Naval Facilities Engineering Command
NAVFAC WASHINGTON

eProjects WORK ORDER NO.
N40080-15-1363771

RFP

NRL Replace Feeders G11 and H11

At the

Naval Research Laboratory

PREPARED BY:

Summer Consultants, Inc.
7900 Westpark Drive, Suite A405
McLean, VA 22102
A/E Contract N40080-14-D-0451

REQUEST FOR PROPOSAL PREPARED BY:

Electrical: Summer Consultants, Inc.

James P. Hoffman, PE Submitted By:	James P. Hoffman Signature	31 July 2015 Date:
Jay Blumenkrantz, PE RFP Approved By CI Team Lead/PMEB	Jay Blumenkrantz Signature	8/18/15 Date:
James Heisler Project Manager:	Jim Heisler Signature	8/19/15 Date:

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Preface

This Request for Proposal (RFP) consists of six parts.

Part 1 contains typical contractual forms, procedures, bidding instructions, bond information, clauses and wage decisions.

Part 2 contains general contract administrative and execution requirements including, but not limited to safety, design criteria & process, quality control, security, schedule, invoicing, temporary facilities, and design and construction oversight processes.

Part 2, Attachment A, contains project-specific general requirements that may either modify and/or supplement the corresponding standard paragraphs in the Part 2 "General Requirements" section.

Part 3 lists the project requirements, specific scope items, and expected quality level above and beyond those outlined in Part 4.

Part 4 contains Performance Specifications and minimum quality requirements.

Part 5, prescriptive specifications, is typically not used in this Small Project format.

Part 6 contains background project information, references, and other project-specific requirements.

Part 1 Proposal Forms and Documents

Part 2 General Requirements

PART 2

GENERAL REQUIREMENTS
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1.0 DEFINITIONS

As used throughout the contract, the following terms shall have the meaning set forth below:

Contracting Officer (KO): The individual designated to administer the contract. Throughout this contract this individual will be responsible and possess the authority to act on behalf of the Government with respect to the specific contract.

Contracting Officer Representative (COR): The individual designated by the Contracting Officer as the authorized representative of the Contracting Officer. The COR is responsible for monitoring performance and technical management of the effort required and should be contacted regarding questions or problems of a technical nature.

Contractor: The term Contractor refers to both the prime Contractor and subcontractors, including the Designer of Record.

Designer of Record (DOR): Licensed architect/engineer working as subcontractor to or partner with prime Contractor who provides design for this contract.

Quality Control (QC): Contractor's system to control the quality of design, material, equipment and construction.

Quality Assurance (QA) Program: Government's program to evaluate the effectiveness of the Contractor's quality control. The Government's QA Program is not a substitute for the Contractor's QC Program.

Federal Holidays: New Year's Day, Martin Luther King Jr. Day, President's Day, Memorial Day, Independence Day; Labor Day, Columbus Day, Veterans Day, Thanksgiving Day, and Christmas Day.

Contract: Contract or task order.

2.0 ORDER OF PRECEDENCE

NFAS Clause 5252.236-9312. In the event of conflict or inconsistency between any of the below described portions of the confirmed contract, precedence shall be given in the following order:

a. Any portions of the proposal or final design that exceed the requirements of the solicitation..

1) Any portion of the proposal that exceeds the final design.

2) Any portion of the final design that exceeds the proposal.

3) Where portions within either the proposal or the final design conflict, the portion that most exceeds the requirements of the solicitation has precedence.

b. The requirements of the solicitation, in descending order of precedence:

1) Standard Form 1442, Price Schedule, and Davis Bacon wage rates.

2) Part 1 - Contract Clauses.

3) Part 2 - General Requirements.

4) Part 3 - Statement of Work/Project Program Requirements.

5) Part 6 - Attachments (excluding Concept Drawings).

6) Part 5 - Prescriptive Specifications, exclusive of performance specifications.

7) Part 4 - Minimum Materials, Engineering and Construction Requirements, exclusive of prescriptive specifications.

8) Part 6 - Attachments (including Concept Drawings).

3.0 POST AWARD KICKOFF MEETING (PAK)

Prior to commencement of design, and within 21 calendar days of award, meet with representatives of the Contracting Officer, installation and client to present the concept design for discussion and acceptance. The project team will develop a mutual understanding relative to the approved proposal, safety program, environmental permits and requirements, quality control procedures, and design and construction schedule. During the meeting, Contractor shall propose and gain acceptance for any critical path work activities requiring advance submittal and approval.

The Contractor's key personnel shall attend at the expense of the Contractor. Key personnel are defined as the Project Manager, Superintendent, CQC representative(s), DOR, major subcontractors and specialized supplementary personnel.

The PAK includes partnering, held during normal work hours with the non-labor -related costs shared by both parties. Partnering is a structured process, as well as philosophy of doing business with Contractors and clients that recognizes common goals through communication and teamwork. It helps create an environment where trust and teamwork prevent disputes, foster good working relationships to everyone's benefit, and facilitate the completion of a successful contract. If included in Attachment A, a Performance Assessment Plan that provides monthly performance feedback to the Contractor, will be discussed during the partnering session.

Key personnel will meet to identify strategies to ensure the project is carried to expeditious closure and turnover to the Client. Start the turnover process at the PAK Meeting utilizing the NAVFAC Red Zone (NRZ) Checklist and convene the Facility Turnover Meetings once the project has reached approximately 75% completion or 3 to 6 months prior to Beneficial Occupancy Date (BOD), whichever comes first. The Contracting Officer's Representative will lead the meetings and guide the discussions based on an agenda provided by the Government. The Facility Turnover effort shall fill in the NRZ Checklist including Contractor, Client, and NAVFAC Checklist Items and assign a person to be responsible for each item and a due date. The Contracting Officer's Representative will facilitate the assignment of responsibilities and fill out the NRZ Checklist. The Contracting Officer's Representative shall develop a Plan of Action and Milestones (POAM) for the completion of all Contractor, Client, and NAVFAC Checklist items.

4.0 DESIGN

Design is the work necessary to ensure functionality, quality, and safety for critical facets of the project. Special coordination requirements, such as for phone, LAN and cable, are included in Attachment A.

a. Provide work in compliance with the following design standards and codes, as a minimum. Government standards listed in this RFP take precedence over industry standards.

b. This RFP references published standards, the titles of which can be found in the *Unified Master Reference List (UMRL)*on the Whole Building Design Guide at the Unified Facilities Guide Specification (UFGS) Website. The publications referenced form a part of this specification to the extent referenced.

The advisory provisions of all codes, requirements, and standards shall be mandatory; substitute words such as "must" or "required" for words such as "shall", "should", "may", or "recommended," wherever they appear. The results of these wording substitutions incorporate these code and standard statements as requirements. Reference to the "authority having jurisdiction" shall be interpreted to mean Contracting Officer or Contracting Officer Representative. Comply with the required and advisory portions of the current edition of the standard at the time of contract solicitation.

The following list of codes and standards is not comprehensive and is augmented by other codes and standards referenced and cross-referenced in the RFP. Refer to Parts 3 and 4 for specific requirements within other UFC's.

1) UFC 1-200-01, *General Building Requirements*

2) UFC 1-300-08, *Criteria for Transfer and Acceptance of Military Real Property*

3) UFC 1-300-09N, *Design Procedures*

4) UFC 3-560-01, *Electrical Safety, O&M*

5) UFC 3-800-10N, *Environmental Engineering for Facility Construction*

c. Part 3 contains the project description, functional and performance requirements, scope items, and expected quality levels that exceed Part 4. Part 4 identifies design criteria, verification requirements, and performance and quality requirements of products. See "Order of Precedence" paragraph in Part 2 for relationships between all parts of this RFP.

d. Provide professional registration and design signing and stamping requirements per requirements of UFC 1-300-09N, *Design Procedures*.

e. See Attachment A for project-specific submittal requirements.

f. Meet sustainability requirements per UFC 1-200-02 High Performance and Sustainable Building requirements and UFGS section 01 33 29.05 20 *Sustainability Requirements for Design Build*.

5.0 FIRE PROTECTION AND LIFE SAFETY REQUIREMENTS

No changes as result of project.

6.0 QUALITY CONTROL

Maintain quality control for and inspect all work under the contract. The DOR, as a member of the Contractor QC organization, shall remain directly involved during the construction process. For certain projects, the Quality Control Manager, Superintendent, and Site Safety and Health Officer may be combined - see paragraphs 6 and 34 in Attachment A. Further QC requirements are identified in Attachment A.

a. Submit a QC Plan for Government review and acceptance. The QC plan shall include the following:

1) NAMES, QUALIFICATIONS and RESPONSIBILITIES: For each person in the QC organization (design and construction).

2) OUTSIDE ORGANIZATIONS: Outside organizations, including architectural and consulting engineering firms and a description of the services these firms will provide.

3) INITIAL SUBMITTAL REGISTER (DESIGN & CONSTRUCTION): Include submittal reviewer, estimated date of delivery, and identify which design submittals require Government approval prior to construction, and which construction submittals require DOR or Government approval prior to construction.

4) TESTING LABORATORIES: Accredited laboratories as applicable.

5) TESTING PLAN AND LOG: Tests required, referenced by specification paragraph number requiring the test, frequency, and person responsible for each test.

6) LIST OF DEFINABLE FEATURES: A Definable Feature of Work (DFOW) is a task, which is separate and distinct from other tasks, and has the same control requirements and work crews.

7) COMMUNICATION PLAN: Provide a plan for key decisions and possible problems the Contractor and Government may encounter during the design phase of the project. Communication Plan shall indicate the frequency of design meetings and what information is covered in those meetings, key design decision points tied to the Network Analysis Schedule and how the DOR plans to include the Government in those decisions, peer review procedures, interdisciplinary coordination, design review procedures, and comment resolution.

b. QC Manager Responsibilities:

1) Participate in the Post Award Kick-off, Partnering, Design Development and Coordination Meetings and Production Meetings.

2) Ensure that no construction begins before the DOR has signed and stamped the design for that segment of work, and design and construction submittals are approved as required in Attachment A and the QC Plan.

3) Immediately stop any work that does not comply with contract plans and specifications, and direct the removal and replacement of any defective work.

4) Prepare QC Reports.

5) Hold biweekly QC meetings with DOR, Superintendent and Government technical team; participation shall be suitable for the phase of work.

6) Ensure that safety inspections are performed. Attend weekly Toolbox meetings.

7) Maintain submittal log.

8) Maintain updated as-built drawings on site.

9) Maintain testing plan and log. Ensure that all testing is performed per contract.

10) Maintain deficiency log on site, noting dates deficiency identified, and date corrected.

11) Certify and sign statement on each invoice that all work to be paid under the invoice has been completed in accordance with contract requirements.

12) Perform Punch-out and Pre-final inspections, and participate in Final Inspections. Establish list of deficiencies; correct prior to the Final inspection.

13) Ensure that all required keys, operation and maintenance manuals, warranty certificates, and the As-built drawings are submitted to the Contracting Officer.

c. Use the Three Phases of Control process for construction QC.

1) Preparatory Phase: Review all applicable documents for compliance with all applicable laws, codes, regulations, and the requirements of the contract, including contract drawings and specifications. Determine requirements for testing and certification. Review submittal approvals for materials, equipment, shop drawings, and applicable methods of construction and installation. Include all Preparatory Phase items in the QC Report.

2) Initial Phase: Observe and inspect the initial portion of the work performed under a DFOW to establish the quality of the workmanship, resolve conflicts in construction, ensure that testing is done and certified as required, and to check all work procedures to ascertain the work is in conformance with required safety requirements. Record and report nonconforming work and work not of acceptable quality and requiring correction or rework. Include all Initial Phase items, along with initial phase checklist and, in the QC Report.

3) Follow-Up Phase: Occurs at the completion of each DFOW. Ensure the work is in compliance with contract requirements, quality of workmanship for all work is maintained, and all work performed meets safety requirements. Include all Follow-Up Phase items, including date, in the QC Report.

d. The QC Manager must posses a current certificate showing successful completion of the NAVFAC Contractor Quality Management (CQM) Training.

7.0 SUBMITTAL PROCESS

Provide to the Government submittals as listed. See Paragraph 4, DESIGN, and Attachment A for specific design and construction submittal format and approval and surveillance requirements. Design drawings may be prepared more like shop drawings to minimize construction submittals after final designs are approved. Therefore, the Contractor is encouraged to prepare and submit with the design drawings, appropriate connection, fabrication, layout, and product specific drawings.

a. QC Plan, prior to Design/Construction (may be phased).

b. Design and construction submittals, prior to construction, approved IAW QC Plan, the DOR or QC Specialist is the approving authority for submittals unless otherwise indicated in Attachment A.

c. Sustainability Action Plan in accordance with 01 33 29.05 20 Sustainability Requirements.

d. DOR-approved design and construction submittals identified in Attachment A for Government surveillance (typically Fire Protection system and Life Safety submittals). Stamp the submittals "FOR SURVEILLANCE ONLY." Submit Surveillance submittals to the Government prior to starting work for that item. Submittals required for surveillance will be returned only if corrective actions are required.

e. Material Safety Data Sheets (MSDS) as applicable.

f. Schedule: Provide detailed design schedule and preliminary construction schedule, due prior to PAK.

g. Environmental Protection Plan, prior to start of the work.

h. Contractor Safety Self-Evaluation Checklist.

i. Accident Reports - submit if incidence occurs.

j. Safety Submittals: Per Paragraph 34 and Attachment A, prior to construction.

k. Schedule of Prices, initial due 21 calendar days after award and a detailed due prior to construction.

l. Record Drawings, due at Beneficial Occupancy

m. Operation and Maintenance Information: Per Paragraph 23, Part 2 Attachment A, and Part 4. Due prior to testing as applicable, no later than 30 calendar days before Beneficial Occupancy.

n. Licenses and Permits: Per Attachment A and Part 4.

o. DD Form 1354: For all new construction, demolition, and any construction on an existing facility that adds new parts, items, or systems that are not maintenance or repair; e.g.

replacement of windows, replacement of roofs, replacement of an exterior utility, adding an AC system, adding exterior lighting, the DOR shall prepare DD Form 1354 TRANSFER AND ACCEPTANCE OF MILITARY REAL PROPERTY, in accordance with UFC 1-300-08, available at http://65.204.17.188/report/doc_ufc.html . Submit form for Government approval a minimum of 30 calendar days prior to final acceptance of work.

p. High Performance and Sustainable Building (HPSB) compliance checklists in accordance with UFC 1-200-02, *High Performance and Sustainable Building Requirements*.

8.0 SUPERVISION

The Contractor shall have a supervisor fluent in English on the job site during working hours. Additional requirements per Attachment A.

9.0 SCHEDULE

Provide Design and Construction Schedule adequate for Contractor to efficiently manage project and for Government to efficiently manage QA and scheduling interfaces. Include construction phasing and any work restrictions (such as occupied spaces, special hours, potential work disruptions). Schedule shall contain DFOWs and dates for completion of each task including material procurement, and construction activities. Update the schedule at least monthly; use 3-week look-ahead for each QC meeting.

10.0 BUDGET MANAGEMENT

The Contractor shall be responsible for budget management throughout the entire project. It is the intent of the Government to partner with the Contractor to maximize project value while strictly controlling contract modifications and maintaining overall fiscal control. When required in Attachment A, develop a Budget Management System for each phase of the design.

11.0 PRECONSTRUCTION CONFERENCE

Prior to construction or demolition start, meet with representatives of the Contracting Officer to discuss and develop mutual understanding relative to administration of the safety programs, environmental issues, safety of building occupants and surrounding area, hazardous materials, waste disposal, construction QC procedures, construction schedule, labor provisions and other construction phase contract procedures. The Preconstruction Conference shall reinforce partnering philosophy initially established during the PAK.

12.0 ACCESSIBILITY

Provide barrier-free design in accordance with UFC 1-200-01, *General Building Requirements*.

13.0 CONTRACTOR'S PRODUCTION REPORTS

Submit Contractor Production Reports on forms furnished for this purpose. Complete the reports weekly unless otherwise requested by the Contracting Officer. Reports shall include:

a. Worker hours by classification, move-on and move-off of construction equipment

furnished by the prime, subcontractor or the Government, and materials and equipment delivered to the site.

b. Safety meetings, checks and inspections.

c. Disposition of Construction Waste Material: Per Waste Management Plan and per Environmental Protection Plan.

d. Design and Construction Services: Including, but not necessarily limited to:

1) Check all Contract Documents for correctness and correlation. If the Contractor notes any discrepancy or ambiguity, immediately notify the COR.

2) Examine the work site as to conditions affecting the work. Field verify the site and scope of work, including but not limited to the measurement and location of all significant items required to perform the work. Failure by the Contractor to familiarize oneself with available information regarding these conditions shall not relieve the Contractor from the responsibility of successfully completing the work.

14.0 SCHEDULE OF PRICES

Submit on forms furnished by the Government. The initial schedule of prices may be preliminary for construction activities until the design is developed. Include a detailed breakdown of the contract price, with quantities for each kind of work. Include General Conditions, profit, and overhead in the unit prices. Break down into design and each construction category if stated in Attachment A. The Contractor may invoice for bonds once the Government has approved the bonds, however, no other requests for payment will be processed without an approved Schedule of Prices.

15.0 CONTRACTOR INVOICES

Contractor requests for payment shall conform and will be processed in accordance with the requirements of FAR 52.232-5 and FAR 52.232-27.

a. Content of Invoice: Requests for payment in accordance with the terms of the contract shall consist of the following: (If NFAS Clause 5252.232-9301 is present in the contract, documents shall be provided as attachments in Wide Area Workflow (WAWF). The maximum size limit per attachment is less than 2 megabytes, but you may have an unlimited number of attachments. If a document cannot be attached to WAWF due to system or size restrictions it shall be provided as instructed by the contracting officer). If NFAS Clause 5252.232.9301 is not present in the contract, follow the invoicing instructions provided in the contract.

1) Contractor's Invoice on NAVFAC Form 7300/30, which shall show, in summary form, the basis for arriving at the amount of the invoice.

2) Contractor's Monthly Estimate for Voucher (LANTNAVFACENGCOM Form 4-4330/110 (New 7/84)), with subcontractor and supplier payment certification.

3) Affidavit to accompany invoice (LANTDIV NORVA Form 4-4235/4 (Rev. 5/81)).

4) Updated copy of submittal register.

5) Updated copy of progress schedule. Furnish as specified in "FAR 52.236-15, Schedules for Construction Contracts."

6) Network mathematical analysis.

7) Contractor Safety Self Evaluation Checklist (original)

8) Final release (for final payment only)

b. Payment:

1) Payment will be made on Contractor's submission of itemized requests and will be subject to reduction for overpayments or increased for underpayments from previous payments. The Government may withhold payment or reduce payments for the following:

a) Defects in material or workmanship.

b) Claims the Government may have against the Contractor under or in connection with this contract.

c) Contractor's failure to submit an updated schedule.

d) Payroll violations.

e) Unless otherwise adjusted, repayment to the Government upon demand for overpayments made to the Contractor.

2) Payments may be made for materials, stored off construction sites, under the following conditions:

a) Conditions described in Attachment A.

b) Materials adequately insured and protected from theft and exposure.

c) Materials not susceptible to deterioration or physical damage in storage or in transit to the job site are acceptable for progress payments. Items such as steel, machinery, pipe and fittings and electrical cable are acceptable, but items such as gypsum board; glass, insulation and wall covering are not.

d) Materials in transit to the job or storage site are not acceptable for payment.

e) Conditions specified in FAR 52.232-5(b) Payments Under Fixed Price Construction Contracts.

16.0 PROTECTION OF GOVERNMENT PROPERTY

Take special care to protect Government property. Return areas damaged as a result of construction under this contract to their original condition. In addition to FAR 52.236-9, *Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements*, perform the following:

a. Remove or alter existing work or facilities in such a manner as to prevent injury or damage to any portion of the existing work or facilities that remain.

b. Repair or replace portions of existing work altered during construction operations to match existing or adjoining work, as approved by the Contracting Officer. At the completion of operations, existing work shall be in a condition equal to or better than that which existed before new work started.

c. Preserve the natural resources in accordance with the approved environmental protection plan.

17.0 EXISTING UNDERGROUND UTILITIES

Verify on-site utilities and have them marked out by a utility locator service prior to the start of construction. Where existing piping, utilities, oil and gas lines, and underground obstructions of any type that are to remain are indicated in locations to be traversed by new piping, ducts, and other work provided herein, and such are not indicated or specified to be removed, the elevations of the existing utilities and obstructions shall be determined before the new work is laid closer than the nearest manhole or other structure at which an adjustment in grade could be made. Obtain required dig permits and notify the Contracting Officer 21 calendar days prior to any excavation. Refer to Attachment A for specific station requirements.

18.0 LICENSES / PERMITS

Obtain all appointments, licenses, and permits required to perform work under this contract at no additional expense to the Government. See "Permits Record of Decision" (PROD) form for list of permits. Comply with all applicable federal, state, and local laws, and base regulations and procedures. Provide evidence of such permits and licenses to the Contracting Officer before work commences and at other times as requested by the Contracting Officer (see FAR 52.236-7, *Permits and Responsibilities*). Coordinate permit applications with Navy or local environmental office.

The contractor shall submit a complete PROD form with the first design submittal package. A blank PROD form can be obtained at the Download Tab of Part 6 of the NAVFAC Design-Build website at the following link http://ndbm.wbdg.org/system/html/6/453 . Contractor shall determine correct permit fees and pay said fees. Copies of all permits, permit applications, and the completed PROD form shall be forwarded to the Government's Civil Reviewer and Environmental Reviewer.

Contractor is exclusively responsible for his full compliance with patent laws and shall affirm that the company is licensed to use equipment and processes the company shall employ in this project.

19.0 CONTRACTOR WORK SITE

Limit use of the premises for work and for storage of material and equipment associated with the contract. Unless otherwise specified or separately agreed to, Government owned material handling equipment, transportation equipment or general tools will not be available for Contractor's use. Clean work area daily and after completion of the work, removing all loose debris and disposing of all non-permanent materials IAW the contractor's Waste Management Plan.

a. **Temporary Facilities**: The Contractor may provide his own office facilities; coordinate and obtain advance approval from the Contracting Officer. Provide and maintain

suitable sanitary facilities within the construction limits of the contract. Dispose of sanitary waste in accordance with the applicable laws, and local regulation.

b. **Contractor-Furnished Equipment**: Equipment is subject to the inspection and approval of the Contracting Officer, prior to and during the life of the contract. All equipment and vehicles shall display readily visible Contractor identification markings. Relocate stored Contractor equipment which may interfere with operations of the Government or with others on-site.

c. **Contractor-furnished Material**: Protect and secure products stored at this site.

1) All replacement units, parts, components, and materials to be used in the maintenance, repair and alteration of facilities and equipment shall be new and compatible with the existing equipment on which it is to be used, and shall comply with applicable Government, commercial, or industrial standards such as Underwriter's Laboratories, Inc., and National Electrical Manufacturers Association.

2) In addition, submit a current certificate recognized by the State or local authority that states the Contractor has completed at least 10 hours of training in backflow preventer installations.

20.0 TEMPORARY UTILITIES

a. The Government will provide water and power in reasonable quantities at no charge.

b. All labor, material, and equipment necessary to affect temporary utility tie-ins, including transformers if necessary, shall be at the expense of the Contractor and under the surveillance of the Contracting Officer.

c. The Contractor shall be responsible for any damages to Government, private or public facilities and property that may result from the installation and removal of these temporary utility tie-ins. Corrections and repairs shall be made at the Contractor's expense.

d. The actual location and installation of the temporary tie-in, together with any interruptions of utilities systems, shall be identified and approved by the Contracting Officer prior to execution. Notify the COR and Station Utilities 15 calendar days prior to any tie-ins.

e. Permanent utility systems, when indicated, will be available for tie-in.

f. Telephone and Data Service: Make arrangements with local telephone company, NMCI and other pertinent base communication departments.

g. Maintain utility services to existing facilities surrounding the site at all times during construction.

h. Contractor shall install and certify back flow preventers on all connections to the potable water supply system.

21.0 ENVIRONMENTAL CONTROLS AND PROTECTION

Unforeseen Hazardous Conditions: Do not disturb hazardous materials and report condition immediately to the Contracting Officer potentially hazardous conditions that are uncovered or the Contractor becomes aware of that have not been identified in the RFP. This includes hazardous components and materials and contamination (see UFC 3-800-10N, *Environmental Engineering for Facility Construction*, for more information). This includes conditions that are not only hazardous to humans but wildlife, marine life and the environment. Stop work in the area of the questionable material or condition until identification and direction is provided.

22.0 WASTE MANAGEMENT

Develop a Waste Management Plan that identifies all recyclable material and disposal methods for all material. Contractor shall reduce, recycle or salvage as much waste material as possible with a goal of diverting at least 50% of construction waste from landfill. Address waste reduction, recycling and salvage as part of the waste management plan. Report volume or weight of disposed and recycled materials. Report destination of debris diverted from disposal. The Contractor is responsible for removing and disposing of all waste materials generated. Consider all material recyclable or reusable, unless clearly demonstrated the material requiring disposal is waste material.

23.0 RECORD DRAWINGS AND OPERATION & MAINTENANCE (O&M) DATA

Furnish hard copy and electronic format for all as-built and O&M information. Record drawings shall incorporate all changes to the approved final design. Provide O&M data for as-built products, materials, and equipment, including data sheets, test reports, warranties, certificates, list of spare parts suppliers for all pieces of equipment, and approved construction submittals. Refer to Attachment A.

24.0 WARRANTY

Warrant all materials and work for not less than one year after final acceptance of the work, except as otherwise indicated in this RFP. If required to provide remedial repair of previously installed work due to latent defect or unacceptable work performance, warrant the repaired work for one year after the completion and acceptance of the repair. For warranted items, furnish the manufacturers' original written warranty accompanied by a copy of the supplier's receipt showing place of purchase, telephone number of supplier, address, delivery order number if applicable, and ticket number.

25.0 PERFORMANCE EVALUATIONS

The evaluation will take into account all aspects of the Contractor's performance, including evaluations from Performance Assessment Plans when included in Attachment A. Performance evaluations may be completed any time during the contract. The Government will provide a copy of the performance evaluation and an opportunity to discuss the evaluation. The performance evaluations will have an impact on the award of future contracts.

26.0 WORK HOURS, ACCESS AND PASSES

All Contractor employees, including subcontractors, and subcontractors' employees, suppliers, and suppliers' employees shall be required to comply with the Installation Security Requirements regarding personnel, vehicle, and equipment security passes and access the jobsite. Nothing in the contract shall be construed in any way to limit the authority of the Commanding Officer to prescribe new, or to enforce existing security regulations governing the admission or exclusion of persons and the conduct of persons while aboard the station, including but not limited to, the rights of search of all persons or vehicles aboard the station.

Coordinate with the Contracting Officer for specific security and access requirements.

a. Access to Buildings/ Occupied Buildings: The Contractor may work in or around existing occupied buildings. The Contractor is responsible, via the Contracting Officer, to obtain access to building and facilities and arrange for them to be opened and closed. Do not enter the building(s) without prior approval of the Contracting Officer. Keep the existing buildings and their contents secure at all times. Provide temporary closures as required to maintain security. Contract personnel will not be permitted in security-regulated buildings or areas unless cleared by the Security Officer.

b. Passes and Badges: Contractor employees and representatives performing work under this contract are required to be either United States citizens or documented legal residents (status verified by prime contractor). All Contractor employees shall obtain the required employee and vehicle passes. Follow guidance per Attachment A. Each employee shall wear the Government issued badge over the front of the outer clothing. Failure to obtain security and base access passes shall not be a cause for contract performance time extension. The Contractor shall immediately turn in all terminated employee's badges to the issuing office.

1) Personnel will be issued appropriate identification badges when the Contractor submits, in writing on company letterhead, a list indicating that all individuals are bona fide employees. Employees shall complete questionnaires and other forms as required for security. Allow 14 calendar days for background checks and processing. The list shall contain the following information:

a) Name of employee

b) Social Security Number

c) Date of Birth

d) Place of Birth

e) Citizenship or proof of documented legal residency

f) Employment Eligibility Verification Form

c. Contractor Vehicles: All vehicles shall display a valid state license plate and safety inspection sticker, if applicable, and shall be maintained in good repair. The company name shall be displayed in a clearly visible manner and size on each Contractor vehicle used in the course of work. Registration, proof of insurance and driver's licenses are required to obtain a station vehicle pass.

d. Work Hours: Unless otherwise indicated, work will be located on a Government compound, military installation, or station. Contractor work hours shall be between 0630

and 1700 Monday through Friday, or as indicated in Attachment A. Obtain advance approval from the Contracting Officer for Contractor personnel to remain on site beyond normal working hours. Notify the Contracting Officer at least 48 hours in advance to obtain approval for access to the jobsite or work outside of normal working hours or on Saturday, Sunday, and Federal Holidays.

e. Contractor Personnel: Provide the Contracting Officer the name(s) of the supervisory person(s) authorized to act for the Contractor. Provide, and update as required, a list of the key personnel for the Contractor and subcontractors including addresses and telephone numbers for use in the event of an emergency.

f. Contractor employees shall conduct themselves in a proper, efficient, courteous and businesslike manner. Remove from the site any individual whose continued employment is deemed by the Contracting Officer to be contrary to the public interest or inconsistent with the best interests of National Security.

27.0 SECURITY REQUIREMENTS

All security requirements apply to all subcontractors and suppliers associated with this contract. Special or extraordinary security requirements are identified in Attachment A. In addition to special or extraordinary security requirements, comply with the following:

a. Do not publicly disclose any information concerning any aspect of the materials or services relating to this contract, without prior written approval of the Contracting Officer.

b. Do not disclose or cause to be disseminated any information concerning the operations of the activity's security or interrupt the continuity of its operations.

c. Do not disclose any information to any person not entitled to receive it. Failure to safeguard any classified information that may come to the Contractor or any person under his control, may subject the Contractor, his agents or employees to criminal liability under 18 U.S.C., Sections 793 and 798.

d. Direct to the Contracting Officer and or Installation Security Officer for resolution all inquiries, comments or complaints arising from any matter observed, experienced, or learned as a result of or in connection with the performance of this contract, the resolution of which may require the dissemination of official information.

e. No photography is allowed.

Deviations from or violations of any of the provisions of this paragraph, will, in addition to all other criminal and civil remedies provided by law, subject the Contractor to immediate termination for default and withdrawal of the Government's acceptance and approval of employment of the individuals involved.

28.0 REQUIRED INSURANCE

Within 15 calendar days after award, furnish the Contracting Officer a Certificate of Insurance as evidence of the following insurance coverage amounts not less than the amount specified below in

accordance with FAR Clause 52.228-5, *Insurance Work On A Government Installation*:

a. Comprehensive General Liability: $500,000 per occurrence.

b. Automobile Liability: $200,000 per person, $500,000 per occurrence for bodily injury; $20,000 per occurrence for property damage.

c. Worker's Compensation: As required by Federal and State Worker's compensation and occupational disease and other laws.

d. Employer's Liability Coverage: $100,000, except in states where worker's compensation may not be written by private carriers.

e. Others as required by state law.

f. Above insurance coverages are to extend to Contractor personnel operating Government owned equipment and vehicles.

g. The Certificate of Insurance shall provide for 30 calendar days written notice to the Contracting Officer by the insurance company prior to cancellation or material change in policy coverage. Other requirements and information are contained in Attachment A.

For projects which require removal of asbestos containing materials the Asbestos Contractor or Subcontractor, as the case may be shall provide occurrence-based liability insurance with asbestos coverages in an amount not less than $1,000,000 and shall name the Government and PQP as additional insureds.

29.0 PROPRIETARY RIGHTS

All field notes, design drawings, specifications, and other documents collected and produced as part of this contract shall be considered property of the Government. These data shall not be used, in whole or part, published or unpublished, as a part of any technical or non-technical presentation without written pre-approval of the Contracting Officer.

30.0 GOVERNMENT FURNISHED MATERIAL AND EQUIPMENT

If applicable, the Government will furnish the materials and equipment for installation by the Contractor pursuant to contract clause FAR 52.245-2, *Government Property (Fixed Price Contracts)*. Notify the Contracting Officer in writing at least 15 calendar days before the materials and equipment are required. Pick up materials and equipment no later than 30 calendar days after such date. When materials and equipment are not picked up by the 30th day, the Contractor will be charged for storage at the prevailing rate. The Contracting Officer will specify the location of materials and equipment and the delivery location.

31.0 ORAL MODIFICATION

No oral statement by any person other than the Contracting Officer, as provided in the contract clause entitled, "CHANGES AND CHANGED CONDITIONS," will in any manner or degree modify or otherwise affect the terms of this contract.

32.0 NO WAIVER BY THE GOVERNMENT

The failure of the Government in any one or more instances to insist upon strict performance to any of the terms of this contract or to exercise any option herein conferred shall not be construed as a wavier or relinquishment to any extent of the right to assert or rely upon such terms or options on any future occasion.

33.0 EQUITABLE ADJUSTMENTS - WAIVER AND RELEASE OF CLAIMS

a. Whenever the Contractor submits a claim for equitable adjustment under a clause which provides for equitable adjustment of the contract, such claim shall include all types of adjustments in the total amounts to which the clause entitles the Contractor, including, but not limited to, adjustment arising out of delays or disruptions.

b. Except as the parties may otherwise expressly agree, the Contractor shall be deemed to have waived: (1) any adjustments to which he otherwise might be entitled under the clause where such claim fails to request such adjustments; and (2) any increase in the amount of equitable adjustments additional to those requested in its claim.

c. The Contractor agrees that, if required by the Contracting Officer, it shall execute a release, in form and substance satisfactory to the Contracting Officer, as part of the supplemental agreement setting forth the aforesaid equitable adjustment. The Contractor further agrees that such release shall discharge the Government, including its officers, agents, and employees, from any further claims, including, but not limited to, further claims arising out of delays or disruptions caused by the aforesaid change.

34.0 SAFETY AND OCCUPATIONAL HEALTH REQUIREMENTS

a. References: The publications listed below form a part of this specification to the extent referenced. Use current version of referenced requirements at the time of contract solicitation. The publications are referred to within the text by the basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
ANSI Z359.1, *Safety Requirements for Personal Fall Arrest System, Subsystems and Components*
ANSI A10.32, *Fall Protection systems for Construction and Demolition Operations*
ANSI A10.6, *Demolition Operations*
ANSI Z9.2, *Fundamentals Governing the Design and Operation of Local Exhaust Systems*
ANSI Z88.2, *Respiratory Protection*
ANSI Z358.1, *Emergency Eyewash and Shower Equipment*

ASME INTERNATIONAL (ASME)
ASME B30.22, *Articulating Boom Cranes*
ASME B30.3, *Construction Tower Cranes*
ASME B30.5, *Mobile and Locomotive Cranes*
ASME B30.8, *Floating Cranes and Floating Derricks*

AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM)
ASTM Standards on Lead-Based Paint Abatement in Buildings

ASTM E 1368, *Visual Inspection of Asbestos Abatement Projects*

DEPARTMENT OF DEFENSE (DoD)
MIL-STD-1472F, Military Standard, *Human Engineering Design Criteria for Military Systems, Equipment and Facilities*
DoD-HDBK 743A, *Anthropometry of US Military Personnel*

DEFENSE LOGISTICS AGENCY (DLA)
DLA 4145.25, *Storage and Handling of Compressed Gases and Liquids in Cylinders*

EPA Standards and Documents - General
15 U.S.C. 2601 - *Toxic Substances Control Act*
EPA Title X - *The Residential Lead Based Paint Hazard Reduction Act*
EPA & HUD - *Lead Safe Work Practices*
HUD Guidelines, *Guidelines for the Evaluation and Control of Lead Based Paint Hazards in Housing*

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
NFPA 241, *Safeguarding Construction, Alteration, and Demolition Operations*
NFPA 51B, *Fire Prevention During Welding, Cutting, and Other Hot Work*
NFPA 70, *National Electrical Code*
NFPA 70E, *Electrical Safety in the Workplace*

U.S. ARMY CORPS OF ENGINEERS (USACE)
EM 385-1-1 Safety -- *Safety and Health Requirements*

UNITED FACILITIES CRITERIA (UFC)
UFC 3-560-01, *Electrical Safety, O&M*

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)
29 CFR 1910 *Occupational Safety and Health Standards*
29 CFR 1910.146 *Permit-required Confined Spaces*
29 CFR 1915 *Occupational Safety and Health Standards for Shipyard Employment*
29 CFR 1926 *Safety and Health Regulations for Construction*

b. Submittals: A "G" following a submittal indicates that Government approval action is required.

1) Contractor Accident Prevention Plan (APP), comply with EM 385-1-1, Appendix A; G

2) Contractor Safety Self-Evaluation Checklist; G

3) Monthly Work-Hour Reports

4) Crane Critical Lift Plan; G

5) Accident Reports – submit if incidence occurs; G.

6) Activity Hazard Analyses, G.

c. Weight Handling Equipment (WHE) Accident: A WHE accident occurs when any one or more of the six elements in the operating envelope fails to perform correctly during operation, including operation during maintenance or testing resulting in personnel injury or death; material or equipment damage; dropped load; derailment; two-blocking; overload; or collision, including unplanned contact between the load, crane, or other

objects. A dropped load, derailment, two-blocking, overload and collision are considered accidents even though no material damage or injury occurs. A component failure (e.g., motor burnout, gear tooth failure, bearing failure) is not considered an accident solely due to material or equipment damage unless the component failure results in damage to other components (e.g., dropped boom, dropped load, roll over).

d. Contractor Safety Self-Evaluation Checklist: Contracting Officer will provide a "Contractor Safety Self-Evaluation checklist" to the Contractor. Complete the checklist monthly and submit with each request for payment. A score of 90 or greater is required. Failure to submit the completed safety self-evaluation checklist or achieve a score of at least 90, will result in a retention of up to 10 percent of the voucher.

e. Regulatory Requirements: In addition to the detailed requirements included in this contract, work performed shall comply with USACE EM 385-1-1, and the laws, ordinances, criteria, rules and regulations included in Attachment A. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting work. Where the requirements of this specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirements shall apply. UFC 3-560-01 takes precedence over all other guidance for electrical safety.

f. Site Safety and Health Officer (SSHO) Qualifications & Duties: SSHO shall perform safety and occupational health management, surveillance, inspections, and safety enforcement for the Contractor. The assignment of the SSHO does not relieve the Contractor from the regulatory requirements governing safety responsibility. The SSHO on this project can be the site superintendent unless otherwise indicated in Attachment A.

In addition to duties required in EM 385-1-1 the SSHO shall perform the following:

1) Conduct daily safety and health inspections and maintain a written log which includes area/operation inspected, date of inspection, identified hazards, recommended corrective actions, estimated and actual dates of corrections. Attach safety inspection logs to the daily production report.

2) Attend pre-construction conference, pre-work meetings including preparatory inspection meeting, and periodic progress meetings.

Failure to actively apply an acceptable safety program will result in dismissal and a project work stoppage that will remain in effect pending approval of a suitable replacement.

g. Accident Notification and Reports

1) For recordable injuries and illnesses, and property damage accidents resulting in at least $2,000 in damages, the Prime Contractor shall conduct an accident investigation to establish the root cause(s) of the accident, fill out the Contractor Incident Report (CIR) electronically and submit via the NAVFAC Enterprise Safety Applications Management System (ESAMS) within 5 calendar days. The Contracting Officer will provide copies of any required or special forms.

2) For any weight handling equipment accident (including rigging gear accidents), the Prime Contractor shall conduct an accident investigation to establish the root cause(s) of the accident, complete the WHE Accident Report (Crane and Rigging Gear) form and provide the report to the Contracting Officer within 30 calendar days of the accident.

Crane operations shall not proceed until cause is determined and corrective actions have been implemented to the satisfaction of the contracting officer. The Contracting Officer will provide a blank copy of the accident report form.

3) Notify the Contracting Officer as soon as practical, but not later than four hours, after any accident meeting the definition of Recordable Injuries or Illnesses or High Visibility Accidents, property damage equal to or greater than $2,000, or any weight handling equipment accident. Include contractor name; contract title; type of contract; name of activity, installation or location where accident occurred; date and time of accident; names of personnel injured; extent of property damage, if any; extent of injury, if known, and brief description of accident (e.g., type of construction equipment used, PPE used). Preserve the conditions and evidence on accident site until the Government investigation team arrives and Government investigation is conducted.

4) Monthly Work-Hour Reports: Monthly work-hour reporting to the Contracting Officer is required to be attached to the monthly billing request. This report is a compilation of employee-hours worked each month for all site workers, both prime and subcontractor. The Contracting Officer will provide copies of any special forms.

h. Hot Work: Prior to performing "Hot Work" (e.g., welding, cutting) or operating other flame-producing/ spark-producing devices, request a written permit from the Fire Division. CONTRACTORS ARE REQUIRED TO MEET ALL CRITERIA BEFORE A PERMIT IS ISSUED. It is mandatory to have a designated FIRE WATCH for any "Hot Work" done at this activity. The Fire Watch shall be trained in accordance with NFPA 51B and remain on-site as required after completion of the task or as specified on the hot work permit.

i. Hazardous Material Use: Each hazardous material must receive approval prior to being brought onto the job site or prior to any other use in connection with this contract. Allow a minimum of 10 working days for processing of the request for use of a hazardous material.

Notwithstanding any other hazardous material used in this contract, radioactive materials or instruments capable of producing ionizing/non-ionizing radiation (with the exception of radioactive material and devices used in accordance with USACE EM 385-1-1 such as nuclear density meters for compaction testing and laboratory equipment with radioactive sources) as well as materials which contain asbestos, mercury or polychlorinated biphenyls, di-isocynates, or lead-based paint are prohibited. The Contracting Officer, upon written request may consider exceptions to the use of any of the above excluded materials.

The Request for Proposal should have identified materials such as PCB, lead paint, and friable and non-friable asbestos. If material, not indicated, that may be hazardous to human health upon disturbance during construction operations is encountered, stop that portion of work and notify the Contracting Officer immediately. Within 14 calendar days the Government will determine if the material is hazardous. If material is not hazardous or poses no danger, the Government will direct the Contractor to proceed without change. If material is hazardous and handling of the material is necessary to accomplish the work, the Government will issue a modification pursuant to FAR 52.243-4, *Changes*, and FAR 52.236-2, *Differing Site Conditions*.

j. Pre-outage Coordination Meeting: Apply for utility outages at least 15 days in advance. As a minimum, include the location of the outage, utilities being affected, duration of outage and any necessary sketches. Once approved, and prior to beginning work on the utility system requiring shut down, attend a pre-outage coordination meeting with the

Contracting Officer to review the scope of work and the lock-out/tag-out procedures for worker protection. No work will be performed on energized electrical circuits unless proof is provided that no other means exist.

k. Fall Hazard Protection and Prevention Program: Establish a fall protection and prevention program, for the protection of all employees exposed to fall hazards. Include company policy; identify responsibilities, education and training requirements, fall hazard identification, prevention and control measures, inspection, storage, care and maintenance of fall protection equipment and rescue and evacuation procedures.

1) Fall Protection for Roofing Work: Implement all protection controls based on the type of roof being constructed and work being performed. Evaluate the roof area to be accessed for its structural integrity including weight-bearing capabilities for the projected loading.

a) A safety monitoring system is not adequate fall protection for low sloped roofs and is not authorized.

b) Work on steep-sloped roofs, including residential or housing type construction, requires a personal fall arrest system, guardrails with toe-boards, or safety nets.

2) Fall Prevention and Design: During design, consider and eliminate fall hazards encountered at the facility during maintenance evolutions whenever possible. If it is not feasible to eliminate or prevent the need to work at heights with its subsequent exposure to fall hazards, include control measures in the design to protect personnel conducting maintenance work after completion of the project. In addition to the detailed requirements included in the provisions of this contract, incorporate the requirements of 29 CFR 1910 Standards in the design (29 CFR 1915 applies for work in Shipyards).

l. Weight Handling Equipment: All handling equipment must meet the requirements of NAVFAC P-307 Section 1.7.2.

1) Crane Critical Lift Plan: Prepare and sign weight handling critical lift plans for lifts over 75 percent of the capacity of the crane or hoist (or lifts over 50 percent of the capacity of a barge mounted mobile crane's hoists) at any radius of lift; lifts involving more than one crane or hoist; lifts of personnel; and lifts involving non-routine rigging or operation, sensitive equipment, or unusual safety risks. Submit the plan 15 calendar days prior to on-site work and include the requirements of USACE EM 385-1-1, paragraph 16.C.18. as well as the following:

a) For lifts of personnel, demonstrate compliance with the requirements of 29 CFR 1926.550(g).

b) For barge mounted mobile cranes, barge stability calculations identifying barge list and trim based on anticipated loading; and load charts based on calculated list and trim. The amount of list and trim shall be within the crane manufacturer's requirements.

2) Provide a Certificate of Compliance for each crane entering an activity under this contract (see Contracting Officer for a blank certificate). Certificate shall state that the crane and rigging gear meet applicable OSHA regulations (with the Contractor citing which OSHA regulations are applicable, e.g., cranes used in construction, demolition, or maintenance shall comply with 29 CFR 1926 and USACE EM 385-1-1 section 16 and Appendix H. The Certificate of Compliance shall state that the crane operator(s) is qualified and trained in the operation of the crane to be used. Also certify that all of its crane operators working on the DOD activity have been trained in the proper use of all

safety devices (e.g., anti-two block devices). Post these certifications on the crane.

3) Notify the Contracting Officer 15 days in advance of any cranes entering the activity so that necessary quality assurance spot checks can be coordinated. Contractor's operator shall remain with the crane during the spot check.

4) Comply with the crane manufacturer's specifications and limitations for erection and operation of cranes and hoists used in support of the work. Perform erection under the supervision of a designated person (as defined in ASME B30.5). Perform all testing in accordance with the manufacturer's recommended procedures.

5) Comply with ASME B30.5 for mobile and locomotive cranes, ASME B30.22 for articulating boom cranes, ASME B30.3 for construction tower cranes, and ASME B30.8 for floating cranes and floating derricks.

6) Under no circumstance make a lift at or above 90% of the crane’s rated capacity in any configuration.

7) When operating in the vicinity of overhead transmission lines, operators and riggers shall be alert to this special hazard and shall follow the requirements of USACE EM 385-1-1 section 11 and ASME B30.5 or ASME B30.22 as applicable.

8) Use cribbing when performing lifts on outriggers.

9) Position the crane hook/block directly over the load. Side loading of the crane is prohibited.

10) Certification records which include the date of inspection, signature of the person performing the inspection, and the serial number or other identifier of the crane that was inspected shall be available for review by Contracting Officer personnel.

11) Written reports listing the load test procedures used along with any repairs or alterations performed on the crane shall be available for review by Contracting Officer personnel.

12) Certify that all crane operators have been trained in proper use of all safety devices (e.g. anti-two block devices).

13) Take steps to ensure that wind speed does not contribute to loss of control of the load during lifting operations. Prior to conducting lifting operations, set a maximum wind speed at which a crane can be safely operated based on the equipment being used, the load being lifted, experience of operators and riggers, and hazards on the work site. Include this maximum wind speed determination in the activity hazard analysis plan for that operation.

m. Utility Locations and Verification Prior to Excavation: Obtain appropriate digging permit from Base personnel through Contracting Officer prior to digging. All underground utilities in the work area must be positively identified by a private utility locating service in addition to any station locating service and coordinated with the station utility department. Maintain all markings during utility investigation throughout the contract. Locate utilities in accordance with Paragraph 17 and Attachment A.

Physically verify underground utility locations by hand digging using wood or fiberglass handled tools when any adjacent construction work is expected to come within three feet of the underground system. Use hand digging within 0.61 m (2 feet) of a known utility. If

construction is parallel to an existing utility, expose the utility by hand digging every 30.5 m (100 feet) if parallel within 1.5 m (5 feet) of the excavation.

n. Utilities Within Concrete Slabs: Utilities located within concrete slabs are extremely difficult to identify due to the reinforcing steel used in the construction of these structures. Whenever work involves concrete chipping, saw cutting, or core drilling, the existing utility location must be coordinated with station utility departments in addition to a private locating service. Outages to isolate utility systems shall be used in circumstances where utilities are unable to be positively identified. The use of historical drawings does not alleviate the contractor from meeting this requirement.

o. Conduct of Electrical Work: Follow electrical safety criteria specified in UFC 3-560-01, USACE EM 385-1-1, and NFPA 70E during the conduct of all work.

p. Work in Confined Spaces: In addition to the requirements of Section 06.I of USACE EM 385-1-1, OSHA 29 CFR 1910.146 and OSHA 29 CFR 1926.21(b)(6), comply with the following paragraphs. Any potential for a hazard in the confined space requires a permit system to be used.

1) Confined Space Signage: Provide permanent signs integral to or securely attached to access covers for permit-required confined spaces provided by this contract. Signs wording: "DANGER--PERMIT-REQUIRED CONFINED SPACE - DO NOT ENTER -" in bold letters a minimum of 25 mm (one inch) in height and constructed to be clearly legible with all paint removed. The signal word "DANGER" shall be red and readable from 1.52 m (5 feet).

2) Entry Procedures. Prohibit entry into a confined space by personnel for any purpose, including hot work, until the qualified person has conducted appropriate tests to ensure the confined or enclosed space is safe for the work intended and all potential hazards are controlled or eliminated and documented. (See Section 06.I.06 of USACE EM 385-1-1 for entry procedures.) Review all hazards pertaining to the space with each employee during AHA process.

3) Forced air ventilation is required for all confined space entry operations. Maintain minimum air exchange requirements to ensure exposure to any hazardous atmosphere is kept below its' action level.

4) Sewer wet wells require continuous atmosphere monitoring with audible alarm for toxic gas detection.

q. Ergonomics Considerations During Design: Design facilities, processes, job tasks, tools and materials to reduce or eliminate work-related musculoskeletal (WMSD) injuries and risk factors in the workplace. Design maintenance access to reduce WMSD risk factors to the lowest level possible. In addition to requirements included in this contract, design shall incorporate the requirements of MIL-STD-1472F.

-- End of Section --

Part 2 Attachment A Project-Specific General Requirements

The following requirements are project specific and may either supplement and/or modify those requirements contained in the body of Part 2, General Requirements, for Small Projects. Paragraph numbers in Part 2 correspond to paragraph numbers used in Part 2, Attachment A.

Paragraph 3 POST AWARD KICKOFF MEETING (PAK)

Request an information partnering as follows:

Informal Partnering: The contracting officer shall organize the partnering sessions with key personnel of the project team, including Contractor's personnel and Government personnel.

The Initial Informal partnering session should be part of the DB Post Award Kickoff (PAK). Partnering session location agreed to by the contracting officer and the contractor.

The partners will determine the frequency of the follow-on sessions. The PAK will be held at NRL and it will not exceeds 8 hours.

Paragraph 4 DESIGN

NAVFAC is standardized on the AutoCAD 2006 file format. A/E/C's may submit a current set of DWG files (AutoCAD 2007 or greater) and a converted set of AutoCAD 2006 DWGs when submitting the final drawings. However, PDFs may not be made using AutoDesk's "DWG to PDF.PC3" plot driver.

Submit design drawings or sketches, calculations and manufacturer's data to demonstrate compliance with contract requirements. The Contractor is encouraged to prepare design drawings more like shop drawings to minimize construction submittals.

Provide electronic copies of design submittal package to the following reviewers 1 week prior to the over-the-shoulder review meeting.

Provide hard (all hard submittals shall be on minimum 30% postconsumer fiber paper, and, when 11x17 or smaller, double-sided) copies of design submittal package to the following reviewers 21 calendar days to the in-progress review meeting:

Submit all submittals to the FEAD for surveillance.

	Deliverable	NFEAD/ROICC	IPT	NRL
	Design Development 65%	1 HARD 1 ELECTRONIC	6 HARD 6 ELECTRONIC	2 HARD 1 ELECTRONIC
	Half-size Drawings or Sketches	1 HARD 1 ELECTRONIC	6 HARD 6 ELECTRONIC	2 HARD 1 ELECTRONIC
	Specifications and Manufacturer's Cut Sheets	1 HARD 1 ELECTRONIC	6 HARD 6 ELECTRONIC	2 HARD 1 ELECTRONIC
	Design/Construction Schedule	1 HARD 1 ELECTRONIC	6 HARD 6 ELECTRONIC	2 HARD 1 ELECTRONIC
	Budget	1 HARD	6 HARD	2 HARD

	Management Status	1 ELECTRONIC	6 ELECTRONIC	1 ELECTRONIC
	Calculations	1 HARD 1 ELECTRONIC	6 HARD 6 ELECTRONIC	2 HARD 1 ELECTRONIC
	PROD Form (Permits)	1 HARD 1 ELECTRONIC	6 HARD 6 ELECTRONIC	2 HARD 1 ELECTRONIC
	Final Design	1 HARD 1 ELECTRONIC	6 HARD 6 ELECTRONIC	2 HARD 1 ELECTRONIC
	Half-size Drawings or Sketches	1 HARD 1 ELECTRONIC	6 HARD 6 ELECTRONIC	2 HARD 1 ELECTRONIC
	Specifications and Manufacturer's Cut Sheets	1 HARD 1 ELECTRONIC	6 HARD 6 ELECTRONIC	2 HARD 1 ELECTRONIC
	Design/Construction Schedule	1 HARD 1 ELECTRONIC	6 HARD 6 ELECTRONIC	2 HARD 1 ELECTRONIC
	Budget Management Status	1 HARD 1 ELECTRONIC	6 HARD 6 ELECTRONIC	2 HARD 1 ELECTRONIC
	Calculations	1 HARD 1 ELECTRONIC	6 HARD 6 ELECTRONIC	2 HARD 1 ELECTRONIC
	PROD Form (Permits)	1 HARD 1 ELECTRONIC	6 HARD 6 ELECTRONIC	2 HARD 1 ELECTRONIC

Submit all submittals requiring Government approval to the FEAD.

1. The final design submittal must be professionally signed and sealed by the DOR and forwarded to the Contracting Officer prior to the start of construction. Separated final design packages will only be considered for Government review and approval during the Post Award Kick-off Meeting

a. 65% Design

b. Final Design

2. Construction submittals are to be Contractor-approved, except those listed below:

a. DOR Approval is required for the Electrical submittals. Submit to Government after DOR review and resolution of DOR comments.

b. Government Approval required for:

1) Medium Voltage Cable

2) Medium Voltage Termination and Splice Kits

3) Splicer Qualifications

3. Submit the following construction submittals, approved by the DOR, to the Government for surveillance:

1) Medium Voltage Cable

2) Medium Voltage Termination and Splice Kits

3) Splicer Qualifications

a. Comply with sustainability submittals per UFGS section 01 33 29.05 20 *Sustainability Requirements for Design Build*.

- UFC 1 200-02 Table 1-1 requires all minor renovations <= $2.79 million (escalated from $2.5 million in 2007 per UFC 3-701-01) and all O&M, Sustainment, Restoration, and Modernization projects comply with Chapters 1, 3, 5, and 6.
  - Chapter 3 has no requirements applicable to the scope of the project.
  - Chapter 5 Paragraph 3.2 indicates minor renovation projects must comply with the Guiding Principles that apply to the scope of the project.
  - Chapter 5 Paragraph 3.3 indicates "Prior to reporting the status of an existing building, the building must be assessed using the requirements in Chapter 4. If the assessment verifies compliance with the Guiding Principles, code the building as "Yes (1)". If the assessment indicates that not all of the Guiding Principles have been met, code the building as "No (2) – …does not meet guidelines …" Buildings that have not yet been assessed are coded as "Not Yet Evaluated (3)"."
  - Chapter 6 has no requirements applicable to the scope of the project.

Paragraph 5 FIRE PROTECTION AND LIFE SAFETY REQUIREMENTS

None.

Paragraph 6 QUALITY CONTROL

The Superintendent may serve also as the Quality Control Manager on this project.

Paragraph 7 SUBMITTAL PROCESSING

	SUBMITTAL/BENCHMARK	DURATION	BENCHMARK	RECEIVED	STATUS
1	Quality Control Plan				
2	Material Safety Data Sheets				
3	Design/Construction Schedule				
4	Waste Management Plan				
5	Safety and Health Plan				

6	Schedule of Prices				
7	Budget Management Summary				
8	Record Drawings				
9	Operation and Maintenance Information				
10	Licenses and Permits				
11	Badge Requests				
12	Statement of Acknowledgement SF 1413				
13	Demolition and Work Plan				
14	Design Development Docs				
15	Final Design Docs				
16	Submittal Register				
17	Performance/Payment Bonds				
18	Environmental Protection Plan				
19	Certificates of Insurance				
20	DD Form 1354				
21	Sustainability Action Plan				
22	Sustainability Notebook				

Paragraph 8 SUPERVISION

The Contractor must have at least one qualified supervisor capable of reading, writing, and conversing fluently in the English language on the job site during working hours. In addition, the Quality Control (QC) representative shall also have fluent English communication skills. All other employees shall be fluent in English.

Paragraph 10 BUDGET MANAGEMENT

Not used.

Paragraph 13 CONTRACTOR'S PRODUCTION REPORTS

Sample forms can be obtained at quality_control_reports.pdf.

Paragraph 14 SCHEDULE OF PRICES
Paragraph 15 INVOICES
Paragraph 17 EXISTING UNDERGROUND UTILITIES

Make utility cutovers and interruptions after normal working hours or on Saturdays, Sundays, and Government holidays. Work outside regular working hours requires Contracting Officer approval. Make application 15 calendar days prior to work outside regular hours to allow arrangements to be made by the Government, giving the specific dates, hours, location, type of work to be performed, contract number and project title. Based on the justification provided, the Contracting Officer may approve work outside regular hours. During periods of darkness, the different parts of the work shall be lighted in a manner approved by the Contracting Officer.

Ensure that new utility lines are complete, except for the connection, before interrupting existing service.

Interruption to electric service shall be considered utility cutovers pursuant to be performed outside regular hours. Such interruption shall be further limited to 48 hours. This time limit includes time for deactivation and reactivation.

The Contractor shall not operate nor disturb the setting of control devices in the station utilities system, including water, sewer, electrical, and steam services. The Government will operate the control devices as required for normal conduct of the work. The Contractor shall notify the Contracting Officer giving reasonable advance notice when such operation is required.

Obtain digging permits prior to start of excavation by contacting the Contracting Officer 15 calendar days in advance. Scan the construction site with electromagnetic or sonic equipment, and mark the surface of the ground or paved surface where existing underground utilities or utilities encased in pier structures are discovered. Verify the elevations of existing piping, utilities, and any type of underground or encased obstruction not indicated to be specified or removed but indicated or discovered during scanning in locations to be traversed by piping, ducts, and other work to be conducted or installed.

Notification Prior to Excavation: Notify the Contracting Officer at least 15 days prior to starting excavation work. Contact Miss Utility 48 hours prior to excavating. Contractor is responsible for marking all utilities not marked by Miss Utility.

Paragraph 19 CONTRACTOR WORK SITE

Contractor shall provide for barricading around all work areas to prevent public access.

Fencing shall be provided along the construction site at all open excavations and tunnels to control access by unauthorized people. Fencing must be installed to be able to retrain a force of at least 114.00kg (250 pounds) against it.

Enclose the project work are and Contractor lay-down area with a 2400 mm(8 ft) high chain link fence and gates with brown, UV light resistant, plastic fabric mesh netting (similar to tennis court or other screening) and can restrain a force of at least 114.00 kg(250 pounds) against it. Remove the fence upon completion and acceptance of the work. Intent is to block (screen) public view of the construction. Coordinate the location of the lay-down area with the contracting officer representative.

In addition, prior to the start of work, enclose those areas at the construction site which are not within the construction fence with a temporary safety fence, including gates and warning signs, to protect the public from construction activities. The safety fence shall match the base standard color (or bright orange where it protects excavated areas), shall be made of high density polyethylene grid or approved equal, a minimum of 1100 mm. (42 inches) high, supported and tightly secured to steel posts located on minimum 3000 mm. (10 feet) centers. Remove the fence from the work site upon completion of the contract.

Place warning signs at the construction area perimeter designating the presence of construction hazards requiring unauthorized persons to keep out. Signs must be placed at all sides of the project, with at least one sign every 90 m (300 feet). All points of entry shall have signs designating the construction site as hard hat area.

All work around/involving roadways, to include roadway excavation and utility crossings, will be conducted in accordance with Manual of Traffic Control Devices. Contractors shall provide and ensure appropriate road closure and detour signs are established as necessary for motor traffic management. All road closures shall be coordinated with the Contracting Officer in advance. Self-illuminated (lighted) barricades shall be provided during hours of darkness. Brightly-colored (orange) vests are required for all personnel working in roadways. Road closures shall require a road closure plan showing the location of signage.

Paragraph 20 TEMPORARY UTILITIES

Backflow preventers shall have a certificate of full approval from FCCCHR-USC, University of Southern California, attesting that the design, size, and make of each backflow preventer has satisfactorily passed the complete sequence of performance testing and evaluation for the respective level of approval. Certificate of Provisional Approval will not be acceptable.

Paragraph 21 ENVIRONMENTAL CONTROLS AND PROTECTION

The Contractor is required to complete and submit evidence of completion of the Environmental Compliance Assessment Training and Tracking (ECATTS) program. For more detailed information on ECATTS see UFGS 01 57 19.00 20.

The DOR is required to edit and submit UFGS 01 57 19.00 20, Temporary Environmental Controls, and UFGS 01 57 19.01 20, Supplemental Temporary Environmental Controls. The DOR must ensure state and local regulations are met within the edited UFGS section.

The DOR is required to edit and submit UFGS 02 82 16.00 20, Engineering Control of Asbestos Containing Materials. The DOR must ensure the requirements of ASHARA, state and local regulations are met within the edited UFGS section.

Submit evidence of DOR qualifications as an EPA accredited Asbestos Project Designer.

Submit evidence of DOR qualifications as an EPA accredited Lead Project Designer.

The DOR is required to edit and submit UFGS 02 83 13.00 20, Lead in Construction.

Paragraph 22 WASTE MANAGEMENT

Provide Waste Management Plan according to UFGS section 01 33 29.05 20 *Sustainability Requirements for Design Build*.

Paragraph 23 RECORD DRAWINGS AND OPERATION & MAINTENANCE (O&M) DATA

Provide the Contracting Officer with two copies of half size as-built drawings, one copy of full-size as-built drawings, and two CDs containing drawings (in both pdf and Autocad formats), and all construction submittals.

Paragraph 24 WARRANTY

Paragraph 25 PERFORMANCE EVALUATIONS

Paragraph 26 WORK HOURS, ACCESS AND PASSES

Application for and use of badges will be as directed. Obtain access to the installation by obtaining passes each day from the Base Pass and Identification Office. One-day passes, issued through the Base Pass and Identification Office will be furnished without charge. Furnish a completed EMPLOYMENT ELIGIBILITY VERIFICATION (DHS FORM I-9) form for all personnel requesting badges. This form is available at http://www.uscis.gov/portal/site/uscis by searching or selecting Employment Verification (Form I-9). Immediately report instances of lost or stolen badges to the Contracting Officer.

1. The contractor shall submit HQ-NRL 5512/3 form to obtain a temporary badge.

2. Work hours for this project shall be determined by the Contracting Officer at the Pre-construction meeting. Naval Research Laboratory (NRL) does not participate in the Navy Commercial Access Control System (NCACS) or RAPID Gate. The Contractor is responsible of obtaining passes from NRL Security Office through the NAVFAC FEAD office point of contact (POC). The Contractor must allow a minimum three weeks lead time for processing base access. See Attachment A, Paragraph 27 – Security Requirements.

Paragraph 27 SECURITY REQUIREMENTS

Naval Research Laboratory requires all workers to be American citizens. Passes will be issued for workers on a weekly basis. No cameras are allowed. Normal working hours will be 7am to 4pm. Outages require a permit. Escorts will be required to enter secure buildings and substation A.

Naval Research Laboratory enforces identification checks to enter the base. NRL currently requires identification checks for all individual entering the activity. Prime contractors and their sub-contractors shall obtain permanent identification badges for the duration of the project. Submit completed badge request forms for all employees seeking base access to the Engineering Technician immediately upon project award for processing or a minimum of three weeks prior to date sought for base access. This process is at the Contractor's expense.

Paragraph 28 REQUIRED INSURANCE

Paragraph 30 GOVERNMENT FURNISHED MATERIAL AND EQUIPMENT

Paragraph 34 SAFETY AND OCCUPATIONAL HEALTH

The DOR is required to edit and submit UFGS 01 35 26, Governmental Safety Requirements.

Submit evidence of DOR qualifications as a Certified Industrial Hygienist (general practice) or Certified Safety Professional.

Sub-Paragraph f., Safety and Health Officer (SSHO)
The Site Safety and Health Officer may also as the Superintendent.

Sub-Paragraph h., Hot Work

Obtain services from a NFPA Certified Marine Chemist for “HOT WORK” within or around flammable materials (such as fuel systems, welding/cutting on fuel pipes) or confined spaces (such as sewer wet wells, manholes, and vaults) that have the potential for flammable or explosive atmospheres.

End of PART 2 Attachment A

Part 3 Statement of Work / Project Program

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D40 Fire Protection Systems.....Not Used
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G10 Site Preparations
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G30 Site Mechanical Utilities.....Not Used
G40 Site Electrical Utilities

1.0 PROJECT DESCRIPTION

The purpose of this project is to replace existing medium voltage Feeders G11 and H11 at the Naval Research Laboratory in the District of Columbia.

Demolish existing PILC feeders G11 and H11. Provide 15 KV 133% MV-105 EPR 4/0 feeders G11 and H11. Provide a 4/0 ground conductor in parallel with each set of phase conductors. Provide copper conductors for compatibility with existing copper cable being spliced to. Provide systems in accordance with UFGS 33 71 02.

Intent of project is to reuse existing ductbank system. If existing cables are not able to be removed, notify the Contracting Officer~~. If new ductbanks are required, provide as follows: Provide 5" Sch 40 PVC concrete encased, minimum 3" all around and between adjacent ducts, duct systems and manholes and remove landscaping, sidewalk, curbing and asphalt. Provide landscaping, sidewalk, curbing and asphalt to accommodate the concrete encased duct systems~~

~~and manholes.~~

Determine the type of grounding system used at NRL (e.g. single point grounded, multi-grounded or ungrounded) and submit the type of grounding system with the design submittals.

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2.0 PROJECT OBJECTIVES

2.1 APPLICABLE CODES AND STANDARDS

In addition to the codes and standards listed in Part 4, the design and construction shall be in accordance with the latest revision/edition of the following referenced codes and standards. The term "Latest Revision/Edition" is defined as the version as of the project award date.

UFC-3-501-01 – Electrical Engineering
UFC 3-550-01 – Exterior Electrical Power Distribution with Change 1
UFC 3-560-01 – Electrical Safety, O&M, with Change
UFC-4-010-01 – DOD Minimum Anti-terrorism Standards for Buildings
UFC 4-020-04A - Security Engineering: Electronic Security Systems
MIL-HDBK-419A

NFPA 70 (National Electric Code 2014)

NFPA 101, Life Safety Code 2009

2.2 SUSTAINABLE DESIGN

Design and construct project per sustainability requirements identified in Section 01 33 29.05 20, *Sustainability Requirements for Design-Build*. Additional specific sustainability requirements are found in this document.

2.3 STORMWATER MANAGMENT - LOW IMPACT DEVELOPMENT (LID)

Not Used

3.0 SITE ANALYSIS

3.1 EXISTING SITE CONDITIONS

The site is located on Naval Research Laboratory, District of Columbia. It is open and contains existing buildings. Existing utilities include compressed air, condensate, chilled water, electric, communications (e.g. fiber optic, telephone, etc.), gas, nitrogen, storm drain, steam, sanitary sewer and water.

3.2 SITE DEVELOPMENT

Not used.

4.0 BUILDING REQUIREMENTS

Not used.

5.0 ROOM REQUIREMENTS

Not used.

6.0 ENGINEERING SYSTEMS REQUIREMENTS (ESR)

A10 Foundations
A20 Basement Construction
B10 Superstructure
B20 Exterior Closure
B30 Roofing
C10 Interior Construction
C20 Stairs
C30 Interior Finishes
D10 Conveying Systems
D20 Plumbing
D30 HVAC
D40 Fire Protection Systems
D50 Electrical Power and Lighting
E10 Equipment
E20 Furnishings
F10 Special Construction
F20 Selective Building Demo
G10 Site Preparations
G20 Site Improvements
G30 Site Civil/Mechanical Utilities
G40 Site Electrical Utilities

A10 FOUNDATION

Not used

A20 BASEMENT CONSTRUCTION

Not used.

B10 SUPERSTRUCTURE

Not Used

B20 EXTERIOR ENCLOSURE

Not used.

B30 ROOFING

Not used.

C10 INTERIOR CONSTRUCTION

Not used.

C20 STAIRS

Not used.

C30 INTERIOR FINISHES (Also Exterior Painting)

SSPC QP 1 CERTIFICATION

The Project requires industrial coatings on surfaces. All contractors and subcontractors that perform surface preparation or coating application shall be certified by the Society for Protective Coatings (formerly Steel Structures Painting Council - SSPC) to the requirements of SSPC QP 1 prior to contract award, and shall remain certified while accomplishing any surface preparation or coating application.

The Project requires industrial coatings on enclosure surfaces. All contractors and subcontractors that perform surface preparation or coating application shall be certified by the Society for Protective Coatings (formerly Steel Structures Painting Council - SSPC) to the requirements of SSPC QP 1 prior to contract award, and shall remain certified while accomplishing any surface preparation or coating application.

D10 CONVEYING SYSTEMS

Not used.

D20 PLUMBING

Not Used

D30 HVAC

Not Used

D40 FIRE PROTECTION SYSTEMS

Not Used

D50 ELECTRICAL

D5010 ELECTRICAL SERVICE & DISTRIBUTION

Extent of feeder work is described in G4010.

Provide an insulated equipment grounding conductor in all raceways.

Refer to Division 33 Utilities: 33 71 02 – Underground Electrical Distribution Part 2 for medium voltage cable, medium voltage terminations, and medium voltage joints, low voltage insulated conductors, low voltage wire connectors and terminals. Provide an Electrical System complete in place, tested and approved, as specified throughout this RFP, as needed for a complete, usable and proper installation.

D5020 LIGHTING & BRANCH WIRING

Not used

D5030 COMMUNICATIONS & SECURITY

Not used.

D5090 OTHER ELECTRICAL SERVICES

Not Used

E10 EQUIPMENT

Not used.

E20 FURNISHINGS – Not Used

Not used.

F10 SPECIAL CONSTRUCTION

Not used.

F20 SELECTIVE BUILDING DEMOLITION

Provide Lead cabling removal per specification 02 53 13.00 20, Lead in Construction. Lead cable shall be re-spooled and shall be returned to the government. The government will dispose of the Lead cables.

G10 SITE PREPARATION

Not used.

~~Perform an underground utility location survey as required in Part 2-Paragraph 17 and include it in the design drawings.~~

~~G1010 SITE CLEARING~~

~~This project is in a fully urbanized area of the NRL. The areas are comprised of paved surfaces and short grass areas. Provide an Erosion and Sediment Control Plan for land disturbance greater than 50 square feet and submit to DDOE for review and approval.~~

~~G1020 SITE DEMOLITION & RELOCATIONS~~

~~Remove as needed and assessed, landscaping, sidewalk, curbing, paving and sub-base to accommodate the new electrical utility work.~~

~~Preserve: pavements to remain, underground site elements; existing utilities to remain. Saw cut existing asphalt pavement to be removed. Remove as needed, sidewalks curbs and gutters to nearest joints.~~

~~G1030 SITE EARTHWORK~~

~~Refer to UFGS 31 23 00 – Excavation and Fill.~~

~~G1040 HAZARDOUS WASTE REMEDIATION~~

~~Not used.~~

G20 SITE IMPROVEMENTS

Not used

~~The design and construction shall be in accordance with the latest revision/edition of the following referenced United Facilities Guide Specifications (UFGS).~~

~~UFGS 01 57 20 – Environmental Protection~~
~~UFGS 03 30 00 – Cast in Place Concrete~~
~~UFGS 31 23 00 – Excavation and Fill~~
~~UFGS 32 10 00 – Bituminous Concrete Pavement~~
~~UFGS 32 11 23 – Aggregate Base Course~~

~~Minimize the impact of construction on operations and neighboring facilities.~~

~~The Contractor shall complete the Permits Record of Decision (PROD) with the first design submittal package. A blank PROD form can be obtained in Part 6. The Contractor shall determine correct permit fees and pay said fees. Copies of all permit applications and the completed PROD form shall be forwarded to the government.~~

~~Where trenches, pits, or other excavations are made to accommodate the electrical utilities been provided by this project in existing roadways and other areas of pavement where surface treatment of any kind exists, restore such surface treatment or pavement with the same thickness and in the same kind as previously existed and to match and tie into the adjacent and surrounding existing surfaces.~~

~~Restore to their original elevation and condition unpaved surfaces disturbed during installation of duct banks and manholes. Preserve sod and topsoil removed during excavation and reinstall after backfilling is completed. Replace sod that is damaged by sod of quality equal to that removed. When the surface is disturbed in a newly seeded area, re-seed the restored surface with the same quantity and formula of seed as that used in the original seeding, and provide topsoil, fertilizing liming, seeding, sodding, sprigging, or mulching.~~

~~G2010 ROADWAYS~~

~~G201001 BASES & SUBBASES~~

~~Where the bases and the sub-base were removed by this project, restore bases and sub-bases removed by this project to their original condition.~~

~~G201002 CURBS & GUTTERS~~

~~Where the curbs and gutters were removed by this project, restore curbs and gutters removed by this project to their original condition.~~

~~G201003 PAVED SURFACES~~

~~Where the paved surfaces were removed by this project, restore paved surface removed by this project to their original condition.~~

~~Where the concrete sidewalks were removed by this project, restore concrete sidewalks removed by this project to their original condition.~~

~~G201004 MARKING & SIGNAGE~~

~~Where the marking and signage were removed by this project, restore marking and signage removed by this project to their original condition.~~

~~G2020 PARKING LOTS~~

~~See G2010~~

~~G2030 PEDESTRIAN PAVING~~

See G2010

~~G2040 SITE DEVELOPMENT~~

~~Provide an Erosion and Sediment Control Plan for land disturbance greater than 50 square feet. Submit erosion and Sediment Control Plan to DDOE for review and approval.~~

~~Provide Stormwater Management Permit if land disturbe is equal or greater than 5000 square feet. Submit Stormwater management to DDOE for review and approval.~~

~~Secure the site using a 2.43 meter (8-foot) high chain link fence. Provide one swing gates for pedestrian and vehicle access.~~

~~Provide zinc-coated steel fencing components for the fencing system. Provide top and bottom tension wires.~~

~~G2050 LANDSCAPING~~

~~See G20~~

G30 SITE CIVIL/MECHANICAL UTILITIES

Not used.

G40 SITE ELECTRICAL UTILITIES

Provide an Electrical System complete in place, tested and approved, as specified throughout this RFP, as needed for a complete, usable and proper installation. All equipment shall be installed per the criteria of PTS Section G40 and the manufacturer’s recommendations. Where the word "should" is used in the manufacturer's recommendations, substitute the word "shall".

The intent of this project is to remove existing and provide new feeders G11 and H11. Transfer all loads, as defined by the position of the primary selective switches, to one feeder (A), and de-energize the remaining feeder (B). Demolish feeder B from the originating switchgear in Building 246 through the manholes indicated, ending at primary selective switches for

transformers T-166, Building 207 switchgear, T-123, T-187, T-165, T-29, T-240, and T-114, and all intermediate primary selective switches. Provide new feeder (B), test and terminate to existing primary selective switches. Transfer all loads to feeder (B), and repeat the process for feeder (A).

G4010 ELECTRICAL DISTRIBUTION

Electrical service is provided to NRL (Naval Research Laboratory) by PEPCO (Potomac Electric Power Company). Service enters the base at Building 246 to 13,800 volt medium voltage switchgear. Medium voltage service is extended from Building 246 to Substation A. Medium voltage circuitry is distributed throughout the base with 15 kV PILC and EPR (ethylene propylene rubber insulated) conductors routed through an underground concrete encased duct bank/manhole system.

Medium voltage circuits are distributed to localized (building) unit substations utilizing redundant feeders (one normally closed and one normally open) locked open or closed with Kirk-keys.

The existence and location of underground and other utilities and construction indicated as existing are indicated per base mapping.

Electrical power at the substations and at building switches will be locked out/tagged out by both the contractor and the Government's Representative prior to de-energizing.
The Government Representatives will be responsible for de-energizing and re-energizing feeders. The Government's Representative will be responsible for transferring the existing loads on redundant feeders prior to de-energizing.

No work shall commence without a written safety plan and detailed work plan, approved by the Government.

Feeders G11 and H11:

Survey and record phasing and rotation at all terminations with Government representative as witness. De-energize one feeder and remove PILC from Building 246 to manhole EMH-203 and from manhole EMH-202 to EMH-200 including branches to selector switches. Provide 15kV EPR cable from switchgear in Building 246 to EMH-203 and from EMH-202 to EMH-200 including branches to selector switches. Provide insulated bonding conductor with all new cable spans. Splice to existing cables in EMH-202 and EMH-203 ~~replaced under previous project~~. Splice branches to selector switches. Splice cables in each manhole. Make all splices in medium voltage using separable 600A dead break connectors, the prohibition in UFGS 33 71 02 is rescinded. Make terminations at switchgear and selector switches. Bond grounding conductor to cable shields and manhole ground rod in each manhole, and bond to ground buses in switchgear and selector switches. Test and then energize cable. Verify phasing and rotation at all terminations with Government representative as witness. Repeat for second feeder.

G4030 SITE COMMUNICATION & SECURITY

Not used.

Part 4 Minimum Materials, Engineering and Construction Requirements

1.0 GENERAL REQUIREMENTS

The requirements indicated here are minimum performance requirements. More specific project functional and performance requirements, scope items and expected quality levels over and above the standards in Part 4 are identified in Part 3 of the Request for Proposal or Basic Ordering Agreement. The Contractor is encouraged to exceed the minimum requirements. The Contractor's performance evaluation will be based in part on enhancements to materials, engineering, design and construction provided for the contract that exceed minimum requirements.

Part 4 is a general section. Not all items in Part 4 will be required for this project. See Part 3 for project-specific requirements. See "Order of Precedence" paragraph in Part 2 for relationships between all parts of the RFP.

In general, unless otherwise indicated, Contractor shall provide all labor, equipment and materials necessary to complete the work required for the contract. All work shall be in conformance with all applicable referenced criteria, construction standards, laws and regulations, including applicable building and fire, life safety codes.

Recycled Materials Considerations:

An Affirmative Procurement Program has been established within the Federal government to promote the purchase of products containing recovered materials. This program promotes the purchase of products containing materials recovered from the solid waste stream. The intent is to conserve resources and reduce solid waste by developing markets for recycled products and encouraging manufacturers to produce quality recycled content products. The contractors shall use products that meet or exceed the EPA guideline standards for recovered content as required by the Federal Acquisition Regulations (FAR). Availability lists of manufacturers and EPA research on product usage are on the Construction Criteria Base (CCB) at http://www.ccb.org under Documents Library, NAVFAC Criteria. A partial list of products containing recycled materials for possible use is as follows:

- Rock Wool Insulation
- Fiberglass Insulation
- Cellulose Insulation
- Structural Fiberboard and Laminated Paperboard
- Cement and Concrete - Coal Fly Ash
- Carpet including backings and cushions
- Floor Tiles
- Reprocessed and Consolidated Latex Paint

- Crushed Concrete Aggregate for new asphalt, concrete or subgrade
- Recycled glass for terrazzo aggregate
- Acoustical Ceiling Tile
- Gypsum Wallboard
- Steel wall studs
- Cellulose spray applied fireproofing
- HDPE Toilet Partitions

1.1 MATERIALS AND METHODS OF CONSTRUCTION

Only new materials and equipment shall be installed in the work. All materials, equipment and appliances shall be of the current manufacturers' products. No obsolete or discontinued materials, equipment and appliances shall be used, except that construction materials containing recycled content as described in Paragraph 1 of this Part that completely comply with all materials specifications found elsewhere in this Part may be used.

1.2 APPLICABLE CODES AND STANDARDS

The design and construction shall be in accordance with established construction practices, and the latest revision/edition of the following referenced codes and standards. The term "Latest Revision/Edition" is defined as the version as of the project award date. References are available at www.wbdg.org/ndbm/ . The advisory provisions of all codes and standards shall be mandatory, as though the word "shall" had been substituted for "should" wherever it appears. Reference to the "authority having jurisdiction" shall be construed to mean "Contracting Officer". Comply with the required and advisory portions of the current edition of the standard at the time of contract award. All work to comply with UFC 1-200-01, *General Building Requirements*, and IBC 2009 or later edition as modified by applicable NFPA Standard as well as codes and standards listed in RFP Part 2 Attachment A.

1.3 LOCATION-SPECIFIC CODES AND STANDARDS

See Part 3.

1.4 DISCREPANCIES

When discrepancies in the referenced standards and the contract requirements occur, the more stringent requirements shall govern. The word "should" in all NFPA publications shall be interpreted as a requirement. The Authority Having Jurisdiction in the interpretation of the codes and standards, and approving the exceptions allowed in the referenced standards, shall be the Contracting Officer, and the parties designated by the Contracting Officer.

2.0 PERFORMANCE TECHNICAL SPECIFICATIONS

Note: The paragraph numbers used correspond with the numbers used in UNIFORMAT II/Work Breakdown Structures (WBS) as listed in the Whole Building Design Guide, Navy Design Build

Master, accessible at this website: www.wbdg.org/ndbm .

SECTION A. SUBSTRUCTURE – Not Used

SECTION B. SHELL – Not Used

SECTION C. INTERIORS

C30 INTERIOR FINISHES

C3040 PAINTING

All painting and coating materials shall be low VOC, comply with local air quality control laws and, regulations; and conform to the Master's Painters Institute's (MPI) *Architectural, Interior Systems Manual* and the MPI's *Maintenance and Repainting Manual* recommendations for paint systems, surface preparation and applications.

Provide minimum of one prime coat and two finish coats. The prime coat shall not be combined with texture or other coatings. Seal and prime all surfaces to cover underlying stains or discoloration that may affect finish paint. Finish coats shall provide full coverage of undercoats and substrates. All walls and ceilings in wet area shall have semi-gloss paint. All wood or metal cased openings, door trims and casings, window trims and casing, and other finish trim shall have semi-gloss paint. All interior walls and ceilings shall have satin or eggshell finish. For previously painted surfaces, prime all surfaces to ensure compatibility of finish coats. Do not paint prefinished surfaces except as noted.

Provide Institutional Low Odor/Low VOC Latex paint or High Performance Architectural Latex systems as defined and approved by the MPI Systems Manual for the various substrates required to be painted.

Paint/Color Selection: Provide paint systems tested to "Detailed Performance Level" standard as defined by MPI. Paints shall be readily available for purchase in standard colors.

SECTION D. SERVICES

D10 CONVEYING Elevators and Escalators - Not used

D20 PLUMBING – Not Used

D30 HEATING, VENTILATION AND AIR CONDITIONING (HVAC) SYSTEMS – Not Used

D40 FIRE PROTECTION – Not used

D50 ELECTRICAL

D5010 ELECTRICAL SERVICE & DISTRIBUTION

Provide electrical wiring, fixtures, switches, outlets, and apparatus in accordance with applicable codes and standards. The electrical system shall conform to NFPA 70.

SECTION E. EQUIPMENT AND FURNISHINGS – Not Used

SECTION F. SPECIAL CONSTRUCTION AND DEMOLITION

F20 SELECTIVE BUILDING DEMOLITION

F2020 HAZARDOUS COMPONENT ABATEMENT

1. **Asbestos Materials**: Asbestos shall be removed, transported and managed in accordance with the following regulations: 29 CFR 1926.1101, and 40 CFR 61-Subpart M.

   Category I & II Nonfriable: Demolition of Category I & II nonfriable asbestos containing materials (approved to be left in place during building demolition) shall be performed in accordance with 40 CFR 61 - Subpart M.

2. **Paint Containing Lead, Cadmium and Chromium**: Work which requires the disturbance of paint that have been determined to contain all or any of the following: lead, cadmium and chromium must be performed in accordance with: 29 CFR 1926.62, 29 CFR 1926.1126 and 29 CFR 1926.1127.

3. **PCBs**: Test di-electric after de-energizing cable for presense of PCBs. If found, work which requires removal of PCB containing components or materials shall be performed in accordance with 29 CFR 1910.1000, 40 CFR 761, and 40 CFR 273.

4. **Hazardous Materials Reporting**:
   a. **Daily Report**: Notify the Contracting Officer of work involving hazardous materials abatement and removal, including the quantities involved, on daily reports.
   b. **Hazardous Material Inventory Report:** The Contractor shall provide a list of all hazardous materials used on the site.

SECTION G. BUILDING SITEWORK

G10 SITE PREPARATIONS

1. **General Requirements**: Building site work includes site preparation, site improvements, site civil/mechanical utilities, site electrical utilities, exterior furnishings, landscaping, and irrigation. Provide site work in accordance with UFC 3-201-01, *Civil Engineering*.

2. **Project Limitations**: Prior to the start of design, the contractor shall determine the exact limit-of-work line for the project periphery, considering items such as, but not limited to, utility work, landscape re-vegetation of disturbed areas, and lay down areas. The Civil Engineer and Landscape Architect of Record shall determine limit-of-work lines. Minimize the impact of construction activity on operations and neighboring facilities.

3. **Geotechnical Data**: A geotechnical engineer shall conduct the subsurface exploration, investigation/evaluation, testing, and analysis that the Designer of Record deems necessary for the design and construction of the proposed facilities, including building pad, structure, pavement sections, repairs, overlays, stormwater management facilities, utility structure foundations, septic systems, and other features requiring soil support.

G1010 SITE CLEARING

1. **Existing Utilities**: When the Contractor is to work at a site that has existing utilities, the contractor is responsible for coordination with Contracting Officer and utility companies for staking out, capping, connection and relocation of any existing utility systems or traffic interruption. Notify utility locator service for area where Project is located before site clearing.

2. **Interruption**: All interruption to the existing utilities and traffic shall be coordinated with and approved by the Contracting Officer not less than 14 calendar days in advance of such interruption.

G1020 SITE DEMOLITION & RELOCATIONS

Abandon utility systems in-place conforming to applicable codes and regulations, removing their presence from the ground surface and clearly indicating that they have been abandoned. Remove utilities underneath or within 3.0 m (10 feet) of any new facilities. Fill abandoned gravity systems with flowable fill. Fill abandoned utility system piping under pavements subject to potential vehicle loading with flowable fill.

Remove existing utility structures to 900 mm (3 feet) below existing or new adjacent grade, whichever is greater. Break up bases to permit drainage. Fill with clean sand.

Comply with the requirements of the utility provider concerning utility relocation.

G1030 SITE EARTHWORK

The DOR shall utilize UFGS Section 31 23 00.00 20 for the project specification and shall submit the edited section as a part of the design submittal. Perform quality assurance for earthwork in accordance with UFGS Section 31 23 00.00 20. If sheeting/shoring or dewatering is required, the Contractor shall provide a registered Professional Engineer to provide excavation, sheeting, shoring, and dewatering plans and inspection of excavations and soil/groundwater conditions throughout construction. The Engineer shall be responsible for performing pre-construction and periodic site visits throughout construction to assess site conditions. The Engineer, with the concurrence of the contractor and the Contracting Officer, shall update the excavation, sheeting, shoring, and dewatering plans as construction progresses to reflect actual site conditions and shall submit the updated plan and a written report (with professional seal) at least monthly informing the Contractor and the Contracting Officer of the status of the plan and an accounting of Contractor adherence to the plan; specifically addressing any present or potential problems. The Engineer shall be available to meet with the Contracting Officer at any time throughout the contract duration.

G20 SITE IMPROVEMENTS

Provide site improvements as required to make a useable facility that meets functional and operational requirements, incorporates all applicable anti-terrorism, force protection and physical security requirements and blends into the existing environment.

Provide site improvements in conformance with applicable requirements of the Uniform Federal Accessibility Standards.

1. **Pavements**: For work in and adjacent to existing pavements, the Contractor is required to match the existing adjacent finish elevation, materials, paving section and texture, unless otherwise indicated in Part 3 or directed by the Contracting Officer.

   Provide pavement design and pavement section materials in accordance with UFC 3-200-10N, *Civil Engineering*.

2. **Traffic Control**: If the site work involves interference with normal vehicular and or pedestrian traffic, the Contractor shall coordinate with the authority having jurisdiction, propose and obtain approval for traffic control measures that may be required in performance of the work required by the contract.

3. **Performance Verification And Acceptance Testing**:
   a. **Subgrade Preparation:** If required by the Designer of Record, perform proof rolling. Proof rolling shall be performed in the presence of the Contracting Officer. Rutting or pumping of material shall be undercut as directed by the Contracting Officer and replaced with satisfactory soil materials as defined by the Geotechnical Engineer.
   b. **Base Course Performance Verification**: At a minimum, Contractor must perform visual performance verification. Surface shall be smooth with no ruts, sloped or crowned to not pond water.
   c. **Bituminous Concrete Pavement Performance Verification**: At a minimum, Contractor must perform visual performance verification. Finished surface shall be uniform in texture and appearance, free of defects such as cracks and creases, and be sloped or crowned so as to not pond water.
   d. **Portland Cement Concrete Pavement Performance Verification**: At a minimum, Contractor must perform visual performance verification. Finished surface shall be uniform in texture and appearance, free of defects such as cracks and spalls, and be sloped or crowned so as to not pond water.

e. **Concrete Joint Performance Verification**: Joint sealer that fails to cure properly, or fails to bond to joint walls, or reverts to uncured state or fails in cohesion, or shows excessive air voids, blisters, or has surface defects, swells, or other deficiencies, or is not recessed within indicated tolerances shall be rejected. Remove rejected sealer, re-clean and reseal joints.

G30 SITE CIVIL/MECHANICAL UTILITIES – Not Used

G40 SITE ELECTRICAL UTILITIES

G4010 ELECTRICAL DISTRIBUTION

1. **Electrical Utilities Design and Construction**: Site electrical utilities include all exterior electrical work, including the connection to the primary distribution system.

   Provide electrical overhead and underground, distribution systems in accordance with IEEE C2 (National Electrical Safety Code), NFPA 70, and local Activity guidelines.

2. **Coordination With Local Utilities Company and Local Activity**: Service meters for electrical services shall be provided and installed in conformance with the local activity guidelines.

3. **Substations**: When secondary unit substations are required, the Designer of Record shall utilize UFGS Section 26 11 13, *Secondary Unit Substation*, and UFGS Section 26 23 00, *Switchboards and Switchgear*, for the project specification, and shall submit the edited specification section as a part of the design submittal for the project.

4. **Transformers**: When transformers are required, the Designer of Record shall utilize UFGS Section 26 12 19.10, *Three-Phase Pad Mounted Transformers*, UFGS Section 26 12 19.20, *Single-Phase Pad Mounted Transformers*, or UFGS Section 33 71 01, *Overhead Transmission and Distribution*, for the project specification, and shall submit the edited specification section as a part of the design submittal for the project.

5. **Switches, Controls and Devices**: When switches or control devices are required, the Designer of Record shall utilize UFGS Section 26 13 00.00 20, SF6 *Insulated Pad Mounted Switchgear*, or UFGS Section 33 71 01, *Overhead Transmission and Distribution*, for the project specification, and shall submit the edited specification section as a part of the design submittal for the project.

G4020 EXTERIOR LIGHTING FIXTURES AND CONTROLS – Not Used

G4030 SITE COMMUNICATION & SECURITY – Not Used

Part 6 Attachments

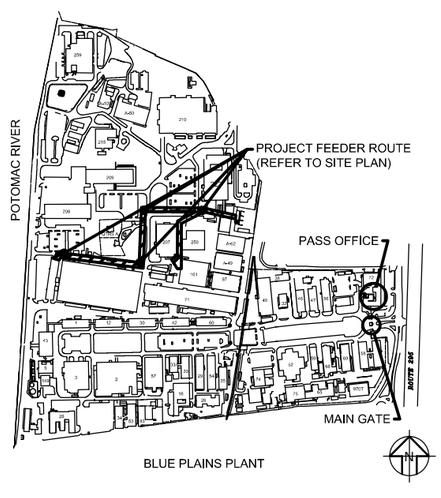
Part 6 contains information that will help the contractor develop a suitable design and construct without hindrance.

NRL REPLACE FEEDERS G11 AND H11

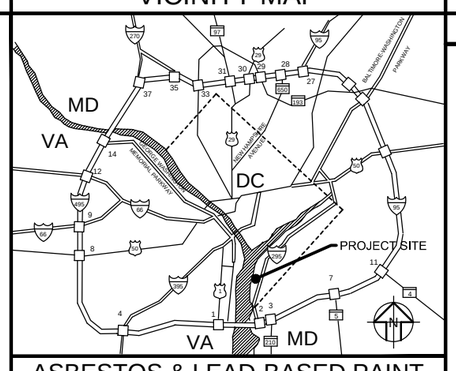
NAVAL RESEARCH LABORATORY
WASHINGTON, D.C.

CONSTRUCTION CONTRACT NO.
WORK ORDER NO. 1363771

LOCATION MAP



VICINITY MAP



ASBESTOS & LEAD-BASED PAINT

NOTE: A PRE-ALTERATION ASSESSMENT HAS BEEN CONDUCTED FOR ASBESTOS CONTAINING MATERIALS (ACM'S) AND LEAD-BASED PAINT (LBP). AREAS FOUND TO CONTAIN THESE MATERIALS HAVE BEEN INDICATED ON THE CONTRACT DOCUMENTS. HOWEVER, IF SUSPECT ACM'S OR LBP'S ARE ENCOUNTERED IN AREAS NOT INDICATED TO CONTAIN THESE MATERIALS, DEMOLITION ACTIVITIES SHALL CEASE AND BULK ASBESTOS AND/OR LEAD PAINT CHIP SAMPLING SHALL BE CONDUCTED. IF THE MATERIALS SAMPLED ARE DETERMINED NECESSARY FOR REMOVAL THEN THE CONTRACTOR SHALL ADHERE TO THE SPECIFICATION AND THE REQUIREMENTS OF SPECIFICATION SECTIONS 02 82 16.00 20 FOR ASBESTOS REMOVAL, AND 02 83 13.00 20 FOR LEAD IN CONSTRUCTION. SEE SHEET XX FOR ADDITIONAL REQUIREMENTS.

DRAWING INDEX

SHEET NUMBER	SHEET TITLE	NAVFAC DWG NO.	SHEET NUMBER	SHEET TITLE	NAVFAC DWG NO.
G-001	COVER SHEET				
G-002	SITE PLAN, SYMBOLS AND ABRREVIATION				
E-501	ONE LINE DIAGRAM				

NOTICES

NO.	DESCRIPTION	DATE	APPR.

NAVFAC

PRELIMINARY NOT FOR CONSTRUCTION

SUMMER CONSULTANTS INCORPORATED
7900 Westpark Drive | Suite A405 | McLean, VA 22102
(703) 556-0002 | www.summerconsultants.com

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE
DES ELT DRW ELT CHK CPC
<<PM/DM>> DE JESUS
BRANCH MANAGER
CHIEF ENG./ARCH
<<OOO>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
WASHINGTON NAVY YARD – WASHINGTON, D.C.
LPT GOLD
NAVAL RESEARCH LABORATORY
WASHINGTON, D.C.
NRL REPLACE FEEDERS G11 AND H11
COVER SHEET

SCALE: AS NOTED
PROJECT NO.: 1363771
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
SHEET 1 OF 3
G-001
DRAWFORM REVISION: 10 MARCH 2009

RFP – NOT FOR CONSTRUCTION – RFP

SYMBOLS

- CURRENT TRANSFORMER
- CIRCUIT BREAKER.
- FUSE.
- POTHEAD.
- TRANSFORMER.
- ELECTRIC MANHOLE
- ELECTRIC DUCTBANK, EXISTING
- NORMALLY OPEN CONTACT.
- NORMALLY CLOSED CONTACT.
- NORMALLY OPEN SWITCH.
- NORMALLY CLOSED SWITCH.
- HAND-OFF-AUTOMATIC.
- SWITCHGEAR BREAKER
- SWITCHGEAR BREAKER TRANSFER INTERLOCK

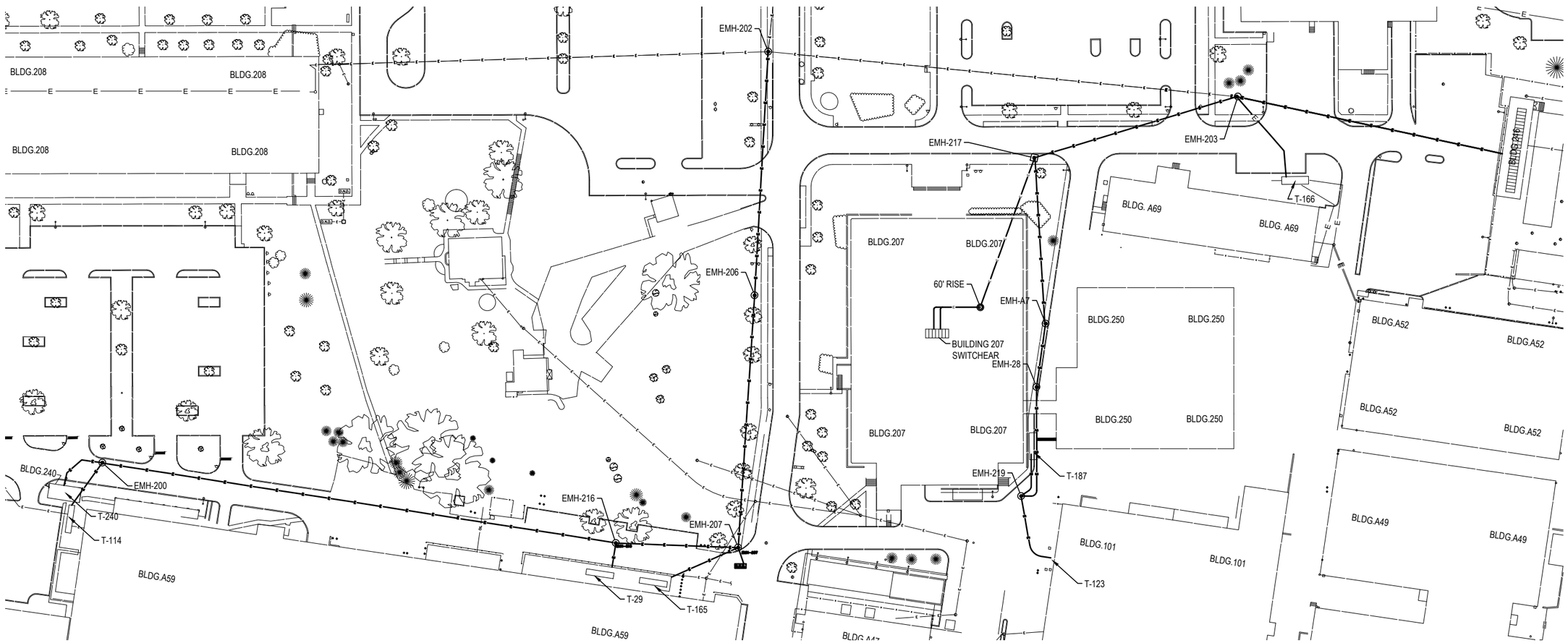
ABBREVIATIONS

A	AMPERES.
AFF	ABOVE FINISHED FLOOR.
ANNUN.	ANNUNCIATOR.
ATC	AUTOMATIC TEMPERATURE CONTROL SYSTEM.
ATS	AUTOMATIC TRANSFER SWITCH.
BATT	BATTERY BACK-UP.
BLDG.	BUILDING.
C/B	CIRCUIT BREAKER.
DDC	DIRECT DIGITAL CONTROL.
ELEC	ELECTRICAL
EC	EMPTY CONDUIT.
EMT	ELECTRICAL METALLIC TUBING.
EMH	ELECTRICAL MANHOLE.
FAAP	FIRE ALARM ANNUNCIATOR PANEL.
GFCI	GOVERNMENT FURNISHED, CONTRACTOR INSTALLED.
GFI	GROUND FAULT INTERRUPTER.
GRD.	GROUND CONDUCTOR.
HLOA	HIGH-LOW-OFF-AUTOMATIC SELECTOR SWITCH.
HOA	HAND-OFF-AUTOMATIC SELECTOR SWITCH.
M.L.O.	MAIN LUGS ONLY.
(N)	NEW
N.C.	NORMALLY CLOSED.
N.O.	NORMALLY OPEN.
NEC	NATIONAL ELECTRIC CODE.
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION.
PVC	POLY-VINYL CHLORIDE.
(R)	RELOCATE
SSP	START-STOP PUSH BUTTON.
U.L.	UNDERWRITER'S LABORATORIES.
V	VOLTAGE.
NFSS	NON-FUSED SAFETY SWITCH
FSS	FUSED SAFETY SWITCH
P	POLE
PH	PHASE
AC	ALTERNATING CURRENT
XFMR	TRANSFORMER

GENERAL NOTES

G1. ALL WORK SHALL BE NEW AND PROVIDED UNDER THIS CONTRACT UNLESS SPECIFICALLY MARKED "EXISTING", "EXIST.", OR "(E)".

G2. VERIFY LOCATION AND DIMENSIONS OF EXISTING EQUIPMENT AND COORDINATE ALL WORK PRIOR TO THE START OF CONSTRUCTION.



SITE PLAN

SCALE: 1"=50'

N

GRAPHIC SCALE

1"=50'-0"

50' 0 50' 100'

CAUTION: IF THIS DRAWING IS A REDUCTION, GRAPHIC SCALES MUST BE USED.

CM	DESCRIPTION	DATE	APPR

NAVFAC

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7900 WHITE OAK | Suite A405 | McLean, VA 22102
(703) 556-9100 | www.summerconsultants.com

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SATISFACTORY TO DATE

DES ELT	DRW ELT	CHK PC

<<PM/DM>> DE JESUS

BRANCH MANAGER

CHIEF ENG/ARCH

<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND - WASHINGTON
WASHINGTON NAVY YARD – WASHINGTON, D.C.
IPT GOLD
NAVAL RESEARCH LABORATORY
WASHINGTON, D.C.
NRL REPLACE FEEDERS G11 AND H11
SITE PLAN, SYMBOLS AND ABBREVIATIONS

SCALE: AS NOTED

EPROJECT NO.: 1363771

CONSTR. CONTR. NO.

NAVFAC DRAWING NO.

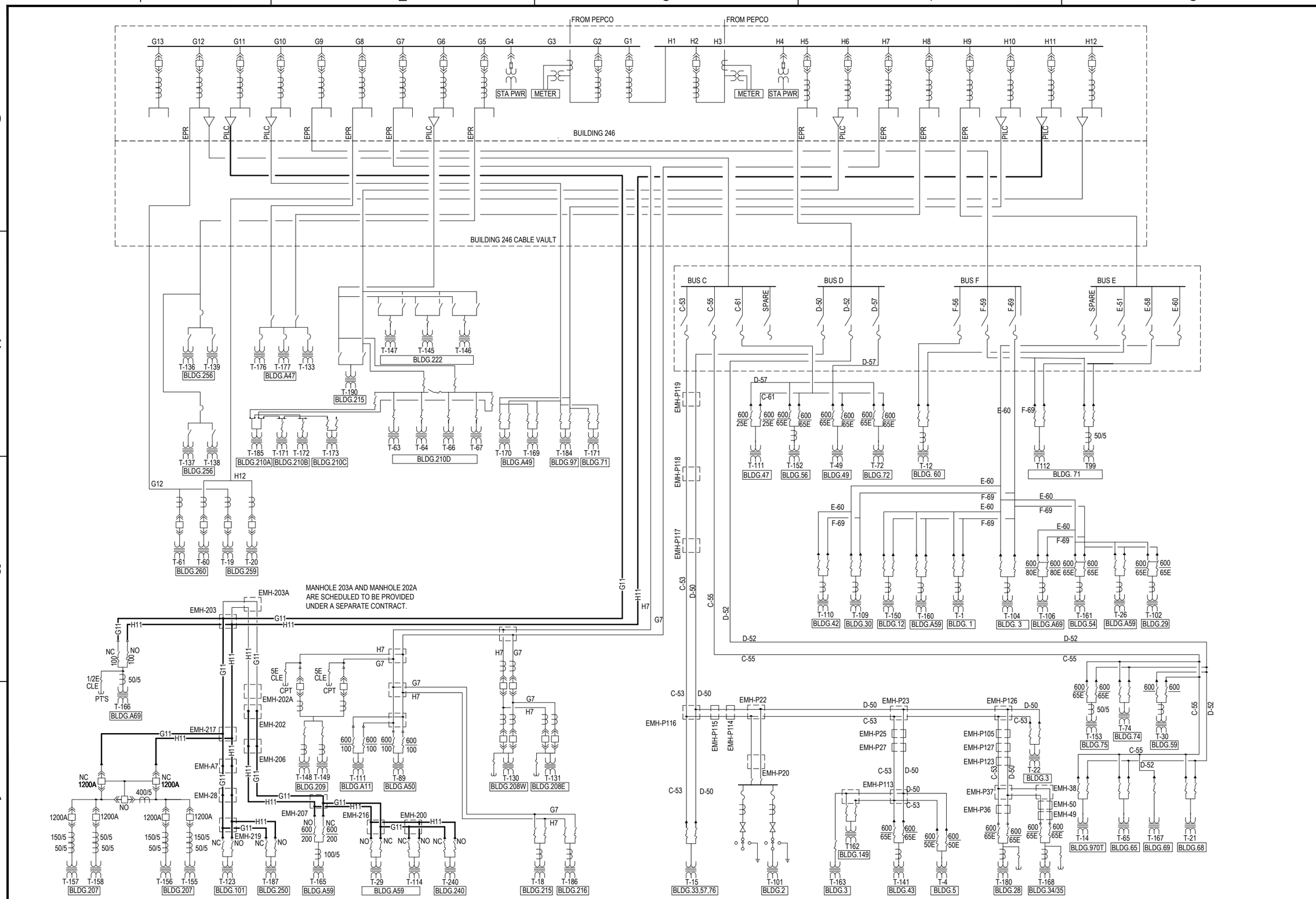
SHEET 2 OF 3

G-002

DRAWFORM REVISION: 10 MARCH 2009

FILE NAME: G-002-G11H11.DWG
OUR REF: XXX.XX
PLOT DATE: 8/17/2015 11:51:59 AM

RFP – NOT FOR CONSTRUCTION – RFP



FILE NAME: E-501.DWG
OUR REF: XXX.XX
PLOT DATE: 8/27/2015 2:29:16 PM

RFP – NOT FOR CONSTRUCTION – RFP

NAVFAC

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7900 Westpark Dr. | Suite A405 | McLean, VA 22102
(703) 556-0010 | www.summerconsultants.com

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FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES	ELT	DRW	ELT	CHK	PC
<<PM/DM>>		DE JESUS			

BRANCH MANAGER

CHIEF ENG/ARCH

<<XXX>>

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND - WASHINGTON
WASHINGTON NAVY YARD – WASHINGTON, D.C.
IPT GOLD

NAVAL FACILITIES ENGINEERING COMMAND - WASHINGTON
NAVAL RESEARCH LABORATORY
WASHINGTON, D.C.
NRL REPLACE FEEDERS G11 AND H11

ONE LINE DIAGRAM

SCALE: AS NOTED
EPROJECT NO.: 1363771
CONSTR. CONTR. NO.
NAVFAC DRAWING NO.
SHEET 3 OF 3

E-501

DRAWFORM REVISION: 10 MARCH 2009

Limited Asbestos & Lead Testing

REPLACE FEEDERS AND SUBSTATIONS

Naval Research Laboratory
Washington, DC

Summer Ref. No. 141.34

Prepared for

SUMMER CONSULTANTS INCORPORATED
7900 Westpark Drive
Suite A405
McLean, VA 22102

July 16, 2015

Prepared by

AERO EH&S, INC.
ENVIRONMENTAL HEALTH & SAFETY
10310-B BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MD 21042
(410) 480-3636

AERO EH&S, INC.
ENVIRONMENTAL HEALTH & SAFETY
10310-B BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MD 21042
OFFICE (410) 480-3636
FAX (410) 480-3637

July 16, 2015

Summer Consultants, Inc.
7900 Westpark Drive
Suite A405
McLean, VA 22102

Re: Limited Asbestos & Lead Testing
Replace Feeders and Substations
Naval Research Laboratory
Washington, DC
Summer Ref. No. 141.34

Gentlemen:

AERO EH&S, Inc. (AERO) is pleased to submit the attached Limited Asbestos & Lead Testing report for the referenced site. The testing was performed on June 8, 2015 and included all accessible portions of the building specified by the Summer Consultants' Project Engineer during the walkthrough inspection as potentially impacted by the referenced renovation project. The report includes the procedures and methods for testing.

As a result of this testing, paint containing lead was identified. AERO has provided conclusions and/or recommendations regarding these materials within the report.

AERO appreciates the opportunity to perform limited asbestos and lead testing for Summer Consultants, Inc. Please contact our office if you have any questions.

Sincerely,

AERO EH&S, Inc.

S. Michael Derdeyn
Senior Project Manager

Michael Hentgen, CIH CSP
President

LIMITED ASBESTOS & LEAD TESTING
Replace Feeders and Substations
Naval Research Laboratory
Washington, DC
Summer Ref. No. 141.34

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Lead 2
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APPENDIX B XRF Reading Location Diagrams

LIMITED ASBESTOS & LEAD TESTING
Replace Feeders and Substations
Naval Research Laboratory
Washington, DC
Summer Ref. No. 141.34

Purpose and Scope of Service

The purpose of this project was to conduct limited asbestos and lead testing of locations at the Naval Research Laboratory in Washington, DC that will be impacted by the Replace Feeders and Substations project. The testing was performed in accordance with the following scope of work:

A. Conduct a walk-through inspection of all accessible portions of the building with Summer Consultants' Project Engineer.

B. Review existing asbestos documentation.

C. Identify suspect asbestos-containing materials that may be impacted by the proposed renovations.

D. Collect bulk samples of accessible suspect asbestos-containing materials not addressed in the existing documentation.

E. Identify suspect lead paint that may be impacted by the proposed renovations.

F. Test for the presence of lead in paint and other materials utilizing a Niton XLp 300A X-Ray Fluorescence (XRF) Analyzer in general accordance with the Niton Performance Characteristic Sheet (PCS) and Environmental Protection Agency (EPA) recommendations.

The testing was conducted by an EPA-accredited Lead Risk Assessor and an EPA-accredited Asbestos Building Inspector.

Asbestos

No suspect asbestos-containing materials were identified in the areas to be impacted by the project.

Lead

The following building components identified during the walk-through inspection were suspected of being coated with paint containing lead and may be impacted by the referenced renovation project:

- Metal Pull Boxes
- Metal Switch Boards
- Metal Switch Gear
- Metal Bollards
- Metal MCC Boxes
- Metal Pit Cover
- Metal Breaker Boxes
- Metal Transformers
- Metal Conduits
- Metal Pipe Supports
- Metal Meter Boxes
- Concrete Wall Blocks

XRF testing revealed none of the surfaces had lead concentrations of 1.0 mg/cm^2 or greater.

XRF testing revealed lead concentrations less than 1.0 mg/cm^2, but greater than the limit of detection for the instrument, on the following surfaces:

- Metal Pull Boxes
- Metal Switch Boards
- Metal Bollards
- Metal Pit Cover
- Metal Transformers
- Metal Conduits
- Concrete Wall Blocks

XRF testing revealed lead concentrations less than the limit of detection for the instrument used on the remaining surfaces. The XRF testing results are included in **Appendix A**. Diagrams depicting the XRF reading locations are included in **Appendix B**.

Current District of Columbia regulations define a lead-based paint as any paint or other surface coating containing lead or lead in its compounds in any quantity exceeding one half percent (0.5%) of the total weight of the material or more than one milligram per square centimeter (1.0 mg/cm^2), or such more stringent standards as may be specified in Federal law or regulations promulgated by EPA or the United States Department of Housing and Urban Development (HUD), which shall be adopted by the Mayor by rule.

Federal regulations define a lead-based paint as any paint or other surface coating containing lead or lead in its compounds in any quantity greater than 0.50% lead by weight, or more than 1.0 mg/cm^2. The Occupational Safety and Health Administration (OSHA) regulates lead present in the work place in any concentration.

Environmental Protection Agency (EPA) regulations concerning lead hazardous waste require the collection of representative samples of the demolition waste stream. These samples must be analyzed using EPA's Toxicity Characteristic Leaching Procedure (TCLP). If TCLP analysis reveals a leachate concentration of 5 parts per million of lead

or higher, the waste stream must be treated as hazardous waste and handled accordingly.

Conclusions and Recommendations

Based upon the work conducted for this survey and AERO's understanding of the project, AERO concludes and recommends the following:

A. No suspect asbestos-containing materials were identified in the areas to be impacted by the project.

B. Lead-containing paints were identified during the survey. Removal of paint with lead as a result of demolition activities does not necessarily constitute a lead paint abatement provided the lead paint(s) have not been included in the demolition plans to reduce or eliminate a lead hazard. However, if lead paint is removed with the intention of reducing or eliminating a lead hazard, then the removal must be performed by a licensed lead abatement contractor.

C. Painted surfaces containing lead in any concentration must be handled in accordance with 29 CFR 1926.62, the OSHA Lead Exposure in Construction Standard. Therefore, AERO recommends notifying contractors of all known lead-containing paints prior to bidding on work at the Site.

D. The Department of the Navy, Naval Facilities Engineering Command Guide Specifications for the Removal/Control and Disposal of Paint with Lead, Specification Section 02.82.33.13.20, and the Lead in Construction Specification Section 02.83.13.00.20 provide the requirements and standards for handling lead-containing paint and materials in Navy and Marine Corps facilities.

   Specifically, the Navy Guide Specification 02.82.33.13.20 applies to removal/control of lead-based paint or paint with lead (LBP/PWL) (including paint film stabilization) or lead-based paint hazards abated as defined by Public Law 102-550 Title X - Residential Lead-Based Paint Hazard Reduction Act of 1992. Specification Section 02.83.13.00.20 and the OSHA Lead in Construction Standard apply to all projects that impact materials containing lead.

E. The OSHA Lead Standard requires an employer to ensure that no employee is exposed to lead at concentrations greater than 50 micrograms of lead per cubic meter of air ($\mu g/M^3$) averaged over an eight-hour period. The standard further requires the employer to make a determination of its employees' potential exposure to lead. The Standard details presumed exposure levels for various

construction activities. The employer must provide adequate personal and respiratory protection to match the presumed exposure listed in the Standard. Deviation from the presumed exposure is typically achieved by performing personal monitoring during various representative construction activities. The level of personal and respiratory protection can then be modified based upon the results of the monitoring.

F. Representative demolition waste stream samples should be collected and submitted for TCLP analysis. Should TCLP results reveal lead concentrations of 5 parts per million or higher, the waste stream should be handled and disposed of as hazardous waste.

APPENDIX A

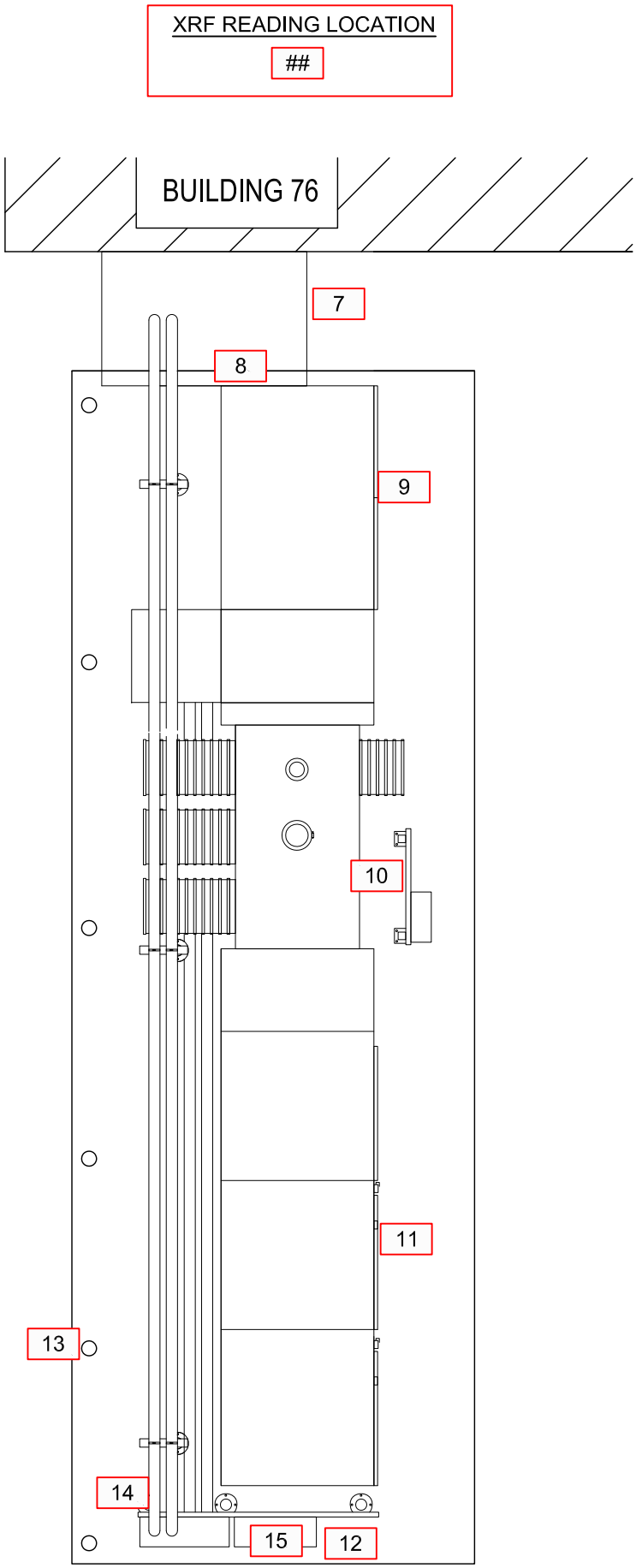
XRF Testing Results

Replace Feeders and Substations
Naval Research Laboratory
Washington, DC
Summer No. 141.34

No	Time	Inspector	Site	Floor	Room	Substrate	Component	Condition	Color	Results	PbC	+/-	Error	PbL	+/-	Error	PbK	+/-	Error
2	**6/8/2015 7:47**						**Shutter_Cal**				**8.02**	**+/-**	**0**	**1.38**	**+/-**	**0**	**0.02**	**+/-**	**0**
3	**6/8/2015 7:50**						**CALIBRATE**			**Negative**	**0**	**+/-**	**0.02**	**0**	**+/-**	**0.02**	**0.19**	**+/-**	**0.78**
4	**6/8/2015 7:50**						**CALIBRATE**			**Positive**	**1**	**+/-**	**0.1**	**1**	**+/-**	**0.1**	**0.4**	**+/-**	**0.3**
5	**6/8/2015 7:51**						**CALIBRATE**			**Positive**	**1**	**+/-**	**0.1**	**1**	**+/-**	**0.1**	**0.3**	**+/-**	**0.3**
6	**6/8/2015 7:51**						**CALIBRATE**			**Positive**	**1**	**+/-**	**0.1**	**1**	**+/-**	**0.1**	**0.4**	**+/-**	**0.3**
7	6/8/2015 7:52	Derdeyn	XFMR T-15	Outside	Outside	Metal	Pull Box	Poor	White	Negative	0	+/-	0.02	0	+/-	0.02	-0.02	+/-	0.75
8	6/8/2015 7:53	Derdeyn	XFMR T-15	Outside	Outside	Metal	Breaker Box	Intact	Grey	Negative	0	+/-	0.02	0	+/-	0.02	-0.01	+/-	1.04
9	6/8/2015 7:54	Derdeyn	XFMR T-15	Outside	Outside	Metal	Switch Board	Intact	Grey	Negative	0	+/-	0.02	0	+/-	0.02	0.04	+/-	0.79
10	6/8/2015 7:55	Derdeyn	XFMR T-15	Outside	Outside	Metal	Transformer	Intact	Grey	Negative	0.04	+/-	0.02	0.04	+/-	0.02	0.2	+/-	0.74
11	6/8/2015 7:56	Derdeyn	XFMR T-15	Outside	Outside	Metal	Switch Gear	Intact	Grey	Negative	0	+/-	0.02	0	+/-	0.02	0.4	+/-	0.7
12	6/8/2015 7:56	Derdeyn	XFMR T-15	Outside	Outside	Metal	Conduit	Intact	Grey	Negative	0.03	+/-	0.02	0.03	+/-	0.02	0.28	+/-	0.66
13	6/8/2015 7:57	Derdeyn	XFMR T-15	Outside	Outside	Metal	Bollard	Intact	Brown	Negative	0.01	+/-	0.02	0.01	+/-	0.02	0.03	+/-	0.7
14	6/8/2015 7:57	Derdeyn	XFMR T-15	Outside	Outside	Metal	Pipe Support	Intact	Grey	Negative	0	+/-	0.02	0	+/-	0.02	0.16	+/-	0.84
15	6/8/2015 8:00	Derdeyn	XFMR T-15	Outside	Outside	Metal	MCC Box	Intact	Grey	Negative	0	+/-	0.02	0	+/-	0.02	0.05	+/-	0.73
25	6/8/2015 8:27	Derdeyn	XFMR 168	Outside	Outside	Metal	Pull Box	Peeling	White	Negative	0.09	+/-	0.21	0.09	+/-	0.21	0.01	+/-	1.78
26	6/8/2015 8:28	Derdeyn	XFMR 168	Outside	Outside	Metal	Switch Box	Intact	Grey	Negative	0.03	+/-	0.04	0.03	+/-	0.04	-0.04	+/-	0.78
27	6/8/2015 8:29	Derdeyn	XFMR 168	Outside	Outside	Metal	Transformer	Intact	Grey	Negative	0.02	+/-	0.02	0.02	+/-	0.02	-0.31	+/-	0.8
28	6/8/2015 8:29	Derdeyn	XFMR 168	Outside	Outside	Metal	Switch Gear	Intact	Grey	Negative	0	+/-	0.02	0	+/-	0.02	-0.17	+/-	0.8
29	6/8/2015 8:30	Derdeyn	XFMR 168	Outside	Outside	Metal	Meter Box	Intact	Grey	Negative	0	+/-	0.02	0	+/-	0.02	0.29	+/-	1.61
30	6/8/2015 8:31	Derdeyn	XFMR 168	Outside	Outside	Metal	Pit Cover	Fair	Grey	Negative	0.18	+/-	0.06	0.18	+/-	0.06	0.24	+/-	0.76
31	6/8/2015 8:32	Derdeyn	XFMR 168	Outside	Outside	Concrete	Wall Block	Fair	White	Negative	0.04	+/-	0.04	0.04	+/-	0.04	-0.07	+/-	0.72
47	**6/8/2015 13:18**						**CALIBRATE**			**Positive**	**1**	**+/-**	**0.1**	**1**	**+/-**	**0.1**	**0.8**	**+/-**	**0.3**
48	**6/8/2015 13:18**						**CALIBRATE**			**Positive**	**1**	**+/-**	**0.1**	**1**	**+/-**	**0.1**	**0.8**	**+/-**	**0.3**
49	**6/8/2015 13:19**						**CALIBRATE**			**Positive**	**1**	**+/-**	**0.1**	**1**	**+/-**	**0.1**	**0.8**	**+/-**	**0.3**

APPENDIX B

XRF Reading Location Diagrams



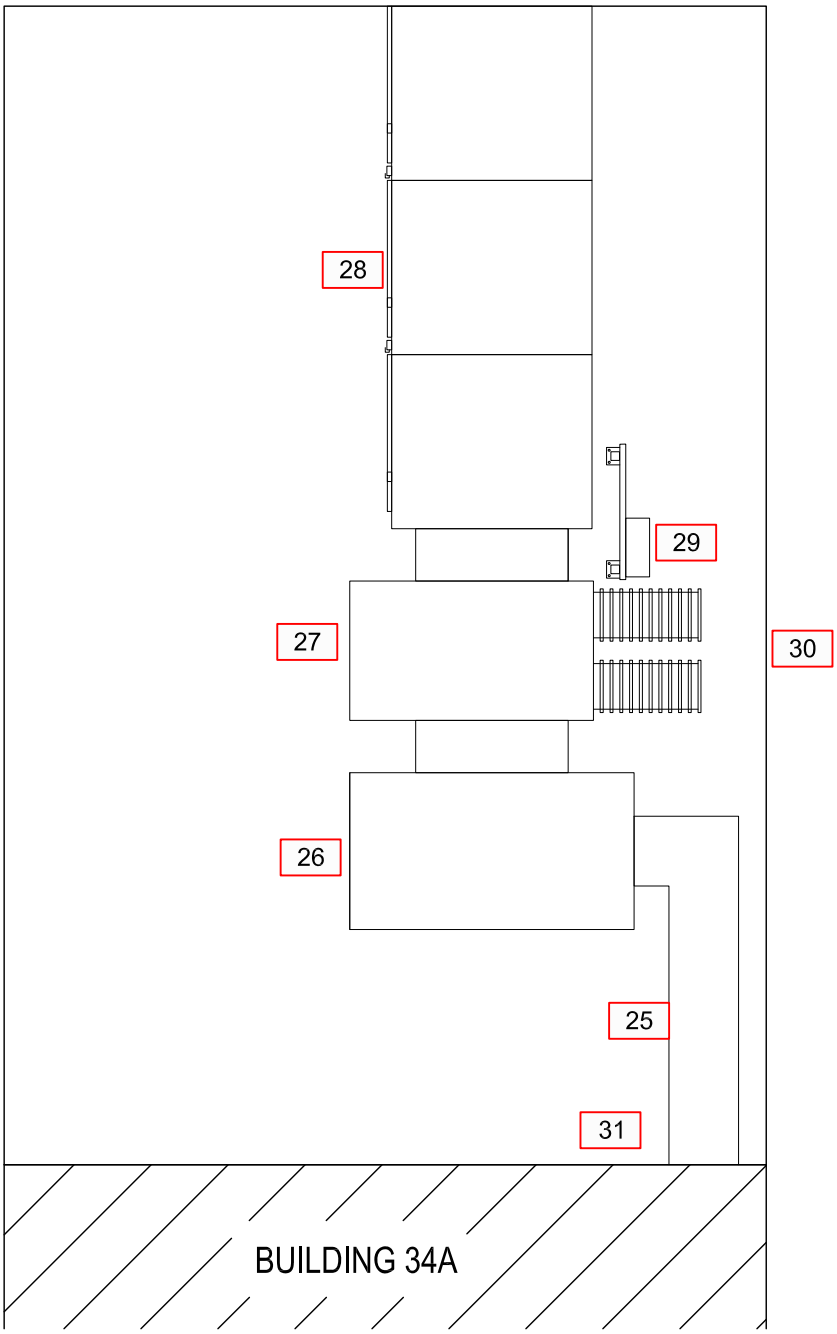
XRF READING LOCATIONS

TRANSFORMER 15

NRL, WASHINGTON, DC

XRF READING LOCATION

##



XRF READING LOCATIONS

TRANSFORMER 168

NRL, WASHINGTON, DC