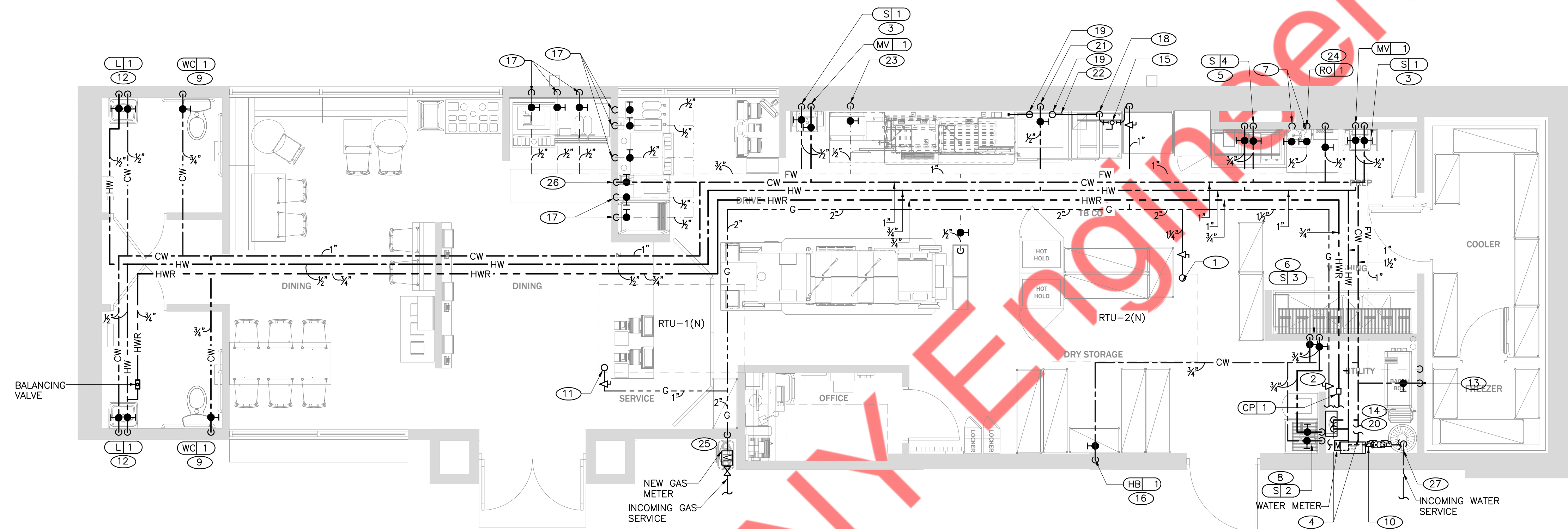


WASTE & VENT PIPING PLAN 1/4" = 1'-0" 1

- A. NO ROOF PENETRATIONS PERMITTED WITHIN ROOF WATER PLY. REFER TO ROOF PLAN FOR LOCATIONS.
- B. REFER TO RISER DIAGRAM ON SHEET P601.00 FOR ALL WASTE AND VENT SIZES.
- C. SEE ARCHITECTURAL PLANS FOR DOWNSPOUT LOCATIONS
- D. VERIFY WITH THE LOCAL BUILDING AUTHORITY THAT CONDENSATE DRAINAGE CAN BE ROUTED THROUGH MOP SINK.

- 1 UNDERGROUND SANITARY PIPE SHALL BE NO HUB CAST IRON PIPE FOR THE FIRST 10 FEET FROM CONNECTION TO FLOOR SINK, OUTWARD.
- 2 PROVIDE CONDENSATE LINE AND DRAIN LINE FROM ICE MACHINE TO FS, PROVIDE AIR GAP PER LOCAL CODE.
- 3 PROVIDE WASTE LINES FROM BEVERAGE UNIT TO HD/FS, PROVIDE AIR GAP PER LOCAL CODE
- 4 PROVIDE 3/4" COPPER CONDENSATE FROM DRAIN PROVIDED BY VENDOR TO OUTFALL AT HUB DRAIN / FLOOR DRAIN (HEAT ROPE IS SUPPLIED WITH FREEZER CONDENSATE). CONCEAL CONDENSATE PIPE IN WALL.
- 5 PVC OR COPPER CONDENSATE DRAIN, FROM HVAC UNITS ON ROOF. RUN TO MOP SINK, FLOOR DRAIN, PIPING SHALL SLOPE 1/4" PER FOOT AND SHALL BE INSULATED WITH 1" CLOSED COPPER CELLULAR INSULATION. REFER TO RISER DIAGRAM ON SHEET P5.0 FOR PIPE SIZES
- 6 ENTIRE RUN OF DRAIN LINES TO INLET OF EXTERIOR GREASE INTERCEPTOR AND OUTBOUND FROM INTERCEPTOR TO CONNECTION AT SANITARY MAIN SHALL BE CAST IRON PIPE OR AS REQUIRED BY AUTHORITY HAVING JURISDICTION.
- 7 ROUTE INDIRECT WASTE FROM WH-1, WH-2 TO FD-1. REFERENCE DETAIL 2/P5.0.
- 8 4" VENT UP THROUGH ROOF.
- 9 PIPE 3-COMPARTMENT SINK TO FLOOR SINK WITH AIR GAP PER CODE.
- 10 1" CONDENSATE DRAIN DOWN FROM RTU-1(N). SEE DETAIL 9/P5.0.
- 11 1" CONDENSATE DRAIN DOWN FROM RTU-2(N). SEE DETAIL 9/P5.0.
- 12 CONDENSATE DRAIN PIPE DOWN TO HUB DRAIN NEAR HAND SINK. PROVIDE AIR GAP AS REQUIRED BY CODE. IF REQUIRED RUN CONDENSATE PIPING TO EXTERIOR DRYWELL, RETENTION AREA OR STORM SEWER AS DIRECTED BY AUTHORITY HAVING JURISDICTION.
- 13 RUN DRAIN LINE FROM S/S DRINK MACHINE THROUGH WALL OPENING. TO OUTFALL AT FS-1 BENEATH D/T DRINK MACHINE.
- 14 NOT USED
- 15 ROUTE DRAIN FOR REVERSE OSMOSIS DISCHARGE TO FLOOR SINK. ENSURE PROPER AIR GAP.
- 16 1" CONDENSATE DRAIN DOWN FROM CONDENSING UNIT SERVING FROZEN BEVERAGE MACHINE.
- 17 1" CONDENSATE DRAIN DOWN FROM CONDENSING UNIT SERVING ICE MAKER



- AS PER 2018 INTERNATIONAL ENERGY CONSERVATION CODE C404.4, PIPING FROM A WATER HEATER TO THE TERMINATION OF HEATED WATER FIXTURE SUPPLY PIPE SHALL BE INSULATED IN ACCORDANCE WITH TABLE OF MINIMUM PIPE INSULATION THICKNESS.
- ALL DOMESTIC WATER PIPING ABOVE GRADE SHALL BE INSULATED WITH FIRE RETARDANT, FACTORY APPLIED JACKET. PROVIDE COLD WATER PIPING WITH FACTORY APPLIED VAPOR BARRIER. INSULATION REQUIREMENT SHOULD COMPLY WITH 2018 IECC SECTION 403.11.3

FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (INCHES)				
	CONDUCTIVITY BTU-IN./ (H- FT2- °F)	MEAN RATING TEMPERATURE °F	<1	1 to < 1 1/2	1 1/2 to < 4	4 to < 8	>=8
141-200	0.25-0.29	125	1.5	1.5	2	2	2
105-140	0.21-0.28	100	1.0	1.0	1.5	1.5	1.5
40-60	0.21-0.27	75	0.5	0.5	1.0	1.0	1.0

- AS PER 2018 INTERNATIONAL ENERGY CONSERVATION CODE C404.6.1 HEATED WATER CIRCULATION SYSTEM SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. CONTROLS FOR CIRCULATING HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE AND WHEN THERE IS NO DEMAND FOR HOT WATER.

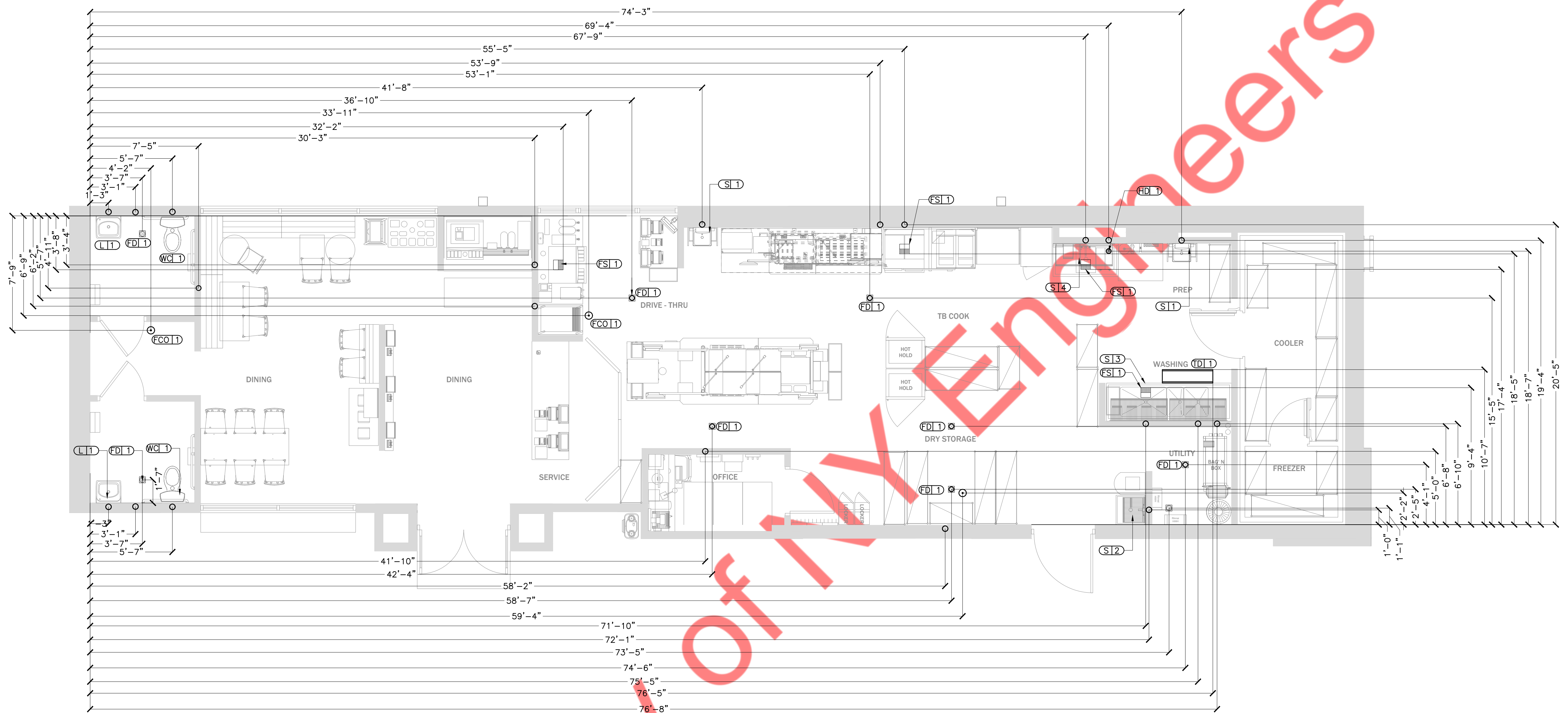
- AS PER 2018 INTERNATIONAL ENERGY CONSERVATION CODE C404.7, PUMPS SHALL HAVE CONTROLS THAT COMPLY WITH BOTH OF THE FOLLOWING:

- THE CONTROL SHALL START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE OR APPLIANCE, SENSING THE PRESENCE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE FITTING OR APPLIANCE.
- THE CONTROL SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD-WATER PIPING TO 104°F (40°C).
- AS PER 2018 INTERNATIONAL ENERGY CONSERVATION CODE C404.3, WATER HEATING EQUIPMENT NOT SUPPLIED WITH INTEGRAL HEAT TRAPS AND SERVING NON RE-CIRCULATING SYSTEM SHALL BE PROVIDED WITH HEAT TRAPS ON SUPPLY AND DISCHARGE PIPING ASSOCIATED WITH EQUIPMENT.
- HW SYSTEM PIPING IS DESIGNED AS PER MAXIMUM ALLOWED PIPE LENGTH METHOD AS PER INTERNATIONAL ENERGY CONSERVATION CODE 2018 C404.5.1. THE HW PIPE LENGTH FROM THE NEAREST SOURCE OF HEATED WATER TO THE TERMINATION OF THE FIXTURE SUPPLY PIPE SHALL BE AS PER FOLLOWING TABLE.

NOMINAL PIPE SIZE (INCHES)	MAXIMUM PIPING LENGTH (FEET)	
	PUBLIC LAV	OTHER FIXTURES
1/2"	2'	43'
3/4"	0.5'	21'
1"	0.5'	13'
1 1/4"	0.5'	8'
1 1/2"	0.5'	6'
2" OR LARGER	0.5'	4'

- NO ROOF PENETRATIONS PERMITTED WITHIN ROOF "WATER VALLEYS". REFER TO ROOF PLAN FOR LOCATIONS.
- REFER TO SHEET P4.0 FOR ROUGH-IN LOCATIONS.
- REFER TO SHEET P6.0 FOR WATER AND GAS ISOMETRIC DRAWINGS.
- FLUSH ALL WATER SUPPLY LINES OF ALL DEBRIS AND IMPURITIES PRIOR TO CONNECTING TO WATER FILTERS.
- PROVIDE REDUCED PRESSURE BACKFLOW PREVENTER TO SERVE CARBONATOR. DRAIN RELIEF TO FLOOR SINK WITH AIR GAP

- 1-1/4" (180 CFH) GAS UPTO RTU-2(N) WITH DIRT LEG, GAS COCK AND UNION.
- 1-1/4" (398 CFH) GAS DOWN TO WATER HEATER WITH DIRT LEG, GAS COCK AND UNION.
- 1/2" TEMPERED WATER DOWN IN WALL TO HAND SINK.
- 3/4" HOT AND 3/4" COLD WATER LINES DOWN TO WATER HEATER.
- 3/4" HOT AND COLD WATER LINES DOWN IN WALL TO PREP SINK.
- 3/4" COLD AND HOT WATER LINES DOWN IN WALL TO THREE COMPARTMENT SINK.
- 1/2" COLD WATER 2'-0" A.F.F. . CONNECT TO WATER FILTER FOR HOT WATER SYSTEM P-452. PROVIDE SHUT-OFF VALVE PRIOR TO CONNECTION TO WATER FILTER.
- 3/4" COLD AND HOT WATER DOWN IN WALL TO MOP SINK.
- 3/4" CW DOWN IN WALL TO FLUSH TANK WATER CLOSET .
- REDUCED PRESSURE BACKFLOW PREVENTER LOCATED PER LOCAL UTILITY REQUIREMENTS. PIPE RELIEF TO HUB SINK
- 1" (130 CFH) GAS UPTO RTU-1(N) WITH DIRT LEG, GAS COCK AND UNION.
- 1/2" TEMPERED WATER LINES DOWN IN WALL TO LAVATORY.
- 3/4" CW DOWN ALONG WALL TO WATER FILTER S-540.
- WATER HEATERS (WH-1.2). PIPE CONDENSATE LINE. T&P DISCHARGE AND DRAIN PAN TO FLOOR DRAIN. SEE WATER HEATER DETAIL 2/P5.0
- EMERGENCY GAS SHUT OFF VALVE LOCATED BELOW CEILING.
- 3/4" CW DOWN IN WALL TO EXTERIOR HOSE BIBB
- 1/2" FILTERED WATER PIPE DOWN IN WALL TO BEVERAGE DISPENSERS S-284 & S-285, ICE MAKERS S-513 , FROZEN BEVERAGE CONDENSER S-740, CARBONATOR S-570 AND ICED TEA BREWER S-546. SEE DRAWINGS A2.0 AND P5.0
- 1-1/4" GAS DOWN IN WALL TO COOKING EQUIPMENT. VERTICAL GAS PIPING IN WALL SHALL NOT BE RIGIDLY SECURED AND ADEQUATE PIPE PROTECTION SHALL BE PROVIDED.
- 3/4" GAS LINE. W/ GAS COCK TO COOKING EQUIPMENT. PROVIDE FLEXIBLE GAS HOSE KIT FOR CONNECTION TO COOKING EQUIPMENT.
- 3" PVC EXHAUST AND INTAKE FLUES FROM WATER HEATER, PIPE THROUGH ROOF AS RECOMMENDED BY MANUFACTURER TO LOCATIONS SHOWN ON SHEET M2.0. SEE DETAIL 2/P5.0
- 1/2" HOT WATER DOWN IN WALL TO RETHERMALIZER C-107. PROVIDE SHUT-OFF VALVE OUTSIDE OF WALL FOR CONNECTION TO RETHERMALIZER.
- RUN GAS PIPE 18" A.F.F. FOR GAS HOSE KITS TO COOKING EQUIPMENT C-107.
- 1/2" RO WATER PIPE DOWN IN WALL AND ROUTED IN LOW WALL OF DRY PRODUCTION LINE . PROVIDE SHUT-OFF VALVE ON RO PIPG IN CEILING NEAR CHASE
- 1/2" COLD WATER TO REVERSE OSMOSIS FILTER P-315 AND 1/2" FILTER WATER FROM REVERSE OSMOSIS FILTER. PROVIDE SHUT-OFF VALVE ON CW PIPE PRIOR TO CONNECTION TO FILTER. SEE DETAIL 4/P5.0
- GAS METER, REGULATOR VALVES, BRACKETS, ETC. AS REQUIRED BY LOCAL GAS COMPANY.
- 1/2" COLD WATER CONNECT TO WATER FILTER FOR BUNN POD BREWER S-547. PROVIDE SHUT OFF VALVE PRIOR TO CONNECTION TO WATER FILTER.
- INCOMING WATER SERVICE TO RUN IN CEILING. NO TAP OFF TO BE TAKEN BEFORE BFP.



PLUMBING ROUGH-IN PLAN 1/4" = 1'-0" 1

EQUIP #	EQUIPMENT ITEM	TYPE	ELEVATION	REMARKS	EQUIP #	EQUIPMENT ITEM	TYPE	ELEVATION	REMARKS
FS 1	FLOOR SINK			--	S 3	3-COMPARTMENT SINK FAUCET	CW/HW	+38" A.F.F.	--
HD 1	HUB DRAIN			--	S 4	PREP SINK		W +19" A.F.F.	--
WH 1,2	WATER HEATERS		G +50" A.F.F.	--	S 4	PREP SINK FAUCET	CW/HW	+38" A.F.F.	--
WC 1	WATER CLOSET		CW +29" A.F.F.	BOTH HANDICAP AND REGULAR	WCQ 1	WALL CLEAN OUT			--
L 1	LAVATORY		TW +20" A.F.F.	--	FCO 1	FLOOR CLEAN OUT			--
L 1	LAVATORY WASTE LINE		W +16-1/2" A.F.F.	--					
RO 1	REVERSE OSMOSIS		CW +84" A.F.F.	--					
S 1	HAND SINK		TW +18" A.F.F.	RIM OF LAV @ +2-8" A.F.F.					
S 2	MOP SINK	W	-6" A.F.F.	RECESSED IN FLOOR	C-107	RETHERMALIZER	HW	+8" A.F.F.	
S 2	MOP SINK FAUCET	CW/HW	+36" A.F.F.	--	C-107	RETHERMALIZER	HW	G +12" A.F.F.	
S 2	MOP SINK FAUCET		+42" A.F.F.	CLOSET MOP SINK ONLY					
S 3	3-COMPARTMENT SINK		W +19" A.F.F.	--					
TD 1	TRENCH DRAIN								
					S-286	WATER FILTER SYSTEM	CW	+94" A.F.F.	INLET TO & OUTLET FROM FILTER

- ALL DIMENSIONS TO FLOOR SINKS, FLOOR DRAINS AND HUB DRAINS ARE TO CENTER OF FIXTURE.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THIS DATA ON LOCATION OF ALL PLUMBING ROUGH-INS WITH INFORMATION PROVIDED ON ARCHITECTURAL AND STRUCTURAL DRAWINGS AND EQUIPMENT ACTUALLY SUPPLIED AND TO CONFIRM CORRECTNESS OF DIMENSIONS INDICATED HEREIN.