



## **HALAWA ANIMAL QUARANTINE STATION**

DEPARTMENT OF AGRICULTURE  
HALAWA ANIMAL INDUSTRY FACILITY CONSOLIDATION OF FACILITIES  
PROJECT DEVELOPMENT REPORT  
DAGS NO. 12-11-7697

FINAL SUBMITTAL: 15 DECEMBER 2020

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HONOLULU, HAWAII 96815



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HALAWA ANIMAL INDUSTRY FACILITY  
CONSOLIDATION OF FACILITIES**

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DAGS PROJECT NO: 12-11-7697

**PREPARED FOR:**  
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## EXECUTIVE SUMMARY

Fung Associates, Inc. (FAI) was contracted by the Department of Accounting and General Services (DAGS) Planning Branch to provide a comprehensive planning and programming plan for the Animal Industry Division (AID) to consolidate several primary functions into a single consolidated campus.

The Project Development Report (PDR) was conducted in support of the strategic vision for the Division and is a document through the collaboration between the design team and the key stakeholders. We like to acknowledge the following individuals for their contributions: Mr. Lance Maja, DAGS Planning Branch; Dr. Isaac Maeda, the Hawaii Department of Agriculture (HDOA) Veterinary Program Administrator; Dr. Raquel Wong, the Veterinary Medical Officer for the Animal Industry Division (AID); Ms. Mary Tashiro, the Quarantine Station Operations Supervisor, and personnel from the AQS Administration, Accounting and Support Facilities. The broad guiding strategies for the planning process were:

- Relocation of the Animal Quarantine facilities (AQS) to benefit from proximity to the Animal Industry Division's primary functions.
- Modernization of the AQS facility to better support Hawaii's current and projected animal quarantine policies and needs.
- Downsizing of the animal quarantine operations to a manageable size, given that over the years animal housing requirements have dramatically reduced.
- Pursuing green, carbon reducing initiatives to conserve State resources, operating costs, and provide a healthier work environment for animals, and staff alike through the Leadership in Energy and Environmental Design (LEED) certification.

The predecessor to the Project Development Report (PDR) was discussed in the 2018 Environmental Impact Statement (EIS) for selection of the future site for the Oahu Community Correctional Center (OCCC) conducted by Architects Hawaii Ltd. (AHL) under Appendix D: Animal Quarantine Station: Possible Plan for Relocation. Under Appendix D, Exhibit-1 provided a preliminary feasibility concept for the relocation of Animal Quarantine Station from the East side of the H-3 Highway to the site on the West side of the H-3. This selected location was the basis of this PDR.

The objectives of this PDR were to develop: 1) a detailed project requirement for the future AQS facilities; 2) a conceptual master plan for the consolidated AID site; and 3) a budgetary cost estimate. The process and methodology entailed taking several steps:

- Assess existing Animal Quarantine facility conditions and operations.
- Develop programmatic space allocation for the future facility.
- Identify quantitative and qualitative requirements for the key functional components of the facility.
- Identify the opportunities and constraints of the new site by examining key design parameters such as: topography of land, regulatory guidelines, infrastructure, and accessibility for vehicles, public, animals, and employees.
- Test the site to accommodate the functional components and adjacency requirements for the future AQS and its support facilities.
- Define the fundamental site and program driven features for the project.

- Develop a final comprehensive conceptual master plan in support of the goals and objectives of the Division and the requirements of the facilities such as: efficiency, accessibility, visibility, access control, security, sustainability, and the wellbeing of animals.
- Provide a budgetary construction cost estimate based on program and operational requirements for AID campus as represented by the final site plans.

The proposed site and building floor plans presented in this report were vetted through the review process by stakeholders and the design team prior to finalization of the conceptual site plans. The plans, although still conceptual at this time, are a close representation of the project requirements as detailed in this report and are the basis for the budgetary cost estimate. The cost of development for the future AQS facilities are estimated at \$32.3M (rounded) with anticipated construction in FY23. A complete breakdown is provided in this report.

In summary, this PDR constitutes the planning and programming phase and lays the foundation for the next phase in design and construction of the future AQS and its related support facilities. The proposed consolidation master plan for the Animal Industry Division on the western side of the Halawa site will aid the Division to upgrade its facilities to better meet the modern standards on animal and sample handling, waste handling, performing outreach, coordination of personnel, and to respond to animal disease outbreaks of high consequence.

### **Concluding Remarks**

Since this PDR was conducted independently and concurrent with the OCCC's relocation planning process, further collaboration and coordination during the design and construction phase is recommended. Two areas of special interest are:

1. Access requirements for both OCCC and the Large Animal Holding facilities should be examined. Design of the primary vehicular entry drive and gate from the Halawa Valley Road to the Halawa site to consider LAH requires a safe and secure entry for large trailers that transport large animals to the loading and unloading area.
2. Right-of-way considerations as it relates to the land below the H-3 freeway belonging to DOT Highways Division. Direct access from the Public Parking Lot to the future AQS building is essential to the operation of the future Animal Quarantine Station.

The Department of Accounting and General Services (DAGS), as the managing department, could spearhead the coordination effort to resolve the outstanding issues and to ensure a cohesive approach to the Halawa master plan and phasing for these two projects.

The next step for the AID Consolidated Animal Quarantine facilities will begin once the funding for the Design and Construction Phase has been awarded by DAGS.

# 1.0 | INTRODUCTION

## 1.1 SCOPE OF WORK

Fung Associates Inc. (FAI) was tasked by Department of Accounting and General Services (DAGS) to prepare a Project Development Report (PDR) to relocate the existing Animal Quarantine Station (AQS) facility located at 99-951 Halawa Valley Street, Aiea, Hawaii to be in closer proximity to the Animal Industry Division (AID) and its related departments. AID includes the Veterinary Laboratory, Animal Disease Control Center, and the Necropsy located on the west of AQS. A site was selected in a previous site selection project for the Oahu Community Correctional Center prepared by AHL in 2018 and was the basis in this project.

The PDR constitutes the planning and programming phase and lays the foundation for the next phase in design and construction of the relocated AQS. A construction cost estimate is included in this PDR for budgetary purposes. In consolidation of the operations of the Animal Industry Division into a single campus on the western side of the Halawa site, AQS will be upgraded to meet the modern standards on animal and sample handling, waste handling, performing outreach, coordination of personnel, and responding to animal disease outbreaks of high consequence.

Through the architectural programming process, the functional and operational requirements and priorities for AQS were identified. The relocation site was put to test to accommodate the AQS Administration Building and Kennels, as well as the displaced Maintenance Building, Caretaker Residence, and Quarantine Branch tenants. The Large Animal Holding/Handling Facilities is to remain with a reduced area allocation and a smaller size pasture. The US Military Moral, Welfare, Recreation (MWR) Boarding Kennels and the Bee Hives were not included in the scope of this project.

This report will include an operational assessment, new programmed spaces, site analysis, conceptual designs, and cost estimate.

## 1.2 PROCESS AND METHODOLOGY

Architectural programming is a team effort that requires close cooperation with stakeholders and users of the facility. The process and methodology used for the development of the PDR is outlined below.

- A. Initiated a collaborative process with the stakeholders and end users to engage in the planning and project development process for the new facility.
- B. Stakeholders defined the strategic vision, mission, objectives, short term and long term goals for the future consolidated facility.
- C. Conducted data gathering surveys and questionnaires to gain an understanding of the programs and key functional components, including flow charts for traffic movement key to the organization of a quarantine operation.
- D. Research of governmental regulations and standards and codes for animal care and shelter; and industry trends, design trends, evolving technology were employed.

- E. A facility walkthrough to ascertain existing and future needs of the facility and its operation, to identify issues and challenges, and seek solutions to improve effectiveness, and efficiency within the facility.
- F. Identified the stakeholder/user group program assumptions and requirements, and key functional components and activities that need to be supported by the new facility.
- G. Developed detailed area requirements for the functional components of the Animal Industry facilities, along with adjacency requirements, flow diagram and design considerations.
- H. Conducted an assessment of the proposed site to identify design parameters such as: site’s infrastructure constraints; pedestrian, vehicular and employee/staff access requirements; service access to service the compound; and public accessibility issues.
- I. Tested the site and alternative site options were identified and evaluated by the team and stakeholders. Features that best represented the functional requirements for the facility were incorporated into a conceptual site plan. Considerations included:
  - Placement options for the programs and facility requirements as described in the Area Table summary.
  - Consideration for design objectives such as efficiency, visibility, controlled public and private access; security requirements; and movement control.
  - Sustainable design considerations of LEED Silver for new construction and major renovation.
  - Accessibility (ADA) standards and code requirements.
  - Adaptability to Wellness factors (including COVID consideration) in office space.
- J. Developed a final comprehensive conceptual site and floor plan.
- K. Obtained a construction budget determination based on the final plans.

**1.3 STAKEHOLDERS AND GUIDING PRINCIPLES**

<b>Name</b>	<b>Job Description</b>	<b>Department</b>
Dr. Isaac Maeda	Veterinary Program Administrator	DOA Animal Industries Division
Dr. Raquel Wong	Veterinary Medical Officer	DOA Animal Industries Division
Mary F. Tashiro	Quarantine Station Operations Supervisor	AQS Administrative Staff

The Hawaii Department of Agriculture (HDOA) Animal Industries guiding principles is development of a facility that provides customer service (visitor flow and containment) with physical layout that promotes biosecurity (minimize introduction and spread of disease), employee safety (zoonotic diseases, noise, security and capability to determine individual’s access) and animal well-being (ex. heat abatement, noise, cleaning).

The mission statement and goals of the Animal Industries Division are as follow:

## **A. Mission Statement**

Safeguard Hawaii against the introduction of the rabies virus to protect human health through regulation of dog and cat importation into Hawaii.

## **B. Goals and Objectives**

- Short Term Goal - Incorporate technological solutions to facilitate animal identification, data capture, review and processing for animals imported into the state.
- Long Term Goal – Employ technology allowing importer electronic request to interface with various national and local electronic health and inspection data sources within the quarantine system to determine eligibility for import or export and execute appropriate notification to owner and import/export documents.
- Facilities that address animals, employees, pet owners and are adaptable to future biosecurity principles and emerging infectious diseases affecting quarantine and movement.
- Flexible animal housing with ability to expand and contract efficiently.

## **C. Core Values**

- Address animal diseases of high consequence in a timely manner based on current science.
- Use disease control methods of immunization, objective testing, controlled movement and quarantine when necessary to prevent introduction and spread of high consequence animal diseases.
- Facilities address animal wellbeing and disease biosecurity with maximum efficiency.
- Use of technology and structures to improve public and employee processes and experience.
- Employees are well informed of current animal health issues through communication technologies and access to timely scientific articles.

### **1.4 FEDERAL AND STATE GUIDELINES**

The care and boarding of animals is governed by federal, state, and local regulations. Design and construction of animal care facilities should meet the following code requirements and nationally established best practices:

- A. Animal Welfare Act – US Code, Title 7: Chapter 54: Sections 2131-2159 Transportation, Sale, and Handling of Certain Animals
- B. Code of Federal Regulations – Title 9 Animals and Animal Products
- C. Hawaii Administrative Rules Chapter 4-29
- D. Guidelines for Standards of Care in Animal Shelter, The Association of Shelter Veterinarians, 2010

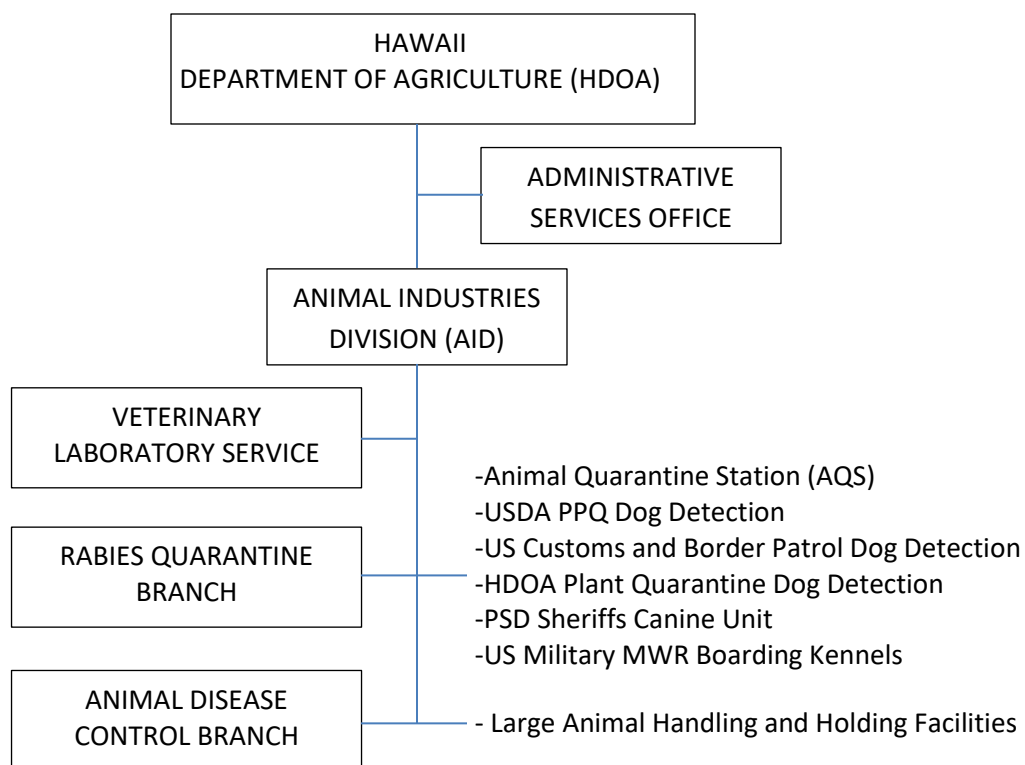
- E. International Building Code, Section 304 (expected update 2012-2018)
- G. The Americans With Disabilities Act of 1990
- I. Leadership in Energy and Environmental Design (LEED) Silver Certification
- J. Strategies from The Well Building Standard, International Well Building Institute

## 2.0 | PROJECT BACKGROUND

### 2.1 STATE OF HAWAII ANIMAL QUARANTINE OPERATIONS

The Hawaii Department of Agriculture (HDOA) is responsible for protection of all of Hawaii’s agricultural resources and carries out its responsibilities by preventing the introduction of certain plants, animals, and diseases that would be harmful to Hawaii’s unique ecosystem.

The Animal Industries Division (AID) is one of six Divisions under the umbrella of HDOA and it manages all facets of the animal health and disease program. The Rabies Quarantine Program focuses on preventing the introduction of the fatal neurologic disease rabies that can affect both animals and humans. The Veterinary Laboratory, Animal Disease Control, and Necropsy Facility fall under the Animal Industry Division. The diagram below illustrates the organizational structure for the State of Hawaii Quarantine Operations.



The Rabies Quarantine Branch Housing Units consist of the Animal Quarantine Station (AQS); and the USDA PPQ Dog Detection, U.S. Customs and Border Patrol Dog Detection, PSD Sheriffs Canine Unit, and U.S. Military MWR Boarding Kennels, currently tenants of the Quarantine Branch. The Animal Disease Control Branch operates the Large Animal Handling and Holding Facilities.

The existing Animal Quarantine Station (AQS) includes: The Administrative Building, 1,600 plus Dog and Cat Kennels; the Maintenance Facility; and the Caretaker’s Residence.



## **2.2 RABIES QUARANTINE BRANCH - ANIMAL QUARANTINE STATION (AQS) FOR DOGS AND CATS**

The Animal Quarantine Branch is charged with the role of preventing the entry of rabies into the State. The rabies quarantine program was first established in 1912 when the disease was declared endemic in the State of California and it was feared that carnivorous animals imported from that state could transmit the disease to Hawaii. The program began as a 120-day quarantine period, and later transitioned into 30-day quarantine in 1997. A 5-day or less quarantine went into effect in 2003 and continues today for direct release of dogs and cats from the point of entry into the state with documentation of rabies vaccination and acceptable antibody titer response. Exceptions made to the quarantine are for dogs and cats originating from other rabies free areas that are equal or stricter than those in Hawaii. At the present time, the British Isles, Australia, Guam and New Zealand meet the criteria.

Hawaii is currently the only rabies-free State in the nation. All animals traveling to Hawaii are required to have specific documentation of vaccinations against rabies and other diseases and are subject to quarantine if they fail to meet the necessary requirements. Annually, approximately 18,000 dogs and cats pass through the Honolulu airport and approximately 90% of them qualify to be released at the point of entry at the airport. At the Airport Animal Quarantine Holding Facility the documents are processed, dogs and cats are inspected, identified, and scanned for parasites. Those with proper documentation are released directly to their owners or handler, and those to be quarantined are loaded into vehicles and transported to AQS. Under the new administrative rule changes, it is expected that the number of animals released on the day of arrival will continue to increase. The current quarantine operations fall into three categories:

- Direct Airport Release (DAR), same day release.
- 5-days or less quarantine, early release.
- 120-days, maximum length of quarantine (average length of stay is 40-days)

Over the past several decades, with advances in rabies science and changes in policies, the need to confine animals in quarantine has drastically declined, and modification of the qualifying process is expected to contribute to further reduce the length of their stay. The existing AQS facility that was built in 1963 with over 1,600 kennels has now become oversized and an operational burdened. The vision for the future AQS is a much smaller and a more efficient facility, consolidated as a single campus on the Administration and Veterinary Laboratory site to serve the current and the future mission of the Animal Industry Division.

With the proposed relocation of Oahu Correctional Community Center (OCCC) to the existing AQS site, the current out of date facilities are to be replaced with a modern facility that supports Hawaii's current and projected animal quarantine policies and needs. The other Quarantine Branch tenants, approximately 15-20 dogs, which are presently located at various locations on the AQS site will also, require relocation.

## **2.3 ANIMAL DISEASE CONTROL BRANCH, LARGE ANIMAL HANDLING AND HOLDING FACILITIES**

Over the years, the need for housing for large animals has decreased. The existing Large Animals Handling and Holding facilities, located partially under the H-3 Highway at the Halawa property, far exceed the present-day needs. Majority of large animals received at the quarantine facility for inspection are horses and cattle; sheep goats and swine are received infrequently. Generally, livestock inspections occur twice per month and typically large animals are released on the same day they are received, unless, a disease or disease vector is identified.

Under consideration for the existing location is a reduced size facility that supports the livestock identification and evaluations and a smaller 1-acre pasture, while the quarantine holding areas could be relocated to an off-site location.

#### **2.4 RABIES QUARANTINE BRANCH FACILITIES - EXISTING SITE**

The Animal Quarantine Station (AQS) facilities are located on the island of Oahu at 99-951 Halawa Valley Street in Aiea owned by the State of Hawaii (DLNR) and operated by the Hawaii Department of Agriculture (HDOA). The Halawa property encompasses a total of 41.16 acres, with a small portion of the site owned by the U.S. Navy (3.47 acres). H-3 Highway viaduct straddles the Halawa property.

The existing AQS facilities, occupying nearly 50 percent of the Halawa property on the east side of H-3, will be the future site of the new Oahu Correctional Community Center (OCCC), and a new quarantine complex is planned to relocate to parcel TMK 9-9-010:054, a 9.662 acre area to the west of H-3 Highway. The relocation site will be discussed in detail in the latter section of the report.

Refer to the aerial view of the Existing Quarantine Facilities, Section 3.0 Photo-1.

## 3.0 | OPERATIONAL ASSESSMENT

### 3.1 EXISTING ANIMAL QUARANTINE STATION (AQS)

As the first step in the planning phase, FAI conducted a condition and operational assessment of the AQS facilities. This assessment identifies the key components and their operational roles at AQS, what currently is working for them, what elements needs improvements, and what criteria should be included or considered in the design. The evaluation of the existing facility and operations provided the basis for the Space Allocation Program for the future facility that will be discussed in detail in Section-4.0.

AQS occupies approximately 9,450 gross square feet (GSF). It was built in 1968 to include an administrative office, veterinary office, support spaces, and an estimated 1,600-1,700 dog kennels and 9-cateries, most of which are currently not in use and in aging condition. Plans of existing facility can be found in Exhibit-2.

The relocation plan for the new site includes the maintenance building, caretaker's residence, and the quarantine tenants. The large animal holding facility, and pasture will remain at its present location, but their facilities will be reduced in size.

The primary functional components of AQS that were evaluated include:

- 1) Public Lobby Visitor Services
- 2) Animal Intake Drop-Off and Animal Release
- 3) Veterinary/Dispensary
- 4) AQS Office and Operations
- 5) Animal Support Facilities/QAC
- 6) Animal Kennels/Dogs and Cats
- 7) Animal Grooming and Bathing, Dog Exercise, Eye Washer Stations

The aerial photo shows the existing quarantine facilities and the site for the future the AQS Project.



Photo-1: Existing Quarantine Facilities

### **3.2 PUBLIC LOBBY VISITOR SERVICES**

The visitors (public) enter the facility at an open-air roofed lobby area. They register at the AQS services counter to receive an ID-pass badge before they are permitted to enter the kennel areas to visit their pets. There are three service counters and one ADA counter, and a marked queuing area available to visitors for registration. The owner visitor movement from the lobby area to the animal kennels is controlled through a secured entry vestibule. At the vestibule, they can access Operations (OPS) staff and the OPS window counter where they can discuss their pet's daily care needs.

At the Lobby, visitors have access to the office staff at the service counter windows, public toilets, and vending machines. The service windows allow transaction as well as viewing of the lobby. One-way mirrored windows and blinds help control visual access into the workspace. The Sheriff's office is located at the corner of the public lobby area and has a commanding view of all activities. An overnight roaming security monitors the perimeter of the facility.

The pet owners can visit their animals during visitation hours throughout the length of their stay, and all visitations occur at the kennels only.

Currently, the Visitor Parking Lot located under the H-3 viaduct accommodates all the employee and public parking needs for occupants and visitors of the Halawa site. From here, visitors walk to the Animal Quarantine Station Office building.

#### **Operational Assessment:**

##### Works Well:

- Public Lobby adequately provides for a queuing area and accessible service windows, one of which is an ADA counter.
- Adjacent to the Lobby are the public toilet facilities and vending machines that are separate from that of employees.
- AQS staff at the service windows can view the public entry gate to the kennels. This works well in controlling the flow of movement of visitors.
- Lobby's open-air breezeway covered from weather elements and shaded works well.

##### Does Not Work Well:

- Currently the lobby area is shared by all employees to enter the office. Paths of entry should be separated.
- There are two controlled entry vestibules from the lobby into the kennel grounds that are not easily distinguishable from one another. The public vestibule is for visitors and there is another vestibule for the QAC staff and pets during release of pets. These functions could improve by separating the two entries and by providing better signage.
- There is no clear separation of public from employee restricted areas. Once public enter the complex through the controlled vestibule, they can easily access the 'employee only' areas such as the facility services, employee locker rooms, and breakroom.
- Visitors have direct access to Operations staff but not to the Dispensary window. To get to the Dispensary window, they must bypass the employee Breakroom.



Photo-2: Public Lobby Visitor Services



Photo-3: QAC Gate & Public Vestibule



Photo-4: Public Toilets, Vending and Sheriff



Photo-5: Secured QAC Gate and Public Vestibule

### Design Consideration:

- Enclosed area with a single controlled gate to the Public Lobby which is separate from the Animal Drop-off, Employees, and Service deliveries.
- A roof covered Lobby area that accommodates public queuing area at the service window counters.
- Direct visual access of the Public Lobby by AQS staff.
- Sheriff office near the public entrance with views of the Lobby.
- A security system with video monitoring capabilities of the site and facilities is needed because of frequency of break-ins.
- Visitors accessibility to public restrooms, and vending area.
- The controlled entry/exit vestibules for public and QAC/animals to be separated and easily identifiable in order to avoid congestion and overlap of movement.
- Complete separation of public from employee functions. The movement and circulation between the public and the staff should be kept separate.
- Wayfinding signage to direct visitors.

- Only staff should have access to employee entry and exit doors.
- Public should have direct access to the Service Windows at AQS Office, Operations and Dispensary. Service windows should be equipped with notification system to alert personnel upon arrival.
- AQS staff work areas should not be visible to public.
- Lobby and all public service areas should be ADA accessible. These include but not limited to service counters, curb ramps, clearances, and transitions; surface textures of flooring; public toilet facilities.

### 3.3 ANIMAL INTAKE DROP-OFF AND ANIMAL RELEASE

Animals that do not qualify for direct airport release are transported from the airport to the Animal Quarantine Station (AQS) by AQS staff. A van operating twice a day provides transportation for the animals. Animals are received by the Quarantine Animal Caretakers (QAC) at the Animal Drop-off Unloading area which is physically separated from the entrance that serves the public and employees. Once examined by the veterinary staff and data collected, pets are escorted from the Dispensary to New Arrival Kennels by the QAC, where they board for a few days of observation.

The Animal Drop-off Unloading is a secured area that accommodates one stall for the animal transportation vans. An ingress and egress door from the Drop-off area allows pets escorted by QAC into the Dispensary for intake process. A second ingress and egress door provide QACs and pets access to the Kennel complex. Pets are always accompanied by the QACs.

At time of release, pets are currently being escorted through a separate secured vestibule and gate at the Public Lobby.

#### Operational Assessment:

##### Works Well:

- The Animal Drop-off accommodates one stall for the transportation vans located at a fenced and gated area.
- The pets/vans unloading area is adjacent to the Veterinary and Dispensary, and Cart Storage.
- Unloading occurs at the roof covered dock where animals are unloaded onto carts.
- Entry access door from unloading area into Dispensary.

##### Does Not Work Well:

- Pets are released to owners in the public lobby area at a separate vestibule. Would be better to have a separate entry door.



Photo-6: Secured Animal Drop-off for Vans



Photo-7: Secured Van, Drop-Off and Carts

### **Design Consideration:**

- A single secured entry enclosure is needed for the transportation vans that unload the animals.
- The Animal Drop-off entry to the facility should be separate from the Public, Employees, and Service entries to the complex.
- The secured service area to be large enough for a van to park while unloading pets.
- The QACs receive the pets and transport them to be processed at the Vets/Dispensary.
- All areas dealing with animals must have secured enclosure to prevent animals from escape.
- Animal Drop-off should be clearly marked and designated, and video monitored.
- Provide a separate release area from the public lobby. Animal Release area should have access to a parking stall to facilitate owner/pet pickup. An area large enough for QAC to transport animals with their belonging.

### **3.4 VETERINARY/DISPENSARY**

Once pets are unloaded at the Animal Drop-off, they are escorted by a caretaker to the Veterinary treatment area, to be identified, examined, tested, and evaluated. Pets are monitored by a veterinary technician and examined for external parasites. It is also where minor medical conditions are attended to. If a medical condition arises while animals are at AQS, they are taken to an outside veterinarian. The Veterinary Laboratory provides diagnostic testing for dogs and cats housed at AQS. Samples are delivered daily to the Veterinary Laboratory which is currently located on the West side of the H-3 highway.

Staffing includes two veterinarians. Technical staff are two livestock inspectors and one veterinary technician. The medical support areas for the animal care unit include: a public accessible transaction Service Window Counter; Dispensary and Storage; 2-Veterinary Offices; Exam Room with 2-Exam Tables with a ICU Isolation holding room with 2-Kennels; and collaboration and workspace for the technicians. Except for the two offices, currently all activities occur in one big open space.

### **Operational Assessment:**

#### **Does Not Work Well:**

- Pet owners use the Dispensary Service Window to consult with veterinary medical staff regarding the health status of their pets housed at AQS. To access the window, owners must transverse employee designated areas.
- Transaction counter at the Dispensary does not provide adequate work surface area.
- Poor ventilation, uneven cooling system and noisy air handler.
- Shared storage for medical supplies and sanitization supplies.
- Existing exam tables don't accommodate large size dogs.
- There is no animal holding room/area for ICU kennels. The two small kennels are in the open work area, near the technician workstations, requiring noise mitigation.
- There is no separation between workstations and the exam/treatment areas.
- Excessive and challenging movement/foot traffic is generated because of the current floor layout. The Operations staff has to go through the Dispensary to get to their office or to AQS office. Ideally, they should have separate entrances.

**Design Consideration:**

- Adjacency with Animal Drop-off area.
- Dispensary to have direct ingress/egress door to the Animal Kennels.
- A publicly accessible transaction window with a large work area and counter.
- Public transaction counters to have a notification system to alert staff.
- Dispensary workstations to be separated from the exam/treatment area, but still maintain direct visual access to animal exam/treatment areas.
- Technicians to have standard workstations cubicles with adequate social distancing consideration.
- Natural light and even lighting for all work areas.
- A treatment room with two exam tables is desirable, one table to accommodate larger size dogs. (Tub that doubles up as exam table with a metal grate cover is acceptable.) Should include sink and drainage, adequate task lighting, and work surface.
- Holding enclosures for progressive (intermediate) or intensive care unit (ICU) to be provided off of/or near the treatment area. Design features should ensure capability to clean and sanitize ICU area that is separate from main examination area with drainage; and enhanced lighting to provide good visualization of dogs and cats housed. Space should consider noise mitigation features.
- Rooms or areas dealing with animals to be escape proof.
- Dispensary or the exam room needs floor space for a scale.
- Hands free operation/foot pedal at hand washing sink in the Dispensary. Sink and automated soap dispenser.



Photo-8: Dispensary



Photo-9: Medical Cabinet and Supply Cabinet



Photo-10: ICU and Exam Table

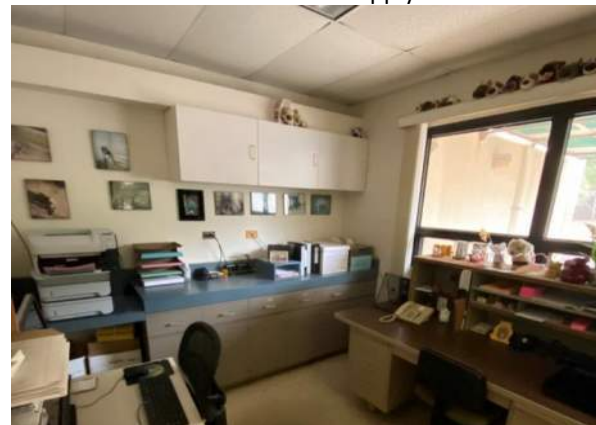


Photo-11: Veterinary Offices



- Dispensary records should be located in this area but easily accessible to OPS and AQS staff.
- Separate storages for medication and supplies; refrigerator/freezer for meds; and a microwave for quick warm compresses.
- Separate storage for sanitizing and disinfectant cleaning supplies.
- Proper ventilation and air circulation to be considered.
- Light above dispensary sink, and task lighting for exam tables and treatment areas. Ability to darken as needed for ophthalmic exam.
- Special attention to location and height requirements for outlets and power requirement for specialized equipment.
- Minimize excessive foot traffic through the medical care unit.
- Select materials and finishes that are durable easily cleaned and sanitized with low maintenance throughout the vet clinic.

### **3.5 AQS OFFICE AND OPERATIONS**

AQS administration office includes the business personnel that handle the visitor/owner processing, accounting and finance, and the operations (OPS) staff who manage the operations of the quarantine animal facility, caretakers, and animals.

The employee entrance to the existing office building is from the Public Lobby and is shared by all staff. The ground floor has offices for the managerial staff, open workstations and flexible desks, and a meeting room that is used for team use. AQS clerical personnel attend the Service Window Counters.

The second floor of the existing building houses the IT and the Server Room, and it is where the Accounting and Finance operations are located. The Accountant currently works in a large open room and requires a large area for storage and filing space because animal records and tax records must be kept accessible for seven years.

There is a common centrally located Breakroom for all employees. Same room is being used for meetings.

There are eight parking stalls available to employees near the office building; 4-stalls are standard parking stalls; two ADA standard stalls; and 2-stalls for vans, one of which is ADA accessible.

#### **Operational Assessment:**

##### **Works Well:**

- Natural lighting for offices and workstations is conducive to work.
- Ability to close off public visibility at the Service Window Counter with one-way mirror glass and blinds.
- Separation of Accounting and Finance from other office areas.

##### **Does Not Work Well:**

- The overlap of Public Lobby as the primary place of entry for all the employees presents conflict of circulation.
- Poor workflow in the front office; lack of clear circulation and cross foot traffic amongst the different staff (Veterinary, AQS and OPS) creates congestion.
- The two story building is operationally inefficient.

- The OPS Board Display Station is currently in a passageway which makes access inconvenient for staff.
- The Records Storage rooms are not easily accessible to all the primary users.
- The IT and Server room is not centrally located. Cables should be concealed and not visible. There are inadequate numbers of network outlets.
- Employee parking is currently at the Public Parking lot which is far from AQS and has experienced car break-ins. A dedicated area in the lot would be desirable. Employee parking areas should have visibility, so it is easier to monitor.
- Existing key lock system is cumbersome.



Photo-12: Employee Entry from Public Lobby



Photo-13: AQS Public Service Counter



Photo-14: AQS Front Office



Photo-15: AQS Front Office



Photo-16: Operations Manager



Photo-17: Kennel Board Display (OPS)



Photo-18: Team Leader, Supervisor



Photo-19: Accounting Office



Photo-20: Accounting Records



Photo-21: Accounting Records



Photo-22: Breakroom/Meeting Room



Photo-23: Breakroom Kitchen Counter

### Design Consideration:

- A single separate secured employee entrance to the facility. Once staff have entered the facility, they should have access to their own areas without having to go through other departments.
- Allowance for temporary parking and an entry/exit for daily mail deliveries.
- Daylighting for all offices and work areas with privacy screening.
- Adequate work surface area and file storage at the business Window Service Counter. Remote doors/gates lock unlock to allow ingress and egress from office counter.
- Workstations/cubicles for staff should be adequately spaced with social distancing considerations.
- Separate accounting office with easy access to records storage and filing, and proximity to archive storage.
- Provide offices for the professional staff.
- Operations Manager and the Team Leader Supervisor should be situated next to each other with a connecting door and have prominent view of the Kennels. The Operations Manager and Supervisor need to access a display board for the daily operations of the Kennels. Direct access to Kennels.
- Operations needs its own service window for the public, separate from AQS office and Dispensary.
- Records storage to be accessible to primary areas of use: AQS office, OPS, Accounting, and Archive. Archival storage requires a sustainable long-term solution. During design phase space saving solutions should be explored such as a future move to digital storage.
- Central location for a copy/printing and office supplies room.
- Separation of Office supplies from Operation's supplies. Locate caretakers and groundskeeping, and fuel storage with other Animal Support/QAC Facilities.
- Staff should have access to a centrally located Breakroom and a Meeting room. Flexible partition walls to convert part of Breakroom to meeting space.
- Separate accessible toilets for the administrative and dispensary staff.
- Employee parking near building to accommodate staffing for 12-OPS personnel plus one or two additional. If parking in close proximity to AQS building is not possible, a designated parking zone at the general open parking lot is desirable.
- Provide power, and adequate general and task lighting.
- Centrally locate the IT room in relationship to computer workstations. Visually conceal network and telephone cables. Consider ceiling mounted Wifi routers and provide adequate network/data & communication outlets per workstation/office layout.
- Directional signage throughout the complex. Wayfinding signage to direct public to all key functional areas such as the Kennels, service counters at the Office, Operations, and Dispensary. Better parking signs. Larger signage for the Kennel numbers.
- Facility wide access control system for major entries.
- Off-site storage is needed for records that can be stored outside the facility.

### 3.6 QAC SUPPORT FACILITIES

In the existing building the Carts Storage is on the opposite side of the building from the rest of support facilities. The Quarantine Animal Caretakers (QAC) pick up carts from the Carts Storage Room, before going to the support facilities, where, they can load supplies that are taken to the Kennels. Preferably carts should be located near the Food Storage Room.

Currently, the Service Loading area is not secured. The central Animal Support Facilities includes: a Service Loading Dock; QAC Loading Dock; Dry Storage Room; Walk-in Cold Room and Freezer where much of the food supplies are kept; a Laundry Room; a Utility room for the gas water heater; and a Janitor Closet with a utility sink. The food storage requires direct access from the Service Dock. The caretakers load supplies at the QAC Loading Dock into their carts before going to the Team Hubs or Kennels.

There are showers, toilet rooms and locker room for men and female caretakers, where they can store their personal items. Caretakers' daily work wear includes use of rubber boots that currently gets stored in the locker room. Other daily wears are gloves, face coverings and aprons.

There are two structures used as QAC Team Hubs, located in close proximity to the Kennels. These structures provide a workspace for the caretakers and storage of some supplies. Hubs are equipped with a utility sink, a refrigerator, storage for supplies, and a desk for their reporting functions. Daily care of animals involve feeding, cleaning kennels, medicating animals, sanitation and disinfection, some bathing, socializing animals, monitoring, reporting, and interacting with owners.

The drain/disposal area for the feces is approximately 20-feet away from the building, in an open space between the Kennels and Animal Support Facilities.

The trash dumpster is located off of the main drive and it is not adjacent to the building. This creates blockage of the building driveway during trash pickup times.

There is an outdoor enclosure for the Mechanical Equipment and the Fuel Storage off of the Loading area.

### **Operational Assessment:**

#### Works Well:

- The common Breakroom is central to all employees, including the QACs.
- The existing Men's Shower/Locker room facilities are adequate size.
- Two Hub structures for QACs is adequate for the existing and future operations.

#### Does Not Work Well:

- The existing Women's Shower/Locker room facilities should be increased by one more toilet stall.
- The existing Kitchen/Cooking area is no longer required for preparation of food. Instead a washer machine is located in the room. The excess space is used for storage.
- The Trash bin is commercial size and it is located off-site. It should be adjacent to the service yard.
- The existing Janitor Storage room is too small for the facility needs.
- The Utility room needs more shelving for storing supplies.
- General Storage areas are currently being used for storing Accounting Archive Records. Records should be separated from the animal support area and placed near accounting or should be stored off-site.



Photo-24: Service Loading Dock



Photo-25: QAC Loading Dock



Photo-26: Laundry Washer



Photo-27: Freezer Room



Photo-28: Food Supply/Service Dock



Photo-29: Locker Room



Photo-30: Showers



Photo-31: ADA Toilet Stall



Photo-32: Lavatories



Photo-33: Carts Storage



Photo-34: Carts Storage



Photo-35: QAC Team Hub Structure



Photo-36: QAC Team Hub



Photo-37: QAC Team Hub



Photo-38: QAC Team Hub



Photo-39: QAC Team Hub

### Operational Assessment:

- Secured entrance gate for the service vehicles and loading.
- Food Supplies and the Carts Storage should have access to the Service Yard.
- The walk-in Refrigerator/Freezer Rooms where most of the bulk food is stored should be adjacent to Service Loading Dock and accessible to the QAC Loading Dock.
- The trash container should not be visible, and it should be located near the facility service yard.
- Trash pick-up service should not block driveways or walkways.
- Public should not be able to access the QAC Support Facilities.
- Different types of storage are needed:
  - Fuel storage for small engine equipment should be located near the Carts' storage room. If more than one is needed, one could be located on the Kennel grounds.
  - Fire hazard storage.
  - Caretakers require a central supplies storage room.
  - Caretakers require a landscaping equipment storage room.
- Location and number of Team Hubs depends on facility layout. Two central Team Hubs in the existing complex has been adequate for the population size. It is expected that two would suffice for the future facility. Hubs should have connectivity to network record keeping and communication with Operations and the Dispensary.
- In addition to the Hubs each animal cluster needs a support area for supplies and equipment. These are needed so that the QACs can maintain proper PPE and disinfectant procedures of work areas and animal areas at all times, i.e. proper disinfecting of bowls after each feed, and personal hygiene procedures.
- Types of equipment that staff require for daily care of animals are: electric carts, dishwasher, buckets, kick pans/scrapers, boots, aprons, gloves, disinfectants, soap, cat litter pans, water hose, food and water bowls.
- Hubs and other animal support structures should be clearly marked with signage.
- Materials used for support structures should be weather resistant. Metal panels or roofs that tend to rust is not preferred.



### 3.7 ANIMAL HOUSING FOR DOGS

The outdoor Animal Kennels are serviced by wide access paths that accommodate the Quarantine Animal Caretakers' (QAC) foot and cart traffic. The sizes and configurations of dog kennels vary for different animal population and species. Generally, there are four sizes of dog kennels that accommodate the dog population. Typical existing kennel sizes are:

Small:	(6' W) X (14' L) X (6'-8" X 8'-4" H)
Medium:	(6' W) X (20' L) X (6'-8" X 8'-4" H)
Large:	(6' W) X (26' L) X (6'-8" X 8'-4" H)
X-Large:	(6' W) X (36' L) X (6'-8" X 8'-4" H)

Existing kennels are individually placed three to four feet apart from one another to prevent contact between pets. Kennels have metal grilles around the three sides of the run and solid metal paneling for the sleeping area to provide a quiet and cool environment for the dogs. Because of the open grilles, the runs tend to receive full sun. Each Kennel has shading protection from two metal shed roofs. The back roof is typically higher to allow air to circulate into the more enclosed sleeping compartment. The metal roofs and frames of the Kennels have experienced rusting, the extent of which depends on their orientation in relation to driving winds and rains. The open-air layout of kennels has served advantageously to reduce noise for caretakers.

Kennels allow day-time activity in the front run and a sheltered area for sleeping in the back. The separation allows the sleeping function to be physically separate from eating and animal discharge area. Dog kennels come with a platform. Owners can furnish it with bedding. The smaller dogs are normally kept separate from the bigger dogs.

Owners are responsible for bathing and grooming their own pet. There are grooming and bathing structures near kennels available. In the existing complex, owners are not permitted to exercise their dogs outside of the assigned kennel.

Daily cleaning and disinfecting of the Kennels are done by the QACs. Hose bibs are dispersed on the grounds next to every three or four Kennels. The Kennel floors slope down towards the trench drains along the length of each Kennel and hosed daily. Trench drains are gravity drained into a grinding facility and then to the city sewer drain. The water supply to kennels is also gravity supplied.

Animals are fed in bowls. After each feeding, bowls have to be washed and sanitized.

#### **Operational Assessment:**

##### Works Well:

- Kennels' metal grille frame allows good air circulation into the kennel.
- Raised roof over the sleeping area allows air to reach the sleep compartment.
- Two Team Club structures provide central storage for food and cleaning supplies and work area for the QACs.

Does Not Work Well:

- The turf that surrounds the Kennels makes it difficult for the QAC's to maintain and clean without disturbing animals and creating debris. A better surface is one that can be sanitized, to lower the risk of parasites and pests such as slugs, mosquitoes, roaches, ants, and centipedes.
- Urine and fecal matter are washed down trench drains. Gravity flow helps drain the sewage, but it also allows contamination to flow from one kennel to another.
- The drains are located on the outside face of the kennel structure which exposes it to rain and potential spread and contamination.
- The three to four feet separation between kennels are not enough to prevent overspray from reaching/contaminating next kennel during the daily cleaning process. The open grille frame adds to the problem.
- Poor rain protection in Kennels. Wind driven rains gets inside the rear section of kennel which tends to stay wet and does not allow the dogs to stay dry.
- There are no support amenities near Kennels such as handwashing with soap/sanitizing stations and trash cans for public and caretaker use.
- Water and food bowls require disinfecting between each feeding.



Photo-40: Fencing and Cart Paths



Photo-41: Water Hose Connection



Photo-42: Typ. Kennels with Trench Drains along Length



Photo-43: Two Compartment Kennel for Sleep and Run

- There is no separation between the newly arrived animals, or sick animals from the permanent population.
- The existing lighting that is at end of each row does not adequately light the area.
- Metal roofs are noisy and majority of them have heavily rusted due to the tropical weather conditions of high winds and driving rain.
- Daily cleaning and disinfecting of the Kennels are done by the QACs. The Kennel floors slope down towards the trench drains along the length of the Kennels and hosed daily. Trench drains are gravity drained into a grinding facility and then to the city sewer drain. The water supply to kennels is also gravity supplied.



Photo-44: Fencing around Grouping of Kennels



Photo-45: Waterer



Photo-46: Rust at the Metal Roofing



Photo-47: Rust at Metal Walls and Drain

### Design Consideration:

#### Functional Considerations for Layout of Kennels:

- Control visibility into Kennels without blocking breezes. Structures should allow good air circulation.
- Caretakers should be able to visually observe the kennels.
- Solid walls and deeper overhangs to provide shading.

- Mixed kennel sizes (large and medium) to allow owners with multiple size dogs to be near each other. Multi-pet owners usually want pets next to each other regardless of size.
- Separate New Arrival Kennels for pets that have just arrived before placing them in permanent kennel.



Photo-48: Signage at Kennels



Photo-49: Eye Washing Stations



Photo-50: Trench Drains

- Separate Isolation Kennel where sick animals or animals under special observation can be monitored. Isolation should be located downwind, and far enough away from the general population as to not encourage airborne spreading. Isolation needs its own QAC support area.
- Each housing area should have its own support area.
- Roof design for kennel structures should provide rain and sun coverage. Maximum temperatures not to exceed 85-degree in the kennel areas.
- Hyper aggressive runners, excitable dogs need to be away from traffic and external stimuli (i.e. carts, birds, passing animals/people, mongoose, noises that can trigger behavior).
- Ground surface around clusters should be maintainable, and cleanable. Maintain a minimum of 3-feet of paved surface around each cluster.
- Materials should be durable, non-corrosive and wind and storm resistant.
- Clusters of 10-12 kennels are ideal for control and management of contagious infectious diseases.
- Spacing between kennel clusters should be approximately 25-feet with barrier, and 40-feet without barrier.
- Protective fence enclosures and a gate per cluster to contain escapes. Gates can remain open during operation hours and closed after hours.
- Adequate auxiliary lighting to enhance visualization in each kennel for health evaluation.

### 3.8 ANIMAL HOUSING FOR CATS

There are two existing catteries that house the cat population at AQS. Each cattery has two wings, and each wing is a double loaded corridor with kennels lined up along the lengths, arranged under one single metal gable roof. Each cattery has an entry vestibule that opens into a common work area for caretakers. Each wing is also secured with a secondary gate that prevents cats from escaping the cattery. Additionally, the cattery and the kennels are escape proofed with a metal grille ceiling below the roof line.

Cats are currently housed individually in a 5' wide by 10' long kennel. They are sized, and configured for cats. The cat kennels have two compartments, the sleep quarter is the one facing the middle aisle and the run is in the back. The two compartments have a door in between them to facilitate moving the cats to the rear, while the fronts get hosed and cleaned. The runs are partially covered with the roof, and the separation walls between the runs are currently metal grille/fencing material which allows easy transmission of disease between adjoining kennels. The sleep area compartments have solid panel.

The wing configuration allows for a centrally located common support area for the QAC. There is space for storage of cleaning equipment, and a desk space for record taking needs. The service area is also equipped with a refrigerator to store food, a sink with hot water, a tub for bathing and grooming. Owners are responsible for the grooming and bathing of their own pets at the cattery.

Daily cleaning and disinfecting of the Kennels are done by the QACs. The Kennel floors slope down towards the trench drains along the length of the Kennels and hosed daily. Trench drains are gravity drained into a grinding facility and then to the city sewer drain. The water supply to kennels is also gravity supplied.

### **Operational Assessment:**

#### Works Well:

- Existing catteries are located away from the dog kennels to keep cats insulated from noise. Cats are extremely sensitive to barking noise.
- The existing double loaded corridor configuration of catteries works well for the caretakers.
- Cats cherish elevated areas. Each kennel has a ladder for cats to perch onto a platform.
- Kennels require a metal grille ceiling below the roof to prevent them from escaping because of their ability to jump.
- The double compartment layout works well for creating a separation between cats sleeping and eating, and play area.
- While a common Central Support area between two wings of the Cattery is an efficient layout, smaller cluster size with a separate independent support service area is better for health of animals.

#### Does Not Work Well:

- Water bowl access and sizing not effective.
- Similar to the dog kennels, the existing catteries have turf surrounding the kennels which makes it difficult to maintain and clean without disturbing animals and creating debris.
- Similar to the dog kennels, the cattery uses trench drains that use gravity flow to drain sewage. Urine and fecal matter are washed down into the trench drains that are on the outside face of the fence and exposed to rain. This allows contamination from one kennel to another.
- The open metal grille/fencing between each kennel allows easy transmission of diseases (i.e. when the cats sneeze or cough).
- Current lighting at each end of rows is not adequate.
- Metal roofs are noisy and rusting due to the tropical weather conditions of high winds and driving rain.



Photo-51: Cattery Wings



Photo-52: Partial Covered Runs



Photo-53: Trench Drain along Length of Cattery



Photo-54: Fencing Material as Separation



Photo-55: Double Loaded Corridor



Photo-56: Double Loaded Corridor



Photo-57: Equipment Storage



Photo-58: Cat Perch Platform



Photo-59: Common Support Area

### Design Consideration:

- Cats are sensitive to noise and catteries should be located away from barking dogs.
- Solid wall panel separation between kennels for prevention of disease transmission.
- Ceilings below the roof at kennels to prevent cats from jumping over the wall.
- One support station per cattery wing should be provided. Separation of clean from dirty storage. Separate cabinets for feeding supplies, medication, PPE, and disinfectants. Food and medication should be stored in a cool and shaded area. Refrigerator for perishable food and medication.
- Area for grooming and bathing of cats by owners.
- The ground surface surrounding catteries should be maintainable and cleanable without disturbing animals and creating debris. Provide minimum of 3-foot wide paved area around the catteries.
- Automated bottles preferred to water bowls that require disinfecting after each feed.
- Structures should allow good air circulation for the animals in the kennels.
- Adequate auxiliary lighting to enhance visualization in each kennel for health evaluation.

- Design of roof overhangs above the kennels or kennel clusters to provide coverage from sun during the peak hours. Maximum temperatures not to exceed 85-degree in the kennel areas.
- A general storage for storing crates, benches, and bed boards.
- Separate cluster for cats requiring isolation for respiratory contagious illness.

### 3.9 BATHING AND GROOMING, DOG EXERCISE, EYE WASHERS

Two Animal Grooming and Bathing Stations are available in the existing complex. These are independent structures situated on a large concrete pad. They are equipped with sinks, tubs, and hot and cold water for bathing the animals. Each structure contains three tubs and a drying station on one side and three grooming platforms on the other side. Stations have water heaters, electrical outlets, a holding cage, and a water fountain for owner visitors. Structures are partial height CMU walls with metal roofing that provides deep overhang coverage.

Grooming and bathing is done by appointment only. Animals have to be kept on leash at all times. Physical contact between dogs is not permitted.

Current facility does not have an exercise yard. Eye washers are located throughout the complex at intervals along the service paths.

#### Operational Assessment:

##### Works Well:

- Tubs and pad can be hosed down, sanitized, and disinfected after each use.
- Deep roof coverage provides adequate shading.
- Hot water.

##### Does Not Work Well:

- Currently the tubs are too close to one another. Tubs should have adequate separation to prevent overspray and contamination. Grooming facilities should be cognizant of social distancing needs for pets and owners.



Photo-60: Three Tubs & Drying Platform



Photo-61: Three Grooming Stations





Photo-62: Water Heater & Water Fountain



Photo-63: Tub basin with Water Hose



Photo-64: Eye Washing Stations



Photo-65: Kennel Signage

### Design Consideration:

- Grooming and Bathing Area:
  - Minimum of 4-tub basins with hot and cold water should be provided for the whole facility.
  - Minimum of 4- elevated grooming platforms/stations with electrical outlet.
  - Spacing should be cognizant of social distancing needs for pets and owners.
  - Lighting if the area is heavily shaded.
- Eye washing stations at Support Stations and along the service path.
- Yard is to be used for walking the dogs for purposes (urination and defecation)
- Secure enclosure of Dog Park to regulate access.
- Park setting walk paths around perimeter, with synthetic grass within perimeter and natural landscaping surround.
- Easy to maintain, and clean and sanitize after each usage.
- Wayfinding and directional signage throughout the complex.

- Larger identification signage for each Kennel.

### **3.10 OVERALL FACILITY ISSUES AND CHALLENGES OF EXISTING AQS FACILITY**

The operational assessment survey and interviews with key stakeholders led to understanding of some overall facility operational factors and challenges in the existing AQS. Some of the highlights were:

- Existing facility is spread out on the Halawa site and majority of kennels are not in use.
- Current location of AQS on the opposite side of the Highway from the Animal Industries Division leads to operational inefficiencies in the daily movement of samples from AQS to AID laboratory. Closer proximity of these buildings would improve operations.
- Perimeter security does not currently prevent intrusion into the complex. Facilities have had incidents of vandalism and theft of animals as a result of unauthorized access.
- Record keeping and paper storage is taking a lot of floor area. There is need for long term space saving solutions such as a move towards digital technology.
- Existing signage throughout the complex need improvement.
  - Kennel identification signs should be sized for visibility from distance.
  - Kennel support areas should be clearly marked. These are clusters, grooming/bathing stations, and exercise areas.
  - Clear signage to and from parking.
  - Wayfinding Signage to all the primary use areas throughout the complex. Improved directional property signs to Division, AQS and DOH.
- There is no light by area option throughout the facility driveways, kennels, exterior buildings, and entrances.
- The kennel enclosures and roofs are all metal and are corroding because of the tropical weather conditions.
- Separation of entry/exit points by user types: public, staff, services, and animals.
- Separation of public circulation from pets/QAC. The existing public lobby acts as the hub of circulation creating cross traffic flow amongst different users resulting in congestion and security concerns. The controlled entry points of the visitors and the animals/QAC to the kennels are both from the lobby that is also shared by the professional staff. Public functions should be separated from the staff areas. It is best for the animal release to also be separated from the public access point. Visitors should not be able to easily access employee areas.

## 4.0 | SPACE ALLOCATION PROGRAM

### 4.1 PROJECTIONS AND PROGRAM ASSUMPTIONS

The projections for animal capacity listed below were obtained from recent operations data obtained from AQS. Based on these population projections, the number of staffing, the owner/visitor count; and parking requirements were established.

#### A. Pet Population Projections

Based on recent operations data, the projected monthly peak in animal population is approximately 219. The average daily kennel requirement for the same period ranges from 171 to 189. It is anticipated that the new administrative rule changes and modifications to qualifying procedures will result in the need for the outdoor housing to accommodate approximately 108-animal kennels, 72-dogs (2/3), and 36-cats (1/3).

Indoor air-conditioned housing for animals are needed to accommodate animals that will be medically distressed by the heat and humidity conditions, or that need medical treatment for other reasons. A facility with 6-dog kennels and 4-cat kennels are planned for the future facility. Temperature above 85-degree and high humidity are especially challenging for dogs and cats with “pug” nose.

Displaced tenant agencies are to be sited somewhere on the Halawa property. The Sheriff’s Canine Unit is to be located in close proximity to AQS complex.

AQS Outdoor Kennels	AQS Indoor Kennels	Other Tenants
72-Dog Kennels (Includes: 4-Security Dogs) 36-Cat Kennels	10-Dogs 4-Cats	5-PSD Sheriff’s Canine Unit 5-USDA PPQ Dog Detection 5-US Customs & Borders Patrol Dog Detection 6- Plant Quarantine Dog Detection

#### B. Owner/Visitor Projections

As a result of reduction of animal population in the new facility, roughly 131 per day owner visitations on weekends and 95 during the weekdays are expected. The recent web-based system has contributed to lowering numbers of owner visitations because they are now able to interact with their pets online.

#### C. Staffing Projections

AQS operates every day of the year. For the projected animal population, the staffing is expected to remain same as the current staffing, about 35 staff members for a 7-day per week operation with a maximum of 26 staff on site at any given time. There is one staff assigned for the site security and monitoring.

#### D. Parking Projections

It is anticipated that the existing 240-stalls at the existing surface parking lot under the H-3 Highway is large enough to accommodate the future operational needs of the quarantine facilities based on the reduced owner visitation count and the projected staffing mentioned above. Per current zoning regulations and the

projected programs, a total of 82-parking stalls, 2 loading stalls, and 9-bicycle parking will be required for the new facility. It is proposed that like the existing facility, an employee designated parking area for 14-staff and 1-stall for mail deliveries to be provided near the administration building and the remaining 68 to be accommodated at the existing public parking lot.

#### **E. Large Animal (Livestock) Projections**

Livestock program includes mostly horses and cattle, because sheep, goats, and swine are less frequently inspected and shipped. Facilities are to support livestock animal inspections and shipment for 30-horses and 15-Cattle. The overall capacity of the new facility is expected to decrease to about the half of the current capacity and size because large animals are quarantined only if a disease or disease vector is identified. The pasture requirement is expected to decrease to 1-acre.

#### **4.2 SPACE ALLOCATIONS AREA REQUIREMENTS**

The first critically important step in the architectural programming for the new Animal Quarantine Station was to identify the unique set of functional components based on facility's current and projected operational needs. The basis of the Space Allocation Program for the new facility was derived from the combination of the projections presented above, and the operational assessment in Section 3.0. A detailed Area Table Requirements is developed to quantify and qualify the space requirements, determine the position and sizes of different rooms according to the user's requirements and geometric constraints. The proposed square footages are presented in the Tables below.

Tables-1 through Table-4 are organized according to the primary functional components for the proposed new Animal Quarantine Facility. These are: 1. Public Lobby Visitor Services; 2. AQS Administration and Operations; 3. Veterinary/Dispensary; 4. Indoor Animal Kennels; 5. QAC Support Facilities, includes the Animal Intake Drop-off and Animal Release; and 6 through 8. Outdoor Animal Housing.

Functional components 9 through 11 represent the other quarantine facilities and tenants considered for the Conceptual Consolidated Site Plan.

4.2 TABLE-1 SPACE ALLOCATION PROGRAM AREA REQUIREMENTS						
DISCRIPTION	EXISTING	PROGRAMMED				
	Area Existing (SF)	Quantity Required	Area Required (SF)	Total Interior (SF)	Total Outdoor Covered (SF)	Total Paving (SF)
<b>1 PUBLIC LOBBY VISITOR SERVICES</b>						
Public Lobby (Open Air/Covered)	812	1	800	—	800	—
Public Toilets Men: 3-Fixures,1/ADA	215	1	200	200	—	—
Public Toilets Women: 3-Fixures,1/ADA	190	1	200	200	—	—
Vending Machines: 3	100	3	25	75	—	—
Sheriff Office	215	1	150	150	—	—
<b>Subtotal (NSF):</b>	<b>720</b>			<b>625</b>	<b>800</b>	<b>0</b>
<b>Total (GSF) 20%</b>				<b>750</b>	<b>800</b>	<b>0</b>
<b>2 AQS OFFICES</b>						
<b>General Office Areas</b>						
Staff Entry Vestibule	0	1	100	100	—	—
Public Service Windows (3-W; Stnd & ADA) & Workcounter	30	1	50	50	—	—
Transaction Counter (3-Windows and 1-ADA Work Counter)	30	1	80	80	—	—
AQS Admin Office (Combined Offices & Workstations)	686	0	0	0	—	—
Manager Office	159	1	150	150	—	—
Workstations (4)	0	4	80	320	—	—
Flex Desk	0	2	60	120	—	—
Clerical Supervisor Station	0	1	100	100	—	—
AQS Office Records	0	1	150	150	—	—
Archives (Records/Docs Storage)	0	1	150	150	—	—
Copy Room & Supplies Storage/Safe Closet	106	1	100	100	—	—
IT Room	159	1	80	80	—	—
Staff Toilet Room Men: 1-Fix	0	1	60	60	—	—
Staff Toilet Room Women: 1-Fix	0	1	60	60	—	—
Employee break room/ break/relax/meal/nvw & team meeting (2-200sqft)	533	1	500	500	—	—
Janitors/Utility Sink/Supplies	0	1	80	80	—	—
<b>Subtotal :</b>	<b>1,673</b>			<b>2,100</b>	<b>0</b>	<b>0</b>
<b>Accounting &amp; Finance Operations</b>						
Financial Accountant	0	1	150	150	—	—
Records Storage (Community Desks; Types of storage TBD)	525	1	400	400	—	—
<b>Subtotal:</b>	<b>525</b>			<b>550</b>	<b>0</b>	<b>0</b>
<b>Operations (OPS)</b>						
Public Service Window (Stnd and ADA) & Workcounter	15	1	30	30	—	—
OPS Manager	111	1	150	150	—	—
QAC Team Leader	105	1	100	100	—	—
Kennel Operation Display Board Area	10	1	15	15	—	—
<b>Subtotal:</b>	<b>241</b>			<b>295</b>	<b>0</b>	<b>0</b>
<b>Employee Parking</b>						
Employee Parking	4,600	8	275	—	—	2,200
Accessible Parking (2-Standard)	—	2	375	—	—	750
Accessible Parking (2-Van)	—	2	375	—	—	750
Bicycle Parking	—	1	200	—	—	200
Temporary Loading (Mail Deliveries)	—	1	600	—	—	600
Provisions for Electric Charge Station	—	1	100	—	—	100
<b>Total (NSF):</b>	<b>3,159</b>			<b>2,945</b>	<b>0</b>	<b>0</b>
<b>Total (GSF) 30%</b>				<b>3,829</b>	<b>0</b>	<b>4,600</b>

4.2 TABLE-2 SPACE ALLOCATION PROGRAM AREA REQUIREMENTS						
DISCRPTION	EXISTING	PROGRAMMED				
		Area Existing (SF)	Quantity Required	Area Required (SF)	Total Interior (SF)	Total Outdoor Covered (SF)
<b>3 VET/DISPENSARY</b>						
<b>Veterinary &amp; Dispensary</b>						
Public Service Window (Stnd and ADA) & Workcounter	0	1	30	30	-	-
Workstations (4)		4	80	320	-	-
Veterinary Offices	272	2	150	300	-	-
Exam Rm: 2-Exam Tables/Sink/Cab (1-small & 1-large)	506	1	300	300	-	-
ICU Holding Room (2-Kenels)	0	1	150	150	-	-
Dispensary Medication/Supplies & Sink	0	1	50	50	-	-
Dispensary Records	0	1	120	120	-	-
Cleaning Supply Storage	0	1	100	100	-	-
<b>Total (NSF)</b>	<b>778</b>			<b>1,370</b>	<b>0</b>	<b>0</b>
<b>Total (GSF) 30%</b>	<b>0</b>			<b>1,781</b>	<b>0</b>	<b>0</b>
<b>4 INDOOR ANIMAL KENNELS</b>						
<b>Dog Kennel Suite (Indoors):</b>						
Dog Kennels (One Size): 5' W x 16' L	0	6	80	480	-	-
Service Circulation (6' W Aisle per Kennel)	0	-	-	180	-	-
Common Food Supplies Storage	0	1	25	25	-	-
Cleaning Supplies/Storage/Utility Sink	0	1	25	25	-	-
Indoor Bathing Tub & Grooming	0	1	100	100	-	-
Common Equipment Storage	0	1	50	50	-	-
Water Heater	0	1	20	20	-	-
<b>Subtotal: Dog Suite</b>				<b>880</b>	<b>0</b>	<b>0</b>
<b>Cat Kennel Suite (Indoors):</b>						
Cat Kennels (One size): 4' W x 10' L	0	4	40	160	-	-
Service Circulation (6' W Aisle per Kennel)	0	-	-	96	-	-
Common Food Supplies Storage	0	1	25	25	-	-
Cleaning Supplies/Storage/Sink	0	1	25	25	-	-
Indoor Bathing Tub & Grooming	0	1	50	50	-	-
<b>Subtotal: Cat Suite</b>				<b>356</b>	<b>0</b>	<b>0</b>
<b>Total (NSF)</b>				<b>1,236</b>	<b>0</b>	<b>0</b>
<b>Total (GSF) 30%</b>	<b>0</b>			<b>1,607</b>	<b>0</b>	<b>0</b>
<b>5 QAC ANIMAL SUPPORT/ANIMAL INTAKE &amp; RELEASE</b>						
Staff Shwrs/Toilets/Jan.clos. (Men)	336	1	350	350	-	-
Staff Shwrs/Toilets/Jan.clos. (Women)	336	1	400	400	-	-
Staff Lockers (M&W)	614	2	300	600	-	-
Dry Storage (Previously Food Prep Area & Stor.)	108	1	100	100	-	-
Walk-in Refrig./Freezer	300	2	150	300	-	-
QAC Storage (Temp. Stor. for Cages)	200	1	80	80	-	-
Laundry/Utility/Gas Water Heater	136	1	180	180	-	-
Janitor Closet/Cleaning Supplies	45	1	80	80	-	-
Carts Storage Room	836	1	850	850	-	-
Storage (was Equip. now Account'g Archives-Offsite TBD)	608	1	600	600	-	-
Grounds/Lansdcaping (On-Site)	-	1	600	600	-	-
Electrical Room	-	1	80	80	-	-
Electrical Room	-	1	80	80	-	-
QAC Loading Dock (Roof)	375	1	350	-	350	-
Trash Enclosure (Exst Off-site)	100	1	100	-	-	100
Fuel Storage	120	2	80	-	-	160
Service Drive/Loading Dock/Unloading Area	400	1	750	-	250	500
<b>Subtotal:</b>	<b>4,514</b>			<b>4,300</b>	<b>600</b>	<b>760</b>
<b>Animal Drop-Off Unloading</b>						
Secured Van Parking	740	1	800	-	-	800
Loading Dock for Handling Animals	120	1	180	-	-	180
<b>Pet Release (Locate Near Disp. &amp; QAC Facilities)</b>						
Vestibule	-	1	150	150	-	-
Pet Release Parking	-	1	375	-	-	375
<b>Subtotal:</b>	<b>860</b>			<b>150</b>	<b>0</b>	<b>1,355</b>
<b>Total (NSF)</b>	<b>4,514</b>			<b>4,450</b>	<b>0</b>	<b>0</b>
<b>Total (GSF) 20%</b>				<b>5,340</b>	<b>350</b>	<b>2,115</b>

4.2 TABLE-3 SPACE ALLOCATION PROGRAM AREA REQUIREMENTS						
DISCRIPTION	EXISTING	PROGRAMMED				
		Quantity Required	Area Required (SF)	Total Interior (SF)	Total Outdoor Covered (SF)	Total Paving (SF)
<b>6 OUTDOOR ANIMAL HOUSING</b>						
<b>General Population Dog Kennels (6-Clusters of 9-K)</b>						
Dog Kennels: Large (14-dogs)	2,184	16	156	-	2,496	-
Dog Kennels: Medium (36 dogs)	4,320	34	120	-	4,080	-
Security Kennels: (2-Large)	-	2	156	-	312	-
Security Kennels: (2-Medium)	-	2	120	-	240	-
QAC Support Areas (6)	-	6	120	-	720	-
Clusters Service Surround (5-feet Paved)	-	6	600	-	-	3,600
<b>Subtotal: No. of Dogs</b>	<b>6,504</b>				<b>7,848</b>	<b>3,600</b>
<b>New Arrival Dog Kennels ( 1-Cluster of 9-K)</b>						
Dog Kennels: Large	468	3	156	-	468	-
Dog Kennels: Medium	720	6	120	-	720	-
QAC Support Area	-	1	120	-	120	-
Cluster Service Surround (5-feet Paved)	-	1	600	-	-	600
<b>Subtotal: No. of Dogs</b>	<b>1,188</b>				<b>1,308</b>	<b>600</b>
<b>New Isolation Dog Kennels (2-Clusters of 5-K &amp; 4-K)</b>						
<b>Contagious</b>						
Dog Kennels: Large	780	5	156	-	780	-
QAC Support Area	-	1	120	-	120	-
Cluster Service Surround (Paved)	-	1	300	-	-	300
<b>Behavioral (1-Cluster of 4-Knls)</b>						
Dog Kennels: Large	624	4	156	-	624	-
QAC Support Area	-	1	120	-	120	-
Cluster Service Surround (5-feet Paved)	-	1	300	-	-	300
<b>Subtotal: No. of Dogs</b>	<b>780</b>				<b>1,644</b>	<b>600</b>
<b>QAC Support Hubs (2)</b>						
Common Food Supplies Storage (Teams)	110	2	25	-	50	-
Cleaning Supplies/Storage	-	2	50	-	100	-
Equip. Storage/Utility Sink/Trash	-	2	50	-	100	-
General Storage:crates, benches, bed boards	-	2	50	-	100	-
Work Counter/Communication System/Elec Outlets	-	2	25	-	50	-
Eyewashing Stations	3	6	6	-	36	-
<b>Subtotal: Dogs (72-Kennels)</b>	<b>113</b>				<b>436</b>	<b>0</b>
<b>Catteries</b>						
<b>General Population (2-Clusters of 12-K)</b>						
Cat Kennels	40	24	50	-	1,200	-
Cattery Vestibule	40	1	50	-	50	-
Double Loaded Corridor (6' x 60')	270	1	360	-	360	-
Grooming & Bathing	15	1	15	-	15	-
Common Food Supplies/Meds	20	1	25	-	25	-
Cleaning Supplies/Storage	20	1	25	-	25	-
Equipment Storage/Utility Sink	40	1	50	-	50	-
Trash Disposal Area	10	1	10	-	10	-
Work Counter/Communication System/Elec Outlets	20	1	25	-	25	-
Cluster Service Surround (5-feet Paved)	-	2	300	-	-	600
<b>Isolation (1-Cluster of 12-Knls)</b>						
Cat Kennels	-	12	50	-	600	-
Cattery Vestibule	-	1	50	-	50	-
Double Loaded Corridor (6' x 30')	-	1	180	-	180	-
Grooming & Bathing	15	2	15	-	30	-
Cleaning Supplies/Storage	-	1	25	-	25	-
Equipment Storage/Utility Sink	-	1	50	-	50	-
Trash Disposal Area	-	1	10	-	10	-
Work Counter/Communication System/Elec Outlets	-	1	25	-	25	-
Cluster Service Surround (5-feet Paved)	-	1	300	-	-	300
<b>Subtotal: Cats (36-Kennels)</b>	<b>475</b>				<b>2,730</b>	<b>900</b>

4.2 TABLE-3 (CONTINUED)						
SPACE ALLOCATION PROGRAM						
AREA REQUIREMENTS						
DISCRIPTION	EXISTING	PROGRAMMED				
	Area Existing (SF)	Quantity Required	Area Required (SF)	Total Interior (SF)	Total Outdoor Covered (SF)	Total Paving (SF)
<b>7 GROOMING &amp; BATHING</b>						
Grooming & Bathing /Elevated Platform	70	4	100	-	400	-
Hot Water/Elec Outlets/Lighting	-	2	20	-	40	-
Structure	490	2	400	-	800	-
<b>Subtotal :</b>	<b>560</b>				<b>1,240</b>	<b>0</b>
<b>8 DOG PARK (EXERCISE)</b>						
Fenced Exercise Area (Paved)	-	1	1,600	-	-	1,600
<b>Subtotal:</b>						<b>1,600</b>
<b>Total (NSF)</b>	<b>8,432</b>				<b>15,206</b>	<b>0</b>
<b>Total (GSF) 10%</b>					<b>16,727</b>	<b>7,300</b>



4.2 TABLE-4 SPACE ALLOCATION PROGRAM AREA REQUIREMENTS							
DISCRIPTION	EXISTING	PROGRAMMED					
	Area Existing (SF)	Quantity Required	Area Required (SF)	Total Interior (SF)	Total Outdoor (SF)	Total Paving (SF)	
<b>9 LARGE ANIMAL HOLDING</b>							
Receiving Handling Area	17,700	1	3,000	-	-	3,000	
Holding Sheds:				-	-	-	
Horses: Stables @ 400 EA	1,200	6	400	-	2,400	-	
Cattle: Holding	6,400	1	6,400	-	6,400	-	
Sorting	3,000	3	1,000	-	3,000	-	
Storage Shed	-	1	300	-	300	-	
Carcass/Composting	-	1	3,000	-	-	3,000	
<b>Total (NSF)</b>	<b>28,300</b>				<b>12,100</b>	<b>6,000</b>	
<b>10 MAINTENANCE BUILDING</b>							
Vehicle Garage	12,842	2	400		800	-	
Shop area	600	1	500	500	-	-	
Warehouse	600	1	150	150	-	-	
Storage	800	1	200	200	-	-	
Service Yard	-	1	700	-	-	700	
<b>Subotal (NSF)</b>	<b>14,842</b>			<b>850</b>	<b>800</b>	<b>700</b>	
<b>Caretaker (Second Flr)</b>							
3-Bedroom House	1126	1	1,650	1,650	-	-	
Carport	234	1	200	-	-	200	
<b>Total (NSF)</b>	<b>16,202</b>			<b>1,650</b>	<b>-</b>	<b>200</b>	
<b>Total (GSF) 10%</b>				<b>2,750</b>	<b>800</b>	<b>900</b>	
<b>11 Other Tenants</b>							
<b>USDA PPQ Dog Detection</b>							
Dog Kennels		5	120	-	600	-	
Service Yard				-	-	2,400	
<b>US Customs &amp; Border Patrol Dog Detection</b>							
Dog Kennels		5	120	-	600	-	
Service Yard				-	-	2,400	
<b>Plant Quarantine Dog Detection</b>							
Dog Kennels		6	120	-	720	-	
Service Yard				-	-	2,400	
<b>Sheriffs Canine Unit</b>							
Dog Kennels		5	120	-	600	-	
Office space		1	150	-	150	-	
Exercise Area		1	800	-	-	800	
Service Yard		1	2000	-	-	2,000	
<b>Total (NSF)</b>					<b>2,670</b>	<b>10,000</b>	

## 5.0 | FUNCTIONAL COMPONENTS & ADJACENCIES

### 5.1 PROGRAM FLOW DIAGRAM - VISITOR, STAFF, ANIMALS & SERVICES

The next step for FAI was the physical and spatial interpretation of the key features of the diagram that best describes the user goals and objectives of attaining visitor flow and containment, while preventing spread of diseases and promoting animal wellbeing, as well as, creating a safe environment for the staff.

A quarantine facility is a highly specialized facility that uniquely combines animal housing with veterinary services. It must accommodate different users: owner visitors (public); cat and dog population (animals); the quarantine animal caretaker personnel (QAC), and staff (administrative, vets and technicians). The physical layout of the facility requires careful consideration of the interface of users and activities such as: how public circulation and work traffic patterns are organized; how animals (dogs & cats) are received and housed; how the animal facilities are cleaned and disinfected; and how animal housing areas are oriented and ventilated. A high level of quality is required to be able to keep animals in the healthiest, least stressful manner possible, while meeting the standards of animal care, and at the same time holding up under heavy wear of daily sanitization.

The layout of the facility ultimately impacts the efficiency of the operations. Diagram below, provided by AID, illustrates key workflow and traffic patterns that are unique to AQS. Features represented are: 1) Secure Entry/Exits; 2) Secure Perimeter; 3) Pet Movements; 4) Pet Owner Movements; and 5) Staff Movements.

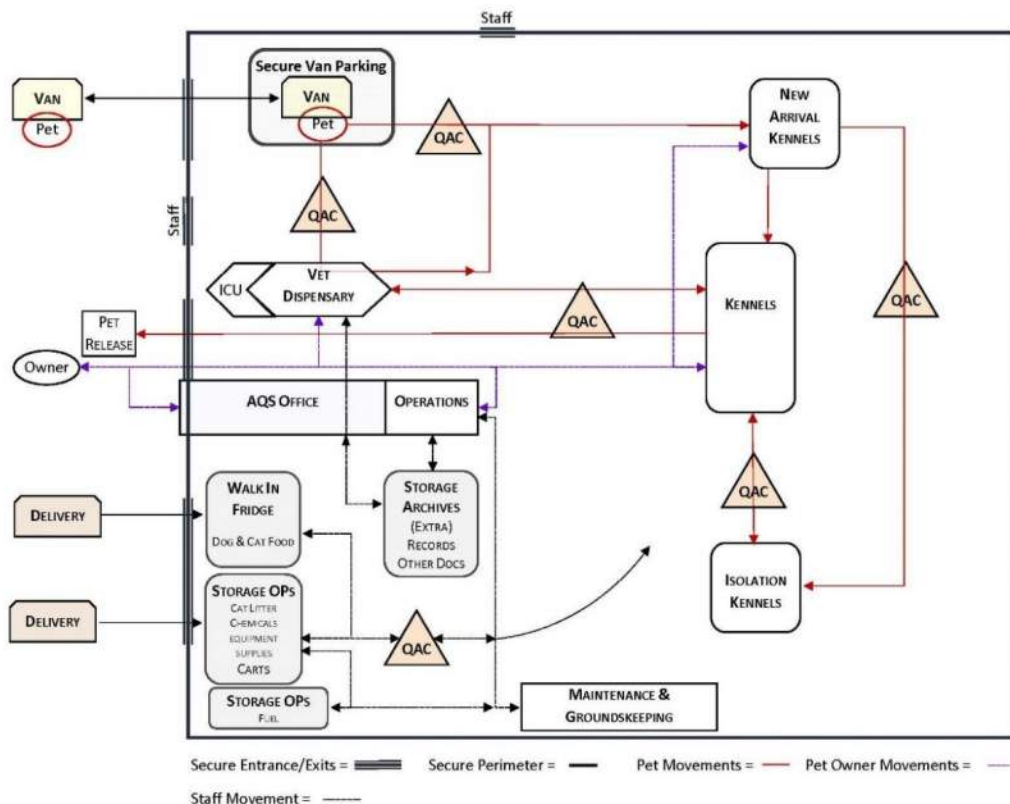


Diagram: AQS Facilities  
 Work Traffic & Adjacencies (Source: AID)

**Program Flow Diagram.** The Program Flow Diagram, Figure 5.1, combines the primary functional components of the AQS facilities with the space allocation requirements as established in Section 4.0, adjacency requirements, separation of points of entry, and the work traffic patterns and movement by different user groups: Visitors, Animals, Staff and Service.

**Visitor.** Public Lobby serves as a control point of entry for all visitors. Owners/Visitors after registering with the AQS office, may enter the Outdoor and Indoor housing complex through a secure gate.

**Animal.** How animals arrive, are received, and released is a critical consideration for the physical layout of a quarantine facility. The animal's movement is controlled from the time of entry at a separate secured service yard where they get delivered by a transportation van from the airport. The animal movement is always with a quarantine animal caretaker (QAC) who receives pets at the Animal Drop-Off area. Once the intake process is complete at the Veterinary and Dispensary, pets are moved to their assigned kennel at the New Arrival cluster. After a period of observation, animals are moved to the General Population housing clusters. Animals with observed behavioral issues are moved to an Isolation cluster, while animals with contagious symptoms are moved to a second Isolation cluster, physically separated from the population. Animals prone to heat and humidity sensitivities are moved to the Indoor Kennel building. At the time of release, QACs bring the pets and belongings in carts to a separate release area. Owners arrive at a pickup loading area to receive their pets.

**QAC.** QAC facilities are independent of the AQS office with a separate ingress and egress door accessible from the employee parking. QACs enter the Support Facilities where they can change at the locker rooms and equip for their daily routine. QAC/Animal movement at time of Intake and Release must be kept separate from that of public and staff. It is preferred that there is no crossover and the areas for Intake and Release are physically separated. To ease the work traffic for the QACs servicing the Kennels and the Hubs, it is recommended that single cart pathways are kept at a minimum of 6-feet, and the primary service pathways to kennels should consider side by side cart movement, requiring a minimum of 12-feet.

**Staff.** It is proposed that ingress and egress between the professional staff and QACs are kept independent. After parking their vehicles at an employee parking area, staff enter the AQS Office building and quarantine caretakers go to the QAC Support facilities. The professional personnel include the administration, accounting, operations, and the veterinary staff.

**Service.** Food and other deliveries to the Animal Support Services are made through another secured service yard with oversight by personnel. The loading dock should have direct access to the general Food Storage and the Cart Storage.

From the flow diagram and from the operation assessment, the spaces were elaborated to illustrate these relationships and work patterns.

See Program Flow Diagram, Figure -5.1.

## 5.2 FUNCTIONAL COMPONENTS

A more detailed spatial layout of program areas are depicted by the grouping of functional components into individual "blocks". These "blocks" reflect the program needs discussed in Section 4.0 and

illustrates the approximate size and adjacency to one another. The proximity relationships between the blocks and the general circulation requirements determine where components are best located and interconnected. The common central resources are placed near circulation corridors accessible to all staff.

The six major functional components for AQS are diagrammatically shown in Figure-5.2. These are:

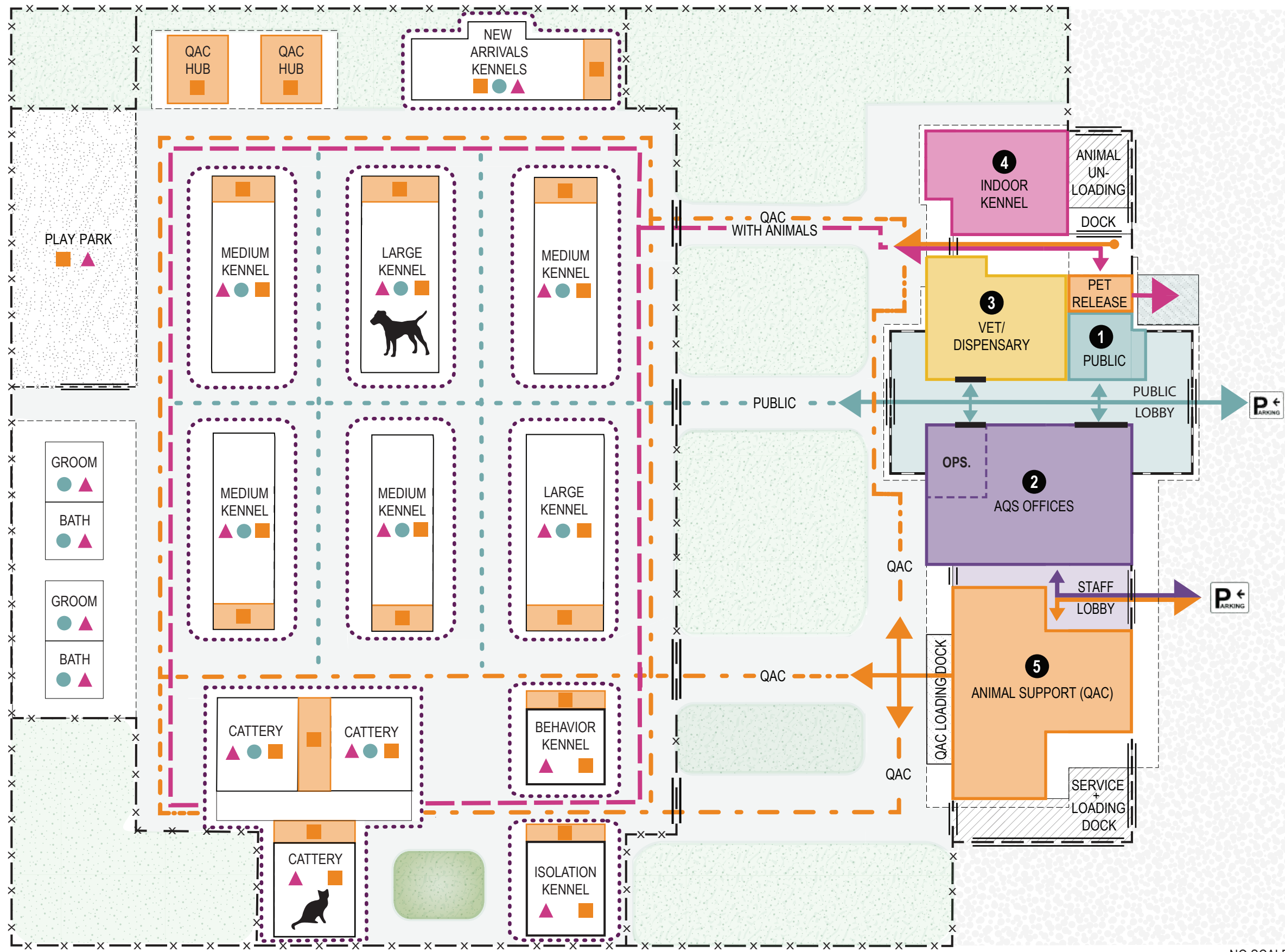
1. Public Lobby Visitor Services
2. AQS Office and Operations
3. Veterinary/Dispensary Services
4. Indoor Animal Kennels
5. QAC Support Facilities/Intake Drop-off &7\*- Pet Release
6. Animal Housing (Dogs & Cats). d

Space allocations and design considerations for each major component is separately discussed in Figures-5.3 through 5.13. For the listing of detailed program areas refer to Section 4.2 Tables-1 to Table-4.

# PROGRAM: FLOW DIAGRAM

## ADJACENCIES

- 1 PUBLIC LOBBY**
  - AQS OFFICE
  - DISPENSARY
  - OPERATIONS
- 2 AQS OFFICE**
  - PUBLIC
  - DISPENSARY + RECORDS
  - OPERATIONS (OPS.)
  - STAFF LOBBY
  - ACCOUNTING + RECORDS
- 3 VET/DISPENSARY**
  - AQS OFFICE + RECORDS
  - INDOOR KENNELS
  - ANIMAL DROP-OFF, UNLOADING/DOCK
  - ANIMAL RELEASE
- 4 INDOOR ANIMAL KENNELS**
  - VET/DISPENSARY
  - ANIMAL UNLOADING DOCK
  - ANIMAL SUPPORT QAC
- 5 QAC - ANIMAL SUPPORT**
  - KENNELS
  - OPERATIONS (OPS.)
  - ANIMAL DROP-OFF, UNLOADING DOCK
  - SERVICE + LOADING DOCK
  - ANIMAL RELEASE
- OUTDOOR KENNELS**
  - GROOMING/BATHING
  - PLAY PARK

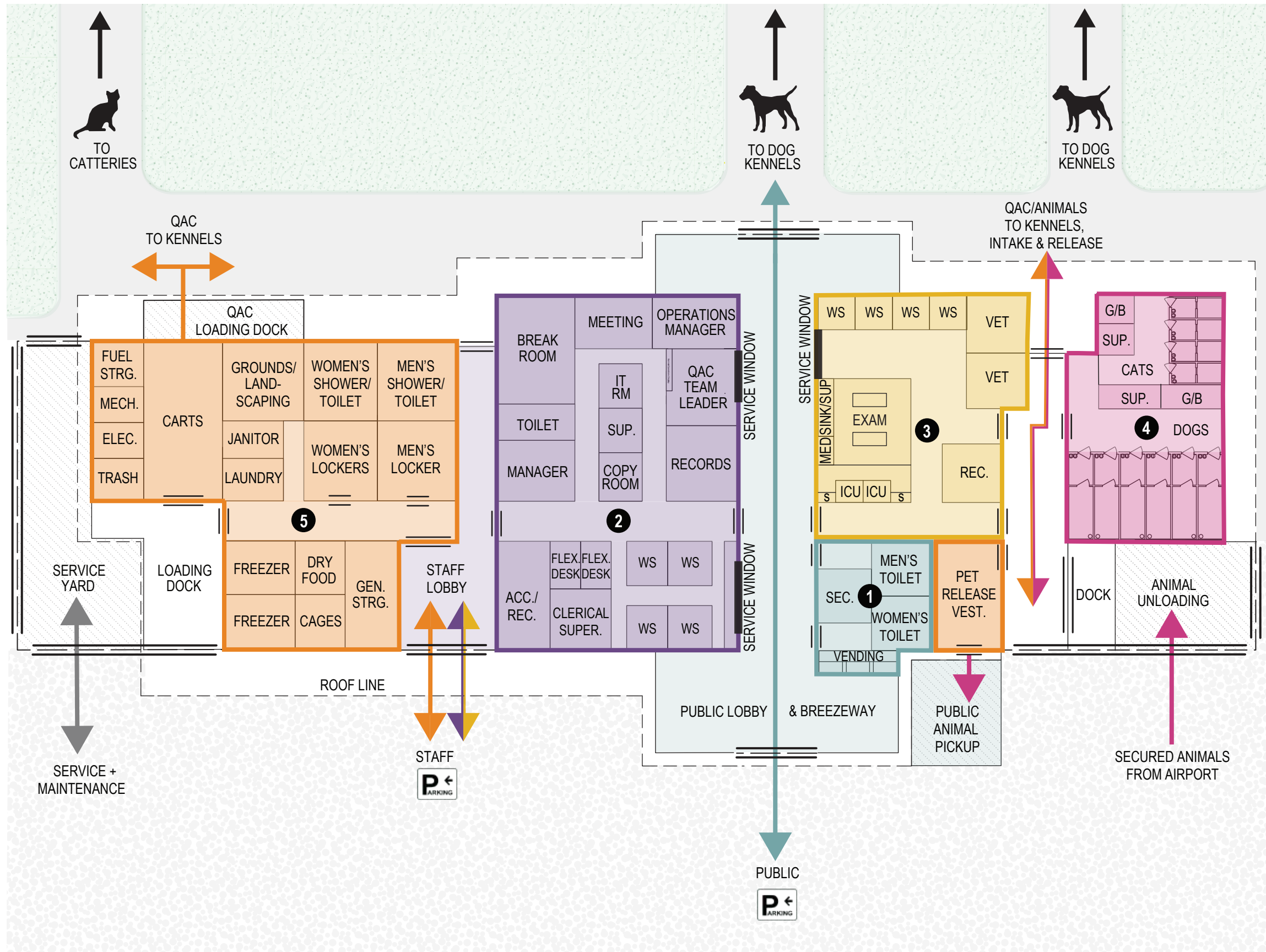


NO SCALE

## LEGEND

- - - QAC MOVEMENT + ACCESS
- - - ANIMAL WITH QAC MOVEMENT + ACCESS
- - - PUBLIC MOVEMENT + ACCESS
- STAFF MOVEMENT
- INDOOR KENNELS
- VET + DISPENSARY
- PUBLIC
- AQS MAIN OFFICE
- QAC
- PERIMETER FENCE ENCLOSURE
- SECURE ENTRANCE
- SECURE FENCE

FIGURE 5.1



**PROGRAM: FUNCTIONAL COMPONENTS**

**SPACE ALLOCATIONS (GROSS SQUARE FEET)**

<b>1</b>	<b>PUBLIC LOBBY</b>	<b>750 GSF</b>
	LOBBY/BREEZEWAY PUBLIC TOILETS SHERIFF VENDING (3)	
<b>2</b>	<b>QAS OFFICE</b>	<b>3,829 GSF</b>
	FRONT OFFICE OPERATIONS ACCOUNTING/RECORDS BREAKROOM COMMON/RECORDS	
<b>3</b>	<b>VET/DISPENSARY</b>	<b>1,781 GSF</b>
	WORK STATIONS (4) VETS (2) EXAM SERVICE WINDOW ICU/HOLDING ROOM SUPPLIES + RECORDS	
<b>4</b>	<b>INDOOR ANIMAL KENNELS</b>	<b>1,607 GSF</b>
	DOG SUITE (6) CAT SUITE (4)	
<b>5</b>	<b>QAC ANIMAL SUPPORT</b>	<b>5,340 GSF</b>
	CARTS LOCKERS/TOILETS FOOD/FREEZER GENERAL OTHER ANIMAL DROP-OFF PET RELEASE VESTIBULE	

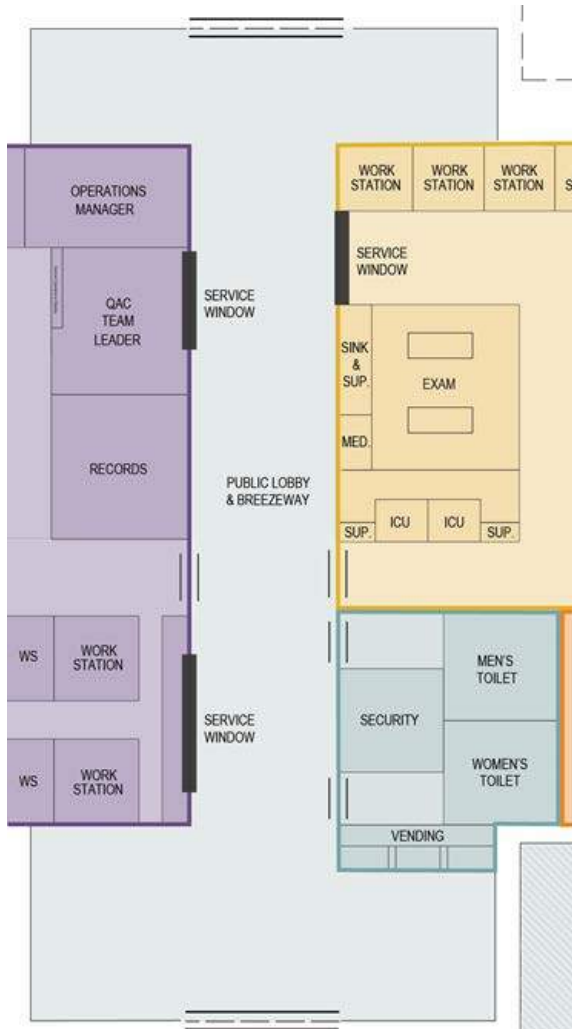
FIGURE 5.2

**LEGEND**

	QAC ENTRANCE + AREA
	ANIMAL ENTRANCE + AREA
	PUBLIC ENTRANCE + AREA
	QAS OFFICE STAFF ENTRANCE + AREA
	VET + DISPENSARY ENTRANCE + AREA
	SERVICE + MAINTENANCE ENTRANCE
	TO KENNELS + CATTERIES
	SECURE ENTRANCES

NO SCALE

### 5.3 FUNCTIONAL COMPONENT: PUBLIC LOBBY VISITOR SERVICES



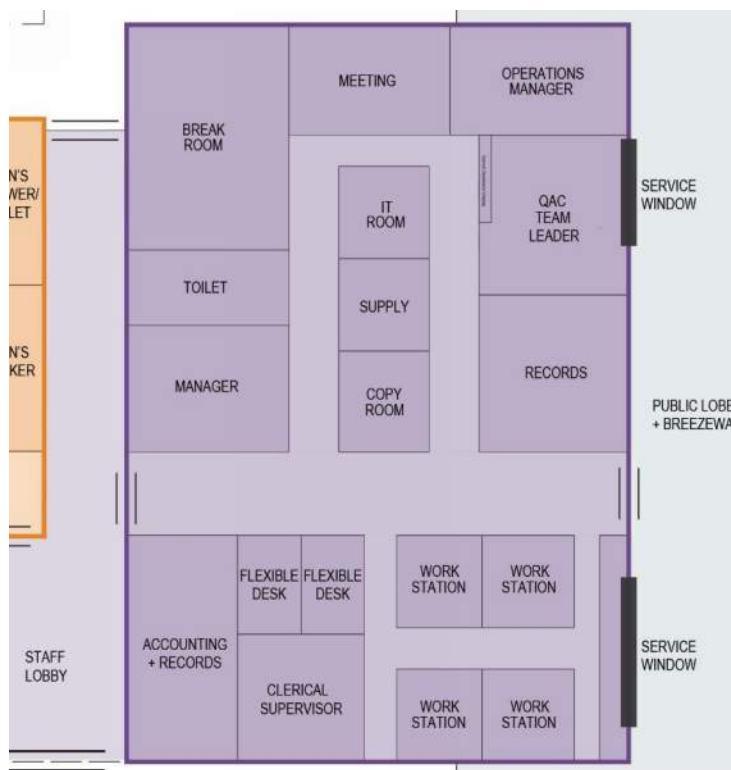
#### PROGRAM SUMMARY

Public Lobby Breezeway (Outdoor/Covered Lanai)	<b>800 SF</b>
Vending	<b>75 SF</b>
Men's Toilet	<b>200 SF</b>
Women's Toilet	<b>200 SF</b>
Sec. (Sheriff Office)	<b>150 SF</b>
<b>TOTAL (SF)</b>	<b>625 SF</b>
<b>TOTAL (GSF)</b>	<b>750 GSF</b>
<b>Outdoor Covered (SF)</b>	<b>800 SF</b>

#### DESIGN CONSIDERATIONS

- Open air breezeway with secured entry/exit points.
- Owner/Visitor access restricted to public areas only.
- No animals within the Lobby.
- Controlled owner/visitor access to Kennels.
- Direct access to Service Window Counters at: AQS visitor services; Operations; and Vets/Dispensary.
- Direct access to public toilets and vending machines from Lobby.
- High visibility by Security Sheriff and AQS staff.
- Sherriff centrally located at Public Lobby.
- Access control devices at all employee entry doors.
- ADA accessibility to all public areas including Service Window Counters and Public Toilets and areas.
- Materials and finishes selection according to ease of maintenance, high durability, sanitation, combined with accessibility and sustainability measures.

## 5.4 FUNCTIONAL COMPONENT: AQS OFFICES & OPERATIONS



### PROGRAM SUMMARY

<b>AQS Office:</b>	
Entry Vestibule	100 SF
Service Windows (AQS)	130 SF
Manager	150 SF
Clerical Supervisor	100 SF
Office (4-WS & 2-Desks)	440 SF
Records	150 SF
Archive Records	150 SF
IT Room	80 SF
Copy/Supplies/Safe	100 SF
Toilets/Janitor	200 SF
Breakroom/Meeting Room	500 SF
<b>Operations:</b>	
Service Window (Ops)	30 SF
Operations Manager	150 SF
QAC Team Leader	100 SF
Kennel Display Board	15 SF
<b>Accounting:</b>	
Accountant	150 SF
Accountant & Records	400 SF
<b>TOTAL (SF)</b>	<b>2,945 SF</b>
<b>TOTAL (GSF)</b>	<b>3,829 SF</b>

### DESIGN CONSIDERATIONS

- Secured Employee Entry Lobby accessible from Employee parking.
  - Staff entrance to administrative areas.
  - QAC entrance to QAC Support Areas.
- Visitor Service Window Counters accessible from Public Lobby with a notification system for alerting staff.
- Work surface alongside the Service Windows.
- Open office layout with workstations/cubicles/flex desks with social distancing standards for staff.
- Private offices for Management and Supervisory staff.
- Adjacency requirement for Operations Manager and Team Leader Supervisor with a connecting door. Prominent view of the Kennels, shared Kennel display board, and access to QAC.
- Central location of Records Storage, accessible to primary areas of use.
- Central location of copy/printing and office supplies.
- Central location of Breakroom and Meeting room.
- Central location of IT Room.
- Separate accessible toilets for office staff.
- Access control system at all employee ingress/egress doors.
- Separate access to Accounting Suite from Employee Lobby that includes an office and records area.
- Natural lighting with privacy screening; air-conditioning; and data/power/communications.



## 5.5 FUNCTIONAL COMPONENT: VETERINARY/DISPENSARY



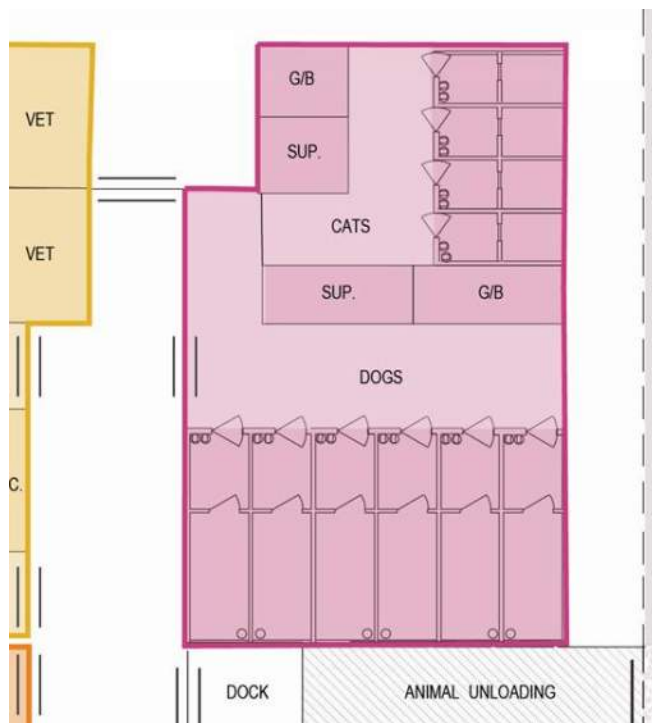
### PROGRAM SUMMARY

Service Window	<b>30 SF</b>
Workstation-4	<b>320 SF</b>
Exam Room	<b>300 SF</b>
ICUs-2 Holding Room	<b>150 SF</b>
Vet Offices-2	<b>300 SF</b>
Records	<b>120 SF</b>
Supplies	<b>100 SF</b>
Medications	<b>50 SF</b>
<b>TOTAL (SF)</b>	<b>1,370 SF</b>
<b>TOTAL (GSF)</b>	<b>1,781 SF</b>

### DESIGN CONSIDERATIONS

- Vets/Dispensary in close proximity to Intake Animal Drop-Off, and the Pet Release Vestibule.
- A publicly accessible Service Window with a notification system to alert staff.
- Access to Animal Kennels for vets.
- Ingress/egress for QAC/Animals. Allow minimum 6-foot wide passageway for carts.
- Dispensary workstations separated but have direct visual access to the exam/treatment room.
- Open office layout; workstation cubicles for technicians with social distancing standards; natural or even lighting at work areas.
- A Holding room with 2-ICU kennels off of the exam room, visible to staff. Integrate other noise mitigation features into design and materials as needed. Provide separate supply storage.
- Treatment room with two exam tables, sink counter, medical supplies, refrigerator, and microwave. One for small-medium animals and one large size with task lighting. Large size can be a tub that converts into exam table. Floor space for a scale near Exam Room. Sinks should be hands-free or foot-operated.
- Higher level lighting should be used where animal care tasks require enhanced visibility.
- Escape proof all areas used by animals.
- Central location of Records for Dispensary staff, accessible to AQS and OPS.
- Storage and Work Counter:
  - Separate medication supplies from sanitizing and disinfectant cleaning supplies.
  - Refrigerator/freezer for meds; microwave for quick warm compresses; and
  - Hands free operation sink (can be foot pedal), with automated soap dispensary.
- Non-porous materials and finishes selection for durability, ease of cleaning, sanitizing, low maintenance combined with accessibility and sustainability measures.
- Gently slope floors to drain in exam and ICU Holding room. Access to floor drain should not be inhibited by cage racks. Drain covers should be sanitized/disinfected prior to allowing animal access.
- HVAC to provide clean, odor free, uncontaminated air to control the spread of air borne viruses.

## 5.6 FUNCTIONAL COMPONENT: INDOOR ANIMAL KENNELS



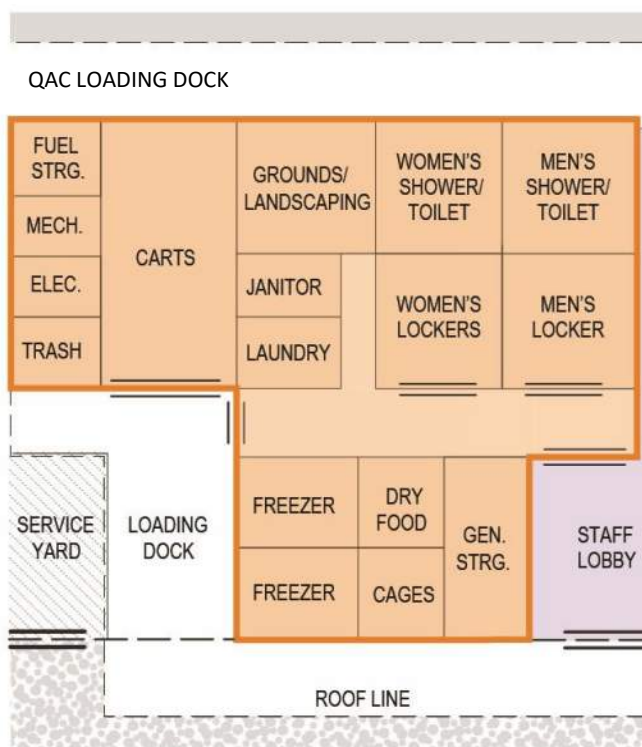
### PROGRAM SUMMARY

Dog Kennel Suite - 6	<b>480 SF</b>
Service Circulation	<b>180 SF</b>
Supplies/Storage	<b>100 SF</b>
Grooming and Bathing	<b>100 SF</b>
Water Heater	<b>20 SF</b>
Cat Kennel Suite - 4	<b>160 SF</b>
Service Circulation	<b>96 SF</b>
Supplies/Storage	<b>50 SF</b>
Grooming and Bathing	<b>50 SF</b>
<b>TOTAL (SF)</b>	<b>1,236 SF</b>
<b>TOTAL (GSF)</b>	<b>1,607 SF</b>

### DESIGN CONSIDERATIONS

- Indoor Kennels in close proximity to the Vets/Dispensary and the secured Animal Drop-Off.
- Separate the Dogs Kennels from the Cat Kennels with no visual connection. Accessible to visitors from the Kennel complex. Each equipped with their own supply storage and QAC work area.
- Indoor dog kennel sizes are (5' W x 16' L).
- Indoor cat kennel sizes are (4' W x 10' L).
- The Runs may be designed for indoor use; or convertible with a door control to an indoor/outdoor run.
- Indoor support areas to provide hot water for Bathing and Grooming area.
- Storage should be separated by type: food supplies, medicine, and cleaning and disinfecting supplies. Equipped with sink/refrigerator and work counter. Frequently used sinks should be hands-free or foot-operated.
- Non-porous materials and finishes selection for durability, ease of cleaning, sanitizing, low maintenance combined with accessibility and sustainability measures.
- Sealed impermeable surface such as sealed concrete floor or epoxy.
- Gently sloped floor to enable wastes and water to run off into drains. Wastewater should not run off into common areas or adjacent kennels. Floors kept clean and dry for comfort of animals.
- Provide daylighting: clerestories or skylights for health of animals.
- HVAC to provide clean, odor free, uncontaminated air to control the spread of air borne viruses. All ventilation systems must be maintained, and air quality monitored. Each primary enclosure should allow an animal to maintain normal body temperature. Temperature and humidity recommendations vary with the species of animals.

### 5.7 FUNCTIONAL COMPONENT: QAC SUPPORT FACILITIES



#### PROGRAM SUMMARY

Men-Locker/Shower/Toils	<b>650 SF</b>
Women-Locker	<b>700 SF</b>
Shower/Toils	
Carts/Equipment	<b>850 SF</b>
Dry Food Storage	<b>100 S F</b>
Freezer-2	<b>300 SF</b>
General Storage	<b>600 SF</b>
Electrical	<b>80 SF</b>
Mechanical	<b>80 SF</b>
Laundry /Utility Rms/WH	<b>180 SF</b>
Janitor/Cleaning Supplies	<b>80 SF</b>
Grounds Supplies & Landscaping	<b>600 SF</b>
QAC Storage (Cage)	<b>80 SF</b>
Pet Release Vestibule	<b>150 SF</b>
<b>Total (SF)</b>	<b>4,450 SF</b>
<b>Total (GSF)</b>	<b>5,340 GSF</b>

#### Covered:

Loading/Docks (Covered):	<b>600 SF</b>
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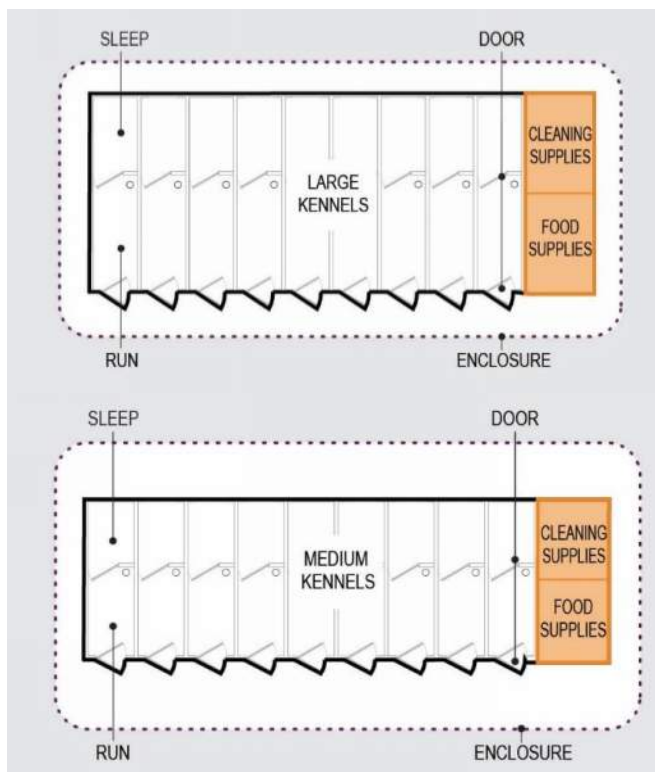
#### Paved:

Animal Drop-Off/Unloading	<b>980 SF</b>
Trash	<b>100 SF</b>
Fuel Storage	<b>160 SF</b>
Service Yard	<b>500 SF</b>
Owner Pick Up Stall	<b>375 SF</b>

#### DESIGN CONSIDERATIONS

- Secured enclosure and entry gate for the service vehicles and loading.
- Access control ingress/egress for personnel only.
- Food Supplies and Carts Storage should have direct access and be on the same level as the Loading Dock.
- QAC loading dock at Kennel side of the QAC Support areas.
- Types of general QAC storage:
  - Pet cages, backup parts for repair of equipment, crates, benches, bed boards.
  - Fuel storage for small engine equipment near the Carts' storage and Kennel grounds.
  - Fire hazard storage.
  - Central grounds and landscaping equipment and supply storage room.
- Trash, Mechanical and Electrical with service access.
- Women's and Men's Shower/Toilet & Lockers within the QAC Support areas, accessible to QACs.

## 5.8 FUNCTIONAL COMPONENT: GENERAL POPULATION KENNELS 6-CLUSTERS 54-KENNELS



### PROGRAM SUMMARY

#### 2-Large Gen. Pop. Clusters-18 Kennels

Large Dogs 14-Kennels	<b>2,184 SF</b>
Security Dogs 2-Kennels	<b>312 SF</b>
ADA-2-Kennels	<b>312 SF</b>
QAC Support Area	<b>240 SF</b>

#### 4-Medium Gen. Pop. Clusters: 36 Kennels

Medium Dogs 32-Kennels	<b>4,080 SF</b>
Security Dogs 2-Kennels	<b>240 SF</b>
ADA-2-Kennels	<b>240 SF</b>
QAC Support Area	<b>480 SF</b>

**TOTAL (SF) 7,848 SF**

### DESIGN CONSIDERATIONS

#### *Site Considerations:*

- Layout to allow visibility by Operations and QACs.
- Locate Kennel clusters such that there is no visibility between dogs.
- The Runs on the door side, facing south to take advantage of sun during the day, and Sleeps facing north for the cooler side for sleep and quiet.
- Site orientation is important for good natural ventilation. Clusters positioned for northeasterly tropical trade winds and solar power.
- Mix Kennel sizes (large and medium) to allow owners with multiple size dogs to be near each other regardless of size.
- Maintain a minimum of 3-feet paved surround for ease of service and maintenance, and cleaning without disturbing animals and creating debris.
- Recommended distance between clusters is 25-feet with barrier, and 40-feet without barrier.
- Each cluster to have a fenced enclosure.
- Trees in planters in between kennel structures or along service paths that can add to campus setting and provide shading desirable where possible. Trees must not attract bees and wasps.

#### *Kennel Design Considerations (Typical):*

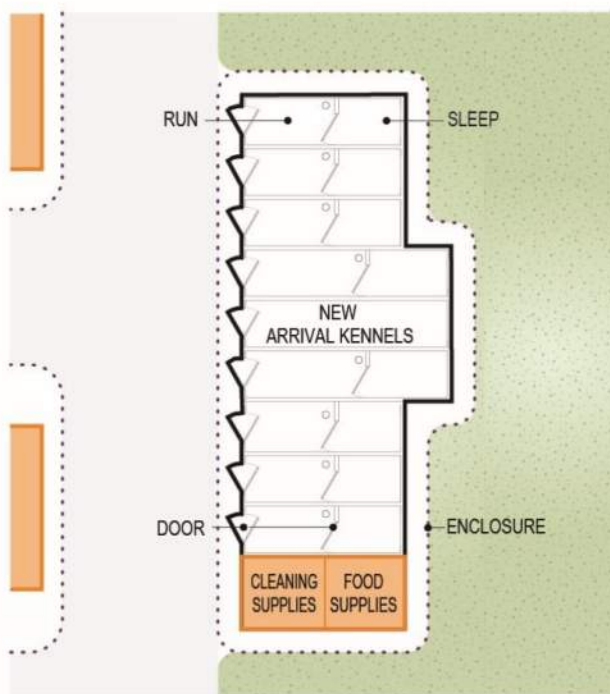
- Double compartment Kennels provide a Run and a Sleep area, with an intermediate door to allow isolation of pets during daily cleaning routine. Sleep areas often serve as area of refuge and protection during hurricanes and tropical storms. Kennels should accommodate a clean dry area with drinking water, a food pass-through, bed-board, and an area to sleep comfortably.

- Generally, there is one primary entry/exit door on the Run side; one intermediate door, and a third door may be considered on the Sleep end to ease and facilitate the cleaning process.
- Waterer to be accessible/serviceable from outside.
- Single-hole drains to minimize cross contamination of wastewater. Drains should not be located directly below the roof line to be subject to rain. Design floor slabs to slope towards drains. Gravity flow to pre-treatment plant to de-grit, aerate, and suspend then discharge into sewage system.
- Concrete floor and concrete curb, 18 to 36 inches high for ease of cleaning and durability. Impervious and seamless surface floors and drains because they are highly abused and can be source of cross-contamination. Flooring should be easy to clean and scrape with a spatula or putty knife, to squeegee off water. Should be chemical resistant, moisture proof and smooth to facilitate cleaning, and slip resistant for caretakers and animals.
- 7-foot separation wall between kennels, high enough to prevent dogs from stretching over.
- Walls above concrete curb can be standard kennel material, such as FRP and solid surface, easily sanitized, non-staining and non-porous, and durable (not easily damage).
- Exterior materials such as walls and roofs to be non-corrosive, durable, wind and storm resistant.
- Roof overhangs to provide rain and sun coverage. Allow natural air flow. Shed roof at Runs may be designed with full coverage.
- Roof design/slope to provide south exposure for potential photovoltaic energy.
- Kennel's identification signage to be designed for visibility from some distance.
- Frequent sanitation/hygiene and disinfection protocols, including Na-hypochlorite for central waste disposal to control smells and odors.
- Each support block should contain electric points, waterpoints, handwashing station with hot-water, secured storage area, work area, bins, and cleaning equipment. Storage of food, and medication separated from the PPE equipment, and disinfectant supplies. Refrigerator for perishable food and medication that needs to be stored in a cool and shaded area.
- Modern facilities include central pressure washing equipment; flushing floor drains; automated water systems save staff time required to refill bowls; air purification systems for indoor kennels; noise control and sound absorbing considerations.

***Functional Considerations for Vets & QACs:***

- Even general lighting in Kennel clusters for vet exams, and caretakers.
- Steam cleaning machines to help manage giardia, especially if kennels will be shaded and less apt to drying out.
- Eye washing station throughout the facility.
- Central location for storing backup parts for repair of equipment, crates, benches, and bed boards. Space allocation could be combined with the two Support Hubs or with QAC Support Facilities.
- Adequate air flow in work area, or ceiling mounted fans.
- Minimum 6-foot wide service path for single carts and minimum 12-foot wide to accommodate side by side carts for the primary pathway to provide for efficient movement of personnel and equipment.
- Minimum door widths should be 42-48 inches for safe and ease of movement of equipment. Door heights to accommodate cage racks. Thresholds should be flush to ease maneuvering of carts.

### 5.9 FUNCTIONAL COMPONENT: NEW ARRIVAL KENNELS 1-CLUSTER 9-KENNELS



#### PROGRAM SUMMARY

##### 1-New Arrival Cluster: 9-Kennels

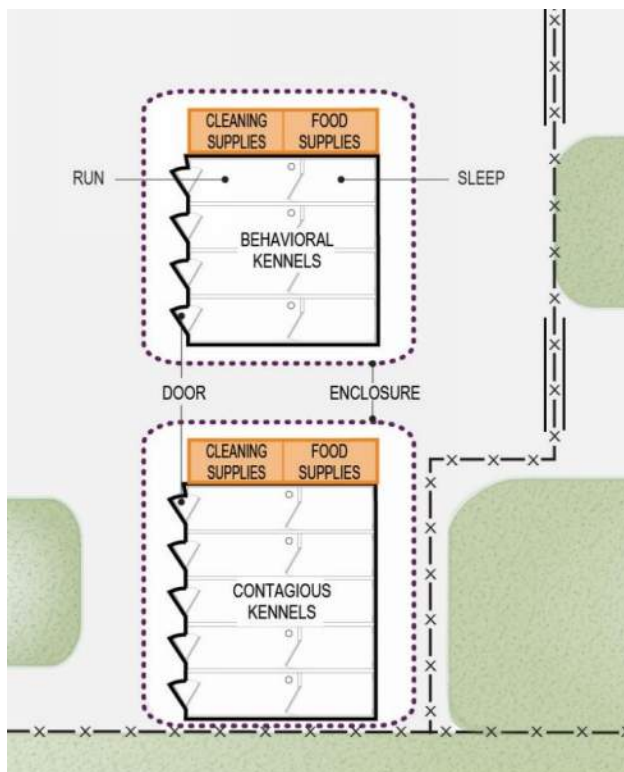
Large Dogs 3-Kennels	<b>468 SF</b>
Medium Dogs 6-Kennels	<b>720 SF</b>
QAC Support Area	<b>120 SF</b>

**TOTAL (SF) 1,308 SF**

#### DESIGN CONSIDERATIONS

- Separate New Arrival Kennels for pets that have just arrived before placing them among the General Population in a permanent kennel.
- Locate in close proximity to the Vets/Dispensary.
- Locate in a fenced and gated enclosure.
- Open air cluster of 9: includes 3-Large Kennels (6' W x 26' L) and 6-Medium Kennels (6' W x 20' L).
- Kennels typically have two compartments, a Run in the front area and Sleep in the back.
- Minimum of 3-feet service path around clusters.
- Kennels to be located such that animals don't see other dogs.
- General design considerations apply to all Kennels (See 5.8).

### 5.10 FUNCTIONAL COMPONENT: ISOLATION KENNELS 2-CLUSTERS 9-KENNELS



#### PROGRAM SUMMARY

##### 1-Behavioral Cluster: 4-Kennels

Large Dogs 4-Kennels	<b>624 SF</b>
QAC Support Area	<b>120 SF</b>

##### 1-Contagious Cluster: 5-Kennels

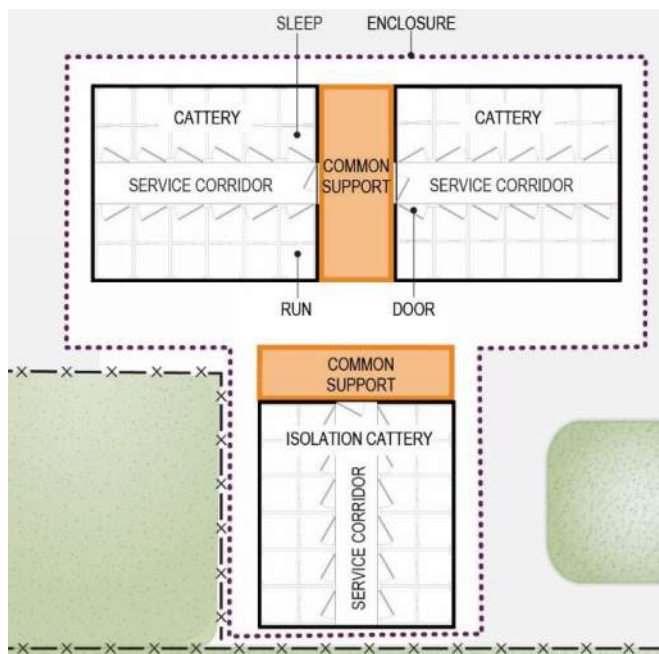
Large Dogs 5-Kennels	<b>780 SF</b>
QAC Support Area	<b>120 SF</b>

<b>TOTAL (SF)</b>	<b>1,644 SF</b>
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#### DESIGN CONSIDERATIONS

- Pets that have contagious illness and those under special observation for behavioral conditions will be housed in separate Isolation clusters and located away from the general population.
- The Behavioral Isolation cluster of 4-kennels is for the hyper aggressive runners, or excitable dogs that need to be away from traffic and external stimuli (i.e. carts, birds, passing animals/people, mongoose, noises that can trigger behavior).
- The Contagious Isolation cluster of 5-kennels is to be located downwind in order to prevent airborne spreading. Animals with infectious conditions generally require an environment that is comfortable, non-stressful, and easily cleaned between occupants.
- Smaller size clusters allow flexibility.
- Each cluster to have its own enclosure and have its own support supply storage.
- Kennels to be located such that animals can't look at each other.
- Kennels typically have two compartments, a Run in the front area and Sleep in the back.
- Maintain a minimum of 3-feet paved surround for ease of service and maintenance, and cleaning without disturbing animals and creating debris.
- General design considerations apply to all Kennels. See 5.8.

### 5.11 FUNCTIONAL COMPONENT: CATTERIES 2-CLUSTERS 36-KENNELS



#### PROGRAM SUMMARY

##### 1-Cluster: General Population

Cat Kennels-24-Kennels	<b>1,200 SF</b>
Double Loaded Corridor	<b>360 SF</b>
Grooming + Bathing	<b>15 SF</b>
QAC Support	<b>185 SF</b>

##### 1-Cluster: Isolation

Cat Kennels-12-Kennels	<b>600 SF</b>
Double loaded Corridor	<b>180 SF</b>
Grooming + Bathing	<b>15 SF</b>
QAC Support	<b>175 SF</b>

**TOTAL (SF) 2,730 SF**

#### DESIGN CONSIDERATIONS

##### Site Considerations:

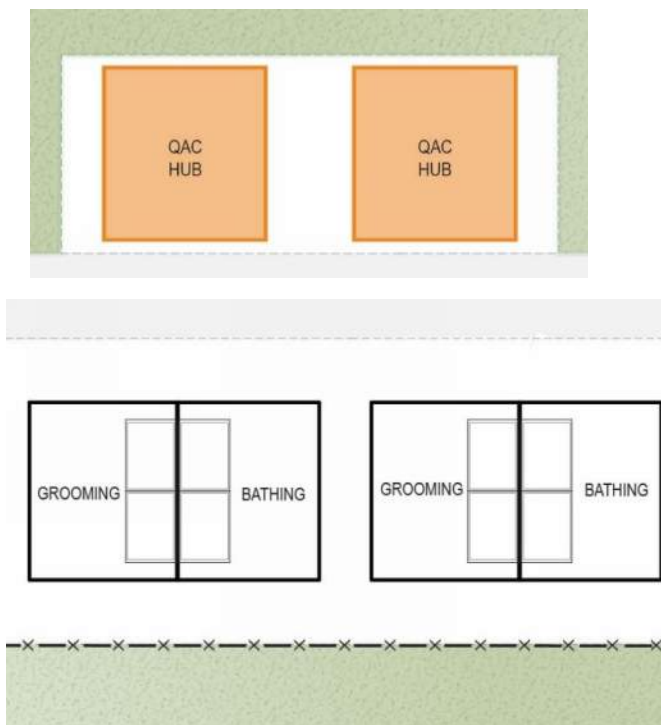
- Because cats are sensitive to noise, catteries should be located away from barking dogs.
- General Population of cats are housed in a 24-kennel cattery. The cattery layout is two clusters of 12-kennels that are joined together and share a QAC support area and a vestibule in the middle.
- Contagious population are housed in a separate Isolation cluster of 12-kennels with a separate QAC support area.
- Minimum of 3-feet of paved service surround each cluster for ease of maintenance and cleaning without disturbing animals and creating debris.
- A door at the vestibule and a door at each cluster provide escape prevention from the Catteries.
- Position clusters to take advantage of natural air ventilation and northeasterly trade winds.

##### Kennel Design Considerations:

- Catteries are typically double loaded corridor layout (similar to existing Catteries), consisting of Kennels facing each other into a common corridor. The middle corridor to be minimum of 6-feet wide.
- In a double compartmented kennel, the main door is at Sleep compartment that butts the corridor and the Runs are in the back.
- 7-feet solid separation wall between kennels for prevention of disease transmission.
- Ceiling below the roof to prevent perching cats from escaping.
- Separation of food and medicine areas from cleaning and sanitizing supplies at QAC Support stations. Equipped with utility sink, refrigerator, and desk work surface.
- Dedicated area for grooming of cats by owners within the common support area.
- Shade & coverage from sun during the peak hours with roof overhangs. Partial roof cover at runs.
- General Kennel design considerations apply to all Kennels. See 5.8.



### 5.12 FUNCTIONAL COMPONENT: SUPPORT HUBS & BATHING AND GROOMING



#### PROGRAM SUMMARY

##### QAC HUBS

Common Food Supplies	<b>50 SF</b>
Storage-2	
Cleaning	<b>100 SF</b>
Supplies/Storage/Equipment -2	
Equipment/Refrigerator/Utility	<b>100 SF</b>
Sink-2	
General Storage	<b>100 SF</b>
Work Desk or Counter-2	<b>50 SF</b>
Eye Washing Station	<b>36 SF</b>

**TOTAL SF** **436 SF**

##### Common Grooming Station:

Bathing & Grooming-4	<b>400 SF</b>
Structure (Roof/Flr)	<b>840 SF</b>

**TOTAL (SF)** **1,240 SF**

#### DESIGN CONSIDERATIONS

##### *Support Hubs.*

- Two centrally located QAC Support Hubs (Similar to existing Team Club House).
- Central storage of supplies and equipment for QACs PPE and disinfectant supplies.
- Desk and work surface for QACs record keeping.
- Types of equipment that staff require for daily care of animals could be stored at the two central Support Hubs. These could include electric carts, dishwasher, buckets, kick pans/scrapers, boots, aprons, gloves, disinfectants, soap, cat litter pans, water hose, food, and water bowls.
- Open air structure.
- Clear signage.
- Weather resistant structures and materials.
- Natural ventilation with ceiling fans.
- Layout flexibility.

##### *Bathing and Grooming:*

- A separate structure for Bathing and Grooming (B&G). B&G should be easy to maintain, clean and sanitize after each usage.
- Allow social distancing separation of tubs and grooming area.
- Minimum of 4-tub basins with hot and cold water for the facility; electrical outlet for driers.
- Rack for shampoo/towels/etc.
- Minimum of 4- elevated grooming platforms/stations with electrical outlet.
- Water heater. Provide hot and cold water at Grooming and Bathing.

### 5.13 FUNCTIONAL COMPONENT: PLAY PARK (EXERCISE AREA)



#### PROGRAM SUMMARY

Outdoor Enclosed Exercise Area	<b>1,600 SF</b>
<b>TOTAL (SF)</b>	<b>1,600 SF</b>

#### DESIGN CONSIDERATIONS

- Separate secured outdoor exercise enclosure to be provided to allow owners to interact for short periods of time with their pets.
- Open air exercise area, design to be washed down and sanitized after each use to prevent cross contamination, infection, and spread of diseases.
- Area must be a gated enclosure with regulated access for dogs to exercise with owners. Generally used for walking the dogs for purposes (urination and defecation).
- Outdoor play area equipped with some toys and structures.
- Create a park setting with walk paths and synthetic grass within perimeter and natural landscaping surround to provide a more inviting environment for pets.

## 6.0 | SITE ASSESSMENT

### 6.1 AQS RELOCATION SITE

The 2018 Oahu Correctional Community Center (OCCC) site selection study determined that the new quarantine complex will relocate to parcel TMK 9-9-010:054 in close proximity to the Animal Industry Division (AID) and its related departments.

The site lies just north of H-201 Moanalua Freeway within a highly developed urban environment comprised of commercial and industrial buildings. The Halawa Valley Street forms the site's northwestern borders, providing access to Halawa site. The outer western portion of the parcel is occupied by Animal Industry Administration Building, Veterinary Lab, Animal Disease Center, Necropsy, and their employee parking lot. The existing Large Animal Holding facilities are on the northern edge of the site, and the remaining relatively flat area consisting of undeveloped vegetation, is the development site for the new consolidated AQS facility. An existing surface public parking area under H-3 Freeway flanks the site at its eastern edge and is planned to support the future public and employee demand.

The site remains undeveloped, covered with native and non-native vegetation including large size monkeypod trees in the middle parts of site. The animal pasture located north of the site will remain undeveloped with grass and woody species that includes several monkeypod trees. Vehicular access to future AQS site from Halawa Valley Street is expected to remain same as existing, while a new entry drive is proposed on the Northeastern side to provide access to the new proposed OCCC site.



Photo-66: AQS Relocation Site



Photo-67: Future Vehicular Entry From Halawa Valley Street



Photo-68: Relocation Site (Undeveloped Corner at Access Road Viewed from H-3)



Photo-69: Relocation Site (Undeveloped Land Viewed From Public Parking Lot)



Photo-70: Relocation Site (Viewed from AID Entry)

## **6.2 SITE ANALYSIS**

Every site has a set of unique conditions that help determine the building placement, orientation, and the form. These are external and internal factors such as: regulatory factors; physical natural constraints; and site utilities. As the next step in the planning process these were evaluated and potential alternative solutions that could satisfy the project requirements as set forth in Section 4.0 and 5.0 were explored.

## **6.3 SITE ANALYSIS: REGULATORY CONSTRAINTS**

### **A. Tax Map Key**

The Honolulu Department of Planning and Permitting records indicate that the tax map key for the new site for the Animal Quarantine Station is 9-9-010:054. This parcel is owned by the Department of Land and Natural Resources (DLNR) and is 9.662 acres in size. The site has been consolidated and currently has one active tenant: Animal Industry Division. The undeveloped area designated for the future Animal Quarantine Station is roughly 3-acres (127,000 SF). The existing Large Animal Holding (LAH) site is approximately 3.3-acres (146,815 SF) and it is partially under the H-3 Highway. Other buildings on the site are the Necropsy Building, AID/DOH Employee Parking Lot, Waste Pre-Treatment Plant operated by Animal Industry Division. The parcel under the H-3 Highway East of the property line belongs to Department of Transportation (DOT) and the current usage by the Large Animal Holding (LAH) and the public parking lot are presumably grandfathered and can remain.

Refer to Figure-6.3 Site Analysis: Regulatory Constraints.

### **B. Roadways**

The future AQS is bounded by the primary vehicular access, Halawa Valley Street to the north, and the H-3 Highway viaduct overpass lies above the site's eastern boundary. The concrete driveway apron and pavement Access Road that currently provides access to AID site and the existing AQS facility will continue to remain as the primary entry to the planned AQS site. Future plans for the OCCC indicate that a new vehicular access point will be provided via a new driveway connection to Halawa Valley Street on north east side of the project as the primary entry to OCCC.

### **C. Zoning and Development Standards**

The land use for this parcel is Urban District and zoning is Intensive Industrial District (I-2). The Property has no existing setbacks and has a maximum buildable height limit of 60 feet. The proposed Animal Kennels facility is an allowable usage in the I-2 district.

The development standards per Land Use Ordinance Chapter 21 Table 21-3.5 for I-2 District is broken down in the following table:

<b>Chapter 21 Table 21-3.5 (I-2 District) Development Standards</b>	
<b>Animal Quarantine Facilities</b>	<b>Proposed</b>
<b>A. Area (AQS Site):</b> (excluded: Large Animal Holding approx. 146,000 SF, partly below H-3)	Approx. 3-acres=127,000 SF
<b>B. Max Allowable Building Area:</b> 80% of Zoning Lot (127,000 SF x 80%)	101,000 SF
<b>C. Max Allowable Floor Area:</b> FAR ratio=2.5 (2.5x 127,000)	317,500 SF
<b>D. Total Floor Area:</b> 32,039 SF <u>Area Tabulation:</u> <ul style="list-style-type: none"> <li>▪ AQS Office Building=4,624 SF</li> <li>▪ Vets/Dispensary=1,710 SF</li> <li>▪ Indoor Animal Kennels=1,558</li> <li>▪ QAC Services=4,300 SF</li> <li>▪ Proposed Kennels = 16,727 SF</li> <li>▪ Maintenance &amp; Caretaker=3,630 SF</li> </ul>	32,549 SF < 317,500 SF Proposed Floor Area < Allowable.
<b>E. Off Street Parking:</b> 1 per 400 SF <ul style="list-style-type: none"> <li>▪ Office Bldg. = 1 per 400 SF</li> <li>▪ Animal Kennels = 1 Per 400 SF</li> </ul>	Requirement: 82 32,549 SF/400 SF = 82 Vehicle Stalls 14 at Employee Parking. 68 at Public Lot
<b>F. Off Street Loading:</b> Office Bldg. & Storage (Sect 21.6.100) <ul style="list-style-type: none"> <li>▪ Office: 1 per 20,000 per 50,000 SF</li> <li>▪ Storage: 1 per 10,000 SF</li> </ul>	Requirement: 2  1 for Office 1 for Services
<b>G. Bicycle Parking:</b> 1 per 10 Vehicles	Requirement: 9

**6.4 SITE ANALYSIS: PHYSICAL AND NATURAL CONDITIONS**

**A. Site Topography**

The topographical site analysis indicates the site generally slopes from the northeast towards southwest direction with a portion of site having a steep slope of 10 – 15 feet. The steep slope is located on the northeast portion of the site bordering the existing Large Animal Holding Facility and Parking Lot underneath the H-3 Highway. The South portion of the site is relatively flat. Storm runoff within the site sheet flows west and south direction to onsite drain inlets.

## **B. Building Footprint**

The Consolidated Site has various structures that border and occupy the site. The Animal Industry Division (AID) Administration Building is a large structure which includes a paved parking lot for its employees. The AID also has smaller structures like the Necropsy Building and the Waste Pre-Treatment Plant. The Cattle Holding and Sorting Pens, Horse Stables, and paved receiving areas are located on the northern parts of the parcel, while also occupying a small area under the H-3 Highway.

The parcel and structures bordering the northwest side of the site belong to and are occupied by the Department of Health (DOH) and are not impacted by this project. The large parking lot below the H-3 Highway will remain as public parking for the new OCCC and future AQS. The undeveloped portion on the south side of the lot belongs to Department of DOT and any future usage will be subject to discussion and approval process by the Highways Division, Right-of-Ways Branch.

## **C. Sun Path and Wind Direction**

Northeasterly winds are prevalent throughout the year. The sun rises from the South East and sets on the South West. The sun creates minimal shadows during the summer months due to the high sun angle and longer shadows during the winter months.

Refer to Figure-6.4 Site Analysis: Physical and Natural Conditions.

## **6.5 SITE ANALYSIS: SITE UTILITIES**

The utility connection to various building infrastructure are: Water; Wastewater; Sewer; and Power (HECO) and COMM and Data (Spectrum or Hawaiian Telcom).

### **A. Water**

Water connection is possible from four side for the new proposed site. Two fire hydrants located on the West of the site can serve the site.

### **B. Waste Pre-Treatment Plant**

The existing Waste Pre-Treatment plant, owned and operated by AQS for the Kennels is located on the south end on the property near the existing entry, and will continue to provide pre-treatment for the new AQS site prior to discharging to the City wastewater collection system.

### **C. Sewer**

The City sewer main runs east-west below the new project and connects to the existing sewer main within Halawa Valley Street. Sewer connection is possible from an existing location on the west portion of the site (catch basin and inlet grate).

## **D. Power and Telecommunication**

The existing HECO Sub Station is located North just adjacent to the site. A combination of overhead power lines and underground ducts provides power to the site. Spectrum Cable shares an existing underground duct with HECO to provide Cable/TV and DATA/COMMS to the site. Refer to Figure-6.5.

### **6.6 SITE ANALYSIS SUMMARY: BUBBLE DIAGRAM**

The site assessment graphically highlights the opportunities and potential constraints of the future AQS site in the Bubble Diagram in Figure-6.6.

The site analysis conveys that the ideal location for a building is on the south end of the site where the land is relatively flat, providing good vehicular and pedestrian access to the building on the site, and good connection to the Animal Industry Division Building. The central portion of the site is ideal for locating the kennels and catteries. The steep topography and vegetation at the north and northeast, provides a buffer zone between the Larger Animals and the Kennels. The path of flow of drainage and the low point in topography is westerly direction to the lowest point as shown in Figure 6.5. Furthermore, a secured perimeter fencing and vegetation around the Kennels can provide the needed buffer zone between the Kennels and various office buildings.

The best orientation for the Kennel structures is northeasterly to take advantage of the tropical trade winds. It is advantageous for the kennel sleep areas to face the cooler north side and the runs to face the sun direction or the south side. Abundant natural ventilation and lighting in animal housing areas is essential for their well-being. The south facing roofs have the potential to provide green power from solar PV systems to operate much of the facilities.

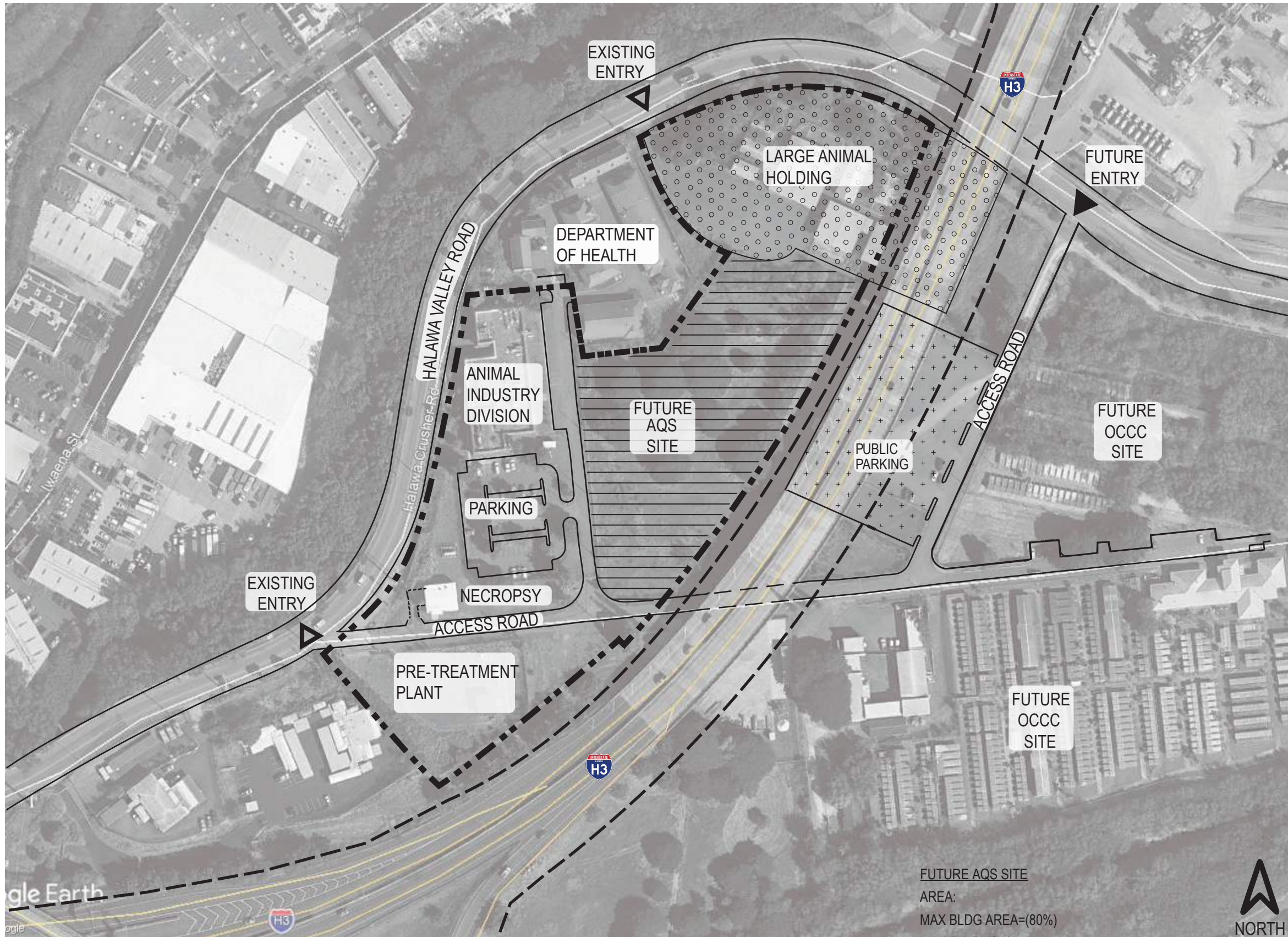
There are currently several points of vehicular entry to the Halawa site. There are two existing entries to the west and northwest of the site which serve as primary vehicular access to DOH and AID. These are planned to remain in use for the consolidated site. It is envisioned that the future reduced LAH site will require a separate access from the Halawa Valley Road for the large trailers that transport the larger animals. This entry could potentially be combined with the new primary access as suggested by the 2018 conceptual plans for OCCC, but since the OCCC planning efforts are currently conducted independent of this PDR no coordination has occurred to date. During the Design and Construction phase, coordination between the design teams is recommended.

The Public Parking Lot is the primary parking location for visitors of AQS. The southwest boundary of the parking lot provides an ideal opportunity for a short and direct pedestrian access to the future AQS facility. As the land below the H-3 Highway belongs to the Department of Transportation (DOT), any consideration for the use of portions of this parcel as pedestrian right-of-way would require future discussions and approval process by the Highways Division, Right-of-Ways Branch.

The existing DOH facilities located on the northwest are not impacted by the future development of the AQS site. A vegetation separation as buffer zone between the existing DOH and the new AQS is recommended.

Refer to Figure-6.6 Site Analysis Bubble Diagram.





**SITE ANALYSIS: TAX MAP KEY**  
**ZONING**  
**LAND USE**  
**ROADWAYS**

**REGULATORY CONSTRAINTS**

TMK:	9-9-010:054
AREA:	420,877 SF
ACRES:	9.662
OWNER:	STATE OF HAWAII (DLNR)
ZONING:	I-2
LAND USE:	URBAN DISTRICT
SMA FLOOD ZONE:	NONE
HEIGHT LIMIT:	60 FEET
EVACUATION ZONE:	NO
MAX BUILDING AREA:	80%
MAX FLOOR AREA RATIO (F.A.R)	2.5

**FUTURE AQS PROJECT**

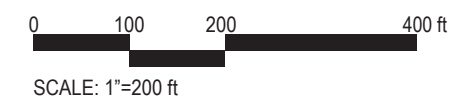
AREA:	127,000 SF
MAX BLDG AREA = 80% OF ZONING LOT	101,600 SF
MAX F.A.R = 2.5 X 127,000 SF PROPOSED	317,500 SF
PROGRAM FLR AREA : 32,549 SF	32,549 < 317,500 SF
PARKING REQ: 1 PER 400 SF LOADING	82-STALLS REQUIRED
REQ: 2 PER 10,000 TO 50,000	2-REQUIRED
BICYCLE REQ: 1 PER 10 VEHICLES	9-REQUIRED

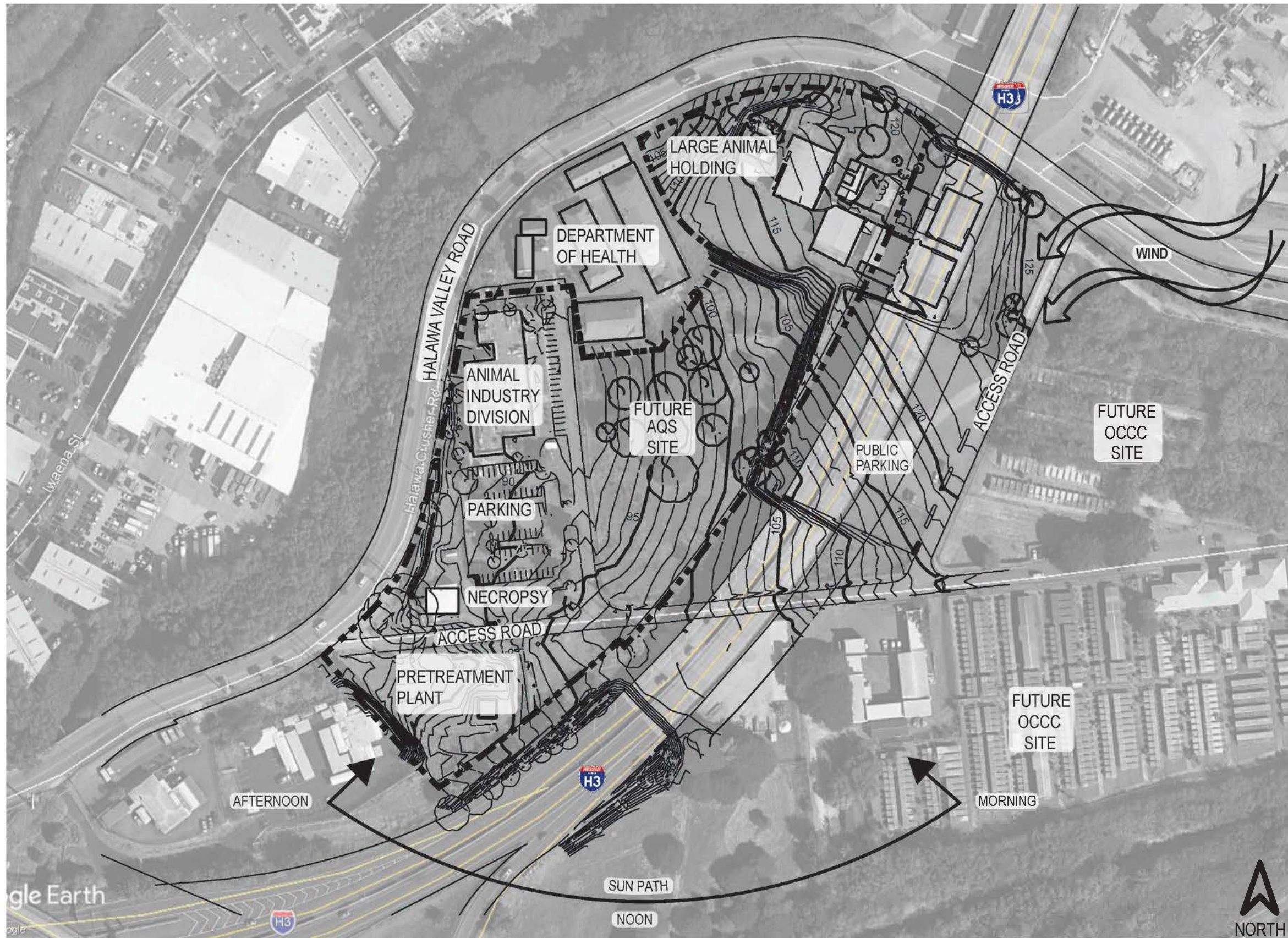
FIGURE 6.3

**LEGEND**

- EXISTING VEHICULAR ENTRY
- FUTURE VEHICULAR ENTRY
- PROPERTY LINE
- H-3 HIGHWAY ABOVE
- EXISTING PARKING (64 AID+240 PUBLIC LOT)
- LARGE ANIMAL HOLD'G (106,000 + 40,000 SF (UNDER HI))
- FUTURE AQS SITE

**FUTURE AQS SITE**  
 AREA:  
 MAX BLDG AREA=(80%)  
 MAX F.A.R: (2.5):  
 PARKING REQ:  
 LOADING REQ:  
 BICYCLE REQ:





**SITE ANALYSIS:** TOPOGRAPHY  
 BUILDING FOOTPRINT  
 SUN PATH  
 WIND DIRECTION

**PHYSICAL AND NATURAL CONDITIONS**

**TOPOGRAPHY**

THE EXISTING SITE GRADE SLOPES FROM THE NORTH-EAST DIRECTION.

**BUILDINGS**

THE EXISTING STRUCTURES NEAR/ON THE SITE INCLUDE:

- DEPARTMENT OF AGRICULTURE ANIMAL INDUSTRY DIVISION
- DEPARTMENT OF HEALTH SANITATION BRANCH
- LARGE ANIMAL HOLDING FACILITY
- NECROPSY FACILITY
- BWS WASTE WATER PREP-TREATMENT FACILITY

**SUN PATH**

THE SUN RISES FROM THE SOUTH-EAST AND SETS ON THE SOUTH-WEST. THE SUN CREATES MINIMAL SHADOWS DURING THE SUMMER MONTHS DUE TO THE HIGH SUN ANGLE AND LONGER SHADOWS DURING THE WINTER MONTHS. THE H-3 HIGHWAY HAS A MINIMAL SHADOW IMPACT TO SITE.

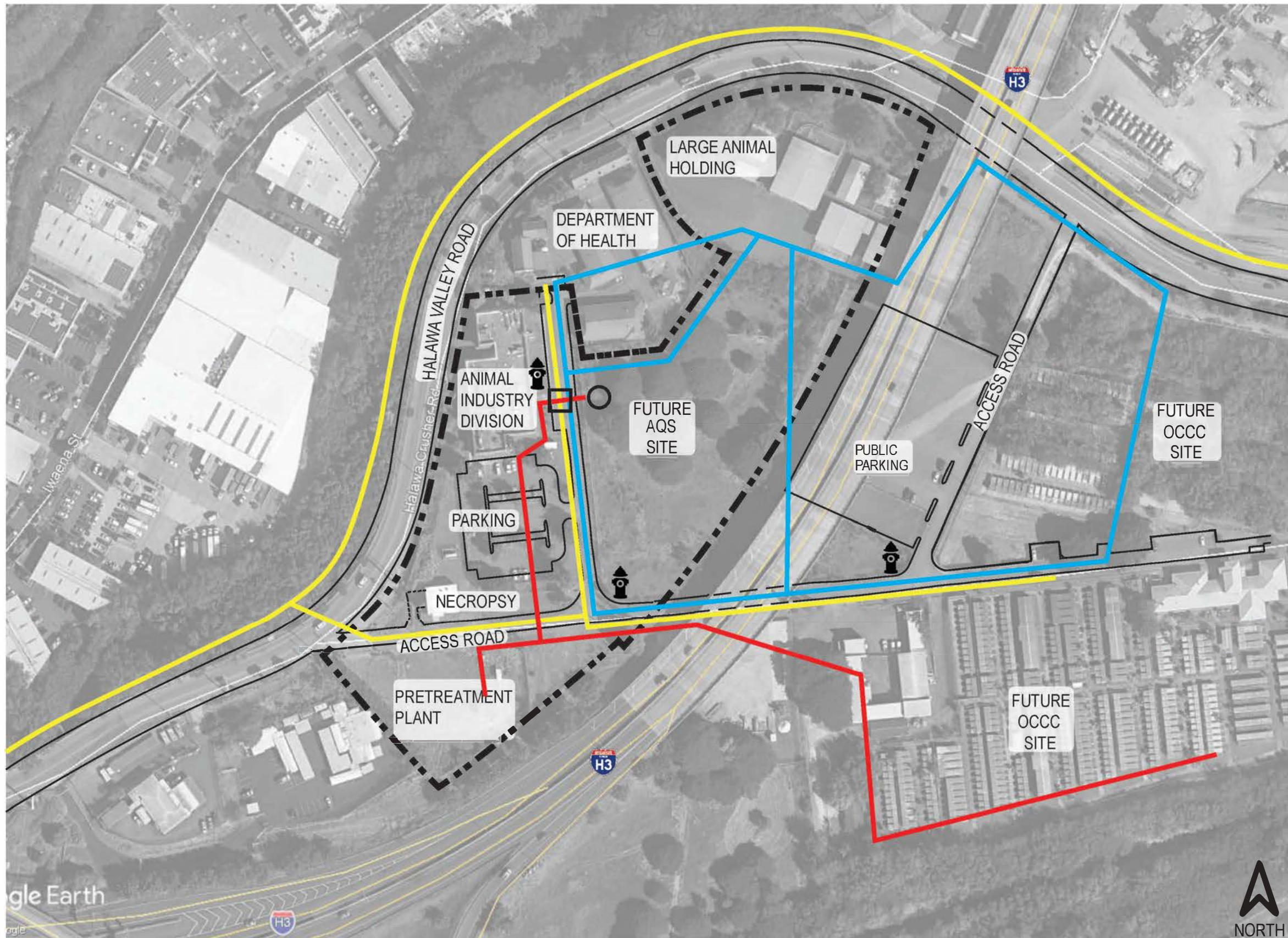
**WIND DIRECTION**

PREDOMINANT WINDS FROM THE NORTHEASTERLY DIRECTION THROUGHOUT THE YEAR.

FIGURE 6.4

**LEGEND**

- PROPERTY LINE
- ▭ BUILDING FOOT PRINT
- ⊙ TREE



**SITE ANALYSIS:** WATER  
WASTE WATER  
SEWER  
POWER / COMMS

**INFRASTRUCTURE**

**WATER:**

WATER CONNECTION IS POSSIBLE FROM FOUR SIDES OF THE PROPOSED SITE.

**WASTE WATER:**

THE EXISTING WASTE PRE-TREATMENT PLANT IS LOCATED ON THE SOUTH WEST END ON THE PROPERTY. POSSIBLE CONNECTION TO EXISTING WASTE LINE POSSIBLE ON THE WEST OR SOUTH SIDE OF THE SITE.

**SEWER:**

SEWER CONNECTION IS POSSIBLE FROM AN EXISTING LOCATION ON THE WEST PORTION OF THE SITE ( CATCH BASIN & INLET GRATE)

**POWER / COMM:**

THE EXISTING HECO SUB STATION IS LOCATED NORTH JUST ADJACENT TO THE SITE. A COMBINATION OF OVERHEAD POWER LINES AND UNDERGROUND DUCTS PROVIDES POWER TO THE SITE. SPECTRUM CABLE SHARES EXISTING UNDERGROUND DUCTS WITH HECO TO PROVIDE CABLE/ TV / INTERNET / COMMS. TO THE SITE.

FIGURE 6.5

**LEGEND**

- POWER / COMMS
- WATER
- WASTE WATER
- PROPERTY LINE
- INLET
- CATCH BASIN
- 🔦 FIRE HYDRANT

# SITE ANALYSIS: BUBBLE DIAGRAM

## SITE PARAMETERS

- BUILDING - LOCATED ON SOUTH END (FLAT AREA)
- LOWEST ELEVATION @ 95 FEET
- HIGHEST ELEVATION @ 110 FEET
- 15 FOOT BERM ALONG NORTH AND EAST OF SITE
- 2 EXISTING PARKING LOTS ADJACENT TO SITE
- PROXIMITY TO ANIMAL INDUSTRY DIVISION
- PROXIMITY TO LARGE ANIMAL HOLDING FACILITY
- ANIMAL KENNELS LOCATED IN THE MIDDLE OF SITE
- BERM AND BUILDING CREATES BUFFER FOR ANIMALS.
- SOUTHERLY SUN PATH AND NORTH EASTERLY WINDS

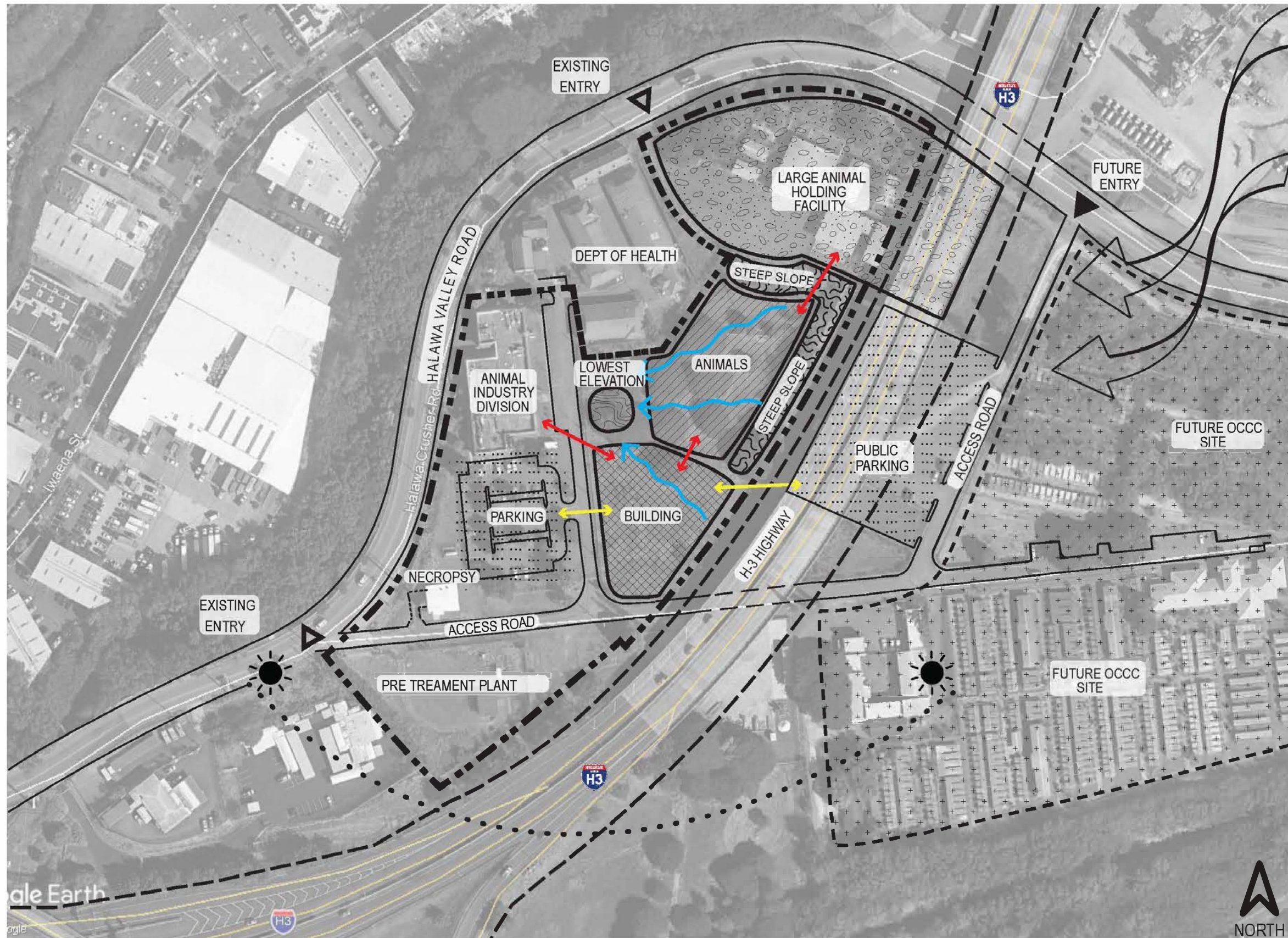


FIGURE 6.6

## LEGEND

- EXISTING VEHICULAR ENTRY
- FUTURE VEHICULAR ENTRY
- PROPERTY LINE
- H-3 HIGHWAY ABOVE
- SITE DRAINAGE / WATER RUN-OFF
- USER FLOW
- PARKING PROXIMITY TO BUILDING
- BUILDING
- LOWEST ELEVATION ON SITE
- STEEP SLOPE (15 FOOT BERM)
- ANIMALS
- PARKING
- LARGE ANIMAL HOLDING FACILITY
- FUTURE OCCC SITE

## 7.0 | SITE TESTING

### 7.1 SITE DESIGN PROCESS

Once the site's potentials and constraints were identified it allowed FAI to test the site's capacity using the major functional building blocks from the programmatic space requirements in Section 4.0 and the functional relationships in Section 5.0.

Four alternative scenarios evolved during this process and were evaluated by stakeholders and design team. The pros and cons analysis of the options were weighed in order to narrow down the key features, finalize the adjacency requirements, and to develop a conceptual master plan for the consolidated site.

The alternative Options 1 through 4 can be found in Exhibit-4 of this report, along with the record of minutes from meetings and individual discussions.

Through the site testing process, several key site and function driven features were identified for further design consideration and were instrumental in the formation of the final site concept. These are:

- The Public Parking Lot to accommodate the owner visitor parking requirements.
- AQS Public lobby areas to be near the Public Parking Lot.
- The pedestrian connection between the Public Parking and AQS building to be ADA accessible.
- Physical adjacency between AQS Front Office and Vets/Dispensary.
- A separate independent Pet Release area accessible by owner vehicle.
- A secure Employee Parking near AQS.
- Separation of ingress/egress for the professional staff and QAC.
- Separation of QAC support areas from administrative areas.
- Mail delivery/loading zone near AQS Front Office.
- PSD Canine unit near AQS with separate access.
- Maintenance and Caretaker near AQS with their own separate access. Second level for Caretaker living is acceptable.
- Tenants require independent site access and enclosure, and proximity between AQS and its Tenants is not required.
- Separate access for animal trailers to Large Animal Holding (LAH).
- Pasture to be gated and near the LAH area.

### 7.2 CONSOLIDATED AID SITE PLAN

The Consolidated Site Plan, Figure 7.2, is the proposed conceptual master plan for AID's new quarantine facilities. The future AQS complex is planned to occupy the undeveloped portion of the approximately 3-acres site. A reduced Large Animal Holding (LAH) and the AQS Tenants is planned to relocate to the existing LAH, a roughly 3.3 acre site that is partially underneath the H-3 Highway (grandfathered). The key site and function driven features of the AID campus plan are:

- Separation of vehicular entry/exit points for Staff, Public, Large Animals, and AQS tenants.
- Secure perimeter and controlled entry points.

- Existing vehicular access from the Halawa Valley Road to remain as primary entry to AQS.
- AQS Public Lobby is located close to the Public Parking Lot and entry is controlled and secured.
- An ADA accessible pedestrian path is provided between the Public Parking Lot and the AQS Office building shown under the Highway, subject to approval process by DOT Highways Division.
- Vets/Dispensary in proximity to AID encourages collaboration and connectivity.
- Gated employee parking near AQS Office building.
- Dedicated and separate drive provides access to support services. Separation of service vehicles from the public and office workers is desirable.
- PSD Canine Unit near AQS facility with its own access.
- Proximity of the Maintenance and Caretaker near AQS for ease of access, and work connectivity.
- Maintenance is combined with a second floor housing unit for the Caretaker.
- Large Animal Holding area is reduced and reconfigured:
  - Reconfigured cattle and horse sheds in secured fenced enclosures.
  - New entry for large trailers, with a one way drive through near the future OCCC entry gate.
  - Shared exit drive with AQS Tenants (on the opposite west end of the site).
  - Secured enclosure for large animal unloading and pick-up.
  - Unloading area to accommodate multiple trailer queuing area and side by side traffic.
  - Proximity to a gated pasture.
- AQS Tenants remote location within the northwest part of the consolidated site.
  - Existing access drive from Halawa Valley Road to be used by Tenants.
  - Separate independent enclosures for each Tenant.
- Layout to provide high visibility from H-3 Highway.

See Figure 7.2 Consolidated AID Site Plan.

### **7.3 AQS SITE PLAN**

The AQS Site Plan, Figure 7.3, provides an overview of the animal quarantine facilities and the interrelationship of the key functional components of the Animal Quarantine Station and Kennels.

The conceptual site plan considers the project's area requirements, adjacency relationships, staff workflow, interface, and connectivity of functions. Fundamental design considerations for AQS Concept Site Plan are discussed below:

- Public Entry Lobby and Visitor Services are located close to the Public Parking Lot.
- A gently sloped ADA accessible pedestrian pathway connects visitors between the public parking area and the covered entry courtyard.
- Visitor entry from the Public Lobby to Kennel complex is controlled and secured with a gate.
- Complete separation of public areas from staff areas.
- Secure employee parking area near AQS Office building.
- Dedicated loading and unloading zone for mail deliveries near the AQS Front Office.
- Separate entrances for the professional staff and the Quarantine Animal Caretakers (QAC).
- Pedestrian walkway between AQS building and AID Office to facilitate daily connectivity and collaboration.
- Animal Drop-off is separated from the Pet Release area.
- Secure Animal Drop-Off/Animal Intake processing area near Dispensary.

- Central secure QACs/Pets circulation breezeway.
- A parking stall at Pet Release Vestibule allows visitor owners to park and pick up their pets.
- Dedicated service access drive to: QAC Support facilities, Maintenance and Caretaker, and PSD Canine Unit enclosure. Gated access path from the service drive to LAH.
- Secured loading and unloading yards at QAC Support facilities, Maintenance and Caretaker, and PSD Canine Unit.
- A wide (12-16 feet) central service path to accommodate the side by side cart traffic.
- Two centrally located QAC Support Team structures.
- Kennel Cluster structures oriented to take advantage of northeasterly breezes.
- Kennel Clusters are typically separated from one another by 30'-0", front to back.
- Minimum 3-foot roof overhangs at kennel clusters to allow dry interior enclosures for pets.
- Dog Population: 9-Clusters (72-Kennels)

<u>Description:</u>	<u>No. Clusters:</u>	<u>No. of Kennels:</u>
General Population	4 Medium	32; 2-Security, 2 ADA Kennels
General Population	2 Large	14; 2-Security, 2-ADA Kennels
New Arrival	1 Mix-Medium/Large	6 Medium 1-Large Kennel
Isolation Contagious	1 Large	5 Kennels
Isolation Behavioral	1 Large	4 Kennels
Total:		72-Kennels

- Cat Population: 2-Clusters (36-Kennels)

<u>Description:</u>	<u>No. Clusters:</u>	<u>No. of Kennels:</u>
General Population	1 Cluster	21 plus 3 ADA Kennels
General Population	1 Cluster	12 Kennels

- Perimeter enclosure at each Cluster.
- Secured centrally located enclosure for dogs to exercise.
- Dogs Grooming and Bathing: Four tubs and four grooming areas, spaced for social distancing needs for pets.

See Figure 7.3 AQS Site Plan

## 7.4 AQS FLOOR PLAN

The AQS enlarged floor plan, Figure 7.4, provides a conceptual layout of the Animal Quarantine Station offices. It illustrates the space allocations, the key functional components, as well as their adjacency relationships and requirements. For specific design recommendations for various project elements, refer back to Section 5.0.

Key design parameters of the concept floor plan are:

### A. Public/Visitors:

- ADA accessible pedestrian path connects the visitors coming from public parking to the public lobby.
- Visitor entry court for AQS signage and information board.

- Inviting, covered, and secured outdoor lobby breezeway courtyard.
- Visitor owner services at lobby include:
  - Direct access to transaction windows at AQS Front Office, Operations, and Dispensary.
  - Sheriff/Security Office.
  - Public Toilets (Men and Women).
  - 3-vending machines.
- Separation of public areas from staff areas.
- Controlled ingress/egress gate at Public Lobby for visitors to access outdoor and indoor Kennels.

#### **B. Employee Parking**

- Dedicated gated parking: 12 standard parking stalls; 2-vans; 2-ADA; bicycle racks and electric vehicle charger.
- ADA accessible sidewalk to the main entries at AQS Office and QAC breezeway.
- Dedicated loading/unloading zone for mail deliveries near the employee parking and the office entrance.

#### **C. AQS Offices/Operations**

- Primary entry for AQS office employees is separated from the QAC staff.
- A pedestrian sidewalk connects the AQS office to AID for daily deliveries.
- AQS Front Office receives the mail deliveries at a reception counter off-of the entry hallway.
- Front Office staff receive visitors at the work counter along the public service windows.
- Front Office Suite: 4-Work Stations; Manager Office; Clerical Support Manager.
- Accounting Suite: 1-Accountant Office and records area.
- OPS Suite: 1-OPS Manager, 1-Team Leader Supervisor, Display Board. Direct access to public and QAC staff. Open view of Kennels.
- Physical connection between AQS Front Office staff and Dispensary technicians.
  - Frequent daily record sharing.
  - No cross traffic circulation with public.
  - No cross traffic within the general workspace.
- Common centralized Records/Archives accessible to AQS Front Office, OPS, and Dispensary.
- Centrally located: Staff Toilets, Copy/Supply Room, Meeting Room, and Breakroom.
- Breakroom accessible to QAC from QAC breezeway.
  - An outdoor covered break area off-of the main breakroom.

#### **D. Vet/Dispensary**

- Technicians have direct access to AQS Front Office and the centralized Records/Archives.
- Technicians have visual connection to Exam Room and ICU Holding Room.
- Technicians have access to public service windows and service counter.
- Vet/Dispensary Suite: 2-Vet Offices; 1-Exam Room; 2-Kennels ICU Holding Room.
- Exam Room with refrigerator/freezer for meds, microwave, sink and drain.
- ICU Holding Room with floor drain, separate ICU supply storage and sanitizing storage.
- Supply Storage Room: separate medical supplies from cleaning supplies.
- Pets/QACs entry/exit door to and from Kennels.
- Minimum 6-foot wide aisles to accommodate carts.
- Proximity to Animal Intake Drop-Off area.
- Proximity to Dogs and Cats Indoor Kennels.



#### **E. Animal Intake Drop-Off & Animal Release**

- Intake Drop-Off
  - Loading/Unloading Dock.
  - Secured parking and yard.
  - Proximity to Vets/Dispensary.
  - Accessible to QACs/Pets circulation breezeway.
  
- Pet Release Vestibule
  - Pet Release Vestibule: indoor room or a covered enclosed area that can accommodate carts bringing pet belongings and cages.
  - Accessible from Kennel complex.
  - Proximity to Vets/Dispensary.
  - Accessible to visitor parking stall and loading area.

#### **F. Indoor Kennels**

- Entry/Exit doors for visitor owners.
- Entry/Exit door for Vets accessible from Dispensary.
- QAC Entry/Exit door from QAC service area.
- Dogs Suite: 6-Kennels: 5'-0" X 15'-0".
  - Grooming and Bathing area with floor drain and hot water.
  - Support Supplies area: separate medical from cleaning storage; sink and floor drain.
  - Slope floor for drainage.
- Cats Suite: 4-Kennels: 4'-0" X 10'-0".
  - Grooming and Bathing area with floor drain and hot water.
  - Support Supply area: separate medical from cleaning storage; sink and floor drain.
  - Slope floor for drainage.
- Paved outdoor service area adjacent to the Indoor Kennels.

#### **G. QAC Support Services**

- Dedicated service drive from the AID/DOH Access Road.
- Separation of services from the staff and public areas.
- Secure service yard with loading and unloading area.
- Showers/Locker rooms accessible to QAC and separated from Office areas.
- QAC Support Services:
  - Accessible Carts Storage room.
  - Food Supplies/Freezer rooms direct access from loading dock.
  - Other: Fuel Storage, Mechanical and Electrical areas, Landscape Equipment Storage, QAC Supply Storage, Utility Room, and Janitor Room.
- QAC Loading/Unloading area accessible to Kennel complex.

See Figure 7.4 AQS Floor Plan.

# CONSOLIDATED AID SITE PLAN

## DESIGN PARAMETERS

- VEHICULAR ACCESS TO AQS FROM THE EXISTING HALAWA VALLEY ROAD ENTRY
- PEDESTRIAN ACCESS FROM PUBLIC PARKING LOT IN CLOSE PROXIMITY TO AQS
- VISITOR PARKING AT PUBLIC PARKING LOT
- VET/DISPENSARY PROXIMITY TO AID
- CONSOLIDATION OF QAC SUPPORT FACILITIES WITH SEPARATE SERVICE DRIVE
- EMPLOYEE PARKING IN CLOSE PROXIMITY TO AQS (14 STALLS: 10-STND, 2-VANS & 2-ADA)
- PSD SHERIFF UNIT IN CLOSE PROXIMITY TO AQS WITH SEPARATE INGRESS / EGRESS
- MAINTENANCE BLDG. AND CARETAKER IN CLOSE PROXIMITY TO AQS
- SECURED PERIMETER
- VEHICULAR ACCESS TO AQS TENANTS FROM THE EXISTING HALAWA VALLEY ROAD ENTRY
- NEW INDEPENDENT ONE WAY DRIVE-THROUGH FOR TRAILERS TO LARGE ANIMAL HOLDING FROM HALAWA VALLEY RD. SECURED AND GATED LOADING & UNLOADING ZONE.
- ANIMAL HOUSING:  
DOGS: 8-CLUSTERS (72-KENNELS)  
CATS: 3-CLUSTERS (36-KENNELS)

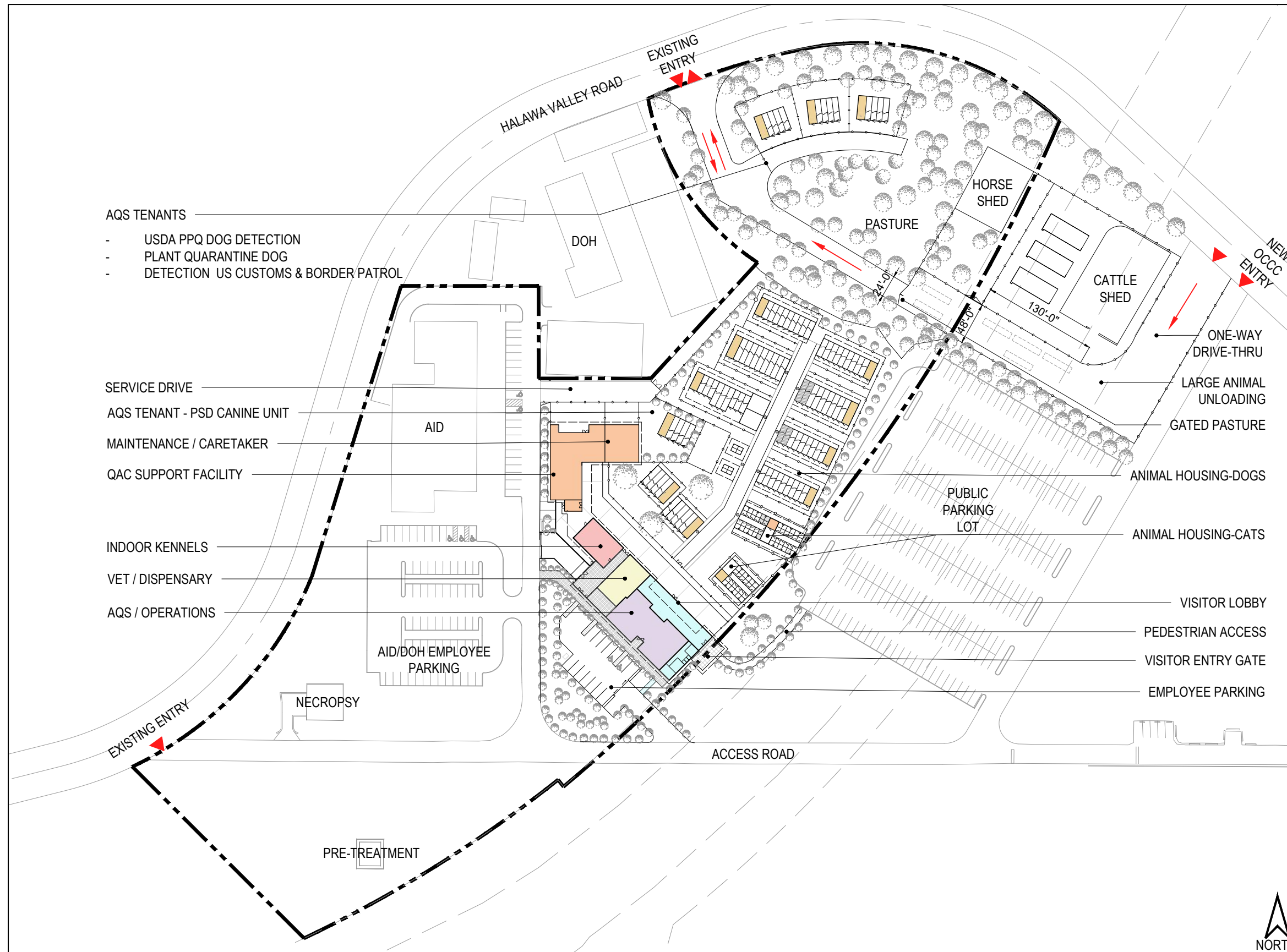





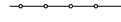



FIGURE 7.2

## LEGEND

-  AQS OFFICE
-  VET/DISPENSARY
-  QAC SUPP FAC
-  INDOOR KENNELS
-  PUBLIC
-  FENCE
-  PROPERTY LINE

# ANIMAL QUARANTINE STATION CONCEPTUAL SITE PLAN

## DESIGN CONSIDERATION

- PEDESTRIAN ADA RAMP FROM PUBLIC PARKING; SECURE VISITOR ENTRY TO AQS
- AQS EMPLOYEE PARKING (10-STND, 2-VANS & 2-ADA)
- SEPARATE ENTRIES FOR STAFF & QAC PERSONNEL
- SECURE QAC / PET BREEZEWAY
- SECURE VAN PARKING AND PET DROP-OFF
- SEPARATE PET RELEASE VESTIBULE & VISITOR PARKING
- SEPARATION OF PUBLIC AREAS FROM STAFF AREAS
- CONSOLIDATION OF QAC CENTRAL SUPPORT; MAINTENANCE BLDG. & CARETAKER, EACH WITH A SEPARATE SECURE PERIMETER
- PSD CANINE UNIT IN CLOSE PROXIMITY TO AQS; SEPARATE ACCESS AND SECURE PERIMETER
- PERIMETER ENCLOSURE AT EACH CLUSTER; QAC SUPPORT AT EACH CLUSTER
- DOGS: 8-CLUSTERS (72-KENNELS)
  - GEN. POPULATION: 4-MEDIUM (34 + 2-ADA KENNELS)
  - GEN. POPULATION: 2-LARGE (16 + 2-ADA KENNELS)
  - NEW ARRIVAL: 3-LARGE + 6 MEDIUM (9-KENNELS)
  - ISOLATION BEHAVIORAL: 1-LARGE (4-KENNELS)
  - ISOLATION CONTAGIOUS: 1-LARGE (5-KENNELS)
- CATS: 2-CLUSTERS (36-KENNELS)
  - GEN. POPULATION: 1-CLUSTER (21+ 3-ADA KENNELS)
  - ISOLATION CONTAGIOUS: 1-CLUSTER (12-KENNELS)

FIGURE 7.3



## LEGEND

- AQS OFFICE
- VET/DISPENSARY
- QAC SUPP FAC
- INDOOR KENNELS
- PUBLIC
- FENCE
- PROPERTY LINE

# ANIMAL QUARANTINE STATION CONCEPTUAL FLOOR PLAN

## DESIGN HIGHLIGHTS:

### PUBLIC/VISITOR:

- SECURE VISITOR ENTRY IN CLOSE PROXIMITY TO PUBLIC PARKING
- DIRECT VISITOR ACCESS TO SERVICE WINDOWS AT AQS, OPS & DISPENSARY
- SEPARATION OF PUBLIC AREAS FROM EMPLOYEE AREAS

### AQS:

- ENTRANCE NEAR EMPLOYEE PARKING
- SEPARATE ENTRANCE FOR AQS STAFF
- ADJACENCY OF AQS / OPERATIONS & VET/DISPENSARY
- CENTRAL RECORDS ACCESSIBLE TO AQS, OPS AND VETS/DISPENSARY
- CENTRAL SUPPORT AREAS: COPY ROOM, COMM ROOM., STAFF TOILETS, MEETING ROOM
- CENTRAL INDOOR & COVERED LANAI BREAKROOM, ACCESSIBLE TO ALL EMPLOYEES

### VET/DISPENSARY:

- ICU HOLDING OFF OF EXAM ROOM
- ENTRY/EXIT DOORS TO QAC/PET CIRCULATION BREEZEWAY
- VETS NEAR INDOOR KENNELS

### INTAKE DROP-OFF & PET RELEASE:

- PROXIMITY TO VET/DISPENSARY
- INTAKE OFF-OF QAC/PET CIRCULATION BREEZEWAY
- SEPARATE PET RELEASE VESTIBULE / VISITOR PARKING STALL

### INDOOR KENNELS:

- SEPARATE CAT SUITE & DOG SUITE WITH SEPARATE ENTRY/EXIT DOORS
- ACCESSIBLE TO VET/DISPENSARY AND QACs

### QAC SUPPORT

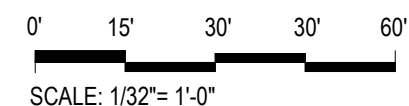
- SEPARATION OF SERVICE DRIVE FROM AQS ADMINISTRATION
- CONSOLIDATION OF QAC SUPPORT WITH MAINT. & CARETAKER



FIGURE 7.4

## LEGEND

- AQS OFFICE
- VET/DISPENSARY
- QAC SUPP FAC
- INDOOR KENNELS
- PUBLIC
- FENCE
- PROPERTY LINE



**7.5 FINAL AREA TABULATIONS**

A comparative Area Tabulation summary of all the functional and operational components of the AID consolidated facilities are provided in the Tables below. The grayed columns on the left side are the areas “Programmed” in Section 4.0. The columns on the right side directly correspond to the conceptual plan layouts and the area allocations “Provided” in Figures 7.2, 7.3 and 7.4. The site plans combined with the area calculations provide the base for the design phase.

7.5 TABLE-1 CONSOLIDATED AID SITE FINAL AREA TABULATIONS								
DISCRPTION	PROGRAMMED			PROVIDED				
	Total Interior (SF)	Total Outdoor Covered (SF)	Total Paved (SF)	Quantity Provided	Area Provided (SF)	Total Interior (SF)	Total Outdoor Covered (SF)	Total Paved (SF)
<b>1 PUBLIC LOBBY VISITOR SERVICES</b>								
Public Lobby (Open Air/Covered)	–	800	–	1	–	–	1,400	–
Public Toilets Men: 3-Fixures,1/ADA	200	–	–	1	150	140	–	–
Public Toilets Women: 3-Fixures,1/ADA	200	–	–	1	185	185	–	–
Vending Machines: 3	75	–	–	3	–	100	–	–
Sheriff Office	150	–	–	1	150	150	–	–
<b>Subtotal (NSF):</b>	<b>625</b>	<b>800</b>	<b>0</b>			<b>575</b>	<b>1,400</b>	<b>0</b>
<b>Total (GSF) 20%</b>	<b>750</b>	<b>800</b>	<b>0</b>			<b>760</b>	<b>1,400</b>	<b>0</b>
<b>2 AQS OFFICES</b>								
<b>General Office Areas</b>								
Staff Entry Vestibule	100	–	–	1	100	100	–	–
Public Service Windows (3-W; Stnd & ADA) & Workcounter	50	–	–	1	50	50	–	–
Transaction Counter (3-Windows and 1-ADA Work Counter)	80	–	–	1	80	80	–	–
AQS Admin Office (Combined Offices & Workstations)	0	–	–	0	0	0	–	–
Manager Office	150	–	–	1	150	150	–	–
Workstations (4)	320	–	–	4	80	320	–	–
Flex Desk	120	–	–	2	50	100	–	–
Clerical Supervisor Station	100	–	–	1	100	100	–	–
AQS Office Records (Central Consolidated)	150	–	–	1	465	465	–	–
Archives (Records/Docs Storage)	150	–	–	0	0	0	–	–
Copy Room & Supplies Storage/Safe Closet	100	–	–	1	145	145	–	–
IT Room	80	–	–	1	85	85	–	–
Staff Toilet Room Men: 1-Fix	60	–	–	1	70	70	–	–
Staff Toilet Room Women: 1-Fix	60	–	–	1	70	70	–	–
Employee Breakroom/Sink/Ref/MW/HW & Meeting	500	–	–	1	430	430	500	–
Janitors/Utility Sink/Supplies	80	–	–	1	30	30	–	–
<b>Subtotal :</b>	<b>2,100</b>	<b>0</b>	<b>0</b>			<b>2,195</b>	<b>500</b>	<b>0</b>
<b>Accounting &amp; Finance Operations</b>								
Financial Accountant	150	–	–	1	150	150	–	–
Records Storage (Community Desks; Types of storage TBD)	400	–	–	1	380	380	–	–
<b>Subtotal:</b>	<b>550</b>	<b>0</b>	<b>0</b>			<b>530</b>	<b>0</b>	<b>0</b>
<b>Operations (OPS)</b>								
Public Service Window (Stnd and ADA) & Workcounter	30	–	–	1	30	30	–	–
OPS Manager	150	–	–	1	150	150	–	–
QAC Team Leader	100	–	–	1	120	120	–	–
Kennel Operation Display Board Area	15	–	–	1	0	0	–	–
<b>Subtotal:</b>	<b>295</b>	<b>0</b>	<b>0</b>			<b>300</b>	<b>0</b>	<b>0</b>
<b>Employee Parking</b>								
Employee Parking	–	–	2,200	8	275	–	–	2,200
Accessible Parking (2-Standard)	–	–	750	2	375	–	–	750
Accessible Parking (2-Van)	–	–	750	2	375	–	–	750
Bicycle Parking	–	–	200	1	200	–	–	200
Temporary Loading (Mail Deliveries)	–	–	600	1	600	–	–	600
Provisions for Electric Charge Station	–	–	100	1	100	–	–	100
<b>Total (NSF):</b>	<b>2,945</b>	<b>0</b>	<b>0</b>			<b>3,025</b>	<b>0</b>	<b>0</b>
<b>Total (GSF) 30%</b>	<b>3,829</b>	<b>0</b>	<b>4,600</b>			<b>3,864</b>	<b>500</b>	<b>4,600</b>

7.3 TABLE-2 CONSOLIDATED AID SITE FINAL AREA TABULATIONS								
DISCRPTION	PROGRAMMED			PROVIDED				
	Total Interior (SF)	Total Outdoor Covered (SF)	Total Paving (SF)	Quantity Provided	Area Provided (SF)	Total Interior (SF)	Total Outdoor Covered (SF)	Total Paved (SF)
<b>3 VET/DISPENSARY</b>								
<b>Veterinary &amp; Dispensary</b>								
Public Service Window (Std and ADA) & Workcounter	30	-	-	1	30	30	-	-
Workstations (4)	320	-	-	4	80	320	-	-
Veterinary Offices	300	-	-	2	150	300	-	-
Exam Rm: 2-Exam Tables/Sink/Cab (1-small & 1-large)	300	-	-	1	300	300	-	-
ICU Holding Room (2-Kenels)	150	-	-	1	150	150	-	-
Dispensary Medication/Supplies & Sink	50	-	-	1	50	50	-	-
Dispensary Records	120	-	-	1	120	120	-	-
Cleaning Supply Storage	100	-	-	1	90	90	-	-
<b>Total (NSF)</b>	<b>1,370</b>	<b>0</b>	<b>0</b>			<b>1,360</b>	<b>0</b>	<b>0</b>
<b>Total (GSF) 30%</b>	<b>1,781</b>	<b>0</b>	<b>0</b>			<b>1,710</b>	<b>0</b>	<b>0</b>
<b>4 INDOOR ANIMAL KENNELS</b>								
<b>Dog Kennel Suite (Indoors):</b>								
Dog Kennels (One Size): 5' W x 16' L	480	-	-	6	80	480	-	-
Service Circulation (6' W Aisle per Kennel)	180	-	-	-	-	200	-	-
Common Food Supplies Storage	25	-	-	1	25	25	-	-
Cleaning Supplies/Storage/Utility Sink	25	-	-	1	25	25	-	-
Indoor Bathing Tub & Grooming	100	-	-	1	100	100	-	-
Common Equipment Storage	50	-	-	1	50	50	-	-
Water Heater	20	-	-	1	20	20	-	-
<b>Subtotal: Dog Suite</b>	<b>880</b>	<b>0</b>	<b>0</b>			<b>900</b>	<b>0</b>	<b>0</b>
<b>Cat Kennel Suite (Indoors):</b>								
Cat Kennels (One size): 4' W x 10' L	160	-	-	4	40	160	-	-
Service Circulation (6' W Aisle per Kennel)	96	-	-	-	-	120	-	-
Common Food Supplies Storage	25	-	-	1	25	25	-	-
Cleaning Supplies/Storage/Sink	25	-	-	1	25	25	-	-
Water Heater	50	-	-	1	50	50	-	-
<b>Subtotal: Cat Suite</b>	<b>356</b>	<b>0</b>	<b>0</b>			<b>380</b>	<b>0</b>	<b>0</b>
<b>Total (NSF)</b>	<b>1,236</b>	<b>0</b>	<b>0</b>			<b>1,280</b>	<b>0</b>	<b>0</b>
<b>Total (GSF) 30%</b>	<b>1,607</b>	<b>0</b>	<b>0</b>			<b>1,558</b>	<b>0</b>	<b>0</b>
<b>5 QAC ANIMAL SUPPORT/ANIMAL INTAKE &amp; RELEASE</b>								
Staff Shwrs/Toilets/Jan.clos. (Men)	350	-	-	1	350	350	-	-
Staff Shwrs/Toilets/Jan.clos. (Women)	400	-	-	1	400	400	-	-
Staff Lockers (M&W)	600	-	-	2	300	600	-	-
Dry Storage (Previously Food Prep Area & Stor.)	100	-	-	1	135	135	-	-
Walk-in Refrig./Freezer	300	-	-	2	165	330	-	-
QAC Storage (Temp. Stor. for Cages)	80	-	-	1	135	135	-	-
Laundry/Utility/Gas Water Heater	180	-	-	1	200	200	-	-
Janitor Closet/Cleaning Supplies	80	-	-	1	90	90	-	-
Carts Storage Room	850	-	-	1	775	775	-	-
Storage (was Equip. now Account'g Archives-Offsite TBD)	600	-	-	0	0	0	-	-
Grounds/Lansdcaping (On-Site)	600	-	-	1	300	300	-	-
Electrical Room	80	-	-	1	80	80	-	-
Mechanical Room	80	-	-	1	120	120	-	-
QAC Loading Dock (Roof)	-	350	-	1	550	-	550	-
Trash Enclosure (Exst Off-site)	-	-	100	1	100	-	-	100
Fuel Storage	-	-	160	2	100	-	-	200
Service Drive/Loading Dock/Unloading Area	-	250	500	1	1,290	-	290	1,000
<b>Subtotal:</b>	<b>4,300</b>	<b>600</b>	<b>760</b>			<b>3,515</b>	<b>840</b>	<b>1,300</b>
<b>Animal Drop-Off Unloading</b>								
Secured Van Parking	-	-	800	1	1,200	-	-	1200
Loading Dock for Handling Animals	-	-	180	1	200	-	-	200
<b>Pet Release (Locate Near Disp. &amp; QAC Facilities)</b>								
Vestibule	150	-	-	1	300	300	-	-
Pet Release Parking	-	-	375	1	375	-	-	375
<b>Subtotal:</b>	<b>150</b>	<b>0</b>	<b>1,355</b>			<b>300</b>	<b>840</b>	<b>1,775</b>
<b>Total (NSF)</b>	<b>4,450</b>	<b>0</b>	<b>0</b>			<b>3,815</b>	<b>-</b>	<b>-</b>
<b>Total (GSF) 20%</b>	<b>5,340</b>	<b>350</b>	<b>2,115</b>			<b>4,300</b>	<b>840</b>	<b>3,075</b>

7.3 TABLE-3 CONSOLIDATED AID SITE FINAL AREA TABULATIONS								
DISCRIPTION	PROGRAMMED			PROVIDED				
	Total Interior (SF)	Total Outdoor Covered (SF)	Total Paving (SF)	Quantity Provided	Area Provided (SF)	Total Interior (SF)	Total Outdoor Covered (SF)	Total Paved (SF)
<b>6 OUTDOOR ANIMAL HOUSING</b>								
<b>General Population Dog Kennels (6-Clusters of 9-K)</b>								
Dog Kennels: Large (14 plus 2-ADA)	-	2,496	-	16	156	-	2,496	-
Dog Kennels: Medium (32 plus 2-ADA)	-	4,080	-	34	120	-	4,080	-
Security Kennels: (2-Large)	-	312	-	2	156	-	312	-
Security Kennels: (2-Medium)	-	240	-	2	120	-	240	-
QAC Support Areas (6)	-	720	-	6	120	-	720	-
Clusters Service Surround (5-feet Paved)	-	-	3,600	6	600	-	-	3,600
<b>Subtotal: No. of Dogs</b>		<b>7,848</b>	<b>3,600</b>				<b>7,848</b>	<b>3,600</b>
<b>New Arrival Dog Kennels ( 1-Cluster of 9-K)</b>								
Dog Kennels: Large	-	468	-	3	156	-	468	-
Dog Kennels: Medium	-	720	-	6	120	-	720	-
QAC Support Area	-	120	-	1	120	-	120	-
Cluster Service Surround (5-feet Paved)	-	-	600	1	600	-	-	600
<b>Subtotal: No. of Dogs</b>		<b>1,308</b>	<b>600</b>				<b>1,308</b>	<b>600</b>
<b>New Isolation Dog Kennels (2-Clusters of 5-K &amp; 4-K)</b>								
<b>Contagious (1-Cluster of 5-Knls)</b>								
Dog Kennels: Large	-	780	-	5	156	-	780	-
QAC Support Area	-	120	-	1	120	-	120	-
Cluster Service Surround (Paved)	-	-	300	1	300	-	-	300
<b>Behavioral (1-Cluster of 4-Knls)</b>								
Dog Kennels: Large	-	624	-	4	156	-	624	-
QAC Support Area	-	120	-	1	120	-	120	-
Cluster Service Surround (5-feet Paved)	-	-	300	1	300	-	-	300
<b>Subtotal: No. of Dogs</b>		<b>1,644</b>	<b>600</b>				<b>1,644</b>	<b>600</b>
<b>QAC Support Hubs (2)</b>								
Common Food Supplies Storage (Teams)	-	50	-	2	25	-	50	-
Cleaning Supplies/Storage	-	100	-	2	50	-	100	-
Equip. Storage/Utility Sink/Trash	-	100	-	2	50	-	100	-
General Storage:crates, benches, bed boards	-	100	-	2	50	-	100	-
Work Counter/Communication System/Elec Outlets	-	50	-	2	25	-	50	-
Eyewashing Stations	-	36	-	6	6	-	36	-
<b>Subtotal: Dogs (72-Kennels)</b>		<b>436</b>	<b>0</b>				<b>436</b>	<b>0</b>
<b>Catteries</b>								
<b>General Population (2-Clusters of 12-K)</b>								
Cat Kennels	-	1,200	-	24	50	-	1,200	-
Cattery Vestibule	-	50	-	1	50	-	50	-
Double Loaded Corridor (6' x 60')	-	360	-	1	360	-	360	-
Grooming & Bathing	-	15	-	1	15	-	15	-
Common Food Supplies/Meds	-	25	-	1	25	-	25	-
Cleaning Supplies/Storage	-	25	-	1	25	-	25	-
Equipment Storage/Utility Sink	-	50	-	1	50	-	50	-
Trash Disposal Area	-	10	-	1	10	-	10	-
Work Counter/Communication System/Elec Outlets	-	25	-	1	25	-	25	-
Cluster Service Surround (5-feet Paved)	-	-	600	2	300	-	-	600
<b>Isolation (1-Cluster of 12-Knls)</b>								
Cat Kennels	-	600	-	12	50	-	600	-
Cattery Vestibule	-	50	-	1	50	-	50	-
Double Loaded Corridor (6' x 30')	-	180	-	1	180	-	180	-
Grooming & Bathing	-	30	-	2	15	-	30	-
Cleaning Supplies/Storage	-	25	-	1	25	-	25	-
Equipment Storage/Utility Sink	-	50	-	1	50	-	50	-
Trash Disposal Area	-	10	-	1	10	-	10	-
Work Counter/Communication System/Elec Outlets	-	25	-	1	25	-	25	-
Cluster Service Surround (5-feet Paved)	-	-	300	1	300	-	-	300
<b>Subtotal: Cats (36-Kennels)</b>		<b>2,730</b>	<b>900</b>				<b>2,730</b>	<b>900</b>
<b>7 GROOMING &amp; BATHING</b>								
Grooming & Bathing /Elevated Platform	-	400	-	4	100	-	400	-
Hot Water/Elec Outlets/Lighting	-	40	-	2	20	-	40	-
Structure	-	800	-	2	400	-	800	-
<b>Subtotal :</b>		<b>1,240</b>	<b>0</b>				<b>1,240</b>	<b>0</b>
<b>8 DOG PARK (EXERCISE)</b>								
Fenced Exercise Area (Paved)	-	-	1,600	1	1,600	-	-	1,600
<b>Subtotal:</b>			<b>1,600</b>					<b>1,600</b>
<b>Total (NSF)</b>		<b>15,206</b>	<b>0</b>				<b>15,206</b>	<b>0</b>
<b>Total (GSF) 10%</b>		<b>16,727</b>	<b>7,300</b>				<b>16,727</b>	<b>7,300</b>

7.3 TABLE-4 CONSOLIDATED AID SITE FINAL AREA TABULATIONS								
DISCRIPTION	PROGRAMMED			PROVIDED				
	Total Interior (SF)	Total Outdoor (SF)	Total Paving (SF)	Quantity Required	Area Required (SF)	Total Interior (SF)	Total Outdoor Covered (SF)	Total Paved (SF)
<b>9 LARGE ANIMAL HOLDING</b>								
Receiving Handling Area	-	-	3,000	1	3,000	-	-	3,000
Holding Sheds:	-	-	-	-	-	-	-	-
Horses: Stables @ 400 EA	-	2,400	-	6	400	-	2,400	-
Cattle: Holding	-	6,400	-	1	6,400	-	6,400	-
Sorting	-	3,000	-	3	1,000	-	3,000	-
Storage Shed	-	300	-	1	300	-	300	-
Carcass/Composting	-	-	3,000	1	3,000	-	-	3,000
<b>Total (NSF)</b>		<b>12,100</b>	<b>6,000</b>				<b>12,100</b>	<b>6,000</b>
<b>10 MAINTENANCE BUILDING/CARETAKER</b>								
Vehicle Garage	-	800	-	2	400	800	-	-
Shop area	500	-	-	1	500	500	-	-
Warehouse	150	-	-	1	150	150	-	-
Storage	200	-	-	1	200	200	-	-
Service Yard	-	-	700	1	700	-	-	700
<b>Subtotal (NSF)</b>	<b>850</b>	<b>800</b>	<b>700</b>			<b>1650</b>	<b>0</b>	<b>700</b>
<b>Caretaker (Second Flr)</b>								
3-Bedroom House	1,650	-	-	1	1,650	1,650	-	-
Carport	-	-	200	1	200	-	200	-
<b>Subtotal (NSF)</b>	<b>1,650</b>	<b>-</b>	<b>200</b>			<b>1,650</b>	<b>-</b>	<b>-</b>
<b>Total (GSF) 10%</b>	<b>2,750</b>	<b>800</b>	<b>900</b>			<b>3,630</b>	<b>-</b>	<b>700</b>
<b>11 Other Tenants</b>								
<b>USDA PPQ Dog Detection</b>								
Dog Kennels	-	600	-	5	120	-	600	-
Service Yard	-	-	2,400	-	-	-	-	2,400
<b>US Customs &amp; Border Patrol Dog Detection</b>								
Dog Kennels	-	600	-	5	120	-	600	-
Service Yard	-	-	2,400	-	-	-	-	2,400
<b>Plant Quarantine Dog Detection</b>								
Dog Kennels	-	720	-	6	120	-	720	-
Service Yard	-	-	2,400	-	-	-	-	2,400
<b>Sheriffs Canine Unit</b>								
Dog Kennels	-	600	-	5	120	-	600	-
Office space	-	150	-	1	150	-	150	-
Exercise Area	-	-	800	1	800	-	-	800
Service Yard	-	-	2,000	1	2000	-	-	2,000
<b>Total (SF)</b>		<b>2,670</b>	<b>10,000</b>				<b>2,670</b>	<b>10,000</b>



## 8.0 | SUSTAINABILITY AND WELLNESS

### 8.0 SUSTAINABILITY AND WELLNESS MANDATE

Leadership in Energy and Environmental Design (LEED) supports Hawaii's strategies to mitigate climate change and contribute to the state's green building commitment. LEED Silver certification for new government building construction is mandated by the State of Hawaii. It is also the HDOA/AID plan to provide a healthier environment for animals, staff, visitors, and the community at large.

During the next phases of design and construction, the animal quarantine project team shall employ and incorporate sustainable and wellness design strategies to use less energy and water and reduce the operation and maintenance of AID facilities. Sustainability strategies should be brought up and incorporated early in the design phase. A few design strategies are listed for future consideration:

#### **Environmentally Responsible Design.**

- Massing, siting, and orientation of structures to maximize natural ventilation and minimize energy consumption. Strategies such as: daylighting, natural ventilation, and use of renewable resources.
- Enhance daylight access in offices and work areas. Provide window fenestrations that provide ample natural lighting exposure and views into outdoors to maintain wellbeing, as well as reducing demand for electricity.
- Maximize air ventilation at outdoor kennel structures and roofs.
  - Northeastly orientation of kennel structures to maximize air movement.
  - Design south face roofs for day-time shading of animal runs, and north face roofs for nighttime coolness.
- Integrate daylighting into the design of the Indoor Kennels.
- Ergonomic design of work areas that can reduce physical strain and injury as well as improve comfort, safety, and wellbeing.
- Sustainable material selection with low maintenance, high durability, moisture-proof, and seamless requirements.
- Design large south facing canopies that can incorporate photovoltaic solar system.
- Source locally available materials such as concrete, as well as materials that contain recycled content.

#### **Design Measures to Reduce Heat Island Effects.**

- Select light-colored and reflective surface materials for roofing.
- Select light color concrete for hardscape surrounding clusters to reduce heat effect.
- Provide visual interest, shading, and enhance environmental comfort by selectively retaining existing trees that are not high maintenance.
  - Integrate low maintenance native plant species with low water needs.
  - Introduce planter boxes along service paths for ease of maintenance.

### **Reduction of Energy Consumption and Energy Efficiency Measures.**

- Solar efficient glazing at fenestrations.
- Controllability of lighting and thermal comfort. Lighting control throughout the facility driveways, kennels, exterior buildings, and entrances.
- Energy efficient LED fixtures with dimming option, occupancy light sensors, and timers.
- Integrate photovoltaic solar cell systems to substantially reduce energy needs.
- Electric carts.
- Energy Star appliances selected for efficiency.

### **Enhance Indoor & Outdoor Air Quality.**

- Considerations of system to be zoned between vet clinic and staff, animal to staff, and animal to animal for proper ventilation and for breeding/spreading of viruses and other infectious air-borne contaminants.
- Implement advanced air filtration and ventilation strategies that can enhance air quality for animals and staff such as increased outdoor air supply, demand-control ventilation, and advanced air distribution.
- Select low-VOC materials and finishes such as paints, adhesives, sealants.
- Incorporate humidity and moisture control strategies.

### **Design Considerations for Indoor and Outdoor Water Use Reduction, and Wastewater Treatment.**

- Integrate equipment selection for water reduction, i.e., cage-washers, automated bottle fillers and cleaners.
- Low-flow and touch-less plumbing fixtures.

### **Lifestyle and Wellness.**

- Electric vehicle parking and charging station to encourage fuel efficient to zero emission vehicles.
- Bicycle storage racks and changing/shower facilities to promote alternative commuting opportunities.
- Provide high-quality level drinking water.
- Incorporate social distancing into the design of open office areas and workstations.
- Waste sorting stations for recycling.
- Incorporate visual and physical ergonomic design at workplace.

## 9.0

## COST ESTIMATE

Cost estimator, J Uno & Associates, was retained for this effort. The estimated cost is \$26.4M (rounded) for the AQS campus and \$5.9M (rounded) for the large animal renovation.

Estimation was based on cost per square foot for construction in FY23 as a single phase project. This project assumes a design-bid-build strategy vice design-build to be overseen by DAGS.

The breakdown is as follows:



■ CONSTRUCTION COST CONSULTANT



## Cost Estimate for:

<b>PROJECT NAME:</b>	<b>DEPARTMENT OF AGRICULTURE HALAWA ANIMAL INDUSTRY CONSOLIDATION OF FACILITIES</b>
<b>DAGS PROJ. NO:</b>	
<b>LOCATION:</b>	<b>HALAWA, OAHU, HAWAII</b>
<b>DATE:</b>	<b>12/15/2020</b>
<b>JUA NO.:</b>	<b>19-376</b>
<b>PREPARED FOR:</b>	<b>FUNG ASSOCIATES, INC.</b>
<b>SUBMITTAL:</b>	<b>FINAL 100%</b>

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P R O J E C T   N O T E S

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PROJECT:	<b>HALAWA ANIMAL INDUSTRY</b>	ESTIMATE NO.:	19-376
LOCATION:	HALAWA, OAHU, HAWAII	PROJECT NO.:	DATE: 12/15/2020
ARCHITECT:	FUNG ASSOCIATES, INC.	SUBMITTAL: FINAL 100%	CHECKED BY: V. HIRAOKA
QTY BY:	J. UNO	PRICES BY: J. UNO	DATE CHECKED:

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**PROJECT NOTES & BASIS OF COST ESTIMATE**

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**COST VAILIDITY**                      Costs will remain valid for 120 days from the date of this estimate.

**BASIS OF ESTIMATE**

Project Type:                      Program Development Report (PDR)  
Estimate Type:                     Square Foot  
Estimate Purpose:                Construction Budget Determination  
Estimate Level:                    0% Submittal

**DRAWINGS AND DOCUMENTS**

Name of Drawings:                DAGS: Animal Quarantine Station Relocation  
Level of Drawings:                Conceptual  
Provided By:                        Fung Associates, Inc.  
Date Provided:                     8/6/2020  
Updated Information:              11/10/2020

**PROJECT SCOPE:**

Facility Type:                      Animal Quarantine

Conceptual Cost Estimate includes the following Building Systems:

- Structural:                        1) Substructure  
    2) Superstructure
- Architectural:                    1) Exterior Closure  
    2) Interior Construction  
    3) Interior Finishes
- Plumbing:                        1) Plumbing Rough-in, Fixtures, and Trim
- HVAC:                                1) Air Conditioning & Ventilation where applicable
- Fire Protection                 1) Fire Sprinkler System
- Electrical:                        1) Electrical Distribution System  
    2) Power & Lighting
- Telecom:                            1) Communications, Alarms, Data & Security Infrastructure

**COST BASIS**

Materials:                         Based on Generic DAGS Quality Materials and Construction Types  
Material Costs:                    Based on historical local data & vendor quotes.  
Labor Costs:                        Prevailing wage union rates & fringe benefits.  
Labor Productivity:                Based on historical local data & vendor quotes.  
Equipment Costs:                 Based on historical local data & vendor quotes.  
Ajdusted Square Feet:            (ASF) Based on 100% of Enclosed, Covered Space + 50% of Unenclosed, Covered Space.

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P R O J E C T   N O T E S

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PROJECT:	<b>HALAWA ANIMAL INDUSTRY</b>	ESTIMATE NO.:	19-376
LOCATION:	HALAWA, OAHU, HAWAII	PROJECT NO.:	DATE: 12/15/2020
ARCHITECT:	FUNG ASSOCIATES, INC.	SUBMITTAL: FINAL 100%	CHECKED BY: V. HIRAOKA
QTY BY:	J. UNO	PRICES BY: J. UNO	DATE CHECKED:

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**PROJECT NOTES & BASIS OF COST ESTIMATE**

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**MARKUPS**

Design Contingency: Allocated to cover cost increases due to incomplete design and detail changes.  
Prime Contractor: Prime contractor markups include field overhead, home office expenses, profit, bonds and insurance.  
Sub Contractor(s): Sub contractor markups include field overhead, home office expenses and profit.  
Bonds & Insurances: The estimate includes Bonds & Insurances.  
Taxes: The estimate includes Hawaii General Excise Tax (GET) on the overall contract amount.

**CONTRACT & BIDDING ASSUMPTIONS**

Contract: Design-Bid-Build  
Bidding Situation: Non-Restrictive, Competitive bids from a minimum of (5) Qualified Prime Contract Bidders. If number of bidders amount to less than the noted amount, cost increases may occur.  
Escalation: Assumes Midpoint of Construction to be 2023

**ESTIMATE ASSUMPTIONS**

Geotechnical: Assume existing soil retains adequate load bearing properties for the proposed foundations.  
Access Restrictions: Assume no access restrictions to contractor throughout duration of work.  
Phasing: Assume no phasing of project scope through construction.  
Workhours: Assume normal daytime workhours with no planned overtime.

**EXCLUDED COSTS**

1. Hazardous Materials Remediation.
2. Furniture, Fixtures & Equipment (FF&E).
3. Escalation.
4. Relocation Costs
5. Owner's Construction Contingency (Change Orders From Unforeseen Conditions)
6. Owner's Scope Contingency (Change Orders From Owner's Scope Changes)
7. Soft Costs, Art in Architecture, Fees, Permits, etc.

**GENERAL NOTE**

This estimate is an opinion of probable construction cost created by J. Uno & Associates, Inc. It is based on delivered information, documentation and prices assumed to be true, accurate and valid at the time of estimation. J. Uno & Associates uses proprietary procedures and formulae in producing this estimate, and it represents our experience and qualifications as construction cost professionals generally familiar with the industry in respective areas. This estimate makes no guarantee as to final quantities, specifications and prices of materials and procedures. Actual project costs are determined by variable market factors outside the scope of this estimate. J. Uno & Associates, Inc. shall not be held liable for design changes made after this estimate has been submitted, nor for errors and omissions not exposed during a normal design review process. The recipient of this estimate is urged to review it carefully and address any discrepancies. This estimate shall not be altered without prior consent from J. Uno & Associates.

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P R O J E C T C O S T S U M M A R Y



PROJECT:	HALAWA ANIMAL INDUSTRY	ESTIMATE NO.:	19-376
LOCATION:	HALAWA, OAHU, HAWAII	PROJECT NO.:	DATE: 12/15/2020
ARCHITECT:	FUNG ASSOCIATES, INC.	SUBMITTAL: FINAL 100%	CHECKED BY: V. HIRAOKA
QTY BY:	J. UNO	PRICES BY: J. UNO	DATE CHECKED: 12/15/2020

DESCRIPTION	QTY	UNIT	T O T A L	
			UNIT COST	TOTAL

**PROJECT SUMMARY - AID CONSOLIDATED FACILITIES**

SITE DEVELOPMENT	3.0	AC	\$1,691,000	\$5,073,000
AQS ADMINISTRATION OFFICES	4,624	ASF	\$894.03	\$4,134,000
QAC SUPPORT FACILITIES/INTAKE & RELEASE	4,300	ASF	\$836.51	\$3,597,000
VETERINARY/DISPENSARY	1,710	ASF	\$867.84	\$1,484,000
INDOOR KENNELS	1,558	ASF	\$794.61	\$1,238,000
OUTDOOR KENNELS	16,727	ASF	\$446.34	\$7,466,000
MAINTENANCE	2,435	ASF	\$340.45	\$829,000
CARETAKER'S RESIDENCE	1,650	ASF	\$698.18	\$1,152,000
AQS TENANTS	12,670	ASF	\$108.68	\$1,377,000
<b>TOTAL ESTIMATED CONTRACT COST, ROUNDED,</b>	<b>45,674</b>	<b>ASF</b>	<b>\$576.91</b>	<b>\$26,350,000</b>

**PROJECT SUMMARY - LARGE ANIMAL HOLDING & HANDLING**

SITE DEVELOPMENT	3.3	AC	\$637,575.76	\$2,104,000
LARGE ANIMAL HANDLING	18,100	ASF	\$209.45	\$3,791,000
<b>TOTAL ESTIMATED CONTRACT COST, ROUNDED,</b>	<b>18,100</b>	<b>ASF</b>	<b>\$325.69</b>	<b>\$5,895,000</b>

P R O J E C T C O S T S U M M A R Y



PROJECT:	HALAWA ANIMAL INDUSTRY	ESTIMATE NO.:	19-376
LOCATION:	HALAWA, OAHU, HAWAII	PROJECT NO.:	DATE: 12/15/2020
ARCHITECT:	FUNG ASSOCIATES, INC.	SUBMITTAL: FINAL 100%	CHECKED BY: V. HIRAOKA
QTY BY:	J. UNO	PRICES BY: J. UNO	DATE CHECKED: 12/15/2020

DESCRIPTION	QTY	UNIT	T O T A L	
			UNIT COST	TOTAL

**SITE DEVELOPMENT - AQS**

SITE PREPARATION

Site Clearing	3.0	ac	\$12,000.00	\$36,000
Site Earthwork	11,759	cy	\$8.00	\$94,074

SITE UTILITIES

Water Distribution	1,175	lf	\$210.00	\$246,750
Sanitary Sewer	1,180	lf	\$195.00	\$230,100
Storm Drainage	1,282	lf	\$295.00	\$378,190
Electrical Primary Distribution	1	ls	\$800,000.00	\$800,000

SITE IMPROVEMENTS

Parking, Roads, & Sidewalks	19,936	sf	\$10.50	\$209,328
Animal Kennels Area Paving	32,338	sf	\$18.00	\$582,084
Landscape, Irrigation & Hardscape	40,781	sf	\$7.20	\$293,623

SUBTOTAL, DIRECT COST,				\$2,870,149
DESIGN CONTINGENCY,	15.00%			\$430,522
PRIME CONTRACTOR'S OVERHEAD,	20.00%			\$660,134
PRIME CONTRACTOR'S PROFIT,	10.00%			\$396,081
BONDS & INSURANCE,	2.00%			\$87,138
G.E. TAX,	4.71%			\$209,402
ESCALATION TO MIDPOINT OF CONSTRUCTION, 2023	9.00%			\$418,808

<b>TOTAL ESTIMATED CONTRACT COST,</b>				<b>\$5,072,235</b>
<b>ROUNDED,</b>	<b>3.0</b>	<b>AC</b>	<b>\$1,691,000.00</b>	<b>\$5,073,000</b>



P R O J E C T C O S T S U M M A R Y



PROJECT:	HALAWA ANIMAL INDUSTRY	ESTIMATE NO.:	19-376
LOCATION:	HALAWA, OAHU, HAWAII	PROJECT NO.:	DATE: 12/15/2020
ARCHITECT:	FUNG ASSOCIATES, INC.	SUBMITTAL: FINAL 100%	CHECKED BY: V. HIRAOKA
QTY BY:	J. UNO	PRICES BY: J. UNO	DATE CHECKED: 12/15/2020

DESCRIPTION	QTY	UNIT	T O T A L	
			UNIT COST	TOTAL

**ANIMAL QUARANTINE STATION - AQS ADMINISTRATION OFFICES**

<b>SUBSTRUCTURE</b>				
Footings & Foundations	4,624	gsf	\$36.00	\$166,464
Slabs on Grade	4,624	gsf	\$22.00	\$101,728
<b>STRUCTURE</b>				
Structural Frame	4,624	gsf	\$95.00	\$439,280
<b>EXTERIOR ENCLOSURE</b>				
Roofing	4,624	gsf	\$22.00	\$101,728
Exterior Walls	4,624	gsf	\$40.00	\$184,960
Exterior Doors, Windows, Fittings	4,624	gsf	\$25.00	\$115,600
<b>INTERIOR CONSTRUCTION</b>				
Interior Walls, Partitions, Doors, etc.	4,624	gsf	\$28.00	\$129,472
Millwork, Building Specialties, & Accessories	4,624	gsf	\$32.00	\$147,968
<b>INTERIOR FINISHES</b>				
Interior Floor, Wall, & Ceiling Finishes	4,624	gsf	\$24.00	\$110,976
<b>MECHANICAL</b>				
Plumbing	4,624	gsf	\$8.00	\$36,992
Air Conditioning & Ventilation	4,624	gsf	\$42.00	\$194,208
Fire Sprinkler & Protection	4,624	gsf	\$12.00	\$55,488
<b>ELECTRICAL</b>				
Building Service & Distribution	4,624	gsf	\$12.00	\$55,488
Power & Lighting	4,624	gsf	\$32.00	\$147,968
Telecom, Data & Alarms	4,624	gsf	\$8.00	\$36,992
<b>COVERED OUTDOOR AREA</b>				
Public Lobby	1,400	gsf	\$165.00	\$231,000
Breakroom	500	gsf	\$165.00	\$82,500
<b>SUBTOTAL, DIRECT COST,</b>				<b>\$2,338,812</b>
<b>DESIGN CONTINGENCY,</b>			15.00%	\$350,822
<b>PRIME CONTRACTOR'S OVERHEAD,</b>			20.00%	\$537,927
<b>PRIME CONTRACTOR'S PROFIT,</b>			10.00%	\$322,756
<b>BONDS &amp; INSURANCE,</b>			2.00%	\$71,006
<b>G.E. TAX,</b>			4.71%	\$170,637
<b>ESCALATION TO MIDPOINT OF CONSTRUCTION, 2023</b>			9.00%	\$341,276
<b>TOTAL ESTIMATED CONTRACT COST,</b>				<b>\$4,133,236</b>
<b>ROUNDED,</b>			4,624 <b>ASF</b>	<b>\$894.03    \$4,134,000</b>

P R O J E C T C O S T S U M M A R Y



PROJECT:	HALAWA ANIMAL INDUSTRY	ESTIMATE NO.:	19-376
LOCATION:	HALAWA, OAHU, HAWAII	PROJECT NO.:	DATE: 12/15/2020
ARCHITECT:	FUNG ASSOCIATES, INC.	SUBMITTAL: FINAL 100%	CHECKED BY: V. HIRAOKA
QTY BY:	J. UNO	PRICES BY: J. UNO	DATE CHECKED: 12/15/2020

DESCRIPTION	QTY	UNIT	T O T A L	
			UNIT COST	TOTAL

**ANIMAL QUARANTINE STATION - QAC SUPPORT FACILITY/INTAKE & RELEASE**

<b>SUBSTRUCTURE</b>				
Footings & Foundations	4,300	gsf	\$36.00	\$154,800
Slabs on Grade	4,300	gsf	\$22.00	\$94,600
<b>STRUCTURE</b>				
Structural Frame	4,300	gsf	\$95.00	\$408,500
<b>EXTERIOR ENCLOSURE</b>				
Roofing	4,300	gsf	\$22.00	\$94,600
Exterior Walls	4,300	gsf	\$40.00	\$172,000
Exterior Doors, Windows, Fittings	4,300	gsf	\$28.00	\$120,400
<b>INTERIOR CONSTRUCTION</b>				
Interior Walls, Partitions, Doors, etc.	4,300	gsf	\$28.00	\$120,400
Millwork, Building Specialties, & Accessories	4,300	gsf	\$32.00	\$137,600
<b>INTERIOR FINISHES</b>				
Interior Floor, Wall, & Ceiling Finishes	4,300	gsf	\$24.00	\$103,200
<b>MECHANICAL</b>				
Plumbing	4,300	gsf	\$8.00	\$34,400
Air Conditioning & Ventilation	4,300	gsf	\$42.00	\$180,600
Fire Sprinkler & Protection	4,300	gsf	\$12.00	\$51,600
<b>ELECTRICAL</b>				
Building Service & Distribution	4,300	gsf	\$12.00	\$51,600
Power & Lighting	4,300	gsf	\$32.00	\$137,600
Telecom, Data & Alarms	4,300	gsf	\$8.00	\$34,400
<b>COVERED OUTDOOR AREA</b>				
Animal Drop Off Unloading Dock	840	gsf	\$165.00	\$138,600
SUBTOTAL, DIRECT COST,				\$2,034,900
DESIGN CONTINGENCY, 15.00%				\$305,235
PRIME CONTRACTOR'S OVERHEAD, 20.00%				\$468,027
PRIME CONTRACTOR'S PROFIT, 10.00%				\$280,816
BONDS & INSURANCE, 2.00%				\$61,780
G.E. TAX, 4.71%				\$148,464
ESCALATION TO MIDPOINT OF CONSTRUCTION, 2023 9.00%				\$296,930
<b>TOTAL ESTIMATED CONTRACT COST,</b>				<b>\$3,596,151</b>
<b>ROUNDED,</b>				<b>\$3,597,000</b>

P R O J E C T C O S T S U M M A R Y



PROJECT:	HALAWA ANIMAL INDUSTRY	ESTIMATE NO.:	19-376
LOCATION:	HALAWA, OAHU, HAWAII	PROJECT NO.:	DATE: 12/15/2020
ARCHITECT:	FUNG ASSOCIATES, INC.	SUBMITTAL: FINAL 100%	CHECKED BY: V. HIRAOKA
QTY BY:	J. UNO	PRICES BY: J. UNO	DATE CHECKED: 12/15/2020

DESCRIPTION	QTY	UNIT	T O T A L	
			UNIT COST	TOTAL

**ANIMAL QUARANTINE STATION - VETERINARY/DISPENSARY**

<b>SUBSTRUCTURE</b>				
Footings & Foundations	1,710	gsf	\$36.00	\$61,560
Slabs on Grade	1,710	gsf	\$22.00	\$37,620
<b>STRUCTURE</b>				
Structural Frame	1,710	gsf	\$95.00	\$162,450
<b>EXTERIOR ENCLOSURE</b>				
Roofing	1,710	gsf	\$22.00	\$37,620
Exterior Walls	1,710	gsf	\$40.00	\$68,400
Exterior Doors, Windows, Fittings	1,710	gsf	\$25.00	\$42,750
<b>INTERIOR CONSTRUCTION</b>				
Interior Walls, Partitions, Doors, etc.	1,710	gsf	\$28.00	\$47,880
Millwork, Building Specialties, & Accessories	1,710	gsf	\$32.00	\$54,720
<b>INTERIOR FINISHES</b>				
Interior Floor, Wall, & Ceiling Finishes	1,710	gsf	\$24.00	\$41,040
<b>BUILDING SPECIALTIES</b>				
Exam Room w/Treatment Tables	195	gsf	\$320.00	\$62,400
ICU Enclosures	130	gsf	\$110.00	\$14,300
<b>MECHANICAL</b>				
Plumbing	1,710	gsf	\$8.00	\$13,680
Air Conditioning & Ventilation	1,710	gsf	\$48.00	\$82,080
Fire Sprinkler & Protection	1,710	gsf	\$12.00	\$20,520
<b>ELECTRICAL</b>				
Building Service & Distribution	1,710	gsf	\$12.00	\$20,520
Power & Lighting	1,710	gsf	\$34.00	\$58,140
Telecom, Data & Alarms	1,710	gsf	\$8.00	\$13,680
<b>SUBTOTAL, DIRECT COST,</b>				<b>\$839,360</b>
DESIGN CONTINGENCY,	15.00%			\$125,904
PRIME CONTRACTOR'S OVERHEAD,	20.00%			\$193,053
PRIME CONTRACTOR'S PROFIT,	10.00%			\$115,832
BONDS & INSURANCE,	2.00%			\$25,483
G.E. TAX,	4.71%			\$61,239
ESCALATION TO MIDPOINT OF CONSTRUCTION, 2023	9.00%			\$122,478
<b>TOTAL ESTIMATED CONTRACT COST,</b>				<b>\$1,483,348</b>
<b>ROUNDED,</b>	<b>1,710</b>	<b>ASF</b>	<b>\$867.84</b>	<b>\$1,484,000</b>

P R O J E C T C O S T S U M M A R Y



PROJECT:	HALAWA ANIMAL INDUSTRY	ESTIMATE NO.:	19-376
LOCATION:	HALAWA, OAHU, HAWAII	PROJECT NO.:	DATE: 12/15/2020
ARCHITECT:	FUNG ASSOCIATES, INC.	SUBMITTAL: FINAL 100%	CHECKED BY: V. HIRAOKA
QTY BY:	J. UNO	PRICES BY: J. UNO	DATE CHECKED: 12/15/2020

DESCRIPTION	QTY	UNIT	T O T A L	
			UNIT COST	TOTAL

**ANIMAL QUARANTINE STATION - AQS INDOOR KENNELS**

<b>SUBSTRUCTURE</b>				
Footings & Foundations	1,558	gsf	\$36.00	\$56,088
Slabs on Grade	1,558	gsf	\$22.00	\$34,276
<b>STRUCTURE</b>				
Structural Frame	1,558	gsf	\$95.00	\$148,010
<b>EXTERIOR ENCLOSURE</b>				
Roofing	1,558	gsf	\$22.00	\$34,276
Exterior Walls	1,558	gsf	\$40.00	\$62,320
Exterior Doors, Windows, Fittings	1,558	gsf	\$25.00	\$38,950
<b>INTERIOR CONSTRUCTION</b>				
Interior Walls, Partitions, Doors, etc.	1,558	gsf	\$28.00	\$43,624
Millwork, Building Specialties, & Accessories	1,558	gsf	\$32.00	\$49,856
<b>INTERIOR FINISHES</b>				
Interior Floor, Wall, & Ceiling Finishes	1,558	gsf	\$24.00	\$37,392
<b>BUILDING SPECIALTIES</b>				
Dog Kennels, 5' x 16'	6	ea	\$2,200.00	\$13,200
Cat Kennels, 4' x 10'	4	ea	\$1,100.00	\$4,400
<b>MECHANICAL</b>				
Plumbing	1,558	gsf	\$8.00	\$12,464
Air Conditioning & Ventilation	1,558	gsf	\$42.00	\$65,436
Fire Sprinkler & Protection	1,558	gsf	\$12.00	\$18,696
<b>ELECTRICAL</b>				
Building Service & Distribution	1,558	gsf	\$12.00	\$18,696
Power & Lighting	1,558	gsf	\$32.00	\$49,856
Telecom, Data & Alarms	1,558	gsf	\$8.00	\$12,464
SUBTOTAL, DIRECT COST,				\$700,004
DESIGN CONTINGENCY, 15.00%				\$105,001
PRIME CONTRACTOR'S OVERHEAD, 20.00%				\$161,001
PRIME CONTRACTOR'S PROFIT, 10.00%				\$96,601
BONDS & INSURANCE, 2.00%				\$21,252
G.E. TAX, 4.71%				\$51,071
ESCALATION TO MIDPOINT OF CONSTRUCTION, 2023 9.00%				\$102,144
<b>TOTAL ESTIMATED CONTRACT COST,</b>				<b>\$1,237,073</b>
<b>ROUNDED,</b>				<b>\$1,238,000</b>

P R O J E C T C O S T S U M M A R Y



PROJECT:	HALAWA ANIMAL INDUSTRY	ESTIMATE NO.:	19-376
LOCATION:	HALAWA, OAHU, HAWAII	PROJECT NO.:	DATE: 12/15/2020
ARCHITECT:	FUNG ASSOCIATES, INC.	SUBMITTAL: FINAL 100%	CHECKED BY: V. HIRAOKA
QTY BY:	J. UNO	PRICES BY: J. UNO	DATE CHECKED: 12/15/2020

DESCRIPTION	QTY	UNIT	T O T A L	
			UNIT COST	TOTAL
<b>ANIMAL QUARANTINE STATION - AQS OUTDOOR KENNELS</b>				
<b>SUBSTRUCTURE</b>				
Footings & Foundations	16,727	gsf	\$36.00	\$602,172
Slabs on Grade	16,727	gsf	\$22.00	\$367,994
<b>STRUCTURE</b>				
Structural Frame	16,727	gsf	\$95.00	\$1,589,065
<b>EXTERIOR ENCLOSURE</b>				
Roofing	16,727	gsf	\$22.00	\$367,994
Exterior Walls	16,727	gsf	\$5.00	\$83,635
Exterior Doors, Windows, Fittings	16,727	gsf	\$4.00	\$66,908
<b>INTERIOR CONSTRUCTION</b>				
Interior Walls, Partitions, Doors, etc.	16,727	gsf	\$2.50	\$41,818
Millwork, Building Specialties, & Accessories	16,727	gsf	\$3.00	\$50,181
<b>INTERIOR FINISHES</b>				
Interior Floor, Wall, & Ceiling Finishes	16,727	gsf	\$2.50	\$41,818
<b>BUILDING SPECIALTIES</b>				
Dog Kennels, 6' x 26', Large	51	ea	\$3,600.00	\$183,600
Dog Kennels, 6' x 20', Medium	21	ea	\$2,700.00	\$56,700
Cat Kennels, 5' x 10'	36	ea	\$1,250.00	\$45,000
<b>MECHANICAL</b>				
Plumbing	16,727	gsf	\$14.00	\$234,178
Air Conditioning & Ventilation	16,727	gsf	\$1.50	\$25,091
<b>ELECTRICAL</b>				
Building Service & Distribution	16,727	gsf	\$8.00	\$133,816
Power & Lighting	16,727	gsf	\$16.00	\$267,632
Telecom, Data & Alarms	16,727	gsf	\$4.00	\$66,908
SUBTOTAL, DIRECT COST,				\$4,224,509
DESIGN CONTINGENCY,	15.00%			\$633,676
PRIME CONTRACTOR'S OVERHEAD,	20.00%			\$971,637
PRIME CONTRACTOR'S PROFIT,	10.00%			\$582,982
BONDS & INSURANCE,	2.00%			\$128,256
G.E. TAX,	4.71%			\$308,215
ESCALATION TO MIDPOINT OF CONSTRUCTION, 2023	9.00%			\$616,435
<b>TOTAL ESTIMATED CONTRACT COST,</b>				<b>\$7,465,709</b>
<b>ROUNDED,</b>	<b>16,727</b>	<b>ASF</b>	<b>\$446.34</b>	<b>\$7,466,000</b>

P R O J E C T C O S T S U M M A R Y



PROJECT:	HALAWA ANIMAL INDUSTRY	ESTIMATE NO.:	19-376
LOCATION:	HALAWA, OAHU, HAWAII	PROJECT NO.:	DATE: 12/15/2020
ARCHITECT:	FUNG ASSOCIATES, INC.	SUBMITTAL: FINAL 100%	CHECKED BY: V. HIRAOKA
QTY BY:	J. UNO	PRICES BY: J. UNO	DATE CHECKED: 12/15/2020

DESCRIPTION	QTY	UNIT	T O T A L	
			UNIT COST	TOTAL

**SITE DEVELOPMENT - LARGE ANIMAL HOLDING & HANDLING**

SITE PREPARATION

Demolish Existing Large Animal Facilities	19,556	sf	\$12.00	\$234,672
Site Clearing	3.3	ac	\$12,000.00	\$39,600
Site Earthwork	13,949	cy	\$8.00	\$111,592

SITE UTILITIES

Water Distribution	295	lf	\$210.00	\$61,950
Sanitary Sewer	265	lf	\$195.00	\$51,675
Storm Drainage	855	lf	\$295.00	\$252,225
Electrical Primary Distribution	1	ls	\$100,000.00	\$100,000

SITE IMPROVEMENTS

Pasture	1.7	ac	\$26,000.00	\$43,606
Large Animal Area Ground Cover	73,056	sf	\$2.00	\$146,112
Landscape & Hardscape	59,493	sf	\$2.50	\$148,733

SUBTOTAL, DIRECT COST,				\$1,190,164
DESIGN CONTINGENCY,	15.00%			\$178,525
PRIME CONTRACTOR'S OVERHEAD,	20.00%			\$273,738
PRIME CONTRACTOR'S PROFIT,	10.00%			\$164,243
BONDS & INSURANCE,	2.00%			\$36,133
G.E. TAX,	4.71%			\$86,833
ESCALATION TO MIDPOINT OF CONSTRUCTION, 2023	9.00%			\$173,667

<b>TOTAL ESTIMATED CONTRACT COST,</b>				<b>\$2,103,302</b>
<b>ROUNDED,</b>	<b>3.3</b>	<b>AC</b>	<b>\$637,575.76</b>	<b>\$2,104,000</b>

P R O J E C T C O S T S U M M A R Y



PROJECT:	HALAWA ANIMAL INDUSTRY	ESTIMATE NO.:	19-376
LOCATION:	HALAWA, OAHU, HAWAII	PROJECT NO.:	DATE: 12/15/2020
ARCHITECT:	FUNG ASSOCIATES, INC.	SUBMITTAL: FINAL 100%	CHECKED BY: V. HIRAOKA
QTY BY:	J. UNO	PRICES BY: J. UNO	DATE CHECKED: 12/15/2020

DESCRIPTION	QTY	UNIT	T O T A L	
			UNIT COST	TOTAL

**ANIMAL QUARANTINE STATION - MAINTENANCE**

<b>MAINTENANCE</b>				
Vehicle Garage	800	gsf	\$165.00	\$132,000
Shop Area	550	gsf	\$360.00	\$198,000
Warehouse	165	gsf	\$320.00	\$52,800
Storage	220	gsf	\$320.00	\$70,400
Service Yard	700	gsf	\$22.00	\$15,400
SUBTOTAL, DIRECT COST,				\$468,600
DESIGN CONTINGENCY,	15.00%			\$70,290
PRIME CONTRACTOR'S OVERHEAD,	20.00%			\$107,778
PRIME CONTRACTOR'S PROFIT,	10.00%			\$64,667
BONDS & INSURANCE,	2.00%			\$14,227
G.E. TAX,	4.71%			\$34,188
ESCALATION TO MIDPOINT OF CONSTRUCTION, 2023	9.00%			\$68,377
<b>TOTAL ESTIMATED CONTRACT COST,</b>				<b>\$828,127</b>
<b>ROUNDED,</b>	<b>2,435</b>	<b>ASF</b>	<b>\$340.45</b>	<b>\$829,000</b>

**ANIMAL QUARANTINE STATION - CARETAKER'S RESIDENCE**

<b>CARETAKER'S HOUSE</b>				
3 Bedroom Residence	1,650	gsf	\$375.00	\$618,750
Carport	200	gsf	\$165.00	\$33,000
SUBTOTAL, DIRECT COST,				\$651,750
DESIGN CONTINGENCY,	15.00%			\$97,763
PRIME C	20.00%			\$149,903
PRIME CONTRACTOR'S PROFIT,	10.00%			\$89,942
BONDS & INSURANCE,	2.00%			\$19,787
G.E. TAX,	4.71%			\$47,551
ESCALATION TO MIDPOINT OF CONSTRUCTION, 2023	9.00%			\$95,103
<b>TOTAL ESTIMATED CONTRACT COST,</b>				<b>\$1,151,797</b>
<b>ROUNDED,</b>	<b>1,650</b>	<b>ASF</b>	<b>\$698.18</b>	<b>\$1,152,000</b>

P R O J E C T C O S T S U M M A R Y



PROJECT:	HALAWA ANIMAL INDUSTRY	ESTIMATE NO.:	19-376
LOCATION:	HALAWA, OAHU, HAWAII	PROJECT NO.:	DATE: 12/15/2020
ARCHITECT:	FUNG ASSOCIATES, INC.	SUBMITTAL: FINAL 100%	CHECKED BY: V. HIRAOKA
QTY BY:	J. UNO	PRICES BY: J. UNO	DATE CHECKED: 12/15/2020

DESCRIPTION	QTY	UNIT	T O T A L	
			UNIT COST	TOTAL

**ANIMAL QUARANTINE STATION - LARGE ANIMAL HOLDING**

COVERED OUTDOOR AREA

Receiving Handling Area (Paved)	3,000	gsf	\$22.00	\$66,000
Horse Stables	2,400	gsf	\$165.00	\$396,000
Cattle Holding	6,400	gsf	\$165.00	\$1,056,000
Cattle Sorting	3,000	gsf	\$165.00	\$495,000
Storage Shed	300	gsf	\$220.00	\$66,000
Carcass/Composting	3,000	gsf	\$22.00	\$66,000
SUBTOTAL, DIRECT COST,				\$2,145,000
DESIGN CONTINGENCY,	15.00%			\$321,750
PRIME CONTRACTOR'S OVERHEAD,	20.00%			\$493,350
PRIME CONTRACTOR'S PROFIT,	10.00%			\$296,010
BONDS & INSURANCE,	2.00%			\$65,122
G.E. TAX,	4.71%			\$156,496
ESCALATION TO MIDPOINT OF CONSTRUCTION, 2023	9.00%			\$312,996
<b>TOTAL ESTIMATED CONTRACT COST,</b>				<b>\$3,790,724</b>
<b>ROUNDED,</b>	<b>18,100</b>	<b>ASF</b>	<b>\$209.45</b>	<b>\$3,791,000</b>

**ANIMAL QUARANTINE STATION - OTHER TENANTS**

USDA PPQ Dog Detection				
Covered Area	600	gsf	\$165.00	\$99,000
Dog Kennels	5	ea	\$3,600.00	\$18,000
Service Yard	2,400	gsf	\$22.00	\$52,800
US Customs & Border Control Dog Detection				
Covered Area	600	gsf	\$165.00	\$99,000
Dog Kennels	5	ea	\$3,600.00	\$18,000
Service Yard	2,400	gsf	\$22.00	\$52,800
Plant Quarantine Dog Detection				
Covered Area	720	gsf	\$165.00	\$118,800
Dog Kennels	6	ea	\$3,600.00	\$21,600
Service Yard	2,400	gsf	\$22.00	\$52,800
Sherrif's Canine Unit				
Covered Area	600	gsf	\$165.00	\$99,000
Dog Kennels	5	ea	\$3,600.00	\$18,000
Office Space	150	gsf	\$450.00	\$67,500
Exercise Area	800	gsf	\$22.00	\$17,600
Service Yard	2,000	gsf	\$22.00	\$44,000
SUBTOTAL, DIRECT COST,				\$778,900
DESIGN CONTINGENCY,	15.00%			\$116,835
PRIME CONTRACTOR'S OVERHEAD,	20.00%			\$179,147
PRIME CONTRACTOR'S PROFIT,	10.00%			\$107,488
BONDS & INSURANCE,	2.00%			\$23,647
G.E. TAX,	4.71%			\$56,828
ESCALATION TO MIDPOINT OF CONSTRUCTION, 2023	9.00%			\$113,656
<b>TOTAL ESTIMATED CONTRACT COST,</b>				<b>\$1,376,501</b>
<b>ROUNDED,</b>	<b>12,670</b>	<b>ASF</b>	<b>\$108.68</b>	<b>\$1,377,000</b>