

# MCHENRY COUNTY COLLEGE

## LIEBERT SYSTEM REPLACEMENT

---

8900 US HWY 14  
CRYSTAL LAKE, IL 60012

DKA PROJECT NO: 24-014

ISSUED FOR BID - NOT FOR CONSTRUCTION

4/25/2024



ARCHITECT:

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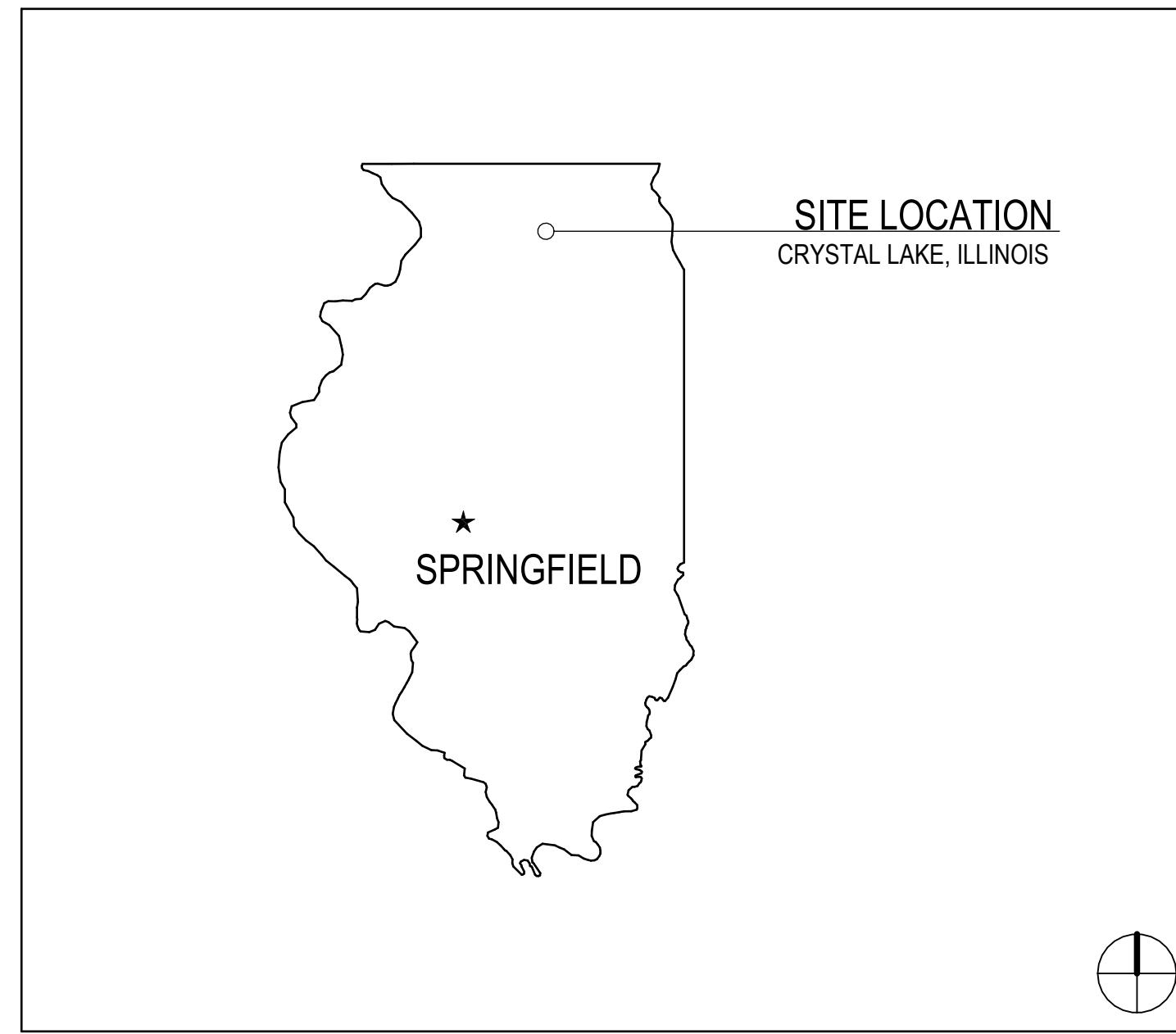
MEP-FP ENGINEER

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1216 TOWER ROAD SCHAUMBURG,  
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**ABBREVIATIONS**

AP ACCESS PANEL	HDW HARDWARE	TEL TELEPHONE
ACOUST ACUSTICAL	HDWD HARDWOOD	TV TELEVISION
ACT ACUSTICAL CEILING TILE	HDR HEADER	TRZ TERRAZZO
ADJ ADJACENT	HTG HEATING	TB TILE BASE
A.F.F. ABOVE FINISH FLOOR	HVAC HEATING, VENTILATING, AIR CONDITIONING	THK THICK
AGGR AGGREGATE	HT HEIGHT	T.O.C. TOP OF CURB
A/C AIR CONDITIONING	HC HOLLOW CORE	TOP TOP OF PAVEMENT
ALT ALTERNATE	HM HOLLOW METAL	TOW TOP OF WALL
ALUM ALUMINUM	HMF HOLLOW METAL FRAME	T&G TONGUE AND GROOVE
I ANGLE	HORZ HORIZONTAL	TYP TYPICAL
APPD APPROVED	HB HOSE BIB	
APPROX APPROXIMATE	HR HOUR	UNF UNFINISHED
ARCH ARCHITECTURAL OR ARCHITECT		U.N.O. UNLESS NOTED OTHERWISE
AD AREA DRAIN	INC INCLUDE	UR URINAL
ASB ASBESTOS	I.D. INSIDE DIAMETER	
ASPH ASPHALT	INSUL INSULATION	VB VINYL BASE
AV AUDIO VISUAL	INTR INTERIOR	VERT VERTICAL
	INV INVERT	VEST VESTIBULE
		VCT VINYL COMPOSITION TILE
		VW VINYL WALLCOVERING
BSMT BASEMENT	JAN JANITOR	WSCT WAINSCOT
BRG BEARING	JT JOINT	WC WATER CLOSET
BM BEAM	KIT KITCHEN	WLK WALK-OFF MAT
BTW BETWEEN	LAM LAMINATE	WR WATER RESISTANT
BITUM BITUMINOUS	LAV LAVATORY	WT WALL TILE OR WEIGHT
BLK BLOCK	LH LEFT HAND	LT LIGHT
BLKG BLOCKING	LGTH LENGTH	W WEST
BD BOARD	LT LIGHT	W WIDE FLANGE "W16x21"
BRK BRICK	LWC LIGHT WEIGHT CONCRETE	W WIDTH
BLDG BUILDING	LTL LINTEL	W/ WITH
	LN LINOLEUM	W/O WITHOUT
CAB CABINET	LL LIVE LOAD	WD WOOD
CIP CAST IN PLACE		WDP WOOD PANEL
CIPC CAST IN PLACE CONCRETE		X EXISTING
CI CURB INLET	MH MANHOLE	
CB CATCH BASIN	MFR MANUFACTURER	
CLG CEILING	MAS MASONRY	
CTR CENTER	MO MASONRY OPENING	
CJ CONTROL JOINT	MTL METAL	
CL CENTER LINE	MAX MAXIMUM	
CPT CARPET	MECH MECHANICAL	
CT CERAMIC TILE	MTC MECHANICAL TRADES CONTRACTOR	
CLR CLEAR	MEMB MEMBRANE	
CLO CLOSET	MT MARBLE TILE	
COL COLUMN	MIN MINIMUM	
CONC CONCRETE	MISC MISCELLANEOUS	
CONN CONNECTION	MTD MOUNDED	
CONST CONSTRUCTION	MTG MOUNTING	
CM CONSTRUCTION MANAGER	MUL MULLION	
CONT CONTINUOUS OR CONTINUE		
CONTR CONTRACTOR	NOM NOMINAL	
CK CORK	N NORTH	
CORR CORRIDOR	N.I.C. NOT IN CONTRACT	
CNSK COUNTERSUNK	N.T.S. NOT TO SCALE	
CRS COURSE	NO OR # NUMBER	
DEMO DEMOLISH OR DEMOLITION	OBS OBSCURE	
DEPT DEPARTMENT	OFF OFFICE	
DL DEAD LOAD	O.C. ON CENTER	
DIA DIAMETER	OPNG OPENING	
DIM DIMENSION	OPP OPPOSITE	
DISP DISPENSER	OSB ORIENTED STRAND BOARD	
DIV DIVISION	O.D. OUTSIDE DIAMETER	
DR DOOR	OA OVERALL	
DO DOOR OPENING	OFD OVERFLOW DRAIN	
DBL DOUBLE		
DS DOWNSPOUT	PT PAINT	
DRW DRAWER	PTD PAINTED	
DWG DRAWING	PR PAIR	
DF DRINKING FOUNTAIN	PNL PANEL	
DS DRY STANDPIPE	PBD PARTICLE BOARD	
DWT DETECTABLE WARNING TILE	PTN PARTITION	
	PLAS PLASTIC	
E EAST	P-LAM PLASTIC LAMINATE	
EA EACH	PL PLATE	
EIFS EXTERIOR INSULATION FINISH SYSTEM	PTC PLUMBING TRADES CONTRACTOR	
ELEC ELECTRICAL	PLYWD PLYWOOD	
ETC ELECTRICAL TRADES CONTRACTOR	PSI POUNDS PER SQUARE INCH	
EWG ELECTRICAL WATER COOLER	PC PRECAST	
EP ELECTRICAL PANEL BOARD	PCC PRECAST CONCRETE	
EL ELEVATION		
ELEV ELEVATION	QT QUARRY TILE	
ELVTR ELEVATOR	R RADIUS	
ENCL ENCLOSURE	RWL RAIN WATER LEADER	
EMER EMERGENCY	RFRG REFRIGERATOR	
EP PT EPOXY PAINT	RGTR REGISTER	
EPF EPOXY FLOORING	REINF REINFORCED	
EQ EQUAL	REQD REQUIRED	
EQPMT EQUIPMENT	RES RESILIENT	
EXSTG EXISTING	RA RETURN AIR	
EXP EXPANSION	RAG RETURN AIR GRILLE	
EXP JT EXPANSION JOINT	RH RIGHT HAND	
EXPD EXPOSED	ROW RIGHT OF WAY	
EXTR EXTERIOR	R RISER	
	RD ROOF DRAIN	
	RM ROOM	
	R.O. ROUGH OPENING	
	RB RUBBER BASE	
FOC FACE OF CONCRETE	SECT SECTION	
FOF FACE OF FINISH	SK SINK	
FOS FACE OF STUD	SCHED SCHEDULE	
FR FIBERGLASS REINFORCED PANEL	SHTG SHEATHING	
FIN FINISH OR FINISHED	SHT SHEET	
FA FIRE ALARM	SV SHEET VINYL	
FE FIRE EXTINGUISHER	SHWR SHOWER	
FEC FIRE EXTINGUISHER CABINET	SIM SIMILAR	
FHC FIRE HOSE CABINET	SC SEALED CONCRETE	
FRRF FIREPROOF	SPM SINGLE PLY MEMBRANE	
FB FLAT BAR STOCK	S SOUTH	
FL FLOOR	SFRM SPRAY APPLIED FIRE RESISTIVE MATERIAL	
FD FLOOR DRAIN	SPEC SPECIFICATION	
FLUOR FLUORESCENT	SQ SQUARE	
FT FOOT OR FEET	S.S. STAINLESS STEEL	
FTG FOOTING	STD STANDARD	
FDN FOUNDATION	STA STATION	
FRM FRAMING	STL STEEL	
FRMG FRAMING	STOR STORAGE	
FS FULL SIZE	STRUCT STRUCTURE OR STRUCTURAL	
FURR FURRING	SUSP SUSPENDED	
FUTR FUTURE	SAT SUSPENDED ACOUSTICAL TILE	
FW FABRIC WALLCOVERING	SYM SYMMETRICAL	
GA GAUGE		
GALV GALVANIZED		
GEN GENERAL		
GC GENERAL CONTRACTOR		
GTC GENERAL TRADES CONTRACTOR		
GL GLASS OR GLAZING		
GD GRADE		
GND GROUND		
GYP BD GYPSUM BOARD		

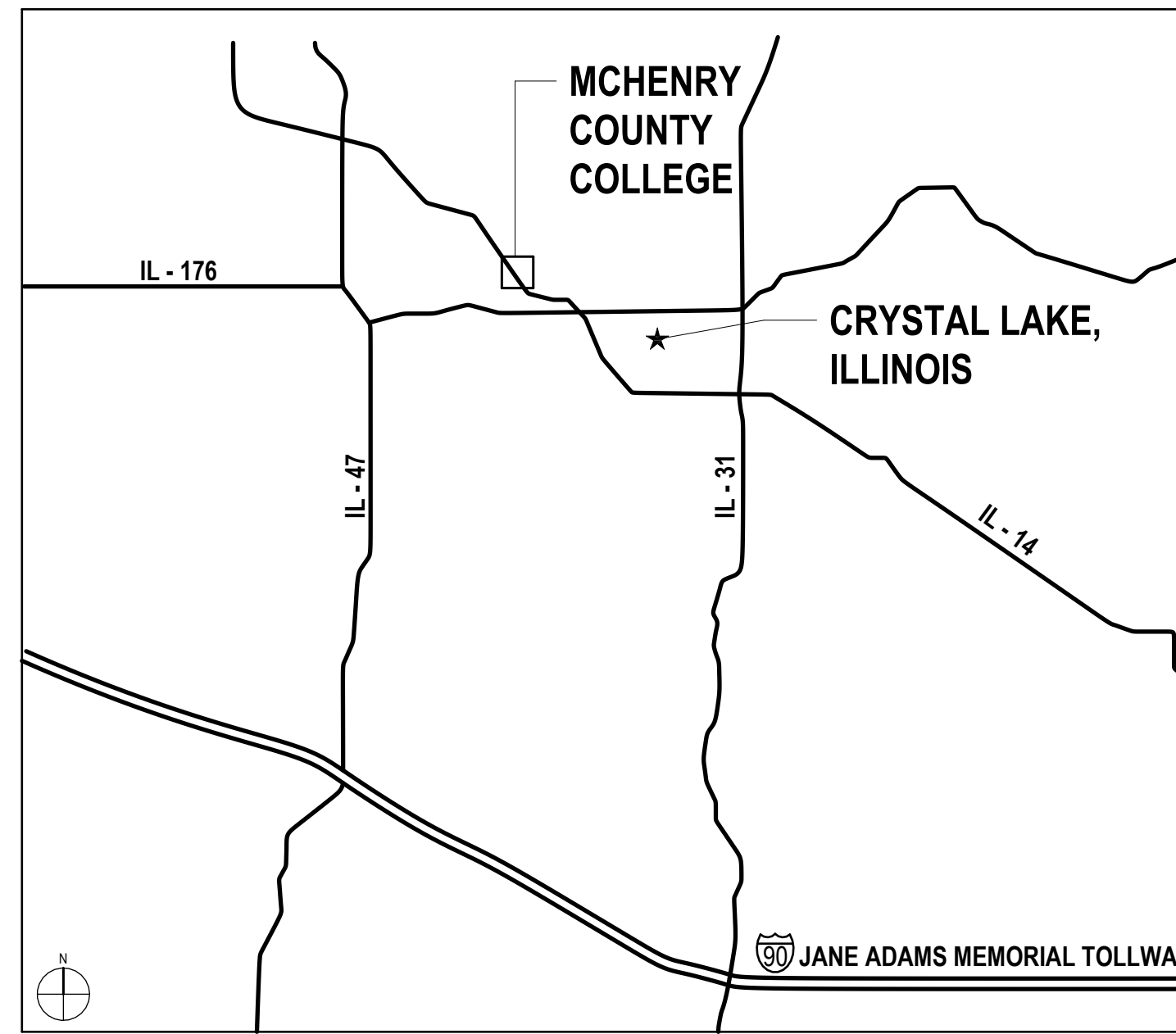
**STATE LOCATION MAP**



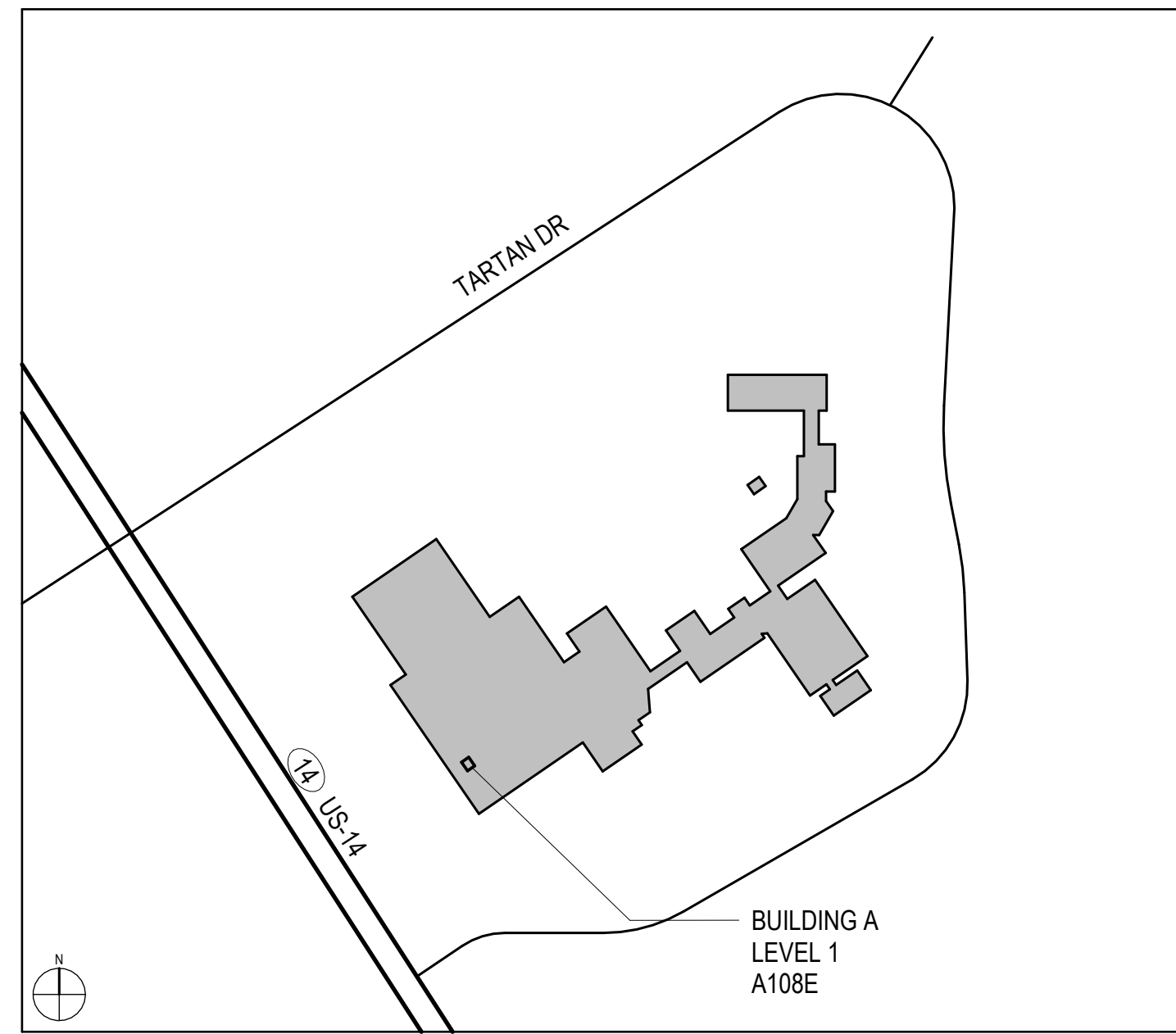
**SHEET INDEX**

GENERAL	G1.00 SHEET INDEX, ABBREVIATIONS, SYMBOLS & NOTES
ARCHITECTURAL	
AD1.10	OVERALL PLANS, DEMO PLAN, AND DEMO RCP
A1.10	FLOOR PLAN AND REFLECTED CEILING PLAN
MECHANICAL	
ME1.00	MEP COORDINATION NOTES AND DETAILS
HVD1.00	DEMOLITION HVAC PLANS
HV1.00	HVAC PLANS
HV2.00	HVAC SCHEDULES, DETAILS, AND NOTES
ELECTRICAL	
ED1.01	ELECTRICAL DEMOLITION PLANS
E1.00	OVERALL ELECTRICAL PLANS
E1.01	ELECTRICAL PLAN
E2.00	ELECTRICAL SYMBOL LIST, NOTES, AND SCHEDULES
E3.00	ELECTRICAL DETAILS, NOTES, AND SPECIFICATIONS

**AREA MAP**



**CAMPUS MAP**



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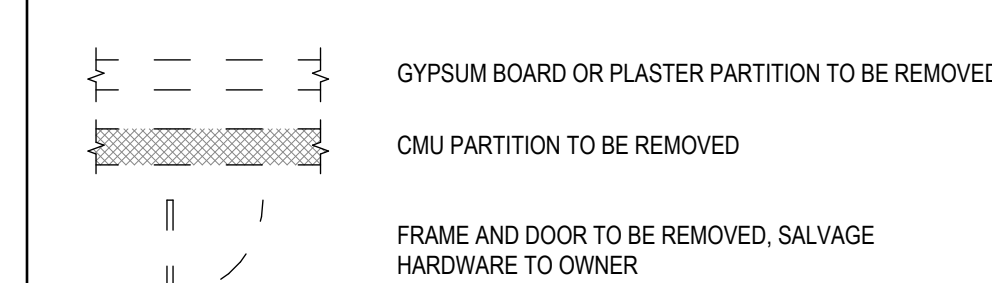
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 DEMO PLAN, AND  
 DEMO RCP**

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**AD1.10**

**DEMO FLOOR PLAN SYMBOLS LEGEND:**

NOTE: REFER TO M.E.P.P. DRAWINGS FOR ADDITIONAL INFORMATION ON MECHANICAL, ELECTRICAL, AND FIRE PROTECTION SYSTEMS



**DEMO FLOOR PLAN GENERAL NOTES:**

- PRIOR TO AND DURING ANY DEMOLITION THE CONTRACTOR SHALL VERIFY AND MAINTAIN THE BUILDING'S STRUCTURAL INTEGRITY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AS REQUIRED TO INSTALL ALL NEW WORK. REPAIR, PATCH AND FINISH EXISTING FLOORS, WALLS AND CEILINGS DESIGNATED TO REMAIN TO MATCH EXISTING CONDITIONS.
- REMOVE ALL HANGERS, SUSPENSION SYSTEMS, SUPPORT FRAMING, EQUIPMENT PADS, ANCHORS, ATTACHMENT HARDWARE AND RELATED APPURTENANCES CONNECTED WITH THE WORK TO BE DEMOLISHED. IF COMPLETE REMOVAL IS NOT POSSIBLE, CUT DEVICES AS CLOSE AS POSSIBLE TO ADJOINING SURFACES OR ORIGIN OF SUPPORT.
- DURING THE BIDDING PERIOD, EACH BIDDING CONTRACTOR SHALL VISIT THE SITE AND THE FACILITY TO DETERMINE EXISTING CONDITIONS. CONTRACTOR'S FAILURE TO REASONABLY DETERMINE AND/OR ANTICIPATE THE EFFECT OF EXISTING CONDITIONS AND THE WORK INVOLVED THEREBY SHALL NOT BE JUSTIFICATION FOR ADDITIONAL COMPENSATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
- ALL MATERIALS, EQUIPMENT, FIXTURES, SYSTEMS, AND ACCESSORIES WHICH ARE TO REMAIN IN SERVICE SHALL BE CLEANED, REPAIRED, ADJUSTED AND PLACED INTO PROPER OPERATIONS IN ALL MODES WITH THE ORIGINAL SYSTEM.
- WHEN TEMPORARY SHORING AND BRACING IS REQUIRED, CONTRACTOR SHALL RETAIN AND PAY FOR THE SERVICES OF A PROFESSIONAL ENGINEER-LICENSED TO PRACTICE IN THE STATE WHERE THE PROJECT IS LOCATED TO DESIGN AND PREPARE DETAILED DRAWINGS.
- CONTRACTOR SHALL COORDINATE SCHEDULE OF DEMOLITION WORK WITH THE OVERALL PHASING PLAN. ALL AREAS SURROUNDING EACH PHASE OF DEMOLITION/CONSTRUCTION WILL BE OCCUPIED BY THE OWNER DURING THE OWNER'S NORMAL BUSINESS HOURS. DEMOLITION WORK SHALL NOT ENCUMBER THE USE OF EXISTING ADJACENT SPACES.
- EACH CONTRACTOR SHALL FOLLOW THE PROGRESS OF THE GENERAL DEMOLITION AND REMODELING WORK TO ASSURE THE ACCESSIBILITY AND SAFETY OF EQUIPMENT AND SYSTEMS IN SERVICE IN ORDER TO PROVIDE FOR THE TIMELY REMOVAL AND/OR RELOCATION OF EQUIPMENT, PIPING, ETC.
- REMOVE ALL ABANDONED CONDUIT BOXES, CONDUCTORS, TELEPHONE LINES, ELECTRIC PANELS, AND ANY OTHER MISCELLANEOUS EQUIPMENT NOT REQUIRED FOR THE NEW FACILITY.
- NO TOXIC SUBSTANCES HAVE BEEN NOTED ON THE SITE. SHOULD THE CONTRACTOR ENCOUNTER ANY ASBESTOS, ASBESTOS PRODUCTS, PCBs OR OTHER TOXIC SUBSTANCES, THE CONTRACTOR SHOULD REPORT THIS IMMEDIATELY TO THE OWNER IN WRITING PRIOR TO CONTINUING WORK IN THIS AREA. WORK SHALL NOT BE RESUMED EXCEPT BY WRITTEN AUTHORIZATION OR AGREEMENT.
- ALL CONSTRUCTION DEBRIS AND EXCESS MATERIAL IS TO BE REMOVED BY THE CONTRACTOR AT THE END OF EACH WORK DAY. THE JOB SITE IS TO BE LEFT SUFFICIENTLY CLEAN AS TO WARRANT OWNER'S APPROVAL.
- REMOVE ALL CEILING SYSTEMS IN THEIR ENTIRETY, INCLUDING TILE, GRID, SUSPENSION WIRING, ANCHORS AND ALL ASSOCIATED APPURTENANCES.
- EXISTING IT SERVER SYSTEM AND ALL ASSOCIATED EQUIPMENT, UTILITIES, CABLING, AND ACCESSORIES SHALL REMAIN OPERATIONAL THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE IT SYSTEM THROUGHOUT CONSTRUCTION WITHOUT ANY INTERRUPTION IN SERVICE. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL TEMPORARY SUPPORT OR TEMPORARY SHIFT/RELOCATION OF IT EQUIPMENT AS REQUIRED FOR DEMO OR NEW WORK NOTED. ALL PROPOSED SUPPORT OR RELOCATION OF IT EQUIPMENT SHALL BE REVIEWED WITH OWNER PRIOR TO COMMENCEMENT.

**DEMO FLOOR PLAN REFERENCED NOTES:**

**FLOOR DEMOLITION KEYED NOTES:**

- REMOVE EXISTING SOLID PLAM RAISED FLOOR SYSTEM COMPLETE, INCLUDING ALL ASSOCIATED SUPPORTS, FLOOR PANELS, SIDE PANELS, AND OTHER ACCESSORIES.
- BASE BID:** REMOVE EXISTING RAISED PLAM FLOOR SYSTEM COMPLETE, INCLUDING ALL ASSOCIATED SUPPORTS, FLOOR PANELS, SIDE PANELS, AND OTHER ACCESSORIES. CONTRACTOR SHALL BE RESPONSIBLE FOR LIFTING AND/OR SHIFTING EXISTING IT RACKS AND EQUIPMENT TO REMOVE AND REPLACE EXISTING RAISED FLOOR SYSTEM BELOW. REFER TO DEMO FLOOR PLAN GENERAL NOTE #13 AND NEW WORK FOR ADDITIONAL SCOPE REQUIREMENTS.
- BID ALI:** LEAVE EXISTING SOLID PLAM RAISED FLOOR SYSTEM TO REMAIN.
- REMOVE EXISTING STEEL VENTED FLOOR TILE AND ASSOCIATED SUPPORTS AND ACCESSORIES COMPLETE AT LOCATION INDICATED. SALVAGE VENTED TILE AND TURN OVER TO OWNER.
- REMOVE EXISTING STEEL VENTED FLOOR TILE AND TURN OVER TO OWNER. LEAVE ALL SUPPORTS AND ACCESSORIES EXISTING TO REMAIN. REFER TO NEW WORK PLANS FOR NEW FLOOR TILE INSTALLATION.
- EXISTING STEEL VENTED FLOOR TILE SYSTEM, INCLUDING ALL SUPPORTS, FLOOR PANELS, AND OTHER ACCESSORIES, TO REMAIN.
- REMOVE EXISTING STEEL SOLID FLOOR TILE AND ASSOCIATED SUPPORTS AND ACCESSORIES COMPLETE AT LOCATION INDICATED. SALVAGE SOLID TILE FOR REINSTALLATION IN NEW WORK. REFER TO NEW WORK PLANS FOR LOCATION.
- REMOVE RAISED FLOOR SYSTEM SIDE PANELS COMPLETE.
- EXISTING SOLID PLAM RAISED FLOOR SYSTEM, INCLUDING ALL SUPPORTS, FLOOR PANELS, SIDE PANELS, AND OTHER ACCESSORIES, TO REMAIN.
- REMOVE UNDERLOOR WOOD POST SUPPLEMENTAL SUPPORT SYSTEM COMPLETE.

**WALL DEMOLITION KEYED NOTES:**

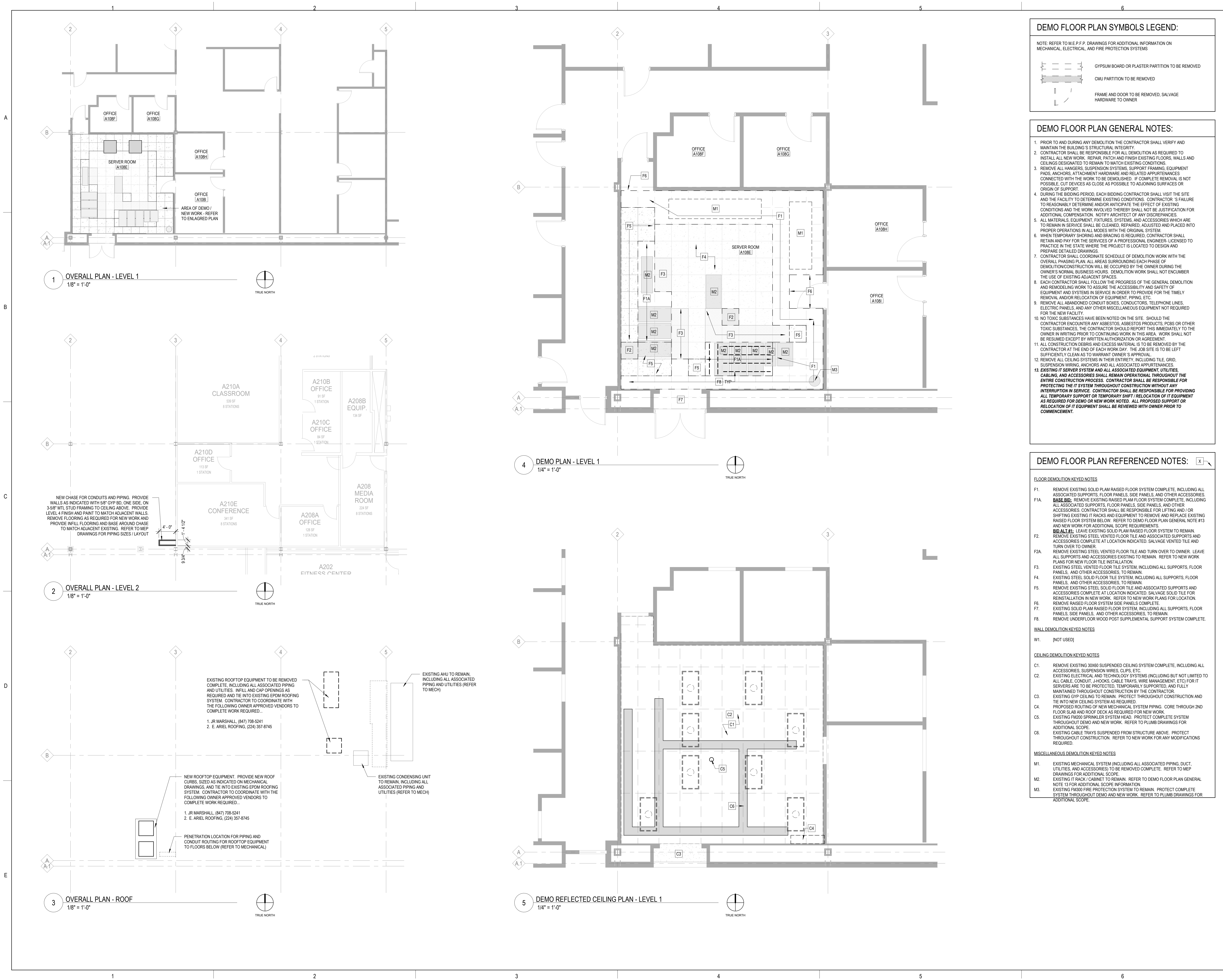
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**CEILING DEMOLITION KEYED NOTES:**

- REMOVE EXISTING 30X90 SUSPENDED CEILING SYSTEM COMPLETE, INCLUDING ALL ACCESSORIES, SUSPENSION WIRES, CLIPS, ETC.
- EXISTING ELECTRICAL AND TECHNOLOGY SYSTEMS (INCLUDING BUT NOT LIMITED TO ALL CABLE, CONDUIT, J-HOOKS, CABLE TRAYS, WIRE MANAGEMENT, ETC) FOR IT SERVERS ARE TO BE PROTECTED, TEMPORARILY SUPPORTED, AND FULLY MAINTAINED THROUGHOUT CONSTRUCTION BY THE CONTRACTOR.
- EXISTING GYP CEILING TO REMAIN. PROTECT THROUGHOUT CONSTRUCTION AND TIE INTO NEW CEILING SYSTEM AS REQUIRED.
- PROPOSED ROUTING OF NEW MECHANICAL SYSTEM PIPING. CORE THROUGH 2ND FLOOR SLAB AND ROOF DECK AS REQUIRED FOR NEW WORK.
- EXISTING FM200 SPRINKLER SYSTEM HEAD. PROTECT COMPLETE SYSTEM THROUGHOUT DEMO AND NEW WORK. REFER TO PLUMB DRAWINGS FOR ADDITIONAL SCOPE.
- EXISTING CABLE TRAYS SUSPENDED FROM STRUCTURE ABOVE. PROTECT THROUGHOUT CONSTRUCTION. REFER TO NEW WORK FOR ANY MODIFICATIONS REQUIRED.

**MISCELLANEOUS DEMOLITION KEYED NOTES:**

- EXISTING MECHANICAL SYSTEM (INCLUDING ALL ASSOCIATED PIPING, DUCT, UTILITIES, AND ACCESSORIES) TO BE REMOVED COMPLETE. REFER TO MEP DRAWINGS FOR ADDITIONAL SCOPE.
- EXISTING IT RACK (CABINET) TO REMAIN. REFER TO DEMO FLOOR PLAN GENERAL NOTE 13 FOR ADDITIONAL SCOPE INFORMATION.
- EXISTING FM400 FIRE PROTECTION SYSTEM TO REMAIN. PROTECT COMPLETE SYSTEM THROUGHOUT DEMO AND NEW WORK. REFER TO PLUMB DRAWINGS FOR ADDITIONAL SCOPE.



**1 OVERALL PLAN - LEVEL 1**  
 1/8" = 1'-0"

**2 OVERALL PLAN - LEVEL 2**  
 1/8" = 1'-0"

**3 OVERALL PLAN - ROOF**  
 1/8" = 1'-0"

**4 DEMO PLAN - LEVEL 1**  
 1/4" = 1'-0"

**5 DEMO REFLECTED CEILING PLAN - LEVEL 1**  
 1/4" = 1'-0"

EXISTING ROOFTOP EQUIPMENT TO BE REMOVED COMPLETE, INCLUDING ALL ASSOCIATED PIPING AND UTILITIES. INFILL AND CAP OPENINGS AS REQUIRED AND TIE INTO EXISTING EPDM ROOFING SYSTEM. CONTRACTOR TO COORDINATE WITH THE FOLLOWING OWNER APPROVED VENDORS TO COMPLETE WORK REQUIRED.

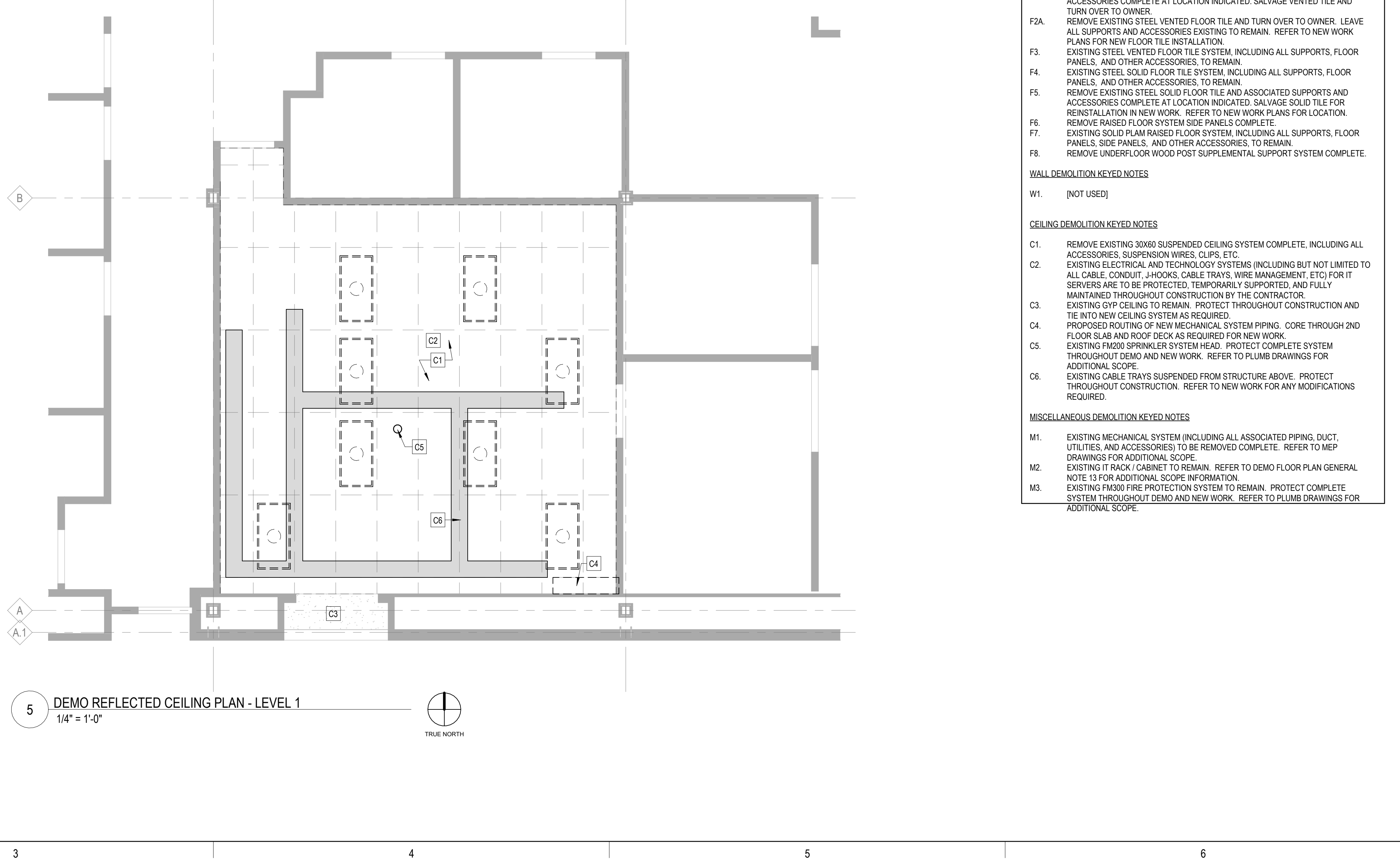
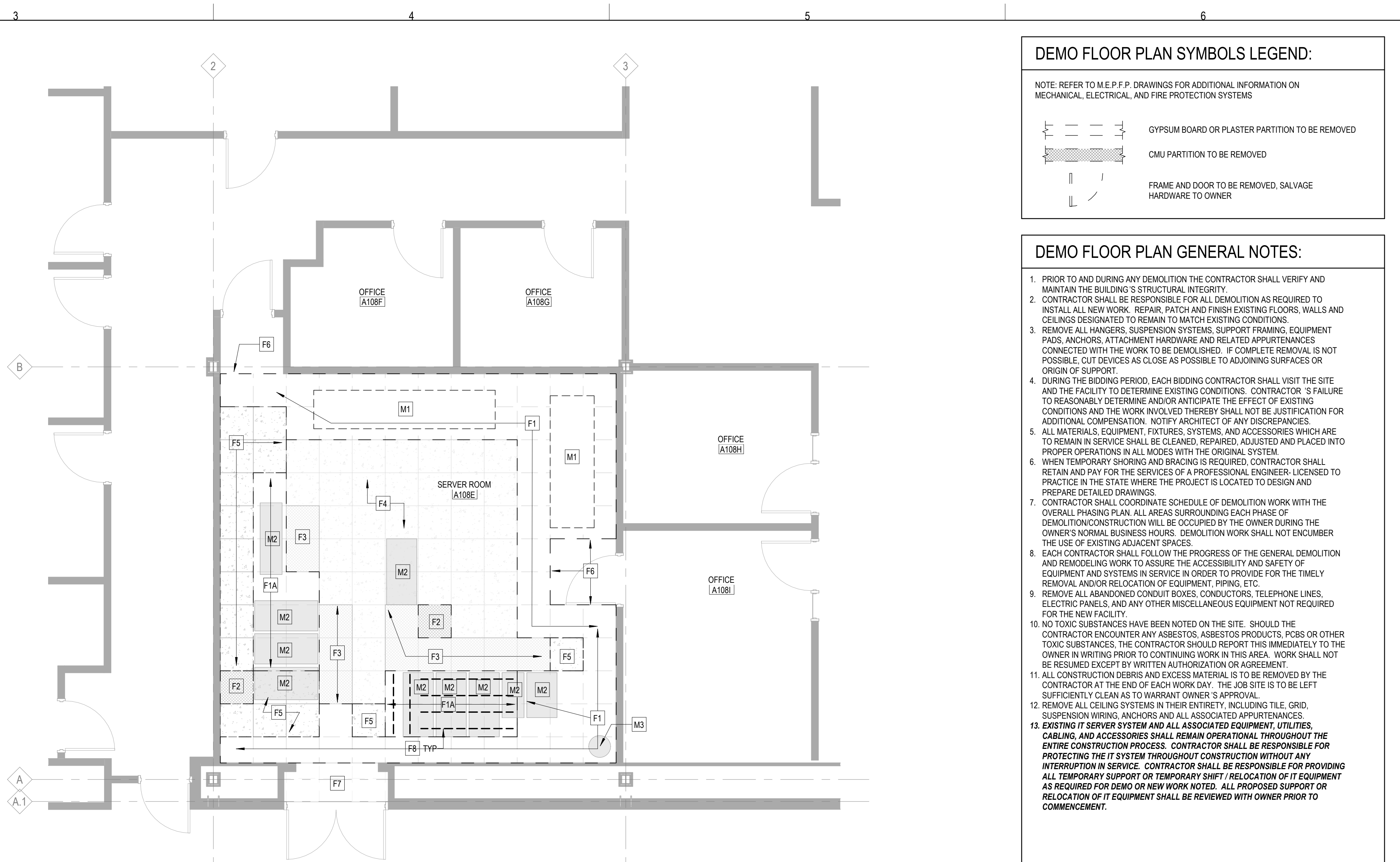
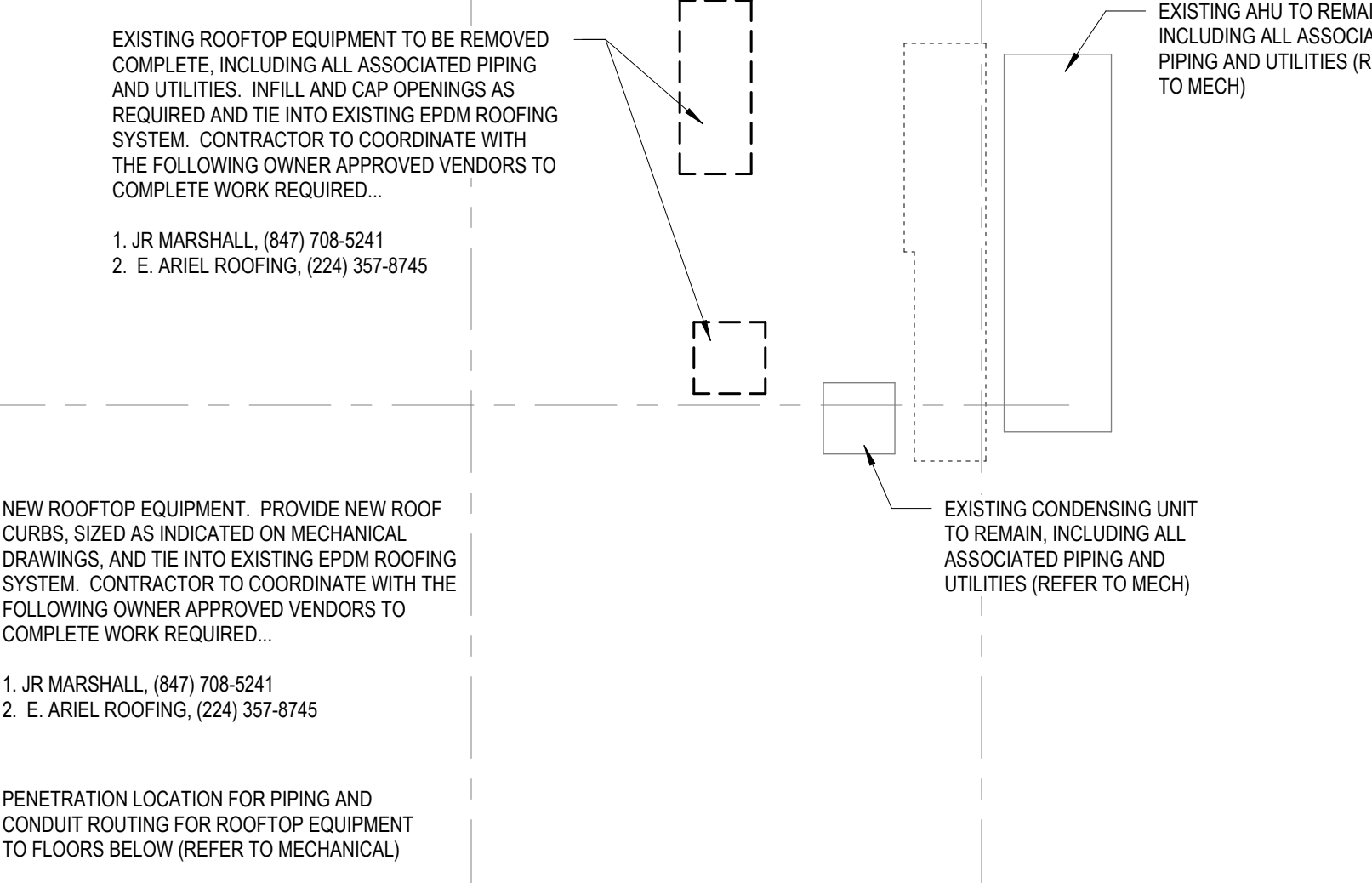
1. JR MARSHALL, (847) 798-5241  
 2. E. ARELL ROOFINGS, (224) 357-8745

NEW ROOFTOP EQUIPMENT. PROVIDE NEW ROOF CURBS, SIZED AS INDICATED ON MECHANICAL DRAWINGS, AND TIE INTO EXISTING EPDM ROOFING SYSTEM. CONTRACTOR TO COORDINATE WITH THE FOLLOWING OWNER APPROVED VENDORS TO COMPLETE WORK REQUIRED.

1. JR MARSHALL, (847) 798-5241  
 2. E. ARELL ROOFINGS, (224) 357-8745

PENETRATION LOCATION FOR PIPING AND CONDUIT ROUTING FOR ROOFTOP EQUIPMENT TO FLOORS BELOW (REFER TO MECHANICAL)

NEW CHASE FOR CONDUITS AND PIPING. PROVIDE WALLS AS INDICATED WITH 5/8" GYP BD, ONE SIDE, ON 3-5/8" MTL STUD FRAMING TO CEILING ABOVE. PROVIDE LEVEL 4 FINISH AND PAINT TO MATCH ADJACENT WALLS. REMOVE FLOORING AS REQUIRED FOR NEW WORK AND PROVIDE INFILL FLOORING AND BASE AROUND CHASE TO MATCH ADJACENT EXISTING. REFER TO MEP DRAWINGS FOR PIPING SIZES / LAYOUT





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### RCP SYMBOLS LEGEND:

NOTE: REFER TO M.E.P.F.P. DRAWINGS FOR ADDITIONAL INFORMATION ON MECHANICAL, ELECTRICAL, AND FIRE PROTECTION SYSTEMS

- CEILING TYPE
- CEILING ELEVATION AFF
- SUSPENDED ACOUSTICAL TILE CEILING
- RECESSED 2x4 LIGHT FIXTURE
- RECESSED 2x2 FLUORESCENT FIXTURE
- SPRINKLER HEAD
- SOLID HATCH DENOTES EXIT SIGN FACE PLATE
- DIRECTION OF EGRESS
- EXIT SIGN, WALL MOUNTED
- HEAT DETECTOR
- SMOKE DETECTOR
- EMERGENCY LIGHT (REFER TO ELEC)
- RETURN AIR GRILLE
- SUPPLY AIR GRILLE

### FLOOR PLAN SYMBOLS LEGEND:

NOTE: REFER TO M.E.P.F.P. DRAWINGS FOR ADDITIONAL INFORMATION ON MECHANICAL, ELECTRICAL, AND FIRE PROTECTION SYSTEMS

- GREY TONE LINES DEPICT EXISTING CONSTRUCTION
- EXISTING DOOR
- NEW WALL CONSTRUCTION
- NEW DOOR
- ROOM NAME
- ROOM TAG
- DOOR / FRAME TAG
- PARTITION TYPE
- PARTITION MODIFIERS
- PLAN AND SECTION DETAIL CALLOUT
- SECTION CALLOUT
- ELEVATION CALLOUT
- DATUM TAG
- NEW WORK REFERENCED NOTES

### RCP GENERAL NOTES:

- ALL HEATING, VENTILATION, ELECTRICAL, PLUMBING, AND FIRE PROTECTION ITEMS ARE SHOWN ON ARCHITECTURAL REFLECTED CEILING PLANS FOR REFERENCE AND COORDINATION ONLY. REFER TO HEATING, VENTILATION, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR ACTUAL QUANTITIES. IN CASE OF CONFLICT THE ARCHITECTURAL REFLECTED CEILING PLAN SHALL GOVERN LOCATION OF THESE ITEMS.
- IN AREAS THAT DO NOT HAVE ARCHITECTURAL REFLECTED CEILING PLANS YET REQUIRE NEW ITEMS TO BE INSTALLED IN OR ABOVE THE CEILING PLANE. CONTRACTOR SHALL REMOVE AND REINSTALL, REPLACE OR MODIFY EXISTING CEILING CONSTRUCTION TO ACCOMMODATE NEW WORK. ANY NEW CEILING AREAS SHALL MATCH EXISTING ADJACENT FINISHES.
- CENTER ALL FIXTURES IN CEILING TILES AND FIELD VERIFY GRID LAYOUT FOR PROPER FIXTURE LOCATION. ALIGN ALL FIXTURES IN BOTH DIRECTIONS OF CEILING TILE (L&O).
- CENTER ALL SPRINKLER HEADS IN CEILING TILES.
- ALL GYP. BD. CEILINGS TO BE PAINTED PT-1 UNLESS OTHERWISE NOTED ON PLANS.
- EXTEND FACE OF ALL GYP. BD. SOFFITS AND HEADERS TO FINISHED CEILING ABOVE U.L.O.

### FLOOR PLAN GENERAL NOTES:

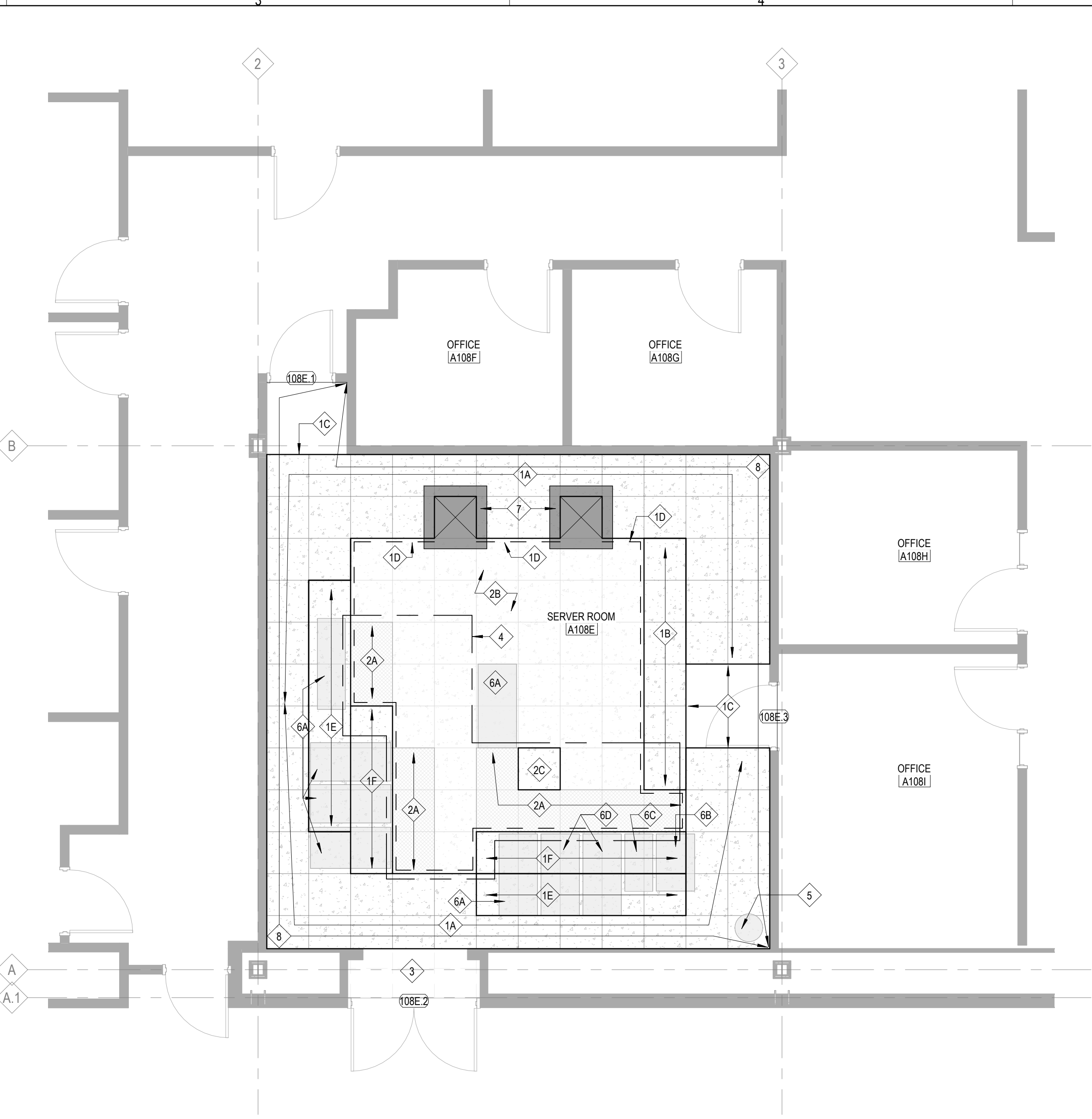
- ELEVATIONS SHOWN ON ARCHITECTURAL DRAWINGS ARE RELATIVE TO FIRST FLOOR FINISH ELEVATION OF 0'-0".
- DO NOT SCALE DRAWINGS.
- NOTIFY ARCHITECT OF ANY DISCREPANCIES IN THE DOCUMENTS PRIOR TO WORK COMMENCING.
- NOTES ON DRAWINGS SHALL APPLY TO ALL SIMILAR CONDITIONS WHETHER THEY ARE REPEATED OR NOT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF EXISTING CONDITIONS AND IN-FIELD DIMENSIONS PRIOR TO COMMENCING WORK.
- ALL INTERIOR DIMENSIONS ARE TO FACE OF FINISHED WALL UNLESS NOTED OTHERWISE.
- PROVIDE ACCESS PANELS AT LOCATIONS INDICATED AND AS REQUIRED FOR ACCESS TO EQUIPMENT AND DEVICES INCLUDING, BUT NOT LIMITED TO, MECHANICAL, PLUMBING AND ELECTRICAL WORK. PAINT ACCESS PANELS TO MATCH ADJACENT WALL OR CEILING FINISH.
- EXISTING IT SERVER SYSTEM AND ALL ASSOCIATED EQUIPMENT, UTILITIES, CABLING, AND ACCESSORIES SHALL REMAIN OPERATIONAL THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE IT SYSTEM THROUGHOUT CONSTRUCTION WITHOUT ANY INTERRUPTION IN SERVICE. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL TEMPORARY SUPPORT OR TEMPORARY SHIFT / RELOCATION OF IT EQUIPMENT AS REQUIRED FOR DEMO OR NEW WORK NOTED. ALL PROPOSED SUPPORT OR RELOCATION OF IT EQUIPMENT SHALL BE REVIEWED WITH OWNER PRIOR TO COMMENCEMENT.

### RCP REFERENCED NOTES:

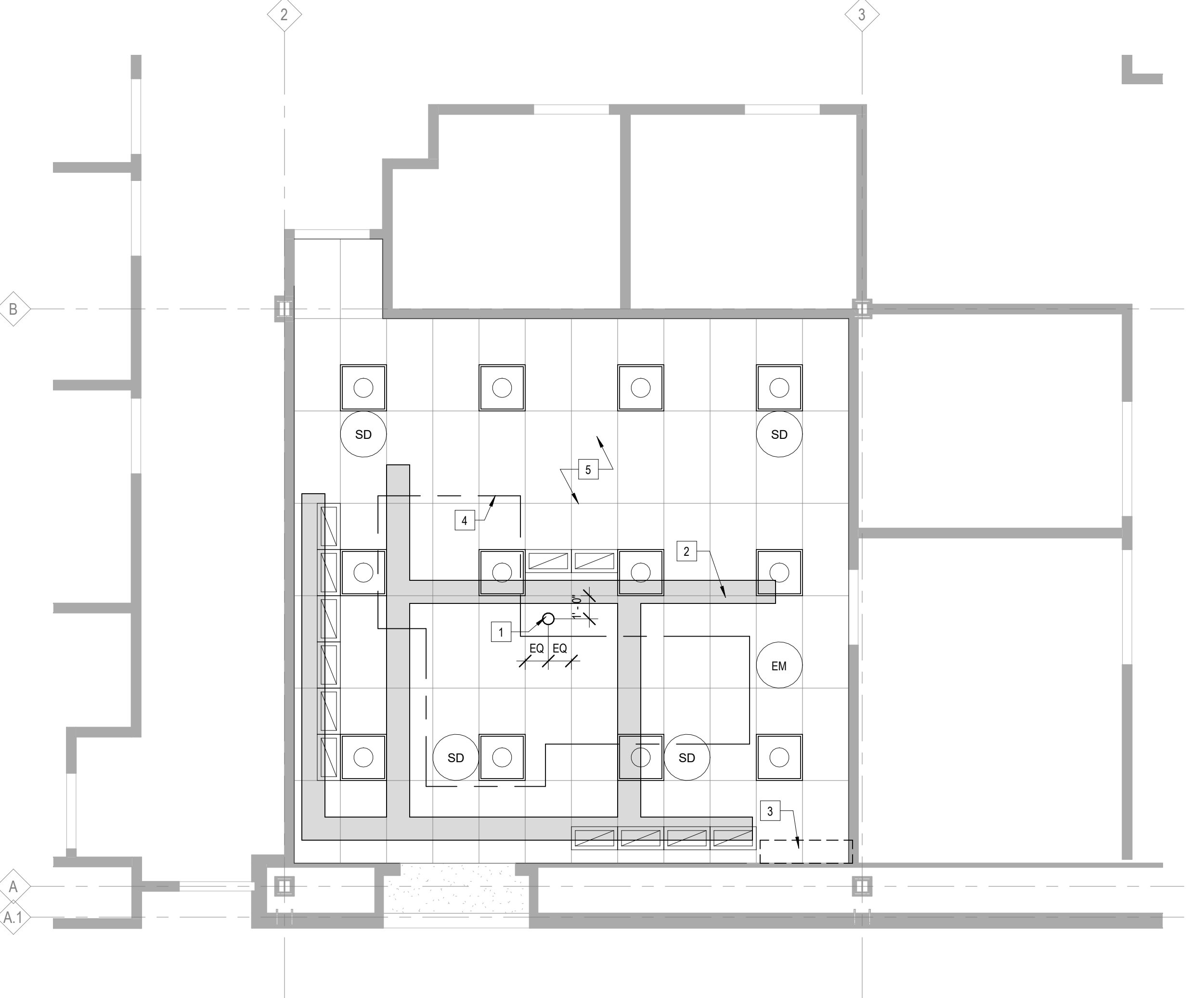
- EXISTING FM200 SPRINKLER SYSTEM HEAD TO REMAIN. MODIFY BRANCH PIPING AS REQUIRED FOR NEW MECHANICAL LAYOUT. REFER TO MECHANICAL-PLUMBING DRAWINGS.
- EXISTING CABLE TRAY SYSTEM TO REMAIN. COORDINATE SUPPORT PENETRATIONS THROUGH CEILING WITH NEW CEILING SYSTEM.
- LOCATION OF NEW PIPING ROUTING FROM HVAC EQUIPMENT. CORE THROUGH SLAB AND ROOF DECK ABOVE AS REQUIRED TO GET TO NEW ROOFTOP EQUIPMENT. REFER TO OVERALL PLANS FOR SCOPE OF WORK AT 2ND FLOOR OR ROOF.
- COLD AISLE CONTAINMENT SYSTEM (REFER TO MECH)
- PROVIDE 2x4 SAT CEILING SYSTEM. REFER TO BELOW FOR PRODUCT DETAILS.
  - ARMSTRONG CORTEGA SECOND LOOK II, 24x24 TILES WITH PRELUDE X1 FIREGUARD SUSPENSION SYSTEM IN WHITE FINISH.
  - COORDINATE CEILING TILES AROUND EXISTING PENETRATIONS TO REMAIN AND NEW PENETRATIONS. SEAL ALL PENETRATIONS THROUGH CEILING TILES FOR AIRTIGHT INSTALLATION. REFER TO MEP FOR ADDITIONAL PENETRATION LOCATIONS.
  - PROVIDE HOLD DOWN CLIPS AT ALL CEILING TILES IN FINAL INSTALLATION.
  - INSTALL AT 9'-0" AFF (8'-4" ABOVE RAISED FLOOR SYSTEM). COORDINATE WITH MECHANICAL LAYOUT TO CONFIRM FINAL CEILING HEIGHT AND NOTIFY A/E IF A LOWER CEILING HEIGHT IS REQUIRED.

### FLOOR PLAN REFERENCED NOTES:

- NEW RAISED FLOORING SYSTEM, RLE TECHNOLOGIES, TRIAD SYSTEM. CONTACT CHRISTIE MAXWELL (970.222.3924, CHIAWELL@RLETECH.COM) FOR MATERIAL PRICING. QUOTE NUMBER XX-XXXX. PROVIDE A COMPLETE SYSTEM, INCLUDING ALL TILES, SUPPORT GRID, EDGE TRIM PANELS, CORNER TRANSITIONS, VERTICAL EDGE PANELS, AND ANY OTHER REQUIRED ACCESSORIES FOR A COMPLETE INSTALLATION. THE NEW SUPPORT SYSTEM INTO EXISTING TILE / SUPPORT SYSTEM. REFER TO NOTES BELOW FOR SPECIFIC SYSTEM REQUIREMENTS.
  - PROVIDE SOLID STEEL TILE, 4000 LB WEIGHT LIMIT IN GRAY FINISH, ON NEW SUPPORT SYSTEM.
  - PROVIDE SALVAGED SOLID STEEL TILE, GENESIS FINISH, ON NEW SUPPORT SYSTEM.
  - PROVIDE SOLID END PANEL AT LOCATIONS INDICATED, GRAY FINISH.
  - PROVIDE UNDERFLOOR BLANK-OFF PLENUM PANELS AT LOCATIONS INDICATED WITH ALL REQUIRED ACCESSORIES FOR A COMPLETE INSTALLATION. SEAL PLENUM PANELS TO SLAB BELOW FOR AIRTIGHT SYSTEM. THE PANELS INTO HVAC PLENUM PANELS FOR COMPLETE ENCLOSURE.
  - BASE BID:** PROVIDE SOLID STEEL TILE, 4000 LB WEIGHT LIMIT IN GRAY FINISH, ON NEW SUPPORT SYSTEM. **ALT BID NO. 1:** LEAVE EXISTING PLAM RAISED FLOOR SYSTEM TO REMAIN.
  - BASE BID:** PROVIDE SALVAGED SOLID STEEL TILE, GENESIS FINISH, ON NEW SUPPORT SYSTEM. **ALT BID NO. 1:** LEAVE EXISTING PLAM RAISED FLOOR SYSTEM TO REMAIN.
- EXISTING RAISED FLOORING SYSTEM, INCLUDING ALL FLOOR PANELS, SUPPORTS, AND ACCESSORIES TO REMAIN. REFER TO NOTES BELOW FOR FLOOR PANEL TYPES NOTED.
  - EXISTING VENTED TILE, GENESIS FINISH TO REMAIN.
  - EXISTING SOLID TILE, GENESIS FINISH TO REMAIN.
  - PROVIDE SALVAGED SOLID STEEL TILE, GENESIS FINISH, ON EXISTING SUPPORT SYSTEM.
- EXISTING RAISED PLAM FLOORING SYSTEM TO REMAIN.
- COLD AISLE CONTAINMENT SYSTEM (REFER TO MECH)
- EXISTING FM200 SYSTEM TO REMAIN. PROTECT THROUGHOUT CONSTRUCTION AND MODIFY AS REQUIRED FOR NEW WORK.
- EXISTING EQUIPMENT TO REMAIN. SEE BELOW FOR SPECIFIC EQUIPMENT PARAMETERS. REFER TO FLOOR PLAN GENERAL NOTE 8 FOR ADDITIONAL SCOPE.
  - SERVER RACK
  - UPS BATTERY BACK-UP UNIT, 1650 LBS
  - UPS BATTERY BACK-UP UNIT, 1400 LBS
  - UPS BATTERY BACK-UP RACK, 1650 LBS
- NEW HVAC SYSTEM. LEAVE OPEN 2x2 TILE BELOW UNIT FOR SUPPLY AIR. (REFER TO MEP)
- PAINT ALL WALLS, SURFACE MOUNT CONDUITS, SURFACE MOUNT PIPING, AND ALL OTHER MISC ACCESSORIES ATTACHED TO WALL PT-X. PROVIDE LOW VOC INTERIOR PAINT SYSTEM APPROPRIATE FOR LOW AIRFLOW ENVIRONMENTS AND NO DUST / AIRBORNE PARTICULATES. ALLOW OUTSIDE AIR INTO IT ROOM FOR 24 HOURS AFTER PAINTING IS COMPLETE TO FLUSH OUT SYSTEM.



1 ENLARGED PLAN - SERVER ROOM  
 1/4" = 1'-0"  
 TRUE NORTH



2 REFLECTED CEILING PLAN - LEVEL 1  
 1/4" = 1'-0"  
 TRUE NORTH

A

B

C

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D

E



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**MCHENRY COUNTY COLLEGE  
 2024 SERVER ROOM IMPROVEMENTS**

8900 U.S. Highway 14  
 Crystal Lake, IL 60012  
 DKA PROJECT NO: 21-042

KEY PLAN:

SHEET STATUS: 04/25/2024  
**ISSUED FOR BID - NOT  
 FOR CONSTRUCTION**

NO.	DESCRIPTION	DATE

SHEET TITLE:

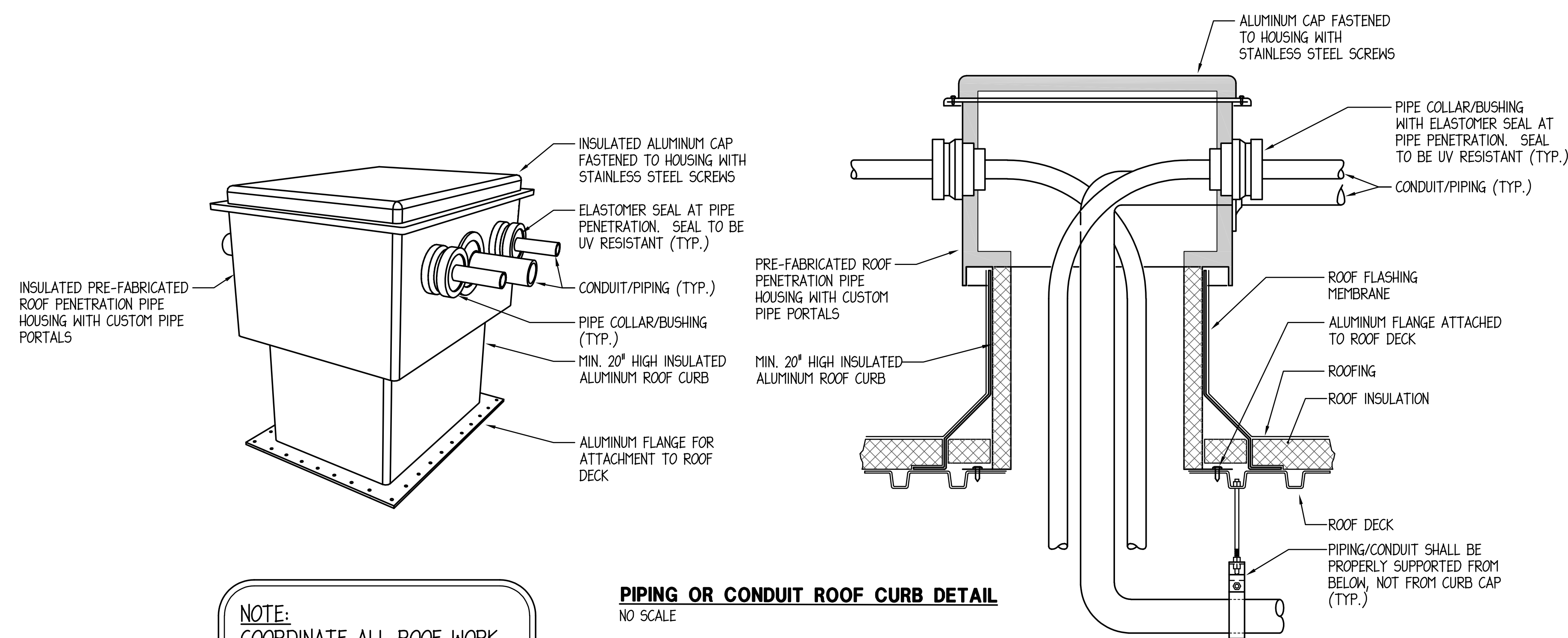
**MEP  
 COORDINATION  
 NOTES AND  
 DETAILS**

SHEET NUMBER:

**ME1.00**

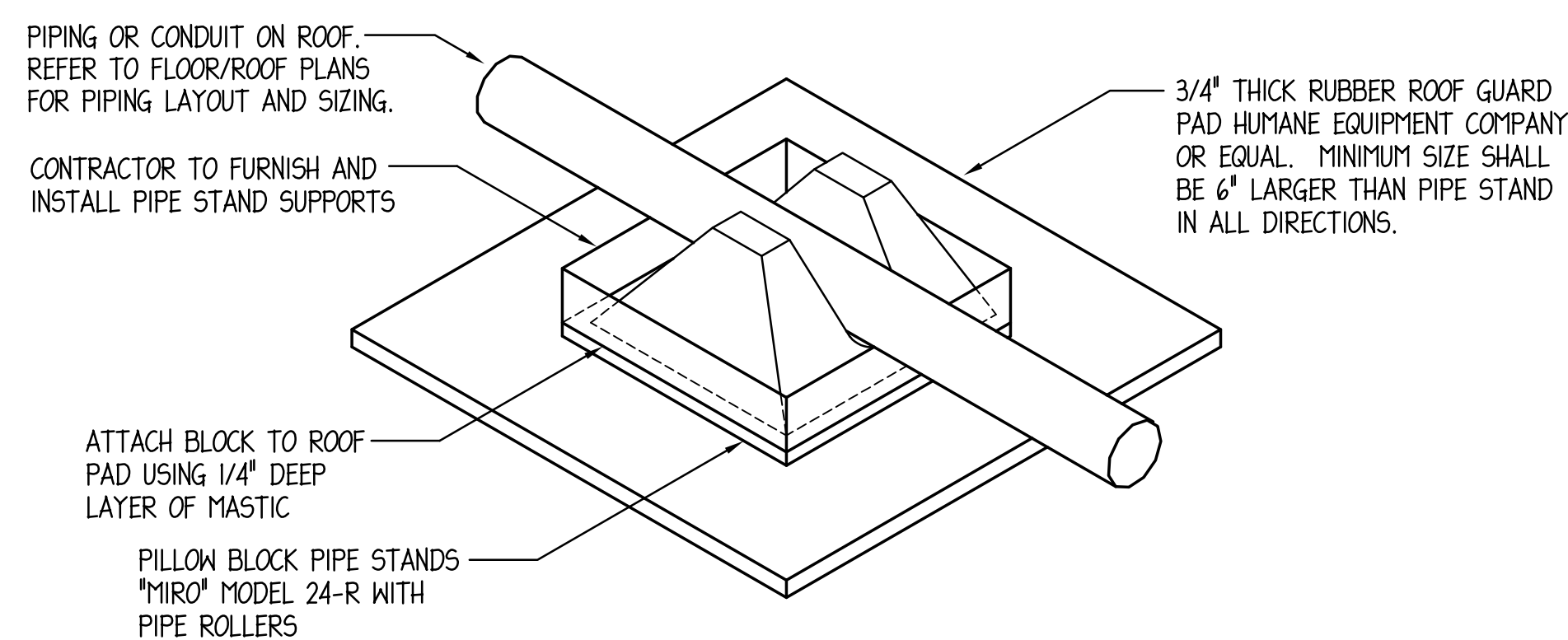
**GENERAL REMODELING NOTES - ALL CONTRACTORS**

- ALL WORK SHOWN ON DRAWINGS SHALL BE CONSIDERED NEW AND IN CONTRACT UNLESS SPECIFICALLY INDICATED OTHERWISE.
- DRAWINGS ARE GENERALLY DIAGRAMMATIC. ROUTING OF PIPING, DUCTWORK, CONDUITS, RACEWAYS, ETC., AS SHOWN ON DRAWINGS, DOES NOT INTEND TO SHOW EVERY RISE, DROP, OFFSET, FITTING NOR EVERY STRUCTURAL ELEMENT THAT MAY BE ENCOUNTERED DURING THE INSTALLATION OF THIS WORK. EACH CONTRACTOR SHALL MAKE ANY REQUIRED CHANGES FROM THE GENERAL ROUTING SHOWN ON THESE DRAWINGS, SUCH AS OFFSETS, BENDS OR CHANGES IN ELEVATION DUE TO COORDINATION WITH THE WORK OF OTHER TRADES AND BUILDING CONSTRUCTION. ALL CHANGES SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER OR DELAY IN COMPLETION DATE OF THE PROJECT.
- IT IS INTENDED THAT EQUIPMENT SHALL BE LOCATED SYMMETRICALLY WITH THE ARCHITECTURAL ELEMENTS OF THE BUILDING, NOTWITHSTANDING THE FACT THAT LOCATIONS INDICATED BY THESE DRAWINGS MAY BE DISTORTED FOR CLARITY OF PRESENTATION.
- CONTRACTOR SHALL CHECK DRAWINGS OF OTHER TRADES TO VERIFY THAT SPACES IN WHICH THEIR WORK WILL BE INSTALLED ARE CLEAR OF OBSTRUCTIONS. WORK SHALL BE INSTALLED TO MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITIONS AT ALL POINTS IN THE BUILDING. WHERE HEADROOM OR SPACE CONDITIONS APPEAR INADEQUATE, CONTRACTOR SHALL NOTIFY OWNER/ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE INSTALLATION OF THEIR WORK.
- CONTRACTOR SHALL FURNISH OTHER TRADES ADVANCE INFORMATION AND/OR SHOP DRAWINGS ON LOCATIONS AND SIZES OF PIPING, DUCTWORK, CONDUIT, RACEWAYS, EQUIPMENT, FRAMES, BOXES, SLEEVES AND OPENINGS, ETC. NEEDED FOR THEIR WORK TO PERMIT OTHER TRADES AFFECTED TO INSTALL THEIR WORK PROPERLY AND WITHOUT DELAY.
- WHERE THERE IS EVIDENCE THAT WORK OF ONE TRADE WILL INTERFERE WITH WORK OF OTHER TRADES, ALL TRADES SHALL MEET ON JOB SITE TO WORK OUT SPACE CONDITIONS AND MAKE SATISFACTORY ADJUSTMENTS TO INSTALLATION OF THE NEW WORK. CONTRACTORS SHALL VERIFY EXACT LOCATIONS OF ALL DEVICES AND EQUIPMENT WITH FIELD CONDITIONS, SHOP DRAWINGS, AND WORK OF OTHER TRADES PRIOR TO ROUGH-IN. EACH CONTRACTOR SHALL BE RESPONSIBLE, AT THEIR OWN EXPENSE, FOR THE REMOVAL AND REINSTALLATION OF ANY PART OF THEIR WORK IF SAME WAS INSTALLED WITHOUT CONSULTING WITH OTHER TRADES BEFORE INSTALLING THEIR WORK.
- CONTRACTOR SHALL PROVIDE SLEEVES IN BEAMS, FLOORS, COLUMNS AND WALLS AS SHOWN ON THE DRAWINGS, AS REQUIRED BY JOB SITE CONDITIONS, AND/OR AS SPECIFIED, WHEN INSTALLING THEIR WORK. ALL BEAMS AND COLUMNS WHICH ARE REQUIRED TO BE SLEEVED SHALL BE CUT AND REINFORCED AS REQUIRED BY FIELD CONDITIONS AND LOCATIONS AND SIZES SHALL BE CHECKED AND APPROVED BY ARCHITECT BEFORE CONTRACTOR CUTS ANY STRUCTURAL BUILDING MEMBER.
- THE SEQUENCE FOR THE INSTALLATION OF ALL WORK SHALL BE COORDINATED BETWEEN ALL CONTRACTORS ON THE PROJECT AND IN STRICT ACCORDANCE WITH ARCHITECT/ENGINEER AND OWNERS STIPULATION AS DIRECTED.
- CONTRACTOR SHALL REFER TO THE ARCHITECTURAL AND STRUCTURAL CONTRACT DRAWINGS (BEFORE SUBMITTING THEIR BIDS) TO FAMILIARIZE THEMSELVES WITH THE EXTENT OF THE GENERAL CONTRACTOR'S WORK, CEILING HEIGHTS AND CLEARANCE FOR INSTALLING THEIR WORK.
- CONTRACTOR SHALL BE RESPONSIBLE AND PAY FOR ALL CORING, CUTTING, PATCHING, REPAIRING, REFINISHING AND REMOVAL/REPLACEMENT OF NEW OR EXISTING BUILDING CONSTRUCTION REQUIRED TO ACCOMMODATE THE INSTALLATION OR REMOVAL OF THEIR WORK. ALL PATCHING, REPAIRING AND REFINISHING WORK SHALL BE PERFORMED BY THOSE REGULARLY INVOLVED IN THAT TRADE AND SHALL MATCH THE ADJACENT CONSTRUCTION AS CLOSELY AS POSSIBLE. CARE SHALL BE TAKEN SO AS NOT TO DAMAGE ANY EXISTING BUILDING CONSTRUCTION OR ITEMS THAT ARE TO REMAIN. ANY EXISTING FINISHES THAT ARE DAMAGED DURING THE INSTALLATION OF NEW WORK OR REMOVAL OF EXISTING WORK SHALL BE REPAIRED, REPLACED AND PAID FOR BY THE INSTALLING CONTRACTOR, TO THE SATISFACTION OF THE ARCHITECT AND OWNER. REFER TO ARCHITECTURAL DRAWINGS FOR EXISTING BUILDING CONSTRUCTION THAT IS TO REMAIN AND, THEREFORE, SUBJECT TO PATCHING, REPAIRING, REFINISHING, AND REMOVAL/REPLACEMENT. (NOTE: CONTRACTOR SHALL VERIFY EXISTING BUILDING'S ROOF WARRANTY AND EMPLOY OTHER SUBCONTRACTOR(S) AS REQUIRED BY ROOF MANUFACTURER'S REPRESENTATIVE SO AS NOT TO VOID OWNER'S ROOF WARRANTY.)
- SOME OF THE EXISTING ITEMS AND EQUIPMENT SCHEDULED TO BE REMOVED SHALL BE TURNED OVER TO THE OWNER. ANY ITEMS THAT THE OWNER WANTS TO RETAIN SHALL BE REMOVED CAREFULLY SO AS NOT TO DAMAGE THEM. ALL OTHER ITEMS TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND REMOVED FROM THE SITE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR OWN CLEAN-UP DURING CONSTRUCTION. IF CONTRACTOR FAILS TO PROVIDE SUCH CLEAN-UP, THE ARCHITECT/ENGINEER WILL DIRECT ANOTHER CONTRACTOR TO PERFORM THE CLEAN-UP AND THE NEGLIGENT CONTRACTOR SHALL PAY THE ASSOCIATED BACK-CHARGES AS DEEMED APPROPRIATE BY THE ARCHITECT/ENGINEER.
- CONTRACTOR SHALL INSTALL ALL AUXILIARY SUPPORTING STEEL AS REQUIRED FOR THE SUPPORTING OF THEIR PIPING, DUCTWORK, CONDUIT, TANKS, EQUIPMENT, ETC. ALL SUPPORTING STEEL FOR ITEMS ABOVE A SUSPENDED CEILING SHALL BE FROM BUILDING STRUCTURAL MEMBERS ONLY.
- IT IS MANDATORY THAT THE COMPLETE EXISTING BUILDING REMAIN IN CONTINUOUS AND NON-INTERRUPTED OPERATION DURING REMODELING/ALTERING OF SAID EXISTING BUILDING. THE SPECIFIC AREA(S) BEING REMODELED/ALTERED AT ANY SCHEDULED TIME ARE OBVIOUSLY EXCLUSIVE OF THIS STATEMENT. SERVICES TO EXISTING BUILDING SHALL BE KEPT IN CONTINUOUS OPERATION INCLUDING POWER, SIGNAL SYSTEMS, LIGHTING, TELEPHONE, HEATING, COOLING, VENTILATING, TEMPERATURE CONTROL, SEWERS AND HOT AND COLD WATER. ANY ABSOLUTELY NECESSARY INTERRUPTION OF THESE SERVICES TO ACCOMPLISH CONTRACT WORK SHALL BE ARRANGED WITH THE OWNER A MINIMUM OF TEN (10) WORKING DAYS IN ADVANCE. SUCH INTERRUPTIONS SHALL BE KEPT TO AN ABSOLUTE MINIMUM AS FAR AS TIME INTERVAL IS INVOLVED AND TEMPORARY SERVICES SHALL BE FURNISHED AND INSTALLED UNDER THIS CONTRACT WHERE NECESSARY TO ACCOMPLISH THIS PURPOSE. TEMPORARIES SHALL BE REMOVED BY THE CONTRACTOR ONLY AFTER NEW PERMANENT SERVICES ARE INSTALLED AND FULLY OPERATIONAL.
- UNLESS INDICATED OTHERWISE, THE ARCHITECT/ENGINEER MAKES NO REPRESENTATION AS TO WHETHER OR NOT ANY HAZARDOUS OR CONTAMINATED MATERIALS (INCLUDING BUT NOT LIMITED TO ASBESTOS, PCB'S, CONTAMINATED SOILS, ETC.) ARE PRESENT WITHIN THE EXISTING BUILDING OR ON THE SITE. WORK SHOWN ON THE DRAWINGS AND/OR INDICATED IN THE SPECIFICATIONS SHALL NOT BE CONSTRUED TO CALL FOR CONTACT WITH ANY OF THESE MATERIALS. IF THESE MATERIALS ARE ENCOUNTERED OR SUSPECTED, THE CONTRACTOR SHALL NOT DISTURB THEM AND SHALL CONTACT THE ARCHITECT/ENGINEER IMMEDIATELY.
- WHERE WORK CALLED FOR ON THE DRAWINGS OR IN THE SPECIFICATIONS INVOLVES THE REMOVAL OR RELOCATION OF PIPING OR EQUIPMENT CONTAINING REFRIGERANT, ALL REFRIGERANT SHALL BE RECOVERED BY APPROVED METHODS PER EPA REGULATIONS.
- CONTRACTOR SHALL STORE ALL MATERIALS AND EQUIPMENT SHIPPED TO THE SITE IN A PROTECTED AREA. IF MATERIAL IS STORED OUTSIDE OF THE BUILDING, IT MUST BE STORED OFF THE GROUND A MINIMUM OF SIX INCHES (6") SET ON 6" X 6" PLANKS AND/OR WOOD PALLETES. ALL MATERIAL AND EQUIPMENT MUST BE COMPLETELY COVERED WITH WATERPROOF TARP OR VISQUIN. ALL PIPING AND DUCTWORK WILL HAVE THE ENDS CLOSED TO KEEP OUT DIRT AND OTHER DEBRIS. NO EQUIPMENT WILL BE ALLOWED TO BE STORED OUTSIDE THE BUILDING ON THE SITE UNLESS IT IS SUPPORTED OFF THE GROUND AND COMPLETELY PROTECTED WITH WEATHERPROOF COVERS.
- THE DRAWINGS, SCHEDULES AND SPECIFICATIONS HAVE BEEN PREPARED USING ONE MANUFACTURER FOR EACH PIECE OF EQUIPMENT AS THE BASIS FOR DIMENSIONAL DESIGN. IF THE CONTRACTOR PURCHASES EQUIPMENT FROM A SPECIFIED ACCEPTABLE MANUFACTURER, BUT NOT THE SCHEDULED MANUFACTURER USED FOR THE BASE DESIGN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING ALL THE DIMENSIONS OF THE EQUIPMENT TO VERIFY THAT IT WILL FIT IN THE SPACE SHOWN ON THE DRAWINGS. MINOR DEVIATIONS IN DIMENSIONS WILL BE PERMITTED, PROVIDED THE RATINGS MEET THOSE SHOWN ON THE DRAWINGS AND EQUIPMENT WILL PHYSICALLY FIT INTO THE SPACE ALLOCATED WITH SUITABLE ACCESS AROUND EQUIPMENT FOR OPERATION AND MAINTENANCE OF THE EQUIPMENT. WHEN EQUIPMENT SUBMITTED FOR REVIEW DOES NOT MEET THE PHYSICAL SIZE OR ARRANGEMENT OF THAT SCHEDULED AND SPECIFIED, CONTRACTOR SHALL PAY FOR ALL ALTERATIONS REQUIRED TO ACCOMMODATE SUCH EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR WILL ALSO PAY ALL COSTS FOR ADDITIONAL WORK REQUIRED BY OTHER CONTRACTORS, OWNER, ARCHITECT OR ENGINEER TO MAKE CHANGES WHICH WOULD ALLOW THE EQUIPMENT TO FIT IN THE SPACE AND FUNCTION AS INTENDED.
- CONTRACTOR AND/OR MANUFACTURER SHALL VERIFY THAT THE CHARACTERISTICS OF THE EQUIPMENT SUBMITTED FOR REVIEW MEETS THE CAPACITY AND DUTY SPECIFIED. WHEN EQUIPMENT SUBMITTED FOR REVIEW REQUIRES MODIFICATIONS TO THE WORK OF OTHER CONTRACTORS, SUBMITTING CONTRACTOR SHALL PAY FOR ALL COSTS FOR ADDITIONAL WORK REQUIRED BY OTHER CONTRACTORS, OWNER, ARCHITECT OR ENGINEER TO MAKE CHANGES WHICH WOULD ALLOW THE EQUIPMENT FUNCTION SAFELY AND PROPERLY.
- CONTRACTOR SHALL FIELD VERIFY THE SIZE OF EXISTING OPENINGS, WINDOWS, DOORS, CORRIDORS, ROOMS, ETC. FOR ACCESS OF THE NEW EQUIPMENT INTO OR REMOVAL OF EXISTING EQUIPMENT FROM THE BUILDING. IF OPENINGS ARE TOO SMALL FOR ACCESS THEN CONTRACTOR SHALL, AT THEIR OWN EXPENSE, PROVIDE NEW OR ENLARGED OPENINGS AND RESTORE SAME TO ORIGINAL SIZE AND CONDITION. CONTRACTOR MAY ELECT TO ORDER THE EQUIPMENT DISASSEMBLED AND/OR WITH SPLIT HOUSING FOR ENTRANCE INTO THE EXISTING SPACE OR BUILDING. CONTRACTOR SHALL REASSEMBLE EQUIPMENT AFTER IT IS IN THE SPACE AT THEIR OWN EXPENSE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND THEIR ASSOCIATED FEES.
- CONTRACTOR SHALL SUBMIT DIGITAL COPIES OF SHOP DRAWINGS OF ALL EQUIPMENT, DIFFUSERS, REGISTERS, TEMPERATURE CONTROL SYSTEM, FIRE DAMPERS, LIGHTING FIXTURES, PANELBOARDS, ELECTRICAL DEVICES, PLUMBING FIXTURES, AND 1/4" = 1'-0" SCALE DETAILED DUCT LAYOUT DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO ORDERING ANY ITEMS OR FABRICATING ANY DUCTWORK.
- CONTRACTOR SHALL PROVIDE OWNER TRAINING ON ALL EQUIPMENT AND BUILDING SYSTEMS PROVIDED/ALTERED BY THEIR WORK. TRAINING SHALL BE ACCOMPLISHED DURING TIME DEDICATED FOR THAT PURPOSE, NOT IN CONJUNCTION WITH SERVICE WORK.
- AT COMPLETION OF PROJECT, CONTRACTOR SHALL SUBMIT ONE PHYSICAL AND DIGITAL COPIES OF OPERATION AND MAINTENANCE MANUALS FOR ALL WORK PROVIDED BY THEM ON PROJECT. MANUALS SHALL BE CLEARLY ORGANIZED AND CONTAIN COPIES OF APPROVED EQUIPMENT, SHOP DRAWINGS, EQUIPMENT PARTS LISTS, SERVICE CONTACTS, CONTRACTOR AND MANUFACTURER WARRANTIES, AND "AS BUILT" FLOOR PLANS.
- CONTRACTOR SHALL PROVIDE WARRANTY FOR ALL MATERIAL AND GUARANTEE ALL WORKMANSHIP PROVIDED BY THEM FOR (ONE) YEAR FROM SUBSTANTIAL COMPLETION OF WORK INVOLVED.
- CONTRACTOR SHALL MAINTAIN A CURRENT CRYSTAL LAKE LICENSE THROUGHOUT ALL PHASES OF CONSTRUCTION. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO COORDINATE ANY INSPECTIONS WITH CRYSTAL LAKE OFFICIALS. CONTRACTOR SHALL PROVIDE ANY MINIMUM PRIOR NOTICE FOR INSPECTIONS WITH OFFICIALS.
- IDENTIFY ALL PIPING AND DUCTWORK WITH PLASTIC LABELS INDICATING CONTENTS AND FLOW DIRECTION. MARKERS TO BE PLACED AT A MAXIMUM OF 50 FT. INTERVALS AT BRANCH CONNECTIONS, AND AT BOTH SIDES OF WALL/FLOOR PENETRATIONS. IDENTIFY VALVES, EQUIPMENT, AND PANELS WITH ENGRAVED 3-LAYER PLASTIC LAMINATED TAGS OR SIGNS.

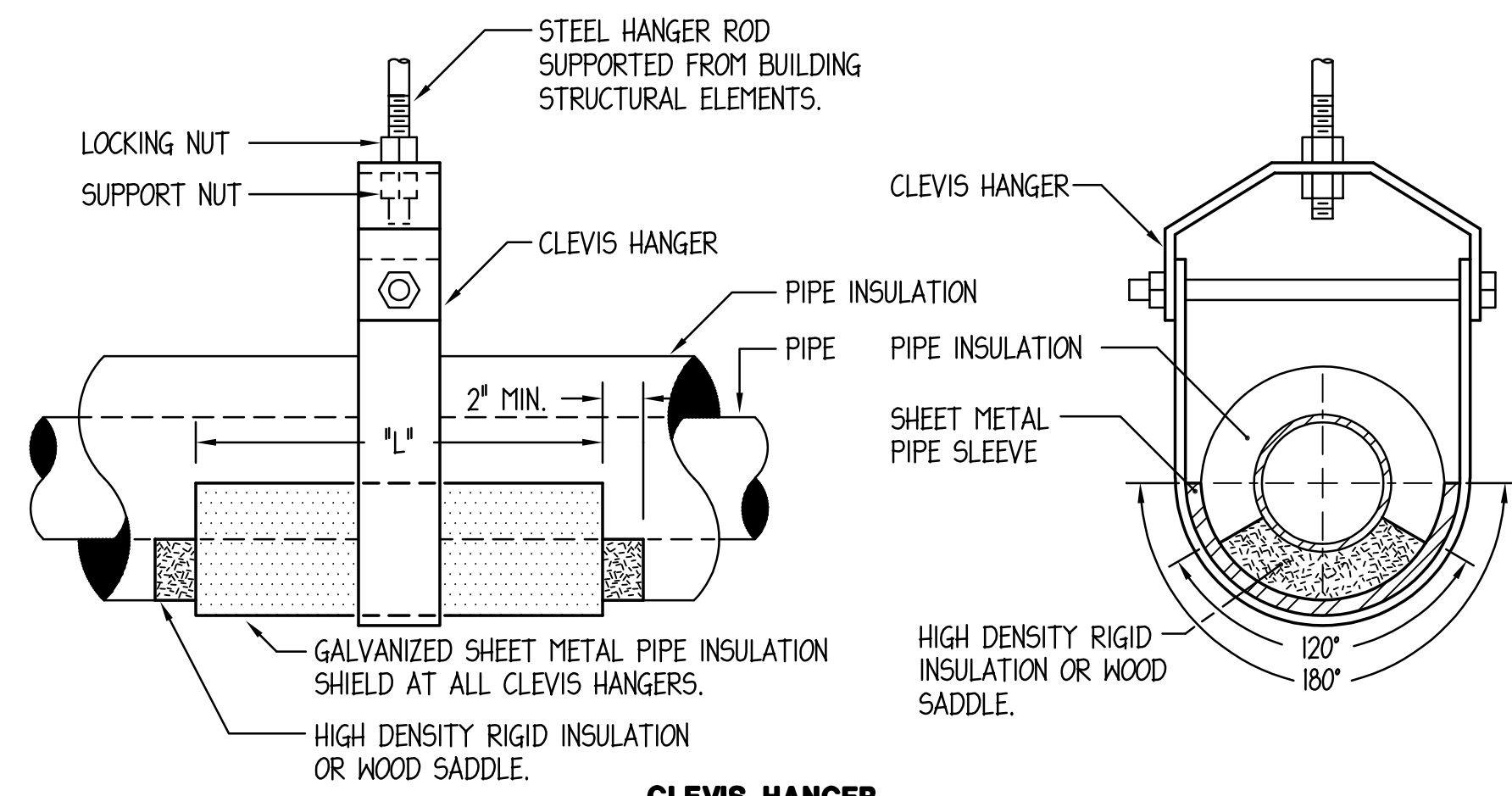


**PIPING OR CONDUIT ROOF CURB DETAIL**  
 NO SCALE

**NOTE:**  
 COORDINATE ALL ROOF WORK  
 SO AS NOT TO VOID OWNER'S  
 ROOF WARRANTY.



**PIPING OR CONDUIT ROOF SUPPORT DETAIL**  
 NO SCALE



**CLEVIS HANGER**

PIPE SIZE	LENGTH	GAUGE
UP TO 3/4"	8"	20 GA.
1" - 2"	12"	18 GA.
2 1/2" - 4"	12"	16 GA.

**NOTE:** 1. CONFER WITH ARCHITECT AND REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION ON ACCEPTABLE METHODS AND LOCATIONS FOR HANGER SUPPORTS.

**TYPICAL PIPE HANGER DETAILS**  
 NO SCALE



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**MCHENRY COUNTY COLLEGE  
 2024 SERVER ROOM IMPROVEMENTS**

8900 U.S. Highway 14  
 Crystal Lake, IL 60012  
 DKA PROJECT NO: 21-042

KEY PLAN:

SHEET STATUS: 04/25/2024

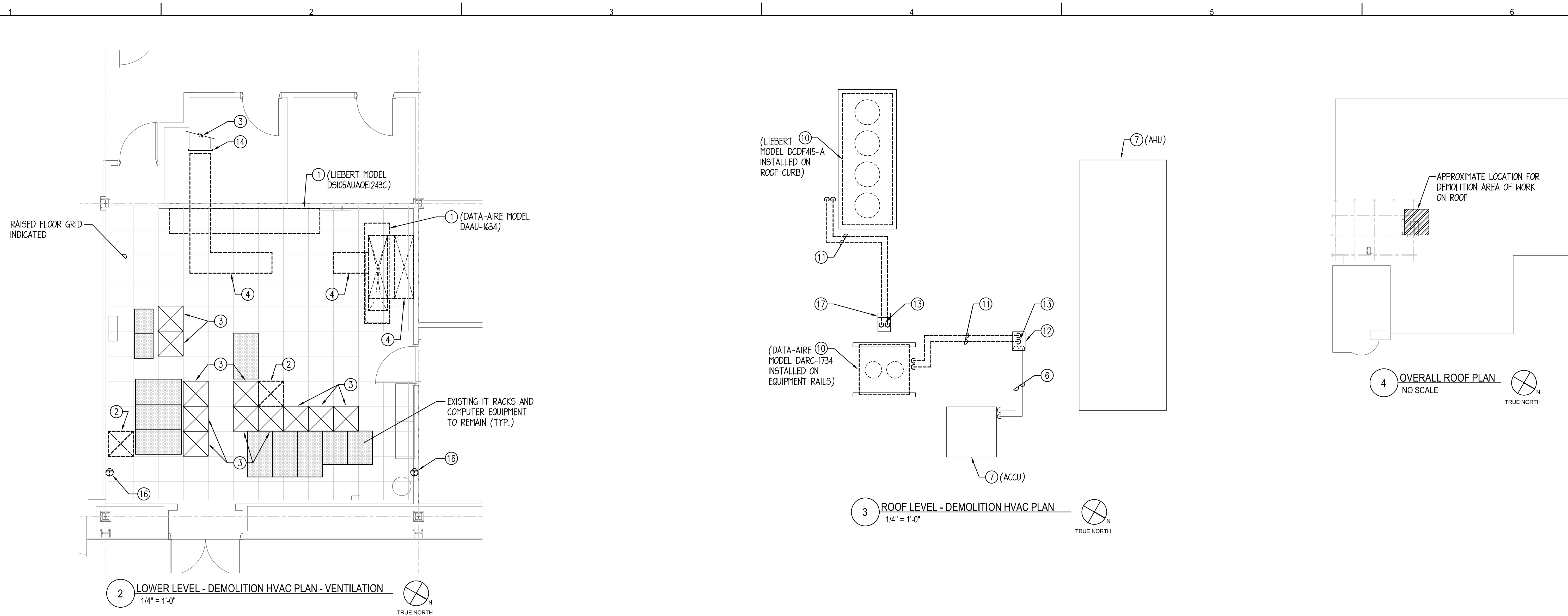
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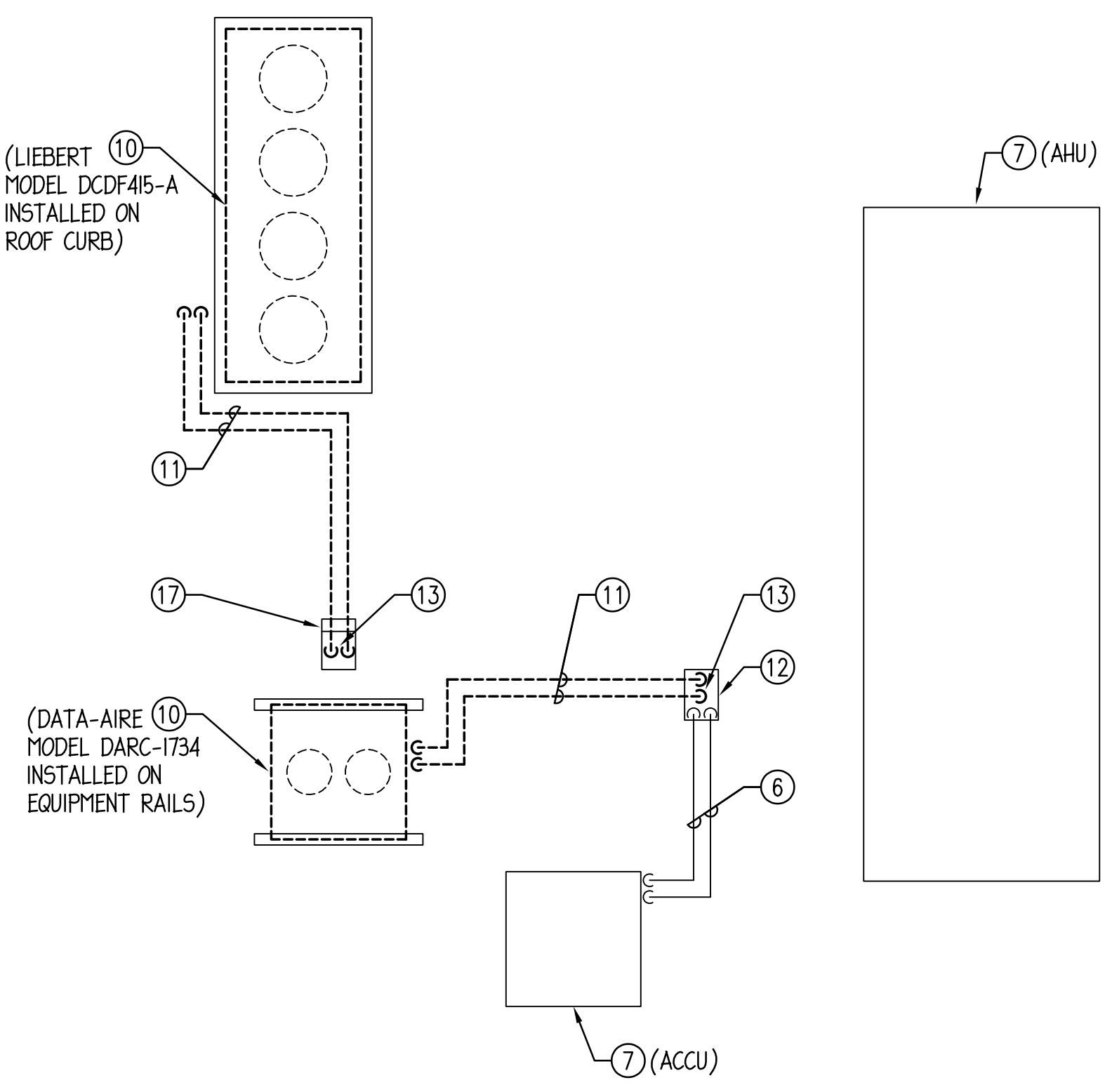
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**DEMOLITION HVAC  
 PLANS**

SHEET NUMBER:

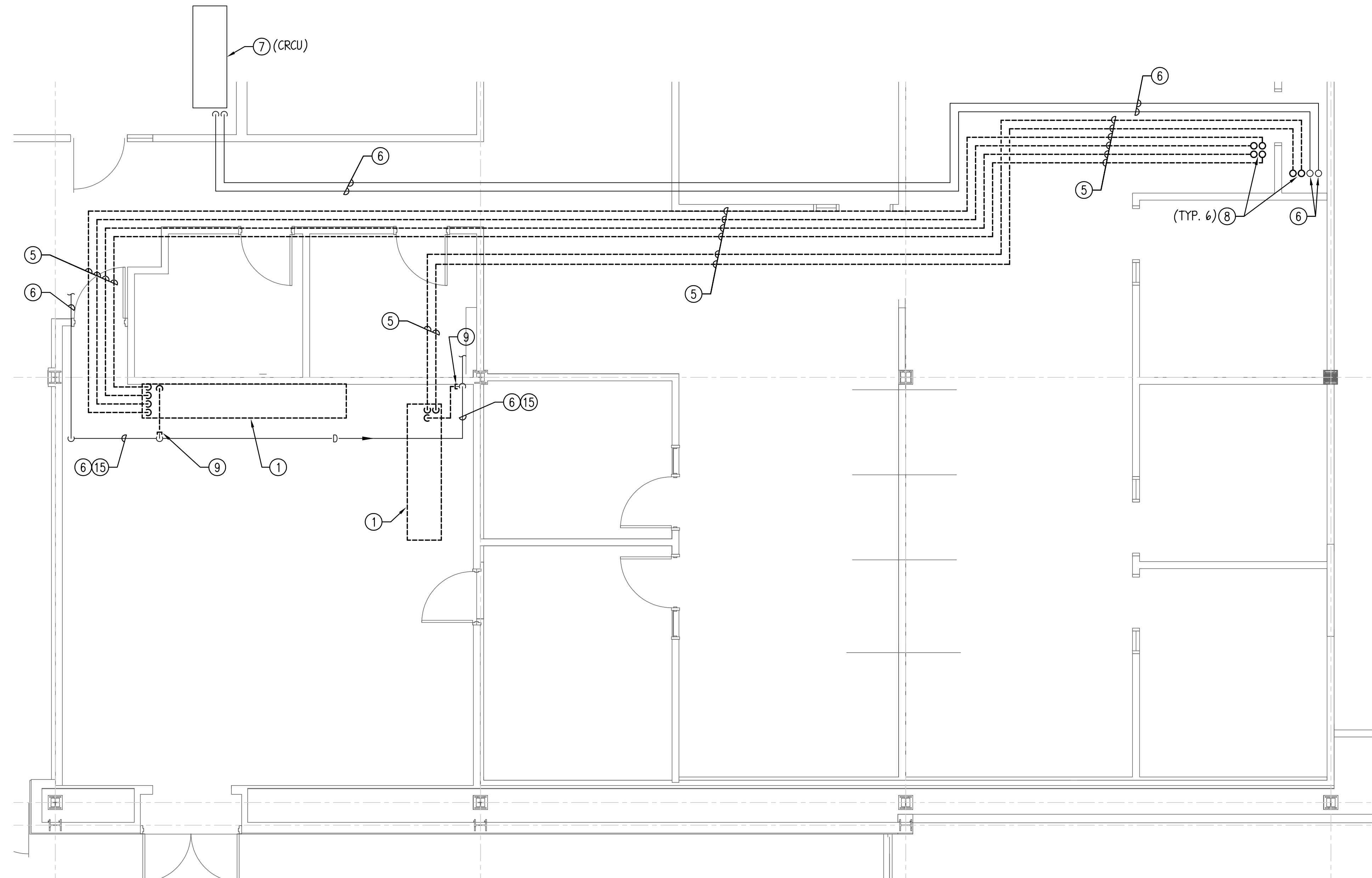
**HVD1.00**



**2 LOWER LEVEL - DEMOLITION HVAC PLAN - VENTILATION**  
 1/4" = 1'-0"  
 TRUE NORTH



**3 ROOF LEVEL - DEMOLITION HVAC PLAN**  
 1/4" = 1'-0"  
 TRUE NORTH



**1 LOWER LEVEL - DEMOLITION HVAC PLAN - PIPING**  
 1/4" = 1'-0"  
 TRUE NORTH

**DRAWING NOTES:** (TYPICAL FOR THIS DRAWING ONLY)

- 1 REMOVE EXISTING COMPUTER COOLING UNIT INCLUDING ASSOCIATED DUCTWORK, DAMPERS, REFRIGERANT PIPING, VALVING, CONTROLS, HANGERS, SUPPORTS, INSULATION, CONDENSATE PUMP, EQUIPMENT SUPPORT, ETC. MODIFY DRAIN PIPING AS REQUIRED TO ACCOMMODATE INSTALLATION OF NEW UNIT. COORDINATE REMOVAL OF POWER WITH ELECTRICAL CONTRACTOR. COORDINATE REMOVAL OF DOMESTIC WATER WITH PLUMBING CONTRACTOR.
- 2 REMOVE EXISTING FLOOR SUPPLY GRILLE SHOWN DASHED. SEE ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION.
- 3 EXISTING DUCTWORK, DIFFUSERS, REGISTERS, AND GRILLES TO REMAIN.
- 4 REMOVE ALL DUCTWORK, DIFFUSERS, REGISTERS, HANGERS, INSULATION, ETC. SHOWN DASHED. REMOVE ASSOCIATED EXISTING DUCTWORK ROUTED ABOVE CEILING.
- 5 REMOVE ALL PIPING, VALVING, HANGERS, INSULATION, ETC. BETWEEN CONDENSING UNIT LOCATED ON ROOF TO ASSOCIATED INDOOR UNIT SHOWN DASHED.
- 6 EXISTING PIPING AND VALVING TO REMAIN.
- 7 EXISTING HVAC EQUIPMENT TO REMAIN.
- 8 REMOVE REFRIGERANT PIPING SHOWN DASHED TO FLOOR ABOVE. REMOVE EXISTING REFRIGERANT PIPING ROUTED FROM FLOOR ABOVE AND OVER TO ROOF CURB.
- 9 CAP EXISTING PIPE AT LOCATION SHOWN AND REMOVE ALL PIPING, VALVING, HANGERS, INSULATION, ETC. SHOWN DASHED BEYOND THIS POINT.
- 10 REMOVE EXISTING COMPUTER COOLING UNIT CONDENSING UNIT LOCATED ON ROOF INCLUDING ASSOCIATED REFRIGERANT PIPING, VALVING, CONTROLS, INSULATION, ETC. COORDINATE REMOVAL OF POWER WITH ELECTRICAL CONTRACTOR. REMOVE EXISTING ROOF CURB/EQUIPMENT RAILS AND PATCH TO MATCH EXISTING.
- 11 REMOVE ALL PIPING, VALVING, HANGERS, INSULATION, ETC. BETWEEN CONDENSING UNIT LOCATED ON ROOF DOWN TO ASSOCIATED INDOOR UNIT SHOWN DASHED.
- 12 EXISTING PIPE CURB TO REMAIN AND BE SEALED/CAPPED TO ACCOMMODATE REMOVAL OF EXISTING REFRIGERANT PIPING, CONDUITS, WIRING, ETC.
- 13 REMOVE EXISTING REFRIGERANT PIPING ROUTED THRU PIPE CURB AND TO FLOOR BELOW. REMOVE PIPING WITHIN CEILING ON FLOOR BELOW AND DOWN THRU CHASE TO LOWER LEVEL.
- 14 CAP EXISTING DUCT AT LOCATION SHOWN AND REMOVE ALL DUCTWORK, REGISTERS, DIFFUSERS, HANGERS, INSULATION, ETC. SHOWN DASHED BEYOND THIS POINT.
- 15 FIELD VERIFY EXISTING DRAIN PIPING AND CONFIGURATION. PROVIDE REPORT TO ENGINEER IF THE INDICATED PIPING IS NOT DRAIN PIPING, OR HAS A DIFFERENT CONFIGURATION THAN INDICATED ON PLAN. TAPE EXISTING INSULATION AROUND PIPING CLOSED WHERE SEALANT HAS FAILED AND EXISTING PIPING IS EXPOSED.
- 16 COORDINATE REMOVAL OF EXISTING THERMOSTAT CONNECTED TO REMOVED EQUIPMENT, INCLUDING ASSOCIATED CONDUIT, WIRING, PNEUMATIC TUBING, ETC. LOCATED ABOVE ANY ACCESSIBLE CEILING BETWEEN THERMOSTAT AND THE UNIT IT CONTROLS. PROVIDE BLANK COVER PLATE OVER ALL ABANDONED JUNCTION BOXES IN WALLS THAT ARE TO REMAIN.
- 17 REMOVE EXISTING PIPE CURB IF ALL PIPING AND CONDUIT/WIRING HAS BEEN REMOVED AND PATCH/SEAL TO MATCH EXISTING. IF ANY ACTIVE PIPING, CONDUIT, WIRING, ETC. IS TO REMAIN, SEAL/CAP WEATHERTIGHT TO ACCOMMODATE REMOVAL OF EXISTING PIPING, WIRING, CONDUITS, ETC.

NAME: 1550424 HVD1.00.DWG BY: JEC DATE: Apr. 25, 24 TIME: 1:25 PM



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 SCHAUMBURG, IL 60173  
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**MCHENRY COUNTY COLLEGE  
 2024 SERVER ROOM IMPROVEMENTS**

8900 U.S. Highway 14  
 Crystal Lake, IL 60012  
 DKA PROJECT NO: 21-042

KEY PLAN:

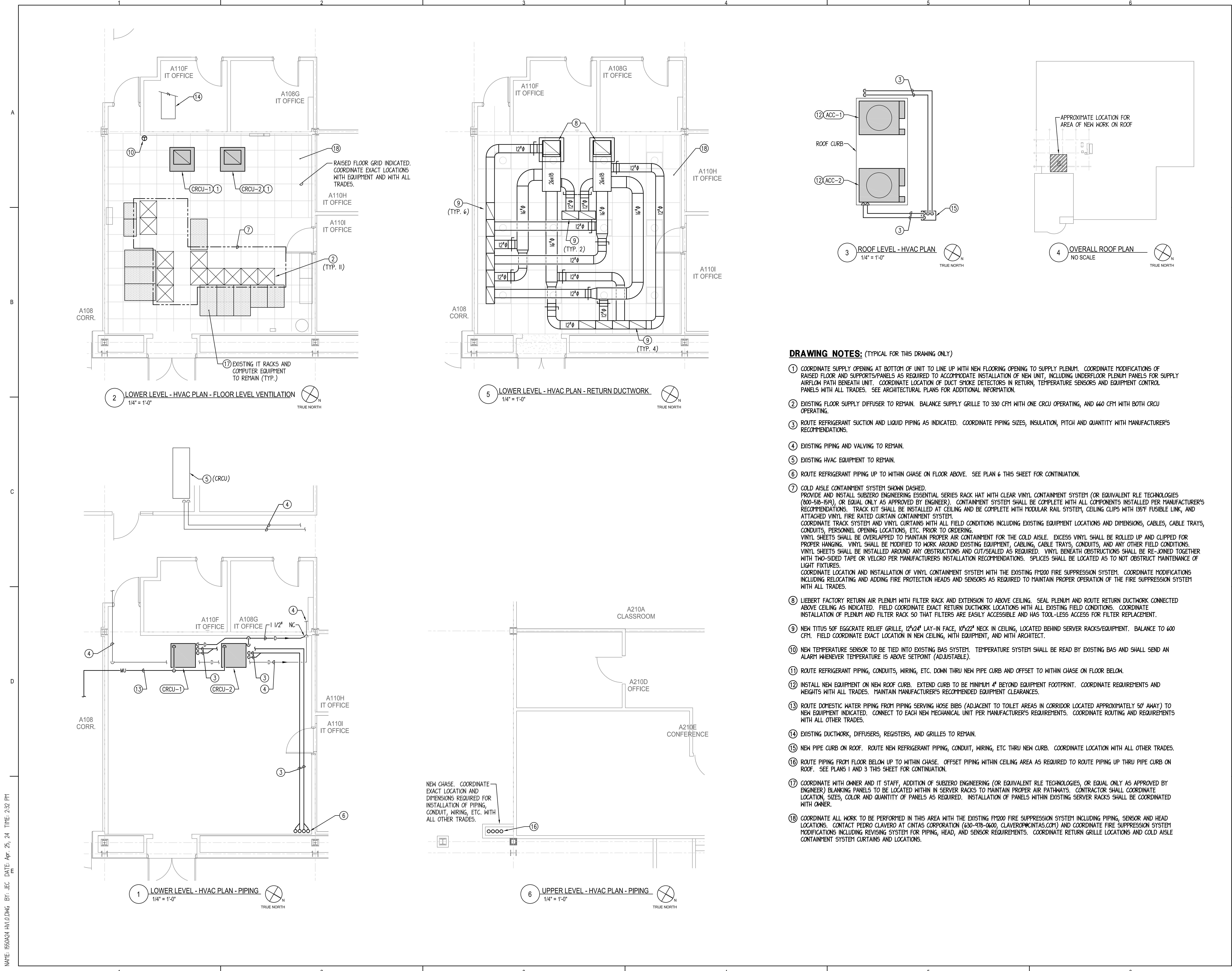
SHEET STATUS: 04/25/2024  
**ISSUED FOR BID - NOT  
 FOR CONSTRUCTION**

NO.	DESCRIPTION:	DATE:

SHEET TITLE:  
**HVAC PLANS**

SHEET NUMBER:

**HV1.00**



**2 LOWER LEVEL - HVAC PLAN - FLOOR LEVEL VENTILATION**  
 1/4" = 1'-0" TRUE NORTH

**5 LOWER LEVEL - HVAC PLAN - RETURN DUCTWORK**  
 1/4" = 1'-0" TRUE NORTH

**1 LOWER LEVEL - HVAC PLAN - PIPING**  
 1/4" = 1'-0" TRUE NORTH

**6 UPPER LEVEL - HVAC PLAN - PIPING**  
 1/4" = 1'-0" TRUE NORTH

**3 ROOF LEVEL - HVAC PLAN**  
 1/4" = 1'-0" TRUE NORTH

**4 OVERALL ROOF PLAN**  
 NO SCALE TRUE NORTH

**DRAWING NOTES:** (TYPICAL FOR THIS DRAWING ONLY)

- COORDINATE SUPPLY OPENING AT BOTTOM OF UNIT TO LINE UP WITH NEW FLOORING OPENING TO SUPPLY PLENUM. COORDINATE MODIFICATIONS OF RAISED FLOOR AND SUPPORTS/PANELS AS REQUIRED TO ACCOMMODATE INSTALLATION OF NEW UNIT, INCLUDING UNDERFLOOR PLENUM PANELS FOR SUPPLY AIRFLOW PATH BENEATH UNIT. COORDINATE LOCATION OF DUCT SMOKE DETECTORS IN RETURN, TEMPERATURE SENSORS AND EQUIPMENT CONTROL PANELS WITH ALL TRADES. SEE ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION.
- EXISTING FLOOR SUPPLY DIFFUSER TO REMAIN. BALANCE SUPPLY GRILLE TO 330 CFM WITH ONE CRCU OPERATING, AND 660 CFM WITH BOTH CRCU OPERATING.
- ROUTE REFRIGERANT SUCTION AND LIQUID PIPING AS INDICATED. COORDINATE PIPING SIZES, INSULATION, PITCH AND QUANTITY WITH MANUFACTURER'S RECOMMENDATIONS.
- EXISTING PIPING AND VALVING TO REMAIN.
- EXISTING HVAC EQUIPMENT TO REMAIN.
- ROUTE REFRIGERANT PIPING UP TO WITHIN CHASE ON FLOOR ABOVE. SEE PLAN 6 THIS SHEET FOR CONTINUATION.
- COLD AISLE CONTAINMENT SYSTEM SHOWN DASHED. PROVIDE AND INSTALL SUBZERO ENGINEERING ESSENTIAL SERIES RACK HAT WITH CLEAR VINYL CONTAINMENT SYSTEM (OR EQUIVALENT RLE TECHNOLOGIES (800-518-5194), OR EQUAL ONLY AS APPROVED BY ENGINEER). CONTAINMENT SYSTEM SHALL BE COMPLETE WITH ALL COMPONENTS INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. TRACK KIT SHALL BE INSTALLED AT CEILING AND BE COMPLETE WITH MODULAR RAIL SYSTEM, CEILING CLIPS WITH 195F FUSIBLE LINK, AND ATTACHED VINYL FIRE RATED CURTAIN CONTAINMENT SYSTEM. COORDINATE TRACK SYSTEM AND VINYL CURTAINS WITH ALL FIELD CONDITIONS INCLUDING EXISTING EQUIPMENT LOCATIONS AND DIMENSIONS, CABLES, CABLE TRAYS, CONDUITS, PERSONNEL OPENING LOCATIONS, ETC. PRIOR TO ORDERING. VINYL SHEETS SHALL BE OVERLAPPED TO MAINTAIN PROPER AIR CONTAINMENT FOR THE COLD AISLE. EXCESS VINYL SHALL BE ROLLED UP AND CLIPPED FOR PROPER HANGING. VINYL SHALL BE MODIFIED TO WORK AROUND EXISTING EQUIPMENT, CABLING, CABLE TRAYS, CONDUITS, AND ANY OTHER FIELD CONDITIONS. VINYL SHEETS SHALL BE INSTALLED AROUND ANY OBSTRUCTIONS AND CUT/SEALED AS REQUIRED. VINYL BENEATH OBSTRUCTIONS SHALL BE RE-JOINED TOGETHER WITH TWO-SIDED TAPE OR VELCRO PER MANUFACTURER'S INSTALLATION RECOMMENDATIONS. SPLICES SHALL BE LOCATED AS TO NOT OBSTRUCT MAINTENANCE OF LIGHT FIXTURES. COORDINATE LOCATION AND INSTALLATION OF VINYL CONTAINMENT SYSTEM WITH THE EXISTING FM200 FIRE SUPPRESSION SYSTEM. COORDINATE MODIFICATIONS INCLUDING RELOCATING AND ADDING FIRE PROTECTION HEADS AND SENSORS AS REQUIRED TO MAINTAIN PROPER OPERATION OF THE FIRE SUPPRESSION SYSTEM WITH ALL TRADES.
- LIEBERT FACTORY RETURN AIR PLENUM WITH FILTER RACK AND EXTENSION TO ABOVE CEILING. SEAL PLENUM AND ROUTE RETURN DUCTWORK CONNECTED ABOVE CEILING AS INDICATED. FIELD COORDINATE EXACT RETURN DUCTWORK LOCATIONS WITH ALL EXISTING FIELD CONDITIONS. COORDINATE INSTALLATION OF PLENUM AND FILTER RACK SO THAT FILTERS ARE EASILY ACCESSIBLE AND HAS TOOL-LESS ACCESS FOR FILTER REPLACEMENT.
- NEW TITUS 50F EGGCRATE RELIEF GRILLE, 12"x24" LAY-IN FACE, 10"x22" NECK IN CEILING, LOCATED BEHIND SERVER RACKS/EQUIPMENT. BALANCE TO 600 CFM. FIELD COORDINATE EXACT LOCATION IN NEW CEILING, WITH EQUIPMENT, AND WITH ARCHITECT.
- NEW TEMPERATURE SENSOR TO BE TIED INTO EXISTING BAS SYSTEM. TEMPERATURE SYSTEM SHALL BE READ BY EXISTING BAS AND SHALL SEND AN ALARM WHENEVER TEMPERATURE IS ABOVE SETPOINT (ADJUSTABLE).
- ROUTE REFRIGERANT PIPING, CONDUITS, WIRING, ETC. DOWN THRU NEW PIPE CURB AND OFFSET TO WITHIN CHASE ON FLOOR BELOW.
- INSTALL NEW EQUIPMENT ON NEW ROOF CURB. EXTEND CURB TO BE MINIMUM 4" BEYOND EQUIPMENT FOOTPRINT. COORDINATE REQUIREMENTS AND HEIGHTS WITH ALL TRADES. MAINTAIN MANUFACTURER'S RECOMMENDED EQUIPMENT CLEARANCES.
- ROUTE DOMESTIC WATER PIPING FROM PIPING SERVING HOSE BIBS (ADJACENT TO TOILET AREAS IN CORRIDOR LOCATED APPROXIMATELY 50' AWAY) TO NEW EQUIPMENT INDICATED. CONNECT TO EACH NEW MECHANICAL UNIT PER MANUFACTURER'S REQUIREMENTS. COORDINATE ROUTING AND REQUIREMENTS WITH ALL OTHER TRADES.
- EXISTING DUCTWORK, DIFFUSERS, REGISTERS, AND GRILLES TO REMAIN.
- NEW PIPE CURB ON ROOF. ROUTE NEW REFRIGERANT PIPING, CONDUIT, WIRING, ETC THRU NEW CURB. COORDINATE LOCATION WITH ALL OTHER TRADES.
- ROUTE PIPING FROM FLOOR BELOW UP TO WITHIN CHASE. OFFSET PIPING WITHIN CEILING AREA AS REQUIRED TO ROUTE PIPING UP THRU PIPE CURB ON ROOF. SEE PLANS 1 AND 3 THIS SHEET FOR CONTINUATION.
- COORDINATE WITH OWNER AND IT STAFF, ADDITION OF SUBZERO ENGINEERING (OR EQUIVALENT RLE TECHNOLOGIES, OR EQUAL ONLY AS APPROVED BY ENGINEER) BLANKING PANELS TO BE LOCATED WITHIN IN SERVER RACKS TO MAINTAIN PROPER AIR PATHWAYS. CONTRACTOR SHALL COORDINATE LOCATION, SIZES, COLOR AND QUANTITY OF PANELS AS REQUIRED. INSTALLATION OF PANELS WITHIN EXISTING SERVER RACKS SHALL BE COORDINATED WITH OWNER.
- COORDINATE ALL WORK TO BE PERFORMED IN THIS AREA WITH THE EXISTING FM200 FIRE SUPPRESSION SYSTEM INCLUDING PIPING, SENSOR AND HEAD LOCATIONS. CONTACT PEDRO CLAVERO AT CINTAS CORPORATION (630-978-0600, CLAVEROP@CINTAS.COM) AND COORDINATE FIRE SUPPRESSION SYSTEM MODIFICATIONS INCLUDING REVISING SYSTEM FOR PIPING, HEAD, AND SENSOR REQUIREMENTS. COORDINATE RETURN GRILLE LOCATIONS AND COLD AISLE CONTAINMENT SYSTEM CURTAINS AND LOCATIONS.

NAME: 1550424 HV1.0.DWG BY: JEC DATE: Apr. 25, 24 TIME: 2:32 PM



ARCHITECT OF RECORD  
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 125 N. HALSTED STREET, SUITE 301  
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MEP-PP ENGINEER  
 2010 ENGINEERING GROUP, LLC  
 1216 TOWER ROAD  
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**COMPUTER ROOM COOLING UNIT SCHEDULE (PRE-PURCHASED)**

EQUIPMENT TAG	LOCATION	AREA SERVED	MANUFACTURER	MODEL	TYPE	APPROX. WEIGHT (LBS.)	APPROXIMATE OVERALL DIMENSIONS (IN.)			CAPACITY (MBH)		AIRFLOW			COMPRESSOR		REHEAT		HUMIDIFIER			AIR FILTERS				ELECTRICAL DATA				NOTES
							H	W	D	TOTAL	SENS.	CFM	EAT. (DB/WB)	LAT. (DB/WB)	REFRIGERANT	TYPE	CAP. (KW)	STAGES	TYPE	CAPACITY	KW	TYPE	LBS/HR	EFF	THICKNESS	MCA	MOCP	PHASE	VOLT	
CRCU-1	IT EQUIPMENT ROOM	IT EQUIPMENT ROOM	LIEBERT	FX023DA14D	AIR COOLED VERTICAL DOWNFLOW	725	78	34	35	74.5	66	3,600	75/61	58/54	R-410A	ELEC.	12	2	INFRARED	7.7 LBS/HR.	4.8	INFRARED	7.7	MERV 8	2"	33.7	50	3	480	1,2,3,4,5,6,7,8,9,10
CRCU-2	IT EQUIPMENT ROOM	IT EQUIPMENT ROOM	LIEBERT	FX023DA14D	AIR COOLED VERTICAL DOWNFLOW	725	78	34	35	74.5	66	3,600	75/61	58/54	R-410A	ELEC.	12	2	INFRARED	7.7 LBS/HR.	4.8	INFRARED	7.7	MERV 8	2"	33.7	50	3	480	1,2,3,4,5,6,7,8,9,10

NOTES: 1. ICOM ADVANCED MICROPROCESSOR CONTROL WITH GRAPHICS, AND UNIT-TO-UNIT COMMUNICATIONS FOR CONTROL FUNCTIONALITY, AUTO-RESTART, ETC.  
 2. DIGITAL SCROLL COMPRESSORS WITH TXV.  
 3. DUAL FLOAT 5 GPM CONDENSATE PUMP WITH UNIT INTERLOCK.  
 4. LIQUITEC LEAK DETECTOR.  
 5. SMOKE DETECTOR  
 6. LOCKING DISCONNECT SWITCH  
 7. ADJUSTABLE FLOOR STAND AND EQUIPMENT PANELS COMPATIBLE WITH EXISTING FLOOR.  
 8. RETURN AIR/SUPPLY AIR TEMPERATURE SENSORS.  
 9. BACNET CARD.  
 10. TOP RETURN AIR PLENUM WITH FILTER ACCESS.

**AIR COOLED CONDENSER SCHEDULE (PRE-PURCHASED)**

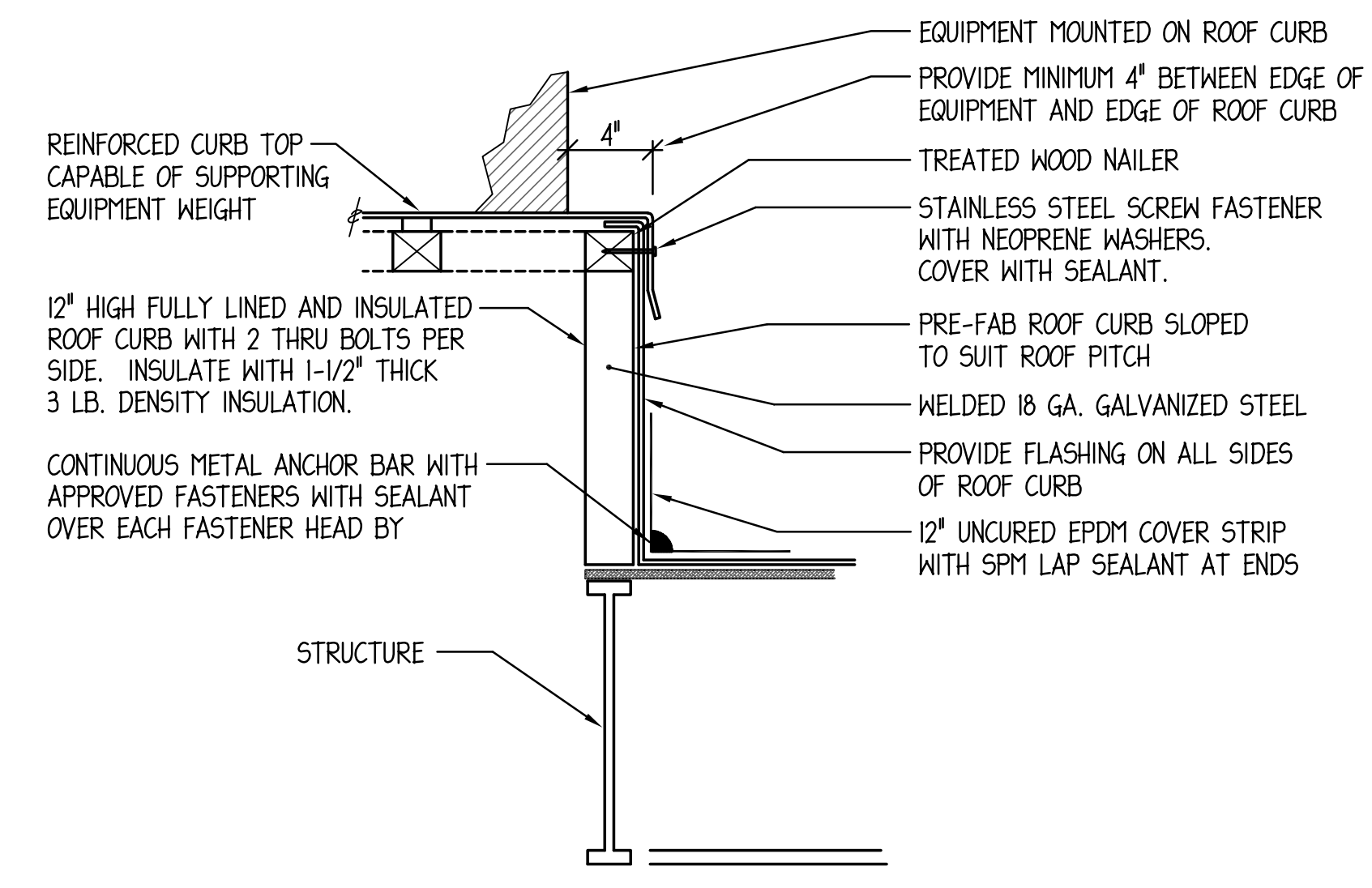
EQUIPMENT TAG	LOCATION	UNIT SERVED	MANUFACTURER	MODEL	APPROX. WEIGHT (LBS.)	APPROXIMATE OVERALL DIMENSIONS (IN.)			HEAT REJECTION (MBH)	REFRIGERANT TYPE	FANS		ELECTRICAL DATA				NOTES
						L	W	H			EAT (°F)	QUANTITY	MCA	MOCP	PHASE	VOLT	
ACC-1	ROOF	CRCU-1	LIEBERT	MCM040E1	310	57	48	40	75	R-410A	100	1	1.4	15	3	480	1,2,3
ACC-2	ROOF	CRCU-2	LIEBERT	MCM040E1	310	57	48	40	75	R-410A	100	1	1.4	15	3	480	1,2,3

NOTES: 1. FAN SPEED CONTROL WITH PREMIUM EC MOTOR. 2. LOCKING DISCONNECT SWITCH. 3. 18" LEGS, OR AS REQUIRED TO MAINTAIN PIPE PITCH.

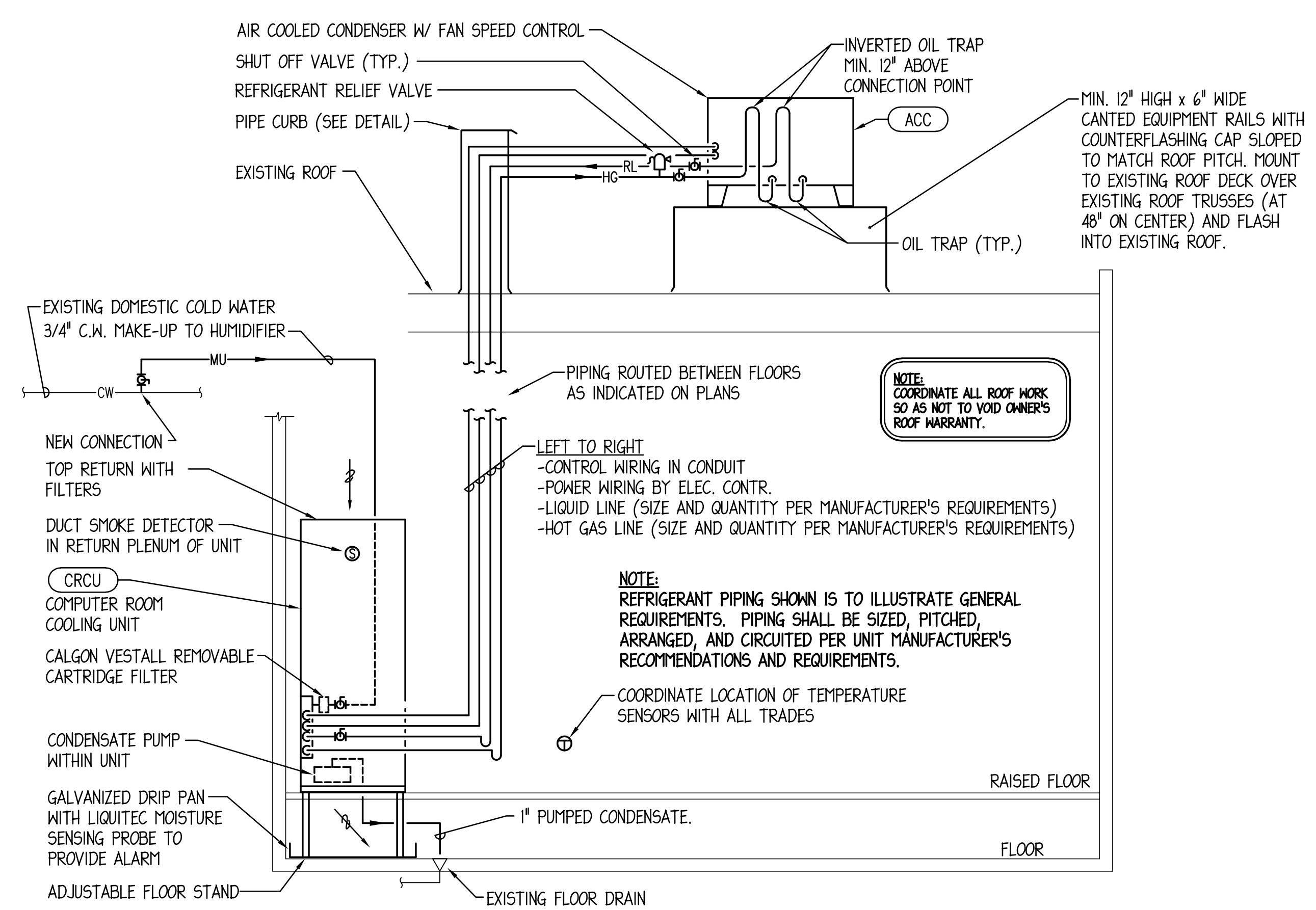
EQUIPMENT INDICATED IN SCHEDULES HAVE BEEN PRE-PURCHASED BY OWNER AND SHALL BE INSTALLED BY CONTRACTOR. CONTRACTOR SHALL INSTALL ALL FIELD INSTALLED ACCESSORIES/OPTIONS.

**GENERAL NOTES - HVAC WORK:**

- ALL NEW WORK AND MATERIALS SHALL CONFORM TO CRYSTAL LAKE CODE AND MCC BUILDING STANDARDS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS AND INSPECTIONS AND PAYING THEIR ASSOCIATED FEES.
- NOISE AND VIBRATION WILL NOT BE TOLERATED. CONTRACTOR SHALL BID ON FURNISHING EVERY DETAIL TO ASSURE THIS END.
- PATCH AND REFINISH ALL DAMAGED INSULATED SURFACES OF ALL EXISTING DUCTWORK, PIPING AND ASSOCIATED FITTINGS TO MATCH EXISTING WHERE NEW CONNECTIONS ARE BEING MADE.
- CONTRACTORS SHALL PROVIDE A ONE YEAR WARRANTY ON ALL MATERIALS, EQUIPMENT AND LABOR FROM DATE OF SUBSTANTIAL COMPLETION.
- CONTRACTORS SHALL PROVIDE IN WARRANTY LABOR AND MANUFACTURER WILL PROVIDE IN WARRANTY PARTS FOR EQUIPMENT WHICH HAS BEEN PRE-PURCHASED BY THE OWNER. CONTRACTOR SHALL RECEIVE THIS EQUIPMENT FROM THE OWNER AT THE PROJECT SITE OR OTHER COORDINATED LOCATION, AND THE CONTRACTOR SHALL COMPLETE REQUIRED ASSEMBLY WORK AND PROVIDE LABOR AND PROPER INSTALLATION.
- THE LOCATIONS SHOWN FOR ALL DIFFUSERS, REGISTERS AND GRILLES, ETC. ARE DIAGRAMMATIC. EXACT LOCATION SHALL BE DETERMINED FROM THE REFLECTED CEILING PLANS AND/OR ON THE JOB SITE BY THE ARCHITECT/ENGINEER REPRESENTATIVES.
- EXCEPT AS NOTED OTHERWISE, ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK SHALL BE GALVANIZED SHEET METAL WITH SEALED JOINTS CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH CURRENT SMACNA MANUAL. SIZES SHOWN ARE INSIDE FACE TO INSIDE FACE.
- THE GAUGES OF IRON FOR DUCTS AND CASINGS AND SIZE OF STRUCTURAL REINFORCING ANGLES FOR DUCTS AND CASING SHALL BE SUCH AS TO PROVIDE ABSOLUTELY AIR TIGHT CONSTRUCTION FREE FROM PULSATION, DEFORMATION, OR VIBRATION AT NORMAL OPERATING PRESSURES.
- ALL NEW RETURN DUCTWORK SHALL BE EXTERNALLY INSULATED MINIMUM 1 1/2" THICK WITH FLEXIBLE FIBERGLASS INSULATION WITH VAPOR BARRIER JACKET.
- ALL ROUND CONCEALED FLEXIBLE DUCT SHALL BE WIREMOLD OR THERMOFLEX FACTORY INSULATED 1" THICK MAXIMUM OF 5'-0" LONG TO DIFFUSERS/REGISTERS. FLEXIBLE DUCT MAY BE UTILIZED ONLY WHERE CONCEALED ABOVE ACCESSIBLE CEILINGS.
- PROVIDE MANUAL VOLUME DAMPERS AT EACH BRANCH DUCT TAKEOFF IN RETURN DUCTWORK. PROVIDE TURNING VANES IN ALL SQUARE DUCT ELBOWS.
- PAINT ALL INTERIOR DUCTWORK VISIBLE THROUGH AIR INLETS OR OUTLETS FLAT BLACK.
- BALANCE DUCT SYSTEMS TO ACCOMPLISH AIR QUANTITIES SHOWN AT ALL INLETS/OUTLETS (NEW AND EXISTING) AS SHOWN ON DRAWING AND SUBMIT TEST REPORT FOR REVIEW BY OWNER AND ENGINEER.
- ALL MAKE-UP WATER PIPING AND FITTINGS SHALL BE TYPE 1/2" COPPER, INSULATED WITH MINIMUM 1" THICK FIBERGLASS PIPE INSULATION W/VAPOR BARRIER JACKET.
- ALL REFRIGERANT PIPING SHALL BE TYPE 1/2" COPPER WITH WROUGHT COPPER SOLDER FITTINGS. PIPING SHALL BE CIRCUITED, SIZED, AND PITCHED PER EQUIPMENT MANUFACTURER'S RECOMMENDATIONS. INSULATE REFRIGERANT SUCTION AND HOT GAS LINES WITH 3/4" THICK AP/ARMAFLEX. PAINT EXTERIOR INSULATION WITH 2 COATS UV RESISTANT FINISH, COLOR AS SELECTED PER ARCHITECT.
- DRIP PAN DRAIN PIPING SHALL BE SCHEDULE 40 PVC, OR TYPE 1/2" COPPER WITH 1/2" INSULATION.
- ALL PIPING SHALL BE SUSPENDED WITH CLEVIS AND/OR TRAPEZE PIPE HANGERS. INSULATED PIPING SHALL REST ON SHEET METAL INSULATION SHIELDS. ANCHORS SHALL BE DRILLED INTO EXISTING FLOOR CONSTRUCTION.
- FLUSH, CLEAN, PRESSURE TEST AND CHARGE ALL NEW PIPING SYSTEMS AND EXTENSION TO PIPING SYSTEMS. TESTING SHALL BE MINIMUM 50 PSI HIGHER THAN NORMAL OPERATING PRESSURE OF SYSTEM. CLEANING OF SYSTEM SHALL BE ACCOMPLISHED WITH H-O-H C-312 (OR EQUAL) CHEMICAL SOLUTION MULTIPURPOSE CLEANER UTILIZED IN STRICT ACCORDANCE WITH CHEMICAL TREATMENT SUPPLIER'S INSTRUCTION.
- PROVIDE MIRO PIPE CURBS ON TOP OF 3/4" RUBBER ROOF GUARD PAD FOR NEW PIPE OR CONDUIT ON ROOF SUPPORT PIPING OR CONDUITS MAXIMUM 6' ON CENTER.
- BALL VALVES SHALL BE STOCKHAM, MILWAUKEE, OR NIBCO MSS SP 110, 400 PSI WOG, ONE PIECE BRONZE BODY, CHROME PLATED BRASS BALL, FULL PORT, TEFLON SEATS, BLOW-OUT PROOF STEM, SOLDER ENDS, LEVER HANDLE.
- ALL NEW PIPING SHALL BE IDENTIFIED WITH WRAP AROUND PIPE MARKERS. ALL NEW EQUIPMENT SHALL BE IDENTIFIED WITH PLASTIC ENGRAVED NAMEPLATES.
- ALL TEMPERATURE CONTROL WORK SHALL MATCH EXISTING TRANE TRACER SYSTEM CURRENTLY INSTALLED IN BUILDING.
- CONTRACTOR SHALL SETUP CRCU EQUIPMENT, INCLUDING INTERCONNECTING EQUIPMENT CONTROLLERS FOR EQUIPMENT COMMUNICATION PER EQUIPMENT MANUFACTURER'S RECOMMENDATIONS, INCLUDING NETWORK CONNECTIONS FOR CONNECTING VIA WEBSITE INTERFACE, AND SO THAT UNITS COMMUNICATE WITH EACH OTHER AND PROVIDE ALARMS TO OWNER. CONTRACTOR SHALL INSTALL ALL FIELD-INSTALLED ACCESSORIES AS RECOMMENDED BY EQUIPMENT MANUFACTURER.
- ALL EQUIPMENT THERMOSTATS SHALL BE PROGRAMMABLE COMPATIBLE WITH ASSOCIATED EQUIPMENT. THERMOSTAT SELECTION SHALL BE MATCHED TO UNIT HEATING/COOLING STAGES.
- LOW VOLTAGE WIRING SHALL BE U/L LISTED AND PLENUM RATED (LOW SMOKE PRODUCING). WIRING SHALL BE CONCEALED IN WALLS AND MAY BE INSTALLED WITHOUT CONDUIT ABOVE ACCESSIBLE LAY-IN CEILING SPACES ONLY.



**ROOF CURB DETAIL**  
NO SCALE



**COMPUTER ROOM COOLING SYSTEM CRCU/ACC PIPING DETAIL**  
NO SCALE

**MCHENRY COUNTY COLLEGE  
 2024 SERVER ROOM IMPROVEMENTS**  
 8900 U.S. Highway 14  
 Crystal Lake, IL 60012  
 DKA PROJECT NO: 21-042

KEY PLAN:

SHEET STATUS: 04/25/2024  
**ISSUED FOR BID - NOT FOR CONSTRUCTION**

NO.	DESCRIPTION	DATE

SHEET TITLE:  
**HVAC SCHEDULES, DETAILS, NOTES**

SHEET NUMBER:  
**HV2.00**

NAME: B50424 HV2.0.DWG BY: JEC DATE: Apr. 25, 24 TIME: 1:24 PM





ARCHITECT OF RECORD  
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 2010 ENGINEERING GROUP, LLC  
 1216 TOWER ROAD  
 SCHAUMBURG, IL 60173  
 P: 847.882.2010

**DRAWING NOTES:** (TYPICAL FOR THIS DRAWING ONLY.)

- ① EXISTING MECHANICAL EQUIPMENT TO REMAIN. PROTECT CONDUITS AND CONDUCTORS SERVING EQUIPMENT TO MAINTAIN PROPER OPERATION.
- ② ELECTRICALLY DISCONNECT EXISTING EQUIPMENT FOR REMOVAL. REMOVE ANY ASSOCIATED DISCONNECT SWITCHES AND STARTERS. EXISTING CONDUITS AND CONDUCTORS ORIGINATING FROM EXISTING PANEL "DP-EMIT" SHALL REMAIN TO FEED NEW REPLACEMENT EQUIPMENT.



**MCHENRY COUNTY COLLEGE  
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**ELECTRICAL  
 DEMOLITION  
 PLANS**

SHEET NUMBER:

**ED1.01**

1 LOWER LEVEL - ELECTRICAL DEMOLITION PLAN  
 1/4" = 1'-0"



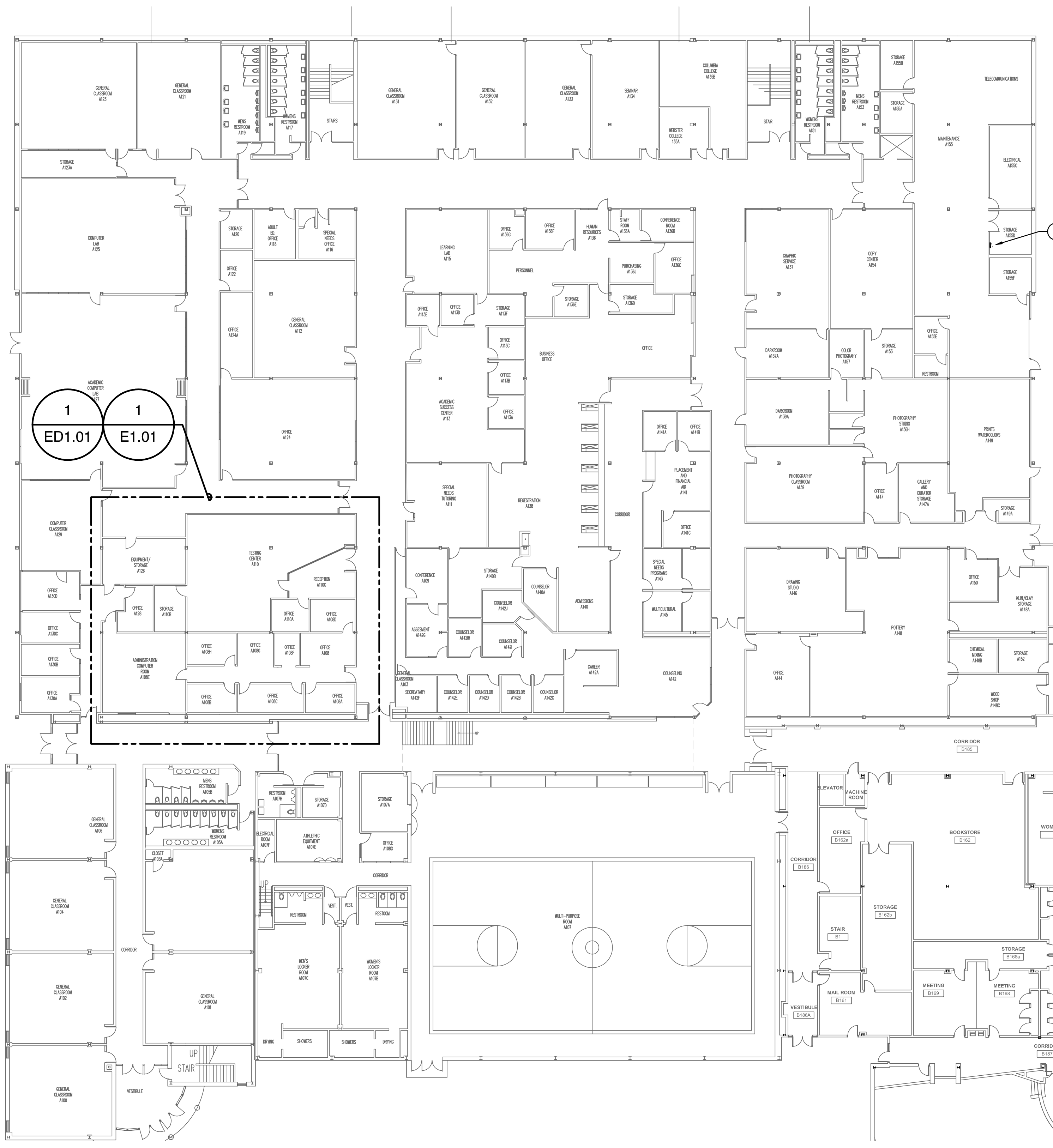


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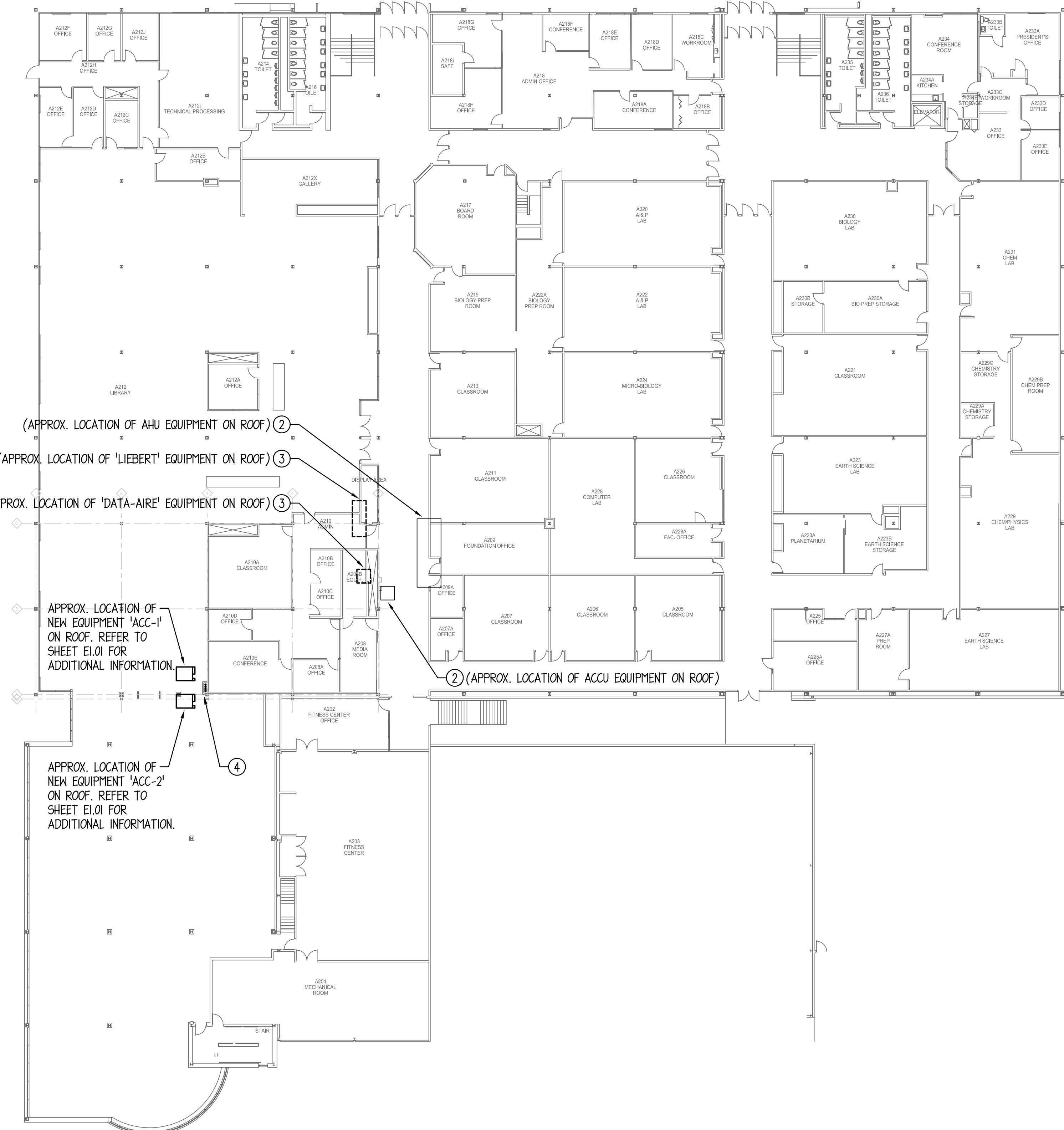
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- APPROXIMATE LOCATION OF EXISTING 480/277V-3PH-4W, 300MVA PANEL "DP-BMT" MANUFACTURED BY "SQUARE D". DISCONNECT AND REMOVE (1) 10A-3P & (1) 70A-3P CIRCUIT BREAKERS CURRENTLY SERVING COMPUTER ROOM COOLING UNITS SCHEDULED TO BE DEMOLISHED. REMOVED CIRCUIT BREAKERS SHALL BE TURNED OVER TO OWNER FOR ATTIC STOCK. REPLACE WITH (2) NEW 50A-3P CIRCUIT BREAKERS TO SERVE REPLACEMENT EQUIPMENT "CRCU-1" & "CRCU-2". NEW CIRCUIT BREAKERS SHALL BE OF TYPE AND AIC RATING TO MATCH EXISTING PANEL. EXTEND EXISTING CONDUCTORS TO NEW CIRCUIT BREAKERS AS REQUIRED. INCLUDE UPDATED PANELBOARD DIRECTORY TO REFLECT CHANGES. FIELD VERIFY EXACT REQUIREMENTS.
- EXISTING MECHANICAL EQUIPMENT TO REMAIN. PROTECT CONDUITS AND CONDUCTORS SERVING EQUIPMENT TO MAINTAIN PROPER OPERATION.
- ELECTRICALLY DISCONNECT EXISTING EQUIPMENT FOR REMOVAL. REMOVE ANY ASSOCIATED FIRE ALARM DEVICES, DISCONNECT SWITCHES, STARTERS, AND ALL CONDUITS AND CONDUCTORS BETWEEN EQUIPMENT AND PANEL. LEAVE CIRCUIT BREAKER AT "OFF" POSITION AND INDICATE CIRCUIT AS "SPARE" IN PANELBOARD DIRECTORY.
- FOLLOW PATH FOR MECHANICAL SYSTEM PIPING AND ROUTE NEW CONDUITS IN PIPE CHASE FROM FLOOR BELOW TO ROOF TO SERVE NEW EQUIPMENT "ACC-1" & "ACC-2". UTILIZE SAME ROOF CURB AS MECHANICAL PIPING FOR ROUTING OF CONDUITS UP TO ROOF. SEE DETAIL ON SHEET ME1.0 FOR ROOF CURB AND ROOF SUPPORT REQUIREMENTS AND VERIFY EXACT CONDUIT ROUTING.



1 LOWER LEVEL - OVERALL ELECTRICAL PLAN  
 1" = 20'-0"  
 TRUE NORTH



2 UPPER LEVEL - OVERALL ELECTRICAL PLAN  
 1" = 20'-0"  
 TRUE NORTH

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**OVERALL ELECTRICAL PLANS**

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**E1.00**



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**DRAWING NOTES:** (TYPICAL FOR THIS DRAWING ONLY.)

- ① EXISTING MECHANICAL EQUIPMENT TO REMAIN. PROTECT CONDUITS AND CONDUCTORS SERVING EQUIPMENT TO MAINTAIN PROPER OPERATION.
- ② DISCONNECT SWITCH FURNISHED WITH EQUIPMENT, WIRED BY CONTRACTOR.
- ③ UTILIZE EXISTING 480V-3PH FEEDER ORIGINATING FROM EXISTING PANEL "DP-EMIT" SERVING DEMOLISHED EQUIPMENT, CUT BACK EXISTING CONDUCTORS AND CONDUIT, PROVIDE NEW JUNCTION BOX AND SPLICE CONDUCTORS OF MATCHING CHARACTERISTICS FOR FINAL CONNECTION TO NEW EQUIPMENT. CONDUCTORS SHALL BE MINIMUM SIZE OF #6AWG. INFORM ARCHITECT/ENGINEER IF OTHERWISE. FIELD VERIFY EXACT REQUIREMENTS.
- ④ PROVIDE SINGLE GANG BACKBOX AND EMPTY CONDUIT WITH PULL STRING STUBBED INTO ACCESSIBLE CEILING SPACE FOR THERMOSTAT/CARBON DIOXIDE DETECTOR, MOUNT 48" A.F.F. UNLESS NOTED OTHERWISE. REFER TO MECHANICAL PLANS FOR EXACT LOCATIONS. CABLING SHALL BE BY MECHANICAL CONTRACTOR.
- ⑤ MOUNT NEW DEVICE ON NEW PIPE CURB. WIRE TO EXISTING 120VAC, 20AMP. RECEPTACLE BRANCH CIRCUIT CURRENTLY SERVING ROOF WITH SPARE CAPACITY. FIELD VERIFY EXACT REQUIREMENTS.
- ⑥ NEW LUMINAIRES SHALL RECONNECT TO EXISTING LIGHTING BRANCH CIRCUIT SERVING AREA. PROVIDE NEW SWITCHING SCHEME WHERE INDICATED, OTHERWISE, EXISTING SWITCHING SCHEME SHALL BE MAINTAINED. FIELD VERIFY EXACT REQUIREMENTS.
- ⑦ PROPOSED LAYOUT OF VINYL CURTAIN AS PART OF COLD AISLE CONTAINMENT SYSTEM IS SHOWN. FIELD COORDINATE EXACT PLACEMENT OF LUMINAIRES WITH OTHER TRADES PRIOR TO INSTALLATION.
- ⑧ FIELD COORDINATE EXACT LAYOUT OF RELOCATED CEILING MOUNTED DETECTORS ASSOCIATED WITH EXISTING CLEAN AGENT SUPPRESSION SYSTEM PRIOR TO INSTALLATION. CONTACT PEDRO CLAVERO AT CINTAS CORPORATION (630-978-0600, CLAVEROP@CINTAS.COM) FOR ADDITIONAL INFORMATION.

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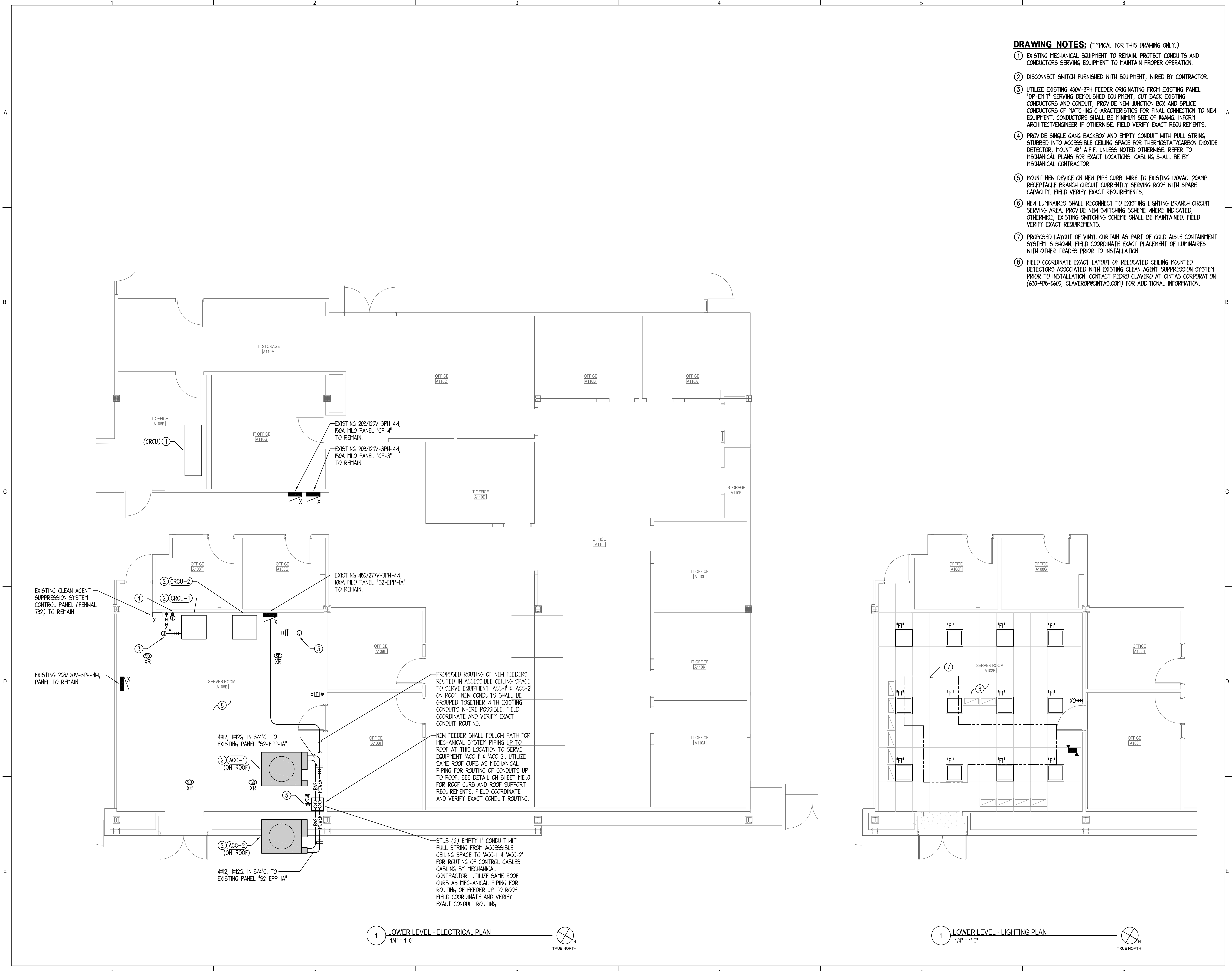
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SHEET TITLE:  
**ELECTRICAL  
 PLANS**

SHEET NUMBER:  
**E1.01**



1 LOWER LEVEL - ELECTRICAL PLAN  
 1/4" = 1'-0"

1 LOWER LEVEL - LIGHTING PLAN  
 1/4" = 1'-0"



ARCHITECT OF RECORD  
**DEMIONICA KEMPER ARCHITECTS**  
 125 N. HALSTED STREET, SUITE 301  
 CHICAGO, IL 60661  
 P: 312.496.0000

MEP-FP ENGINEER  
**2010 ENGINEERING GROUP, LLC**  
 1216 TOWER ROAD  
 SCHAUMBURG, IL 60173  
 P: 847.882.2010

**MCHENRY COUNTY COLLEGE**  
**2024 SERVER ROOM IMPROVEMENTS**

8900 U.S. Highway 14  
 Crystal Lake, IL 60012  
 DKA PROJECT NO: 21-042

KEY PLAN:

SHEET STATUS: 04/25/2024  
**ISSUED FOR BID - NOT FOR CONSTRUCTION**

NO.	DESCRIPTION	DATE

SHEET TITLE:  
**ELECTRICAL SYMBOL LIST AND SCHEDULES**

SHEET NUMBER:

**E2.00**

INTERIOR LUMINAIRE SCHEDULE								
TYPE	DESCRIPTION	MOUNTING	LAMPS	VOLTAGE	INPUT WATTAGE	MANUFACTURER & CATALOG NUMBER	ALTERNATE BID MANUFACTURER	NOTES
"f1"	2'X2' LAY-IN LED PANEL	RECESSED	LED	UNV.	30.1	LITHONIA LIGHTING #CPX-2X2-3200LM-80CRI-40K-SAL-MINO-ZT-11VOLT	HLI COLUMBIA LIGHTING, SIGNIFY DAY-BRITE	I

**NOTES:**  
 I. CONTRACTOR TO PROVIDE ALL OPTIONS AND ACCESSORIES AS REQUIRED TO INSTALL LUMINAIRES IN VARYING CEILING TYPES AS SHOWN ON THE PLANS.

**GENERAL NOTES:**  
 a. CONTRACTOR TO PROVIDE ALL NECESSARY MOUNTING HARDWARE AND LABOR FOR ALL LUMINAIRES.  
 b. ALL LAY-IN CEILING GRID LUMINAIRES SHALL BE SUITABLE FOR USE WITH SPECIFIED CEILING GRID SYSTEM.  
 c. ALL FINISH COLORS AND COLOR TEMPERATURES TO BE CONFIRMED BY THE ARCHITECT.

EXIT SIGN & EMERGENCY LIGHTING SCHEDULE								
SYMBOL	TAG	DESCRIPTION	MOUNTING	LAMPS	VOLTAGE	MANUFACTURER & CATALOG NUMBER	ALTERNATE BID MANUFACTURER	NOTES
	"EM1"	DUAL HEAD EMERGENCY LIGHTING UNIT WITH WHITE CONTEMPORARY THERMOPLASTIC ENCLOSURE	CEILING	LED	UNV.	LITHONIA LIGHTING #ELM16L-UVOLT-LTP-SDRT	HLI DUAL-LITE, SIGNIFY CHLORIDE	I

**SCHEDULE NOTES:**  
 I. CONNECT BATTERY UNIT TO LOCAL UNSWITCHED LIGHTING CIRCUIT.

**GENERAL NOTES:**  
 a. CONTRACTOR TO PROVIDE ALL NECESSARY MOUNTING HARDWARE AND LABOR FOR ALL LUMINAIRES.  
 b. BATTERIES SHALL BE CAPABLE OF PROVIDING ILLUMINATION FOR A MINIMUM OF 90 MINUTES.  
 c. NOT ALL SYMBOLS WILL BE ACCOMPANIED BY TAGS ON THE PLANS FOR CLARITY PURPOSES.

**PANEL SCHEDULE NOTE:**  
 SCHEDULES FOR EXISTING PANELS ARE SHOWN FOR REFERENCE TO INDICATE SIZE AND QUANTITY OF NEW CIRCUIT BREAKERS REQUIRED. CONTRACTOR TO FIELD VERIFY EXISTING PANEL CHARACTERISTICS AND BRANCH CIRCUIT BREAKER LAYOUT.

PANEL SCHEDULE: "6A"										LOCATION: SERVER ROOM	C.B. RATING: VIK.A.I.C.
VOLT: 480/277V-3PH-4W		MAINS: 100A MLO		MOUNTING: SURFACE		TYPE: BOLT-ON					
REMARKS: EXISTING PANEL MANUFACTURED BY 'EATON'.											
USE AND/OR AREA SERVED	C/B	CIR. NO.	9A	9B	9C	CIR. NO.	C/B	USE AND/OR AREA SERVED			
EXISTING LOAD		20				2	15	M: ACC-2			
		3	388			4					
		5		388		6					
M: ACC-1		15	7	388		8		BUSSED SPACE			
			9	388		10		BUSSED SPACE			
			11		388	12		BUSSED SPACE			
BUSSED SPACE			13			14		BUSSED SPACE			
BUSSED SPACE			15			16		BUSSED SPACE			
BUSSED SPACE			17			18		BUSSED SPACE			
BUSSED SPACE			19			20		BUSSED SPACE			
BUSSED SPACE			21			22		BUSSED SPACE			
BUSSED SPACE			23			24		BUSSED SPACE			
BUSSED SPACE			25			26		BUSSED SPACE			
BUSSED SPACE			27			28		BUSSED SPACE			
BUSSED SPACE			29			30		BUSSED SPACE			
TOTAL CONNECTED LOAD PER PHASE:			776	776	776	TOTAL V.A. = 2,328		2.80 AMPS			

□ - PROVIDE NEW CIRCUIT BREAKER OF TYPE AND AIC RATING TO MATCH EXISTING PANEL TO SERVE NEW LOAD AS INDICATED. UTILIZE EXISTING BUSSED SPACE FOR INSTALLATION OF NEW CIRCUIT BREAKER.  
 △ - UTILIZE EXISTING SPARE CIRCUIT BREAKER OR CIRCUIT BREAKER MADE AVAILABLE FROM DEMOLITION WORK TO SERVE NEW LOAD AS INDICATED.

**ELECTRICAL SYMBOL LIST** (NOTE: NOT ALL SYMBOLS ARE USED IN THE PROJECT.)

- 2' X 4' LUMINAIRE, RECESSED OR SURFACE MOUNTED PER LUMINAIRE SCHEDULE.
- 2' X 2' LUMINAIRE, RECESSED OR SURFACE MOUNTED PER LUMINAIRE SCHEDULE.
- 1' X 4' LUMINAIRE, RECESSED OR SURFACE MOUNTED PER LUMINAIRE SCHEDULE.
- ROUND LUMINAIRE. RECESSED OR SURFACE MOUNTED PER LUMINAIRE SCHEDULE.
- HALF SHADING DENOTES UNSWITCHED LUMINAIRE (NIGHTLIGHT).
- EMERGENCY EXIT FIXTURE, SURFACE CEILING MOUNTED, SINGLE OR DOUBLE FACE, WITH OR WITHOUT DIRECTIONAL ARROWS.
- EMERGENCY EXIT FIXTURE, SURFACE WALL MOUNTED, SINGLE OR DOUBLE FACE, WITH OR WITHOUT DIRECTIONAL ARROWS.
- EMERGENCY BATTERY LIGHT FIXTURE.
- SELF-CONTAINED EMERGENCY LUMINAIRE WITH DUAL WEATHERPROOF REMOTE HEADS, BATTERY BACK-UP AND SOLID STATE CHARGER PER SCHEDULE.
- SINGLE POLE 20 AMP 120-277V VOLT TOGGLE SWITCH INSTALLED 48" A.F.F.
- SINGLE POLE 20 AMP 120-277V TOGGLE SWITCH WITH PILOT LIGHT INSTALLED 48" A.F.F.
- WALL SWITCH/OCCUPANCY SENSOR PER LIGHTING CONTROL SCHEDULE.
- OCCUPANCY SENSOR, LETTER INDICATES TYPE PER LIGHTING CONTROL SCHEDULE.
- DENOTES ELECTRICAL DEVICE MOUNTED ON SURFACE RACEWAY, WIREMOLD V700 OR EQUAL.
- SURFACE MOUNTED (EXPOSED) CONDUIT, BACKBOX FOR DEVICE AS SHOWN
- SURFACE MOUNTED (EXPOSED) RECEPTACLE OUTLET(S) AND CONDUIT, INSTALLATION IN NON-PUBLIC AREAS ONLY (JANITOR CLOSET, ELECTRIC, BOILER ROOMS)
- 20A 2P, 3 WIRE, GROUNDING TYPE, 125V. SPECIFICATION-GRADE, TAMPER-RESISTANT TYPE DUPLEX RECEPTACLE NEMA 5-20R. INSTALLED 6" ABOVE COUNTER TOP OR 42" A.F.F. UNLESS NOTED OTHERWISE.  
- "GFI" DENOTES RECEPTACLE EQUIPPED WITH INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER.  
- "WP" DENOTES RECEPTACLE WITH WHILE-IN-USE WEATHERPROOF COVER.
- 20A 2P, 3 WIRE, GROUNDING TYPE, 125V. SPECIFICATION-GRADE, TAMPER-RESISTANT TYPE DUPLEX RECEPTACLE NEMA 5-20R. INSTALLED 6" ABOVE COUNTER TOP OR 42" A.F.F. UNLESS NOTED OTHERWISE.  
- "GFI" DENOTES RECEPTACLE EQUIPPED WITH INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER.
- 20A 2P, 3 WIRE, GROUNDING TYPE, SPECIFICATION-GRADE, TAMPER-RESISTANT TYPE DUPLEX RECEPTACLES NEMA 5-20R. INSTALLED 46" A.F.F. UNLESS NOTED OTHERWISE.  
- "GFI" DENOTES RECEPTACLE EQUIPPED WITH INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER.
- POWER OUTLET, CEILING MOUNTED
- THERMOSTAT/CO2 SENSOR.
- CEILING JUNCTION BOX.
- WALL MOUNTED JUNCTION BOX.
- JUNCTION BOX WITH FLEXIBLE CONDUIT AND FINAL CONNECTION TO EQUIPMENT.
- FIRE ALARM DUCT SMOKE DETECTOR REMOTE KEYED TEST STATION.
- FIRE ALARM DUCT SMOKE DETECTOR.
- FIRE ALARM MAGNETIC DOOR HOLDER DEVICE.
- FIRE ALARM SYSTEM PULL STATION INSTALLED +48" A.F.F.
- FIRE ALARM SYSTEM STROBE NOTIFICATION DEVICE INSTALLED +80" A.F.F.
- FIRE ALARM SYSTEM HORN/STROBE NOTIFICATION DEVICE INSTALLED +80" A.F.F.
- FIRE ALARM SYSTEM CEILING SMOKE DETECTOR.
- FIRE ALARM SYSTEM CEILING HEAT DETECTOR.  
"FT" DENOTES FIXED TEMPERATURE.
- FIRE ALARM SYSTEM STROBE NOTIFICATION DEVICE, CEILING MOUNTED.
- FIRE ALARM SYSTEM HORN NOTIFICATION DEVICE, CEILING MOUNTED.
- FIRE ALARM SYSTEM HORN/STROBE NOTIFICATION DEVICE, CEILING MOUNTED.
- WATER FLOW SWITCH.
- TAMPER SWITCH.
- FIRE ALARM BELL.
- FIRE ALARM CONTROL PANEL.
- FIRE ALARM ANNUNCIATOR PANEL.
- CONDUIT ROUTED CONCEALED IN WALLS AND CEILING. HASH MARKS DENOTE QUANTITY OF #12 CONDUCTORS OR AS NOTED.
- CONDUIT ROUTED EXPOSED. INSTALL PARALLEL TO WALLS AND CEILINGS. HASH MARKS DENOTE QUANTITY OF #12 CONDUCTORS OR AS NOTED.
- CONDUIT ROUTED BELOW GRADE. HASH MARK DENOTES QUANTITY OF #12 CONDUCTORS OR AS NOTED.
- DENOTES CONDUIT, 3/4" MINIMUM
- DENOTES INSULATED GROUND WIRE, #12 AWG MINIMUM
- LONG TICK MARK DENOTES NEUTRAL CONDUCTOR, #10 AWG MINIMUM
- SHORT TICK MARK DENOTES LINE (HOT) OR SWITCH LEG CONDUCTOR, #12 AWG MINIMUM.
- CIRCUIT BREAKER PANELBOARD.

**ELECTRICAL ABBREVIATIONS**

A	AMPERES	G, GRD.	GROUND	MIN	MINIMUM	VA	VOLT - AMPERES
AFCI	ARC FAULT CIRCUIT INTERRUPTER	GFI	GROUND FAULT CIRCUIT INTERRUPTER	MLO	MAIN LUGS ONLY	W	WATTS
A.F.F.	ABOVE FINISHED FLOOR	GFP	GROUND FAULT PROTECTIVE EQUIPMENT	MOCP	MAXIMUM OVERCURRENT PROTECTION	WG	WIRE GUARD
C	CONDUIT	HP	HORSEPOWER	PT	POTENTIAL TRANSFORMER	WP	WEATHER PROOF
C/B	CIRCUIT BREAKER	I.T.	INFORMATION TECHNOLOGY	SPD	SURGE PROTECTIVE DEVICE	XFTIR	TRANSFORMER
CT	CURRENT TRANSFORMER	KCM	THOUSAND CIRCULAR MILS	TR	TAMPER-RESISTANT	IP	SINGLE POLE
CU	COPPER	MAX	MAXIMUM	TYP.	TYPICAL	2P	TWO POLE
EC	ELECTRICAL CONTRACTOR	MCA	MINIMUM CIRCUIT AMPS	U.N.O.	UNLESS NOTED OTHERWISE	3P	THREE POLE
EM	EMERGENCY	MCB	MAIN CIRCUIT BREAKER	V	VOLTS	∅	PHASE
FLA	FULL LOAD AMPS						

DEMOLITION SYMBOLS	
SYMBOL	DESCRIPTION
R	EXISTING ELECTRICAL EQUIPMENT OR OUTLET TO BE REMOVED.
X	EXISTING ELECTRICAL EQUIPMENT OR OUTLET TO REMAIN.
XC	EXISTING ELECTRICAL EQUIPMENT OR OUTLET TO BE REMOVED AND JUNCTION BOX CAPPED OR REUSED AS REQUIRED.
XO	NEW ELECTRICAL EQUIPMENT INSTALLED OVER EXISTING OUTLET.
XRR	EXISTING ELECTRICAL EQUIPMENT OR OUTLET TO BE REMOVED, RELOCATED AND JUNCTION BOX REMOVED OR CAPPED AS REQUIRED. STORE AND PROTECT EXISTING DEVICE FOR RE-USE AND RE-INSTALLATION.
XR	EXISTING ELECTRICAL EQUIPMENT OR OUTLET RELOCATED (NEW LOCATION). EXTEND EXISTING FEED AS REQUIRED TO MAINTAIN DEVICE/EQUIPMENT OPERATION. PROVIDE NEW FEED OF MATCHING SPECIFICATIONS IN SITUATIONS WHERE THEY CANNOT BE SPLICED OR ARE NOT OF SUFFICIENT LENGTH TO REACH NEW LOCATION.
XRT	EXISTING ELECTRICAL EQUIPMENT OR OUTLET TO BE TEMPORARILY REMOVED AND REINSTALLED IN SAME LOCATION.
XA	EXISTING ELECTRICAL EQUIPMENT OR OUTLET TO BE ABANDONED.
XM	EXISTING ELECTRICAL EQUIPMENT OR OUTLET TO BE MODIFIED.
XN	EXISTING ELECTRICAL EQUIPMENT TO BE REWIRED.

NOTE: NOT ALL SYMBOLS MAY BE USED.

**ELECTRICAL SPECIFICATIONS**

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2017 NATIONAL ELECTRICAL CODE WITH CITY OF CRYSTAL LAKE AMENDMENTS AND SHALL CONFORM TO MCHENRY COUNTY COLLEGE STANDARDS.
- PROVIDE ALL PERMITS AND INSPECTION FEES.
- ALL MATERIAL AND LABOR SHALL BE GUARANTEED FOR ONE YEAR AFTER FINAL ACCEPTANCE BY THE OWNER.
- CONTRACTOR SHALL PROVIDE THEIR OWN RIGGING, SCAFFOLDING, RUBBISH REMOVAL, AND LEAVE SPACE BROOM CLEAN.
- MINIMUM SIZE CONDUIT SHALL BE 3/4" EMT, PROVIDE IMC WHERE EXPOSED TO HEAT OR DAMP LOCATIONS. IMC SHALL HAVE THREADED CONNECTIONS. TRANSITION TO LIQUID-TIGHT FLEXIBLE METAL CONDUIT FOR FINAL CONNECTION (MAXIMUM LAST 6 FEET) OF CONDUCTORS SERVING EQUIPMENT SUBJECT TO VIBRATION.
- MINIMUM SIZE CONDUCTOR SHALL BE #12 THHN, OR THINER WHERE REQUIRED. CONDUCTOR MATERIAL SHALL BE COPPER ONLY.
- PROVIDE SEPARATE, INSULATED EQUIPMENT GROUNDING CONDUCTOR WITHIN EACH FEEDER AND BRANCH CIRCUIT RACEWAY. TERMINATE EACH END ON SUITABLE LUG, BUS, OR BUSHING.
- BRANCH CIRCUIT CONDUCTORS FOR 20 AMP RECEPTACLES AND LIGHTING CIRCUITS SHALL BE ADJUSTED FOR VOLTAGE DROP:
  - A. 120/208V:
    - 0-75' - #12AWG MINIMUM
    - 75-150' - #10AWG MINIMUM
    - 150-225' - #8AWG MINIMUM
  - B. 277/480V:
    - 0-100' - #12AWG MINIMUM
    - 100-200' - #10AWG MINIMUM
    - 200-300' - #8AWG MINIMUM
- CONDUCTOR SIZES #14 AWG, #12 AWG, AND #10 AWG SHALL BE SOLID. CONDUCTOR SIZES #8 AWG AND LARGER SHALL BE STRANDED. ALL CONDUCTORS SHALL BE COLOR CODED.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY CUTTING AND PATCHING INCLUDING SLEEVES AND INSERTS.
- COLOR AND FINISH OF ALL MATERIALS SHALL BE SUBJECT TO REVIEW AND APPROVAL BY OWNER. PROVIDE SHOP DRAWINGS REQUIRED FOR FINISH AND COLOR SELECTION.
- ALL NEW CIRCUIT BREAKERS SHALL BE BOLT-ON BREAKERS (10,000 A.I.C. MINIMUM), COMPATIBLE WITH EXISTING PANELBOARD. PROVIDE TYPEWRITTEN DIRECTORIES IN ALL PANELS.
- CONTRACTOR SHALL VISIT THE SITE TO ASCERTAIN ALL WORK INVOLVED IN THE PROJECT.
- CONTRACTOR SHALL COORDINATE THEIR WORK WITH OTHER CONTRACTORS ON THE PROJECT.
- CONTRACTOR SHALL MAKE NECESSARY MODIFICATIONS AND ADJUSTMENTS TO ALL ELECTRICAL ITEMS AND EQUIPMENT AS MAY BE REQUIRED BY THIS WORK.
- LAY-IN LUMINAIRES SHALL BE SUPPORTED INDEPENDENTLY FROM CEILING FRAMES BY TYING TWO HANGER WIRES ON OPPOSITE CORNERS OF THE LUMINAIRE UP TO A STRUCTURAL MEMBER.
- ALL ELECTRICAL EQUIPMENT MUST MAINTAIN WORKING CLEARANCES AS REQUIRED BY NEC.
- CONTRACTOR SHALL BE RESPONSIBLE AND PAY FOR ALL CORING, CUTTING, PATCHING, REPAIRING, REFINISHING, AND REMOVAL/REPLACEMENT OF NEW OR EXISTING BUILDING CONSTRUCTION REQUIRED TO ACCOMMODATE THE INSTALLATION OR REMOVAL OF THEIR WORK. REMOVE, STORE, AND REINSTALL CEILING TILES AS REQUIRED TO INSTALL WORK ABOVE EXISTING REMOVABLE CEILINGS WHICH REMAIN; REPLACE TILES BROKEN OR DAMAGED DURING CONSTRUCTION. ALL PATCHING, REPAIRING, AND REFINISHING WORK TO OTHER FINISHES AND STRUCTURAL ELEMENTS SHALL BE PERFORMED BY THOSE REGULARLY INVOLVED IN THAT TRADE AND SHALL MATCH THE ADJACENT CONSTRUCTION AS CLOSELY AS POSSIBLE WHILE MAINTAINING EXISTING FIRE RATINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXISTING FIRE RATINGS OF CEILINGS AND PARTITIONS SYSTEMS. CARE SHALL BE TAKEN SO AS NOT TO DAMAGE ANY EXISTING BUILDING CONSTRUCTION OR ITEMS THAT ARE TO REMAIN. ANY EXISTING FINISHES THAT ARE DAMAGED DURING THE INSTALLATION OF NEW WORK OR REMOVAL OF EXISTING WORK SHALL BE REPAIRED, REPLACED, AND PAID FOR BY THE INSTALLING CONTRACTOR TO THE SATISFACTION OF THE ARCHITECT AND OWNER. REFER TO ARCHITECTURAL DRAWINGS FOR EXISTING BUILDING CONSTRUCTION THAT IS TO REMAIN AND, THEREFORE, SUBJECT TO PATCHING, REPAIRING, AND REMOVAL/REPLACEMENT.
- NEW LIGHTING CONTROL CABLES ROUTED ABOVE ACCESSIBLE CEILINGS SHALL BE PLENUM RATED. CABLING SHALL BE SUPPORTED AT INTERVALS NOT EXCEEDING 5 FEET UTILIZING J-HOOKS SUPPORTED BY STRUCTURAL MEMBERS ABOVE ACCESSIBLE CEILINGS. LIGHTING CONTROL CABLES SHALL BE CONTAINED IN A COMPLETE RACEWAY SYSTEM WITH JUNCTION BOXES WHERE ROUTED THROUGH INACCESSIBLE CEILINGS OR UNFINISHED AREAS WITH EXPOSED STRUCTURE. CABLING AND RACEWAY SHALL BE ROUTED PARALLEL OR PERPENDICULAR TO STRUCTURAL MEMBERS.
- FLEXIBLE RACEWAY SYSTEMS SHALL NOT BE USED TO PENETRATE ROOFS, FLOORS, OR AIR/MOISTURE BARRIERS.
- RACEWAY SYSTEMS SHALL NOT BE ROUTED THROUGH OR IN HVAC DUCTS.
- WIRING DEVICES:
  - ACCEPTABLE MANUFACTURERS: HUBBELL, LEVITON, PASS & SEYMOUR OR COOPER.
  - SWITCHES SHALL BE COMMERCIAL GRADE, 120/277 VOLT, BACK AND SIDE WIRED, TOGGLE TYPE RATED AT 20 AMPERES AND UL LISTED.
  - RECEPTACLES SHALL BE SPECIFICATION GRADE, POLARIZED, GROUNDED, DUPLEX, BACK AND SIDE WIRED, RATED 20 AMPERES AND UL LISTED.
- DEVICE PLATES:
  - SWITCH AND RECEPTACLE PLATES IN FINISHED AREAS SHALL BE THERMOPLASTIC NYLON FROM SAME MANUFACTURER AS WIRING DEVICES.
- ALL NEW FIRE ALARM CABLING ABOVE ACCESSIBLE CEILINGS SHALL BE PLENUM RATED CABLE OF TYPE COMPATIBLE WITH EXISTING BUILDING FIRE ALARM SYSTEM.
- ALL NEW FIRE ALARM DEVICE(S) SHALL BE UL LISTED AND OF TYPE AND MANUFACTURER TO MATCH EXISTING. NEW FIRE ALARM DEVICE(S) SHALL BE INTEGRATED INTO EXISTING FIRE ALARM SYSTEM.
- ALL NEW FIRE ALARM CABLES SHALL BE IN CONDUIT EXCEPT WHERE LOCATED ABOVE ACCESSIBLE CEILINGS. FIRE ALARM CONDUITS SHALL BE 1/2" MINIMUM. JUNCTION BOXES SERVING FIRE ALARM DEVICES SHALL BE RED. PROVIDE #18 AWG MINIMUM SIZE CONDUCTOR FOR INITIATING CIRCUITS AND #12 AWG MINIMUM SIZE CONDUCTOR FOR NOTIFICATION CIRCUITS. ALL CONDUIT/BOXES SHALL BE CONCEALED IN WALLS UNLESS WALL IS OF EXISTING MASONRY CONSTRUCTION WHERE ARCHITECT APPROVED SURFACE MOUNTED RACEWAY/BOXES MAY BE UTILIZED (WIREMOLD OR EQUAL).
- LUMINAIRES:
  - LUMINAIRES SHALL BE PROVIDED AS SPECIFIED ON DRAWINGS. LUMINAIRES SHALL BE HUNG AND MOUNTED IN PLACE, PROPERLY WIRED, TESTED, AND LEFT READY FOR OPERATION BY THE CONTRACTOR.
  - WHERE LOCATED BENEATH DUCTWORK, THE CONTRACTOR IS PROHIBITED FROM PUNCTURING THE DUCTWORK OR MOUNTING LUMINAIRES DIRECTLY TO THE DUCTWORK. THE CONTRACTOR MAY MOUNT THE LUMINAIRES TO THE DUCTWORK SUPPORT MEMBERS.
  - HANGING DEVICES, BRACKETS, ENCLOSURES, AND OTHER ACCESSORIES SHALL BE PROVIDED FOR A COMPLETE INSTALLATION AND SHALL BE INSTALLED BY THE CONTRACTOR.
  - LUMINAIRES SHALL BE HUNG PLUMB AND SET SQUARE AGAINST THE WALL OR CEILING, OR SUSPENDED AS DESIGNATED.
  - THE MOUNTING HEIGHT OF LUMINAIRES SHALL BE CONFIRMED BEFORE INSTALLATION.

**GENERAL ELECTRICAL NOTES**

- THE MINIMUM WIRE SIZE SHALL BE 12 AWG. THE MINIMUM CONDUIT SIZE FOR HOMERUNS AND BRANCH FEEDS SHALL BE 3/4". ALL BRANCH CIRCUITS SHALL TERMINATE AT 20A. 1-POLE CIRCUIT BREAKERS IN PANELBOARD INDICATED UNLESS OTHERWISE NOTED.
- PROVIDE ALL PENETRATIONS, SLEEVES, AND SEALANT AS REQUIRED THROUGH PARTITIONS TO ACCOMMODATE THE FIRE ALARM, VOICE, AND DATA CABLING. ANY PENETRATIONS THROUGH WALLS AND FLOORS SHALL BE PROPERLY SEALED AND TREATED TO MAINTAIN THE FIRE STOPPING RATING OF THE WALLS, FLOORS AND CEILINGS.
- BACKBOXES ARE TO BE MOUNTED OFFSET, NOT BACK TO BACK.
- CIRCUIT NUMBER(S), WHERE SHOWN, ARE TO INDICATE QUANTITY OF CIRCUITS REQUIRED. VERIFY EXACT CIRCUIT NUMBER TO BE UTILIZED IN FIELD. CONTRACTOR SHALL PROVIDE ACTUAL CIRCUITING AS PART OF "AS BUILT" DRAWINGS.
- UNLESS INDICATED OTHERWISE, MATERIALS REQUIRED TO PROVIDE BRANCH CIRCUITS AND FEEDERS ARE TO BE NEW.
- DURING THE COURSE OF INVESTIGATION AND DEMOLITION, IF IT IS DETERMINED THAT IT MAY BE FEASIBLE TO UTILIZE EXISTING MATERIALS FOR BRANCH CIRCUITS AND FEEDERS, CONTRACTOR SHALL NOTIFY ENGINEER FOR APPROVAL PRIOR TO PERFORMING ANY WORK.
- ANY ELECTRICAL DEVICES ON WALLS SHALL BE FLUSH MOUNTED. NO WIREMOLDS ARE ACCEPTABLE UNLESS SPECIFICALLY INDICATED OTHERWISE.
- VERIFY RECEPTACLE LOCATIONS WITH ARCHITECTURAL FURNITURE LAYOUT TO ENSURE PROPER ACCESSIBILITY.
- LOW VOLTAGE CABLES SHALL NOT LAY ON TOP OF CEILING GRID SYSTEM. CABLES SHALL BE SUPPORTED AT INTERVALS NOT EXCEEDING 5 FEET UTILIZING J-HOOKS SUPPORTED BY STRUCTURAL MEMBERS. CABLES SHALL BE ROUTED PARALLEL OR PERPENDICULAR TO STRUCTURAL MEMBERS.
- DRAWING DO NOT REPRESENT ALL EXISTING FIRE ALARM DEVICES. INITIATING AND NOTIFICATION DEVICES NOT SHOWN ON THE DRAWINGS ARE EXISTING TO REMAIN. IT IS THIS CONTRACTOR'S RESPONSIBILITY TO MAINTAIN OPERATION OF THE EXISTING DEVICES NOT SHOWN.
- EXISTING FIRE ALARM SYSTEM SHALL BE OPERATIONAL AT ALL TIMES. THE OCCUPIED AREA OF THE BUILDING SHALL NOT BE LEFT UNPROTECTED AT ANY TIME. IF AN INTERRUPTION OF FIRE ALARM SYSTEM IS REQUIRED TO FACILITATE DEVICE INSTALLATION, PROVIDE 48 HOURS OF ADVANCE NOTICE TO THE OWNER AND THE LOCAL FIRE DEPARTMENT. CONTRACTOR SHALL HIRE AN AUTHORIZED PERSONNEL TO WATCH/GUARD ANY UNPROTECTED AREAS OF THE BUILDING WHERE NECESSARY.
- REMOVE AND REINSTALL CEILING MOUNTED DEVICES AS REQUIRED TO ALLOW INSTALLATION OF FEEDERS, BRANCH CIRCUITS, MECHANICAL PIPING AND DUCT WORK. DEVICES INCLUDE BUT ARE NOT LIMITED TO, LUMINAIRES, SPEAKERS, FIRE ALARM, AND PAGING DEVICES.
- PROVIDE PULL BOX(ES) BETWEEN PULL POINTS AS REQUIRED TO COMPLY WITH NEC 344.26 THAT THERE SHALL NOT BE MORE THAN THE EQUIVALENT OF FOUR QUARTER BEND (360 DEGREE TOTAL) BETWEEN PULL POINTS.
- SPECIAL ATTENTION SHALL BE PAID TO ALL CONDUIT ROUTING IN OPEN CEILING SPACE FOR AESTHETIC PURPOSES. ALL EXPOSED CONDUITS SHALL BE ROUTED PERPENDICULAR AND PARALLEL TO BUILDING LINES AND TIGHT TO CEILING/STRUCTURAL CORNERS. WHERE THIS IS NOT FEASIBLE, SUBMIT CONDUIT ROUTING PLAN TO ARCHITECT/ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
- IN RENOVATIONS, IF AN EXISTING RECEPTACLE/JUNCTION BOX LOCATION WILL END UP HIDDEN BEHIND PERMANENTLY INSTALLED EQUIPMENT OR CASEWORK, PROCEED AS NOTED BELOW:
  - A. IF THE RECEPTACLE IS AN END OF LINE DEVICE (IT DOES NOT FEED OTHER DEVICES), IT SHALL BE REMOVED INCLUDING ASSOCIATED WIRING BACK TO LAST ACTIVE DEVICE OR JUNCTION BOX AND A BLANK COVER PLATE INSTALLED.
  - B. IF THE RECEPTACLE DOES SERVE DOWNSTREAM DEVICES, REMOVE RECEPTACLE AND REWORK WIRING TO A NEW OR EXISTING JUNCTION BOX ABOVE CEILING SUCH THAT NO WIRES ARE PRESENT IN THE JUNCTION BOX. A BLANK COVER PLATE SHALL BE INSTALLED.
- CONTRACTOR SHALL PROVIDE DEDICATED NEUTRAL FOR EACH BRANCH CIRCUIT TO MEET THE REQUIREMENTS OF NEC ARTICLE 210.4(B).
- PROVIDE BOND TO JUNCTION BOX FROM EQUIPMENT GROUNDING CONDUCTOR IN JUNCTION BOXES WHERE CURRENT CARRYING CONDUCTORS ARE SPICED OR TERMINATED.
- CONDUITS AND RACEWAYS SHALL NOT BE ROUTED ACROSS FLOORS OR SLABS.
- IN AREAS OF THE BUILDING WHERE NEW CEILING HEIGHT IS HIGHER THAN THE EXISTING CEILING HEIGHT, ANY EXISTING CONDUITS/CONDUCTORS AND JUNCTION BOXES SERVING EXISTING DEVICES/EQUIPMENT TO REMAIN SHALL BE RE-ROUTED, RELOCATED, AND MODIFIED AS REQUIRED TO ACCOMMODATE NEW CEILING HEIGHT. FIELD VERIFY EXACT CONDITIONS.
- IN AREAS OF THE BUILDING WHERE NEW DRYMALL OR PLASTER CEILING IS SCHEDULED TO BE INSTALLED, ANY EXISTING JUNCTION BOXES AND ASSOCIATED CONDUITS/CONDUCTORS SHALL BE MODIFIED AND RELOCATED AS REQUIRED TO AN ACCESSIBLE LOCATION UNLESS NEW ACCESS PANELS ARE PERMITTED TO BE INSTALLED IN NEW CEILING BY THE ARCHITECT.
- REFER TO MECHANICAL PLANS FOR EXACT LOCATIONS OF THERMOSTAT/CARBON DIOXIDE DETECTORS. PROVIDE SINGLE GANG BACKBOX AND EMPTY 3/4" CONDUIT WITH PULL STRING STUBBED INTO ACCESSIBLE CEILING SPACE FOR INSTALLATION OF THERMOSTAT/CARBON DIOXIDE DETECTORS. CABLING AND DEVICE SHALL BE BY OTHERS.
- ALL LAY-IN LUMINAIRES SHALL BE INDEPENDENTLY SUPPORTED TO A STRUCTURAL MEMBER.
- REFER TO ARCHITECTURAL FLOOR PLANS FOR ADDITIONAL INFORMATION REGARDING MOUNTING HEIGHTS AND LOCATIONS OF ELECTRICAL DEVICES BEFORE ROUGH-IN. WHERE CONFLICTS BETWEEN ELECTRICAL & ARCHITECTURAL ELEVATIONS ARISE, CONTRACTOR TO VERIFY WITH ARCHITECT/ENGINEER TEAM PRIOR TO ROUGH-IN.

**GENERAL DEMOLITION NOTES**

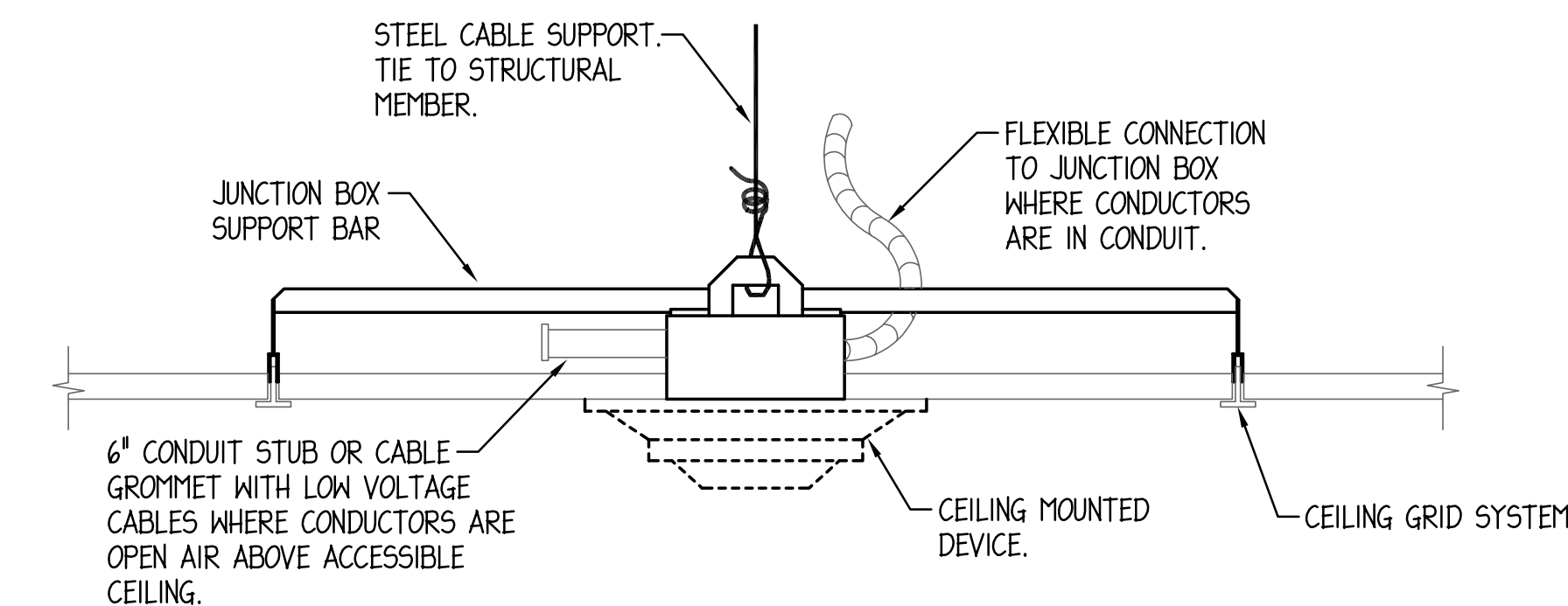
- ALL INDICATED ELECTRICAL EQUIPMENT, LUMINAIRES, DEVICES AND RELATED CONDUIT AND CONDUCTORS TO REMAIN UNLESS NOTED OTHERWISE.
- ALL DEMOLITION OF THE ELECTRICAL SYSTEM AS NOTED ON THE DEMOLITION DRAWINGS SHALL BE COORDINATED WITH THE RENOVATION REQUIREMENTS TO DETERMINE THIS CONTRACTOR'S WORK.
- IT IS THE INTENT OF THE ELECTRICAL DEMOLITION DRAWING(S) TO INDICATE AREAS IN WHICH ELECTRICAL EQUIPMENT, CONDUIT, LIGHTING FIXTURES, DEVICES, ETC. NEED TO BE REMOVED, RELOCATED OR MODIFIED BY THIS CONTRACTOR TO ALLOW FOR THE RENOVATION PHASE OF CONSTRUCTION. THE ELECTRICAL DEMOLITION PLAN IS FOR REFERENCE PURPOSES ONLY AND IT IS NOT INTENDED TO BE THE SOLE SOURCE OF EXISTING CONDITIONS.
- CONTRACTOR SHALL VISIT THE BUILDING, BEFORE SUBMITTING HIS BID, TO VERIFY THE EXISTING CONDITIONS WHICH WILL AFFECT HIS WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE ELECTRICAL DEMOLITION REQUIRED TO ACCOMMODATE THE RENOVATION. REMOVE AS REQUIRED ALL LIGHTING FIXTURES, CONNECTIONS TO MECHANICAL EQUIPMENT, DEVICES, ETC. PULL OUT ALL UNUSED CONDUCTORS AND CABLES AND REMOVE ALL ABANDONED CONDUIT. ELECTRICALLY DISCONNECT AIR HANDLING UNITS, PUMPS, BOILERS, AND OTHER SUCH EQUIPMENT FOR REMOVAL BY OTHERS. BACKFEED AS REQUIRED ALL DOWNSTREAM DEVICES WHICH REMAIN. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER WHICH ITEMS INDICATED TO BE REMOVED & DISCONNECTED SHALL BE SALVAGED AND PRESENTED TO THE OWNER PRIOR TO ANY DISPOSAL OF THESE ITEMS.
- ALL REMOVED EQUIPMENT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE. WHERE WORK CALLED FOR ON THE DRAWINGS OR IN THE SPECIFICATIONS INVOLVES THE REMOVAL OF FLUORESCENT LAMPS CONTAINING MERCURY OR CLOTH INSULATED CONDUCTORS, THEY SHALL BE PROPERLY HANDLED AND REMOVED FROM SITE BY APPROVED METHODS PER EPA REGULATIONS.
- ALL EXISTING RECEPTACLES/DATA OUTLETS/EQUIPMENT ON WALLS THAT ARE NOT PART OF DEMOLITION SHALL REMAIN AS IS UNLESS NOTED OTHERWISE. CONTRACTOR SHALL CHECK AND VERIFY FOR CONTINUING OPERATION OF THESE DEVICES PRIOR TO SUBSTANTIAL COMPLETION. IF ANY EXISTING CIRCUITS TO REMAIN ARE INTERRUPTED BY DEMOLITION OR NEW CONSTRUCTION, CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT/REMOVAL/REROUTING OF CONDUITS AND WIRES AS REQUIRED TO MAINTAIN FUNCTIONALITY OF DOWNSTREAM DEVICES AND EQUIPMENT.
- THE CONTRACTOR SHALL COORDINATE WITH THE THE PROJECT PHASING AND MAINTAIN EXISTING SYSTEMS ACTIVE IN AREAS WHICH REMAIN OCCUPIED.
- EXISTING CEILING MOUNTED SPEAKERS, PROGRAM BELLS, FIRE ALARM DEVICES AND SIMILAR ELECTRICAL EQUIPMENT AND DEVICES TO REMAIN SHALL BE EXTENDED AND REINSTALLED AS REQUIRED IN NEW CEILINGS. FIELD VERIFY EXACT QUANTITIES AND REQUIREMENTS.
- SUPPORT ALL CABLING DRAPED OR LAYING LOOSE ABOVE EXISTING CEILINGS WHICH ARE SCHEDULED TO BE REMOVED. THE WRAP CABLING TO JOISTS OR OTHER STRUCTURAL MEMBERS AS REQUIRED. UPON THE COMPLETION OF THE PROJECT, NO WIRING/CABLING SHALL BE LAYING ON THE ACCESSIBLE CEILINGS.
- WHERE EXISTING DEVICE IS REMOVED FROM WALL WITH NO NEW DEVICE GOING BACK AT SAME LOCATION, PROVIDE BLANK BRUSHED STAINLESS STEEL COVER PLATES AS REQUIRED. COVER PLATES SHALL BE OF PROPER SIZE AND INSTALLED FLUSH WITH WALL.

**GENERAL NOTES**

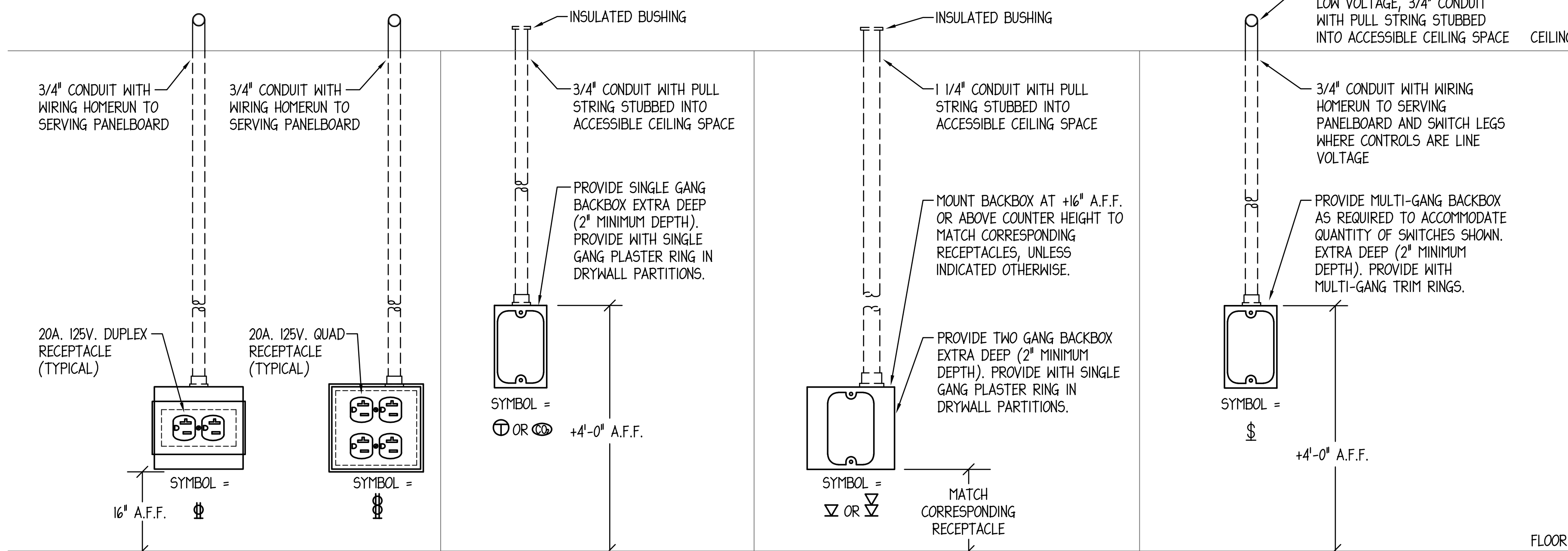
- CONTRACTOR SHALL MAINTAIN FIRE RATING OF ALL PARTITIONS FOR NEW PENETRATIONS. ANY PENETRATIONS THROUGH WALLS AND FLOORS SHALL BE PROPERLY SEALED AND TREATED TO MAINTAIN THE FIRE STOPPING RATING OF THE WALL. CABLING SHALL NOT PENETRATE WALLS UNLESS ROUTED THROUGH RACEWAY SYSTEM OR ROUTED ABOVE ACCESSIBLE CEILINGS THROUGH METALLIC CONDUIT SLEEVES, EXTENDING A MINIMUM OF 6" EACH SIDE OF THE WALL WITH PROTECTIVE END BUSHINGS TO PREVENT DAMAGE TO CABLES. VOIDS AROUND SLEEVES SHALL BE SEALED WITH APPROPRIATE MATERIALS AS TO MAINTAIN THE ACOUSTIC OR FIRE RATING OF WALLS ABOVE AND BELOW CEILINGS. CABLES RAN THROUGH VOIDS WITHOUT SLEEVES OR RACEWAYS WILL NOT BE ACCEPTABLE. CONTRACTOR SHALL VERIFY EXISTING FIRE PARTITIONS IN THE FIELD.
- INCIDENTAL WORK MAY ALSO BE NECESSARY DUE TO CHANGES AFFECTING, FIRE ALARM, ELECTRICAL, OR OTHER SYSTEMS. SUCH INCIDENTAL WORK IS ALSO PART OF THIS CONTRACT. INSPECT THOSE AREAS, ASCERTAIN WORK NEEDED, AND DO THAT WORK IN ACCORD WITH THE CONTRACT REQUIREMENTS, AT NO ADDITIONAL COST. THE REMOVAL & REINSTALLATION OF EXISTING WORK TO ACCOMMODATE CHANGES TO EXISTING, OR INSTALLATION OF, ELECTRICAL, OTHER SYSTEMS IS ALSO PART OF THIS CONTRACT.
- EXISTING CONDITIONS WERE OBTAINED FROM EXISTING AS-BUILT DRAWINGS AND CURSORY FIELD OBSERVATION. CONTRACTOR SHALL IDENTIFY ANY DISCREPANCIES IN THE FIELD AND REPORT THEM TO THE ENGINEER.
- REFER TO ARCHITECTURAL FLOOR PLANS FOR ADDITIONAL INFORMATION REGARDING MOUNTING HEIGHTS AND LOCATIONS OF ELECTRICAL DEVICES BEFORE ROUGH-IN. WHERE CONFLICTS BETWEEN ELECTRICAL & ARCHITECTURAL ELEVATIONS ARISE, CONTRACTOR TO VERIFY WITH ARCHITECT/ENGINEER TEAM PRIOR TO ROUGH-IN.

**BIDDING NOTE**

SEE DRAWING FIELD FOR GENERAL NOTES AND ADDITIONAL DETAILS APPLICABLE TO THIS TRADE'S WORK.



**CEILING MOUNTED DEVICE SUPPORT DETAIL**  
NO SCALE



**JUNCTION BOX ROUGH-IN DETAIL**

- NO SCALE
- NOTES:
- DETAILS ARE FOR REFERENCE ONLY.
  - NOT ALL DEVICES ARE REQUIRED FOR THIS PROJECT.
  - PROVIDE TWO GANG BACKBOXES (2" MINIMUM DEPTH) WITH ALL RECEPTACLE OUTLETS.



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**MCHENRY COUNTY COLLEGE**  
**2024 SERVER ROOM IMPROVEMENTS**

8900 U.S. Highway 14  
 Crystal Lake, IL 60012  
 DKA PROJECT NO: 21-042

KEY PLAN:

SHEET STATUS: 04/25/2024  
**ISSUED FOR BID - NOT FOR CONSTRUCTION**

NO.	DESCRIPTION	DATE

SHEET TITLE:

**ELECTRICAL DETAILS, NOTES AND SPECIFICATIONS**

SHEET NUMBER:

**E3.00**