



## TELLUS WAREHOUSE EXPANSION PROJECT

### HVAC INSTALLATION - DETAILED SCOPE OF WORK

#### SUMMARY

Work to be performed under this Contract is shown on the drawings and specifications listed in this document and as described herein. In general, the Work includes, but is not limited to, Project Management, Supervision, shop and field labor, fabrication, materials, equipment, safety management, transportation, tools, consumables, insurances, and other services required to provide Installation services plus all other work described herein for the Tellus Warehouse Expansion Project in Belle Glade, Florida. The following is not intended to be a comprehensive listing of the work, nor is it intended to indicate or limit the methods or resources necessary to satisfy the requirements of the work, but is further defined as follows.

#### WORK INCLUDED BY CONTRACTOR:

**Note: The scope description herein shall take precedence over any other scope descriptions on drawings or specifications.**

##### I. Equipment Demolition

In general, the Work includes, but is not limited to, Project Management, Supervision, safety management, transportation, tools, equipment, consumables, insurances, and other services required to provide demolition services and disposal of equipment and materials off-site for the Tellus Warehouse Expansion Project in Belle Glade, Florida. The following is not intended to be a comprehensive listing of the work, nor is it intended to indicate or limit the methods or resources necessary to satisfy the requirements of the work, but is further defined as follows:

- A. Reference Demolition drawing TEL2305-ME-HVAC-0004.
- B. Items in the demolition drawing should be worked in conjunction with vendor drawings and demolition descriptions in the installation sections below.
- C. Demolition shall commence once operations have stopped, and area is cleared of Tellus personnel for the outage tentatively scheduled to start on December 23<sup>rd</sup>, 2023.
- D. Existing Molding Building modifications (Demolition and Duct Installations) to existing Air rotation Unit 1.2 shall be completed before restart of operations tentatively scheduled for January 2<sup>nd</sup>, 2024. Schedule shifts, crew size, premium and overtime pay shall be appropriately considered for completion of demolition scope and Installation scope II.A.a below in this 10-day duration.
  - a. Existing Molding Building Demo (ARU 1.2)
    - i. Louver and Trim on south wall of existing building above docks to be demolished and site cleared. Repair in kind in accordance with architectural drawings.
    - ii. Insulated duct and hangers between existing louver and mix box taper to be demolished and site cleared.

**Commented [DD1]:** Not sure we need to write all this again (just had it in the summary above).

- iii. The existing conduits interfering with new louver location between columns E and F along the east wall will be relocated by Fire Protection contractor or others. See TEL2305-ME-HVAC-0004 note 1 and 2.
- iv. The opening to cut in the east wall and receive the new 180" x 96" louver is detailed in the structural works package.

## II. **Major Equipment Installation**

New Warehouse expansion building will be ventilated only without heating or cooling except for the office area along the south wall. Office area will be cooled only via ductless split air conditioning unit. Warehouse area will operate in positive pressure from six (6) wall mounted fans supplying 10,000 CFM of fresh outside air. Four passive rooftop vents will allow air to exit the warehouse as pressure builds.

- A. The contractor shall procure, receive, and install all new equipment in accordance with HVAC Schedules on drawings TEL2305-ME-HVAC-0003 and TEL2305-ME-HVAC-0006. Warehouse ventilation equipment and ARU1.2 Louver is to be purchased by Greenheck. Office conditioning unit is to be purchased by Mitsubishi, Daikin, or equivalent approved by Tellus. Additional information included below:
  - a. Existing Molding Building (TEL2305-ME-HVAC-0005 and TEL2305-ME-HVAC-0006)
    - i. Wall Mounted Louver (LV-001)
      - A rough opening will be made to receive the 180" X 96" Greenheck ESD-635X wall mounted Louver with bottom of louver height at 19'-6" above finished floor.
      - Louver to be installed and secured to insulated metal wall between existing Z-girts.
      - Manufacturer's installation method to comply with Miami dade approval. It is the responsibility of the contractor to properly install the louver per the manufacturer's details.
    - ii. ARU1.2 Intake Ductwork
      - Dimensions of existing equipment and locations are for reference only. Contractor is to field verify all dimensions prior to fabrication to ensure proper fitup.
      - Galvanized steel ductwork shall be fabricated and installed per drawings and notes on TEL2305-ME-HVAC-0005.
      - Galvanized sheet(s) shall be installed at the horizontal and vertical interior duct corners, acting as a vane to guide air into mixbox.
  - b. Warehouse Ground Level (TEL2305-ME-HVAC-0001)
    - i. All supply fans will be supported from grade on stick built steel frames. Reference structural scope of work for additional details.
    - ii. East Supply Fan Assemblies (Detail A, Section A-A, Typical 3)
      - New Greenheck furnished supply grille (GRL-001 to GRL-003) to be installed at each east wall opening.

- Contractor will field construct a new plenum box to fitup with each wall opening, including interior turning vanes and exterior facing access door.
- New Greenheck furnished Supply fan and housing, and filter bank assembly (F-001 to F-003) to be installed and mate up to plenum box. Electrical scope details supplying power to each 5hp motor.
- New Greenheck furnished weatherhood (WTHD-001 to WTHD-003) to be installed and mate up to filter bank.
- iii. West Supply Fan Assemblies (Detail B, Section B-B, Typical 3)
  - New Greenheck furnished supply grille (GRL-004 to GRL-006) to be installed at each west wall opening.
  - Contractor will field construct a new plenum box to fitup with each wall opening, including interior turning vanes and exterior facing access door.
  - New Greenheck furnished Supply fan and housing, and filter bank assembly (F-004 to F-006) to be installed and mate up to plenum box. Electrical scope details supplying power to each 5hp motor.
  - New Greenheck furnished weatherhood (WTHD-004 to WTHD-006) to be installed and mate up to filter bank.
- iv. Air Curtain Fan #1 (DAC-001)
  - Install mounting brackets per mechanical detail 2 and manufacturer's instructions.
  - Install vendor furnished 120" air curtain.
- v. Air Curtain Fan #2 (DAC-002)
  - Install mounting brackets per mechanical detail 2 and manufacturer's instructions.
  - Install vendor furnished 120" air curtain.
- vi. Ductless Split Air Conditioning Unit (FC-001 / CU-001)
  - Field locate and drill hole(s) in west office wall for refrigerant tubing between units.
  - Field locate and drill hole in south warehouse wall for condensate drain piping from fan coil unit inside the office.
  - Install fan coil unit interior of office on west office wall with bottom of unit at 7' above finished floor. Install Support steel between studs as needed.
  - Install condensing unit exterior of office on south warehouse wall with bottom of unit at 7' above finished floor. Install bracing steel between girts as needed.
  - Install unit and refrigerant tubing in strict accordance with manufacturers recommendations. Install tubing to allow access to unit.
  - Route and pitch condensate (at size that meets or exceeds connection point to ductless mini split) to exterior of building in accordance with local codes. Owner to approve discharge point.

- Condensate piping shall be ASTM B88 type I hard temper copper tubing with ASTM B145/ANSI B16.29 wrought solder-type drainage fittings.
  - Galvanized steel may be specified (with cast iron drainage fittings) as a suitable alternative.
- c. Warehouse Roof (TEL2305-ME-HVAC-0002)
- i. Roof Ventilators (V-0001 to V-0004)
    - 1. Four (4) new Greenheck furnished ventilators with 58"x 58" gravity exhaust dampers to be installed between column lines Y and Z.
    - 2. Hoods are passive exhaust points in the roof and exclude any motors, electricity, etc. Gravity damper is only moving part and is balanced/spring assisted for minimal resistance to flow.
    - 3. Four (4) new Greenheck furnished pitched roof curbs are to be installed at each ventilator.
- B. For equipment, the Contractor shall provide:
- a. Transportation of equipment from Tellus staging area onsite to its final location, erecting and setting and affixing in place on structural framing or concrete, including the equipment listed on the Equipment List with the associated parts which may or may not be on the list. Contractor shall move any spare parts purchased with Equipment and that could be shipped with the Equipment or separately to the final location designated by Tellus. Vendor drawings or descriptions herein shall be referred to for the installation and assembly required of equipment. The Contractor shall provide all scaffolding and rigging necessary to install or insulate the Equipment.
  - b. Equipment setting on structural steel shall have the bolt holes drilled, with shims and all necessary hardware for bolting provided by the Contractor.
  - c. All equipment either staged in storage or setting in place during the construction period shall be fully protected from the weather and contamination by construction activities.
  - d. All equipment shall be unpacked from its shipping container by the Contractor and shall be inspected for damage. The Contractor shall assist Tellus with inventory of all components. This shall require unboxing and visual inspection of all components. Replacement of the components back into these containers shall be by Contractor for safe storage until installation.

Commented [DD2]: Perhaps use "fixing" or "attaching" or keep as "bolting" if there is nothing but bolting.

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