

PLUMBING SYMBOLS

NOTE: THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS, ETC. ARE NECESSARILY USED ON THE DRAWINGS.

ANNOTATION

- PLUMBING PLAN NOTE CALLOUT
- PLUMBING EQUIPMENT DESIGNATION. (CONTRACTOR FURNISHED AND INSTALLED). REFER TO PLUMBING FIXTURE SCHEDULES.
- EQUIPMENT DESIGNATION (OWNER FURNISHED, CONTRACTOR INSTALLED)
- MECHANICAL EQUIPMENT DESIGNATION (CONTRACTOR FURNISHED AND INSTALLED UNLESS NOTED OTHERWISE)
- CONNECTION POINT OF NEW WORK TO EXISTING
- DETAIL REFERENCE UPPER NUMBER INDICATES DETAIL NUMBER LOWER NUMBER INDICATES SHEET NUMBER

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	MAX	MAXIMUM
AFB	ABOVE FINISHED GRADE	MBH	1000 BTU PER HOUR
BFF	BELOW FINISHED FLOOR	MIN	MINIMUM
BFG	BELOW FINISHED GRADE	ORD	OVERFLOW ROOF DRAIN
BOP	BOTTOM OF PIPE	PDI	PLUMBING DRAINAGE INSTITUTE
BOS	BOTTOM OF STRUCTURE	PVC	POLYVINYL CHLORIDE
BTU	BRITISH THERMAL UNIT	PRV	PRESSURE REDUCING VALVE
CPVC	CHLORINATED POLYVINYL CHLORIDE	RD	ROOF DRAIN
DN	DOWN	RFM	REVOLUTIONS PER MINUTE
DS	DOWNSPOUT	SF	SQUARE FEET, SUPPLY FAN
ETR	EXISTING TO REMAIN	SP	SUMP PUMP
FFA	FROM FLOOR ABOVE	TDH	TOTAL DYNAMIC HEAD
FFB	FROM FLOOR BELOW	TFA	TO FLOOR ABOVE
FF	FINISHED FLOOR	TFB	TO FLOOR BELOW
FLA	FULL LOAD AMPS	TYP	TYPICAL
FLR	FLOOR	UL	UNDERWRITERS LABORATORIES,INC.
GPM	GALLONS PER MINUTE	VS	VENT STACK
HD	HEAD, HUB DRAIN	VTR	VENT THROUGH ROOF
IE	INVERT ELEVATION	W/	WITH
IN WC	INCHES OF WATER COLUMN	W/O	WITHOUT
KW	KILOWATT	WC	WATER COLUMN
MAU	MAKE-UP AIR UNIT	WS	WASTE STACK

-----	DOMESTIC COLD WATER (CW)
-----SCW-----	SOFTENED COLD WATER (SCW)
-----FW-----	FILTERED COLD WATER (FW)
-----	DOMESTIC HOT WATER (HW)
-----	DOMESTIC HOT WATER RECIRC. (HWR)
-----140'-----	140' DOMESTIC HOT WATER (140')
-----T-----	TRAP PRIMER LINE (T)
-----S-----	SOIL PIPING - ABOVE FLOOR (S)
-----S-----	SOIL PIPING - BELOW FLOOR (S)
-----W-----	WASTE PIPING - ABOVE FLOOR (W)
-----W-----	WASTE PIPING - BELOW FLOOR (W)
-----GW-----	GREASE WASTE - ABOVE FLOOR (GW)
-----GW-----	GREASE WASTE - BELOW FLOOR (GW)
-----ST-----	STORM DRAIN - ABOVE FLOOR (ST)
-----ST-----	STORM DRAIN - BELOW FLOOR (ST)
-----OST-----	OVERFLOW STORM DRAIN - ABOVE FLOOR (OST)
-----VBG-----	VENT BELOW GRADE (VBG)
-----VBF-----	VENT BELOW FLOOR (VBF)
-----CD-----	CONDENSATE DRAIN (CD)
-----SPD-----	SUMP OR SEWAGE PUMP DISCHARGE (SPD)
-----G-----	NATURAL GAS (G)
-----G-----	NATURAL GAS ON ROOF (G)
-----MPG-----	MEDIUM PRESSURE NATURAL GAS (MPG)
-----MPG-----	MEDIUM PRESSURE NATURAL GAS ON ROOF (MPG)
-----LPG-----	LIQUIFIED PETROLEUM GAS (LPG)
-----	EXISTING PIPING TO BE REMOVED
-----ETR-----	EXISTING PIPING TO REMAIN (ETR)
-----V-----	VENT PIPING (V)
-----#-----	BALL VALVE
-----#-----	CONTROL VALVE
-----#-----	SHUTOFF VALVE
-----#-----	CHECK VALVE
-----#-----	BALANCING VALVE WITH PRESSURE PORTS
-----#-----	WATER METER
-----#-----	STRAINER
-----#-----	STRAINER WITH BLOWOFF
-----#-----	RELIEF/SAFETY VALVE
-----#-----	SOLENOID VALVE
-----#-----	PRESSURE REDUCING VALVE
-----#-----	GAS PRESSURE REGULATOR
-----#-----	THERMOSTATIC MIXING VALVE
-----#-----	BACKFLOW PREVENTER
-----#-----	PRESSURE GAUGE
-----#-----	THERMOMETER
-----#-----	UNION
-----#-----	FLANGE CONNECTION
-----#-----	HOSE BIBB (HB)
-----#-----	NONFREEZE WALL HYDRANT (NW)
-----#-----	MANUAL/AUTOMATIC AIR VENT OR RELIEF VALVE
-----#-----	CLEANOUT
-----#-----	CAP
-----#-----	WALL CLEANOUT (WCO)
-----#-----	FLOOR CLEANOUT (FCO)
-----#-----	EXTERIOR CLEANOUT (ECO)
-----#-----	ELBOW UP
-----#-----	ELBOW DOWN
-----#-----	TEE UP
-----#-----	TEE DOWN
-----#-----	WATER HAMMER ARRESTER (WHA)
-----#-----	RECIRCULATION PUMP
-----#-----	P-TRAP
-----#-----	GAS COCK
-----#-----	TRAP PRIMER
-----#-----	TRAP PRIMER WITH DISTRIBUTION UNIT

GENERAL PLUMBING NOTES:

- DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF THE WORK. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE TO OBSERVE THE EXISTING CONDITIONS OF THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY OWNER'S CONSTRUCTION MANAGER OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
- PROVIDE A CONSTRUCTION RECORD SET OF "AS-BUILT" DOCUMENTS TO THE OWNER'S CONSTRUCTION MANAGER REFLECTING ANY VARIANCES OF INSTALLED PIPING LOCATIONS OR EQUIPMENT CONTRARY TO THE CONSTRUCTION DOCUMENTS, REFER TO SPECIFICATIONS.
- PROVIDE TO THE OWNER'S CONSTRUCTION MANAGER A COPY OF INSPECTION REPORTS AND APPROVAL CERTIFICATES FROM LOCAL AND STATE INSPECTIONS, REFER TO SPECIFICATIONS.
- INSTALLATION SHALL COMPLY WITH LEGALLY CONSTITUTED CODES AND THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION AND ALSO MEET ALL REQUIREMENTS OF THE LANDLORD. OBTAIN A COPY OF THE LANDLORD'S REQUIREMENTS AND REVIEW PRIOR TO SUBMITTING BID.
- PLANS AND SPECIFICATIONS GOVERN WHERE THEY EXCEED CODE REQUIREMENTS.
- VERIFY LOCATION AND DEPTH OF UTILITIES AT POINTS OF CONNECTION BEFORE START OF PIPING INSTALLATION.
- REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF PLUMBING FIXTURES.
- DO NOT SCALE FLOOR PLANS FOR EXACT HORIZONTAL LOCATION OF PIPE ROUTING.
- INSTALL CONCEALED PIPING TIGHT TO THE STRUCTURE AND AS HIGH AS POSSIBLE. INSTALL EXPOSED PIPING TIGHT TO THE STRUCTURE, WALL OR CEILING AND AS HIGH AS POSSIBLE. COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS.
- VALVES SHALL BE LINE SIZE UNLESS OTHERWISE NOTED.
- PIPING IN FINISHED AREAS SHALL BE ROUTED CONCEALED; EXPOSED PIPING, WHERE NECESSARY, SHALL BE ROUTED AS HIGH AS POSSIBLE AND TIGHT TO WALLS.
- COORDINATE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
- COORDINATE PIPING INSTALLATION WITH STRUCTURAL GRADE BEAMS, FOOTINGS, COLUMN PIERS, ETC. SLEEVE PIPING THROUGH GRADE BEAMS, FOOTING, ETC. WHERE REQUIRED AND AS NOTED ON PLANS. COORDINATE SLEEVE INSTALLATIONS WITH THE ARCHITECT, STRUCTURAL ENGINEER, STRUCTURAL CONTRACTOR AND GENERAL CONTRACTOR BEFORE CONCRETE IS INSTALLED.
- CLEAN FAUCET AERATORS AND PIPE STRAINERS PRIOR TO TURNING BUILDING OVER TO THE OWNER.
- PROVIDE TRAP PRIMERS WHERE REQUIRED BY LOCAL AUTHORITIES.
- COORDINATE PIPE ROUTING AWAY FROM ELECTRICAL PANELS. DO NOT INSTALL PIPING OVER ELECTRICAL PANELS.
- PAINT ALL EXPOSED GAS AND WATER PIPING USING RUST INHIBITOR PAINT. PAINT AND COLOR SHALL BE COORDINATED WITH THE ARCHITECT AND / OR OWNER.
- COORDINATE ALL ROOF PENETRATIONS WITH OTHER TRADES. MAINTAIN 10' MINIMUM CLEARANCE FROM ALL AIR INTAKES. MAINTAIN 2' CLEARANCE FROM ALL OTHER EQUIPMENT.
- INSULATE PIPING ROUTED IN EXTERIOR BUILDING WALLS WITH MINIMUM 2" BATT INSULATION TO PREVENT FREEZING.
- SEAL ALL PENETRATIONS THROUGH RATED WALLS AND CEILINGS.
- EXAMINE THE CONTRACT DRAWINGS AND ALL AVAILABLE INFORMATION CONCERNING EXISTING INSTALLATION, STRUCTURE, AND LOCAL CONDITIONS. VISIT THE SITE TO UNDERSTAND THE NATURE AND SCOPE OF ALL WORK TO BE PERFORMED AND VERIFY EXISTING CONDITIONS. THE SUBMISSION OF A BID WILL BE TAKEN AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE AND THAT ALL EXISTING CONDITIONS HAVE BEEN CONSIDERED. NO ALLOWANCES WILL BE MADE AFTER THE PROJECT HAS BEEN AWARDED FOR FAILURE TO VERIFY EXISTING CONDITIONS. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THAT OF THESE DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.

PLUMBING FIXTURE SCHEDULE:

FIXTURES IN THIS SCHEDULE OR THEIR APPROVED EQUIVALENT ARE PROVIDED BY THE PLUMBING CONTRACTOR. SUBMIT SHOP DRAWINGS ON EACH OF THESE ITEMS. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION AND INSTALLATION REQUIREMENTS. VERIFY ROUGH-IN REQUIREMENTS WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS. REFER TO THE ARCHITECTURAL DRAWINGS FOR THE PLUMBING FIXTURE MOUNTING HEIGHTS.

- BFP** DUAL CHECK VALVE WITH ATMOSPHERIC PORT: ZURN WILKINS 740, 300 STAINLESS STEEL BODY, 3/8" INLET AND OUTLET, ATMOSPHERIC PORT, AND WYE PATTERN STRAINER. MEETS ASSE 1022 STANDARDS.
- ECO** EXTERIOR CLEANOUT: ZURN Z1474-N SERIES DUCO CAST IRON DOUBLE FLANGED HOUSING WITH HEAVY DUTY SECURED SCORATED CAST IRON COVER WITH LIFTING DEVICE AND CLEANOUT BODY WITH ABS PLASTIC PLUG WITH GASKET SEAL AND PUSH-ON JOINT. REFER TO SPECIFICATIONS FOR INSTALLATION.
- ET** EXPANSION TANK: AMTROL "THERM-X-TROL" # ST-5, WELDED STEEL PRESSURE TANK, POLYPROPYLENE LINING, FLEXIBLE BUTYL DIAPHRAGM, AIR CHARGING VALVE, 150 PSI MAXIMUM WORKING PRESSURE, 2.0 GALLON CAPACITY, 0.45 MAXIMUM ACCEPTANCE FACTOR, 3/4" PIPE CONNECTION. SET THE AIR CHARGE PRESSURE TO MATCH EXISTING WATER SYSTEM PRESSURE.
- FCO** FLOOR CLEANOUT: ZURN C02450-AB3 ADJUSTABLE FLOOR CLEANOUT, 3 INCH ABS HUB CONNECTION, 4" SIZE AVAILABLE. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
- FD** FLOOR DRAIN: ZURN # FD2210, PVC OR ABS BODY, ADJUSTABLE NICKEL BRONZE HEAD AND SECURED GRATE.
- FS** FLOOR SINK: SIOUX CHIEF 861, PVC BODY WITH SCH 40 HUB CONNECTION, PVC STRAINER.
- GT** GREASE TRAP: SCHIER PRODUCTS GB2, HDPE SEAMLESS HIGH DENSITY POLYETHYLENE BODY, 20 GALLON CAPACITY AND RATED FLOW RATE OF 50 GPM AND 127.6 POUNDS OF GREASE STORED, WITH INTEGRAL INLET AND OUTLET DIFFUSERS WITH ANTI-SIPHON AIR RELIEF, GASKETED PEDESTRIAN RATED COVERS WITH EXTENSIONS AS REQUIRED.
- HB** HOSE BIBB: PRIER PRODUCTS # C-244, ANTI-FREEZING, ANTI-SIPHON VACUUM BREAKER, POWDER COATED CAST ALUMINUM HANDLE, INTEGRAL BACKFLOW CHECK VALVE, VANDAL PROOF EXTENDED LOOKSHIELD AND OPERATING KEY, SOLID BRASS BODY, AVAILABLE VARIOUS 1/2" & 3/4" INLET STYLES.
- LV** WALL MOUNTED LAVATORY (ADA ACCESSIBLE): TOTO MODEL #LT307 21" x 18-1/4" RECTANGULAR WALL MOUNTED WHITE VITREOUS CHINA FIXTURE WITH FAUCET LEDGE AND FRONT OVERFLOW, SINGLE HOLE. FAUCET: CHICAGO FAUCET #B02-VE2805XKCP 4" CENTERSET VANDAL RESISTANT, FAUCET WITH #390 LEVER HANDLES, CERAMIC QUARTER TURN CARTRIDGES AND #E2805 0.5 GPM AERATOR. TRIM: MCGUIRE #155A GRID DRAIN WITH TAILPIECE, MCGUIRE #Z165CCLK LOOSE KITCHEN SINK ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS, MCGUIRE #B887ZCF 1-1/4" 17 GAUGE CAST CHROME PLATED BRASS ADJUSTABLE P-TRAP AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON, CONCEALED ARM CARRIER WITH STANCHIONS TO FLOOR, AND PLUMBEX "PRO-EXTREME" #X-4222 INSULATION KIT FOR WATER AND WASTE PIPES.
- MS** MOP SINK: STERN-WILLIAMS # MTB-2424, 24" X 24" X 10" HIGH TERRAZZO TOP WITH INTEGRAL STAINLESS STEEL DRAIN BODY. FAUCET: CHICAGO FAUCET # 897-CP FAUCET WITH WALL BRACE, INTEGRAL VACUUM BREAKER, PAIL HOOK, AND 3/4" MALE HOSE THREADED OUTLET. SECURE FAUCET IN WALL WITH BACKBOARD. TRIM: # BP TYPICAL 304, 20 GAUGE, STAINLESS STEEL WALL SURROUNDS. # T-35 THREE FOOT LONG REINFORCED HOSE WITH 3/4" CHROME COUPLING AND WALL HOOK. # V-70 EXTRUDED VINYL BUMPER GUARD, AND # T-40 24" STAINLESS STEEL MOP HANGER.
- RPZ** REDUCED PRESSURE ZONE BACKFLOW PREVENTER: WATTS # LF0090T-S, LEAD FREE CAST BRONZE BODY, QUARTER TURN TEST COCKS, QUARTER TURN BALL VALVES, BRONZE STRAINER, AND # 909AG AIR GAP FITTING.
- TMV** THERMOSTATIC MIXING VALVE: POWERS # e480, SOLID BRASS BODY, THERMOSTATIC WAX ELEMENT, CORROSION RESISTANT INTERNAL PARTS, AND INTEGRAL CHECKS, ASSE 1070 COMPLIANT, CAPABLE OF 2.2 GPM WITH A 20 PSI DIFFERENTIAL AND A MINIMUM FLOW RATE OF 0.5 GPM. SET TEMPERATURE TO 110F FOR DUEL TEMPERATURE LAVATORIES AND HAND SINKS, 100F FOR SINGLE TEMPERATURE LAVATORIES AND HAND SINKS AND 120F FOR SINKS. MOUNT BELOW THE PLUMBING FIXTURE WHERE INDICATED ON PLAN(S).
- TS** TRAP SEAL: ProSet SYSTEMS "TRAP GUARD" INSERT FOR ACTUAL FLOOR DRAIN MODEL AND SIZE PROVIDED, FLEXIBLE ELASTOMERIC PVC MATERIAL MOLDED INTO SHAPE OF DUCK'S BILL, OPEN ON TOP WITH CURL CLOSURE AT BOTTOM. ALLOWS WASTEWATER TO OPEN AND ADEQUATELY DISCHARGE FLOOR DRAIN THROUGH ITS INTERIOR. CLOSSES AND RETURNS TO ORIGINAL MOLDED SHAPE AFTER WASTEWATER DISCHARGE IS COMPLETE.
- WC** FLOOR-MOUNTED WATER CLOSET (ADA ACCESSIBLE): NIAGARA MODEL # LEFT HANDLE COMBO SKU: C44-303.01 RIGHT HANDLE COMBO SKU: C44-303.01 "BARRON" TANK TYPE WHITE VITREOUS CHINA FIXTURE WITH ELONGATED BOWL, 1.28 GALLON PER FLUSH, CLOSE COUPLED TANK WITH PRESSURE ASSISTED SIPHON JET ACTION SYSTEM. INSTALL SIDE MOUNTED CHROME TRIP LEVER ON THE WIDE SIDE OF THE STALL. LEFT HANDLE TANK MODEL 44-0322-01/CH RIGHT HANDLE TANK MODEL 44-0322-01/RCH REFERENCE DRAWINGS FOR EXACT NUMBER OF RIGHT AND LEFT HAND TRIP LEVER TANKS REQUIRED. TRIM: CENTOCO 500STSCC-001 WHITE OPEN-FRONT CONTOURED, SOLID PLASTIC, HEAVY DUTY, SEAT LIDS COVER WITH SELF-SUSTAINING CHECK HINGES AND STAINLESS STEEL BOLTS, MCGUIRE # 2166CC ANGLE STOP VALVE WITH RISER AND CHROME-PLATED ESCUTCHEON.
- WCO** WALL CLEANOUT: SIOUX CHIEF #873 SERIES, BRASS COUNTERSUNK PLUG, 20 GAUGE STAINLESS STEEL COVER AND SCREW. CLEANOUT TEE TO BE PROVIDED SEPARATELY. REFER TO SPECIFICATIONS FOR INSTALLATION.

GREASE INTERCEPTOR CALCULATIONS

Quote: 3964E3X

Reference No. 76430

Project Name: Scooter's - Cameron, NC (2294)

Step 1: Flow rate to grease interceptor

Fixture flow rate: (cu in / 231) = gal x 0.75 / 2 min = 2 min flow rate

NAME	TYPE	DIMENSIONS	QTY	CU IN	FLOW RATE
#10 - 3 Comp	3 Compartment Sink	20" x 12" x 12" (3)	1	8,640	14.03 GPM
#24 - Mop Sink	Mop Basin	20" x 16" x 6"	1	1,920	3.12 GPM
#27 - Dipper Well	Dipper Well	N/A	1	N/A	2 GPM
#32A - Hand Sink	Hand Sink	10" x 14" x 9"	1	1,260	2.05 GPM
#33 - Dump Sink (1 bowl)	Dump Sink One Bowl	10" x 14" x 6"	1	840	1.36 GPM
Drain Drain	Floor Drain	N/A	3	N/A	0 GPM

Total

22.55 GPM

Step 2: Grease Production

Servings per day x Grease production value x Days between pump-outs = Grease output

Servings per day: 250

Grease production value: 0.005 lbs per serving (Coffee Shop: Low / No flatware)

Days between pump-outs: 90 days

250 x 0.005 x 90 = 112.5 lbs OF FOG

SCHIER MODEL	Description: GREASE INTERCEPTOR 35 GPM / 50 GPM, 4" FPT CONNECTIONS W/ 3" AND 4" PLAIN END ADAPTERS, PEDESTRIAN RATED POLYPROPYLENE COVER
GB2	Dimensions: Length: 35", Width: 23", Height: 13.75" Flow Rate/Grease Capacity: 35 GPM / 130 lbs Liquid Capacity: 20 gal

LOW PRESSURE GAS PIPE SIZING CHART

PIPE SIZE	LOAD (CFH)
3/4"	105
1"	197
1-1/4"	404

OPERATING PRESSURE ("WC) = 7
PRESSURE DROP ("WC) = 0.5
DEVELOPED LENGTH (FEET) = 100
TOTAL LOAD (CFH) = 289.0

BASED ON NFPA 54 EQUATION 4-1

WATER CALCULATIONS

TOTAL WATER SUPPLY FIXTURE UNITS	34.0
WATER GPM	22.0
PREDOMINANT WATER CLOSET FIXTURE TYPE	FLUSH TANK
PIPE SIZE (IN.)	1-1/4"
PIPING DEVELOPED LENGTH W/ 25% FOR FITTINGS (FT)	170
PRESSURE AT WATER METER (PSI)	65
1.00" METER LOSS INCLUDING TAP (PSI)	-2.8
1.00" BACKFLOW PREVENTER LOSS (PSI)	-14.0
HIGHEST FIXTURE ELEVATION (FT)	10
STATIC PRESSURE LOSS TO HIGHEST FIXTURE (H x 0.434)	-4.3
PRESSURE REQUIRED AT MOST REMOTE FIXTURE (PSI)	-20.0
TOTAL PRESSURE AVAILABLE FOR FRICTION LOSS	23.9
ALLOWABLE FRICTION FACTOR (23.86 PSI / 170 FT) x 100	14.0
USE 14 PSI PER 100 FEET PRESSURE DROP CHART	

PLUMBING PIPE MATERIAL SCHEDULE

PIPING SYSTEM	ABBREVIATION	PIPING MATERIAL
SANITARY DRAINAGE & VENT (ABOVE GRADE)	S, W, GW OR V	HUBLESS CAST IRON (PVC DWV OPTIONAL)
SANITARY DRAINAGE & VENT (BELOW GRADE)	S, W, GW OR V	SERVICE WEIGHT CAST IRON (PVC DWV OPTIONAL)
POTABLE WATER (ABOVE GRADE)	CW, HW OR HWR	TYPE L HARD DRAWN COPPER (PEX TUBING UP TO 2" OPTIONAL)
POTABLE WATER - 2" & SMALLER (BELOW GRADE)	CW, HW OR HWR	TYPE K SOFT ANNEALED COPPER (CPVC SCHEDULE 80 OPTIONAL)
NATURAL GAS (ABOVE GRADE & ON ROOF)	G	SCHEDULE 40 BLACK STEEL
NATURAL GAS (BELOW GRADE)	G	APPROVED "PE" PIPE FOR GAS
CONDENSATE DRAIN - 1" & SMALLER	CD	TYPE M HARD DRAWN COPPER (PVC DWV OPTIONAL)
INDIRECT DRAIN - 1-1/4" & LARGER	ID	TYPE DWV HARD DRAWN COPPER
REVERSE OSMOSIS	RO	WHITE PEX TUBING

REFER TO SPECIFICATIONS FOR FITTINGS, INSTALLATION REQUIREMENTS AND FURTHER INFORMATION. PIPING MATERIALS WITHIN AIR PLENUMS SHALL BE NONCOMBUSTIBLE OR SHALL BE LISTED AND LABELED AS HAVING A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E84 OR UL 723. A PLENUM IS AN ENCLOSED PORTION OF THE BUILDING STRUCTURE, OTHER THAN AN OCCUPIABLE SPACE BEING CONDITIONED, THAT IS DESIGNED TO ALLOW AIR MOVEMENT.

KITCHEN FIXTURE CONNECTION SCHEDULE

TAG #	FIXTURE/EQUIPMENT	HOT WATER (IN.)	COLD WATER (IN.)	WASTE	GAS	NOTES
2A	ICE MAKER		1/2"	3/4"		FILTERED WATER SYSTEM, BFP, DRAIN TO FS
2B	ICE STORAGE BIN			3/4"		DRAIN TO FS
6	COFFEE MAKER		1/2"			FILTERED WATER SYSTEM, BFP
9	ESPRESSO MACHINE		1/2"	3/4"		FILTERED WATER SYSTEM, BFP, DRAIN TO FS
10	3-COMPARTMENT SINK	3/4"	3/4"	3"		DRAIN TO FS
12	WATER STATION		1/2"	1-1/4"		FILTERED WATER SYSTEM, BFP, DRAIN TO FS
17	MOBILE ICE STORAGE BIN			3/4"		DRAIN TO FS
18	DECK MOUNT SINGLE FAUCET	1/2"				
21B	PITCHER RINSER SINK	1/2"	1/2"	2"		DRAIN TO FS
21C	HAND SINK	1/2"	1/2"		2"	TMV
22A	WATER TREATMENT SYSTEM	1/2"	1/2"	1/4"		FILTERED WATER SYSTEM, RPZ, DRAIN TO FD
23A	WATER SOFTENER	1"				
27	DIPPER WELL	1/2"	1-1/2"			DRAIN TO FS
28	CUP RINSER	1/2"	3/4"			DRAIN TO FS
32	HAND SINK	1/2"	1/2"		2"	TMV

ELECTRIC WATER HEATER SCHEDULE

MARK	MANUFACTURER/ MODEL#	AREA SERVED	ENERGY SOURCE	TANK SIZE (GALLONS)	ELECTRICAL DATA			RECOVERY RATE (GPH)	NOTES
					VOLTS	PHASE	KW		
WH-1	STATE CSB 52 12 IFE	KITCHEN/ LAVS	ELECTRIC	50	230	1	12	61	A,D
NOTES: A. 80°F TEMPERATURE RISE WITH 140°F OPERATING TEMPERATURE. D. TRIPLE ELEMENT WIRED FOR SIMULTANEOUS OPERATION									

RECIRCULATION PUMP SCHEDULE (IF REQUIRED)

MARK	MANUFACTURER / MODEL#	SERVICE	GPM	HEAD (FT)	SUCTION & DISCHARGE SIZE	IMPELLER SIZE (IN.)	ELECTRICAL DATA			NOTES
							VOLTS	PHASE	FLA	
RP-1	BELL & GOSSETT # NBF-9U/LW	WH-1	2	7.0	SEE PLAN	N/A	120	1	0.40	A-D
NOTES: A. ALL BRONZE BOOSTER. B. PROVIDE WITH STRAINER UPSTREAM OF PUMP. C. PROVIDE ADJUSTABLE, SURFACE MOUNTED AQUASTAT - HONEYWELL L6006C OR EQUIVALENT. D. SET AQUASTAT TO SHUT OFF RECIRCULATION PUMP AT WATER HEATER SET POINT AND ON AT 10F BELOW SET POINT.										

IPC WATER & WASTE FIXTURE UNITS

FIXTURE TYPE	QTY	D.F.U. (EA)	TOTAL D.F.U.	HOT S.F.U. (EA)	COLD S.F.U. (EA)	COMBINED S.F.U. (EA)	TOTAL S.F.U. (HOT)	TOTAL S.F.U. (COLD)	TOTAL SERVICE S.F.U.
PUBLIC LAVATORY	1	2.0	2.0	1.50	1.50	2.00	1.5	1.5	2.0
SERVICE SINK (MOP BASIN)	1	3.0	3.0	2.25	2.25	3.00	2.25	2.25	3.0
FLOOR DRAIN (2"DW)	3	2.0	6.0	0.00	0.00	0.00	0	0	0.0
FIRST WALL OR ROOF HYDRANT	1	0.0	0.0	0.00	5.00	5.00	0	5	5.0
EACH ADDITIONAL WALL OR ROOF HYDRANT	1	0.0	0.0	0.00	1.00	1.00	0	1	1.0
PUBLIC WATER CLOSET (1.28 GPF FLUSH TANK)	1	4.0	4.0	0.00	5.00	5.00	0	5	5.0
SPECIALTY KITCHEN EQUIP.									
WATER STATION	1	2.0	2.0	0.00	1.50	1.50	0	1.5	1.5
SINK (DUMP)	1	2.0	2.0	1.50	1.50	2.00	1.5	1.5	2.0
SINK (HAND)	3	2.0	6.0	1.50	1.50	2.00	4.5	4.5	6.0
SINK (3 COMPARTMENT)	1	3.0	3.0	3.00	3.00	4.00	3	3	4.0
ICE MACHINE (3/4" IW)	1	0.5	0.5	0.00	1.00	1.00	0	1	1.0
ESPRESSO MACHINE (3/4" IW)	3	0.5	1.5	0.00	0.50	0.50	0	1.5	1.5
COFFEE MAKER	1	0.0	0.0	0.00	0.50	0.50	0	0.5	0.5
DIPPER WELL (3/4" IW)	2	0.5	1.0	0.00	0.75	0.75	0	1.5	1.5
TOTAL UNITS:	21		31.0				12.8	29.8	34.0

WATER PIPE SIZING CHART

FIXTURE UNITS VS. PRESSURE LOSS

IN PSI / 100 FEET WITH Copper Type L PIPING MATERIAL

COLD WATER @ 14 PSI / 100'			
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