

Revisions	
1	ADDENDUM #1 3-18-2010
3	ADDENDUM #3 3-25-2010

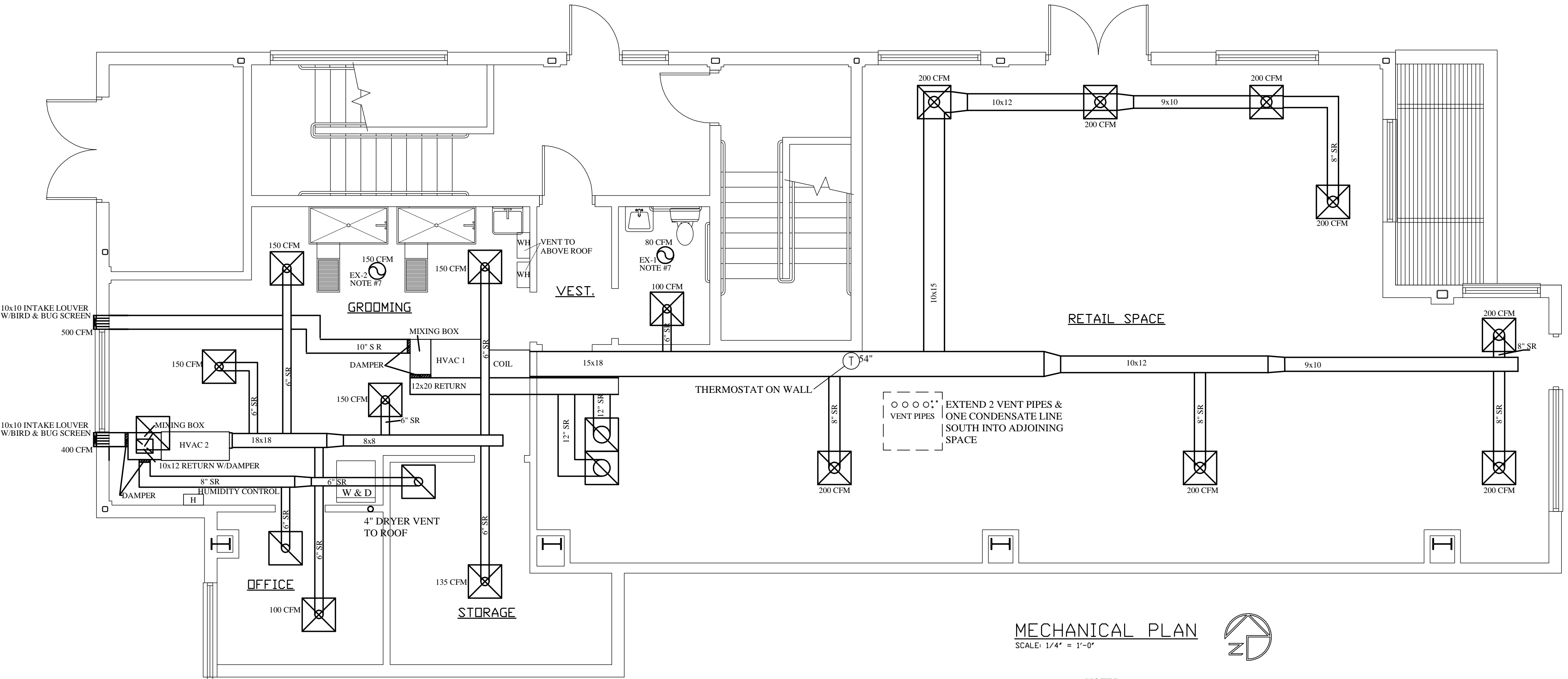
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Plotted: APRIL 6, 2010
 Issue Date:
 MARCH 16, 2010
 Drawn: J.KIDD
 Job No:

- MECHANICAL NOTES:**
- ALL DUCT SIZES NOTED ON DRAWINGS REFER TO ACTUAL AIRWAY SIZES (SOUND LINING AND/OR INSULATION IS NOT INCLUDED)
 - COORDINATE ALL FINAL LOCATIONS OF SUPPLY AIR DIFFUSERS, RELIEF AIR GRILLES, THERMOSTATS, SENSORS, ETC. WITH ARCHITECT AND ARCHITECTURAL REFLECTED CEILING PLANS.
 - MECHANICAL CONTRACTOR TO COORDINATE WITH ALL OTHER TRADES INVOLVED, ALL WORK WHICH IS IN THE CEILING SPACE AS INDICATED IN THE DRAWINGS WITHOUT CONFLICT AND TO REVISE HIS WORK TO AVOID CONFLICTS AND OBSTRUCTIONS AS NECESSARY AND AS REQUIRED.
 - ALL DUCTS PENETRATING FULL HEIGHT WALLS ABOVE CEILINGS SHALL BE SEALED TO WITHIN 1/8" OF DUCT WITH WALL MATERIAL ON EACH SIDE OF WALL.
 - PROVIDE R-6 EXTERNAL INSULATION FOR ALL SUPPLY AND RETURN DUCTWORK.
 - ALL DUCT COVERINGS AND LININGS SHALL HAVE A FLAME SPREAD RATINGS NOT TO EXCEED 25 AND A SMOKE DEVELOPMENT RATING NOT MORE THAN 50.
 - DUCT CONSTRUCTION AND INSULATION SHALL COMPLY WITH SMACNA 95 STANDARDS DUCTS SHALL BE CONSTRUCTED OF GALVANIZED SHEET STEEL.
 - ALL CONSTRUCTION DOCUMENTS, INSTALLATION MANUALS, MANUFACTURERS CATALOG CUT SHEETS ARE TO BE PROVIDED AT TIME OF INSPECTIONS. ALL MATERIALS AND EQUIPMENT ARE TO BE LISTED AND LABELED AND SUITABLE FOR USE.
 - DUCTS SHALL BE SUPPORTED WITH APPROVED HANGERS AT INTERVALS NOT EXCEEDING TEN FEET. DUCTS INSTALLED IN LOCATIONS WHERE THEY ARE EXPOSED TO MECHANICAL DAMAGE BY VEHICLES OR OTHER CAUSES SHALL BE PROTECTED BY APPROVED BARRIERS.
 - THERE IS A PERMANENT APPROVED MEANS OF ACCESS TO THE ROOF FOR SERVICING THE ROOFTOP EQUIPMENT.
 - ALL FRESH AIR INTAKES SHALL BE MORE THAN 12' FROM ANY SOURCES OF CONTAMINANTS.

- NOTES FOR EXHAUST SYSTEMS:**
- PROVIDE NEW ROUND DUCT. SEAL ALL JOINTS. DO NOT USE SHEET METAL SCREWS
 - PROVIDE DUCT TAPE FOR ALL JOINTS. PROVIDE ADDITIONAL DUCT TAPE SUPPORT AS REQUIRED
 - PROVIDE ACCESS PANELS (IN DUCTS) AND CLEANOUTS (AT END OF DUCTS) TO CLEAN DUCTS. UNITED MCGILL MODEL ASHXFSDC - HINGED ACCESS DOOR. SEE PLANS AND DETAILS, FOR LOCATIONS OF NEW DOORS. (CLEANOUTS IN NEW AND EXISTING DUCTS. SEE DETAIL FOR NEW DUCT WORK AT DRYERS.)
 - DUCTED VENTS TO TERMINATE ABOVE ROOF.
 - COMBUSTION AIR AND EXHAUST FOR FURNACE TO TERMINATE ABOVE ROOF PER MANUFACTURERS SPECIFICATIONS.

- SYMBOLS AND GENERAL SPECIFICATIONS**
- 50 AIR QUANTITY IN CFM
- PERFORATED CEILING SUPPLY DIFFUSER, DEFLECTORS IN NECK, STEEL CONSTRUCTION, ADJUSTABLE AIR PATTERN CONTROLLERS, FLUSH FACE CEILING MODULE, T-BAR LAY-IN CEILING - SEE ARCH. DWGS., ARCHITECT TO SELECT COLOR, OPPOSED BLADE DAMPER.
- 6"Ø NECK - 0-135 CFM
 8"Ø NECK - 136-200 CFM
 10"Ø NECK - 201-350 CFM
 12"Ø NECK - 350-600 CFM
 14"Ø NECK - 600-900 CFM
- RETURN GRILLE, SAME AS ABOVE EXCEPT WITHOUT OPPOSED BLADE DAMPER, ADJUSTABLE AIR PATTERN CONTROLLERS AND DEFLECTORS IN NECK
- TRANSFER GRILLE, FIXED LOUVERS. STEEL CONSTRUCTION, 45 DEG. DEFLEC, FRONT BLADES PARALLEL TO LONG DIMENSION, ARCHITECT TO SELECT COLOR, VERIFY BORDER / MOUNTING WITH ARCHITECT
- LINEAR SUPPLY DIFFUSER WITH INSULATED PLENUM 2' LONG. (2) 1" SLOTS KEES MODEL OR EQUAL.
- DAMPER, IN DUCT, ADJUSTABLE SIZE TO FIT (2) 1" SLOTS KEES MODEL OR EQUAL.
- 10" S R SPIRAL ROUND DUCT, SIZE PER DRAWING
- 15x18 RECTANGULAR DUCT, SIZE PER DRAWING
- H HUMIDISTAT-THERMOSTAT, THREE STAGE, PROGRAMABLE
- T THERMOSTAT, PROGRAMABLE
- E EXHAUST FAN



VENTILATION DATA

ROOM #	ROOM NAME	ROOM USE	SQ. FT.	O.A. DESIGN LOAD	# OF PEOPLE	O.A. PER PERSON	TOTAL O.A.	ACT. S.A. C.F.M.	ACT. R.A. C.F.M.	ACT. EXH.	EQUIPMENT
1	RETAIL SPACE	RETAIL	1433	0.30 CFM / SQ FT	NA	NA	430	1600	1500	—	HVAC-1
2	REST ROOM	REST ROOM	46	75 CFM / WC	NA	NA	NA	100	—	80	HVAC-1
3	GROOMING ROOM	PET CARE	388	1 CFM / SQ FT	NA	NA	388	600	600	150	HVAC-2
4	OFFICE	OFFICE	95	7 PEOPLE PER 1000 SQ. FT.	1	20	20	100	100	—	HVAC-2
5	STORE ROOM	STORAGE	135	0.05 CFM / SQ FT	NA	NA	7	135	135	—	HVAC-2

- NOTES:**
- DUCTWORK DESIGNED @ 0.08" FRICTION, INSULATE PER ASHRAE RECOMMENDATIONS.
 - COMPRESSORS FOR HVAC 1 & 2 LOCATED ON ROOF. PROVIDE POWER, CONTROL WIRING, DISCONNECTS AND MAINTENANCE OUTLETS PER CODE. (SEE SHEET E1)
 - PROVIDE BOOSTER FANS FOR BOTH EXHAUST FANS, WATER HEATER VENTS AND DRYER VENT. PROVIDE POWER AND CONTROL FROM SAME CIRCUIT FOR EQUIPMENT IN ROOMS.
 - PROVIDE CONDENSATE LINES FOR HVAC 1 & 2 RUN TO OPEN SITE DRAIN.
 - HANG HVAC UNITS ON ISOLATION MOUNTS (1.5" STATIC DEFLECTION OR BETTER) AND USE ISOLATION BOOTS ON DUCTWORK ON BOTH ENDS OF THE UNITS.
 - HVAC2 SHALL HAVE HEAT PUMP HUMIDITY CONTROL WITH ELECTRIC HEAT
 - DUCT UP TO ROOF FOR EXHAUST FANS EX-1, EX-2 AND DRYER VENT.
 - PROVIDE ROOFTOP MECHANICAL EQUIPMENT CURBS AND ROOF FLASHINGS AT PENETRATIONS AS NECESSARY FOR A COMPLETE WEATHERTIGHT INSTALLATION. DO NOT VOID THE ROOF MANUFACTURER'S WARRANTY.
 - NO FLEX DUCTWORK SHALL BE USED ON THIS PROJECT.

HVAC UNIT EQUIPMENT SCHEDULE

UNIT NO.	AREA SERVED	SUPPLY FAN PERFORMANCE			HEATING			ELECTRIC SERVICE				REMARKS	WEIGHT (LBS)	COOLING			ELECTRIC SERVICE				REMARKS	WEIGHT (LBS)		
		TOTAL CFM	OUTSIDE AIR CFM	RPM	4.5" H ₂ O MIN. GAS PRESS. OUTPUT MBH	INPUT AIR TEMP RISE °F	VOLTS	PH	MCA	MOC	PH			MCA	MOC	PH	MCA	MOC						
HVAC1	1,2	2135	500	23	—	1/2	88	84	35	120	1	12	20	G61MP060C090	168	4	45.5	15	208	3	18.5	30	SSB60CH4	148
HVAC2	3,4,5	1545	400	26	—	1/2	57	NA	NA	208	3	29	30	CBX32MV036	183	3	57.2	14.7	208	3	15.4	25	SPB036H4	229

HVAC2 HEAT PUMP HUMIDITY CONTROL W/ELECTRIC HEAT

FAN SCHEDULE

UNIT NO.	SERVICE / LOCATION	CFM	TOTAL STATIC PRESSURE H ₂ O	DUCT PRESSURE CLASS IN H ₂ O	DUCT SEALING CLASS	FAN RPM	DRIVE	WEIGHT (LBS)	TYPE	DISCH.	MOTOR				VIBRATION ISOLATION		REMARKS
											V/PH/CY	HP	RPM	INTER LOCK w/ SYSTEM	TYPE	MIN. STAT DEFL. IN.	
EX-1	TOILETS	80	0.10	0.1	C	NA	DIRECT	10	CLG.	—	120/1/60	23.3 W	—	LIGHT SW.	—	—	BROAN QTXE080
EX-2	GROOMING	150	0.10	0.1	C	NA	DIRECT	11	CLG.	—	120/1/60	15.3 W	—	LIGHT SW.	—	—	BROAN QTXE150

DUCT CONSTRUCTION MINIMUM SHEET METAL THICKNESS

Max size (Inches)	ROUND DUCTS	
	Spiral Seam Duct Steel Nominal Min. Thickness	Longitudinal Seam Duct Steel Nominal Min Thickness
Through 14	0.015 (28 gage)	0.018 (26 gage)
Through 20	0.018 (26 gage)	0.024 (24 gage)
Through 30	0.024 (24 gage)	0.030 (22 gage)
Through 40	0.030 (22 gage)	0.036 (20 gage)
Through 52	0.036 (20 gage)	0.048 (18 gage)

Max size (Inches)	RECTANGULAR DUCTS	
	Steel Nominal Min. Thickness	Aluminum Nominal Min Thickness
Through 14	0.018 (26 gage)	0.024 (24 gage)
Through 30	0.024 (24 gage)	0.030 (22 gage)
Through 55	0.030 (22 gage)	0.036 (20 gage)
Through 84	0.036 (20 gage)	0.048 (18 gage)
Over 84	0.048 (18 gage)	0.060 (16 gage)

FIRESTOPPING NOTE:
 CONTRACTORS SHALL PROVIDE FIRESTOPPING AT ALL PENETRATIONS THROUGH FLOORS. PROVIDE MIN. 1" THERMAFIBER SMOKE SEAL CAULK TOP & BOTTOM OF PENETRATION ALL AROUND. COMPLETELY FILL VOID WITH THERMAFIBER SAFING INSULATION.

