

**STATE OF HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES
OFFICE OF CONSERVATION AND COASTAL LANDS
Honolulu, Hawai'i**

File No: OA-3778
180-Day Exp. Date: February 22, 2017

January 27, 2017

Board of Land and
Natural Resources
State of Hawaii
Honolulu, Hawaii

REGARDING: Conservation District Use Application (CDUA) OA-3778 for
the Division of Forestry and Wildlife (DOFAW) Makiki
Baseyard Improvements Project

APPLICANT: State of Hawai'i
Department of Accounting and General Services (DAGS)

AGENT: HHF Planners
733 Bishop Street, Suite 2590
Honolulu, Hawai'i 96813

LANDOWNER: State of Hawai'i
Executive Order (EO) 3729 for land set aside to the DOFAW
and
EO 4314 for land set aside to the Division of State Parks

LOCATION: Makiki, Island of O'ahu

TAX MAP KEY: (1) 2-5-019: portion 008

AREA OF PARCEL 346.355 Acres

USE: 3.05 Acres

SUBZONE: Resource

DESCRIPTION OF AREA AND CURRENT USE:

The project site is located in Makiki Valley within the Makiki-Tantalus Area in the Kona District, on the island of O'ahu. The area is also a part of the larger Honolulu Watershed Forest Reserve and is under the jurisdiction of the Department of Land and Natural

Resources (DLNR) Division of Forestry and Wildlife (DOFAW). The project site is further identified as Tax Map Key (TMK): (1) 2-5-019: portion of 008 (see Exhibit 1). The parcel is located in the Resource Subzone of the State Land Use Conservation District (see Exhibit 2). Access to the site is provided via a paved driveway that serves as an access road located off Makiki Heights Drive. This access road passes through the State property leading to the baseyard. However, once you reach the baseyard, access is restricted to mainly DOFAW employees with the exception of visitors conducting business as the baseyard. Uses surrounding the project site include the Makiki Valley State Recreational Area, the Hawai'i Nature Center (HNC), and the Halau Ku Mānā Public Charter School.

The existing DOFAW Makiki Baseyard site consists of various permanent and temporary buildings as the development of the baseyard has been expanded in a reactionary manner to meet the growing programmatic and functional needs of its programs through the addition of temporary office and storage structures. There are 21 existing structures on-site ranging in size and form. Many of the temporary structures are comprised of office trailers, metal shipping containers converted to storage structures, and steel-framed carports to partially shelter vehicles and equipment. The total floor area of the existing facility is 13,500 square feet, not including the nursery/greenhouse structure. The nursery structure is approximately 3,000 square feet.

Elevation at the project site ranges from a low of roughly 337 feet above mean sea level (msl) near the entrance of the baseyard to a high of nearly 388 feet above msl near the rear of the project site.

Soils within the project area are comprised of Ka'ena stony clay soils (KaeD), Rock land (rRk), and Tantalus silt loam (TAF). KaeD soils are comprised of deep, poorly drained and stony soils on alluvial fans and talus slopes. Permeability is characteristically slow with medium runoff rates. These soils are sticky and very plastic with slight to neutral acidity. Workability of this soil is difficult and the erosion risk is moderate. rRk soils are found in areas where exposed rock covers 25 to 90 percent of the surface. This soil is associated with rock outcrops and is very sticky and plastic with slight to neutral acidity. It has a high shrink-swell potential, and is susceptible to movement when saturated. These soils can be found at a range of elevations. TAF soils encompass well-drained soils on the island of O'ahu. Tantalus silt loam and other soils within the series are located in upland areas of volcanic spurs and cinder cones. These soils are characterized by moderately rapid permeability with medium to rapid runoff rates. Acidity is neutral in the surface and subsoil layers. Erosion risk is severe.

The U.S. geological Survey's Atlas of Natural Hazards in the Hawaiian Coastal Zone assigned seismic hazard intensity ratings for all islands on a scale of 1 to 5 with 1 representing the lowest hazard and 5 the highest. The project site has a moderately high (3 ranking) seismic risk ranking. According to the Flood Insurance Rate Map (FIRM), the project site is designated Zone X which are areas determined to be outside of the 0.2% annual chance floodplain. The project site is located outside the City's tsunami evacuation zone.

The project site is located within the Nuʻuanu Aquifer System which is situated within the larger Honolulu Aquifer Sector. The Nuʻuanu Aquifer System has an estimated sustainable yield of 14 million gallons per day (mgd). The aquifer system in the project area is classified as a basal aquifer that is mostly characterized by horizontally extensive flank lava geology with a water table in the upper surface of the aquifer. The water is fresh, can be used for drinking, and is considered irreplaceable with a high vulnerability to pollution.

The nearest surface body of water is Makiki Stream which is located approximately anywhere from 3 feet to 50 feet to the east of the baseyard. Makiki Stream is approximately 3.5 miles long and is classified as an interrupted, perennial stream. It is fed by Kanahā, Kanealole, Moleka, and Maunalaha Streams. Makiki Stream is classified as a Class 2 inland freshwater body. The Class 2 designation applies to waters protected for recreational purposes, the support and propagation of aquatic life, agricultural and industrial water supplies, shipping, and navigation. Class 2 waters shall not receive discharge that has been treated.

A biological survey was prepared for the project area. The survey found two (2) species of trees, *Hibiscus clayi* and *Pritchardia loulu*, present at the project site. Both are on the U.S. Fish and Wildlife Service list of Hawaiʻi Endangered Plant Species. The applicant notes that the *Hibiscus clayi* was introduced as landscape planting. The sole endemic avifauna species observed during the survey was the white-tailed Tropicbird (*Phaeton lepterus*). Mammals observed on site were all alien species. No Hawaiian Hoary bats were detected, however there is a possibility that they may use resources within the project area on a seasonal basis as there is dense woody vegetation on and adjacent to the site that is suitable for bat roosting.

An archaeological literature review and field inspection (LRFI) was conducted at the project site. The LRFI indicated that no above ground historic properties are located within the project site. However, the project site is located within a portion of four (4) Land Commission Awards (LCAs), which suggests the potential for pre-and/or post-contact land uses and associated sub-surface historic properties. Consultation with the State Historic Preservation Division (SHPD) indicates that the baseyard site could have features or buildings that qualify for consideration as historic properties, given the site's history as a Territorial government nursery and later use for modern forestry related activities by DOFAW. The applicant also states that there are no known native Hawaiʻi cultural practices ongoing at the baseyard site although some plants found on the project site are known to have cultural uses.

Existing site drainage is managed through a series of grass swales that direct stormwater runoff away from baseyard facilities and towards Makiki Stream on the eastern end. A concrete swale and concrete rubble masonry (CRM) wall system located in the northwest corner of the baseyard captures a portion of site runoff.

Potable water is currently provided via a Board of Water Supply (BWS) water meter located near the project site entrance. Existing 8-inch and 4-inch water mains from BWS spring sources are located on the project site. An active 8-inch water main follows the existing access road alignment, terminating in front of an inactive BWS Chlorination Station located

at the mauka end of the project site. There is also an existing fire hydrant located near the entrance of the project site.

DOFAW currently has a septic system consisting of a septic tank and a nearby leach field. As the existing leach field has become unusable, DOFAW has connected their septic tank to the Division of State Park's (SP) and HNC's "Green Machine" which provides secondary wastewater treatment (R-2 recycled water) which is discharged to an existing subsurface irrigation field located on SP land, makai of DOFAW's existing administrative office. The subsurface irrigation field occupies approximately 4,000 square feet in area.

Electrical service is provided to the site from Hawaiian Electric Company (HECO) overhead subtransmission lines.

PROPOSED USE:

DOFAW is proposing to improve its existing Makiki Baseyard Facility which includes additional buildings and improvements to existing facilities to support DOFAW's ability to manage their island wide operations and more effectively implement program activities. The proposed structures and infrastructure improvements would include the following (see Exhibits 3-8):

- Expansion of the current Administration Building by demolishing an existing office and two storage buildings. The addition will be a 5,901 square foot, two-story building, with a height of approximately 35 feet and a covered courtyard area;
- Construction of a new, 9,800 square foot, two-story operational support building with a height of approximately 35 feet.
- Demolition of the existing City Board of Water Supply (BWS) chlorination station no longer in use and the removal of a modified storage container structure to allow for the construction of a new, 1,320 square foot, single-story building for the Na Ala Hele Trails and Access Program with a height of approximately 16 feet tall. An area has been set-aside near the driveway turn-around area for a new chlorination station should the BWS choose to reactivate their chlorination station in the future.
- Renovation of the former Fire Cache building (1,100 square feet) for office space.
- Demolition of the Wildlife storage building and construction of a new, 2,000 square foot, single-story building for addition office and storage space;
- Demolition of the existing nursery greenhouse structure, shade structure, and tool shed and replaced with a modern nursery greenhouse structure of similar size ;
- Construction of four, new retaining walls behind the existing Administration Building and new Operations Building. Height would vary, dependent upon the height of material retained but would typically range from 2 to 11 feet tall for some sections. A description of the proposed walls is as follows:
 - Wall No.1 is located makai (south) of the proposed DOFAW operations building and wraps around the eastern front of the building. The wall is approximately 120 feet long and ranges from 2 to 11 feet in height.

- Wall No. 2 is located behind (west) the operations building. The wall is approximately 95 feet long and ranges from 9 to 11 feet in height.
- Wall No. 3 is located behind (west) the operations building parking lot. The wall is approximately 80 feet long and 11 feet high.
- Wall No. 4 is located in front (east) of the operation building parking area and extends to the concrete curb serving the ramp leading into the parking area. This wall is approximately 50 feet long and ranges from 5 to 11 feet in height;
- Upgrade of the existing septic system. The existing DOFAW septic system is obsolete as the leach field has become unusable. Therefore, DOFAW's existing septic tank is currently connected to SP's and HNC's "Green Machine" for secondary wastewater treatment. As the "Green Machine" is old and has structural problems, DOFAW has decided to pursue the installation of a new septic system and constructed wetland area to allow them to disconnect from the "Green Machine". The new septic system will be comprised of up to two (2) tanks with a total maximum capacity of 2,500 gallons. The new septic system will be connected to the new constructed wetland area (leachfield) which will be located in a portion (1,500 square feet) of the existing drip irrigation fields. The constructed wetland area is comprised of a single basin, approximately 3 to 4 feet in depth. A non-permeable liner, or either natural (i.e. bentonite clay) or synthetic material would be installed in the basin and then backfilled with media appropriate to proposed plantings. A perimeter berm will be constructed around the wetland to contain rainwater collecting within the wetland basin to prevent entry of stormwater runoff. Perimeter fencing (approximately 5 feet in height) around the wetland may be required to restrict access to the area. Once the wastewater passes through the constructed wetland for secondary treatment, it will be discharged into the adjacent existing irrigation fields.
- Widening of the existing access road to 20 feet and the creation of a turn around area with a 24 foot right-of-way (total area approximately 11,500 square feet);
- Installation of walkways around buildings and parking areas (total area 3,100 square feet). Widths of walkways will be approximately 6 feet wide. Accessible paths will be provided to building entrances from accessible parking areas, however, there will be no accessible paths connecting the various buildings throughout the site due to topographical limitations;
- Construction of 69 parking stalls (6,340 square feet), of which most will be covered. 7 of the stalls will be for guest parking and 4 of the stalls will meet American Disability Act (ADA) requirements. The covered parking would be an open-air design, likely consisting of metal frames with a metal roof. Parking areas will be paved with an impervious material, however use of pervious materials, where applicable, will be encouraged to reduce storm water quantities;
- Relocation of three existing electrical utility poles and the realignment of an existing HECO easement. Electrical service requirements for the new facilities will change as phases of the master plan are implemented. Design plans will be coordinated with

HECO to address the relocation of utility poles and modifying the electrical easement;

- Installation of a stormwater retention system comprised of two subsurface retention tanks (8,000 gallons total) that will be used to retain stormwater runoff. The retention tanks will store runoff, and release the detained water slowly so receiving waters are not impacted from stormwater runoff;
- Installation of 470 linear feet of 18- and 24-inch drainage lines to route stormwater away from buildings;
- Installation of an onsite rainwater catchment system comprised of five (5) 4,000 gallon tanks. The catchment system will be located near the Administration Building and proposed Operations Building;
- Installation of bioswales to slow stormwater flows and retain pollutants that may be transported offsite. Existing natural swales at the mauka end of the project site will be reinforced with boulders to further retain stormwater;
- Installation of a new, 8-inch waterline approximately 1,600 linear feet in length. The waterline will be installed approximately 3 feet below ground surface;
- Landscaping using native vegetation such as lonomea, koa, alahe'e, loulu palm, 'ōhi'a lehua, wiliwili, hibiscus koki'o ke'oke'o, hibiscus koki'o 'ula, hapu'u tree fern, hō'awa, 'uki, and 'uki'uki.

Low impact development strategies, such as bioretention areas, are proposed to minimize effects of groundwater resources and Makiki Stream. Bioretention areas would absorb pollutants carried in runoff before they percolate into groundwater resources. The proposed drainage improvements (stormwater retention basins and rainwater catchment) would detain runoff onsite. Bioswales will be utilized as a means of filtering pollutants from baseyard runoff before entering Makiki stream.

Potential short-term impacts may associated with the construction of the project may occur, however, appropriate best management practices (BMPs) and other mitigative measures developed in more detail during the project's design process will be implemented by the contractor to minimize disturbances to the area during short-term construction activities. Mitigation measures would incorporate applicable City erosion and sedimentation control guidelines. A State DOH NPDES permit for construction activities would be obtained that will include BMPs and other requirements. Design plans will also be submitted to pertinent State and City agencies for ministerial review and approval.

The endangered *Hibiscus clayi* plant species present on the site would not be adversely impacted by project improvements because no new improvements are planned at that location. A *Pritchardia loulu* specimen identified on the project site growing within a grove of other planted natives could be endangered given the number of species in the *loulu* genus that may be endangered. However, improvements are not proposed for that area and the project does not require its removal or relocation. As a result, the project should not have an

adverse effect on threatened or endangered, or candidate threatened or endangered botanical species.

Construction and operation of the expanded DOFAW facilities may impact endemic and endangered seabirds that could enter the project area. Outdoor lighting, such as streetlights or building lights, will be designed to be shielded to the maximum extent possible and will use the lowest wattage bulbs. No night time construction activity is planned to occur for this project.

Hawaiian hoary bats could also be present on a seasonal basis given the site's existing vegetation. Therefore, construction activities that require the clearing of large trees or shrubs during the birthing and rearing season (June 1 to September 15) could impact Hawaiian hoary bats. Potential impacts from such disturbance will be minimized by avoiding the disturbance of wood vegetation taller than 15-feet during the bat birthing and rearing season. If tree disturbance of 15-feet or taller is required during this period, trees would first be inspected by a knowledgeable person to ensure that bats are not present.

Although the Archaeological LRFI did not identify any historic properties, some of the buildings and some features within the baseyard could have historic property eligibility based upon the meeting with SHPD. Therefore, DOFAW will implement additional measures to further document these features within the project site based upon input received from SHPD. To mitigate impacts on potential historic properties within the project site, DOFAW is proposing to:

1. Conduct an archaeological inventory survey (AIS) covering the entire baseyard site to better document and evaluate all site features for Hawai'i State Register of Historic Places eligibility;
2. Conduct an AIS of three existing buildings (the wildlife building, the forestry storage building, and the chlorination station) for Hawai'i State Register of Historic Places eligibility;
3. Prepare an archaeological monitoring plan that includes provisions for the post-review of historic properties, if any are encountered during construction activities; and
4. DOFAW will continue consultation with SHPD throughout the various design phases of the master plan's implementation to address any questions of measures needed regarding potential historic properties.

Due to funding restrictions, the project is anticipated to be constructed in phases. The first phase (Phase 1A) would involve construction of the new Na Ala Hele Building, covered parking area, the driveway expansion, additional parking, and utility improvements. Phase 1A is anticipated to start in the second quarter of 2017. Phase 1B is anticipated to occur soon after and would involve the design of the Administration Building along with the associated site work. Future phases of the project would depend on the availability of funding and DOFAW program priorities. Project improvements are planned to occur over a time period of 10 years with project build anticipated in 2027.

OTHER ALTERNATIVES CONSIDERED:

No Action Alternative: Under this alternative, the master plan would not be implemented. DOFAW's existing facilities would continue to be used for their operations, wastewater flows would continue to be treated by the Green Machine system. Over the next 10 years, anticipated increases in demands placed on DOFAW's resource management initiatives and programmatic growth would likely create pressure to increase staffing and provide more temporary space. This alternative was eliminated because it would not meet the purpose and need for the project. As the Makiki Baseyard has grown over the years in a reactionary manner to meet the growing programmatic and functional needs of DOFAW, this alternative would worsen this situation due to the pressure from increased program demands placed on existing facilities.

2011 Master Plan Alternative: A prior master plan was prepared for DOFAW in 2011. This plan included new facilities, parking areas, and other site improvements to address future programmatic needs and proposed to remove temporary structures along with demolishing select buildings to accommodate new buildings. This alternative was eliminated because the proposed improvements would require significant amount of site work (more grubbing and grading as well as a greater number of retention walls) and DOFAW desired a more environmentally sensitive design concept.

SUMMARY OF COMMENTS

The Office of Conservation and Coastal Lands referred the application to the following agencies and organizations for review and comment:

State

DLNR, Engineering Division
DLNR, Historic Preservation Division
DLNR, O'ahu Land Division
DLNR, Division of State Parks
Office of Hawaiian Affairs
Department of Health

City & County of Honolulu

Department of Planning & Permitting

The CDUA and the Environmental Assessment (EA) were also sent to the nearest state library (Hawai'i State Library) to make this information readily available to those who may wish to review and comment on it.

Below is a summary of comments received as well as the applicant's response to those comments as applicable.

STATE OF HAWAII

Department of Land and Natural Resources -

Engineering Division Comments: The rules and regulations of the National Flood Insurance Program (NFIP), Title 33 of the Code of Federal Regulations (CFR), are in effect when development falls within a designated Flood Hazard. The owner of the project property and/or their representative is responsible to research the Flood Hazard Zone designation for the project. The NFIP Zone X is a designation where there is no perceived flood impact. Therefore, the NFIP does not regulate any development within a Zone X Designation.

The applicant should include water demands and infrastructure required to meet project needs. Please note that projects within State lands requiring water service from their local Department/Board of Water Supply system will be required to pay a resource development charge, in addition to Water Facilities Charges for transmission and daily storage.

The applicant is required to provide water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update projections.

Applicants Response: We confirm that the project is situated within the Zone X flood hazard area where there is no perceived flood impact. The Flood Hazard Assessment tool was used to research the flood hazard designation for the project as suggested. We confirm that the NFIP does not regulate development within Zone X designations.

Information on existing and future water demands as discussed in Chapters 3 and 4 of the project's Final EA which is included in Appendix B of the CDUP application. Coordination with the Board of Water Supply will also be conducted during the design project phases implemented under the mater plan to address resource development and water facility charges. DOFAW will also coordinate with the Engineering Division to provide water demands and calculations that can be incorporated into the State Water Projects Plan Update.

Division of State Parks Comments: The rock and mortar walls in the area of the proposed wetland are significant historic properties that were built by the Civilian Conservation Corps in the 1930s and were part of the Forestry nursery complex. However, there is very little discussion of them in the CDUA and EA. The archaeological survey that was conducted should have addressed the walls as they will need to be protected and preserved under mitigation plan.

In addition, more discussion is needed about previous archaeological surveys and the LCA. Both of these sources suggest that the baseyard area was probably in agriculture during the pre-contact and early contact periods. As such, there is a potential for buried agricultural deposits and 'auwai which may be addressed if archaeological monitoring is performed during construction.

The subsurface constructed wetland system that will permanently replace the existing Green Machine is located on land under the jurisdiction of SP, and is further under General Lease No. S-97-01 to HNC. The Green Machine is an above ground device that is designed to mimic the cleansing functions of wetlands. Secondary treated effluent is processed by the

Green Machine and discharged as recycled water into onsite subsurface irrigation fields located near the ranger cottage. Existing separate septic systems serving wastewater flows from the baseyard and HNC will continue to function as the first level of wastewater treatment. The existing cesspool for the HNC will be closed, and a new septic system provided. Effluent from these septic tanks will be connected to the proposed subsurface constructed wetland system for secondary treatment.

SP does not have adequate funds for the construction or maintenance of a constructed wetland and notes that the responsibility of maintenance of structures on the leased area is the responsibility of the lessee.

We recommend that DOFAW initiate a survey for a subdivision of the parcel and execute a set aside and Governor's EO to take jurisdiction for the portion of land that contains both the wastewater and the HNC. By this action, DOFAW subsumes the management of the comfort station and General Lease No. S-97-01 to HNC. However, the subdivision should exclude the portion of the parcel that contains the Halau Ku Mānā charter School that will remain under the set aside and EO to SP.

Applicant's Response: The Archeological LRFI study completed for this project did provide a historical overview of the project site and general Makiki Valley area. This background included discussion of place names, legendary sites, Makiki background history, LCAs, etc., and the acquisition of upper Makiki Valley by the DOFAW in 1904.

A site visit and meeting with SHPD was also conducted to address historic properties. Based upon this meeting and the Archaeological LRFI, the project's effect on historic properties and mitigative measures could be identified. Subsequently, an archaeological inventory survey (AIS) is being conducted for the project site, which includes subsurface testing. Additional information on the baseyard's involvement with the prior forestry program will be incorporated in the AIS report, and information on the availability of annual reports is appreciated.

The rock walls in the area of the proposed constructed wetlands would not be affected because this improvement would occur where the existing wastewater irrigation fields are operating. Any best management practices needed to ensure they are not damaged during construction would be appropriately coordinated with SHPD, which includes their review of the AIS report.

The LRFI included sufficient information on previous archaeological surveys and LCAs, however, additional information will be incorporated into the AIS, as appropriate. The AIS results would provide additional information on potential subsurface deposits, and DOFAW will coordinate with the SHPD to determine the level of archaeological monitoring required.

We would like to clarify that DOFAW would be responsible for the development and maintenance of the constructed wetland, not SP. DOFAW is agreeable to executing a set aside to take jurisdiction from DSP for the constructed wetland and wastewater irrigation field by the ranger's cottage since they would be responsible for its maintenance. However,

the HNC, its comfort station and wastewater system serving that area are not a part of DOFAW's proposed project or necessary to support their baseyard operations. The HNC's activities are more appropriate to SP's mission and activities. Nevertheless, DOFAW is open to discussions with SP to evaluate the HNC's role within the valley, and it appropriate, make revisions to the jurisdictional boundaries between agencies that would maximize stewardship and management benefits to the area.

ANALYSIS

Following review of the application, representatives of the Applicant were notified by letter dated August 24, 2016, of the following:

1. The proposed project is an identified land use within the Conservation District, pursuant to Hawai'i Administrative Rules (HAR) § 13-5-22 P-8 STRUCTURES AND LAND USES, EXISTING (D-1) Major alteration of existing structures, facilities, uses, and equipment, or topographical features which are different from the original use or different from what was allowed under the original permit.
2. Pursuant to HAR §13-5-40 HEARINGS, a Public Hearing will not be required.
3. In conformance with Chapter 343, Hawai'i Revised Statutes (HRS), as amended, and HAR, Title 11, Department of Health, Chapter 200, Environmental Impact Statement Rules, an EA for the project was prepared and a Finding of No Significant Impacts (FONSI) issued by DOFAW was published in the July 8, 2016 edition of the Office of Environmental Quality's The Environmental Notice.
4. The proposed project is not located within the Special Management Area (SMA).

The Final EA/Finding of No Significant Impact (FONSI) was published in the July 8, 2016 edition of the Office of Environmental Quality Control's *The Environmental Notice*.

The following discussion evaluates the merits of the proposed land use by applying the criteria established in Section 13-5-30, HAR.

1. *The proposed land use is consistent with the purpose of the Conservation District.*

The objective of the Conservation District is to conserve, protect, and preserve the important natural and cultural resources of the State through appropriate management and use to promote their long-term sustainability and the public health, safety, and welfare.

The proposed project is consistent with the existing uses within the project area and involves improvements to support DOFAW's operations and ability to effectively manage, restore, and protect natural resources on the island of O'ahu. Development of permanent facilities will support DOFAW with their management activities, and

administration and operational needs, which includes proper storage and security of equipment, parts, and other programmatic items.

The proposed improvements include landscaping with native vegetation and other sustainable improvements that enhance the baseyard facility effectiveness in managing and preserving natural resources within this area. The project layout limits development to previously disturbed areas, respects site terrain, and minimizes the impact of project construction. Building themes and architectural style are important elements that will create a cohesive, campus-like setting that aligns with DOFAW's mission, enhances the working environment, and improves the quality of life for employees and visitors.

Sustainability elements would be incorporated into the design of facilities and site development, including:

- 1) Utilization of rainwater catchment systems;
- 2) Development of a Constructed Wetland system;
- 2) LID stormwater strategies;
- 3) Solar energy technology;
- 4) Natural lighting of interior spaces, and
- 5) Energy efficient lighting and equipment selections.

Incorporation of these sustainability concepts aligns with DOFAW's mission and will minimize effects on the natural resources present within and surrounding the project site.

2. *The proposed land use is consistent with the objectives of the subzone of the land on which the use will occur.*

The project site is located in the Resource subzone. The objective of this subzone is to ensure, with proper management, the sustainable use of the natural resources of those areas.

The proposed project is an identified land use within the Conservation District, pursuant to HAR §13-5-22 *Identified land uses in the protective subzone*, P-8 STRUCTURES AND LAND USES, EXISTING; (D-1) Major alteration of existing structures, facilities, uses, and equipment, or topographical features which are different from the original use or different from what was allowed under the original permit. The proposed use requires a Board Permit.

3. *The proposed land use complies with provisions and guidelines contained in Chapter 205A, HRS, entitled "Coastal Zone Management," where applicable.*

The project area is not located within the Special Management Area (SMA). However, the proposed land use complies with following Coastal Zone Management guidelines as follows:

(1) Recreational Resources

The baseyard site has restricted access, does not have areas currently used for public recreation, and does not have coastal resources uniquely suited for recreational activities within the baseyard. Areas outside of the baseyard are used for hiking, but the proposed project would not impact those trails or public access to them.

No coastal resources would be impacts as project improvements were designed to support smart stormwater management and improve food mitigation.

(2) Historic Resources

As mentioned earlier, an LRFI was prepared for the project which determined that no significant historic properties within the project area would be affected by the improvements. However, the site is located within portions of four LCAs which indicates the potential for pre-and/or early post-Contact land uses being uncovered during ground disturbing activities. Therefore an archaeological inventory survey (AIS) is being prepared for the entire baseyard site along with a monitoring plan to address impacts that ground-disturbing activities may have on subsurface historic properties. Both documents will be submitted to SHPD for review and approval.

(3) Scenic and Open Space Resources

Proposed improvements are located inland, away from the shoreline and will not adversely impact inland or coastal public views of important scenic land forms such as the Ko'olau mountain range.

(4) Coastal ecosystems

While the project site is located well inland and away from the coastline, Makiki Stream is located directly adjacent to the project site. Therefore, project improvements have been designed to minimize degradation of freshwater and downstream marine ecosystems through improved on-site stormwater management infrastructure which will serve as a water pollution control measure.

4. *The proposed land use will not cause substantial adverse impacts to existing natural resources within the surrounding area, community, or region.*

Proposed improvements are not anticipated to have significant impacts on existing natural resources within the project site or in the surrounding area because the project limits development to previously disturbed areas, respects the site terrain, and minimizes the impact of construction activities. Sustainability elements (e.g. LID stormwater measures) would also be incorporated into the design of the facilities and site development to minimize effects on the natural resources present within and

surrounding the project site. Alternative water and solar energy technologies planned can offset energy increases required for project improvements.

No major cut or fill activities would occur that significantly alter the existing site's topography. Proposed drainage improvements would manage the rate and flow pattern of site runoff thereby reducing potential erosion on the site and minimizing effects on site topographic and soil conditions. A bioswale, rain catchment systems, and other drainage improvements would help minimize silt and pollutants associated with stormwater runoff before discharging from the site into Makiki Stream.

As described in an earlier section, BMPs and mitigation measures shall be implemented to reduce any potential impacts to any natural or cultural resources at the site.

5. *The proposed land use, including buildings, structures and facilities, shall be compatible with the locality and surrounding area, appropriate to the physical conditions and capabilities of the specific parcel or parcels.*

The improvements proposed are appropriate for the physical conditions and capabilities of the site as the project limits development to previously disturbed areas and includes a site design that respects the property's terrain, and minimizes the impact of construction activities. Further, the project site is already being used by DOFAW for their operations.

As mentioned earlier, building themes and architectural style are intended to be compatible with the existing Administration Building, and will create a cohesive, campus-like setting that enhances DOFAW's working environment, and improves the effectiveness and efficiency of their operations. Sustainability elements planned include improvements such as utilization of rainwater catchment systems, LID stormwater measures, and using native vegetation for landscaping.

The baseyard is also located inland at the mauka end of a State parcel that is shared with SP. The HNC and a parking area serving the Makiki Valley State Recreational Area (for access to nearby hiking trails) are located makai of the baseyard site. Therefore, there are no other sensitive land uses adjacent to the baseyard site. Furthermore, expansion of facilities within the project would not significantly change the environmental or social character of this site as it is already being used for DOFAW operations. New facilities are not proposed for areas outside the existing project site boundaries, thus the project will not increase the size of the baseyard, and surrounding undeveloped areas would not be changed.

6. *The existing physical and environmental aspect of the land, such as natural beauty and open space characteristics, will be preserved or improved upon, which ever is applicable.*

The project will not affect important public viewing locations, coastal views, or significantly impact the visual character of the current baseyard site. As previously discussed, the building themes and architectural style are intended to be compatible with the existing Administration Building, and will create a cohesive, campus-like setting. Existing metal storage containers being used would be removed, and the physical character of the site will be enhanced through landscaping improvements that will add native plants.

7. *Subdivision of the land will not be utilized to increase the intensity of land uses in the Conservation District.*

No subdivision of land is proposed.

8. *The proposed land use will not be materially detrimental to the public health, safety and welfare.*

Improvements proposed under the master plan for DOFAW's baseyard will not detrimentally impact public health, safety, and welfare as the project is intended to improve DOFAW's existing Makiki Baseyard facilities to better support their operations to effectively and efficiently manage, restore, and protect Hawai'i's natural, cultural, and historic resources. Short-term project effects (e.g. fugitive dust, noise, erosion control) associated with temporary construction-related activities would be addressed by various BMPs incorporated into design plans for implementation by contractors.

CULTURAL IMPACT ANALYSIS:

In *Ka Pa'akai O Ka 'Āina v. Land Use Commission*, 94 Haw. 31 (2000), the Hawai'i Supreme Court laid out a framework for assessing cultural impacts. An assessment must include:

- (1) The identity and scope of "valued cultural, historic, or natural resources" in the area, including the extent to which traditional and customary native Hawaiian rights are exercised in the petition area;
- (2) The extent to which those resources – including traditional and customary native Hawaiian rights – will be affected or impaired by the proposed action; and
- (3) The feasible action, if any, to be taken by the (agency) to reasonably protect native Hawaiian rights if they are found to exist.

As discussed earlier, an Archaeological LRFI was conducted at the project site. The LRFI indicated that no above ground historic properties are located within the project site. However, the project site is located within a portion of four (4) LCAs, which suggests the potential for pre-and/or post-contact land uses and associated sub-surface historic properties. Consultation with SHPD indicates that the baseyard site could have features or buildings that

qualify for consideration as historic properties, given the site's history as a Territorial government nursery and later use for modern forestry related activities by DOFAW. Therefore, DOFAW will implement additional measures to further document these features within the project site based upon input received from SHPD. To mitigate impacts on potential historic properties within the project site, DOFAW is proposing to:

1. Conduct an archaeological inventory survey (AIS) covering the entire baseyard site to better document and evaluate all site features for Hawai'i State Register of Historic Places eligibility;
2. Conduct an AIS of three existing buildings (the wildlife building, the forestry storage building, and the chlorination station) for Hawai'i State Register of Historic Places eligibility;
3. Prepare an archaeological monitoring plan that includes provisions for the post-review of historic properties, if any are encountered during construction activities; and
4. DOFAW will continue consultation with SHPD throughout the various design phases of the master plan's implementation to address any questions of measures needed regarding potential historic properties.

The applicant also states that there are no known native Hawai'i cultural practices ongoing at the baseyard site although some plants found on the project site are known to have cultural uses.

In addition, during the processing of the application, no comments were received from native practitioners, the Office of Hawaiian Affairs, and SHPD.

DISCUSSION

The proposed DOFAW project is located in an area that was designated as a Forest Reserve in 1904 and is under the management of DOFAW. As the area has been under the management of DOFAW prior to the advent of the Conservation Land Use District, the baseyard can be considered a non-conforming use.

The proposed project is already an existing use at a previously disturbed site and has been designed to minimize the impact of construction activities. While there are natural resources in the area that may be of concern, BMPs and mitigation measures to ensure their protection will be implemented. Additionally, there appears to be no cultural resources within the project site (e.g. the baseyard) and extra precaution is being taken by DOFAW (i.e. preparation of an AIS and monitoring plan) in the event that unrecorded historic remains (i.e., artifacts, or human skeletal remains) are inadvertently uncovered during construction or operations. View planes in the area will also be maintained.

Staff notes the purpose of the project is to improve the facilities at an already existing baseyard so that it can properly accommodate DOFAW's current and future operational and

program demands/needs in support of DOFAW's mission to effectively manage, restore, and protect natural resources on the island of O'ahu.

Staff, therefore, recommends the following:

RECOMMENDATION

That the Board of Land and Natural Resources APPROVE the DOFAW Makiki Baseyard Improvements located at the DOFAW Makiki Baseyard Facility in Makiki Valley on the Island of O'ahu, further identified as TMK (1) 2-5-019: 008 (por.), subject to the following conditions:

1. The permittee shall comply with all applicable statutes, ordinances, rules, and regulations of the Federal, State and County governments, and applicable parts of this chapter;
2. The permittee shall comply with all applicable Department of Health administrative rules;
3. Before proceeding with any work authorized by the Board, the permittee shall submit four (4) copies of the construction and grading plans and specifications to the Chairperson or his authorized representative for approval for consistency with the conditions of the permit and the declarations set forth in the permit application. Three (3) of the copies will be returned to the applicant. Plan approval by the Chairperson does not constitute approval required from other agencies;
4. Any work done or construction to be done on the land shall be initiated within one year of the approval of such use, in accordance with construction plans that have been signed by the Chairperson, and, unless otherwise authorized, shall be completed within ten (10) years of the approval. The permittee shall notify the Department in writing when construction activity is initiated and when it is completed;
5. All representations relative to mitigation set forth in the accepted environmental assessment of impact statement of the proposed use are incorporated as conditions of the permit;
6. In issuing this permit, the Department and Board have relied on the information and data that the permittee has provided in connection with this permit application. If, subsequent to the issuance of this permit, such information and data prove to be false, incomplete or inaccurate, this permit may be modified, suspended or revoked, in whole or in part, and/or the Department may, in addition, institute appropriate legal proceedings;
7. When provided or required, potable water supply and sanitation facilities shall have the approval of the department of health and county department of water supply;

8. Provisions for access, parking, drainage, fire protection, safety, signs, lighting, and changes on the landscape shall be provided;
9. Where any interference, nuisance, or harm may be caused, or hazard established by the use, the permittee shall be required to take measures to minimize or eliminate the interference, nuisance, harm, or hazard;
10. Obstruction of public roads, trails, lateral shoreline access, and pathways shall be avoided or minimized. IF obstruction is unavoidable, the permittee shall provide alternative roads, trails, lateral beach access, or pathways acceptable to the department;
11. During construction, appropriate mitigation measures shall be implemented to minimize impacts of off-site roadways, utilities, and public facilities;
12. Cleared areas shall be re-vegetated within thirty (30) days of grading or construction completion unless otherwise provided for in a plan on file with and approved by the department;
13. Use of the area shall conform with the program of appropriate soil and water conservation district or plan approved by and on file with the department, where applicable;
14. The permittee shall obtain a county building or grading permit or both for the use prior to final construction plan approval by the department;
15. For all landscaped areas, landscaping and irrigation shall be contained and maintained within the property, and shall under no circumstances extend seaward of the shoreline as defined in section 205A-1, HRS;
16. Artificial light from exterior lighting fixtures, including but not limited to floodlights, uplights, or spotlights used for decorative or aesthetic purposes, shall be prohibited if the light directly illuminates or is direct to project across property boundaries toward the shoreline and ocean waters, except as may be permitted pursuant to section 205A-71, HRS. All exterior lighting shall be shielded to protect the night sky;
17. The permittee acknowledges that he approved work shall not hamper, impede, or otherwise limit the exercise of traditional, customary, or religious practices of native Hawaiians in the immediate area, to the extent the practices are provided for by the Constitution of the State of Hawai'i, and by Hawai'i statutory and case law;
18. In the event that unrecorded historic remains (i.e., artifacts, or human skeletal remains) are inadvertently uncovered during construction or operations, all work shall cease immediately in the vicinity and the remains shall be protected from further damage. State Historic Preservation Division (692-8015) shall immediately be contacted;

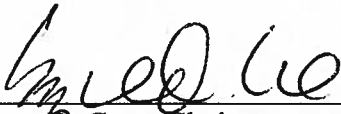
19. The applicant shall obtain permission from the Division of State Parks for the installation of the constructed wetland system in the interim of obtaining a set aside and Governor's Executive Order for the portion of land in which the wetland is to be situated on.
20. The applicant shall comply with any conditions set forth in the forthcoming Archeological Inventory Survey (AIS) once approved and accepted by State Historic Preservation Division. The applicant shall also provide a copy of the accepted AIS to the Department.
21. The applicant shall provide the Department with a copy of the archeological monitoring plan;
22. Other terms and conditions as may be prescribed by the Chairperson; and
23. Failure to comply with any of these conditions shall render this Conservation District Use Permit null and void.

Respectfully submitted,

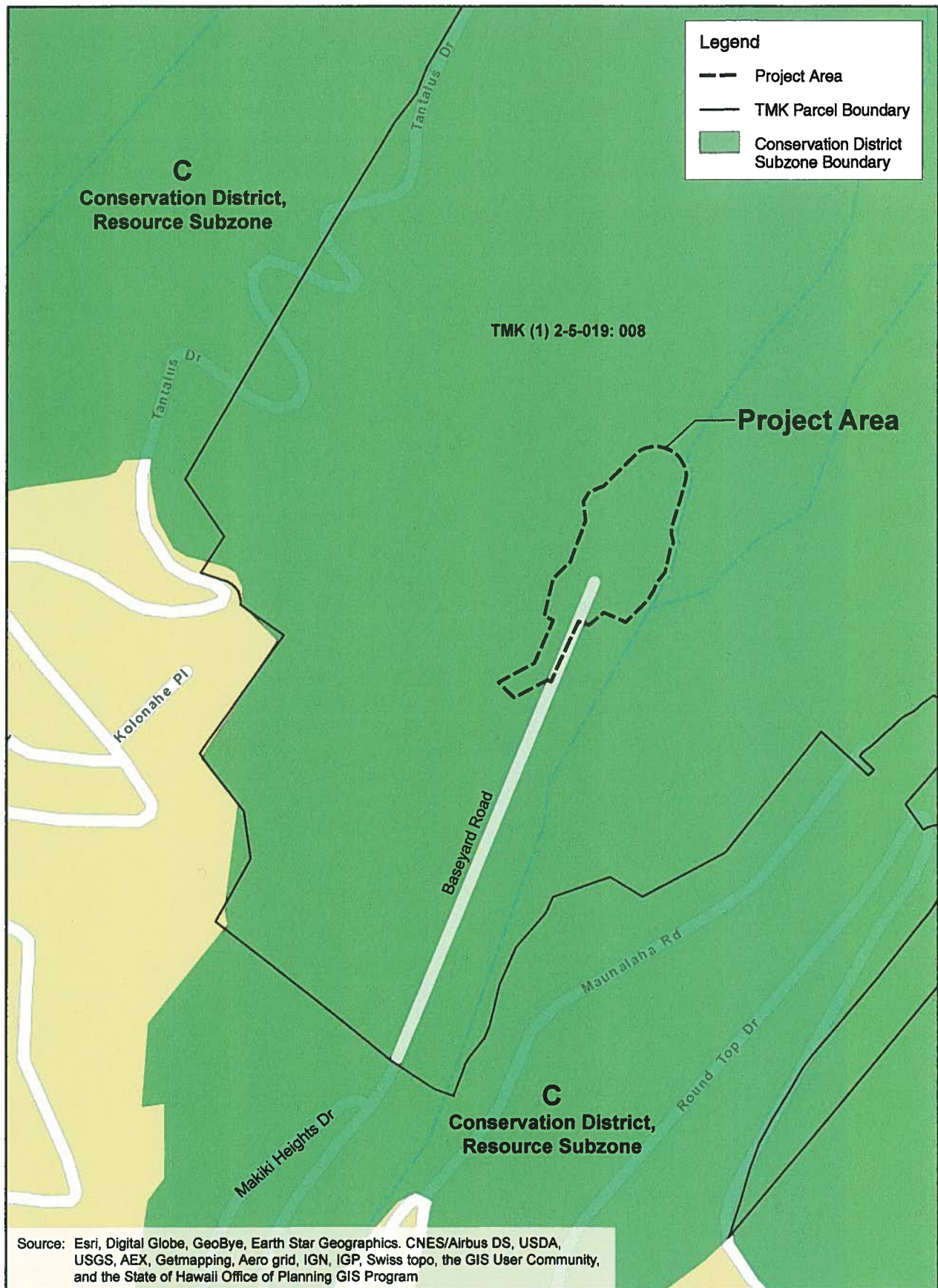


Lauren Yasaka
Office of Conservation and Coastal Lands

Approved for submittal:



SUZANNE D. Case, Chairperson
Board of Land and Natural Resources



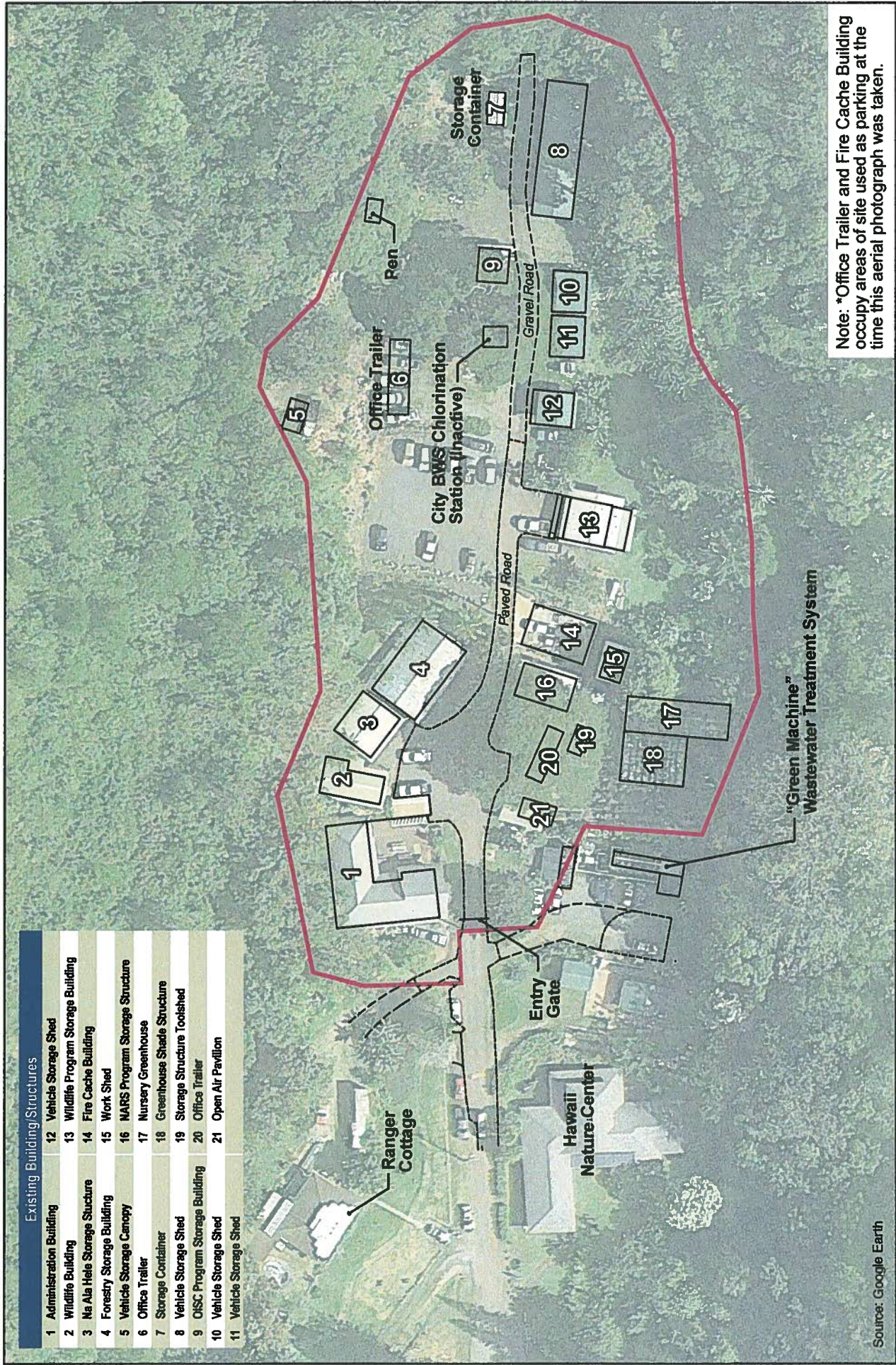
DOFAW Makiki Baseyard Improvements Project
Figure 2 – Conservation District Subzones Map

Honolulu, Hawai'i



0 400 Feet





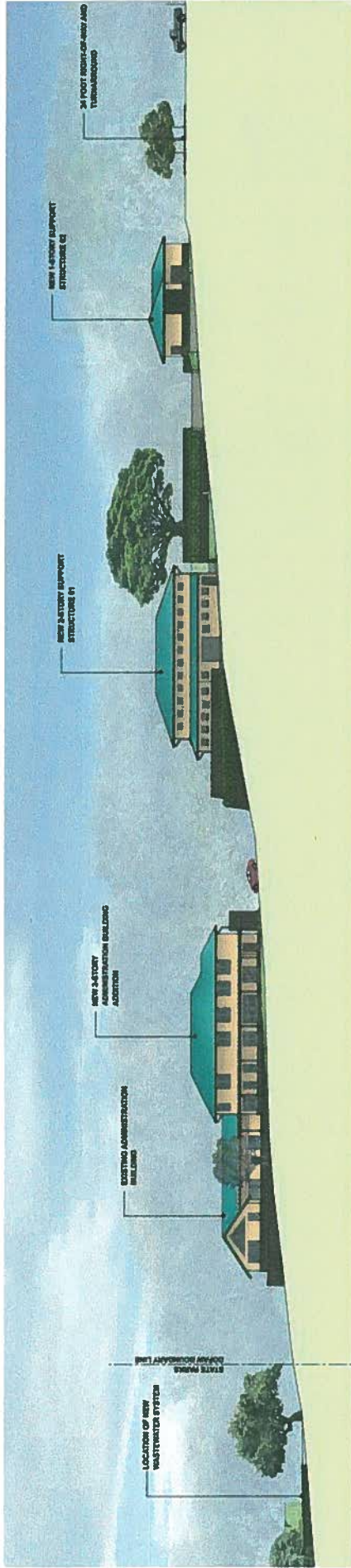
Source: Google Earth

DOFAW Makiki Baseyard Improvements Project
Figure 5 – Existing Facilities Map

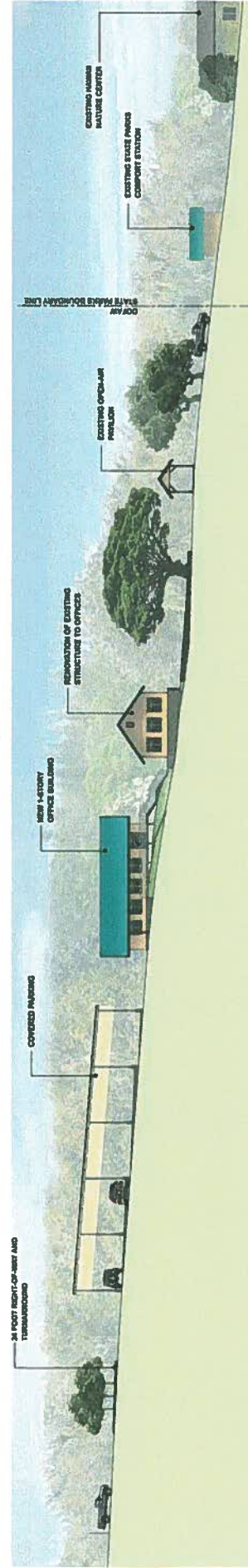


Source: Mason Architects

DOFAW Makiki Baseyard Improvements Project
Figure 6 – Conceptual Master Plan



FROM PROPOSED ROAD LOOKING TOWARDS MOUNTAIN

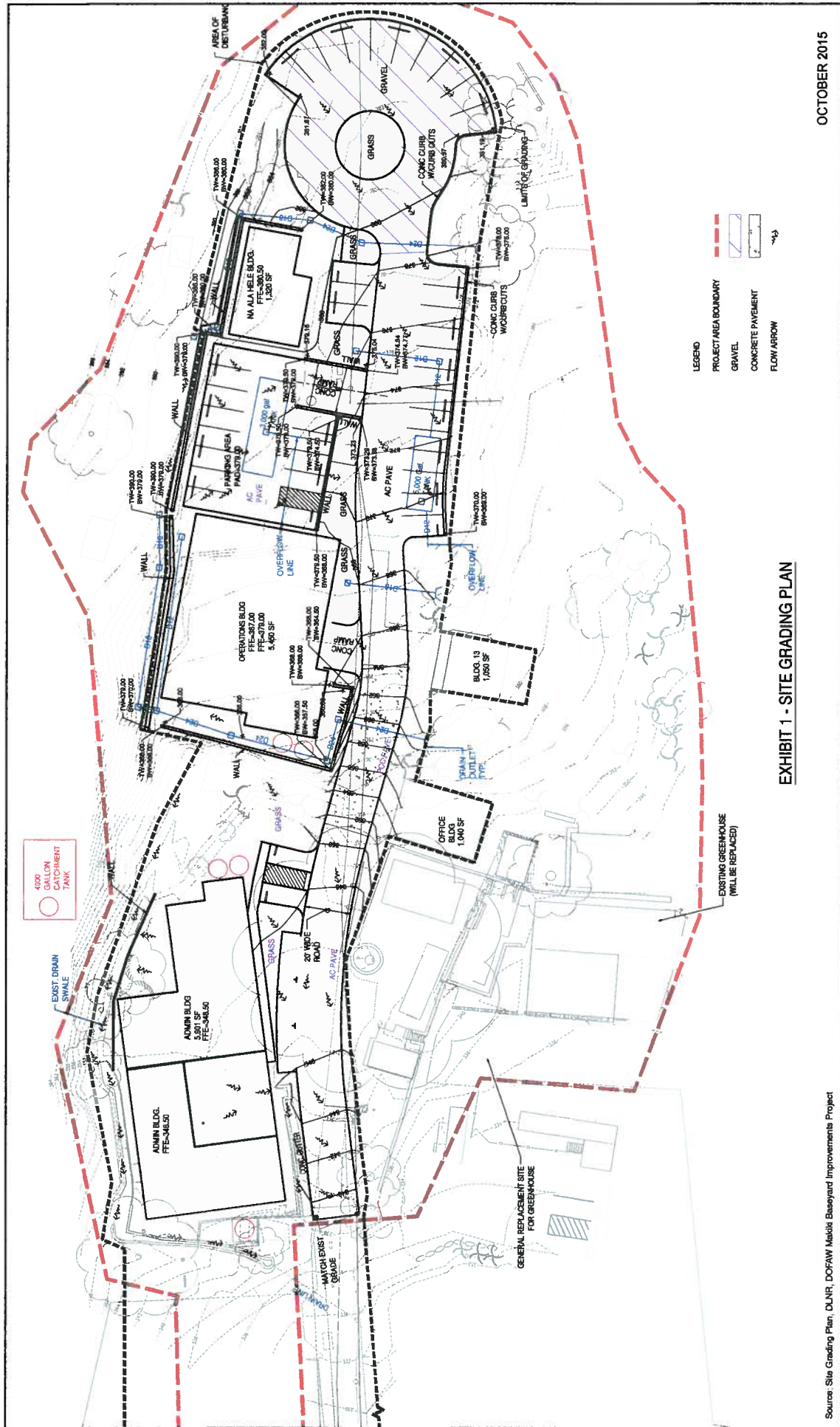


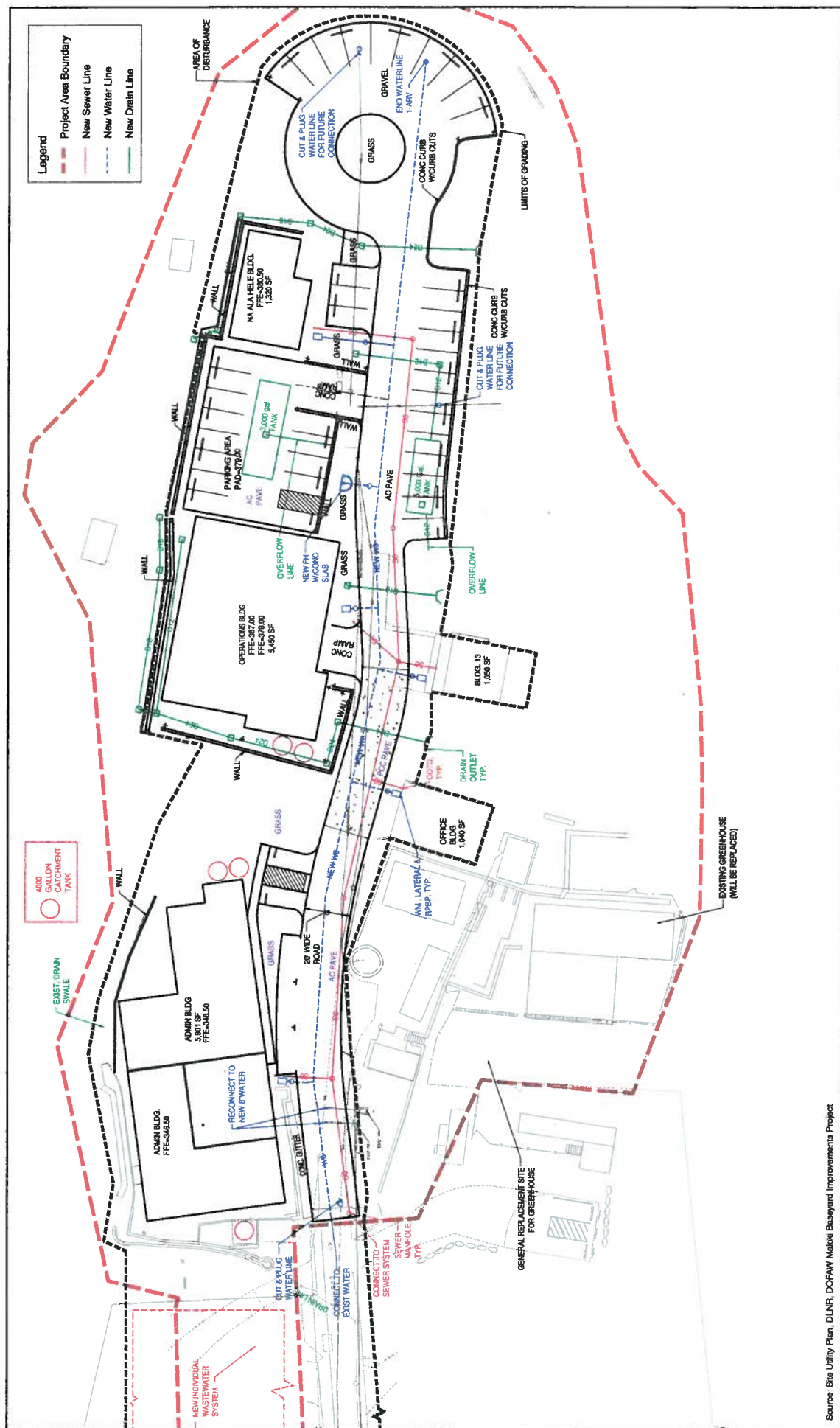
FROM PROPOSED ROAD LOOKING TOWARDS STREAM

Source: Mason Architects

DOFAW Makiki Baseyard Improvements Project

Figure 7 – Conceptual Section Views of Buildings







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