BROAD AGENCY ANNOUNCEMENT (BAA)

US Air Force Nuclear Weapons Center (AFNWC)
Program Development and Integration Directorate (AFNWC/XZ)

PART ONE - OVERVIEW

BROAD AGENCY ANNOUNCEMENT TITLE: Ground Based Strategic Deterrence
BROAD AGENCY ANNOUNCEMENT NUMBER: BAA-AFNWC-XZ-13-001
NAICS CODE: 541712

FEDERAL AGENCY NAME: Air Force Nuclear Weapons Center (AFNWC), Intelligence, Program Development and Integration Directorate (XZ)

DATES:
Posting Date: 07 Jan 2013
White Papers Due: 1700 hrs MST on 8 Feb 2013
Proposals Due: 1200 hrs MST on 15 Mar 2013 (Only if Requested)
Anticipated Contract Award Date: 29 Mar 2013

White papers/Proposals received after these due dates and times shall be governed by the provisions of Federal Acquisition Regulations (FAR) 52.215-1(c)(3). It should be noted that this installation observes strict security procedures to enter the facility. These security procedures are NOT considered an interruption of normal Government processes, and proposals received after the above stated date and time as a result of security delays will be considered “late”. NOTE: If offerors use commercial carriers for delivery of proposals, carriers may not honor time-of-day delivery guarantees on military installations. Early proposal submission is encouraged.

ANTICIPATED AWARDS: Multiple awards are possible. The number, amount, and length of awards under this BAA will depend on the number of concepts that are selected for further study in the Analysis of Alternatives, the quality of the proposals received and the availability of funds.

TYPE OF INSTRUMENTS TO BE AWARDED: Firm Fixed Price (FFP) Contracts are anticipated, however, the agency reserves the right to award the instrument best suited to the nature of the work proposed.

AVAILABLE FUNDING: $3M.

INTRODUCTION: This Broad Agency Announcement (BAA) will remain open through 31 Dec 2013, or until amended or superseded. It may be reissued and/or amended periodically, as needed. White papers/Proposals may be requested at any time during the open period by the appropriate point of contacts (POC) identified in this BAA. However, prior to submitting a proposal, offerors are required to submit a white paper on their proposed concepts to the technical POC. The purpose of the white paper is to
preclude unwarranted effort on the part of an offeror whose proposed work is not of current interest under this BAA. White papers will be evaluated in accordance with the instructions in Part Two. Those offerors submitting white papers found to be consistent with the intent of this BAA may subsequently be invited to submit a proposal. If invited by the Government, the proposal shall be in accordance with the instructions in Part Two. Such invitation does not assure that a contract will be awarded. Proposals submitted may be evaluated as they are received or held for consolidated evaluation. There will be no further correspondence between the Government and offerors if their white papers are not selected for award. However, offerors may call or email the contracting POC directly for selection status.

AFNWC/XZ anticipates evaluating white papers in the month of February 2013, assuming a sufficient number of white papers have been submitted at that point. Agencies wishing to have their white papers considered during this review should submit them no later than close of business 8 February 2013. Papers submitted after 8 February 2013 may be reviewed for proposal submission requests at a later date.

This BAA may be amended as needed to provide specific further defined information regarding a prospective research area listed below. In that case, either white papers or technical/cost proposals in accordance with Part Two may be requested, and more specific instructions may be provided.

**PROGRAM DESCRIPTION:** This is a BAA of the Air Force Nuclear Weapons Center, Intelligence, Program Development & Integration Directorate (AFNWC/XZ), under the provisions of paragraph 6.102(d)(2)(i) of the Federal Acquisition Regulation, which provides for the competitive selection of research white papers/proposals. White papers/proposals submitted in response to this BAA that are selected for award are considered to be the results of full and open competition and in full compliance with the provisions of PL 98-369, the Competition in Contracting Act of 1984.

For purposes of this announcement, research is defined to be methodology research, scientific study, concept maturation, modeling and simulation, and experimentation directed at developing and advancing capabilities for a ground based strategic deterrence.

AFNWC/XZ intends to contract with educational institutions, non-profit organizations, and private industry for research. Offerors contemplating submission of a proposal should carefully examine this BAA and are strongly encouraged to contact the appropriate POC. This announcement is to neither be construed as a commitment by the Government nor will the Government pay for information solicited. Submissions that do not meet all requirements or are not submitted within the allotted time will not be considered.

**TECHNICAL POINT OF CONTACT:** Tony Rendon, AFNWC/XZ (GBSD Program Manager), antonio.rendon@kirtland.af.mil, 505-846-7012.

**CONTRACTING POINT OF CONTACT:** Anthony W. Kaiser, AFNWC/PZID, anthony.kaiser@kirtland.af.mil, 505-846-0515.
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I. REQUIREMENT DESCRIPTION:

AFNWC/XZ is soliciting white papers/proposals for concepts that address modernization or replacement of the ground based leg of the nuclear triad. For purposes of this BAA, “concept” is defined as a prospective system materiel solution addressing identified and validated gaps or shortfalls based on conditions in which a future system will need to operate. These gaps and shortfalls were identified during the Ground Based Strategic Deterrence (GBSD) capabilities-based assessment (CBA) and validated in the Initial Capabilities Document. Each white paper/proposal should provide adequate technical, schedule and cost information to allow feasibility analysis of the concept.

This BAA initiates a request for analysis, refinement, and technical amplification of concepts designed to satisfy the GBSD capabilities with an operational life of 2025-2075 timeframe. Concepts are requested to address the GBSD weapon system-of-systems, to include the payload delivery vehicle, warhead integration, basing, and nuclear command, control and communications starting at message receipt. Underlying considerations should be a modular, open systems architecture (“Plug and Play”) and commonality with Intercontinental Ballistic Missiles (ICBM), Submarine-launched Ballistic Missiles (SLBM), Prompt Global Strike/Conventional Strike Missile, and space launch vehicles.

In December, 2011, AFNWC issued a request for information (RFI) to industry soliciting inputs to close the gaps. Inputs were requested in six mission focus areas: propulsion, guidance, basing, nuclear command control and communications (NC3), warhead and re-entry vehicle (RV) and “Plug and Play” Technology. Responses were received in March 2012, and AFNWC personnel visited responding industry offices in May and June 2012 to obtain further information on the responses. Based on the responses and subject matter expert (SME) input, AFNWC created five concept characterization and technical descriptions (CCTD):

- Continued use of the current Minuteman III baseline until 2075 with no deliberate attempt to close identified gaps;
- Current Fixed that incorporates incremental changes to the current Minuteman III baseline to close the gaps;
- New Fixed;
- New Mobile; and
- New Tunnel.

All five concepts will be evaluated as part of the Materiel Development Decision (MDD) and those judged adequate will be included in the Analysis of Alternatives (AoA). **AFNWC will not award contracts for concepts not approved at the MDD.** Since the baseline CCTD is similar to current operations and does not include introduction of new technology, required data and analyses exist for an adequate evaluation. However, the Current Fixed and each of the three new CCTDs will require additional analysis and technical input to satisfy the AoA, if carried forward from the MDD. This BAA requests industry assistance in the AoA process by further defining technical, cost, and management inputs for each concept to provide a basis for differentiating between concepts and selecting the optimum concept(s) for entry into the Technology
Development (TD) phase. Offerors are encouraged to provide responses to one or more of these system concepts. Additionally, AFNWC may consider contract awards to offerors who propose novel technologies in individual mission focus areas in order to further define the technology.

Appendix A provides a top-level description of the conceptualized approaches for the four concepts and mission focus areas. The offerors selected for each concept will:

- Further define the trade space for each mission focus area, conduct trade studies, provide technology descriptions, and recommend an approach, with rationale, including preferred technologies.
- Identify a timeline for technology development efforts necessary to ensure that all technology is at an appropriate technology readiness level (TRL) when required and a risk matrix to identify cost, time, and technical risks of the chosen concept.
- Address operations, maintenance and logistics implications of the concept.
- Address how the identified concept fits into a notional weapon system infrastructure.

Offerors are encouraged to investigate and recommend innovative technologies not included in Appendix A that could provide cost effective approaches to closing gaps.

The USAF has determined that GBSD shall possess the following capabilities in priority order:

- Effective: deliver required effects / services under normal and wartime conditions; high operational effectiveness through lethal effects.
- Reliable: perform with confidence under normal and wartime conditions; high reliability to ensure a high probability of success.
- Responsive: operate within specified time constraints; high availability with connectivity to a secure, redundant, and immediate command and control capability.
- Survivable: maintain acceptable operational capability under wartime conditions; overcome and/or minimize impact from attack during all phases of missions/operations.
- Secure: minimize likelihood and consequences of unauthorized access; positive control of weapon system during all phases of mission/operations.
- Safe: minimize likelihood and consequences of exposure, error, or accident; safe operation during all phases of missions/operations.
- Flexible: provide options and react to changing conditions; scalable and tailororable range of postures and operations.
- Global: conduct world-wide operations; maintain ability to hold all assigned targets at risk.
- Sustainable: affordable, maintainable, feasible, and executable across system lifetime; sustained performance while maintaining low total life cycle costs.
- Adaptable: provide or enable new capabilities; common/modular weapon system components to improve performance/sustainability.
- Transportable: compatible with mobility aircraft, ground transportation and handling equipment; safely/securely transport weapon system components.

Offerors shall address how well the concept contributes to satisfying the capabilities. Analysis of Alternatives activities will consider tradeoffs among the capabilities.
A. CONCEPT DESCRIPTION:

The work to be performed involves four independent concepts as outlined in Appendix A. White papers/proposals should discuss innovative and feasible acquisition approaches as they pertain to, and in the context of, the full architecture solutions.

Each of these four concepts is described in more detail in Appendix A -- BAA Concept Objectives and Architectures of Interest. Offerors may respond to the BAA with one or more white papers, one white paper for each concept. Offerors are also requested to provide additional new and innovative technical approaches for each mission focus area even if not included in Appendix A.

B. GOALS:

- A detailed refinement of the concept with description, diagrams, and interfaces (to include an Operational View, OV-1) and Concept of Operations.
- Mapping of the capabilities of the concept to the capabilities referenced above and the enabling technology with associated maturity.
- List of perceived critical technology elements with assessed technology readiness levels at the present time and the anticipated timeframe when the technology will be ready for implementation.
- Estimated life cycle costs/schedule associated with Research, Development, Test and Evaluation (RDT&E), Procurement, Sustainment and Disposal. Highlight major cost drivers and sensitivity analysis for these drivers.
- Key performance characteristics to enable effective modeling and assessment.
- Previous studies, analysis and experiments conducted on the specific concept, if any. List tools used to conduct previous analysis and their accreditation status.
- Risk Assessment to include risk identified and mitigation plans associated with the proposed design. The assessment shall include operational, program, technical, and integration risks.

This BAA is being issued, and any resultant selection for negotiation and/or award will be made, using procedures under FAR Part 35.016. Proposals received as a result of this BAA shall be evaluated in accordance with evaluation criteria specified herein through a review process. The BAA will appear on the Federal Business Opportunities website, http://www.fbo.gov/.

II. AWARD INFORMATION:

Multiple awards are possible. The number, amount, and length of awards under this BAA will depend on the number of concepts that are selected for further study in the Analysis of Alternatives, the quality of the proposals received and the availability of funds.

Offerors are invited to submit one or more white papers, one white paper for each concept, addressing all Mission Focus Areas (as defined in Appendix A). Only those
offerors whose white papers adequately satisfy the intent of this BAA may subsequently be invited to submit a proposal. Depending on the strength of proposals received, AFNWC/XZ reserves the option to award contracts for any or all concepts. If AFNWC/XZ receives additional funding any time after making the initial awards, AFNWC/XZ may extend already awarded contracts by exercising contract options, or execute additional contracts.

The Government reserves the right to select for negotiation all, some, one, or none of the proposals received in response to this BAA, and to make awards without communications with the offerors. The Government may at its discretion communicate with the offerors if it is determined to be necessary.

Awards under this BAA will be made to offerors on the basis of the evaluation criteria listed below (see section V – Evaluation Information). The Government reserves the right to request additional documentation once it makes the award instrument determination. Such additional information may include, but is not limited to, Representations and Certifications. The Government reserves the right to remove offerors from award consideration should the parties fail to reach agreement on award terms, conditions and cost/price within a reasonable time or the offeror fails to timely provide requested additional information.

III. ELIGIBILITY INFORMATION:

All responsible sources capable of satisfying the Government's needs may submit a white paper/proposal that shall be considered. Historically Black Colleges and Universities (HBCUs), Small Businesses, Small Disadvantaged Businesses and Minority Institutions (MIs) are encouraged to submit white papers/proposals and join others in submitting white papers/proposals; however, no portion of this announcement will be set aside for these organizations' participation due to the impracticality of reserving discrete or severable areas of this research for exclusive competition among these entities.

Federally Funded Research and Development Centers (FFRDCs) and Government entities (Government/National laboratories, military educational institutions, etc.) are subject to applicable direct competition limitations and cannot propose to this BAA in any capacity unless they meet the following conditions. FFRDCs must clearly demonstrate that the work is not otherwise available from the private sector AND they also provide a letter on letterhead from their sponsoring organization citing the specific authority establishing their eligibility to propose to Government solicitations and compete with industry, and compliance with the associated FFRDC sponsor agreement and terms and conditions. This information is required for FFRDCs proposing to be prime or subcontractors. Government entities must clearly demonstrate that the work is not otherwise available from the private sector and provide written documentation citing the specific statutory authority (as well as, where relevant, contractual authority) establishing their ability to propose to Government solicitations. While 10 U.S.C. § 2539b may be the appropriate statutory starting point for some entities, specific supporting regulatory guidance, together with evidence of agency approval, will still be required to fully establish eligibility. AFNWC will consider eligibility submissions on a case-by-case basis; however, the burden to prove eligibility for all team members rests solely with the offeror.

Offerors must have a valid U.S. security clearance of SECRET or higher in order to eligible for award under this Announcement, because the Ground Based Strategic
Deterrence (GBSD) capabilities-based assessment (CBA) includes information classified at the SECRET/NOFORN level which will be released only to offerors possessing the appropriate clearance. All classified material must be handled in accordance with the National Industrial Security Program Operating Manual (NISPOM) (DoD 5220-22-M) and Industrial Security Regulation (DoD 5220.22-R).

**Procurement Integrity, Standards of Conduct, Ethical Considerations, and Organizational Conflicts of Interest**

All potential offerors must submit an assessment of actual, potential, or perceptions of Organizational Conflicts of Interest (OCI) through the submission of an OCI Mitigation Plan. The mitigation plan must ensure proper safeguards are implemented or will be implemented to protect the Government's interests and to identify perceptions of bias and immitigable OCIs in accordance with FAR 9.5. OCIs can occur at any level; prime, subcontractor, or other types of teammates. Additionally, there are two underlying principles of OCI; 1) conflicting roles that might bias or impair a contractor's judgment, and 2) unfair competitive advantage (where a competing contractor has access to proprietary information of a competitor(s) or has access to the OCI plan will also provide how offerors will protect proprietary information in the course of performing the contract). The OCI plans must also be in compliance with the current version of the OCI mitigation plan checklist at Appendix B and also available upon request from the contracting officer. If the offeror’s assessment shows no actual, potential or perception in accordance with FAR 9.5, please provide a statement indicating such.

**IV. WHITE PAPER/PROPOSAL PREPARATION GUIDANCE:**

**A. GENERAL:**

1. **Proprietary Information and Security Classification**

Industry is encouraged to respond with information not constrained by proprietary data rights. However, all white papers/proposals containing proprietary data should have the cover page and each page containing proprietary data clearly marked as containing proprietary data. It is the offeror’s responsibility to clearly define to the Government what is considered proprietary data.

Offerors are advised that data included in the white papers/proposals submitted to the Government in response to this BAA will be released for review and analysis to the following third party, non-Government Subject Matter Experts:

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<th>Contractor</th>
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<tr>
<td>Aero Thermo Technology, Inc.</td>
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<td>BAE Systems</td>
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<td>Booz Allen Hamilton</td>
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<td>Jacobs Technology Inc.</td>
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<td>Johns Hopkins University/Applied Physics Laboratory</td>
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<td>ManTech International Corporation</td>
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<td>Systems Planning and Analysis, Inc. (SPA)</td>
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<td>TASC Inc.</td>
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<td>Tecolote Research, Inc.</td>
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<td>The Aerospace Corporation</td>
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These advisors will serve strictly in an advisory capacity to the Government evaluators. All of the individuals who will serve as advisors have executed general Non-Disclosure Agreements with the Government. It will be the offeror’s responsibility to initiate any desired additional Non-Disclosure Agreements prior to submission of proposal. Please contact the GBSD Program Manager for the list of NDA Points of Contact at these companies.

Offerors must have a valid U.S. security clearance of SECRET or higher in order to be eligible for award under this Announcement. Security classification guidance via a DD Form 254 will not be provided at this time. A DD Form 254 will be issued and attached as part of the request for proposal, if required. Offerors must have existing and in-place prior to execution of an award, approved capabilities (personnel and facilities) to perform research and development at the classification level they propose.

It is AFNWC’s policy to treat all white papers/proposals as competitive information, and to disclose their contents only for the purpose of evaluation. White papers/proposals will not be returned. The original of each proposal received will be retained at AFNWC and all other non-required copies destroyed.

Any subsequent actions resulting from the evaluation of the information provided in response to this BAA may be synopsized at a future date. If synopsized, information detailing the specific requirements of this procurement(s) will be included. Responses to this BAA may be classified. Classified responses should be properly marked and packaged. For instructions on submitting classified information and/or visit requests contact Security Specialist, Everett Heinonen, 505-846-3184, email everett.heinonen@kirtland.af.mil.

This BAA contains all information required to submit a white paper/proposal. No additional forms, kits, or other materials are needed. This notice constitutes the total BAA. No additional information is available, nor will a formal Request for Proposal (RFP) or additional solicitation regarding this announcement be issued. Requests for same will be disregarded.

Only those offerors submitting white papers found to be consistent with the intent of this BAA may subsequently be invited to submit a proposal.

B. WHITE PAPERS:

White papers may be submitted as a hard-copy or electronically (preferred) in Microsoft Word or searchable Adobe Acrobat Portable Document Format (PDF) format via email to the POC listed below.

ATTN: Anthony Kaiser
AFNWC/PZID
1551 Wyoming Blvd SE
AFNWC/XZ ROOM 210
Kirtland AFB, NM 87117
Papers shall include a signed cover letter in PDF. One or more white papers, one white paper for each concept listed in Appendix A, may be submitted by each offeror. Each white paper shall not exceed fifty (50) pages. The white paper shall be formatted as follows:

**Section A**: Title, Submitter, Date, Email Address, Phone Number, Fax Number, Organization/Office symbol, Address, Period of Performance, Cost of Effort. **{2 page limit]**

**Section B**: Proposed Solution. **{45 page limit}**.

Offerors shall provide a detailed concept, as listed in Appendix A, that provides preferred approaches to each mission focus area. The goal is to recommend a preferred approach for system-of-systems that incorporates technologies adequately mature at the time of system design, a cost analysis of the system, and risks so that optimum concept(s) are selected for entry into the Technology Development phase. The following information is to be included:

a) Understanding of the concept and mission focus areas identified for that concept. Describe how the identified concept fits into a notional weapon system infrastructure.

b) Architectures and Operational Concepts. Define the trade space for each mission focus area, conduct trade studies, provide technology descriptions, and recommend an approach, with rationale, including preferred technologies. Operations, maintenance and logistics implications shall be addressed.

c) Methodologies to be used to refine cost estimates once the concept is defined.

e) System Integration bringing together all of the subsystem components into one GBSD weapon system solution that ensures that the subsystems function together as one weapon system.

Note: Ensure innovative technical approaches are clearly identified in the offeror’s white paper(s).

**Section C**: Prior Work **{3 page limit}**

Describe any ongoing work or past relevant projects that have been successfully completed by the team members. Include information on the offeror team’s experience in:

a) Conducting research for, development or design of, installation and checkout of, management of, upgrades to, or sustainment of integrated missile systems.

b) Estimating life cycle costs for integrated missile systems-of-systems.

c) Integration of missile subsystems into a system-of-systems.

One or more white papers, one white paper for each concept listed in Appendix A, may be submitted by each offeror. Each white paper shall not exceed fifty (50) pages.
C. PROPOSALS:

1. Proposal Information

If invited by the Government, offerors are required to submit full proposals by the time and date specified in the BAA in order to be considered. The evaluations will take place shortly after the due date and any late proposal may not be evaluated. Additionally, submissions not meeting the format described in the BAA may not be evaluated.

Proposals MUST be submitted via mail, courier or delivery service, or by hand to the contracting officer. E-mail or fax submissions will not be accepted.

ATTN: Anthony Kaiser
AFNWC/PZID
1551 Wyoming Blvd SE
AFNWC/XZ ROOM 210
Kirtland AFB, NM 87117

All correspondence and questions on this solicitation, including requests for information on how to submit a full proposal to this BAA, should be directed via e-mail to Anthony Kaiser, anthony.kaiser@kirtland.af.mil.

2. Proposal Preparation and Format

The proposal shall be delivered in two volumes, Volume 1 (technical and management proposal) and Volume 2 (cost proposal). Proposals not meeting the format described in this BAA may be rejected without review.

The technical and management proposal shall include the following sections, each starting on a new page (where a "page" is 8-1/2 by 11 inches with type not smaller than 12 point font, charts may use 10 point font, margins not smaller than 1 inch all around, and line spacing not smaller than single-spaced). All submissions must be in English. Individual elements of the proposal shall not exceed the total of the maximum page lengths for each section as shown in braces {} below.

3. Submission Dates and Times

Three (3) hard copies and one (1) electronic copy on CD/DVD (in Microsoft Word or searchable Adobe Acrobat Portable Document Format (PDF)) of the full proposal must be submitted per the instructions above by the date and time identified in Part One in order to be considered.

AFNWC/PZID will acknowledge receipt of complete submissions via email and assign control numbers that should be used in all further correspondence regarding proposals. Failure to comply with the submission procedures may result in the submission not being evaluated.

4. Funding Information
Anticipated initial funding for this BAA is $3M, awarded in one contract, or split into multiple contracts. Pending availability of funding, AFNWC has the option to include additional topics of interest at contract award or a later date.

Final determination for number, amount, and length of awards will be determined at time of award. AFNWC will make recommendations to BAA decision authority (AFNWC/XZ), based on proposals received.

Volume 1 – Technical and Management Proposal

Proposal Section 1 - Administrative

1.1 Cover Sheet {No page limit}

The cover sheet should contain the following information:
- BAA number;
- Proposal title;
- Concept;
- Lead organization submitting the proposal;
- Technical point of contact, including: name, telephone number, electronic mail address, fax (if available), and mailing address;
- Administrative point of contact, including: name, telephone number, electronic mail address, fax (if available), and mailing address;
- Total funds requested from AFNWC. Summary of the costs of the proposed research, including total base cost and estimates of itemized options;
- Contractor’s reference number (if any);
- Contractor's Small Business Administration (SBA) status (i.e. Small Business, Woman-Owned Small Business, Large Business, etc.); and
- Other team members (if applicable) and type of business for each.

1.2 Official Transmittal Letter {No page limit}

1.3 Table of Contents {No page limit}

Proposal Section 2 - Technical Details

2.1 Executive Summary {1 page}
Provide a top-level view of the content and structure of the proposal. It is important to make the Executive Summary as explicit and informative as possible. Summarize the strengths of the offer for proposed concept.

2.2 Innovative Claims for the Proposed Concept {2 pages}
Succinctly describe the unique proposed approach and contributions. Describe the strengths of the offeror for the proposed concept.

2.3 Technical Approach {30 pages}
The following information is to be included:

1. Describe the proposed technical approach, including:
a) Understanding of the concept and mission focus areas identified for that concept. Describe how the identified concept fits into a notional weapon system infrastructure.

b) Architectures and Operational Concepts. Define the trade space for each mission focus area, conduct trade studies, provide technology descriptions, and recommend an approach, with rationale, including preferred technologies. Operations, maintenance and logistics implications shall be addressed.

c) Technical and performance criteria to be employed in developing options and trades, including modeling and simulation (M&S). Include any government-owned facilities or software (M&S codes) that will be required to support the analyses.

d) Methodologies to be used to refine cost estimates once the concept is defined.

e) Identify a timeline for technology development efforts necessary to ensure that all technology is at an appropriate technology readiness level (TRL) when required and a risk matrix to identify cost, time, and technical risks of the chosen concept.

(f) System Integration bringing together all of the subsystem components into one GBSD weapon system solution that ensures that the subsystems function together as one weapon system. System integration should look at how the warfighter is integrated into the weapon system to guarantee complete control between the subsystems. System integration should also look at increased adaptability of subsystems to ensure continued sustainability of the weapon system while minimizing costs of future upgrades to the concept.

Note: Ensure innovative technical approaches are clearly identified in the offeror’s proposal(s).

2. Discuss feasible acquisition approaches associated with the proposal, including:
   a) Alternatives to Government Develop/Operate or Service Lease
   b) Comparison of proposed procurement versus traditional Military acquisition (FAR Part 15)
   c) Life Cycle Cost Impacts

3. Describe the methodology for developing and validating proposed architectures, and the criteria you propose for architecture trades.

2.4 Prior Work {5 pages}
Describe any ongoing work or past relevant projects that have been successfully completed by the team members. Include information on the offeror team’s experience in:

1. Conducting research for, development or design of, installation and checkout of, management of, upgrades to, or sustainment of integrated missile systems.

2. Estimating life cycle costs for integrated missile systems-of-systems.
3. Integration of missile subsystems into a system-of-systems.

2.5 Statement of Work (SOW) {5 pages}
Offeror shall provide a SOW for each proposed concept.

For each concept, the SOW must include the following in the order listed: (1) Scope (2) Objectives (3) SOW tasks (4) Deliverables, which shall be defined and described under the applicable task/portion of the SOW.

Do not include any proprietary information in the SOW.

2.6 Management Plan {1-2 pages}
Describe any formal teaming agreements that are required to execute this program, a brief synopsis of all key personnel, and a clearly defined organization chart for the program team (prime contractor and subcontractors, if any).

2.7 Schedule and Milestones {1-4 pages}
Provide graphic representation of key project milestones, deliverables and schedule for the SOW tasks in each mission focus area from the date of contract award.

2.8 Organizational Conflict of Interest Affirmations and Disclosure {No page limit}
Submit an OCI Mitigation Plan per the instructions in Section III, Eligibility Information, above.

If the offeror or any proposed subcontractors DOES NOT currently have an OCI, the offeror should simply state “NONE”, and submit an OCI plan for mitigation should a conflict of interest appear.

Proposals that fail to fully disclose potential conflicts of interests or do not have acceptable plans to mitigate identified conflicts will be rejected without technical evaluation and withdrawn from further consideration for award.

2.9 Statement of Unique Capability Provided by Government or Government-funded Team Member {No page limit}
Per Section III, Eligibility Information, proposals which include Government or Government-funded entities (i.e., FFRDCs, National laboratories, etc.) as prime, sub or team member, shall provide a statement which clearly demonstrates the work being provided by the Government or Government-funded entity team member is not otherwise available from the private sector. If none of the team members belongs to a Government or Government-funded entity, then the offeror should state “Not Applicable.”

2.10 Government or Government-funded Team Member Eligibility {No page limit}
Per Section III, Eligibility Information, proposals which include Government or Government-funded entities (i.e., FFRDCs, National laboratories, etc.) as prime contractor, subcontractor or team member shall provide documentation citing the
specific authority which establishes they are eligible to propose to Government solicitations: 1) statutory authority; 2) contractual authority; 3) supporting regulatory guidance; AND 4) evidence of agency approval. If no such entities are involved, then the offeror should state “None.”

Volume 2 – Cost Proposal

1.1 Cover Sheet

The cover sheet should contain the following information:
Award instrument: Firm Fixed Price (FFP) contract.

- BAA number;
- Proposal title;
- Concept;
- Lead organization submitting the proposal;
- Technical point of contact, including: name, telephone number, electronic mail address, fax (if available), and mailing address;
- Administrative point of contact, including: name, telephone number, electronic mail address, fax (if available), and mailing address;
- Total funds requested from AFNWC. Summary of the costs of the proposed research, including total base cost and estimates of itemized options;
- Contractor’s reference number (if any);
- Contractor's SBA status (i.e. Small Business, Woman-Owned Small Business, Large Business, etc.)
- Other team members (if applicable) and type of business for each.
- Place(s) and period(s) of performance;
- Subcontractor information; and
- Proposal validity period (minimum 180 days).

1.2 Detailed Cost Breakdown

Provide:
1. Total program cost broken down into CLINs for each Mission Focus Area defined in Appendix A (i.e., direct labor, including labor categories; subcontracts; materials, other direct costs, overhead charges, etc.). The Government reserves the right to fund only those individual CLINs required to support AoA requirements.
2. If the proposed cost is greater than $700,000, offeror must submit a Certificate of Current Cost and Pricing Data in accordance with FAR 15.406-2(a).

V. EVALUATION INFORMATION

A. EVALUATION CRITERIA

1. White papers/proposals submitted in response to this BAA will be evaluated as received using the factors given below. Proposals will
not be evaluated against each other. While these factors are listed in descending order of relative importance (a, b, c), it should be noted that the combination of all non-cost evaluation factors is significantly more important than cost. Sub-factors are of equal importance. The Government reserves the right to select all, part, or none of the proposals received in response to this announcement, subject to the availability of funds.

2. White Paper Evaluation Factors

a. Proposed Solution
   - Completeness of content, adequacy of description for innovative technologies and comprehensiveness of systems integration.
   - The proposed technical approach is consistent, technically sound, feasible, and achievable.

Note: Refers to the information provided in Section B of the white paper.

b. Prior Work
   - The offeror adequately describes capabilities, related experience (to include past and present performance), facilities, techniques, or unique combinations of these that are integral factors for achieving the white paper/proposal objectives.

Note: Refers to the information provided in Section C of the white paper.

3. Proposal Evaluation Factors

a. Technical Merit
   - Completeness of content, adequacy of description for innovative technologies and comprehensiveness of systems integration. (Overall)
   - The proposed technical approach is consistent, technically sound, feasible, and achievable. Will provide insight and differentiation between concepts, enabling system evaluation and cost-benefit trades. (Overall)
   - Cost, schedule and technical risks are adequately identified and support technology readiness level (TRL) for proposed concept. (Overall)
   - Importance to the overall success of the Ground Based Strategic Deterrence program. (Overall)
b. Offeror’s Capabilities and/or Related Experience.

- The offeror adequately describes capabilities, related experience (to include past and present performance), facilities, techniques, or unique combinations of these that are integral factors for achieving the proposal objectives.
- The adequate description of qualifications, capabilities, and experience of the proposed principal investigator, team leader, and other key personnel who are critical to achieving the proposal objectives.

Note: Refers to the information provided in Volume 1, section 2.4 Technical Approach of the proposal.

c. Cost /Price

The objective of this criterion is to establish that the proposed costs are reasonable for the technical and management approach offered, as well as to determine the offeror’s practical understanding of the effort.

Note: Refers to the information provided in Volume 2, of the proposal.

4. It is the policy of AFNWC/XZ to treat all white papers/proposals as privileged information, and to disclose the contents only for the purposes of evaluation. The offeror must indicate on the appropriate form/page any limitation to be placed on disclosure of information contained in the white paper/proposal. Should portions of the white paper/proposal be incorporated into a resulting contract, that portion may be subject to release under the Freedom of Information Act unless exempt from release.

B. Review and Recommendation Process

It is the policy of AFNWC to ensure impartial, equitable, comprehensive proposal evaluations and to select the source(s) whose offer meets the Government's technical, policy, and programmatic goals. Pursuant to FAR 35.016, the primary basis for selecting proposals for acceptance shall be technical, importance to agency programs, and fund availability. In order to provide the desired evaluation, qualified Government personnel will conduct reviews and (if necessary) convene panels of experts in the appropriate areas.

Each proposal will be evaluated on the merit and relevance rather than against other proposals for research in the same general area. For evaluation purposes, a
proposal is the document described above in Section IV, White Paper/Proposal Preparation Guidance.

Award(s) may be made to offerors whose proposals are determined to meet or exceed the evaluation criteria, all factors considered, including the potential contributions of the proposed work to the overall goals of the BAA and the availability of funding for the effort.

VI. AWARD ADMINISTRATION INFORMATION

A. Award Notices

As soon as the evaluation of a proposal is complete, the offeror will be notified that 1) the proposal has been selected for funding pending contract negotiations, or 2) the proposal has not been selected. These official notifications will be sent via e-mail to the Technical POC identified on the proposal coversheet.

B. Administrative and National Policy Requirements

1. Meeting Requirements

Periodic (at a minimum two (2)) Technical Interchange Meetings (TIM) to status contractor findings, to review data packages and update the contractor on the status of the AoA. (Contractor will provide presentation material to the Government for review before the TIMs).

Final report TIM to status final concept results. (Contractor will provide presentation material to the Government for review before the TIM).

2. Export Control

Should this project develop beyond fundamental research (basic and applied research ordinarily published and shared broadly within the scientific community) with military or dual-use applications the following apply:

- 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 (including deemed exports) hardware, technical data, and software, or for the provision of technical assistance.

- 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 any Government installation (whether in or outside the United States), where the foreign person will have access to export-controlled technologies, including technical data or software.
- The Contractor shall be responsible for all regulatory record keeping requirements associated with the use of licenses and license exemptions/exceptions.
- The Contractor shall be responsible for ensuring that the provisions of this clause apply to its subcontractors.

3. **Subcontracting**

Pursuant to Section 8(d) of the Small Business Act (15 U.S.C. 637(d)), it is the policy of the Government to enable small business and small disadvantaged business concerns to be considered fairly as subcontractors to contractors performing work or rendering services as prime contractors or subcontractors under Government contracts, and to assure that prime contractors and subcontractors carry out this policy. Each offeror who submits a contract proposal and includes subcontractors is required to submit a subcontracting plan in accordance with FAR 19.702(a) (1) and (2) should do so with their proposal. The plan format is outlined in FAR 19.704.

4. **Central Contractor Registration (CCR)**

Offerors selected, but not already registered in the CCR will be required to register in CCR prior to any award under this BAA. Information on CCR registration is available at http://www.ccr.gov.

5. **On-line Representations and Certifications (ORCA)**

In accordance with FAR 4.1201, prospective offerors shall complete electronic annual representations and certifications at http://orca.bpn.gov.

6. **Wide Area Work Flow (WAWF)**

Performers will be required to submit invoices for payment directly via the Internet/WAWF at http://wawf.eb.mil. Registration to WAWF will be required prior to any award under this BAA.

7. **Employment Eligibility Verification**

As per FAR 22.1802, recipients of FAR-based procurement contracts must enroll as Federal Contractors in E-verify and use E-Verify to verify employment eligibility of all employees assigned to the award. All resultant contracts from this BAA will include FAR 52.222-54, “Employment Eligibility Verification.” This clause will not be included in grants, cooperative agreements, or other transactions.

**VII. AGENCY CONTACTS**

AFNWC will use email for all technical and administrative correspondence regarding this BAA, with the exception of select/not-selected notifications.

Administrative or contractual questions should be sent via e-mail to Anthony W. Kaiser (anthony.kaiser@kirtland.af.mil)
Technical questions should be sent via email to Tony Rendon (antonio.rendon@kirtland.af.mil)

All requests must include the organization name and the individual name, email address, and phone number of a point of contact.

Ombudsman: In accordance with AFFARS 5301.9103, an Ombudsman has been appointed to hear and facilitate the resolution of concerns from offerors, potential offerors, and others for this acquisition announcement. Before consulting with an ombudsman, interested parties must first address their concerns, issues, disagreement, and/or recommendations to the Contracting Officer listed above for resolution. The Ombudsman does not diminish the authority of the program director or contracting officer, but communicates contractor concerns, issues, disagreements, and recommendations to appropriate Government personnel. When required, the Ombudsman shall maintain strict confidentiality as to the source of the concern. The Ombudsman does not participate in the evaluation of proposals or in the source selection process. Matters of a routine or administrative nature concerning this acquisition should not be addressed to the Ombudsman, but rather to the Contract Specialist listed above. For any other concerns, interested parties may call the AFNWC Ombudsman, Ms. Jeannine Kinder, at (505) 846-1924 or submit the concern(s) in writing to AFNWC/PZ, 8500 Gibson Blvd SE, Kirtland AFB, NM 87117.

VIII. OTHER INFORMATION

A. Intellectual Property

Noncommercial Items (Technical Data and Computer Software)

Offerors responding to this BAA shall identify all noncommercial technical data and noncommercial computer software that it plans to generate, develop, and/or deliver under any proposed award instrument in which the Government will acquire less than unlimited rights, and to assert specific restrictions on those deliverables. Offerors shall follow the format under DFARS 252.227-7017 for this stated purpose. In the event that offerors do not submit the list, the Government will assume that it automatically has “unlimited rights” to all noncommercial technical data and noncommercial computer software generated, developed, and/or delivered under any award instrument, unless it is substantiated that development of the noncommercial technical data and noncommercial computer software occurred with mixed funding. If mixed funding is anticipated in the development of noncommercial technical data and noncommercial computer software generated, developed, and/or delivered under any award instrument, unless it is substantiated that development of the noncommercial technical data and noncommercial computer software occurred with mixed funding, offerors should identify the data and software in question, as subject to Government Purpose Rights (GPR). In accordance with DFARS 252.227-7013 Rights in Technical Data - Noncommercial Items, and DFARS 252.227-7014 Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation, the Government will automatically assume that any such GPR restriction is limited to a period of five (5) years in accordance with the applicable DFARS clauses, at which time the Government will acquire “unlimited rights” unless the parties agree otherwise. Offerors are admonished that the Government may use the list during the review process to evaluate the impact of any identified restrictions and may request additional information from the
proposer, as may be necessary, to evaluate the proposer’s assertions. If no restrictions are intended, then the proposer should state “NONE.”

B. Information Updates

This BAA and any updates may be found at http://www.fbo.gov.

C. Period of Performance

The anticipated period of performance for individual awards resulting from this BAA is 6 months. The period of performance is to be proposed in the format “includes 5 months for concept development effort and 1 month for Final Report/Out-Brief preparation.”

D. Anticipated Type of Contracts/Instruments

The Air Force anticipates awarding a Fixed Price type of Contract(s) as a result of this BAA but reserves the right to award the instrument best suited to the nature of the work proposed. A model contract will be provided to each apparent successful offeror for review and comment as part of the BAA solicitation and award process. No grant or other assistance opportunities will result from this BAA.

E. Intent to Propose

Potential offerors are requested, but not required, to advise the contracting point of contact if they intend to submit a proposal in response to invitation resulting from this BAA. Such notification is merely a courtesy and is not a commitment by the offeror to submit a proposal.

F. Deliverables Items:

1. Contractor will provide a **project kick-off briefing** consisting of:
   - Project objectives
   - Project team and partnering
   - Project approach and methodology
   - Project schedule

2. Contractor will provide **monthly Technical Status Reports** to include:
   - Project objectives
   - Accomplishments for the month
   - Issues/Risks
   - Plans for the following month
   - Cumulative percent complete

3. Regular telecon updates are expected. At a minimum, the Contractor will hold **monthly telecon updates** with the Government to review project status and issues.
4. Contractor shall provide **briefings** during the periodic (at a minimum two (2)) TIMs at the Contractor's location, consisting of:
   - Summary of work performed to date
   - Issues/Risks with resolution plans
   - Plan forward with accompanying schedule

5. Contractor shall provide a **final report** consisting of:
   - Results of the effort addressing the Goals listed in Part Two paragraph I.B.
   - Final Issues/Risks with resolution plans
## IX. ACRONYMS

### ACRONYM LIST

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<td>Air Force Base</td>
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<td>ALCS</td>
<td>Airborne Launch Control System</td>
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<td>ICBM</td>
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<td>ISR</td>
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<td>MIRV</td>
<td>Multiple, Independently Targeted Re-entry Vehicle</td>
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<td>MOB</td>
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<td>RDT&amp;E</td>
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<td>RFP</td>
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<td>RV</td>
<td>Re-entry Vehicle</td>
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<td>SBA</td>
<td>Small Business Administration</td>
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<td>SLBM</td>
<td>Submarine-launched Ballistic Missile</td>
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<td>SME</td>
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<td>WAWF</td>
<td>Wide Area Work Flow</td>
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Appendix A
BAA Concept Objectives and Architectures of Interest

I. Current Fixed Concept

The Minuteman III Current Fixed option remains available for prompt action 24/7/365. The Current Fixed option will support the full operational range from peacetime through full-scale nuclear war. Current high readiness and reliability rates will be maintained as required.

This concept involves modernizing the Minuteman III (MM III) weapon system to mitigate gaps and meet required attributes identified in the 2012 GBSD ICD. The Current Fixed option will continue to use the existing silo infrastructure. Modernization will occur in the sub-component areas of guidance, propulsion, reentry vehicles/reentry systems, nuclear command, control and communications (NC3) and ground infrastructure. Industry should look at methods to reduce overall ownership cost to sustain the system to include refining security and maintenance operating concepts. Industry inputs should provide an integrated systems engineered approach to implement technologies incrementally to optimize efficiencies.

Current Fixed Mission Focus Areas

A. Propulsion
1) Further evaluation of alternative propellants
2) Evaluation of Alternative case materials
3) Evaluate nozzle configuration/control
4) Evaluate propellant aging/health monitoring capabilities

B. Guidance
1) Evaluate new Inertial Measurement Unit (IMU) technologies
2) Evaluate new Accelerometer technologies
3) Evaluate ease of maintenance concept
4) Evaluate guidance Mean Time Between Failure (MTBF) increase

C. Ground Infrastructure
1) Evaluate current Launch Facility (LF) hardness and identify what, if any, modifications would be required
2) Identify all ground support equipment necessary for this basing mode and identify any upgrades that may be needed
3) Evaluate affordable and effective security enablers
4) Evaluate methods to reduce maintenance requirements

D. Nuclear Command, Control and Communication (NC3)
1) Evaluate state of current NC3 and existing vulnerabilities
2) Prioritize items to be upgraded
3) Further define technologies to increase bandwidth on current Hardened Intersite Cable System (HICS)
Appendix A
BAA Concept Objectives and Architectures of Interest

4) Evaluate/Assess operational effectiveness of Airborne Launch Control System (ALCS) and make recommendations on changes/improvements/modifications

5) Define timelines for processing Emergency Action Messages (EAM) and sending out critical commands

E. Warhead and Re-entry Vehicle (RV)
   1) Quantify manufacturing and operational risk in utilizing existing RVs
   2) Evaluate Multiple, Independently Targeted Re-entry Vehicle (MIRV) capabilities

F. “Plug and Play” Technology for Nuclear/Space/Conventional Systems

G. System Integration
   1) Fully integrated concept addressing all subsystem components into single weapon system solution.
   2) Evaluate how warfighter is integrated into weapon system to provide positive control between subsystem components.
   3) Evaluate life cycle cost risks for all integrated subsystem components and assess ability to minimize future upgrade costs.
Appendix A
BAA Concept Objectives and Architectures of Interest

II. New Fixed Concept

The New Fixed concept envisions using a new, super-hardened silo with a new missile that will address all required attributes documented in the GBSD ICD. The hardened facility should be able to withstand overpressures to meet survivability requirements. This concept also explores protecting the missile from ground shock levels by using a cannisterized missile to increase survivability from a post-nuclear attack. This concept explores the capability to raise the canister to a desired level above ground to overcome debris loads over the launch enclosure.

Industry inputs should address support building and weapon system architecture required to meet ICD requirements. The NC3 architecture will consist of a secure and survivable network for critical weapons employment functions and secondary network with high-bandwidth, data integrity, assurance guards and availability to facilitate maintenance, security, and non-critical system support functions. Industry should look at methods to reduce overall ownership cost to sustain the system to include refining security and maintenance operating concepts. Industry inputs should provide an integrated systems engineered approach to implement technologies incrementally to optimize efficiencies.

New Fixed Mission Focus Areas

A. Propulsion
   1) Further evaluation of alternative propellants
   2) Evaluation of Alternative case materials
   3) Evaluate nozzle configuration/control
   4) Evaluation of number of stages
   5) Evaluation of diameter of stages
   6) Evaluate Thrust Termination (TT) vs. Generalized Energy Management System (GEMS) vs. Liquid 3rd stage
   7) Evaluate propellant aging/health monitoring capabilities

B. Guidance
   1) Evaluate new IMU technologies
   2) Evaluate new Accelerometer technologies
   3) Evaluate ease of maintenance concept
   4) Evaluate guidance MTBF increase
   5) Evaluate capabilities/vulnerabilities of external aiding
   6) Evaluate pros/cons/risk of strap down and semi-strap down configurations

C. Ground Infrastructure
   1) Evaluate proposed basing hardness level/vulnerabilities
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2) Identify all ground support equipment necessary for this basing mode and identify any upgrades that may be needed
3) Evaluate affordable and effective security enablers
4) Discuss top-level strategy in developing new basing mode

D. Nuclear Command, Control and Communication (NC3)
1) Clearly define NC3 architecture and identify potential vulnerabilities
2) Evaluate/Assess operational effectiveness of ALCS and make recommendations on changes/improvements/modifications
3) Define timelines for processing EAMs and sending out critical commands

E. Warhead and Re-entry Vehicle
1) Quantify manufacturing and operational risk in utilizing existing RVs
2) Evaluate MIRV capabilities
3) Evaluate adaptability of Trajectory Shaping Vehicles/Trajectory Correcting Vehicles (TSV/TCV)
4) Evaluate materials to increase operational effectiveness

F. "Plug and Play” Technology for Nuclear/Space/Conventional Systems

G. System Integration
1) Fully integrated concept addressing all subsystem components into single weapon system solution.
2) Evaluate how warfighter is integrated into weapon system to provide positive control between subsystem components.
3) Evaluate life cycle cost risks for all integrated subsystem components and assess ability to minimize future upgrade costs.
Appendix A
BAA Concept Objectives and Architectures of Interest

III. Mobile Concept

The Mobile concept employs a new ICBM on a transporter erector launcher (TEL). The systems would be located on government land and be capable of deploying on- or off-road. The TEL must have the capability to leave government land to increase survivability, if required. Survivability is a function of system hardness and mobility; therefore, a key feature will be the speed at which the TEL can depart the operating base when required. Industry inputs should look at the following elements:

- A missile capable of delivering up to two Mk12A or Mk21 reentry vehicles. Guidance needs to account for the deployed mode to ensure adequate accuracy is achieved while maintaining prompt responsive capabilities.

- TEL architecture. The TEL should be capable of both on and off-road travel. Weight considerations should be considered to meet Department of Transportation requirements.

- The weapon control system may consist of some combination of fixed and mobile control systems. For example, a fixed launch control center may be located at the main operating base (MOB), while survivable back up is provided by a mobile launch control center that is deployed during higher readiness states. In higher readiness states, the primary mode of communication to and from higher authority needs to be considered by industry.

Industry should provide methods to reduce overall ownership cost to sustain the system to include refining security and maintenance operating concepts. Industry inputs should provide an integrated systems engineered approach to implement technologies incrementally to optimize efficiencies.

Mobile Mission Focus Areas

A. Propulsion
   1) Further evaluation of alternative propellants
   2) Evaluation of Alternative case materials
   3) Evaluate nozzle configuration/control
   4) Evaluation of number of stages
   5) Evaluation of diameter of stages
   6) Evaluate TT vs. GEMS vs. Liquid 3rd stage
   7) Evaluate propellant aging/health monitoring capabilities

B. Guidance
   1) Evaluate new IMU technologies
Appendix A
BAA Concept Objectives and Architectures of Interest

2) Evaluate new Accelerometer technologies
3) Evaluate ease of maintenance concept
4) Evaluate guidance MTBF increase
5) Evaluate capabilities/ vulnerabilities of external aiding
6) Evaluate pros/cons/risk of strap down and semi-strap down configurations
7) Evaluate external aiding concepts

C. Ground Infrastructure
1) Evaluate proposed basing hardness level/vulnerabilities
2) Identify all ground support equipment necessary for this basing mode and identify any upgrades that may be needed
3) Evaluate affordable and effective security enablers
4) Discuss top-level strategy in developing new basing mode

D. Nuclear Command, Control and Communication (NC3)
5) Clearly define NC3 architecture and identify potential vulnerabilities
6) Evaluate/Assess operational effectiveness of ALCS and make recommendations on changes/improvements/modifications
7) Define timelines for processing EAMs and sending out critical commands

E. Warhead and Re-entry Vehicle
1) Quantify manufacturing and operational risk in utilizing existing RVs
2) Evaluate MIRV capabilities
3) Evaluate adaptability of TSV/TCV
4) Evaluate materials to increase operational effectiveness

F. “Plug and Play” Technology for Nuclear/Space/Conventional Systems

G. System Integration
1) Fully integrated concept addressing all subsystem components into single weapon system solution.
2) Evaluate how warfighter is integrated into weapon system to provide positive control between subsystem components.
3) Evaluate life cycle cost risks for all integrated subsystem components and assess ability to minimize future upgrade costs.
Appendix A
BAA Concept Objectives and Architectures of Interest

IV. Tunnel Concept

The Tunnel concept mode operates similar to a subway system but with only a single transporter/launcher and missile dedicated to a given tunnel. The vehicle moves at random down the length of the Tunnel. The Tunnel is long enough to improve survivability but leaving enough room to permit adequate "rattle space" in the event of an enemy attack. The diameter of the Tunnel should be designed to fit the missile and the mobile launcher. The self-propelled, unmanned cars can move via rail or in a “trackless” configuration. Launch portals should be available at regular intervals, allowing the transporter’s strongback to be raised and the missile launched. During an attack, the launcher vehicle will need protection from ground shock.

Launch communications is addressed in three different modes. Industry should provide a communications architecture for Higher Authority paths between Leadership and mobile Launch Control Centers. Industry should also address Intra-Tunnel communication capability to communicate to the mobile launch control center and launch unit within a given Tunnel.

Industry should provide methods to reduce overall ownership cost to sustain the system to include refining security and maintenance operating concepts. Industry inputs should provide an integrated systems engineered approach to implement technologies incrementally to optimize efficiencies.

Tunnel Mission Focus Areas

A. Propulsion
   1) Further evaluation of alternative propellants
   2) Evaluation of Alternative case materials
   3) Evaluate nozzle configuration/control
   4) Evaluation of number of stages
   5) Evaluation of diameter of stages
   6) Evaluate TT vs. GEMS vs. Liquid 3rd stage
   7) Evaluate propellant aging/health Monitoring capabilities

B. Guidance
   1) Evaluate new IMU technologies
   2) Evaluate new Accelerometer technologies
   3) Evaluate ease of maintenance concept
   4) Evaluate guidance MTBF increase
   5) Evaluate capabilities/ vulnerabilities of external aiding
   6) Evaluate pros/cons/risk of strap down and semi-strap down configurations
Appendix A
BAA Concept Objectives and Architectures of Interest

C. Ground Infrastructure
   1) Evaluate proposed basing hardness level/vulnerabilities
   2) Identify all ground support equipment necessary for this basing mode and identify any upgrades that may be needed
   3) Evaluate affordable and effective security enablers
   4) Discuss top-level strategy in developing new basing mode

D. Nuclear Command, Control and Communication (NC3)
   1) Clearly define NC3 architecture and identify potential vulnerabilities
   2) Evaluate/Assess operational effectiveness of ALCS and make recommendations on changes/improvements/modifications
   3) Define timelines for processing EAMs and sending out critical commands

E. Warhead and Re-entry Vehicle
   1) Quantify manufacturing and operational risk in utilizing existing RVs
   2) Evaluate MIRV capabilities
   3) Evaluate adaptability of TSV/TCV
   4) Evaluate materials to increase operational effectiveness

F. “Plug and Play” Technology for Nuclear/Space/Conventional Systems

G. System Integration
   1) Fully integrated concept addressing all subsystem components into single weapon system solution.
   2) Evaluate how warfighter is integrated into weapon system to provide positive control between subsystem components.
   3) Evaluate life cycle cost risks for all integrated subsystem components and assess ability to minimize future upgrade costs.
ORGANIZATIONAL CONFLICT OF INTEREST MITIGATION PLAN CHECKLIST

<table>
<thead>
<tr>
<th>Contractor:</th>
<th>Contract/RFP Number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The contractor shall enter the page and line numbers from their OCI Mitigation Plan corresponding to each requirement listed on this form, and submit the completed form to the Contracting Officer (CO) along with each new and revised OCI Mitigation Plan. If subcontractor or other teammate OCI Mitigation Plan(s) is submitted, each Plan shall include a completed checklist. Mark items that are not applicable “N/A.”</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1.0</th>
<th>General Considerations</th>
<th>Page/Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Clear statement of corporate commitment and sensitivity of OCI for this acquisition.</td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>Plan signed by senior corporate official Vice President of above.</td>
<td></td>
</tr>
<tr>
<td>1.3</td>
<td>Corporate commitment to certify annual compliance with OCI Plan.</td>
<td></td>
</tr>
<tr>
<td>1.4</td>
<td>Description of business unit performing contract effort position within corporate structure clearly explained.</td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>Parent organization chart is included in the Plan.</td>
<td></td>
</tr>
<tr>
<td>1.6</td>
<td>Performing business unit (division, sector, subsidiary, affiliate, etc) organization chart is included in the Plan.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2.0</th>
<th>Definitions</th>
<th>Page/Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Definitions of all terms used are included in the Plan.</td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td>Identification of any definitions, from solicitation/contract Section H OCI Provision, altered, added or deleted is described in the Plan with rationale for deviation.</td>
<td></td>
</tr>
<tr>
<td>2.3</td>
<td>Definitions of all acronyms used in the Plan are included.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.0</th>
<th>Description of the OCI Situation</th>
<th>Page/Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Description of OCI situation(s)/role(s) included in Plan.</td>
<td></td>
</tr>
<tr>
<td>3.2</td>
<td>All actual or potential OCI described in the Plan.</td>
<td></td>
</tr>
<tr>
<td>3.3</td>
<td>OCI situations are identified by contract number and customer.</td>
<td></td>
</tr>
<tr>
<td>3.4</td>
<td>Plan contains detailed explanation of the factors that place the contractor in an OCI situation.</td>
<td></td>
</tr>
<tr>
<td>3.5</td>
<td>Plan identifies if subcontractors or other teammates have OCI situation.</td>
<td></td>
</tr>
<tr>
<td>3.6</td>
<td>Plan identifies subcontractor or other teammate OCI Mitigation Plans.</td>
<td></td>
</tr>
<tr>
<td>3.7</td>
<td>Subcontractor or other teammate OCI Mitigation Plans are attached to prime Plan.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4.0</th>
<th>Management of OCI Mitigation Plan</th>
<th>Page/Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Individual responsible for oversight and administration of the Plan is identified by name and place in company/business unit organizational structure.</td>
<td></td>
</tr>
<tr>
<td>4.2</td>
<td>Individual responsible for maintaining documentation related to Plan is identified by name and place in company/business unit organizational structure.</td>
<td></td>
</tr>
</tbody>
</table>
### APPENDIX B

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.3</td>
<td>Plan identifies location where Plan documentation is maintained and the location is easily accessible by the Government Contracting Officer or auditor.</td>
</tr>
<tr>
<td>4.4</td>
<td>Corporate OCI-related policies and procedures are identified.</td>
</tr>
<tr>
<td>4.5</td>
<td>Any corporate policies and procedures referenced in the instant Plan are in writing and attached to the Plan.</td>
</tr>
<tr>
<td>4.6</td>
<td>Processes and procedures to execute the Plan are in place to effectively execute the Plan.</td>
</tr>
<tr>
<td>4.7</td>
<td>Processes and procedures to execute the Plan are clearly described in the Plan.</td>
</tr>
<tr>
<td>4.7.1</td>
<td>Process for advance notification to Government PCO of addition, deletion, or change to Plan team members is described and complies with contract Section H OCI provision.</td>
</tr>
<tr>
<td>4.7.2</td>
<td>Process for timely notification to Government PCO of OCI Plan violation or appearance of violation is described and complies with contract Section H OCI provision.</td>
</tr>
<tr>
<td>4.7.3</td>
<td>If OCI is one of bias or impaired objectivity, plan includes more than firewalls or methods for protection of data. Process for de-conflicting contract data submittals to mitigate impaired objectivity or bias is described and complies with contract Section H OCI provision or methods are described. For example: assignment of work to non-conflicted subcontractors (along with how such subcontractors are to be managed); or independent review of work product to insure it is free from bias or impaired objectivity.</td>
</tr>
<tr>
<td>4.8</td>
<td>Plan describes how organizational separation will be used as an OCI mitigation tool.</td>
</tr>
<tr>
<td>4.9</td>
<td>Cost Accounting Standards disclosure statements are in place.</td>
</tr>
<tr>
<td>4.10</td>
<td>Cost estimating systems and cost collection systems are in place.</td>
</tr>
<tr>
<td>4.11</td>
<td>The business unit for this contract action has provisional billing rates and separate labor rate structures in place.</td>
</tr>
<tr>
<td>4.12</td>
<td>Plan describes how physical/geographic separation will be used as an OCI mitigation tool.</td>
</tr>
<tr>
<td>4.13</td>
<td>Physical workspace separation with controlled access areas is used in addition to separation provided within the program areas where sensitive information is involved.</td>
</tr>
<tr>
<td>4.14</td>
<td>Badge accesses are used for separation and control.</td>
</tr>
<tr>
<td>4.15</td>
<td>Data separation and protection processes and procedures are in place.</td>
</tr>
<tr>
<td>4.16</td>
<td>Separate computers and networks are maintained with adequate firewalls to preclude data from being accessed outside program/project channels.</td>
</tr>
<tr>
<td>4.17</td>
<td>Government-approved electronic isolation is used (e.g. restricted access on shared drives)</td>
</tr>
<tr>
<td>4.18</td>
<td>Electronic data is sufficiently password-protected among all personnel to preclude inadvertent release of sensitive information.</td>
</tr>
<tr>
<td>4.19</td>
<td>Plan requires obtaining consent from other contractors prior to releasing their proprietary information for legitimate program purposes.</td>
</tr>
</tbody>
</table>
4.20 Access lists are used to document those with restricted access to potential OCI material and information.

4.21 Plan describes the process for ensuring access lists are current and accurate.

4.22 Release and approval procedures are in place to preclude release of either hardcopy or softcopy information (including email) without prior approval and screening.

4.23 Plan describes the person to approve release of hardcopy or softcopy information and their placement in the program/contract organization.

4.24 Document marking procedures are clearly described to control program/project reports and products, as well as sensitive information of the Government or other contractors.

4.25 Storage containers and procedures are described for safeguarding program/project material and sensitive information of the Government or other contractors.

5.0 Management of Personnel

5.1 Plan meets the minimum employment restrictions contained in the solicitation/contract Section H OCI provision.

5.2 Employment restrictions apply, as a minimum, to classes of employees as described in the solicitation/contract Section H OCI provision.

5.3 Any deviation from the employment restrictions described in the solicitation/contract is clearly indicated in the Plan with rationale and alternative mitigation techniques.

5.4 Personnel policies mitigate rotation of personnel on new tasks to avoid biased judgment or impaired objectivity.

5.5 Corporate policies on assignment of personnel to mitigate OCI are described in the Plan and attached to the Plan.

5.6 Employee transfers are limited to preclude the inadvertent flow of sensitive information to competing part of the company where inside information could be used inappropriately.

5.7 OCI training and awareness briefings of all personnel working on the program/project are identified in the Plan.

5.8 Persons or classes of persons working on the program/project not subject to OCI training and awareness briefings is identified in the Plan with rationale and description of alternate OCI mitigation techniques.

5.9 Plan describes frequency of training and awareness briefings (not less than annually).

5.10 Plan describes how training completion is documented and where maintained.

5.11 Plan describes requirements for program/project personnel to execute Non-Disclosure Agreements (NDA) to protect proprietary and other sensitive information.

5.12 Plan describes requirements for debriefing personnel who executed NDAs upon transfer, reassignment, change of employers, or retirement.
### APPENDIX B

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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>5.13</strong></td>
<td>NDAs require protection of information in perpetuity or for some designated period.</td>
</tr>
<tr>
<td></td>
<td>NDA remains in effect from the date of signature until two years after completion of participation on the developmental effort.</td>
</tr>
<tr>
<td><strong>5.14</strong></td>
<td>Plan describes how personnel involvement in Government source selection activities is restricted when parts of the parent company are competing in OCI-impacted efforts.</td>
</tr>
<tr>
<td><strong>5.15</strong></td>
<td>Plan describes how personnel are disciplined for non-compliance with the Plan.</td>
</tr>
<tr>
<td><strong>5.16</strong></td>
<td>Plan description of discipline for non-compliance with the Plan is sufficient to clarify the stratification in discipline commensurate with the severity of the offense.</td>
</tr>
<tr>
<td><strong>5.17</strong></td>
<td>Plan specifies how and where disciplinary actions are documented.</td>
</tr>
<tr>
<td><strong>6.0</strong></td>
<td><strong>OCI Mitigation Plan Reviews</strong></td>
</tr>
<tr>
<td><strong>6.1</strong></td>
<td>Plan provides for corporation oversight and audit of OCI processes and procedures.</td>
</tr>
<tr>
<td><strong>6.2</strong></td>
<td>Plan specifies frequency of corporate audits.</td>
</tr>
<tr>
<td><strong>6.3</strong></td>
<td>Plan requires annual certification of compliance with the terms of the Plan, signed by a senior corporate official Vice President or above.</td>
</tr>
<tr>
<td><strong>6.4</strong></td>
<td>Plan specifies where Plan certification documentation is maintained.</td>
</tr>
</tbody>
</table>