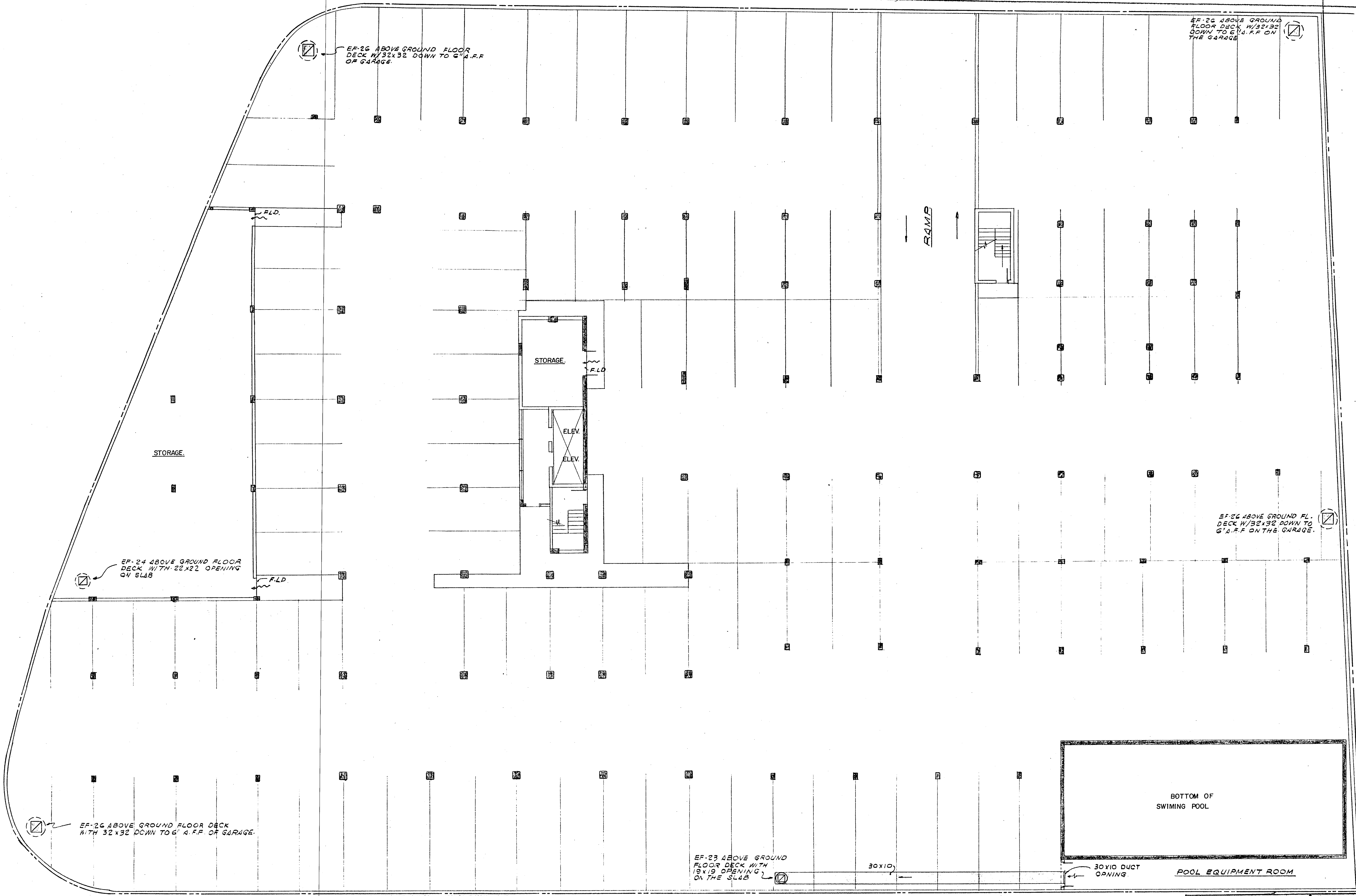

NOTE:
ALL DUCTWORK EXPOSED TO VEHICULAR TRAFFIC SHALL BE PROTECTED WITH STEEL ANGLES AS REQUIRED TO BE A HEIGHT OF 4 FT. A.F.F.

GARAGE LEVEL-FLOOR PLAN
SCALE: 3/32"=1'-0"

8/20/79

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FLORIDA ENGINEERING SERVICES
252 N.E. 167 STREET
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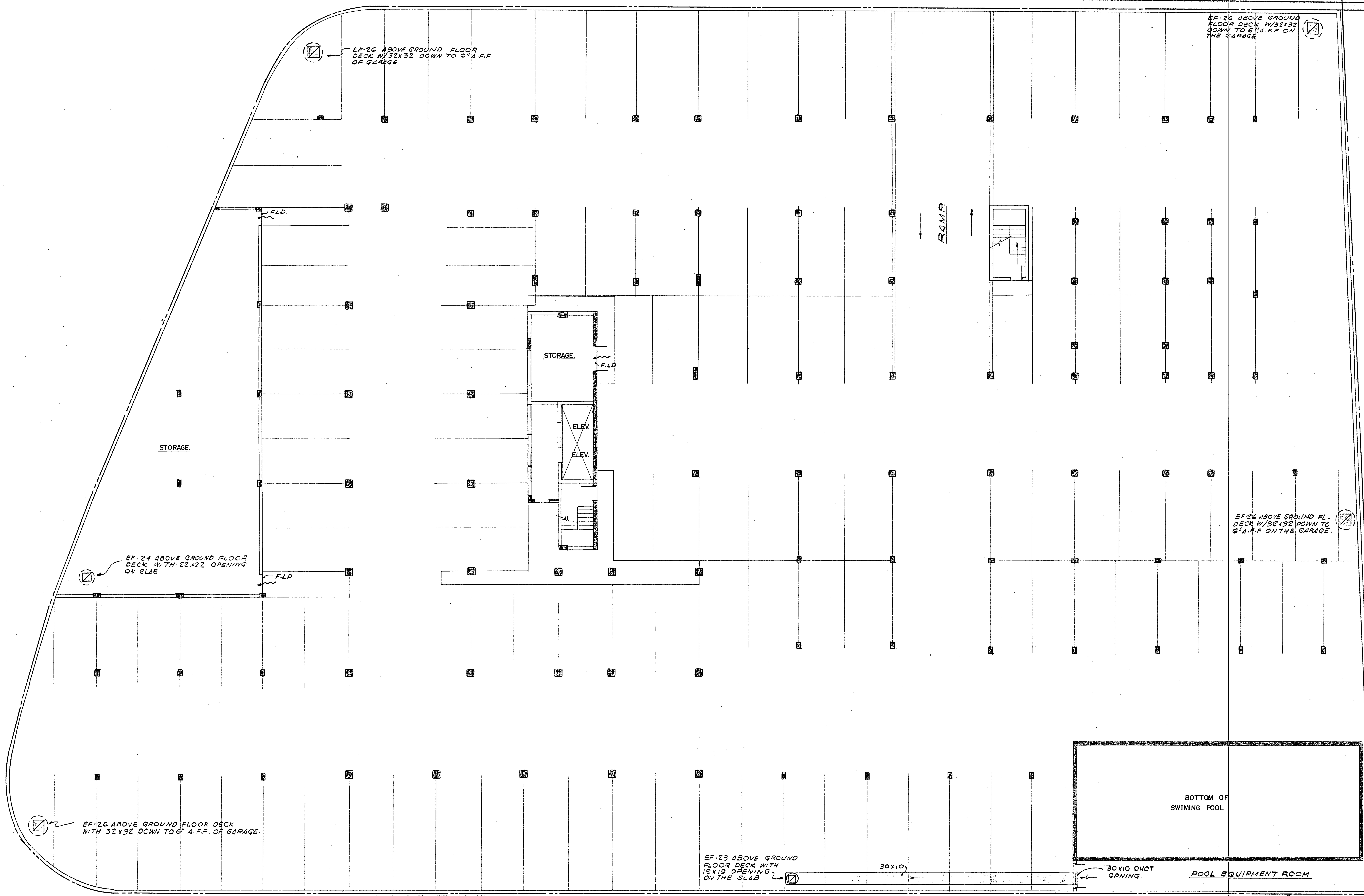
33162 . 945-4743

WILLIAM M. FRIEDMAN
AND ASSOCIATES ARCHITECTS, INC.
138 S.E. 14th LANE
3588044

CHAMPLAIN TOWERS SOUTH

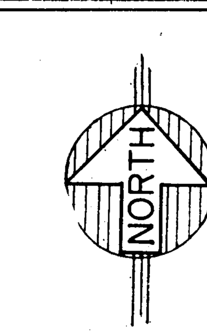
A. 135 UNIT CONDOMINIUM

COMM. No.	DATE: 8-13-79	SHEET No. A-1 OF 9 SHEETS
	REV.	



NOTE:
ALL DUCTWORK EXPOSED TO VEHICULAR TRAFFIC SHALL BE PROTECTED WITH STEEL ANGLES AS REQUIRED TO BE A HEIGHT OF 4 FT. A.F.F.

GARAGE LEVEL-FLOOR PLAN
SCALE: 3/32"=1'-0"



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CHAMPLAIN TOWERS SOUTH
A. 135 UNIT CONDOMINIUM

COMM. No.	DATE: 8-13-79	SHEET No. A-1 OF 9 SHEETS
	REV.	

FLORIDA ENGINEERING SERVICES
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... 945-4743

Solomon ... 8/13/79

FIRST FLOOR PLAN.
SCALE 1/8"=1'-0"
NORTH
TRANSFORMER VAULT.
ELECTRICAL ROOM
TRASH ROOM
KITCHEN
MEN'S
WOMEN'S
RECREATION AREA
GENERATOR ROOM
FIRE PUMP
DOMESTIC PUMP
EMERGENCY GENERATOR
MUFFLER
5"Ø SCHEDULE 40 BLACK STEEL PIPE
72"x36" OAL
72"x84" OAL
WALL CAP
EF 23
EF-22
EF-21
AHU-8
AHU-7
AHU-6
A.H.U.-3
A.H.U.-4
A.H.U.-5
REF. LINES UP
6-15x15 CD-4W 600 CFM EACH
12x12 CD-1W 600 CFM
OFFICE
MAIL
SECURITY
SAUNA
GYMNASIUM
ELEV.
ENTRANCE
DRIVEWAY
PARKING
12x12 CD-4W 400 CFM
22x6 SR 425 CFM
EMERGENCY GENERATOR DETAIL NTS
1"Ø STEEL ROD (TYP.)
FLEX. CONNECT.
OAL
CHAIN
EMER. GENERATOR
CANVAS CONNECTION
SPRING ISOLATOR
WILLIAM M. FRIEDMAN AND ASSOCIATES ARCHITECTS, INC.
1138 S.E. 14th LANE 3588044
CHAMPLAIN TOWERS SOUTH
A- 135 UNIT CONDOMINIUM
COMM. No.
DATE: 8-13-79
REV.
SHEET No. AC2 OF 9 SHEETS
FLORIDA ENGINEERING SERVICES
252 N.E. 167 STREET N. MIAMI BCH. FLA. 33162 945-4743
8/20/79
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8/13/79

WILLIAM M. FRIEDMAN AND ASSOCIATES ARCHITECTS, INC.
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CHAMPLAIN TOWERS SOUTH
A- 135 UNIT CONDOMINIUM

FLORIDA ENGINEERING SERVICES
252 N.E. 167 STREET
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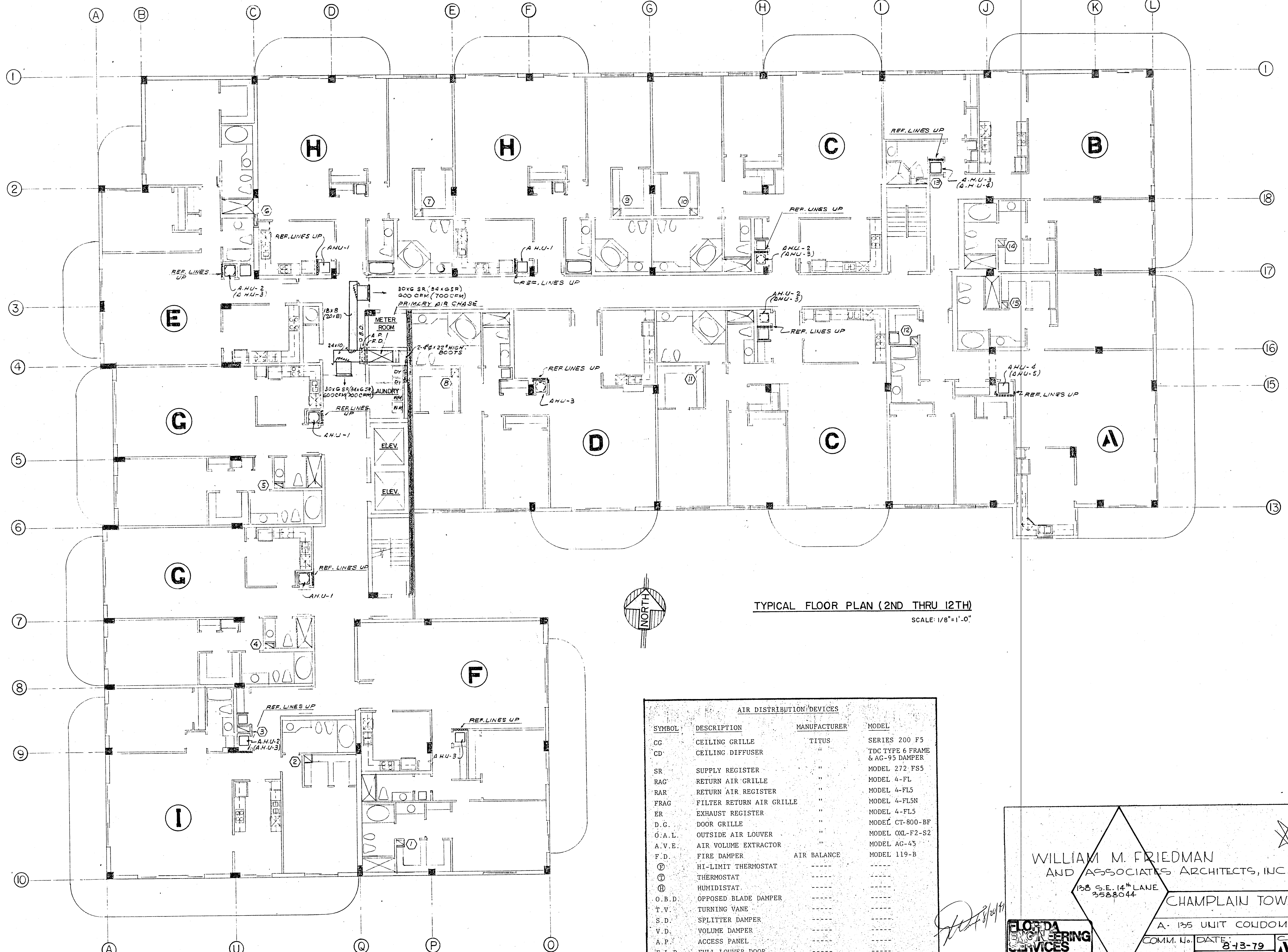
COMM. No.	DATE: 8-13-79.	SHEET No. AC2 OF 9 SHEETS
	REV.	

8/1/79



TYPICAL FLOOR PLAN (2ND THRU 12TH)

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

AIR DISTRIBUTION DEVICES

SYMBOL	DESCRIPTION	MANUFACTURER	MODEL
CG	CEILING GRILLE	TITUS	SERIES 200 F5
CD	CEILING DIFFUSER	"	TDC TYPE 6 FRAME & AG-95 DAMPER
SR	SUPPLY REGISTER	"	MODEL 272 FS5
RAG	RETURN AIR GRILLE	"	MODEL 4-FL
RAR	RETURN AIR REGISTER	"	MODEL 4-FL5
FRAG	FILTER RETURN AIR GRILLE	"	MODEL 4-FL5N
ER	EXHAUST REGISTER	"	MODEL 4-FL5
D.G.	DOOR GRILLE	"	MODEL CT-800-BF
O.A.L.	OUTSIDE AIR LOUVER	"	MODEL OXL-F2-S2
A.V.E.	AIR VOLUME EXTRACTOR	"	MODEL AG-45
F.D.	FIRE DAMPER	AIR BALANCE	MODEL 119-B
F	HI-LIMIT THERMOSTAT	-----	-----
T	THERMOSTAT	-----	-----
H	HUMIDISTAT	-----	-----
O.B.D.	OPPOSED BLADE DAMPER	-----	-----
T.V.	TURNING VANE	-----	-----
S.D.	SPLITTER DAMPER	-----	-----
V.D.	VOLUME DAMPER	-----	-----
A.P.	ACCESS PANEL	-----	-----
F.L.D.	FULL LOUVER DOOR	-----	-----
U.D.	UNDERCUT DOOR	-----	-----

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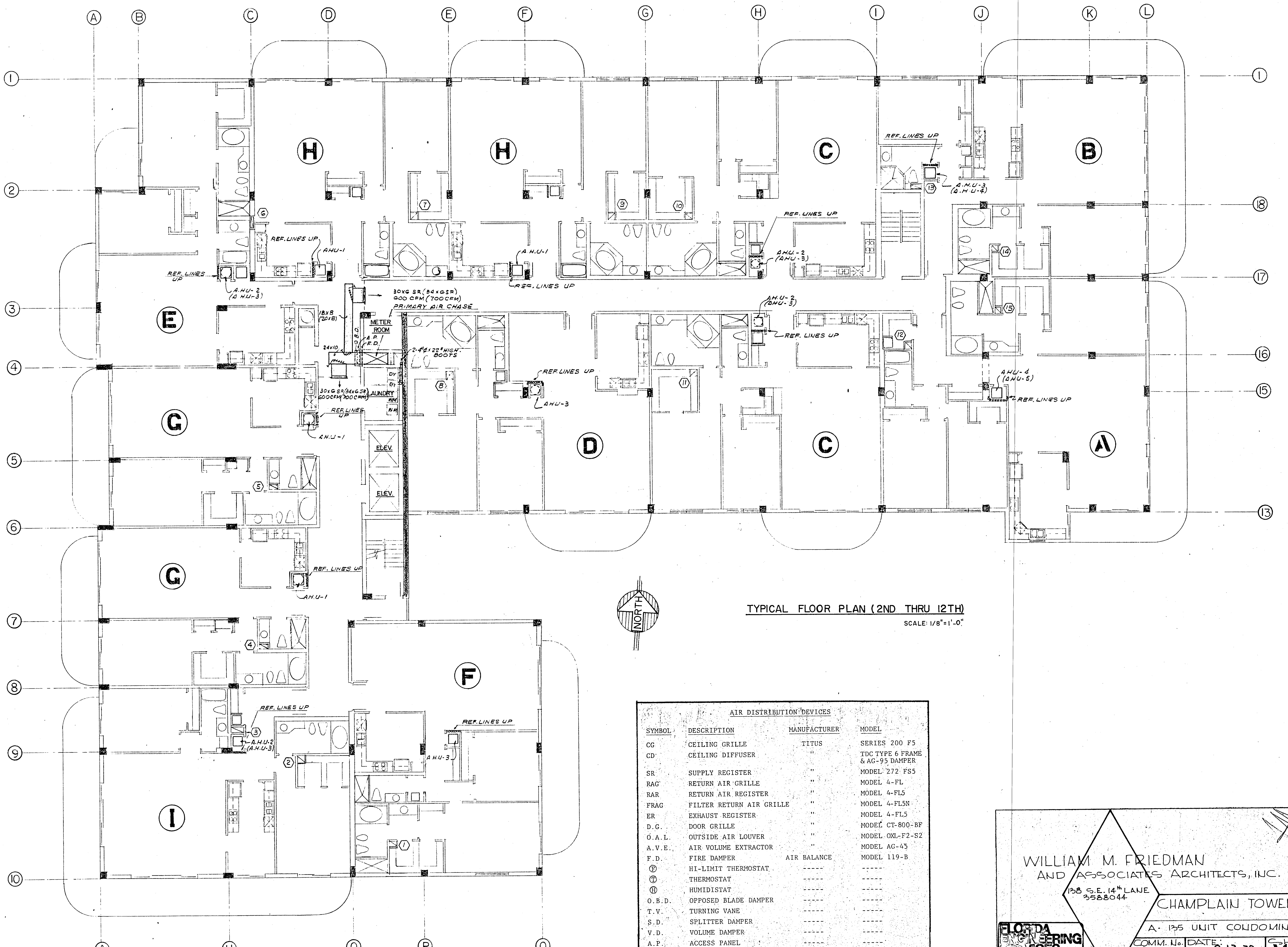
CHAMPLAIN TOWERS SOUTH

A- 135 UNIT CONDOMINIUM

COMM. No.	DATE: 8-13-79	SHEET No. AC3 OF SHEETS
	REV.	



TYPICAL FLOOR PLAN (2ND THRU 12TH)

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

AIR DISTRIBUTION DEVICES

SYMBOL	DESCRIPTION	MANUFACTURER	MODEL
CG	CEILING GRILLE	TITUS	SERIES 200 F5
CD	CEILING DIFFUSER	"	TDC TYPE 6 FRAME & AG-95 DAMPER
SR	SUPPLY REGISTER	"	MODEL 272 FS5
RAG	RETURN AIR GRILLE	"	MODEL 4-FL
RAR	RETURN AIR REGISTER	"	MODEL 4-FL5
FRAG	FILTER RETURN AIR GRILLE	"	MODEL 4-FL5N
ER	EXHAUST REGISTER	"	MODEL 4-FL5
D.G.	DOOR GRILLE	"	MODEL CT-800-BF
O.A.L.	OUTSIDE AIR LOUVER	"	MODEL OXL-F2-S2
A.V.E.	AIR VOLUME EXTRACTOR	"	MODEL AG-45
F.D.	FIRE DAMPER	AIR BALANCE	MODEL 119-B
F	HI-LIMIT THERMOSTAT	-----	-----
T	THERMOSTAT	-----	-----
H	HUMIDISTAT	-----	-----
O.B.D.	OPPOSED BLADE DAMPER	-----	-----
T.V.	TURNING VANE	-----	-----
S.D.	SPLITTER DAMPER	-----	-----
V.D.	VOLUME DAMPER	-----	-----
A.P.	ACCESS PANEL	-----	-----
F.L.D.	FULL LOUVER DOOR	-----	-----
U.D.	UNDERCUT DOOR	-----	-----

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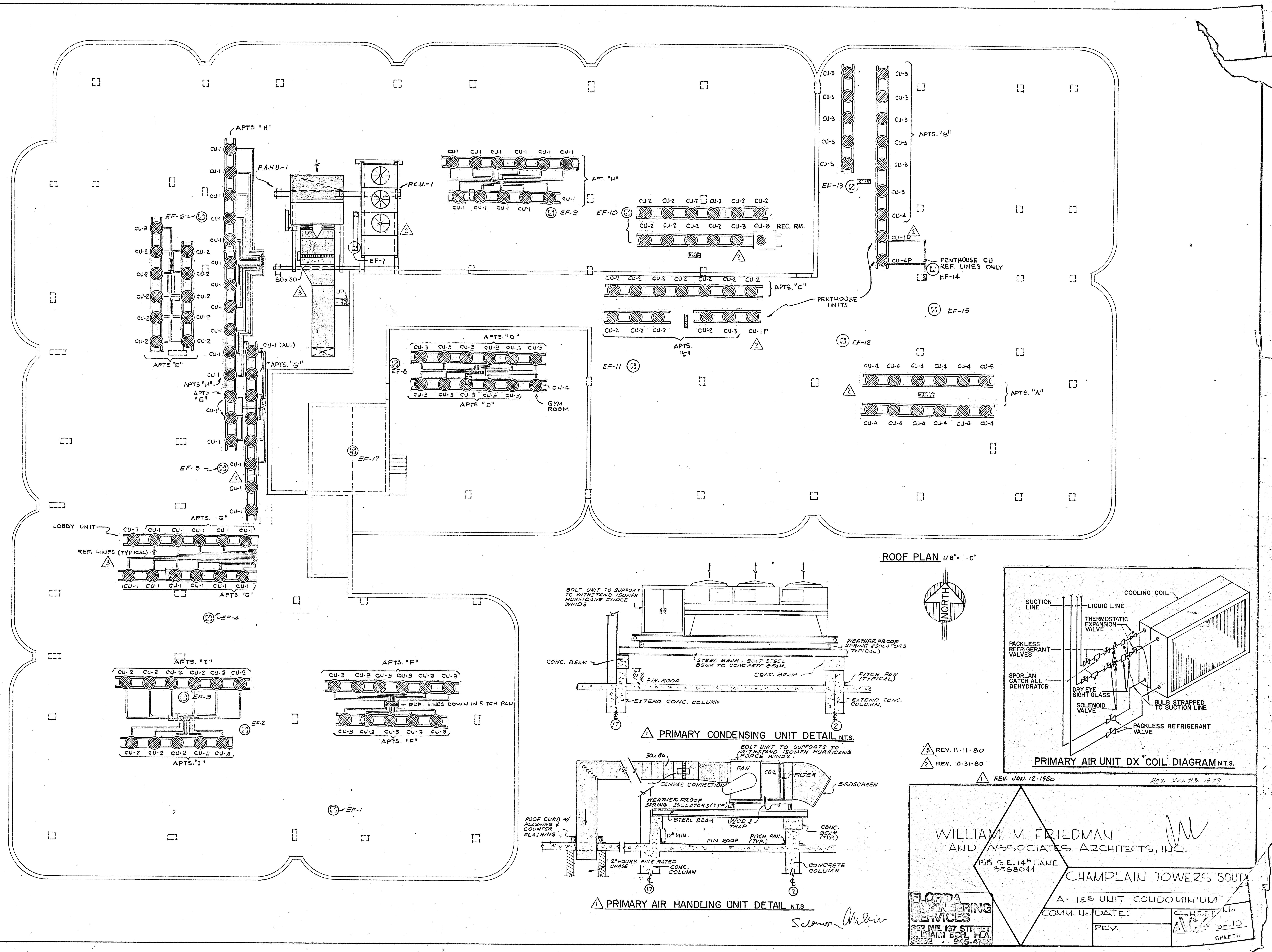
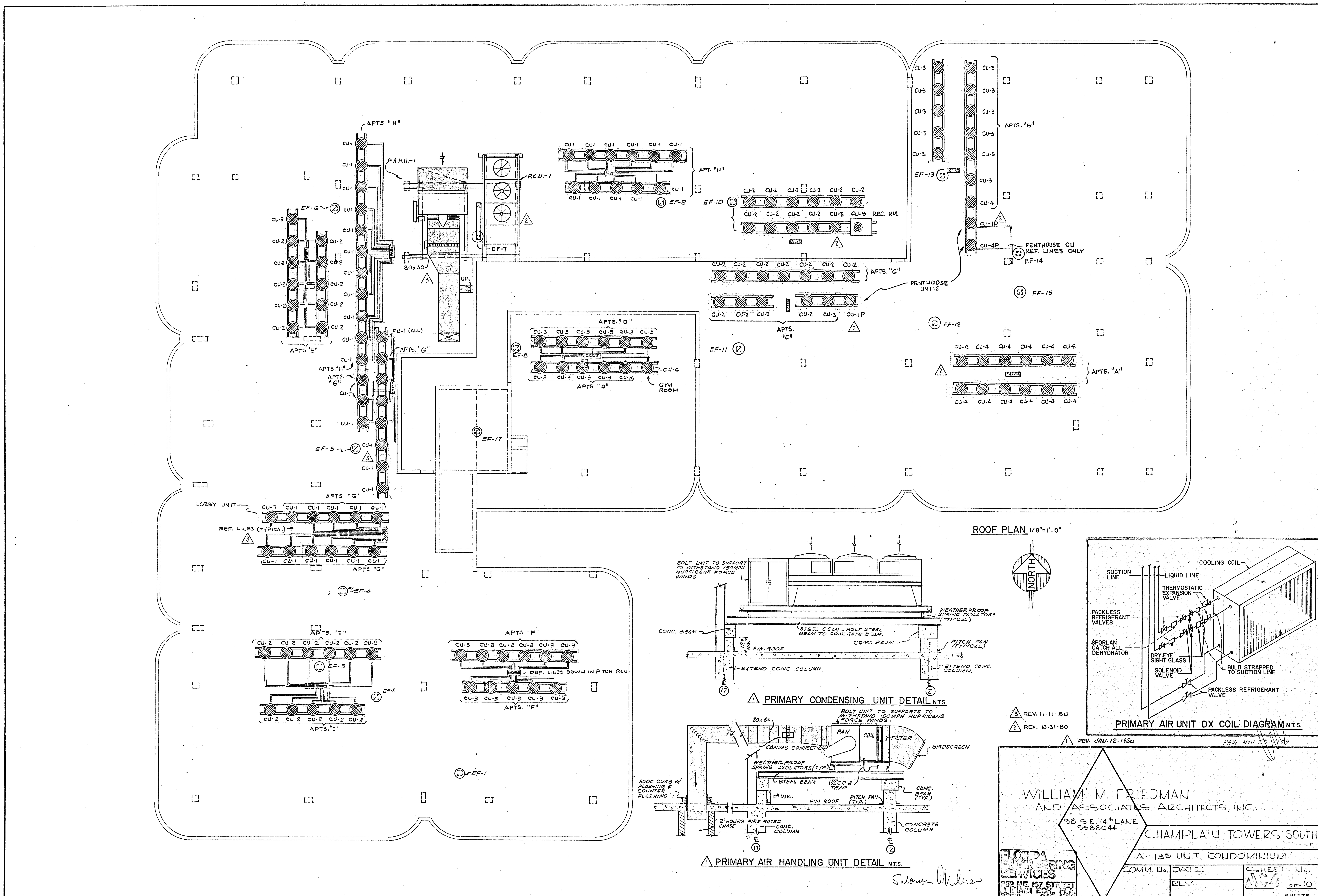
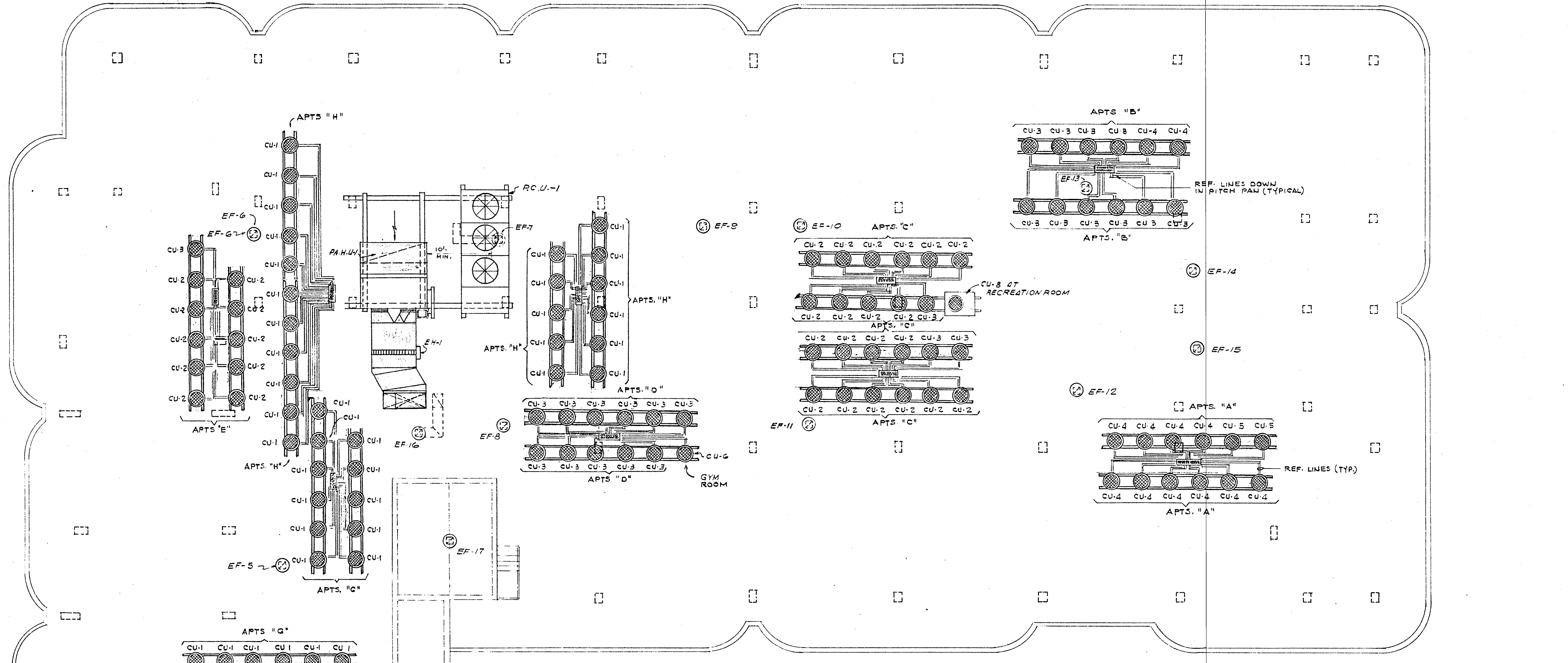
CHAMPLAIN TOWERS SOUTH
A· 135 UNIT CONDOMINIUM

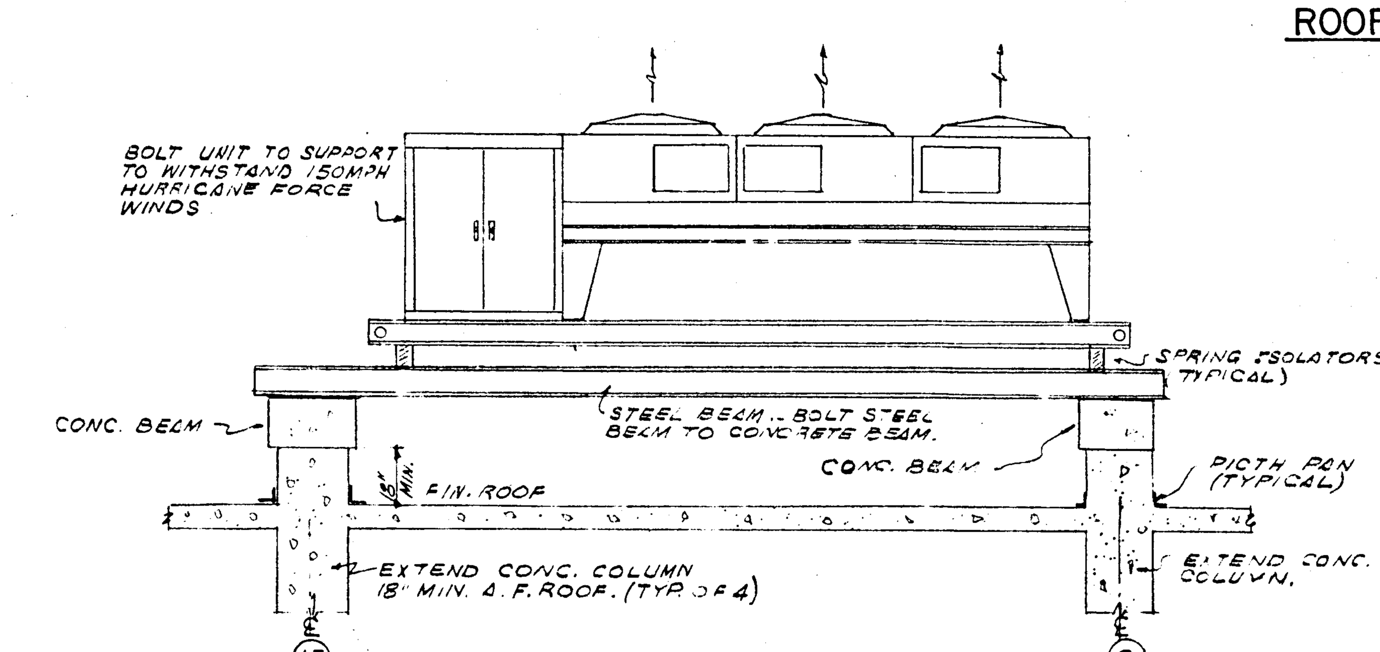
COMM. No.	DATE: 8-13-79	SHEET No. AC.3 OF. 9 SHEETS
	REV.	


ROOF PLAN 1/8"=1'-0"
NORTH
APTS "H"
APTS "E"
APTS "G"
APTS "I"
APTS "F"
APTS "D"
APTS "C"
APTS "B"
APTS "A"
APT "H"
P.A.H.U.-1
P.C.U.-1
EF-1
EF-2
EF-3
EF-4
EF-5
EF-6
EF-7
EF-8
EF-9
EF-10
EF-11
EF-12
EF-13
EF-14
EF-15
EF-17
LOBBY UNIT
REF. LINES (TYPICAL)
REF. LINES DOWN IN PITCH PAN
REC. RM.
GYM ROOM
PENTHOUSE UNITS
PENTHOUSE CU REF. LINES ONLY
CU-1 (ALL)
80x30
PRIMARY CONDENSING UNIT DETAIL N.T.S.
BOLT UNIT TO SUPPORT TO WITHSTAND 150MPH HURRICANE FORCE WINDS
WEATHER PROOF SPRING ISOLATORS TYPICAL
STEEL BEAM - BOLT STEEL BEAM TO CONCRETE BEAM.
CONC. BEAM
FIN. ROOF
PITCH PAN (TYPICAL)
EXTEND CONC. COLUMN
PRIMARY AIR HANDLING UNIT DETAIL N.T.S.
BOLT UNIT TO SUPPORTS TO WITHSTAND 150MPH HURRICANE FORCE WINDS.
FAN
COIL
FILTER
BIRDSCREEN
CANVAS CONNECTION
WEATHER PROOF SPRING ISOLATORS (TYP)
STEEL BEAM
12" MIN.
ROOF CURB W/ FLASHING & COUNTER FLASHING
2 HOURS FIRE RATED CHASE
CONC. COLUMN
FIN ROOF
PITCH PAN (TYP)
CONC. BEAM (TYP.)
CONCRETE COLUMN
PRIMARY AIR UNIT DX COIL DIAGRAM N.T.S.
COOLING COIL
SUCTION LINE
LIQUID LINE
THERMOSTATIC EXPANSION VALVE
PACKLESS REFRIGERANT VALVES
SPORLAN CATCH ALL DEHYDRATOR
DRY EYE SIGHT GLASS
SOLENOID VALVE
BULB STRAPPED TO SUCTION LINE
PACKLESS REFRIGERANT VALVE
3 REV. 11-11-80
2 REV. 10-31-80
1 REV. JAN. 12-1980
REV. NOV. 29-1979
WILLIAM M. FRIEDMAN
AND ASSOCIATES ARCHITECTS, INC.
138 S.E. 14th LANE
3588044
CHAMPLAIN TOWERS SOUTH
A 135 UNIT CONDOMINIUM
COMM. No.
DATE:
REV.
SHEET No.
OF 10
SHEETS
FLORIDA ENGINEERING SERVICES
352 N.E. 167 STREET
N. MIAMI BCH, FLA.
33162 945-4743

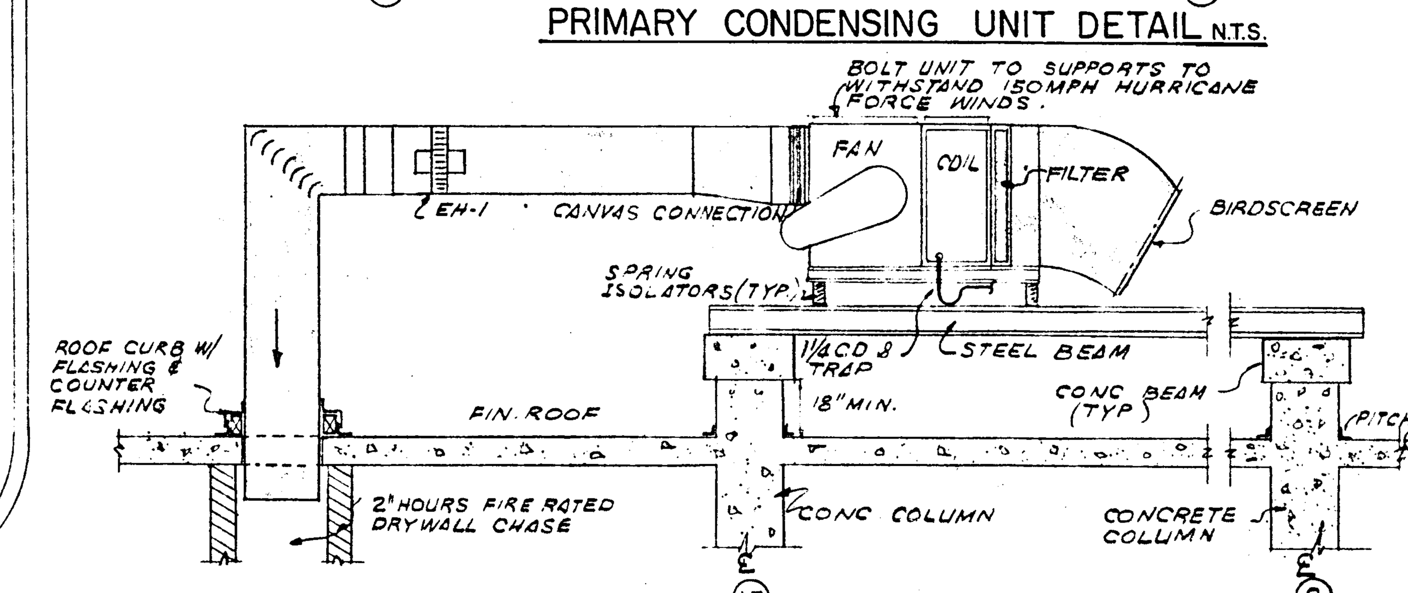

ROOF PLAN 1/8"=1'-0"
NORTH
PRIMARY CONDENSING UNIT DETAIL N.T.S.
PRIMARY AIR HANDLING UNIT DETAIL N.T.S.
PRIMARY AIR UNIT DX COIL DIAGRAM N.T.S.
COOLING COIL
SUCTION LINE
LIQUID LINE
THERMOSTATIC EXPANSION VALVE
PACKLESS REFRIGERANT VALVES
SPORLAN CATCH ALL DEHYDRATOR
DRY EYE SIGHT GLASS
SOLENOID VALVE
BULB STRAPPED TO SUCTION LINE
PACKLESS REFRIGERANT VALVE
REV. 11-11-80
REV. 10-31-80
REV. JAN. 12-1980
WILLIAM M. FRIEDMAN
AND ASSOCIATES ARCHITECTS, INC.
138 S.E. 14th LANE
3588044
CHAMPLAIN TOWERS SOUTH
A 135 UNIT CONDOMINIUM
COMM. No.
DATE:
REV.
SHEET No.
OF 10
SHEETS
FLORIDA ENGINEERING SERVICES
252 NE 167 STREET
N. MIAMI BCH, FLA.
945-4745



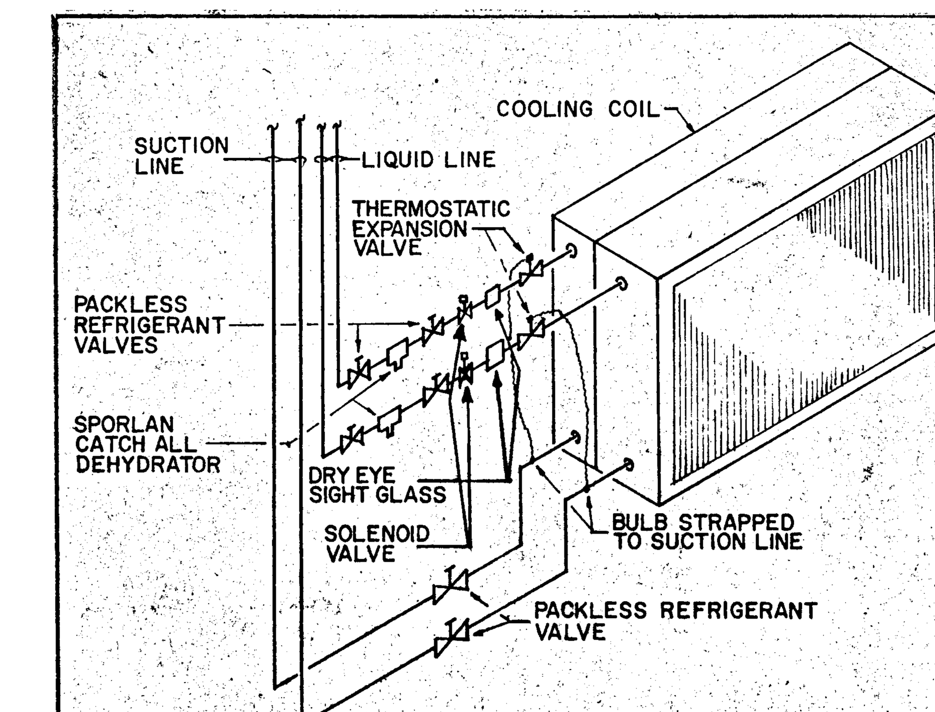
ROOF PLAN 1/8"=1'-0"



PRIMARY CONDENSING UNIT DETAIL N.T.S.



PRIMARY AIR HANDLING UNIT DETAIL N.T.S.



PRIMARY AIR UNIT DX COIL DIAGRAM N.T.S.

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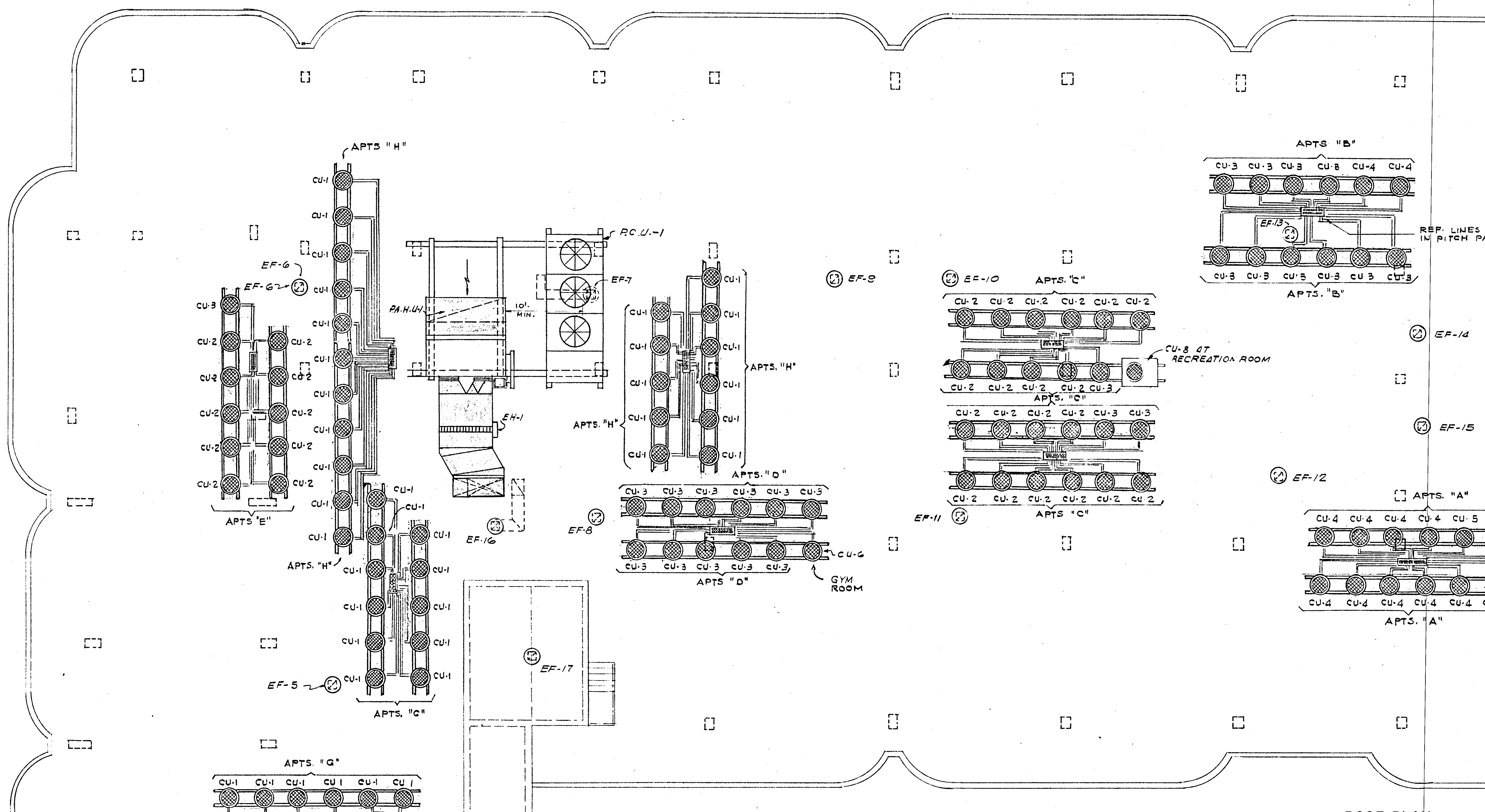
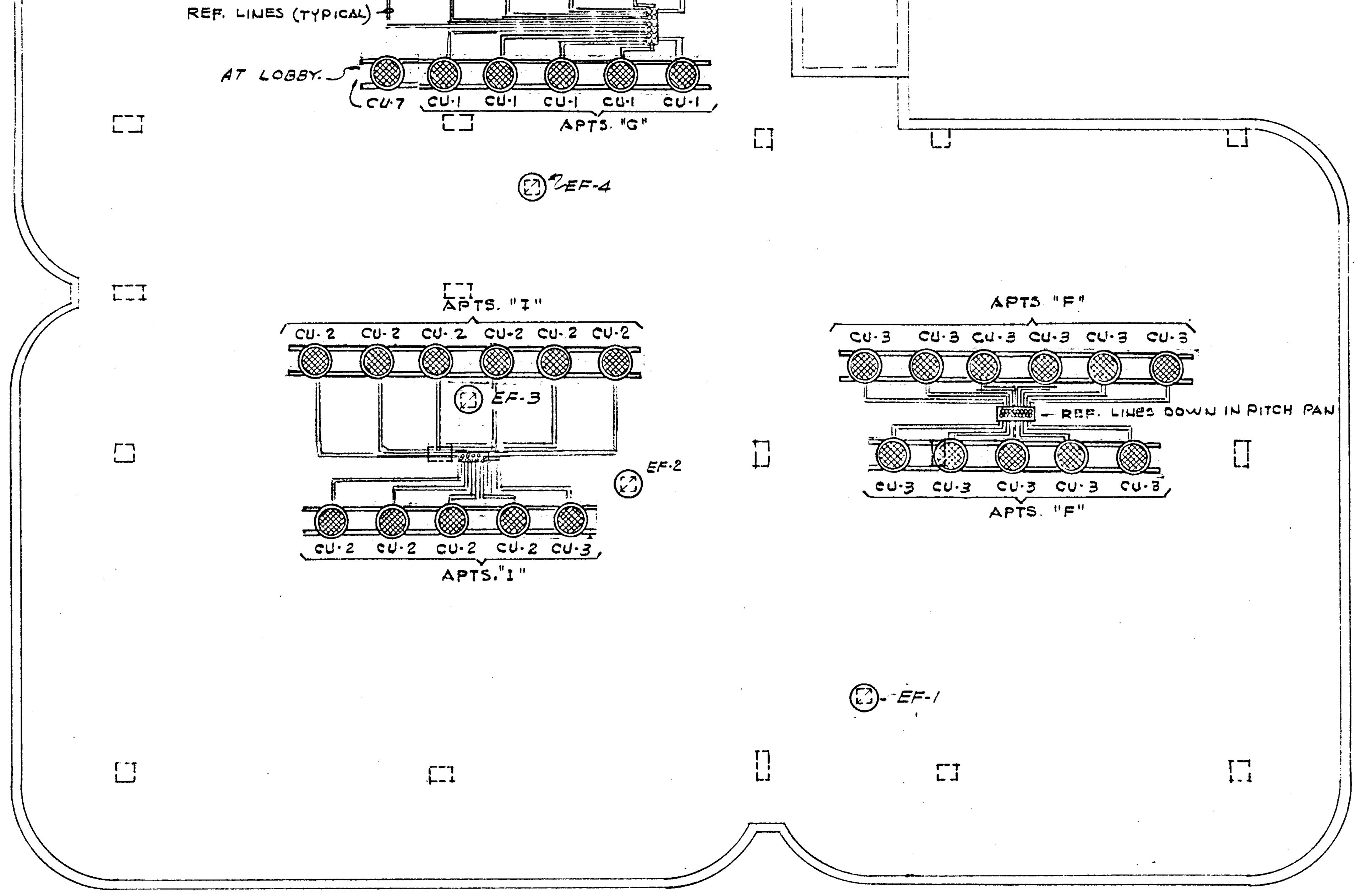
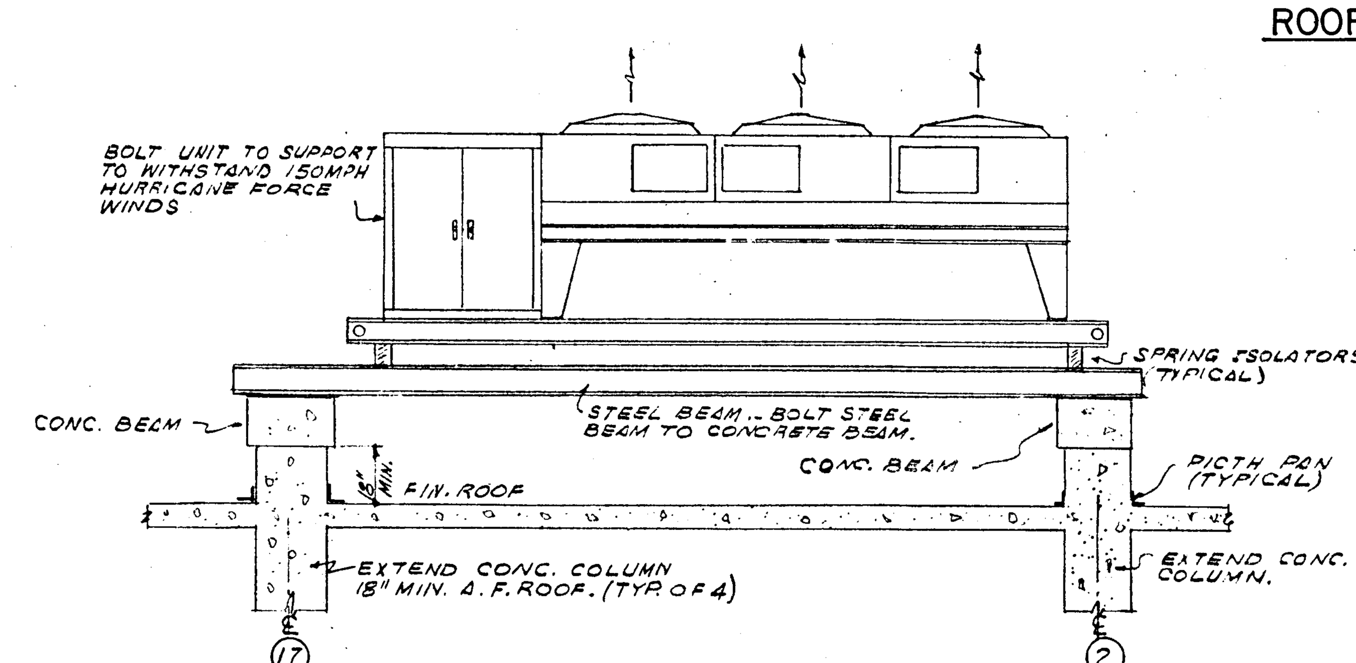
CHAMPLAIN TOWERS SOUTH
A 135 UNIT CONDOMINIUM

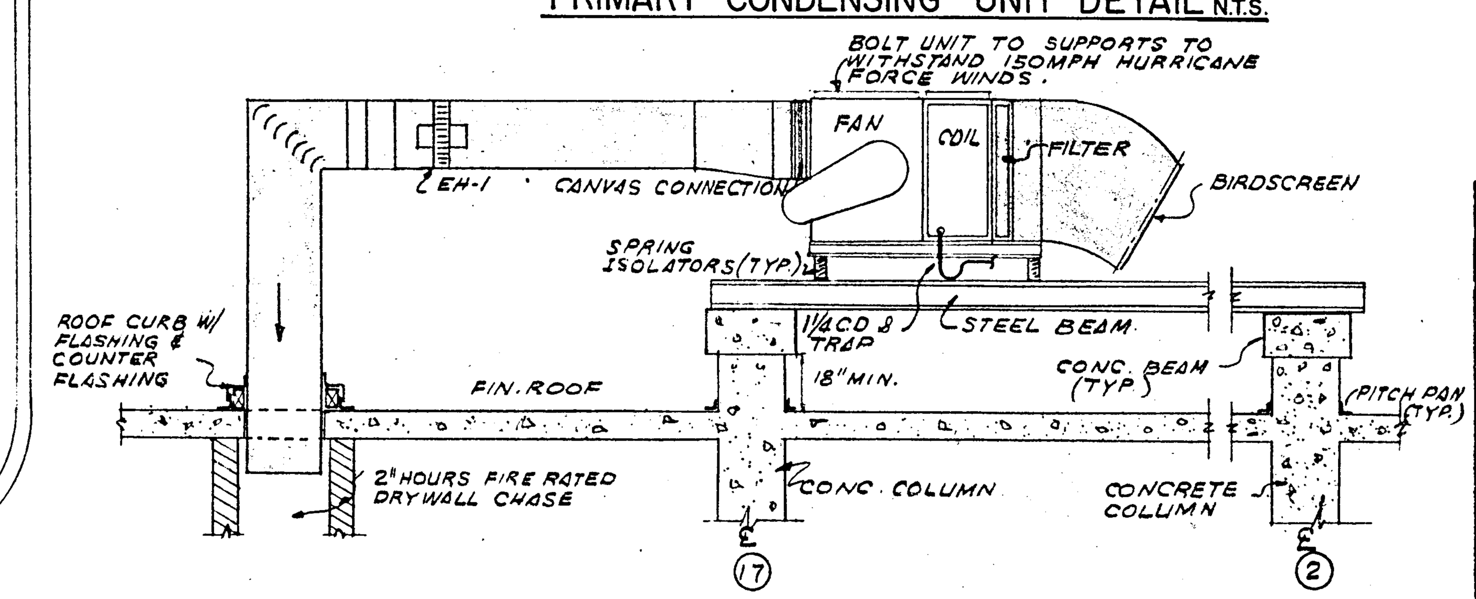
COMM. No.	DATE: 8-13-79	SHEET No. AC4 OF 9 SHEETS
	REV.	

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



PRIMARY CONDENSING UNIT DETAIL N.T.S.



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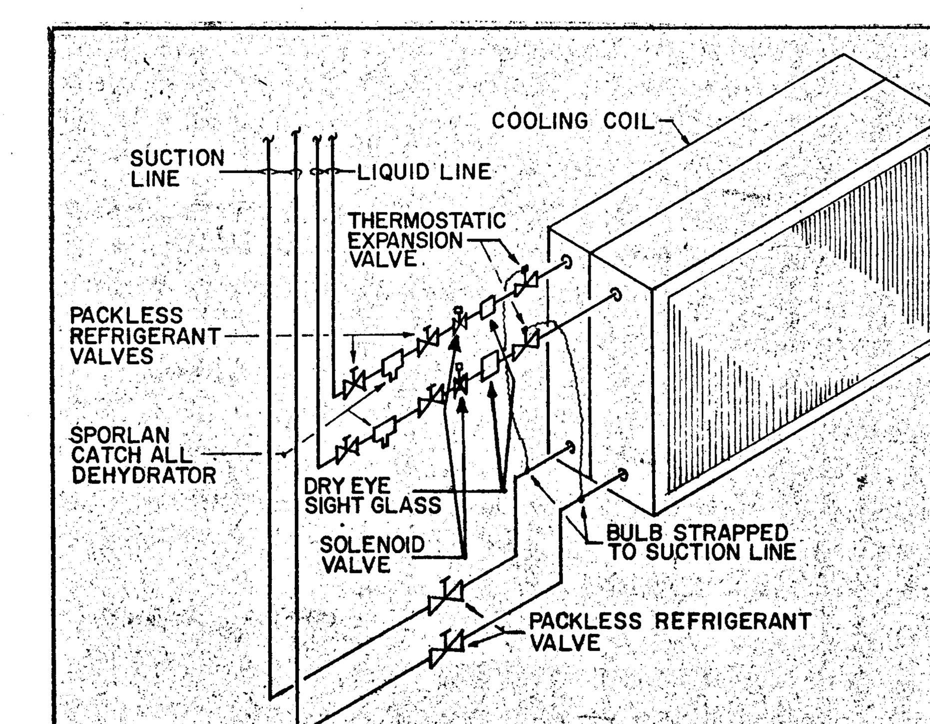

PRIMARY AIR UNIT DX COIL DIAGRAM N.T.S.

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CHAMPLAIN TOWERS SOUTH
A- 135 UNIT CONDOMINIUM

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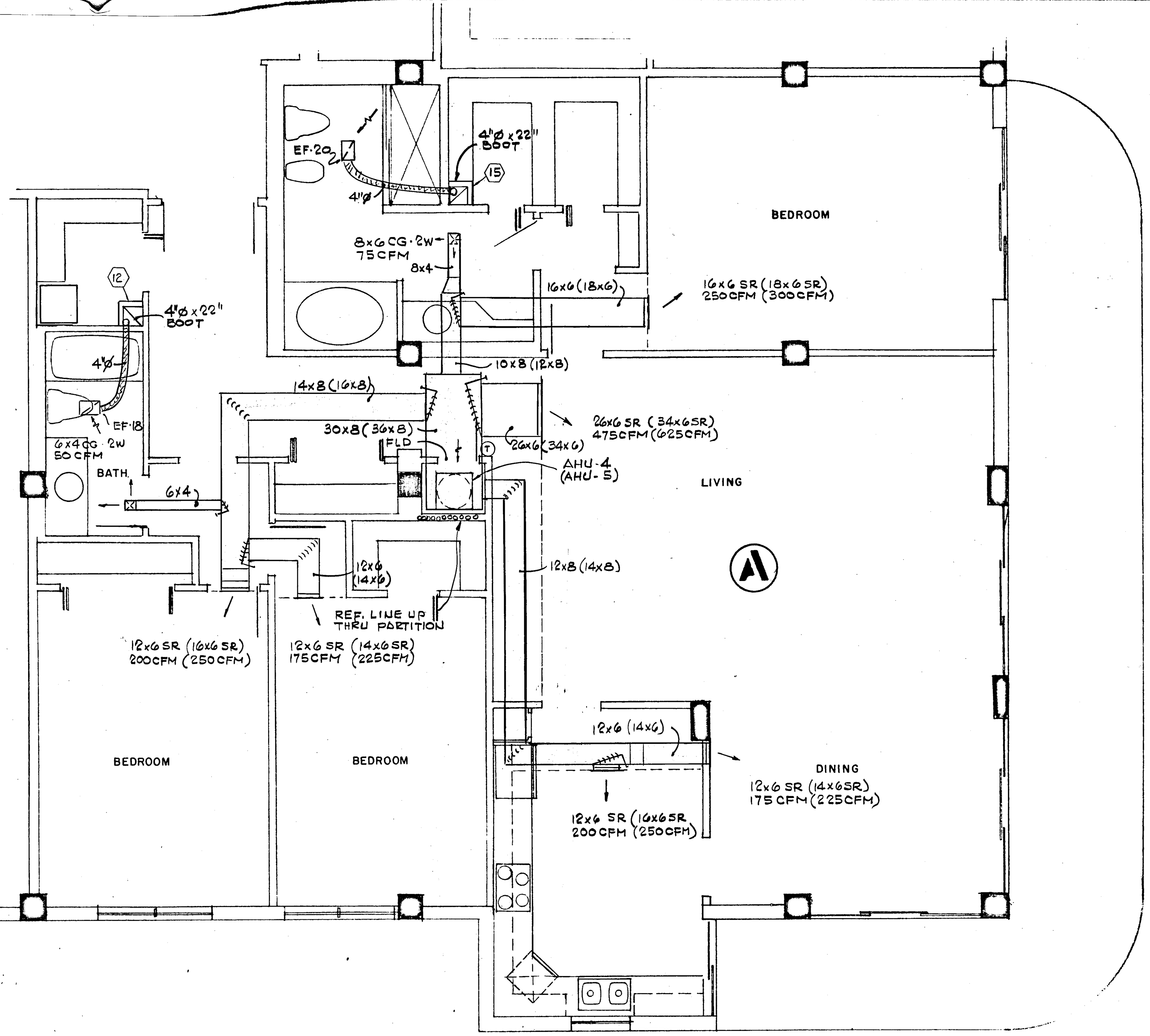
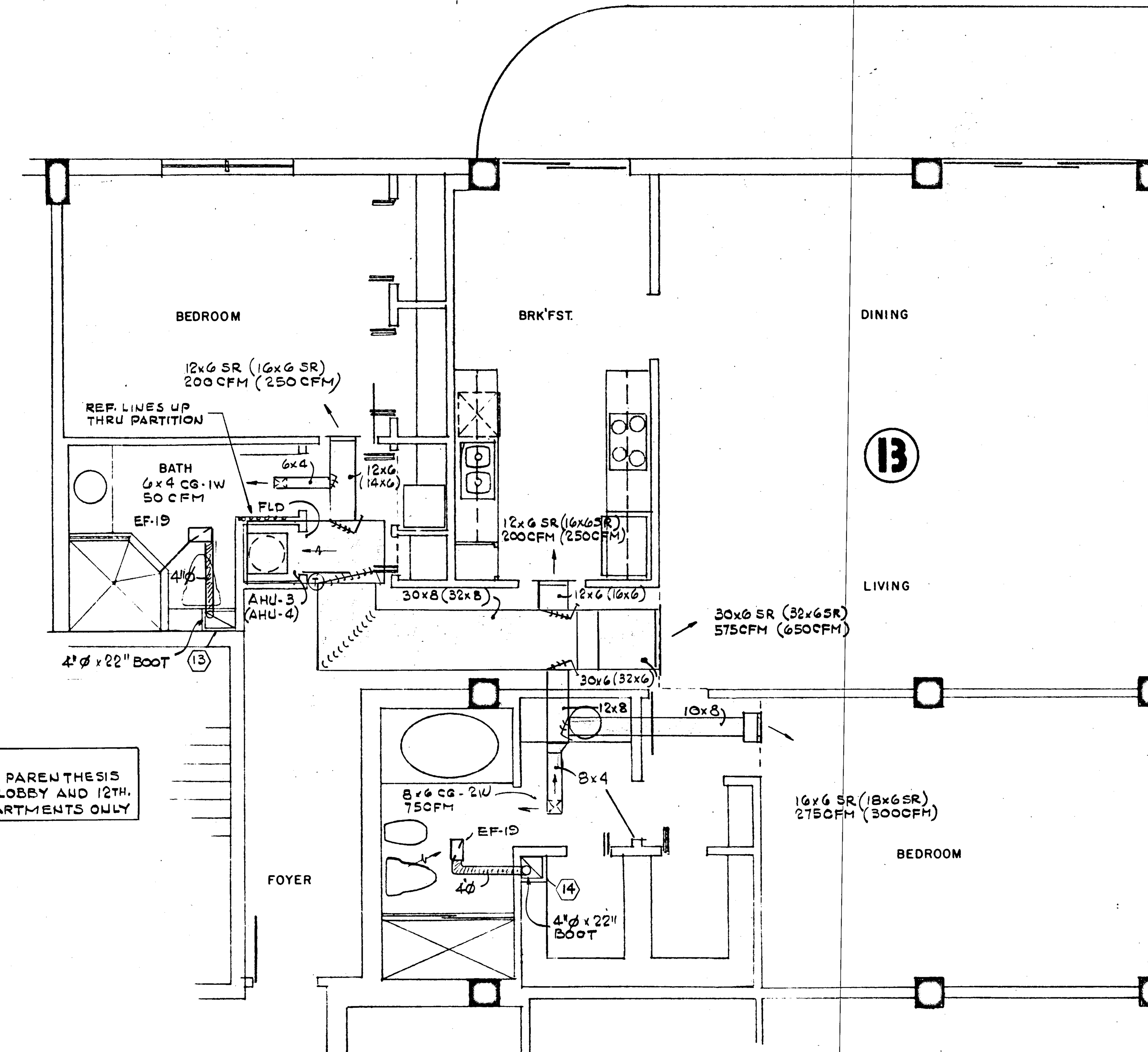
252 N.E. 167 STREET
N. MIAMI BCH. FLA.
33162 · 945-4743

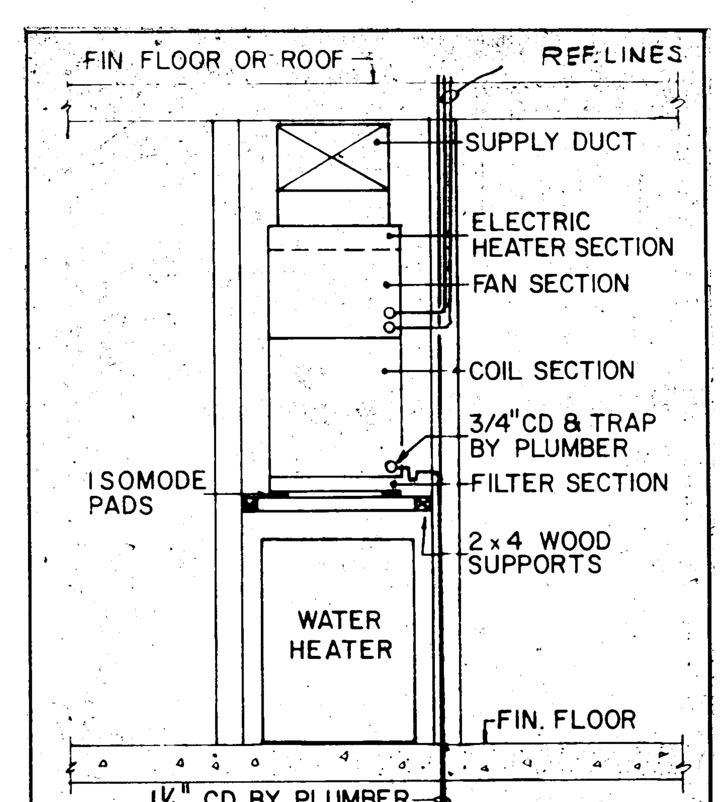
COMM. No.	DATE: 8-13-79	SHEET No. AC4 OF 9 SHEETS
	REV.	

8/13/79





NOTE:
ITEMS IN PARENTHESIS APPLY TO LOBBY AND 12TH. FLOOR APARTMENTS ONLY



TYPICAL AIR HANDLING UNIT DETAIL
N.T.S.

8/13/79

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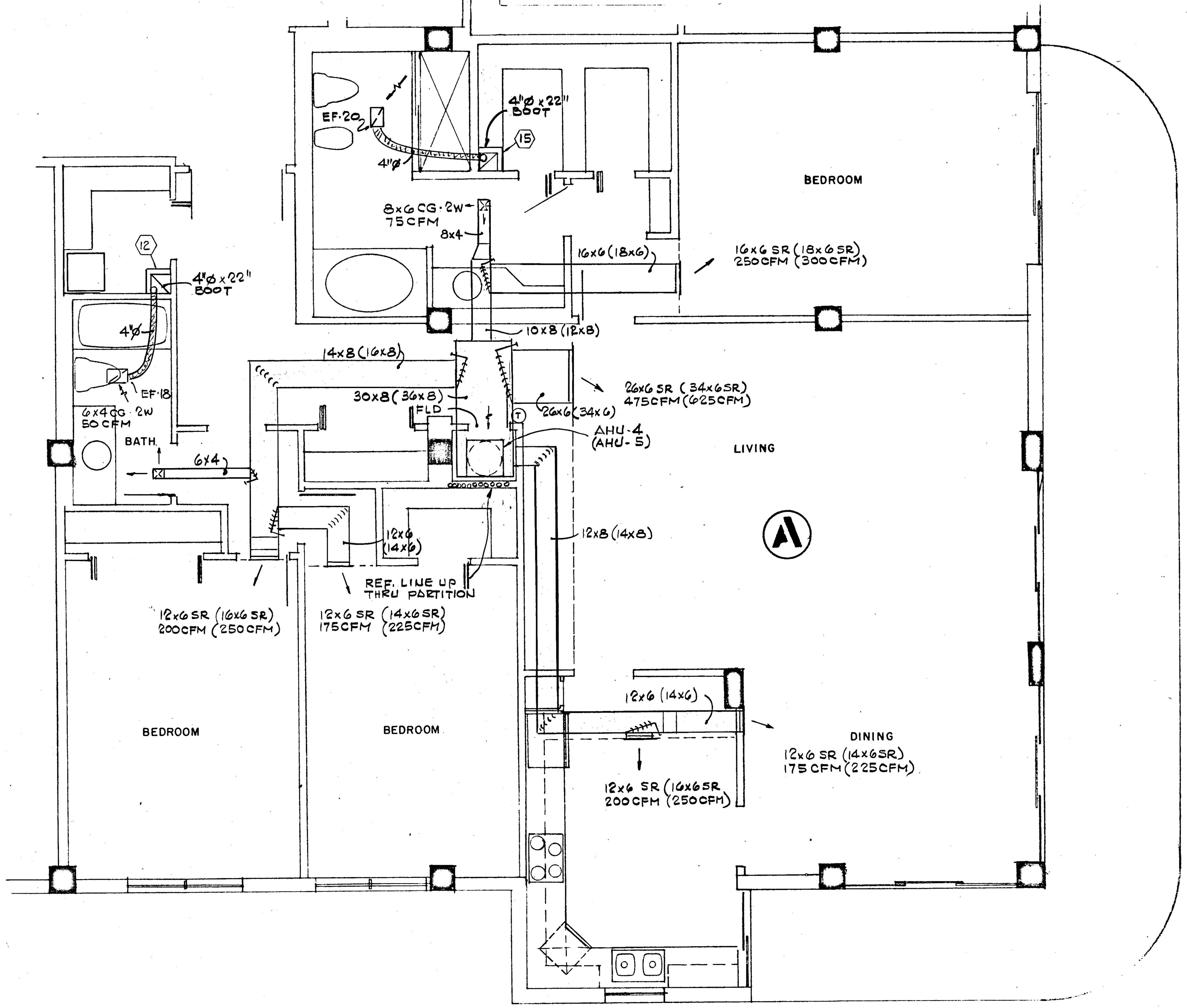
CHAMPLAIN TOWERS SOUTH
A-135 UNIT CONDOMINIUM

COMM. No.	DATE: 8-13-79	SHEET No. AC-5 OF 9 SHEETS
	REV.	



NOTE:
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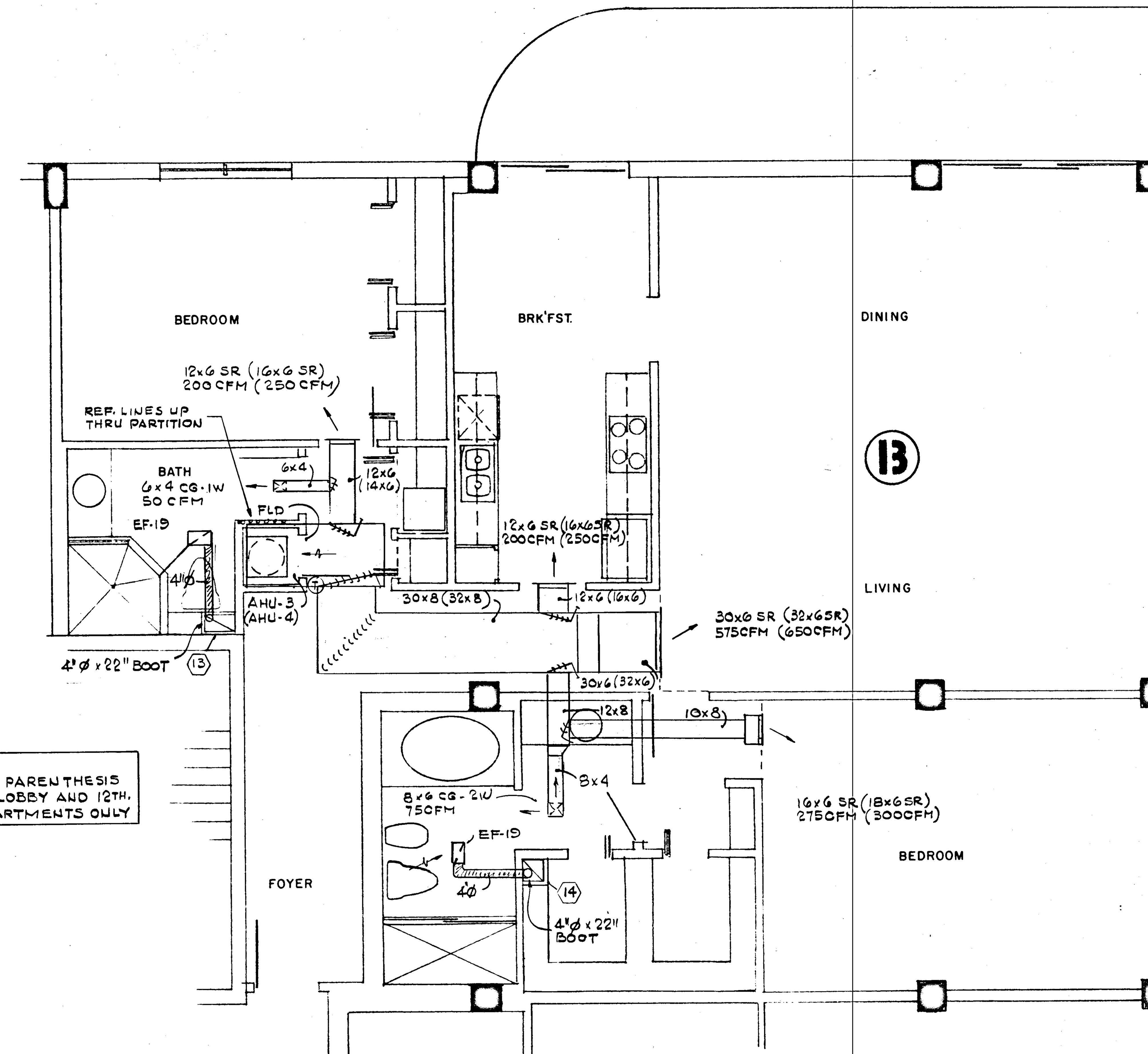

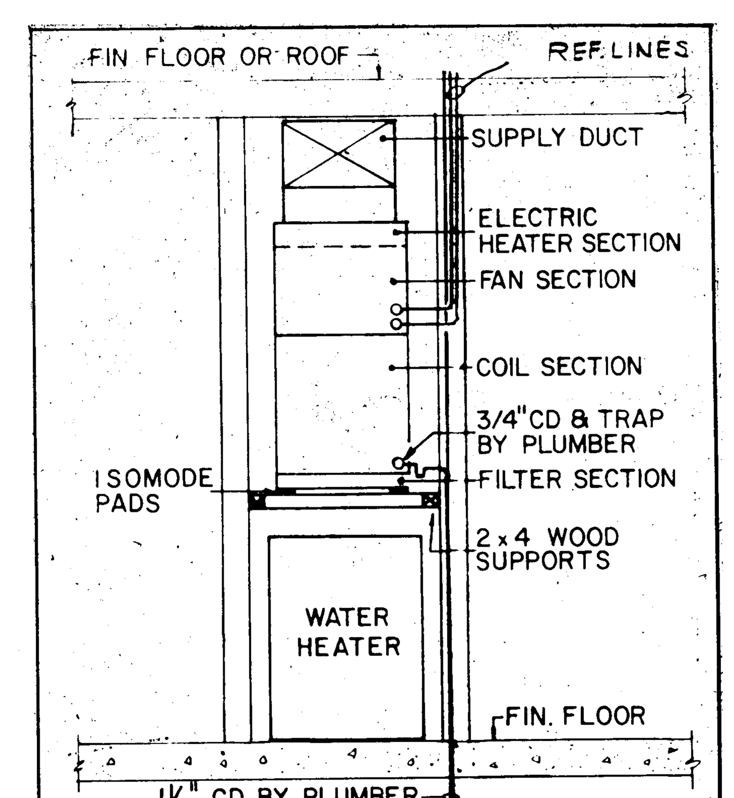

TYPICAL AIR HANDLING UNIT DETAIL
N.T.S.

WILLIAM M. FRIEDMAN
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138 S.E. 14th LANE
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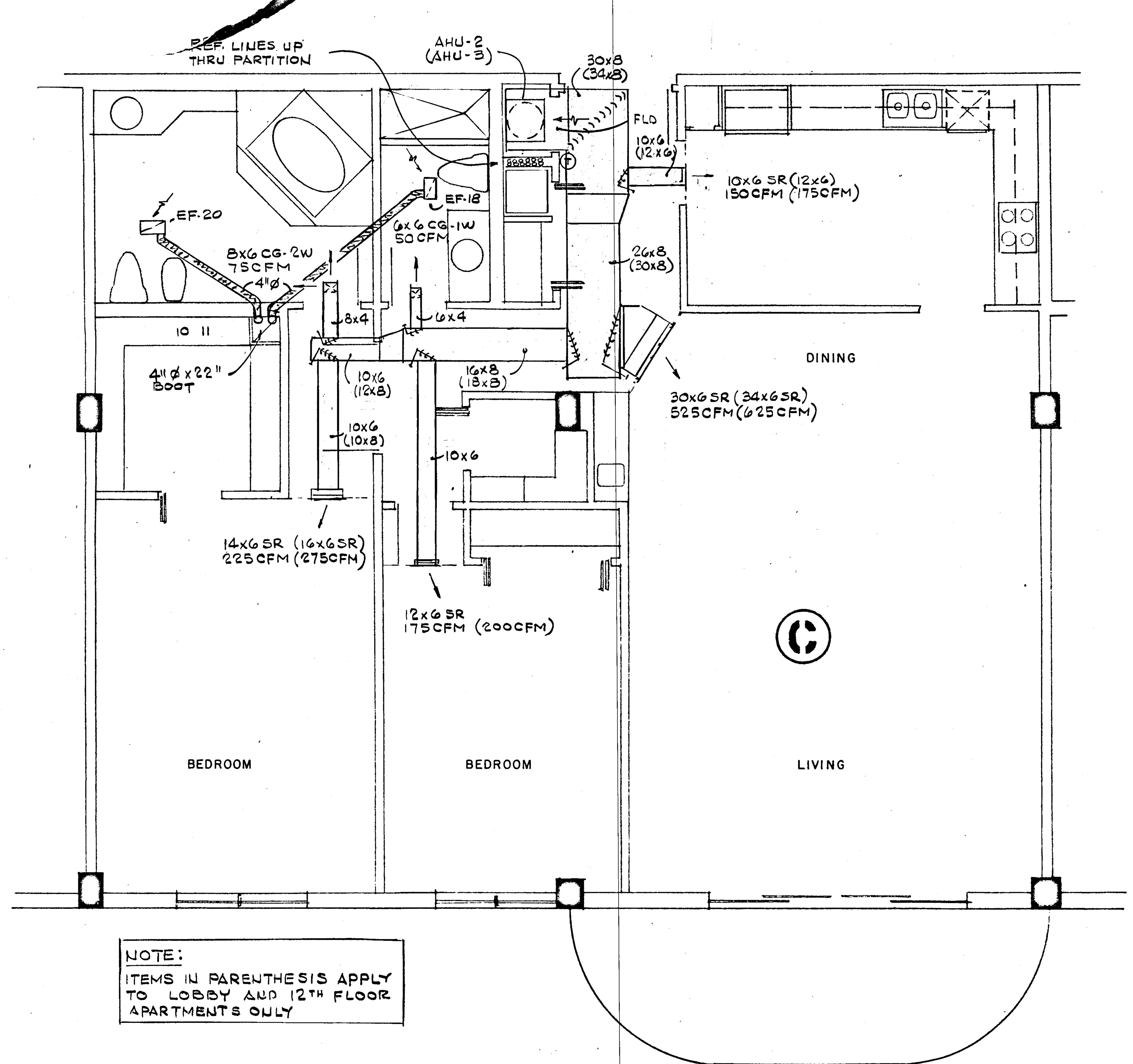
CHAMPLAIN TOWERS SOUTH
A 135 UNIT CONDOMINIUM

COMM. No.	DATE: 8-13-79	SHEET No. AC-5 OF 9 SHEETS
	REV.	



NOTE:
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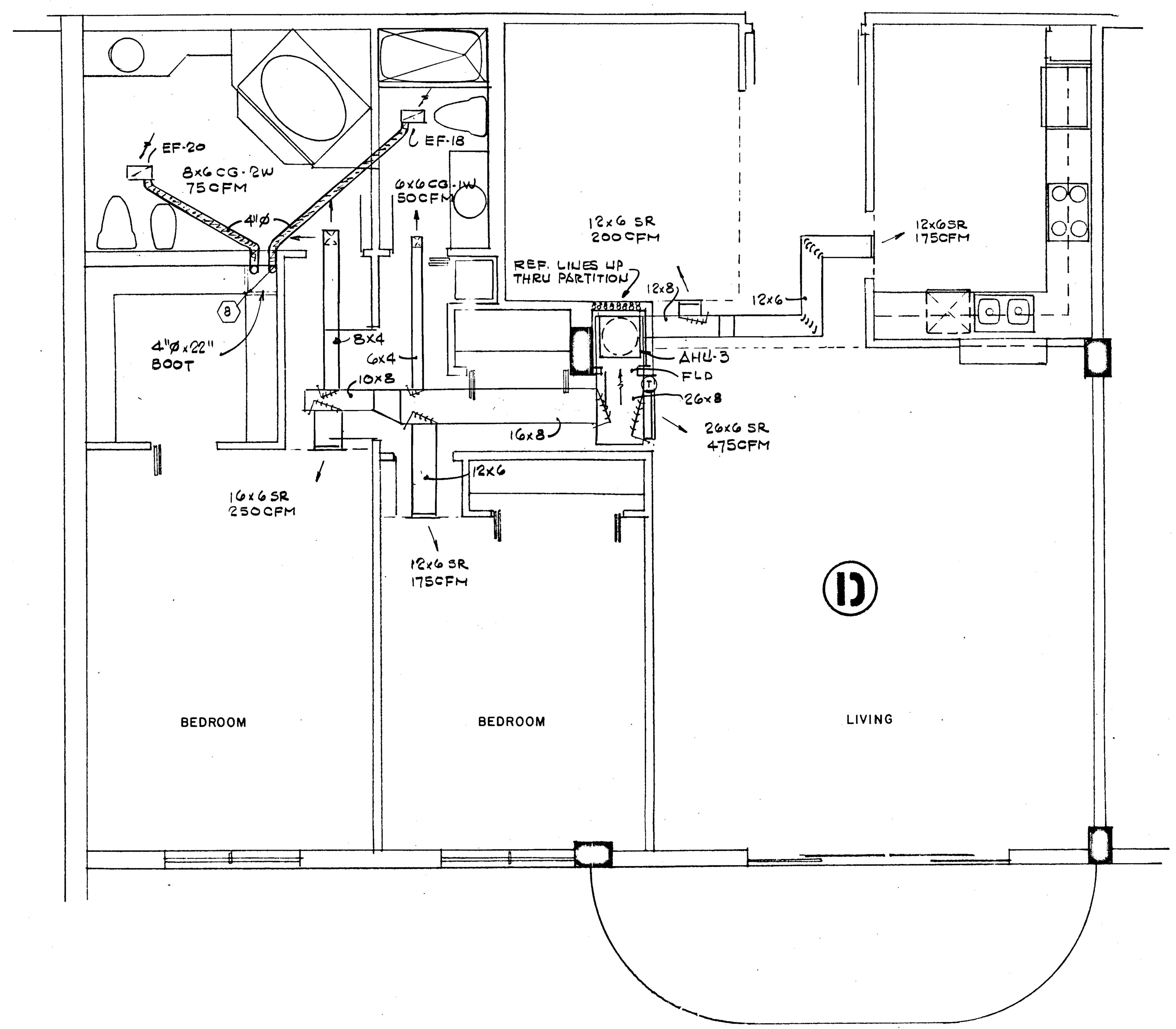

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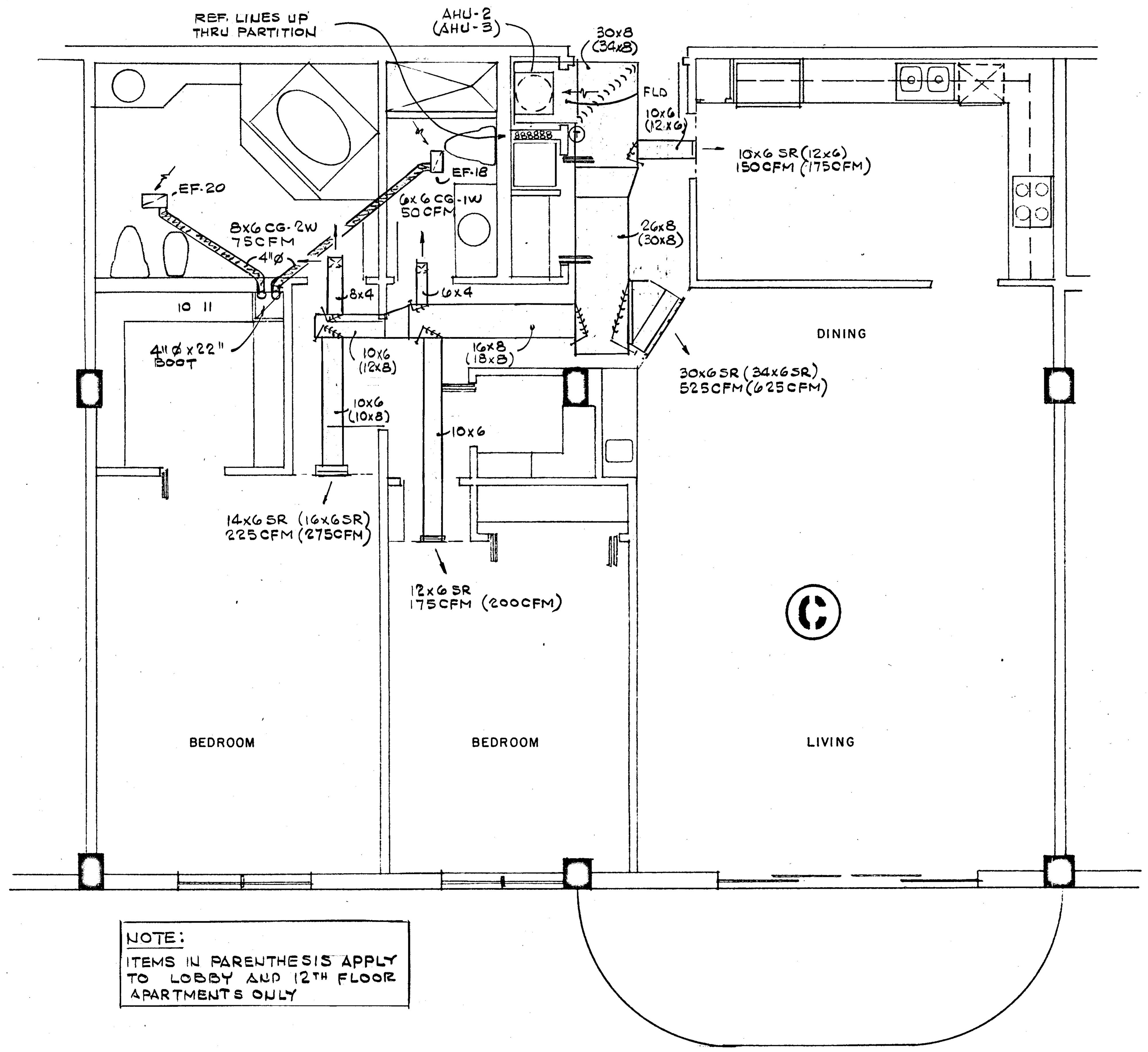
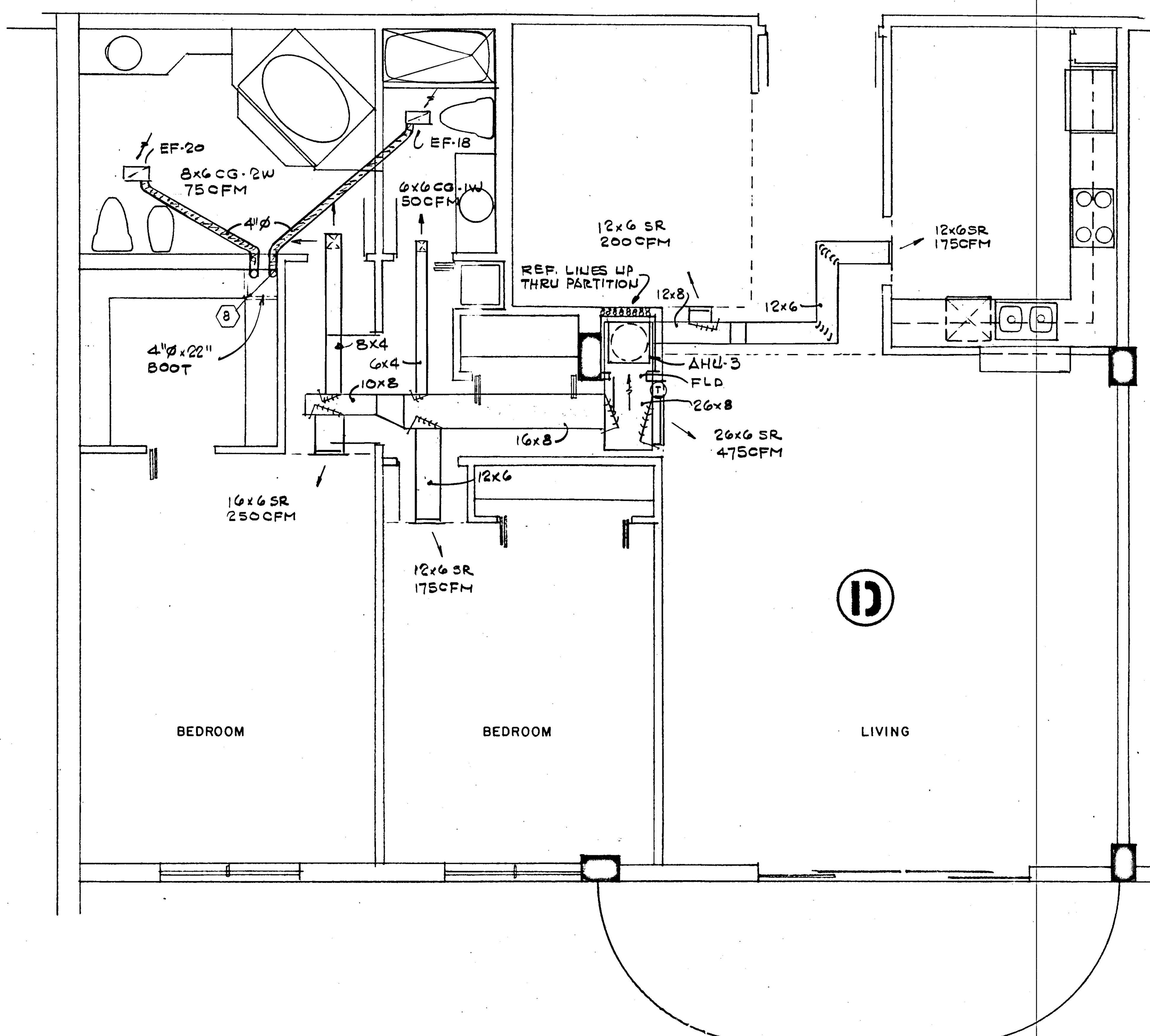
CHAMPLAIN TOWERS SOUTH
A- 135 UNIT CONDOMINIUM

COMM. No.	DATE: 8-13-79	SHEET No. AC6 OF 9 SHEETS
	REV.	



NOTE:
ITEMS IN PARENTHESIS APPLY TO LOBBY AND 12TH FLOOR APARTMENTS ONLY



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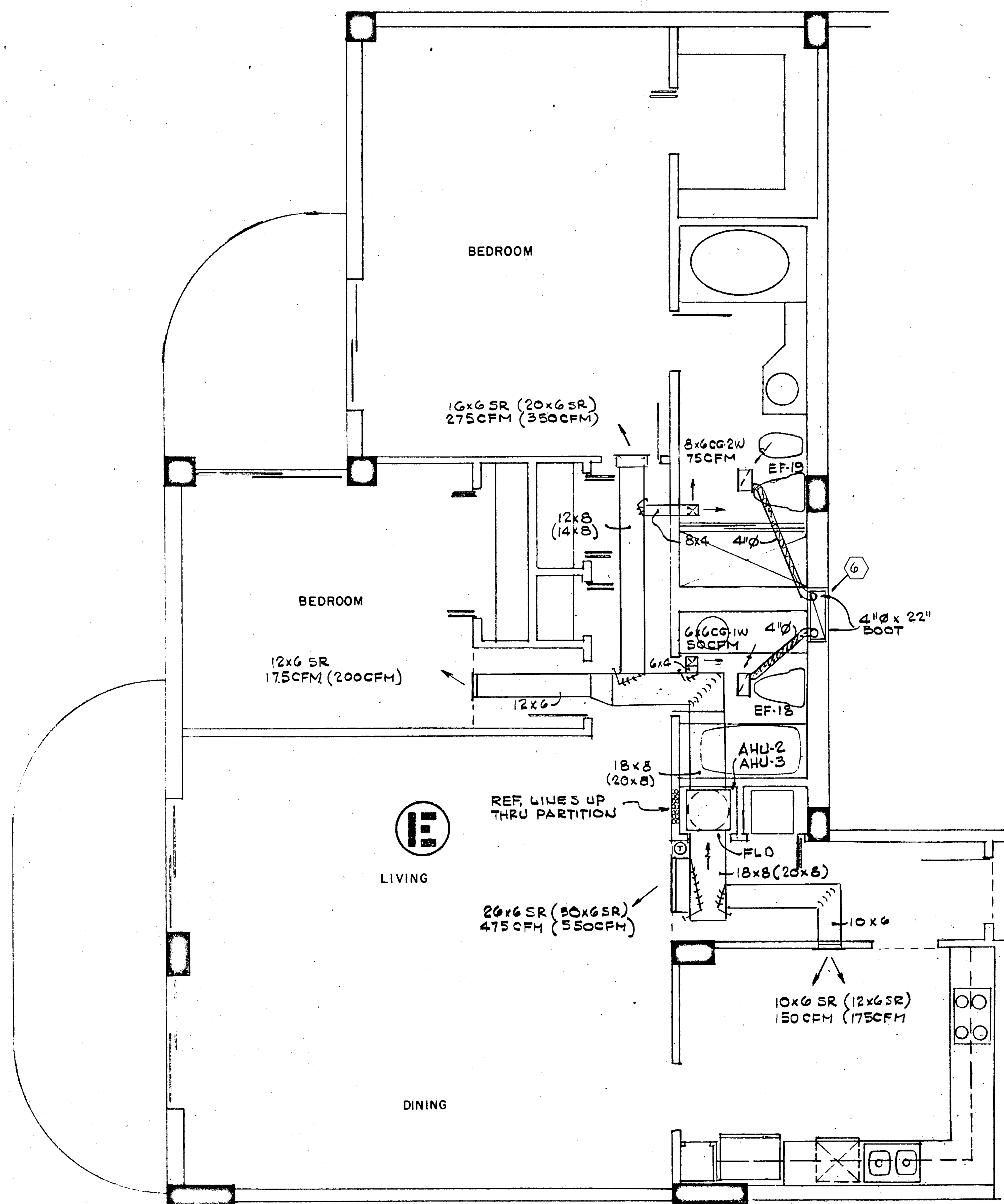
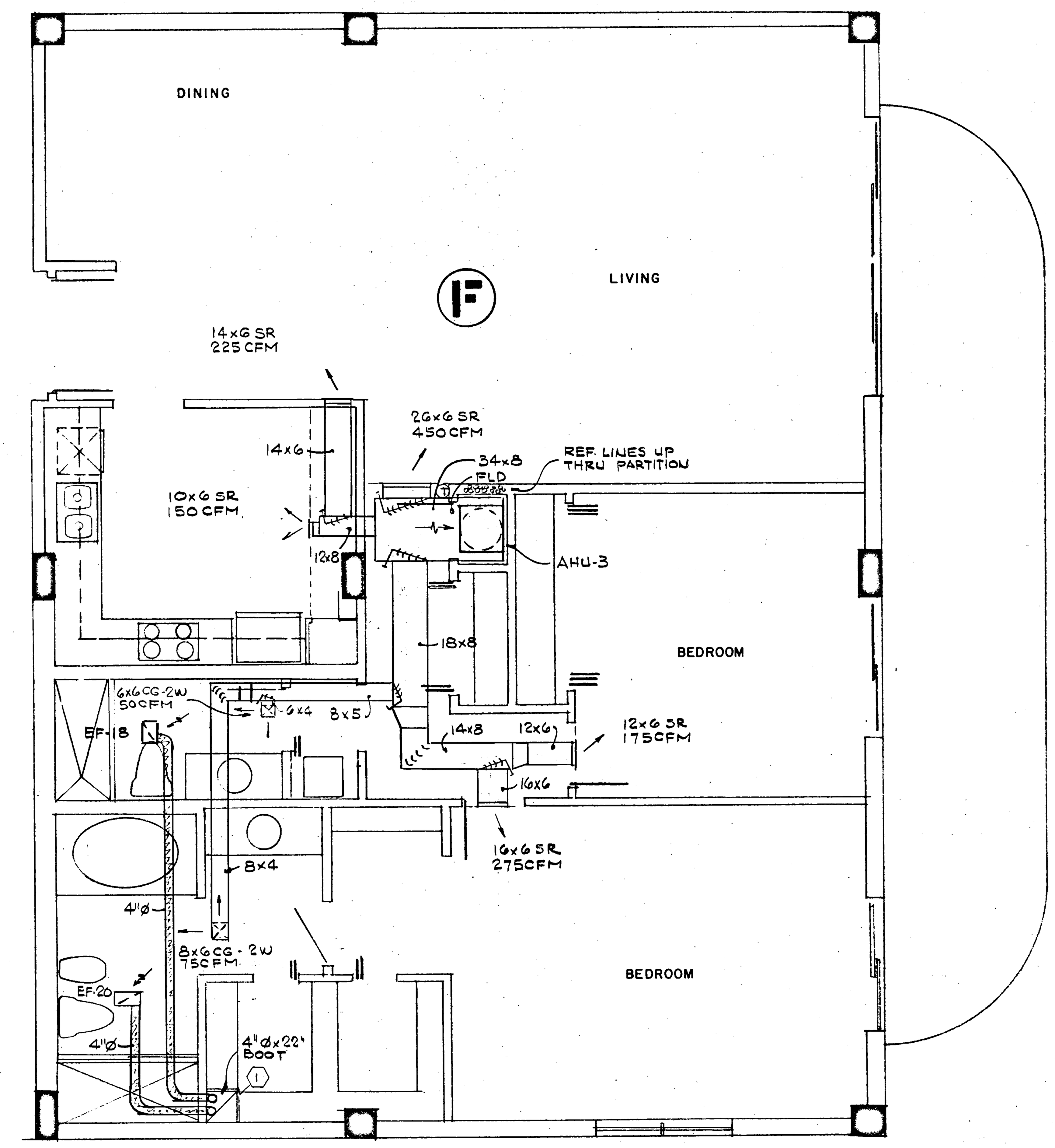
CHAMPLAIN TOWERS SOUTH
A 135 UNIT CONDOMINIUM

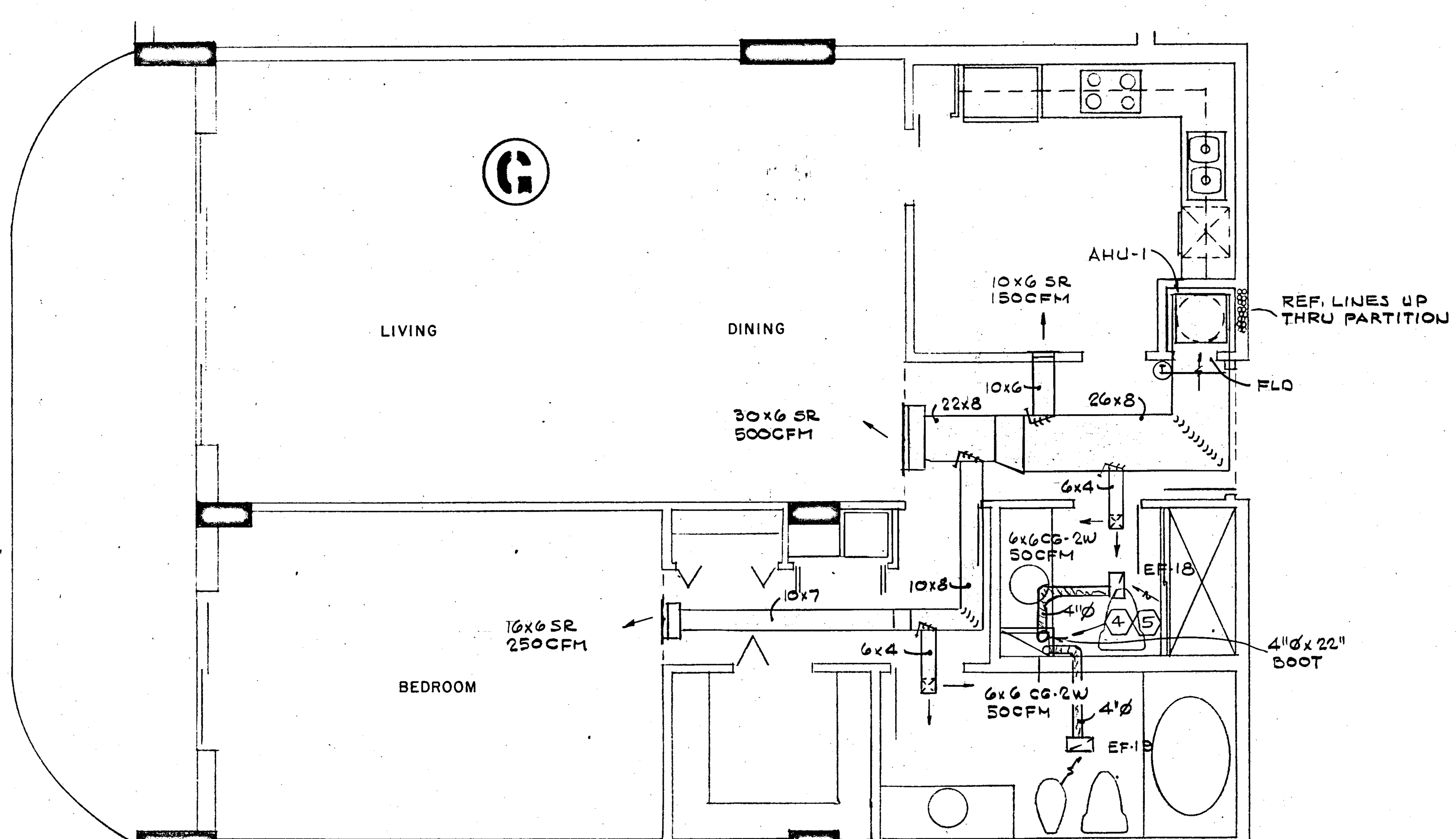
COMM. No.	DATE: 8-13-79	SHEET No. AC6 OF 9 SHEETS
	REV.	

8/13/79





NOTE:
ITEMS IN PARENTHESIS APPLY TO LOBBY AND 12TH FLOOR APARTMENTS ONLY



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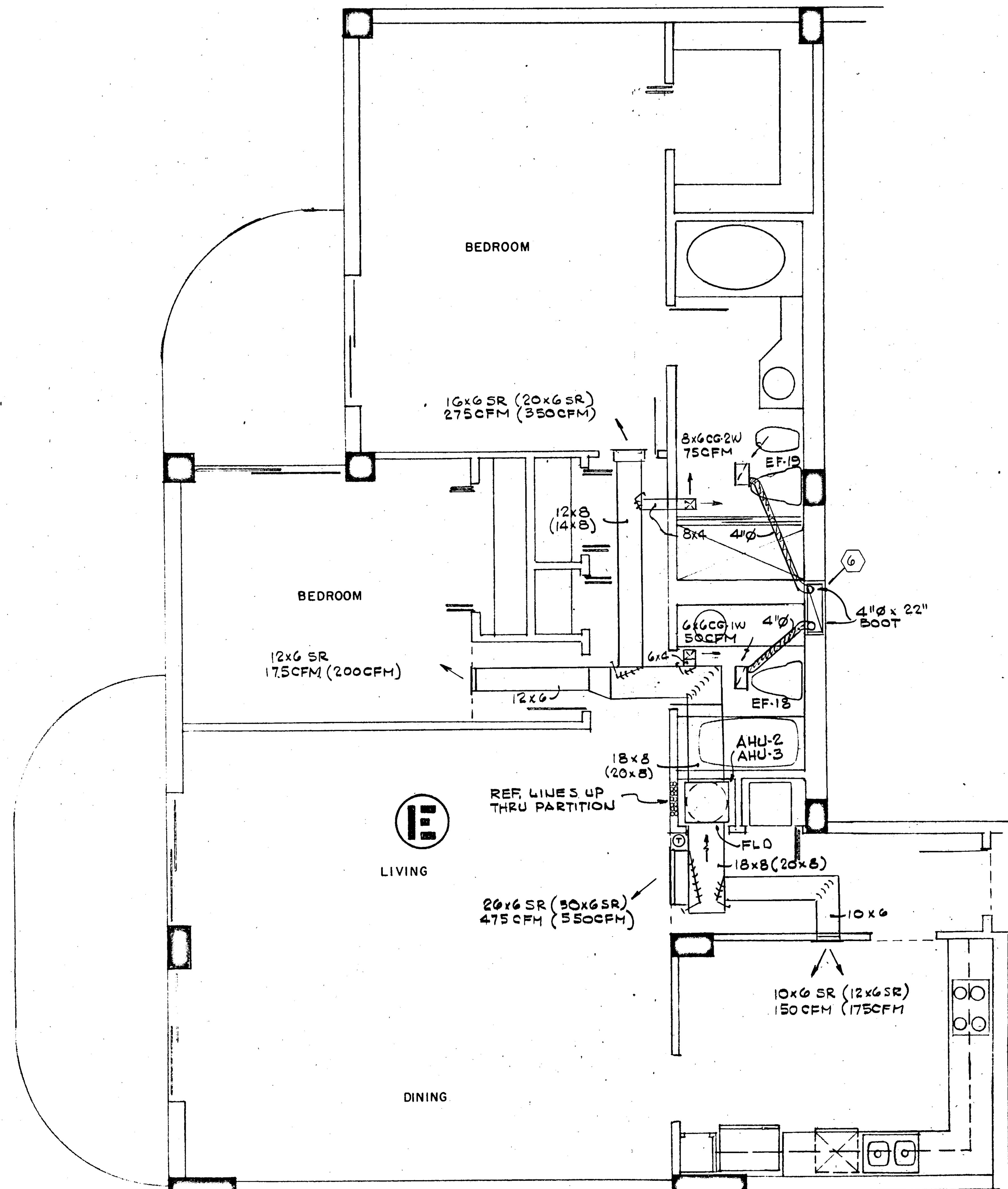
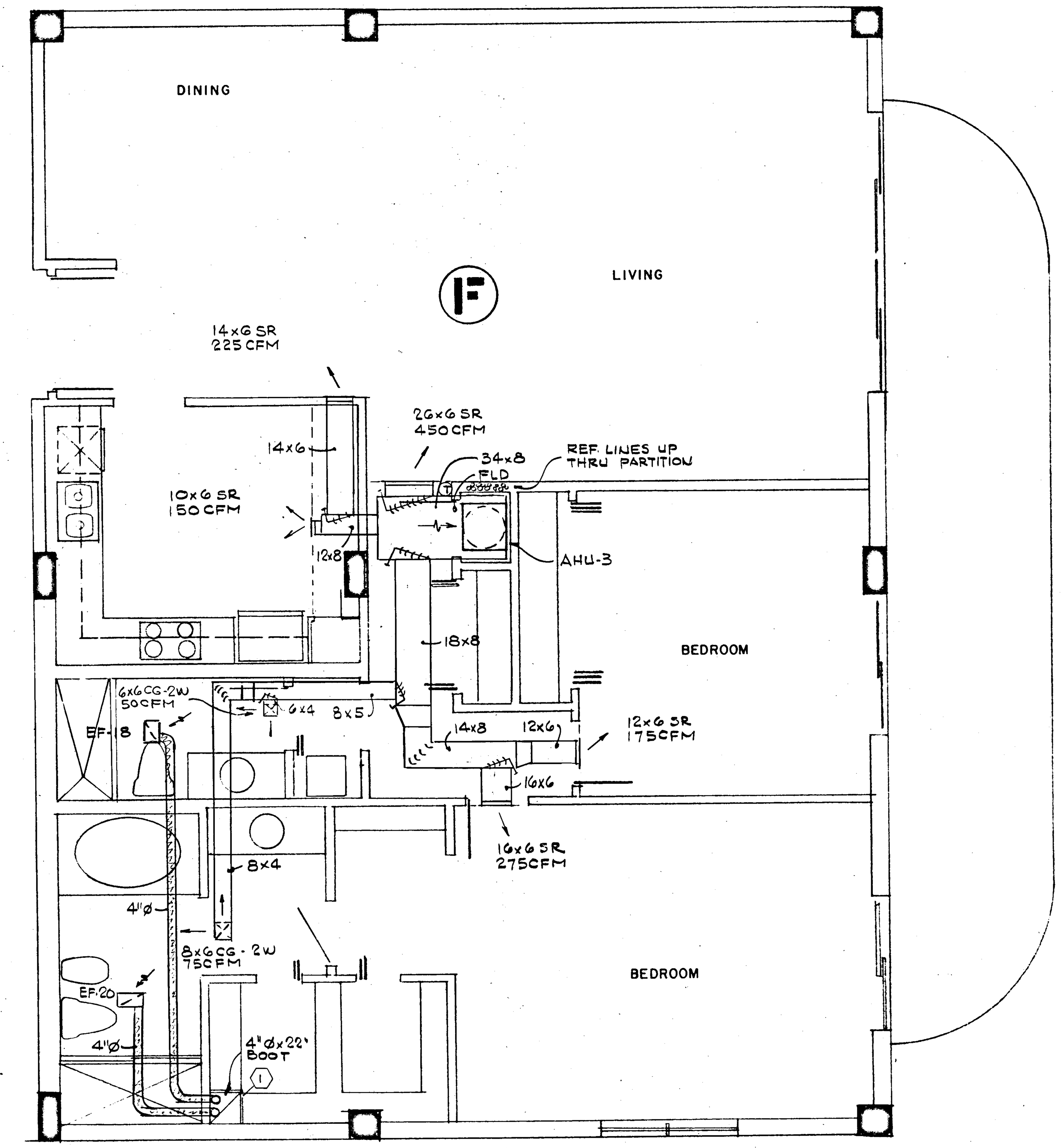
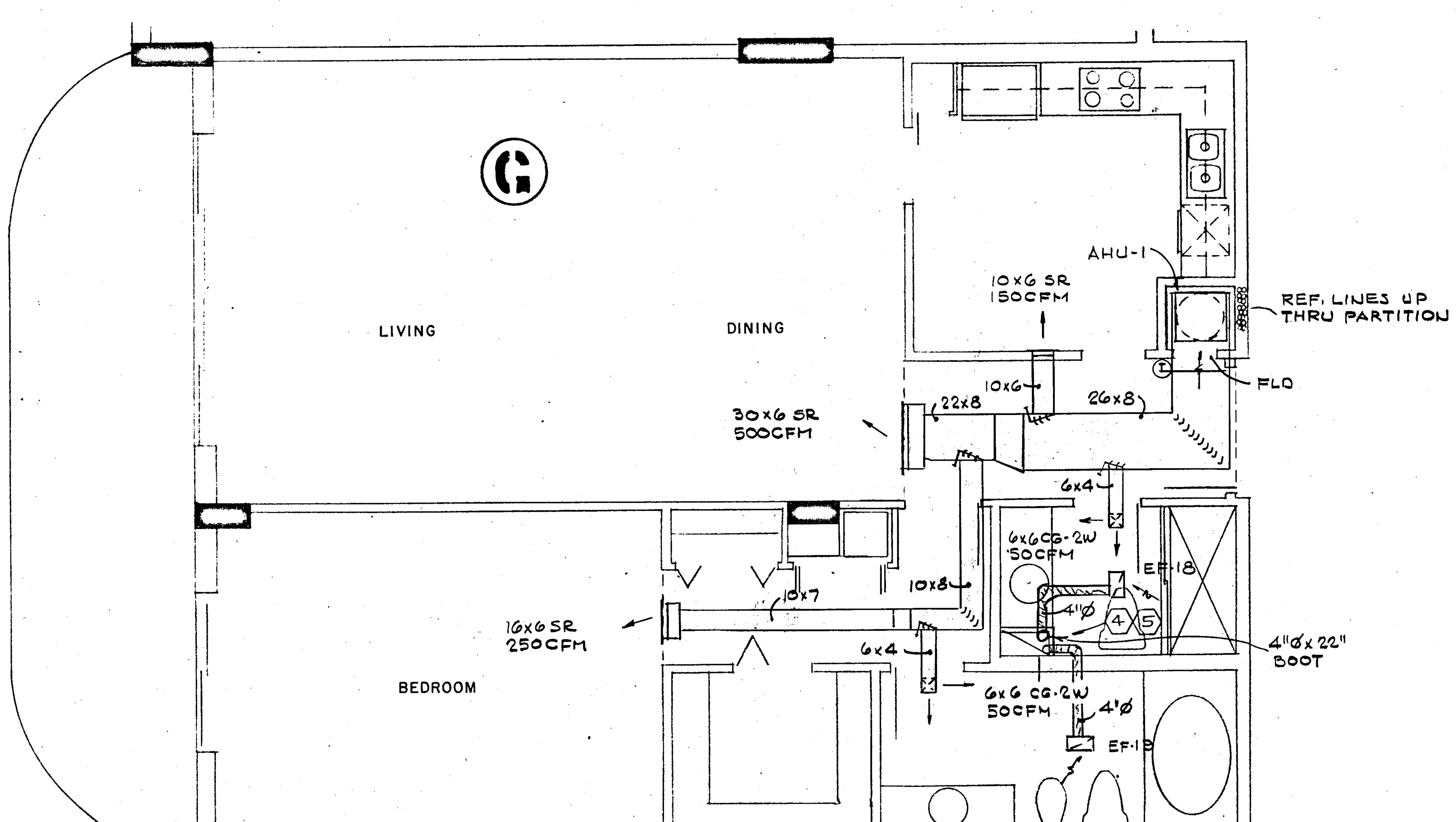
CHAMPLAIN TOWERS SOUTH
A- 135 UNIT CONDOMINIUM

COMM. No.	DATE: 8-13-79	SHEET No. AC7. OF
	REV.	





NOTE:
ITEMS IN PARENTHESIS APPLY
TO LOBBY AND 12TH FLOOR
APARTMENTS ONLY



8/20/79

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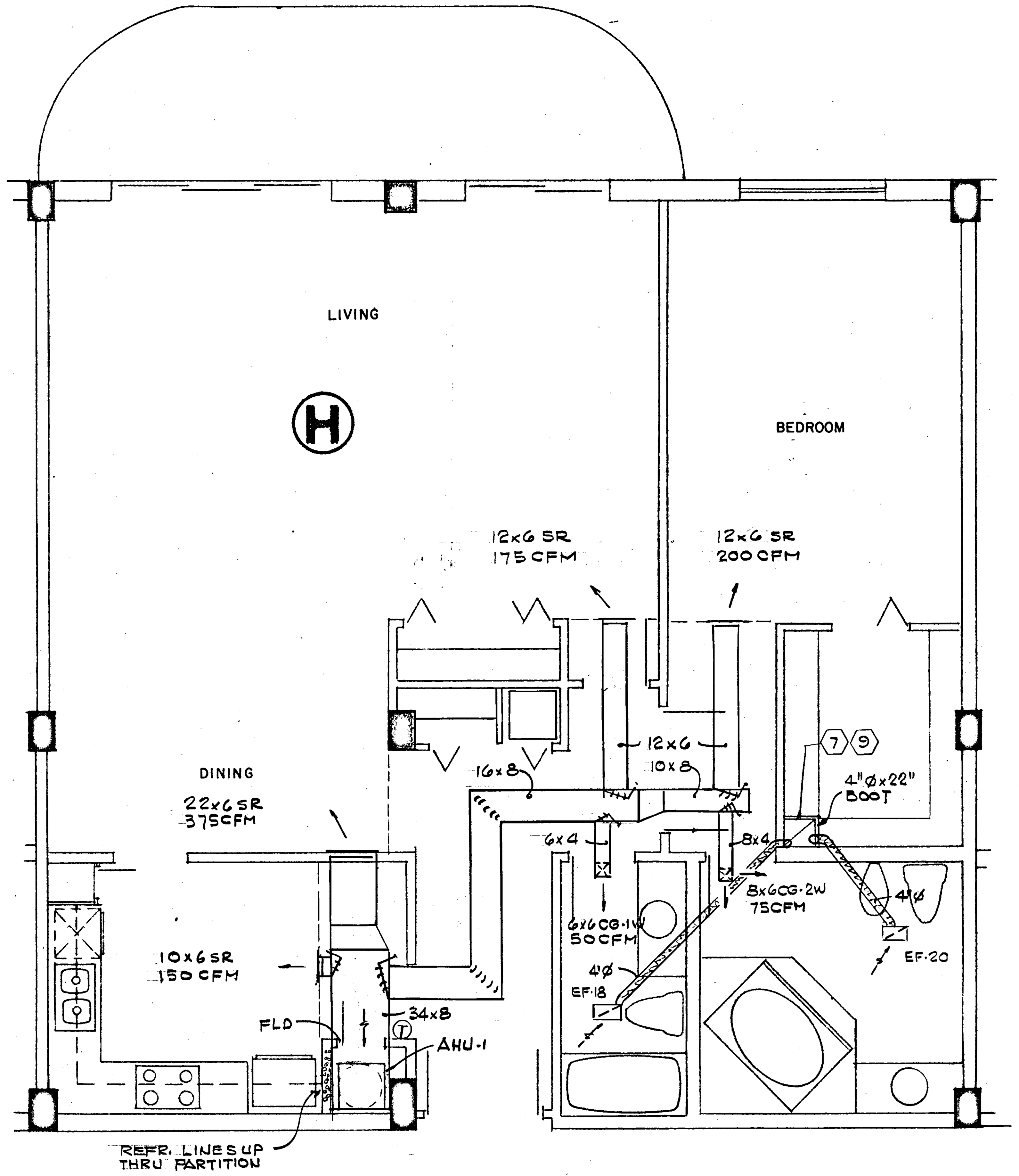
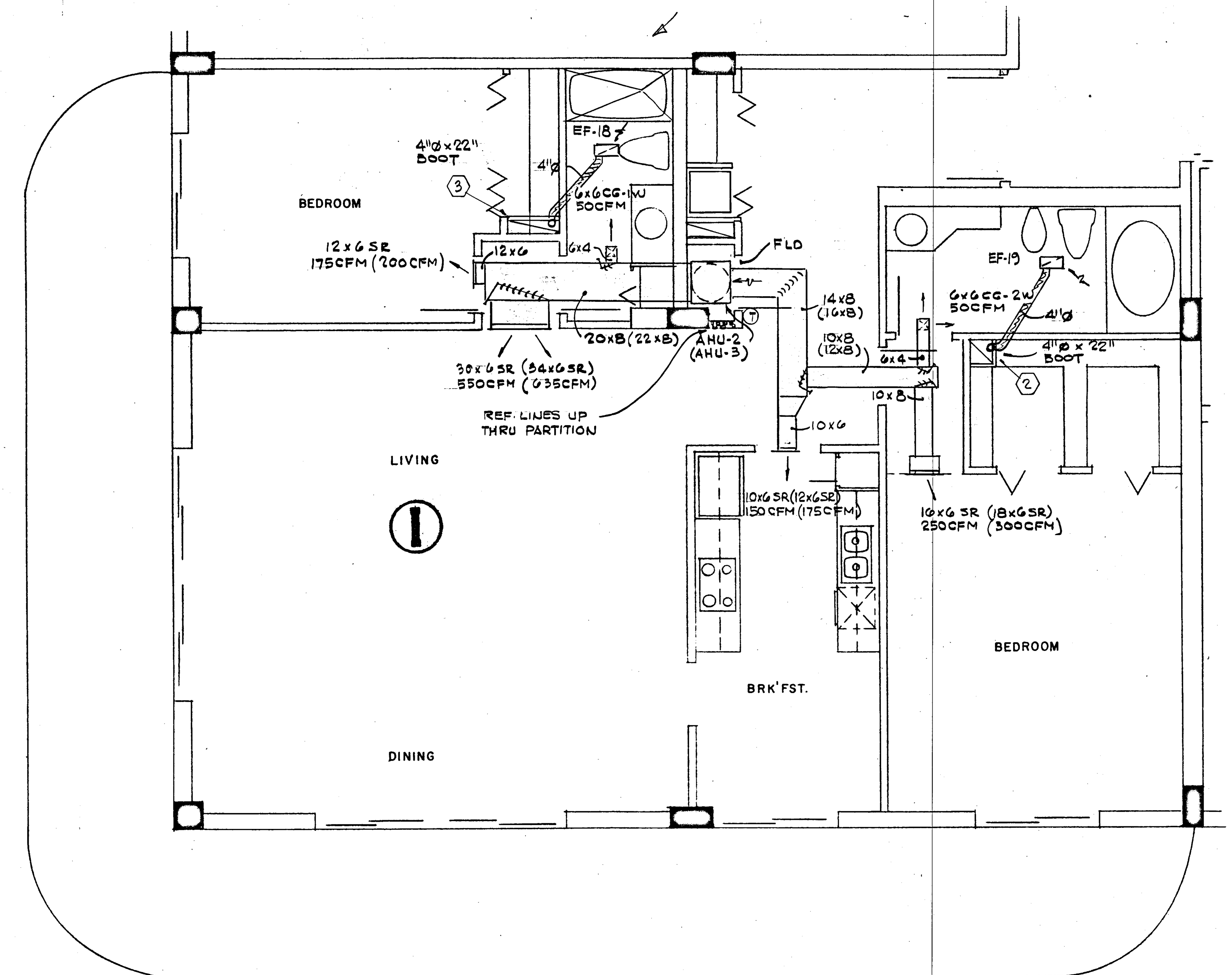
AND ASSOCIATES ARCHITECTS, INC.
138 S.E. 14th LANE
3568044

CHAMPLAIN TOWERS SOUTH

A-135 UNIT CONDOMINIUM

COMM. No.	DATE 8-13-79	SHEET No.
	REV.	AC7 OF 9 SHEETS



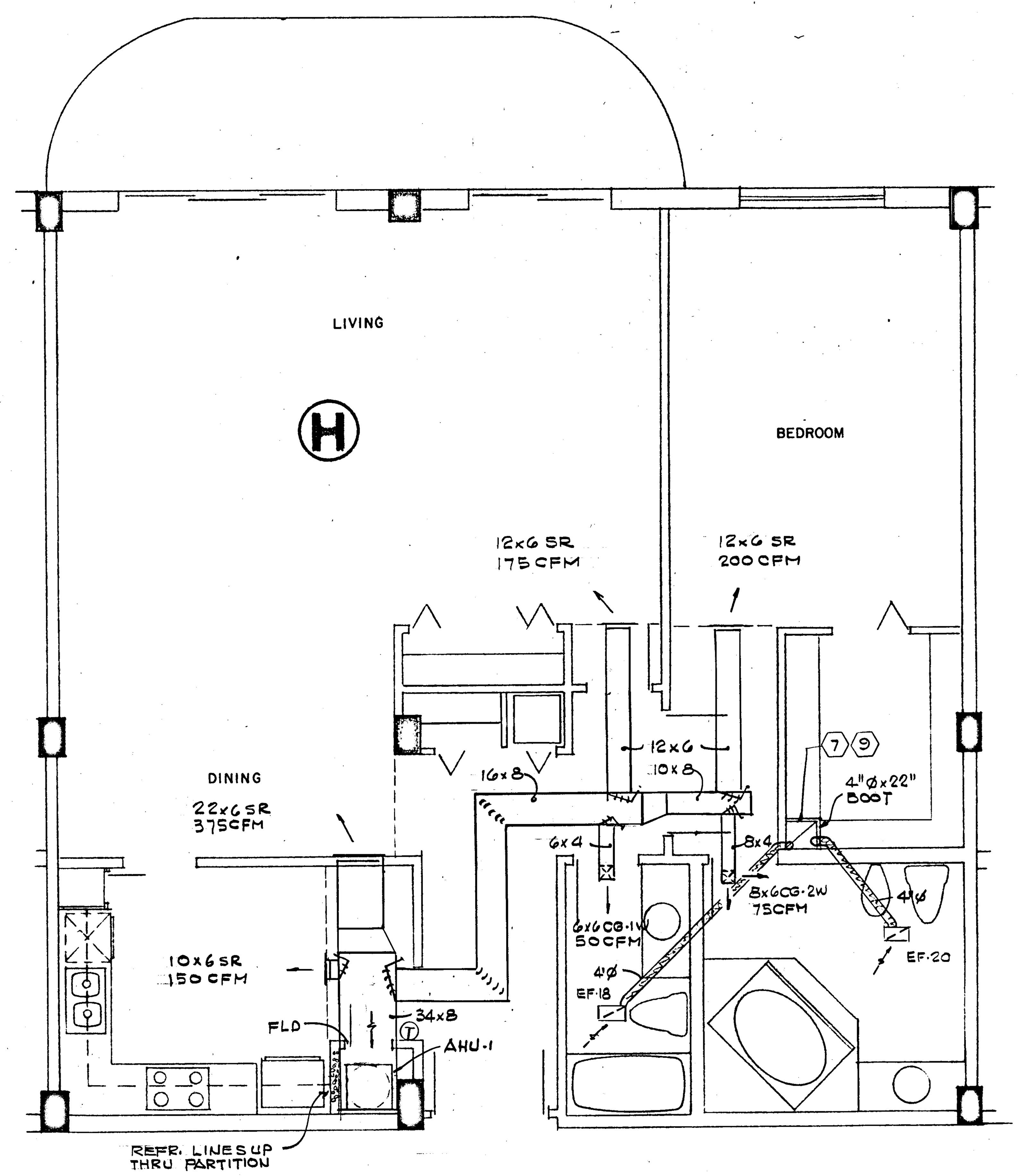


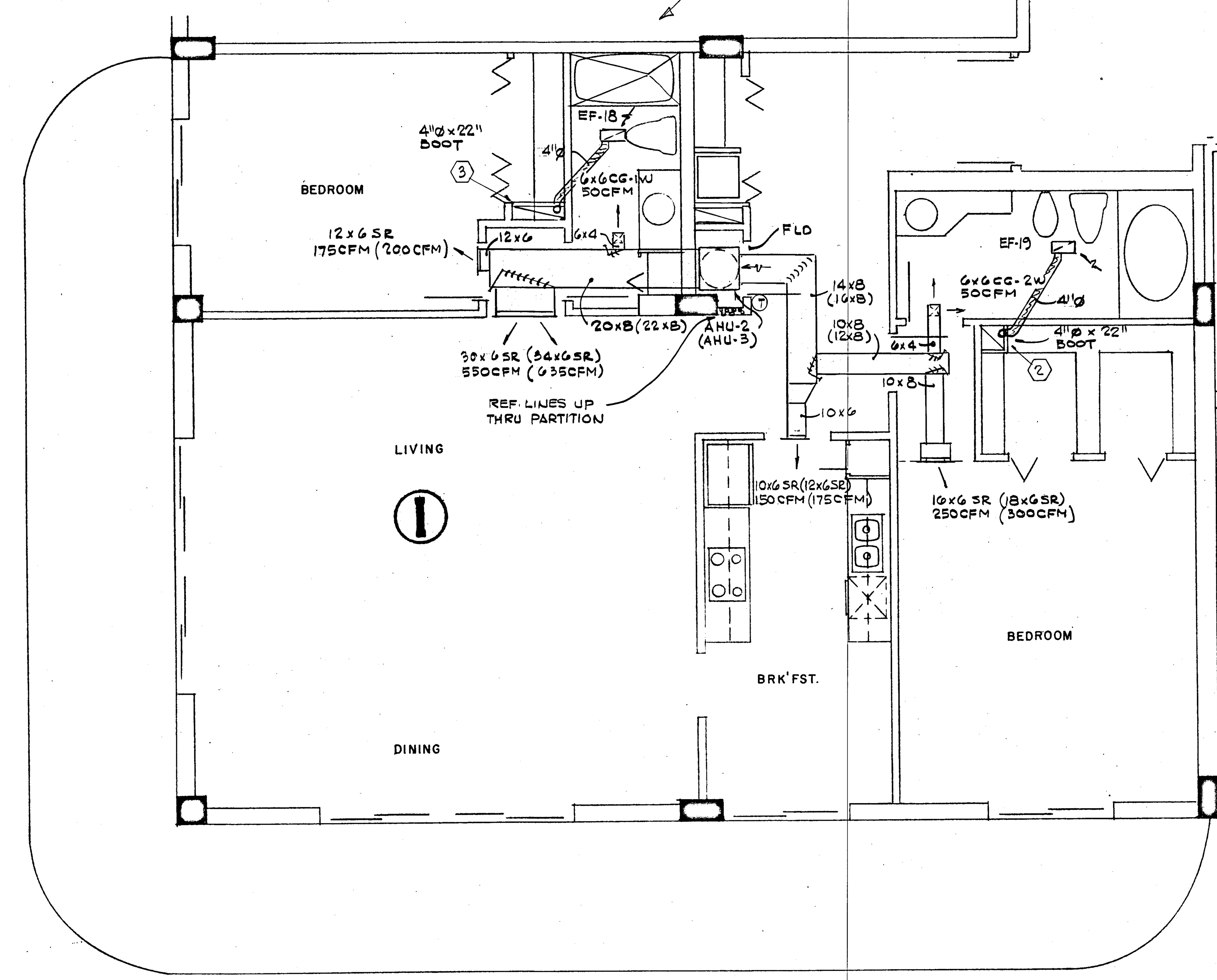
NOTE:
ITEMS IN PARENTHESIS APPLY TO LOBBY AND 12TH FLOOR APARTMENTS ONLY

WILLIAM M. FRIEDMAN
AND ASSOCIATES ARCHITECTS, INC.
138 S.E. 14th LANE
3568044

CHAMPLAIN TOWERS SOUTH
A 135 UNIT CONDOMINIUM

COMM. No.	DATE 8-13-79	SHEET No. AC8 OF 9
	REV.	





NOTE:
ITEMS IN PARENTHESIS APPLY TO LOBBY AND 12TH FLOOR APARTMENTS ONLY

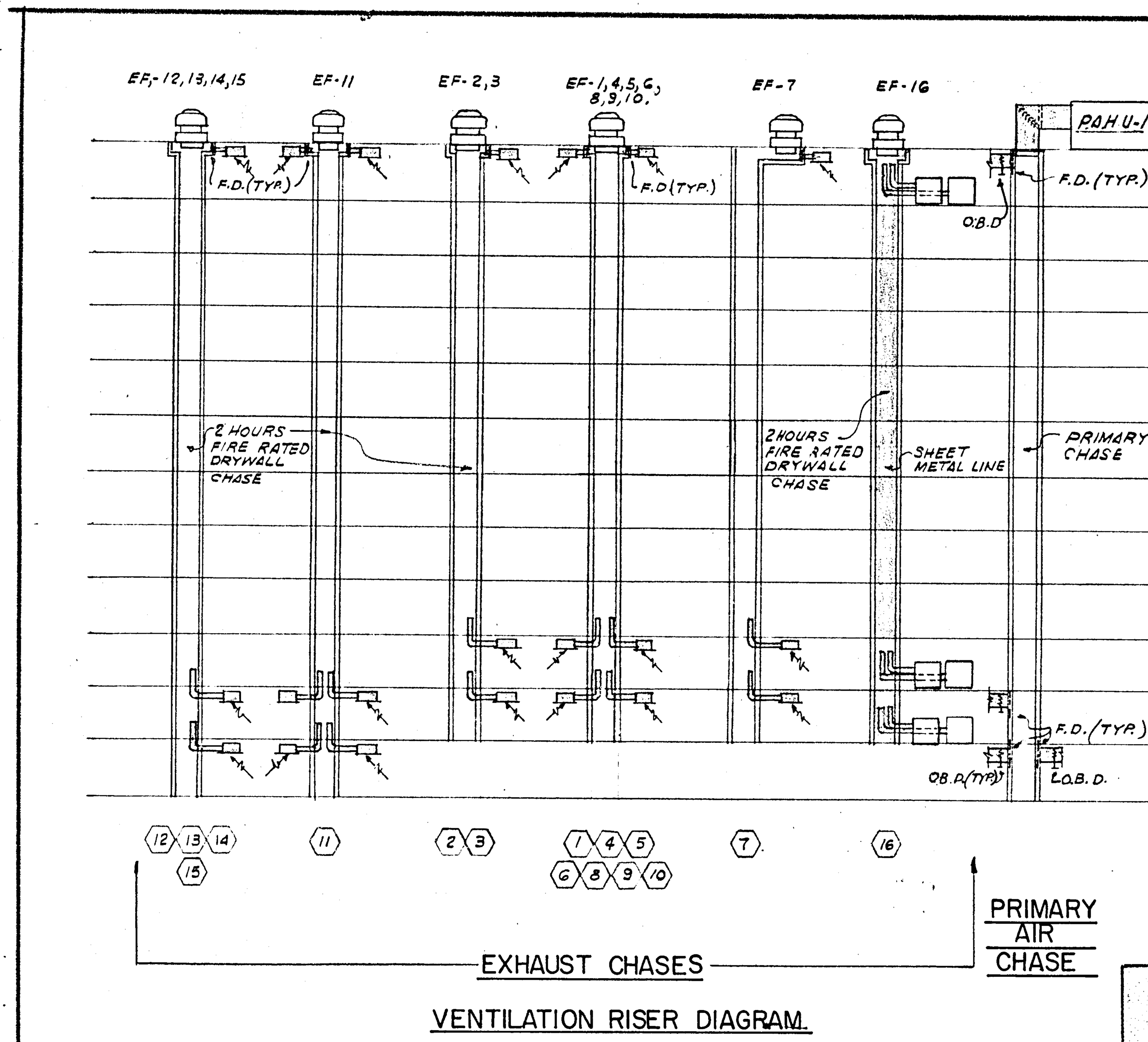
8/20/79

S. Conover Miller
8/13/79

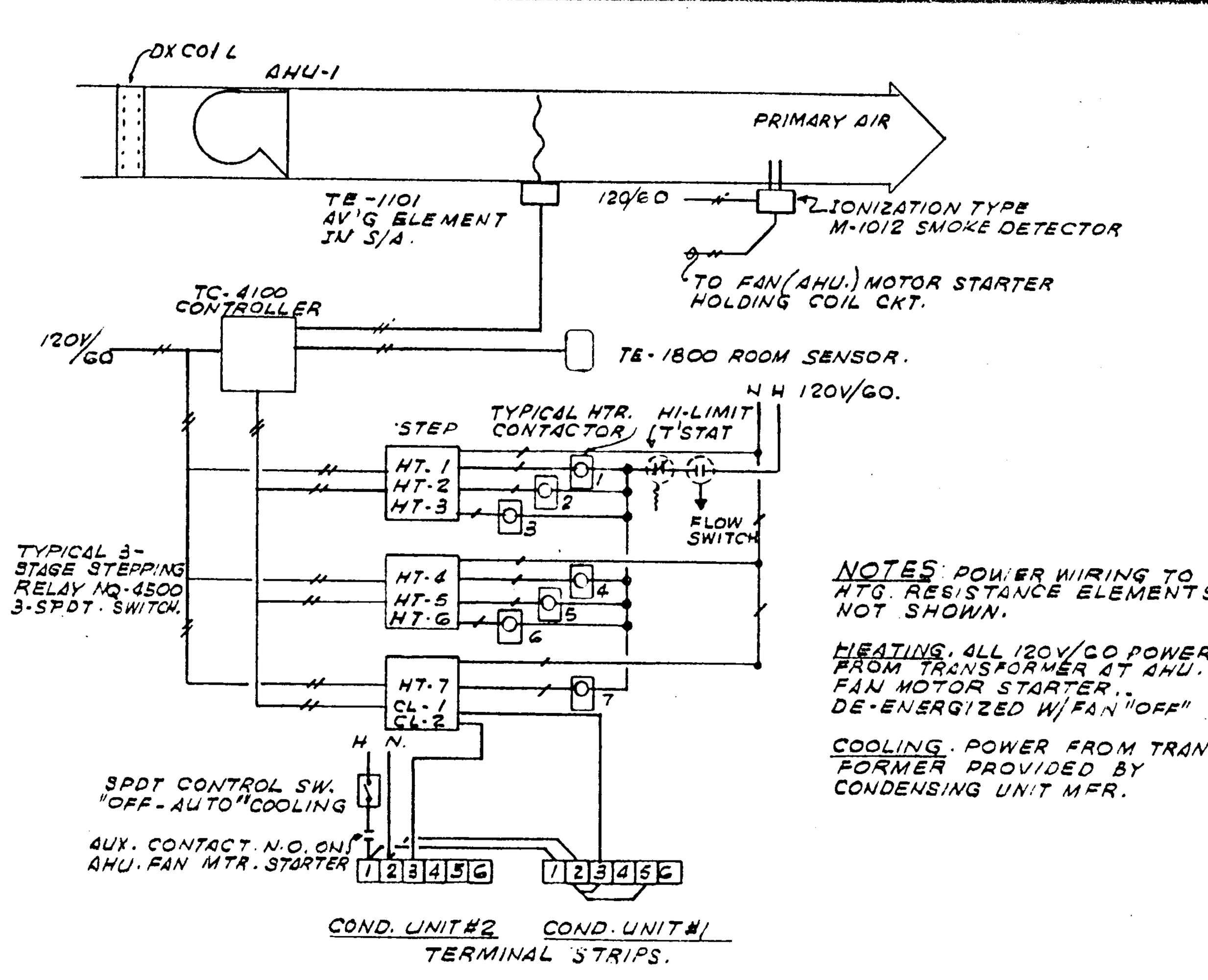
WILLIAM M. FRIEDMAN
AND ASSOCIATES ARCHITECTS, INC.
138 S.E. 14th LANE
3588044

CHAMPLAIN TOWERS SOUTH
A 135 UNIT CONDOMINIUM

COMM. No.	DATE: 8-13-79	SHEET No. AC8 OF 9 SHEET
	REV.	



VENTILATION RISER DIAGRAM.



NOTES: POWER WIRING TO HTG. RESISTANCE ELEMENTS NOT SHOWN.

HEATING: ALL 120V/60 POWER FROM TRANSFORMER AT AHU. FAN MOTOR STARTER DE-ENERGIZED W/ FAN "OFF"

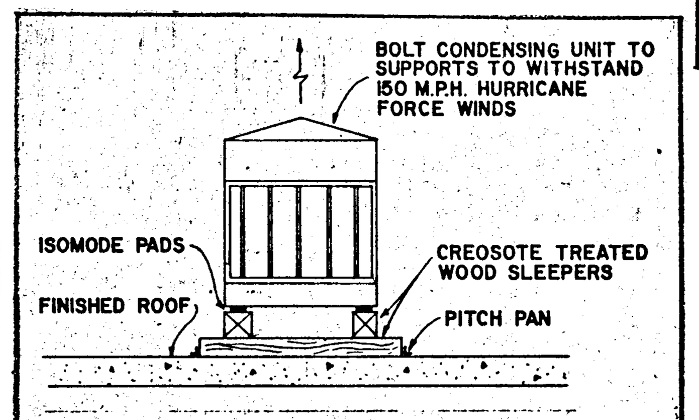
COOLING: POWER FROM TRANSFORMER PROVIDED BY CONDENSING UNIT MFR.

PRIMARY AIR SYSTEM CONTROL DIAGRAM.

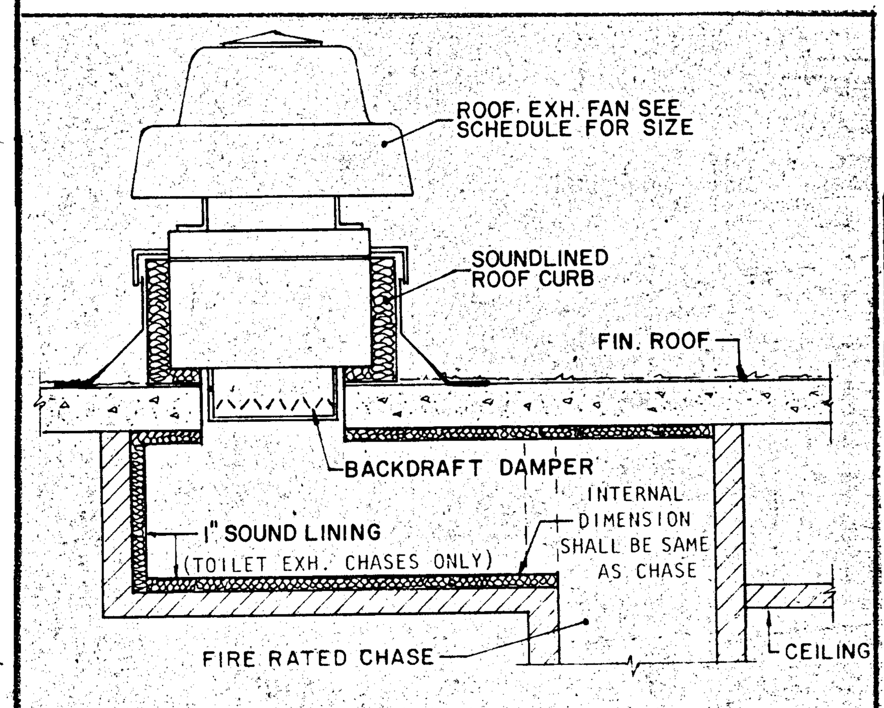
AIR HANDLING UNIT SCHEDULE

UNIT NUMBER	PAHU-1
SERVICE	PRIMARY AIR
LOCATION	ROOF
TOTAL CFM	14000
OUTSIDE AIR CFM	14000
INDOOR DESIGN TEMPERATURE-DB/WB-°F	75/63
TOTAL SENSIBLE HEAT-BTUH	647,740
TOTAL LATENT HEAT-BTUH	370,340
GRAND TOTAL HEAT-BTUH	1,018,080
ENTERING AIR DB/WB - °F	91/79
LEAVING AIR DB/WB - °F	60.3/60.0
COIL TYPE	DX
COOLING COIL FACE AREA - FT. SQ.	31.07
COOLING COIL FACE VELOCITY - FPM	450
COOLING COIL ROWS/FINS	8/8
REFRIGERANT TYPE	R-22
REFRIGERANT TEMPERATURE - °F	48.5
EXTERNAL STATIC PRESS. - IN WATER	0.5
FAN MOTOR HP	7½
FAN R.P.M.	496
VOLTAGE	208-3-60
MANUFACTURER	BOHN
MODEL	231 HCS-LF
UNIT TYPE	HORIZONTAL DRAW-THRU
FILTER (CLEANABLE)	7-16x20x2 & 7-16x25x2
WEIGHT - LBS.	3060

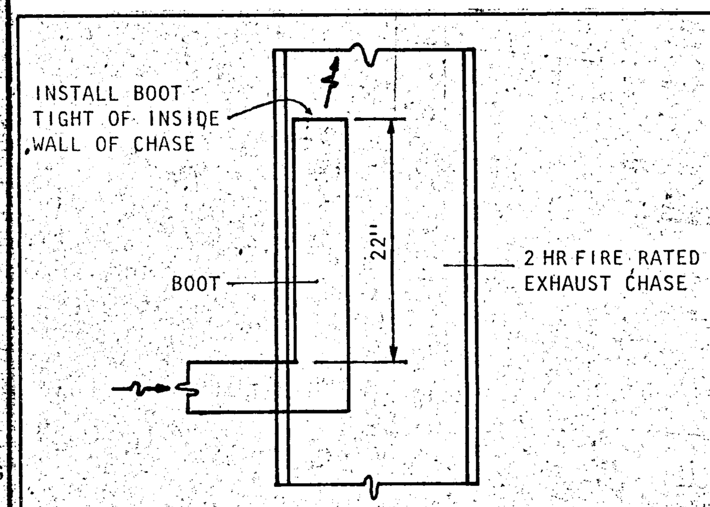
ACCESSORIES:
WEATHERPROOF AIR UNIT
CADMIUM PLATED SPRING ISOLATORS
TEFC FAN MOTOR
ROW CONTROL



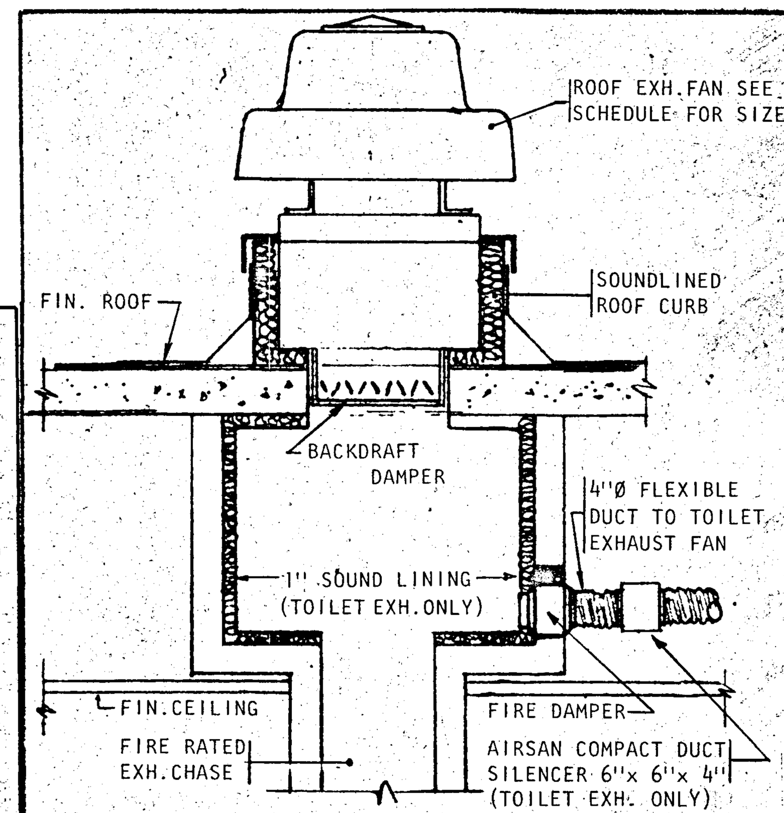
CONDENSING UNIT DETAIL N.T.S.



ROOF FAN WITH EXHAUST CHASE DETAIL (NTS)



EXHAUST BOOT DETAIL N.T.S.



ROOF FAN DETAIL FOR EXHAUST CHASE N.T.S.

ELECTRIC HEATER SCHEDULE

HEATER NO.	EH-1	EH-2
BTU/HR.	406,150	51,200
KW.	119	15
STAGES	7	2
KW./STAGE	17	7.5
VOLTAGE	208-3-60	208-3-60
DUCT. SIZE	80 x 30	36 x 14
C.F.M.	14,000	4,000
MANUFACTURER	BRASCH	BRASCH
AREA SERVED	PRIMARY AIR	REC. RM-AHU-8

ALL ELECTRIC HEATERS SHALL BE COMPLETE W/CONTACTORS, THERMAL PROTECTOR RELAY, FUSES TRANSFORMER W/PRIMARY FUSE PROTECTION TO SUPPLY CONTROL VOLTAGE, PRESSURE TYPE AIR FLOW SWITCH, FAN INTERLOCK RELAY, ETC. ENTIRE ASSEMBLY SHALL CONFORM TO NATIONAL ELECTRIC CODE REQUIREMENTS AND BE U.L. LABELED.

CONDENSING UNIT SCHEDULE

UNIT NUMBER		PCU-1
SERVICE		PRIMARY AIR
LOCATION		ROOF
TOTAL COOLING CAPACITY-BTUH		1,018,080
AMBIENT AIR TEMPERATURE - °F		95
MAX. CONDENSING TEMPERATURE - °F		130 MAX.
CAPACITY REDUCTION STEPS		100-72-50-22-0
COMPRESSOR - F.L.A.		2 @ 68.6 & 2 - 84.7
CONDENSER FAN H.P.		3 @ 2 EA.
CONDENSER F.L.A.		3 @ 6.8 EA.
VOLTAGE		208-3-60
MANUFACTURER		BOHN
MODEL		RCB74-T
REFRIGERANT		R-22
No. OF REFRIGERANT CIRCUITS		2
OPERATING WEIGHT - LBS.		6460
REFRIGERANT LINE SIZE	SUCTION	2 @ 2 1/8 EA.
	LIQUID	2 @ 7/8 EA.
SUCTION TEMPERATURE - °F		48.5

ACCESSORIES:
5 MINUTE ANTI-RECYCLING RELAY
CADMIUM PLATED SPRING ISOLATORS
REFRIGERANT LINES SHALL BE TYPE "L" SEAMLESS COPPER TUBING INSULATE SUCTION LINE WITH 3/4" ARMAFLEX

AIR CONDITIONING NOTES

1. AIR CONDITIONING SHALL:
   A) VERIFY ALL SPACE CONDITIONS AND DIMENSIONS AT JOB SITE PRIOR TO FABRICATION OF DUCTWORK AND INSTALLATIONS OF EQUIPMENT.
   B) COORDINATE WORK WITH OTHER TRADES.
   C) DO WORK IN ACCORDANCE WITH STATE AND LOCAL CODES.
   D) DO ALL WORK IN ACCORDANCE WITH LATEST ASHRAE GUIDE AND SMACNA STANDARDS.
   E) PAY FOR ALL PERMITS, FEES, INSPECTIONS AND TESTING.
   F) ADJUST AND BALANCE DIFFUSERS IN ACCORDANCE WITH QUANTITIES SHOWN ON PLANS.
2. GUARANTEES:
   ALL EQUIPMENT AND MATERIALS SHALL BE GUARANTEED FOR ONE YEAR AFTER DATE OF ACCEPTANCE. ALL COMPRESSORS SHALL CARRY STANDARD FACTORY 5-YEAR GUARANTEE.
3. AIR CONDITIONING DUCTWORK:
   A) INSIDE BUILDING:
   SHALL BE CONSTRUCTED OF 1" THICK STANDARD DUTY FIBERGLASS BOARD FLAMEPROOF REINFORCED ALUMINUM FACED COVER IN ACCORDANCE WITH N.F.P.A. NO. 90A AS MANUFACTURED BY OWENS-CORNING. DUCTWORK SHALL BE FABRICATED AND INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS. INSTALL AIR VOLUME EXTRACTORS AT EACH DUCT TAP.
   B) PRIMARY AIR:
   SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL AND SHALL BE EXTERNALLY INSULATED WITH 1" THICK, 6 LB. DENSITY FIBERGLASS BOARD ADHERED TO DUCTS WITH WELD PINS AND SPEED WASHERS. INSULATIONS SHALL BE VAPOR SEALED AND COVERED WITH GLASFAB AND MASTIC AND FINISH PAINTED WITH 2 COATS OF ALUMINUM PAINT.
4. VENTILATION DUCTWORK:
   SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL.
5. SOUNDLINING:
   SOUNDLINE DUCTS AS SHOWN ON PLANS WITH ½" THICK 3 LB. DENSITY, VINYL COVERED DUCTLINER.
6. REFRIGERANT PIPING:
   SHALL BE HARD DRAWN TYPE "L" SEAMLESS COPPER TUBING WITH WROUGHT COPPER FITTING AND SILVER SOLDERED JOINTS. SUCTION LINES SHALL BE INSULATED WITH ½" THICK NON-SPLIT ARMAFLEX (3/4" THICK FOR PRIMARY AIR UNITS).
   NOTE:
   FACTORY PRECHARGED PIPING SHALL BE ALLOWED AS PER MANUFACTURERS RECOMMENDATIONS.
7. VIBRATION AND NOISE ISOLATION:
   VIBRATION AND NOISE ISOLATORS SHALL BE PROVIDED FOR ALL MOTORIZED EQUIPMENT IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. ALL VIBRATION ISOLATORS SHALL BE AS MANUFACTURED BY MASON INDUSTRIES AND SHALL BE PROPERLY SELECTED FOR APPLICATION.
8. THERMOSTATS:
   (UNLESS OTHERWISE CALLED FOR) SHALL BE LOW VOLTAGE HEAT-COOL WITH FAN AND SELECTOR SWITCHES ON SUB-BASE STAGES AS SHOWN ON PLANS. MOUNT ON WALL WHERE SHOWN ON PLANS 5'6" ABOVE FINISHED FLOOR.
9. CONTROLS:
   FURNISH AND INSTALL A COMPLETE SYSTEM OF ELECTRIC CONTROLS AS SPECIFIED AND OR AS REQUIRED FOR COMPLETE AUTOMATIC SYSTEM OPERATION.
   A COMPLETE ELECTRICAL WIRING DIAGRAM SHALL BE SUBMITTED BY AIR CONDITIONING CONTRACTOR TO THE ENGINEER FOR HIS APPROVAL. ALL WIRING SHALL BE FUSED. PROVIDE COLOR CODED WIRING DIAGRAM FRAMED UNDER GLASS AND MOUNTED IN PRIMARY AIR UNIT ROOM.
10. PRIMARY AIR CONTROL SEQUENCE:
   THE PRIMARY AIR HANDLING UNIT SHALL BE CONTROLLED BY SOLID STATE ELECTRONIC CONTROLS ACCORDING TO THE FOLLOWING SEQUENCE:
   WHEN THE UNIT IS STARTED FROM A LOCAL STATION THE CONTROLS SHALL BE ENERGIZED. A TEMPERATURE CONTROLLER SENSING SUPPLY TEMPERATURE AND BEING RESET BY ROOM TEMPERATURE SHALL STAGE ONE STEP OF COOLING AND FIVE STEPS OF HEATING TO MAINTAIN DESIRED TEMPERATURE. THE SPACE HUMIDISTAT SHALL ENERGIZE THE COOLING ONLY TO MAINTAIN SET HUMIDITY. THE ELECTRIC STRIP HEATER SHALL BE LIMITED TO ONE STAGE OF OPERATION WHILE THE CONDENSING UNIT IS ENERGIZED.
   A SMOKE DETECTOR, LOCATED IN THE SUPPLY DUCT SHALL STOP THE UNIT, UPON INDICATION OF SMOKE. THE SMOKE DETECTOR SHALL BE MANUAL RESET TYPE.
   WHEN THE AIR HANDLING UNIT IS DE-ENERGIZED, THE CONTROLS SHALL BE DE-ENERGIZED.
11. ELECTRICAL NOTES:
   ALL POWER AND CONTROL WIRING AND DISCONNECTS SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR, AIR CONDITIONER CONTRACTOR SHALL FURNISH TO ELECTRICAL CONTRACTOR FOR HIS INSTALLATION ALL MOTORS, STARTERS, CONTROLS, RELAYS, THERMOSTATS, FIRESTATS, ETC., ALONG WITH APPROVED WIRING DIAGRAM.
   STARTERS SHALL BE PROVIDED AS FOLLOWS:
   3/4 H.P. MOTORS AND LARGER - ALLEN BRADLEY - BULLETIN NO. 709 WITH OVERLOAD PROTECTION FOR ALL POLES.
   1/2 H.P. MOTORS AND SMALLER - ALLEN BRADLEY - BULLETIN NO. 600.
12. WORK REQUIRED OR FURNISHED BY OTHERS:
   A) ALL ELECTRICAL WIRING AND DISCONNECT FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
   B) CONDENSATE DRAIN LINES AND MAKE UP FEED LINE ARE FURNISHED AND INSTALLED BY PLUMBING CONTRACTOR.
   C) CONCRETE BASES FOR EQUIPMENT BY GENERAL CONTRACTOR.
   D) STEEL SUPPORTS FOR PRIMARY AIR CONDENSING UNITS BY GENERAL CONTRACTOR.
   E) ROOF FLASHING BY ROOFING CONTRACTOR, PITCH PANS FURNISHED BY AIR CONDITIONER CONTRACTOR AND INSTALLED BY ROOFING CONTRACTOR.
   F) ROOF CURBS INSTALLED BY GENERAL CONTRACTOR AND FURNISHED BY AIR CONDITIONING CONTRACTOR.
   G) VENTILATION CHASES SHALL BE CONSTRUCTED BY GENERAL CONTRACTOR IN ACCORDANCE WITH GOVERNING CODES.

AIR HANDLING UNIT

UNIT NUMBER		AHU-1	AHU-2	AHU-3	AHU-4	AHU-5	AHU-6	AHU-7	AHU-8
MANUFACTURER		CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	WEATHERKING
MODEL		40AS030	40AS036	40FS160 28GS042	40FS200 28GS048	40FS220 28GS060	40FS200 28GS048	40FS220 28GS060	VC-134
NOMINAL TONS		2 1/2	3	3 1/2	4	5	4	5	10
C.F.M.		1000	1200	1400	1500	2000	1600	2000	4000
ENERGY EFFICIENCY RATIO (E.E.R.)		9.0	8.6	8.8	8.7	7.3	7.6	7.3	8.0
EVAPORATOR FAN-F.L.A.		3.6	3.6	3.5	4.5	5.6	4.5	5.6	2 H.P.
VOLTAGE		208-1-60	208-1-60	208-1-60	230-1-60 (2)	230-1-60 (2)	208-1-60	208-1-60	208-3-60
CABINET		VERTICAL	VERTICAL	VERTICAL	VERTICAL	VERTICAL	VERTICAL	VERTICAL	VERTICAL
WEIGHT-LBS.		100	114	120	127	127	127	127	505
MATCHING CONDENSING UNIT		CU-1	CU-2	CU-3	CU-4	CU-5	CU-6	CU-7	CU-8
ELECTRIC HEATER (INSIDE OF UNIT)	KW	5.6	7.5	7.5	10.0	10.0	7.5	7.5	DUCT
	BTUH	19200	25600	25600	34100	34100	25600	25600	
	STAGE	1	1	1	2	2	1	1	
	VOLTAGE	208-1-60	208-1-60	208-1-60	230-1-60 (2)	230-1-60 (2)	208-3-60	208-3-60	HEATER

CONDENSING UNIT

UNIT NUMBER		CU-1	CU-2	CU-3	CU-4	CU-5	CU-6	CU-7	CU-8 (4)
MANUFACTURER		CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	WEATHERKING
MODEL		38VE003	38VE004	38VE045	38VE005	38TE060	38TE048	38TE060	RC-134-3A
NOMINAL TONS		2 1/2	3	3 1/2	4	5	4	5	10
COMPRESSOR - F.L.A.		14.0	17.8	17.1	23.9	35.3	18.3	20.0	2 - 20.0 EA.
CONDENSER FAN F.L.A.		0.9	1.2	1.2	2.3	2.1	2.1	2.1	1-6.2
VOLTAGE		208-1-60	208-1-60	208-1-60	230-1-60 (2)	230-1-60 (2)	208-3-60	208-3-60	208-3-60
WEIGHT		205	225	240	250	250	246	250	830
REFRIGERANT LINE SIZE (1)	LIQUID	5/16 (3)	5/16 (3)	3/8	3/8	3/8	3/8	3/8	2 - 1/2"
	SUCTION	1 1/8	1 1/6	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	2 - 1 1/8
AREA SERVED		APT 'G' APT 'H'	APT C TYPICAL FL APT E TYPICAL FL APT I TYPICAL FL	APT B TYPICAL FL APT C LOBBY & 12TH FLOOR APT D APT E 12TH FL APT F APT I 12TH FL	APT A TYPICAL FL APT B LOBBY & 12TH FL	APT A LOBBY & 12TH FL	EXCERCISE ROOM	LOBBY	RECREATION ROOM
QUANTITY		44	40	37	12	2	1	1	1

(1) REFRIGERANT LINES SHALL BE TYPE "L" SEAMLESS COPPER TUBING. INSULATE SUCTION LINE WITH ½" ARMAFLEX
(2) FURNISH AND INSTALL 208/240 BUCK AND BOOST TRANSFORMER
(3) FOR PIPE RUNS OF LESS THAN 50 FT. USE 3/8"
ACCURATOR PISTON SIZED AS PER MANUF. RECOMMENDATIONS: INSTALL FILTER DRYER
(4) 5 MINUTE ANTI-RECYCLING RELAY CADMIUM PLATED SPRING ISOLATORS CONTROL KIT INCLUDING START-ER, SIGHT GLASS AND DRYER

FAN SCHEDULE

FAN NO.	QUAN	C F M	S P	H P	R P M	VOLTAGE	DRIVE	MFR.	MODEL	SERVICE	LOCATION	MAX. SONES	ACCESSORIES
EF-1	1	880	1/8	1/4	1280	120	DIRECT	POWERLINE	105DRE8C	EXH. CHASE 1	ROOF	2.8	A,B,C & D
EF-2	1	590	1/8	1/12	940	120	DIRECT	POWERLINE	105DRE7Z	EXH. CHASE 2	ROOF	1.9	A,B,C & D
EF-3	1	330	1/8	1/10	1055	120	DIRECT	POWERLINE	90DRE8X	EXH. CHASE 3	ROOF	1.0	A,B,C & D
EF-4	1	770	1/8	1/4	1180	120	DIRECT	POWERLINE	105DRE8C	EXH. CHASE 4	ROOF	2.1	A,B,C & D
EF-5	1	770	1/8	1/4	1180	120	DIRECT	POWERLINE	105DRE8C	EXH. CHASE 5	ROOF	2.1	A,B,C & D
EF-6	1	770	1/8	1/4	1180	120	DIRECT	POWERLINE	105DRE8C	EXH. CHASE 6	ROOF	2.1	A,B,C & D
EF-7	1	880	1/8	1/4	1280	120	DIRECT	POWERLINE	105DRE8C	EXH. CHASE 7	ROOF	2.8	A,B,C & D
EF-8	1	880	1/8	1/4	1280	120	DIRECT	POWERLINE	105DRE8C	EXH. CHASE 8	ROOF	2.8	A,B,C & D
EF-9	1	880	1/8	1/4	1280	120	DIRECT	POWERLINE	105DRE8C	EXH. CHASE 9	ROOF	2.8	A,B,C & D
EF-10	1	880	1/8	1/4	1280	120	DIRECT	POWERLINE	105DRE8C	EXH. CHASE 10	ROOF	2.8	A,B,C & D
EF-11	1	960	1/8	1/4	1380	120	DIRECT	POWERLINE	105DRE8C	EXH. CHASE 11	ROOF	3.0	A,B,C & D
EF-12	1	360	1/8	1/10	1100	120	DIRECT	POWERLINE	90DRE8X	EXH. CHASE 12	ROOF	1.1	A,B,C & D
EF-13	1	650	1/8	1/12	1000	120	DIRECT	POWERLINE	105DRE7Z	EXH. CHASE 13	ROOF	1.9	A,B,C & D
EF-14	1	650	1/8	1/12	1000	120	DIRECT	POWERLINE	105DRE7Z	EXH. CHASE 14	ROOF	1.9	A,B,C & D
EF-15	1	790	1/8	1/4	1170	120	DIRECT	POWERLINE	105DRE8C	EXH. CHASE 15	ROOF	2.8	A,B,C & D
EF-16	1	2200	1/8	1/4	845	120	BELT	POWERLINE	165BRE8C	EXH. CHASE 16	ROOF	5.3	A,B,D & H
EF-17	1	2200	1/8	1/4	845	120	BELT	POWERLINE	165BRE8C	ELEV. MACH RM EXH.	ROOF	5.3	A,B,D & H
EF-18	123	50	0.1	---	----	120	DIRECT	NUTONE	9415	TOILET EXH.	CEILING	2.5	---------
EF-19	68	90	0.1	---	----	120	DIRECT	NUTONE	8662	TOILET EXH.	CEILING	3.5	---------
EF-20	79	110	0.1	---	----	120	DIRECT	NUTONE	QT-110	TOILET EXH.	CEILING	2.5	---------
EF-21	3	150	1/8	---	1000	120	DIRECT	POWERLINE	85DCF8D2	EXCERCISE RM TOILET	CEILING	1.5	C & E
EF-22	2	200	1/8	---	1300	120	DIRECT	POWERLINE	85DCF8D2	LOBBY TOILET EXH.	CEILING	2.2	C & E
EF-23	1	4000	1/4	1/3	822	120	BELT	POWERLINE	24BV8D	LOBBY EQUIP. RM	WALL	6.6	F,G & H
EF-24	1	4000	1/4	1/2	625	120	BELT	POWERLINE	245BCV8F	GARAGE STOR. EXH.	GROUND FL. DECK	6.9	A,B,D & H
EF-25	1	1945	1/4	1/4	931	120	BELT	POWERLINE	165BCV8C	POOL EQUIP. EXH.	GROUND FL. DECK	5.6	A,B,D & H
EF-26	4	12000	1/8	2	513	208-3-60	BELT	POWERLINE	365BCV8M	GARAGE EXH.	GROUND FL. DECK	13.5	A,B,D & H

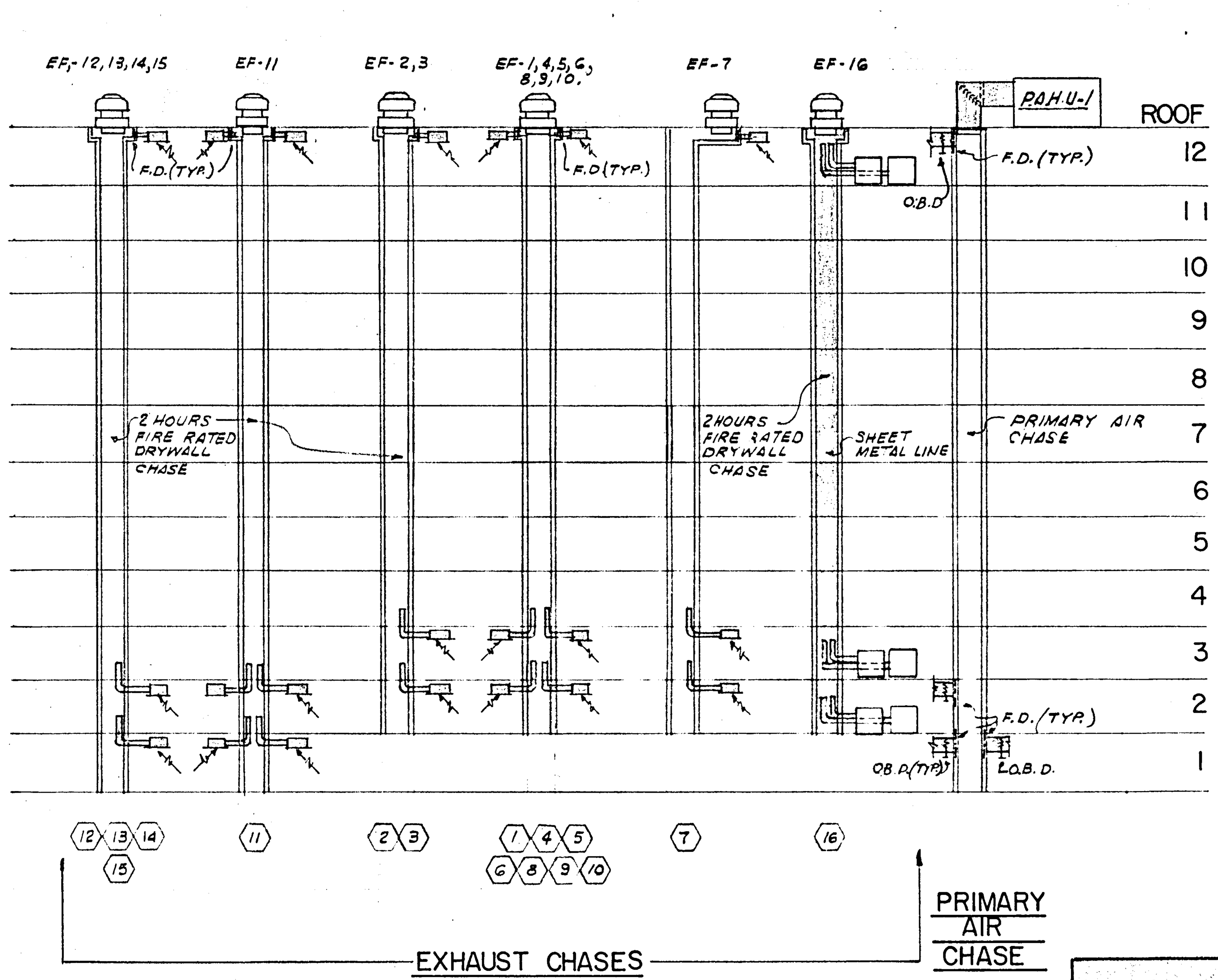
ACCESSORIES:
A. BACKDRAFT DAMPER
B. BIRDSCREEN
C. SOLID STATE SPEED CONTROL
D. 12" PAC CURB
E. WALL CAP
F. AUTOMATIC WALL LOUVER
G. FAN GUARD
H. VARIABLE PITCH PULLEY

WILLIAM M. FRIEDMAN AND ASSOCIATES ARCHITECTS, INC.
138 S.E. 14th LANE
3538044

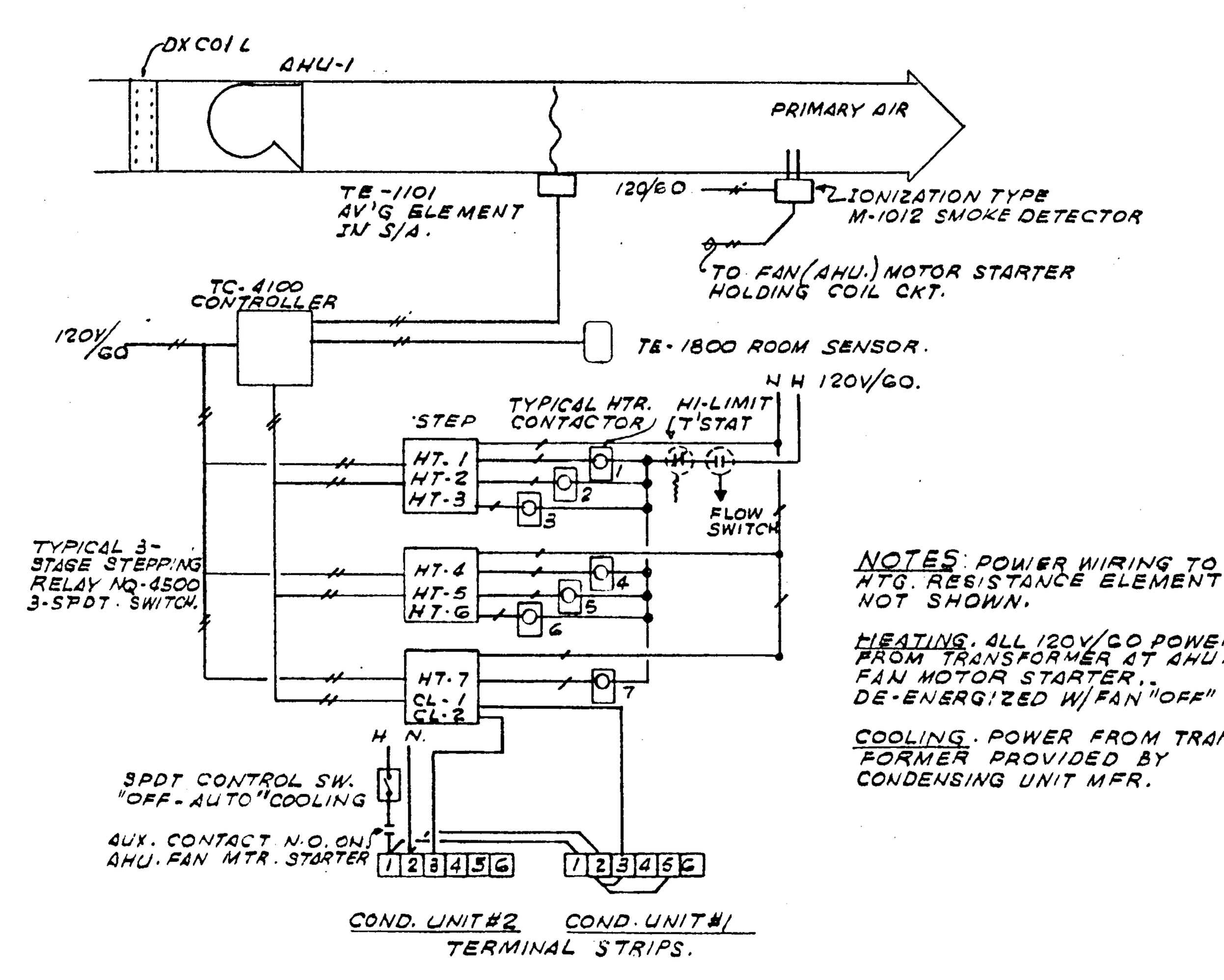
CHAMPLAIN TOWERS SOUTH
A 135 UNIT CONDOMINIUM

COMM. No. | DATE: 5-13-79 | REV. | SHEET No. AC9 OF 9 SHEETS

8/13/79



VENTILATION RISER DIAGRAM.

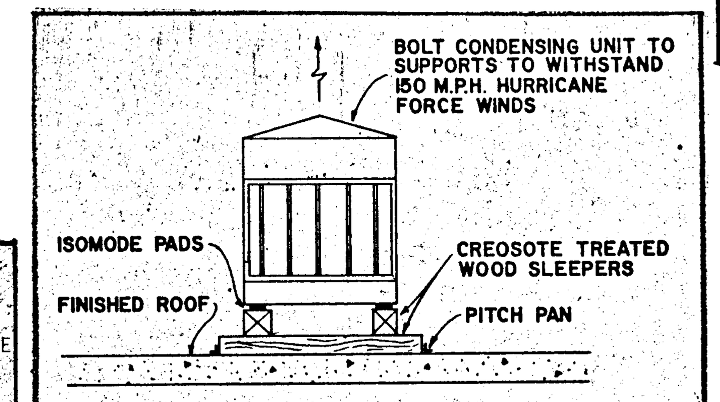


PRIMARY AIR SYSTEM CONTROL DIAGRAM.

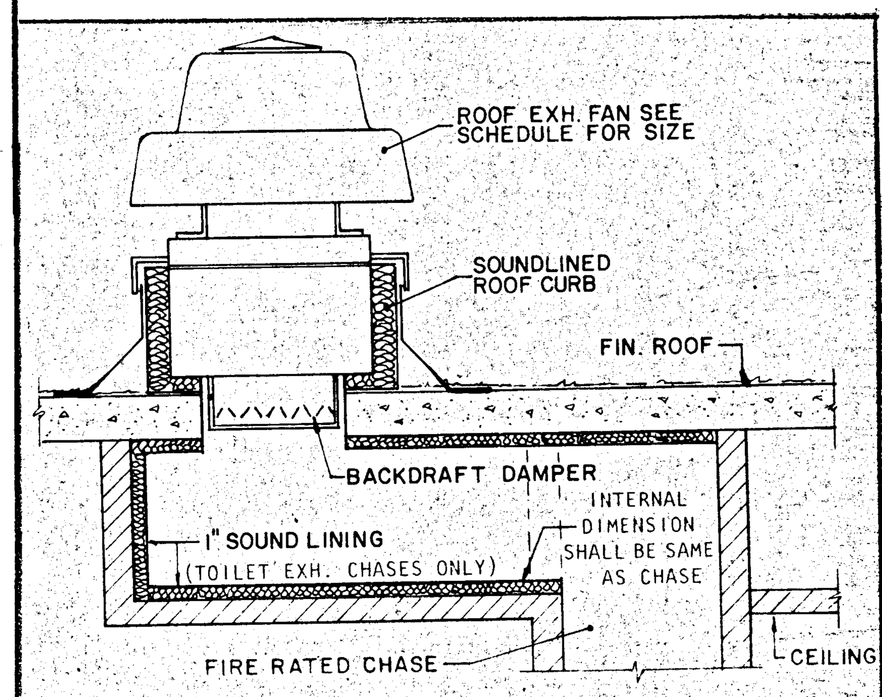
AIR HANDLING UNIT SCHEDULE

UNIT NUMBER	PAHU-1
SERVICE	PRIMARY AIR
LOCATION	ROOF
TOTAL CFM	14000
OUTSIDE AIR CFM	14000
INDOOR DESIGN TEMPERATURE-DB/WB-°F	75/63
TOTAL SENSIBLE HEAT-BTUH	647,740
TOTAL LATENT HEAT-BTUH	370,340
GRAND TOTAL HEAT-BTUH	1,018,080
ENTERING AIR DB/WB - °F	91/79
LEAVING AIR DB/WB - °F	60.3/60.0
COIL TYPE	DX
COOLING COIL FACE AREA - FT. SQ.	31.07
COOLING COIL FACE VELOCITY - FPM	450
COOLING COIL ROWS/FINS	8/8
REFRIGERANT TYPE	R-22
REFRIGERANT TEMPERATURE - °F	48.5
EXTERNAL STATIC PRESS.- IN WATER	0.5
FAN MOTOR HP	7½
FAN R.P.M.	496
VOLTAGE	208-3-60
MANUFACTURER	BOHN
MODEL	231 HCS-LF
UNIT TYPE	HORIZONTAL DRAW-THRU
FILTER. (CLEANABLE)	7-16x20x2 & 7-16x25x2
WEIGHT-LBS.	3060

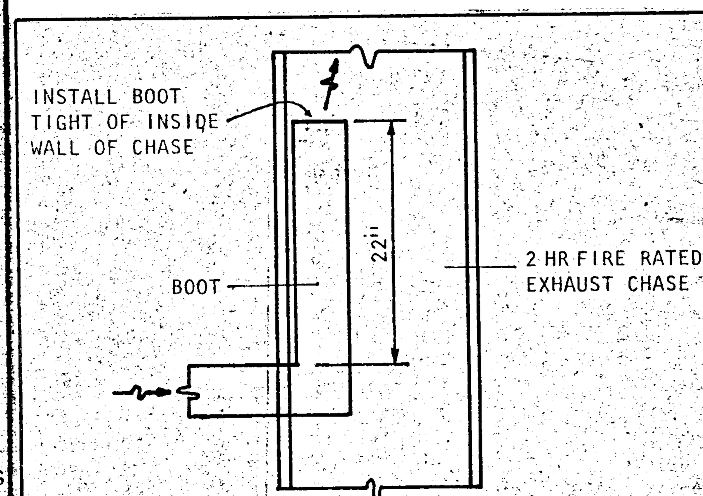
ACCESSORIES:
WEATHERPROOF AIR UNIT
CADMIUM PLATED SPRING ISOLATORS
TEFC FAN MOTOR
ROW CONTROL



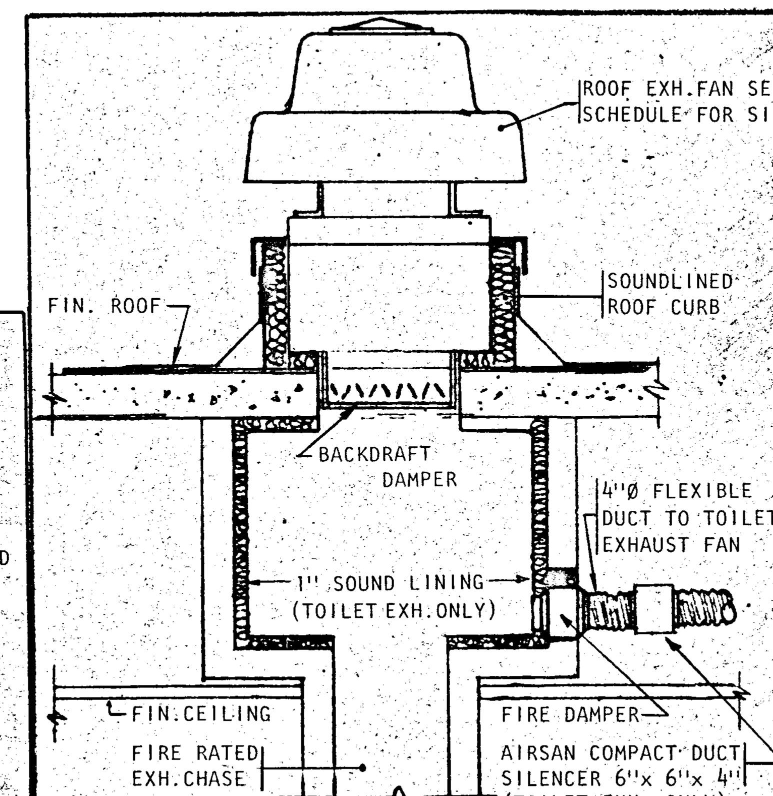
CONDENSING UNIT DETAIL N.T.S.



ROOF FAN WITH EXHAUST CHASE DETAIL (NTS)



EXHAUST BOOT DETAIL N.T.S.



ROOF FAN DETAIL FOR EXHAUST CHASE N.T.S.

ELECTRIC HEATER SCHEDULE

HEATER NO.	EH-1	EH-2
BTU/HR.	406,150	51,200
KW	119	15
STAGES	7	2
KW./STAGE	17	7.5
VOLTAGE	208-3-60	208-3-60
DUCT. SIZE	80 x 30	36 x 14
C.F.M.	14,000	4,000
MANUFACTURER	BRASCH	BRASCH
AREA SERVED	PRIMARY AIR	REC. RM-AHU-8

ALL ELECTRIC HEATERS SHALL BE COMPLETE W/CONTACTORS, THERMAL PROTECTOR RELAY, FUSES TRANSFORMER W/PRIMARY FUSE PROTECTION TO SUPPLY CONTROL VOLTAGE, PRESSURE TYPE AIR FLOW SWITCH, FAN INTERLOCK RELAY, ETC. ENTIRE ASSEMBLY SHALL CONFORM TO NATIONAL ELECTRIC CODE REQUIREMENTS AND BE U.L. LABELED.

CONDENSING UNIT SCHEDULE

UNIT NUMBER		PCU-1
SERVICE		PRIMARY AIR
LOCATION		ROOF
TOTAL COOLING CAPACITY-BTUH		1,018,080
AMBIENT AIR TEMPERATURE - °F		95
MAX. CONDENSING TEMPERATURE - °F		130 MAX.
CAPACITY REDUCTION STEPS		100-72-50-22-0
COMPRESSOR - F.L.A.		2 @ 68.6 & 2 - 84.7
CONDENSER FAN H.P.		3 @ 2 EA.
CONDENSER F.L.A.		3 @ 6.8 EA.
VOLTAGE		208-3-60
MANUFACTURER		BOHN
MODEL		RCB74-T
REFRIGERANT		R-22
No. OF REFRIGERANT CIRCUITS		2
OPERATING WEIGHT - LBS.		6460
REFRIGERANT LINE SIZE	SUCTION	2 @ 2 1/8 EA.
	LIQUID	2 @ 7/8 EA.
SUCTION TEMPERATURE - °F		48.5

ACCESSORIES:
5 MINUTE ANTI-RECYCLING RELAY
CADMIUM PLATED SPRING ISOLATORS
REFRIGERANT LINES SHALL BE TYPE "L" SEAMLESS COPPER TUBING INSULATE SUCTION LINE WITH 3/4" ARMAFLEX

AIR HANDLING UNIT / CONDENSING UNIT

		AHU-1	AHU-2	AHU-3	AHU-4	AHU-5	AHU-6	AHU-7	AHU-8
AIR HANDLING UNIT: UNIT NUMBER		AHU-1	AHU-2	AHU-3	AHU-4	AHU-5	AHU-6	AHU-7	AHU-8
MANUFACTURER		CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	WEATHERKING
MODEL		40AS030	40AS036	40FS160 28GS042	40FS200 28GS048	40FS220 28GS060	40FS200 28GS048	40FS220 28GS060	VC-134
NOMINAL TONS		2 1/2	3	3 1/2	4	5	4	5	10
C.F.M.		1000	1200	1400	1500	2000	1600	2000	4000
ENERGY EFFICIENCY RATIO (E.E.R.)		9.0	8.6	8.8	8.7	7.3	7.6	7.3	8.0
EVAPORATOR FAN-F.L.A.		3.6	3.6	3.5	4.5	5.6	4.5	5.6	2 H.P.
VOLTAGE		208-1-60	208-1-60	208-1-60	230-1-60 (2)	230-1-60 (2)	208-1-60	208-1-60	208-3-60
CABINET		VERTICAL	VERTICAL	VERTICAL	VERTICAL	VERTICAL	VERTICAL	VERTICAL	VERTICAL
WEIGHT-LBS.		100	114	120	127	127	127	127	505
MATCHING CONDENSING UNIT		CU-1	CU-2	CU-3	CU-4	CU-5	CU-6	CU-7	CU-8
ELECTRIC HEATER (INSIDE OF UNIT)	KW	5.6	7.5	7.5	10.0	10.0	7.5	7.5	DUCT
	BTUH	19200	25600	25600	34100	34100	25600	25600	
	STAGE	1	1	1	2	2	1	1	
	VOLTAGE	208-1-60	208-1-60	208-1-60	230-1-60 (2)	230-1-60 (2)	208-3-60	208-3-60	HEATER
CONDENSING UNIT: UNIT NUMBER		CU-1 *	CU-2 *	CU-3 *	CU-4 *	CU-5 *	CU-6	CU-7	CU-8 (4)
MANUFACTURER		CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	WEATHERKING
MODEL		38VE003	38VE004	38VE045	38VE005	38TE060	38TE048	38TE060	RC-134-3A
NOMINAL TONS		2 1/2	3	3 1/2	4	5	4	5	10
COMPRESSOR - F.L.A.		14.0	17.8	17.1	23.9	35.3	18.3	20.0	2 - 20.0 EA.
CONDENSER FAN F.L.A.		0.9	1.2	1.2	2.3	2.1	2.1	2.1	1-6.2
VOLTAGE		208-1-60	208-1-60	208-1-60	230-1-60 (2)	230-1-60 (2)	208-3-60	208-3-60	208-3-60
WEIGHT		205	225	240	250	250	246	250	830
REFRIGERANT LINE SIZE (1)	LIQUID	5/16 (3)	5/16 (3)	3/8	3/8	3/8	3/8	3/8	2 - 1/2"
	SUCTION	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	2 - 1 1/8
AREA SERVED		APT 'G' APT 'H'	APT C TYPICAL FL APT E TYPICAL FL APT I TYPICAL FL	APT B TYPICAL FL APT C LOBBY & 12TH FLOOR APT D APT E 12TH FL APT F APT I 12TH FL	APT A TYPICAL FL APT B LOBBY & 12TH FL.	APT A LOBBY & 12TH FL	EXCERCISE ROOM	LOBBY	RECREATION ROOM
QUANTITY		44	40	37	12	2	1	1	1

(1) REFRIGERANT LINES SHALL BE TYPE "L" SEAMLESS COPPER TUBING. INSULATE SUCTION LINE WITH ½" ARMAFLEX
(2) FURNISH AND INSTALL 208/240 BUCK AND BOOST TRANSFORMER
(3) FOR PIPE RUNS OF LESS THAN 50 FT USE 3/8"
* ACCURATOR PISTON SIZED AS PER MANUF. RECOMMENDATIONS: INSTALL FILTER DRYER
(4) 5 MINUTE ANTI-RECYCLING RELAY CADMIUM PLATED SPRING ISOLATORS CONTROL KIT INCLUDING STARTER, SIGHT GLASS AND DRYER

FAN SCHEDULE

FAN NO.	QUAN	C F M	S P	H P	R P M	VOLTAGE	DRIVE	MFR.	MODEL	SERVICE	LOCATION	MAX. SONES	ACCESSORIES
EF-1	1	880	1/8	1/4	1280	120	DIRECT	POWERLINE	105DRE8C	EXH. CHASE 1	ROOF	2.8	A,B,C & D
EF-2	1	590	1/8	1/12	940	120	DIRECT	POWERLINE	105DRE7Z	EXH. CHASE 2	ROOF	1.9	A,B,C & D
EF-3	1	330	1/8	1/10	1055	120	DIRECT	POWERLINE	90DRE8X	EXH. CHASE 3	ROOF	1.0	A,B,C & D
EF-4	1	770	1/8	1/4	1180	120	DIRECT	POWERLINE	105DRE8C	EXH. CHASE 4	ROOF	2.1	A,B,C & D
EF-5	1	770	1/8	1/4	1180	120	DIRECT	POWERLINE	105DRE8C	EXH. CHASE 5	ROOF	2.1	A,B,C & D
EF-6	1	770	1/8	1/4	1180	120	DIRECT	POWERLINE	105DRE8C	EXH. CHASE 6	ROOF	2.1	A,B,C & D
EF-7	1	880	1/8	1/4	1280	120	DIRECT	POWERLINE	105DRE8C	EXH. CHASE 7	ROOF	2.8	A,B,C & D
EF-8	1	880	1/8	1/4	1280	120	DIRECT	POWERLINE	105DRE8C	EXH. CHASE 8	ROOF	2.8	A,B,C & D
EF-9	1	880	1/8	1/4	1280	120	DIRECT	POWERLINE	105DRE8C	EXH. CHASE 9	ROOF	2.8	A,B,C & D
EF-10	1	880	1/8	1/4	1280	120	DIRECT	POWERLINE	105DRE8C	EXH. CHASE 10	ROOF	2.8	A,B,C & D
EF-11	1	960	1/8	1/4	1380	120	DIRECT	POWERLINE	105DRE8C	EXH. CHASE 11	ROOF	3.0	A,B,C & D
EF-12	1	360	1/8	1/10	1100	120	DIRECT	POWERLINE	90DRE8X	EXH. CHASE 12	ROOF	1.1	A,B,C & D
EF-13	1	650	1/8	1/12	1000	120	DIRECT	POWERLINE	105DRE7Z	EXH. CHASE 13	ROOF	1.9	A,B,C & D
EF-14	1	650	1/8	1/12	1000	120	DIRECT	POWERLINE	105DRE7Z	EXH. CHASE 14	ROOF	1.9	A,B,C & D
EF-15	1	790	1/8	1/4	1170	120	DIRECT	POWERLINE	105DRE8C	EXH. CHASE 15	ROOF	2.8	A,B,C & D
EF-16	1	2200	1/8	1/4	845	120	BELT	POWERLINE	165BRE8C	EXH. CHASE 16	ROOF	5.3	A,B,D & H
EF-17	1	2200	1/8	1/4	845	120	BELT	POWERLINE	165BRE8C	ELEV. MACH RM EXH.	ROOF	5.3	A,B,D & H
EF-18	123	50	0.1	---	----	120	DIRECT	NUTONE	9415	TOILET EXH.	CEILING	2.5	---------
EF-19	68	90	0.1	---	----	120	DIRECT	NUTONE	8662	TOILET EXH.	CEILING	3.5	---------
EF-20	79	110	0.1	---	----	120	DIRECT	NUTONE	QT-110	TOILET EXH.	CEILING	2.5	---------
EF-21	3	150	1/8	---	1000	120	DIRECT	POWERLINE	B5DCF8D2	EXCERCISE RM TOILET	CEILING	1.5	C & E
EF-22	2	200	1/8	---	1300	120	DIRECT	POWERLINE	B5DCF8D2	LOBBY TOILET EXH.	CEILING	2.2	C & E
EF-23	1	4000	1/4	1/3	822	120	BELT	POWERLINE	24BV8D	LOBBY EQUIP. RM	WALL	6.6	F,G & H
EF-24	1	4000	1/4	1/2	625	120	BELT	POWERLINE	245BCV8F	GARAGE STOR. EXH.	GROUND FL. DECK	6.9	A,B,D & H
EF-25	1	1945	1/4	1/4	931	120	BELT	POWERLINE	165BCV8C	POOL EQUIP. EXH.	GROUND FL. DECK	5.6	A,B,D & H
EF-26	4	12000	1/8	2	513	208-3-60	BELT	POWERLINE	365BCV8M	GARAGE EXH.	GROUND FL. DECK	13.5	A,B,D & H

ACCESSORIES:
A. BACKDRAFT DAMPER
B. BIRDSCREEN
C. SOLID STATE SPEED CONTROL
D. 12" PAC CURB
E. WALL CAP
F. AUTOMATIC WALL LOUVER
G. FAN GUARD
H. VARIABLE PITCH PULLEY

Solomon Milne
8/13/79

AIR CONDITIONING NOTES

1. AIR CONDITIONING SHALL:
   A) VERIFY ALL SPACE CONDITIONS AND DIMENSIONS AT JOB SITE PRIOR TO FABRICATION OF DUCTWORK AND INSTALLATIONS OF EQUIPMENT.
   B) COORDINATE WORK WITH OTHER TRADES.
   C) DO WORK IN ACCORDANCE WITH STATE AND LOCAL CODES.
   D) DO ALL WORK IN ACCORDANCE WITH LATEST ASHRAE GUIDE AND SMACNA STANDARDS.
   E) PAY FOR ALL PERMITS, FEES, INSPECTIONS AND TESTING.
   F) ADJUST AND BALANCE DIFFUSERS IN ACCORDANCE WITH QUANTITIES SHOWN ON PLANS.
2. GUARANTEES:
   ALL EQUIPMENT AND MATERIALS SHALL BE GUARANTEED FOR ONE YEAR AFTER DATE OF ACCEPTANCE. ALL COMPRESSORS SHALL CARRY STANDARD FACTORY 5-YEAR GUARANTEE.
3. AIR CONDITIONING DUCTWORK:
   A) INSIDE BUILDING:
   SHALL BE CONSTRUCTED OF 1" THICK STANDARD DUTY FIBERGLASS BOARD FLAMEPROOF REINFORCED ALUMINUM FACED COVER IN ACCORDANCE WITH N.F.P.A. NO. 90A AS MANUFACTURED BY OWENS-CORNING. DUCTWORK SHALL BE FABRICATED AND INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS. INSTALL AIR VOLUME EXTRACTORS AT EACH DUCT TAP.
   B) PRIMARY AIR:
   SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL AND SHALL BE EXTERNALLY INSULATED WITH 1" THICK, 6 LB. DENSITY FIBERGLASS BOARD ADHERED TO DUCTS WITH WELD PINS AND SPEED WASHERS. INSULATIONS SHALL BE VAPOR SEALED AND COVERED WITH GLASFAB AND MASTIC AND FINISH PAINTED WITH 2 COATS OF ALUMINUM PAINT.
4. VENTILATION DUCTWORK:
   SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL.
5. SOUNDLINING:
   SOUNDLINE DUCTS AS SHOWN ON PLANS WITH ½" THICK 3 LB. DENSITY, VINYL COVERED DUCTLINER.
6. REFRIGERANT PIPING:
   SHALL BE HARD DRAWN TYPE "L" SEAMLESS COPPER TUBING WITH WROUGHT COPPER FITTING AND SILVER SOLDERED JOINTS. SUCTION LINES SHALL BE INSULATED WITH ½" THICK NON-SPLIT ARMAFLEX (3/4" THICK FOR PRIMARY AIR UNITS).
   NOTE:
   FACTORY PRECHARGED PIPING SHALL BE ALLOWED AS PER MANUFACTURERS RECOMMENDATIONS.
7. VIBRATION AND NOISE ISOLATION:
   VIBRATION AND NOISE ISOLATORS SHALL BE PROVIDED FOR ALL MOTORIZED EQUIPMENT IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. ALL VIBRATION ISOLATORS SHALL BE AS MANUFACTURED BY MASON INDUSTRIES AND SHALL BE PROPERLY SELECTED FOR APPLICATION.
8. THERMOSTATS:
   (UNLESS OTHERWISE CALLED FOR) SHALL BE LOW VOLTAGE HEAT-COOL WITH FAN AND SELECTOR SWITCHES ON SUB-BASE STAGES AS SHOWN ON PLANS. MOUNT ON WALL WHERE SHOWN ON PLANS 5'6" ABOVE FINISHED FLOOR.
9. CONTROLS:
   FURNISH AND INSTALL A COMPLETE SYSTEM OF ELECTRIC CONTROLS AS SPECIFIED AND OR AS REQUIRED FOR COMPLETE AUTOMATIC SYSTEM OPERATION.
   A COMPLETE ELECTRICAL WIRING DIAGRAM SHALL BE SUBMITTED BY AIR CONDITIONING CONTRACTOR TO THE ENGINEER FOR HIS APPROVAL. ALL WIRING SHALL BE FUSED. PROVIDE COLOR CODED WIRING DIAGRAM FRAMED UNDER GLASS AND MOUNTED IN PRIMARY AIR UNIT ROOM.
10. PRIMARY AIR CONTROL SEQUENCE:
   THE PRIMARY AIR HANDLING UNIT SHALL BE CONTROLLED BY SOLID STATE ELECTRONIC CONTROLS ACCORDING TO THE FOLLOWING SEQUENCE:
   WHEN THE UNIT IS STARTED FROM A LOCAL STATION THE CONTROLS SHALL BE ENERGIZED. A TEMPERATURE CONTROLLER SENSING SUPPLY TEMPERATURE AND BEING RESET BY ROOM TEMPERATURE SHALL STAGE ONE STEP OF COOLING AND FIVE STEPS OF HEATING TO MAINTAIN DESIRED TEMPERATURE. THE SPACE HUMIDISTAT SHALL ENERGIZE THE COOLING ONLY TO MAINTAIN SET HUMIDITY. THE ELECTRIC STRIP HEATER SHALL BE LIMITED TO ONE STAGE OF OPERATION WHILE THE CONDENSING UNIT IS ENERGIZED.
   A SMOKE DETECTOR, LOCATED IN THE SUPPLY DUCT SHALL STOP THE UNIT, UPON INDICATION OF SMOKE. THE SMOKE DETECTOR SHALL BE MANUAL RESET TYPE.
   WHEN THE AIR HANDLING UNIT IS DE-ENERGIZED, THE CONTROLS SHALL BE DE-ENERGIZED.
11. ELECTRICAL NOTES:
   ALL POWER AND CONTROL WIRING AND DISCONNECTS SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. AIR CONDITIONER CONTRACTOR SHALL FURNISH TO ELECTRICAL CONTRACTOR FOR HIS INSTALLATION ALL MOTORS, STARTERS, CONTROLS, RELAYS, THERMOSTATS, FIRESTATS, ETC., ALONG WITH APPROVED WIRING DIAGRAM.
   STARTERS SHALL BE PROVIDED AS FOLLOWS:
   3/4 H.P. MOTORS AND LARGER - ALLEN BRADLEY - BULLETIN NO. 709 WITH OVERLOAD PROTECTION FOR ALL POLES.
   1/2 H.P. MOTORS AND SMALLER - ALLEN BRADLEY - BULLETIN NO. 600.
12. WORK REQUIRED OR FURNISHED BY OTHERS:
   A) ALL ELECTRICAL WIRING AND DISCONNECT FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
   B) CONDENSATE DRAIN LINES AND MAKE UP FEED LINE ARE FURNISHED AND INSTALLED BY PLUMBING CONTRACTOR.
   C) CONCRETE BASES FOR EQUIPMENT BY GENERAL CONTRACTOR.
   D) STEEL SUPPORTS FOR PRIMARY AIR CONDENSING UNITS BY GENERAL CONTRACTOR.
   E) ROOF FLASHING BY ROOFING CONTRACTOR. PITCH PANS FURNISHED BY AIR CONDITIONER CONTRACTOR AND INSTALLED BY ROOFING CONTRACTOR.
   F) ROOF CURBS INSTALLED BY GENERAL CONTRACTOR AND FURNISHED BY AIR CONDITIONING CONTRACTOR.
   G) VENTILATION CHASES SHALL BE CONSTRUCTED BY GENERAL CONTRACTOR IN ACCORDANCE WITH GOVERNING CODES.

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CHAMPLAIN TOWERS SOUTH
A- 135 UNIT CONDOMINIUM

COMM. No.	DATE: 8-13-79	SHEET No. AC9 OF 9 SHEETS
	REV.	