

15 Scope of Work Plumbing. The work includes but is not limited to the following:

- I. Mobilization
  - a. The work includes placement of office trailers, storage trailers and excavation equipment and storage boxes and tool boxes
- II. Stored Material
  - a. If the sub requires reimbursement for materials purchased and either stored on or off site, the payment has to be approved by the bank that issues the draws.
  - b. All material brought to the site will be insured by this sub contractor until the entire apartment building is turned over and accepted by management
  - c. The sub will continue to insure stored material that the GC has paid for. The sub will continue to insure the material and equipment until it has been approved and the building accepted by management.
- III. Material and Equipment
  - a. All material will be kept secure and dry stored in trailers on site. GC will not be responsible for theft or vandalism of partially installed material or equipment that is roughed in and not functional.
- IV. Site Plumbing
  - a. The site subcontractor will bring the domestic water and sewer within 5 feet of the building, it is the responsibility of the plumbing contractor to extend the water line, the sewer line and the fire protection line, in to the building. To include all sleeve requirements
  - b. The sewer is to have a cleanout located at the exterior of the building at the point of connection.
  - c. The work includes trenching for the installation of the building under-slab plumbing. Trench spoils will be removed from the building floor area and trenches will be bed with structural fill provided by this sub contractor
  - d. All trunk lines installed will be tested for leakage using a method accepted by the inspecting entity.
  - e. All vertical pipe branches will be staked in place to prevent alignment issues with the concrete pour
  - f. All Floor drains will be boxed out for future installation
  - g. If there is a back flow preventor installed in the building, the plumber is required to install a floor drain at that location.
  - h. If pipe substitutions are made it is in this work to ensure that the substitution pipe can meet the local testing requirements. For example foam core cannot withstand the same testing that solid PVC can.
  - i. Provide the fire line pipe requirements under-slab to the sprinkler riser room including a shut of valve. The fire line will be brought to within 5, (Five) foot of the building by the site sub contractor only when applicable
  - j. Provide copper link between buildings for the electrical grounding systems
- V. Building Plumbing
  - a. The work includes the installation of architect and building department approved materials.

- b. All plumbing permits in this scope of work
- c. The work includes all water and waste lines, waste venting, and roof top or wall pipe flashing, all fixtures and faucets and sinks and drains exterior water valves future washer roughs, water heater to HVAC connections (when applicable), floor drains, backflow preventors. RPC valves, shock resistors, leads and shutoffs caulking at sinks and water closets and testing and all gas piping and final gas pipe connections and regulators for gas appliances, including fireplaces and fireplace key valves as required
- d. All sheet metal vents and fresh and combustion air will be by the HVAC contractor
- e. Water and waste lines will be installed per code
- f. Alternate pricing is needed for piping for remote water meter readers
- g. All sink and toilette leads will include shut offs.
- h. The work includes floor drains in mechanical rooms and at back flow preventor locations.
- i. All lower unit tub/showers and stand up showers will come with factory applied plywood backing for the installation of grab bars
- j. The work includes gas lines in the clubhouse and units and special use buildings and when applicable the poolroom including all regulators and venting of regulators when applicable, all headers and final connections required for the furnace and water heater installations.
- k. Plumber to assume 2# gas pressure, which means regulators at each appliance.
- l. Plumber to price 1/4 # gas pressure which excludes regulators but increases the size of the gas piping.
- m. The plumber is to discover if flexible gas lines are acceptable in the work geographical area
- n. Work includes water piping the unit furnaces (when applicable) and final water and gas connections to the furnaces and water heaters.
- o. Work includes all fire collars especially at bathtub floor penetrations and anywhere there is a rated assembly breach because of plumbing penetrations.
- p. Minimum dimensioned pipe will be used in the 2x4 stud wall assemblies so the pipe does not exceed the framing space
- q. Vanities in the units have laminate tops and drop-in sinks. The sinks are provided and installed by this sub contractor
- r. Garbage disposals are furnished by this sub and will come with pigtails and wall plugs attached.
- s. All fixtures including water closets and counter tops will be caulked to finish substrates.
- t. The work includes the final connections of the Icemaker water line, the dishwasher final connection
- u. The work includes fire caulking and fire collars as a part of this scope of work
- v. The work includes furnish and install sump pump pits and sump pumps in basement or other designated areas

VI. Cleaning

- a. The work includes picking up and cleaning on a daily basis. If the work area is not clean it will be cleaned for you at your expense.

VII. Protection of the Work

- a. All material and equipment will be securely stored in jobsite trailers. Material will not be warehoused in apartment units or left unattended. All unused material and supplies will be returned to the storage trailer on a daily basis.

VIII. Safety

- a. The work includes workmen on site who have been trained in OSHA safety requirements and who have the ability to recognize an unsafe act or condition and has the authority to stop work and make recommendations for improvements

IX. Closeout

- a. The work includes as built drawings submitted as a condition to final payment. As built drawings will show cleanout locations and critical valve and critical under slab splices and connection locations as well as under slab fire line location.
- b. The work includes all manufacturers serial numbers, equipment and product instruction guides and warranties and guarantees and manufacturer contact information

X. Submittals

- a. Six sets of original highlighted submittals will accompany the bid and the final approved submittal will be a part of the closeout package.

XI. Value Engineering

- a. All value engineering is welcome. When bidding please list material or design value engineering suggestions as a voluntary alternate and show the savings in dollars