STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
Land Division
Honolulu, Hawaii 96813

June 27, 2014

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

Hawaii

Resubmittal: Consent to Sublease under General Lease No. S-4191 to the University of Hawaii, Lessee, to TMT International Observatory LLC, Sublessee, Kaohe, Hamakua, Island of Hawaii, Tax Map Key: 3rd/ 4-4-15: 09 por.; and

Decision-Making on Requests for Contested Case Hearing by Kalani Flores and Dan Purcell on Board Action of June 13, 2014, Item D-8 in Opposition to the Request for Consent to Sublease under General Lease No. S-4191 to the University of Hawaii, Lessee, to TMT International Observatory LLC, Sublessee, Kaohe, Hamakua, Island of Hawaii, Tax Map Key: 3rd/ 4-4-15: 09 por.

BACKGROUND:

At its meeting of June 13, 2014, Item D-8, the Board of Land and Natural Resources deferred action on the University of Hawaii's request for consent to sublease to TMT International Observatory LLC (TIO). A copy of the deferred Board action is attached as Exhibit AA. The Board deferred action to allow the University of Hawaii (UH) to address three questions and issues the Board raised during the June 13 meeting. The questions and issues are listed at page 8a of the attached submittal. UH has advised staff that it will be prepared to address these questions and issues at the Board's upcoming meeting of June 27, 2014.

Additionally, two of the members of the public present at the June 13, 2014 meeting, Kalani Flores and Dan Purcell, made an oral request for a contested case hearing before the close of the meeting. It is anticipated that Mr. Flores and Mr. Purcell will submit written petitions within the 10 days required under applicable rules.

DISCUSSION:

UH's request for consent to sublease to TIO is hereby resubmitted to the Board in the form of Exhibit AA attached.

As to Mr. Flores' and Mr. Purcell's requests for contested case hearing, staff incorporates by reference the analysis contained in another submittal before the Board at the June 27, 2014 meeting, Item D-5, which relates to three petitions for contested case hearings regarding UH's leases at Mauna Kea.

Respectfully Submitted,

Kevin E. Moore
Assistant Administrator

APPROVED FOR SUBMITTAL:

William J. Aila, Jr., Chairperson

DEFERRED

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
Land Division
Honolulu, Hawaii 96813

June 13, 2014

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

Hawaii

Consent to Sublease under General Lease No. S-4191 to the University of Hawaii, Lessee, to TMT International Observatory LLC, Sublessee, Kaohe, Hamakua, Island of Hawaii, Tax Map Key: 3rd/ 4-4-15: 09 por.

APPLICANT:

University of Hawaii, as Sublessor, to TMT International Observatory LLC, a Delaware limited liability company, Tenant in Severalty, as Sublessee.

LEGAL REFERENCE:

Section 171-36(a)(6), Hawaii Revised Statutes, as amended.

LOCATION:

Portion of Government lands of Kaohe situated at Hamakua, Island of Hawaii, identified by Tax Map Key: 3rd/ 4-4-15: 09, as shown on the attached map labeled Exhibit 1.

AREA:

Lease Area:	11,215.554 acres, more or less.
Sublease Area:	5.9986 acres, more or less, for telescope site, and 2.6653 acres, more or less, for a non-exclusive access and utility easement.

TRUST LAND STATUS:

Section 5(b) lands of the Hawaii Admission Act

DHHL 30% entitlement lands pursuant to the Hawaii State Constitution: NO

Deferred
~~APPROVED~~ BY THE BOARD OF
LAND AND NATURAL RESOURCES
AT ITS MEETING HELD ON
June 13, 2014

D-8
EXHIBIT AA

LEASE CHARACTER OF USE:

For a scientific complex, including without limitation thereof an observatory, and as a scientific reserve being more specifically a buffer zone to prevent the intrusion of activities inimical to said scientific complex. Activities inimical to said scientific complex shall include light and dust interference to observatory operation and certain types of electric or electronic installation on the demised lands, but shall not necessarily be limited to the foregoing.

SUBLEASE CHARACTER OF USE:

Sublessee shall use the subleased premises solely to construct and operate the Thirty Meter Telescope facilities in accordance with the sublease and the Scientific Cooperation Agreement.

TERM OF LEASE:

65 years, commencing on January 1, 1968 and expiring on December 31, 2033. There are no rental reopenings under the lease.

TERM OF SUBLEASE:

Approximately 19.5 years, commencing on the date of the Board consent to the sublease and expiring on December 31, 2033.

ANNUAL RENTAL:

Gratis.

ANNUAL SUBLEASE RENTAL:

The annual rent paid under the sublease starts at $300,000 and increases periodically pursuant to the following schedule:

Year	Annual Rent
1-3	$300,000
4-5	$400,000
6-7	$600,000
8-9	$700,000
10	$900,000
11 and later	$1,080,000

Rent for the initial, partial year will be prorated. Beginning January 2015, the annual lease rents shall also be adjusted for inflation in accordance with the Consumer Price Index for all Urban Consumers, U.S. City Average (not seasonally adjusted) (base year

1982-1984 – 100).

RECOMMENDED ADJUSTMENT TO LEASE RENTAL:

None. See discussion in remarks section below.

DCCA VERIFICATION:

SUBLESSOR:
Not applicable. Sublessor, as a government entity, is not required to register with the Department of Commerce and Consumer Affairs.

SUBLESSEE:

Place of business registration confirmed:	YES X	NO __
Registered business name confirmed:	YES X	NO __
Good standing confirmed:	YES X	NO __

REMARKS:

By letter dated May 22, 2014, Donald Straney, Chancellor, University of Hawaii at Hilo, requested consent to sublease under General Lease No. S-4191 to TMT International Observatory LLC (TIO). TIO plans to construct the Thirty Meter Telescope observatory and accessory buildings near the summit of Mauna Kea. A copy of Mr. Straney's letter is attached as Exhibit 2.

Background

The Mauna Kea Science Reserve (MKSR), the largest of the University of Hawaii (UH) Management Areas, was established in 1968. The entire 11,288-acre MKSR is designated as part of the Conservation District, resource subzone. Eight optical and/or infrared observatories are currently present in the MKSR's 525-acre Astronomy Precinct; the first Mauna Kea observatories were built in the 1960s. Optical/infrared telescopes use mirrors to collect and focus visible and infrared light. Each optical/infrared observatory consists of a single telescope, except the W. M. Keck observatory which currently houses the two most powerful optical/infrared telescopes on Mauna Kea, each with a 10-meter diameter primary mirror. The MKSR also hosts three submillimeter observatories and a radio antenna.

At its meeting of November 22, 1967, Item F-31, the Board approved the issuance of a 65-year lease of the Mauna Kea summit to UH "[t]o serve as a Scientific Reserve and, specifically, as a buffer zone to prevent the intrusion of activities inimical to scientific complex, including an observatory, in the process of being located near the Mauna Kea summit". General Lease No. S-4191 dated June 21, 1968 was thereafter issued to UH with a commencement date of January 1, 1968 and a termination date of December 31, 2033.

Subsequently, UH obtained Board approval for and issued the following subleases:

Sublessee	Date of Bd Action	Character of Use	Area	EIS	CDUP Appr'd	Sublease Term
National Aeronautics and Space Administration	2/19/75, Item F-1-d	Erecting and operating infrared astronomical observatory facilities	70,650 sf	Appr'd 8/4/75	HA-653; 8/29/75, Item H-5	11/29/74-12/31/33
Canada-France-Hawaii Telescope Corporation	11/7/75, Item F-11	Erecting and managing astronomical observatory research facilities	2 acres	Appr'd 8/12/74	HA-527	12/18/75-12/31/33
Science Research Council	11/18/77, Item F-17	Erecting and managing astronomical observatory research facilities	32,000 sf	Appr'd 8/4/75	HA-653; 8/29/75, Item H-5	1/21/76-12/31/33
Science and Engineering Research Council	4/22/83, Item F-1-f	Construction and operation of a 15-meter telescope facility and appurtenant improvements	2 acres	Appr'd 1/20/83	HA-1515; 2/25/83, Item H-11	2/10/84-12/31/33
California Institute of Technology	8/26/83, Item F-1-i	Construction and operation of a 10.4 meter telescope	.75 acre	Appr'd 8/26/82	HA-1492; 12/17/82, Item H-6	12/20/83-12/31/33
California Institute of Technology	6/14/85, Item F-1-a	Construction and operation of the WM Keck 10-meter telescope observatory	2 acres	Appr'd 1/20/83	HA-1646; 8/24/84, Item H-1; HA-2509	10/30/85-12/31/33
National Astronomical Observatory of Japan	8/21/97, Item D-1	Construction and operation of the 8-meter Japan national large telescope	5.4 acres	Appr'd 1/20/83	HA-2642	6/5/92-12/31/33
Smithsonian Institution	8/21/97, Item D-2	Construction and operation of the Smithsonian submillimeter array telescope	3 acres	Appr'd 1/20/83	HA-2728	5/15/95-12/31/33
Associated Universities Inc.	8/21/97, Item D-3	Construction and operation of a very long baseline array antenna	87,500 sf	Appr'd 11/2/88	HA-2174	9/28/90-12/31/33
National Science Foundation	8/21/97, Item D-4	Construction and operation of the Gemini 8-meter telescope	2 acres	Appr'd 1/20/83	HA-2691	9/26/94-12/31/33

The rent charged for the subleases was nominal at $1.00 for the term of the sublease, however, UH received observatory time at sublessees' facilities in exchange for issuing

the sublease.[1] For each sublease, a CDUP was secured for the telescope facility as indicated above.

At its meeting of November 9, 1978, Item H-10, the Board approved the set-aside of the Mauna Kea Ice Age Reserve (MKIAR), comprising two locations of 3,750 acres and 143.5 acres, to the Natural Area Reserve Commission. Additionally, the Board approved a CDUP for the designation of the MKIAR, as well as other locations throughout the State, as natural area reserves at its meeting of May 8, 1981, Item H-11. Governor's Executive Order No. 3101 dated November 16, 1981 effected the set-aside. However, the MKIAR was not formally taken out of General Lease No. S-4191 until the Board's action of June 13, 1997, Item D-2. A Partial Withdrawal From General Lease No. S-4191 was thereafter executed by UH and the Board on March 23, 1998.

At its meeting of September 24, 1982, Item F-4, the Board authorized the Division of Forestry and Wildlife to hold public hearings (after-the-fact) on the proposed withdrawal of approximately 13,328.054 acres from the Mauna Kea Forest Reserve, so that the withdrawn lands could be included in the lease to UH. After public hearings, the Board approved the withdrawal of the lands from the forest reserve at its meeting of March 22, 1985, Item C-2. By Governor's Executive Order No. 3710 dated August 7, 1997, lands with a net area of 11,269.554 acres (after excluding the MKIAR) were officially withdrawn from the forest reserve.

In late 2013, UH sought the mutual cancellation of General Lease No. S-4191 and the issuance of a new 65-year direct lease to UH for the MKIAR. The Board heard considerable testimony on this request at its meeting of November 8, 2013, Item D-5, before losing quorum. At the Board meeting of December 13, 2013, Item D-15, UH committed to doing an environmental impact statement prior to the Board rendering a decision on its request for a new lease. The Board therefore deferred action on UH's request.

At the Board meeting of May 23, 2014, Item D-6, UH reported on the early termination of the United Kingdom Infrared Telescope operated by the Science and Technology Facilities Council (the third item listed in the table above). UH explained that it will take over operation of the observatory and be responsible for its eventual decommissioning. The sublessee gave UH $2.5 million to cover decommissioning expenses.

Thirty Meter Telescope

At its meeting of February 25, 2011, Item K-1, the Board approved CDUP HA-3568 for the Thirty Meter Telescope while simultaneously ordering on the Board's own motion the holding of a contested case proceeding and the appointment of a hearing officer, Item K-2. A contested case followed with the Board approving the Findings of Fact, Conclusions

1 The Board additionally approved some short-term dispositions which have expired by their terms and are not listed in this table.

of Law, and Decision and Order on April 12, 2013. Excerpts of this lengthy document are attached as Exhibit 3. Petitioners in the contested case appealed the Board's decision to the Circuit Court of the Third Circuit. On May 5, 2014, the Circuit Court affirmed the Board's Findings of Fact, Conclusions of Law, and Decision and Order. See Exhibit 4 attached. Final Judgment was entered on the same day. See Exhibit 5 attached.

Proposed sublessee TIO plans to construct and operate an optical/infrared telescope facility known as the Thirty Meter Telescope (TMT). According to the Final Environmental Impact Statement that was published in the Office of Environmental Quality Control's The Environmental Notice on May 6, 2010, TMT will be located at the 13,150-foot elevation of Mauna Kea. Further:

> The TMT Observatory will consist of the telescope, adaptive optics (AO) system, and instruments all contained in a dome; support building; and parking area. These facilities will all be clustered within an approximately 5-acre site. The primary component of the telescope is the 98-foot (30-meter) segmented primary mirror, with 492 individual mirror segments that will function as a single mirror. The focal ratio (f/) of the telescope will be f/1.0, which translates to a shorter telescope and allows for a smaller dome size relative to a telescope with a larger focal ratio. The dome housing the telescope will be a Calotte-type enclosure with a total height of 180 feet, will appear rounded and smooth, and will have an aluminum-like exterior coating. The support building will be attached to the dome and have an area of roughly 18,000 square feet. A small visitor viewing platform and visitor restrooms are included in the design.

The TMT facilities will include additional equipment and infrastructure such as instruments, electrical conductors, cableways and tunnels; driveways; power, telephone and communications conduits and lines and access roads. See the proposed Sublease and Non-Exclusive Easement Agreement Between TMT International Observatory LLC and the University of Hawaii, a copy of which is attached as Exhibit 6.

HRS Section 171-36 and various Board policies adopted pursuant to that authority allow the Board to collect sandwich profits in certain sublease situations. Pursuant to the Board's policy adopted at its meeting of January 26, 2001, Item D-8, for lessees paying less than fair market rent, if the lessee subleases unimproved lands, "the Board shall revise the rent to include as additional rent, 50% of that portion of the sublease rent in excess of the original ground rent paid to the State. . . ."

In this case, however, UH cites to Act 132, Session Laws of Hawaii 2009 (Act 132), which created a special fund for revenues generated on the Mauna Kea leases premises. Act 132 states in relevant part:

> There is established the Mauna Kea lands management special fund, into which shall be deposited: . . . (2) All net rents from leases, licenses, and

> permits, including fees and charges for the use of land and facilities within the Mauna Kea lands; . . . .

Moreover, the Board included a condition in its April 12, 2013 Decision and Order that:

> TMT will pay a "substantial" amount for sublease rent. The rent would be deposited into the Mauna Kea Land Fund, and only used for management of Mauna Kea.

See Exhibit 3, page 125.

At the Board meeting of February 25, 2011, Item K-1, there was discussion about what a substantial sublease rent would be, and the range of $1-2 million per year was suggested. The proposed sublease attached as Exhibit 6 indicates that by year 11 of the sublease, rent will be $1,080,000 per year. UH therefore takes the position that the sublease rent meets the substantiality requirement of CDUP HA-3568 as approved by the Board's Decision and Order. In light of the foregoing, staff is recommending that the Board not participate in the sublease rent or make any adjustment to rent under General Lease No. S-4191.

There are no rent re-openings provided for in General Lease No. S-4191, and therefore there are no outstanding rent re-opening issues. UH is compliant with the terms and conditions of General Lease No. S-4191.

No agency comments were solicited as the TMT project has already been through environmental impact statement, conservation district use permit, contested case and judicial review proceedings, and received Board approval of the project.

TIO is aware that General Lease No. S-4191 is presently set to expire on December 31, 2033. The proposed sublease between UH and TIO obligates UH to use best efforts to pursue the mutual cancellation of General Lease No. S-4191 and the issuance of a new 65-year direct lease to UH for the MKSR. If UH obtains a new 65-year lease, the proposed sublease grants TIO the right to an automatic extension of its sublease for a term not exceeding 65 years from its effective date.

RECOMMENDATION:

That the Board consent to the sublease under General Lease No. S-4191 between the University of Hawaii, as Sublessor, and TMT International Observatory LLC, as Sublessee, subject to any applicable conditions cited above which are by this reference incorporated herein and further subject to the following terms and conditions:

1. The Lessee shall submit construction plans of the Sublessee's improvements to the Land Division for the Chairperson's approval prior to constructing any improvements on the demised premises;

2. Sublessee shall comply with all the conditions of Conservation District Use Permit No. HA-3568, as approved by the Board of Land and Natural Resources' Findings of Fact, Conclusions of Law, and Decision and Order issued on April 12, 2013;

3. The standard terms and conditions of the most current consent to sublease form, as may be amended from time to time;

4. Review and approval by the Department of the Attorney General; and

5. Such other terms and conditions as may be prescribed by the Chairperson to best serve the interests of the State.

Respectfully Submitted,

Kevin E. Moore
Assistant Administrator

APPROVED FOR SUBMITTAL:

William J. Aila, Jr., Chairperson

Land Board Meeting: June 13, 2014; D-8: Deferred. See attached page.

Land Board Meeting: June 13, 2014; D-8: Deferred.

Deferred to allow the University of Hawaii to address certain questions and issues raised during the public testimony portion of the Land Board meeting. UH is asked to respond to the following questions and issues:

1. **Explain how the sublease rent schedule proposed for the TIO sublease meets the "substantial sublease rent" requirement of CDUP HA-5668. In order to comply with the "substantial sublease rents" requirement: (a) should an appraisal be performed by UH in accordance with HRS 171-17; and (b) whether compensation paid for telescope viewing times at other observatories located elsewhere ought be considered?**
2. **Respond to the June 4, 2014 letter from the National Council on Historic Preservation questioning whether UH complied with the section 106 consultation requirements of the National Historic Preservation Act.**
3. **Whether the prohibition on options to renew leases contained in HRS 171-36 prohibits UH from entering into this proposed sublease with TIO?**

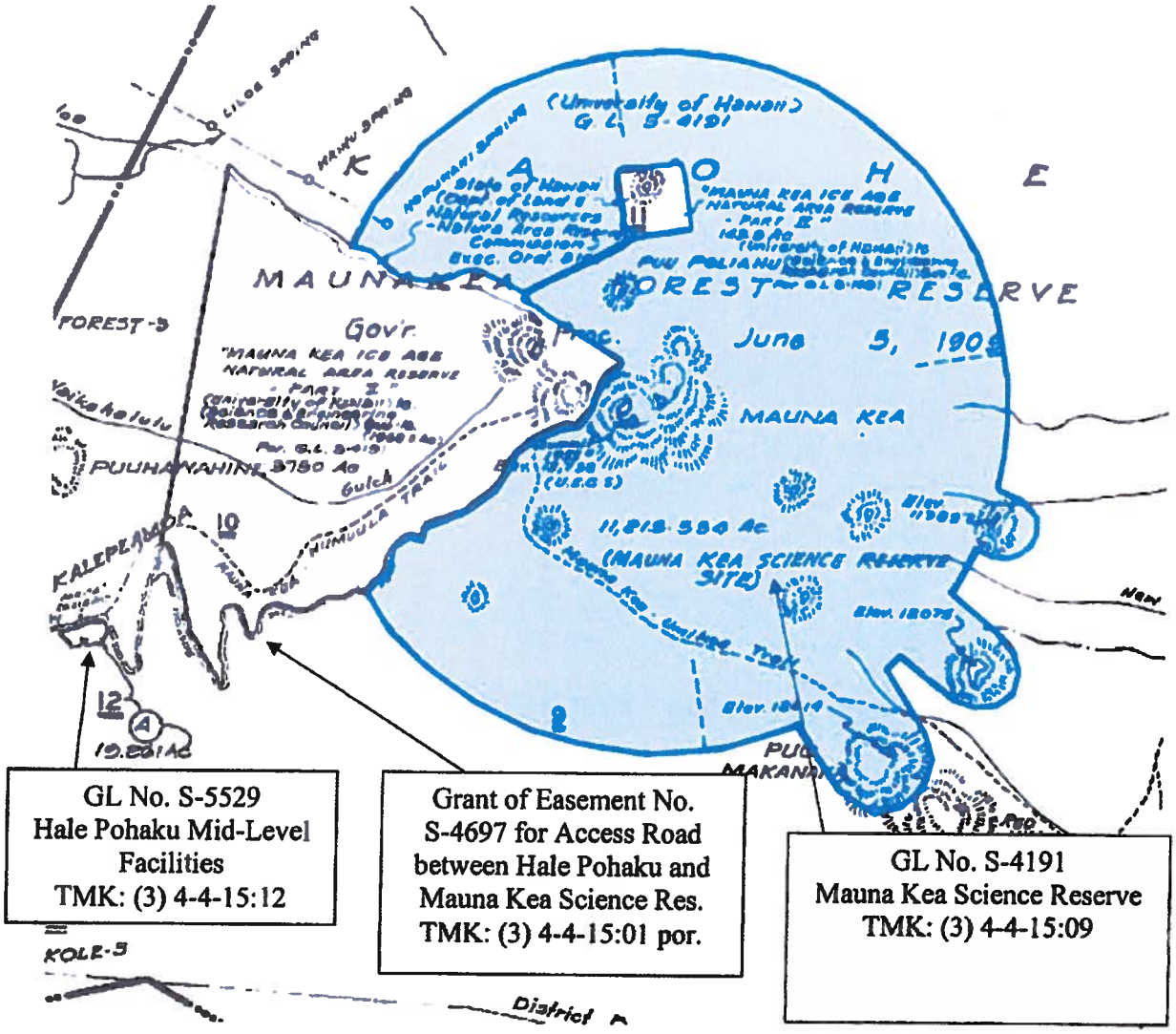
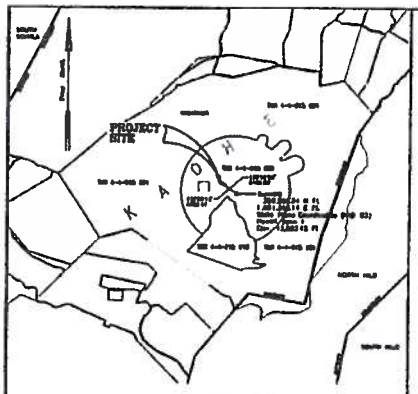
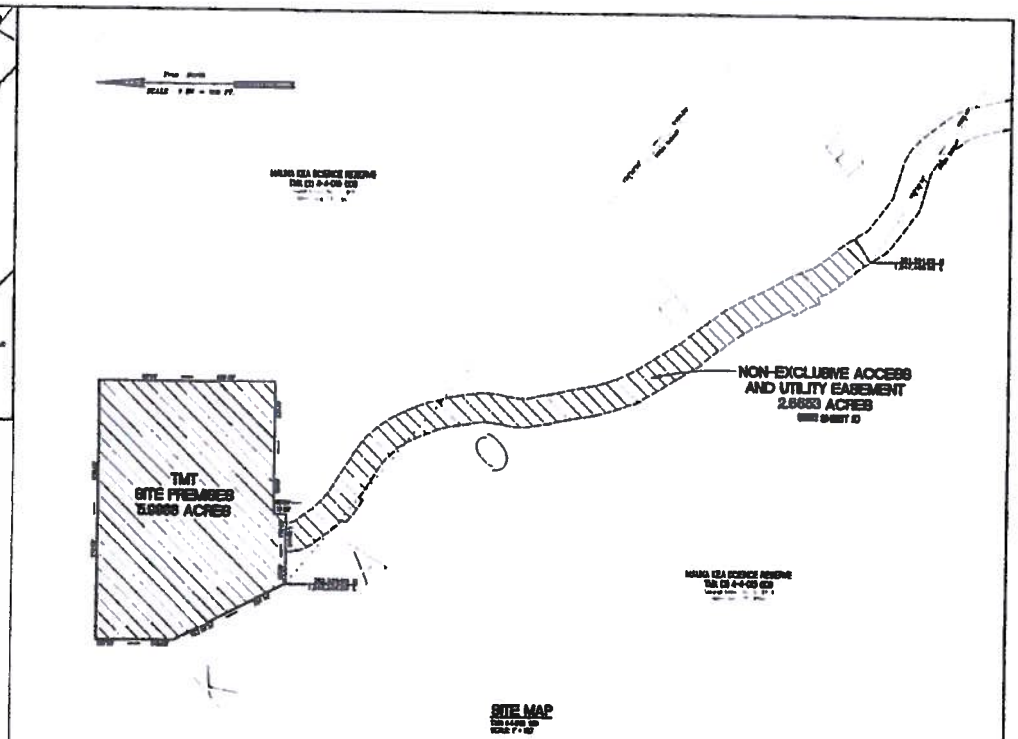

(University of Hawaii)
G.L. S-4191
K A O H E
MAUNA KEA FOREST RESERVE
June 5, 1909
MAUNA KEA
11,813.584 Ac
(MAUNA KEA SCIENCE RESERVE SITE)
FOREST-5
PUUHAWAHINE
KALEPEAMOA
KOLE-5
District
GL No. S-5529
Hale Pohaku Mid-Level Facilities
TMK: (3) 4-4-15:12
Grant of Easement No. S-4697 for Access Road between Hale Pohaku and Mauna Kea Science Res.
TMK: (3) 4-4-15:01 por.
GL No. S-4191
Mauna Kea Science Reserve
TMK: (3) 4-4-15:09

EXHIBIT 1



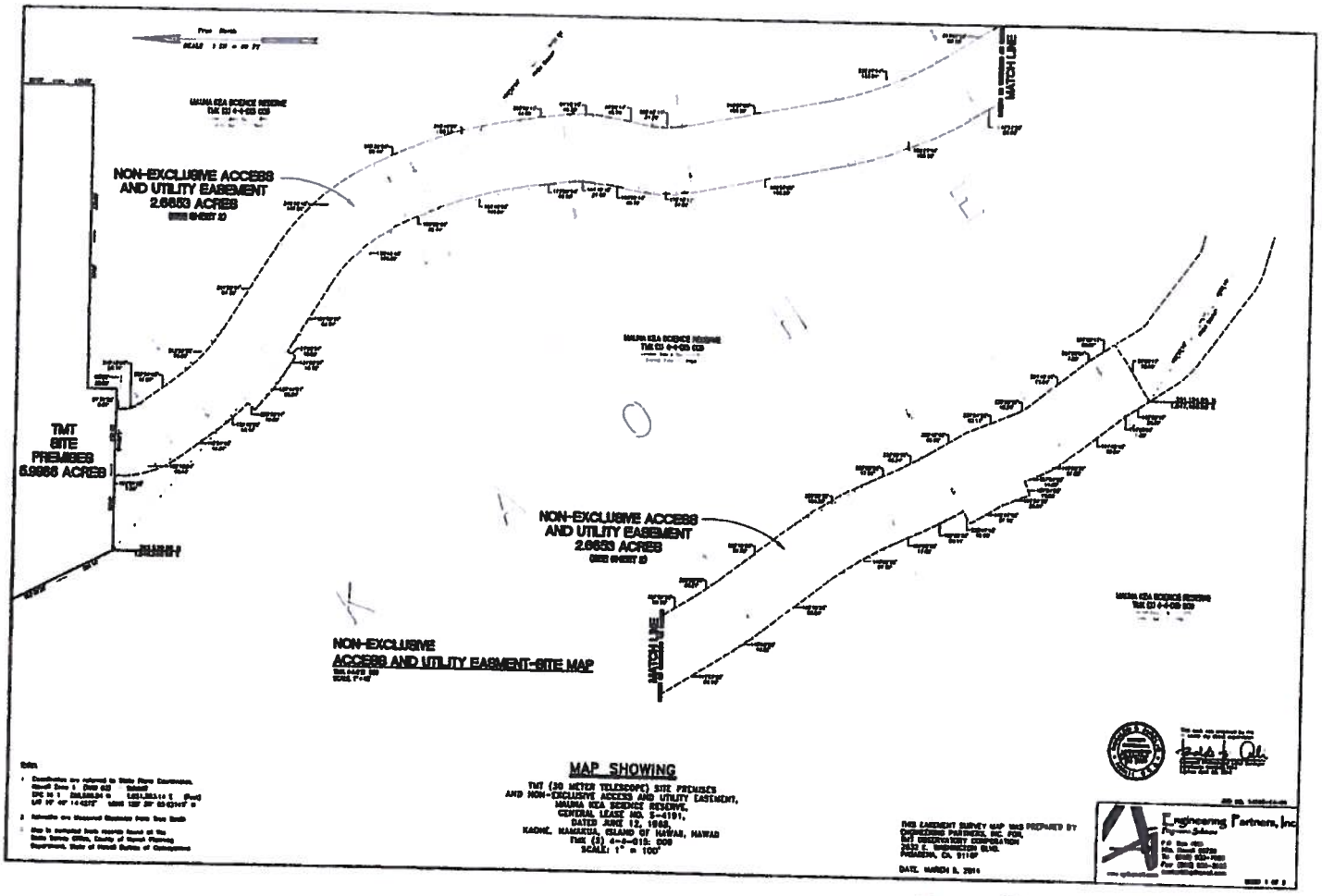


MAP SHOWING

TMT (30 METER TELESCOPE) SITE PREMISES
AND NON-EXCLUSIVE ACCESS AND UTILITY EASEMENT
MAUNA KEA SCIENCE RESERVE,
GENERAL LEASE NO S-4191,
DATED JUNE 12, 1968,
KAOHE, HAMAKUA, ISLAND OF HAWAII, HAWAII
TMK (3) 4-4-015: 009
SCALE: 1" = 100'

DATE: MARCH 5, 2014

Engineering Partners, Inc.



MAP SHOWING

TMT (30 METER TELESCOPE) SITE PREMISES
AND NON-EXCLUSIVE ACCESS AND UTILITY EASEMENT,
MAUNA KEA SCIENCE RESERVE,
GENERAL LEASE NO. S-4191,
DATED JUNE 12, 1968,
KAOHE, HAMAKUA, ISLAND OF HAWAII, HAWAII
TMK (3) 4-4-015: 009
SCALE: 1" = 100'

THIS EASEMENT SURVEY MAP WAS PREPARED BY
CHRISTENSEN PARTNERS, INC. FOR,
TMT OBSERVATORY CORPORATION
2632 E. WASHINGTON BLVD.
PASADENA, CA. 91107

DATE: MARCH 5, 2014

Engineering Partners, Inc.

UNIVERSITY of HAWAI'I HILO

Office of the Chancellor

May 22, 2014

William J. Aila, Chairperson
Attn: Russell Y. Tsuji, Land Division Administrator
Department of Land and Natural Resources
P.O. Box 621
1151 Punchbowl Street
Honolulu, Hawai'i 96809-0621

Subject: Application for Consent to Sublease; Approval of Sublease and Non-Exclusive Easement Agreement between TMT International Observatory LLC and University of Hawai'i; General Lease No. S-4191; Lessee: University of Hawai'i; TMK 3/4-4-015:09 (port.); Ahupua'a of Kaohe, District of Hāmākua, Island, County and State of Hawai'i

Dear Chairman Aila:

The University of Hawai'i at Hilo ("UH Hilo") respectfully requests the approval and consent of the Board of Land and Natural Resources ("BLNR") to sublease a 8.7 acre portion of the Mauna Kea Science Reserve ("MKSR") to the TMT International Observatory LLC ("TIO") to be used for the construction and operation of the Thirty Meter Telescope ("TMT"). The MKSR is located on the summit of Mauna Kea on the Island of Hawai'i and covers approximately 11,288 acres within the State's Conservation District Resource subzone. The University of Hawai'i (UH/the University) presently holds the lease to the MKSR pursuant to General Lease No. S-4191 issued by the BLNR in 1968 for the term of 65 years ending on December 31, 2033. UH also leases the Hale Pōhaku Mid-Level Facilities ("Hale Pōhaku") covering an area of just over 19 acres with a termination date of February 27, 2041. These two properties, together with the Mauna Kea Observatory Access Road corridor, collectively constitute the UH Management Areas within the ahupua'a of Kaohe in the district of Hāmākua. The UH currently has pending before BLNR a request to terminate its current leases for the UH Management Areas and concurrently enter into new 65 year leases with the State of Hawai'i on terms and conditions updated to conform to current management and stewardship standards. Action on that request has been deferred until after completion of an environmental review pursuant to Chapter 343 of the Hawai'i Revised Statutes ("HRS").

Background Information

The BLNR approved the Conservation District Use Application submitted by the UH for the construction and operation of the TMT project on April 12, 2013 (the "CDUP"). The CDUP requires the payment of a "substantial amount" of sublease rent for the TMT, to be used solely for the management of lands within the UH Management Areas of Mauna Kea. The CDUP also requires compliance with mitigation measures described in the Conservation District Use Application submitted to the Department of Land and Natural Resources on September 2, 2010 and the Final Environmental Impact Statement ("FEIS") accepted by the

EXHIBIT 2

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Hilo, Hawai'i 96720-4091
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An Equal Opportunity/Affirmative Action Institution

Governor on May 19, 2010 for the TMT project. The FEIS anticipated and expressly included the proposed sublease of these lands for the TMT project.

Act 132

In 2009, the State Legislature passed Act 132 which authorized the UH to charge fees for the sublease and use of lands within the UH Management Areas provided that (1) the fees be established at an open public meeting subject to HRS Chapter 92, (2) the subleases comply with all statutory requirements in the disposition of ceded lands, and (3) any proceeds collected, including all fees and sublease rents, be deposited in the Mauna Kea Lands Management Special Fund established by HRS § 304A-2170 for the sole purpose of managing the lands, facilities and resources within the UH Management Areas of Mauna Kea. At an open public meeting on February 20, 2014, the Board of Regents of the University of Hawai'i approved the fees negotiated with TIO for sublease rents set forth in the attached copy of the Sublease and Non-Exclusive Easement Agreement between TMT International Observatory LLC and University of Hawai'i (the "Sublease").

The Sublease

The Sublease covers an area of approximately 8.7 acres within the Astronomy Precinct on the northern plateau below the Mauna Kea summit. It provides for substantial rent of $1,080,000 per year beginning in year 11 of the Sublease term, when the TMT will be commissioned and in operation, and a phase-in of the full rental amount over the construction period, as follows:

Year	Annual Rent	Milestone
1-3	$300,000	Civil construction
4-5	$400,000	Enclosure
6-7	$600,000	Telescope Structure
8-9	$700,000	Instruments and Mirrors
10	$900,000	Commissioning
11 and later	$1,080,000	Operations

Rents will be adjusted annually for inflation.

The term of the Sublease will expire on December 31, 2033, the termination date of the Master Lease. The Sublease requires the University to use its best efforts to complete the process currently underway to obtain mutual cancellation of the current master lease and concurrent issuance of a new master lease for the MKSR for a term of 65 years, as submitted by the UH in its request to the BLNR in November, 2013. Upon successful completion of that process, the Sublease provides that its term will automatically be extended to 65 years after its effective date, or upon expiration or termination of the new master lease, whichever first occurs.

The Sublease also contains provisions expressly requiring TIO to conform to current community-based management and stewardship standards for Mauna Kea. The TMT project will be the first project constructed under the new paradigm established by the 2000 Master Plan, the Comprehensive Management Plan and its subplans (the Natural Resources Management Plan, Cultural Resources

Management Plan, Decommissioning Plan, and Public Access Plan) approved by BLNR (collectively, the "CMP"), and Act 132 (SLH 2009) adopted by the State Legislature which formally establishes a mechanism for sublease rents and fees for the use of Mauna Kea lands to be devoted to management and stewardship of the mountain. The Sublease expressly recognizes that customary and traditional rights are protected by the State Constitution and is further subject to the right of Native Hawaiians to exercise protected traditional and customary practices as provided in the CMP consistent with the laws of the State of Hawai'i.

Concurrently with execution of the Sublease, the University and TIO will enter into a Scientific Cooperation Agreement ("SCA"), which addresses scientific cooperation between the University and TIO. Under the SCA, TIO will be solely responsible for design, construction, and operation of the TMT and for the costs thereof. After the TMT is completed and commissioned, the University will be entitled to 7.5% of the scientific observing time of the telescope. The University will also be entitled to appoint one member to the TIO Board, who will have non-voting observer status, and to be represented on the TIO Science Advisory Committee. The University's research and education program will benefit substantially from the University's access and involvement in the TMT.

Please find attached the completed application form for the UH's request for consent to sublease a portion of the MKSR. We appreciate the assistance and cooperation of the Department of Land and Natural Resources in this request for approval of consent for the sublease to TIO; our staff looks forward to working with your Land Division and the BLNR to process the subject request. Please feel free to contact me at 808-974-7444 or by email at dstraney@hawaii.edu if you have any questions or require additional information regarding this request.

Sincerely,

Donald O. Straney
Chancellor
University of Hawai'i at Hilo

cc: Dr.David Lassner, Interim President, UH
Mr. John C. Holzman, Chair, UH Board of Regents
Dr. Henry T. Yang, Chairman, TMT International Observatory LLC

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LANDS

BOARD OF LAND AND NATURAL RESOURCES

2013 APR 12 P 3:11

STATE OF HAWAII

&
CES
STATE OF HAWAII

In re Petitions Requesting a Contested Case Hearing Re Conservation District Use Permit (CDUP) HA-3568 for the Thirty Meter Telescope at the Mauna Kea Science Reserve, Ka'ohe Mauka, Hamakua District, Island of Hawai'i, TMK (3) 4-4-015:009	DLNR Docket No. HA-[illegible] FINDINGS OF FACT, CONCLUSIONS OF LAW AND DECISION AND ORDER; CERTIFICATE OF SERVICE

FINDINGS OF FACT, CONCLUSIONS OF LAW AND DECISION AND ORDER

This contested case hearing involves Conservation District Use Application ("CDUA") HA-3568 for the Thirty Meter Telescope at the Mauna Kea Science Reserve. The following Findings of Fact, ("FOF"), Conclusions of Law ("COL"), and Decision and Order are based on the records maintained by the Department of Land and Natural Resources on CDUA HA-3568 and the witness testimonies and exhibits presented and accepted into evidence.

If any statement denominated a COL is more properly considered a FOF, then it should be treated as a FOF; and conversely, if any statement denominated as a FOF is more properly considered a COL, then it should be treated as a COL.

Any proposed finding of fact submitted by the parties which is not specifically incorporated above is rejected for one or more of the following reasons:

1. They are repetitious or similar to the Board of Land and Natural Resources' own findings of fact or conclusions of law or decision and order, and/or

2. They are not supported by the reliable and/or probative evidence, and/or

3. They are in whole or in part not supported by and/or are contrary to the facts or law, and/or

4. They are immaterial, superfluous, and/or irrelevant to the material facts, issues, and/or law of this case.

EXHIBIT 3

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FINDINGS OF FACT

I. INTRODUCTION

A. The Parties

1. The University of Hawai'i ("University" or "UH") was established as the state university of the State of Hawai'i and constitutes a body corporate. (Haw. Rev. Stat. § 304-2.) The University has ten campuses statewide, one of which is the University of Hawai'i at Hilo ("UHH"). UHH is the applicant for the Conservation District Use Permit for the Thirty Meter Telescope project ("TMT Project") that is proposed to be built within the Mauna Kea Science Reserve ("MKSR") in the summit region of Mauna Kea on Hawai'i Island.

2. Petitioner KAHEA: The Hawaiian Environmental Alliance ("KAHEA") is a nonprofit Hawai'i environmental organization. In the contested case proceedings in this matter, KAHEA was represented by Marti Townsend, who is identified on KAHEA's web site as the organization's "Program Director/Staff Attorney." See http://kahea.org/about/staff.

3. Petitioner Mauna Kea Anaina Hou ("MKAH") is an unincorporated association. In the contested case proceedings in this matter, MKAH was represented by Kealoha Pisciotta, who is the current president of MKAH and is a native Hawaiian cultural practitioner. During the contested case hearing, Ms. Pisciotta also advised that she is the new president of KAHEA. Tr. 9/26/11 at 45.

4. Petitioner Clarence Kukauakahi Ching ("Ching") is a Hawaiian cultural practitioner.

5. Petitioner Flores-Case 'Ohana ("Flores-Case 'Ohana") is an unincorporated association consisting of E. Kalani Flores ("Flores") and B. Pualani Case ("Case"), who are native Hawaiian cultural practitioners.

6. Petitioner Deborah Ward ("Ward") is a recreational user of Mauna Kea lands.

7. Petitioner Paul K. Neves ("Neves") is a native Hawaiian cultural practitioner. As described below, Mr. Neves originally filed his petition in this matter on behalf of both himself as an individual and the Royal Order of Kamehameha I, Moku o Mamalahoa, Mauna Kea Committee ("ROOK I"), but subsequently withdrew his petition on behalf of ROOK I. Mr. Neves sought and was granted standing solely in his individual capacity. At the contested case hearing, Mr. Neves stated that he was representing himself and his two hula halau. However, Mr. Neves's participation in this contested case proceeding is solely as an individual and is not in any representative capacity.

Archaeological Site Plan, Maintenance Plan, and Arthropod Monitoring Plan, are incorporated as conditions of this permit;

8. The TMT Project will comply with any terms and conditions outlined in the Comprehensive Management Plan and associated sub-plans;

9. The TMT Management Plan is approved, including all specific management actions articulated in the TMT Management Plan including, Cultural Resources Management, Natural Resources Management, Education & Outreach, Astronomical Resources, Permitting and Enforcement, Infrastructure and Maintenance, Construction Guidelines, Site Recycling, Decommissioning, Demolition & Restoration, Future Land Uses, and Monitoring, Evaluation & Updates. These management actions and their associated mitigation measures and the implementation of the recommendation contained in these plans (for example, the incorporation of a Decommissioning Funding Plan in any sublease) are incorporated as conditions of this permit;

10. The following additional conditions shall be implemented by OMKM and TMT:

- Ensuring that employees attend mandatory cultural and natural resources training;
- Working with the 'Imiloa Astronomy Center and OMKM to develop informational exhibits for visitors regarding the natural, cultural and archaeological resources of Mauna Kea;
- Funding the re-naturalization of the closed access road on Pu'u Poli'ahu, partially re-naturalizing of the batch plant staging area after construction has been completed, and camouflaging the utility pull boxes in certain locations to reduce the visual impact from the summit area;
- Implementing an invasive species control program;
- Working with OMKM to develop and implement a habitat restoration study;
- Implementing the "Zero Waste Management" policy;
- Filling employment opportunities locally to the greatest extent possible;
- Mandating that employees traveling beyond Hale Pōhaku take part in a ride-sharing program using project vehicles;

- Using energy savings devices such as solar hot water systems, photovoltaic power systems, energy efficient light fixtures, and the use of Energy Star rated appliances;

- Providing $1 million annually, adjusted for inflation, for "Community Benefits Package" which will commence with construction and continue through the term of the sublease. The package will be administered via The Hawai'i Island New Knowledge (THINK) Fund Board of Advisors; and

- Partnering with other institutions to implement a Workforce Pipeline Program, headed by at least one full-time position through the Community Outreach office, to prepare local residents for jobs in science, engineering, and technical fields;

- The University will ensure that the survey of the power line corridor easement complies with DLNR standards and is in accordance with the conditions contained in the grant of easement (including the Mauna Kea Ice Age Natural Area Reserve) that was approved by the BLNR in August 1985. The University will provide copies of the survey to DOFAW;

- OMKM will consult with the U.S. Fish and Wildlife Service and experts who are advising OMKM, including representatives from the DLNR, on surveys of the wēkiu bug and invertebrates regarding surveys along the utility corridor, including Pu'u Hau Kea and the pu'u west of the Parking Area 1;

- The construction contractor will be required to minimize the visual changes to land within the utility line right-of-way during utility upgrades. Any disturbance outside of the easement area of the construction corridor will be restored to the extent possible;

- UHH will present a plan for handling recreational parking during construction to the OCCL for review and approval prior to beginning construction;

- Following construction, TMT shall keep their area clean and free of trash or unattended tools and equipment, unless authorized by OMKM and OCCL;

- The Archaeological Monitoring Plan will be submitted to the State Historic Preservation Division for review and approval prior to the onset of construction; and

- TMT will pay a "substantial" amount for sublease rent. The rent would be deposited into the Manna Kea Land Fund, and only used for management of Mauna Kea.

11. UHH will notify OCCL of the date of the twice-annual inspections of the project site and allow Department staff to attend if available;

12. UHH will provide OCCL and BLNR a copy of TMT's annual report to OMKM;

13. UHH will allow BLNR to name a DLNR representative to participate in the five-year management review process;

14. When provided or required, potable water supply and sanitation facilities shall have the approval of the Department of Health and the county Board of Water Supply;

15. UHH understands and agrees that this permit does not convey any vested rights or exclusive privilege;

16. In issuing this permit, the Department and Board have relied on the information and data that UHH has provided in connection with this permit application. If, subsequent to the issuance of this permit, such information and data prove to be false, incomplete or inaccurate, this permit may be modified, suspended or revoked, in whole or in part, and/or the Department may, in addition, institute appropriate legal proceedings;

17. Where any interference, nuisance, or harm may be caused, or hazard established by the use, UHH shall be required to take the measures necessary to minimize or eliminate the interference, nuisance, harm, or hazard;

18. Should historic remains such as artifacts, burials or concentration of charcoal be encountered during construction activities, work shall cease immediately in the vicinity of the find, and the find shall be protected from further damage. The contractor shall immediately contact the State Historic Preservation Division (692-8015), which will assess the significance of the find and recommend an appropriate mitigation measure, if necessary; the Applicant will also notify the Office of Hawaiian Affairs at the same time;

19. During construction, appropriate mitigation measures shall be implemented to minimize impacts to off-site roadways, utilities, and public facilities;

20. No construction work shall be initiated until the Applicant demonstrates compliance with all preconstruction conditions and mitigation measures

FILED

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CLERK
THIRD CIRCUIT COURT
STATE OF HAWAII

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IN THE CIRCUIT COURT OF THE THIRD CIRCUIT

STATE OF HAWAI'I

MAUNA KEA ANAINA HOU; CLARENCE KUKAUAKAHI CHING; FLORES-CASE 'OHANA; DEBORAH J. WARD; PAUL K. NEVES; and KAHEA: THE HAWAIIAN ENVIRONMENTAL ALLIANCE, a domestic non-profit corporation,

Appellants,

vs.

CIVIL NO. 13-1-0349
(AGENCY APPEAL)

DECISION AND ORDER AFFIRMING BOARD OF LAND AND NATURAL RESOURCES, STATE OF HAWAII'S FINDINGS OF FACT, CONCLUSIONS OF LAW AND DECISION AND ORDER GRANTING CONSERVATION DISTRICT USE PERMIT FOR THE

I hereby certify that this is a full, true and correct copy of the original on file in this office.

4826-1091-2964.1

Clerk, Third Circuit Court, State of Hawaii

EXHIBIT 4

BOARD OF LAND AND NATURAL RESOURCES, STATE OF HAWAII; DEPARTMENT OF LAND AND NATURAL RESOURCES, STATE OF HAWAII; WILLIAM AILA, JR., in his official capacity as Chair of the Board of Land and Natural Resources and Director of the Department of Land and Natural Resources, and the UNIVERSITY OF HAWAI'I AT HILO,

Appellees.

THIRTY METER TELESCOPE AT THE MAUNA KEA SCIENCE RESERVE DATED APRIL 12, 2013

HEARING DATES: December 13, 2013 and February 20, 2014

I. INTRODUCTION

This case is an appeal of the April 12, 2013 Board of Land and Natural Resources ("BLNR" or "Board") Findings of Fact ("FOF"), Conclusions of Law ("COL") and Decision and Order ("Decision and Order") granting the Conservation District Use Permit ("CDUP") for the University of Hawai'i at Hilo's ("UHH") Thirty Meter Telescope Project (the "Project") to be located in the Mauna Kea Science Reserve. Appellants Mauna Kea Anaina Hou ("MKAH"), Clarence Kukauakahi Ching, Flores-Case 'Ohana, Deborah J. Ward, Paul K. Neves, and KAHEA: The Hawaiian Environmental Alliance ("KAHEA") (collectively, "Appellants") filed their Notice of Appeal on May 13, 2013. Initial briefing was completed on November 19, 2013, and oral arguments were heard on December 13, 2013. Later on December 13, 2013, the Hawai'i Supreme Court rendered its decision in *Kilakila 'O Haleakala v. Board of Land and Natural Resources*, 131 Hawai'i 193, 317 P.3d 27 (2013). The parties notified the Court of the decision, and Appellees requested supplemental briefing to address whether that case had any impact on the present action. On December 19, 2013, the Court granted the request for supplemental briefing. On January 2, 2014, the TMT Observatory Corporation filed a Motion for Leave to File Brief as Amicus Curiae, which the Court subsequently granted. The parties submitted supplemental briefs on January 21, 2014, and additional oral arguments were heard on February 20, 2014. Richard N. Wurdeman, Esq. appeared for Appellants MKAH, Ching, Flores-Case 'Ohana, Ward, Neves, and KAHEA. David M. Louie, Esq., Daniel A. Morris, Esq., and Julie H. China, Esq. appeared for Appellees BLNR and William J. Aila, Jr. Jay S. Handlin, Esq. and Ian L. Sandison, Esq. appeared for Appellee UHH.

Based on the record on appeal, the briefs submitted, arguments of counsel, and applicable law, the Court finds as follows:

II. DESCRIPTION OF THE PROJECT

1. On September 2, 2010, UHH submitted the Conservation District Use Application ("CDUA") for the Project to the Department of Land and Natural Resources. FOF 9.

2. In November 2010, written comments on the CDUA were submitted by MKAH (by Kealoha Pisciotta), KAHEA, Mr. Neves (claiming to represent the Royal Order of Kamehameha I ("ROOK I")), Sierra Club Hawai'i (by Ms. Ward), and Mr. Ching. FOF 10.

3. On December 2 and 3, 2010, the DLNR held public informational hearings on UHH's CDUA in Hilo and Kona, respectively. MKAH (Ms. Pisciotta), Mr. Neves, Ms. Ward, and Mr. Ching offered live testimony at the Hilo hearing. MKAH (Ms. Pisciotta), Ms. Ward, Mr. Ching, and Mr. Flores and his family testified at the Kona hearing. FOF 11.

4. The BLNR held a public hearing on UHH's CDUA on February 25, 2011. At that hearing, there was extensive public testimony, including from MKAH (Ms. Pisciotta), KAHEA, and Mr. Ching. Members of the Board and its Chairperson directed numerous questions to the representatives of UHH. At the conclusion of the comments and questions, the Board rendered a preliminary ruling, voting unanimously to grant CDUP HA-3568 for the Project. Essentially simultaneously, on its own motion, the Board directed that a contested case be held; provided a date for interested parties to petition to participate in a contested case; and expressly conditioned implementation of the CDUP upon UHH prevailing in any resulting contested case. FOF 15.

5. On February 23, 2011, E. Kalani Flores submitted a written petition for a contested case hearing on behalf of himself, B. Pualani Case, and their two daughters, Hawane Rios and Kapulei Flores. FOF 26. Hawane Rios and Kapulei Flores were later withdrawn as potential parties to the contested case. FOF 51. Thus, for purposes of the underlying proceeding and this appeal, the Flores-Case 'Ohana is an unincorporated association consisting of Mr. Flores

and Ms. Case. FOF 5.

6. On March 7, 2011: Ms. Pisciotta submitted a written petition for a contested case hearing on behalf of MKAH, an unincorporated association, FOF 3, 18; Ms. Martha Townsend submitted a written petition for a contested case hearing on behalf of KAHEA, a nonprofit Hawaii environmental organization, FOF 2, 20; Mr. Neves, a native Hawaiian cultural practitioner, submitted a written petition for a contested case hearing on behalf of himself and on behalf of ROOK I (the petition for ROOK I was subsequently withdrawn), FOF 7, 23; and Mr. Ching, a native Hawaiian cultural practitioner, and Ms. Ward, a recreational user of Mauna Kea land, also submitted written petitions for a contested case hearing on behalf of themselves as individuals, FOF 4, 6, 22, 25.

7. On April 7, 2011, Paul Aoki, Esq. was selected as the Hearing Officer. FOF 31. After a hearing on standing, the Hearing Officer issued an order admitting Mr. Ching, KAHEA, MKAH, Ms. Ward, Mr. Neves, and the Flores-Case 'Ohana as parties to the contested case. FOF 52.

8. The contested case proceeding included a site visit to the Mauna Kea Science Reserve on August 11, 2011, and evidentiary hearings on August 15, 16, 17, 18, and 25, 2011 and September 26 and 30, 2011. FOF 76, 81. Following the hearing, each side submitted proposed findings of fact and conclusions of law, comments on the other side's proposed findings and conclusions, and briefs responding to the comments. The Hearing Officer deliberated and then rendered his Proposed Findings of Fact, Conclusions of Law and Decision and Order on November 30, 2012. *See* ROA, Vol. 5, Doc. 108. On January 9, 2013, the parties submitted exceptions to the Proposed Findings of Fact, Conclusions of Law and Decision and Order, and on January 23, 2013, the parties filed responses to one another's exceptions. *See*

ROA, Vol. 5, Docs. 112 - 116. On April 12, 2013, the BLNR issued its Findings of Fact, Conclusions of Law and Decision and Order.

III. STANDARD OF REVIEW

1. Hawai'i Revised Statutes ("HRS") § 91-14(g) sets forth the standard of review for an agency appeal:

> Upon review of the record the court may affirm the decision of the agency or remand the case with instructions for further proceedings; or it may reverse or modify the decision and order if the substantial rights of the petitioners may have been prejudiced because the administrative findings, conclusions, decisions, or orders are:
>
> (1) In violation of constitutional or statutory provisions; or
>
> (2) In excess of the statutory authority or jurisdiction of the agency; or
>
> (3) Made upon unlawful procedure; or
>
> (4) Affected by other error of law; or
>
> (5) Clearly erroneous in view of the reliable, probative, and substantial evidence on the whole record; or
>
> (6) Arbitrary, or capricious, or characterized by abuse of discretion or clearly unwarranted exercise of discretion.

2. "Under HRS § 91-14(g), conclusions of law are reviewable under subsections (1), (2), and (4); questions regarding procedural defects under subsection (3); findings of fact under subsection (5); and an agency's exercise of discretion under subsection (6)." *Paul's Elec. Serv. v. Befitel*, 104 Hawai'i 412, 416, 91 P.3d 494, 498 (2004) (citations omitted).

3. An agency's conclusions of law "are freely reviewable to determine if the agency's decision was in violation of constitutional or statutory provisions, in excess of statutory authority or jurisdiction of agency, or affected by other error of law." *Ka Pa'akai O Ka'Aina v. Land Use Comm'n*, 94 Hawai'i 31, 41, 7 P.3d 1068, 1078 (2000) (citations and internal quotation marks omitted). When reviewed under HRS § 91-14(g)(5), an agency's findings of fact "are not

clearly erroneous and will be upheld if supported by reliable, probative and substantial evidence unless the reviewing court is left with a firm and definite conviction that a mistake has been made." *Brescia v. N. Shore Ohana*, 115 Hawai'i 477, 491-92, 168 P.3d 929, 943-44 (2007) (citation omitted).

4. Mixed questions of fact and law are reviewed under the clearly erroneous standard. *In re Waiola O Molokai, Inc.*, 103 Hawai'i 401, 421, 83 P.3d 664, 684 (2004). Where mixed questions are presented, "deference will be given to the agency's expertise and experience in the particular field and the court should not substitute its own judgment for that of the agency." *Dole Hawai'i Division-Castle & Cooke, Inc. v. Ramil*, 71 Haw. 419, 424, 794 P.2d 1115, 1118 (1990) (citation omitted).

IV. DISCUSSION

A. THE BLNR'S APPROVAL OF CDUP HA-3568 PRIOR TO THE CONTESTED CASE HEARING DOES NOT WARRANT REVERSAL

1. The Court finds that the Hawai'i Supreme Court's discussion, analysis, and holding in *Kilakila* is dispositive of whether the preliminary approval of the CDUP in this case was appropriate. The *Kilakila* case addressed the specific question of:

> whether a circuit court has jurisdiction over an HRS § 91-14 appeal when an agency makes a final decision on a given matter – in this case, an application for a conservation district use permit – without either granting or denying an interested party's request for a contested case hearing on the matter.

Kilakila, 131 Hawai'i at 195, 317 P.3d at 29.

2. In *Kilakila*, the BLNR approved a conservation district use permit after a public board meeting without granting or denying the appellant's request for a contested case hearing. Kilakila 'O Haleakala ("KOH") appealed to the circuit court. The circuit court dismissed the appeal for lack of jurisdiction because a contested case hearing had not been held. The circuit

court also determined that the appeal was moot because the BLNR subsequently granted a contested case hearing. A consequence of this decision was that construction under the conservation district use permit was allowed.

3. In reversing the circuit court's decision, the Hawai'i Supreme Court concluded in *Kilakila* that:

> [b]ecause BLNR voted to grant the permit without having held a contested case hearing as requested by KOH prior to taking that vote, BLNR effectively rendered a final decision and order within the meaning of HRS § 91-14, and KOH at that point had the right to appeal to circuit court.

Id. at 196, 317 P.3d at 30. Thus, the focus of *Kilakila* was the issue of finality of the BLNR decision and order. If the decision and order were final, then KOH had the right to appeal it to the circuit court.

4. Of particular concern to the Hawai'i Supreme Court in *Kilakila* was the fact that unless KOH had the right to appeal, it would not have had the opportunity to seek effective relief. This is evident in the context of the Hawai'i Supreme Court's discussion of mootness. Here, the Hawai'i Supreme Court stated:

> Crucially, the BLNR had neither stayed nor revoked the permit, not even when KOH appealed or BLNR granted KOH a contested case hearing on the already issued permit. Because the permit remains in effect despite BLNR's failure to hold a contested case hearing before voting to grant the permit, UH can still build on Haleakala and KOH can still seek effective relief against UH. Consequently, we agree with KOH's position and conclude that this case is not moot.

Id. at 199, 317 P.3d at 33.

5. Having reviewed the record on appeal and the BLNR's FOF and COL, the Court finds that the present case is distinguishable from *Kilakila*. In this case, the BLNR granted a contested case hearing essentially simultaneously with the preliminary grant of the CDUP. The continued viability of the preliminary grant of the CDUP depended upon a final grant of the

permit after a contested case hearing. Unless and until there was a final grant of the CDUP after a contested case hearing, construction under the CDUP was not to occur. Thus, in the March 3, 2011 conditional CDUP, Condition 21 imposed by the BLNR stated: "If the contested case proceeding is initiated, no construction shall occur until a *final decision* is rendered by the Board in favor of the applicant or the proceeding is otherwise dismissed." ROA, Vol. 2, Doc. 14 (emphasis added). By stating that its "final decision" would come only after conclusion of the contested case hearing, the Board made clear that its February 25, 2011 vote on the CDUP was a preliminary ruling.

6. In this case, the preliminary grant of the CDUP did not have such a legal consequence that a contested case hearing was required prior to this action being taken. The BLNR contemplated and did actually afford a contested case hearing prior to the entry of a final decision and order. Moreover, Appellants were not prejudiced during the pendency of the contested case hearing because construction under the CDUP was prohibited.

7. In summary, in *Kilakila*, the Hawai'i Supreme Court determined that a final decision and order was entered because the BLNR voted to grant the permit while deferring decision on the request for a contested case hearing, and did not stay the permit, even when the objectors immediately sought to appeal. In this case, by contrast, after preliminarily granting the CDUP, the BLNR immediately ordered that a contested case hearing be held, stayed the permit, and only entered its final decision and order after the contested case hearing had been concluded; and, after the preliminary vote on the permit, there was no immediate request for an appeal.

8. Further, the preliminary grant of the CDUP did not alter the burden of proof placed on UHH under Hawaii Administrative Rules ("HAR") § 13-5-30(c). *See* COL 29.

9. The Court's finding that the *Kilakila* decision has no impact on the BLNR's

approval of the CDUP for the Thirty Meter Telescope Project is further supported by the Hawai'i Supreme Court's recent decisions in *Blake v. County of Kaua'i Planning Comm'n*, 131 Hawai'i 123, 315 P.3d 749 (2013), and *Kellberg v. Yuen*, 131 Hawai'i 513, 319 P.3d 432 (2014).

10. In *Blake*, which was decided on December 19, 2013, the Hawai'i Supreme Court found two considerations to be paramount in determining whether an agency action was "final": (1) whether the agency's decision reflected its "definitive position" on the matter being challenged, *i.e.*, "the consummation of the agency's decision-making process, rather than merely . . . a tentative or interlocutory" determination; and (2) whether the agency's actions allowed construction to commence. *Blake*, 131 Hawai'i at 133-35 & n.9, 315 P.3d 759-61 & n.9. Then, in *Kellberg*, decided on January 22, 2014, the Hawai'i Supreme Court found that a final agency decision is one that is "decisive" and "conclusive," "not to be altered or undone"; it "connotes a state of being final, settled or complete." *Kellberg*, 131 Hawai'i at ___, 319 P.3d at 447.

11. These decisions confirm that the BLNR's February 25, 2011 vote on the CDUP was not a final decision. The facts recited above show that the preliminary grant of the CDUP was interlocutory and construction was not allowed to proceed until, if ever, a final decision in favor of the Project was rendered. Condition 21 imposed by the BLNR made plain that the initial CDUP could be altered or undone by the outcome of the contested case hearing, and so the preliminary ruling was not conclusive. Under *Kilakila*, *Blake*, and *Kellberg*, the preliminary grant of the CDUP was not a final agency action.

12. For all of the reasons stated herein, the Court finds that *Kilakila* does not apply to the BLNR's February 25, 2011 vote, and that reversal of the Decision and Order under the standards set forth under HRS § 91-14(g) is not warranted.

B. THE FOF AND COL RELATING TO THE CRITERIA SET FORTH UNDER HAR § 13-5-30(c) DO NOT WARRANT REVERSAL

1. HAR § 13-5-30(c) (2011) sets forth the eight criteria to be applied by the BLNR in evaluating the merits of a proposed land use in the conservation district.

2. The clear inference from Appellants' arguments is that Appellants' premise is that the use of conservation district land for astronomy facilities inherently violates the eight criteria identified in HAR § 13-5-30(c). However, HAR § 13-5-24(c) makes clear that astronomy facilities under an approved management plan are appropriate in the Resource subzone, which is where the Project is to be located. Accordingly, the Court finds that Appellants' premise that use of conservation district land for astronomy facilities inherently violates Section 13-5-30(c) lacks merit.

3. As stated in their Opening Brief (at 11-27), Appellants have asserted that "The Reliable, Probative and Substantial Evidence Does Not Support a Decision that" each of the eight criteria in Section 13-5-30(c) is satisfied. In other words, Appellants have challenged the BLNR's findings on the eight criteria as being clearly erroneous. Having reviewed the record on appeal and the BLNR's FOF and COL, the Court finds that the BLNR's findings are amply supported by the reliable, probative, and substantial evidence, and are not clearly erroneous; the Court further finds that Appellants' challenges to the BLNR's FOF and COL with respect to the eight criteria are unfounded and that reversal of the Decision and Order under the standards set forth under HRS § 91-14(g) is not warranted.

C. THE FOF AND COL RELATING TO NATIVE HAWAIIAN CUSTOMARY AND TRADITIONAL PRACTICES DO NOT WARRANT REVERSAL

1. In the contested case hearing, at Appellants' request, the parties stipulated that Appellants Neves, Ching, Flores, Case, and Pisciotta would be recognized as expert witnesses on their cultural practices regarding Mauna Kea. Appellants now argue that this stipulation

somehow resulted in their providing insufficient evidence of traditional and customary native Hawaiian cultural practices. Having reviewed the record on appeal and the BLNR's FOF and COL, the Court finds that Appellants were afforded the full opportunity to provide their written direct testimonies prior to the stipulation, and were also afforded an opportunity to provide oral summaries of their testimonies after the stipulation. Appellants also appear to argue that it was assumed, based on the stipulation, that certain expert opinion testimony would be deemed conclusive. However, clearly, the presentation of expert opinion testimony is not conclusive; as with any testimony, the factfinder may accept or reject it. *See Miyamoto v. Lum*, 104 Hawai'i 1, 16, 84 P.3d 509, 524 (2004). The Court, therefore, rejects Appellants' arguments.

2. Having reviewed the record on appeal and the BLNR's FOF and COL relating to native Hawaiian cultural practices and resources, the Court finds that the BLNR's findings and conclusions relating to native Hawaiian customary and traditional practices were not clearly erroneous, and that reversal of the Decision and Order is not warranted under the standards set forth under HRS § 91-14(g).

D. THE CDUP IS SUBJECT TO A SUFFICIENT MANAGEMENT PLAN

1. HAR § 13-5-24(c) R-3 (D-1) (2011) allows for a land use of "[a]stronomy facilities under a management plan approved simultaneously with the permit."

2. Under HAR § 13-5-2 (2011), a "management plan" is defined as a "project or site based plan to protect and conserve natural and cultural resources." The Court finds that HAR § 13-5-2 does not require that the "management plan" be a "comprehensive plan," as argued by Appellants.

3. The TMT Management Plan not only relates to the Project, but also incorporates components of the Mauna Kea Comprehensive Management Plan and its four subplans. The

Court finds that the TMT Management Plan and the plans that it incorporates are clearly sufficient for the TMT Project.

4. Having reviewed the record on appeal and the BLNR's FOF and COL relating to the TMT Management Plan, the Court finds that reversal of the Decision and Order is not warranted under the standards set forth under HRS § 91-14(g).

E. NONE OF APPELLANTS' OTHER ARGUMENTS WARRANTS REVERSAL

All other arguments not expressly addressed herein have been considered and the Court finds, based upon a review of the record on appeal and the BLNR's FOF and COL, and applying the standards of review set forth above, that such arguments do not warrant reversal of the Decision and Order under the standards set forth under HRS § 91-14(g).

V. DECISION AND ORDER

Based on the foregoing, it is hereby ORDERED, ADJUDGED AND DECREED that the Board of Land and Natural Resources's Findings of Fact, Conclusions of Law and Decision and Order dated April 12, 2013 is AFFIRMED.

DATED: Hilo, Hawai'i, May 5, 2014.

GREG K. NAKAMURA (Seal) SEAL

JUDGE OF THE ABOVE-ENTITLED COURT

APPROVED AS TO FORM:

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Attorney for Appellants
Mauna Kea Anaina Hou; Clarence Kukauakahi Ching;
Flores-Case 'Ohana; Deborah J. Ward; Paul K. Neves; and
KAHEA: The Hawaiian Environmental Alliance, a domestic
non-profit corporation

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THIRD CIRCUIT COURT
STATE OF HAWAII

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IN THE CIRCUIT COURT OF THE THIRD CIRCUIT

STATE OF HAWAI'I

MAUNA KEA ANAINA HOU; CLARENCE KUKAUAKAHI CHING; FLORES-CASE 'OHANA; DEBORAH J. WARD; PAUL K. NEVES; and KAHEA: THE HAWAIIAN ENVIRONMENTAL ALLIANCE, a domestic non-profit corporation, Appellants, vs.	CIVIL NO. 13-1-0349 (AGENCY APPEAL) **FINAL JUDGMENT**

I hereby certify that this is a full, true and correct copy of the original on file in this office.

Clerk, Third Circuit Court, State of Hawaii

4851-1053-1354.2

EXHIBIT 5

BOARD OF LAND AND NATURAL RESOURCES, STATE OF HAWAII; DEPARTMENT OF LAND AND NATURAL RESOURCES, STATE OF HAWAII; WILLIAM AILA, JR., in his official capacity as Chair of the Board of Land and Natural Resources and Director of the Department of Land and Natural Resources, and the UNIVERSITY OF HAWAI'I AT HILO,

Appellees.

FINAL JUDGMENT

All claims filed by Appellants Mauna Kea Anaina Hou, Clarence Kukauakahi Ching, Flores-Case 'Ohana, Deborah J. Ward, Paul K. Neves, and KAHEA: The Hawaiian Environmental Alliance, a domestic non-profit corporation ("Appellants"), against Appellees Board of Land and Natural Resources, Department of Land and Natural Resources, William J. Aila, Jr., in his official capacity as Chairperson of the Board of Land and Natural Resources and Director of the Department of Land and Natural Resources, and the University of Hawai'i at Hilo ("Appellees") were resolved in Appellees' favor by the Decision and Order Affirming Board of Land and Natural Resources, State of Hawaii's Findings of Fact, Conclusions of Law and Decision and Order Granting Conservation District Use Permit for the Thirty Meter Telescope at the Mauna Kea Science Reserve dated April 12, 2013, filed herein on May 5, 2014.

Now, therefore, pursuant to Rule 58 and, to the extent applicable, Rule 72(k) of the Hawai'i Rules of Civil Procedure, Judgment is hereby entered in favor of Appellees as to all claims in Appellants' Notice of Appeal, filed *ex officio* on May 13, 2013.

This Judgment resolves all claims as to all parties. There are no further claims or parties remaining in this matter.

DATED: Hilo, Hawai'i, May 5, 2014.

GREG K. NAKAMURA
JUDGE OF THE ABOVE-ENTITLED COURT

APPROVED AS TO FORM:

RICHARD NAIWIEHA WURDEMAN
333 Queen Street, Suite 604
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Attorney for Appellants
Mauna Kea Anaina Hou; Clarence Kukauakahi Ching;
Flores-Case 'Ohana; Deborah J. Ward; Paul K. Neves; and
KAHEA: The Hawaiian Environmental Alliance, a domestic
non-profit corporation

SUBLEASE AND NON-EXCLUSIVE EASEMENT AGREEMENT
BETWEEN
TMT INTERNATIONAL OBSERVATORY LLC
AND
THE UNIVERSITY OF HAWAII

THIS SUBLEASE AND NON-EXCLUSIVE EASEMENT AGREEMENT (this "**Sublease**") is made and entered into on this _____ day of _____, 2014, effective as of _____, 2014 (the "**Effective Date**"), by and between TMT International Observatory LLC, a Delaware limited liability company ("**Sublessee**"), and the University of Hawaii, a public body corporate and the public university of the State of Hawaii ("**Sublessor**").

RECITALS

This Sublease is entered into with reference to the following:

A. Sublessor leases certain lands located on and around the summit of Mauna Kea, Island of Hawaii from the State of Hawaii, Board of Land and Natural Resources ("**Lessor**") pursuant to General Lease No. S-4191, dated June 21, 1968 (the "**Master Lease**"), a copy of which is attached hereto as **Exhibit A** and incorporated herein by reference.

B. Sublessee desires to sublease a portion of said lands, as more fully described below, for the purpose of constructing and operating an optical/infrared telescope facility known as the Thirty Meter Telescope ("**TMT**") in the manner described in, and accordance with, this Sublease and that certain Scientific Cooperation Agreement Between Sublessee and Sublessor Concerning the Design, Construction and Operation of the Thirty Meter Telescope on Mauna Kea, Hawaii (the "**Scientific Cooperation Agreement**") executed simultaneously herewith and to be effective on the same Effective Date indicated above. The TMT facilities will include, but are not limited to, the TMT telescope and enclosure; the support building (the space necessary to support scientific observers and technical personnel while at the summit); together with instruments, electrical conductors, cableways and tunnels; driveways and parking lots; power, telephone and communications conduits and lines; and access roads within the border of the Subleased Premises (as defined in Section 1 below) ("**TMT Facilities**"). "TMT Facilities" does not include any facilities outside the Subleased Premises.

C. The Master Lease provides that Sublessor may not enter into a sublease without the prior written consent of the Lessor. Prior written consent to this Sublease has been obtained pursuant to that certain Consent to Sublease Under General Lease No. S-4191 dated _____, 2014, a copy of which is attached hereto as **Exhibit B** and incorporated herein by reference.

D. In 2000, Sublessor adopted the Mauna Kea Science Reserve Master Plan, which establishes the management structures for Sublessor's stewardship of the areas it

manages on Mauna Kea. In 2009 and 2010, Sublessor adopted, and Lessor approved, the Mauna Kea Comprehensive Management Plan ("**CMP**") and its subplans: the Cultural Resources Plan, Natural Resources Management Plan, Public Access Plan, and Decommissioning Plan. These plans commit Sublessor to exercise responsible stewardship of Mauna Kea and to ensure that astronomical activities are conducted in a manner that respects the cultural significance of Mauna Kea, protects the environment, and is responsive to the needs and concerns of Native Hawaiians and the public.

E. In May 2010, Sublessor completed an Environmental Impact Statement for the TMT. In September 2010, Sublessor filed an Application for a Conservation District Use Permit to construct the TMT. The permit was approved in April 2013. Sublessee is now seeking a long term sublease to build and operate the TMT.

F. Sublessor has submitted a request to the Lessor for the mutual cancellation of the current Master Lease and issuance of a new master lease for a term of sixty-five (65) years from issuance. Sublessee desires to continue operation of the TMT Facilities beyond 2033. It is desirable for management and planning purposes, including appropriate stewardship of Mauna Kea, to address the potential continued operation of the TMT Facilities beyond 2033 in this Sublease.

AGREEMENT

Now, therefore, in consideration of the foregoing and of the mutual promises and agreements set forth herein, Sublessor and Sublessee agree as follows:

1. Subleased Premises. Sublessor does hereby sublease to Sublessee, and Sublessee does hereby sublease from Sublessor, the parcel of land shown and described in **Exhibits C-1** and **C-2** attached hereto and incorporated herein by reference (the "**Subleased Premises**"), constituting a portion of the land leased by Sublessor under the Master Lease.

2. Non-Exclusive Easements. Sublessee shall have the right of access to and egress from the Subleased Premises over and across the Mauna Kea Science Reserve, utilizing the common entrances and rights of way, together with others entitled thereto, under such rules and regulations as may be established by and amended from time to time by Sublessor. Sublessee shall also have the rights to (i) utilize and construct in, grade, fill, and perform work approved by Lessor and Sublessor in the easement area shown and described in **Exhibits C-1** and **C-3** attached hereto and incorporated herein by reference (the "**Easement Area**"), (ii) utilize and construct in and perform work approved by Lessor and Sublessor and consistent with the TMT Access Way Agreement dated September 13, 2012, by and among Sublessor, the Smithsonian Institution Astrophysical Observatory, and the TMT Observatory Corporation, in the spur road from the Mauna Kea Observatory Access Road to the Subleased Premises, (iii) install and utilize power and communications conduits and lines from a central handhole or handholes in the Mauna Kea summit area to the Subleased Premises, and (iv) utilize and access the Batch Plant staging area as authorized by the TMT CDUP (as defined in Section 4 below).

3. Survey/Site Specific Description. The site shown in Exhibit C-1 hereto has been surveyed. The area covered by the Subleased Premises is specifically described in the metes and bounds description in Exhibit C-2 hereto. The area covered by the Easement Area is specifically described in the metes and bounds description in Exhibit C-3 hereto.

4. Use of Subleased Premises. Sublessee shall use the Subleased Premises solely to construct and operate the TMT Facilities in accordance with this Sublease and the Scientific Cooperation Agreement. The construction and operation of the Subleased Premises shall be conducted in strict compliance with the terms and conditions of Conservation District Use Permit HA-3568 approved by the Lessor on April 12, 2013 (the "**TMT CDUP**"), including performance of all mitigation conditions set forth therein, and any amended or subsequent Conservation District Use Permit. Sublessee shall not at any time during the term of this Sublease construct, place, maintain, or install on the Subleased Premises any other building, structure, or improvement without the prior written approval of Sublessor and Lessor and upon such conditions as Sublessor or Lessor may impose. For purposes of the foregoing sentence, any other "improvement" means improvements that are not specified in or contemplated by the TMT CDUP and not contained within the building envelop of TMT observatory plans approved in accordance with Section 37 below. For the avoidance of doubt, the addition of any instruments, equipment or any other additions that are fully contained within the observatory structure or buildings shall not require the prior written approval of Sublessor or Lessor, provided that such additions are otherwise in compliance with the terms of this Sublease and the Master Lease.

5. Management and Stewardship Obligations. This Sublease shall be subject to the following:

a. The Subleased Premises are within the State Land Use Conservation District and all uses shall comply with the applicable rules and regulations of the State Conservation District, including but not limited to Hawaii Revised Statutes ("**HRS**") Chapter 183C and Hawaii Administrative Rules ("**HAR**") Chapter 13-5.

b. Sublessee shall comply with applicable State rules and regulations related to historic preservation including but not limited to HRS Chapter 6E, and HAR Chapters 13-197, 13-198, 13-275 through 13-284 and 13-300, and any applicable amendments of or supplements to such historic preservation regulations.

c. Sublessor shall exercise management jurisdiction over the Subleased Premises pursuant to management plans approved by the Lessor, including the CMP and its subplans, the Natural Resources Management Plan, Cultural Resources Management Plan, Decommissioning Plan, and Public Access Plan, the TMT Management Plan, and any amendments of or supplements to management plans approved by the Lessor for lands that include the Subleased Premises. Sublessee acknowledges that it has reviewed and is familiar with the CMP and subplans. Sublessor shall keep Sublessee informed regarding any future amendments or supplements thereto, and shall promptly provide copies of such documents to Sublessee.

d. All public and commercial activities in the areas of Mauna Kea managed by Sublessor, including recreational activities, shall be governed by administrative rules promulgated pursuant to the authority granted Sublessor by Act 132 (SLH 2009), following consultation with DLNR, the Office of Hawaiian Affairs, and the public in accordance therewith.

e. The Constitution of the State of Hawaii mandates the protection of recognized customary and traditional native Hawaiian rights subject to State regulation. This Sublease shall be subject to the right of Native Hawaiians to exercise protected traditional and customary practices as provided in the CMP and consistent with the laws of the State of Hawaii.

f. Sublessor has established a management structure to manage the lands of which the Subleased Premises are a part, which structure includes the Office of Mauna Kea Management at the University of Hawaii at Hilo, the volunteer community-based Mauna Kea Management Board and the Kahu Kū Mauna advisory council on Hawaiian cultural matters.

6. Operation of the TMT Facilities. Neither Sublessee nor any successor or assign shall operate the TMT Facilities for purposes of research without a valid and effective Scientific Cooperation Agreement with Sublessor. The TMT Facilities may be operated in the absence of a valid and effective Scientific Cooperation Agreement only when necessary to ensure the safety of personnel or of the TMT Facilities.

7. Rent. In consideration for the use of the Subleased Premises, Sublessee shall pay to Sublessor annual rents based on calendar years during the term of this Sublease as set forth below. The annual rent during the construction period is based on the incremental value of the major milestones achieved during the construction of the TMT Facilities. The milestones are set forth below and generally span approximately two (2) year periods. The annual rents shall be paid based upon the specified calendar years below regardless of whether the respective milestone is achieved.

Year	Annual Rent	Milestone
1-3	$300,000	Civil construction
4-5	$400,000	Enclosure
6-7	$600,000	Telescope Structure
8-9	$700,000	Instruments and Mirrors
10	$900,000	Commissioning
11 and later	$1,080,000	Operations

Rent shall be paid in advance, in equal semi-annual installments, on or before January 31 and July 31, of each calendar year during the term of this Sublease. The first installment of rent for the initial, partial year (which will be prorated) shall be due within 30 days of the date of execution of this Sublease. Beginning in January of 2015, and in January of each year thereafter, the annual rental amount for the year shall be based on the initial annual rental amount adjusted for the annual rate of inflation recorded for subsequent years in

accordance with the Consumer Price Index for all Urban Consumers, U.S. City Average (not seasonally adjusted) (base year 1982-1984 - 100) ("**CPI**"), published by the United States Department of Labor, Bureau of Labor Statistics. The calculation shall be made by comparing the CPI last published for the date nearest to the Effective Date (the "**Base Index**") with the CPI last published for the date nearest to the current anniversary date (the "**Current Index**"). If the Current Index has increased or decreased over the Base Index, then the amount subject to adjustment shall be set for the ensuing year by multiplying the initial annual rental amount by a fraction, the numerator of which is the Current Index and the denominator of which is the Base Index. If the base of the CPI changes from the 1982-84 base (100), the CPI shall, thereafter, be adjusted to the 1982-84 base (100) before the computation indicated above is made. If the CPI Index is at any time no longer published, a comparable index generally accepted and employed by the real estate profession shall be used.

Sublessor shall receive, deposit, and apply the rents received hereunder in accordance with the laws of the State of Hawaii, including, without limitation, Section 304A-2170 of the Hawaii Revised Statutes, as amended from time to time. Such deposit shall be net of the funds required by law to be transferred or paid to the Office of Hawaiian Affairs. Sublessor shall be responsible for paying over to the Office of Hawaiian Affairs its ratable share of the rents received in accordance with the laws of the State of Hawaii.

8. Master Lease; Order of Precedence. The rights granted to Sublessee pursuant to this Sublease are subject to the terms and conditions of the Master Lease, as the same may be amended. In the event of any conflict between the terms of this Sublease and the Master Lease, the Master Lease shall be controlling. In the event of any conflict between the terms of this Sublease and the Scientific Cooperation Agreement, this Sublease shall be controlling. Sublessee shall comply with the terms and conditions of the Master Lease at all times. If Sublessee causes a breach or default of any term, covenant, restriction, or condition of the Master Lease, and this breach or default shall continue for a period of more than forty-five (45) days after delivery by the Sublessor of a written notice of breach or default and demand for cure (plus any additional period as the Lessor may allow for good cause), then Sublessor may, subject to the provisions of Section 171-21 of the Hawaii Revised Statutes, at once re-enter the Subleased Premises, or any part, and upon or without the entry, at its option, terminate this Sublease without prejudice to any other remedy or right of action for arrears of rent or for any preceding or other breach of contract; and in the event of termination, at the option of the Sublessor, all buildings and improvements shall remain and become the property of the Sublessor or shall be removed by Sublessee in accordance with the Site Decommissioning Plan at Sublessee's sole cost and expense; furthermore, Sublessor shall retain all rent paid in advance to be applied to any damages.

9. Term and Termination. The term of this Sublease shall begin on the Effective Date and shall expire on December 31, 2033, unless extended or sooner terminated as provided herein.

a. Mutual Cancellation of Master Lease and Concurrent Issuance of New Master Lease.

(1) Sublessor shall use its best efforts to continue to and shall diligently pursue and take all actions necessary or advisable to complete the process currently underway with Lessor to obtain mutual cancellation of the current Master Lease subject to and concurrent with issuance of a new master lease (the "**New Master Lease**"), for a term of sixty-five (65) years and on terms and conditions materially consistent with the form of lease document submitted to the Lessor for consideration at its meeting of November 8, 2013. In the foregoing sentence, such "actions" shall include, without limitation, continuing to prepare and process an Environmental Impact Statement for the New Master Lease and such "terms and conditions" shall include, without limitation, that the New Master Lease shall include the provisions stating that "The lease shall be subject to all existing subleases entered into by the Lessee and approved by the Lessor pursuant to General Lease No. S-4191 dated June 21, 1968", and "Should this lease be rendered or declared invalid, illegal, or unenforceable by a court of competent jurisdiction, such invalidation shall cause, without further action, General Lease No. S-4191 dated June 21, 1968 to be revived in its entirety for the duration of the term therein, unless and until the parties subsequently agree otherwise".

(2) If the New Master Lease is approved and duly executed by Lessor and Sublessor, Sublessor shall promptly provide a copy of the New Master Lease to Sublessee. Effective as of the effective date of the New Master Lease, the following shall apply:

i) The provisions of this Sublease shall continue, whether by extension, issuance of a new sublease, or otherwise, provided that any continuance shall be in accordance with the terms herein as a sublease under the New Master Lease (including, without limitation, the rents set forth herein);

ii) The New Master Lease shall become the Master Lease for all purposes of this Sublease or any new sublease, and all references to the Master Lease in this Sublease or any new sublease shall thereafter refer to the New Master Lease; and

iii) The term of this Sublease shall automatically be extended, and shall thereafter expire sixty-five (65) years after the Effective Date, or upon expiration or termination of the New Master Lease, whichever shall first occur.

(3) If the New Master Lease is approved, but the term is not for sixty-five (65) years or the terms and conditions thereof are not materially consistent with the form of lease document submitted to the Lessor for consideration at its meeting of November 8, 2013, Sections 9.a.(2)i), ii), and iii) above shall apply unless Sublessee, at its sole option, provides a notice of termination to Sublessor in accordance with Section 9.d. below within one hundred twenty (120) days after Sublessee's receipt of the New Master Lease from Sublessor. Sublessor further agrees to diligently negotiate in good faith with Sublessee regarding mutually acceptable amendments to this Sublease during such one hundred twenty (120) day period and to promptly and diligently pursue approval by the Lessor of such amendments.

(4) If the New Master Lease is approved on terms and conditions materially consistent with the form of lease document submitted to the Lessor for consideration at its meeting of November 8, 2013 or is otherwise acceptable to Sublessee in Sublessee's sole judgment, Sublessor agrees to execute an amendment to this Sublease to reflect compliance with Sections 9.a.(2)i), ii), and iii) above or a new sublease on the same material terms and conditions as set forth in this Sublease (including, without limitation, the rents set forth herein) and reflecting compliance with Sections 9.a.(2)i), ii), and iii) above.

(5) Sublessee acknowledges that the Lessor has sole authority to determine whether to approve and enter into the New Master Lease, pursuant to and in accordance with Hawaii law, that no such approval has been granted as of the date of this Sublease, and that no prior commitment to issue such approval has been or can be made.

b. Failure to Obtain New Master Lease. If the New Master Lease is not approved by Lessor or if Sublessor otherwise fails to obtain a New Master Lease that automatically extends the term of this Sublease in accordance with of Sections 9.a.(3) or 9.a.(4) above, Sublessor agrees to use its best efforts to and will immediately and diligently pursue another means of acquiring sufficient rights to continue to lease the Subleased Premises to Sublessee on substantially the same terms and conditions herein, but for an additional term extending to, on or about March 31, 2079. If a subsequent master lease is approved and duly executed by Lessor and Sublessor, Sublessor shall promptly provide a copy of such subsequent master lease to Sublessee and, at Sublessee's sole option: (I) the provisions of Sections 9.a.(2)i), ii), and iii) above shall apply as if the subsequent master lease is the "New Master Lease" referred to in Section 9.a. above and Sublessor shall execute an amendment to this Sublease to reflect compliance with Sections 9.a.(2)i), ii), and iii) above or a new sublease on the same material terms and conditions as set forth in this Sublease (including, without limitation, the rents set forth herein) and reflecting compliance with Sections 9.a.(2)i), ii), and iii) above, or (II) Sublessor shall diligently negotiate in good faith a new sublease with Sublessee, if so desired by Sublessee, on the same material terms and conditions as set forth in this Sublease (including, without limitation, the rents set forth herein and compliance with the Master Lease then in effect) or on such other terms and conditions as may be mutually agreeable to Sublessor and Sublessee, with a term ending on or after March 31, 2079.

c. Option to Extend Term. Notwithstanding the foregoing in Sections 9.a. and 9.b. above, Sublessee shall have an option to extend the term of this Sublease beyond December 31, 2033 if Sublessor acquires rights to sublease the Subleased Premises to Sublessee, whether under the New Master Lease or other master lease, and such extension shall be coterminous with such New Master Lease or other master lease, but in no event shall the term of this Sublease extend beyond March 31, 2079. Such option shall expire on December 31, 2033 and Sublessee shall have sole discretion regarding whether or not to exercise such option.

d. Termination Without Cause. Sublessee shall have the right to terminate this Sublease at any time upon six (6) months prior written notice to Sublessor.

e. Termination for Breach. This Sublease may be terminated for breach as provided in, and in accordance with, Sections 8 above or 25 below.

f. Non-use and Abandonment. If the Sublessee shall, at any time for a continuous period of eleven (11) months, fail or cease to use, or abandon the Subleased Premises, this Sublease shall cease and terminate. Sublessor shall provide written notice to Sublessee within thirty (30) days after the sixth (6th) month of such eleven (11) month period and shall allow Sublessee three (3) months to cure any such purported abandonment.

10. Effect of Termination or Expiration; Decommissioning. Upon termination or expiration of this Sublease, Sublessee shall, at Sublessor's sole option and at Sublessee's sole cost and expense either (a) surrender the Subleased Premises with all improvements existing or constructed thereon, or (b) decommission and remove the TMT Facilities and restore the land in accordance with the CMP and the Decommissioning Plan for Mauna Kea Observatories, A Sub-Plan of the Mauna Kea Comprehensive Management Plan (dated January, 2010 and approved by Lessor in March, 2010) ("**Decommissioning Plan**"), and any amended, supplemental, or successor plans adopted by Sublessor with the approval of the Lessor.

a. Decommissioning Funding Plan. Sublessee shall develop and periodically update a Decommissioning Funding Plan as described in, and in accordance with, the Decommissioning Plan, to provide assurance to Sublessor that sufficient funds will be available to carry out deconstruction and site restoration activities upon termination or expiration of this Sublease. The Decommissioning Funding Plan shall include one or more financial assurance mechanisms as described in the Decommissioning Plan. Sublessee shall provide the initial Decommissioning Funding Plan on or before the execution date of this Sublease as set forth above. Sublessee shall submit an updated Decommissioning Funding Plan to Sublessor for Sublessor's review and approval as provided in the CMP, and shall provide such information and documents as Sublessor may reasonably request from time to time to verify the availability and adequacy of funding to meet Sublessee's decommissioning and restoration obligations. If, at any time during the term of this Sublease, Sublessor reasonably determines that the Decommissioning Funding Plan is insufficient, Sublessee shall consult with Sublessor and shall negotiate in good faith to determine the amount of such additional funding and provide such additional funding assurance mechanisms.

b. Site Decommissioning Plan. Upon expiration or termination of this Sublease or any extended sublease, decommissioning, including site restoration, shall be carried out in strict compliance with a Site Decommissioning Plan developed and approved in accordance with the Decommissioning Plan ("**Decommissioning Obligations**").

c. Delivery of Possession. Except as otherwise provided herein, upon expiration or termination of this Sublease or any extended sublease and completion of Sublessee's Decommissioning Obligations, Sublessee shall peaceably deliver to Sublessor possession of the Subleased Premises in a clean and orderly condition.

d. Payment of Decommissioning Costs of Sublessor or Lessor. Sublessee shall promptly pay on demand any reasonable and necessary costs incurred by Sublessor or Lessor to remedy any failure on the part of Sublessee to fully and timely perform its Decommissioning Obligations.

e. Survival. The obligations of Sublessee under this Section 10, the rights and obligations of Sublessor and Sublessee under Sections 9.a., 9.b., and 9.c. above, and the obligations of Sublessee under Section 11 below shall survive expiration or termination of this Sublease.

f. Termination Without Decommissioning; Assumption of Decommissioning Obligations by Sublessor. If this Sublease expires or is terminated prior to the expiration of the Master Lease and at a time when the TMT Facilities have remaining useful life, at Sublessor's sole option Sublessee shall be relieved of its Decommissioning Obligations and permitted to surrender its subleasehold interest in the Subleased Premises without removal of the TMT Facilities on such terms as may be mutually agreed in writing by Sublessor and Sublessee, which may include payment to Sublessor of an amount to be held in reserve for future decommissioning in exchange for Sublessor's assumption of the Decommissioning Obligations.

11. Indemnity. Sublessee shall indemnify, defend, and hold harmless Lessor, Sublessor, and their officers, agents, employees, and other persons acting on their behalf, from and against any claim or demand for loss, liability, or damages (including, but not limited to, reasonable attorneys' fees and claims for property damage, personal injury, or death, based upon any accident, fire, or other incident on or about the Subleased Premises) to the extent arising or resulting from: (1) any act or omission on the part of Sublessee relating to Sublessee's use, occupancy, maintenance, or enjoyment of the Subleased Premises; (2) any failure on the part of Sublessee to properly maintain the Subleased Premises, and areas adjacent thereto in Sublessee's use and control, including any accident, fire, or nuisance, arising from or caused by any failure on the part of Sublessee to maintain the Subleased Premises in a safe condition; or (3) Sublessee's non-observance or non-performance of any of the terms, covenants, and conditions of this Sublease or the Master Lease or the rules, regulations, ordinances and laws of the Federal, State, or County governments. Sublessee further agrees to indemnify, defend, and hold harmless Lessor and Sublessor from any damages or claims arising from the release of "hazardous material" (as defined in Section 31 below) on the Subleased Premises occurring while Sublessee is in possession, or elsewhere if caused by Sublessee or any person acting under Sublessee.

12. Insurance. Sublessee shall, at its own cost and expense, maintain the following insurance. Such insurance shall be subject to the reasonable approval of Sublessor and Lessor and, except as to any property insurance, shall name Sublessor and Lessor as additional insureds. Sublessee shall deliver executed certificates thereof to Sublessor on or before the Effective Date of this Sublease and thereafter within a reasonable time prior to the expiration of the term of each such policy. As often as any such policy shall expire or terminate, renewal or additional policies shall be procured and maintained by Sublessee in like manner to like extent. If Sublessee has only provided

Sublessor with certificates evidencing the policies required to be carried by Sublessee under this Sublease, Sublessee agrees to deliver executed copies of all such required policies to Sublessor within ten (10) days of Sublessor's written request for the same.

a. Property Insurance. Sublessee shall at its own expense and at all times during the term of this Sublease keep Sublessee's property, including but not limited to the TMT Facilities, insured against (i) all of the risks covered by a standard ISO Commercial Property Special Causes of Loss Form (or equivalent) which shall be in an amount equal to the full replacement cost of such property and shall not have a deductible in excess of Two Hundred and Fifty Thousand Dollars ($250,000), and (ii) such other hazards or risks which a reasonably prudent telescope operator on Mauna Kea would insure against. Sublessee hereby waives any and all rights of subrogation which it may have against Lessor and/or Sublessor, except to the extent of available insurance. In case the property required to be insured above or any part thereof shall be destroyed or damaged by fire or such other casualty required to be insured against, then and as often as the same shall happen, the proceeds of such insurance shall be paid to Sublessee to be used by Sublessee to promptly repair and restore any damage to such property.

b. Liability Insurance. Sublessee shall procure at Sublessee's expense and keep in force during the term of this Sublease and any extension thereof, the following insurance:

i) General Liability Insurance. Commercial general liability insurance (including coverage for liability caused by the fault of Sublessee, products-completed operations liability, personal and advertising injuries and coverage for contractual liability to the extent provided by ISO Form CGL #00-01-04-13 (or equivalent) covering Sublessee and naming as additional insureds: (i) Sublessor, (ii) Lessor, (iii) Sublessor's and Lessor's managers, officers, agents and employees, and (iv) such other parties as Sublessor may specify, insuring against liability arising out of the use, occupancy or maintenance of the Subleased Premises and areas appurtenant thereto by Sublessee with limits of not be less than One Million Dollars ($1,000,000) for property damage, and Five Million Dollars ($5,000,000) for injuries and deaths in any one occurrence or a combined single limit of Five Million Dollars ($5,000,000) per occurrence and deductibles of no more than Two Hundred and Fifty Thousand Dollars ($250,000). Such insurance shall be primary and shall not limit the liability of the Sublessee under Section 11 above.

ii) Auto Liability Insurance. Auto liability insurance covering all automobiles used by Sublessee in connection with its operations in the Subleased Premises with limits of not less than Five Hundred Thousand Dollars ($500,000) for property damage, and Five Million Dollars ($5,000,000) for injuries or deaths in any one occurrence or a combined single limit of Five Million Dollars ($5,000,000) per occurrence, with deductibles of no more than Five Thousand Dollars ($5,000) per occurrence and naming Sublessor and Lessor as additional insureds.

iii) Pollution Liability Insurance. Pollution liability insurance in the amount of not less than Five Million Dollars ($5,000,000) and with deductibles of no

more than Two Hundred and Fifty Thousand Dollars ($250,000) per occurrence and naming Sublessor and Lessor as additional insureds. Such insurance shall cover bodily injury, property damage, and environmental damage, including clean up and defense and remediation costs, for occurrences that arise from the occupancy or use of the Subleased Premises during the term of this Sublease by Sublessee.

c. General Insurance Requirements.

i) Sublessee shall use its best efforts to obtain the following terms in each policy of commercial property insurance and general liability insurance required in Sections 12.a. and 12.b. above to the extent that such terms are reasonably available in the commercial marketplace:

a) a provision that the liability of the insurer thereunder shall not be affected by, and that the insurer shall not claim, any right of set-off, counterclaim, apportionment, proration, or contribution by reason of, any other insurance obtained by or for Sublessor, Lessor, Sublessee, or any person claiming by, through, or under any of them; and

b) no provision relieving the insurer from liability for loss occurring while the hazard to buildings and personal property is increased, whether or not within the knowledge or control of, or because of any breach of warranty or condition or any other act or neglect by Sublessor, Lessor, Sublessee, or any person claiming by, through, or under any of them.

ii) Each policy of commercial property insurance and general liability insurance required in Sections 12.a. and 12.b. above shall:

a) be written by an insurance company rated A- or better, Class size VIII or better, by the Best's Key Rating Guide, based upon the rating system in effect on the date this Sublease is signed. In the event that Best's changes its rating system or ceases to provide ratings at some later date, then such insurance company shall have a rating from Best (or some other comparable rating service if Best's ceases to provide ratings) comparable to the "A- or better, Class VIII or better" requirement of the immediately preceding sentence; and

b) be specifically endorsed to provide that they are primary policies, not contributing with and not in excess of any coverage that Sublessor and/or Lessor may carry, notwithstanding anything to the contrary contained in any policies obtained by Sublessor and/or Lessor.

In addition, Sublessor shall request that each such policy be specifically endorsed to provide that such policy may not be cancelled except upon the insurer giving at least thirty (30) days' prior written notice thereof (ten (10) days in the case of nonpayment of premium) to Sublessor, Lessor, Sublessee, and other person having an interest in the property who has requested such notice of the insurer.

13. Taxes, Assessments, etc. Sublessee shall pay or cause to be paid, when due, the amount of all taxes, rates, and assessments of every description as to which the Subleased Premises or any part, or any improvements, or the Lessor, Sublessor, or Sublessee, are now or may be assessed or become liable by authority of law during the term of this Sublease; provided, however, that with respect to any assessment made under any betterment or improvement law which may be payable in installments, Sublessee shall be required to pay only those installments, together with interest, which becomes due and payable during the term of this Sublease.

14. Utility Services. Sublessee shall be responsible for obtaining any utility services and shall pay when due all charges, duties and rates of every description, including water, sewer, gas, refuse collection or any other charges, as to which the Subleased Premises or any part, or any improvements, or the Lessor, Sublessor, or Sublessee may become liable for during the term, whether assessed to or payable by the Lessor, Sublessor, or Sublessee.

15. Covenant against discrimination. The use and enjoyment of the Subleased Premises shall not be in support of any policy which discriminates against anyone based upon race, creed, sex, color, national origin, religion, marital status, familial status, ancestry, physical handicap, disability, age or HIV (human immunodeficiency virus) infection.

16. Sanitation. Sublessee shall keep the Subleased Premises and improvements in a strictly clean, sanitary and orderly condition.

17. Waste and Unlawful, Improper or Offensive Use of Subleased Premises. Sublessee shall not commit, suffer or permit to be committed any waste, nuisance, strip or unlawful, improper or offensive use of the Subleased Premises or any part, nor, without the prior written consent of the Lessor and Sublessor, cut down, remove or destroy, or suffer to be cut down, removed or destroyed, any trees now growing on the premises.

18. Compliance with Laws. Sublessee shall comply with all applicable requirements of all municipal, state, and federal authorities and observe all municipal, state and federal laws applicable to the Subleased Premises, now in force or which may be in force.

19. Inspection of Subleased Premises. Upon reasonable notice by Sublessor to Sublessee, Sublessee shall permit the Lessor, Sublessor, and their respective agents, at all reasonable times during the Sublease term, to enter the Subleased Premises and examine the state of its repair and condition.

20. Improvements. Sublessee shall not at any time during the term of this Sublease construct, place, maintain and install on the premises any building, structure or improvement of any kind and description except with the prior written approval of the Lessor and the Sublessor and upon those conditions as the Lessor or Sublessor may impose, unless otherwise provided in this Sublease. Construction of the TMT Facilities in accordance with Section 4 above is authorized. Except as otherwise provided in this

Sublease, Sublessee shall own all improvements constructed by and installed by Sublessee on the Subleased Premises.

21. Repairs to Improvements. Sublessee shall, at its own expense, keep, repair, and maintain all buildings and improvements now existing or hereafter constructed or installed on the Subleased Premises in good order, condition and repair, reasonable wear and tear excepted.

22. Liens. Sublessee shall not commit or suffer any act or neglect which results in the Subleased Premises, any improvement, the leasehold estate of the Sublessor, or the subleasehold estate of the Sublessee becoming subject to any attachment, lien, charge, or encumbrance, except as provided in this Sublease, and shall indemnify, defend, and hold the Lessor and Sublessor harmless from and against all attachments, liens, charges, and encumbrances and all resulting expenses.

23. Assignments, etc. Sublessee shall not sublease, subrent, transfer, assign, or permit any other person to exclusively occupy the Subleased Premises or any portion or transfer or assign this Sublease or any interest therein, either voluntarily or by operation of law, without the prior written approval of the Lessor and the Sublessor.

24. Costs of Litigation. Sublessee shall pay all costs, including reasonable attorney's fees, and expenses incurred by or paid by the Lessor or Sublessor (i) in enforcing the covenants and agreements of the Master Lease or this Sublease with respect to Sublessee, (ii) in recovering possession of the Subleased Premises, or (iii) in the collection of delinquent rental, taxes, and any and all other charges.

25. Breach. Time is of the essence in this Sublease and if the Sublessee shall become bankrupt, or if this Sublease and Subleased Premises shall be attached or taken by operation of law, or if Sublessee shall fail to observe and perform any of the material covenants, terms, and conditions contained in this Sublease and on its part to be observed and performed (other than a failure that causes a breach of the Master Lease, in which case Sublessor and Sublessee hereby agree that Section 8 above applies), and this failure shall continue for a period of more than sixty (60) days after delivery by the Sublessor of a written notice of breach or default and demand for cure, by personal service, registered mail or certified mail to the Sublessee at its last known address and to each holder of record having a security interest in the premises, then Sublessor may, subject to the provisions of Section 171-21 of the Hawaii Revised Statutes, at once re-enter the premises, or any part, and upon or without the entry, at its option, terminate this Sublease without prejudice to any other remedy or right of action for arrears of rent or for any preceding or other breach of contract; and in the event of termination, at the option of Sublessor, all buildings and improvements shall remain and become the property of the Sublessor or shall be removed by Sublessee in accordance with Section 10 above; furthermore, Sublessor shall retain all rent paid in advance to be applied to any damages.

26. Condemnation. If at any time, during the term of this Sublease, any portion of the Subleased Premises should be condemned, or required for public purposes by any

government authority, the rental shall be reduced in proportion to the value of the portion of the Subleased Premises condemned. Sublessee shall be entitled to receive from the condemning authority the proportionate value of the Sublessee's permanent improvements so taken in the proportion that it bears to the unexpired term of the Sublease; provided, that the Sublessee may, in the alternative, remove and relocate its improvements to the remainder of the lands occupied by Sublessee. Sublessee shall not by reason of the condemnation be entitled to any claim against the Lessor or Sublessor for condemnation or indemnity for leasehold interest and all compensation payable or to be paid for or on account of the leasehold interest by reason of the condemnation shall be payable to and be the sole property of the Lessor or Sublessor. The foregoing rights of the Sublessee shall not be exclusive of any other to which Sublessee may be entitled by law. Where the portion taken renders the remainder unsuitable for the use or uses for which the Subleased Premises were leased, Sublessee shall have the option to surrender this lease and be discharged and relieved from any further liability; provided, that Sublessee shall remove the permanent improvements constructed, erected and placed by it within any reasonable period allowed by the Lessor and Sublessor, in accordance with Section 10 above.

27. Right to Enter. The Lessor, Sublessor, or the County of Hawaii and their agents or representatives shall have the right to enter and cross any portion of the Subleased Premises for the purpose of performing any public or official duties; provided, however, in the exercise of these rights, the Lessor, Sublessor, or the County of Hawaii shall not interfere unreasonably with the Sublessee or Sublessee's use and enjoyment of the Subleased Premises.

28. Extension of Time. Notwithstanding any provision contained in this Sublease, when applicable, Sublessor may for good cause shown, allow additional time beyond the time or times specified in this Sublease for the Sublessee to comply, observe, and perform any of the Sublease terms, conditions, and covenants.

29. Quiet Enjoyment. Sublessor covenants and agrees with Sublessee that upon payment of the rent at the times and in the manner provided and the observance and performance of these covenants, terms, and conditions on the part of the Sublessee to be observed and performed, the Sublessee shall and may have, hold, possess, and enjoy the premises for the term of this Sublease, without hindrance or interruption by the Lessor, Sublessor or any other person or persons lawfully claiming by, through, or under the Lessor or Sublessor.

30. Non-warranty. Neither the Lessor nor Sublessor warrants the conditions of the Subleased Premises, as the same are being subleased as is.

31. Hazardous Materials. Sublessee shall not cause or permit the escape, disposal or release of any hazardous materials except as permitted by law. Sublessee shall not allow the storage or use of such materials in any manner not sanctioned by law or by the highest standards prevailing in the industry for the storage and use of such materials, nor allow to be brought onto the premises any such materials except to use in the ordinary

course of Sublessee's business where the Sublessee has provided Sublessor with a list that contains the identity of such materials used or stored by Sublessee in the ordinary course of its business and in compliance with all applicable federal and state regulations; provided, that if Sublessor disapproves in writing any such materials, the disapproved materials shall not be brought onto the Subleased Premises. If any lender or governmental agency shall ever require testing to ascertain whether or not there has been any release of hazardous materials by Sublessee, then the Sublessee shall be responsible for the reasonable costs thereof. In addition, Sublessee shall execute affidavits, representations and the like from time to time at Lessor's or Sublessor's request concerning Sublessee's best knowledge and belief regarding the presence of hazardous materials on the Subleased Premises placed or released by Sublessee.

For the purpose of this Sublease ,"hazardous material" shall mean any pollutant, toxic substance, hazardous waste, hazardous material, hazardous substance, or oil as defined in or pursuant to the Resource Conservation and Recovery Act, as amended, the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, the Federal Clean Water Act, or any other federal, state, or local environmental law, regulation, ordinance, rule, or by-law, whether existing as of the date hereof, previously enforced, or subsequently enacted.

32. Hawaii Law. This Sublease shall be construed, interpreted, and governed by the laws of the State of Hawaii.

33. Exhibits - Incorporation in Sublease. All exhibits referred to herein are attached to this Sublease and hereby are deemed incorporated by reference.

34. Headings. The section headings herein are inserted only for convenience and reference and shall in no way define, describe or limit the scope or intent of any provision of this Sublease.

35. Partial Invalidity. If any term, provision, covenant or condition of this Sublease should be held to be invalid, void or unenforceable, the remainder of this Sublease shall continue in full force and effect and shall in no way be affected, impaired or invalidated thereby.

36. Withdrawal. If and to the extent that Lessor exercises its power of withdrawal under the Master Lease to withdraw any portion of the Subleased Premises for public uses or purposes upon giving reasonable notice and without compensation except as otherwise provided in the Master Lease, HRS Chapter 171, the New Master Lease, or other master lease between Sublessor and Lessor that includes the Subleased Premises, then Sublessor shall have the right to withdraw these same portions of the Subleased Premises during the term of this Sublease upon giving reasonable notice to Sublessee and subject to the Sublessee's claim for any compensation provided under the Master Lease, HRS Chapter 171, the New Master Lease, or other master lease between Sublessor and Lessor that includes the Subleased Premises for any permanent improvement constructed upon the Subleased Premises that is destroyed or made unusable in the process of the withdrawal or

taking. Upon such withdrawal, or upon the taking which causes any portion of the Subleased Premises to become unusable for the specific use or uses for which it was subleased, the rent shall be reduced in proportion to the value of the land withdrawn or made unusable, and to the extent permitted in the Master Lease, HRS Chapter 171, the New Master Lease, or other master lease between Sublessor and Lessor that includes the Subleased Premises, if any permanent improvement constructed upon the land by Sublessee is destroyed or made unusable in the process of the withdrawal or taking, the proportionate value shall be paid based upon the unexpired term of the lease (which value shall also include the cost of decommissioning such improvements including site restoration as required in the Decommissioning Plan).

37. Building Construction. All building construction shall be in full compliance with all applicable laws, rules and regulations of the federal, state, and county governments and in accordance with plans and specifications submitted to and approved by the Sublessor and the Chairman of the Board of Land and Natural Resources prior to commencement of construction.

38. Clearances. Sublessee shall be responsible for obtaining all necessary federal, state or county clearances.

39. Time of Essence. Time is of the essence in all provisions of this Sublease.

40. Written Notice. All notices shall be in writing and shall be deemed to have been delivered on the date sent if sent by certified mail (return receipt requested) or recognized courier (with delivery confirmation) or transmitted by facsimile (with written confirmation of transmission) and in each case with a copy sent by email on the same date as follows:

Sublessor:

Chancellor
University of Hawaii at Hilo
200 West Kawili Street
Hilo, Hawaii 96720-4091
Telephone: (808) 932-7348
Facsimile: (808) 932-7338
Email: dstraney@hawaii.edu

Sublessee:

Project Manager (during construction) or Observatory Director (after first light; contact information for Observatory Director to be delivered to Sublessor by written notice following construction)
TMT International Observatory LLC
1111 South Arroyo Parkway, Suite 200
Pasadena, CA 91105

Telephone: (626) 395-2997
Facsimile: (626) 296-1887
Email: sanders@tmt.org

With a copy to:

Ann Martin
General Counsel
TMT Observatory Corporation
Telephone: (626) 395-1646
Facsimile: (626) 395-6841
Email: ann.martin@caltech.edu

41. Dispute Resolution. Any dispute relating to or arising as a result of or in connection with this Sublease, if not resolved by negotiation, shall be submitted first to non-binding mediation with Dispute Prevention & Resolution, Inc. and if such mediation is not concluded within six (6) months after submission, then shall be decided in legal or equitable proceedings in accordance with Hawaii law in any court having jurisdiction in the State of Hawaii. Such mediation shall take place in the County of Honolulu, State of Hawaii. Each party shall bear its own costs and fees for such mediation and the fees and expenses of the mediator shall be borne by the parties equally.

42. Historic preservation. In the event any historic properties or burial sites, as defined in Section 6E-2 of the Hawaii Revised Statutes, are found on the Subleased Premises, Sublessee and Sublessee's agents, employees and representatives shall immediately stop all land utilization and/or work and contact the Historic Preservation Office in compliance with Hawaii Revised Statutes Chapter 6E.

43. Removal of Trash. Sublessee shall be responsible for the removal of all illegally dumped trash upon the premises within ninety (90) days from the date of execution of this Sublease and shall so notify the Sublessor in writing at the end of ninety (90) days.

44. Phase I Environmental Site Assessment. Prior to termination or revocation of this Sublease, Sublessee shall conduct a Phase I environmental site assessment of the Subleased Premises and conduct a complete abatement and disposal of any such sites, if necessary, satisfactory to the standards required by the Federal Environmental Protection Agency, the Department of Health, and the Department of Land and Natural Resources. Failure to comply with the provisions of this Section 44 shall not extend the term of this Sublease or automatically prevent termination or revocation of the lease. Sublessor, at its sole option, may refuse to approve termination, unless this evaluation and abatement provision has been performed. In addition or in the alternative, Sublessor may, at its sole option if Sublessee does not do so, arrange for performance of the provisions of this Section 44, all costs and expenses of such performance to be charged to and paid by Sublessee.

[Remainder of page intentionally left blank; signature page follows.]

IN WITNESS WHEREOF, Sublessor and Sublessee have executed this Sublease as of the date first written above.

SUBLESSOR:

FOR THE UNIVERSITY OF HAWAI'I:

By_____
Name: David Lassner
Title: Interim President
Date: _____

By_____
Name: Howard Todo
Title: Vice-President for Budget and Finance
Date: _____

By_____
Name: Donald Straney
Title: Chancellor, University of Hawai'i at Hilo
Date: _____

SUBLESSEE:

FOR TMT INTERNATIONAL OBSERVATORY LLC:

By_____
Name: Edward C. Stone
Title: Executive Director
Date: _____

Approved as to form:

By_____
Name: Lawrence S. Okinaga, Carlsmith Ball LLP
Title: Special General Counsel
Date: _____

STATE OF HAWAII)
) ss.
CITY AND COUNTY OF HONOLULU)

The attached document: **SUBLEASE AND NON-EXCLUSIVE EASEMENT AGREEMENT BETWEEN TMT INTERNATIONAL OBSERVATORY LLC AND THE UNIVERSITY OF HAWAII**, dated _____, 2014 which consists of _____ pages (including this page), was executed by **DAVID LASSNER AND HOWARD TODO** and on this ____ day of _____, 2014 in the First Judicial Circuit of the State of Hawaii, personally known/proved to me on the basis of satisfactory evidence to be the persons, who personally appeared before me and being by me duly sworn or affirmed, did say that they are the **INTERIM PRESIDENT** and **VICE-PRESIDENT FOR BUDGET AND FINANCE**, respectively, of the **UNIVERSITY OF HAWAI'I**, and that such persons executed the foregoing instrument as the free act and deed of such persons, and if applicable in the capacities shown, having been duly authorized to execute such instrument in such capacities.

(notary stamp or seal)

_____
[Notary Signature]

Printed Name: Notary Name

My commission expires: _____

STATE OF HAWAII)
) ss.
COUNTY OF HAWAII)

The attached document: **SUBLEASE AND NON-EXCLUSIVE EASEMENT AGREEMENT BETWEEN TMT INTERNATIONAL OBSERVATORY LLC AND THE UNIVERSITY OF HAWAII**, dated _____, 2014 which consists of _____ pages (including this page), was executed by **DONALD STRANEY** on this ____ day of _____, 2014 in the Third Judicial Circuit of the State of Hawaii, personally known/proved to me on the basis of satisfactory evidence to be the person, who personally appeared before me and being by me duly sworn or affirmed, did say that he is the **CHANCELLOR** of **UNIVERSITY OF HAWAI'I AT HILO**, and that such person executed the foregoing instrument as the free act and deed of such person, and if applicable in the capacity shown, having been duly authorized to execute such instrument in such capacity.

(notary stamp or seal)

_____
[Notary Signature]

Printed Name: Notary Name

My commission expires: _____

STATE OF CALIFORNIA)
) ss.
COUNTY OF _____)

The attached document: **SUBLEASE AND NON-EXCLUSIVE EASEMENT AGREEMENT BETWEEN TMT INTERNATIONAL OBSERVATORY LLC AND THE UNIVERSITY OF HAWAII**, dated _____, 2014 which consists of _____ pages (including this page), was executed by **EDWARD C. STONE** on this ____ day of _____, 2014, personally known/proved to me on the basis of satisfactory evidence to be the person, who personally appeared before me and being by me duly sworn or affirmed, did say that he is the **EXECUTIVE DIRECTOR** of **TMT INTERNATIONAL OBSERVATORY LLC** and that such person executed the foregoing instrument as the free act and deed of such person, and if applicable in the capacity shown, having been duly authorized to execute such instrument in such capacity.

(notary stamp or seal)

_____
[Notary Signature]

Printed Name: Notary Name

My commission expires: _____

Exhibit A to Sublease

Master Lease (General Lease No. S-4191)

GENERAL LEASE NO. S-4191

THIS INDENTURE OF LEASE, made this 21st day of December, 1968, by and between the STATE OF HAWAII, by its Board of Land and Natural Resources, pursuant to the provisions of Section 103A-90(b), Revised Laws of Hawaii 1955, as amended, hereinafter referred to as the "LESSOR", and the UNIVERSITY OF HAWAII, a body corporate, whose post office address is 2444 Dole Street, Honolulu, City and County of Honolulu, State of Hawaii, hereinafter referred to as the "LESSEE",

WITNESSETH THAT:

FOR and in consideration of the mutual promises and agreements contained herein, the Lessor does hereby demise and lease unto the said Lessee and the said Lessee does hereby rent and lease from the Lessor, all of that certain parcel of land situate at Kaohe, Hamakua, County and Island of Hawaii, State of Hawaii, and more particularly described in Exhibit "A", hereto attached and made a part hereof.

TO HAVE AND TO HOLD, all and singular the said premises, herein mentioned and described, unto the said Lessee, for and during the term of sixty-five (65) years, to commence from the 1st day of January, 1968, and to terminate on the 31st day of December, 2033.

DEPARTMENT OF LAND AND NATURAL RESOURCES
HONOLULU, HAWAII

EXHIBIT A

RESERVING UNTO THE LESSOR THE FOLLOWING:

1. Water Rights. All surface and ground waters appurtenant to the demised premises, together with the right to enter and to capture, divert or impound water; provided, that the Lessor shall exercise such rights in such manner as not to interfere unreasonably with the Lessee's use of the demised premises; provided, further, that the Lessee shall have the right to use the waters of Lake Waiau for any purpose necessary or incidental to the use permitted by this lease on the following conditions:

a. No drilling or disturbance of Lake Waiau's bottom, banks or areas adjacent thereto shall be permitted;

b. No activity shall be permitted which will result in the pollution of the waters of Lake Waiau;

c. Lessee shall not take or divert any of the waters arising from springs which furnish the water supply for Pohakuloa, and no alterations to said springs shall be made by Lessee.

2. Access. All rights to cross the demised premises for inspection or for any government purposes.

3. Hunting and Recreation Rights. All hunting and recreation rights on the demised lands, to be implemented pursuant to rules and regulations issued by said Board in discharging its fish and game or state parks responsibilities; provided, however, that such hunting and recreation activities shall be coordinated with the activities of the Lessee on the demised lands; and provided, further, that such hunting and recreation activities shall be limited to day-light hours only.

4. Right to use Demised Lands. The right for itself, and its successors, lessees, grantees and permittees, to use any portion of the lands demised and the right to grant to others rights and privileges affecting said land; provided, however, that, except as otherwise provided herein, no such use shall be permitted or rights and privileges granted affecting said lands, except upon mutual determination by the parties hereto that such use or grant will not unreasonably interfere with the Lessee's use of the demised premises; provided, further, that such agreement shall not be arbitrarily or capriciously withheld.

THE LESSEE, IN CONSIDERATION OF THE PREMISES, COVENANTS WITH THE LESSOR AS FOLLOWS:

1. Surrender. The Lessee shall, at the expiration or sooner termination of this lease, peaceably and quietly surrender and deliver possession of the demised premises to the Lessor in good order and condition, reasonable wear and tear excepted.

2. Maintenance of the Premises. The Lessee shall keep the demised premises and improvements in a clean, sanitary and orderly condition.

3. Waste. The Lessee shall not make, permit or suffer, any waste, strip, spoil, nuisance or unlawful, improper or offensive use of the demised premises.

4. Specified Use. The land hereby leased shall be used by the Lessee as a scientific complex, including without limitation thereof an observatory, and as a scientific reserve being more specifically a buffer zone to prevent the intrusion of activities inimical to said scientific complex.

Activities inimical to said scientific complex shall include light and dust interference to observatory operation

~~during hours of darkness~~ and certain types of electric or electronic installation on the demised lands, but shall not necessarily be limited to the foregoing.

5. Assignments. The Lessee shall not sublease, sub-rent, assign or transfer this lease or any rights thereunder without the prior written approval of the Board of Land and Natural Resources.

6. Improvements. The Lessee shall have the right during the existence of this lease to construct and erect buildings, structures and other improvements upon the demised premises; provided, that plans for construction and plot plans of improvements shall be submitted to the Chairman of the Board of Land and Natural Resources for review and approval prior to commencement of construction. The improvements shall be and remain the property of the Lessee, and shall be removed or disposed of by the Lessee at the expiration or sooner termination of this lease; provided, that with the approval of the Chairman such improvements may be abandoned in place. The Lessee shall, during the term of this lease, properly maintain, repair and keep all improvements in good condition.

7. Termination by the Lessee. The Lessee may terminate this lease at any time by giving thirty (30) days' notice in writing to the Lessor.

8. Termination by the Lessor. In the event that (1) the Lessee fails to comply with any of the terms and conditions of this lease, or (2) the lessee abandons or fails to use the demised lands for the use specified under paragraph 4 of these covenants for a period of two years, the Lessor may terminate this lease by giving six months' notice in writing to the Lessee.

9. Non-Discrimination. The Lessee covenants that the use and enjoyment of the premises shall not be in support of any

policy which discriminates against anyone based upon race, creed, color or national origin.

10. General Liability. The Lessee shall at all times, with respect to the demised premises, use due care for safety, and the Lessee shall be liable for any loss, liability, claim or demand for property damage, personal injury or death arising out of any injury, death or damage on the demised premises caused by or resulting from any negligent activities, operations or omissions of the Lessee on or in connection with the demised premises, subject to the laws of the State of Hawaii governing such liability.

11. Laws, Rules and Regulations, etc. The Lessee shall observe and comply with Regulation 4 of the Department of Land and Natural Resources and with all other laws, ordinances, rules and regulations of the federal, state, municipal or county governments affecting the demised lands or improvements.

12. Objects of Antiquity. The Lessee shall not appropriate, damage, remove, excavate, disfigure, deface or destroy any object of antiquity, prehistoric ruin or monument of historical value.

13. Undesirable Plants. In order to prevent the introduction of undesirable plant species in the area, the Lessee shall not plant any trees, shrubs, flowers or other plants in the leased area except those approved for such planting by the Chairman.

IN WITNESS WHEREOF, the STATE OF HAWAII, by its Board of Land and Natural Resources, has caused the seal of the Department of Land and Natural Resources to be hereunto affixed and these presents to be duly executed this 3/.2

day of _____, 1968, and the UNIVERSITY OF HAWAII, by its _____ and _____ has caused these presents to be duly executed this _____ day of _____, 1968, effective as of the day and year first above written.

STATE OF HAWAII

By: _____
ACTING Chairman and Member
Board of Land and
Natural Resources

And By: _____
Member
Board of Land and
Natural Resources

UNIVERSITY OF HAWAII

By: _____
Its ACTING President

And By: _____
Its

APPROVED AS TO FORM:

_____
Deputy Attorney General
Dated: _____

mm
Proofed by:

EXHIBIT "A"

MAUNA KEA SCIENCE RESERVE

Kaohe, Hamakua, Island of Hawaii, Hawaii

Being a portion of the Government Land of Kaohe

Beginning at a point on the south boundary of this parcel of land, the coordinates of said point of beginning referred to Government Survey Triangulation Station "SUMMIT 1955" being 12,325.95 feet South and 471.84 feet West, as shown on Government Survey Registered Map 2789, thence running by azimuths measured clockwise from True South:-

1. Along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909, on a curve to the right with a radius of 13,200.00 feet, the chord azimuth and distance being: 135° 00' 18,667.62 feet;

2. Thence along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909, still on a curve to the right with a radius of 13,200.00 feet, the chord azimuth and distance being: 225° 00' 18,667.62 feet;

3. Thence along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909, still on a curve to the right with a radius of 13,200.00 feet, the chord azimuth and distance being: 281° 18' 04.6" 5173.56 feet;

4. 207° 49' 06.5" 841.83 feet along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909;

5. Thence along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909, on a curve to the right with a radius of 1200.00 feet, the chord azimuth and distance being: 297° 49' 06.5" 2400.00 feet;

6. 27° 49' 06.5" 841.83 feet along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909;

7. Thence along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909, on a curve to the right with a radius of 13,200.00 feet, the chord azimuth and distance being: 306° 59' 47.4" 1824.16 feet;

8. 227° 29' 00.9" 2805.06 feet along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909;

9. Thence along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909, on a curve to the right with a radius of 1500.00 feet, the chord azimuth and distance being: 317° 29' 00.9" 3000.00 feet;

10. 47° 29' 00.9" 2805.06 feet along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909;

11. Thence along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909, on a curve to the right with a radius of 13200.00 feet, the chord azimuth and distance being: 325° 31' 55.2" 701.87 feet;

12. 245° 46' 12.7" 2760.45 feet along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909;

13. Thence along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909, on a curve to the right with a radius of 2000.00 feet, the chord azimuth and distance being: 335° 46' 12.7" 4000.00 feet;

14. 65° 46' 12.7" 2760.45 feet along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909;

15. Thence along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909, on a curve to the right with a radius of 13,200.00 feet, the chord azimuth and distance being: 352° 14' 32.9" 3563.50 feet;

16. Thence along Mauna Kea Forest Reserve, Governor's Proclamation dated June 5, 1909, still on a curve to the right with a radius of 13,200.00 feet, the chord azimuth and distance being: 45° 00' 18,667.62 feet to the point of beginning and containing an AREA OF 13,321.054 ACRES.

EXCEPTING and RESERVING to the State of Hawaii and to all others entitled thereto, the Mauna Kea-Humuula and Mauna Kea-Umikoa Trails, and all other existing trails within the above-described parcel of land, together with rights of access over and across said trails.

ALSO, EXCEPTING and RESERVING to the State of Hawaii, its successors and assigns, the waters and all riparian and other rights in and to all the streams within the above-described parcel of land.

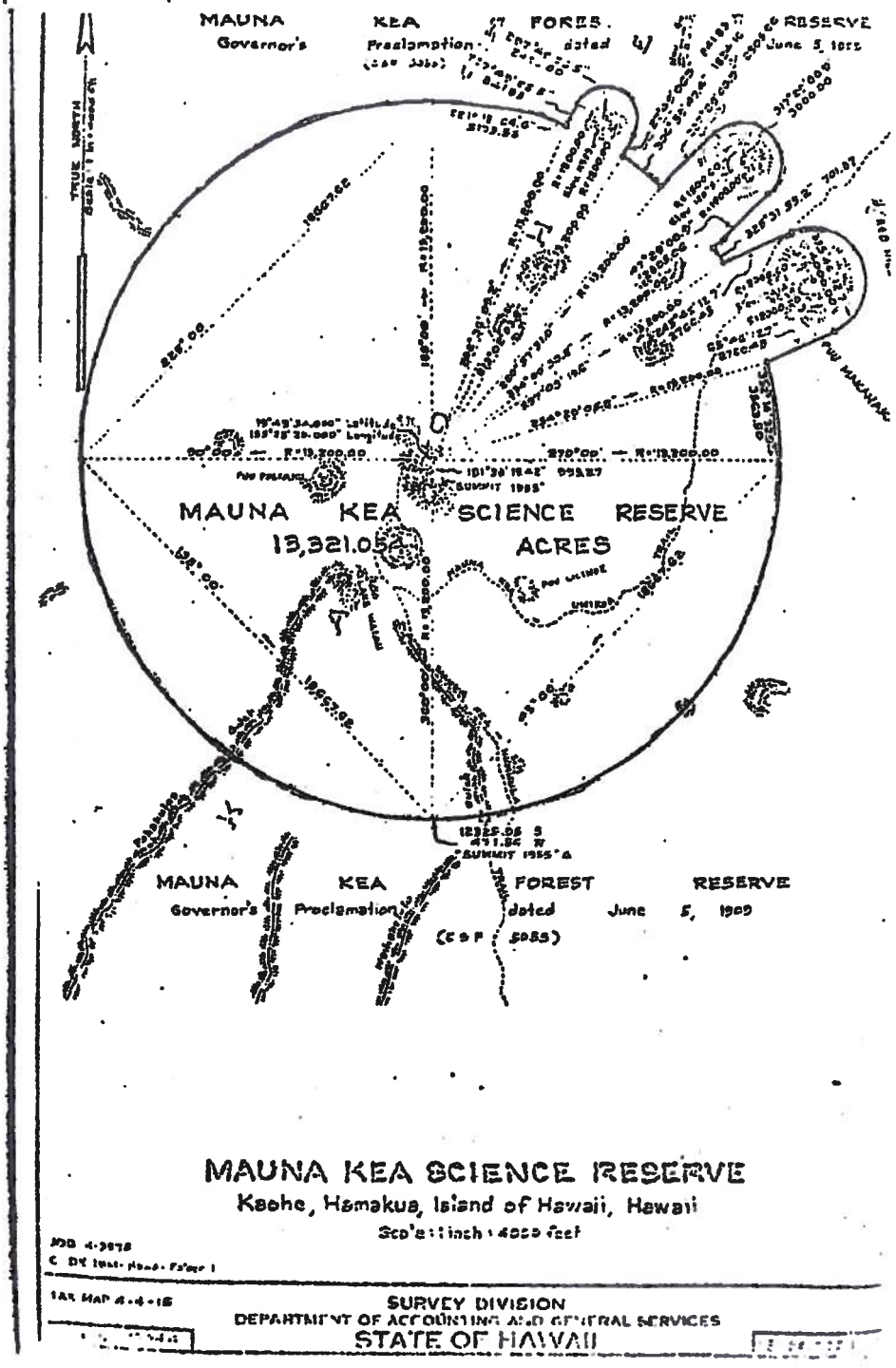

MAUNA KEA FOREST RESERVE
Governor's Proclamation dated June 5, 1909
MAUNA KEA SCIENCE RESERVE
13,321.05 ACRES
MAUNA KEA FOREST RESERVE
Governor's Proclamation dated June 5, 1909
(G.P. 5085)
MAUNA KEA SCIENCE RESERVE
Keahe, Hamakua, Island of Hawaii, Hawaii
Scale: 1 inch = 4000 feet
SURVEY DIVISION
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
STATE OF HAWAII

Exhibit B to Sublease

Consent to Sublease Under General Lease No. S-4191

(attached)

CONSENT TO SUBLEASE OF GENERAL LEASE NO. S-4191

CONSENT is hereby given by the STATE OF HAWAII, by its Board of Land and Natural Resources, Lessor under unrecorded General Lease No. S-4191 dated June 21, 1968, leased to the University of Hawaii, a public body corporate, as Lessee, to the attached Sublease and Non-Exclusive Easement Agreement ("Sublease") dated _____, 2014, from the UNIVERSITY OF HAWAII, a public body corporate, as "Sublessor," to TMT INTERNATIONAL OBSERVATORY LLC, a Delaware limited liability company, as "Sublessee"; SUBJECT, HOWEVER, to the provisions of Section 171-21, Hawaii Revised Statutes, as amended, relating to the rights of holder of security interests, PROVIDED, FURTHER, that noting contained herein shall change, modify, waive or amend the provisions, terms, conditions and covenants or the duties and obligations of the Lessee or Sublessee under General Lease S-4191.

IT IS UNDERSTOOD that except as provided herein, should there be any conflict between the terms of General Lease No. S-4191 and the terms of the Sublease, the former shall control; and that no further sublease or assignment of any interest of the premises or any portion thereof shall be made without the prior written consent of the Board of Land and Natural Resources.

IT IS FURTHER UNDERSTOOD AND AGREED by the STATE OF HAWAII, by its Board of Land and National Resources, that in the event said General Lease No. S-4191 is surrendered or defaulted upon by Lessee, UNIVERSITY OF HAWAII, prior to the expiration of the term thereof, the Sublease shall remain in full force and effect for the remainder of the term thereof, and Sublessee, TMT INTERNATIONAL OBSERVATORY LLC, shall be allowed its continued right to quiet enjoyment of the demised premises, upon and subject to the terms, conditions and covenants of General Lease No. S-4191. For the avoidance of doubt, for purposes of the immediately preceding sentence, a "surrender" by Lessee, UNIVERSITY OF HAWAII, does not include a mutual cancellation of said General Lease No. S-4191 and concurrent issuance of a New Master Lease (as defined in Section 9.a. of the Sublease) on terms that are acceptable to Sublessee or other master lease on terms that are acceptable to Sublessee, TMT INTERNATIONAL OBSERVATORY LLC, as contemplated by Section 9 of the Sublease.

FURTHERMORE, Lessee hereby acknowledges that the Lessor's consent to sublease under General Lease No. S-4191 does not release the Lessee of any and all responsibilities, obligations, liabilities, and claims respecting or arising under or out of said General Lease prior to the effective date of this consent.

DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
P. O. Box 621
Honolulu, Hawaii 96809

IN WITNESS WHEREOF, the STATE OF HAWAII, by its Board and Land and Natural Resources, has caused the seal of the Department of Land and Natural Resources to be hereunto affixed and these presents to be fully executed on this ___ day of _____, 2014.

STATE OF HAWAII

By_____
Chairperson and Member
Board of Land and
Natural Resources

Approved by the Board of Land and Natural Resources at its meeting held on _____, 2014

LESSOR

UNIVERSITY OF HAWAII, a public body corporate

By _____
DAVID LASSNER
Its Interim President

By _____
HOWARD TODO
Its Vice-President for Budget and Finance

By _____
DONALD STRANEY
Chancellor, University of Hawai'i at Hilo

LESSEE

APPROVED AS TO FORM:

_____
Deputy Attorney General
Dated: _____

DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
P O Box 621
Honolulu, Hawaii 96809

STATE OF HAWAII)
) ss.
CITY AND COUNTY OF HONOLULU)

On this _____ day of _____, 2014, before me personally appeared **DAVID LASSNER, HOWARD TODO** and **DONALD STRANEY** personally known , who, being by me duly sworn or affirmed, did say that they are the Interim President of the University of Hawai'i, the Vice-President for Budget and Finance of the University of Hawai'i, and the Chancellor of the University of Hawai'i at Hilo, respectively, and that the foregoing instrument was signed in the capacity shown, having been duly authorized to execute such instrument on behalf of the University of Hawai'i, a public body corporate, by authority of its Board of Regents, and that said **DAVID LASSNER, HOWARD TODO** and **DONALD STRANEY** acknowledged the foregoing instrument as the free act and deed of said University.

_____
Name: _____

Notary Public, State of Hawaii

My commission expires: _____

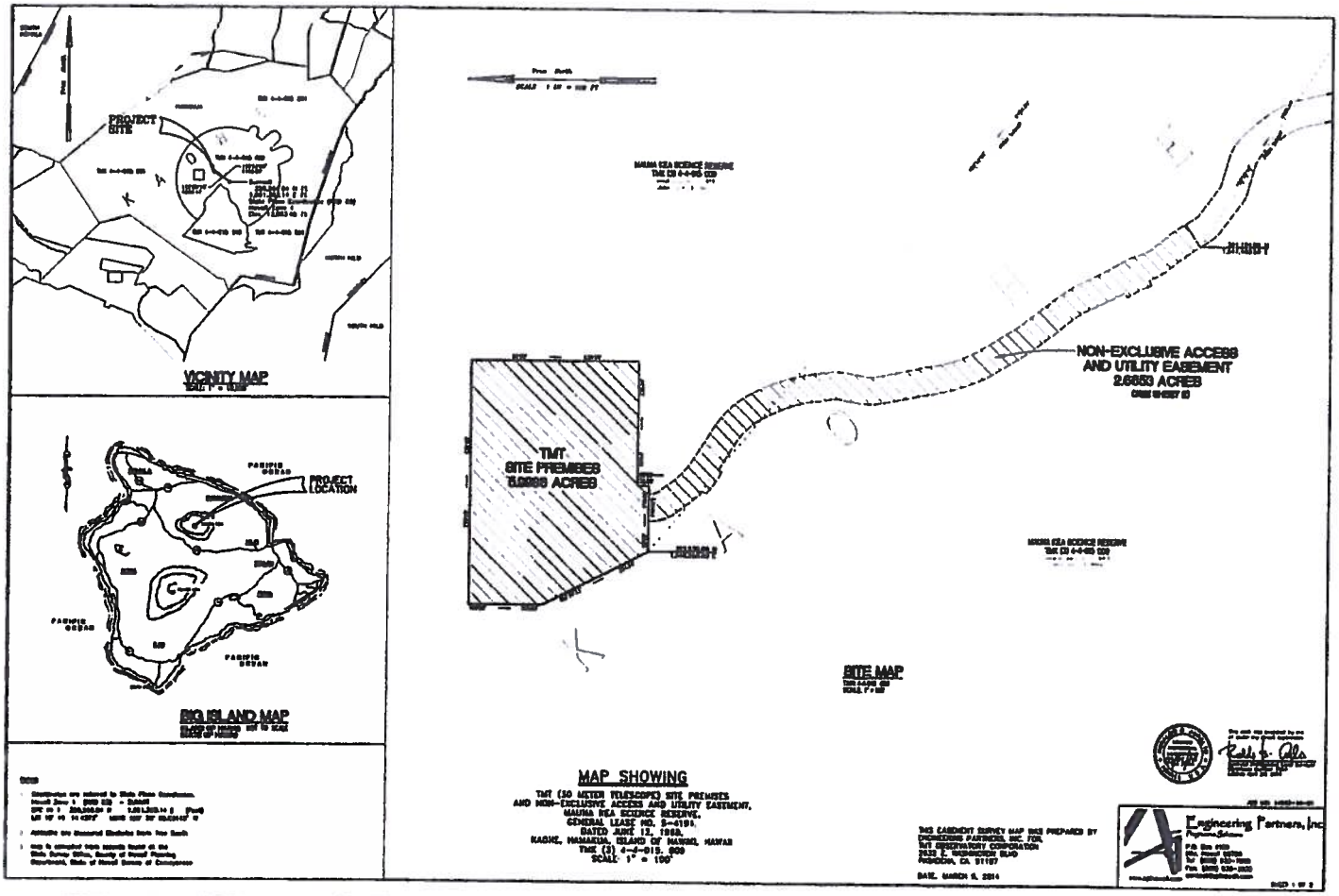
(Notary Stamp or Seal)

NOTARY CERTIFICATION STATEMENT	
Document Identification or Description:	**CONSENT TO SUBLEASE OF GENERAL LEASE NO. S-4191**
Document Date: _____	
No. of Pages: _____	
Jurisdiction (in which notarial act is performed): Third Judicial Circuit of the State of Hawaii	
Signature of Notary	**Date of Notarization and Certification Statement**
	(Notary Stamp or Seal)
Printed Name of Notary	

Exhibit C-1 to Sublease

Subleased Premises and Easement Area

(attached)


PROJECT SITE
VICINITY MAP
PROJECT LOCATION
BIG ISLAND MAP
TMT SITE PREMISES 5.0999 ACRES
NON-EXCLUSIVE ACCESS AND UTILITY EASEMENT 2.6653 ACRES
SITE MAP
MAP SHOWING
TMT (30 METER TELESCOPE) SITE PREMISES AND NON-EXCLUSIVE ACCESS AND UTILITY EASEMENT, MAUNA KEA SCIENCE RESERVE, GENERAL LEASE NO. S-4191, DATED JUNE 12, 1968, HAMAKUA, HAMAKUA, ISLAND OF HAWAII, HAWAII TMK (3) 4-4-015: 009
SCALE: 1" = 100'
THIS EASEMENT SURVEY MAP WAS PREPARED BY ENGINEERING PARTNERS, INC. FOR THE OBSERVATORY CORPORATION 1630 E. WASHINGTON BLVD PASADENA, CA 91107
DATE: MARCH 6, 2014
Engineering Partners, Inc

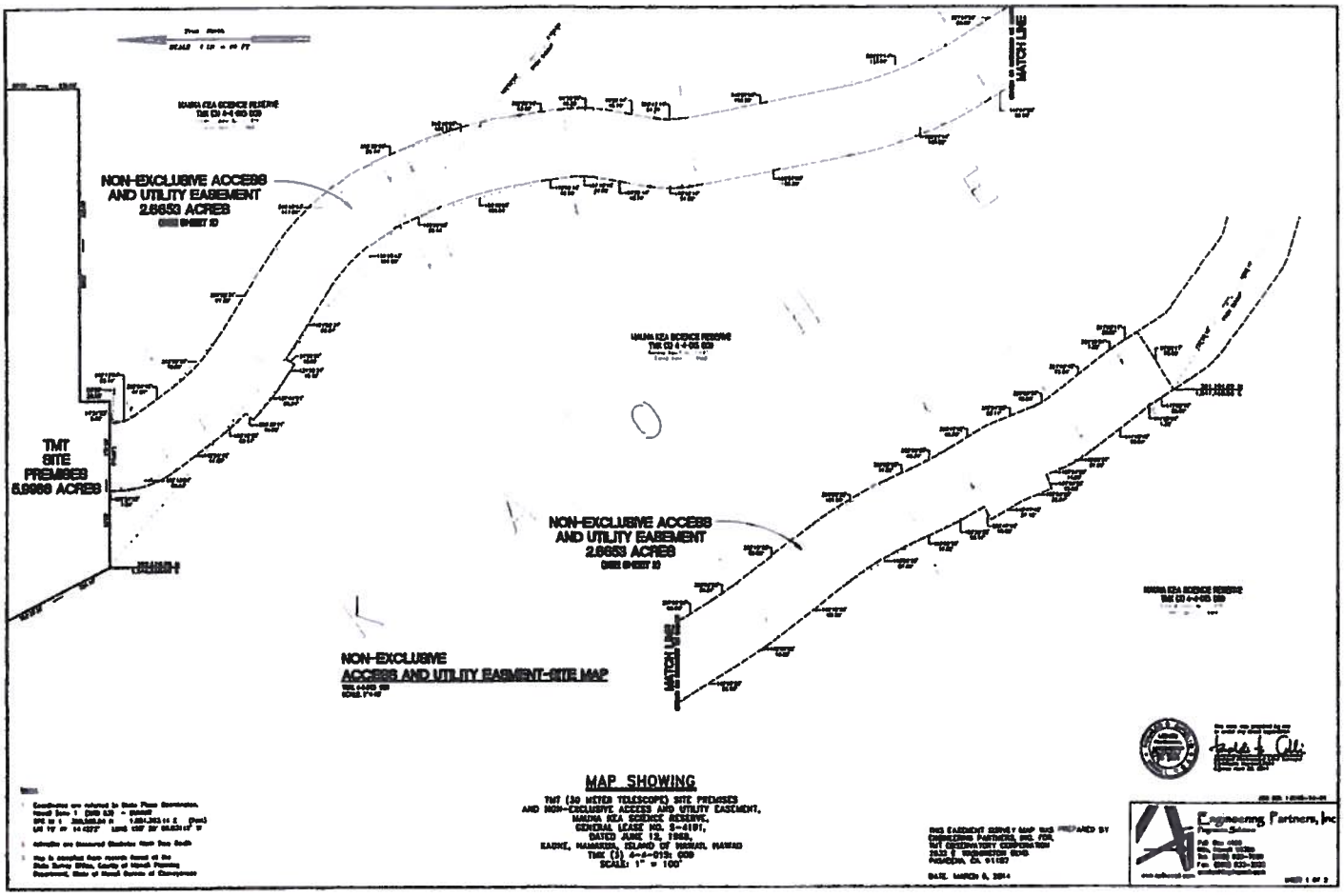

NON-EXCLUSIVE ACCESS AND UTILITY EASEMENT 2.6653 ACRES
TMT SITE PREMISES 5.9999 ACRES
NON-EXCLUSIVE ACCESS AND UTILITY EASEMENT 2.6653 ACRES
MATCH LINE
MATCH LINE
NON-EXCLUSIVE ACCESS AND UTILITY EASEMENT-SITE MAP
MAP SHOWING
TMT (30 METER TELESCOPE) SITE PREMISES AND NON-EXCLUSIVE ACCESS AND UTILITY EASEMENT, MAUNA KEA SCIENCE RESERVE, GENERAL LEASE NO. S-4191, DATED JUNE 12, 1968, KAOHE, HAMAKUA, ISLAND OF HAWAII, HAWAII TMK: (3) 4-4-015: 009
SCALE: 1" = 100'
Engineering Partners, Inc

Exhibit C-2 to Sublease

Legal Description of Subleased Premises

(attached)

DESCRIPTION

TMT SITE PREMISES

All of that certain parcel of land being a portion of the Government Land of Kaohe, being also a portion of Mauna Kea Science Reserve covered by General Lease S-4191 to the University of Hawaii Situate at Kaohe, Hamakua, Island of Hawaii, Hawaii

Beginning at the southwest corner of this parcel of land referred to the Hawaii State Plane Coordinate System, Zone 1 (NAD83) 362,519.00 feet North and 1,646,660.00 feet East and the direct azimuth and distance from the Government Survey Triangulation Station "SUMMIT 1955" being 129° 52' 08"; 6,166.86 feet and running by azimuths measured clockwise from True South:

1.	152°	35'	33"	304.14	feet along the remainder of the Government Land of Kaohe and the remainder of Mauna Kea Science Reserved covered by General Lease S-4191 to the University of Hawaii;
2.	180°	00'	00"	190.00	feet same;
3.	270°	00'	00"	630.00	feet along same;
4.	0°	00'	00"	430.00	feet along same;
5.	90°	00'	00"	320.00	feet along same;
6.	0°	00'	00"	30.00	feet along same;
7.	90°	00'	00"	170.00	feet along the same to the point of beginning and containing an area of 5.9986 acres, more or less.

Description Prepared By:
Engineering Partners Inc.

RONALDO B. AURELIO
Licensed Professional Land Surveyor
Certificate Number 7564
Expires April 30, 2014

Hilo, Hawaii, March 10, 2014

Exhibit C-3 to Sublease

Legal Description of Easement Area

(attached)

DESCRIPTION

NON-EXCLUSIVE ACCESS AND UTILITY EASEMENT

All of that certain parcel of land being a portion of the Government land of Kaohe, being also a portion of Mauna Kea Science Reserve covered by General Lease S-4191 to the University of Hawaii Situate at Kaohe, Hamakua, Island of Hawaii, Hawaii

Beginning at the southwest corner of this parcel of land referred to the Hawaii State Plane Coordinate System, Zone 1 (NAD83) 361,104.89 feet North and 1,647,460.58 feet East and the direct azimuth and distance from the Government Survey Triangulation Station "SUMMIT 1955" being 122° 50' 16"; 4,680.47 feet and running by azimuths measured clockwise from True South:

1. 147° 03' 17" 30.07 feet along the remainder of the Government Land of Kaohe and the remainder of Mauna Kea Science Reserved covered by General Lease S-4191 to the University of Hawaii;

   Thence along the same on a curve to the left with a radius of 15.00 feet, the chord azimuth and distance being;

2. 144° 25' 01" 1.38 feet;

3. 141° 46' 45" 73.94 feet along same;

   Thence along the same on a curve to the right with a radius of 135.00 feet, the chord azimuth and distance being:

4. 149° 50' 37" 37.88 feet;

5. 157° 54' 28" 14.29 feet along same:

6. 67° 54' 28" 15.00 feet along same:

7. 157° 54' 28" 32.04 feet along same;

8. 148° 47' 42" 37.18 feet along same;

9. 238° 47' 42" 15.00 feet along same:

Thence along the same on a curve to the right with a radius of 435.00 feet, the chord azimuth and distance being;

10. 152° 25' 35" 55.11 feet;

11. 156° 03' 28" 17.62 feet along same;

Thence along the same on a curve to the left with a radius of 365.00 feet, the chord azimuth and distance being;

12. 149° 09' 32" 87.69 feet;

13. 142° 15' 36" 89.55 feet along same;

Thence along the same on a curve to the right with a radius of 435.00 feet, the chord azimuth and distance being;

14. 145° 06' 28" 43.22 feet;

15. 147° 57' 20" 86.90 feet along same;

Thence along the same on a curve to the right with a radius of 435.00 feet, the chord azimuth and distance being;

16. 158° 27' 14" 158.52 feet;

17. 168° 57' 08" 156.20 feet along same;

Thence along the same on a curve to the right with a radius of 155.00 feet, the chord azimuth and distance being;

18. 179° 43' 11" 57.92 feet;

19. 190° 29' 14" 45.76 feet along same;

Thence along the same on a curve to the left with a radius of 85.00 feet, the chord azimuth and distance being;

20. 181° 19' 15" 22.08 feet;

21.	172°	09'	16"	43.65	feet along same;
					Thence along the same on a curve to the left with a radius of 365.00 feet, the chord azimuth and distance being:
22.	163°	49'	06"	105.84	feet;
23.	155°	28'	55"	25.44	feet along same;
					Thence along the same on a curve to the left with a radius of 185.00 feet, the chord azimuth and distance being;
24.	138°	43'	43"	106.65	feet;
25.	121°	58'	31"	82.07	feet along same;
26.	31°	58'	31"	10.00	feet along same;
27.	121°	58'	31"	15.18	feet along same;
					Thence along the same on a curve to the right with a radius of 275.00 feet, the chord azimuth and distance being;
28.	127°	44'	21"	55.24	feet;
29.	223°	30'	11"	10.00	feet along same;
					Thence along the same on a curve to the right with a radius of 265.00 feet, the chord azimuth and distance being;
30.	138°	12'	29"	43.47	feet;
31.	142°	54'	46"	47.07	feet along same;
					Thence along the same on a curve to the right with a radius of 105.00 feet, the chord azimuth and distance being;
32.	162°	13'	04"	69.43	feet;
33.	181°	31'	22"	1.83	feet along same;
34.	270°	00'	00"	70.02	feet along the TMT Building Site Easement;

35.	1°	31'	22"	3.69	feet along the remainder of the Government Land of Kaohe and the remainder of Mauna Kea Science Reserved covered by General Lease S-4191 to the University of Hawaii;
					Thence along the same on a curve to the left with a radius of 35.00 feet, the chord azimuth and distance being;
36.	342°	13'	04"	23.14	feet;
37.	322°	54'	46"	47.07	feet along same;
					Thence along the same on a curve to the left with a radius of 195.00 feet, the chord azimuth and distance being;
38.	312°	26'	39"	70.86	feet;
39.	301°	58'	31"	97.25	feet along same;
					Thence along the same on a curve to the right with a radius of 255.00 feet, the chord azimuth and distance being;
40.	318°	43'	43"	147.01	feet;
41.	335°	28'	55"	25.44	feet along same;
					Thence along the same on a curve to the right with a radius of 435.00 feet, the chord azimuth and distance being;
42.	343°	49'	06"	123.13	feet;
43.	352°	09'	16"	43.65	feet along same;
					Thence along the same on a curve to the right with a radius of 155.00 feet, the chord azimuth and distance being;
44.	1°	19'	15"	49.38	feet;
45.	10°	29'	14"	45.76	feet along same;