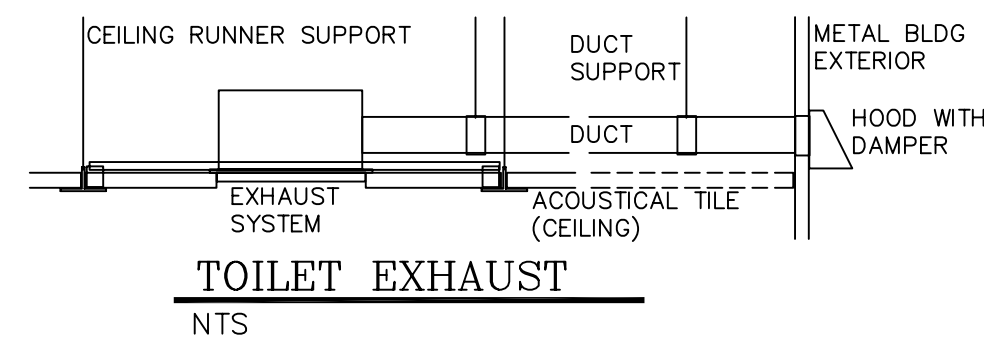
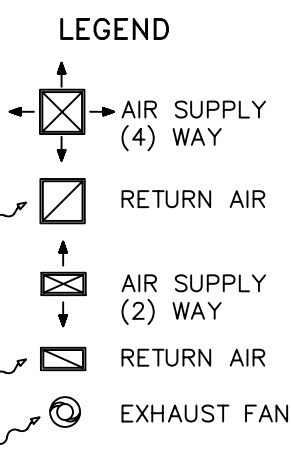


NOTE:
SPECIAL A/C NOTE:
A/C LOAD CALCULATIONS HAVE BEEN PROVIDED.
VERIFY THAT TOTAL A/C REQUIREMENTS ARE IN COMPLIANCE WITH FBC & ASHRAE.
ADJUST A/C DEMAND LOAD, IF REQUIRED, FOR THE OCCUPANCY LOAD (BTUH / PERSON).
MODIFICATION OF SYSTEM IS PERMITTED. FIELD ADJUST SUPPLY
AND RETURN REGISTERS AS NEEDED TO AVOID CONFLICT WITH
BUILDING COMPONENTS OR OTHER TRADES.
PROVIDE SHUT DOWN CONTROL ON AIR RETURN SIDE OF A/C UNIT
ALL DUCTS TO BE WRAPPED WITH GLASS FAB AND MASTIC
ALL DUCTS TO BE SUPPORTED IN A MANNER COMPLYING WITH SMACNA
"LOW PRESSURE DUCT STANDARD 5th EDITION", HANGERS AND SUPPORT SECTION.
A/C EQUIPMENT SHALL BE INSTALLED PER SMC 1997 EDITION 304.2 AND
PER MFG SPECS AND REQUIRED CLEARANCE.
PROVIDE AUTO A/C SHUT DOWN CONTROLS ON THE RETURN AIR SIDE OF
THE A/C UNIT PER 1997 SMC, 408 NFPA 90A 1993 EDITION.
AN APPROVED SMOKE DETECTOR MAY BE USED IN LIEU OF FIRESTAT.
REFRIGERANT LINES
(SUCTION INSULATED, LIQUID UNINSULATED)
TRANE A/C SYSTEM OR EQUAL



NOTE:
ROMEX WIRING MAY BE USED, UNLESS NOT ACCEPTED
BY LOCAL AUTHORITY.
IN ANY EVENT, ALL WORK AND MATERIAL SHALL
COMPLY WITH NEC
C403.2.7.6 Air-handling units.
Air-handling units shall not be allowed in attics of commercial buildings.
A/C CONTRACTOR IS RESPONSIBLE TO
PROVIDE CODE APPROVED COMPONENTS AND
EQUIPMENT, AND TO VERIFY THAT ALL CONNECTED LOAD AND
ADJUST SERVICE AS REQUIRED.
ALL WORK SHALL BE DONE PER THE FLORIDA BUILDING
CODE, ASHRAE AND ANY GOVERNING AUTHORITIES.
PROVIDE ENERGY CALCULATIONS AS REQUIRED

MECHANICAL NOTE:
VERIFY LOAD CALCULATIONS AND
DUCT/REGISTER DISTRIBUTION.
BALANCE SYSTEM

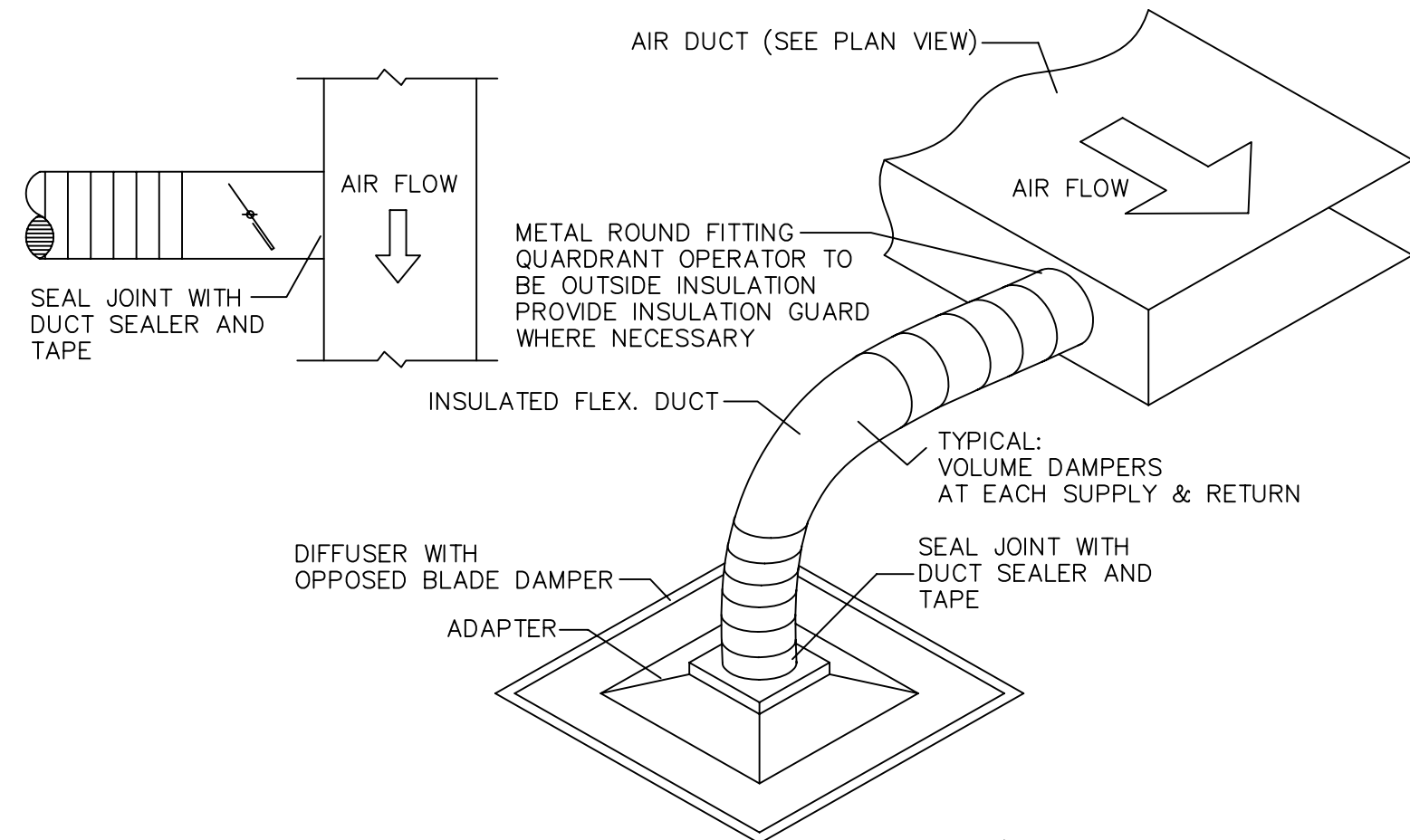


*** CFM ***	ROUND	RECTANGULAR
0 - 65	5" Ø	6x3.5
66 - 110	6" Ø	10x3.5 or 8x4 or 6x5
111 - 160	7" Ø	14x3.5 or 12x4 or 8x6
161 - 230	8" Ø	18x3.5 or 16x4 or 10x6 or 8x8
231 - 410	10" Ø	26x4 or 16x6 or 12x8 or 10x10
411 - 650	12" Ø	24x6 or 16x8 or 12x10
651 - 1000	14" Ø	32x6 or 22x8 or 16x10 or 14x12
1001 - 1400	16" Ø	30x8 or 22x10 or 18x12 or 16x14
1401 - 2000	18" Ø	38x8 or 28x10 or 22x12 or 16x16
2001 - 2500	22" Ø	36x12 or 30x14 or 26x16 or 24x18
2501 - 4000	24" Ø	36x14 or 32x16 or 30x16 or 24x20
4001 - 5000	26" Ø	40x14 or 38x16 or 32x18 or 26x22
5001 - 7500	30" Ø	50x20 or 40x20 or 35x25 or 30x30
7501 - 10000	36" Ø	60x20 or 50x25 or 40x30

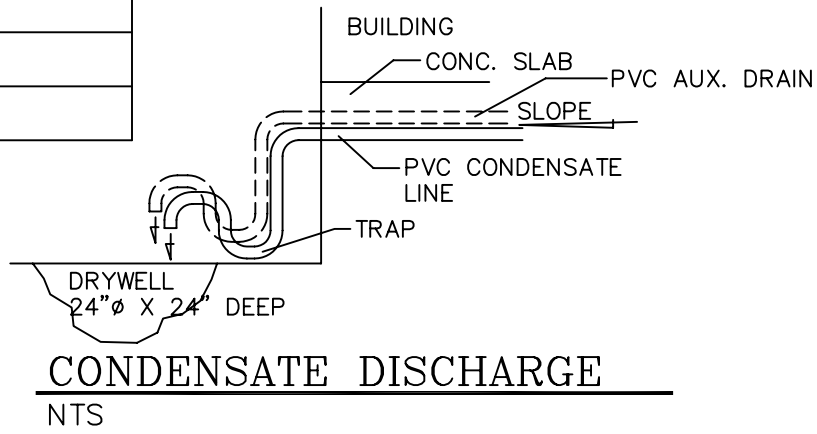
AIR DISTRIBUTION SCHEDULE				
SYMBOL	USE	TYPE	ACCESSORIES	DESIGN, MFG & MODEL #
	SUPPLY AIR	CEILING DIFFUSER	OBD	TITUS PCS
	RETURN AIR	CEILING FILTER GRILLE	---	TITUS 3FF

OUTDOOR AIR CALCULATION							
DESIGNATION	FLOOR AREA	PERSONS PER 1000 SF	TOTAL PERSONS	CFM PER PERSON	CFM PER SF	CFM REQUIRED	SYSTEM DESIGNATION
A/C #1	1278	10	13	20	0.20	256	AHU #1
A/C #2	1278	10	13	20	0.20	256	AHU #2
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

PROVIDE FULL SIZE INLET PLENUM WITH VOLUME DAMPER. CONNECT OUTSIDE AIR INTAKE DUCT TO PLENUM. PROVIDE VOLUME DAMPER AT O/A DUCT.
FOR MULTIPLE A/C UNITS DISTRIBUTE CFM BASED ON UNIT SIZE PERCENTAGE



FLEXIBLE DUCT CONNECTION DETAIL
NTS

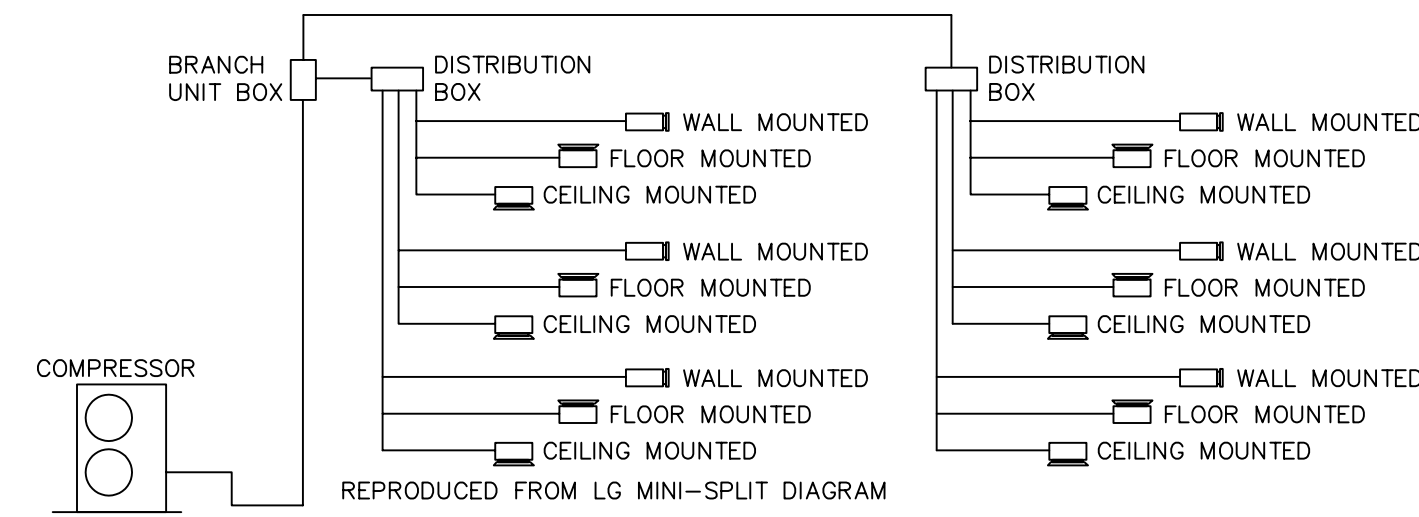


CONDENSATE DISCHARGE
NTS

NOTE:
THE OWNER HAS THE OPTION OF INSTALLING MINI-SPLIT UNITS OR SPLIT A/C UNITS

COOLING LOAD CALCULATIONS: 1st Floor		Cooling Load (BTUH)	
Local Conditions: 93F DB, 79F WB, OUTSIDE		78F DB, 60% R.H., INSIDE	
Components/Transmission:	Gross Wall Area = 1422 Exterior	SENSIBLE	LATENT
Net	Q = Area x U x Tdeg	= 0	= 0
Walls: Exterior	Q = 1286 x 0.200 x 30	= 7716	= 0
Interior	Q = 0 x 0.100 x 30	= 0	= 0
Floor:	Q = 1278 x 0.053 x 76	= 5112	= 0
Roof:	Q = 1278 x 0.050 x 0	= 0	= 0
Doors: Exterior	Q = 40 x 0.095 x 44	= 168	= 0
Doors: Interior	Q = 0 x 0.800 x 44	= 0	= 0
Glass:	Q = 96 x 1.100 x 13	= 1373	= 0
Glass:	Q = Area x OSF x SH.Coeff.	= 0	= 0
Orient. N	Q = 0 x 43 x 0.83	= 0	= 0
NE	Q = 0 x 83 x 0.83	= 0	= 0
E	Q = 0 x 146 x 0.83	= 0	= 0
SE	Q = 0 x 155 x 0.83	= 0	= 0
S	Q = 0 x 137 x 0.83	= 0	= 0
SW	Q = 0 x 155 x 0.83	= 0	= 0
W	Q = 96 x 1.100 x 13	= 11633	= 0
NW	Q = 0 x 83 x 0.83	= 0	= 0
Internal Heat Gain:			
People:	Q = People x Factor		
Sen.	Q = 9 x 250	= 2250	
Lat.	Q = 9 x 200	= 1800	
Lights:	Q = Area x W / SF x Factor		
Power:	Q = 1278 x 1 x 3.4	= 4345	
Power:	Q = Power x Factor		
Ventilation:	Q = 3834 x 1.1	= 4217	
Ventilation:	Q = People x CFM x TD x Factor		
Se.	Q = 13 x 20 x 15 x 1.08	= 2916	
Lat.	Q = People x CFM x HD x Factor		
Lat.	Q = 9 x 20 x 50 x 0.68	= 6120	
Total Req'd CFM:	Q = 1684		
Duct Heat Gain:	Q = Factor (R-4.5) x D.Length / 100		
	Q = 1.4 x 1250 x 120 / 100	= 2100	
Total Cooling Load	41830	7920	
	CFM / Register = 241 Average	49750	
Total Number of Registers = 7			
HEATING LOAD CALCULATIONS:			
Local Conditions: 93F DB, Outside			
78F DB, Inside			
Heating:	Q = Factor x CFM x TD - Internal Heat Gain		
Q = (1.08 x 1684 x 15 - 6595) / 3400			
Total Heating Load	6 KW		
Equipment Size: Based on Heating / Cooling Calculations:			
Required: 4.1 Ton Unit	USE 4 TONS		
49750 BTUH	with a Strip Heat of 6 KW		

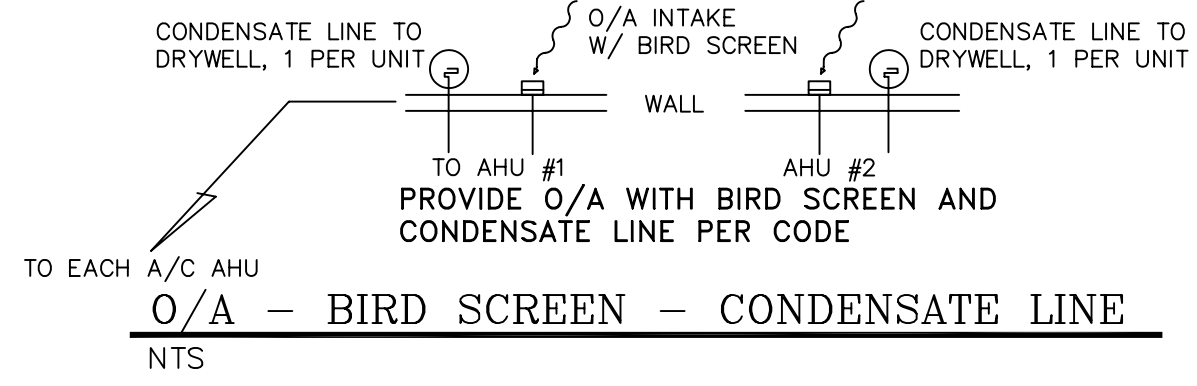
COOLING LOAD CALCULATIONS: 2nd Floor		Cooling Load (BTUH)	
Local Conditions: 93F DB, 79F WB, OUTSIDE		78F DB, 60% R.H., INSIDE	
Components/Transmission:	Gross Wall Area = 1266 Exterior	SENSIBLE	LATENT
Net	Q = Area x U x Tdeg	= 0	= 0
Walls: Exterior	Q = 1206 x 0.200 x 30	= 7236	= 0
Interior	Q = 0 x 0.100 x 30	= 0	= 0
Floor:	Q = 1278 x 0.053 x 76	= 5112	= 0
Roof:	Q = 1278 x 0.050 x 0	= 0	= 0
Doors: Exterior	Q = 0 x 0.095 x 44	= 0	= 0
Doors: Interior	Q = 0 x 0.800 x 44	= 0	= 0
Glass:	Q = 80 x 1.100 x 13	= 1144	= 0
Glass:	Q = Area x OSF x SH.Coeff.	= 0	= 0
Orient. N	Q = 0 x 43 x 0.83	= 0	= 0
NE	Q = 0 x 83 x 0.83	= 0	= 0
E	Q = 0 x 146 x 0.83	= 0	= 0
SE	Q = 0 x 155 x 0.83	= 0	= 0
S	Q = 0 x 137 x 0.83	= 0	= 0
SW	Q = 0 x 155 x 0.83	= 0	= 0
W	Q = 80 x 1.100 x 13	= 9694	= 0
NW	Q = 0 x 83 x 0.83	= 0	= 0
Internal Heat Gain:			
People:	Q = People x Factor		
Sen.	Q = 13 x 250	= 3250	
Lat.	Q = 13 x 200	= 2600	
Lights:	Q = Area x W / SF x Factor		
Power:	Q = 1278 x 1 x 3.4	= 4345	
Power:	Q = Power x Factor		
Ventilation:	Q = 3834 x 1.1	= 4217	
Ventilation:	Q = People x CFM x TD x Factor		
Se.	Q = 13 x 20 x 15 x 1.08	= 4212	
Lat.	Q = People x CFM x HD x Factor		
Lat.	Q = 13 x 20 x 50 x 0.68	= 8840	
Total Req'd CFM:	Q = 1663		
Duct Heat Gain:	Q = Factor (R-4.5) x D.Length / 100		
Q = 1.4 x 1250 x 120 / 100	= 2100		
Total Cooling Load	41311	11440	
	CFM / Register = 151 Average	52751	
Total Number of Registers = 11			
HEATING LOAD CALCULATIONS:			
Local Conditions: 93F DB, Outside			
78F DB, Inside			
Heating:	Q = Factor x CFM x TD - Internal Heat Gain		
Q = (1.08 x 1663 x 15 - 7595) / 3400			
Total Heating Load	6 KW		
Equipment Size: Based on Heating / Cooling Calculations:			
Required: 4.4 Ton Unit	USE 4 TONS		
52751 BTUH	with a Strip Heat of 6 KW		



MINI-SPLIT INTERFACING DIAGRAM
NTS

INTERFACING DIAGRAM PROVIDED BY LG.
OBTAIN INTERFACING DIAGRAM AND INSTALLATION
INSTRUCTIONS AND SPECS FROM SELECTED MFG.
MAKE ANY ADJUSTMENTS AS REQUIRED.
SEE ATTACHED SPECS PROVIDED ON THESE PLANS.
MANUFACTURER MAY BE OTHER THAN SHOW, SUCH AS
MITSUBISHI, DAIKIN, PANASONIC, ETC. (PROVIDE OWNER WITH OPTIONS)

NOTE:
THE A/C INFORMATION PROVIDED MAY VARY BASED
UPON SELECTED MANUFACTURER AND UNITS INSTALLED
ADJUSTED AS REQUIRED.
ALL UNITS TO BE APPROVED BY FLA. ENERGY CODE
PER A/C UNIT



GENERAL NOTES HVAC
1. GENERAL:
A. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE FLORIDA BUILDING
CODE AND WITH ALL APPLICABLE REGULATIONS.
B. DRAWINGS: REFER TO ALL DRAWINGS FOR COORDINATION OF THE HVAC WORK.
C. ARRANGE AND PAY FOR ALL PERMITS, LICENSES, INSPECTIONS AND TESTS.
OBTAIN THE REQUIRED CERTIFICATES AND PRESENT TO OWNER.
D. GUARANTEE: THE COMPLETED INSTALLATION SHALL BE FULLY GUARANTEED
AGAINST DEFECTIVE MATERIALS AND/OR IMPROPER WORKMANSHIP FOR
A MINIMUM OF ONE YEAR FOR MATERIAL AND LABOR. COMPRESSOR
SHALL BE GUARANTEED FOR A PERIOD OF FIVE YEARS.
2. SHOP DRAWINGS:
CONTRACTOR SHALL SUBMIT FOR APPROVAL, WITHIN 30 DAYS AFTER SIGNING
CONTRACT, A MINIMUM OF FIVE COPIES OF FULLY DESCRIPTIVE LITERATURE,
INCLUDING BUT NOT LIMITED TO FANS AND AIR OUTLETS. NO WORK SHALL PROCEED
WITHOUT APPROVAL OF THESE SUBMITTALS.

NOTE:
A/C UNITS MAY BE
REPLACED WITH SPLITS UNITS
IN LIEU OF MINI-SPLITS
WITH CASSETTS

NOTE:
OUTDOOR AIR CALCS SHOWN FOR
(2) 5 TON UNITS.
A/C CONTRACTOR MAY PROVIDE A SINGLE
10 TON UNIT OR (2) 5 TON UNITS.
ADJUST DISTRIBUTION PER SELECTED
SYSTEMS INSTALLED.

A/C UNITS INSTALLED PER MFG SPECS

A. OUTDOOR DESIGN TEMPERATURE (SUMMER): 93 DEG.F DB & 79 DEG.F WB
B. OUTDOOR DESIGN TEMPERATURE (WINTER): 45 DEG.F DB
C. INDOOR DESIGN TEMPERATURE (SUMMER): 78 DEG.F DB
D. INDOOR DESIGN TEMPERATURE (WINTER): 72 DEG.F DB
COOLING MODE MINIMUM SETTING OF 70 DEG.F. THE THERMOSTAT SHALL BE ARRANGED TO PREVENT SIMULTANEOUS OPERATION OF HEATING AND COOLING.

CONTROLS, ETC. LISTED IN THE CATALOG AS STANDARD WITH THE EQUIPMENT.
OPTIONAL OR ADDITIONAL ACCESSORIES SHALL BE FURNISHED AS SPECIFIED.
A. ALL SUPPLY AND RETURN AIR DUCTWORK SHALL BE 1 1/2" THICK FIBERGLASS
DUCTBOARD (MIN. R-6.0), FABRICATED AND INSTALLED AS PER LATEST EDITION OF
SMACNA "FIBROUS GLASS DUCT MANUAL".
B. ALL EXHAUST AND OUTDOOR AIR DUCTWORK SHALL BE GALVANIZED SHEET METAL
OR ALUMINUM DUCT NOT LIGHTER THAN 26 GAGE.
C. ALL DUCT DIMENSIONS ARE CLEAR INSIDE DIMENSIONS.
D. FLEXIBLE DUCTWORK SHALL BE INSULATED WITH 1 1/2" THICK FIBERGLASS
INSULATION WITH FRK VAPOR BARRIER. (R-6.0 MINIMUM)

CONTRACTOR SHALL TEST AND BALANCE ALL VENTILATION AND AIR CONDITIONING
SYSTEMS. SUBMIT FOUR COPIES OF TEST AND BALANCE REPORT TO THE OWNER FOR
APPROVAL. (AIR CONDITIONING SYSTEM)
INDIVIDUAL THERMOSTATS SHALL START/STOP SUPPLY FANS AND ACTIVATE
COOLING/HEATING SYSTEMS AS SELECTED.

PROVIDE FULL SIZE INLET PLENUM WITH VOLUME DAMPER. CONNECT OUTSIDE AIR INTAKE
DUCT TO PLENUM. PROVIDE VOLUME DAMPER AT O/A & R/A DUCT.

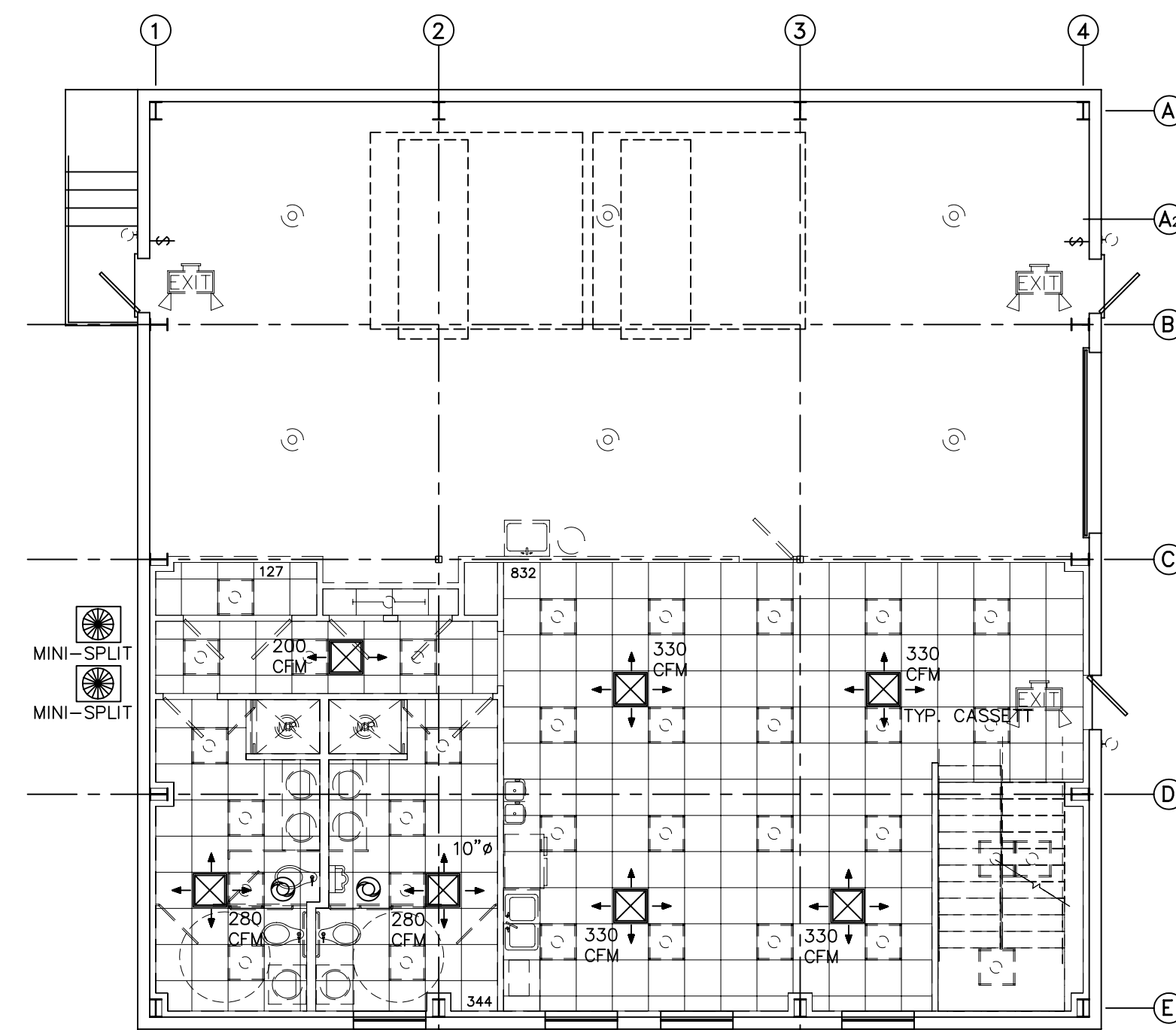
MECHANICAL NOTE:
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PROVIDE SHUT DOWN CONTROL ON AIR RETURN SIDE OF A/C UNIT
TRANE A/C SYSTEM OR EQUAL

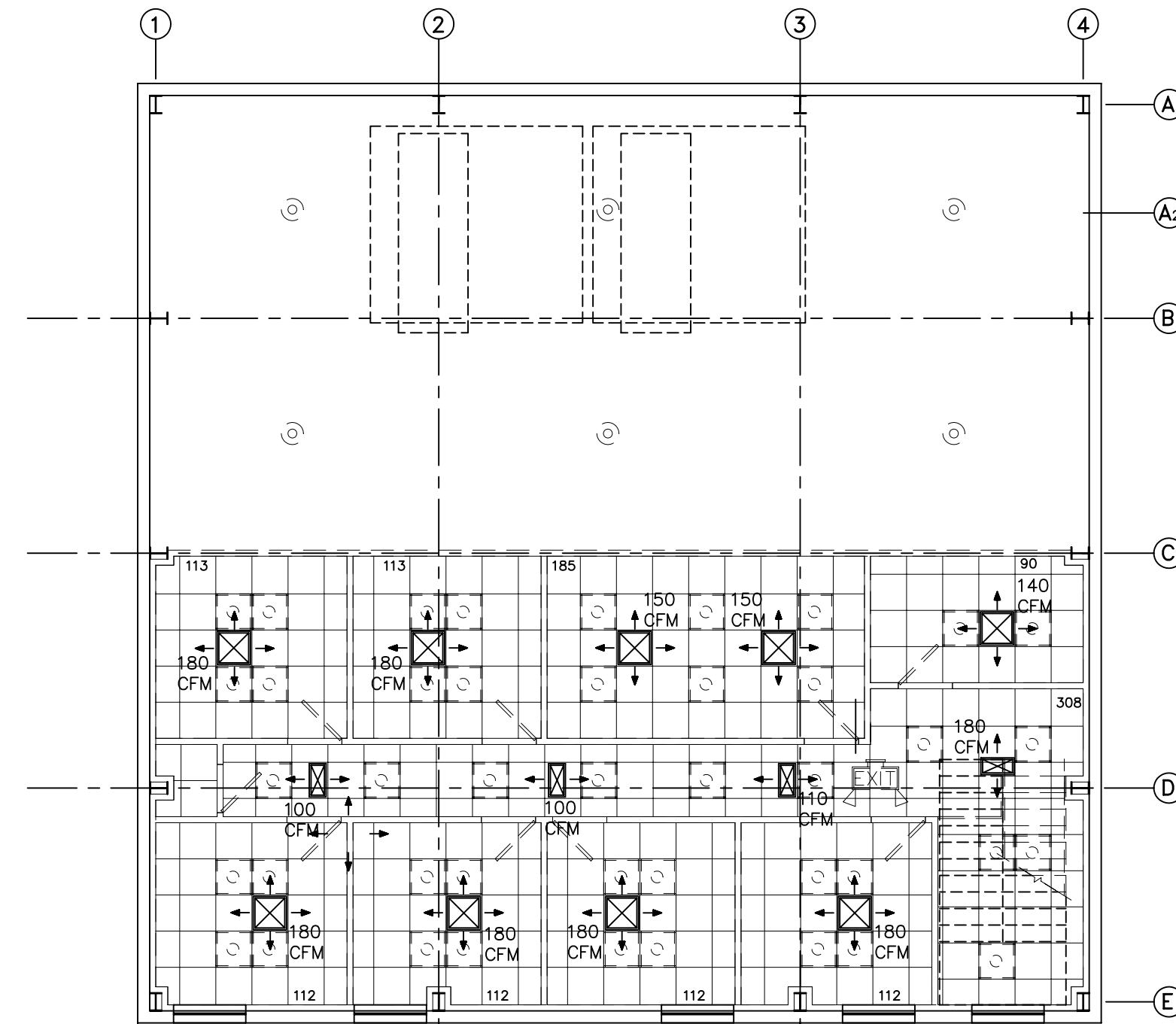
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AN APPROVED SMOKE DETECTOR MAY BE USED IN LIEU OF FIRESTAT.

REFRIGERANT LINES
(SUCTION INSULATED, LIQUID UNINSULATED)



1st FLOOR A/C PLAN
SCALE: 1/8" = 1'-0"



2nd FLOOR A/C PLAN
SCALE: 1/8" = 1'-0"

AP Construction
Contractor, LLC
439 River Isle Ct.
Longwood, Florida 32779

FOR
New Control Room
Florida Caribbean Distillers Co
425 Recker Highway, Auburndale, Polk County, Florida

JULIAN J. GARCIA
Architect - Engineer
709 West Central Avenue • Winter Haven, Florida 33880
Phone: (863) 294-4760
Web Site: jgarcia.com
Email: architect@jgarcia.com

THESE PLANS ARE NOT VALID UNLESS
THEY ARE SIGNED AND SEALED
Signature: _____

DRAWN
JUG
CHECKED
JUG
DATE
10/25/19
SCALE
AS SHOWN
JOB NUMBER
1804908C-Auburndale
SHEET
7
OF 8 SHEETS

ALL CONTRACTORS AND SUB-CONTRACTORS ARE TO REVIEW THE ENTIRE SET OF PLANS INCLUDING THE GENERAL NOTES AND OTHER INFORMATION IN THESE PLANS PRIOR TO AND DURING CONSTRUCTION. USE WRITTEN DIMENSIONS ONLY - DO NOT SCALE DRAWINGS.