						PUMP SCH	IEDULE	=					
					CIRCI	JLATING FLUID			ELE	CTRICAL N	MOTOR		
MARK	SYSTEM AND/OR SERVICE	TYPE	BASIS OF DESIGN	FLOW	HEAD	TEMPERATURE	SP GR	NOMINAL POWER	PHASE	VOLT	MAX RPM	SPEED CONTROL	REMARKS
				GPM	FT	°F		HP			RPIVI	CONTROL	
CP-1	RECLAIM HOT WATER	CLOSE COUPLED	BELL & GOSSETT PL-36	5	35	150	1	0.167	1	120	3300	CONSTANT	1
CP-2	RECLAIM HOT WATER BOILER CIRCULATOR	CLOSE COUPLED	BELL & GOSSETT PL-36	5	35	150	1	0.167	1	120	3300	CONSTANT	2

1. PROVIDE WITH AQUA-STAT AND SET TO 145 DEGREES. REFER TO THE INSTRUMENTATION AND PROCESS PLANS FOR MORE INFORMATION. 2. CIRCULATOR IS TO RUN ONLY WHEN THE BOILER IS ENABLED. REFER TO THE INSTRUMENTATION AND PROCESS PLANS FOR MORE INFORMATION.

			STORAGE	TANK SCHE	DULE				
			SYSTEM TEMPE	RATURE RANGE	MAX	MIN	INLET	OUTLET	
MARK	TYPE	BASIS OF DESIGN	MIN	MAX	OPERATING PRESSURE	VOLUME	PIPE SIZES	PIPE SIZES	REMARKS
			°F	°F	PSIG	GAL	IN	IN	
ST-1	FACTORY JACKETED AND INSULATED	AO SMITH TJV-750A	60	150	80	750	3	3	1

1. TANK IS TO BE OPEN TO ATMOSPHERE AND NOT PRESSURIZED. PROVIDE WITH SPRAY-ON RIGID INSULATION TOP COAT. A MINIMUM OF 3 PIPING CONNECTIONS SHALL BE AVAILABLE ON THE TANK WITH A BULBWELL

					F	PACKAGED B	OOSTE	R PUM	P SCHEDU	LE					
	SYSTEM				CIRCULA	TING FLUID			PRESSURE		ELEC	CTRICAL M	OTOR		
MARK	AND/OR SERVICE	PUMP TYPE	NO	FLOW EA. PUMP	PUMP HEAD	TEMPERATURE	SP GR	% EFF	TRANSMITTER SETPOINT	NOMINAL POWER, EA.	PHASE	VOLT	MAX	SPEED	REMARKS
	GERWIGE		PUMPS	GPM	FT	°F			PSIG	HP			RPM	CONTROL	
BP-1	RECLAIM HOT WATER	INLINE CENTRIFUGAL	2	80	275	150	1	70	110	15	3	460	3500	VARIABLE	1 & 2

1. PUMP PACKAGE IS TO INCLUDE INTEGRAL SKID, HEADER, VARIABLE SPEED DRIVES W/ NEMA 4X ENCLOSURE. REFER TO SPECIFICATION SECTION 11215 AS WELL

AS THE ELECTRICAL AND THE INSTRUMENTATION & PROCESS PLANS/SPECIFICATIONS FOR MORE INFORMATION. 2. MOTORS SHALL BE PROVIDED WITH SHAFT GROUNDING RINGS.

							HOT	WATER BO	OILER SC	HEDU	LE					
	CVCTEM				FLUID			BOILER			GAS SUPPLY		RELIEF	ELECTF	RICAL	
MARK	SYSTEM AND/OR SERVICE	TYPE	BASIS OF DESIGN	FLOW	EWT	LWT	POWER	OUTPUT GENERATED	MAX HEAT INPUT	% EFF	PRESSURE	FUEL	VALVE SETTING	PHASE	VOLT	REMARKS
	OEIWIOE			GPM	°F	°F	HP	MBH	MBH		IN WG		PSIG			
B-1	RECLAIM HOT WATER	FIRE TUBE	COLUMBIA MPH-50	36.5	70	150	50	1722	2100	82%	6	LFG	45	1	120	1

1. BOILER IS TO HAVE INTEGRAL CONTROLS. REFER TO THE ELECTRICAL AND THE INSTRUMENTATION AND PROCESS PLANS FOR MORE INFORMATION.

					BLO	VER SCHE	EDULE					
	SYSTEM				ENT.	INLET	OUTLET		ELECTF	RICAL		
MARK	AND/OR SERVICE	TYPE	BASIS OF DESIGN	FLOW	TEMP	PRESSURE	PRESSURE	POWER	PHASE	VOLT	MAX	REMARKS
	OLIVIOL			SCFM	°F	IN. W.G.	IN. W.G.	HP			RPM	$\sim\sim$
BL-1	LAND FILL GAS (LFG)	TRI-LOBE BLOWER	TUTHILL 3206 PD PLUS	80	120	5	50	3	3	460	1,800	1, 2 & 3

1. BLOWER PACKAGE IS TO INCLUDE INTEGRAL SKID, INTAKE AND EXHAUST SILENCERS, INTAKE FILTER, VARIABLE SPEED CONTROLLER & DRIVE. ENTIRE PACKAGE

2. MOTOR AND ELECTRICAL COMPONENTS SHALL BE EXPLOSION PROOF.

3. ACCEPTABLE MANUFACTURER'S ARE GARDNER DENVER, UNISON SOLUTIONS, INGERSOLL RAND, AND TUTHILL (BASIS OF DESIGN)

AIR COOLED CHILLER SCHEDULE EVAPORATOR ELECTRICAL CONDENSER SYSTEM REFRIGERANT MAX IPLV COMPRESSOR MOTOR CONDENSER FAN REMARKS AND/OR |BASIS OF DESIGN| | FLOW | EWT | LWT | AMBIENT OA TEMP | | MCA | MOP | # HP | PHASE | VOLT | # FANS | PHASE | VOLT | GPM | °F | °F LAND FILL GAS | JOHNSON THERMAL | 12 55 45 460 DRYER SYSTEMS XPV5-SIA

1. CHILLER IS A PART OF THE VAREC BIOGAS LANDFILL GAS (LFG) DRYER PACKAGE.

		LANDFI	LL GAS	(LFG) DR'	YER SCHE	DULE	-	
	SYSTEM			(GAS		ELECTI	RICAL	
MARK	AND/OR SERVICE	BASIS OF DESIGN	FLOW	EGT	LGT	PRRESSURE DROP	PHASE	VOLT	REMARKS
	OLIVIOL		SCFH	°F	°F	IN W.C.			
D-1	LAND FILL GAS DRYER	VAREC BIOGAS 237 SERIES	4,000	145	40	35	1	120	1

1. PACKAGED SYSTEM IS CUSTOM DESIGNED BY VAREC BIOGAS AND SHALL INCLUDE INTEGRAL SKID AND CONTROLS. REFER TO SPECIFICATION 15715 FOR MORE INFORMATION ON THIS UNIT. REFER TO THE INSTRUMENTATION AND PROCESS PLANS FOR MORE INFORMATION ON CONTROLS INTEGRATION TO THE SCADA SYSTEM.

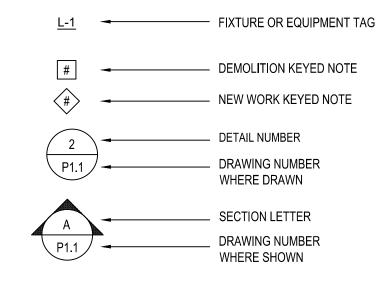
RECLAIM WATER (COLD) RECLAIM HOT WATER — - - - - RWR — - - - -RECLAIM HOT WATER RETURN LANDFILL GAS _____ PIPING TO BE DEMOLISHED EXISTING PIPING TO REMAIN GATE VALVE GLOBE VALVE CHECK VALVE BALL VALVE —Ф— **BUTTERFLY VALVE** MOTORIZED CONTROL VALVE **₩** PRESSURE REDUCING VALVE ——K>— OR ——⊗— BALANCING VALVE PRESSURE RELIEF VALVE FLOW METER PIPING DOWN Ю PIPING UP TEE UP TEE DOWN GAS REGULATOR LIMITS OF DEMOLITION

PLUMBING LEGEND

DRAINAGE (SANITARY, BELOW GRADE)

DRAWING SYMBOLS

POINT OF CONNECTION TO EXISTING

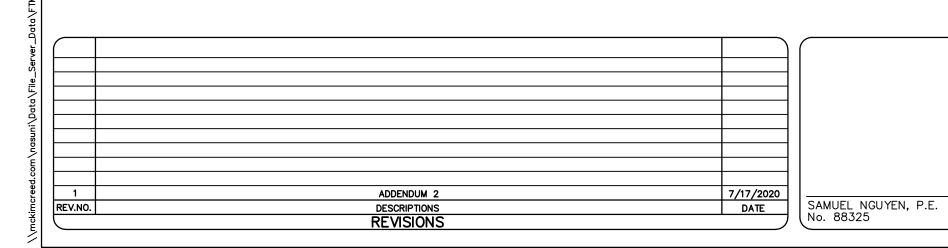


PLUMBING GENERAL NOTES

- THE ENTIRE PLUMBING SYSTEM SHALL CONFORM TO ALL LOCAL, STATE, AND NATIONAL CODES.
- UPON COMPLETION OF ASSEMBLY, PIPING SYSTEMS (INCLUDING HOSES) SHALL BE TESTED AND PROVEN LEAK FREE.
- ALL WORK SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION. CONTRACTOR SHALL COORDINATE ROUTING OF ALL PIPING WITH EXISTING CONDITIONS AND SHALL PROVIDE ANY NECESSARY OFFSETS, REROUTING, ETC. REQUIRED FOR A COMPLETE AND COORDINATED INSTALLATION.
- THESE PLANS ARE DIAGRAMMATIC. CONTRACTOR SHALL PROVIDE ALL NECESSARY OFFSET, TEES, ELBOWS, ETC FOR A COMPLETE WORKING PLUMBING SYSTEM.
- PROVIDE ISOLATION VALVES FOR EACH FIXTURE OR PIECE OF EQUIPMENT.
- ALL PIPING SYSTEMS SHALL BE SUPPORTED AS REQUIRED BY ALL LOCAL, STATE, AND NATIONAL CODES ALONG WITH MANUFACTURER'S RECOMMENDATIONS. PROVIDE PIPE HANGERS OF THE SAME MATERIAL AS THE PIPING SYSTEM OR **USE COATED HANGERS.**
- THE PLUMBING CONTRACTOR SHALL COORDINATE ALL UNDERGROUND PLUMBING PIPING WITH ALL STRUCTURAL
- THE PLUMBING CONTRACTOR SHALL VERIFY ALL PLUMBING EQUIPMENT PART NUMBERS PRIOR TO PURCHASING EQUIPMENT. THE ENGINEER IS NOT RESPONSIBLE FOR INVALID PART NUMBERS.
- THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES, AND INSPECTIONS REQUIRED FOR HIS WORK.
- ALL MATERIALS, EQUIPMENT AND PRODUCTS INCORPORATED IN THE WORK UNDER THE CONTRACT SHALL BE NEW, OF A SUITABLE GRADE FOR THE PURPOSES INTENDED. AND TO THE EXTENT POSSIBLE. STANDARD PRODUCTS OF THE VARIOUS MANUFACTURES EXCEPT WHERE SPECIAL CONSTRUCTION OR PERFORMANCE FEATURES ARE CALLED FOR.
- ANY EQUIPMENT OR MATERIAL DEVIATIONS FROM THAT SPECIFIED OR DETAILED ON THIS DRAWING SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT/ENGINEER. ALL PROPOSED EQUIPMENT DEVIATIONS SUBMITTED SHALL BE SIMILAR BOTH IN QUALITY AND CAPACITY TO THAT EQUIPMENT SPECIFIED.

	PLUMBING AB	BREVIA	TIONS
A/E	ARCHITECT / ENGINEER	LWT	LEAVING WATER TEMPERATURE
AFF	ABOVE FINISH FLOOR	M	METER
AFG	ABOVE FINISH GRADE	NC	NORMALLY CLOSED
AG	AIR GAP	NIC	NOT IN CONTRACT
AP	ACCESS PANEL	NOM.	NOMINAL
ASME	AMERICAN SOCIETY MECHANICAL ENGINEERS	NTS	NOT TO SCALE
ACDE		OC	ON CENTER
ASPE	AMERICAN SOCIETY PLUMBING ENGINEERS	OD	OUTSIDE DIAMETER
В	BOILER	PDI	PLUMBING AND DRAINAGE INSTITUTE
CP	CIRCULATING PUMP	PRV	PRESSURE REDUCING VALVE
DN	DOWN		
DWG	DRAWING	PSIG	POUNDS PER SQUARE INCH GAUGE
EGT	ENTERING GAS TEMPERATURE	RHW	RECLAIM HOT WATER
EL	ELEVATION	RW	RECLAIM WATER
ET	EXPANSION TANK	RWR	RECLAIM WATER RETURN
EWS	EYE WASH STATION	SAN	SANITARY SEWER
EWT	ENTERING WATER TEMPERATURE	SCFH	STANDARD CUBIC FEET PER
EX	EXISTING		HOUR
F	FAHRENHEIT	SCFM	STANDARD CUBIC FEET PER MINUTE
FD	FLOOR DRAIN	SP GR	SPECIFIC GRAVITY
GAL	GALLON	SQFT	SQUARE FEET
GPH	GALLONS PER HOUR	SS	STAINLESS STEEL
GPM	GALLONS PER MINUTE	ST	STORAGE TANK
HD	HUB DRAIN	TD	TEMPERATURE DIFFERENCE
HP	HORSEPOWER	TEMP	TEMPERATURE
IPC	INTERNATIONAL PLUMBING	TYP.	TYPICAL
150	CODE	VTR	VENT THROUGH ROOF
LFG	LAND FILL GAS	W.G.	WATER GAUGE
LGT	LEAVING GAS TEMPERATURE	WHS	WASH HOSE STATION

			PLUMBING FIXTU	RE CC	NNEC	TION/S	SPECIF	FICATION SCHEDULE
ITEM#	MANUFACTURER	MODEL	DESCRIPTION	WASTE	VENT	CW	HW	SPECIFICATION
FD-1	WATTS	FD-100-B	HEAVY DUTY FLOOR DRAIN	SEE PLANS	-	-	-	6" DIA. HEAVY DUTY FLOOR DRAIN WITH NICKEL BRONZE GRATE AND NO HUB CONNECTION. MATERIAL SHALL BE COATED CAST IRON.
FD-2	WATTS	FD-200-WB	FLOOR DRAIN W/ DOMED STANDPIPE	SEE PLANS	-	-	-	DUTY FLOOR DRAIN WITH NO HUB CONNECTION, CHROME PLATED SECURED DOME AND ADJUSTABLE STANDPIPE. MATERIAL SHALL BE COATED CAST IRON.
WHS	T&S BRASS	MV-1907-12CW	SINGLE TEMPERATURE WASH DOWN STATION	-	-	-	3/4"	SINGLE CHROME PLATED WASHDOWN STATION W/ 3/4" GLOBE VALVE, 50' RUBBER HOSE W/ REAR TRIGGER WATER GUN, INTEGRAL THERMOMETER AND SS HOSE RACK.







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SEWRF GREASE FACILITY MODIFICATIONS

PLUMBING NOTES, LEGEND, AND SCHEDULES

DATE:	APRIL, 2020
MCE PROJ. #	1024-0173
DRAWN	JMB
DESIGNED	JMB/DNM
CHECKED	SN
PROJ. MGR.	MDN

SCALE HORIZONTAL: VERTICAL:

DRAWING NUMBER

ISSUED FOR BID