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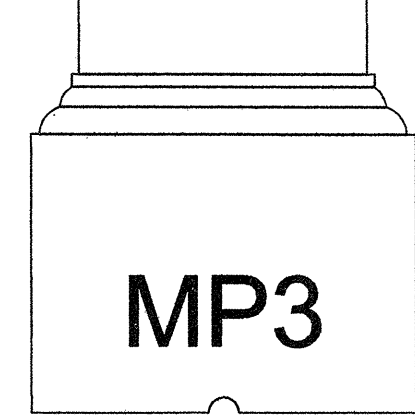
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NATIONAL WATER WORKS
NORTH PHOENIX BRANCH
Parcel #209-03-104 A
2140 W Williams Drive
Phoenix, Arizona

job number
0658

title
MECHANICAL AND PLUMBING
SCHEDULES, RISER DIAGRAMS

sheet number



OUTSIDE AIR CALCULATIONS ①

UNIT	OCCUPANCY CLASSIFICATION	OCCUPANTS PER 1,000 SQ. FT.	CFM PER OCCUPANT	CFM PER SQ. FT.	AREA (SQ. FT.)	QTY. OF OCCUPANTS	AREA OSA CFM TOTAL
AHU-1	GENERAL OFFICE	7	20	-	761	6	120
AHU-2	GENERAL OFFICE	7	20	-	769	6	120
AHU-3	GENERAL OFFICE	7	20	-	761	6	120
AHU-4	GENERAL OFFICE	7	20	-	769	6	120

① CALCULATIONS BASED ON 2003 IMC. OCCUPANT DENSITY IS MULTIPLIED BY OUTDOOR AIR REQUIREMENTS (CFM PER PERSON) LISTED IN TABLE 403.3.

EXHAUST FAN SCHEDULE

EQUIPMENT NUMBER	SERVICE LOCATION	AIR VOLUME CFM	STATIC PRESSURE	VOLTAGE/PHASE	HORSE POWER	MANUFACTURER MODEL	WEIGHT	REMARKS
EF-1,2,3	REST ROOM	75	.125	115/1Ø	49 WATTS	COOK GC-120	20 LBS.	①

① FAN TO TURN ON WITH RESTROOM LIGHT. PROVIDE BACKDRAFT DAMPER.

⑤ DIFFUSER AND GRILLE SCHEDULE

AIR DISTRIBUTION IDENTIFIER	RATED CFM	⑥ NECK SIZE ①	MAX PRESSURE LOSS	MODEL ②	THROW (FEET)	FACE SIZE ③	NOISE CRITERIA	REMARKS
CSD-1	120	6"Ø	0.125	1400--**06	7	12X12 OR 24X24	23	
CSD-2	250	8"Ø	0.07	1400--**08	7	12X12 OR 24X24	20	
CSD-3	350	10"Ø	0.09	1400--**10	11	24X24	22	
CRG-1	175	8"Ø	0.09	6590--**8	-	24X24	21	
CRG-2	270	10"Ø	0.09	6590--**10	-	24X24	16	
CRG-3	350	12"Ø	0.07	6590--**12	-	24X24	19	
CRG-4	450	14"Ø	0.06	6590--**14	-	24X24	15	
CRG-5	1,681	22X22	0.186	6290--**22X22	-	24X24	-	
SG-1	290	14X6	0.061	S580H	16	14X6	19	
RG-1	620	22X6	0.129	S5480HZ	-	22X6	26	

① DIMENSION IS DUCT SIZE.
② MANUFACTURER MODEL NO. IS KRUEGER. ** PORTION OF MODEL NUMBER IS FOR FRAME. FRAME DEPENDS UPON LOCATION (LAY-IN OR HARD LID). REFERENCE RCP WHEN ORDERING FRAME.
③ CEILING DIFFUSER/GRILLES ARE FOR LAY IN CEILING GRID.
④ NOT ALL DIFFUSERS OR GRILLES USED THIS PROJECT. SEE DRAWING FOR GRILLE USED.
⑤ PROVIDE TRANSITION TO DUCT WHERE REQUIRED.

PLUMBING FIXTURE SCHEDULE

FIXTURE NUMBER	DESCRIPTION	MANUFACTURER/MODEL	FITTINGS ACCESSORIES	ROUGH-IN				REMARKS
				WASTE	VENT	CW	HW	
WC-1	FLOOR MOUNTED FLUSH TANK WATER CLOSET, ELONGATED BOWL WHITE VITREOUS CHINA, 1.6 GPF	CRANE ECONOMIZER 3835	STOP AND SUPPLY, OPEN FRONT WHITE SEAT, BOLT CAPS	4"	2"	3/4"	-	ADA COMPLIANT, AVAILABLE THROUGH HOME DEPOT
L-1	LAVATORY, VITREOUS CHINA, WALL HUNG 0.5 GPM	KOHLER MORNINGSIDE 12636	KOHLER MODEL CORALAIS 15182-F-CP, SINGLE LEVER FAUCET, P-TRAP, WALL CARRIER, LAV GUARD, STOPS AND SUPPLIES	1 1/2"	1 1/2"	1/2"	1/2"	ADA COMPLIANT, SINK AND FAUCET AVAILABLE THROUGH HOME DEPOT
L-2	LAVATORY, VITREOUS CHINA, WALL HUNG 0.5 GPM	KOHLER KINGSTON 2005	KOHLER MODEL CORALAIS 15182-F-CP, SINGLE LEVER FAUCET, P-TRAP, WALL CARRIER, LAV GUARD, STOPS AND SUPPLIES	1 1/2"	1 1/2"	1/2"	1/2"	ADA COMPLIANT, SINK AND FAUCET AVAILABLE THROUGH HOME DEPOT
EW-1	20 GALON ELECTRIC WATER HEATER WITH INTEGRAL HEAT TRAPS, 0.92 EFFICIENCY	RHEEM EGSP20	STOPS & SUPPLIES	-	-	1/2"	1/2"	208 VOLT 1 PH, 3 KW, 14.4 FLA.
MS-1	MOP SINK	FIAT MSB-2424	MODEL B-0665-BSTR FAUCET, STOPS, SUPPLIES, VACUUM BREAKER FOR HOSE ATTACHMENT	3"	1 1/2"	1/2"	1/2"	MOP SINK AND FAUCET AVAILABLE THROUGH HOME DEPOT
S-1	STAINLESS STEEL, DOUBLE COMPARTMENT, COUNTER MOUNTED SINK	KOHLER MARCATO 3199-4-NA	PRICE PFISTER H34-4NCC FAUCET, IN-SINK-ERATOR BADGER 5, 1/2 HP 120 V DISPOSAL, STOPS AND SUPPLIES	3"	1 1/2"	1/2"	1/2"	SINK FAUCET AND DISPOSAL AVAILABLE THROUGH HOME DEPOT
EDF-1	WALL MOUNTED, HI-LO ELECTRIC DRINKING FOUNTAIN	OASIS PF8ACSL	P-TRAP, STOP & SUPPLY	1 1/2"	1 1/2"	1/2"	-	120 VOLT 1 PH, 400 WATTS, 4.8 FLA
FS-1	FLOOR SINK WITH P-TRAP PRIMER CONNECTION	WATTS FS-710	PPP PR-500 TRAP PRIMER AND P-TRAP	2"	1 1/2"	1/2"	-	PROVIDE 3/4 GRATE, TRAP PRIMER AND ASSOCIATED PIPING. TRAP PRIMER ACTIVATES UPON ANY LOSS OF PRESSURE IN THE SYSTEM.

SPLIT SYSTEM HEAT PUMP UNIT SCHEDULE

EQUIPMENT NUMBER	MANUFACTURER MODEL	AIR CAPACITIES				MIN. HSPFF	MIN. SEER	HEATING/COOLING CAPACITY					ELEC DATA			MIN. CIRCUIT AMP. (MCA)	MAX. FUSE AMP. (MOCP)	WEIGHT LBS	REMARKS					
		TOTAL CFM	OSA CFM	ESP W.G.	BLOWER HP			CYCLE	ENT AIR		AMBIENT		MBH		MAX FLA (HP)									
									DB	WB	DB	WB	SEN	TOT	COMP					IDF	ODF	VOLT/P		
AHU-1,2,3,4	GOODMAN ARUF48601	1,600	②	0.5	0.75	8.2	13.0	COOL	80.0	67.0	-	-	-	-	-	-	4.3	-	208 V 1 PH	5.4	15	192	①	
HPU-1,2,3,4	GOODMAN GSH130483	-	-	-	-	8.2	13.0	COOL	80.0	67.0	115.0	76.0	31.4	39.7	-	-	5.8	-	0.8	460 V 3 PH	8.0	15	225	①

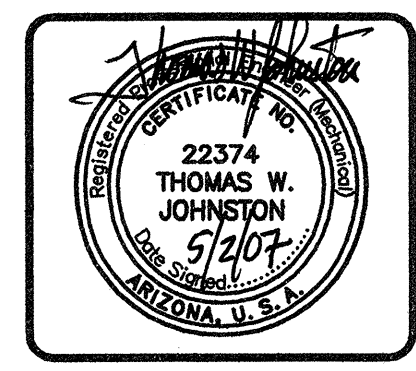
① PROVIDE ALL ELECTRIC SPLIT SYSTEM UNIT, AUTOMATIC CHANGEVER PROGRAMMABLE THERMOSTAT, DISCONNECT AT EACH PIECE OF EQUIPMENT, FILTER RACK AND VIBRATION ISOLATION.
② SEE OUTSIDE AIR CALCULATIONS THIS SHEET.

EVAPORATIVE COOLER SCHEDULE

EQUIPMENT IDENTIFIER	MANUFACTURER MODEL	FAN PERFORMANCE			ELECTRICAL				PLUMBING CONNECTIONS		EVAPORATIVE SECTION		DISCHARGE	OPERATING WEIGHT	AREA SERVED	REMARKS		
		CFM	RPM	E.S.P.	HP	SPEED	VOLTS	PH	FLA	DRAIN	MAKE-UP	MEDIA TYPE					EFFECTIVENESS AT 500 FPM	
EC-1,2,3	PHOENIX MANUFACTURING, INC. UIUP-701	8,872	230	0.2" W.C.	1	1	460	3	1.6	①	3/4" MTH	3/8" COMP	12" CELLULOSE	90%	UP	830	WAREHOUSE	②③④

① PROVIDE TWO PRO-CLEAN FLUSH SYSTEMS AT 120V, 1PH, 0.39 AMPS EACH (ONE FOR EACH SUMP), AND TWO PK60LA SUMP PUMPS AT 120V, 1PH, 1.7 AMPS EACH (ONE FOR EACH SUMP).
② PROVIDE UL LISTED UNIT WITH MAG STARTERS, DISCONNECT AND TRANSFORMERS.
③ PROVIDE PART #55A SHAFT. SHEAVE PROVIDED BY CONTRACTOR. COORDINATE SHEAVE SELECTION WITH PHOENIX MFG.
④ INSTALL PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE FIELD INSTALLED DISCONNECT, MOTOR STARTER, OVER CURRENT PROTECTION, SEPERATE PUMP AND FAN SWITCHES. ADJUST SHEAVE TO OPERATE AT DESIGN CFM. ALL ASSEMBLY IS REQUIRED. ALL PARTS COME LOOSE SHIPPED.

CITY OF PHOENIX
Development Services Department
BY:
(ANTHONY GASCA)
MAY 23 2007



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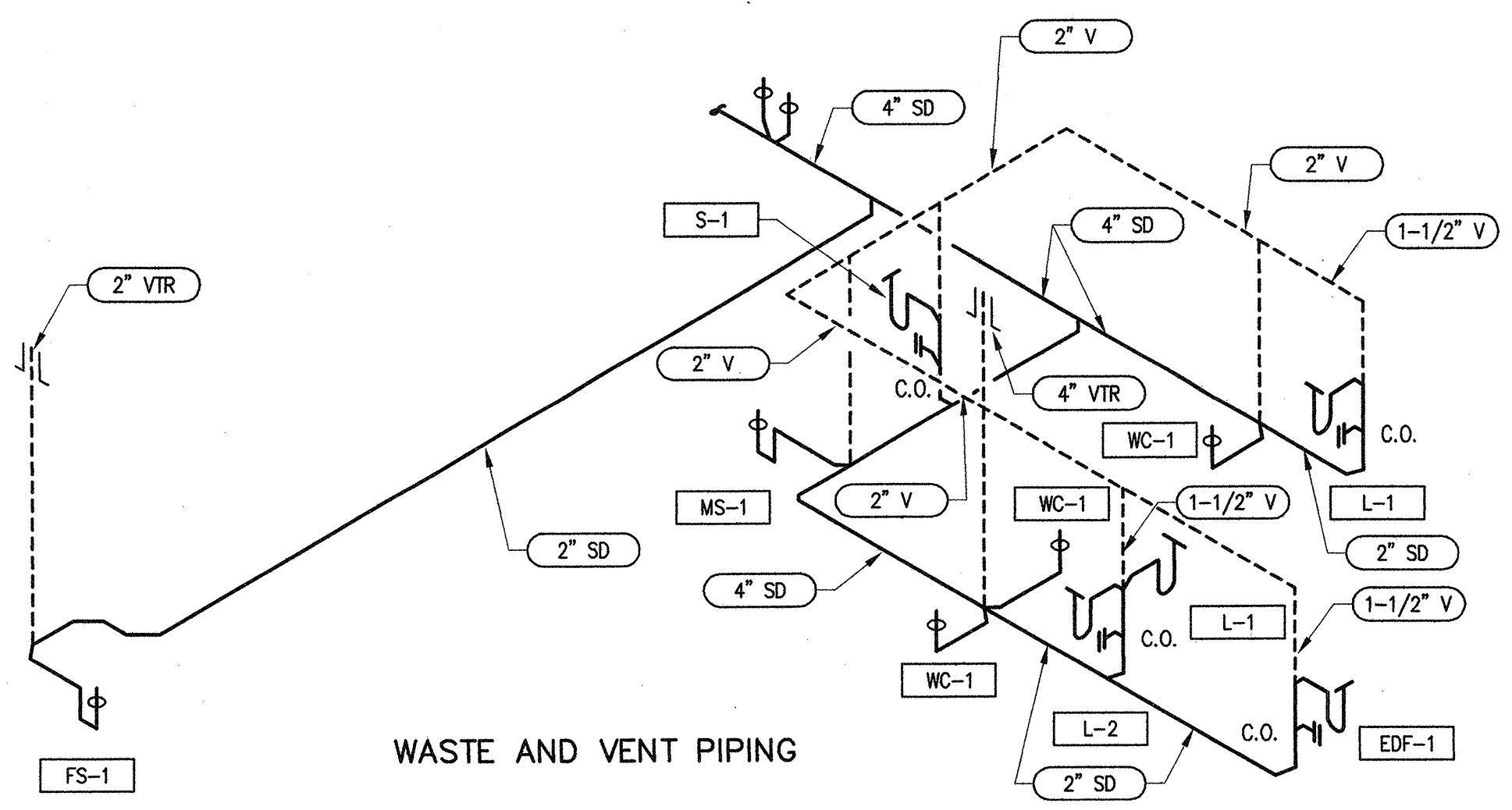


DIAGRAM
SCALE: NONE
2 MP3

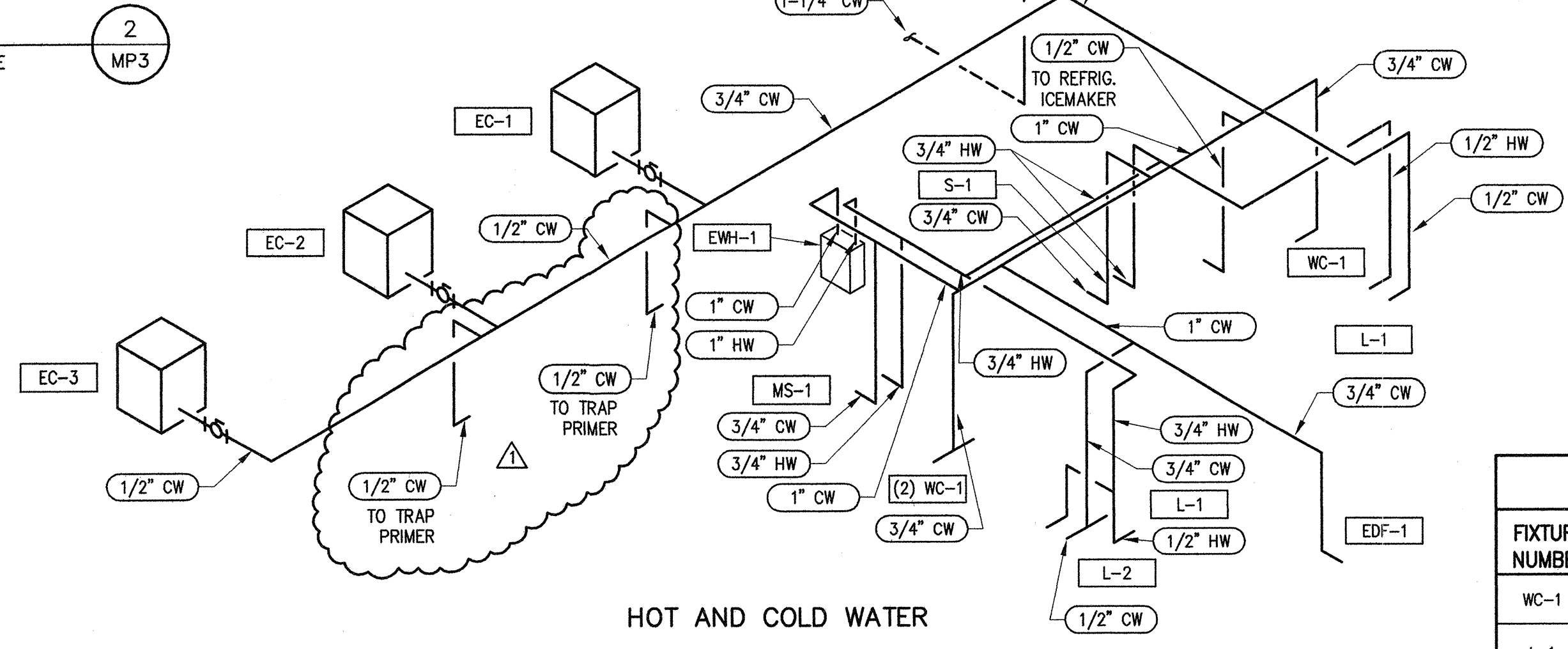


DIAGRAM
SCALE: NONE
1 MP3

WATER CALCULATIONS

STREET PRESSURE = 65 PSI
HORIZONTAL PIPE LENGTH, TAP TO METER = 50 FT.
HORIZONTAL PIPE LENGTH, METER TO LAST FIXTURE = 200 FT.
VERTICAL RISE TAP TO HIGHEST FIXTURE = 10 FT.
TOTAL LENGTH PIPE = 260 FT.
FITTING LOSS 10% = 26 FT.
TOTAL LENGTH PIPE = 286 FT.

HEIGHT 10 X 0.43 = 4.3 PSI LOSS (STATIC)

SIZE	DEVICE	PSI LOSS
1"	TAP	5.0
1"	METER	11.0
1-1/4"	RPBP	8.0

STATIC HEIGHT = 4.3
MINIMUM FIXTURE PRESSURE = 8.0
TOTAL LOSS = 36.3
(PSI DIFFERENCE 28.7) X (100) = 10.0 MAXIMUM PSI DROP ALLOWABLE PER 100 FT. PIPE.

NOTE:
CALCULATIONS ARE BASED UPON THE USE OF FLUSH TANK TYPE FIXTURES. IRRIGATION SERVED FROM DOMESTIC METER, PROVIDE APPROPRIATE BACKFLOW PREVENTION.

FIXTURE UNIT COUNT

PUBLIC FIXTURE	QUANT.	WATER WSFU	TOTAL WSFU	WASTE DFU	TOTAL DFU
WC-1	3	5	15	6	18
L-1	3	2	6	1	3
S-1	1	4	4	2	2
MS-1	1	4	4	6	6
EDF-1	1	2 (X 2 HEADS)	4	2	2
EC-1	3	1	3	-	-
FS-1	-	-	-	2	2
ICEMAKER	1	2	2	-	-
LANDSCAPING	1	2	3	-	-
TOTAL			41		33

① 2.5 GPM PER LANDSCAPE ARCHITECT. 2.5 GPM = 3 FU FOR LANDSCAPING PER PIPE SIZING SCHEDULE THIS SHEET.

RELIEF LOUVER SCHEDULE

EQUIPMENT IDENTIFIER	CFM	MANUFACTURER MODEL	LOUVER SIZE	REMARKS
LVR-1,2	16,840	RUSKIN L811	54" X 84"	①

① PROVIDE RUSKIN CBD2 BACKDRAFT DAMPER AND WALL SLEEVE.

PIPE SCHEDULE ①

PIPE SIZE	G.P.M.	F.U.
1/2"	0-3	0-3
3/4"	4-9	4-13
1"	10-17	14-25
1-1/4"	18-33	26-60
1-1/2"	34-54	61-140

① BASED ON ARIZONA PLUMBING CODE CHARTS A-2 AND A-4 AT THE ALLOWABLE PRESSURE LOSS CALCULATED THIS SHEET.