# SCOPE OF WORK
# FOR
# BUILDING 2 EMERGENCY BACKUP GENERATOR REPLACEMENT

1. **GENERAL REQUIREMENTS**: The work consists of providing all labor, materials, and equipment as required for demolition/removal of existing Building 2 generator and appurtenances, demolition of the existing building which houses the current generator, demolition of the existing building slab, installation of a new reinforced concrete slab with thickened edges to accommodate the new generator package, and installation of a new 3-phase, 277/480VAC, 600kW turbo-diesel generator including provisions for a temporary generator, hookup to the existing emergency electrical system at the Salem Veterans Affairs Medical Center, 1970 Roanoke Boulevard, Salem, Virginia, and final testing and activation of the new unit. The temporary generator will be supplied by the government for use by the contractor. The contractor will be required to perform wiring functions to hook up and unhook the temporary generator, as required. The work shall be performed in accordance with this Scope of Work any other mandated requirements.

2. **COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK**: Upon acceptance, the contractor shall commence work NLT four (4) weeks after notice to proceed and work diligently to complete the entire work ready for use by eight (8) weeks after contract award. This timeframe shall include adequate cure time for the new concrete pad prior to installation of the new generator unit as agreed to by the COR.

3. **SPECIAL PROVISION:** Quotes shall include a specific line item credit, if applicable, optionable at the Salem VAMC's discretion, setting forth the salvage value of the existing Cummins 600kW generator. This value shall include the loading, securing and removal of the existing generator from Salem VAMC property by the contractor or agent thereof.

4. **SCOPE OF WORK:**

    a. Provide all labor and materials necessary for:
        i. Remove and reconnect feeder for temporary generator and prepare for new generator.
            1. Contractor shall hook up emergency power generator for temporary connection until completion of installation and satisfactory load bank run of new generator. The temporary generator shall be supplied by the government, but the contractor will be responsible for connecting and disconnecting, as necessary.
        ii. Remove existing building including all associated utility work in conformance with COR requirements.
        iii. Remove old generator and appurtenances.
        iv. Remove existing concrete slab and appurtenances.
        v. Construct new concrete pad to accommodate new generator per generator set manufacturer's specifications.
        vi. Install new generator, set-up mounting(s) per generator manufacturer's specifications.
        vii. Connect generator start circuit, battery charger and sump heater as applicable to nearest available power supply.
        viii. Connect fuel supply to new generator.
        ix. Verify installation and perform start-up checks, transfer and load bank testing to verify proper operation of all electrical and mechanical components.
        x. Clear all work debris and material from site and remove from Salem VAMC property. All material and debris shall be disposed of properly.

    b. Install and disconnect government furnished temporary emergency generator as required:
        i. Contractor shall include the cost of connection/disconnection of a temporary government-furnished generator..
        ii. Generator shall be set up and tied in to existing emergency feeds and automatic start circuit.

## 5. EXAMINATION AND PREPARATION

a. The vendor shall insure that the delivery and installation methods consider the limited overhead clearance aspects of the site of installation. This could impact the method of delivery of the new unit as well as delivery of raw materials required for the construction such as ready-mixed concrete.
b. The beginning of installation stipulates the acceptance of surface and site conditions.
c. Installation will not be carried out unless above conditions are satisfied.

## 6. MATERIAL SPECIFICATIONS

a. Generator
    i. One (1) new turbo-diesel packaged generator set with brushless generator, 600kW, 3-Phase, 277/480VAC, 60HZ @ 1800 RPM, 0.8 Power Factor, Standby Duty with the following attachments and accessories:
        1. Enclosure
        2. Designed for outdoor installation with sound attenuation.
        3. Generator
            a. Insulation System
            b. Drip proof generator air intake (NEMA 2, IP 23)
            c. Electrical design in accordance with BS5000 Part 99, EN-61000-6, IEC60034-1, NEMA MG-1.33
        4. Generator Set
            a. Complete system designed and built at ISO 9001 certified facilties
            b. Factory tested to design specifications at full load conditions
        5. Engine
            a. Governor – Electronic
            b. Electrical System – 12 VDC
            c. Cartridge type filters
            d. Batteries, rack and cables included
            e. Coolant and lube oil sump drains piped to edge of base frame.
        6. Exhaust
            a. Exhaust system shall be installed per manufacturer's specifications and shall include catalytic exhaust scrubbers, if to reduce particulate emission. Back pressure shall not exceed manufacturer's specifications.
        7. Fuel System
            a. Generator shall include an appropriately sized day tank for 24 hours run time.
                i. Day tank shall include a primary and back-up fuel transfer pump piped to existing UST and filter system.

b. All other materials used shall conform to manufacturer's specifications as provided for in technical documentation. Materials not specified by the manufacturer shall not be used; however, shop materials and incidentals shall conform to industry standards.

## 7. INSTALLATION

a. Installation of all equipment shall be per manufacturer's specifications.

## 8. WARRANTY

a. For a period of one year from the date of substantial completion, equipment installed hereunder shall (i) be free from defects in material, manufacture, and workmanship and (ii) shall have the capacities and ratings set forth in the manufacturer's specifications.

**9. QUALITY ASSURANCE**

a. The parts and materials utilized must come from suppliers with experience in the manufacturing of electrical generators, switchgear, conductors and fittings.
b. Installer must have performed installations of the same scale in the last three years.
c. Installer must be recognized and approved by the manufacturer.

**10. DESIGNATED CONTRACTING OFFICER'S REPRESENTATIVE**: The designated contracting officer's representative and Point of Contact for this project is Anthony Richards, Electric Shop Supervisor, (540) 982-2463 ext. 2847. Inquiries concerning any phase of the specification before or after award shall be made to same.

**11. CONDITIONS AFFECTING THE WORK**: The Offeror should visit the site and take such other steps as may be reasonably necessary to ascertain the nature and location of the work, the general and local conditions which can affect the cost of the work thereof. Failure to do so will not relieve bidders from responsibility for estimating properly the difficulty or cost of successfully performing the work. The government will assume no responsibility for any understanding or misrepresentations concerning conditions made by any of its officers or agents prior to the execution of the contract, unless included in the request for quotes, the specification or related documents. The potential vendors are advised to look especially at site access to this location.

**12. PERFORMANCE PERIOD**: The contractor must begin NLT 4 weeks after award and complete installation within 8 weeks of initiation of the work, inclusive of concrete cure timeframes.

**13. ORAL MODIFICATION**: No oral statement of any person other than the contracting officer shall in any manner or degree, modify or otherwise affect the terms of this contract.

**14. WORK OUTSIDE REGULAR HOURS**: This work will require coordination with functions of Building 2 (critical care building housing the nursing home and hospice care functions of the medical center) and may require some work outside of normal business hours for downtime to avoid interference with day-to-day business. Generally, this should be minimal as a temporary generator will be in place. However, some work outside normal business hours will be necessary in order to transition to temporary generator and back to the new generator, at a minimum. Work required outside or normal business hours (which are 7:30 a.m. to 5:00 p.m. Monday through Friday) should be 20% or less of the required work. If the contractor opts to work on Saturday, Sunday, holidays or outside the station's regular hours, he may submit his request in writing to the Contracting Officer's Representative for approval consideration. The contractor shall allow ample time to enable satisfactory arrangements to be made by the government for inspecting the work in progress.