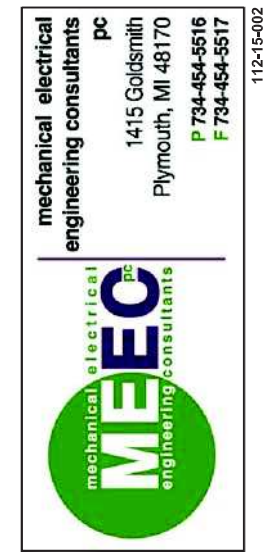


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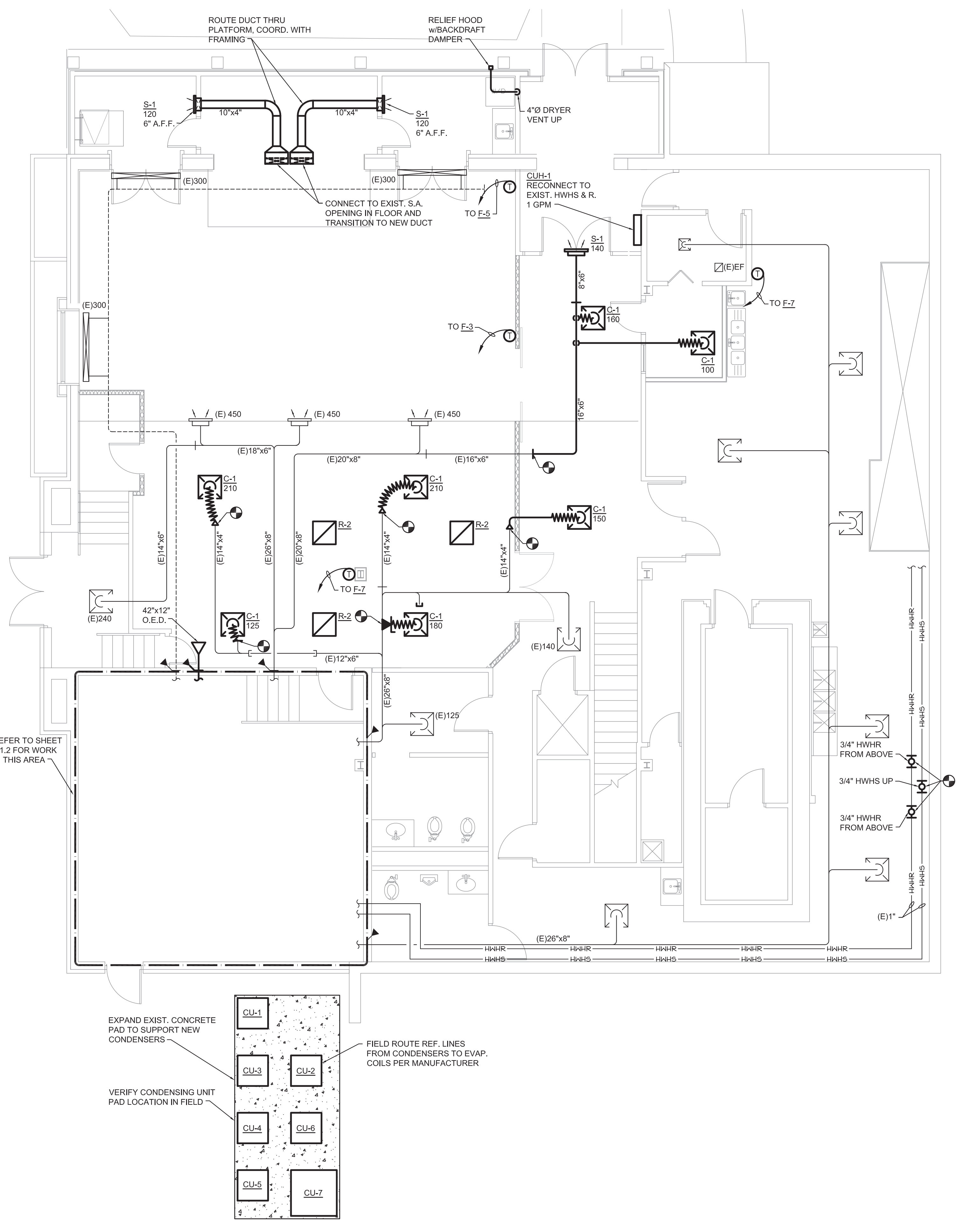
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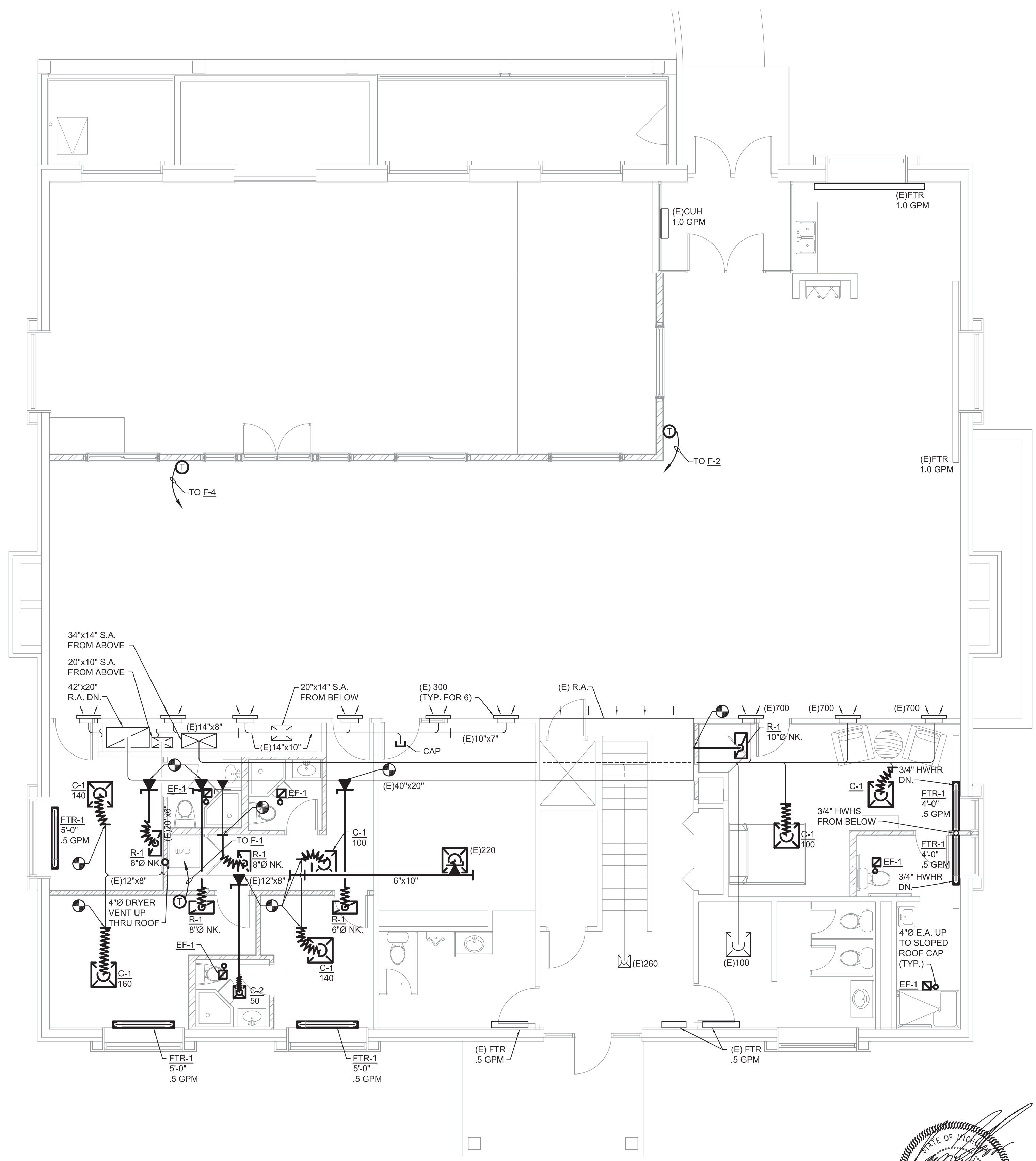
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NEW ADDITION AND REMODEL FOR:
MICHIGAN BHAKTI CENTER
FARINGTON HILLS, MICHIGAN
FLOOR PLANS - MECHANICAL NEW WORK

M1.1
1421

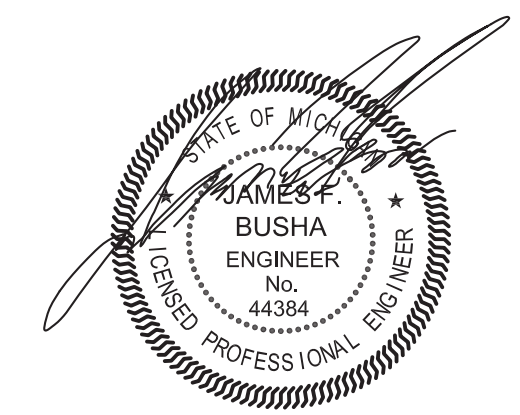


1 FIRST FLOOR PLAN - MECHANICAL NEW WORK



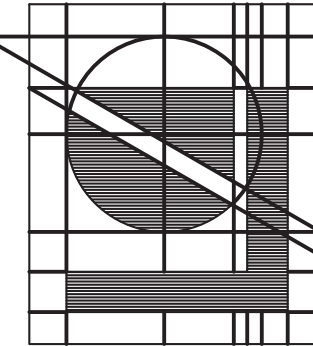
DIFFUSER/GRILLE NECK SIZE SCHEDULE	
NECK SIZE	CFM
6"Ø	0 - 140
8"Ø	150 - 300
10"Ø	325 - 500
12"Ø	525 - 700

2 SECOND FLOOR PLAN - MECHANICAL NEW WORK



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SCALE: 3/16" = 1'-0"



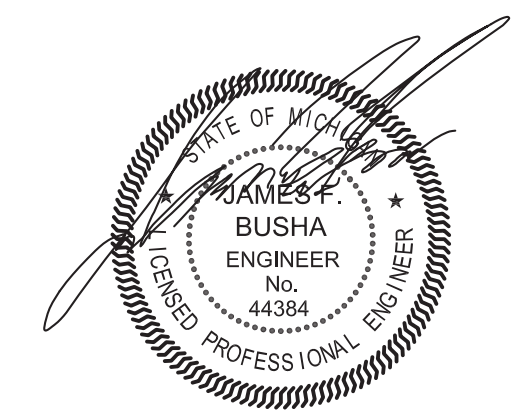
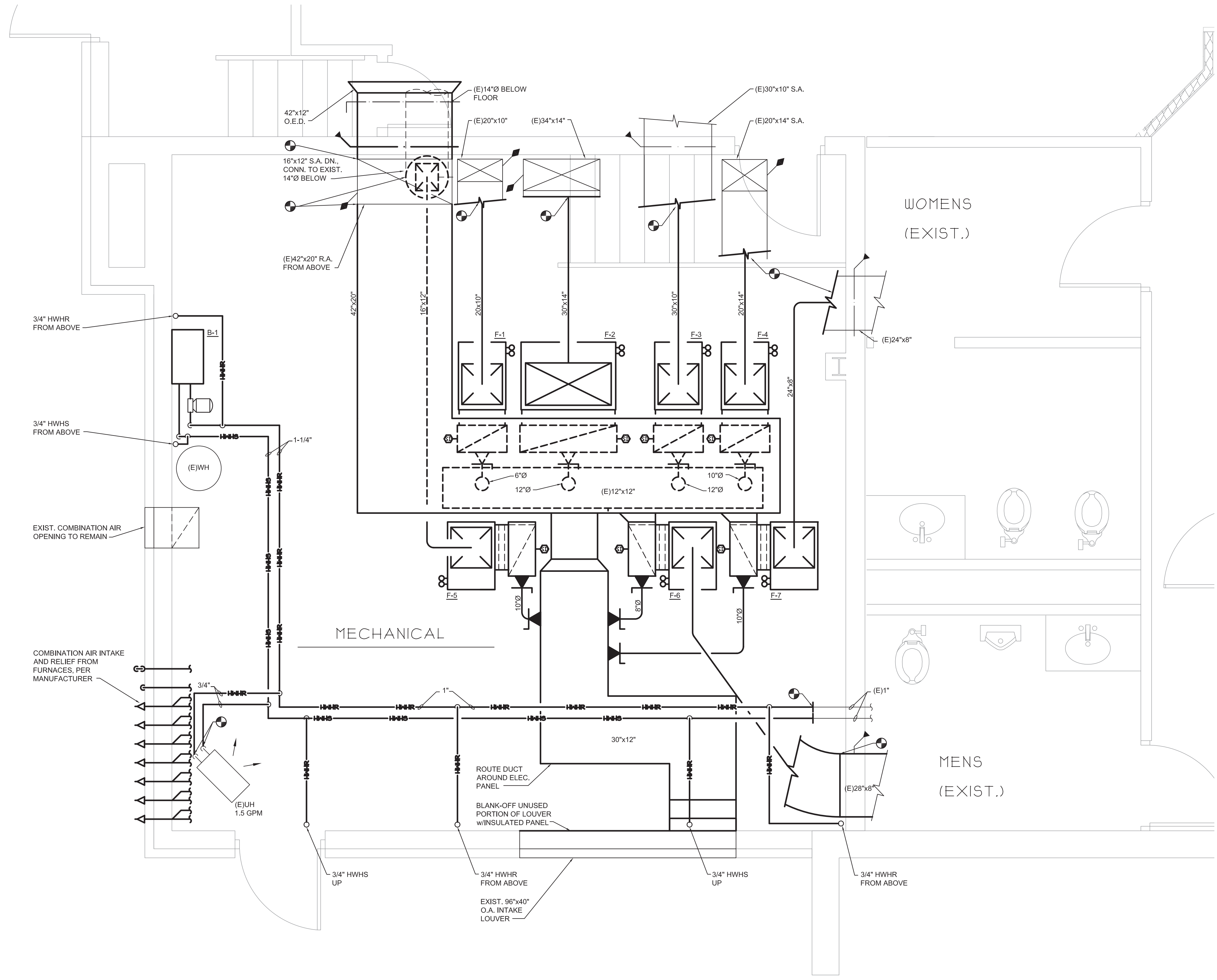
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NEW ADDITION AND REMODEL FOR:
MICHIGAN BHAKTI CENTER
FARYINGTON HILLS, MICHIGAN
MECHANICAL ROOM PLAN - MECHANICAL NEW WORK

M1.2
1421



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BOILER SCHEDULE																	
MARK	MANUFACTURER	MODEL NUMBER	BOILER TYPE	UNIT SERVING	FUEL TYPE	FLUID	DESIGN WATER FLOW	INPUT (MBH)	OUTPUT (MBH)	TURNDOWN RATIO	MAXIMUM PRESSURE	C.A. DIA.	VENT DIA.	VENT MATERIAL	ENTERING WATER TEMP.	LEAVING WATER TEMP.	NOTES
B-1	LOCHINVAR	WBN106	CONDENSING WALL HUNG	HEATING	NATURAL	WATER	10	105	94	5:1	160 PSI	2"	2"	CPVC	160	180 °F	1 - 8

(APPROVED EQUAL: LOCHINVAR, RAYPAK, LARRS, A.O. SMITH)

- NOTES:
- ELECTRICAL CONTRACTOR TO PROVIDE POWER TO BOILER CONTROL TERMINAL STRIP, SEQUENCER & ASSOCIATED PUMP.
 - PROVIDE OPTIONAL SEALED COMBUSTION CONNECTION.
 - UNIT MOUNTED CIRCULATING PUMP.
 - OUTDOOR TEMPERATURE RESET
 - 30 PSI RELIEF VALVE
 - LOW WATER CUT-OFF
 - HIGH TEMP. RESET
 - FLOW SWITCH

PUMP SCHEDULE														
MARK	MANUFACTURER	MODEL NUMBER	SIZE	LOCATION	TYPE	FLOW (GPM)	TOTAL HEAD (FT)	ELECTRICAL DATA					NOTES:	
								HP	RPM	VOLTAGE	PHASE	HZ		
P-1	GRUNDFOSS	UPS26-99FC	1"	MECH. ROOM	IN-LINE	10	18	1/6	3-SPEED	120	1	60	1, 2, 3, 4, 5, 6	

(APPROVED EQUAL: BELL & GOSSETT, TACO, GRUNDFOS, ARMSTRONG)

- NOTES:
- START/STOP FROM BOILER.

CONDENSING UNIT SCHEDULE																		
MARK	MANUFACTURER	MODEL NUMBER	SYSTEM SERVED	COMPRESSORS				CONDENSER FAN			ELECTRICAL				WEIGHT	NOTES:		
				NUMBER	TYPE	CAPACITY (COMP-1)	R.L.A. (COMP-1)	CAPACITY (COMP-2)	R.L.A. (COMP-2)	#	HP (EA)	F.L.A. (EA)	VOLTS / PHASE	M.C.A.			MOCOP	SEER
CU-1	TRANE	4TTB3024E1	F-1	1	SCROLL	24,000	13.6	-	-	1	1/8	0.9	208/230/1	9	15	13	-	1 - 5
CU-2	TRANE	TTA090H300A	F-2	2	SCROLL	45,000	14.6	45,000	14.6	1	3/4	3.1	208/230/3	36	50	11.2	-	1 - 5
CU-3	TRANE	4TTA30603D	F-3	1	SCROLL	60,000	15.6	-	-	1	1/5	0.9	208/230/3	21	35	13	-	1 - 5
CU-4	TRANE	4TTA3048D3	F-4	1	SCROLL	48,000	13.7	-	-	1	1/5	0.9	208/230/3	18	30	13	-	1 - 5
CU-5	TRANE	4TTA3036A3	F-5	1	SCROLL	36,000	11.5	-	-	1	1/8	0.7	208/230/3	15	25	13	-	1 - 5
CU-6	TRANE	4TTA3036A3	F-6	1	SCROLL	36,000	11.5	-	-	1	1/8	0.7	208/230/3	15	25	13	-	1 - 5
CU-7	TRANE	4TTA3030A3	F-7	1	SCROLL	30,000	7.4	-	-	1	1/8	0.7	208/230/3	10	15	13	-	1 - 5

(APPROVED EQUAL: TRANE, CARRIER, YORK, LENNOX)

- NOTES:
- DATA BASED ON 95°F AMBIENT AIR.
 - CONCRETE SUPPORT PAD.
 - U.L. LISTED
 - LIQUID LINE FILTER/DRYER.
 - 410A REFRIGERANT
 - DUAL CIRCUIT.

FURNACE SCHEDULE																
MARK	MANUFACTURER	MODEL NUMBER	UNIT TYPE	SUPPLY AIR FLOW (CFM)	OUTDOOR AIRFLOW (CFM)	E.S.P. (IN)	COOLING DATA			HEATING DATA				ELECTRICAL DATA		NOTES:
							COIL TYPE	SIZE (TONS)	REFRIGERANT	TYPE	INPUT (MBH)	OUTPUT (MBH)	AFUE	FAN (HP)	VOLTS/PH/Hz	
F-1	TRANE	TUH1B040A9242	UP-FLOW	800	70	0.5	A-COIL	2.0	R-410	NATURAL	40	38	95%	1/5	120/160	1 - 5
F-2	TRANE	TUH1B080A960	UP-FLOW	2600	530	0.5	A-COIL	7.5	R-410	NATURAL	77	73.1	95%	3/4	120/160	1 - 6
F-3	TRANE	TUH1S120A960	UP-FLOW	2000	550	0.5	A-COIL	5.0	R-410	NATURAL	110	1045	95%	3/4	120/160	1 - 5
F-4	TRANE	TUH1C100A948	UP-FLOW	1600	330	0.5	A-COIL	4.0	R-410	NATURAL	97	92.1	95%	1/2	120/160	1 - 5
F-5	TRANE	TUH1B060A936	UP-FLOW	1200	325	0.5	A-COIL	3.0	R-410	NATURAL	60	57	95%	1/3	120/160	1 - 5
F-6	TRANE	TUH1B060A936	UP-FLOW	1215	200	0.5	A-COIL	3.0	R-410	NATURAL	60	57	95%	1/3	120/160	1 - 5
F-7	TRANE	TUH1B060A936	UP-FLOW	1140	325	0.5	A-COIL	3.0	R-410	NATURAL	60	57	95%	1/3	120/160	1 - 5

(APPROVED EQUAL: TRANE, CARRIER, LENNOX, ARMSTRONG)

- NOTES:
- PROVIDE 2" THICK PLEATED FILTER RACK AND FILTER, MERV 8.
 - UNIT SHALL HAVE ELECTRIC IGNITION (NO STANDING PILOT)
 - PROVIDE 7-DAY AUTOMATIC CHANGE-OVER PROGRAMMABLE THERMOSTAT WITH SUB-BASE.
 - UNIT SHALL BE U.L. LISTED AND A.G.A. CERTIFIED.
 - COOLING COIL CASING SHALL BE INSULATED AND DRAINED TO NEAREST FLOOR DRAIN.
 - TWINNING KIT.

HOT WATER CABINET UNIT HEATER SCHEDULE														
MARK	MANUFACTURER	MODEL NUMBER	DIMENSIONS	AREA SERVED	HEAT OUTPUT (BTUH)	WATER FLOW (GPM)	MAX PRESSURE DROP (FT WG)	ENTERING WATER TEMP.	LEAVING WATER TEMP.	NOMINAL (CFM)	ENTERING AIR TEMP.	LEAVING AIR TEMP.	MOTOR (HP)	NOTES
CUH-1	VULCAN	F02	35"x25"	VESTIBULE	17.4	1.0	.09	180°F	145	225	60°F	128°F	1/10	1 - 6

(APPROVED EQUAL: TRANE, STERLING, VULCAN)

- NOTES:
- COORDINATE EXACT LOCATION WITH ARCHITECTURAL TRADES AND WALL COVERING.
 - COLOR TO BE SELECTED BY ARCHITECT.
 - SURFACE MOUNTED.
 - CONFIGURATION TOP OUTLET, BOTTOM INLET
 - 3-WAY CONTROL VALVE
 - REFER TO PIPING DIAGRAM.

FINNED TUBE RADIATOR SCHEDULE											
MARK	MANUFACTURER	MODEL NUMBER	ENCLOSURE DIMENSIONS	TUBE MATERIAL	FIN MATERIAL	FIN SIZE	FINS PER FOOT	AVG. OUTPUT BTUH / FT	ENTERING WATER TEMP.	LEAVING WATER TEMP.	NOTES
FTR-1	VULCAN	800	3-3/8" x 9" H.	COPPER	ALUMINUM	2-3/4" x 2-3/4"	40	710	180°F	160°F	1 - 4

(APPROVED EQUAL: STERLING, VULCAN, TRANE, SLANTFIN)

- NOTES:
- COLOR SELECTION BY ARCHITECT.
 - FIELD VERIFY EXACT DIMENSIONS, PROVIDE ALL FITTINGS, END CAPS, HANGERS, ETC. AS REQUIRED.
 - PROVIDE ACCESS DOORS FOR VALVES, REFER TO PIPING DIAGRAM.
 - MANUAL DAMPER

EXPANSION TANK SCHEDULE												
MARK	MANUFACTURER	MODEL NUMBER	SYSTEM SERVED	TYPE	FLUID	MEAN WATER TEMP.	ASME CONSTRUCTION	PRESSURE RATING	TANK VOLUME (GALLONS)	ACCEPTANCE VOLUME (GALLONS)	WEIGHT LBS.	NOTES / ACCESSORIES
ET-1	AMTROL	ST-12-C	HEATING HOT WATER	VERTICAL BLADDER	WATER	180	NO	150	6.4	3.2	26	BLADDER TYPE VERTICAL THERMAL EXPANSION TANK

(APPROVED EQUAL: BELL & GOSSETT, WESSELS, AMTROL, TACO)

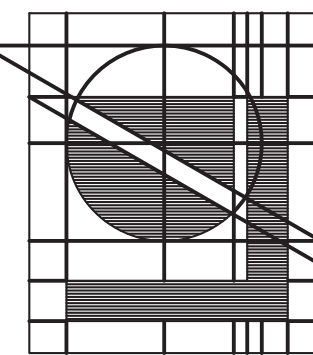
OUTDOOR AIR CALCULATION SCHEDULE													
UNIT TAG	ROOM NAME & NUMBER	TOTAL AREA SQ. FT. (Az)	2012 MMC OCCUPANCY CLASSIFICATION	AREA OUTDOOR AIRFLOW RATE (Ra) CFM/SQ. FT.	AREA OUTDOOR AIR (Ra) x (Az) CFM	OCCUPANT DENSITY RATE #/1000 SQ. FT.	ZONE POPULATION (Pz) x (Az) (#/1000) PEOPLE	PEOPLE OUTDOOR AIRFLOW RATE (Rp) CFM/PERSON	OCCUPANT OUTDOOR AIR (Rp) x (Pz) CFM	BREATHING ZONE OUTDOOR AIR (Vbz+RpPz+RaAz) CFM	ZONE AIR DISTRIBUTION EFFECTIVENESS (Ez)	ZONE OUTDOOR AIRFLOW REQUIRED (Voz=Vbz/Ez) CFM	TOTAL OUTDOOR AIR REQUIRED WITHIN ZONE CFM
F-1	UNIT 1	95	BEDROOM	0.06	5.7	-	1	5	5	10.7	0.8	13.4	1186
	UNIT 2	116	BEDROOM	0.06	7	-	1	5	5	12.0	0.8	15.0	
	UNIT 3	90	BEDROOM	0.06	5.4	-	1	5	5	10.4	0.8	13.0	
	CORRIDOR	95	CORRIDOR	0.06	5.7	-	-	-	-	5.7	0.8	7.2	
	EXIST. OFFICE	182	OFFICE	0.06	10.9	5	1	5	5	15.9	0.8	19.9	
F-2, 4	EDUCATION	1776	CLASSROOM	0.12	213	35	62	10	620	833.0	1.0	833.0	853
	UNIT 4	187	BEDROOM	0.06	11.5	-	1	5	5	16.2	0.8	20.3	
F-3, 5, 7	DEITY PREP	70	STORAGE	0.06	4.2	-	-	-	-	4.2	1.0	4.2	68.5
	ROBE ROOM	77	STORAGE	0.06	4.6	-	-	-	-	4.6	1.0	4.6	
	PLATFORM	190	STORAGE	0.06	11.4	-	2 ACTUAL	5	10	21.4	1.0	21.4	
	SEATING	1365	AUDITION	0.06	81.9	150	205	5	1025	1107.0	1.0	1107.0	
	CORRIDOR	300	CORRIDOR	0.06	18	-	-	-	-	18.0	0.8	22.5	
	GIFT SHOP	49	SALES	0.12	5.9	15	2	7.5	15	20.9	0.8	26.2	

PER THE 2012 MICHIGAN MECHANICAL CODE TABLE 403.3 THE SPACES WITHIN THIS SCHEDULE MEET OR EXCEED THE REQUIREMENTS FOR OUTDOOR AIR FLOW RATE.

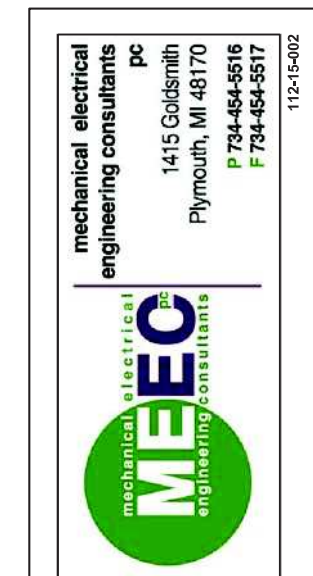
GRILLES REGISTERS AND DIFFUSERS SCHEDULE										
MARK	MANUFACTURER	MODEL NUMBER	NECK SIZE	DIFFUSER SIZE	FINISH	MOUNTING TYPE	CONSTRUCTION	ACCESSORY	NOTES	
C-1	PRICE	SPD	SEE NECK SCHEDULE	24"x24"	WHITE	LAY - IN	STEEL	-	1	
R-1	PRICE	80	10"x22"	12"x24"	WHITE	LAY-IN	ALUMINUM	-	1, 2	
R-2	PRICE	80	22"x22"	24"x24"	WHITE	LAY-IN	ALUMINUM	-	1, 2	
S-1	PRICE	520D	10"x	10"x6"	12"x8"	SURFACE	STEEL	-	1	

(APPROVED EQUAL: TITUS, PRICE)

- NOTES:
- REFER TO REFLECTED CEILING PLAN FOR LOCATIONS. PROVIDE ALL ACCESSORIES NEEDED TO PROPERLY MOUNT DEVICES.
 - 1/2"x1/2"x1/2" ALUMINUM EGGRATE GRID.



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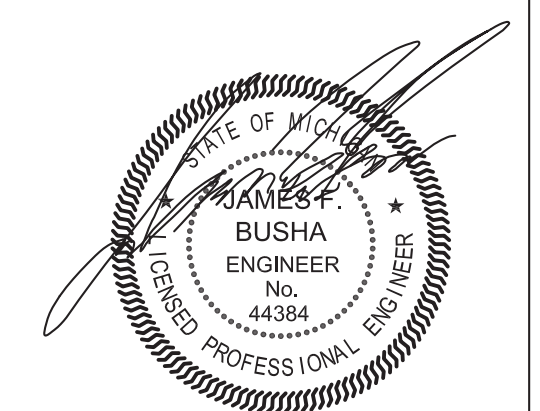


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NEW ADDITION AND REMODEL FOR:
MICHIGAN BHAKTI CENTER
FARMINGTON HILLS, MICHIGAN
MECHANICAL SCHEDULES



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SCALE: N.T.S.