KI	TCHEN	PLUMBING LEGEND						
SYMBOL	ABBREVIATION	DESCRIPTION						
	A/C	ABOVE CEILING						
	A/F	ABOVE FLOOR						
	AFF	ABOVE FINISHED FLOOR						
	AFG	ABOVE FINISHED GRADE						
	A/P	ACCESS PANEL						
	B/C	BELOW COUNTER						
	B/F	BELOW FLOOR						
	B/G	BELOW GRADE						
	BV	HOT WATER RETURN BALANCING VALVE						
	FAAV	FRESH AIR AUXILIARY VENT						
—— CA ——	CA	COMPRESSED AIR						
—— CD ——	CD	CONDENSATE DRAIN						
	CV	CHECK VALVE						
	CW	COLD WATER PIPING						
CWV	CWV	COMBINATION WASTE & VENT						
<u> </u>	DN	PIPING TURNING DOWN						
(<u>o</u>)	ERD	EMERGENCY ROOF DRAIN						
——ERL —	ERL	EMERGENCY RAIN LEADER						
<u> </u>	FC0	FLOOR CLEANOUT						
	FD	FLOOR DRAIN						
	FS	FLOOR SINK						
G	G	GAS PIPING - LOW PRESSURE						
——GW——	GW	GREASE WASTE PIPING						
<u></u> МG	MG	GAS PIPING — MEDIUM PRESSURE						
	GV	GATE/BALL VALVE						
─ <>,,	HB/NFHB	HOSE BIBB/NON-FREEZE HOSE BIBB						
	H.C.	HANDICAPPED						
(<u>)</u>	HD	HUB DRAIN						
	GW	GREASE WASTE						
	HW	HOT WATER PIPING						
	HWR	HOT WATER RETURN PIPING						
	LZ	LOW ZONE COLD WATER (STREET PRESSURE)						
	0/Н	OVER HEAD						
	POC	POINT OF CONNECTION NEW TO EXISTING						
——PD——	PD	PUMPED DISCHARGE						
<u>~</u>		P-TRAP						
	PRV	PRESSURE REDUCING VALVE						
	RPBP	REDUCED PRESSURE BACKFLOW PREVENTOR						
<u> </u>	S,W	SOIL, WASTE PIPING (ABOVE GROUND)						
 S 	S,W	SOIL, WASTE PIPING (BELOW GROUND)						
	SA	SHOCK ABSORBER						
—-ST —	ST 	STORM DRAINAGE PIPING						
.1	TP	TRAP PRIMER						
 		UNION						
O	UP	PIPING TURNING UP						
	V	VENT PIPING						
	VTR	VENT THRU ROOF						
· 	WCO	WALL CLEANOUT						
G	WH/NFWH	WALL HYDRANT/NON-FREEZE WALL HYDRANT						

EQUIPMENT			r scf	SCHEDULE			
TAG	EQUIPMENT	CW	HW	DRAIN	GAS	CFH	
1	MOP SINK	1/2"	1/2"	2"			
2	THREE COMPT SINK	3/4"	3/4"	1-1/2"			
3	DISHWASHER		3/4"	2"			
4	SOILED DISHTABLE	1/2"	1/2"	1-1/2"			
5	FLOOR TROUGH			4"			
6	FLOOR TROUGH			4"			
7	ICE MACHINE	1/2"		1-1/2"			
8	HAND SINK	1/2"	1/2"	1-1/2"			
9	PREP TABLE WITH SINK	1/2"	1/2"	1-1/2"			
10	COOLER EVAPORATOR COIL			1/2"			
11)	FREEZER EVAPORATOR COIL			1/2"			
12)	STOCK POT RANGE				3/4"	220	
(13)	RANGE, OPEN BURNER WITH OVEN				3/4"	191	
14)	CONVECTION OVENS				3/4"	110	
(15)	FRYER				3/4"	110	
16)	RADIANT BROILER				3/4"	87 C	
(17)	SALAMANDER BROILER				3/4"	132	
18)	RANGE, WITH OVEN				3/4"	382	
(19)	RANGE, WITH OVEN				3/4"	104	
20	HAND SINK	1/2"	1/2"	1-1/2"			
21)	PREP TABLE WITH SINK	1/2"	1/2"	1-1/2"			
22	HAND SINK	1/2"	1/2"	1-1/2"			
23)	PIZZA OVEN				3/4"	40 C	
24)	ICE AND WATER STATION	1/2"		1/2"			
25)	ESPRESSO MACHINE	1/2"					
26)	RANGE				3/4"	60	
27)	HAND SINK	1/2"	1/2"	1-1/2"			
28)	GELATO CASE	1/4"		1/2"			
29	DELI CASE			1"			
30	HOT FOOD TABLE	1/4"		1"			
31)	ICE AND WATER STATION	1/2"		1/2"			
32)	TEA BREWER	1/2"					
(33)	COFFEE BREWER	1/2"					

2. 3 COMPARTMENT SINK TO HAVE BOWL A MINIMUM 15" X 15" X 12" (L X W X D), 3/4" ROUNDED

INTERNAL ANGLE AND DUAL DRAIN BOARDS. AMTEKCO INDUSTRIES. MODEL C-3-1824-18D.

-FREEZE WALL HYDRANT
THEEZE WALL THERWAY
D GOLLDDILLD

WATER HEATER SCHEDULE						
SYMBOL	MANUFACTURER\ MODEL NO.	STORAGE CAPACITY GALLONS	GPH REC. @ 100°F RISE	OUTLET TEMPERATURE	GAS INPUT	NOTES
WH-1	RANNAI R98LSi	N/A	N/A	140°F	199,000 BUTH	1-8
NOTES:	•					

- T&P RELIEF VALVE. BALL VALVES WITH UNIONS AND DIELECTRIC FITTINGS ON WATER INLET AND OUTLET CONNECTIONS. ALL HEATERS AND INSTALLATION SHALL MEET 2006 INTERNATIONAL ENERGY CONSERVATION CODE CRITERIA.
- 5. T&P RELIEF DRAINS TO EXISTING DRAIN. 6. PROVIDE WITH STAINLESS STEEL HEAT EXCHANGER AND 1/4HP CIRCULATOR PUMP.

4. LOCATE WATER HEATERS AS INDICATED ON PLANS.

- 7. HEATER SHALL BE SEALED COMBUSTION LO-NOX DIRECT VENTED, MINIMUM 85% COMBUSTION EFFICIENCY.
- 8. WATER HEATER SHALL BE INSTALLED PER MANUFACTURES GUIDELINES.

	HW CIRCULATOR PUMP SCHEDULE					IP SCHEDULE
SYMBOL	SERVICE/ LOCATION	TYPE	FLOW (GPM)	HEAD (PSI/FT)	HP	MANUFACTURER AND MODEL
HWRP	HOT WATER RECIRC.	INLINE	5	10	1/25	GRUNDFOS MODEL UP 15-42

FIRE PROTECTION SYSTEM MATERIALS

- ALL MATERIALS, PIPE, VALVES AND EQUIPMENT FURNISHED UNDER THIS SECTION SHALL BE NEW AND APPROVED BY NFPA, UNDERWRITER'S LABORATORIES, INC. (U.L.), FACTORY MUTUAL (F/M) AND AMERICAN WATER WORKS ASSOCIATION (AWWA)
- 2. SCHEDULE 40 WELDED OR SEAMLESS STEEL PIPE, ASTM A53, AND A135.
 - A. CLASS 125, AND 250 CAST IRON THREADED FITTINGS, ANSI B16.4.
 - B. CLASS 150, AND 300 MALLEABLE IRON THREADED FITTINGS, ANSI B16.3.
 - C. GROOVED MECHANICAL COUPLINGS AND FITTINGS WITH EPDM GASKET. MALLEABLE IRON OR DUCTILE IRON, 800 PSI MINIMUM RATING ASTM A47 AND A536, U.L. LISTED, F.M. APPROVED.
- 3. LIGHTWALL WELDED OR SEAMLESS STEEL PIPE, ASTM A53, AND A135.
 - A. GROOVED MECHANICAL COUPLINGS AND FITTINGS WITH EPDM GASKET, MALLEABLE IRON OR DUCTILE IRON, 800 PSI MINIMUM RATING ASTM A47, AND A536, U.L. LISTED, F.M. APPROVED.
 - B. LIGHTWALL, 150 PSI, BUTTWELD FITTINGS, ANSI B16.9.
- 4. AUTOMATIC SPRINKLERS SHALL BE PROVIDED AS FOLLOWS:
 - A. FULLY CONCEALED TYPE SPRINKLERS, GLASS ELEMENT OR FUSIBLE LINK STYLE, FAST RESPONSE, HIGH SENSITIVITY SPRINKLERS SHALL BE PROVIDED IN THE LOBBY AND CONFERENCE ROOMS. TEMPERATURE RATING OF SPRINKLERS SHALL BE 155° - 165°. CEILING COVERPLATE SHALL BE FACTORY PAINTED TO MATCH THE ADJACENT CEILING COLOR, SUBMIT PAINTED SAMPLE TO THE ARCHITECT FOR APPROVAL. SPRINKLER TO BE VIKING HORIZON MIRAGE CONCEALED SPRINKLER OR APPROVED EQUAL.
 - B. SMALL FRAME GLASS ELEMENT, SEMI-RECESSED, FAST RESPONSE PENDENT SPRINKLERS SHALL BE PROVIDED IN ALL REMAINING AREAS WITH LAY-IN CEILINGS UNLESS OTHERWISE NOTED. TEMPERATURE RATING OF SPRINKLERS SHALL BE 155° - 165°. SPRINKLERS TO BE VIKING MICROFAST MODEL M SERIES WITH MODEL E-1 ESCUTCHEON, FINISH OF SPRINKLER AND ESCUTCHEON SHALL BE WHITE.
 - C. FAST RESPONSE UPRIGHT PENDENT SPRINKLERS SHALL BE PROVIDED IN ALL AREAS WITH NO CEILING. TEMPERATURE RATING IS TO BE 165° UNLESS CONDITIONS REQUIRE HIGHER TEMPERATURE. FINISH OF SPRINKLER TO BE ROUGH BRASS. SPRINKLER TO BE VIKING MICROFAST MODEL M.
 - D. ALTERNATE ACCEPTABLE MANUFACTURERS WITH EQUIVALENT SPRINKLERS ARE AUTOMATIC, CENTRAL, GRINNELL, GEM, AND RELIABLE.
- ALL INTERIOR SPRINKLER PIPING SHALL MEET THE REQUIREMENTS OF APPLICABLE SECTIONS OF NFPA, AND THE OWNER'S UNDERWRITER. ALL PIPE, FITTINGS. VALVES, AND SPRINKLER SYSTEM COMPONENTS SHALL BE RATED FOR WORKING PRESSURES AS REQUIRED BY SYSTEM DESIGN.
- ALL PIPE, SUPPORTS AND HANGER ASSEMBLIES SHALL BE IN ACCORDANCE WITH NFPA-13 AND SHALL BE U.L. LISTED OR F.M. APPROVED.
- THE ADDITION TO THE EXISTING SPRINKLER SYSTEMS SHALL BE DESIGNED TO THE EXISTING AVAILABLE WATER SUPPLY PRESSURE. THE CONTRACTOR SHALL CONFIRM THE REVISED SPRINKLER PIPING ARRANGEMENT WITH HYDRAULIC CALCULATIONS.
- THE TENANT BUILD-OUT AREA IS TO BE PROVIDED WITH AUTOMATIC SPRINKLERS BASED UPON LIGHT HAZARD DESIGN CLASSIFICATION WITH A DENSITY OF .10 GPM OVER 1500 SQ. FT. AND MAXIMUM OF 225 SQUARE FEET SPACING.
- SPRINKLER HEADS INSTALLED IN LAY IN ACOUSTICAL TILE CEILINGS SHALL BE CENTERED IN THE CEILING TILES OR INSTALLED ON QUARTER POINTS OF THE FOUR FOOT DIMENSIONS OF 2' X 4' TILES.
- 10. ALL FIRE PROTECTION EQUIPMENT AND SYSTEMS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE.
- 11. ALL PIPING ABOVE GRADE SHALL BE SUPPORTED BY THE BUILDING STRUCTURE AND SHALL NOT REST ON CEILING TILES OR CEILING STRUCTURE. PIPING HUNG FROM JOISTS SHALL BE HUNG FROM THE TOP CHORDS OF THE JOISTS.
- 12. ALL SPRINKLER PIPING SHALL BE ROUTED TO MAINTAIN DESIGNED CEILING HEIGHTS INDICATED ON ARCHITECTURAL DRAWINGS.
- 13. ALL FIRE PROTECTION DRAWINGS SUBMITTALS SHALL BE AT 1/8" SCALE AS A MINIMUM. ALL SUBMITTALS SHALL BE IN REPRODUCIBLE VELLUM OR MYLAR FORMAT ONLY, SUBMITTALS OF MULTIPLE PRINTS WILL BE RETURNED WITHOUT REVIEW.
- 14. FIRE PROTECTION SHOP DRAWINGS SHALL INCLUDE ALL DATA REQUIRED BY N.F.P.A. SECTION 13. SHOP DRAWING PLANS SHALL INDICATE ALL LIGHTS, GRILLES, SOFFITS, ALARMS, SPEAKERS AND OTHER CEILING COMPONENTS, AS WELL AS HYDRAULIC NODE POINTS. TO INSURE COORDINATION. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO AND SECURE APPROVAL OF THE OWNER'S UNDERWRITER, LOCAL AUTHORITY AND/OR STATE AUTHORITIES PRIOR TO SUBMISSON TO THE ENGINEER. THE CONTRACTOR SHALL NOT COMMENCE WORK. PURCHASE, OR PROVIDE ANY MATERIALS TO THE JOB SITE WITHOUT OBTAINING SHOP DRAWING APPROVAL FROM THE ABOVE AND THE ENGINEER. SHOP DRAWINGS SHALL INCLUDE COPIES OF ALL HYDRAULIC CALCULATIONS PROVIDING DESIGN DENSITIES, WHERE APPLICABLE.
- 15. ALL DESIGN DRAWINGS AND CALCULATIONS PREPARED BY THE FIRE PROTECTION SUBCONTRACTOR SHALL BEAR THE SEAL OF A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF GEORGIA OR EQUIVALENT FIRE SPRINKLER CONTRACTOR'S CERTIFICATE SEAL.

PLUMBING FIXTURE SCHEDULE

FIXTURE SELECTION IS BASED ON KOHLER MODELS UNLESS OTHERWISE NOTED, APPROVED EQUAL MANUFACTURERS AS FOLLOWS:

FIXTURES: AMERICAN STANDARD, KOHLER, FAUCETS & TRIM: KOHLER, AMERICAN STANDARD, BRASSCRAFT, DELTA, MCGUIRE,

SANITARY DASH, ZURN

FLUSH VALVES: DELANY, SLOAN, ZURN FIXTURE SEATS: AMERICAN STANDARD, BEMIS, BENEKE, CENTOCO, CHURCH, KOHLER

FIXTURE CARRIERS: JOSAM, JAY R. SMITH, WADE, ZURN

- L1 LAVATORY WALL HUNG GRID DRAIN:
 - AMERICAN STANDARD 0958.000 VITREOUS CHINA, WALL HUNG LAVATORY, FAUCET HOLES 8" CENTERS, BOWL SIZE 15-1/2" X 13-1/2" X 5" DEEP. DELTA MODEL 3530-LHP, H24 A24 (HANDLES), ALL CHROME FINISH, R2707 (ROUGH VALVE) FAUCET WITH AERATOR, .5 GPM FLOW RESTRICTOR AND GRID DRAIN. MCGUIRE 170 SUPPLY TO WALL WITH WHEEL HANDLE STOPS, 5" EXTENSION TUBE, WALL ESCUTCHEON AND FLEXIBLE RISERS. DEEP SEAL P-TRAP WITH CAST BRASS NUTS AND CLEANOUT PLUG. PROVIDE THERMOSTATIC MIXING VALVE. WATTS MODLE USG-P SET AT 110°
- WC-H WATER CLOSET FLOOR MOUNTED FLUSH VALVE 1.6 GPF TOP SPUD: AMERICAN STANDARD 3461.128 MADERA "FLOWISE" SIPHON JET ELONGATED BOWL, 1-1/2" TOP SPUD, EVERCLEAN. ZURN Z-6000-WS-1 1.6 GPF FLUSH VALVE. CENTOCO 1500CCSS HEAVY DUTY SOLID PLASTIC ELONGATED OPEN FRONT SEAT WITH CHECK HINGE. BOLT CAPS 471310-100.

PLUMBING NOTES

- REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND ELEVATIONS OF ALL PLUMBING FIXTURES.
- ALL PLUMBING WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE 2006 UNIFORM PLUMBING CODE WITH HOUSTON, TEXAS AMENDMENTS AND ALL APPLICABLE LOCAL
- ALL PIPING ABOVE GRADE SHALL BE PROPERLY SUPPORTED FROM THE BUILDING STRUCTURE AND SHALL NOT REST ON CEILING TILES OR BE SUPPORTED FROM
- WATER PIPING ROUTED ABOVE CEILING AND IN EXTERIOR WALLS SHALL BE ROUTED ON HEATED SIDE (UNDERSIDE) OF CEILING INSULATION AND HEATED SIDE (INSIDE)
- SANITARY AND DRAINAGE PIPING 3" AND SMALLER SHALL BE SLOPED AT 1/4" PER FOOT
- PLUMBING PIPING IS NOT TO BE INSTALLED IN ELECTRICAL ROOMS, CLOSETS, TELEPHONE ROOMS, OR ELEVATOR EQUIPMENT ROOMS EXCEPT PIPING
- ALL COLD WATER, HOT WATER AND DRAIN PIPING AT HANDICAPPED FIXTURES SHALL
- PROVIDE WATER HAMMER ARRESTORS SIZED PER PDI SPECIFICATIONS ON ALL DOMESTIC WATER LINES SERVING WASHING MACHINE SUPPLIES, WATER CLOSET/LAVATORIES
- ALL PLUMBING EQUIPMENT WITH THE ELECTRICAL DRAWINGS AND THE ELECTRICAL CONTRACTOR, AND SHALL FURNISH EQUIPMENT WIRED FOR THE
- 11. ALL PLUMBING EQUIPMENT, PIPING, INSULATION, ETC. INSTALLED IN HVAC PLENUM
- ALL PLUMBING EQUIPMENT AND SYSTEMS SHALL BE GUARANTEED FOR A MINIMUM
- ALL PIPE AND CONNECTION BOX PENETRATIONS OF FIRE AND/OR SMOKE RATED ASSEMBLIES SHALL BE FIRE STOPPED AS REQUIRED TO RESTORE ASSEMBLY TO ORIGINAL INTEGRITY. FIRE BARRIER PRODUCTS SHALL BE AS MANUFACTURED BY 3M COMPANY, CP25 CAULK, CS195 COMPOSITE PANEL, FS195 WRAP/SRINK, OR PSS 7900 SERIES SYSTEMS AS
- OUTSIDE AIR INTAKE.
- 17. TRAP PRIMERS ARE TO BE PROVIDED ON ALL FLOOR DRAINS AND HUB DRAINS WHICH DO NOT RECEIVE A CONTINUOUS DISCHARGE. TP "L" LAVATORY WASTE TRAP PRIMERS ARE TO BE PROVIDED ON DRAINS IN PUBLIC RESTROOMS, GUEST ROOMS, AND OTHER AREAS WITH DRAINS ADJACENT TO LAVATORIES TP "A" AUTOMATIC TRAP PRIMERS ARE TO BE PROVIDED IN ALL OTHER REQUIRED LOCATIONS. PRO-VENT TRAP GUARD DEVICES MAY BE SUBSTITUTED WHERE

PLUMBING MATERIALS

- . COLD AND HOT WATER PIPING ABOVE FLOOR SHALL BE TYPE L HARD DRAWN COPPER TUBING CONFORMING TO ASTM B-88 WITH SWEAT JOINTS AND CAST OR WROUGHT FITTINGS. ALL JOINTS SHALL BE MADE WITH LEAD FREE SOLDER. COLD AND HOT UNDER FLOOR, DOMESTIC WATER BRANCH PIPING UNDER FLOOR SHALL BE PROTECTED WITH SLEEVES AT ALL PENETRATIONS THROUGH CONCRETE.
- . SANITARY WASTE AND VENT PIPING ABOVE FLOOR SHALL BE NO-HUB
- . SANITARY WASTE DRAIN AND VENT PIPING BELOW FLOOR SHALL BE CAST—IRON WITH PUSH-ON JOINTS, OR SCHEDULE 40 DWV PVC WITH SOLVENT JOINTS.
- 4. ALL HOT WATER, HOT WATER RETURN PIPING ABOVE FLOOR SHALL BE INSULATED WITH 1 INCH NOMINAL THICKNESS PIPE INSULATION WITH VAPOR BARRIER JACKET, ALL COLD WATER PIPING ABOVE FLOOR SHALL BE INSULATED WITH 1/2 INCH THICKNESS INSULATION ON PIPING 2" AND SMALLER, 1" THICK INSULATION ON PIPING 2 1/2" AND LARGER. OWENS-CORNING ASJ/SSLII OR EQUAL.

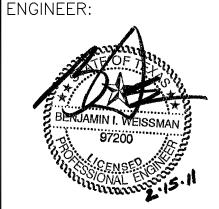
- CODES AND ORDINANCES.
- CEILING TILES.
- OF WALL INSULATION.
- MINIMUM, PIPING 4" AND LARGER SHALL BE SLOPED AT 1/8" PER FOOT MINIMUM.
- TOPS OF ALL FLOOR DRAINS AND CLEANOUTS SHALL BE SET FLUSH WITH FINISHED FLOOR.
- SERVING THAT SPECIFIC ROOM.
- BE INSULATED WITH HANDI-LAV GUARD MODELS 102 AND 105 INSULATION KITS.
- AND OTHER INSTALLATIONS WITH QUICK CLOSING VALVES. PPP-SERIES SC-500, SC-750.
- CONTRACTOR SHALL COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF VOLTAGES SHOWN THEREIN.
- SPACES SHALL MEET CODE REQUIREMENTS FOR SMOKE AND COMBUSTIBILITY.
- PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE.
- RECOMMENDED BY MANUFACTURER FOR PARTICULAR APPLICATIONS, OR EQUIVALENT SYSTEM AS APPROVED BY LOCAL CODE OFFICIALS.
- 14. INSTALL ALL PLUMBING EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS.
- 15. ALL SANITARY VENTS THRU ROOF SHALL BE LOCATED A MINIMUM OF 10'-0" FROM ANY
- 16. ALL WATER SUPPLY LINES SHALL BE INSULATED AGAINST FREEZING AND CONDENSATION.
- ALLOWED BY LOCAL AUTHORITY.

- WATER SERVICE PIPING BELOW FLOOR SHALL TYPE K SOFT COPPER. JOINTS NOT ALLOWED
- CAST-IRON WITH STAINLESS STEEL COUPLINGS, OR SCHEDULE 40 DWV PVC WITH SOLVENT JOINTS IF APPROVED BY LOCAL CODE OFFICIAL. PVC PIPING SHALL NOT BE LOCATED IN RETURN AIR PLENUM SPACES.
- NATURAL GAS PIPING ABOVE GRADE SHALL BE SCHEDULE 40 BLACK STEEL WITH WELDED JOINTS. NATURAL GAS PIPING BELOW GRADE SHALL BE SCHEDULE 40 BLACK STEEL WITH FACTORY APPLIED PLASTIC COATING, WELDED JOINTS, COATED WITH BITUMASTIC AND WRAPPED WITH TAPE COATING AT ALL JOINTS.

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