

PLUMBING SYMBOL LIST

BASIC

	EXISTING PIPING
	EXISTING PIPING TO BE REMOVED
	PIPING TO BE ABANDONED
	NEW SOIL, WASTE OR SANITARY PIPING
	VENT PIPING (SANITARY)
	PIPING BELOW SLAB
	DOMESTIC COLD WATER PIPING
	DOMESTIC HOT WATER PIPING (120°)
	DOMESTIC HOT WATER CIRCULATION PIPING
	PIPING w/FREEZE PROTECTION CABLE & INSULATION
	ARROW INDICATES DIRECTION OF FLOW
	COMPRESSED AIR PIPING
	GAS PIPING
	EJECTOR DISCHARGE PIPING
	NITROGEN VENT PIPING
	INDIRECT WASTE PIPING
	PUMP DISCHARGE PIPING
	SUMP PUMP DISCHARGE PIPING
	STORM WATER DRAINAGE PIPING
	TEMPERED WATER PIPING
	DISCONNECT FROM EXISTING
	CONNECT TO EXISTING
	SHOCKWATER HAMMER ARRESTOR
	FLEXIBLE CONNECTION
	EXPANSION LOOP SIZE
	HOSE BIBB
	WALL HYDRANT
	FRESH AIR INLET
	CLEAN OUT/PLUGGED OUTLET
	CAPPED OUTLET
	CLEAN OUT DECK PLATE
	P-TRAP
	VACUUM BREAKER
	BOTTOM PIPE CONNECTION
	TOP PIPE CONNECTION
	SIDE CONNECTION
	PIPE DOWN/DROP
	PIPE RISE/UP
	PIPE SLOPE
	VALVE IN VERTICAL
	UNION
	REDUCER
	WATER PROOF SLEEVE
	SLEEVE
	PRESSURE GAUGE w/GAUGE COCK
	TEMPERATURE GAUGE
	FLOOR DRAIN
	ROOF DRAIN
	PUMP
	WATER METER
	AUTOMATIC BALL DRP
	VENT THRU ROOF
	TRAP
	TAMPER SWITCH
	PRESSURE SWITCH w/GAUGE COCK
	WATERFLOW SWITCH
	TEMPERATURE AND PRESSURE RELIEF VALVE
	BACKWATER VALVE
	PLUG VALVE
	MIXING VALVE
	RELIEF VALVE
	BALL VALVE
	BALL VALVE w/LOCK SHIELD
	GATE VALVE
	GLOBE VALVE
	OUTSIDE SCREW & YOKE (OS & Y) VALVE
	CHECK VALVE
	PRESSURE REDUCING VALVE (PRV)
	SOLENOID VALVE
	FLOAT VALVE
	BALANCING VALVE
	Y STRAINER w/BLOW OFF VALVE
	BACKFLOW PREVENTER ASSEMBLY
	REDUCED-PRESSURE ZONE BACKFLOW PREVENTER ASSEMBLY
	REDUCED-PRESSURE DETECTOR ASSEMBLY
	DOUBLE CHECK VALVE ASSEMBLY
	DOUBLE CHECK DETECTOR ASSEMBLY
	BALANCING VALVE ASSEMBLY
	RISER DESIGNATION: X = RISER SERVICE, # = RISER NUMBER
	CIRCUIT SOLVER ASSEMBLY

HOSPITAL AND LAB

	AIR PIPING
	ACID RESISTANT PIPING
	CARBON DIOXIDE PIPING
	DEIONIZED WATER PIPING
	DISTILLED WATER PIPING
	LABORATORY VENT PIPING
	LABORATORY WASTE PIPING
	MEDICAL AIR PIPING
	MEDICAL AIR INTAKE PIPING
	MEDICAL GAS PIPING
	MEDICAL VACUUM PIPING
	MEDICAL VACUUM EXHAUST PIPING
	NITROGEN PIPING
	NITROGEN VENT PIPING
	NITROUS OXIDE PIPING
	NITROUS OXIDE VENT PIPING
	OXYGEN PIPING
	VACUUM PIPING
	WASTE ANESTHETIC GAS DISPOSAL PIPING

PLUMBING EQUIPMENT DESIGNATIONS

XXX-XX-XX

EQUIPMENT TAG NUMBER
FLOOR DESIGNATION
EQUIPMENT DESIGNATION
(REFER TO SPECIFIC TRADE LIST)

WH-2-3

UNIT NUMBER 3
SECOND FLOOR
WATER HEATER
(REFER TO LIST)

PLUMBING ABBREVIATIONS

AD	AREA DRAIN
AF	ABOVE FINISHED FLOOR
B	BUILDING
BOP	BOTTOM OF PIPE
CL	CEILING
CM	COFFEE MAKER
CO	CLEANOUT
COOP	CLEANOUT DECK PLATE
CONN	CONNECT
CONT	CONTINUATION
CV	CHECK VALVE
CVO	CAPPED AND VALVED OUTLET
CW	COLD WATER
DA	DIAMETER
DN	DOWN (PENETRATES FLOOR SLAB)
DR	DRAIN
DWG	DRAWING
EDIS	EJECTOR DISCHARGE
EDC	ELECTRIC WATER COOLER
(E)	EXISTING
(ER)	EXISTING TO BE REMOVED
(ERR)	EXISTING TO BE REMOVED & RELOCATED
EL	ELEVATION
FAU	FRESH AIR INLET
FD	FLOOR DRAIN
FL	FLOOR
FLH	FLOOR HYDRANT
FT	FEET
FU	FUTURE UNIT
GA	GALLONS
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HOLD	HOLD
HW	HOT WATER
HWR	HOT WATER RETURN
ID	INSIDE DIAMETER
IN	INCH
IW	INDIRECT WASTE
JS	JANITOR'S SINK
LAV	LAVATORY
MAP	MEDICAL GAS ALARM PANEL
MAX	MAXIMUM
MIN	MINIMUM
MR	MDR RECEPTOR
NC	NORMALLY CLOSED
NC	NOT IN THIS CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
OS&Y	OUTSIDE SCREW & YOKE GATE VALVE
PD	PLUMBING CONTRACTOR
PD	PUMP DISCHARGE
PO	PLUGGED OUTLET
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH (GAUGE)
(RE)	RELOCATED EXISTING
(RR)	EXISTING TO BE REMOVED AND RETURN TO OWNER
RD	ROOF DRAIN
SA	SHOCK ABSORBER
SAN	SANITARY
SD	SUMP PUMP DISCHARGE
SH	SHOWER
SK	SINK
SQFT	SQUARE FOOT
ST	STORM
TIW	TEPID WATER
TWR	TEPID WATER RETURN
TYP	TYPICAL
UN	UNLESS OTHERWISE NOTED
UP	UP (PENETRATES FLOOR SLAB)
UR	URINAL
V	VENT
VB	VACUUM BREAKER
VTR	VENT THROUGH ROOF
W	WASTE
WC	WATER CLOSET
WCO	WALL CLEANOUT
WH	WALL HYDRANT
ZCV	ZONE CONTROL VALVE BOX

PLUMBING DEMOLITION NOTES

- THE CONTRACTOR SHALL INCLUDE IN HIS PRICE ALL COSTS ASSOCIATED WITH REMOVALS AND RELOCATIONS OF PLUMBING WORK AS DESCRIBED ON THE DRAWINGS AND IN THE SPECIFICATIONS WITH ALLOWANCES FOR EXPECTED OR UNEXPECTED DIFFICULTIES WHEN CONCEALED WORK HAS BEEN OPENED. NO CLAIMS FOR ADDITIONAL WORK ASSOCIATED WITH DEMOLITION WILL BE ACCEPTED, EXCEPT IN CERTAIN CASES CONSIDERED JUSTIFIABLE BY THE ARCHITECT.
- THE CONTRACTOR SHALL REMOVE AND/OR RELOCATE ALL EXISTING PLUMBING WORK WHICH INTERFERES WITH THE NEW ARCHITECTURAL LAYOUTS. ALL SYSTEMS WHICH ARE NO LONGER REQUIRED TO FUNCTION SHALL BE REMOVED BACK TO ACTIVE LINES.
- THE CONTRACTOR SHALL PERFORM DEMOLITION AND REMOVAL WORK WITH MINIMUM INTERFERENCE WITH FUNCTIONING PLUMBING SYSTEMS. ALL AFFECTED SYSTEMS SHALL BE RECONNECTED AND RESTORED.
- DEMOLITION AND REMOVAL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER. THE CONTRACTOR SHALL PATCH, REPAIR OR OTHERWISE RESTORE ANY DAMAGED INTERIOR OR EXTERIOR BUILDING SURFACE TO ITS ORIGINAL CONDITION.
- THE CONTRACTOR SHALL REMOVE ALL PIPING SUPPORTS, ETC. FROM PARTITIONS THAT ARE TO BE REMOVED. WHERE THE REMOVAL OF THESE ITEMS DISRUPTS EXISTING PIPING THAT IS TO REMAIN, THE CONTRACTOR SHALL INSTALL AND PROVIDE BYPASS CONNECTIONS NECESSARY.
- ALL PIPING WHICH BECOMES EXPOSED DURING THE ALTERATION WORK SHALL BE REMOVED AND REROUTED CONCEALED BEHIND FINISHED SURFACES.
- PORTIONS OF MAINS TO BE REMOVED OR ABANDONED AS A RESULT OF DEMOLITION WORK, BUT WHICH ARE REQUIRED TO REMAIN ACTIVE, SHALL BE CUT AT CONVENIENT LOCATIONS, REROUTED AND RECONNECTED.
- THE CONTRACTOR SHALL NOTIFY THE OWNER AT THE APPROPRIATE TIME OF THE PROJECTED DEMOLITION AND PHASING SCHEDULE SO THAT REMOVAL OR RELOCATION OF AFFECTED UTILITIES MAY BE CARRIED OUT IN COORDINATION WITH THE PROJECT REQUIREMENTS.
- ALL EXISTING MATERIAL AND EQUIPMENT IN USABLE CONDITION, WHICH IS TO BE REMOVED UNDER THIS CONTRACT, SHALL REMAIN THE PROPERTY OF THE OWNER OR SHALL BE DISPOSED OF BY THE PLUMBING CONTRACTOR, AS DIRECTED BY THE OWNER.
- ARRANGE TO WORK CONTINUOUSLY, INCLUDING OVER TIME, IF REQUIRED, TO ASSURE THAT SYSTEMS WILL BE SHUT DOWN ONLY DURING THE TIME ACTUALLY REQUIRED TO MAKE THE NECESSARY CONNECTIONS TO THE EXISTING SYSTEMS.
- THE SHUTDOWN OF EXISTING BUILDING PLUMBING SERVICES SHALL BE COORDINATED WITH THE OWNER. MAKE ARRANGEMENTS AT LEAST 15 BUSINESS DAYS PRIOR TO A SHUTDOWN.

PLUMBING GENERAL NOTES

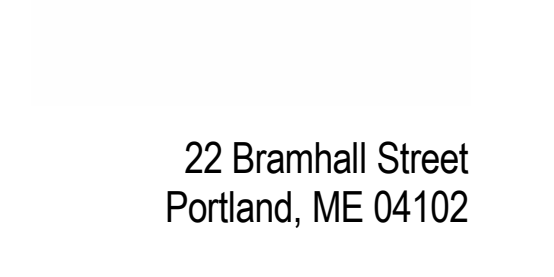
- GENERAL NOTES, SYMBOL LIST AND DETAILS ARE APPLICABLE TO ALL PLUMBING DRAWINGS.
- ALL WORK IS NEW UNLESS OTHERWISE NOTED.
- DRAWINGS ARE DIAGRAMMATIC. DETERMINE LOCATIONS OF SYSTEMS AND COMPONENTS IN FIELD.
- NEITHER ACCURACY NOR COMPLETION OF UTILITY LOCATIONS SHOWN ON DRAWINGS IS GUARANTEED. DETERMINE EXACT LOCATIONS OF EXISTING UTILITY IN FIELD, WHETHER OR NOT SHOWN ON DRAWINGS. EXERCISE CAUTION AND IDENTIFY LOCATIONS OF UNMARKED UTILITY LINES AS NECESSARY TO PERFORM WORK OF THIS SECTION.
- ALL PLUMBING WORK SHALL BE IN ACCORDANCE WITH THE CURRENT PLUMBING CODE AND ALL APPLICABLE LOCAL CODES AND DRAWINGS.
- IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO COORDINATE HIS WORK WITH THAT OF ALL OTHER TRADES, INCLUDING (BUT NOT LIMITED TO), ELECTRICAL, HVAC PROCESS PIPING, SPRINKLER, PLUMBING STRUCTURAL AND GENERAL ARCHITECTURE.
- ANY INTERFERENCE SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND THE OWNER'S REPRESENTATIVE, AND SHALL BE RESOLVED PRIOR TO THE INSTALLATION OF THE WORK INVOLVED.
- NO WORK SHALL BE INSTALLED IN VIOLATION OF ANY GOVERNING CODES. ANY WORK SHOWN ON THE DRAWINGS WHICH IS IN VIOLATION OF SUCH CODES SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND THE OWNER'S REPRESENTATIVE AND SHALL BE RESOLVED PRIOR TO THE INSTALLATION OF THE WORK INVOLVED.
- ALL PIPING PENETRATING CEILING AND WALLS SHALL BE INSTALLED WITH CHROME (STAINLESS WHERE NOTED) PLATED ESCUTCHEONS AT THE PENETRATION. ALL PIPING PENETRATING EXTERIOR WALLS AND ROOFS SHALL BE FLASHED IN AN APPROVED MANNER AND SHALL BE SEALED WEATHER TIGHT. PIPING PENETRATING RATED PARTITIONS SHALL BE PROTECTED AS REQUIRED BY LOCAL CODE AUTHORITY. (SEE DETAILS)
- MANUFACTURER'S MODEL NUMBERS ARE SPECIFIED SOLELY TO ESTABLISH STANDARDS OF QUALITY FOR PERFORMANCE AND MATERIALS.
- PRODUCT INSTALLATION SHALL ADHERE TO MANUFACTURERS' RECOMMENDATIONS.
- PROVIDE ACCESS PANELS FOR EQUIPMENT THAT REQUIRES PERIODIC SERVICE.
- TOPS OF ALL FLOOR DRAINS SHALL BE SET FLUSH WITH FINISHED FLOOR. ALL PIPING ABOVE GRADE SHALL BE PROPERLY SUPPORTED BY THE BUILDING STRUCTURE AND SHALL NOT REST ON CEILING TILES OR CEILING STRUCTURE.
- CONTRACTOR SHALL COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF ALL PLUMBING EQUIPMENT WITH THE ELECTRICAL DRAWINGS AND SHALL FURNISH EQUIPMENT WIRED FOR THE VOLTAGES SHOWN HEREON.
- PROVIDE SHUT-OFF VALVES ON ALL BRANCH PIPING AND ON ALL SUPPLIES TO INDIVIDUAL FIXTURES AND EQUIPMENT. PROVIDE BALL VALVES ON ALL WATER MAIN BRANCHES IN CORRIDORS AND WHERE INDICATED ON DRAWINGS. ALL VALVES SHALL BE ACCESSIBLE.
- ALL SLEEVES THROUGH CONCRETE FLOORS AND ALL CORE DRILLING OF CONCRETE FLOORS AND WALLS SHALL BE BY THIS CONTRACTOR.
- CONCRETE PADS AND PLATFORMS FOR WORK OF THIS SECTION WILL BE PROVIDED BY GENERAL CONTRACTOR. PROVIDE INFORMATION AND HARDWARE AS NECESSARY TO COORDINATE WORK.
- SCHEDULE WORK OF THIS SECTION TO AVOID INTERFERENCES WITH FIRE-PROOFING WORK.
- COORDINATE ROOF PENETRATIONS WITH WORK OF OTHER SECTIONS AND WITH FLASHING REQUIREMENTS.
- RUN PIPING CONCEALED, UNLESS SPECIFIED OTHERWISE, AND CLEAR OF CEILING INSERTS.
- STRUCTURAL WELDING SHALL BE 1/4-INCH FILLET UNLESS OTHERWISE SPECIFIED.
- PROVIDE CLAMPS, OFFSETS, EXPANSION JOINTS, ANCHORS AND GUIDES AS NECESSARY TO PREVENT STRESS ON PIPING.
- PROVIDE BALANCING VALVES AT SYSTEM LOOP RETURNS AND AT RETURN RISERS. PROVIDE SHUT-OFF VALVES AT SYSTEM LOOP SUPPLIES AND SUPPLY RISERS.
- PROVIDE VENTS AT HIGH POINTS IN PIPING SYSTEMS AND DRAIN VALVES AT LOW POINTS.
- PROVIDE GAUGE FITTINGS AND THERMOMETER WELLS AT HOT WATER SUPPLY AND RETURN BRANCHES AND AT PUMP INLETS AND OUTLETS.
- VERIFY EXACT SIZES, LOCATIONS, INVERTS AND ELEVATIONS PRIOR TO RUNNING ANY PIPING. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF ALL FIXTURES AND EQUIPMENT.
- PLUMBING SUBCONTRACTOR IS RESPONSIBLE FOR EXTENDING ALL REGULATOR VENTS TO ATMOSPHERE. REGULATORS ARE PART OF EQUIPMENT GAS TRAIN.
- PIPING SHALL NOT RUN OVER ELECTRICAL PANELS AND SHALL BE COORDINATED WITH WORK OF OTHER TRADES.

PLUMBING DRAWING LIST

DRAWING NO.	DRAWING TITLE
P00-01	PLUMBING GENERAL NOTES, SYMBOLS AND ABBREVIATIONS
P00-11	PLUMBING SCHEDULES
P00-21	PLUMBING DETAILS
P04-51	PLUMBING LEVEL 5 DEMOLITION FLOOR PLAN - SECTOR 1
P04-62	PLUMBING LEVEL 5 DEMOLITION FLOOR PLAN - SECTOR 2
P04-61	PLUMBING ROOF DEMOLITION PLAN - SECTOR 1
P04-62	PLUMBING ROOF DEMOLITION PLAN - SECTOR 2
P11-51	PLUMBING LEVEL 5 FLOOR SUPPLY PLAN - SECTOR 1
P11-52	PLUMBING LEVEL 5 FLOOR SUPPLY PLAN - SECTOR 2
P11-61	PLUMBING LEVEL 6 FLOOR SUPPLY PLAN - SECTOR 1
P11-62	PLUMBING LEVEL 6 FLOOR SUPPLY PLAN - SECTOR 2
P11-71	PLUMBING LEVEL 7 FLOOR SUPPLY PLAN - SECTOR 1
P11-72	PLUMBING LEVEL 7 FLOOR SUPPLY PLAN - SECTOR 2
P12-51	PLUMBING LEVEL 5 FLOOR DRAINAGE PLAN - SECTOR 1
P12-52	PLUMBING LEVEL 5 FLOOR DRAINAGE PLAN - SECTOR 2
P12-61	PLUMBING LEVEL 6 FLOOR DRAINAGE PLAN - SECTOR 1
P12-62	PLUMBING LEVEL 6 FLOOR DRAINAGE PLAN - SECTOR 2
P12-71	PLUMBING LEVEL 7 FLOOR DRAINAGE PLAN - SECTOR 1
P12-72	PLUMBING LEVEL 7 FLOOR DRAINAGE PLAN - SECTOR 2
P12-81	PLUMBING ROOF PLAN - SECTOR 1
P12-82	PLUMBING ROOF PLAN - SECTOR 2
P12-91	PLUMBING PENTHOUSE PLAN - SECTOR 1
P12-92	PLUMBING PENTHOUSE PLAN - SECTOR 2
P20-01	PLUMBING HOISTWAY ROOF PLAN - SECTOR 2
P20-02	PLUMBING RISER DIAGRAMS



225 Franklin Street, Suite 1100
Boston, MA 02110
617.478.0300
617.478.0321
www.perkinswill.com



22 Bramhall Street
Portland, ME 04102

CONSULTANTS

CIVIL/LANDSCAPE ARCHITECT
Sabago Technics
75 John Roberts Road, Suite 1A, South Portland, ME 04106

STRUCTURAL/ENR/BUILDING ENVELOPE CONSULTANT
Singston Gumpertz & Hepler Inc.
41 Seaver Street, Building 1, Suite 701, Walham, MA 02463

MEPEP ENGINEER CODE
AKF Group LLC
99 Bedford Street, 2nd Floor, Boston, MA 02111

CONSTRUCTION MANAGER
Turner Construction
2 Seaport Lane, Suite 200, Boston, MA 02210

ELEVATOR CONSULTANT
VDA (Van Deusen & Associates)
101 Summer Street, 4th Floor, Boston, MA 02110

COST ESTIMATOR
D. G. Jones International
3 Baldwin Green Common, Suite 202, Woburn, MA 01801

PROJECT TITLE

East Tower 6 & 7 Addition
22 Bramhall Street
Portland, ME 04102

