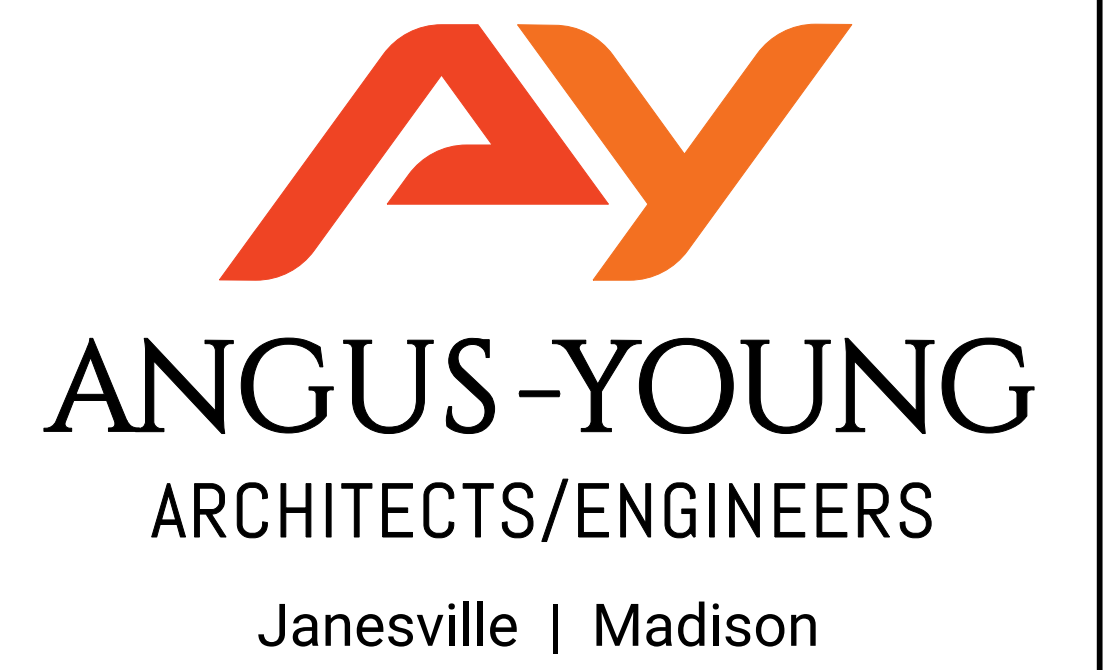


DODGE COUNTY COURTHOUSE CHILLER (WC1-2) UPGRADES



DODGE COUNTY

210 W CENTER STREET
JUNEAU, WI 53039

DODGE COUNTY COURTHOUSE
CHILLER (WC1-2) UPGRADES

AY PROJECT NUMBER: 81960

SHEET INDEX:

G001 COVER SHEET
M100 MECHANICAL PIPING PLANS

REGULATORY DATA:



ISSUANCES / REVISIONS		
NO:	DESCRIPTION:	DATE:
1	5% OWNER REVIEW	2024-01-19
2	BID / CONSTRUCTION	2024-02-26

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PROJECT TEAM

OWNER: DODGE COUNTY 210 W CENTER STREET JUNEAU, WI 53039	ARCHITECT: ANGUS-YOUNG ASSOCIATES, INC. 555 S. River St. Janesville, WI 53548	MECHANICAL ENGINEER: ANGUS-YOUNG ASSOCIATES, INC. 555 S. River St. Janesville, WI 53548	ELECTRICAL ENGINEER: ANGUS-YOUNG ASSOCIATES, INC. 555 S. River St. Janesville, WI 53548
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35	30	25	20	15	10	05
34	29	24	19	14	09	04
33	28	23	18	13	08	03
32	27	22	17	12	07	02
31	26	21	16	11	06	01

608.756.2326
www.angusyouth.com

COVER SHEET

G001

DETAILS IN THIS SET ARE PLACED ON THE SHEETS AND NUMBERED WITH RESPECT TO THE GRID ABOVE. CONSEQUENTLY, DETAILS ON A GIVEN SHEET MAY OR MAY NOT BE NUMBERED CONSECUTIVELY.

SCALE 1" = 1'-0"

PLOTTED BY: ayoung

ORIGINAL SIZE: 24" x 36"

AIR-COOLED CHILLER SCHEDULE (SCREW)		WC1-2
TAG		WC1-2
MANUFACTURER		TRANE
MODEL NUMBER		CGAM
CAPACITY (TONS OF REFRIGERATION)		90
CHILLED WATER TEMPS.	EWT (DEG. F.)	55.0
	LWT (DEG. F.)	45.0
CHILLED WATER FLOW (GPM)		226.5
MIN FLUID FLOW (GPM)		128.5
PRESSURE DROP (FEET H2O)		21.7
PROPYLENE GLYCOL %		36%
EVAPORATOR FOULING FACTOR		0.0001
AMBIENT DESIGN TEMPERATURE (F)		95
CHILLER POWER (KW)		99.02
MCA		183
MOP		225
EER		10.65
PLV		16.83
REFRIGERANT		R-454B
NUMBER OF FANS		6
DIMENSIONS (L"x"H"xW")		146.2"x92.5"x88.4"
ESTIMATED CHILLER VOLUME (GAL)		12.09
PIPE CONN. SIZES (INCHES)	CHILLED-WATER CONNECTIONS	4"
ELECTRICAL DATA	VOLTS	460
	PHASE	3
	HERTZ	60
WEIGHTS (LBS)	SHIPPING	5859
	OPERATING	5961
ACCESSORIES: MANUFACTURE PROVIDED INTEGRAL SINGLE POINT DISCONNECT		

CIRCULATING PUMP SCHEDULE									
TAG	ROOM LOCATION	SERVICE	TYPE	GPM	HEAD	MOTOR H.P.	MOTOR RPM	VOLTAGE @ 60HZ.	MANUFACTURER & MODEL NUMBER
P1-3	PENTHOUSE	WC1-2 PRIMARY	BASE MOUNTED	226.5	56	7 1/2	1760	460/3	TACO 2509D

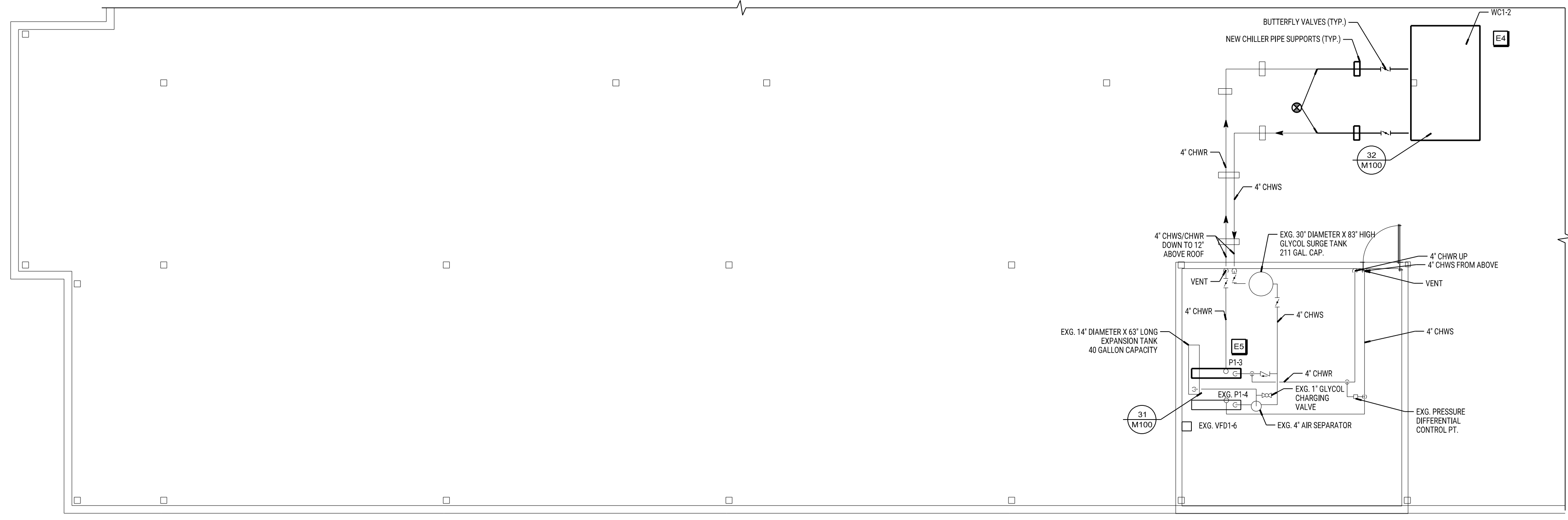
CIRCULATING PUMP SCHEDULE (FOR REFERENCE ONLY)									
TAG	ROOM LOCATION	SERVICE	TYPE	GPM	HEAD	MOTOR H.P.	MOTOR RPM	VOLTAGE @ 60HZ.	MANUFACTURER & MODEL NUMBER
EXISTING P1-4	PENTHOUSE	CHILLED GLYCOL SYSTM	BASE MOUNTED	220	65	7 1/2	-	460/3	TACO 2307

NOTE: EXG. VFD1-6 IS SERVING EXG P1-4.

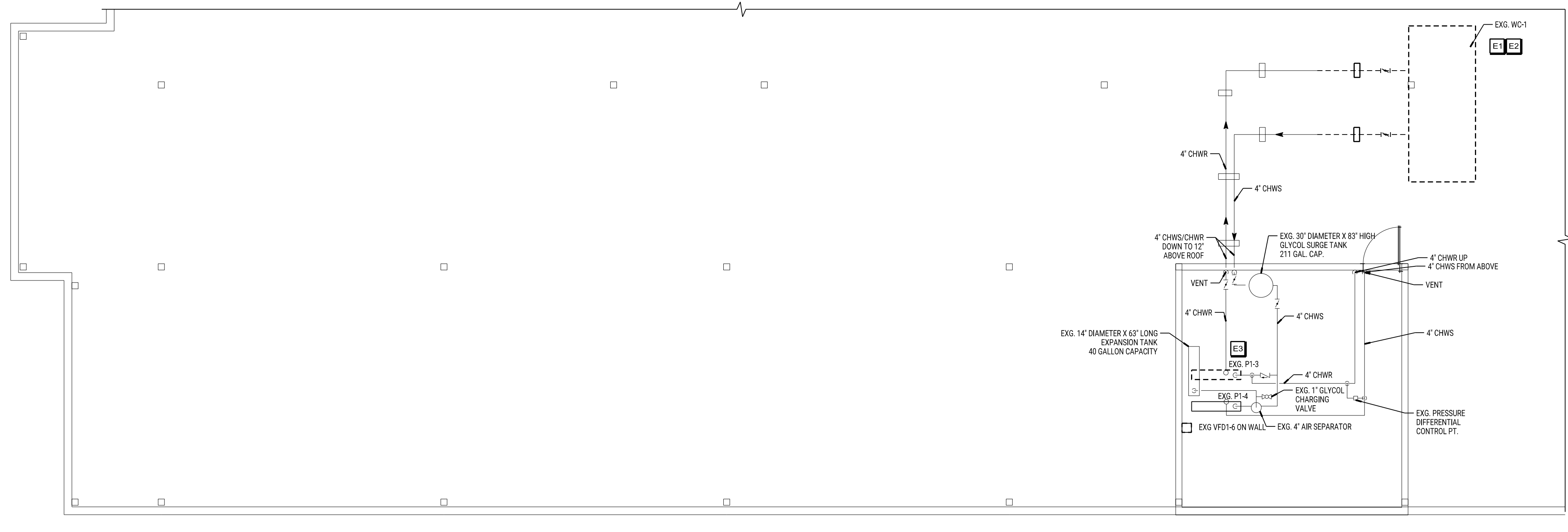
HVAC SYMBOL LEGEND			
	METER		BALANCE VALVE
	THERMOSTAT		TRIPLE DUTY VALVE
	BALL VALVE/PLUG VALVE		FLEXIBLE CONNECTOR
	GATE VALVE		PRESSURE GAGE
	CHECK VALVE		THERMOMETER
	BUTTERFLY VALVE		UNION CONNECTION
	CONTROL VALVE		PIPE DROPS
	RELIEF VALVE		PIPE RISERS

NOTE: ALL SYMBOLS MAY NOT BE USED IN THIS SET.

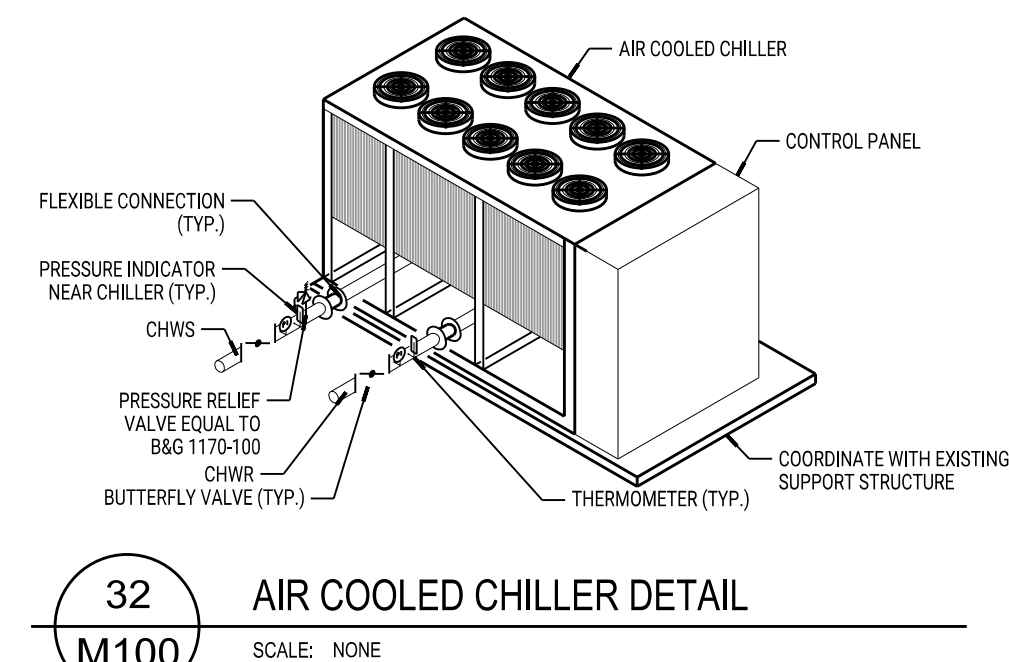
- DEMOLITION GENERAL NOTES**
- DODGE COUNTY RESERVES THE RIGHT OF FIRST REFUSAL IN OWNERSHIP OF ANY EQUIPMENT ITEMS AND MATERIAL TO BE REMOVED FROM THE BUILDING AND SITE.
 - THE INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM THE ORIGINAL CONSTRUCTION DRAWINGS WHERE AVAILABLE, AND FROM LIMITED FIELD REVIEW OF THE BUILDING AND SYSTEMS PRIOR TO BIDDING. EACH CONTRACTOR SHALL FIELD INVESTIGATE THE EXISTING SYSTEMS TO THE EXTENT NECESSARY TO ACCURATELY DETERMINE THE EXACT EXTENT OF THE DEMOLITION REQUIRED. THE CONTRACTORS BID PRICE SHALL INCLUDE THE REMOVAL OF ITEMS NOT EXPLICITLY SHOWN ON THESE DRAWINGS BUT NECESSARY FOR THE COMPLETION OF THE WORK.
 - THE CONTRACTOR SHALL FIELD VERIFY ACTUAL LOCATION, SIZES, AND ROUTING OF EXISTING DUCTWORK, PIPING, VALVES, EQUIPMENT, AND CONTROLS.
 - DEMOLITION OF AN ITEM SHALL INCLUDE REMOVAL OF ALL RELATED CONTROL DEVICES, CONTROL WIRING AND TUBING, HANGERS, SUPPORTS, DUCTWORK, PIPING, INSULATION AND ACCESSORIES.
 - CONTRACTOR SHALL PROTECT ALL WALLS, CEILING, FLOORS, LIGHTS, AND OTHER FINISHED SURFACES THAT ARE NOT TO BE REMOVED. IF DAMAGED, CONTRACTOR SHALL REPAIR OR REPLACE TO MATCH EXISTING CONDITIONS AT NO ADDITIONAL COST TO THE OWNER. VERIFY LOCATIONS OF AND PROTECT EXISTING INTERIOR ELECTRICAL AND MECHANICAL UTILITIES AND SERVICES.
 - ALL MATERIALS AND EQUIPMENT REMOVED AND NOT RE-USED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE. THE OWNER RESERVES THE RIGHT TO SALVAGE PARTS FROM ANY MECHANICAL AND ELECTRICAL EQUIPMENT BEFORE REMOVAL FROM THE SITE. ALL MATERIALS AND EQUIPMENT REQUIRING REMOVAL AND RE-LOCATION FOR RE-USE SHALL BE CAREFULLY REMOVED AND STORED TO PREVENT DAMAGE AND SHALL BE RE-INSTALLED AS THE WORK PROGRESSES.
 - IF ANY MATERIAL IS ENCOUNTERED WHICH IS SUSPECTED TO CONTAIN ASBESTOS MATERIAL IT SHALL BE REPORTED IMMEDIATELY TO THE OWNER.
 - ALL HATCHED ITEMS TO BE REMOVED ALONG WITH ASSOCIATED HANGERS, SUPPORTS, BRACKETS, TUBING AND ALL OTHER ANCILLARY COMPONENTS.
 - THE MECHANICAL CONTRACTOR SHALL COMPLETELY DRAIN THE SYSTEM PRIOR TO REMOVAL OF EQUIPMENT AND PIPING. CONTRACTOR SHALL MONITOR THE NUMBER OF GALLONS REMOVED FROM THE SYSTEM DURING DRAWING. THE SYSTEM SHALL BE FILLED TO ACCOMMODATE THE VOLUME OF THE NEW CHILLER.
- ELECTRICAL KEYNOTES**
- DISCONNECT EXG. WC1-1 FOR REMOVAL BY OTHERS. DISCONNECT EXG. WEATHERPROOF DISCONNECT FOR SALVAGE. EXISTING 3Ø/400V, 4Ø FEEDER FROM SWITCHGEAR MDA TO REMAIN FOR RE-USE.
 - REMOVE EXG. 2Ø/40P BREAKER SERVING EXG. WC-1 IN SWITCH GEAR MDA LOCATED IN THE BASEMENT.
 - DISCONNECT EXG. P1-3 FOR REMOVAL BY OTHERS. EXG. DISCONNECT SWITCH AND 3Ø/400V, 4Ø FEEDER IN 100% TO REMAIN FOR RE-USE. REMOVE EXG. 1Ø/40P BREAKER IN PANEL, HOP LOCATED IN THIRD FLOOR MECHANICAL ROOM.
 - PROVIDE NEW 2Ø/40P 4Ø/5 BREAKER IN SWITCHGEAR MDA AND RECONNECT EXG. FEEDER TO NEW CHILLER WC1-2. EXTEND EXISTING FEEDER AS NECESSARY.
 - PROVIDE NEW 4Ø/5 2Ø/40P BREAKER IN PANEL, HOP TO SERVE NEW PUMP P1-3. CONNECT P1-3 TO EXG. FEEDER AND DISCONNECT. EXTEND EXISTING FEEDER AS NECESSARY.
- GENERAL NOTES**
- PROVIDE OWNER WITH OPERATION AND MAINTENANCE MANUALS. TESTING AND BALANCING REPORTS UPON JOB COMPLETION. THE AGENCY RESPONSIBLE FOR BALANCING OF THE VENTILATION SYSTEM SHALL DOCUMENT IN WRITING THE AMOUNT OF OUTDOOR AIR BEING PROVIDED AND DISTRIBUTED AND SHALL RETAIN A COPY OF THE DOCUMENT ON SITE, AND SHALL BE MADE AVAILABLE TO THE STATE DEPT. OF SAFETY UPON REQUEST.
 - PROVIDE ISOLATION VALVES AT EQUIPMENT ON ALL MECHANICAL PIPING SERVING EQUIPMENT. THE WORK TO MINIMIZE DISRUPTION AND COORDINATE ANY DISRUPTIONS WITH THE OWNER.
 - UPON COMPLETION OF INSTALLATION, CONTRACTOR SHALL DRAIN, DISPOSE OF, AND REFILL THE EXISTING SYSTEM WITH A NEW 36% PROPYLENE GLYCOL MIX. INCLUDING ALL THE WORK NECESSARY TO COMPLETELY PURGE THE SYSTEMS OF ANY AIR, AND INITIAL NEW CHEMICALS TO TREAT THE SYSTEM. 3% PROPYLENE GLYCOL SHALL BE UTILIZED WITHIN THE CHILLED WATER SYSTEM.
 - P1-3 LOCATED IN PENTHOUSE ON ROOF. SHALL BE BALANCED TO 226 GPM AND 56' OF HEAD.
 - P1-4 LOCATED IN PENTHOUSE ON ROOF. SHALL BE BALANCED AS NECESSARY TO MAINTAIN ORIGINAL CHILLED WATER DELIVERY TO THE AIR HANDLING UNITS.
 - THE BUILDING WILL REMAIN OCCUPIED AND IN USE DURING THE RENOVATION PROCESS. THE CONTRACTOR SHALL SCHEDULE THE WORK TO MINIMIZE DISRUPTION AND COORDINATE ANY NECESSARY DISRUPTIONS WITH THE OWNER.
 - THE INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM THE ORIGINAL CONSTRUCTION DRAWINGS WHERE AVAILABLE, AND FROM LIMITED FIELD REVIEW OF THE BUILDING AND SYSTEMS PRIOR TO BIDDING. EACH CONTRACTOR SHALL FIELD INVESTIGATE THE EXISTING SYSTEMS TO THE EXTENT NECESSARY TO ACCURATELY DETERMINE THE EXACT EXTENT OF THE REQUIRED WORK.
 - THE CONTRACTORS BID PRICE SHALL INCLUDE THE RESOLUTION OF MINOR DISCREPANCIES AT NO COST TO THE OWNER. PRIOR TO THE START OF THE RENOVATION, THE CONTRACTOR SHALL REVERIFY ALL EXISTING MECHANICAL SYSTEMS AND SYSTEM COMPONENTS AND REPORT ANY SIGNIFICANT DISCREPANCIES FOUND TO THE A/E FOR RESOLUTION. ANY CONTROLLED EQUIPMENT OR COMPONENTS NOT NOTED IN THE PLANS OR SPECS BUT FOUND PRIOR TO OR DURING COMPLETION OF THE NEW WORK SHALL ALSO BE REPORTED TO THE A/E.
 - DODGE COUNTY RESERVES THE RIGHT OF FIRST REFUSAL IN OWNERSHIP OF ANY EQUIPMENT ITEMS AND MATERIAL TO BE REMOVED FROM THE BUILDING AND SITE.
 - ANY MECHANICAL EQUIPMENT FOUND TO BE NON-FUNCTIONAL OR IN NEED OF REPAIR OR MAINTENANCE WORK SHALL BE REPORTED TO THE A/E AND THE OWNER.
 - THE MECHANICAL CONTRACTOR SHALL MONITOR THE NUMBER OF GALLONS REMOVED FROM THE SYSTEM WHILE DRAINING THE SYSTEM. THE SYSTEM SHALL BE FILLED TO ACCOMMODATE THE NEW VOLUME OF THE CHILLER. THE EXISTING SYSTEM CONTAINS APPROXIMATELY 220 GALLONS. COORDINATE CHEMICAL TREATMENT REQUIREMENTS FOR THE CHILLED WATER SYSTEM WITH THE OWNER'S TREATMENT REPRESENTATIVE.
 - THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING ANY LEVELING BLOCKS OR SUPPORTS NECESSARY IN ORDER TO PROPERLY CONNECT NEW PUMP TO EXISTING PIPING.



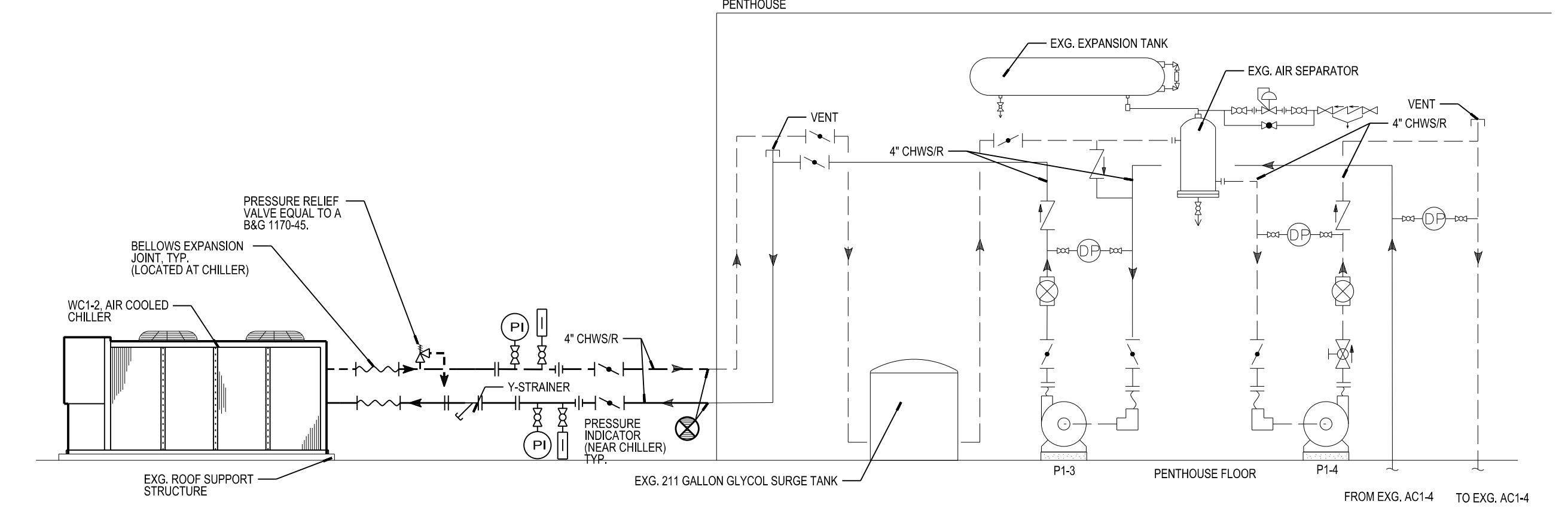
MECHANICAL ROOF PLAN
SCALE: 1/8"=1'-0"



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



32 AIR COOLED CHILLER DETAIL
SCALE: NONE



31 CHILLED WATER PIPING SCHEMATIC
SCALE: NO SCALE



ISSUANCES / REVISIONS		
NO.	DESCRIPTION	DATE
533	OWNER REVIEW	2026-01-19
534	CONSTRUCTION	2026-02-26

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PROJECT NUMBER
81960

APPROVED BY
S/JG

REVIEWED BY
S/JG

DRAWN BY
AMP

MECHANICAL PIPING PLANS

SCALE: 1/8"=1'-0"

ORIGINAL SIZE: 24" x 36"

PLOTTED BY: smp/010

ORIGINAL SIZE: 24" x 36"