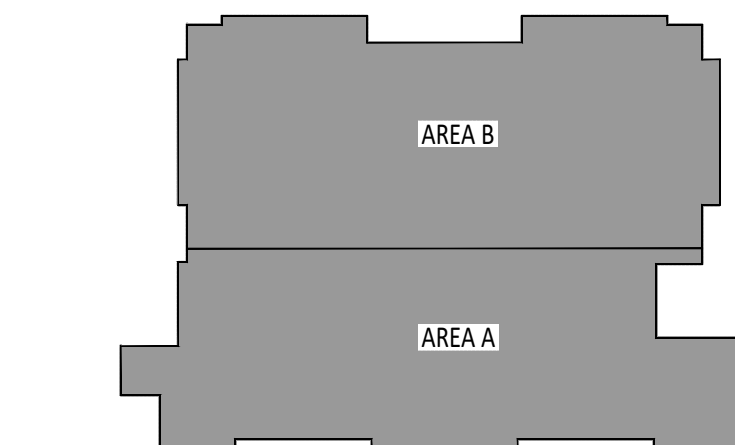


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S-100	STRUCTURAL DETAILS
MD-102	ROOF PLAN - HVAC - DEMO
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SATELLITE JAIL



SATELLITE IMAGE
NO SCALE



KEY PLAN
NO SCALE

FILE: H:\GHR Projects\7253 - Champaign County Satellite Jail - Mechanical Upgrade\HVAC\01 - Worksheets\7253 - C-000.dwg
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DATE	NO.	DESCRIPTION

GHR

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COVER SHEET

SATELLITE JAIL HVAC REPLACEMENT

CHAMPAIGN COUNTY
502 S LIERMAN AVE URBANA, IL 61802

DATE

NO.

DRAWN: JMD

APPROVED: RCVN

DATE: MAY 5, 2021

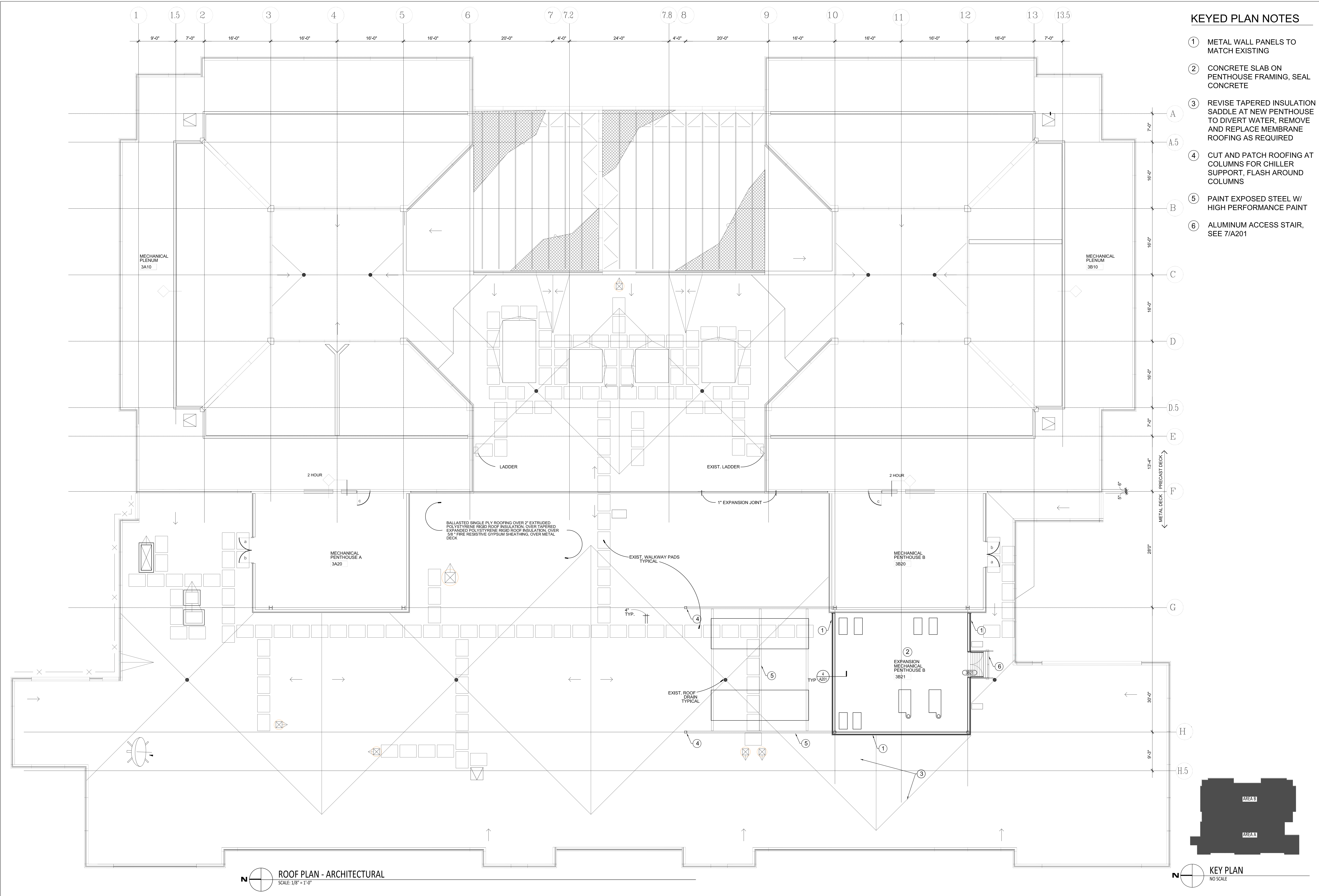
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PROJECT: GHR # 7253

SHEET:

C-000

FILE: F:\Files2\12125 - CC Satellite Jail Mechanical Upgrade\A103 Roof-CD-Reduced.DWG
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KEYED PLAN NOTES

- 1 METAL WALL PANELS TO MATCH EXISTING
- 2 CONCRETE SLAB ON PENTHOUSE FRAMING, SEAL CONCRETE
- 3 REVISE TAPERED INSULATION SADDLE AT NEW PENTHOUSE TO DIVERT WATER, REMOVE AND REPLACE MEMBRANE ROOFING AS REQUIRED
- 4 CUT AND PATCH ROOFING AT COLUMNS FOR CHILLER SUPPORT, FLASH AROUND COLUMNS
- 5 PAINT EXPOSED STEEL W/ HIGH PERFORMANCE PAINT
- 6 ALUMINUM ACCESS STAIR, SEE 7/A201

ROOF PLAN - ARCHITECTURAL
SCALE: 1/8" = 1'-0"

KEY PLAN
NO SCALE

DATE	NO.	DESCRIPTION

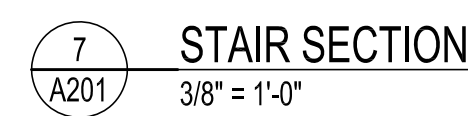
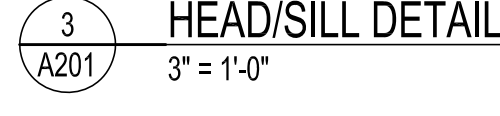
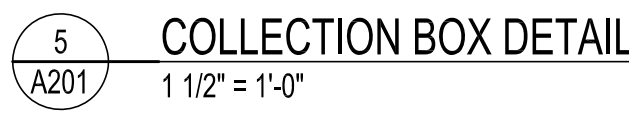
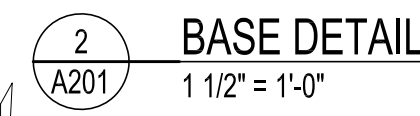
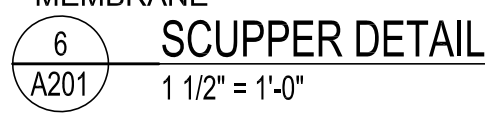
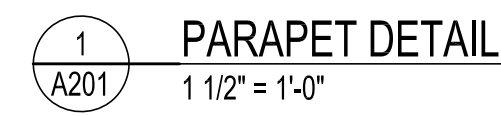
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Mechanical & Electrical Consulting Engineers
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ROOF PLAN - ARCHITECTURAL
SATELLITE JAIL HVAC REPLACEMENT
CHAMPAIGN COUNTY
502 S LIERMAN AVE URBANA, IL 61802

DATE:	APRIL 30, 2021
ISSUED FOR BIDDING	
PROJECT:	IGW 2125-GHR # 7253

SHEET:
A-103

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[illegible]

- ① TAPERED INSULATION OVER 4.3" MINIMUM BASE LAYER AT SCUPPERS
- ② SCUPPER SEE DETAIL 6/A201
- ③ COLLECTION BOX AND DOWNSPOUT SEE DETAIL 5/A201
- ④ TAPERED INSULATION SADDLES TO DIVERT TO SCUPPERS



- D1 CUT MEMBRANE AND REMOVE INSULATION AT AREA OF NEW PENTHOUSE AS REQUIRED FOR NEW WORK
- D2 CUT WALL PANELS AS REQUIRED FOR CONNECTION OF NEW STRUCTURE
- D3 REMOVE WALK PADS WITHIN FOOTPRINT
- D4 REMOVE PORTION OF EXISTING MEMBRANE ROOFING FOR MODIFICATION OF TAPERED INSULATION SADDLE
- D5 CUT MEMBRANE AND REMOVE INSULATION AS REQUIRED FOR NEW COLUMN INSTALL

SHEET:

DATE	NO.	DESCRIPTION



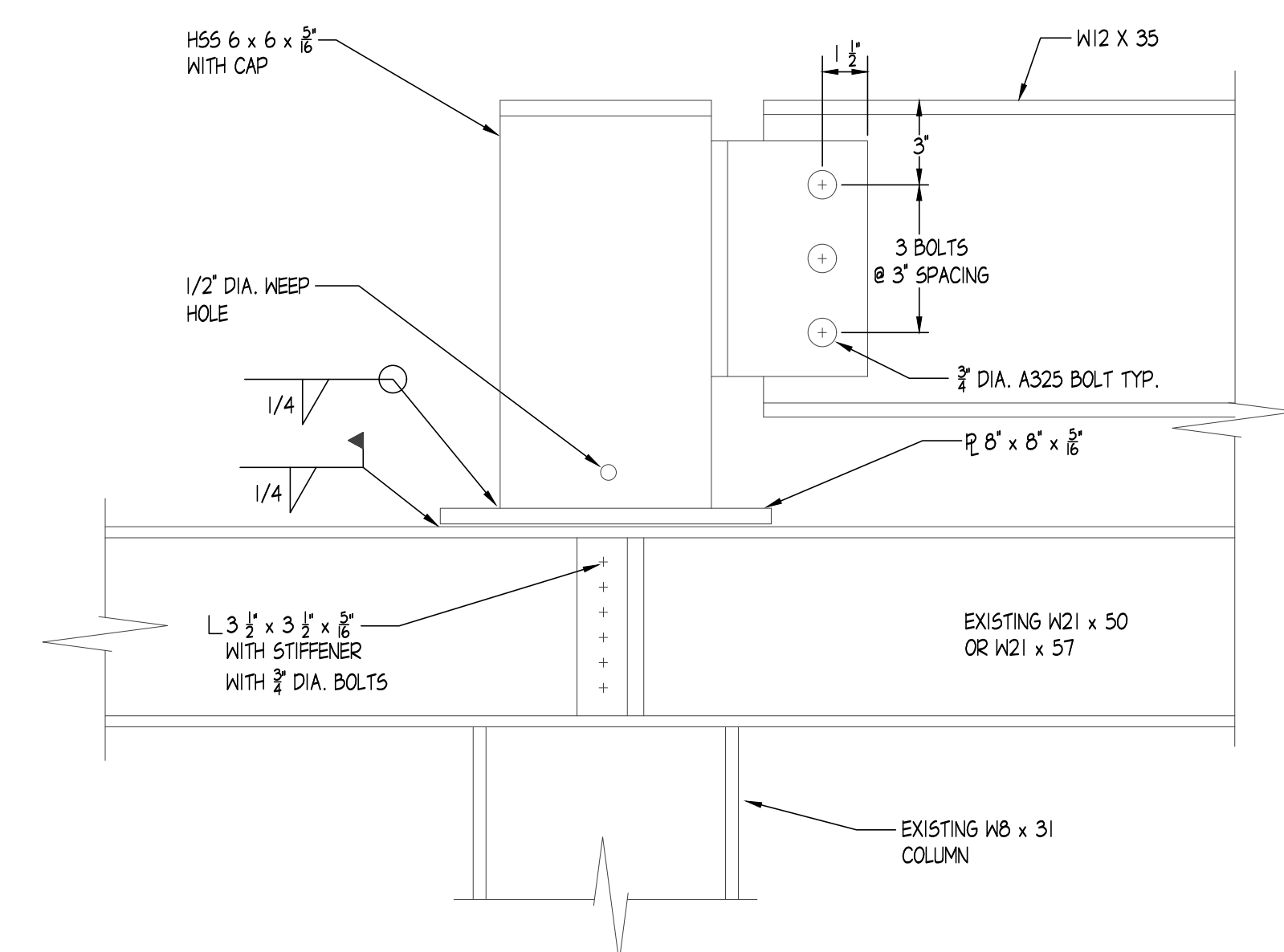
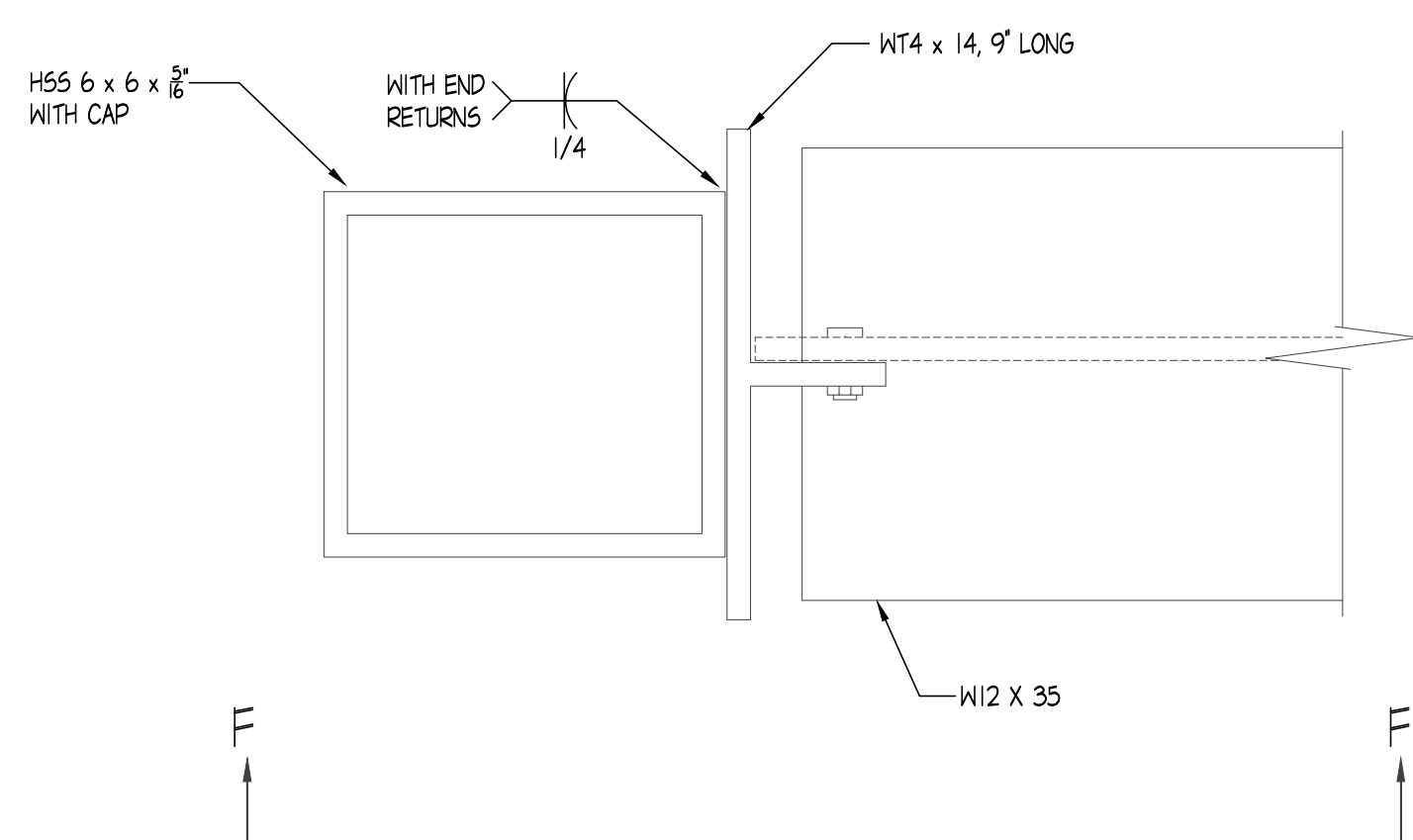
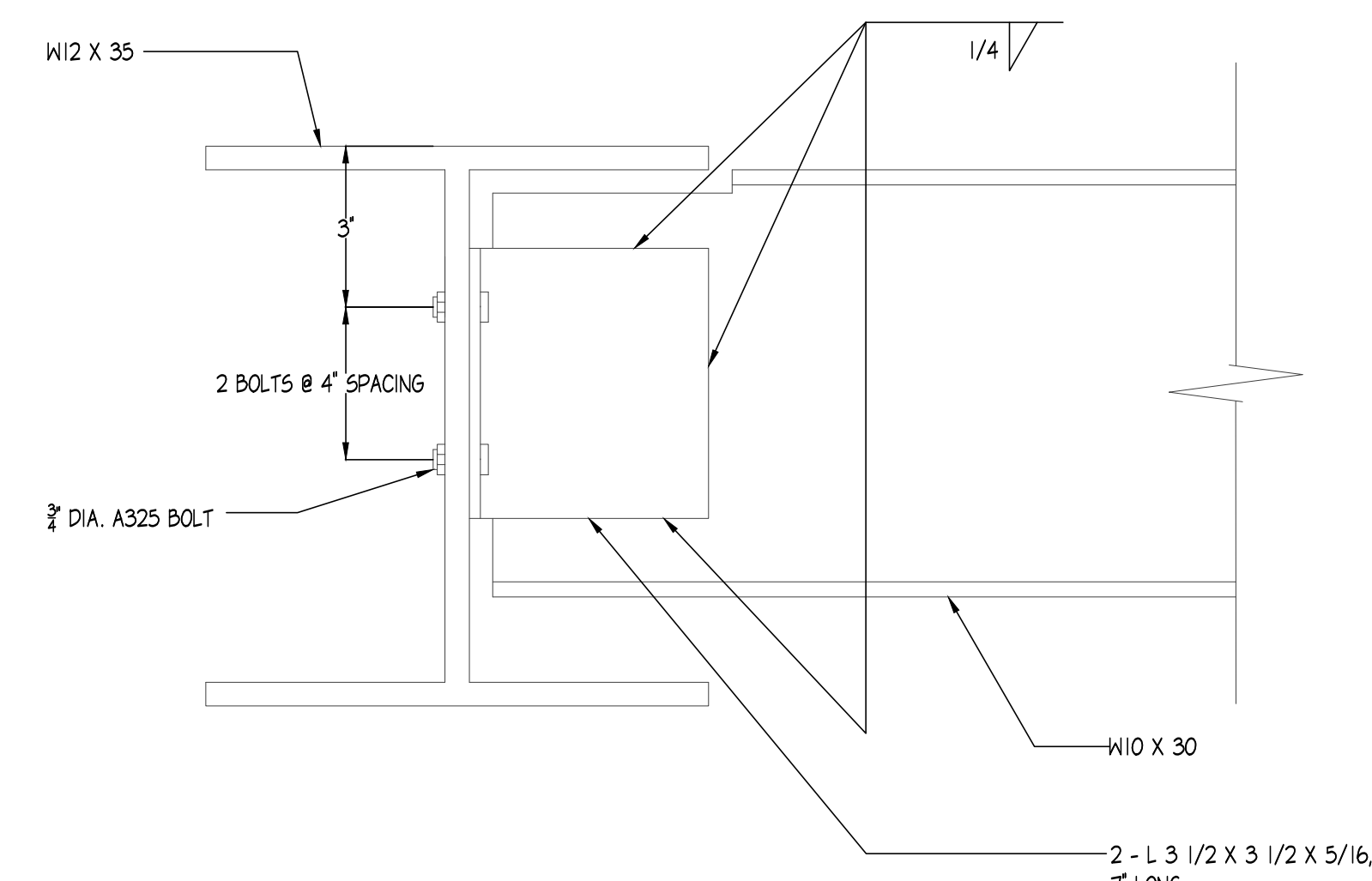
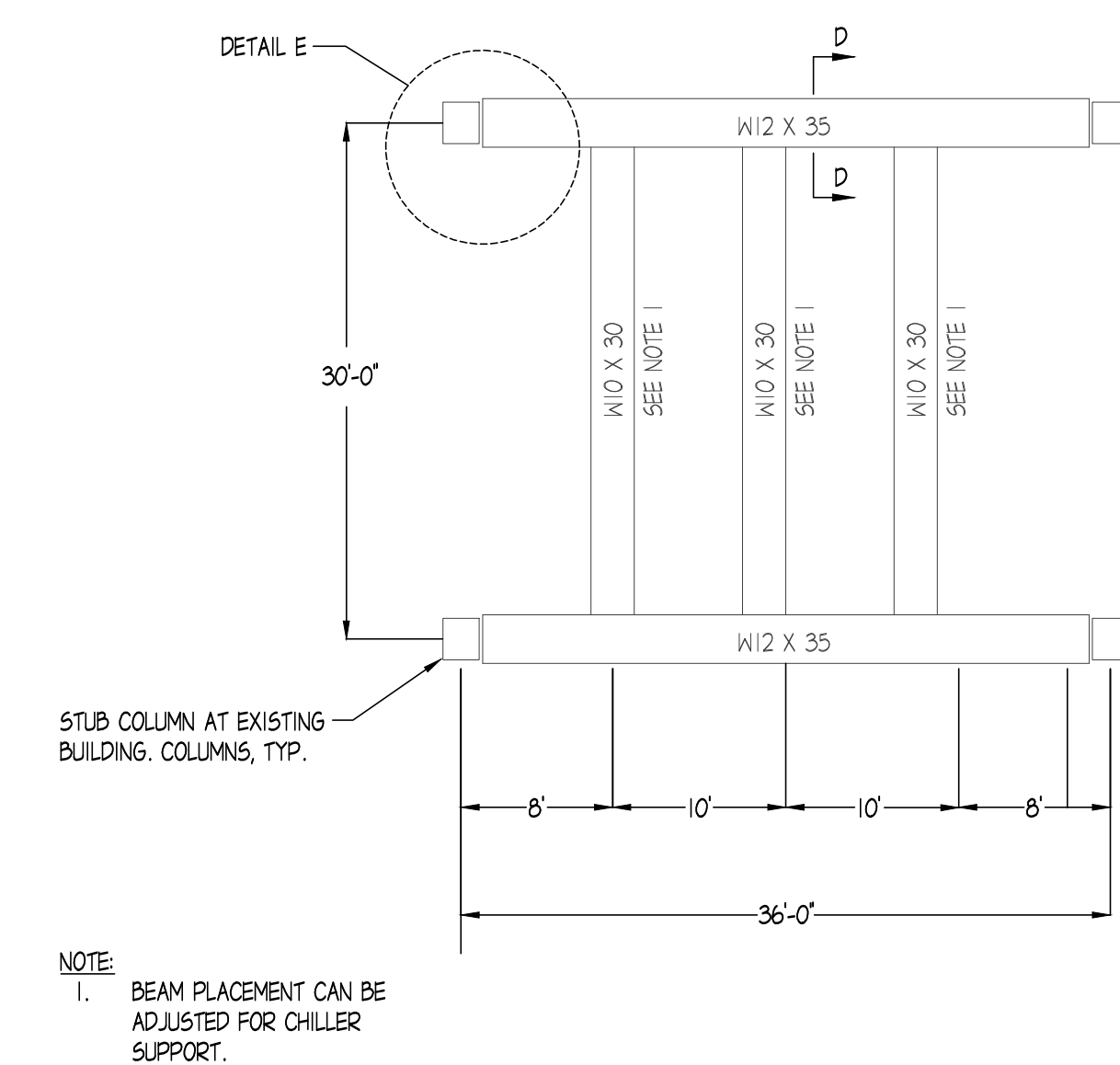
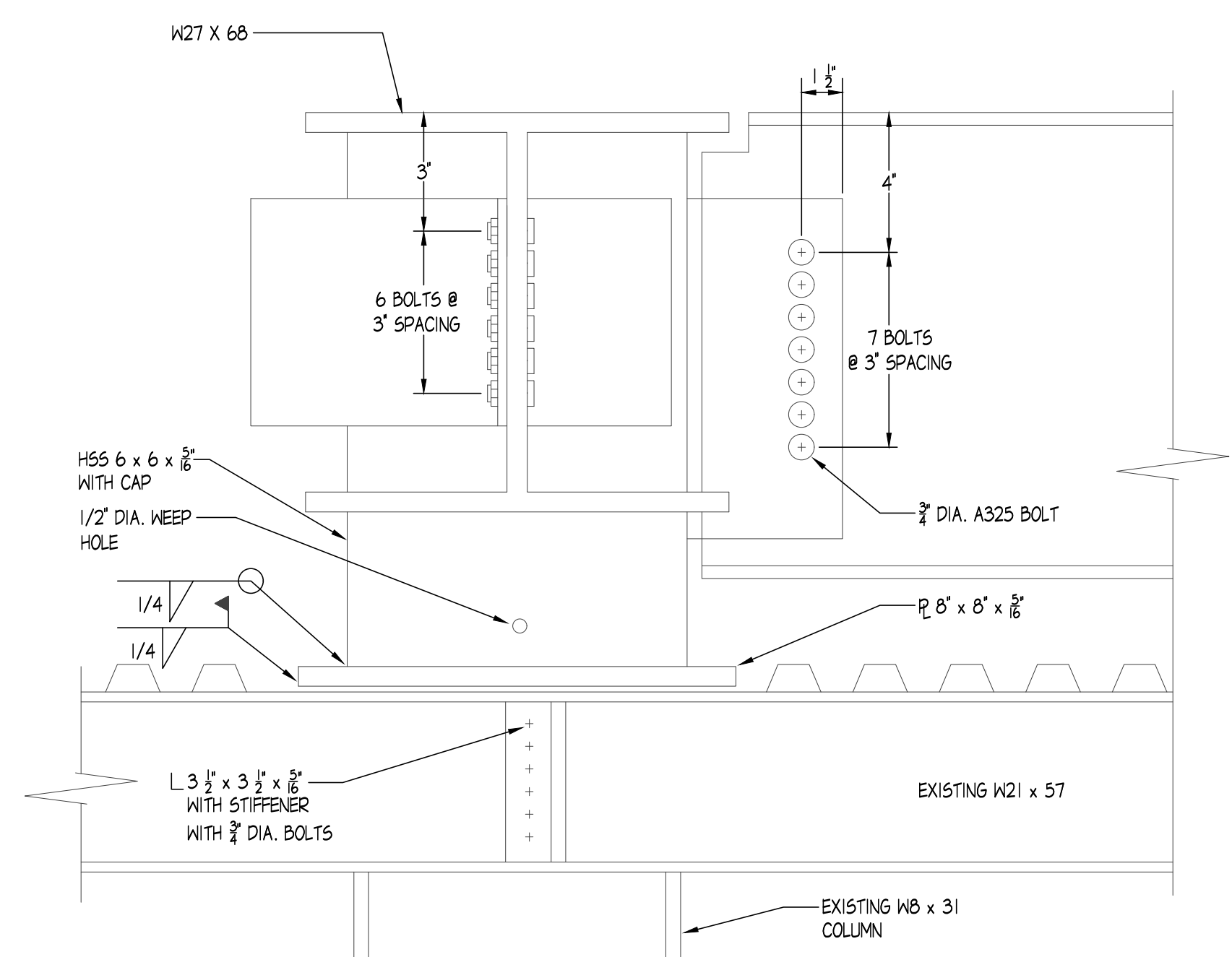
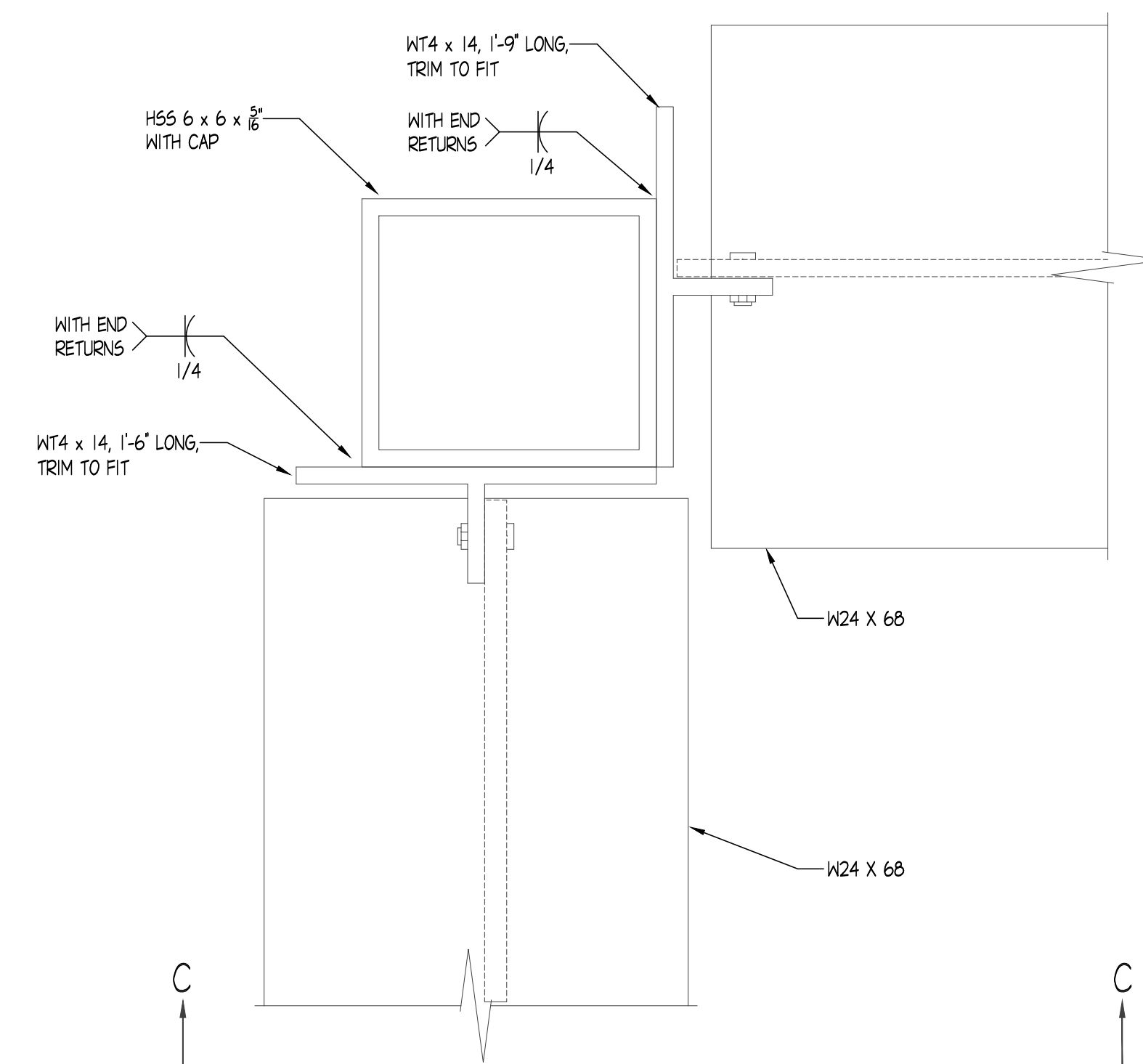
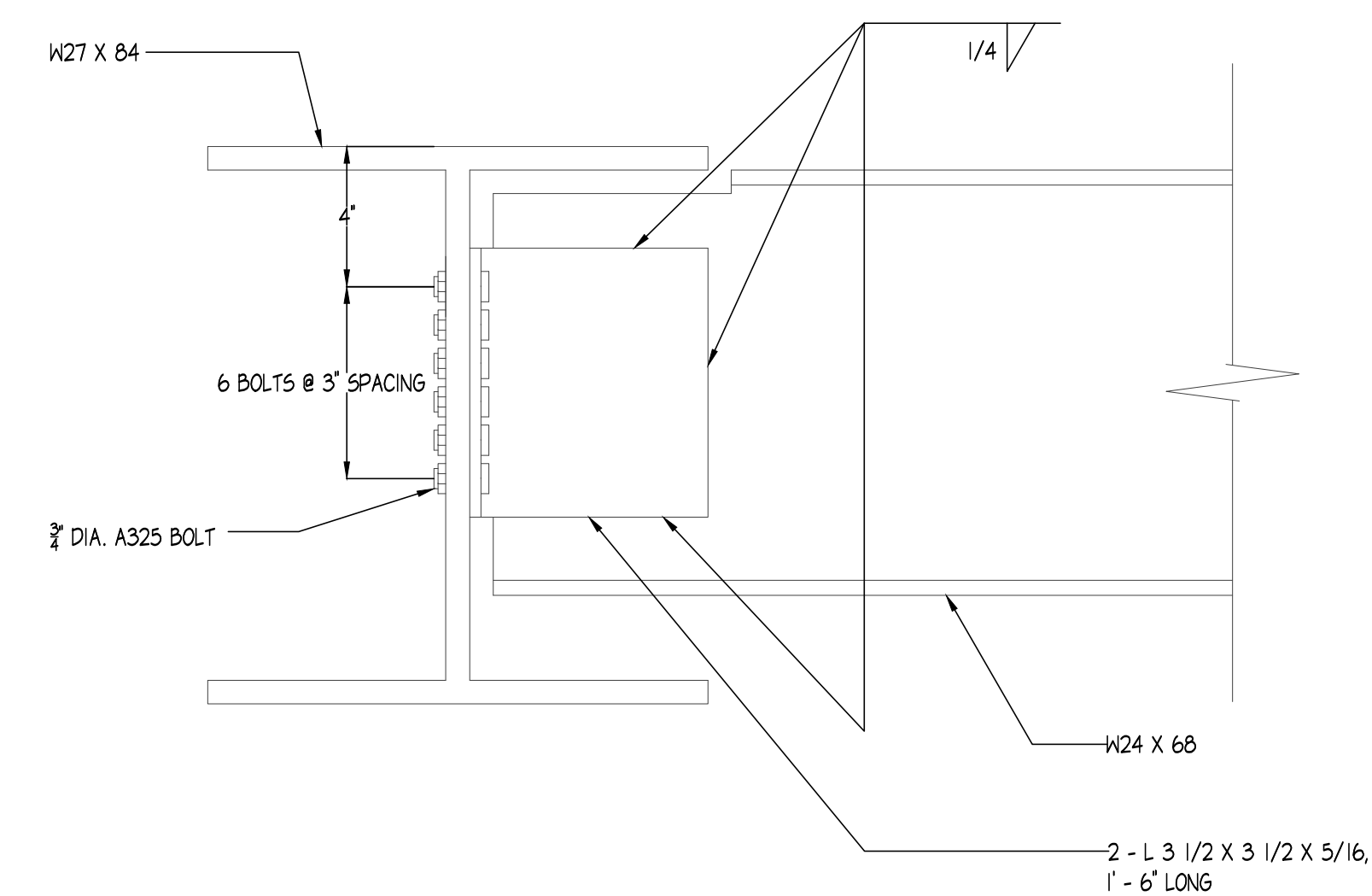
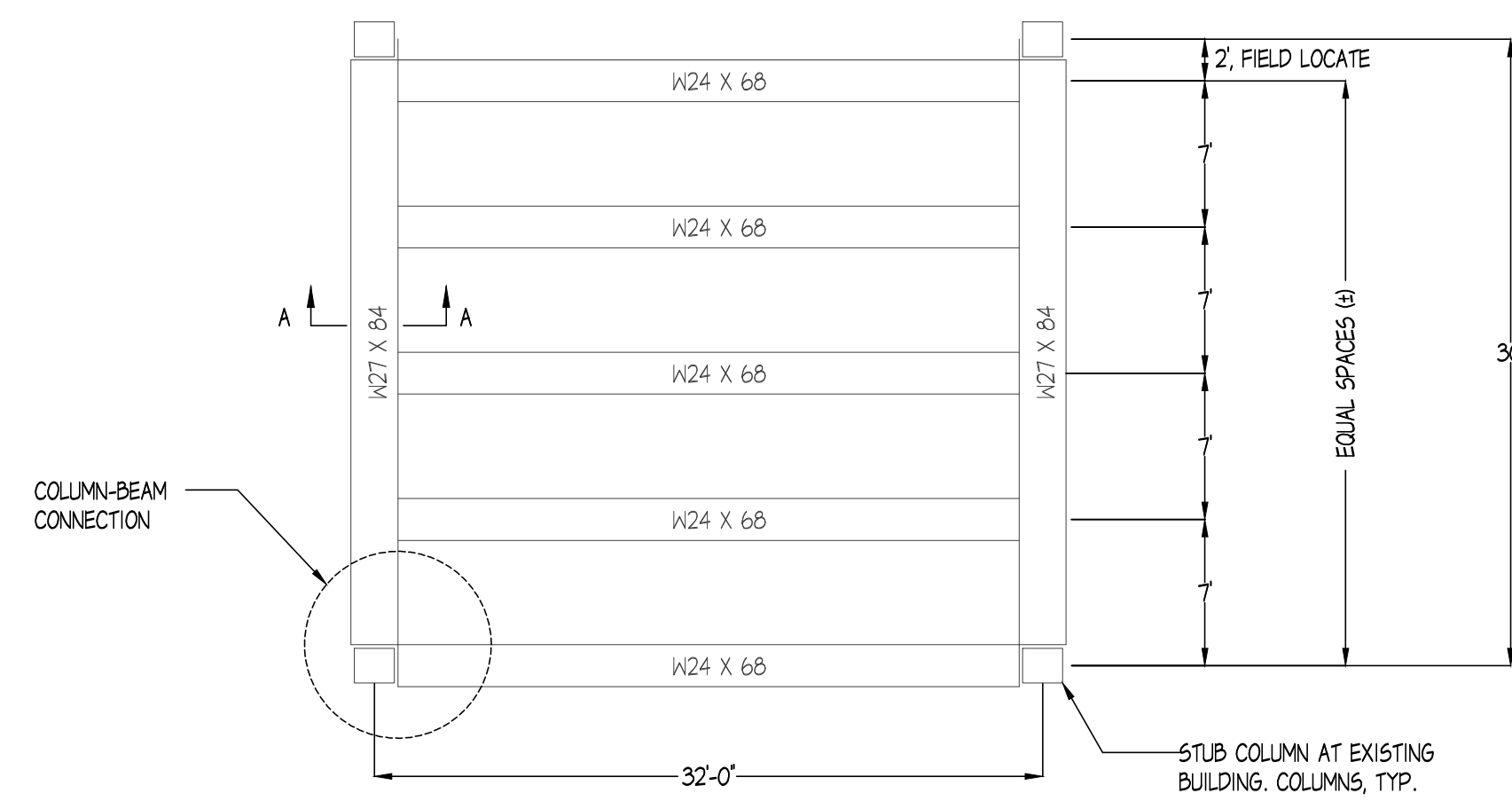
SATELLITE JAIL HVAC REPLACEMENT

CHAMPAIGN COUNTY
502 S LIERMAN AVE URBANA, IL 61802

SSAL	ORIGIN:	APPROVED:
	DATE:	APRIL 30, 2021
	ISSUED FOR BIDDING	
	PROJECT:	IGW 2125-GHR # 7253

A-201

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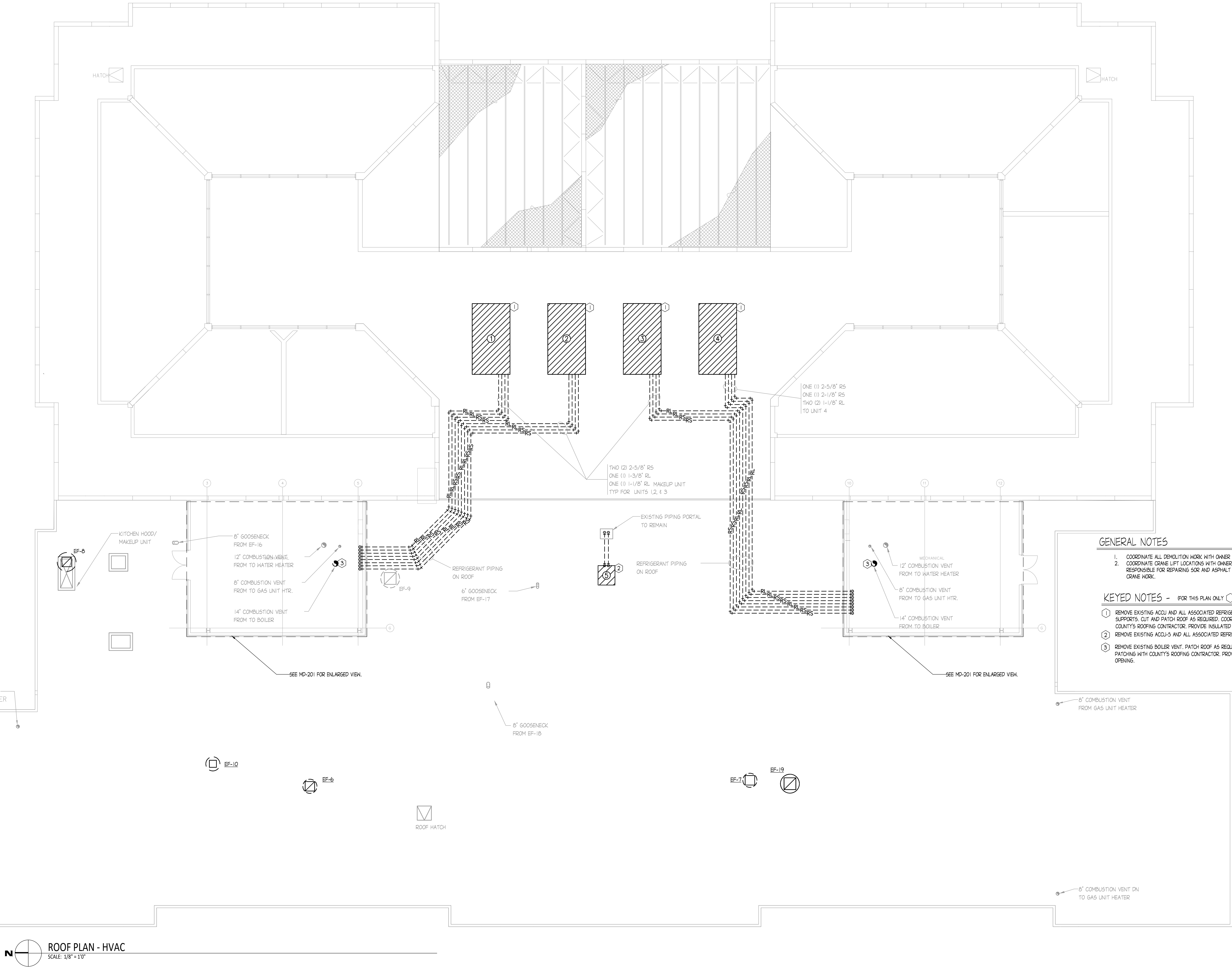
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SATELLITE JAIL HVAC REPLACEMENT

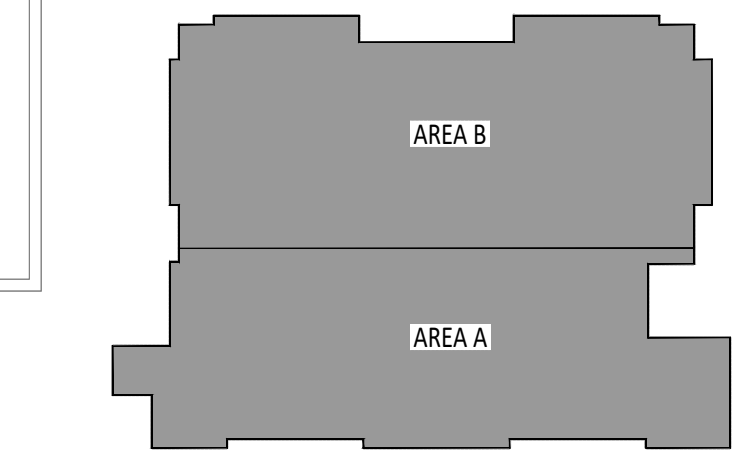
CHAMPAIGN COUNTY
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SEAL	DRAWN: JMD	APPROVED: RCVN	SHEET: S-100
	DATE: MAY 5, 2021		
	ISSUED FOR BID		
	PROJECT: GHR # 7253		

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- GENERAL NOTES**
- COORDINATE ALL DEMOLITION WORK WITH OWNER AND OTHER TRADES.
 - COORDINATE CRANE LIFT LOCATIONS WITH OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING SOR AND ASPHALT SHOULD DAMAGE OCCUR FROM CRANE WORK.
- KEYED NOTES** - (FOR THIS PLAN ONLY) (CIRCLE SYMBOL)
- REMOVE EXISTING ACQU AND ALL ASSOCIATED REFRIGERANT PIPING. REMOVE PIPING SUPPORTS. CUT AND PATCH ROOF AS REQUIRED. COORDINATE ROOF PATCHING WITH COUNTY'S ROOFING CONTRACTOR. PROVIDE INSULATED PATCH AT OPENING.
 - REMOVE EXISTING ACQU-S AND ALL ASSOCIATED REFRIGERANT PIPING.
 - REMOVE EXISTING BOILER VENT. PATCH ROOF AS REQUIRED. COORDINATE ROOF PATCHING WITH COUNTY'S ROOFING CONTRACTOR. PROVIDE INSULATED PATCH AT OPENING.



ROOF PLAN - HVAC
SCALE: 1/8" = 1'-0"

KEY PLAN
NO SCALE

DATE	NO.	DESCRIPTION

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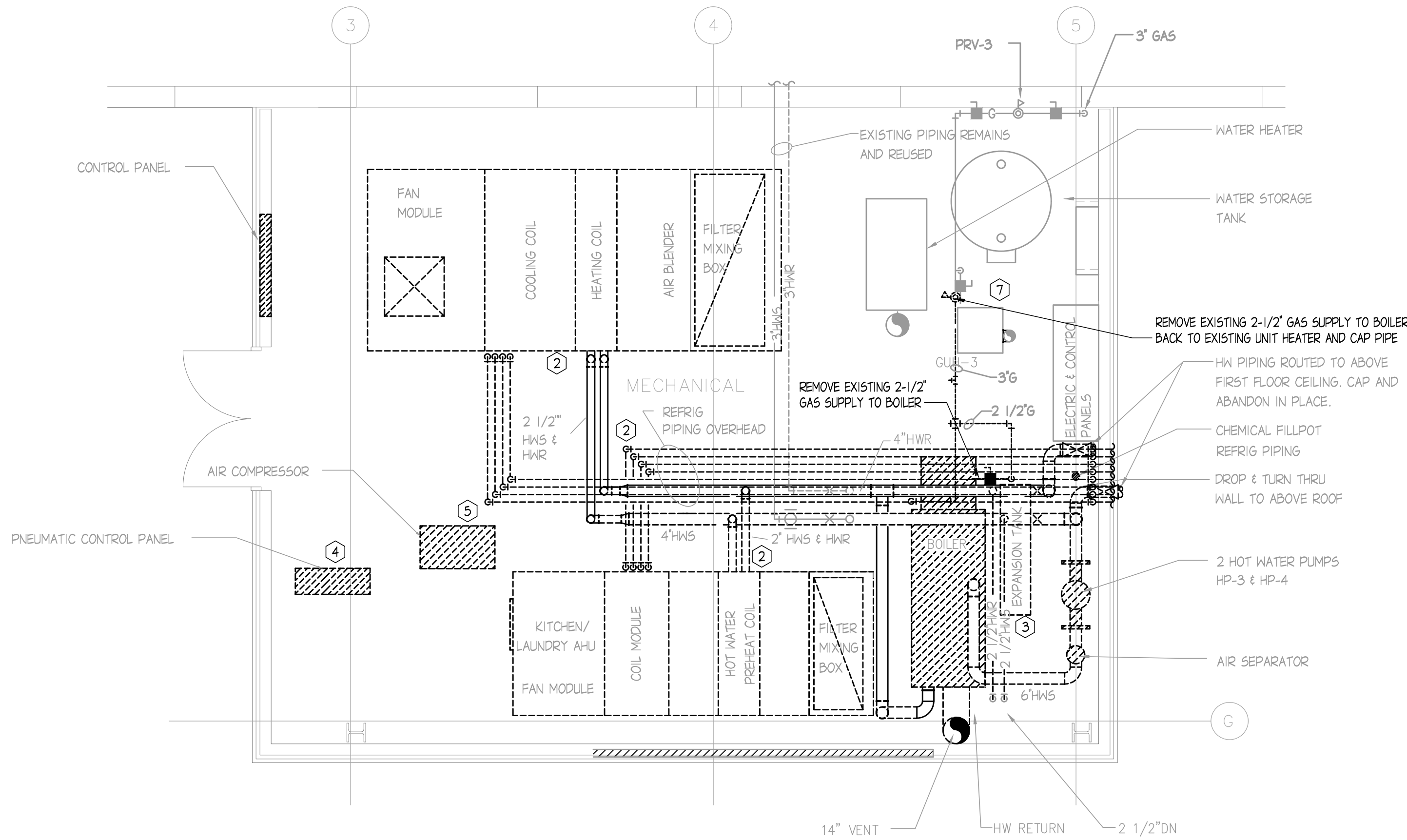
ROOF PLAN - HVAC - DEMO
SATELLITE JAIL HVAC REPLACEMENT
CHAMPAIGN COUNTY
502 S LIERMAN AVE URBANA, IL 61802

DATE:	NO.

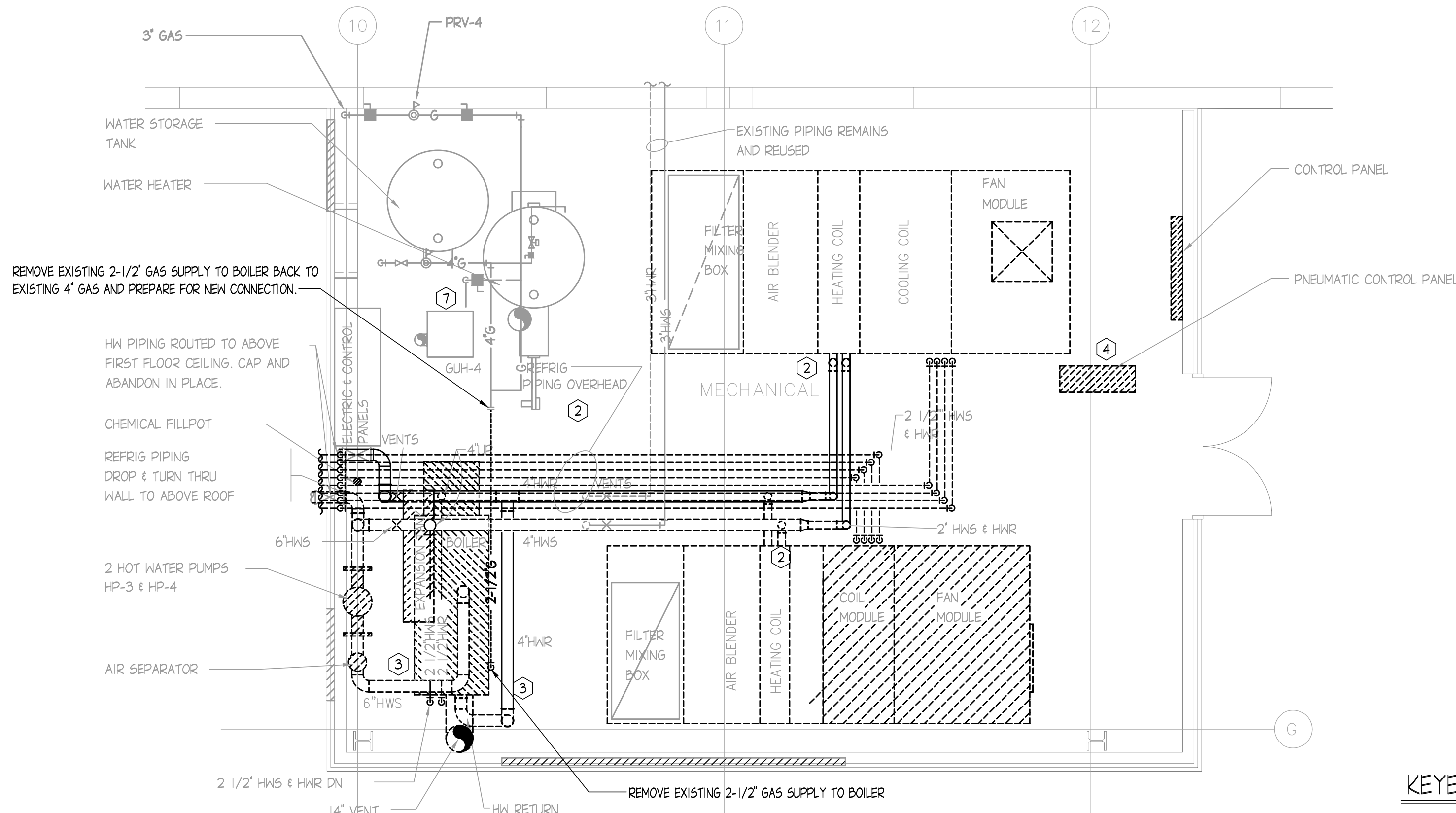
DRAWN: JMD	APPROVED: RCVN
DATE: MAY 5, 2021	ISSUED FOR BID
PROJECT: GHR # 7253	

SHEET:
MD-102

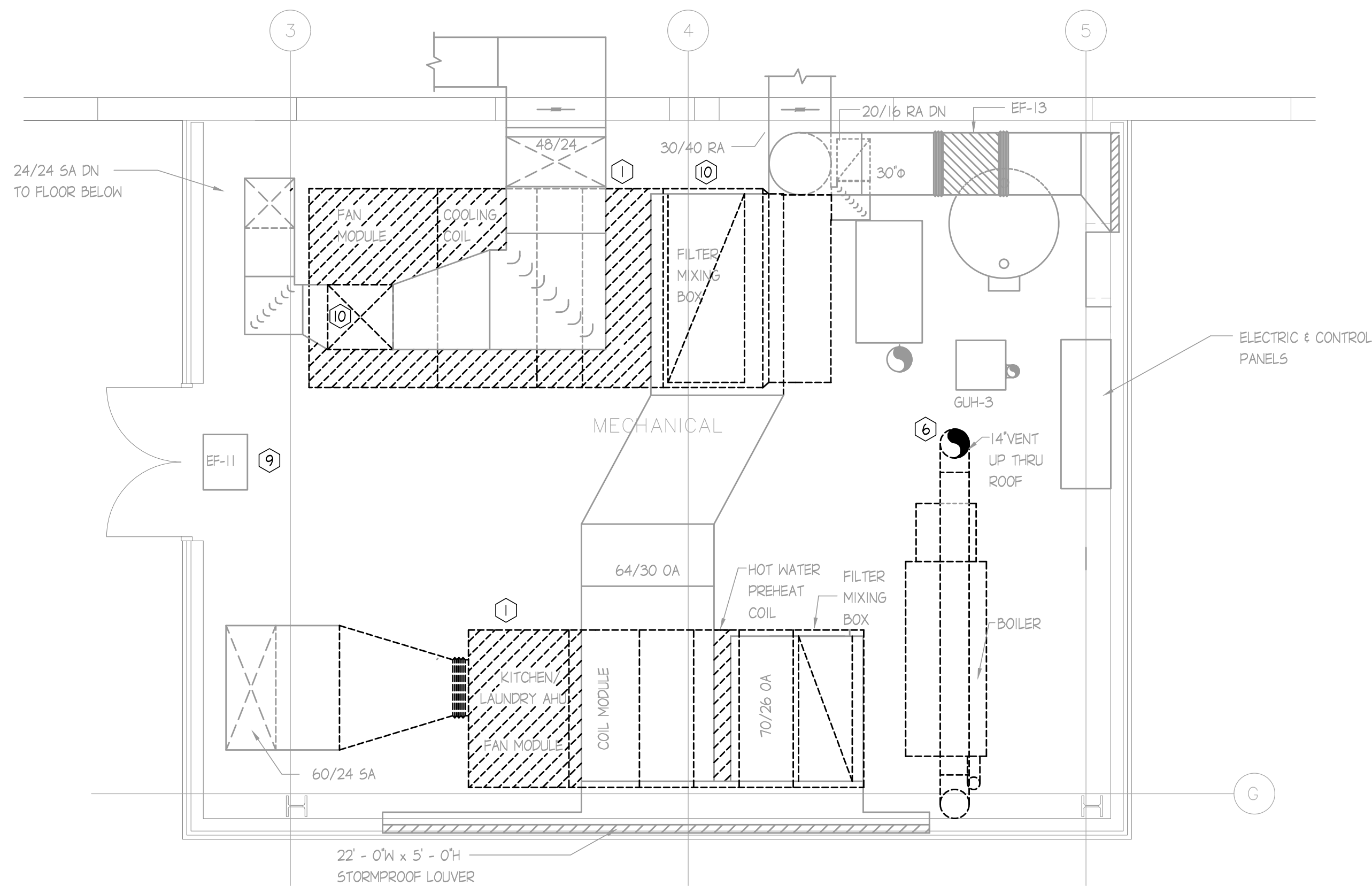
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PRINTED: 05/04/2021



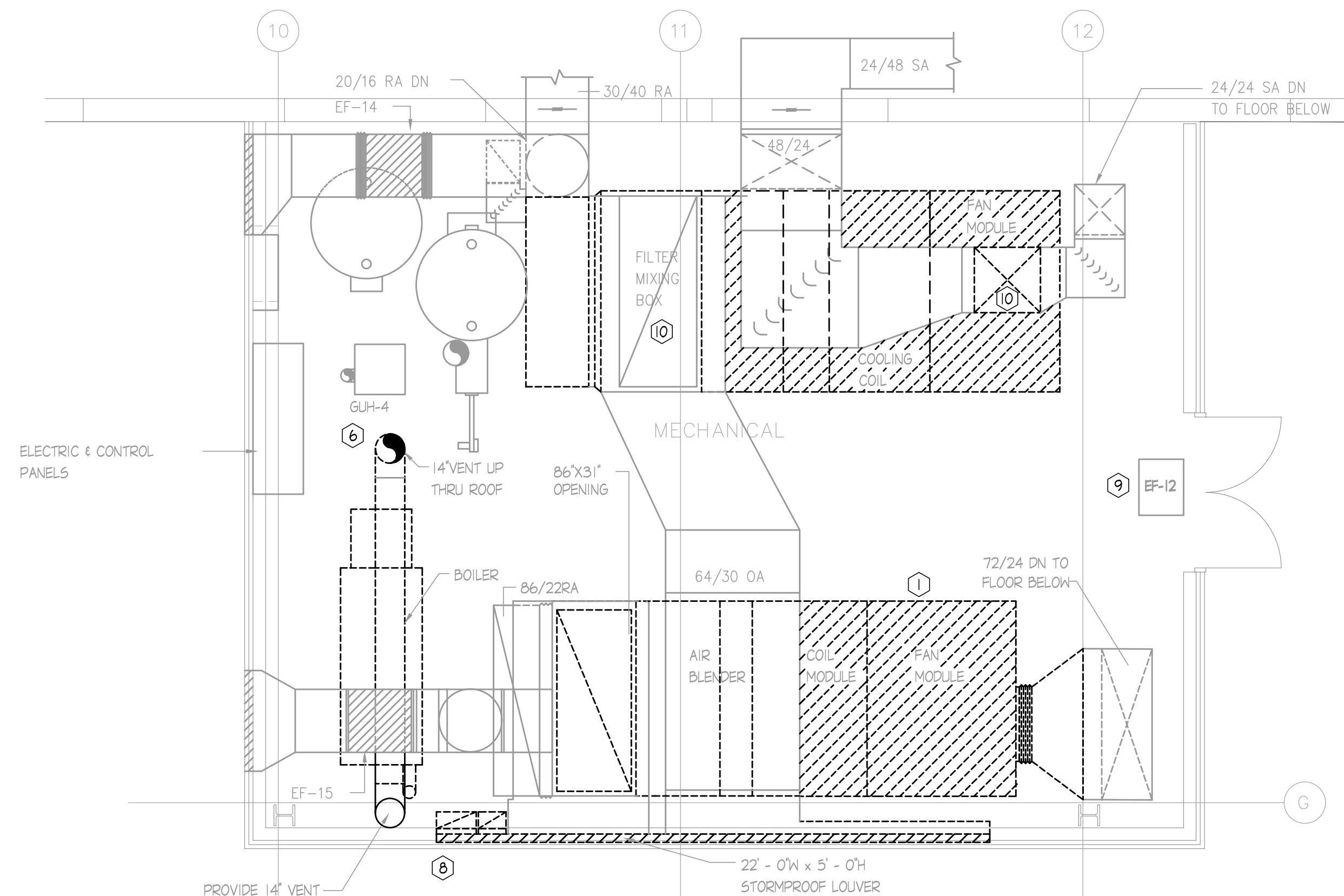
ENLARGED MECHANICAL ROOM PLAN - NORTH - HEATING DEMO
SCALE: 1/4" = 1'-0"



ENLARGED MECHANICAL ROOM PLAN - SOUTH - HEATING DEMO
SCALE: 1/4" = 1'-0"



ENLARGED MECHANICAL ROOM PLAN - NORTH - VENTILATION DEMO
SCALE: 1/4" = 1'-0"



ENLARGED MECHANICAL ROOM PLAN - SOUTH - VENTILATION DEMO
SCALE: 1/4" = 1'-0"

KEYED NOTES - (FOR THIS PLAN ONLY) (SYMBOL)

- REMOVE EXISTING AHU. DISCONNECT FROM SUPPLY, RETURN AND OA DUCTWORK.
- DISCONNECT HW & REFRIGERANT PIPING FROM AHU. REMOVE ALL ASSOCIATED PIPING FROM PENTHOUSE. PATCH, INSULATE AND PAINT EXISTING WALL TO MATCH.
- REMOVE EXISTING HOT WATER BOILER AND ASSOCIATED BOILER PUMPS. REMOVE ASSOCIATED AIR SEPARATOR AND SHOT FEEDER.
- REMOVE PNEUMATIC CONTROL PANEL AND ASSOCIATED AIR TUBING.
- REMOVE PNEUMATIC AIR COMPRESSOR, AIR DRYER AND ASSOCIATED AIR TUBING.
- REMOVE EXISTING BOILER FLUE THROUGH ROOF. PATCH PENTHOUSE ROOF.
- GAS FIRED UNIT HEATER TO REMAIN. REPLACE EXISTING ASSOCIATED CONTROLLER AND THERMOSTAT.
- REMOVE EXISTING LOUVERS, PATCH PENTHOUSE WALL.
- EXISTING EF TO REMAIN. REPLACE EXISTING ASSOCIATED CONTROLLER. FOR EF CONTROLS WORK SEE DETAIL. PROVIDE START/STOP.
- REMOVE EXISTING DUCT DROP AND RISER FROM AHU.

GENERAL NOTES :

- COORDINATE ALL DEMOLITION WORK WITH OWNER AND OTHER TRADES.
- COORDINATE AND/OR STAGE REMOVAL OF EXISTING PNEUMATIC TEMPERATURE CONTROL SYSTEM WITH OWNER.
- CLEAN AND REMOVE DEBRIS FROM SITE ON A DAILY BASIS.

DATE	NO.	DESCRIPTION

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ENLARGED FLOOR PLANS - HVAC - DEMO
SATELLITE JAIL HVAC REPLACEMENT

CHAMPAIGN COUNTY
502 S UERMAN AVE URBANA, IL 61802

DESIGN: JMD	APPROVED: RCVN	SHEET: MD-201
DATE: MAY 5, 2021	ISSUED FOR BID	
PROJECT: GHR # 7253		

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SITE PLAN

SATELLITE JAIL HVAC REPLACEMENT

CHAMPAIGN COUNTY

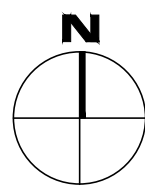
502 S LIERMAN AVE URBANA, IL 61802

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DATE:	MAY 5, 2021		
PROJECT:	100% CD		
GHR # 7253			

SHEET:

M-100



 SATELLITE IMAGE
NO SCALE

GENERAL NOTES

- COORDINATE ALL WORK WITH OWNER AND OTHER TRADES.
- COORDINATE LOCATIONS OF MATERIAL LAY DOWN AND DEBRIS CONTAINER WITH OWNER.

NORTH PENTHOUSE

COORDINATE CRANE LIFT/RIGGING LOCATIONS WITH OWNER. PROVIDE REQUIRED PLANKING TO PROTECT BOTH HARD AND SOFT SURFACES.

NEW PENTHOUSE

SOUTH PENTHOUSE

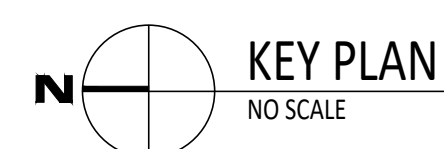
TRAILER LOCATION

PARKING



- ① DUCTED REHEAT COIL TO REMAIN. REPLACE EXISTING CONTROL VALVE AND ACTUATOR. REPLACE ASSOCIATED CONTROLLER AND THERMOSTAT. FOR DUCTED REHEAT COIL CONTROLS WORK SEE DETAIL REMOVE PNEUMATIC PIPING LOCALLY AND CAP.
- ② GAS FIRED UNIT HEATER TO REMAIN. REPLACE EXISTING ASSOCIATED CONTROLLER AND THERMOSTAT. FOR GAS FIRED UNIT HEATER CONTROLS WORK SEE DETAIL.
- ③ EXISTING EF TO REMAIN. REPLACE EXISTING ASSOCIATED CONTROLLER. FOR EF CONTROLS WORK SEE DETAIL.
- ④ PROVIDE EXISTING COOLING COIL WITH NEW COOLING COIL AND REFRIGERANT PIPING.

1. COORDINATE ALL WORK WITH OWNER AND OTHER TRADES.
2. INSTALL NEW RACENWAYS AS REQUIRED TO INSTALL NEW CONTROL WIRING.
3. INSTALL NEW THERMOSTATS IN EXISTING LOCATIONS AND PROVIDE NEW THERMOSTAT GUARDS AS REQUIRED.

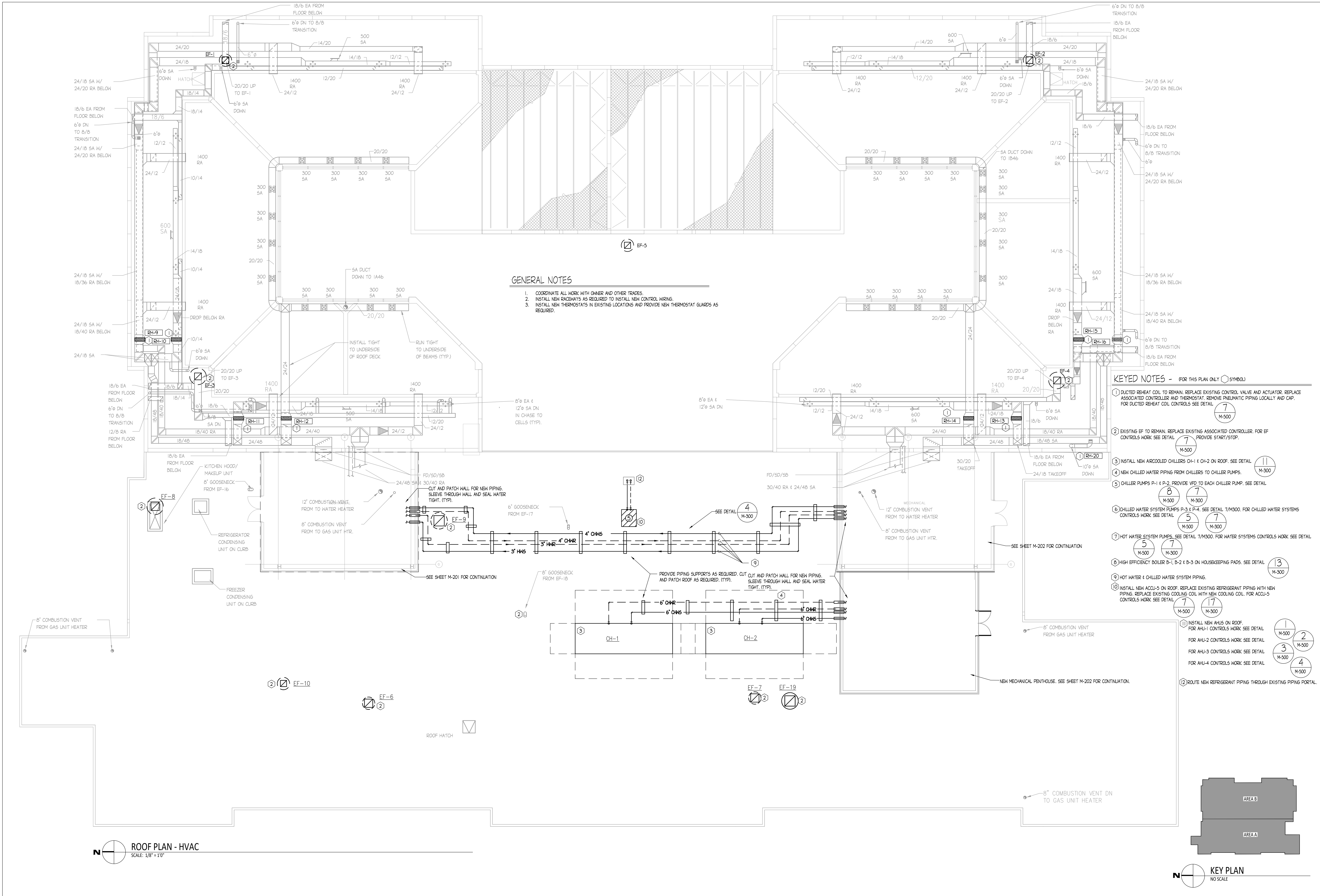


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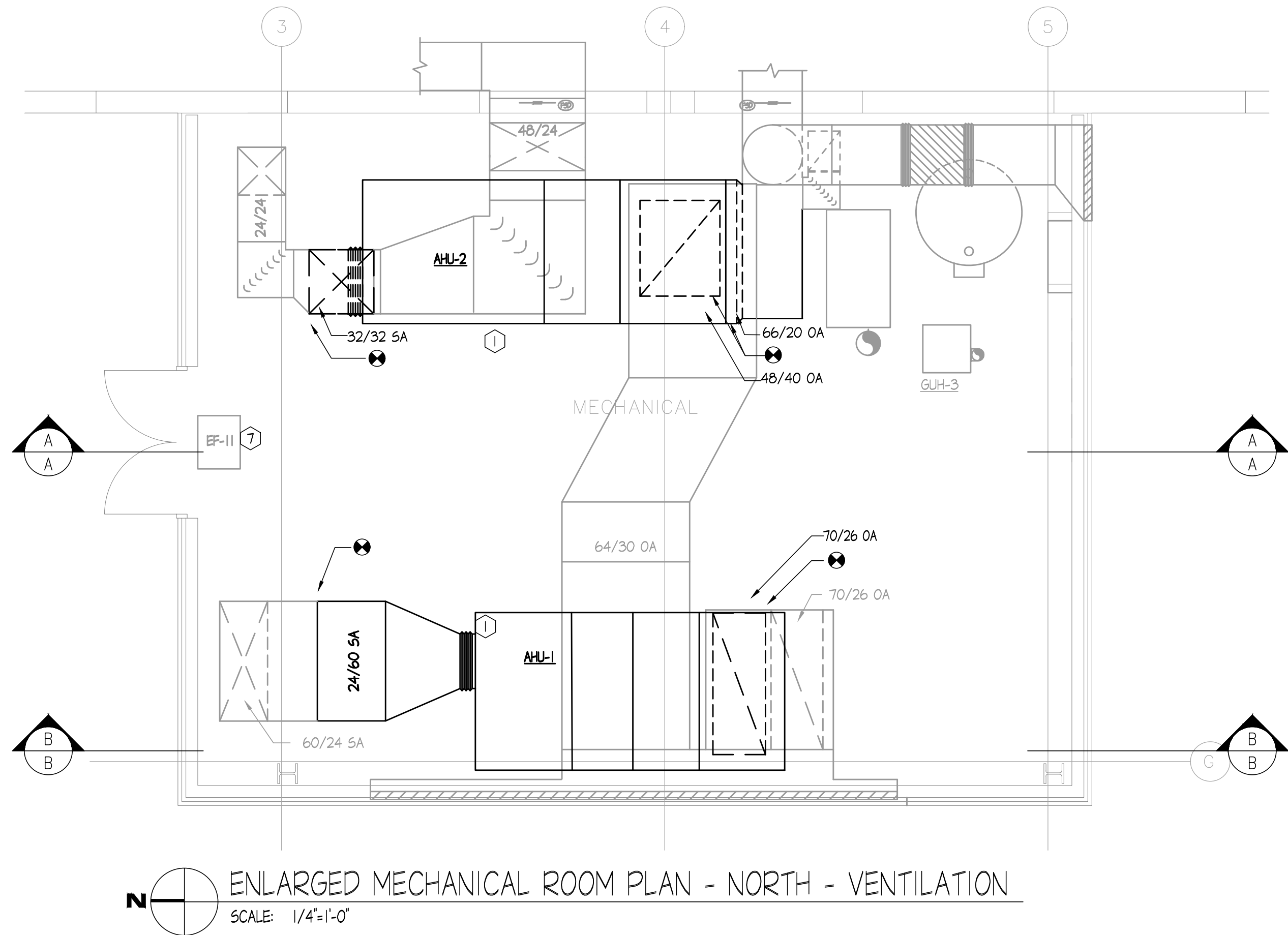
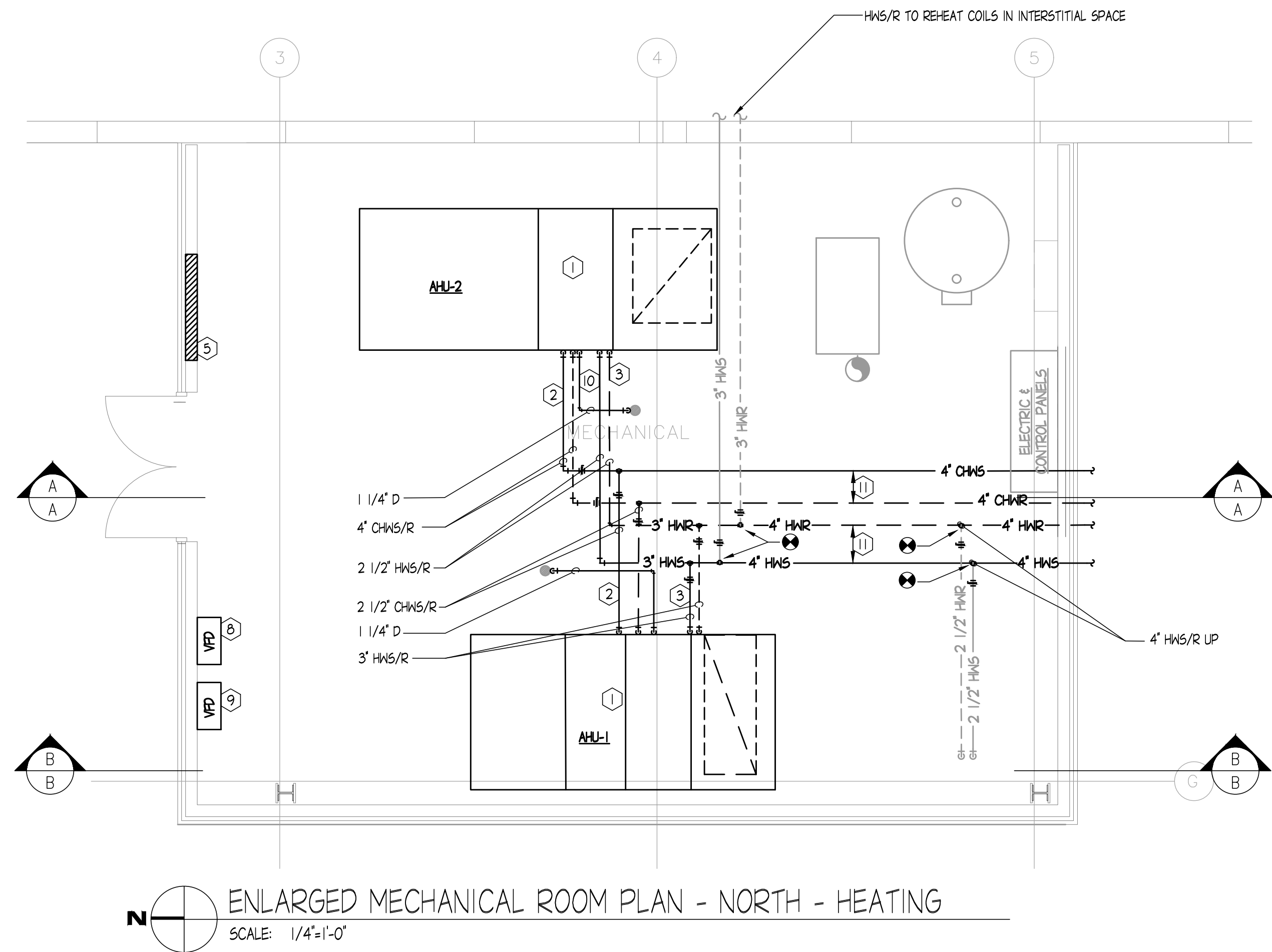
DATE	NO.	DESCRIPTION

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ROOF PLAN - HVAC
SATELLITE JAIL HVAC REPLACEMENT
CHAMPAIGN COUNTY
502 S UERMAN AVE URBANA, IL 61802

DATE: MAY 5, 2021	ISSUED FOR BID	SHEET: M-102
PROJECT: GHR # 7253		

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PRINTED: 05/04/2021



KEYED NOTES - (FOR THIS PLAN ONLY (SYMBOL))

- 1 INSTALL NEW AHU ON EXISTING HOUSEKEEPING PAD
- 2 CONNECT NEW CHWS/R PIPING TO NEW AHU. FOR COIL CONNECTIONS SEE DETAIL M-300
- 3 CONNECT NEW HWS/R PIPING TO NEW AHU. FOR COIL CONNECTIONS SEE DETAIL M-300
- 4 CONNECT NEW AHU TO EXISTING SA, RA & RA DUCTWORK.
- 5 INSTALL NEW CONTROL PANEL.
- 6 EXTEND OA DUCT INTO PENTHOUSE. TURN OA DUCT VERTICALLY TO NEW ROOF HOODS ON PENTHOUSE.
- 7 EXISTING EF TO REMAIN. REPLACE EXISTING ASSOCIATED CONTROLLER. FOR CONTROLS WORK SEE DETAIL M-500 PROVIDE START/STOP.
- 8 NEW VFD SERVING AHU-1.
- 9 NEW VFD SERVING AHU-2.
- 10 NEW CONDENSATE PIPING FROM AHU TO FLOOR DRAIN.
- 11 INSTALL DIFFERENTIAL PRESSURE SENSOR. SEE DETAIL M-300

DATE	NO.	DESCRIPTION

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Mechanical & Electrical Consulting Engineers

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ENLARGED FLOOR PLANS - NORTH PENTHOUSE - HVAC
SATELLITE JAIL HVAC REPLACEMENT

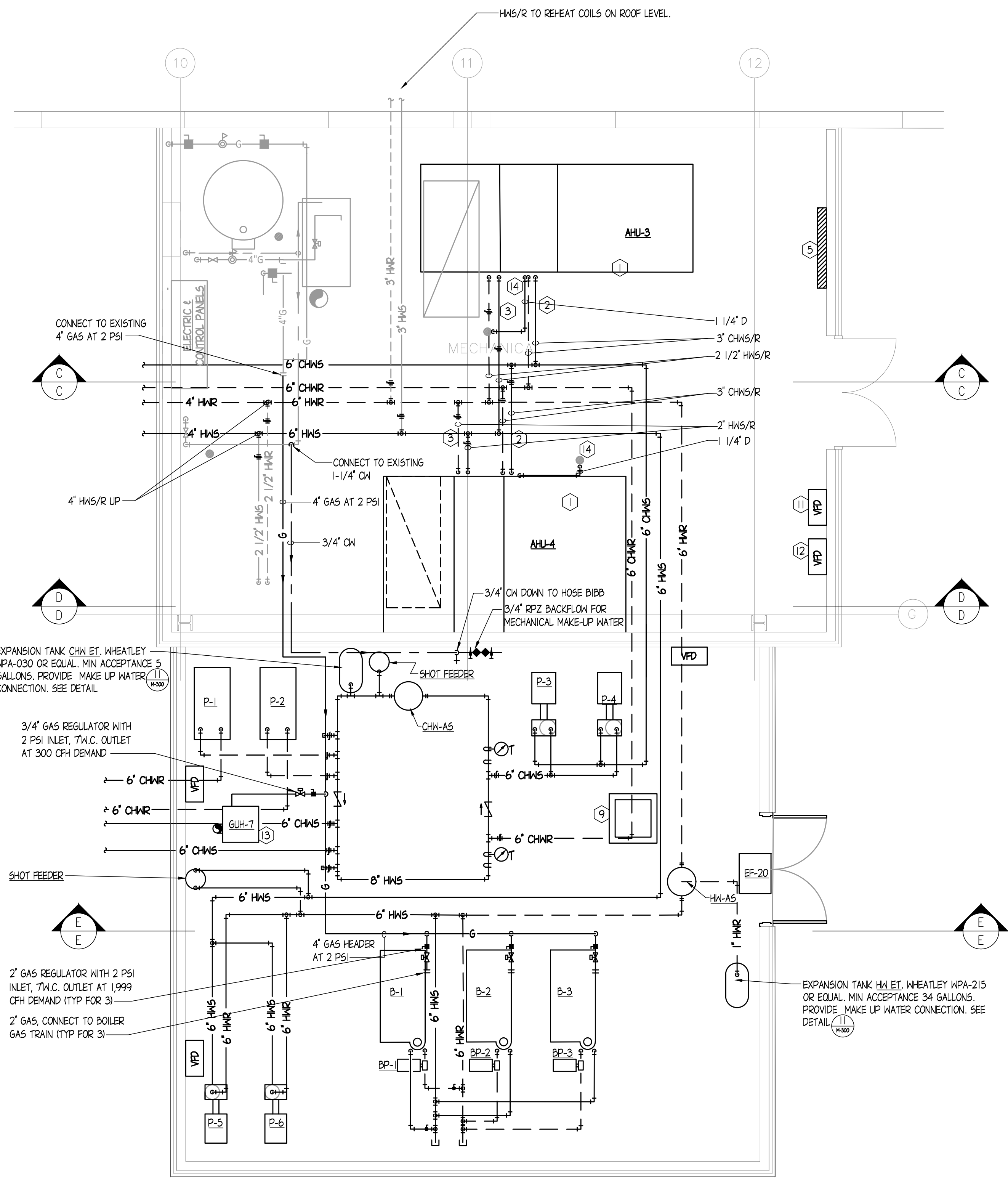
CHAMPAIGN COUNTY
502 S LIERMAN AVE URBANA, IL 61802

DATE:	NO.

DRAWN:	JMD	APPROVED:	RCVN
DATE:	MAY 5, 2021		
ISSUED FOR BID			
PROJECT:	GHR # 7253		

SHEET:
M-201

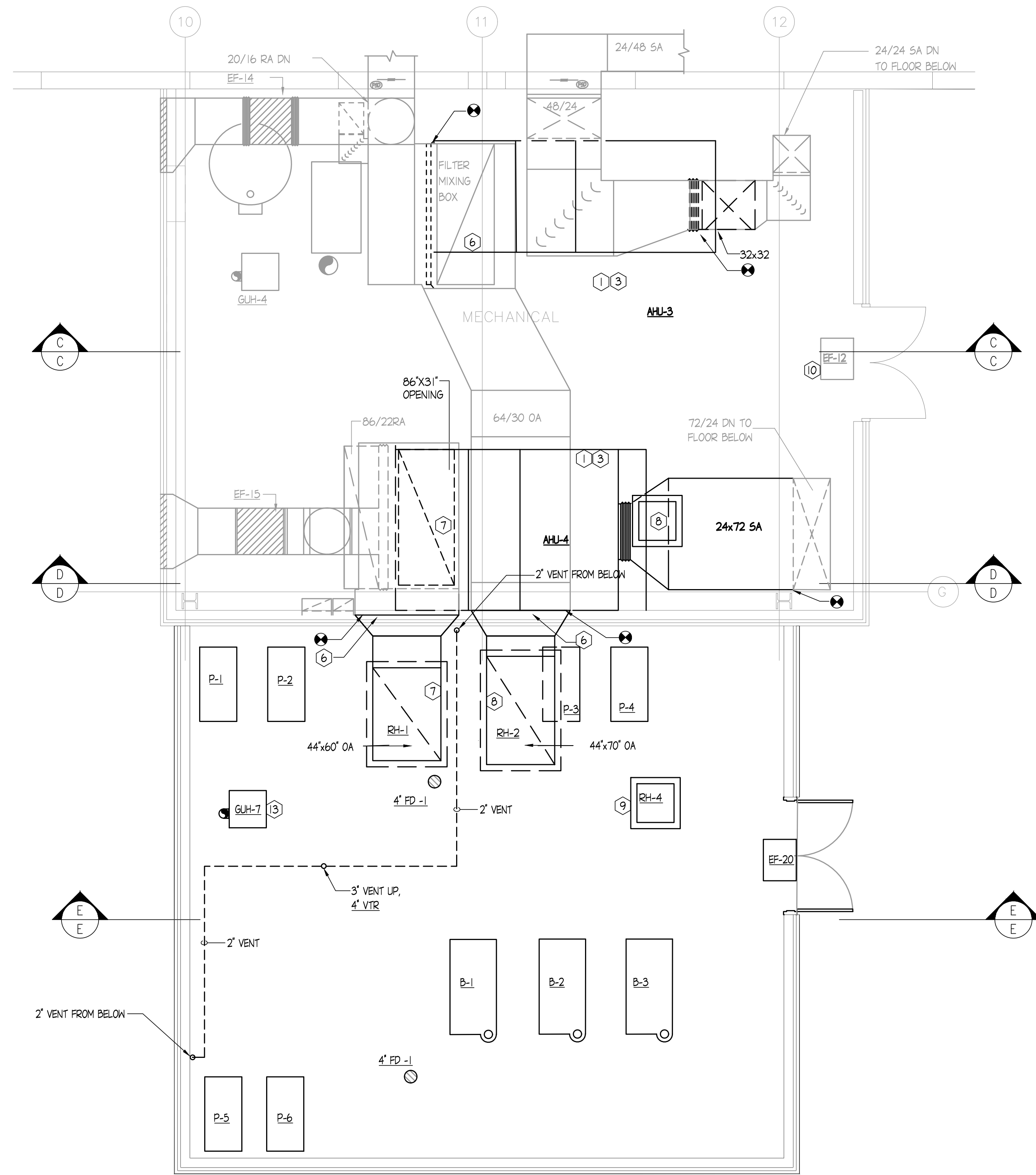
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PRINTED: 05/04/2021



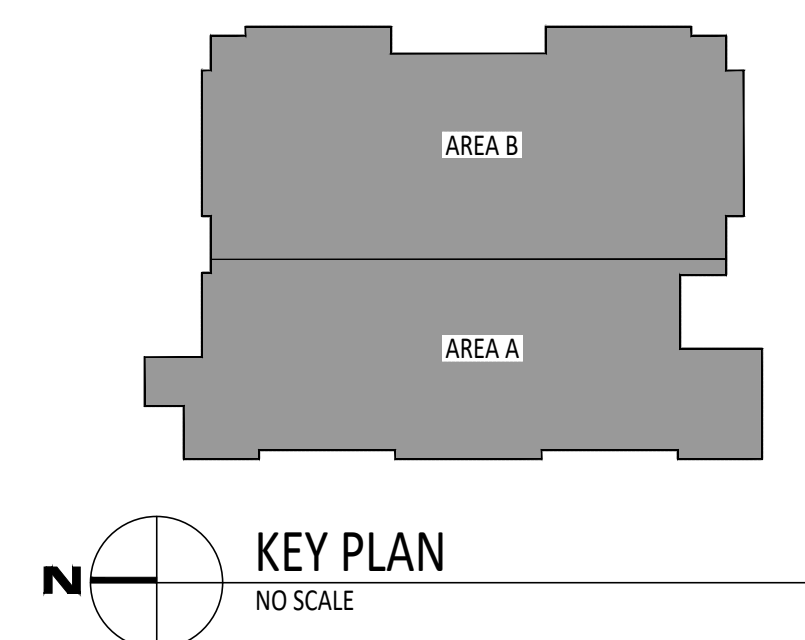
ENLARGED MECHANICAL ROOM PLAN - SOUTH & ADDITION - HEATING
SCALE: 1/4" = 1'-0"

KEYED NOTES - (FOR THIS PLAN ONLY)

1. INSTALL NEW AHU ON EXISTING HOUSEKEEPING PAD
2. CONNECT NEW CHWS/R PIPING TO NEW AHU. FOR COIL CONNECTIONS SEE DETAIL
3. CONNECT NEW HWS/R PIPING TO NEW AHU. FOR COIL CONNECTIONS SEE DETAIL
4. CONNECT NEW AHU TO EXISTING SA, RA & OA DUCTWORK.
5. INSTALL NEW CONTROL PANEL.
6. EXTEND OA DUCT INTO PENTHOUSE. TURN OA DUCT VERTICALLY TO NEW ROOF HOODS ON PENTHOUSE.
7. NEW 44"x70" ROOF HOOD FOR OUTSIDE AIR. CURB CAP WIDTH AND LENGTH 52"x78".
8. NEW 44"x60" ROOF HOOD FOR OUTSIDE AIR. CURB CAP WIDTH AND LENGTH 52"x68".
9. NEW 25"x24" ROOF HOOD. CURB CAP WIDTH AND LENGTH 35"x32". PROVIDE MOD. PROVIDE BIRD/INSECT SCREEN.
10. EXISTING EF TO REMAIN. REPLACE EXISTING ASSOCIATED CONTROLLER. FOR CONTROLS WORK SEE DETAIL. PROVIDE START/STOP.
11. NEW VFD SERVING AHU-3.
12. NEW VFD SERVING AHU-4.
13. INSTALL NEW UNIT HEATER.
14. NEW CONDENSATE PIPING FROM AHU TO FLOOR DRAIN.



ENLARGED MECHANICAL ROOM PLAN - SOUTH & ADDITION - VENTILATION
SCALE: 1/4" = 1'-0"



KEY PLAN
NO SCALE

DATE	NO.	DESCRIPTION

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Mechanical & Electrical Consulting Engineers
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217-356-0536 Business - 217-356-1092 Fax

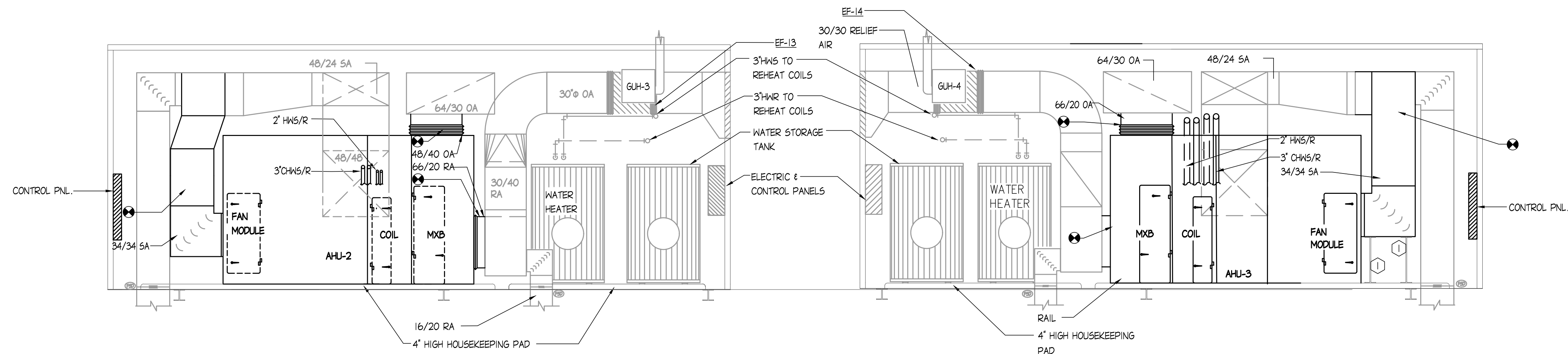
ENLARGED FLOOR PLANS - SOUTH PENTHOUSE & ADDITION - HVAC
SATELLITE JAIL HVAC REPLACEMENT

CHAMPAIGN COUNTY
502 S LIERMAN AVE URBANA, IL 61802

DRAWN: JMD
DATE: MAY 5, 2021
PROJECT: ISSUED FOR BID
GHR # 7253

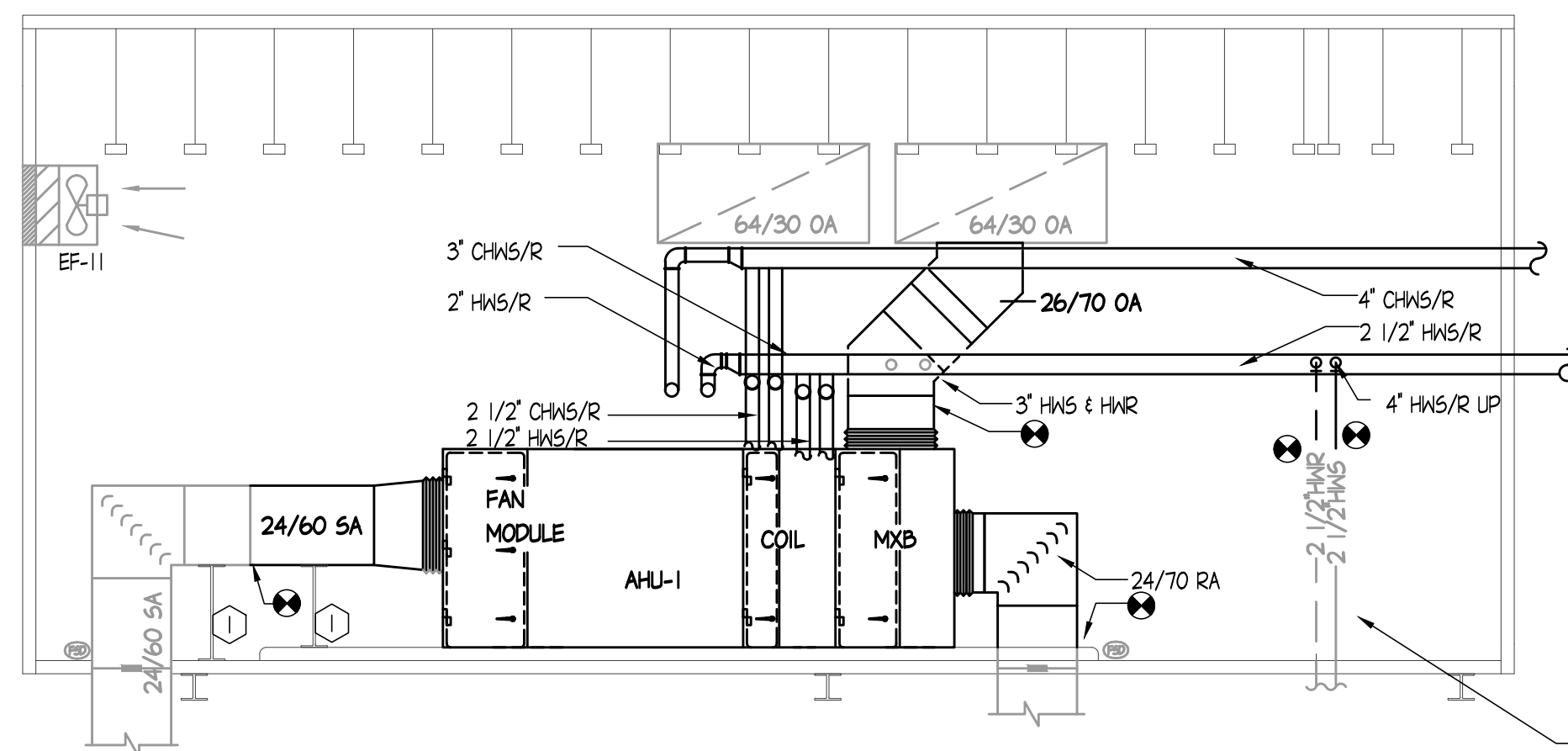
SHEET:
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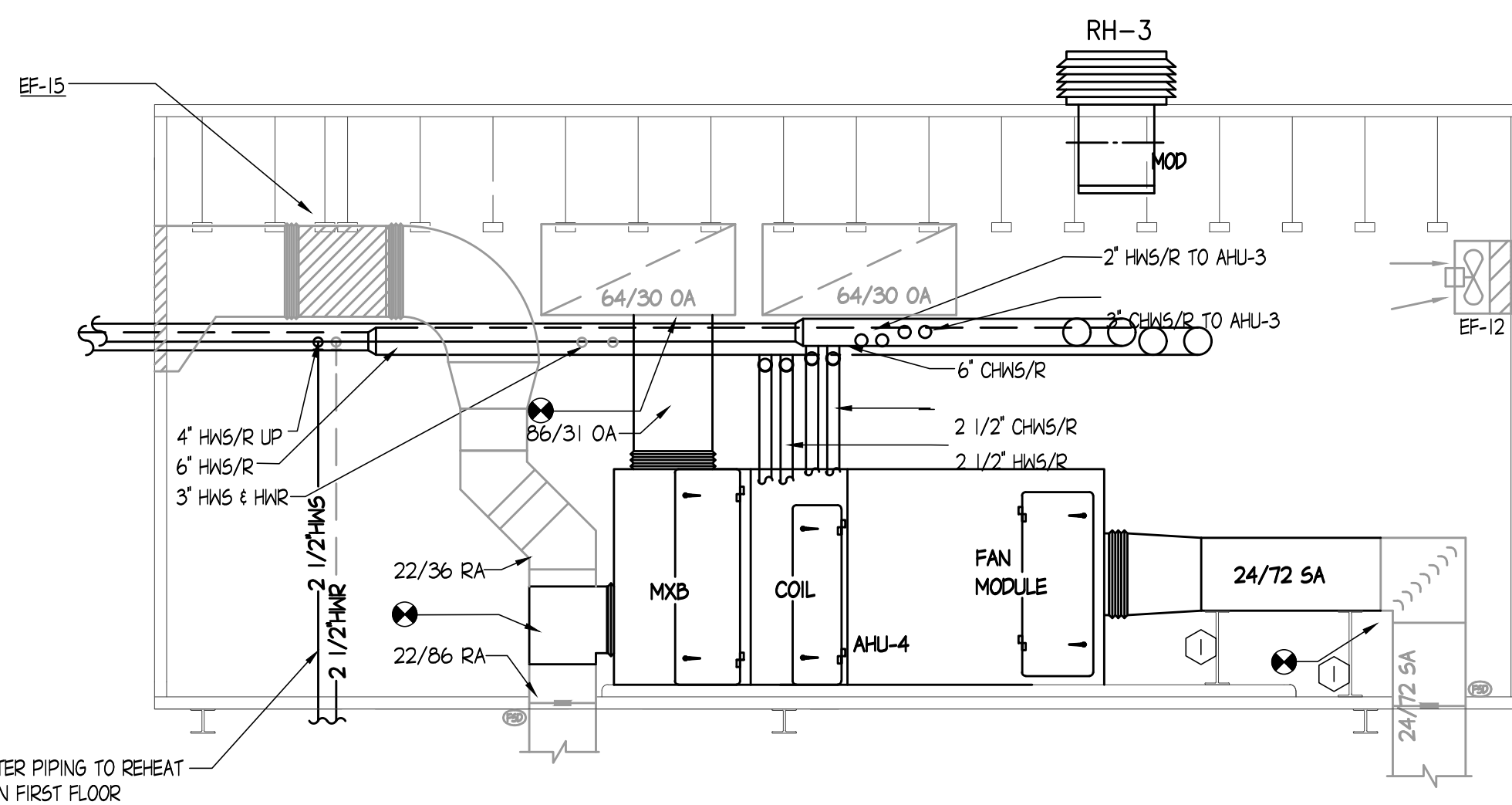


C SECTION A - A
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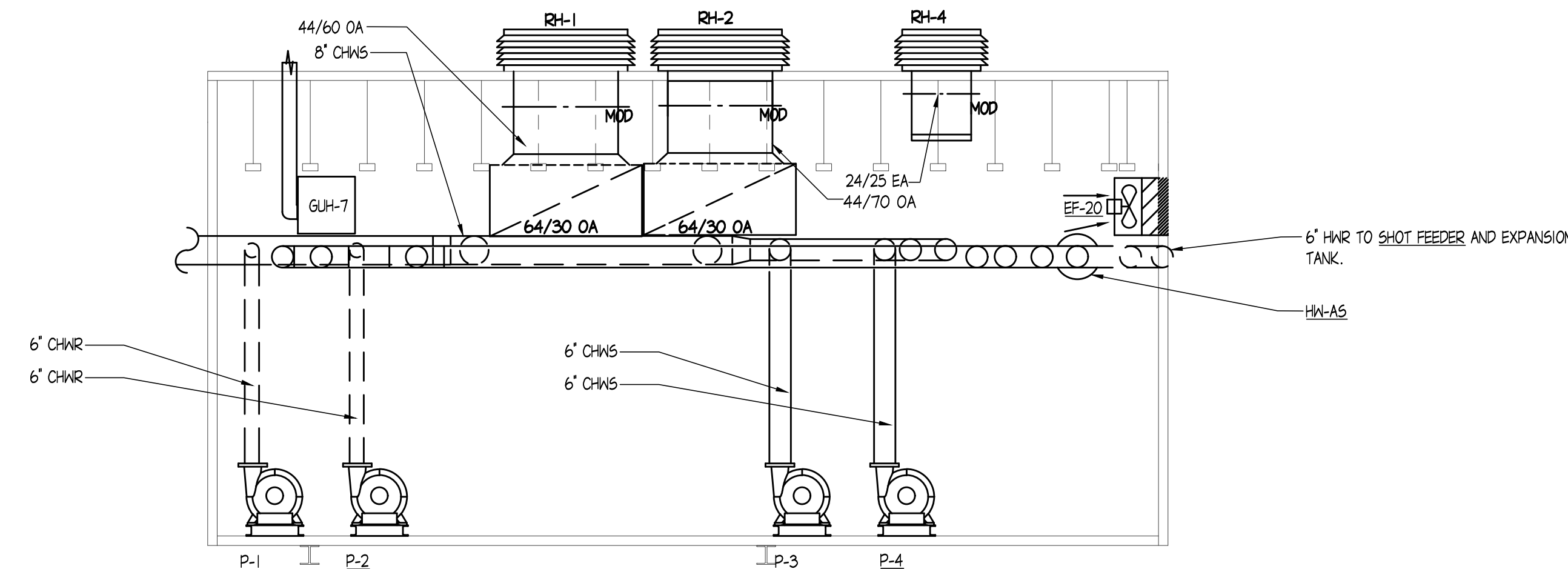
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12" 0 1' 5' 10'



E SECTION B - B
SCALE: 1/4" = 1'-0"
12" 0 1' 5' 10'

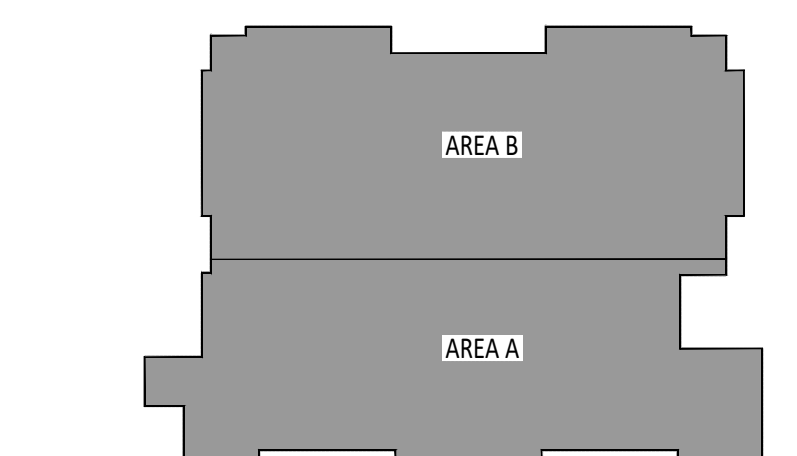


F SECTION D - D
SCALE: 1/4" = 1'-0"
12" 0 1' 5' 10'



G SECTION E - E
SCALE: 1/4" = 1'-0"
12" 0 1' 5' 10'

KEYED NOTES - FOR THIS PLAN ONLY SYMBOL
① INSTALL NEW DUCT SUPPORTS.



DATE	NO.	DESCRIPTION

GHR ENGINEERS AND ASSOCIATES, INC.
Mechanical & Electrical Consulting Engineers
1615 South Neil Street, Champaign, Illinois 61820
217-356-0536 Business - 217-356-1092 Fax

PENTHOUSE SECTIONS - HVAC
SATELLITE JAIL HVAC REPLACEMENT

CHAMPAIGN COUNTY
502 S LIERMAN AVE URBANA, IL 61802

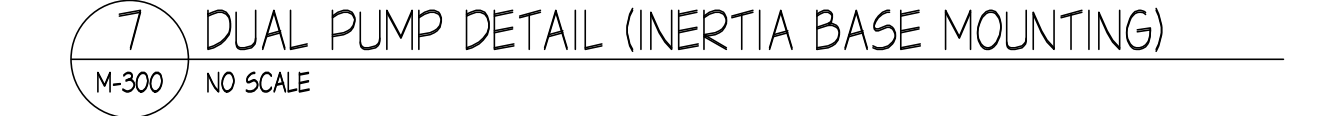
DATE:	NO.

DRAWN:	JMD	APPROVED:	RCVN
DATE:	MAY 5, 2021	ISSUED FOR BID	
PROJECT:	GHR # 7253		

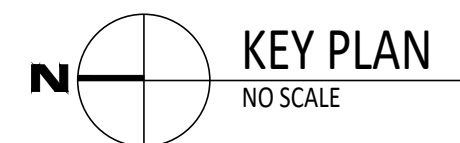
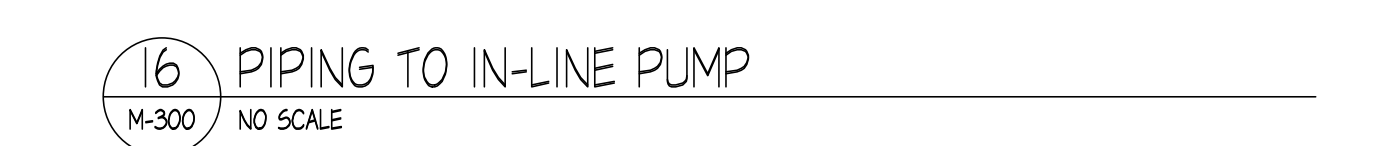
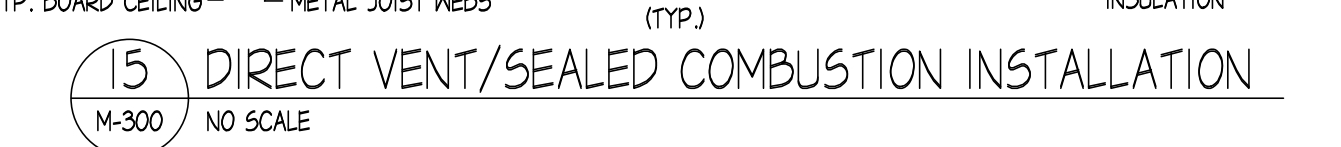
SHEET:
M-203

THE ORIGINAL OF THIS DRAWING IS 30"x42". IF THIS COPY IS ANY OTHER SIZE, IT HAS EITHER BEEN REDUCED OR ENLARGED. TAKE APPROPRIATE PRECAUTIONS ACCORDINGLY.

SYMBOL OR ABBREVIATION	DESCRIPTION
—CHWR—	CHILLED WATER RETURN
—CHWS—	CHILLED WATER SUPPLY
—HWR—	HEATING WATER RETURN
—HWS—	HEATING WATER SUPPLY
	GATE VALVE
	MOTOR CONTROL VALVE
	THREE-WAY MOTOR CONTROL VALVE
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	GLOBE VALVE
	HOSE END VALVE
	CHECK VALVE
	BALANCING VALVE
	BUTTERFLY VALVE
	SHUTOFF VALVE
	BALL VALVE
	STRAINER
	UNION
	PIPE RISER
	PIPE DROP
	90° ELL
	PIPE DROP WITH 90° ELL
	45° ELL
	PIPE TEE
	PIPE TAKEOFF FROM TOP OF MAIN
	PIPE TAKEOFF FROM BOTTOM OF MAIN
	END CAP
	PIPE FLANGE
	ECCENTRIC REDUCER
	CONCENTRIC REDUCER
	FLEXIBLE CONNECTION
	PIPE SLEEVE
	PIPE GUIDE
	PIPE ANCHOR
	BREAK
	NEW CONNECTION TO EXISTING
	FLOW SWITCH
	EMPTY WELL
	THERMOMETER AND WELL
	FLUID PRESSURE GAUGE
	THERMOSTAT
	MANUAL AIR VENT



SYMBOL OR ABBREVIATION	DESCRIPTION
AHJ	AIR HANDLING UNIT
EF	EXHAUST FAN
EXH	EXHAUST
OA	OUTDOOR AIR
RA	RETURN AIR
RAD	RETURN AIR DAMPER
RF	RETURN FAN
RG	RETURN GRILLE
RH	ROOF HOOD
SA	SUPPLY AIR
SD	SUPPLY DIFFUSER
VD	VOLUME DAMPER
	SUPPLY DUCT
	RETURN DUCT
	SUPPLY DIFFUSER (WITH HARD DUCT)
	SUPPLY DIFFUSER (TWO WAY)
	RETURN GRILLE
	SIDEWALL RETURN GRILLE
	FIRE DAMPER
	VOLUME DAMPER
	OFFSET (DOUBLE 45° RADIOUS FITTINGS)
	FLEXIBLE DUCT CONNECTION
	TRANSITION FROM SQUARE TO ROUND DUCT
	SQUARE ELL WITH TURNING VANES
	200% CONNECTION WITH VOLUME DAMPER AND FLEX DUCT

[illegible]

CHAMPAIGN COUNTY
502 S LIERMAN AVE URBANA, IL 61802

SEAL	DATE: MAY 5, 2021 ISSUED FOR BID	SHEET: M-300
	DRAWING: JMD APPROVED: RCVN	
	DATE: MAY 5, 2021	
	ISSUED FOR BID	
	PROJECT: GHR # 7253	

FILE: H:\GHR Projects\7253 - Champaign County Satellite Jail - Mechanical Upgrade\HVAC\01 - Worksheets\7253 - M-400.dwg
PRINTED: 05/04/2021

SCHEDULE OF EXHAUST FANS												
MARK	LOCATION	MANUFACTURER	MODEL NUMBER AND DRIVE	CFM	STATIC PRESSURE	RPM	MOTOR			REMARKS		
							H.P.	VOLTS	PHASE			
EF-20	PENTHOUSE	GREENECK	CLBE-140-16-V6	3000	0.25	1726	1	480	3	PROVIDE WITH ECM MOTOR, POWER DISCONNECT, GRAVITY OPERATED BACKDRAFT DAMPER.		

SCHEDULE OF AIR COOLED CHILLERS													
MARK	LOCATION	MANUFACTURER	CATALOG NUMBER	FLUID	EVAPORATOR			ELECTRICAL DATA				REMARKS	
					ENT °F	LMT °F	GPM	WPD	MAX FLSE AMPS	VOLTS	PHASE		CYCLE
CH-1	ROOF	CARRIER	30R2X19064-LHLC3	FRESH WATER	54	44	444.8	12.1	408	480	3	60	SEE NOTES BELOW
CH-2	ROOF	CARRIER	30R2X19064-LHLC3	FRESH WATER	54	44	444.8	12.1	408	480	3	60	SEE NOTES BELOW

- NOTES:
1. PROVIDE DISCONNECT, CENTRAL TRANSFORMER WITH COMMUNICATION CAPABILITY DDC COM INTERFACE CARD.
2. PROVIDE AIR-SIDE LOW AMBIENT CONTROLS.
3. PROVIDE FACTORY FLOW SWITCH, STRAINER, VARIABLE SPEED CONDENSER FANS, FACTORY STARTUP AND ONE YEAR PARTS AND LABOR WARRANTY.
4. PROVIDE REMOVABLE SCREEN ON INLET SIDE OF COILS FOR CLEANING.
5. PROVIDE HAIL GUARDS.

SCHEDULE OF PACKAGED MODULAR BOILERS												
MARK	LOCATION	MANUFACTURER	MODEL NUMBER	AGA INPUT MBH	AGA OUTPUT MBH	FUEL	ELECTRICAL			REMARKS		
							H.P.	VOLTS	PHASE			
B-1,2,3	PENTHOUSE	LOCHINVAR	PBA2001	1999	1923	NAT GAS	480V/3PH/60Hz			PROVIDE SEALED COMBUSTION VENTING KIT, NEUTRALIZING KIT, FACTORY 480V-120V TRANSFORMER EMERGENCY GAS SHUT-OFF, VARIABLE SPEED CIRCULATION PUMP SIZED BY MANUFACTURER, MINIMUM FLOW: 200 GPM. PROVIDE NATURAL GAS PRESSURE REGULATOR.		

GAS FIRED UNIT HEATER												
MARK	MANUFACTURER	MODEL NUMBER	FUEL	INPUT/OUTPUT MBH	A.F.U.E.	BLOWER			REMARKS			
						H.P.	VOLTS	PHASE				
GH-1	REZNER	UB2-300	NAT. GAS	300 / 250	83%	1.5	110	1	5/23	PROVIDE WITH WALL MOUNTED THERMOSTAT AND CONCENTRIC VENT KIT. PROVIDE INTEGRAL STARTER AND DISCONNECT.		

SCHEDULE OF AIR COOLED CONDENSING UNITS													
MARK	MANUFACTURER	MODEL	LOCATION	CAPACITY (BTU)	VOLTS / PHASE	COMPRESSOR(S)			CONDENSER FAN(S)			SEER (EER)	REMARKS
						Number	FLA	K.W.	Number	H.P.	Phase		
ACCU-1	DATA AIR	DRCU-0352-3	ROOF	36,000	208 / 3	1	10.8	-	1	3/4	3	-	PROVIDE COOLING COIL OPT-A0430ARC, INTEGRAL STARTER/DISCONNECT.

SCHEDULE OF ROOF HOODS												
MARK	MANUFACTURER	MODEL	STYLE	TYPE	MIN CFM	MAX CFM	THROAT AREA (SQ FT)	THROAT SIZE	CLUB CAP	PD	REMARKS	
RH-1	GREENECK	KIH	PENTHOUSE	INTAKE	14500	14500	18.33	44"x10"	52"x68"	0.114	PROVIDE ROOF CLUB AND BIRD SCREEN.	
RH-2	GREENECK	KIH	PENTHOUSE	INTAKE	17000	17000	21.39	44"x60"	52"x78"	0.113	PROVIDE ROOF CLUB AND BIRD SCREEN.	
RH-3	GREENECK	KIH	PENTHOUSE	INTAKE	3000	3000	4.17	25"x24"	33"x32"	0.094	PROVIDE ROOF CLUB AND BIRD SCREEN. INTERLOCK WITH EF-19.	
RH-4	GREENECK	KIH	PENTHOUSE	INTAKE	3000	3000	4.17	25"x24"	33"x32"	0.094	PROVIDE ROOF CLUB AND BIRD SCREEN. INTERLOCK WITH EF-20.	

PUMP SCHEDULE															
MARK	MANUFACTURER	MODEL	LOCATION	SYST	FLUID	Fluid TEMP	GPM	SIZE, in.		HEAD, ft WG		MOTOR		REMARKS	
								Disch	Suc	Oper	Cutoff	HP	RPM		Volts / Phase
P-1	BELL & GOSSETT	IS10	PENTHOUSE	CH-1	WATER	45	444.8	3	4	35.0	56.0	7.5	1573	480/3	TEMPERATURE CONTROL CONTRACTOR TO PROVIDE VFD. PROVIDE WITH INVERTER-DUTY RATED MOTOR. INSTALL ON INERTIA PAD.
P-2	BELL & GOSSETT	IS10	PENTHOUSE	CH-2	WATER	45	444.8	3	4	35.0	56.0	7.5	1573	480/3	TEMPERATURE CONTROL CONTRACTOR TO PROVIDE VFD. PROVIDE WITH INVERTER-DUTY RATED MOTOR. INSTALL ON INERTIA PAD.
P-3	BELL & GOSSETT	IS10	PENTHOUSE	CHW	WATER	45	570.9	3	4	68.4	89.2	15	1721	480/3	TEMPERATURE CONTROL CONTRACTOR TO PROVIDE VFD. PROVIDE WITH INVERTER-DUTY RATED MOTOR. INSTALL ON INERTIA PAD.
P-4	BELL & GOSSETT	IS10	PENTHOUSE	CHW	WATER	45	570.9	3	4	68.4	89.2	15	1721	480/3	TEMPERATURE CONTROL CONTRACTOR TO PROVIDE VFD. PROVIDE WITH INVERTER-DUTY RATED MOTOR. INSTALL ON INERTIA PAD.
P-5	BELL & GOSSETT	IS10	PENTHOUSE	HW	WATER	180	421.8	3	4	72.4	89.4	15	1601	480/3	TEMPERATURE CONTROL CONTRACTOR TO PROVIDE VFD. PROVIDE WITH INVERTER-DUTY RATED MOTOR. INSTALL ON INERTIA PAD.
P-6	BELL & GOSSETT	IS10	PENTHOUSE	HW	WATER	180	421.8	3	4	72.4	89.4	15	1601	480/3	TEMPERATURE CONTROL CONTRACTOR TO PROVIDE VFD. PROVIDE WITH INVERTER-DUTY RATED MOTOR. INSTALL ON INERTIA PAD.

AIR HANDLING UNIT SCHEDULE				
GENERAL AHU DATA	MARK	AHU-1	AHU-2,3	AHU-4
	SERVING	BOOKING	CELLS	KITCHEN
	LOCATION	NORTH PENTHOUSE	NORTH, SOUTH PENTHOUSE	SOUTH PENTHOUSE
	UNIT TYPE	HORIZONTAL VAV	HORIZONTAL VAV	HORIZONTAL VAV
	ARRANGEMENT	DRAW THRU	DRAW THRU	DRAW THRU
	MANUFACTURER	CARRIER	CARRIER	CARRIER
SUPPLY FAN DATA	MODEL NUMBER	39MN21W	39MN36W	39MN30W
	CFM (STANDARD AIR)	9310	17200	14500
	EXTERNAL STATIC PRESSURE (INCHES W.C.)	2.50	2.75	3.0
	TOTAL STATIC PRESSURE (INCHES W.C.)	4.39	4.54	4.88
	OUTLET VELOCITY (FPM)	434.2	469	477.8
	RPM	1200	1200	1200
	MOTOR HORSEPOWER/ VOLTAGE / PHASE	10/460/3	20/460/3	10/460/3
	MINIMUM OUTDOOR AIR (CFM)	7,100	6,300	4,250
	HEATING MEDIA	HOT WATER	HOT WATER	HOT WATER
	FACE AREA (SQ. FT.)	21.44	36.67	30.35
HEATING COIL DATA	(HCOILS) HEIGHT / LENGTH	(1)	(1)	(1)
	TUBE DIAMETER	0.5	0.5	0.5
	RONDS/ TYPE/ F.P.F.	2 / SINE / 96	1 / SINE / 96	1 / SINE / 96
	ENTERING AIR TEMPERATURE (°F db)	10	60	60
	LEAVING AIR TEMPERATURE (°F db)	84.78	90.8	90.51
	AIR SIDE PRESSURE DROP (INCHES W.C.)	0.19	0.18	0.19
	TOTAL HEATING CAPACITY (MBH)	845.95	589.16	492.07
	HEATING MEDIA FLOW RATE (GPM)	86.5	60.3	50.5
	HEATING MEDIA ENTERING TEMPERATURE OR PRESSURE	180	180	180
	HEATING MEDIA LEAVING TEMPERATURE	160	160	160
COOLING COIL DATA	HEATING MEDIA PRESSURE DROP (FT. WATER)	23.4	7.8	7.0
	COOLING MEDIA (30% PG)	CHILLED WATER	CHILLED WATER	CHILLED WATER
	FACE AREA (SQ. FT.)	21.44	36.67	30.35
	(HCOILS) HEIGHT / LENGTH	(1)	(1)	(1)
	TUBE DIAMETER	0.5	0.5	0.5
	RONDS/ TYPE/ F.P.F.	10 / SINE / 120	8 / SINE / 132	8 / SINE / 132
	ENTERING AIR °F _{db} / °F _{wb}	74.60	67	67
	LEAVING AIR °F _{db} / °F _{wb}	49.45	51.65	51.85
	AIR SIDE PRESSURE DROP (INCHES W.C.)	1.05	0.98	1.01
	TOTAL COOLING CAPACITY (MBH)	705.78	761.64	635.02
	COOLING MEDIA FLOW RATE (GPM)	140.7	151.8	126.6
	COOLING MEDIA ENTERING / LEAVING TEMP.	45/55	45/55	45/55
	COOLING MEDIA PRESSURE DROP (FT. WATER)	10.9	7.6	6.5

- NOTES:
1. PROVIDE SHIPPING SPLITS TO ALLOW FOR INSTALLING UNIT IN EXISTING PENTHOUSE DOOR OPENINGS.
2. PROVIDE WITH SUPPLY FAN VFD'S.

DATE	NO.	DESCRIPTION



ENGINEERS AND ASSOCIATES, INC.
Mechanical & Electrical Consulting Engineers
1615 South Neil Street, Champaign, Illinois 61820
217-356-0536 Business - 217-356-1092 Fax

SCHEDULES - HVAC

SATELLITE JAIL HVAC REPLACEMENT

CHAMPAIGN COUNTY
502 S LIERMAN AVE URBANA, IL 61802

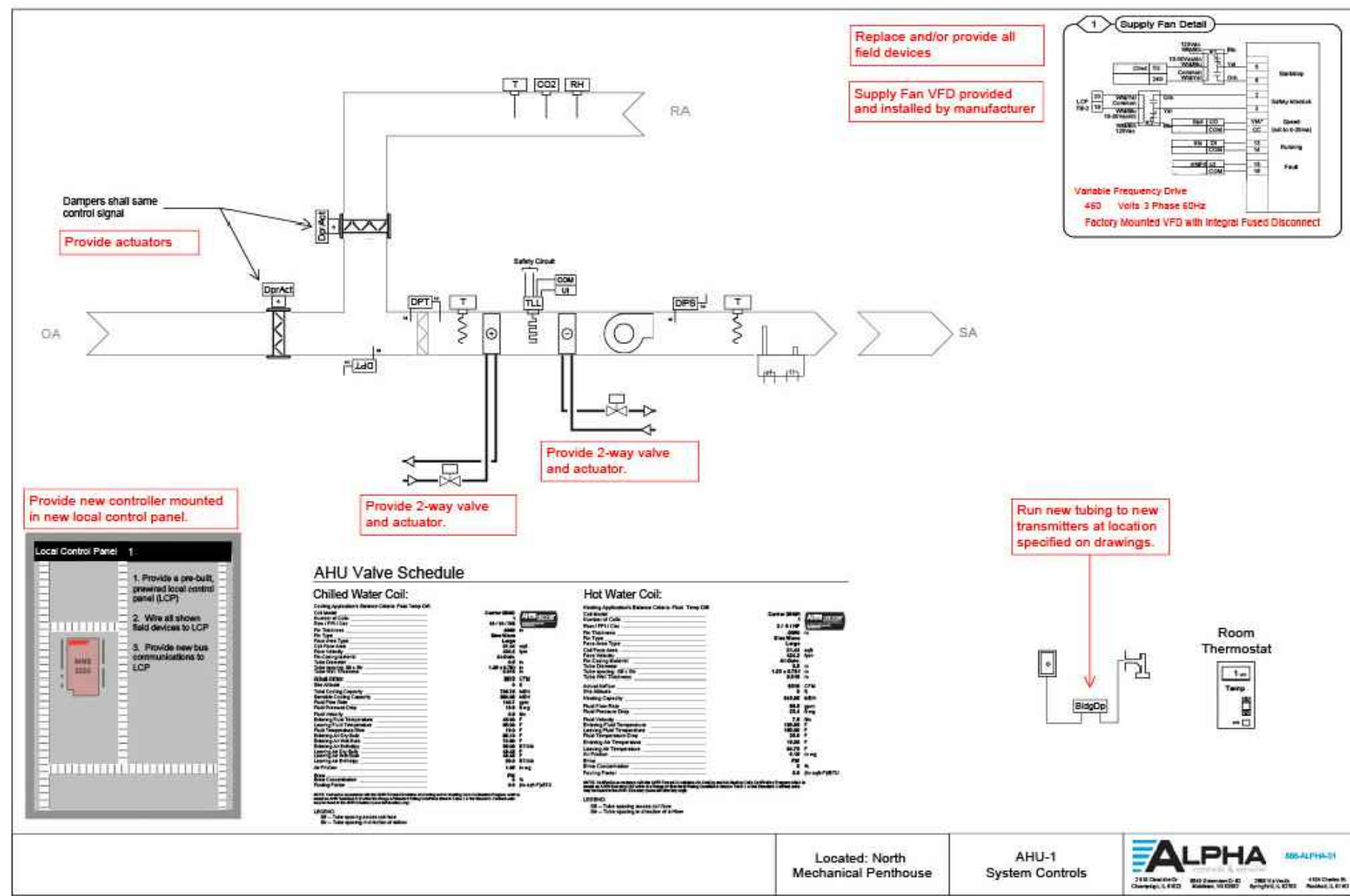
SIN

DATE: MAY 5, 2021
100% CD
GHR # 7253

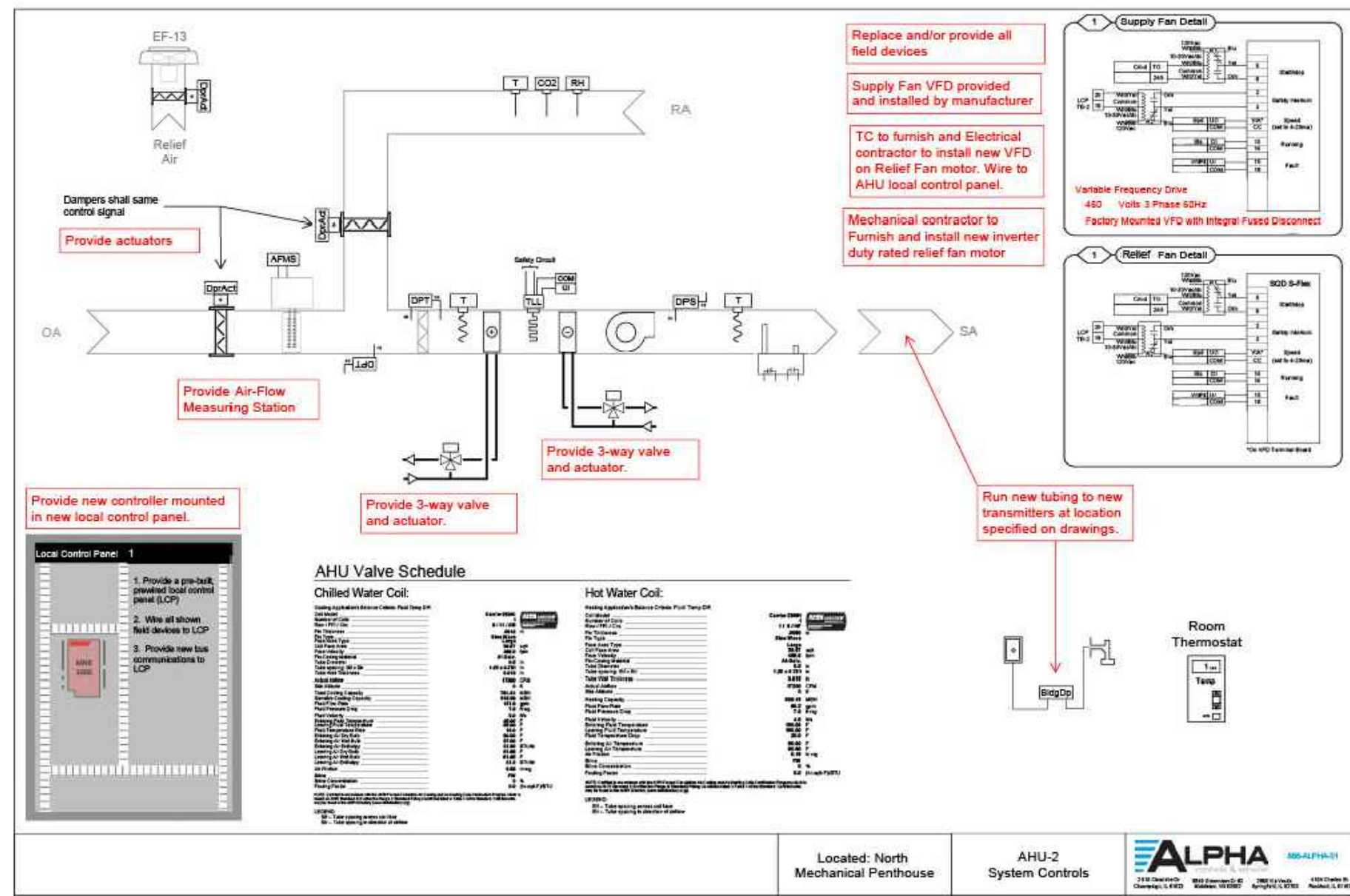
DRAWN: JMD
APPROVED: RCVN

PROJECT: GHR # 7253

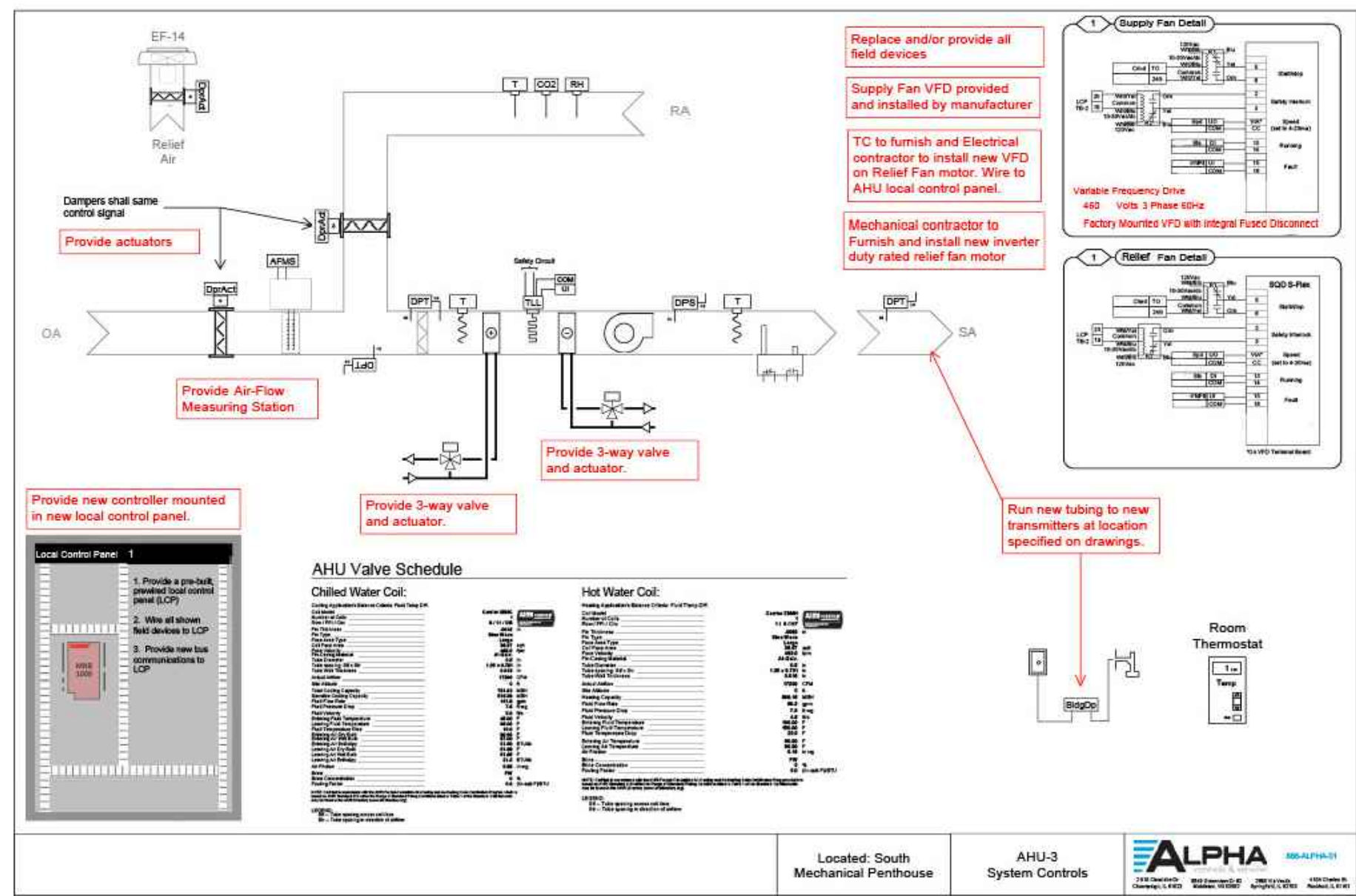
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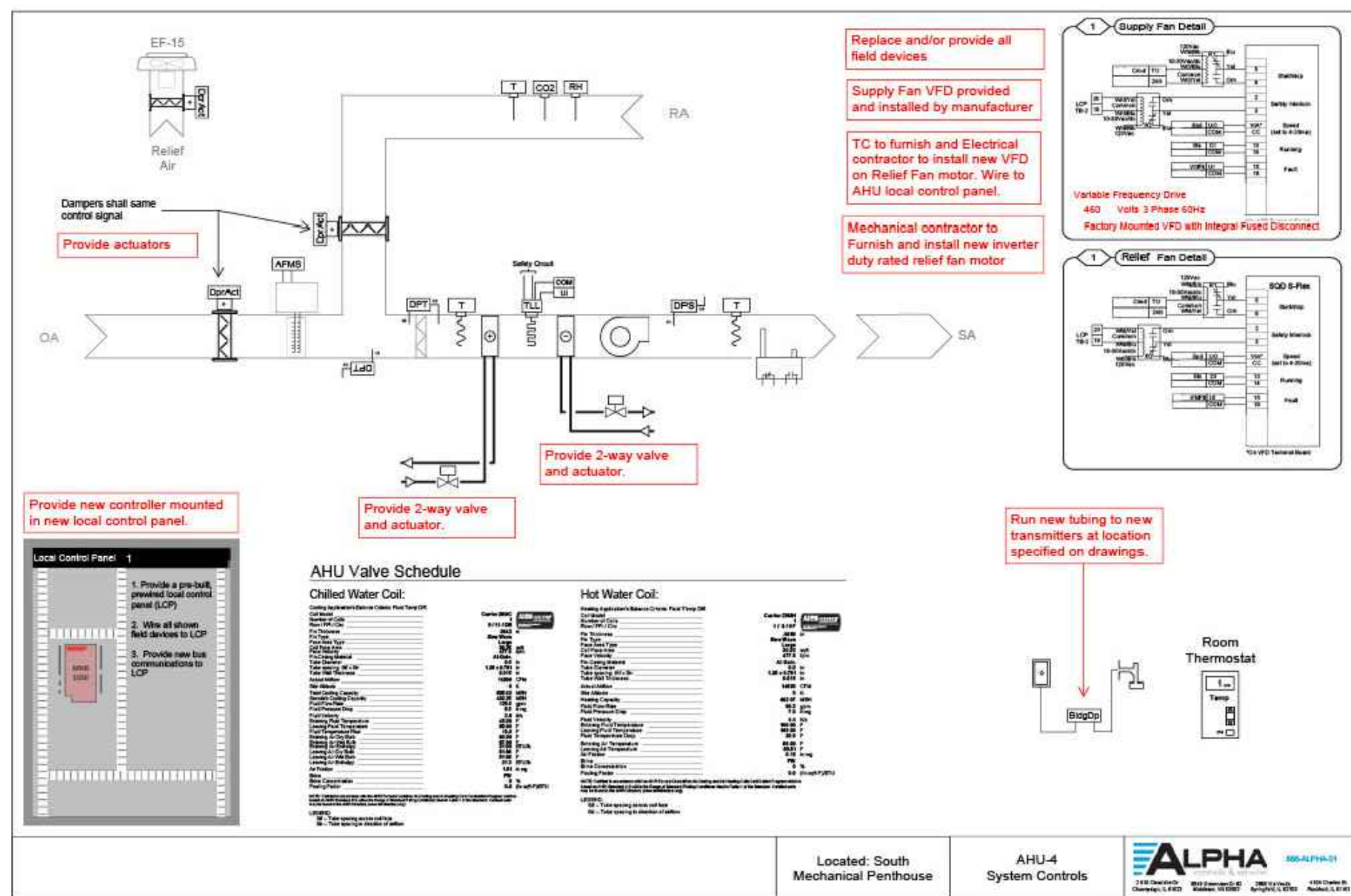
1 AHU-1 SYSTEM CONTROLS
M-500 NO SCALE



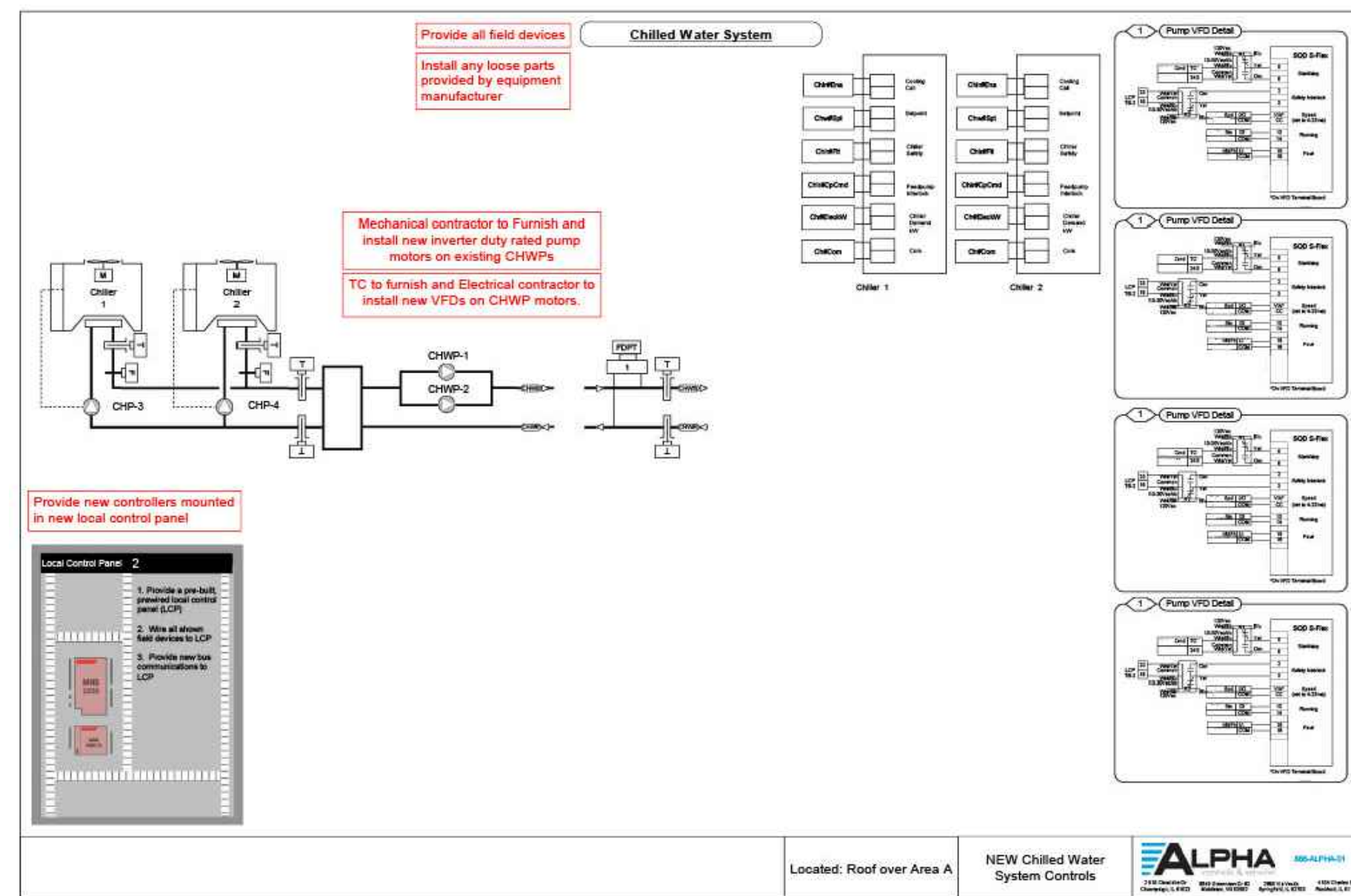
2 AHU-2 SYSTEM CONTROLS
M-500 NO SCALE



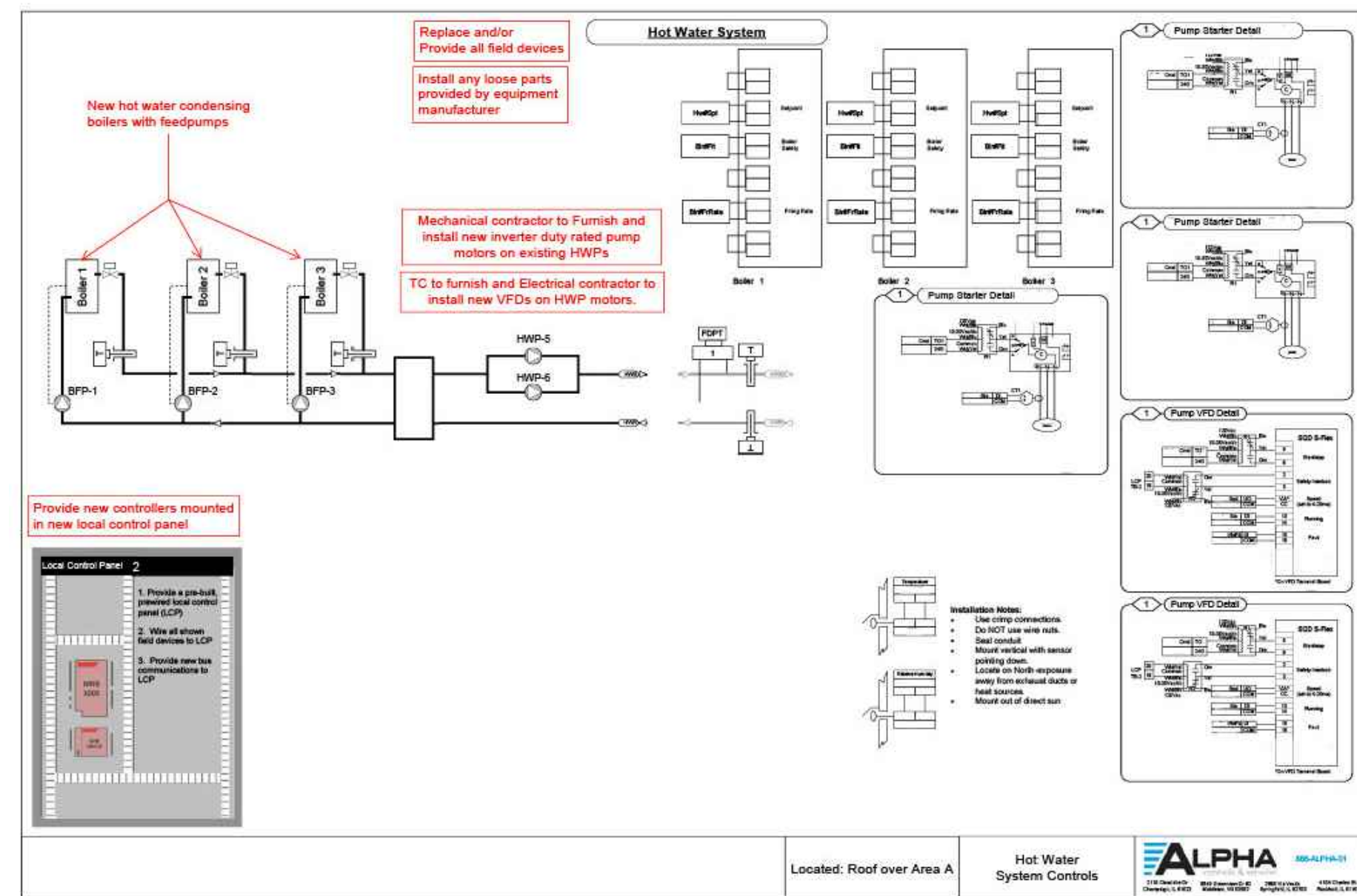
3 AHU-3 SYSTEM CONTROLS
M-500 NO SCALE



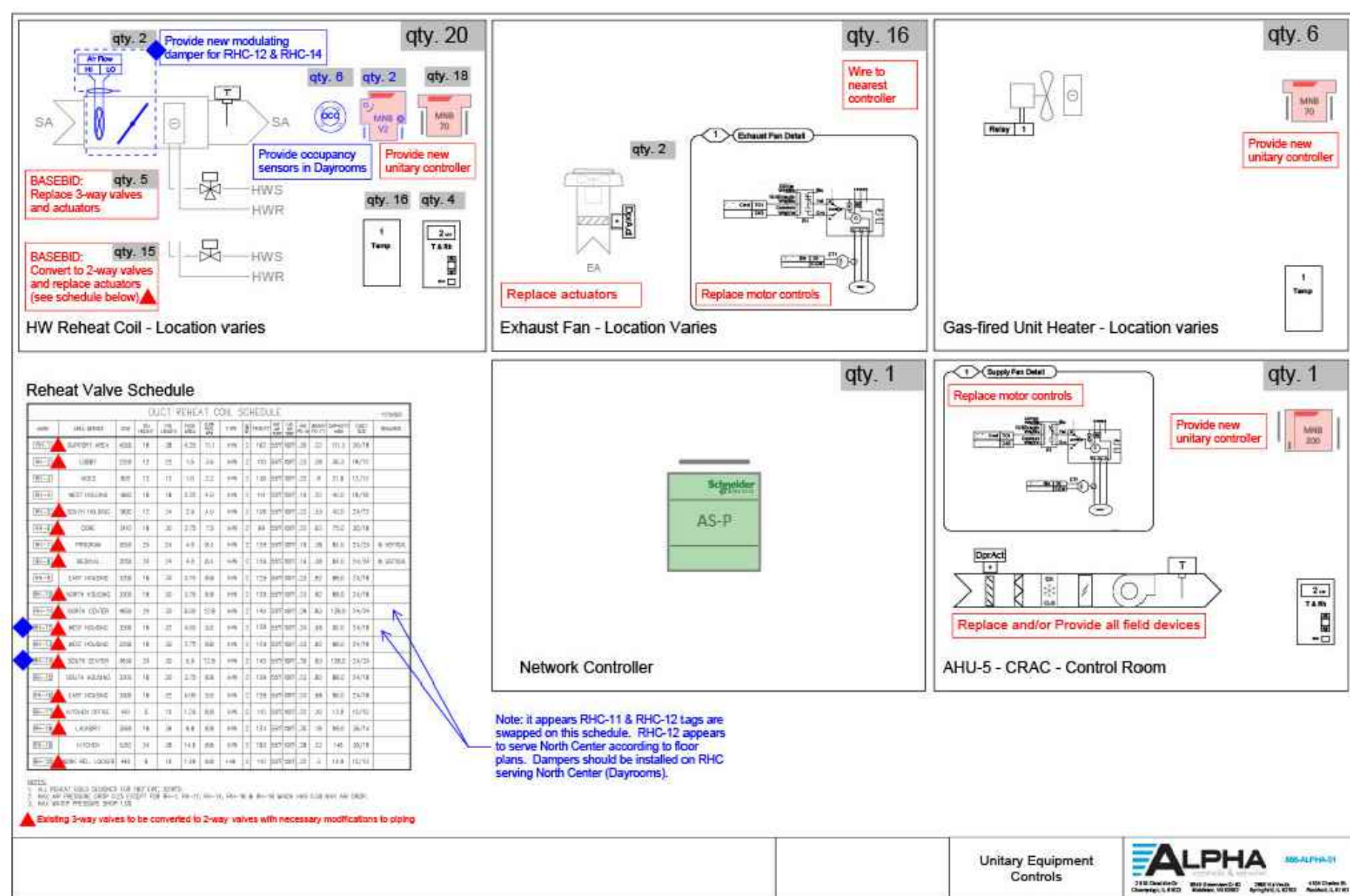
4 AHU-4 SYSTEM CONTROLS
M-500 NO SCALE



5 NEW CHILLED WATER SYSTEM CONTROLS
M-500 NO SCALE



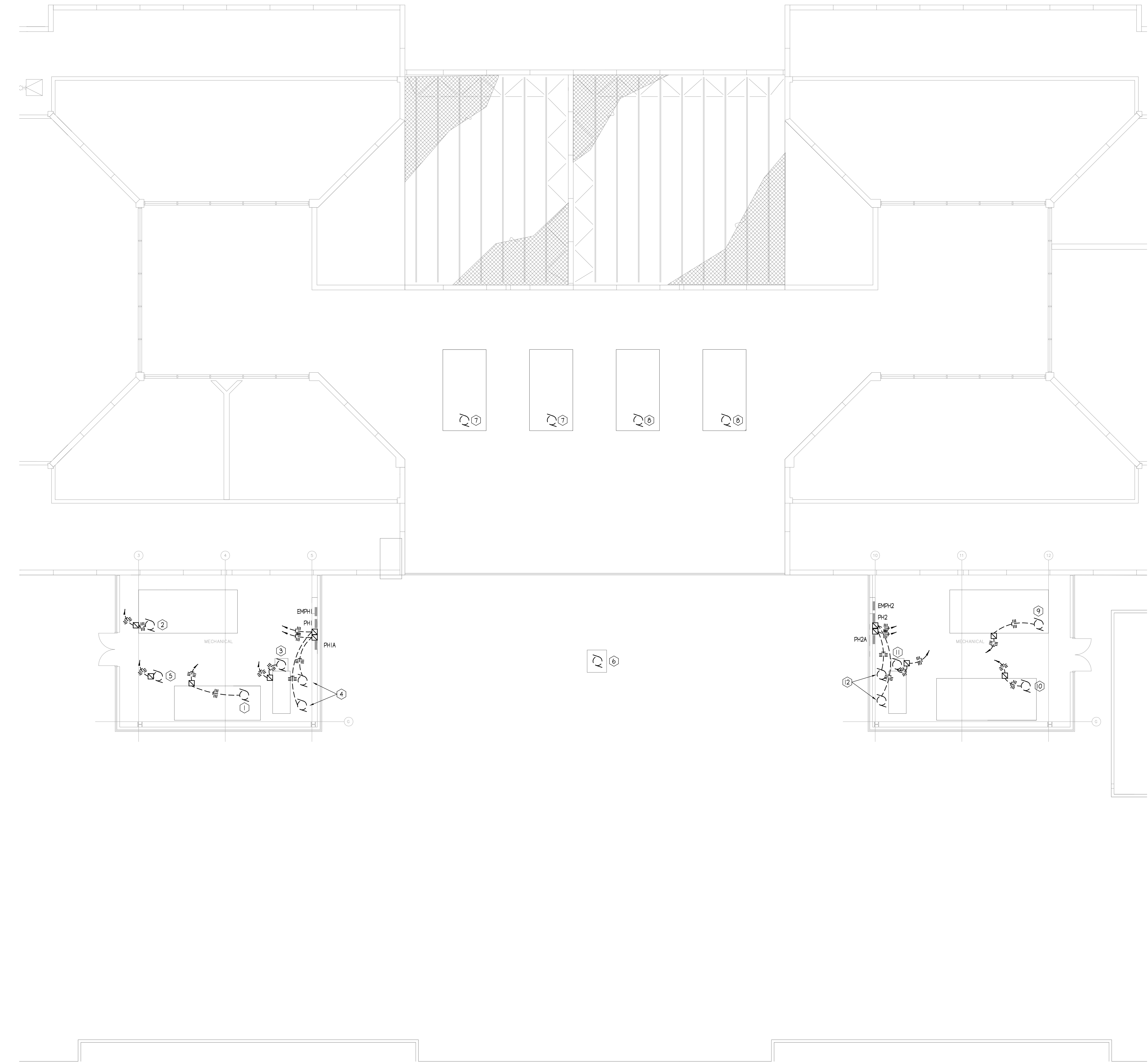
6 HOT WATER SYSTEM CONTROLS
M-500 NO SCALE



7 UNITARY EQUIPMENT CONTROLS
M-500 NO SCALE

VFD and Motor Schedule																			
Tag	System	Fan	Existing VFD?	HP	Voltage	Application	Replace VFD?	Replace Motor?	Replace Motor	HP	Frame Type	Motor Type	Grounding	Provides New	Load	Pre and post	Notes		
ASU-1-01	New ASU-1	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-2-01	New ASU-2	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-3-01	New ASU-3	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-4-01	New ASU-4	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-5-01	New ASU-5	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-6-01	New ASU-6	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-7-01	New ASU-7	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-8-01	New ASU-8	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-9-01	New ASU-9	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-10-01	New ASU-10	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-11-01	New ASU-11	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-12-01	New ASU-12	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-13-01	New ASU-13	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-14-01	New ASU-14	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-15-01	New ASU-15	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-16-01	New ASU-16	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-17-01	New ASU-17	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-18-01	New ASU-18	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-19-01	New ASU-19	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-20-01	New ASU-20	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-21-01	New ASU-21	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-22-01	New ASU-22	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-23-01	New ASU-23	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-24-01	New ASU-24	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-25-01	New ASU-25	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-26-01	New ASU-26	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-27-01	New ASU-27	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-28-01	New ASU-28	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-29-01	New ASU-29	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-30-01	New ASU-30	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-31-01	New ASU-31	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-32-01	New ASU-32	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-33-01	New ASU-33	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-34-01	New ASU-34	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-35-01	New ASU-35	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-36-01	New ASU-36	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-37-01	New ASU-37	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-38-01	New ASU-38	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-39-01	New ASU-39	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-40-01	New ASU-40	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-41-01	New ASU-41	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-42-01	New ASU-42	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-43-01	New ASU-43	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-44-01	New ASU-44	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-45-01	New ASU-45	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-46-01	New ASU-46	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-47-01	New ASU-47	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-48-01	New ASU-48	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-49-01	New ASU-49	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-50-01	New ASU-50	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-51-01	New ASU-51	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-52-01	New ASU-52	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-53-01	New ASU-53	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-54-01	New ASU-54	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-55-01	New ASU-55	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-56-01	New ASU-56	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-57-01	New ASU-57	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-58-01	New ASU-58	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-59-01	New ASU-59	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-60-01	New ASU-60	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-61-01	New ASU-61	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-62-01	New ASU-62	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-63-01	New ASU-63	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-64-01	New ASU-64	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-65-01	New ASU-65	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-66-01	New ASU-66	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-67-01	New ASU-67	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-68-01	New ASU-68	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-69-01	New ASU-69	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-70-01	New ASU-70	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-71-01	New ASU-71	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-72-01	New ASU-72	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-73-01	New ASU-73	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-74-01	New ASU-74	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable	Yes	Yes	ASU-010		
ASU-75-01	New ASU-75	Supply	NA	50	480	By Man.	Yes	NEW MOTOR	NA				Yes	Not applicable					

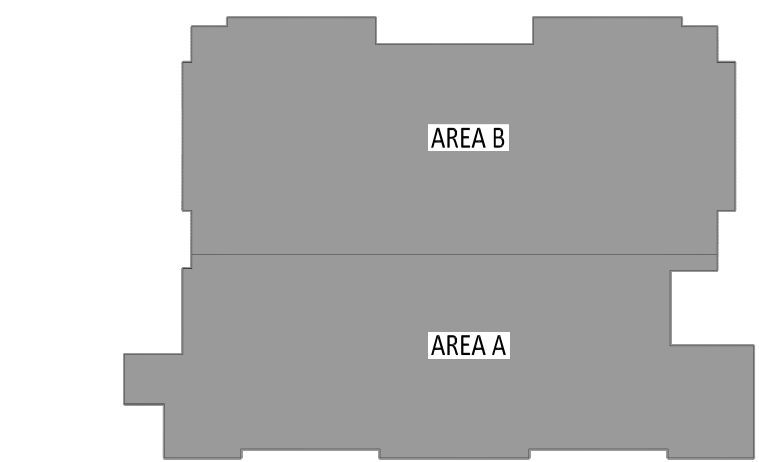
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PRINTED: 05/04/2021



ROOF PLAN - ELECTRICAL
SCALE: 1/8" = 1'-0"

KEYED NOTES

- 1 DISCONNECT EXISTING 'AHU-1' TO BE REMOVED BY OTHERS. REMOVE ASSOCIATED WIRING BACK TO SOURCE AND 3P-60A MOTOR STARTER. REMOVE ASSOCIATED 3P-45A CIRCUIT BREAKER FROM PANEL 'EMPH-1'.
- 2 DISCONNECT EXISTING 'AHU-2' TO BE REMOVED BY OTHERS. REMOVE ASSOCIATED WIRING BACK TO SOURCE AND 3P-60A MOTOR STARTER. PRESERVE ASSOCIATED 3P-60A CIRCUIT BREAKER IN PANEL 'EMPH-1' FOR REUSE.
- 3 DISCONNECT EXISTING BOILER #11 TO BE REMOVED BY OTHERS. REMOVE ASSOCIATED WIRING BACK TO SOURCE AND 3P-30A DISCONNECT. REMOVE ASSOCIATED 3P-20A CIRCUIT BREAKER FROM PANEL 'EMPH-1'.
- 4 DISCONNECT EXISTING HOT WATER PUMPS (HP-1 & HP-2) TO BE REMOVED BY OTHERS. REMOVE ASSOCIATED WIRING AND 3P-30A MOTOR STARTERS. REMOVE ASSOCIATED 3P-25A CIRCUIT BREAKERS FROM PANEL 'EMPH-1'.
- 5 DISCONNECT AND REMOVE EXISTING AIR COMPRESSOR. REMOVE ASSOCIATED WIRING AND 3P-30A DISCONNECT. REMOVE ASSOCIATED 3P-20A CIRCUIT BREAKER FROM PANEL 'EMPH-1'.
- 6 DISCONNECT EXISTING AIR COOLED CONDENSING UNIT 'ACCU-5' TO BE REMOVED BY OTHERS. PRESERVE ASSOCIATED WIRING BUT REMOVE ASSOCIATED 3P-20A CIRCUIT BREAKER FROM PANEL 'EM'.
- 7 DISCONNECT EXISTING AIR COOLED CONDENSING UNIT (ACCU-1 & ACCU-2) TO BE REMOVED BY OTHERS. REMOVE ASSOCIATED WIRING AND REMOVE ASSOCIATED 3P-150A CIRCUIT BREAKERS FROM PANEL 'PH-1'.
- 8 DISCONNECT EXISTING AIR COOLED CONDENSING UNIT (ACCU-3 & ACCU-4) TO BE REMOVED BY OTHERS. REMOVE ASSOCIATED WIRING. REMOVE ASSOCIATED 3P-150A CIRCUIT BREAKER (ACCU-3) FROM PANEL 'PH-2'. PRESERVE 3P-125A CIRCUIT BREAKER (ACCU-4) FOR REUSE.
- 9 DISCONNECT EXISTING 'AHU-3' TO BE REMOVED BY OTHERS. REMOVE ASSOCIATED WIRING BACK TO SOURCE AND 3P-60A MOTOR STARTER. PRESERVE ASSOCIATED 3P-60A CIRCUIT BREAKER IN PANEL 'EMPH-2' FOR REUSE.
- 10 DISCONNECT EXISTING 'AHU-4' TO BE REMOVED BY OTHERS. REMOVE ASSOCIATED WIRING BACK TO SOURCE AND 3P-60A MOTOR STARTER. REMOVE ASSOCIATED 3P-45A CIRCUIT BREAKER FROM PANEL 'EMPH-2'.
- 11 DISCONNECT EXISTING BOILER #2 TO BE REMOVED BY OTHERS. REMOVE ASSOCIATED WIRING BACK TO SOURCE AND 3P-30A DISCONNECT. PRESERVE ASSOCIATED 3P-20A CIRCUIT BREAKER FOR REUSE.
- 12 DISCONNECT EXISTING HOT WATER PUMPS (HP-3 & HP-4) TO BE REMOVED BY OTHERS. REMOVE ASSOCIATED WIRING AND 3P-30A MOTOR STARTERS. REMOVE ASSOCIATED 3P-25A CIRCUIT BREAKERS FROM PANEL 'EMPH-2'.



KEY PLAN
NO SCALE

DATE	NO.	DESCRIPTION

GHR ENGINEERS AND ASSOCIATES, INC.
Mechanical & Electrical Consulting Engineers
1615 South Neil Street, Champaign, Illinois 61820
217-356-0536 Business - 217-356-1092 Fax

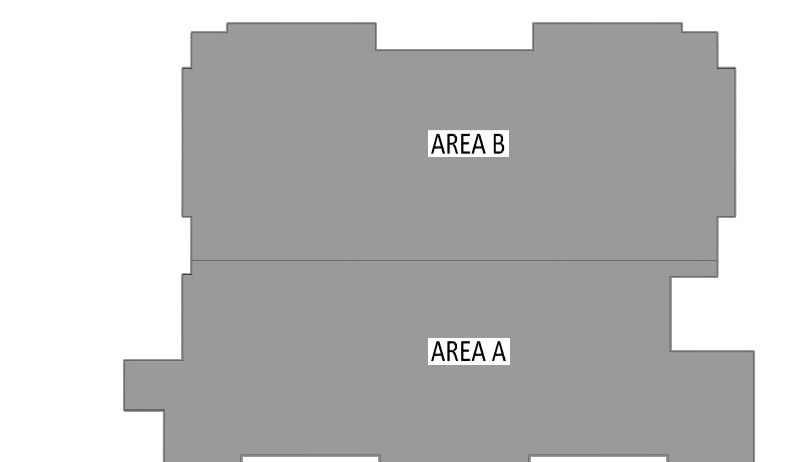
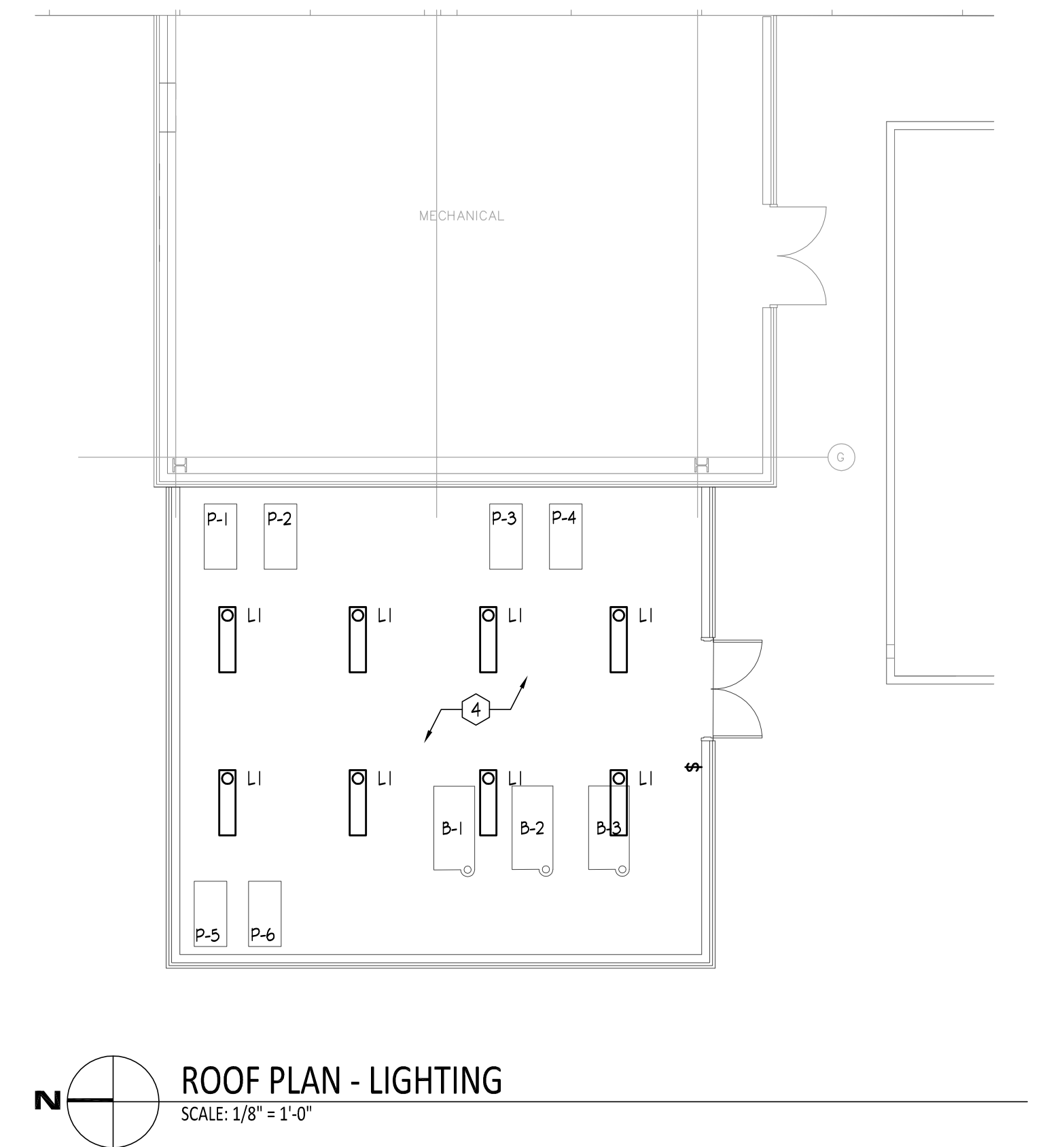
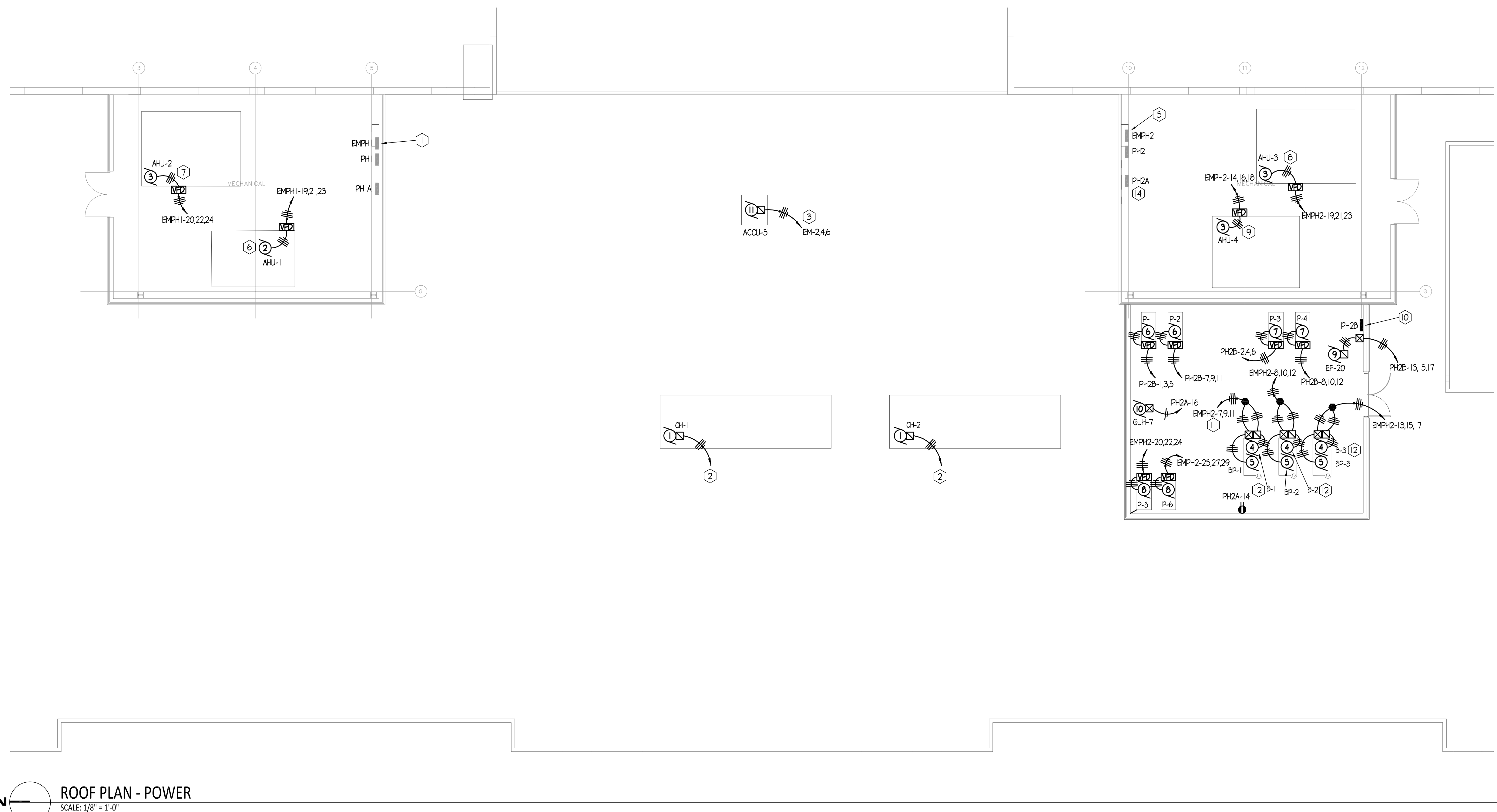
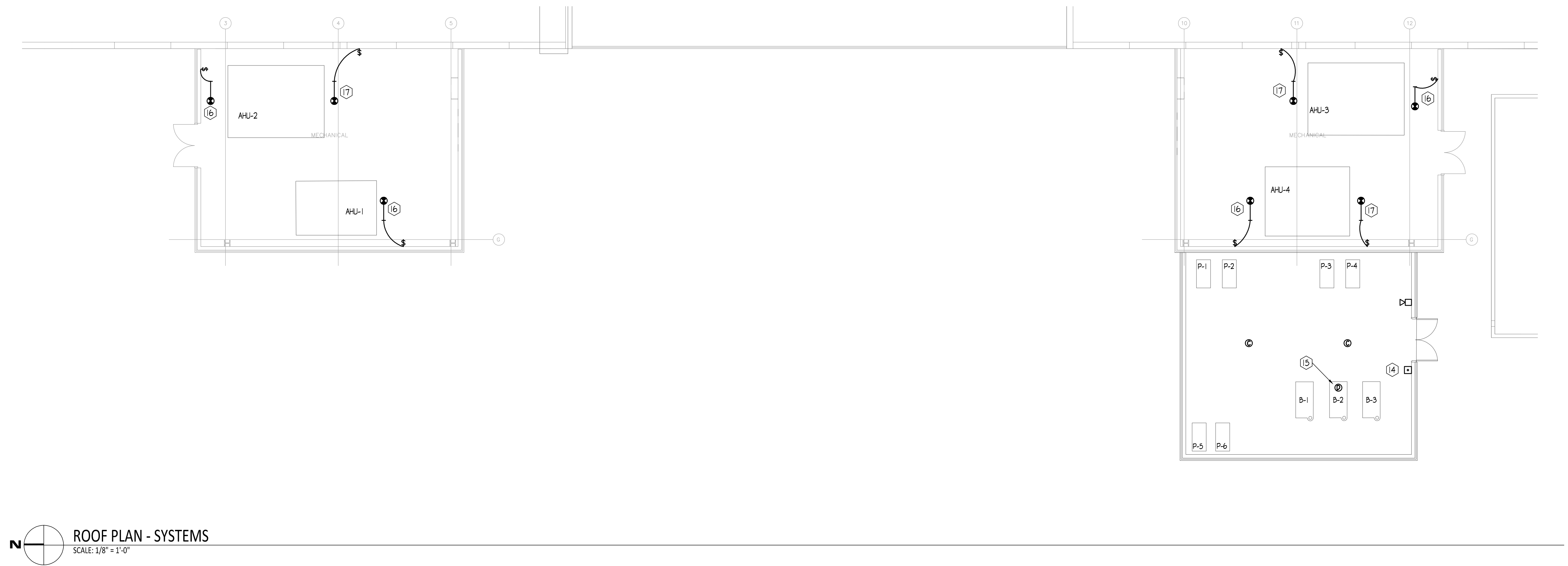
ROOF PLAN - ELECTRICAL
SATELLITE JAIL HVAC REPLACEMENT
CHAMPAIGN COUNTY
502 S LIERMAN AVE URBANA, IL 61802

DATE:	NO SCALE
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DRAWN: DAK	APPROVED: LEM
DATE: MAY 5, 2021	
ISSUED FOR BID	
PROJECT: GHR # 7253	

SHEET:
ED-103

1. INSTALL 3P-30A CIRCUIT BREAKER IN PLACE OF 3P-45A CIRCUIT BREAKER PREVIOUSLY SERVING EXISTING AH-1.
2. INSTALL 12P-45A CIRCUIT BREAKERS IN AVAILABLE SPACE OF MAIN SWITCH BOARD 350 TO SERVE NEW CHILLERS.
3. INSTALL 3P-25A CIRCUIT BREAKER IN PANEL 1BH IN PLACE OF 3P-20A CIRCUIT BREAKER PREVIOUSLY SERVING ACQU-5.
4. INTERCEPT AND EXTEND UNLIGHTED LIGHTING CIRCUIT SERVING EXISTING EAST PENTHOUSE TO NEW LIGHT FIXTURES, NEW FIXTURES TO BE CONTROLLED BY NEW SINGLE POLE LIGHT SWITCH IN NEW PENTHOUSE.
5. INSTALL THE FOLLOWING CIRCUIT BREAKERS IN PANEL EMPH-4:
 - INSTALL 3P-40A CIRCUIT BREAKER TO SERVE NEW AH-4 IN PLACE OF 3P-45A CIRCUIT BREAKER PREVIOUSLY SERVING EXISTING AH-4.
 - INSTALL 3P-20A CIRCUIT BREAKERS TO SERVE P-2 & P-2.2 IN PLACE OF 3P-25A CIRCUIT BREAKER PREVIOUSLY SERVING EXISTING HOT WATER PUMP - BOTTOM.
 - INSTALL 3P-20A CIRCUIT BREAKERS TO SERVE P-3 & P-3.3 IN PLACE OF 3P-25A CIRCUIT BREAKER PREVIOUSLY SERVING EXISTING HOT WATER PUMP - TOP.
 - INSTALL 12P-60A CIRCUIT BREAKERS IN AVAILABLE SPACE OF PANEL TO SERVE P-5 & P-6.
6. CIRCUIT NEW AH-1 TO NEW 3P-30A CIRCUIT BREAKER IN PANEL EMPH-1.
7. CIRCUIT NEW AH-2 TO EXISTING 3P-60A CIRCUIT BREAKER IN PANEL EMPH-1.
8. CIRCUIT NEW AH-3 TO EXISTING 3P-60A CIRCUIT BREAKER IN PANEL EMPH-2.
9. CIRCUIT NEW AH-4 TO NEW 3P-60A CIRCUIT BREAKER IN PANEL EMPH-2.
10. CIRCUIT PANEL P40B TO EXISTING 3P-125A CIRCUIT BREAKER PREVIOUSLY SERVING ACQ44 IN PANEL 1BH. P42 FEED PANEL P40B WITH 4H1 & 1H6 GND IN 2" CONDUIT.
11. CIRCUIT P-1 & P-2 TO EXISTING 3P-20A CIRCUIT BREAKER PREVIOUSLY SERVING EXISTING BOILER IN PANEL 1BH.
12. E.C. TO INSTALL FACTORY FURNISHED TRANSFORMER FOR BOILER TO ACCEPT 480V FEED.
14. INSTALL THE FOLLOWING CIRCUIT BREAKERS IN PANEL 1P2A:
 - CIRCUIT NEW GFCI RECEPTACLE IN NEW PENTHOUSE TO SPARE 1P-20A CIRCUIT BREAKER.
 - INSTALL 1P-40A CIRCUIT BREAKER TO SERVE G1H-7. INSTALL NEW CIRCUIT BREAKER IN PLACE OF EXISTING 2P-20A CIRCUIT BREAKER.
14. FURNISH AND INSTALL EMERGENCY BULB SHUT-OFF BUTTON AND MAKE ALL WIRING CONNECTIONS TO BOILERS.
15. INSTALL HEAT DETECTOR ABOVE BOILERS.
16. INSTALL DUCT MOUNTED SMOKE DETECTOR IN SUPPLY AIR DUCT OF AIR HANDLING UNIT SHOW PROVIDE REMOTE KEY OPERATED TEST/RESET SWITCH. INSTALL ON WALL, CONNECT TO DUCT MOUNTED SMOKE DETECTOR.
17. INSTALL DUCT MOUNTED SMOKE DETECTOR IN RETURN AIR DUCT OF AIR HANDLING UNIT SHOW. PROVIDE REMOTE KEY OPERATED TEST/RESET SWITCH. INSTALL ON WALL, CONNECT TO DUCT MOUNTED SMOKE DETECTOR.

[illegible]

ROOF PLAN - ELECTRICAL

SATELLITE JAIL HVAC REPLACEMENT

CHAMPAIGN COUNTY

502 S LIERMAN AVE URBANA, IL 61802

SAL	DRAWN:	DAK	APPROVED:	LEM	SHEET: E-103
	DATE:	MAY 5, 2021			
	ISSUED FOR BID				
	PROJECT:	GHR # 7253			

KEYED NOTES AND ABBREVIATIONS FOR MOTOR STARTER SCHEDULE							
FVR	FULL VOLTAGE NON REVERSING	FDS	FUSED DISCONNECT SWITCH	PB	PUSH BUTTON	A	AMPS
MM5	MANUAL MOTOR STARTER	NFDS	NON FUSED DISCONNECT SWITCH	PA	HAND-OFF-AUTO SELECTOR	P	POLE
CSDS	COMBINATION STARTER/DISCONNECT SWITCH	WPDS	WEATHERPROOF FUSED DISCONNECT SWITCH	PL	PILOT LIGHT	HP	HORSEPOWER
VFD	VARIABLE FREQUENCY DRIVE	WNFDS	WEATHERPROOF NON FUSED DISCONNECT SWITCH	NO	NORMALLY OPEN	KM	KILOWATT
STCB	SHUNT TRIP CIRCUIT BREAKER	HADR	HEATING, AIR CONDITIONING, REFRIGERATION RATED	NC	NORMALLY CLOSED	FLA	FULL LOAD AMPS
MCC	MOTOR CONTROL CENTER	MSS	MOTOR STARTING SWITCH				

①	DISCONNECT SWITCH FURNISHED INTEGRAL WITH UNIT BY MANUFACTURER.
②	DISCONNECT SWITCH AT UNIT FURNISHED INTEGRAL WITH VFD.
③	VFD FURNISHED BY OTHERS AND INSTALLED BY ELECTRICAL CONTRACTOR.
④	STARTER FURNISHED INTEGRAL WITH UNIT BY MANUFACTURER.
⑤	VFD FURNISHED INTEGRAL WITH UNIT BY MANUFACTURER.

LIGHT FIXTURE SCHEDULE																
FIXTURE NUMBER	MANUFACTURER AND CATALOG NUMBER		DESCRIPTION	LAMPs				FIXTURE MOUNTING			FIXTURE LOCATION		FINISH	REMARKS		
				LED	INCAND.	HP	QUANTITY	TYPE	RECESSED	SURFACE	PENDANT	SUSPENDED			CEILING	WALL
L1	LITHONIA	LFIT-L48-6000LM-SEF-MVOLT-G210-35K-B0CRI	48" LED STRIPLIGHT	●			1	6000 NOMINAL LUMENS 3500K		●			●		MATTE WHITE	COLD ROLLED STEEL HOUSING, MULTI-VOLT OPERATION, HIGH POWER FACTOR LED DRIVER, 0-10V DIMMING DOWN TO 10 PERCENT.

ELECTRICAL SYMBOL SCHEDULE	
SYMBOL	DESCRIPTION
	1 x 4 SURFACE MOUNTED FLUORESCENT CEILING LIGHT FIXTURE
	SINGLE POLE SWITCH
	JUNCTION BOX FOR EMERGENCY CIRCUITS
	DUPLEX CONVENIENCE OUTLET
	GROUND FAULT INTERRUPTING TYPE OUTLET
	DISCONNECT SWITCH
	MANUAL MOTOR STARTER OR MAGNETIC MOTOR STARTER WITH INTEGRAL DISCONNECT SWITCH
	MOTOR OUTLET AS NOTED. NO. REFERS TO MOTOR STARTER SCHEDULE
	ELECTRICAL PANEL-NORMAL POWER
	ELECTRICAL PANEL-EMERGENCY POWER
	REMOTE PUSHBUTTON AS NOTED
	CONDUIT FOR NORMAL CIRCUIT CONCEALED IN WALL OR CEILING CONSTRUCTION
	CONDUIT HOMERUN TO PANELBOARD
	NEUTRAL WIRE
	PHASE WIRE
	EMERGENCY CONDUIT HOMERUN TO PANELBOARD
	CARBON MONOXIDE DETECTOR
	AUTOMATIC HEAT DETECTOR
	WALL MOUNTED HORN & FLASHING LIGHT
	DUCT MOUNTED SMOKE DETECTOR

[illegible]

GHR ENGINEERS AND ASSOCIATES, INC.
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ELECTRICAL SCHEDULES	
SATELLITE JAIL HVAC REPLACEMENT	
CHAMPAIGN COUNTY	
502 S LIERMAN AVE	URBANA, IL 61802

SEAL 	DRAWN:	DAK	APPROVED:	LEM	SHEET: E-400
	DATE:	MAY 5, 2021			
	ISSUED FOR BID				
	PROJECT:	GHR # 7253			

