

UNIT HEATER SCHEDULE														
TAG	MANUFACTURER	MODEL	LOCATION	HEATING OUTPUT		AIR FLOW		TEMPSETPOINT		ELECTRICAL		WEIGHT		NOTES
				KW	MBH	L/s	CFM	°C	°F	VOLTAGE	PHASE	kg	LBS	
UH-L60-1	OUELLET	OAS02036AM	MAIN FLOOR	2.0	6.8	241	511	10	50	600	3	20	44	1
UH-L60-2	OUELLET	OAS04036AM	MOTOR FLOOR	4.0	13.6	241	511	10	50	600	3	20	44	1
UH-L60-3	OUELLET	OAS04036AM	PUMP FLOOR	4.0	13.6	241	511	10	50	600	3	20	44	1
NOTES: 1. PROVIDE WITH REMOTE THERMOSTAT AND MOUNTING BRACKETS.														

TAG	MANUFACTURER	MODEL	AREA SERVED	TYPE	AIR FLOW		ESP		MOTOR		MOTOR SPEED	ELECTRICAL		WEIGHT		NOTES
					L/s	CFM	Pa	in. WC	W	HP		VOLTAGE	PHASE	kg	LBS	
SF-L60	GREENHECK	SQ-100-VG	MOTOR ROOM & PUMP ROOM	DIRECT DRIVE CENTRIFUGAL INLINE FAN	482	1022	100	0.40	186.43	0.25	1475	120	1	25	56	1,2,3
SF-L61	GREENHECK	CUE-070-D	WET WELL	DIRECT DRIVE, UPBLAST	133	282	55	0.22	24.85	0.03	1550	120	1	12	26	2,3
NOTES: 1. INCLUDE SPRING ISOLATORS FOR CEILING MOUNTING AND GRAVITY BACK DRAFT DAMPER. 2. ALL FANS TO BE EQUIPPED WITH STARTER AND DISCONNECT SWITCH. 3. STANDARD OF ACCEPTANCE: LOREN COOK, GREENHECK, PENNBERRY.																

LOUVRE SCHEDULE															
TAG	LOCATION	SERVES	DIMENSIONS						AIRFLOW		AIR PRESSURE DROP		ACCESSORIES	ACCEPTABLE PRODUCT	NOTES
			WIDTH		HEIGHT		DEPTH		L/s	CFM	Pa	in W.G.			
			mm	inch	mm	inch	mm	inch							
LV-L61	WET WELL ROOM	SF-L61	300	11 3/4"	250	9 3/4"	102	4"	3064.8	6494.0	29.9	0.1	BS, FF	GREENHECK	1,2
ACCESSORIES:			BP BS	BLANK- OFF BIRDSCREEN	FF CA	FLANGED FRAME CLIP/CONTINUOUS	ANGLE	SA JB	STRAP JAMB	FASTENERS FASTENERS			SB GA	SECURITY BARS GLAZING ADAPTER	
TYPE:			I	INTAKE	R	RELIEF		E	EXHAUST			IS	INSECT	SCREEN	
NOTES:															
1. HEAVY GAUGE EXTRUDED ALUMINUM WITH DRAINABLE HEAD MEMBER AND HORIZONTAL RAIN RESISTANT BLADES. KYNAR 70% (2 COAT) FINISH.															
2. CONFIRM LOUVRE COLOUR WITH ARCHITECT PRIOR TO ORDERING															

DUCT HEATER SCHEDULE											
TAG	AREA SERVED	ELECTRICAL RATINGS			MAX. AIR FLOW		MIN. AIR FLOW		ACCEPTABLE PRODUCT		NOTES
		VOLTAGE	PHASE	KW	L/s	CFM	L/s	CFM	MANUFACTURER	MODEL	
HCE-L60	SF-1	600	3	26	482	1021	100.0	211.9	INDECO	QUZ	1
NOTES: 1. PROVIDE WITH SCR CONTROLLER, AIRFLOW SWITCH, DUCT THERMOSTAT, DISCONNECT AND AUTOMATIC LIMIT SWITCH FOR OVER TEMPERATURE PROTECTION											

GRILLE SCHEDULE (BASED ON E.H. PRICE)		
TAG	MODEL	NOTES
GR-L60	510 w/ DAMPER	1
GR-L61	530	1
NOTES: 1. REFER TO DRAWINGS FOR GRILLE SIZES.		

AIR CONDITIONING UNIT SCHEDULE											
TAG	LOCATION	RATED COOLING CAPACITY			POWER			ACCEPTABLE PRODUCT		NOTES	
		KW	MBH	SEER	VOLTAGE	PHASE	MCA	MANUFACTURER	MODEL		
AC-L60	MOTOR ROOM	4	12.0	23.1	208	1	1	MITSUBISHI ELECTRIC CORPORATION	MSY-GL12NA	1,2	
CU-L60	ROOF	4	12.0	23.1	208	1	7	MITSUBISHI ELECTRIC CORPORATION	MUY-GL12NA	3	
NOTES:											
1. R410A REFRIGERANT.											
2. C/W WALL MOUNTED THERMOSTAT.											
3. ULTRA LOW AMBIENT C/W REAR AND SIDE SNOW GUARD, AND FRONT WIND DEFLECTOR.											

SUMP PUMP SCHEDULE										
TAG	LOCATION	TYPE	MOTOR			FLOW RATE (LPM)	PUMP HEAD (m)	MANUFACTURER	MODEL	NOTES
			POWER (kW)	VOLTAGE (V)	PHASE					
SPD-L55	PUMP ROOM FLOOR EXISTING SUMP PIT	SANITARY	0.37	208	1	212	9.1	ZOELLER	D282	1,2
NOTES: 1. 500 SPHERICAL SOLIDS HANDLING. CAST IRON HOUSING. 2. FLOAT OPERATED, 2 POLE MECHANICAL SWITCH, STAINLESS STEEL FLOAT GUARD, STAINLESS STEEL SWITCH ARM AND SOLID BUOYANT POLYPROPYLENE FLOAT.										

BACKFLOW PREVENTER

WATTS LF009M2-QT-909-AGC-LEAD FREE REDUCED PRESSURE ZONE ASSEMBLY.

POINT OF USE BACKFLOW PREVENTER

WATTS 90M2 19mm DUAL CHECK VALVE WITH INTERMEDIATE ATMOSPHERIC VENT. BRASS BODY CONSTRUCTION, STAINLESS STEEL INTERNAL PARTS, TIGHT SEATING RUBBER CHECK VALVE ASSEMBLIES.

HOSE BIBB

WATTS SC8-3 HYDRANT CAST BRASS HOSE BIBB, WATTS MODEL 8B TAMPER-PROOF VACUUM BREAKER WITH BREAK-AWAY SCREW, 13mm REGULAR PATTERN, DUAL SWEAT CONNECTION WITH CAST IRON HAND WHEEL, CAST BRASS, ADJUSTABLE PACKING NUT CARTRIDGE.

SOLENOID VALVE (SEAL WATER SYSTEM)

- ASCO SERIES 8210 2-WAY VALVE, 304 STAINLESS STEEL BODY, 9mm NPT, PTFE SEALS AND DISCS, 302 STAINLESS STEEL SPRING, 120 VOLTS AC.
- ASCO SERIES 8210 2-WAY VALVE, 304 STAINLESS STEEL BODY, 9mm NPT, PTFE SEALS AND DISCS, 302 STAINLESS STEEL SPRING, 24 VOLTS DC, FOR STORM PUMP ONLY.

MOTORIZED DAMPER: MD-L60-1 & MC-L60-2

TAMCO SERIES 9000BF THERMALLY BROKEN FRAME THERMALLY INSULATED DAMPER, OPPOSED BLADE ACTION DAMPER, DESIGNED FOR OPERATION IN TEMPERATURES RANGING FROM -40C TO 100C. BLADE AND FRAME SEALS ARE EXTRUDED SILICONE FOR REDUCED AIR LEAKAGE AT COLDER TEMPERATURES. C/W BELIMO LP24-SR US DAMPER ACTUATOR MODULATING SPRING RETURN, 24VAC/DC, FOR 2 TO 10VDC CONTROL SIGNAL.

FUNNEL FLOOR DRAIN

- DURA-COATED CAST IRON DRAIN BODY, WITH 100mm NICKEL BRONZE STRAINER WITH SECURED OPEN THROAT OVAL FUNNEL AND A TRAP PRIMER CONNECTION.
- EQUIVALENT TO ZURN MODEL No. ZN211-BF

GAS DETECTION SYSTEM

1. THE SENSOR SHALL BE MSA TG5000-A GAS MONITOR WITH POLYCARBONATE PLASTIC HOUSING AND 120 VAC POWER SUPPLY.
2. THE UNIT MUST BE CAPABLE OF COMMUNICATING WITH TWO REMOTE SENSORS AT A TIME. SENSORS SHALL BE CONTAINED IN SENSOR MODULES EXTERNALLY MOUNTED TO THE MAIN ENCLOSURE.
3. A LOCAL SCROLLING OLED DISPLAY WILL INDICATE THE GAS TYPE BEING MONITORED AND CONCENTRATION OF GAS PRESENT.
4. THE MONITOR WILL LED-VIEWABLE FROM 50 FEET. PROVIDE WITH RED AND AMBER TOP MOUNTED LED STROBES.
5. THE UNIT WILL BE MANUFACTURED TO UL AND CSA STANDARDS.
6. THE SENSOR ALARM LEVELS AND LOCATION SHALL BE (FINAL VALUES AND LOCATIONS TO BE DETERMINED DURING COMMISSIONING):
 - A. METHANE:
 - FIRST ALARM: 10% LEL
 - SECOND ALARM: 25% LEL
 - SENSOR LOCATION: 0.3 - 0.5 M BELOW CEILING (MAIN FLOOR)
 - B. CARBON MONOXIDE:
 - FIRST ALARM: 25 PPM
 - SECOND ALARM: 100 PPM
 - SENSOR LOCATION: 1-2 M ABOVE FLOOR (MAIN FLOOR)

BUILDING VENTILATION

- SYSTEMS:
 - SUPPLY FAN SF-1, ELECTRIC DUCT HEATER EDH-1, OUTDOOR AIR DAMPER MD-1, RECIRCULATION AIR DAMPER MD-2, GAS DETECTION SYSTEM
- SYSTEM START:
 - THE SYSTEM SHALL BE ENABLED TO RUN CONTINUOUSLY 24 HOURS/7 DAYS PER WEEK.
- UNOCCUPIED OPERATION:
 - WHEN SPACE IS UNOCCUPIED AS DETERMINED BY KEY SWITCH (BY DIVISION 26) RECIRCULATION AIR DAMPER IS FULLY OPEN AND OUTDOOR AIR DAMPER IS OPEN AT 25%. SUPPLY FAN RUNS CONTINUOUSLY.
- OCCUPIED OPERATION:
 - WHEN SPACE IS OCCUPIED AS DETERMINED BY KEY SWITCH (BY DIVISION 26) RECIRCULATION AIR DAMPER IS FULLY CLOSED AND OUTDOOR AIR DAMPER IS FULLY OPEN. SUPPLY FAN RUNS CONTINUOUSLY.
- EMERGENCY OPERATION:
 - IN THE EVENT OF A HIGH LEVEL OF COMBUSTIBLE GAS AS DETECTED BY THE GAS DETECTION SYSTEM (ALARM A), RECIRCULATION DAMPER CLOSES AND OUTDOOR AIR DAMPER OPENS FULLY. SUPPLY FAN RUNS CONTINUOUSLY.
- TEMPERATURE CONTROL:
 - ELECTRIC DUCT HEATER OPERATES UNDER ITS OWN CONTROL TO MAINTAIN SUPPLY AIR TEMPERATURE AT 10 °C
- ALARMS:
 - LOSS OF AIRFLOW AS INDICATED BY AIRFLOW SENSOR AT SCADA PANEL

BUILDING HEATING

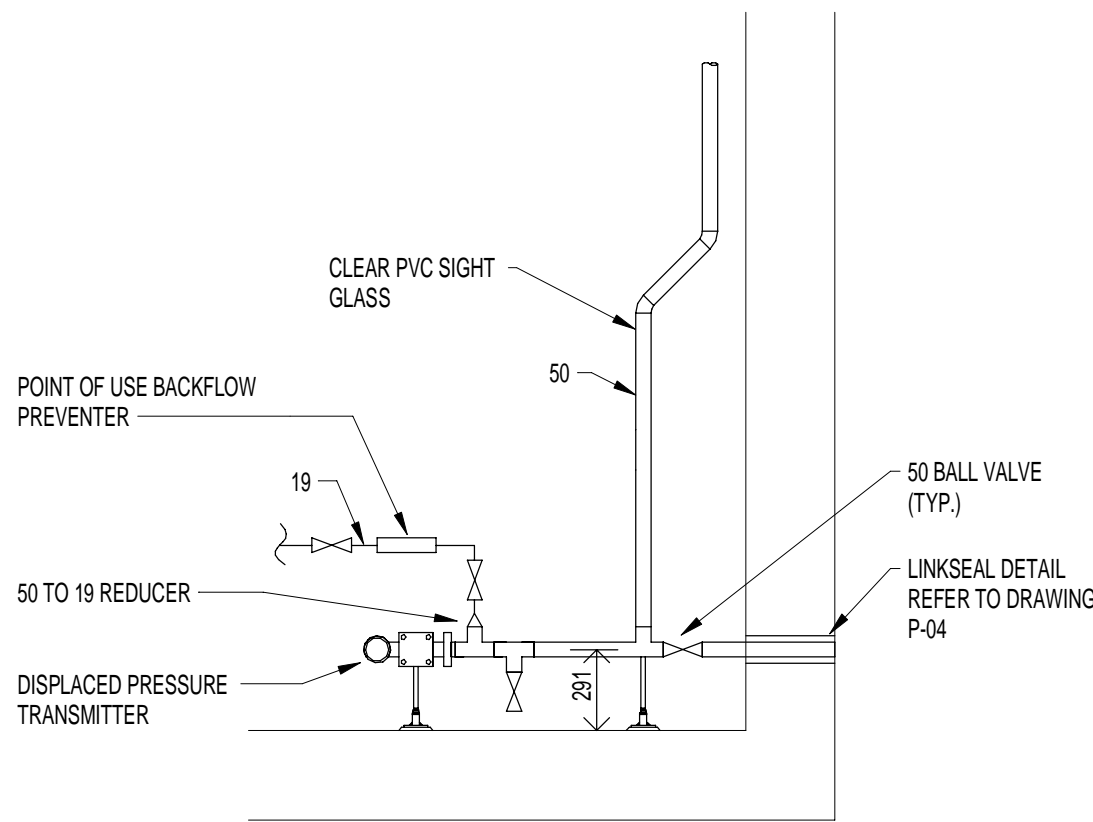
- SYSTEMS:
 - UNIT HEATERS UH-1, UH-2, UH-3
- SYSTEM START:
 - UNIT HEATER IS STARTED BY INTERNAL OEM CONTROLS AND THERMOSTAT.
- NORMAL OPERATION:
 - THE UNIT HEATER OPERATES UNDER INTERNAL CONTROL TO MAINTAIN SPACE TEMPERATURE SETPOINT.
- ALARMS:
 - LOW TEMPERATURE AS INDICATED BY TEMPERATURE SENSOR AT SCADA PANEL (BY DIVISION 26); 2°C BELOW TEMPERATURE SETPOINT (ADJ.)

MOTOR ROOM COOLING

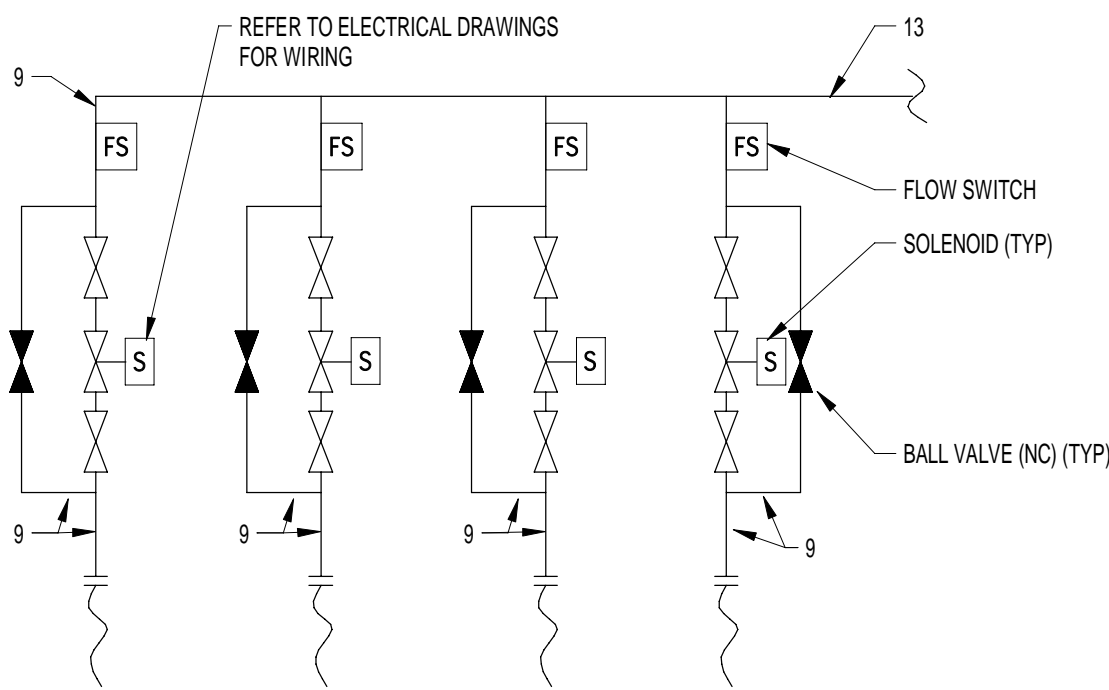
- SYSTEMS:
 - AIR CONDITIONING SYSTEM AC-1, CU-1
- SYSTEM START:
 - SYSTEM IS STARTED BY INTERNAL OEM CONTROLS AND THERMOSTAT.
- NORMAL OPERATION:
 - THE AIR CONDITIONING UNIT OPERATES UNDER INTERNAL CONTROL TO MAINTAIN SPACE TEMPERATURE SETPOINT.
- ALARMS:
 - HIGH TEMPERATURE AS INDICATED BY TEMPERATURE SENSOR AT SCADA PANEL (BY DIVISION 26); 2°C ABOVE TEMPERATURE SETPOINT (ADJ.)

ENGINE VENTILATION

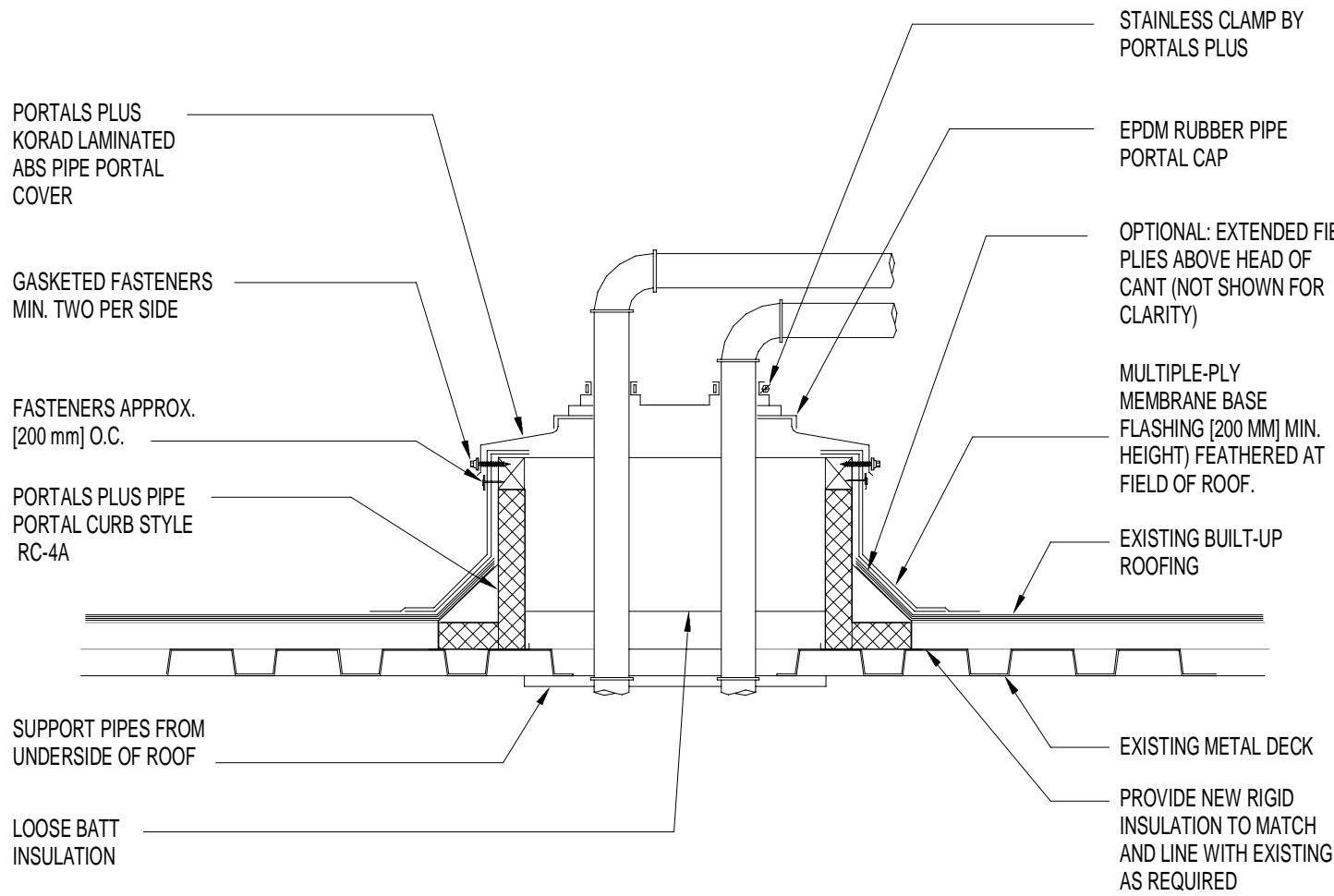
- EXISTING OPERATION (TO REMAIN):
 - WHEN THE ENGINE IS SIGNALLED TO TURN ON, THE COMBUSTION AIR DAMPER OPENS. OPEN LIMIT SWITCH ON THE DAMPER PREVENTS ENGINE TO START UNTIL PROVEN OPEN.
- NEW OPERATION (TO BE REVISED FOR NEW DETECTION SYSTEM):
 1. SYSTEMS:
 - GAS DETECTION SYSTEM, EXISTING ENGINE RELIEF DAMPER, EXISTING ENGINE
 2. ALARM LEVEL A:
 - WHEN THE GAS DETECTION SYSTEM SENSES ELEVATED LEVELS (ALARM A) THE GAS DETECTION SYSTEM WILL SEND AN ALARM TO THE SCADA PANEL.
 3. ALARM LEVEL B:
 - WHEN THE GAS DETECTION SYSTEM SENSES ELEVATED LEVELS (ALARM B) THE GAS ENGINE SHUTS OFF AND THE ENGINE RELIEF DAMPER OPENS. THE GAS DETECTION WILL ACTIVATE THE AUDIBLE/VISIBLE ALARM AND SEND AN ALARM TO THE SCADA PANEL.
 - WHEN THE GAS DETECTION SYSTEM SENSES THE LEVELS HAVE DROPPED BELOW ALARM LEVEL B FOR 5 MINUTES (ADJ.) THE ENGINE LOCKOUT WILL BE RELEASED AND THE RELIEF DAMPER WILL CLOSE.



1 WATER SUPPLY CONNECTION FOR DP LEVEL MEASUREMENT SYSTEM
SCALE: N.T.S.



2 SEAL WATER SOLENOID VALVES ARRANGEMENT
SCALE: N.T.S.



3 TYPICAL PITCH BOX INSTALLATION
SCALE: 1 : 10

TENDER
NOT FOR CONSTRUCTION

APEGM
Certificate of Authorization
Dillon Consulting Limited (MB)
No. 1789 Date: xxxxxx

DILLON CONSULTING			ENGINEER'S SEAL		THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT	
DESIGNED BY	JCY	CHECKED BY	PDT	WESTWOOD WASTEWATER PUMPING STATION		CITY DRAWING NUMBER 1-0194L-M0006-001
DRAWN BY	HL	APPROVED BY	PDT			SHEET 17 OF 23
HOR. SCALE	As indicated	RELEASED FOR CONSTRUCTION		MECHANICAL SCHEDULES AND DETAILS		CONSULTANT DRAWING NUMBER M-03
VERTICAL						
NO. REVISIONS	DATE	BY	DATE	SEPTEMBER 2020	DATE	
			CONSULTANT PROJECT NUMBER 20-2316			