



UNIT	NAME	AREA (SQ. FT.)	* OF UR	* OF POWDER	SIZE (T)	FIXTURE UNITS	BR	SQ. FT./T
414	IC-D1	530	2	0	1	16	1	530
415	IC-DC1	600	2	0	1	16	1	600
416	IC-DF	610	2	0	1	16	1	610
417	ID3	480	1	0	1	10	1	480
418	IC-DA1	570	1	1	1	16	1	570
419	IG	700	2	0	15	16	2	467
421	IM	550	1	0	15	10	1	367
422	IC-DE1	625	2	0	15	16	1	417
423	IC-DD1	620	2	0	1	16	1	620
424	IC-DG1	620	2	0	1	16	1	620
425	IL2	615	1	0	15	10	1	410
426	ILA	595	1	0	15	10	1	397
427	IL2	615	1	0	15	10	1	410

GRILLE SIZING TABLE		
DESIGNATION	SIZE	L/S (UNLESS OTHERWISE SPECIFIED)
SG-A	300x100	47-70
SG-B	300x150	71-93
SG-C	400x150	94-140
SG-D	450x150	141-188
EG-A	150x150	35
W-1	225x200	210mm(L)
W-2	475x200	INSULATED
W-3	675x200	WALL BOX

VERTICAL FAN COIL SIZE		
DESIGNATION	MODEL	W X D
FCU-IT	450	500x660
FCU-15T	600	500x660
FCU-2T	800	500x660
FCU-25T	1000	550x660
FCU-3T	1200	550x660

NOTE:
A MIN. OF 125mm IS REQUIRED ON THE SIDE OF PIPE RISER.

DUCT SIZING TABLE (4.06 m/s, 800 FPM)					
DESIGNATION	L/S	DUCT SIZE	DESIGNATION	L/S	DUCT SIZE
(A)	47	100x150	(G)	189	350x150
(B)	71	150x150	(H)	236	450x150
(C)	94	200x150	(J)	283	500x150
(D)	118	200x150	(K)	330	600x150
(E)	141	250x150	(L)	377	500x200
(F)	165	300x150			



- GENERAL NOTES:
- CONTRACTOR SHALL CO-ORDINATE ARCHITECTURAL, STRUCTURAL, LIGHTING, HVAC, SFRINKLER DRAWINGS TO AVOID AREAS OF CONFLICT AND TO MAINTAIN CEILING HEIGHTS.
 - CONTRACTOR SHALL REPORT ALL DISCREPANCIES AND AREA OF CONFLICTS TO THE ENGINEER PRIOR TO WORK BEGINS.
 - PROVIDE EXPANSION CHAMBERS FOR ALL KITCHEN SINKS.
 - SEE INSTALLATION DETAILS DRAWING FOR WASHER, D.O.M, H.C WATER, SANITARY CONNECTION DETAILS.
 - SUPPLY AND INSTALL COMPLETE DOMESTIC HOT AND COLD WATER LINES, SANITARY AND VENT LINES TO EACH FIXTURE EQUIPMENT INCLUDING WATER CLOSETS, LAVATORIES, BATHS, SHOWERS, KITCHEN SINK, WASHING MACHINES, DISHWASHERS, AND FLOOR DRAINS, KITCHEN SINK, LAVATORIES, WATER CLOSETS AND WASHING MACHINE TO BE CAU LOCALIZED SHUT-OFF VALVES.
 - ALL VENT PIPE INSTALLATION TO COMPLY WITH PLUMBING CODES.
 - FOR D.H.C. W. RISER SIZES, REFER TO RISER DIAGRAM
 - FIRE DAMPERS ARE REQUIRED TO BE LISTED AND ARE TO HAVE FIRE PROTECTION RATING OF THE PENETRATED FIRE SEPARATION.
 - THE PIPING PENETRATING THE VARIOUS FIRE SEPARATION IS REQUIRED TO BE FIRESTOPPED WITH A LISTED FIRESTOPPING MATERIAL IN ACCORDANCE WITH OBC ARTICLE 3.13.1
 - THE FIRE HOSE CABINET THAT ARE RECESSED INTO THE EXIT STAIR SHAFTS ARE REQUIRED TO BE SEPARATED FROM THE EXIT STAIR BY A 2 HR FIRE SEPARATION.
 - NO FLEXIBLE DUCT SHALL BE USED FOR ANY IN-SUITE DUCTWORK.
 - PROVIDE 25MM EXTERNAL INSULATION TO ENTIRE FRESH AIR DUCT FROM EXTERIOR WALL TO ERV FAN COIL UNIT.
 - DRYER EXHAUST DUCT SHALL BE SMOOTH AND CORROSION-RESISTANT MATERIAL (FLEXIBLE CONNECTION IS NOT ACCEPTABLE).

- ACOUSTIC NOTES:
- ALL SYSTEM/DOMESTIC PIPE LOOPS OR OFFSETS WHICH ARE 50MM DIA. AND LARGER SHALL BE ISOLATED USING NEOPRENE IN-SHEAR HANGERS, AND ADDITIONAL 25 MM THICK RIBBED OR WAFFLED NEOPRENE PADS IN THE SADDLES OF CLEVIS HANGERS.
 - ALL PIPES SMALLER THAN 50MM DIA. SHALL BE ISOLATED WITH 5MM THICK RIBBED OR WAFFLED RUBBER PADS IN HANGER SADDLES.
- CLEAR FLOOR TO UNDERSLAB = 250mm
CLEAR PRODUCT = 250mm
UNITS 419/421: DRAINS FROM TERRACE ON 5/F

- NOTES:
- SOUTH F/A SHAFT FROM G/F TO 5/F. DUCT SERVING CORRIDOR FROM G/F TO 5/F. SEE PRESSURIZATION / VENTILATION RISER DIAGRAM FOR DETAILS.
 - 150+ KITCHEN / DRYER / W/R / FCU INTAKE / FCU EXHAUST DUCT. (TYPICAL UNLESS OTHERWISE NOTED)
 - 100+ RUL FROM ABOVE AND DOWN.
 - 150+ RUL FROM ABOVE AND DOWN.
 - 100+ RUL FROM ABOVE.
 - 100+ RUL DOWN.
 - 100+ ST1 @1%.

LEGEND MECHANICAL

SYMBOL	DESCRIPTION
[Symbol]	APPLY AIR DRYER
[Symbol]	APPLY AIR TRAP
[Symbol]	LINEAR SUPPLY DIFFUSER
[Symbol]	THERMOSTAT
[Symbol]	FAN MOTOR
[Symbol]	RETURN AIR GRILLE
[Symbol]	EXHAUST AIR GRILLE
[Symbol]	APPLY DUCT UP
[Symbol]	APPLY DUCT DOWN
[Symbol]	RETURN DUCT UP
[Symbol]	RETURN DUCT DOWN
[Symbol]	EXHAUST DUCT UP
[Symbol]	EXHAUST DUCT DOWN
[Symbol]	FIRE DAMPER
[Symbol]	BALANCING DAMPER
[Symbol]	MOTORIZED DAMPER
[Symbol]	MOTORIZED FIRE DAMPER
[Symbol]	BACKDRIFT DAMPER
[Symbol]	OPPOSED BLADE VOLUME CONTROL DAMPER
[Symbol]	CO2 SENSOR
[Symbol]	TURNING VANES
[Symbol]	FLEXIBLE CONNECTION
[Symbol]	ACOUSTIC INSULATION
[Symbol]	TYPE OF EQUIPMENT
[Symbol]	BASEMENT IDENTIFICATION
[Symbol]	TYPE OF CHIMNEY OR GRILLE
[Symbol]	SHALL BE ON OFFSHORE WALK W/SE
[Symbol]	ANALOG (G/F OR L/S)
[Symbol]	STARTER (3 PHASE / PHASE)
[Symbol]	IN-SUITE ERV WATER METER
[Symbol]	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
[Symbol]	CO SENSOR
[Symbol]	GAS LINE
[Symbol]	GAS METER
[Symbol]	GAS SOLE
[Symbol]	PRESSURE REDUCING VALVE
[Symbol]	SANITARY ABOVE GRADE
[Symbol]	SANITARY BELOW GRADE
[Symbol]	STORM ABOVE GRADE
[Symbol]	STORM BELOW GRADE
[Symbol]	DOMESTIC COLD WATER
[Symbol]	DOMESTIC HOT WATER
[Symbol]	DOMESTIC HOT WATER RECIRCULATION
[Symbol]	SANITARY VENT
[Symbol]	WATER METER
[Symbol]	FLOOR DRAIN
[Symbol]	RUNNEL FLOOR DRAIN
[Symbol]	ALB DRAIN
[Symbol]	ROOF DRAIN
[Symbol]	ALB DRAIN
[Symbol]	AREA DRAIN
[Symbol]	BI-LEVEL AREA DRAIN
[Symbol]	CATCH BASIN
[Symbol]	SANITARY TRAP
[Symbol]	ELBOW UP
[Symbol]	ELBOW DOWN
[Symbol]	WALL CLEANOUT
[Symbol]	FLOOR CLEANOUT
[Symbol]	HOSE BIBB
[Symbol]	NON-PRESSURE HOSE BIBB
[Symbol]	GATE VALVE
[Symbol]	BALL VALVE
[Symbol]	BUTTERFLY VALVE
[Symbol]	PRESSURE REDUCING VALVE
[Symbol]	CAP VALVE
[Symbol]	CAP
[Symbol]	COMPRESSED AIR OUTLET
[Symbol]	BACKUP OF PRESSURE
[Symbol]	CIRCUIT BALANCING VALVE
[Symbol]	MULTIPLE PIPES
[Symbol]	IDENTIFY NO. OF PIPES
[Symbol]	TEMPERATURE SENSOR
[Symbol]	THERMOPETER
[Symbol]	2-WAY MODULATING VALVE
[Symbol]	3-WAY MODULATING VALVE
[Symbol]	10'x10' THERMOWELL
[Symbol]	CAU 10' BUILDING 4 10' PLUS
[Symbol]	FLOOR ELEVATION ABOVE LEVEL
[Symbol]	CEILING ELEVATION ABOVE LEVEL
[Symbol]	HEADROOM FLOOR TO CEILING

NO.	DESCRIPTION	DATE
1	ISSUED FOR PERMIT	EP
2	ISSUED FOR PERMIT	EP
3	ISSUED FOR PERMIT	EP
4	ISSUED FOR PERMIT	EP
5	ISSUED FOR PERMIT	EP
6	ISSUED FOR PERMIT	EP
7	ISSUED FOR PERMIT	EP
8	ISSUED FOR PERMIT	EP
9	ISSUED FOR PERMIT	EP
10	ISSUED FOR PERMIT	EP
11	ISSUED FOR PERMIT	EP
12	ISSUED FOR PERMIT	EP
13	ISSUED FOR PERMIT	EP
14	ISSUED FOR PERMIT	EP
15	ISSUED FOR PERMIT	EP
16	ISSUED FOR PERMIT	EP
17	ISSUED FOR PERMIT	EP
18	ISSUED FOR PERMIT	EP
19	ISSUED FOR PERMIT	EP
20	ISSUED FOR PERMIT	EP
21	ISSUED FOR PERMIT	EP
22	ISSUED FOR PERMIT	EP
23	ISSUED FOR PERMIT	EP
24	ISSUED FOR PERMIT	EP
25	ISSUED FOR PERMIT	EP
26	ISSUED FOR PERMIT	EP
27	ISSUED FOR PERMIT	EP
28	ISSUED FOR PERMIT	EP
29	ISSUED FOR PERMIT	EP
30	ISSUED FOR PERMIT	EP
31	ISSUED FOR PERMIT	EP
32	ISSUED FOR PERMIT	EP
33	ISSUED FOR PERMIT	EP
34	ISSUED FOR PERMIT	EP
35	ISSUED FOR PERMIT	EP
36	ISSUED FOR PERMIT	EP
37	ISSUED FOR PERMIT	EP
38	ISSUED FOR PERMIT	EP
39	ISSUED FOR PERMIT	EP
40	ISSUED FOR PERMIT	EP
41	ISSUED FOR PERMIT	EP
42	ISSUED FOR PERMIT	EP
43	ISSUED FOR PERMIT	EP
44	ISSUED FOR PERMIT	EP
45	ISSUED FOR PERMIT	EP
46	ISSUED FOR PERMIT	EP
47	ISSUED FOR PERMIT	EP
48	ISSUED FOR PERMIT	EP
49	ISSUED FOR PERMIT	EP
50	ISSUED FOR PERMIT	EP

NOVA ENGINEERING

175 West Beaver Creek Road Unit 31
Richmond Hill, Ontario L4B 3M1
Tel: 905-882-5445
Fax: 905-882-5441

PROJECT TITLE
4/F SOUTH MECHANICAL LAYOUT

DATE: FEB 13 2013

SCALE: 1:50

PROJECT NUMBER: M-16

DRAWING NUMBER: 04