PLUMBING FIXTURE SCHEDULE - BASIS OF DESIGN

IDENTITY DATA				CONNECTION SIZE					NOTE
UNIT TAG	QTY	FIXTURE	LOCATION	W	V	CW	HW	MFG / MODEL / OTHER	
AP-1	182	ACCESS PANEL	RESIDENTIAL UNITS					12" X 12" CEILING FIRE RESISTANT ACCESS DOOR WITH LATCHING SYSTEM. FINISH WHITE.	
BT-1	84	TUB/SHOWER	RESIDENTIAL RESTROOMS	2"	2"	1/2"	1/2"	AMERICAN STANDARD 2392.202 AND DELTA T14459 TRIM	
BT-2	3	ADA TUB/SHOWER	RESIDENTIAL RESTROOM UNIT 205	2"	2"	1/2"	1/2"	AMERICAN STANDARD 2392.202 AND DELTA T13H253 TRIM	
BW-1	1	BACKWATER VALVE	RETAIL 151	4"				RECTORSEAL CLEAN CHECK 97024	
FD-1	6	FLOOR DRAIN	UTILITY114, 206, TRASH T100, WATER 118 & 902					SIOUX CHIEF 832-3DNR	1
GI-1	1	GREASE INTERCEPTOR	RETAIL 150	4"				SCHIER PRODUCTS GB-250	
HB-1	3	HOSE BIBB	GROUND FLOOR			3/4"		WOODFORD MODEL 65	
HB-2	2	HOSE BIBB	TRASH T100, UTILITY 114			1"	1"	WOODFORD MODEL HC67	
HD-1	1	HUB DRAIN	UTILITY 411	6				FIELD FABRICATED	2
KS-1	178	KITCHEN SINK	RESIDENTIAL KITCHEN	1-1/2"	2"	1/2"	1/2"	SINK PROVIDED AND INSTALLED BY OTHERS. FAUCET, BADGER5 1/2 HP GARBAGE DISPOSAL AND AIR SWITCH BY AHI.	
KS-2	4	ADA KITCHEN SINK	ADA RESIDENTIAL KITCHEN	1-1/2"	2"	1/2"	1/2"	SINK PROVIDED AND INSTALLED BY OTHERS. FAUCET, BADGER5 1/2 HP GARBAGE DISPOSAL AND AIR SWITCH BY AHI.	
LV-1	203	BATHROOM LAVATORY	RESIDENTIAL RESTROOMS	1-1/2"	2"	1/2"	1/2"	SINK PROVIDED AND INSTALLED BY OTHERS. FAUCET, BY AHI.	
LV-2	3	BATHROOM LAVATORY	COMMON AREA	1-1/2"	2"	1/2"	1/2"	AMERICAN STANDARD 0355.012 AND SLOAN SF2350-CP	
MS-1	1	MOP SINK	JANITOR 111			1/2"	1/2"	MUSTEE M63 AND CHICAGO C897 FAUCET	
MS-2	1	MOP SINK	UTILITY 206			1/2"	1/2"	MUSTEE 17F AND DELTA D2133LF FAUCET	
RD-1 & OD-1	6	ROOF DRAIN/OVERFLOW	ROOF	4"				SIOUX CHIEF 868-D1503	
RD-2 & OD-2	2	DECK DRAIN/OVERFLOW	TERRACE 821B	3"				JR SMITH D1620T & ZURN Z1042 ELBOW ADAPTER	
OD-3	1	PLANTER AREA DRAIN	3RD FLOOR PLANTER	3"				SIOUX CHIEF 867-L3AP	
OD-3	1	PLANTER AREA OVERFLOW	3RD FLOOR PLANTER	3"				SIOUX CHIEF 867-L3AP	
RD-4 & OD-4	8	DECK DRAIN/OVERFLOW	3RD FLOOR DECKS	2"				SIOUX CHIEF 822-MF3DNR	
RH-1	1	ROOF HYDRANT (HOSE BIBB)	ROOF			1"		WOODFORD MODEL SRH-MS	
S-1	4	STAINLESS SINK	105,204, 215 & BBQ AREA ON THE ROOF	1-1/2"	2"	1/2"	1/2"	DAYTON D12522 SINK AND SYMMONS SK6600 FAUCET	
S-2	1	STAINLESS SINK	CLUB ROOM 821	1-1/2"	2"	1/2"	1/2"	DAYTON D12522 SINK, SYMMONS SK6600 FAUCET AND BADGER 5 3/4HP GARBAGE DISPOSAL	
SH-1	100	SHOWER	RESIDENTIAL RESTROOMS	2"	2"	1/2"	1/2"	PROFLO PFS4832WH AND DELTA T14259	
SH-2	1	ADA SHOWER	RESIDENTIAL RESTROOMS	2"	2"	1/2"	1/2"	FREEDOM SHOWER APA6232BFPAN AND DELTA T13H153	
TD-1	1	TRENCH DRAIN	PARKING 112					SIOUX CHIEF FASTTRACK 865 SERIES	1
WB-1	182	COLD WATER WALL BOX	RESIDENTIAL ICE MAKER			1/2"		SIOUX CHIEF 696-G1010WF	
WB-2	182	WASHING MACHINE WALL BOX	RESIDENTIAL WASHING...	2"	2"	1/2"	1/2"	SIOUX CHIEF 696-G2313WF	
WC-1	193	WATER CLOSET	RESIDENTIAL RESTROOMS			1/2"		GERBER VIPER WS-21-518 WITH CENTOCO 1600-001 SEAT	
WF-1	1	BOTTLE FILLER	COMMON AREA - L2	2"	1-1/2"	3/4"		ELKAY LZWSDK (115V/60 HZ)	
WC-2	3	WATER CLOSET	COMMON AREA			1"		AMERICAN STANDARD 3461.001 AND SLOAN 8111-1.6 FLUSHOMETER	

NOTES:
1. SEE DRAWINGS FOR SIZE.
2. HUB DRAIN WILL ALSO BE USED FOR FIRE SYSTEM PRV TESTING.

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PLUMBING EQUIPMENT & MISCELLANEOUS SCHEDULE - BASIS OF DESIGN

IDENTITY DATA				CONNECTION SIZE	ELECTRICAL DATA	PHYSICAL / OTHER DATA	NOTE
UNIT TAG	QTY	SERVING	LOCATION	INLET/OUTLET [IN]	VOLT/PHASE/POWER/FREQ [V/PH/VA/HZ]	MFG / MODEL/ OTHER	
PRV-1	2	COLD WATER SUPPLY DISTRIBUTION PRESSURE ZONES 1 & 2	CW HEADER IN T400 & CW HEADER T700	4"		PRESSURE REDUCING VALVE LF115 - 4" FLANGED	1
PRV-2	2	HOT WATER SUPPLY DISTRIBUTION PRESSURE ZONES 1 & 2	HW HEADER IN T400 & HW HEADER T700	3"		PRESSURE REDUCING VALVE LF115 - 3" FLANGED	1
MMV-1	1	BUILDING MAIN WATER HEATERS	WATER HEATER ROOM 902	4" HW , 4" CW, 3" HWR	115V,---,30VA,60HZ	MASTER MIXING VALVE WATTS TRIPLE VALVE INSTALLATION DUAL VALVE MODEL LFIS150DV	2
RBPA-1	1	REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY	WATER 118	6"		WATTS REDUCED PRESSURE ZONE ASSEMBLIES MODEL 957	
RBPA-2	2	REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY	UTILITY 206, WATER HEATER ROOM 902	1"		WATTS REDUCED PRESSURE ZONE ASSEMBLIES MODEL 900	
DCV-1	1	DOUBLE CHECK VALVE	TRASH T800	3/4"		WATTS DOUBLE CHECK VALVE MODEL 007	

NOTES:
1. SET WORKING PRESSURE TO 70 PSIG.
2. PUMP RELAY 16A @ 115 VAC

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PLUMBING MATERIALS SCHEDULE - BASIS OF DESIGN

PLUMBING SYSTEM	MATERIAL	NOTES
DOMESTIC COLD WATER LARGER THAN 3"	STAINLESS STEEL WITH GROOVED COUPLING	1, 2
DOMESTIC HOT WATER LARGER THAN 3"	STAINLESS STEEL WITH GROOVED COUPLING	1, 3
DOMESTIC COLD WATER 3" AND SMALLER	PEX TUBING WITH EPDM EXPANSION FITTINGS	1, 4
DOMESTIC HOT WATER 3" AND SMALLER	PEX TUBING WITH EPDM EXPANSION FITTINGS	1, 5
SANITARY WASTE PIPING	CAST IRON - NO HUB WITH STANDARD COUPLINGS	NOT INSULATED
SANITARY WASTE PIPING UNDER GROUND	PVC PIPING WITH SOLVENT WELD DWV FITTINGS	NOT INSULATED
SANITARY VENT PIPING	PVC PIPING WITH SOLVENT WELD DWV FITTINGS	NOT INSULATED
STORM ABOVE AND BELOW GRADE	SCH 40 PVC WITH SOLVENT WELD DWV FITTINGS	NOT INSULATED
OVERFLOW ABOVE GRADE	SCH 40 PVC WITH SOLVENT WELD DWV FITTINGS	NOT INSULATED
PUMPED WASTE	SCH 40 PVC SOLID CORE WITH SOLVENT WELD FITTINGS	NOT INSULATED
EXCAVATION	SAND BEDDING	BACKFILL WITH NON-NATIVE SOIL

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NOTES:
1. INSULATION MATERIAL ARMAFLEX.
2. INSULATION SHALL BE 1" THICK.
3. INSULATION SHALL BE 1-1/2" THICK.
4. PRE-INSULATION SHALL BE 1" THICK.
5. INSULATION THICKNESS FOR 1-1/2" AND LARGER PIPES SHALL BE 1-1/2", AND FOR PIPES 1" AND SMALLER PIPES SHALL BE 1" THICK.

GAS WATER HEATER SCHEDULE - BASIS OF DESIGN

IDENTITY DATA							PHYSICAL / OTHER						NOTES
UNIT TAG	QTY	SERVING	LOCATION	INPUT [BTU/HR]	STORAGE CAPACITY [GAL]	RECOVERY RATE AT 100FT [GPH]	SIZE (DIA X H) [IN]	WATER CONN. [IN]	GAS CONN. [IN]	VENT SIZE [IN]	SHIPPING WEIGHT [LBS]	OTHER / MFG MODEL	
WH-1	6	BUILDING DOMESTIC HOT WATER	WATER 118	500000	120	582	34"x75-1/2"	2"	1"	4"	909	LOCHINVAR MODEL# SNA501-125	1,2,3

NOTES:
1. SET P&T TO 100PSI & 140F.
2. ROUTE P&T OUTLET AND PAN DRAIN SEPARATELY TO NEARBY FLOOR DRAIN.
3. INSTALL CONDENSATE NEUTRALIZATION KIT.

ELECTRIC WATER HEATER(S) SCHEDULE - BASIS OF DESIGN

IDENTITY DATA					ELECTRICAL DATA		PHYSICAL / OTHER			NOTES
UNIT TAG	QTY	SERVING	STORAGE CAPACITY [GAL]	RECOVERY RATE AT 100FT [GPH]	ELEMENT [KW]	VOLT/PHASE/AMPS/FREQ [V/PH/A/HZ]	SIZE (DIA X H) [IN]	SHIPPING WEIGHT [LBS]	OTHER / MFG MODEL	
WH-2	1	LEVELS 1 TO 4 HWR LOOP	50	62	6	208V/3PH/16.7A/60HZ	21-3/4" x 55-3/4"	265	AO SMITH MODEL# DRE 52	1,2
WH-3	1	SINK AT BBQ AREA ON THE ROOF	1.5	SEE NOTES	1.4	120V/1PH/12A/60HZ	15" x 9.75" x 10"	11.7	EEMAX MODELI#: MINITANK - EMT1	1,3,4,5,6

NOTES:
1. SET P&T TO 100PSI & 140F.
2. ROUTE P&T OUTLET AND PAN DRAIN SEPARATELY TO NEARBY FLOOR DRAIN.
3. RECOVERY TIME BASED ON 60 TEMPERATURE RISE IS 8 MINUTES.
4. 1/2" NPT CONNECTION AT TOP OF UNIT. RELIEF VALVE IS INCLUDED.
5. FOR FREEZE PROTECTION DURING WINTER MONTHS, FOLLOW INSTRUCTIONS IN USER MANUAL TO DISCONNECT AND DRAIN THE WATER HEATER.
6. ROUTE P&T OUTLET TOWARDS ROOF DRAIN. THE DISCHARGE PIPE SHALL NOT BE LONGER THAN 15' AND HAVE MORE THAN TWO ELBOWS.

EXPANSION TANK SCHEDULE - BASIS OF DESIGN

IDENTITY DATA				PHYSICAL / OTHER							NOTES
UNIT TAG	SERVING	LOCATION	STYLE	TANK VOLUME [GAL]	ACCEPTANCE VOL. [GAL]	RELIEF [PSIG]	CONNECTION SIZE [IN]	SIZE (DIA X H) [IN]	SHIPPING WEIGHT [LBS]	OTHER/MFG MODEL	
ET-1	LEVELS 5 TO 8 HWR LOOP	WATER HEATER 902	Diaphragm	53	35	100	1-1/4" NPT	24" x 37"	224	AMTROL ST-80 VC ASME SECTION VIII, DIV 1 CERTIFIED	1
ET-2	LEVELS 1 TO 4 HWR LOOP	UTILITY 206	Diaphragm	25	11	100	3/4" NPT	16" x 32"	85	AMTROL ST-60 VC ASME SECTION VIII, DIV 1 CERTIFIED	2
ET-3	BOOSTER PUMP	WATER 118	Diaphragm	180	162	100	2" NPT	30" X 79"	577	ELBI WTL-680 ASME SECTION VIII, DIV 1 CERTIFIED	

NOTES:
1. SIZED FOR SYSTEM VOLUME OF 970GAL, FILL PRESSURE 40PSI, AND MAXIMUM OPERATING P&T 140F & 100PSI.
2. SIZED FOR SYSTEM VOLUME OF 300GAL, FILL PRESSURE 40PSI, AND MAXIMUM OPERATING P&T 140F & 100PSI.

PUMP SCHEDULE - BASIS OF DESIGN

IDENTITY DATA			PUMP DATA			MOTOR DATA			OTHER / MFG MODEL	NOTES
UNIT TAG	QTY	LOCATION	MAX FLOW [GPM]	MAX HEAD [FT]	CONNECTION [IN]	VOLT/PHASE/CURRENT/FREQ [V/PH/A/HZ]	HP	ON / OFF		
BP-1	1	WATER 118	570	207FT / 90PSI	6" GROOVED	208/3PH/--/60HZ	20 EACH	VFD	ARMSTRONG DUPLEX PUMP MODEL#N270212	
RCP-1	1	WATER HEATER ROOM 902	76.0	45FT / 19.5PSI	2"	208/3PH/--/60HZ	0.75	AUTO	GRUNDFOS 32-160/2	
RCP-2	1	UTILITY 206	76.0	45FT / 19.5PSI	2"	208/3PH/--/60HZ	0.75	AUTO	GRUNDFOS 32-160/2	
SP-1	1	ELEVATOR PIT	100	16FT / 6.9PSI	2" FLANGED	208V/1PH/6A/60HZ	0.75	AUTO	LIBERTY PUMPS MODEL# LE72A	1
SP-2	3	CAR STACKER PIT	100	16FT / 6.6PSI	2" FLANGED	208V/1PH/6A/60HZ	0.75	AUTO	LIBERTY PUMPS MODEL# LE72A	1
SP-3	1	ELECTRICAL ROOM E100	100	16FT / 6.9PSI	2" FLANGED	208V/1PH/6A/60HZ	0.75	AUTO	LIBERTY PUMPS MODEL# LE72A	1

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NOTES:
1. MINIMUM REQUIRED HEAD 15'.

HEAT TRACING SCHEDULE - BASIS OF DESIGN

IDENTITY DATA		CABLE DATA			OTHER / MFG MODEL	NOTES
UNIT TAG	LOCATION	VOLTAGE [V]	POWER [W/FT]	ON / OFF		
HT-1	SEE DRAWINGS	120	3	THERMOSTAT	EASAYHEAT-FREEZE FREE	1
HT-2	SEE DRAWINGS	120	5	THERMOSTAT	EASAYHEAT-SR TRACE MODEL: SR51J	2,3

NOTES:
1. CAN BE APPLIED TO WATER-FILLED PLASTIC OR METAL PIPES UP TO 2" OD.
2. CAN BE APPLIED TO WATER-FILLED METAL PIPES 4" UP TO 8".
3. MAXIMUM CABLE LENGTH 195FT @ 120V and 15A.

City Of Portland
REVIEWED FOR CODE COMPLIANCE
Date: 02/11/20
Project: 19-106743-REV-01-CO

American Heating, Inc.
5035 SE 24TH AVENUE
PORTLAND, OREGON 97202-4765

DATE: 08/23/18
CONTACT: B. SHEA
DRAFTER: J. LOVELL
NO. 418309

REGISTERED PROFESSIONAL ENGINEER
80947PE
DIGITALLY SIGNED
OREGON
MAY 23, 2013
JARED SCOTT FRAZIER
RENEWS: 12-31-2019
NOT FOR CONSTRUCTION UNLESS SIGNED

18S
GREYSTAR
1715 SW Salmon St
Portland, OR 97205

REVISIONS

A	PERMIT RESPONSE 1	06/03/2019
3	AB-01	09/27/2019

CHECKED BY: Checker
ISSUE DATE: 27 SEP 2019
PROJECT NO: 1803002

PLUMBING SCHEDULES

P00.02

CONSTRUCTION SET

10/31/2019 1:05:13 PM