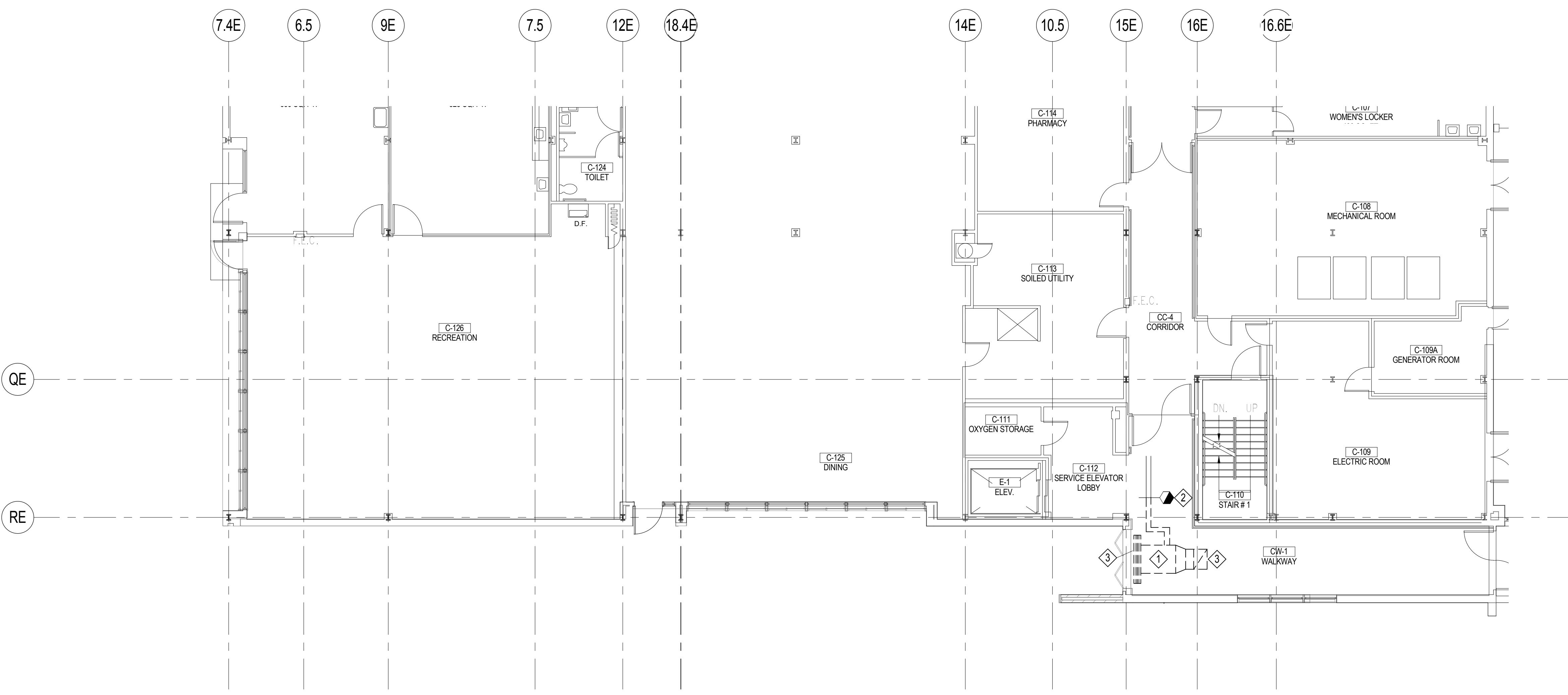


three inches = one foot
one and one half inches = one foot
one inch = one foot
three quarters inch = one foot
one half inch = one foot
three eighths inch = one foot
one quarter inch = one foot
one eighth inch = one foot
one sixteenth inch = one foot

- [illegible]

three inches = one foot
one and one half inches = one foot
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one half inch = one foot
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one quarter inch = one foot
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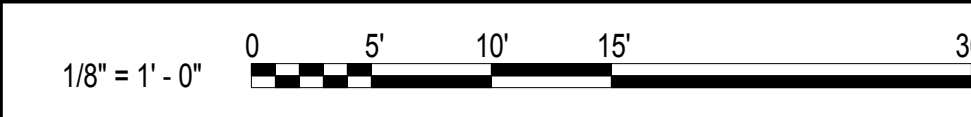
FIRST FLOOR DEMO PLAN - CLC ADMIN
1/8" = 1'-0"

GENERAL NOTES

KEY NOTES

1. REMOVE EXISTING HEATING UNIT AND ALL ASSOCIATED CONTROLS, DUCTWORK, ETC RENDERED USELESS BY THE REMOVAL OF THE UNIT.
2. CAP HOT WATER PIPING, REPAIR INSULATION.
3. REMOVE SUPPLY AND RETURN GRILLES.

GRAPHIC SCALE(S)



Revisions:	Date:

CONSULTANTS:



CLARK NEXSEN



ARCHITECT/ENGINEERS:



TOLAND
MIZELL
MOLNAR

590 MEANS ST NW ATLANTA, GA 30318

Drawing Title:
FIRST FLOOR DEMO PLAM - CLC ADMIN

Approved Project Director:

Project Title:
**CONSTRUCT DOM CLINIC
AND CLC ADMINISTRATION
ADDITION**

Location:
MARTINSBURG, WV

Date:
JUNE 27, 2018

Checked:
WAW

Drawn:
WNW

Project Number:
613-121

Building Number:
501D

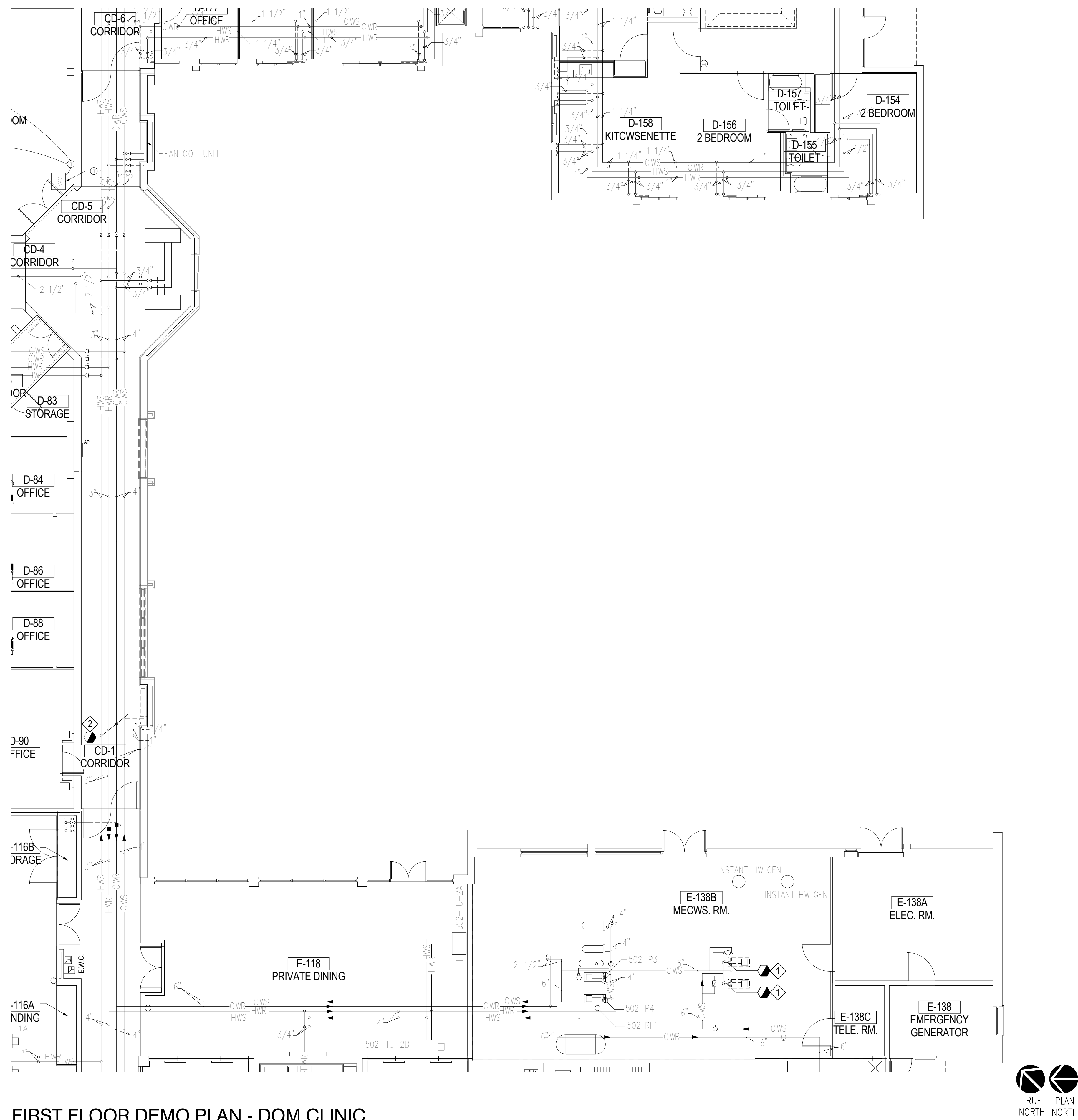
Drawing Number:
MD101

Dwg. of

BID DOCUMENTS

OFFICE OF
CONSTRUCTION
AND FACILITIES
MANAGEMENT





GENERAL NOTES

A. ALL UTILITY OUTAGES SHALL BE COORDINATED WITH THE COR. REFER TO SPECIFICATION SECTION 01 00 00 FOR ADDITIONAL INFORMATION.

B. CHILLED WATER SUPPLY SHALL BE MAINTAINED TO THE EXISTING SYSTEM. REMOVE AND REPLACE PUMPS ONE AT A TIME.

KEY NOTES

1. REMOVE EXISTING CHILLED WATER PUMP. LEAVE PIPING READY FOR RECONNECTION.
2. REMOVE PIPING TO SCOPE OF WORK MARK. CAP PIPE AND REPAIR INSULATION.

GRAPHIC SCALE(S)

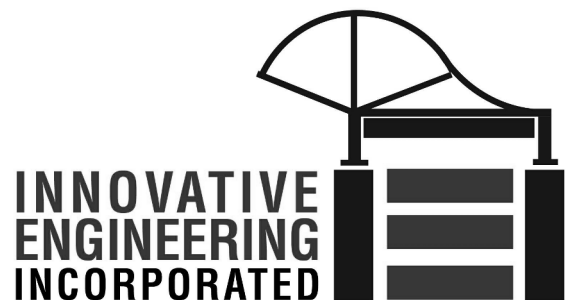


FIRST FLOOR DEMO PLAN - DOM CLINIC

$$1/8'' = 1'-0''$$

Revisions:
Date:

CONSULTANTS:



TRIAD
TRIAD ENGINEERING, INC.

CLARK NEXSEN



ARCHITECT/ENGINEERS:



TOLAND
MIZELL
MOLNAR

590 MEANS ST NW ATLANTA, GA 30318

Drawing Title: **FIRST FLOOR DEMO PLAN - DOM CLINIC**

Approved Project Director

Project Title:
**CONSTRUCT DOM CLINIC
AND CLC ADMINISTRATION
ADDITION**

Location: **MARTINSBURG, WV**

Date: JUNE 27, 2018

Checked: WAW

Drawn: WNI

Project Number:
613-121

Building Number:
502F

Drawing Number:

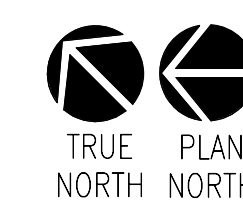
MD-102

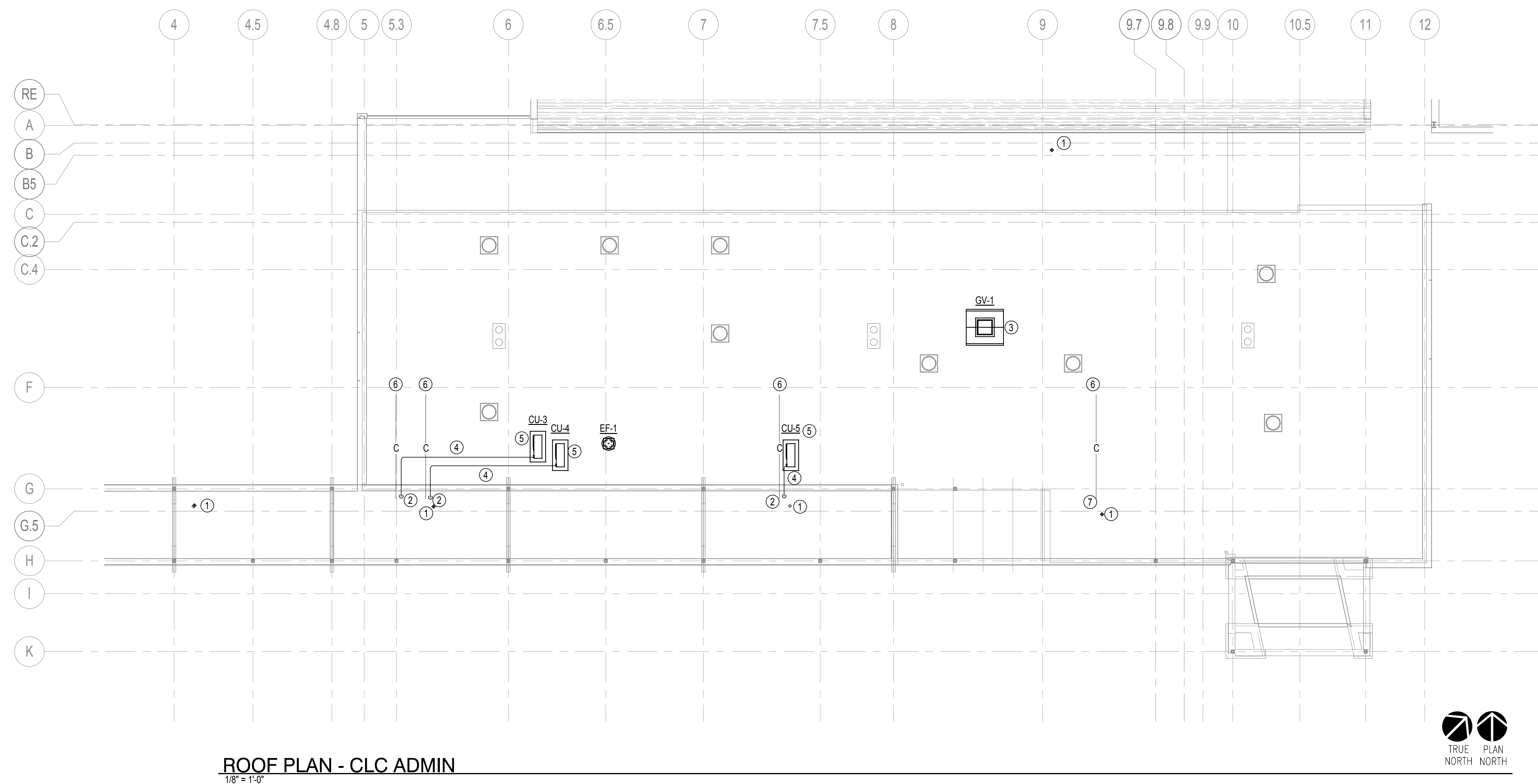
BID DOCUMENTS

**OFFICE OF
CONSTRUCTION
AND FACILITIES
MANAGEMENT**







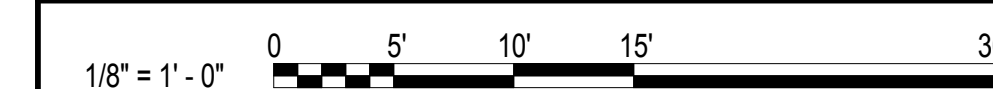








GENERAL NOTES

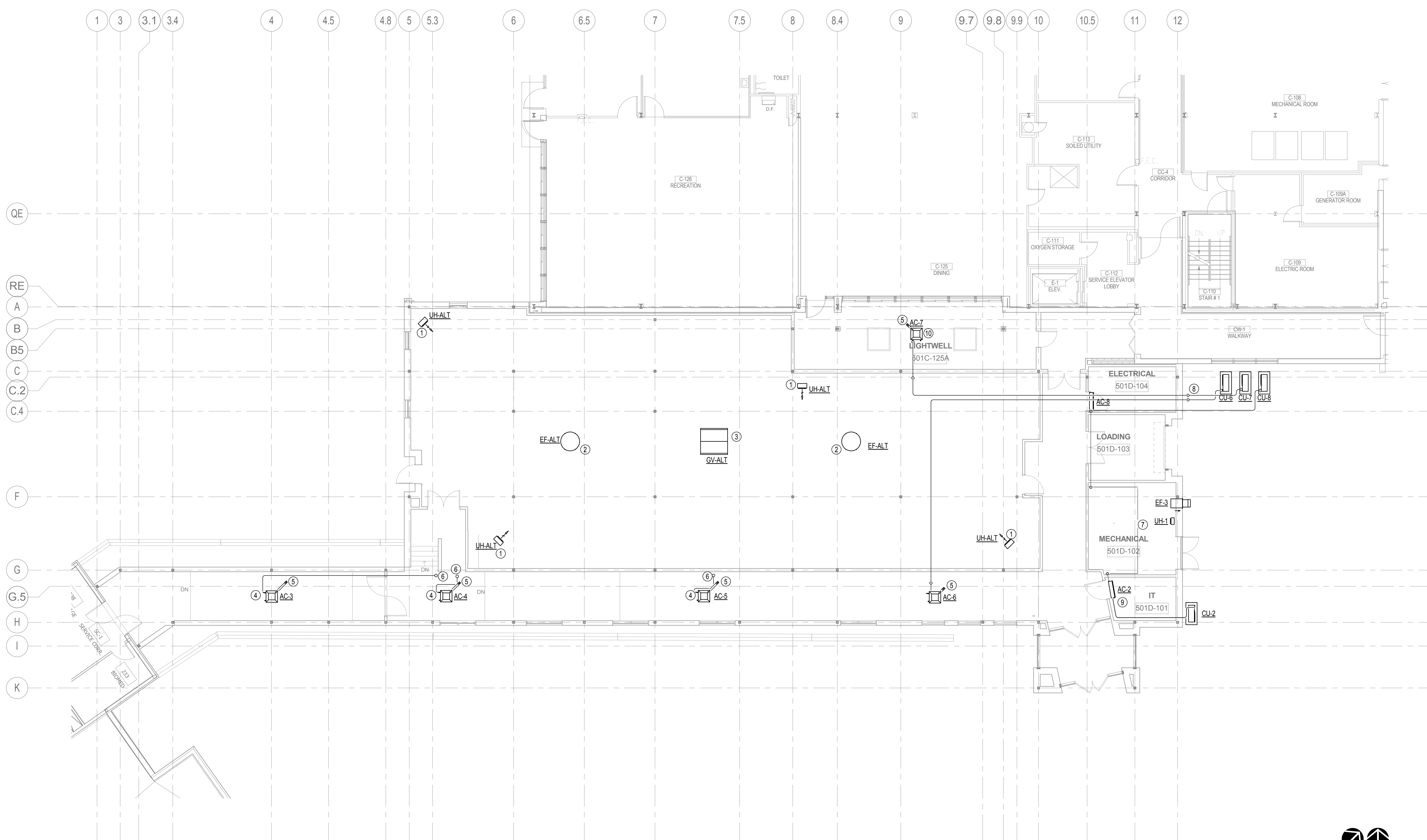
KEY NOTES

1. 4" OUTSIDE AIR DUCT DOWN TO CEILING CASSETTE.
2. REFRIGERANT AND CONDENSATE PIPING DOWN TO CEILING CASSETTE. SEE SHEET MP101 FOR CONTINUATION.
3. OUTSIDE AIR INTAKE HOOD FOR AHU-1. SEE SHEET MH101 FOR CONTINUATION.
4. PROVIDE ROOF PIPING SUPPORT. MAXIMUM SPACING SHALL BE AS DEFINED IN SPECIFICATION SECTIONS 23.21.13 AND 23.23.00.
5. SEE DETAIL ON M502 FOR UNIT SUPPORT.
6. ROUTE CONDENSATE PIPING TO NEAREST ROOF DRAIN.
7. CONDENSATE PIPING UP FROM AC-6.

GRAPHIC SCALE(S)



<div>Revisions:</div> <div></div>	<div>Date:</div> <div></div>	CONSULTANTS:		<div><div><div>INNOVATIVE ENGINEERING INCORPORATED</div></div><div><div><div>TRIAD ENGINEERING, INC.</div></div><div><div><div>CLARK NEXSEN</div></div></div></div></div>	<div><div></div></div>	ARCHITECT/ENGINEERS:		<div><div><div>TOLAND MIZELL MOLNAR</div></div><div>590 MEANS ST NW ATLANTA, GA 30318</div></div>	Drawing Title: ROOF PLAN - CLC ADMIN		Project Title: CONSTRUCT DOM CLINIC AND CLC ADMINISTRATION ADDITION		Project Number: 613-121		OFFICE OF CONSTRUCTION AND FACILITIES MANAGEMENT <div></div>
		Approved Project Director:				Location: MARTINSBURG, WV			Building Number: 501D		Drawing Number: MH103 Dwg. of				
						Date: JUNE 27, 2018			Checked: WAW			Drawn: WNW			



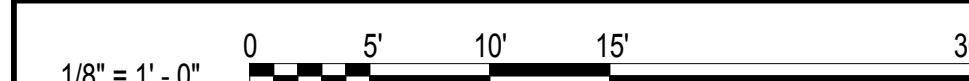
GENERAL NOTES

A. THIS PLAN SHOWS WORK REQUIRED IF BID ITEM NO. 6 IS TAKEN. CLC ADMIN SPACE SHALL BE HEATED AND VENTILATED ONLY.

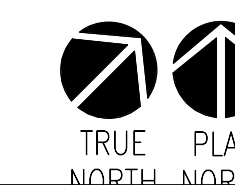
KEY NOTES







1. ELECTRIC UNIT HEATER. MOUNT 10' AFF.
2. EXHAUST FAN ON ROOF. OPEN TO SPACE BELOW. PROVIDE WITH ROOF CURB AND BACKDRAFT DAMPER.
3. GRAVITY VENTILATOR ON ROOF. OPEN TO SPACE BELOW. PROVIDE WITH ROOF CURB AND GRAVITY DAMPER.
4. SEE SHEET MH103 FOR CONDENSING UNIT LOCATION ON ROOF.
5. 4" OUTSIDE AIR DUCT UP TO ROOF.
6. REFRIGERANT AND CONDENSATE PIPING TO ROOF. SEE SHEET MH103 FOR CONTINUATION.
7. ROUTE CONDENSATE PIPING TO FLOOR DRAIN IN MECHANICAL ROOM. FOLLOW AHU HOUSE KEEPING PAD OVER TO FLOOR DRAIN. SEE PLUMBING DRAWINGS FOR DRAIN LOCATION.
8. ROUTE REFRIGERANT PIPING UP WALL AND INTO BUILDING ABOVE CEILING. ROUTE PIPING IN ELECTRICAL ROOM TO AVOID RUNNING ABOVE A ELECTRICAL PANEL.
9. MOUNT AC-2 DIRECTLY ABOVE THE DOOR. ROUTE CONDENSATE PIPING THROUGH WALL TO MECHANICAL ROOM.
10. ROUTE CONDENSATE PIPING TO ROOF DRAIN.

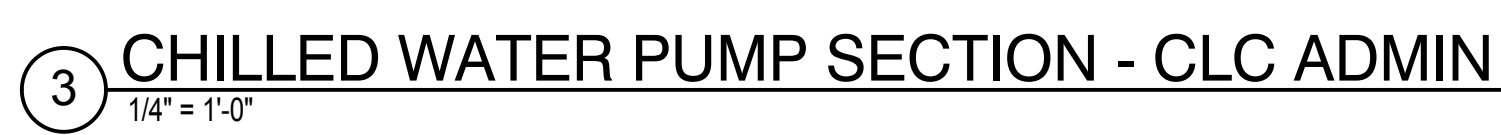
GRAPHIC SCALE(S)



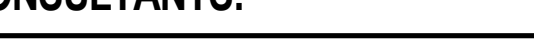





1 FIRST FLOOR MECHANICAL PLAN - CLC ADMIN - ALTERNATE NO. 5 - (BID ITEM NO. 6)
1/8" = 1'-0"



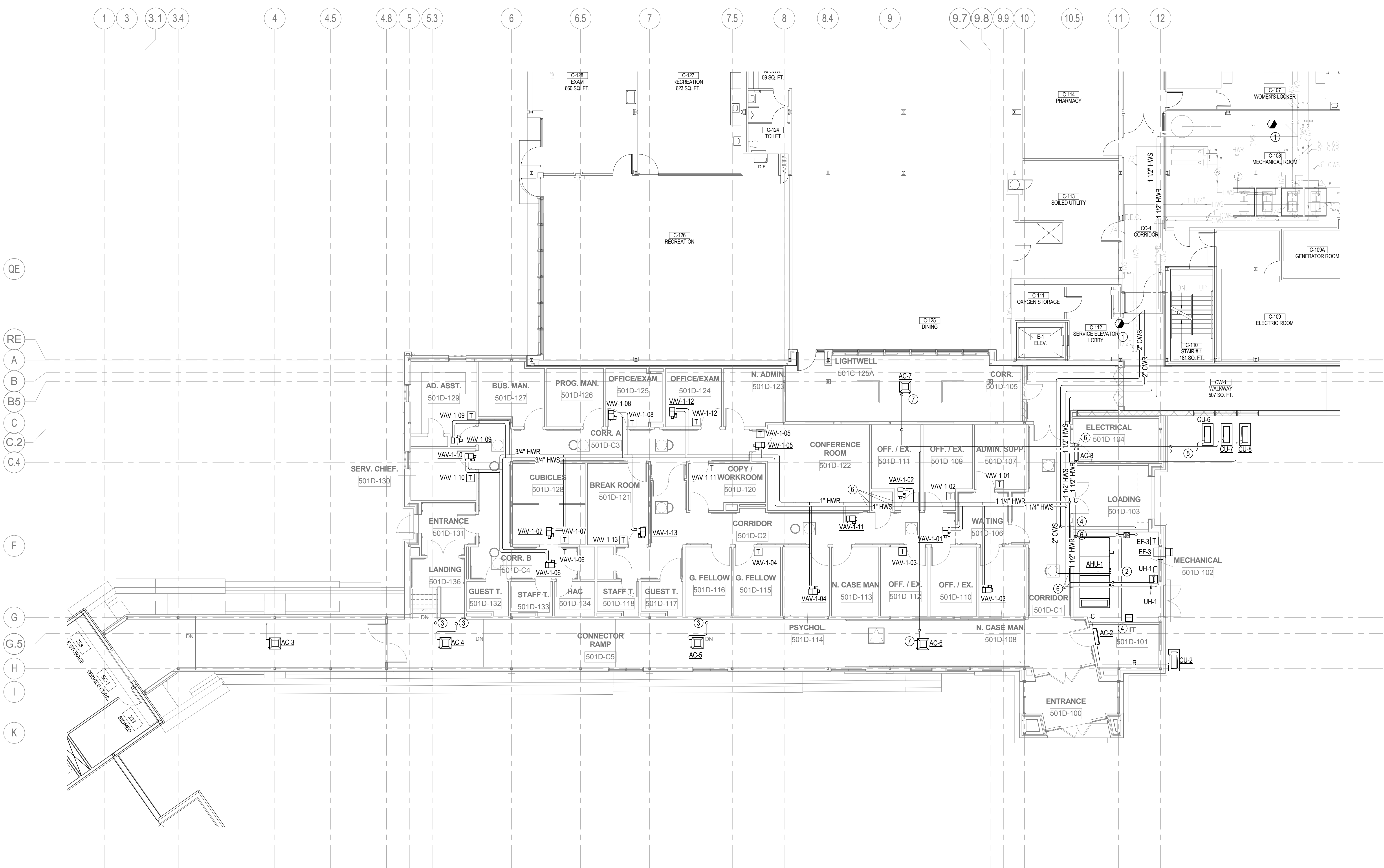
			CONSULTANTS:			ARCHITECT/ENGINEERS:		Drawing Title: FIRST FLOOR MECHANICAL PLAN - CLC ADMIN - ALTERNATE NO.5 - (BID ITEM NO. 6)		Project Title: CONSTRUCT DOM CLINIC AND CLC ADMINISTRATION ADDITION		Project Number: 613-121		OFFICE OF CONSTRUCTION AND FACILITIES MANAGEMENT 			
			 INNOVATIVE ENGINEERING INCORPORATED	 TRIAD ENGINEERING, INC.		 CLARK NEXSEN	 TOLAND MIZELL MOLNAR	590 MEANS ST NW ATLANTA, GA 30318		Location: MARTINSBURG, WV	Building Number: 501D	Drawing Number: MH105	Date: JUNE 27, 2018		Checked: WAW	Drawn: WNW	Dwg. _____ of _____
Revisions:		Date:															



1/4" = 1' - 0"

		CONSULTANTS:		  				ARCHITECT/ENGINEERS:  590 MEANS ST NW ATLANTA, GA 30318		Drawing Title: ENLARGED PLANS		Project Title: CONSTRUCT DOM CLINIC AND CLC ADMINISTRATION ADDITION		Project Number: 613-121		OFFICE OF CONSTRUCTION AND FACILITIES MANAGEMENT 	
								Approved Project Director:		Location: MARTINSBURG, WV		Building Number: 501D & 502F		Drawing Number: MH401			
Revisions:		Date:								Date: JUNE 27, 2018		Checked: WAW		Drawn: WNW		Dwg. of	

three eighths inch = one foot
one eighth inch = one foot
one quarter inch = one foot
three eighths inch = one foot
one half inch = one foot
one inch = one foot
one and one half inches = one foot
three inches = one foot



GENERAL NOTES

A. ALL RUNOUTS TO VAVs ARE 3/4" UNLESS NOTED OTHERWISE.

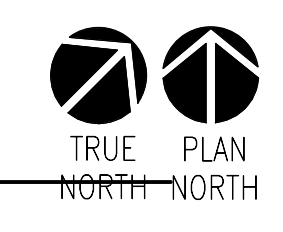
KEY NOTES

1. CONNECT TO EXISTING PIPING. REPAIR INSULATION.
2. ROUTE CONDENSATE PIPING TO DRAIN. SEE PLUMBING DRAWINGS FOR DRAIN LOCATIONS.
3. REFRIGERANT AND CONDENSATE PIPING TO ROOF. SEE SHEET MH103 FOR CONTINUATION.
4. ROUTE CONDENSATE PIPING TO FLOOR DRAIN IN MECHANICAL ROOM. ROUTE DOWN WALL AND ALONG AHU HOUSE KEEPING PAD TO FLOOR DRAIN. SEE PLUMBING DRAWINGS FOR DRAIN LOCATION.
5. ROUTE REFRIGERANT PIPING UP WALL AND INTO BUILDING ABOVE CEILING. ROUTE PIPING IN ELECTRICAL ROOM TO AVOID RUNNING ABOVE A ELECTRICAL PANEL.
6. PIPE THROUGH A SMOKE PARTITION. SEE DETAIL ON SHEET M502.
7. ROUTE CONDENSATE PIPING TO ROOF DRAIN.

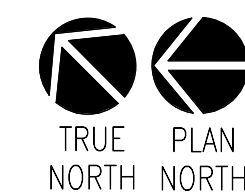
GRAPHIC SCALE(S)

1/8" = 1' - 0"

FIRST FLOOR PIPING PLAN - CLC ADMIN
1/8" = 1'-0"

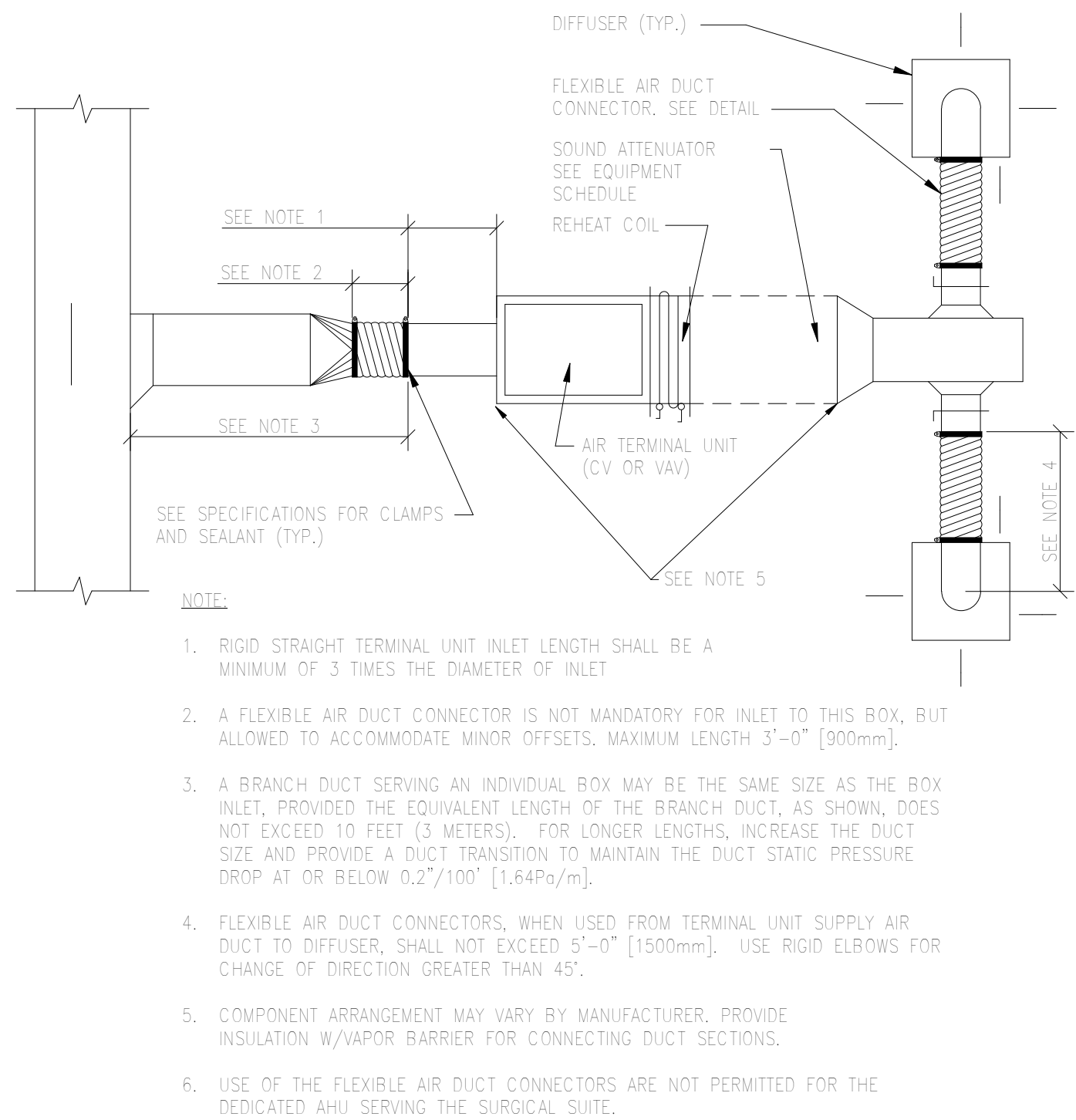


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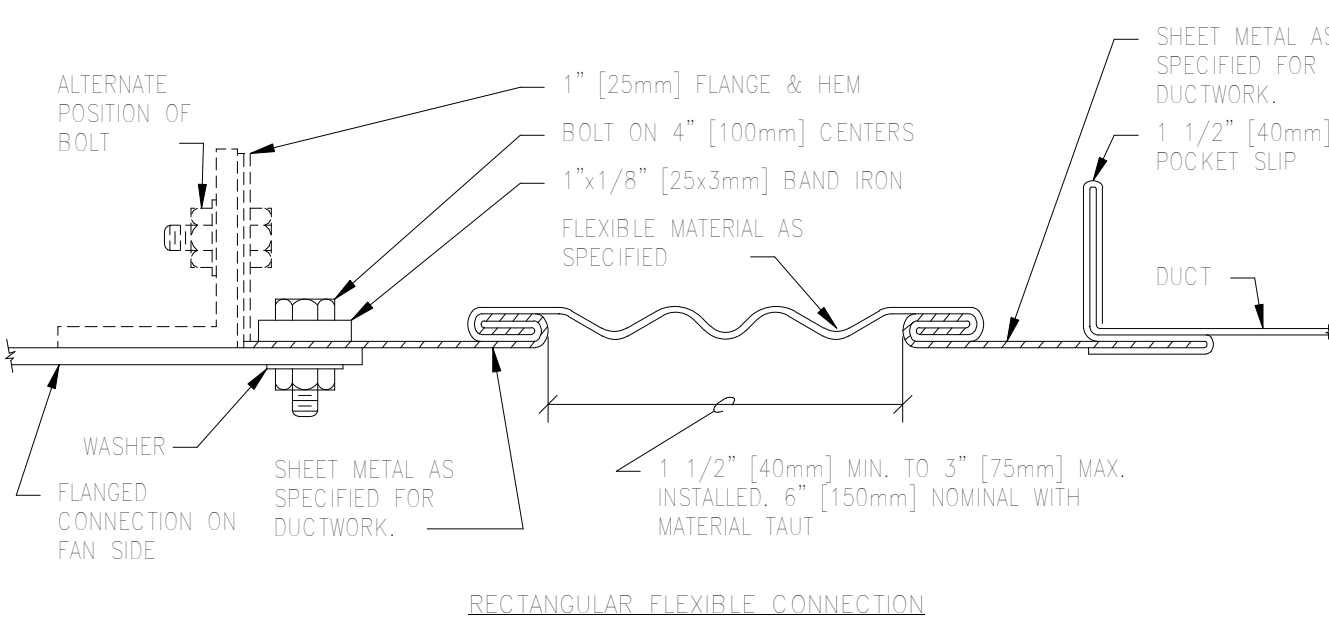




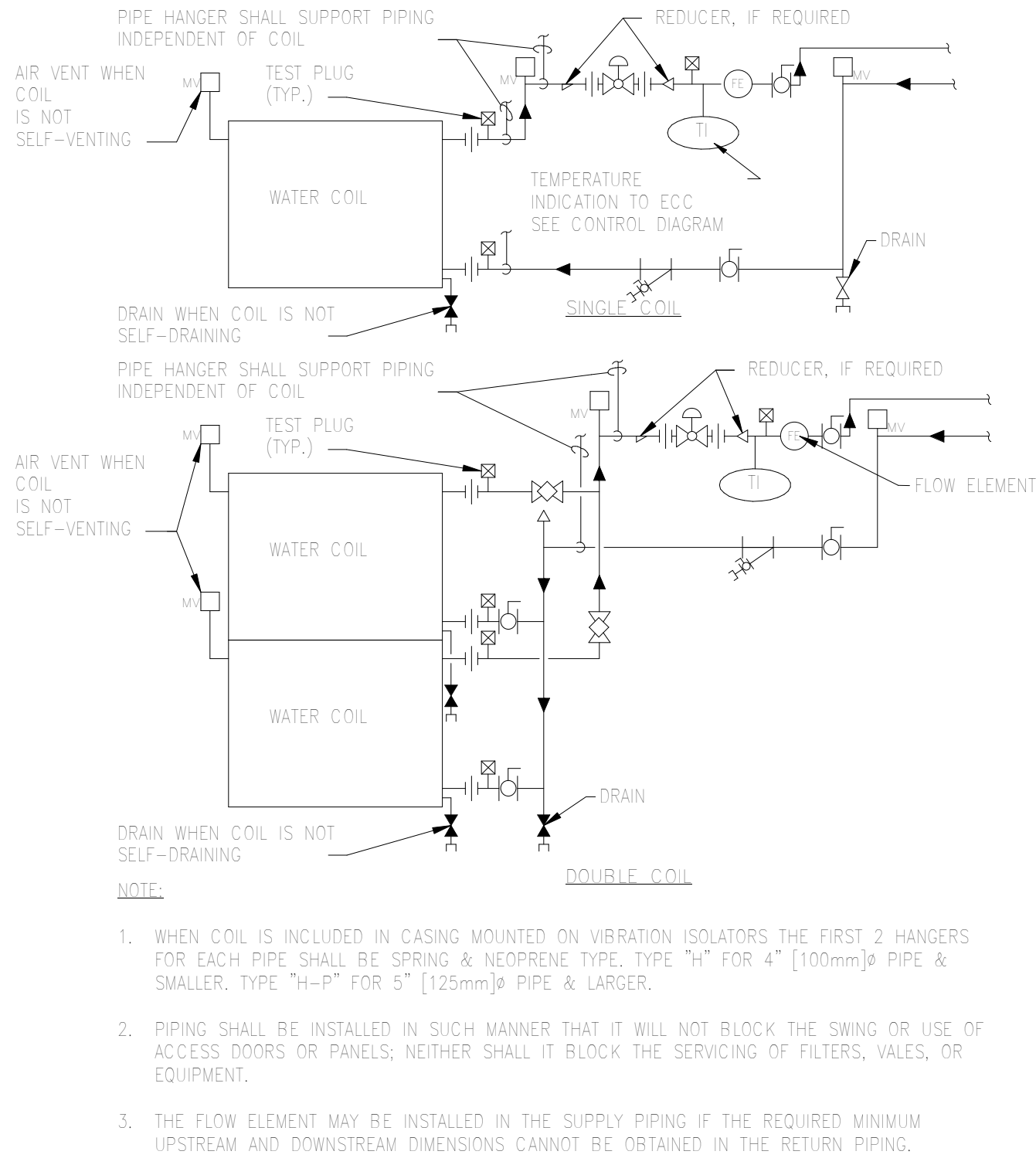
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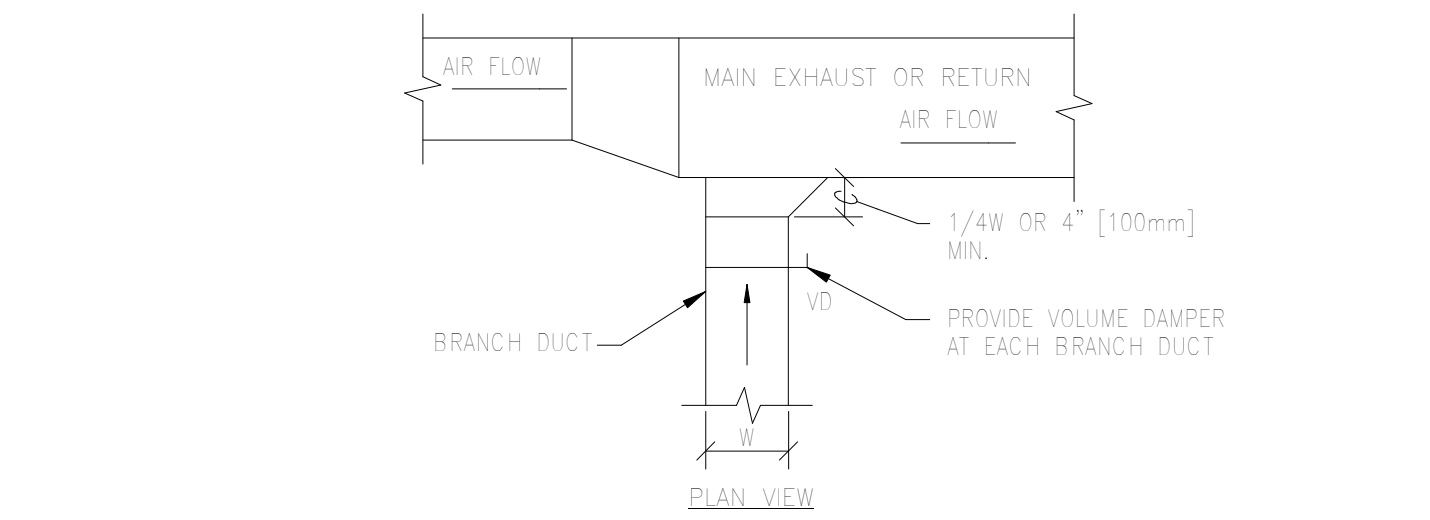
A DUCT CONNECTIONS - AIR TERMINAL UNITS
NTS



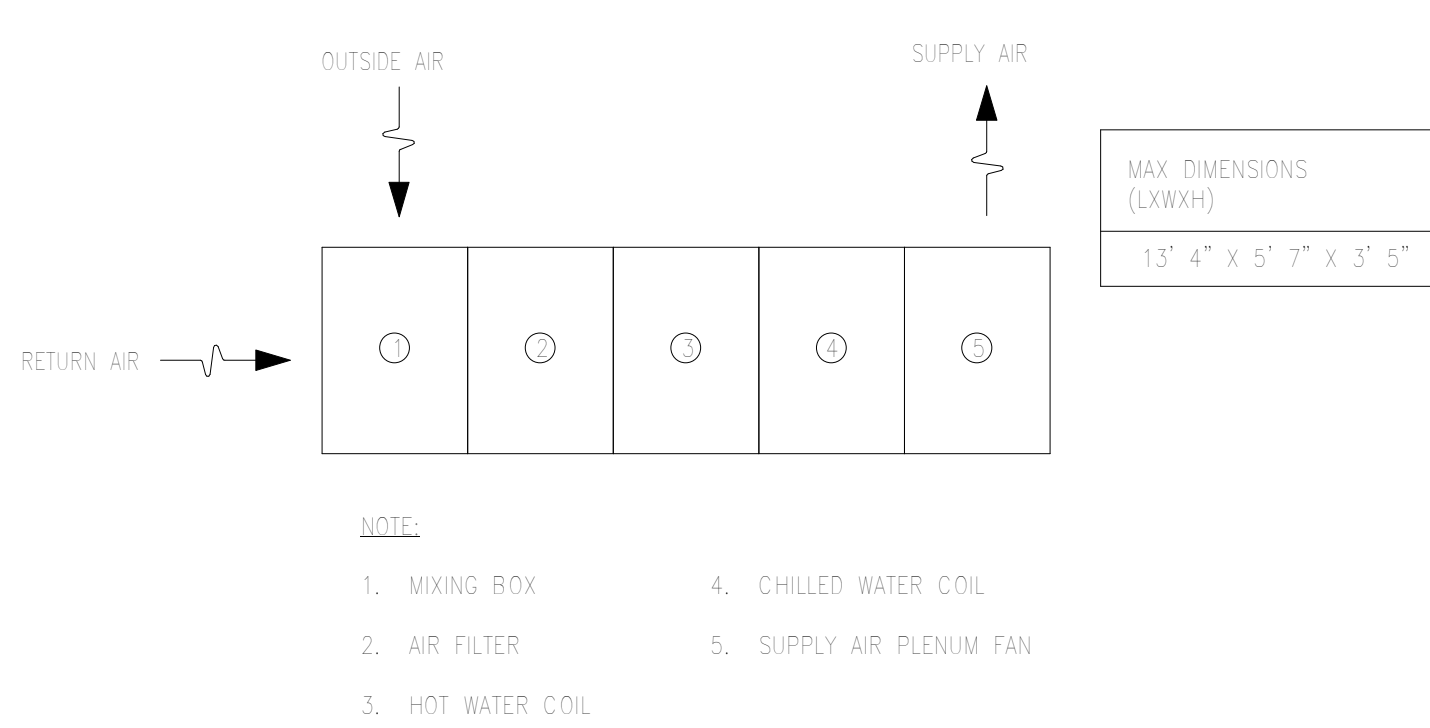
E FLEXIBLE DUCT CONNECTIONS
NTS



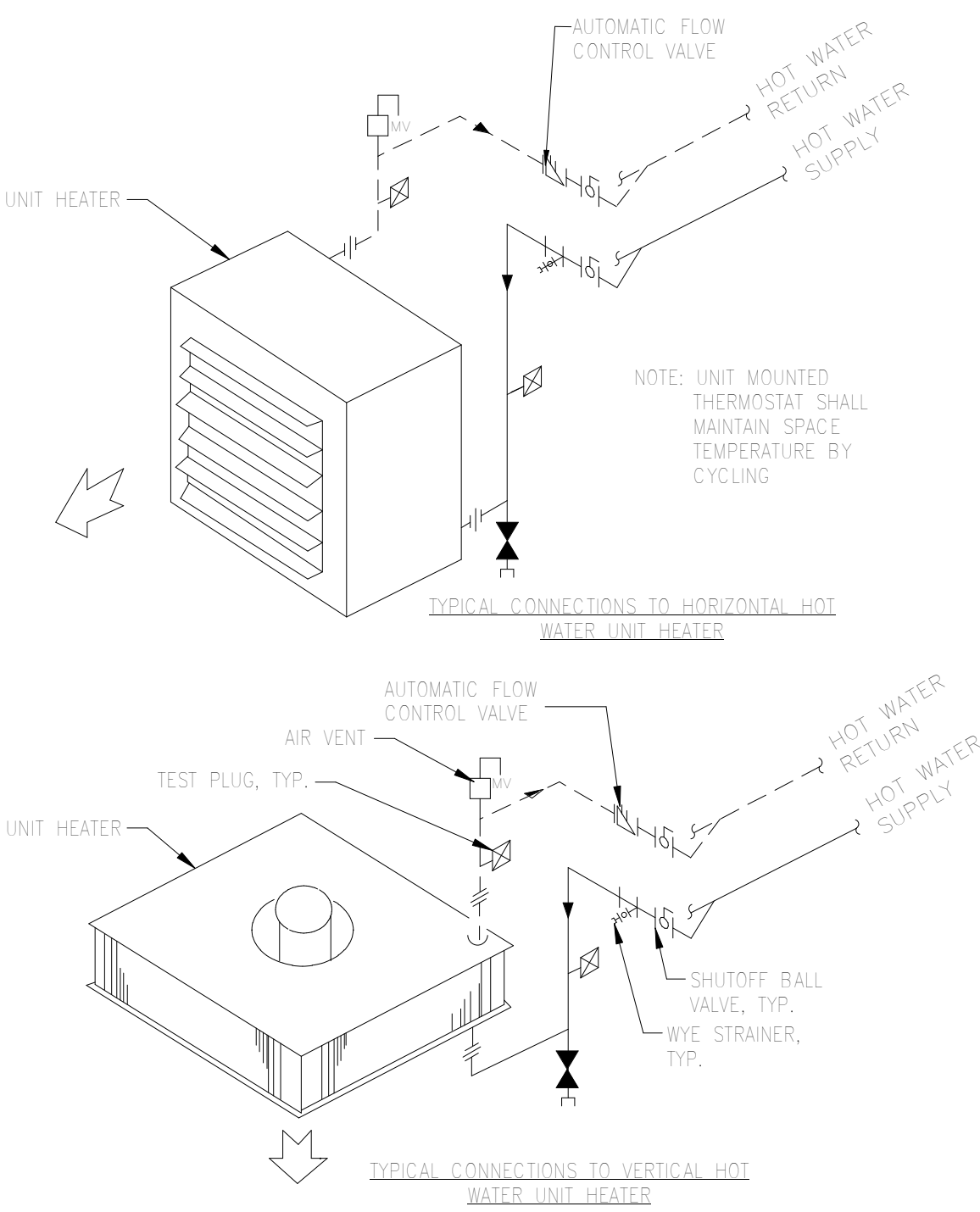
B WATER COILS - PIPING CONNECTIONS
NTS



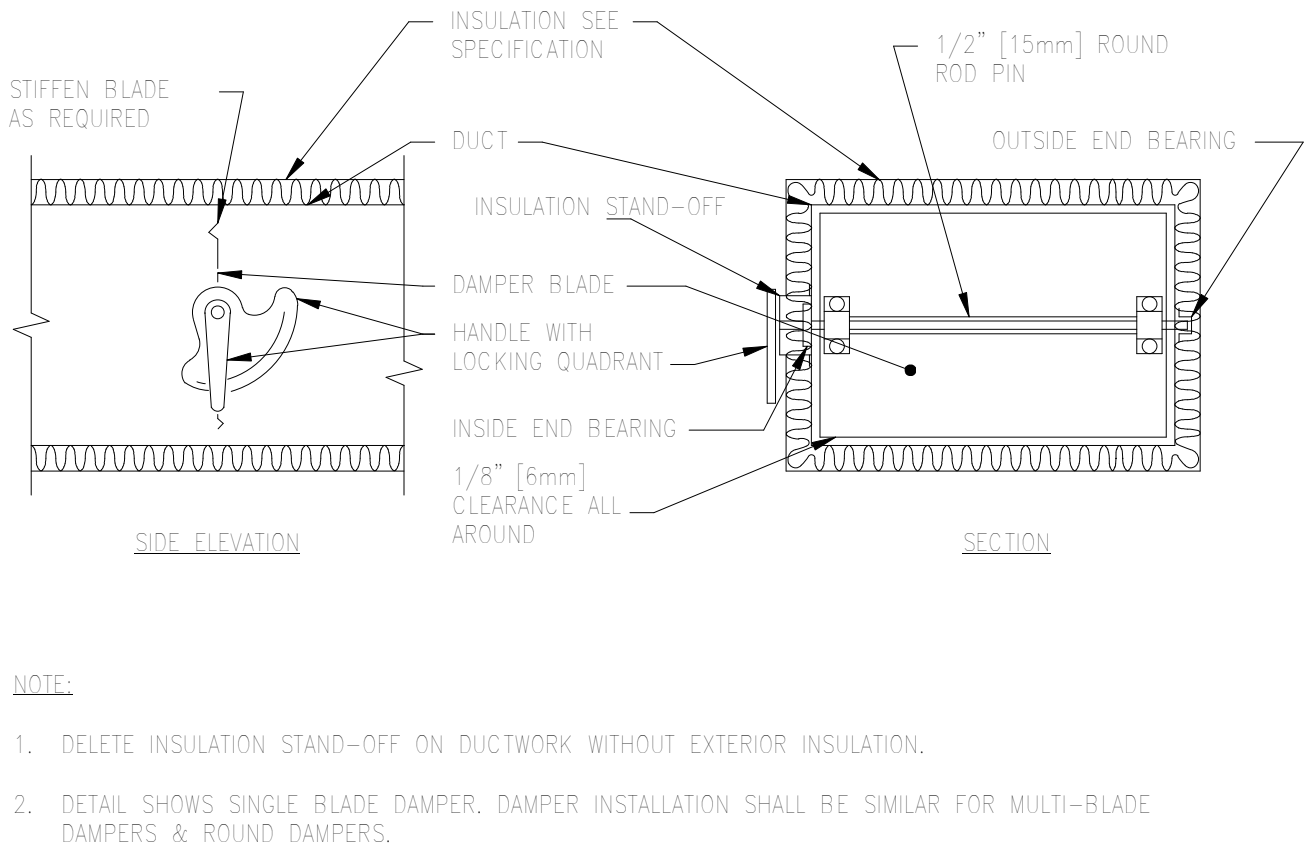
F EXHAUST OR RETURN BRANCH DUCTWORK
NTS



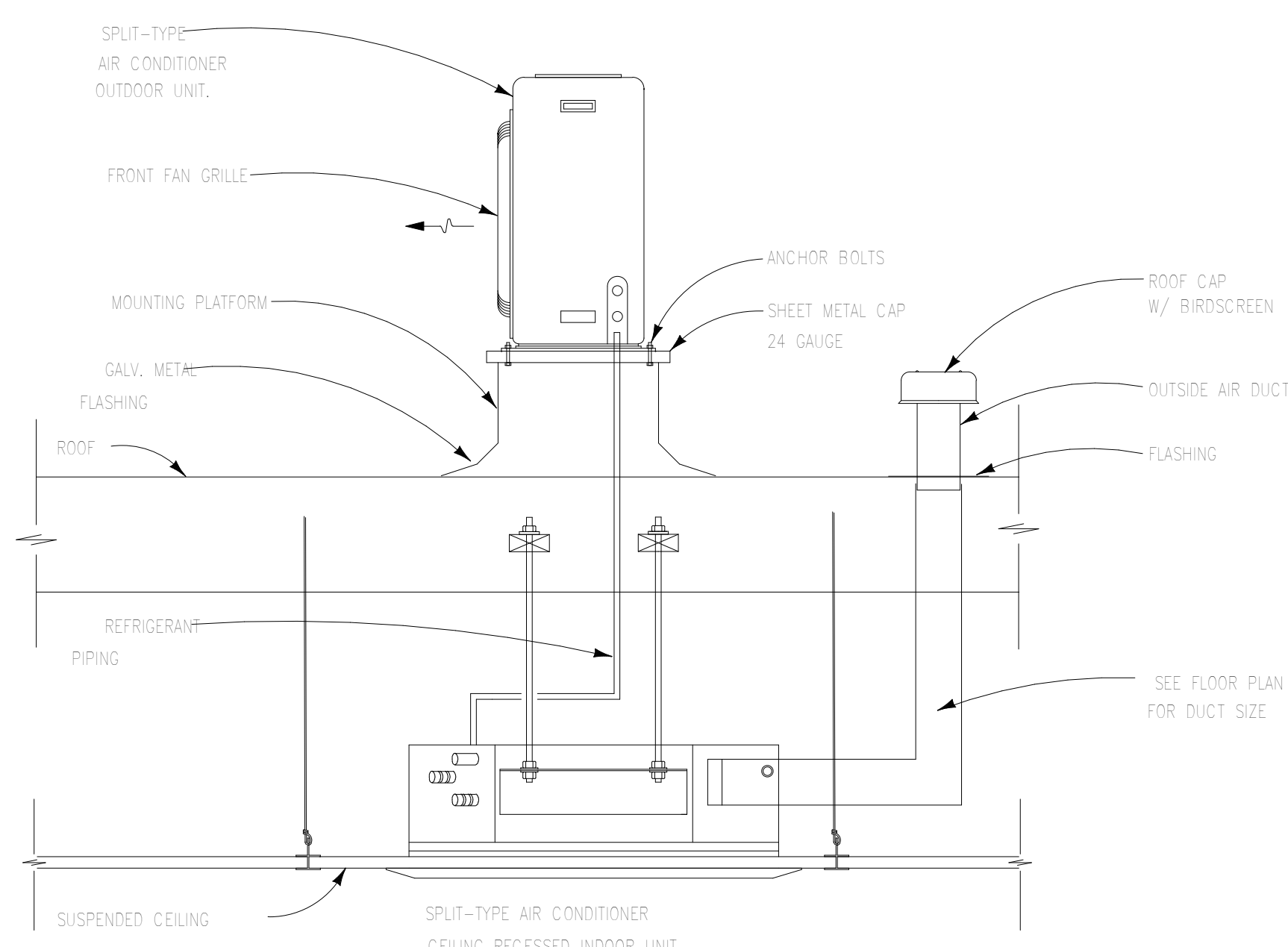
I AHU-1 AND AHU-2 COMPONENT DIAGRAM
NTS



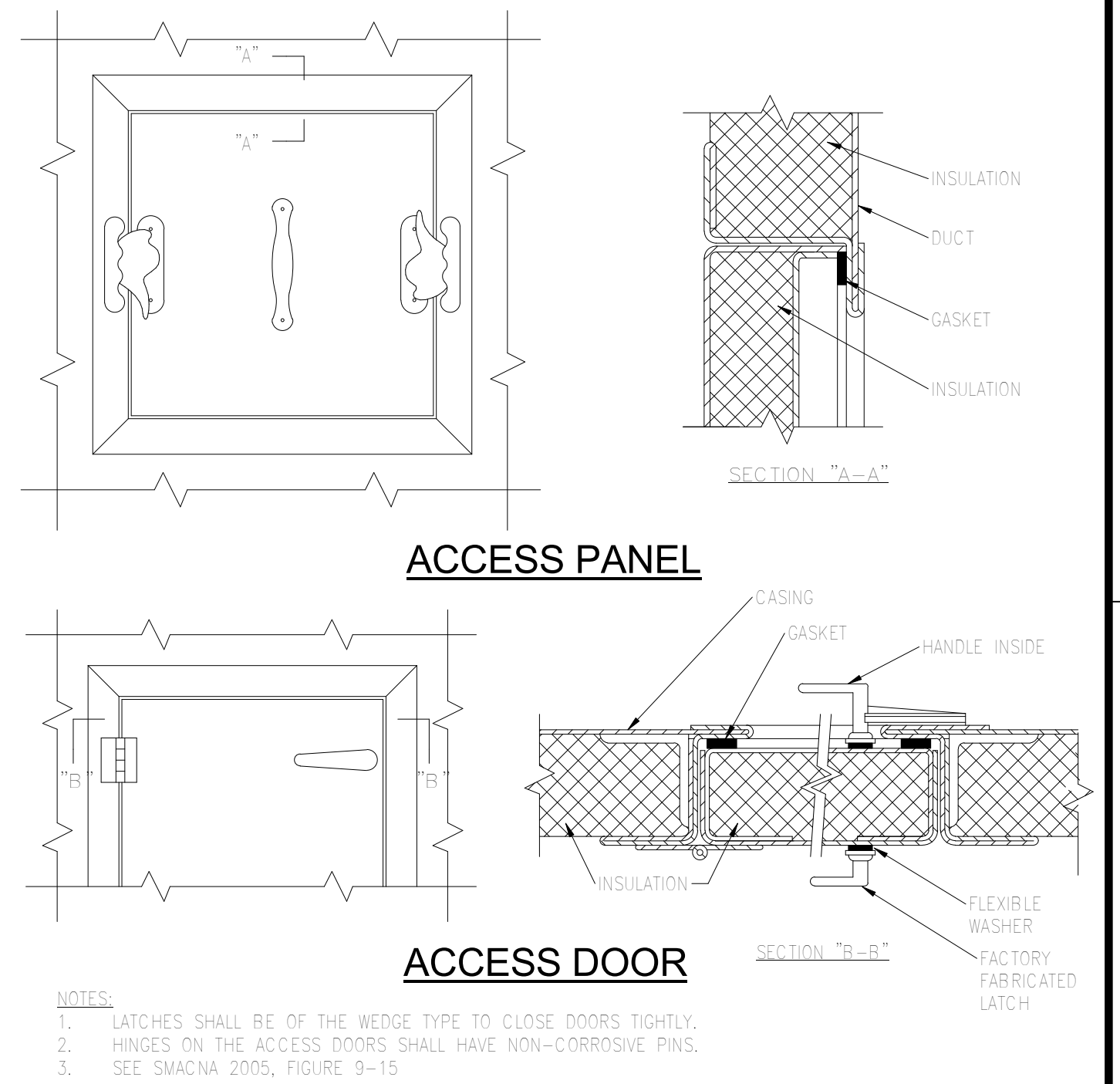
C UNIT HEATERS (HOT WATER) - PIPING CONNECTIONS
NTS



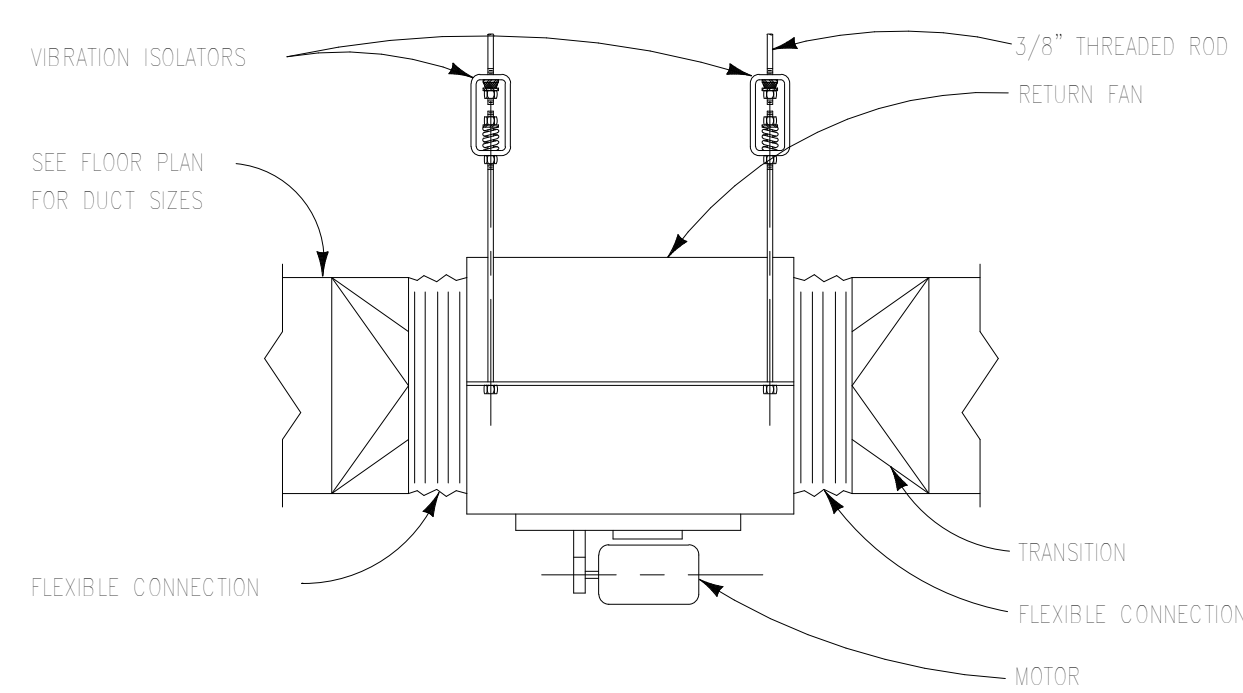
G VOLUME DAMPER DETAIL
NTS



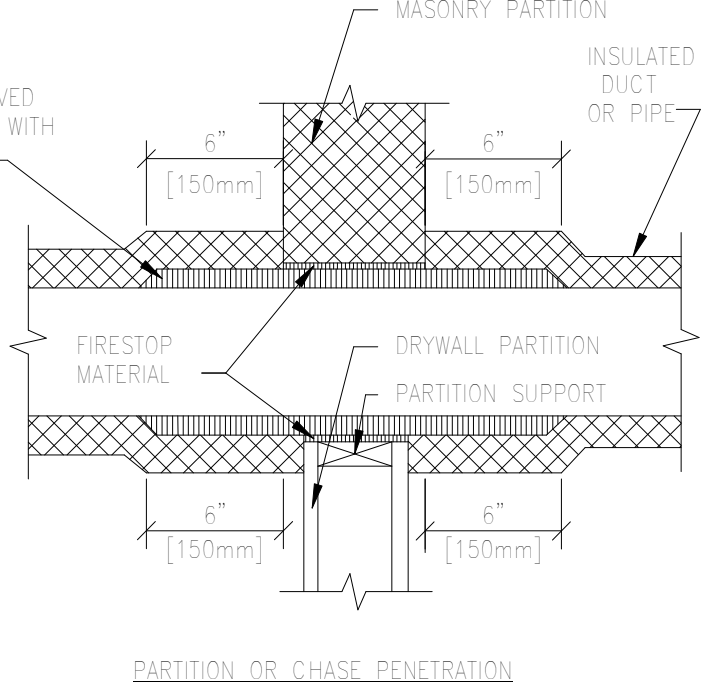
J SPLIT SYSTEM AC - CEILING MOUNTED CASSETTE
NTS



D ACCESS PANEL AND DOOR DETAIL
NTS



H INLINE FAN SUPPORT DETAIL
NTS



K PIPE/DUCT PENETRATION OF SMOKE/FIRE BARRIERS
NTS

Revisions:		Date:		CONSULTANTS:		ARCHITECT/ENGINEERS:		Drawing Title:		Project Title:		Project Number:		Office of Construction and Facilities Management	
				INNOVATIVE ENGINEERING INCORPORATED		TOLAND MIZELL MOLNAR		DETAILS		CONSTRUCT DOM CLINIC AND CLC ADMINISTRATION ADDITION		613-121		OFFICE OF CONSTRUCTION AND FACILITIES MANAGEMENT	
				CLARK NEXSEN		590 MEANS ST NW ATLANTA, GA 30318		Approved Project Director:		Location: MARTINSBURG, WV		Building Number: 501D & 502F		Dwg. of	
										Date: JUNE 27, 2018		Checked: WAW		Drawn: WNW	
												Drawing Number: M502			

three inches = one foot

one and one half inches = one foot

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one half inch = one foot

three eighths inch = one foot

one quarter inch = one foot

one eighth inch = one foot

CHILLED WATER COOLING COIL SCHEDULE																														
MARK	LOCATION	AREA AND/OR BLDG SERVED	SYSTEM AND/OR SERVICE	AIR FLOW		MAX FACE VELOCITY		APD		EAT				LAT				TOTAL CAPACITY		SENSIBLE CAPACITY		CHILLED WATER								REMARKS
										Db		Wb		Db		Wb						FLOW		EWT		LWT		WPD		
				CFM	[L/s]	FPM	[M/s]	IN WG	[Pa]	*F	[°C]	*F	[°C]	*F	[°C]	*F	[°C]	MBH	[kW]	MBH	[kW]	GPM	[L/s]	*F	[°C]	*F	[°C]	FT	[M]	
1-CC1	501D-102	CLC ADDITION	AHU-1	4635	[2200]	450	[2]	0.65	[160]	80	[27]	67	[19]	55	[13]	54	[12]	166.6	[49]	107.2	[31]	27.7	[2]	44	[7]	56	[13]	6	[2]	1;
2-CC1	502F-128	DOM ADDITION	AHU-2	5745	[2700]	450	[2]	0.65	[160]	83.2	[28.4]	65.5	[19]	55	[13]	54	[12]	182.1	[53]	143.1	[42]	30.35	[2]	44	[7]	56	[13]	6	[2]	1;
				[]		[]		[]									[]		[]		[]						[]			
NOTE																														
1. THE COOLING COIL FIN SPACING SHALL NOT EXCEED 132 FINS PER FOOT [400 FINS PER METER].																														

FAN SCHEDULE																											
MARK	LOCATION	AREA AND/OR BLDG SERVED	SYSTEM AND/OR SERVICE	AIR FLOW		TSP		FAN										MOTOR ELECTRICAL								CONTROL SEQUENCE	REMARKS
								TYPE	WHEEL	CLASS	ARRANGEMENT, ROTATION, AND DISCHARGE	DIAMETER		MIN % EFF	DRIVE	FAN MAX RPM	NOMINAL POWER			PHASE	VOLT	RPM	SPEED CONTROL				
				CFM	[L/s]	IN	[Pa]					IN	[mm]				BHP	HP	[kW]								
1-SF1	501D-102	CLC ADD	AHU-1	4,635	[2200]	2.5	[630]	PLENUM	AIRFOIL	II		16.5	[410]	55%	DIRECT	3,275	4.4	5	[4]	3	460	1800	VARIABLE		1, 4;		
1-RF1	501D-102	CLC ADD	AHU-1	3,295	[1600]	1.619	[400]	INLINE TUBULAR	MIXED FLOW	II	ARRANGMENT 9, MOTOR AT 180 DEGREES, HORIZONTAL DISCHARGE	24.5	[610]	60%	DIRECT	2,517	1.6	2	[2]	3	460	1725	VARIABLE		---		
2-SF1	502F-128	DOM ADD	AHU-2	5,745	[2700]	2.5	[630]	PLENUM	AIRFOIL	II		16.5	[410]	54%	DIRECT	3,275	5.8	7.5	[6]	3	460	1800	VARIABLE		1, 4;		
2-RF1	502F-128	DOM ADD	AHU-2	4,155	[2000]	1.65	[410]	INLINE TUBULAR	MIXED FLOW	II	ARRANGMENT 9, MOTOR AT 180 DEGREES, HORIZONTAL DISCHARGE	24.5	[610]	60%	DIRECT	2,517	1.85	2	[2]	3	460	1725	VARIABLE		----		
EF-1	ROOF	RESTROOMS	EXHAUST	375	[180]	0.5	[130]	ROOF EXHAUST	BACKWARD INCLINED	II		15	[380]	-	DIRECT	1,674		0.07	[]	1	115	1725	CONSTANT		----		
EF-2	ABOVE CEILING	RESTROOMS	EXHAUST	75	[35]	0.2	[50]	CEILING MOUNTED	FORWARD CURVED	II		7	[180]	-	DIRECT	943		6.1W	[]	1	115	-	CONSTANT		1;		
EF-3	501D-102	CCL ADD	MECH ROOM EXHAUST	1,000	[470]	0.29	[73]	WALL PROP	PROPELLER	I		14	[350]	-	DIRECT	1,400	0.15	0.5	[]	1	208	1725	CONSTANT		2, 3;		
EF-4	502F-128	DOM ADD	MECH ROOM EXHAUST	1,000	[470]	0.29	[73]	WALL PROP	PROPELLER	I		14	[350]	-	DIRECT	1,400	0.15	0.5	[]	1	208	1725	CONSTANT		2, 3;		
EF-ALT	ROOF	CLC ADD	SHELL SPACE EXHAUST	1,235	[580]	0.29	[73]	ROOF EXHAUST	BACKWARD INCLINED	II		19	[480]	-	DIRECT	1,720	0.28	0.25	[]	1	115	1725	CONSTANT		1, 5;		
NOTE																											
1. SEE FLOOR PLAN FOR NUMBER OF FANS.																											
2. PROVIDE WITH EC MOTOR FOR BALANCING. FAN SPEED CONTROL SHALL BE ON MOTOR																											
3. PROVIDE WITH GRAVITY OPERATED BACKDRAFT DAMPER, SHORT WALL HOUSING, FLUSH TO THE EXTERIOR WITH OSHA APPROVED FAN GUARD, GALVANIZED 45 DEGREE WEATHER HOOD WITH BIRD SCREEN, AND A FACTORY DISCONNECT. WEATHER HOOD SHALL HAVE HI-PRO POLYESTER COATING. ALL OTHER COMPONENTS SHALL HAVE AN INDUSTRIAL EPOXY COATING.																											
4. CFM SCHEDULED REFLECTS A 5% LEAKAGE ALLOWANCE AND A 5% SAFETY FACTOR.																											
5. PROVIDE ONLY IF ALTERNATE NO.5 - (BID ITEM NO. 6) IS TAKEN.																											

AIR HANDLING UNIT SCHEDULE																						
MARK	LOCATION	AREA AND/OR BLDG SERVED	TYPE	AIR FLOW	AIR FLOW						SUPPLY FAN MARK	RETURN OR RELIEF FAN MARK	EXHAUST FAN MARK	PREFILTER MARK	AFTER FILTER MARK	FINAL FILTER MARK	HEAT RECOVERY MARK	PREHEAT COIL MARK	COOLING COIL MARK	REHEAT COIL	HUMIDIFIER MARK	REMARKS
					SUPPLY		MIN OA		RETURN													
					CFM	[L/s]	CFM	[L/s]	CFM	[L/s]												
AHU-1	501D-102	CLC ADDITION	MODULAR	VAV	4635	[2200]	1270	[600]	3295	[1600]	1-SF1	N/A	N/A	1-PF1	1-AF1	N/A	N/A	1-PHC1	1-CC1	AT TU	N/A	-----
AHU-2	502F-128	DOM ADDITION	MODULAR	VAV	5745	[2700]	1105	[520]	4155	[2000]	2-SF1	N/A	NA	2-PF1	2-AF1	N/A	N/A	2-PHC1	2-CC1	AT TU	N/A	-----
						[]		[]		[]												
						[]		[]		[]												

HOT WATER HEATING COIL SCHEDULE																										
MARK	LOCATION	AREA AND/OR BLDG SERVED	SYSTEM AND/OR SERVICE	APPLICATION	AIR FLOW		MAX FACE VELOCITY		APD		TEMPERATURES				TOTAL MIN CAPACITY		HOT WATER								% GLYCOL	REMARKS
											EAT		LAT				FLOW		EWT		LWT		WPD			
					CFM	[L/s]	FPM	[M/s]	IN WG	[Pa]	*F	[°C]	*F	[°C]	MBH	[kW]	GPM	[L/s]	*F	[°C]	*F	[°C]	FT	[kPa]		
1-PHC1	501D-102	CLC ADDITION	AHU-1	PREHEAT	2665	[1300]	450	[2]	0.2	[50]	43.7	[7]	65	[18]	61.3	[210]	4.09	[]	180	[82]	150	[66]	8	[24]	0	---
2-PHC1	502F-128	DOM ADDITION	AHU-2	PREHEAT	4160	[2000]	450	[2]	0.2	[50]	52.5	[11]	65	[18]	56.2	[190]	3.74	[]	180	[82]	150	[66]	8	[24]	0	
					[]		[]			[]					[]		[]						[]			
					[]		[]			[]					[]		[]						[]			

PUMP SCHEDULE																						
MARK	LOCATION	AREA AND/OR BLDG SERVED	SYSTEM AND/OR SERVICE	TYPE	CIRCULATING FLUID									MIN % EFF	ELECTRICAL MOTOR					REMARKS		
					FLUID	FLOW		HEAD		NPSH AVAILABLE		TEMPERATURE			SP GR	NOMINAL POWER		PHASE	VOLT		MAX RPM	SPEED CONTROL
						GPM	[L/s]	FT	[kPa]	FT	[kPa]	°F	[°C]			HP	[kW]					
CHP-1	E-138B	502	CHILLED WATER	END SUCTION	CHILLED WATER	650	[41]	100	[1800]	18.1	[290]	44	[7]	1	80.7	25	[19]	3	460	3600	VARIABLE	----
CHP-2	E-138B	502	CHILLED WATER	END SUCTION	CHILLED WATER	650	[41]	100	[1800]	18.1	N/A	44	[7]	1	80.7	25	[19]	3	460	3600	VARIABLE	----
PMP-1	501D-102	501	CHILLED WATER	INLINE	CHILLED WATER	27.7	[2]	10	[180]	4.1	N/A	44	[7]	1	63	0.25	[]	3	208	1725	VARIABLE	----
PMP-2	501D-102	501	CHILLED WATER	INLINE	CHILLED WATER	27.7	[2]	10	[180]	4.1	N/A	55	[13]	1	63	0.25	[]	3	208	1725	VARIABLE	----
							[]		[]		N/A					[]						

SINGLE DUCT AIR TERMINAL UNIT SCHEDULE																
MARK	LOCATION	AREA AND/OR ROOM SERVED	SYSTEM AIR HANDLING	SIZE	AIR FLOW				ADDITIONAL SOUND ATTENUATION REQUIRED	CONTROL TYPE	CONTROL SEQUENCE	REHEAT			PERIMETER SUPPLEMENTAL HEAT LINK	REMARKS
					MAX		MIN					HW	ELEC	NONE		
					CFM	[L/s]	CFM	[L/s]								
VAV 1-01	501D-C2	WAITING	AHU-1	B	230	[110]	175	[83]	NONE	VAV	5 DEGREE DEADBAND	X			NONE	----
VAV 1-02	501D-111	OFFICE/EXAM	AHU-1	C	240	[110]	240	[110]	NONE	VAV	5 DEGREE DEADBAND	X			NONE	
VAV 1-03	501D-108	OFFICE	AHU-1	D	440	[210]	365	[170]	NONE	VAV	5 DEGREE DEADBAND	X			NONE	
VAV 1-04	501D-114	OFFICE	AHU-1	C	330	[160]	215	[100]	NONE	VAV	5 DEGREE DEADBAND	X			NONE	
VAV 1-05	501D-120	CONFERENCE	AHU-1	C	370	[170]	195	[87]	NONE	VAV	5 DEGREE DEADBAND	X			NONE	
VAV 1-06	501D-C4	CORRIDOR	AHU-1	E	540	[260]	420	[200]	NONE	VAV	5 DEGREE DEADBAND	X			NONE	
VAV 1-07	501D-128	OFFICE	AHU-1	B	200	[94]	130	[61]	NONE	VAV	5 DEGREE DEADBAND	X			NONE	
VAV 1-08	501D-125	OFFICE	AHU-1	C	350	[170]	260	[120]	NONE	VAV	5 DEGREE DEADBAND	X			NONE	
VAV 1-09	501D-129	OFFICE	AHU-1	B	250	[120]	110	[52]	NONE	VAV	5 DEGREE DEADBAND	X			NONE	
VAV 1-10	501D-130	OFFICE	AHU-1	B	190	[90]	75	[35]	NONE	VAV	5 DEGREE DEADBAND	X			NONE	
VAV 1-11	501D-C2	CORRIDOR	AHU-1	D	450	[210]	150	[71]	NONE	VAV	5 DEGREE DEADBAND	X			NONE	
VAV 1-12	501D-124	OFFICE/EXAM	AHU-1	B	220	[100]	180	[85]	NONE	VAV	5 DEGREE DEADBAND	X			NONE	
VAV 1-13	501D-121	BREAK ROOM	AHU-1	D	400	[190]	180	[78]	NONE	VAV	5 DEGREE DEADBAND	X			NONE	
						[]		[]								
VAV 2-01	502F-102	LOBBY	AHU-2	D	435	[210]	290	[140]	NONE	VAV	5 DEGREE DEADBAND	X			NONE	
VAV 2-02	502F-100	WAITING	AHU-2	H	1100	[520]	475	[220]	NONE	VAV	5 DEGREE DEADBAND	X			NONE	
VAV 2-03	502F-105	N. STATION	AHU-2	C	375	[180]	150	[71]	NONE	VAV	5 DEGREE DEADBAND	X			NONE	
VAV 2-04	502F-108	EXAM	AHU-2	D	390	[190]	250	[120]	NONE	VAV	5 DEGREE DEADBAND	X			NONE	
VAV 2-05	502F-115	OFFICE	AHU-2	E	510	[240]	280	[130]	NONE	VAV	5 DEGREE DEADBAND	X			NONE	
VAV 2-06	502F-110	CORRIDOR	AHU-2	F	570	[270]	475	[220]	NONE	VAV	5 DEGREE DEADBAND	X			NONE	
VAV 2-07	502F-118	OFFICE	AHU-2	C	300	[140]	245	[120]	NONE	VAV	5 DEGREE DEADBAND	X			NONE	
VAV 2-08	502F-121	OFFICE	AHU-2	C	370	[170]	160	[78]	NONE	VAV	5 DEGREE DEADBAND	X			NONE	
VAV 2-09	502F-125	OFFICE	AHU-2	D	400	[190]	200	[94]	NONE	VAV	5 DEGREE DEADBAND	X			NONE	
VAV 2-10	502F-127	OFFICE	AHU-2	D	400	[190]	200	[94]	NONE	VAV	5 DEGREE DEADBAND	X			NONE	
VAV 2-11	502F-126	OFFICE	AHU-2	C	370	[170]	160	[78]	NONE	VAV	5 DEGREE DEADBAND	X			NONE	
						[]		[]								
						[]		[]								

three inches = one foot

one and one half inches = one foot

one inch = one foot

three quarters inch = one foot

one half inch = one foot

three eighths inch = one foot

one quarter inch = one foot

one eighth inch = one foot

SPLIT SYSTEM AIR CONDITIONER HEAT PUMP SCHEDULE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
MARK	LOCATION	AREA AND/OR BLDG SERVED	TYPE	TOTAL SUPPLY AIR FLOW		MIN. OUTSIDE AIR FLOW		EXT. STATIC PRESSURE		COOLING CAPACITY										HEATING CAPACITY										AIR FILTER MARK NO	ELECTRICAL DATA										SUPPLEMENTAL HEAT			REMARKS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
										MIN TOTAL CAPACITY		MIN SENS CAPACITY		MIN SEER	EAT				OSA DESIGN TEMP		COMP Kw	MIN. HEAT CAPACITY		EAT DB		LAT DB		OSA DESIGN TEMP			INDOOR FAN			OUTDOOR UNIT FAN			MCA	PHASE	VOLT																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
				CFM	[L/s]	CFM	[L/s]	IN	[Pa]	MBH	[kW]	MBH	[kW]		°F		°C		°F	°C		°F	°C	°F	°C	°F	°C	°F	°C		°F	°C	HP	[W]	CONTROL	HP				[W]	CONTROL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					

NOTE
1. PROVIDE WITH CONDENSATE PUMP.

AIR FILTER SCHEDULE																
MARK	LOCATION	AREA AND/OR BLDG SERVED	SYSTEM AND/OR SERVICE	MERV RATING	AIR FLOW		APD				HOUSING TYPE	CARTRIDGES			ARRANGEMENT	REMARKS
							INITIAL		CHANGEOVER			SIZE				
					CFM	[L/s]	IN	[mm]	IN	[mm]		#	IN	[mm]		
1-PF1	522-102	CLC ADDITION	AHU-1	8	4635	[2200]	0.15	[4]	0.4	[10]	SIDE	2	24 x 24 x 2	[600 x 600 x 50]	3 WIDE BY 1 HIGH	-----
												1	12 x 24 x 2	[600 x 600 x 50]		
1-FF1	522-102	CLC ADDITION	AHU-1	13	4635	[2200]	0.3	[8]	0.6	[15]	SIDE	2	24 x 24 x 12	[600 x 600 x 300]	3 WIDE BY 1 HIGH	-----
												1	12 x 24 x 12	[600 x 600 x 300]		
2-PF1	521-128	DOM ADDITION	AHU-2	8	5745	[2700]	0.18	[5]	0.4	[10]	SIDE	2	24 x 24 x 2	[600 x 600 x 50]	3 WIDE BY 1 HIGH	-----
												1	12 x 24 x 2	[600 x 600 x 50]		
2-FF1	521-128	DOM ADDITION	AHU-2	13	5745	[2700]	0.35	[9]	0.7	[18]	SIDE	2	24 x 24 x 12	[600 x 600 x 300]	3 WIDE BY 1 HIGH	-----
												1	12 x 24 x 12	[600 x 600 x 300]		
						[]		[]								
						[]		[]								
						[]		[]								

HOT WATER UNIT HEATER SCHEDULE																						
MARK	LOCATION	AREA AND/OR BLDG SERVED	TYPE UNIT	AIR FLOW		MIN CAPACITY		TEMPERATURES				FLOW		WPD		CONTROL SEQUENCE	MOTOR					REMARKS
								EAT		EWT							POWER		PHASE	VOLT	RPM	
				CFM	[L/s]	BTUH	[W]	*F	[°C]	*F	[°C]	GPM	[L/s]	FT	[Pa]		HP	[W]				
UH-1	501D-102	CLC ADDITION	HORIZONTAL	340	[160]	12000	[3500]	55	[13]	180	[82]	0.8	0.05	0.5	[13]		0.02	[12]	1	120	-----	
UH-2	502F-128	DOM ADDITION	HORIZONTAL	340	[160]	12000	[3500]	55	[13]	180	[82]	0.8	0.05	0.5	[13]		0.02	[12]	1	120	-----	
					[]		[]					0.00		[]			[]					

ELECTRIC TO STEAM HUMIDIFIER SCHEDULE																
MARK	LOCATION	SYSTEM AND/OR SERVICE	HUMIDIFIER TYPE	AIR FLOW		EAT				LAT		SOURCE	ELECTRICAL	REMARKS		
						Db		Wb		DEWPOINT					DEWPOINT	
				CFM	[L/s]	°F	[°C]	°F	[°C]	°F	[°C]	°F	[°C]		KW	
1-SH1	501D-102	1-AHU1	UNIT-MOUNTED DISPERSION TUBE	4240	[2000]	65	[18]	46.8	[8]	22	[-6]	45	[7]	ELECTRIC	10	
2-SH1	502F-128	1-AHU2	UNIT-MOUNTED DISPERSION TUBE	5120	[2400]	65	[18]	46.8	[8]	22	[-6]	45	[7]	ELECTRIC	10	
					[]											

HVAC DESIGN DATA												
DESIGN CONDITIONS	SUMMER					WINTER					LOWEST AVERAGE ANNUAL DEWPOINT	
	TEMP		WET BULB TEMP		% HUMIDITY	TEMP		DEWPOINT TEMP		% HUMIDITY		
	'F	[°C]	'F	[°C]		'F	[°C]	'F	[°C]		'F	[°C]
OUTDOOR DESIGN CONDITIONS	90.4	[32]	73.1	[23]	44.2	9.7	[-12]	0	[-18]	NA	-0.3	[-18]
INDOOR AREA DESIGN CONDITIONS												
OFFICE	75	[24]	65.3	[19]	60	70	[21]	27	[-3]	20		
EXAM ROOM	75	[24]	65.3	[19]	60	70	[21]	27	[-3]	20		
WAITING	75	[24]	65.3	[19]	60	70	[21]	27	[-3]	20		
CONFERENCE ROOM	75	[24]	65.3	[19]	60	70	[21]	27	[-3]	20		
CORRIDORS	75	[24]	65.3	[19]	60	70	[21]	27	[-3]	20		
TOILETS - PUBLIC (INTERIOR)	N/A		N/A		N/A	N/A		N/A		N/A		
TOILETS - PUBLIC (PERIMETER)	N/A		N/A		N/A	68	[20]	N/A		N/A		
VESTIBULES	N/A		N/A		N/A	50	[10]	N/A		N/A		
HAC	N/A		N/A		N/A	N/A		N/A		N/A		

AIR DEVICE SCHEDULE																
MARK	TYPE	AIR FLOW				MAX APD		MOUNTING	PANEL/FRAME SIZE		NECK SIZE		NC	DAMPER	FINISH	REMARKS
		MIN		MAX		IN WG	[Pa]		IN x IN	[mm x mm]	IN	[mm]				
		CFM	[L/s]	CFM	[L/s]											
A	LOUVERED FACE	40	[19]	160	[78]	0.100	[25]	CEILING	24 x 24	[600 x 600]	6 ø	[152 ø]	30	OBD	WHITE	1,2,3;
B	LOUVERED FACE	70	[33]	280	[130]	0.100	[25]	CEILING	24 x 24	[600 x 600]	8 ø	[203 ø]	30	OBD	WHITE	1,2,3;
C	LOUVERED FACE	200	[94]	400	[190]	0.100	[25]	CEILING	24 x 24	[600 x 600]	10 ø	[254 ø]	30	OBD	WHITE	1,2,3;
D	LOUVERED FACE	50	[24]	110	[52]	0.100	[25]	CEILING	12 x 12	[600 x 600]	6 ø	[306 ø]	30	OBD	WHITE	1,2,3;
E	PERFORATED	90	[42]	400	[190]	0.100	[25]	CEILING	24 x 24	[203 x 203]	8 x 8	[152 x 152]	30	OBD	WHITE	1,2,3;
F	PERFORATED	405	[190]	570	[270]	0.100	[25]	CEILING	24 x 24	[600 x 600]	12 x 12	[152 DIAM]	30	OBD	WHITE	1,2,3;
G	PERFORATED	50	[24]	100	[47]	0.100	[26]	CEILING	12 x 12	[600 x 600]	6 x 6	[203 DIAM]	30	OBD	WHITE	1,2,3;

three inches = one foot

one and one half inches = one foot

one inch = one foot

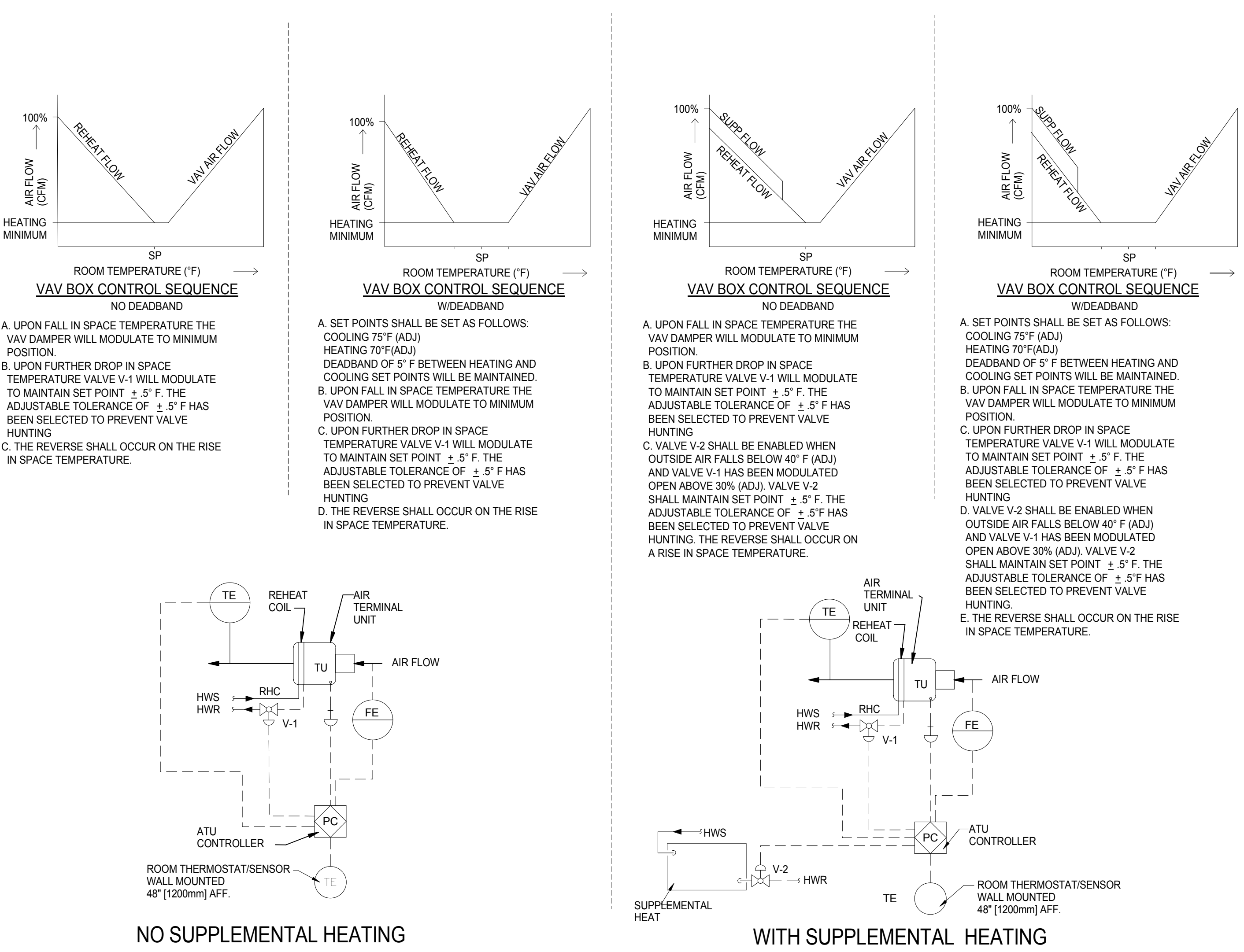
three quarters inch = one foot

one half inch = one foot

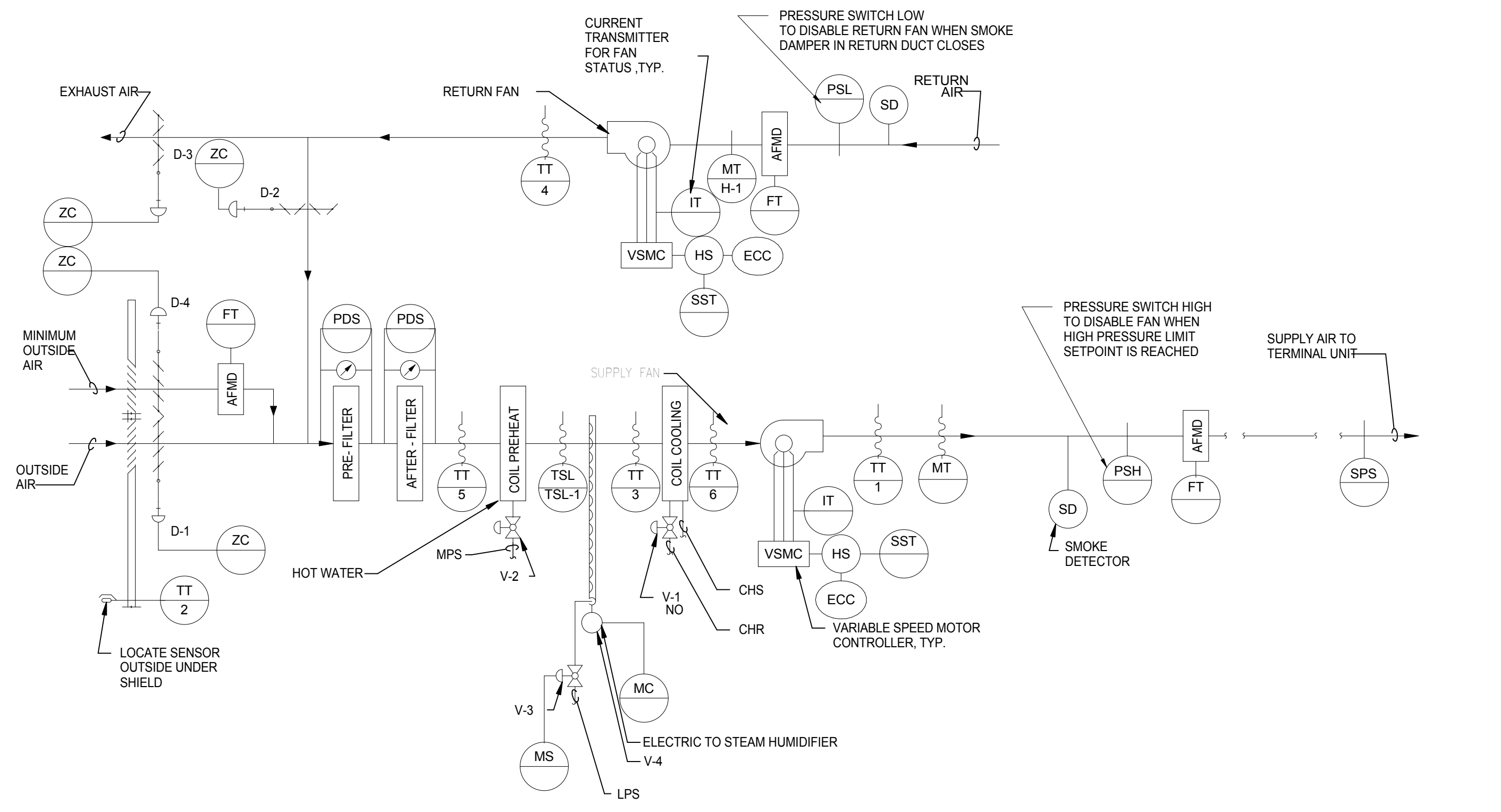
three eighths inch = one foot

one quarter inch = one foot

one eighth inch = one foot



1 VARIABLE VOLUME AIR TERMINAL UNIT CONTROL DIAGRAM



2 VARIABLE AIR VOLUME AIR HANDLING UNIT WITH OUTSIDE AIR CONTROL DIAGRAM (AHU-1 AND AHU-2)

SEQUENCE OF OPERATION FOR VARIABLE AIR VOLUME AIR HANDLING UNIT WITH MINIMUM OUTSIDE AIR

1. GENERAL

1.1 UNIT IS NORMALLY STARTED AND STOPPED REMOTELY AT THE ECC. H-O-A SWITCH SHALL BE KEPT IN THE "AUTO" POSITION. "HAND" AND "OFF" POSITIONS SHALL BE USED ONLY FOR MAINTENANCE. WHEN THE UNIT IS "OFF" D-1, D-3, SHALL BE FULLY CLOSED. WHEN THE UNIT IS "ON" D-1, SD-1 AND SD-2 SHALL BE FULLY OPEN. D-2 AND D-3 SHALL MODULATE IN ACCORDANCE WITH THE FOLLOWING SEQUENCE.

2. TEMPERATURE CONTROL

2.1 SUPPLY AIR TEMPERATURE, SENSED BY TT-1, SHALL BE MAINTAINED AT SETPOINT VIA DIGITAL CONTROL PANEL BY MODULATING V-1 OR D-2 AND D-3 OR V-2 IN SEQUENCE.

2.2 WHEN THE TEMPERATURE OF THE OUTSIDE AIR, SENSED BY TT-2, IS ABOVE 75°F (ADJ) [23.8°C], THE DIGITAL CONTROL PANEL SHALL PREVENT THE MODULATION OF D-2 AND D-3 AND SHALL ASSUME THE MINIMUM OUTSIDE AIR POSITION (D-2 FULLY OPENED AND D-3 FULLY CLOSED). THE DIGITAL CONTROL PANEL SHALL MODULATE V-1 TO MAINTAIN THE SUPPLY AIR TEMPERATURE, SENSED BY TT-1.

2.3 WHEN THE TEMPERATURE OF THE OUTSIDE AIR, SENSED BY TT-2, IS BETWEEN 65°F [18.3°C] AND THE SUPPLY AIR TEMPERATURE SENSED BY TT-1, DAMPER D-2 SHALL FULLY CLOSE AND D-1 AND D-3 SHALL BE FULLY OPEN (MAXIMUM OUTSIDE AIR POSITION). THE DIGITAL CONTROL PANEL SHALL MODULATE V-1 TO MAINTAIN THE SUPPLY AIR TEMPERATURE, SENSED BY TT-1.

2.4 WHEN THE TEMPERATURE OF THE OUTSIDE AIR, SENSED BY TT-2, IS BELOW THE SUPPLY AIR TEMPERATURE, SENSED BY TT-1, DAMPERS D-1, D-2 AND D-3 SHALL MODULATE TO MAINTAIN THE SCHEDULED SUPPLY AIR TEMPERATURE. IF D-2 IS OPEN AND D-3 IS CLOSED TO MINIMUM OUTSIDE AIR, V-2 SHALL MODULATE OPEN TO MAINTAIN THE SUPPLY AIR TEMPERATURE, SENSED BY TT-1.

3. AIR FLOW CONTROL

3.1 THE SUPPLY AIR FLOW SHALL BE CONTROLLED BY THE DIGITAL CONTROL PANEL MODULATING THE SUPPLY FAN VARIABLE SPEED MOTOR TO MAINTAIN 1.5" OF DUCT STATIC PRESSURE BASED ON ACTUAL BUILDING LOAD BY POLLING ALL ATU.

3.2 THE DIGITAL CONTROL PANEL, USING TOTAL SUPPLY AIR AND RETURN AIR FLOW SIGNALS, SHALL RESET THE RETURN AIR FAN VSMC TO MAINTAIN A CONSTANT AIR FLOW DIFFERENCE BETWEEN THE SUPPLY AIR AND THE RETURN AIR EQUAL TO MINIMUM OUTSIDE AIR.

3.3 USING HIGH PRESSURE SENSOR SPS-2 LOCATED AT THE SUPPLY FAN DISCHARGE, SHALL PREVENT THE SUPPLY FAN FROM DEVELOPING OVER 5" OF STATIC PRESSURE (FIELD ADJUSTABLE). IF STATIC PRESSURE AT SPS-2 DOES EXCEED 5" THE SUPPLY AIR FAN SHALL STOP. SPS-2 SHALL BE HARDWIRED TO THE SUPPLY FAN VSMC AND UNIT SHALL BE SHUTDOWN IN HAND AUTO OR BYPASS MODE. SPS-2 WILL REQUIRE MANUAL RESET AT THE DEVICE.
4. HUMIDITY CONTROL

4.1 WHEN THE DIGITAL CONTROL PANEL IS NOT CALLING FOR HUMIDITY, SENSED BY RETURN AIR HUMIDITY H-1, 2-WAY "ON-OFF" CONTROL VALVE V-3 SHALL REMAIN CLOSED. WHEN THE DIGITAL CONTROL PANEL IS CALLING FOR HUMIDITY, V-3 SHALL REMAIN OPEN.

4.2 RETURN AIR HUMIDITY SHALL BE MAINTAINED AT SETPOINT OF 35% RH (ADJ.) VIA DIGITAL CONTROL PANEL BY MODULATING CONTROL VALVE V-4 TO MAINTAIN THE DESIRED HUMIDITY. THE DCP SHALL OVERRIDE THIS CONTROL TO MAINTAIN HUMIDITY OF 80% AS SENSED BY H-2. DCP SHALL CLOSE VALVE V-3 WHENEVER THE SUPPLY FAN IS OFF. VALVE V-4 SHALL BE INTERLOCKED WITH A TEMPERATURE SWITCH TO KEEP THE HUMIDIFIER OFF UNTIL CONDENSATE TEMPERATURE APPROACHES STEAM TEMPERATURE.

5. FREEZE PROTECTION

5.1 IF THE AIR TEMPERATURE AS SENSED BY TT-3 FALLS BELOW 45°F [7°C], AN ALARM SIGNAL SHALL INDICATE AT THE DCP AND ECC. IF THIS TEMPERATURE FALLS BELOW 40°F [4°C], AS SENSED BY THE TSL, THE SUPPLY AND RETURN FANS SHALL SHUT DOWN AND A CRITICAL ALARM SHALL INDICATE AT THE DIGITAL CONTROL PANEL AND ECC. TSL SHALL BE HARDWIRED TO THE SUPPLY FAN UPD AND UNIT SHALL BE SHUTDOWN IN HAND AUTO OR BYPASS MODE. TSL WILL REQUIRE MANUAL RESET AT THE DEVICE.

6. AUTOMATIC SHUTDOWN/RESTART

6.1 WHEN SMOKE IS DETECTED BY DUCT SMOKE DETECTOR, SD, THE SUPPLY AND RETURN FANS SHALL SHUT "OFF" AND AN ALARM SIGNAL SHALL BE TRANSMITTED TO THE FIRE ALARM SYSTEM.

6.2 EXHAUST FANS SERVING AREA OF THE SUPPLY FAN SHALL CONTINUE TO RUN. SUPPLY AND RETURN FANS SHALL RESTART WHEN FIRE ALARM CIRCUIT IS RESET.

7. EMERGENCY CONSTANT SPEED OPERATION

7.1 UPON FAILURE OF THE VSMC, THE SUPPLY AND RETURN FANS SHALL BE STARTED/STOPPED MANUALLY AT THE DIGITAL CONTROL PANEL OR THE ECC THROUGH THE BY-PASS STARTER. FANS SHALL THEN BE OPERATED AT CONSTANT SPEED.

8. MIXED AIR SECTION OPERATION

8.1 DURING OCCUPIED PERIODS THE CONTROL SYSTEM SHALL PLACE THE OUTSIDE AIR, RETURN AIR, AND RELIEF AIR DAMPERS EITHER IN THE MINIMUM OUTSIDE AIR POSITION OR IN THE CONTROL POSITION DETERMINED BY THE ECONOMIZER CONTROLS WHICHEVER IS GREATER IN CFM OF OUTSIDE AIR DELIVERED.

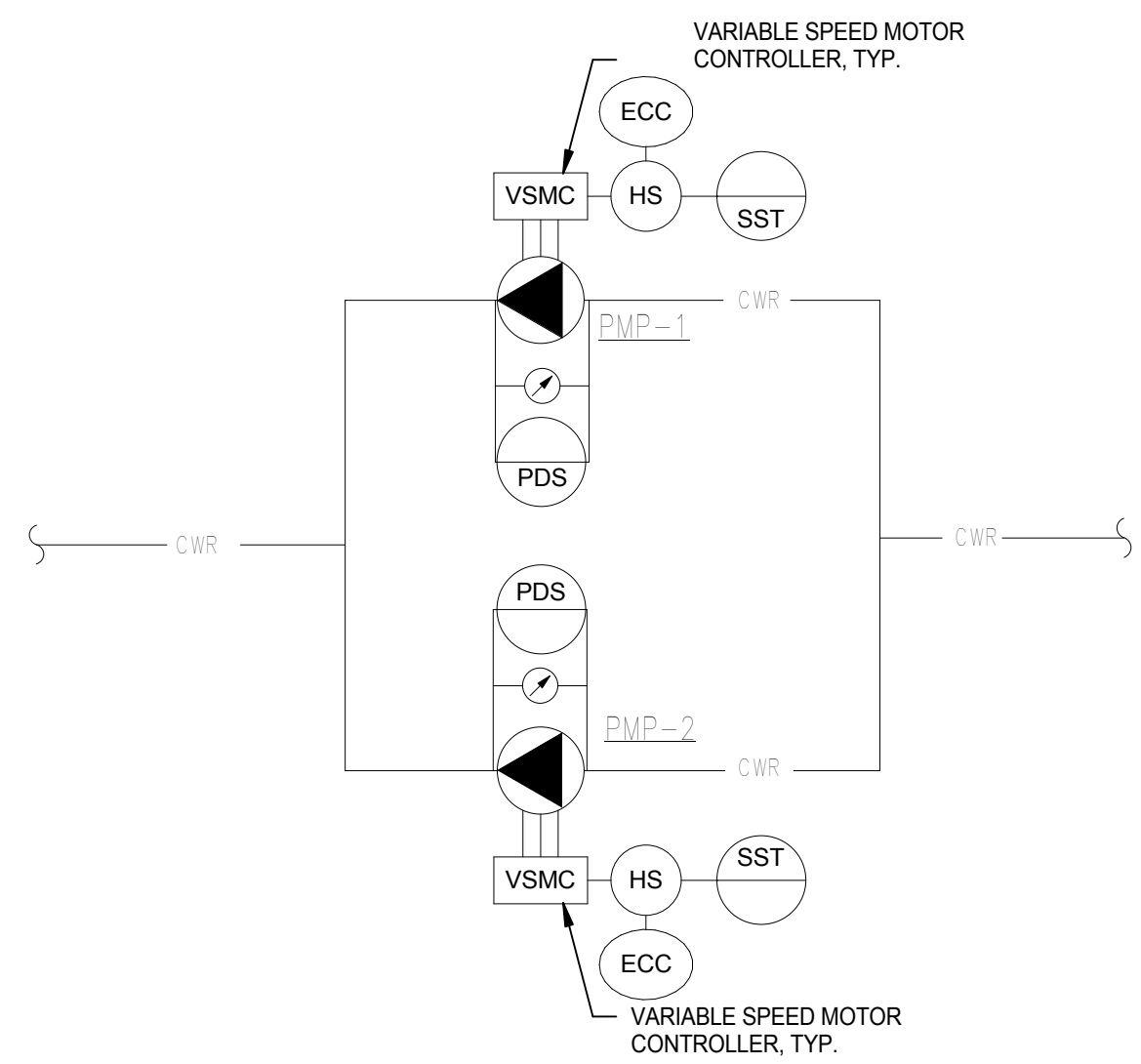
8.2 MINIMUM OUTSIDE AIR: THE MINIMUM OUTSIDE AIR POSITION OF THE OUTSIDE AIR, RETURN AIR, AND RELIEF AIR DAMPERS SHALL BE CALIBRATED DURING TEST AND BALANCE.

8.3 ECONOMIZER: THE CONTROL SYSTEM SHALL MODULATE THE OUTSIDE AIR, RETURN AIR, AND RELIEF AIR DAMPERS TO MAINTAIN MIXED AIR TEMPERATURE AT 55 DEGREES F (ADJUSTABLE SETPOINT).

8.4 HIGH LIMIT LOCK OUT: WHEN THE OUTSIDE AIR TEMPERATURE EXCEEDS 67 DEGREES F (ADJUSTABLE SETPOINT) THE ECONOMIZER CONTROLS SHALL BE DISABLED.

JOB: BUILDING: 501D AND 502F	POINT LEGEND	SYSTEM OUTPUTS	SYSTEM INPUTS		SYSTEM SOFTWARE/CONTROL		PAGE:
			BINARY	ANALOG	ALARM PROCESSING	APPLICATION/FUNCTION	
SYSTEM: VAV AIR HANDLER							
SYSTEM COMPONENT:	POINT ID	ABBREVIATION	EXTERNAL/LOCAL/TERMINATE NO.	EXTERNAL/LOCAL/TERMINATE NO.	EXTERNAL/LOCAL/TERMINATE NO.	EXTERNAL/LOCAL/TERMINATE NO.	REMARKS
Return air Humidity	AI-1	RAT					
Return air Humidity	AI-2	RAH					
Return Air Flow (cfm)	AI-3	RAF					
Mixed Air Temperature	AI-4	MAT					
Pre-Heat Temperature	AI-5	PHT					
Cooling Coil Temperature	AI-6	CCT					
Discharge Air Temperature	AI-7	DAT					
Discharge Static Pressure	AI-8	DASP					
Discharge Air Humidity	AI-9	DAH					
Supply Air Flow (cfm)	AI-10	SAF					
OUTSIDE AIR TEMPERATURE	AI-11	OAT					
OUTSIDE AIR FLOW (CFM)	AI-12	OAF					
RETURN FAN STATUS	BI-2	RF-ST5					
SUPPLY FAN STATUS	BI-3	SF-ST5					
MIXED AIR LOW LIMIT	BI-4	TSL-1					
STATIC PRESSURE HIGH LIMIT	BI-5	SPS-2					
HUMIDITY HIGH LIMIT	BI-6	HHL					
SUPPLY FAN VSMC ALARM	BI-7	SF-ALA					
RETURN FAN VSMC ALARM	BI-8	RF-ALA					
RETURN FAN VSMC	AO-1	RF-SPD					FULL COMMUNICATION
SUPPLY FAN VSMC	AO-2	SF-SPD					FULL COMMUNICATION
OUTSIDE AIR DAMPER	AO-3	OAD					
RETURN AIR DAMPER	AO-4	RAD					
EXHAUST AIR DAMPER	AO-5	EAD					
MINIMUM OUTSIDE AIR DAMPER	AO-7	MIN-OAD					
PRE-HEAT VALVE V-2	AO-8	PHT-V1					
COILING VALVE V-1	AO-9	CLG-V1					
HUMIDIFIER VALVE V-4	AO-10	HUM-V4					
RETURN FAN START/STOP	BO-1	RF-SST					
SUPPLY FAN START/STOP	BO-2	SF-SST					
HUMIDIFIER ISOLATION VALVE V-3	BO-3	HUM-ISO-V3					

POINTS LIST FOR VAV AIR HANDLING UNIT WITH OUTSIDE AIR



SEQUENCE OF OPERATION FOR INLINE PUMPS

- PUMP OPERATION:

DURING SCHEDULED OCCUPIED HOURS PROVIDED BY A LOCAL SCHEDULER SIGNAL, WITH THE HAND-OFF-AUTO SWITCH IN THE AUTO POSITION, THE COOLING SYSTEM PUMP SHALL BE TURNED ON WHEN THE COOLING COIL HAS CALLED FOR COOLING FOR 15 MINUTES (ADJUSTABLE) OR LONGER.

THE PUMP SHALL BE TURNED OFF WHEN THE COOLING COIL IS NOT CALLING FOR COOLING FOR 15 MINUTES (ADJUSTABLE) OR LONGER.

UNOCCUPIED MODE:

DURING UNOCCUPIED HOURS THE CONTROL SYSTEM SHALL TURN ON THE LEAD PUMP WHENEVER ANY SPACE IS 85 F (ADJUSTABLE) OR GREATER. DURING UNOCCUPIED HOURS ONCE ACTIVATED THE CONTROL SYSTEM SHALL DISABLE THE LEAD PUMP WHENEVER ALL SPACES ARE BELOW 80 F (ADJUSTABLE).

PUMP ROTATION:

THE CONTROL SYSTEM SHALL OPERATE THE PUMPS AS LEAD AND LAG ON A WEEKLY BASIS (ADJUSTABLE).

PUMP SPEED CONTROL:

THE CONTROL SYSTEMS SHALL MODULATE THE PUMP SPEED TO MAINTAIN A SYSTEM DIFFERENTIAL PRESSURE SETPOINT. SETPOINT TO BE DETERMINED AT TEST AND BALANCE.

WHEN CHILLED WATER PUMPS ARE AT MINIMUM SPEED THE CONTROL SYSTEM SHALL MODULATE THE BYPASS VALVE TO MAINTAIN MINIMUM FLOW THROUGH THE CHILLER (60 GPM). MINIMUM FLOW SHALL BE DETERMINED BY THE PRESSURE DROP ACROSS THE CHILLER EVAPORATOR BUNDLE.

FREEZE PROTECTION MODE:

THE CONTROL SYSTEM SHALL TURN ON THE LEAD PUMP AND RUN IT AT FULL SPEED WHENEVER THE OUTDOOR AIR IS BELOW 38 F (ADJUSTABLE) FOR 15 MINUTES. THE CONTROL SYSTEM SHALL TURN OFF THE LEAD PUMP WHENEVER THE OUTDOOR AIR RAISE ABOVE 38 F (ADJUSTABLE).

CHILLED WATER PUMP CONTROL DIAGRAM (PMP-1/PMP-2)

Revisions:

Date:

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CONSTRUCT DOM CLINIC AND CLC ADMINISTRATION ADDITION

Location:

MARTINSBURG, WV

Date:

JUNE 27, 2018

Checked:

WAW

Drawn:

WNW

Project Number:

613-121

Building Number:

501D & 502F

Drawing Number:

M701

Dwg. of

BID DOCUMENTS

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