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STATE OF HAWAI`I
DEPARTMENT OF EDUCATION
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OFFICE OF FACILITIES AND OPERATIONS

March 9, 2022

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

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

SUBJECT: **Environmental Assessment and Finding of No Significant Impact**
Waimea High School – Gymnasium Athletic Facilities
Waimea, Kauai, Hawaii
Tax Map Key: (4) 1-6-010: 098

The Hawaii State Department of Education has reviewed the Environmental Assessment for the Waimea High School Athletic Facilities and comments received during the 30-day comment period and has issued a Finding of No Significant Impact (FEA-FONSI) determination. Please publish this determination in the next edition of the Environmental Notice.

Attached is a completed OEQC Publication Form, one electronic copy in Adobe Acrobat PDF file format of the same, and an electronic copy of the publication form in MS Word. Simultaneous with this letter, we have submitted the summary of the action in a text file by electronic mail to your office.

Should you have any questions, please contact Richard Bass, Project Coordinator of the Facilities Development Branch, Project Management Section, at (808) 784-5135 or via email at rbass@bowerandkubota.com or contact our authorized agent of this project, Taeyong Kim, of Environmental Communications, Inc. at (808) 528-4661.

ESI:rb

c: Facilities Development Branch
Kendall Ellingwood, Design Partners, Inc
Kristi Sumida, Design Partners, Inc.

From: webmaster@hawaii.gov
To: DBEDT OPSD Environmental Review Program
Subject: New online submission for The Environmental Notice
Date: Friday, March 10, 2023 11:52:01 AM

Action Name

Waimea High School Gymnasium Complex

Type of Document/Determination

Final environmental assessment and finding of no significant impact (FEA-FONSI)

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

Waimea, Kauaʻi

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

(4)1-6-010: 004

Action type

Agency

Other required permits and approvals

Use Permit, Class IV Zoning Permit, Grubbing, Grading and Building Permits

Proposing/determining agency

State of Hawaii Department of Education

Agency contact name

Richard Bass

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Map It

Was this submittal prepared by a consultant?

Yes

Consultant

Environmental Communications, Inc.

Consultant contact name

Taeyong Kim

Consultant contact email

tkim@environcom.com

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(808) 528-4661

Consultant address

P.O. Box 236097
Honolulu, HI 96823
United States
Map It

Action summary

The proposed action consists of a replacement for the original gymnasium which has been in operation since 1948. The existing gymnasium is in poor condition and does not meet the National Federation of State High School Associations (NFSHSA) and is not suitable for interscholastic competition. The replacement structure consists of the construction of a 19,374 square foot gymnasium complex. The single story structure will include the main gym floor, wrestling room, multi-purpose team room, concession stand, lobby and ticket booth, office space, restrooms, locker rooms, support and utility spaces and general circulation.

Appurtenant to the complex are two separate parking areas. A lot consisting of 78 regular and handicap parking stalls will be accessed by Tsuchiya Road and Makeke Road on the western portion of the campus. A second small parking lot for 20 vehicles will be located on the eastern corner of the campus.

Reasons supporting determination

Reasons supporting the anticipated Finding of No Significant Impact are discussed in Section IV of the Final Environmental Assessment. The project is required to meet compliance with NFSHSA requirements for interscholastic competition.

Attached documents (signed agency letter & EA/EIS)

- WaimeaGymFEAv1-consolidated.pdf
- FEA-FONSI-Waimea-HS-Gym-Athletic-SIGNED.pdf

Shapefile

- The location map for this Final EA is the same as the location map for the associated Draft EA.

Action location map

- Waimea-H.S.-Project-Location.kml.zip

Authorized individual

Taeyong Kim

Authorization

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

FINAL ENVIRONMENTAL ASSESSMENT

WAIMEA HIGH SCHOOL
GYMNASIUM COMPLEX

DOE PROJECT NO. Q43201-18
TMK (4) 1-6-010: 004
9707 TSUCHIYA ROAD
WAIMEA, KAUAI, HAWAII

THIS DOCUMENT IS PREPARED PURSUANT TO CHAPTER 343, HAWAII REVISED STATUTES

APPROVING AGENCY:
STATE OF HAWAII
DEPARTMENT OF EDUCATION

MARCH 2023

Waimea High School Gymnasium Complex
Waimea High School
DOE PROJECT NO. Q43201-18
Waimea, Island of Kauai, Hawaii
Tax Map Keys: (4) 1-6-010: 004 and (4) 1-6-009: 023

Final ~~Draft~~ Environmental Assessment

Prepared by the Department of Education pursuant to Chapter 343, Hawaii Revised Statutes (HRS)

Notice of availability of this document will be made in the Environmental Notice published by the Environmental Review Program.

For additional information concerning this document please contact:

Mr. Taeyong Kim
Environmental Communications, Inc.
P.O. Box 236097
Honolulu, HI 96823
Email: tkim@envirocom.com

A copy of any comments or requests should be made to:

Richard Bass, DOE Project Coordinator
HIDOE FDB Project Management
3633 Waialae Avenue, Building B, Room 201
Honolulu, HI 96816
Email: rbass@bowersandkubota.com

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APPENDIX

I. PROJECT SUMMARY

PROPOSING AGENCY:	Department of Education State of Hawaii 3633 Waialae Avenue Honolulu, Hawaii 96816
PROJECT NAME:	Waimea High School Gymnasium
PROJECT LOCATION:	The project site is located within the Waimea High School campus on an open area located southwest of Building U. The street address of the school is 9707 Tsuchiya Road, Waimea, Kauai, Hawaii 96796
TAX MAP KEY/ OWNERSHIP:	State of Hawaii (4) 1-6-010: 004 por. (gymnasium and parking) County of Kauai (4) 1-6-009:023 por. (parking)
AREA:	8.08 acres / 352,226 square feet and 3.027 acres / 131,856 square feet
ZONING:	R-1/ ST-P Special Treatment District - Public Facilities
STATE LAND USE:	Urban District
CURRENT LAND USE:	The project site consists of vacant, maintained land serving as a central green space on the Waimea High School Campus. The site is open except for a single, large monkey pod tree. The area is not actively used but does provide an open space and visual amenity for the campus. The school has served as the area public high school since 1935.
PROJECT SCOPE:	The proposed action consists of a replacement for the original gymnasium which has been in operation since 1948. The existing gymnasium is in poor condition and does not meet the National Federation of State High School Associations (NFSHSA) and is not suitable for interscholastic competition. The replacement structure consists of the construction of a

19,374 square foot gymnasium complex. The single story structure will include the main gym floor, wrestling room, multi-purpose team room, concession stand, lobby and ticket booth, office space, restrooms, locker rooms, support and utility spaces and general circulation.

Appurtenant to the complex are two separate parking areas. A lot consisting of 78 regular and handicap parking stalls will be accessed by Tsuchiya Road and Makeke Road on the western portion of the campus. A second small parking lot for 20 vehicles will be located on the eastern corner of the campus.

PURPOSE AND NEED:

The existing Waimea High School Gym was constructed in 1935 and is near the end of its useful life. It is does not meet current athletic facility standards therefore a replacement facility that meets the programmatic requirements and standards is planned for construction on campus. This new facility will be in full compliance with NSFHSA standards and Title IX requirements.

PROJECT COST/PHASING

The estimated construction cost for the gymnasium building is approximately $22,500,000.00.

The proposed project is intended to be conducted in a single continuous phase with a projected commencement date of the Summer of 2023 and a completion date in the Spring of 2025. The improvements should be completed in approximately 21 months.

PERMITS AND APPROVALS

<u>State of Hawaii</u>

- Department of Health Community Noise Permit
- National Pollutant Discharge Elimination System Permit (NPDES)

County of Kauai

- Use Permit
- Class IV Zoning Permit
- Grubbing Permit
- Grading Permit
- Building Permit

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II. PROPOSED PROJECT AND STATEMENT OF OBJECTIVES

A. Project Location

The proposed gymnasium project will be located on a vacant open area located within the campus of the Waimea High School in the central portion of Waimea, Kauai, Hawaii. The area is vacant, grassed and maintained and primarily serves as open space and a visual amenity. The proposed location contains a large monkeypod tree which will have to be removed to accommodate the gymnasium structure. The Waimea High School campus is located in the central portion of Waimea town and notable landmarks near the project site include Waimea State Pier located to the south, and Hapokele Park and Kauai Veterans Memorial Hospital to the west and northwest. The gymnasium and small parking lot project site is identified as Tax Map Key: (4) 1-6-010: 004 with a street address of 9707 Tsuchiya Road. The site is owned by the State of Hawaii. The larger parking lot located near the exiting gymnasium is located on County of Kauai owned Tax Map Key: (4) 1-6-009: 023. See Figure 1.

While not located on the same parcel, uses and facilities associated with the Waimea High School complex include the Waimea River Park, Niihau High and Elementary School, Waimea Swimming Pool and the existing gymnasium which is considered part of the High School complex. Additionally, tennis courts are located across Tsuchiya Road as well as the Captain Cook Memorial Park baseball field.

The surrounding neighborhood located to the west is characterized as a mix of commercial, institutional and residential areas. The Waimea United Church of Christ is a significant adjacent neighbor as the public facilities listed above wrap around the church site. Areas north of the project site are primarily in single-family residential use. Located to the east of the project site are the Easter Seals building, the First Marshallese United Church of Christ, and Waimea United Church of Christ Educational Center. See Figure 2.

B. Project Description

The proposed project consists of the construction of an approximately 23,576 square foot gymnasium complex to serve the students of the Waimea High School. As previously described, the existing gymnasium building does not conform with current athletic facilities standards and does not support current athletic programs putting students in a disadvantaged position. Title IX gender equity regulations will be met with the new facility and the new parking areas will also support the use of the gymnasium for competitive events that will be held within the facility. The proposed facility will be comparable to other Department of Education gymnasium facilities

providing the students of the Waimea High School the opportunity to use current standard facilities and support uses.

The new facility will also be designated for enhanced hurricane protection in accordance with Section 430 “State- and County-Owned Public High Occupancy Buildings – Design Criteria for Enhanced Hurricane Protection Areas” of the Hawaii State Building Code for occupancy during hurricanes of up to Saffir Simpson Category 3. Applicable areas withing the facility include the Main Gymnasium, Wrestling/ Cheer Room, Training Room, Toilet Rooms, and Locker Rooms (with showers).

The new facility will include the following components.

Program Components

Main Gymnasium
This space is used for team activities and scholastic sports competitions such as basketball and volleyball. Consists of one regulation Basketball (94-feet x 50-feet) / Volleyball court with two (2) practice cross courts, six (6) ceiling mounted retractable basketball goals, scoreboards and retractable wall-mounted bleachers on both sides of the Main Gymnasium with a seating capacity of 840 (includes 8 accessible seats). In addition, a motorized vertical-acting divider curtain with manual override will be provided between practice courts.

Wrestling Room / Cheer Room
Ancillary Gym to be used for Wresting and Cheerleading. Sized to accommodate one full size wrestling mat (42-feet x 42-feet).

Lobby
Primary entry space into the Gymnasium for patrons, visitors, and spectators, with direct connection to the Main Gymnasium and Concession. The primary function of the Lobby is to be a control checkpoint for the facility.

Concession Booth
Room to support concession activities, which consist of selling snacks and drinks during events. Provided with countertop space, cabinets, a sink, refrigerator, freezer, ice machine and tables.

Men’s and Women’s Toilet Rooms
Toilet room for use by Gymnasium patrons, visitors, spectators and others from the school’s Athletic Complex. Provided with dual entrances and controls for dual use (Gymnasium and Athletic Complex).

General (Gymnasium) Storage
This area is sized to accommodate the storage of equipment and supplies such as basketballs, volleyball standards/gear, other equipment and

maintenance/repair supplies. Double doors will provide access to the Gymnasium. This space should be located to be accessible from the interior of the Gymnasium.

PE Storage
Storage space to secure and store Gymnasium PE equipment when not in use.

Locker Room A1
Locker Room for Varsity Boys scholastic sports teams. One of two Locker Rooms to be used during practices and games. To also be used by visiting team as Locker Rooms during scholastic competition.

Locker Room A2
Locker Room for Junior Varsity scholastic sports teams. One of two Locker Rooms to be used during practices and games. To also be used by visiting team as Locker Rooms during scholastic competition.

Restroom 1
Toilet and Shower rooms to support Locker Rooms which connect to both Locker Rooms A1 and A2. Secondary access from other supporting areas of the Gymnasium also provided.

Locker Room B1
Locker Room for Varsity scholastic sports teams. One of two Locker Rooms to be used during practices and games. To also be used by visiting team as Locker Rooms during scholastic competition.

Locker Room B2
Locker Room for Junior Varsity scholastic sports teams. One of two Locker Rooms to be used during practices and games. To also be used by visiting team as Locker Rooms during scholastic competition.

Restroom 3
Toilet and Shower rooms to support Locker rooms which connect to Locker Rooms B1 and B2. Secondary access from other supporting areas of the Gymnasium also provided.

Restroom 2
Unisex toilet area adjacent to locker rooms. Grouped together with Boys and Girls Locker Rooms.

Restroom 4
Unisex locker room, toilet, and shower area located adjacent to Locker Rooms.

Training Room

Athletic training room to allow athletic trainers to evaluate students who may have suffered an injury or have general questions about sports medicine. The Training Room is equipped with an office (with the ability to view the entire Training Room), (3) training tables, filing cabinets, refrigerator, first aid supplies, an ice machine and whirlpool.

Weightlifting Room
Room to support weightlifting and other resistance methods to improve athletic performance and reduce the risk of injury. Weight Room to be equipped with mirrored walls, ceiling fans and appropriate weightlifting equipment and mats.

Team Equipment Storage Room
Space to store team equipment, including uniforms and team equipment.

Laundry Room
Space located within the Training Room for laundry activities for game and practice rooms. To house large residential grade washers and dryers.

Athletic Director Office
Private office for the school's Athletic Director.

Utility Spaces
Communication Rooms, Electrical Rooms, Janitor Rooms, and Mechanical spaces to support the Gymnasium facility.

Storage
Space to store Volleyball, Basketball and various Athletic equipment.

Building Construction
The gymnasium building will be constructed with reinforced CMU in compliance with enhanced hurricane protection requirements. The building will have a standing seam metal roof. Exterior windows will use factory finished aluminum fixed frames. Windows will meet hurricane and windborne debris requirements.

The foundation of the building will use conventional spread footings. Retaining walls required around the perimeter of the structure will be constructed of CMU.

Interior spaces for the Training Room, Weight Room, Athletic Director's Office, and Concession spaces will be air conditioned for cooling. Non-air conditioned spaces will be provided with ceiling fans or exhaust systems for climate control.

Water, sewer and electrical service utility infrastructure will be connected to the new building. Existing utility services are on campus and capacity to accommodate the new gymnasium is available.

New Parking Areas

Two improved parking areas will be provided on the campus. The first is a parking located on the eastern side of the site with direct access to Ola Road. This 20 stall lot will include 2 handicap stalls and will be located east of Buildings T and B.

The second parking lot will be located northwest of the existing gym building and will have direct access to Tsuchiya Road and Makeke Road. This 78-stall lot will include 3 handicap accessible stalls. See Figure 6.

The floor plan and building elevations are shown in Figures 4, 5 and 6 respectively.

Program Spaces	(Net SF)
Main Gym Floor (DE up to 1000)	11,578
Lobby & Display Area	635
Ticket Booth	
Concession Booth	248
AD Office	132
AD Restroom & Shower	64
AD Conference Room	
PE & Coaches Office	
PE Equipment Room	116
Custodial Closet (Public Area)	88
Boys' Locker Facilities	
Varsity Locker Room	203
Junior Varsity Locker Room	203
Varsity / JV Toilet Area	501
Varsity / JV Shower Rm.(min 6 stalls inc.ADA)	
Girls' Locker Facilities	
Varsity Locker Room	203
Junior Varsity Locker Room	203
Varsity / JV Toilet Area	501
Varsity / JV Shower Rm.(min 6 stalls inc.ADA)	
Common Facilities	
Gender Neutral (Restrm/Lkr/Shower) Rm #1	173
Gender Neutral (Restrm/Lkr/Shower) Rm #2	173
First-Aid Room	
Laundry Room	193
Custodial Closet (Locker Area)	
Wrestling/Cheer Room	2,076

Trainer's Room	905
Weight Training Room	912
General Storage	267
Total Program Area of Gymnasium	19,374
Non-Program Spaces	
Telecommunications Room	109
Men's Toilet (Public)	318
Women's Toilet (Public)	335
Electrical Room	151
Mechanical Room	599
IDF Room	
Corridor #1	300
Hall #1	639
Corridor #2	264
Total Non-Program Area of Gymnasium	2,715
Total Net SF Area (Program + Non Program Spaces)	22,089
Total Gross SF Area of Building	23,576

Landscaping

The new gymnasium building will require the removal of existing trees on the project site. This includes a large monkey pod tree in the location of the new Gymnasium building, and a few other smaller trees located in the proposed new parking areas. The Monkeypod tree and other trees removed will be replaced with new 25 gallon size trees of similar type, as well as additional tree varieties, with the intent of adding a minimum of two new trees for every tree removed. New plantings will include native Loulu plams, native Kou trees, Gold trees, and a Monkeypod. New parking lot areas will include a minimum of one tree for every 10 parking spaces, per the Kauai County Code. Parking areas will include some screening with hedges in areas fronting roadways.

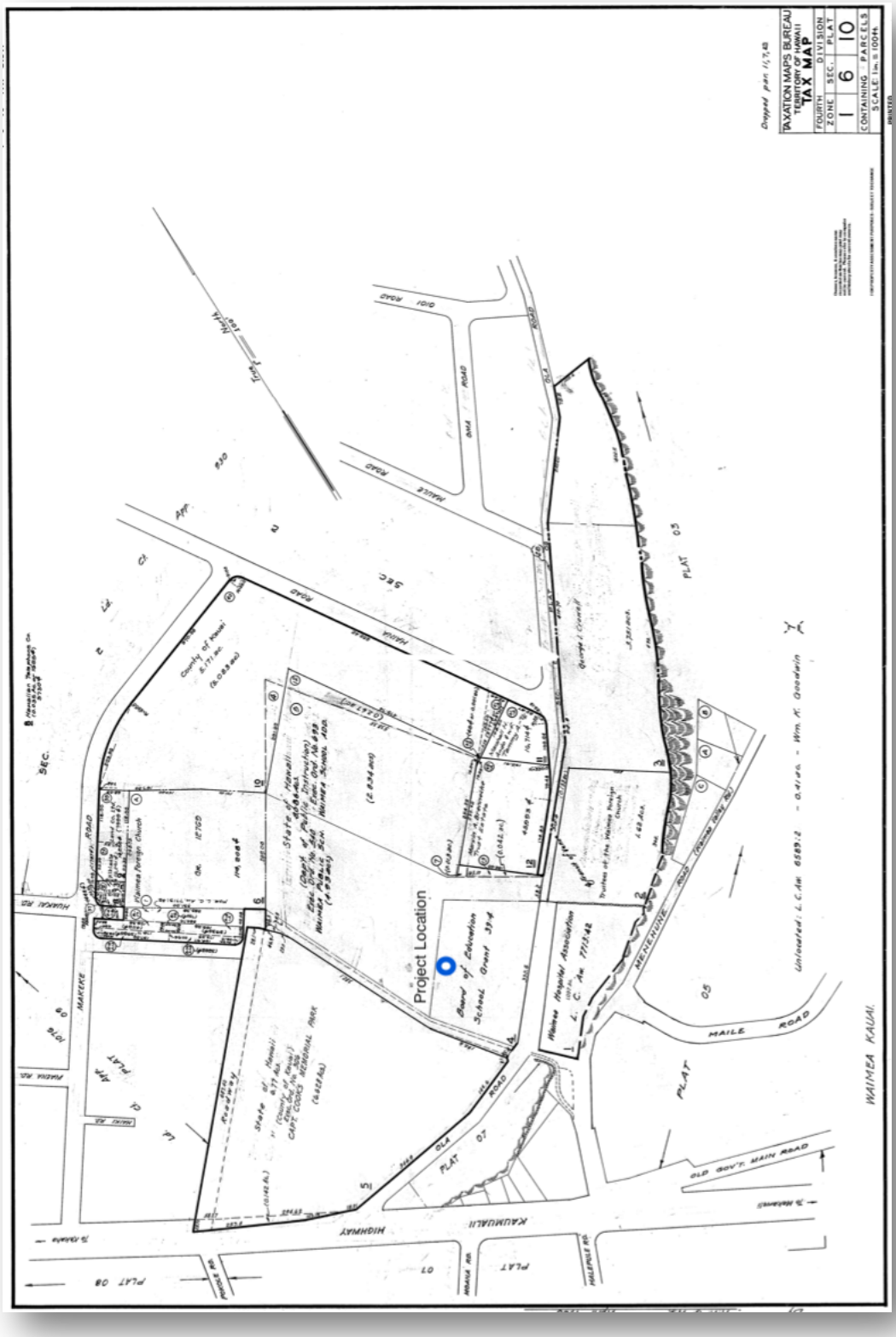


Figure 1: Tax Map
Source: County of Kauai Property Tax Office

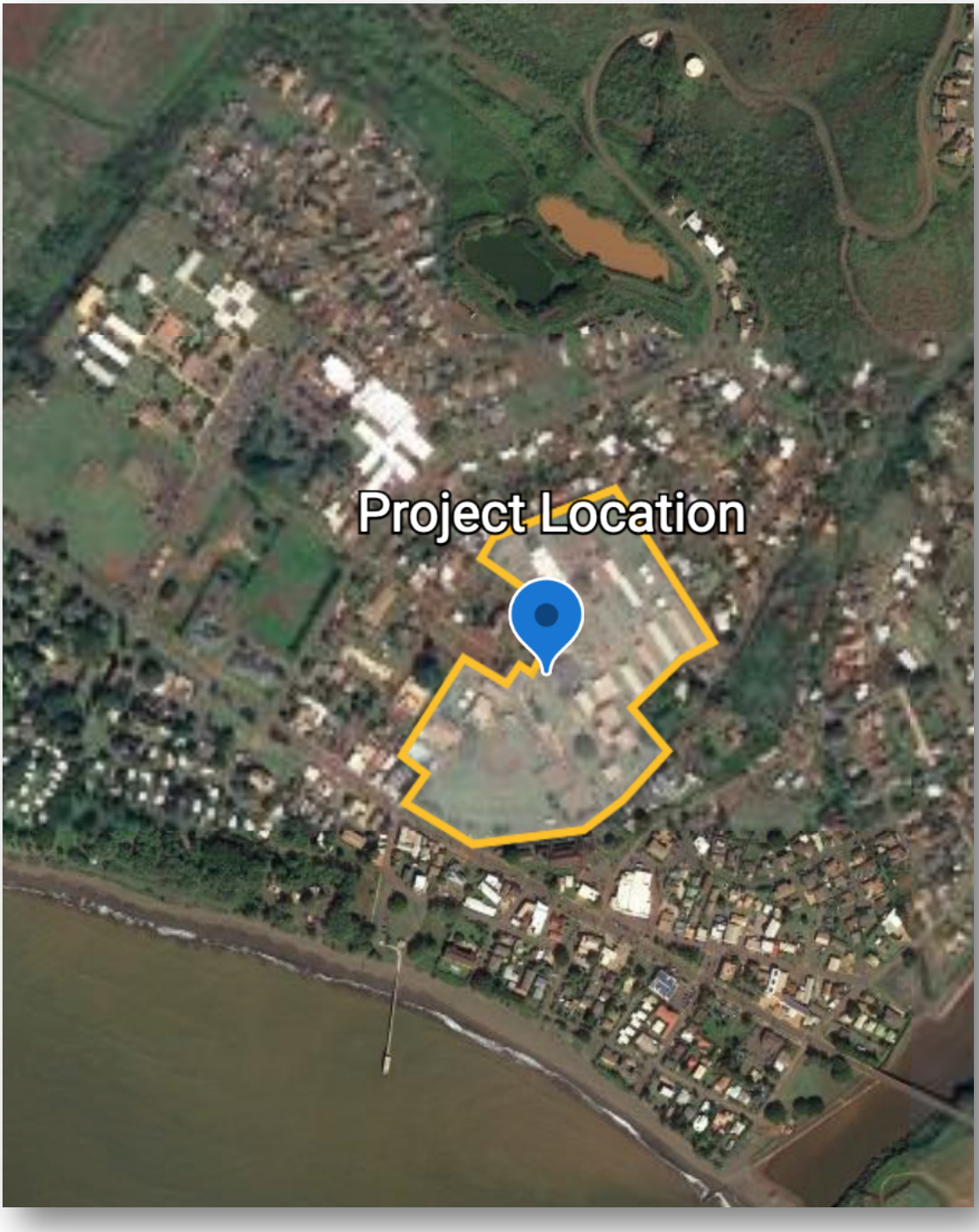


Figure 2: Aerial Location Map
Source: Google Earth

Figure 3: Existing Campus Site Plan
Source: Design Partners Incorporated

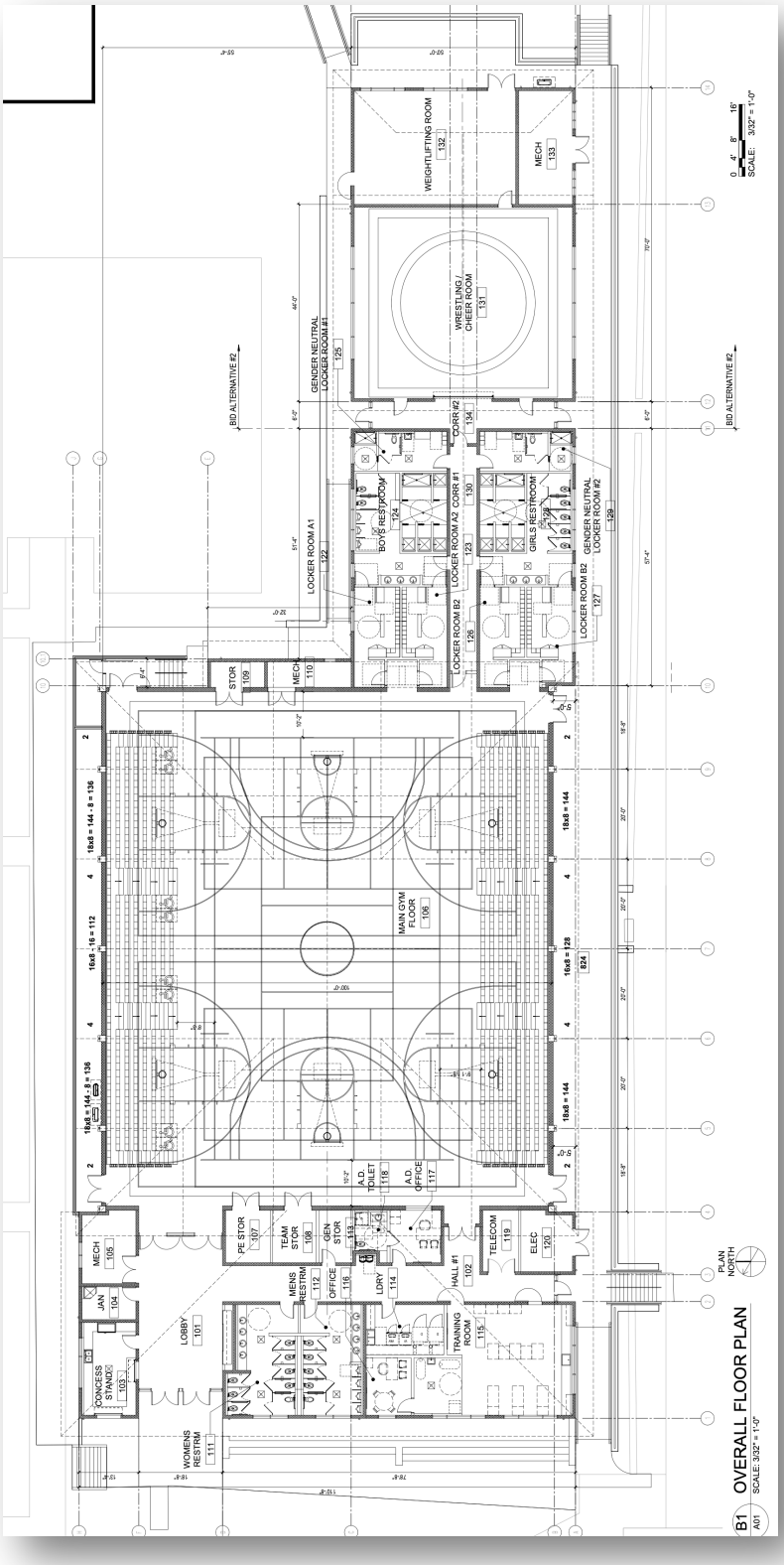


Figure 4: Gymnasium Floor Plan
Source: Design Partners Incorporated

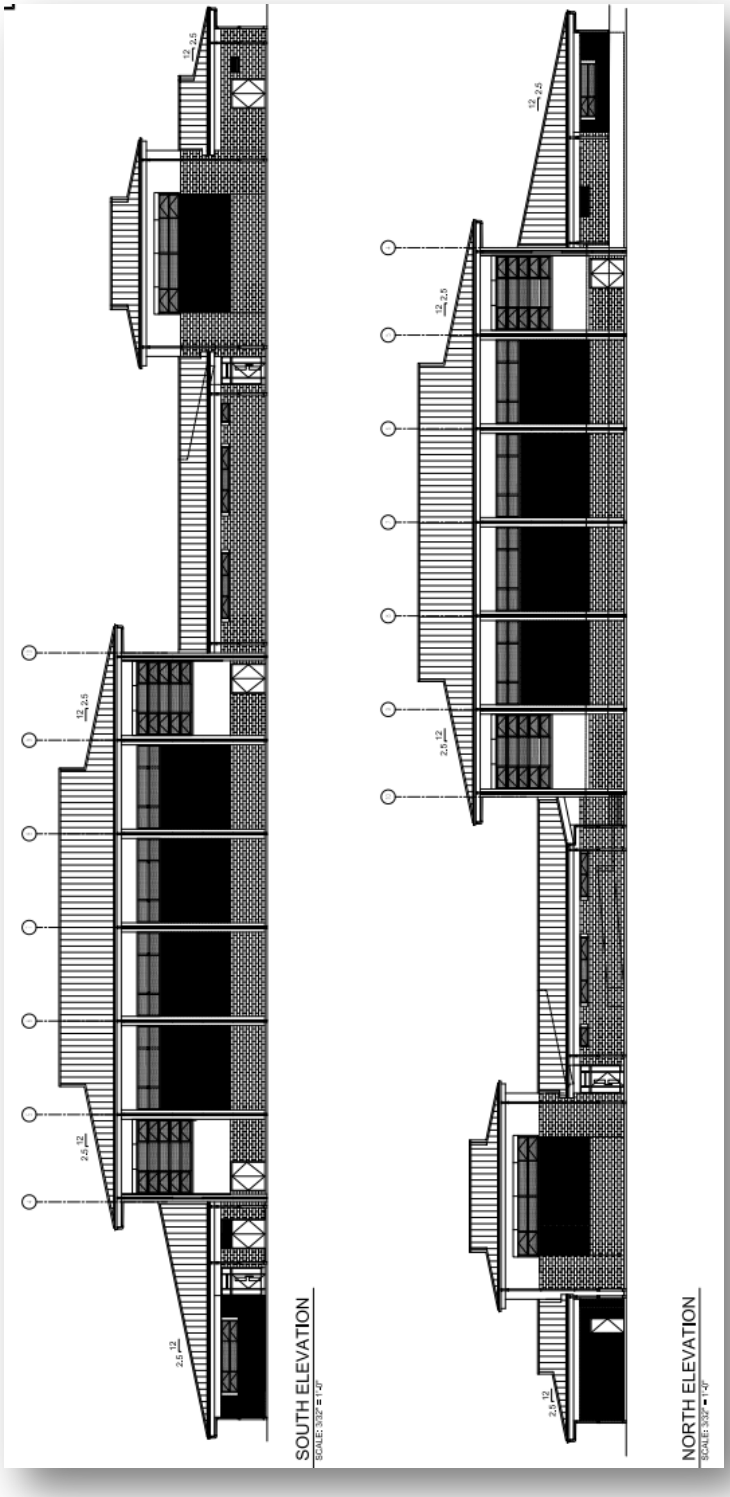


Figure 5: South and North Elevations
Source: Design Partners Incorporated

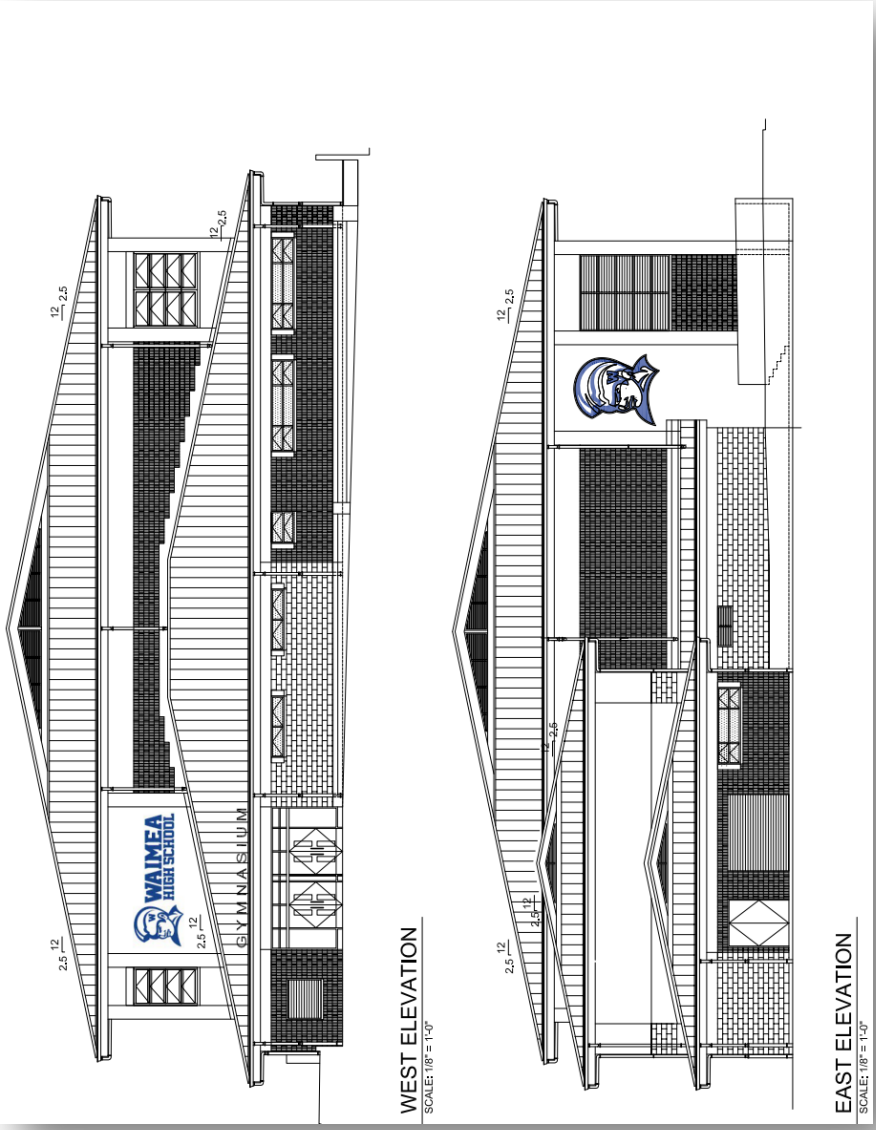


Figure 6: West and East Elevations
Source: Design Partners Incorporated

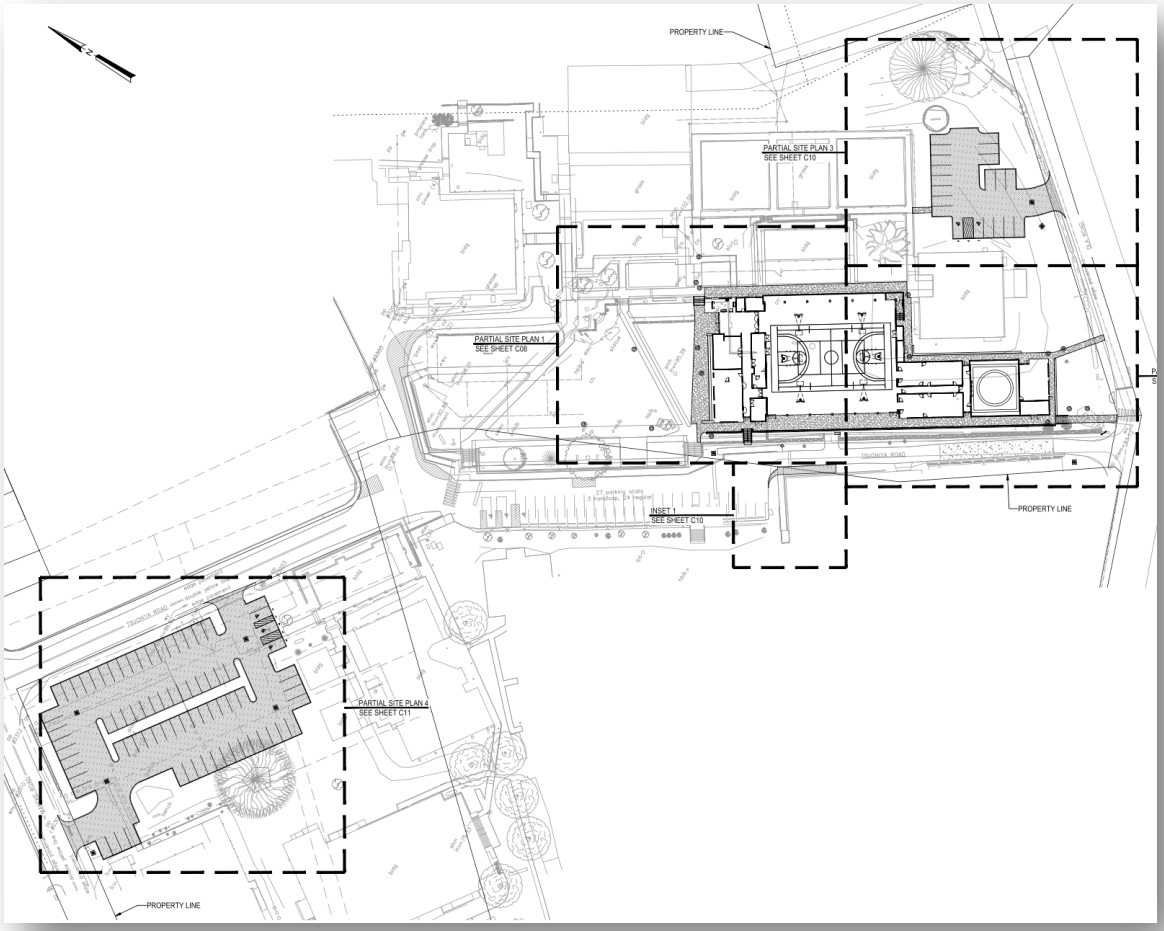


Figure 7: New Parking Lots Plan
Source: Design Partners Incorporated

C. Infrastructure Assessment

The Basis of Design prepared for the project provided a summary of infrastructure availability and capacities. The following assessment can be found in its entirety in Appendix A.

Water System

The school is serviced by an existing 3-inch domestic water meter. The new gymnasium will connect to an existing 2-inch domestic water line located within the school campus. The 2-inch water line currently runs directly under the gymnasium site and services an existing music building and irrigation system. The water line will be relocated around the proposed gymnasium and the new service for the gymnasium will be connected to this line. A new fire

line connection will be provided for the project and connect to an 8" Department of Water Line on Ola Road, near the intersection of Tsuchiya. The new fire line will provide a connection for the gymnasium's fire sprinkler system and a new fire hydrant. The new fire hydrant will be located on the south side of the building adjacent to Tsuchiya Road.

Sanitary Sewer System

The project will connect to an existing 6-inch sewer line near the front entrance of the new gymnasium. A portion of the existing sewer line and two abandoned cesspools are located directly under the proposed gymnasium footprint. The existing sewer line will be replaced by a new sewer line that will be outside the new building and the abandoned cesspools will be demolished as needed. The 6-inch sewer line has sufficient capacity for the new gymnasium.

Grading, Drainage Utilities, and Low Impact Development

The site of the new Waimea High School Gymnasium consists of a grass lawn and walkways that slope towards Tsuchiya Road. A retaining wall will be installed on the south side of the gymnasium to level the grade for the gymnasium building pad. The principles of positive drainage, with minimum slopes, are applied to control the conditions that direct rainfall away from facilities. New facilities shall accommodate ADA requirements as well as positive drainage away from the building.

There are no existing drainage systems in the project vicinity. The building roof down spouts will be collected and conveyed by buried pipe to three underground detention systems on the east and west sides of the gymnasium. Runoff from the parking lots will be collected via inlets in the center of parking aisles and stored in underground detention systems beneath the parking pavement. Out flows from the detention systems will be conveyed to seepage inlets to allow excess stormwater to be release from the detention systems.

The storm drainage system will be properly coordinated with surrounding areas to ensure that runoff does not cause damage to other on-site buildings. All stormwater management calculations will be in accordance with County of Kaua'i, Department of Public Works Storm Water Runoff System Manual, dated November 2001.

Temporary and permanent Best Management Practices for erosion and sediment control will be required, including but not limited to, a dust fence around the perimeter of the project area and surface runoff control.

Electrical Distribution System

The existing main electrical switchboard "MSB" for the campus is located in the existing Utility Building, which is located behind the existing Cafeteria Building 'F'. A 750 kVA KIUC pad-mounted transformer services the main switchboard 'MSB', which is rated at 800A at 480Y/277V, 3Ø, 4-wire. The 'MSB' is integrated with a 400A PV system, power factor correction capacitor,

and an external transfer switching scheme to accommodate a portable generator.

While the available demand capacity of the main switchboard ‘MSB’ to support the new Gymnasium must be confirmed, there is ample physical space within the enclosure for a new circuit and the switchboard appears to be in good condition. The manual transfer switch with a provision to connect a portable generator is provided for the ‘MSB’ to support certain buildings or portions of the buildings during a utility service outage event, but the extent of the emergency generator power coverage is undetermined at this time.

The intent is to provide a new underground electrical distribution from the ‘MSB’ to the new Gymnasium, with an oversized conduit for future electrical capacity.

Pole-mounted LED lighting will be provided for the new parking lots, identified as Parking Lots ‘A’ and ‘B’. Power to the pole lights shall be extended from the new Gymnasium for Parking Lot ‘A’ and from the existing Athletic Complex for Parking Lot ‘B’.

Telecommunications System

The Main Distribution Frame ‘MDF’ for the campus telecommunications system is located in the existing Administration Building, where the demarcations of service providers were established. The fiber optic and copper cables currently extend from the ‘MDF’ to their respective Intermediate Distribution Frames ‘IDFs’ in various existing buildings to support the school network and telephone services. The existing central distribution equipment for the CATV and PA/intercom systems are also located in the existing Administration Building and extend to all the existing buildings via underground infrastructure.

The existing ‘MDF’ has adequate capacity to support and terminate the new fiber optic and copper cables in existing equipment racks.

A new 48ST SM FO cable and 25-pr copper cable in 4-inch ducts are proposed to support the new Gymnasium. In addition, two 2-inch ducts will be provided between ‘MDF’ and the Comm Room in new Gymnasium for the CATV and PS systems.

Fire Alarm System

The campus has a single master fire alarm control panel, Simplex, located in the existing Administration Building. The system connects to the other buildings via copper wiring in the communications duct system.

Fire Protection

The campus has an existing fire line that serves the on-site hydrants. The existing Gymnasium does not have an automatic fire sprinkler system.

D. Project Objective and Need for Action

The proposed gymnasium project was established through a facilities assessment conducted for the existing Waimea High School Gymnasium. The existing gym was constructed in 1935 and is presently at the end of its useful life. The facility does not meet current standards based on the Department of Education's Facilities and Development Schedule (FADS) for a high school gymnasium with a student enrollment of approximately 600 students. The site has undergone an extensive alternatives analysis and the project subject of this Environmental Assessment was determined to be the most desirable of all alternatives considered.

The subject Environmental Assessment is prepared in conformance with Chapter 343 Hawaii Revised Statutes, as the project will involve the use of County funds. The project parcel is owned by the Hawaii Health Care Systems but the project will be funded by the County of Kauai.

E. Alternatives Considered

Three major alternative sites within the school complex were considered during the facilities assessment process. Additionally, variations on two of the alternative sites were considered. The alternative locations are shown in Figure 8.

The first alternative considered would locate the new gymnasium west of the existing gymnasium with Tsuchiya Road located along the northern boundary of the building. This alternative would require the removal of a large monkeypod tree and would most likely require the relocation of existing portable buildings. The location could also affect the Waimea Neighborhood Center operationally due to its close proximity. This location is also owned by the County of Kauai.

The second alternative location is located in the courtyard area adjacent to Buildings W, U and B. This central location would also require the removal of a large monkeypod tree and the removal or relocation of aluminum bleachers.

The third alternative location would replace the existing tennis courts with gymnasium. This site is also owned by the County of Kauai.

After discussion with school administrators, Alternative 2A which keeps all program areas on a single floor was selected as the most desirable location. The site is owned by the State of Hawaii, has adequate area to construct a single story building and use lands that are not heavily used for other purposes.

No action is not considered an alternative as the existing gymnasium is not suitable for continued use nor is it programmatically suitable putting the Waimea High School students in a disadvantaged athletics position.

Figure 8: Alternative Site Locations
Source: Design Partners Incorporated

III. DESCRIPTION OF ANTICIPATED IMPACTS AND MITIGATION MEASURES

A. Overview and Environmental Setting

The Waimea High School Gymnasium was subject of a due diligence report prepared for the Department of Education Waimea High School in March of 2021. This report, prepared by Design Partners, Inc. is included in part in this Environmental Assessment and the initial findings are provided as follows.

The Waimea High School, is a public high school operated by the Hawai'i State Department of Education (HIDOE) and located on the island of Kaua'i, in the town of Waimea. Established in 1881, it began as an elementary school before becoming a high school in 1935. Serving grades 9 through 12, Waimea High School is the oldest high school on the island of Kaua'i and considered the westernmost high school in the United States.

The existing high school campus sits on various parcels. Much of the main campus buildings are on state- owned land (TMK: 4-1-6-010:004) and with a few on county-owned land (TMK: 4-1-6-010:010) comprising of 8.08 and 5.18 acres, respectively. The existing Athletic Complex, which includes the Gymnasium and the Waimea Neighborhood Center, is located on county-owned land (TMK: 4-1-6- 009:023) comprising of 2.97 acres (Figure 2). The state-owned parcel is bordered by Haina Road to the north, Makeke Road to the west and Ola Road to the east. Tsuchiya Road bisects the state and county parcels with Captain Cooks Memorial Park located between the parcels. Waimea High School is also part of the Kaua'i Interscholastic Federation (KIF) of interscholastic sports.

The existing Gymnasium (Building N) was constructed in 1948 as part of the original Waimea school campus. Since its initial construction, there have been numerous renovations to the Gymnasium. Some of the more recent renovations to the existing Boys' and Girls' Showers (1997) and new telescoping bleachers (1998).

The existing gym consists of a main court with regulation high school basketball / volleyball court, roll-out bleachers and stage. Support facilities include locker rooms, showers, laundry room, weight room, storage and toilet facilities for the public. The gymnasium is currently used by the school's interscholastic sport teams, which include:

o Fall: Volleyball (Girls), Cheerleading (Girls)

o Winter: Wrestling (Boys, Girls), Basketball (Boys, Girls) – busiest season (2-Junior Varsity and 2- Varsity)

o Spring: Volleyball (Boys)

The Gymnasium is also used for school assemblies and other school gathering activities. The overall condition of the existing Gymnasium is very poor, as there are numerous building systems that are antiquated, beyond its service life and should be replaced now. There is visible rusting and termite damage throughout, with jalousie windows that permit water infiltration which is especially prevalent during heavy rains. The gymnasium was not designed to current National Federation of State High School Associations (NFHS) standards and is not suitable for interscholastic competition.

The location of the proposed new gymnasium is located in a courtyard space bounded by Tsuchiya Road and campus Buildings W, U and B. Across Tsuchiya Road is an existing tennis court complex and the Captain Cook Memorial Park.

Figure 9: Photo of Project Site Looking Towards Building B
Source: Design Partners, Inc.

B. Surrounding Uses

The surrounding neighborhood located to the west is characterized as a mix of commercial, institutional and residential areas. The Waimea United Church of Christ is a significant adjacent neighbor as the public facilities listed above wrap around the church site. Areas north of the project site are primarily in single-family residential use. Located to the east of the project site are the Easter Seals building, the First Marshallese United Church of Christ, and Waimea United Church of Christ Educational Center.

C. Environmental Considerations

1. Geological Characteristics

Topography

The project improvement area consists of a site that gently sloping lands from east to west and from north to south in a mauka to makai orientation. The project site is devoid of any structures, geographic features, drains, swales or other variations from the smooth grassed surface. A sanitary sewer manhole is located on the site. A single large monkeypod tree is located within this grassed courtyard area and will have to be removed in favor of the new gymnasium. The sites wayfinding coordinates are 21*57'25"N 159*40'05"W. The project site ranges in elevation from 105-feet at the entrance of Building B down to 96-feet at Tsuchiya Road. The proposed gymnasium is expected to have a finished floor elevation 102-feet.

Climate

According to NOAA, the long term climate data for Lihue represents the closest recorded long-term climate data for the project site. The daily average temperature from this recording site is 71 to 80 degrees with an average annual temperature of 76.2 degrees. The coolest month of the year is February while the warmest is August. The average annual rainfall is approximately 40 inches with a wet season from October to April. Northeasterly tradewinds predominate this area with occasional southerly "Kona" winds approaching from the south. Air conditions are very good, particularly due to the site's eastern location. The project site is outside of any area subject to rising sea levels.

Soil Conditions

According to the Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii by the US Department of Agriculture Soil

Conservation Service, the project site is located primarily on soils classified as Makaweli silty clay loam, 0 to 6 percent slopes (MgB). See Figure 9.

This series consists of well-drained soils on uplands on the island of Kauai. The annual rainfall amounts to 20-35 inches. Soils are used for irrigated sugarcane, pasture, and homesites. The natural vegetation consists of kiawe, lantana, fingergrass, klu, koa haole, and piligrass.

MgB is on the tops of broad interfluves in the uplands. Representative profile the surface layer is dusky-red silty clay loam that has a prismatic and subangular block structure. The substratum is soft, weather basic igneous rock. The soil is slightly acid in the surface layer and slightly acid to neutral in the subsoil.

Permeability is moderate. Runoff is slow, and the erosion hazard is slight. The available water capacity is about 1.6 inches per foot of soil. In places roots penetrate to a depth of 5 feet or more.

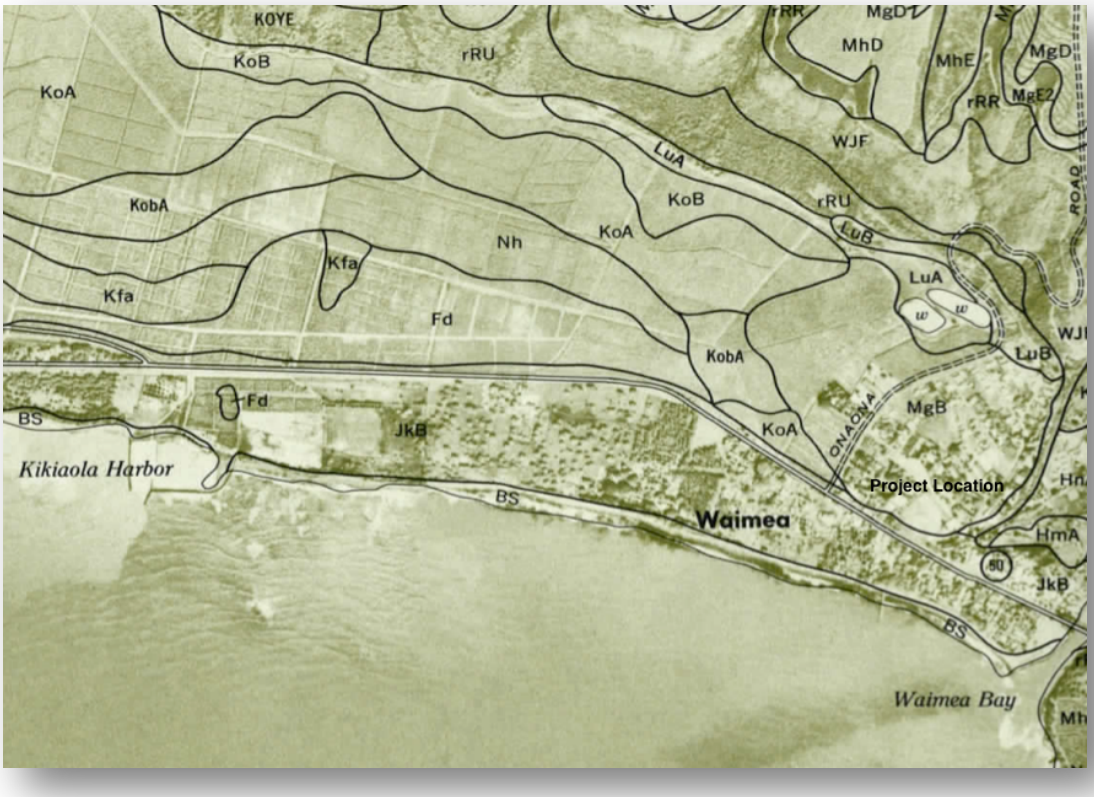


Figure10: Soils Map
Source: U.S. Soil Conservation Service

Air Quality and Noise Environment

The ambient air quality of the project site is typical of the low-density residential character of the site. No point source pollution sources have been identified in the general area and typical trade winds ensure that air quality remains within acceptable standards as recorded by the Department of Health air quality monitors.

Air quality impacts from the construction and operation of the gymnasium and appurtenant facilities are expected to be minimal to insignificant. During the construction period, gasoline or diesel powered heavy equipment will be required for earthwork and construction of the improvements. Air quality degradation from the operation of this equipment will be negligible and temporary. No long-term air impacts will occur as a result of the project.

The noise environment will be affected during the construction period. Heavy equipment will be used during site grading and construction. All activities will continue to adhere to State Department of Health community noise standards. Upon completion of all construction related activities, no long-term noise impacts are expected from the facility itself. The installation of temporary PTAC air conditioning units may be considered for the duration of construction for classrooms near the construction area. Noise associated with full gymnasium events is not expected to create any nuisance to residents since the project is located away from residential areas.

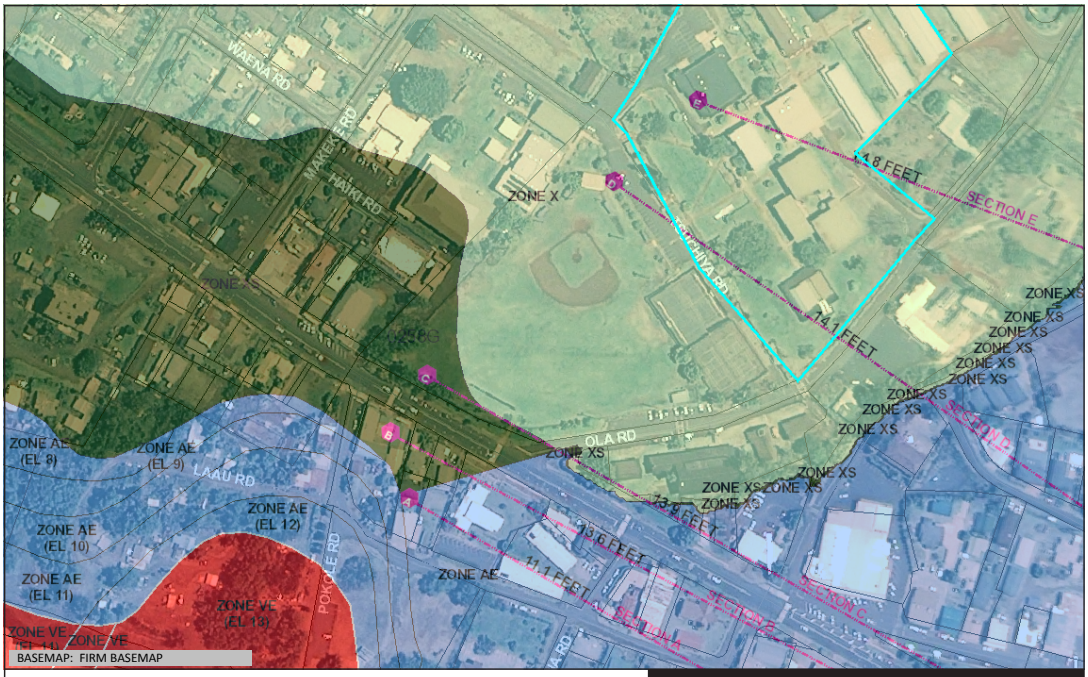
2. Water Resources

Hydrologic Hazards and Resources

According to Panel 1500020258G of the Federal Emergency Management Agency Flood Insurance Rate Map, the entire project area is located in Zone X. This is an area determined to be outside of the annual 0.2% annual chance floodplain (Figure 11). The project is not in a tsunami evacuation area or a dam evacuation area as shown in Figure 12.

Special Management Area

The project site is not located within the Special Management Area (SMA). The SMA boundary is located makai of Kaumuali'i Highway (Figure 13).



Flood Hazard Assessment Report

www.hawaiinfip.org

Waimea HS New Gymnasium

Property Information

COUNTY:	KAUAI
TMK NO:	(4) 1-6-010:004
WATERSHED:	KAPILIMAO; WAIMEA
PARCEL ADDRESS:	WAIMEA, HI 96796

Notes:

Flood Hazard Information

FIRM INDEX DATE:	FEBRUARY 26, 2021
LETTER OF MAP CHANGE(S):	NONE
FEMA FIRM PANEL:	1500020258G
PANEL EFFECTIVE DATE:	FEBRUARY 26, 2021

THIS PROPERTY IS WITHIN A TSUNAMI EVACUTION ZONE: NO
FOR MORE INFO, VISIT: http://www.scd.hawaii.gov/

THIS PROPERTY IS WITHIN A DAM EVACUATION ZONE: NO
FOR MORE INFO, VISIT: http://dlnreng.hawaii.gov/dam/

0 200 400 ft

Disclaimer: The Hawaii Department of Land and Natural Resources (DLNR) assumes no responsibility arising from the use, accuracy, completeness, and timeliness of any information contained in this report. Viewers/Users are responsible for verifying the accuracy of the information and agree to indemnify the DLNR, its officers, and employees from any liability which may arise from its use of its data or information.

If this map has been identified as 'PRELIMINARY', please note that it is being provided for informational purposes and is not to be used for flood insurance rating. Contact your county floodplain manager for flood zone determinations to be used for compliance with local floodplain management regulations.

FLOOD HAZARD ASSESSMENT TOOL LAYER LEGEND
(*Note: legend does not correspond with NFHL)*

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD - The 1% annual chance flood (100-year), also know as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. SFHAs include Zone A, AE, AH, AO, V, and VE. The Base Flood Elevation (BFE) is the water surface elevation of the 1% annual chance flood. Mandatory flood insurance purchase applies in these zones:

	Zone A: No BFE determined.
	Zone AE: BFE determined.
	Zone AH: Flood depths of 1 to 3 feet (usually areas of ponding); BFE determined.
	Zone AO: Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.
	Zone V: Coastal flood zone with velocity hazard (wave action); no BFE determined.
	Zone VE: Coastal flood zone with velocity hazard (wave action); BFE determined.
	Zone AEF: Floodway areas in Zone AE. The floodway is the channel of stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without increasing the BFE.

NON-SPECIAL FLOOD HAZARD AREA - An area in a low-to-moderate risk flood zone. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

	Zone XS (X shaded): Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
	Zone X: Areas determined to be outside the 0.2% annual chance floodplain.

OTHER FLOOD AREAS

	Zone D: Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase apply, but coverage is available in participating communities.

Figure 11: Flood Hazard Map
Source: State of Hawaii Department of Land and Natural Resources

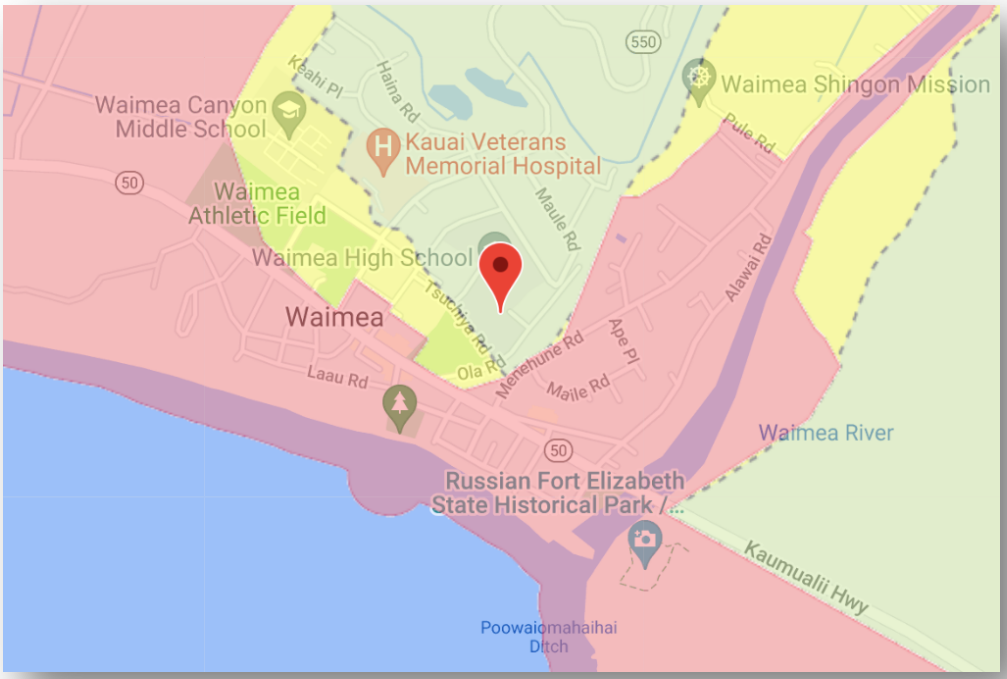


Figure 12: Tsunami Inundation Map
Source: Hawaii Emergency Management Agency

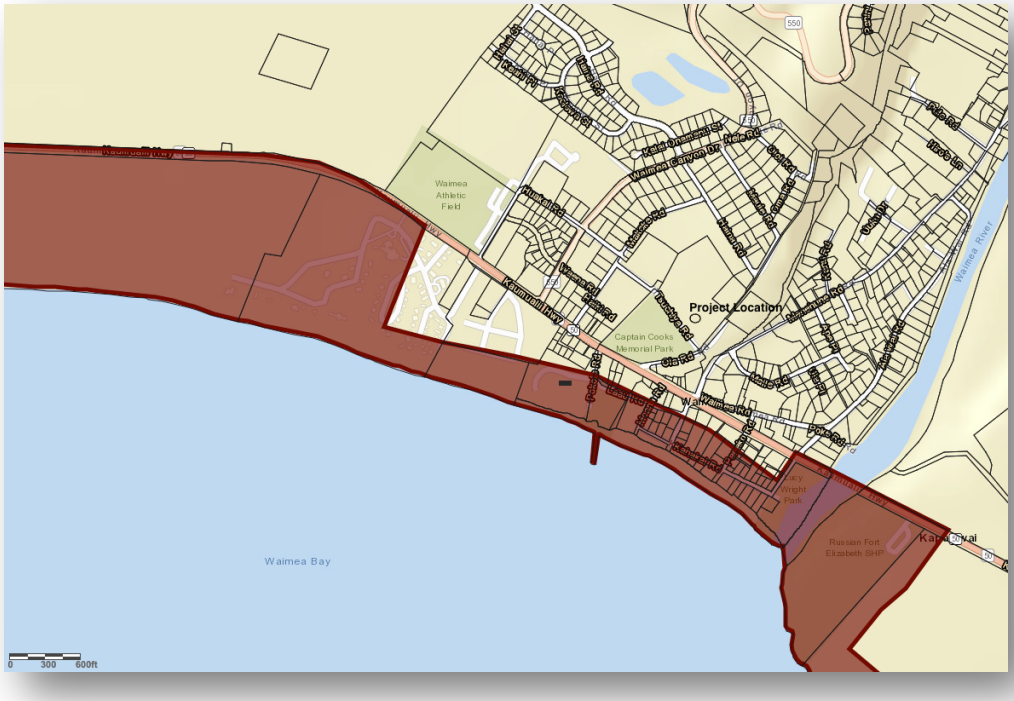


Figure 13: Special Management Area Map
Source: County of Kauai

Sea Level Rise

According to the Kauai Climate Change and Coastal Hazards assessment prepared for the County of Kauai, sea level rise due to climate change is 1-foot by year 2050 and 3l-feet by year 20100. The project site will not be impacted by sea level change. The project site is located for than 35 feet above mean sea level. See Figure 14.

Water Quality

The project will not adversely affect water quality however the site will increase impervious surfaces. A storm drainage will be designed to retain runoff in a safe area or will convey drainage to areas where minimal impacts will occur. The project site is not located over an aquifer recharge area.

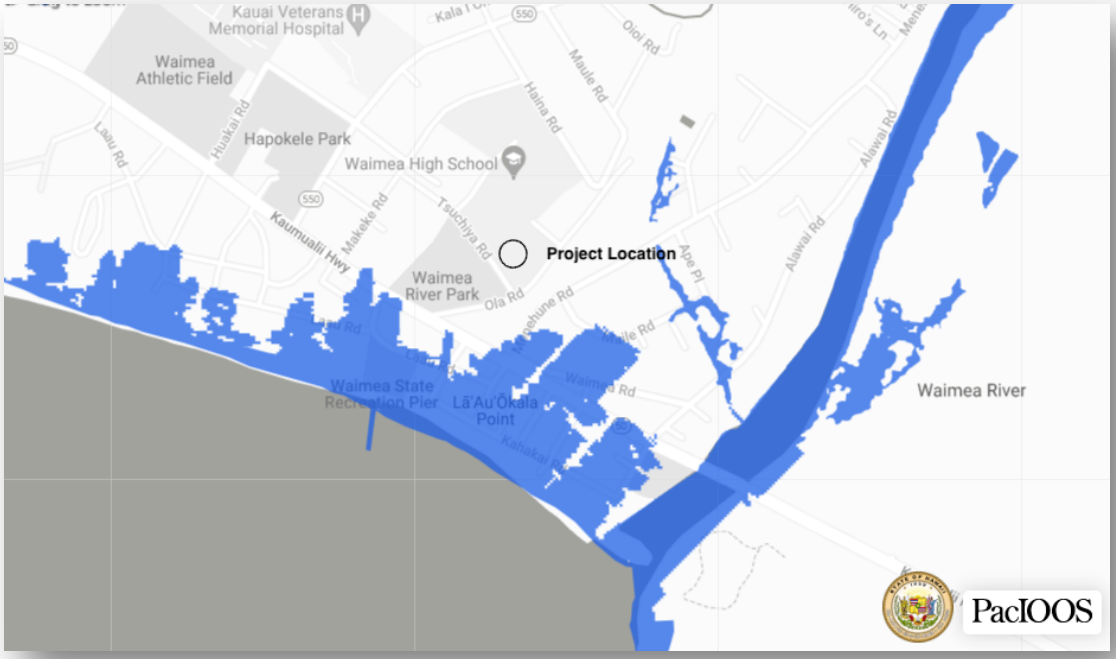


Figure 14: Sea Level Rise Exposure Area
Source: Hawaii Sea Level Rise Viewer

During the construction phase, best management practices will be used to keep the site clean and prevent any adverse discharges from affecting adjacent properties. These measures will include an erosion plan consisting of construction access pads and filters along the project perimeter.

3. Archaeological, Cultural, Botanical and Faunal Resources

Archaeological and Historic Resources

Waimea High School is not listed on the Hawai'i Register of Historic Places or listed on the National Register of Historic Places. Two classroom buildings (TMK: 1-6-010:004; owned by the State of Hawai'i), however, were placed on the Hawai'i Register of Historic Places in August 1991. The two buildings (Site No. 50-30-05-9391) are described thusly:

"The 1936 Homemaking Building is the only extant school building on Kaua'i with this type of board and batten wall and the Classroom Building (which is currently being used as a dressing room) is a four-room building with a gable roof and insert lanai along the entire length of the building. These two buildings retain significant physical and associative integrity, despite the modern setting of the other school buildings..."

The Gymnasium was constructed in 1948 and is over 50 years old and therefore considered historic property. HRS Chapter 6E-2 defines historic property as "any building, structure, objects, district, area or site, including heiau and underwaters site, which is over fifty years old."

New Gymnasium

The State Historic Preservation Division (SHPD) may require an archaeological investigation for the new gymnasium that may include a literature review of prior archaeological studies in the area of Waimea High School and a field inspection of the new Gymnasium site.

Demolition of Existing Gymnasium

Demolition of the existing Gymnasium is not a part of this project. Should this structure be planned for demolition, SHPD may require architectural documentation prior to demolishing the Gymnasium which may include a request for an "architectural inventory survey" or "architectural recordation survey" or both. The contents of the either survey would be provided by SHPD.

SHPD could also request an architectural inventory survey of all buildings 50 years or older at Waimea High School. The nearest State Register of Historic Places sites include the Bishop National Bank of Hawaii (First Hawaii Bank) building, the Charles Gay House, the Gulick Rowell House, and the Cook Landing Site.

Cultural Resources

The project site has been open space use since the development of the Waimea High School. Prior use as grazing land would make any native cultural practices unlikely in this seaport town. There are no current cultural

practices in the project area and no need for access, therefore, no impact on cultural practices. From a contemporary perspective, the Waimea High School complex is an important community asset and the co-location of the community center, swimming pool, ball field and the original gymnasium serve as an important community center. The specific courtyard, while visually attractive, is not known to be a cultural resource area.

Flora

The project site is predominantly covered with maintained lawn grass. Other vegetation includes ornamental bougainvillea and plumeria. Most notable on the site is a large monkeypod tree which provides an attractive shady area however no seating or observed use beneath the canopy was observed. No rare, threatened or endangered species of flora were observed within the project site.

The proposed action will have limited area for landscaping however the usefulness of the new facility is considered an offsetting benefit to the school, students and community.

Fauna

The site does not serve as an endangered wildlife habitat although avifauna, feral cats, and rodents may be found on-site.

4. Infrastructure and Utilities

The proposed improvements are not expected to have a significant impact on existing infrastructure and utilities. No sewer, water, electrical or other utilities will be impacted or require relocation. No disruption in utility services is anticipated. All required utilities are available via underground and connection points along Ola Tsuchiya Roads.

Vehicular and Pedestrian Access

The existing parking lot, west of the project site, may be utilized for access to the new Gymnasium and (new) expanded parking lot. A secondary access has been added to reduce congestion between parking lots.

ADA accessible walkways shall connect the existing walkways to the proposed Gymnasium and to the existing and new parking lots. The proposed walkways shall also connect to the existing walkways near the Locker Room building to the south.

Fire Department access will be provided via a fire lane that loops through the existing parking lot and comes within 50-feet of the new Gymnasium entrance in accordance with Hawai'i Fire Code Section 18.2.3.2.1.

Vehicular traffic to and from the site is not expected to have any change or increase. The proposed parking lots will essentially harden surfaces and eliminate potential erosion where vehicles are already parking. The hardened surfaces will provide for safer pedestrian and vehicular access.

Water

The proposed improvements will marginally increase demand on municipal potable water resources. Water service is available to the campus with a 3-inch meter which is adequate to supply the additional fixtures for the new gymnasium. Only minor increase demand for potable water will be required.

Wastewater

The project is served by the municipal sewer system with a 6-inch sewer line that runs directly under the new building. This line has sufficient capacity for the increased demand.

Drainage

A county storm drainage system does not serve the property therefore a drainage plan will be required to address drainage runoff and to prevent any adjacent properties from potential runoff impacts. This will be designed during the building design phase.

Solid Waste

The project area is served by the municipal refuse service. Any construction waste associated with the project will be removed by the project contractor and disposed at an approved waste disposal site.

Telephone and Electrical Services

Telephone and electrical services are readily available through existing connection points on campus. The increase power demand will be offset by the use of energy efficient fixtures and equipment wherever possible.

5. Public Facilities

The proposed project will provide significant community benefit through improved athletic curriculum and intramural competition opportunities that are facilitated by a new gymnasium building. Other public facilities will not

be adversely affected by the proposed facility. No additional demand for fire protection and police services is anticipated. In addition to the expanded and improved athletic facility, the project will provide the benefit of a new source of civic pride which will enhance the community's opportunities to attend sporting events.

The Waimea Fire Station provides fire protection and first response emergency and rescue service to the project area. The station is located at 9835 Kaumuali'i Highway south east of the project site. The station is located approximately 500 feet from the project site and response time to the site is approximately 3 to 5 minutes.

D. Social and Economic Characteristics

The proposed action will have a positive and significant social impact to the surrounding area. The construction of a current standard facility that is highly visible to the community will provide a sense of health, safety and education that is beneficial as a significant component of community.

The project will have some beneficial economic impacts. The construction of the improvements will create short-term employment, the purchase of goods and services, the generation of excise and income taxes, and other secondary and tertiary effects as a result of the project expenditures.

In the short-term, some traffic disruption will occur as a result of the construction in and along Ola and Makeke Roads when heavy equipment accesses the site and when utility connections are made. The selected contractor will be required to provide appropriate traffic controls to ensure safe passage around the work areas.

The long-term operations of the gymnasium should be considered a long-term asset of the community.

E. Relationship to Plans, Codes and Ordinances

<u>Use and Class IV Zoning Permits</u>
The County of Kaua'i Comprehensive Zoning Ordinance (CZO), Ordinance 935, lists within each district of the County, development and activities that are "generally permitted" and those which may be allowed only after obtaining a Use Permit. Per the Kaua'i County Real Property Assessment Division, Waimea High School is located in the Residential R-1 zoning district (Figure 15). Per the CZO, public facilities (defined as a facility owned or controlled by a governmental agency) within a R-1 zoning

district requires a Use Permit. The primary purpose of the Use Permit is to assure

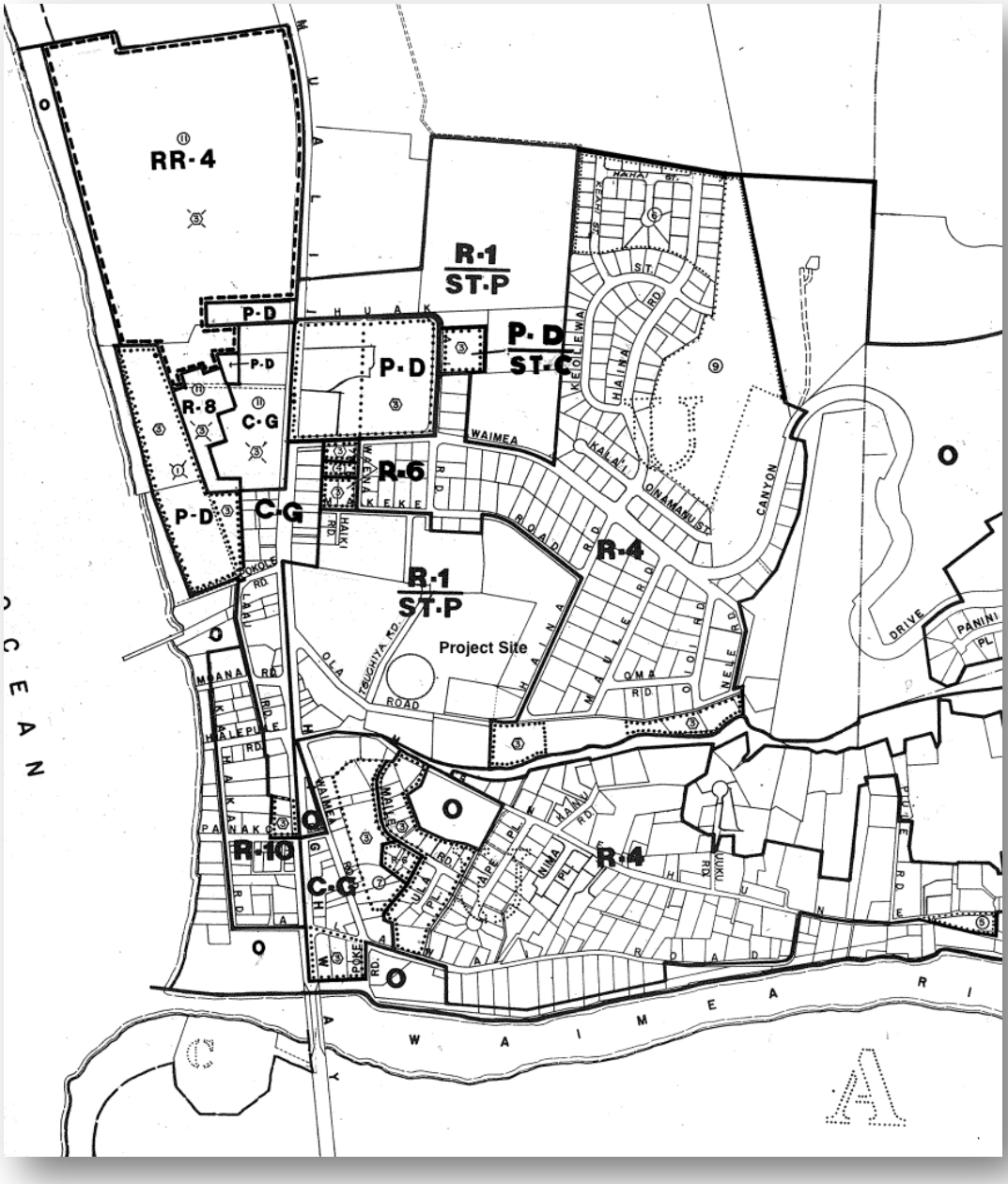


Figure 14: Zoning Map
Source: County of Kauai

that a particular activity or use of land can be integrated into and be compatible with its immediate surroundings. If allowed, the Planning Commission can impose certain conditions which can affect the design (e.g., height, size, color, etc.) of the structure in which the use/activity is occurring or the manner and conduct of the overall operations (e.g., hours of operation, traffic, off-street parking restrictions).

All Use Permits for development or use in a Residential District shall require a public hearing in accordance with procedures as required for a Class IV Zoning Permit.

Review and approval of Use Permits are by the County of Kaua'i Planning Commission.

No construction or development shall be undertaken within a Residential District without a valid zoning permit. Based on the proposed development, a Class IV Zoning permit will be required. Class IV Zoning Permits are approved by the Kaua'i Planning Commission

National Pollutant Discharge Elimination System Permit

Per Hawai'i Administrative Rules (HAR) Chapter 11-55, a National Pollutant Discharge Elimination System (NPDES) permit may be required for point source water pollutant discharges into State surface waters. An NPDES permit must be obtained at least one hundred eighty (180) days prior to the start of construction activities that result in the disturbance of one (1) or more acres of total land area, including clearing, grading, and excavation. Construction activities for this project will potentially disturb approximately 2.87 acres, therefore, an NPDES permit for construction activities will be required. If the project can comply with every requirement in the applicable NPDES General Permit, coverage under NPDES General Permit Appendix C may be requested. For NPDES general permit coverage, a Notice of Intent (NOI) form must be submitted at least thirty (30) calendar days before the commencement of the discharge.

Grading Permit

A Grading Permit shall be furnished by the Engineering Division of the Department of Public Works (DPW), County of Kaua'i, and shall comply with the Kaua'i County Grading Ordinance. A Grading Permit will be required for this project since construction activities is proposed to exceed excavation or fill of one hundred (100) cubic yards.

Grubbing Permit

A Grubbing Permit shall be furnished by the Engineering Division of the Department of Public Works (DPW), County of Kaua'i, and shall conform with the DPW Erosion and Sediment Control Standards Act 249,

SLH1974. A grubbing permit is required for this project since the total disturbed area is proposed to exceed one (1) acre.

General Plan

The Kauai County General Plan provides the blueprint for Kauai's future and supports the general expansion of emergency services as the population grows. While the proposed project is consistent will all policies addressed in the Plan, of particular relevance are Policy #1, Policy #4, and Policy #17.

Policy #1 directs managed growth to preserve the rural character of Kauai, and to ensure that growth is within growth boundaries in order to keep communities compact and walkable. The proposed gymnasium will be sited on lands withing the Waimea High School campus and does not expand the campus outwardly. By using the selected location, the campus will remain compact and walkable.

Policy #4 calls for the design of healthy and complete neighborhoods. This is accomplished by similarly utilizing available lands within the campus for the new gymnasium. The new athletic facility may also encourage student to participate more in organized sports which could carry on into their adult lives establishing lifelong health habits.

Policy #17 most importantly call for the nurture of our keiki. This is strongly and directly applicable to the proposed project through the provision of modern athletic facilities. Students will be able to train and grow physically and athletically and will have an additional source of pride through their high school years. This could lead to diminished desire to move away from their home of Kauai and can also lead the promotion of lifelong health consciousnesses.

State Land Use Designation

The State Land Use Boundary Maps show the project locations to be in Urban use.

Hawaii State Plan

The project is also consistent with the objectives of the Hawaii State Plan particularly with respect to the objectives and policies for socio-cultural advancement – education (HRS § 226-21) where the objective promoted states that *(a) Planning for the State's socio-cultural advancement with regard to education shall be directed towards achievement of the objective of the provision of a variety of educational opportunities to enable individuals to fulfill their needs, responsibilities, and aspirations.* This is further supported by *(b) To achieve the education objective, it shall be the policy of this State to: (1) Support educational programs and activities that enhance personal development, physical fitness, recreation, and cultural*

pursuits of all groups. In this regard the proposed gymnasium is fully consistent with this objective and policy by providing current and highly desirable health, recreation and competition facilities on par with other State high school facilities.

Coastal Zone Management

The project is also subject to conformance with HRS § 205A-2, the Hawaii Coastal Zone Management (CZM) Act where the objectives and policies state that State resources should be managed and that growth should include public participation. While none of the objectives and policies specifically address public education, health and safety facilities, the proposed project will indirectly support all policies of the CZM.

The proposed improvements will require ministerial permits from the State of Hawaii, and discretionary and ministerial permits from the County of Kauai.

State of Hawaii

- Department of Health Community Noise Permit
- National Pollutant Discharge Elimination System Permit (NPDES) if grading required exceeds 1 acre.

County of Kauai

- Planning Division, Use Permit (Planning Commission Approval Required)
- Planning Division, Class IV Zoning Permit (Planning Commission Approval Required)
- Building Division, Building Permits

Work on the proposed improvements will not commence until all permits have been obtained and the environmental assessment process is completed.

F. Probable Impact on the Environment

The proposed improvements will result in any change in use and intensity of the project site. The proposed action is a long-term public facility improvement project and is an essential facility that is located centrally and will minimally impact the adjacent neighborhood residential district. The noise associated with large events will be minimally disruptive as residential areas are located on the other side of the campus.

The proposed improvements will have short-term construction related impacts. Traffic will be impacted during work within and along the roadway but traffic control measures will ensure that there are no major inconveniences to local traffic. Beyond the inconvenience of some minor traffic disruption and associated noise from the use of heavy equipment, no adverse long-term impacts are expected. Any traffic diversions and roadway construction must conform with applicable State and County construction regulations. Work will also be limited to daytime non-peak traffic hours.

Benefits beyond an improved drainage system is the creation of short-term and employment both on and off property, the generation of additional revenues to the State of Hawaii and County of Kauai and the resultant secondary and tertiary spending and tax collections that will likely be experienced in the community. Most significantly, the completed project will provide an equitable athletic facility that is comparable to other current State of Hawaii high school gymnasiums.

G. Adverse Impacts Which Cannot be Avoided

Adverse impacts that cannot be avoided are generally related to short-term construction activities. These impacts can be minimized by sound construction practices, adherence to applicable construction regulations as prescribed by the Department of Health, and coordination with applicable State and County agencies.

Minor grading will be required for the construction of the project improvements. This work will create dust, noise and a minor traffic nuisance during the course of construction. Possible repair of the roadways will also require the use of heavy machines that will enter the project site. Traffic control measures will be used to minimize the disruption of traffic during the construction period.

H. Alternatives to the Proposed Project

Alternatives to the proposed site location are discussed in Chapter II of this document. The site selected is one of three that were under consideration. The selected site was deemed the most appropriate by the selection group and due to its functional capacity, immediate availability and cost. The no action alternative was rejected because the existing gymnasium is at the end of its useful life and due to current physical education requirements.

I. Mitigation Measures

Long-term impacts resulting from the proposed improvements are expected to be minimal or positive based upon the subject environmental assessment. Long-term air and noise impacts are not expected to change significantly after improvements are completed. Traffic conditions will not change, as there will not be any new demand for access to the project site. Short-term construction-related noise and air quality impact mitigation measures include general good housekeeping practices and avoidance of a prolonged construction period. The contractor will be directed to use best management practices (BMP) wherever applicable.

Examples of BMPs that may be implemented include watering during demolition, clearing and grubbing to control fugitive dust and the containment and controlled release of any runoff during the construction period. All waste materials will be securely contained and appropriately disposed.

BMP and erosion control measures include the use of compost filter socks the use of a sand bag cofferdam, and the addition of a stabilized construction entrance/exit point. Compost filter socks will be used at the catch basin inlets as well as around the perimeter of work areas. The construction ingress/egress located at the entrance to the property will be stabilized with a fabric barrier topped with large aggregate which will be removed when construction is completed.

J. Irreversible and Irretrievable Commitment of Resources

Implementation of the proposed project will result in the irreversible and irretrievable commitment of resources in the use of non-recyclable energy expenditure and labor. Materials used for new construction may have salvage value; however, it is unlikely that such efforts will be cost-effective. The expenditure of these resources is offset by gains in construction-related wages, increased tax base and tertiary spending.

IV. REASONS SUPPORTING FINDING OF NO SIGNIFICANT IMPACT

As stated in Section 11-200-12, EIS Rules, Significance Criteria: in determining whether an action may have a significant effort on the environment, every phase of a proposed action shall be considered. The expected consequences of an action, both primary and secondary, and the cumulative as well as the short-term and long-term effects must be assessed in determining if an action shall have significant effect on the environment. Each of the significance criteria is listed below and is followed by the means of compliance or conflict (if extant).

- Involves the loss or destruction of any natural or cultural resource.

The proposed action will not involve the loss or destruction of any natural or cultural resource. The project site is presently a vacant open space owned by the State of Hawaii and managed by the Department of Education.

- Curtails the range of beneficial uses of the environment.

The proposed installation will not curtail any beneficial uses of the environment. The project area is not generally used by the public nor is it used as a recreational or cultural resource by the public.

- Conflicts with the State's long-term goals or guidelines as expressed in Chapter 343, Hawaii Revised Statutes.

The proposed action is consistent with the goals and guidelines expressed in Chapter 343, Hawaii Revised Statutes. The proposed action is triggered by the use of County funds. The subject Environmental Assessment has been developed in compliance with the Chapter 343.

- Substantially affects the economic or social welfare of the community or state.

The proposed action will make a positive contribution to the welfare of the County and State by creating employment during the construction period and will also benefit the State through increased tax revenue. Most significantly, the completed project will make a major contribution to the social, health and safety welfare of the general public. The project will significantly and positively enhance the social welfare of the community by providing state of the art athletic facilities benefitting the students of the Waimea High School.

- Substantially affects public health.

The proposed is will have direct impact on the health of students attending Waimea High School through the provision of modern and safe athletic facilities.

- Involves substantial or adverse secondary impacts, such as population changes or effect on public facilities.

The proposed action will not produce secondary impacts resulting in population changes or significantly increase use of public facilities.

- Involves substantial degradation of environmental quality.

The proposed improvements will not involve the substantial degradation of environmental quality. The improvements proposed will have short-term impact on the environment; however, this is temporary in nature.

- Cumulatively have a considerable effect upon the environment or involve a commitment for larger actions.

The proposed action is not a first phase of any larger action nor will it have a considerable effect on the environment.

- Affect rare, threatened or endangered species, or their habitats.

The proposed action will not affect any rare, threatened or endangered species of flora or fauna. The project improvements are not anticipated to create any additional wildlife habitat. Any loss of wildlife is largely associated with introduced wildlife that are found in the project area but are not associated with the proposed action.

- Detrimentally affect air or water quality or ambient noise levels.

The proposed action is not expected to negatively impact ambient air or water quality. Long-term ambient noise will increase due to the use of sirens in an area adjacent to residential use. This impact is necessary and unavoidable but is offset by the invaluable and essential service for the general welfare of the public. This noise impact is very short in duration.

Minimal impacts on air, noise and water quality are anticipated during construction. These impacts will be limited by best management construction practices and compliance with Department of Health construction mitigation standards.

- Affect scenic vistas and view planes identified in County or State plans or studies.

The proposed action will not affect any scenic vistas or view planes identified by the County or State. The site will use an attractive open space within the campus and will also require the removal of a large banyan tree but the new gymnasium facility will provide long-term benefits to the students and community of Waimea.

- Require substantial energy consumption.

The project will increase energy consumption. Operation of the facility will involve a large facility and additional air conditioned area which will require more electrical power. Energy efficient equipment and fixtures will be used wherever practicable. The additional consumption of energy is offset by the additional benefits that are brought to the students of Waimea High School. Energy utilization during the construction phase will increase through the use of fossil fuels used by construction vehicles. Operation of the infrastructure will not require any energy.

- 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.

The project is not located in an environmentally sensitive location.

~~Anticipated~~ Finding of No Significant Impact

Based on the above stated criteria, the Department of Education has determined ~~anticipates~~ that the proposed project will not have any significant adverse environmental impacts and that an Environmental Impact Statement will not be required for the proposed action.

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V. LIST OF PARTIES CONSULTED PRIOR TO DEVELOPMENT OF THE DRAFT ENVIRONMENTAL ASSESSMENT

Agencies with ministerial or specific interests regarding the proposed project were contacted or their public information was used to develop the subject Draft Environmental Assessment.

Police Department
County of Kauai

Building Division
County of Kauai

Planning Department
County of Kauai

Fire Department
Kauai Fire Deparment

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VI. LIST OF AGENCIES, ORGANIZATIONS AND INDIVIDUALS TO BE CONSULTED DURING THE DRAFT ENVIRONMENTAL ASSESSMENT PROCESS

State of Hawaii Agencies	Date
1. Department of Health Clean Air Branch	
2. Department of Land and Natural Resources	
3. Department of Business Economic Development and Tourism	
4. Office of Planning	Dec. 8, 2022
5. Office of Hawaiian Affairs	

County of Kauai Agencies

1. County of Kauai Planning Department	
2. County of Kauai Building Division -Public Works	Dec. 23, 2022
3. County of Kauai Engineering Division – Public Works	
4. Fire Department	
5. Police Department	
6. Kauai Emergency Management Agency	
7. Parks and Recreation	
8. Planning Department	
9. Waste Water Management -Public Works	
10. Water Department	

Other Parties

1. Kauai Island Utility Cooperative

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Notice of Availability Waimea High School Gymnasium Draft EA

2 messages

Taeyong Kim <environcom1@gmail.com> Thu, Dec 8, 2022 at 10:18 AM
Bcc: dbedt.op.lud@hawaii.gov, dbedt.energyoffice@hawaii.gov, dlnr@hawaii.gov, webmail@doh.hawaii.gov, info@oha.org, planningdepartment@kauai.gov, publicworks@kauai.gov, pwengineering@kauai.gov, kfd@kauai.gov, kpddispatch@kauai.gov, kema@kauai.gov, parks@kauai.gov, wrp@kauaiwater.org, info@kiuc.coop, Troy Tanigawa <ttanigawa@kauai.gov>, Taeyong Kim <environcom1@gmail.com>

Dear Reviewer,

Attached is a link to the Draft Environmental Assessment published in the December 8, 2022 edition of the Environmental Notice.

https://files.hawaii.gov/dbedt/erp/Doc_Library/2022-12-08-KA-DEA-Waimea-High-School-Gym-Complex.pdf

If you are interested in submitting comments on this document, the deadline for written comments is January 9, 2023. Your comments can be addressed to:

Taeyong Kim

Environmental Communications, Inc.

P.O. Box 236097

Honolulu, HI 96823

or

tkim@environcom..com

If you have any questions, please contact me by email or phone at (808) 528-4661.

Mahalo,

Taeyong Kim

Environmental Communications, Inc.

DBEDT OP Land Use Division <dbedt.op.lud@hawaii.gov> Wed, Dec 14, 2022 at 12:10 PM
To: "rbass@bowerandkubota.com" <rbass@bowerandkubota.com>, Taeyong Kim <environcom1@gmail.com>
Cc: "Balassiano, Katia" <katia.balassiano@hawaii.gov>

Sending on behalf of Katia Balassiano

Aloha,

Thank you for the opportunity to review the Draft Environmental Assessment for the Waimea High School Gymnasium Complex. The project is in the State's Urban District and outside of the Special Management Area. We support the upgrading of the school's gymnasium facilities. We understand that all construction options require the removal of trees and recommend that the trees removed will be replaced elsewhere on the site. We encourage you to consider planting shade trees in the parking lots and/or installing photovoltaic panels over the parking stalls. We also encourage you to install photovoltaic panels on the roof of the new building.

Thank you,

Megumi Nakayama

Secretary, Land Use Division

State of Hawai´i Office of Planning & Sustainable Development

Dept. of Business, Economic Development & Tourism

235 S. Beretania Street, 6th Floor
Honolulu, Hawaii 96813

(808) 587-2842

[Quoted text hidden]

ENVIRONMENTAL COMMUNICATIONS, INC.

March 7, 2023

Katia Balassiano
Office of Planning and Sustainable Development
235 South Beretania Street, 6th Floor
Honolulu, HI 96813

Re: Waimea High School Environmental Assessment

Dear Ms. Balassiano:

Thank you for your comments of December 14, 2022.

We have reviewed your comments and thank you for your confirmation that the project site is located with the State Urban District and is located outside of the Special Management Area. We concur with your recommendation regarding plantings and trees and are please to inform you that existing and significant new plantings will be incorporated to site. Your comments regarding the use of photovoltaic panels has been taken into advisement but is not part of the present scope of improvement. We appreciate your support of the project.

Thank you for participating in the environmental review process. Your comments are appreciated and will be included in the Final Environmental Assessment.

Sincerely,

Taeyong Kim
Principal Planner
Environmental Communications, Inc.

cc: R. Bass, Department of Education

P.O. BOX 236097 • HONOLULU • HI • 96823

ENGINEERING DIVISION
DEPARTMENT OF PUBLIC WORKS
TROY K. TANIGAWA, P.E., COUNTY ENGINEER
BOYD GAYAGAS, DEPUTY COUNTY ENGINEER

DEREK S.K. KAWAKAMI, MAYOR
MICHAEL A. DAHILIG, MANAGING DIRECTOR

December 23, 2022

Environmental Communications, Inc.
P.O. Box 236097
Honolulu, HI 96823
Attn: Taeyong Kim (tkim@environcom.com)

Subject: Environmental Assessment and Finding of No Significant Impact
Waimea High School Gymnasium Athletic Facilities
TMK: (4) 1-6-010:004
Waimea High School, Kaua'i

To Whom It May Concern:

The County of Kaua'i Department of Public Works offers the following comments for the subject Draft Environmental Assessment (DEA):

1) The proposed project is located in Flood Zone X and is not within the Special Flood Hazard Area.

2) We acknowledge that the DEA states that "All stormwater management calculations will be in accordance with County of Kaua'i, Department of Public Works Storm Water Runoff System Manual, dated November 2001."

3) The applicant shall comply with all provisions of the "Sediment and Erosion Control Ordinance No. 808" (https://library.qcode.us/lib/kauai_county_hi/pub/county_code/item/title_viii-chapter_22-article_7?view=all) to safeguard the public health, safety, and welfare, to protect property, and to control soil erosion and sedimentation. This shall include, but not be limited to, a grading and/or grubbing permit in compliance with the Ordinance, which is required if any of the following conditions apply:
   - The work area exceeds one (1) acre,
   - Grading involving excavation or embankment, or combination thereof exceeds 100 cubic yards.
   - Grading exceeds five (5) feet in vertical height or depth at its deepest point.
   - The work area unreasonably alters the general drainage pattern to the detriment of abutting properties.

   The ordinance includes a permit exemption for "Work in a public street, sidewalk, alley, right-of-way or in an isolated, self-contained government controlled area." If the State of Hawai'i would like to obtain a permit exemption, an exemption should be requested in writing at the address below or via email at pwengineering@kauai.gov. The exemption request should include information about how the State will control and inspect the grading or grubbing work and ensure compliance with all other requirements of the County's Sediment and Erosion Control Ordinance.

4) During construction, best management practices (BMPs) shall be incorporated to the maximum extent practicable to prevent damage by sedimentation, erosion, or dust to watercourses, natural areas, and other properties. The permittee and the property owner shall be responsible to ensure that BMPs are satisfactorily implemented at all times.

Sincerely,

Michael Moule, P.E.
Chief, Engineering Division

cc: Regulatory Section
Richard Bass (rbass@bowersandkubota.com)

ENVIRONMENTAL COMMUNICATIONS, INC.

March 7, 2023

Michael Moule, P.E.
Chief, Engineering Division
Department of Public Works
4444 Rice Street, Suite 275
Lihue, HI 96766

Re: Waimea High School Environmental Assessment

Dear Mr. Moule:

Thank you for your comments of December 23, 2022 on the Draft Environmental Assessment for the subject project and offer the following responses:

1. Thank you for your confirmation that the project is located in Flood Zone X and is not located within the Special Flood Hazard Area.

2. We note that concurrence regarding the stormwater calculations method is appreciated.

3. The project applicant agency will comply with the provisions of the Sediment and Erosion Control Ordinance No. 808. Thank you for the references provided.

4. Best Management Practices (BMPs) will be incorporated into the project design and will be a requirement for the project contractor. This improvement will occur on an active school campus and BMPs are a significant consideration in the construction of this project.

Thank you for participating in the environmental review process. Your comments are appreciated and will be included in the Final Environmental Assessment.

Sincerely,

Taeyong Kim
Principal Planner
Environmental Communications, Inc.

cc: R. Bass, Department of Education

P.O. BOX 236097 • HONOLULU • HI • 96823

APPENDIX A

Due Diligence Report for Waimea High School New Gymnasium
prepared by
Design Partners Incorporated

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BASIS OF DESIGN

FOR

WAIMEA HIGH SCHOOL
NEW GYMNASIUM

WAIMEA, KAUA'I, HAWAI'I

PRELIMINARY DESIGN SUBMITTAL
JULY 2022

PREPARED FOR

HAWAI'I STATE
DEPARTMENT OF EDUCATION

SUBMITTED BY:

DESIGN PARTNERS INCORPORATED
ARCHITECTURE • PLANNING • CONSTRUCTION MANAGEMENT

TABLE OF CONTENTS

BASIS OF DESIGN

INTRODUCTION

A. Overview

This submittal is the Preliminary Design Submittal for the new Gymnasium at Waimea High School. The submittal includes the following:

1. Preliminary Design Drawings: Construction design drawing, approximately 80% level of development. Drawings included in this submittal: General Notes, Site Plans, Grading Plans, Site Utility Plans, Landscape Plans, Building Plans, Building Sections, Building Elevations, and preliminary design drawings for all applicable engineering disciplines.

2. Basis of Design (this document): Preliminary Basis of Design narratives, building program, preliminary engineering calculations and other back-up information pertinent to the project.

4. Design Meeting Reports: Meeting minutes, presentations and attendance sheets from the Scope, Site Selection, Kaua'i County, and Preliminary Design meetings.

5. Outline Specifications & Product Cuts: Specifications noting which building materials and/or systems are being proposed.

6. Working Construction Cost Estimate: See attached cost estimate under separate cover.

B. Project Background

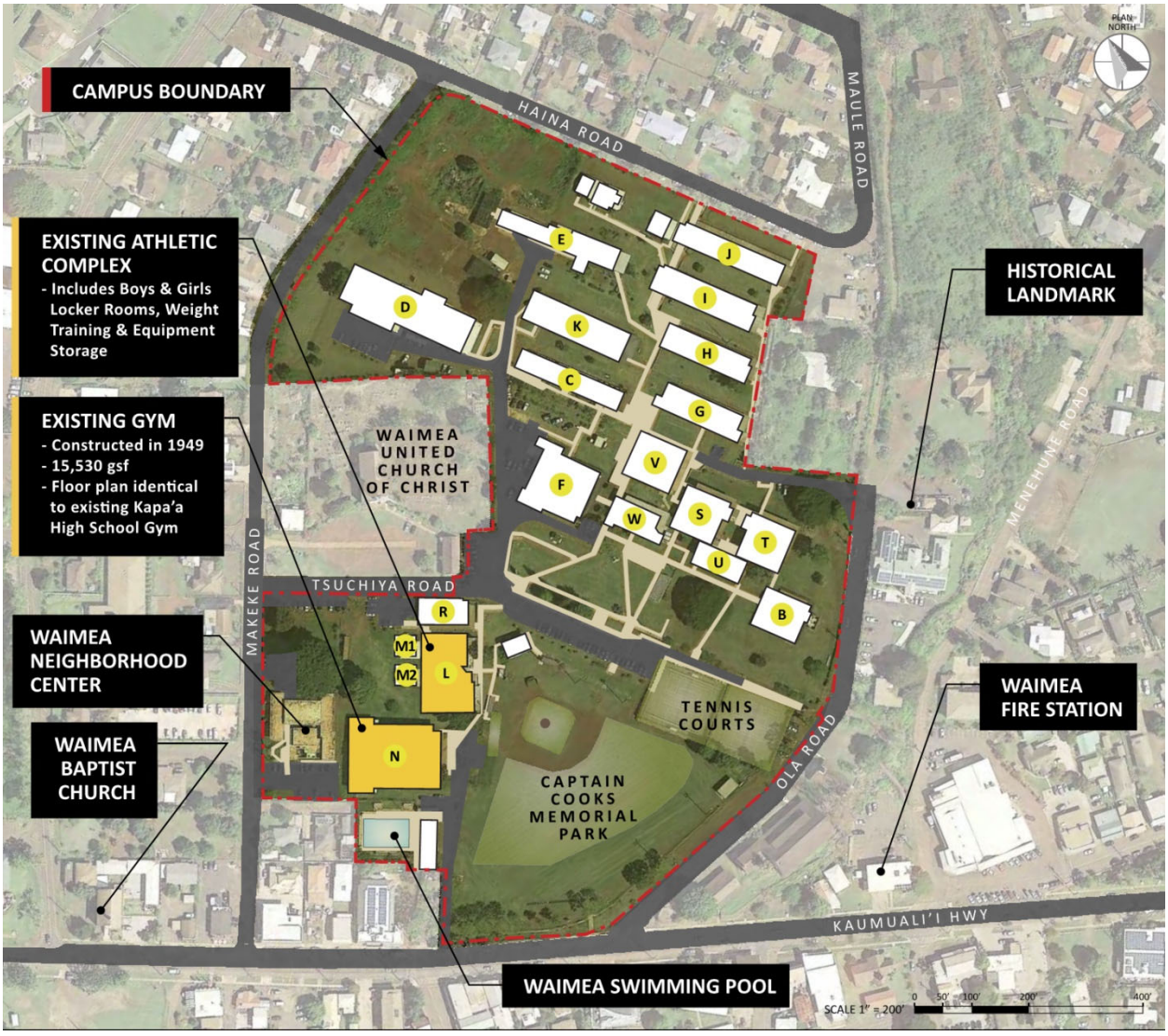
1. Project Description: The project will construct a new Gymnasium, replacing the existing Gymnasium which was constructed in 1948 as part of the original Waimea school campus. The facility will include a Lobby, Concession, Training Room, Main Court (with regulation high school basketball and volleyball courts), Locker Rooms, Showers, an Athletic Director Office, restrooms, and other various support space for utility and circulation. The project also includes a Bid Alternative for a Wrestling Room, Multipurpose Room, and Mechanical Room.

   The new Gymnasium will also be designed for enhanced hurricane protection in accordance with the Hawaii State Building Code, Section U103, Section 426 as the project is a state-owned public building of Risk Category III, whose primary occupancy is public assembly and has an occupant load greater than 300.

2. Project Phasing: There are no construction phasing requirements for this project. The

new Gymnasium will be constructed in an open courtyard on the southern edge of the campus.

3. Project Site Location and Existing Condition: Waimea High School is part of the Hawaii State Department of Education West Kaua'i Complex and is the center of the Waimea community. The West Kaua'i community is rural with much of the economy centering on agriculture, tourism, the military and scientific/military research. Established in 1881, Waimea High School began as an elementary school before becoming a high school in 1935. Serving grades 9 through 12, Waimea High School is the oldest high school on the island of Kaua'i and considered the westernmost high school in the United States.



The existing Waimea High School campus sits on various parcels. Much of the main campus buildings are on state-owned land and with a few on county-owned land,

including the existing Athletic Complex, which includes the Gymnasium and Waimea Neighborhood Center. The state-owned parcel is bordered by Haina Road to the north, Makeke Road to the west and Ola Road to the east. Tsuchiya Road bisects the state and county parcels with Captain Cooks Memorial Park located between the parcels.

4. Existing Gymnasium: The existing Gymnasium (Building N) was constructed in 1948 as part of the original Waimea school campus. Since its initial construction, there have been numerous renovations to the Gymnasium including the more recent renovations to the existing Boys' and Girls' Showers (1997) and new telescoping bleachers (1998). The existing gymnasium consists of a main court with regulation high school basketball / volleyball court, roll-out bleachers, and stage. Support facilities include locker rooms, showers, laundry room, weight room, storage, and toilet facilities for the public. The gymnasium is currently used by the school's interscholastic sport teams, for school assemblies, and other school activities. The overall condition of the existing Gymnasium is very poor, as there are numerous building systems that are antiquated, beyond its service life with visible rusting and termite damage throughout, and jalousie windows that permit water infiltration which is especially prevalent during heavy rains.

C. Design Objective

The objective of the project is to provide a modern, state-of-the-art Gymnasium that is functional, safe, cost effective and visually appealing. The new Gymnasium's style will blend effortlessly with the campus and community and enhance the visual environment of not only the immediate campus setting, but the Waimea community in general. The Gymnasium design shall represent a modern/up-to-date school facility, be non-institutional in character and respect the existing context of the campus and community,

and be exciting for the students, faculty, and guests of Waimea High School.

The project will be designed and constructed in accordance with to U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design for Building Design and Construction: Schools Rating System to the greatest extent possible. The project will not be registered with LEED Online and will not seek USGBC LEED certification.

D. Applicable Criteria and Technical Requirements

The new Gymnasium facility will be designed in accordance with Americans with Disabilities Act and Architectural Barriers Act Accessibility Guidelines (ADA/ABAAG), National Fire Protection Association Life Safety Code, and the International Building Code, 2012 Edition, as amended by the Kaua'i County Code.

E. Program

This facility is being designed using the Facilities Assessment and Development Schedule, otherwise known as FADS, and includes program and functional areas supporting the current student enrollment and present curriculum. The proposed program and associated square footage are based on the program documents provided by the Department of Education (DOE) and further developed based on subsequent design meetings with DOE and Waimea High School. Program elements within this project are described in Section C.1 of the Architectural Basis of Design.

F. Design Development

Project program and design development including site selection, site and building plan development were developed in conjunction with the stakeholders during a series of design meetings held at Waimea High School and virtually over Google Meets. The meetings involved interface with the major stakeholders, which included representatives from the Department of Education (DOE) Project Management, DOE Facilities, West Kaua'i Complex ASA, Department of Accounting and General Services, Waimea High School, and the Architect-Engineer (A-E) design team, led by the prime A-E, Design Partners Incorporated (DPI). Waimea High School representatives include the Principal, Vice Principal, and Athletic Director.

Meeting minutes are included as part of the Appendix of this Basis of Design.

G. Project Schedule

The general project delivery schedule is illustrated in the table below; however, a more detailed project construction schedule will be developed at a later time by DOE Project Management branch in conjunction with the Construction Contractor.

Project Delivery Schedule

Milestone	Date
Schematic Submittal	April 28, 2022
Draft EA Publication Date (Environmental Notice)	July 22, 2022
Final EA / FONSI Publication Date	September 23, 2022
Use Permit and Class IV Permit (Concurrent Permits)	October 2022
Preliminary Submittal	July 19, 2022
Final Submittal	October 5, 2022
Anticipated Approval of Use Permit, Class IV Permit	November 2022
Building Permit Submittal	December 2022
Bid Documents	March 2023
Anticipated Building Permit Approval	November 2023

H. Project Budget and Construction Cost Estimate

The project is a Legislative add-on Project, with construction funds already obtained from the Legislature. These construction funds will lapse in 2024, thus the project will need to go out to bid by January 2024. The project construction estimate, including Bid Alternatives, is $23,571,000, per Schematic Cost Estimate, dated April 27, 2022). The noted project estimate includes only items approved for funding and construction under the Hawaii DOE Capital Improvements Program (CIP) and does not include equipment/furnishings that must be procured with funding other than this CIP.

A working cost estimate based on the current schematic design is included under separate cover and has been escalated to reflect the current market conditions.

CIVIL BASIS OF DESIGN

A. Existing Conditions

Waimea High School is located on the west side of the island of Kaua'i. The school can be accessed from Kaumualii Highway to Ola Road or Makeke Road and Tsuchiya Road. The topography of the site is developed for the current school building facilities and generally slopes to the south, towards the ocean. Based on the topographic survey, the south west side of the site has elevations of approximately 70-feet, and the north side of the school has elevations of approximately 110-feet. There are no existing drainage facilities in the general area.

The soils, as indicated by the USDA, NCRS Web Soils Survey, consists of mainly Makaweli silty clay loam (MgB), 0 to 6 percent slopes. Runoff in the area surface flows downhill towards Kaumualii Highway and the ocean.

The project site infrastructure includes an existing 2-inch water line that services an existing music building and irrigation system. An existing 6-inch sewer line runs through the site from the classroom buildings to the north to the baseball field to the south. An 8-inch water main runs along Ola Road to the east of the site.

There are a series of small parking areas around the campus providing approximately 74 parking stalls for staff, faculty, including ADA accessible stalls.

B. General Project Description

The project scope consists of a new Gymnasium building which contains a main court, locker rooms, showers, an office, training room, concession, and utility support spaces, and two separate parking lots providing 99 stalls. Accessible paths will be provided to connect the new Gymnasium with the existing campus. The building site is approximately 0.54 acres and the parking lots are approximately 0.81 acres.

The existing Waimea High School campus sits on various parcels. Much of the main campus buildings are on state-owned land (TMK: 4-1-6-010:004) with a few on Kauai county-owned land (TMK: 4-1-6-010:010) comprising of 8.08 and 5.18 acres, respectively. The existing Athletic Complex, which includes the Gymnasium and the Waimea Neighborhood Center, is located on Kauai county-owned land (TMK: 4-1-6-009:023) comprising of 2.97 acres. The state-owned parcel is bordered by Haina Road to the north, Makeke Road to the west and Ola Road to the east. Tsuchiya Road bisects the state and county parcels with Captain Cooks Memorial Park located between the parcels.

C. Technical Requirements

1. Sewer System: The sewer system shall comply with the County of Kaua'i, Department of Public Works *Standard Specifications*, dated September 1986, and the Department of Public Works *Standard Details*, dated September 1984.

2. Storm Drainage: Provide positive drainage away from the building and structures along the site and provide onsite retention facilities for excess runoff in accordance with the County of Kaua'i, Department of Public Works Storm Water Runoff System Manual, dated November 2001

3. Domestic Water System: Provide domestic and fire protection water systems, including appurtenances, per *Water System Standards, Standard Details for Water System Construction*, Department of Water Supply and the Kaua'i County Code.

D. Water Utilities

The school is serviced by an existing 3-inch domestic water meter. The new gymnasium will connect to an existing 2-inch domestic water line located within the school campus. The 2-inch water line currently runs directly under the gymnasium site and services an existing music building and irrigation system. The water line will be relocated around the proposed gymnasium and the new service for the gymnasium will be connected to this line. A new fire line connection will be provided for the project and connect to an 8" Department of Water Line on Ola Road, near the intersection of Tsuchiya. The new fire line will provide a connection for the gymnasium's fire sprinkler system and a new fire hydrant. The new fire hydrant will be located on the south side of the building adjacent to Tsuchiya Road.

E. Sewer Utilities

The project will connect to an existing 6-inch sewer line near the front entrance of the new gymnasium. A portion of the existing sewer line and two abandoned cesspools are located directly under the proposed gymnasium footprint. The existing sewer line will be replaced by a new sewer line that will be outside the new building and the abandoned cesspools will be demolished as needed. The 6-inch sewer line has sufficient capacity for the new gymnasium.

F. Grading, Drainage Utilities, and Low Impact Development

The site of the new Waimea High School Gymnasium consists of a grass lawn and walkways that slope towards Tsuchiya Road. A retaining wall will be installed on the south side of the gymnasium to level the grade for the gymnasium building pad. The principles of positive drainage, with minimum slopes, are applied to control the conditions that direct rainfall away from facilities. New facilities shall accommodate ADA requirements as well as positive drainage away from the building.

There are no existing drainage systems in the project vicinity. The building roof down spouts will be collected and conveyed by buried pipe to three underground detention systems on the east and west sides of the gymnasium. Runoff from the parking lots will be collected via inlets in the center of parking aisles and stored in underground detention systems beneath the parking pavement. Out flows from the detention systems will be conveyed to seepage inlets to allow excess stormwater to be release from the detention systems.

The storm drainage system will be properly coordinated with surrounding areas to ensure that runoff does not cause damage to other on-site buildings. All stormwater management calculations will be in accordance with County of Kaua'i, Department of Public Works *Storm Water Runoff System Manual*, dated November 2001.

Temporary and permanent Best Management Practices for erosion and sediment control will be required, including but not limited to, a dust fence around the perimeter of the project area and surface runoff control.

G. Accessible Route / Walkways

Walkway locations will conform to the requirements of the ADAAG requirements. Walkway widths will be 5-feet or greater as shown on the project drawings

The existing site sidewalks or walkways will be maintained within the existing school site to allow passage of students to other buildings on the campus. Walkway locations will conform to the requirements of the ADAAG requirements. The new walkway concrete will include an appropriate Solar Reflectance Index (SRI) to address heat-island affect.

H. Geotechnical

The Contractor will comply with requirements and recommendations from the project Geotechnical Investigation, Waimea High School, New Gymnasium, Waimea, Kaua'i, Hawaii, conducted by Hirata & Associates, dated January 20, 2022.

I. Standard and References

- Accessibility With Disabilities Act Accessibility Guidelines (ADAAG)
- Construction Best Management Practices (BMPs) for Sediment and Erosion Control for the County of Kauai. Department of Public Works, County of Kauai, April 2, 2004.
- Ordinance No. 808: A Bill for an Ordinance to Amend Chapter 22, Article 7, Kauai County Code 1987, Relating to Grading, Grubbing, and Stockpiling. Kauai County, October 2003.
- Flood Insurance Rate Map (FIRM), Kauai County, Hawaii.
- Storm Water Runoff System Manual. Department of Public Works, County of Kauai, July 2001.
- "PFDS: Hawaiian Islands." NOAA's National Weather Service. Hydrometeorological Design Studies Center, n.d. Web. 20 Nov. 2015. <http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_hi.html>.
- "Water System Standards", 2002 as adopted by the Department of Water, County of Kauai, including all subsequent amendments and additions and "Standard Details for Water System Construction, Department of Water Supply.

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LANDSCAPE BASIS OF DESIGN

A. GENERAL PARAMETERS

1. General Descriptions: The proposed project is to build a new gymnasium facility and associated parking and landscaping within the existing school campus. The goal of the landscape design is to provide an appropriate and visually appealing landscape that meets the functional and program requirements of the school and community. Landscape goals include low maintenance and low water use landscape design concepts.

   The project site will consist of a new gymnasium building and two new parking lot areas, with associated pedestrian circulation, and storm water management features.

2. Existing Conditions: The existing landscape of the Waimea High School campus is comprised primarily of a scattering of canopy trees, such as Monkey Pod, Plumeria, Banyan, and Gold Trees. A large open lawn area fronts the main office. There is a minimal use of shrubs and groundcovers on the campus. Manually watering is apparently used throughout the main campus open lawn areas on campus. Annual rainfall at this location is about 22 inches, with April to September being the driest months with less than 2 inches per month.

B. DESIGN OBJECTIVES

To create a culturally and environmentally appropriate landscape that can contribute to the educational mission of the school. The landscape should be relatively low water use landscape and require minimal maintenance. The design should help to reinforce a sense of identity to the school.

1. Sustainability: The landscape design should recognize an appropriate level of concern for ongoing maintenance, water consumption, and energy consumption.

2. Function: The landscape will have functional requirements of shade, and visual buffering, open space for gathering and activities.

3. Security and Safety: The intent of the landscape design is to provide a safe, secure site surrounding the building, with good line of site visibility.

4. Disposition and protection of Existing Plant Materials: Some mature trees will need to be removed to facilitate the position of the new gymnasium. New trees will be planted for at least a 2 for 1 replacement of any large trees removed. It might be

possible to relocate a row of existing Plumeria trees, which will conflict with new construction, and utilize them for a new parking lot area or other locations. Trees to remain in place will be protected from construction activities.

5. Landscape Plantings:

   a. Final plant selections will primarily consist of low water and low maintenance plant material appropriate to the site. Any non-native plants used will be non-invasive. Plants with known severe insect or disease problems, subject to excessive wind damage, or demonstrating other high maintenance attributes will not be used.

   b. Due to maintenance concerns and practical limitations, large expanses of shrubs and groundcovers will be avoided, accept where required for parking lot screening.

   c. A 2 inch layer of cover mulch will be provided around the base of all newly planted trees in lawn areas to a distance of 3 ft. from the trunk, typical.

   d. Parking lots will be provided with a minimum of one tree for every 10 stalls.

   e. There will be a 4 inch layer of new imported screened topsoil with organic soil amendments throughout the new landscape areas.

   f. Lawn grass will be hydro-mulched seed and will be comprised of a grass type commonly recommended as appropriate to Kauai.

   g. All new plants will be warranted for one year after planting and any non-healthy plants will be replaced.

6. Landscape Irrigation: A permanent automatic spray irrigation system will not be provided. Irrigation is currently achieved via hand watering as needed. Irrigation hose faucets will be provided at strategic locations to facilitate hand watering. Given anticipated average rainfall amounts, some supplemental irrigation will be required for success of any tree and shrub plantings.

7. Maintenance: Plant and ground maintenance will be provided during both the planting operation and plant establishment period. The plant establishment period will be a minimum of 90 days, and is considered completed when all plantings have been installed, are in a healthy growing condition and turf areas have provided adequate coverage as determined by the Contracting Officer.

C. STANDARDS AND REFERENCES

- Americans with Disabilities Act and Architectural Barriers Act Accessibility Guidelines, dated 23 July 2010.
- Kauai County Building Code

D. PRELIMINARY LANDSCAPE PLANT LIST

TREE ALTERNATIVES

• Kukui	Aleurites moluccanus
• Kou	Cordia subcordata
• Gold Tree	Roseodendron donnell-smithii
• Manila Palm	Veitchia merrilii
• Loulu Palm	Pritchardia spp. (Kauai variety)
• Shower Tree	Cassia fistula x javanica

SHRUB ALTERNATIVES

• Croton	Codeaum spp.
• Golden Eldorado	Pseuderanthemum reticulatum
• Native White Hibiscus	Hibiscus spp.
• Mock Orange	Murraya paniculate
• Ki (Ti)	Cordyline spp.

ARCHITECTURAL BASIS OF DESIGN

A. General Parameters

1. General Description: The scope of the project involves a new Gymnasium Building at Waimea High School, Waimea, Kaua'i, Hawaii. This project intends to construct a new Gymnasium for Waimea High School in support of their interscholastic sports team activities, primarily indoor court sports which includes Basketball, Volleyball, Wresting and Cheerleading. The new Gymnasium will also support other interscholastic sports, Physical Education activities and existing sports complex activities with its ancillary facilities within the Gymnasium. Programmed spaces include a Lobby, Main Court, Concession Booth, Trainers Room, Trainers' Office, Athletic Director Office, Locker Rooms, Showers, and miscellaneous support spaces.

2. Existing Conditions: Waimea High School is part of the Hawaii State Department of Education West Kaua'i Complex and is the center of the Waimea community. The West Kaua'i community is rural with much of the economy centering on agriculture, tourism, the military and scientific/military research. Established in 1881, Waimea High School began as an elementary school before becoming a high school in 1935. Serving grades 9 through 12, Waimea High School is the oldest high school on the island of Kaua'i and considered the westernmost high school in the United States.

The existing Waimea High School campus sits on various parcels. Much of the main

campus buildings are on state-owned land and with a few on county-owned land, including the existing Athletic Complex, which includes the Gymnasium and Waimea Neighborhood Center. The state-owned parcel is bordered by Haina Road to the north, Makeke Road to the west and Ola Road to the east. Tsuchiya Road bisects the state and county parcels with Captain Cooks Memorial Park located between the parcels.

B. Design Objective

1. General: The objective of the project is to provide a modern, state-of-the-art Gymnasium that is functional, safe, cost effective and visually appealing. The new Gymnasium's style will blend effortlessly with the campus and community and enhance the visual environment of not only the immediate campus setting, but the Waimea community in general. The Gymnasium design shall represent a modern/up-to-date school facility, be non-institutional in character and respect the existing context of the campus and community, and be exciting for the students, faculty, and guests of Waimea High School.

2. Imagery/Aesthetics: The overall design should enhance the visual environment of the immediate campus setting as well as the Waimea community in general. The Gymnasium design shall represent a modern/up-to-date school facility, being non-institutional in character, respect the existing context of the campus and community and be exciting for the students, faculty, and guests of Waimea High School. The Gymnasium's main entrance design shall convey the language of hierarchy and be easily identified as the front. Steps fronting the main entrance will also serve as seating in the event, outdoor events occur in the existing courtyard. Appropriate exterior signage to be provided near the main entrance and be visible from the street to help clearly identify the function of the facility.

   Interior surfaces shall be light in color to brighten the spaces and make the space feel warm and inviting. The interior design to offer the same interest, excitement, high energy, and professionalism that can be found in other modern high school gymnasiums.

C. Functional and Technical Requirements

1. Program Requirements: The new Waimea High School Gymnasium to be designed to accommodate current student enrollment and support present curriculum. The FADS are based on the current enrollment of 600 students and is similar to the new

Kapa'a High School Gymnasium.

The program and functional areas as outlined in the FADS was provided as guidance for the school to conform to the standards as outlined. The authorized total (rounded) area is 18,518 Net Gross-Feet (NSF). The FADS do not account for utility support spaces such as Electrical, Communication or Mechanical Rooms, and circulation spaces and does not account for existing spaces which are not part of the current Hawai'i State Department of Education Educational Specifications (EDSPECS) for High Schools, such as the Stage or Weight Room. If those spaces are desired by the school, tradeoffs with existing spaces may be executed, provided the total area is not surpassed.

SPACE	NEW WORK	EDSPECS AREA	WAIMEA HS GYM FADS	PROVIDED AREA
Lobby Area				
Office/Restroom Shower	1	180	180	187
PE Equipment Room	1	100	160	117
Janitor's Closet	1	40	80	88
Electrical Room	Area by Designer			
Men's Toilet (Public)	1	324	340	320
Women's Toilet (Public)	1	353	370	335
Concession Booth	1	240	240	248
Ticket Booth	1	50	80	-
Lobby	1	1070	900	360
Main Floor	1	11,817	12,540	11,551
General Storage	1	200	400	210
Electrical & Heater Room	Area by Designer			
Janitor's Closet	1	40	80	-
Boys' JV Facilities				
Locker Room	1	320	320	185
Toilet	1	96	96	502
Varsity / J.V. Drying Room	1	128	128	
Varsity / J.V. Shower Booth	1	96	96	
Varsity / J.V. Shower Room	1	96	96	

SPACE	NEW WORK	EDSPECS AREA	WAIMEA HS GYM FADS	PROVIDED AREA
Trainer's Room	1	-	1,300	872
Boys' Varsity Facilities				
Locker Room	1	320	320	235
Toilet	1	96	96	*
Girls' JV Facilities				
Locker Room	1	320	320	185
Toilet	1	96	96	502
Varsity / J.V. Drying Room	1	128	128	
Varsity / J.V. Shower Booth	1	96	96	
Varsity / J.V. Shower Room	1	96	96	
Girls' Varsity Facilities				
Locker Room	1	320	320	220
Toilet	1	96	96	*
Gender Neutral Locker Rooms				
Locker Room A	1	150	150	180
Locker Room B	1	150	150	180

* JV and Varsity Toilet Combined into Shared Space

Bid Alternative 1:

Wrestling Room	1	1800	2,304	2,076
Multi-Purpose Room	1	900	900	875
Mechanical	Area by Designer			

The project includes two Bid Alternatives:

a. Bid Alternative 1: Provide air conditioning for existing Buildings 'S', 'T', and 'U' due to its proximity to the project site and the potential for noise and dust.
b. Bid Alternative 2: Add Wrestling Room, Multi-Purpose, and Mechanical Room.

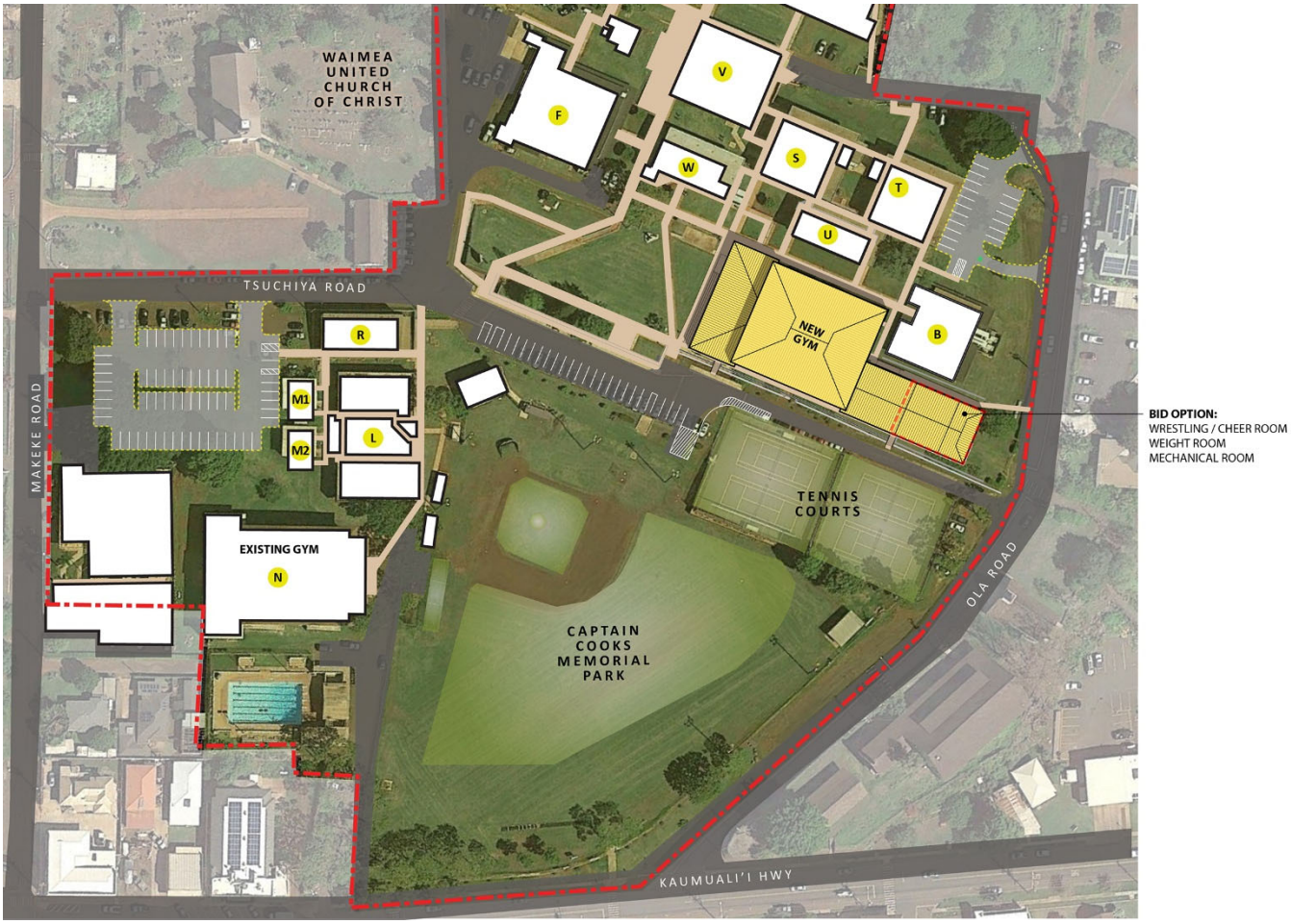
2. Site Layout: The project site to be located on the state-owned parcel closer to the main campus thereby allowing the continued use of the existing Gymnasium for the duration of construction, of which is of utmost importance to Waimea High School.

3. Interior Design: Construction and finishes (walls, floor, and ceiling) should support the cohesive image and theme of the facility. The durability and maintenance of the

interior construction and finishes are also a primary consideration in selection of materials. Interior surfaces shall be light in color in order to brighten the spaces and make a room feel warm and inviting. The interior design to offer the same interest, excitement, high energy and professionalism that can be found in other modern high school gymnasiums.

D. Design Solution

1. Site Plan: The new Gymnasium will be sited on the main campus, within the open courtyard, south of the existing Administration Building and adjacent to the existing Music Building. Its location is convenient and beneficial as it will allow for the functions of the building, e.g., locker rooms, showers, etc. to be shared by the surrounding sports field activities and permits for all physical education and sport activities to be grouped at the southern end of campus. The proposed walkways, which surround the new Gymnasium, will connect to existing walkways with the aid of a new set of stairs and accessible ramp.



The current working site plan supports the project program and function while preserving as much of the front lawn (courtyard) as feasibly possible as requested by Waimea High School.

Due to site constraints, parking for the new Gymnasium will be in two separate areas, one on-site, the other off-site. The on-site parking lot, consisting of 18 parking stalls and 2 accessible parking stalls, is located within a grassed area off Ola Road, within the Waimea High School campus and adjacent to the existing Music Building. The off-site parking lot, consisting of 78 parking stalls and 3 accessible parking stalls, is located in an empty, sparsely grassed lot owned by the County of Kaua'i, south of Tsuchiya Road and north of the existing Gymnasium. A virtual meeting was held on February 11, 2022, with the County of Kaua'i Mayor, representatives from the Department of Parks and Recreation, the Department of Education and Design Partners Incorporated, to discuss the off-site parking lot, in support of the new Gymnasium on County land. The County of Kaua'i was receptive to the parking lot and further discussions with the DOE are ongoing.

2. Building Plan: The Gymnasium's "L-shaped" footprint is a result of the site constraints and existing classroom buildings to the north and Music Building to the east. The floor plan is organized for maximum efficiency and arranged in a functional manner with simple circulation schemes that allow for easy wayfinding. The space and program space requirements, building layouts were developed through a series of on-site meeting with representatives from DOE Facilities, Waimea High School, DAGS Kaua'i, West Kaua'i Complex ASA and the design team. Several iterations of the concept layouts were presented to the project stakeholders. The current layout best addresses feedback from the Waimea High School Principal, Vice Principal, and Athletic Director, as well as other stakeholders including DOE Facilities Planner and Project Manager.

The Gymnasium's main entry on the west end provides a direct connection to the existing courtyard and off-site parking. Stepped seating adjacent to the main entry not only serves as seating for courtyard events, but also provides a student hangout space. The Lobby functions as the hub of the Gymnasium with access to the Concession Stand, Main Court, Training Room, Athletic Director's Office, and support

spaces such as the public restrooms and utility spaces. The Main Court consists of one regulation Basketball (94-feet x 50-feet) / Volleyball court, two (2) practice cross courts with a seating capacity of 824 (includes 8 accessible seats). A motorized vertical-acting divider curtain between the practice courts offers the flexibility to easily divide the space into two. Locker rooms and showers are directly accessible from the Main Court and to hallways leading to the exterior for easy access to the sports fields to the south. Bid Alternative 2, if exercised, will add a Wrestling/Cheer Room, Multi-Purpose Room, and Mechanical space at the east end.

3. Enhanced Hurricane Protection: In compliance with Hawaii State Building Code Section U103, Section 426, the project being a state-owned public high occupancy building of Risk Category III, and in compliance with IBC Table 1604.5 which states "enclosed and partially enclosed structures whose primary occupancy is public assembly with an occupant load greater than 300" will be designed for enhanced hurricane protection. At least 50-percent of the net square feet of a facility, excluding spaces such as Mechanical Rooms, Electrical Rooms, and Storage spaces, will be constructed to qualify as an enhanced protection area. In addition, toilet and hand washing facilities will be located and accessible from within the perimeter of the enhanced hurricane protection area.

4. Finish Materials: All interior and exterior finish materials are proposed for their functionality, durability, cost effectiveness, and compatibility with the surrounding context and Waimea community. The interior materials, specifically, shall be easily maintainable and replaceable while meeting functional requirements. The following finishes are recommended and priced:

    a. Exterior: Primary exterior finish will be reinforced, painted, CMU and light metal framing with board and batten siding.

        The roofing system will be standing seam metal roof over metal decking with an integral acoustical and insulation system.

        Exterior windows will be a combination of factory-finished aluminum fixed and awning windows with a pre-finished clear anodized finish. Exterior windows will use an insulated glazing system with a Low-E coating meeting hurricane and windborne debris requirements. Glazing units are selected for high visible light transmittance for better daylighting and a low solar heat gain coefficient for energy efficiency. The awning windows and exterior storm louvers together, will also provide the required ventilation in compliance with Hawaii State Building Code Section U103.

        Similar to the exterior windows, the glazed entry doors will be of identical clear anodized aluminum finish and selected for its durability, cost-effectiveness, and

compatibility while best serving the facility's functions while withstanding the hot/humid and corrosive environment.

All exposed metal hardware and fasteners will be stainless steel or other extremely rust- and corrosion-resistant material.

b. Interior: Primary wall finishes consists of painted CMU and impact resistant gypsum wall board walls. Acoustical ceiling tiles (ACT) and painted gypsum wallboard will be the primary ceiling finish in the occupied spaces. Some specialized spaces will have acoustical wall treatments and other finishes with high acoustical qualities. Most spaces will receive sealed concrete and resilient flooring and wall base. The Lobby, restrooms, and showers will have ceramic tile flooring and ceramic tile wainscoting where applicable. The Main Gymnasium floor to consist of a fixed resilient athletic (maple) wood flooring system with safety wall padding and acoustic wall panels on the surrounding walls.

Interior doors will be painted hollow metal doors and frames. Cabinets will be constructed from solid hardwood with plastic laminate finishes and solid surface countertops on marine-grade plywood.

E. Standards and References

- International Building Code (IBC), 2012 Edition.
- Hawaii State Building Code, with Amendments to the 2018 ICC International Building Code
- ICC 500 / NSSA Standard for the Design and Construction of Storm Shelters
- Americans with Disabilities Act and Architectural Barriers Act Accessibility Guidelines dated 23 July 2010.

STRUCTURAL BASIS OF DESIGN

A. Enhanced Hurricane Protection Area:

The gymnasium structure and attached spaces are classified as a Risk Category III structure as determined by the 2018 International Building Code (IBC-18). To conform to the Hawaii State Building Code Appendix U, the gymnasium structure is to be designed as an Enhanced Hurricane Protection Area (EHPA). The EHPA provisions of the building code establish minimum life safety design criteria for high occupancy buildings intended to be occupied during hurricanes up to Saffir Simpson Category 3.

EHPA criteria addresses many areas of the design including but not limited to siting, emergency vehicle access, quantity of toilets and sinks, ventilation and standby electrical system. The EHPA criteria for the design of structural elements differs primarily with the enclosure classification of the building. For a typical Risk Category III building not designated as an EHPA, only the glazing needs to impact-resistant or have impact-resistant protection. For an EHPA, the entire building envelope must not be perforated or penetrated by windborne debris. Compliance to the impact-resistance criteria is by determined by meeting the criteria of ASTM E1996-20 "Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Windborne Debris in Hurricanes."

The missile level required by Appendix U of the Hawaii State Building Code is Level D. However, based on the wind load provisions of Appendix W in the building code, the gymnasium structure would be in Wind Zone 3 requiring a Level E missile. This increase in large missile criteria is due to the structure being within one mile of the coastline. Being that the provisions of Appendix W require higher impact-resistance, we will require the building envelope to meet ASTM E1996-20, Level E missile.

B. Structural Systems:

The new gymnasium can be divided into 4 distinct areas. The following describes the structural systems for each area of the structure.

1. Lobby/Offices: This area consists of the lobby, concession, boys' and girls' restrooms, storage, utilities, offices, training, laundry and janitorial rooms. This area is a part of the designated EHPA. With the impact-resistant building envelope, this area is considered an "enclosed building" for determining the wind internal pressure coefficient.

   The roof at the Lobby/Offices is a hip roof which dies into the taller wall of the actual gymnasium. The roof is pitched at 2½:12 slope. The roof is framed with cold-formed steel (CFS) trusses spaced at 2'-0" on center. The trusses are a delegated design

system meaning the contractor will be responsible for design, fabrication and installation of the CFS framing system. This allows different manufacturers of CFS trusses the ability to offer a bid based on their proprietary shapes and system. Girder trusses will be located at a 12'-0" setback from the plate line and stepdown trusses used beyond that. Hip and jack trusses framing into the girder trusses complete the roof framing. The roof diaphragm is 33 mil (20 ga.) steel roof decking. The trusses extend past the plate line to frame the 4'-0" eaves. Eaves will have a soffit so that the CFS material will not remain exposed. Fascias will be fabricated from CFS as well.

Concrete masonry units (CMU) walls will be used at the perimeter of the lobby/offices area. The CMU walls will have reinforcement and use 8" nominal block. The CMU blocks will be laid in a running bond pattern and will be grouted solid. A 16 inch deep reinforced concrete collar will be at the top of the CMU wall and the trusses will bear directly on the concrete collar. Lintels over openings in the wall will be made of CMU or reinforced cast-in-place concrete.

Foundations will be shallow, reinforced concrete wall footings along the perimeter of the structure and at any interior CMU bearing walls. Wall footings will have a concrete stem extending to the finish floor elevation. Locations of relatively large concentrated loads will have a square spread footing of reinforced concrete placed integral with the wall footing.

Floor will be 4½ inch thick reinforced concrete place over 15 mil thick vapor barrier, 4 inch gravel base and an 8 inch subbase of aggregate base course. Concrete mixture will have a relatively low water-cementitious material ratio (w/cm) to help mitigate problems associated with moisture level of the concrete and shrinkage cracks. Saw cut control joints will also be used to control random cracking due to the concrete shrinking as it dries.

2. Gymnasium: The actual gymnasium area of the structure is much taller than the other areas with a plate height of 28'-0". The roof is a Dutch gable shape with a pitch of 2½:12 and a 6'-0" overhang at the eaves. Because of the open space, this area is the main part of the EHPA. With the impact-resistant building envelope, this area is considered an "enclosed building" for determining the wind internal pressure coefficient even with the louvers considered as openings.

   Hot-dip galvanized structural steel will be used to frame the gymnasium roof. Structural steel trusses with spans of 100 feet will be used along with girder trusses at a setback of 28'-0" from the plate line. Hip and jack trusses frame the roof at the ends of the gymnasium. Spacing of trusses vary but are approximately 20'-0" on center at the side walls and 21'-4" on center at the end walls. Top and bottom chord of the trusses are wide flange shapes and web members will be square hollow structural

sections (HSS). Trusses will have a 4'-0" tall heel at the bearing ends along the perimeter of the structure. The tall heel is used to increase the overall depth of the truss in order to control deflections. The framing will remain exposed at the eaves. Trusses will be designed and detailed for field assembly. Trusses will be supported on reinforced concrete columns at the side walls and 12" CMU walls at the ends of the gymnasium. A reinforced concrete collar will be cast on top of the perimeter walls.

Wide flange purlins will support the 33 mil (20 ga.) steel roof decking. Purlins will be flush with the truss top chords and be spaced 3'-0" on center at the eaves and 5'-0" to 7'-0" elsewhere. Bottom flange bracing will be provided for stability of the purlin when subjected to net uplift loading. Rectangular HSS sections will be used for fascias.

Side walls of the gymnasium will have reinforced concrete columns supporting the trusses. The concrete collar will run between columns. Below the collar will be ventilation louvers that meet the windborne debris impact-resistance criteria. Below the louvers will be 12" reinforced CMU.

End walls will be constructed of nominal 12 inch reinforced concrete masonry blocks. Reinforced CMU and concrete lintels will span over openings in the walls. CMU will be laid in a running bond pattern.

Foundation for the gymnasium will be constructed with reinforced concrete. Square spread footings will be provided at the columns and continuous wall footings elsewhere. At the spread footings the columns will continue below grade and bear directly on the footing. At the wall footings, the CMU will extend below grade to the top of footing.

The gymnasium floor will be 5-inch reinforced concrete placed over 15 mil vapor barrier, 4 inch gravel base and an 8 inch subbase of aggregate base course. At the court area, the slab will be depressed to allow installation of an athletic flooring system. Concrete mixture will have relatively low w/cm ratio to help mitigate problems associated with moisture level of the concrete and shrinkage cracks. Saw cut control joints will also be used to control random cracking due to the concrete shrinking as it dries.

3. Locker rooms: The locker rooms are in a single-story structure located at the opposite end of the gym from the lobby/office portion of the structure. It contains locker rooms, showers, and toilets. Access to the gym is through interior doorways. The structures included with Bid Alternative #2 (Wrestling/Cheer and Multi-purpose Rooms,) will attach to the end of the locker room structure if the bid alternate is accepted. If Bid Alternative #2 is not accepted, the roof at the end of the locker rooms will be a Dutch gable. If Bid Alternative #2 is selected, the locker room roof will frame into the wall of

the wrestling/cheer room. The opposite end of the roof frames into the end wall of the gymnasium. The locker room has a 2½:12 pitch with a ridge at the centerline and 4'-0" overhang at the eaves. This area is a part of the designated EHPA. With the impact-resistant building envelope, this area is considered an "enclosed building" for determining the wind internal pressure coefficient.

The roof at the Locker Rooms is framed with CFS trusses pitched at 2½:12 slope and spaced at 2'-0" on center. The trusses are a delegated design system meaning the contractor will be responsible for design, fabrication and installation of the CFS framing system. This allows different manufacturers of CFS trusses the ability to offer a bid based on their proprietary shapes and system. The roof diaphragm is 33 mil (20 ga.) steel roof decking. The trusses extend past the plate line to frame the 4'-0" eaves. Eaves will have a soffit so that the CFS material will not remain exposed. Fascias will be fabricated from CFS as well.

Exterior bearing wall will be constructed with 8-inch nominal CMU laid in running bond. Lintels over openings will be CMU or cast-in-place concrete. Both sides of the hallway that runs down the middle of the structure are bearing walls and will be 8-inch CMU was well. All of the CMU walls will be reinforced and grouted solid.

Exterior and interior CMU walls will be supported with shallow, reinforced concrete wall footings. CMU walls will extend below grade to the top of footing.

The locker room floor will be 4½ inch reinforced concrete placed over 15 mil vapor barrier, 4-inch gravel base and an 8 inch subbase of aggregate base course. Concrete mixture will have relatively low w/cm ratio to help mitigate problems associated with moisture level of the concrete and shrinkage cracks. Saw cut control joints will also be used to control random cracking due to the concrete shrinking as it dries.

4. Bid Alternative #2: If accepted, this Alternative adds a wrestling/cheer room next to the locker rooms and a multi-purpose room at the end of the structure. An interior hallway would separate the wrestling room from the locker rooms. The wrestling room has a plate height of 16'-8" which is above both the locker rooms and the multi-purpose room with plate heights of 10'-8". The roof at the wrestling room is a gable end roof while the roof at the multi-purpose room has a Dutch gable at the free end and flush frames to the wrestling wall at the other end. The rooms provided with Bid Alternative #2 are not a part of the EHPA. However, the wrestling wall supports a portion of the locker room roof. Therefore, the design will have to consider effects on the EHPA if the wrestling room is destroyed during the storm. For this reason, it is prudent to design the wrestling room and multi-purpose room with the same wind provisions, including impact resistance, of the EHPA.

The wrestling room roof included with Bid Alternative #2 will be framed with CFS trusses. The roof is a gable end and will utilize a gable end truss above the plate line. Roof overhang at the gable end is 2'-0". Overhang at the eaves is 4'-0". CFS trusses will be spaced at 2'-0" on center and support a 33 mil (20 ga.) steel roof deck. Eaves will have a soffit to protect the steel from direct exposure to the elements. Fascia will be a CFS member with shape dependent on truss system incorporated in the construction.

The roof at the multi-purpose room is a Dutch gable also framed with CFS trusses. The girder truss is located at a 12'-0" setback. Hip and jack trusses are used to form the hip portion of the roof. Roof overhang at the eaves is 4'-0". Like all the other CFS roofs, the eaves will have a soffit and the fascia will be a CFS shape.

Both the wrestling room and the multi-purpose room will use 8" nominal CMU walls. Construction will be similar to that described for the lobby/office portion of the structure.

Foundations at both rooms in Bid Alternative #2 will be shallow, reinforced concrete wall footings along the perimeter of the structure and at any interior CMU bearing walls. CMU walls will extend below grade to the concrete footings.

Floor slab at the wrestling room will be 5-inch thick reinforced concrete. Floor at the multi-purpose room will be 4½ inch thick reinforced concrete. The slabs at both rooms will be constructed over 15 mil thick vapor barrier, 4-inch gravel base and an 8-inch subbase of aggregate base course. Concrete mixture will have relatively low w/cm ratio to help mitigate problems associated with moisture level of the concrete and shrinkage cracks. Saw cut control joints will also be used to control random cracking due to the concrete shrinking as it dries.

C. Design Criteria

1.	Risk Category:	III	IBC
2.	Roof Live Load:	20 psf	IBC
3.	Wind Design Data:		
	Basic Wind Speed (V)	145 mph	IBC
	Allowable stress design wind speed (V_{asd})	115 mph	IBC
	Topographic Factor (K_{zt})	1.4	HSBC
	Directionality Factor (K_d) - MWFRS	0.75	HSBC
	Components & Cladding	0.75	HSBC
	Exposure Category	C	HSBC
	Enclosure Classification	Enclosed	ASCE 7

Internal Pressure Coefficient (GC_{pi})	±0.18	ASCE 7
Gust Effect Factor (G)	0.85	ASCE 7

4. Earthquake Design Data:

Importance Factor (I_e)		1.25	ASCE 7
Mapped Accelerations	(S_S)	0.189 g	USGS Web Services
	(S_1)	0.055 g	USGS Web Services
Site Class		B	Geotechnical Report
Design Accelerations	(S_{DS})	0.126 g	
	(S_{D1})	0.037 g	
Seismic Design Category		A	ASCE 7

Exemption from Seismic Provisions. Structures assigned to Seismic Design Category A do not need to comply with seismic design provisions. ASCE 7-16, Section 11.7

5. Windborne debris missile impact for building enclosure elements:
ASTM E1996-14, Wind Zone 3, Enhanced Protection, Missile Level E

6. Foundation: From Geotechnical Report
Allowable Bearing Pressure:

Dead Load + Live Load	3,000 psf
Dead + Live + Wind	4,000 psf
Passive Earth Pressure	300 pcf (3,000 pcf, maximum)
Coefficient of Friction	0.4

D. Material Properties:

1. Concrete Compressive Strength at 28-days:

Footings	4,000 psi
Slabs-on-Grade	4,500 psi
Columns and Walls	4,000 psi
Lintels/Beams	4,000 psi

2. Steel Reinforcement:

Deformed Bar	ASTM A615, Grade 60
	ASTM A706, Grade 60
Welded Wire Reinforcement	ASTM A1060, Galvanized

3. Concrete Masonry Units:

Hollow Concrete Units	ASTM C90. Normal Weight
Mortar	ASTM C270, Type M
Grout (compressive strength)	ASTM C476 (3,000 psi at 28-days)

Specified Design Strength (f'_m) 2,000 psi by Unit Strength Method

3. Structural Steel:

Channels, Angles, Plates, & Bars		ASTM A36
Wide Flange Sections		ASTM A992
Steel Pipe		ASTM A53, Grade B
Hollow Structural Sections-	Rectangular	ASTM A500, Grade B, F_y=46 ksi
	Round	ASTM A500, Grade B, F_y=42 ksi
Steel Roof Deck		ASTM A653, Minimum F_y=33 ksi
High-Strength Bolts		ASTM F3125, Grade A325, Type I
Anchor Bolts		ASTM F1554, Grade 36
Welding Electrodes		E70XX

4. Cold-Formed Steel:

Framing Components -	54 mils and heavier	ASTM C955, Grade 50
	43 mils and lighter	ASTM C955, Grade 33
Finish		Galvanized, G60

E. References

- HSBC Hawaii State Building Code, Adopted April 20, 2021
- IBC-18 International Building Code, 2018 Edition
- ASCE 7-16 Minimum Design Loads and Associated Criteria for Buildings and Other Structures, 2016 Edition
- ACI 117-10 Specification for tolerances for Concrete Construction and Materials, 2010 Edition
- ACI 301-10 Specifications for structural Concrete, 2010 Edition
- ACI 318-14 Building Code Requirements for Structural Concrete, 2014 Edition
- AISC 303-16 Code of Standard Practice for Steel Buildings and Bridges", 2016 Edition
- AISC 341-16 Seismic Provisions for Structural Steel Buildings, 2016 Edition
- AISC 360-16 Specification for Structural Steel Buildings, 2016 Edition
- AISI S100-16 North American Specification for the Design of Cold-Formed Steel Structural Members, 2016 Edition
- AISI S200-07 North American Standard for Cold-Formed Steel Framing – General Provisions, 2007 Edition
- AISI S240-15 North American Standard for Cold-Formed Steel, 2015 Edition
- AWS D1.1-15 Structural Welding Code – Steel, 2015 Edition
- AWS D1.3-18 Structural Welding Code – Sheet Steel, 2018 Edition
- AWS D1.4-18 Structural Welding Code – Reinforcing Steel, 2018 Edition
- SDI RD1.0-10 Standard for Steel Roof Deck, 2010 Edition

- TMS 402-16 Building Code for Masonry Structures, 2016 Edition
- TMS 602-16 Specification for Masonry Structures, 2016 Edition

FIRE PROTECTION / LIFE SAFETY BASIS OF DESIGN

A. Introduction and General Description

The project calls for constructing a new one-story gymnasium with locker rooms and supporting spaces. A portion of the building will be a bid option; however, the analysis will be based on the combined building with the bid option.

B. Building Code Analysis

1. Occupancy (IBC):

The following occupancies occur within the facility:

Description	**Occupancy Group**
Gymnasium	Group A-4 (Assembly)
Offices	Group B (Business)
Training Rooms, Locker Rooms	Group E (Education)
Storage, Mechanical, and Electrical Rooms	Incidental

2. Height and Area Limitations:

Frontage Increase (506.3.3):

$I_f = [F/P – 0.25] W/30$

F = 355 ft
P = 810 ft
W = 30 ft

I_f = **0.188**

Multiple Story Increase (506.2.3) – Not applicable

Allowable Area (506.2)

The building will be analyzed as a mixed occupancy and will comply with the most restrictive requirements.

$A_a = A_t + [NS \times I_f]$

Occupancy	Allowable Area per Floor (sf)	Allowable Area (NS)	Allowable Area with Increase	Proposed Area (sf)
A-4 (IIB)	38,000	9,500	39,788	23,394
B (IIB)	92,000	23,000	---	---
E (IIB)	58,000	14,500	---	---

The building's area complies.

Occupancy	Allowable Height (ft)	Proposed Height (ft)	Allowable Number of Stories	Proposed Number of Stories
A-4 (IIB)	75	42	3	1
B (IIB)	75	42	4	1
E (IIB)	75	42	3	1

The building's height and number of stories complies.

3. Building Construction Type: The type of construction shall meet requirements set forth in IBC Chapter 6 and Table 601. The facility will be constructed as a Type II-B.

Type II-B Construction	Rating Required (hr)	Rating Provided (hr)
Structural Frame	0	0
Bearing walls, Interior	0	0
Bearing walls, Exterior	0	0 / 1
Nonbearing walls, Exterior (see section 7)	0	0
Nonbearing walls, Interior	0	0
Floor Construction	0	0
Roof Construction	0	0

4. Building Separation and Exposure Protection: The exposures on each side of the building is:

	Exposure	Frontage Distance (ft)	Fire Separation Distance (ft)
North:	38 ft to Studies Complex 20 ft to Music Building	20 ft 20 ft	10 ft 10 ft
East:	15 ft to Music Building 57 ft to Access Road	15 ft 30+ ft	5 ft 30 ft
West:	30 ft to Front Lawn	30 ft	30 ft
South:	15 ft to Tsuchiya Road	30 ft	22 ft

Occupancy Group	Separation (ft)	Exterior Walls
A, B, E – Type IIB	10' > X => 5'	1 hour
A, B, E – Type IIB	30' > X => 10'	0 hour

With a minimum of 10 ft separation, the exterior walls do not have to be rated. For the East wall facing the Music Building, the exterior wall must be one hour rated. From IBC 705.8.1, a sprinklered building with exterior walls that aren't required to be rated is permitted unlimited unprotected openings. For the East wall, Table 705.8 allows 25% unprotected openings.

5. Fire Rated Separation:

   a. IBC Occupancy Separation: The building design is based on non-separated use, therefore no occupancy separation walls are required.

   b. Fire Walls: There are no fire wall requirements for this project.

   c. Fire Barriers: There are no barrier requirements.

   d. Fire Partitions and Smoke Partitions: There are no partition requirements.

6. Interior Finish and Insulation: (Table 803.13)

Occupancy	Enclosed Vertical Exitways	Other Exitways	Rooms
A-4	B	B	C
B	B	C	C
E	B	C	C

7. Fire Protection Systems (Section 9):

   a. IBC 903.2.1.4 requires an automatic fire sprinkler system when the assembly area exceeds 12,000 sf.

   b. IBC 903.2.2 requires an automatic fire sprinkler system when the educational area exceeds 12,000 sf.

   c. IBC 906 requires portable fire extinguishers for the A-4, B and E occupancies.

   d. IBC 907.2.1 requires a fire alarm system in an assembly occupancy. IBC 907.2.3 requires a voice evacuation type fire alarm system.

8. Means of Egress: (Section 10)

a. Occupant Load Factors (Table 1004.5)

1) Assembly - 15 sf/person

2) Assembly Bleachers – 18"/person

3) Locker Room – 50 sf/person

4) Office - 100 ft^2/person

5) Mechanical, Storage Rooms – 300 sf/person

Location			
1st Floor	Area (SF)	Occupant Load Factor (SF/person)	Occupant Load
Concession Stand	248	100	2
Janitor/Mechanical	278	300	1
Womens/Mens Restrooms	651	100	6
PE Storage	315	300	1
Office	240	100	2
AD Office	240	100	2
Training Room	871	15	53
Telecom/Electric Room	260	300	1
Gymnasium (fixed seats)	800	NA	800
Gymnasium Open Floor	6250	15	416
Storage/Mechanical	173	300	1
Locker Room A	1063	50	21
Locker Room B	1059	50	21
Wrestling/Cheer Room	2036	15	135
Multi-Purpose Room	874	15	58
Mechanical Room	304	300	1
		Total 1st Floor	**1,521**

b. Egress Width, Table 1005.1

1) Horizontal - 0.15 inches/person
Vertical - 0.20 inches/person

2) Exit capacity provided:

Single Door – 34" / 0.15 = 226 persons
Double Door – 68" / 0.15 = 453 persons

Main Entrance:
2 X Double Doors = 2 X 453 = 906 persons
Hall #1:
1 X Single Door = 1 x 226 = 226 persons
Gymnasium:
3 X Double Doors = 3 X 453 = 1,359 persons
1 X Single Door = 1 x 226 = 226 persons
Corridor:
2 X Single Door = 2 X 226 = 452 persons
Multipurpose:
2 X Single Door = 2 X 226 = 452 persons

Total **= 3,621 persons**

Exit Discharge:

Stair 1 – 60" / 0.20 = 300 persons
Stair 2 – 72" / 0.20 = 360 persons

c. Means of Egress Components:

1) 1005.7.1 requires the door to not obstruct more than half of the required egress width during its swing and not more than 7 inches when it is fully open.

2) 1010.1.2.1 requires exit doors to swing in the direction of egress for occupant loads of 50 and greater.

3) 1011.1 requires stairs to be a minimum of 44 inches. Stairs are a minimum of 60 inches wide.

4) 1020.2 requires exit access corridors to be a minimum of 44 inches. The exit access corridors are a minimum of 72 inches wide.

d. Exit Access, Common Path of Travel, 1006.2.1

1) The maximum common path of travel permitted is 75 feet.

e. Number of Exits, Table 1006.2.1:

Two exits are to be provided if the occupant load exceeds the following:

Assembly 49 persons
Educational 49 persons

f. Arrangement of Exits, Section 1007.1.1:

Where two exits are required, the exits or exit access doors shall be separated by one half the diagonal of the area being considered. All rooms, combined rooms and the floors comply.

g. Travel Distance, Table 1017.1

For sprinklered assembly and educational occupancies, the maximum travel distance is 250 feet.

h. Corridors, Section 1020.1:

Corridors for A and E occupancies are not required to be rated when the building is sprinklered.

i. Dead End Corridors, Section 1020.4

Dead ends in corridors are limited to 20 feet.

j. Illumination and Exit Signs:

Section 1008 requires the means of egress to be provided with lighting.

Section 1013.1 requires illuminated exit signs. No point shall be more than 100 feet from an exit sign.

k. Vertical Exit Enclosures, Section 1023:

Not applicable.

l. Assembly Occupancies, Section 1029:

Section 1029.2 requires the main entrance to an assembly be able to accommodate half of the occupant load.

Section 1029.9.1 requires a minimum of 48" for stepped aisle with seating on both sides. For seating on one side the aisle can be 36".

C. Fire Department Access

1. Building Access, Section 18.2.3.2:

Kauai Fire Code requires at least one door to be within 50 feet of the fire department access road, 18.2.3.2.1.

All portions of the exterior of the building shall be within 450 feet of the fire department access and water supply, 18.2.3.2.2 when the building is fully sprinklered.

D. Fire Sprinkler System

1. Design Criteria:

   State Building Code, IBC 2018
   Kauai Fire Code, NFPA 1-2012
   NFPA 13, Installation of Sprinkler Systems, 2016

2. IBC Section 903: Requires sprinklers in assembly or educational occupancies greater than 12,000 sf.

3. Sprinkler Hazard Classification: The office, locker rooms and gymnasium will be classified as light hazard occupancy. The storage and mechanical spaces shall be classified as Ordinary Hazard Group 2.

4. Sprinklers: Sprinklers shall be quick response, semi-recessed type in finished spaces and quick response uprights or pendents in rooms without a finished ceiling.

5. Design Criteria: Sprinkler design criteria will be as follows:

Gymnasium, Locker Rooms	
Occupancy Classification:	Light Hazard
Design Density:	0.10 gpm/sf
Design Area:	1,500 sf
Hose Stream Allowance:	100 gpm

Storage, Mechanical Spaces	
Occupancy Classification:	Ordinary Hazard Group 2
Design Density:	0.20 gpm/sf
Design Area:	Part of light hazard calculation

6. Fire Sprinkler System Water Supply: The fire protection water supply will be connected to the existing line. A flow test will be conducted next submittal:

   Static Pressure: xx psi
   Residual Flow and Pressure: x,xxx gpm @ 20 psi

E. Portable Fire Extinguishers

1. Portable fire extinguishers shall be provided. Extinguishers shall be a minimum 2A:40B:C classification and shall be located in cabinets.

F. Fire Alarm System

1. Design Criteria:

   State Building Code, IBC 2018
   Kauai Fire Code, NFPA 1-2012
   NFPA 72, National Fire Alarm Code, 2016

2. IBC 907.2.1 requires a fire alarm system in an assembly occupancy. IBC 907.2.3 requires a voice evacuation type fire alarm system.

3. A new fire alarm panel will be provided in the Gymnasium. This panel will report to the main panel in the school office. The panel is also required to be remotely monitored by Section 907.6.6.

4. The system will have manual initiation and automatic initiation. The system will feature manual pull stations, smoke detector at the panel and sprinkler monitoring.

5. Audio and visual notification will be provided throughout the building.

MECHANICAL BASIS OF DESIGN

A. Project Background

1. General Description: This project involves the new construction of a campus Gymnasium building. Mechanical and Plumbing systems for this scope of work will be based upon the requirements set forth in the proposed improvements for Waimea High School Gymnasium Due Diligence report. The design will conform to the 2018 Uniform Mechanical and Plumbing Codes, ASHRAE Standards, and DOE requirements. Ventilation systems will be provided in a majority of the Facility, with air conditioning provided in a few selected spaces. Exhaust systems will be provided for the locker rooms, restrooms, janitor closets, mechanical and electrical rooms. New plumbing systems, including waste, vent, hot and cold water and condensate systems, will be provided as required by programming. In addition, the building will be provided design features due to it being classified as a "shelter in place" facility.

   This section will summarize the mechanical and plumbing concepts and the criteria for which the project will be designed. The resulting mechanical and plumbing systems design is intended to provide energy efficient, environmentally responsible, maintainable, and long-lasting systems for Waimea High School.

B. Technical Requirements

1. HVAC Systems and Equipment: VRF and Standard Split DX Systems will be provided for the air conditioning for this project and are highly efficient and maintenance friendly systems. All Fan Coil Units will be provided with filtered outside air.

   a. Training Room, Athletic Directors Office, and Multi-Purpose Team Room: These spaces will be provided with a dedicated cooling only fan coil units with dedicated OA.

   b. Main Gym, Locker Rooms, and the Wrestling Cheer Room: These spaces will be provided with ventilation systems that will include outside air supply fans and exhaust fans. Ceiling fans will also be provided in the Gymnasium Main Floor.

   c. Restrooms, Janitors Closets, Mechanical and Electrical Rooms: These spaces will be provided exhaust systems and with operational control as programmed.

   d. Outside air (OA) for each conditioned space shall be provided through the louvers with direct connection to FCU's. Outside for ventilated spaces will be provided with ventilation fans connected to louvers. OA supplied to the facility shall be equal to or greater than the minimum required by the ASHRAE 62.1.

e. The project shall include special design requirements for design in tropical environments, such as coated coils and no roof mounted equipment.

2. Design Calculations: Cooling load calculations shall be performed using Trane Trace, which is in compliance with the current edition of the ASHRAE Handbook of Fundamentals and ASHRAE 90.1. Equipment shall be sized to meet the total load determined by the calculations. Weather data used for the analysis shall be based on weather data provided below in accordance with ASHRAE weather data. Room air flow requirements shall be computed based on the individual room load. Values for internal cooling loads shall be included in the computerized load calculations in accordance with ASHRAE recommendations and user input.

   - Latitude = 20.0231°N
   - Longitude = 155.6717°W
   - Elevation = 13 feet
   - 1.0% Summer Design Dry Bulb Temperature = 88.7°F
   - 1.0% Wet Bulb Temperature = 73.5
   - 99.0% Winter Design Dry Bulb Temperature = 66.7°F
   - Inside Temperatures:

   Faculty and Student Activities: 74°F (adj.).
   Faculty and Administration Spaces: 74°F (adj.).
   Concessions: 74°F (adj.).
   Telecomm Room: 78°F (adj.).

   Outside air requirements will be based on the requirements of ASHRAE 62.1-2007, Table 6-1, Educational Facilities.

3. Ductwork: All supply and return air ductwork (except as otherwise noted) shall be galvanized steel, 26 gauge or as recommended by SMACNA Duct Construction Standards and shall be properly insulated to prevent condensation. All OA ductwork and dampers shall be stainless steel considering the corrosive conditions of Hawaii.

4. Exhaust and Ventilation System: The ventilated and exhausted spaces shall be by inline fan systems, with outside air intake and exhaust at wall louvers. Ventilation and exhaust shall be continuous except during unoccupied periods in accordance with minimum flow rates of ASHRAE 62.1. The building shall be ventilated and exhausted as follows:

   a. Men's and Women's Toilets and Shower Rooms: Minimum of 50 cfm per toilet fixture in accordance with ASHRAE Standard 62 or 10 ACH, whichever is greater.

   b. Janitor's Closet: Minimum of 1.0 cfm/ft^2 in accordance with ASHRAE Standard 62 or 10 ACH, whichever is greater.

c. Mechanical and Electrical Rooms: The mechanical and electrical rooms shall be ventilated at 4 ACH.

d. Gymnasium Main Floor: This space is ventilated at a minimum of 2.5 ACH, with ventilation fans and exhaust fans to ensure effective air change and air quality.

5. Energy Management System: The HVAC system shall be monitored by an electronic direct digital control (DDC) Energy Management and Control System (EMCS) with the capability of real time monitoring, trending, and controlling. The communications protocol shall be compatible with Hawaii DOE design standards and shall be LonWorks or Bacnet. The project shall provide advance water metering with remote recording and monitoring capability for energy consumption.

6. Commissioning and Testing, Adjusting, and Balancing: Testing, adjusting, and balancing of each system shall by the Contractor's responsibility. Prior to testing, adjusting, and balancing, the Contractor shall verify that the systems have been properly installed and are operating as specified. Testing of individual items of equipment shall be performed by a person authorized to perform such testing and startup by the equipment manufacturer. The Contractor shall correct all systems and equipment found not in compliance and shall be responsible for all labor and materials required for this effort. AABC MN-1 or NEBB-01 shall be used as the standard for providing testing of air system. Testing, adjusting, and balancing shall be performed in accordance with UFGS which requires a qualified TAB agency. The selected standard shall be used throughout the entire project. All recommendations and suggested practices contained in the selected standard shall be considered mandatory. Instrumentation accuracy shall be in accordance with selected standard.

7. Natural Ventilation Strategy: The typical requirement for natural ventilation will not be applied to this project.

8. Existing Buildings S, T, and U will be provided with Packaged Terminal Air Conditioners (PTAC) for each Classroom and Faculty space due to windows being closed for construction dust and noise. In addition, ventilation fans with filtered inlets will be provided for outside air.

9. Shelter-In-Place Design Features: For hurricane shelters,sper 2018 State Building Code, mechanical ventilation shall be provided per the IMC and HVAC equipment mounted on the exterior will have heavy duty anchorage.

C. Plumbing

1. General: The plumbing system shall be designed and installed in accordance with the 2018 Uniform Plumbing Code. Inspection, sterilization, chlorination, and testing of the plumbing system shall be performed as prescribed in the 2018 UPC. Specified materials and equipment shall be standard products of a manufacturer regularly engaged in the manufacture of such products. Specified equipment shall be equipment that has performed satisfactory at least two years prior to bid opening.

2. Shelter-In-Place Requirements: Plumbing facilities shall be provided for Community Shelters per 2018 State Building Code. and plumbing facilities that include toilets and hand washing facilities, shall be provided.

3. Design Calculations: The plumbing design shall be based on the 2018 edition of the UPC for domestic water, sanitary waste, and vent piping. All water piping shall be sized in accordance with methods outlined in the 2018 UPC, to limit water velocity in the pipe to 8 ft/sec unless a lower velocity is recommended by the plumbing fixture manufacturer(s).

4. Equipment: Domestic hot water will be provided using electric tank type systems with recirculation pumps. Hot water will be provided to showers, lav's and sinks.

5. Efficiency: Though this project is not a HCHPS project, the building domestic water system shall be designed to use a minimum of 20% less water than the HCHPS water usage baseline for the building. Calculations shall be based on estimated occupant usage and shall include the following fixtures:

    - Water closets, flush valve - 1.28 gallons per flush (gpf).
    - Urinals - 0.125 gallons per flush.
    - Lavatory faucets - 0.5 gallons per minute (gpm).
    - Showers 1.5 GPM
    - Kitchen sinks - 1.5 gpm.
    - Drinking Fountains.

D. Standards and References

- NFPA 30, Flammable and Combustible Liquids Code, 2008.
- NFPA 90A, Installation of Air Conditioning and Ventilation Systems.
- Uniform Mechanical Code (UMC), 2018.
- Uniform Plumbing Code (IPC), 2018.
- ASHRAE 62.1-2007, Ventilation for Acceptable Indoor Air Quality.
- ASHRAE 90.1-2007, Energy Standard for Buildings Except Low-Rise Residential Buildings.
- ASHRAE Handbooks (Fundamentals, Systems and Equipment, Applications).
- Sheet Metal and Air Conditioning Contractors' National Association (SMACNA), HVAC

Duct Construction Standards.

- 2014 ICC 500/NSA Standard for the Design and Construction of Storm Shelters.

ELECTRICAL / COMMUNICATIONS BASIS OF DESIGN

A. General Parameters

1. Existing Conditions:

   a. Existing Power Distribution: The Waimea High School (WHS) receives electrical power from Kauai Island Utility Cooperative (KIUC) utility pole: primary circuits (4.16kV, 3-phase) are routed to KIUC's 750KVA pad-mounted transformer located near the WHS's utility building. Secondary circuits, serve the existing Main Switch Board 'MSB' rated at 800A at 480Y/277V 3Ø. The 'MSB' is integrated with a 400A PV system, power factor correction capacitor and an external transfer switching scheme to accommodate a portable generator. There is ample physical space within the enclosure for new facility's dedicated circuit breaker and the switchboard appears to be in good condition.

   Building S, T, and U are supported by a single 2P250A breaker located in the existing MSB. Existing feeder is routed through electrical handhole 'EHHG-1', electrical handhole 'EHH-2', spliced inside EHH-2, then provide individual feeders to each building.

   b. Existing Program Bell System: The existing program bell system consists of a panel located in the Library's Telecom Room. The current system will be extended to the new gymnasium building via underground infrastructure.

   c. Existing Communication System: Existing communication system consist of an MDF in the Telecom room of the existing Library Building. The new gymnasium building will consist of a telecom backboard and IDF rack at the Telecom room and will be routed to the existing MDF rack. All new communication outlets in the new building will be routed back to the new IDF rack located in the Telecom Room. The existing 'MDF' has adequate capacity to support and terminate the new fiber optic and cooper cables in the new existing equipment rack,

B. Functional and Technical Requirements

1. The electrical design will include complete power, signal, and lighting systems for the new Gymnasium. In addition, electrical improvements to support Building S, T, and U's new AC equipment.

2. Electrical Site Work:
   Design purposes for the new gymnasium shall provide a new breaker and circuit in the available space of the 'MSB'. New circuits will utilize the existing spare underground pathways from 'MSB' to 'HHG-1' then 'HHG-3'. New underground infrastructure shall be

extended from 'HHG-3' (via new electrical handholes) to support the new Gymnasium's electrical distribution system.

Existing building S, T, and U existing feeder shall be removed from each 480Y/277V panel up to Main Switch Board. The existing conduit supporting the existing feeders will remain and to be reused.

The three existing buildings shall be provided each with a new 3P150A breaker in MSB. From MSB, a dedicated feeder for each building (3) shall be routed through EHH-1, EHH-2, then to each respective building. Two new feeders shall be provided new conduit and one feeder will utilize the 3" existing conduit.

The communication system shall provide a new 8"x8"x6 NEMA 4X SS rated pull-box on the exterior wall of the existing Library building and new underground pathways from the pull-box to the new Gymnasium telecom backboard utilizing 'HHG-1' then 'HHG-3'.

3. Secondary Power Distribution:

   a. New Gymnasium
      i. The Electrical Room located will house distribution equipment including panelboards, transformers, and manual transfer switch.
      ii. 400A,480Y/277V incoming power from the Main Switch Board.
      iii. 112.5 KVA transformer 480Y/277V to 208Y/120V shall be provided for general purposes circuits.
      iv. 75 KVA transformer 480Y/277V to 208Y/120V shall be provided for emergency purposes circuits
      v. A dedicated 480Y/277V and 208Y/120V panel will be used to serve emergency loads.
      vi. 208Y/120V,3PH service will be distributed throughout the new gymnasium to receptacles and applicable mechanical equipment, 480Y/277V,3PH service will be distributed throughout the new gymnasium to light fixtures and applicable mechanical equipment.

   b. Buildings S, T, U
      i. The existing 100A,480Y/277V panels located in each building will be upgraded to a 225A,480Y/277V Panel.
      ii. All existing circuits to be reconnected similarly as the previous existing conditions.
      iii. 45KVA transformer 480Y/277V to 208Y/120V shall be provided in each building for new AC equipment panel.
      iv. A 208Y/120V panel will be installed to serve as a dedicated panel for AC equipment.

4. Communications:

   a. The Telecom Room shall house the distribution equipment including IDF rack and

telecom backboards.

b. The IDF rack will be connected to the existing MDF in the library's Telecom room.

c. Cable tray systems will be provided at the communication room to distribute data cables.

d. Servers: Requirements will be coordinated with the School Tech Coordinator.

5. Lighting:

a. Illumination (footcandle) levels will comply with the latest IESNA Lighting Handbook, and the lighting power densities will adhere to ASHRAE 90.1.

b. Lighting throughout the gymnasium will be designed to have a lighting automation system to comply with the HI-CHPS EQ.C8 requirements. Light automation is not required in Locker/Shower but will be provided.

c. Lighting automation system will include the following components:
   i. 0-10 Volt Dimming Controllers
   ii. Daylight Sensor
   iii. Occupancy Sensors
   iv. Digital 5-Button Scene Switches with dimming option

d. Lighting automation system sequence of operations is as follows:
   i. General Illumination – All lights will illuminate at the recommended foot-candle value per room type.
   ii. A/V mode – All lights dim down to average 20 foot-candles.
   iii. Daylight Zone Only – Lights closest to the window will dim accordingly to the amount of sunlight is present.

e. Interior lighting will be LED type, 3500-5000K color temperature.

f. Interior lighting will be controlled with occupancy sensors equipped with a manual override. Occupancy sensors in the restrooms will be the ultrasonic sensor type to help minimize lights turning off while restrooms are occupied.

g. Exterior lighting will be full-cutoff, LED type, controlled by a lighting control panel with an integrated time clock for night light.

h. Emergency lighting utilizing integral battery packs will be provided to illuminate exit paths. Integral battery packs will be connected to the un-switched leg of associated lighting branch circuits serving the area. The Main Gym floor will use backup inverters

to provide power to a limited amount high-bay fixtures at full capacity.

i. Illuminated exit signs with integral battery packs will be provided for all emergency exits and passageways as required by NFPA 101, Life Safety Code. LED type exit signs will be utilized for energy efficiency.

6. Circuit Breakers: Branch circuits feeding receptacles and lighting fixtures will be protected by thermal-magnetic, molded-case circuit breakers. All circuit breakers will be of the bolt-on type. Sizing of protective devices will be made in accordance with the National Electric Code (NEC).

7. Receptacles:

   a. Receptacles located in classrooms will be UL Listed tamper resistant.

   b. Receptacles adjacent to sinks, utility rooms, locker rooms, bathrooms. and at building exteriors will be of the ground fault circuit interrupting (GFCI) type for personnel safety. Weatherproof GFCI receptacles with cast while-in-use covers will be provided at exterior locations. Weatherproof covers will be provided in the Main Gym Floor.

8. Electrical Enclosures: Electrical equipment enclosures will be NEMA Type 1 for interior locations and NEMA type 4X 316 stainless steel for exterior locations.

9. Interior Wiring System: The electrical wiring system will consist of insulated copper conductors in conduits or surface metal raceways. A separate, insulated, green equipment grounding conductor will be provided for each feeder and branch circuit. PVC conduit will be utilized underground or under floor slab.

10. Grounding: The existing neutral to ground bound is located at the Main Distribution Panel and is to remain. The gymnasium building grounding systems will consist of a main equipment ground bus in the electric room and telecommunication rooms. Equipment ground busses will be connected to each other and to the main equipment ground bus. The ground grid will have copper-clad ground rods driven to a depth of 10 feet. A code-sized or larger ground conductor will be included in all raceways.

11. Emergency System: An emergency system consisting of 480Y/277V panel, 75KVA step down transformer, 208Y/120V panel and manual transfer switch will be provided. The emergency panel shall consist of all critical loads and shall adhere to ICC 500/NSSA. A generator interlock box will be located at the exterior of the gymnasium for provision for a portable generator.
12. Excluded Services:

    a. Security system design.

b. Provision for a Photovoltaic system design.

C. Standards and References

- American National Standards Institute (ANSI)
- National Electrical Manufacturers Association (NEMA)
- NFPA 70, National Electrical Code, 2008 edition
- 2006 NFPA1, Uniform Fire Code
- NFPA 72, National Fire Alarm Code, 2002 edition
- NFPA 101, Life Safety Code, 2006 edition
- 2010 ADA Standards for Accessible Design
- IESNA Lighting Handbook Reference and Application, Ninth Edition
- Underwriters Laboratories (UL)
- Educational Specifications (EDSPECS) for High Schools

APPENDICES

Appendices

GEOTECHNICAL INVESTIGATION

GEOTECHNICAL INVESTIGATION
WAIMEA HIGH SCHOOL
NEW GYMNASIUM
WAIMEA, KAUAI, HAWAII
DOE PROJECT NO.: Q43201-18

for

DESIGN PARTNERS, INC.

HIRATA & ASSOCIATES, INC.
W.O. 21-6528.1
January 20, 2022

Hirata & Associates
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January 20, 2022
W.O. 21-6528.1

Mr. Kendall Ellingwood III
Design Partners Incorporated
1580 Makaloa Street, Suite 1100
Honolulu, Hawaii 96814

Dear Mr. Ellingwood:

Our report, "Geotechnical Investigation, Waimea High School, New Gymnasium, Waimea, Kauai, Hawaii, DOE Project No.: Q43201-18," dated January 20, 2022, our Work Order 21-6528.1 is enclosed. This investigation was conducted in general conformance with the scope of services presented in our proposal dated May 6, 2021.

Borings B1, B3, B4, B7, and B9 encountered surface soil classified as tan and dark brown to light brown silty sand in a loose to medium dense condition, extending to depths ranging from about 1.5 to 5 feet. Beneath the silty sand, and from the surface in the remaining borings, was brown to reddish brown clayey silt in a firm to stiff condition, extending to depths ranging from about 3.5 to 13.5 feet. Boulders with maximum dimensions of about 1 to 2 feet were encountered in borings B1, B2, B5, B7, and B9 between depths of about 2 and 12.5 feet. Thin seams of gray silty clay in a stiff condition were encountered in borings B1, B5, B6, and B8, at depths ranging between about 3.5 to 13 feet, respectively. Underlying the clayey silt was brown to gray completely to slightly weathered basalt. The weathered basalt was in a medium hard to hard condition and extended to the maximum depths drilled. Neither groundwater nor seepage water was encountered in the borings.

Based on the finish floor elevation of the proposed gymnasium, site grading will generally consist of maximum cuts of about 3.5 feet on the northeastern side and fill placements of about 2 to 3 feet on the southwestern side. Footing excavations are therefore expected to expose newly placed fill and the insitu soils. To provide more uniform support, we recommend that all footings and slabs-on-grade be underlain by 12 inches of imported granular structural fill.

Additional geotechnical recommendations for the design of foundations, slabs-on-grade, retaining walls, and site grading are presented in this report.

We appreciate this opportunity to be of service. Should you have any questions concerning this report, please feel free to call on us.

Very truly yours,

HIRATA & ASSOCIATES, INC.

Rick I.K. Yoshida

Rick I.K. Yoshida, P.E. Vice President

RIKY:JC

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GEOTECHNICAL INVESTIGATION
WAIMEA HIGH SCHOOL
NEW GYMNASIUM
WAIMEA, KAUAI, HAWAII
DOE PROJECT NO.: Q43201-18

INTRODUCTION

This report presents the results of our geotechnical investigation performed for the new gymnasium at Waimea High School in Waimea, Kauai, Hawaii. Our scope of services for this study included the following:

- A visual reconnaissance of the site and its vicinity to observe existing conditions which may affect the project. The general location of the project site is shown on the enclosed Location Map, Plate A2.1.

- A review of available in-house soils information pertinent to the site and the proposed project.

- Drilling and sampling nine exploratory borings to depths ranging from about 14.5 to 20 feet. A description of our field investigation is summarized on Plates A1.1 through A1.3. The approximate exploratory boring locations are shown on the enclosed Boring Location Plans, Plates A2.2 and A2.3, and the soils encountered in the borings are described on the Boring Logs, Plates A4.1 through A4.9.

- Drilling four percolation test holes to depths of approximately 5 feet. The approximate test hole locations are shown on Plates A2.2 and A2.3. Falling head percolation tests were performed in the test holes in general accordance with Department of Health guidelines and results are presented on the Department of Health Site Evaluation/Percolation Test forms, Plates A5.1 through A5.4.

- Laboratory testing of selected soil samples. Testing procedures are presented in the Description of Laboratory Testing, Plates B1.1 through B1.3. Test results are presented in the Description of Laboratory Testing, and on the Boring Logs (Plates A4.1 through A4.9), Consolidation Test reports (Plates B2.1 through B2.3), Direct Shear Test reports (Plates B3.1 and B3.2), Modified Proctor Test reports (Plates B4.1 and B4.2), CBR Test report (Plate B5.1), and Sieve Analysis Test report (Plate B6.1).

- Engineering analyses of the field and laboratory data.

- Preparation of this report presenting the results of our exploratory fieldwork and laboratory testing, and geotechnical recommendations for the design of foundations, including seismic considerations, resistance to lateral pressures, retaining walls, slabs-on-grade, flexible pavement, and site grading.

PROJECT CONSIDERATIONS

Information regarding the proposed project was provided by personnel from your office.

The proposed gymnasium will be a one-story structure located on the southeastern side of the school's campus and will have a footprint area of approximately 24,596 square feet. Based on a finish floor elevation of about +42.5, site grading will generally consist of maximum cuts of about 3.5 feet on the northeastern side of the site and fill placements of about 2 to 3 feet on the southwestern side. Demolition of existing walkways, trees, and grassed lawn areas will be required to accommodate the new gymnasium. Structural loads were not available at the time of this report.

Parking Lots A and B are proposed on the northeast side of the existing Music Building and on the northeast side of the existing gymnasium, respectively. Parking Lot A will accommodate 19 parking stalls and 2 ADA stalls, while Parking Lot B will accommodate 42 parking stalls and 4 ADA stalls.

Underground detention chambers are also planned for this project. Chambers are proposed on the north and south sides of the new gymnasium, as well as beneath the proposed parking lots.

SITE CONDITIONS

Waimea High School is located on both the north and south sides of Tsuchiya Road, and is bounded by Ola Road on the southeast, Kaumualii Highway on the

southwest, Makeke Road on the northwest, and Haina Road on the northeast in Waimea, Kauai. The site of the proposed gymnasium is located on the southeast side of the school's campus, southwest of Buildings U and B, and northeast of Tsuchiya Road. The site is generally occupied by trees, grass fields, and concrete walkways connecting Tsuchiya Road and the classroom buildings.

The site of proposed Parking Lot A is generally covered by trees, grassed lawn, and moderate growth of vegetation. At the time of our fieldwork, trees, boulders, two shipping containers, and a detachable utility trailer occupied the site of proposed Parking Lot B.

Based on the topographic survey map provided by your office, total relief over the site of the proposed gymnasium is about 6 feet, with ground elevations ranging from about +46 northeastern side to about +40 on the southwestern side. The site is sloped such that drainage flows in a southwesterly direction.

SOIL CONDITIONS

Borings B1, B3, B4, B7, and B9 encountered surface soil classified as tan and dark brown to light brown silty sand in a loose to medium dense condition, extending to depths ranging from about 1.5 to 5 feet. Beneath the silty sand, and from the surface in the remaining borings, was brown to reddish brown clayey silt in a firm to stiff condition, extending to depths ranging from about 3.5 to 13.5 feet. Laboratory testing on the clayey silt indicates that the soil has a low potential.

Boulders with maximum dimensions of about 1 to 2 feet were encountered in borings B1, B2, B5, B7, and B9 between depths of about 2 and 12.5 feet. Thin seams of gray silty clay in a stiff condition were encountered in borings B1, B5, B6, and B8, at depths ranging between about 3.5 to 13 feet, respectively.

Laboratory testing on the silty clay indicates that the soil has a moderate to high expansion potential.

Underlying the clayey silt was brown to gray completely to slightly weathered basalt. The weathered basalt was in a medium hard to hard condition and extended to the maximum depths drilled.

Neither groundwater nor seepage water was encountered in the borings.

CONCLUSIONS AND RECOMMENDATIONS

Based on the finish floor elevation of about +42.5, site grading will generally consist of maximum cuts of about 3.5 feet on the northeastern side of the site and fill placement of about 2 to 3 feet on the southwestern side. Therefore, footing excavations are expected to expose newly placed fill, silty sand, and clayey silt. To provide more uniform support, we recommend that all footings and slabs-on-grade be underlain by 12 inches of compacted granular structural fill. Overexcavation of the insitu soils will be required to accommodate placement of the 12-inch granular structural fill section. If cobbles or boulders are exposed at the bottom of overexcavations, they should be removed and replaced with compacted granular structural fill.

Foundations

Conventional spread footings founded on a minimum 12 inches of imported granular structural fill may be used to support the proposed gymnasium. The granular fill should conform to and be placed in accordance with recommendations in the *Site Grading* section of this report. Overexcavation of the insitu soils will be required to accommodate placement of the 12-inch granular structural fill section. If gray silty clay is encountered at the bottom of overexcavations, the silty clay should be completely removed or excavated to a depth of at least 24 inches below the bottom of footing elevation, whichever is shallower.

Foundations founded on a minimum 12 inches of imported granular structural fill may be designed for an allowable bearing value of 3,000 pounds per square foot. The recommended allowable bearing value is for the total of dead and frequently applied live loads and may be increased by one-third for short duration loading which includes the effects of wind and seismic forces.

Spread footings should be a minimum 16 inches in width and embedded at least 18 inches below finish adjacent grade. The bottom of footing excavations should be thoroughly tamped and cleaned of loose material prior to placement of reinforcing steel and concrete. If cobbles or boulders are exposed at the bottom of structural excavations, they should be removed and replaced with compacted granular structural fill.

The imported granular structural fill should also extend laterally, a minimum 12 inches beyond the edge of footings. Imported granular structural fill should conform to and be placed in accordance with recommendations presented in the *Site Grading* section of this report.

In areas where granular structural fill is placed outside the building area and is open to the environment, we recommend that the granular material be capped with a minimum 12 inches of low permeability soil, such as the onsite clayey silt. The intent of this recommendation is to reduce intrusion of the surface runoff into the granular fill below footings. The capping layer should be compacted in lifts to a minimum 90 percent compaction as determined by ASTM D 1557. In addition, we recommend that areas adjacent to the building be graded to allow surface water to drain away from the structure. Downspouts connect to rain gutters should discharge water away from the structure.

Seismic Design

Based on the borings drilled as part of this study and our knowledge of the deep soil conditions in the area, the subsurface soils can be characterized as a rock profile. Therefore, based on the 2012 International Building Code, Site Class B is recommended for this site.

Lateral Design

Resistance to lateral loading may be provided by friction acting at the base of foundations, and by passive earth pressure acting on the buried portions of foundations. A coefficient of friction of 0.4 may be used with the dead load forces. Passive earth pressure may be computed as an equivalent fluid having a density of 300 pounds per cubic foot with a maximum earth pressure 3,000 pounds per square foot. Unless covered by pavement or concrete slabs, the upper 12 inches of soil should not be considered in computing lateral resistance.

Retaining Walls

Retaining wall foundations may be designed using recommendations in the *Foundations, Seismic Design,* and *Lateral Design* sections of this report.

For active earth pressure considerations, equivalent fluid pressures of 40 and 50 pounds per cubic foot may be used for level and sloping backfill conditions, respectively. An equivalent fluid pressure of 55 pounds per cubic foot may be used for restrained conditions. To prevent buildup of hydrostatic pressures, retaining walls should be well-drained. The standard of practice consists of placing an approximately 12-inch thick layer of free-draining gravel at the back of the wall. The gravel should extend from the base of the wall, around subdrains and/or weepholes, and up to within 12 inches of finish grade.

Alternatively, prefabricated drainage geocomposites, such as Miradrain or J-drain, may be used in lieu of the free-draining gravel. As with the free-draining gravel, the drainage geocomposites should be placed at the back of the wall, be connected with the weepholes and/or subdrains (in accordance with manufacturers specifications), and extend to within 12 inches of finish grade. For freestanding walls, the drainage system should be covered by at least 12 inches of low permeability soil, such as the onsite clayey silt. If the backfill is covered by

interior or exterior concrete slabs, the gravel fill should extend to the bottom of slab cushion elevation.

Foundation Settlement

Structural loads were not available at the time of this report. However, neither excessive total nor differential settlement is anticipated for foundations bearing on 12 inches of imported granular structural fill overlying the clayey silt. When available, final loads should be submitted to our office for review.

Slabs-on-Grade

To provide uniform support, all building slabs-on-grade should be underlain by a minimum 12 inches of imported granular fill. The upper 4 inches of granular fill should consist of a cushion of clean gravel, such as #3 Fine (ASTM C 33, No.67). The remainder of the granular fill section should consist of imported granular structural fill. All building slabs should also be protected by a vapor barrier.

Prior to placement of granular fill, the exposed subgrade should be scarified to a minimum depth of 6 inches, moisture conditioned to about 2 percent above optimum moisture content, and compacted to a minimum 95 percent compaction as determined by ASTM D 1557. The granular structural fill should be compacted in lifts to a minimum 95 percent compaction as determined by ASTM D 1557. The gravel cushion should be compacted to a level surface using a vibratory compactor.

In terms of serving as a slab cushion, basaltic termite barrier (BTB) may be used in place of the 4 inches of clean gravel. The recommended minimum thickness of BTB material should be compacted as indicated by the manufacturer specifications.

Slabs-on-grade, particularly those which will receive floor covering, should include control joints saw-cut into the concrete slab. The purpose of this is to help reduce the potential for reflective cracking of the floor covering due to shrinkage cracks in the concrete slab. Proper curing of the concrete slabs will help reduce shrinkage cracking.

Concrete walkways should be underlain by a minimum 12 inches of imported granular structural fill with the upper 6 inches consisting of aggregate base course in lieu of the gravel cushion. The base course should be compacted to a minimum 95 percent compaction as determined by ASTM D 1557.

Pavement Design

We assume that the pavement areas will generally be limited to passenger vehicles and light trucks. Based on the results of our laboratory testing, flexible pavement may be designed on the following sections.

Flexible Pavement

2.0”	Asphalt Concrete
6.0”	Base Course (CBR = 85 minimum)
8.0”	Total Thickness

The exposed subgrade should be sacrificed to a minimum depth of 6 inches, moisture conditioned to about 2 percent above optimum moisture content, and compacted to a minimum 95 percent compaction as determined by ASTM D 1557. The base course should also be compacted to a minimum 95 percent compaction as determined as ASTM D 1557.

Site Grading

Site Preparation - The project site should be cleared of all vegetation, including large roots, concrete footings, demolition debris, and other deleterious material. In areas requiring fill placement, the exposed subgrade should be scarified to a minimum depth of 6 inches, moisture conditioned to about 2 percent above the

optimum moisture content and compacted to a minimum 95 percent compaction as determined by ASTM D 1557. If cobbles or boulders are exposed at the bottom of overexcavations, they should be removed and replaced with compacted granular structural fill.

Structural Excavations - Based on our exploratory borings, we believe that excavations into the surface and near surface soils can generally be accomplished using conventional excavating equipment. Temporary cuts into the clayey silt should be stable at slope gradients of 1H:1V or flatter. Excavations into the basalt and sections where cobbles and boulders are encountered may require hydraulic hoe ramming equipment. It should be the Contractor's responsibility to conform to all OSHA safety standards for excavations.

Onsite Fill Material – The onsite clayey silt will be acceptable for reuse in compacted fills and backfills, except in the granular structural fill section recommended below foundations and slabs-on-grade. Rock fragments larger than 3 inches in maximum dimension should be removed prior to reuse. Excavated cobbles and boulders may be reused in structural fills and backfills provided the material is crushed to a well-graded consistency with a maximum particle size of 3 inches.

Imported Fill Material - Imported structural fill should be well-graded, non-expansive granular material. Specifications for imported granular structural fill should indicate a maximum particle size of 3 inches, and state that between 8 and 20 percent of soil by weight shall pass the #200 sieve. In addition, the plasticity index (P.I.) of that portion of the soil passing the #40 sieve shall not be greater than 10. Imported structural fill should have a CBR expansion value no greater than 1.0 percent and a minimum CBR value of 15 percent, when tested in accordance with ASTM D 1883.

Compaction – Cohesive soils, such as the onsite clayey silt, should be placed in horizontal lifts restricted to eight inches in loose thickness and compacted to a minimum 95 percent compaction as determined by ASTM D 1557. Granular fill, such as imported granular structural fill, should be placed in horizontal lifts restricted to eight inches in loose thickness and compacted to a minimum 95 percent compaction as determined by ASTM D 1557. Fill placed in areas which slope steeper than 5H:1V should be continually benched as the fill is brought up in lifts.

ADDITIONAL SERVICES

We recommend that we perform a general review of the final design plans and specifications. This will allow us to verify that the foundation design and earthwork recommendations have been properly interpreted and implemented in the design plans and construction specifications.

For continuity, we recommend that we be retained during construction to (1) observe structural excavations prior to placement of granular structural fill, reinforcing steel, and concrete, (2) review and/or perform laboratory testing on import borrow to determine its acceptability for use in compacted fills, (3) observe structural fill placement and perform compaction testing, and (4) provide geotechnical consultation as required.

Our services during construction will allow us to verify that our recommendations are properly interpreted and included in construction, and if necessary, to make modifications to those recommendations, thereby reducing construction delays in the event subsurface conditions differ from those anticipated.

LIMITATIONS

The boring logs indicate the approximate subsurface soil conditions encountered only at those times and locations where our borings were made and may not

represent conditions at other times and locations. This report was prepared specifically for Design Partners, Inc. and their sub-consultants for the design of the proposed gymnasium at Waimea High School in Waimea, Kauai, Hawaii. The boring logs, laboratory test results, and recommendations presented in this report are for design purposes only, and are not intended for use in developing cost estimates by the contractor.

Our recommendations and conclusions are based upon the site materials observed, the preliminary design information made available, the data obtained from our site exploration, our engineering analyses, and our experience and engineering judgment.

The conclusions and recommendations in this report are professional opinions which we have strived to develop in a manner consistent with that level of care, skill, and competence ordinarily exercised by members of the profession in good standing, currently practicing under similar conditions in the same locality. We will be responsible for those recommendations and conclusions, but will not be responsible for the interpretation by others of the information developed. No warranty is made regarding the services performed, either expressed or implied.

Respectfully submitted,

HIRATA & ASSOCIATES, INC.

Juanito Cajimat, Project Engineer

Rick Yoshida, P.E., Project Manager

This work was prepared by me or under my supervision.
Expiration Date of License: April 30, 2022

APPENDIX A

FIELD INVESTIGATION

DESCRIPTION OF FIELD INVESTIGATION

GENERAL

The site was explored from October 10 to 15, 2021, by performing a visual reconnaissance of the site and drilling nine test borings to depths ranging from about 14.5 to 20 feet with a Mobile L-22 truck-mounted drill rig. In addition, four percolation test holes were drilled to depths of about 5 feet.

During drilling operations, the soils were continuously logged by our field engineer and classified by visual examination in accordance with the Unified Soil Classification System. The boring logs indicate the depths at which the soils or their characteristics change, although the change could actually be gradual. If the change occurred between sample locations, the depth was interpreted based on field observations. Classifications and sampling intervals are shown on the boring logs. A Boring Log Legend is presented on Plate A3.1, while the Unified Soil Classification and Rock Weathering Classification Systems are shown on Plates A3.2 and A3.3, respectively. The soils encountered are logged on Plates A4.1 through A4.9.

Borings were located in the field by measuring/taping offsets from existing site features shown on the plans provided by your office. Surface elevations at boring locations were estimated based on the Grading Plan provided by Design Partners, Inc. on April 30, 2021. The accuracy of the boring locations shown on Plates A2.2 and A2.3, and the surface elevations shown on the boring logs are therefore approximate, in accordance with the field methods used.

SOIL SAMPLING

Representative, disturbed, and bulk soil samples, as well as core samples of rock, were recovered from the borings for selected laboratory testing and analyses. Representative samples were recovered by driving a 3-inch O.D. split tube sampler a total of 18 inches with a 140-pound hammer dropped from a height of

30 inches. Disturbed samples were obtained by driving a 2-inch O.D. standard split spoon sampler a total of 18 inches with a 140-pound hammer dropped from a height of 30 inches. The number of blows required to drive the samplers the final 12 inches are recorded at the appropriate depths on the boring logs, unless noted otherwise. Bulk soil samples were recovered from percolation tests holes P3 and P4 at depths of about 1 foot.

ROCK SAMPLING

Core samples of rock were obtained with an NX core barrel having an inside diameter of 2.5 inches. Recovery percentages for each core run are shown on the enclosed Boring Logs. Photos of selected rock core samples are presented on Plates A6.1 and A6.2.

The rock quality designation (RQD) for the core runs are also shown on the boring logs. This is a modified core recovery percentage which takes into account the number of fractures observed in the core samples. Only pieces of core 4 inches in length or longer, as measured along the centerline, were included in the determination of this modified core recovery percentage. Fractures caused by drilling or handling were ignored.

The following is a general correlation between RQD percentages and rock quality.

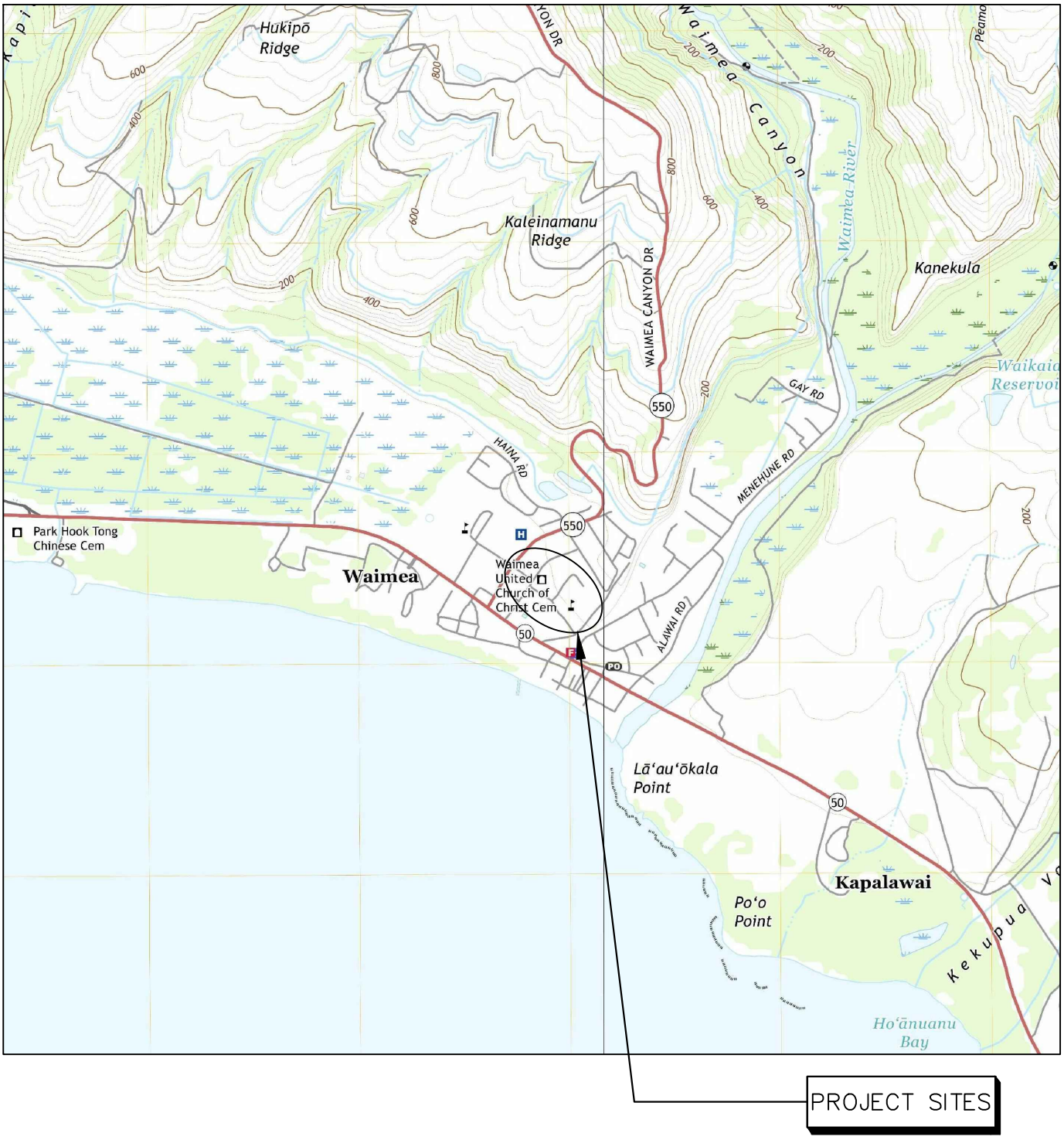
RQD (%)	Description of Rock Quality
0 - 25	Very Poor
25 - 50	Poor
50 - 75	Fair
75 - 90	Good
90 - 100	Excellent

Reference: Tunnel Engineering Handbook, Second Edition,
edited by J.O. Bickel, T.R. Kuesel, and E.H. King, 1996

PERCOLATION TESTING

Four percolation test holes were drilled to depths of about 5 feet. The approximate percolation test locations are shown on Plates A2.2 and A2.3. Falling head percolation tests were performed in the test holes in general accordance with Department of Health guidelines. Test results are presented on the Department of Health Site Evaluation/Percolation Test forms, Plates A5.1 through A5.4. The following table presents the results of our falling head percolation tests and the estimated infiltration rates. The infiltration rates were estimated using the Porchet Method.

Test Hole	Percolation Rate (min./in.)	Infiltration Rate (in./hr.)
P1	6.0	0.5
P2	16.6	0.3
P3	26.7	0.2
P4	53.3	0.1



Reference: Topographic Quadrangle Map prepared by the United States Department of the Interior Geologic Survey
Waimea Canyon, Kekaha OE S, Kekaha, and Hanapepe Quadrangle
Hawaii-Kauai Co., Hawaii. 2017

Waimea High School - New Gymnasium

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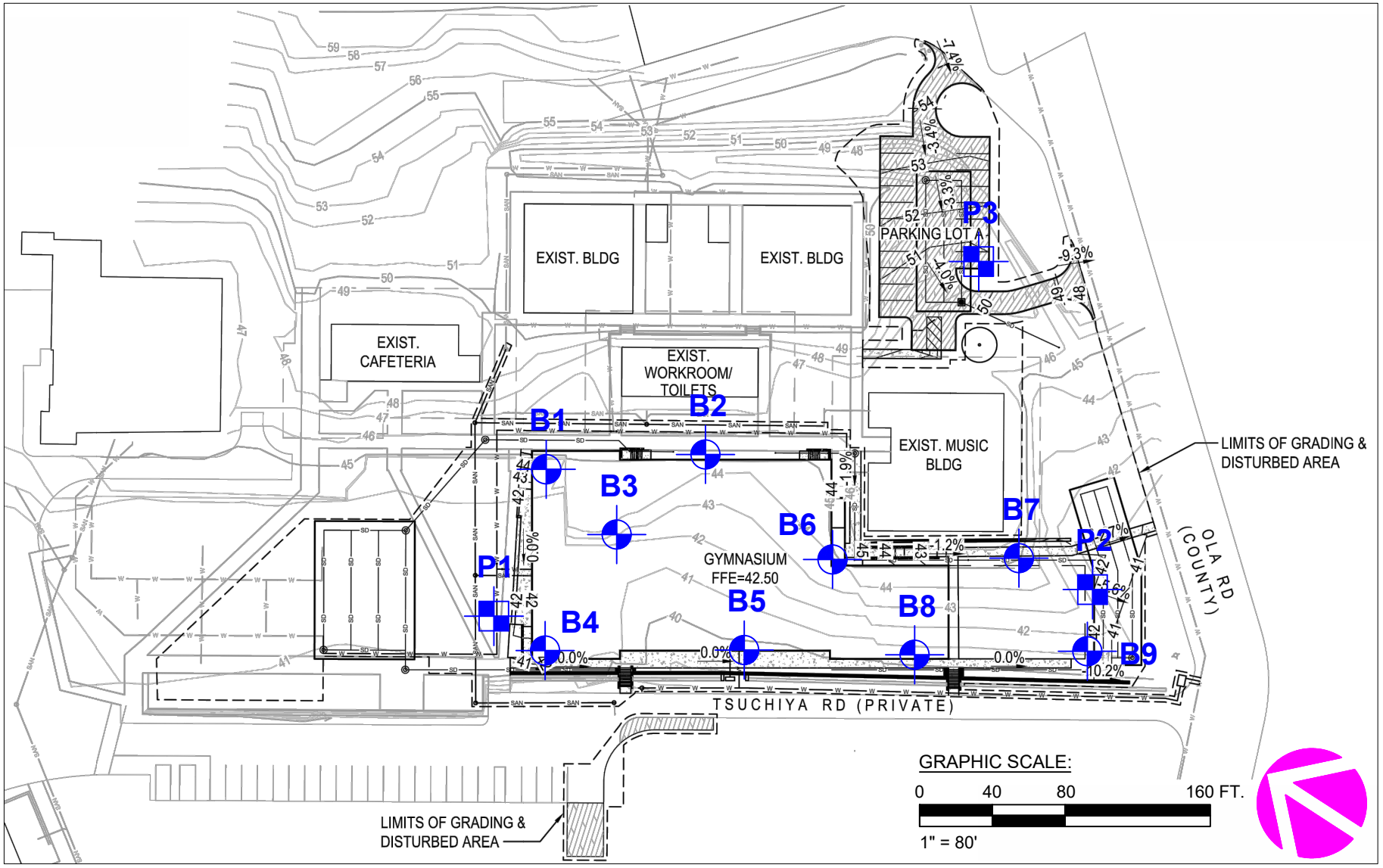
W.O. 21-6528.1

LOCATION MAP

Plate
A2.1



LEGEND:

- Approximate location of borings
- Approximate location of percolation tests

Reference: Grading Plan provided by Design Partners, Inc. on April 30, 2021.

Waimea High School - New Gymnasium

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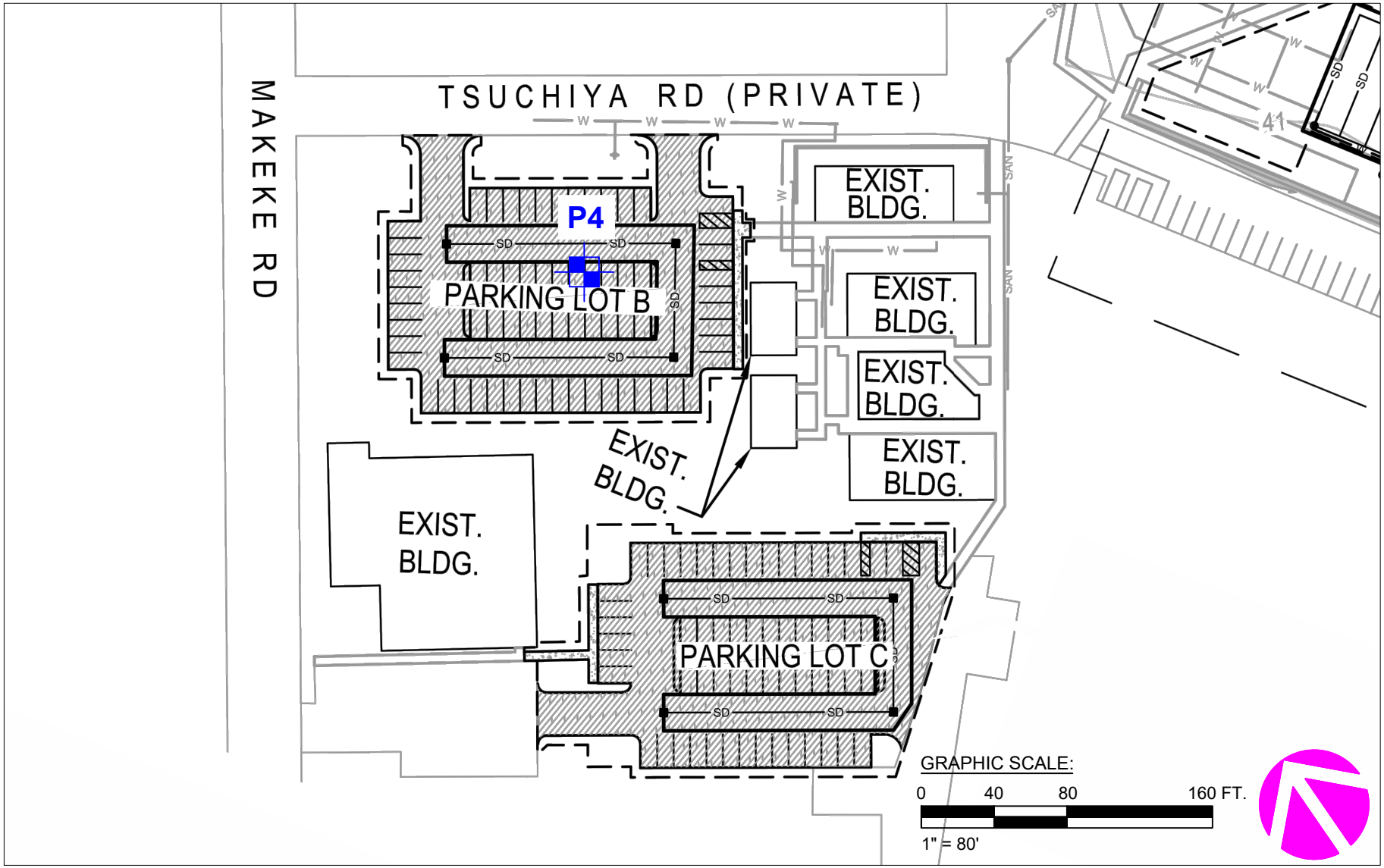
BORING LOCATION PLAN

Plate A2.2



LEGEND:

Approximate location of percolation tests

Reference: Grading Plan provided by Design Partners, Inc. on April 30, 2021.

Waimea High School - New Gymnasium

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BORING LOCATION PLAN

Plate A2.3

MAJOR DIVISIONS			GROUP DIVISIONS	TYPICAL NAMES
COARSE GRAINED SOILS (More than 50% of the material is LARGER than No. 200 sieve size.)	GRAVELS (More than 50% of coarse fraction is LARGER than the No. 4 sieve size.)	CLEAN GRAVELS (Little or no fines.)	GW	Well graded gravels, gravel-sand mixtures, little or no fines.
			GP	Poorly graded gravels or gravel-sand mixtures, little or no fines.
		GRAVELS WITH FINES (Appreciable amt. of fines.)	GM	Silty gravels, gravel-sand-silt mixtures.
			GC	Clayey gravels, gravel-sand-clay mixtures.
	SANDS (More than 50% of coarse fraction is SMALLER than the No. 4 sieve size.)	CLEAN SANDS (Little or no fines.)	SW	Well graded sands, gravelly sands, little or no fines.
			SP	Poorly graded sands or gravelly sands, little or no fines.
		SANDS WITH FINES (Appreciable amt. of fines.)	SM	Silty sands, sand-silt mixtures.
			SC	Clayey sands, sand-clay mixtures.
FINE GRAINED SOILS (More than 50% of the material is SMALLER than No. 200 sieve size.)	SILTS AND CLAYS (Liquid limit LESS than 50.)		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
			CL	Inorganic clays of high plasticity, lean clays.
			OL	Organic silts and organic silty clays of low plasticity.
	SILTS AND CLAYS (Liquid limit GREATER than 50.)		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
			CH	Inorganic clays of high plasticity, fat clays.
			OH	Organic clays of medium to high plasticity, organic silts.
HIGHLY ORGANIC SOILS			PT	Peat and other highly organic silts.
FORMATIONS				FRESH TO MODERATELY WEATHERED BASALT
				VOLCANIC TUFF / HIGHLY TO COMPLETELY WEATHERED BASALT
				CORAL

SAMPLE DEFINITION

2" O.D. Standard Split Spoon Sampler	Shelby Tube	RQD: Rock Quality Designation
3" O.D. Split Tube Sampler	Core Sample	Water Table

Waimea High School - New Gymnasium

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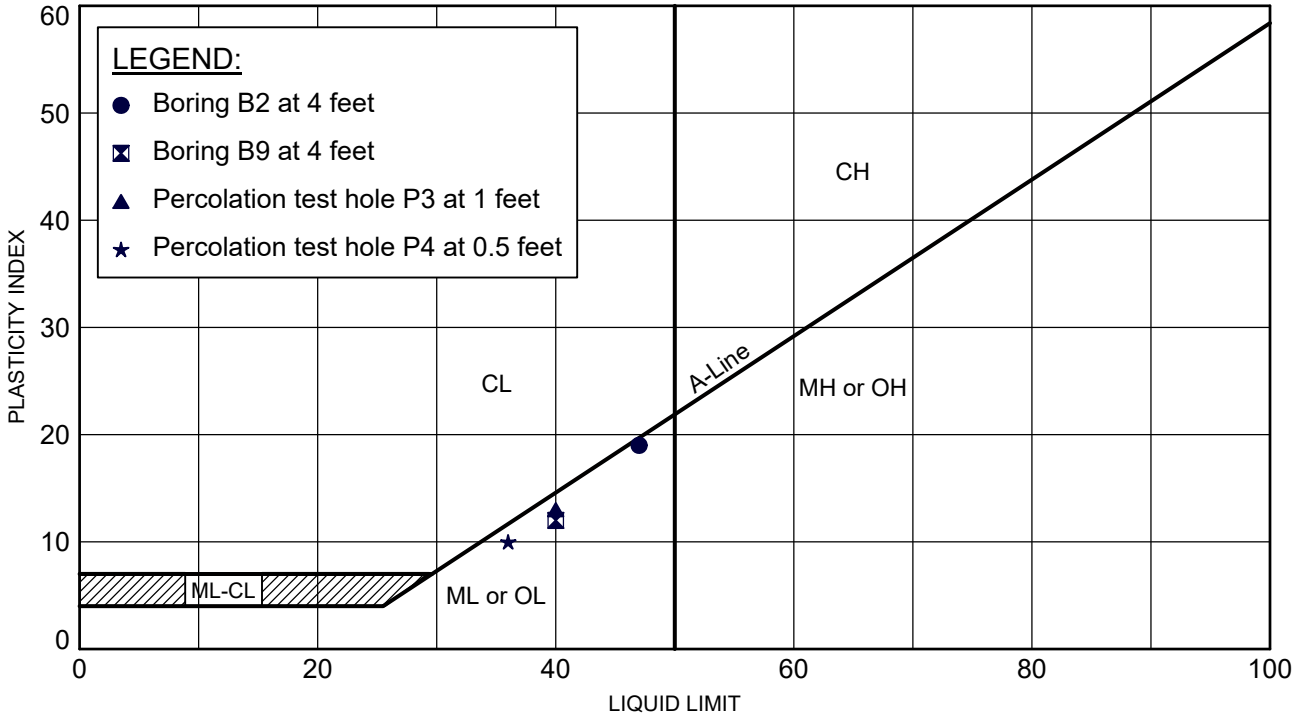
BORING LOG LEGEND

Plate A3.1

PLASTICITY CHART



GRADATION CHART

COMPONENT DEFINITIONS BY GRADATION	
COMPONENT	SIZE RANGE
Boulders	Above 12 in.
Cobbles	3 in. to 12 in.
Gravel	3 in. to No. 4 (4.76 mm)
Coarse	3 in. to 3/4 in.
Fine Gravel	3/4 in. to No. 4 (4.76 mm)
Sand	No. 4 (4.76 mm) to No. 200 (0.074mm)
Coarse Sand	No. 4 (4.76 mm) to No. 10 (2.0 mm)
Medium Sand	No. 10 (2.0 mm) to No. 40 (0.42 mm)
Fine Sand	No. 40 (0.42 mm) to No. 200 (0.074 mm)
Silt and Clay	Smaller than No. 200 (0.074 mm)

Waimea High School - New Gymnasium

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UNIFIED SOIL CLASSIFICATION SYSTEM

Plate
A3.2

Grade	Symbol	Description
Fresh	F	No visible signs of decomposition or discoloration. Rings under hammer impact.
Slightly Weathered	WS	Slight discoloration inwards from open fractures, otherwise similar to F.
Moderately Weathered	WM	Discoloration throughout. Weaker minerals such as feldspar decomposed. Strength somewhat less than fresh rock but cores cannot be broken by hand or scraped by knife. Texture preserved.
Highly Weathered	WH	Most minerals somewhat decomposed. Specimens can be broken by hand with effort or shaved with knife. Core stones present in rock mass. Texture becoming indistinct but fabric preserved.
Completely Weathered	WC	Minerals decomposed to soil but fabric and structure preserved (Saprolite). Specimens easily crumbled or penetrated.
Residual Soil	RS	Advance state of decomposition resulting in plastic soils. Rock fabric and structure completely destroyed. Large volume change.

Reference: Soil Mechanics, NAVFAC DM-7.1, Department of the Navy, Naval Facilities Engineering Command, September, 1986.

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GEOTECHNICAL ENGINEERING

Boring No.
B1

BORING LOG

PROJECT NAME Waimea High School - New Gymnasium
WORK ORDER NO. 21-6528.1 DRIVING WT. 140 lb. START DATE 10/14/21
SURFACE ELEV. 43.1 ± DROP 30 in. END DATE 10/14/21

REMARKS/ SAMPLE NO.	CORE RECOVERY (%)	RQD (%)	BLOWS PER FOOT	DRY DENSITY (pcf)	MOISTURE CONTENT (%)	DEPTH (ft)	GRAPHIC LOG	SAMPLE	MATERIAL DESCRIPTION
			16/12"	70	5				Silty SAND (SM) - Tan, slightly moist, loose.
			10/No Penetration	91	24				Clayey SILT (ML) - Reddish brown, moist, stiff. Boulder from 2 to 3.5 feet. Gray silty clay seam from 3.5 to 4.5 feet.
	73	61				5			MODERATELY WEATHERED BASALT (WM) - Gray, hard, vesicular, slightly fractured.
	68	68				10			
	82	69				15			End boring at 15.0 feet. Neither groundwater nor seepage water encountered. *Elevations based on Grading Plans provided by Design Partners, Inc. on April 30, 2021.
						20			
						25			
						30			
						35			

Plate A4.1

Hirata & Associates, Inc.
GEOTECHNICAL ENGINEERING

Boring No.
B2

BORING LOG

PROJECT NAME Waimea High School - New Gymnasium
WORK ORDER NO. 21-6528.1 DRIVING WT. 140 lb. START DATE 10/13/21
SURFACE ELEV. 45.9 ± DROP 30 in. END DATE 10/13/21

REMARKS/ SAMPLE NO.	CORE RECOVERY (%)	RQD (%)	BLOWS PER FOOT	DRY DENSITY (pcf)	MOISTURE CONTENT (%)	DEPTH (ft)	GRAPHIC LOG	SAMPLE	MATERIAL DESCRIPTION
Direct Shear Test			27/7" 10/No Penetration	89	12				Clayey SILT (ML) - Reddish brown, moist, stiff. Cobble at 0.5 feet.
Consolidation Test			22		21	5			Boulder from 3 to 4 feet.
			80/9" 10/No Penetration		22				COMPLETELY WEATHERED BASALT (WC) - Tannish gray, moist, medium hard.
	83	39				10			MODERATELY WEATHERED BASALT (WM) - Gray, hard, vesicular, slightly fractured. Highly fractured from 9.5 to 10.5 feet.
	77	50				15			
						20			End boring at 19.5 feet. Neither groundwater nor seepage water encountered.
						25			
						30			
						35			

Plate A4.2

Hirata & Associates, Inc.
GEOTECHNICAL ENGINEERING

Boring No.
B3

BORING LOG

PROJECT NAME Waimea High School - New Gymnasium
WORK ORDER NO. 21-6528.1 DRIVING WT. 140 lb. START DATE 10/12/21
SURFACE ELEV. 43.0 ± DROP 30 in. END DATE 10/12/21

REMARKS/ SAMPLE NO.	CORE RECOVERY (%)	RQD (%)	BLOWS PER FOOT	DRY DENSITY (pcf)	MOISTURE CONTENT (%)	DEPTH (ft)	GRAPHIC LOG	SAMPLE	MATERIAL DESCRIPTION
Sieve Analysis Test			7	69	16				Silty SAND (SM) - Brown, slightly moist, loose, with gravel.
			5	77	14				Clayey SILT (ML) - Reddish brown, moist, firm.
			8	83	18	5			Cobble at 4.5 feet.
			57/12"	86	27				HIGHLY WEATHERED BASALT (WH) - Brown, moist, medium hard.
			10/No Penetration			10			
	92	87							MODERATELY WEATHERED BASALT (WM) - Gray to brownish gray, hard, vesicular, slightly fractured.
	91	74				15			
						20			End boring at 20.0 feet.
									Neither groundwater nor seepage water encountered.
						25			
						30			
						35			

Plate A4.3

Hirata & Associates, Inc.
GEOTECHNICAL ENGINEERING

Boring No.
B4

BORING LOG

PROJECT NAME Waimea High School - New Gymnasium
WORK ORDER NO. 21-6528.1 DRIVING WT. 140 lb. START DATE 10/15/21
SURFACE ELEV. 41.1 ± DROP 30 in. END DATE 10/15/21

REMARKS/ SAMPLE NO.	CORE RECOVERY (%)	RQD (%)	BLOWS PER FOOT	DRY DENSITY (pcf)	MOISTURE CONTENT (%)	DEPTH (ft)	GRAPHIC LOG	SAMPLE	MATERIAL DESCRIPTION
			5/6"	97	26				Silty SAND (SM) - Dark brown, slightly moist, medium dense.
			8/6"	75	33				Clayey SILT (ML) - Reddish brown, moist, medium stiff.
Consolidation Test			18	90	33	5			
	99	89				10			SLIGHTLY WEATHERED BASALT (WS) - Gray, hard, vesicular, slightly fractured.
	95	72				15			Moderately weathered from 14.5 feet.
									End boring at 16.0 feet.
						20			Neither groundwater nor seepage water encountered.
						25			
						30			
						35			

Plate A4.4

Hirata & Associates, Inc.
GEOTECHNICAL ENGINEERING

Boring No.
B5

BORING LOG

PROJECT NAME Waimea High School - New Gymnasium
WORK ORDER NO. 21-6528.1 DRIVING WT. 140 lb. START DATE 10/13/21
SURFACE ELEV. 39.7 ± DROP 30 in. END DATE 10/14/21

REMARKS/ SAMPLE NO.	CORE RECOVERY (%)	RQD (%)	BLOWS PER FOOT	DRY DENSITY (pcf)	MOISTURE CONTENT (%)	DEPTH (ft)	GRAPHIC LOG	SAMPLE	MATERIAL DESCRIPTION
Consolidation Test			15	96	28				Clayey SILT (ML) - Reddish brown, moist, medium stiff.
			56/8" 10/No Penetration		19	5			Boulder from 5.5 to 7.5 feet. Gray silty clay seam from 7.5 to 9 feet.
						10			HIGHLY WEATHERED BASALT (WH) - Gray, medium hard, highly fractured.
	85	50							MODERATELY WEATHERED BASALT (WM) - Gray, hard, vesicular, moderately fractured.
	100	85				15			
						20			End boring at 20.0 feet. Neither groundwater nor seepage water encountered.
						25			
						30			
						35			

Plate A4.5

Hirata & Associates, Inc.
GEOTECHNICAL ENGINEERING

Boring No.
B6

BORING LOG

PROJECT NAME Waimea High School - New Gymnasium
WORK ORDER NO. 21-6528.1 DRIVING WT. 140 lb. START DATE 10/13/21
SURFACE ELEV. 43.9 ± DROP 30 in. END DATE 10/13/21

REMARKS/ SAMPLE NO.	CORE RECOVERY (%)	RQD (%)	BLOWS PER FOOT	DRY DENSITY (pcf)	MOISTURE CONTENT (%)	DEPTH (ft)	GRAPHIC LOG	SAMPLE	MATERIAL DESCRIPTION
Direct Shear Test			34	83	20				Clayey SILT (ML) - Brown to reddish brown, moist, stiff.
			65	92	23				
			54	98	19	5			Gray silty clay seam from 5.5 to 6.5 feet.
			30/5"	76	20				COMPLETELY WEATHERED BASALT (WC) - Gray, slightly moist, medium hard.
			10/No Penetration			10			MODERATELY WEATHERED BASALT (WM) - Gray, hard, vesicular, slightly fractured.
	86	73							
	85	82				15			
						20			End boring at 19.5 feet.
									Neither groundwater nor seepage water encountered.
						25			
						30			
						35			

Plate A4.6

Hirata & Associates, Inc.
GEOTECHNICAL ENGINEERING

Boring No. B7

BORING LOG

PROJECT NAME Waimea High School - New Gymnasium
WORK ORDER NO. 21-6528.1 DRIVING WT. 140 lb. START DATE 10/14/21
SURFACE ELEV. 45.1 ± DROP 30 in. END DATE 10/14/21

REMARKS/ SAMPLE NO.	CORE RECOVERY (%)	RQD (%)	BLOWS PER FOOT	DRY DENSITY (pcf)	MOISTURE CONTENT (%)	DEPTH (ft)	GRAPHIC LOG	SAMPLE	MATERIAL DESCRIPTION
Sieve Analysis Test			7	96	6				Silty SAND (SM) - Dark brown to light brown, slightly moist, loose.
			17/6"	105	6	5			
			26/6"	98	14				Clayey SILT (ML) - Reddish brown, moist, stiff.
			67	87	33	10			Brown in color at 8 feet.
									Boulder from 11.5 to 12.5 feet.
			79	88	26				HIGHLY WEATHERED BASALT (WH) - Gray, slightly moist, medium hard.
						15			End boring at 14.5 feet.
									Neither groundwater nor seepage water encountered.
						20			
						25			
						30			
						35			

Plate A4.7

Hirata & Associates, Inc.
GEOTECHNICAL ENGINEERING

Boring No.
B8

BORING LOG

PROJECT NAME Waimea High School - New Gymnasium
WORK ORDER NO. 21-6528.1 DRIVING WT. 140 lb. START DATE 10/14/21
SURFACE ELEV. 40.4 ± DROP 30 in. END DATE 10/14/21

REMARKS/ SAMPLE NO.	CORE RECOVERY (%)	RQD (%)	BLOWS PER FOOT	DRY DENSITY (pcf)	MOISTURE CONTENT (%)	DEPTH (ft)	GRAPHIC LOG	SAMPLE	MATERIAL DESCRIPTION
			53	78	21				Clayey SILT (ML) - Reddish brown, moist, stiff. Gray silty clay seam from 1.5 to 2.5 feet.
			95/11"	93	20				
			10/No Penetration			5			MODERATELY WEATHERED BASALT (WM) - Gray, hard, vesicular, highly fractured.
	48	13							
	100	75				10			Moderately fractured from 9.5 feet.
			34/7"		55				Gray silty clay seam from 11 to 13 feet.
			10/No Penetration						
	94	35							
						15			End boring at 15.0 feet. Neither groundwater nor seepage water encountered.
						20			
						25			
						30			
						35			

Plate A4.8

Hirata & Associates, Inc.
GEOTECHNICAL ENGINEERING

Boring No.
B9

BORING LOG

PROJECT NAME Waimea High School - New Gymnasium
WORK ORDER NO. 21-6528.1 DRIVING WT. 140 lb. START DATE 10/14/21
SURFACE ELEV. 41.1 ± DROP 30 in. END DATE 10/14/21

REMARKS/ SAMPLE NO.	CORE RECOVERY (%)	RQD (%)	BLOWS PER FOOT	DRY DENSITY (pcf)	MOISTURE CONTENT (%)	DEPTH (ft)	GRAPHIC LOG	SAMPLE	MATERIAL DESCRIPTION
						0			Silty SAND (SM) - Dark brown, dry, medium dense. Cobble at 0.5 feet.
Direct Shear Test			12	113	4				
			14/6"	99	6				
Consolidation Test			83/12"	84	19	5			Clayey SILT (ML) - Reddish brown, moist, stiff.
			54/9" 10/No Penetration	92	23				Very stiff at 8.5 feet.
						10			Boulder from 10 to 11 feet.
									MODERATELY WEATEHRED BASALT (WM) - Gray, hard, vesicular, slightly fractured.
						15			End boring at 15.0 feet.
									Neither groundwater nor seepage water encountered.
						20			
						25			
						30			
						35			

Plate A4.9

SITE EVALUATION/PERCOLATION TEST

Date/Time:	October 12, 2021 | 11:20 A.M.
Test performed by:	Hirata & Associates, Inc.
Project Name:	Waimea High School - New Gymnasium
Tax Map Key:	(4) 1-6-010: 004
Test Number:	P1

Elevation: ±41.3 ft.
Depth to Groundwater Table: >16 ft. below grade (Based on boring B4)
Depth to Bedrock (if observed): ±7 ft. below grade (Based on boring B4)
Diameter of Hole: 4 in.
Depth to Hole Bottom: 5 ft. below grade

Depth (inches)	**Soil Profile** (Color, texture, other)
0 – 12	Dark brown to light brown clayey silt
12 – 60	Reddish brown clayey silt

PERCOLATION READINGS

Time 12 inches of water to seep away: >30 min.
Time 12 inches of water to seep away: >30 min.

____ For percolation tests in sandy soils, record time intervals and water drops every 10 minutes for at least 1 hour.

__✓__ For percolation tests in non-sandy soils, presoak the test hole for at least 4 hours. Record time intervals and water drops at least every 10 minutes for 1 hour; or if the time for the first 6 inches to seep away is greater than 30 minutes, record time intervals and water drops at least every 30 minutes for 4 hours or until 2 successive drops do not vary by more than 1/16 inch.

Time interval	Drop in inches	Time interval	Drop in inches
* 30	5-9/16	* 30	4-1/8
* 30	3-15/16	* 30	5-5/16
* 30	5-7/16	* 30	6-3/4
* 30	5-5/8	* 30	5

Percolation Rate (time/final water level drop): 6 min/in

* Added water to test hole.

As the engineer responsible for gathering and providing site information and percolation test results, I attest to the fact that above site information is accurate and that the site evaluation was conducted in accordance with the provisions of Chapter 11-62, "Wastewater Systems" and the results were acceptable.

Rick I.K. Yoshida
Engineer's Signature/Stamp

SITE EVALUATION/PERCOLATION TEST

Date/Time:	October 12, 2021 | 11:45 A.M.
Test performed by:	Hirata & Associates, Inc.
Project Name:	Waimea High School - New Gymnasium
Tax Map Key:	(4) 1-6-010: 004
Test Number:	P2

Elevation: ±41.5 ft.
Depth to Groundwater Table: >15 ft. below grade (Based on boring B9)
Depth to Bedrock (if observed): ±13 ft. below grade (Based on boring B9)
Diameter of Hole: 4 in.
Depth to Hole Bottom: 5 ft. below grade

Depth (inches)	**Soil Profile** (Color, texture, other)
0 – 24	Brown silty sand
24 – 60	Reddish brown clayey silt

PERCOLATION READINGS

Time 12 inches of water to seep away: >30 min.
Time 12 inches of water to seep away: >30 min.

____ For percolation tests in sandy soils, record time intervals and water drops every 10 minutes for at least 1 hour.

__✓__ For percolation tests in non-sandy soils, presoak the test hole for at least 4 hours. Record time intervals and water drops at least every 10 minutes for 1 hour; or if the time for the first 6 inches to seep away is greater than 30 minutes, record time intervals and water drops at least every 30 minutes for 4 hours or until 2 successive drops do not vary by more than 1/16 inch.

Time interval	Drop in inches	Time interval	Drop in inches
* 30	1-11/16	* 30	1-3/4
* 30	2	* 30	1-3/4
* 30	1-15/16	* 30	1-13/16
* 30	1-7/8		

Percolation Rate (time/final water level drop): 16.6 min/in

* Added water to test hole.

As the engineer responsible for gathering and providing site information and percolation test results, I attest to the fact that above site information is accurate and that the site evaluation was conducted in accordance with the provisions of Chapter 11-62, "Wastewater Systems" and the results were acceptable.

Rick I.K. Yoshida
Engineer's Signature/Stamp

SITE EVALUATION/PERCOLATION TEST

Date/Time:	October 12, 2021 | 9:00 A.M.
Test performed by:	Hirata & Associates, Inc.
Project Name:	Waimea High School - New Gymnasium
Tax Map Key:	(4) 1-6-010: 004
Test Number:	P3

Elevation: ±47.9 ft.
Depth to Groundwater Table: N/A ft. below grade
Depth to Bedrock (if observed): N/A ft. below grade
Diameter of Hole: 4 in.
Depth to Hole Bottom: 5 ft. below grade

Depth (inches)	**Soil Profile** (Color, texture, other)
0 – 18	Brown clayey silt with gravel
18 – 60	Reddish brown clayey silt

PERCOLATION READINGS

Time 12 inches of water to seep away: >30 min.
Time 12 inches of water to seep away: >30 min.

____ For percolation tests in sandy soils, record time intervals and water drops every 10 minutes for at least 1 hour.

__✓__ For percolation tests in non-sandy soils, presoak the test hole for at least 4 hours. Record time intervals and water drops at least every 10 minutes for 1 hour; or if the time for the first 6 inches to seep away is greater than 30 minutes, record time intervals and water drops at least every 30 minutes for 4 hours or until 2 successive drops do not vary by more than 1/16 inch.

Time interval	Drop in inches	Time interval	Drop in inches
* 30	7/8	* 30	1
* 30	2	* 30	1-1/16
* 30	11/16	* 30	1-1/8
* 30	15/16	* 30	1-1/8

Percolation Rate (time/final water level drop): 26.7 min/in

* Added water to test hole.

As the engineer responsible for gathering and providing site information and percolation test results, I attest to the fact that above site information is accurate and that the site evaluation was conducted in accordance with the provisions of Chapter 11-62, "Wastewater Systems" and the results were acceptable.

RICK I.K. YOSHIDA
LICENSED PROFESSIONAL ENGINEER
No. 11118-C
HAWAII, U.S.A.

Rick I.K. Yoshida
Engineer's Signature/Stamp

SITE EVALUATION/PERCOLATION TEST

Date/Time:	October 12, 2021 | 9:00 A.M.
Test performed by:	Hirata & Associates, Inc.
Project Name:	Waimea High School - New Gymnasium
Tax Map Key:	(4) 1-6-009: 023
Test Number:	P4

Elevation: N/A ft.
Depth to Groundwater Table: N/A ft. below grade
Depth to Bedrock (if observed): N/A ft. below grade
Diameter of Hole: 4 in.
Depth to Hole Bottom: 5 ft. below grade

Depth (inches)	**Soil Profile** (Color, texture, other)
0 – 12	Brown clayey silt
12 – 60	Reddish brown clayey silt

PERCOLATION READINGS

Time 12 inches of water to seep away: >30 min.
Time 12 inches of water to seep away: >30 min.

____ For percolation tests in sandy soils, record time intervals and water drops every 10 minutes for at least 1 hour.

✓ For percolation tests in non-sandy soils, presoak the test hole for at least 4 hours. Record time intervals and water drops at least every 10 minutes for 1 hour; or if the time for the first 6 inches to seep away is greater than 30 minutes, record time intervals and water drops at least every 30 minutes for 4 hours or until 2 successive drops do not vary by more than 1/16 inch.

Time interval	Drop in inches	Time interval	Drop in inches
* 30	1-3/8	* 30	1-1/8
* 30	1-7/16	* 30	7/8
* 30	1-1/4	* 30	11/16
* 30	13/16	* 30	9/16

Percolation Rate (time/final water level drop): 53.3 min/in

* Added water to test hole.

As the engineer responsible for gathering and providing site information and percolation test results, I attest to the fact that above site information is accurate and that the site evaluation was conducted in accordance with the provisions of Chapter 11-62, "Wastewater Systems" and the results were acceptable.

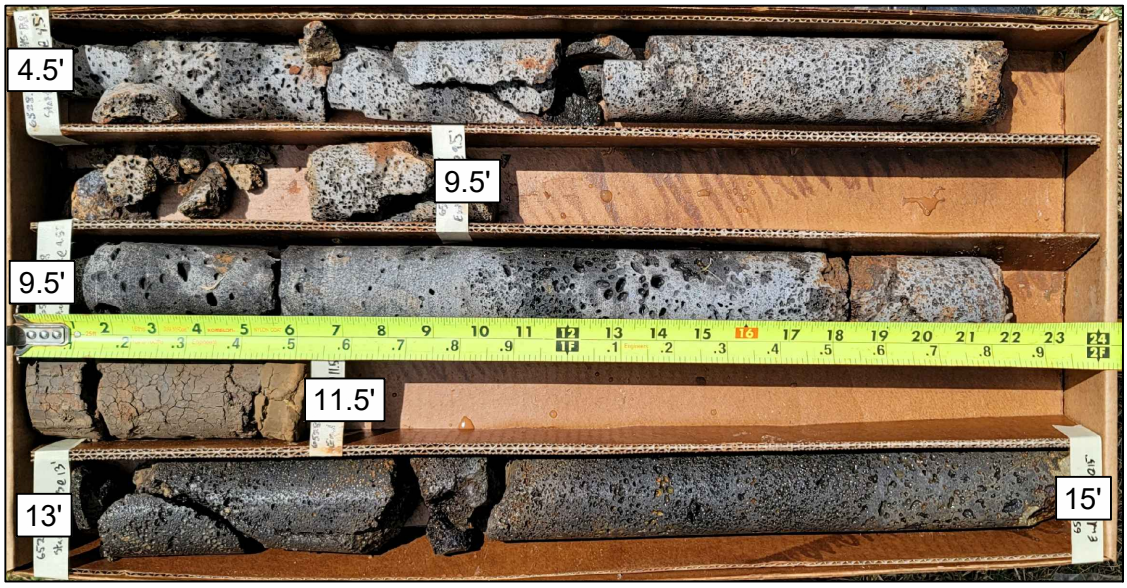
Rick I.K. Yoshida
Engineer's Signature/Stamp

Boring B2 from 3 to 19.5 feet

Boring B4 from 7.5 to 16 feet

	Waimea High School - New Gymnasium		
	HIRATA & ASSOCIATES, INC. Geotechnical Engineering	**SELECT CORE RECOVERY PHOTOS**	Plate A6.1
	W.O. 21-6528.1		

Boring B6 from 9.5 to 19.5 feet



Boring B8 from 4.5 to 15 feet

	Waimea High School - New Gymnasium		
	HIRATA & ASSOCIATES, INC. Geotechnical Engineering	**SELECT CORE RECOVERY PHOTOS**	Plate A6.2
	W.O. 21-6528.1		

APPENDIX B

LABORATORY TESTING

DESCRIPTION OF LABORATORY TESTING

CLASSIFICATION

Field classification was verified in the laboratory in accordance with the Unified Soil Classification System. Laboratory classification was determined by visual examination, and both Atterberg Limit tests and sieve analysis tests performed in general accordance with ASTM D 4318 and ASTM D 422, respectively. Results of the sieve analysis tests are plotted on Plate B6.1. The final classifications are shown at the appropriate locations on the Boring Logs, Plates A4.1 through A4.9.

MOISTURE-DENSITY

Representative samples were tested for field moisture content and dry unit weight, while disturbed samples were tested for moisture content. The dry unit weight was determined in pounds per cubic foot while the moisture content was determined as a percentage of dry weight. Representative amples were obtained using a 3-inch O.D. split tube sampler. Test results are shown at the appropriate depths on the Boring Logs, Plates A4.1 through A4.9.

CONSOLIDATION

Selected representative samples were tested for its consolidation characteristics. The test samples were 2.42 inches in diameter and 1 inch high. Porous stones were placed in contact with the top and bottom of the test sample to permit addition and release of pore fluid. Loads were then applied in several increments in a geometric progression, and the resulting deformations recorded at selected time intervals. Test results are plotted on the Consolidation Test reports, Plates B2.1 through B2.3.

SHEAR TESTS

Shear tests were performed in the Direct Shear Machine which is of the strain control type. Each sample was sheared under varying confining loads in order to

determine the Coulomb shear strength parameters, cohesion, and angle of internal friction. Test results are presented on Plates B3.1 and B3.2.

SWELL TEST

Swell tests were performed on representative soil samples by placing a 90 psf surcharge load on one-inch high specimens. The samples were inundated with water, and total expansion recorded after a period of at least 24 hours. Test results were recorded as a percentage of original height. Test results are summarized in the following table:

Sample	Sample Type	Recorded Expansion	Moisture Content Prior to Test
B4 @ 3’	Representative (Clayey Silt)	0.8%	33.2%
B6 @ 5.5’	Representative (Silty Clay)	5.2%	18.5%
B8 @ 3’	Representative (Clayey Silt)	0.1%	20.3%

PROCTOR TEST

Modified Proctor tests were performed in general accordance with ASTM D 1557 on bulk samples obtained from near test holes P3 and P4 at depths of about 1 foot. The test is used to determine the optimum moisture content at which the soil compacts to 100 percent dry density. Results are shown on Plates B4.1 and B4.2.

CALIFORNIA BEARING RATIO TEST

A CBR test was performed on a bulk sample obtained from near test hole P3 at a depth of about 1 foot, in general accordance with ASTM D 1883. The test is used to evaluate the relative quality of subgrade soils to be used in the design of flexible pavement. Results are shown on Plate B5.1.

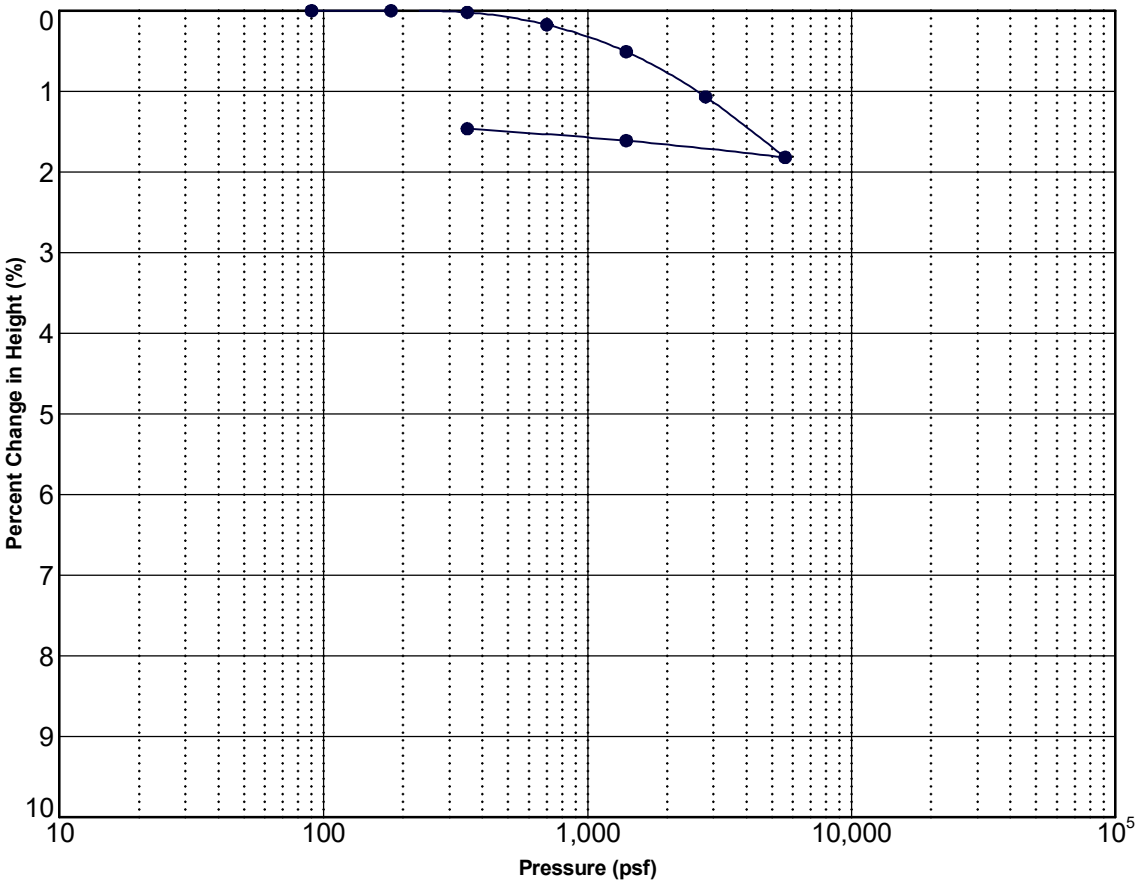
SIEVE ANALYSIS

Sieve analysis tests were performed on representative samples obtained from borings B3 and B7 at depths between 1 to 3.5 feet to determine the distribution of particle sizes in the soil. This test, conducted in general accordance with ASTM D 422, is used to classify granular soils. Test results are presented on Plate B6.1.

EXPANSION INDEX TEST

An expansion index test was performed in general accordance with ASTM D 4829. A surcharge load of 144 psf was placed on a one-inch high by four-inch diameter specimen which was molded to about 50 percent saturation. The sample was inundated with water, and total expansion recorded after volumetric equilibrium was reached. An expansion index test performed on the clayey silt obtained from boring B3 at depths between 3 and 6.5 feet resulted in an expansion index of 20, corresponding to a low expansion potential.

Consolidation Test Results



Sample Description

Boring No.: B4 Depth (ft): 4

Soil Description: Reddish brown clayey silt

	Moisture Content (%)	Dry Density (pcf)
Initial	33.0	89.5
Final	30.9	90.5

Waimea High School - New Gymnasium

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Geotechnical Engineering

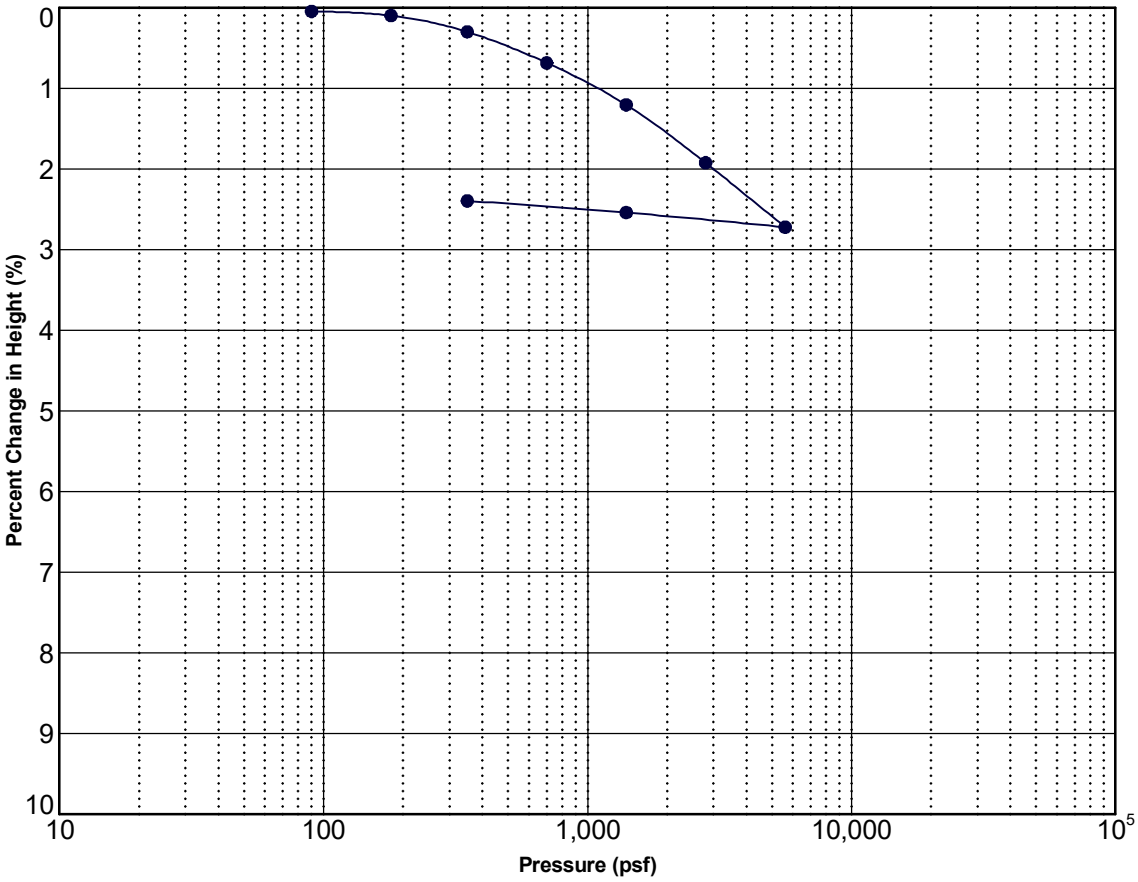
W.O. 21-6528.1

CONSOLIDATION TEST

ASTM D2435 / D2435M - 11

Plate B2.1

Consolidation Test Results



Sample Description

Boring No.: B5 Depth (ft): 2

Soil Description: Reddish brown clayey silt

	Moisture Content (%)	Dry Density (pcf)
Initial	28.2	95.8
Final	26.3	98.2

Waimea High School - New Gymnasium

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Geotechnical Engineering

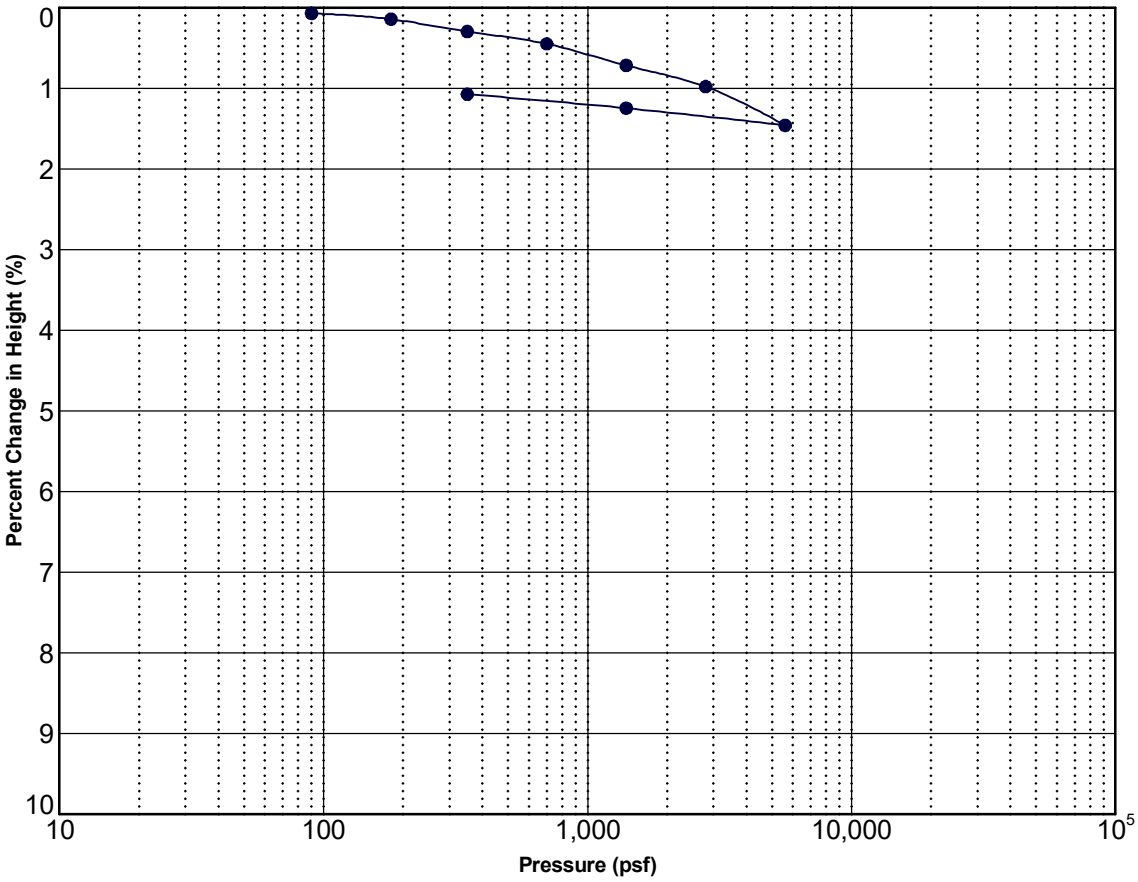
W.O. 21-6528.1

CONSOLIDATION TEST

ASTM D2435 / D2435M - 11

Plate B2.2

Consolidation Test Results



Sample Description

Boring No.: B9 Depth (ft): 4.5

Soil Description: Reddish brown clayey silt

	Moisture Content (%)	Dry Density (pcf)
Initial	19.0	83.7
Final	17.7	84.6

Waimea High School - New Gymnasium

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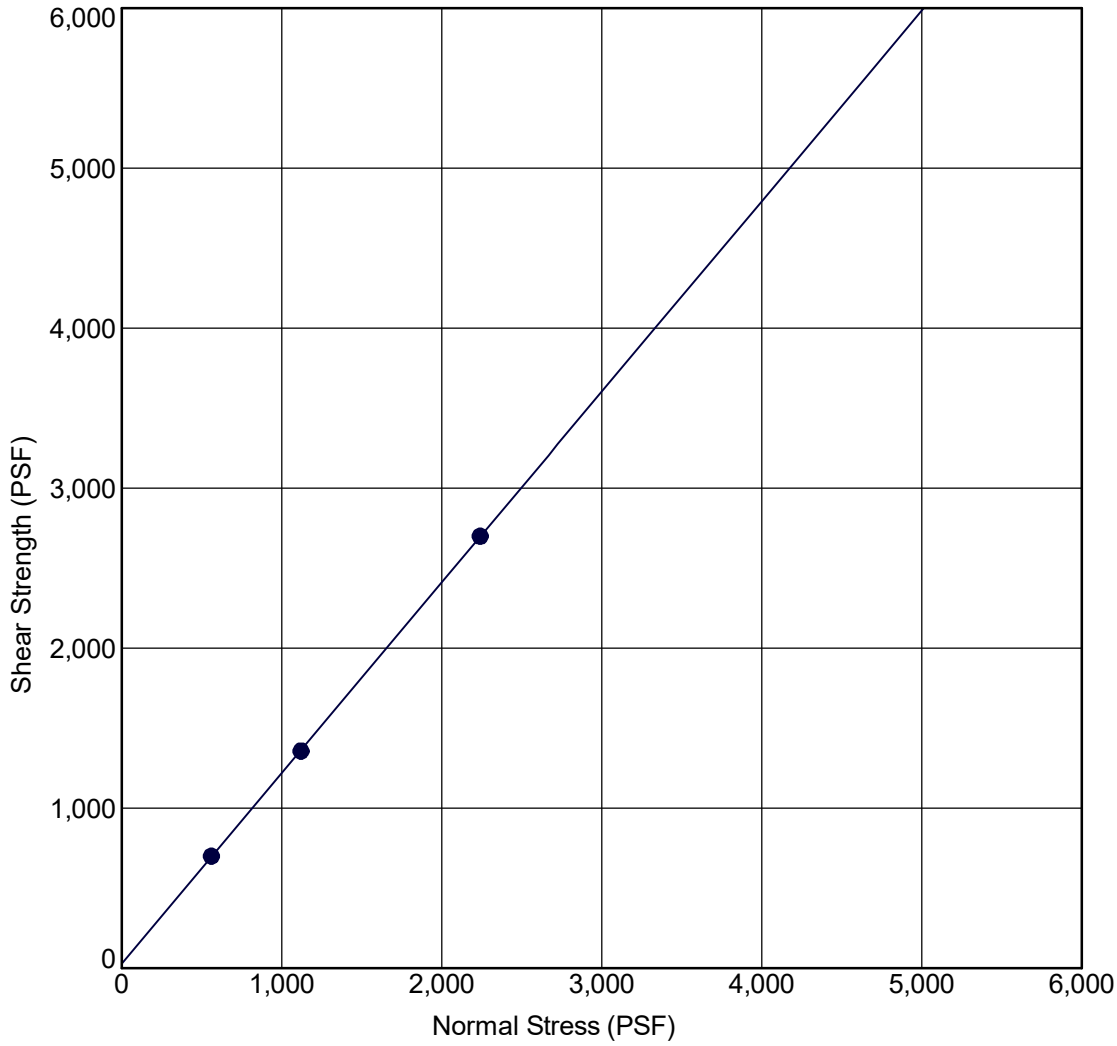
W.O. 21-6528.1

CONSOLIDATION TEST

ASTM D2435 / D2435M - 11

Plate B2.3

Direct Shear Test Results



Soil Data

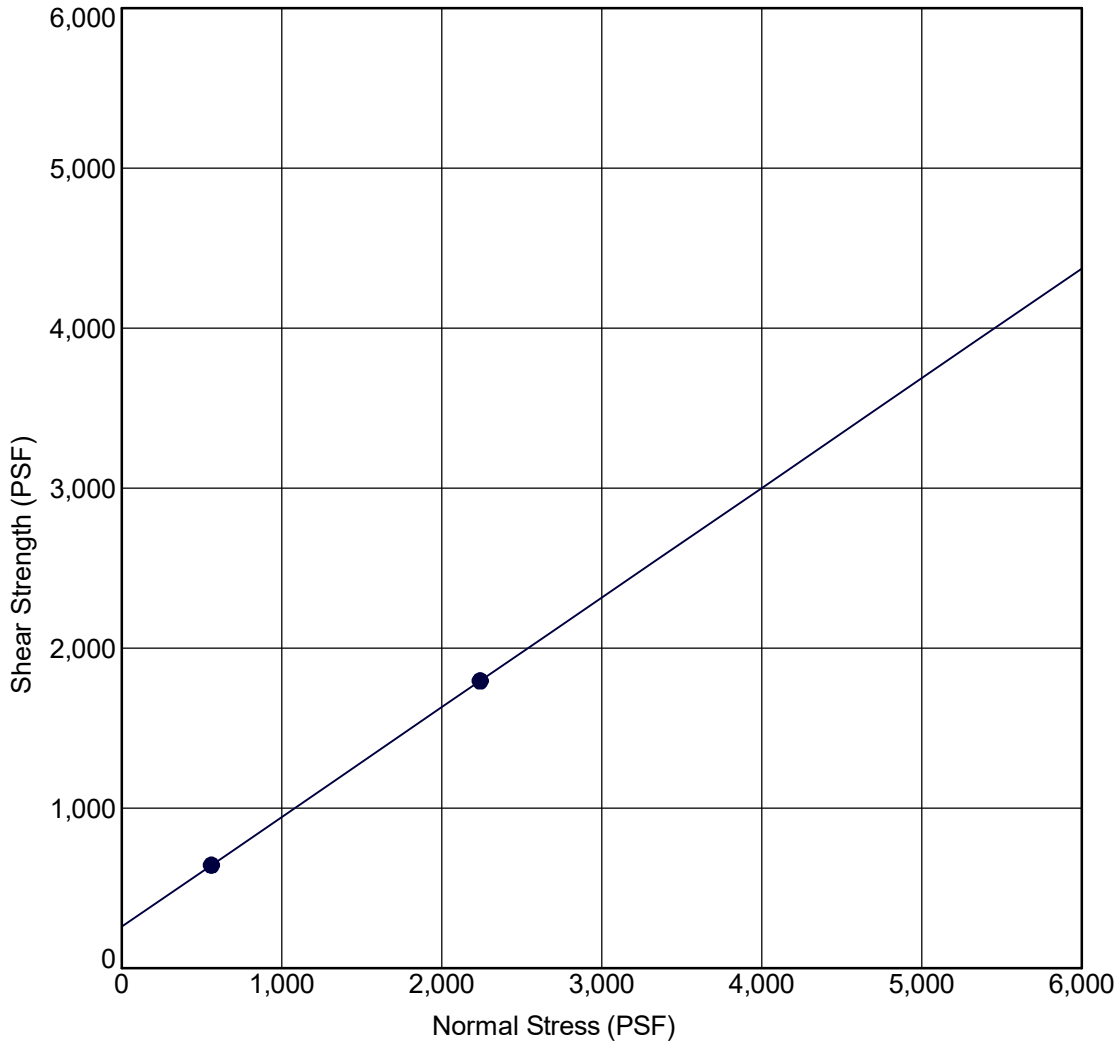
Boring No.: B2 Depth (ft): 2
Soil Description: Reddish brown clayey silt

Test Results

Strength Intercept (c): 29.2 PSF (Peak Strength)
Friction Angle (phi): 50.0 DEG (Peak Strength)

	Waimea High School - New Gymnasium		
	HIRATA & ASSOCIATES, INC. Geotechnical Engineering	**DIRECT SHEAR TEST**	Plate B3.1
	W.O. 21-6528.1	*ASTM D3080*	

Direct Shear Test Results



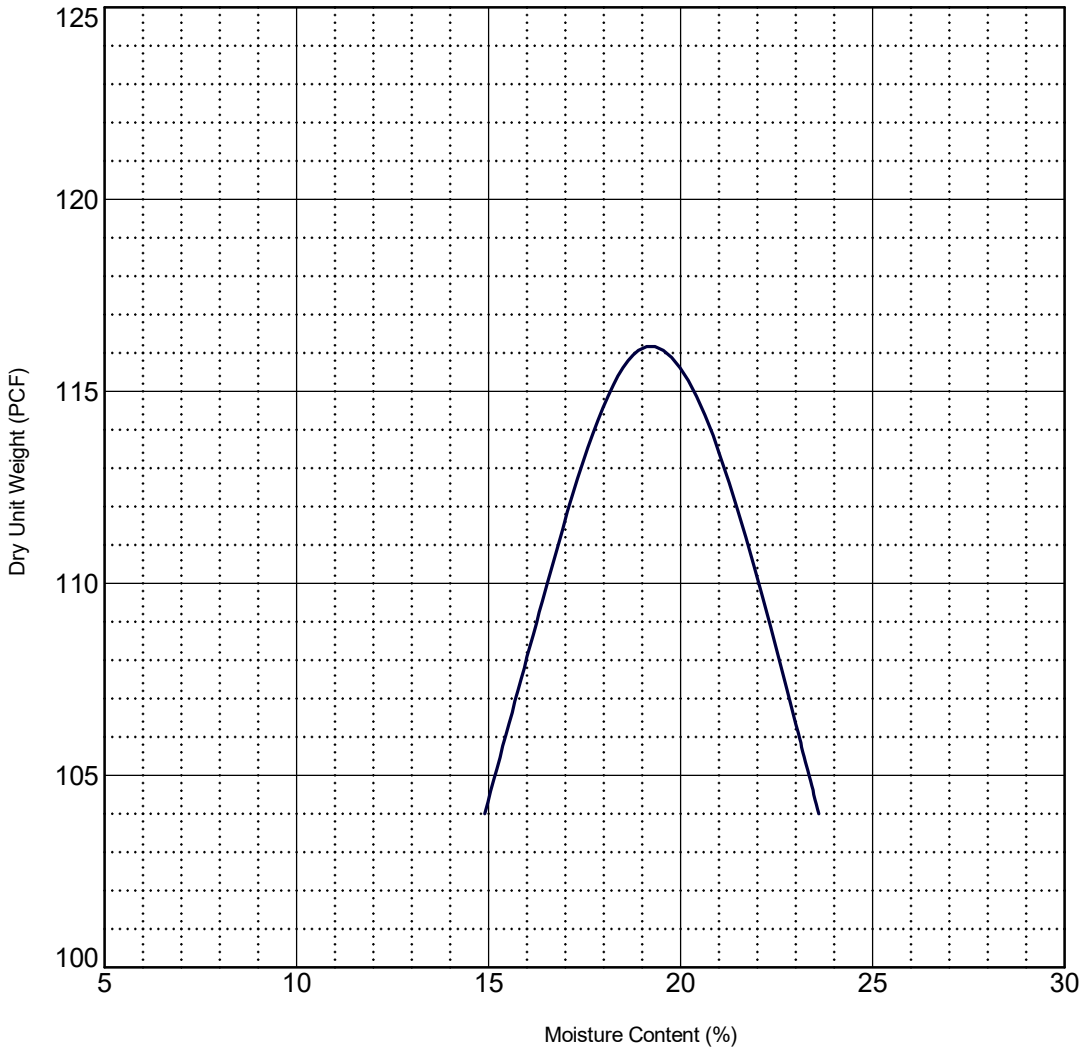
Soil Data

Boring No.: B9 Depth (ft): 2
Soil Description: Dark brown silty sand

Test Results

Strength Intercept (c): 259.2 PSF (Peak Strength)
Friction Angle (phi): 34.4 DEG (Peak Strength)

	Waimea High School - New Gymnasium		
HIRATA & ASSOCIATES, INC. Geotechnical Engineering	**DIRECT SHEAR TEST**		Plate B3.2
W.O. 21-6528.1		*ASTM D3080*	



Soil Data

Location: Percolation test hole P3 at 1 foot

Description: Reddish brown clayey silt

Test Results

Maximum Dry Density: 116.2 PCF

Optimum Moisture Content: 19.1 %

Waimea High School - New Gymnasium

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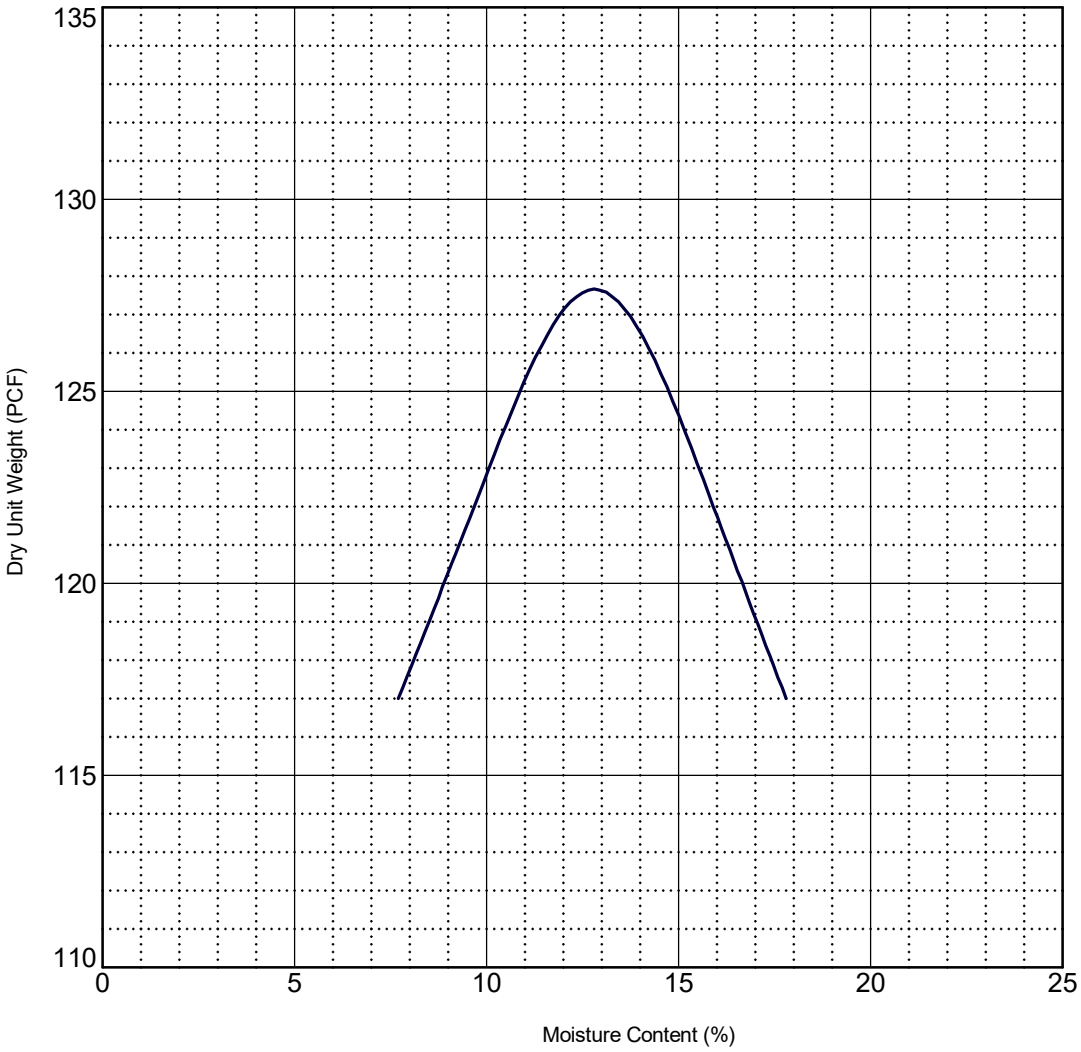
W.O. 21-6528.1

MODIFIED PROCTOR CURVE

ASTM D1557

Plate B4.1



Soil Data

Location: Percolation test hole P4 at 1 foot

Description: Reddish brown clayey silt

Test Results

Maximum Dry Density: 127.7 PCF

Optimum Moisture Content: 12.8 %

Waimea High School - New Gymnasium

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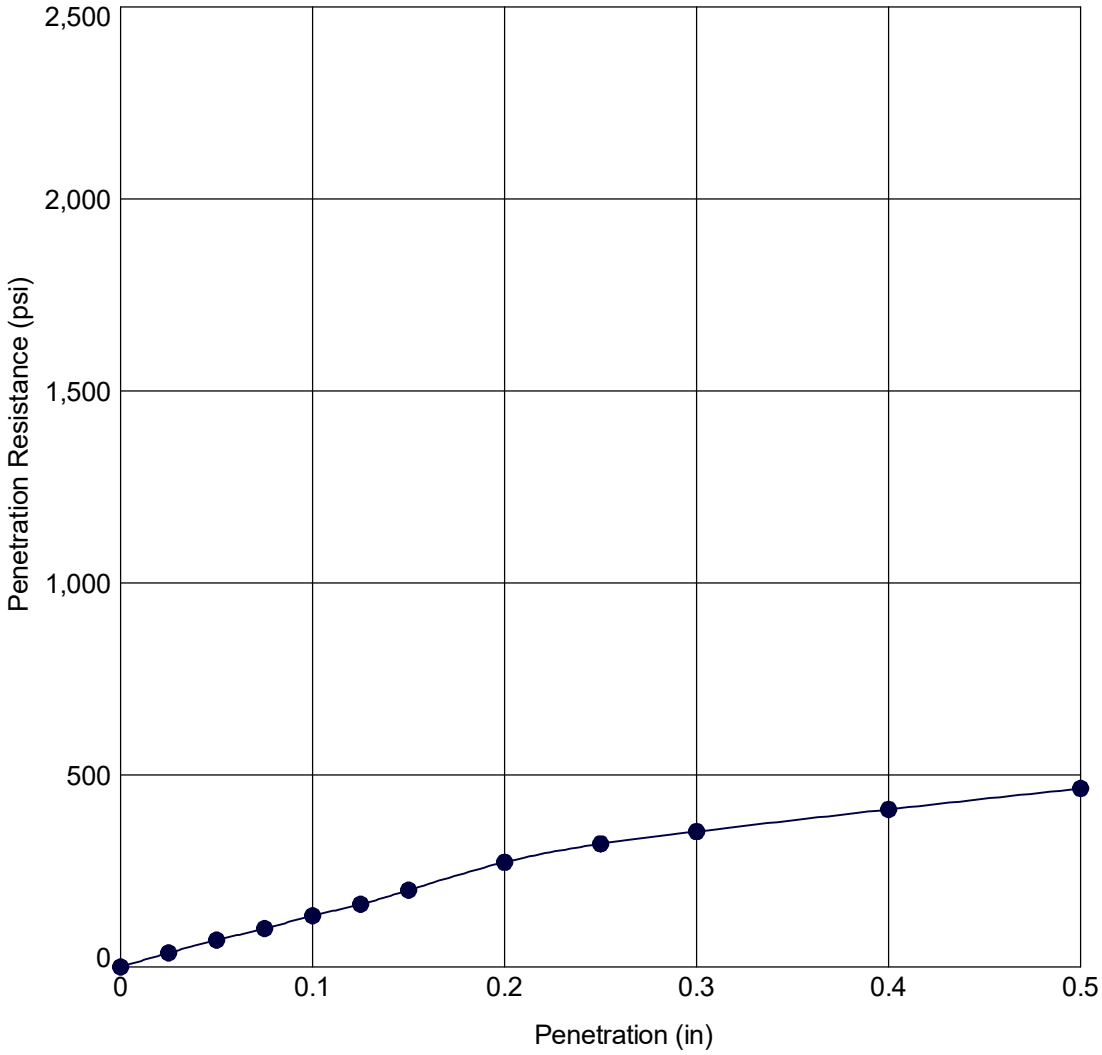
W.O. 21-6528.1

MODIFIED PROCTOR CURVE

ASTM D1557

Plate B4.2



Soil Data

Location:	Percolation test hole P3 at 1 foot
Description:	Reddish brown clayey silt
Sample Dry Density	113.3 pcf
Sample Moisture Content	19.8 %

Test Results

CBR Value:	17.0 %
Expansion:	0.3 %

Waimea High School - New Gymnasium

HIRATA & ASSOCIATES, INC.
Geotechnical Engineering

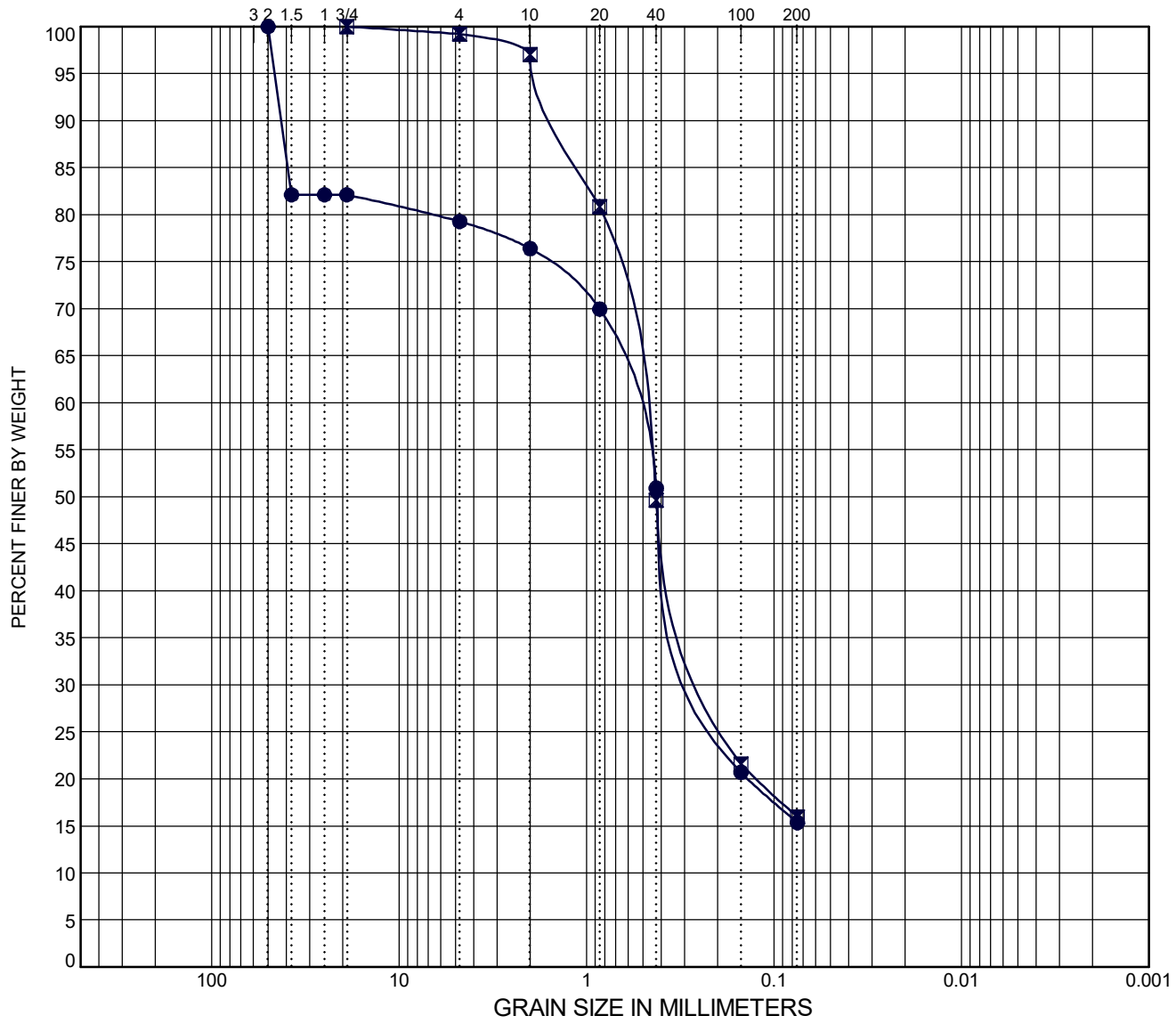
W.O. 21-6528.1

CBR STRESS PENETRATION CURVE

ASTM D1883

Plate B5.1

U.S. SIEVE OPENING IN INCHES | U.S. SIEVE NUMBERS | HYDROMETER



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Sample Location	Classification	%Gravel	%Sand	%Fines
● Boring B3 at 1 feet	Brown silty sand with gravel	20.7	63.9	15.3
⊠ Boring B7 at 2 feet	Dark brown silty sand	0.8	83.3	15.9

Sample Location	D100	D60	D30	D10	Cc	Cu
● Boring B3 at 1 feet	50	0.6	0.2	*	*	*
⊠ Boring B7 at 2 feet	19	0.5	0.2	*	*	*

Waimea High School - New Gymnasium

HIRATA & ASSOCIATES, INC.
Geotechnical Engineering

W.O. 21-6528.1

SIEVE ANALYSIS TEST

ASTM D422

Plate B6.1

Appendices

MEETING MINUTES

DESIGN PARTNERS INCORPORATED

ARCHITECTURE • PLANNING • INTERIORS
CIVIL • CONSTRUCTION MANAGEMENT

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06 June 2022

Record of Conversation

PROJECT: PS D020-500 Professional Services – Architectural Planning & Design
Waimea High School Gymnasium Athletic Facilities
DOE Project Number: Q43201-18

SUBJECT: Schematic Design Review Meeting Minutes

LOCATION: Waimea High School Library

ATTACHMENTS: None

ATTENDEES:

Name	Organization	Phone Number	Fax Number	Email
Mahina Anguay	Waimea High School – Principal			Mahina.Anguay@k12.hi.us
Jon Kobayashi	Waimea High School – Athletic Director			Jon.Kobayashi@k12.hi.us
Lois Keamoai	Waimea High School – Assistant Athletic Director			Lois.Keamoai@k12.hi.us
Richard Bass	HIDOE FDB Project Management – Project Coordinator			rbass@bowersandkubota.com
Kendall Ellingwood	Design Partners Incorporated – Principal-in-Charge	808-949-0044		kendall@designpartnersinc.com
Kristi Sumida	Design Partners Incorporated – Project Manager	808-949-0044		kristi@designpartnersinc.com

Summary of Discussion:

The following are comments based on the Schematic Design Submittal drawings:

1. Mahina Anguay (Waimea High School Principal) noted that there may be community reaction to the removal of existing trees. Kristi Sumida (Design Partners Incorporated, Project Manager) noted that the current off-site parking lot layout looks to avoid the existing trees, including the large banyan and monkeypod trees. There will be trees that will need to be removed in support of the proposed

Gymnasium and on-site parking (east of the proposed Gymnasium) site of which the design team looks to replace and/or relocate trees.

   a. The Design Team's landscape and planner consultant to work together to address the removal and/or replacement of the existing trees and assist with responses to any community concerns.

2. Mahina Anguay also asked whether the following items will be incorporated into the new Gymnasium:

   a. Loudspeakers for surround sound

      1. Infrastructure for the loudspeakers can be included

   b. Ability to livestream games, events, etc.

      1. Design Team to study a location for a permanent camera, most likely centered on the south Gymnasium wall, facing the home team

      2. Infrastructure to support the camera to be provided by the construction contract, however camera equipment may need to be funded and purchased by other means (to be confirmed)

   c. Location to plug in AV controls for sound and video playback

   d. Design Team to coordinate with Waimea HS Tech Coordinator, John Altomare (John.Altomare@k12.hi.us)

3. Discussed adding infrastructure to support a video screen adjacent to the scoreboards (both sides of the Main Court). Video screens themselves would be purchased/funded by means outside the construction contract.

4. Confirmed current Main Court bleachers have a seating capacity of 824 seats. Home team to be located on the north side, thus proposed center court logo facing home team.

5. Training Room to be updated to include built-in casework as required by the DOE Education Specifications for High Schools

6. Current Multipurpose Room to be revised to a Weight Room and be outfitted as such with mirrors, appropriate flooring, etc.

   a. Request to add a set of exterior double doors and revise the exterior concrete walkway to a larger concrete pad to allow for expanded outdoor use. Having this flexibility will be useful with what was learned during the coronavirus pandemic.

7. Laundry Room: Ideally, two sets of washers and dryers, would be useful, however in past DOE projects, construction contracts only allowed one washer and one dryer. Infrastructure and space for a second set can be added, however the purchase of the additional washer and dryer would be by other funds.

8. Conditioning of Existing Buildings "S", "T" and "U": Mahina Anguay asked whether the school could take possession of the air conditioning units following construction completion. Richard Bass (DOE Project Coordinator) noted that he will investigate what would be allowed.

9. Exterior Building Lighting: Confirmed there will be exterior building lights and the Design Team to add light shields.
10. Building Master Key System:
    a. Request for a standalone master key system (separate from the remainder of the campus)
    b. Coaches' access limited to the following:
        1. Team Storage
        2. Gymnasium Main Court
        3. Locker Rooms
        4. Weight Room
11. Main Court Striping:
    a. Current Main Court striping includes "Waimea" on the west end, "Menehunes" on the east end, "KIF" within the keys, and the Menehunes mascot in the center court.
    b. Jon Kobayashi (Waimea HS Athletic Director) noted that the existing Gymnasium striping differs. Existing striping includes "Waimea" on the short ends of the court, "Menehunes" and its mascot on both long ends, and "W" in the center court.
    c. Kendall Ellingwood (Design Partners Incorporated, Principal-in-Charge) stated that Design Partners can present a couple of striping options for review and comment.
12. Existing Gymnasium Orientation:
    a. Jon Kobayashi noted that the jalousies within the existing Gymnasium has to be closed at times to block the glare that makes it difficult to conduct games and asked whether a tint could be added to the windows within the new Gymnasium to reduce any potential glare. The Design Team will add appropriate tint to the glazing.
    b. Jon Kobayashi also noted that at times, depending on the origin of the rain event, i.e. from Ni'ihau, rain can enter the building.
13. Site Grading:
    a. Kristi Sumida mentioned that the existing site slopes from north to south with the high point being near the existing Music Building. As such, the finished floor elevation of the proposed Gymnasium will be at a midpoint between the low and high points to cost effectively balance the project site.
    b. With that noted, the grading lends itself to allowing for a protected maintenance area on the north side of the proposed Gymnasium. The exterior wall of this space will also act as a retaining wall and will be secured with grating above and a lockable gate serving as an entry point. A question was brought up as to how vehicles would be able to access this area should equipment be located within this space. Further study will need to be conducted.
14. Existing Courtyard:
    a. Mahina Anguay noted that the existing courtyard is currently the site for events such as graduation. Mahina asked whether the existing portable outdoor bleachers could be

relocated such that it can be a functional part of the courtyard design. Mahina also requested a couple of options for both a small and a larger graduation ceremony to which Kendall Ellingwood responded that options could be presented for the school's review and comment.

15. Existing Gymnasium: Brief discussion held on the future of the existing Gymnasium. Design Partners and DOE (Richard Bass, Gaylyn Nakatsuka) had a meeting on February 11, 2022, with the County of Kaua'i Mayor and Department of Parks and Recreation to discuss among other topics, whether the County would be interested in taking ownership of the existing Gymnasium (Please refer to Waimea HS Gym_County of Kauai Meeting Minutes.pdf for additional information) In summary, the County does not want to take on ownership of the existing Gymnasium without conducting their own due diligence over concerns over potential maintenance costs. Mahina Anguay noted that the existing Gymnasium has had structural repairs within the last 5 years or so.
16. Current Schedule:
    a. Preliminary Design Submittal to DOE: July 19, 2022
    b. Final Design Submittal: October 5, 2022
    c. Bid Documents Complete: March 2023
    d. Anticipated Building Permit Approval: November 2023

The above represents the writer's understanding of the discussions and a complete and accurate record of the decisions and agreements made. Amendments to this record shall be made in writing to the author within 5 days from the date of this document.

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11 February 2022

Record of Conversation

PROJECT: PS D020-500 Professional Services – Architectural Planning & Design
Waimea High School Gymnasium Athletic Facilities
DOE Project Number: Q43201-18

SUBJECT: County of Kaua'i – Parking Lot Discussion Meeting Minutes

LOCATION: Virtual, Google Meets

ATTACHMENTS:

1. Waimea HS Gym Site Plan
2. Waimea HS Gym Additional Parking Options

ATTENDEES:

Name	Organization	Phone Number	Email
Derek Kawakami	County of Kaua'i Office of the Mayor, Mayor		mayor@kauai.gov
Sarah Blane	County of Kaua'i Office of the Mayor, Chief of Staff		
Patrick Porter	County of Kaua'i Parks & Recreation Department, Director		pporter@kauai.gov
Gaylyn Nakatsuka	DOE, Office of Facilities & Operations, Facilities Development Branch/Planning Section	808-784-5088	gaylyn.nakatsuka@k12.hi.us
Richard Bass	DOE Project Coordinator	808- 784-5135	rbass@bowersandkubota.com
Kendall Ellingwood	Design Partners Incorporated, Principal-in-Charge	808-949-0044	kendall@designpartnersinc.com
Kristi Sumida	Design Partners Incorporated, Project Manager	808-949-0044	kristi@designpartnersinc.com
Kanako Furchi	Design Partners Incorporated, Project Architect	808-949-0044	ksuzuki@designpartnersinc.com

Summary of Discussion:

1. The intent of this meeting is to discuss the potential use of a portion of County of Kaua'i owned property, identified as TMK (4)1-6-009:023, an open area north of the existing Waimea Neighborhood Center, for a new parking lot in support of the new Waimea High School Gymnasium.
2. Gaylyn Nakatsuka (Department of Education, Office of Facilities & Operations, Facilities Development Branch / Planning Section) noted that the replacement of the existing Waimea High School gymnasium is of high priority as it is one of the few remaining wood constructed gymnasiums still being used. Construction funds have also been obtained from the Legislature and will lapse in 2024, thus the project will need to go out to bid by June 2024.
3. Gaylyn Nakatsuka also noted that the proposed parking lot, on County owned land, could be a shared use which could benefit the county for use by the Waimea Neighborhood Center, perhaps during the day, and Waimea High School during the afternoon / evening during school events and activities. The agreement between the County of Kaua'i and the State/Department of Education would also identify repair and maintenance responsibilities.
4. Kristi Sumida (Project Manager, Design Partners Incorporated) presented the proposed site plan noting the new Gymnasium, existing Gymnasium and Athletic Complex. The state-owned property of which most of the Waimea High School campus is situated, is not conducive to providing the required parking. (Approximately 103 parking stalls are required and is based on the County of Kaua'i Comprehensive Zoning Ordinance parking requirement of 1 parking stall per 8 seats; 824 seats total per the current design) It was noted that the design team has had past discussions with Waimea High School and identified areas of potential parking within the Waimea High School campus, however these areas were not ideal for the school's use for it would require visitors to traverse through the campus which poses a safety and security issue.
5. Mayor Derek Kawakami and Patrick Porter (County of Kaua'i Parks and Recreation Department Director) were acceptable to using the open area for parking and sees the benefit of having it be shared used. Mayor Kawakami provided his support for the parking situation and asked that the team work together with Patrick Porter.
6. Maintenance of the Proposed Parking Lot: Mayor Kawakami asked who would be responsible for the maintenance of the proposed parking lot, whether it be the County or the State. Gaylyn Nakatsuka responded that if the land is turned over to the State, the DOE would be responsible for its upkeep and if the County retains ownership, then the State would look into providing funds to the County with an agreement dictating such costs.
7. Gaylyn Nakatsuka also brought up the issue of what to do with the existing Waimea High School gymnasium and whether the County would be interested in taking ownership of the existing gymnasium. There was some repair work done in the past and if the County was interested, documentation could be forwarded. Once such improvement noted was the addition of one accessible exit at the gymnasium. Although one was added, not all exits are accessible, and any future accommodations would need to be included in the costs should the existing gymnasium be retained. If the gymnasium were to be demolished, the DOE can work with the County to ensure the property is left in a condition that will work for the County.

8. While the County could see the benefit in retaining the existing gymnasium into their portfolio for community use, there was concern expressed over the potential costs to maintain and repair the gymnasium and its useful life. The existing gymnasium's location near the Waimea Neighborhood Center and close proximity to the ballpark and pool makes it an attractive use, however, the County would need to conduct their own due diligence before making any decisions. Further discussions will be required.
9. Electric Vehicle (EV) Parking: Mayor Kawakami asked whether EV parking would be provided for its state law to provide such parking when a minimum 100 parking stalls are provided. Gaylyn Nakatsuka asked whether there was community need and acknowledged that some schools on Oahu have EV parking and the DOE's own Facilities building (on Oahu) also has EV parking. Kendall Ellingwood (Principal in Charge, Design Partners Incorporated) asked that if EV parking is required, that the requirements be provided to the design team.
10. Emergency Shelter Use: Gaylyn Nakatsuka noted that the new gymnasium will be designed to be able to be used as an emergency shelter.
11. Gaylyn Nakatsuka also noted that there is a bill out there whereby County land would be turned over to the state and depending on the County, there may be an issue with this transfer. Mayor Kawakami noted that unfortunately, they are used to this, thus doesn't see this as a huge deal.
12. Mayor Kawakami also pointed out that the County of Kaua'i recently acquired over 400 acres of agricultural land nearby (in Waimea) from the Faye family whereby there are plans for future workforce housing, recreation, and economic uses for the Westside community (Please see the website, waimea400.com for additional information regarding the Waimea 400 Conceptual Master Plan process). Because of its close proximity to Waimea High School, it could also provide opportunities for the school.
13. In conclusion, Mayor Kawakami provides his support to the proposed parking lot and Waimea High School for the community and school deserves a new gymnasium. To support any land use agreements and/or acquisition, the County can also assist in assembling a team consisting of the Patrick Porter, the County Managing Director, County attorneys, and representation from the Planning Department. Further discussions to continue between the County and State/DOE on a path forward for the proposed parking lot and future of the existing Waimea High School gymnasium.

The above represents the writer's understanding of the discussions and a complete and accurate record of the decisions and agreements made. Amendments to this record shall be made in writing to the author within 5 days from the date of this document.

CONCEPT DESIGN:
SITE PLAN

SCALE 1” = 100’-0”

PROPOSED PARKING LOT
21 STALLS

PROPOSED PARKING LOT
68 STALLS

WAIMEA NEIGHBORHOOD CENTER

EXISTING GYM


Huakai Rd
Waimea High School
Makeke Rd
Tsuchiya Rd
Ola Rd
50
Gina's Anykine Grinds Cafe
Waimea River Park
Ola Rd

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07 October 2021

Record of Conversation

PROJECT: PS D020-500 Professional Services – Architectural Planning & Design
Waimea High School Gymnasium Athletic Facilities
DOE Project Number: Q43201-18

SUBJECT: Parks & Recreation Department Meeting Minutes

LOCATION: Google Meets Teleconference

ATTACHMENTS:

1. Concept Site Plan

ATTENDEES:

Name	Organization	Phone Number	Fax Number	Email
William Trugillo	Chief of Planning & Development County of Kaua'i Parks & Recreation			wtrugillo@kauai.gov
Wally Rezentes	Deputy Director County of Kaua'i Parks & Recreation			wrezentes@kauai.gov
Kendall Ellingwood	Design Partners Incorporated – Principal-in-Charge	808-949-0044		kendall@designpartnersinc.com
Kristi Sumida	Design Partners Incorporated – Project Manager	808-949-0044		kristi@designpartnersinc.com

Summary of Discussion:

1. Kendall Ellingwood (Design Partners Incorporated, Principal-in-Charge) started the presentation off by noting that the Department of Education has obtained construction funding for the new Gymnasium, thus the design phase is underway concurrent with the entitlement and permit phases. The purpose of today's discussion is to discuss the potential parking on the County-owned parcel currently housing the Waimea Neighborhood Center, existing Waimea HS Gymnasium and Athletic Complex.

2. The Department of Education intends to build a new Gymnasium on the state-owned parcel comprising of the Waimea High School campus. Per the County of Kaua'i Comprehensive Zoning Ordinance, one parking stall per 8 seats will be required. As such, with 824 seats proposed, a total of 103 stalls would be required.
3. Given the lack of available space on the Waimea High School campus, the project proposes to add a new paved parking lot on the county-owned parcel, in an open area just north of the Waimea Neighborhood Center and existing Waimea HS Gymnasium.
4. Wally Rezentes (County of Kaua'i Parks and Recreation Department, Deputy Director) is open to providing the noted space for parking. Noted that the adjacent Waimea Neighborhood Center has public activities and could benefit from having access to the new parking lot as well.
    a. Request for a letter from the DOE requesting the area for parking purposes to be submitted as the issue may need a 'head nod' at the County level and in addition, City Council and/or various County department approvals.
    b. Letter to start the dialogue/process to construct parking lot on County land.
5. William Trugillo (County of Kaua'i, Parks and Recreation Department, Chief of Planning & Development) noted that schools were once under County control and now schools are under state control, thus the reason a portion of the existing Waimea HS campus on county property. Noted that while the school may use the nearby softball field, the County maintains it.
6. Kristi Sumida (Design Partners Incorporated, Project Manager) inquired if there were any formal agreements between the County and State regarding the use of parking as it was previously observed that Waimea HS uses parking stalls on County-owned land.
    a. William Trugillo noted that there is no formal agreement, more of a 'handshake' agreement.
    b. Currently, Waimea HS staff/visitors park in the stalls along Tsuchiya Road (north of Captain Cook Memorial Park) and during events, park along Tsuchiya Road in unmarked stalls.
    c. A formal written agreement between the Department of Education (DOE) and the County will be required for the current parking arrangement and new parking lot (both on County property).
7. William Trugillo also asked whether the proposed new parking lot (area north of Waimea Neighborhood Center) would integrate with the existing lot in the area. Kristi Sumida responded that the design team could look into what can be done given its close proximity to one another.
8. Kendall Ellingwood asked both Wally Rezentes and William Trugillo whether the County, in their opinion, would be interested in taking on the existing Gymnasium once the new Waimea HS Gymnasium is built and operational. Kendall Ellingwood noted that this is merely to gauge their temperature and that the Department of Education would be reaching out for more formal discussions/agreement(s).
    a. Wally Rezentes expressed concern for acquiring the Gymnasium knowing its age, potential upkeep costs and repairs.

b. Wally Rezentes noted that the County has spent money in the past when taking over existing buildings and a decision to do such in this case would need to come from officials above himself and William Trugillo.

c. Wally Rezentes suggested speaking with Mayor Kawakami should the DOE want to pursue the matter further.

d. Wally Rezentes mentioned there was discussion at one point whereby the DOE could use the Gymnasium during school hours and the County at night. In the end, any agreement(s) would need to involve Mayor Kawakami.

9. Moving Forward:

a. DOE to have additional discussions directly with the County should the DOE decide to pursue the transfer of ownership of the Gymnasium to the County. Discussions to include Mayor Derek Kawakami.

b. Formal letter to the County of Kaua'i Department of Parks and Recreation Director Patrick Porter regarding proposed parking lot can be addressed to.

c. A formal written agreement between the Department of Education (DOE) and the County will be required for the current parking arrangement and new parking lot (on County land).

The above represents the writer's understanding of the discussions and a complete and accurate record of the decisions and agreements made. Amendments to this record shall be made in writing to the author within 5 days from the date of this document.

CONCEPT DESIGN:
SITE PLAN

SCALE 1” = 100’-0”

PROPOSED PARKING LOT
21 STALLS

PROPOSED PARKING LOT
68 STALLS

WAIMEA NEIGHBORHOOD CENTER

EXISTING GYM

DESIGN PARTNERS INCORPORATED

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12 August 2020

Record of Conversation

PROJECT: PS D020-500 Professional Services – Architectural Planning & Design
Waimea High School Gymnasium Athletic Facilities
DOE Project Number: Q43201-18

SUBJECT: Site Selection Meeting Minutes

LOCATION: Go-to-Meeting Teleconference

ATTACHMENTS:

1. Due Diligence Study – Site Selection Meeting Presentation

ATTENDEES:

Name	Organization	Phone Number	Fax Number	Email
Dino Pabre	Waimea HS Vice Principal	808-286-2064	808-338-6807	dino.pabre@k12.hi.us
Jon Kobayashi	Waimea HS Athletic Director	808-338-6800	808-338-6807	jon.kobayashi@k12.hi.us
Lynn Antonio	ASA	808-652-9778		Lynn.antonio@k12.hi.us
Eric Agena	DAGS	808-274-3033	808-274-3035	Eric.m.agena@hawaii.gov
Kent Tomimoto	DAGS	808-274-3030		Kent.K.Tomimoto@hawaii.gov
Kendall Ellingwood	Design Partners Incorporated – Principal in Charge	808-949-0044		kendall@designpartnersinc.com
Kristi Sumida	Design Partners Incorporated – Project Manager	808-949-0044		kristi@designpartnersinc.com
Kaiemi Young	Design Partners Incorporated – Architect	808-949-0044		kyoung@designpartnersinc.com

Summary of Discussion:

1. Following our previous meeting, held July 15, 2020 and follow-on email correspondence, the direction was to proceed with the open site south of the existing Administration and Music buildings. The intent of this site selection meeting is to discuss the further development of this site and varying building options.
2. Kristi Sumida (Project Manager, Design Partners Incorporated) started the meeting by providing a brief recap of the last meeting in which several site options were presented. The options included a new Gymnasium north of the existing Gymnasium (county-owned parcel), a new Gymnasium on the existing Captain Cooks Memorial Park tennis courts (county-owned parcel) and the current option south of the existing Administration and Music buildings.
3. The following building design options were discussed:
4. Option 1A: Proposes a one-story structure with a Bid Option for future construction of a Wrestling Room, Multi-Purpose Room and additional Storage if sufficient funds aren't available to complete the entire design at once. The design will include all spaces with the aforementioned Bid Option spaces being noted as such.
    a. New parking proposed at existing Gym Parcel (addition of 68 stalls) and north of existing Music Building 'B' (addition of 34 stalls). If the Bid Option is not exercised, additional parking could potentially be added in this area.
    b. In the event that the existing Gymnasium is demolished, an additional 61 parking stalls could be added.
    c. Per the County of Kauai Zoning Ordinance, 1 parking stall is required per 8 seats. With the proposed 840 bleacher seats, we are required to provide 105 parking stalls.
    d. One-story structure is less expensive and will not require an elevator.
    e. Potential Bid Option to add air conditioning to existing Buildings 'S', 'T' and 'U' to mitigate dust and noise during construction.
    f. New parking would be close to proposed new Gymnasium.
    g. In the event the existing Gymnasium is demolished, approximately 61 stalls can be added in its place.
5. Option 1B: One-story structure with no Bid Option, thus a Wrestling Room, Multi-Purpose Room and additional Storage is not included.
    a. Similar to Option 1A, new parking proposed at existing Gym Parcel (addition of 68 stalls) and north of existing Music Building 'B' (addition of 34 stalls). Because the building footprint is smaller (due to no Bid Option), there's potential space for an additional 22 parking stalls.
    b. In the event that the existing Gymnasium is demolished, an additional 61 parking stalls could be added.
    c. Single story structure less expensive than two-story structure and will not require an elevator.

d. Because the proposed building footprint is smaller, this option would be the least costly.

e. Similar to Option 1A, Option 1B also includes a Bid Option to add air conditioning to existing Buildings 'S', 'T' and 'U' to mitigate dust and noise during construction.

6. Option 2: Two-story structure with public spaces on the ground level with the Wrestling Room, Multi-Purpose, Training Room and Laundry on the second floor.

   a. Similar to Options 1A and 1B, new parking proposed at existing Gym Parcel (addition of 68 stalls) and north of existing Music Building 'B' (addition of 34 stalls). Because the building footprint is smaller, there's also potential space for an additional 22 parking stalls.

   b. In the event that the existing Gymnasium is demolished, an additional 61 parking stalls could be added.

   c. Similar to Options 1A and Option 1B, Option 2 also includes a Bid Option to add air conditioning to existing Buildings 'S', 'T' and 'U' to mitigate dust and noise during construction.

   d. A two-story structure would be the costliest as it will require an elevator, which will need continual maintenance.

7. Site Utilities:

   a. Sewer:

      1. There are two (2) existing, abandoned-in-place cesspools located within the proposed building Gymnasium footprint that may impact the future Gymnasium's footings. Further investigation into its location and how it was abandoned-in-place required.

      2. There are two (2) sewer lines that cross the proposed Gymnasium footprint, one from the existing Music Building and the other from buildings north of the proposed site.

      3. Existing sewer lines traversing through the footprint will be removed and new sewer lines would be routed around the new Gymnasium with connections to a sewer manhole in Tsuchiya Road.

   b. Water:

      1. An existing 2" water line currently traverses through the new Gymnasium footprint and will need to be re-routed. There are also additional water lines connecting to this line that serves the existing Cafeteria and courtyard irrigation system. Further investigation will be needed to determine the capacity of these lines as it currently feeds other surrounding buildings.

      2. For fire sprinkler purposes, propose connection to an existing 8" water line at the corner of Ola Road and Tsuchiya Road.

   c. Drainage:

      1. The County of Kauai requires, per the Kauai Drainage Standards, that drainage be designed to the 100-year storm.

2. Unfortunately, at this time, as-builts found thus far indicate no existing drainage system in the area. Propose to provide underground detention basins whose capacity as shown is based on the new Gymnasium only. Additional and/or revisions to the proposed underground detention basins would be required for any new parking lots added.
3. Design team investigated designing the underground detention basins to be oversized to accommodate the entire 100-year storm, however, that was determined to be too cost prohibitive.
4. The proposed discharge would be toward the existing baseball field to the south, however it was noted that it would need to be close to the 100-year storm for there to be a considerable amount of storm water discharge and most likely, during such an event, the baseball field would not be in use.

8. Finished Floor Elevations:
    a. The Design team investigated several scenarios of the new Gymnasium finished floor elevations:
        1. Matching the courtyard elevation to reduce any necessary grading into the adjacent courtyard would result in an excess of on-site excavation (higher cost for excavation and disposal) and drainage may be an issue.
        2. Increasing the finished floor elevation by a couple of feet would provide a balance in grading and result in lower costs for material. Ramps and stairs would most likely be required at the Gymnasium and some grading will be needed at the courtyard to transition the grades. A portion of the sidewalk connecting Tsuchiya Road to the existing classroom buildings would need to be redone to connect to the new Gymnasium. A small retaining wall (approximately 1 to 2 feet) and fence may be required above the existing wall running parallel to Tsuchiya Road.
        3. Increasing the finished floor elevation by more than 5-feet would not be feasible as it would require longer stairs, ramps and reconstructing the sidewalks adjacent to the new Gym, running parallel to Tsuchiya Road. In addition, a large amount of fill would be required to be brought to the site which would be costly.
9. Building Discussion:
    a. Jon Kobayashi (Waimea HS Athletic Director) noted his desire for a Wrestling Room, thus Option 1A.
    b. Main entrance to the new Gymnasium off the existing courtyard is ideal and having the option to use the steps as seating during events in the courtyard is a nice addition.
    c. The number of steps (at the Lobby) is subject to change depending on the finished floor elevation and can be extended to provide more seating space.
    d. Wrestling Room can be multi-purpose in that it can also be used for other activities such as cheerleading during off-seasons.

e. Discussion held as to the ceiling height required for cheerleading. U.S. Cheer requires a ceiling height of 25'-0" however high school cheerleading may require a lower ceiling height. Waimea HS to confirm height required.

f. Concern was expressed that there may not be enough storage spaces. Ideally, it would be nice to have designated space for each sport, i.e. basketball, cheerleading, volleyball, etc.

g. Training Room: Needs an ice machine; request for an office within the Training Room with a window to see into the Training Room. A wall can be added to separate the spaces. Kendall Ellingwood (Principal, Design Partners Incorporated) requested that the school meet with its Training staff to provide a list of requirements to be included in the Due Diligence report and cost estimate.

h. Concession: Requires counter, sink, refrigerator. Currently, food is cooked off-site and brought to the school where it is sold, thus Concession space would need appropriate equipment to reheat food.

i. Athletic Director (AD) Office: Preference for view and access into the Main Court.

10. Moving Forward:

    a. A-E Team to further develop Option 1A, incorporating the comments related to Training Room and Storage. Kendall Ellingwood noted that the building's overall area cannot exceed those listed in the FADS, thus it will be a 'push/pull' whereby the area for some spaces may have to be reduced in order to gain area in other spaces.

    b. Waimea HS to provide required ceiling height for Cheerleading.

11. The following comments were received following the Site Selection Meeting via email, August 12, 2020 from Kent Tomimoto (DAGS). In addition, the A-E team was also given a copy of the State of Hawaii Department of Health Cesspool Backfilling Final Completion Report per earlier discussion regarding verification of abandoned-in-place cesspool.

    a. Request to see a rendition of what the street view may look like, i.e. street view from Tsuchiya Road (between the school and Captain Cooks Memorial Park).

    b. Thoughts are that a retaining wall may be needed along the street.

    c. Question as to whether the new Gym will be visible from Kaumualii Highway. Might want to check with the Kauai Planning Department if visual impacts come into play, variance(s) may be needed. Perhaps the Planning Department may require the wall facing the street to be aesthetically pleasing.

    d. Verify County road requirements if the intention is to push more traffic onto Tsuchiya Road. The road may be substandard for two-way traffic and at one point in time, there was question as to its ownership. The concern is that the County may require road improvements that may drive up costs significantly.

    e. The right turn from Kaumualii Highway, coming from the east side, is bad too. Hoping DOT does not require any highway improvements; thus, the Civil consultant should investigate further as the cost may be detrimental to the project.

f. Concern that the age of the existing Gymnasium may have grandfathered in items that would normally be required for new projects and having a new Gymnasium project may have the County seeing this as an opportunity for improvements.

g. Verify if there are any fire flow issues and/or if there are any other improvements required.

h. May need a soils study as the existing soils may require over-excavation or special thicknesses.

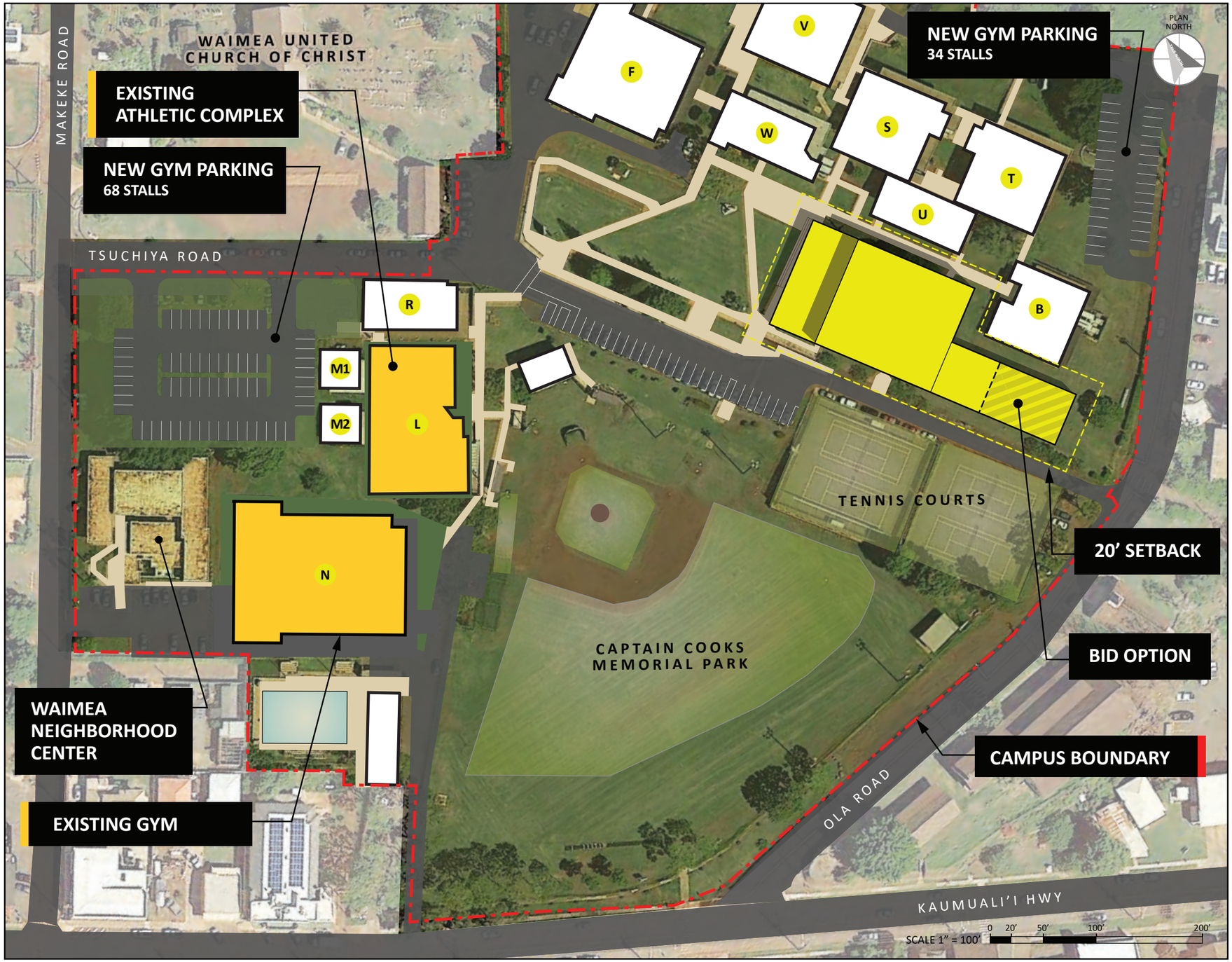
i. Verify if the school has a requirement for a conference/meeting room.

j. Ensure route from the parking lot to the Gymnasium is accessible and well lit.

The above represents the writer's understanding of the discussions and a complete and accurate record of the decisions and agreements made. Amendments to this record shall be made in writing to the author within 5 days from the date of this document.

WAIMEA HIGH SCHOOL GYMNASIUM

Due Diligence Study - **Site Selection Meeting**

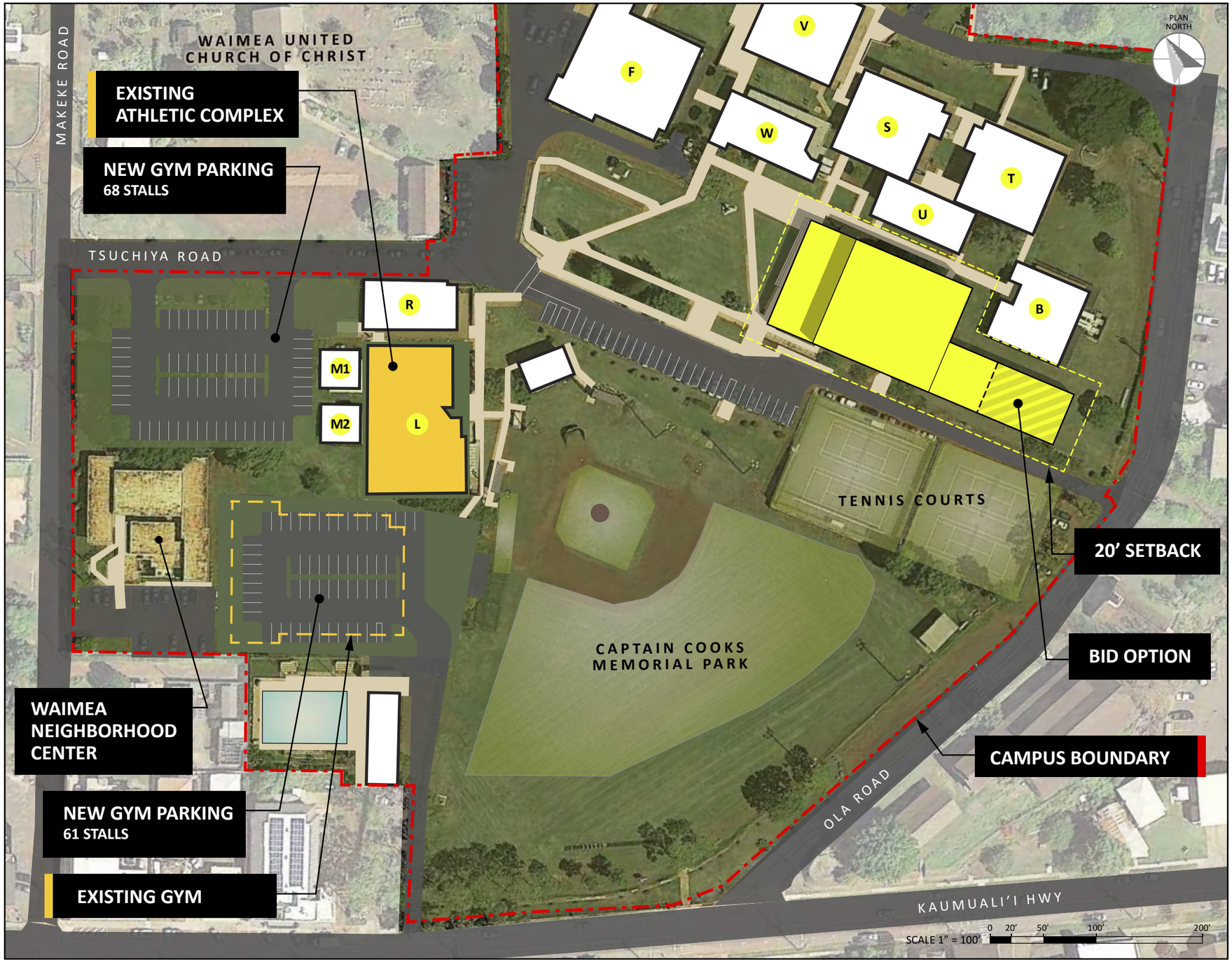


DESIGN OPTION #1A:
1-STORY SCHEME
(INCLUDES BID OPTION)

SCALE 1" = 100'

	1	2	YES	NO
NUMBER OF STORIES:	●			
INCLUDES WRESTLING:			●	
POTENTIAL FUTURE ADDITION:			●	
NUMBER OF PARKING PROVIDED:	102 STALLS			
PARKING REQUIRED:	105 STALLS (County Requires 1 stall : 8 seats)			

- One-story scheme, which is less expensive than two-story option, will not require an elevator.
- Potential Bid Option for future construction of Wrestling Room, Multi-Purpose Room and additional storage.
- Potential Bid Option to add airconditioning to existing Buildings 'S', 'T' and 'U' to mitigate dust and noise during construction.
- New parking near existing Gymansium
- If the Bid Option is not exercised, area south of the existing Music Building 'B' can be additional parking.



DESIGN OPTION #1A:
1-STORY SCHEME
(REMOVAL OF EXISTING GYM)

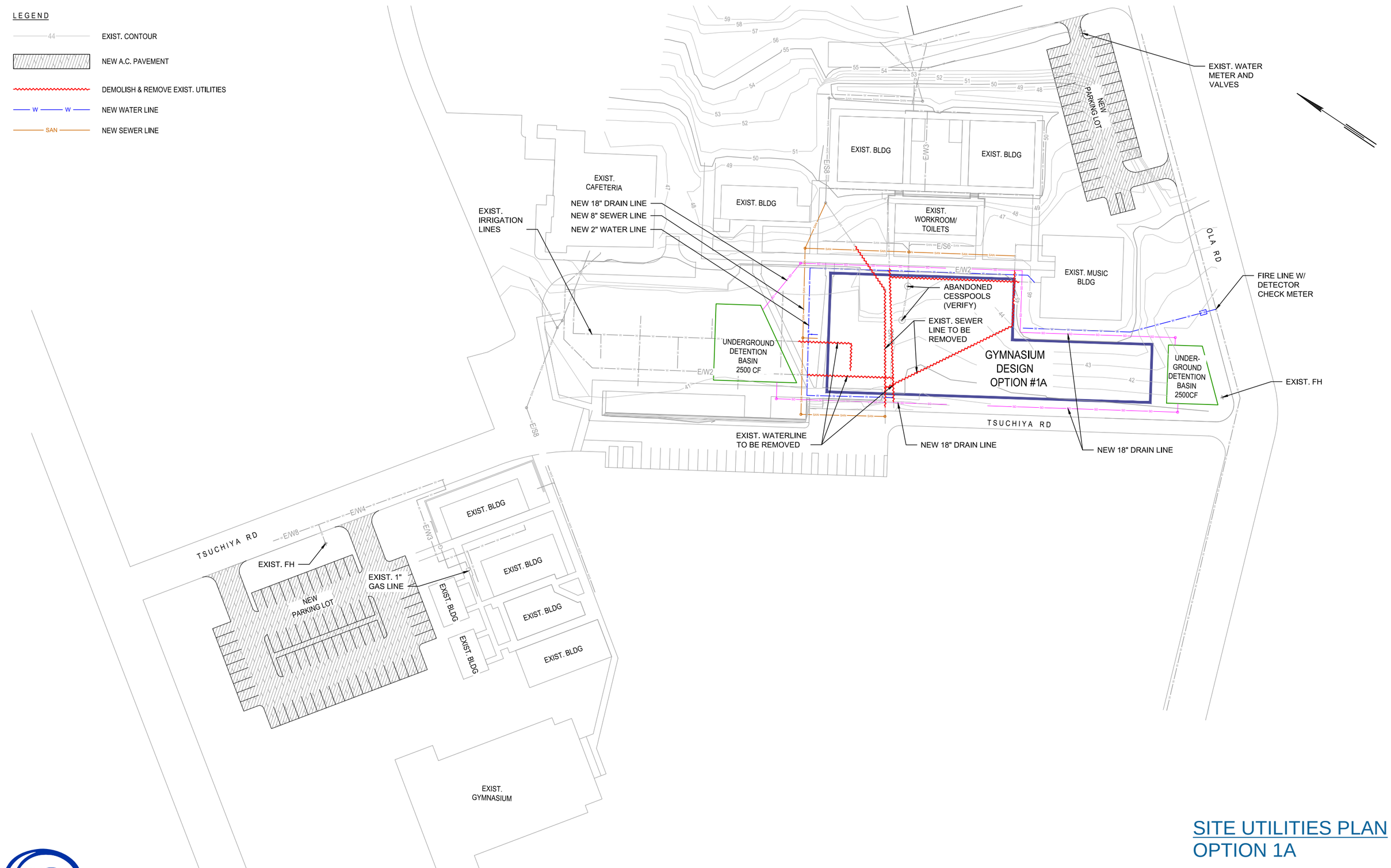
SCALE 1" = 100'

	1	2	YES	NO
NUMBER OF STORIES:	●			
INCLUDES WRESTLING:			●	
POTENTIAL FUTURE ADDITION:			●	
NUMBER OF PARKING PROVIDED:	129 STALLS			
PARKING REQUIRED:	105 STALLS (County Requires 1 stall : 8 seats)			

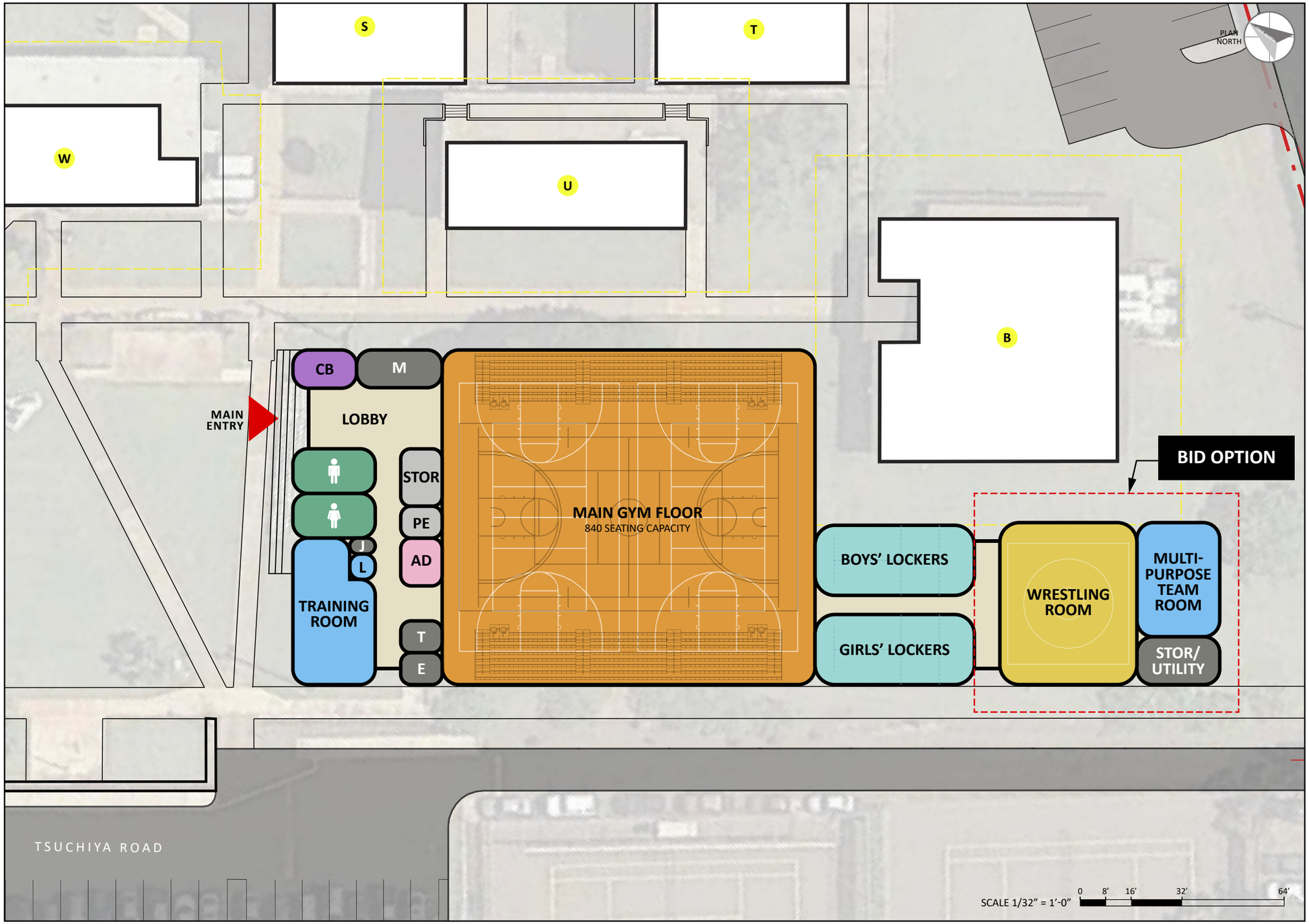
- One-story scheme, which is less expensive than two-story option, will not require an elevator.
- Potential Bid Option for future construction of Wrestling Room, Multi-Purpose Room and additional storage.
- Potential Bid Option to add airconditioning to existing Buildings 'S', 'T' and 'U' to mitigate dust and noise during construction.
- Two new parking lots; in place of the existing Gym and at the corner of Tsuchiya Road and Makeke Road.
- If the Bid Option is not exercised, area south of the existing Music Building 'B' can be additional parking.

LEGEND

- EXIST. CONTOUR
- NEW A.C. PAVEMENT
- DEMOLISH & REMOVE EXIST. UTILITIES
- W — W — NEW WATER LINE
- SAN — SAN — NEW SEWER LINE



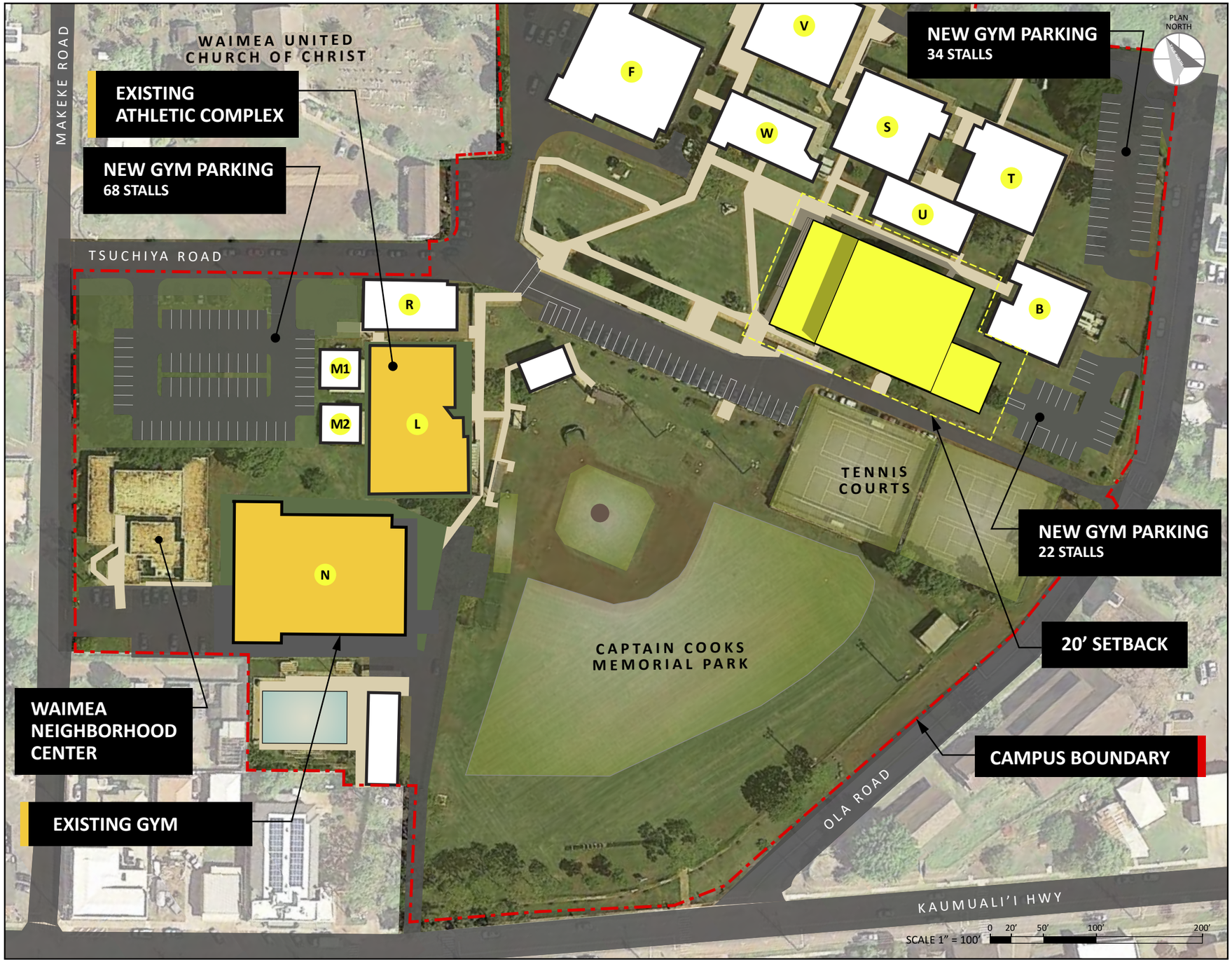
SITE UTILITIES PLAN
OPTION 1A



DESIGN OPTION #1A:
CONCEPT FIRST FLOOR PLAN

SCALE 1/32" = 1'-0"

Main Gym Floor	11,817 SF
Wrestling Room	1,800 SF
Athletics Program	2,020
Concession Stand	240 SF
Athletic Director Office	180 SF
Locker Rooms	2,304 SF
Restrooms	
Support Spaces	300 SF
Utility	
Building Circulation	
Vertical Circulation	

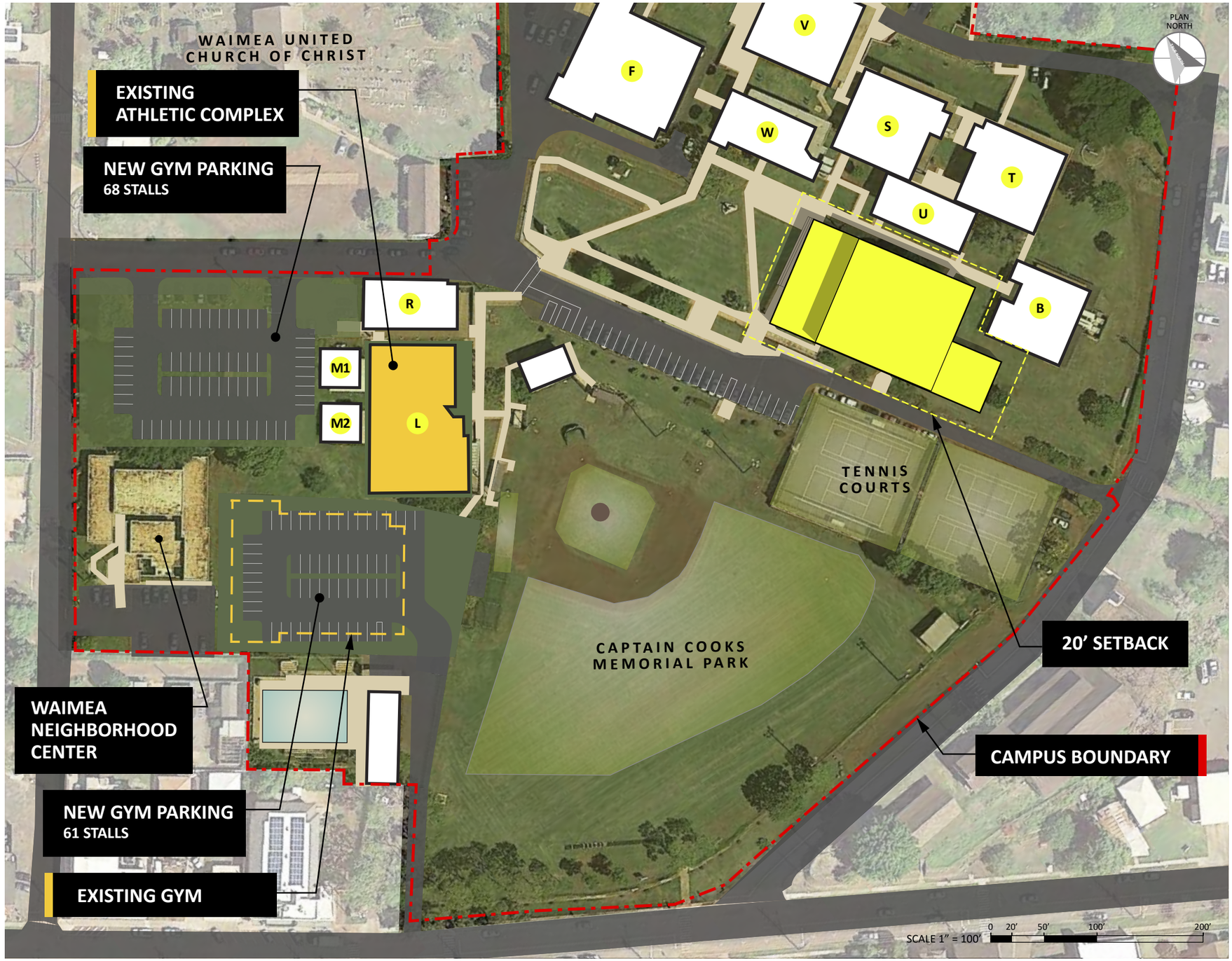


DESIGN OPTION #1B:
1-STORY SCHEME
(WITHOUT BID OPTION)

SCALE 1" = 100'

	1	2	YES	NO
NUMBER OF STORIES:	●			
INCLUDES WRESTLING:				●
POTENTIAL FUTURE ADDITION:				●
NUMBER OF PARKING PROVIDED:	124 STALLS			
PARKING REQUIRED:	105 STALLS (County Requires 1 stall : 8 seats)			

- One-story scheme, which is less expensive than two-story option, will not require an elevator.
- Does not include Wrestling Room, Multi-Purpose Room and additional storage.
- Potential Bid Option to add airconditioning to existing Buildings 'S', 'T' and 'U' to mitigate dust and noise during construction.
- New parking near existing Gymansium
- If the Bid Option is not exercised, area south of the existing Music Building 'B' can be additional parking.



DESIGN OPTION #1B:
1-STORY SCHEME
(REMOVAL OF EXISTING GYM)

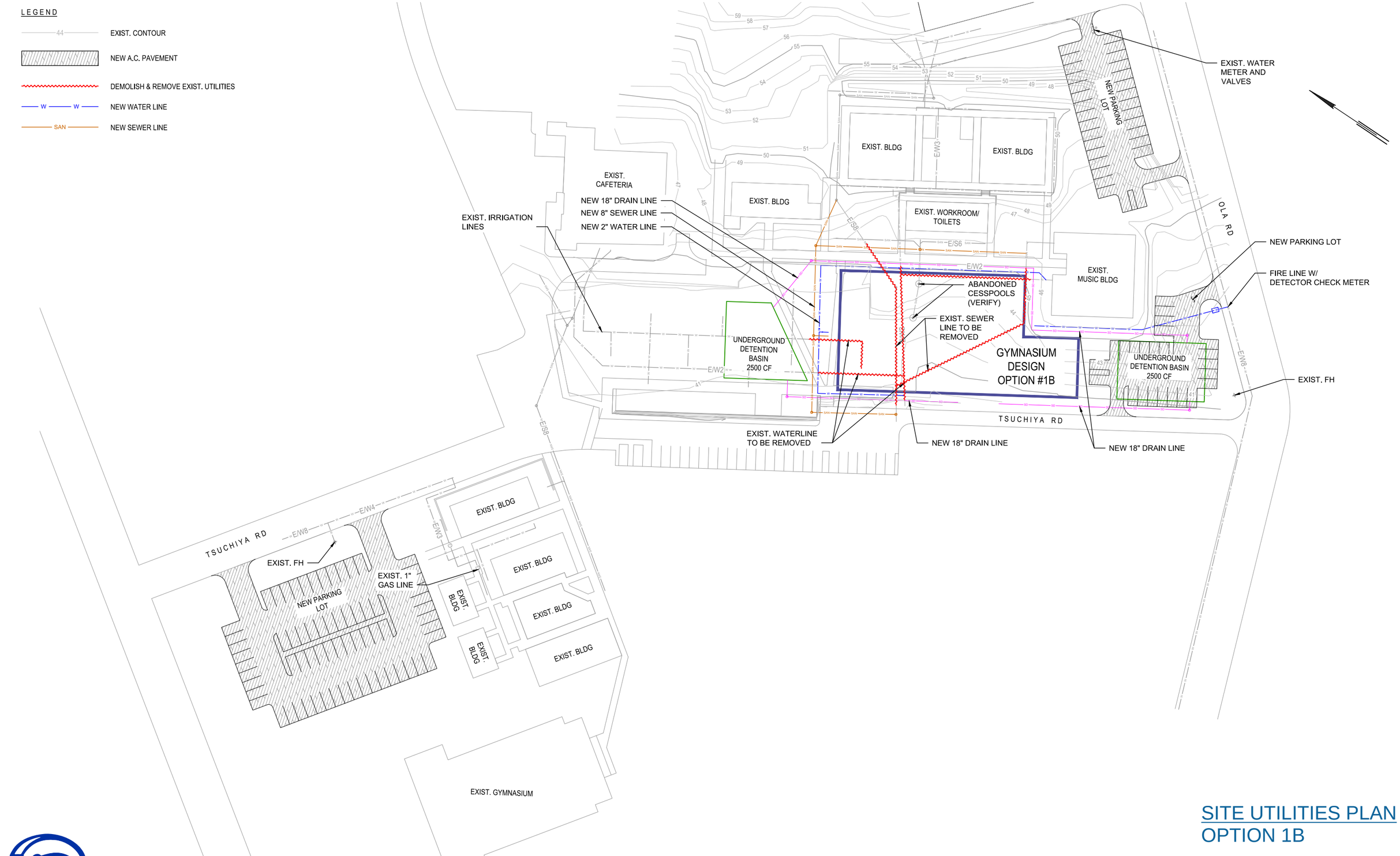
SCALE 1" = 100'

	1	2	YES	NO
NUMBER OF STORIES:	●			
INCLUDES WRESTLING:				●
POTENTIAL FUTURE ADDITION:				●
NUMBER OF PARKING PROVIDED:	129 STALLS			
PARKING REQUIRED:	105 STALLS (County Requires 1 stall : 8 seats)			

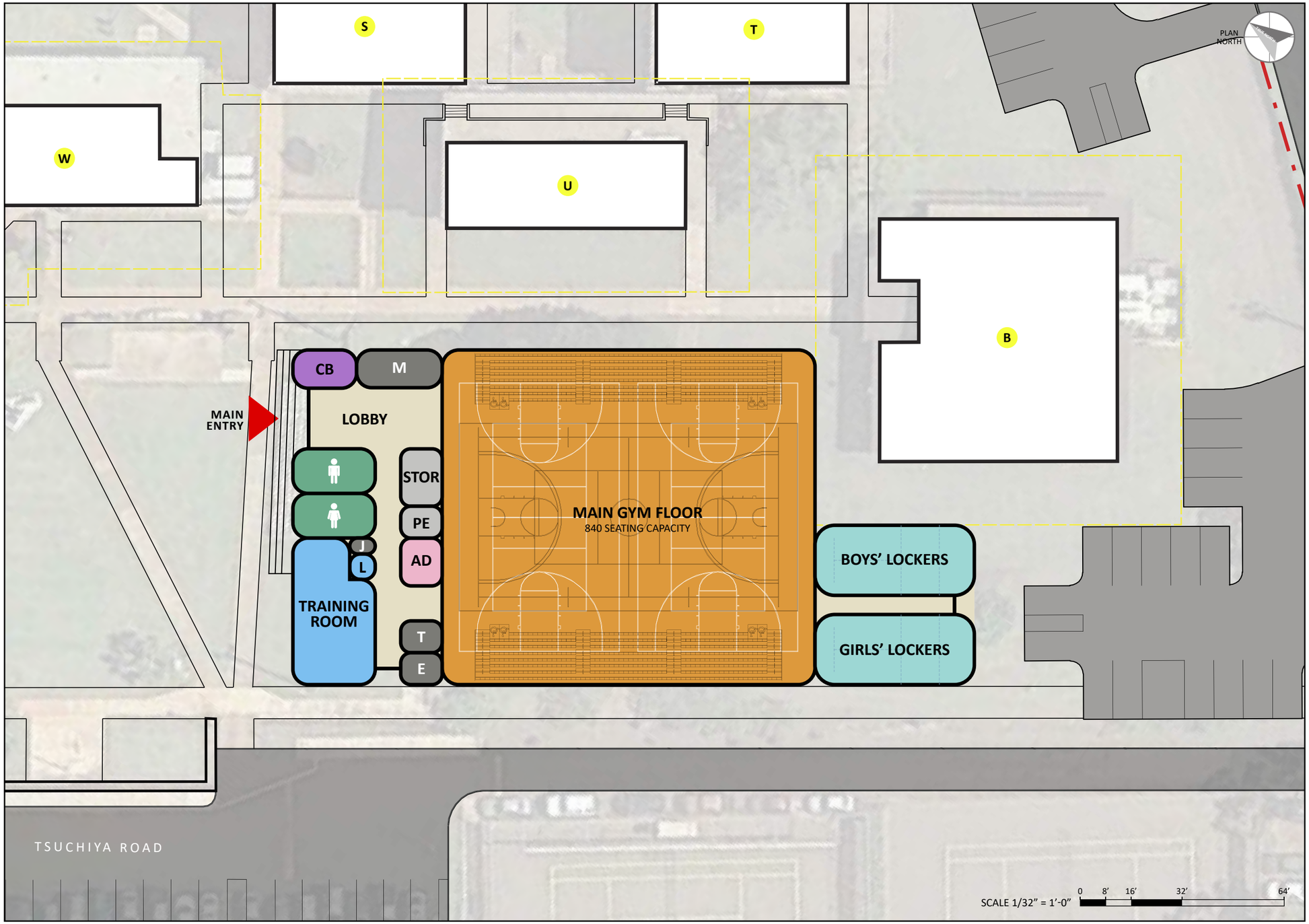
- One-story scheme, which is less expensive than two-story option, will not require an elevator.
- Does not include Wrestling Room, Multi-Purpose Room and additional storage.
- Potential Bid Option to add airconditioning to existing Buildings 'S', 'T' and 'U' to mitigate dust and noise during construction.
- Two new parking lots; in place of the existing Gym and at the corner of Tsuchiya Road and Makeke Road.
- If the Bid Option is not exercised, area south of the existing Music Building 'B' can be additional parking.

LEGEND

- EXIST. CONTOUR
- NEW A.C. PAVEMENT
- DEMOLISH & REMOVE EXIST. UTILITIES
- NEW WATER LINE
- NEW SEWER LINE



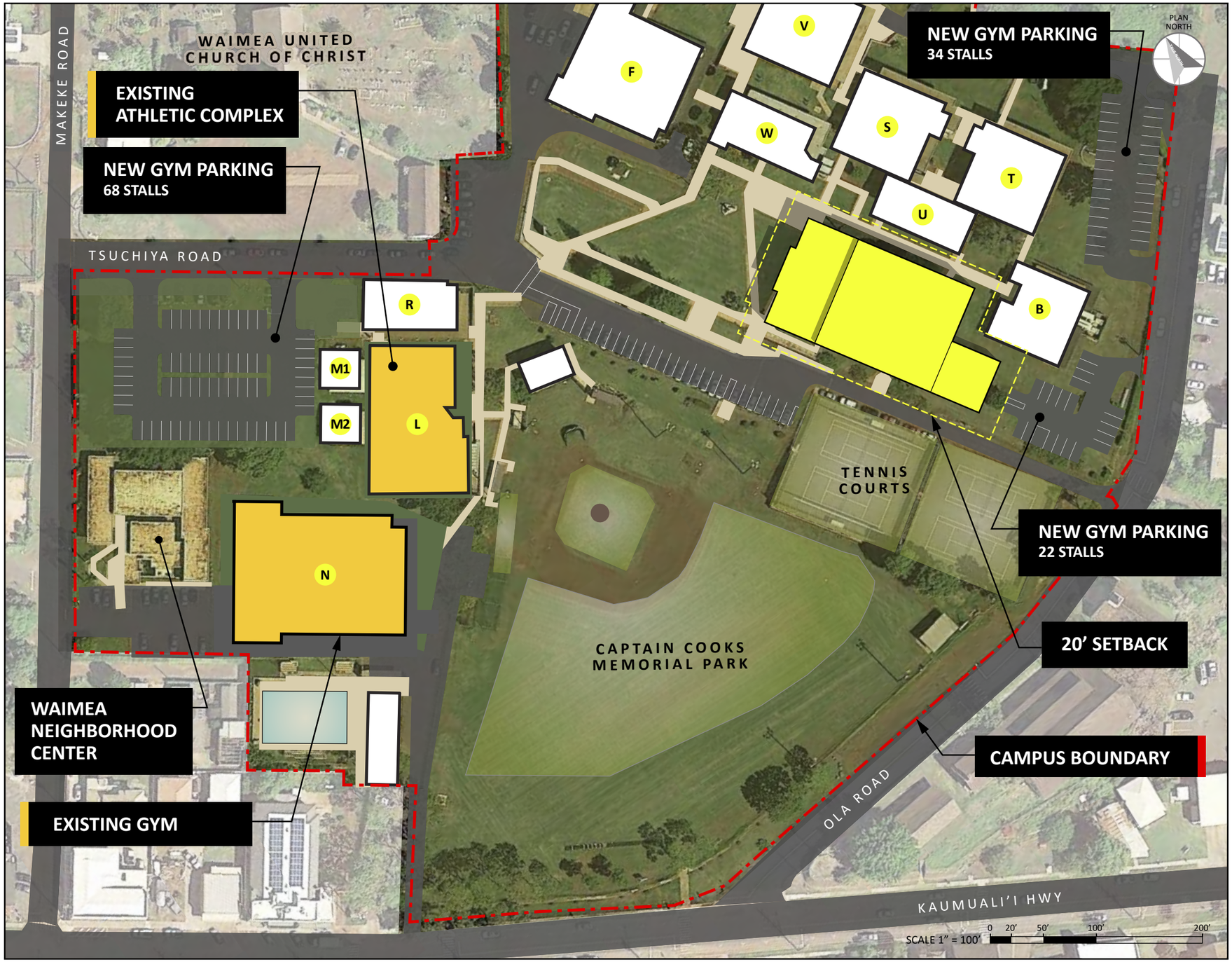
SITE UTILITIES PLAN
OPTION 1B



DESIGN OPTION #1B:
CONCEPT FIRST FLOOR PLAN

SCALE 1/32" = 1'-0"

Main Gym Floor	11,817 SF
Wrestling Room	1,800 SF
Athletics Program	2,020
Concession Stand	240 SF
Athletic Director Office	180 SF
Locker Rooms	2,304 SF
Restrooms	
Support Spaces	300 SF
Utility	
Building Circulation	
Vertical Circulation	

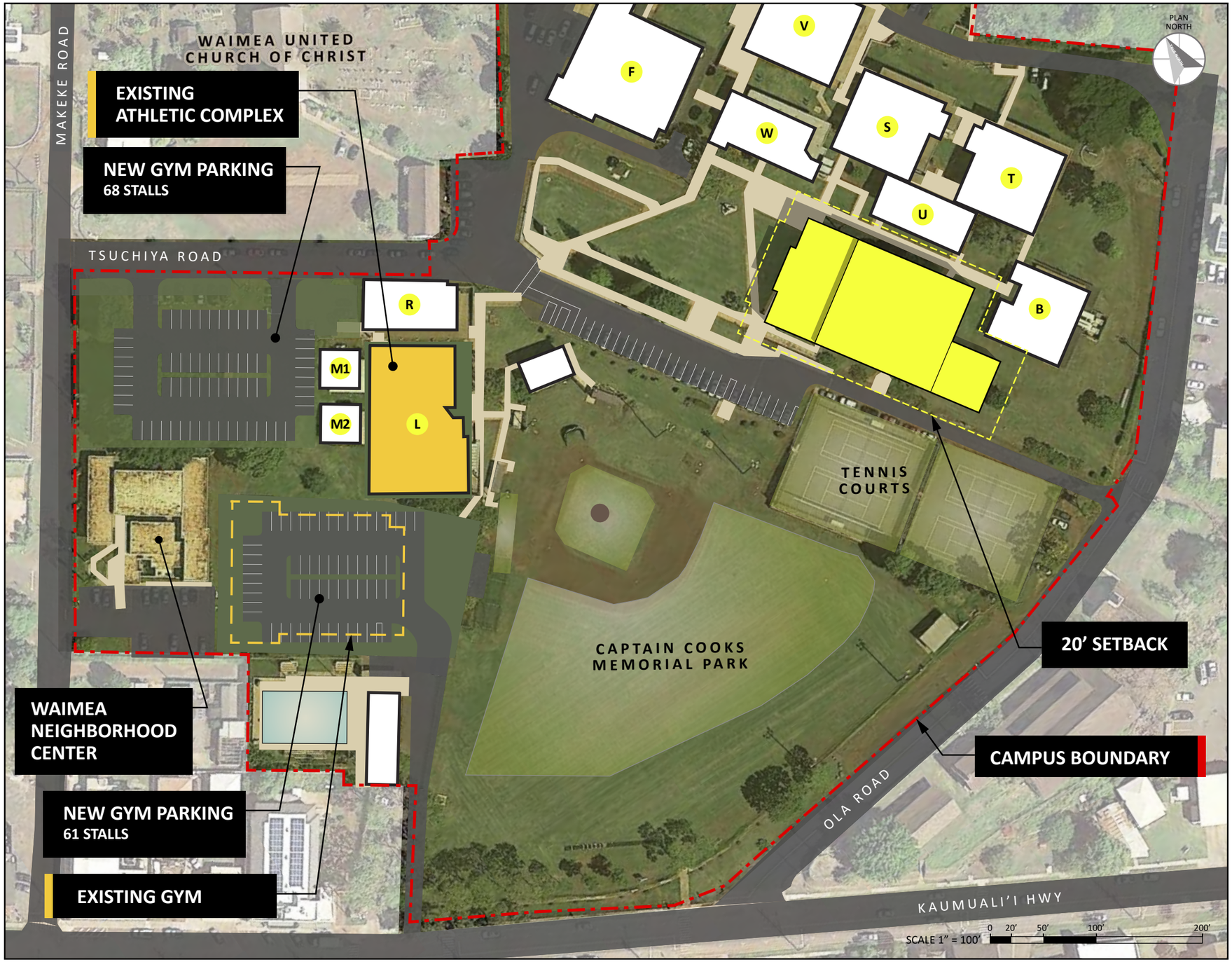


DESIGN OPTION #2:
2-STORY SCHEME
(EXISTING GYM REMAINS)

SCALE 1" = 100'

	1	2	YES	NO
NUMBER OF STORIES:		●		
INCLUDES WRESTLING:			●	
POTENTIAL FUTURE ADDITION:				●
NUMBER OF PARKING PROVIDED:	124 STALLS			
PARKING REQUIRED:	105 STALLS (County Requires 1 stall : 8 seats)			

- Two-story scheme likely more expensive and will require stairs and an elevator. Elevator will require continual maintenance.
- Propose to place Wrestling, Multi-Purpose and Training Room on the second floor; all public spaces to remain on ground level.
- Potential Bid Option to add air condition to existing Buildings 'S', 'T' and 'U' to mitigate dust and noise during construction.
- New parking near existing Gymnasium and adjacent to proposed Gymnasium and existing Music Building 'B'.



DESIGN OPTION #2:
2-STORY SCHEME
(REMOVAL OF EXISTING GYM)

SCALE 1" = 100'

	1	2	YES	NO
NUMBER OF STORIES:		●		
INCLUDES WRESTLING:			●	
POTENTIAL FUTURE ADDITION:				●
NUMBER OF PARKING PROVIDED:	129 STALLS			
PARKING REQUIRED:	105 STALLS (County Requires 1 stall : 8 seats)			

- Two-story scheme likely more expensive and will require stairs and an elevator. Elevator will require continual maintenance.
- Propose to place Wrestling, Multi-Purpose and Training Room on the second floor; all public spaces to remain on ground level.
- Potential Bid Option to add air condition to existing Buildings 'S', 'T' and 'U' to mitigate dust and noise during construction.
- Twonew parking lots; in place of the existing Gym and at the corner of Tsuchiya Road and Makeke Road.

LEGEND

- EXIST. CONTOUR
- NEW A.C. PAVEMENT
- DEMOLISH & REMOVE EXIST. UTILITIES
- NEW WATER LINE
- NEW SEWER LINE

EXIST. WATER METER AND VALVES

NEW PARKING LOT

EXIST. BLDG

EXIST. BLDG

EXIST. BLDG

EXIST. CAFETERIA

NEW 18" DRAIN LINE

NEW 8" SEWER LINE

NEW 2" WATER LINE

EXIST. IRRIGATION LINES

EXIST. WORKROOM/ TOILETS

OLA RD

NEW PARKING LOT

FIRE LINE W/ DETECTOR CHECK METER

EXIST. MUSIC BLDG

ABANDONED CESSPOOLS (VERIFY)

EXIST. SEWER LINE TO BE REMOVED

UNDERGROUND DETENTION BASIN 2500 CF

GYMNASIUM DESIGN OPTION #2

UNDERGROUND DETENTION BASIN 2500 CF

EXIST. FH

TSUCHIYA RD

EXIST. WATERLINE TO BE REMOVED

NEW 18" DRAIN LINE

NEW 18" DRAIN LINE

TSUCHIYA RD

EXIST. FH

NEW PARKING LOT

EXIST. 1" GAS LINE

EXIST. BLDG

EXIST. BLDG

EXIST. BLDG

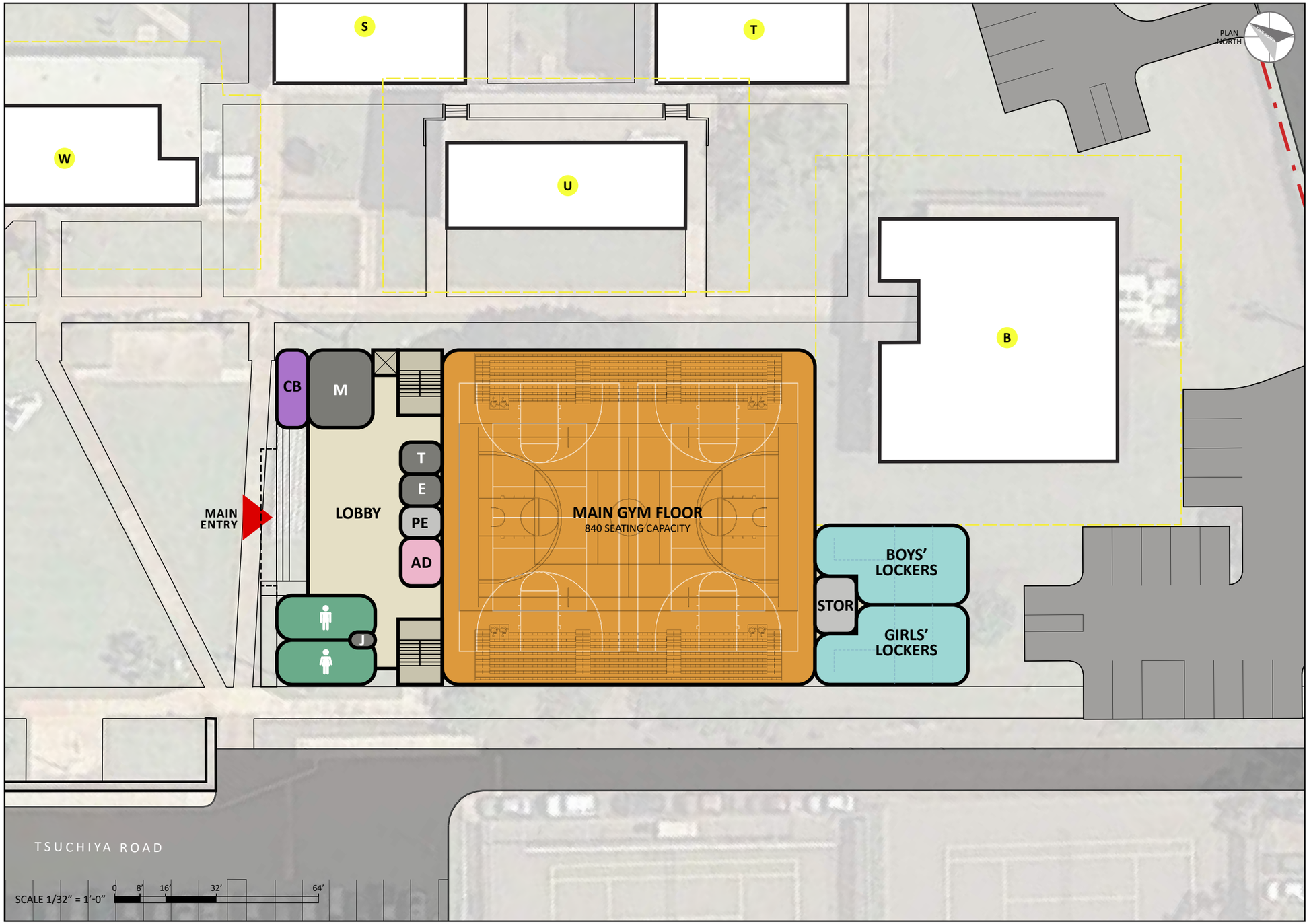
EXIST. BLDG

EXIST. BLDG

EXIST. BLDG

EXIST. GYMNASIUM

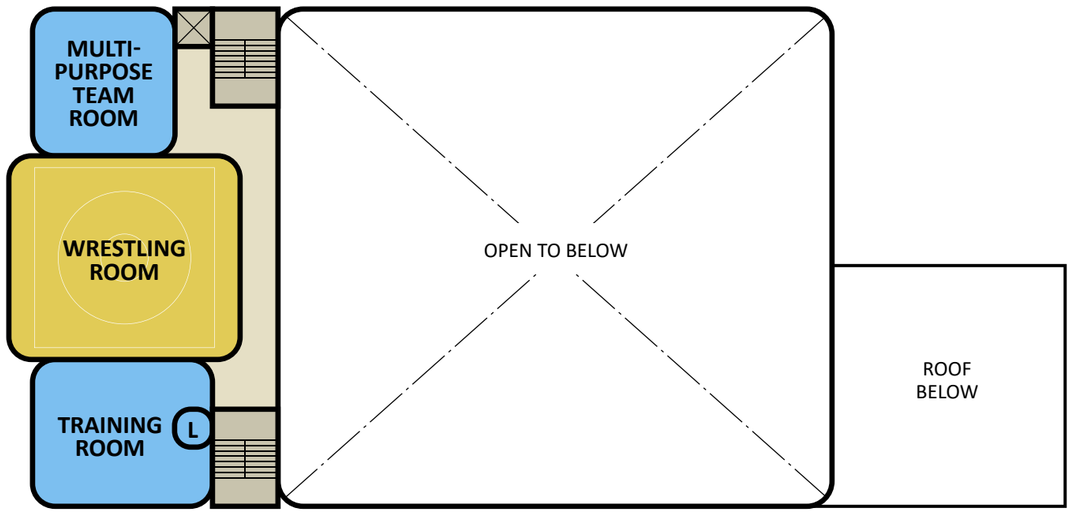
SITE UTILITIES PLAN
OPTION 2



DESIGN OPTION #2: CONCEPT FIRST FLOOR PLAN

SCALE 1/32" = 1'-0"

Main Gym Floor	11,817 SF
Wrestling Room	1,800 SF
Athletics Program	2,020
Concession Stand	240 SF
Athletic Director Office	180 SF
Locker Rooms	2,304 SF
Restrooms	
Support Spaces	300 SF
Utility	
Building Circulation	
Vertical Circulation	



DESIGN OPTION #2:
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SCALE 1/32" = 1'-0"

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Utility	
Building Circulation	
Vertical Circulation	

Waimea High School Gymnasium - DOE Project Number: Q43201-18		
GYMNASIUM	EDSPECS PROGRAM	Revised Program
Lobby Area		
(AD) Office/Restroom & Shower	180	180
PE Equipment Room	100	100
Janitors Closet	40	40
Electrical room by Designer + Future Invertor Space	Area by Designer	
Men's Toilet (Public)	324	324
Women's Toilet (Public)	353	353
Multipurpose Room	-	900
Concession Booth	240	240
Ticket Booth	50	-
Lobby	1070	220
Main Floor	11817	11817
Wrestling Room	1800	1800
General Storage	200	200
Electrical & Heater Room	Area by Designer	
Janitors Closet (Locker Area)	40	40
Boy's JV Facilities		
Locker Room	320	320
Toilet	96	96
Varsity / J.V. Drying Room	128	128
Varsity / J.V Shower Booth (ADA)	96	96
Varsity / J.V. Shower Room	96	96
Boy's Varsity Facilities		
Locker Room	320	320
Toilet	96	96
Girl's JV Facilities		
Locker Room	320	320
Toilet	96	96
Varsity / J.V. Drying Room	128	128
Varsity / J.V. Shower Booth (ADA)	96	96
Varsity / J.V. Shower Room	96	96
Girl's Varsity Facilities		
Locker Room	320	320
Toilet	96	96
TOTAL	**18518**	**18518**

Legend

- Program Area Added
- Program Area Revised

Take-Aways:

- FADS based on Kapa'a HS Gymnasium (DOE Project No. Q41000-18)
- Reduced Lobby area from 1,070 sf to 220 sf
- Reduction in Lobby area allowed for added Multi-Purpose Room (900 sf)
- Removed Ticket Booth (-50 sf)
- Total Area remains unchanged at 18,518 sf

DESIGN PARTNERS INCORPORATED

ARCHITECTURE • PLANNING • INTERIORS
CIVIL • CONSTRUCTION MANAGEMENT

1580 Makaloa Street • Suite 1100 • Honolulu, HI 96814
(808) 949-0044 • FAX (808) 946-9663

15 July 2020

Record of Conversation

PROJECT: PS D020-500 Professional Services – Architectural Planning & Design
Waimea High School Gymnasium Athletic Facilities
DOE Project Number: Q43201-18

SUBJECT: Design Scope Meeting Minutes

LOCATION: Waimea High School, Portable P15

ATTACHMENTS:

1. Due Diligence Study – Design Scope Meeting Presentation

ATTENDEES:

Please refer to attached sign-in sheet

Summary of Discussion:

1. The intent of this design scope meeting is to establish the project requirements and identify potential site locations.
2. Kristi Sumida (Project Manager, Design Partners Incorporated) presented the existing site plan noting the existing Gymnasium and Athletic Complex locations. Per the previous Design Scope meeting (held via teleconference, April 2, 2020), it was noted that the existing Gymnasium to remain operational until the new Gymnasium is complete and functional.
3. As discussed in the previous Design Scope meeting, it was noted that the existing Waimea High School is situated on various parcels that were either County or State owned. A Property Ownership exhibit was presented which delineated the parcels and noted their respective ownership.
4. Existing Gymnasium Parcel (TMK: 1-6-009:023): Falls under the forthcoming West Kauai Form-Based Code planning document, which is currently undergoing review with hopes of being approved by the end of the year. The West Kauai Form-Based Code promotes community design, preserves the neighborhood character, and encourages walkable, pedestrian oriented mixed-use development/places. This parcel would be considered transect zone "T4 Village Neighborhood", which is described as "integrating appropriate, medium-density residential building types such as duplexes and multiplex; small with limited and service uses in an environment conducive to walking and bicycling." Parcel is also situated in an "Extreme Tsunami Zone" which is defined as exceeding

the historic distant Tsunami Evacuation Zone whose tsunami event may occur following an earthquake with a magnitude of 9 or higher.

5. Much of the Waimea High School campus sits on State-owned land (TMK: 1-6-010:004), with the Industrial Arts Building 'D' and Art Building 'J' buildings on County-owned land (TMK: 1-6-010:010). The existing Captain Cooks Memorial Park and adjacent tennis courts are also situated on County-owned land (TMK: 1-6-010:005).
6. The following site options were discussed:
7. Option 1A/B (County-Owned Parcel): Proposes either a one-story or two-story structure north of the existing Gymnasium; requires removal of existing trees, existing County structure; depending on new Gymnasium footprint, may require relocation of existing portable classroom structures.
    a. Option 1A (County-Owned Parcel): Two-story structure to minimize footprint; propose Training Room, Athletic Director office and some storage on the second floor.
    b. Pros:
        1. Retention of and continued use of existing Locker Room/Shower Building 'L' and portable classroom structures during and after construction.
        2. Location groups athletic functions.
        3. If the existing Gymnasium is demolished (following the completion of the new Gymnasium), the area can be converted to parking by extending/modifying existing Haiki Road.
    c. Cons:
        1. Two-story structure likely more expensive.
        2. Requires an elevator which requires continual maintenance.
        3. Requires removal of existing trees and County-Owned structure.
        4. Location on County-owned land will require further coordination.
    d. Comments:
        1. Concerned that a new Gymnasium in this location would place it near the adjacent neighborhood which may not be ideal, noise issue.
        2. If parking were to be added following the demolition of the existing Gymnasium, parking could be shared by the Waimea Neighborhood Center or Waimea Pool.
        3. Preference for retaining the existing Locker Room/Shower Building 'L'.
    e. Option 1B (County-Owned Parcel): One-story structure north of the existing Gymnasium.
    f. Pros:
        1. Single story structure less expensive than two-story structure.
        2. No elevator required.
        3. Location groups athletic functions.

4. If the existing Gymnasium is demolished (following the completion of the new Gymnasium), the area can be converted to parking by extending/modifying the existing Haiki Road.

g. Cons:

1. Requires removal of existing trees, relocation of existing portable classroom structures, demolition of the existing Locker Room/Shower Building 'L'.
2. Requires use of existing Gymnasium showers, locker rooms for duration of new Gymnasium construction.
3. Location on County-owned land will require further coordination.

h. Comments:

1. Similar to Option 1A, noise concern for adjacent neighborhood.
2. Similar to Option 1A, having parking at the site of the existing Gymnasium would be ideal.
3. The loss of the existing Locker Room/Shower Building 'L' is not preferred.

i. Option 2A (State-Owned Parcel): One-story structure situated in the existing courtyard south of the existing Administration Building 'W' and Classroom Building 'U'.

j. Pros:

1. Location is on state-owned parcel and closer to the main campus.
2. Allows for the continued use of existing Gymnasium, Locker Room/Shower Building and portable classroom structures.
3. If the existing Gymnasium were to be retained, the open area north of the building could be used for potential parking.

k. Cons:

1. Loss of open space at the front of the campus and relocation of existing bleachers required.
2. Parking, if only near the existing Gymnasium, would be a distance away.

l. Comments:

1. Outdoor functions that currently take place within the courtyard can be easily moved to the new Gymnasium.
2. The one-story footprint, as currently shown, will block the existing Administration Building 'W' which is not ideal. Preference for building not to block view.
3. Concerned that this option places the new Gymnasium close to existing classroom buildings and depending on the construction schedule, the noise and dust could be a nuisance. Kendall Ellingwood (Principal, Design Partners Incorporated) noted that the air conditioning of existing Classroom Buildings 'S', 'T' and 'U' can be made as a bid option which would be two-fold in that it would cool the classrooms and

also help control any construction noise/dust. Loud construction activities can also be scheduled during times when school is not in session, i.e. summer break.

4. A-E Team to study drainage as it was noted that the site can sometimes flood.
5. A-E Team to study soil material as the existing soil may be of a rocky material.

m. Option 2B (State-Owned Parcel): Similar to Option 2A, but a two-story structure situated in the existing courtyard south of the existing Administration Building 'W' and Classroom Building 'U'.

n. Pros:

1. Location is on state-owned parcel and closer to the main campus.
2. Allows for the continued use of existing Gymnasium, Locker Room/Shower Building 'L' and portable classroom structures.
3. If the existing Gymnasium were to be retained, the open area north of the building could be used for potential parking.
4. Option to site additional parking in open area south of the Music Building 'B'. Parking entrance/exit would be off existing Ola Road due to elevation difference between Tsuchiya Road and site.
5. Two-story option would have a smaller footprint thereby allowing view of existing Administration Building 'W'.

o. Cons:

1. Similar to Option 1A, two-story structure likely more expensive and will require an elevator which needs continual maintenance.
2. Similar to Option 2A, noise and dust during construction could be an issue.
3. Similar to Option 2A, loss of open space at the front of the campus and relocation of existing bleachers required.

p. Comments:

1. A smaller footprint is preferred not only for visibility to the existing Administration Building 'W', but it allows for the retention of a larger portion of the existing courtyard, which is desirable.
2. Comment was made that there may be existing utilities running through the courtyard. A-E Team to investigate further.
3. Eric Agena (DAGS) suggested adding an exterior covered platform that can be used from the existing courtyard. Lobby area can be situated to allow for connection to this platform.
4. Suggestion was made that the existing Gymnasium can be turned over back to the County once the new Gymnasium is built and operational. Recent structural repairs to the Gymnasium will hopefully prolong its useful life.

5. Adding additional parking to areas surrounding existing Music Building 'B' would be ideal and can also be shared with the nearby Boys & Girls Club or shared with those using the nearby tennis courts.

q. Option 3 (County-Owned Parcel): One-story structure situated on the existing tennis courts of the adjacent Captain Cooks Memorial Park. New tennis courts, in open area north of the existing Gymnasium, would replace the displaced tennis courts.

r. Pros:

1. Location is near the existing Captain Cooks Memorial Park which allows for continued direct access.
2. Location is closer to the existing main campus.
3. Allows for continued use of existing Gymnasium and Locker Room/Shower Building for the duration of construction.

s. Cons:

1. Location displaces existing tennis courts thus replacement of tennis courts required which will add cost.
2. Location on County-owned land will require further coordination.

t. Comments:

1. County may have upcoming plans for the tennis courts, thus if this option is pursued, coordination with the County will be required to avoid wasting funds.

8. Building Discussion:

a. Kristi Sumida presented the FADS, which is identical to the Kapa'a HS Gymnasium FADS, notes program spaces such as a Multi-Purpose Room (900 sf) that were added with the trade off being a reduction in the Lobby (reduced from 1,070 sf to 200 sf) and removal of Ticket Booth (minus 50 sf). Depending on the needs of the school, areas and spaces can be adjusted with the total square footage remaining the same at 18,518 sf.

b. Dino Padre (Waimea High School Vice Principal) noted that the current wrestling team is small (less than 10) whose practice is currently held in one of the portable classrooms near the existing Gymnasium. Kendall Ellingwood suggested, as a cost savings measure which in turn may increase chances of obtaining funds for this project, that the wrestling component be removed. Wrestling matches are currently held on the Main Court of the Gymnasium.

c. It was noted that Athletics is strong at Waimea High School and an important part of the community, thus a new Gymnasium will greatly benefit the West Kauai community.

d. Most popular events in the Gymnasium are basketball and volleyball games.

e. When assemblies are held in the Gymnasium, the floor is used in lieu of the stage, thus a stage in the new Gymnasium is not required.

9. General Comments:

a. Preference for Option 2B as it allows for the Gymnasium to be placed on state-owned land, is least impactive to the existing Athletic structures which also allows for the continued use of the existing Gymnasium (during construction), existing Locker Room/Shower Building 'L' and portable classroom structures.

10. Moving Forward:
    a. A-E Team to study and explore Option 2A/B further with a one-story structure, if possible.
    b. A-E Team to study existing site utilities and soils in the area of Option 2A/B.
11. The following comments were received following the Design Scope Meeting via email, July 20, 2020 from Mahina Anguay (Waimea High School Principal) following discussions with Waimea High School staff and stakeholders. Single story plan comments noted below are based on the "Single Story Floor Plan Option" included in the presentation (please refer to the attached):
    a. After discussion with some of my staff/stakeholders, I would like to pursue design option #2B, a two-story building on the front lawn. I had some comments or requests that we would like to incorporate into our plan; I don't think it should affect the overall scope/design/cost of the project significantly.
    b. Could we please get a layout of what the two-story gym would look like?
    c. We looked at the single-story plan and had these requests; could you please:
        1. Move the AD Office to where the Utility and Janitor room is located with a door and window into the gym.
        2. Move the utility and Janitor room to where the AD Office was.
        3. Move the Laundry Room into the Mechanical Room attached to the Training room as a wet room where the washer /dryer, ice machine and whirlpool will be located. Flip flop the mechanical room and laundry room.
        4. Turn the storage room into another office with shower /bathroom and add a window/door into the gym.
        5. Create another walkway into the gym between the storage room and PE equipment room.
        6. We also had a question --- are the two side courts full sized?
12. Kendall Ellingwood responded via email, July 20, 2020, as follows:
    a. We think we can make a one-story work with Option 2B. We will further develop both a 1-story and 2-story option for Option 2B.
    b. We will look to incorporate your comments.
    c. The two cross courts are regulation High School courts 84'.
13. Mahina Anguay noted that the school would like to preserve as much of the front lawn as possible since traditionally that's where graduation is held to which Kendall Ellingwood responded that we will look into shifting the new Gymnasium as close to the existing Music Building 'B' as feasibly possible to preserve as much of the front lawn.

The above represents the writer's understanding of the discussions and a complete and accurate record of the decisions and agreements made. Amendments to this record shall be made in writing to the author within 5 days from the date of this document.

State of Hawaii Department of Education
Facilities Development Branch

SIGN – IN SHEET

PROJECT: Waimea High School, Gymnasium Athletic Facilities – Q43201-18
DATE: 7/15/2020 @ 10:00

Initial Attendance	Name	Organization	Phone No.	Fax No.	Email Address
	Richard Bass	DOE/FDB - Project Management Section	784-5135	733-4660	rbass@bowersandkubota.com
	Dino Pabre	Vice Principal	286 2064		dino.pabre@k12.hi.us
	Lynn Antonio	ASA	652-9778		lynn.antonio@k12.hi.us;
	Kent Tomimoto	DAGS			kent.k.tomimoto@hawaii.gov
	Eric Agena	DAGS	274-3033	274-3035	eric.m.agena@hawaii.gov
	Kendall Ellingwood	Design Partners Inc	949.0044		kendall@designpartnersinc.com
	Kristi Sumida	Design Partners Inc	949.0044		kristi@designpartnersinc.com

WAIMEA HIGH SCHOOL GYMNASIUM

Due Diligence Study - **Design Scope Meeting**

EXISTING CAMPUS SITE PLAN

SCALE 1" = 200'

BLDG LETTER	BUILDING NAME
B	Music Building
C	Home Economics Building
D	Industrial Arts Building
E	Vocational Agriculture Building
F	Cafeteria Building
G	Commercial Building
H	Science Building
I	Multipurpose Building
J	Art Building
K	Classroom Building
L	Athletic Complex
M1	M-1 Portable
M2	M-2 Portable
N	Gymnasium
R	General Classroom
S	Classrooms (Language Arts Studies)
T	Classrooms (Language Arts Studies)
U	Classrooms (Language Arts Studies)
V	Library
W	Administration Building

PROPERTY OWNERSHIP

SCALE 1" = 200'

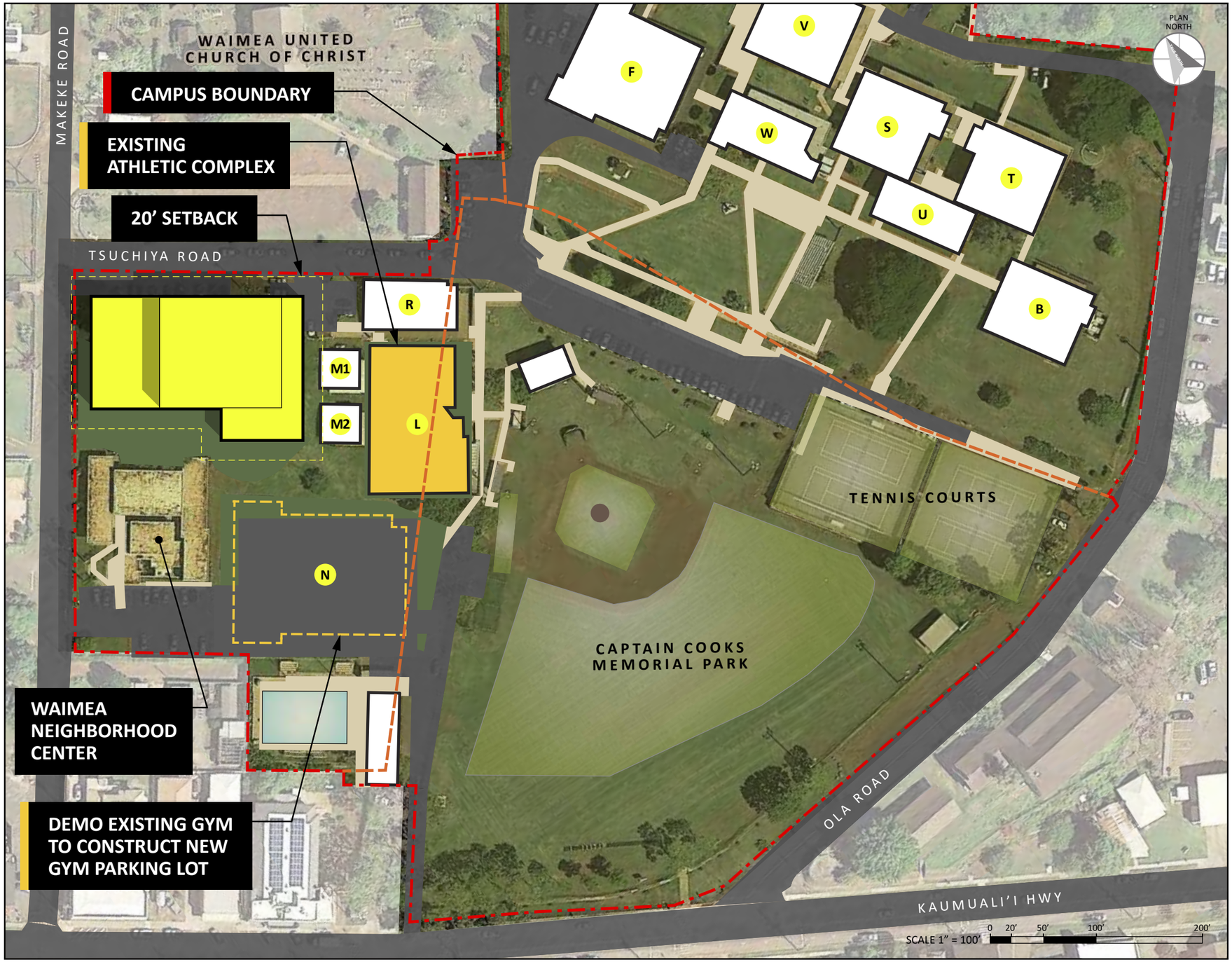
- County Owned Land
- DOE Land
- Campus Boundary
- TMK Land Division

NEW GYM LOCATION OPTIONS

SCALE 1" = 200'

	DESIGN OPTION				
	#1A	#1B	#2A	#2B	#3
Location	Near Existing Gym		In Existing Courtyard		In Place of Existing Tennis Courts
Property Owner	County Owned		DOE		County Owned
Number of Stories	2	1	1	2	1
Demolition/ Buildings Relocation	N (Gym)*	N (Gym)* L M1 & M2	Existing Bleachers	N (Gym)* Existing Bleachers	N (Gym)* L M1 & M2 Tennis Courts
Includes Gym Parking Area	Lot in place of Existing Gym	Lot in place of Existing Gym & along Tsuchiya Rd	New Gym Parking at corner of Tsuchiya Rd & Makeke Rd	Lot in place of Existing Gym & at corner of Tsuchiya Rd & Ola Rd	Parking south of courtyard& at corner of Tsuchiya Rd & Ola Rd
New Tennis Courts	No	No	No	No	Yes
Requires Tree Removal	Yes	Yes	Yes	Yes	Yes

** = Demolition not required for this Design Option*



DESIGN OPTION #1A

SCALE 1" = 100'

Design Option #1A is located near the existing Building N (Gym) along Tsuchiya Road. To minimize the building footprint, the proposed new gym would be a 2-story structure with Training Room, Athletic Director and some Athletic Storage on the second floor.

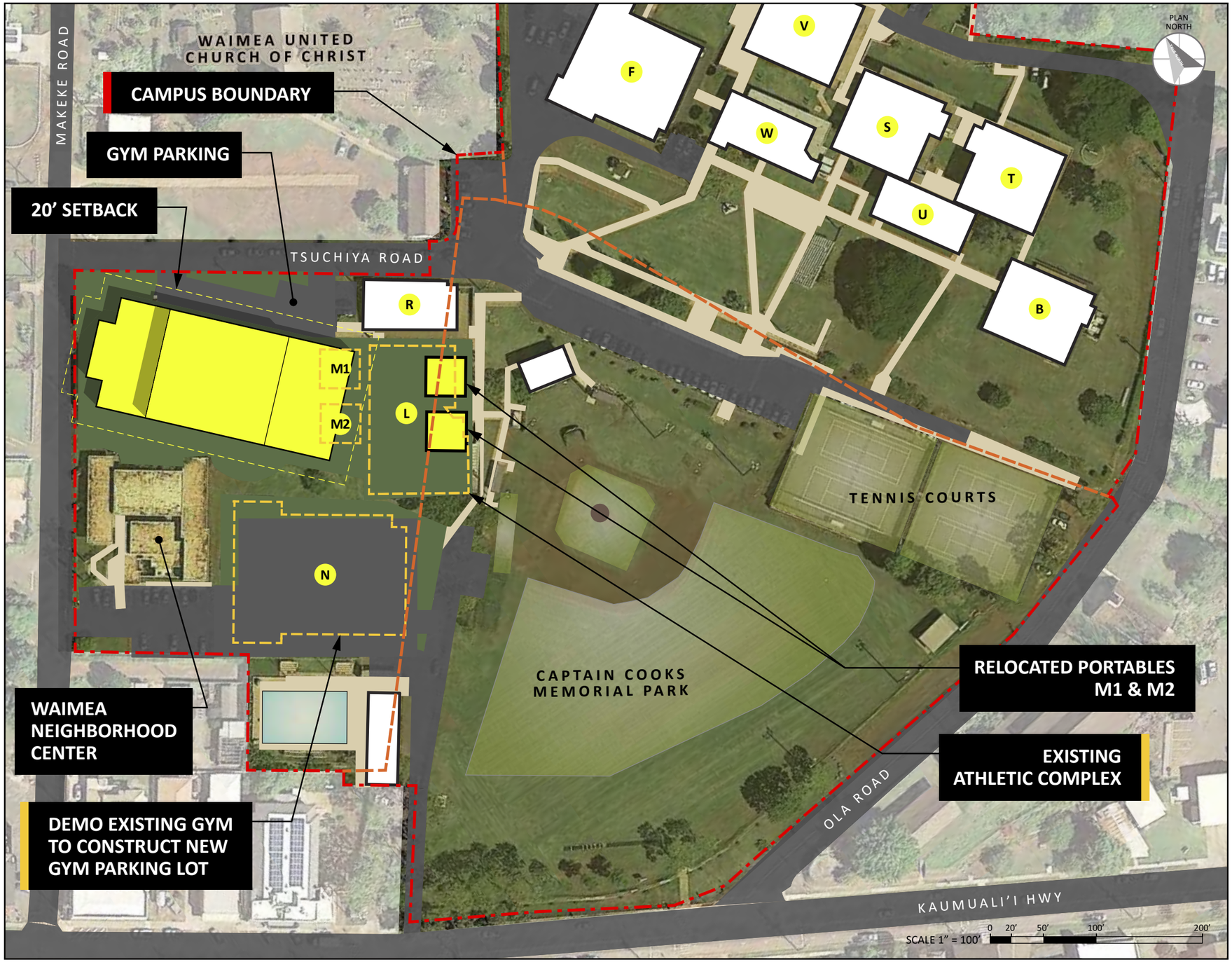
If the existing lockers (in Building L) were to remain and not included in the program, the total gross area would be reduced resulting in a smaller footprint to fit in the constrained site.

PROS:

- Location allows for the retention and continued use of the existing Locker Room/Shower Building 'L'
- Requires removal of existing trees
- Location groups athletic functions
- Allows for continued use of existing Gymnasium and Locker Room/Shower Building for the duration of construction
- Following demolition of existing Gymnasium, area can be converted to parking by extending Haiki Road, although modifications likely required

CONS:

- Two-story structure likely more expensive
- Requires an elevator which continual maintenance
- May need to relocate existing classroom portables



DESIGN OPTION #1B

SCALE 1" = 100'

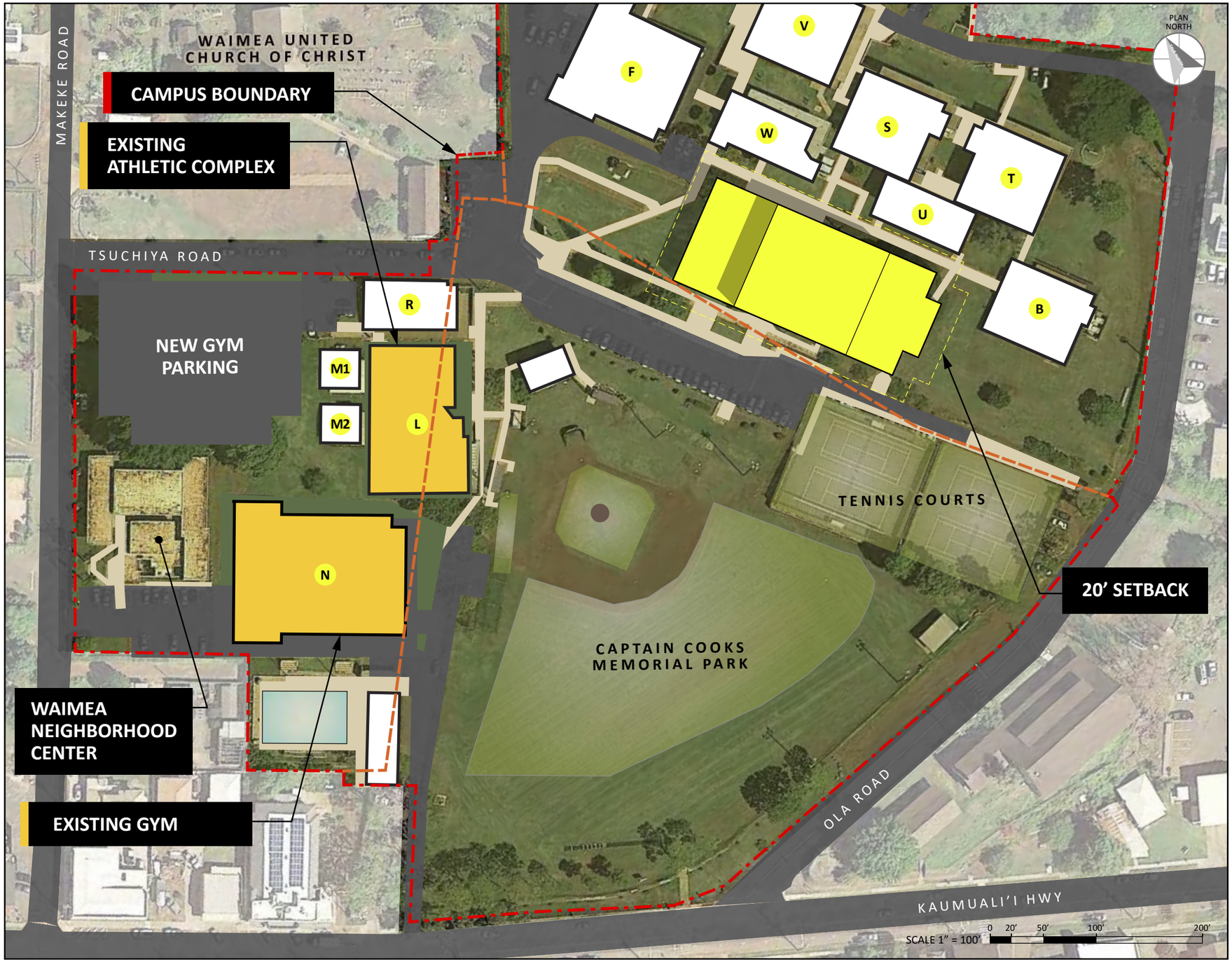
Design Option #1B is located near the existing Building N (Gym) along Tsuchiya Road. The proposed building is a 1-story structure, requiring removal of Building L and relocation of Portables M-1 and M-2.

PROS:

- Location groups athletic functions
- Single story structure less expensive than two-story structure, no elevator requirement
- Allows for continued use of existing Gymnasium for the duration of construction
- Following demolition of existing Gymnasium, area can be converted to parking by extending Haiki Road, although modifications likely required

CONS:

- Requires removal of existing trees, classroom portables, existing Locker Room/ Shower Building 'L'
- Requires use of existing Gymnasium showers and lockers for the duration of construction



DESIGN OPTION #2A

SCALE 1" = 100'

The proposed location for Design Option #2a is the existing courtyard south of Buildings W and U. Design Option #2A is a 1-story building.

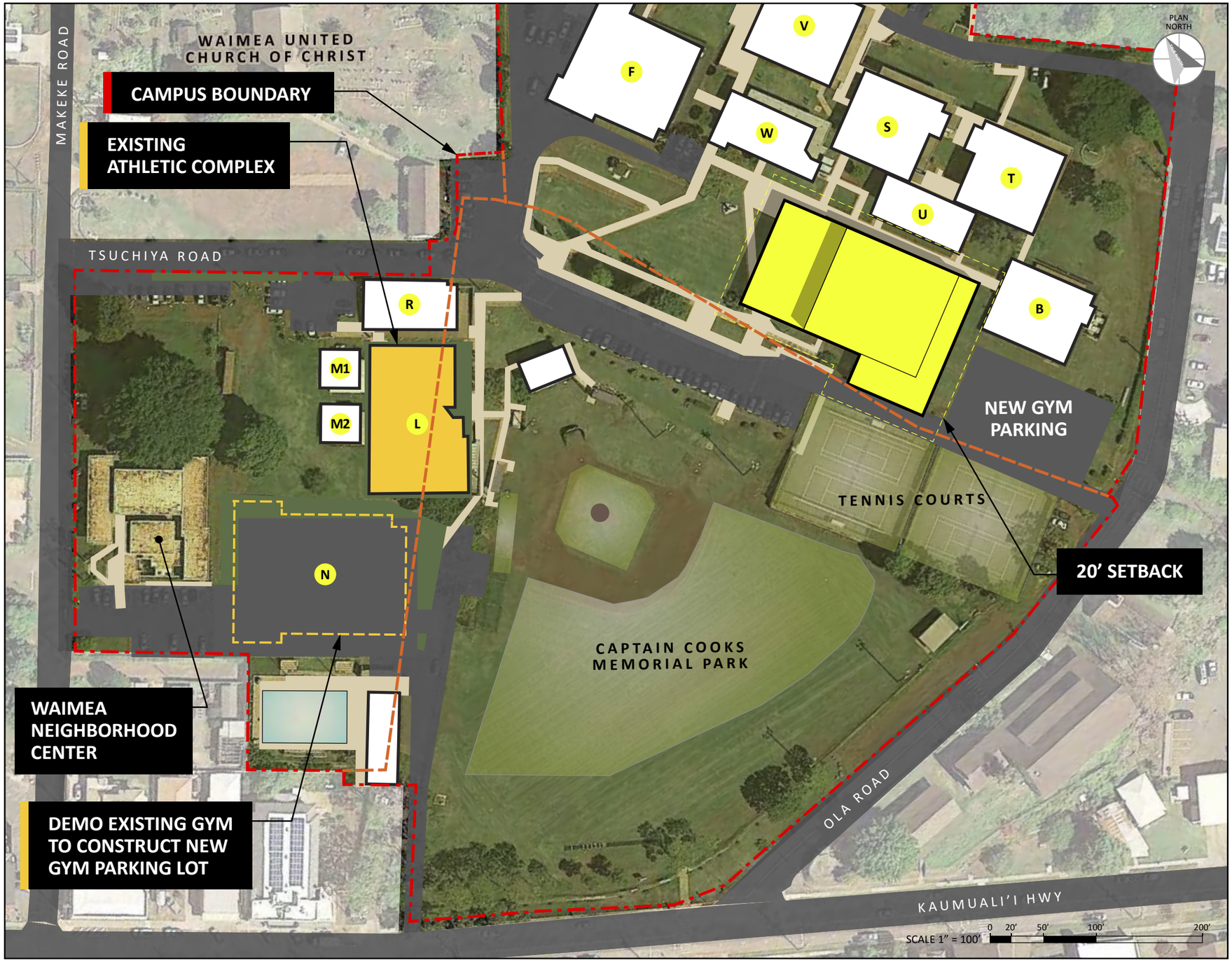
If the existing lockers (in Building L) were to remain and not included in the program, the total gross area would be reduced resulting in a smaller footprint..

PROS:

- Location is closer to main campus
- Allows for continued use of existing Gymnasium and Locker Room/Shower Building for the duration of construction
- Following demolition of existing Gymnasium, area can be converted to parking by extending Haiki Road, although modifications likely required

CONS:

- Loss of open space at the front of campus; requires removal of existing bleachers, tree
- Majority of parking will be a distance away



DESIGN OPTION #2B

SCALE 1" = 100'

The proposed location for Design Option #2B is the existing courtyard south of Buildings W and U. Design Option #2B is a 2-story building.

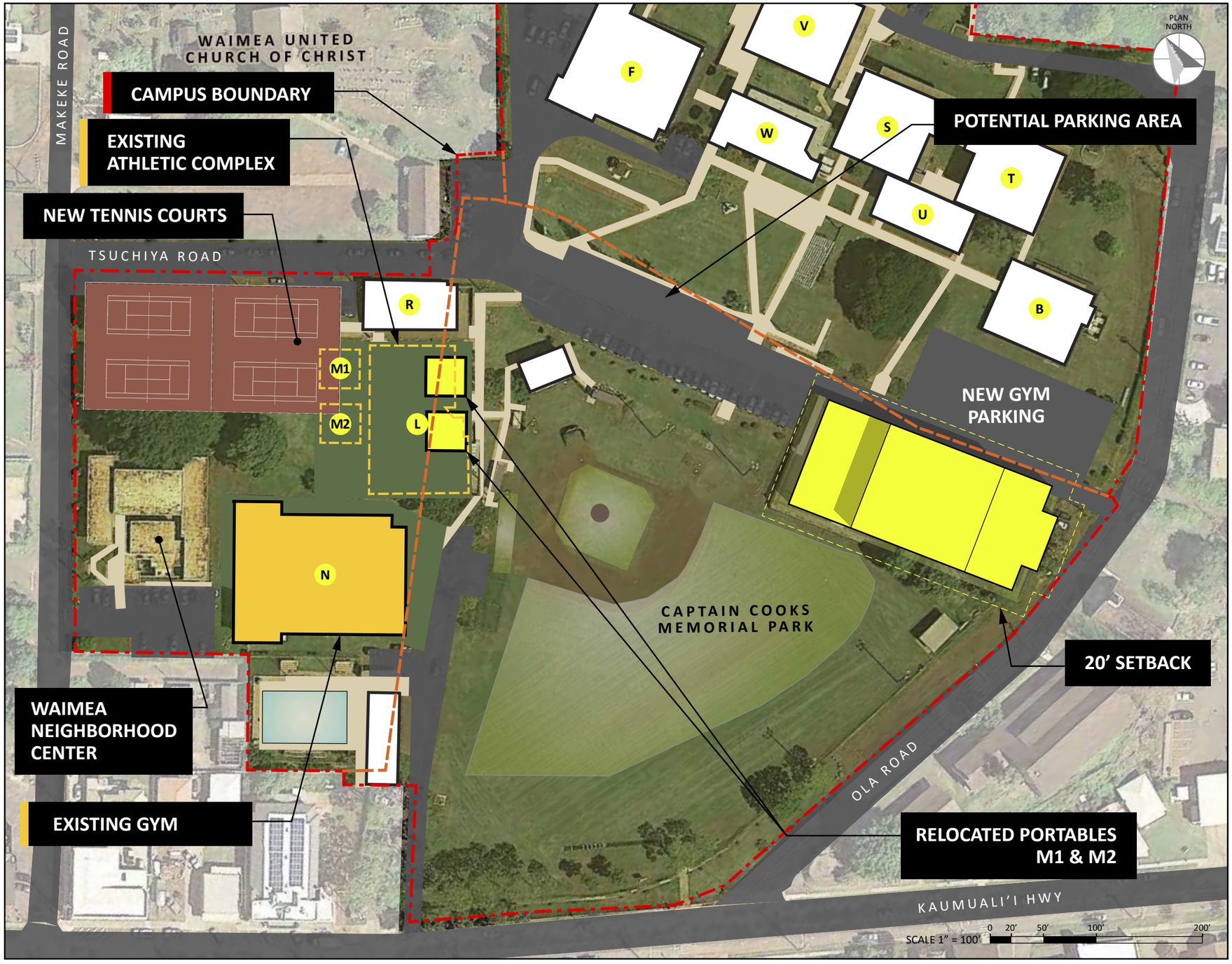
If the existing lockers (in Building L) were to remain and not included in the program, the total gross area would be reduced resulting in a smaller footprint..

PROS:

- Location is closer to main campus
- Allows for continued use of existing Gymnasium and Locker Room/Shower Building for the duration of construction
- Following demolition of existing Gymnasium, area can be converted to parking by extending Haiki Road, although modifications likely required

CONS:

- Loss of open space at the front of campus; requires removal of existing bleachers, tree



DESIGN OPTION #3

SCALE 1" = 100'

Design Option #3 construct a 1-story building in place of the existing tennis courts. New tennis courts to be constructed in place of existing Gymnasium.

PROS:

- Location is near Captain Cooks Memorial Park which allows for continued direct access and closer to main campus
- Allows for continued use of existing Gymnasium and Locker Room/Shower Building for the duration of construction

CONS:

- Location displaces existing tennis courts, thus replacement of tennis courts required (possible location: site of existing Gymnasium) which adds cost

Waimea High School Gymnasium - DOE Project Number: Q43201-18		
GYMNASIUM	EDSPECS PROGRAM	Revised Program
Lobby Area		
(AD) Office/Restroom & Shower	180	180
PE Equipment Room	100	100
Janitors Closet	40	40
Electrical room by Designer + Future Invertor Space	Area by Designer	
Men's Toilet (Public)	324	324
Women's Toilet (Public)	353	353
Multipurpose Room	-	900
Concession Booth	240	240
Ticket Booth	50	-
Lobby	1070	220
Main Floor	11817	11817
Wrestling Room	1800	1800
General Storage	200	200
Electrical & Heater Room	Area by Designer	
Janitors Closet (Locker Area)	40	40
Boy's JV Facilities		
Locker Room	320	320
Toilet	96	96
Varsity / J.V. Drying Room	128	128
Varsity / J.V Shower Booth (ADA)	96	96
Varsity / J.V. Shower Room	96	96
Boy's Varsity Facilities		
Locker Room	320	320
Toilet	96	96
Girl's JV Facilities		
Locker Room	320	320
Toilet	96	96
Varsity / J.V. Drying Room	128	128
Varsity / J.V. Shower Booth (ADA)	96	96
Varsity / J.V. Shower Room	96	96
Girl's Varsity Facilities		
Locker Room	320	320
Toilet	96	96
TOTAL	**18518**	**18518**

Legend

- Program Area Added
- Program Area Revised

Take-Aways:

- FADS based on Kapa'a HS Gymnasium (DOE Project No. Q41000-18)
- Reduced Lobby area from 1,070 sf to 220 sf
- Reduction in Lobby area allowed for added Multi-Purpose Room (900 sf)
- Removed Ticket Booth (-50 sf)
- Total Area remains unchanged at 18,518 sf

Waimea High School Gymnasium - DOE Project Number: Q43201-18

GYMNASIUM	EDSPECS PROGRAM	**Waimea HS FADS**	Kapa'a HS Program	Kaua'i HS FADS
Lobby Area				
(AD) Office/Restroom & Shower	180	**180**	170	270
Conference Room	240	**-**	-	440
PE & Coaches Office	160	**-**	-	160
PE Equipment Room	100	**100**	110	160
Janitors Closet	40	**40**	45	80
Electrical room by Designer + Future Invertor Space	Area by Designer	**Area by Designer**	320	Area by Designer
Men's Toilet (Public)	324	**324**	280	340
Women's Toilet (Public)	353	**353**	270	370
Multipurpose Room	-	**900**	905	-
Concession Booth	240	**240**	245	340
Ticket Booth	50	**-**	50	80
Lobby	1070	**220**	725	900
Main Floor	11,817	**11,817**	12,035	15,045
Wrestling Room	1,800	**1,800**	1,775	2,304
General Storage	200	**200**	260	460
Electrical & Heater Room	Area by Designer	**Area by Designer**	Area by Designer	Area by Designer
Janitors Closet (Locker Area)	40	**40**	40	80
Team Equipment Room	-	**-**	675	-
Laundry	-	**-**	160	160
Training Room	-	**-**	1,315	1,120
Mechanical Room	Area by Designer	**Area by Designer**	320	Area by Designer
Telecom Room	Area by Designer	**Area by Designer**	120	80

Legend

Program Area Added

Program Area Revised

Kapa'a HS Gymnasium:
Added the following spaces:
- Team Equipment Room
- Laundry
- Training Room
- Larger Locker Rooms
- Gender Neutral Locker Rooms
  (Noted as Locker Room A, Locker Room B)

Kaua'i HS Gymnasium:
Added the following spaces:
- Conference Room
- PE & Coaches Office
- Laundry
- Training Room
- Gender Neutral Locker Rooms
  (Noted as Locker Room A, Locker Room B)

Waimea High School Gymnasium - DOE Project Number: Q43201-18				
GYMNASIUM	EDSPECS PROGRAM	**Waimea HS FADS**	Kapa'a HS Program	Kaua'i HS FADS
Boy's JV Facilities				
Locker Room	320	**320**	235	320
Toilet	96	**96**	720	110
Varsity / J.V. Drying Room	128	**128**		180
Varsity / J.V Shower Booth (ADA)	96	**96**		80
Varsity / J.V. Shower Room	96	**96**		220
Boy's Varsity Facilities				
Locker Room	320	**320**	235	320
Toilet	96	**96**	*	110
Girl's JV Facilities				
Locker Room	320	**320**	225	320
Toilet	96	**96**	805	110
Varsity / J.V. Drying Room	128	**128**		180
Varsity / J.V. Shower Booth (ADA)	96	**96**		80
Varsity / J.V. Shower Room	96	**96**		220
Girl's Varsity Facilities				
Locker Room	320	**320**	220	320
Toilet	96	**96**	*	110
Gender Neutral Locker Rooms				
Locker Room A	150	**-**	205	120
Locker Room B	150	**-**	205	120
Circulation				
	Area by Designer	**Area by Designer**	3,000	Area by Designer
TOTAL		**18,518**	**25,670**	**25,309**

* JV and Varsity Toilet Combined into Shared Space

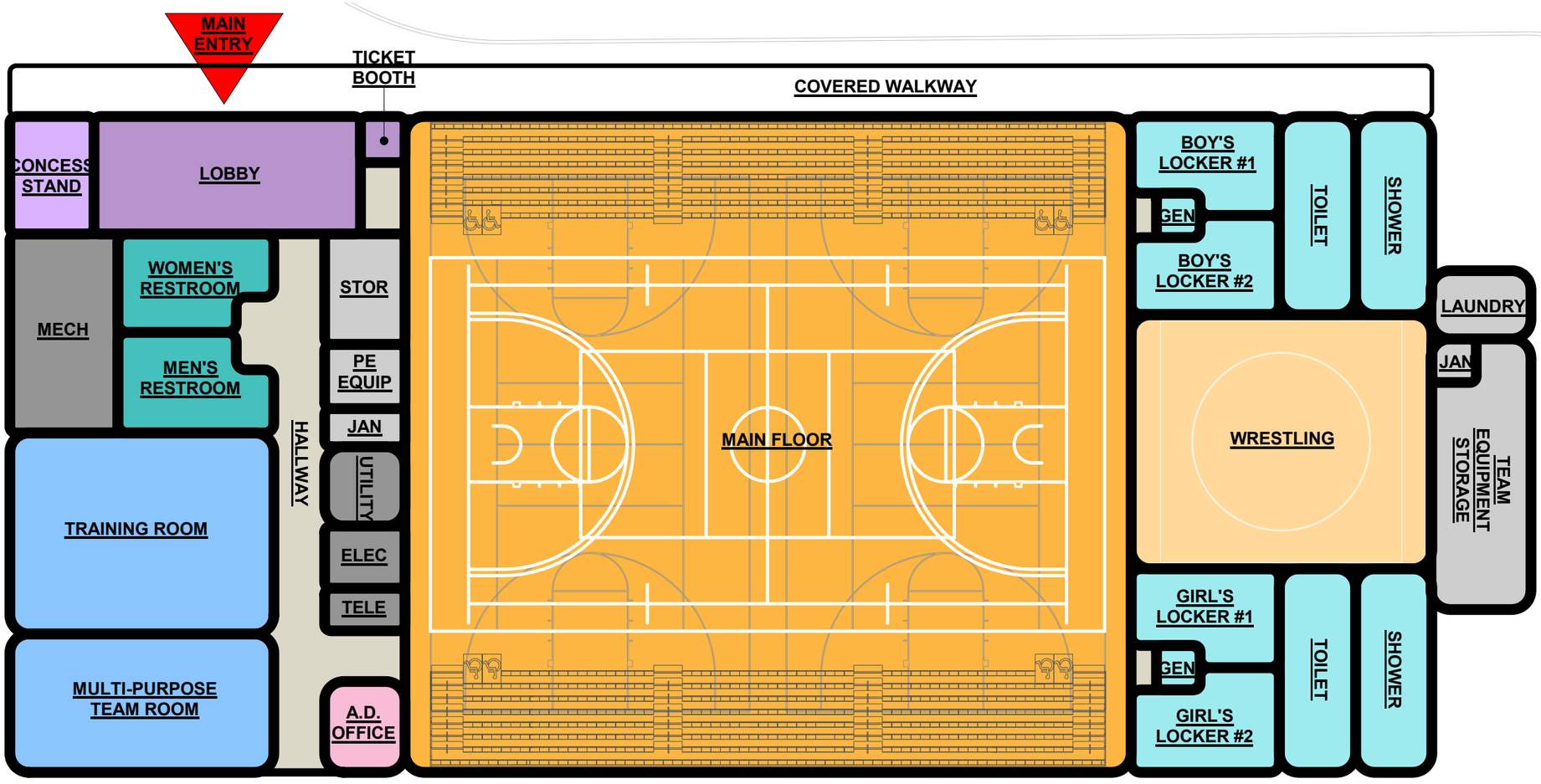
Future Weight Room (Separate Project)			1,000	

Legend

Program Area Added

Program Area Revised

Kapa'a HS Gymnasium:
Future Weight Room (Separate Project)



LEGEND

- MAIN GYM FLOOR
- WRESTLING ROOM
- MULTI-PURPOSE TEAM ROOM
- CONCESSION STAND
- LOBBY
- A.D. OFFICE
- RESTROOM
- LOCKER ROOM
- CIRCULATION
- SUPPORT SPACE
- UTILITY

SINGLE STORY FLOOR PLAN OPTION

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

DESIGN PARTNERS INCORPORATED

ARCHITECTURE • PLANNING • INTERIORS
CIVIL • CONSTRUCTION MANAGEMENT

1580 Makaloa Street • Suite 1100 • Honolulu, HI 96814
(808) 949-0044 • FAX (808) 946-9663

02 April 2020

Record of Conversation

PROJECT: PS D020-500 Professional Services – Architectural Planning & Design
Waimea High School Gymnasium Athletic Facilities
DOE Project Number: Q43201-18

SUBJECT: Design Scope Meeting Minutes

LOCATION: Go-to-Meeting Teleconference

ATTACHMENTS:

1. Due Diligence Study – Design Scope Meeting

ATTENDEES:

Jon Kobayashi	Waimea HS Athletic Director
Penny Vess	Waimea HS Vice Principal
Sharlene Morimoto	DOE ASA, Kaua'i West Complex
Gaylyn Nakatsuka	DOE Office of Facilities and Operations, Facilities Development Branch/Planning Section
Richard Bass	DOE Project Coordinator
Kendall Ellingwood	Design Partners Incorporated, Principal, A-E Team
Kristi Sumida	Design Partners Incorporated, Project Manager, A-E Team
Alessandra Olsen	Design Partners Incorporated, Architectural Designer, A-E Team

Summary of Discussion:

1. The goal of this project is to build a new Gymnasium to meet the latest High School Facilities Assessment and Development Schedule (FADS) and demolish the existing wood-structure Gymnasium. Replacing the Gymnasium now would reduce overall maintenance costs and stay ahead of the curve for the Gymnasium's useful life. This project currently does not have funding for

construction; thus, it will be designed via a two-step process. The first step is to conduct and complete a due diligence study to articulate the intent of the project, identify the development requirements and produce an opinion of probable cost for budgeting purposes. The second step is the project budget which will be relayed to the Legislature for consideration. Design work to commence upon appropriation of adequate construction funding.

2. The intent of this design scope meeting is to establish the project requirements and identify potential site locations. Following the submission of the A-E team fees, a design contract will be executed to encumber lapsing funds. A kick-off meeting will follow contract execution.

3. Gaylyn Nakatsuka, Planner, noted that through the due diligence process, items such as the historic significance (if any), any sheltering-in-place requirements (Hawaii Emergency Management Agency [HIEMA]) shall be verified and documented. Compliance with ADA will also be required.

4. Current Waimea High School population: approximately 600 students (once as high as 1,000 students), however student population may increase due to boundaries being redefined. Preference for a Gymnasium seating capacity to match existing capacity which is between 800 to 850 seats.

5. The following site options were discussed:

    a. Option to site new Gymnasium over existing Gymnasium. Drawback would be that the school would be without a Gymnasium for the duration of construction which could be as long as 24 months. Jon Kobayashi, Waimea HS Athletic Director, opposed this option as there are no other facilities nearby that could be used for practice and/or games. Using other school facilities, e.g. Kaua'i HS, would be a challenge as these schools already have established schedules.

    b. Discussed an option to site new Gymnasium adjacent to the existing Gymnasium, in an open area bordered by Tsuchiya Road to the north, two (2) existing Matson containers, portable restrooms to the west and portables to the east. The area appears to be limited; thus, discussions were held to design a two-story structure which would reduce the building footprint. In this option, the support spaces, e.g. Locker Rooms, Training Room, Storage, etc. could be placed on the lower floor with the Main Court, due to it's tall ceiling height, placed on the upper floor. Public spaces such as restrooms, concession, etc. would be on the same level as the Main Court. Spaces would be connected via a combination of stairs, ramps and elevator.

    c. Another scenario for a two-story Gymnasium design would place the Gymnasium on the lower floor and place smaller functions such as the Multi-Purpose Room, Training Room, Storage and Athletic Director Office on the second floor. The new Kaua'i HS Gymnasium design is a two-story structure with the Athletic Director Office, Storage and Conference Room on the second floor.

    d. The option to build a new Gymnasium on any site separate from the existing Gymnasium would allow for the continued use of the existing Gymnasium.

    e. Discussed an option to demolish the existing Athletic Complex, currently located adjacent to the existing Gymnasium. The existing Athletic Complex and adjacent Building 'R' are fairly new (believed to have been built after the mid-1980's). The existing Athletic Complex

houses PE/Athletic Locker Rooms, Weight Room, Storage and Laundry; no play courts. Jon Kobayashi noted that the existing Locker Rooms and Restrooms in the existing Gymnasium could be used while the new Gymnasium is under construction. This option would entail phases and may be costly.

f. It was noted that the existing Gymnasium may be on County of Kaua'i owned land. The building to the west of the existing Gymnasium is the Waimea Neighborhood Center, also owned by the County of Kaua'i.

g. Discussion was held as to whether the existing Tennis Courts, south of the existing Waimea HS campus could be used as a potential site, however, it was noted that these courts are owned by the County of Kaua'i.

6. Building Discussion:

   a. Ideal scenario would be to have two (2) full courts with a main court in the middle, however, will have to keep in mind the building footprint and available space

   b. Ideally, all three high schools (Kaua'i, Kapa'a and Waimea HS) would have the same type of spaces as the programs are similar

   c. Seating Capacity: Preference for 800 to 850 seats, similar to existing. The existing Gymnasium can fill up depending on the competition

   d. Desire for a Weight Room, however, similar to Kapa'a HS, it may have to be phased in under a future project.

   e. State code requires assembly spaces such as a Gymnasium be a storm shelter facility, thus certain spaces will need to be hardened.

7. Moving Forward:

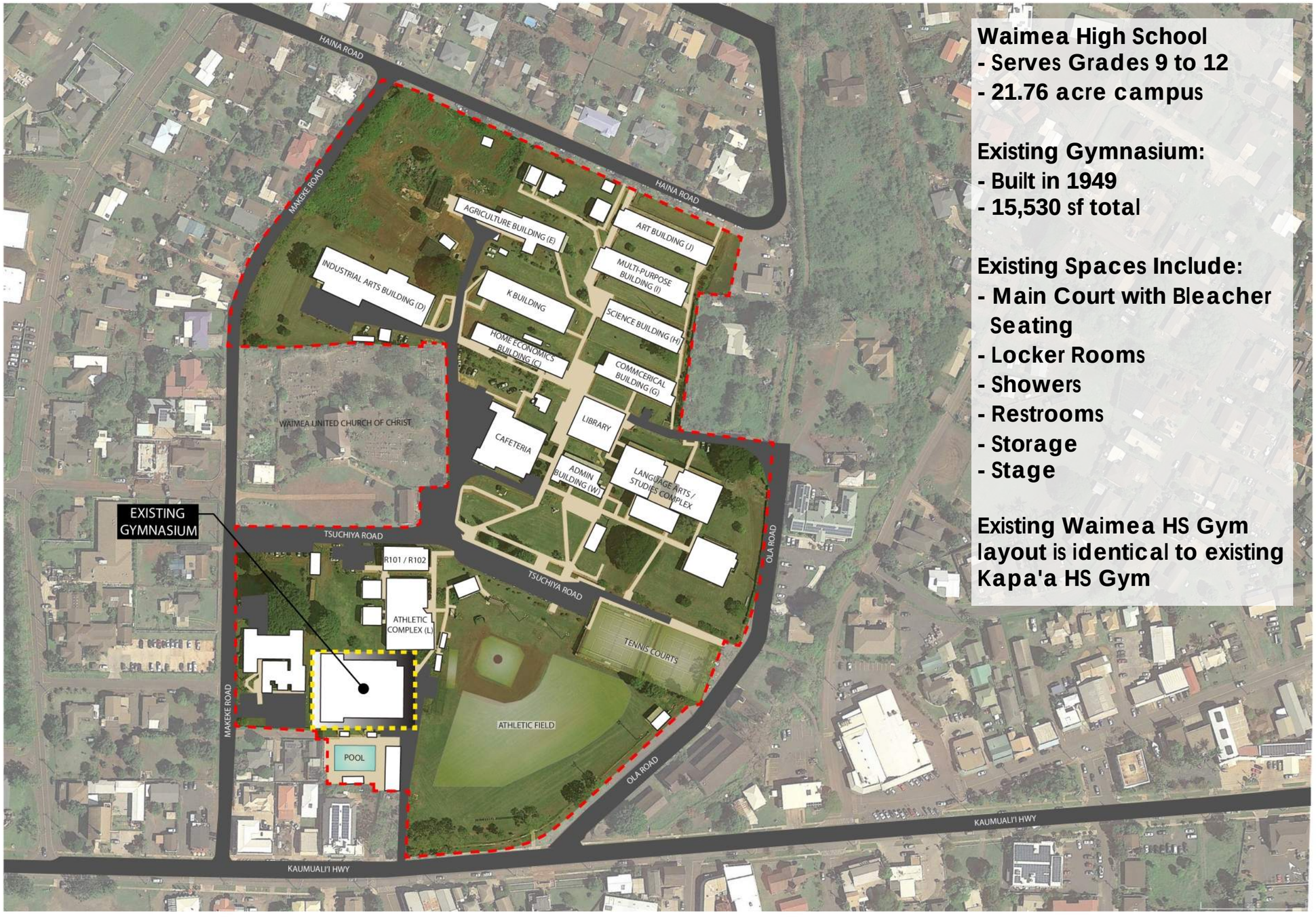
   a. A-E Team to study property ownership and boundaries

   b. Study options to place new Gymnasium in open space (adjacent to existing Gymnasium), at existing Athletic Complex or identify other open areas on the main campus

The above represents the writer's understanding of the discussions and a complete and accurate record of the decisions and agreements made. Amendments to this record shall be made in writing to the author within 5 days from the date of this document.

WAIMEA HIGH SCHOOL GYMNASIUM

Due Diligence Study - **Design Scope Meeting**



Waimea High School
- Serves Grades 9 to 12
- 21.76 acre campus

Existing Gymnasium:
- Built in 1949
- 15,530 sf total

Existing Spaces Include:
- Main Court with Bleacher Seating
- Locker Rooms
- Showers
- Restrooms
- Storage
- Stage

Existing Waimea HS Gym layout is identical to existing Kapa'a HS Gym

LEGEND

- EXISTING BUILDINGS
- SIDEWALK
- STREET
- SCHOOL SITE BOUNDARY
- GYMNASIUM BOUNDARY

PLAN NORTH

0 200' 400'

SCALE: 1" = 200'

Waimea High School Gymnasium - DOE Project Number: Q43201-18		
GYMNASIUM	EDSPECS PROGRAM	Revised Program
Lobby Area		
(AD) Office/Restroom & Shower	180	180
PE Equipment Room	100	100
Janitors Closet	40	40
Electrical room by Designer + Future Invertor Space	Area by Designer	
Men's Toilet (Public)	324	324
Women's Toilet (Public)	353	353
Multipurpose Room	-	900
Concession Booth	240	240
Ticket Booth	50	-
Lobby	1070	220
Main Floor	11817	11817
Wrestling Room	1800	1800
General Storage	200	200
Electrical & Heater Room	Area by Designer	
Janitors Closet (Locker Area)	40	40
Boy's JV Facilities		
Locker Room	320	320
Toilet	96	96
Varsity / J.V. Drying Room	128	128
Varsity / J.V Shower Booth (ADA)	96	96
Varsity / J.V. Shower Room	96	96
Boy's Varsity Facilities		
Locker Room	320	320
Toilet	96	96
Girl's JV Facilities		
Locker Room	320	320
Toilet	96	96
Varsity / J.V. Drying Room	128	128
Varsity / J.V. Shower Booth (ADA)	96	96
Varsity / J.V. Shower Room	96	96
Girl's Varsity Facilities		
Locker Room	320	320
Toilet	96	96
TOTAL	**18518**	**18518**

Legend

Program Area Added

Program Area Revised

Take-Aways:

- FADS based on Kapa'a HS Gymnasium (DOE Project No. Q41000-18)

- Reduced Lobby area from 1,070 sf to 220 sf

- Reduction in Lobby area allowed for added Multi-Purpose Room (900 sf)

- Removed Ticket Booth (-50 sf)

- Total Area remains unchanged at 18,518 sf

LEGEND

- EXISTING BUILDINGS
- PROPSED GYMNASIUM
- SIDEWALK
- STREET
- SCHOOL SITE BOUNDARY
- GYMNASIUM BOUNDARY

PLAN NORTH

0 200' 400'

SCALE: 1" = 200'

Waimea High School Gymnasium - DOE Project Number: Q43201-18				
GYMNASIUM	EDSPECS PROGRAM	**Waimea HS FADS**	Kapa'a HS Program	Kaua'i HS FADS
Lobby Area				
(AD) Office/Restroom & Shower	180	**180**	170	270
Conference Room	240	**-**	-	440
PE & Coaches Office	160	**-**	-	160
PE Equipment Room	100	**100**	110	160
Janitors Closet	40	**40**	45	80
Electrical room by Designer + Future Invertor Space	Area by Designer	**Area by Designer**	320	Area by Designer
Men's Toilet (Public)	324	**324**	280	340
Women's Toilet (Public)	353	**353**	270	370
Multipurpose Room	-	**900**	905	-
Concession Booth	240	**240**	245	340
Ticket Booth	50	**-**	50	80
Lobby	1070	**220**	725	900
Main Floor	11,817	**11,817**	12,035	15,045
Wrestling Room	1,800	**1,800**	1,775	2,304
General Storage	200	**200**	260	460
Electrical & Heater Room	Area by Designer	**Area by Designer**	Area by Designer	Area by Designer
Janitors Closet (Locker Area)	40	**40**	40	80
Team Equipment Room	-	**-**	675	-
Laundry	-	**-**	160	160
Training Room	-	**-**	1,315	1,120
Mechanical Room	Area by Designer	**Area by Designer**	320	Area by Designer
Telecom Room	Area by Designer	**Area by Designer**	120	80

Legend

Program Area Added

Program Area Revised

Kapa'a HS Gymnasium:

Added the following spaces:

- Team Equipment Room
- Laundry
- Training Room
- Larger Locker Rooms
- Gender Neutral Locker Rooms (Noted as Locker Room A, Locker Room B)

Kaua'i HS Gymnasium:

Added the following spaces:

- Conference Room
- PE & Coaches Office
- Laundry
- Training Room
- Gender Neutral Locker Rooms (Noted as Locker Room A, Locker Room B)

Waimea High School Gymnasium - DOE Project Number: Q43201-18

GYMNASIUM	EDSPECS PROGRAM	**Waimea HS FADS**	Kapa'a HS Program	Kaua'i HS FADS
Boy's JV Facilities				
Locker Room	320	**320**	235	320
Toilet	96	**96**	720	110
Varsity / J.V. Drying Room	128	**128**		180
Varsity / J.V Shower Booth (ADA)	96	**96**		80
Varsity / J.V. Shower Room	96	**96**		220
Boy's Varsity Facilities				
Locker Room	320	**320**	235	320
Toilet	96	**96**	*	110
Girl's JV Facilities				
Locker Room	320	**320**	225	320
Toilet	96	**96**	805	110
Varsity / J.V. Drying Room	128	**128**		180
Varsity / J.V. Shower Booth (ADA)	96	**96**		80
Varsity / J.V. Shower Room	96	**96**		220
Girl's Varsity Facilities				
Locker Room	320	**320**	220	320
Toilet	96	**96**	*	110
Gender Neutral Locker Rooms				
Locker Room A	150	**-**	205	120
Locker Room B	150	**-**	205	120
Circulation				
	Area by Designer	**Area by Designer**	3,000	Area by Designer
TOTAL		**18,518**	**25,670**	**25,309**

* JV and Varsity Toilet Combined into Shared Space

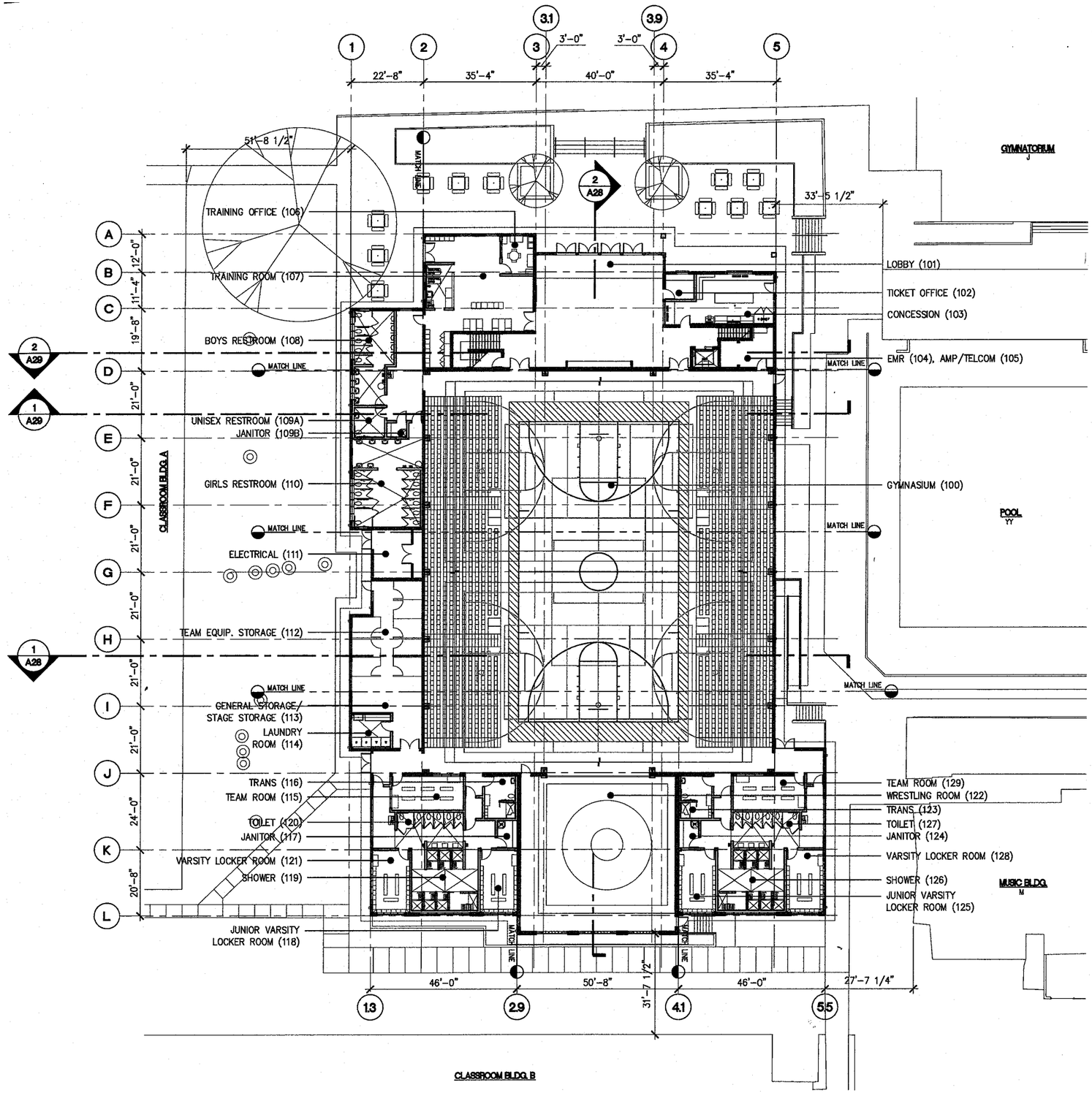
Future Weight Room (Separate Project)			1,000	

Legend

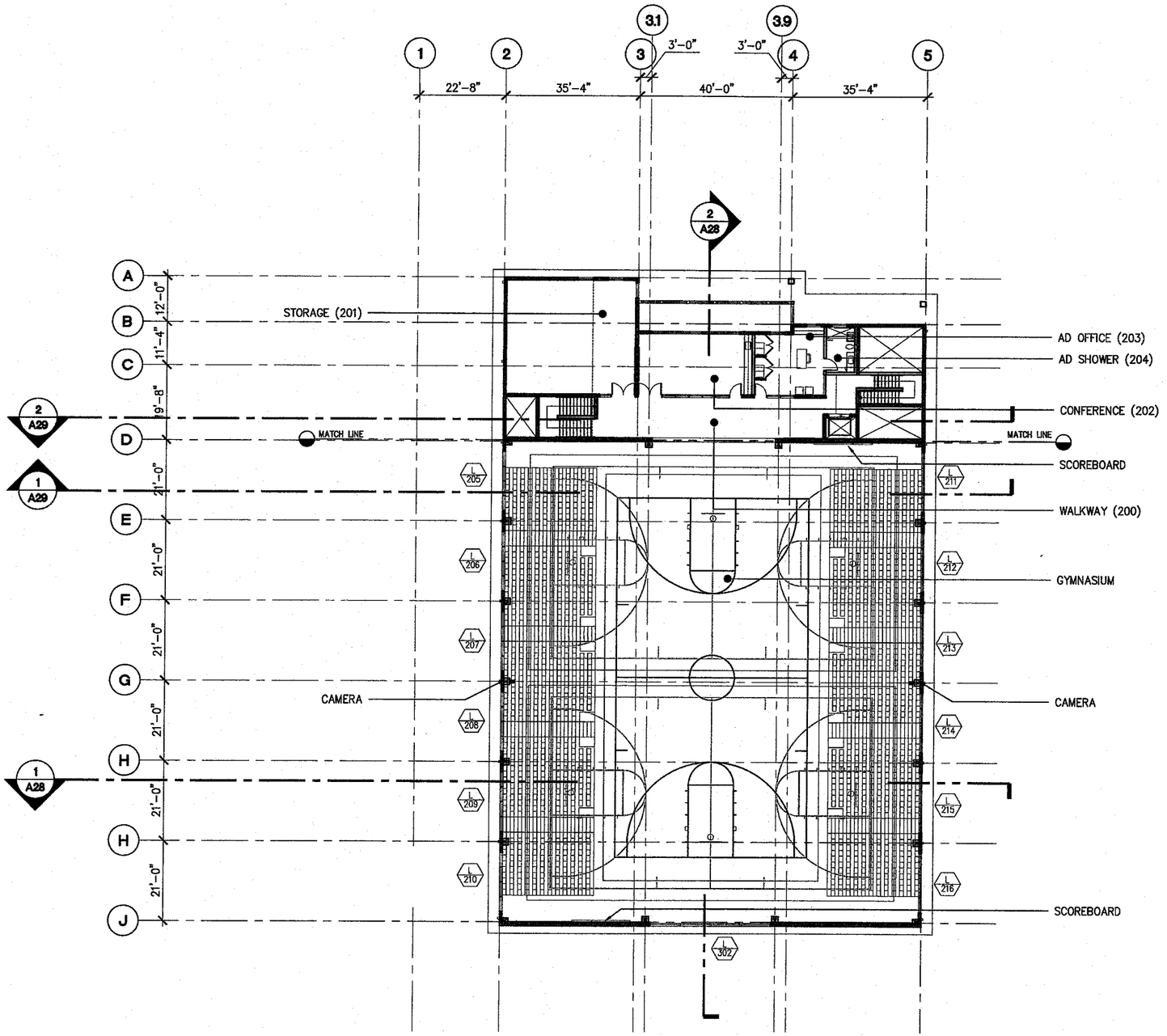
Program Area Added

Program Area Revised

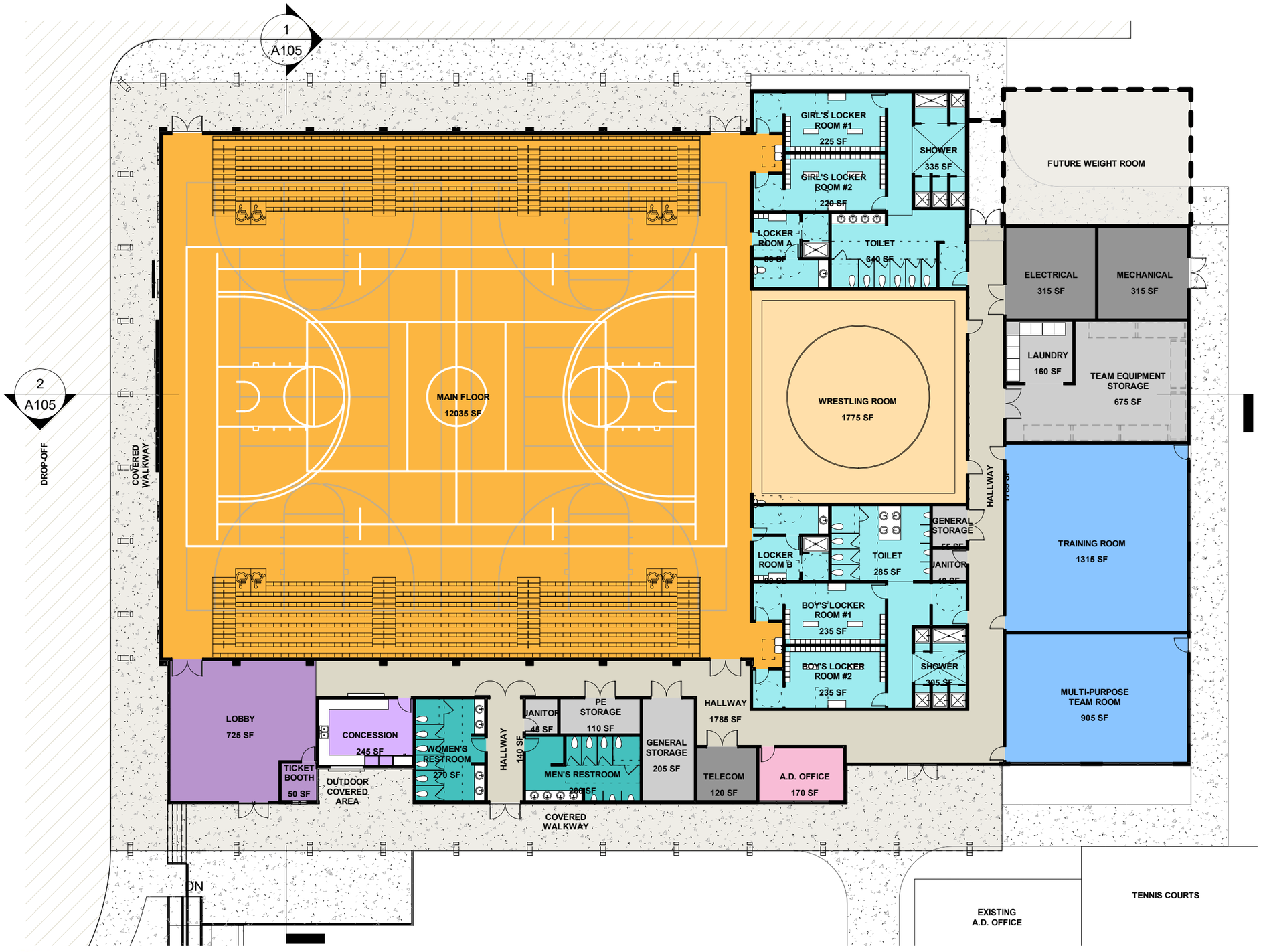
Kapa'a HS Gymnasium:
Future Weight Room (Separate Project)



Kaua'i HS Gymnasium
First Floor Plan



Kaua'i HS Gymnasium
Second Floor Plan



LEGEND

- MAIN GYM FLOOR
- WRESTLING ROOM
- MULTI-PURPOSE TEAM ROOM
- CONCESSION STAND
- LOBBY
- A.D. OFFICE
- RESTROOM
- LOCKER ROOM
- CIRCULATION
- SUPPORT SPACE
- UTILITY

Kapa'a HS Gymnasium
First Floor Plan