SPECIFICATION

SECTION 15400 PLUMBING

PART 1 GENERAL

1.01 Furnish 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 this 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. Shop drawing review is only for review of general conformance with the design concept of the project and general compliance with the information given in 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. Shutoff valves shall be bronze ball valves rated 400# WOG, check valves shall be bronze rated 200# WOG. Equal to Nibco.

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 stencil 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 gages shall be equal to Trerice.

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 DWV 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 Gastite 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 trade contractors. Priority given to ductwork and gravity drainage piping. Do not run piping through duct chases. Reserve space for sprinkler mains. 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 indeterminable 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 3-½" wall cavities to ensure correct fit and alignment.

8. No structural members shall be cored 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 bar 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 drain-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 U.L. 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 waters and dish washers.

15. All sanitary waste piping 3" and less shall pitch down at ¼" per L.F. All 4" and larger piping shall pitch at ⅛" per L.F. wherever possible. The piping main from where it enters the building to the furthest point in the system may pitch down at ⅛" per L.F. unless indicated otherwise. No sanitary/ waste piping under slab shall be less than 2" in diameter.

PLUMBING FIXTURE SCHEDULE

TAG	FIXTURE	COLD WATER	HOT WATER	SAN/ WASTE	VENT	SPECIFICATION AND REMARKS
DW-1	DISHWASHER RESIDENTIAL	-	1/2" 140°	1-½"	1-½"	APPLIANCE BY OTHERS
LV-1	LAVATORY, COUNTER MTD	1/2"	1/2"	1-¼"x 1-½"	1-½"	FIXTURE AND FAUCET AS SELECTED BY OWNER - ALLOWANCE $250. INSTALL AND PROVIDE ALL REQUIRED ROUGH-IN W/ CHROME P-TRAP & SUPPLIES W/ WHEEL HANDLE STOPS & ESCUTCHEONS.
LV-2	LAVATORY, SMALL COUNTER MTD	1/2"	1/2"	1-¼"x 1-½"	1-½"	FIXTURE AND FAUCET AS SELECTED BY OWNER - ALLOWANCE $250. INSTALL AND PROVIDE ALL REQUIRED ROUGH-IN W/ CHROME P-TRAP & SUPPLIES W/ WHEEL HANDLE STOPS & ESCUTCHEONS.
LV-3	LAVATORY, COUNTER MTD	1/2"	1/2"	1-¼"x 1-½"	1-½"	AMERICAN STANDARD MODEL 476.028 AQUALYN, V.C., 4" CENTERS, WHITE. CHICAGO FAUCETS MODEL 2201-4CP MARATHON SINGLE LEVER DECK MOUNTED FAUCET W/ GRID DRAIN, CERAMIC CARTRIDGES, CHROME. MCGUIRE CHROME P-TRAP & SUPPLIES W/ WHEEL HANDLE STOPS & ESCUTCHEONS.
LV-4	LAVATORY, COUNTER MTD ADA	1/2"	1/2"	1-¼"x 1-½"	1-½"	AMERICAN STANDARD MODEL 476.028 AQUALYN, V.C., 4" CENTERS, WHITE. CHICAGO FAUCETS MODEL 2201-4CP MARATHON SINGLE LEVER DECK MOUNTED FAUCET W/ GRID DRAIN, CERAMIC CARTRIDGES, CHROME. MCGUIRE PRONRAP INSULATED P-TRAP AND SUPPLY COVERS. MCGUIRE CHROME SUPPLIES W/ WHEEL HANDLE STOPS & ESCUTCHEONS.
SH-1	SHOWER UNIT CONTROLS LEFT SIDE	1/2"	1/2"	2"	1-½"	LASCO MODEL 1483-E 48"x35-¼" WHITE, FIBER-GLASS SHOWER GELCOAT STALL. S.S. CURTAIN, ROD. SYMMONS 25-1-131-X SHOWER VALVE AND HEAD, INTEGRAL STOPS. MOUNT HEAD ON WALL AT 82".
SK-1	SINK, SINGLE BOWL, KITCHEN COUNTER MOUNTED	1/2"	1/2"	1-½"	1-½"	FIXTURE AND FAUCET AS SELECTED BY OWNER - ALLOWANCE $350. INSTALL AND PROVIDE ALL REQUIRED ROUGH-IN W/ CHROME P-TRAP & SUPPLIES W/ WHEEL HANDLE STOPS & ESCUTCHEONS.
SK-2	SINK, SINGLE BOWL, KITCHEN COUNTER MOUNTED	1/2"	1/2"	1-½"	1-½"	ELKAY LR-3122-3 SINGLE BOWL SINK, 18 GA S.S. LR35 BASKET DRAIN. CHICAGO FAUCETS MODEL 2304-CP MARATHON DECK MOUNTED SINGLE HANDLE GOOSENECK FAUCET W/ SIDE SPRAY, CHROME. MCGUIRE CHROME P-TRAP AND WHEEL HANDLE SUPPLIES.
TS-1	TUB/SHOWER UNIT RIGHT HAND	1/2"	1/2"	2"	1-½"	FIXTURE, TRIM AND CONTROLS AS SELECTED BY OWNER - ALLOWANCE $1500. INSTALL AND PROVIDE ALL REQUIRED ROUGH-IN W/ CHROME BRASS TRIP LEVER BATH DRAIN W/ OVERFLOW, P-TRAP.
TS-2	TUB/SHOWER UNIT LEFT HAND	1/2"	1/2"	2"	1-½"	SAME AS ABOVE EXCEPT OPPOSITE HAND.
WC-1	WATER CLOSET, TANK TYPE	1/2"	-	4"	2"	FIXTURE AND SEAT AS SELECTED BY OWNER - ALLOWANCE $250. INSTALL AND PROVIDE ALL REQUIRED ROUGH-IN W/ CHROME WHEEL HANDLE SUPPLY.
WC-2	WATER CLOSET, TANK TYPE	1/2"	-	4"	2"	AMERICAN STANDARD 2023.212 CHAMPION ROUND FRONT BOWL, WHITE, VC, RIM 15-¼". LAUREL SEAT A/S 5308.014. CHROME SUPPLY W/ WHEEL HANDLE STOPS & ESCUTCHEON.
WC-3	WATER CLOSET, TANK TYPE. - ADA	1/2"	-	4"	2"	AMERICAN STANDARD 2002.012 CHAMPION RIGHT HEIGHT ELONGATED BOWL, WHITE, VC, RIM 16-½". LAUREL SEAT A/S 5311.012. CHROME SUPPLY W/ WHEEL HANDLE STOPS & ESCUTCHEON.
WC-4	WATER CLOSET, TANK TYPE - ADA	1/2"	-	4"	2"	SAME AS ABOVE EXCEPT TANK W/ RH TRIP LEVER
WM-1	WASHING MACHINE SUPPLY & DRAIN	1/2"	1/2" 140°	2"	1-½"	APPLIANCE BY OTHERS

WATER SPECIALTY SCHEDULE

TAG	ITEM	CW	HW	OUTLET	SPECIFICATION & REMARKS
MV-1	MASTER MIXING VALVE	¾"	¾"	¾" 120°	SYMMONS 5-130 THERMIXER, 9 GPM at 10 PSI LOSS
BFP-1	WATER ENTRANCE BACK FLOW PREVENTER	SIZE OF PIPE	-	SIZE OF PIPE	WATTS MODEL 007-M2QT-5-U DOUBLE CHECK BFP W/ STRAINER, UNIONS
BFP-2	MAKE-UP WATER BACK FLOW PREVENTER	½"	-	½"	WATTS MODEL 007-M3QT-5-U DOUBLE CHECK BFP W/ STRAINER, UNIONS
ET-1	EXPANSION TANK	3/4"	-	-	WATTS DET-5-MI, 2.1 GAL
HB-1	HOSE BIB W/ VB.	3/4"	-	¾" GHT	ZURN 1345 SELF DRAINING WALL FAUCET W/ VB
RV-1	PRESSURE RELIEF VALVE	3/4"		¾" TO FD	WATTS 3L, SET FOR 100 PSI
SA-1	SHOCK ABSORBER	1/2"		-	ZURN WH2950-A ½" 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 C02449-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 NB IN THE EVENT THAT CARPET IS EVENTUALLY REMOVED.
FCO-3	ROUND FLOOR CLEANOUT RECESSED FOR TILE	SIZE OF PIPE	-	ZURN ZN-1400-X PV4, ADJUSTABLE, CI BODY, NB TOP RIM. ¼" WIDE RIM MAX. COORDINATE SHEET VINYL INSERT W/ FLOOR INSTALLER.
WCO-1	WALL CLEANOUT	SIZE OF PIPE		ZURN C0241I-PV4 4" CLEANOUT PLUG, PVC W/ BRASS THREADED INSERT. C02530-SS7 7" SS ROUND ACCESS COVER W/ SECURING SCREW.

PUMP SCHEDULE

TAG	SERVICE	GPM	HEAD FT	HP	VOLTS	PH	SPEC. & REMARKS
DCP-1	DOMESTIC HOT WATER RECIRCULATING PUMP	1	4	1/40	115	1	TACO, 1/2", W/ AQUASTAT. ELEC. BY EC

PROGRESS SET ONLY
FOR REVIEW BY AUTHORITIES
HAVING JURISDICTION

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REVISION NO.	DESCRIPTION	DATE

PROPOSED NEW SYNAGOGUE AND RESIDENCE

POMEROY STREET
PORTLAND, MAINE

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

DATE	07.18.2007
SCALE	NONE
DRAWN BY	E.J.P.
JOB NO.	0702
DESIGN STAGE	REVIEW DOCUMENTS

SHEET TITLE
PLUMBING SCHEDULES

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