

Part 3

Repair Latrines

Statement of Work / Project Program

Table of Contents

CHAPTERS

1. PROJECT DESCRIPTION
2. PROJECT OBJECTIVES.....
3. SITE ANALYSIS.....
4. BUILDING REQUIREMENTS.....
5. ROOM REQUIREMENTS.....
6. ENGINEERING SYSTEMS REQUIREMENTS

C10 Interior Construction
C30 Interior Finishes
D20 Plumbing
D30 HVAC
D40 Fire Protection Systems
D50 Electrical Power and Lighting
E10 Equipment
F10 Special Construction
F20 Selective Building Demolition
G30 Site Mechanical Utilities
G40 Site Electrical Utilities

1.0 PROJECT DESCRIPTION:

This project consists of renovations to six (6) existing latrines due to deteriorated conditions and a design and build for an expansion to three (3) of the latrines to accommodate population growth.

Statement of Work

Mission Impact: Project includes repairs to latrines in Naval Nuclear Power Training Command Building 2400.

Mission Partner(s): Naval Nuclear Power Training Command, 628 CES

A. GENERAL: The work includes providing a design and all labor, material parts, and equipment necessary to repair and renovate six (6) latrines located in rooms P119, P123, P221, P224, P319 and P320 in building 2400. The vestibules P119A, P121A, and P320A shall be included in the renovation. This project will require an expansion into adjoining spaces, which are currently vending areas, to add at least two additional water closets to the existing women's latrines, rooms P119, P221, and P320. One of the additional closets shall be ADA compliant. The

vending areas will have to be modified, including any required electrical, mechanical, plumbing and fire systems work, to accommodate a new vending area layout. Two vending machines shall remain in the area and will need to be repositioned in the new layout. The renovation of the men's latrines, rooms P123, P224, and P319 shall include the conversion of one water closet to meet ADA requirements.

All interior tile and wallboard shall be removed. Contractor shall demolish and replace all steel studs, tracks, headers, and appurtenances for a complete system in the wet walls. Contractor shall evaluate all remaining studs and framing system and replace all deteriorated items. All deteriorated bottom track and studs shall be replaced. Wet walls have severe deterioration in the track and stud up to about 12" AFF. All plumbing shall be inspected, and deteriorated plumbing shall be replaced. The urinal sanitary lines are known to be in a failed state and shall be replaced. The existing latrines do not have hot water and a recirculating electrically heated hot water supply will need to be designed and installed. All measurements and quantities are estimated, contractor is to confirm and adjust all measurements and quantities. The materials and finishes used in the renovation of latrines P158 and P159 shall be used as basis of design. This building does not have an elevator.

Contractor shall provide all tools, qualified labor, materials, equipment, supplies and supervision necessary to engineer, install, and warranty all items in accordance with the following Statement of Work. All work shall be accomplished in accordance with all Federal, State, Local Regulations and the guidelines & requirements to include but not limited to the following:

1. International Building Code (Current Edition)
2. International Mechanical Code (Current Edition)
3. International Plumbing Code (Current Edition)
4. National Electrical Code (NFPA 70)
5. National Fire Code (NFPA 1)
6. Base Architectural Compatibility Guide
7. Unified Federal Criteria (UFC)
8. Unified Facilities Guide Specifications (UFGS)
9. NFPA 101 Life Safety Code (Current Edition)
10. NFPA 72 National Fire Alarm Code (Current Edition)
11. American Society for Testing and Materials (ASTM) C840

NOTE: All work may be done during normal business hours (0600-1700 M-F), no weekends or government holidays work without prior written authorization. The demolition, chipping and grinding of the latrine floors for the removal of tile and preparation of the new floor system shall be scheduled for off hours or during the weekend, this shall be coordinated with the user. Common wall work that does not affect classrooms may be completed during normal hours. Common wall work in classrooms will require work outside of normal hours due to the sensitive nature of classroom instruction.

B. LOCATIONS: Building 2400 NNPTC Compound, 101 Naval Nuclear Power Training Command Circle, Goose Creek, SC 29445.

SECURITY NOTE: Building 2400 has an extra layer of security. All contractors will have a single point of entry and exit from the building. All contractors shall be required to obtain a security badge from the security desk and return it each time they leave the building. No cell phones, smart watches or other electronic communication devices shall be allowed in the building. There is no smoking within 100 yards of the building. Violations can result in permanent access revocation.

C. SCOPE OF WORK:

The project requirements include, but are not limited to the following major items of work:

NOTE: In accordance with 29 CFR 1926.1101 (OSHA's Asbestos Standard for the Construction Industry) Building Owners are required to inform potential contractors bidding for work of the presence, location, type and amount of asbestos containing building materials (ACBM) that may be impacted by this project scope of work. The following is applicable:

1. Building is asbestos free as of 1999.

ASBESTOS/LEAD PAINT SURVEY/ABATEMENT:

1. Contractor shall conduct a limited building asbestos and lead survey and provide the government the original report prior to start of construction. Asbestos and lead found in the immediate work area which will be disturbed by construction will be abated and disposed of properly. Material will be disposed of at an approved offsite landfill.
2. Contractor shall coordinate the transportation and disposal of hazardous materials at their cost with the 628 Civil Engineer Hazardous Waste Program Manager at (843) 963-1470.
3. Contractor shall prepare a Hazardous Waste Profile Sheet in accordance with the Joint Base Charleston Hazardous Waste Management Plan.

GENERAL SITE AREA:

1. Contractor shall provide daily work cleanup with a final cleanup at the end of the project.
2. Contractor shall safe guard all GOV owned equipment. Contractor shall maintain a safe work environment.
3. Contractor shall protect the building's stair treads from damage. The contractor shall be responsible to any damage to the epoxy stair treads.
4. The building does NOT have an elevator.
5. A licensed electrical contractor shall perform all electrical connections. Installation shall be in accordance with National Electrical Code current edition and Unified Facilities Criteria.
6. Contractor shall follow proper lock out-tag out procedures when working on electrical circuits.
7. A licensed plumbing contractor shall perform all plumbing connections. Installation shall be in accordance with International Plumbing Code and Unified Facilities Criteria.
8. Contractor shall be provided with an approximate 625SqFt lay down area. On the NNPTC campus. Lay down area may be in excess of 100' away from the building pending mission requirements. No utilities will be provided by the government for the lay down area.

NOTES:

1. All plumbing pipes connected to active systems shall be plugged or capped at all times and all water feed valves shall be locked out by approved means to prevent accidental flooding. The contractor shall be responsible for any and all flooding repairs associated with the project.
2. There are active electrical and communication conduits in the slab.
3. Dust mitigation shall be used for the duration of the project. Submit dust mitigation plan before the start of demolition. A plenum return is utilized in the majority of the building.

DEMOLITION:

NOTES:

1. Protect B2400 Stair treads from damage.
2. Protect all fire alarm devices and sprinkler heads from dust or damage.
3. Protect all return vents from any dust intake.
4. Provide dust mitigation during demo and sheetrock sanding phases.
5. Shared classroom and hallway walls shall be kept intact.
6. Protect existing floor drains from debris in a way that will still allow water to drain.

INSTALLATION:

WALLS

Note:

1. The finish for exposed sheetrock shall be level 5. All non-exposed or above ceiling sheetrock finish shall be level 2 as described in ASTM C840

2. Tile shall be Dal Tile Unity 12"x24" Polished Filed Tile in Ash Grey (P405) or approved substitute.
3. Wall color shall be Sherwin Williams Pro Mar 200 221-C1 SW9136 Lullaby in Semi-Gloss
4. Grout shall be Laticrete Epoxy Grout in Smoke Grey#89 or approved substitute.

CEILING

Note:

1. Ceiling sheetrock shall be installed prior to the installation of the wall sheetrock.
2. Ceiling paint and color shall be Sherwin Williams Pro Mar 200 256-C1 SW7757 High Reflective White in Semi-Gloss.

LIGHTING, ELECTRICAL, FIRE ALARM and INTRUSION ALARM

NOTES:

1. Follow NFPA 101 Life Safety Code for emergency fixture requirements.
2. All concealed wiring shall be in Electrical Metallic Tubing per UFC 3-520-01.
3. Metal Clad cable shall be allowed if not concealed after construction is complete. MC shall be allowed above the drop ceiling. MC shall not to be used for home runs to the electrical panel.
4. Lighting color shall be 4000-4100K.

PLUMBING

NOTE:

1. Provide bushing and/or grommets for all copper or PEX water feed lines installed in steel studding channels.

Products:

All project components and materials shall be installed in accordance with the manufacturer's technical installation instructions and specifications.

APPLICABLE INSTRUCTIONS

- a. Work areas around project site will be occupied by the user during the course of work day.
- b. Caution must be taken to insure all safety work practices are adhered to while construction work requirements are performed within the facility.
- c. Warranty equipment and all work performed for one (1) year.

D. SUBMITTALS: Refer to the Submittals, RFI's & RFV's Sections in the Division 1 specifications. The submittal register will be developed as part of the design after award in accordance with 01 33 16. At a minimum the submittal requirements shall include the following:

- a. Progress/Construction Schedule
- b. Activity Hazard Analysis(s)
- c. Quality Control Plan
- d. Contractor Certifications
- e. Product Data/SDS
- f. Water Closet and Urinal Partition Layout Drawing with accessories.
- g. Manufacture's Equipment Cut Sheets & Instructions
- h. Asbestos Survey Results
- i. Environmental Protection Plan
- j. Dust Mitigation Plan
- k. Steel Stud Framing Plan

- l. Wall Blocking Layout Plan
- m. Slab Sealing Materials
- n. Electrical General
- o. Lighting Fixtures
- p. Plumbing Fixtures
- q. Plumbing General
- r. Fasteners General
- s. Linear Sinks and Faucets
- t. Epoxy Flooring/Cove Base
- u. Tile General
- v. Cement Board
- w. Plywood
- x. Insulation
- y. Automatic Soap and Paper Towel Dispensers

E. ENVIRONMENTAL: The contractor shall comply with all applicable federal (i.e. Environmental Protection Agency), state (i.e. SC DHEC), and local environmental protection laws and regulations. The contractor shall submit a project specific Environmental Protection Plan Supplement that identifies the APPLICABLE environmental impact issues (i.e. Sediment Control/Erosion Prevention, Asbestos Abatement, Special/Hazardous Waste Management, Freon/ODS Management, Oil & Hazardous Substance Spill Prevention/Response, Pesticide Use, Lead-Based Paint Management, Wetlands & Waters of the US Protection) and describes the procedures/practices/controls that will be applied to prevent and minimize impacts. Procedures/practices/controls described in the government approved Baseline Environmental Protection Plan may be cited by reference. Sediment Control and Erosion Prevention practices (i.e. silt fence, sediment tubes, mulching, hydro-seeding, re-grassing, dewatering discharge filtering) to be applied should be shown on a site plan. All materials used in the performance of this contract shall be applied in strict accordance with manufacturer's printed label instructions and all applicable standards. The use of Class I ozone depleting substances, asbestos containing materials, and lead paints are strictly prohibited.

F. WASTE DISPOSAL/RECYCLING: Refer to the Environmental Specification and the Hazardous Materials Section in the Division 1 specifications.

G. SAFETY AND HEALTH: Refer to the Safety and Health requirements in the Division 1 specifications.

H. OUTAGES: Refer to the requirements in the Division 1 specifications.

I. PERMITTING: Refer to the requirements in the Division 1 specifications.

J. CLOSEOUT DOCUMENTS: Refer to the requirements in the Division 1 specifications

- End Statement of Work

2.0 PROJECT OBJECTIVES

Renovate deteriorated latrines and expand water closet capacity in female latrines. Replace deteriorated galvanized metal track, studs and wallboard. Provide and updated latrine with epoxy flooring and integrated cove base to help prevent future deterioration of replacement wall system.

2.1 APPLICABLE CODES AND STANDARDS

In addition to the codes and standards listed in Part 4, the design and construction must 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.

1. International Building Code
2. International Mechanical Code
3. International Plumbing Code
4. National Electrical Code (NFPA 70)
5. National Fire Code (NFPA 1)
6. Base Architectural Compatibility Guide
7. Unified Federal Criteria
8. Unified Facilities Guide Specifications
9. NFPA 101 Life Safety Code
10. NFPA 72 National Fire Alarm Code

2.2 SUSTAINABLE DESIGN

Not Used

2.3 STORMWATER MANAGMENT - LOW IMPACT DEVELOPMENT (LID)

Not Used

2.4 CYBERSECURITY

All control systems (including systems separate from an energy management control system) must be designed, acquired, and executed in accordance with DoD Instruction 8500.01, DoD Instruction 8510.01, and as required by individual Facilities Engineering Command (FEC) or installation implementation policy.

Incorporate ICS Security Controls located in NIST 800-82, Appendix G, Table G-1.

3.0 SITE ANALYSIS

3.1 EXISTING SITE CONDITIONS

The site is on the Navy Nuclear Power Training Command on Joint Base Charleston Naval Weapons Station. It is and contains an existing building. Existing utilities include water lines, sanitary gravity sewer main, storm sewer, overhead and underground electric and underground telephone.

3.2 SITE DEVELOPMENT

Not Used

4.0 BUILDING REQUIREMENTS

Not Used

5.0 ROOM REQUIREMENTS

Follow guidance and requirements in the statement of work, the design documents, and Part C10 Interior Construction for detailed room requirements.

6.0 ENGINEERING SYSTEMS REQUIREMENTS (ESR)

C10 Interior Construction
C30 Interior Finishes
D20 Plumbing
D30 HVAC
D40 Fire Protection Systems
D50 Electrical Power and Lighting
E10 Equipment
F10 Special Construction
F20 Selective Building Demo
G30 Site Civil/Mechanical Utilities
G40 Site Electrical Utilities

C10 INTERIOR CONSTRUCTION

C1010 PARTITIONS

Fixed Partitions

Provide fixed interior partitions, except where demountable or retractable partitions are specifically required. Sound-rated partition assemblies must have a minimum Sound Transmission Coefficient (STC) of 36 in accordance with ASTM E 90 or ASTM E 413 for frequency data.

Interior fixed partitions must be metal studs with gypsum board on each side.

C1020 INTERIOR DOORS

Provide wood interior doors except where metal doors are required for durability or to meet fire ratings. All interior door frames must be hollow metal.

Doors must have Factory Finish of AWI Quality Standards Section 1500, specification for field finish.

Interior Door Hardware

Provide the services of a Certified Door Hardware Consultant to prepare the door hardware schedule.

Provide hands free door pull on latrine exit doors.

C1030 SPECIALTIES

Compartments, Cubicles, & Toilet Partitions

Provide toilet partitions in all toilet rooms with more than one water closet or urinal. Toilet partitions and screens must be high density polyethylene/solid plastic.

Toilet and Bath Accessories

Contractor to confirm toilet and bath accessories conform to facility/client requirements and janitorial contracts.

Provide toilet and bath accessories including toilet paper holder, automatic soap dispenser, paper towel dispenser: convertible automatic universal and automatic roll paper towel dispenser and sanitary napkin disposal unit

Signage

All interior doors must have an identifying device per UFC 3-120-10, *Sign Standards*.

Counters

Provide solid plastic or synthetic/natural stone counter tops and back splashes.

Cabinets

Provide cabinetry and millwork items with associated accessories and hardware. Cabinetry must be AWI premium grade and have concealed hinges with adjustable standards for shelves. All exposed surfaces will be covered with high pressure plastic laminate clad.

Casework

Provide all built-in premanufactured metal cabinetry for specialized functions such as laboratories, libraries, medical and dental facilities. Casework must comply with Mil Std. 1691.

Firestopping Penetrations

Provide all sleeves, caulking, and flashing for firestopping penetrations.

Entrance Floor Grilles and Mats

Provide floor mats at all building entrances.

C30 INTERIOR FINISHES

SSPC QP 1 CERTIFICATION

The Project requires industrial coatings on wall surfaces. All contractors and subcontractors that perform surface preparation or coating application must 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 must remain certified while accomplishing any surface preparation or coating application.

C3010 WALL FINISHES

Conceptual Wall Finish Schedule

SPACE	MINIMUM FINISH REQUIREMENT
Restrooms	Ceramic tile to a height of 4'6" above finished floor, paint from end to tile to ceiling. Tile: 12"x24" Dal Tile Unity Polished in Ash Grey(P405)

Unless noted otherwise, all interior gypsum board wall partitions must be painted and provide ceramic tile in all toilet rooms to a height of 4'6" AFF.

C3020 FLOOR FINISHES

Provide floor finish materials to meet the following requirements;

a. Carpet Requirements

CARPET CHARACTERISTIC	MINIMUM CARPET REQUIREMENTS
Fiber Surface Color	100% branded nylon type 6.6 Multi-colored

	and Patterned
Surface Texture	Loop
TARR Rating	Severe 3.5
Dye Method	Solution Dyed
Backing	Moisture Resistant and Anti-Microbial
Sustainability	NSF 140 2007e Gold

- b. Concrete Floor Requirements
Finish concrete surface smooth enough to meet the minimum requirements of this RFP or the floor finish manufacturer's smoothness requirements, whichever is the most restrictive. Exposed concrete floors that are not required to have an applied floor finish, must receive a minimum of 3 coats of the manufacturer's approved sealer.
- c. Raised Floor Requirements
Raised Flooring must be interchangeable 24"x24" square module panels capable of support design loads. Finish to be static dissipative flooring. Raised flooring must accommodate data, electrical and mechanical systems. Majority of Raised Flooring components to be available on GSA Schedule.
- d. Resilient Floor Finishes
Provide resilient floor finishes as identified in the Project Program, Room Requirements or as directed below. Include manufacturer's full line of color, texture and pattern selections, including multi-colored materials.
 - 1) Resilient Sheet Flooring for floors with high durability, low to moderate maintenance, antistatic and antimicrobial requirements. This product is made from readily renewable, natural raw materials including linseed oil, flour and resin binders double calendared onto natural jute backing. Pattern and color must extend throughout thickness of material. Seal linoleum using manufacturer's recommended sealer for commercial application. A manufacturer's 5-year warranty is required.
 - 2) Resilient Tile Flooring Provide resilient vinyl composition tile (VCT) flooring and corridors, offices, classrooms, break rooms and other similar areas] requiring flooring with moderate durability high maintenance and low cost VCT must be commercial grade, with pattern through thickness of tile VCT with bio based materials or recycled content must be used where practical. Provide resilient solid vinyl tile, in corridors and other high traffic areas for floors with high durability, low maintenance, high slip-resistance requirements. Solid vinyl tile must be planks or square tiles with protective urethane finish for ease of maintenance. 40 mil 20-year warranty is required
- e. Epoxy Floor Finishes Provide epoxy 3 stage epoxy floor system.
- f. Base
Wall base must be epoxy cove base that matches epoxy flooring system. System is to provide a seamless transition between the floor and 6" AFF.

Conceptual Floor Finish Schedule

SPACE	MINIMUM FINISH REQUIREMENT
Private Office	Carpet tile
Open Office	Carpet tile
Conference Room	Carpet tile
Reception	Solid vinyl
Kitchen/ Break Room	Solid vinyl
Restrooms	Epoxy floor system with integral cove base
Lobby/ Entrance	Solid vinyl
Executive Office and Adjoining Suite	Carpet tile
Corridors	VCT
Training Room	carpet tile

C3030 CEILING FINISHES

Primary ceiling finish material must be moisture and mold resistant painted gypsum board.

C3040 INTERIOR COATINGS AND SPECIAL FINISHES

Paint new and previously painted interior surfaces including walls, doors, trim, ceilings as well as all interior exposed metal items, to include interior grilles, registers, diffusers, access panels, and panel boxes.

D10 CONVEYING SYSTEMS

D20 PLUMBING

D2010 PLUMBING FIXTURES

Provide quantity and type of plumbing fixtures required for the occupancy, use, and functions described for this facility and in accordance with the plumbing code. Provide handicapped fixtures in accordance with the referenced criteria.

Water Closets

Remove, store and reinstall wall mounted flush valve type water closets in all restroom spaces.

Provide water closet flush valve with electronic control in all restroom spaces.

Urinals

Remove, store and reinstall flush valve type urinals in all restroom spaces.

Provide flush valve with electronic control in all restroom spaces.

Sinks

Provide countertop sinks with electronic control in each female restroom space.

Provide linear four-gang wall mounted sinks made of stainless steel, straight back with electronic control male restrooms in preexisting gang sink locations.

Water Coolers

Provide electric water cooler(s).

D2020 DOMESTIC WATER DISTRIBUTION

Provide double check valve type backflow preventer at the service entrance inside the mechanical room.

Provide reduced pressure principle type backflow preventer at all make-up water lines inside the mechanical room.

Provide water meter and tie water meter into BAS.

Provide high efficiency condensing type water heater with a minimum efficiency of 97%.

Provide electric or natural gas water heater for heating of domestic water.

Provide in-line circulator for domestic hot water distribution system.

Insulation & Identification

Provide insulation on domestic water hot and cold supply and recirculation piping.

Specialties

Other Domestic Water Supply

Provide piping supports in accordance with the IPC. Provide inspections, disinfection, and testing in accordance with the IPC.

D2030 SANITARY WASTE

Floor Drains

Provide in mechanical rooms, restrooms, and to receive condensate from air handling equipment.

Sanitary & Vent Equipment

Provide sump pump in the wet wall areas where needed.

D2040 RAIN WATER DRAINAGE

Pipe & Fittings

Provide Cast iron hub and spigot or hub less pipe and fittings to interface with existing plumbing. Provide PVC piping, fittings, and solvent cement. Provide ABS piping, fittings, and solvent cement.

Roof Drains

Provide roof drains that are compatible with the roofing system.

Insulation & Identification

Provide the same as domestic water piping.

D2090 OTHER PLUMBING SYSTEMS

Special Piping Systems

Obtain natural gas pressures from the local gas company. Contractor is responsible for providing the complete natural gas system to the facility, including any applications and permits.

D30 HVAC

HVAC System Requirements

Provide air conditioning and heating for spaces as indicated and for the following Design conditions:

Provide Ventilation rates and systems per the latest edition of ASHRAE Standard 62.1, *Ventilation for Acceptable Indoor Air Quality*.

For unoccupied mode, provide the following night setback temperatures:

For winter, 10 degrees F lower than indoor heating design conditions, but no lower than 55 degrees F.

For summer, 5 degrees F higher than indoor cooling design conditions, but no higher than 85 degrees F.

D3010 ENERGY SUPPLY

D3020 HEAT GENERATING SYSTEMS

D3030 COOLING GENERATING SYSTEMS

D3040 DISTRIBUTION SYSTEMS

Air Distribution, Heating & Cooling

Provide insulated, galvanized steel ductwork. Provide double wall, pre-insulated ductwork in public areas when exposed.

Provide aluminum grilles, registers, and diffusers. Provide filter grilles for return air.

Water Distribution Systems

Provide complete, operable hot and chilled water system to serve the HVAC equipment throughout the

facility.

Exhaust Systems

Provide ducted exhaust ventilation systems and exhaust fans to serve all ventilated zones of the facility.
Provide in-line centrifugal exhaust fan[s].

Air Handling Units

Other Distribution Systems

Provide in-line base circulating pumps with variable frequency drives.

D3050 TERMINAL & PACKAGE UNITS

D3060 CONTROLS AND INSTRUMENTATION

HVAC Controls

D3070 SYSTEMS TESTING AND BALANCING

Provide complete Testing and Balancing (TAB) of all air and water distribution systems and HVAC equipment.

D40 FIRE PROTECTION SYSTEMS

D4010 FIRE ALARM AND DETECTION SYSTEMS

All fire alarms, supervisory alarms and trouble conditions indicated at the fire alarm control panel must be transmitted to the fire alarm receiving station. Transmitter zones must be as follows:

- a. Sprinkler Water Flow
- b. Smoke Detector
- c. Manual Pull Station
- d. Supervisory (i.e., valve tamper switch, fire pump loss of power, fire pump phase reversal)
- e. Duct Smoke Detector
- f. Fire Pump Running
- g. Sleeping Room Smoke Detector

D4020 FIRE SUPPRESSION WATER SUPPLY AND EQUIPMENT

D4040 SPRINKLERS

Provide wet pipe automatic sprinkler protection for complete coverage throughout.

The incoming sprinkler service must be provided with a double check backflow preventer.

D4090 OTHER FIRE PROTECTION SYSTEMS

Provide portable fire extinguishers and cabinets as required.

D50 ELECTRICAL

The electrical design must comply with the design criteria specified in UFC 3-501-01, *Electrical Engineering*, and its referenced documents.

D5010 ELECTRICAL SERVICE & DISTRIBUTION

Provide an insulated equipment grounding conductor in all raceways for systems operating at greater than 50 volts.

D5020 LIGHTING & BRANCH WIRING

Provide a complete lighting system consisting of exit and emergency lighting and area lighting consisting of light emitting diode (LED) lighting including switches and automatic controls including occupancy sensors, automatic lighting shutoff systems.

Provide lighting and general purpose receptacles throughout all spaces as required.

Provide dedicated power connections to all ancillary office equipment such as printers, faxes, plotters, and shredders.

D5030 COMMUNICATIONS & SECURITY

Telecommunications Systems

Public Address and Intercommunications Systems

Television Systems

Security Systems

D5090 OTHER ELECTRICAL SERVICES

E10 EQUIPMENT

E1010 COMMERCIAL EQUIPMENT

All specialty equipment will be installed by qualified installers regularly engaged in installing the specialty equipment. The general contractor must be responsible for coordinating equipment design requirements with the end user, providing equipment specifications, and procurement and installation of equipment using Best Value practices. The construction contractor is responsible for the installation of equipment requiring a hard

connection (plumbing, hardwire, venting, etc.) to the building.

E1030 VEHICULAR EQUIPMENT

E1040 GOVERNMENT FURNISHED EQUIPMENT

Rough-in and provide connections for Government-furnished equipment such that equipment will operate as intended, including providing miscellaneous items such as plugs, receptacles, wire, cable, conduit, flexible conduit and outlet boxes or fittings. Equipment must remain in control of the Government until such time as the Contractor is ready to install. Contractor must provide thirty (30) days advance notice of expected installation date and pick up equipment at building 2 Joint Base Charleston Naval Weapons Station and transfer to site for installation. Testing requirements of Government Furnished equipment must be the responsibility of the Contractor and must follow the same guidelines as though the Contractor had provided the equipment. The following items will be furnished by the Government and must be installed and tested by the Contractor: 30 GE Mogul Base LED Lamps, 2 FAA Beacon Systems to include LED beacon, cable, stainless steel beam clamps, cable strain reliefs and control system.

E1090 OTHER EQUIPMENT

E20 FURNISHINGS

Not Used

F10 SPECIAL CONSTRUCTION

Not Used

F20 SELECTIVE BUILDING DEMOLITION

Not Used

G10 SITE PREPARATION

Not Used

G20 SITE IMPROVEMENTS

Not Used

G30 SITE CIVIL/MECHANICAL UTILITIES

G3010 WATER SUPPLY

The new water system is an extension of the existing water system. The existing water system serving the project site is owned and maintained by the federal government. Provide the new water system and connections to the existing water system in accordance with state sewerage regulations, the utility provider's requirements and UFC 3-230-01 *Water Storage, Distribution, and Transmission*; whichever is more stringent.

Notify the utility provider of the additional demand generated by the proposed facility. Provide a copy of all correspondence with the utility provider to the Government's Civil/Mechanical Reviewer.

G3020 SANITARY SEWER

The new sanitary sewer system is an extension of the existing sanitary sewer collection system. The existing sanitary sewer collection system serving the project site is owned and maintained by the federal government. Provide the new sanitary sewer system and connections to the existing sanitary sewer collection system in accordance with state sewerage regulations, the utility provider's requirements and UFC

3-240-01 *Wastewater Collection*; whichever is more stringent.

Notify the utility provider of the additional wastewater flow generated by the proposed facility. Provide a copy of all correspondence with the utility provider to the Government Civil Reviewer.

Provide connection to the existing sanitary sewer collection system at the point indicated on the drawings in another part of this RFP. In identifying a suitable point of connection, evaluate the capacity of the existing collection system.

A wastewater pump station will not be required.

G3030 STORM SEWER

G40 SITE ELECTRICAL UTILITIES

G4010 ELECTRICAL DISTRIBUTION

The electrical design must comply with the design criteria specified in UFC 3-501-01, *Electrical Engineering*.

All primary distribution systems must be designed as four wire, multi-grounded systems that are wye connected at the source transformer. A system grounded neutral conductor must be provided throughout the system. Equipment intended to interrupt current at fault levels must have interrupting ratings sufficient for the nominal circuit voltage and the current that is available at the line terminals of the equipment.

Use stainless steel enclosures and hardware for exterior electrical equipment.

Equipment foundation pads must be 200 mm (8 in) thick; pre-cast concrete pads can be used. Ensure a minimum of 3 m (10 Ft) clear workspace in front of pad-mounted equipment for hot stick work. Provide bollards in areas where equipment is subject to vehicular damage.

Underground Electric Conductors

Underground primary electrical distribution must comply with UFC 3-501-01, *Electrical Engineering*.

G4030 SITE COMMUNICATION & SECURITY

Not Used

End of Part 3