ARCHITECTURAL **ENGINEERING** CONSORTIUM, INC IECHANICAL • ELECTRICAL • PLUMBII STRUCTURAL • FIRE PROTECTION WWW.AECONSORT.COM

10233 MILLSTONE DRIVE, #4112 LENEXA, KS 66220

P: 816-916-4675

JOB NO.: 2310200 DATE: 02/03/2023 **REVISIONS:**

/2\CITY CMNTS 3/14/23

DESIGNED BY: MBW ELS

DRAWN BY: CHECKED BY: MBW SHEET NO.

AIR COOLED CONDENSING UNIT SCHEDULE CONDENSING INFORMATION UNIT INFORMATION SYSTEM SEER NOTES MFG MODEL TONS THC AMB # OF (MBH) CALLOUT NO. PHASE COMP TEMP ACCU-01A-1,2 FCU-01A-1,2 LENNOX MPC048S4M-1P MS HP 100 208/1 48 ACCU-01A-3,4 FCU-01A-3,4 LENNOX MPC048S4M-1P MS HP 208/1 48 100 14 4 FCU-01A-1,2 14 LENNOX MPC048S4M-1P MS HP 208/1 48 100 ACCU-01B-1,2 4 ACCU-01B-3,4 FCU-01A-3,4 14 LENNOX MPC024S4M-1P MS HP 208/1 2 24 100 ACCU-01B-5,6 FCU-01A-3,4 LENNOX MPC048S4M-1P MS HP 208/1 48 LENNOX MPC012S4S-1P MS HP 208/1 12 100 LENNOX MPC048S4M-1P MS HP 48 100 ACCU-02A-2,3 FCU-02A-2,3 208/1 4 100 LENNOX | MPC012S4S-1P MS HP 12 ACCU-02B-1 FCU-02B-1 14 208/1 1 LENNOX MPC048S4M-1P MS HP ACCU-02B-2,3 FCU-02B-2,3 208/1 48 100 4

NOTES: 1. SUPPLY WITH LOW AMBIENT KIT FOR OPERATION DOWN TO 0°F.

						OALLOO!
	FCU-01A-1					
	FCU-01A-2					
LINUT		RMATION	040	VOLT/	1 NOTES 1	FCU-01A-3
UNIT	MFG	MODEL	CAP	VOLT/	NOTES	FCU-01A-4
CALLOUT		NO.	(KW)	PHASE		<u> </u>
CUH-01	TRANE	UHCA	5.0	208/1	1	FCU-01B-1
CUH-02	TRANE	UHCA	5.0	208/1	1 1	FCU-01B-2
0011-02	FCU-01B-3					
	FCU-01B-4					

1. PROVIDE WITH MOUNTING KIT AND REMOTE TEMPERATURE SENSOR.

UNIT

					FAI	N COIL UNI	T SCHEDU	JLE						
		UNIT INFORMATION						HEAT PUMP INFORMATION			DX COIL INFORMATION			
UNIT	MFG	MODEL	FLOW	VOLT/	MCA	MOCP	EAT	LAT	CAP	EAT	LAT	SHC	THC	NOTES
CALLOUT		NO.	(CFM)	PHASE	(AMPS)	(AMPS)	(°F)	(°F)	(BTUH)	(°F)	(°F)	(MBH)	(MBH)	
FCU-01A-1	LENNOX	MMDB018S4	675	208/1			70	99.0	21141	80	59	15.3	14.4	1,2,3
FCU-01A-2	LENNOX	MMDB018S4	675	208/1			70	99.0	21141	80	59	15.3	14.4	1,2,3
FCU-01A-3	LENNOX	MMDB018S4	675	208/1			70	99.0	21141	80	59	15.3	14.4	1,2,3
FCU-01A-4	LENNOX	MMDB018S4	675	208/1			70	99.0	21141	80	59	15.3	14.4	1,2,3
FCU-01B-1	LENNOX	MMDB018S4	675	208/1			70	99.0	21141	80	59	15.3	14.4	1,2,3
FCU-01B-2	LENNOX	MMDB018S4	675	208/1			70	99.0	21141	80	59	15.3	14.4	1,2,3
FCU-01B-3	LENNOX	MMDB009S4	343	208/1			72	99.0	10002	80	59.5	7.6	9	1,2,3
FCU-01B-4	LENNOX	MMDB009S4	343	208/1			72	99.0	10002	80	59.5	7.6	9	1,2,3
FCU-01B-5	LENNOX	MMDB018S4	675	208/1			70	99.0	21141	80	59	15.3	14.4	1,2,3
FCU-01B-6	LENNOX	MMDB018S4	675	208/1			70	99.0	21141	80	59	15.3	14.4	1,2,3
FCU-02A-1	LENNOX	MMDB012S4	343	208/1			70	97.0	10002	80	56.9	8.6	10.8	1,2,3
FCU-02A-2	LENNOX	MMDB018S4	675	208/1			70	99.0	21141	80	59	15.3	14.4	1,2,3
FCU-02A-3	LENNOX	MMDB018S4	675	208/1			70	99.0	21141	80	59	15.3	14.4	1,2,3
FCU-02B-1	LENNOX	MMDB012S4	343	208/1			70	97.0	10002	80	56.9	8.6	10.8	1,2,3
FCU-02B-2	LENNOX	MMDB018S4	675	208/1			70	99.0	21141	80	59	15.3	14.4	1,2,3
FCU-02B-3	LENNOX	MMDB018S4	675	208/1			70	99.0	21141	80	59	15.3	14.4	1,2,3

BY HENRY MILLER MECHANICAL.

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- NOTES: 1. SUPPLY WITH MOUNTING KIT, THERMOSTAT
- 2. SUPPLY WITH OVERFLOW DRAIN PAN UNDER UNIT, WITH MOISTURE SENSING DEVICE,
- WIRED TO SHUT DOWN FCU SUPPLY FAN WHEN MOISTURE IS SENSED.
- 3. SUPPLY WITH PROSELECT PSCPV220WS CONDENSATE PUMP. ROUTE PUMP DISCHARGE TO JANITOR'S SINK.

4 4 4 4 4 4 4 A A A A A SPRING VIBRATION ISOLATOR TYPE MASON INDUSTRIES 30N-HANGER ROD -SUSPENDED **EQUIPMENT** 1/8" ANGLE -LOCK NUT AND WASHER

> 1. HANGER SPACING ALONG LENGHT OF UNIT TO BE AS FOLLOWS: MINIMUN - 2 HANGERS MAXIMUM SPACING 6'-0". 2. ATTACH TO STRUCTURE ABOVE.

∖SUSPENDED EQUIPMENT HANGING DETAIL

NOTES:

FACTORY EQUIP. MOUNTING HOLE W/ 1/2" [\times 2-1/2" GALV. LAG @ WASHER, (4) EA. 14GA PREFABRICATED EQUIP. NEW 4" x 4" CANT STRIP, RAIL W/ INTEGRAL MOUNTING BLOĆK & GALV. FLASHING. CONTINUOUS @ SIDES OF PROVIDE W/ 1/2" OVERHANG EQUIP. RAIL, TYP. — FOR INSULATION, TYP. FACE SIDE OF EQUIP RAIL W/ REMOVE EXISTING ROOF 1/2" POLYISO & EXTEND NEW INSULATION & GYP. BD. FOR ROOF MEMBRANE TO MATCH INSTALLATION OF EQUIPMENT EXISTING UP TO EQUIP. RAIL RAIL & REPLACE WITH FLASHING CONSTRUCTION TO MATCH **EXISTING** 4x4x1/4 STL PROVIDE 3/8" THRU BOLTS & ANGLÉ SPANNING WASHERS @ EA SIDE OF FROM JOIST TO EQUIPMENT RAIL THRU RAIL JOIST FOR FULL FLANGE & TOP CORD OF LENGTH OF EXISTING BAR JOIST WHERE

EQUIPMENT RAIL. RAIL CROSSES BAR JOISTS,

ROOF MOUNTED EQUIPMENT INSTALLATION DETAIL

FCU-01A-4 (1.5 TON) (1) \rightarrow 3/4"D \rightarrow 1 3/4"D \rightarrow 1(1.5 TON) ←3/4"D—Ū <u>-CU-02A-3</u> (1.5 TON) **_+**──3/4"D──+

SpaceA

SECOND FLOOR PLAN - MECHANICAL

(ON ROOF)

(4.0 TON) (ON ROOF) (

(2 TON)

(4.0 TON)

(ON ROOF)

(ON ROOF)

(4.0 TON) (ON ROOF)

(4.0 TON)

(ON ROOF)

ACCU-02B-1 (1.0 TON)

(ON ROOF)

(1.0 TON) (ON ROOF) ACCU-01A-3,4 — — —

FIRST FLOOR PLAN - MECHANICAL

SpaceA

GENERAL NOTES:

1. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. REVIEW GENERAL NOTES, SPECIFICATIONS AND OTHER DISCIPLINE'S DRAWINGS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, TENANT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO SUBMISSION OF BID.

HENRY MILLER

MECHANICAL

2. REFER TO ARCHITECTURAL DRAWINGS FOR RELATED CONSTRUCTION DETAILS AS APPLICABLE TO THE PLUMBING SYSTEMS. VERIFY CHASE AND PENETRATION LOCATIONS SHOWN ON THE ARCHITECTURAL DRAWINGS THAT ARE INTENDED FOR PIPING MEET REQUIREMENTS.

3. INSTALL PIPING PARALLEL TO BUILDING LINES, UNLESS NOTED OTHERWISE.

4. COORDINATE LOCATION OF EQUIPMENT AND SUPPORTS WITH LOCATION OF ACCESS PANELS/DOORS TO ENABLE SERVICE OF EQUIPMENT. IF NO ACCESS PANEL IS SHOWN, PROVIDE ACCESS PANEL IN SIZE REQUIRED FOR MAINTENANCE OF EQUIPMENT. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.

5. SEAL PENETRATIONS THROUGH BUILDING COMPONENTS IN ACCORDANCE WITH LOCAL CODES. FIREPROOF PENETRATIONS THROUGH FIRE RATED COMPONENTS IN ACCORDANCE WITH U.L. REQUIREMENTS.

PLAN NOTES:

(1) 3/4" HVAC CONDENSATE DRAIN. ROUTE TO NEAREST FLOOR DRAIN/SINK AND TERMINATE.

(2) HANG THERMOSTAT LOOSE WITH 50' OF ROLLED UP THERMOSTAT

GENERAL

MECHANICAL NOTE REFERENCE DEMOLITION NOTE REFERENCE

REVISION NOTE REFERENCE

CONNECT TO EXISTING WORK

HVAC

—— D —— HVAC CONDENSATE DRAIN —— RS —— REFRIGERANT SUCTION RD REFRIGERANT DISCHARGE —— RL —— REFRIGERANT LIQUID THERMOSTAT TEMPERATURE SENSOR

SUPPLY DIFFUSER

RETURN GRILLE/EXHAUST REGISTER RETURN AND EXHAUST AIR FLOW INDICATOR DUCT MOUNTED MANUAL BALANCING DAMPER F/S FD SD

DUCT MOUNTED SMOKE DETECTOR

DUCT MOUNTED FIRE/SMOKE, FIRE, AND SMOKE

MECHANICAL SYMBOLS

ELECTRICAL SPECIFICATIONS

. PROVIDE FIRE STOP ON ALL PIPING THAT PENETRATES RATED WALLS. METHOD OF FIRE STOP SHALL MEET WALL RATING. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION OF FIRE RATED WALLS. THIS CONTRACTOR SHALL PROVIDE FIRE RATED ENCLOSURES AROUND ALL ROUGH-IN BOXES, PANELS, ETC.

- THAT ARE LOCATED IN FIRE RATED WALLS AND SHALL FIRE CAULK ALL OPENINGS IN RATED ASSEMBLIES. C. CODES, REGULATIONS, AND STANDARDS THE INSTALLATION SHALL COMPLY WITH APPLICABLE LOCAL AND STATE CODES AND ORDINANCES, WITH
- INSTALLATION. THE LATEST EDITIONS OF THE FOLLOWING INDUSTRY STANDARDS, SPECIFICATIONS, AND CODES ARE
- MINIMUM REQUIREMENTS:
- A. THE NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION STANDARDS. B. THE NATIONAL ELECTRICAL CODE, INCLUDING LOCAL AMENDMENTS.
- C. UNDERWRITER LABORATORIES INCORPORATED STANDARDS.
- D. AMERICAN NATIONAL STANDARDS INSTITUTE.
- E. INTERNATIONAL BUILDING CODE.

THE DRAWINGS INDICATE THE GENERAL ARRANGEMENT AND LOCATIONS OF THE ELECTRICAL WORK DATA PRESENTED ON THESE DRAWINGS ARE AS ACCURATE AS PLANNING CAN DETERMINE, BUT FIELD VERIFICATION OF ALL DIMENSIONS, LOCATIONS, LEVELS, ETC., TO SUIT FIELD CONDITIONS IS REQUIRED. REVIEW ALL ARCHITECTURAL, STRUCTURAL, AND MECHANICAL DRAWINGS AND ADJUST ALL WORK TO MEET THE REQUIREMENTS OF CONDITIONS SHOWN. THE ARCHITECTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER ALL OTHER DRAWINGS. DISCREPANCIES BETWEEN DIFFERENT PLANS, OR BETWEEN DRAWINGS AND SPECIFICATIONS, OR REGULATIONS AND CODES GOVERNING THE INSTALLATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING BEFORE THE DATE OF BID OPENING. IF DISCREPANCIES ARE NOT REPORTED, THE CONTRACTOR SHALL BID THE GREATER QUANTITY OR BETTER QUALITY, AND APPROPRIATE ADJUSTMENTS WILL BE MADE AFTER CONTRACT AWARD. CONTRACTOR SHALL BE RESPONSIBLE TO FIELD MEASURE AND CONFIRM MOUNTING HEIGHTS AND LOCATION OF ELECTRICAL EQUIPMENT WITH RESPECT TO COUNTERS, RADIATION, ETC. DO NOT SCALE DISTANCES

COOPERATION WITH OTHER CONTRACTORS

COORDINATE HVAC AND PLUMBING EQUIPMENT CONNECTION REQUIREMENTS WITH HVAC AND PLUMBING

PART II - PRODUCTS AND EXECUTION

ALL MATERIALS SHALL BE NEW AND OF QUALITY AS SPECIFIED ON THE PLANS OR SPECIFICATIONS AND MUST CARRY THE UNDERWRITER'S LABORATORIES APPROVAL COVERING THE PURPOSE FOR WHICH THEY ARE USED, IN ADDITION TO MEETING ALL REQUIREMENTS OF THE CURRENT APPLICABLE CODES AND REGULATIONS.

CONDUCTOR SIZES SHOWN ON THE DRAWINGS ARE BASED ON COPPER WIRE. UNLESS OTHERWISE SPECIFIED, ALL WIRE SHALL BE TYPE XHHW OR SE FOR FEEDERS OR BRANCH CIRCUITS LARGER THAN 4 AWG, TYPE THHN/THWN INSULATION FOR FEEDERS AND BRANCH CIRCUITS 4 AWG AND SMALLER. ALL BRANCH CIRCUIT WIRING SHALL BE COPPER.

2. MC CABLE WITH COPPER CONDUCTORS AND GROUND WIRE MAY BE USED WHERE PERMITTED.

ALL WIRING SHALL BE INSTALLED IN LISTED METALLIC CONDUIT EXCEPT AS PERMITTED IN OTHER SECTIONS. RGS, WITH A 20 MIL PVC COATING WILL BE USED WHEN IN CONTACT WITH EARTH. IMC MAY BE USED IN INDOOR LOCATIONS NOT IN CONTACT WITH THE EARTH. EMT MAY BE USED IN INDOOR LOCATIONS NOT IN CONTACT WITH EARTH, NOT IN CONCRETE SLABS OR WALLS AND NOT SUBJECT TO DAMAGE. PVC MAY BE USED IN OR BELOW CONCRETE AND DIRECT BURIED IN EARTH. FLEXIBLE STEEL CONDUIT SHALL BE USED FOR INDOOR FINAL CONNECTIONS TO EQUIPMENT IN LENGTHS NOT TO EXCEED 72". LIQUID-TIGHT FLEXIBLE STEEL CONDUIT SHALL BE FOR OUTDOOR FINAL CONNECTIONS TO EQUIPMENT NOT TO EXCEED 48".

- FITTINGS AND CONDUIT BODIES SHALL BE STEEL. DIECAST FITTINGS ARE NOT ACCEPTABLE. CONDUIT SIZES SHALL BE AS REQUIRED BY CODE AND AS INDICATED OR SPECIFIED.
- ALL EMPTY CONDUIT SYSTEMS SHALL HAVE A 200 LB. TEST NYLON PULL STRING TO FACILITATE
- WIRING, CONDUITS, AND OUTLETS SHALL BE CONCEALED WITH THE BUILDING STRUCTURE, EXCEPT THAT CERTAIN MOTOR AND LIGHTING FEEDER CONDUITS MAY BE RUN EXPOSED IN CERTAIN AREAS AS
- INDICATED ON THE DRAWINGS.
- CONDUIT PENETRATION THROUGH ROOF SHALL HAVE ROOF FLASHING WITH CAULK TYPE COUNTER FLASHING SLEEVE. INSTALLATION SHALL BE WATERTIGHT.
- 7. CONDUITS SHALL BE ROUTED PARALLEL AND PERPENDICULAR TO THE STRUCTURE.

- WALL SWITCHES SHALL BE SPECIFICATION GRADE AC SILENT TYPE SWITCHES, 20A 120/277 VOLT. RECEPTACLES SHALL BE SPECIFICATION GRADE, DUPLEX TYPE. NEMA5-20R, 20 AMPERE, 120VOLT GROUNDED TYPE. SPECIAL APPLICATION RECEPTACLES SHALL BE INDICATED ON PLANS. MOUNT WITH
- 3. DEVICE PLATES SHALL BE EQUAL TO SIERRA SMOOTH-LINE PLASTIC WALL PLATES. COLOR SHALL BE WHITE, UNLESS OTHERWISE NOTED.
- 4. RECEPTACLES IN OUTDOOR AND WET LOCATIONS SHALL BE INSTALLED WITH A HINGED OUTLET COVER/ENCLOSURE CLEARLY MARKED AND U.L. LISTED SUITABLE FOR WET LOCATIONS WHILE IN USE, EQUAL TO TAYMAC SPECIFICATION GRADE.

GUARANTEE ALL MATERIAL FURNISHED AND ALL WORKMANSHIP PERFORMED FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE OF WORK. ANY DEFECTS DEVELOPING WITHIN THIS PERIOD, TRACEABLE TO MATERIAL FURNISHED AS A PART OF THIS SECTION OR WORKMANSHIP PERFORMED HEREUNDER, SHALL BE MADE GOOD AT NO EXPENSE TO THE OWNER.

SYMBOLS LEGEND

NOTE: THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS, ETC, ARE NECESSARILY USED ON THE DRAWINGS.

POWER DISTRIBUTION

120/208V, 3 PHASE, 4 WIRE PANELBOARD, UNO

GFI DUPLEX RECEPTACLE WITH WEATHERPROOF COVERPLATE

☐☐☐ DISCONNECT SWITCH — SIZE AND TYPE NOTED

MECHANICAL EQUIP. CONNECTION, SEE SCHED. ON MECH. PLAN

———— CONDUIT RUN CONCEALED IN WALL OR ABOVE CEILING

— — — CONDUIT RUN BELOW FLOOR OR GRADE

HOMERUN TO PANELBOARD, INFORMATION AT ARROWS ARE CIRCUIT NUMBERS AND PANELBOARD FOR TERMINATION. REFER TO ASSOCIATED NOTE FOR BRANCH CIRCUIT CONDUCTOR SIZES.

S INDICATES 1/2" CONDUIT CONCEALED IN CEILING OR WALL WITH (3) CONDUCTORS. (1) PHASE, (1) NEUTRAL AND (1) GROUND WIRE. ALL ARE #12 AWG UNLESS NOTED OTHERWISE.

(E) OR ETR: DENOTES EXISTING ITEM/EQUIPMENT TO REMAIN

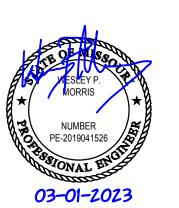
JSC ENGINEERS

RELEASED FOR CONSTRUCTION As Noted on Plans Review

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ORIGINAL: 02.24.2023 REVISIONS: DATE / DESCRIPTION

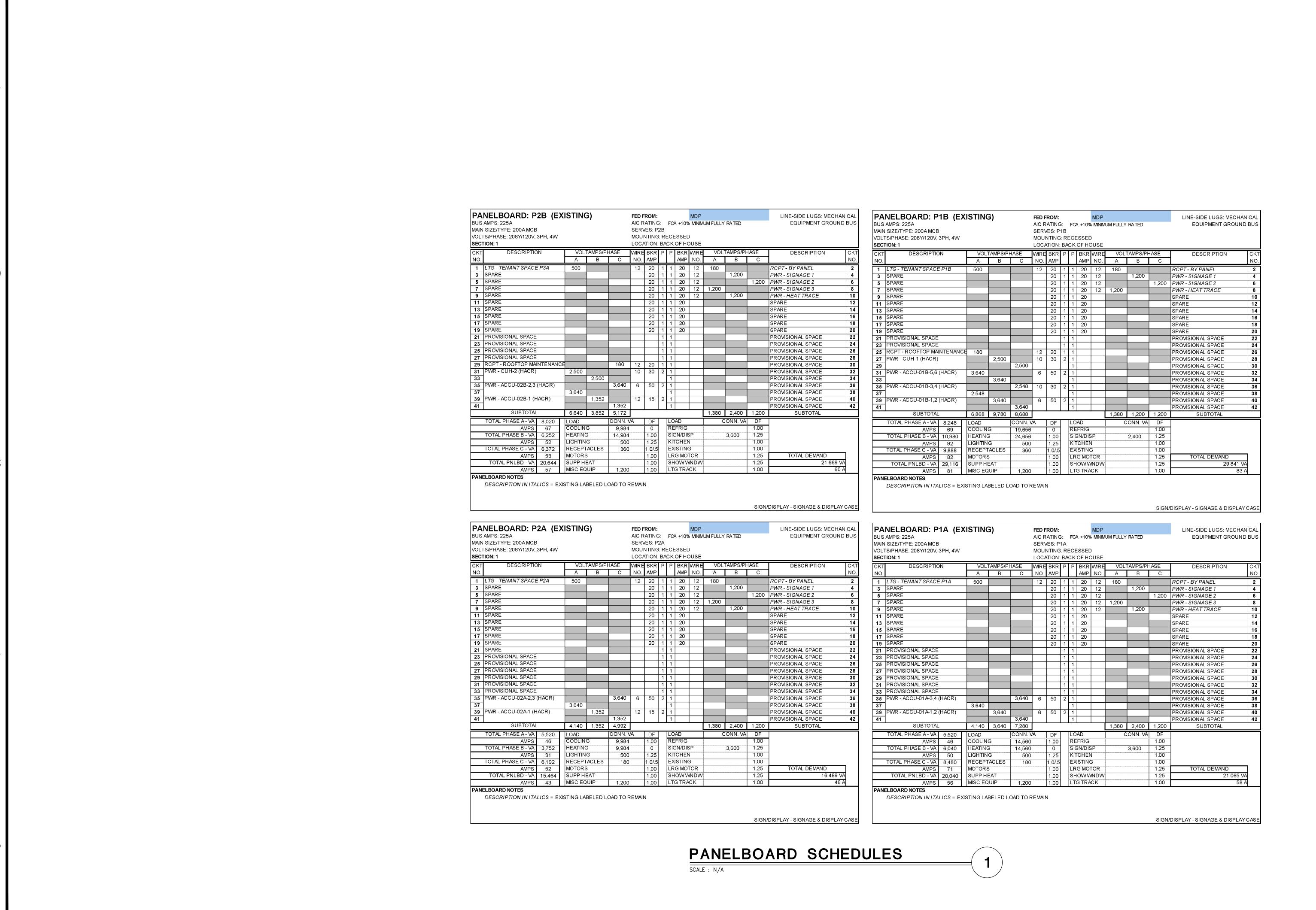
03.01.23 / PLANCHECK

ELECTRICAL

PLAN

JOB NO.: 23-031

SHEET:



As Noted on Plans Review **ENGINEERS** MO COA NO. 2012006786 / KS COA NO. E-2818 1925 CENTRAL STREET, SUITE 201 KANSAS CITY, MO 64108 phone: (816) 272-5289

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CONSTRUCTION

03-01-2023

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420 LEE ORIGINAL: 02.24.2023 REVISIONS: DATE / DESCRIPTION 1 03.01.23 / PLANCHECK Copyright 2023 JSC Engineers ISSUED:

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SHEET TITLE: PANELBOARD

SCHEDULES

JOB NO.: **23-031**

SHEET: