VENTILATION SCHEDULE

	ROOM NAME	AREA SQ.FT.	LIGHT REQ'D	LIGHT ACTUAL	VENT REQ'D	VENT ACTUAL	SUPPLY REQ'D	SUPPLY ACTUAL	EXHAUST REQ'D	EXHAUST ACTUAL	BTUH LOSS	REMARKS
BSMT & 1ST FLOOR	GREAT ROOM	254	19.4	20.3	9.7	14		300			9,275	FU-1 SUPPLY & RETURN
	BEDROOM #1	120	9.6	10.8	4.8	14		150			4,200	
	W.I.C. #1	222	N.R.	---	N.R.	---		250			7,770	
	LAUNDRY	30	N.R.	---	N.R.	---		50			1,050	
	BATH #1	49	N.R.	5.4	N.R.	7		50	74	100	1,715	EF-2 EXHAUST
	HALL #1	87	N.R.	---	N.R.	---		50			3,045	
	KITCHEN FAMILY ROOM	420	33.6	46.5	16.8	48		550			14,700	
	DINING ROOM	183	14.6	22.4	7.3	13.6		250			6,405	
	LIVING ROOM	201	16	24	8	38.6		300			7,035	
	PWDR	27	N.R.	---	N.R.	---		50	50	50	945	EF-1 EXHAUST
	TOTAL:	1,593						2,000			55,755	
2ND & 3RD FLOOR	BEDROOM #2	168	13.4	36	6.7	21.9		200			5,880	FU-2 SUPPLY & RETURN
	MASTER BEDROOM	253	20.2	22.4	10.1	13.6		300			8,855	
	MASTER BATH	183	N.R.	12.8	N.R.	8.4		100	275	300	6,405	EF-3 EXHAUST
	W.I.C. #2	76	N.R.	5	N.R.	3.4		50			2,660	
	BATH #2	45	N.R.	---	N.R.	---		50	68	100	1,575	EF-2 EXHAUST
	HALL #2	55	N.R.	---	N.R.	---		50			1,925	
	LOFT	284	22.7	46.4	11.4	61.6		350			9,940	
	BEDROOM #3	165	13.2	24	6.6	21.9		200			5,775	
	BATH #3	39	N.R.	---	N.R.	---		50	59	100	1,365	EF-2 EXHAUST
	W.I.C. #3	24	N.R.	---	N.R.	---		50			840	
	BEDROOM #4	116	9.3	22.4	4.6	13.6		150			4,060	
	HALL #3	174	N.R.	---	N.R.	---		100			6,090	
	TOTAL:	1,582						1,650			55,370	

REFRIGERATION SCHEDULE

*TOTAL TONNAGE:..........9 TONS — ALL CU UNITS W/ SINGLE COMPRESSOR

ITEM NO.	MANUF.	TYPE/AMOUNT OF FREON	TON	H.P.	NO. OF UNITS AND COMP	S/C	REMOTE	DIA. OF LL	DIA. OF SL	UNIT SERVING	AIR COOLED	UNIT LOCATION
CU-1	AMERICAN STANDARD	R-410A: 10#	5.0	5.0	1 UNIT & 1 COMP.		X	3/8"	3/4"	BSMT & 1ST FLR	AIR	AT ROOF
CU-2	AMERICAN STANDARD	R-410A: 8#	4.0	4.0	1 UNIT & 1 COMP.		X	3/8"	3/4"	2ND & 3RD FLR	AIR	AT ROOF

TITUS REGISTER (WALL OR CLG. MOUNT)

		NET FREE AREA
3"x6"	(AT TOILETS - 50CFM)	14 S.I.
3"x9"	(FOR 150 CFM) SUPPLY	24 S.I.
4"x12"	(FOR 200 & 300 CFM) SUPPLY	44 S.I.
6"x12"	(FOR 650 CFM - 800 CFM) RETURN	58 S.I.
8"x14"	(FOR 800 CFM - 1,000 CFM) RETURN	68 S.I.
8"x18"	(FOR 1,000 CFM - 1,300 CFM) RETURN	86 S.I.

COMBUSTION AIR SCHEDULE

METAL LOUVER SIZE		NET FREE AREA
12"x3"	0-27,000 BTU/HR	27 S.I.
12"x6"	27,001 - 54,000 BTU/HR	54 S.I.
12"x12"	54,001 - 108,000 BTU/HR	108 S.I.
12"x18"	108,001 - 162,000 BTU/HR	162 S.I.
18"x18"	162,001 - 243,000 BTU/HR	243 S.I.
18"x24"	243,001 - 324,000 BTU/HR	324 S.I.

COMBUSTION AIR REQ'D

FU-1 + HWH	170,000 BTU/HR (90+80)
FU-2	90,000 BTU/HR

EXTERIOR DOOR & WINDOW SCHEDULE (R.O.)

MARK	TYPE	SIZE R.O.	NET GLASS SIZE	NET VENT SIZE
A	DOUBLE-HUNG	3'-0" x 5'-4"	12	7.3
B	DOOR	3'-0" x 8'-0"	---	24
C	PICTURE	4'-8" x 2'-8"	9.5	---
D	CASEMENT	3'-0" x 2'-8"	5.4	7.0
E	DOUBLE-HUNG	3'-0" x 5'-0"	---	---
F	DOUBLE-HUNG	6'-0" x 5'-0"	22.4	13.6
G	DOUBLE-HUNG	2'-0" x 4'-0"	5.0	3.4
H	DOUBLE-HUNG	3'-0" x 5'-0"	11.2	6.8
J	CASEMENT	6'-0" x 2'-8"	10.8	14
K	GLASS BLOCK	2'-8" x 2'-8"	---	---
L	SKYLIGHT	3'-10" x 3'-10"	14	---
M	DOOR	3'-0" x 8'-0"	12	24
N	PICTURE	5'-4" x 5'-0"	22.5	---
O	DOUBLE-HUNG	2'-4" x 4'-0"	6.4	4.2
P	DBL. DOOR	6'-0" x 8'-0"	24	48

WINDOWS SHALL MAINTAIN U-FACTOR OF 0.32 OR LOWER DOORS W/ 50% OF GLASS SHALL MAINTAIN U-FACTOR OF 0.32 OR LOWER
WINDOW INSTALLER TO FIELD VERIFY ALL EXISTING ROUGH OPENINGS PRIOR TO NEW WINDOWS INSTALLATION
SEE ELEVATION AND PLANS FOR EXACT WINDOW LOCATION
* T.G. - TEMPERED GLASS

MECHANICAL EQUIPMENT SCHEDULE

1. FU-1 — AMERICAN STANDARD OR EQUAL 90% EFF. GAS-FIRED FURNACE 90 MBTUH INPUT, 80 MBTUH OUTPUT, 2,000 CFM FAN, w/ THERMOSTAT 3" DIA. PVC. FLUE THRU ROOF & 3'-0" ABOVE ROOF FURNACES TO HAVE HUMIDIFIER: POWER # HUM CCLP-1016
2. FU-2 — AMERICAN STANDARD OR EQUAL 90% EFF. GAS-FIRED FURNACE 90 MBTUH INPUT, 80 MBTUH OUTPUT, 1,700 CFM FAN, w/ THERMOSTAT 3" DIA. PVC. FLUE THRU ROOF & 3'-0" ABOVE ROOF FURNACES TO HAVE HUMIDIFIER: POWER # HUM CCLP-1016
3. CU-1 — AMERICAN STANDARD OR EQUAL 5 TON CONDENSING UNIT AT ROOF (SINGLE COMPRESSOR UNIT)
4. CU-2&3 — AMERICAN STANDARD OR EQUAL 4 TON CONDENSING UNIT AT ROOF (SINGLE COMPRESSOR UNIT)
5. EF-1 (1 REQ'D) — BROAN OR EQUAL 50 CFM EXHAUST FAN W/ 4" DIA. DUCT TO EXTERIOR
6. EF-2 (3 REQ'D) — BROAN OR EQUAL 100 CFM EXHAUST FAN W/ 4" DIA. DUCT TO EXTERIOR
7. EF-3 (1 REQ'D) — BROAN OR EQUAL 300 CFM EXHAUST FAN W/ 6" DIA. DUCT TO EXTERIOR
8. HWH (1 REQ'D) — NEW HIGH EFF. RHEEM OR EQUAL GAS HOT WATER HEATER - 80 GAL.

HVAC NOTES:

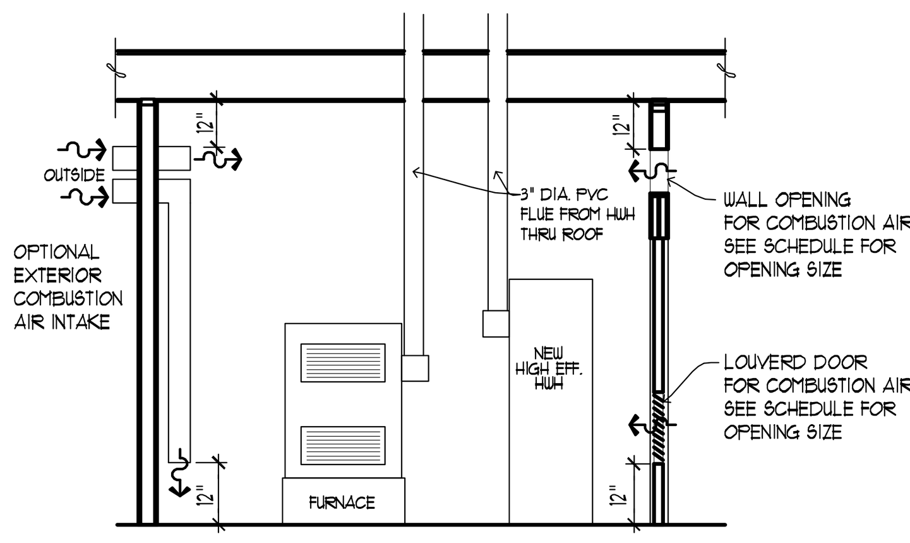
1) ALL DUCTS TO BE SHEET METAL PER S.M.A.C.N.A. w/ LOCK-TYPE DAMPERS
2) PROVIDE HUMIDIFYING DEVICE
3) FLOOR REGISTERS- NOT MORE THAN 9" FROM WALL
4) HEATING SYSTEM WILL MAINTAIN 70 DEG. F INDOOR @ -10 DEG. F OUTDOOR
5) SD. DETECTOR 3 FT. FROM FLOOR OR CEILING & MAX 15' FROM BEDROOM
6) PROVIDE CO DETECTOR - MAX 40 FT. FROM BEDROOM
7) NOISE LEVEL OF NEW MECHANICAL EQUIPMENT SHALL NOT EXCEED 35 DB

ADDITIONAL MECHANICAL NOTES:
1. CONTRACTOR SHALL FURNISH ALL LABOR AND EQUIPMENT FOR A COMPLETE INSTALLATION OF THE REQUIRED WORK IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS, AND IN ACCORDANCE WITH CODES AND REGULATIONS OF THE AUTHORITY HAVING JURISDICTION.
2. ALL WORK TO BE DONE IN A FIRST CLASS, CRAFTSMANSHIP-LIKE MANNER, INSTALLED AND BALANCED BY C.S.M.C.A. CERTIFIED CONTRACTORS.
3. CLEARANCES FOR FORCED AIR FURNACES SHALL CONFORM TO MANUFACTURER'S REQUIREMENTS
4. PROVIDE 1" MIN. SEPARATION BETWEEN FURNACE FLUE AND ANY FRAMING OR DRYWALL
5. FLOOR REGISTERS SHALL BE NOT MORE THAN 9" FROM WALL
6. NOISE GENERATED BY ANY H.V.A.C. EQUIPMENT SHALL NOT EXCEED 35db AT ANY INTERIOR LIVING OR SLEEPING ROOMS.
7. ALL WORK SHALL CONFORM TO THE CHICAGO BUILDING CODE, CHAPTER 18-28(MECHANICAL CODE)
DAMPERS MUST BE PROVIDED WHERE INDICATED AND INSTALLED AS INDICATED IN (18-7-7160),(18-28-607)

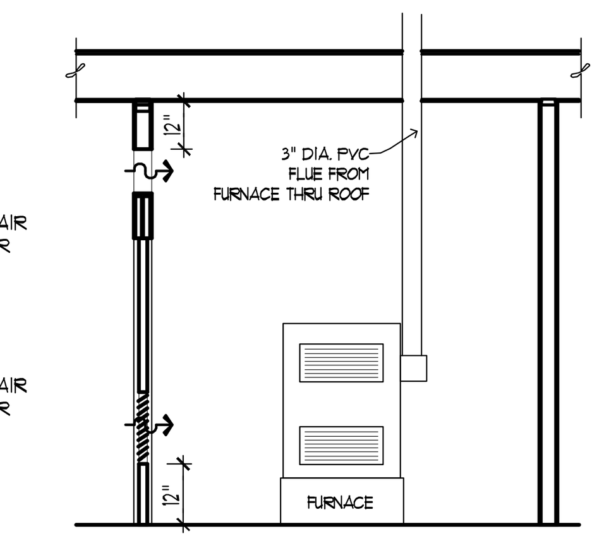
MECHANICAL NOTES

1. THE CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT AND MATERIAL ETC. FOR A COMPLETE INSTALLATION OF THE REQUIRED WORK IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND AUTHORITY HAVING JURISDICTION.
2. EQUIPMENT EXPOSED TO NATURAL ELEMENTS SHALL BE OF WELDED OR SOLDERED CONSTRUCTION AND SHALL RECEIVE ONE (1) COAT OF PRIMER AND TWO (2) COATS OF PAINT.
3. REGISTERS, DIFFUSERS, GRILLS, ETC. SHALL BE INSTALLED AS TO MATCH THE EXISTING EQUIPMENT.
4. CONTRACTOR SHALL USE CAUTION IN REMOVING AND RELOCATING EQUIPMENT TO REMAIN OR BE RELOCATED. DAMAGE TO SAID EQUIPMENT SHALL BE THE RESPOSIBILITY OF THE CONTRACTOR.
5. CONTROLS FOR A COMPLETE INSTALLATION OF THE EQUIPMENT SHALL BE SUPPLIED BY THE HVAC CONTRACTOR AND CONNECTED BY THE ELECTRICAL CONTRACTOR.
6. ALL SHEET METAL DUCT WORK SHALL BE GALVANIZED AND CONSTRUCTED IN ACCORDANCE WITH "SMACNA" LOW PRESSURE STANDARDS.
7. HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR THE TESTING AND BALANCE OF HVAC EQUIPMENT.
9. CONTRACTOR SHALL FURNISH AND INSTALL ALL ROOF CURBS APPLICABLE TO EQUIPMENT SUPPLIED BY THE CONTRACTOR. ROOF CURBS SHALL BE INSTALLED SO THE EQUIPMENT IS LEVEL AND THAT THE CURB FOLLOWS THE CONTOUR OF THE ROOF.
10. BURGLAR BARS SHALL BE PROVIDED FOR ROOF OPENINGS LARGER THAN 10" SQUARE. BARS SHALL BE A MINIMUM OF 1/2" DIAMETER ROD PLACE A MAXIMUM OF 6" OC EACH DIRECTION AND WELDED TO THE STEEL ANGLE FRAME. AS AN ALTERANTE METHOD THE BARS MAY BE AN INTEGRAL PART OF THE CURB CONSTRUCTION.
11. NOISE GENERATED BY ANY HVAC EQUIPMENT SHALL NOT EXCEED 55db AT LOT LINE.
12. INSTALL ANY DUCT WORK AS CLOSE AS POSSIBLE TO STRUCTURAL STEEL.
13. ALL HVAC EQUIPMENT INSTALLED SHALL BE LEVEL AS TO ASSURE PROPER WORKING ORDER.
14. CONTRACTOR SHALL INSTALL ANY REQUIRED REFRIGERANT LINES IN ACCORDANCE WITH CITY CODE REQUIREMENTS- TYPE "K" COPPER.
15. CONTRACTOR SHALL ASSURE THAT FLUES OF EXISTING AND/OR NEW EQUIPMENT EXTEND A MINIMUM OF 6'-0" ABOVE THE ROOF LINE AND THAT ALL FRESH AIR INTAKES ARE INSTALLED A MINIMUM OF 15'-0" AWAY FROM ANY EXHAUST OUTLET.
SOIL STACKS & O.A.I. TO BE MIN. 10 FT ABOVE GRADE.
16. CONTRACTOR SHALL MAKE SURE THAT ALL EXPANSION VALVE, DEVICES AND CONNECTIONS ARE REMOVED FROM THE AIRSTREAM ON NEW AND EXISTING EQUIPMENT.
17. NATURAL GAS PIPING SHALL BE SCHEDULED 40 STANDARD WEIGHT BLACK STEEL PIPE WITH STANDARD WEIGHT BLACK THREADED MALLEABLE IRON FITTINGS 2" OR SMALLER AND STANDARD WELDED FITTINGS 2-1/2" OR LARGER.
18. ALL EQUIPMENT CONNECTED TO NATURAL GAS PIPING SHALL BE HARD PIPED CONNECTIONS.
19. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL CONNECTIONS TO ALL GAS BURNING APPLIANCES AND SHALL IN CONJUCTION WITH THE HVAC CONTRACTOR MAKE ALL REQUIRED TESTS AS TO ASSURE A PROPER AND SAFE INSTALLATION.
20. SHEET METAL DUCT SHALL INCORPORATE LOCK TYPE DAMPERS FOR BALANCING.
21. THE HVAC AND PLUMBING CONTRACTORS SHALL COORDINATE WITH THE LOCAL UTILITIES FOR INCOMING SERVICE OF GAS, WATER AND SEWAGE.
22. HVAC CONTRACTOR WILL GUARANTEE 70° F INDOOR @-10° F OUTDOOR, & 75° F INDOOR @ 90° F OUTDOOR.

MECH. CONTRACTOR ______ LICENCE NO. ______ EXP. DATE ______



FURNACE ROOM DETAIL



FURNACE ROOM DETAIL

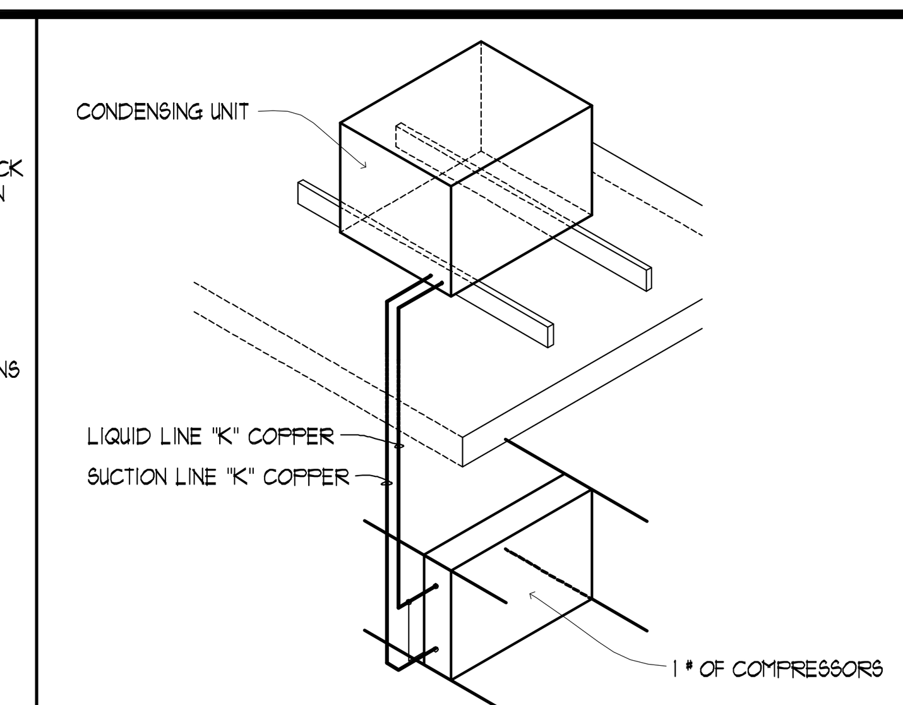
* ALL FUEL BURNING EQUIPMENT WITH A COMBINED INPUT RATING GREATER THAN 150,000 BTU/H SHALL BE PROVIDED WITH AIR FROM OUTDOORS FOR COMBUSTION AND DILUTION USING THE METHODS DESCRIBED IN SECTION 18-28-703.3
* FUEL BURNING HEATHING EQUIPMENT AND HWH. WITH A COMBINED INPUT RATING EQUAL OR LASS THAN 150,000 BTU/H IS NOT REQUIRED TO BE PROVIDED WITH AIR FROM OUTDOORS.
* SPACE SHALL BE PROVIDED WITH 2 PERMINENT OPENING COMMUNICATING DIRECTLY WITH OTHER SPACES OF SUFFICIENT VALUME SO THAT THE COMBINED VOLUME OF ALL SUCH SPACES MEETS THE CRITERIA FOR AN UNCONFINED SPACE. ONE OPENING SHALL BE WITHIN 12 IN. OF THE TOP OF THE ENCLOSURE, AND ONE OPENING SHALL BE WITHIN 12 IN. OF THE BOTTOM OF THE ENCLOSURE.

MECHANICAL VENT
* HORIZONTAL TERMINATIONS MUST BE LOCATED PER SECTION (18-28-804.3.4)

1. WHERE LOCATED ADJACENT TO WALKWAYS, THE TERMINATION OF MECHANICAL DRAFT SYSTEMS SHALL BE NOT LESS THAN 7 FEET ABOVE THE LEVEL OF THE WALKWAY
2. VENTS SHALL TERMINATE AT LEAST 3 FEET ABOVE ANY FORCED AIR INLET LOCATED WITHIN 10 FEET
3. THE VENT SYSTEM SHALL TERMINATE AT LEAST 4 FEET BELOW, 4 FEET HORIZONTALLY FROM OR 1 FOOT ABOVE AND DOOR, WINDOW OR GRAVITY AIR INLET INTO TO THE BUILDING
4. THE VENT TERMINATION POINT SHALL NOT BE LOCATED CLOSER THAN 3 FEET TO AN INTERIOR CORNER FORMED BY TWO WALLS PERPENDICULAR TO EACH OTHER.
5. VENT TERMINATION SHALL NOT BE MOUNTED DIRECTLY ABOVE OR WITHIN 3 FEET HORIZONTALLY FROM AN OIL TANK VENT OR GAS METER
6. THE BOTTOM OF THE VENT TERMINATION SHALL BE LOCATED AT LEAST 12 INCHES ABOVE FINISHED GRADE.

* VERTICAL TERMINATIONS MUST BE LOCATED PER SECTION (18-28-804.3.5)

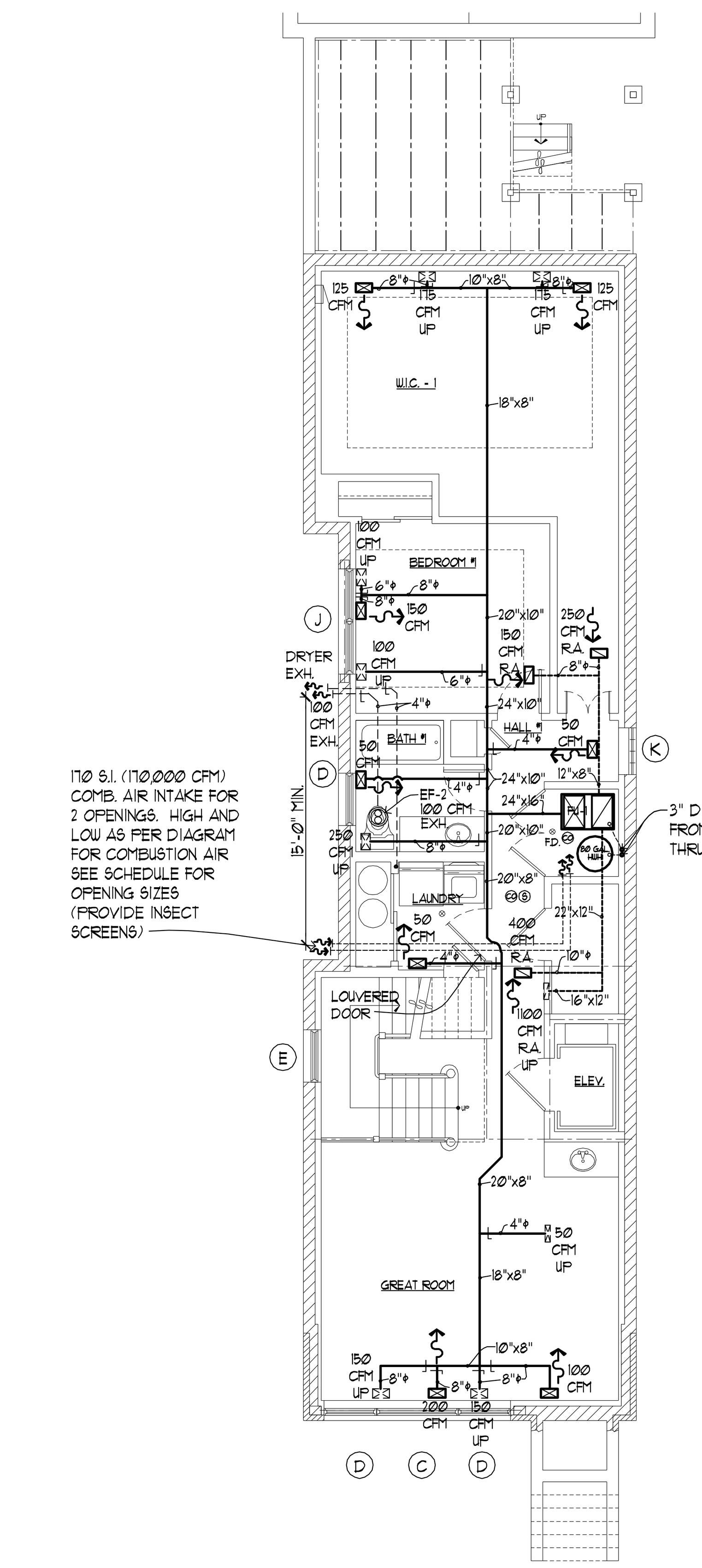
1. WHERE LOCATED ADJACENT TO WALKWAYS, THE TERMINATION OF MECHANICAL DRAFT SYSTEMS SHALL BE NOT LESS THAN 7 FEET ABOVE THE LEVEL OF THE WALKWAY
2. VENTS SHALL TERMINATE AT LEAST 3 FEET ABOVE ANY FORCED AIR INLET LOCATED WITHIN 10 FEET
3. WHERE THE VENT TERMINATION IN LOCATED BELOW AN ADJACENT ROOF STRUCTURE, THE TERMINATION POINT SHALL BE LOCATED AT LEAST 3 FEET FROM ANY STRUCTURE.
4. THE VENT SHALL TERMINATE AT LEAST 4 FEET BELOW, 4 FEET HORIZONTALLY FROM OR 1 FOOT ABOVE AND DOOR, WINDOW OR GRAVITY AIR INLET FOR THE BUILDING
5. A VENT CAP SHALL BE INSTALLED TO PREVENT RAIN FROM ENTERING THE VENT SYSTEM
6. THE VENT TERMINATION SHALL BE LOCATED AT LEAST 3 FEET HORIZONTALLY FROM ANY PORTION OF THE ROOF STRUCTURE



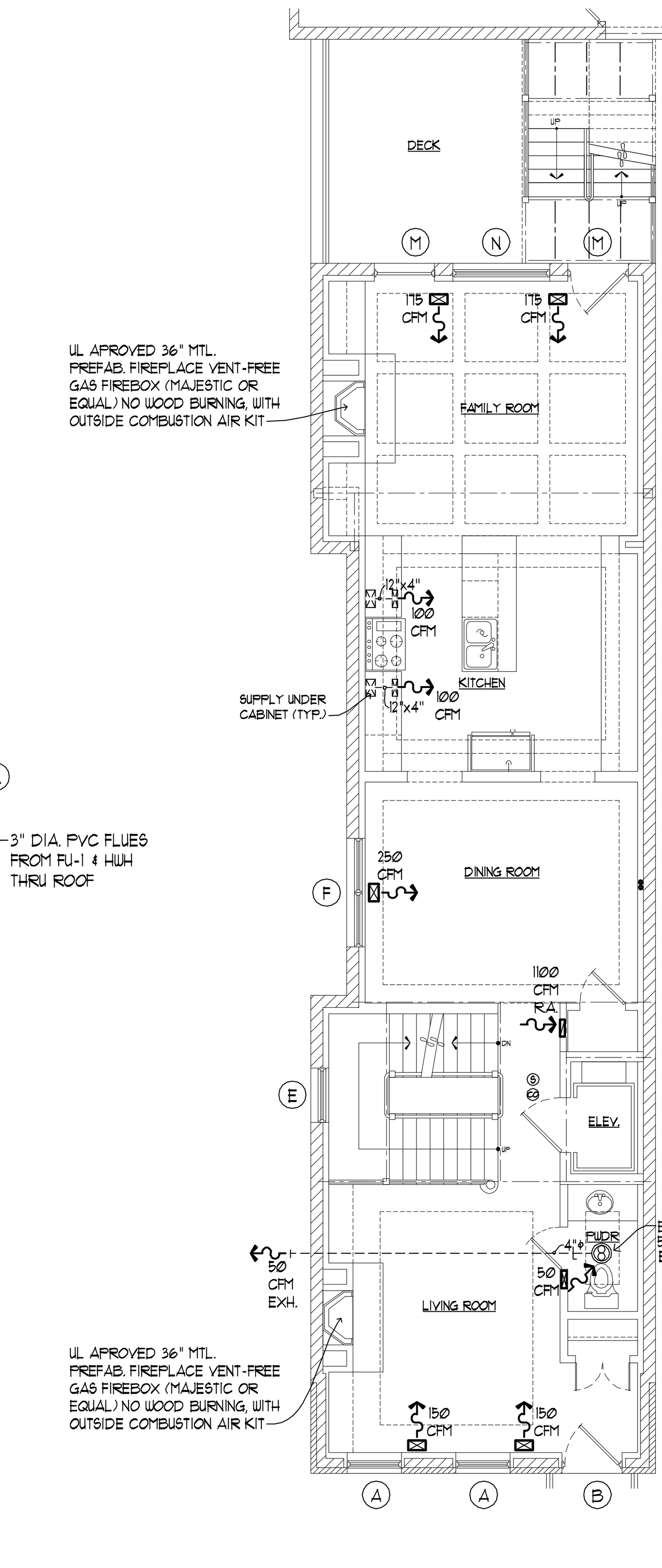
REMOTE REFRIGERATION PIPING DIAGRAM

* INSTALL PRESSURE RELIEF VALVE ON HIGH PRESSURE SIDE OF SYSTEM, UPSTREAM OF ANY INTERVENING VALVES
* REMOVE EXPANSION VALVES, DEVICES, & CONNECTIONS FROM AIR STREAM
* REFRIGERATION PIPING TO BE TYPE "K" COPPER
* ALL CONNECTIONS AND DEVICES TO BE BRAZED
* 3/8" SAFETY VALVE TO HIGH SIDE OF SYSTEM
* COPPER TUBING MAY BE TYPE ACR OR TYPE K UNLESS THE PRESSURE EXCEEDS THE RATED CAPACITY OF ACR TUBING (18-28-1107.4.3)
* CONDENSING UNIT MUST BE READILY ACCESSIBLE AND PROVIDED WITH ADEQUATE MEANS OF LIGHT AND VENTILATION AND MAY NOT BE LOCATED ON STAIRWAYS, UNDER STAIRWAYS OR FIRE ESCAPES OR IN PASSAGEWAYS, ENTRANCES OR EXITS (EXCEPT SELF CONTAIN UNIT SERVING THE STAIRWAY)

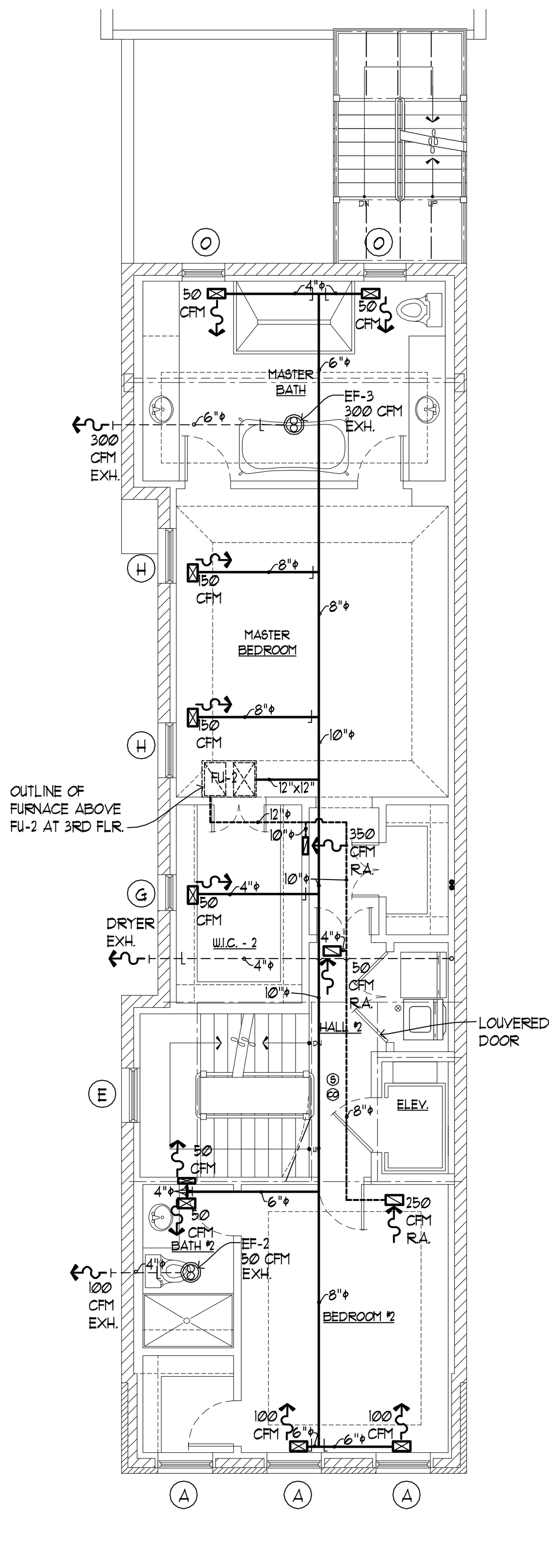
* DRYER EXHAUST MUST NOT EXCEED MAXIMUM LENGTHS AS INDICATED BY 504.6 AND 504.7 (18-28-504.6 &7)
* MAKEUP AIR IS REQUIRED FOR DRYER VENTS EXHAUSTING MORE THAN 200 CFM (18-28-504.5)
* HORIZONTAL TERMINATIONS FOR VENTS ARE PERMITTED ON CATEGORY IV APPLIANCES ONLY (18-28-804.3.4)
* HORIZONTAL TERMINATIONS MUST BE LOCATED PER SECTION 804.3.4 (18-28-804.3.4)
* VENTING FOR ALL GAS FIRED APPLIANCES MUST CONFORM TO INTERNATIONAL FUEL GAS CODE(IFGC) 18-28-801-1)
* CLERANCES FOR FORCED AIR FURNACES MUST CONFORM TOMANUFACTURER'S REQUIREMENTS (18-28-918.9.3)
* SIZING OF REQUIRED COMBUSTION AIR MUST CONFORM TO SECTIONS 703.2 AND 703.3 (18-28-703.2 & 3)
* COMBUSTION AIR DUCTS MUST CONFORM TO 708.1 (18-28-708.1)
* PROVIDE PERMANENT ACCESS IF EQUIPMENT IS LOCATED AT A HEIGHT GREATHER THAN 16 FEET ABOVE GRADE (18-28-306.5)
* EVAPORATIVE AND COOLING DEVICES THAT PRODUCE CONDENSATE MUST BE DRAINED (18-28-307.2)
* CONDENSATE SHALL BE COLLECTED AND DISCHARGED TO AN APPROVED PLACE OF DISPOSAL. (18-28-307.2.1)
* CARBON MONOXIDE DETECTOR MUST BE PROVIDED ACCORDING TO THE REQUIREMENTS OF (13-64-190 TO 280) (18-28-711)



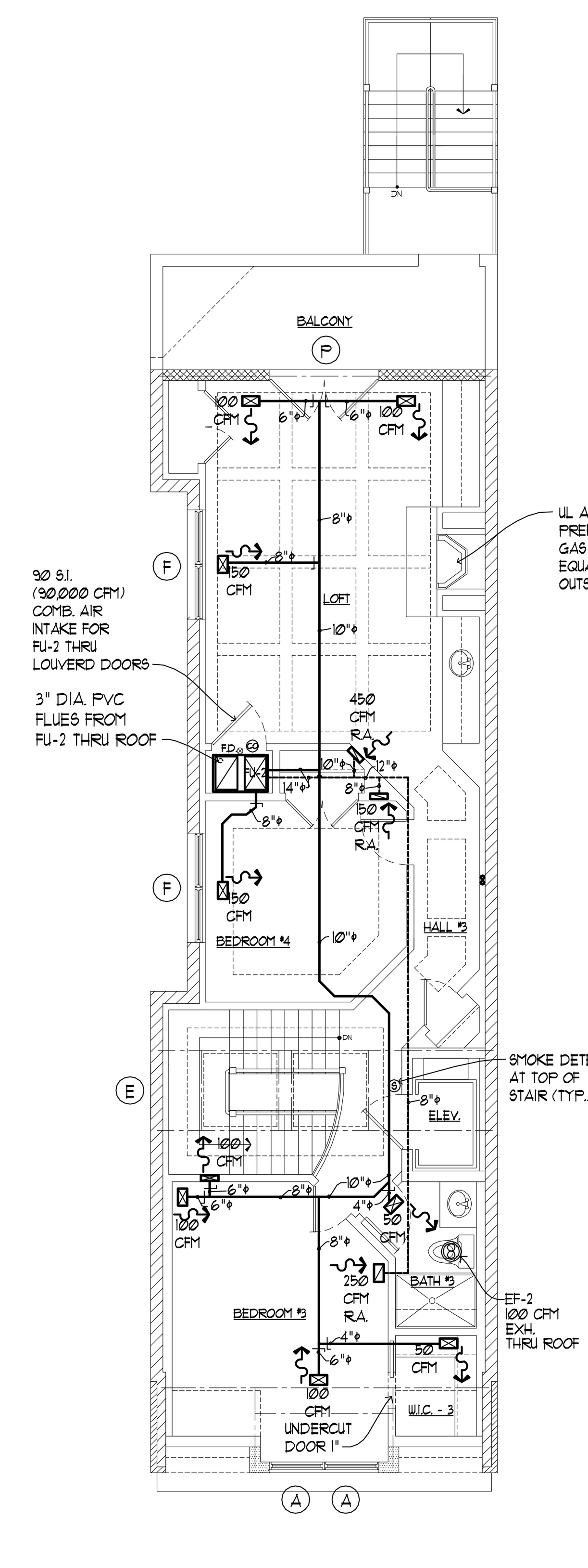
MECHANICAL BASEMENT PLAN
SCALE: 1/8"=1'-0"



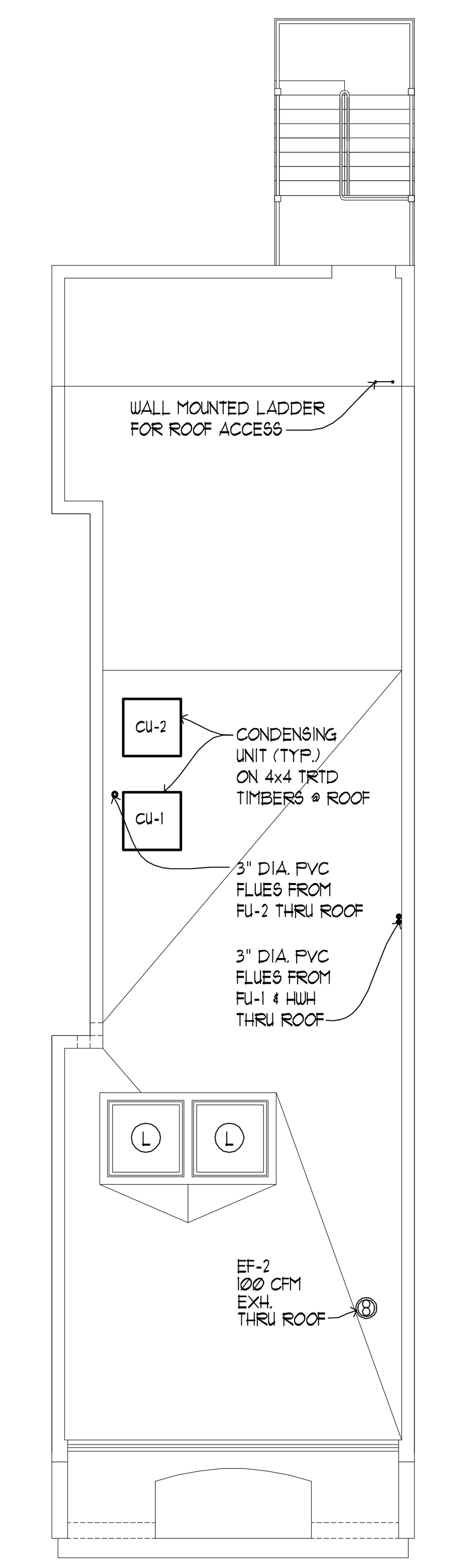
MECHANICAL 1ST FLOOR PLAN
SCALE: 1/8"=1'-0"



MECHANICAL 2ND FLOOR PLAN
SCALE: 1/8"=1'-0"



MECHANICAL 3RD FLOOR PLAN
SCALE: 1/8"=1'-0"



COMMON VENTING SYSTEM MAY NOT SERVE MORE THAN ONE FLOOR (18-28-801.18)

MECHANICAL AS SHOWN ON PLANS IS SCHEMATIC ONLY. ALL WORK SHALL BE COORDINATED WITH PLUMBING AND ELECTRICAL CONTRACTS AND SHALL COMPLY WITH APPLICABLE CODES AND ORDINANCES.

ROOF PLAN
SCALE: 1/8"=1'-0"

PERMIT SET 3-7-17

PROPOSED 3 STORY, SINGLE FAMILY HOME
625 E. OAKWOOD BLVD.
CHICAGO, ILLINOIS

S.K.I. ARCHITECTURE
1645 W. OGDEN AVE. SUITE # 523
CHICAGO, ILLINOIS 60612
312.953.5142 708.369.1614 FAX. 708.579.5846
cesarch_220@hotmail.com bkkalata@comcast.net

STATE OF ILLINOIS LICENSED ARCHITECT
CHARLES E. SCHWARTZ
001-013713

PROJECT #:
PRINT DATE: 3-7-17

M-1