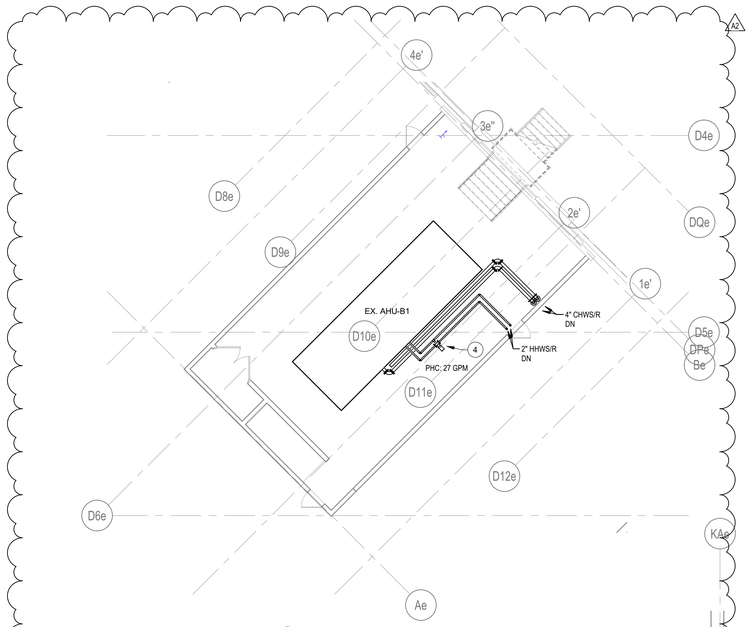
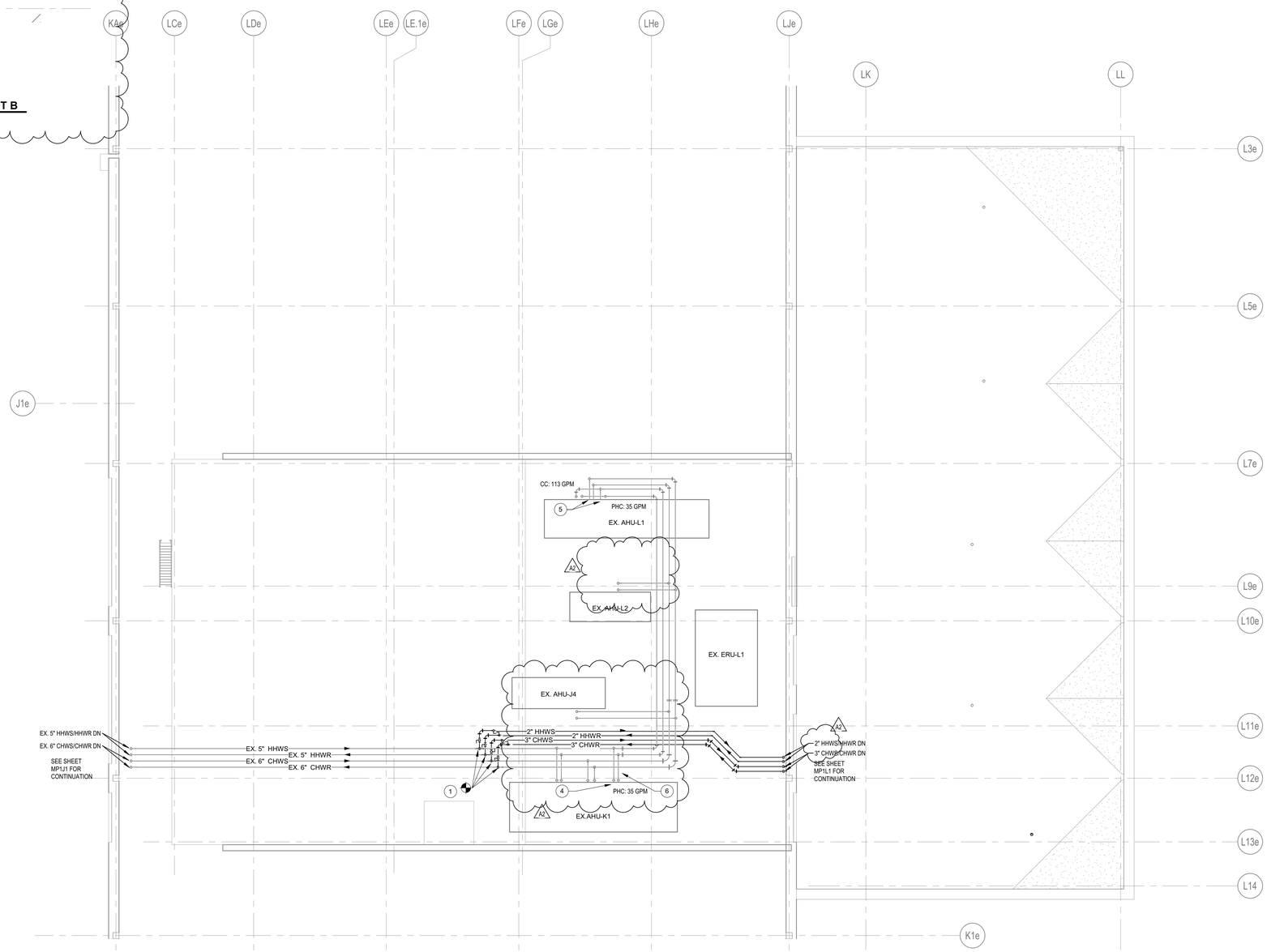
MECHANICAL PIPING PLAN NOTES

#	NOTE
1	CONNECT NEW CHILLED AND HEATING HOT-WATER PIPING TO EXISTING IN THIS LOCATION. PROVIDE VALVE AT EACH CONNECTION.
2	CONNECT NEW 3/4" HEATING HOT-WATER PIPING TO EXISTING 1" HEATING HOT-WATER PIPING IN THIS LOCATION. PROVIDE VALVE AT EACH CONNECTION.
3	THERMOSTAT NOT INSTALLED AT STANDARD HEIGHT. COORDINATE WITH OWNER ON HEIGHT PRIOR TO INSTALL.
4	CONVERT EXISTING 3-WAY VALVE COIL CONNECTION TO 2-WAY. BALANCE WITH AUTOFLOW VALVE CARTRIDGE TO VALUE INDICATED.
5	CONVERT EXISTING 2-WAY VALVE COIL CONNECTION TO 3-WAY. BALANCE WITH AUTOFLOW VALVE CARTRIDGE TO VALUE INDICATED.
6	REPLACE EXISTING 2-1/2" BUTTERFLY VALVE ON HEATING HOT-WATER PIPING NEAR AHU.



5D SECOND FLOOR HVAC PIPING PLAN - UNIT B
1/8" = 1'-0"



2A SECOND FLOOR HVAC PIPING PLAN - UNIT L
1/8" = 1'-0"

SCHMIDT ASSOCIATES
415 Massachusetts Avenue
Indianapolis, IN 46204
www.schmidt-arch.com

Project No. 2019-030.MSA
Project Date 05.18.2020
Produced CDH / AM

SARAH KATHLEEN HEMPSTEAD REGISTERED NO. AR10400134 STATE OF INDIANA ARCHITECT

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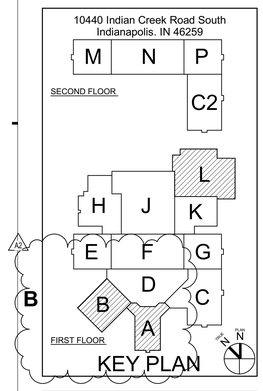
#	Revision	Date
A2	Addendum #2	06.09.2020

10440 Indian Creek Road South
Indianapolis. IN 46259



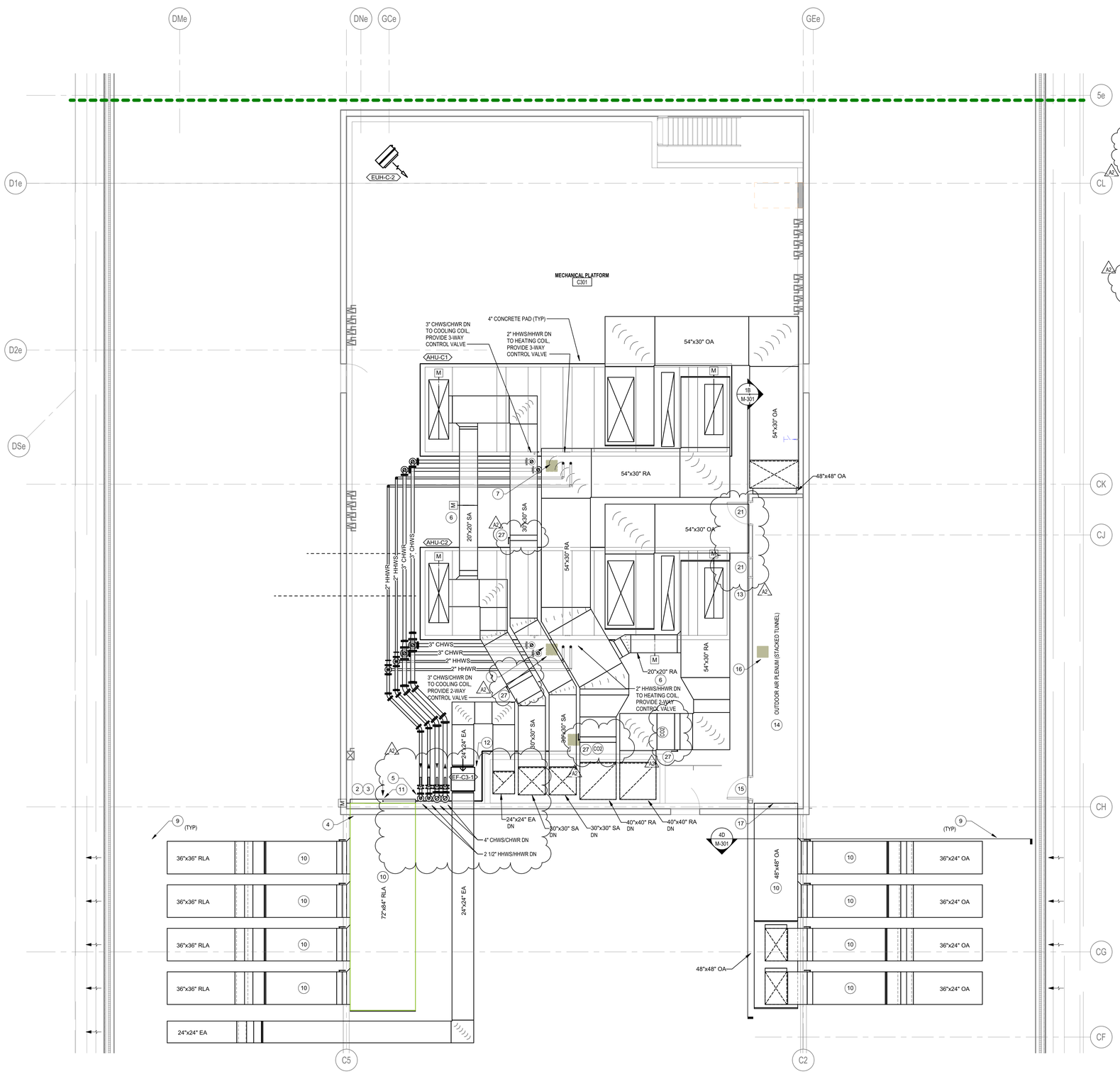
KEY PLAN

Franklin Township Community School Corporation

FRANKLIN CENTRAL JUNIOR HIGH SCHOOL

SECOND FLOOR HVAC PIPING PLAN - UNIT B AND UNIT L

MP1L2



2A MECHANICAL CLASSROOM ADDITION PENTHOUSE PLAN
1/4" = 1'-0"

ENLARGED HVAC PLAN NOTES

#	NOTE
1	PROVIDE BUBBLE-TIGHT, HIGH PERFORMANCE DAMPER AT CONNECTION TO SUPPLY MAIN.
2	MOTORIZED DAMPER FOR RELIEF AIR STRATEGY. CONNECT DAMPER TO RELIEF AIR AS PART OF TCC SEQUENCE. DAMPER AND ACTUATOR SHALL BE ACCESSIBLE FOR SERVICE.
3	PROVIDE 1/2" X 1/2" MESH SCREEN OVER OPENING.
4	TRANSITION BOTH DUCTS INTO ONE DUCT AT THIS LOCATION.
5	PIPING SHALL ENTER ROOM WITH BOTTOM OF PIPE AT 12" AFF. OFFSET UP TO BOTTOM OF CEILING. PROVIDE VALVE IN VERTICAL PIPE.
6	AHU DUCTWORK BYPASS. REFER TO M-700 SERIES DRAWINGS FOR SEQUENCE.
7	PROVIDE CONDENSATE P-TRAP FOR COOLING COIL. ROUTE TO NEARBY FLOOR DRAIN.
8	BLANK OFF REMAINING SECTION OF LOUVER.
9	PROVIDE LOUVER PLENUM BEHIND LOUVER. CONNECT DUCT TO LOUVER PLENUM. PROVIDE SEALED TIGHT CONNECTION.
10	DUCTWORK SHALL SLOPE BACK TO MECHANICAL PLATFORM.
11	PROVIDE DRAIN CONNECTION FROM DUCT TO FLOOR DRAIN. PROVIDE 3/4" PIPING WITH TRAP AT DUCT CONNECTION.
12	INSTALL TOP OF EXHAUST FAN BELOW BOTTOM OF ADJACENT PIPING FOR PROPER ACCESS.
13	MAINTAIN MINIMUM 24 INCHES BETWEEN EDGE OF AHU AND OUTDOOR AIR PLENUM.
14	OUTDOOR AIR PLENUM (STACKED TUNNEL) INSULATED METAL PANEL SYSTEM. PROVIDE FULL HEIGHT SYSTEM (DOUBLE STACKED, 1 PER UNIT). PROVIDE CONTINUOUS CONCRETE CURB AROUND SYSTEM. SEAL ALL JOINTS AND CONNECTIONS TO FLOOR AND CEILING.
15	TWO (2) 24" X 48" ACCESS DOORS, ONE PER TUNNEL (STACKED).
16	PROVIDE 3/4" DRAIN FROM UPPER TUNNEL DOWN TO FLOOR DRAIN.
17	CONNECT OUTDOOR AIR DUCT TO INSULATED METAL PANEL SYSTEM, IN THIS LOCATION.
18	PROVIDE VAV BOX WITH 3'-0" SECTION OF SOUND ATTENUATION. COORDINATE WITH VAV BOX SCHEDULE.
19	PROVIDE NEW PRIMARY-SECONDARY PIPING SYSTEM WITH NEW BOILER PUMPS. REFER TO DETAIL 1E/M-502 FOR PIPING SCOPE OF WORK.
20	REPLACE/UPGRADE EXISTING REFRIGERANT MONITORING SYSTEM (REFRIGERANT R-123A). MANUFACTURER TO BE CHILLGUARD OR APPROVED EQUAL.
21	ONE (1) 20" X 48" ACCESS DOOR AND ONE (1) 24" X 48" ACCCESS DOOR. SMALLER DOOR FOR UPPER TUNNEL.
22	INSTALL PIPING AND CONDUIT ON BIG FOOT SYSTEMS MODEL H FRAME SET. INSTALL PIPING AND CONDUIT AT AN ELEVATION PER CHILLER MANUFACTURER'S RECOMMENDATIONS REGARDING PIPING REQUIREMENTS BETWEEN INDOOR EVAPORATOR AND CHILLER. INSTALL SUPPORTS AT EVERY 5 FEET. INSTALL CONCRETE BLOCK UNDER EACH SUPPORT. INSTALL 2 INCH FLEXIBLE ELASTOMERIC INSULATION AROUND ALL EXTERIOR REFRIGERANT PIPING. INSTALL ALUMINUM JACKET AROUND INSULATION AND INSTALL POLYISOCYANURATE THERMAL INSERTS AT SUPPORT LOCATIONS.
23	INSTALL PIPING AND CONDUIT CONNECTIONS THROUGH CHILLER TO REFRIGERANT, ELECTRICAL, AND CONTROLS CONNECTIONS IN CHILLER. PENETRATE THROUGH KNOCK-OUT HOLES IN LOUVERED PANEL.
24	ALL INTERLOCKING WIRING REQUIRED BY THE MANUFACTURER BETWEEN THE INDOOR EVAPORATOR AND OUTDOOR CONDENSING UNIT ARE THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR. VERIFY ALL CONNECTIONS WITH MANUFACTURER PRIOR TO INSTALLATION. MAINTAIN MANUFACTURER REQUIRED SERVICE CLEARANCE ON ALL SIDES OF UNIT.
25	RECONNECT RELIEF TO EXISTING RELIEF VENT.
26	MAINTAIN MINIMUM CLEARANCE REQUIREMENTS ON ALL SIDES OF CHILLER. VERIFY WITH MANUFACTURER
27	MANUAL BALANCE DAMPER FOR BYPASS STRATEGY. BALANCE TO AIRFLOW PER OWNER'S REQUIREMENTS.

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SARAH KATHLEEN HEMPSTEAD REGISTERED NO. AR10400134 STATE OF INDIANA ARCHITECT

Sarah K Hempstead

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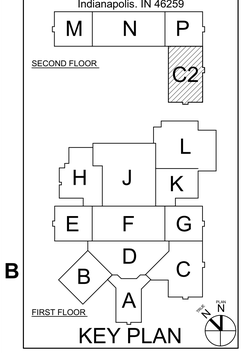


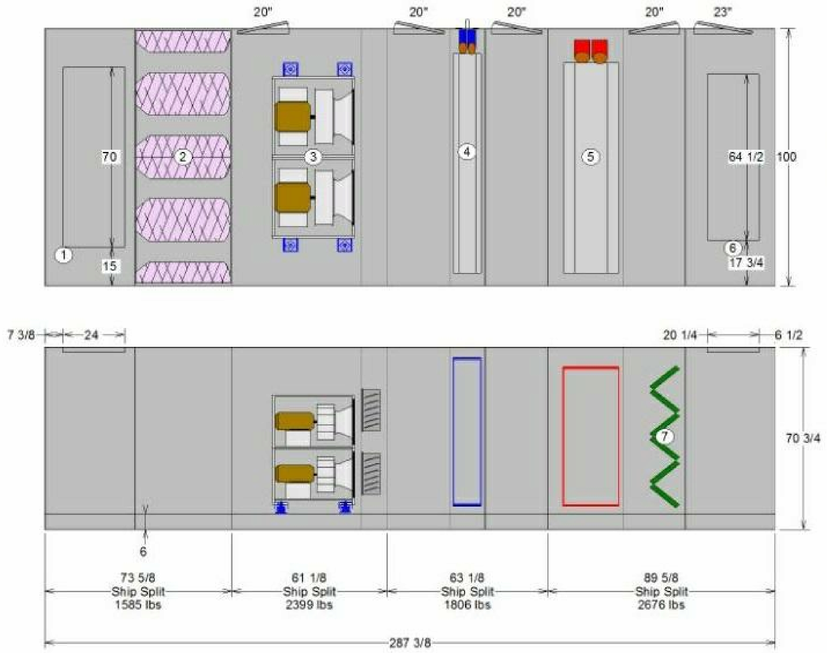
KEY PLAN

Franklin Township Community School Corporation

FRANKLIN CENTRAL JUNIOR HIGH SCHOOL

MECHANICAL ENLARGED PLANS

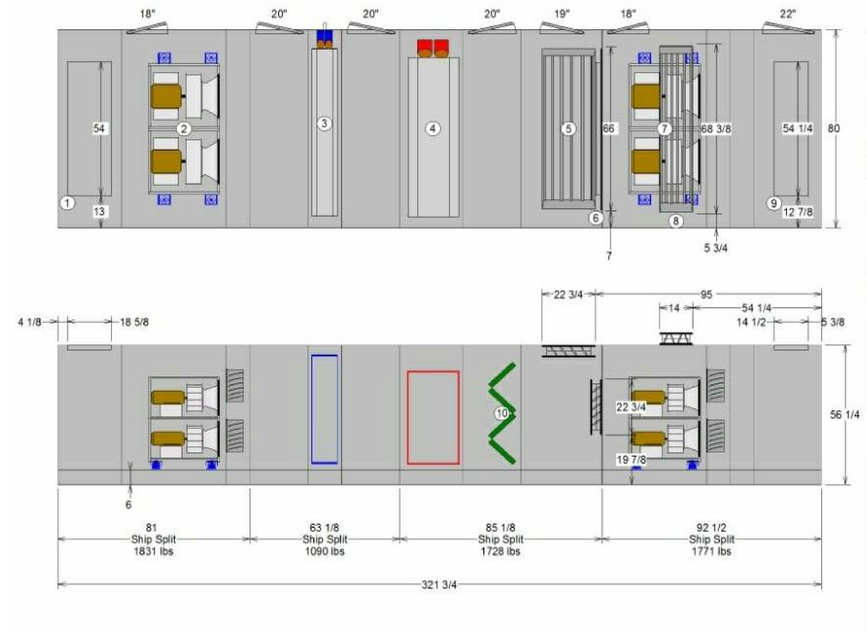
M-401



1 Opening top
70 x 24
2 Silencer
3 Plenum fan - 16.5in. dd
plenum, full width, M press
Supply fan 7.5 hp 460/3
Backdraft damper
4 Cooling coil - 8 Coil type
UU
5 Heating coil - Coil type
6 Opening top
64.5 x 20.25
7 Angled filters - Pleated
media - MERV 8

Doors
20 width x 61 height
23 width x 61 height

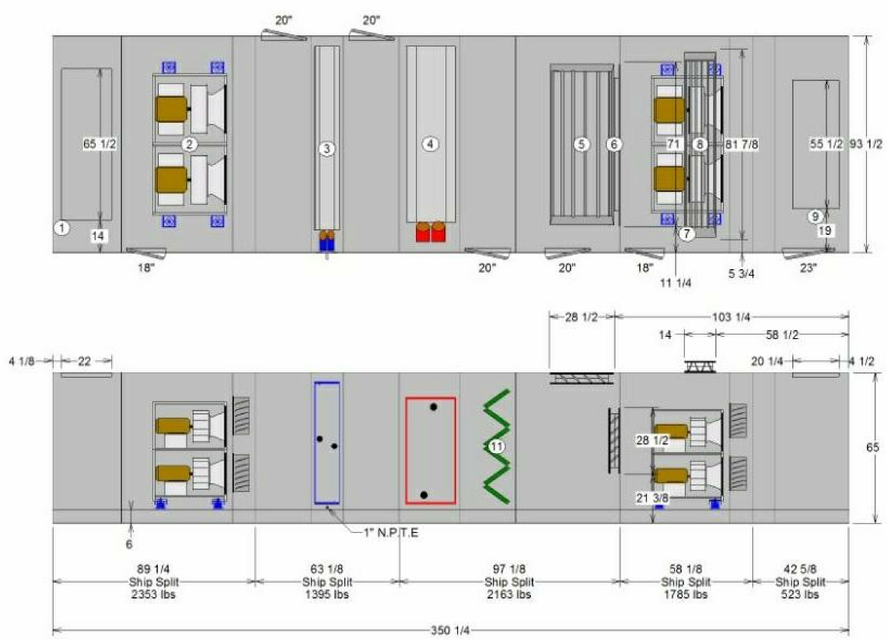
5C AHU-H1 DETAIL
NOT TO SCALE



1 Opening top
54 x 18.667
2 Plenum fan - 13.5in. dd
plenum, full width, M press
Supply fan 3 hp 460/3
Backdraft damper
3 Cooling coil - 8 Coil type
UU
4 Heating coil - Coil type
5 Damper top-parallel blade
66 x 22.75
6 Damper back-parallel
blade
22.75 x 66
7 Plenum fan - 13.5in. dd
plenum, full width, M press
Return fan 1 hp 460/3
Backdraft damper
8 Damper top
68.375 x 14
9 Opening top
54.25 x 14.5
10 Angled filters - Pleated
media - MERV 8

Doors
18 width x 46 height
20 width x 46 height
19 width x 46 height
22 width x 46 height

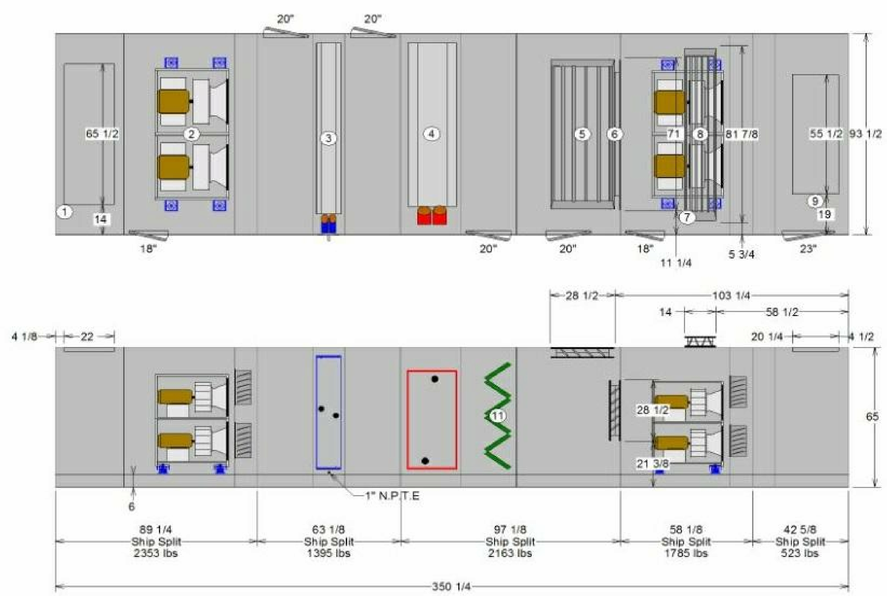
2C AHU-L3 DETAIL
NOT TO SCALE



1 Opening top
65.45 x 22
2 Plenum fan - 16.5in. dd
plenum, full width, M press
Supply fan 7.5 hp 460/3
Backdraft damper
3 Cooling coil - 8 Coil type
UU
4 Heating coil - Coil type
5 Damper top-parallel blade
71 x 28.5
6 Damper back-parallel
blade
28.5 x 71
7 Plenum fan - 15in. dd
plenum, full width, M press
Return fan 5 hp 460/3
Backdraft damper
8 Damper top
81.875 x 14
9 Opening top
55.5 x 20.25
10 1" N.P.T.E
11 Angled filters - Pleated
media - MERV 8

Doors
18 width x 55 height
20 width x 55 height
23 width x 55 height

5A AHU-C1 DETAIL
NOT TO SCALE



1 Opening top
65.45 x 22
2 Plenum fan - 16.5in. dd
plenum, full width, M press
Supply fan 7.5 hp 460/3
Backdraft damper
3 Cooling coil - 8 Coil type
UU
4 Heating coil - Coil type
5 Damper top-parallel blade
71 x 28.5
6 Damper back-parallel
blade
28.5 x 71
7 Plenum fan - 15in. dd
plenum, full width, M press
Return fan 5 hp 460/3
Backdraft damper
8 Damper top
81.875 x 14
9 Opening top
55.5 x 20.25
10 1" N.P.T.E
11 Angled filters - Pleated
media - MERV 8

Doors
18 width x 55 height
20 width x 55 height
23 width x 55 height

2A AHU-C2 DETAIL
NOT TO SCALE

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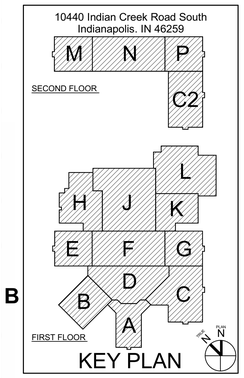

KEY PLAN

Franklin Township Community School Corporation

FRANKLIN CENTRAL JUNIOR HIGH SCHOOL

AHU DETAILS

M-504

VAV BOX WITH HOT WATER REHEAT SCHEDULE

IDENTITY DATA				AIRFLOW DATA					REHEAT COIL DATA										
MARK	MANUFACTURER	MODEL	INLET DIAMETER	COOLING MAX AIRFLOW (CFM)	HEATING MAX AIRFLOW (CFM)	OCCUPIED MINIMUM AIRFLOW (CFM)	MAX N.C. DISCHARGED	MAX N.C. RADIATED	CAPACITY (BTUH)	EAT (°F)	LAT (°F)	APD (IN W.G.)	FLOW (GPM)	EWT (°F)	LWT (°F)	WPD (FT-WG)	ROWS	NOTES
TC1-01	PRICE	SDV	12"	1,400	1,050	420	30	30	45,360	55	95	0.50	3.50	160	130	2.47	2	1-3
TC1-02	PRICE	SDV	10"	900	675	270	30	30	29,160	55	95	0.40	2.00	160	130	0.97	2	1-3
TC1-03	PRICE	SDV	10"	1,000	750	300	30	30	32,400	55	95	0.48	2.50	160	130	1.15	2	1-3
TC1-04	PRICE	SDV	10"	900	675	270	30	30	29,160	55	95	0.40	2.00	160	130	0.97	2	1-3
TC1-05	PRICE	SDV	9"	600	450	180	30	30	19,440	55	95	0.19	1.50	160	130	0.51	2	1-3
TC1-06	PRICE	SDV	10"	900	675	270	30	30	29,160	55	95	0.40	2.00	160	130	0.97	2	1-3
TC1-07	PRICE	SDV	9"	800	600	240	30	30	25,920	55	95	0.32	2.00	160	130	0.80	2	1-3
TC1-08	PRICE	SDV	9"	800	600	240	30	30	25,920	55	95	0.32	2.00	160	130	0.80	2	1-3
TC1-09	PRICE	SDV	9"	600	450	180	30	30	19,440	55	95	0.19	1.50	160	130	0.51	2	1-3
TC1-10	PRICE	SDV	10"	900	675	270	30	30	29,160	55	95	0.40	2.00	160	130	0.97	2	1-3
TC1-11	PRICE	SDV	10"	800	600	240	30	30	25,920	55	95	0.32	2.00	160	130	0.80	2	1-3
TC1-12	PRICE	SDV	10"	1,000	750	300	30	30	32,400	55	95	0.48	2.50	160	130	1.15	2	1-3
TC1-13	PRICE	SDV	10"	900	675	270	30	30	29,160	55	95	0.40	2.00	160	130	0.97	2	1-3
TC1-14	PRICE	SDV	10"	900	675	270	30	30	29,160	55	95	0.40	2.00	160	130	0.97	2	1-3
TC1-15	PRICE	SDV	7"	500	375	150	30	30	16,200	55	95	0.46	1.50	160	130	0.30	2	1-3
TC1-16	PRICE	SDV	4"	200	150	60	30	30	6,480	55	95	0.09	0.50	160	130	0.05	2	1-3
TC1-17	PRICE	SDV	9"	800	600	240	30	30	25,920	55	95	0.32	2.00	160	130	0.80	2	1-3

VAV BOX WITH HOT WATER REHEAT SCHEDULE NOTES:
1. CONTRACTOR TO VERIFY EXACT INLET SIZE PRIOR TO ANY DUCTWORK FABRICATION.
2. CONTRACTOR TO VERIFY LEFT-HAND VS RIGHT HAND CONFIGURATION PRIOR TO ORDERING. BOX CONTROL PANEL SHALL HAVE MINIMUM 3'-0" CLEARANCE. BOX TO HAVE 3/4 INCH FIBER FREE INSULATION.
3. HEATING AIRFLOWS BASED OFF OF 75% COOLING AIRFLOW. MINIMUM AIRFLOWS BASED OFF OF 30% COOLING AIRFLOW.
4. PROVIDE WITH 3'-0" SOUND ATTENUATOR SECTION FROM VAV BOX MANUFACTURER.

A2

VAV BOX WITH HOT WATER REHEAT SCHEDULE

IDENTITY DATA				AIRFLOW DATA					REHEAT COIL DATA										
MARK	MANUFACTURER	MODEL	INLET DIAMETER	COOLING MAX AIRFLOW (CFM)	HEATING MAX AIRFLOW (CFM)	OCCUPIED MINIMUM AIRFLOW (CFM)	MAX N.C. DISCHARGED	MAX N.C. RADIATED	CAPACITY (BTUH)	EAT (°F)	LAT (°F)	APD (IN W.G.)	FLOW (GPM)	EWT (°F)	LWT (°F)	WPD (FT-WG)	ROWS	NOTES
TC2-01	PRICE	SDV	14"	1,500	1,125	450	30	30	48,600	55	95	0.28	3.50	160	130	1.57	2	1-3
TC2-02	PRICE	SDV	14"	1,500	1,125	450	30	30	48,600	55	95	0.28	3.50	160	130	1.57	2	1-3
TC2-03	PRICE	SDV	10"	900	675	270	30	30	29,160	55	95	0.40	2.00	160	130	0.97	2	1-3
TC2-04	PRICE	SDV	9"	800	600	240	30	30	25,920	55	95	0.32	2.00	160	130	0.80	2	1-3
TC2-05	PRICE	SDV	10"	900	675	270	30	30	29,160	55	95	0.40	2.00	160	130	0.97	2	1-3
TC2-06	PRICE	SDV	9"	600	450	180	30	30	19,440	55	95	0.19	1.50	160	130	0.51	2	1-3
TC2-07	PRICE	SDV	9"	800	600	240	30	30	25,920	55	95	0.32	2.00	160	130	0.80	2	1-3
TC2-08	PRICE	SDV	10"	900	675	270	30	30	29,160	55	95	0.40	2.00	160	130	0.97	2	1-3
TC2-09	PRICE	SDV	9"	600	450	180	30	30	19,440	55	95	0.19	1.50	160	130	0.51	2	1-3
TC2-10	PRICE	SDV	10"	1,000	750	300	30	30	32,400	55	95	0.48	2.50	160	130	1.15	2	1-3
TC2-11	PRICE	SDV	10"	900	675	270	30	30	29,160	55	95	0.40	2.00	160	130	0.97	2	1-3
TC2-12	PRICE	SDV	10"	900	675	270	30	30	29,160	55	95	0.40	2.00	160	130	0.97	2	1-3
TC2-13	PRICE	SDV	10"	900	675	270	30	30	29,160	55	95	0.40	2.00	160	130	0.97	2	1-3
TC2-14	PRICE	SDV	4"	250	190	75	30	30	8,208	55	95	0.13	1.00	160	130	0.08	2	1-3
TC2-15	PRICE	SDV	4"	200	150	60	30	30	6,480	55	95	0.09	0.50	160	130	0.05	2	1-3
TC2-16	PRICE	SDV	9"	800	600	240	30	30	25,920	55	95	0.32	2.00	160	130	0.80	2	1-3
TH1-08	PRICE	SDV	12"	1,200	900	360	30	30	38,880	55	95	0.37	3.00	160	130	1.91	2	1-3
TH1-09	PRICE	SDV	16"	2,700	2,025	810	30	30	87,480	55	95	0.25	6.75	160	130	4.00	2	1-3
TL3-01	PRICE	SDV	6"	350	265	105	30	30	11,448	55	95	0.24	1.00	160	130	0.13	2	1-3
TL3-02	PRICE	SDV	24"x16"	4,000	3,000	1,200	30	30	129,600	55	95	0.25	7.75	160	130	6.30	2	1-3
TL3-03	PRICE	SDV	24"x16"	4,500	3,375	1,350	30	30	145,800	55	95	0.10	9.50	160	130	9.25	2	1-3,4
TP1-32	PRICE	SDV	9"	600	450	180	30	30	19,440	55	95	0.19	1.50	160	130	0.51	2	1-3

A2 A2

PUMP SCHEDULE

IDENTITY DATA						FLUID DATA				MOTOR DATA			ELECTRICAL DATA		
MARK	MANUFACTURER	MODEL	SYSTEM SERVED	WEIGHT (LBS)	TYPE	FLUID TYPE	FLOW (GPM)	HEAD (ftH2O)	EFF (%)	BHP	NOM HP	SPEED (RPM)	VOLTS (V)	PHASE	NOTES
	A1				A1					A1					A1
BP-A1	BELL & GOSSETT	XL 45-375	HEATING HOT-WATER	75	CLOSE COUPLED IN-LINE MOUNTED	WATER	150	30	60%	2.08	3	2983	480	3	1
BP-A2	BELL & GOSSETT	XL 45-375	HEATING HOT-WATER	75	CLOSE COUPLED IN-LINE MOUNTED	WATER	150	30	60%	2.08	3	2983	480	3	1
BP-A3	BELL & GOSSETT	XL 45-375	HEATING HOT-WATER	75	CLOSE COUPLED IN-LINE MOUNTED	WATER	150	30	60%	2.08	3	2983	480	3	1
BP-A4	BELL & GOSSETT	XL 45-375	HEATING HOT-WATER	75	CLOSE COUPLED IN-LINE MOUNTED	WATER	150	30	60%	2.08	3	2983	480	3	1
CHWP-A4	BELL & GOSSETT	1510 4 BD	CHILLED WATER	500	BASE MOUNTED END SUCTION	WATER	700	40	81%	8.67	10	1750	480	3	2
CHWP-A5	BELL & GOSSETT	1510 4 BD	CHILLED WATER	500	BASE MOUNTED END SUCTION	WATER	700	40	81%	8.67	10	1750	480	3	2

PUMP SCHEDULE NOTES:
1. PROVIDE WITH EC MOTOR AND EXTERNAL DIAL. PUMP TO BE ON-OFF CONTROL.
2. PUMP CONTROLLED BY VFD.

MODULAR AIR HANDLING UNIT - OVERVIEW SCHEDULE

IDENTITY DATA				CAPACITY		AIRFLOW		UNIT SIZE (IN)			
MARK	MANUFACTURER	LOCATION	AREA SERVED	COOLING (BTU/H)	HEATING (BTU/H)	SUPPLY (CFM)	MIN OSA (CFM)	L	W	H	NOTES
AHU-C1	TRANE	UNIT C MECH PLATFORM	UNIT 1, FIRST FLOOR ADDITION	685,000	492,000	15,000	5,250	29'-2"	7'-10"	5'-5"	1
AHU-C2	TRANE	UNIT C MECH PLATFORM	UNIT 1, SECOND FLOOR ADDITION	685,000	492,000	15,000	5,250	29'-2"	7'-10"	5'-5"	1
AHU-H1	TRANE	UNIT H MECH PLATFORM	UNIT H, NEW & EXISTING	735,000	615,000	16,000	6,400	24'-0"	8'-4"	5'-11"	1
AHU-L3	TRANE	UNIT L MECH ROOM	UNIT L, NEW ADDITION	413,000	345,000	9,000	3,600	26'-10"	6'-8"	4'-9"	1

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MODULAR AIR HANDLING UNIT - OVERVIEW SCHEDULE NOTES:
1. PROVIDE UNIT ON 6 INCH BASE RAIL.

FAN SCHEDULE

IDENTITY DATA			FAN DATA				NOISE CRITERIA		ELECTRICAL DATA					
MARK	MANUFACTURER	MODEL	FAN TYPE	AIRFLOW (CFM)	ESP (IN-WG)	RPM	SONES	DBA	HP	BHP	VOLTS (V)	PHASE	FREQ (HZ)	NOTES
EF-C1-1	GREENHECK	SP-B150	CEILING	150	0.25	1050	3.5	20	0.1	0.05	120	1	60	1
EF-C2-1	GREENHECK	SP-B150	CEILING	150	0.25	1050	3.5	20	0.1	0.05	120	1	60	1
EF-C3-1	GREENHECK	SQ-160-VG	INLINE	3,200	1.00	1433	17	70	2	1.07	208	1	60	2-4
RF-H1	GREENHECK	SQ-160-VG	INLINE	4,000	1.00	1642	22	74	2	1.57	208	1	60	3-4

FAN SCHEDULE NOTES:
1. PROVIDE WITH GRILLE AND INTEGRAL DISCONNECT.
2. PROVIDE WITH FACTORY SHIPPED-LOOSE 120V MOTORIZED BACKDRAFT DAMPER AND ACTUATOR. DAMPER AND ACTUATOR BY MC. WIRING BY EC. FURNISH AND INSTALL END SWITCH TO PROVE DAMPER OPEN POSITION PRIOR TO FAN OPERATION.
3. PROVIDE WITH INTEGRAL DISCONNECT, DIRECT DRIVE/EC MOTOR WITH EXTERNAL DIAL.
4. PROVIDE WITH SUPPORT BRACKETS AND SPRING ISOLATORS.

MODULAR AIR HANDLING UNIT - RETURN FAN SCHEDULE

IDENTITY DATA							SOUND CRITERIA OCTAVE BAND (INLET)								MOTOR DATA					
MARK	MANUFACTURER	AIRFLOW (CFM)	QTY	TYPE	ESP (IN-WG)	TSP (IN-WG)	DRIVE	1	2	3	4	5	6	7	8	HP	BHP	RPM	VOLTS	PH	NOTES
AHU-C1	TRANE	15,000	4	PLENUM	1.85	3.00	DIRECT	80	72	78	90	78	81	80	71	5	3.12	1800	480	3	1
AHU-C2	TRANE	15,000	4	PLENUM	1.70	2.85	DIRECT	81	72	78	89	78	81	80	71	5	3.00	1800	480	3	1
AHU-L3	TRANE	9,000	4	PLENUM	1.00	1.60	DIRECT	75	64	82	80	71	75	71	62	1	0.97	1800	480	3	1

A2

MODULAR AIR HANDLING UNIT - RETURN FAN SCHEDULE NOTES:
1. HP AND BHP INDICATED ARE PER FAN.
2. PROVIDE WITH SHAFT GROUNDING KIT FOR VFD OPERATION.

MODULAR AIR HANDLING UNIT - FILTER SCHEDULE

IDENTITY DATA MARK	TYPE	AIRFLOW (CFM)	FACE AREA (SF)	DEPTH (IN)	APD (IN-WG)	MERV	NOTES
AHU-C1	PLEATED	15,000	56.67	2	0.56	8	1
AHU-C2	PLEATED	15,000	56.67	2	0.56	8	1
AHU-H1	PLEATED	16,000	63.33	2	0.56	8	1
AHU-L3	PLEATED	9,000	33.33	2	0.56	8	1

MODULAR AIR HANDLING UNIT - FILTER SCHEDULE NOTES:
1. APD REPRESENTS DROP THROUGH FILTERS AT MID-LIFE PERIOD.

ELECTRIC HEATER SCHEDULE

IDENTITY DATA					HEATING DATA				ELECTRICAL DATA		
MARK	MANFACTURER	MODEL	TYPE	WEIGHT (LBS)	CAPACITY (KW)	EAT (F)	LAT (F)	AIRFLOW (CFM)	VOLTS	PH	NOTES
EUH-C-1	TRANE	FFCB040	HORIZONTAL DUCTED	130	7.5	40	100	380	480	3	1
EUH-C-2	TRANE	UHEC10	UNIT	100	10	60	105	700	480	3	1,2
EUH-L-1	TRANE	FFEB060	HORIZONTAL RECESSED	130	4.5	60	93	430	480	3	1,3
EUH-L-2	TRANE	UHEC07	UNIT	100	7.5	60	94	700	480	3	1,2

ELECTRIC HEATER SCHEDULE NOTES:
1. PROVIDE WITH FACTORY INSTALLED INTEGRAL DISCONNECT.
2. PROVIDE WITH WALL BRACKETS FOR INSTALLATION.
3. PROVIDE WITH STANDARD FACTORY WHITE DISCHARGE CEILING PLATE.

MODULAR AIR HANDLING UNIT - HEATING COIL SCHEDULE

IDENTITY DATA										HOT WATER COIL				
MARK	HEATING AIRFLOW (CFM)	MIN OSA (CFM)	CAPACITY (BTU/H)	EAT DB (°F)	LAT DB (°F)	ROWS	FPI	APD (IN-WG)	FACE VELOCITY (FPM)	EWT (°F)	LWT (°F)	WPD (FT-WG)	FLOW (GPM)	NOTES
AHU-C1	11,250	5,250	492,000	35	75	3	11	0.75	650	160	130	2.3	25	1-2
AHU-C2	11,250	5,250	492,000	35	75	3	11	0.75	650	160	130	2.3	25	1-2
AHU-H1	12,000	6,400	615,000	28	75	3	11	0.60	577	160	130	4.6	45	1-2
AHU-L3	6750	3,600	345,000	28	85	3	11	0.44	487	160	130	2.8	20	1-2

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MODULAR AIR HANDLING UNIT - HEATING COIL SCHEDULE NOTES:
1. COIL TO BE SIZED FOR 100% WATER, NO GLYCOL.
2. COIL TO BE 'WING' INTERNAL FACE AND BYPASS COIL.

DIFFUSERS, REGISTERS, AND GRILLES

IDENTITY DATA				NECK SIZE	MODULE SIZE			
MARK	DESCRIPTION	MANUFACTURER	MODEL	Ø OR W X W	W	L	MATERIAL/COLOR	NOTES
SDG36/8	SPIRAL DUCT GRILLE	PRICE	SDG	SEE PLANS	36	8	STEEL / P.G. FINISH	2
SDG16/8	SPRIAL DUCT GRILLE	PRICE	SDG	SEE PLANS	16	8	STEEL / P.G. FINISH	2
EC24/24	EGG CRATE RETURN GRILLE	PRICE	80		24	24	ALUMINUM / WHITE	4
RG24/12	LOUVERED FACE RETURN GRILLE	PRICE	630		24	12	STEEL / WHITE	3,5
RG40/14	LOUVERED FACE RETURN GRILLE	PRICE	630		40	14	STEEL / WHITE	3,5
RG48/12	LOUVERED FACE RETURN GRILLE	PRICE	630		48	12	STEEL / WHITE	3,5
RG76/16	LOUVERED FACE RETURN GRILLE	PRICE	630		76	16	STEEL / WHITE	3,5
SD24-6	SQUARE CONE DIFFUSER	PRICE	SCD	6	24	24	STEEL / WHITE	1,6
SD24-8	SQUARE CONE DIFFUSER	PRICE	SCD	8	24	24	STEEL / WHITE	1,6
SD24-10	SQUARE CONE DIFFUSER	PRICE	SCD	10	24	24	STEEL / WHITE	1,6
SD24-12	SQUARE CONE DIFFUSER	PRICE	SCD	12	24	24	STEEL / WHITE	1,6

DIFFUSER, REGISTER, AND GRILLE SCHEDULE NOTES:
1. COORDINATE WITH CEILING TYPE FOR CEILING AIR TERMINAL APPLICATION.
2. PROVIDE WITH INTEGRAL AIR SCOOP FOR BALANCING. PROVIDE WITH PAINT GRIP FINISH FOR FIELD PAINTING BY OTHERS.
3. PROVIDE WITH PAINT GRIP FINISH FOR FIELD PAINTING BY OTHERS.
4. PROVIDE WITH 1/2" X 1/2" X 1/2" GRID.
5. PROVIDE WITH PAINT GRIP FINISH FOR FIELD PAINTING BY OTHERS.
6. COORDINATE WITH PLANS ON DIFFUSERS THAT REQUIRE 2-WAY THROW IN CLASSROOMS.

MODULAR AIR HANDLING UNIT - COOLING COIL SCHEDULE

IDENTITY DATA												CHILLED WATER COIL			
MARK	AIRFLOW (CFM)	MIN OSA (CFM)	TOTAL CAPACITY (BTU/H)	SENSIBLE CAPACITY (BTU/H)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	ROWS	FPI	APD (IN-WG)	FACE VELOCITY (FPM)	EWT (°F)	LWT (°F)	WPD (FT-WG)	FLOW (GPM)	NOTES
AHU-C1	15,000	5,250	685,000	447,000	82	69	55	55	8	11	0.83	650	45	55	9.3	140	1
AHU-C2	15,000	5,250	685,000	447,000	82	69	55	55	8	11	0.83	650	45	55	9.3	140	1
AHU-H1	16,000	6,400	735,000	495,000	83	69	55	54	8	11	0.70	577	45	55	9.6	150	1
AHU-L3	9,000	3,600	413,000	280,000	83	69	55	55	8	11	0.67	487	45	55	3.6	85	1

MODULAR AIR HANDLING UNIT - COOLING COIL SCHEDULE NOTES:
1. COIL TO BE SIZED FOR 100% WATER, NO GLYCOL.

MODULAR AIR HANDLING UNIT - SUPPLY FAN SCHEDULE

IDENTITY DATA							SOUND POWER (OUTLET) OCTAVE BAND								MOTOR DATA					
MARK	AIRFLOW (CFM)	QTY	TYPE	ESP (IN-WG)	TSP (IN-WG)	DRIVE	1	2	3	4	5	6	7	8	HP	BHP	RPM	VOLTS	PH	NOTES
AHU-C1	15,000	4	PLENUM	3.00	6.10	DIRECT	89	88	89	93	90	90	86	79	7.5	6.21	1800	480	3	1-2
AHU-C2	15,000	4	PLENUM	2.75	6.10	DIRECT	88	87	89	93	89	89	86	79	7.5	6.21	1800	480	3	1-2
AHU-H1	16,000	4	PLENUM	2.50	5.00	DIRECT	87	85	87	92	88	89	87	79	7.5	5.52	1800	460	3	1-2
AHU-L3	9,000	4	PLENUM	2.00	4.30	DIRECT	85	84	85	87	85	85	84	78	3.0	2.41	1800	480	3	1-2

A2

MODULAR AIR HANDLING UNIT - SUPPLY FAN SCHEDULE NOTES:
1. HP AND BHP INDICATED ARE PER FAN.
2. PROVIDE WITH SHAFT GROUNDING KIT FOR VFD OPERATION.

SOUND ATTENUATOR SCHEDULE

IDENTITY DATA					DIMENSIONS					MIN. INSERTION LOSSES (BY OCTAVE BAND)								
MARK	MANUFACTURER	MODEL	EQUIPMENT SERVED	AIRFLOW (CFM)	H	W	L	MAX STATIC PRESSURE (IN-WG)	FACE VELOCITY	1	2	3	4	5	6	7	8	NOTES
SA-AHU-L3	PRICE	RM60/8B	AHU-L3 RETURN	9,000	18"	54"	60"	0.11	1,333	7	12	18	26	22	15	11	10	1
SA-RF-H1	PRICE	RM36/9B	AHU-H1 RETURN	3,900	20"	30"	36"	0.04	936	6	8	12	17	14	11	9	7	1

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SOUND ATTENUATOR SCHEDULE NOTES:
1. PROVIDE WITH 2 INCH SLIP INLET AND OUTLET, 22 GA PERFORATED LINER, AND POLYMER FILM MEDIA PROTECTION.

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#	Revision	Date
A1	Addendum #1	06.01.2020
A2	Addendum #2	06.09.2020

10440 Indian Creek Road South
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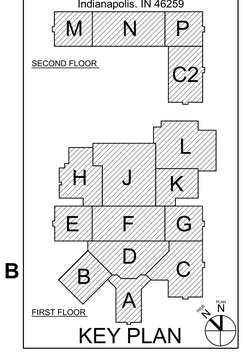


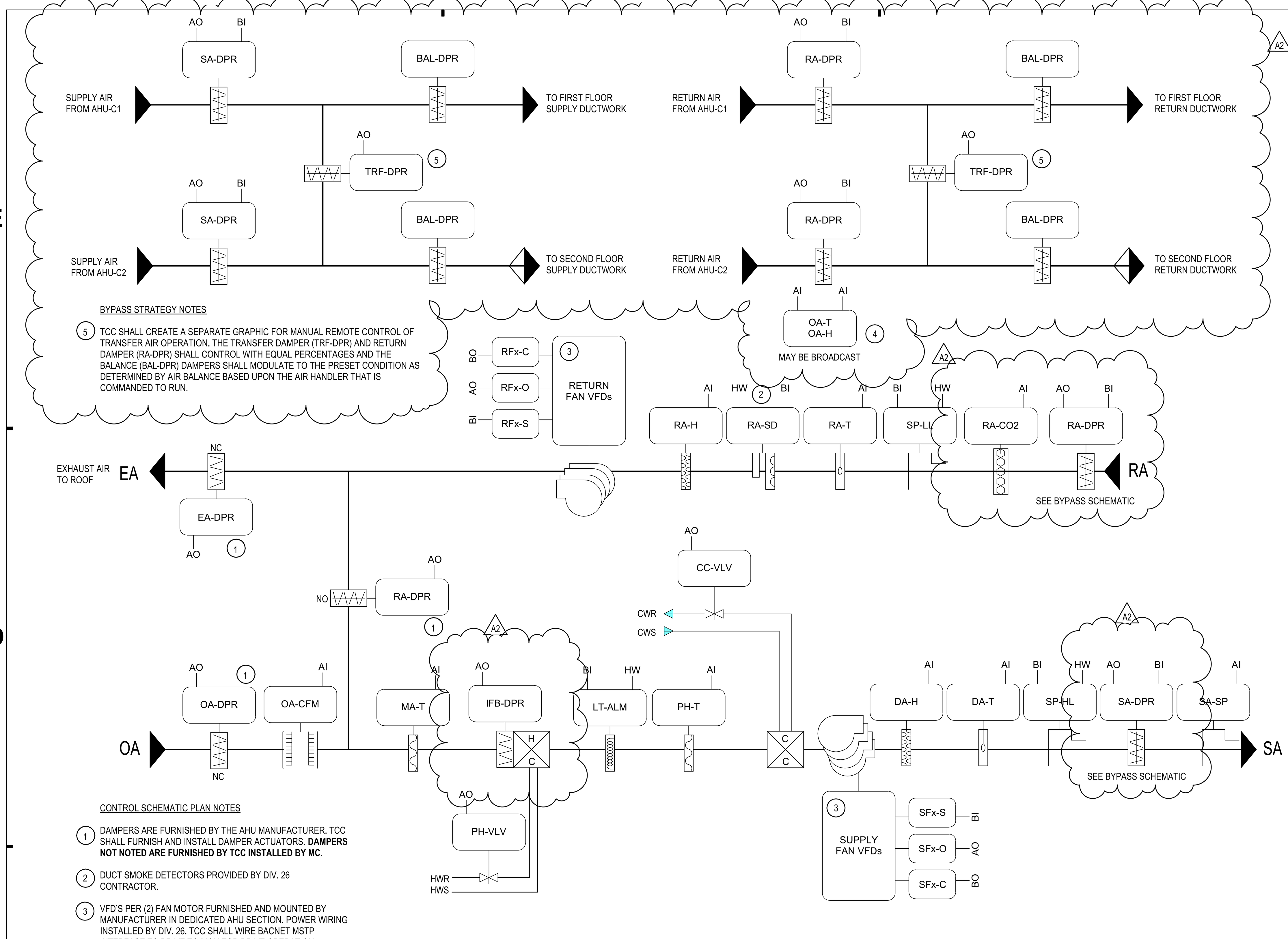
KEY PLAN

Franklin Township Community School Corporation

FRANKLIN CENTRAL JUNIOR HIGH SCHOOL

MECHANICAL SCHEDULES

M-601



BYPASS STRATEGY NOTES

(5) TCC SHALL CREATE A SEPARATE GRAPHIC FOR MANUAL REMOTE CONTROL OF TRANSFER AIR OPERATION. THE TRANSFER DAMPER (TRF-DPR) AND RETURN DAMPER (RA-DPR) SHALL CONTROL WITH EQUAL PERCENTAGES AND THE BALANCE (BAL-DPR) DAMPERS SHALL MODULATE TO THE PRESET CONDITION AS DETERMINED BY AIR BALANCE BASED UPON THE AIR HANDLER THAT IS COMMANDED TO RUN.

CONTROL SCHEMATIC PLAN NOTES

1. DAMPERS ARE FURNISHED BY THE AHU MANUFACTURER. TCC SHALL FURNISH AND INSTALL DAMPER ACTUATORS. **DAMPERS NOT NOTED ARE FURNISHED BY TCC INSTALLED BY MC.**
2. DUCT SMOKE DETECTORS PROVIDED BY DIV. 26 CONTRACTOR.
3. VFD'S PER (2) FAN MOTOR FURNISHED AND MOUNTED BY MANUFACTURER IN DEDICATED AHU SECTION. POWER WIRING INSTALLED BY DIV. 26. TCC SHALL WIRE BACNET MSTP INTERFACE TO DRIVE TO MONITOR DRIVE OPERATION. INTERFACE MUST RESIDE ON THE CONTROLLER BUS AND NOT REQUIRE AN ADDITIONAL ETHERNET DATA DROP.
4. FURNISH AND INSTALL ONE OUTDOOR AIR TEMPERATURE AND HUMIDITY SENSOR WITH SHIELD. THIS VALUE MAY BE BROADCAST IF EXISTING.

	Hardware Points				Software Points						
Point Name	AI	AO	BI	BO	AV	BV	Loop	Sched	Trend	Alarm	Show On Graphic
Outside Air Temperature (OA-T)	x								x		x
Outside Air Humdity (OA-H)	x								x		x
Mixed Air Temperature (MA-T)	x								x		x
Outside Airflow (OA-CFM)	x								x	x	x
Return Air Humidity (RA-H)	x								x		x
Supply Air Humidity (DA-H)	x								x		x
Return Air Temperature (RA-T)	x								x		x
Supply Air Static Pressure (SA-SP)	x								x	x	x
Supply Air Temperature (DA-T)	x								x		x
Preheat Discharge Air Temperature (PH-T)	x								x		x
Return Carbon Dioxide (RA-CO2)	x								x		x
Cooling Valve (CC-VLV)		x							x		x
Preheat Valve (PH-VLV)		x							x		x
Outside Air Damper (OA-DPR)		x							x		x
Return Air Damper (RA-DPR)		x							x		x
Return Fan VFD Speed (RFx-O)		x							x		x
Supply Fan VFD Speed (SFx-O)		x							x		x
Exhaust Damper (EA-DPR)		x							x		x
Transfer Damper (TRF-DPR)		x							x		x
Balance Dampers (BAL-DPR) QTY 2		x							x		x
Return and Supply Damper (SA-DPR,RA-DPR)		x							x		x
Integral Face&Bypass Damper (IFB-DPR)		x							x		x
Freezestat (LT-ALM)			x						x	x	x
High Static Shutdown (SP-HL)			x						x	x	x
Low Static Shutdown (SP-LL)			x						x	x	x
Smoke Detector (RA-SD)			x						x	x	x
Return Fan Status (RFx-S)			x						x		x
Supply Fan Status (SFx-S)			x						x		x
Return Fan Start/Stop (RFx-C)				x					x		x
Supply Fan Start/Stop (SFx-C)				x					x		x

	Hardware Points				Software Points						
Point Name	AI	AO	BI	BO	AV	BV	Loop	Sched	Trend	Alarm	Show On Graphic
Economizer Mixed Air Temp Setpoint					x				x		x
Outside Airflow Setpoint					x				x		x
Supply Air Static Pressure Setpoint					x				x		x
Supply Air Temperature Setpoint					x				x		x
Emergency Shutdown						x			x	x	x
High Mixed Air Temperature						x				x	
High Return Air Humidity						x				x	
High Return Air Temperature						x				x	
High Return Airflow						x				x	
High Supply Air Static Pressure						x				x	
High Supply Air Temperature						x				x	
Low Mixed Air Temperature						x				x	
Low Return Air Humidity						x				x	
Low Return Air Temperature						x				x	
Low Supply Air Temperature						x				x	
Return Fan Failure						x				x	
Return Fan in Hand						x				x	
Return Fan Runtime Exceeded						x				x	
Supply Fan Failure						x				x	
Supply Fan in Hand						x				x	
Supply Fan Runtime Exceeded						x				x	
Occupied								x			

A2

CARBON DIOXIDE CONCENTRATION LEVEL CONTROL: A RETURN AIR CO2 SENSOR SHALL OVERRIDE THE OUTSIDE AIR DAMPER CONTROL TO MAINTAIN THE ADJUSTABLE RETURN AIR CO2 SETPOINT (INITIALLY SET AT 1000PPM). THE DISCHARGE AIR SENSOR SHALL MAINTAIN LOW LIMIT AT 50F.

INTEGRAL FACE AND BYPASS DAMPER CONTROL: ANYTIME THE OUTSIDE AIR TEMPERATURE IS BELOW 38 F (ADJ), THE HEATING COIL SHALL BE FULLY OPEN AND THE DISCHARGE AIR TEMPERATURE (DA-T) SHALL BE MAINTAINED BY MODULATION OF THE INTEGRAL FACE AND BYPASS DAMPER. ANYTIME THE OUTSIDE AIR TEMPERATURE IS ABOVE 39 F (ADJ), THE INTEGRAL FACE AND BYPASS DAMPER DIRECT ALL AIR ACROSS THE PREHEAT COIL AND THE DISCHARGE AIR TEMPERATURE (DA-T) SHALL BE MAINTAINED BY MODULATION OF THE PREHEAT COIL CONTROL VALVE (PH-VLV).

1A CLASSROOM AHU-C1 AND C2
NOT TO SCALE

VARIABLE AIR VOLUME AIR HANDLING UNIT SEQUENCE OF OPERATION

RUN CONDITIONS: CONTINUOUS: THE UNIT SHALL RUN CONTINUOUSLY. THE CONTROL PROGRAMMING SHALL BE CAPABLE OF SEAMLESS TRANSITION TO EMERGENCY POWER AND RETURN OF BUILDING POWER TO ENSURE EQUIPMENT IS PROTECTED AND RECOVER IN A ORDERLY MANNER.

EMERGENCY SHUTDOWN: THE UNIT SHALL SHUT DOWN AND GENERATE AN ALARM UPON RECEIVING AN EMERGENCY SHUTDOWN SIGNAL.
FREEZE PROTECTION: THE UNIT SHALL SHUT DOWN AND GENERATE AN ALARM UPON RECEIVING A FREEZESTAT STATUS.
HIGH STATIC SHUTDOWN: THE UNIT SHALL SHUT DOWN AND GENERATE AN ALARM UPON RECEIVING A HIGH STATIC SHUTDOWN SIGNAL.
SMOKE DETECTION: THE UNIT SHALL SHUT DOWN AND GENERATE AN ALARM UPON RECEIVING A RETURN AIR SMOKE DETECTOR OR FIRE ALARM STATUS.

SUPPLY FAN: THE SUPPLY FAN SHALL RUN ANYTIME THE UNIT IS COMMANDED TO RUN, UNLESS SHUTDOWN ON SAFETIES. TO PREVENT SHORT CYCLING, THE SUPPLY FAN SHALL HAVE A USER DEFINABLE (ADJ.) MINIMUM RUNTIME.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- SUPPLY FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
- SUPPLY FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
- SUPPLY FAN RUNTIME EXCEEDED: STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT (ADJ.).

SUPPLY AIR DUCT STATIC PRESSURE CONTROL: THE CONTROLLER SHALL MEASURE DUCT STATIC PRESSURE AND MODULATE THE SUPPLY FAN VFD SPEED TO MAINTAIN A DUCT STATIC PRESSURE SETPOINT. THE SPEED SHALL NOT DROP BELOW 30% (ADJ.). THE STATIC PRESSURE SETPOINT SHALL BE RESET BASED UPON THE POSITION OF THE ZONE DAMPERS, WITH A GOAL OF REDUCING THE STATIC PRESSURE UNTIL AT LEAST ONE ZONE DAMPER IS NEARLY WIDE OPEN.
- THE INITIAL DUCT STATIC PRESSURE SETPOINT SHALL BE 1.5IN H2O (ADJ.).
- IF NO ZONE DAMPER IS NEARLY WIDE OPEN, THE SETPOINT SHALL RESET DOWN TO A MINIMUM OF 1.3IN H2O (ADJ.) IN 0.1 INCREMENTS OVER A 30 MINUTE (ADJ) PERIOD.
- AS ONE OR MORE DAMPERS NEARS THE WIDE OPEN POSITION, THE SETPOINT SHALL RESET UP TO A MAXIMUM OF 1.8IN H2O (ADJ.) IN 0.1 INCREMENTS OVER A 30 MINUTE (ADJ) PERIOD.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH SUPPLY AIR STATIC PRESSURE: IF THE SUPPLY AIR STATIC PRESSURE IS 25% (ADJ.) GREATER THAN SETPOINT FOR A 5 MINUTE (ADJ) PERIOD.
- LOW SUPPLY AIR STATIC PRESSURE: IF THE SUPPLY AIR STATIC PRESSURE IS 25% (ADJ.) LESS THAN SETPOINT FOR A 5 MINUTE (ADJ) PERIOD.
- SUPPLY FAN VFD FAULT.
- HIGH STATIC AIRFLOW SWITCH: IF THE SUPPLY AIRFLOW HIGH STATIC PRESSURE SWITCH IS ACTIVATED, THE SUPPLY FAN SHALL SHUTDOWN VIA HARDWIRED INTERLOCK AND AN ALARM GENERATED.

RETURN FAN: THE RETURN FAN SHALL RUN WHENEVER THE SUPPLY FAN RUNS.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- RETURN FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
- RETURN FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.
- RETURN FAN RUNTIME EXCEEDED: STATUS RUNTIME EXCEEDS A USER DEFINABLE LIMIT (ADJ.).
- RETURN FAN VFD FAULT.

RETURN AIRFLOW: THE RETURN FAN VFD SHALL MODULATE IN UNISON WITH THE SUPPLY FAN VFD. RETURN AIRFLOW SETPOINT SHALL BE 100% (ADJ.) OF THE SUPPLY AIRFLOW MINUS THE OUTSIDE AIRFLOW SETPOINT (ADJ.). THE RETURN FAN VFD SPEED SHALL NOT DROP BELOW 20% (ADJ.).

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH RETURN AIRFLOW: IF THE RETURN AIRFLOW IS AN 25% (ADJ) GREATER THAN SETPOINT FOR A 5 MINUTE (ADJ) PERIOD.
- LOW RETURN AIRFLOW: IF THE RETURN AIRFLOW IS AN 25% (ADJ) LESS THAN SETPOINT FOR A 5 MINUTE (ADJ) PERIOD.
- LOW STATIC SWITCH: IF THE RETURN AIRFLOW LOW STATIC PRESSURE SWITCH IS ACTIVATED, THE RETURN FAN SHALL SHUTDOWN VIA HARDWIRED INTERLOCK AND AN ALARM GENERATED.

SUPPLY AIR TEMPERATURE SETPOINT - OPTIMIZED: THE CONTROLLER SHALL MONITOR THE SUPPLY AIR TEMPERATURE AND SHALL MAINTAIN A SUPPLY AIR TEMPERATURE SETPOINT RESET BASED ON ZONE COOLING REQUIREMENTS. THE ZONE COOLING REQUIREMENTS ARE DEFINED BY ASSOCIATED SPACES CALLING FOR COOLING WITH SPACE TEMPERATURES ABOVE THE SETPOINT AND DEADBAND.

THE SUPPLY AIR TEMPERATURE SETPOINT SHALL BE RESET FOR COOLING BASED ON ZONE COOLING REQUIREMENTS AS FOLLOWS:
- THE INITIAL SUPPLY AIR TEMPERATURE SETPOINT SHALL BE 55°F (ADJ.).
- AS COOLING DEMAND INCREASES, THE SETPOINT SHALL RESET DOWN TO A MINIMUM OF 53°F (ADJ.) IN 0.5°F INCREMENTS OVER A 30 MINUTE (ADJ) PERIOD.
- AS COOLING DEMAND DECREASES, THE SETPOINT SHALL RESET UP TO A MAXIMUM OF 65°F (ADJ.) IN 0.5°F INCREMENTS OVER A 30 MINUTE (ADJ) PERIOD.

COOLING COIL VALVE: THE CONTROLLER SHALL MEASURE THE SUPPLY AIR TEMPERATURE AND MODULATE THE COOLING COIL VALVE TO MAINTAIN ITS COOLING SETPOINT.

THE COOLING SHALL BE ENABLED WHENEVER:
- OUTSIDE AIR TEMPERATURE IS GREATER THAN 60°F (ADJ.).
- AND THE ECONOMIZER IS DISABLED OR FULLY OPEN.
- AND THE SUPPLY FAN STATUS IS ON.
- AND THE HEATING IS NOT ACTIVE.
- AND CHILLED WATER IS AVAILABLE.

THE COOLING COIL VALVE SHALL OPEN TO 50% (ADJ.) WHENEVER THE FREEZESTAT IS ON.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS 5°F (ADJ.) GREATER THAN SETPOINT.

HEATING COIL VALVE: THE CONTROLLER SHALL MEASURE THE SUPPLY AIR TEMPERATURE AND MODULATE THE HEATING COIL VALVE TO MAINTAIN ITS HEATING SETPOINT.

THE HEATING SHALL BE ENABLED WHENEVER:
- OUTSIDE AIR TEMPERATURE IS LESS THAN 60°F (ADJ.).
- AND THE SUPPLY FAN STATUS IS ON.
- AND THE COOLING IS NOT ACTIVE.
- AND HOT WATER IS AVAILABLE.

THE HEATING COIL VALVE SHALL OPEN WHENEVER:
- SUPPLY AIR TEMPERATURE DROPS BELOW 40°F (ADJ.).
- OR THE FREEZESTAT IS ON.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
LOW SUPPLY AIR TEMP: IF THE SUPPLY AIR TEMPERATURE IS 5°F (ADJ.) LESS THAN SETPOINT.

MINIMUM OUTSIDE AIR VENTILATION: PRIOR TO OCCUPANCY, THE UNIT SHALL PERFORM A FRESH AIR PURGE TO REMOVE SPACE AIR CONTAMINANTS. THE FRESH AIR PURGE SHALL RUN FOR A MINIMUM OF FIVE MINUTES PRIOR TO OCCUPANCY AND DISCHARGE CONDITIONED OUTSIDE AIR. PROVIDE A FLAG TO SIGNAL ASSOCIATED TERMINAL UNITS TO ENTER PURGE MODE AND MONITOR ASSOCIATED TERMINAL UNITS FOR SUCCESSFUL COMPLETION OF THE PURGE. WHEN IN THE OCCUPIED MODE, THE MINIMUM OUTDOOR AIR DAMPER SHALL BE MODULATED TO MAINTAIN THE SCHEDULED MINIMUM OUTSIDE AIR SETPOINT (ADJ) AS READ BY THE OUTSIDE AIR FLOW MEASURING STATION (OA-CFM). THE MINIMUM OUTSIDE AIR DAMPER SHALL BE SUBJECT TO A MIXED AIR TEMPERATURE LOW LIMIT OF 40°F (ADJ).

IF THE ZONE DAMPER TO ONE OR MORE OF THE VARIABLE VOLUME TERMINAL UNITS WITH DEMAND CONTROL VENTILATION ARE CLOSED, THE MINIMUM OUTSIDE AIR VENTILATION RATE SHALL BE DECREASED BY THE SUM OF VENTILATION AIRFLOW RATES TO THE VACANT SPACES. IF THE HIGHEST LEVEL CO2 READING OF THE VARIABLE VOLUME TERMINAL UNITS WITH DEMAND CONTROL VENTILATION EXCEEDS ITS SETPOINT, THE MINIMUM OUTSIDE AIR VENTILATION RATE SHALL BE INCREASED BY THE SUM OF VENTILATION AIRFLOW RATES TO THE OCCUPIED SPACES OVER A 30 MINUTE (ADJ) PERIOD. ECONOMIZER MODE, DESCRIBED BELOW, SHALL OVERRIDE MINIMUM OUTSIDE AIR VENTILATION REQUIREMENTS.

ECONOMIZER: THE CONTROLLER SHALL MEASURE THE MIXED AIR TEMPERATURE AND MODULATE THE MAXIMUM OUTDOOR AIR DAMPER IN SEQUENCE TO MAINTAIN A SETPOINT 2°F (ADJ.) LESS THAN THE SUPPLY AIR TEMPERATURE SETPOINT. THE MAXIMUM OUTSIDE AIR DAMPER SHALL BE SUBJECT TO A MIXED AIR TEMPERATURE LOW LIMIT OF 40°F (ADJ).

THE ECONOMIZER SHALL BE ENABLED WHENEVER:
- OUTSIDE AIR TEMPERATURE IS LESS THAN THE RETURN AIR TEMPERATURE.
- AND THE OUTSIDE AIR ENTHALPY IS LESS THAN THE RETURN AIR ENTHALPY.
- AND THE SUPPLY FAN STATUS IS ON.

THE ECONOMIZER SHALL CLOSE WHENEVER:
- MIXED AIR TEMPERATURE DROPS BELOW 40°F (ADJ.)
- OR THE FREEZESTAT IS ON.
- OR ON LOSS OF SUPPLY FAN STATUS.

WHEN THE UNIT IS OFF OR IN A LOW LIMIT CONDITION THE RETURN AIR DAMPER SHALL BE FULLY OPEN AND OUTDOOR AIR DAMPER SHALL REMAIN CLOSED UNTIL THE MIXED AIR TEMPERATURE RISES ABOVE 45°F (ADJ) AND THE UNIT IS COMMANDED TO RUN.

MIXED AIR TEMPERATURE: THE CONTROLLER SHALL MONITOR THE MIXED AIR TEMPERATURE AND USE AS REQUIRED FOR ECONOMIZER CONTROL OR PREHEATING CONTROL.
ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH MIXED AIR TEMP (ADJ.).
- LOW MIXED AIR TEMP (ADJ.).

RETURN AIR HUMIDITY: THE CONTROLLER SHALL MONITOR THE RETURN AIR HUMIDITY AND USE AS REQUIRED FOR ECONOMIZER CONTROL OR HUMIDITY CONTROL.
ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH RETURN AIR HUMIDITY (ADJ.).
- LOW RETURN AIR HUMIDITY (ADJ.).

RETURN AIR TEMPERATURE: THE CONTROLLER SHALL MONITOR THE RETURN AIR TEMPERATURE AND USE AS REQUIRED FOR SETPOINT CONTROL OR ECONOMIZER CONTROL.
ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH RETURN AIR TEMP (ADJ.).
- LOW RETURN AIR TEMP (ADJ.).

SUPPLY AIR TEMPERATURE: THE CONTROLLER SHALL MONITOR THE SUPPLY AIR TEMPERATURE.
ALARMS SHALL BE PROVIDED AS FOLLOWS:
- HIGH SUPPLY AIR TEMP (ADJ.).
- LOW SUPPLY AIR TEMP (ADJ.).

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Project No. 2019-030.MSA
Project Date 05.18.2020
Produced CDH / DLM

SARAH KATHLEEN HEMPSTEAD REGISTERED NO. AR10400134 STATE OF INDIANA ARCHITECT

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#	Revision	Date
A1	Addendum #1	06.01.2020
A2	Addendum #2	06.09.2020

10440 Indian Creek Road South
Indianapolis. IN 46259

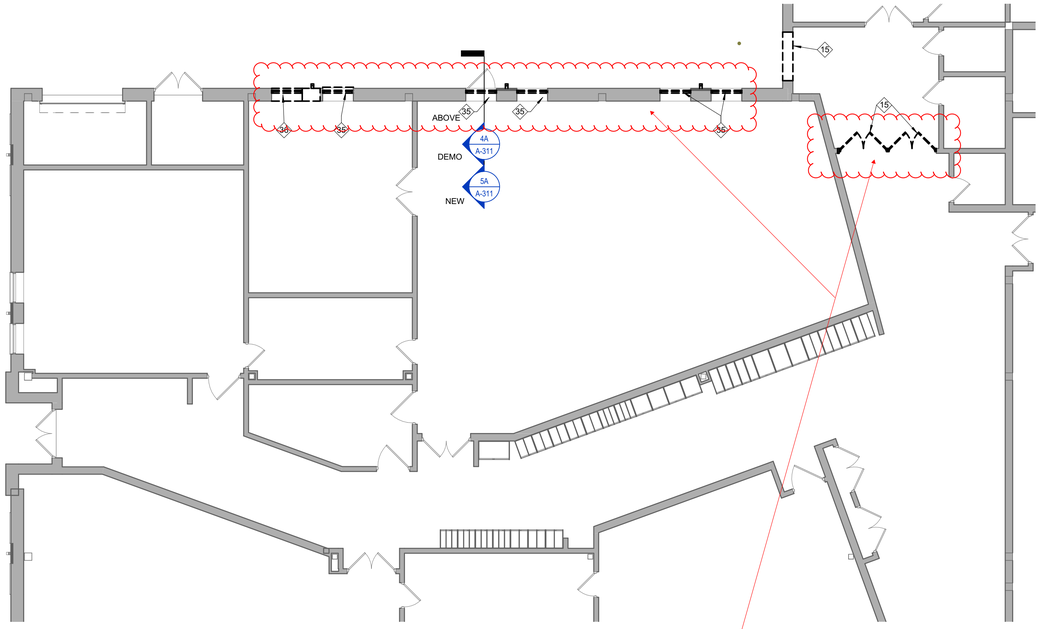
KEY PLAN

Franklin Township Community School Corporation

FRANKLIN CENTRAL JUNIOR HIGH SCHOOL

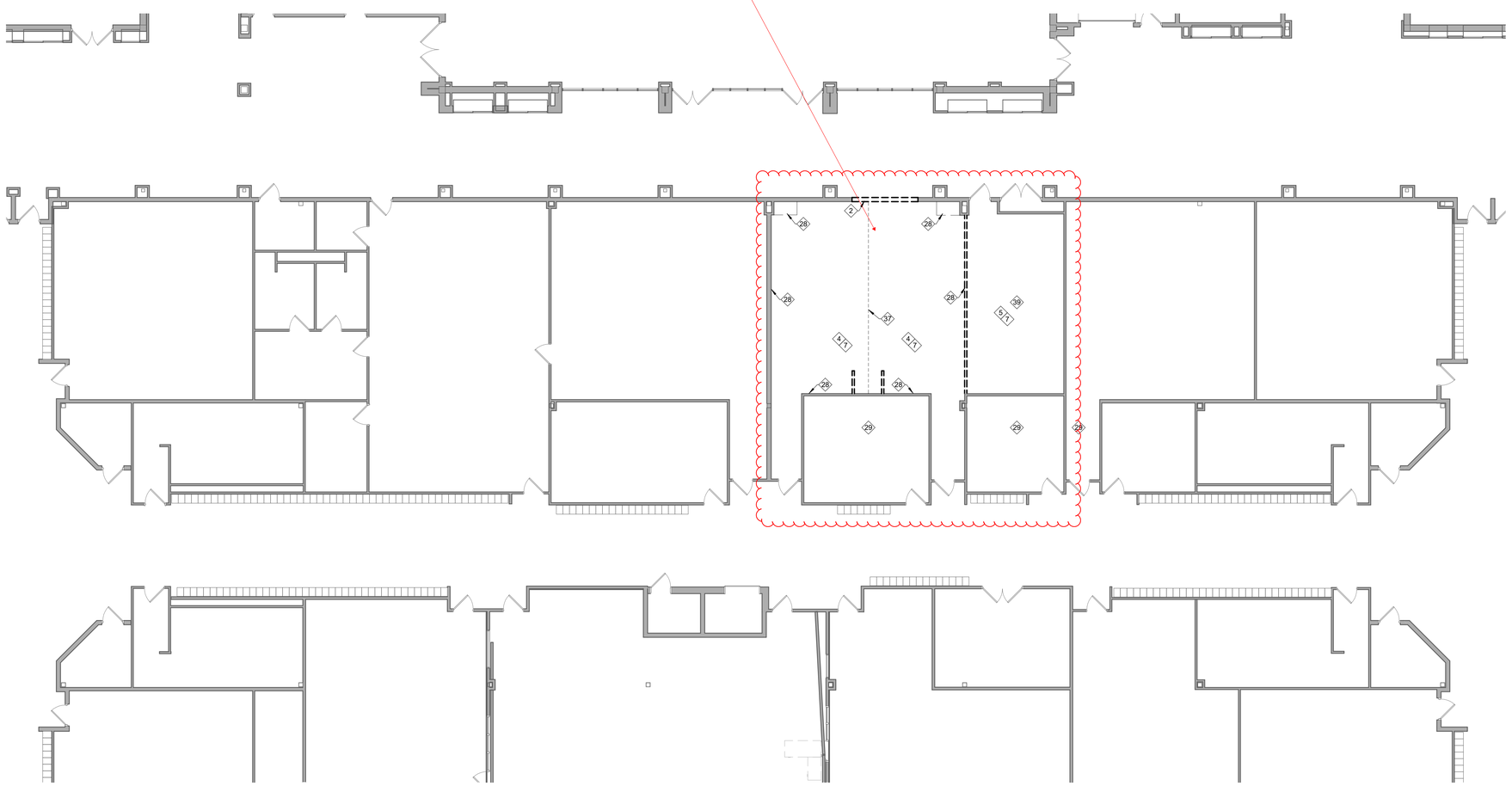
TEMPERATURE CONTROLS SCHEMATICS

M-703



4D FIRST FLOOR DEMOLITION PLAN - UNIT H
1/8" = 1'-0"

SUMMER 2021



2A DEMOLITION FIRST FLOOR PLAN -UNIT F
1/8" = 1'-0"

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#	Revision	Date

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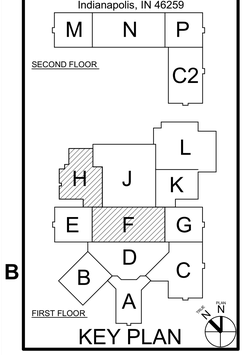


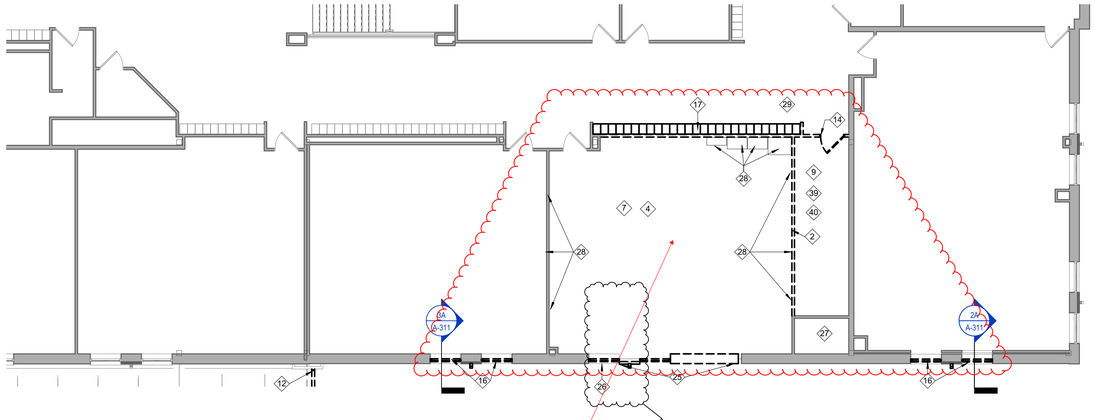
KEY PLAN

Franklin Township Community School Corporation

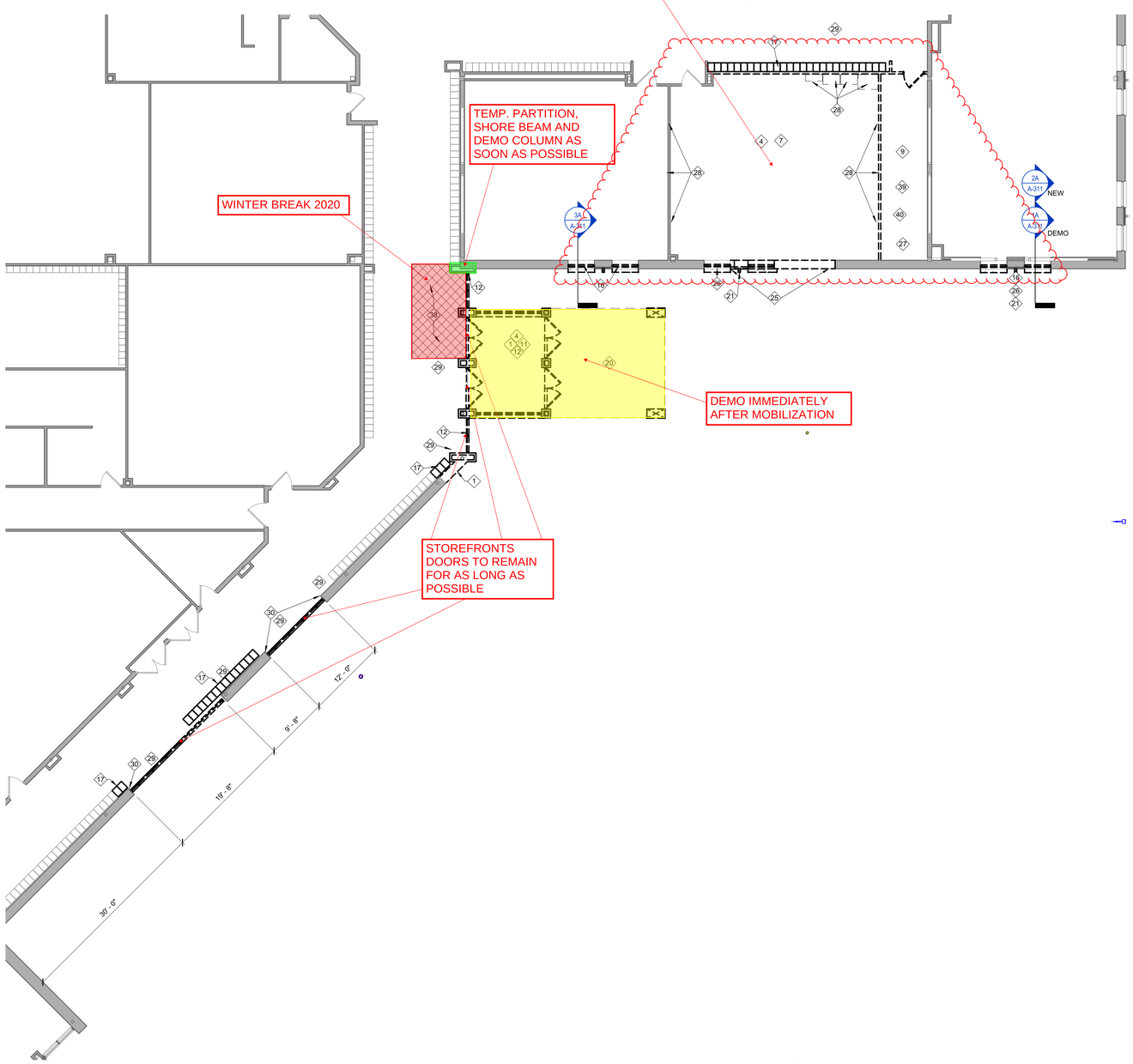
FRANKLIN CENTRAL JUNIOR HIGH SCHOOL

DEMO/CONSTRUCTION PHASING PLAN

CP-101 06/08/20



4E DEMOLITION SECOND FLOOR PLAN - UNIT C
1/8" = 1'-0"



4A FIRST FLOOR DEMOLITION PLAN - UNIT C
1/8" = 1'-0"

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#	Revision	Date
A1	Addendum #1	05.XX.2020

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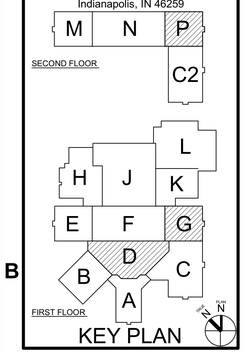


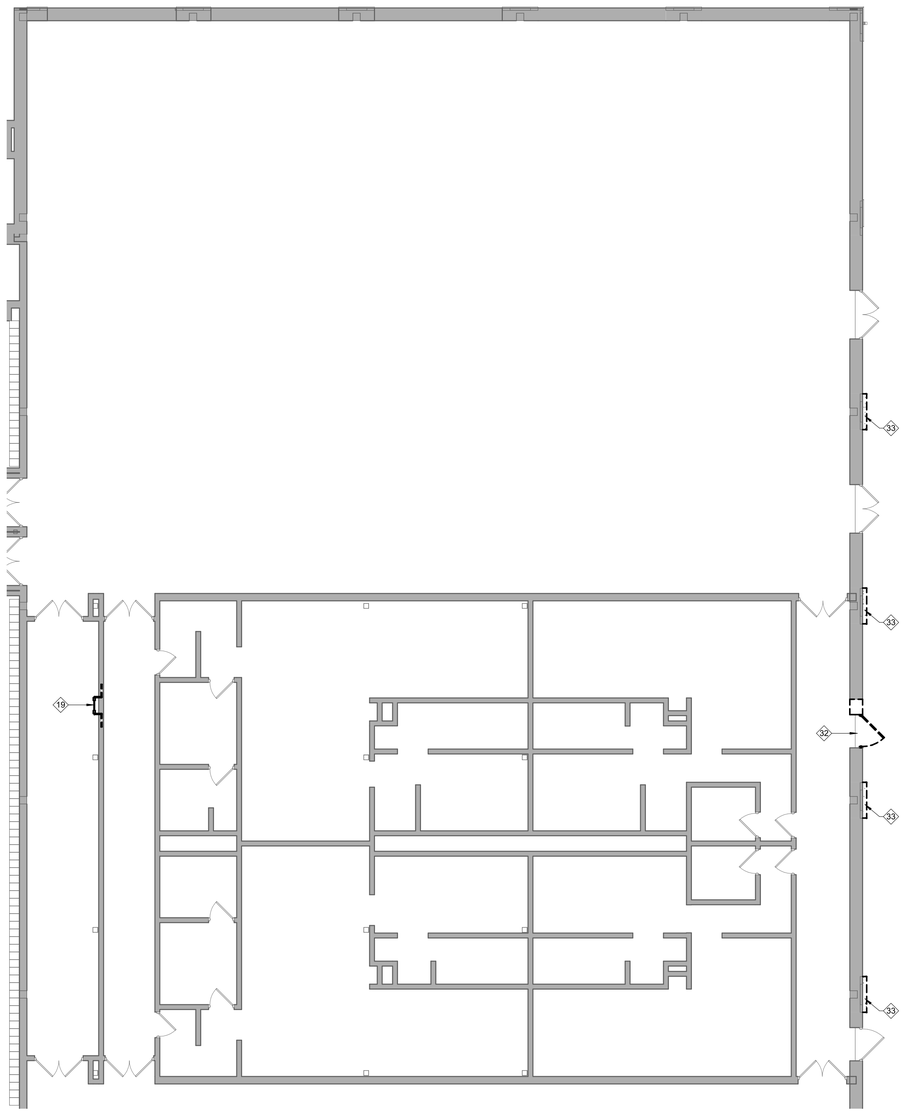
KEY PLAN

Franklin Township Community School Corporation

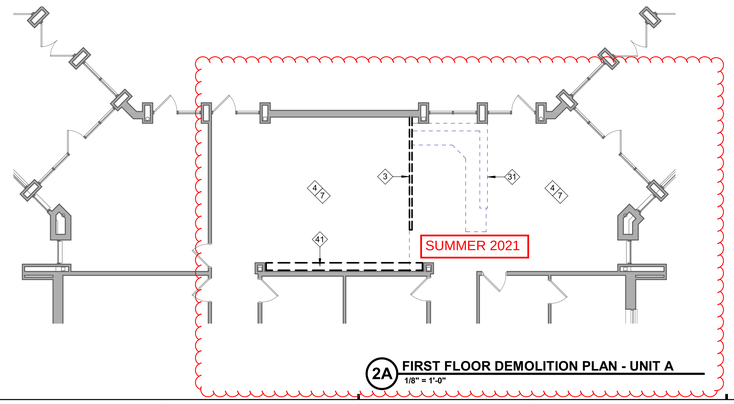
FRANKLIN CENTRAL JUNIOR HIGH SCHOOL

DEMO/CONSTRUCTION PHASING PLAN

CP-102 06/08/20



5A FIRST FLOOR DEMOLITION PLAN - UNIT L
1/8" = 1'-0"



2A FIRST FLOOR DEMOLITION PLAN - UNIT A
1/8" = 1'-0"

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Project No. 2019-030.MSA
Project Date 05.18.2020
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SARAH KATHLEEN HEMPSTEAD REGISTERED NO. AR10400134 STATE OF INDIANA ARCHITECT

Sarah K Hempstead

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#	Revision	Date

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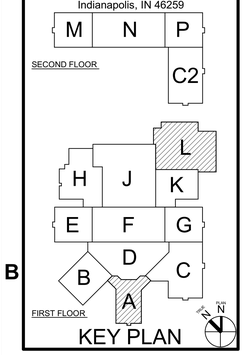

KEY PLAN

Franklin Township Community School Corporation

FRANKLIN CENTRAL JUNIOR HIGH SCHOOL

DEMO/CONSTRUCTION PHASING PLAN

CP-103 06/08/20