

ROOFING OVERLAY FOR MEMPHIS TOWB/ATCT/CATWALK and ES BUILDING

MEM ATCT
2515 Winchester RD
Memphis, TN 38116

1. STATEMENT OF WORK

The Federal Aviation Administration, has an Air Traffic Control Tower (ATCT), its associated Base Building, Link and Environmental Support (ES) building that provides air navigation for pilots on a twenty-four hour basis. The roof of the base building, the ES building and the concrete catwalk around the perimeter of the ATCT tower shaft has had some leaks and it has been determined that a roofing overlay system shall be applied to the existing roofs/catwalk. The Contractor shall execute and complete the following scope of work for the installation of the roofing overlay system. The contractor shall furnish necessary equipment, materials, labor and supervision to perform the following work at the MEM ATCT located at 2515 Winchester RD, Memphis, TN 37116.

The facility is a navigational aid facility with Air Traffic Control personnel, equipment technicians and administrative personnel that provide information directly to aircraft and the flying public for navigation. Work within this area may require escort, and possibly badging requirements, which might include background checks for all onsite personnel, and must be coordinated with the FAA Contracting Officer's Representative (COR) in advance.

1. Provide and install a Silicone Overlay roofing (applied with roller) product on:
 - (a) Base building roof: Modified Bitumen (fine gravel impregnated) - Approx. 13225 sf
 - Apply vertical product on all parapet walls
 - (b) ES building roof: Modified Bitumen (fine gravel impregnated) - Approx. 3000 sf (Figs. 8,9)
 - (c) Catwalk of the Air Traffic Control Tower: Concrete - (4' wide by 50' x 4 sections) Approx. 800 sf)
 - (d) Tower cab roof: Concrete with coating (Approx. 500 sf)
 - (e) Tower penthouse roof: Concrete with coating (Approx. 400 sf)
2. All materials used in the installation of the roofing system must have the following Salient characteristics: (Submittal Required)
 - (a) be a low VOC (< 50g/L),
 - (b) white
 - (c) silicone-based, liquid applied by roller product of one manufacturer
 - (d) Tack-Free Time.....1-2 hrs.
 - (e) Cure Time.....1-4 hrs.
 - (f) Tensile Strength, psi ASTM D-412.....247
 - (g) Elongation, percent ASTM D-412.....237
 - (h) Permeability¹, perms ASTM E-96.....10.7
3. Flashing products shall be White, with VOC <50g/L (Submittal Required)
4. Walkway material shall be liquid applied Yellow, with Silica Non Slip Granules (Submittal Required)
5. Upon approval of Submittal, and as a minimum no less than two weeks prior to the actual application of the product, contractor shall provide a small quantity of each submitted product for a 'sniff test,' for the facility personnel to be made aware of the potential odors that may be encountered during the installation.
6. The Silicone Product roofing system must be installed by an authorized contractor for the

manufactured roofing product. Written proof from manufacturer required. (Submittal Required)

7. Note: No destructive testing shall be permitted unless visual inspection necessitates a need for further investigation.
8. If loose insulation is found beneath the existing roof, the contractor shall be responsible for determining the applicable fastening system, to include appropriate spacing of fasteners if applicable and based upon the wind uplift for the region. (Submittal Required)
9. It is the contractor's responsibility to verify all measurements.
10. Contractor shall prepare roof in accordance with manufacturer's instructions prior to installing new products.
11. The ATCT catwalk is a concrete walkway with a concrete sealer that shall also be overlaid to provide a water tight seal. Overlay shall be white. Areas on catwalk shown in pics (see Figs 10, 11) shall be addressed to ensure smooth walking surface and good adhesion of the silicone overlay system. Apply non-slip granules on catwalk
12. The ATCT Cab roof is a concrete roof with a liquid applied membrane. Contractor shall apply a liquid silicone roofing (roll-on) product to seal. Contractor shall ensure compatibility with the existing product. (See Figs 12, 13)
13. The penthouse roof is a concrete roof with a liquid applied membrane. Contractor shall apply a liquid silicone roofing (roll-on) product to seal. Contractor shall ensure compatibility with the existing product. See Fig 14
14. Contractor shall provide and install new granular product to all locations to define maintenance or high traffic walk paths. Where current walk pads exist (Contractor is not required to remove existing walkway pads.) (Submittal Required) (See Fig 7)
15. Contractor shall remove lightning protection lay cable or provide and install a masking tape product over the entire length of all roof cables to ensure that the conductors are not compromised by coating with the silicone product. (see photos) Contractor shall remove masking tape from the cable or return the cables to their original location as soon as that section of roofing has cured. (See Figs. 2,3, 6,7,12 typical)
16. A Technical Manufacturer's Representative must inspect the roofing system for compliance with the manufacturer's specifications before a commercial/industrial warranty is issued.
17. **Warranty – The contractor shall provide a written manufacturer's 20 year warranty at the close of the project. The warranty shall cover all costs associated with any failure of the roof covering and installation over the warranty period. The warranty shall identify the project, contractor, manufacturer and the system used.**
18. **Contractor shall provide two duplicate binders with all approved products used in the roofing system and the roofing warranty, and one copy of the roof warranty shall be electronically mailed to the FAA Onsite Representative upon completion and acceptance of the roof overlay system.**

The General Contractor (GC) shall be expected to work Monday through Friday during the day time hours of 0700 AM to 0330 PM unless alternatively coordinated in advance with the Contracting Officer Representative (COR). Coordination between the GC and FAA personnel shall be required at all times in order to maintain an operational facility.

Any discrepancies between the contract provisions and the actual site conditions shall be referred to the

Contracting Officer (CO) for a written determination in accordance with Contract Clause entitled Differing Site Conditions.

2. SITE ACCESS/CONSTRUCTION LIMITS

1. Contractor shall maintain access to the site at all times.
2. Care shall be taken and contractor shall be responsible for any material or product that may fall from roof or be carried by wind to damage any vehicles or property.
3. Construction/demolition shall in no way interfere with FAA Operations. Extreme care shall be exercised so as not to cause any interference or interruption of service provided by this facility. It is mandatory that the contractor protect FAA personnel and existing communications equipment. Any damages incurred, as a result of construction activity during the performance of this contract will be repaired/replaced immediately by the contractor at no cost to the FAA.
4. Any work or activity that may impact the FAA, such as work on critical equipment or circuits, will require coordination with the COR. The COR will coordinate with the local facility personnel to address develop an activity specific "Risk Assessment" for the facility's final approval. This process may take a full day to complete.
5. The contractor shall confine operations, activities, storage of materials and employee parking within the designated areas, as identified by the COR. If required, Additional space the contractor deems necessary shall be obtained off site, at no additional cost to the Government.
6. Vehicles transporting materials shall not be loaded beyond the capacity prescribed by federal, state, or local laws. Obstruction of existing roadways, driveways, to the facility is strictly prohibited.
7. Damage to existing paving, lawns, and utilities caused by the contractor's activities shall be repaired immediately. Any damages that are a result of the contractor's activities shall be repaired. All costs of repairs shall be paid by the contractor. After notice to proceed and prior to the commencement of construction, the contractor and COR shall conduct joint inspections of the existing areas affected by the construction. Existing damage or defects shall be noted and will be used as the basis for determination of damages caused by the contractor's operations.
8. Contractor shall coordinate activities with on-site representative, and shall ensure that no damage to any parked vehicles, facility, or grounds occurs as a result of their activity. **Contractor shall be responsible for all vehicle or facility damages due to blowing/falling/drift/dripping product.**
9. It is strongly urged that the contractor carefully examine the premises to determine the extent of work and the conditions under which it must be done.
10. The Government reserves the right to enter the construction area at any time for work inspection and for the operation of the facility.
11. All work hours, shifts, and overtime work shall be coordinated with the COR. Before commencing construction, furnish to the COR a statement of hours per day and days per week to normally be worked and approximate number of persons on the job for a normal work shift.
12. At the end of each work day, the contractor shall secure all construction areas. The contractor is responsible for the security of the staging area, and shall provide the required measures at no additional expense to the government.
13. Weather Protection - When inclement weather forces a work stoppage or when the contractor leaves

the work site at night, over weekends, or any other time, the roof shall be covered with the specified tarpaulin securely tied down and weighted with sand bags or similar means to prevent the wind from blowing the tarpaulin off. It shall be the responsibility of the contractor to insure the tarpaulin is leak-free. Roofing materials damaged from wind or rain during construction shall be replaced at the contractor's expense.

3. PERSONNEL

Contracting Officer - The term "Contracting Officer" (CO) as used herein denotes the person designated to act on behalf of the Government in the performance of this contract. Where reference is made to "Federal Aviation Administration" (FAA), "Contracting Officer's Representative" (COR), or the like, this shall mean the Contracting Officer or his/her authorized representative.

Contractor Superintendence - In accordance with Contract Clause entitled SUPERINTENDENCE BY THE CONTRACTOR, the Contractor shall at all times during performance of this contract and until the work is completed and accepted, directly superintend the work or assign and have on site a competent superintendent with the authority to act for the Contractor.

The contractor and his employees shall be subject to all rules and regulations relative to entering and leaving the FAA facility.

Employees - The government reserves the right to restrict access to the facility/site to prospective contractors.

4. COORDINATION/SUBMITTALS

The contractor shall provide submittals for items listed in the Statement of Work (Section 1).
Prior to Delivery of Roofing Materials.- Submit the following:

- a. Catalog Cut, Specification Sheet or Technical Data Sheet of the proposed roofing materials.
- b. Catalog Cuts, Specification Sheets or Technical Data sheets for any other Contractor furnished materials that will become part of the roof overlay system.
- c. Small samples of each material to be used shall be provided, following approval, which will be used for a 'sniff test' by facility personnel. SDS sheets shall accompany all samples.

The contractor shall coordinate all work which has any or may have any impact on any operational system through the COR. The contractor shall immediately cease any work which is adversely impacting the operation of the FAA facility and shall be responsible for the immediate repair or restoration of any portion of the operational system that has been damaged or suffered diminished performance as a result of the contractor's activities. No repairs shall be completed without notification of the COR.

The Contractor will be responsible for obtaining and payment of all building fees, inspection fees, utility connection charges and any other fees or charges which may be incurred in the performance of this contract. The contractor shall comply with all local city, county, and state construction codes.

All materials or workmanship or both which have been rejected by the COR by reasons of failure to conform with the requirements of the Contract Documents shall be removed and replaced with new, acceptable materials by the contractor at the contractor's own expense. Contractor shall also pay for testing of new materials which have been installed in place of rejected materials.

5. SAFETY REQUIREMENTS

Contractor Responsibility

1. General Safety Provisions - The Contractor shall bear full responsibility to provide safe working conditions for its employees and Contractors. The Contractor shall not permit any employee or Subcontractor to work in surroundings or under working conditions that are unsanitary, hazardous, or dangerous to the health and safety of the employee.

2. Accident Prevention - The Contractor shall bear the responsibility of maintaining an accident prevention program such that frequent and regular inspections of the job site, materials and equipment are made by a competent person designated by the employer.

3. Use of Equipment - The Contractor shall not permit the use of any machinery, tool, material, or equipment that is not in compliance with OSHA regulations. The employer shall permit only those employees qualified by training and/or experience to operate equipment and machinery.

(a) Submittals required include, but are not necessarily limited to, the following:

1. Contractor Safety Plan

Contractor Responsibility

1. The FAA shall not be held responsible for safety inspections to ensure Contractor conformance with the OSHA safety regulations. The FAA, however, reserves the right to notify the Contractor of any deficiencies regarding worker safety.

The FAA will evaluate the Contractor on its safety performance, including that of its Subcontractors. The number and severity of safety and security violations will be considered in this evaluation.

OSHA Regulations

The Contractor shall comply with the latest Occupational Safety and Health Administration regulations (CFR 29 Part 1926) regarding safety in the work area.

The Contractor shall be responsible for obtaining copies of non-FAA referenced documents without additional cost to the FAA. If Contractor requests a copy of FAA directives, they may be obtained by contacting the Contracting Officer.

The Contractor is not relieved from adhering to other OSHA requirements not listed herein. The Contractor shall consult the latest referenced OSHA documents for safety regulations.

Documents:

OSHA Documents:

CFR 29 Part 1926 Safety and Health Regulations for Construction CFR 29 Part

1910 General Industry Standards Applicable to Construction Industry

FAA Documents:

FAA Order 3900.49 Control of Hazardous Energy During Maintenance, Servicing and Repair

7. CLEAN-UP

The contractor shall correct or repair any damage done during any part of this contract. Scrap and debris resulting from the project shall be removed from the site after each day's work on site. All debris and generated waste shall require disposal in a manner that is not in conflict with local sanitary regulations.

8. SUPPLIES AND EQUIPMENT

The Contractor shall furnish all supplies and equipment as specified to accomplish the contract specifications.

SHIPPING AND RECEIVING MATERIAL. FAA shall not be responsible for shipping or receiving any material relating to this contract nor shall the contractor ship or otherwise receive any materials at the expense of the FAA.

PROTECTION OF MATERIAL. Contractor shall protect and maintain in like new condition all materials and supplies to be incorporated into this project and shall be responsible for their safe storage.

STORAGE OF MATERIALS. No storage area/space will be provided for contractor furnished equipment or supplies. Onsite storage must be coordinated with the COR so that the roadway is not blocked.

CONTACT/LOCATION INFORMATION

A. Location of Work:

MEM ATCT
2515 Winchester RD
Memphis, TN 38116

B. FAA Point of Contact:

Ron Nelson
901-482-7667

- C. Pre-Bid Site Visit: All interested contractors are invited to view the site conditions prior to bidding. A site visit can be coordinated with the FAA Point of Contact. All expenses for the recommended site visit shall be the responsibility of the contractor. The U.S. Government shall not reimburse any expenses incurred for the purpose of soliciting bids for this contract.
- D. Upon contract award, the roofing installer and manufacturer's representative shall tour the roof area. Manufacturer's representative will record and submit any disputes or concerns governing the installation of the roof system. The installer will complete and submit the manufacturers "Roof Inspection Report" along with pre-application photos depicting the overall roof area and details representative of the installation.

9. **ACCEPTANCE OF WORK**

The FAA COR will conduct a Construction Acceptance Inspection at the completion of the project to ensure that all items of the contract have been fulfilled and that the site has been cleaned of debris.

PHOTOS

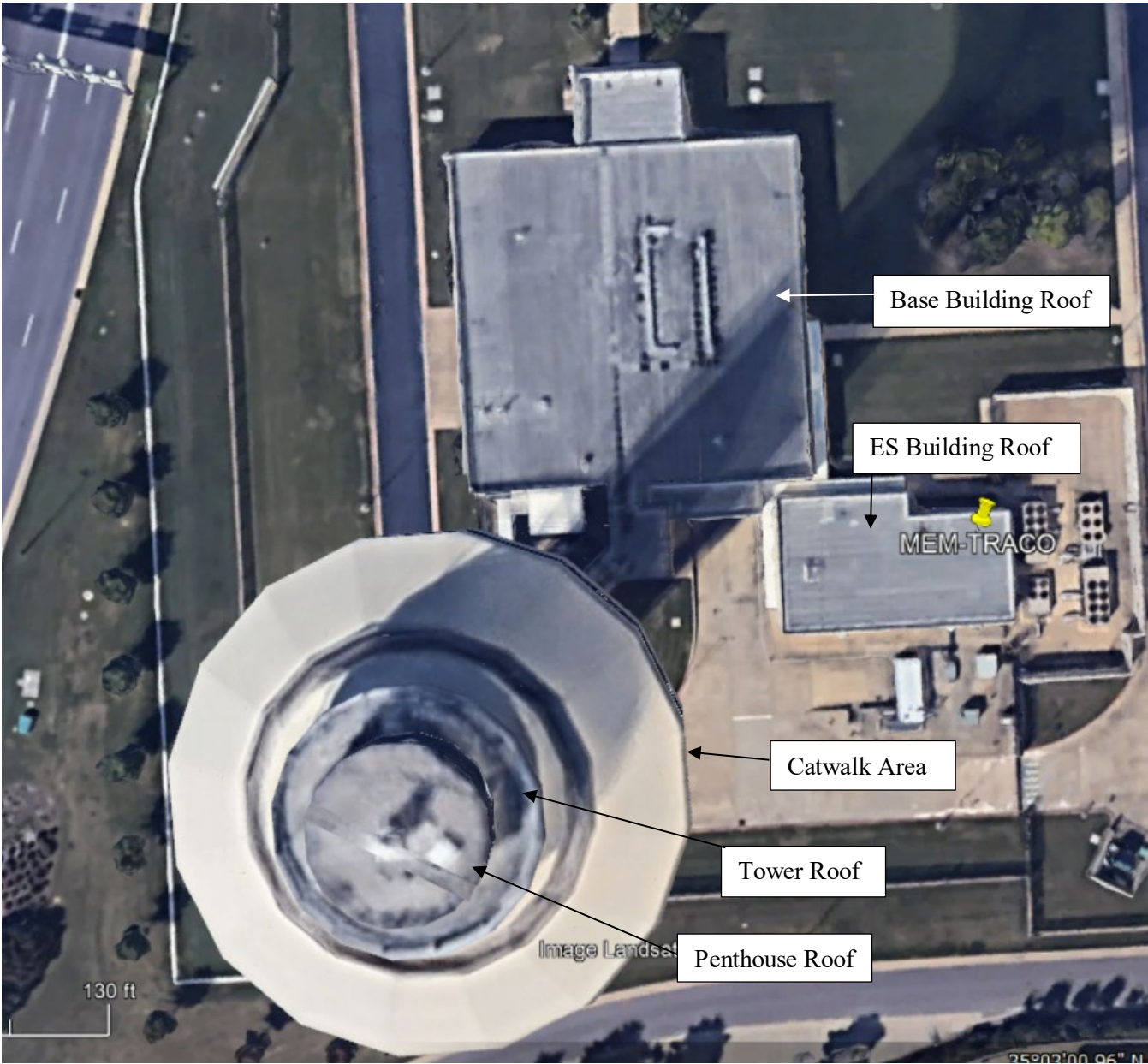


Figure 1: Satellite View of MEM ATCT



Figure 2: Base building roof

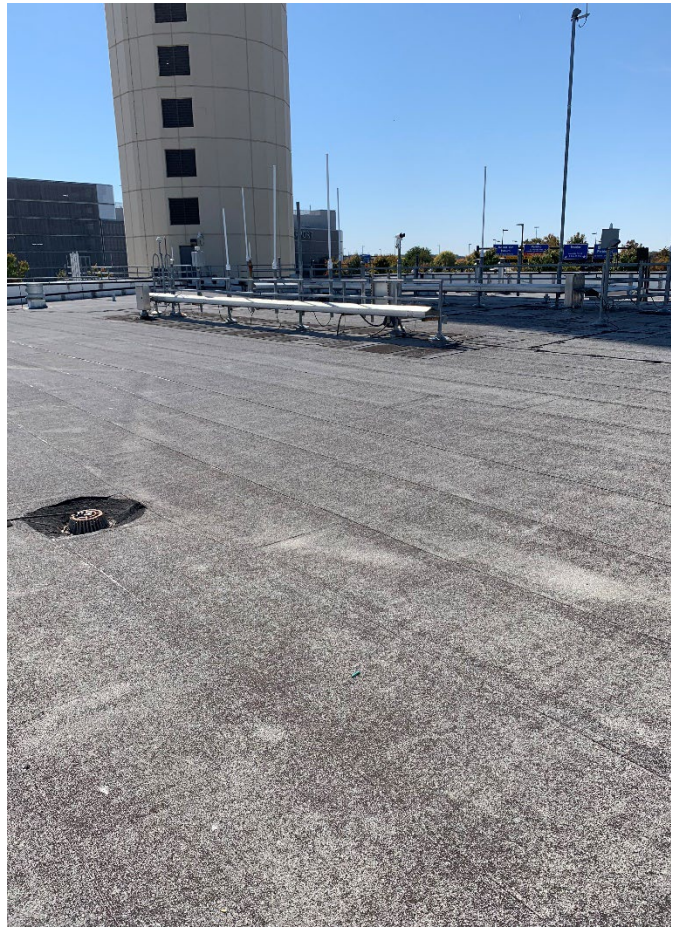


Figure 3: Roof overhang at North Entrance



Figure 4: Typical treatment at lower parapet wall corner



Figure 5: Typical Treatment at upper parapet wall corner



Figure 6: Roof Drain (typical)



Figure 7: Walk Pads (typical)



Figure 8: View of ES Building Roof



Figure 9: ES Building Roof



Figure 10: Catwalk Pics (Typical) Cracking in material in some places.

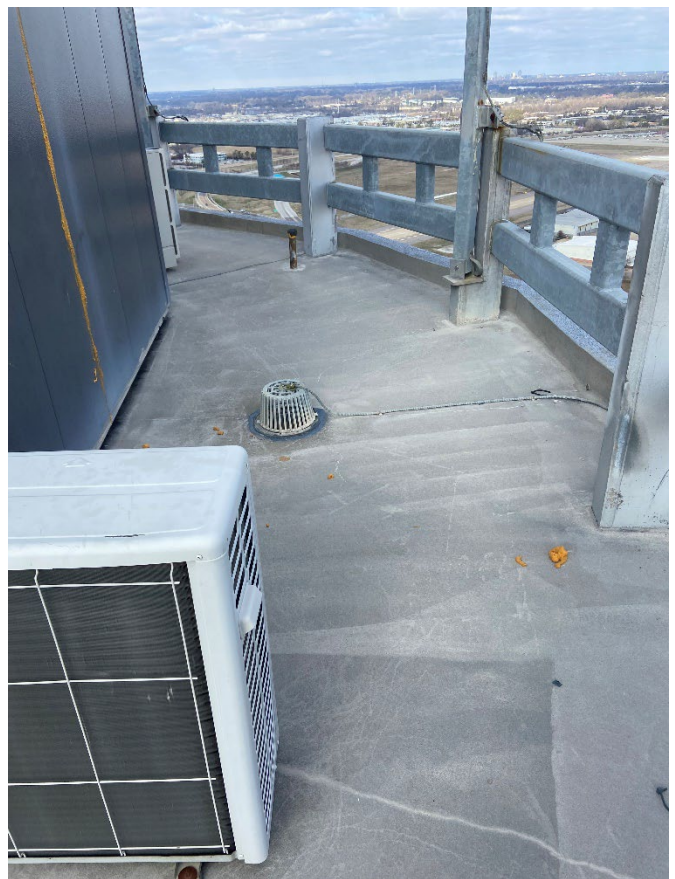




*Figure 11: Area where epoxy coating severely cracked.
Cutout/Treat. Reseal*



Figure 12: Tower Cab Roof



*Figure 13: Tower Cab Roof:. Seal Entire Catwalk/Roof Floor.
Protect small miniplit A/C unit visible in this pic.*



Figure 14: Typical Pics or Penthouse Roof

