

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

GENERAL NOTES

1. ALL WORK SHOWN TO COMPLY WITH ALL LOCAL AND STATE CODES, ORDINANCES, ETC.
2. SEE ALL OTHER DRAWINGS AND WALGREENS SPECIFICATIONS FOR ADDITIONAL WORK OR CLARIFICATION OF NECESSARY WORK.
3. PROVIDE 3/4" ROUND STEEL ROD IN ALL OPENINGS GOING THRU ROOF OR WALL (12"x12" OR LARGER EXCEPT SCUTTLE), ON 6" CENTER IN BOTH DIRECTIONS, FOR BURGLAR PROOFING. SEE DETAIL #1 SHEET M2.1.
4. ALL FRESH AIR INTAKES ON ROOF SHALL BE LOCATED A MINIMUM OF 15'-0" AWAY FROM ANY EXHAUST DUCT OR BLOWER DISCHARGE.
5. HVAC ROOF-TOP UNIT TO INCLUDE FLEXIBLE CONNECTIONS, TURN VANES, AND VIBRATION ELIMINATORS, AS REQUIRED. SEE SECTION 15F ME1.1 FOR AIR CONDITIONING AND HEATING CONTROLS.
6. ALL DUCTWORK TO BE GALVANIZED SHEET METAL. (LINED DUCTWORK WILL NOT BE ACCEPTED.)
7. ALL HVAC SUPPLY & RETURN AIR DUCTS SHALL BE INSULATED AS FOLLOWS: ALL DUCTWORK BELOW ROOF TO HAVE 1-1/2" EXTERNAL INSULATION SEE SPECIFICATIONS, FOR ADDITIONAL INFORMATION.
8. EACH HVAC UNIT TO HAVE ITS OWN CONTROLS. SEE DRAWING ME1.1 FOR HVAC CONTROL WIRING DIAGRAM AND SPECIFICATION.
9. PROVIDE CONDENSATE DRAIN WITH TRAP, AS SHOWN ON DETAIL 5/M2.1, FOR EACH HVAC UNIT PIPE DOWN THRU ROOF WITHIN CURB, CONNECT TO CD LINE ABOVE CEILING. INSULATE ALL CONDENSATE LINES SIMILAR TO DOMESTIC COLD WATER PIPING.
10. ALL HVAC SYSTEMS TO BE BALANCED (BY AN INDEPENDENT CERTIFIED AIR BALANCE CONTRACTOR WITH A MINIMUM OF 5 YEARS EXPERIENCE) AFTER COMPLETION OF WORK.
11. STOCKROOM FANS TO BE INTERLOCKED ON THERMOSTAT. SET "ON" AT 80 DEGREES F., "OFF" AT 70 DEGREES F.
12. EQUIPMENT MANUFACTURER SHALL PROVIDE ON EACH NEW WALGREEN STORE FACTORY SUPERVISED "CHECK, TEST AND START" SERVICE UTILIZING STANDARD WALGREEN FORMS AS PROVIDED BY FACILITIES PLANNING AND DESIGN AND DEPARTMENT. HVAC CONTRACTOR SHALL VERIFY COMPLIANCE WITH PLANS AND SPECIFICATIONS AND SHALL FORWARD TO THE WALGREEN COMPANY COMPLETE C.T.S. FORMS ALONG WITH THREE COPIES OF SERVICE AND INSTALLATION MANUALS, PARTS LIST AND ALL RELATED WARRANTIES. SUBMITTAL SHALL BE IN BOOK FORM AND APPLICABLE TO ACTUAL EQUIPMENT INSTALLED.
13. HVAC UNITS SHALL BE INSTALLED LEVEL ON ROOF.
14. RUN THERMOSTAT SENSOR WIRING INSIDE PIPE COLUMNS.
15. DO NOT INSTALL SUPPLY AIR DIFFUSERS IN CEILING PANELS ADJACENT TO ROWS OF LIGHT FIXTURES.
16. FLEX. DUCT LENGTH, MAX. = 7'-0".
17. SUPPLY AND/OR RETURN AIR PLENUMS WILL NOT BE ACCEPTED.
18. UNIT HEATERS MUST BE INSTALLED IN AISLE AREAS. DO NOT INSTALL ABOVE STOCK ROOM SHELVING.
19. ELECTRIC WALL HEATERS (EWH) ARE PROVIDED UNDER THE ELECTRICAL CONTRACT, SHOWN HERE FOR HVAC INFORMATION ONLY.
20. GAS PIPING SHALL BE RUN ABOVE THE CEILING. PROVIDE SHUT-OFF VALVE AT EACH PIECE OF EQUIPMENT (NOT BELOW ROOF FOR ROOF TOP UNITS).
21. SEE SHEET ME1-1 FOR OUTSIDE AIR CALCULATIONS.
22. SEE ARCHITECTURAL DRAWING FOR HVAC UNIT ROOF CURB AND SUPPORT DETAIL.
23. ALL NON-AIR CONDITIONING COMPRESSORS LISTED WITH REFRIGERANT PIPING SHALL BE FURNISHED BY WALGREENS. ALL ELECTRICAL WORK (SEE DWG. E1.2) AND PLUMBING WORK (SEE DWG. P1.1), INCLUDING ROOF SUPPORT, FURNISHED BY CONTRACTOR.
24. SEE ARCHITECTURAL DRAWING FOR ROOF TOP COMPRESSOR CURB & SUPPORT DETAIL.

MECHANICAL KEYED NOTES

- 1 HVAC ROOF-TOP UNIT. SEE GENERAL NOTES (ABOVE) AND SCHEDULE ON DRAWING M2.1 FOR ADDITIONAL INFORMATION.
- 2 THERMOSTAT 6'-0" AFF FOR HEATING AND COOLING. SEE SHEET ME1.1 FOR DETAILS.
- 3 GAS FIRED UNIT HEATER (SEE SCHEDULE DWG. M2.1); BOTTOM 8'-0" UP; THERMOSTAT MOUNTED ON WALL AS SHOWN. PROVIDE 4" FLUE TO ROOF, WITH WEATHER CAP.
- 4 GAS FIRED UNIT HEATER (SEE SCHEDULE DWG. M2.1); BOTTOM 12'-0" UP; THERMOSTAT MOUNTED ON BOTTOM OF UNIT. PROVIDE 4" FLUE TO ROOF, WITH WEATHER CAP.
- 5 GAS FIRED UNIT HEATER (SEE SCHEDULE DWG. M2.1); BOTTOM 12'-0" UP; THERMOSTAT MOUNTED ON WALL AS SHOWN. PROVIDE 4" FLUE TO ROOF, WITH WEATHER CAP.
- 6 ROOF-TOP COMPRESSOR FOR WALK-IN COOLER. SEE SCHEDULE ON DRAWING M2.1 FOR ADDITIONAL INFORMATION.
- 7 ROOF CURB FOR WALK-IN COOLER/FREEZER COMPRESSOR REFRIGERANT AND ELECTRICAL LINES. SEE DETAIL #4 SHEET M2.1.
- 8 30/30 DUCT UP TO SUPPLY FAN ON ROOF. PROVIDE 40X40 METALAIR MODEL #CC-5FB, TRANSITION AS REQUIRED. SEE DETAIL #2 SHEET M2.1.
- 9 30/30 DUCT UP TO EXHAUST FAN ON ROOF. PROVIDE 40X40 METALAIR MODEL #CC-5FB, TRANSITION AS REQUIRED. SEE DETAIL #2 SHEET M2.1.
- 10 10/4 DUCT FROM EXHAUST FAN UP TO VENTILATOR ON ROOF. TRANSITIONS AS REQUIRED. SEE VENTILATOR DETAIL #6 SHEET M2.1.
- 11 10/6 DUCT FROM EXHAUST FAN UP TO VENTILATOR ON ROOF. TRANSITIONS AS REQUIRED. SEE VENTILATOR DETAIL #6 SHEET M2.1.
- 12 ALL OPENINGS 12"x12" AND LARGER THROUGH ROOF OR WALLS SHALL BE EQUIPPED WITH BURGLAR BARS. SEE DETAIL #1 SHEET M2.1.
- 13 8/8 DUCT FROM 300 CFM 9X9 EXHAUST GRILLE TO EXHAUST FAN ON ROOF. TRANSITION AS REQUIRED. SEE DETAIL #2 SHEET M2.1.
- 14 PROVIDE SMOKE DETECTOR IN AIR STREAM.
- 15 ADJUST FRONT HORIZONTAL BARS TO AN ANGLE OF 45 SO THAT THE AIR FLOWS AWAY FROM THE WINDOW. THIS IS TO HELP PREVENT CONDENSATION ON THE GLASS IN HOT, HUMID CLIMATE CONDITIONS.
- 16 ELECTRIC WALL HEATER (EWH) FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. SEE DRAWING E1.2 FOR FURTHER INFORMATION.
- 17 THERMOSTATIC REMOTE SENSOR MOUNTED 6'-0" AFF. PROVIDE STAINLESS STEEL COVER (RE: ARCHITECTURAL DWGS.) ROUTE WIRING WITHIN COLUMN.
- 18 SE-1 & EF-1 SHALL BE INTERLOCKED ON A THERMOSTAT. SET: "ON" AT 80 DEGREES F., "OFF" AT 70 DEGREES F.
- 19 NOT USED
- 20 DO NOT LOCATE LIEBERT UNIT OR ROUTE CONDENSATE DRAIN OR COLD WATER SUPPLY ABOVE ELECTRONIC EQUIPMENT SHELVING OR ELECTRICAL EQUIPMENT. (SEE SCHEDULE DWG. M2.1)
- 21 PROVIDE ROOF CURB W/ CAP, SIZED FOR FUTURE 750 CFM EXHAUST FAN FOR 1-HOUR PHOTO FACILITY.
- 22 DUCT SIZED FOR ADDITIONAL CFM FOR FUTURE 1-HOUR PHOTO FACILITY.

Walgreens
HIGHWAY 365 & MAGNOLIA
PORT NECHES, TEXAS

DEVELOPED BY
L.S.I. DEVELOPMENT
PORT NECHES, L.P.

515 POST OAK BLVD.
SUITE 310
HOUSTON, TEXAS 77027
(713) 622-8231

Levinson Associates, Inc.
Architecture • Planning • Interior Design

2401 Fountain View Dr.
Suite 600
Houston, Texas 77057
(713) 952-3200

REVISIONS

9-29-94	Walgreens Comments
10-11-94	Revised for Constr.

Handwritten initials and date: 2-9-95

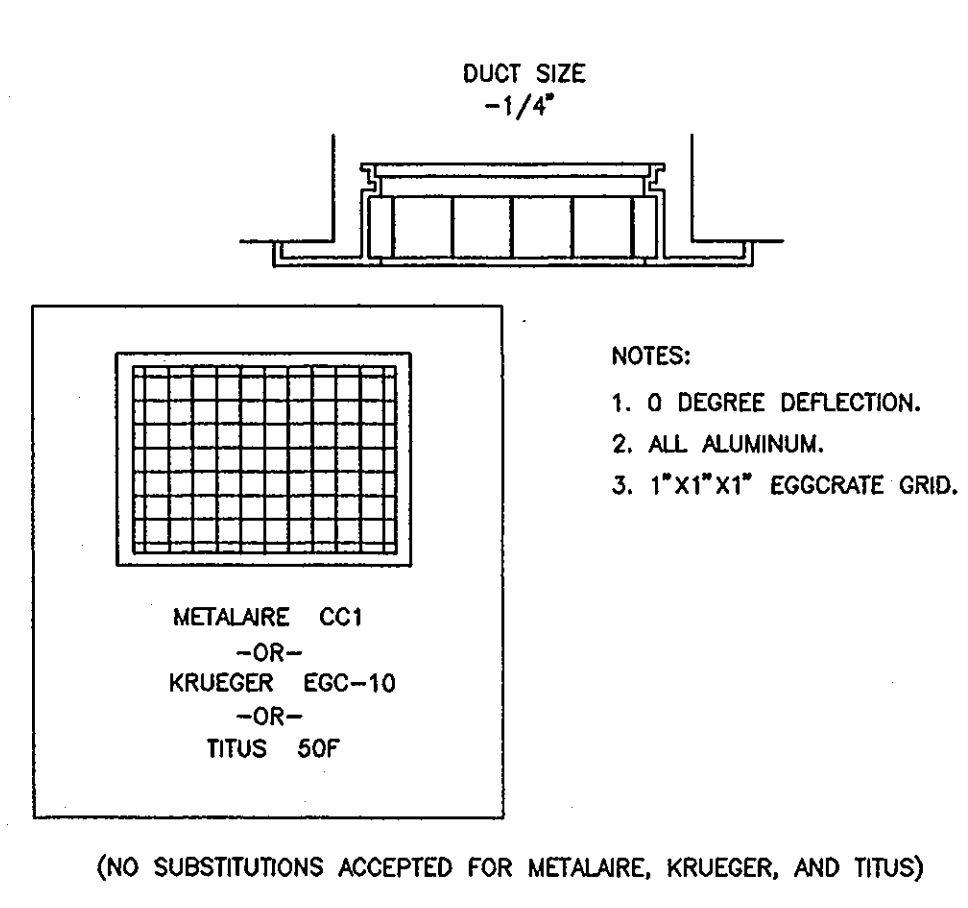


R.H. George and Associates, Inc.
Consulting Engineering
8700 Jameel, Suite 150
Houston, Texas 77040 (713) 680-6300

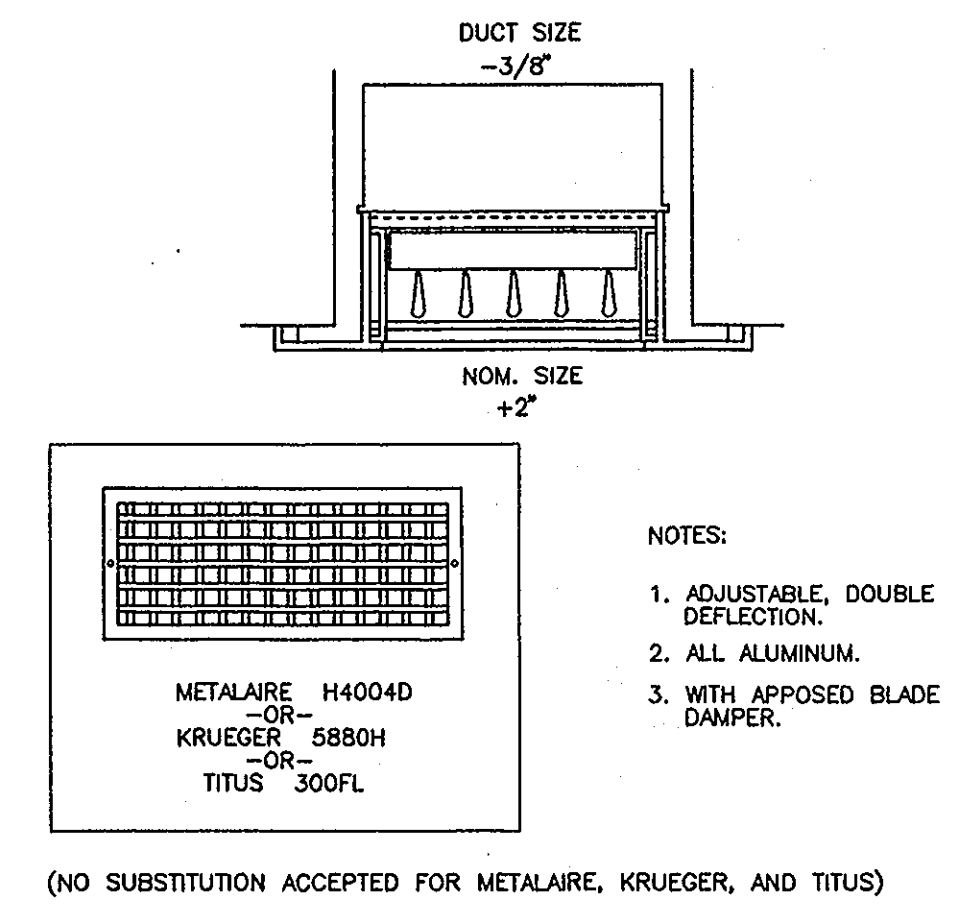
LAI Project No.	94150.000
Walgreen Store Number	03507
Issued For Permit	
Issued For Bidding	
Issued For Construction	

M1.1
Mechanical
Floor Plan

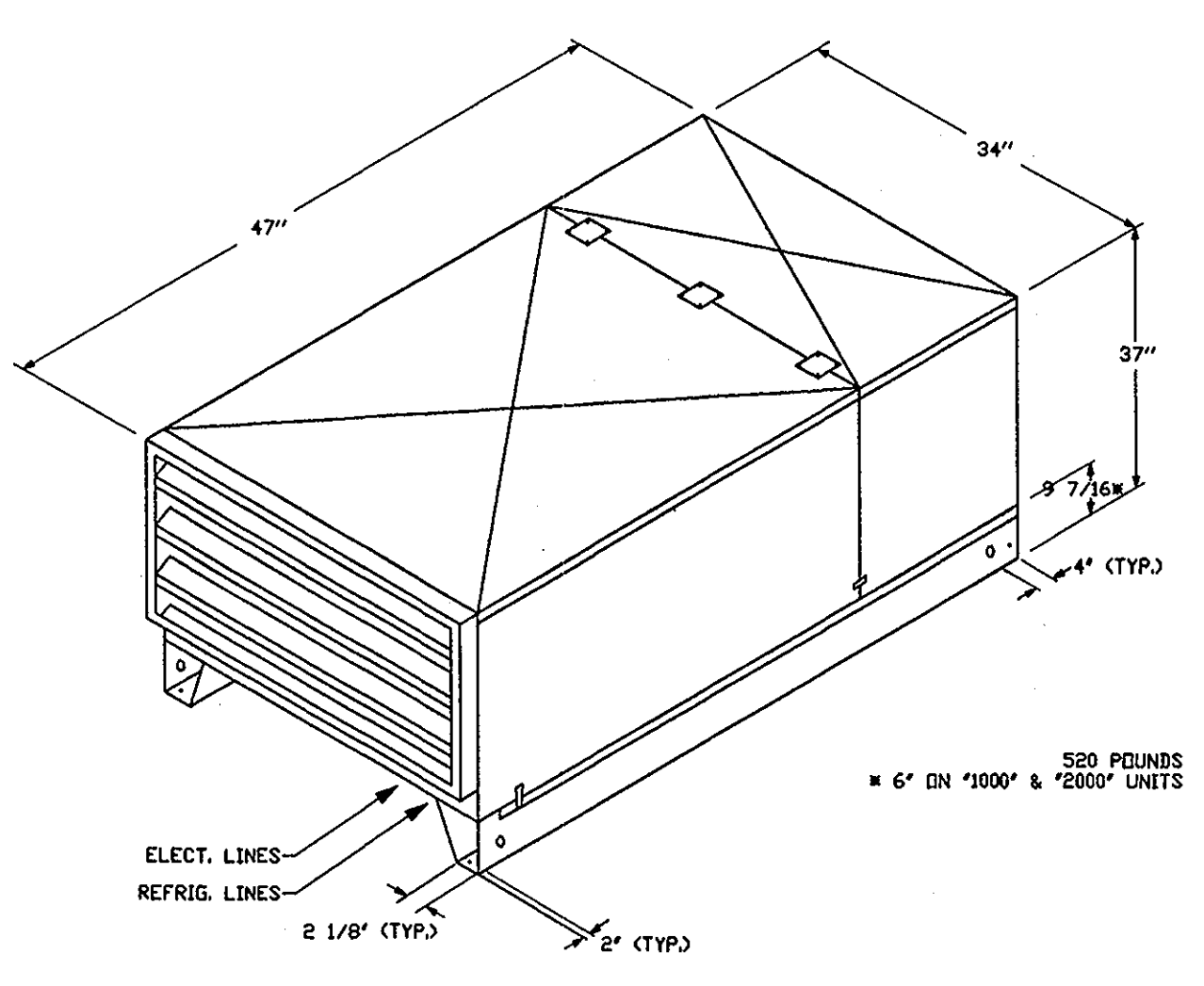
DATE: 5 AUG. 1994



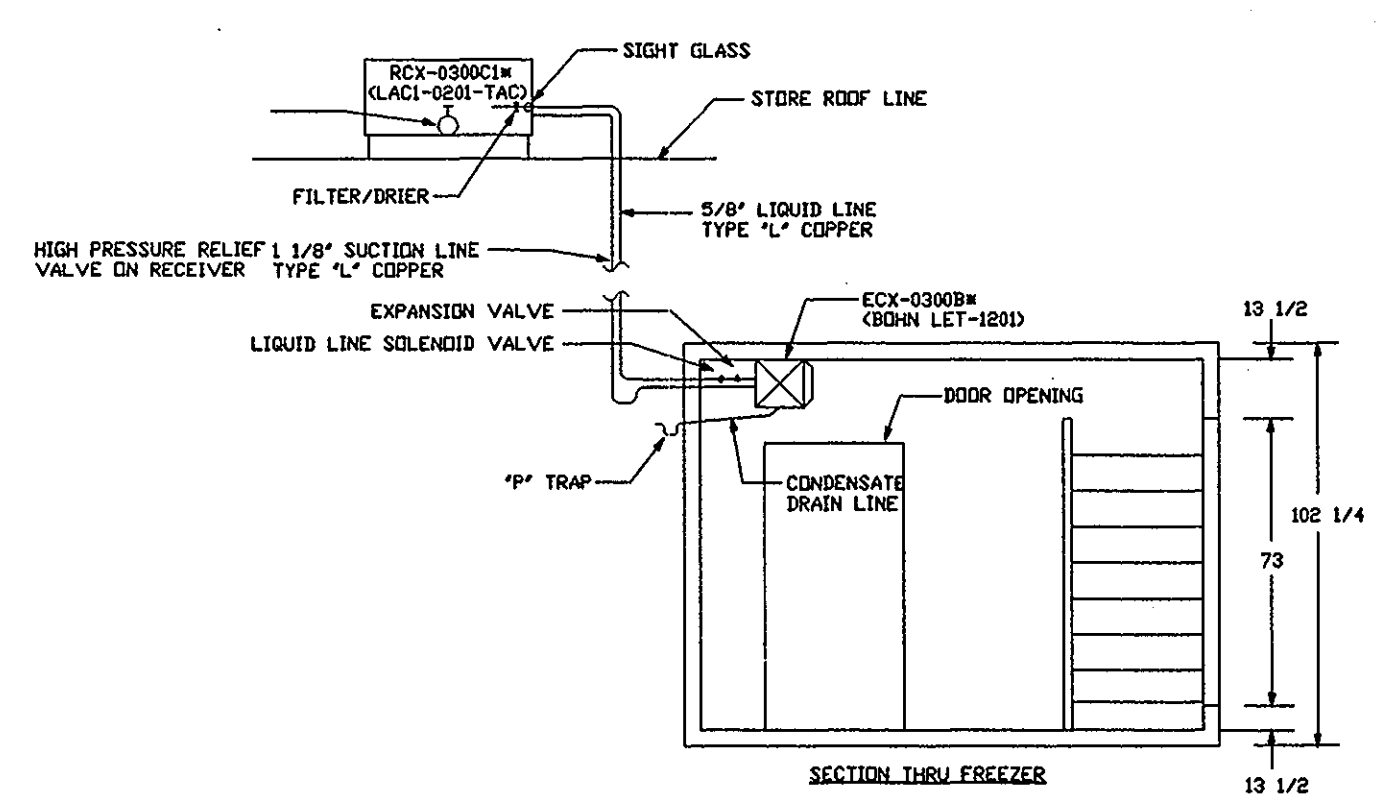
11 RETURN AIR GRILLE
SCALE: - NOT TO SCALE



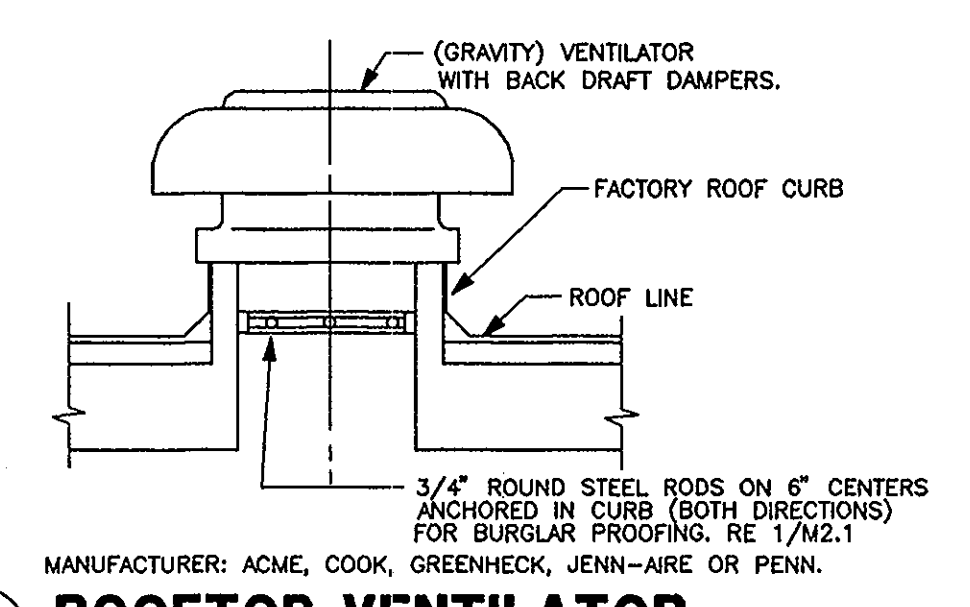
10 SUPPLY AIR GRILLE
SCALE: - NOT TO SCALE



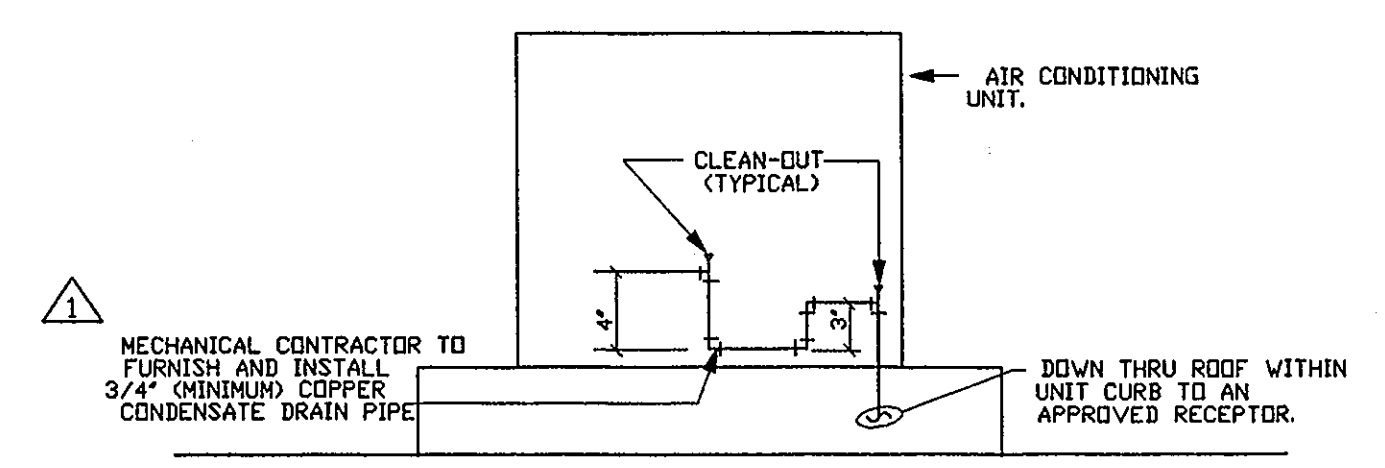
8 REFRIGERATION CONDENSER DETAIL
SCALE: - NOT TO SCALE



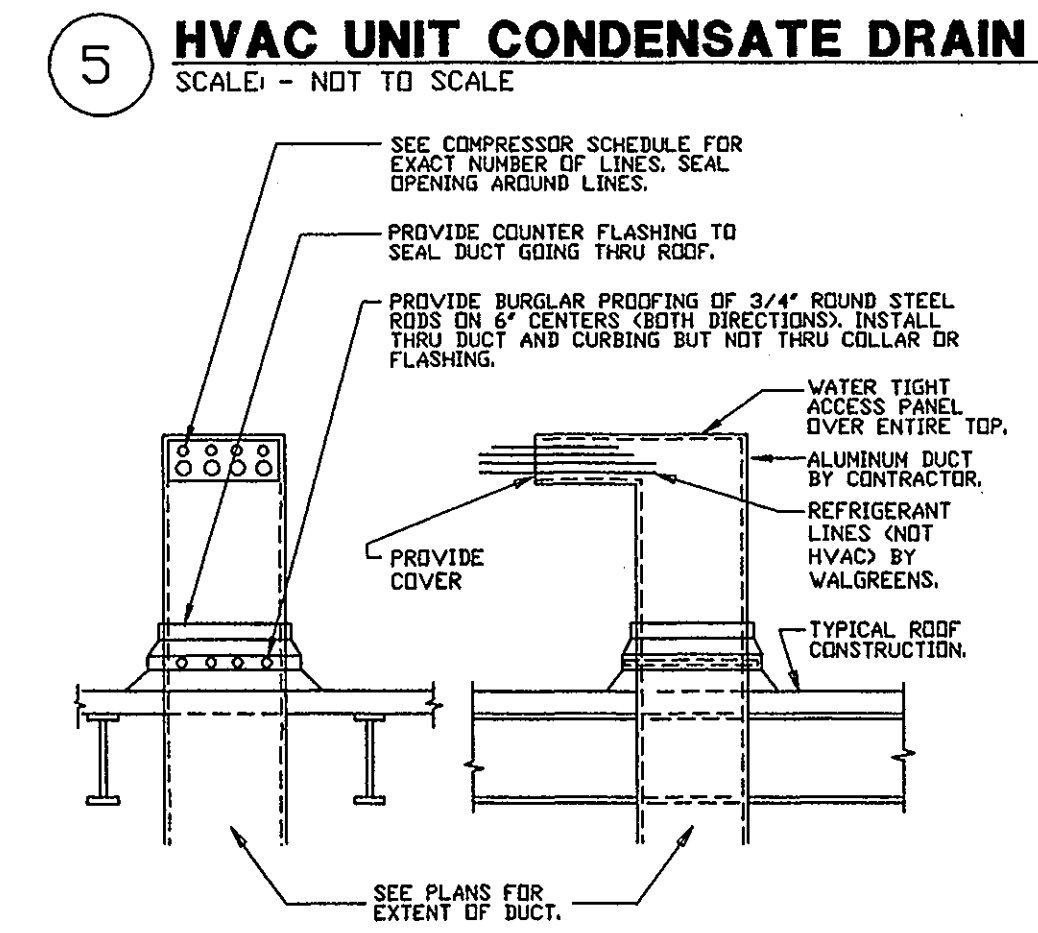
7 REFRIGERATION PIPING SCHEMATIC
SCALE: 1/4" = 1'-0"



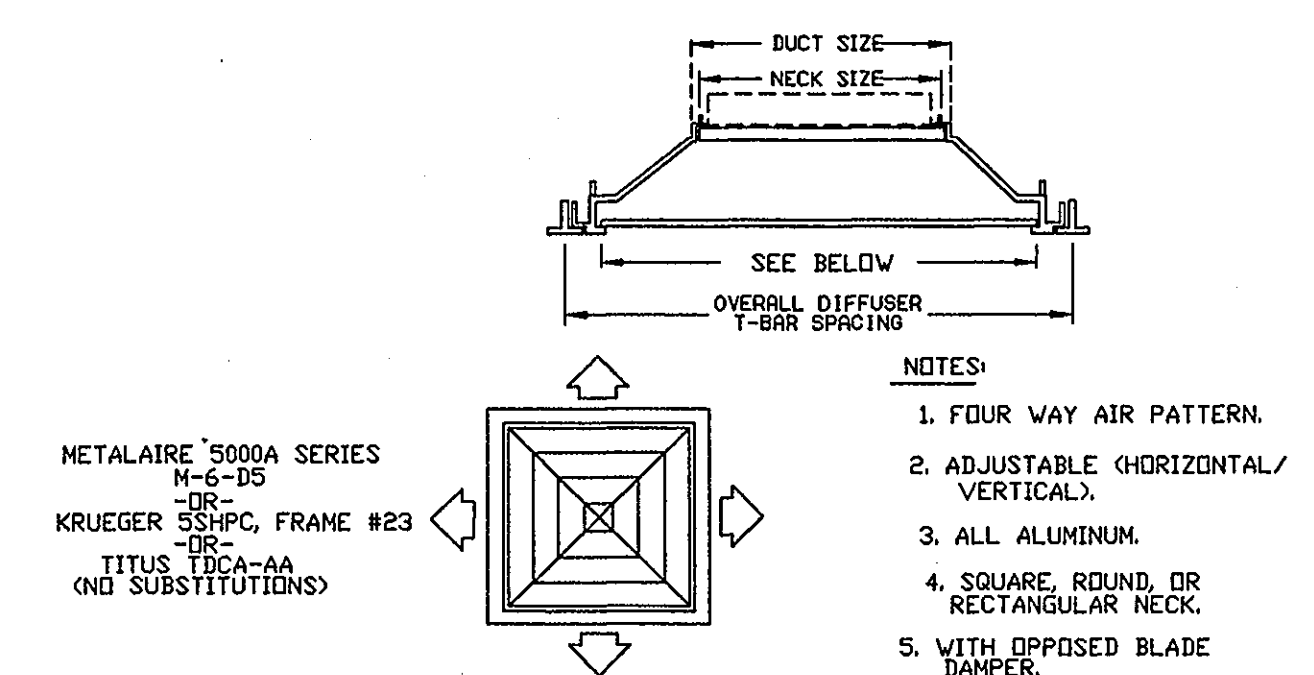
6 ROOFTOP VENTILATOR
SCALE: - NOT TO SCALE



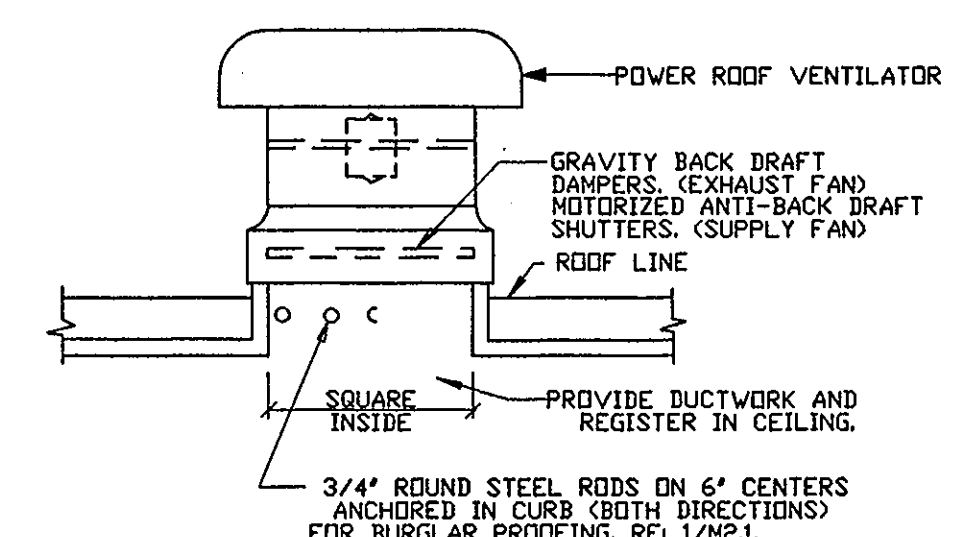
5 HVAC UNIT CONDENSATE DRAIN TRAP
SCALE: - NOT TO SCALE



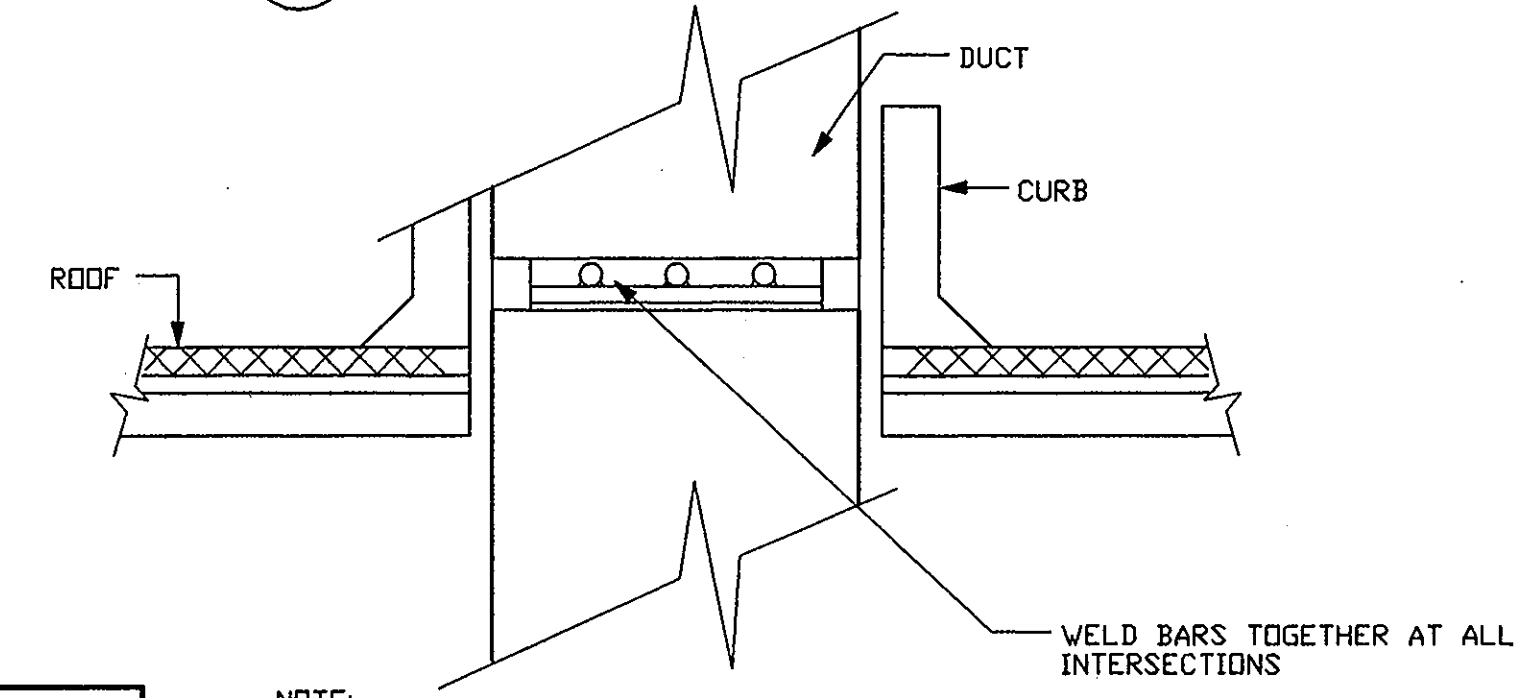
4 ALUMINUM DUCT FOR REFRIGERANT LINES
SCALE: - NOT TO SCALE (20 GA. ALUMINUM)



3 SUPPLY AIR DIFFUSER
SCALE: - NOT TO SCALE



2 ROOF-TOP EXHAUST BLOWER
SCALE: - NOT TO SCALE



1 BURGLAR PROOFING
SCALE: - NOT TO SCALE

NOTE:
2" x 3/8" STEEL WELDED FRAME ALL SIDES WITH 3/4" DIA. STEEL RODS ON 6" (MAX.) CENTERS (BOTH WAYS) WELDED TO FRAME AND EACH OTHER. ANCHOR FRAME TO CURB WITH 1/2" DIA. STEEL BOLTS (TAMPER-PROOF) ON 6" (MAX.) CENTERS, MIN. 2 PER SIDE.

ONLY REQUIRED FOR OPENINGS 12" X 12" AND LARGER.

GRILLE SCHEDULE							
MARK	DESCRIPTION	TYPE VOLUME CONTROL	CONSTRUCT. MATERIAL	FINISH	MANUFACTURER	MODEL	REMARKS
A	SUPPLY AIR DIFFUSER	ALUM OBD	ALUM.	OFF WHITE	METAL-AIRE KRUEGER TITUS	5000A M-6-DS S5HPC TDCA-AA	SUPPLY AIR DIFFUSER, 24"x24" FACE. FRAME STYLE FOR EXPOSED T-BAR CEILING.
B	SIDEWALL REGISTER	ALUM OBD	ALUM.	OFF WHITE	METAL-AIRE KRUEGER TITUS	H4004D 5880H 300FL	DOUBLE DEFLECTION SIDEWALL REGISTER WITH EXPOSED ADJUSTMENT KNOB.
C	VAV DIFFUSER	ALUM OBD	ALUM.	OFF WHITE	ACUTHERM	THERMAFUSER HC	SELF CONTAINED VARIABLE VOLUME DIFFUSER, 24"x24" FACE. FRAME STYLE FOR EXPOSED T-BAR CEILING.
D	RETURN AIR GRILLE	--	ALUM.	OFF WHITE	METAL-AIRE KRUEGER TITUS	CC1 EGC-10 50F	EGGRATE TYPE RETURN AIR GRILLE. FRAME STYLE FOR EXPOSED T-BAR CEILING. 24"x48" FACE.
E	SUPPLY AIR DIFFUSER	ALUM OBD	ALUM.	OFF WHITE	METAL-AIRE KRUEGER TITUS	5000A S5HPC TDCA-AA	SAME AS 'A' EXCEPT SURFACE MOUNTED.
F	EXHAUST AIR REGISTER	ALUM OBD	ALUM.	OFF WHITE	METAL-AIRE KRUEGER TITUS	RHD 5880H 3FL	FIXED 45 DEGREE RETURN AIR GRILLE. FRAME TO BE SURFACE MOUNTED WITH DAMPER.
G	RETURN AIR GRILLE	--	ALUM.	OFF WHITE	METAL-AIRE KRUEGER TITUS	CC1 EGC-10 50F	EGGRATE TYPE RETURN AIR GRILLE. FRAME STYLE FOR EXPOSED T-BAR CEILING. 24"x24" FACE.

UNIT HEATER SCHEDULE								
UNIT	AREA SERVED	BTU/HR INPUT	CFM	MOTOR		RPM	TYPE	MAKE AND MODEL
				HP.	VOLTS PHASE			
GUH-1	STOCK AREA	25,000	380	1/70	120-1-60	1550	INDOOR POWER VENTED	REZNDR FE25
GUH-2	RECEIVING	50,000	650	1/40	120-1-60	1550	INDOOR POWER VENTED	REZNDR FE50
GUH-3	PASSAGE	25,000	380	1/70	120-1-60	1550	INDOOR POWER VENTED	REZNDR FE25

FAN SCHEDULE								
UNIT	AREA SERVED	CFM	SP.	MOTOR		RPM	TYPE	MAKE AND MODEL
				HP	VOLTS PHASE			
SF-1	STOCK ROOM	6350	0.250	1.5	480 3	860	ROOF MOUNTED SUPPLY PROPELLER TYPE	ACME #LQ30K8-S 400 LBS W/ BACKDRAFT DAMPER
EF-1	STOCK ROOM	6350	0.500	1	480 3	860	ROOF MOUNTED EXHAUST PROPELLER TYPE	ACME #LQ30J8 400 LBS W/ MOTORIZED ANTI-BACKDRAFT SHUTTERS.
EF-2	LOUNGE	300	0.125	165 WATTS	120 1	1625	CEILING MOUNTED EXHAUST FAN	ACME #V-300 W/ BACKDRAFT DAMPER AND VERT. DISCHARGE AND WHITE PLASTIC GRILLE.
EF-3	MEN TOILET RM.	200	0.375	165 WATTS	120 1	1625	CEILING MOUNTED EXHAUST FAN	ACME #V-300 W/ BACKDRAFT DAMPER AND DISCHARGE AND WHITE PLASTIC GRILLE.
EF-4	WOMEN TOILET RM.	200	0.375	165 WATTS	120 1	1625	CEILING MOUNTED EXHAUST FAN	ACME #V-300 W/ BACKDRAFT DAMPER AND DISCHARGE AND WHITE PLASTIC GRILLE.
EF-5	OFFICE	300	0.125	1/12	120	1300	ROOF MOUNTED EXHAUST FAN	ACME #PRN80-3 W/ MOTORIZED BACKDRAFT DAMPER, ROOF CURB AND BIRDSCREEN

HEATING/COOLING ROOF TOP UNIT SCHEDULE																
NOTE: AT 95 DEG. CONDENSER ENTRANCE AIR TEMPERATURE & ARI CONDITIONS.																
UNIT	AREA SERVED	FUSE SIZE MAX AMP 480 VOLTS 3 PHASE	BLOWER			COMPRESSOR			AIR COOLED CONDENSER		GAS FIRED FURNACE					
			CFM	MOTOR HP	ELECT. REQ. FL VOLTS PHASE	ELECT. REQ. FL VOLTS PHASE	COOLING CAPACITY TOTAL SENSIBLE	ELECT. REQ. FL VOLTS PHASE	HP	BTU/HR RATE INPUT OUTPUT	MAKE/MODEL/WEIGHT/FILTERS					
RTU-1	GENERAL SALES	SEE ELECT. DRAWINGS	8,170	893	7.5 11.0	480/3	44.2	480/3	245,115	196,780	5.6	2 AT 1	480/3	270,000	216,000	W/(1)(4)(5)(6)(7)(8)(9)(10)
RTU-2	GENERAL SALES	SEE ELECT. DRAWINGS	5,965	908	5.0 7.6	480/3	31.4	480/3	204,725	152,150	5.6	2 AT 1	480/3	270,000	216,000	W/(2)(4)(5)(6)(7)(8)(9)(10)
RTU-3	PHARMACY	SEE ELECT. DRAWINGS	1,800	120	1.0 1.8	480/3	9.6	480/3	48,645	41,660	1.0	1/4	480/3	74,000	59,200	W/(3)(4)(5)(6)(7)(8)(9)(10)

NOTES:
1) CARRIER 48HJD028, 3,420 LBS, WITH DISPOSABLE FILTERS.
2) CARRIER 48HJD024, 2,250 LBS, WITH DISPOSABLE FILTERS.
3) CARRIER 48HJD006, 675 LBS, WITH DISPOSABLE FILTERS.
4) WELDED ROOF CURB.
5) EXTENDED 5 YEAR WARRANTY ON COMPRESSOR.
6) EXTENDED 10 YEAR WARRANTY ON HEAT EXCHANGER.

7) WARRANTIES OR A COPY OF WARRANTIES IS TO BE GIVEN TO WALGREEN'S PROJECT ARCHITECT UPON COMPLETION OF PROJECT.
8) ECONOMIZER SYSTEMS NOT REQUIRED.
9) UNITS SHALL HAVE THE HIGHEST EFFICIENCY RATINGS AVAILABLE FROM THE MANUFACTURER FOR BOTH HEATING AND COOLING.
10) SEE MELL FOR OUTSIDE AIR CALCULATIONS.

SPLIT SYSTEM SCHEDULE													
NOTE: AT 95 DEG. CONDENSER ENTRANCE AIR TEMPERATURE & ARI CONDITIONS.													
UNIT	AREA SERVED	FUSE SIZE MAX AMP 208 VOLTS 1 PHASE	BLOWER		COMPRESSOR			AIR COOLED CONDENSER		REMARKS			
			CFM	MOTOR HP	ELECT. REQ. FL VOLTS PHASE	ELECT. REQ. FL VOLTS PHASE	COOLING CAPACITY TOTAL SENSIBLE	ELECT. REQ. FL VOLTS PHASE	HP	BTU/HR RATE INPUT OUTPUT			
SS-1	TECH. ROOM	SEE ELECT. DRAWINGS	900	1/2 2.3	208/1	21.4	208/1	20,020	19,020	14.1	1/3	208/1	WITH (1)(2)

NOTES:
1) LIEBERT MINI-MATE PLUS MME024E WITH AIR DISTRIBUTION PLENUM AND CONDENSING UNIT.
2) WARRANTIES OR A COPY OF WARRANTIES IS TO BE GIVEN TO WALGREEN'S PROJECT ARCHITECT UPON COMPLETION OF PROJECT.

Walgreens
 HIGHWAY 365 & MAGNOLIA
 PORT NECHES, TEXAS

DEVELOPED BY
L.S.I. DEVELOPMENT
PORT NECHES, L.P.

515 POST OAK BLVD.
SUITE 310
HOUSTON, TEXAS 77027
(713) 622-8231

Levinson Associates, Inc.
Architecture • Planning • Interior Design

2401 Fountain View Dr.
Suite 600
Houston, Texas 77057
(713) 952-3200

REVISIONS
 1) 9-29-94 Walgreens Comments
 2) 10-11-94 Revised for Constr.



LAI Project No. 94150.000
 Walgreen Store Number 03507
 Issued For Permit
 Issued For Bidding
 Issued For Construction

M2.1
Mechanical
Sch./Details

DATE: 5 AUG. 1994

R.H. George and Associates, Inc.
Consulting Engineering
8700 Jameel, Suite 150
Houston, Texas 77040 (713) 690-6300

OUTSIDE AIR CALCULATIONS					
ROOF TOP UNIT #1					
RETAIL SALES			CFM _{DA}	CFM _{SA}	Z
4640 Sq. Ft. x 8 PEOPLE	1000 Sq. Ft. x 1 PERSON	15 CFM	= 557 CFM	7,280 CFM	.076
OFFICE					
195 Sq. Ft. x 7 PEOPLE	1000 Sq. Ft. x 1 PERSON	20 CFM	= 27 CFM	500 CFM	.054
STORAGE					
120 Sq. Ft. x .05 CFM/Sq. Ft.			= 6 CFM	130 CFM	.046
CORRIDOR					
225 Sq. Ft. x 50 PEOPLE	1000 Sq. Ft. x 1 PERSON	15 CFM	DIVERSITY x.5 = 85 CFM	260 CFM	.327
			675 CFM	8,170 CFM	
X = 675/8,170 = .0826					
Y = .0826/L 1 + .0826 - .327 J = .1093					
Y = .1093 = V _{ot} / 8,170 V _{ot} = 893 CFM DA					
ROOF TOP UNIT #2					
RETAIL SALES					
4640 Sq. Ft. x 8 PEOPLE	1000 Sq. Ft. x 1 PERSON	15 CFM	= 557 CFM	5,400 CFM	.103
EMPLOYEE LOUNGE/LOCKERS					
144 Sq. Ft. x .50 CFM/Sq. Ft.			= 72 CFM	270 CFM	.267
CORRIDOR					
108 Sq. Ft. x .05 CFM/Sq. Ft.			= 6 CFM	100 CFM	.060
RESTROOMS					
3 FIXTURES x 50 CFM/FIXTURE			= 150 CFM	---	---
			785 CFM	5,965 CFM	
X = 785/5,965 = .1316					
Y = .1316/L 1 + .1316 - .267 J = .1522					
Y = .1522 = V _{ot} / 5,965 V _{ot} = 908 CFM DA					
ROOF TOP UNIT #3					
PHARMACY					
1007 Sq. Ft. x 8 PEOPLE	1000 Sq. Ft. x 1 PERSON	15 CFM	= 120 CFM		

SECTION 15F
AUTOMATIC TEMPERATURE CONTROL

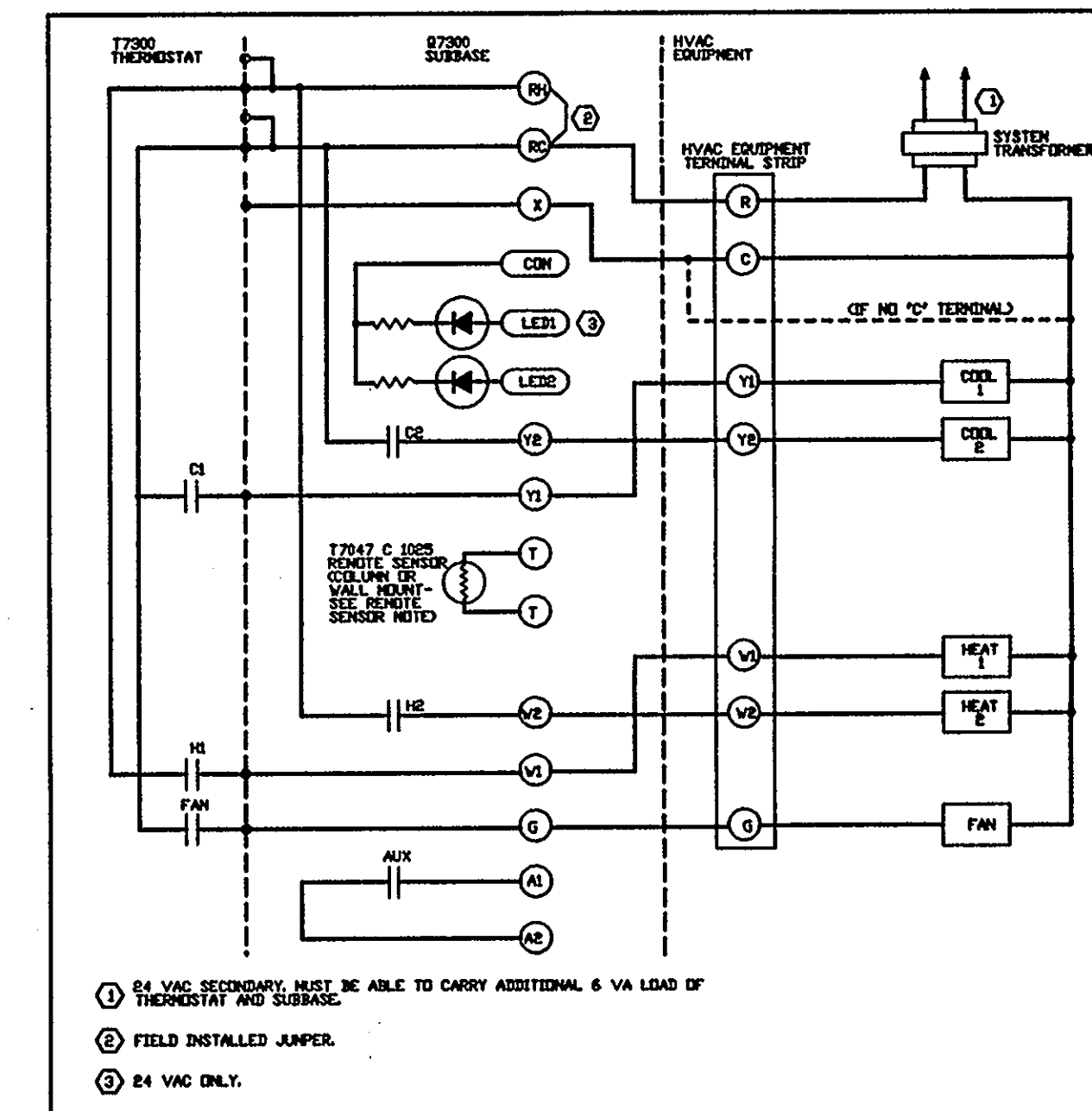
- SCOPE OF WORK**
THE CONTRACTOR UNDER THIS HEADING SHALL BE THE HEATING AND AIR CONDITIONING CONTRACTOR WHO SHALL FURNISH ALL CONTROL EQUIPMENT, ENGINEERING SERVICES, JOB DRAWINGS AND FIELD SUPERVISION FOR TEMPERATURE CONTROL.
THIS SPECIFICATION IS INTENDED TO COVER EQUIPMENT FOR THE AUTOMATIC TEMPERATURE CONTROL FOR:
HEATING
VENTILATION
AIR CONDITIONING
- SERVICE AND GUARANTEE**
THE CONTROL SYSTEM AS HEREIN SPECIFIED SHALL BE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIAL UNDER NORMAL USE AND SERVICE IF WITHIN TWELVE (12) MONTHS FROM DATE OF ACCEPTANCE BY THE ENGINEER. ANY OF THE EQUIPMENT HEREIN DESCRIBED IS PROVED TO BE DEFECTIVE IN WORKMANSHIP OR MATERIAL, IT SHALL BE REPLACED OR REPAIRED FREE OF CHARGE.
THIS CONTRACTOR SHALL, AFTER COMPLETION OF THE ORIGINAL TEST OF THE INSTALLATION AND ACCEPTANCE BY THE ENGINEER, PROVIDE ANY SERVICE INCIDENTAL TO THE PROPER PERFORMANCE OF THE TEMPERATURE CONTROL SYSTEM UNDER GUARANTEES OUTLINED ABOVE FOR THE PERIOD OF ONE (1) YEAR. AFTER COMPLETION OF THE INSTALLATION, THIS CONTRACTOR SHALL REGULATE AND ADJUST ALL EQUIPMENT PROVIDED UNDER THIS CONTRACT. HE SHALL PLACE THEM IN COMPLETE OPERATING CONDITION SUBJECT TO THE APPROVAL OF WALGREEN CO.
- DRAWINGS AND LAYOUTS**
THIS CONTRACTOR SHALL SUBMIT TO WALGREEN CO. A COMPLETE SHOP DRAWING OF THE ENTIRE CONTROL SYSTEM BEFORE STARTING WORK. UPON COMPLETION OF ALL WORK, HE SHALL PROVIDE FOUR COPIES OF AS-BUILT LAYOUTS OF THE CONTROL SYSTEM TO WALGREEN CO. ENGINEERING DEPARTMENT.
- INSTALLATION OF VALVES AND DAMPERS MOTORS**
ALL CONTROL VALVES AND DAMPER MOTORS, WHERE REQUIRED, SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR.
- POSITIONING OF DAMPERS**
ALL DAMPERS SHALL BE POSITIONED BY THE VENTILATION CONTRACTOR. VENTILATION CONTRACTOR SHALL ALSO MARK POSITIONS OF DAMPERS ON AS-BUILT LAYOUTS.
- CONTROL MOTORS**
ALL MOTORS MUST BE SPRING RETURN AND MUST HAVE OIL IMMERSER GEAR TRAIN.
- ELECTRIC WIRING**
ALL WIRING AND MOUNTING OF TEMPERATURE CONTROL DEVICES SHALL BE PROVIDED UNDER THE ELECTRICAL CONTRACT AND SHALL BE IN ACCORDANCE WITH ALL EXISTING CODES. THE ELECTRICAL CONTRACTOR SHALL RUN ALL CONDUIT IN ACCORDANCE WITH SCHEMATIC DIAGRAM. THIS CONTRACTOR SHALL PROVIDE FINAL JOB WIRING DRAWINGS TO THE ELECTRICAL CONTRACTOR FOR INSTALLATION.
- HONEYWELL T7300 - SEQUENCE OF OPERATIONS**
THE HEATING AND COOLING SETPOINTS SHALL BE INDIVIDUALLY ADJUSTABLE FOR BOTH OCCUPIED AND UNOCCUPIED PERIODS. THE THERMOSTATS SHALL HAVE A MINIMUM DEADBAND OF 2°F AND A MAXIMUM DEADBAND OF 48°F AND MECHANICAL HEATING OR COOLING SHALL OPERATE WITHIN THIS DEADBAND. SPACE TEMPERATURE DEVIATION ABOVE COOLING SETPOINT OR BELOW THE HEATING SETPOINT SHALL GENERATE A DEMAND SIGNAL TO CONTROL THE SYSTEM AS FOLLOWS:
A. HEATING
1) THE THERMOSTAT SHALL CONTROL THE HEATING OUTPUTS BASED ON THE DEMAND SIGNAL COMMUNICATED FROM THE THERMOSTAT PROGRAM, TAKING INTO ACCOUNT BOTH SPACE TEMPERATURE DEVIATION (PROPORTIONAL ERROR) AND THE DURATION OF THAT TEMPERATURE DEVIATION (INTEGRAL ERROR).
2) THE OUTDOOR AIR DAMPER SHALL BE AT A MINIMUM POSITION DURING THE OCCUPIED PERIOD, AND SHALL BE CLOSED DURING THE UNOCCUPIED PERIOD OF THE HEATING MODE.
3) AUXILIARY HEAT SHALL BE CONTROLLED AT 2°F BELOW HEATING SETPOINT ON HEAT PUMP SYSTEMS.
B. COOLING
THE THERMOSTAT SHALL CONTROL THE COOLING OUTPUTS BASED ON THE DEMAND SIGNAL COMMUNICATED FROM THE THERMOSTAT PROGRAM, TAKING INTO ACCOUNT BOTH SPACE TEMPERATURE DEVIATION (PROPORTIONAL ERROR) AND THE DURATION OF THAT TEMPERATURE DEVIATION (INTEGRAL ERROR).
C. HEATING SETBACK AND COOLING SETUP
INITIATION OF HEATING SETBACK OR COOLING SETUP FOR EACH OF 7 DAYS SHALL BE PROVIDED BY A PROGRAMMED TIME SCHEDULE MANUALLY ENTERED INTO THE THERMOSTAT. WHEN ALL OR A PORTION OF A MANUALLY PROGRAMMED SCHEDULE IS UNAVAILABLE, THE THERMOSTAT SHALL CONTROL THE UNAVAILABLE PROGRAM FUNCTIONS TO OCCUPIED MODE AND DEFAULT SETPOINT RANGES AS FOLLOWS:

	TABLE OF DEFAULT SETPOINT RANGES			
	OCCUPIED		UNOCCUPIED	
	*F	*C	*F	*C
HEATING	68	20	55	13
COOLING	78	26	90	32

D. SETPOINT RECOVERY FROM UNOCCUPIED TO OCCUPIED
THE THERMOSTAT SHALL EMPLOY INTELLIGENT RECOVERY™. THIS SHALL SELECT THE OPTIMUM TIME TO BEGIN BUILDING WARM UP OR COOL DOWN BASED ON SETPOINTS AND OCCUPIED PROGRAM.
1) THE TEMPERATURE SHALL RAMP 5 DEGREES PER HOUR FOR BOTH HEATING AND COOLING ON A CONVENTIONAL SYSTEM.
2) THE TEMPERATURE SHALL RAMP 3 DEGREES PER HOUR FOR HEATING AND 5 DEGREES FOR COOLING ON A HEAT PUMP SYSTEM.
E. FAN OPERATION
1) FAN OPERATION SHALL BE CONSTANT DURING THE OCCUPIED PERIOD WHEN USED WITH A CONVENTIONAL SYSTEM.
2) FAN OPERATION SHALL BE INTERMITTENT DURING THE UNOCCUPIED PERIOD.
F. HEATING AND COOLING OPERATION MINIMUM ON/OFF TIMES
THE THERMOSTAT SHALL INCORPORATE A PROGRAM TO MAINTAIN MINIMUM-STAGE OPERATION TIMES OF 2 MINUTES "ON" AND 4 MINUTES "OFF" FOR COMPRESSOR STAGES, AND 2 MINUTES "ON" AND 2 MINUTES "OFF" FOR HEAT (GAS OR ELECTRIC RESISTIVE).
G. HUMIDITY CONTROL
A SPACE HUMIDITY SENSOR SHALL, WHEN ABOVE IT'S SETPOINT, OVER-RIDE THE TEMPERATURE SENSOR AND STAGE THE COOLING AS REQUIRED TO MAINTAIN SPACE HUMIDITY SETPOINT. DURING THE HUMIDITY OVER-RIDE MODE, THE SPACE THERMOSTAT SHALL STAGE THE GAS HEATING TO MAINTAIN TEMPERATURE SETPOINT.
9. CONTROL FOR UNIT HEATERS
PROVIDE A ROOM THERMOSTAT FOR UNIT HEATER SHOWN ON PLANS AND SPECIFICATIONS. (UNIT HEATER PROVIDED BY HEATING CONTRACTOR.)
10. PERFORMANCE OF WORK
ALL WORK OUTLINED ABOVE SHALL BE DONE BY THE TEMPERATURE CONTROL CONTRACTOR UNLESS NOTED OTHERWISE.
11. STORAGE ROOM VENTILATION
A. SEQUENCE OF OPERATION
SPACE THERMOSTAT SHALL ENERGIZE SUPPLY FAN AND EXHAUST FAN (UNLOCKED) TO MAINTAIN SPACE TEMPERATURE. THERMOSTAT SHALL BE SET TO BRING FANS ON AT 60°F AND TO SHUT FANS OFF AT 70°F.

BILL OF MATERIAL			
THE FOLLOWING CONTROLS TO BE FURNISHED BY TEMPERATURE CONTROL CONTRACTOR			
NO.	QUANTITY	MAKE	REMARKS
T2	1 (PER UNIT)	HONEYWELL T7300A1005 MODEL 07300A1019	NOTE: FDR PHARMACY UNIT USE T7300/07300B1009
	1 (PER UNIT)	HONEYWELL T7047C1025	REMOTE SENSOR (NOTE: EXCEPT PHARMACY UNIT)

REMOTE SENSOR NOTE:
REMOTE SENSOR (T7047C1025) IS TO BE MOUNTED ON COLUMN (OR WALL) 6'-0" UP, WITH THE SUBBASE (T707300) LOCATED IN OFFICE (AS SHOWN ON PLAN). CONNECT REMOTE SENSOR TO T-T TERMINALS OF SUBBASE VIA TWO (2) #16 AWG WIRES. SEE CONTROL WIRING DIAGRAM.
(NOTE: NOT TO INCLUDE PHARMACY UNIT)



T7300/07300 (CONFIGURED FOR 2H-2C) USED IN SINGLE TRANSFORMER, 2 STAGE HEATING/ 2 STAGE COOLING SYSTEM WITHOUT ECONOMIZER.

HVAC CONTROL DIAGRAM (EACH UNIT)

T-7300 THERMOSTATS (HONEYWELL)
NO SUBSTITUTIONS

(CONTROLS WITH OTHER NAMEPLATES, SUCH AS 'LENNOX' AND 'YORK', WHICH ARE MADE BY HONEYWELL AND PERFORM EXACTLY AS HONEYWELL ARE ACCEPTABLE.)

PROGRAM	
1) COOLING	76°F } OCCUPIED
2) HEATING	72°F } OCCUPIED
1) COOLING	85°F } NOT OCCUPIED
2) HEATING	60°F } NOT OCCUPIED
1) COOLING	80°F } NOT OCCUPIED
2) HEATING	68°F } PHARMACY
ON	8 AM
OFF	10 PM

Walgreens
HIGHWAY 365 & MAGNOLIA
PORT NECHES, TEXAS

DEVELOPED BY

L.S.I. DEVELOPMENT
PORT NECHES, L.P.

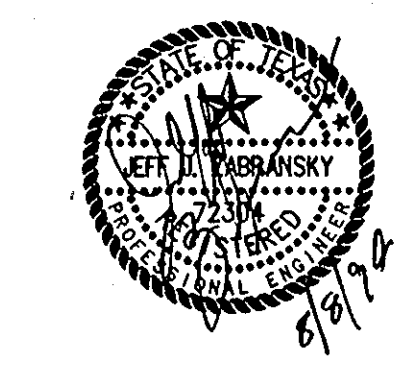
515 POST OAK BLVD.
SUITE 310
HOUSTON, TEXAS 77027
(713) 622-8231

Levinson Associates, Inc.
Architecture • Planning • Interior Design

2401 Fountain View Dr.
Suite 600
Houston, Texas 77057
(713) 952-3200

REVISIONS

11-29-94



LAI Project No. 94150.000
Walgreen Store Number 03507
Issued For Permit
Issued For Bidding
Issued For Construction

ME 1.1
Mechanical
HVAC Controls

R.H. George and Associates, Inc.
Consulting Engineering
8700 Jameel, Suite 150
Houston, Texas 77040 (713) 690-6300

DATE: 5 AUG. 1994