EXHIBIT B
STATEMENT OF WORK NNSS
Power Ops Planning, Design, Build – Substation Control Houses
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List of Acronyms

Acronym	Definition
CM	Construction Manager
EPP	Environmentally Preferable Products
ES&H	Environmental Safety and Health
GFE	Government Furnished Equipment
GFP	Government Furnished Property
LAO	Los Alamos Operations at Los Alamos, NM
LO	Livermore Operations at Livermore, CA
M&O	Maintenance and Operation
MSTS	Mission Support and Test Services, LLC
NEPA	National Environmental Policy Act
NESC	National Electrical Safety Code
NFO	Nevada Field Office
NLV	North Las Vegas Facility
NNSA	National Nuclear Security Administration
NNSS	Nevada National Security Site
REOP	Real Estate Operations Permit
ROM	Rough Order Magnitude
RSLA	Remote Sensing Lab at Andrews AFB, Maryland
RSLN	Remote Sensing Lab at Nellis AFB, North Las Vegas, NV
SME	Subject Matter Expert
SSSP	Site-Specific Safety Plan
STL	Special Technologies Lab at Santa Barbara, CA
STR	Subcontract Technical Representative
WBS	Work Breakdown Structure

B-1 INTRODUCTION AND BACKGROUND

1.1. Introduction

The Nevada National Security Sites (NNSS) is a U.S. Department of Energy, National Nuclear Security Administration (NNSA) installation, operated by Mission Support and Test Services, LLC (MSTS or CONTRACTOR), comprising approximately 3,561 square kilometers (1,375 square miles) of federally owned land located in southeastern Nye County, Nevada. Located approximately 105 kilometers (65 miles) northwest of Las Vegas, Nevada, the NNSS is accessed from U.S. Highway 95, which roughly forms the southern boundary of the site.

The MSTS also operates the North Las Vegas Facility (NLV); the Remote Sensing Lab at Nellis AFB, North Las Vegas, NV (RSLN); the Remote Sensing Lab at Andrews AFB, Maryland (RSLA); Special Technologies Lab at Santa Barbara, CA (STL); Livermore Operations at Livermore, CA (LO); and Los Alamos Operations at Los Alamos, NM (LAO).

1.2. Background

To manage the diversity and volume of construction efforts on the NNSS our objective is to establish a relationship with a single industry partner to assist the development, design, and the construction execution of projects at the NNSS. The SUBCONTRACTOR will be leveraged to establish design engineering, filed engineering, estimating, procurement, project control, project management, construction execution, and testing/commissioning team leveraging commercial industry practices with a focus on maturing a project from the early idea phase through construction and into closeout with commissioning and turnover.

The Electric Power Transmission System that services the NNSS is a 138kV Power Loop Configuration Network with eight major substations and three possible service sites for the incoming commercial power service. This Power System was engineered and constructed in the early 1960's and has been maintained for the on-going service requirements. Reliability requirements have now established that the Substation Control Houses need to be replaced with modern electrical equipment and to utilize prefabricated structures that can be built off site and equipped with the most modern electrical equipment. This will allow quick installation and reduce required power outages with service downtime. These structures shall be secure housing that is custom built to house the equipment requirements for the footprint of that substation and will be required to meet all code compliance standard for the structure and electronic equipment.

B-2 OBJECTIVE

CONTRACTOR requires the services of an experienced SUBCONTRACTOR to effectively manage the diverse and substantial construction activities at the Nevada National Security Site (NNSS), our objective is to establish a singular partnership with an industry leader. This collaboration will support the entire project lifecycle, encompassing development, design, and construction execution.

The SUBCONTRACTOR will provide comprehensive services, including design engineering, field engineering, estimating, procurement, project controls, project management, construction execution, and testing/commissioning. The SUBCONTRACTOR will integrate commercial industry best practices to streamline projects from initial concept through construction completion, commissioning, and final closeout.

A critical initiative involves modernizing the NNSS Electric Power Transmission System, a 138kV looped network established in the 1960s. This system comprises eight primary substations and three potential commercial power service points. To enhance reliability and minimize service disruptions, the existing Substation Control Houses require replacement. The modernization strategy prioritizes the use of prefabricated structures, equipped with contemporary electrical components, manufactured off-site. This approach facilitates rapid installation and

reduces power outage durations. These custom-built, secure structures must comply with all applicable code standards for both the physical housing and the electronic equipment contained within, tailored to each substation's specific footprint.

B-3 DESCRIPTION OF WORK

The SUBCONTRACTOR shall provide technically qualified resources that work as a part of a team under the direct oversight of MSTS. SUBCONTRACTOR resources shall be responsible for independently planning, organizing, and performing a wide variety of non-hazardous specialized administrative/technical duties in support of the successful completion of goals and deliverables. Additionally, the SUBCONTRACTOR shall furnish all necessary labor, technical and professional services, supervision, materials, tools, equipment, consumables, and payment of any applicable taxes to perform all operations necessary and required to perform the scope as directed by MSTS.

Unless otherwise approved, the SUBCONTRACTOR shall work in accordance with MSTS subcontract requirements.

The work scope for this activity includes the resources, material and/or equipment necessary to accomplish the below MSTS activities.

The SUBCONTRACTOR will be required to have resources readily available (preferably local) to execute the following scope activities. It is expected that multiple projects/efforts will be underway at any one time across the various phases outlined below. The quality and completeness of the SUBCONTRACTOR'S efforts for each phase (advancement through the phases) will be evaluated by a board comprised of leadership from the various CONTRACTOR programs and functional areas. The effort for each phase beyond the initial Idea and Discovery Phase will be unique for each project and is envisioned to be released via Task Order Release that the selected subcontractor will provide a proposal.

3.1 Technical Requirements:

3.1.1 Prefabricated Structure Design and Construction: The structures must be custom-built off-site, necessitating expertise in modular construction, precise dimensioning to fit existing substation footprints, and robust structural integrity for transportation and installation.

3.1.2 Modern Electrical Equipment Integration: The structures will house advanced electrical equipment. This requires knowledge of current utility-grade switchgear, protection and control systems, SCADA (Supervisory Control and Data Acquisition) components, and communication interfaces. The design must accommodate power distribution, grounding, and surge protection for this equipment.

3.1.3 Code Compliance: Strict adherence to a multitude of codes and standards is paramount. This includes, but is not limited to:

- **National Electrical Safety Code (NESC)** for safety provisions related to electric supply stations and overhead/underground lines.
- National Electrical Code (NEC) for electrical installations within the structures.
- International Building Code (IBC) or relevant local building codes for structural integrity and seismic requirements.
- IEEE standards for electrical equipment design and performance.
- OSHA regulations for safety during construction and operation.
- Specific Department of Energy (DOE) orders and standards applicable to facility operations.

3.1.4 Security Integration: As secure housing, the design must incorporate physical security measures appropriate for critical infrastructure, potentially including hardened exteriors, access control systems, surveillance, and intrusion detection.

3.1.5 Environmental Controls: The structures must provide a stable environment for sensitive electrical equipment, requiring robust HVAC systems, fire detection, and potentially humidity control, designed for the specific climate conditions of the NNSS.

3.1.6 Interoperability: New equipment must seamlessly integrate with the existing 138kV Power Loop Configuration Network, including control systems and protective relaying, without compromising the overall system's stability or reliability.

3.2 Challenges:

3.2.1 Minimizing Downtime: The primary challenge is to execute replacements with minimal service downtime for the 138kV power system. This necessitates meticulous planning for cutovers, temporary power arrangements, and potentially phased installation strategies to maintain grid stability.

3.2.2 Legacy System Integration: Interfacing modern digital controls and equipment with older, potentially analog or electromechanical systems from the 1960s requires specialized engineering to ensure compatibility and reliable operation without introducing new vulnerabilities.

3.2.3 Site-Specific Constraints: Each of the eight substations may have unique physical footprints, access limitations, or environmental considerations (e.g., soil conditions, existing underground utilities) that require bespoke design solutions for each prefabricated structure.

3.2.4 Procurement and Logistics: Managing the procurement of specialized, long-lead electrical components and coordinating the delivery and installation of large, prefabricated structures to a secure, remote site like the NNSS presents significant logistical challenges.

3.2.5 Rigorous Testing and Commissioning: New systems must undergo extensive testing and commissioning to verify functionality, reliability, and safety before being brought online, especially given the critical nature of the NNSS power supply. This includes Factory Acceptance Testing (FAT) and Site Acceptance Testing (SAT).

3.2.6 Cybersecurity: Integrating modern control systems introduces cybersecurity considerations that must be addressed to protect the Operational Technology (OT) network from potential threats, aligning with DOE cybersecurity requirements for critical infrastructure.

3.3 Commissioning and Turnover Activities and Responsibilities

The commissioning phase systematically verifies that all new components and integrated systems function according to design specifications and operational requirements. Turnover formally transfers responsibility for the operational system to the owner (DOE/NNSS).

Key Activities:

3.3.1 Pre-Commissioning Checks:

- **Activity:** Verification of proper installation, wiring continuity, insulation resistance, and equipment calibration. Includes visual inspections to confirm compliance with drawings and specifications.
- **Responsibility:** SUBCONTRACTOR's construction and quality control teams, with oversight from the NNSS project team.

3.3.2 Functional Testing:

- **Activity:** Individual component testing (e.g., circuit breaker operation, relay protection functions, transformer tests, SCADA point validation). Followed by integrated system testing to simulate various operational scenarios, including normal operation, fault conditions, and emergency responses. This includes testing of communications, controls, and interlocking systems.
- **Responsibility:** SUBCONTRACTOR's commissioning team, involving specialized engineers and technicians, in collaboration with NNSS operations personnel to validate functional requirements.

3.3.3 Performance Testing:

- **Activity:** Verification that the entire modernized substation control house and integrated equipment meet specified performance parameters under operational loads, including checks on voltage regulation, power quality, and thermal performance of equipment.
- **Responsibility:** SUBCONTRACTOR's commissioning team, with active participation from NNSS engineering and operations to confirm operational readiness and adherence to design parameters.

3.3.4 Documentation and Training:

- **Activity:** Compilation of all commissioning reports, test results, updated as-built drawings, operation and maintenance (O&M) manuals, spare parts lists, and warranty information. Comprehensive training for NNSS operations and maintenance staff on the new equipment and systems.
- **Responsibility:** SUBCONTRACTOR is responsible for developing and delivering all documentation and training materials. NNSS is responsible for reviewing and approving documentation and ensuring staff complete required training.

3.3.5 Punch List Closure:

- **Activity:** Identification of any deficiencies or non-conformances during testing, creation of a punch list, and verification of satisfactory resolution.
- **Responsibility:** SUBCONTRACTOR is responsible for addressing all punch list items. NNSS ensures that all items are closed out satisfactorily before final acceptance.

3.3.6 Final Acceptance and Turnover:

- **Activity:** Formal acceptance of the system by NNSS after successful completion of all commissioning activities, punch list resolution, and documentation/training. Transfer of operational responsibility and warranties.
- **Responsibility:** NNSS formally accepts the system from the SUBCONTRACTOR.

3.4 Tasks

Task Orders may include, but not be limited to the following:

3.4.1 Discovery Phase

In the Discovery phase the SUBCONTRACTOR shall work with key stakeholders to validate the objectives of the project, develop draft function requirements, set up the structure of the project within MSTS business systems, and prepare a Class 5 cost estimate/rough order of magnitude (ROM). As this phase may involve activity level work and craft resources to execute, the SUBCONTRACTOR will need to satisfy the requirements in Exhibit E for discrete activity level work elements.

SUBCONTRACTOR shall thoroughly assess project requirements, constraints, and objectives, involving site evaluations, stakeholder consultations, and identification of regulatory requirements. SUBCONTRACTOR shall clearly define and document key project drivers—such as timeline, budget, sustainability goals, and functional needs.

3.4.2 Planning Phase

In the Planning Phase the SUBCONTRACTOR shall increase the maturity of the project documentation by completing addition project deliverable/documentation such as a structured Work Breakdown Structure (WBS) to segment the project into logical, manageable components, conceptual design, initial risk register, initial project schedule, project charter, updated project acquisition strategy, and project initiation checklist. SUBCONTRACTOR shall engage with relevant experts and stakeholders to ensure the scope adequately of these documents/deliverables reflects both operational goals and compliance obligations.

3.4.3 Development Phase

In this phase the SUBCONTRACTOR may be tasked to continue to mature project artifacts, work with MSTS programs and down select the acquisition strategy and assist the CONTRACTOR in reviewing project documents. This may include long lead procurement packages for items such as power transformers. Additional MSTS specific project documents such as Project Planning Checklist, National Environmental Policy Act (NEPA) Checklist, and Real Estate Operations Permit (REOP) may also be developed by the SUBCONTRACTOR at this phase. Given the selected acquisition strategy, complexity, and size this phase is often consolidated with design.

3.4.4 Design Phase

As established in specific task orders, SUBCONTRACTOR shall perform design services consisting of urban/campus, interior, mechanical, electrical, civil, structural, electronics, communications, fire protection, architectural, topographical, and cadastral design; geotechnical surveys of existing conditions or facilities; development of documentation, calculations, computerized modeling, and reports for conceptual design, building code analyses, preliminary design, definitive design criteria, detailed final design, cost estimates and schedules, construction drawings and specifications, interior design and color boards and/or renderings, design criteria documents, functional classification documents, and any other documentation necessary to execute maintenance, repair, alteration, modification, and/or new construction projects for non-nuclear facilities.

CONTRACTOR will provide general design criteria, which contains standard base design requirements and adopted versions of codes and standards. The SUBCONTRACTOR shall be responsible for reviewing documents and adapting requirements for design deliverables.

SUBCONTRACTOR shall provide a schedule for each design activity. The schedule shall match dates specified in the task order.

Additional requirements for design are detailed in Appendix A, 1.2 “A/E Detailed Design Requirements.”

3.4.5 Construction Phase

The SUBCONTRACTOR will be responsible for development of all applicable permits, health and safety plans and activity level work control documents, procurement of material, execution of all construction activities, and start-up testing.

The SUBCONTRACTOR shall perform general construction work, which may include but is not limited to: surveying, site preparation & earthwork (rough & finish), utility pole installation / replacement, trenching, piping, underground utilities (wet, dry, sewage), landscaping, paving, demolition, lead & asbestos abatement, concrete (structural & sub-structure), masonry, general carpentry (rough & finish), drywall & acoustic ceiling, miscellaneous metals, structural metal & wood, thermal & moisture protection, fire protection, mechanical, electrical (including telecom/data and high voltage work), plumbing, insulation (exterior & interior), roofing, flooring (removal and/or installation), painting (exterior & interior), alteration, remodeling, and green/sustainability capabilities.

The SUBCONTRACTOR shall be available to perform a pre-job walk-down which may be required and specified on certain Task Orders.

The SUBCONTRACTOR shall provide accurate quantity takeoffs and detailed cost breakdowns for multi-disciplined construction projects if required by CONTRACTOR for pre-planning or planning strategy purposes only.
The SUBCONTRACTOR is solely responsible for determining the techniques, means, methods, and materials to meet the requirements of Task Orders. All work shall comply with applicable codes at the time of Task Order authorization.

3.4.6 Close Out Phase

The SUBCONTRACTOR may be tasked to complete all as-built drawings and work with the CONTRACTOR to develop lessons learned and close out all project artifacts.

3.5 Acceptance Criteria

Work products and services provided shall meet all applicable MSTS procedures for control and review of work products and pertinent regulatory requirements, as required by this subcontract and incorporated provisions.

3.5.1 **Functional Verification:** All installed equipment and integrated systems must demonstrate full functionality in accordance with the approved design specifications, manufacturer's guidelines, and relevant standards (e.g., IEEE, NESC).

3.5.2 **Performance Validation:** The system must meet all specified performance metrics, including but not limited to:

- Reliable operation of protective relaying and control systems.
- Accurate metering and SCADA data acquisition.
- Environmental controls (HVAC, fire suppression) operate within specified ranges.
- Communication systems are fully functional and integrated with the NNSS network.

3.5.3 **Safety Compliance:** All systems must be verified to comply with all applicable safety codes and standards, including NESC, NEC, OSHA, and specific DOE safety requirements. This includes verified grounding, clearances, and lockout/tagout procedures, Arc Flash Safety.

3.5.4 **Documentation Completeness:** All required documentation, including as-built drawings, O&M manuals, test reports, and equipment warranties, must be provided, reviewed, and approved by NNSS.

3.5.5 **Personnel Training:** NNSS operations and maintenance personnel must successfully complete all required training sessions and demonstrate proficiency in operating and maintaining the new systems.

3.5.6 **Punch List Resolution:** All deficiencies identified during commissioning must be rectified and verified as closed by NNSS project management.

3.5.7 **Cybersecurity Compliance:** For any integrated digital control or communication systems, compliance with NNSS and DOE cybersecurity requirements must be verified and documented.

B-4 PERSONNEL REQUIREMENTS

4.1. Training

There is no site-specific training required for the Indefinite Delivery, Indefinite Quantity (IDIQ) Blanket Master Agreement. SUBCONTRACTOR personnel supporting task orders shall attend the following site-specific training. Additional training may be specified when required for a task order work scope. NOTE site access may be delayed until training is completed or renewed. The SUBCONTRACTOR shall contact the STR to coordinate scheduling of training. See Section B-6, 6.4 *Badging*. To facilitate task order performance, upon award of the agreement SUBCONTRACTOR may request training for personnel who will support task orders throughout the agreement ordering period.

DESCRIPTION	DURATION	FREQUENCY
NNSS Site Access Safety Orientation (1E00W102)	0.5 Hours	One time only
General Employee Radiological Training (GERT) (WBT) 1E00W585	0.5 Hours	One time only
MSTS Export Control Awareness (WBT) 1H00W310	0.5 Hours	One time only
Overview of Controlled Unclassified Information	1.0 Hour	One time only
Protective actions - How to Act During an Emergency (WBT) 1REMPAW1	0.5 Hour	365 days
Initial Security Briefing. DOE O 470.4B, “Safeguards and Security Program” (1S000110) as well as DOE O 470.4B Chg. 3 (Ltd.Chg.)	1 Hour	One time only
IWCP-WBT Training (1G00W552)	1 Hour	One Time Only
Personal Protective Equipment (WBT) 1E00W315	1 Hour	One Time Only
Hearing Conservation Training (WBT) 1E00W350	1 Hour	One Time Only
Any other training identified in Exhibit E, or subsequent Task Orders	N/A	N/A

The SUBCONTRACTOR shall maintain training records for their personnel and ensure all required training is completed prior to start of work. Additionally, as soon as practical after award, the SUBCONTRACTOR shall

submit a badge request for personnel required under the various releases so that they may be scheduled for training and medical evaluation so that crews will be eligible for work on site.

4.2. Qualifications, Licensing and Certifications

The SUBCONTRACTOR shall ensure that its personnel meet and maintain the appropriate training, qualifications, licensing, and certification requirements to perform the work as specified in this Statement of Work (SOW). The SUBCONTRACTOR shall provide appropriately trained and qualified staff to perform the type of work in accordance with the specifications, exhibits, and other documents, which are made by reference, and part of this SOW. Additionally, the SUBCONTRACTOR shall perform work in accordance with the specifications, exhibits, and other documents, which are made by reference, and are a part of the SOW.

4.2.1. Key Personnel Qualifications

All key personnel proposed for this project, including but not limited to the Project Manager, Lead Electrical Engineer, Lead Protection & Control Engineer, and Lead SCADA Engineer, shall be direct employees of the prime SUBCONTRACTOR. Subcontracted personnel will not be accepted for these critical roles. The contractor shall submit resumes for all proposed key personnel, detailing their qualifications, experience in similar substation projects, and their employment status with the prime contractor. The CONTRACTOR reserves the right to interview proposed key personnel and approve their suitability for the project.

Minimum qualifications and experience for key personnel roles are as follows:

4.2.1.8 Project Manager

Assists CM on construction projects, ensuring they are completed on time, within budget and to the required standards.

.Responsibilities

- Manage all phases of projects, from planning and budgeting to execution and completion.
- Coordinates with various stakeholders, including clients, contractors, and suppliers.
- Create and manage project schedules, ensuring that all tasks are completed on time and that resources are allocated efficiently.
- Supervise project activities to ensure compliance with safety regulations and quality standards, addressing any issues that arise during the construction process.
- Identify and resolve issues that may impact project timelines or budgets, ensuring projects stay on track.

Qualifications

- Bachelor’s degree in construction management, engineering, or a related field.
- Demonstrated experience with projects involving substation control houses, protection systems, and SCADA integration.
- Minimum of ten (10) years of progressive experience in managing complex electrical infrastructure or substation projects, with at least five (5) years in a primary project management role.
- Project Management Professional (PMP) certification or equivalent is highly preferred.

4.2.1.1 Lead Electrical Engineer

Oversees the design, implementation, and management of electrical systems, ensuring compliance with industry standards and project specifications

Responsibilities

- Lead the design and development of electrical systems and components.
- Collaborate with cross-functional teams to integrate electrical designs with other systems.
- Ensure compliance with industry standards and regulations.

- Optimize design processes and methodologies for maximum efficiency.
- Review and approve technical drawings, specifications, and documentation.
- Conduct feasibility studies, risk assessments, and cost estimations for projects.
- Participate in project planning and management activities.
- Identify and implement innovative solutions to improve system performance.

Qualifications

- Minimum of a bachelor's degree in electrical engineering from an ABET-accredited institution.
- Professional Engineer (PE) license in at least one U.S. state, with the ability to obtain licensure in [State where project is located, if necessary] within six months of contract award.
- Minimum of eight (8) years of experience in electrical power system design, specifically related to substations, including AC/DC auxiliary systems and equipment specification.
- Direct experience with control house electrical layouts, cable sizing, and grounding system design.

4.2.1.2 Lead Protection & Control Engineer

Responsibilities

- Oversee the planning and execution of engineering projects for protection systems and control equipment.
- Ensure compliance with industry standards, local codes, National Electrical Equipment Integration (NESC) and safety regulations.
- Collaborate with architects, contractors, and other stakeholders.
- Perform relay control and protection analysis and calculations.
- Install calculated settings into relays
- Test and validate relay settings
- Prepare and review engineering plans, specifications, and reports.
- Conduct site inspections and ensure quality control.
- Resolve technical issues and provide engineering solutions

Qualifications

- Minimum of a bachelor's degree in electrical engineering from an ABET-accredited institution.
- Professional Engineer (PE) license in at least one U.S. state, with the ability to obtain licensure in [State where project is located, if necessary] within six months of contract award.
- Minimum of eight (8) years of specialized experience in the design, setting, testing, and commissioning of protective relaying schemes for high-voltage substations.

4.2.1.3 Proficiency with various relay manufacturers and communication protocols relevant to substation automation.Electrical Engineer

Oversees the design, evaluation, and implementation of engineering projects, ensuring compliance with safety and regulatory standards.

Responsibilities

- Oversee the planning and execution of engineering projects.
- Ensure compliance with industry standards, local codes, National Electrical Equipment Integration (NESC) and safety regulations.
- Collaborate with architects, contractors, and other stakeholders.
- Perform electrical analysis and calculations.
- Prepare and review engineering plans, specifications, and reports.

- Conduct site inspections and ensure quality control.
- Resolve technical issues and provide engineering solutions

Qualifications

- Minimum of a bachelor's degree in electrical engineering from an ABET-accredited institution.
- Professional Engineer (PE) license in at least one U.S. state, with the ability to obtain licensure in [State where project is located, if necessary] within six months of contract award.
- Minimum of eight (8) years of experience in electrical power system design, specifically related to substations, including AC/DC auxiliary systems and equipment specification.
- Direct experience with control house electrical layouts, cable sizing, and grounding system design.

4.2.1.4 Lead SCADA Engineer:

Oversee the operational requirements, design, evaluation, and implementation of engineering projects, ensuring compliance with safety and regulatory standards.

Responsibilities

- Monitor and control operations and processes for Supervisory Control and Data Acquisition (SCADA) systems.
- Focus on designing, configuring, and deploying the SCADA systems in a Power Transmission and Distribution environment.
- Configure and install existing systems and plan the deployment of devices, computers and instruments that are a part of the SCADA system.
- Develop and perform maintenance and handle the update responsibilities for software and hardware within the system.
- Develop procedures for emergencies and help troubleshoot when issues arise.
- Analyze system performance and suggest or make improvements where applicable.

Qualifications

- Minimum of a Bachelor's degree in Electrical Engineering, Computer Engineering, or a related technical field.
- Minimum of seven (7) years of experience in the design, implementation, and integration of SCADA systems within utility or substation environments.
- Demonstrated expertise in communication protocols (e.g., DNP3, Modbus, IEC 61850) and real-time data acquisition and control systems specific to substation applications.
- Experience with Human-Machine Interface (HMI) development and integration with existing master SCADA systems.

4.2.1.4 Construction Manager (CM)

Oversees construction projects, ensuring they are completed on time, within budget, and to the required quality standards.

Responsibilities

- Manage all phases of construction projects, from planning and budgeting to execution and completion.
- Coordinates with various stakeholders, including clients, contractors, and suppliers.
- Create and manage project schedules, ensuring that all tasks are completed on time and that resources are allocated efficiently.

- Supervise construction activities to ensure compliance with safety regulations and quality standards, addressing any issues that arise during the construction process.
- Identify and resolve issues that may impact project timelines or budgets, ensuring projects stay on track.

Qualifications

- Bachelor's degree in Construction Management, Civil Engineering, Architecture, or a related field.
- Preferably Certifications such as Certified Construction Manager (CCM) or Project Management Professional (PMP)
- Minimum of five (5) years of experience managing large scale construction work, similar in type, scope, and complexity as will be requested under the Agreement.
- Strong knowledge of construction principles, practices, and standards.
- Excellent project management and organizational skills.
- Strong communication and interpersonal skills.

4.2.1.7 Corporate Safety Officer

Ensure a safe and healthy work environment, compliance with safety regulations, and development of safety programs and policies.

Responsibilities

- Develop and implement health and safety plans.
- Conduct regular safety inspections and audits to identify potential hazards and ensure compliance with local, state, and federal regulations.
- Lead safety training sessions to educate employees on best practice and required safety measures.
- Investigate accidents and incidents to identify root causes and recommend corrective actions to prevent future occurrences.
- Collaborate with management and employees to create a culture of safety and encourage open communication regarding safety concerns.

Qualifications

- Bachelor's degree in safety management or relevant field.
- 5 years of proven work experience as a Safety Officer or similar role.
- Experience in writing reports and policies for health and safety.
- Familiarity with conducting data analysis and reporting statistics.
- Knowledge of potentially hazardous materials or practices.
- Experience in conducting safety drills and training.
- Strong communication and interpersonal skills.

In addition to the above, the SUBCONTRACTOR shall provide qualified personnel throughout the period of performance of the Subcontract. SUBCONTRACTOR shall be responsible for ensuring its personnel meet and/or maintain current and valid training requirements, certifications, and are fully capable of completing the duties described through the entirety of the Subcontract period of performance.

B-5 TECHNICAL REQUIREMENTS

Specifications and Drawings will be provided within each Task Order.

B-6 PLACE OF PERFORMANCE

6.1 Delivery Location

Delivery location will be Nevada National Security Site Receiving Warehouse 160 Mercury, NV 89023

6.2 Work Location

Work will be performed at Multiple CONTRACTOR locations to be specified with each Task Order.

For any work performed on the NNSS site or in an MSTS controlled facility, the provision of the On-Site services shall apply to this subcontract.

Work performed outside normal operating hours shall be coordinated and/or approved through the STR and/or the Procurement Specialist prior to performing the work.

6.3 Site Access and Work Hours

MSTS personnel at the NNSS work a standard 4/10 schedule. The standard work week consists of ten (10) hours of work between 6:00 a.m. and 4:30 p.m. with one-half hour designated as an unpaid period for lunch, Monday through Thursday.

Onsite work required to be performed outside normal operating hours shall be coordinated and/or approved through the STR and/or the Procurement Specialist prior to performing work.

6.4 Badging

Any onsite work shall be coordinated with the STR in accordance with the SOW and site-specific training requirements. The SUBCONTRACTOR shall wear a MSTS issued security badge identifying themselves. The SUBCONTRACTOR shall wear a Contractor issued security badge identifying themselves. A minimum of two (2) working days advance notice is needed for site badging. SUBCONTRACTOR employees shall be required to submit to vehicle searches and not personally carry or transport certain prohibited articles (ProhibitedControlledArticlesPolicy.pdf).

B-7 CLEARANCE REQUIREMENTS

The following access authorization or clearance requirements are required.

1) Check all that apply:

- ☒ No security clearance; unclassified work
- ☐ DOE L
- ☐ DOE Q
- ☐ HSPD-12 PIV Credential

2) If applicable, add any or all parts of the following statement security qualifications:

- ☐ The SUBCONTRACTOR shall have the ability to obtain a U.S. Department of Energy (DOE) facility security clearance and have personnel capable of obtaining a Q-type or L-type security clearance.
- ☐ Q- or L-type security clearance is required for all SUBCONTRACTOR personnel having access to classified information or special nuclear material when performing such work.
- ☐ A corresponding level of security clearance from another federal agency may be applicable if approved by the MSTS and DOE.
- ☒ N/A

B-8 SPECIAL REQUIREMENTS

6.5 Personal Protective Equipment

SUBCONTRACTOR shall be responsible for providing Personal Protective Equipment (PPE) for all SUBCONTRACTOR personnel visiting the site(s). PPE shall be suitable for the working environment of the project

Minimum PPE is defined as (additional PPE may be specified in the task order):

- Steel-Toed boots (safety shoes).
- Work gloves
- Ear Protection.
- Hard hat.
- Safety glasses.
- Hi Vis Vest.

6.6 Qualifications, Licensing, Certifications

In order to determine whether the SUBCONTRACTOR is qualified to perform the scope of work as outlined, the SUBCONTRACTOR shall have the following qualifications:

6.6.1. Experience - SUBCONTRACTOR shall have the following corporate experience

- SUBCONTRACTOR shall have minimum 8 years of experience in design and construction of power systems installations and modifications.
- SUBCONTRACTOR shall have previous experience of progressive responsibility in administrative coordinative program experience
- SUBCONTRACTOR shall have demonstrated experience at a government facility, working with multiple regulators and clients in an operational environment. Specific experience with working with the DOE/NNSA is desired.

6.6.2. Licenses – SUBCONTRACTOR shall have the following job-specific licenses:

- Contractors License authorized to work in Nevada

6.6.3. Certifications – SUBCONTRACTOR shall have the following job-specific certifications:

- Certifications to include but limited to perform electrical design work in the State of Nevada
- Task orders may identify additional project specific certifications as required.

In addition to the above, the SUBCONTRACTOR shall provide qualified personnel throughout the period of performance of the Subcontract. SUBCONTRACTOR shall be responsible for ensuring its personnel meet and/or maintain current and valid training requirements, certifications and are fully capable to complete the duties described through the entirety of the Subcontract period of performance.

6.7 Government Assets

Use of Government Vehicles	
☒	There is **NO** anticipated need for any SUBCONTRACTOR employees to use a Government-furnished vehicle in the performance of this SOW. The SUBCONTRACTOR's employees, therefore, are specifically prohibited from driving any Government-furnished vehicles under the performance of this SOW unless this SOW is formally modified by the parties and the employee(s) will present a valid driver's license to the STR for review.

☐	One or more SUBCONTRACTOR employees will have access to Government-furnished vehicles while performing this SOW.
Government Property	
☐	Government Property **NOT** anticipated to be furnished to or acquired by the SUBCONTRACTOR under this SOW.
☒	Pursuant to Federal Acquisition Regulation (FAR) 52.245.1 – Government Property, the following Government-owned property will be furnished to the SUBCONTRACTOR. The SUBCONTRACTOR shall be responsible for managing the Government-Furnished Property (GFP) below and/or Contractor-Acquired Property (CAP) as required in accordance with FAR 52.245-1. A list of the property to be furnished to the SUBCONTRACTOR can be found in Appendix Choose an item, along with any special technical and/or handling instructions.

6.8 Quality Assurance (QA)

The work as described has been identified to be.	
☐	**SAFETY CLASS/SAFETY SIGNIFICANT SERVICES AND/OR COMMODITIES (NUCLEAR/RADIOLOGICAL)** This PO is related to items or services used in support of the nuclear and/or radiological mission(s) of the Nevada National Security Site, therefore: The SUBCONTRACTOR shall implement and maintain a Quality Assurance (QA) program in accordance with at least one the following quality assurance criteria and requirements: • ASME NQA-1 (2015) quality assurance requirements for nuclear facility applications • ASME NQA-1 (2008 with 2009 addenda) quality assurance requirements for nuclear facility applications • Equivalent program authorized in writing by the contractor's quality assurance organization In addition, the SUBCONTRACTOR shall be responsible for: **Price Anderson Amendments Act (PAAA)** The item or service identified in the purchase order agreement is being procured by a contractor to the Department of Energy (DOE)/National Nuclear Security Administration (NNSA). This item or service is intended to be used in the performance of activities that (1) prevent or mitigate radiological or harm to the worker, the public or the environment or (2) provide a healthful and safe workplace for DOE/NNSA contractor personnel. Therefore, the SUBCONTRACTOR is responsible for assuring that the items or services provided under this purchase agreement meet the stated requirements.
☒	**GENERAL SERVICES AND/OR COMMODITIES** This subcontract is for items or services that support the mission(s) of the Nevada National Security Sites, therefore: **SUSPECT/COUNTERFEIT ITEMS REQUIREMENTS**: The SUBCONTRACTOR will take positive measures to ensure that only new, unused equipment/material from acceptable sources is provided under this subcontract. Notwithstanding any other provisions of this subcontract, should any suspect/counterfeit items or components be found within or on this equipment

	during contractor receipt inspection, SUBCONTRACTOR shall, at its expense, promptly replace such items or components. These requirements shall be flowed down to all levels of subcontractors as they pertain to this procurement activity.

B-9 ENVIRONMENTALLY PREFERABLE PRODUCTS

MSTS is required by the U.S. Department of Energy to purchase Environmentally Preferable Products (EPP) (also known as green or sustainable purchasing) and are also required to flow those procurement requirements to their SUBCONTRACTOR. When designing materials and/or supplying materials to be used onsite as part of a subcontract SOW, those materials must meet these same requirements.

The following is a list of EPP types that must be used if they are available:

- **Products with Recycled Content.** MSTS supports efforts that reduce or eliminate environmental hazards, conserve environmental resources, minimize life-cycle cost and liabilities. Towards the end, the acquisition cycle is viewed as an important key in understanding what is brought onto the Site as well as identifying what can be reused/recycled. Focus is directed on recycled-content, biobased-content, ozone-depleting substances, and other environmental impacts. Specific additional clauses are included in this solicitation that address potential requirements and preferences based on the nature of the item being considered for purchase.
- **Water Efficient Plumbing Products**. When purchasing commercially available, off-the-shelf water consuming products, products must meet EPA's WaterSense standards (http://www.epa.gov/watersense).
- **Non-Toxic or Less Toxic Alternatives**
- **Green Certified Products**. (e.g., Design for Environment, Green Seal)
- **Bio-Based Products**. MSTS will give preference to acquiring Department of Agriculture designated biobased products. For more information to this program, see www.biopreferred.gov.
- **Energy Efficient Products**.
  - EPA Energy Star® When purchasing commercially available, off-the-shelf energy-consuming products, products must be Energy Star rated (www.energystar.gov).
  - Federal Energy Management Program designated products, When purchasing commercially available, off-the-shelf energy-consuming products, products must use no more than one watt of standby power as defined and measured by International Electrotechnical Commission (IEC) code 62301 or otherwise met FEMP specifications for low standby power consumption. If FEMP has not specified a standby power level for a product category, the item shall be the lowest standby power consumption available.
- **Energy Efficient Electronics**. When purchasing the following products, EPEAT ratings will apply:
  - Desktop and Notebook Computers – must meet the EPEAT silver rating or higher
  - Displays, Monitors, Integrated Desktop Computers, Workstation Desktops, Thin Client, Workstation Notebooks, and/or Tablet Notebooks – must meet the EPEAT silver rating or higher
  - Fax Machines, Multifunction Devices, and Printers – must meet the EPEAT bronze rating or higher
  - Copiers and Digital Duplicators – must meet the EPEAT silver rating or higher

- **Reuse of Leased IT Electronic Equipment** In accordance with DOE Order 436.1, Departmental Sustainability, MSTS is striving to reduce or eliminate environmental hazards, conserve environmental resources, minimize life-cycle cost and maximize operational sustainability through the incorporation of electronics stewardship practices thereby minimizing the economic and environmental impacts of managing toxic by-products and hazardous wastes generated in the conduct of site activities. Therefore, MSTS requires that at the end of the lease period, the equipment is to be reused, refurbished, donated, or recycled using environmentally sound management practices.

B-10 MEETINGS

After subcontract award, a Subcontract Kickoff Meeting may be requested, which may be a conference call, an internet meeting, or a meeting to be held at MSTS. The time, date, and agenda for the meeting will be provided to the SUBCONTRACTOR by MSTS.

The SUBCONTRACTOR shall interface with various MSTS (and other) organizations through MSTS' Procurement Specialist (or designated Subcontract Technical Representative (STR) for in-scope work), as required, or at points and frequency determined by the Procurement Specialist.

MSTS will issue meeting notices and prepare an agenda and minutes for each meeting addressed in this Section. When applicable, minutes will identify action items, assigned actioner, and due dates.

The purpose of the meetings is the exchange of work-related information. The person or persons designated by the SUBCONTRACTOR to attend all meetings shall have all required authority to make decisions and commit SUBCONTRACTOR to technical decisions made during meetings.

A. **Site Labor Conference**: Will be held between MSTS, the appropriate union(s), and the SUBCONTRACTOR before work commences at the NNSS in accordance with the applicable Project Labor Agreements.

B. **Kickoff Meeting**: after issuance/acceptance of a **Task Order Release**, MSTS will conduct a meeting with the SUBCONTRACTOR and major lower-tier SUBCONTRACTORS. The meeting's purpose is to provide the SUBCONTRACTOR with additional information as required to accomplish the scope specified in **the Task Order Release** SOW, and to develop lines of communications, and a working relationship. This meeting will focus on a discussion of the work scope and goals and roles and responsibilities of each participant. Pertinent documents will be reviewed and discussed. The SUBCONTRACTOR shall prepare meeting minutes that emphasize agreements, commitments, and planned actions. The SUBCONTRACTOR shall submit the final minutes after the meeting in accordance with the Submittal Register.

C. **Status Meetings**: Project status meetings will be held weekly either by MS Teams or in person to review the progress, to provide weekly schedule status, and exchange work-related information, including but not limited to design and scope changes, progress, coordination with functional utility providers, and scheduling issues. The SUBCONTRACTOR shall prepare meeting minutes that emphasize agreements, commitments, and planned actions. The SUBCONTRACTOR shall submit the final minutes after the meeting in accordance with the MSR.

D. **Safety Meetings**: SUBCONTRACTOR shall perform and document daily pre-job meetings using the MSTS Pre-job Briefing Form 1063B. Late arrivals and/or visitors shall be provided with the same daily briefing. The SUBCONTRACTOR is also required to perform a documented weekly safety meeting. This documentation shall be maintained onsite for the job duration for review upon request.

FREQUENCY	DURATION	TITLE	DESCRIPTION / PURPOSE
Monthly	2 Hours	Phase Gate Reviews	Evaluate the maturations of project development and preparedness to advance through the development process

B-11 SUBMITTALS

Appendix 1.1 identifies submittals required for the agreement. Each task order will contain an Appendix that identifies submittals required for the task order.

B-12 DELIVERABLES

There are no deliverables required for the agreement.

Task Orders will identify required deliverables.

B-13 APPENDIX

APPENDIX NUMBER	*TITLE*	*REV*	*PAGES*
Appendix 1.1	Submittal Register	*0*	*1*
Appendix 1.2	A/E Detailed Design Requirements	*0*	*6*
Appendix 1.3	Construction Requirements for all Task Orders	*0*	*4*
Appendix 1.4	Phase Gate Deliverables Placemat	*0*	*1*

The SUBCONTRACTOR shall meet the required schedule and provide the documents specified in accordance with the following submittals.

APPENDIX 1.1
SUBMITTAL REGISTER

Section A: Purchase Order/Subcontract Information			
Subcontractor Name:	*TBD*	SOW Title:	NNSS Power Ops Planning, Design, Build
Purchase Order and Release Number:	*TBD*	Requisition Number:	*0037266*

Section B: Submittal Delivery Requirement
Submittals shall be electronically, unless otherwise noted, to: *Procurement Specialist; Jacob Curry curryja@nv.doe.gov and Subcontract Technical Representative Wisam AlShammary; AlshamwJ@NV.DOE.GOV* Click or tap here to enter text.

Section C: Submittal Requirement Details					
NO.	TITLE	REFERENCE	DUE DATE / FREQUENCY	REVIEWED BY	COMMENTS
001.	Subcontract Schedule	*insert reference*	No later than 10 calendar days from date of award, update *insert SOW required frequency*	ProcSpec STR	Prior to the start of work
002.	Timesheets/Field Tickets Progress Report/Employee Count	*insert reference*	Monthly, NLT 5th day of new month	ProcSpec STR	
003.	Service Contract Reporting Requirements	*insert reference*	Annually by October 15	ProcSpec	As specified in special condition titled, “Service Contract Reporting Requirements”
004.	Workplace Substance Abuse Program to include Evidence of Compliance with SUBCONTRACTOR’s Workplace Substance Abuse Program	*insert reference*	Annually, based on date of CONTRACTOR acceptance	ProcSpec	Provide any changes to the Program and evidence for that year’s compliance in accordance with Title 10 Code of Federal Regulations Part 707
005.	Subcontract Hours, FRM-1253	*insert reference*	On or prior to the 28th of the month	STR	

APPENDIX 1.1
SUBMITTAL REGISTER

Section A: Purchase Order/Subcontract Information			
Subcontractor Name:	*TBD*	SOW Title:	NNSS Power Ops Planning, Design, Build
Purchase Order and Release Number:	*TBD*	Requisition Number:	*0037266*

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Click or tap here to enter text.

Section C: Submittal Requirement Details

NO.	TITLE	REFERENCE	DUE DATE / FREQUENCY	REVIEWED BY	COMMENTS
006.	Monthly Total Recordable Incident Rate (TRIR) and Days Away,	*insert reference*	On or prior to the 28th of the month	STR	*List any comments*
007.	Restricted or Transfer Case Rate (DART)		Annually, based on date of CONTRACTOR acceptance	STR	
008.	Safety and Personnel Report	Exhibit E	Monthly, NLT 28th day of the new month	Procurement Specialist, STR	
009.	NNSS Construction Office and Equipment Trailer Permit Application		Per Task Order, 28 days prior to being on site	STR	

NLT = No Later Than
NTP = Notice to Proceed
TLO = Transmittal Letter Only