

EXHIBIT B – Scope of Work

INTENT:

In general, this Bid Package is comprehensive to specific CSI Division Work and related Work as referenced, indicated on, or implied by the Project Drawings, Specifications and Project Manual. Subcontractor acknowledges that the following Scope of Work detail is provided as a courtesy and must be used in conjunction with **all** Project Documents. Scope of Work detail listed is not intended to describe a complete and final work scope. It is provided as a summary overview only.

I. SCOPE OF WORK SUMMARY:

The Scope of Work shall include the furnishing and installation, complete, of the **Plumbing Work** as outlined in **The Contract Bidding Requirements** and in accordance with the **Contract Documents**. This shall include, but is not limited to all required, engineering, submittals (samples or mock-ups and shop drawings), materials, fabrication, labor, equipment and tools, supervision, hoisting, scaffolding, and transportation, burden and taxes as required for a complete installation.

II. GENERAL REQUIREMENTS

- A. Subcontractor has included all material, labor, supervision and administration for requirements outlined in the Exhibit C - Special Provisions. These are the standard expectations for all Balfour Beatty Construction projects.
- B. This Subcontractor shall obtain and pay for any additional permits, bonds, or fees as required to complete scope of work under this agreement including any required re-inspection fees / costs are responsibility of Subcontractor.
- C. Subcontractor understands that all work is being done on an active university campus. As such the following apply:
 - 1. Due to the Emergency Declaration associated with this project the guidelines present in Section 5 – Special Provisions, specifically Item No. 4 shall be strictly adhered to without exception. Coordinate ALL weekend work with the Site Superintendent as there are restrictions and guidance from UNCW that must be adhered to on Campus.
 - a. No noise making activities (including trucks backing or equipment prepping or music playing) prior to 7:00 AM or after 6:00 PM
 - b. No work will be permitted to start early without 48 hour written notification to UNCW Project Manager outlining specific tasks to be performed prior to 7:00 AM.
 - c. No afterhours work will be permitted without 48 hour written notification to UNCW Project Manager outlining specific tasks to be performed after 5:30 PM.
 - d. All gates will be locked after 6:00 PM.
 - 2. Streets are to be clean all the time. Subcontractor is responsible for cleaning the roads should their specific activities track dirt or mud onto university streets.

3. No trucks are to be left on university roads.
4. All deliveries are to be accompanied by flagmen at the entry gates.
5. No work shall be performed outside the site fencing without UNCW authorization.
6. At no point are any construction personnel to interact (talk or look) with the students.

D. Employee Conduct:

1. All construction personnel shall be respectful to all University of North Carolina Wilmington staff and students. Any disrespect, harassment, unwelcome comments or advances from any construction personnel toward any staff member or student shall constitute sufficient grounds for University of North Carolina Wilmington to request removal of any specific individuals from this project.
 - a. Such Owner action shall not constitute grounds for a delay claim.
 - b. Owner will not be responsible for any delays caused to the project due to any individual being removed from this project.
 - c. Construction superintendents shall be held accountable for any incident of this nature.
2. All after normal hours work shall be scheduled a minimum of 48 hours for Interior Work and 7 Days for Exterior Work.
3. Special attention is required for traffic control in and out of the Construction Site so as to avoid the Student population as they move around on Campus.
4. Use of tobacco products and other controlled substances on the Project Site is not permitted.
5. No Lottering on campus is allowed at any time.

III. TRADE SPECIFIC SCOPE OF WORK ITEMS:

- A. The following is a general outline of items included, but not limited to, under this agreement for all **Plumbing work** per all specification sections under **Division 22** and applicable specification sections under Division 01, etc.
1. All work/repairs to plumbing piping in crawl space. Work shall be considered in confined space and all safety protocols are to be followed. Subcontractor is to include required ventilation, supervision, monitoring, etc. required for safe access and work in this environment.
 2. Subcontractor shall connect to the existing piping at the entry door to each room and run all services as shown on the 1994 Construction Documents and the subsequent renovations to the lab casework, fume hoods or other devices in the rooms.
 3. All above-grade sanitary sewer systems and vent systems including, but not limited to, all piping, insulation, trap primers, fittings, cleanouts, drains, traps, etc.

4. All domestic hot and cold water systems including, but not limited to, all piping, insulation, trap primers, drain piping, fittings, valves, pumps, fixtures, meters, water heaters, backflows, balancing valves, wall hydrants, hose bibs, temperature transmitters, etc.
5. Complete medical gas, compressed air and vacuum systems including but not limited to valves, tanks, zone valve cabinet, control panels, alarm systems, manifolds, vacuum systems, piping, control/interlock wiring (regardless of voltage), hook-up to owner supplied equipment, owner installed equipment, testing and certification.
6. All Deionized water systems including, but not limited to, all piping, insulation, fittings, valves, pumps, fixtures, meters, backflows, balancing valves, wall hydrants, hose bibs, temperature transmitters, etc.
7. All natural gas piping systems including, but not limited to, all piping, fittings, valves, fixtures, meters, etc.
8. In addition to the piping installed under this scope of work, this Subcontractor shall furnish and install all insulation of existing piping being reused on the water systems. This insulation was damaged and removed by others. This subcontractor will be responsible for 100% of the insulation of all HVAC water piping systems.
 - a. Prior to insulation, subcontractor shall test all existing piping to the project specifications. All test reports shall be submitted with noted repairs necessary.
9. Subcontractor shall test all existing piping to the project specifications. All test reports shall be submitted with noted repairs necessary.
10. All plumbing fixtures
 - a. Subcontractor is responsible to ensure all fixtures are provided as specified and as indicated on floor plans and as shown on riser diagrams.
 - b. Subcontractor shall verify all equipment fits within specified wall cavity space.
11. All floor drains.
12. Drinking Fountains and Water Coolers
13. All sump pumps including all required piping, valves, fittings, etc.
14. Subcontractor shall provide all rough-in and final hook-up of all items requiring Plumbing service that are specified in any other section of the Specifications, or Owner furnished, and/or shown on the Drawings. All equipment or materials provided under other Specification sections which are to be installed by this Subcontractor will be identified and delivered to this Subcontractor's Project office.

15. Subcontractor shall provide all required pressure reducing valves to equipment furnished under this agreement as required for the proper function of the equipment whether indicated on documents or not.
 16. Subcontractor shall furnish and install all required supports for this work in accordance with the contract documents, all applicable codes, and standard building practices. Any bridging between structural members required to accommodate pipe hangers is the responsibility of the subcontractor.
 17. All notations on contract documents relating to PLUMBING referenced as “by General Contractor” or by “Construction Manager” shall be assumed to be included in this agreement by Subcontractor.
- B. Taping of all floor drains, clean-out covers, etc. is included for protection of finish. Protection of drains and covers shall be removed upon conclusion of all work by all trades and prior to Architect's punchlist. Final cleaning and polishing of drain and clean-out covers is included at conclusion of project.
- C. Final cleaning of all exposed equipment, fixtures, piping and piping insulation is included in this Scope of Work just prior to Owner Occupancy Inspection including removal of shipping stickers, etc.
- D. Subcontractor shall coordinate with the Building Energy Management System, Fire Alarm, and Electrical Subcontractors to assure provision of adequate contacts, relays, electrical power required for proper operation/interface between systems.
- E. Subcontractor shall furnish and install all necessary items required for concrete work related to the systems installed under this agreement including, but not limited to, the following per *Division 03 Specification Sections* including furnishing and installation of reinforcing steel:
1. All concrete housekeeping and equipment pads, etc.
 2. Concrete collars for all clean-outs, etc.
 3. All concrete backfill for piping systems location under building footings, etc.
 4. All grouting for equipment, etc.
 5. Grouting of wall sleeves to building structure.
 6. Grouting of all floor drains, shower drains, and toilet flanges/connections.
- F. Subcontractors shall layout and install all required sleeves within elements of the structure for the installation of Subcontractor's work. Subcontractor shall seal, pack, fire safe, water seal, weather caulk, aesthetic caulk, etc. all of its sleeves/penetrations as required by the Contract Documents and as to maintain required ratings. Subcontractor to refer to Specification sections 07 8413 and 07 8446 respectively for Firestopping requirements. Formed openings in masonry and concrete walls are herein included.

1. Core drilling, cutting, and sleeving new plumbing penetrations at existing construction walls, foundations walls, and slabs locations is herein included. Subcontractor is responsible to clean-up all core drill slurry from walls and slabs as well as removing and patching all core drill machine anchors. Hammering of walls causing a blow-out or sprawling is not permitted and will be corrected at expense of Subcontractor. Subcontractor will provide barricade and a watch at floors below to avoid damage due to falling cores.
 2. Concrete saw cuts, removal, and concrete replacement as required to install Work within this Scope is included in this Scope of Work. No saw cuts or core drills are to be performed without written approval from Construction Manager and Architect/Engineer.
- G. Provide various caulking, including fire caulking as required at penetrations thru rated walls or slabs. Caulking to include final caulking at the plumbing fixtures.
- H. All required weather proofing and protection of equipment provided and installed under this package shall be included. This shall include protecting the medical air compressor and vacuum pump to be installed in the penthouse.
- I. Subcontractor shall provide labor and material for two (2) additional floor drains for damaged or obstructed floor drains not caused by this subcontractor.
- J. All access panels and covers specified, shown, or required for this scope of work shall be furnished and installed by this Subcontractor. This Subcontractor is responsible for coordinating the locations and sizes of required framed openings with respective trades during the construction of walls, ceilings, and floors.
- K. Subcontractor understands that the ceiling grid system is to be protected by this Subcontractor and this Subcontractor shall be responsible for costs to make any repairs or portion thereof of unidentifiable damage caused jointly with other mechanical, plumbing and electrical trades.
- L. Subcontractor understands all building finishes are to be protected by this Subcontractor to perform work under this agreement. Subcontractor is responsible to protect surrounding substrates and finishes from Work of this Scope especially windows, window blinds, existing MEP installations, flooring, doors, frames, paint, new MEP installations proceeding completion of work under this agreement, etc.
1. Subcontractor shall provide code approved panel shields at new and electrical or fire alarm panels due to new piping running overhead if alternate locations cannot be approved to re-route pipe.
 2. Subcontractor shall provide lavatory templates to casework and solid surface countertop Subcontractors to precut openings off-site. Template shall be provided within 90 days of notice of award.
 3. Subcontractor shall protect all piping from dirt, dust and debris at all times from unloading, storage, rough-in, startup, etc. until Owner accepts building.

4. Subcontractor agrees to cover the top piping insulation with 6-mil poly to protect insulation from water and dirt damages in order to insulate piping prior to dry-in condition of building.

M. Schedule: {Description of Critical Patch, requirements and crew logic}

1. Subcontractor understands that multiple mobilizations are required and has included all cost.
2. Subcontractor understands that multiple crews, supervisors, and equipment are required to start and complete work in each of the buildings simultaneously in accordance with the schedule.
3. Install hangers prior to **fireproofing** when possible and patch otherwise at the expense of this package.
4. Subcontractor shall allow walls to be primed and finish painted prior to installation of surface mounted piping and setting of wall mounted equipment or equipment mounted within six (6) inches of a painted wall. This Subcontractor will be responsible for repainting costs if damages occur during installation of work under this agreement.

N. Addendum / Bid Clarifications:

1. Subcontractor shall demolish and remove all existing plumbing as necessary to install new items shown on the contract drawings. All debris is to be removed from the building and placed into dumpsters, supplied by others.
2. Subcontractor shall perform all pressure testing and leak testing of existing crawl space drains. Subcontractor shall include a \$20,000 scope allowance for repair work to be determined by this testing.
3. Subcontractor shall refer to highlighted drawings issued in Addendum No 1 to delineate scope of work boundaries.
 - a. Subcontractor shall furnish and install the air intake and exhaust ductwork for GWH-1 and 2, including the stack routing up the existing chimney. The intent is that this subcontractor is to furnish and install the system 100% complete.
4. Subcontractor shall furnish and install the SS wall protection option with the MB-1's.
5. Subcontractor shall furnish and install all new safety showers (EW-1), with associated TMV-#.
6. Subcontractor shall furnish and install all TMV-# on sink eye washes furnished and installed as part of the Lab Casework.
7. Subcontractor shall furnish and install the new water fountains (EWC-1).

8. Regarding Item III.A.2, work shall include the specialty gas (SG) piping from the closets to the end point devices and equipment. For example, Room 2203 on the 1994 Construction Drawings.
9. All new acid waste piping shall be compatible with the existing waste piping material. Subcontractor shall verify this existing material.

IV. SCOPE ALLOWANCES

- A. The subcontractor shall include the following allowance(s) in the base bid amount for work above and beyond the work outlined in the bid package scope of work sections.
 1. Subcontractor shall include 2% of the contract value for general clean-up. This will be deducted from the contract and managed by CMAR. Once credited, this Subcontractor shall continue to perform their daily clean-up as required by the Special Provisions.
- B. These allowances are intended to cover the cost of work for the scope described. It is understood that all overhead, profit, insurance or other direct or indirect expense of the Subcontractor are included in the base bid amount and thus will not be accounted for when reconciling these allowances.
- C. Verification of any allowance usage must be signed off on by the Contractor to be validated for billing purposes.
- D. All unused portion(s) of these item(s) will be reconciled based on the unit prices provided on the bid form at the completion of the project via deductive change order.
- E. Any work in excess of the allowance amount(s) will be paid via change order based on the unit prices provided on the bid form.

V. TRADE SPECIFIC SCOPE EXCLUSIONS

The following is a list of specific exclusions normally related to this scope of work:

- A.
- B.
- C.

VI. RECAP OF CONTRACT AMOUNT

The Total Subcontract Amount is arrived at and recorded as follows:

BP-## – Bid Amount
Additions / Deletions

\$ #,###,###
\$ ###,###

TOTAL SUBCONTRACT AMOUNT

\$ #,###,###