

SPECIFICATION

SECTION 15400 PLUMBING

PART 1 GENERAL

- 1.01 Finish all materials, equipment, transportation and labor and perform all operations required to install complete plumbing systems.
- 1.02 Provide and file all plans and pay requisite fees and secure all permits.
- 1.03 This contractor shall guarantee all work and materials for no less than one (1) year from date of final acceptance.
- 1.04 Submittals:

A. As soon as possible after award of Contract (but not longer than 21 calendar days) before any material or equipment is purchased, this Contractor shall submit shop drawings to the Architect for review. If shop drawings are not submitted within the allotted time frame all substitutions included in the late shop drawings will be invalid and the equipment primarily specified must be provided. Any costs resulting from delays in the project schedule due to failure to submit shop drawings related to this section in a timely manner shall be the responsibility of the Contractor. Shop drawings shall be properly identified and shall describe in detail the material and equipment to be provided, including all dimensional data, performance data clearly indicated, fan curves, pump curves, computer selection printouts, etc. Capacities indicated are minimums. Equipment submitted with capacities below specified parameters will be refused.

B. Corrections or comments made on the shop drawings do not relieve the Contractor from compliance with requirements of the drawings and specifications. Submitting shop drawings to the Architect does not constitute approval of the contract documents. The contractor is responsible for confirming and correlating all quantities and dimensions, selecting fabrication processes and techniques of construction; coordinating his work with that of all other trades and performing his work in a safe and satisfactory manner.

C. Should any materials or products be purchased and/or installed without prior review and comment the contractor shall be required to remove or replace those products and/or materials if directed by the Architect at his own expense. If the materials are not removed or replaced, and the project is delayed as a result, the Architect reserves the right to order the withholding of payment until the situation is resolved in a manner satisfactory to the Architect.

D. Plumbing submittals shall be separate from Mechanical. All submittals shall have a clear area on the front for the stamp or they will be refused for re-submittal. E. Hard copies of shop drawings must be original documents or good quality photocopies of original documents (photocopies of color samples are not acceptable). Faxed copies of submittal sheets will be refused.

1.05 Any work deemed substandard by the Architect shall be redone at no additional cost to the Owner.

1.06 As-builts: During construction, on a clean set of drawings, neatly note any work executed that differs from the plans. Provide them to owner.

PART 2 PRODUCTS AND SYSTEMS

2.01 The makes and models indicated on these drawings are only to illustrate the properties and quality required. Submit for approval items equal to those indicated. The Architect not the contractor shall have final determination whether materials are equal. Provide American made products whenever practical.

2.02 DOMESTIC WATER SYSTEM

- A. Tubing to be soldered copper type "L" above slab and soft type "K" or PEX (one size larger) below. No joints below slab.
- B. Any exposed uninsulated piping such as under fixtures shall be chrome plated brass or copper.
- C. Shut-off valves shall be bronze ball valves rated 400# MOP, check valves shall be bronze rated 200# MOP. Equal to Nilaco.
- D. Provide valve tags of different shape than Heating tags.
- E. Provide escutcheons in finished areas.
- F. Insulation shall be 1" thick fiberglass with all service jacket. Every 10 ft, neatly stenciled jacket with 'Dom. Cold', 'Dom. Hot', as appropriate (or use pipe markers).
- G. Hangers shall be especially manufactured for this purpose, equal to Carpenter & Patterson. Do not support piping from piping of other trades. Provide insulation shields on cold water piping.
- H. Dial thermometers and pressure gauges shall be equal to Trentec.
- I. All piping left unattended shall be capped to prevent the entry of foreign matter.
- J. Test, flush and sterilize piping according to the recommendations of the American Water Works Association. Provide copy of test to Architect.

2.03 SANITARY WASTE AND VENT SYSTEM

- A. Piping to be schedule 40 PVC with DYN fittings unless indicated otherwise. Joints carefully cemented.
- B. Exposed traps and piping shall be chrome plated.
- C. All floor drains shall have deep seal traps.
- D. If roof covering is dark, the plumbing vent termination shall be black PVC OR CPVC.
- E. Do not cover underground piping until it has been tested and inspected.

2.04 FUEL GAS SYSTEM

- A. Outside building shall be schedule 40 black steel with 150# screwed pattern malleable iron fittings. Painted with black rust inhibiting paint.
- B. Inside shall be same as above (less paint) or Gasite Flexible piping, fittings and valves.
- C. Provide gas cocks and unions at each piece of equipment.
- D. Installation shall meet and be tested in accordance with NFPA 54, and the requirements of the local gas supplier.

GENERAL NOTES

- 1. All work shall be in accordance with the International Plumbing Code, state and local laws, codes and ordinances, National Fire Code (NFPA), or these plans or specifications, whichever is more strict.
- 2. All drawings are schematic only, and are intended to indicate the intent, extent, and general arrangement of work. They are not meant to show every fitting, change of direction or every situation. Verify locations in the field. Work indicated shall be furnished complete to perform the function intended.
- 3. Carefully coordinate the space requirements and location of piping with the other trades on any given floor. Verify space for sparker marks. If coordination fails, conflicts will be decided in favor of the other contractors with this contractor relocating his piping and equipment at no expense to the Owner.
- 4. For pipe sizes not shown on the floor plans, refer to fixture schedules and details as well as adjacent floors plans. As a minimum use equipment connection sizes and Plumbing Code requirements. For otherwise indeterminate pipe segments, the size shall be the same as the largest known adjacent segment. Where pipe sizes are erroneously shown to decrease then increase the smaller segment shall be increased to match the larger segment. When a conflict exists the larger size shall govern. Pipe sizes are nominal (not O.D.) unless specifically noted otherwise.
- 5. All plumbing fixtures shall be vented.
- 6. This contractor shall make all final plumbing connections to equipment/ fixtures provided by other contractors.

- 7. All piping shall run concealed above ceilings, in walls, in soffits and in chases unless noted otherwise. Special care shall be taken when dropping 3" nominal waste pipe in 3-1/2" wall cavities to ensure correct fit and alignment.
- 8. No structural members shall be bored or cut without approval of the Structural Consultant.
- 9. All plumbing shall be supported from the building structure. All piping 2" and larger shall be supported from the top chord of top joists unless permission to do otherwise is obtained from the Structural Consultant. All piping drops to fixtures shall be anchored solid to walls with a steel support bracket with adjustable clip.
- 10. All water piping shall be installed parallel to building lines and pitched to low points. Provide draw-offs at low points. Piping shall be run neatly grouped together. Also group with heating piping when practical.
- 11. All piping through roofs, masonry walls and partitions shall have steel pipe sleeves. Openings between pipes and sleeves shall be caulked and sealed smoke and water tight. All pipe penetrations through a fire rated wall or floor shall have a UL Listed fire stopping system rated to match the rating of the wall, as per the NFPA.
- 12. All wall fixtures shall be carrier mounted unless otherwise specified.
- 13. Run all piping on warm side of building insulation. No water, or waste lines shall be run in exterior walls, unless directly indicated.
- 14. Provide shock absorbers (water hammer arresters) where shown on drawings and at the top of the riser on individual runouts feeding clothes washers and dish washers.

- 15. All sanitary waste piping 3" and less shall pitch down at 1/8" per LF. All 4" and larger piping shall pitch at 1/4" per LF, whenever possible. The piping main from where it enters the building to the furthest point in the system may pitch down at 1/8" per LF, unless indicated otherwise. No sanitary waste piping under slab shall be less than 2" in diameter.

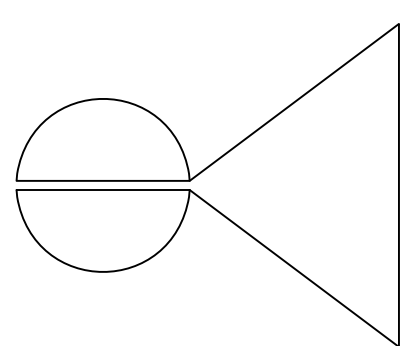
WATER SPECIALTY SCHEDULE

TAG	ITEM	CW	HW	OUTLET	SPECIFICATION & REMARKS
MY-1	MASTER MIXING VALVE	3/4"	3/4"	3/4" 1/2"	SYMONS 5-150 THERMIXER, 4 GPM at 10 PSI LOGS
BFP-1	WATER ENTRANCE BACK FLOW PREVENTER	SIZE OF PIPE	-	SIZE OF PIPE	MATTS MODEL C07-H20T-S-U DOUBLE CHECK BFP W/ STRAINER, UNIONS
BFP-2	MAKE-UP WATER BACK FLOW PREVENTER	1/2"	-	1/2"	MATTS MODEL C07-M30T-S-U DOUBLE CHECK BFP W/ STRAINER, UNIONS
ET-1	EXPANSION TANK	3/4"	-	-	MATTS DET-5-M, 21 GAL
HB-1	HOSE BIB W/ VB.	3/4"	-	3/4" GHT W/ VB	ZURN B45 SELF DRAINING WALL FAUCET W/ VB
RY-1	PRESSURE RELIEF VALVE	3/4"	-	3/4" TO FD	MATTS 3L, SET FOR 100 PSI
SA-1	SHOCK ABSORBER	1/2"	-	-	ZURN W4250-A 1/2" RING TYPE WATER HAMMER ARRESTOR
TP-1	TRAP PRIMER	1/2"	-	1/2"	PPP MODEL PR-500

DRAINAGE SPECIALTY SCHEDULE

TAG	ITEM	WASTE	VENT	SPECIFICATION & REMARKS
FD-1	GENERAL ROUND FLOOR DRAIN	3"	1-1/2"	ZURN FD2210-PVC, NB STRAINER, PVC BODY
FCO-1	GENERAL ROUND FLOOR CLEANOUT	SIZE OF PIPE	-	ZURN G0244R-PV3 OR PV4, 5", ADJUSTABLE, PVC BODY, NB TOP
FCO-2	ROUND FLOOR CLEANOUT FOR CARPET	SIZE OF PIPE	-	SAME AS FCO-1 EXCEPT PROVIDE CARPET MARKER (CM). NOTE: TOP TO REMAIN IN THE CARPET
FCO-3	ROUND FLOOR CLEANOUT RECESSED FOR TILE	SIZE OF PIPE	-	ZURN ZN1400-X PV4 ADJUSTABLE BODY, NB TOP RIM, 1/2" WIDE RIM MAX. COORDINATE SHEET VINYL INSERT W/ FLOOR INSTALLER.
MCO-1	WALL CLEANOUT	SIZE OF PIPE	1/2"	ZURN G0241H-PV4 4" GLEANOUT PLUG, PVC W/ BRASS THREADED INSERT. G02330-557 T, 55 ROUND ACCESS COVER W/ SECURING SCREEN.

FOR REVIEW BY AUTHORITIES
MECHANICAL SYSTEMS ENGINEERS
FOR HAVING JURISDICTION



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NO.	DESCRIPTION	DATE

PROPOSED NEW SYNAGOGUE
AND RESIDENCE

PORTLAND, MAINE
POWEROY STREET

OWNER
CHABAD LUBAVITCH OF
MAINE, INC.
101 CRAGIE STREET
PORTLAND, ME 04102

DATE	SCALE	NO.
06.28.2007		NONE
DRAWN BY	DESIGNED BY	JOB NO.
		0702
DESIGN STAGE	REVIEW DOCUMENTS	REVISIONS
SHEET TITLE		
PLUMBING SCHEDULES		

