

**Attachment C**  
**Management Plan**

# MANAGEMENT PLAN

## ETS Round Top Radio Facility Tower Replacement and Consolidation

DAGS Job No. 12-10-0942

TMKs: (1) 2-5-019: 003 (por.) and 011

Makiki/Lower Punchbowl/Tantalus, Honolulu District, Kona Moku,  
Island of O'ahu



**April 2025**



**Applicant:**

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## **INTRODUCTION**

This Management Plan is prepared for the State Department of Accounting and General Services (DAGS), Office of Enterprise Technology Services' (ETS) Round Top Radio Facility Tower Replacement and Consolidation project. The project is located within the State Land Use Conservation District, Resource subzone, and has been identified under Hawai'i Administrative Rules (HAR) §13-5-22 as land use "*P-14 Telecommunications (D-1) New telecommunications facility. A management plan approved simultaneously with the permit, is also required*". A Conservation District Use Application (CDUA) is being submitted with this project, and as a requirement for proposed land uses identified as P-14 Telecommunications (D-1), this Management Plan has been prepared and attached to the CDUA. This Management Plan was prepared pursuant to the requirements set forth in Hawaii Administrative Rules Chapter 13-5, Exhibit 3.

### **1.0 GENERAL DESCRIPTION OF THE PROPOSED USE**

The ETS, which is attached to DAGS, is proposing upgrades to the ETS Radio Facility (ERF) at the Round Top Communication Station Site in Honolulu on the island of O'ahu. A project location map is shown in Figure 1. Upgrades include the replacement of the City and County of Honolulu (City) and State of Hawai'i (State) radio towers with a new 180-foot tower, consolidating State and City equipment to a single tower, constructing a retaining wall and fencing around the new tower, and rerouting an existing water line. The proposed project would occur on portions of Tax Map Keys (TMK): (1) 2-5-019:003 (por.) and 011 (the "Project Site").

The existing use of the Project Site is for the ERF and a parking lot for Pu'u 'Ualaka'a State Wayside Park ("Pu'u 'Ualaka'a Park"). A public restroom is located next to the ERF site. The ERF houses two 100-foot radio antenna towers which operate under the Hawai'i Wireless Interoperability Network (HIWIN) System. The proposed project will alter existing structures at the site but will not change the current use of the site for radio facility and telecommunication purposes.

### **2.0 PROJECT LOCATION**

The Project Site encompasses approximately 0.60 acres across portions of two TMK parcels. The first TMK parcel (1) 2-5-019:011 is a total of 3,920 square feet (SF) (or .09 acres) and control of the site has been granted to the City and County of Honolulu by the State of Hawai'i through Governor's Executive Order No. 1215. The second TMK parcel (1) 2-5-018:003 is 120 acres and is owned by the State of Hawai'i. Governor's Executive Order No. 4350 set aside 792 SF of parcel 003 for telecommunication purposes to DAGS for the construction of the State tower. In 2011, the State of Hawai'i, Board of Land and Natural Resources (BLNR) approved DAGS' request to withdraw .047 acres of land from Governor's Executive Order No. 4314 (approved for the set aside of land from parcel 003 for State Park purposes for the DLNR Division of State Parks) for the expansion of the State's microwave tower site. The expansion included the addition of a power room, generator room, and fuel tank to provide redundancy and support of the State tower's operations. Figure 2 shows the site map of the existing facilities.

The Project Site is situated on top of Pu‘u ‘Ualaka‘a Park within the Round Top Forest Reserve. Beyond the boundaries of the reserve are undeveloped forested State lands. The Project Site is in the Kona moku (district) on the Island of O‘ahu, and borders the ahupua‘a of Honolulu and Waikīkī. There are no residences within approximately 1,400 feet of the Project Site. The nearest residences are located downhill of the Project Site along Round Top Drive. Access to the Project Site is via Round Top Drive and Nutridge Street.

The Project Site is surrounded by the Round Top Forest Reserve with forested land along the east, south, and west perimeters of the Project Site. Beyond the northern boundaries of Pu‘u ‘Ualaka‘a Park are undeveloped forested State-owned lands. Pu‘u ‘Ualaka‘a Lookout is located approximately 800 feet southwest of the Project Site. This lookout provides views of leeward O‘ahu and downtown Honolulu.

There are two public trails nearby that utilize the parking lot located beside the Project Site. The closest and shortest trail is the Round Top Forest Reserve Park Trail, which starts from the end of the parking lot and runs about one mile southwest to Tantalus Lookout. The other trail, Ualaka‘a Trail, runs from Nutridge Street north into the Round Top Forest Reserve where it connects to the Nā Ala Hele Trail; it is located approximately one and a half miles from the Project Site. There are two structures providing shelter for picnic tables near the Project Site which are accessible from the parking lot.

## **3.0 NATURAL RESOURCE ASSESSMENT**

### **3.1 Biological Resources**

SWCA Environmental Consultants (SWCA) conducted a biological survey for the Project Site. The report is based on field surveys conducted during July 2021 and a review of relevant documents and databases. In addition, a Tree Assessment was conducted by an arborist to assess the trees designated for removal. Based on the findings from the biological survey and tree assessment, no State or federally listed threatened, endangered, or candidate plant or animal species were observed on the Project Site. A more detailed summary of the findings from the biological survey can be found in the Final Environmental Assessment, Finding of No Significant Impact (FEA-FONSI) attached to the CDUA.

All the flora identified on-site were nonnative species, including the 27 trees that will be removed which consist of Silk Oak, Christmas Berry, Ironwood, Fiddlewood, and Cook Pine seedlings. Any new landscaping necessary for the Project would consist of grass and other appropriate plants, which will be incorporated into the site development plans to reduce potential erosion.

The SWCA report identified the House finch (*Herpestes javanicus*) as the only observed bird listed by the Migratory Bird Treaty Act (MBTA). The MBTA prohibits the unregulated “taking” of covered species, which is defined as “hunting, pursuing, killing, possessing or transporting any migratory bird, nest, egg or part thereof.” The proposed project would not result in a “taking” of the House finch species.

While the Hawaiian hoary bat was not observed at or near the Project Site, the trees and vegetation may be suitable habitats for the bats. To mitigate possible effects to the Hawaiian

hoary bat, no trees taller than 15 feet will be trimmed or removed during the roosting season from June 1 through September 15.

### **3.2 Archaeological Resources**

An archaeological literature review and field inspection (LRFI) was conducted by Nohopapa Hawai'i, LLC ("Nohopapa") in September 2021 in support of the ETS Round Top Radio Facility Tower Replacement and Consolidation Draft Environmental Assessment (EA). During the literature review, previous archaeological reports and surveys were reviewed to identify any potential historic resources within the Project Site and the surrounding area. The following is a summary of the main findings of the LRFI. A more detailed summary of the findings from the LRFI are included in the FEA-FONSI.

An Archaeological Inventory Survey of Pu'u 'Ualaka'a Park was conducted in 1994 that included the Project Site. During this survey, a rock shelter State Inventory of Historic Places (SIHP) #50-80-14-4668 and a series of terraces (SIHP #50-80-14-4866) were documented near a stream and within Makiki Valley. No historic properties were found at the Project Site. It is assumed that the agricultural production and recreational use of the Project Site may have destroyed any archaeological site that may have formerly existed on the slopes or summit of the project area.

In 2010, Cultural Surveys Hawai'i completed an LRFI for the installation of the Round Top Radio Facility Building Addition, in which no historic properties were found.

No historic properties were found near the Project Site during the pedestrian survey conducted by Nohopapa. Based on prior research, as well as the pedestrian survey, the Project Site has already been impacted by grading and leveling as well as non-native vegetation consistent with the earlier development of the Round Top Radio Facility and Pu'u 'Ualaka'a Park. The LRFI suggests that the probability of encountering historic properties is highly unlikely based on the location and the highly developed environment of the Project Site.

### **3.3 Cultural Resources**

A Cultural Impact Assessment (CIA) was prepared by Nohopapa, for the FEA-FONSI. The CIA project spanned from June 2021 through October 2021 and was conducted following the State Environmental Council *Guidelines for Assessing Cultural Impacts*. The following is a summary of the main findings of the CIA.

The Project Site is located approximately 2.4 miles mauka (inland) of the southern border of the ahupua'a of Makiki and sits within the Kona moku on the island of O'ahu. Makiki is a small land division with the upper limits never reaching the Ko'olau ridgeline and the lower limits never reaching the ocean. The boundary of the Makiki Ahupua'a is defined by a line of three cinder cones: Pu'u 'Ohi'a (Tantalus); Pu'u Kākea (Sugarloaf); and Pu'u 'Ualaka'a (Round Top).

Nohopapa conducted community outreach as a part of the CIA. Two individuals and seven organizations were contacted to participate in the CIA. Based on the community consultation, the ongoing cultural practices and resources associated with the project area vicinity include: water (specifically water reserves), sweet potato cultivation, stored cultural landscapes, the cinder of 'Ualaka'a, the viewsapes from 'Ualaka'a, the extensive network of Hawaiian trails

used for transport, and the cinder cone as a space for ceremonies, generational knowledge sharing, as well as picnics and weddings. In the interview with Coco Needham, she noted that the project area is also within proximity to Maunalaha Homesites, which she describes as one of the last intact Native Hawaiian communities within urban Honolulu. None of the aforementioned cultural practices and resources were found to occur in the direct area of the Project Site, but rather in the surrounding areas near the site.

Due to successive land modifications of the Project Area from the development of the Pu'u 'Ualaka'a Park and existing ERF, it is unlikely that evidence of traditional cultural practices would be present. However, access needed for areas nearby or outside of the Project where certain cultural practices occur will be considered during construction and operation. Access to the Pu'u 'Ualaka'a Park, nearby trails, or the lookout will not change during or following construction. The proposed project is not anticipated to impact any of the gathering practices or cultural practices that may be ongoing in the surrounding forest.

### **3.4 Geological Resources**

The Project Area sits just above Mānoa Valley to the west and is located near three vents: Sugar Loaf, Tantalus, and Round Top. The geology of the area consists of lava flows, tuff, cinder vent deposits, and breccia from the Tantalus Peak and Sugarloaf Vents. The Project Site itself is located within areas of alluvium deposits formed during the Pleistocene Epoch. Alluvial deposits are typically characterized by clay, silt, sand, or gravel that has been deposited by a water source.

The proposed project is not anticipated to impact the geology of the area. Drilled shafts that will be approximately 5 feet in diameter will be drilled approximately 60 feet deep to support the new 180-foot tower, while deeper than the existing footings, are not anticipated to result in substantive impacts on the existing geological conditions. The drilled shafts will be precisely controlled minimizing the risk of disturbing the surrounding geological formations. While the shafts will be drilled to a depth of about 60 feet, this depth is not anticipated to intersect with any critical geological features or aquifers. Prior to the drilling, thorough engineering assessments are being conducted to ensure that the proposed depth and diameter of the shafts will not adversely affect the geological stability of the area.

### **3.5 Coastal Resources**

The Project Site is situated approximately 2.6 miles inland from the nearest shoreline, and approximately 1,075 to 1,080 feet above sea level. As such, the project would not affect beach processes and is consistent with the protection of coastal resources.

### **3.6 Recreational Resources**

Pu'u 'Ualaka'a Park is popular for hiking, picnics, sightseeing, and biking. The park offers various facilities to support these activities, including paved access roads with landscaped grounds, two parking lots, a comfort station, a picnic shelter, a lookout pavilion, water tanks, and trailheads for an unnamed connecting trail and the 'Ualaka'a Trail.

The proposed project will not significantly increase activity at the Project Site or restrict access to nearby recreational facilities. Located at an elevation of approximately 1,075 to 1,080 feet above sea level, the project will not impact public access to or along shorelines with recreational value.

### **3.7 Scenic Resources**

While the proposed project would construct a new 180-foot tower that is taller than the two existing 100-foot towers, it will have a narrower overall profile, utilize colors that blend with the natural surroundings, and be located in place of the existing towers. The current location of the Project Site is uphill (mauka) of the Tantalus Lookout and does not interfere with any views to the shoreline thus avoiding impacts on any of the identified visual resources that the Pu'u 'Ualaka'a Park lookout is known for. The Project Site is not visible to residents along Round Top Drive, therefore, the increased height of the tower will not impact the nearest residents to the Project Site. Photographs of the existing towers and renders of the new 180-foot tower are provided in Figures 3 and 4.

## **4.0 NATURAL HAZARD ASSESSMENT**

### **4.1 Flood Hazard**

The Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) shows that the Project Site is designated Zone X, which is determined to be the lowest risk flood hazard area. No flood mitigation measures are needed; however, the proposed project will include best management practices (BMPs) during construction and design to minimize both short- and long-term effects of the project in terms of flooding and floodplain management.

In addition, the proposed project would not result in a significant amount of impervious surfaces to be added to the Project Site, and would not significantly increase runoff produced at the site or the vulnerability for flooding of the surrounding environment.

### **4.2 Tsunami Hazard**

The Project Site is located approximately 1.7 miles outside of the tsunami evacuation zone and 1.3 miles outside of the extreme tsunami zones. Additionally, the Project Area sits elevated about 1,000 feet above sea level. Due to the Project Site's elevation and distance from the tsunami evacuation zones, no impacts to or from tsunami hazards are anticipated.

### **4.3 Hurricane Hazard**

To minimize potential hurricane damage, facilities, structures, and other improvements, the proposed project would be constructed in accordance with hurricane proofing criteria. In cases of natural disasters and extreme weather events, the proposed project would improve the reliability of both the services and the structures of the Round Top Radio Facility, which emergency response, disaster management, and civil defense utilize for their communication needs during these events. Therefore, the proposed project is not anticipated to be of greater risk to tropical storm or hurricane damage than the Round Top Radio Facility is currently, and is

expected to provide a beneficial impact in the event of a hurricane by supporting emergency response.

#### **4.4 Earthquake Hazard**

Earthquake hazard to the Project Site is comparable to the rest of the southeastern portion of O‘ahu and is not anticipated to have a significant impact on the proposed project. The drilled shaft foundation of the new 180-foot tower would reduce the risk of adverse impacts to the ETS communications and HIWIN operations from earthquakes.

### **5.0 BEST MANAGEMENT PRACTICES USED DURING PROJECT CONSTRUCTION AND IMPLEMENTATION**

The following BMPs that will be utilized include, but are not limited to, the following:

#### **Surface water runoff and erosion control:**

- Installation of a perimeter construction fence
- Installation of silt fence or filter socks adjacent to and down slope from disturbed areas
- Installation of dust screens around disturbed areas
- Utilization of methods to ensure mud, dirt, or debris would be kept onsite and minimized on roadways
- Use of temporary sprinklers in non-active construction areas and stationing water trucks nearby during construction to provide sprinkling in active areas; and
- Installing stabilized construction entrances, tire wash areas, and concrete washout areas.

#### **Air quality and fugitive dust control:**

- Designing, developing, and implementing a dust control plan
- Applying water, dust suppressants, or suitable compounds on roads, material stockpiles, and on construction areas
- Establish and monitor speed limits for onsite vehicles
- Cover all moving, open-bodied trucks transporting soil or dusty material
- Install dust screens or wind barriers around the construction site
- Stabilize and cover stockpile materials
- Limiting areas to be disturbed at any given time
- Clean nearby pavements and paved roads affected by construction
- Providing a buffer zone between the construction site and residential areas
- Moving heavy construction equipment during periods of lower traffic volume
- Adjusting schedules of commuting construction workers to avoid peak hours in the project vicinity; and
- Implementing emission control methods on construction equipment.

#### **Invasive plant species management:**

- Washing and inspecting of construction equipment, vehicles, and materials imported from outside of the island of O‘ahu for excessive debris, plant materials, and invasive or

harmful nonnative species at a designated location before entering or exiting the Project Site

- When possible, purchase raw materials (e.g., gravel, rock, soil) from local suppliers on O‘ahu to avoid introducing nonnative species to the island; and
- The use of appropriate native Hawaiian plants or non-invasive plants to the maximum extent possible for landscaped areas.
- Inspect trees proposed for removal and tree trimmings for the coconut rhinoceros beetle before transporting off site.

To minimize the risk of starting a wildfire at the Project Site, the contractor and ETS staff will adhere to the following mitigation measures when engaging in activities that have a high risk of starting a fire:

1. Wet down the area before starting a task
2. Continuously wet down the area as needed
3. Have a fire extinguisher on hand; and,
4. If the contractor or staff’s vision is impaired (i.e. welding goggles), have a spotter to watch for fire ignitions.

Construction noise will be mitigated by scheduling start and curfew times per State Department of Health requirements and limited to within Pu‘u ‘Ualaka‘a Park hours. Construction equipment will utilize noise suppressant devices, such as mufflers, to minimize acoustic impacts on the surrounding environment.

To mitigate possible effects to the Hawaiian hoary bat, no trees taller than 15 feet will be trimmed or removed during the roosting season from June 1 through September 15.

Nighttime construction is not currently anticipated for the Proposed Action. Should nighttime work need to be conducted, it will be avoided during the seabird fledging season from September 15 through December 15 to mitigate any potential impacts to seabirds that may pass through the area at night. In addition, all lights used during nighttime construction would be fully shielded to minimize the attraction of seabirds.

## **6.0 BEST MANAGEMENT PRACTICES TO BE USED DURING THE LIFETIME OF THE PROJECT**

The BMPs listed in Section 5.0 will be implemented to minimize erosion and minimize the risk of starting a wildfire on the Project Site during and after construction. Following construction of the project, the site will be inspected on a quarterly and as-needed basis to ensure regular maintenance of the area.

## **7.0 CONSERVATION METHODS AND APPLICATIONS TO BE USED IN THE SHORT TERM AND LONG TERM**

The construction plans will include BMPs to minimize erosion on the Project Site during and after construction and will also include measures to contain runoff on-site during the construction period. The proposed project will not change the on-site drainage pattern or infrastructure and will not result in a significant amount of additional impervious surfaces.

Additionally, any necessary erosion and settlement control plans will be reviewed by the City and all necessary building, grading, stockpiling, and trenching permits will be acquired before beginning construction as described in the Revised Ordinances of Honolulu.

Any anticipated traffic disruptions or alterations during the construction phase will be coordinated with the Honolulu Police Department. Construction activities would take place during normal business hours on weekdays and would have little overlap with anticipated peak-hour traffic. After construction is complete, traffic along Round Top Drive will return to baseline levels. The proposed project would not result in any changes to the operations occurring at the Project Site, therefore an increase in traffic resulting from the proposed project is not anticipated.

As part of the project, there are 27 trees proposed to be removed to clear the site for the new 180-foot tower. The trees planned for removal consist of Silk Oak, Christmas Berry, Ironwood, Fiddlewood, and Cook Pine trees, all of which are nonnative species and are not State or federally listed as threatened or endangered. While these trees are not considered to be host plants for the coconut rhinoceros beetle, the trees proposed to be removed, and any tree trimmings will be inspected for any presence of the beetle prior to being transported off site to reduce the potential spread of the beetle. As previously noted, to mitigate any possible effects to the Hawaiian hoary bat, which may potentially traverse through the Project Site, no trees taller than 15-feet will be removed or trimmed during the roosting season from June 1 through September 15<sup>th</sup>. The removal of the trees is not anticipated to result in an adverse impact to the surrounding environment as the 27 trees would be considered nominal compared to the amount of trees found in the surrounding Round Top Forest Reserve, Pu'u 'Ualaka'a Park, and the Round Top ridge.

As previously noted in Section 3.2, the LRFI suggests that the probability of encountering historic properties is highly unlikely based on the location and the highly developed environment of the Project Site. In the event that archaeological properties, artifacts, or remains are encountered during construction activities, construction work shall cease immediately, the contractor shall immediately contact the State Historic Preservation Division (SHPD), and the agency will assess the significance of the find and recommend appropriate mitigation measures.

Access to the Pu'u 'Ualaka'a Park, nearby trails, or the lookout will not change during or following construction. The proposed project is not anticipated to impact any of the gathering practices or cultural practices that may be ongoing in the surrounding forest.

The proposed project will replace the two existing 100-foot towers with a single 180-foot tower. Section 3.11 of the FEA-FONSI provides a discussion of the visual resources in the project area and the potential impacts and mitigation measures for the proposed project. The Project Site is not visible to residents along Round Top Drive, therefore, the increased height of the tower will not impact the nearest residents to the Project Site. The Project Site is located mauka of the Pu'u 'Ualaka'a Park and lookout, therefore the proposed project is not anticipated to adversely impact any viewpoints or visual resources that the lookout is known for.

## 8.0 EXISTING USES AND FACILITIES

The Project Site's existing use includes the HIWIN facilities at Round Top, which consist of two 100-foot radio antenna towers that service Federal, State, and City and County of Honolulu agencies. The existing State radio antenna tower is located on TMK 2-5-019:003 (por.) and includes ancillary buildings to accommodate the tower's equipment, transmitter, generator and fuel tank. The City and County of Honolulu's facilities are located on the parcel adjacent to the State facilities on TMK 2-5-019:011 and include a radio antenna tower and control building.

## 9.0 PROPOSED FACILITIES AND USES

The proposed project will alter the existing structures at the site but will not change the current use of the site for radio facility and telecommunication purposes. The proposed project will include the following actions:

- Demolition of the two existing 100-foot radio towers. One tower is State-owned and operated, and the other tower is owned and operated by the City and County of Honolulu.
- Site clearing, removal of 27 trees, tree and vegetation trimming, and grading and grubbing. The removal of approximately 27 trees is proposed to accommodate the site of the new 180-foot radio tower. Tree and vegetation trimming will be performed only to the extent needed to meet necessary line of sight requirements. A new concrete foundation with an area of approximately 1,600 square feet (SF) will be constructed to accommodate the new tower. The concrete foundation will feature approximately 60-foot-deep drilled shafts to support the new radio tower.
- Construction of the new 180-foot radio tower. The base of the radio tower will have a width of 23-feet and length of 23-feet from leg to leg. The radio tower will accommodate over 40 appurtenances and equipment, which are being transferred over from the two existing 100-foot radio towers. The radio tower will be constructed of steel and the color of the tower will be similar to the existing towers and will blend in with the surrounding environment.
- A new cable bridge will be installed to house cable connections from the existing equipment building to the new radio tower.
- A new retaining wall with a 12- to 14-foot-high chain link fence will be installed around the new 180-foot tower. The chain link fence is proposed to deter trespassers from accessing the tower.
- An existing waterline that serves the comfort station will be rerouted to accommodate the site of the new tower. The existing waterline will be cut, plugged, and abandoned in place.

Figure 5 shows a site plan of the proposed improvements. The project will utilize a phased approach during construction. During the first phase, the site will be cleared for the new tower, and approximately 27 trees will be removed. Existing waterlines serving the comfort station will be rerouted to accommodate the site of the new tower. The new concrete foundation will be constructed and then the new 180-foot tower will be installed. All the State and City antenna equipment from the two existing 100-foot towers will be moved onto the new 180-foot tower.

Once all the equipment is transferred and operational, the two existing 100-foot towers will be demolished. Tree and vegetation trimming will be performed to ensure necessary line of sight for the new tower. The new retaining wall and 12- to 14-foot-high chain link fence will be installed around the new tower. New landscaping necessary for the project would consist of grass and other appropriate plants, which will be incorporated into the site development plans to reduce potential erosion.

## **10.0 ACTIVITY SCHEDULE**

Proposed commencement Date: December 2025 (pending permits/approvals)

Proposed Completion Date: July 2027

Construction is anticipated to begin after the permits are secured and would be completed in approximately twenty months.

Once the installation of the new 180-foot radio tower and proposed improvements are completed, the site will be inspected by ETS on a quarterly basis to ensure proper operation of the radio tower and equipment. Landscaping services (e.g., grass cutting) will be scheduled quarterly to maintain the site. Various other equipment (e.g., backup generator, air condition system, etc.) inspection and maintenance checks may occur monthly.

## **11.0 OTHER INFORMATION OR DATA, AS REQUIRED BY THE DEPARTMENT.**

For additional information on the proposed project, please see the FEA-FONSI and the CDUA.

Figure 1: Project Location Map

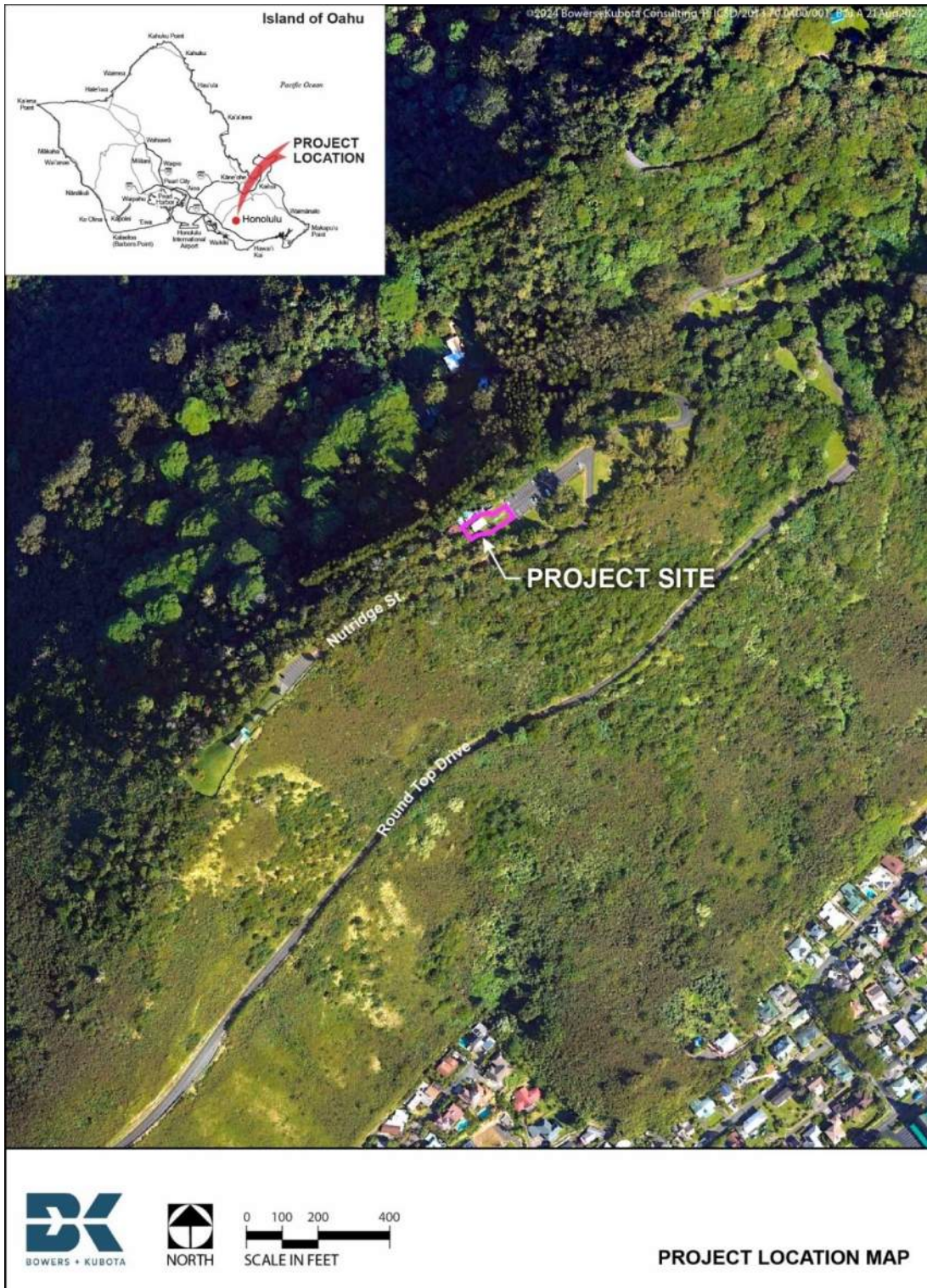


Figure 2: Project Site Map



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Figure 3: Photo of Existing Tower and Rendering of Proposed Tower, View Looking Makai from Parking Lot

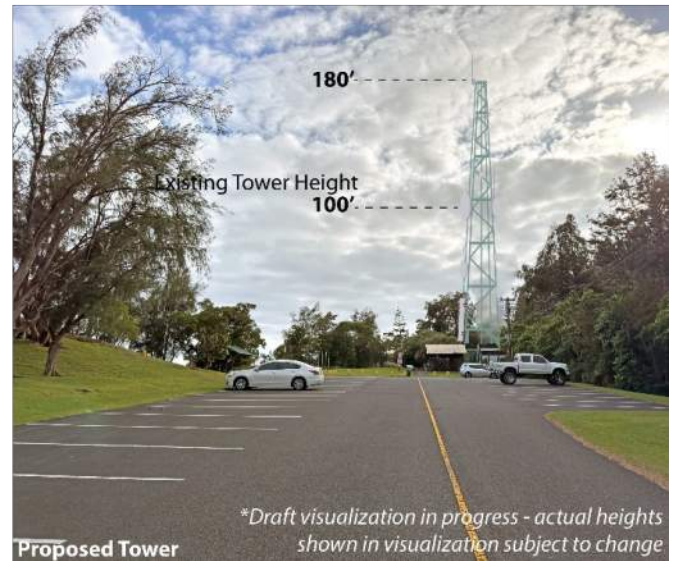


Figure 4: Photo of Existing Tower and Rendering of Proposed Tower, View Looking Mauka from Pu'u 'Ualaka'a Lookout

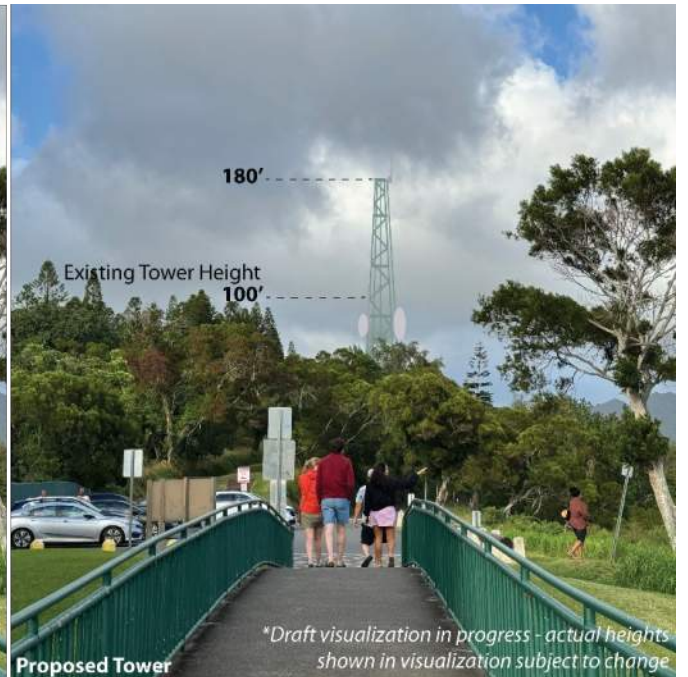


Figure 5: Proposed Site Plan

