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SECTION 1 – CONTINUATION OF SF 1449

CONTRACT PRICING

Table 1-1: CLIN Structure and Pricing

CLIN	DESCRIPTION	PRICE IN CALENDAR YEAR ORDERED					
		2021	2022	2023	2024	2025	2026
1.0	Standard Launch Services ^{1,2}	NTE Price \$TBP	NTE Price \$TBP	NTE Price \$TBP	NTE Price \$TBP	NTE Price \$TBP	NTE Price \$TBP
2.0	Streamlined CubeSat Launch Service	Established at Task Order	Established at Task Order	Established at Task Order	Established at Task Order	Established at Task Order	Established at Task Order
3.0	Special Task Assignments	See Table 1-2	See Table 1-2	See Table 1-2	See Table 1-2	See Table 1-2	See Table 1-2
TOTAL CONTRACT PRICE		\$300M potential cumulative value across all contracts					

1. Not-to-Exceed (NTE) pricing is based on a dedicated launch service with a standard integration period of L-24 plus or minus 3 months.

2. NTE pricing does not preclude proposing lower prices when responding to a Request for Launch Service Proposal (RLSP) for a mission task order.

Table 1-2: CLIN 3 Special Task Assignments Labor Rates

	Firm Fixed Price (\$FFP) in Calendar Year Ordered					
	<u>2021</u> <i>Unit Price / Hourly Rate</i>	<u>2022</u> <i>Unit Price / Hourly Rate</i>	<u>2023</u> <i>Unit Price / Hourly Rate</i>	<u>2024</u> <i>Unit Price / Hourly Rate</i>	<u>2025</u> <i>Unit Price / Hourly Rate</i>	<u>2026</u> <i>Unit Price / Hourly Rate</i>
<u>Fully Burdened Composite Labor Rate</u>						
Labor Rate	\$TBP	\$TBP	\$TBP	\$TBP	\$TBP	\$TBP

(End of Clause)

Minimum Guarantee

The guaranteed minimum value for any awarded contract is \$5,000.

[END OF SECTION]

**SECTION 2 – ADDENDUM TO FAR 52.212-4, CONTRACT TERMS AND CONDITIONS
– COMMERCIAL ITEMS (OCT 2018)**

2.1 FAR 52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

For Federal Acquisition Regulation (FAR) clauses, see

<https://www.acquisition.gov/browse/index/far>

For NASA Far Supplement (NFS) clauses, see

<https://www.hq.nasa.gov/office/procurement/regs/NFS.pdf>

(End of Clause)

2.2 LISTING OF CLAUSES INCORPORATED BY REFERENCE

In addition to the clauses marked as incorporated by reference on the SF 1449, the following contract clauses pertinent to this section are hereby incorporated by reference:

FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES:

FAR 52.204-13	System for Award Management Maintenance (OCT 2018)
FAR 52.204-18	Commercial and Government Entity Code Maintenance (AUG 2020)
FAR 52.227-14	Rights in Data—General (MAY 2014) Alternate II (DEC 2007) Alternate III (DEC 2007)

Excerpt from Alternate II, paragraph (g)(3):

LIMITED RIGHTS NOTICE (DEC 2007)

(a) These data are submitted with limited rights under Government Contract No. 80KSC021C____. These data may be reproduced and used by the Government with the express limitation that they will not, without written permission of the Contractor, be used for purposes of manufacture nor disclosed outside the Government; except that the Government may disclose these data outside the Government for the following purposes, if any; provided that the Government makes such disclosure subject to prohibition against further use and disclosure:

- (i) Use (except for manufacture) by support service contractors.
- (ii) Evaluation by nongovernment evaluators.

- (iii) Use (except for manufacture) by other contractors participating in the Government's program of which the specific contract is a part.
- (iv) Emergency repair or overhaul work.
- (v) Release to a foreign government, or its instrumentalities, if required to serve the interests of the U.S. Government, for information or evaluation, or for emergency repair or overhaul work by the foreign government.

Excerpt from Alternate III, paragraph (g)(4):

RESTRICTED RIGHTS NOTICE (Dec 2007)

(a) This computer software is submitted with restricted rights under Government Contract No. 80KSC021C____. It may not be used, reproduced, or disclosed by the Government except as provided in paragraph (b) of this notice or as otherwise expressly stated in the contract.

(b) This computer software may be-

(1) Used or copied for use with the computer(s) for which it was acquired, including use at any Government installation to which the computer(s) may be transferred;

(2) Used or copied for use with a backup computer if any computer for which it was acquired is inoperative;

(3) Reproduced for safekeeping (archives) or backup purposes;

(4) Modified, adapted, or combined with other computer software, provided that the modified, adapted, or combined portions of the derivative software incorporating any of the delivered, restricted computer software shall be subject to the same restricted rights;

(5) Disclosed to and reproduced for use by support service Contractors or their subcontractors in accordance with paragraphs (b)(1) through (4) of this notice; and

(6) Used or copied for use with a replacement computer.

(c) Notwithstanding the foregoing, if this computer software is copyrighted computer software, it is licensed to the Government with the minimum rights set forth in paragraph (b) of this notice.

(d) Any other rights or limitations regarding the use, duplication, or disclosure of this computer software are to be expressly stated in, or incorporated in, the contract.

(e) This notice shall be marked on any reproduction of this computer software, in whole or in part.

(End of notice)

FAR 52.232-40 Providing Accelerated Payments to Small Business Subcontractors (DEC 2013)

NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) CLAUSES:

NFS 1852.215-84 Ombudsman (NOV 2011), Alternate I (JUN 2000)
 NFS 1852.223-70 Safety and Health Measures and Mishap Reporting (DEC 2015)
NOTE: Only applicable when the work will be conducted completely or partly on federally-controlled facilities.
 NFS 1852.223-75 Major Breach of Safety or Security (FEB 2002); Alternate I (FEB 2006)
 NFS 1852.227-14 Rights in Data—General (APR 2015)
 NFS 1852.237-73 Release of Sensitive Information (JUN 2005)

2.3 FAR 52.216-18 -- ORDERING (AUG 2020)

- (a) Any supplies and services to be furnished under this contract shall be ordered by issuance of delivery orders or task orders by the individuals or activities designated in the Schedule. Such orders may be issued for a period of five years from date of contract award.
- (b) All delivery orders or task orders are subject to the terms and conditions of this contract. In the event of conflict between a delivery order or task order and this contract, the contract shall control.
- (c) A delivery order or task order is considered "issued" when—
 - (1) If sent by mail (includes transmittal by U.S. mail or private delivery service), the Government deposits the order in the mail;
 - (2) If sent by fax, the Government transmits the order to the Contractor's fax number; or
 - (3) If sent electronically, the Government either—
 - (i) Posts a copy of the delivery order or task order to a Government document access system, and notice is sent to the Contractor; or
 - (ii) Distributes the delivery order or task order via email to the Contractor's email address.
- (d) Orders may be issued by methods other than those enumerated in this clause only if authorized in the contract.

(End of Clause)

2.4 FAR 52.216-19 -- ORDER LIMITATIONS (OCT 1995)

- (a) *Minimum order.* When the Government requires supplies or services covered by this contract in an amount less than \$5,000, the Government is not obligated to purchase, nor is the Contractor obligated to furnish, those supplies or services under the contract.
- (b) *Maximum order.* The Contractor is not obligated to honor --
 - (1) Any order for a single item in excess of \$100 million;
 - (2) Any order for a combination of items in excess of \$200 million; or
 - (3) A series of orders from the same ordering office within 180 days that together call for quantities exceeding the limitation in subparagraph (b)(1) or (2) of this section.
- (c) If this is a requirements contract (*i.e.*, includes the Requirements clause at subsection 52.216-21 of the Federal Acquisition Regulation (FAR)), the Government is not required to order a part of any one requirement from the Contractor if that requirement exceeds the maximum-order limitations in paragraph (b) of this section.
- (d) Notwithstanding paragraphs (b) and (c) of this section, the Contractor shall honor any order exceeding the maximum order limitations in paragraph (b), unless that order (or orders) is returned to the ordering office within 30 days after issuance, with written notice stating the Contractor's intent not to ship the item (or items) called for and the reasons. Upon receiving this notice, the Government may acquire the supplies or services from another source.

(End of Clause)

2.5 FAR 52.216-22 -- INDEFINITE QUANTITY (OCT 1995)

- (a) This is an indefinite-quantity contract for the supplies or services specified and effective for the period stated in the Ordering clause. The quantities of supplies and services specified in the Schedule are estimates only and are not purchased by this contract.
- (b) Delivery or performance shall be made only as authorized by orders issued in accordance with the Ordering clause. The Contractor shall furnish to the Government, when and if ordered, the supplies or services specified in the Schedule up to and including the quantity designated in the Schedule as the "maximum." The Government shall order at least the quantity of supplies or services designated in the Schedule as the "minimum."
- (c) Except for any limitations on quantities in Order Limitations clause, or in the Schedule, there is no limit on the number of orders that may be issued. The Government may issue orders requiring delivery to multiple destinations or performance at multiple locations.
- (d) Any order issued during the effective period of this contract and not completed within that period shall be completed by the Contractor within the time specified in the order. The contract shall govern the Contractor's and Government's rights and obligations with

respect to that order to the same extent as if the order were completed during the contract's effective period; provided, the Contractor shall not be required to make any deliveries under this contract beyond fifteen years from date of award.

(End of clause)

2.6 NFS 1852.228-78 -- CROSS-WAIVER OF LIABILITY FOR SCIENCE OR SPACE EXPLORATION ACTIVITIES UNRELATED TO THE INTERNATIONAL SPACE STATION (OCT 2012)

- (a) The purpose of this clause is to extend a cross-waiver of liability to NASA contracts for work done in support of Agreements between Parties involving Science or Space Exploration activities that are not related to the International Space Station (ISS) but involve a launch. This cross-waiver of liability shall be broadly construed to achieve the objective of furthering participation in space exploration, use, and investment.
- (b) As used in this clause, the term:
- (1) "*Agreement*" refers to any NASA Space Act agreement that contains the cross-waiver of liability provision authorized in 14 CFR Part 1266.104.
 - (2) "*Damage*" means:
 - (i) Bodily injury to, or other impairment of health of, or death of, any person;
 - (ii) Damage to, loss of, or loss of use of any property;
 - (iii) Loss of revenue or profits; or
 - (iv) Other direct, indirect, or consequential Damage;
 - (3) "*Launch Vehicle*" means an object, or any part thereof, intended for launch, launched from Earth, or returning to Earth which carries Payloads or persons, or both.
 - (4) "*Party*" means a party to a NASA Space Act agreement for Science or Space Exploration activities unrelated to the ISS that involve a launch and a party that is neither the prime contractor under this contract nor a subcontractor at any tier hereof.
 - (5) "*Payload*" means all property to be flown or used on or in a Launch Vehicle.
 - (6) "*Protected Space Operations*" means all Launch or Transfer Vehicle activities and Payload activities on Earth, in outer space, or in transit between Earth and outer space in implementation of an Agreement for Science or Space Exploration activities unrelated to the ISS that involve a launch. Protected Space Operations begins at the signature of the Agreement and ends when all activities done in implementation of the Agreement are completed. It includes, but is not limited to:
 - (i) Research, design, development, test, manufacture, assembly, integration, operation, or use of Launch or Transfer Vehicles, Payloads, or instruments, as well as related support equipment and facilities and services; and
 - (ii) All activities related to ground support, test, training, simulation, or guidance and control equipment, and related facilities or services.

Protected Space Operations excludes activities on Earth which are conducted on return from space to develop further a payload's product or process other than for the activities within the scope of an Agreement.

- (7) "Related entity" means:
- (i) A contractor or subcontractor of a Party at any tier;
 - (ii) A user or customer of a Party at any tier; or
 - (iii) A contractor or subcontractor of a user or customer of a Party at any tier.

The terms "contractors" and "subcontractors" include suppliers of any kind.

- (8) "Transfer Vehicle" means any vehicle that operates in space and transfers Payloads or persons or both between two different space objects, between two different locations on the same space object, or between a space object and the surface of a celestial body. A Transfer Vehicle also includes a vehicle that departs from and returns to the same location on a space object.

(c) Cross-waiver of liability:

- (1) The Contractor agrees to a waiver of liability pursuant to which it waives all claims against any of the entities or persons listed in paragraphs (c)(1)(i) through (c)(1)(iv) of this clause based on Damage arising out of Protected Space Operations. This cross-waiver shall apply only if the person, entity, or property causing the Damage is involved in Protected Space Operations and the person, entity, or property damaged is damaged by virtue of its involvement in Protected Space Operations. The waiver shall apply to any claims for Damage, whatever the legal basis for such claims, against—
- (i) A Party;
 - (ii) A Party to another NASA Agreement or contract that includes flight on the same Launch Vehicle;
 - (iii) A Related Entity of any entity identified in paragraphs (c)(1)(i) or (c)(1)(ii) of this clause; or
 - (iv) The employees of any of the entities identified in (c)(1)(i) through (iii) of this clause.
- (2) The Contractor agrees to extend the cross-waiver of liability as set forth in paragraph (c)(1) of this clause to its own subcontractors at all tiers by requiring them, by contract or otherwise, to:
- (i) Waive all claims against the entities or persons identified in paragraphs (c)(1)(i) through (c)(1)(iv) of this clause; and
 - (ii) Require that their Related Entities waive all claims against the entities or persons identified in paragraphs (c)(1)(i) through (c)(1)(iv) of this clause.

- (3) For avoidance of doubt, this cross-waiver of liability includes a cross-waiver of claims arising from the *Convention on International Liability for Damage Caused by Space Objects*, entered into force on 1 September 1972, in which the person, entity, or property causing the Damage is involved in Protected Space Operations and the person, entity, or property damaged is damaged by virtue of its involvement in Protected Space Operations.
- (4) Notwithstanding the other provisions of this clause, this cross-waiver of liability shall not be applicable to:
 - (i) Claims between the Government and its own contractors or between its own contractors and subcontractors;
 - (ii) Claims made by a natural person, his/her estate, survivors, or subrogees (except when a subrogee is a Party to an Agreement or is otherwise bound by the terms of this cross-waiver) for bodily injury to, or other impairment of health, or death of such person;
 - (iii) Claims for Damage caused by willful misconduct;
 - (iv) Intellectual property claims;
 - (v) Claims for damages resulting from a failure of the contractor to extend the cross-waiver of liability to its subcontractors and related entities, pursuant to paragraph (c)(2) of this clause; or
 - (vi) Claims by the Government arising out of or relating to a contractor's failure to perform its obligations under this contract.
- (5) Nothing in this clause shall be construed to create the basis for a claim or suit where none would otherwise exist.
- (6) This cross-waiver shall not be applicable when 49 U.S.C. Subtitle IX, Chapter 701 is applicable.

(End of clause)

2.7 NFS 1852.232-80 -- SUBMISSION OF VOUCHERS/INVOICES FOR PAYMENT (APR 2018)

- (a) The designated payment office is the NASA Shared Services Center (NSSC) located at FMD Accounts Payable, Bldg. 1111, Jerry Hlass Road, Stennis Space Center, MS 39529.
- (b) Except for classified vouchers, the Contractor shall submit all vouchers and invoices using the steps described at NSSC's Vendor Payment information web site at: <https://www.nssc.nasa.gov/vendorpayment>. Please contact the NSSC Customer Contact Center at 1-877-NSSC123 (1-877-677-2123) with any additional questions or comments.
- (c) Payment requests.
 - (1) The payment periods are stipulated in the payment clause(s) contained in this contract.
 - (2) Vouchers submitted under cost-type contracts and invoices submitted under fixed-price contracts shall include the items delineated in FAR 32.905(b) supported by

relevant back-up documentation. Back-up documentation shall include at a minimum, the following information:

- (i) Vouchers.
 - (A) Breakdown of billed labor costs and associated contractor generated supporting documentation for billed direct labor costs to include rates used and number of hours incurred.
 - (B) Breakdown of billed other direct costs (ODCs) and associated contractor generated supporting documentation for billed ODCs.
 - (C) Indirect rate(s) used to calculate the amount of billed indirect expenses.
 - (D) Progress reports, as required.
- (ii) Invoices.
 - (A) Description of goods and services delivered as part of the contract's terms and conditions, including the dates of delivery/performance.
 - (B) Progress reports, as required.
 - (C) Date goods and services were performed.
- (iii) Fee vouchers.
 - (A) Listing of all provisionally-billed fee by period or date earned since contract award.
 - (B) A reconciliation of all billed and earned fee.
 - (C) A clear explanation of the fee calculations.
- (d) Non-electronic payment requests. The Contractor may submit a non-electronic voucher/invoice using the steps for non-electronic payment requests described at <https://www.nssc.nasa.gov/vendorpayment>, when any of the following conditions are met:
 - (1) The Contracting Officer administering the contract for payment has determined, in writing, that electronic submission would be unduly burdensome to the Contractor.
 - (2) The contract includes provisions allowing the contractor to submit vouchers or invoices using the steps for non-electronic payment requests. In such instances the Contractor agrees to submit non-electronic payment requests using the method or methods specified in Section G of the contract.
- (e) Improper vouchers/invoices. The NSSC Payment Office will notify the contractor of any apparent error, defect, or impropriety in a voucher/invoices within seven calendar days of receipt by the NSSC Payment Office. Inquiries regarding requests for payment should be directed to the NSSC as specified in paragraph (b) of this section.
- (f) Other payment clauses. In addition to the requirements of this clause, the Contractor shall meet the requirements of the appropriate payment clauses in this contract when submitting payment requests.

- (g) In the event that amounts are withheld from payment in accordance with provisions of this contract, a separate payment request for the amount withheld will be required before payment for that amount may be made.

(End of clause)

2.8 52.223-99 -- ENSURING ADEQUATE COVID-19 SAFETY PROTOCOLS FOR FEDERAL CONTRACTORS (DEVIATION 21-03)

- (a) *Definition.* As used in this clause -

United States or its outlying areas means—

- (1) The fifty States;
- (2) The District of Columbia;
- (3) The commonwealths of Puerto Rico and the Northern Mariana Islands;
- (4) The territories of American Samoa, Guam, and the United States Virgin Islands; and
- (5) The minor outlying islands of Baker Island, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Palmyra Atoll, and Wake Atoll.

(b) *Authority.* This clause implements Executive Order 14042, Ensuring Adequate COVID Safety Protocols for Federal Contractors, dated September 9, 2021 (published in the Federal Register on September 14, 2021, 86 FR 50985).

(c) *Compliance.* The Contractor shall comply with all guidance, including guidance conveyed through Frequently Asked Questions, as amended during the performance of this contract, for contractor or subcontractor workplace locations published by the Safer Federal Workforce Task Force (Task Force Guidance) at <https://www.saferfederalworkforce.gov/contractors/>.

(d) *Subcontracts.* The Contractor shall include the substance of this clause, including this paragraph (d), in subcontracts at any tier that exceed the micro-purchase threshold, as defined in Federal Acquisition Regulation 2.101, performed in whole or in part within the United States or its outlying areas.

(End of clause)

2.9 MISSION SUCCESS CRITERIA

The Contracting Officer will determine Mission Success based on the following:

- (a) The payloads are successfully separated and placed into the Interface Control Document (ICD) required insertion orbit(s) by the launch vehicle, and

- (1) Received telemetry data shows the ICD environments and parameters were not exceeded, and
 - (2) The launch vehicle causes no damage to the payload during launch or thereafter from collision or contamination products.
 - (3) However, if there is a violation of the ICD (VADR 1-2/VADR 2-2), but there is no launch vehicle/service caused degradation of the payload's ability to perform its intended function, the mission may be determined a Mission Success.
- (b) A mission will be determined a *Failed Mission* when the payload is destroyed during launch/flight or cannot be separated from the launch vehicle or when there is a violation of the ICD (VADR 1-2/VADR 2-2) during launch/flight preventing the payload from achieving its mission and performing its intended function(s).

NOTE: For purposes of this clause, failures attributed to sources outside of the Contractor's control shall not be considered failures. The loss of the payload will not be considered a "Mishap" under NPR 8621.1 NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping, consistent with the NASA Policy Directive (NPD) 8610.23 modified technical oversight approach.

Application

- (a) In the event the Contracting Officer determines the launch service a Mission Success, the Contractor will be paid 100% of the total mission.
- (b) In the event the Contracting Officer determines the launch service a Failed Mission, the final payment shall be forfeited by the Contractor and is not recoupable.

2.10 SECURITY FOR LAUNCH SERVICE PAYMENT FINANCING

2.10.1 REQUIREMENTS FOR FINANCING PAYMENTS.

Payments will be made under this contract upon submission of properly certified invoices or vouchers by the Contractor, and approval by the administering office, NASA John F. Kennedy Space Center.

2.10.2 SECURITY.

Pursuant to FAR Subpart 32.202-4, Security for Government Financing, and 10 U.S.C. 2307(f) and 41 U.S.C. 255(f), the Government is required to obtain adequate security for Government

financing. Adequate security for payments made under this contract shall be required in the form of (TBP) prior to submission of the first invoice and thereafter when more security is needed to cover additional contract financing payments or as requested by the Government.

If applicable, when the security is in the form of assets, the Contractor shall submit certification that the assets are free from any prior encumbrances. The certification shall list the assets and state the physical location of the assets and their value. When any changes to the assets occurs or when work in process is used to satisfy this requirement, subsequent invoices should be accompanied with a certification statement containing the information described here.

In the event the Contractor fails to provide adequate security as required in this contract, no financing payment shall be made under this contract. Upon receipt of adequate security, financing payments shall be made, including all previous payments to which the Contractor is entitled, in accordance with the terms of the contract. If at any time the Contracting Officer determines that the security provided by the Contractor is insufficient, the Contractor shall promptly provide such additional security as the Contracting Officer determines necessary. In the event the Contractor fails to provide such additional security, the Contracting Officer may collect or liquidate such security that has been provided, and suspend further payments to the Contractor; the Contractor shall repay to the Government the amount of unliquidated financing payments as the Contracting Officer at his/her sole discretion deems repayable.

(End of clause)

2.11 ON-RAMP AND TECHNOLOGY INSERTION

2.11.1 ON-RAMP

The purpose of the Indefinite Delivery Indefinite Quantity (IDIQ) on-ramp is to ensure competition exists for future requirements not currently on contract and to allow qualified new service providers the opportunity to provide services.

In accordance with this clause, the original solicitation (as revised) shall remain open throughout the ordering period. The decision to request proposals under this clause will be solely at NASA's discretion and will only occur after the action has been synopsisized. When requested, new providers will be allowed to submit proposals that may result in contract award(s) to new providers.

The minimum contract requirements, the technical acceptability standards, evaluation factors, solicitation terms and conditions, price reasonableness, and basis for award shall remain in full force and effect for each new proposal.

2.11.2 TECHNOLOGY INSERTION

The purpose of the Indefinite Delivery Indefinite Quantity (IDIQ) technology insertion is for current contract providers to introduce new capabilities.

Existing Contractor(s) may propose a new Common Launch Vehicle Configuration or a Common Launch Vehicle Configuration Change at any time by providing the information in section 6.4.11.2, *Launch Service Overview*, of the current solicitation document. If the existing Contractor's proposed new launch vehicle is not accepted they remain as a candidate for competition of future orders under the terms of the existing contract. If the existing Contractor's new launch vehicle is accepted, their existing contract will be modified to incorporate the additional capabilities.

(End of clause)

2.12 TASK ORDERING PROCEDURES

Types of Task Orders. There are two types of task orders that may be issued under this contract. The first type is a Launch Service Task Order (LSTO). Any required services related to a specific launch service will be included in the LSTO. All items other than launch services and items not related to a specific launch service will be obtained by task orders referred to herein as Special Task Assignments.

Requirements for Competition. The Government will provide all contract holders a fair opportunity to be considered for task orders issued under this contract based upon the specific task order requirements, unless it is determined that one of the exceptions to the fair opportunity process applies as listed under FAR 16.505(b)(2).

2.12.1 LAUNCH SERVICE TASK ORDER (LSTO)

2.12.1.1 REQUEST FOR LAUNCH SERVICE PROPOSAL (RLSP)

The task order RLSP will provide instructions regarding the level of detail required in the proposal and specific information unique to the mission. The RLSP will also provide the required method of submission (e.g. electronic and/or paper copy), basis upon which selection will be made, and (for orders expected to exceed \$5.5 million) the relative importance of the evaluation factors as described in FAR 15.101-1(b)(2). Prior to the issuance of an RLSP, exchanges and fact-finding may take place with the existing contractors.

2.12.1.2 RLSP PROPOSALS

Task Order Proposals shall contain all required information and be submitted as directed in the RLSP. Untimely proposals will be treated as a late proposal in accordance with FAR 52.212-1(f), Late submissions, revisions, and withdrawals of Offerors. Proposals shall clearly state their compliance with the contract terms, statement of work, and all specific requirements contained in the RLSP. Only launch vehicle configurations already on contract as identified in Attachment 05 may be proposed and any Common Launch Vehicle Configuration Upgrades or Modifications will require additional information as described in the RLSP.

Companies who decide not to submit a task order proposal shall provide the Contracting Officer notification 15 days after RLSP release. The notification shall include a brief rationale for not submitting a proposal.

Price shall be below the Not-to-Exceed contract prices shown in the Table 1-1. Other than certified cost or pricing data may be requested, if necessary, to support a price reasonableness determination.

2.12.1.3 RLSP TASK ORDER EVALUATION

A best value award decision will be made for all competitive task orders in accordance with FAR 16.505(b) using the selection process as described in the task order RLSP. The evaluation will include technical capability/risk and price reasonableness. The evaluation of past performance will be determined at the time of the task order RLSP.

2.12.1.4 RLSP TASK ORDER AWARD

The only person authorized to issue task orders under this contract is the Contracting Officer. Task orders will be issued via electronic format directly to the Offeror's point of contact. The Offeror will acknowledge receipt and acceptance of the task order by signing the task order and returning an electronic copy directly to the Contracting Officer.

For awards exceeding \$5.5 million, Offerors will be notified of award in accordance with FAR 15.503(b)(1) and FAR 16.505(b)(6)(i) and a post-award debriefing may be requested and provided in accordance with FAR 15.506 and FAR 16.505(b)(6)(ii).

Protests may be filed as allowed under FAR 16.505(a)(10).

2.12.1.5 RLSP POST AWARD MODIFICATIONS

After an LSTO is issued, it may be necessary to add mission specific requirements. These additions will be accomplished via modifications to the original order. In this instance, the terms of the existing task order, such as price, Milestone Events, and Statement of Work completion criteria, may be modified to reflect the change(s). The resultant change in price will be applied to the remaining payment amounts, as performance dictates. In addition, special task assignments may be added to launch service task orders without further competition when they are needed to support that specific mission.

2.12.2 SPECIAL TASK ASSIGNMENT

2.12.2.1 REQUEST FOR PROPOSAL (RFP) FOR SPECIAL TASK ASSIGNMENTS

The task order RFP will provide instructions regarding the level of detail required in the proposal and specific information unique to the mission. The RFP will also provide the required method of submission (e.g. electronic and/or paper copy), basis upon which selection will be made, and (for orders expected to exceed \$5.5 million) the relative importance of the evaluation factors as

described in FAR 15.101-1(b)(2). Prior to the issuance of an RFP, exchanges and fact-finding may take place with the existing contractors.

2.12.2.2 RFP PROPOSALS

Task Order Proposals shall contain all required information and be submitted as directed in the RFP for task assignment(s). Untimely proposals will be treated as a late proposal in accordance with FAR 52.212-1(f), Late submissions, revisions, and withdrawals of Offerors. Proposals shall clearly state their compliance with the contract terms, statement of work, and all specific requirements contained in the RFP.

The Offerors shall utilize the fully burdened labor rates shown in Table 1-2: CLIN 3 Special Task Assignments Labor Rates, when developing their firm fixed-price proposal. The rates in the table may be adjusted downward by the Offeror. Any proposed reduction will be applicable to the current proposal only and will not be deemed a permanent reduction of the labor rate(s). Other than certified cost or pricing data may be required to support the price for additional items included in the proposal.

2.12.2.3 RFP TASK ORDER EVALUATION

Award will be made after fairly considering all Offerors in accordance with FAR 16.505(b)(1)(iii) and may include orders to more than one Offeror.

2.12.2.4 RFP TASK ORDER AWARD

The only person authorized to issue task orders under this contract is the Contracting Officer. Task orders will be issued via electronic format directly to the Offeror's point of contact. The Offeror will acknowledge receipt and acceptance of the task order by signing the task order and returning an electronic copy directly to the Contracting Officer. For awards exceeding \$5.5 million, Offerors will be notified of award in accordance with FAR 15.503(b)(1) and FAR 16.505(b)(6)(i) and a post-award debriefing may be requested and provided in accordance with FAR 15.506 and FAR 16.505(b)(6)(ii).

Protests may be filed as allowed under FAR 16.505(a)(10).

(End of clause)

2.13 USE OF GOVERNMENT PROPERTY, FACILITIES, ASSETS, OR SERVICES

This clause applies to any Government support, including property, facilities, assets, or services, not otherwise provided for under this contract whether obtained from NASA or another Government Agency.

- (a) Support obtained from a Government Agency other than NASA.

- (1) The Contractor shall obtain and maintain any necessary contracts or agreements between the Contractor and any Government Agency authorizing the use of Government property, facilities, assets or services in performance of this contract (except as may be expressly stated in this contract as furnished by the Government). The Contractor shall be responsible to arrange any contracts or agreements outside of this contract as it deems appropriate. The terms and conditions of such contracts or agreements will govern the use of those Government resources. Any costs associated with such contracts or agreements shall result in no increase in the price of this contract. All remedies to disputes or performance issues shall be resolved in accordance with the terms and conditions of those contracts or agreements. The Contractor shall notify the Contracting Officer Representative (COR), or designee, of any contracts or agreements between the Contractor and any Government Agency under this paragraph (a).
 - (2) NASA makes no warranty whatsoever as to the availability or suitability for use of Government property, facilities, assets, or services made available by another Government Agency under the terms and conditions of other contracts or agreements. The Contractor assumes all responsibility for determining the suitability for use of all property, facilities, assets, or services acquired or made available to the Contractor by a Government Agency under other contracts or agreements. The Contractor further acknowledges and agrees that any use of such Government property, facilities, assets, or services shall not relieve the Contractor of full performance responsibility under the contract.
- (b) Support obtained from a NASA Center or Component Facility.
- (1) Except as may be expressly stated in this contract as furnished by the Government, the Contractor shall obtain use of any Government property, facilities, assets or services available from a NASA Center or Component Facility (a "Performing Organization") for performance of this contract through the use of an appropriate agreement. The Contractor shall be responsible for obtaining, negotiating and documenting all agreements with the Performing Organization. The Contractor shall be responsible for any costs associated with property, facilities, assets, or services provided by a Performing Organization under an agreement and such costs shall result in no increase in the price of this contract. The Contractor shall notify the Contracting Officer Representative (COR), or designee, of any agreements between the Contractor and a Performing Organization under this paragraph.
 - (2) NASA makes no warranty whatsoever as to the availability or suitability for use of property, facilities, assets, or services made available by a Performing Organization under an agreement. The Contractor assumes all responsibility for determining the suitability for use of all such property, facilities, assets, or services, including technical suitability, schedule availability and cost. The Contractor further acknowledges and agrees that any use of Government property, facilities, assets, or services under an agreement shall not relieve the Contractor of full performance responsibility under the contract.

- (3) Any implementation issues or disputes arising under an agreement shall be referred for resolution to the Points of Contact, or if necessary, the signatories, identified in the agreement.
- (c) The Contractor is responsible for determining the suitability for use of all materials, property, and facilities acquired or made available to the Contractor by NASA or other Government agencies under any contract or agreement. Any use of Government-Furnished Property (GFP), materials, or facilities and services shall not relieve the Contractor of full performance responsibility under the contract.

(End of clause)

2.14 LICENSES, PERMITS, AND INSURANCE FOR A LAUNCH SERVICE OPERATOR

- (a) The Contractor must obtain and maintain the necessary licenses, permits and clearances that may be required by the Department of Transportation, Department of Commerce, Department of Defense, NASA, or other Governmental agencies in order to provide launch services under this contract. A Federal Aviation Administration (FAA) commercial launch license is required under this contract. All costs and fees associated with obtaining licenses, permits and clearances shall be included in the launch service price. Approvals required by the payload are the responsibility of NASA.
- (b) In accordance with 51 U.S.C. § 50914, the Contractor shall obtain liability insurance or demonstrate financial responsibility in amounts to compensate for the maximum probable loss from claims by: (1) a third party for death, bodily injury, or property damage or loss arising in connection with the covered launch activities under this contract; and (2) the United States Government against a person for damage or loss to Government property arising in connection with the covered launch activities under this contract. The Contractor shall provide the NASA Contracting Officer a copy of the Maximum Probable Loss (MPL) determination and certificate of such insurance once it has been obtained.
- (c) The foregoing insurance requirement does not preclude the Contractor from acquiring or continuing in effect any additional insurance to protect the interests of the Contractor or its Related Parties, such as Commercial General Liability coverage.

(End of Clause)

2.15 KENNEDY SPACE CENTER BADGING ISSUANCE AND IDENTITY VERIFICATION PROCESS

Reference FAR clause 52.204-9, Personal Identity Verification of Contractor Personnel, incorporated by reference in Section 2 of this contract. See the KSC Protective Services Office (PSO) website (<https://pso.ksc.nasa.gov/>), NASA Procedural Requirement (NPR) 1600.3, Personnel Security, NPR 1600.4A, Identity and Credential Management, and Kennedy NPR

(KNPR) 1600.1, KSC Security Procedural Requirements, regarding the process contractor personnel must follow to obtain access to NASA KSC facilities, property, personnel, and information technology resources.

(End of Clause)

2.16 ADVANCE UNDERSTANDING REGARDING TERMINATION SETTLEMENT UNDER FAR 52.212-4 CONTRACT TERMS AND CONDITIONS-COMMERCIAL ITEMS (OCT 2018)

NOTE – This clause only applies to CLIN 1 Standard Launch Service Task Orders

- (a) In the event the Government decides to exercise its right to terminate all or part of this contract under FAR 52.212-4 (l), *Termination for the Government's convenience*, it is agreed in advance that the Contractor, after receipt of a written notice of termination, will have satisfied all obligations and discharged all duties required by FAR 52.212-4(l), *Termination for the Government's convenience*, when the Contractor has refunded that portion of the milestone-based payment(s) for each launch service affected by the termination, in accordance with Table 2.20-1, *Launch Service Milestone Schedule*.
- (b) The parties agree that by virtue of the refund specified in Table 2.20-1, any and all claims for equitable adjustment as a result of the termination are fully satisfied and discharged. The parties agree that this settlement represents fair compensation for Contractor effort accomplished for the terminated portions of the contract and that the terms as stated herein represent full and final settlement between the parties. The parties agree that the Contractor shall retain title to all hardware associated with the terminated launch service. The parties agree that the above settlement shall represent the total amount to be paid to the Contractor without agreeing on or segregating the particular elements of costs or profits comprising this amount. The refund amount shall be payable in full no later than thirty (30) days after receipt of the written notice of termination. Delinquent payment(s) shall be subject to interest at the applicable rate as determined by the Secretary of the Treasury.
- (c) The provisions of this Contract clause shall only apply from Award until the point of intentional ignition of the launch vehicle, or final launch vehicle in the case of multiple launches. The provision of this Contract clause shall in no way be deemed to limit the rights of the Government under FAR 52.212-4(m), *Termination for Cause*. In the event the Government exercises its rights under FAR 52.212-4(m), *Termination for Cause*, the provisions of this contract clause will not apply.

(End of Clause)

2.17 NFS 1852.225-70 EXPORT LICENSES (FEB 2000)

- (a) The Contractor shall comply with all U.S. export control laws and regulations, including the International Traffic in Arms Regulations (ITAR), 22 CFR Parts 120 through 130, and the Export Administration Regulations (EAR), 15 CFR Parts 730 through 799, in the

performance of this contract. In the absence of available license exemptions/exceptions, the Contractor shall be responsible for obtaining the appropriate licenses or other approvals, if required, for exports of hardware, technical data, and software, or for the provision of technical assistance.

- (b) The Contractor shall be responsible for obtaining export licenses, if required, before utilizing foreign persons in the performance of this contract, including instances where the work is to be performed on-site at Kennedy Space Center, FL, where the foreign person will have access to export-controlled technical data or software.
- (c) The Contractor shall be responsible for all regulatory record keeping requirements associated with the use of licenses and license exemptions/exceptions.
- (d) The Contractor shall be responsible for ensuring that the provisions of this clause apply to its subcontractors.

(End of Clause)

2.18 NFS 1852.232-77 LIMITATION OF FUNDS (FIXED-PRICE CONTRACT) (MAR 1989)

NOTE: This clause will be included in any resultant incrementally funded task order to reflect the funds presently available to cover the launch services and/or task assignment ordered.

- (a) Of the total price of items ___ through ___, the sum of \$TBD is presently available for payment and allotted to this contract. It is anticipated that from time to time additional funds will be allocated to the contract as required by the schedule in contract Section 2.20, *Milestone Payments, Events and Completion Criteria*, until the total price of said items CLINs is allotted.
- (b) The Contractor agrees to perform or have performed work on the items specified in paragraph (a) of this clause up to the point at which, if this contract is terminated pursuant to FAR 52.212-4(1) *Termination for the Government's Convenience* of this contract, the total amount payable by the Government would equal the amount retained by the Contractor pursuant to Section 2.20 and Table 2.20-1. The Government is not obligated in any event to pay or reimburse the Contractor more than the amount from time to time allotted to the contract, anything to the contrary in the Termination for Convenience of the Government clause notwithstanding.
- (c)
 - (1) It is contemplated that funds presently allotted to this contract will cover the work to be performed until TBD.
 - (2) If funds allotted are considered by the Contractor to be inadequate to cover the work to be performed until that date, or an agreed date substituted for it, the Contractor shall notify the Contracting Officer in writing when within the next 60 days the work will reach a point at which, if the contract is terminated pursuant to contract

FAR 52.212-4(1) *Termination for the Government's Convenience* of this contract, the total amount payable by the Government would equal the amount retained by the Contractor pursuant to contract Section 2.20 and Table 2.20-1.

- (3) (i) The notice shall state the estimate when the point referred to in paragraph (c)(2) of this clause will be reached and the estimated amount of additional funds required to continue performance to the date specified in paragraph (c)(1) of this clause, or an agreed date substituted for it.
- (ii) The Contractor shall, 60 days in advance of the date specified in paragraph (c)(1) of this clause, or an agreed date substituted for it, advise the Contracting Officer in writing as to the estimated amount of additional funds required for the timely performance of the contract for a further period as may be specified in the contract or otherwise agreed to by the parties.
- (4) If, after the notification referred to in paragraph (c)(3)(ii) of this clause, additional funds are not allotted by the date specified in paragraph (c)(1) of this clause, or an agreed date substituted for it, the Contracting Officer shall, upon the Contractor's written request, terminate this contract on that date or on the date set forth in the request, whichever is later, pursuant to the FAR 52.212-4(1), *Termination for the Government's Convenience* clause.
- (d) When additional funds are allotted from time to time for continued performance of the work under this contract, the parties shall agree on the applicable period of contract performance to be covered by these funds. The provisions of paragraphs (b) and (c) of this clause shall apply to these additional allotted funds and the substituted date pertaining to them, and the contract shall be modified accordingly.
- (e) If, solely by reason of the Government's failure to allot additional funds in amounts sufficient for the timely performance of this contract, the Contractor incurs additional costs or is delayed in the performance of the work under this contract, and if additional funds are allotted, an equitable adjustment shall be made in the price or prices (including appropriate target, billing, and ceiling prices where applicable) of the items to be delivered, or in the time of delivery, or both.
- (f) The Government may at any time before termination, and, with the consent of the Contractor, after notice of termination, allot additional funds for this contract.
- (g) The provisions of this clause with respect to termination shall in no way be deemed to limit the rights of the Government under the default clause of this contract. The provisions of this Limitation of Funds clause are limited to the work on and allotment of funds for the items set forth in paragraph (a) of this clause. This clause shall become inoperative upon the allotment of funds for the total price of said work except for rights and obligations then existing under this clause.

- (h) Nothing in this clause shall affect the right of the Government to terminate this contract pursuant to the Termination for Convenience of the Government clause of this contract.

(End of Clause)

2.19 CONTRACT DATA REQUIREMENTS LIST (CDRL)

- (a) In performance of each task order, the Contractor shall furnish all data identified and described in Attachment 03, *CDRLS*.
- (b) The Government reserves the right to reasonably defer the date of delivery of any or all items of data specified in the CDRL. Such right may be exercised at no increase in the task order amount. The Government also reserves the right to terminate the requirement for any or all items of data specified in the CDRL.
- (c) To the extent that data required to be furnished by other provisions of this contract are also identified and described in the CDRL, compliance with the CDRL shall be accepted as compliance with such other provisions. In the event of conflict between the identity and description of data called for by specific provisions of this contract and the CDRL, the CDRL shall control the data to be furnished.
- (d) Nothing contained in this Contract Data Requirements List provision shall relieve the Contractor from furnishing data called for by, or under the authority of, other provisions of this contract which are not identified and described in the CDRL attached to this contract. Whenever such data are identified, either by the Contractor or the Government, they will be listed in the CDRL.
- (e) Except as otherwise provided in this contract, the cost of data to be furnished in response to the CDRL attached to this contract is included in the price of each task order.

(End of Clause)

2.20 MILESTONE PAYMENTS, EVENTS AND COMPLETION CRITERIA

- (a) Upon successful completion of a milestone event and submission of a properly certified invoice, the Contractor may request commercial interim payments. The commercial interim payments will be paid in accordance with the payment schedules shown in Tables 2.20-1 and 2.20-2.
- (b) Commercial interim payments are contract financing payments that are not payment for accepted items. Commercial interim payments are fully recoverable, in the same manner as progress payments, in the event of default. Commercial interim payments are contract financing payments and, therefore, are not subject to the interest-penalty provisions of prompt payment. However, these payments shall be made in accordance with the Agency's policy for prompt payment of contract financing payments.

- (c) Milestone estimated completion dates are provided in Table 2.20-1 and Table 2.20-2 are tentative. Payments may be deferred or canceled by the Government if the Contractor fails to make substantial progress in accomplishing the milestone events in Attachment 02, *Meetings and Formal Reviews*. Payments falling due in the first quarter of each fiscal year (October - December) shall be paid promptly to the maximum extent practicable, but shall not be considered late until January 31st of the following calendar year. In the event the Contractor completes a milestone ahead of the milestone completion date, the Contractor may submit a proper invoice and the Government will consider on a case-by-case basis, the early payment of the milestone.
- (d) Termination for Convenience:
- (i) CLIN 1 Standard Launch Services: The Contractor agrees in the event of a termination for convenience of this contract pursuant to contract Section 2.16, *Advance Understanding Regarding Termination Settlement Under Far 52.212-4 Contract Terms And Conditions- Commercial Items (Oct 2018)*, the Government shall not be obligated in any event to pay or reimburse the Contractor any amount in excess of the amount already obligated to the contract. The Contractor shall not be obligated to continue performance of the work beyond such point.
 - (ii) CLIN 2 Streamlined CubeSats Launch Services: In the event of a termination for convenience, the amount due to the Contractor will be determined in accordance with FAR 52.212-4(l).
- (e) The Contracting Officer will unilaterally determine the Contractor's accomplishment and successful completion of each milestone event. The Contracting Officer's determination of milestone event completion will include, but is not limited to, the accomplishment criteria listed for the major milestone events set forth in the Attachment 02, *Meetings and Formal Reviews*. In addition, the Contracting Officer will determine if the following are complete for each payment requested: all Contract Data Requirements List (CDRL) data item deliverables for which delivery is required prior to the requested payment and all previous events have been met.
- (f) If terms are modified under resulting task orders, Tables 2.20-1 and/or 2.20-2 below will be adjusted as necessary to reflect the actions required by those contract modifications.
- (g) Table 2.20-1 assumes a 24-month plus or minus 3 months integration. Table 2.20-2 assumes a 15-month plus or minus 3 months integration. Any changes to this integration timeline will be handled at the task order level.

TABLE 2.20-1, LAUNCH SERVICE MILESTONE SCHEDULE FOR STANDARD LAUNCH SERVICES CLIN 1

<u>Launch Service Milestone Payment</u>	<u>Milestone</u>	<u>Estimated Completion</u>	<u>Amount (% of Launch Service CLIN Price)</u>	<u>Individual Amount of Launch Service Payment (\$)</u> <u>Amounts</u>	<u>Cumulative Amount of Launch Service Payments</u> <u>(\$)</u>	<u>¹Termination for Convenience of the Government Repayment Schedule</u> <u>Percentage (%) of Cumulative Payments Made to Date to be Returned to Government (after the milestone)</u>
1	ATP Kick-off Meeting Scheduled	ATP	10%	Established at Task Order	Established at Task Order	10%
2	Preliminary ICD submittal Draft Verification Matrix with Compliance Method	ATP+3M	10%	Established at Task Order	Established at Task Order	10%
3	Initial Performance and Guidance Accuracy Analysis (PGAA) Initial Coupled Loads Analysis (CLA)	L-18M	10%	Established at Task Order	Established at Task Order	25%
4	Mission Specific Design Review (MSDR) Signed Baseline ICD and Verification Matrix	L-12M	15%	Established at Task Order	Established at Task Order	35%
5	Performance and Guidance Accuracy Analysis (PGAA)	L-9M	10%	Established at Task Order	Established at Task Order	35%
6	Launch Vehicle Schedules Launch Vehicle certification activities on schedule, if applicable	L-6M	5%	Established at Task Order	Established at Task Order	40%
7	Final Coupled Loads Analysis (CLA) Mission Integration Readiness Review (MIRR)	L-3M	10%	Established at Task Order	Established at Task Order	50%

8	Launch Processing Readiness Review (LPRR)	L- 2M	10%	Established at Task Order	Established at Task Order	50%
9	Launch Readiness Review (LRR) Quick Look Report	L-0	5%	Established at Task Order	Established at Task Order	0
² 10	Mission Success Final Flight Report	Orbit Insertion + 30 days	15%	Established at Task Order	Established at Task Order	0

1. The amount shown in the “termination for convenience” column is payable through the most recently completed milestone event up until launch.

2. The final milestone will be paid in accordance with 2.9, Mission Success Criteria. In the event the Contracting Officer determines the launch service a Failed Mission, the final payment shall be forfeited by the Contractor and is not recoupable.

TABLE 2.20-2, LAUNCH SERVICE MILESTONE SCHEDULE FOR STREAMLINED CUBESAT LAUNCH SERVICES CLIN 2

<u>Launch Service Milestone Payment</u>	<u>Milestone</u>	<u>Estimated Completion</u>	<u>Amount (% of Launch Service CLIN Price)</u>	<u>Individual Amount of Launch Service Payment (\$)</u>	<u>Cumulative Amount of Launch Service Payments (\$)</u>
1	Kick-off	ATP + 2 weeks	25%	Established at Task Order	Established at Task Order
2	Signed Baseline ICD and Verification Matrix	ATP+2 months	25%	Established at Task Order	Established at Task Order
3	Conduct Mission Readiness Review	Spacecraft to Dispenser Integration - 1 month	25%	Established at Task Order	Established at Task Order
*4	Deploy CubeSat into required orbit	Insertion	25%	Established at Task Order	Established at Task Order

**NOTE: The final milestone will be paid in accordance with 2.9, Mission Success Criteria. In the event the Contracting Officer determines the launch service a Failed Mission, the final payment shall be forfeited by the Contractor and is not recoupable.*

(End of Clause)

2.21 DOMESTIC SOURCE CRITERIA

- (a) In addition to the certification regarding United States commercial provider of space transportation services (Public Law 105-303, Title II, Section 201), the Contractor shall continue to comply with domestic source criteria established below and with United States National Space Transportation Policy, dated November 21, 2013. Failure to comply with the criteria may be grounds for "Termination for Cause" in accordance with FAR 52.212-4(m).
- (b) Participation in this procurement is restricted to prime Contractors from the United States launch vehicle/services industry. "United States industry" means any corporation, partnership, joint venture, association, or other entity which is organized or existing under the laws of the United States or any State, and whose controlling interest is held by United States citizens. "Launch services" means all services required in the performance of this contract, excluding those necessary to produce or manufacture launch vehicles, its components and other equipment and facilities required in the performance of the contract. "Controlling interest" means ownership of an amount of equity in such entity sufficient to direct management or to void transactions entered into by management. Ownership of at least fifty-one (51) percent of the equity creates a rebuttable presumption that such interest is controlling; however, the ultimate determination as to whether the interest is controlling resides with NASA.
- (c) The Contractor shall provide in the performance of this contract launch vehicles that are domestic end products. The launch vehicle shall be a domestic end product only if the cost of its components, mined, produced or manufactured in the United States exceeds 50 percent of the cost of all its components. The cost of each component includes transportation costs to the place of incorporation into the launch vehicle and any applicable duty (whether or not a duty-free entry certificate is issued). "Components," as used in this contract clause, means those materials and supplies directly incorporated into the end product.
- (d) The Contractor shall provide, in the performance of this contract, domestic launch services. Launch services shall be considered to be domestic if the cost for launch services performed by United States industry sources exceeds 50 percent of the cost of the total required launch services.

(End of Clause)

2.22 ADJUSTMENTS TO LAUNCH SCHEDULE

NOTE – This clause only applies to CLIN 1. CLIN 2 adjustments will be handled in accordance with terms in FAR 52.212-4.

The postponement periods for both the Government and the Contractor shall include the applicable grace period plus any excusable delay plus an additional 12 months each. This clause shall in no

way limit the rights of the Government under FAR 52.212-4(l), and 52.212-4 (m). Postponements during this period shall be subject to the postponement fees pursuant to table 2.22-1 and will be paid by the postponing party. In the event of a single postponement, or cumulative postponements for each launch service by the Government/Contractor exceeds 12 months in addition to any applicable grace period or excusable delay, the contract shall be subject to equitable adjustment for that portion of delay exceeding 12 months. Any amounts owed by the postponing party as equitable adjustment shall be in addition to the maximum postponement fees for the twelve (12) month delay, and/or other available remedies provided for under 2.16, *Advance Understanding Regarding Termination Settlement Under FAR 52.212*.

This clause, including grace periods, shall not apply to missions with limited launch periods defined as daily launch opportunities constrained by blackout periods associated with scientific requirements (e.g., planetary, lunar, seasonal, and/or lunar exclusions). Requests for launch adjustments for missions with limited launch periods shall be in accordance with the 52.212-4 (c), *changes*, of this contract. Contractor requests for launch adjustments for missions with limited launch periods are subject to equitable adjustment and require approval of NASA prior to implementation. If NASA approval is granted, the Contractor shall be obligated to launch at the next opportunity capable of meeting the mission's scientific requirements, irrespective of other launch commitments or customer's priorities (In accordance with the DPAS ratings).

2.22.1 DEDICATED AND PRIMARY RIDESHARE PAYLOAD LAUNCH DELAYS

- (a) NASA or the Contractor will give written notice with rationale of any desired change in the launch date or launch window start date as soon as possible. In the case of a request for postponement of the launch date or launch window start date by NASA or the Contractor, the Contractor or NASA will propose a new launch date or launch window start date. Within one week of receipt of the written request of a launch schedule adjustment, the Contractor or NASA will inform NASA or the Contractor whether a launch opportunity exists as requested or will propose an alternatively available launch date. NASA or the Contractor will work to provide written agreement within 7 days following receipt of the Contractor's or NASA's proposition, and will work together to resolve Range conflicts.
- (b) If the Contractor or NASA requests a postponement of the launch date or launch window start date and NASA or Contractor cannot meet the requested launch date or launch window start date, both parties will mutually agree to a new launch date and the grace days and/or postponement fees will be calculated based on the initial request for postponement.
- (c) **Grace Days:** Grace Days are defined as the number of days the Contractor and NASA may delay the launch date window or launch window start date without incurring postponement fees. Each task order may include up to 180 grace days as described in this clause.

From ATP through L-12 months, NASA and the Contractor will be allowed up to 120 grace days without penalty. During this period, any delays beyond the allowable grace days are

subject to a postponement fee of \$500 for each day of delay (*NOTE: grace days may be decreased or removed at the task order level based on mission requirements*).

Beginning at L-12, NASA and the Contractor are each allowed up to 60 additional grace days subject to the schedule below:

TABLE 2.22-1: NASA AND CONTRACTOR GRACE DAYS

Phase	Prior to Launch Date	Maximum Grace Days	Postponement Fee for each day of delay (\$)
1	L-12 Months through L-9 Months	60	\$1,000
2	L-9 Months through L-3 Months	45	\$1,500
3	L-3 Months through Launch	15	\$3,000

NOTE: The amount of grace days available for any phase in table 2.22-1, is the smaller of the number of days in the Maximum Grace Days column compared to the remaining available grace days from previous period. For example, if 20 days were used during Phase 1, there would be 40 days available in Phase 2. If no days are used in Phase 2, then there would be 15 days available in Phase 3.

- (d) If the Contractor or NASA requests a postponement of the launch date beyond any of Contractor's or NASA's remaining grace days, and is not the result of any event described in paragraph (f), the Parties agree to the postponement fees schedule shown in table 2.22-1 and the following:

The amount of postponement fees shall be added to/subtracted from (as applicable) the contract price and evenly distributed among the remaining milestones. In the event that NASA and/or the Contractor postpones the launch date, the Payment Schedule shall be suspended for the length of the delay and then resumed with all remaining Program Events and payments shifted by the amount (length) of the delay. In this event, NASA and/or the Contractor shall have the right of approval of the revised launch or launch window start date prior to its implementation.

- (e) If NASA terminates this contract in whole or in part under FAR 52.212-4 (l), *Termination for the Government's convenience*, the Contractor is liable for termination fees in accordance with Table 2.20-1, *Launch Service Milestone Schedule*.
- (f) NASA and/or the Contractor will not be charged the above fees when the delay in delivery or performance arises solely out of causes beyond the control of and without the fault or negligence of the NASA and/or the Contractor as defined in FAR 52.212-4, (f), *Excusable Delays* and also include, but are not limited to the following:

Delays resulting from payload or launch vehicle launch day mission rules/constraints documented in the Contractor's countdown procedure/process, FAA launch day constraints, range launch constraints, range mandatory hold requirements, wars (declared or undeclared), riots, revolution, hijacking, freight embargoes, sabotage, pandemics, interruptions of essential services such as

electricity, natural gases, fuels and water, or any condition which jeopardizes the safety of the employees of the Contractor, NASA, or its subcontractors.

2.22.2 EXCUSABLE DELAYS FOR TRADITIONAL RIDESHARES

FAR 52.212-4, (f), *Excusable Delays*, applies to traditional rideshares and also includes, but is not limited to the following:

Delays resulting from payload or launch vehicle launch day mission rules/constraints documented in the Contractor's countdown procedure/process, FAA launch day constraints, range launch constraints, range mandatory hold requirements, wars (declared or undeclared), riots, revolution, hijacking, freight embargoes, sabotage, pandemics, interruptions of essential services such as electricity, natural gases, fuels and water, or any condition which jeopardizes the safety of the employees of the Contractor, NASA, or its subcontractors.

(End of Clause)

2.23 ADJUSTMENTS SUBJECT TO FAR 52.223-99

The contractor may request adjustments in the schedule or price of this contract as a result of any and all future impacts to the contractor and/or its suppliers and subcontractors, including, but not limited to, adjustments for impacts to the contractor and its suppliers/subcontractors resulting from the following: (1) amendments to applicable guidance (including Frequently Asked Questions) published by the Safer Federal Workforce Task Force after 24 September 2021; and (2) the requirement to include the substance of FAR 52.223-99 (DEVIATION 21-03) in subcontracts.

(End of Clause)

[END OF SECTION]

SECTION 3 – ATTACHMENT - FAR 52.212-5**3.1 CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS-COMMERCIAL ITEMS (JAN 2021)**

- (a) The Contractor shall comply with the following Federal Acquisition Regulation (FAR) clauses, which are incorporated in this contract by reference, to implement provisions of law or Executive orders applicable to acquisitions of commercial items:
- (1) 52.203-19, Prohibition on Requiring Certain Internal Confidentiality Agreements or Statements (JAN 2017) (section 743 of Division E, Title VII, of the Consolidated and Further Continuing Appropriations Act, 2015 (Pub. L. 113-235) and its successor provisions in subsequent appropriations acts (and as extended in continuing resolutions)).
 - (2) 52.204-23, Prohibition on Contracting for Hardware, Software, and Services Developed or Provided by Kaspersky Lab and Other Covered Entities (JUL 2018) (Section 1634 of Pub. L. 115-91).
 - (3) 52.204-25, Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment. (AUG 2020) (Section 889(a)(1)(A) of Pub. L. 115-232).
 - (4) 52.209-10, Prohibition on Contracting with Inverted Domestic Corporations (NOV 2015).
 - (5) 52.233-3, Protest After Award (AUG 1996) (31 U.S.C. 3553).
 - (6) 52.233-4, Applicable Law for Breach of Contract Claim (OCT 2004) (Public Laws 108-77 and 108-78 (19 U.S.C. 3805 note)).
- (b) The Contractor shall comply with the FAR clauses in this paragraph (b) that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

[Contracting Officer check as appropriate.]

- (1) 52.203-6, Restrictions on Subcontractor Sales to the Government (JUNE 2020), with *Alternate I* (OCT 1995) (41 U.S.C. 4704 and 10 U.S.C. 2402).
- (2) 52.203-13, Contractor Code of Business Ethics and Conduct (JUN 2020) (41 U.S.C. 3509)).
- (3) 52.203-15, Whistleblower Protections under the American Recovery and Reinvestment Act of 2009 (JUN 2010) (Section 1553 of Pub. L. 111-5). (Applies to contracts funded by the American Recovery and Reinvestment Act of 2009.)
- (4) 52.204-10, Reporting Executive Compensation and First-Tier Subcontract Awards (JUN 2020) (Pub. L. 109-282) (31 U.S.C. 6101 note).

- (5) [Reserved].
- (6) 52.204-14, Service Contract Reporting Requirements (OCT 2016) (Pub. L. 111-117, section 743 of Div. C).
- (7) 52.204-15, Service Contract Reporting Requirements for Indefinite-Delivery Contracts (Oct 2016) (Pub. L. 111-117, section 743 of Div. C).
- (8) 52.209-6, Protecting the Government's Interest When Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment. (JUN 2020) (31 U.S.C. 6101 note).
- (9) 52.209-9, Updates of Publicly Available Information Regarding Responsibility Matters (OCT 2018) (41 U.S.C. 2313).
- (10) [Reserved].
- (11) (i) 52.219-3, Notice of HUBZone Set-Aside or Sole-Source Award (MAR 2020) (15 U.S.C. 657a).
- (ii) Alternate I (MAR 2020) of 52.219-3.
- (12) (i) 52.219-4, Notice of Price Evaluation Preference for HUBZone Small Business Concerns (MAR 2020) (if the offeror elects to waive the preference, it shall so indicate in its offer) (15 U.S.C. 657a).
- (ii) Alternate I (MAR 2020) of 52.219-4.
- (13) [Reserved]
- (14) (i) 52.219-6, Notice of Total Small Business Set-Aside (NOV 2020) (15 U.S.C. 644).
- (ii) Alternate I (MAR 2020) of 52.219-6.
- (15) (i) 52.219-7, Notice of Partial Small Business Set-Aside (NOV 2020) (15 U.S.C. 644).
- (ii) Alternate I (MAR 2020) of 52.219-7.
- (16) 52.219-8, Utilization of Small Business Concerns (OCT 2018) (15 U.S.C. 637(d)(2) and (3)).
- (17) (i) 52.219-9, Small Business Subcontracting Plan (JUN 2020) (15 U.S.C. 637(d)(4)).
- (ii) Alternate I (NOV 2016) of 52.219-9.

- (iii) Alternate II (NOV 2016) of 52.219-9.
- (iv) Alternate III (JUN 2020) of 52.219-9.
- (v) Alternate IV (JUN 2020) of 52.219-9
- (18) (i) 52.219-13, Notice of Set-Aside of Orders (MAR 2020) (15 U.S.C. 644(r)).
- (ii) Alternate I (MAR 2020) of 52.219-13.
- (19) 52.219-14, Limitations on Subcontracting (MAR 2020) (15 U.S.C. 637(a)(14)).
- (20) 52.219-16, Liquidated Damages-Subcontracting Plan (JAN 1999) (15 U.S.C. 637(d)(4)(F)(i)).
- (21) 52.219-27, Notice of Service-Disabled Veteran-Owned Small Business Set-Aside (MAR 2020) (15 U.S.C. 657f).
- (22) (i) 52.219-28, Post Award Small Business Program Rerepresentation (NOV 2020) (15 U.S.C. 632(a)(2)).
- (ii) Alternate I (MAR 2020) of 52.219-28.
- (23) 52.219-29, Notice of Set-Aside for, or Sole Source Award to, Economically Disadvantaged Women-Owned Small Business Concerns (MAR 2020) (15 U.S.C. 637(m)).
- (24) 52.219-30, Notice of Set-Aside for, or Sole Source Award to, Women-Owned Small Business Concerns Eligible Under the Women-Owned Small Business Program (Mar2020) (15 U.S.C. 637(m)).
- (25) 52.219-32, Orders Issued Directly Under Small Business Reserves (MAR 2020) (15 U.S.C. 644(r)).
- (26) 52.219-33, Nonmanufacturer Rule (MAR 2020) (15U.S.C. 637(a)(17)).
- (27) 52.222-3, Convict Labor (JUN 2003) (E.O.11755).
- (28) 52.222-19, Child Labor-Cooperation with Authorities and Remedies (JAN2020) (E.O.13126).
- (29) 52.222-21, Prohibition of Segregated Facilities (APR 2015).
- (30) (i) 52.222-26, Equal Opportunity (SEP 2016) (E.O.11246).

- (ii) Alternate I (FEB 1999) of 52.222-26.
- (31) (i) 52.222-35, Equal Opportunity for Veterans (JUN 2020) (38 U.S.C. 4212).
- (ii) Alternate I (JUL 2014) of 52.222-35.
- (32) (i) 52.222-36, Equal Opportunity for Workers with Disabilities (JUN 2020) (29 U.S.C. 793).
- (ii) Alternate I (JUL 2014) of 52.222-36.
- (33) 52.222-37, Employment Reports on Veterans (JUN 2020) (38 U.S.C. 4212).
- (34) 52.222-40, Notification of Employee Rights Under the National Labor Relations Act (DEC 2010) (E.O. 13496).
- (35) (i) 52.222-50, Combating Trafficking in Persons (OCT 2020) (22 U.S.C. chapter 78 and E.O. 13627).
- (ii) Alternate I (MAR 2015) of 52.222-50 (22 U.S.C. chapter 78 and E.O. 13627).
- (36) 52.222-54, Employment Eligibility Verification (OCT 2015). (Executive Order 12989). (Not applicable to the acquisition of commercially available off-the-shelf items or certain other types of commercial items as prescribed in 22.1803.)
- (37) (i) 52.223-9, Estimate of Percentage of Recovered Material Content for EPA–Designated Items (May 2008) (42 U.S.C. 6962(c)(3)(A)(ii)). (Not applicable to the acquisition of commercially available off-the-shelf items.)
- (ii) Alternate I (MAY 2008) of 52.223-9 (42 U.S.C. 6962(i)(2)(C)). (Not applicable to the acquisition of commercially available off-the-shelf items.)
- (38) 52.223-11, Ozone-Depleting Substances and High Global Warming Potential Hydrofluorocarbons (Jun 2016) (E.O. 13693).
- (39) 52.223-12, Maintenance, Service, Repair, or Disposal of Refrigeration Equipment and Air Conditioners (JUN 2016) (E.O. 13693).
- (40) (i) 52.223-13, Acquisition of EPEAT®-Registered Imaging Equipment (JUN 2014) (E.O.s 13423 and 13514).
- (ii) Alternate I (OCT 2015) of 52.223-13.

- (41) (i) 52.223-14, Acquisition of EPEAT®-Registered Televisions (JUN 2014) (E.O.s 13423 and 13514).
- (ii) Alternate I (Jun2014) of 52.223-14.
- (42) 52.223-15, Energy Efficiency in Energy-Consuming Products (MAY 2020) (42 U.S.C. 8259b).
- (43) (i) 52.223-16, Acquisition of EPEAT®-Registered Personal Computer Products (OCT 2015) (E.O.s 13423 and 13514).
- (ii) Alternate I (JUN 2014) of 52.223-16.
- (44) 52.223-18, Encouraging Contractor Policies to Ban Text Messaging While Driving (JUN 2020) (E.O. 13513).
- (45) 52.223-20, Aerosols (JUN 2016) (E.O. 13693).
- (46) 52.223-21, Foams (Jun2016) (E.O. 13693).
- (47) (i) 52.224-3 Privacy Training (JAN 2017) (5 U.S.C. 552 a).
- (ii) Alternate I (JAN 2017) of 52.224-3.
- (48) 52.225-1, Buy American-Supplies (JAN2021) (41 U.S.C. chapter 83).
- (49) (i) 52.225-3, Buy American-Free Trade Agreements-Israeli Trade Act (JAN 2021)(41 U.S.C.chapter83, 19 U.S.C. 3301 note, 19 U.S.C. 2112 note, 19 U.S.C. 3805 note, 19 U.S.C. 4001 note, Pub. L. 103-182, 108-77, 108-78, 108-286, 108-302, 109-53, 109-169, 109-283, 110-138, 112-41, 112-42, and 112-43).
- (ii) Alternate I (JAN 2021) of 52.225-3.
- (iii) Alternate II (JAN 2021) of 52.225-3.
- (iv) Alternate III (JAN 2021) of 52.225-3.
- (50) 52.225-5, Trade Agreements (OCT 2019) (19 U.S.C. 2501, *et seq.*, 19 U.S.C. 3301 note).
- (51) 52.225-13, Restrictions on Certain Foreign Purchases (JUN 2008) (E.O.'s, proclamations, and statutes administered by the Office of Foreign Assets Control of the Department of the Treasury).

- (52) 52.225-26, Contractors Performing Private Security Functions Outside the United States (Oct 2016) (Section 862, as amended, of the National Defense Authorization Act for Fiscal Year 2008; 10 U.S.C. 2302Note).
- (53) 52.226-4, Notice of Disaster or Emergency Area Set-Aside (Nov2007) (42 U.S.C. 5150).
- (54) 52.226-5, Restrictions on Subcontracting Outside Disaster or Emergency Area (Nov2007) (42 U.S.C. 5150).
- (55) 52.229-12, Tax on Certain Foreign Procurements (JUN 2020).
- (56) 52.232-29, Terms for Financing of Purchases of Commercial Items (FEB 2002) (41 U.S.C. 4505, 10 U.S.C. 2307(f)).
- (57) 52.232-30, Installment Payments for Commercial Items (Jan 2017) (41 U.S.C. 4505, 10 U.S.C. 2307(f)).
- (58) 52.232-33, Payment by Electronic Funds Transfer-System for Award Management (OCT2018) (31 U.S.C. 3332).
- (59) 52.232-34, Payment by Electronic Funds Transfer-Other than System for Award Management (Jul 2013) (31 U.S.C. 3332).
- (60) 52.232-36, Payment by Third Party (MAY 2014) (31 U.S.C. 3332).
- (61) 52.239-1, Privacy or Security Safeguards (AUG 1996) (5 U.S.C. 552a).
- (62) 52.242-5, Payments to Small Business Subcontractors (JAN 2017) (15 U.S.C. 637(d)(13)).
- (63) (i) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (FEB 2006) (46 U.S.C. Appx. 1241(b) and 10 U.S.C. 2631).
 - (ii) Alternate I (APR 2003) of 52.247-64.
 - (iii) Alternate II (FEB 2006) of 52.247-64.
- (c) The Contractor shall comply with the FAR clauses in this paragraph (c), applicable to commercial services, that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items:
 - (1) 52.222-41, Service Contract Labor Standards (AUG 2018) (41 U.S.C. chapter67).

- (2) 52.222-42, Statement of Equivalent Rates for Federal Hires (MAY 2014) (29 U.S.C. 206 and 41 U.S.C. chapter 67).

- (3) 52.222-43, Fair Labor Standards Act and Service Contract Labor Standards-Price Adjustment (Multiple Year and Option Contracts) (AUG 2018) (29 U.S.C. 206 and 41 U.S.C. chapter 67).

- (4) 52.222-44, Fair Labor Standards Act and Service Contract Labor Standards-Price Adjustment (May 2014) (29U.S.C.206 and 41 U.S.C. chapter 67).

- (5) 52.222-51, Exemption from Application of the Service Contract Labor Standards to Contracts for Maintenance, Calibration, or Repair of Certain Equipment-Requirements (May 2014) (41 U.S.C. chapter 67).

- (6) 52.222-53, Exemption from Application of the Service Contract Labor Standards to Contracts for Certain Services-Requirements (MAY 2014) (41 U.S.C. chapter 67).

- (7) 52.222-55, Minimum Wages Under Executive Order 13658 (NOV 2020).

- (8) 52.222-62, Paid Sick Leave Under Executive Order 13706 (JAN 2017) (E.O. 13706).

- (9) 52.226-6, Promoting Excess Food Donation to Nonprofit Organizations (Jun 2020) (42 U.S.C. 1792).

- (d) *Comptroller General Examination of Record*. The Contractor shall comply with the provisions of this paragraph (d) if this contract was awarded using other than sealed bid, is in excess of the simplified acquisition threshold, as defined in FAR 2.101, on the date of award of this contract, and does not contain the clause at 52.215-2, Audit and Records-Negotiation.
 - (1) The Comptroller General of the United States, or an authorized representative of the Comptroller General, shall have access to and right to examine any of the Contractor's directly pertinent records involving transactions related to this contract.

 - (2) The Contractor shall make available at its offices at all reasonable times the records, materials, and other evidence for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in FAR subpart 4.7, Contractor Records Retention, of the other clauses of this contract. If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement. Records relating to appeals under the disputes clause or to litigation or

the settlement of claims arising under or relating to this contract shall be made available until such appeals, litigation, or claims are finally resolved.

- (3) As used in this clause, records include books, documents, accounting procedures and practices, and other data, regardless of type and regardless of form. This does not require the Contractor to create or maintain any record that the Contractor does not maintain in the ordinary course of business or pursuant to a provision of law.
- (e)
- (1) Notwithstanding the requirements of the clauses in paragraphs (a), (b), (c), and (d) of this clause, the Contractor is not required to flow down any FAR clause, other than those in this paragraph (e)(1) in a subcontract for commercial items. Unless otherwise indicated below, the extent of the flow down shall be as required by the clause-
- (i) 52.203-13, Contractor Code of Business Ethics and Conduct (JUN 2020) (41 U.S.C. 3509).
 - (ii) 52.203-19, Prohibition on Requiring Certain Internal Confidentiality Agreements or Statements (Jan 2017) (section 743 of Division E, Title VII, of the Consolidated and Further Continuing Appropriations Act, 2015 (Pub. L. 113-235) and its successor provisions in subsequent appropriations acts (and as extended in continuing resolutions)).
 - (iii) 52.204-23, Prohibition on Contracting for Hardware, Software, and Services Developed or Provided by Kaspersky Lab and Other Covered Entities (JUL 2018) (Section 1634 of Pub. L. 115-91).
 - (iv) 52.204-25, Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment. (AUG 2020) (Section 889(a)(1)(A) of Pub. L. 115-232).
 - (v) 52.219-8, Utilization of Small Business Concerns (OCT 2018) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds the applicable threshold specified in FAR 19.702(a) on the date of subcontract award, the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.
 - (vi) 52.222-21, Prohibition of Segregated Facilities (APR 2015).
 - (vii) 52.222-26, Equal Opportunity (SEP 2015) (E.O.11246).
 - (viii) 52.222-35, Equal Opportunity for Veterans (JUN 2020) (38 U.S.C. 4212).
 - (ix) 52.222-36, Equal Opportunity for Workers with Disabilities (JUN 2020) (29 U.S.C. 793).
 - (x) 52.222-37, Employment Reports on Veterans (JUN 2020) (38 U.S.C. 4212).
 - (xi) 52.222-40, Notification of Employee Rights Under the National Labor Relations Act (DEC 2010) (E.O. 13496). Flow down required in accordance with paragraph (f) of FAR clause 52.222-40.
 - (xii) 52.222-41, Service Contract Labor Standards (AUG 2018) (41 U.S.C. chapter 67).

- (xiii)
 - (A) 52.222-50, Combating Trafficking in Persons (OCT 2020) (22 U.S.C. chapter 78 and E.O 13627).
 - (B) Alternate I (MAR 2015) of 52.222-50 (22 U.S.C. chapter 78 and E.O. 13627).
 - (xiv) 52.222-51, Exemption from Application of the Service Contract Labor Standards to Contracts for Maintenance, Calibration, or Repair of Certain Equipment-Requirements (May2014) (41 U.S.C. chapter 67).
 - (xv) 52.222-53, Exemption from Application of the Service Contract Labor Standards to Contracts for Certain Services-Requirements (MAY 2014) (41 U.S.C. chapter 67).
 - (xvi) 52.222-54, Employment Eligibility Verification (OCT 2015) (E.O. 12989).
 - (xvii) 52.222-55, Minimum Wages Under Executive Order 13658 (NOV 2020).
 - (xviii) 52.222-62, Paid Sick Leave Under Executive Order 13706 (JAN 2017) (E.O. 13706).
 - (xix)
 - (A) 52.224-3, Privacy Training (Jan 2017) (5 U.S.C. 552a).
 - (B) Alternate I (JAN 2017) of 52.224-3.
 - (xx) 52.225-26, Contractors Performing Private Security Functions Outside the United States (OCT 2016) (Section 862, as amended, of the National Defense Authorization Act for Fiscal Year 2008; 10 U.S.C. 2302 Note).
 - (xxi) 52.226-6, Promoting Excess Food Donation to Nonprofit Organizations (JUN 2020) (42 U.S.C. 1792). Flow down required in accordance with paragraph (e) of FAR clause 52.226-6.
 - (xxii) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (FEB 2006) (46 U.S.C. Appx. 1241(b) and 10 U.S.C. 2631). Flow down required in accordance with paragraph (d) of FAR clause 52.247-64.
- (2) While not required, the Contractor may include in its subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

(End of clause)

[END OF SECTION]

SECTION 4 - LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS**4.1 LIST OF ATTACHMENTS**

The following documents are attached hereto and made a part of this contract:

ATTACHMENT NUMBER	TITLE
01	SOW
02	Meetings and Formal Reviews
03	CDRLs
04	Definitions
05	Launch Service Capabilities, Specification and Environments <i>(To Be Proposed)</i>
06	Safety and Health Plan <i>(To Be Proposed)</i>
07	Small Business Subcontracting Plan <i>(To Be Proposed), if applicable</i>

4.2 LIST OF SOLICITATION APPENDICES

This section will not be included in the model contract.

APPENDIX	TITLE
A	Past Performance Questionnaire
B	LSIRD Sample

(End of clause)

[END OF SECTION]

SECTION 5 – REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF BIDDERS**5.1 LISTING OF PROVISIONS INCORPORATED BY REFERENCE**

- (a) FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) PROVISIONS:
- FAR 52.203-18 PROHIBITION ON CONTRACTING WITH ENTITIES THAT REQUIRE CERTAIN INTERNAL CONFIDENTIALITY AGREEMENTS OR STATEMENTS— REPRESENTATION (JAN 2017)
 - FAR 52.204-17 OWNERSHIP OR CONTROL OF OFFEROR (AUG 2020)
 - FAR 52.209-2 PROHIBITION ON CONTRACTING WITH INVERTED DOMEST- CORPORATIONS--REPRESENTATION (NOV 2015)
 - FAR 52.225-25 PROHIBITION ON CONTRACTING WITH ENTITIES ENGAGING IN CERTAIN ACTIVITIES OR TRANSACTIONS R-ATING TO IRAN-- REPRESENTATION AND CERTIFICATIONS (JUN 2020)
- (a) NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) PROVISIONS: None

5.2 FAR 52.204-20 PREDECESSOR OF OFFEROR (AUG 2020)

- (a) *Definitions.* As used in this provision—

Commercial and Government Entity (CAGE) code means—

- (1) An identifier assigned to entities located in the United States or its outlying areas by the Defense Logistics Agency (DLA) Commercial and Government Entity (CAGE) Branch to identify a commercial or government entity by unique location; or
- (2) An identifier assigned by a member of the North Atlantic Treaty Organization (NATO) or by the NATO Support and Procurement Agency (NSPA) to entities located outside the United States and its outlying areas that the DLA Commercial and Government Entity (CAGE) Branch records and maintains in the CAGE master file. This type of code is known as a NATO CAGE (NCAGE) code.

Predecessor means an entity that is replaced by a successor and includes any predecessors of the predecessor.

Successor means an entity that has replaced a predecessor by acquiring the assets and carrying out the affairs of the predecessor under a new name (often through acquisition or merger). The term “successor” does not include new offices/divisions of the same company or a company that only changes its name. The extent of the responsibility of the successor for the liabilities of the predecessor may vary, depending on State law and specific circumstances.

- (b) The Offeror represents that it is or is not a successor to a predecessor that held a Federal contract or grant within the last three years.
- (c) If the Offeror has indicated "is" in paragraph (b) of this provision, enter the following information for all predecessors that held a Federal contract or grant within the last three years (if more than one predecessor, list in reverse chronological order):

Predecessor CAGE code: _____ (or mark "Unknown").

Predecessor legal name: _____.

(Do not use a "doing business as" name).

(End of Provision)

**5.3 FAR 52.204-24 REPRESENTATION REGARDING CERTAIN
TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR
EQUIPMENT (OCT 2020)**

The Offeror shall not complete the representation at paragraph (d)(1) of this provision if the Offeror has represented that it "does not provide covered telecommunications equipment or services as a part of its offered products or services to the Government in the performance of any contract, subcontract, or other contractual instrument" in paragraph (c)(1) in the provision at 52.204-26, Covered Telecommunications Equipment or Services—Representation, or in paragraph (v)(2)(i) of the provision at 52.212-3, Offeror Representations and Certifications-Commercial Items. The Offeror shall not complete the representation in paragraph (d)(2) of this provision if the Offeror has represented that it "does not use covered telecommunications equipment or services, or any equipment, system, or service that uses covered telecommunications equipment or services" in paragraph (c)(2) of the provision at 52.204-26, or in paragraph (v)(2)(ii) of the provision at 52.212-3.

- (c) Definitions. As used in this provision—

Backhaul, covered telecommunications equipment or services, critical technology, interconnection arrangements, reasonable inquiry, roaming, and substantial or essential component have the meanings provided in the clause 52.204-25, Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment.

- (b) Prohibition.

- (1) Section 889(a)(1)(A) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2019, from procuring or obtaining, or extending or renewing a contract to procure or obtain, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. Nothing in the prohibition shall be construed to—

- (i) Prohibit the head of an executive agency from procuring with an entity to provide a service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or
 - (ii) Cover telecommunications equipment that cannot route or redirect user data traffic or cannot permit visibility into any user data or packets that such equipment transmits or otherwise handles.
- (2) Section 889(a)(1)(B) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2020, from entering into a contract or extending or renewing a contract with an entity that uses any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. This prohibition applies to the use of covered telecommunications equipment or services, regardless of whether that use is in performance of work under a Federal contract. Nothing in the prohibition shall be construed to—
 - (i) Prohibit the head of an executive agency from procuring with an entity to provide a service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or
 - (ii) Cover telecommunications equipment that cannot route or redirect user data traffic or cannot permit visibility into any user data or packets that such equipment transmits or otherwise handles.
- (c) Procedures. The Offeror shall review the list of excluded parties in the System for Award Management (SAM) (<https://www.sam.gov>) for entities excluded from receiving federal awards for "covered telecommunications equipment or services".
- (d) Representation. The Offeror represents that—
 - (1) It will, will not provide covered telecommunications equipment or services to the Government in the performance of any contract, subcontract or other contractual instrument resulting from this solicitation. The Offeror shall provide the additional disclosure information required at paragraph (e)(1) of this section if the Offeror responds "will" in paragraph (d)(1) of this section; and
 - (2) After conducting a reasonable inquiry, for purposes of this representation, the Offeror represents that—

It does, does not use covered telecommunications equipment or services, or use any equipment, system, or service that uses covered telecommunications equipment or services. The Offeror shall provide the additional disclosure information required at paragraph (e)(2) of this section if the Offeror responds "does" in paragraph (d)(2) of this section.

(a) Disclosures.

- (1) Disclosure for the representation in paragraph (d)(1) of this provision. If the Offeror has responded "will" in the representation in paragraph (d)(1) of this provision, the Offeror shall provide the following information as part of the offer:
 - (i) For covered equipment—
 - (A) The entity that produced the covered telecommunications equipment (include entity name, unique entity identifier, CAGE code, and whether the entity was the original equipment manufacturer (OEM) or a distributor, if known);
 - (B) A description of all covered telecommunications equipment offered (include brand; model number, such as OEM number, manufacturer part number, or wholesaler number; and item description, as applicable); and
 - (C) Explanation of the proposed use of covered telecommunications equipment and any factors relevant to determining if such use would be permissible under the prohibition in paragraph (b)(1) of this provision.
 - (ii) For covered services—
 - (A) If the service is related to item maintenance: A description of all covered telecommunications services offered (include on the item being maintained: Brand; model number, such as OEM number, manufacturer part number, or wholesaler number; and item description, as applicable); or
 - (B) If not associated with maintenance, the Product Service Code (PSC) of the service being provided; and explanation of the proposed use of covered telecommunications services and any factors relevant to determining if such use would be permissible under the prohibition in paragraph (b)(1) of this provision.
- (2) Disclosure for the representation in paragraph (d)(2) of this provision. If the Offeror has responded "does" in the representation in paragraph (d)(2) of this provision, the Offeror shall provide the following information as part of the offer:
 - (i) For covered equipment—
 - (A) The entity that produced the covered telecommunications equipment (include entity name, unique entity identifier, CAGE code, and whether the entity was the OEM or a distributor, if known);
 - (B) A description of all covered telecommunications equipment offered (include brand; model number, such as OEM number, manufacturer

- part number, or wholesaler number; and item description, as applicable); and
- (C) Explanation of the proposed use of covered telecommunications equipment and any factors relevant to determining if such use would be permissible under the prohibition in paragraph (b)(2) of this provision.
- (ii) For covered services—
- (A) If the service is related to item maintenance: A description of all covered telecommunications services offered (include on the item being maintained: Brand; model number, such as OEM number, manufacturer part number, or wholesaler number; and item description, as applicable); or
 - (B) If not associated with maintenance, the PSC of the service being provided; and explanation of the proposed use of covered telecommunications services and any factors relevant to determining if such use would be permissible under the prohibition in paragraph (b)(2) of this provision.

(End of provision)

5.4 FAR 52.209-7 INFORMATION REGARDING RESPONSIBILITY MATTERS (OCT 2018)

- (a) Definitions. As used in this provision—

“Administrative proceeding” means a non-judicial process that is adjudicatory in nature in order to make a determination of fault or liability (e.g., Securities and Exchange Commission Administrative Proceedings, Civilian Board of Contract Appeals Proceedings, and Armed Services Board of Contract Appeals Proceedings). This includes administrative proceeding at the Federal and State level but only in connection with performance of a Federal contract or grant. It does not include agency actions such as contract audits, site visits, corrective plans, or inspection of deliverables.

“Federal contracts and grants with total value greater than \$10,000,000” means—

- (1) The total value of all current, active contracts and grants, including all priced options; and
- (2) The total value of all current, active orders including all priced options under indefinite-delivery, indefinite-quantity, 8(a), or requirements contracts (including task and delivery and multiple-award Schedules).

“Principal” means an officer, director, owner, partner, or a person having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a division or business segment; and similar positions).

- (b) The Offeror [] has [] does not have current active Federal contracts and grants with total value greater than \$10,000,000.
- (c) If the Offeror checked “has” in paragraph (b) of this provision, the Offeror represents, by submission of this offer, that the information it has entered in the Federal Awardee Performance and Integrity Information System (FAPIS) is current, accurate, and complete as of the date of submission of this offer with regard to the following information:
- (1) Whether the Offeror, and/or any of its principals, has or has not, within the last five years, in connection with the award to or performance by the Offeror of a Federal contract or grant, been the subject of a proceeding, at the Federal or State level that resulted in any of the following dispositions:
- (i) In a criminal proceeding, a conviction.
 - (ii) In a civil proceeding, a finding of fault and liability that results in the payment of a monetary fine, penalty, reimbursement, restitution, or damages of \$5,000 or more.
 - (iii) In an administrative proceeding, a finding of fault and liability that results in—
 - i. The payment of a monetary fine or penalty of \$5,000 or more; or
 - ii. The payment of a reimbursement, restitution, or damages in excess of \$100,000.
 - (iv) In a criminal, civil, or administrative proceeding, a disposition of the matter by consent or compromise with an acknowledgment of fault by the Contractor if the proceeding could have led to any of the outcomes specified in paragraphs(c)(1)(i), (c)(1)(ii), or (c)(1)(iii) of this provision.
- (2) If the Offeror has been involved in the last five years in any of the occurrences listed in (c)(1) of this provision, whether the Offeror has provided the requested information with regard to each occurrence.
- (d) The Offeror shall post the information in paragraphs (c)(1)(i) through (c)(1)(iv) of this provision in FAPIS as required through maintaining an active registration in the System for Award Management which can be accessed via <https://www.sam.gov> (see 52.204-7).

(End of Provision)

5.5 FAR 52.209-11 REPRESENTATION BY CORPORATIONS REGARDING DELINQUENT TAX LIABILITY OR A FELONY CONVICTION UNDER ANY FEDERAL LAW (FEB 2016)

- (a) As required by sections 744 and 745 of Division E of the Consolidated and Further Continuing Appropriations Act, 2015 (Pub. L 113-235), and similar provisions, if

contained in subsequent appropriations acts, the Government will not enter in— a contract with any corporation that--

- (1) Has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability, where the awarding agency is aware of the unpaid tax liability, unless an agency has considered suspension or debarment of the corporation and made a determination that suspension or debarment is not necessary to protect the interests of the Government; or
 - (2) Was convicted of a felony criminal violation under any Federal law within the preceding 24 months, where the awarding agency is aware of the conviction, unless an agency has considered suspension or debarment of the corporation and made a determination that this action is not necessary to protect the interests of the Government.
- (b) The Offeror represents that—
- (1) It is is not a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability; and
 - (2) It is is not a corporation that was convicted of a felony criminal violation under a Federal law within the preceding 24 months.

(End of Provision)

5.6 FAR 52.209-12 – CERTIFICATION REGARDING TAX MATTERS (OCT 2020)

- (a) This provision implements section 523 of Division B of the Consolidated and Further Continuing Appropriations Act, 2015 (Pub. L. 113-235), and similar provisions, if contained in subsequent appropriations acts.
- (b) If the Offeror is proposing a total contract price that will exceed \$5.5 million (including options), the Offeror shall certify that, to the best of its knowledge and belief, it
 - (1) Has filed all Federal tax returns required during the three years preceding the certification;
 - (2) Has not been convicted of a criminal offense under the Internal Revenue Code of 1986; and
 - (3) Has not , more than 90 days prior to certification, been notified of any unpaid Federal tax assessment for which the liability remains unsatisfied, unless the assessment is the subject of an installment agreement or offer in compromise that has been approved by the Internal Revenue Service and is not in default, or the assessment is the subject of a non-frivolous administrative or judicial proceeding.

(End of Provision)

**5.7 FAR 52.212-3 OFFEROR REPRESENTATIONS AND CERTIFICATIONS-
COMMERCIAL ITEMS (FEB 2021), Alternate I (OCT 2014)**

The Offeror shall complete only paragraph (b) of this provision if the Offeror has completed the annual representations and certification electronically in the System for Award Management (SAM) accessed through <https://www.sam.gov>. If the Offeror has not completed the annual representations and certifications electronically, the Offeror shall complete only paragraphs (c) through (v) of this provision.

(a) *Definitions.* As used in this provision—

"Covered telecommunications equipment or services" has the meaning provided in the clause 52.204-25, Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment.

Economically disadvantaged women-owned small business (EDWOSB) concern means a small business concern that is at least 51 percent directly and unconditionally owned by, and the management and daily business operations of which are controlled by, one or more women who are citizens of the United States and who are economically disadvantaged in accordance with 13 CFR part 127. It automatically qualifies as a women-owned small business eligible under the WOSB Program.

Forced or indentured child labor means all work or service—

- (1) Exacted from any person under the age of 18 under the menace of any penalty for its nonperformance and for which the worker does not offer himself voluntarily; or
- (2) Performed by any person under the age of 18 pursuant to a contract the enforcement of which can be accomplished by process or penalties.

Highest-level owner means the entity that owns or controls an immediate owner of the offeror, or that owns or controls one or more entities that control an immediate owner of the offeror. No entity owns or exercises control of the highest level owner.

Immediate owner means an entity, other than the offeror, that has direct control of the offeror. Indicators of control include, but are not limited to, one or more of the following: ownership or interlocking management, identity of interests among family members, shared facilities and equipment, and the common use of employees.

Inverted domestic corporation, means a foreign incorporated entity that meets the definition of an inverted domestic corporation under 6 U.S.C. 395(b), applied in accordance with the rules and definitions of 6 U.S.C. 395(c).

Manufactured end product means any end product in product and service codes (PSCs) 1000-9999, except—

- (1) PSC 5510, Lumber and Related Basic Wood Materials;

- (2) Product or Service Group (PSG) 87, Agricultural Supplies;
- (3) PSG 88, Live Animals;
- (4) PSG 89, Subsistence;
- (5) PSC 9410, Crude Grades of Plant Materials;
- (6) PSC 9430, Miscellaneous Crude Animal Products, Inedible;
- (7) PSC 9440, Miscellaneous Crude Agricultural and Forestry Products;
- (8) PSC 9610, Ores;
- (9) PSC 9620, Minerals, Natural and Synthetic; and
- (10) PSC 9630, Additive Metal Materials.

Place of manufacture means the place where an end product is assembled out of components, or otherwise made or processed from raw materials into the finished product that is to be provided to the Government. If a product is disassembled and reassembled, the place of reassembly is not the place of manufacture.

Predecessor means an entity that is replaced by a successor and includes any predecessors of the predecessor.

Reasonable inquiry has the meaning provided in the clause 52.204-25, Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment.

Restricted business operations means business operations in Sudan that include power production activities, mineral extraction activities, oil-related activities, or the production of military equipment, as those terms are defined in the Sudan Accountability and Divestment Act of 2007 (Pub. L. 110-174). Restricted business operations do not include business operations that the person (as that term is defined in Section 2 of the Sudan Accountability and Divestment Act of 2007) conducting the business can demonstrate—

- (1) Are conducted under contract directly and exclusively with the regional government of southern Sudan;
- (2) Are conducted pursuant to specific authorization from the Office of Foreign Assets Control in the Department of the Treasury, or are expressly exempted under Federal law from the requirement to be conducted under such authorization;
- (3) Consist of providing goods or services to marginalized populations of Sudan;
- (4) Consist of providing goods or services to an internationally recognized peacekeeping force or humanitarian organization;
- (5) Consist of providing goods or services that are used only to promote health or education; or
- (6) Have been voluntarily suspended. “Sensitive technology”—

Sensitive technology—

- (1) Means hardware, software, telecommunications equipment, or any other technology that is to be used specifically—

- (i) To restrict the free flow of unbiased information in Iran; or
 - (ii) To disrupt, monitor, or otherwise restrict speech of the people of Iran; and
- (2) Does not include information or informational materials the export of which the President does not have the authority to regulate or prohibit pursuant to section 203(b)(3) of the International Emergency Economic Powers Act (50 U.S.C. 1702(b)(3)).

Service-disabled veteran-owned small business concern—

- (1) Means a small business concern—
- (i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and
 - (ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a service-disabled veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.
- (2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. § 101(2), with a disability that is service connected, as defined in 38 U.S.C. 101(16).

Small business concern—

- (1) Means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR part 121 and size standards in this solicitation.
- (2) *Affiliates*, as used in this definition, means business concerns, one of whom directly or indirectly controls or has the power to control the others, or a third party or parties control or have the power to control the others. In determining whether affiliation exists, consideration is given to all appropriate factors including common ownership, common management, and contractual relationships. SBA determines affiliation based on the factors set forth at 13 CFR 121.103.

Small disadvantaged business concern, consistent with 13 CFR 124.1002, means a small business concern under the size standard applicable to the acquisition, that—

- (1) Is at least 51 percent unconditionally and directly owned (as defined at 13 CFR 124.105) by—
- (i) One or more socially disadvantaged (as defined at 13 CFR 124.103) and economically disadvantaged (as defined at 13 CFR 124.104) individuals who are citizens of the United States; and

- (ii) Each individual claiming economic disadvantage has a net worth not exceeding \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); and
- (1) The management and daily business operations of which are controlled (as defined at 13.CFR 124.106) by individuals, who meet the criteria in paragraphs (1)(i) and (ii) of this definition.

Subsidiary means an entity in which more than 50 percent of the entity is owned—

- (1) Directly by a parent corporation; or
- (2) Through another subsidiary of a parent corporation

Successor means an entity that has replaced a predecessor by acquiring the assets and carrying out the affairs of the predecessor under a new name (often through acquisition or merger). The term "successor" does not include new offices/divisions of the same company or a company that only changes its name. The extent of the responsibility of the successor for the liabilities of the predecessor may vary, depending on State law and specific circumstances.

Veteran-owned small business concern means a small business concern—

- (1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. § 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and
- (2) The management and daily business operations of which are controlled by one or more veterans.

Women-owned small business (WOSB) concern eligible under the WOSB Program (in accordance with 13 CFR part 127), means a small business concern that is at least 51 percent directly and unconditionally owned by, and the management and daily business operations of which are controlled by, one or more women who are citizens of the United States.

Women-owned small business concern means a small business concern—

- (1) That is at least 51 percent owned by one or more women; or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and
- (2) Whose management and daily business operations are controlled by one or more women.

(b)

- a. *Annual Representations and Certifications*. Any changes provided by the Offeror in paragraph (b)(2) of this provision do not automatically change the representations and certifications in SAM.
- b. The Offeror has completed the annual representations and certifications electronically in SAM accessed through <http://www.sam.gov>. After reviewing SAM information, the

Offeror verifies by submission of this offer that the representations and certifications currently posted electronically at FAR 52.212-3, Offeror Representations and Certifications-Commercial Items, have been entered or updated in the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the business size standard(s) applicable to the NAICS code(s) referenced for this solicitation), at the time this offer is submitted and are incorporated in this offer by reference (see FAR 4.1201), except for paragraphs _____.

[Offeror to identify the applicable paragraphs at (c) through (v) of this provision that the offeror has completed for the purposes of this solicitation only, if any.]

These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer.

Any changes provided by the offeror are applicable to this solicitation only, and do not result in an update to the representations and certifications posted electronically on SAM.]

- (c) Offerors must complete the following representations when the resulting contract will be performed in the United States or its outlying areas. Check all that apply.
- (1) *Small business concern.* The offeror represents as part of its offer that it is, is not a small business concern.
 - (2) *Veteran-owned small business concern.* *[Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.]* The offeror represents as part of its offer that it is, is not a veteran-owned small business concern.
 - (3) *Service-disabled veteran-owned small business concern.* *[Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (c)(2) of this provision.]* The offeror represents as part of its offer that it is, is not a service-disabled veteran-owned small business concern.
 - (4) *Small disadvantaged business concern.* *[Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.]* The offeror represents, that it is, is not a small disadvantaged business concern as defined in 13 CFR 124.1002.
 - (5) *Women-owned small business concern.* *[Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.]* The offeror represents that it is, is not a women-owned small business concern.
 - (6) *WOSB concern eligible under the WOSB Program.* *[Complete only if the offeror represented itself as a women-owned small business concern in paragraph (c)(5) of this provision.]* The offeror represents that-
 - (i) It is, is not a WOSB concern eligible under the WOSB Program, has provided all the required documents to the WOSB Repository, and no change in circumstances or adverse decisions have been issued that affects its eligibility; and

- (ii) It is, is not a joint venture that complies with the requirements of 13 CFR part 127, and the representation in paragraph (c)(6)(i) of this provision is accurate for each WOSB concern eligible under the WOSB Program participating in the joint venture. [The offeror shall enter the name or names of the WOSB concern eligible under the WOSB Program and other small businesses that are participating in the joint venture: _____.] Each WOSB concern eligible under the WOSB Program participating in the joint venture shall submit a separate signed copy of the WOSB representation.
- (7) Economically disadvantaged women-owned small business (EDWOSB) concern. [Complete only if the offeror represented itself as a WOSB concern eligible under the WOSB Program in (c)(6) of this provision.] The offeror represents that-
- (i) It is, is not an EDWOSB concern, has provided all the required documents to the WOSB Repository, and no change in circumstances or adverse decisions have been issued that affects its eligibility; and
- (ii) It is, is not a joint venture that complies with the requirements of 13 CFR part 127, and the representation in paragraph (c)(7)(i) of this provision is accurate for each EDWOSB concern participating in the joint venture. [The offeror shall enter the name or names of the EDWOSB concern and other small businesses that are participating in the joint venture: _____.] Each EDWOSB concern participating in the joint venture shall submit a separate signed copy of the EDWOSB representation.

NOTE: Complete paragraphs (c)(8) and (c)(9) only if this solicitation is expected to exceed the simplified acquisition threshold.

- (8) *Women-owned business concern (other than small business concern).* [Complete only if the offeror is a women-owned business concern and did not represent itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents that it is a women-owned business concern.
- (9) *Tie bid priority for labor surplus area concerns.* If this is an invitation for bid, small business offerors may identify the labor surplus areas in which costs to be incurred on account of manufacturing or production (by offeror or first-tier subcontractors) amount to more than 50 percent of the contract price: _____
- (10) *HUBZone small business concern.* [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents, as part of its offer, that-
- (i) It is, is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material changes in ownership and control, principal office, or HUBZone employee percentage have occurred since it was certified in accordance with 13 CFR Part 126; and

- (ii) It is, is not a HUBZone joint venture that complies with the requirements of 13 CFR Part 126, and the representation in paragraph (c)(10)(i) of this provision is accurate for each HUBZone small business concern participating in the HUBZone joint venture. [The offeror shall enter the names of each of the HUBZone small business concerns participating in the HUBZone joint venture: _____.] Each HUBZone small business concern participating in the HUBZone joint venture shall submit a separate signed copy of the HUBZone representation.

(11) *[Complete if the offeror has represented itself as disadvantaged in paragraph (c)(4) of this provision.]*

_____ Black American.

_____ Hispanic American.

_____ Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians).

_____ Asian-Pacific American (persons with origins from Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Japan, China, Taiwan, Laos, Cambodia (Kampuchea), Vietnam, Korea, The Philippines, Republic of Palau, Republic of the Marshall Islands, Federated States of Micronesia, the Commonwealth of the Northern Mariana Islands, Guam, Samoa, Macao, Hong Kong, Fiji, Tonga, Kiribati, Tuvalu, or Nauru).

_____ Subcontinent Asian (Asian-Indian) American (persons with origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the Maldives Islands, or Nepal).

_____ Individual/concern, other than one of the preceding.

(d) Representations required to implement provisions of Executive Order 11246-

(1) Previous contracts and compliance. The offeror represents that-

- (i) It has, has not participated in a previous contract or subcontract subject to the Equal Opportunity clause of this solicitation; and
- (ii) It has, has not filed all required compliance reports.

(2) *Affirmative Action Compliance.* The offeror represents that-

- (i) It has developed and has on file, has not developed and does not have on file, at each establishment, affirmative action programs required by rules and regulations of the Secretary of Labor (41 CFR parts 60-1 and 60-2), or
- (ii) It has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

(e) *Certification Regarding Payments to Influence Federal Transactions (31 U.S.C. 1352 <http://uscode.house.gov/>).* (Applies only if the contract is expected to exceed \$150,000.) By submission of its offer, the offeror certifies to the best of its knowledge and belief that no Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress or an employee of a Member of Congress on his or her behalf in connection with the award of any resultant contract. If any registrants under the Lobbying Disclosure Act of 1995 have made a lobbying contact on behalf of the offeror with respect to this contract, the offeror shall complete and submit, with its offer, OMB Standard Form LLL, Disclosure of Lobbying Activities, to provide the name of the registrants. The offeror need not report regularly employed officers or employees of the offeror to whom payments of reasonable compensation were made.

(f) *Buy American Certificate.* (Applies only if the clause at Federal Acquisition Regulation (FAR) 52.225-1, Buy American-Supplies, is included in this solicitation.)

- (1)
 - (i) The Offeror certifies that each end product, except those listed in paragraph (f)(2) of this provision, is a domestic end product.
 - (ii) The Offeror shall list as foreign end products those end products manufactured in the United States that do not qualify as domestic end products.
 - (iii) The terms "domestic end product," "end product," "foreign end product," and "United States" are defined in the clause of this solicitation entitled "Buy American-Supplies."

(2) Foreign End Products:

Line Item No.	Country of Origin

[List as necessary]

(3) The Government will evaluate offers in accordance with the policies and procedures of FAR part 25.

(g) (1) *Buy American-Free Trade Agreements-Israeli Trade Act Certificate.* (Applies only if the clause at FAR 52.225-3, Buy American-Free Trade Agreements-Israeli Trade Act, is included in this solicitation.)

- (i)
 - (A) The Offeror certifies that each end product, except those listed in paragraph (g)(1)(ii) or (iii) of this provision, is a domestic end product.

(B) The terms "Bahrainian, Moroccan, Omani, Panamanian, or Peruvian end product," "domestic end product," "end product," "foreign end product," "Free Trade Agreement country," "Free Trade Agreement country end product," "Israeli end product," and "United States" are defined in the clause of this solicitation entitled "Buy American-Free Trade Agreements-Israeli Trade Act."

(ii) The Offeror certifies that the following supplies are Free Trade Agreement country end products (other than Bahrainian, Moroccan, Omani, Panamanian, or Peruvian end products) or Israeli end products as defined in the clause of this solicitation entitled "Buy American-Free Trade Agreements-Israeli Trade Act."

Free Trade Agreement Country End Products (Other than Bahrainian, Moroccan, Omani, Panamanian, or Peruvian End Products) or Israeli End Products:

Line Item No.	Country of Origin

[List as necessary]

(iii) The Offeror shall list those supplies that are foreign end products (other than those listed in paragraph (g)(1)(ii) of this provision) as defined in the clause of this solicitation entitled "Buy American-Free Trade Agreements-Israeli Trade Act." The Offeror shall list as other foreign end products those end products manufactured in the United States that do not qualify as domestic end products.

Other Foreign End Products:

Line Item No.	Country of Origin

[List as necessary]

(iv) The Government will evaluate offers in accordance with the policies and procedures of FAR part 25.

- (2) *Buy American-Free Trade Agreements-Israeli Trade Act Certificate, Alternate I.* If Alternate I to the clause at FAR 52.225-3 is included in this solicitation, substitute the following paragraph (g)(1)(ii) for paragraph (g)(1)(ii) of the basic provision:

(g)

(1)

- (ii) The offeror certifies that the following supplies are Canadian end products as defined in the clause of this solicitation entitled "Buy American-Free Trade Agreements-Israeli Trade Act":

Canadian End Products:

Line Item No.	Country of Origin

[List as necessary]

- (3) *Buy American-Free Trade Agreements-Israeli Trade Act Certificate, Alternate II.* If Alternate II to the clause at FAR 52.225-3 is included in this solicitation, substitute the following paragraph (g)(1)(ii) for paragraph (g)(1)(ii) of the basic provision:

(g)

(1)

- (ii) The offeror certifies that the following supplies are Canadian end products or Israeli end products as defined in the clause of this solicitation entitled "Buy American-Free Trade Agreements-Israeli Trade Act":

Canadian or Israeli End Products:

Line Item No.	Country of Origin

[List as necessary]

- (4) *Buy American-Free Trade Agreements-Israeli Trade Act Certificate, Alternate III.* If Alternate III to the clause at 52.225-3 is included in this solicitation, substitute the following paragraph (g)(1)(ii) for paragraph (g)(1)(ii) of the basic provision:

- (g)
 - (1)
 - (ii) The offeror certifies that the following supplies are Free Trade Agreement country end products (other than Bahrainian, Korean, Moroccan, Omani, Panamanian, or Peruvian end products) or Israeli end products as defined in the clause of this solicitation entitled "Buy American-Free Trade Agreements-Israeli Trade Act":

Free Trade Agreement Country End Products (Other than Bahrainian, Korean, Moroccan, Omani, Panamanian, or Peruvian End Products) or Israeli End Products:

Line Item No.	Country of Origin

[List as necessary]

- (5) *Trade Agreements Certificate.* (Applies only if the clause at FAR 52.225-5, Trade Agreements, is included in this solicitation.)
 - (i) The offeror certifies that each end product, except those listed in paragraph (g)(5)(ii) of this provision, is a U.S.-made or designated country end product, as defined in the clause of this solicitation entitled "Trade Agreements."
 - (ii) The offeror shall list as other end products those end products that are not U.S.-made or designated country end products.

Other End Products:

Line Item No.	Country of Origin

[List as necessary]

- (iii) The Government will evaluate offers in accordance with the policies and procedures of FAR part 25. For line items covered by the WTO GPA, the Government will evaluate offers of U.S.-made or designated country end products without regard to the restrictions of the Buy American statute. The Government will consider for award only offers of U.S.-made or designated country end products unless the Contracting Officer determines that there

are no offers for such products or that the offers for such products are insufficient to fulfill the requirements of the solicitation.

(h) *Certification Regarding Responsibility Matters (Executive Order 12689)*. (Applies only if the contract value is expected to exceed the simplified acquisition threshold.) The offeror certifies, to the best of its knowledge and belief, that the offeror and/or any of its principals—

- (1) Are, are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;
- (2) Have, have not, within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a Federal, state or local government contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, violating Federal criminal tax laws, or receiving stolen property;
- (3) Are, are not presently indicted for, or otherwise criminally or civilly charged by a Government entity with, commission of any of these offenses enumerated in paragraph (h)(2) of this clause; and
- (4) Have, have not, within a three-year period preceding this offer, been notified of any delinquent Federal taxes in an amount that exceeds the threshold at 9.104-5(a)(2) for which the liability remains unsatisfied.

(i) Taxes are considered delinquent if both of the following criteria apply:

- (A) *The tax liability is finally determined.* The liability is finally determined if it has been assessed. A liability is not finally determined if there is a pending administrative or judicial challenge. In the case of a judicial challenge to the liability, the liability is not finally determined until all judicial appeal rights have been exhausted.
- (B) *The taxpayer is delinquent in making payment.* A taxpayer is delinquent if the taxpayer has failed to pay the tax liability when full payment was due and required. A taxpayer is not delinquent in cases where enforced collection action is precluded.

(ii) *Examples.*

- (A) The taxpayer has received a statutory notice of deficiency, under I.R.C. §6212, which entitles the taxpayer to seek Tax Court review of a proposed tax deficiency. This is not a delinquent tax because it is not a final tax liability. Should the taxpayer seek Tax Court review, this will not be a final tax liability until the taxpayer has exercised all judicial appeal rights.

- (B) The IRS has filed a notice of Federal tax lien with respect to an assessed tax liability, and the taxpayer has been issued a notice under I.R.C. §6320 entitling the taxpayer to request a hearing with the IRS Office of Appeals contesting the lien filing, and to further appeal to the Tax Court if the IRS determines to sustain the lien filing. In the course of the hearing, the taxpayer is entitled to contest the underlying tax liability because the taxpayer has had no prior opportunity to contest the liability. This is not a delinquent tax because it is not a final tax liability. Should the taxpayer seek tax court review, this will not be a final tax liability until the taxpayer has exercised all judicial appeal rights.
- (C) The taxpayer has entered into an installment agreement pursuant to I.R.C. §6159. The taxpayer is making timely payments and is in full compliance with the agreement terms. The taxpayer is not delinquent because the taxpayer is not currently required to make full payment.
- (D) The taxpayer has filed for bankruptcy protection. The taxpayer is not delinquent because enforced collection action is stayed under 11 U.S.C. §362 (the Bankruptcy Code).

(i) *Certification Regarding Knowledge of Child Labor for Listed End Products (Executive Order 13126). [The Contracting Officer must list in paragraph (i)(1) any end products being acquired under this solicitation that are included in the List of Products Requiring Contractor Certification as to Forced or Indentured Child Labor, unless excluded at 22.1503(b).]*

(1) *Listed end products.*

Line Item No.	Country of Origin

(2) *Certification. [If the Contracting Officer has identified end products and countries of origin in paragraph (i)(1) of this provision, then the offeror must certify to either (i)(2)(i) or (i)(2)(ii) by checking the appropriate block.]*

- (i) The offeror will not supply any end product listed in paragraph (i)(1) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product.
- (ii) The offeror may supply an end product listed in paragraph (i)(1) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product. The offeror certifies that it has made a good faith effort to determine whether forced or indentured child labor was used to mine, produce, or manufacture any such end product furnished

under this contract. On the basis of those efforts, the offeror certifies that it is not aware of any such use of child labor.

- (j) *Place of manufacture.* (Does not apply unless the solicitation is predominantly for the acquisition of manufactured end products.) For statistical purposes only, the offeror shall indicate whether the place of manufacture of the end products it expects to provide in response to this solicitation is predominantly-
- (1) In the United States (Check this box if the total anticipated price of offered end products manufactured in the United States exceeds the total anticipated price of offered end products manufactured outside the United States); or
 - (2) Outside the United States.
- (k) *Certificates regarding exemptions from the application of the Service Contract Labor Standards* (Certification by the offeror as to its compliance with respect to the contract also constitutes its certification as to compliance by its subcontractor if it subcontracts out the exempt services.) [*The contracting officer is to check a box to indicate if paragraph (k)(1) or (k)(2) applies.*]
- (1) Maintenance, calibration, or repair of certain equipment as described in FAR 22.1003-4(c)(1). The offeror does does not certify that-
 - (i) The items of equipment to be serviced under this contract are used regularly for other than Governmental purposes and are sold or traded by the offeror (or subcontractor in the case of an exempt subcontract) in substantial quantities to the general public in the course of normal business operations;
 - (ii) The services will be furnished at prices which are, or are based on, established catalog or market prices (see FAR 22.1003-4(c)(2)(ii)) for the maintenance, calibration, or repair of such equipment; and
 - (iii) The compensation (wage and fringe benefits) plan for all service employees performing work under the contract will be the same as that used for these employees and equivalent employees servicing the same equipment of commercial customers.
 - (2) Certain services as described in FAR 22.1003-4(d)(1). The offeror does does not certify that-
 - (i) The services under the contract are offered and sold regularly to non-Governmental customers, and are provided by the offeror (or subcontractor in the case of an exempt subcontract) to the general public in substantial quantities in the course of normal business operations;
 - (ii) The contract services will be furnished at prices that are, or are based on, established catalog or market prices (see FAR 22.1003-4(d)(2)(iii));
 - (iii) Each service employee who will perform the services under the contract will spend only a small portion of his or her time (a monthly average of less than 20 percent of the available hours on an annualized basis, or less than

- 20 percent of available hours during the contract period if the contract period is less than a month) servicing the Government contract; and
- (iv) The compensation (wage and fringe benefits) plan for all service employees performing work under the contract is the same as that used for these employees and equivalent employees servicing commercial customers.
- (3) If paragraph (k)(1) or (k)(2) of this clause applies–
- (i) If the offeror does not certify to the conditions in paragraph (k)(1) or (k)(2) and the Contracting Officer did not attach a Service Contract Labor Standards wage determination to the solicitation, the offeror shall notify the Contracting Officer as soon as possible; and
- (ii) The Contracting Officer may not make an award to the offeror if the offeror fails to execute the certification in paragraph (k)(1) or (k)(2) of this clause or to contact the Contracting Officer as required in paragraph (k)(3)(i) of this clause.
- (1) *Taxpayer Identification Number (TIN)* (26 U.S.C. 6109, 31 U.S.C. 7701). (Not applicable if the offeror is required to provide this information to the SAM to be eligible for award.)
- (1) All offerors must submit the information required in paragraphs (1)(3) through (1)(5) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the Internal Revenue Service (IRS).
- (2) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.
- (3) *Taxpayer Identification Number (TIN)*.

TIN: _____.

TIN has been applied for.

TIN is not required because:

Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;

Offeror is an agency or instrumentality of a foreign government;

Offeror is an agency or instrumentality of the Federal Government.

(4) *Type of organization.*

Sole proprietorship;

Partnership;

Corporate entity (not tax-exempt);

Corporate entity (tax-exempt);

Government entity (Federal, State, or local);

Foreign government;

International organization per 26 CFR 1.6049-4;

Other _____.

(5) *Common parent.*

Offeror is not owned or controlled by a common parent;

Name and TIN of common parent:

Name _____.

TIN _____.

(m) *Restricted business operations in Sudan.* By submission of its offer, the offeror certifies that the offeror does not conduct any restricted business operations in Sudan.

(n) *Prohibition on Contracting with Inverted Domestic Corporations.*

(1) Government agencies are not permitted to use appropriated (or otherwise made available) funds for contracts with either an inverted domestic corporation, or a subsidiary of an inverted domestic corporation, unless the exception at 9.108-2(b) applies or the requirement is waived in accordance with the procedures at 9.108-4.

(2) *Representation.* The Offeror represents that—

(i) It is, is not an inverted domestic corporation; and

(ii) It is, is not a subsidiary of an inverted domestic corporation.

(o) *Prohibition on contracting with entities engaging in certain activities or transactions relating to Iran.*

- (1) The offeror shall e-mail questions concerning sensitive technology to the Department of State at CISADA106@state.gov.
- (2) *Representation and Certifications.* Unless a waiver is granted or an exception applies as provided in paragraph (o)(3) of this provision, by submission of its offer, the offeror-
- (i) Represents, to the best of its knowledge and belief, that the offeror does not export any sensitive technology to the government of Iran or any entities or individuals owned or controlled by, or acting on behalf or at the direction of, the government of Iran;
 - (ii) Certifies that the offeror, or any person owned or controlled by the offeror, does not engage in any activities for which sanctions may be imposed under section 5 of the Iran Sanctions Act; and
 - (iii) Certifies that the offeror, and any person owned or controlled by the offeror, does not knowingly engage in any transaction that exceeds the threshold at FAR [25.703-2\(a\)\(2\)](#) with Iran's Revolutionary Guard Corps or any of its officials, agents, or affiliates, the property and interests in property of which are blocked pursuant to the International Emergency Economic Powers Act (et seq.) (see OFAC's Specially Designated Nationals and Blocked Persons List at <https://www.treasury.gov/resource-center/sanctions/SDN-List/Pages/default.aspx>).
- (3) The representation and certification requirements of paragraph (o)(2) of this provision do not apply if-
- (i) This solicitation includes a trade agreements certification (e.g., [52.212-3\(g\)](#)) or a comparable agency provision); and
 - (ii) The offeror has certified that all the offered products to be supplied are designated country end products.
- (p) *Ownership or Control of Offeror.* (Applies in all solicitations when there is a requirement to be registered in SAM or a requirement to have a unique entity identifier in the solicitation).
- (1) The Offeror represents that it has or does not have an immediate owner. If the Offeror has more than one immediate owner (such as a joint venture), then the Offeror shall respond to paragraph (2) and if applicable, paragraph (3) of this provision for each participant in the joint venture.
 - (2) If the Offeror indicates "has" in paragraph (p)(1) of this provision, enter the following information:
 Immediate owner CAGE code: _____.
 Immediate owner legal name: _____.
- (Do not use a "doing business as" name)

Is the immediate owner owned or controlled by another entity: Yes or No.

- (3) If the Offeror indicates "yes" in paragraph (p)(2) of this provision, indicating that the immediate owner is owned or controlled by another entity, then enter the following information:

Highest-level owner CAGE code: _____.

Highest-level owner legal name: _____.

(Do not use a "doing business as" name)

- (q) *Representation by Corporations Regarding Delinquent Tax Liability or a Felony Conviction under any Federal Law.*

- (1) As required by sections 744 and 745 of Division E of the Consolidated and Further Continuing Appropriations Act, 2015 (Pub. L. 113-235), and similar provisions, if contained in subsequent appropriations acts, The Government will not enter into a contract with any corporation that—

- (i) Has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability, where the awarding agency is aware of the unpaid tax liability, unless an agency has considered suspension or debarment of the corporation and made a determination that suspension or debarment is not necessary to protect the interests of the Government; or
- (ii) Was convicted of a felony criminal violation under any Federal law within the preceding 24 months, where the awarding agency is aware of the conviction, unless an agency has considered suspension or debarment of the corporation and made a determination that this action is not necessary to protect the interests of the Government.

- (2) The Offeror represents that—

- (i) It is is not a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability; and
- (ii) It is is not a corporation that was convicted of a felony criminal violation under a Federal law within the preceding 24 months.

- (r) *Predecessor of Offeror.* (Applies in all solicitations that include the provision at 52.204-16, Commercial and Government Entity Code Reporting.)

- (1) The Offeror represents that it is or is not a successor to a predecessor that held a Federal contract or grant within the last three years.
- (2) If the Offeror has indicated "is" in paragraph (r)(1) of this provision, enter the following information for all predecessors that held a Federal contract or grant within the last three years (if more than one predecessor, list in reverse chronological order):

Predecessor CAGE code: (or mark "Unknown").

Predecessor legal name:_____.

(Do not use a "doing business as" name).

- (s) [Reserved].
- (t) *Public Disclosure of Greenhouse Gas Emissions and Reduction Goals.* Applies in all solicitations that require offerors to register in SAM (12.301(d)(1)).
 - (1) This representation shall be completed if the Offeror received \$7.5 million or more in contract awards in the prior Federal fiscal year. The representation is optional if the Offeror received less than \$7.5 million in Federal contract awards in the prior Federal fiscal year.
 - (2) Representation. [Offeror to check applicable block(s) in paragraph (t)(2)(i) and (ii)].
 - (i) The Offeror (itself or through its immediate owner or highest-level owner) does, does not publicly disclose greenhouse gas emissions, i.e., makes available on a publicly accessible website the results of a greenhouse gas inventory, performed in accordance with an accounting standard with publicly available and consistently applied criteria, such as the Greenhouse Gas Protocol Corporate Standard.
 - (ii) The Offeror (itself or through its immediate owner or highest-level owner) does, does not publicly disclose a quantitative greenhouse gas emissions reduction goal, i.e., make available on a publicly accessible website a target to reduce absolute emissions or emissions intensity by a specific quantity or percentage.
 - (iii) A publicly accessible website includes the Offeror's own website or a recognized, third-party greenhouse gas emissions reporting program.
 - (3) If the Offeror checked "does" in paragraphs (t)(2)(i) or (t)(2)(ii) of this provision, respectively, the Offeror shall provide the publicly accessible website(s) where greenhouse gas emissions and/or reduction goals are reported: _____.
- (u)
 - (1) In accordance with section 743 of Division E, Title VII, of the Consolidated and Further Continuing Appropriations Act, 2015 (Pub. L. 113-235) and its successor

provisions in subsequent appropriations acts (and as extended in continuing resolutions), Government agencies are not permitted to use appropriated (or otherwise made available) funds for contracts with an entity that requires employees or subcontractors of such entity seeking to report waste, fraud, or abuse to sign internal confidentiality agreements or statements prohibiting or otherwise restricting such employees or subcontractors from lawfully reporting such waste, fraud, or abuse to a designated investigative or law enforcement representative of a Federal department or agency authorized to receive such information.

- (2) The prohibition in paragraph (u)(1) of this provision does not contravene requirements applicable to Standard Form 312 (Classified Information Nondisclosure Agreement), Form 4414 (Sensitive Compartmented Information Nondisclosure Agreement), or any other form issued by a Federal department or agency governing the nondisclosure of classified information.
 - (3) *Representation.* By submission of its offer, the Offeror represents that it will not require its employees or subcontractors to sign or comply with internal confidentiality agreements or statements prohibiting or otherwise restricting such employees or subcontractors from lawfully reporting waste, fraud, or abuse related to the performance of a Government contract to a designated investigative or law enforcement representative of a Federal department or agency authorized to receive such information (e.g., agency Office of the Inspector General).
- (v) *Covered Telecommunications Equipment or Services-Representation.* Section 889(a)(1)(A) and section 889 (a)(1)(B) of Public Law 115-232.
- (1) The Offeror shall review the list of excluded parties in the System for Award Management (SAM) (<https://www.sam.gov>) for entities excluded from receiving federal awards for "covered telecommunications equipment or services".
 - (2) The Offeror represents that—
 - (i) It does, does not provide covered telecommunications equipment or services as a part of its offered products or services to the Government in the performance of any contract, subcontract, or other contractual instrument.
 - (ii) After conducting a reasonable inquiry for purposes of this representation, that it does, does not use covered telecommunications equipment or services, or any equipment, system, or service that uses covered telecommunications equipment or services.

(End of Provision)

5.8 FAR 52.219-1 SMALL BUSINESS PROGRAM REPRESENTATIONS (Nov 2020)

- (a) *Definitions.* As used in this provision-

"Economically disadvantaged women-owned small business (EDWOSB) concern" means a small business concern that is at least 51 percent directly and unconditionally owned by,

and the management and daily business operations of which are controlled by, one or more women who are citizens of the United States and who are economically disadvantaged in accordance with 13 CFR part 127. It automatically qualifies as a women-owned small business concern eligible under the WOSB Program.

Service-disabled veteran-owned small business concern-

- (1) Means a small business concern-
 - (i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and
 - (ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a service-disabled veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.
- (2) "Service-disabled veteran" means a veteran, as defined in 38 U.S.C.101(2), with a disability that is service-connected, as defined in 38 U.S.C.101(16).

Small business concern—

- (1) Means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR part 121 and the size standard in paragraph (b) of this provision.
- (2) *Affiliates*, as used in this definition, means business concerns, one of whom directly or indirectly controls or has the power to control the others, or a third party or parties control or have the power to control the others. In determining whether affiliation exists, consideration is given to all appropriate factors including common ownership, common management, and contractual relationships. SBA determines affiliation based on the factors set forth at 13 CFR 121.103.

Small disadvantaged business concern, consistent with 13 CFR 124.1002, means a small business concern under the size standard applicable to the acquisition, that-

- (1) Is at least 51 percent unconditionally and directly owned (as defined at 13 CFR 124.105) by-
 - (i) One or more socially disadvantaged (as defined at 13 CFR 124.103) and economically disadvantaged (as defined at 13 CFR 124.104) individuals who are citizens of the United States, and
 - (ii) Each individual claiming economic disadvantage has a net worth not exceeding \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); and

- (2) The management and daily business operations of which are controlled (as defined at 13 CFR 124.106) by individuals who meet the criteria in paragraphs (1)(i) and (ii) of this definition.

"Veteran-owned small business concern" means a small business concern-

- (1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C.101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and
- (2) The management and daily business operations of which are controlled by one or more veterans.

"Women-owned small business concern" means a small business concern-

- (1) That is at least 51 percent owned by one or more women; or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and
- (2) Whose management and daily business operations are controlled by one or more women.

"Women-owned small business (WOSB) concern eligible under the WOSB Program" (in accordance with 13 CFR part 127), means a small business concern that is at least 51 percent directly and unconditionally owned by, and the management and daily business operations of which are controlled by, one or more women who are citizens of the United States.

(b)

- (1) The North American Industry Classification System (NAICS) code for this acquisition is 481212.
- (2) The small business size standard is 1,500.
- (3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture (i.e., nonmanufacturer), is 500 employees.

(c) Representations.

- (1) The offeror represents as part of its offer that it is, is not a small business concern.
- (2) [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents that it is, is not, a small disadvantaged business concern as defined in 13 CFR 124.1002.
- (3) [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents as part of its offer that it is, is not a women-owned small business concern.

- (4) Women-owned small business (WOSB) concern eligible under the WOSB Program. [Complete only if the offeror represented itself as a women-owned small business concern in paragraph (c)(3) of this provision.] The offeror represents as part of its offer that-
- (i) It is, is not a WOSB concern eligible under the WOSB Program, has provided all the required documents to the WOSB Repository, and no change in circumstances or adverse decisions have been issued that affects its eligibility; and
 - (ii) It is, is not a joint venture that complies with the requirements of 13 CFR part 127, and the representation in paragraph (c)(4)(i) of this provision is accurate for each WOSB concern eligible under the WOSB Program participating in the joint venture. [The offeror shall enter the name or names of the WOSB concern eligible under the WOSB Program and other small businesses that are participating in the joint venture: _____.] Each WOSB concern eligible under the WOSB Program participating in the joint venture shall submit a separate signed copy of the WOSB representation.
- (5) Economically disadvantaged women-owned small business (EDWOSB) concern. [Complete only if the offeror represented itself as a women-owned small business concern eligible under the WOSB Program in (c)(4) of this provision.] The offeror represents as part of its offer that-
- (i) It is, is not an EDWOSB concern eligible under the WOSB Program, has provided all the required documents to the WOSB Repository, and no change in circumstances or adverse decisions have been issued that affects its eligibility; and
 - (ii) It is, is not a joint venture that complies with the requirements of 13 CFR part 127, and the representation in paragraph (c)(5)(i) of this provision is accurate for each EDWOSB concern participating in the joint venture. [The offeror shall enter the name or names of the EDWOSB concern and other small businesses that are participating in the joint venture: _____.] Each EDWOSB concern participating in the joint venture shall submit a separate signed copy of the EDWOSB representation.
- (6) [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents as part of its offer that it is, is not a veteran-owned small business concern.
- (7) [Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (c)(6) of this provision.] The offeror represents as part of its offer that it is, is not a service-disabled veteran-owned small business concern.
- (8) [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents, as part of its offer, that-
- (i) It is, is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns

maintained by the Small Business Administration, and no material changes in ownership and control, principal office, or HUBZone employee percentage have occurred since it was certified in accordance with 13 CFR Part 126; and

- (ii) It is, is not a HUBZone joint venture that complies with the requirements of 13 CFR Part 126, and the representation in paragraph (c)(8)(i) of this provision is accurate for each HUBZone small business concern participating in the HUBZone joint venture. [The offeror shall enter the names of each of the HUBZone small business concerns participating in the HUBZone joint venture: _____.] Each HUBZone small business concern participating in the HUBZone joint venture shall submit a separate signed copy of the HUBZone representation.
- (d) Under 15 U.S.C.645(d), any person who misrepresents a firm's status as a business concern that is small, HUBZone small, small disadvantaged, service-disabled veteran-owned small, economically disadvantaged women-owned small, or women-owned small eligible under the WOSB Program in order to obtain a contract to be awarded under the preference programs established pursuant to section 8, 9, 15, 31, and 36 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall-
- (1) Be punished by imposition of fine, imprisonment, or both;
 - (2) Be subject to administrative remedies, including suspension and debarment; and
 - (3) Be ineligible for participation in programs conducted under the authority of the Act.

(End of Provision)

5.9 FAR 52.222-38 COMPLIANCE WITH VETERANS' EMPLOYMENT REPORTING REQUIREMENTS (FEB 2016)

By submission of its offer, the Offeror represents that, if it is subject to the reporting requirements of 38 U.S.C.4212(d)(i.e., if it has any contract containing Federal Acquisition Regulation clause 52.222-37, Employment Reports on Veterans), it has filed the most recent VETS-4212 Report required by that clause.

(End of Provision)

5.10 FAR 52.227-15 REPRESENTATION OF LIMITED RIGHTS DATA AND RESTRICTED COMPUTER SOFTWARE (DEC 2007)

- (a) This solicitation sets forth the Government's known delivery requirements for data (as defined in the clause at [52.227-14](#), Rights in Data-General). Any resulting contract may also provide the Government the option to order additional data under the Additional Data Requirements clause at [52.227-16](#), if included in the contract. Any data delivered under the resulting contract will be subject to the Rights in Data-General clause at [52.227-14](#) included in this contract. Under the latter clause, a Contractor may withhold from delivery

data that qualify as limited rights data or restricted computer software, and deliver form, fit, and function data instead. The latter clause also may be used with its Alternates II and/or III to obtain delivery of limited rights data or restricted computer software, marked with limited rights or restricted rights notices, as appropriate. In addition, use of Alternate V with this latter clause provides the Government the right to inspect such data at the Contractor's facility.

(b) By completing the remainder of this paragraph, the offeror represents that it has reviewed the requirements for the delivery of technical data or computer software and states [*offeror check appropriate block*]-

None of the data proposed for fulfilling the data delivery requirements qualifies as limited rights data or restricted computer software; or

Data proposed for fulfilling the data delivery requirements qualify as limited rights data or restricted computer software and are identified as follows:

(c) Any identification of limited rights data or restricted computer software in the offeror's response is not determinative of the status of the data should a contract be awarded to the offeror.

(End of Provision)

5.11 DOMESTIC SOURCE CERTIFICATION (PUBLIC LAW 105-303, TITLE II, SECTION 201)

(a) The Offeror certifies, to the best of its knowledge and belief, that it [] is [] is not in compliance with all requirements in clause 2.21 *DOMESTIC SOURCE CRITERIA*. Offerors that fail to meet these requirements are ineligible for award.

(b) The Offeror's above certification shall be substantiated below with a statement attesting to how the determination was made that the Offeror is in compliance with the domestic source criteria. In addition, the Offeror shall provide a breakdown of any foreign equity stakeholder(s) with a controlling interest of 10% or more.

(Additional pages may be added if needed)

(End of Provision)

[END OF SECTION]

SECTION 6 –INSTRUCTIONS TO OFFERORS

6.1 LISTING OF PROVISIONS INCORPORATED BY REFERENCE

In addition to the provisions marked as incorporated by reference on the SF 1449, the following contract clauses pertinent to this section are hereby incorporated by reference:

FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) PROVISIONS:

FAR 52.204-7	System for Award Management (OCT 2018)
FAR 52.204-16	Commercial and Government Entity Code Reporting (AUG 2020)
FAR 52.204-22	Alternative Line Item Proposal (JAN 2017)
FAR 52.204-26	Covered Telecommunications Equipment or Services-Representation (OCT 2020)
FAR 52.212-1	Instructions to Offerors—Commercial Items (JUN 2020)
FAR 52.225-25	Prohibition on Contracting with Entities Engaging in Certain Activities or Transactions Relating to Iran—Representation and Certifications (JUN 2020)

NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) PROVISIONS:

NFS 1852.233-70	Protests to NASA (DEC 2015)
NFS 1852.223-73	Safety and Health Plan (JUL 2015) (<i>NOTE: Submitted under Technical/Management Capability Volume as part of Management Approach</i>)

6.2 FAR 52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998)

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The Offeror is cautioned that the listed provisions may include blocks that must be completed by the Offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the Offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es):

FAR: <https://www.acquisition.gov>

NASA FAR Supplement (NFS): <https://www.hq.nasa.gov/office/procurement/regs/NFS.pdf>

6.3 TAILORED PARAGRAPHS IN 52.212-1

Paragraph (c) is tailored as follows: *Period for acceptance of offers*. The Offeror agrees to hold the prices in its offer firm for **120** calendar days from the date specified for receipt of offers and the proposal shall contain a statement to this effect.

Paragraph (e) is tailored as follows: (e) *Multiple offers*. Multiple offers **will not** be accepted in response to the solicitation.

6.4 PROVISIONS INCORPORATED VIA ADDENDUM TO 52.212-1

6.4.1 FAR 52.211-14 NOTICE OF PRIORITY RATING FOR NATIONAL DEFENSE, EMERGENCY PREPAREDNESS, AND ENERGY PROGRAM USE (APR 2008)

Any contract awarded as a result of this solicitation will be DX rated order; X DO rated order certified for national defense, emergency preparedness, and energy program use under the Defense Priorities and Allocations System (DPAS) (15 CFR700), and the Contractor will be required to follow all of the requirements of this regulation.

(End of Provision)

6.4.2 FAR 52.216-1 TYPE OF CONTRACT (APR 1984)

The Government contemplates award of Indefinite-Delivery Indefinite-Quantity task order contract(s) resulting from this solicitation.

(End of Provision)

6.4.3 FAR 52.216-27 SINGLE OR MULTIPLE AWARDS (OCT 1995)

The Government may elect to award a single task order contract or to award multiple task order contracts for the same or similar services to two or more sources under this solicitation.

(End of Provision)

6.4.4 FAR 52.233-2 SERVICE OF PROTEST (SEP 2006)

- (a) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the Government Accountability Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from:

kathy.l.owen@nasa.gov

- (b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

(End of Provision)

6.4.5 NFS 1852.233-70 PROTESTS TO NASA (DEC 2015)

Potential bidders or Offerors may submit a protest under 48 CFR Part 33 (FAR Part 33) directly to the Contracting Officer. As an alternative to the Contracting Officer's consideration of a protest, a potential bidder or Offeror may submit the protest to the Assistant Administrator for Procurement, who will serve as or designate the official responsible for conducting an independent review. Protests requesting an independent review shall be addressed to Assistant Administrator for Procurement, NASA Code H, Washington, DC 20546-0001.

(End of Provision)

6.4.6 NFS 1852.215-81 PROPOSAL PAGE LIMITATIONS (APR 2015)

The following page limitations are established for each portion of the proposal submitted in response to this solicitation.

TABLE 6.4.6-1 PAGE LIMITATIONS

Volume	Proposal Part Required	Page Limit
I	Technical/Management Capability	60
II	Price	None
III	Past Performance	10
IV	Administration / Model Contract	None

- (a) A page is defined as a page, 8 1/2" x 11", with at least one-inch margins on all sides, using not smaller than Times New Roman, 12 point font to include tables. For captions and respective text within graphics and figures, any 10-point, font may be used; however, this information shall be limited to clarifying the purpose of the graphics and figures, and shall not be used to convey narrative proposal information submitted for evaluation as described in Section 6 and Section 7. Foldouts count as an equivalent number of 8 1/2" x 11" pages. The metric standard format most closely approximating the described standard 8 1/2" x 11" size may also be used.
- (b) Title pages, tables of contents, launch site agreements, 6.4.11.4, *Financial Information*, Attachment 05, *Launch Service Capabilities, Specification and Environments*, Attachment 06, *Safety and Health Plan*, Attachment 07, *Small Business Subcontracting Plan*, and schedule(s) as required in Section 6.4.11 Volume I, TECHNICAL/MANAGEMENT CAPABILITY, are excluded from the page counts specified in this provision. Responses to the attachments in volume I shall be submitted as separate documents. In addition, Volume II, *Price*, of your proposal is not page limited. However, this volume is to be strictly limited to price information. Price should not be included in any other volumes or places other than Price and Model Contract. Information that can be construed as belonging in one of the other volumes of the proposal will be so construed and counted against that volume's page limitation.

If final revisions are requested, separate page limitations will be specified in the Government's request for that submission. Pages submitted in excess of the limitations specified in this provision will not be evaluated by the Government and the Offeror will be notified.

(End of Provision)

6.4.7 ELECTRONIC SUBMISSION OF PROPOSALS – PROPOSAL MARKING AND DELIVERY THROUGH NASA'S EFSS BOX (MAY 2021)

(a) The Offeror shall submit its proposal via NASA's Enterprise File Sharing and Sync Box (EFSS Box), a FedRAMP Moderate certified platform. Electronic submissions shall not contain hidden formulas, tables, be locked, be protected, or contain links to data not included in the electronic copy. All electronic submissions should be searchable and should not contain scanned documents, except those documents that must be provided in their native format (e.g., signature pages, prior award fee letters for past performance, DCAA/DCMA approval letters, as applicable). The Offeror shall ensure documents are free from viruses and malware, as documents determined by NASA to contain a virus or malware will not be opened or evaluated. All the documents shall be in Adobe Searchable Portable Document Format (PDF) and spreadsheets shall be in Excel format.

(b) Prior to the submission of proposal files, offerors interested in submitting a proposal in response to this solicitation should notify Kathy Owen, Contracting Officer, of their intent to submit a proposal at least 48 hours prior to the intended submission date, at the following email address:

ksc-vadr@mail.nasa.gov

(c) The Offeror shall submit all proposal files to:

<https://nasagov.app.box.com/f/2c947d58fa034b06aee5ca254e8b6704>

The Offeror shall follow instructions regarding proposal submission found at <https://www.hq.nasa.gov/office/procurement/other/EFSS-Box-Offeror-Proposal-Submission-Instructions.pdf>.

(d) Electronic file names shall be limited to letters, numbers, and single spaces, with the exception of the period that is required before the file extension (e.g., .pdf), in order to successfully upload and download files from the EFSS Box system. The offeror shall not use special characters "/" or "\" in file names. The offeror shall clearly label the contents of the file and include the name of the offeror and subcontractor name (if applicable) in the file name. Examples of acceptable file names are as follows (not specific to this solicitation):

For Prime Offeror Submissions:

Offeror name - solicitation number - MS Volume.doc

Offeror name - solicitation number - PP Volume.pdf

Offeror name - solicitation number - Cost-Price Volume.xlsx

Individual files cannot exceed 150GB per file. Unless specifically authorized by the solicitation instructions, alternate proposal submissions shall not be submitted.

- (e) Immediately after all files have been uploaded and the proposal has been submitted in its entirety, the Offeror shall notify Kathy Owen, Contracting Officer, at the following email address: ksc-vadr@mail.nasa.gov with a listing of all documents that were submitted via EFSS Box. If any problems are experienced with the EFSS Box system (e.g., login, file transfer), please contact NASA via e-mail as soon as possible.
- (f) The Offeror is responsible for ensuring its proposal reaches the Government office designated in the solicitation by the date and time specified in the solicitation (see FAR 52.215-1(c)(3)). The Government is not responsible for any failure attributable to the transmission or receipt of documents submitted using electronic means, including the missing of any submission requirements and established deadlines. Please note that uploading documents via EFSS Box and the transmission of the files from the Offeror to the Government may not be instantaneous. To ensure timely delivery, the Offeror is encouraged to submit its proposal at least 24 hours prior to the due date specified in the solicitation. The electronic submission of the proposal shall contain all information required by the solicitation to be determined responsive.

(End of provision)

6.4.8 PROPOSAL DUE DATE

All offers shall be delivered on or before 4:00pm (EDT), on July 2, 2021.

(End of Provision)

6.4.9 COMMUNICATIONS REGARDING THIS SOLICITATION

Any communications in reference to this solicitation shall cite the solicitation number 80KSC021R0034 and be directed to ksc-vadr@mail.nasa.gov. Questions regarding this solicitation must be presented in writing and shall be submitted to the above e-mail addresses no later than June 14, 2021 to allow for analysis and dissemination of responses in advance of the proposal due date. Late questions or comments are not guaranteed a response prior to the proposal due date.

(End of Provision)

6.4.10 PROPOSAL CONTENT

Offeror is requested to provide information responsive to the items set forth below. This information is considered essential for the Government to conduct a fair and uniform evaluation of proposals in accordance with the evaluation factors provided in Section 7. The

items listed are not, however, all-inclusive, and Offerors should therefore include in their proposals any further discussion that they believe to be necessary or useful in demonstrating their ability to understand and perform the work under the contemplated contract.

Proposals shall be specific, detailed, and comprehensive to clearly and fully demonstrate understanding of the requirements and the inherent risks associated with the objectives of this procurement.

Proposals that are unrealistic in terms of technical maturity, understanding, or price, and fail to meet the requirements of the RFP will be determined to be non-responsive. Further, a proposal will be determined to be non-responsive if it takes exceptions to the RFP to such a degree that it increases the risk of unsuccessful contract performance to an unacceptable level.

The Offeror's proposal shall contain the following volumes:

VOLUME I, TECHNICAL/MANAGEMENT CAPABILITY

VOLUME II, PRICE

VOLUME III, PAST PERFORMANCE

VOLUME IV, ADMINISTRATION / MODEL CONTRACT

6.4.11 VOLUME I, TECHNICAL/MANAGEMENT CAPABILITY

Note: Data required in response to this factor that is maintained by a subcontractor may be delivered by either the Offeror, or subcontractor, directly to the Contracting Officer

6.4.11.1 MINIMUM LAUNCH SERVICE CRITERIA

The Offeror shall provide responses to the following quick look items:

- (a) All Offerors shall provide evidence of at least one launch site to be used in support of task orders awarded under this contract.
- (b) All Offerors shall provide evidence of at least one of the following:
 - (1) Launch attempt (intentional ignition) of common launch vehicle configuration being proposed including, but not limited to, the outcome of the launch attempt
 - (2) Successful launch reaching an altitude of 100km or greater (can include any launch vehicle in the Offeror's fleet)
 - (3) Development tests demonstrating at least 50% of the flight thrust at the complete full-scale single engine assembly level for all core stage engines of the common launch vehicle configuration being proposed. As evidence, the Offeror shall provide data plots. Each plot shall state that the data is from a complete engine assembly test and include achieved engine test duration. Deviations from the complete engine assembly level shall be listed for each additional data plot, if any, provided in the proposal.

- (c) If Offeror is proposing to use a launch vehicle provided by another company (e.g. broker services, transfer vehicle), Offeror shall provide any agreements for each proposed vehicle, and shall demonstrate an acceptable technical and management approach to planning, documenting, and executing the launch service for the VADR Contract and subsequent task orders.

6.4.11.2 LAUNCH SERVICE OVERVIEW

- (a) The Offeror shall provide a concept of operations. The Offeror's concept of operations shall include, at a minimum, a narrative and supporting schedule which shall include design, integration, test, manifest management, launch site operations, payload processing and launch. If the Offeror's business operations concept includes launches for other customers, the Offeror shall include their approach to supporting multiple vehicles fabrication, assembly, launch site operations, flight data evaluation, and turn-around details to meet the manifest.
- (b) The Offeror shall provide all information in Attachment 05, *Launch Services Capabilities, Specification and Environments*, for the launch service including each proposed common launch vehicle configuration. The Offeror may propose more than one common launch vehicle configuration. Any information requested in Attachment 05, that does not apply to each proposed common launch vehicle configuration shall be left blank or marked N/A. Attachment 05 is excluded from the page count and will be included in any resultant contract award.
- (c) Common Launch Vehicle Configuration: The Offeror shall identify the common launch vehicle configuration being proposed and any NASA launch vehicle certification achieved per NPD 8610.7, *Launch Services Risk Mitigation Policy for NASA*. Offerors proposing a common launch vehicle configuration that has achieved a NASA category 1, 2, or 3 certification need not provide the information remaining in items 1 through 4 below. For any proposed common launch vehicle configuration that has not been assigned a NASA category 1, 2, 3 certification the Offeror shall detail their proposed solution for each common launch vehicle configuration that demonstrates a launch system that includes, but is not limited to, the following:
- (1) Launch Vehicle Characteristics: Proposed launch vehicle's system characteristics, specifications, and/or requirements identified and defined to a level adequate to verify the capability to deliver a payload at a minimum to a 200km circular orbit. If applicable, include flight history of all proposed launch vehicle engines.
 - (2) Propulsion System: Provide status of propulsion system (each engine and each stage level) development and qualification tests including a milestone schedule(s) of engine qualification testing with planned qualification tests specifically identified and explained; if qualification testing has been started, a qualification test matrix, with status (complete or not) of the tests for engines required to meet the values in item 1.
 - (3) Other Systems: Provide schedule status of major component development and

qualification tests: core stage tanks, flight computer, Inertial Navigation Unit (INU), engine actuators, main batteries, separation systems, and flight software processes/test status.

- (4) Risks: Provide all technical, schedule, and performance risks associated with the proposed launch vehicle, and describe the resolution or avoidance of the identified risks.

6.4.11.3 MANAGEMENT APPROACH

The Offeror shall provide a narrative of its capability, which includes:

- (a) Offeror's corporate structures and management team for the VADR contract to include relevant experience of the identified personnel.
- (b) Offeror's approach to receiving approval/licensing (e.g., FAA, FCC) and obtaining the necessary approvals with the proposed launch site and Range, if applicable, include any Flight Termination System (FTS) approvals.
- (c) Offeror's description of the methods of configuration management to be used for launch vehicle production, assembly, testing and processing for launch vehicle components/subsystems, hardware, and software.
- (d) Offeror's description of the mission integration activities performed to develop, document, implement and verify the interfaces between the payload, flight, and ground systems, and between the payload and the launch vehicle.
- (e) Offeror's description of how the Offeror will track development status of, and resolve issues associated with, mission specific hardware and software.
- (f) Offeror's approach to safety, quality, and mission assurance via submission of their corporate Safety and Quality Management Plan(s) as described in SOW section 1.11, *Safety and Quality*, and in accordance with NFS 1852.223-73 *Safety and Health Plan*, including any additional information needed specific to the contract requirements. The Safety and Quality Management Plan(s) is/are excluded from the total page count.

6.4.11.4 FINANCIAL INFORMATION

- (a) The Offeror shall provide evidence of development funds for any vehicle proposed under this contract that has not had a successful launch. The response shall include a summary of financing already obtained and an approach to securing additional financing needed for the development of their launch service vehicle.

- (b) The Offeror shall submit one copy of financial statements and accompanying notes for the two most recently completed fiscal years which demonstrates adequate financial resources to perform the contract, or ability to obtain them. In addition, provide data which show the amount of established and/or available lines of credit, the financial institution extending the line and the dollar amount (if any) presently in use. Provide the limits of the company's general liability insurance coverage.
- (c) Security for Government Financing: The Offeror shall provide the form of security from FAR Subpart 32.202-4(b), (c), and (d) that will be provided to satisfy the requirement in clause 2.10, *Security for Launch Service Payment Financing*, paragraph (b). Supporting information shall be included to show that the Offeror has the necessary resources to provide adequate security for all contract-financing payments. For an asset used as security, the Offeror shall certify that the asset is free from any prior encumbrances. The Offeror may request the contracting officer consider the Offeror's financial condition to be adequate security, provided the Offeror agrees to provide additional security should that financial condition become inadequate as security (see paragraph (c) of the clause at 52.232-29, *Terms for Financing of Purchases of Commercial Items*).

6.4.11.5 SMALL BUSINESS SUBCONTRACTING PLAN (*EXCLUDED FROM PAGE COUNT*)

Applicable to Large Business only. This solicitation contains FAR clause 52.219-9, *Small Business Subcontracting Plan*. The Plan described and required by the clause, including the associated subcontracting percentage goals and subcontracting dollars, shall be submitted by all large business Offerors. For this procurement, NASA has determined that Offerors shall propose goals based on their independent assessment of the small business subcontracting opportunities for this requirement pursuant to their standard company practices. A commercial plan is the preferred type of subcontracting plan for this procurement; however, Offerors may choose to submit any form of plan as defined in 52.219-9.

6.4.11.6 STATEMENT OF ACCEPTANCE/SUMMARY OF EXCEPTION

The Offeror shall include a statement of acceptance of the Statement of Work, solicitation provisions, and model contract terms and conditions, along with a list and explanation of any exceptions or conditional assumptions made to include where it is addressed in the proposal. Failure to clearly indicate exceptions to the proposed - contract terms and conditions contained in this solicitation will be construed as acceptance of them, verbatim. The Offeror is cautioned that exceptions, inaccurate conditional assumptions or new terms, conditions, or clauses may result in the proposal being determined unacceptable, may preclude award to an Offeror if award is made without discussions, or may otherwise affect an Offeror's competitive standing.

(End of Provision)

6.4.12 VOLUME II, PRICE

- (a) The Offeror shall provide a Not-to-Exceed (NTE) price for each calendar year shown in Table 1-1, CLIN Structure and Pricing for a dedicated launch service under CLIN 1,

Standard Launch Service. The proposed pricing should match the prices included in the Model Contract and should be rounded to the nearest whole dollar. In addition, Offerors are required to provide supporting information (i.e., data other than certified cost or pricing data) which will demonstrate reasonableness of the proposed NTE prices. Accordingly, at a minimum, the Offerors shall submit their baseline/advertised commercial launch service price accompanied with the rationale and assumptions applied when developing the proposed CLIN 1 NTE prices.

- (b) The Offeror shall provide a single labor rate for each calendar year shown in Table 1-2, CLIN 3 Special Tasks Assignment Labor Rates. This is a composite rate consisting of all labor required to complete these tasks and is fully burdened to include profit. The proposed pricing should match the prices included in the Model Contract. In addition, Offerors are required to provide supporting information (i.e., data other than certified cost or pricing data) which will demonstrate reasonableness of the proposed composite rates.

(End of Provision)

6.4.13 VOLUME III, PAST PERFORMANCE

- (a) Contract Past Performance, History, and Experience

The Offeror shall provide a narrative description on up to three (3) relevant, recent (within three (3) years of the proposal submission) contracts, task orders, and/or agreements similar in size, content, and complexity to the requirements of this solicitation. The same information shall be provided for up to three (3) additional past performance efforts by Major Subcontractors. No more than six (6) past performance efforts total shall be submitted. Major Subcontractors are defined as those companies that provide a launch vehicle proposed under this contract. For recent past performance contracts, the Offeror shall include the following:

- (1) Contract/Agreement name and number
- (2) Contractor Name, Cage Code and DUNS number
- (3) Government Agency/Company Name
- (4) Government/Company Point of Contact (address, telephone numbers, and e-mail)

(NOTE: If a Government Agency, include both the Contracting Officer and Contracting Officer's Representative points of contact)

- (5) Total original and present or final contract value
- (6) Contract type
- (7) Method of acquisition (competitive or noncompetitive, contract or agreement)
- (8) Period of performance

(NOTE: Offerors are advised that the Government's evaluation of submitted contracts for past performance will include an evaluation of how recently performance has occurred. Only contracts with performance within 3 years prior to the release date of the solicitation will be considered recent.)

- (9) North American Industrial Classification System (NAICS) Code
 - (10) Description of the services provided to include a discussion on the relevancy and magnitude of the effort(s) as they relate specifically to the requirements.
 - (11) Provide an assessment of the performance (technical and schedule) on these past programs and support these assessments with metrics such as award or incentive fees earned. Identify and explain successes, setbacks, and adherence to program schedules.
 - (12) Status of Contract [current, terminated (if so, why), successfully completed (include completion date)]
 - (13) Consent letters executed by each Major Subcontractor authorizing the release of past performance information so the Offeror can respond to such information.
- (b) Past Performance Questionnaires

For each of the contracts, task orders, and/or agreements in paragraph (a) of this section, the Offeror shall provide references from organizations and companies for whom work has been performed within the past 3 years from the RFP release date. For each Government organization and private sector customer, the Offeror shall provide their customer references with an Appendix A, Past Performance Questionnaire. The Offeror shall request the customer references to fully complete the questionnaire and to return it in accordance with the instructions on the form, on or before the due date. The questionnaires are not subject to the page limitation constraints. Where an Offeror chooses to request, from a civil servant employee, that a past performance questionnaire be submitted on its behalf for its proposed key personnel, please be advised that a Limited Communications Notice (LCN) has been issued in conjunction with this solicitation. The LCN directs that all civil service personnel at KSC shall refrain from communicating with industry on any matters related to this competitive procurement; as a result, while the civil servants may respond to the past performance questionnaire they will be unable to provide status to the Offeror, or communication in any other fashion with the Offeror, about that past performance request.

(End of Provision)

6.4.14 VOLUME IV, ADMINISTRATION / MODEL CONTRACT

- (a) Offeror shall include the signed SF 1449 along with the model contract (sections 1 through 4 of the solicitation) with all areas of this RFP completed. Any proposed updates and/or exceptions proposed in Volume I, Technical/Management Capability, shall also be reflected in the Model Contract as an attachment in section IV. Offeror shall complete the "to be proposed" (TBP) portions in the sections below as part of the Model Contract:

Tables 1-1, 1-2
2.10.2
Attachment 2
Attachment 3

CONTRACT PRICING
SECURITY
LAUNCH READINESS REVIEW
CDRLs

- (b) If available, Offeror is to provide point of contacts for DCMA/DCAA.
- (c) Offeror shall provide Data Universal Numbering system (DUNS) number and Commercial and Government Entity Code (CAGE) number.
- (d) Offeror shall include applicable reps and certs as required in section 5.
- (e) Offeror shall include a list of Contractor specific Acronyms that are in addition to those provided by this RFP.

(End of Provision)

[END OF SECTION]

SECTION 7 - EVALUATION FACTORS FOR AWARD

7.1 GENERAL CRITERIA

Proposals will be evaluated in accordance with FAR 52.212-2, *Evaluation-Commercial Items* (OCT 2014), in conjunction with FAR Part 15. The Government may elect to award one/more than one contract for IDIQ launch services resulting from this solicitation to the responsible Offeror(s) whose proposal, conforming to the solicitation, provides fair and reasonable not-to-exceed launch services prices and fixed labor rates, and meets or exceeds the acceptability standards for non-price factors.

Proposals shall be prepared as prescribed in this RFP. Accordingly, the Government reserves the right to reject proposals determined unacceptable as described under NFS 1815.305-70, *Identification of unacceptable proposals*. Furthermore, proposals with exceptions to the terms and conditions, inaccurate conditional assumptions or new terms, conditions, or clauses may result in the proposal being determined unacceptable, may preclude award to an Offeror if award is made without discussions, or may otherwise affect an Offeror's competitive standing. The Government will only consider the information provided in the proposal volumes; therefore, any references to information contained outside the proposal (e.g., websites) will not be considered.

The Government intends to evaluate and select for award, based on initial proposals, without discussions or negotiations. However, the Government reserves the right to conduct discussions if deemed in the best interest of the Government. Accordingly, each Offeror should submit its initial proposal to the Government using the most favorable terms from a price and technical standpoint.

Administration: The Contracting Officer will review the administrative information in Volume IV for completeness and may identify areas necessary for corrections. This review is separate from

the Technical/Management Capability evaluation. As such, the Government may communicate, outside of discussions, with any Offeror at any time during the evaluation process concerning the administrative information; however, substantive omissions may result in the proposal being ineligible for award. At contract award, the Representation and Certifications shall be incorporated by reference into the contract in accordance with FAR Part 52.212-4(v).

Price will be evaluated for reasonableness and the following evaluation factors will establish proposal acceptability:

**Technical/Management Capability
Past Performance**

All Offerors whose price is determined reasonable and are not “unacceptable” in the Technical/Management Capability and Past Performance factors will be eligible for a contract award.

7.2 VOLUME I, TECHNICAL/MANAGEMENT CAPABILITY

The Technical/Management Capability factor will be rated as either “Acceptable” or “Unacceptable.” All parts in this volume must be rated “Acceptable” to be eligible for contract award.

7.2.1 MINIMUM LAUNCH SERVICE CRITERIA

Initial evaluation will be performed on the quick look items from section 6.4.11.1 to determine acceptability. Proposals that are evaluated as unacceptable in this section, will not be evaluated any further, and will not be eligible for award.

- (a) Offeror has provided evidence of at least one launch site to be used in support of task orders awarded under this contract.
- (b) Offeror meets at least one of the following:
 - (1) Proposed common launch vehicle configuration has completed one launch attempt (intentional ignition).
 - (2) Successful launch reaching an altitude of 100km or greater (can include any launch vehicle in the Offeror’s fleet)
 - (3) Data plots were provided showing all core stage engines, at the complete full-scale single engine assembly level have achieved 50% of flight thrust in development tests and qualification tests.
- (c) If Offeror is proposing to use a launch vehicle provided by another company (e.g. broker services, transfer vehicle), it has an established agreement(s), covering the resultant contract’s ordering period, with the launch vehicle provider, for each launch vehicle proposed. In addition, the Offeror demonstrates an acceptable technical and management

approach to planning, documenting, and executing the launch service for the VADR Contract and subsequent task orders.

7.2.2 LAUNCH VEHICLE OVERVIEW

- (a) Attachment 05, *Launch Services Capabilities, Specification and Environments*: The Offeror's capabilities described in Attachment 05 will be evaluated for completeness and feasibility based on the proposed common launch vehicle configuration.
- (b) Common Launch Vehicle Configuration: Offerors whose proposed vehicles are NASA Category 1, 2, or 3 certified, will be determined acceptable in this area. Proposed common launch vehicle configurations that have not achieved a NASA category 1, 2, or 3 certification will be determined acceptable based on the risk and feasibility of delivering a payload to a minimum circular orbit of 200 km. In addition, based on the information proposed in response to section 6.4.11.2 the proposal will be evaluated for acceptability based on the Offeror's demonstrated knowledge, skill and understanding of launch vehicle design, test, analysis, and manufacturing.

7.2.3 MANAGEMENT APPROACH

The management approach will be evaluated on the risk and feasibility of the Offeror's response as described in section 6.4.11.3

7.2.4 FINANCIAL INFORMATION

Offerors will be evaluated for their demonstrated financial capability to complete launch vehicle development (if applicable) and to provide the VADR launch services that may be ordered under this contract. This information may also be used to support a responsibility determination in accordance with FAR Subpart 9.1.

The Offeror's proposed security for Government financing will be evaluated to determine if there is adequate security available to cover future financing payments. This information may also be used to support a responsibility determination in accordance with FAR Subpart 9.1.

7.2.5 SMALL BUSINESS SUBCONTRACTING PLAN

Small Business Subcontracting Plan (Large business only): The Offeror's Small Business Subcontracting Plan will be evaluated for appropriateness of the total proposed small business subcontracting goals and the proposed goals by small business category, as supported by the Offeror's independent assessment of subcontract opportunities for this requirement. The Offeror's Small Business Subcontracting Plan will also be evaluated in terms of meeting the requirements of FAR 19.704, *Subcontracting Plan Requirements*, and NFS, 1819.704, *Subcontracting Plan Requirements*. The evaluation of the Small Business Subcontracting Plan will be on the basis of total contract value.

7.2.6 STATEMENT OF ACCEPTANCE/SUMMARY OF EXCEPTION:

Proposals shall be prepared as prescribed in this RFP. Accordingly, the Government reserves the right to reject proposals determined unacceptable as described under NFS 1815.305-70, Identification of unacceptable proposals. Furthermore, proposals with exceptions to the terms and conditions, inaccurate conditional assumptions or new terms, conditions, or clauses may result in the proposal being determined unacceptable, may preclude award to an Offeror if award is made without discussions, or may otherwise affect an Offeror's competitive standing.

(End of Provision)

7.3 VOLUME II, PRICE

- (a) The dedicated launch service not-to-exceed price for a CLIN 1, Standard Launch Service, will be evaluated for reasonableness in accordance with FAR 15.404-1(b). This analysis will take into consideration the other than certified cost or pricing information submitted in support of the proposed not-to-exceed launch service prices.
- (b) The labor rates proposed in Table 1-2, CLIN 3 Special Task Assignments Labor Rates, will be evaluated for reasonableness in accordance with FAR 15.404-1(b). Additional analysis may be performed with other than certified cost or pricing data, if necessary, to support a fair and reasonable price determination in accordance with FAR 15.404-1(c).

(End of Provision)

7.4 VOLUME III, PAST PERFORMANCE

The Government will conduct a past performance evaluation in accordance with FAR 15.305(a)(2). The Government will evaluate the recent and relevant performance of the Offeror (to include proposed Major Subcontractors) in the areas of technical, schedule, management, small business, cost/price, and mission success. Up until contract award, the Government may supplement the information contained in the proposal with information obtained from Government organizations and personnel, commercial sources, public information sources, and, if applicable, data gathered during the discussion phase of the evaluation. This evaluation will result in a rating of "Acceptable," "Neutral," or "Unacceptable," as outlined in the table below.

Recent: Only efforts performed during the past three years prior to proposal submission will be considered in this evaluation. Furthermore, the Government will not consider efforts on newly awarded contracts without any assessable performance completed.

Past Performance Evaluation Ratings

Rating	Definition
Acceptable	The Offeror's relevant past performance is pertinent to this acquisition, and it demonstrates effective performance. Performance was responsive to contract requirements; there may have been reportable problems, but the contractor took effective corrective action.
Neutral	The Offeror has no relevant past performance history or for whom past performance information is not available.
Unacceptable	The Offeror's relevant past performance does not meet minimum acceptable standards in one or more areas; remedial action was required in one or more areas; performance problems occurred in one or more areas which, adversely affected overall performance; resulting in a very low level of confidence that the Offeror will successfully perform the required effort.

(End of Provision)

[END OF SECTION]

ATTACHMENT 01

STATEMENT OF WORK

For

Venture-Class Acquisition of Dedicated and Rideshare (VADR)

Launch Services

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Statement of Work

This Statement of Work (SOW) and all documents attached or referenced herein define the Government's requirements for the Contractor to provide launch services in support of NASA's Launch Services Program (LSP). Launch services will include dedicated and rideshare launch service capabilities.

This SOW defines the overall launch service requirements for US Government payloads (hereinafter referred to as 'payloads'). The Contractor shall perform all tasks necessary to safely and reliably launch payloads in accordance with Government-defined mission objectives. The loss of payloads will not be considered a “Mishap” under 8621.1 NASA Procedural Requirements (NPR) for Mishap and Close Call Reporting, Investigating, and Recordkeeping, which is consistent with the NASA Policy Directive (NPD) 8610.23, Launch Vehicle Technical Oversight Policy, modified technical oversight approach.

The Contractor shall provide all Contract Data Requirements List (CDRL) items as described in Attachment 03, Contract Data Requirements List (CDRL).

The Contractor shall comply with the following documents:

- a. Range Safety Documentation for the selected launch site as determined by the appropriate governing authority (e.g. Federal Aviation Administration (FAA)).
- b. Certification Regarding United States Commercial Provider of Space Transportation Services (Public Law 105-303, Title II, Section 201).

1.0 STANDARD LAUNCH SERVICES (CLIN 1)

1.1 Scope of Standard Launch Services

This SOW defines the Venture-Class Acquisition of Dedicated and Rideshare (VADR) launch services. The Contractor shall provide an FAA licensed launch service for payloads with a risk tolerance of Class D per NPR 8705.4, Risk Classification for NASA Payloads, or payloads that do not have defined risk classification. The Contractor shall perform launch vehicle planning, analysis, design, development, production, integration, and testing required to provide the launch service appropriate to transport the payload to the desired orbit.

The standard launch services described in this section are intended to align with standard commercial practices while still retaining an appropriate level of Government oversight commensurate with a Class D mission and an FAA-licensed launch. The actual mission orbital requirements will be identified at the task order level, will be to a variety of orbits, and may include escape trajectories.

Missions will require one of the following launch types: dedicated, primary (aka anchor) payload on rideshare, or traditional rideshare. Some missions will require a specific type of launch and others will have flexibility for the launch service provider to define its approach to meeting the mission's requirements.

- a. Dedicated: The Government is allocated the full performance capacity of the launch vehicle for sole use by the Government's payload(s).
- b. Rideshare: The Government is allocated a portion of the full performance capability of the launch vehicle for use by the Government's payload(s). The launch vehicle provider is allowed to utilize excess capacity for other payloads.
 - i. Traditional rideshare missions are defined as follows: the Government has flexibility on some orbit parameters for the task order mission (to be defined at the task order level); does not control the other mission's(s') orbits, order of payload deployment, or the launch schedule; and does not have the right to refuse other payloads on the mission.
 - ii. Primary rideshare missions are defined as follows: The Government will require, or the Contractor's approach shall state, that the payload be designated as the primary payload that controls both the schedule (launch day and time) and specific orbit parameters of the launch, including the Government's payload separation sequence. If the primary payload is not ready on schedule, the Contractor shall not launch without it.

For all rideshare missions, the Contractor shall ensure that there are no compatibility issues that impact NASA payload(s). The Contractor shall provide mass simulators for NASA payload(s), if required by the launch vehicle provider.

Some missions will require a Category 1 certified launch vehicle. This requirement will be determined at the task order level. For missions that require Category 1 certification, the Contractor shall comply with NPD 8610.7D, Launch Services Risk Mitigation Policy for NASA-Owned and/or NASA-Sponsored Payloads/Missions and LSP-PLN-324.01, Launch Vehicle Certification Plan. Information about attaining a NASA Category 1 certification should be coordinated through LSP.

1.2 Planning

The Contractor shall furnish all services necessary to accomplish the contract requirements including: program management, mission integration, payload processing, launch site support, ground and flight system safety, and performance assurance necessary to accomplish the safe and successful launch of payloads to the required orbit conditions within required launch period.

The Contractor shall be responsible for initiating and ultimately obtaining the necessary approval/licensing (e.g., FAA, Federal Communications Commission) to successfully deliver the procured launch service. The Contractor shall be responsible for all integration and Range services in order to successfully deliver the launch service. The Contractor shall make all arrangements with the responsible authorities for the required launch Range authorization and support for vehicle processing; integrated payload/vehicle processing, launch; and launch site maintenance and modifications if required.

The Contractor shall provide logistical supplies, services, and hardware support to the post-production, transportation, and launch base operations of the vehicle system. The Contractor shall provide all necessary services and mission specific elements, including launch vehicle test and flight hardware and software, required to integrate the payload to the launch vehicle system. The

Contractor shall provide all necessary services, test hardware, software, and mission specific elements required to integrate the combined payload and separation system to the launch vehicle system. Such support should include but is not limited to: provision of spares; provision of propellants; liquids, and gases for launch and test; packaging and transportation of the vehicle system; and warehousing and storage.

Limited Government program management and technical insight, in accordance with NPD 8610.23 Attachment C, Class D Mission Launch Vehicle Modified Technical Oversight, will be required in order to assess completion of milestones as defined in Attachment 02 and Attachment 03. NASA seeks to enable the use of commercially accepted practices while still understanding the schedule risks of the launch service used for the mission.

1.3 Program Management

The Contractor shall perform the program management tasks required to provide the launch service and satisfy the mission requirements. These tasks shall include as a minimum:

- a. Conduct launch vehicle program reviews that provide evidence of launch vehicle maturity towards the contracted launch period and provide the Government with appropriate evidence needed to satisfy milestone payments to the Contractor as defined in Attachment 02 and Attachment 03.
- b. Develop and maintain a master schedule and sub-tier schedules.
- c. Obtain all applicable licenses, permits, and approvals required by federal, state, and local regulatory agencies; and prepare (or, if necessary, support the Government in preparing, for the payload) and submit any environmental impact statements that may be necessary for the provisioning of the launch service. Approvals required by the payload will be the responsibility of the Government. The Contractor and the Government shall cooperate and support to each other in the process of obtaining, maintaining, and renewing permits and licenses as set forth above.
- d. Provide resolution of critical problem areas to minimize or eliminate schedule impacts.
- e. Manage all subcontracts and monitor subcontractor activities to a sufficient level of detail to ensure timely delivery of acceptable components.
- f. Provide the recommended mission success criteria prior to the launch and the Final Flight Report (VADR 1-14) to enable determination of mission success as defined in the Interface Control Document (ICD) (VADR 1-2). NASA will determine whether the mission is a success or failure based on the application of the mission success criteria as defined in the RFP and ICD (VADR 1-2).
- g. Make provision for insurance to cover liability for possible damage to Government property and third parties in accordance with necessary approval/licensing (i.e., FAA).
- h. Pay any taxes and transfer costs required for the delivery of the launch service.

1.4 Technical Oversight

While the Contractor shall allow NASA oversight, the Contractor shall ensure necessary steps have been taken that result in mission success per clause 2.9, *Mission Success Criteria*. The Contractor shall comply with all requirements for Class D missions described in NPD 8610.23C Attachment C, Class D Mission Launch Vehicle Modified Technical Oversight.

Government oversight has two elements: approval and insight. Government approval is defined as: the provision of authority to proceed and/or formal acceptance in limited specified areas. Where Government approval is required, the Contractor shall submit the necessary documentation to the Contracting Officer and copies to the Contracting Officer's Representative (COR).

NASA uses its insight to gain an understanding of the mission integration of the unique Government payload to the launch vehicle, to perform program management for associated launch service schedule risks, and to understand the most significant technical risks of the launch service. In accordance with NPD 8610.23, the Contractor shall provide NASA with insight into any Contractor-initiated fleet or vehicle changes that may impact the common launch vehicle configuration for VADR missions. The Contractor shall accommodate this insight with no increase in contract price.

1.4.1 Approval

As defined in NPD 8610.23C Attachment C, the following areas require Government approval for the VADR missions:

1. Spacecraft-to-launch vehicle interface control documents (ICD)/drawings and requirement waivers.
2. Decisions/resolutions of action items as determined by joint NASA/Contractor mission integration teams.
3. Spacecraft launch commit criteria. (*Note: This does not apply to traditional rideshare missions*)
4. Spacecraft handling procedures and deviations.
5. Integrated spacecraft/vehicle mate, test, and closeout procedures and planned or real-time deviations, impacting the spacecraft (e.g., handling, spacecraft power-on, or mission specific requirements).
6. Launch countdown procedures and planned or real-time deviations that affect spacecraft interface in the ICD. (*Note: This applies only to procedures involving the spacecraft*)
7. Anomaly resolutions that affect the spacecraft interface in the ICD.
8. Spacecraft Launch Readiness Go/No-Go. (*Note: This does not apply to traditional rideshare missions. For dedicated and primary rideshare missions as defined in section 1.1, the Government will have Go/No-Go authority on launch day for the spacecraft readiness.*)

1.4.2 Insight

As defined in NPD 8610.23C, the following areas require Government insight:

1. Baseline vehicle configuration to confirm the common launch vehicle configuration as defined in Attachment 04, *Definitions*.
2. Production program reviews, plans, and schedules for the VADR missions.
3. Launch Processing Readiness Reviews (pre-ship reviews) for the VADR missions.
4. Major/critical problems affecting the VADR mission's production or launch schedule and their resolutions.
5. Launch site support work schedules and plans for the VADR missions.
6. Contractor-chaired launch readiness review(s) for the VADR missions.
7. Post flight anomaly, as defined by the launch service provider, investigations/closeouts.
8. VADR mission specific hardware design, analysis, manufacture, and test.
9. VADR mission specific software design, analysis, and test.
10. Contractor's spacecraft-to-launch vehicle ICD verification matrix development and closeout for the VADR missions.
11. Baseline and changes to Contractor's risk management, safety and health, and quality management plan/approach.

1.5 Launch Vehicle Design and Analysis

The Contractor shall be responsible for the design of the launch vehicle (e.g. structures, mechanisms, fluids/propulsion, electrical/electronics, guidance/navigation/control, flight termination, and software).

The Contractor shall document the analyses required to validate the launch vehicle design to their standards.

NASA will specify the requirements for each mission at the task order level.

1.6 Development and Production

The Contractor shall implement a development and qualification program, using Contractor standards, for any new systems required for the launch vehicle including: existing systems that are modified; launch vehicle components not yet qualified; and ground support equipment. The Contractor shall report risks, as defined by the Contractor's risk plan, to the Government.

The Contractor shall manufacture, assemble, test, and transport the launch vehicle and all mission hardware required to provide the launch service and shall provide all materials and equipment necessary for these tasks.

1.7 Mission Integration

The Contractor shall provide the necessary services and hardware to integrate the payload to the separation system, the integrated payload assembly (as applicable), and the launch vehicle. The Contractor shall coordinate with the Government to develop the ICD (VADR 1-2) during

integration. The Contractor shall create and maintain an ICD Verification Matrix (VADR 1-3) that includes a verification plan for each requirement in the ICD based on the appropriate method. The Contractor shall perform verification and provide closure evidence for each ICD requirement based upon the verification plan identified in the ICD Verification Matrix upon completion.

The Contractor shall conduct monthly technical mission integration coordination teleconferences with the Government to address technical integration topics and status action items. Beginning at L-12 months, the Contractor shall conduct technical mission integration coordination teleconferences with the Government every two weeks.

The Contractor shall conduct mission integration working group meeting approximately two times a year from mission ATP to launch.

1.8 Payload Separation Systems

Separation system interfaces will be specified at the task order level and may include but are not limited to separation ring interfaces, CubeSat interfaces, or other payload interfaces. Launch vehicle to payload interface requirements will be levied at the interface between the separation system and the payload. The Government may elect to provide the separation system at the task order level. In the event NASA provides the separation system, requirements in a. through f. below do not apply to the Contractor.

The following requirements shall apply to the Contractor for the provided launch service:

- a. The Contractor shall provide a qualified payload separation system.
- b. The Contractor shall conduct, at a location specified by the Government, a mechanical and electrical fit check between the payload separation system and the payload prior to shipment of the payload to the integration site for launch.
- c. The ICD shall include requirements necessary for the successful integration of the payload and the separation system.
- d. The Contractor shall provide hardware to the payload provider that accurately simulates the mechanical interfaces and dynamic characteristics of the payload separation system, to be used by the payload project during shock and vibration testing. (Note: if applicable, the requirement for separation testing will be included at the task order level)
- e. The payload shall be protected from debris generated by the separation system.
- f. The separation system shall function in a manner that prevents any re-contact with the payload, including Contractor-provided attach hardware on the payload, by the upper stage or any element of the separation system once separation has been initiated.
- g. The Contractor shall initiate the deployment of the payload

- h. For all post-separation maneuvers, including a Collision/Contamination Avoidance Maneuver (CCAM) when applicable, the Contractor shall minimize payload contamination and prevent any chance of re-contact with the separated payload.
- i. The launch vehicle shall establish and hold the nominal separation attitude and/or spin rate(s) prior to payload separation.
- j. The launch vehicle's attitude control system (ACS) shall be disabled immediately prior to payload separation and remain disabled while the launch vehicle sends redundant separation initiation signals to release the payload.
- k. The spacecraft separation will be timed and directed in such a way as to avoid near field re-contact with any other spacecraft deployed from the launch vehicle.

1.9 Payload Processing Support

The Contractor shall provide a Payload Processing Facility (PPF) that meets ISO 14644-1 Class 8 or better cleanroom to support payload processing operations, pre-integration operations and payload fairing encapsulation operations. The Contractor shall provide cleaning supplies, cleanroom garments, and related supplies for personnel that require access to the cleanroom. The duration of PPF occupancy and facility specifications (i.e., payload lifting/handling requirements, hazardous material accommodations, fueling support services) will be specified at the task order level.

The Contractor shall maintain the contamination environment in the PPF and within the payload fairing such that it meets ISO 14644-1 Class 8 or better. Additional requirements that apply to Contractor-provided flight hardware (i.e., Payload Fairing and Payload Adapter surfaces) may be specified at the task order level.

The Contractor shall provide notification at the Launch Processing Readiness Review (LPRR) (reference Attachment 02, *Meetings and Formal Reviews*) to coordinate the payload delivery to the integration site or launch site.

The Contractor shall ensure that Contractor-provided hardware does not contaminate the payload. For example, any thermal and/or acoustic blankets in the payload fairing will be sealed or filtered such that venting of blanket material debris does not contaminate the payload.

The Contractor shall ensure that the PPF includes a control room with the accommodations necessary to operate payload Ground Support Equipment. These accommodations must include harness routing paths and real-time voice and video communication between the control room and payload processing area. For some missions, connectivity between the PPF and launch pad may be required at the task order level.

1.10 Launch Operations

The Contractor shall identify and secure a launch site to meet the requirements of the launch service.

1.10.1 Integration and Checkout

The Contractor shall perform the following:

- a. Assemble, transport, maintain, checkout, and launch a vehicle that delivers the payload into the ICD required orbit.
- b. Provide and make arrangements for all facilities, supplies, and services required for preparation and launch of the vehicle.
- c. Identify launch vehicle ground and flight safety launch constraints. If necessary, integrate the satellite procedures with the launch vehicle checkout effort where appropriate and coordinate launch site and safety approvals. The Government will be responsible for providing all integration site satellite checkout procedures and for obtaining the requisite satellite safety approvals (with the assistance of the Contractor).
- d. Integrate the payload onto the launch vehicle, encapsulate, transport, and perform spacecraft to launch vehicle integrated checkout activities necessary to assure launch readiness.
- e. Provide and schedule the necessary support services at the launch Range that are required for launch preparation of the launch vehicle, integrated testing with the payload, and launch.
- f. Provide access for Government payload personnel at the integration site and provide access to real-time payload telemetry, voice, and video communications to government representatives.

1.10.2 Launch Support

The Contractor shall provide a facility at the launch site or remote launch control center capable of supporting up to 3 government representatives during launch countdown. Support for additional government representatives may be required at the task order level. Support should be consistent with the Contractor's commercial practices for integrated spacecraft to launch vehicle operations and on the day of launch using commercial practices with available information, which may include access to real-time telemetry (RF and hardwire), voice communication channels with listen capabilities, video, and telephones. The Contractor shall provide access to real-time payload telemetry to government representatives during the launch terminal countdown. The Contractor shall communicate real time launch and payload separation status. The Contractor shall verify payload separation by launch vehicle telemetry with redundant separation indications. The Contractor shall provide all recorded payload telemetry to NASA with the Final Flight Report (VADR 1-14). Real time delivery of communication and telemetry to NASA is desirable but not required. As determined by the ICD (VADR 1-2), the Contractor shall notify the Government of the achieved orbit characteristics.

The Contractor shall poll NASA during the launch terminal countdown for the payload status for Dedicated and Primary Rideshare missions as defined in section 1.1 Scope of Standard Launch Services and 1.4.1 Approval. The Contractor shall not launch until NASA states the payload is ready.

1.11 Safety and Quality

The Contractor shall establish, implement, and maintain risk management, safety, reliability, and quality assurance programs with AS9100, Aerospace Quality Management System (QMS), or equivalent as a guideline. For task orders that require Category 1 Certification, a QMS compliant to ISO 9001 or AS9100 is required.

The Contractor shall provide any updates to the Occupational Safety and Health Plan that implements safety and health requirements consistent with federal, state, and local government regulations and applicable launch processing site Safety and Health requirements.

NASA will not retain control of the launch due to its modified technical oversight approach, as described in NPR 8610.23. VADR launch services are for high risk tolerant payloads and the Contractor will be responsible for all mission assurance activities. FAA, as the licensing agency, will conduct all mission anomaly and/or failure investigations.

In the event that NASA personnel or property are affected by an anomaly or failure, the Contractor shall provide sufficient information for NASA to perform its own mishap investigation per NPR 8621.1.

1.12 Contract Documentation Requirements List (CDRL)

The Contract Documentation Requirements List (CDRL) in Attachment 03 identifies critical elements of the Contractor's efforts. The Contractor shall produce and make the appropriate distribution of all items on the CDRL that require review or approval by the Government.

1.13 Public Affairs

The Contractor shall coordinate with NASA Public Affairs Office (PAO) all press releases concerning launches under this contract. The contractor shall provide video footage and photos of vehicle build-up, payload integration, launch countdown, spacecraft integration and encapsulation.

The Contractor may, consistent with Federal law and this Contract, release general information regarding its activities conducted within the scope of the Contract. Any Public Affairs material that refers to NASA or uses the NASA logo requires approval by NASA prior to public release. Any Public Affairs material that does not refer to NASA, NASA missions, or the Government does not require NASA approval.

2.0 STREAMLINED CUBESAT LAUNCH SERVICES (CLIN 2)

2.1 Scope and Requirements

The scope of the Streamlined CubeSat Launch Services includes launch services capable of delivering a CubeSat to a variety of orbits, including escape trajectories. The integration timeline from ATP to on-orbit deployment will be specified at the task order level. For each task order, the Government will define the particular CubeSat interface specifications, required orbital parameters, and schedule.

The Contractor shall furnish all services to meet the requirements defined for Streamlined CubeSat Launch Services.

Objectives

The objectives of the launch service are to:

- a. Provide affordable, accurate, and on-time delivery of Government and/or Government-sponsored payloads to space.
- b. Ensure the safety of the public, as well as all personnel, hardware, and property associated with the launch service.

2.2 Streamlined CubeSat Launch Services Ground Rules

The following ground rules apply, but may be tailored at the task order level:

1. NASA will not have spacecraft readiness go/no-go or "hold" authority during countdown.
2. The CubeSat typically will not require any electrical interface with the Launch Vehicle (LV) and will be powered off from closeout of the CubeSat Dispenser through on-orbit deployment.
3. The CubeSat typically will not contain any hazardous materials (except batteries), pressure vessels, pyrotechnic devices, nor radioactive material. This ground rule may be tailored by the government at the task order level.
4. The CubeSat typically will not contain a propulsion system. Propulsion systems may be allowed at the task order level.
5. The CubeSat project will provide all documentation/data necessary to demonstrate compliance with all applicable mission specific technical/safety requirements.
6. The CubeSat project will be responsible for obtaining all spacecraft Radio Frequency and remote sensing regulatory licensing required by the US Government. Note: FCC consultant services may be required as specified at the task order level.
7. The CubeSat will be delivered to the Contractor for integration to the dispenser on the date and the location specified by the Contractor.

2.3 Streamlined CubeSat Launch Services Requirements

The Contractor shall:

1. Provide the CubeSat dispenser that is qualified to the predicted launch environments and meets the detailed interface requirements that will be identified at the task order level.
2. Perform launch vehicle planning, analysis, design, development, production, integration, and testing required to provide the launch service appropriate to transport the payload(s) to the required orbit.
3. Provide a test fixture that replicates all dispenser to CubeSat interfaces and clearances for use by CubeSat providers during fit check and CubeSat environmental testing.
4. Include NASA LSP on all communications, data requests, and exchanges with the CubeSat project.
5. Conduct a kick-off meeting with NASA LSP and the CubeSat project.
6. Conduct coordination teleconferences with the CubeSat project and NASA LSP at least every two weeks and transmit a post-conference memo documenting the meeting minutes and any actions taken by the CubeSat project and NASA LSP within 5 working days of each meeting.
7. Provide at kick-off and whenever updates are required, a mission specific schedule that identifies all integration/launch campaign milestones and deliverables due from the CubeSat project, NASA LSP, and the Contractor.
8. Provide at kick-off and whenever updates are required, a listing and description of all documentation/data submittals required by the CubeSat project to demonstrate compliance with all applicable technical and safety requirements required by the Contractor, the LV provider, the launch range, and the local/state/federal Government.
9. Produce a baseline CubeSat to dispenser assembly Interface Control Document (ICD) no later than ATP + 2 months and produce updates, as required. The Contractor shall ensure that the ICD includes the anticipated environments at the CubeSat dispenser to LV interface and all technical requirements that must be met by the CubeSat project. In cases where the dispenser includes internal isolation, the Contractor shall ensure that the ICD also includes anticipated environments at the CubeSat to dispenser interface.
10. Provide a baseline ICD requirement verification matrix no later than ATP + 2 months and produce updates, as required.
11. Perform integration of the CubeSat into the dispenser at a location in the contiguous United States, transport the integrated dispenser assembly as necessary, and perform integration of the integrated dispenser assembly onto the LV.
12. Provide telemetry confirmation of CubeSat deployment.
13. Provide NASA LSP ICD documentation/verification evidence within two weeks of requirement completion.
14. Provide and maintain a non-deploying contingency mass simulator for the CubeSat integrated dispenser assembly if required by the LV provider.
15. Conduct a Mission Readiness Review (MRR) at a mutually agreeable time/date with the CubeSat project, NASA LSP, and the LV provider (if applicable) approximately one month prior to CubeSat to dispenser integration to verify that the CubeSat and the dispenser have met all technical/safety/regulatory requirements for the mission, that plans for dispenser

and LV integration are in place and ready to execute, and that the LV remains on schedule to support the mission.

16. Generate a list of any actions and/or constraints resulting from the MRR within one week of the review and track them to closure. The Contractor shall close all actions and constraints prior to LV integration.

2.4 FCC Consulting Services

Some missions may require that the Contractor shall provide consulting services to the CubeSat project for obtaining a Federal Communications Commission (FCC) license for each spacecraft transmitter and associated ground station, in advance of final delivery of the CubeSat for integration into the dispenser. The Contractor shall assist the CubeSat project in obtaining the required information to fill out the FCC application. The Contractor shall submit the application, on behalf the CubeSat project, to the FCC and assist with any questions with the goal of obtaining the license no later than one month prior to integration to the dispenser. All required licenses (e.g. FCC licenses) or permits must be acquired by the agreed integration date of the CubeSat into the dispenser, and copies of these shall be provided at the time of integration. Launch of the CubeSats will be subject to NASA approval should licenses/permits not be obtained by dispenser integration. For missions that need FCC consulting services, the requirement will be specified at the task order level.

2.5 Deliverables

The Contractor shall provide all deliverables electronically via email in PDF format unless otherwise specified. The Contractor shall submit all deliverables to the appropriate NASA Contracting Officer, Contract Specialist, Contracting Officer's Representative (COR), and Mission Manager assigned to the mission. The Contractor shall deliver all CDRLs in accordance with Attachment 03, CDRLs. The task order will include contact information for the recipients.

3.0 SPECIAL TASK ASSIGNMENTS (CLIN 3)

The Contractor shall perform special studies and analyses in support of this contract, as required. Each task will be initiated by written direction from the NASA Contracting Officer. These tasks include advance planning and feasibility studies in support of future contemplated missions; analyses in support of potential change requirements to authorized missions; and development, fabrication, and test of hardware/software to support planning studies or special tests and mission specific studies.

ATTACHMENT 02

**Meetings and Formal Reviews
For**

Venture-Class Acquisition of Dedicated and Rideshare (VADR) Launch Services

Meetings and Reviews

The Contractor shall conduct and chair reviews, as described below, that apply to the system, subsystem, component, and software level items of the launch service (payload interface, and any supporting equipment). Where there is not a direct match between a SOW specified review(s) and the Contractor's standard review(s), the Contractor's review process will be acceptable provided it addresses equivalent content. All derived requirements from all system requirements must be identified and addressed in each of these reviews. The meetings and reviews in this attachment can be conducted virtually, or in-person at the Contractor's facility upon NASA request.

CLIN 1 Standard Launch Services Meetings and Reviews

Kick-Off Meeting

Kick-off meeting shall be held within two weeks of task order award. Presentation packages and hand-out materials provided at the meeting to include:

- a. Vehicle Overview
- b. Proposed Schedule
- c. Risks to implementation of SOW (Cost, Schedule, Technical)
- d. Minutes recorded during meeting

Mission Specific Design Review (MSDR)

The Contractor shall conduct a MSDR. Typically, the MSDR occurs before significant fabrication of mission interface hardware begins. The Contractor shall present a final detailed design based on drawings, analyses, and evaluation testing that shows the mission specific design meets final performance and interface specifications, safety requirements, and mission objectives. The Contractor shall identify and describe all planned qualification and acceptance tests to be performed to prove validity. NASA reserves the right to withhold approval of this milestone if the design does not meet performance or schedule requirements and until all action items have been closed.

As a minimum, the Contractor shall provide verification and rationale for the following items at the MSDR:

- All known technical design problems and development anomalies associated with meeting the ICD requirements, showing that the required system function, performance and safety have not been compromised. If not resolved, provide a credible and detailed plan to resolve them prior to qualification testing or final analysis cycle as appropriate.
- The detailed mission hardware and analytical design that will meet performance, functional requirements, and schedule.
- Software simulations and prototyping tests and results do not present any potential mission risks.
- Key engineering analyses that have been performed to support the detailed design.
- Integrated safety analysis identifying any remaining hazards and proposed resolution.

- Launch vehicle/payload compatibility test plans, if any, that have been defined. Identified any payload compatibility issues and steps for ensuring compatibility of payloads.
- Released drawings (submission to the Government not required) that support the mission qualification, analysis and production milestones in the detailed schedule.
- Review the following submittals: the baseline Interface Control Document (ICD) (VADR 1-2), ICD Requirements Verification Matrix (VADR 1-3), initial submittal of Performance and Guidance Accuracy Analysis (PGAA) (VADR 1-5), and the Coupled Dynamic Loads Analysis (VADR 1-10)
- Status of critical flight hardware qualification (core stage engines and tanks, flight computer and Inertial Navigation Unit (INU), engine actuators, main batteries, separation systems, and payload fairing) and any test anomalies that could affect the NASA mission's production or launch schedule and their resolutions. This shall include insight into fleet-wide problems, anomalies, corrective actions, deviations or waivers that may impact mission schedule.
- List of first flight items
- Methodology and results of analyses
- Status of licensing or applicable certification efforts.

Mission Integration Readiness Review (MIRR)

The Contractor shall conduct a MIRR to provide NASA with the current mission integration status. The contractor shall present the design, fabrication, qualification testing, analysis status, and shall incorporate any flight data available. The Contractor shall address all mission specific items for the payload and mission requirements to verify qualification, compliance, and systems-level compatibility. NASA reserves the right to withhold approval of this milestone if the design does not meet performance or schedule requirements and until all action items have been closed.

As a minimum, the Contractor shall provide verification and rationale of the following items at the MIRR:

- a. Design changes that occurred subsequent to MSDR or changes as a result of new flight data
- b. Summary of applicable major mission specific component tests (test setups, test cases, results and significant anomalies), analyses, margins, or similarity assessments. Included in the summary is component qualification status and rationale (similarity, test, analysis) for all affected components that are new, changed or subject to new environments or functional requirements
- c. Changes or updates to methodology and results of analyses
- d. Status of licensing or applicable certification efforts.

Launch Processing Readiness Review (LPRR)

The Contractor shall conduct a Launch Processing Readiness Review to demonstrate that the launch site and launch vehicle are ready to proceed with launch vehicle processing activities at the launch site including regulatory approvals leading to an on-schedule launch. This review will serve as an input to the Government decision to ship the payload by demonstrating the launch

vehicle is ready to accept spacecraft hardware at the Payload Processing Facility and the launch site.

The Contractor shall present as a minimum:

- a. Mission description including SC and launch vehicle configuration; integration status; summary of waivers; mission specific analyses results, including updates, if any, from the MIRR; flight launch vehicle and launch site hardware/software production and testing status (including core stage engines and tanks, flight computer and Inertial Navigation Unit (INU), engine actuators, main batteries, separation systems, and payload fairing), and Contractor's assessments of any significant manufacturing and test anomalies. Open and accepted contractor risks with the acceptance plan or acceptance rationale respectively.
- b. A detailed schedule showing all activities (ground and flight with relationship to any other manifested missions) remaining to achieve a successful, on-time launch. Include a status of licensing or applicable certification efforts.
- c. A draft outline of the spacecraft to integrated procedures listed in (VADR 1-14), including key inputs received and key inputs still needed from the Government
- d. Provide status of flight anomaly resolutions across the fleet, that require Contractor resolution prior to launch of the next mission, including open and closed investigations required for FAA launch license.
- e. Discuss readiness of the launch site to support the mission, including any required assets and the Payload Processing Facility
- f. Contractor documented risks applicable to the mission
- g. Description of first flight items, Contractor's acceptance rationale or planned date for Contractor's acceptance if not yet completed

Launch Readiness Review (LRR)

The Contractor shall conduct a LRR for the mission to demonstrate the launch vehicle is acceptable, to the contractor's satisfaction, for flight and all Range and other mission requirements have been met, or will be satisfied prior to launch. The LRR will be held approximately **TBP** days before launch.

As a minimum, the Contractor shall provide verification and specific rationale that:

- a. All critical items required to proceed into final launch countdown are ready
- b. Status of licensing or applicable certification efforts.
- c. Vehicle configuration is defined, and all vehicle systems have been verified IAW launch site test plans
- d. All previously recorded action items have been closed or are reflected on the schedule with the planned closure path
- e. All previously held Contractor's readiness review actions have been closed or resolved
- f. Launch site/Range support organizations have committed to launch
- g. Tracking and data support resources are committed to launch
- h. Any open work is identified and closeout plans and schedules are in place and supportable
- i. Any constraints to launch are identified and resolution plans developed
- j. Mission risks are known and documented

- k. Launch commit criteria for the payload and launch vehicle are approved and released

The Contractor shall also discuss:

- a. Status of flight anomaly resolutions across the fleet that require Contractor resolution prior to launch of the next mission, including, open or closed investigations required for FAA launch license. Hardware/software failures of the launch vehicle during launch site integration and testing
- b. Open corrective actions/problems reports
- c. Launch vehicle first flight items
- d. Mission specific items

If there are still open items at the time of this review, the contractor shall conduct a follow on review to ensure the specific launch vehicle is acceptable for flight and all Range and other mission requirements have been met, or will be satisfied prior to launch. As a minimum, the Contractor shall provide verification that any open items and deviations have been satisfied.

CLIN 2 Streamlined CubeSat Launch Services Meetings and Reviews

Kick-Off Meeting

Presentation packages and hand-out materials provided at the meeting to include:

- a. Vehicle Overview
- b. Proposed Schedule
- c. Risks to implementation of SOW (Cost, Schedule, Technical)
- d. Minutes recorded during meeting

Mission Readiness Review (MRR)

The Contractor shall conduct a MRR resulting in verification of the following:

- a. The CubeSat and the dispenser have met all technical/safety/regulatory requirements for the mission
- b. Plans for dispenser and LV integration are in place and ready to execute
- c. The LV remains on schedule to support the mission

ATTACHMENT 03
CONTRACT DATA REQUIREMENTS LIST (CDRL)
FOR
Venture-Class Acquisition of Dedicated and Rideshare (VADR) Launch Services

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CONTRACT DATA REQUIREMENTS LIST (CDRL)

The Contract Data Requirements Lists (CDRL) for CLIN 1 and CLIN 2 identify critical elements of the contracted effort where NASA requires aspects of mission integration insight and approval. The following CDRLs define the scope of documentation required; however, NASA will utilize the Contractor's existing documentation to the extent practicable. Where there is not a direct match between a CDRL item and the Contractor's standard documentation, the Contractor's documentation will be acceptable provided it contains equivalent data requirements. CDRL approval may be assumed unless the Contractor is notified by NASA of disapproval within thirty (30) days. Under certain circumstances, NASA may elect to eliminate certain submittal cycles.

All CDRL data requirements shall be delivered electronically to the KSC ELV Library and the Contracting Officer. The Contractor shall notify the Contracting Officer in writing of CDRL delivery. All electronic formats shall be mutually acceptable to ensure government accessibility.

The requirements for CLIN 1 CDRLs begin with Table A3-1: CDRL Index for CLIN 1 and the requirements for CLIN 2 CDRLs begin with Table A3-2: CDRL Index for CLIN 2.

Note: Data required in response to this factor that is maintained by a subcontractor may be delivered by either the Offeror, or subcontractor, directly to the Contracting Officer.

Table A3-1: CDRL Index for CLIN 1

Item	Document	Approval/ Review/Submit	Initial Submittal Date	Subsequent Submittal Date
	Documentation			
VADR 1-1	Formal Meeting & Review Documentation	Approval (B & D (vi); Review all other	(A) as specified in the CDRL (B, C, D) at Review plus 1W	As Required (A/R)
	Mission Integration			
VADR 1-2	Interface Control Document (ICD)	Approval	Preliminary ICD at ATP + 3M	Baseline ICD at MS DR and A/R
VADR 1-3	Interface Control Document (ICD) Requirements Verification Matrix	Approval	MSDR	A/R or with each ICD revision
VADR 1-4	Launch Vehicle Schedules	Review	ATP + 3M	L-6M, A/R
	Analysis			
VADR 1-5	Performance and Guidance Accuracy Analysis (PGAA)	Initial Submittal = Review, Subsequent Submittals = Approval	ATP+ TBP	L-9M, A/R
VADR 1-6	Final Mission Analysis (FMA)	Approval	Receipt of P/L Data + TBP	A/R
VADR 1-7	Payload/Expended Stage Separation Analysis	Approval	ATP+ TBP	L-TBP
VADR 1-8	Payload Fairing Venting Analysis	Review	Receipt of P/L Data + TBP	A/R
VADR 1-9	Payload Fairing Clearance Analysis	Review	Receipt of P/L Model + TBP	L-TBP
VADR 1-10	Coupled Dynamic Loads Analysis	Approval	Receipt of P/L Model + 3M	L-6M, A/R

Item	Document	Approval/ Review/Submit	Initial Submittal Date	Subsequent Submittal Date
	Documentation			
VADR 1-11	Payload/Launch Vehicle EMC Compatibility Analysis	Review	(A & C) ATP+3M (B) L-12M	(A & C) A/R in CDRL (B) L-3M
VADR 1-12	Quick Look Flight Report	Review	TBP	A/R
VADR 1-13	Final Flight Report	Review	Separation + 2M	A/R
	Engineering			
VADR 1-14	Integrated Procedures	Initial Submittal = Review, Subsequent Submittals = Approval	Draft 30D Prior to Use	1W Prior to Use

CDRL DESCRIPTION**Number: VADR 1-1****FORMAL MEETING & REVIEW DOCUMENTATION****DESCRIPTION/PURPOSE:**

To provide presentation and handout material, minutes, and accompanying action item lists from each formal meeting and review.

DATA REQUIREMENTS:

Formal review documentation shall include:

- (A) Presentation packages for the review for NASA attendees due 3 days prior to the Review
 - (i) Review requirements are documented in Attachment 02, *Meetings and Formal Reviews*
- (B) Minutes from each formal review and archival updates to original presentation packages, as required, within two weeks of the meeting or review
- (C) List of attendees
- (D) An action item list maintained and updated by the Contractor. The list shall include:
 - (i) Due Date
 - (ii) Subject
 - (iii) Assigned tracking number for each action item
 - (iv) Person or organization responsible for completing the action
 - (v) Status of action (i.e., open with key points/details and timeline identified/planned, closed, or deleted)
 - (vi) Closure rationale

CDRL DESCRIPTION**Number: VADR 1-2****INTERFACE CONTROL DOCUMENT (ICD)****DESCRIPTION/PURPOSE:**

The ICD shall identify and define the functional and environmental interfaces, and performance requirements of the payload, and payload GSE with the launch vehicle and associated payload/launch processing facilities, as well as the mission success criteria. The final revision to the ICD, including all approved changes and waivers, will be used for the mission success determination. The Contractor shall comply with the latest approved revision of the ICD, to include all approved changes and waivers.

Preliminary ICD is the first CDRL release of the ICD and is allowed to have several TBD's. Baseline ICD is the next release of the CDRL and is expected to have very few TBD's.

DATA REQUIREMENTS:

The number of interface requirement changes incorporated in each new revision and subsequent release of the ICD shall not exceed ten (10) approved requirements changes.

Where there is not a direct match between the specified ICD data requirements identified below and the Contractor's standard ICD, the Contractor's standard ICD will be acceptable provided it addresses equivalent content as appropriate to meet payload requirements. The outline below is meant to assure all potential requirements are addressed regardless of payload complexity or risk posture; however, any deemed unnecessary requirements based upon manifested payload requirements (upon mutual Government/Contractor agreement) may be listed as not applicable (NA) in the approved ICD:

1.0 INTRODUCTION

- 1.1 Purpose
- 1.2 Scope
- 1.3 Definitions
- 1.4 Interface Change Control
- 1.5 Requirement Traceability
- 1.6 Requirements Status

2.0 APPLICABLE DOCUMENTS

- 2.1 Government Documents
- 2.2 Contractor Documents
- 2.3 Other Documents

3.0 INTERFACE REQUIREMENTS

- 3.1 Structural /Mechanical Interfaces

- 3.1.1 Structural Interfaces
 - 3.1.1.1 Static Payload Envelope
 - 3.1.1.2 PLF Clearance Requirements
 - 3.1.1.3 SC Clearance Requirements
 - 3.1.1.4 Separation System Characteristics
 - 3.1.1.5 SC Access Requirements
- 3.1.2 Structural Loads and Strength
 - 3.1.2.1 SC Stiffness
 - 3.1.2.2 SC Interface Loads
 - 3.1.2.3 Strength
 - 3.1.2.4 SC Load Factors
- 3.1.3 Mass Properties
 - 3.1.3.1 SC Mass Properties
 - 3.1.3.2 SC Propellant Data
- 3.2 Electrical Interfaces
 - 3.2.1 Airborne Interfaces
 - 3.2.1.1 Standard Electrical Interfaces
 - 3.2.1.2 Separation Indication
 - 3.2.1.3 Interface Electrical Constraints
 - 3.2.1.4 Separation System Electrical Interface
 - 3.2.2 SC Umbilical Interface
 - 3.2.2.1 T-0 Umbilical Interface
 - 3.2.2.2 EGSE Interface Electrical Constraints
 - 3.2.3 EGSE Telemetry/Command/Data Link
 - 3.2.4 Electrical Grounding
 - 3.2.4.1 Spacecraft Grounding
 - 3.2.4.2 Support Equipment Grounding
 - 3.2.4.3 Personnel Grounding
 - 3.2.4.4 Ground Continuity
- 3.3 Environmental Interfaces
 - 3.3.1 Thermal
 - 3.3.1.1 SC Thermal Environments
 - 3.3.2 Contamination
 - 3.3.2.1 Payload Fairing Purge

- 3.3.2.1.1 Spacecraft Transport to the Launch Complex
 - 3.3.2.1.2 Spacecraft at Launch Complex
 - 3.3.2.2 GHe Concentration
 - 3.3.2.3 Payload Compartment Cleanliness
 - 3.3.2.4 Spacecraft Contaminant Deposition Limits
 - 3.3.2.4.1 Particulate
 - 3.3.2.4.2 Molecular
 - 3.3.2.5 Spacecraft Instrument GN₂ Purge
 - 3.3.3 Ascent Pressure
 - 3.3.4 Dynamics
 - 3.3.4.1 Sine Vibration
 - 3.3.4.2 Acoustics
 - 3.3.4.3 Shock
 - 3.3.5 Electromagnetic Compatibility
 - 3.3.5.1 EMI Safety Margin
 - 3.3.5.2 Radiated Emissions
 - 3.3.5.2.1 Spacecraft Maximum Allowable Radiated Emissions
 - 3.3.5.2.2 Launch Vehicle Maximum Allowable Radiated Emissions
 - 3.3.5.2.3 SC RF Susceptibility
 - 3.3.5.2.4 Launch Site RF Environment
 - 3.3.5.2.5 Portable Sources Radiated Emissions
 - 3.3.5.3 PLF Electrostatic Discharge
 - 3.3.5.4 Thermal Blanket Electrostatic Discharge
 - 3.3.5.5 RF Transmitter/Receiver Systems EMC
 - 3.3.5.6 Lightning
 - 3.3.5.7 SC/LV Interface Electrical Bonding
- 3.4 Flight Design
 - 3.4.1 Mission Orbit Specification
 - 3.4.2 Launch Window
 - 3.4.3 SC Separation
 - 3.4.4 Sun Angle Constraint
 - 3.4.5 Thermal Roll
 - 3.4.6 LV Telemetry Data

- 3.4.6.1 SC Separation State Vector
- 3.4.6.2 SC Provided Post Separation Data
- 3.5 Ground Operations
 - 3.5.1 Spacecraft Contractor Supplied Ground Support Equipment
 - 3.5.2 Payload Processing Facility
 - 3.5.2.1 Facility Dimensions
 - 3.5.2.2 Power/Electrical
 - 3.5.2.3 Environment
 - 3.5.2.4 Equipment
 - 3.5.2.5 Furnishings
 - 3.5.2.6 Commodities
 - 3.5.2.7 Consumables & Garments
 - 3.5.2.8 Safety/Security
 - 3.5.2.9 Communications and Telemetry
 - 3.5.3 Launch Complex Ground Operations
 - 3.5.3.1 GSE
 - 3.5.3.2 Ground Operations Communications
 - 3.5.4 SC Transport
 - 3.5.4.1 Processing Facility to Launch Complex Transport
 - 3.5.4.2 SC Hoist and Mate Loads
 - 3.5.5 PLF Environmental Control System
 - 3.5.6 Fluids And Gases Requirements
- 3.6 Safety Requirements

4.0 MISSION SUCCESS DETERMINATION METHODOLOGY

The Contractor's proposed methods, including required vehicle telemetry measurements, ground observation, and analysis/reconstruction techniques, for verifying that each proposed mission success criterion is satisfied. Allowances for sensor measurement accuracy shall be explicitly identified and justified. The Contractor's methodology shall be based on applicable flight related ICD requirements to be determined during ICD development and shall be used to determine the success of the mission.

CDRL DESCRIPTION**Number: VADR 1-3****INTERFACE CONTROL DOCUMENT (ICD) REQUIREMENTS VERIFICATION MATRIX****DESCRIPTION/PURPOSE:**

A verification matrix shall document and track all ICD requirements and methods by which they will be verified by the responsible organization. The verification matrix shall list the final documentation that will be provided of the verification approved by the cognizant Contractor engineer.

DATA REQUIREMENTS:

ICD verification matrix shall include the following:

- ICD requirement language
- ICD requirement paragraph number
- Verification Method (Test, Inspection, Analysis, Demonstration)
- Responsible Organization
- Verification Plan
- Verification Source
- Notes/Comments
- Status

CDRL DESCRIPTION**Number: VADR 1-4****LAUNCH VEHICLE SCHEDULE****DESCRIPTION/PURPOSE:**

NASA mission launch vehicle production schedule with status and interdependencies of other launch vehicle production. Mission integration schedule and status for the NASA launch service.

DATA REQUIREMENTS:

1. The contractor shall provide a detailed launch vehicle production and mission integration schedule for the launch service on task order.

Schedule shall include at a minimum:

- Production and major sub-contractor delivery milestones
- Qualification schedule of major subsystems including but not limited to: core stage tanks, flight computer, Inertia Navigation Unit (INU), engine actuators, main batteries, PLF, PLA, separation systems, and flight software processes/test status (Not applicable for NASA certified launch vehicles)
- Major test milestones
- Key analysis inputs and deliverables
- Critical path identification

2. Include a high-level schedule including the production interdependencies with other missions in queue and with other product lines.

CDRL DESCRIPTION**Number: VADR 1-5****PERFORMANCE AND GUIDANCE ACCURACY ANALYSIS (PGAA)****DESCRIPTION/PURPOSE:**

This analysis is prepared using the best available mission requirements (payload mass properties, insertion state vector requirements, tracking requirements, etc.) to identify any potential problems inherent in accomplishing the mission objectives. This analysis shall include parametric trade studies.

DATA REQUIREMENTS:

The analysis shall include, as a minimum:

- (A) The nominal and 3-sigma limits for orbit elements and associated covariance matrix
- (B) Performance impacts as a function of launch date and time
- (C) Performance capability, margins and reserves, including description of how performance reserve is calculated
- (D) Sequence of events and tracking coverage
- (E) Time history of trajectory from launch to targeted condition and extending until the launch vehicle propellant and gases are expended
- (F) Separation trajectories and post separation contact probability prediction (s)
- (G) Launch vehicle summary weight statement
- (H) Sources and magnitude for all dispersions used. If statistical dispersions are used, then the distribution method (e.g., normal, gaussian) shall be specified for each parameter
- (I) Definition of all coordinate systems used
- (J) Reference to the source(s) for all payload and launch vehicle inputs to this analysis (e.g., requirements, mass properties)
- (K) Evaluation of compliance with applicable ICD requirements and constraints.
- (L) Launch windows determined by analysis
- (M) Input file
- (N) An itemized list of all modeling changes made since the previous VADR 1-5 release (including launch vehicle propulsion, mass properties, aerodynamics, and mission design ground rules), along with an assessment of the performance effect of each change

CDRL DESCRIPTION**Number: VADR 1-6****FINAL MISSION ANALYSIS (FMA)****DESCRIPTION/PURPOSE:**

This analysis is prepared based on payload requirements resulting from NASA review of the PGAA and contains information similar to that in the PGAA. This analysis supports pre-flight verification of compliance with mission requirements.

DATA REQUIREMENTS:

The FMA shall include, as a minimum:

- (A) The nominal 5 or 6 Degree of Freedom (DOF) trajectory simulation for each targeted insertion condition utilizing actual weights and propulsion models (electronic format is preferred).
- (B) All Data Requirements identified in PGAA Data Requirement Description.

CDRL DESCRIPTION**Number: VADR 1-7****PAYLOAD/EXPENDED STAGE SEPARATION ANALYSIS****DESCRIPTION/PURPOSE:**

The Payload/Expended Stage Separation Analysis is required to demonstrate that adequate separation distance exists between the payload and the upper stage during the relative motion predicted following payload deployment. The analysis is also required to demonstrate that payload tip-off rates satisfy requirements. This analysis supports pre-flight verification of compliance with mission requirements.

DATA REQUIREMENTS:

- (A) Provide nominal, 3-sigma, or worst-case payload tip-off rates and cone angles (cone angles if deployed while spinning) at deployment.
- (B) The analysis shall include the effects of residual thrust, vehicle and payload mass properties uncertainties, and separation mechanism uncertainties. Additionally, include any methods utilized to ensure contamination upon separation is prevented.
- (C) The report documenting this analysis shall list and describe all dispersion sources used for the analysis, mass properties data sources, and all coordinate systems used.
- (D) Expended stage/payload relative motion analysis following payload deployment

CDRL DESCRIPTION**Number: VADR 1-8****PAYLOAD FAIRING VENTING ANALYSIS****DESCRIPTION/PURPOSE:**

This analysis shall evaluate and verify that the payload depressurization rate requirements are satisfied.

DATA REQUIREMENTS:

The Payload Fairing Venting Analysis shall be based on the mission trajectory, payload geometry, and ventable and non-ventable volume.

CDRL DESCRIPTION**Number: VADR 1-9****PAYLOAD FAIRING CLEARANCE ANALYSIS****DESCRIPTION/PURPOSE:**

This analysis documents/demonstrates that sufficient clearance exists under dynamic conditions is available to prevent payload damage from lift-off through payload fairing jettison.

DATA REQUIREMENTS:

The Payload Fairing Clearance Analysis shall include, as a minimum, the effects of:

- (A) Disconnect forces
- (B) Actuator forces
- (C) Dynamic response
- (D) Manufacturing tolerances

CDRL DESCRIPTION**Number: VADR 1-10****COUPLED DYNAMIC LOADS ANALYSIS****DESCRIPTION/PURPOSE:**

This analysis defines flight loads and deflections for the payload structure. This analysis also supports pre-flight verification of compliance with mission requirements.

DATA REQUIREMENTS:

- (A) Describe the models, methodology and forcing functions used.
- (B) The flight events and conditions that cause the greatest loads on the payload shall be identified and included in the analysis. The flight events and conditions that cause the greatest deflections in the fairing and payload (including instances of minimum clearance) shall be identified and included in the analysis.
- (C) Output from each flight event shall include maximum/minimum tables of payload selected Acceleration Transformation Matrices (ATM), interface forces, and internal Load Transformation Matrices (LTM).
- (D) Worst-case payload fairing dynamic relative deflections shall be identified and included.

CDRL DESCRIPTION**Number: VADR 1-11****PAYLOAD/LAUNCH VEHICLE EMC COMPATIBILITY ANALYSIS****DESCRIPTION/PURPOSE:**

This Electromagnetic Compatibility (EMC) analysis demonstrates that requirements in the ICD are satisfied and ensures that S/C ordnance sub-systems will not be unintentionally triggered by electromagnetic disturbances generated by the launch vehicle, Range or other external sources. This is to ensure that the payload electromagnetic (EM) energy exposure requirements will not be exceeded.

DATA REQUIREMENTS:

At a minimum, the following data items shall be delivered in approved electronic formats:

- (A) An EMC Control Plan including EMC management processes, design guidelines, test requirements and standards used by the launch service provider. Subsequent submittal required with any change from the initial submittal.
- (B) A Spacecraft/Launch Vehicle Electromagnetic Compatibility Analysis which includes:
 - (i) Identification of test levels for S/C and launch vehicle susceptibility, intentional and unintentional emissions.
 - (ii) Field strengths expected from known ground and external emitters.
 - (iii) Calculation of EMI safety margins between S/C hardware susceptibility levels and launch vehicle and external emissions sources.
- (C) A lightning plan including design and/or operational considerations regarding the presence or effects of lightning. Subsequent submittal required with any change from the initial submittal.

CDRL DESCRIPTION**Number: VADR 1-12****QUICK LOOK FLIGHT REPORT****DESCRIPTION/PURPOSE:**

After each launch, a quick look post-flight analysis shall be performed using evaluations of all available vehicle telemetry and insertion performance. A briefing may satisfy the intent of this report.

DATA REQUIREMENTS:

The data report shall include:

- (A) Trajectory and performance data
- (B) Orbital accuracy estimates
- (C) Preliminary vehicle subsystem system performance
- (D) Preliminary evaluation

CDRL DESCRIPTION**Number: VADR 1-13****FINAL FLIGHT REPORT****DESCRIPTION/PURPOSE:**

After launch, a final post-flight report shall be provided. This report will support the NASA Contracting Officer's mission success determination.

DATA REQUIREMENTS:

This report shall include, in its entirety, the Contractor's internal post-flight report produced for the mission.

This report shall also include an assessment of each ICD orbital parameter and environmental condition using flight data, ground observations, or other data sources in accordance with the determination methods proposed by the Contractor under VADR 1-2.

This report shall also include:

- i. Orbit elements determined from vehicle guidance data
- ii. Pre-flight prediction of expected flight environments (i.e., acoustic/vibration, quasi-static acceleration, thermal, shock and pressure) imposed on the spacecraft assembly by the launch.
- iii. Post flight determination of actual flight environments imposed on the spacecraft assembly by the launch. If analysis is required to transform launch vehicle measured data to a spacecraft assembly requirement, that analysis should also be included in the report or provided to in a separate document.
- iv. Explanation of significant differences between the predicted and actual flight environments.
- v. Vehicle data indicating payload separation.
- vi. Vehicle data verifying the actual separation command sent to the separation system and vehicle data indicating the launch vehicle state and health just prior to and after the separation command was sent.
- vii. As flown vehicle sequence data
- viii. All recorded payload telemetry to NASA, if applicable

CDRL DESCRIPTION**Number: VADR 1-14****INTEGRATED PROCEDURES****DESCRIPTION/PURPOSE:**

Site procedures for various operations that involve the payload and/or the launch vehicle/payload interfaces to evaluate any potential impacts to the payload and/or NASA resources.

DATA REQUIREMENTS:

Provide the following integrated procedures (if applicable):

- (A) Payload/ launch vehicle mechanical and electrical integration including fit check
- (B) Payload encapsulation
- (C) Payload/launch vehicle mate, test and closeout procedures (if applicable this includes CubeSat to dispenser integration, and payload adapter and vehicle mates)
- (D) Combined system test/final readiness test if payload is powered on
- (E) Any transport or handling of the payload
- (F) Launch countdown procedures and planned or real-time deviations that affect spacecraft interface as defined in the ICD.

Table A3-2: CDRL Index for CLIN 2

Item	Document	Approval/ Review/ Submit	Initial Submittal Date	Subsequent Submittal Date
	Documentation			
VADR 2-1	Formal Meeting & Review Documentation	Approval (B & D (vi)); Review all other	(A) as specified in the CDRL (B, C, D) at Review plus 1W	As Required (A/R)
	Mission Integration			
VADR 2-2	Interface Control Document (ICD)	Approval	Baseline ICD at ATP + 2M	A/R
VADR 2-3	Interface Control Document (ICD) Requirements Verification Matrix	Approval	ATP + 2M	A/R or with each ICD revision
	Engineering			

CDRL DESCRIPTION**Number: VADR 2-1****FORMAL MEETING & REVIEW DOCUMENTATION****DESCRIPTION/PURPOSE:**

To provide presentation and handout material, minutes, and accompanying action item lists from each formal review.

DATA REQUIREMENTS:

Formal review documentation shall include:

(A) Presentation packages for the review for NASA attendees due 3 days prior to the Review.

(i) Reviews as documented in Attachment 02, *Meetings and Formal Reviews*

(B) Minutes from each formal review and archival updates to original presentation packages as required

(C) List of attendees

(D) An action item list maintained and updated by the Contractor. The list shall include:

(i) Due Date

(ii) Subject

(iii) Assigned tracking number for each action item

(iv) Person or organization responsible for completing the action

(v) Status of action (i.e., open with key points/details and timeline identified/planned, closed, or deleted)

(vi) Closure rationale

CDRL DESCRIPTION**Number: VADR 2-2****INTERFACE CONTROL DOCUMENT (ICD)****DESCRIPTION/PURPOSE:**

The ICD shall identify and define the functional and environmental interfaces, and performance requirements of the payload, and payload GSE with the launch vehicle and associated payload/launch processing facilities, as well as the mission success criteria. The final revision to the ICD, including all approved changes and waivers, will be incorporated by reference into the contract via contract modification prior to the mission success determination. The Contractor shall comply with the latest approved revision of the ICD, to include all approved changes and waivers.

Preliminary ICD is the first CDRL release of the ICD and is allowed to have several TBD's. Baseline ICD is the next release of the CDRL and is expected to have very few TBD's.

DATA REQUIREMENTS:

The number of interface requirement changes incorporated in each new revision and subsequent release of the ICD shall not exceed ten (10) approved requirements changes.

CDRL DESCRIPTION**Number: VADR 2-3****INTERFACE CONTROL DOCUMENT (ICD) REQUIREMENTS VERIFICATION MATRIX****DESCRIPTION/PURPOSE:**

A verification matrix shall document and track all ICD requirements and methods by which they will be verified by the responsible organization. The verification matrix shall list the final documentation that will be provided of the verification approved by the cognizant Contractor engineer.

DATA REQUIREMENTS:

ICD verification matrix shall include the following:

- ICD requirement language
- ICD requirement paragraph number
- Verification Method (Test, Inspection, Analysis, Demonstration)
- Responsible Organization
- Verification Plan
- Verification Source
- Notes/Comments
- Status

ATTACHMENT 04

DEFINITIONS

for

Venture-Class Acquisition of Dedicated and Rideshare (VADR)

Launch Services

Anomaly: An unexpected event that can reasonably be considered to pose mission success implications for current and subsequent NASA missions.

Authority to Proceed (ATP): Notification from the Contracting Officer via task order award to proceed with work on either a Launch Service Task Order (LSTO) or Special Task Assignment.

Baseline Interface Control Document (ICD): First approved and signed release of ICD.

Certified Common Launch Vehicle Configurations: A common launch vehicle configuration which has met the requirements defined in NPD 8610.7 for a specific launch vehicle risk category.

Common Launch Vehicle Configuration (CLVC): A distinct combination of core propulsive stages and launch vehicle hardware used to deliver payloads to earth orbit or escape trajectories.

Common Launch Vehicle Configuration Changes: Items that substantially affect the airframe integrity, operating time, specific impulse, the thrust and/or the mass of one or more core propulsive stages are considered changes to the common launch vehicle configuration. Examples of vehicle configuration changes include the replacement of engine(s), core propulsive stages, and/or major airframe structures (e.g. significant stage length increase and/or major changes in primary load path).

A change in thrust of any core stage engine greater than 10% and/or a change in propellant mass of a core stage greater than 10% constitutes a change to the common launch vehicle configuration.

Common Launch Vehicle Configuration Upgrades or Modifications: Items that do not substantially affect operating time, total impulse, and/or the thrust profile of one or more propulsive stages are considered upgrades or modifications to the certified common vehicle configuration. Examples of upgrades and modifications include changes in avionics, software, payload fairing, payload electrical/mechanical interfaces, incorporation of mission specific requirements, and the addition or deletion of a final stage (exclusively used for orbit circularization or escape), strap-on motors, and/or trim stage. Upgrades or modifications are not to be interpreted as common launch vehicle configuration changes.

Controlling Interest: Ownership of an amount of equity in such entity sufficient to direct management or to void transactions entered into by management.

Core Propulsive Stages: All propulsive stages except strap-on motors, final stages (exclusively used for orbit circularization or escape), and trim stages.

Covered Launch Activities: Any and all activities involved in the preparation of a launch vehicle and payload for launch, and conduct of the launch, when those activities take place at a launch site in the United States.

Dedicated: The Government is allocated the full performance capacity of the launch vehicle for sole use by the Government's payload(s).

First Flight Item: A first flight item is the planned use of a component for which NASA will be one of the first three flights or uses, and/or which affects qualification margins or subsystem performance and interfaces. The term “flight” is used generically to include all airborne systems and ground systems used to meet payload requirements and ground systems with direct interfaces to the vehicle. Additionally, any change of vendor of a major component or manufacturing site relocation will be considered a first flight item if a NASA mission is planned to be one of the first three uses of the new component.

Integrated Procedures: Launch vehicle procedures used for various operations that involve the payload and/or the launch vehicle/payload interfaces.

Launch: The intentional ignition of the first-stage motor(s) of the launch vehicle that has been integrated with the payload.

Launch Services: All services required in the performance of this contract, excluding those necessary to produce or manufacture launch vehicles, its components and other equipment and facilities required in the performance of the contract.

Launch Vehicle: An object, or any part thereof, intended for launch, launched from Earth, or returning to Earth which carries Payloads or persons, or both. This includes the common launch vehicle configuration, non-core propulsive stage(s), the payload fairing, the payload adapter(s) and separation system(s).

Limited Launch Period: Daily launch opportunities constrained by blackout periods associated with scientific requirements (e.g., planetary, lunar, seasonal, and/or lunar exclusions).

Mission Integration Start: The mission integration will start at the ATP when the launch service is awarded. The baseline assumptions under this contract for CLIN 1 is L-24 plus or minus 3 months and for CLIN 2 is L-15 plus or minus 3 months, but the integration cycle for each mission will be determined at the task order level.

Mission Specific: All standard, non-standard, first flight, and any services provided that are newly performed or developed specifically to meet the requirements of the payload and mission.

Non-Core Propulsive Stage: Any upper stage not included as part of the common launch vehicle configuration (e.g. orbital transfer vehicle, tugs, propulsive secondary payload adapters, kick stage, spacecraft bus).

Party or Parties: The Contractor or NASA, or both.

Payload or Spacecraft: All NASA or NASA-sponsored equipment that has been or will be integrated with the launch vehicle for transportation into earth orbit or escape trajectories. Payload and spacecraft are used synonymously throughout the document.

Preliminary ICD: Working copy of the ICD released prior to the first signed release.

Rideshare: The Government is allocated a portion of the full performance capability of the launch vehicle for use by the Government's payload(s). The launch vehicle provider is allowed to utilize excess capacity for other payloads.

- i. **Traditional rideshare** missions are defined as follows: the Government has flexibility on some orbit parameters for the task order mission (to be defined at the task order level); does not control the other mission's(s') orbits, order of payload deployment, or the launch schedule; and does not have the right to refuse other payloads on the mission.
- ii. **Primary rideshare** missions are defined as follows: The Government will require, or the Contractor's approach shall state, that the payload be designated as the primary payload that controls both the schedule (launch day and time) and specific orbit parameters of the launch, including the Government's payload separation sequence. If the primary payload is not ready on schedule, the Contractor shall not launch without it.

Third Party: Any person or entity other than NASA, the Contractor, and related parties.

LAUNCH SERVICES CAPABILITIES, SPECIFICATIONS AND ENVIRONMENTS

ATTACHMENT 05

LAUNCH SERVICES CAPABILITIES, SPECIFICATIONS AND ENVIRONMENTS

FOR

Venture-Class Acquisition of Dedicated and Rideshare (VADR) Launch Services

LAUNCH SERVICES CAPABILITIES, SPECIFICATIONS AND ENVIRONMENTS

LAUNCH SERVICES CAPABILITIES, SPECIFICATIONS AND ENVIRONMENTS

This attachment represents the capabilities, specifications, and environments of the Contractor’s launch services, including all standard and non-standard commercial launch services with a clear delineation between each service. The contractor shall update the attachment annually, if applicable, or notify NASA if no changes have occurred. The purpose of this document is to understand the launch vehicle capabilities **for spacecraft planning purposes**; this information will not be shared publicly but will used for Government purposes.

If there are known and planned updates to each common launch vehicle configuration that would impact the values provided in this document, please describe these changes.

The document shall address, at a minimum:

Launch Vehicle(s)

- a. Define in Table A5-1 the launch vehicle (LV) first stage, upper stage, payload adapter (PA), and payload fairing (PLF) configuration options available for each proposed common launch vehicle configuration. These configurations shall include all standard electrical systems, mechanical systems, propulsion systems, ordnance devices, and flight instrumentation. In addition, include any non-core propulsive stage(s) for the vehicle configuration that are part of each proposed launch service. Thrust and propellant mass shall be included for each stage.

Table A5-1: Vehicle Configurations
(Example Only – Contractor to Specify Format and Data)

Vehicle Configuration	[Insert Config. Name]	[Insert Config. Name]
Common Launch Vehicle Configuration		
LV First Stage		
LV Upper Stage(s)		
LV Payload Adapter(s)		
LV Payload Fairing(s)		
Non-Core Propulsive Stage(s)		

- b. For each vehicle configuration in table A5-1, provide a separate diagram showing the maximum payload static envelope and the associated dynamic envelope for a rigid payload hard mounted to the PA.
- c. Provide a separate detailed drawing for each PA, which includes dimensions, mounting provisions, and interfaces.

LAUNCH SERVICES CAPABILITIES, SPECIFICATIONS AND ENVIRONMENTS

- d. Describe, in detail, the payload electrical interfaces for the proposed vehicle configuration(s).
- e. Provide the maximum payload capability, where applicable, in Tables A5-2 through A5-5, from each launch site with associated ground rules for each vehicle configuration defined in Table A5-1. Table entries corresponding to orbits to which the Contractor is not offering may be left blank. Additional rows or columns may be added to applicable tables by the Contractor to show specific capabilities.

Performance shall be expressed in terms of separated payload mass (assuming standard PAs as outlined in paragraph a.) and shall assume a 3-sigma performance reserve for the following orbits:

Low Earth Orbits (LEO): Data shall be provided for circular orbit altitudes from 200 to 1000 km (in increments of 100 km) for inclinations of 0, 28.5, 38, 70, and 90 degrees

Sun-Synchronous Orbits: Data shall be provided for circular orbit altitudes from 200 to 1000 km.

High Energy Missions: Data shall be provided as a function of C3 from $-10 \text{ km}^2/\text{sec}^2$ to $30 \text{ km}^2/\text{sec}^2$.

Elliptical Orbits: Data shall be provided as a function of apogee altitude and inclination using the launch vehicle’s standard ground rules.

Table A5-2: Maximum LEO Payload Capability for TBP Vehicle Configuration, Launch Site, and Ground Rules (Data TBP)

Orbit Altitude (km)	Separated Payload Mass (kg)				
	Inclination (deg)				
	0	28.5	38	70	90
200					
300					
400					
500					
600					
700					
800					
900					
1000					

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**Table A5-3: Maximum Sun-Synchronous Payload Capability for TBP Vehicle Configuration, Launch Site, and Ground Rules
(Data TBP)**

Orbit Altitude (km)	Separated Payload Mass (kg)		
	Vehicle Configuration		
	[Insert Config Name]	[Insert Config Name]	[Insert Config Name]
200			
300			
400			
500			
600			
700			
800			
900			
1000			

**Table A5-4: High Energy Mission Payload Capability for TBP Vehicle Configuration, Launch Site, and Ground Rules
(Data TBP)**

C3 Value (km ² /sec ²)	Separated Payload Mass (kg)		
	Vehicle Configuration		
	[Insert Config Name]	[Insert Config Name]	[Insert Config Name]
-10			
-5			
0			
5			
10			
15			
20			
25			
30			

LAUNCH SERVICES CAPABILITIES, SPECIFICATIONS AND ENVIRONMENTS

Table A5-5: Maximum Elliptical Orbit Payload Capability with Optimized Perigee for TBP Vehicle Configuration, Launch Site, and Ground Rules
(Data TBP)

Apogee Altitude (km)	Separated Payload Mass (kg)		
	Inclination (deg)		
	28.5	15	0
50,000			
40,000			
35,788			
30,000			
20,000			
10,000			
5,000			

- f. Provide standard insertion accuracies for each vehicle configuration defined in Table A5-1 for each of the maximum and minimum mission profiles defined in Tables A5-2 through A5-5. Table A5-6 lists example orbital parameters that should be considered.

Table A5-6: Standard Insertion Accuracy Requirements
(Example Only – Contractor to Specify Format and Data)

Required 3-Sigma Insertion Error Limit Magnitude	
Variable	Accuracy
Inclination	
Argument of Periapsis	
Right Ascension of Ascending Node	
Apogee	
Perigee	
Right Ascension of Launch Asymptote	
Declination of Launch Asymptote	
C3	

- g. Provide the standard payload deployment capability in Table A5-7. Values provided reflect the generic capabilities of the launch vehicle (e.g. spin stabilization, three-axis stabilization, etc), and all assumptions made with respect to payload mass properties shall be stated. Errors are defined for each vehicle configuration and consist of all known dispersion sources (guidance, navigation, ACS limitations, etc.).

LAUNCH SERVICES CAPABILITIES, SPECIFICATIONS AND ENVIRONMENTS

Table A5-7: Standard Payload Deployment Rates/Attitudes (TBP)

Deployment Capability	Rates (Nominal and Errors)	Attitude (Nominal and Errors)	Assumptions		
			Mass	CG Offset	Inertia Matrix
Spin-stabilization					
Three-axis Stabilization					
Lateral LV rate at separation					

- h. Provide the environments during ground processing, transport, and pad operations, including static loads, vibration, acoustics, thermal, electromagnetic interference (EMI)/ Electromagnetic Compatibility (EMC), and shock environments.
- i. The Contractor shall provide data for the maximum payload EMI/ EMC, acoustic, vibration, shock, acceleration, and thermal environment levels during launch and ascent. The contractor shall provide these environments through payload separation.

The maximum electromagnetic radiated emissions levels encountered by the payload and susceptibility levels of the launch system shall be depicted in Figures A5-1 and A5-2, respectively.

The Contractor shall illustrate the pressure profiles and depressurization rates for each PLF in Figure A5-3. The maximum expected payload flight environments due to acoustics (spatially averaged within the PLF and 50% fill), random vibration (measured at the top of the LV payload adaptor), and shock (measured at the top of the LV payload adaptor) shall be shown in Tables A5-8, A5-9, and A5-10, respectively, and defined at a P95/50 statistical level.

The maximum expected total acceleration (limit load factors), including uncertainty factors, shall be shown in Table A5-11 (key dynamic events may be broken out as appropriate). The maximum expected sinusoidal vibrations at the base of the PA shall be shown in Table A5-12. The maximum quasi-steady acceleration as a function of payload separated mass shall be shown in Figure A5-4.

The Contractor shall provide the maximum thermal environment during ascent for every launch component (e.g. upper stage, unblanketed skin, thermal/acoustic blankets, etc.) inside the fairing with a view factor to the payload in Figure A5-5.

Where the expected payload environments exceed the range of environments described in the NASA Goddard General Environmental Verification Standard (GEVS), GSFC-STD-7000 Rev A guidelines and/or the Space and Missile Systems Center Standard: Test

LAUNCH SERVICES CAPABILITIES, SPECIFICATIONS AND ENVIRONMENTS

Requirements for Launch, Upper-Stage and Space Vehicles (SMC-S-016), the Contractor shall identify mitigation options. Some missions may require specific limits to launch environments.

Figure TBP

Figure A5-1: Maximum Electromagnetic Radiated Emissions Levels Encountered by the Payload

Figure TBP

Figure A5-2: Maximum Electromagnetic Radiated Susceptibility Levels of the Launch System

Figure TBP

Figure A5-3: PLF Pressure Profiles and Depressurization Rates

Table A5-8: Maximum Flight-Level Payload Acoustic Environment

Table TBP

LAUNCH SERVICES CAPABILITIES, SPECIFICATIONS AND ENVIRONMENTS

**Table A5-9: Maximum Flight-Level Payload Interface Random Vibration Environment
(If Applicable)**

Table TBP

Table A5-10: Maximum Flight-Level Payload Interface Shock Response Spectrum

Table TBP

Table A5-11: Payload Design CG Limit Load Factors

Axis	Maximum Acceleration (g)
Axial	TBP
Lateral	TBP

Notes: (1) Sign convention: positive axial acceleration produces compression
 (2) Axial and lateral accelerations are simultaneous

**Table A5-12: Maximum Expected Sinusoidal Vibrations at the Base of the PA
(If Applicable)**

Table TBP

LAUNCH SERVICES CAPABILITIES, SPECIFICATIONS AND ENVIRONMENTS

Figure TBP

Figure A5-4: Maximum Quasi-Steady Acceleration as a Function of Payload Separated Mass

Figure TBP

Figure A5-5: Maximum Thermal Environment During Ascent

Rideshare Payload Adapter System(s)

Describe the commercial rideshare payload adapter and separation system(s), including physical and electrical characteristics provided by the Offeror for each proposed vehicle configuration. Include a graphical description for separating and non-separating payloads and state associated ground rules that apply to the rideshare payload accommodations, including any CubeSat dispenser offerings.

Launch Site Integration

- a. Describe the physical attributes, the capabilities, and the limitations (e.g. fueling, transportation, airlock, lifting, office space, GSE accommodation) of any payload processing facilities (PPF) to be available for any launch service being proposed including PPF occupancy duration(s). Specify the contamination environments achievable in the PPF and within the payload fairing. In addition, specify the temperature and humidity environments to which the PPF and PLF can be controlled (**TBP** to **TBP**°C (**TBP** to **TBP**°F) and **TBP**% to **TBP**%, respectively).
- b. Describe the services, equipment, support, and limitations provided at the launch site(s) for the integration and launch of each payload.

Additional Information

Describe any unique capabilities of the proposed launch service. This should include anything that the Contractor wishes to emphasize as unique to their launch service.