9459.00 - HHS STS A.E. SHEPERD AC REPLACEMENT

3211 Edgington Ave Eldora, IA 50627

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IOWA DEPARTMENT OF **ADMINISTRATIVE SERVICES**



VICINITY MAP APPLICABLE CODES DRAWING INDEX **APPLICABLE CODES Sheet List** CONTRACTOR SHALL COMPLY WITH APPLICABLE CODES AND LOCAL AMENDMENTS INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING: ROJECT COVERSHEET **BUILDING CODE: IBC 2015 EDITION** G000 PROJECT COVERSHEET



FIRE CODE: IFC 2015 EDITION **UPC 2021 EDITION** PLUMBING CODE: MECHANICAL CODE: IMC 2021 EDITION ELECTRICAL CODE: NFPA 70 (NEC) 2020 EDITION **ENERGY CONSERVATION CODE:** IECC 2012

SCOPE OF WORK

REMOVE AND REPLACE EXISTING COOLING COIL, CONDENSING UNIT AND ASSOCIATED REFRIGERANT PIPING CONNECTED TO AHU-2(E) SERVING THE AUDITORIUM SPACE OF SHEPERD HALL OF THE STATE TRAINING SCHOOL

PROJECT DIRECTORY

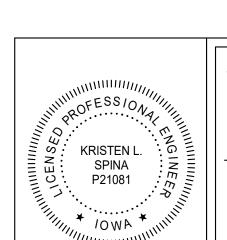
CLIENT: 9459.00 - HHS STS A.E. SHEPERD AC REPLACEMENT

MECHANICAL

2882 106TH STREET DES MOINES, IA 50322 PHONE: (515) 334-4303 CONTACT: NATE JACQUES

ELECTRICAL

IMEG CORP. 2882 106TH STREET DES MOINES, IA 50322 PHONE: (515) 639-3041 CONTACT: KRISTEN SPINA



HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE 01/17/2025 MY LICENSE EXPIRATION DATE IS: 12/31/2025 PAGES OR SHEETS COVERED BY THIS SEAL

FIRST FLOOR DEMOLITION PLAN - MECHANICAL

MECHANICAL DETAILS AND SCHEDULES

DEMOLITION FLOOR PLAN - ELECTRICAL

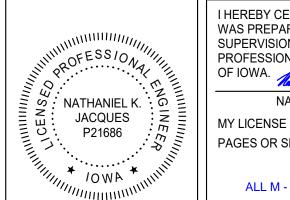
FLOOR PLAN - MECHANICAL

MECHANICAL DIAGRAMS

ELECTRICAL COVERSHEET

FLOOR PLAN - ELECTRICAL ELECTRICAL DETAILS ELECTRICAL SCHEDULES

ALL E - SERIES DRAWINGS



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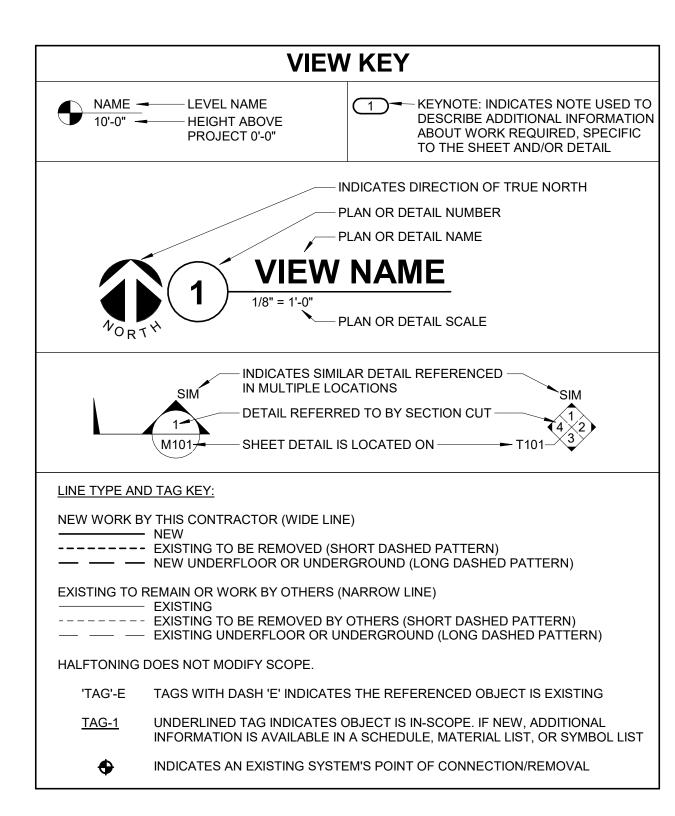
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ALL M - SERIES DRAWINGS

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SHEET INFORMATION BID DOCUMENTS PROJECT COVERSHEET

12" = 1'-0"



APPLICABLE CODES						
CONTRACTOR SHALL COMPLY WITH APPLICABLE CODES AND LOCAL AMENDMENTS INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:						
BUILDING CODE:	IBC 2015 EDITION					
FIRE CODE:	IFC 2015 EDITION					
PLUMBING CODE:	UPC 2021 EDITION					
MECHANICAL CODE:	IMC 2021 EDITION					
ELECTRICAL CODE:	NFPA 70 (NEC) 2020 EDITION					
ENERGY CONSERVATION CODE:	IECC 2012					

	CONTRACTOR ABBREVIATION KEY						
ABBR:	ABBR: DESCRIPTION:						
C.M.	CONSTRUCTION MANAGER						
E.C.	ELECTRICAL CONTRACTOR						
G.C.	GENERAL CONTRACTOR						
M.C.	MECHANICAL CONTRACTOR						
T.C.C.	TEMPERATURE CONTROLS CONTRACTOR						

CONTACT PERSONS:					
DESCRIPTION:	PERSON:				
PROJECT MANAGER	NATE JACQUES				
MECHANICAL	EVAN HAMMER				
ELECTRICAL	KRISTIN SPINA				

	HVAC ABBREVIATION KEY						
ABBR:	ABBR: DESCRIPTION:						
DN	DOWN						
NIC	NOT IN CONTRACT						
SCCR	SHORT CIRCUIT CURRENT RATING						
TYP	TYPICAL						
UON	UNLESS OTHERWISE NOTED						

	DUCT ABBREVIATION KEY					
ABBR.	DESCRIPTION					
OA	OUTSIDE AIR					
RA	RETURN/RELIEF AIR					
SA	SUPPLY AIR					

HVAC SYMBOL LIST						
NOT ALL SYMBOLS MAY APPLY.						
SYMBOL:	DESCRIPTION:					
HWR	HEATING WATER RETURN					
—HWS—	HEATING WATER SUPPLY					
——LIQ——	REFRIGERANT LIQUID					
REF	REFRIGERANT					
SUC	REFRIGERANT SUCTION					
	PIPE CAP					
	PIPE DOWN					
o	PIPE UP OR UP/DOWN					
	PITCH PIPE IN DIRECTION					
_	DIRECTION OF FLOW IN PIPE					
——⋈——	SHUTOFF VALVE NORMALLY OPEN					
——	SHUTOFF VALVE NORMALLY CLOSED					

HVAC SYMBOL LIST							
	NOT ALL SYMBOLS MAY APPLY.						
SYMBOL: DESCRIPTION:							
	MANUAL VOLUME DAMPER						
_	DUCT CAP						
DUCT DOWN							
DUCT UP							
	SUPPLY/OUTSIDE AIR DUCT SECTION						
	RETURN AIR DUCT SECTION						
<u>SD-#</u>	AIR TERMINAL NAME						

TEMPE	TEMPERATURE CONTROLS ABBREVIATION KEY						
ABBR:	DESCRIPTION:						
HWR	HEATING WATER RETURN						
HWS	HEATING WATER SUPPLY						
NO	NORMALLY OPEN						
REF	REFRIGERANT						

HVAC SHEET INDEX						
M000	HVAC COVERSHEET					
M100	FIRST FLOOR DEMOLITION PLAN - MECHANICAL					
M201	FLOOR PLAN - MECHANICAL					
M500	MECHANICAL DIAGRAMS					
M400	MECHANICAL DETAILS AND SCHEDULES					

GRAND TOTAL: 5

TAB POST-CONSTRUCTION NOTES:

- AFTER CONSTRUCTION ACTIVITIES ARE COMPLETE, TESTING, ADJUSTING (TAB) AND BALANCING CONTRACTOR SHALL REBALANCE AIR HANDLING UNITS FANS AS REQUIRED TO 2. INSTALL ALL REFRIGERANT LIQUID AND SUCTION PIPING SIZED PER EQUIPMENT ACHIEVE THE NEW AIRFLOW VALUES SHOWN ON THE CONSTRUCTION DRAWINGS. 2. TAB CONTRACTOR SHALL COMPILE AND SUBMIT ONE COPY OF THE FINAL POST-
- CONSTRUCTION TAB REPORT AS REQUIRED BY SECTION 23 05 93. 3. THE FINAL POST CONSTRUCTION REPORT SHALL INCLUDE ALL ITEMS REQUIRED IN THE SPECIFICATIONS.

PIPING GENERAL NOTES:

1. PIPE DRAIN LINES FROM EQUIPMENT TO NEAREST FLOOR DRAIN. MANUFACTURER RECOMMENDATIONS.

MECHANICAL GENERAL NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS.

- 1. DRAWINGS SHOWING LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC., AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.
- 2. CATALOG AND MODEL NUMBERS SHALL NOT BE CONSIDERED COMPLETE, BUT ARE GIVEN AS AN AID TO THE CONTRACTOR AND TO INDICATE THE QUALITY REQUIRED. CONTRACTOR IS RESPONSIBLE FOR THE COMPLETE DESCRIPTION OF MATERIAL SCHEDULED ON THESE DRAWINGS AND IN THE SPECIFICATIONS BEFORE ORDERING. THE DESCRIPTION OF THE MATERIAL AND SCHEDULED PERFORMANCE TAKES PRECEDENCE OVER THE MODEL NUMBER. THE FIRST MANUFACTURER SCHEDULED IS THE BASIS OF DESIGN.
- DETERMINATION OF QUANTITIES OF MATERIAL AND EQUIPMENT REQUIRED SHALL BE MADE BY THE CONTRACTOR FROM THE DOCUMENTS. WHERE MATERIAL AND/OR QUANTITY DISCREPANCIES ARISE BETWEEN DRAWINGS, SCHEDULES AND/OR SPECIFICATIONS, THE HIGHER QUALITY/ GREATER NUMBER SHALL GOVERN.
- 4. DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CLEARANCES FROM APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. REVIEW ALL DRAWINGS, INCLUDING THOSE OF OTHER TRADES.
- 5. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO PROVIDE CLEARANCES REQUIRED FOR OPERATION, MAINTENANCE, CODE COMPLIANCE, AND TO VERIFY NON-INTERFERENCE WITH OTHER WORK. DO NOT FABRICATE PRIOR TO VERIFICATION OF NECESSARY CLEARANCES FOR ALL TRADES. BRING ANY INTERFERENCES OR CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH FABRICATION OR EQUIPMENT ORDERS.
- . REVIEW SPACE REQUIREMENTS OF EQUIPMENT SPECIFIED OR SUBSTITUTED AND MAKE REASONABLE ACCOMMODATIONS IN LAYOUT AND POSITIONING TO PROVIDE PROPER
- 7. ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR EXPENSE TO OTHERS.
- 8. EACH CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ELECTRICAL CHANGES REQUIRED FOR EQUIPMENT PROPOSED THAT DIFFERS FROM THE BASIS OF
- 9. EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND
- 10. SEAL ALL WALL PENETRATIONS AIRTIGHT WHERE CONDUITS, PIPING, AND DUCTS PENETRATE. PENETRATIONS THROUGH EXTERIOR WALLS SHALL BE SEALED AIRTIGHT WITH WATERPROOFING MATERIALS RECOMMENDED BY MANUFACTURER FOR OUTDOOR
- 11. CAULK ALL PIPE PENETRATIONS OF FULL HEIGHT NON-FIRE RATED WALL & PARTITION ASSEMBLIES. THIS IS ESSENTIAL TO PREVENT NOISE TRANSMISSION FROM ONE ROOM TO ANOTHER AND TO PROVIDE THE DESIRED NC LEVELS WITHIN ROOMS.
- 12. EQUIPMENT SIZES AND SERVICE CLEARANCE REQUIREMENTS VARY AMONG DIFFERENT MANUFACTURERS. CONSULT APPROVED SHOP DRAWINGS FOR EQUIPMENT SIZES AND REQUIRED SERVICE CLEARANCES. COORDINATE WITH LAYOUT OF PIPING, DUCTWORK,
- 13. DO NOT BLOCK TUBE PULL OR EQUIPMENT SERVICE CLEARANCES. 14. MAINTAIN A MINIMUM WORKING CLEARANCE OF 3'-6" IN FRONT OF ALL ELECTRICAL EQUIPMENT REQUIRING MAINTENANCE, INSPECTION, AND TESTING INCLUDING BUT NOT LIMITED TO PANELS, DISTRIBUTION PANELS, SWITCHBOARDS, MOTOR CONTROL CENTERS,
- TRANSFORMERS, EQUIPMENT DISCONNECTS AND STARTERS. 15. MAINTAIN THE DEDICATED ELECTRICAL EQUIPMENT SPACE DEFINED BY THE WIDTH / DEPTH OF ELECTRICAL EQUIPMENT MEASURED FROM THE FLOOR TO A HEIGHT 6'-0" ABOVE THE EQUIPMENT OR THE STRUCTURAL CEILING, WHICHEVER IS LOWER. SYSTEMS FOREIGN TO THE ELECTRICAL DISTRIBUTION SYSTEM ARE NOT ALLOWED IN THE DEDICATED ELECTRICAL SPACE INCLUDING: DUCTWORK, PIPING, ETC.

MECHANICAL RENOVATION NOTES:

- THESE NOTES APPLY TO ALL MECHANICAL SHEETS.
- EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD SURVEYS, EXISTING BUILDING DOCUMENTS, AND STAFF. VERIFY EXISTING CONDITIONS AND
- REPORT ANY CONFLICTS BEFORE PROCEEDING. 2. NOT ALL EXISTING DUCTWORK AND PIPING IS SHOWN. VERIFY EXISTING CONDITIONS
- BEFORE STARTING WORK. NOTIFY ENGINEER OF ANY CONFLICTS WITH NEW WORK. 3. FIELD VERIFY THE AVAILABLE CLEARANCES FOR PIPING BEFORE FABRICATION. RISES AND
- DROPS MAY BE NECESSARY BECAUSE OF EXISTING FIELD CONDITIONS. 4. EACH CONTRACTOR SHALL CUT AND PATCH WALLS ASSOCIATED WITH THEIR WORK.
- 5. THIS CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF CEILINGS, CEILING TILES, AND CEILING GRIDS ASSOCIATED WITH AREAS OF WORK BY ALL CONTRACTORS. NOTIFY THE GENERAL CONTRACTOR OF AFFECTED AREAS PRIOR TO
- . WHERE EXISTING MECHANICAL SYSTEMS ARE LOCATED IN AREAS THAT CONFLICT WITH NEW EQUIPMENT, PIPING, OR DUCTWORK TO BE INSTALLED, EACH CONTRACTOR SHALL EITHER ARRANGE NEW EQUIPMENT, PIPING, OR DUCTWORK IN SUCH A FASHION THAT IT DOES NOT CONFLICT WITH EXISTING SYSTEMS, OR REWORK EXISTING MECHANICAL SYSTEMS TO ALLOW FOR INSTALLATION OF NEW EQUIPMENT, PIPING, OR DUCTWORK.
- . OBTAIN PERMISSION FROM OWNER BEFORE SHUTTING DOWN ANY SYSTEM FOR ANY REASON. MAINTAIN SERVICE TO ALL COMPONENTS THAT ARE TO REMAIN UNTIL NEW SYSTEMS ARE INSTALLED. 8. MAINTAIN EXISTING SYSTEM IN SERVICE UNTIL NEW SYSTEM IS COMPLETE AND READY FOR
- TIE IN AND SWITCHOVER. DRAIN SYSTEM ONLY TO MAKE SWITCHOVERS AND CONNECTIONS, OBTAIN PERMISSION FROM OWNER BEFORE PARTIALLY OR COMPLETELY DRAINING SYSTEM. MAKE CHANGEOVER TO NEW SYSTEMS WITH MINIMUM OUTAGE. 9. DISCONNECT AND REMOVE MECHANICAL DEVICES AND EQUIPMENT SERVING EQUIPMENT
- THAT HAS BEEN REMOVED. 10. PROPERLY RECLAIM AND DISPOSE OF ALL REFRIGERANT IN REMOVED EQUIPMENT/ REFRIGERANT PIPING. RECLAIMED REFRIGERANT SHALL HAVE DOCUMENTATION AS

REQUIRED BY THE AUTHORITY HAVING JURISDICTION (AHJ).

TAB PRE-DEMOLITION NOTES:

- BEFORE ANY DEMOLITION WORK IS BEGUN A COMPLETE AIR BALANCE TEST SHALL BE PERFORMED BY THE TESTING, ADJUSTING AND BALANCING (TAB) CONTRACTOR ON EXISTING AHU-2(E) AND AIR OUTLETS SERVING THE AREAS AFFECTED BY CONSTRUCTION. EQUIPMENT TO BE DEMOLISHED DOES NOT REQUIRE TESTING. PROVIDE AIR BALANCE TESTING ONLY ON EQUIPMENT THAT WILL CONTINUE TO BE USED TO SERVE RENOVATED AREAS AFTER THE CONSTRUCTION PHASE IS COMPLETED.
- 2. TAB CONTRACTOR SHALL COMPILE AND SUBMIT ONE COPY OF THE FINAL PRE-DEMOLITION REPORT WITHIN 10 WORKING DAYS AFTER THE FIELD MEASUREMENTS ARE COMPLETED. FINAL TAB REPORT SHALL BE SUBMITTED FOR REVIEW TO THE ARCHITECT/ENGINEER. TESTING SHALL INCLUDE ALL ITEMS REQUIRED IN THE SPECIFICATIONS.

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CONSTRUCTION MANAGER MCGOUGH CONSTRUCTION

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Revision / Issue

THIS DRAWING AND THE DATA SHOWN THEREON. SAID DRAWING

SHEET INFORMATION BID DOCUMENTS 01/17/2025 24006792.00 Approved

Checked

SHEET TITLE **HVAC COVERSHEET**

As indicated

9459.00 - HHS STS A.E. SHEPERD AC REPLACEMENT

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IOWA DEPARTMENT OF ADMINISTRATIVE SERVICES



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No. Date Revision / Issue

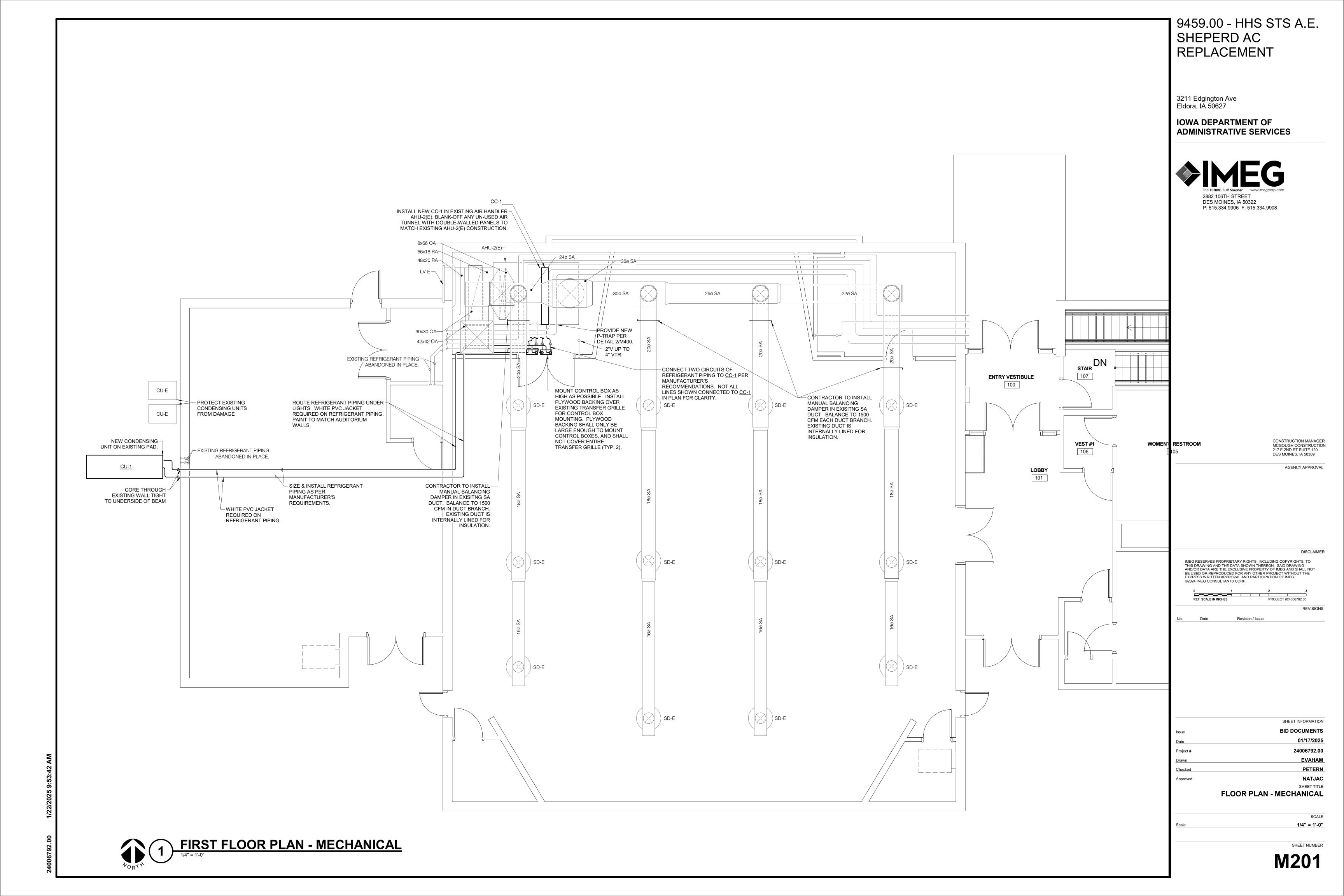
SHEET INFORMATION
BID DOCUMENTS
01/17/2025
24006792.00
EVAHAM
PETERN

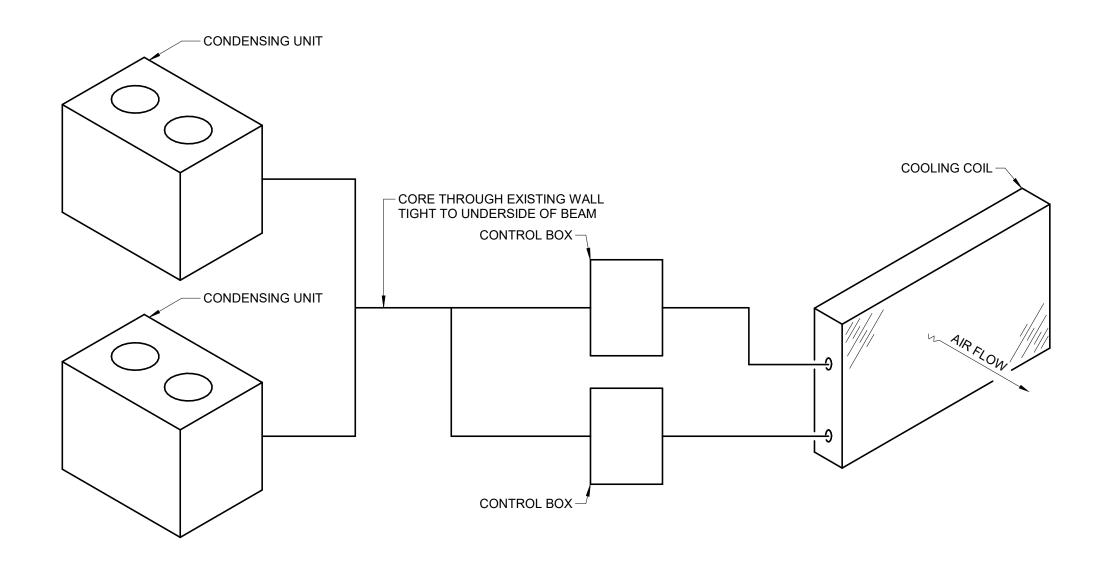
FIRST FLOOR DEMOLITION PLAN -

MECHANICAL

1/4" = 1'-0"

M100





NOTES:

1. THIS DIAGRAM IS SCHEMATIC IN NATURE. UNIT MANUFACTURER SHALL SUBMIT DETAILED PIPING DIAGRAM SHOWING

1. THIS DIAGRAM IS SCHEMATIC IN NATURE. UNIT MANUFACTURER SHALL SUBMIT DETAILED PIPING DIAGRAM SHOWING

2. ANY ACCESSORIES SUCH AS ACCUMULATORS, RECEIVERS, SEPARATORS AND HEAT TRACING SHALL BE DETERMINED BY THE COIL SUPPLIER AND SUBMITTED AS SHOP DRAWINGS. NO COMPENSATION WILL BE MADE IF ACTUAL NUMBER OF PIPES EXCEED WHAT IS SHOWN.

FULL SIZE CONDENSATE - CLEANOUT PLUG (TYP.) DRAIN, CONNECT TO DRAIN PAN AS RECOMMENDED BY MANUFACTURER. ROUTE TO FLOOR DRAIN.

INSTANCES WHERE AN ESCUTCHEON IS REQUIRED AND THE PIPING IS INSULATED, INSTALL A PLASTIC JACKET EXTENDING 6" BEYOND THE WALL TO PROTECT INSULATION FROM DAMAGE FROM THE ESCUTCHEON. - MAKE A SMOOTH ROUND OPENING IN WALL SLIGHTLY LARGER THAN OUTSIDE DIAMETER OF THE PIPE AND INSULATION.

- INSTALL AN ESCUTCHEON AROUND PIPES EXPOSED IN FINISHED ROOMS. IN SUCH

- ADD A BEAD OF NON-HARDENING CAULK IN THE ANNULAR SPACE.

- 1. THIS DETAIL APPLIES TO ALL PIPES. THE INTENTION IS TO CONTINUE THE INSULATION AND VAPOR BARRIER THROUGH ALL PENETRATIONS. PERMIT THERMAL EXPANSION WITHOUT DAMAGING INSULATION, AND TO SEAL AIRTIGHT AROUND INSULATED AND UNINSULATED PIPES FOR NOISE
- TRANSMISSION CONTROL. 2. SEE SPECIFICATION SECTION 23 05 29 FOR ADDITIONAL INFORMATION.

REFRIGERANT - PIPING DIAGRAM W/SINGLE COIL

CONDENSATE TRAP - DRAW THROUGH COIL



VRF MODULAR OUTDOOR UNIT SCHEDULE 1.UNITS SHALL BE SELECTED FOR DESIGN COOLING LOAD. 2.COORDINATE ELECTRICAL CONNECTIONS WITH MANUFACTURER UNIT IS SUPPLIED AS MULTIPLE MODULES. EACH MODULE REQUIRES A SEPARATE ELECTRICAL CONNECTION AND DISCONNECT. 3.NOMINAL COOLING CAPACITY RATED AT: INDOOR TEMP = 80°FDB/67°FWB, OUTDOOR TEMP = 95°FDB. 4.DESIGN COOLING CAPACITY SHALL BE RATED AT: INDOOR TEMP = 75°FDB/62.6°FWB, OUTDOOR TEMP = 95°FDB. EFFECTS OF ESTIMATED REFRIGERANT LINE LENGTH SHALL BE INCLUDED IN COMPUTING DESIGN CAPACITY. 5.REFER TO SPECIFICATION SECTION 23 81 45 FOR ADDITIONAL REQUIREMENTS. 6. PROVIDE WITH AN ITM TOUCHSCREEN WITH BACNET INTERFACE FOR INTEGRATION TO EXISTING BUILDING AUTOMATION SYSTEM. ELECTRICAL MAX. DIMENSIONS (IN.) WEIGHT (LBS) COOLING MODULE 2 DISCONNECT CONTROLLER/STARTER TAG NAME | AREA SERVED MODEL CU-1 AUDITORIUM RXYQ NOTE 1, 2, 5, & 6 R410A

COII	OIL SCHEDULE - REFRIGERANT																			
	TES: RESSURE DROP BASED ON TOTALLY SATURATED COIL. OIL AND CONDENSING UNIT SHALL BE BY SAME MANUFACTURER.																			
			MAX. FPM	E	AT								MAX	C. DIMENSIC	ONS	W	/EIGHT			
TAG	AREA		FACE				TOTAL	NUMBER OF	A.P.D. IN.	SUCT.	LIQ.							MANUFACTURER		
NAME	SERVED	CFM	VELOCITY	DB °F	WB °F	LAT DB °F	MBH	CIRCUITS	W.C. (NOTE 1)	TEMP °F	TEMP °F	REFRIGERANT	LENGTH	WIDTH	HEIGHT	DRY	OPERATING	(NOTE 2)	MODEL	NOTES
CC-1	AUDITORIUM	6000	400	82.5	68.9	55.5	288	2	0.47	42.0	110.0	R-410A	76"	8"	38"	247	295	DAIKIN	5EJ0706B	NOTE 2

SCHEDULE GENERAL NOTES: A. DISCONNECT AND CONTROLLER STARTER FURNISHED AND INSTALLED BY: MFR = MANUFACTURER **B. DISCONNECT TYPE:** NF = NON-FUSED

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IOWA DEPARTMENT OF **ADMINISTRATIVE SERVICES**



CONSTRUCTION MANAGER MCGOUGH CONSTRUCTION 217 E 2ND ST SUITE 120

AGENCY APPROVAL

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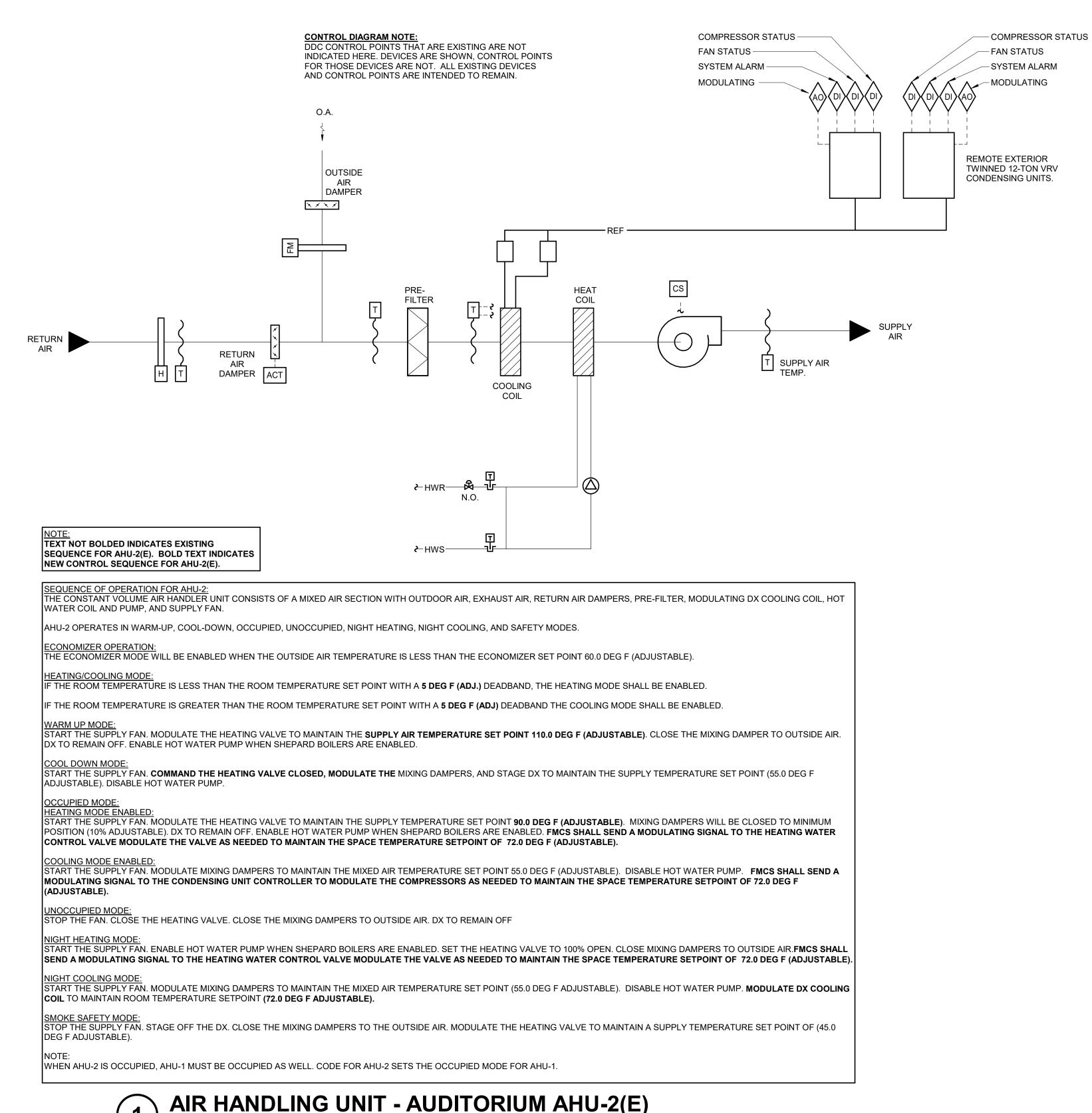
Revision / Issue

SHEET INFORMATION **BID DOCUMENTS** 01/17/2025 24006792.00 SHEET TITLE **MECHANICAL DETAILS AND**

SCHEDULES

SHEET NUMBER

12" = 1'-0"





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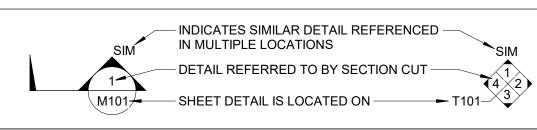
Revision / Issue

Checked Approved SHEET INFORMATION BID DOCUMENTS 24006792.00

> SHEET TITLE MECHANICAL DIAGRAMS

12" = 1'-0"

SHEET NUMBER



LINE TYPE AND TAG KEY:

FIRE CODE:

T.C.C.

NEW WORK BY THIS CONTRACTOR (WIDE LINE)

---- EXISTING TO BE REMOVED (SHORT DASHED PATTERN) — — NEW UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

EXISTING TO REMAIN OR WORK BY OTHERS (NARROW LINE)

---- EXISTING TO BE REMOVED BY OTHERS (SHORT DASHED PATTERN) — — EXISTING UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

HALFTONING DOES NOT MODIFY SCOPE.

'TAG'-E TAGS WITH DASH 'E' INDICATES THE REFERENCED OBJECT IS EXISTING

UNDERLINED TAG INDICATES OBJECT IS IN-SCOPE. IF NEW, ADDITIONAL INFORMATION IS AVAILABLE IN A SCHEDULE, MATERIAL LIST, OR SYMBOL LIST

INDICATES AN EXISTING SYSTEM'S POINT OF CONNECTION/REMOVAL

APPLICABLE CODES
CONTRACTOR SHALL COMPLY WITH APPLICABLE CODES AND LOCAL AMENDMENTS
INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

IFC 2015 EDITION

BUILDING CODE: **IBC 2015 EDITION**

PLUMBING CODE **UPC 2021 EDITION**

MECHANICAL CODE: IMC 2021 EDITION

ELECTRICAL CODE: NFPA 70 (NEC) 2020 EDITION

TEMPERATURE CONTROLS CONTRACTOR

ENERGY CONSERVATION CODE: IECC 2012

CONTRACTOR ABBREVIATION KEY DESCRIPTION: C.M. CONSTRUCTION MANAGER E.C. **ELECTRICAL CONTRACTOR** G.C. GENERAL CONTRACTOR M.C. MECHANICAL CONTRACTOR

CONTACT PERSONS:					
DESCRIPTION:	PERSON:				
PROJECT MANAGER	NATE JACQUES				
MECHANICAL	EVAN HAMMER				
ELECTRICAL	KRISTIN SPINA				

	ELEC	TRICAL	SYMBOL LIST
SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:
E E	ECONN	26 05 33	ELECTRICAL CONNECTION
→	<u>JB</u>	26 05 33	JUNCTION BOX
	PANEL '###'	EXISTING	PANELBOARD - RECESS MOUNT
	PANEL '###'	EXISTING	PANELBOARD - SURFACE MOUNT
	<u>MS-#</u>	EXISTING	SURFACE OR RECESS MOUNTED STARTER.
	DS-#/FDS-#/DSS-#	26 28 16	DISCONNECT SWITCH FUSED DISCONNECT SWITCH INTERLOCKED RECEPTACLE DISCONNECT. REFER TO DISC/STA SCHEDULE

	ELEC	TRICAL	SYMBOL LIST
SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:
#	REC-DUP	26 27 26	DUPLEX RECEPTACLE, 125V
≒ ⊕	REC-DUP-GFI	26 27 26	DUPLEX GFI RECEPTACLE, 125V
₩	REC-DUP-WP	26 27 26	DUPLEX GFI WEATHERPROOF RECEPTACLE 125V

	ELECTRICAL ABBREVIATION KEY
ABBR:	DESCRIPTION:
ABV	ABOVE
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ASR	ARCHITECTURAL SURFACE RACEWAY
ВС	BELOW COUNTER
С	CONDUIT (BRANCH CIRCUIT OR FEEDER CONTEXT)
со	CONDUIT AND BOX ROUGH-IN ONLY (ROUGH-IN ONLY)
EG	EQUIPMENT GROUND
EGC	EQUIPMENT GROUNDING CONDUCTOR
EOL	END OF LINE
EPO	EMERGENCY POWER OFF
GFR	GROUND FAULT REMOTE
НОА	HAND/OFF/AUTO
ITR	IT RACK MOUNTED RECEPTACLE
NC	NORMALLY CLOSED
NEMA#	NEMA RATING
NIC	NOT IN CONTRACTED SCOPE
NO	NORMALLY OPEN
ROOF	EQUIPMENT LOCATED ON ROOF ABOVE
SM	SURFACE MOUNTED
TYP	TYPICAL
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED

ELECTRICAL RENOVATION NOTES:

THESE NOTES APPLY TO ALL ELECTRICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, LIGHTING, POWER, FIRE ALARM, AND OTHER LOW VOLTAGE SYSTEMS.

- 1. EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD SURVEYS, EXISTING BUILDING DOCUMENTS. CONTRACTOR SHALL REVIEW EXISTING
- CONDITIONS AND REPORT CONFLICTS. 2. NOT ALL EXISTING EQUIPMENT, LUMINAIRES, AND CONDUIT ARE SHOWN. CONTRACTOR
- SHALL REVIEW EXISTING CONDITIONS AND REPORT CONFLICTS. 3. CONTRACTOR SHALL REVIEW EXISTING CONDITIONS PRIOR TO FABRICATION OF CABLE
- TRAY, BUSWAY, CONDUIT RACKS, AND OTHER SYSTEMS. RISES AND DROPS MAY BE NECESSARY BECAUSE OF EXISTING FIELD CONDITIONS. 4. ELECTRICAL CONTRACTOR SHALL REVIEW EXISTING CONDITIONS TO VERIFY ACCESSIBILITY
- TO THE AREAS OF THEIR WORK INCLUDING WALLS, FLOOR, CEILINGS, CEILING TILES/GRID. AND ROOF. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE CUTTING, REMOVAL, PATCHING, AND REINSTALLATION OF AFFECTED AREAS ASSOCIATED WITH THEIR WORK BY COORDINATING WITH THE GENERAL CONTRACTOR OR QUALIFIED CONTRACTOR.
- 5. WHERE EXISTING ELECTRICAL SYSTEMS ARE LOCATED IN AREAS THAT CONFLICT WITH NEW EQUIPMENT, PIPING, OR DUCTWORK TO BE INSTALLED, EACH CONTRACTOR SHALL EITHER ARRANGE NEW EQUIPMENT, CONDUIT, OR DUCTWORK IN SUCH A FASHION THAT IT DOES NOT CONFLICT WITH EXISTING SYSTEMS, OR REWORK EXISTING ELECTRICAL SYSTEMS TO ALLOW FOR INSTALLATION OF NEW EQUIPMENT, PIPING, OR DUCTWORK.

RECEPTACLE SUBSCRIPT KEY:

DEVICE KEY:

DEVICE # = MOUNTING (IF APPLICABLE)
1 = CIRCUIT NUMBER

*IF LABEL IS ORIENTED HORIZONTALLY A SLASH WILL SEPARATE THIS INFORMATION. EX: A / 1

ELECTRICAL MOUNTING SUBSCRIPT KEY:

- MOUNT AT +6" TO CENTERLINE ABOVE COUNTER OR BACKSPLASH
- MOUNT AT CEILING (DEVICE OR ROUGH-IN CONTEXT)
- MOUNT ORIENTED HORIZONTALLY MOUNT IN CASEWORK
- MOUNT IN MODULAR FURNITURE
- WIRING DEVICE, OCCUPANCY CONTROLLED
- MOUNT IN SURFACE RACEWAY
- SURFACE MOUNTED
- WEATHERPROOF WIRING DEVICE, NEMA 3R WHILE-IN-USE COVER, WR LISTED WG WIRE GUARD
- WEATHERPROOF

ELECTRICAL INSTALLATION NOTES:

- 1. CIRCUIT NUMBERS ARE SHOWN FOR CIRCUIT IDENTIFICATION. CIRCUITING SHALL AGREE WITH NUMBERING ON THE PANEL PROVIDED. COMMON NEUTRALS MAY NOT BE USED FOR BRANCH CIRCUITS. BALANCE THE LOAD ON PANEL AS EVENLY AS POSSIBLE BETWEEN EACH
- 2. FLUSH MOUNT ALL DUPLEX RECEPTACLES AND TECHNOLOGY OUTLETS AT +18" FROM FLOOR (CENTERLINE DIMENSION), EXCEPT WHERE OTHERWISE NOTED. RECEPTACLES AND OUTLETS MAY BE SURFACE MOUNTED WHEN CONDUIT IS SPECIFIED EXPOSED. MOUNT
- EXTERIOR LOCATED RECEPTACLES WITH WHILE-IN-USE COVERS AT +20" FROM FINISHED GRADE (CENTER DIMENSIONS) TO MAINTAIN INSTALLATION ADA COMPLIANCE. 3. ALL MATERIALS USED TO SEAL PENETRATIONS OF FIRE RATED WALLS AND FLOORS SHALL BE TESTED AND CERTIFIED AS A SYSTEM PER ASTM E814 STANDARDS FOR FIRE TESTS OF
- THROUGH-PENETRATION FIRESTOPS. 4. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL CEILING MOUNTED DEVICES AND EQUIPMENT WITH LUMINAIRES. SPRINKLER, AND CEILING DIFFUSERS. CENTER ALL DEVICES IN CEILING TILE PATTERN. SMOKE DETECTORS, CARBON MONOXIDE DETECTORS, AND OCCUPANCY/VACANCY SENSORS SHALL BE LOCATED NO CLOSER THAN 3 FEET TO AN AIR SUPPLY DIFFUSER OR RETURN GRILLE. CARBON MONOXIDE DETECTORS SHALL BE LOCATED 10 PLUS FT FROM FIRE PLACES, COOKING, AND SIMILAR FUEL-BURNING APPLIANCES.
- 5. CONTRACTOR SHALL VERIFY ALL FURNITURE, MODULAR FURNITURE, AND EQUIPMENT LOCATIONS WITH ARCHITECTURAL PLANS, ELEVATIONS, AND REVIEWED SHOP DRAWINGS. PRIOR TO MAKING THE ACTUAL ELECTRICAL INSTALLATION, THIS CONTRACTOR SHALL ADJUST RECEPTACLES, OUTLETS, OR CONNECTION LOCATIONS TO ACCOMMODATE FURNITURE AND/OR EQUIPMENT.
- 6. ELECTRICAL AND TECHNOLOGY EQUIPMENT SHALL BE MOUNTED TO AVOID IMPEDANCE OF, OPERATION OF, AND/OR ACCESS TO ELECTRICAL AND MECHANICAL EQUIPMENT. ALL MOUNTING OF ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT, ON EQUIPMENT SUPPLIED BY ANOTHER CONTRACTOR, SHALL BE APPROVED IN ADVANCE BY THE OTHER CONTRACTOR.
- 7. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OPENINGS REQUIRED IN WALLS. ALL OPENINGS SHALL BE REPAIRED TO MATCH EXISTING BY A QUALIFIED CONTRACTOR AT THE EXPENSE OF THIS CONTRACTOR. ALL CONDUITS THROUGH WALLS SHALL BE GROUTED OR SEALED INTO OPENINGS.
- 8. EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO THE WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND
- 9. ELECTRICAL IDENTIFICATION. REFER TO SPECIFICATION SECTION 26 05 53 FOR COLOR/LABEL REQUIREMENTS FOR CONDUIT, BOX, CABLE/WIRE, AND EQUIPMENT.

	ELECTRICAL SHEET INDEX
E000	ELECTRICAL COVERSHEET
E101	DEMOLITION FLOOR PLAN - ELECTRICAL
E201	FLOOR PLAN - ELECTRICAL
E400	ELECTRICAL DETAILS
E600	ELECTRICAL SCHEDULES
CDAND TOTAL	· E

CONDUIT INSTALLATION SCHEDULE				
THE FOLLOWING SCHEDULE SHALL BE ADHERED TO UNLESS THEY CONST NOTED OTHERWISE ON THE DRAWINGS. THE INSTALLATION OF RMC COND CONDUIT SPECIFIED IN THIS SCHEDULE. REFER TO CONDUIT AND BOXES S INFORMATION.	OUIT WILL BE I	PERMITTED II	N PLACE OF A	NLL
INSTALLATION TYPE	RMC	IMC	EMT	PVC
FEEDERS: SWITCHBOARDS, DISTRIBUTION PANELS, PANELBOARDS, MOTOR CONTROL CENTERS, ETC.		х	X	
BRANCH CIRCUITS: LIGHTING, RECEPTACLES, CONTROLS, ETC.		Х	X	
MECHANICAL EQUIPMENT FEEDERS: PUMPS, CHILLERS, AIR HANDLING UNITS, ETC.		Х	X	
FLOOR MOUNTED EQUIPMENT FEEDERS: PUMPS, ETC. (INCLUDE NO MORE THAN 6 FEET OF LFMC TO PUMP)		Х	х	
CONTROLS (LIGHTING, POWER, BUILDING AUTOMATION, ETC.)		Х	х	
WET AND DAMP LOCATIONS: (CONDUIT, BOXES, FITTINGS, INSTALLED AND EQUIPPED TO PREVENT WATER ENTRY)	Х			
ELEVATED CONCRETE SLABS (ABOVE GRADE)	Х			х
INTERIOR LOCATIONS WITH FINISHED CEILING AND WALLS: CONCEALED IN WALLS AND ABOVE FINISHED CEILINGS			х	
INTERIOR LOCATIONS WITHOUT FINISHED CEILINGS: CONCEALED IN WALL, EXPOSED ABOVE CEILINGS		X	х	
EXISTING INTERIOR LOCATIONS WITH FINISHED CEILINGS AND WALLS:				

CONCEALED IN WALLS AND ABOVE FINISHED CEILING UNLESS

OTHERWISE NOTED

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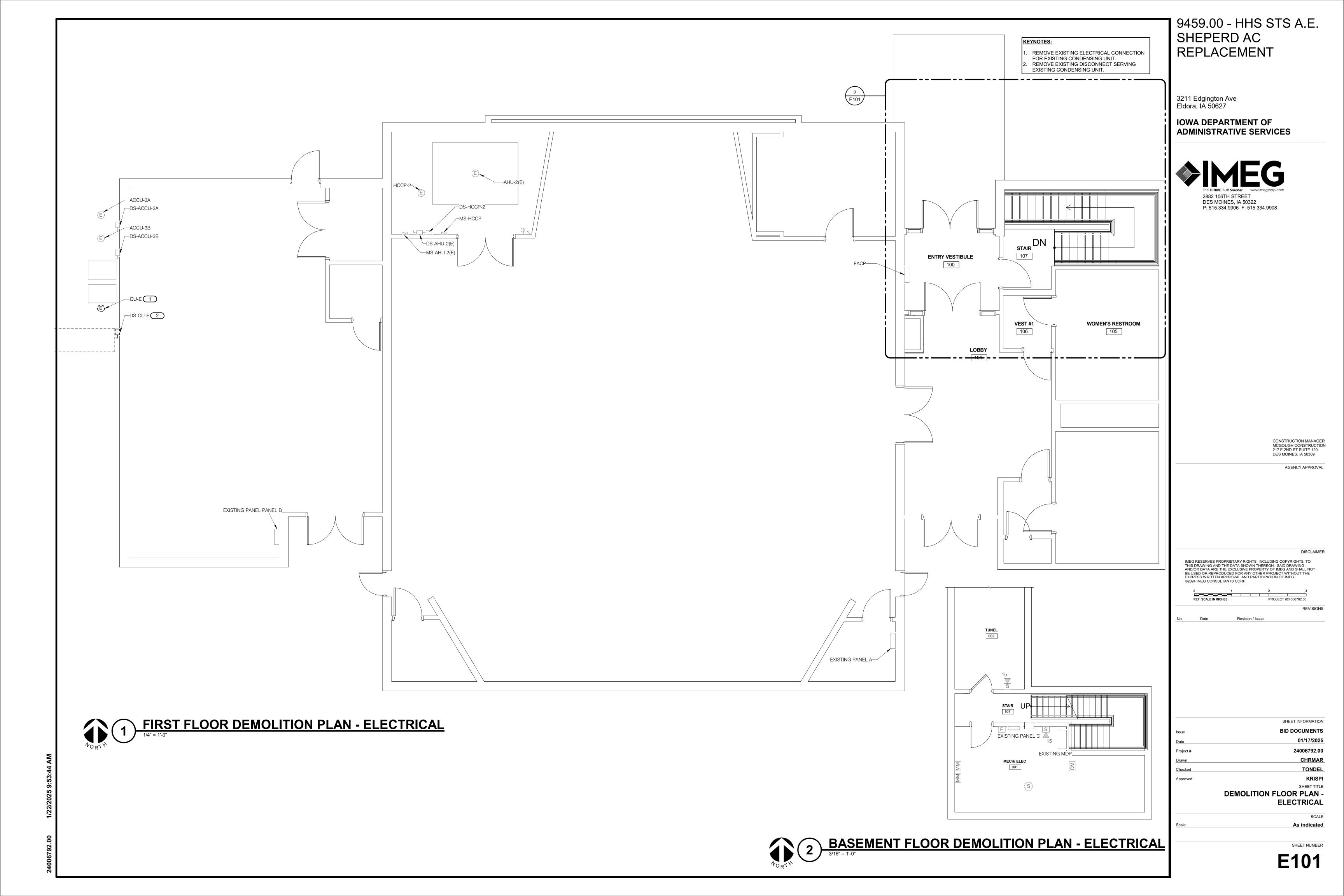
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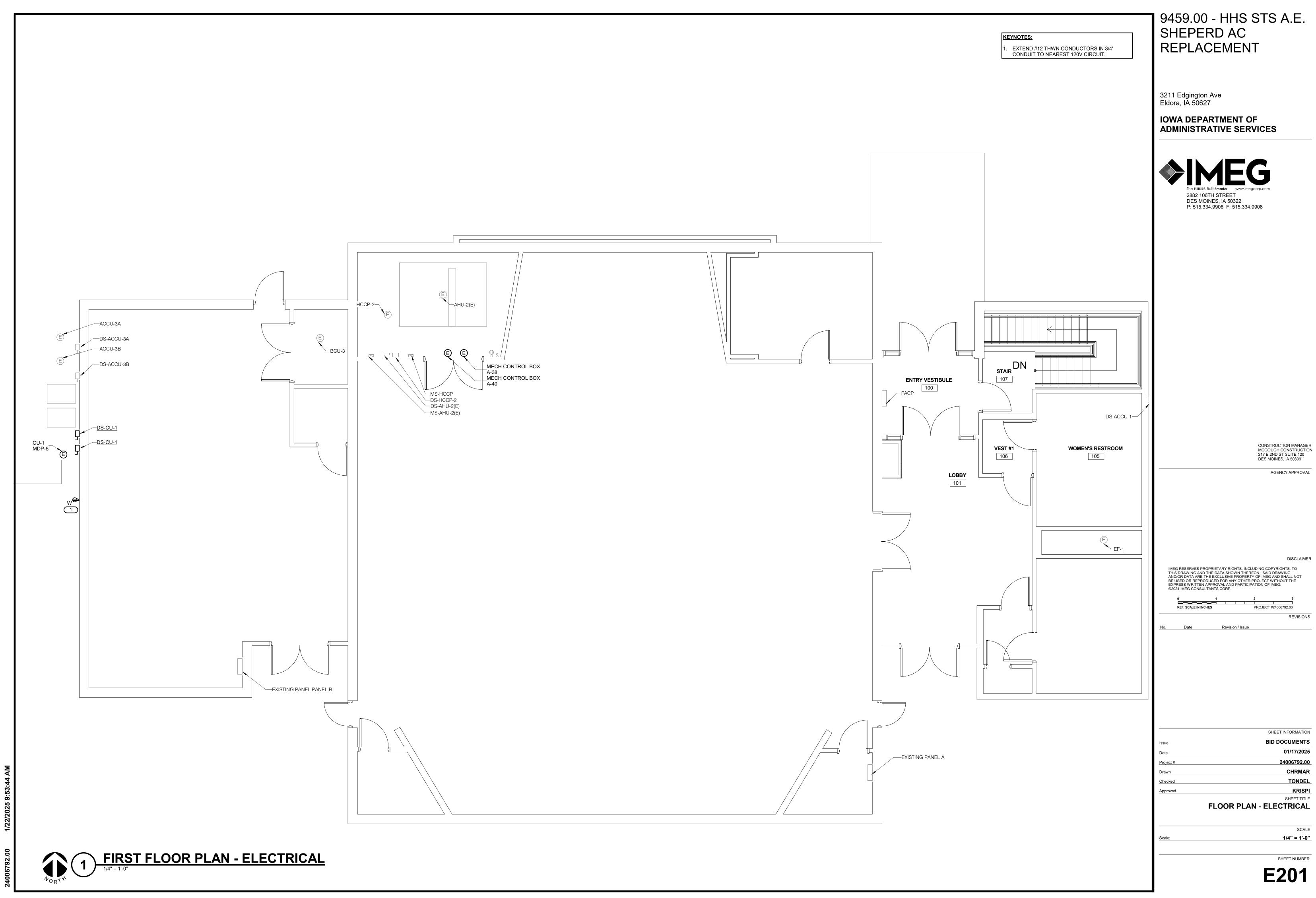
Revision / Issue

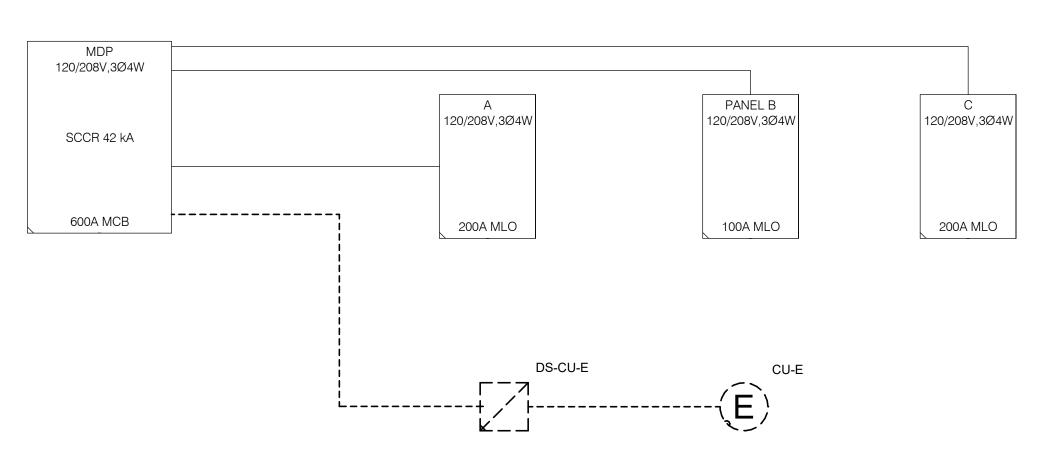
SHEET INFORMATION BID DOCUMENTS 01/17/2025 24006792.00 Checked SHEET TITLE **ELECTRICAL COVERSHEET**

As indicated

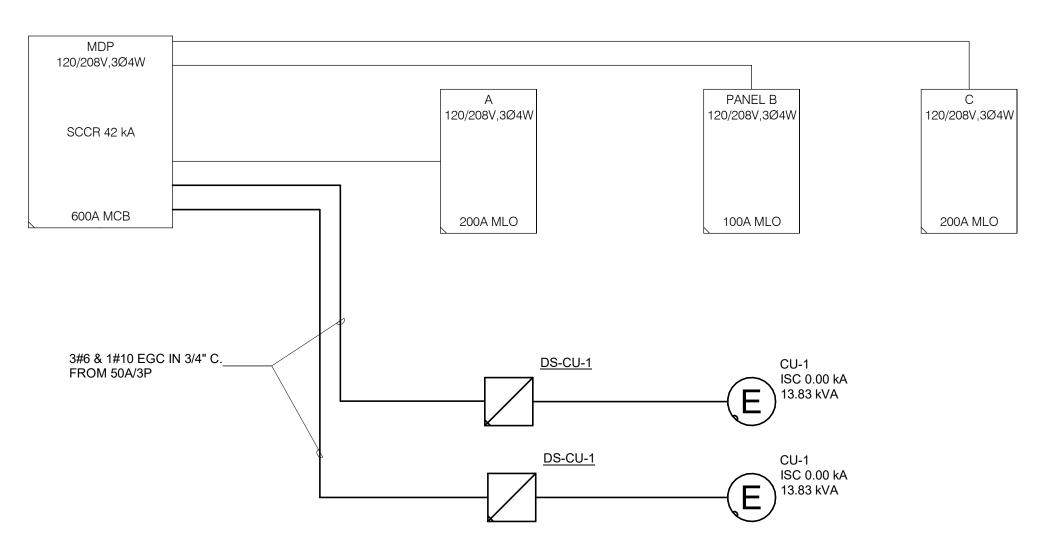
SHEET NUMBER







1 RISER DIAGRAM - DEMO NO SCALE



2 RISER DIAGRAM - NEW
NO SCALE

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No. Date Rev

SHEET INFORMATION
Sisue BID DOCUMENTS
Date 01/17/2025
Project # 24006792.00
Drawn CHRMAR
Checked TONDEL
Supproved KRISPI
SHEET TITLE
ELECTRICAL DETAILS

SHEET NUMBER

E400

12" = 1'-0"

	NOT	E: ALL DI	SCONNE	CTS (EXCEP	MANUAL	STARTER	S) Sł	HALL BE HEAVY DUTY T	PE.					
DISCONNECT TYPE:	A	CCESSO	RIES & OI	PTIONS										
FU - FUSED	S	A - STANI	DARD AC	CESSORIES (INCLUDES	S * ITEMS)	PF -	PHASE LOSS PROTECTION	ON (5 HP OR GREATER, 3 PHASE MOTOR					
NF - NON-FUSED	*(CT - CON	TROL TRA	NSFORMER,	FUSED 12	20V	TO -	MELTING THERMAL OVE	RLOADS (1 PHASE)					
CB - CIRCUIT BREAKER	*E	EO - ELEC	CTRONIC	OVERLOAD (3 PHASE N	MOTORS)	TS - 2	2 SPEED SELECTOR SW	TCH IN DOOR					
	*}	HA - HANI	D-OFF-AU	TO IN DOOR		-	GP -	GREEN (OFF) PILOT LIGI	HT IN DOOR					
STARTER TYPE:	*F	RP - RED	(RUN) PIL	OT LIGHT IN	DOOR		FA -	4-CONVERTIBLE AUXILIA	RY CONTACTS					
FV - FULL VOLTAGE	*-	TA - TWO	CONVER	TIBLE AUXILI	ARY CON	TACTS	EI - ELECTRICAL INTERLOCK (2)-N.O. & (2)-N.C.							
YD - WYE - DELTA	S	/N - INSU	LATED NE	UTRAL ASSE	MBLY		SS - START-STOP PUSHBUTTON IN DOOR							
RE - REVERSING							HL - HANDLE PADLOCK HASP							
TW - 2 SPEED, 2 WINDING														
SW - 2 SPEED, 1 WINDING														
RV - REDUCED VOLTAGE AUTO	XFMR													
SS - SOLID STATE														
MS - MANUAL STARTER														
MX - MANUAL SWITCH														
FS - FUSED SWITCH														
AMS-ASSEMBLED MOTOR STAI	RTER													
	DISC	ONNECT RATING	}					REQUIRED						
ITEM	TYPE	RATING	TRIP RATING	VOLTAGE	POLES	ENCLOSU	JRE	ACCESSORIES & OPTIONS	COMMENTS					
S-CU-1	NF	60		208	3	NEMA 3								
S-CU-1	NF	60		208	3	NEMA 3	R							

				EXIS	STING	MDP						
FEC	OSURE: NEMA 1 D FROM: 0/0P @ CATION: S: SEE ELECTRICAL DISTRIBUTIO	CHEDULE	NOTES F	GROUN	IEUTRAL ND BUS		MAIN: 600 MCB VOLTS: 120/208 Wye PHASE: 3 WIRE: 4 SCCR: 42 kA					
СКТ	LOAD DESCRIPTION	Load	POLES	FRAME	TRIP	TYPE	ACC.	WIRE AND RACEWAY	CI			
1	EXISTING PANEL A	1 kVA	3	250	200			4#3/0 & 1#6 EGC IN 2" C.				
2	EXISTING PANEL B	0 kVA	3	150	100			4#2 & 1#6 EGC IN 1 1/4" C.				
3	EXISTING PANEL C	0 kVA	3	250	200			4#3/0 & 1#6 EGC IN 2" C.				
4	ACCU-2	0 kVA	1	250	250							
5	CU-1 CIRCUIT 1	13.83 kVA	3	150	50			3#6 & 1#10 EGC IN 3/4" C.				
6	CU-1, CIRCUIT 2	13.83 kVA	3	150	50			3#6 & 1#10 EGC IN 3/4" C.				
7	SPACE		1									
8	SPACE		1									
9	SPACE		1									
10	SPACE		1									
11	SPACE		1									
12	SPACE		1									
13	SPACE		1									
14	SPACE		1									
15	SPACE		1									
16	SPACE		1									
				•		ALL TUBS IN		-)				
	ASSIFICATION					ESTIMATED		TOTALS*				
Power		28.668 k	VA	100.0	0%	28.668	3 kVA					
								TOTAL CONNECTED LOAD:	28.67 kVA			
								TOTAL ESTIMATED DEMAND LOAD:	28.668 kVA			
								TOTAL CONNECTED AMPS:	79.58 A			
								TOTAL ESTIMATED DEMAND AMPS:	79.6			

							E	XIS	NIT	IG P	ANE	EL A	4										
MOUNTING: SURFACE ENCLOSURE: NEMA 1 FED FROM: 200/3P @ MDP LOCATION:					SINGLE TUB SOLID NEUTRAL GROUND BUS										MAIN: 200 MLO VOLTS: 120/208 Wye PHASE: 3 WIRE: 4 SCCR: 10 kA								
N	IOTES	S :																					
K E Y	CKT NO.	LOAD DESCRIPTION	OC AMPS			VD °/			В		С		VD %		WIRE SIZE N H		OCPD				CI		
<u>'</u>		LOAD DESCRIPTION LIGHTS	20	Э Р	H 	N 	G	%	0	0					/0			 	P 1	AMPS 20	LOAD DESC	RIFTION	IN
		LIGHTS	20	1		<u></u>			0	0	0	0							1	20	LIGHTS		
	5	LIGHTS	20	1									0	0					1	20	LIGHTS		
	7	LIGHTS	20	1					0	0									1	20	RECEPT.		
	9	RECEPT.	20	1							0	0							1	20	RECEPT.		-
		RECEPT.	20	1									0	0					1	20	RECEPT.		
	13	RECEPT.	20	1					0	0									1	20	RECEPT.		
	15	RECEPT.	20	1							0	0							1	20	RECEPT.		
	17	RECEPT.	20	1									0	0					1	15	TIME CLOCK		
	19								0	0									1	15	FRONT SPEAKERS		:
	21	HCCP-2	20	3							0	0							1	15	SPARE		2
	23												0	0									2
		RECEPT.	20	1					0	0									3	45	AHU-2(E)		2
		RECEPT.	20	1							0	0											:
		RECEPT.	20	1		ļ							0	0					1	20	VIDIO SCREEN		;
		EMS CABINET	20	1					0	0									1	20	PROJECTOR		;
		RECEPT.	20	1							0	0							1	20	WINDOW LAMP		- 3
		POPCORN POPPER	50	1		ļ 				0.5			0	0	4.05				1		NORTH BLACK OUT S	CREEN	- 3
	37 39	RECEPT.	50	2					0	0.5		0.5						_	1	15	CONTROL BOX		
		SPACE		1							0	0.5			1.27	12	12	12	1	15 	SPACE		
	41	SFACE		'			otal Lo	ood:	0.50	kVA	0.50	l-\ / Λ	0.00						<u> </u>		SFACE		
							tal An			81	4.8			00					-				
				-		- 10	iai Aii	iips.	4.	01	4.0) 1	0.										
										LC	OAD SU	ММА	RY										
_0/	AD CL	ASSIFICATION		C	NNC	ECT	ED LO	DAD	DEM	AND F	ACTOF	R ES	AMIT	ΓED D	EMAN	D					TOTALS*		
ow	Power Power		1 k\	/A			100.00)%			1 kVA							IOTALS					
																					D LOAD:	1.00 kVA	
																					DEMAND LOAD:	1 kVA	
														TOT	TAL (CONN	IECTE	D AMPS:	2.78 A				
																			DEMAND AMPS:	2.8			
		*TOTAL DEMAND CALCS SUB	TDACT A	NIV D		NID A	NITIC	- A D						~ ~ ~	IL IOID				~ . ~ ~	- TI 110	CALCIO BONE AT	FAOLIDANI	III

ELECTRICAL DISTRIBUTION AND PANEL SCHEDULE NOTES:

- 1. BRANCH PANEL KEY:

 a. *A = ARC FAULT CIRCUIT INTERRUPT

 b. *G = GROUND FAULT CIRCUIT INTERRUPT

 c. *I = ISOLATED GROUND

 *D = BABLOCK HASD

 **D = BABLOCK HASD

 **TO = BABLOCK HASD

 - d. *P = PADLOCK HASP
 - e. *R = RED HANDLE f. *S = SHUNT TRIP
 - g. *NB = NEW BREAKER (NEW BREAKER TO MATCH EXISTING PANEL CHARACTERISTICS) h. *RB = REPLACE EXISTING BREAKER WITH NEW BREAKER
 i. *EB = EXISTING BREAKER

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Project #

Checked

Approved

SHEET INFORMATION
BID DOCUMENTS
01/17/2025
24006792.00
CHRMAR
TONDEL
KRISPI
SHEET TITLE
ELECTRICAL SCHEDULES

SHEET NUMBER