



UNIVERSITY  
of HAWAII®  
**HILO**

Office of the Chancellor

September 16, 2015

Office of Mauna Kea Management  
Attn: Stephanie Nagata, Director  
640 N. A`ohōkū Place, Room 203  
Hilo, Hawai`i 96720

Re: Notice of Intent to Decommission  
University of Hawaii at Hilo Hoku Kea Telescope

Dear Ms. Nagata:

The University of Hawaii at Hilo (UH Hilo), on behalf of its Department of Physics and Astronomy, hereby submits this Notice of Intent to Decommission (NOI) its Hoku Kea telescope and observatory structure located in the Resource Subzone of the Conservation District at Mauna Kea, Hāmakua, Hawaii (Tax Map Key 4-4-15:09). This NOI is submitted in accordance with the Decommissioning Plan for the Mauna Kea Observatories (2010) (Decommissioning Plan), a sub-plan of the Mauna Kea Comprehensive Management Plan (2009) (CMP).

Intent to Remove. UH Hilo intends to deconstruct and remove the telescope and observatory structure and restore the site. The deconstruction, removal, and restoration activities will be conducted pursuant to a Site Deconstruction and Removal Plan and a Site Restoration Plan, both of which will be developed and implemented in accordance with the Decommissioning Plan. Use of the site for astronomy purposes will be permanently ended; no astronomy re-use is contemplated.

While the Hoku Kea telescope was intended to play a critical role in the educational mission of UH Hilo's Department of Physics and Astronomy, it has not achieved satisfactory operational performance, and UH Hilo has decided to cease efforts to bring it into full operation and will proceed to remove the facility. The educational needs that Hoku Kea was intended to meet will instead be met with observing time on other Maunakea telescopes and possible future installation of an educational telescope at an alternate site away from the Maunakea summit.

Site Description. The site is located on the southeastern side of the 528-acre Astronomy Precinct within the ~11,288-acre Mauna Kea Science Reserve (MKSR), located at the summit of Maunakea. Figure 1 shows the summit area and Hoku Kea site. MKSR lands are leased to the University of Hawai'i (UH)(GL S-4191), and approximately 40.5 acres are currently used for the 13 current observatories and associated infrastructure. Hoku Kea occupies approximately 0.25 acres.

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An Equal Opportunity/Affirmative Action Institution

The Hoku Kea telescope is a 36-inch telescope intended for educational purposes. It was purchased and installed with funding from the National Science Foundation to support the UH Hilo undergraduate astronomy program and affiliated school/community outreach programs. The telescope is located in an observatory structure that was originally constructed in 1968, and was later renovated for use with Hoku Kea. The renovation and telescope replacement were conducted in accordance with Conservation District Use Permit<sup>1</sup> (CDUP) HA-3406 approved by the Department of Land and Natural Resources (DLNR) on May 2, 2007. The observatory renovation was completed in 2008 and the Hoku Kea telescope was installed in 2010. Figures 2 and 3 show site plans and photographs of the Hoku Kea facility just prior to the renovation, which did not materially change the structure or appearance of the facility.

The observatory structure is a dome approximately 20 feet in diameter, located on a concrete slab, and is the smallest observatory in the Maunakea summit area. It originally housed a 24-inch telescope that was constructed with funding from the Air Force and then transferred to and operated by UH. The 24-inch telescope had become functionally obsolescent by 2007, and the facility was determined to be suitable for re-use for Hoku Kea.

The dome is located at the south end of the summit ridge that accommodates (from north to south) the Canada-France-Hawaii telescope, Gemini North, the UH 2.24-m telescope, and the UKIRT observatory. The site is approximately 450 feet south of UKIRT. The geographic location is north latitude  $19^{\circ} 49' 17.81''$ , west longitude  $155^{\circ} 28' 15.47''$ . The site is on a narrow ridge top with a slight slope to the SSW and is directly adjacent to the main paved road to the summit observatories.

The approximate dimensions of the 420 sf building site are shown in Figure 2. The ~10' by 10' delimited area shown at the south end of the building is a poured concrete slab, top about 3" above ground level. Utility lines (power, fiber optics data communication, telephone) run to the observatory building from the UH 2.24-m telescope building in buried conduit. To the best of UH Hilo's knowledge, these lines are the only underground infrastructure. There are no water, drainage, or sewage lines.

Because the observatory structure was originally constructed almost 50 years ago as one of the first astronomy sites on Maunakea, limited information is available regarding pre-construction conditions. The CDUP covering the original observatory, HA-5/26/77-954, was approved by the Board of Land and Natural

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<sup>1</sup> Figures 1-3 attached to this NOI are drawn from the Conservation District Use Application (CDUA) submitted by UH Hilo and accepted by DLNR-OCCL on May 12, 2007.

Resources on an after-the-fact basis on September 9, 1977. Figure 4 shows the Summit Site Plan submitted as part of the CDUA, which shows the contours at that time (note that the Hoku Kea observatory is labeled with its prior name, the "Air Force" 24-inch telescope). Figures 5 and 6 are photographs of the summit area taken during the 1965-1967 Site Survey, before any observatories were constructed, and show conditions on the ridge at that time.

Additional site description details are in the Final Environmental Assessment (2006) and CDUA (2007) for the renovation of Hoku Kea that was submitted to the Department of Land and Natural Resources. The best available description of pre-construction conditions is found in the original CDUA (1977).

Next Steps. In accordance with the Decommissioning Plan, UH Hilo will proceed to conduct an environmental due diligence review, commencing with a Phase I environmental site assessment. The Phase I and any required Phase II or Remedial Action Plan will be submitted to OMKM for review prior to being forwarded to OCCL as required by the Decommissioning Plan.

Following completion of the environmental due diligence, UH Hilo will proceed with preparation of the Site Deconstruction and Removal Plan and Site Restoration Plan. We will consult with you regarding preparation and execution of these plans, particularly as to any requirements for a CDUP and/or environmental assessment.

Thank you in advance for your assistance and cooperation in this matter. We look forward to working with you.

Very truly yours,



Matthew S. Platz  
Vice Chancellor for Academic Affairs

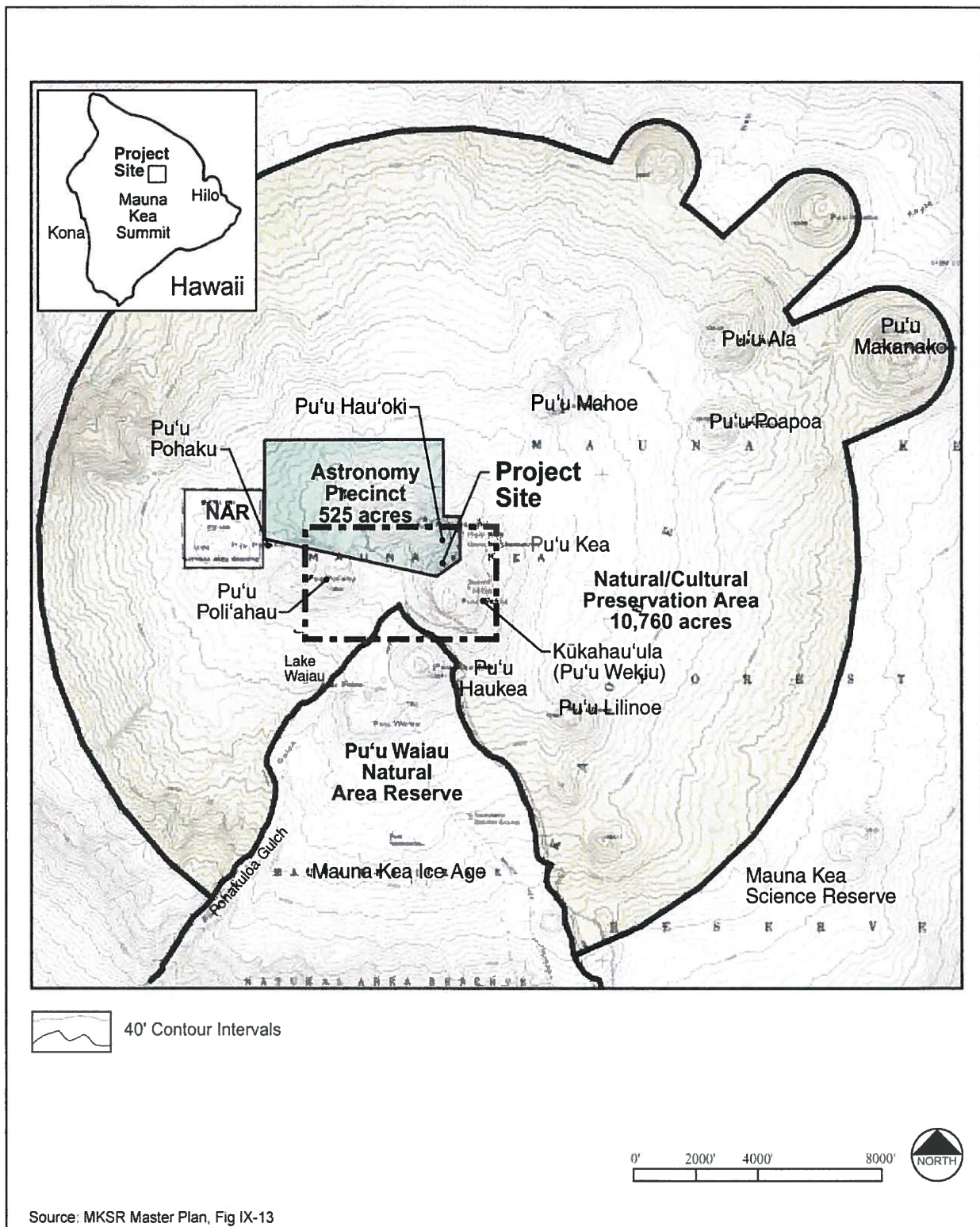


Figure 1: Maunakea Summit Area and Hoku Kea Site

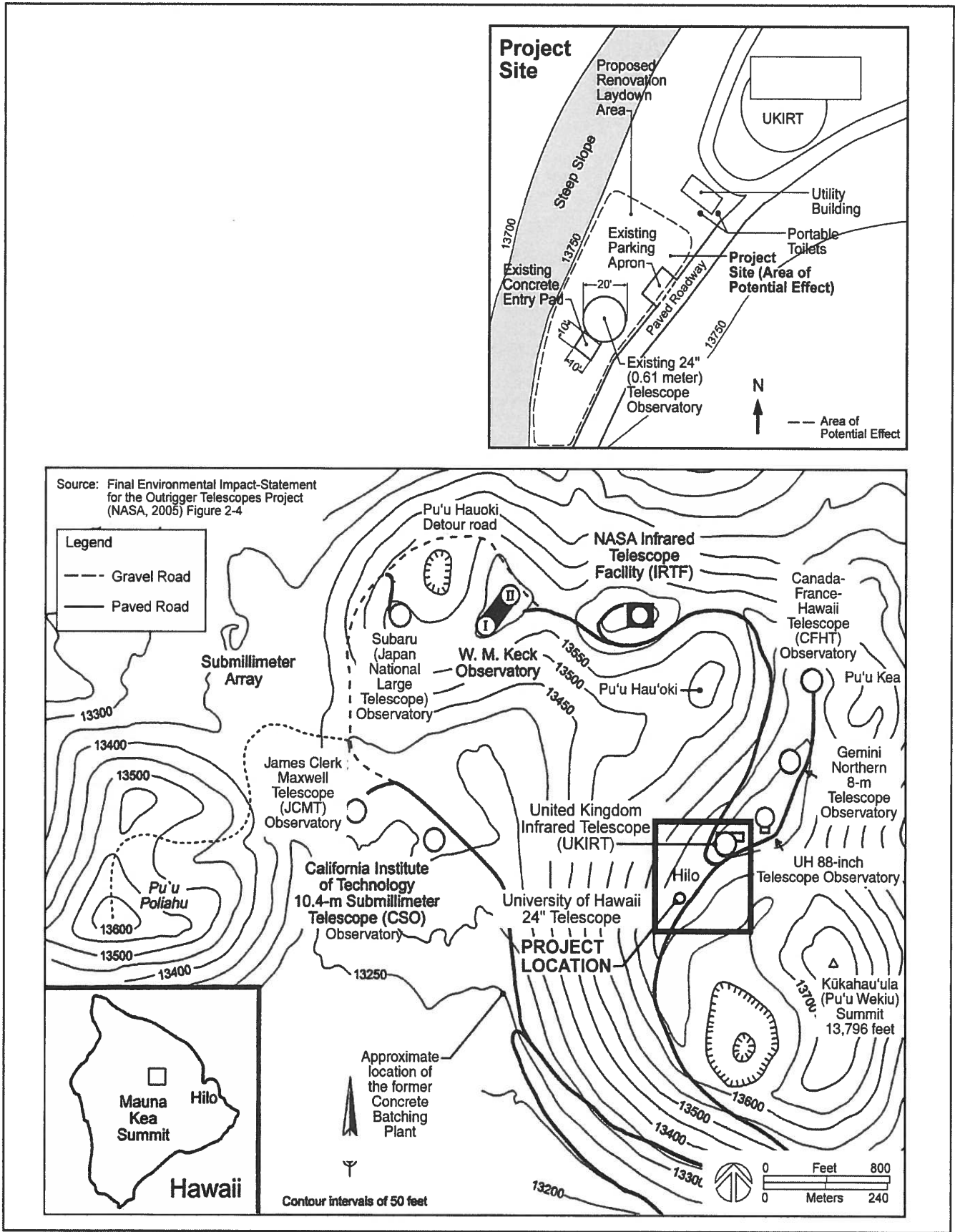


Figure 2: Site Plans (pre-renovation)

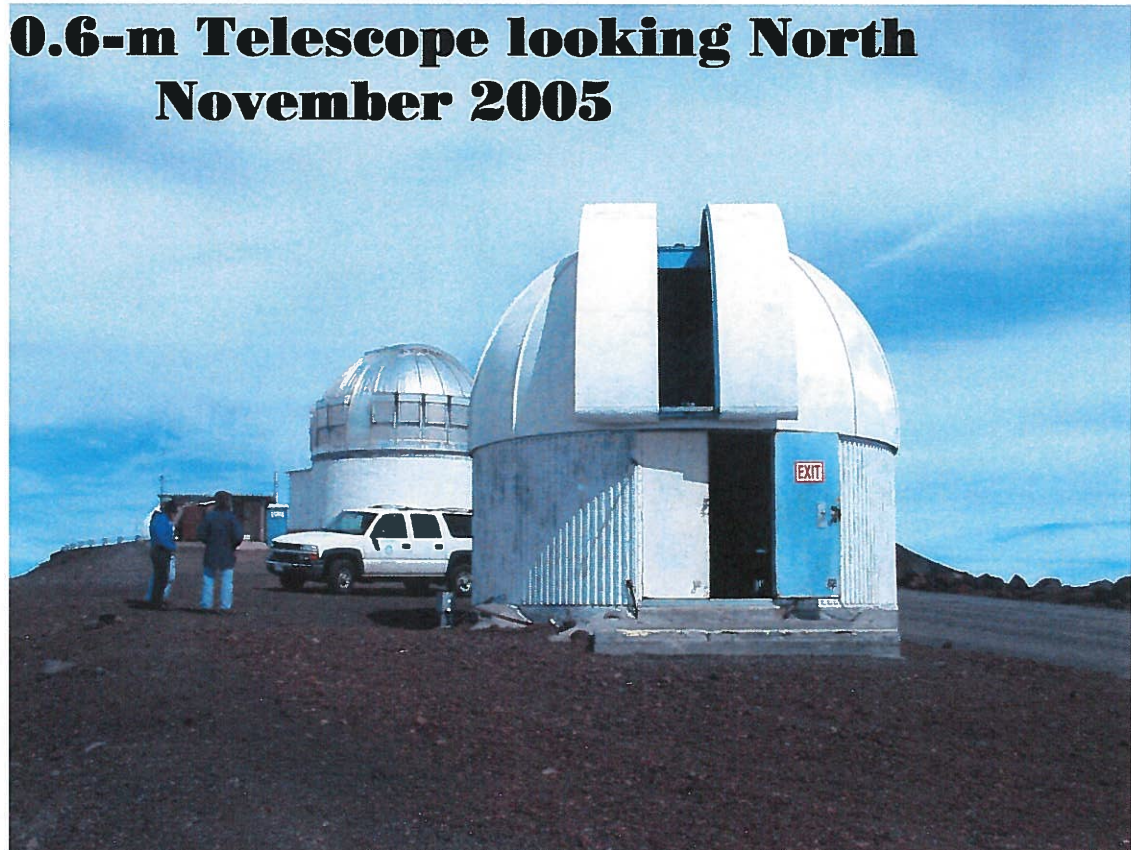
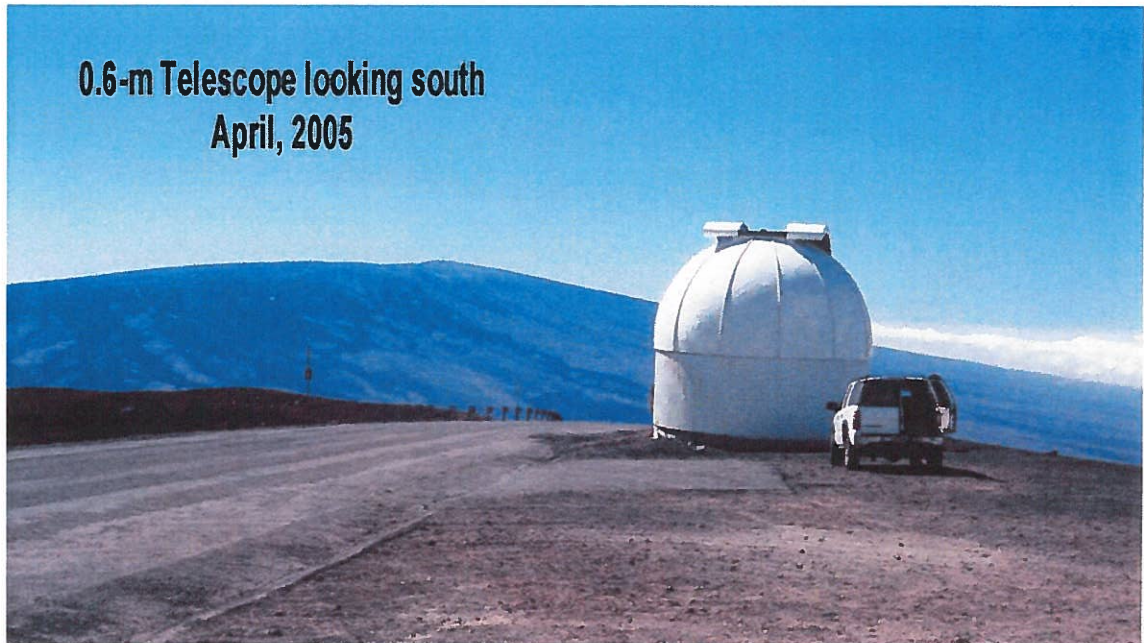


Figure 3: Photos of Hoku Kea dome (pre-renovation)

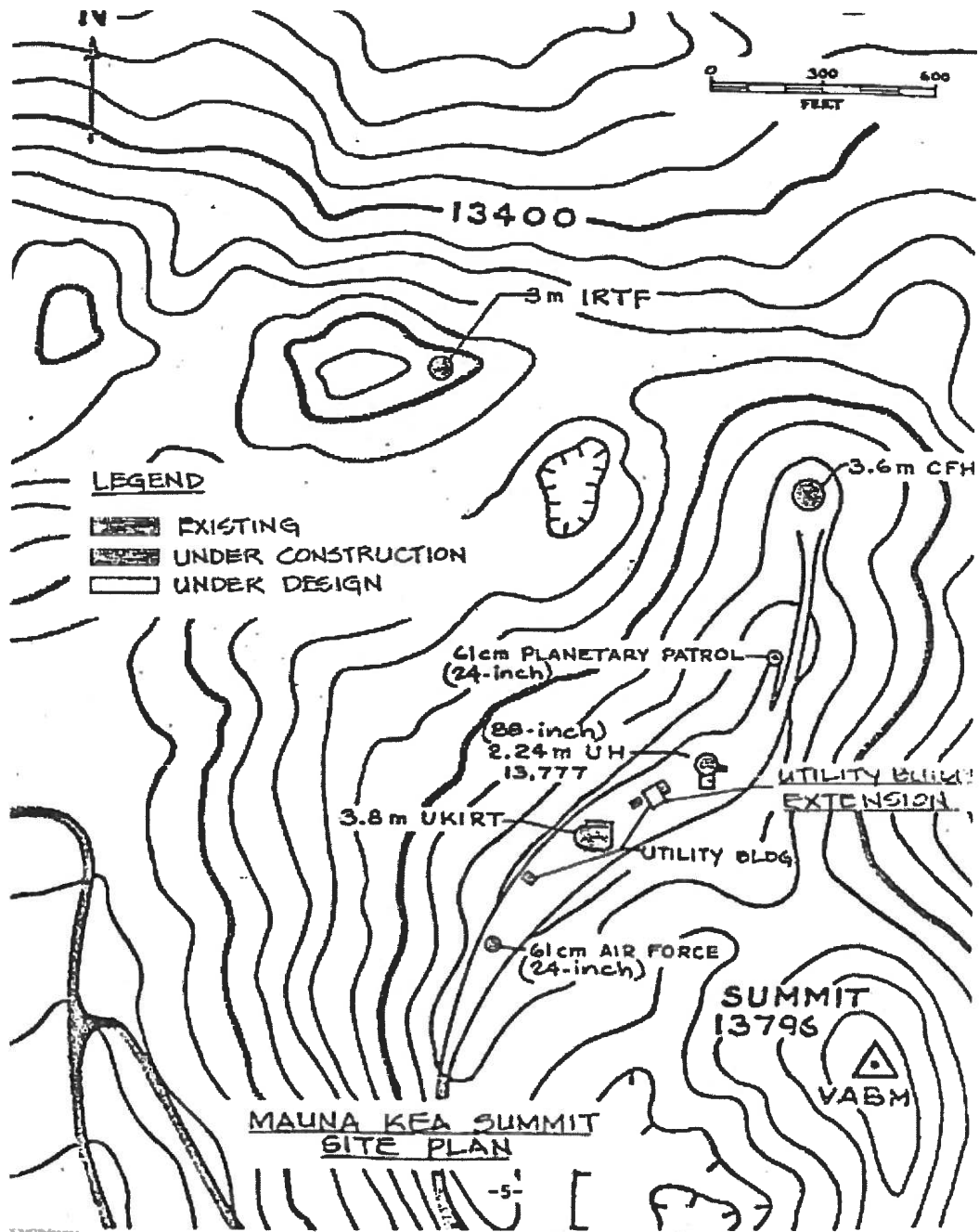


Figure 4: 1977 Site Plan



Figure 5: Photo from 1965-1967 Site Survey



Summit station, seen from geological summit to the east.  
Microthermal tower is to the right, with a person at its top.



Figure 6: Photo from 1965-1967 Site Survey