

GENERAL NOTES

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH BY IBC 2018 EDITION AND SHALL CONFORM TO ALL OTHER APPLICABLE MUNICIPAL, STATE, AND FEDERAL REGULATIONS INCLUDING THE ILLINOIS ACCESSIBILITY CODE (2018) AND THE AMERICANS WITH DISABILITIES ACT.

A. GENERAL NOTES

- 1. ALL CONTRACTORS ARE REQUIRED TO VISIT THE SITE AND BE KNOWLEDGEABLE REGARDING EXISTING CONDITIONS AND THEIR EFFECT ON THE PROPOSED WORK. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ANY CONDITIONS REQUIRING MODIFICATION BEFORE PROCEEDING WITH THE PROJECT.
2. NOTIFY THE OWNER'S REPRESENTATIVE A MINIMUM OF 72 HOURS PRIOR TO THE INTERRUPTION OF ANY UTILITY.
3. PROTECT AND KEEP IN SERVICE ACTIVE UNDERGROUND UTILITIES, PIPES, OR CONDUITS, WHETHER INDICATED ON THE DRAWINGS OR NOT, UNLESS SPECIFICALLY CALLED FOR TO BE REMOVED, RELOCATED, OR DISCONNECTED AND ABANDONED.
4. CONTRACTORS AND SUBCONTRACTORS SHALL COORDINATE THEIR WORK WITH THAT OF OTHER TRADES.
5. NO WORK WILL BE PERMITTED TO BE INSTALLED WITHOUT RECEIPT AND SUBSEQUENT REVIEW OF FULL AND COMPLETE SUBMITTALS BY THE ARCHITECT/ENGINEER.
6. DO NOT SCALE DRAWINGS, DIMENSIONS INDICATED TAKE PRECEDENCE OVER SCALE.
7. VERIFY ALL DIMENSIONS AND ELEVATIONS IN THE FIELD. WHERE DISCREPANCIES ARE FOUND BETWEEN DIMENSIONS OR ELEVATIONS SHOWN AND ACTUAL FIELD CONDITIONS, NOTIFY ARCHITECT/ENGINEER.
8. WHERE CONFLICTS MAY EXIST BETWEEN THE REQUIREMENTS OF PORTIONS OF THE CONTRACT DOCUMENTS, THE GREATER QUANTITY, HIGHER QUALITY OR MORE STRINGENT REQUIREMENT SHALL GOVERN. THEREFORE, BY EXECUTING A CONTRACT FOR CONSTRUCTION, THE CONTRACTOR AGREES THAT, IF IT RAISED NO QUESTIONS REGARDING SUCH CONFLICTS DURING THE BIDDING PROCESS, AND IN THE ABSENCE OF A CLARIFYING ADDENDUM ISSUED DURING THE BIDDING PROCESS, IT HAS VOLUNTEERED TO COMPLY WITH THE MORE EXPENSIVE REQUIREMENT AS PART OF ITS BASE BID AND IS NOT ENTITLED TO ANY ADDITIONAL COMPENSATION TO RESOLVE THE CONFLICT.
9. THE CONTRACT DOCUMENTS REQUIRE THE CONTRACTOR TO FURNISH AND INSTALL COMPLETE PRODUCTS, SYSTEMS AND SERVICES. BY EXECUTING A CONTRACT FOR CONSTRUCTION, THE CONTRACTOR AGREES THAT THE DRAWINGS SET FORTH THE DESIGN INTENT AND, THEREFORE, MAY NOT EXPRESSLY DEPICT EVERY LENGTH, SEGMENT, PIECE, PART, COMPONENT OR UNIT OF A PRODUCT, SYSTEM OR SERVICE. THE CONTRACTOR FURTHER AGREES THAT, AS PART OF ITS BID, IT MUST FURNISH AND INSTALL EVERY LENGTH, SEGMENT, PIECE, PART, COMPONENT OR UNIT OF A PRODUCT, SYSTEM OR SERVICE AND, CONSEQUENTLY, THE CONTRACTOR IS NOT ENTITLED TO ANY ADDITIONAL COMPENSATION FOR ANY LENGTH, SEGMENT, PIECE, PART COMPONENT OR UNIT OF A PRODUCT, SYSTEM OR SERVICE BECAUSE IT IS NOT EXPRESSLY DEPICTED HEREIN.

B. MISCELLANEOUS AND DEMOLITION NOTES

- 1. COORDINATE PENETRATIONS AND/OR SLEEVES REQUIRED IN WALLS, FLOORS, CEILINGS OR ROOFS FOR MECHANICAL AND ELECTRICAL WORK REQUIRED BY ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS.
2. SEAL PENETRATIONS OF DUCTWORK, CONDUIT OR PIPES WITH UL APPROVED MATERIALS TO MAINTAIN THE FIRE RATING OF ASSEMBLIES. PROVIDE FIRE DAMPERS AS INDICATED ON THE DRAWINGS.
3. APPLY APPROPRIATE & COMPATIBLE SEALANT MATERIALS AS REQUIRED TO SEPARATE DISSIMILAR METALS, FILL GAPS IN EXISTING ASSEMBLIES OR WHERE NEW AND EXISTING ASSEMBLIES MEET OR WHERE OTHERWISE REQUIRED BY THE SPECIFICATIONS.
4. BRING ANY UNFREESSEN OR CONFLICTING CONDITIONS TO THE IMMEDIATE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK.
5. REPAIR, PATCH, OR REPLACE FINISH MATERIALS OR VISIBLE ASSEMBLIES THAT ARE SOILED, CUT OR DAMAGED IN ANY FASHION DURING THE COURSE OF THE WORK. PERFORM PATCHING SUCH THAT EDGES BLEND INTO CONTIGUOUS SURFACES SMOOTHLY, MATCHING TEXTURE AND COLOR OF ADJACENT SURFACES.

STANDARD ABBREVIATIONS

Table with 4 columns of abbreviations and their corresponding full names. Includes terms like AT ANCHOR BOLT, EWH ELECTRIC WATER HEATER, PTN PARTITION, etc.

THE MATERIALS, ABBREVIATIONS, AND DRAFTING SYMBOLS LEGEND ARE EACH AN ALL INCLUSIVE MASTER LIST USED BY THIS FIRM. THE INCLUSION OF THESE LEGENDS INTO THESE DOCUMENTS DOES NOT IMPLY THAT ALL THE SYMBOLS OR MATERIALS INCLUDED IN THESE LEGENDS ARE INCORPORATED INTO THIS PROJECT. ABBREVIATIONS MAY APPEAR WITH PERIODS OR OTHER PUNCTUATION SEPARATING CHARACTERS ON THE DRAWINGS; THE MEANING REMAINS THE SAME.

DRAFTING SYMBOLS AND MATERIALS LEGEND. Table with 2 columns: Symbol and Description. Includes symbols for DETAIL NUMBER, DRAWING NUMBER, COLUMN NO., REFERENCE LINE NO., LOCATION ELEVATION, ROOM NUMBER, DOOR NO., NOMINAL THICKNESS, KEYNOTE IDENTIFICATION, WINDOW TYPE IDENTIFICATION, TOILET ACCESSORY IDENTIFICATION, SPOT ELEVATION, BRICK MASONRY IN PLAN, CONCRETE MASONRY IN PLAN, STONE MASONRY IN PLAN, RAKED JOINT IN PLAN, BRICK MASONRY IN SECTION DETAIL, CONCRETE MASONRY IN SECTION DETAIL, STONE MASONRY IN SECTION DETAIL, STEEL IN SECTION DETAIL, DISCONTINUOUS ROUGH WOOD BLOCKING IN SECTION, CONTINUOUS ROUGH WOOD FRAMING/BLOCKING IN SECTION, FINISHED WOOD IN SECTION DETAIL, RIGID BOARD INSULATION, RIGID BOARD INSULATION (ROOFING), BATT INSULATION, GYPSUM BOARD, ACOUSTICAL CEILING PANEL, BITUMINOUS CONCRETE (ASPHALT) PAVING IN SECTION, AGGREGATE BALLAST, FILL OR BACKFILL IN SECTION, UNDISTURBED EARTH, EARTH BACKFILL.

DRAFTING SYMBOLS AND MATERIALS LEGEND



PROJECT

FAMILY REC. CENTER
POOL HVAC RENOVATION
1450 FOREST GATE ROAD
OAK BROOK, IL 60523

OWNER

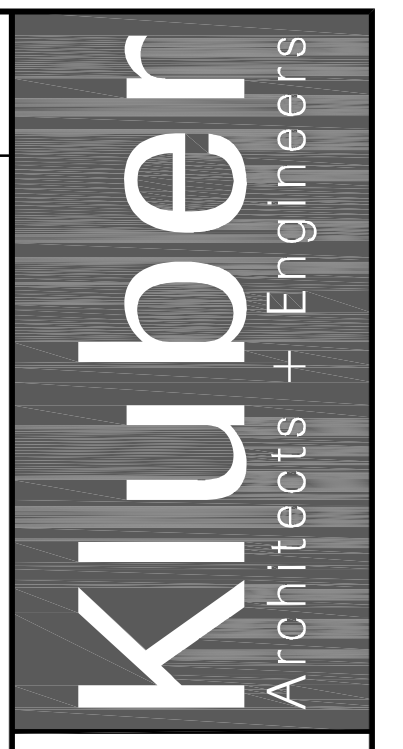
OAK BROOK PARK DISTRICT
1450 FOREST GATE ROAD
OAK BROOK, IL 60523

ARCHITECT/ENGINEER

KLUBER ARCHITECTS + ENGINEERS
41 W. BENTON STREET
AUREORE, ILLINOIS 60506
TEL (630) 406-1213
FAX (630) 406-9472
www.kluberinc.com

INDEX OF DRAWINGS

Table listing drawing numbers and titles: G100 COVER SHEET, AM200 ARCHITECTURAL AND MECHANICAL DEMOLITION ROOF PLAN, M310 MECHANICAL FIRST FLOOR PLAN, M320 MECHANICAL ROOF PLAN, M410 TEMPERATURE CONTROLS, M420 MECHANICAL DETAILS, E310 FIRST FLOOR ELECTRICAL PLAN, E600 ELECTRICAL ONE LINE RISER DIAGRAM.



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OAK BROOK, ILLINOIS 60523

REQUIRED PLAN COVER SHEET
INFORMATION FOR REVIEW
UNDER 2018 INTERNATIONAL CODES.

APPLICABLE CODES

2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL PROPERTY MAINTENANCE CODE
2018 INTERNATIONAL EXISTING BUILDING CODE
2014 NATIONAL ELECTRICAL CODE
LOCAL AMENDMENTS TO THE ABOVE CODES

GENERAL STATEMENT OF OVERALL PROJECT SCOPE AND INTENT:
PROJECT CONSISTS OF ROOF TOP HVAC UNIT REPLACEMENT. NO CHANGES IN PLUMBING COUNTS OR OCCUPANCY LOADS ARE BEING MADE.

SEALS & CERTIFICATES

Three professional seals for Architect (Clayton D. Haldeeman), Mechanical Engineer (Donald D. Ware, Jr.), and Electrical Engineer (Michael T. Kluber). Each seal includes the name, license number, and expiration date.

"G" SERIES, "A" SERIES "G" SERIES, "M" SERIES. "G" SERIES, "E" SERIES

I HAVE PREPARED, OR CAUSED TO BE PREPARED UNDER MY DIRECT SUPERVISION, THE ATTACHED PLANS AND SPECIFICATIONS AND STATE THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND TO THE EXTENT OF MY CONTRACTUAL OBLIGATION, THEY ARE IN COMPLIANCE WITH IBC 2015 EDITION, THE ENVIRONMENTAL BARRIERS ACT AND THE ILLINOIS ACCESSIBILITY CODE.
KLUBER, INC. ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE #184-001284

Table with project information: JOB NO. 22-310-1444.01, DRAWN CDJ, CHECKED CDH, APPROVED CDH, SHEET TITLE COVER SHEET, SHEET NUMBER G100.

KEYNOTES

KEYNOTES ARE TYPICALLY NOT DUPLICATED WITHIN A GIVEN DETAIL. AN UN-KEYNOTED ITEM IN A DETAIL IS THE SAME AS A KEYNOTED ITEM HAVING THE SAME APPEARANCE WITHIN THE SAME DETAIL.

- 2.100 EXISTING ROOF SCREEN STRUCTURAL STEEL FRAMING, UNBRACED BAY.
- 2.101 EXISTING ROOF SCREEN STRUCTURAL STEEL FRAMING, CROSS-BRACED BAY.
- 2.105 EXISTING ROOF SCREEN PANEL; STUCCO-COATED RIGID 2" INSULATION.
- 2.470 REMOVE EXISTING EQUIPMENT RAIL.
- 2.471 REMOVE EXISTING CAPPED ROOF CURB AND EXISTING PLENUM BOX AND 3-SECTION GRILLE EXTENDING THROUGH ROOF DECK BENEATH CURB.
- 23.100 REMOVE GAS PIPE CONNECTION TO HVAC UNIT. REMOVE VALVES, PRESSURE REGULATORS AND PIPING AS REQUIRED TO RECONFIGURE GAS PIPING FOR NEW DEHUMIDIFICATION UNIT. EXISTING BRANCHES TO OTHER EQUIPMENT SHALL REMAIN IN SERVICE.
- 23.101 REMOVE HVAC UNIT AND CURB. PROTECT ROOF OPENING FROM OUTDOOR CONDITIONS.
- 23.106 REMOVE HVAC UNIT CONTROLS AND ABANDONED COMPONENTS.

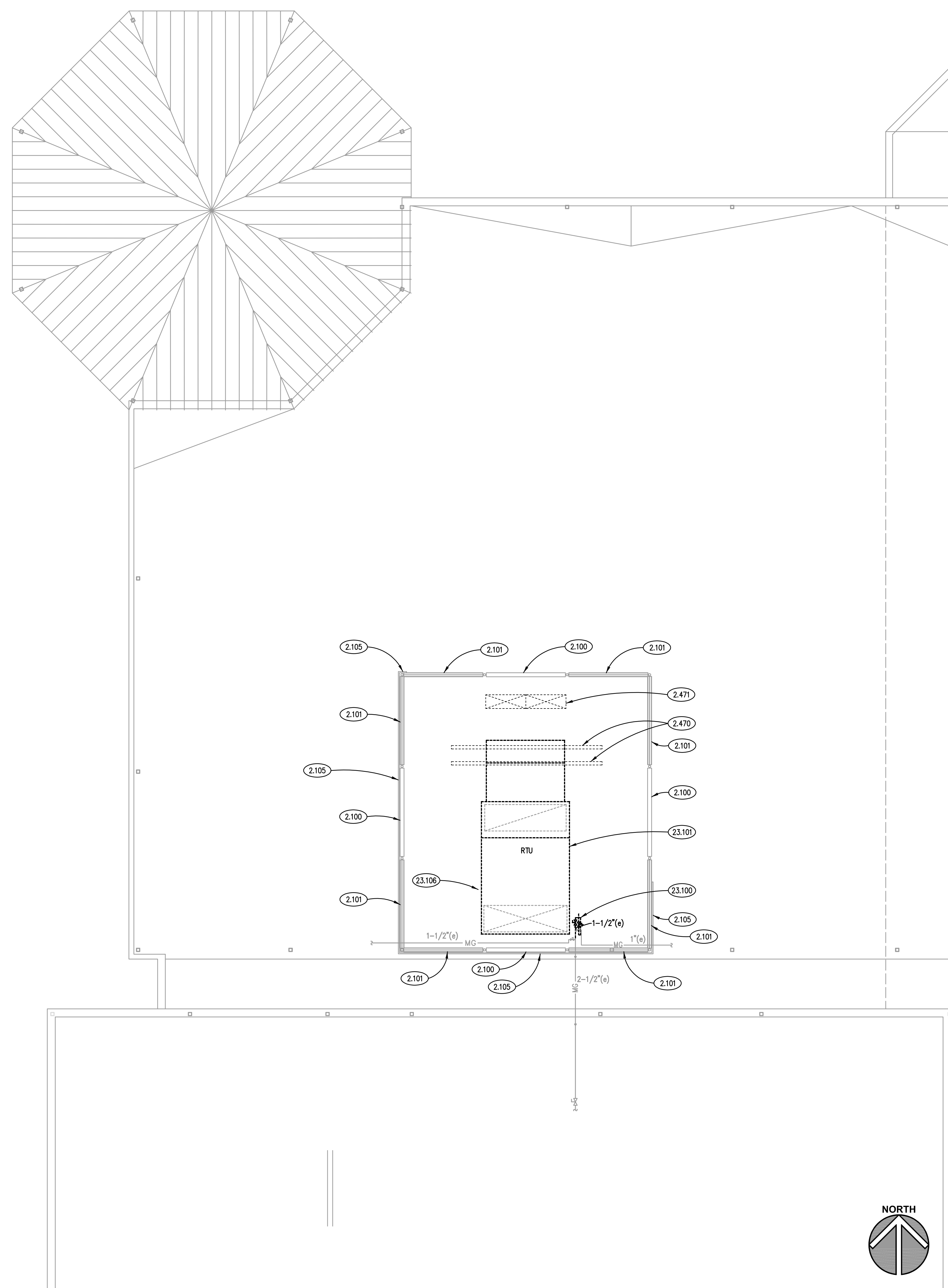
Kluber

Architects + Engineers

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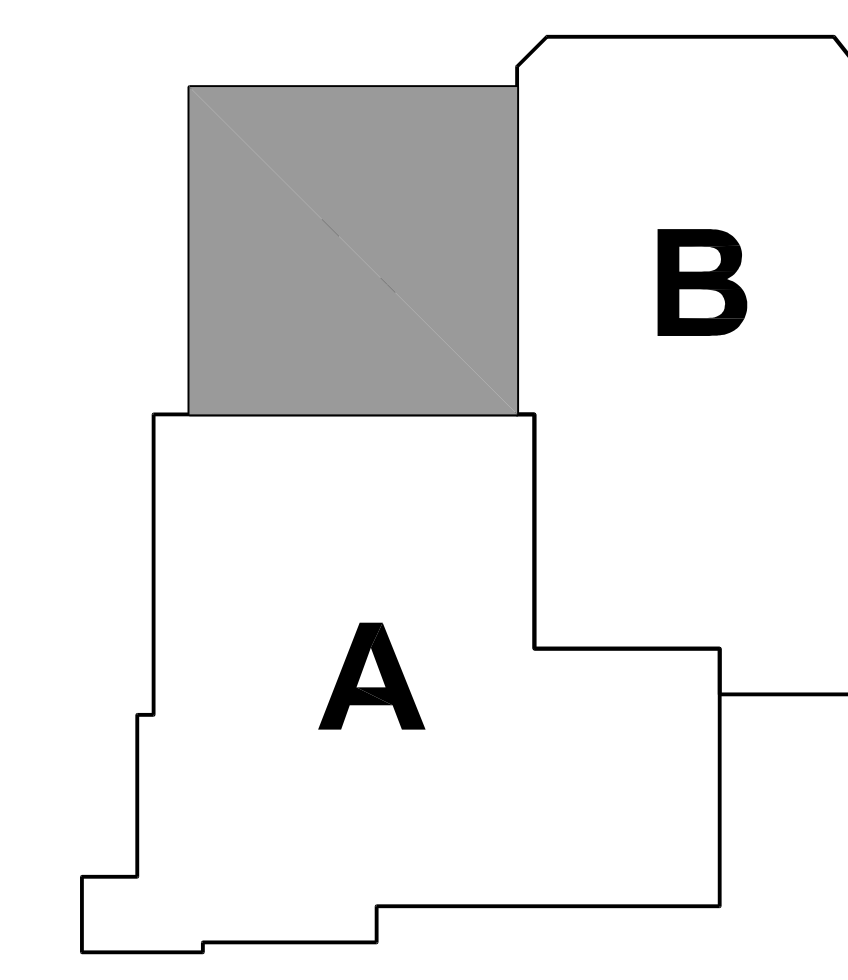
OAK BROOK PARK DISTRICT
1490 FOREST GATE ROAD
OAK BROOK, ILLINOIS 60523



MECHANICAL GENERAL NOTES

1. REFER TO DRAWING G100 FOR PROJECT GENERAL NOTES.
2. ALL PIPING, DUCTWORK AND RACEWAYS ARE SHOWN DIAGRAMMATICALLY AND DO NOT SHOW ALL REQUIRED FITTINGS, OFFSETS, DROPS AND RISES. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL MATERIAL AND LABOR FOR A COMPLETE AND WORKING SYSTEM. COORDINATE WITH OTHER TRADES FOR SPACE AVAILABLE AND RELATIVE LOCATIONS OF EQUIPMENT, PIPING, DUCTWORK, ETC.
3. EXISTING PIPING, DUCTWORK AND RACEWAYS INDICATED ON THESE PLANS SHALL BE FIELD VERIFIED FOR EXACT LOCATIONS, QUANTITY AND SIZES.
4. ALL TAPES AND MASTICS USED TO SEAL DUCTWORK LISTED AND LABELED IN ACCORDANCE WITH UL 181A SHALL BE MARKED ACCORDINGLY. ALL TAPES AND MASTICS USED TO SEAL FLEXIBLE DUCTS AND AIR CONNECTORS SHALL COMPLY WITH UL 181B AND MARKED ACCORDINGLY.
5. SPACE ALLOCATION, COORDINATION WITH ELECTRICAL, ARCHITECTURAL & OTHER MECHANICAL COMPONENTS HAVE BEEN MADE WITH RESPECT TO ALL EQUIPMENT SCHEDULED ON THESE DRAWINGS AND IN THE SPECIFICATIONS OF THE FIRST NAMED MANUFACTURER ONLY. OTHER MANUFACTURERS ARE ACCEPTABLE PROVIDED THEY MEET PERFORMANCE REQUIREMENTS AND AFOREMENTIONED COORDINATION.
6. DO NOT CUT THROUGH THE STRUCTURAL ELEMENTS WHEN INSTALLING OPENINGS REQUIRED FOR ALL DUCTWORK, PIPING, CONDUITS OR OTHER WORK. CONTRACTOR CUTTING THROUGH OR OTHERWISE DAMAGING THESE ELEMENTS WILL BE RESPONSIBLE FOR ALL ASSOCIATED ENGINEERING FEES AND SUBSEQUENT RETRO-FIT/REINFORCING DEEMED NECESSARY TO REINSTATE THE CONTINUITY OF THE DISRUPTED ELEMENTS.
7. ALL ROOFTOP EQUIPMENT (ARCHITECTURAL, MECHANICAL, ELECTRICAL, ETC.) AND THEIR CORRESPONDING CURBS TO BE ATTACHED TO THE STRUCTURAL FRAMING AS REQUIRED TO RESIST THE WIND AND SEISMIC FORCES IDENTIFIED ON SHEET S010. ANCHORAGE TO METAL DECKING IS NOT ACCEPTABLE. CONTRACTOR MANUFACTURER TO CONSULT AN INDEPENDENT STRUCTURAL ENGINEER TO REVIEW, DESIGN AND DETAIL THE REQUIRED CONNECTIONS.
8. OBTAIN AND PAY ALL COSTS FOR PERMITS, LICENSES, CERTIFICATE FILING AND ALL INSPECTIONS BY AUTHORITIES HAVING JURISDICTION.

KEY PLAN



ARCHITECTURAL AND MECHANICAL DEMOLITON ROOF PLAN

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

NOTE: SCALES DEPICTED ON THIS DRAWING ARE NOT CORRECT UNLESS PLOTTED SHEET SIZE IS 30 X 42 INCHES.

ISSUED
07/17/23
BRD DOCUMENTS

JOB NO. 22-310-1444.01
DRAWN DDW
CHECKED DDW
APPROVED DDW

SHEET TITLE
ARCHITECTURAL AND MECHANICAL DEMOLITION ROOF PLAN
SHEET NUMBER

AM220

P:\1444-01 - Oak Brook Park District - Fam. Rec. Center - Family Rec. Pool HVAC RENO - Family Rec. Pool HVAC RENO - 1444-01.dwg, 14/02/22 2:25:07 PM, DDW

KEYNOTES

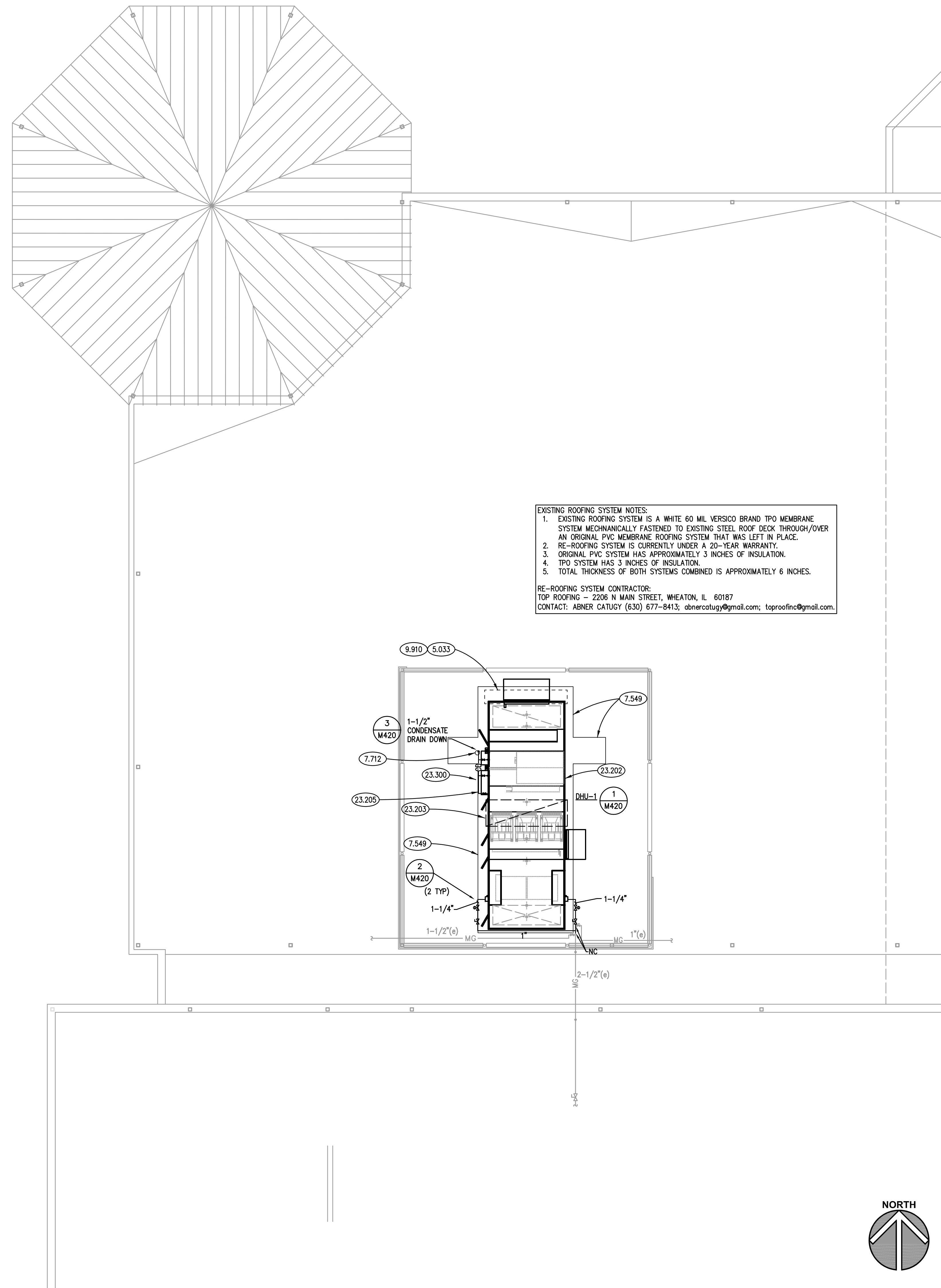
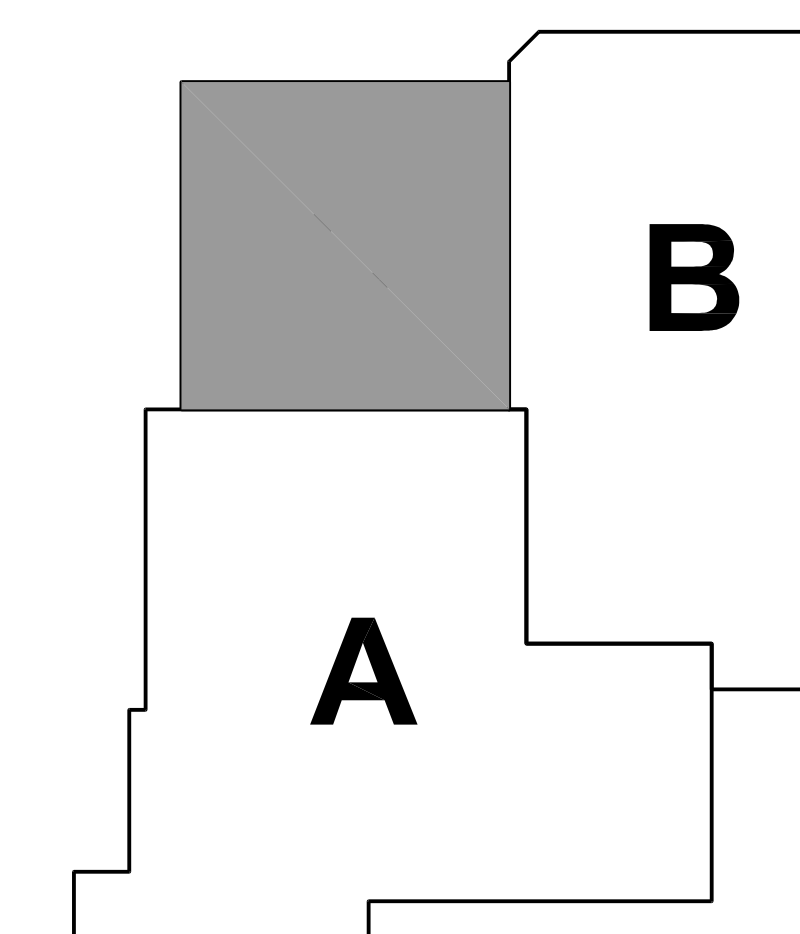
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- 5.033 STEEL DECK: INFILL AREA OF REMOVED CAPPED ROOF CURB WITH 3" TYPE 'N' 16 GA. GALVANIZED STEEL DECK (ALL CHARACTERISTICS MATCHING EXISTING ROOF DECK); EXTEND ENDS OF DECK MIN. 2" OVER EXISTING JOISTS.
- 7.549 ROOFING ASSEMBLY: PATCH EXISTING ROOFING AROUND NEW MECHANICAL UNIT ROOF CURB AND WHERE EXISTING EQUIPMENT RAILS AND EXISTING CAPPED ROOF CURB ARE REMOVED; INFILL WITH ROOFING INSULATION OF THICKNESS TO MATCH THAT OF EXISTING ROOFING INSULATION; FLASH MECHANICAL UNIT ROOF CURB IN ACCORDANCE WITH ROOFING SYSTEM MANUFACTURER'S REQUIREMENTS AND IN ACCORDANCE WITH NRCA ROOFING MANUAL FOR MEMBRANE ROOFING SYSTEMS CONSTRUCTION DETAIL TP-13; FOR PURPOSES OF MAINTAINING EXISTING WARRANTY, SURFACE WITH MEMBRANE AND INSULATION MATCHING EXISTING AND UTILIZE ORIGINAL RE-ROOFING CONTRACTOR FOR PERFORMANCE OF WORK.
- 7.712 ROOF SPECIALTY: MULTIPLE-PORT ROOF PORTAL WITH RUBBER BOOT AND CLAMPING RINGS; PORTALS PLUS ALUMI-FLASH STANDARD BASE AND 4-PORT CAP WITH PORT SIZES APPROPRIATE TO SIZES OF PENETRATIONS; www.portalplus.com; PROVIDE ADEQUATE SUPPORT AND CHORED TO ROOF FRAMING MEMBERS FOR PENETRATING PIPES AND CONDUITS; USING ROOF PORTAL AS A MEANS OF SUPPORTING PENETRATING ITEMS IS NOT PERMITTED; SUBMIT PRODUCT DATA AND MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR REVIEW.
- 9.910 HIGH-PERFORMANCE COATING: APPLY COATING MATCHING ORIGINAL COATING PRODUCT AND COLOR TO UNDERSIDE SURFACE OF NEW SECTION OF ROOF DECK; ENSURE COMPATIBILITY WITH GALVANIZING; SUBMIT PRODUCT DATA AND MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR REVIEW.
- 23.202 PROVIDE NEW POOL DEHUMIDIFICATION UNIT. UNIT SHALL BE PAINTED TO MATCH COLOR OF EXISTING EQUIPMENT SCREEN.
- 23.203 PROVIDE PLENUM CURB FOR NEW UNIT. SUPPLY AIR SHALL LINE UP WITH EXISTING ROOF OPENING. PLENUM SECTION SHALL CONNECT NEW UNIT RETURN AIR OPENING AND EXISTING ROOF RETURN OPENING. FIELD VERIFY EXACT DIMENSIONS. PLENUM CURB SHALL BE 24 INCHES TALL, DOUBLE WALL INSULATED WITH ALL AIRSTREAM MATERIAL MANUFACTURED FROM ALUMINUM.
- 23.205 PROVIDE P-TRAPS AND CONDENSATE PIPING FOR DRAIN PAN OUTLETS. PROVIDE HEAT TRACE, PENTAIR 5XL TRACE SYSTEM WITH AMC-FS CONTROLLER WITH LINE SENSING OPERATION. PROVIDE MINIMUM 1-INCH ARMAFLEX INSULATION ON PIPES AND HEAT TRACE CABLE. PROVIDE PROTECTIVE COATING ON INSULATION FOR EXTERIOR APPLICATION.
- 23.300 ALTERNATE NO. 1: PROVIDE TEMPERATURE CONTROLS INTERFACE BETWEEN UNIT NEW UNIT AND EXISTING BUILDING AUTOMATION SYSTEM. INTERFACE SHALL INCLUDE LISTED POINTS AND GRAPHICS AS SHOWN ON DRAWING M410. CONTACT OAK BROOK PARK DISTRICT TEMPERATURE CONTROLS CONTRACTOR; APPLIED CONTROLS, JOHN KOSTRZEWA, 630-709-5801 FOR THE WORK. ALL ABANDONED/UNUSED CONDUIT AND WIRING SHALL BE REMOVED.

GENERAL NOTES

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- 2. ALL PIPING, DUCTWORK AND RACEWAYS ARE SHOWN DIAGRAMMATICALLY AND DO NOT SHOW ALL REQUIRED FITTINGS, OFFSETS, DROPS AND RISES. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL MATERIAL AND LABOR FOR A COMPLETE AND WORKING SYSTEM. COORDINATE WITH OTHER TRADES FOR SPACE AVAILABLE AND RELATIVE LOCATIONS OF EQUIPMENT, PIPING, DUCTWORK, ETC.
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- 7. ALL ROOFTOP EQUIPMENT (ARCHITECTURAL, MECHANICAL, ELECTRICAL, ETC.) AND THEIR CORRESPONDING CURBS TO BE ATTACHED TO THE STRUCTURAL FRAMING AS REQUIRED TO RESIST THE WIND AND SEISMIC FORCES IDENTIFIED ON SHEET S010. ANCHORAGE TO METAL DECKING IS NOT ACCEPTABLE. CONTRACTOR/MANUFACTURER TO CONSULT AN INDEPENDENT STRUCTURAL ENGINEER TO REVIEW, DESIGN AND DETAIL THE REQUIRED CONNECTIONS.
- 8. OBTAIN AND PAY ALL COSTS FOR PERMITS, LICENSES, CERTIFICATE FILING AND ALL INSPECTIONS BY AUTHORITIES HAVING JURISDICTION.

KEY PLAN



EXISTING ROOFING SYSTEM NOTES:

1. EXISTING ROOFING SYSTEM IS A WHITE 60 MIL VERSICO BRAND TPO MEMBRANE SYSTEM MECHANICALLY FASTENED TO EXISTING STEEL ROOF DECK THROUGH/OVER AN ORIGINAL PVC MEMBRANE ROOFING SYSTEM THAT WAS LEFT IN PLACE.
2. RE-ROOFING SYSTEM IS CURRENTLY UNDER A 20-YEAR WARRANTY.
3. ORIGINAL PVC SYSTEM HAS APPROXIMATELY 3 INCHES OF INSULATION.
4. TPO SYSTEM HAS 3 INCHES OF INSULATION.
5. TOTAL THICKNESS OF BOTH SYSTEMS COMBINED IS APPROXIMATELY 6 INCHES.

RE-ROOFING SYSTEM CONTRACTOR:
 TOP ROOFING - 2206 N MAIN STREET, WHEATON, IL 60187
 CONTACT: ADNER CATUGY (630) 677-8413; adnercatugy@gmail.com; toproofing@gmail.com.

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

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OAK BROOK PARK DISTRICT - FAM. REC. CENTER HVAC RENO.

OAK BROOK PARK DISTRICT
 1450 FOREST GATE ROAD
 OAK BROOK, ILLINOIS 60523

ISSUED	
07/17/23	REV DOCUMENTS

JOB NO. 22-310-1444.01
 DRAWN DDW
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 APPROVED DDW

SHEET TITLE

MECHANICAL ROOF PLAN

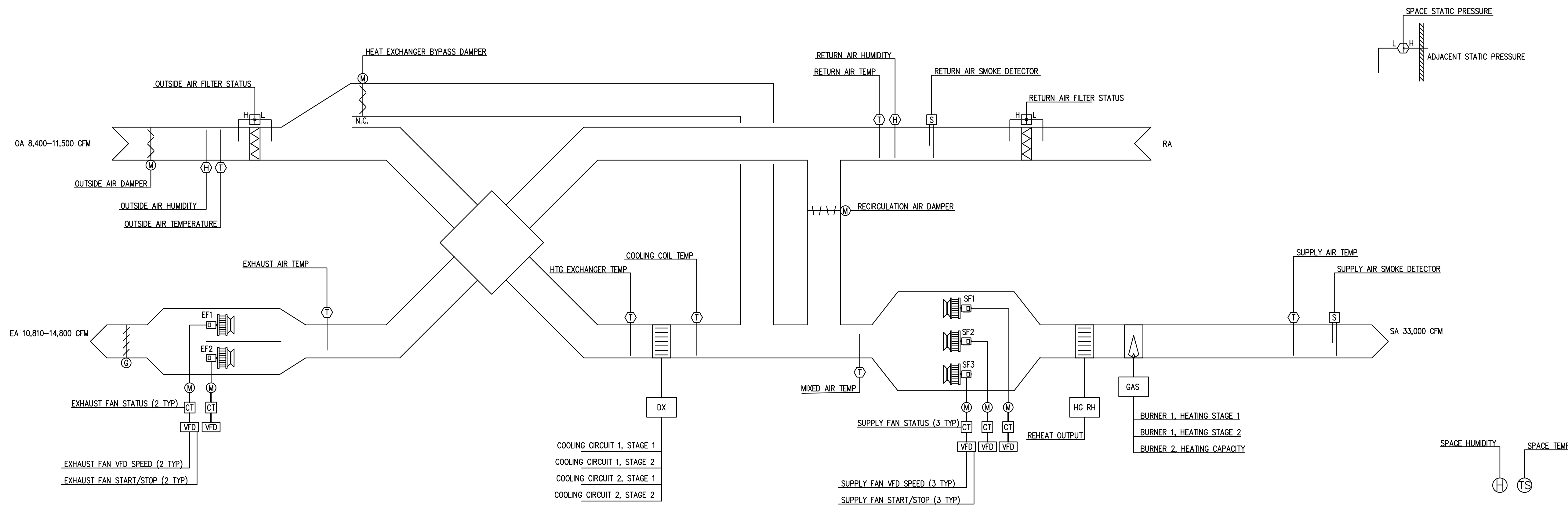
SHEET NUMBER

M320

NOTE: SCALES DEPICTED ON THIS DRAWING ARE NOT CORRECT UNLESS PLOTTED SHEET SIZE IS 30 X 42 INCHES.

P:\1444-01 - Oak Brook Park District - Family Rec Pool HVAC RENO - 07/17/23 - 22-310-1444.01 - 10/20/23 - 22-310-1444.01.DWG

POOL DEHUMIDIFIER UNIT TEMPERATURE CONTROL SCHEMATIC



- NOTES:**
- COMPONENTS AND INTERCONNECTIONS SHOWN ARE SCHEMATIC ONLY.
 - CONTRACTOR IS RESPONSIBLE FOR PROVIDING COMPONENTS, SENSORS, RELAYS, ETC., TO ENSURE A COMPLETE OPERATING SYSTEM.

POINTS LIST

DEHUMIDIFIER	HARDWARE				SOFTWARE			
	AI	AO	DI	DO	SCHED	TREND	ALARM	GRAPHIC
MODE OF OPERATION (OCCUPIED, UNOCCUPIED, PURGE, ECONOMIZER, HEATING, COOLING, DEHUMIDIFY)			X			X		X
SUPPLY FAN START/STOP (SF1, SF2, SF3)			X	X				X
SUPPLY FAN STATUS (SF1, SF2, SF3)			X			X	X	X
SUPPLY FAN SPEED (SF1, SF2, SF3)			X			X		X
EXHAUST FAN START/STOP (EF1, EF2)			X	X				X
EXHAUST FAN STATUS (EF1, EF2)			X			X	X	X
EXHAUST FAN SPEED (EF1, EF2)			X			X		X
SPACE STATIC PRESSURE	X					X	X	X
SPACE STATIC PRESSURE SETPOINT	X					X	X	X
SUPPLY AIR TEMPERATURE	X					X	X	X
SUPPLY AIR TEMPERATURE HIGH/LOW TEMPERATURE SETPOINT	X					X	X	X
RETURN AIR HUMIDITY	X					X	X	X
RETURN AIR HUMIDITY SETPOINT	X					X	X	X
OUTSIDE AIR TEMPERATURE	X					X	X	X
OUTSIDE AIR HUMIDITY	X					X	X	X
EXHAUST AIR TEMPERATURE	X					X	X	X
HEAT EXCHANGER AIR TEMPERATURE	X					X	X	X
HEAT EXCHANGER DEFROST AIR TEMPERATURE SETPOINT	X	X				X	X	X
HEAT EXCHANGER FACE/BYPASS DAMPER	X					X	X	X
SPACE TEMPERATURE	X					X	X	X
SPACE TEMPERATURE SETPOINT	X					X	X	X
SPACE HUMIDITY	X					X	X	X
MIXED AIR TEMPERATURE	X					X	X	X
PURGE ENABLE	X	X			X			X
PURGE TIME LIMIT	X				X			X
COOLING STAGE	X	X				X	X	X
COOLING COIL TEMPERATURE	X					X	X	X
COOLING LOCKOUT TEMPERATURE SETPOINT	X					X	X	X
HOT GAS REHEAT VALVE OUTPUT	X	X				X	X	X
HEATING STAGE BURNER 1	X	X		X		X	X	X
HEATING CAPACITY BURNER 2	X	X				X	X	X
HEATING LOCKOUT TEMPERATURE SETPOINT	X	X				X	X	X
OUTSIDE AIR FILTER STATUS	X	X				X	X	X
RETURN AIR FILTER STATUS	X	X				X	X	X
RETURN AIR FILTER DP SETPOINT	X					X	X	X
OUTSIDE AIR/RECIRCULATION AIR DAMPER	X	X				X	X	X
SMOKE DETECTOR STATUS (SA, RA)	X	X				X	X	X
PHASE/VOLTAGE PROTECTION RELAY	X	X				X	X	X

SEQUENCE OF OPERATIONS

POOL DEHUMIDIFIER UNIT (DHU-1):

DESIGN CONDITIONS

- RECREATION/LEISURE POOL WATER TEMPERATURE - 85° F.
- LAP/COMPETITION POOL WATER TEMPERATURE - 81° F.
- THERAPY POOL WATER TEMPERATURE - 102° F.
- NATATORIUM AIR TEMPERATURE - 85° F.
- NATATORIUM RELATIVE HUMIDITY - 60% RH.

OPERATING STATES

OCCUPIED

- SUPPLY FAN ON, 100% BALANCED AIRFLOW.
- EXHAUST FAN ON, CONTROL PER SEQUENCE.
- ECONOMIZER ENABLED.
- DEHUMIDIFICATION ENABLED.
- HEATING ENABLED.
- COOLING ENABLED.
- ALL DAMPERS ENABLED.

SUPPLY FAN CONTROL

THE SUPPLY FAN VARIABLE SPEED FUNCTION SHALL BE USED FOR MANUAL FIELD BALANCING ONLY.

EXHAUST FAN CONTROL

- THE EXHAUST FAN VARIABLE SPEED SHALL MODULATE TO MAINTAIN A NEGATIVE DIFFERENTIAL PRESSURE SETPOINT OF -0.04" W.C. (ADJUSTABLE) BETWEEN THE POOL SPACE AND AN ADJACENT SPACE.
- THE EXHAUST FAN VARIABLE SPEED SHALL BE LIMITED BY AN OFFSET OF THE CURRENT OUTDOOR DAMPER POSITION.

OPERATING MODES

HEATING

- THE INDIRECT GAS FURNACE SHALL BE CONTROLLED TO MAINTAIN THE SUPPLY TEMPERATURE SETPOINT.
- THE INDIRECT GAS FURNACE SHALL BE LOCKED OUT WHEN THE OUTSIDE AIR TEMPERATURE IS ABOVE 85° F (ADJUSTABLE).

COOLING

- THE ECONOMIZER AND MECHANICAL COOLING ARE CONTROLLED TO MAINTAIN THE SUPPLY TEMPERATURE SETPOINT. THE ECONOMIZER, IF AVAILABLE, WILL BE USED AS THE FIRST STAGE OF COOLING.
- ECONOMIZER MODE SHALL BE ACTIVE ONLY IF THE OUTSIDE AIR TEMPERATURE IS LESS THAN THE RETURN AIR TEMPERATURE.
- COOLING MODE SHALL UTILIZE THE DIRECT EXPANSION COIL TO MAINTAIN THE UNIT SUPPLY TEMPERATURE SETPOINT.
- COOLING LOCKOUT SHALL BE ENABLED WHEN THE OUTSIDE AIR IS LESS THAN 50° F (ADJUSTABLE).

DEHUMIDIFICATION

- STAGE 1
 - THE OUTSIDE AIR AND RECIRCULATION DAMPERS MODULATE TO MAINTAIN RETURN AIR DEW POINT SETPOINT OF 70.5° F (ADJUSTABLE).
 - WHEN THE OUTSIDE AIR DAMPER IS AT ITS MAXIMUM POSITION, THE RECIRCULATION AIR DAMPER SHALL BE AT ITS MINIMUM POSITION, AND THE EXHAUST FAN VARIABLE SPEED IS AT MAXIMUM EXHAUST (+/- SPACE PRESSURE OFFSET DESCRIBED ABOVE).
- STAGE 2
 - MAXIMUM OUTSIDE AIR SHALL BE MAINTAINED WHILE THE DIRECT EXPANSION COIL IS ENERGIZED FOR RETURN DEW POINT CONTROL (OUTSIDE AIR DAMPER IS AT ITS MAXIMUM POSITION AND THE RECIRCULATION AIR DAMPER IS IN ITS MINIMUM POSITION).
 - THE COOLING IS CONTROLLED TO MAINTAIN THE DIRECT EXPANSION COIL LEAVING AIR TEMPERATURE SETPOINT.
 - WHEN THE DIRECT EXPANSION COIL IS ACTIVATED FOR DEHUMIDIFICATION, THE UNIT CONTROLLER SHALL RESET THE DIRECT EXPANSION COIL LEAVING AIR TEMPERATURE SETPOINT UP AND DOWN BETWEEN THE VALUES BELOW IN ORDER TO MAINTAIN THE RETURN AIR DEW POINT SETPOINT.
 - DEHUMIDIFICATION COIL LEAVING MINIMUM SETPOINT 54.9° F (ADJUSTABLE).
 - DEHUMIDIFICATION COIL LEAVING MAXIMUM SETPOINT 70° F.
 - HOT GAS REHEAT SHALL BE CONTROLLED TO MAINTAIN THE SUPPLY TEMPERATURE SETPOINT BETWEEN THE COOLING MINIMUM AND HEATING MAXIMUM SUPPLY SETPOINTS.

IF HEATING IS ACTIVE AND UNABLE TO MAINTAIN THE UNIT SUPPLY TEMPERATURE SETPOINT, THE OUTSIDE DAMPER CONTROL LOOP SHALL BE LIMITED TO MINIMUM POSITION.

SUPPLY TEMPERATURE SETPOINT

- THE UNIT CONTROLLER SHALL RESET THE SUPPLY TEMPERATURE SETPOINT UP AND DOWN BETWEEN THE VALUES LISTED BELOW, IN ORDER TO MAINTAIN THE RETURN AIR TEMPERATURE SETPOINT.
 - OCCUPIED RETURN TEMPERATURE SETPOINT HEATING MODE - 86° F (ADJUSTABLE).
 - SUPPLY HEATING MINIMUM SETPOINT - 70° F (ADJUSTABLE).
 - SUPPLY HEATING MAXIMUM SETPOINT - 110° F (ADJUSTABLE).
 - OCCUPIED RETURN TEMPERATURE SETPOINT COOLING MODE - 86° F (ADJUSTABLE).
 - SUPPLY COOLING MINIMUM SETPOINT - EQUAL TO THE CURRENT RETURN AIR DEW POINT + 2° F.
 - SUPPLY COOLING MAXIMUM SETPOINT - 84° F.

PURGE MODE

- PURGE MODE SHALL BE CONTROLLED THROUGH THE BAS INTERFACE OR REMOTE SWITCH.
- PURGE MODE SHALL BE USED TO INDEX THE UNIT INTO MAXIMUM OUTSIDE AIR MODE FOR REMOVAL OF CHEMICAL OFF-GASSING DURING A "POOL-SHOCKING" PROCEDURE.
- A DIGITAL INPUT OR MANUAL OVERRIDE ON THE REMOTE USER TERMINAL CAN BE USED TO ENERGIZE/DE-ENERGIZE THE PURGE MODE.
- IN PURGE MODE THE OUTSIDE AND RECIRCULATION AIR DAMPERS SHALL MODULATE TO THEIR MAXIMUM OUTSIDE AIR POSITION.
- STAGE 1 DEHUMIDIFICATION SHALL BE OVERRIDDEN.
- STAGE 2 DEHUMIDIFICATION CONTROL PER SEQUENCE.
- COOLING CONTROL PER SEQUENCE.
- HEATING CONTROL PER SEQUENCE.
- THE PURGE MODE SHALL HAVE AN ADJUSTABLE "PURGE TIME LIMIT" (ADJUSTABLE ON A USER TERMINAL, FACTORY SET AT 180 MINUTES).

NON-SHUTDOWN SAFETIES

AIR TO AIR HEAT EXCHANGER DEFROST

THE OUTSIDE AIR HEAT EXCHANGER FACE & BYPASS DAMPERS SHALL MODULATE (BYPASSING OUTSIDE AIR AROUND THE HEAT EXCHANGER) TO MAINTAIN A LEAVING EXHAUST AIR TEMPERATURE ABOVE THE DEFROST SETPOINT OF 38° F (ADJUSTABLE).

DIRTY FILTER SWITCHES

IF A FILTER DIFFERENTIAL PRESSURE SWITCH RISES ABOVE THE ADJUSTABLE SETPOINT OF THE SWITCH, THE DIFFERENTIAL PRESSURE SWITCH SHALL SIGNAL THE UNIT CONTROLLER TO ACTIVATE AND ALARM.

UNIT SHUTDOWN SAFETIES

SUPPLY TEMPERATURE LOW LIMIT

IF THE UNIT SUPPLY TEMPERATURE DROPS BELOW 35° F (ADJUSTABLE), THE UNIT CONTROLLER SHALL SHUT DOWN THE UNIT AFTER AN ADJUSTABLE TIME DELAY. AN ALARM SHALL BE GENERATED AT THE BAS.

SUPPLY TEMPERATURE HIGH LIMIT

IF THE UNIT SUPPLY TEMPERATURE RISES ABOVE 120° F (ADJUSTABLE), THE UNIT CONTROLLER SHALL SHUT DOWN THE UNIT AFTER AN ADJUSTABLE TIME DELAY. AN ALARM SHALL BE GENERATED AT THE BAS.

PHASE/VOLTAGE MONITOR

A PHASE/VOLTAGE PROTECTION RELAY SHALL BE PROVIDED FOR THE UNIT, UPON SENSING A LOSS OF PHASE OR VOLTAGE, THE UNIT SHALL IMMEDIATELY SHUT DOWN. AN ALARM SHALL BE GENERATED AT THE BAS.

SMOKE DETECTORS

UPON DETECTION OF SMOKE THE FANS SHALL BE DE-ENERGIZED, CLOSE OUTSIDE AIR DAMPER, AND SIGNAL ALARM LOCALLY AND AT FIRE ALARM PANEL.

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OAK BROOK PARK DISTRICT - FAM. REC. CENTER HVAC RENO.

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01/17/23	BRG DOCUMENTS

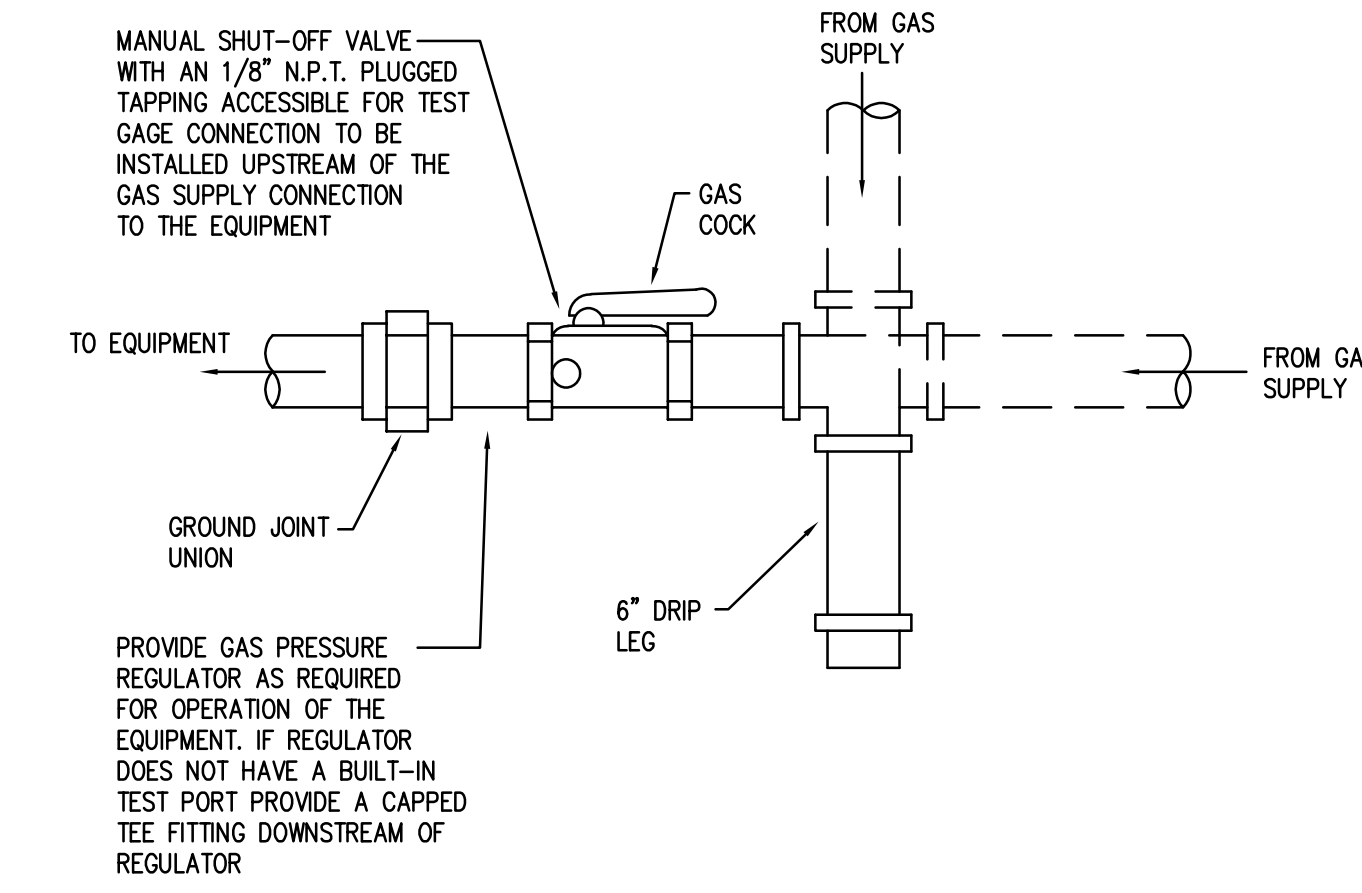
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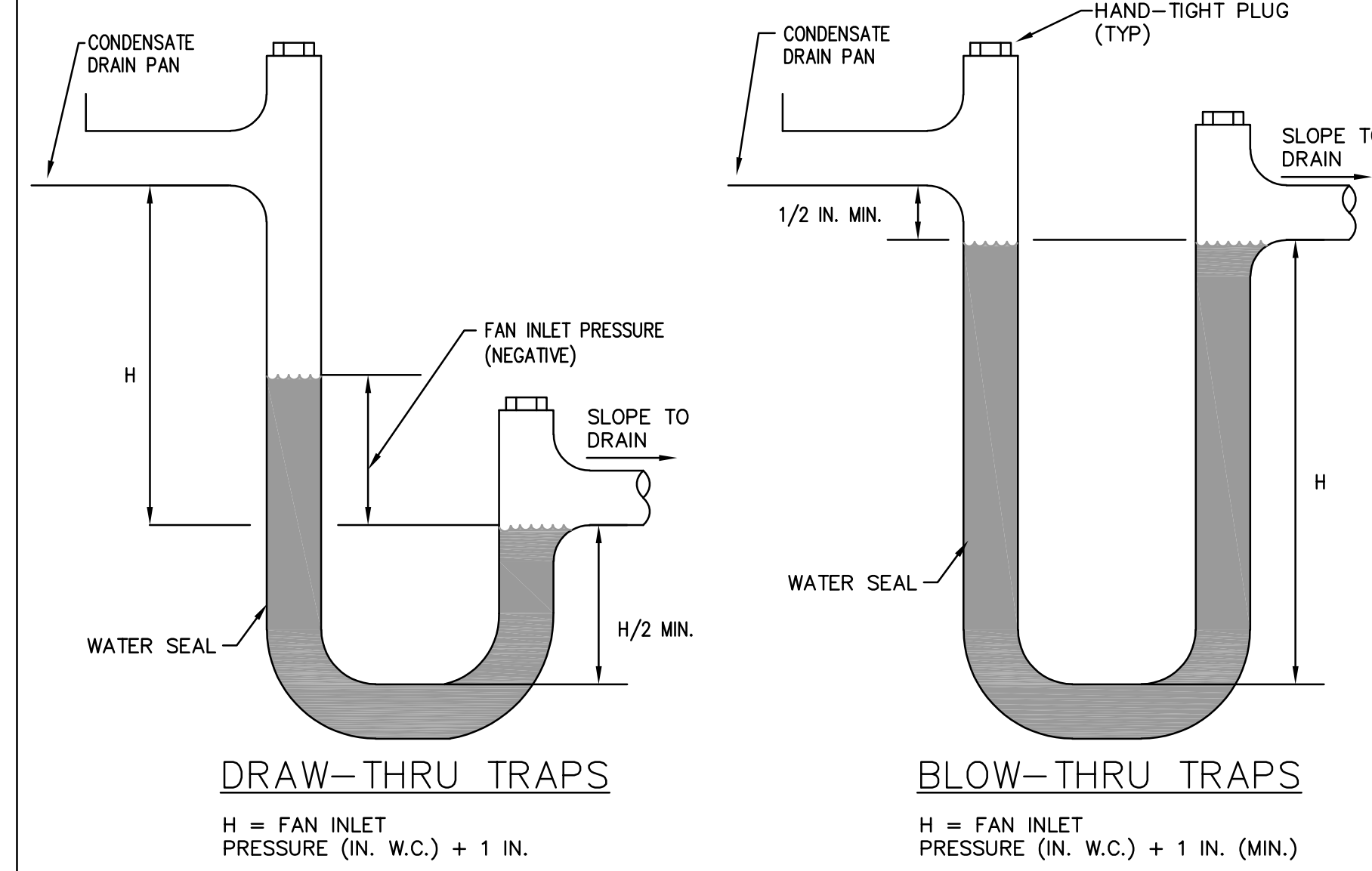
TEMPERATURE CONTROLS

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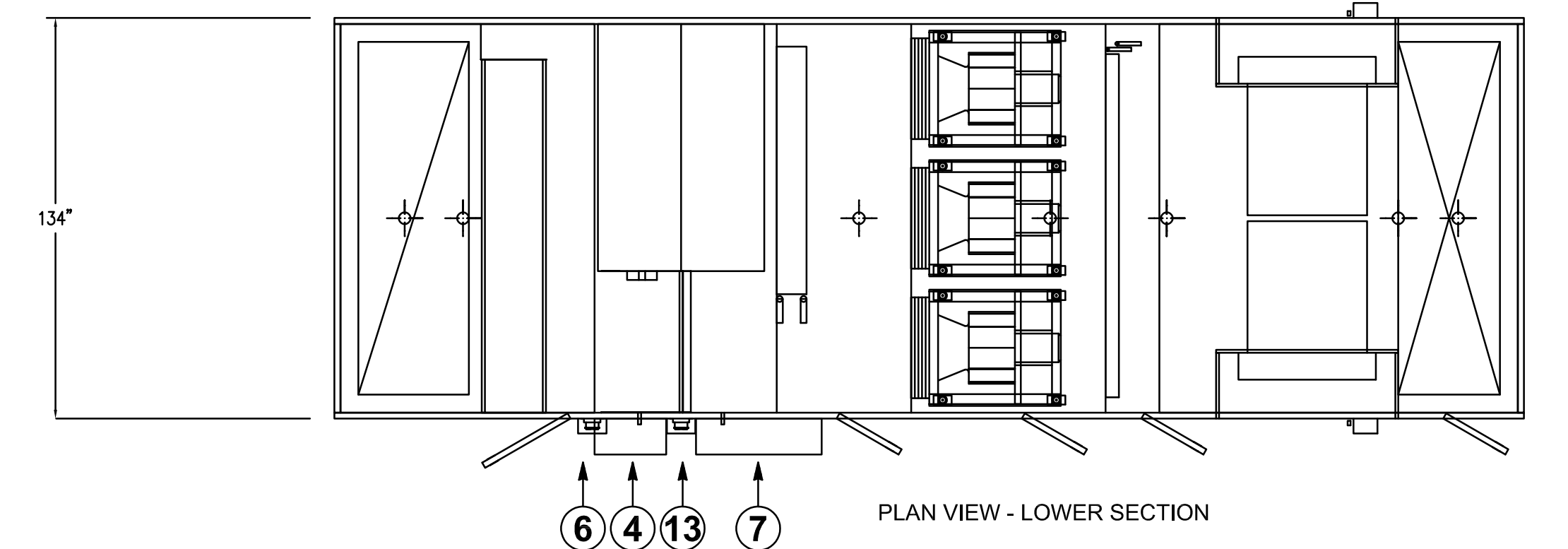
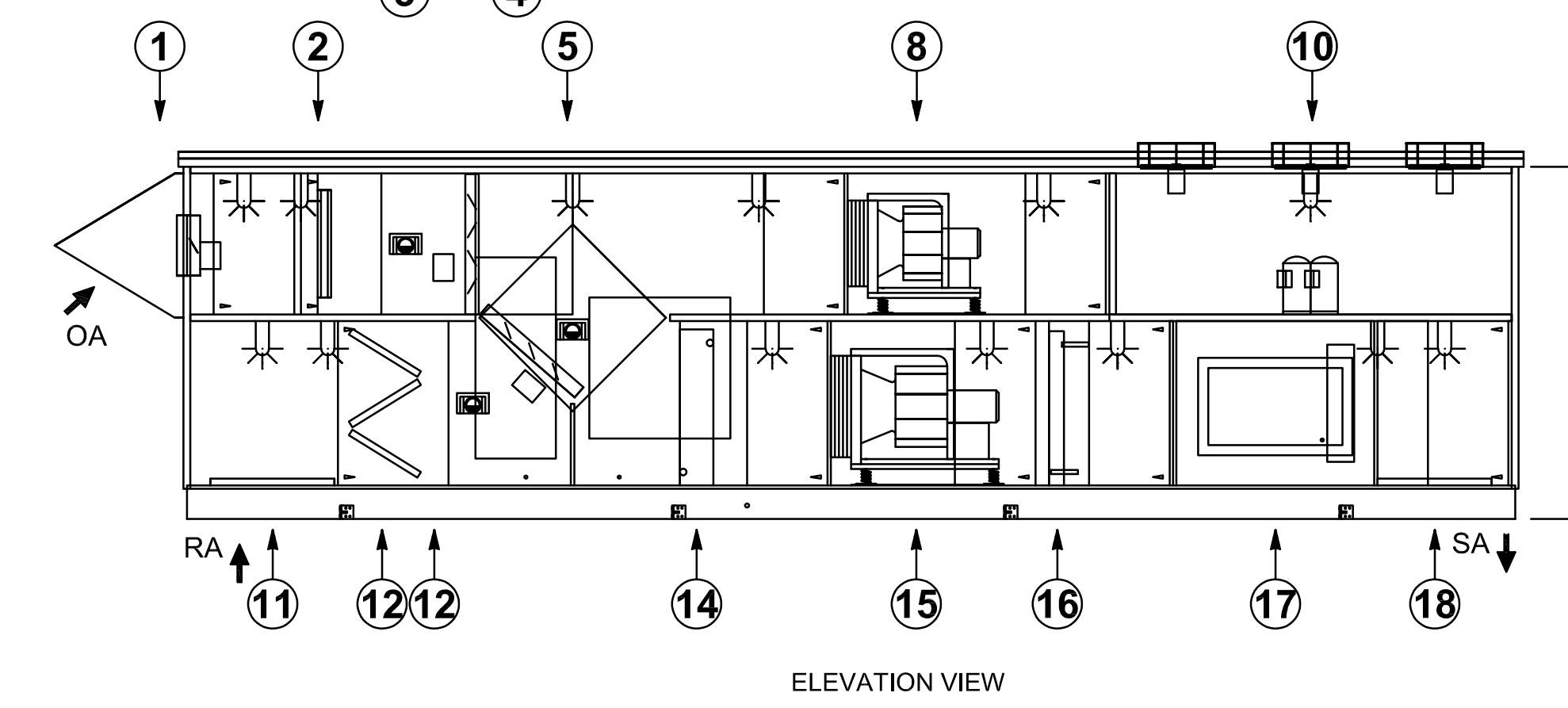
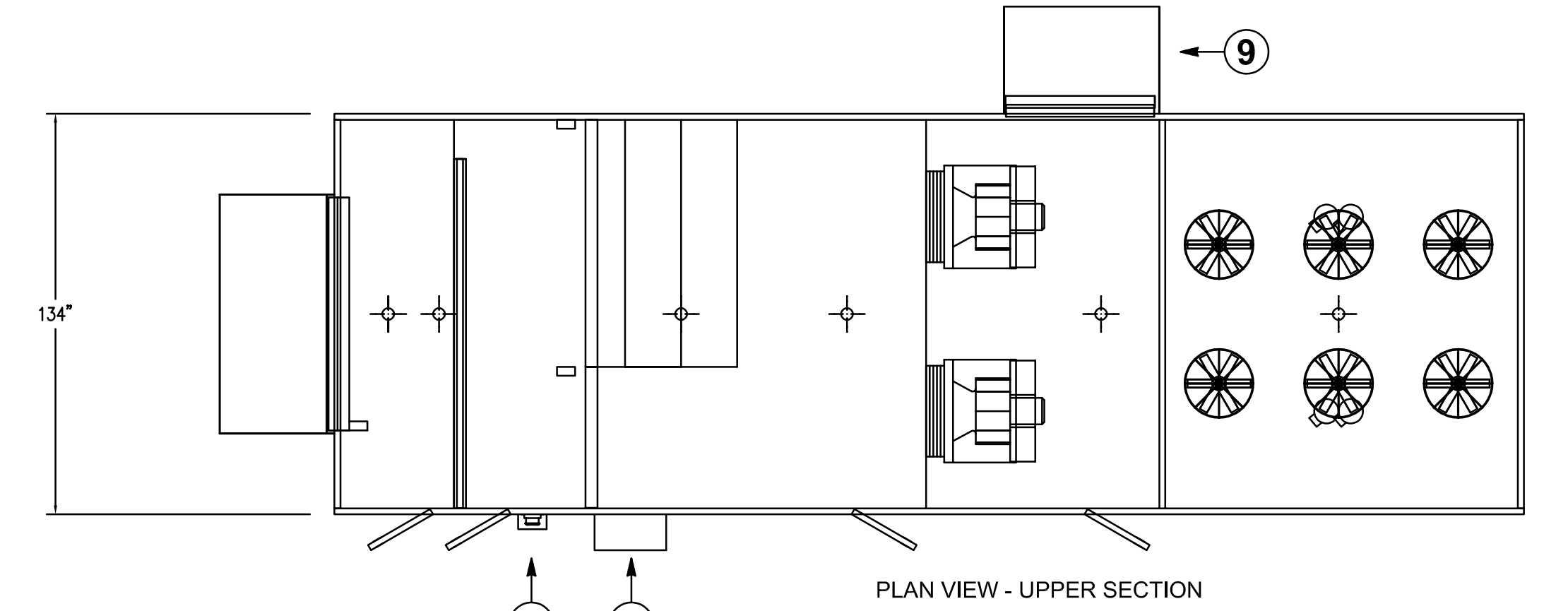
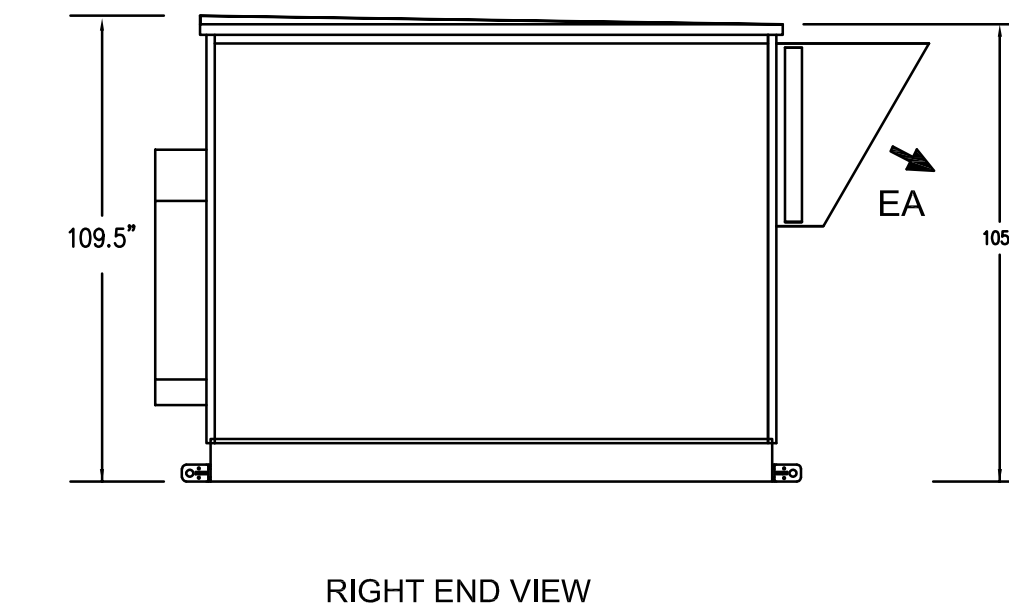


GAS CONNECTION TO EQUIPMENT DETAIL
SCALE: NTS



CONDENSATE TRAP DETAILS
SCALE: NTS

- COMPONENTS**
- 1 - OUTSIDE AIR INLET HOOD W/DAMPER
 - 2 - 2" MERV 8 FILTERS
 - 3 - MAGNEHELIC GAUGE
 - 4 - ELECTRICAL ENCLOSURE
 - 5 - PLATE HEAT EXCHANGER (1.00" MPT DRAIN)
 - 6 - MAGNEHELIC GAUGE
 - 7 - VFD ENCLOSURE
 - 8 - EXHAUST FAN (TYP OF 2)
 - 9 - EXHAUST AIR OUTLET HOOD W/DAMPER
 - 10 - AIR-COOLED REFRIGERATION
 - 11 - RETURN AIR INLET (37.00" x 118.00")
 - 12 - 2" ALUMINUM FILTERS
 - 13 - MAGNEHELIC GAUGE
 - 14 - DX COIL (1.25" MPT DRAIN)
 - 15 - SUPPLY FAN (TYP OF 3)
 - 16 - HOT GAS REHEAT
 - 17 - INDIRECT FIRED FURNACE (TYP OF 2)
 - 18 - SUPPLY AIR OUTLET (34.00" x 118.00")



DHU CONFIGURATION DETAILS
SCALE: NTS

DEHUMIDIFIER UNIT SCHEDULE

MARK	AIR FLOW CONDITIONS						SUPPLY FAN				EXHAUST FAN							
	SUPPLY AIR (CFM)	SUPPLY AIR ESP (IN.WC)	RETURN AIR (CFM)	RETURN AIR ESP (IN.WC)	EXHAUST AIR (CFM)	EXHAUST AIR ESP (IN.WC)	QUANTITY	TYPE	SUPPLY AIR (CFM)	TOTAL STATIC PRESS (IN.WC)	HP	RPM	QUANTITY	TYPE	EXHAUST AIR (CFM)	TOTAL STATIC PRESS (IN.WC)	HP	RPM
DHU-1	33,000	2.5	21,500	1.5	14,800	1.5	3	PLENUM	11,000 EA	4.94	15 EA	1879	2	PLENUM	7,400 EA	3.16	7.5 EA	1694

TYPE	QUANTITY	MODEL	AIR - AIR HEAT EXCHANGER						MIXED AIR CONDITIONS							
			SUMMER EAT (db / wb °F)	SUMMER RA (db / wb °F)	SUMMER LAT (db / wb °F)	WINTER OA (db / wb °F)	WINTER RA (db / wb °F)	WINTER LAT (db / wb °F)	FROST CONTROL	RETURN AIR (CFM)	RA TEMP (db / wb °F)	DX INTO XGR AIR (CFM)	DX INTO XGR (db / wb °F)	MIXED AIR (CFM)	MA TEMP (db / wb °F)	
FIXED PLATE	1	H-1-40C-2100	87.2 / 77.4	86.0 / 60	85.5 / 77.2	-8.0 / -9.0	86.0 / 48.1	56.6 / 37.1	BYPASS	SUMMER	21,500	86.0 / 74.9	11,500	54.9 / 54.8	33,300	74.1 / 68.6
										WINTER	24,600	86.0 / 70.9	8,400	56.6 / 37.1	33,300	77.9 / 64.1

DX COIL				AIR COOLED CONDENSER				HEATING									
AIR FLOW (CFM)	ENT AIR TEMP (db / wb °F)	LVG AIR TEMP (db / wb °F)	SENS CAP (MBH)	TOTAL CAP (MBH)	OAT TEMP (db °F)	CAPACITY (TONS)	NO. COMPRESSOR	CIRCUITS	TYPE	AIR FLOW (CFM)	ENT AIR TEMP (db °F)	LVT AIR TEMP (db °F)	TOTAL GAS INPUT (MBH)	TOTAL GAS OUTPUT (MBH)	NO. BURNERS	TURNDOWN	GAS PRESS (IN WC)
11,500	86.5 / 77.2	54.9 / 54.8	401.3	916.8	95	19.1 - 76.4	4	2	FIXED SPEED	33,300	72.3	99.2	2 @ 600	2 @ 480	2	10 : 1	6" - 14"

HOT GAS REHEAT			ELECTRICAL				MODEL		
AIR FLOW (CFM)	ENT AIR TEMP (db / wb °F)	LVG AIR TEMP (db / wb °F)	CAPACITY (MBH)	COIL (CIRCUIT ROWS/FPI)	VPH/Hz	FLA			
33,000	76.1 / 69.5	84.7 / 72.0	307	2 / 1 / 12	460/3/60	197	233.5	250	NDHU-OU-PL-33000-AC-HG-IF-460

NOTES

1. MODEL BASED ON INNOVENT.
2. DIRECT DRIVE FANS WITH ONE VFD/FAN BANK.
3. HEAT EXCHANGER INCLUDES ONE 2-STAGE GAS CONTROL VALVE AND ONE 5:1 MODULATING GAS CONTROL VALVE.

ISSUED

01/17/23	REV	DOCUMENTS
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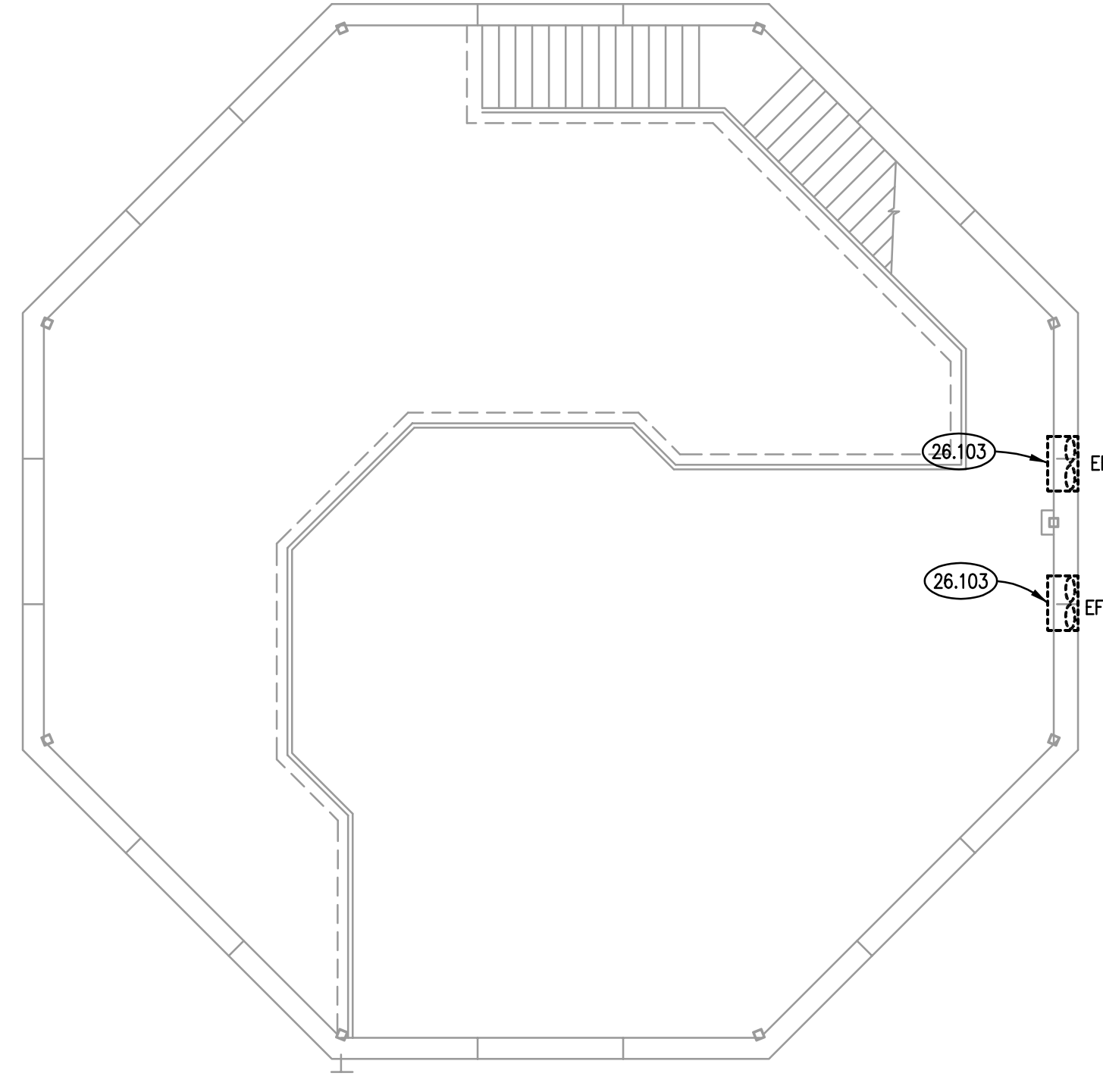
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MECHANICAL DETAILS

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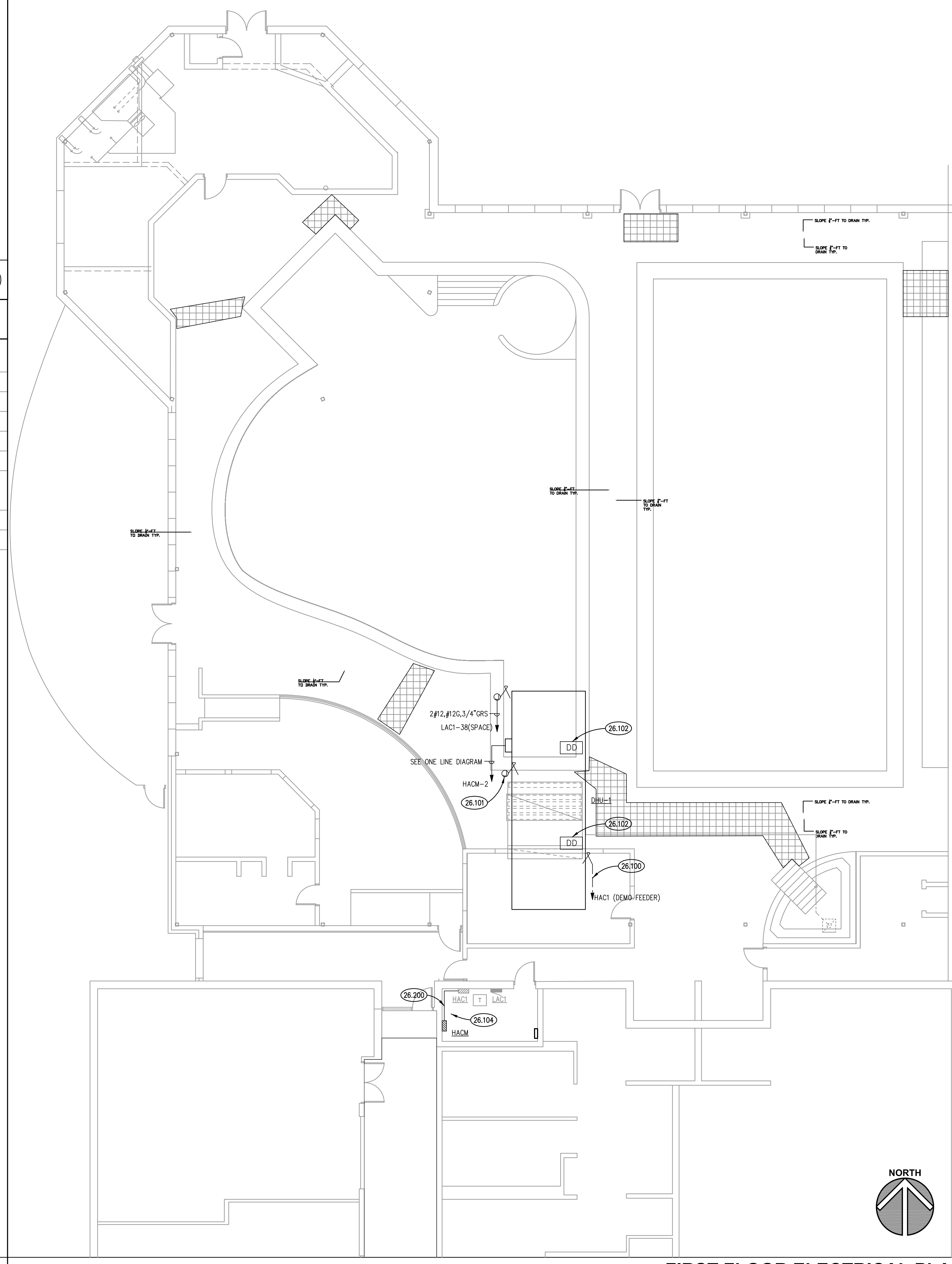
M420



QUEING DECK FLOOR PLAN
SCALE: 1/8" = 1'-0" **2**

ELECTRICAL SYMBOLS LIST

SYMBOL	DESCRIPTION
DD	DUCT DETECTOR
○	JUNCTION BOX
→	CONDUIT HOMERUN TO PANEL/SWITCHBOARD.
SW	480 VOLT SWITCHBOARD
T	DRY TYPE TRANSFORMER
SWB	208 VOLT PANELBOARD, P=PILOT LIGHT, K=KEYED SW., LV=LOW VOLTAGE
SWB	FLEXIBLE CONNECTION
CB	3=3 WAY DIMMER
CB	CIRCUIT BREAKER
100/3AT 200/3AF 16.01	KEYNOTE IDENTIFICATION



FIRST FLOOR ELECTRICAL PLAN
SCALE: 1/8" = 1'-0" **1**

KEYNOTES

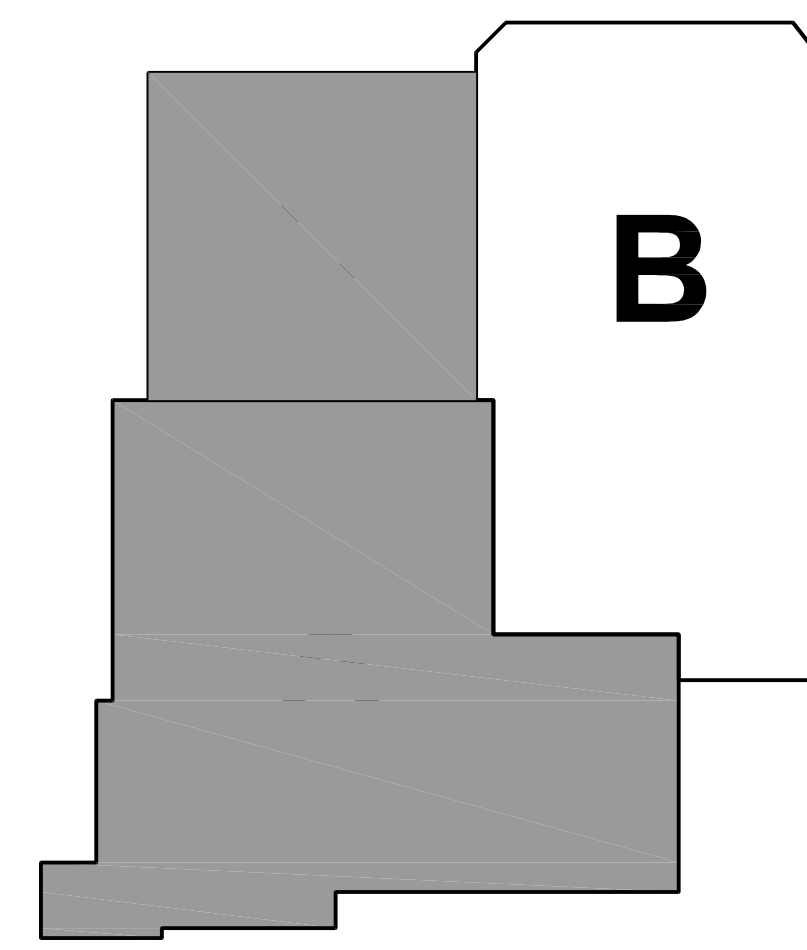
KEYNOTES ARE TYPICALLY NOT DUPLICATED WITHIN A GIVEN DETAIL. AN UN-KEYNOTED ITEM IN A DETAIL IS THE SAME AS A KEYNOTED ITEM HAVING THE SAME APPEARANCE WITHIN THE SAME DETAIL.

- 26.100 DEMOLISH ELECTRICAL FEEDER TO MECHANICAL EQUIPMENT INDICATED TO BE REMOVED.
- 26.101 PROTECT EXISTING 120 VOLT BRANCH CIRCUITS ROUTED NEAR MECHANICAL EQUIPMENT. DO NOT DEMOLISH OR DAMAGE.
- 26.102 REMOVE DUCT DETECTORS AND PROTECT SLC AND FSCF WIRING. PROVIDE NEW DUCT DETECTORS (SUPPLY AND RETURN) AND FAN SHUT DOWN RELAY.
- 26.103 DEMOLISH BRANCH CIRCUIT TO EXHAUST FAN.
- 26.104 MODIFY EXISTING FEEDER AT SWITCHBOARD HAC1 TO TERMINATE AT NEW SWITCHBOARD HACM. DISASSEMBLE AND RECONSTRUCT CONDUIT/CONDUCTORS. AT CONTRACTORS OPTION: PROVIDE PULL BOX, CONDUIT BODY OR 90 DEGREE BEND. SEE ONE LINE DIAGRAM.
- 26.200 PROVIDE NEW FEEDER TO EXISTING SWITCHBOARD HAC1. SEE ONE LINE DIAGRAM.

MECHANICAL GENERAL NOTES

- REFER TO DRAWING G100 FOR PROJECT GENERAL NOTES.
- ALL PIPING, DUCTWORK AND RACEWAYS ARE SHOWN DIAGRAMMATICALLY AND DO NOT SHOW ALL REQUIRED FITTINGS, OFFSETS, DROPS AND RISES. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL MATERIAL AND LABOR FOR A COMPLETE AND WORKING SYSTEM. COORDINATE WITH OTHER TRADES FOR SPACE AVAILABLE AND RELATIVE LOCATIONS OF EQUIPMENT, PIPING, DUCTWORK, ETC.
- EXISTING PIPING, DUCTWORK AND RACEWAYS INDICATED ON THESE PLANS SHALL BE FIELD VERIFIED FOR EXACT LOCATIONS, QUANTITY AND SIZES.
- ALL TAPES AND MASTICS USED TO SEAL DUCTWORK LISTED AND LABELED IN ACCORDANCE WITH UL 181A SHALL BE MARKED ACCORDINGLY. ALL TAPES AND MASTICS USED TO SEAL FLEXIBLE DUCTS AND AIR CONNECTORS SHALL COMPLY WITH UL 181B AND MARKED ACCORDINGLY.
- SPACE ALLOCATION, COORDINATION WITH ELECTRICAL, ARCHITECTURAL & OTHER MECHANICAL COMPONENTS HAVE BEEN MADE WITH RESPECT TO ALL EQUIPMENT SCHEDULED ON THESE DRAWINGS AND IN THE SPECIFICATIONS OF THE FIRST NAMED MANUFACTURER ONLY. OTHER MANUFACTURERS ARE ACCEPTABLE PROVIDED THEY MEET PERFORMANCE REQUIREMENTS AND AFOREMENTIONED COORDINATION.
- DO NOT CUT THROUGH THE STRUCTURAL ELEMENTS WHEN INSTALLING OPENINGS REQUIRED FOR ALL DUCTWORK, PIPING, CONDUITS OR OTHER WORK. CONTRACTOR CUTTING THROUGH OR OTHERWISE DAMAGING THESE ELEMENTS WILL BE RESPONSIBLE FOR ALL ASSOCIATED ENGINEERING FEES AND SUBSEQUENT RETRO-FIT/REINFORCING DEMED NECESSARY TO REINSTATE THE CONTINUITY OF THE DISRUPTED ELEMENTS.
- ALL ROOFTOP EQUIPMENT (ARCHITECTURAL, MECHANICAL, ELECTRICAL, ETC.) AND THEIR CORRESPONDING CURBS TO BE ATTACHED TO THE STRUCTURAL FRAMING AS REQUIRED TO RESIST THE WIND AND SEISMIC FORCES IDENTIFIED ON SHEET S010. ANCHORAGE TO METAL DECKING IS NOT ACCEPTABLE. CONTRACTOR/MANUFACTURER TO CONSULT AN INDEPENDENT STRUCTURAL ENGINEER TO REVIEW, DESIGN AND DETAIL THE REQUIRED CONNECTIONS.
- OBTAIN AND PAY ALL COSTS FOR PERMITS, LICENSES, CERTIFICATE FILING AND ALL INSPECTIONS BY AUTHORITIES HAVING JURISDICTION.

KEY PLAN



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OAK BROOK PARK DISTRICT
1450 FOREST GATE ROAD
OAK BROOK, ILLINOIS 60523

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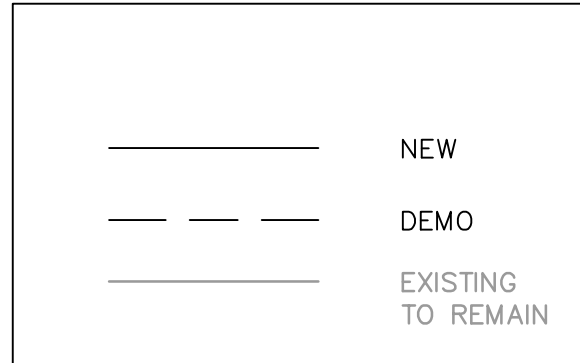
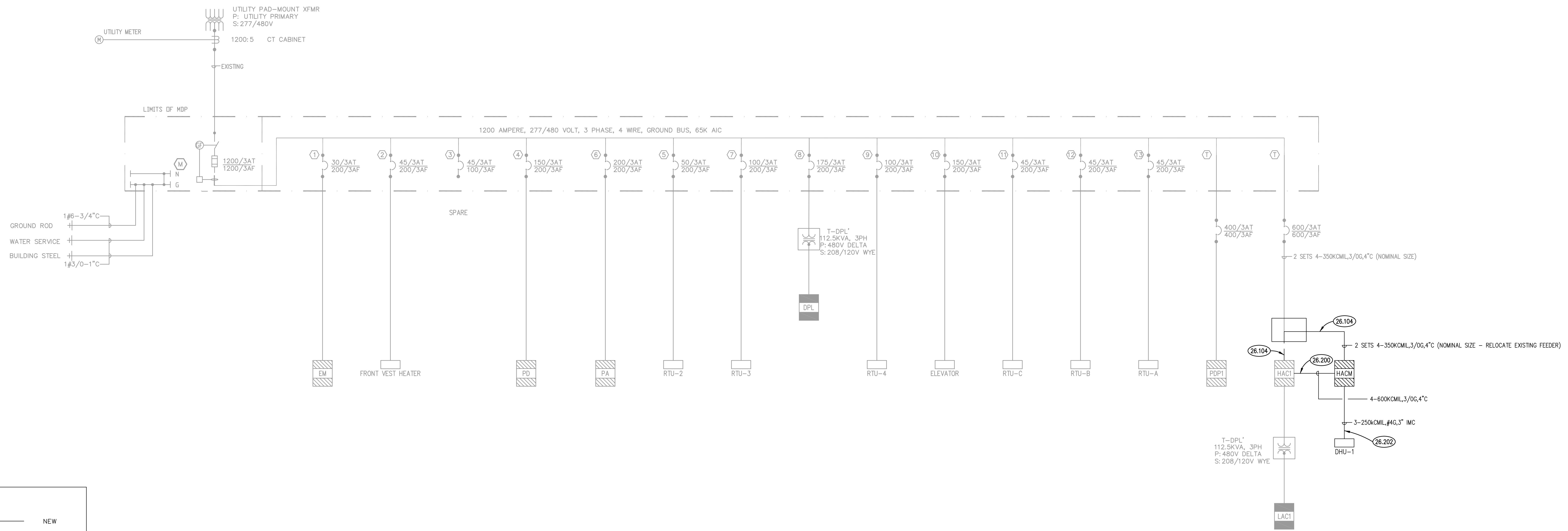
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SHEET TITLE

FIRST FLOOR PLAN
ELECTRICAL PLAN

SHEET NUMBER

E310



ONE LINE RISER DIAGRAM ①
N.T.S.

KEYNOTES KEYNOTES ARE NOT ALWAYS REPEATED ACROSS ALL DRAWINGS ON THIS SHEET. AN UN-KEYNOTED ITEM ON THIS SHEET IS THE SAME AS A KEYNOTED ITEM ON THIS SHEET HAVING THE SAME GRAPHIC APPEARANCE.

- 26.104 MODIFY EXISTING FEEDER AT SWITCHBOARD HAC1 TO TERMINATE AT NEW SWITCHBOARD HACM. DISASSEMBLE AND RECONSTRUCT CONDUIT/CONDUCTORS. AT CONTRACTORS OPTION: PROVIDE PULL BOX, CONDUIT BODY OR 90 DEGREE BEND. SEE ONE LINE DIAGRAM.
- 26.200 PROVIDE NEW FEEDER TO EXISTING SWITCHBOARD HAC1. SEE ONE LINE DIAGRAM.
- 26.202 PROVIDE NEW FEEDER TO MECHANICAL UNIT DHU-1. REFER TO SHOP DRAWINGS FOR EXACT LOCATION.

HACM							
600 AMPERE, 277/480 VOLT, 3 PHASE, 4 WIRE, WYE, CIRCUIT BREAKER STYLE SWITCHBOARD, NEMA1 ENCLOSURE, MAIN LUG ONLY							
CKT	TRIP	DESCRIPTION	FRAME	A	B	C	TOTAL
1	400/3	PANEL HAC1	400/3	84583	84583	84583	253749
2	250/3	HVAC: DHU-1	400/3	61078	61078	61078	183234
3	-	SPACE	-	0	0	0	0
4	-	SPACE	-	0	0	0	0
NEW CONNECTED VA:				145661	145661	145661	436983
NEW CONNECTED AMPS:				526	526	526	1213
NEW DEMAND VA:							436983
NEW DEMAND AMPS:							526

PANEL SCHEDULE ②
N.T.S.

ISSUED

01/17/23	BRG DOCUMENTS
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SHEET TITLE

ELECTRICAL ONE LINE RISER DIAGRAM

SHEET NUMBER

E600

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