

GENERAL LEGEND	
	ELECTRIC BASEBOARD HEATER
	ELECTRIC ENTRANCE HEATER
	ELECTRIC UNIT HEATER
	UNDERCUT DOOR
	GRILLE/DIFFUSER LABEL
	RADIATION LABEL
	EQUIPMENT LABEL
	EQUIPMENT LABEL
	EQUIPMENT LABEL
	EQUIPMENT LABEL
	HEATING LABEL
	CALLOUT NOTE
	NOTE

GENERAL PIPE AND FITTING LEGEND	
	PIPE SLOPE - UP (OR DOWN)
	DIRECTION OF FLOW
	PIPE BREAK FOR CONTINUATION
	VENT THROUGH ROOF
	PIPE DOWN
	PIPE UP
	CAP
	CLEAN OUT
	HOSE BIBB
	WALL HYDRANT
	UNION
	VALVE - NORMALLY OPEN
	VALVE - NORMALLY CLOSED
	PLUG VALVE
	GLOBE VALVE
	SUPERVISED VALVE
	MOTORIZED 2-WAY VALVE
	MOTORIZED 3-WAY VALVE
	PRESSURE REGULATING VALVE
	TEMPERATURE/PRESSURE RELIEF VALVE
	CHECK VALVE
	STRAINER
	FLEXIBLE CONNECTOR

VENTILATION LEGEND	
	SQUARE OR RECTANGULAR DUCT
	DRAWN DOUBLE LINE
	ROUND OR OVAL DUCT
	DRAWN SINGLE LINE
	ACOUSTICALLY LINED DUCT
	THERMALLY INSULATED DUCT
	SQUARE TO ROUND TRANSITION
	TRANSITION
	FLEX CONNECTION
	LONG RADIUS ELBOW
	LONG RADIUS ELBOW C/W TURNING VANES
	SQUARE ELBOW C/W TURNING VANES
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN OR TRANSFER DUCT UP
	RETURN OR TRANSFER DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
	OUTSIDE AIR DUCT UP
	OUTSIDE AIR DUCT DOWN
	CEILING SUPPLY AIR DIFFUSER (TYPE NOTED)
	CEILING RETURN OR TRANSFER GRILLE (TYPE NOTED)
	CEILING EXHAUST GRILLE (TYPE NOTED)
	SIDEWALL SUPPLY AIR GRILLE (TYPE NOTED)
	SIDEWALL EXHAUST, RETURN OR TRANSFER GRILLE (TYPE NOTED)
	EXHAUST WALL CAP
	GRILLE OR DIFFUSER C/W FIRE STOP FLAP
	FIRE DAMPER
	FIRE/SMOKE DAMPER
	BALANCING DAMPER
	OPPOSED BLADE DAMPER
	PARALLEL BLADE DAMPER
	BACK DRAFT DAMPER
	FLEXIBLE DUCT CONNECTION
	END CAP
	ACCESS DOOR
	FAN-SYMBOL (TYPE NOTED)
	DOWNDRAFT CEILING FAN

PLUMBING PIPING LEGEND	
	ABOVE GROUND PIPING
	BELOW GROUND PIPING
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	RECIRCULATED DOMESTIC HOT WATER
	TEMPERED WATER SUPPLY
	TEMPERED WATER RETURN
	NATURAL GAS
	SANITARY DRAIN
	STORM WATER DRAIN
	RAIN WATER LEADER
	PUMPED DISCHARGE
	INDIRECT DRAIN
	PLUMBING VENT

CONTROLS LEGEND	
	WALL MOUNTED THERMOSTAT
	WALL MOUNTED TEMPERATURE SENSOR
	WALL MOUNTED HUMIDISTAT
	WALL MOUNTED HUMIDITY SENSOR
	REMOTE BULB SENSOR AND TUBE
	DUCT MOUNTED THERMOSTAT
	DUCT MOUNTED TEMPERATURE SENSOR
	DUCT MOUNTED HUMIDISTAT
	DUCT MOUNTED HUMIDITY SENSOR
	CARBON DIOXIDE SENSOR
	CARBON MONOXIDE SENSOR
	NITROGEN DIOXIDE SENSOR
	ANALOG OUTPUT
	ANALOG INPUT
	DIGITAL OUTPUT
	DIGITAL INPUT
	TRANSFORMER
	RELAY
	PNEUMATIC/ELECTRIC SWITCH
	TIMELOCK
	SPRING WOUND MANUAL TIMER
	MANUAL SWITCH
	DAMPER OR VALVE MOTOR
	ELECTRONIC SPEED CONTROLLER
	VARIABLE SPEED DRIVE
	VARIABLE FREQUENCY DRIVE

ACCESSORIES LEGEND	
	PLUMBING FIXTURE (TYPE NOTED)
	SHOWER HEAD (TYPE NOTED)
	SERVICE OUTLET (TYPE NOTED)
	FLOOR DRAIN (TYPE NOTED)
	ROOF DRAIN (TYPE NOTED)
	CATCH BASIN
	MANHOLE
	P-TRAP
	RUNNING TRAP
	PUMP
	WATER HAMMER ARRESTOR
	PRESSURE SWITCH
	FLOW SWITCH
	MANUAL AIR VENT
	AUTOMATIC AIR VENT
	BALL DRIP
	FLOW INDICATOR
	FLOW METER
	GAS METER
	WATER METER
	STEAM TRAP
	EXPANSION JOINT
	ALIGNMENT GUIDE
	ANCHOR
	PRESSURE GAUGE C/W SNUBBER VALVE
	THERMOMETER

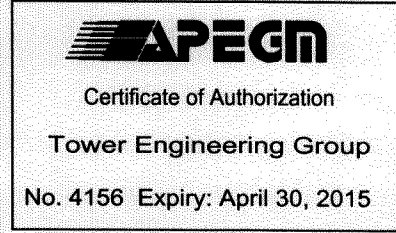
FIRE PROTECTION LEGEND	
	FIRE EXTINGUISHER
	FIRE EXTINGUISHER IN CABINET

ASHRAE 62.1-2007 OUTDOOR AIR CALCULATION																		
Zone	Space	Ceiling Height ft	Area ft ²	Volume ft ³	Zone Population Pz	Time Averaged Zone Population Pz*	Occupancy Density ft ² /occ	Ventilation/ Fresh Air				Supply		Exhaust				
								ASHRAE People Outdoor Air Rate, R _p cfm/person	ASHRAE Area Outdoor Air Rate, R _a cfm/ft ²	Breathing Zone Outdoor Airflow V _{bz} cfm	Breathing Zone Outdoor Airflow V _{bz} * cfm	Zone Outdoor Airflow V _{oz} cfm	Heating cfm	Cooling cfm	HVAC Unit	Heating Effectiveness E _z Heating	Cooling Effectiveness E _z Cooling	cfm/ft ²
	Corridor M02, M12, M19 & Circulation Hub M20		779	0				0.06	46.7	0.0	58.4	46.7	RT-2.E	0.8	1.0			
	Closet M03		20	0				0.12	2.4	0.0	3.0	2.4	RT-2.E	0.8	1.0			
	Gallery M04		54	0	2		27.0	5.0	0.06	13.2	0.0	16.6	13.2	RT-2.E	0.8	1.0		
	Mech/Elec M05		303	0					0.06	18.2	0.0	22.7	18.2	AHU-1.New	0.8	1.0	200.0	
	Canteen M06		139	0	2		69.5	5.0	0.06	18.3	0.0	22.9	18.3	AHU-1.New	0.8	1.0		
	Pantry M07		33	0					0.12	4.0	0.0	5.0	4.0	AHU-1.New	0.8	1.0		
	Kitchen M08		270	0	2		135.0	5.0	0.12	42.4	0.0	53.0	42.4	AHU-1.New	0.8	1.0	420.0	
	Bar M10		73	0	2		36.5	5.0	0.06	14.4	0.0	18.0	14.4	AHU-1.New	0.8	1.0		
	Mens WR M11		208	0						NA	0.0	T/A	T/A	RT-2.E	NA	NA	285.0	
	Washroom M13		60	0						NA	0.0	T/A	T/A	RT-2.E	NA	NA	75.0	
	Womens WR M14		242	0						NA	0.0	T/A	T/A	RT-2.E	NA	NA	285.0	
	Bingo M15		34	0					0.12	4.1	0.0	5.1	4.1	RT-2.E	0.8	1.0		
	Gym Storage M17		416	0					0.12	49.9	0.0	62.4	49.9	RT-2.E	0.8	1.0		
	Office M21		157	0	1		157.0	5.0	0.06	14.4	0.0	18.0	14.4	RT-2.E	0.8	1.0		
	Storage M22		19	0					0.12	2.3	0.0	2.9	2.3	RT-2.E	0.8	1.0		
	Elec. M23		17	0					0.06	1.0	0.0	1.3	1.0	RT-2.E	0.8	1.0		
	Multi-Purpose M24		347	0	9		38.6	5.0	0.06	65.8	0.0	82.3	65.8	RT-2.E	0.8	1.0		
	MPR #1 M25		894	0	23		38.9	5.0	0.06	168.6	0.0	210.8	168.6	RT-2.E	0.8	1.0		
	Computer M26		130	0	2		65.0	5.0	0.06	17.8	0.0	22.3	17.8	RT-2.E	0.8	1.0		
	MPR #2 M27		322	0	8		40.3	5.0	0.06	59.3	0.0	74.2	59.3	RT-2.E	0.8	1.0		
	MPR #3 M28		334	0	9		37.1	5.0	0.06	65.0	0.0	81.3	65.0	RT-2.E	0.8	1.0		
	Storage M29		40	0					0.12	4.8	0.0	6.0	4.8	RT-2.E	0.8	1.0		
	Universal Washroom M30		82	0						NA	0.0	T/A	T/A	RT-2.E	NA	NA	75.0	
	Storage M31		67	0					0.12	8.0	0.0	10.1	8.0	RT-2.E	0.8	1.0		
	Storage Room M32		315	0					0.12	37.8	0.0	47.3	37.8	RT-2.E	0.8	1.0		
	Safe Room M33		26	0					0.12	3.1	0.0	3.9	3.1	RT-2.E	0.8	1.0		
	Hall M34		259	0					0.06	15.5	0.0	19.4	15.5	RT-2.E	0.8	1.0		
	Mezzanine		629	0					0.12	75.5	0.0	94.4	75.5	AHU-1.New	1.0	1.0		
	Mezzanine Corridor		79	0					0.06	4.7	0.0	4.7	4.7	AHU-1.New	1.0	1.0		
	Totals		6348		60					757.5	0.0	926.8	757.5					

T/A = Transfer Air
NA = Not Applicable
NC = Not Included in Calculation

RT-2.E	725.0 cfm	Balance RT-2.E to	725 cfm
AHU-1.New	201.8 cfm	Balance AHU-1.New to	205 cfm
Total =	926.8 cfm	Total =	930 cfm

MECHANICAL DRAWING LIST	
M-0.0	MECHANICAL - LEGEND & DRAWING LIST
M-0.1	MECHANICAL - SITE PLAN
M-1.1	MECHANICAL - MAIN FLOOR - DEMO PLUMBING
M-1.2	MECHANICAL - MAIN FLOOR - NEW PLUMBING
M-2.1	MECHANICAL - MAIN FLOOR - DEMO HVAC
M-2.2	MECHANICAL - MAIN FLOOR - NEW HVAC
M-3.0	MECHANICAL - DETAILS
M-4.0	MECHANICAL - EQUIPMENT SCHEDULES
M-5.0	MECHANICAL - SPECIFICATIONS



rev4 - 2014-09-29 - Issued for Construction
rev3 - 2014-08-01 - Issued for 95% Review
rev2 - 2014-06-27 - Issued for 75% Review
rev1 - 2014-04-30 - Issued for 30% Review
revision

The drawings, specifications, revisions, addendums, and clarifications, must be read as a whole. Errors and omissions due to separation of the documents by the general contractor become the responsibility of the same.

This drawing must not be scaled.
The general Contractor must verify all dimensions, datums and levels prior to commencement of work. All errors and omissions must be reported immediately to the Architect.
Variations and modifications to work shown on this drawing shall not be carried out without written permission from the Architect.

TOWER PROJECT NO. :141033

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project
WESTON MEMORIAL COMMUNITY CENTRE - INTERIOR RENOVATION
WINNIPEG, MANITOBA

sheet title
MECHANICAL LEGEND AND DRAWING LIST

project number: 14-004 drawing number:
scale: AS SHOWN **M-0.0**
drawn by: JRR
approved by: JC
date: September 30, 2014