

THE WHITING-TURNER CONTRACTING COMPANY

300 EAST JOPPA ROAD | TOWSON, MD 21286

C. SPECIFIC SCOPE OF WORK

Unit 22A – Mechanical/Plumbing

This work shall include all labor, supervision, material, tools, equipment, shop drawings, submittals, layout, unloading, scaffolding, ladders, hoisting, transportation, taxes, permits, engineering, support functions, insurance, bonds, and any other items or services necessary for and reasonably incidental to the proper execution and completion of the work, whether temporary or permanent, in accordance with all drawings, specifications, addenda, general conditions, requirements, and other related documents as indicated herein. The scope of work shall include but not be limited to the following: (All work shall be furnished and installed unless specifically noted otherwise herein.)

<u>Specific Scope of Work: Mechanical/Plumbing</u>	Included	Excluded
1. This subcontractor is fully responsible for all drawings and specifications provided during and after the bid phase of this project. This subcontractor is also responsible for any additional/revised drawings & documents formally issued by Whiting-Turner throughout the bid phase via addendum. This includes drawings and specifications directly related to their respective scope, as well as all other drawings and specifications, regardless of their association with this respective scope of work. A complete listing of all drawings and specifications is attached hereto as Exhibit D.		
2. Subcontractor is responsible for all notes in the contract documents related to this scope of work.		
3. Provide all submittals, certifications, reports, source of supply, samples, shop drawings, mock-ups, product data, as-builts, O&Ms and warranties, as required by specifications.		
4. Attend pre-installation meeting		
5. Include cutting, capping, disconnect, and make safe of all systems to be demoed at the Scandrett House. Label equipment and systems to be demolished and to remain for demolition contractor. Ensure items labeled to be removed are de-energized before the demo contractor removes equipment.		
6. Provide miscellaneous steel or wood blocking for support of piping, equipment, panels, valves, etc. that is not indicated on the drawings.		
7. This contractor is to provide layout of all wall and ceiling penetrations prior to framing. The layout should be provided on the floor with size and elevation indicated.		
8. This subcontractor shall furnish & install all materials, equipment, etc. as necessary to complete the plumbing scope of work as indicated on the plumbing drawings and the plumbing specifications. This includes all work associated with drain lines, water lines, sanitary drains, storm, gas, water supply lines, vents, insulation, pumps, heaters, grease interceptors, fixtures, etc.		
9. Subcontractor shall be responsible for all under-slab plumbing work indicated on the contract documents. Include all excavation, fittings, bedding, backfill, etc. for a complete and fully functioning assembly. Excess excavation spoils are to be located in one location for removal from the site by others.		
10. Furnish and install all plumbing equipment and accessories including but not limited to boilers, water heaters, pumps, sump pumps, valves, gauges, thermometers, backwater valves, wall hydrants, hose bibs, backflow preventers, etc..		
11. Make final utility connections to kitchen fixtures and residential appliances that are furnished and installed by others.		
12. Furnish and install all plumbing fixtures and all required accessories including but not limited to water closets, lavatories, showers, sinks, and water coolers. Millwork to be cut out via template provided by this subcontractor, installation and caulking is by this subcontractor.		
13. Subcontractor shall provide chlorination services of all domestic water piping.		

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	Disinfect and clean all new domestic water piping upon completion of installation.		
14.	Furnish & install all waterproof sealant and fire stopping associated with this scope of work.		
15.	All HVAC equipment including but not limited to the outside air handling unit, variable air volume boxes, expansion tanks, air handling units, air cooled chiller, fan coil units, boilers, pumps, radiators, chemical feeders, make up air units, fans, electric heaters, and diffusers. All equipment is to include all accessories for a complete and fully functioning system.		
16.	All HVAC accessories including but not limited to motors, equipment bases, pipe connectors, variable frequency drives, vibration control, hangers and supports, vibration isolation, valves, strainers, thermometers, controllers, fans, sound attenuators, gauges, meters, inertia bases, condensate drains and piping, filters. Any equipment pads required are to be laid out by this contractor for concrete contractor to pour.		
17.	Furnish and install all ductwork as required. This includes all insulation per specifications and plan.		
18.	Furnish & install all architectural diffusers/grilles.		
19.	Install all duct-mounted smoke detectors furnished by #26A Electrical subcontractor.		
20.	Perform air pressure testing on all ductwork, whether new or ETR.		
21.	Furnish, install, program, and test all new thermostats as indicated on the mechanical floor plans.		
22.	Furnish & install all new mechanical louvers; power provided and terminated by others, low voltage is the responsibility of this subcontractor.		
23.	Furnish and install all roof curbs required for this scope of work. All cuts through the roof structure will be by this subcontractor and patched/flashed by #07A Roofing subcontractor.		
24.	Furnish & install vibration isolation as indicated on the contract documents.		
25.	Furnish and install all mechanical connections to equipment (provided by others) as indicated on the plans.		
26.	Perform connections to new site utilities installed by others as shown in the contract documents. Site utilities will be terminated 5' from the face of building.		
27.	Backfill and compaction of all excavation completed under this scope of work.		
28.	Furnish and install magnetic warning tape above all underground utilities installed by other subcontractor approximately 12" below grade as required.		
29.	This subcontractor is required to install all piping to ensure no piping is located over electrical and/or data equipment. This subcontractor should be prepared to install additional piping as necessary to meet this scope item.		
30.	Include manholes and duct banks with site work utilities per the contract documents.		
31.	Remove and reclaim refrigerant from existing chillers and A/C units at the Scandrett House.		
32.	Furnish and install chilled and hot water piping, fittings, and accessories.		
33.	Furnish and install refrigerant piping.		
34.	This subcontractor shall provide cleaning and flushing of all piping.		
35.	Include pressure testing of piping		
36.	Building control system, including but not limited to computers, portable operator terminals, printers, communication controllers, equipment controllers, application specific controllers, software, control valves, sensors, measuring stations, switches, meters, conduits and wiring. Include all accessories needed or required for a fully functioning system.		
37.	Include all testing, balancing and commissioning required for this scope of work.		
38.	Provide temporary filters for use of new HVAC equipment during		

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construction.		
39. Furnish & install new filters in all air handling equipment prior to TAB and again at the completion of the project.		
40. Furnish & install wire mesh screens as indicated.		
41. Furnish & install all fire stopping / fire caulking as indicated on the contract documents and as required per code for this contractor's work.		
42. Subcontractor shall include GPR and/or X-Raying of all concrete slabs prior to sawcutting, core drilling, or creating any other penetration. Coordinate core drill locations with engineer of record. Provide sleeves where required in new concrete slabs, walls and CMU.		
43. Subcontractor shall take extreme care when working around the finish work of other trades. The cost of repairing and/or replacing work of others damaged by this subcontractor to the finish work of others shall be backcharged to this subcontractor.		
44. Subcontractor shall be responsible for all owner training pertaining to this scope of work as indicated in the contract documents.		
45. Contractor will have inspections by local jurisdictions and authorities and 3rd party inspectors scheduled as to meet the CM's schedule. The contractor will notify the CM of inspection date and time.		
46. Provide all cutting, patching and sealing of openings required for the proper installation of this Contractor's Work.		
47. Furnish access panels required for this scope of work for installation by others.		
48. Provide all labor, standby mechanics, and equipment for all testing and startup.		
49. Participate in commissioning coordination, documentation, testing, etc. as required per the specifications and Contract Documents.		
50. Identification devices (labels and tags).		
51. Review equipment suppliers "recommended installation procedures" to ensure that the design complies with manufacturer's space clearances and clearances established by local authorities for maintenance and service.		
52. Obtain and pay for any permits required by local jurisdiction or other governing authority to complete the work. This shall include all permits not covered under the general building permit.		
53. Touch-up all damages to factory applied finishes.		
54. Subcontractor shall be responsible for all hoisting, scaffolding, lifting, temporary bracing, etc. as needed to complete this scope of work.		
55. Subcontractor has included all mobilizations necessary to accomplish this scope of work in accordance with the project schedule.		
56. All layout is included.		
57. The Subcontractor agrees to participate in a composite project clean-up crew supervised by Whiting-Turner and as outlined Exhibit E - General Scope of Work.		
58. Haul offsite all surplus materials. Place all debris and waste materials in dumpsters provided by WT.		
59. Provide all specified warranties. Warranties are to begin from date of project substantial completion and last for one (1) year. This includes all labor performed and all materials provided and/ or installed in conjunction with this project.		
60. Coordinate with other trades as required.		

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Pricing Breakdown as Follows:

- Administration Plumbing \$_____
- Administration HVAC \$_____
- C.F.M Plumbing \$_____
- C.F.M HVAC \$_____
- Pond Pavilion Plumbing \$_____
- Pond Pavilion HVAC \$_____
- Restroom Pavilion Plumbing \$_____
- Restroom Pavilion HVAC \$_____
- Ticketing Plumbing \$_____
- Ticketing HVAC \$_____
- Scandrett House Disconnect/Make Safe \$_____

Total = \$_____