

Contract No. TMT.BUS.CON.19.\_\_\_\_.REL01

## FIRM FIXED PRICE CONTRACT

Contract No. TMT.BUS.CON.19.\_\_\_\_.REL01

Task ID:

BETWEEN

**TMT International Observatory LLC**

100 West Walnut Street; Suite 300

Pasadena, CA 91124

AND

<**Supplier Name**>

<Supplier Address>

This Contract is for

Design and Limited Prototype Production of the  
TMT Primary Mirror Assembly Shipping Containers

This contract (“Contract”) is made effective as of April 18, 2019 (“Effective Date”), by and between the TMT International Observatory LLC, a non-profit public benefit limited liability company organized and existing under the laws of the State of Delaware (“TIO”), and \_\_\_\_\_, a corporation organized and existing under the laws of the State of \_\_\_\_\_ (“Contractor”). Each party to this Contract may be referred to individually as “Party” and collectively as the “Parties.” The Parties agree as follows:

**Article I. STATEMENT OF WORK.**

- A. The Services. Contractor shall provide the following services to design and fabricate prototypes of the TMT Primary Mirror Assembly Shipping Containers (“PMASC”):
  - 1. **Planning and Development.** Contractor shall meet with TIO for a kick-off meeting at the Contractor’s facilities (“Kick-Off Meeting”). All of the Contractor’s staff that are relevant for the execution of the Kick-Off Meeting shall be present at the Kick-Off Meeting. At a minimum, Contractor’s program manager and lead engineer(s) for the Work shall attend the Kick-Off Meeting. At the Kick-Off Meeting, Contractor shall present the Project Plan and Quality Assurance Plan (defined below) to TIO.
    - i. Contractor shall develop and submit a “Project Plan.” The Project Plan shall include a simple work breakdown structure (“WBS”) of all of the tasks necessary to complete the Work, including but not limited to the development, design, analysis, procurement, fabrication, factory assembly, factory acceptance test, packaging and delivery of the PMASC Prototypes. The Project Plan shall include a schedule, showing when each task will be started and completed. This schedule shall include the milestones and key dates specified in Article I.B. of this Contract which shall be negotiated between TIO and the Awardee at a later date. The “Project Plan” shall include, but is not limited to, how the Contractor’s plans to develop and deliver the following:
      - a. A PMASC design that meets the requirements of the PMASC Design Requirements Document (the “DRD”) which is incorporated and attached to this Contract as Exhibit A.
      - b. Fabrication of ten (10) PMASC prototypes (the “Prototypes”).

- c. Destructive or non-destructive testing of two (2) Prototypes to confirm that the PMASC design meets the requirements of the DRD.
    - d. Cost estimate and schedule for the production of 580 PMASC units (assuming a single order). The target price for production is \$1,100 USD per container (2019 cost level).
  - ii. Contractor shall develop and submit an outline (“QA Outline”) of their quality assurance plan (“QA Plan”) for the Work. Contractor can use the TMT Guidelines for Supplier Quality Requirements (Exhibit A - RD4) which is being provided for reference purposes only. At a minimum, the Contractor QA Plan shall contain the following:
    - a. Plans for quality control of procured parts;
    - b. Plans for inspection and verification of piece parts;
    - c. Plans for calibration of assembly and test equipment; and
    - d. Identification of operations to be witnessed by TIO Quality Control personnel.
- 2. Design. Contractor shall prepare the design documentation (“DD”) for the PMASC and deliver the same to TIO in accordance with the Project Plan. A review of the PMASC DD shall be held by the date provided in the Project Plan (“PMASC DD Review”). Contractor shall present the PMASC DD at the PMASC DD Review. Contractor shall notify TIO of the date for the PMASC DD Review no later than (4) four weeks before the PMASC DD Review is scheduled to start. Contractor shall provide TIO with the PMASC DD no later than (2) two weeks before the start of the PMASC DD Review. At a minimum, the PMASC DD shall consist of the following:
  - i. An updated Project Plan including a schedule for the remainder of the Work.
  - ii. A Compliance Matrix shall include all the requirements (collectively, the “Requirements”) with which the Prototypes must comply. This Compliance Matrix shall not be construed as giving Contractor permission to deviate from the Requirements; i.e., all Requirements are mandatory and the Compliance Matrix only provides for an efficient means of disclosure of failures to meet the Requirements. The Compliance Matrix shall be accompanied by a

report detailing (1) any noncompliance noted, (2) any other technical or interface issues that will need to be resolved before the start of the PMASC prototypes (“Prototypes”) manufacturing, and (3) describing proposed methods of resolving these issues

- iii. A design of the PMASC which includes:
  - a. A design summary presentation that (1) illustrates the configuration of the PMASC, (2) identifies the key requirements that drive the design, (3) explains how the design is optimized to satisfy those requirements; and (4) summarizes design considerations regarding reliability and maintainability of components, subsystems, and systems.
  - b. 3D models and 2D drawings of all major assemblies and components. These drawings shall conform to the drawing standard ASME Y14.5M-1994 or later.
  - c. A list of all materials and component parts.
  - d. A summary of testing to be performed to confirm conformance with the PMASC DRD.
- 3. Prototype Fabrication. Contractor shall prepare for the fabrication of the Prototypes after the PMASC DD is approved by TIO. Contractor shall not begin procuring or fabricating any components or subsystems for the Prototypes before the PMASC DD is expressly approved in writing by TIO. Contractor may begin Work on long-lead items for the Prototypes if TIO expressly authorized such Work in writing. Once TIO approves the PMASC DD, Contractor shall procure all the required materials and prepare all fabrication drawings, procedures and instructions that are necessary for the fabrication of all the Prototypes in accordance with the schedule in the Project Plan.
- 4. Factory Assembly and Testing. Contractor shall prepare and submit a test plan to confirm that the Prototypes meet and comply with the Requirements (the “Test Plan”). Contractor shall submit the Test Plan for TIO’s review and approval no later than thirty (30) days before the testing of the Prototypes at the Contractor facility. The Test Plan must describe all test methods, test error analysis, and required results from measurements to be made that will ensure all Requirements are met. TIO shall provide a response (if necessary) with regard to the acceptability of the Test Plan within fifteen (15) days of its receipt by TIO.



- i. Kick-Off Meeting.
  - ii. PMASC DD Review. The PMASC DD Review is advisory in nature and shall not relieve Contractor of any responsibility for the successful completion of the Work in conformity with the Requirements. In accordance with this Contract, comments or discussions during the PMASC DD Review shall not be construed as modifying or waiving any of the Requirements or relieving Contractor of any obligations under this Contract. TIO shall have (15) fifteen days to comment on the PMASC Design Documentation. If needed by TIO, TIO shall notify Contractor of any aspects of the Work that are non-compliant with this Contract. Contractor shall diligently address any open issues and TIO shall not unreasonably withhold approval of the PMASC Design Documentation.
3. Deliverables that can be delivered electronically shall be submitted to TIO by email to [ehansen@tmt.org](mailto:ehansen@tmt.org), [fkamphues@tmt.org](mailto:fkamphues@tmt.org), [cwong@tmt.org](mailto:cwong@tmt.org), and [pratheep@tmt.org](mailto:pratheep@tmt.org).
  4. Unless otherwise instructed, physical Deliverables shall be delivered to TIO at:  
  
TMT International Observatory LLC  
137 W. Walnut Ave.  
Monrovia, CA 91016  
USA  
Attn: Fred Kamphues
  5. Handling, Shipping and Importation of Physical Deliverables.
    - i. Contractor shall arrange and provide handling, shipping and importation (if applicable) of all physical Deliverables, equipment, and materials, including loading, unloading, insurance, customs clearance (and payment of any customs duties in connection therewith) and any required storage and claims, and shall hold TIO harmless against claims for the same. Title and risk of loss of any physical Deliverables passes to TIO upon Contractor's tender of the physical Deliverables at the address specified in Article I.B.4.
- C. The Work. The Services described in Article I.A and the Deliverables identified in Article I.A.1.i, are referred to collectively herein as the "Work."
- D. Delivery. The Contractor agrees to deliver the Work in accordance with the delivery schedule for the Work as set out in Schedule 3.

E. Communication Standards.

1. Contractor shall submit a monthly report to TIO on the last work day of each month during the effective Term of this Contract (“Monthly Report”). The Monthly Report shall include a summary of the current status of the Work, a summary of the completed Work (including, but not limited to, the percentage of Work completed to date for all portions of the Work in progress), a list of all issues with the Work (resolved, unresolved, new, and potential issues), and proposed corrective action (if any).
2. TIO staff shall be available for questions and meetings, as necessary, for the duration of the Contract.

F. Performance Obligations.

1. The Contractor shall ensure that the Work conforms to all descriptions and requirements set out in the Statement of Work, and that the Deliverables are fit for any purpose expressly or impliedly made known to the Contractor.
2. The Contractor shall perform the Services using personnel of required skill, experience and qualifications and in a professional, diligent and workmanlike manner in accordance with commercially reasonable industry standards for similar services and shall devote adequate resources to meet its obligations under this Contract.
3. The Contractor shall use the best quality goods, materials, standards and techniques, and ensure that the Deliverables, and all goods, materials and equipment supplied in connection with the Work or transferred to TIO, will be free from defects in workmanship, installation and design.
4. The Contractor shall co-operate with TIO in all matters relating to the Work, and comply with all instructions from TIO.
5. The Contractor shall furnish all equipment and materials as are required to perform the Work, except to the extent that TIO expressly agrees to furnish the same.
6. The Contractor shall hold all TIO’s equipment and materials, as applicable, in safe custody at its own risk, maintain TIO’s equipment and materials in good condition until returned to TIO, and not dispose of or use TIO’s equipment and materials other than in accordance with TIO’s written instructions and the purposes of the Contract.
7. The Contractor acknowledges that time is of the essence with respect to Contractor's obligations hereunder and that prompt and timely

performance of all such obligations, including all performance dates, timetables, project milestones and other requirements in this Contract is strictly required.

- G. Acceptance. Subject to any specific response times stated herein, TIO shall accept or reject the Work within a reasonable period of time after delivery to TIO by Contractor. Acceptance by TIO, or failure to inspect and accept or reject the Work, shall not relieve the Contractor from responsibility, nor impose liability on TIO, for nonconforming Work. Work is nonconforming when it is not in conformity with all applicable Contract requirements. TIO has the right to reject nonconforming Work and may thereupon terminate the Contract for default as provided herein. If the Contractor fails or is unable to correct or to replace nonconforming Work within the delivery schedule (or such later time as TIO may authorize), TIO may accept the Work and make an equitable price reduction.

## Article II. TERM

- A. Term. The term of this Contract (the "Term") begins as of the Effective Date and shall end on \_\_\_\_\_ ("Contract Completion Date"). This Contract may be extended only by mutual written agreement of the Parties.

## Article III. PRICE AND PAYMENT

- A. Firm, Fixed Price. The firm, fixed price for this Contract is \$\_\_\_\_\_ U.S. Dollars ("FFP" or "Firm Fixed Price"). The total compensation that TIO shall pay for all the Work, including all applicable taxes, fees, shipping costs, insurance and duties shall not exceed the FFP.
- B. No Pre-Contract Compensation. There will be no allowance for compensation of Work incurred prior to the Effective Date of this Contract.
- C. Travel All travel under this Contract must be authorized by TIO in writing and in advance of the requested travel date. Authorized travel costs will be reimbursed at actual and reasonable cost in accordance with TIO policies and procedures and as evidenced by appropriate documentation. No other direct or indirect travel costs will be reimbursed unless specifically agreed to by TIO prior to work commencing.
1. Travel Rate: If Contractor receives advance, written authorization from TIO, Contractor may charge TIO for actual travel time required to perform the Work. In the event that TIO authorizes Contractor to charge for travel time, travel time shall be calculated at one-half the Hourly Rate ("Travel Rate"). Contractor may not charge for more than six (6) hours of travel time within twenty-four (24) hours for trips within the U.S. and Canada. Contractor may not charge for more than twelve (12) hours of travel time



within a twenty-four (24) hour period for trips outside the U.S. and Canada.

- D. Invoices. Contractor shall submit invoices in accordance with the payment schedule defined above for the FFP.
1. Each invoice shall be submitted referencing the designated TIO purchase order number for this Contract. The TIO purchase order will be provided by TIO. The final invoice for this Contract shall be marked "FINAL." All invoices shall be submitted electronically to [invoices@tmt.org](mailto:invoices@tmt.org) or by mail to:  
  
TMT International Observatory LLC  
100 West Walnut Street; Suite 300  
Pasadena, CA 91124  
Attention: Pratheep Eamranond
  2. Contractor shall complete, execute and submit to TIO all required state forms to determine the applicability of California withholding tax. If Contractor is exempt from state withholding tax, Contractor will complete, execute and submit to TIO all required state forms certifying its tax exemption. Contractor must clearly indicate all work that is performed in California under this Contract as a separate line item on the invoice. With respect to transactions for which Contractor may be exempt from any tax or duty, Contractor will indicate its exemption claim within its invoice.
- E. Payment. Subject to the review and approval of the Contractor's invoices, TIO shall pay within thirty (30) days after receipt of invoice. TIO has the right to withhold any and all taxes and duties required by law or regulation. The Parties understand and agree that all terms and conditions regarding payment by TIO are contingent upon Contractor's full and timely compliance with all administrative and documentation requirements. Failure by Contractor to comply with all administrative and documentation requirements in a timely manner may result in a delay of payment. TIO is not liable for any delay of payment due to Contractor's non-compliance with this Article III.
1. Payment shall be in US Dollars. The remittance address, if payment is made by check, shall be:

[Supplier Address for A/R]

#### **Article IV. REPRESENTATIONS, WARRANTIES AND COVENANTS**

- A. Contractor is responsible for the direct management and supervision of its personnel. Contractor will inform all such personnel prior to their start of work that there is no implied employment of Contractor personnel by TIO.

- B. Contractor represents and warrants that the Deliverables and TIO's use of the Deliverables will not infringe, misappropriate or otherwise violate any confidential or proprietary information, any trade secret or any intellectual property right belonging to any third party.
- C. Contractor represents and warrants that it has not engaged in collusion with any other potential contractor to procure this Contract. Contractor further represents and warrants that no benefit of tangible value has been given, nor will be given to any of TIO's agents or employees as a result of being awarded this Contract.
- D. Contractor represents and warrants that it will take necessary safety and other precautions to protect property and persons from damage, injury or illness arising out of the performance of the Work, and be responsible for the compliance by all of its agents, employees and Subcontractors with all applicable laws governing occupational health and safety.
- E. Contractor understands and agrees that this is a firm fixed price contract and that there shall be no allowances or reimbursement for any cost whatsoever except as otherwise explicitly provided in this Contract. Contractor agrees that the Firm Fixed Price includes, but is not limited to, all applicable taxes, fees, shipping costs, insurance and duties. Contractor agrees to fulfill its obligations under this Contract, regardless of cost, for the sole and sufficient compensation of the FFP stated in Article III with no expectation of additional compensation. TIO will not be obligated to pay the Contractor any amount in excess of the Firm Fixed Price specified in Article III

## **Article V. PROPRIETARY INFORMATION**

- A. Proprietary Information Defined.
  - 1. "Proprietary Information" means all confidential information held by one Party (the "Disclosing Party") which is disclosed to the other Party (the "Receiving Party"), whether disclosed orally or disclosed or accessed in written, electronic, or other form of media that is delivered to the receiving Party, bears the date of disclosure, and is visibly identified by clear and conspicuous markings as the Disclosing Party's Proprietary Information. Proprietary Information includes, but is not limited to, the following: business, financial or technical data; machine-readable or interpreted information, or information contained in physical components; mask works or artworks; information concerning the Disclosing Party's past, present and future business affairs including finances, products, services, organizational structure, internal practices, forecasts and sales; and any third-party confidential information included with, or incorporated in, any information provided by a Disclosing Party. A non-written disclosure shall be considered Proprietary Information to the extent that such disclosure is

orally identified as Proprietary Information at the time of disclosure and is confirmed in writing by the Disclosing Party. Such written confirmation shall: (i) sufficiently describe the information disclosed in detail, its scope, and the date and manner of disclosure; (ii) identify disclosers and recipients; (iii) be supplied within ten (10) days after oral disclosure; and (iv) refer to this Article.

2. Contractor's Proprietary Information does not and shall not under any circumstances include: (a) any deliverables submitted by Contractor to TIO under this Contract unless otherwise agreed to in an amendment to this Contract; (b) information in TIO requirements, specifications, or in any future modifications thereto, including, but not limited to, modifications suggested by Contractor; or (c) any scientific data.

- B. Obligations of Receiving Party. The receiving Party shall maintain the confidentiality of the Proprietary Information with at least the same degree of care that it uses to protect its own confidential information, but no less than a reasonable degree of care under the circumstances, for three (3) years from the date of disclosure. The receiving Party may not disclose any of the disclosing Party's Proprietary Information, except to its employees, project members or consultants who have a need to know and who agree to abide by nondisclosure terms at least as comprehensive as those set forth herein. The receiving Party may not disclose a disclosing Party's Proprietary Information to any third party without the disclosing Party's prior written authorization and procuring such third party's agreement to nondisclosure terms at least as comprehensive as those set forth herein. Any copies that are made will be identified as belonging to the disclosing Party and marked "Proprietary" or with a similar legend. A receiving Party may not use Proprietary Information to reproduce, redesign, or reverse engineer any products or equipment of the disclosing Party. Upon disclosure of Proprietary Information by the receiving Party, the receiving Party shall promptly notify the disclosing Party, regardless of whether such disclosure is prohibited or allowed under this Article V. Upon a disclosure of Proprietary Information in violation of this Article V, the disclosing Party shall take reasonable steps to mitigate the effects of such disclosure. Upon the expiration of the Term or earlier termination of this Contract, the receiving party shall return or destroy, as applicable, all Proprietary Information except to the extent that such Proprietary Information is reasonably necessary to carry out work under another contract between the Parties.
- C. No Liability for Certain Disclosures. The receiving Party will not be liable for the disclosure of any information, regardless of its designation as Proprietary Information, if it is (a) rightfully in the public domain other than by a breach of a duty to the disclosing Party; (b) rightfully received from a third party without any obligation of confidentiality; (c) rightfully known to the receiving Party without any limitation on use or disclosure prior to its receipt from the disclosing Party; (d) independently developed by the employees of the receiving Party; (e)

generally made available to third parties by the disclosing Party without restriction on disclosure; or (f) is disclosed by the receiving Party with the disclosing Party's prior written approval.

- D. Disclosures Required by Law. Should a receiving Party be faced with a legal obligation to disclose Proprietary Information received under this Contract, the receiving Party shall, as soon as possible and to the extent that it is lawful to do so, notify the disclosing Party, and upon request of the disclosing Party shall reasonably cooperate in contesting such disclosure. Except in association with a failure to discharge the responsibilities set forth in this paragraph, neither Party shall be liable for any disclosures required by applicable law or an order by a government entity.
- E. Survival. This Article V shall survive expiration or termination of this Contract.

**Article VI. ADDITIONAL TERMS AND CONDITIONS**

- A. Independent Contractor. Contractor is engaged as an independent contractor and not as an agent or employee of TIO. Contractor shall have no authority to bind or obligate TIO in any manner whatsoever. Contractor shall be solely liable and responsible for its employment practices and for paying its employee salaries, benefits, taxes, withholdings, and claims.
- B. Indemnification and Hold Harmless.
  - 1. Contractor agrees to indemnify, defend and hold harmless TIO, its directors, officers, members, employees, agents, assigns and affiliates from any and all liabilities, claims, damages, losses, reasonable attorneys' fees, and other reasonable costs of defense (including costs incurred prior to commencement of a lawsuit) resulting from or attributed to (i) Contractor's breach of its representations, warranties or obligations set forth in this Contract; (ii) any assertion that any component of the Work infringes, misappropriates, or violates any patent right, copyright right, trade secret, or other proprietary right of any third party; or (iii) any negligent or unlawful act or omission of Contractor or any of its employees and/or agents in the performance of this Contract.
  - 2. If TIO seeks indemnification pursuant to this Contract, TIO shall notify the Contractor in writing of any claim or the commencement of any action or proceeding that TIO believes is subject to indemnification (referred to as the "Claim"). TIO shall also forward all documents in its possession and communicate all information known by it to the Contractor to the extent such documents and information are reasonably relevant to the Claim. Any dispute between the Parties related to a Claim shall proceed in accordance with the dispute resolution procedures outlined in Article VII.

Notwithstanding a Claim dispute between the Parties, the Parties shall diligently defend and reasonably cooperate in the defense against the claim or action of third parties in accordance with this Article.

3. The Contractor shall have the right, at its option and sole expense, to assume sole responsibility for defending or settling the Claim, and shall have the right to use legal counsel of its choice. If the Contractor exercises this option it shall notify TIO and TIO shall cooperate in the settlement or defense of the Claim. If the Contractor refuses to accept responsibility for defending or settling the Claim, TIO shall exercise reasonable efforts to defend or settle the Claim, and any recovery against the TIO suffered by it in good faith under such circumstances shall be conclusive in its favor against the Contractor.
4. This Article VI, Section B shall survive expiration or termination of this Contract.

C. Limitation of Liability. NEITHER PARTY SHALL BE LIABLE TO THE OTHER PARTY FOR ANY LOST PROFITS OR PUNITIVE, SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES ARISING OUT OF THIS CONTRACT, EVEN IF SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Notwithstanding anything to the contrary in this Contract, this paragraph shall not apply to damages arising out of or relating to the following: (i) damage claims payable to third parties, irrespective of the basis for such claims; (ii) violations of law; (iii) fraud or fraudulent misrepresentation; (iv) any breach of this Contract that results from the willful act or omission of either party, their employees, agents or subcontractors; (v) personal injury or death caused by the Contractor's grossly negligent act or omission; and (vi) damage claims covered by insurance required to be maintained under this Contract, to the extent so covered. This section shall survive expiration or termination of this Contract.

D. Insurance. At all times during the term of this Contract, the Contractor shall procure and maintain, at its own expense, the following insurance coverage: (A) workers' compensation at statutory limits, (B) employer's liability insurance with limits of at least \$1,000,000 per occurrence, and (C) comprehensive general liability (including bodily injury, property damage and contractual liability) insurance with limits of at least \$1,000,000 per occurrence. Contractor shall give TIO at least thirty (30) days prior written notice of any cancellation of insurance coverage or any proposed reduction of insurance coverage below the limits set forth in this Section. Contractor shall include TIO, its officers, directors and employees as additional insureds under its liability insurance policy and provide TIO with a certificate of insurance for the required coverage promptly upon request.

- E. Governing Law. This Contract shall be governed by and construed in all respects in accordance with the laws of the State of California, without giving effect to its choice of law rules. This section shall survive expiration or termination of this Contract.
- F. Compliance with Laws. The Contractor will ensure that at all times it is in compliance with all applicable laws and maintains all the licenses, permissions, authorizations, consents, and permits that are necessary to carry out its obligations arising out of or in connection with the Contract.
- G. Changes to Contract. This Contract may be modified, amended or waived only by a written instrument executed by both TIO and the Contractor. If the terms of this Contract are modified, amended or waived such that the change causes an increase or decrease in the cost of, or the time required for, the Work, the Parties may agree in writing to an equitable adjustment in pricing, delivery schedule, or both. Contractor must request an adjustment under this clause within fifteen (15) days from the date it receives a written request for a change from TIO. Failure to agree to an adjustment shall be a dispute under the Disputes clause.
- H. Export Regulations. Contractor shall comply with all U.S. export control laws and regulations in the performance of this Contract. The Contractor shall be responsible for (a) obtaining appropriate licenses or other approvals, if required, for exports of hardware, technical data, and software, or for the provision of technical assistance; and (b) all regulatory record-keeping requirements associated with the use of licenses and license exemptions/exceptions. This Article VI.G shall survive expiration or termination of this Contract.
- I. Dispute Resolution.
1. Pre-Arbitration Procedures. Except as provided below, in the event of any dispute or controversy arising out of or relating to this Contract, including its validity, enforceability, performance, or breach (“Dispute”), the Party alleging a Dispute will notify the other Party of the existence of the Dispute, and provide reasonable detail about the Dispute. Senior officials representing both Parties will meet and attempt to resolve the Dispute within fifteen (15) days of the notice.
  2. Arbitration. In the event senior officials do not meet or are unable to resolve a Dispute within the above period, the Dispute shall be resolved exclusively by final binding arbitration in accordance with the then-current Commercial Arbitration Rules of the American Arbitration Association (AAA). The Parties shall endeavor to select a mutually acceptable arbitrator within fifteen (15) days of the Notice of a demand of arbitration (“Arbitration Notice”). In the event the Parties are unable to agree to such a selection, AAA procedures shall be used to select a single arbitrator.

The costs for the arbitration and the fees of the arbitrator shall be shared equally by the Parties. All Parties agree that arbitration shall take place within the County of Los Angeles, California. The arbitrator shall not have the authority, power, or right to award punitive damages or any damages inconsistent with the limitations of liability set forth herein. The arbitrator shall have the power to issue mandatory orders and restraining orders in connection with the arbitration. The arbitrator shall endeavor to commence the arbitration within sixty (60) days of the Arbitration Notice. A written award shall be rendered by the arbitrator within thirty (30) days of the end of the arbitration hearing(s), and shall be final and binding on the Parties. Judgment may be entered thereon in any court having jurisdiction.

3. Continued Performance Pending Dispute Resolution. Pending the resolution of the Dispute, the Parties shall, without delay, continue to perform their respective obligations under this Contract.
4. This Article VI.H shall survive expiration or termination of this Contract.

J. Primary Contacts. The Contractor agrees that the TIO Contracts Manager is the only person authorized to make changes to the Contract.

The primary contacts under this Contract are as follows:

1. *TIO Contract Technical Manager:*

Fred Kamphues  
TMT International Observatory LLC  
100 West Walnut Street  
Suite 300  
Pasadena, CA 91124

Phone: 626.395.1611  
Fax: 626.296.1887  
E-mail: [fkamphues@tmt.org](mailto:fkamphues@tmt.org)

2. *TIO Contracts Manager:*

Pratheep Eamranond  
TMT International Observatory LLC  
100 West Walnut Street  
Suite 300  
Pasadena, CA 91124

Phone: 626.395.1607

Fax: 626.296.1887

E-mail: [pratheep@TIO.org](mailto:pratheep@TIO.org)

- K. Notices. Notices from one Party to the other shall be given in writing by one of the following methods: (a) United States registered mail, return receipt requested, and said notice shall be deemed to have been given three (3) days after said notice is deposited into the United States mail; (b) personal delivery, and said notice shall be deemed given upon such delivery; or (c) recognized overnight courier service, (d) telefax; or (e) e-mail, and said notice shall be deemed given upon delivery by such service at the following addresses or at such other address of which either Party shall advise the other in writing:

To TIO:                   TMT International Observatory LLC  
                                  100 West Walnut Street  
                                  Suite 300  
                                  Pasadena, CA 91124  
                                  ATTN: Pratheep Eamranond  
                                  pratheep@tmt.org

To Contractor:        [Contractor Notice Information]  
                                  NAME  
                                  ADDRESS  
                                  CITY & STATE  
                                  ATTN  
                                  E-MAIL

This section shall survive expiration or termination of this Contract.

- L. Force Majeure.
1. Neither of the Parties shall be responsible for failure or delay of performance if caused by: an act of war, civil unrest, protest, hostility, or sabotage; act of God; government restrictions (including the denial or cancellation of any export or other license); or other event outside the control of the Party obligated to perform (such Party, the “Affected Party”, and such events, “Force Majeure Events”). The following events will not be considered Force Majeure Events: (i) employee lockouts, strikes or slowdowns which solely affect the Contractor or any of its subcontractors or suppliers of any tier; (ii) reasonably foreseeable events that can be avoided or mitigated with advance preparation; (iii) shortages of supplies or of personnel or of market capacity in each case in relation to any goods, materials, activities or personnel required to perform this Contract; (iv) acts or omissions of any subcontractor or supplier of the Contractor of any tier; and (v) changes in economic circumstances.



2. Upon the occurrence of a Force Majeure Event, the Affected Party shall promptly notify the other Party. The Affected Party will use all commercially reasonable efforts to mitigate the effects of a Force Majeure Event, bring the Force Majeure Event to an end, and to find a means by which the obligations under the Contract may be performed despite the continuance of the Force Majeure Event.
  3. If a Force Majeure Event continues for more than thirty (30) days, than the other Party may terminate this Contract by service of a written notice to the Affected Party to take effect not less than fourteen (14) days after the date on which the notice is given.
- M. Entire Contract. This Contract constitutes the complete and exclusive statement of the Contract between the Parties and supersedes all prior representations, understandings, and communications, oral and written, between the Parties relating to the subject matter thereof.
- N. Headings. The headings within this Contract are inserted for convenience of reference only and not to define, describe or limit the scope or the intent or otherwise affect the interpretation of this Contract or any term hereof.
- O. Assignment and Subcontracting.
1. TIO may assign this Contract, in whole or in part, in its sole discretion. The Contractor may not assign or delegate any of its rights or obligations under this Contract without the prior written consent of TIO or its assignee, and any attempt to do so shall be void. This Contract shall be binding upon and inure to the benefit of the heirs, successors and permitted assigns of the Parties hereto.
  2. The Contractor may subcontract any of part of the performance of the Work to any person, provided that the Contractor: (i) obtains the prior written consent of TIO (which consent shall not be unreasonably withheld); (ii) prior to the commencement of any work by any subcontractor, enters into a written agreement with such subcontractor that binds the subcontractor to terms that are at least as protective of the rights and information of TIO as this Contract; and (iii) uses commercially reasonable efforts to subcontract only with subcontractors that have the requisite skills to perform any subcontracted obligations in accordance with the terms of this Contract. In all cases, the Contractor shall be responsible and liable for the acts and omissions of each subcontractor (including its employees) to the same extent as if such acts or omissions were by the Contractor or its employees and shall be responsible for all fees and expenses payable to any subcontractor.

- P. Mutual Non-Waiver. No failure of either Party to exercise any power given hereunder or to insist upon strict compliance with any obligations specified herein, and no custom or practice at variance with the terms hereof, shall constitute a waiver of any Party's right to demand strict compliance with the terms hereof.
- Q. Severability. If any term or provision of this Contract, or the application thereof to any person or circumstance, shall to any extent be found to be invalid, void, or unenforceable, the remaining provisions of this Contract and any application thereof shall, nevertheless, continue in full force and effect without being impaired or invalidated in any way.
- R. Data Rights.
1. Contractor hereby assigns to TIO all right, title and interest of Contractor in and to the Deliverables, and any intellectual property rights therein, developed pursuant to this Contract. During and after the Term of this Contract, Contractor will provide reasonable assistance to TIO and its designees to secure and perfect TIO's rights in the Deliverables, at TIO's expense.
  2. The Parties shall jointly own all data, designs, drawings, business methods, methodologies, ideas, processes, techniques, know-how, or other tangible or intangible property or material whether contained or embodied in or by the Deliverables which may be conceived, developed or reduced to practice by Contractor (whether independently or jointly with TIO) in connection with any Work under this Contract (collectively, the "Jointly-Owned Work"). Each Party shall have the right to use Jointly-Owned Work in whatever manner it wishes, without the consent, concurrence, participation or knowledge of the other Party and without accounting to the other Party for any profits therefrom or proceeds thereof; provided, however, that any exploitation or commercialization of the Jointly-Owned Work by TIO other than for its "internal business purposes" shall require Contractor's prior written consent, which shall not be unreasonably withheld, condition or delayed. For purposes of the foregoing, "internal business purposes" as of the Effective Date means any purpose that is related to the development, construction, advancement, or operation of a telescope observatory and any functions ancillary thereto. During and after the Term of this Contract, each Party will provide reasonable assistance to the other Party and its designees to secure and perfect such other Party's rights in the Jointly-Owned Work, at no cost or expense to the other Party.
  3. Contractor shall own and retain all right, title and interest in and to Contractor's Background Intellectual Property. To the extent that any Deliverables or Foreground Intellectual Property incorporate, rely on, or

are derived from any Background Intellectual Property or such Background Intellectual Property is necessary for TIO to make use of the Deliverables or the Foreground Intellectual Property, Contractor hereby grants to TIO a perpetual, fully paid-up, royalty-free, non-exclusive, non-transferable, sublicensable license under any Background Intellectual Property to make use of and otherwise exploit the Deliverables and Foreground Intellectual Property, and otherwise for TIO's internal business purposes. "Background Intellectual Property" shall mean intellectual property controlled by Contractor which (i) was made, invented, developed, created, conceived, reduced to practice (a) before the Effective Date of this Contract; (ii) constitutes Contractor Knowledge Capital; or (iii) is acquired by Contractor during the Term of this Contract, other than by acquisition or joint ownership with TIO.

4. Contractor shall own and retain all right, title and interest in and to the Contractor Knowledge Capital. Inclusion of any Contractor Knowledge Capital in a Deliverable or as part of the Services does not change its character as Contractor Knowledge Capital. TIO will not obtain any rights in Contractor Knowledge Capital other than the non-exclusive right and license to use the Contractor Knowledge Capital in conjunction with Contractor's use and exploitation of the Deliverables. "Contractor Knowledge Capital" shall mean, collectively, any data, designs, drawings, business methods, methodologies, ideas, processes, techniques, know-how, or other tangible or intangible property or material which are not expressly designated as Deliverables in the applicable SOW and which are owned, held for use by Contractor and/or developed by Contractor outside of its performance of the Work under this Contract.
  5. Each Party will be free to use its general knowledge, skills and experience, and any ideas, concepts, know-how, methodologies, and techniques that it acquires or uses in the course of the Work for any purpose.
- S. No Third-Party Beneficiary. Nothing in this Contract, express or implied, is intended to confer on any person other than the Parties hereto and their respective successors and permitted assigns any rights, remedies, obligations or liabilities under or by reason of this Contract.
- T. Personnel. The Contractor is responsible for providing the staff necessary or appropriate to perform its obligations under this Contract. TIO may by notice in writing to the Contractor object (but not unreasonably) to any personnel, representative, or member of staff employed by the Contractor for the Work and the Contractor shall remove such a person from the Work and appoint a suitable replacement subject to the prior written approval of TIO (such approval not to be unreasonably withheld).

Prior to removing, replacing, or diverting key personnel designated below, if any, the Contractor shall notify TIO, in writing, reasonably in advance and shall submit justification (including proposed substitutions) in sufficient detail to permit evaluation of the impact on the Contract. No diversion shall be made by the Contractor without written consent of TIO. Designated Key Personnel are:

1. \_\_\_\_\_

U. Termination for Default.

1. TIO reserves the right to terminate all or any part of this Contract if Contractor breaches any provision of this Contract and fails to cure such breach within ten (10) days of receiving notice thereof from TIO. TIO may immediately terminate this Contract in the event of any of the following (a) insolvency of Contractor, (b) filing of a voluntary petition in bankruptcy by Contractor, (c) filing of any involuntary petition of bankruptcy against Contractor, (d) appointment of a receiver or trustee for Contractor, or (e) execution of an assignment for the benefit of creditors by Contractor, provided such petition, appointment, or assignment is not vacated or nullified within fifteen (15) days after such event.
2. In the event of termination by TIO pursuant to paragraph 1,
  - i. TIO shall have no remaining liability to Contractor under this Contract other than to pay for any labor or materials accepted by TIO on or before the effective date of the default.
  - ii. TIO shall be entitled to recover from the Contractor (a) the reasonable costs of performing the remainder of the Work (including correction of any defects in the Work performed by the Contractor prior to the termination) to the extent such costs exceed the amount which would have been payable by TIO to the Contractor if the Contract had not been terminated and the Contractor had performed the Work in accordance with the Contract and (b) the reasonable costs of procuring any replacement contractor or supplier for such performance of the remainder of the Work.
  - iii. TIO shall not be required to make any outstanding payment under this Contract (including in respect of any amount due pursuant to paragraph 2(i)) until the Work has been fully performed and the amount due from the Contractor pursuant to paragraph 2(ii) can reasonably be ascertained. At that point TIO shall be entitled to offset any payment due from the Contractor against any liability to make any payment to the Contractor.

- iv. TIO's rights under this paragraph are in addition to any other remedies available hereunder or by law.
  3. Upon a failure by TIO to meet its payment obligations under Article III.E, Contractor may deliver a notice to TIO specifying the amount due and reasonable detail regarding the non-payment, including copies of the applicable invoices ("Late Payment Notice"). Any disputes over amounts due will be subject to the Dispute Resolution clause. If TIO fails to pay (i) amounts set forth in the Late Payment Notice which are not subject to dispute within fourteen (14) days of TIO's receipt of the Late Payment Notice, or (ii) amounts determined to be due upon conclusion of the Dispute Resolution process within fourteen (14) days, then Contractor may deliver a second notice to TIO declaring a termination for default, such termination to be effective upon delivery of such notice to TIO. In the event of such a termination TIO shall pay to the Contractor as its sole remedy the amount defined in Article V.2 in accordance with Article V.3.
- V. Termination for Convenience. TIO reserves the right to terminate this Contract, or any part hereof, for its sole convenience. In the event TIO gives Contractor notice of such termination, Contractor shall immediately stop all Work hereunder and shall cause any and all of its suppliers and subcontractors to promptly cease work.
  1. Within sixty (60) days after the effective date of a termination for convenience, Contractor shall submit a detailed termination claim to TIO with sufficient supporting data to permit TIO's audit and such additional supporting information as TIO requests ("Termination Claim"). The Termination Claim must be certified by the Contractor to represent the sum of all claims under the terminated Contract. The Contractor must also certify on the Termination Claim that no additional claim for services, materials, rights or benefits under the terminated Contract will be brought by the Contractor.
  2. Subject to the terms of this Contract, Contractor shall be paid its reasonable out-of-pocket costs for terminating the Work as of the effective date of the termination. TIO shall pay to the Contractor such proportion of the payment as is commensurate with the Services properly performed by the Contractor up to the date of termination having regard to all of the circumstances surrounding the termination less the amount of any payment in respect of any payment previously made.
  3. TIO's payment to Contractor shall be due within thirty (30) days after its receipt of the Termination Claim less any amount disputed in good faith by TIO. TIO, or its agents, shall have the right to audit and examine all books, records, facilities, work, material, inventories, and other items

related to any termination claim of Contractor. Contractor shall not be entitled to reimbursement for any work performed or costs incurred which reasonably could have been avoided at the time of termination.

- W. Effect of Termination. Upon termination of this Contract:
1. The Parties shall have no further obligation to one another, except for those obligations which survive the termination of this Contract as expressly set forth herein.
  2. The Contractor shall promptly deliver to TIO any TIO equipment or materials and copies of all drawings, documents, physical Deliverables, and other work product in its possession, custody, or control (whether in the course of preparation or completed) prepared or obtained in performance of the Contract.
- X. TIO Property. FAR clause 52.245-1 (June 2007) is incorporated into this Contract in its entirety with the following exceptions:
1. “TIO” shall be substituted for all instances of ‘Government,’”
  2. “TIO contract manager” shall be substituted for all instances of “contracting officer” or “property administrator,”
  3. “Customer Furnished Property” shall be substituted for instances of “Government Furnished Property,”
  4. Paragraph (h)(1) of FAR clause 52.245-1 is revised to read as follows:
    - i. Risk of Loss. Contractor, upon the delivery to it or acquisition by it of any TIO property, assumes the risk of and shall be responsible for all loss thereof or damage thereto. When such property is no longer needed for the performance of this Contract, or at such other time as may be directed by TIO, Contractor shall return such property to TIO, as applicable, in as good a condition as when received, except for reasonable wear and tear, and except for such property as has been reasonably consumed in the performance of work hereunder.
- Y. TIO Fiscal Year Close Requirements. TIO’s fiscal year begins on January 1<sup>st</sup> and ends on December 31<sup>st</sup>. Contractor understands and agrees that it will submit a Fiscal Year Close Report no later than January 15<sup>th</sup> of each fiscal year in which this Contract is effective (“FYCR”). For the FYCR, Contractor shall provide the following:
1. Contractor’s name

- 2. TIO Contract number
- 3. TIO purchase order number
- 4. Name, title and telephone number of Contractor’s representative(s) completing and submitting the FYCR.
- 5. Estimate of unbilled/unpaid costs for all Work performed through the 31<sup>st</sup> of December for that fiscal year.

Z. Scope of Relationship. No provision of this Contract shall be deemed or construed to create a joint venture, partnership or agency between the Parties for any purpose whatsoever.

AA. Counterparts. This Contract, and any amendments hereto, may be executed in counterparts, each such counterpart to be considered an original and all of which shall be construed together as one and the same document.

BB. Authorization. The undersigned individuals represent that they are fully authorized to execute this Contract on behalf of the named Parties.

IN WITNESS WHEREOF, intending to be bound, Contractor and TIO have caused this Contract to be signed by their duly authorized representatives.

**TMT International Observatory LLC**

**[Contractor]**

By \_\_\_\_\_

By \_\_\_\_\_

\_\_\_\_\_  
Name

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date