UH Managed lands – Project Proposal
for projects anticipated to be classified as having “Minimal Impact”

Observatory Name:
Office of Maunakea Management and Maunakea Support Services

Brief Descriptive Title of Project:
UH commercial tour permittee (Permittee) Stargazing Areas, Equipment Storage and Laydown Areas, Traffic Delineation

Project Description
The project will demarcate certain areas (hereinafter referred as trafficked areas) and ensure continued safe operation and maintenance of existing:

• Permittee stargazing areas to address permitted capacity limits (for both commercial tour and special request permits),
• equipment storage and laydown areas for Maunakea Support Services (MKSS),
• vehicular and pedestrian areas used by Permittee and facility management staff and partners.

As these are all previously approved and permitted activities within the Halepōhaku area, this proposal is intended to adapt management to environmental concerns and guide visitor use patterns considerations within the scope of existing permits for these activities. Previously impacted areas outside of designated trafficked areas will be restored using native vegetation. All areas identified for use are previously disturbed, either prior to University management (i.e. pre-1970s) or from previous CDUPs (such as existing approved parking areas or past building foundation sites).

The project includes 3 primary actions:

1. Explicitly recognize existing land uses, activities, and areas for: a) stargazing by Permittees and b) equipment laydown by MKSS
2. Install signs, gates, traffic barriers, and portable toilets to manage impacts from activities listed above and address previously identified traffic safety concerns
3. Restore lands using native vegetation in areas previously impacted by approved uses

Identified Land Use (see HAR § 13-5-22 through 13-5-25)

HAR § 13-5-22. P-7 SIGNS. (B-1): Signs, including safety signs, danger signs, no trespassing signs, and other informational signs. No signs shall exceed twelve square feet in area and shall be non-illuminated. All signs shall be erected to be self-supporting and be less than or equal to eight feet above finished grade.

HAR § 13-5-22. P-8 STRUCTURES AND LAND USES, EXISTING. (B-1): Demolition, removal, or minor alteration of existing structures, facilities, land, and equipment. Any historic property shall be evaluated by the department for historical significance.
HAR § 13-5-22. P-13 LAND AND RESOURCE MANAGEMENT. (A-2): Planting of native and endemic plants and fence maintenance. ... *no fence involved*).

**Identify the existing CDUP this proposal alters or affects**
- HA-0528 (1974, Expansion of HP Facilities [original CFHT dorms])
- HA-1430 (1982, Mid-Level Facilities)
- HA-1646 (1984, Keck 1, Dorm D – for HP [MLF] lower paved parking lot)
- HA-1819 (1986, HP parcel consolidation, lease, facility use)
- HA-3568 (2017, Thirty Meter Telescope – construction staging area)
- HA-3812 (2018, Ingress / Egress – greenhouse for restoration)

**Commercial Tour operator permits on Maunakea**

**Identify University of Hawai‘i exemption per HAR § 11-200-8(a), if any**

**Exemption Class #1:** Operation, repair, or maintenance of existing structures, facilities, equipment or topographical features, involving negligible or no expansion or change of use beyond that previously existing.

1. Operation, Repair or maintenance of:
   - m. Roads, walkways, parking lots, bike paths, and vehicular ramps

**Exemption Class #4:** Minor alterations in the condition of land, water, or vegetation.

2. Planting of trees, other plants, and sod.

**Exemption Class #6:** Construction or placement of minor structures accessory to existing facilities.

1. Construction or placement of:
   - c. Scoreboard, signs, and flag poles.

**Tax Map Key(s)**
- 4-4-015:012 – Halepōhaku
  - General Lease S-5529 (1999, Halepōhaku parcel)
- 4-4-015:001 – Mauna Kea Forest Reserve

**Proposed Commencement Date:** 1 September 2019

**Proposed Completion Date:** 31 December 2021

**Estimated Project Cost:** approximately $40,000 for purchased supplies (gates, signs, etc.) by MKSS. Labor in-kind by MKSS and OMKM.

**Total size / area of proposed use:** 19 acres

**Project Purpose and Need**
Clearly defined areas for maintenance equipment and supply storage, public activities, and Commercial Tour Operator activities helps ensure approved land uses and activities can be safely conducted and any impact is confined to the appropriate, approved area.

This proposal minimizes impacts from existing operations, does not irrevocably commit resources, and accommodates current use patterns for facility operations, stargazing under permits, and independent
travelers, except for large school groups which arrive in a full-size bus (50+ passengers). This is not intended as a permanent solution for Permittee stargazing. As commercial permits conclude and new permits issued, the question of stargazing locations will need to be addressed again at that time.

**Stargazing by Permittees**

Stargazing by Permittees on Maunakea (both commercial tours and special requests) is of increasing public interest. In order to ensure that the stargazing which does occur is safe, under the authority of a required permit, and that any potential impacts are appropriately managed and mitigated; explicit designation and demarcation of use areas is needed. Space assignment and allocation determinations of the sites identified in this application will be accomplished through a UH permitted commercial-tour company led decision making process. Signs in existing paved parking areas will inform both Permittees and other parking lot users of restrictions. Sites identified here will only be available for stargazing or other form of group use via a permit.

- 16 total stargazing areas are identified in this application to meet permitted demand and existing levels of use within the parcel. Permit demand was initially set by DLNR and permit authorities were transferred by BLNR to the University of Hawaii in 2000. The Attorney General opined the transfer was legal and the University officially accepted the transfer in 2005. Use expectations: there are currently 8 permitted commercial tour operators each with a maximum of 2 vans per night. Each van is assigned in this proposal the equivalent of ~3 parking spaces (approximately 600 sq. ft.) for the van, passengers, and any telescope(s). One of these stargazing areas would be reserved for OMKM-issued special request permits. Any remaining commercial tour groups would be required to stargaze elsewhere, such as at approved areas in the Maunakea Science Reserve under procedures determined by a collective decision of the tour companies. Large buses (such as school groups) will not receive permit approval until after improvements under HA-3812 are complete and conditions to ensure visitor safety and avoid resource damage can be confirmed. The areas identified below and in the maps attached to this proposal have all previously been used for stargazing.
  - 7 stargazing areas are identified in the “Construction Staging Area” (approved most recently per CDUP HA-3568). Use would be shared with activities approved under CDUP HA-3568. Traffic control / stargazing areas within the “Construction Staging Area” would be designated using “candlestick” style traffic barriers (image at right). Vehicle access to the “Construction Staging Area” will be through a lockable pipe gate, detailed below.
  - 8 stargazing areas are identified along the lower cinder road (which existed for access to the original “Hale Pōhaku” stone cabins) and, at two former building sites labeled “Construction Worker Housing” (alternatively Recreation Area and Lower Dorm) as shown in as existing building with submission of CDUAs HA-1430 and HA-1819 (these buildings were removed in the late 1980s and the foundation area remains largely unvegetated). These 8 locations will be maintained and graded, as needed, to provide for safe and reliable use. Vehicle access to these areas will be through a lockable pipe gate, detailed below. Use of these sites for stargazing must conclude by 10pm nightly to mitigate potential conflicts with adjacent dormitory residents.
o 1 stargazing area in the old CFHT cabin foundation location (HA-0528). Parking for this stargazing would occur in existing parking areas and thus the actual stargazing space for use is approximately 300 square feet.

o 2 portable (chemical) toilets at the bottom of the Mid-Level Facility lower paved parking lot (HA-1646) to accommodate stargazing visitors.

o 2 portable (chemical) toilets at the bottom of the gravel overflow parking lot, below the VIS, to accommodate stargazing visitors and for after-hours or peak demand periods. 2 portable toilets adjacent to the Visitor Information Station (HA-1430) for after-hours use and during periods of increased demand.

Equipment Laydown Areas
Equipment laydown areas for MKSS will allow for safe, controlled, and reliable areas for storing and using heavy equipment, material storage, and related uses. With increasing independent traveler visitation (as opposed to commercial tour activity), visitors have increasingly been observed at unusual and unexpected locations on the University-managed Halepōhaku parcel. Clearly designated, demarcated, maintained equipment laydown areas will allow Maunakea Support Services, Visitor Information Station, and OMKM staff to communicate clear expectations regarding areas safe for use to all present while allowing for safe and efficient facility operations. Four areas are identified, listed from upper to lower elevation here (North to South in parcel, see attached map). Areas will be demarcated by gates and rock barriers, and when these features are not shown in the map corner posts (fence post or similar) will be placed at corners to help MKSS staff identify the extent of the approved laydown area.

1. Heavy Equipment parking area. Location originally used for vehicle transit prior to University presence on Maunakea. Approximately 700 sq. yards.

2. Roadside equipment storage. Location shown as “existing dirt road” in HA-1430 and HA-1819. Approximately 300 sq. yards.

3. Old building site (in existence prior to 1970 and prior to University management). Building removed prior to HA-1430 and the location has been used for equipment storage since that time. Approximately 300 sq. yards.

4. Lower “Construction Staging Area”. First identified in HA-1819 and most recently incorporated into HA-3568. Currently approximately 0.5 acres (2,400 sq. yards), up to 1.5 acres under HA-3568. Shared with Commercial Tour Operator stargazing activities, potential use conflicts coordinated by MKSS and OMKM.

Traffic, Vehicle and Pedestrian area Demarcation
Traffic, vehicle and pedestrian area demarcation will ensure safety of all those present, allow for regular access to infrastructure such as septic system cleanout areas and under buildings, and irregular access for occasional facility maintenance and renovations. The pipe gates and chain gates, along with the portable chemical toilets and signs for stargazing areas, represent the only physical addition of built infrastructure in this proposal.

1) 5 pipe gates: to manage access to the Halepōhaku parcel from the DOT owned access road. Pipe gates will be mounted on 4-6" diameter steel support posts sunk about 36" into the ground and encased in concrete—the upright pipe may be designed to be removable in the event oversize load access is needed. Gates are comprised of two 12.5 ft. -15 ft. long sections. Total width of the gate is approximately 25'-30' wide. Center of the gate arms will
be secured with 1-2" diameter rod that fit into ~12" deep steel sleeves set into the roadway. The holes will be dug with a backhoe. Gates will be able to be locked open or closed. The design is consistent with the Maunakea Sign Plan and comparable to gates used in other DLNR owned and managed lands adjacent to DOT right-of-way access points. Note that all the pipe gate locations have required recent use of temporary barricades, and the Maunakea Sign Plan identifies that OMKM shall seek approval for permanent gate infrastructure in instances where regular barricade use is required. See conceptual example below:

![Image of a road blocked by temporary barricades](image.jpg)

Locations and purpose and use of each gate, from upper to lower elevations:

Upper-most gate—manages access into utilities work area, gas (automotive fuel) pumps and tanks, water supply, service access to dormitories, laydown area(s), etc. Recent examples of need for gates include temporary barricades used to close this area during Hurricane Lane and when servicing the fuel supply system. Gate will typically be left locked in an open position and include a small (~12”x18”) sign attached to the gate stating “Road Closed” or similar.

Mid-Level Facility gate—manages access into Mid-Level Facility paved parking areas and common (cafeteria) building. Recent examples of need for gates include temporary barricades used to close this area during Hurricane Lane and when conducting facility maintenance. Gate will typically be left locked in an open position and include a small (~12”x18”) sign attached to the gate stating “Road Closed” or similar.

Lower gate—manages access onto the gravel road below Mid-Level Facilities and used for maintenance and facility service, as well as providing access to 8 stargazing areas. A chain gate is already in place approximately 150 feet from the paved road edge and temporary barricades at the road edge have been present for several years to prevent off-road vehicle access by independent travelers. This chain will be removed (the posts left in place). The pipe gate will allow for permitted stargazing areas to have control over vehicle access into their stargazing areas (required for safe stargazing in the dark in an area without
streetlights). The gate will also allow for controlled access by MKSS staff. Stargazing Permittees will be required to have a key to this gate which will be kept locked closed when not in active use. A small (~12”x18”) sign will be attached to the gate stating “Road Closed” or similar.

Upper and lower “Construction Staging Area” gates—manages access into the “Construction Staging Area” from the gravel “overflow parking”, aka “Construction Camp Parking” and from “R-1”. The gate will allow the University to limit use to those activities for which this area is currently permitted. With observatory construction and decommissioning, safety concerns over shared access by visitors and construction crews will be mitigated. Gate installation will only occur after completion of HA-3812 associated parking areas.

2) Four chain gates, approximately 20’ wide with upright posts similar to the pipe gates will be installed to control access within the Halepōhaku parcel. These will limit access for access such as required *infrequent* but regular facility maintenance, septic system cleanouts, etc. to authorized users only. No signs will be used, the posts will be painted either bright yellow or covered with reflective tape similar to what is shown in the pipe gate example.

3) Rocks 2-4 feet in diameter would be spaced no more than 2-feet apart along the perimeter of parking lots and pathways to prevent unauthorized off-road use of vehicles. Slightly over 2,500 linear feet of parking lot and pathway boundaries will be demarcated. Old power poles were considered for the project but not chosen as they contain wood preservatives and there is a concern about leaching into the environment. Rubber or concrete parking stops were considered but after discussing this option with the Hawaii County Traffic Division, it was determined that vehicles can easily pass over them. Pathways are necessary to ensure access to facilities for housekeeping, routine maintenance, etc. Regular vehicle access will be limited *exclusively* to existing roads and these pathways. Areas beyond pathways will have any stored items removed and the area restored whenever appropriate and the rock barriers serve as an additional deterrent to potential trampling. Equipment and material storage will be consolidated and limited to existing, remaining sites (designated laydown areas).

See below for example of existing use at Halepōhaku.
Below are photos showing typical sources of rocks to be used. Only rocks currently found in the road berm or road grader ‘clean-out’ areas will be used.

4) A footpath from the Visitor Information Station to the lower Halepōhaku parking lot along existing previously-disturbed travel-ways for intermittent use when commercial tours or permitted groups may gather for evening stargazing when other areas are full. The trail would be physically marked with orange traffic cones topped with shielded, red, solar-powered lighting only on evenings when use is planned. Cones and lighting would only be placed when needed and be removed each evening.

Existing, permitted vehicle travel-ways, for facility maintenance and stargazing are identified for clarity and to illustrate where rock barriers will be added.

5) A sidewalk to “Dorm D” for housekeeping access. The barriers and restoration work will constrain housekeeping access to Dorm D to the existing concrete sidewalk. This sidewalk,
initially gravel and eventually likely concrete, will allow small service vehicles to access the
dorm entry with housekeeping supplies.

Upon completion of the steps identified above, OMKM staff and community volunteers will restore
native vegetation in the areas identified in the map, using plants grown on-site in the greenhouse
associated with Visitor Information Station Infrastructure Improvements (CDUP HA-3812). Native plant
species may include māmane, aweoweo, hinahina, pukiawe, puakala, and other native species identified
in the 2011 botanical inventory of the parcel as present on the site or nearby. Plant placement will be
determined in part based on use – to allow for example, for ensuring access to buildings for routine
facility maintenance, to minimize (wild) fire hazard, mitigate erosion concerns, etc.

Are there any related ongoing, pending, or planned projects associated with this submission?
The parking, access lane, and walkway permitted under the Ingress / Egress improvements on
MaunaKea (HA-3812) are complete. This project addresses Comprehensive Management Plan
actions, independent traveler parking concerns, provide infrastructure to produce plants to be
used in restoration. Additional detail work for approved gates, greenhouse, and other elements
of CDUP HA-3812 are still ongoing.

Existing Conditions at Project Site(s)
All project activities will occur within existing developed areas and at previously disturbed sites.

Geology, Climate, & Hazards
The Halepōhaku area is located at the base of Maunakea’s upper slopes at an elevation of 9,200
feet and has a semi-arid, sub-alpine climate. Soils are a mix of cinder and ash, prone to erosion if
not vegetated or adequate infiltration areas provided. The proposed activity will only occur
within existing disturbed use areas where existing erosion controls are in place and actively
managed.

Flora, Fauna, Ecology, Water Resources
No native flora inhabits the existing staging area affected by the proposed project—sites are
already used routinely. Regular invasive species monitoring of the project site is conducted by
OMKM. No surface water resources are present. No existing native vegetation will be removed
or disturbed through this proposed project. Restoration of areas removed from regular use will
allow for recovery of native species over time periods longer than the anticipated project
duration.

Cultural Resources
The nearest historic property is immediately adjacent to the cinder road along the North-East
boundary of the Halepōhaku parcel with the Mauna Kea Forest Reserve (site 10312). No adverse
impact to historic properties is anticipated by placing curb stops (rocks) along the perimeter and
gates at the entrance/exit of these area as the delineation is intended to, in part, protect these
areas.
Recreation
The areas are not intended or designed for recreation—beyond the permitted stargazing activities. The proposed activity will help ensure this communication.

Built Infrastructure
The proposed sites are all in pre-existing disturbed areas or built and permitted infrastructure. Relevant permit info is identified above with each component.

Landscaping & Visual Conditions
Existing landscaping is limited with scattered equipment storage. The proposed action will consolidate equipment storage and reduce associated visual impact. The proposed action will define stargazing and traffic areas and make them easier to identify to avoid unintended impacts. Native plant restoration will return one element of the visual landscape to more natural conditions and be done in such a way to avoid the impression of intentional landscaping.
Description of the Project

Location
All work will be confined to the University of Hawai‘i managed parcel – Halepōhaku – under General Lease S-5529. See maps at the end of this proposal for detailed maps.

Description of the process of completing the project
The anticipated sequence for completed the proposed activities is outlined below. Work will be completed in phases by both MKSS and OMKM, prioritizing remediation of health and safety concerns.

1. Communicate planned actions to Observatory community and commercial tour Permittees. Stargazing by Permittees in paved areas is already occurring as needed.
2. Smooth and level gravel stargazing areas.
3. Relocate all items for material storage (laydown areas).
4. Install signs.
5. Install rock and pedestrian barriers.
6. Install pipe and chain gates.
7. Restore previously disturbed areas.

Equipment needed for the proposed actions is maintained on-site. Designated laydown areas are already largely consolidated into these sites. Inclusion in this project is to ensure their clear communication and expectations.

Who will do the work?
On-site installation of infrastructure and pathway barriers will be completed by Maunakea Support Services (MKSS) staff and vendors. Addition of rocks, gates, and footpath is anticipated to be completed within approximately 1 year of approval.

OMKM staff will conduct native plant restoration, also enlisting community volunteers. This phase would begin once areas are cleaned and demarcating rocks are in place, and occur over the remainder of the project period.

Equipment & Transportation
Existing equipment will be used for installation.

Measures to protect the environment and/or mitigate impacts

Protective Measures
- Notify OMKM in writing at least 5 days prior, and no more than 14 days prior, to beginning field work on UH managed lands (Halepōhaku, Road Corridor, Maunakea Science Reserve, or Astronomy Precinct). This notification MUST:
  1. Be sent via US mail to the "Office of Maunakea Management" or to omkm @ hawaii.edu; alternate notifications will not be acknowledged.
  2. Identify by name-of-entity all observatories or MKSS, contractors, vendors, suppliers, etc. anticipated to be associated with and substantively present on UH managed lands at any time during the project.
3. Attest that all individuals anticipated to be associated with the project have completed the Maunakea User Orientation at the time of notification.

4. Identify the date that work will commence. An approximate date or range of potential dates will not be accepted.

5. Identify the observatory-affiliated or MKSS individual(s) who will be coordinating all invasive species related inspections.

6. Attest that the observatory or MKSS will ensure compliance with all permit conditions and communicate with OMKM if there is any uncertainty and notify OMKM in writing of other entities responsible for elements of compliance or responsibility.

7. State if a pre-project meeting with OMKM is requested before work commences. Such a meeting is highly recommended for any project beyond activities completed by existing observatory staff. These meetings review orientation content, implications of project non-compliance, project-specific concerns regarding resource protection, health and safety, impacts to visitors, etc. They may be held in person, via phone, webinar, or other means.

8. OMKM shall provide a written reply explicitly verifying if the project is approved to commence (issue a "notice to proceed"), no project work will commence before this time. No project notification will be accepted by OMKM until all permit requirements are submitted to and approved by OMKM (i.e. any required BMPs, Communication Plans, contract scope questions, etc. must be finalized and approved by OMKM more than 5 days in advance of project commencement).

9. OMKM is not liable or responsible for delays due to inadequate, late, or submissions requiring verification. Incomplete submissions will not be acknowledged.

- All project participants must attend a Maunakea orientation prior to participating in field work.
- Allow OMKM Rangers to visit and monitor activities.
- Comply with all actions and measures described in the proposal, including (community) benefits, CMP compliance list, and mitigation measures.
- Ensure that loose tools or equipment are not left unattended and are properly stored at the end of each day.
- In preparation for high wind conditions protocols must include measures to ensure debris and equipment are not blown from the job site. Projects occurring in the summit region must verify that temporary and permanent infrastructure can sustain 120mph winds.
- All improvements shall be designed and installed to withstand the severe weather conditions on the mountain.
- Remove and properly dispose of all waste material. All perishable items including food, food wrappers and containers, etc. shall be removed from the site at the end of each day and properly disposed.
• Use of lighting from sunset to sunrise is prohibited unless otherwise stated in the project proposal and approved.

• Employ invasive species prevention best practices, including inspections of materials by a DLNR-approved biologist, as identified in the Maunakea Invasive Species Management Plan prior to entering UH managed lands. Every inspection request submitted to OMKM shall include correspondence with the observatory or MKSS representative(s) identified in the initial notification. Inspections shall not occur on UH managed lands on Maunakea, at State or County parks, along public roadsides, or on Department of Hawaiian Home Lands.

• Motorized equipment, when stationary, must have a drain-pan in place suitable for catching fuel or fluid leaks. To allow for expansion with reduced atmospheric pressure, fuel tanks should not be more than 3/4 full prior to transport to the summit (unless used as the fuel source for transport to the summit).

• Large, heavy, non-4-wheel drive, or oversized loads must submit notification to the Maunakea Road Conditions listserve at least one-day prior to delivery. Loads requiring an escort on public roadways must have this escort accompany them to the final destination. Projects choosing not to do so must obtain approval from the Maunakea Rangers before arriving at Halepōhaku. Projects failing to submit notification or arrange for escort to the summit may be denied entry to Halepōhaku or above.

• Nēnē (Branta sandvicensis) may be present. If a nēnē appears within 100 feet (30.5) meters of ongoing work, all activity shall be temporarily suspended until the animal leaves the area of its own accord. Feeding of nēnē is prohibited.

• The project approval/permit may not be transferred or assigned. A copy of the approval/permit must be present on-site and available for review at all times while are working on University-managed lands.

• No use of mechanized equipment is allowed unless authorized by this permit.

• Identify and comply with other permit requirements, such as County of Hawaii building permits or Department of Land & Natural Resources (see both any applicable DLNR permit and HAR §13-5-42 Standard conditions).

• Placement of permanent: markers, monuments, mag nails, survey pins, etc. is not allowed without explicit prior approval.

• Document in writing when field activity associated with the project is completed.

• The project must be completed within the time frame specified in the proposal and (when applicable) DLNR approval.

Compliance with Lease, Sublease, or Comprehensive Management Plan (CMP)
The primary purpose of these activities are to ensure continued safe operations and permitted activities. Safety is identified in management actions under the CMP. Other relevant management actions identified in the CMP include:
NR-1 Limit threats to natural resources through management of permitted activities and uses.
NR-3 Maintain native plant and animal populations and biological diversity.
NR-9 Increase native plant density and diversity through an outplanting program.
NR-10 Incorporate mitigation plans into project planning and conduct mitigation.
NR-11 Conduct habitat rehabilitation projects.
NR-12 Create restoration plans and conduct habitat restoration activities, as needed.
ACT-2 Develop parking and visitor traffic plan.
ACT-4 Develop and enforce a policy that maintains current prohibitions on off-road vehicle use in the UH Management Areas and that strengthens measures to prevent or deter vehicles from leaving established roads and designated parking areas.
ACT-7 Confine University or other sponsored tours and star-gazing activities to previously disturbed ground surfaces and established parking areas.

Identify other required or associated permits
None known.

Five Year Outlook
Elements of this action were included in the MKSS Five-Year Outlook and recommended for in-depth consultation. The consolidation of stargazing and portions of traffic delineation elements originate from OMKM.

Community Benefits
Benefits to other Maunakea entities and/or global astronomy community
The proposed action will establish clear expectations for MKSS, OMKM, and commercial tour companies for ongoing activities at the Halepōhaku parcel. The action does not irrevocably commit land resources to permanent use, as the only built physical infrastructure installed would be several gates, signs and portable toilets.

Benefits to the Hawaii Island community
The community will benefit by having clearly demarcated use areas and areas not used for specific activities restored with native vegetation.

Will data, publications, or other products be free and available to the public?
No formal publications will be generated. Use information and management are summarized in annual and other periodic reports by OMKM to the Board of Land and Natural Resources.
DLNR Evaluation Criteria

After approval by the Maunakea Management Board, the Department of Land & Natural Resources or Board of Land & Natural Resources will evaluate the merits and approve the project based on the following eight criteria (§13-5-30). See http://dlnr.hawaii.gov/occl/files/2013/08/13-5-2013.pdf

1. The purpose of the Conservation District is to conserve, protect, and preserve the important natural and cultural resources of the State through appropriate management and use to promote their long-term sustainability and the public health, safety, and welfare. (ref §13-5-1) How is the proposed land use consistent with the purpose of the conservation district?

   The Board of Land and Natural Resources has adopted the Comprehensive Management Plan and subplans (Cultural Resources Management Plan, Natural Resources Management Plan, Public Access Plan, and Decommissioning Plan) as the approved management documents for land use and activities in the UH Management Areas. The CMP and subplans provide management strategies designed to preserve and protect the resources located in the UH Management Areas. The University is committed to their implementation using the resources that are available to it. The proposed use addresses OMKM-identified public safety and resource damage concerns, using existing natural materials when possible.

2. How is the proposed use consistent with the objectives of the Resource subzone of the land on which the land use will occur? (§13-5-13 The objective of this subzone is to ensure, with proper management, the sustainable use of the natural resources of those areas. This subzone shall encompass: lands necessary for providing future parkland and lands presently used for national, state, county, or private parks. Land suitable for outdoor recreational uses such as hunting, fishing, hiking, camping, and picnicking. [And other lands not applicable to Maunakea.])

   The objective of the Resource subzone “...is to develop, with proper management, areas to ensure sustained use of the natural resources of those areas.” The use that is proposed in this application is within the Conservation District Resource subzone. The road barriers and designated use areas will prevent resource damage while providing for activities specified in General Lease S-5529 and various DLNR-issued permits. Parking signs address public safety concerns associated with visitor use in the Halepōhaku area.

3. Describe how the proposed land use complies with the provisions and guidelines contained in chapter 205A, HRS, entitled “Coastal Zone Management”.

   This activity is not in the coastal zone. The recreation aspects of Coastal Zone Management will not be affected other than this activity will both make visitors safer when parking or walking in the Halepōhaku area and will preclude use of vehicles off of roads consistent with General Lease S-5529.

4. Describe how the proposed land use will not cause substantial adverse impact to existing natural resources within the surrounding area, community or region.

   The signs and gates will be located in existing, previously-disturbed areas, preventing or limiting unintended vehicle access to undisturbed areas. The road barriers will use existing rocks
recovered in the roadway to prevent future use of vehicles off roads and allow for restoration activities.

5. Describe how the proposed land use, including buildings, structures and facilities, is compatible with the locality and surrounding areas, appropriate to the physical conditions and capabilities of the specific parcel or parcels.

The road barriers are an example of using local, natural materials to prevent unauthorized activities. The signs and gates address the Maunakea Sign Plan and Federal “Manual on Uniform Traffic Control Devices” requirements. The activities (laydown areas, stargazing, vehicle pathways) are existing approved uses – this proposal clarifies and constrains locations such that surrounding areas can be restored.

6. Describe how the existing physical and environmental aspects of the land, such as natural beauty and open space characteristics, will be preserved or improved upon.

Natural beauty and open space characteristics will be improved upon by preventing landscape alteration via unauthorized vehicle use off of roads. The signs and barriers proposed also address public safety.

7. If applicable, describe how subdivision of land will not be utilized to increase the intensity of land uses in the Conservation District.

No subdivision of land is involved.

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

The uses are explicitly intended to remedy identified public health, safety, and welfare concerns with existing approved activities.
Maps

Legend
- Chain gate with lock already in place. Chain to be removed, upright posts left in place.
- Chain gate with lock to be added.
- Pipe gate to be added.
- Sign to be added.
- Local (large) rocks to be added. Demarcating areas approved and appropriate for vehicle traffic.
- Stargazing area on pavement.
- Stargazing area on gravel/cinder to be defined and maintained.
- Area to be restored using native plants.
- Existing vehicle pathway to remain.
- Existing foot path to remain.
- Restrooms, chemical toilets.
- Laydown area to be more clearly defined and maintained.
- Greenhouse, to be constructed, previously approved under HA-3812.
- Sidewalk for housekeeping access to Dorm D.
Mid-Level Facility area activities
Visitor Facility Area, without showing parking and access lane additions under HA-3812 (Stargazing areas are smaller polygons in the overall “Construction Staging Area”).
Visitor Facility Area, showing parking and access lane additions under HA-3812