

PROPANE FIRED FURNACE SCHEDULE														
TAG	SERVICE	MANUFACTURER	MODEL	HI SPEED AIR FLOW (l/s)	OUTDOOR AIR (%)	E.S.P. (pa)	HEATING INPUT (kw) OUTPUT (kw)		WEIGHT (kg)	MFA (amps)	ELECTRICAL (V/ph/Hz)	EVAPORATOR COOLING COIL (model)	(kg)	NOTES FN-1 TO C/W:
FN-1	LAB	CARRIER	59SC5A080-16	708	40%	174	23.4	22.9	69.9	15	115/1/60	CNPVP4217ALA	25	- UPFLOW APPLICATION; - DISPOSAL FILTER /w SIDE RETURN; - PROPANE L.P. KIT; - SINGLE STAGE HEATING; - EVAPORATOR COOLING COIL; - H/C PROGRAMMABLE T'STAT; - 2-PIPE DIRECT VENT (50mm PIPE SIZE); - MAINTAIN MIN. 610mm FRONT CLEARANCE; - CONTINUOUS OPERATE DURING OCCUPANCY; - BLOWER SPEED TAP SET AT BLACK; - CONDENSATE NEUTRALIZING KIT.

CONDENSING UNIT SCHEDULE										
TAG	SERVICE	MANUFACTURER	MODEL	MFA (amps)	MCA (amps)	NOMINAL COOLING (ton)	ELECTRICAL (V/ph/Hz)	WEIGHT (kg)	NOTES	
CU-1	FN-1 COOLING COIL	CARRIER	24ABB348A005	30.0	18.0	4.0	208/3/60	84.4	- AIR-COOLED AIR CONDITIONER UNIT; - OUTDOOR ROOF MOUNTED SPLIT SYSTEM; - R-410 REFRIGERANT AND COMPRESSOR OIL; - AIR COOLED COIL, HERMETIC COMPRESSOR, PROPELLER CONDENSER FAN & CONTROL BOX.	

PUMP SCHEDULE										
TAG	MANUFACTURER	SERIES	MODEL	SERVICE	FLOW RATE (l/s)	HEAD PRESSURE (kPa)	MOTOR (HP)	RPM	ELECTRICAL (V/ph/Hz)	NOTES
P-1	ITT GOULDS	LC	B	DCW LIFT	1.51	311	3.0	2850	208/3/60	FLOOR MOUNTED CENTRIFUGAL PUMP W/ AQUAVAR CONTROLLER, FABRICATED 304 S.S., CONTROLLED BY PRESSURE TRANSDUCER, CONTACTOR, RELAY & PRESSURE TANK.
P-2	ARMSTRONG	ASTRO	20B050S-TA	DHW CIRCULATOR	0.063	10.0	FRAC	-	115/1/60	HOT WATER RECIRC. PUMP. PLUG INTO RECEPTACLE IN MECH. ROOM. SHALL HAVE AQUASTAT ON RETURN AND 24 HOUR TIMER.

ELECTRIC HOT WATER HEATER SCHEDULE										
TAG	MANUFACTURER	MODEL	DIMENSIONS (ØxHxL mm)	CAPACITY (litres)	OPERATING Ø 55.5°C (kg)	RECOVERY RISE (l/hr)	ELEC. ELEMENT (No.-WATTS)	ELECTRICAL (V/ph/Hz)	SERVICES	
EHWH-1	A.O. SMITH	DRE-120-30	750Ø x 1581	456	633	465	6x5000 (30KW)	208/3/60 (83.3AMPS)	LAB FIXTURES DOMESTIC HOT WATER, OR EMERGENCY SHOWER/EYEWASH STATION	

NOTES: THE CONDENSATE PIPING SHALL BE GRAVITY DRAINED TO AN INDIRECT WASTE / FUNNEL DRAIN. PROVIDE VACUUM RELIEF VALVE, WATER HAMMER ARRESTOR, TEMPERATURE / PRESSURE RELIEF VALVE AND A DOMESTIC HOT WATER THERMOSTAT. ALL DCW/DHW PLUMBING PIPING REQUIRES INSULATION. REFER TO SPECIFICATION.

EXHAUST FAN SCHEDULE											
TAG	MANUFACTURER	MODEL	FAN DATA			UNIT WEIGHT (kg)	ELECTRICAL (V/ph/Hz)	SERVES			NOTES
			FLOW (l/s)	S.P. (Pa)	HP	FAN RPM					
EF-1	GREENHECK	GB071-4	70	62.5	FRAC.	1000	27	115/1/60	WASHROOM EXHAUST	ROOF MOUNTED CENTRIFUGAL DOWN BLAST BELT DRIVE EXHAUST FAN, WITH BELT AND SHAFT GUARD. WD-100 SERIES DAMPER, ROOF CURB, DISCONNECT SWITCH. FAN TO BE INTERLOCKED TO FURNACE.	
EF-2	PLASTEC	JET 20	248	93.75	FRAC.	-	-	115/1/60	HAB HOOD EXHAUST	CENTRIFUGAL EXHAUST FAN, INSTALLED ON ROOF /w ROOF CURB. HIGHLY CORROSIVE AIR APPLICATION, DISCONNECT SWITCH. FAN TO BE INTERLOCKED TO FURNACE.	

ELECTRIC HEATER SCHEDULE										
TAG	MANUFACTURER	MODEL	DIMENSIONS (WxHxD mm)	DUCTWORK DIMENSIONS (WxH mm)	AIR FLOW (l/s)	MAX. TEMP. RISE (Delta T)	ELECTRICAL CAPACITY (kW)	ELECTRICAL (V/ph/Hz)	(Amps)	NOTES
EH-1	THERMOLECK	SC-14KW-400x250-208-3-xx	400x250x127	400x250	283	41.6°C	14.0	208/3/60	-	BUILT-IN CONTROLS WITH S.C.R. MODULATING, AUTOMATIC CUT-OUT, DUCT STAT (SET @18°C), BUILT-IN AIR SENSOR & C2-CU-TO. HEATER OPERATION TO INTERLOCK WITH FURNACE.
EH-2	OUELLET	OACP4800	561x110x109	N/A	76	-	3.6	208/1/60	-	RECESSED CEILING MOUNTED ELECTRIC HEATER, SINGLE UNIT, BUILT-IN THERMOSTAT, COLOR TO MATCH.

EXPANSION TANK SCHEDULE										
TAG	MANUFACTURER	MODEL	SERVICE	TANK DATA			NOTES			
				LENGTH (mm)	DIA. (mm)	WEIGHT (kg)				
ET-1	AMTROL	THERM-X-TROL ST-12	DOMESTIC HOT WATER TANK	381	279	-	DOMESTIC HOT WATER DIAPHRAGM EXPANSION TANK, 4.4 GALLON, 20mm CONNECTION PRE-CHARGE PRESSURE: 40 psi, WORKING PRESSURE: 150 psi (T&P RELIEF)			
ET-2	AMTROL	THERM-X-TROL ST-8	DOMESTIC COLD WATER BOOSTER SYSTEM	381	229	-	DOMESTIC COLD WATER DIAPHRAGM PRESSURE TANK, 3.2 GALLON, 20mm CONNECTION PRE-CHARGE PRESSURE: 50 psi.			

DOMESTIC WATER STORAGE TANK SCHEDULE										
TAG	MANUFACTURER	MODEL	CAPACITY (litre)	TANK DATA			NOTES			
				LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)				
WT-1	BLAZE PLASTICS	TRANSPORT TANK	2,793 (735 u.s. gallon)	2575	1200	1200	PLASTIC TANK /w LID AND OPENING ON THE TOP FOR RE-FILL. 38mm OUTLET FITTING AT TANK BOTTOM SIDE FOR COLD WATER PIPING CONNECTION.			

PROPANE STORAGE TANK SCHEDULE										
TAG	MANUFACTURER	MODEL	CAPACITY (cubic meter)	TANK DATA			NOTES			
				LENGTH (mm)	I.D. (mm)	STORAGE PRESSURE (psi)				
PT-1	WESTERN	2000 USWG	7.5	6400	1225	10~15	OUTDOOR ABOVE GROUND PROPANE STORAGE TANK. 32mm LIQUID IN/OUT. INSTALLED ON CONCRETE PAD.			

FIRE EXTINGUISHER SCHEDULE				
TAG	MANUFACTURER	MODEL	NOTES	
FE-1	NATIONAL FIRE EQUIPMENT	ABC-100WWD	10lb ABC FIRE EXTINGUISHER c/w WALL HANGER. COORDINATE WITH THE G.C. FOR THE INSTALLATION OF FIRE EXTINGUISHER / HANGER. EMERGENCY SIGNAGE SHALL BE SUPPLIED AND INSTALLED. INSTALLATION SHALL MEET NFPA 10.	
FE-2	NATIONAL FIRE EQUIPMENT	ABC-100WWD CE-950-3-2	10lb ABC FIRE EXTINGUISHER c/w SEMI-RECESSED WALL CABINET. COORDINATE WITH THE G.C. FOR THE INSTALLATION OF FIRE EXTINGUISHER / CABINET. EMERGENCY SIGNAGE SHALL BE SUPPLIED AND INSTALLED. INSTALLATION SHALL MEET NFPA 10. CABINET SHALL BE STAINLESS STEEL TYPE.	

LABORATORY FUME HOOD SCHEDULE (SUPPLIED BY OTHERS)													
TAG	MANUFACTURER	MODEL	FUME HOOD SIZE LxW (mm)	SASH OPENING (mm)	EXHAUST (l/s)	FILTERS	HOOD DUCT EXHAUST RATE (l/s)	C.W. (mm)	H.W. (mm)	WASTE (mm)	CUPSINK	VENT	ELECTRICAL V/ph/Hz AMPS
LH-1	THERMO SCIENTIFIC	HAMILTON SAFEARE II	1219x794	450	229	N/A	248	13	13	38	REQUIRED	AS REQUIRED	SEE ELECTRICAL DWG

NOTES: - CONSTANT VOLUME BYPASS SUPERSTRUCTURE MOUNTED ON CABINET.  
- REFER TO MECHANICAL SPECIFICATIONS FOR FUME HOOD EXHAUST DUCT MATERIAL.  
- CUPSINK DRAIN SHALL BE CONNECTED WITH P-TRAP PROVIDED BY THE MANUFACTURER.  
- FUME HOOD IS NOT INTENDED FOR USE WITH PERCHLORIC ACID.  
- FUME HOOD SUPPLIED BY OTHERS, MECHANICAL CONTRACTOR TO PROVIDE ROUGH-INS AND FINAL INSTALLATION.

SANITARY SEPTIC STORAGE TANK (UNDERGROUND)										
TAG	MANUFACTURER	MODEL	SERVICE	TANK DATA			NOTES			
				LENGTH (mm)	DIA. (mm)	WEIGHT (kg)				
ST-1	ZGL	-	SANITARY STORAGE	3251	1830	-	FIBERGLASS ONE PIECE TANK, ACTUAL CAPACITY 1,806 U.S. GALLONS. PROVIDE PREFABRICATED ENGINEERED CONCRETE DEADEN ANCHORING SYSTEM ACCORDING TO MANUFACTURER'S INSTRUCTIONS TO WITHSTAND CONTINUOUSLY UPLIFT FORCES CAUSED BY GROUND WATER PRESSURE. PROVIDE TANK VENT AND INTAKE PIPE.			

PLUMBING FIXTURE SCHEDULE						
TAG	MANUFACTURER	MODEL (FIXTURE)	TRIM (FAUCET)	LOCATION (TYPICAL)	NOTES	
WC-1	AMERICAN STANDARD	2484.216 FLOWISE DUAL FLUSH	TOILET SEAT: GENTOCO AM820STS	BARRIER FREE WASHROOMS	BARRIER FREE DESIGN, FLOOR MOUNTED, ELONGATED BOWL, 3.0/6.0 LPF DIAL FLUSH LOW CONSUMPTION, VITREOUS CHINA TANK TOILET, TOILET SUPPLY c/w ESCUTCHEON, BRASS STOP, TOILET SEAT SOLID PLASTIC c/w ANTI MICROBIAL COMPOUND, ELONGATED HEAVY DUTY SOLID PLASTIC OPEN FRONT "WITH" COVER, c/w REINFORCED S.S. CHECK HINGE, POSTS, WASHERS AND NUTS.	
L-1	AMERICAN STANDARD	CADET EVERCLEAN ROUND COUNTERTOP SINK (0427.444EC)	MOEN CAL84500 (LESS WASTE)	BARRIER FREE WASHROOMS	COUNTERTOP MOUNTED LAVATORY, WHITE COLOR, VITREOUS CHINA, FRONT OVERFLOW, FAUCET HOLES ON 4" CENTERS. FAUCET: METAL CONSTRUCTION, PIVOT ACTION LEVER HANDLE c/w TEMP. CONTROL, AERATOR LIMITED TO 1.5 GPM FLOW, CARTRIDGE DESIGN.	
SH-1	FREEDOM SHOWER REFER TO ARCHITECTURE FOR SPECIFICATIONS	APF06337BF75 REFER TO ARCHITECTURE FOR SPECIFICATIONS	AMERICAN STANDARD 1662.221	WHERE SHOWN	ADA ROLL-IN SHOWER. COMMERCIAL SHOWER SYSTEM KIT (1662.221) CONTAINS: PRESSURE BALANCE VALVE WITH VOLUME & TEMPERATURE CONTROL, TRIM KIT, HAND SHOWER - 2.5 GPM FLOW RESTRICTOR, METAL HOSE, VACUUM BREAKER, WALL SUPPLY & 36" SLIDE BAR, SHOWER DRAIN c/w P-TRAP.	
KS-1	KINDRED	QDL2031/7 STAINLESS STEEL	MOEN CHATEAU 7425 LESS SPRAY	KITCHEN	SINK: DOUBLE COMPARTMENT KITCHEN SINK WITH FAUCET LEDGE, 20 GAUGE, 18-8 S.S. 3 HOLE FAUCET DECK, NO OVERFLOW, SELF RIMMING, SATIN FINISH SURFACE. S.S. BRAIDED DCW/DHW SUPPLY HOSE, SHUT-OFF VALVES. FAUCET: SURFACE MOUNTED LEVER STYLE FAUCET. METAL CONSTRUCTION C/W A CHROME PLATE FINISH. 3-HOLE DECK PLATE C/W ESCUTCHEON, 1255 CARTRIDGE, TEMPERATURE CONTROLLED THRU ARC OF HANDLE TRAVEL, FLOW LIMITED TO 2.0 GPM MAX.	
LS-1	THERMO SCIENTIFIC HAMILTON	52L989LO STAINLESS STEEL	33L46600	LABORATORY	SINK: STAINLESS STEEL DOUBLE COMPARTMENT SINK (DIM: LxWxD=37"x22"x12-3/4"), NO OVERFLOW, DROP-IN, SELF-RIMMING, LEDGE-STYLE CENTER FIXTURE HOLE, CENTER DRAIN. FAUCET: SWING GOOSENECK WITH WRIST BLADE HANDLES, DECK MOUNTED, AERATOR, 1-3/16" MALE SHANK INLET WITH (2) FLEXIBLE COPPER TUBES.	
EES-1	GUARDIAN	G1950HS	-	LABORATORY	EMERGENCY S.S. EYEWASH/ S.S. SHOWER HEAD STATION. PROVIDE AUXILIARY 8 FOOT DRENCH HOSE HEAD WITH SPRAY HANDLE. PROVIDE THERMOSTATIC MIXING VALVE. "Mv-1".	
MV-1	GUARDIAN	G3800	-	LABORATORY	EMERGENCY EYEWASH & SHOWER THERMOSTATIC MIXING VALVE. TEMPERATURE SHALL BE 15.0°C-32.2°C (60°F-90°F). HIGH TEMPERATURE LIMIT STOP PRESET AT 32.2°C (90°F). MAX. DISCHARGE FLOW RATE SET @20 GPM.	
FD-1	J.R. SMITH MAN. CO.	2005A	-	WHERE SHOWN	FLOOR DRAIN (100Ø), P-TRAP, TRAP PRIMER AND STAINLESS STEEL STRAINER. INSTALL FLOOR DRAINS WHERE SHOWN.	
FFD-1	J.R. SMITH MAN. CO.	2005A-3591	-	WHERE SHOWN	FUNNEL FLOOR DRAIN (100Ø), P-TRAP, TRAP PRIMER AND STAINLESS STEEL STRAINER. INSTALL FUNNEL FLOOR DRAINS WHERE SHOWN.	

DIFFUSER/GRILLE SCHEDULE						
TAG	MANUFACTURER	MODEL	FUNCTION	SIZE	APPLICATION	NOTES
S1	EH PRICE	SPD	SUPPLY AIR	600x600	T-BAR	SQUARE PLAQUE DIFFUSER
S2	EH PRICE	520D	SUPPLY AIR	AS SHOWN	T-BAR	LOUVERED DOUBLE DEFLECTION SUPPLY REGISTER c/w STEEL DAMPER
R1	EH PRICE	80 SERIES	RETURN	AS SHOWN	T-BAR	EGG CRATE RETURN AIR GRILLES
E1/T1	EH PRICE	530	EXHAUST/TRANSFER	AS SHOWN	DRY WALL/T-BAR	LOUVERED RETURN GRILLES (Ø DEFLECTION) SHALL BE BALANCED BY BALANCING DAMPER INSTALLED ON DUCTWORK WHERE SHOWN ON DWG.

### MECHANICAL GENERAL NOTES

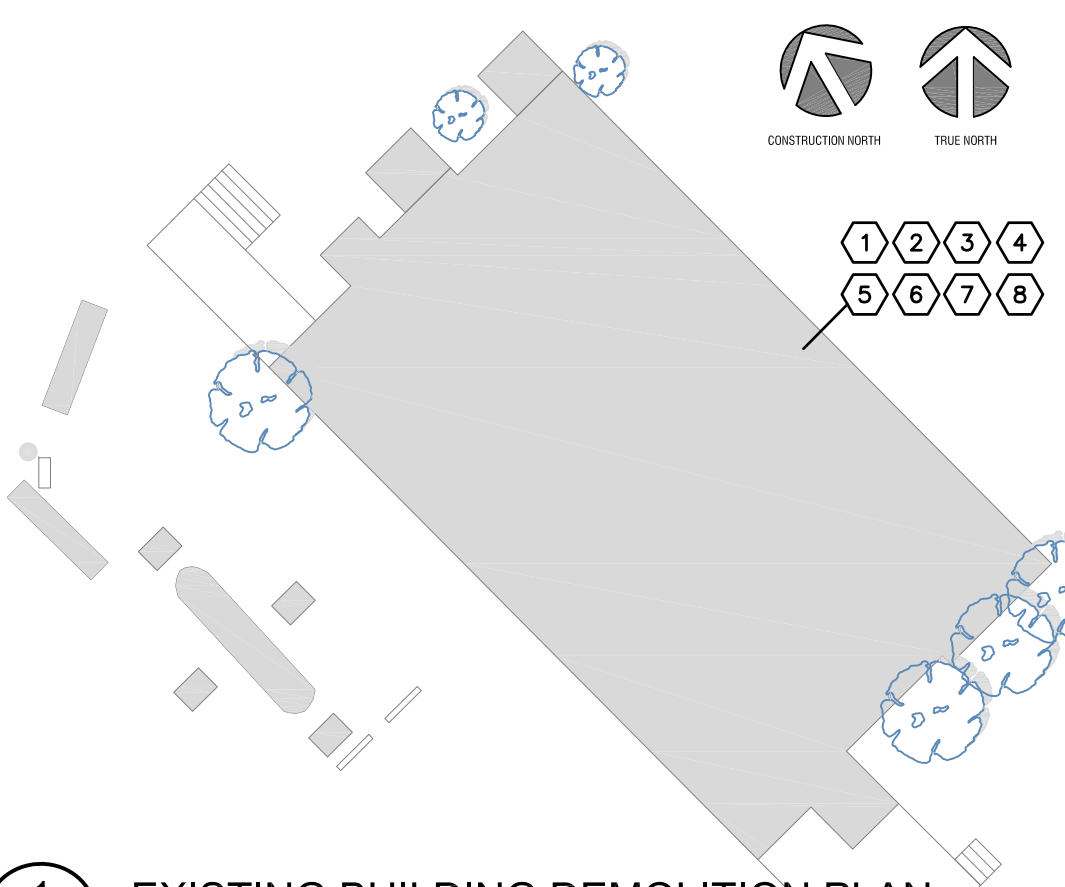
- MECHANICAL CONTRACTOR TO COORDINATE ALL PLUMBING DROPS TO CRAWLSPACE WITH THE GENERAL CONTRACTOR. COORDINATE WITH ELECTRICAL CONTRACTOR ENSURE ALL PLUMBING PIPE EXPOSED TO ELEMENT IS PROPERLY INSULATED AND HEAT TRACED AS REQUIRED.
- MECHANICAL CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR FOR SANITARY SUMP LOCATION. ALL SANITARY PIPE ROUTING AND INVERTS SHALL BE CONFIRMED ON-SITE BEFORE TO BE IN.
- MECHANICAL CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR FOR ABOVE GROUND PROPANE TANK LOCATION.
- MECHANICAL CONTRACTOR TO PROVIDE PLUMBING VENTS IN ACCORDANCE WITH NATIONAL PLUMBING CODE AND AUTHORITIES HAVING JURISDICTION. COORDINATE WITH STRUCTURAL CONTRACTOR TO PROVIDE APPROPRIATE VENTING UP TO ROOF TO MEET CODE.
- COORDINATE ON-SITE WITH GENERAL CONTRACTOR PROVIDE PROPER OPENINGS ON ROOF FOR DUCTWORK PENETRATION, ROOF CURB AND PLUMBING VENTING.
- COORDINATE ALL EQUIPMENT LOCATIONS ON ROOF PRIOR TO INSTALLATION.
- MECHANICAL CONTRACTOR TO COORDINATE ALL LOCATIONS THAT WILL REQUIRE ACCESS DOORS FOR DAMPERS, SHUT-OFF VALVES, CLEAN-OUTS AND ALL MECHANICAL EQUIPMENT.
- INSTALL ISOLATION VALVES ON ALL INDIVIDUAL PLUMBING FIXTURES. PROVIDE CLEANOUTS IN ACCORDANCE WITH NATIONAL PLUMBING CODE. PROVIDE TRAP PRIMERS TO ALL FLOOR DRAINS AS PER MECHANICAL SPECIFICATIONS. FLOOR DRAIN LOCATIONS TO BE CONFIRMED BY ARCHITECTURAL FLOOR SLOPE LAYOUT.
- INSTALL FIRE DAMPERS WHERE SHOWN AND AT ALL PENETRATIONS THROUGH ALL FIRE RATED ASSEMBLIES.
- PROPANE STORAGE TANKS AND PIPING SYSTEM TO BE IN ACCORDANCE WITH THE NATURAL GAS AND PROPANE INSTALLATION CODE (B149.1-10) AND PROPANE STORAGE AND HANDLING CODE (B149.2-10).

### MECHANICAL DRAWING LIST

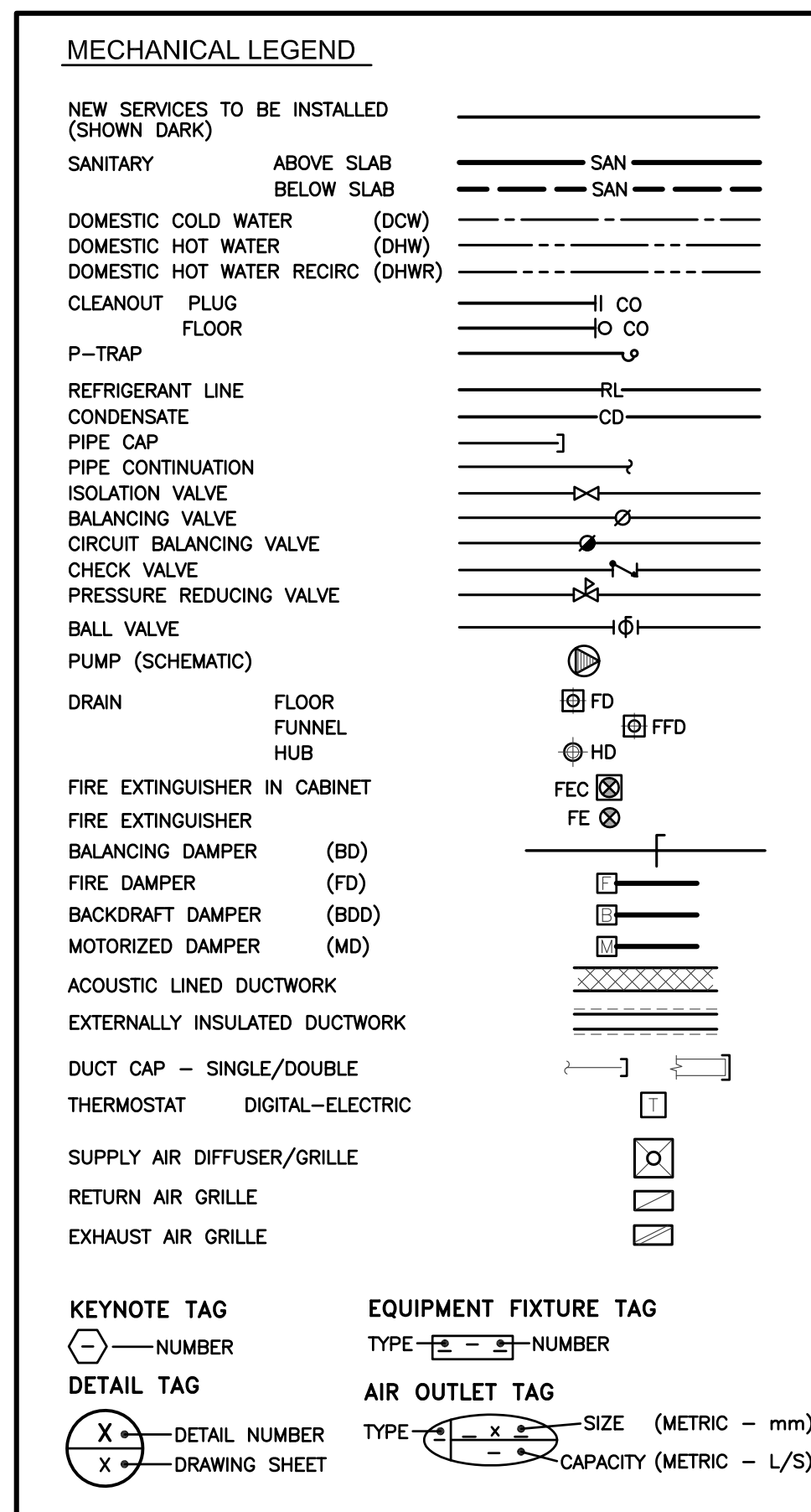
- M1 - MECHANICAL DEMOLITION PLAN, SCHEDULES & LEGEND
- M2 - PLUMBING & FIRE PROTECTION PLANS
- M3 - HVAC & ROOF PLANS
- M4 - MECHANICAL DETAILS

### MECHANICAL DEMOLITION GENERAL NOTES

- ALL EXISTING MECHANICAL EQUIPMENT IS NOT NECESSARILY SHOWN ON THIS DRAWING. MECHANICAL CONTRACTOR SHALL DO A BUILDING WALK THROUGH TO DETERMINE EXTENT OF WORK REQUIRED AND CONFIRM ADDITIONAL LOCATIONS THAT NEED TO BE DEMOLISHED PRIOR TO PRICING.

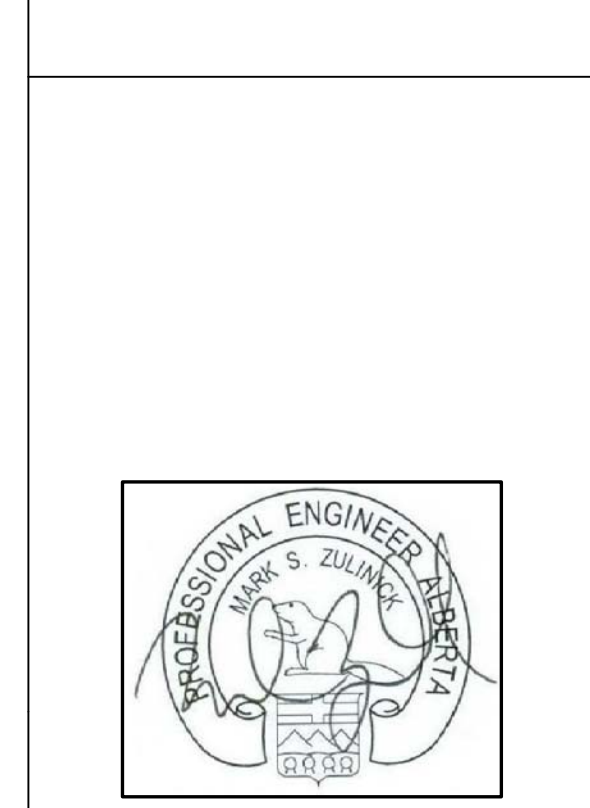
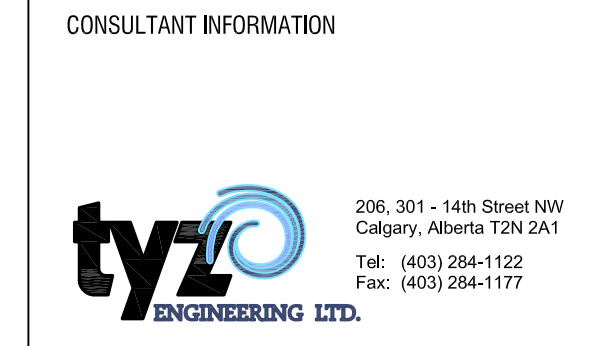


1 EXISTING BUILDING DEMOLITION PLAN  
M1 SCALE: 1:200



### MECHANICAL DEMOLITION KEY NOTES

- REMOVE EXISTING FURNACES AND ASSOCIATED DUCTWORK IN CRAWLSPACE, VENTING, CONTROLS AND SUPPLY PROPANE PIPING.
- REMOVE EXISTING CONDENSING UNITS AND ASSOCIATED REFRIGERANT PIPING.
- REMOVE EXISTING SANITARY HOLDING TANK.
- REMOVE EXISTING DOMESTIC WATER STORAGE TANK AND ASSOCIATED PUMP AND DISTRIBUTION PIPING.
- REMOVE ALL EXISTING EXHAUST FANS SERVING WASHROOMS, LAB HOOD, WORKSHOP, CORRIDOR, LUNCH ROOM AND ASSOCIATED DUCTWORK, CONTROLS, DISCHARGE GRILLES AND GOOSENECKS.
- REMOVE EXISTING HOT WATER TANK AND ASSOCIATED DOMESTIC WATER AND PROPANE PIPING.
- REMOVE ALL LAB GAS AND COMPRESSED AIR PIPING AND ASSOCIATED CYLINDERS (NITROGEN & HELIUM).
- REMOVE ALL EXISTING PLUMBING FIXTURES AND ASSOCIATED PIPING.



PROJECT INFORMATION

SHEPARD LANDFILL  
NEW LAB BLDG.  
Calgary, AB

This drawing supersedes previous issues. Do not scale these drawings.  
Verify all dimensions, elevations and datums, and report any discrepancies to the Architect prior to construction. Dimensions are taken to face of exterior sheathing, face of concrete block, face of stud for interior partitions, and centerline of demising walls, unless noted otherwise on the drawing.  
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REVISIONS	DATE
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ISSUED FOR	DATE
1. TENDER	2014-02-12

SCALE	AS NOTED
DATE	2014-02-12 7:58 AM
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CHECKED BY	TN
PROJECT NO.	02-12-09

DRAWING TITLE  
MECHANICAL DEMOLITION PLAN  
SCHEDULES & LEGEND

DRAWING NO.  
M1

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