CONSTRUCTION DOCUMENTS

City of Puyallup Building REVIEWED FOR COMPLIANCE
RayC
07/07/2023
12:27:16 PM

Approval of submitted plans is not an approval of omissions or oversight by this office or noncompliance with any applicable regulations of local government. The contractor is responsible for making sure that the building complies with all applicable building codes and regulations of the local government.

THE APPROVED CONSTRUCTION PLANS AND ALL ENGINEERING MUST BE POSTED ON THE JOB AT ALL INSPECTIONS IN A VISIBLE AND READILY ACCESSIBLE LOCATION.

Provide preliminary commissioning report for final mechanical inspection for inspector review.

See June 22, 2023 PCS structural solutions structural letter submitted with this permit.

See Project Manual; note pg 3.

Bracing of ductwork shall be in accordance with the state and local code requirements, ASCE 7 Seismic Design Requirements for Nonstructural Components, and with the provisions set forth in the SMACNA seismic restraint manual

City of Puyallup Development & Permitting Services ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

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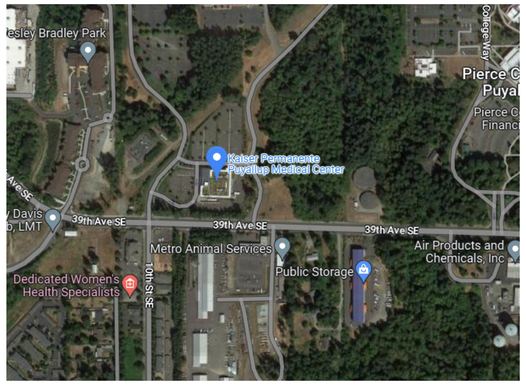
S203	ROOF PLAN

VICINITY MAP



1007 39TH SE, PUYALLUP, WA 98374

PROJECT DESCRITPION

THIS PROJECT IS A LIKE-FOR-LIKE REPLACEMENT OF THE EXISTING ROOF TOP UNITS THAT HAVE BEEN FAILING DUE TO A WARRANTY ISSUE FROM THE MANUFACTURER AND WILL ALSO IMPROVE THE THERMAL COMFORT AND CONTROL IN STRATEGIC AREAS IN THE MEDICAL CENTER.

EXISTING CONSTRUCTION TYPE	PARCEL NUMBER
IIB, FULLY SPRINKLERED	0419034033

OWNER:
KAISER PERMANENTE - WASHINGTON REGION

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PHONE: (650) 863-6280

KAISER PERMANENTE

ROOF TOP UNIT REPLACEMENT & MECHANICAL IMPROVEMENTS

102908.00

06/23/2023

nbbj

PAE

STANDARD MECHANICAL ABBREVIATIONS

AF	AIRFOIL	IE	INVERT ELEVATION
AFF	ABOVE FINISHED FLOOR	IN	INCH(ES)
AHP	APPARATUS HOUSING PLENUM	INSUL	INSULATION
ALT	ALTERNATIVE	ISOL	ISOLAT(OR)(ION)
AL	ALUMINUM	KW	KILOWATT
APD	AIR PRESSURE DROP	KWH	KILOWATT HOUR
APPROX	APPROXIMATELY	L	LENGTH
ARCH	ARCHITECT(URAL)	LAT	LEAVING AIR TEMP
AUTO	AUTOMATIC	LB	POUND
BDD	BACKDRAFT DAMPER	LDB	LEAVING DRY BULB
BI	BACKWARD INCLINED	LF	LINEAR FEET
BLDG	BUILDING	LFT	LEAVING FLUID TEMPERATURE
BSMT	BASEMENT	LVG	LEAVING
BTU	BRITISH THERMAL UNIT	LWB	LEAVING WET BULB
BTUH	BRITISH THERMAL UNITS PER HOUR	LWT	LEAVING WATER TEMPERATURE
CFH	CUBIC FEET PER HOUR	MAX	MAXIMUM
CFM	CUBIC FEET PER MINUTE	MBH	THOUSAND BTU PER HOUR
CFS	CUBIC FEET PER SECOND	MECH	MECHANICAL
CLG	CEILING OR COOLING	MFR	MANUFACTURER
CONC	CONCRETE	MIN	MINIMUM
CONN	CONNECT(ION)	MISC	MISCELLANEOUS
CONT	CONTINUE(ED)(UATION)	MTD	MOUNTED
CL	CENTERLINE	NC	NORMALLY CLOSED
DDC	DIRECT DIGITAL CONTROL	NIC	NOT IN CONTRACT
DEFL	DEFLECTION	NO	NORMALLY OPEN
DN	DOWN	OAD	OUTSIDE AIR DAMPER
DP	DEW POINT	OC	ON CENTER DISTANCE
DWDI	DOUBLE WIDTH DOUBLE INLET	OSA	OUTSIDE AIR
DWG	DRAWING	PH	PHASE
EA	EXHAUST AIR	PP	POLYPROPYLENE
EAD	EXHAUST AIR DAMPER	PSI	POUNDS PER SQUARE INCH
EAT	ENTERING AIR TEMPERATURE	PVC	POLYVINYL CHLORIDE
EDB	ENTERING DRY BULB	PVS	PVC COATED STEEL
EFF	EFFICIENCY	R (RAD)	RADIUS
EFT	ENTERING FLUID TEMPERATURE	RA	RETURN AIR
ELEC	ELECTRIC(AL)	RAD	RETURN AIR DAMPER
ELEV	ELEVATION	REV	REVISION
ENGR	ENGINEER	RH	RELATIVE HUMIDITY
EQ	EQUAL	RPM	REVOLUTIONS PER MINUTE
EQUIP	EQUIPMENT	SA	SUPPLY AIR
ESP	EXTERNAL STATIC PRESSURE	SCFM	STANDARD CUBIC FEET PER MINUTE
EWB	ENTERING WET BULB	SD	SMOKE DAMPER
EWT	ENTERING WATER TEMPERATURE	SECT	SECTION
EX	EXTRACTOR	SENS	SENSIBLE
EXH	EXHAUST	SIM	SIMILAR
EXIST	EXISTING	SP	STATIC PRESSURE
EXP	EXPANSION	SPEC	SPECIFICATION
F	DEGREES FAHRENHEIT	SQ	SQUARE
FC	FORWARD CURVED	SF	SQUARE FOOT(FEET)
FIG	FIGURE	SQ IN	SQUARE INCH(ES)
FILT	FILTER	SS	STAINLESS STEEL
FLEX	FLEXIBLE	STL	STEEL
FPD	FLUID PRESSURE DROP	STRUCT	STRUCTUR(E)(AL)
FPM	FEET PER MINUTE	SWP	SINGLE WALL PLENUM
FPS	FEET PER SECOND	SWSI	SINGLE WIDTH SINGLE INLET
FT	FEET/FOOT	TEMP	TEMPERATURE
FTR	FINNED TUBE RADIATOR	TSP	TOTAL STATIC PRESSURE
FU	FIXTURE UNIT	TYP	TYPICAL
FUT	FUTURE	V	VOLTS
FV	FACE VELOCITY	VD	VOLUME DAMPER
GA	GAGE/GAUGE	VEL	VELOCITY
GAL	GALLON	VERT	VERTICAL
GALV	GALVANIZED	VFD	VARIABLE FREQUENCY DRIVE
GLY	GLYCOL	VTR	VENT THROUGH ROOF
GPH	GALLONS PER HOUR	W	WIDTH
GPM	GALLONS PER MINUTE	WG	WATER GAUGE
H	HEIGHT	WPD	WATER PRESSURE DROP
HORIZ	HORIZONTAL	WTD	WATER TEMPERATURE DROP
HP	HORSEPOWER	WTR	WATER TEMPERATURE RISE
HTG	HEATING	W/	WITH
ID	INSIDE(DIAMETER/DIMENSION)	W/O	WITHOUT

DEMOLITION LEGEND

REMOVE EXISTING DUCT

REMOVE EXISTING PIPE

NEW AND EXISTING WORK

EXISTING WASTE (BELOW GRADE OR FLOOR)

EXISTING COLD WATER

EXISTING DUCT WORK

NEW WASTE (BELOW GRADE OR FLOOR)

NEW COLD WATER

NEW DUCT WORK

HVAC PIPING

RS — RS — REFRIGERANT SUCTION

RL — RL — REFRIGERANT LIQUID

CONTROL SYMBOLS

- DAMPER WITH OPERATOR
- 2-WAY CONTROL VALVE
- 3-WAY CONTROL VALVE
- DO — DIGITAL OUTPUT FROM DDC PANEL
- DI — DIGITAL INPUT TO DDC PANEL
- AO — ANALOG OUTPUT FROM DDC PANEL
- AI — ANALOG INPUT TO DDC PANEL
- DP — DIFFERENTIAL PRESSURE SWITCH
- EP — EP VALVE
- SP — STATIC PRESSURE CONTROLLER
- VP — VELOCITY PRESSURE TRANSMITTER
- R — PNEUMATIC RELAY
- ES — DAMPER END SWITCH
- CO — CARBON MONOXIDE SENSOR
- CO_2 — CARBON DIOXIDE SENSOR
- AMS — AIR MONITORING STATION
- VPP — VELOCITY PRESSURE PROBE
- PE — PE SWITCH
- SMK — DUCT SMOKE DETECTOR
- WFM — WATER FLOW METER WITH ELECTRONIC TRANSMITTER
- PB — PUSH BUTTON SWITCH
- SM — SWITCHED MAIN AIR
- PT — PRESSURE TRANSMITTER
- M — MAIN AIR
- H — ELECTRONIC HUMIDITY TRANSMITTER
- H HL — DUCT MOUNTED HIGH LIMIT HUMIDISTAT
- T — ELECTRONIC TEMPERATURE SENSOR
- FS — FLOW SWITCH
- T — ELECTRONIC SENSOR WITH AVERAGING
- CT STATUS — CURRENT TRANSFORMER / STATUS INDICATOR

DUCT DETAILS (LOW VELOCITY)

W, R=1-1/2W — RADIUS ELBOW

TURNING VANES IN ALL ELBOWS AND TEES — MITER ELBOWS & TEES

FLEX CONNECTION

12x6, 12x6 — SIZE SHOWN IS CLEAR AIR PASSAGE — ACOUSTICAL LINER

LESS THAN 15° | 15° TO 30° | W, R=1-1/2W GREATER THAN 30°

DUCT OFFSETS

30° MAX | 30° MAX — RECTANGULAR TO ROUND

TRANSITIONS

45°, W, 4" MIN OR 1/4W OR 12" MAX

RECTANGULAR DUCT FITTINGS

SPIN-IN FITTING | CONICAL SPIN-IN FITTING

RECTANGULAR TO ROUND FITTINGS

DUCT LEGEND

CFM / TYPE — FLOW DIRECTION (NONE SHOWN IF 4-WAY)

RETURN EXHAUST SUPPLY

SEE SPECS FOR TYPE
SEE SCHEDULE FOR SIZE

CFM / SIZE TYPE

NECK SIZE (SIDEWALL & FLOOR GRILLE)
PLENUM INLET SIZE (SLOT DIFFUSER)

TYPE REFERENCE
H = 6" BELOW CEILING
L = 6" ABOVE FLOOR
F = FLOOR
S = SLOT DIFFUSER
C = CEILING
T = DOOR TRANSFER

CEILING DIFFUSERS & GRILLES — SIDEWALL, SLOTS & FLOOR GRILLES

BOX NUMBER: TU-X-XXX; MAXIMUM CFM: 500

BOX TYPE KEY: TU - X - XXX
- TERMINAL UNIT NUMBER
- FLOOR UNIT IS LOCATED ON
- AIR HANDLER NUMBER
- TERMINAL UNIT

TERMINAL UNITS

EF-XXX
- UNIT NUMBER
- FLOOR UNIT IS LOCATED ON
- EQUIPMENT TYPE

EQUIPMENT

SUPPLY AIR | RETURN AIR | EXHAUST AIR | OUTSIDE AIR

DUCT SECTIONS

FSD | FD | SD

COMBINATION FIRE/SMOKE | FIRE | SMOKE | VOLUME | AUTOMATIC

DAMPERS

RETURN OR EXHAUST AIR FLOW

SUPPLY OR OUTSIDE AIR FLOW

UC 1/2" — UNDERCUT DOOR

LOW PRESSURE DUCTWORK

R=2D FOR FLEX — SECTION, PLAN — FLEX DUCT

R=1-1/2D FOR ROUND — SECTION, PLAN — ROUND DUCT

RETURN OR EXH. GRILLE CONNECTION

R=2D FOR FLEX — SECTION, PLAN — FLEX DUCT

R=1-1/2D FOR ROUND — SECTION, PLAN — ROUND DUCT

SUPPLY DIFFUSER CONNECTION

SECTION, PLAN — RECTANGULAR DUCT

LINED PLENUM, FLEX DUCT, SPIN-IN FITTING — SECTION, PLAN — SQUARE NECK

RETURN OR EXHAUST GRILLE — SUPPLY DIFFUSER SIDE FLEX CONNECTION

SECTION, PLAN — SUPPLY DIFFUSER HARD CONNECTION

EX — SECTION, PLAN — SIDE WALL SUPPLY GRILLE CONNECTION

MEDIUM PRESSURE DUCTWORK

CONICAL TEE | LOW LOSS | LATERAL TEE | CONICAL LATERAL

BRANCH FITTINGS

R=1-1/2D — ELBOW

Y-BRANCH

R=2D, D, R — BELLMOUTH

L=D1-D2, L, D1, D2 — REDUCERS

GENERAL NOTE

THIS IS A STANDARD LEGEND SHEET, THEREFORE, SOME SYMBOLS MAY APPEAR ON THIS SHEET THAT DO NOT APPEAR ON THE DRAWINGS.

FOR ALL LOCATIONS REQUIRING ACCESS FROM BELOW THE CEILING, PATCH, PAINT, AND REPAIR ALL EXISTING GYPSUM BOARD CEILINGS AND WALLS TO MATCH ADJACENT WALL FINISH. FOR ACCESS AT EXISTING ACOUSTIC CEILING TILE LOCATIONS, TAKE SPECIAL CARE WHEN REMOVING TILES. REINSTALL ALL EXISTING CEILING TILES IN THEIR ORIGINAL LOCATION AND ORIENTATION

MISC. FITTINGS & SYMBOLS

- DIRECTION OF FLOW
- DIRECTION OF SLOPE
- PIPE SLEEVE
- REDUCER
- ANCHOR
- ELBOW (90°)
- ELBOW (45°)
- TEE
- CROSS
- PIPING CONNECTIONS
- JOINT OR COUPLING POINT
- UNION
- FLANGED CONNECTION
- CAP
- PLUG OR BLIND FLANGE
- RISER
- ELBOW UP
- ELBOW DOWN
- TEE UP
- TEE DOWN
- HORIZONTAL TEE
- FLEXIBLE CONNECTION
- BALL JOINT
- MC — MECHANICAL COUPLING

SYMBOLS

- A — ACCESS PANEL
- B — BELOW GRADE / FLOOR
- C — CONNECT TO EXISTING
- E — EXISTING TO REMAIN
- K — CAP EXISTING / CAP FOR FUTURE
- R — RELOCATE EXISTING
- X — REMOVE EXISTING
- 1 — NOTE

CALL OUT SYMBOLS

WALL MOUNTED
PENDANT MOUNTED

- T — TEMPERATURE
- H — HUMIDITY
- P — PRESSURE
- CO — CARBON MONOXIDE
- CO2 — CARBON DIOXIDE
- NOX — NITROGEN OXIDE

ROOM SENSORS

MECHANICAL SHEET INDEX

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M102	SECOND FLOOR PLAN - MECHANICAL - DEMO
M103	ROOF PLAN - MECHANICAL - DEMO
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M203	ROOF PLAN - MECHANICAL
M211	FIRST FLOOR PLAN - MECHANICAL - PIPING
M212	SECOND FLOOR PLAN - MECHANICAL - PIPING

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DANIELA SIMONE WAHLER, STATE OF WASHINGTON, 48959, REGISTERED PROFESSIONAL ENGINEER, 06/23/23

KAISER PERMANENTE®

KPWA PLP
ROOF TOP UNIT REPLACEMENT & MECHANICAL IMPROVEMENTS

CONSTRUCTION DOCUMENTS

PROJECT ISSUE DATE
06/23/2023

REVISIONS

MARK	DATE	DESCRIPTION

PROJECT NUMBER 22-1043

CHECKED BY DW

SHEET NAME
SYMBOLS, LEGENDS AND ABBREVIATIONS - MECHANICAL

SHEET NUMBER
M001

Date: 6/23/23 Time: 10:57am File: P:\2022\22-1043 - Kaiser PLP Rooftop Unit Replacement\01 Production\02 CAD\Main Bldg\22-1043 M001.dwg User: eric.heinrich

VRF INDOOR UNIT SCHEDULE

TAG	LOCATION	SERVICE	OUTDOOR UNIT	CONTROLLER NAME	CONTROLLER TYPE	TYPE	OUTSIDE AIR (CFM)	AIRFLOW (CFM)	COOLING TOTAL (MBH)	COOLING SENSIBLE (MBH)	HEATING TOTAL (MBH)	ELECTRICAL VOLT/ PHASE	ELECTRICAL POWER (KW)	ELECTRICAL MCA (A)	GEN. POWER (Y/N)	CONDENSATE LIFT	APPROX. WEIGHT (LBS)	MANUFACTURER & MODEL	NOTES
FCU-1112	OFC B122	OFC B122	CU-01	VBC1101	CMB	CASSETTE	25	90	2.1	1.5	1.9	208/1	0.02	0.24	N	INTEGRAL		MITSUBISHI PLFY-P05	
FCU-1113	STOR B127	STOR B127	CU-01	VBC1101	CMB	CASSETTE	25	90	2.0	1.5	1.8	208/1	0.02	0.24	N	INTEGRAL		MITSUBISHI PLFY-P05	
FCU-2510	MED ROOM H225	MED ROOM H225	CU-05	VBC2501	CMB	CASSETTE	20	300	5.5	4.9	4.5	208/1	0.02	0.28	N	INTEGRAL		MITSUBISHI PLFY-P08	
FCU-2609	MED ROOM J251	MED ROOM J251	CU-06	VBC2601	CMB	CASSETTE	20	300	5.5	4.9	4.5	208/1	0.02	0.28	N	INTEGRAL		MITSUBISHI PLFY-P08	
FCU-2708	MED ROOM K275	MED ROOM K275	CU-07	VBC2701	CMB	CASSETTE	20	300	5.5	4.9	4.5	208/1	0.02	0.28	N	INTEGRAL		MITSUBISHI PLFY-P08	

GENERAL NOTES:

A. MINIMUM EFFICIENCY IS AT ARI STANDARD CONDITIONS.

B. ALL DUCTED AND CASSETTE UNITS ARE PROVIDED WITH AN INTEGRAL CONDENSATE LIFT MECHANISM CAPABLE OF 33 IN WG OF LIFT. ROUTE CONDENSATE TO JANITOR'S MOP SINK.

C. ALL FAN MOTORS ARE EC TYPE

D. MINIMUM AND MAXIMUM ALLOWABLE SUPPLY AIR TEMPERATURES ARE 55°F AND 105°F, RESPECTIVELY.

VRF OUTDOOR UNIT SCHEDULE (DEMO)

TAG	LOCATION	SERVICE	COOLING DESIGN CAPACITY (TON)	HEATING DESIGN CAPACITY (MBH)	CONDENSER COMPRESSORS QTY (#)	CONDENSER COMPRESSORS TYPE	CONDENSER FAN QTY. (#)	MIN EFFICIENCY (S)EER	MIN EFFICIENCY COP	REFRIGERANT TYPE	REFRIGERANT CHARGE (LBS)	ELECTRICAL VOLT/ PHASE	ELECTRICAL MCA (A)	ELECTRICAL MOCP (A)	ELECTRICAL GEN. POWER (Y/N)	APPROX. WEIGHT (LBS)	MANUFACTURER & MODEL
CU-01	ROOF	NORTH LEVEL 1	24	320	2	INVERTER	2	-	-	R410A	-	460/3	27	30	N	1,456	MITSUBISHI PURY
CU-02	ROOF	CENTRAL LEVEL 1	14	188	2	INVERTER	2	-	-	R410A	-	460/3	16	20	N	1,170	MITSUBISHI PURY
CU-03	ROOF	SOUTH LEVEL 1	12	160	1	INVERTER	1	-	-	R410A	-	460/3	27	30	N	728	MITSUBISHI PURY
CU-04	ROOF	WEST LEVEL 1	20	270	2	INVERTER	2	-	-	R410A	-	460/3	23	25	N	1,456	MITSUBISHI PURY
CU-05	ROOF	NORTH LEVEL 2	20	270	2	INVERTER	2	-	-	R410A	-	460/3	23	25	N	1,456	MITSUBISHI PURY
CU-06	ROOF	CENTRAL LEVEL 2	16	215	2	INVERTER	2	-	-	R410A	-	460/3	16	20	N	1,236	MITSUBISHI PURY
CU-07	ROOF	SOUTH LEVEL 2	12	160	1	INVERTER	1	-	-	R410A	-	460/3	27	30	N	728	MITSUBISHI PURY
CU-08	ROOF	WEST LEVEL 2	12	160	1	INVERTER	1	-	-	R410A	-	460/3	27	30	N	728	MITSUBISHI PURY

GENERAL NOTES:

A. NONE.

VRF OUTDOOR UNIT SCHEDULE (NEW)

TAG	LOCATION	SERVICE	COOLING DESIGN CAPACITY (TON)	HEATING DESIGN CAPACITY (MBH)	CONDENSER COMPRESSORS QTY (#)	CONDENSER COMPRESSORS TYPE	CONDENSER FAN QTY. (#)	MIN EFFICIENCY (S)EER	MIN EFFICIENCY COP	REFRIGERANT TYPE	REFRIGERANT CHARGE (LBS)	ELECTRICAL VOLT/ PHASE	ELECTRICAL MCA (A)	ELECTRICAL MOCP (A)	ELECTRICAL GEN. POWER (Y/N)	APPROX. WEIGHT (LBS)	MANUFACTURER & MODEL
CU-01	ROOF	NORTH LEVEL 1	24	320	2	INVERTER	2	11.3	3.2	R410A	26	460/3	24	30	N	1,486	MITSUBISHI PURY
CU-02	ROOF	CENTRAL LEVEL 1	14	188	2	INVERTER	2	12.9	3.52	R410A	26	460/3	15	20	N	1,108	MITSUBISHI PURY
CU-03	ROOF	SOUTH LEVEL 1	12	160	1	INVERTER	1	12.7	3.28	R410A	26	460/3	24	30	N	743	MITSUBISHI PURY
CU-04	ROOF	WEST LEVEL 1	20	270	2	INVERTER	2	10.9	3.42	R410A	26	460/3	21	25	N	1,486	MITSUBISHI PURY
CU-05	ROOF	NORTH LEVEL 2	20	270	2	INVERTER	2	10.9	3.42	R410A	26	460/3	21	25	N	1,486	MITSUBISHI PURY
CU-06	ROOF	CENTRAL LEVEL 2	16	215	2	INVERTER	2	11.9	3.47	R410A	26	460/3	15	20	N	1,148	MITSUBISHI PURY
CU-07	ROOF	SOUTH LEVEL 2	12	160	1	INVERTER	1	12.7	3.28	R410A	26	460/3	24	30	N	743	MITSUBISHI PURY
CU-08	ROOF	WEST LEVEL 2	12	160	1	INVERTER	1	12.7	3.28	R410A	26	460/3	24	30	N	743	MITSUBISHI PURY

GENERAL NOTES:

A. MINIMUM EFFICIENCY IS AT AHRI STANDARD CONDITIONS.

B. SIZE REFRIGERANT PIPING PER MANUFACTURER'S INSTRUCTIONS.

C. REFRIGERANT CHARGE INDICATED IS FOR THE EQUIPMENT ONLY. PROVIDE NECESSARY REFRIGERANT QUANTITY TO MEET THE REQUIREMENTS FOR THE SPECIFIC INSTALLATION.

D. SUPLEMENTAL HEATING IS AUTOMATICALLY DISABLED AT OA TEMPERATURES ABOVE 40°F

DESIGN CONDITIONS - PUYALLUP, WA

SPACE	WINTER TEMPERATURE	WINTER HUMIDITY	SUMMER TEMPERATURE	SUMMER HUMIDITY
OUTDOOR	21° F DB	12° F DP / 26.6 ° F MCDB	86° F DB / 65° F MCWB	60.3° F DP / 70° F MCDB
INDOOR	72° F ± 2° F DB	60° F MAX, NO MINIMUM	75° F ± 2° F DB	60° F MAX, NO MINIMUM

GENERAL NOTES:

A. INDOOR AND OUTDOOR HUMIDITY CONDITIONS BASED ON ASHRAE STANDARD 62.1-2019 AND FUNDAMENTALS 2021 99.6% AND 0.4% DATA.

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06/23/23

KAISER PERMANENTE®

KPWA PLP
ROOF TOP UNIT
REPLACEMENT &
MECHANICAL
IMPROVEMENTS

CONSTRUCTION DOCUMENTS

PROJECT ISSUE DATE
06/23/2023

REVISIONS

MARK	DATE	DESCRIPTION

PROJECT NUMBER 22-1043

CHECKED BY DW

SHEET NAME

EQUIPMENT SCHEDULE - MECHANICAL

SHEET NUMBER

M002

Date: 6/23/23 Time: 10:49am File: P:\2022\22-1043 - Kaiser PLP Rooftop Unit Replacement\01 Production\02 CAD\Main Bldg\22-1043 M002.dwg User: eric.heinrich

KAISER PLP VENTILATION SCHEDULE - 2018 WSMC

LOCATION	FLOOR AREA (SF)	PRIMARY AIRFLOW RATE (CFM)	OCCUPANCY CLASSIFICATION	PEOPLE OUTDOOR AIRFLOW RATE Rp (CFM/PERSON)	AREA OUTDOOR AIRFLOW RATE Ra (CFM/SF)	DEFAULT OCCUPANT DENSITY (PEOPLE/1000SF)	CODE POPULATION	DESIGN POPULATION	OUTDOOR AIRFLOW RATE Voz (CFM)	ZONE AIR DISTRIBUTION EFFECTIVENESS Ez	OUTDOOR AIR INTAKE Voz (CFM)	PRIMARY OUTDOOR AIR FRACTION Zp	NOTES
STOR B127	103	75	OFFICE SPACES	5	0.06	5	0.5	2.0	16.2	0.8	21	0.28	
OFC B122	96	75	OFFICE SPACES	5	0.06	5	0.5	2.0	15.8	0.8	20	0.27	
MED RM H225	75	260	OFFICE SPACES	5	0.06	5	0.4	1.0	9.5	0.8	12	0.05	
MED RM J251	76	260	OFFICE SPACES	5	0.06	5	0.4	1.0	9.6	0.8	12	0.05	
MED RM K273	75	260	OFFICE SPACES	5	0.06	5	0.4	1.0	9.5	0.8	12	0.05	
TOTALS:	425	930					2	7	61		77	Zp max = 0.28	

TOTAL AIRFLOW: 5,000
SYSTEM POPULATION: 50

SYSTEM VENTILATION EFFICIENCY - Ev: 0.87
OCCUPANT DIVERSITY - D: 7.14
UNCORRECTED OUTDOOR AIR INTAKE - Vou: 276
CODE REQUIRED OUTDOOR AIR INTAKE FLOWRATE - Vot: 318

GENERAL NOTES:
A. SYSTEM OUTDOOR AIR CALCULATION IS BASED ON THE SECTION 403 OF THE 2018 INTERNATIONAL MECHANICAL CODE WITH WASHINGTON AMMENDMENTS.
B. MECHANICAL CONTRACTOR RESPONSIBLE FOR VERIFICATION THAT AHUS SERVING THESE AREAS MAINTAIN A MINIMUM OUTSIDE AIR PERCENTAGE OF 20%.

NOTES:
1. DESIGN OCCUPANCY REPRESENTS THE ACTUAL OCCUPANCY DOCUMENTED ON THE PLANS, WHICH IS NOT LESS THAN 1/2 THE CODE OCCUPANCY.

LOAD CALCULATION RESULTS

ZONE NAME	DESIGN POPULATION	DESIGN LIGHTING POWER DENSITY (W/SF)	DESIGN EQUIPMENT POWER DENSITY	COOLING					HEATING	
				DESIGN MAX FLOW (CFM)	PEAK COOLING MONTH	PEAK COOLING TIME	PEAK SENSIBLE LOAD (BTUH)	PEAK TOTAL LOAD (BTUH)	DESIGN MAX FLOW (CFM)	PEAK TOTAL HEATING LOAD (BTUH)
STOR B127	2	0.67	1.33 W/SF	75	7	15	1325	1813	75	1638
OFC B122	2	0.67	1.33 W/SF	75	7	15	1272	1750	75	1583
MED RM H225	1	1.4	3550 BTUH	260	7	15	4288	4757	200	3874
MED RM J251	1	1.4	3551 BTUH	260	7	15	4295	4767	200	3889
MED RM K273	1	1.4	3552 BTUH	260	7	15	4288	4757	200	3874

MECHANICAL HVAC DUCT MATERIAL SCHEDULE

SERVICE	SMACNA PRESSURE CLASS	MATERIAL	LOCATION	INSULATION TYPE	NOTE
LOW PRESSURE SUPPLY AIR	+2" WG	GALVANIZED DUCT	EXPOSED OR VISIBLE	NONE	
			CONCEALED OR IN MECHANICAL ROOMS	FIBERGLASS BLANKET	
			DOWNSTREAM OF AIR TERMINAL UNITS	FIBERGLASS BLANKET	
MEDIUM PRESSURE SUPPLY AIR ROOFTOP DUCTWORK, SHAFTS AND 10 FEET DOWNSTREAM OF FIRE/SMOKE DAMPERS	+6" WG	GALVANIZED DUCT	CONCEALED OR IN MECH ROOM	FIBERGLASS BLANKET	
			EXPOSED OUTSIDE BUILDING ENVELOPE	INTERNALLY LINED	
MEDIUM PRESSURE SUPPLY AIR BETWEEN FIRE/SMOKE DAMPERS AND TERMINAL UNIT INLET	+4" WG	GALVANIZED DUCT	EXPOSED OR VISIBLE	NONE	
			CONCEALED OR IN MECH ROOM	FIBERGLASS BLANKET	
			UPSTREAM OF TERMINAL UNITS	FIBERGLASS BLANKET	
LOW PRESSURE EXHAUST AIR	-2" WG	GALVANIZED DUCT	EXPOSED OR VISIBLE	NONE	
			CONCEALED OR IN MECHANICAL ROOMS	NONE	
			UPSTREAM OF TERMINAL UNITS	NONE	
			ALL ELSE	NONE	
TRANSFER AIR DUCT / RETURN AIR BOOTS	+/- 1" WG	GALVANIZED DUCT	ALL	INTERNALLY LINED	

GENERAL NOTES:
A. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
B. PRESSURE AND LEAKAGE DUCT TESTING PER UW STANDARDS.

NOTES:
1. NONE.

MINIMUM DUCT INSULATION (WASHINGTON)

DUCT SYSTEM	DUCT LOCATION	DUCT USE		CLIMATE ZONE	AIRFLOW	INSULATION R-VALUE	NOTES
	INSIDE THE BUILDING	IN A BUILDING ENVELOPE ASSEMBLY		4C & 5B		R-16	4
SUPPLY AIR	WITHIN CONDTIONED SPACE	SUPPLY AIR < 55°F OR SUPPLY AIR >105°F	DUCT OUTSIDE OF SPACE DIRECTLY SERVED	4C & 5B		R-3.3	2
			DUCT INSIDE OF SPACE DIRECTLY SERVED	4C & 5B		NONE	2
		SUPPLY AIR > 55°F OR SUPPLY AIR <105°F		4C & 5B		NONE	

GENERAL NOTES:
A. INSULATION R-VALUES, MEASURED IN H 6F °F/BTU, ARE FOR THE INSULATION AS INSTALLED AND DO NOT INCLUDE FILM RESISTANCE. THE REQUIRED MINIMUM THICKNESSES DO NOT CONSIDER WATER VAPOR TRANSMISSION AND POSSIBLE SURFACE CONDENSATION. INSULATION RESISTANCE MEASURED ON A HORIZONTAL PLANE IN ACCORDANCE WITH ASTM C518 AT A MEAN TEMPERATURE OF 75°F AT THE INSTALLED THICKNESS.
B. SEE INTERNATIONAL MECHANICAL CODE SECTIONS 603.12 AND 604 FOR FURTHER DETAILS ON DUCT INSULATION REQUIREMENTS.
C. OUTSIDE THE BUILDING INCLUDES ATTICS ABOVE INSULATED CEILINGS, PARKING GARAGES AND CRAWL SPACES.

NOTES:
1. SEE SECTION o403.10.1.1 FOR ADDITIONAL REQUIREMENTS.
2. SEE SECTION C403.10.2 FOR DETAILS.
3. SEE IMC SECTION 603.12 FOR ADDITIONAL REQUIREMENTS FOR CONDENSATION CONTROL AT DUCTWORK.
4. DUCT OR PLENUM IS SEPERATED FROM BUILDING ENVELOPE ASSEMBLY WITH THE MINIMUM INSULATION VALUE.

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REVISIONS

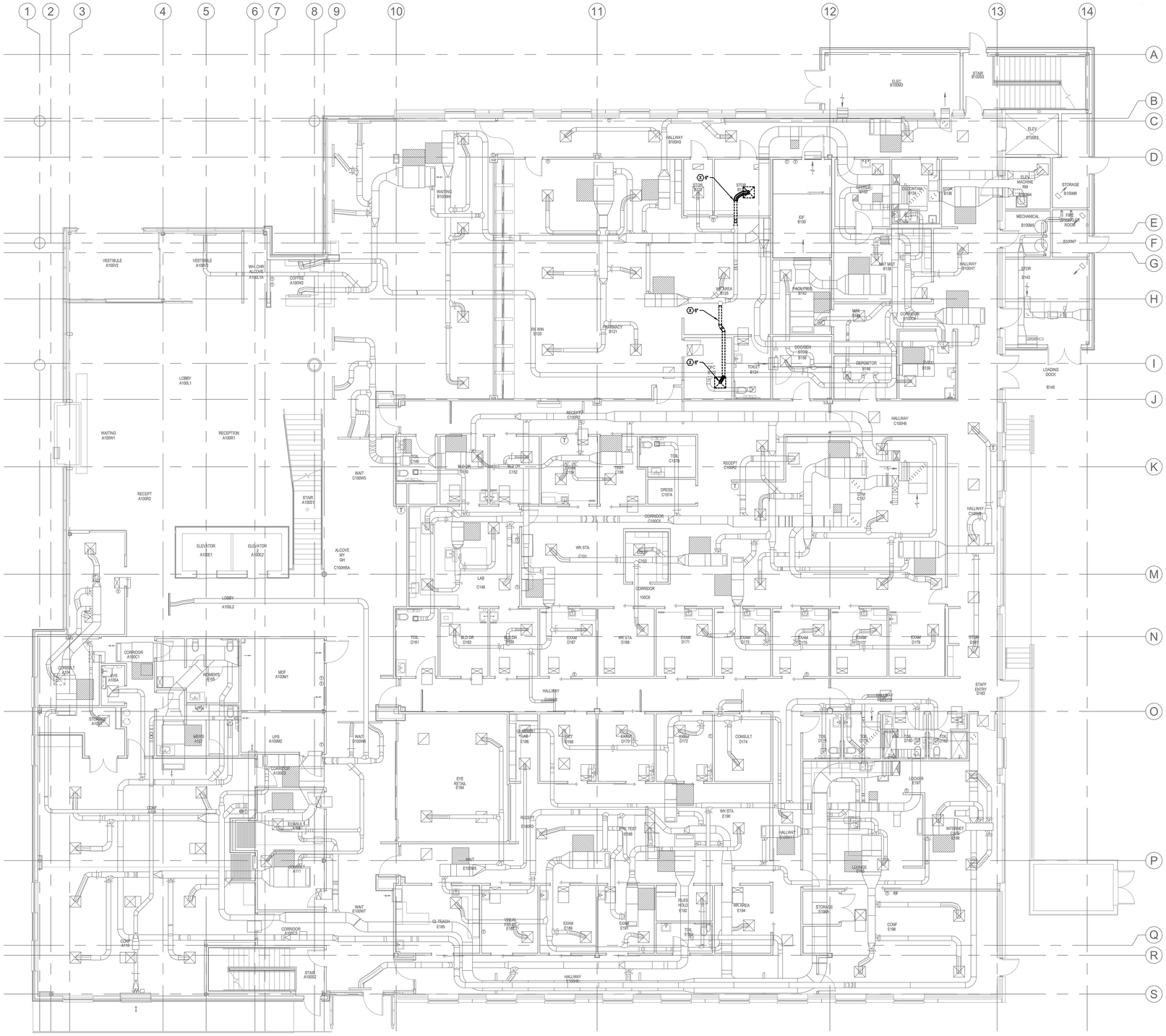
MARK	DATE	DESCRIPTION

PROJECT NUMBER 22-1043
CHECKED BY DW

SHEET NAME
EQUIPMENT SCHEDULE - MECHANICAL

SHEET NUMBER
M003

Date: 6/23/23 Time: 10:48am File: P:\2022\22-1043 - Kaiser PLP Rooftop Unit Replacement\01 Production\02 CAD\Main Bldg\22-1043 M003.dwg User: eric.heinrich



1 M101 FIRST FLOOR PLAN - MECHANICAL - DEMO
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

A. ALL EXISTING CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.

B. PATCH AND REPAIR ALL OPENINGS MADE BY REMOVALS.

C. DEMOLITION WORK SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING : REMOVAL OF EQUIPMENT, SUPPORTS, ANCHORS, PIPING, DUCTWORK AND ALL APPURTENANCES WHERE INDICATED ON THE PLANS.

D. REMOVE MECHANICAL EQUIPMENT, DUCTS, PIPING AND ASSOCIATED ITEMS AS SHOWN OR RELATED TO EQUIPMENT TO BE REMOVED. CAP DUCTWORK OR PIPING AT NEAREST LIVE BRANCH.

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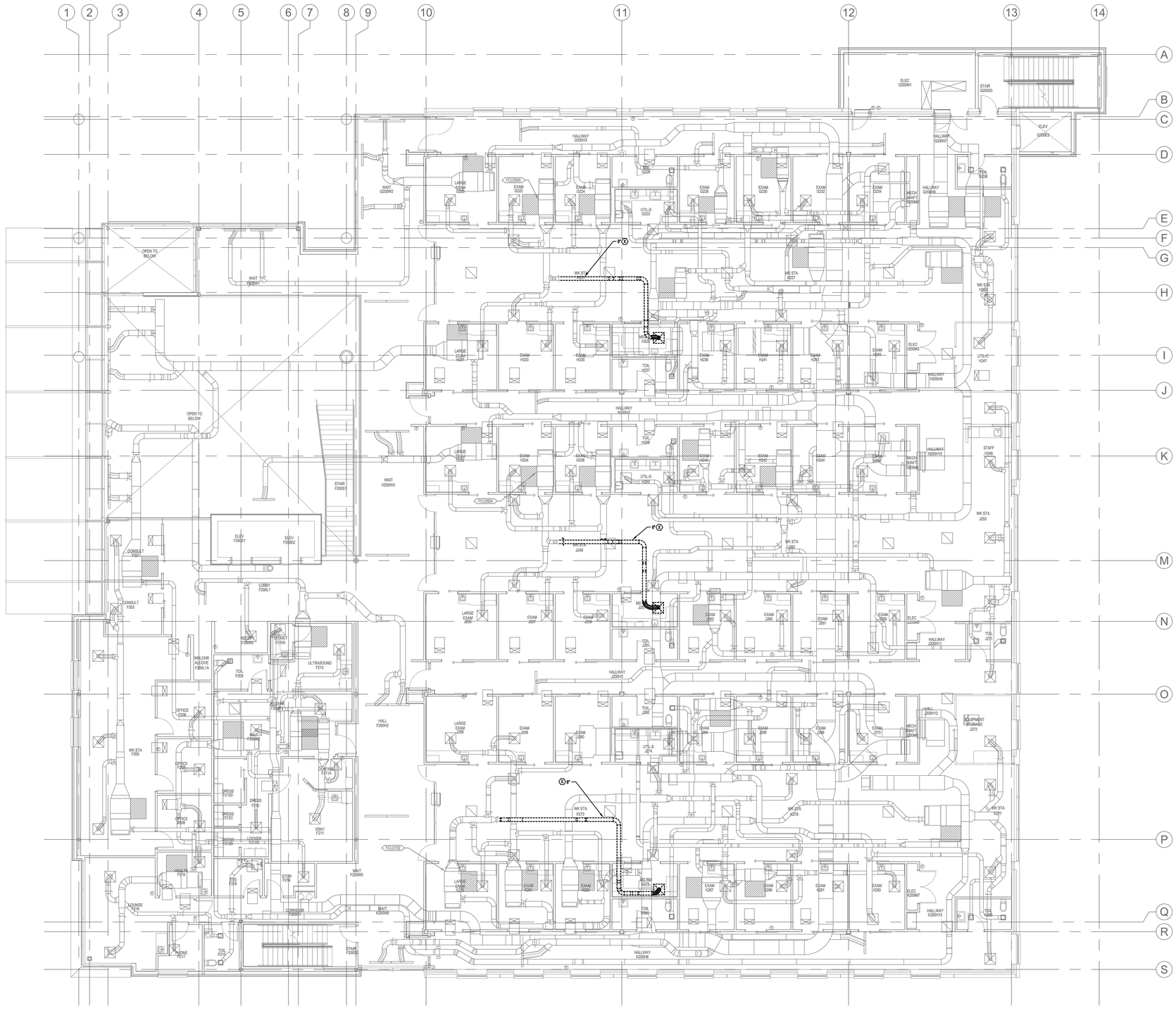
SHEET NAME
FIRST FLOOR PLAN - MECHANICAL - DEMO
SHEET NUMBER
M101

Date: 6/23/23 Time: 10:48am File: P:\2022\22-1043 – Kaiser PLP Rooftop Unit Replacement\01 Production\02 CAD\Main Bldg\22-1043 M101.dwg User: erichehrlich



1 M102 SECOND FLOOR PLAN - MECHANICAL - DEMO
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

A. ALL EXISTING CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.

B. PATCH AND REPAIR ALL OPENINGS MADE BY REMOVALS.

C. DEMOLITION WORK SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING : REMOVAL OF EQUIPMENT, SUPPORTS, ANCHORS, PIPING, DUCTWORK AND ALL APPURTENANCES WHERE INDICATED ON THE PLANS.

D. REMOVE MECHANICAL EQUIPMENT, DUCTS, PIPING AND ASSOCIATED ITEMS AS SHOWN OR RELATED TO EQUIPMENT TO BE REMOVED. CAP DUCTWORK OR PIPING AT NEAREST LIVE BRANCH.

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MARK	DATE	DESCRIPTION

PROJECT NUMBER 22-1043

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SHEET NAME
SECOND FLOOR PLAN - MECHANICAL - DEMO

SHEET NUMBER
M102

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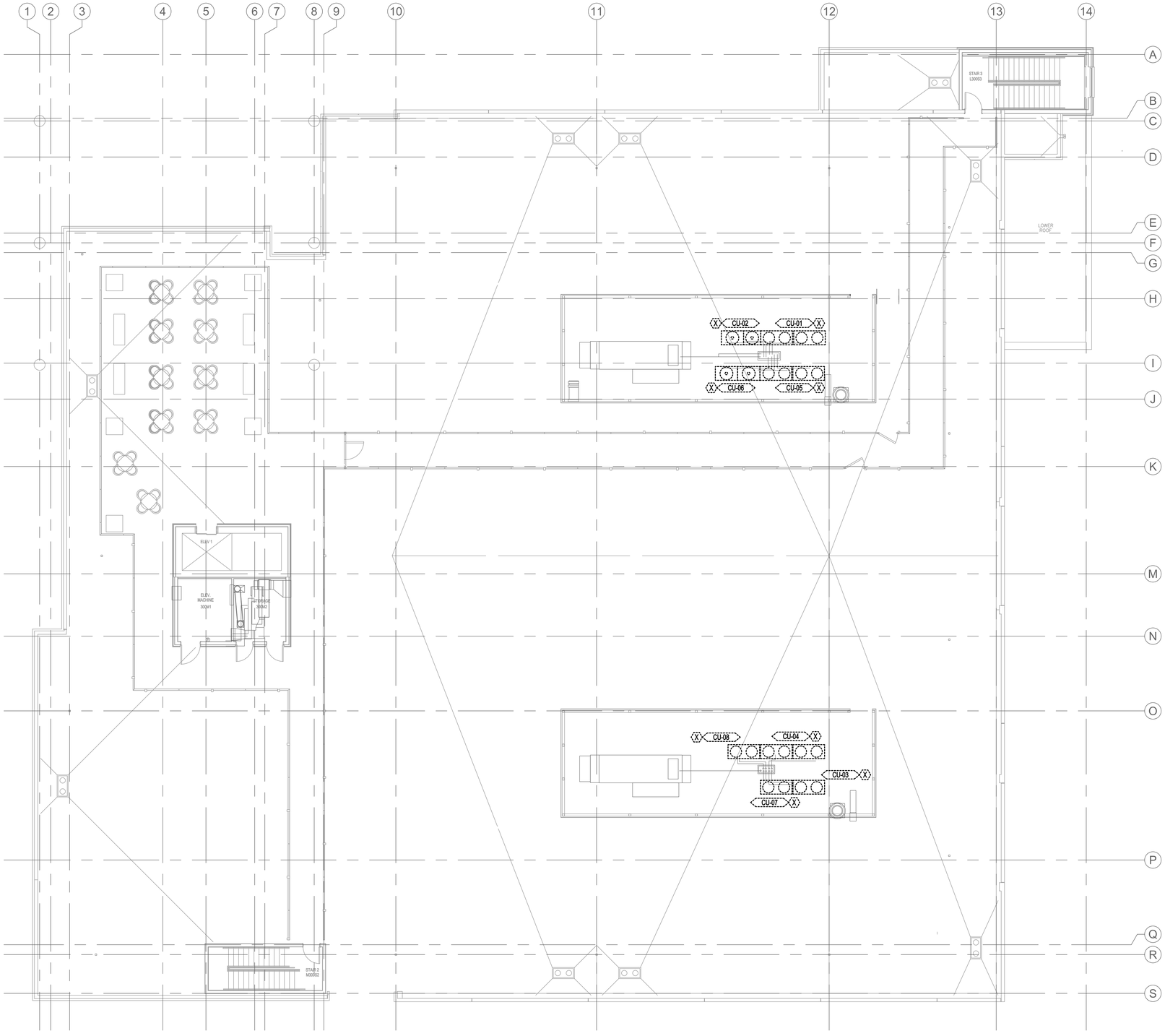
Date: 6/23/23 Time: 10:47pm File: P:\2022\22-1043 - Kaiser PLP Rooftop Unit Replacement\01 Production\02 CAD\Main Bldg\22-1043 M102.dwg User: eric.heinrich



1 M103 ROOF PLAN - MECHANICAL - DEMO

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

GENERAL NOTES:

A. ALL EXISTING CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.

B. PATCH AND REPAIR ALL OPENINGS MADE BY REMOVALS.

C. DEMOLITION WORK SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING : REMOVAL OF EQUIPMENT, SUPPORTS, ANCHORS, PIPING, DUCTWORK AND ALL APPURTENANCES WHERE INDICATED ON THE PLANS.

D. REMOVE MECHANICAL EQUIPMENT, DUCTS, PIPING AND ASSOCIATED ITEMS AS SHOWN OR RELATED TO EQUIPMENT TO BE REMOVED. CAP DUCTWORK OR PIPING AT NEAREST LIVE BRANCH.

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PROJECT NUMBER	22-1043
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ROOF PLAN - MECHANICAL - DEMO

SHEET NUMBER

M103

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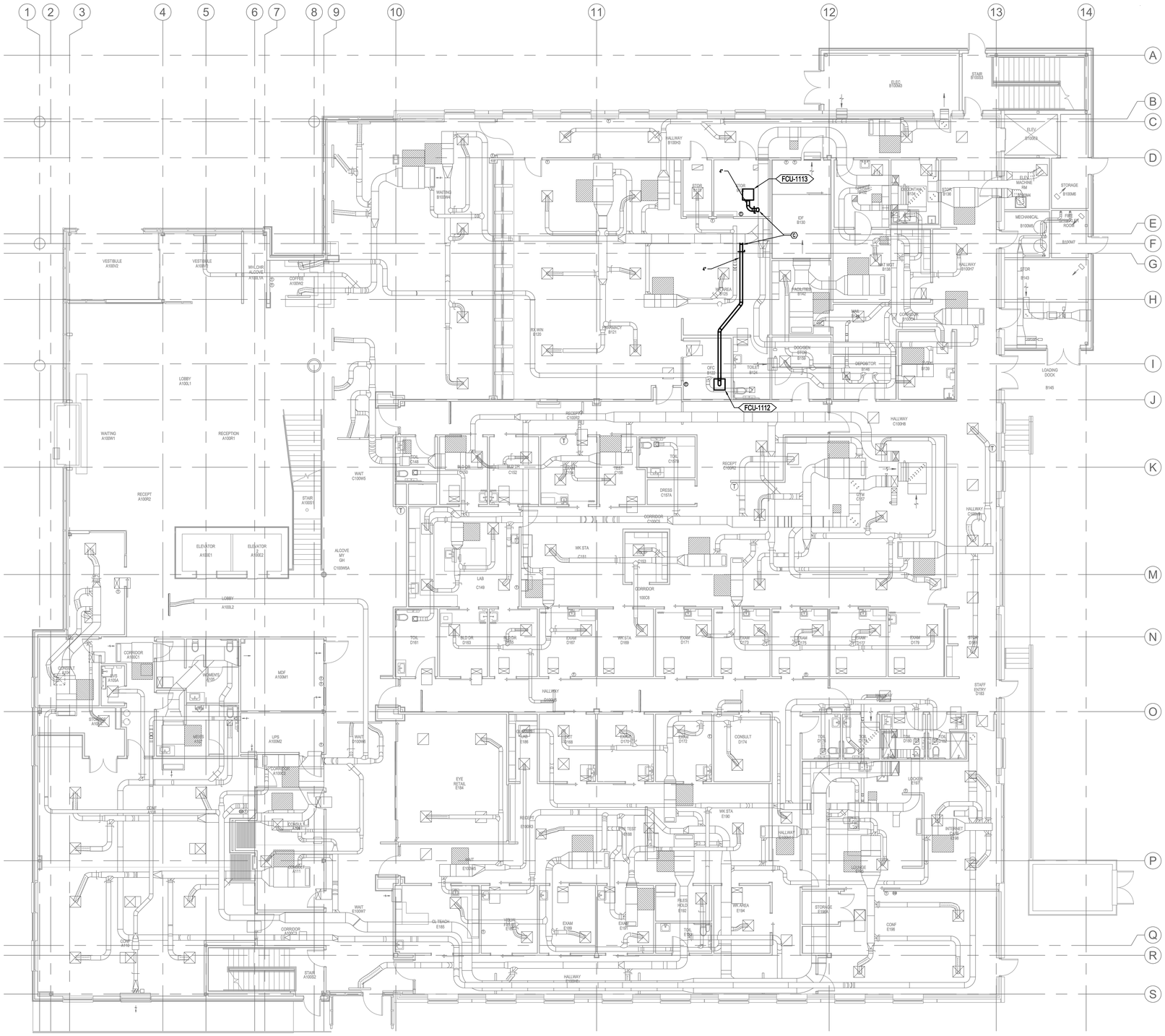
Building	Planning
Engineering	Public Works
Fire	Traffic

Date: 6/23/23 Time: 10:46am File: P:\2022\22-1043 - Kaiser PLP Rooftop Unit Replacement\01 Production\02 CAD\Main Bldg\22-1043 M103.dwg User: eric.heinrich



1 M201 FIRST FLOOR PLAN - MECHANICAL
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

A. PROVIDE TRANSFER OPENINGS FOR RETURN AIR SIZED AT 300 FPM IN FULL HEIGHT WALLS SEE ARCHITECTURAL DRAWINGS.

B. PROVIDE VOLUME DAMPER AT EACH BRANCH OUTLET/INLET.

C. RUN DUCTS AND PIPING CONCEALED, UNLESS SPECIFIED OTHERWISE, AND CLEAR OF CEILING INSERTS. ALL DUCTWORK SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO WALL AND UNDERSIDE OF BEAMS AND JOISTS.

D. ALL WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. OFFSETS IN PIPING AND DUCTS (INCLUDING DIVIDED DUCTS) AND TRANSITIONS AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.

E. VERIFY ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. VERIFY AND PROVIDE DUCT TRANSITIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DIMENSIONS BEFORE FABRICATION.

F. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF AIR DEVICES.

G. ALL DETAILS APPLY TO THIS SHEET WHETHER TAGGED OR NOT.

H. PIPING SHALL BE LARGEST SIZE SHOWN UNTIL SMALLER PIPE SIZE IS INDICATED INCLUDING MAINS AND BRANCH PIPING.

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PROJECT NUMBER 22-1043
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SHEET NAME
FIRST FLOOR PLAN - MECHANICAL

SHEET NUMBER
M201

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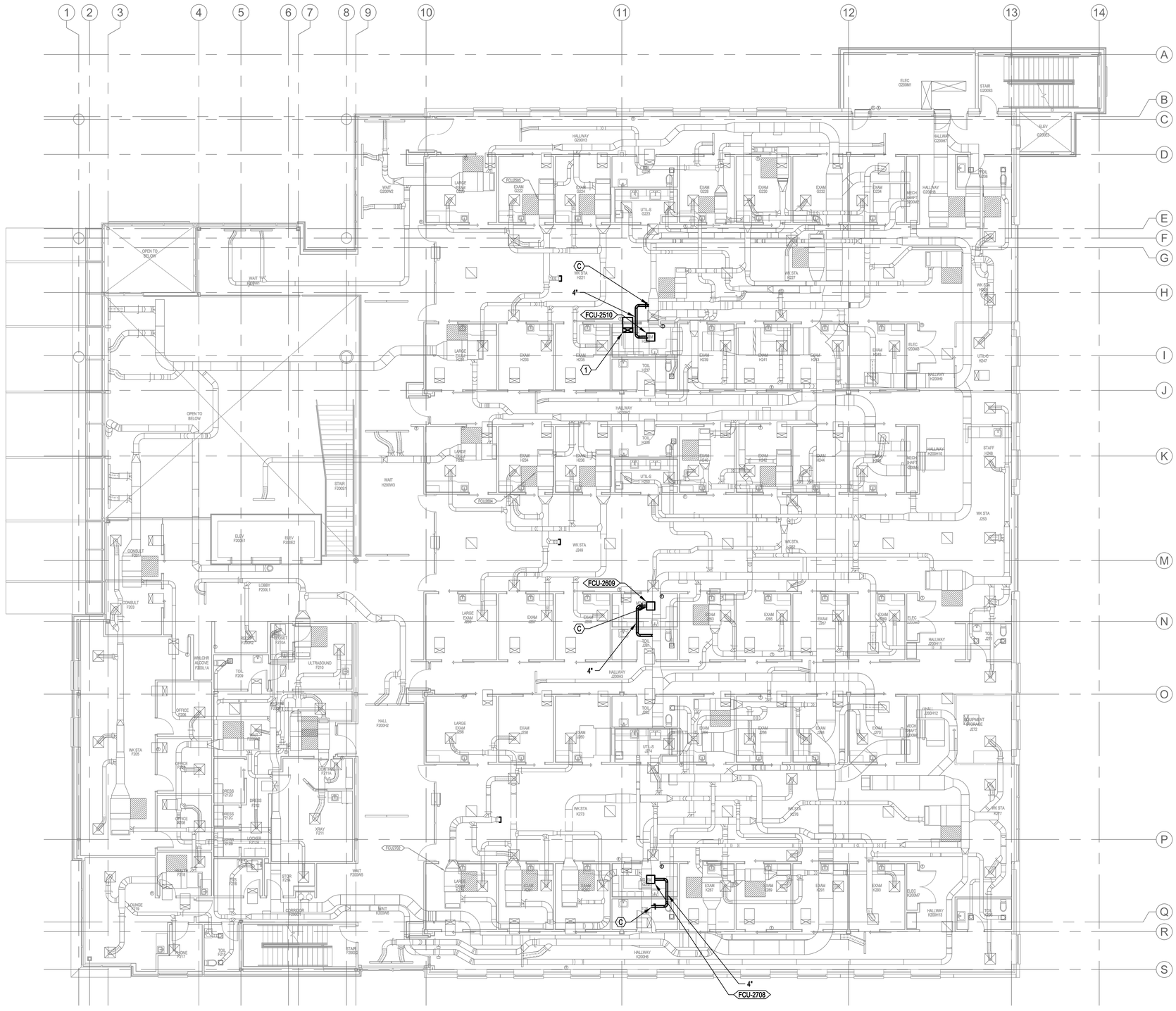
Date: 6/23/23 Time: 10:45am File: P:\2022\22-1043 - Kaiser PLP Rooftop Unit Replacement\01 Production\02 CAD\Main Bldg\22-1043 M201.dwg User: eric.heinrich



1 M202 SECOND FLOOR PLAN - MECHANICAL
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

A. PROVIDE TRANSFER OPENINGS FOR RETURN AIR SIZED AT 300 FPM IN FULL HEIGHT WALLS SEE ARCHITECTURAL DRAWINGS.

B. PROVIDE VOLUME DAMPER AT EACH BRANCH OUTLET/INLET.

C. RUN DUCTS AND PIPING CONCEALED, UNLESS SPECIFIED OTHERWISE, AND CLEAR OF CEILING INSERTS. ALL DUCTWORK SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO WALL AND UNDERSIDE OF BEAMS AND JOISTS.

D. ALL WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. OFFSETS IN PIPING AND DUCTS (INCLUDING DIVIDED DUCTS) AND TRANSITIONS AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.

E. VERIFY ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. VERIFY AND PROVIDE DUCT TRANSITIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DIMENSIONS BEFORE FABRICATION.

F. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF AIR DEVICES.

G. ALL DETAILS APPLY TO THIS SHEET WHETHER TAGGED OR NOT.

H. PIPING SHALL BE LARGEST SIZE SHOWN UNTIL SMALLER PIPE SIZE IS INDICATED INCLUDING MAINS AND BRANCH PIPING.

KEY NOTES:

1. PROVIDE A GRILLE AND TRANSFER DUCT MATCHING THE DUCTWORK FROM THE OTHER MEDS ROOMS.

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SHEET NAME
SECOND FLOOR PLAN - MECHANICAL

SHEET NUMBER
M202

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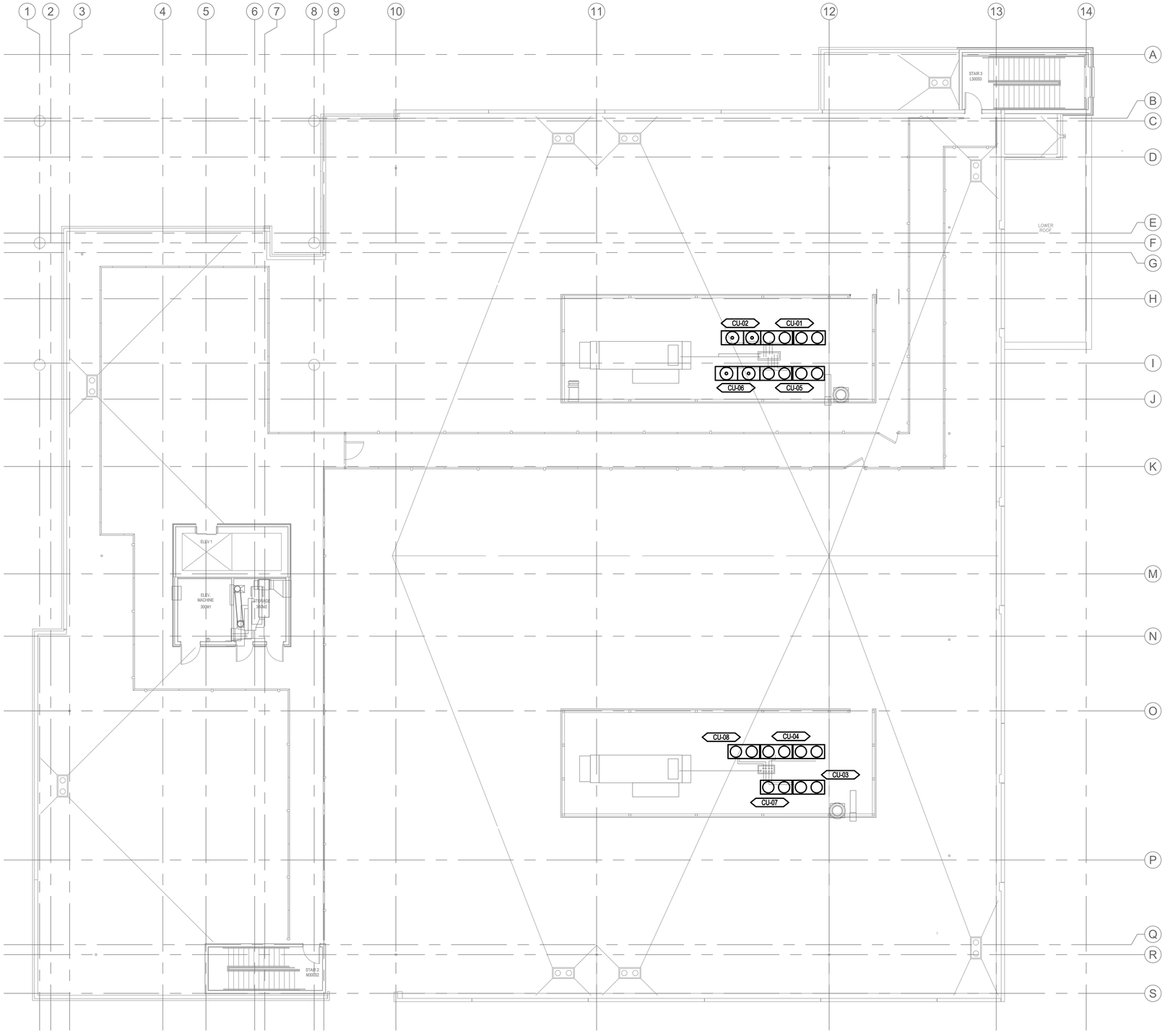
Date: 6/23/23 Time: 10:44am File: P:\2022\22-1043 - Kaiser PLP Rooftop Unit Replacement\01 Production\02 CAD\Main Bldg\22-1043 M202.dwg User: eric.heinrich



1 M203 ROOF PLAN - MECHANICAL
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

A. ALL EXISTING CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.

B. CONNECT TO EXISTING REFRIGERANT PIPING SYSTEM. CHARGE REFRIGERANT AS REQUIRED.

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PROJECT ISSUE DATE
06/23/2023

REVISIONS

MARK	DATE	DESCRIPTION

PROJECT NUMBER	22-1043
CHECKED BY	DW

SHEET NAME
ROOF PLAN - MECHANICAL

SHEET NUMBER
M203

City of Puyallup
Development & Permitting Services
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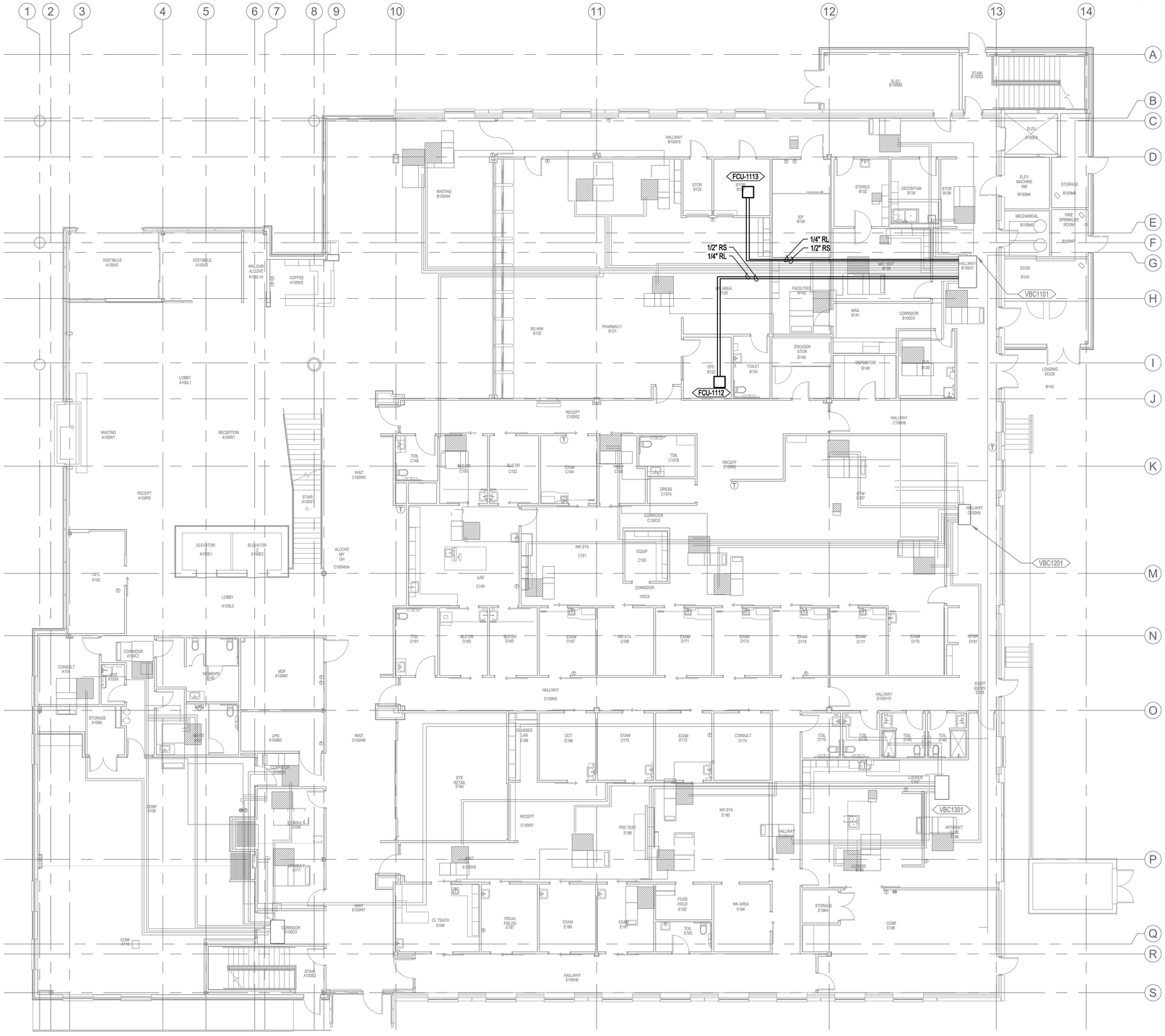
Building	Planning
Engineering	Public Works
Fire	Traffic

Date: 6/23/23 Time: 10:43am File: P:\2022\22-1043 - Kaiser PLP Rooftop Unit Replacement\01 Production\02 CAD\Main Bldg\22-1043 M203.dwg User: eric.heinrich



1 M211 FIRST FLOOR PLAN - MECHANICAL PIPING
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

A. PROVIDE TRANSFER OPENINGS FOR RETURN AIR SIZED AT 300 FPM IN FULL HEIGHT WALLS SEE ARCHITECTURAL DRAWINGS.

B. PROVIDE VOLUME DAMPER AT EACH BRANCH OUTLET/INLET.

C. RUN DUCTS AND PIPING CONCEALED, UNLESS SPECIFIED OTHERWISE, AND CLEAR OF CEILING INSERTS. ALL DUCTWORK SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO WALL AND UNDERSIDE OF BEAMS AND JOISTS.

D. ALL WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. OFFSETS IN PIPING AND DUCTS (INCLUDING DIVIDED DUCTS) AND TRANSITIONS AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.

E. VERIFY ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. VERIFY AND PROVIDE DUCT TRANSITIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DIMENSIONS BEFORE FABRICATION.

F. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF AIR DEVICES.

G. ALL DETAILS APPLY TO THIS SHEET WHETHER TAGGED OR NOT.

H. PIPING SHALL BE LARGEST SIZE SHOWN UNTIL SMALLER PIPE SIZE IS INDICATED INCLUDING MAINS AND BRANCH PIPING.

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KPWA PLP
ROOF TOP UNIT
REPLACEMENT &
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CONSTRUCTION DOCUMENTS

PROJECT ISSUE DATE
06/23/2023

REVISIONS

MARK	DATE	DESCRIPTION

PROJECT NUMBER	22-1043
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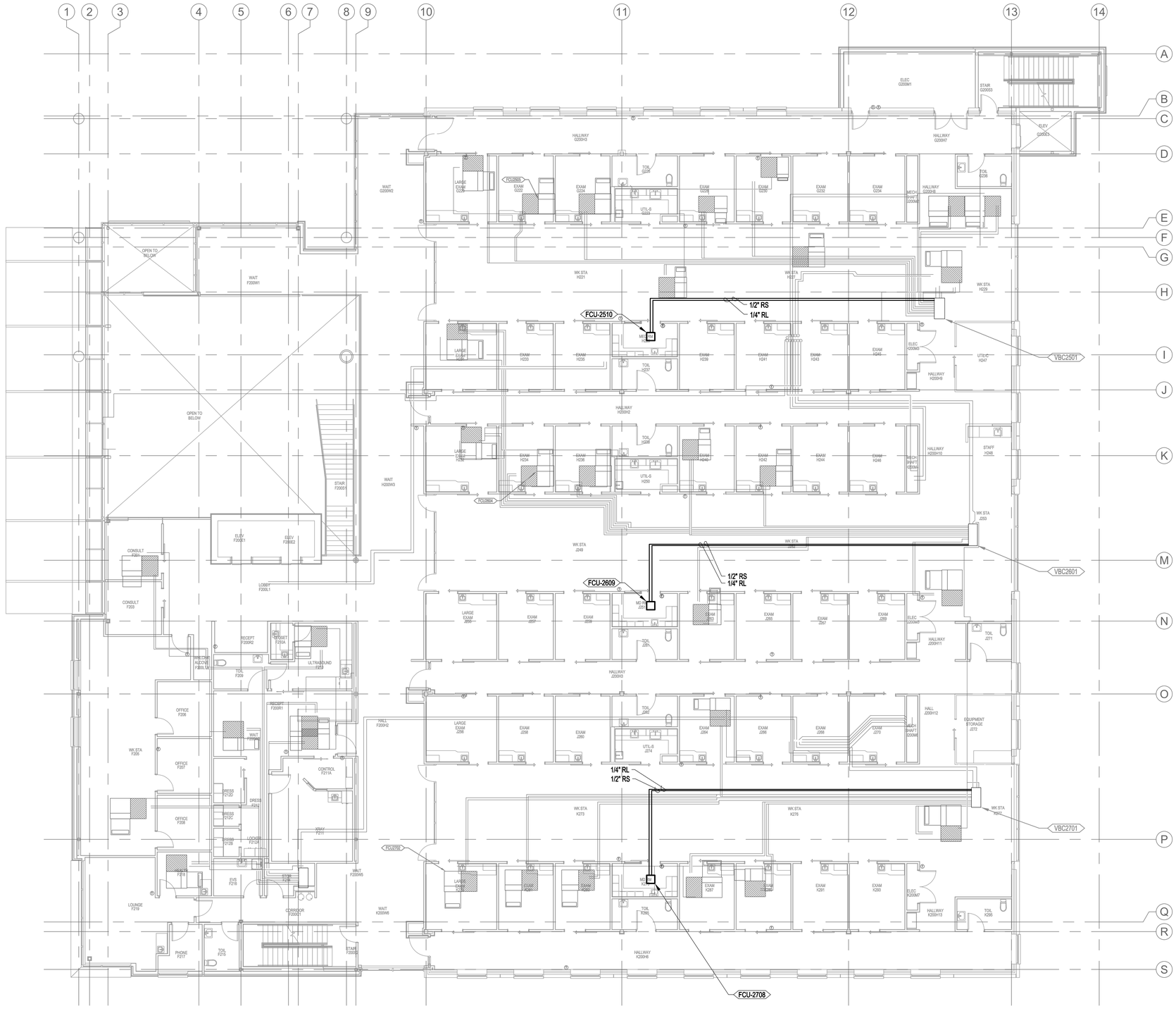
SHEET NAME
FIRST FLOOR PLAN - MECHANICAL PIPING

SHEET NUMBER
M211

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

Date: 6/23/23 Time: 10:43am File: P:\2022\22-1043 - Kaiser PLP Rooftop Unit Replacement\01 Production\02 CAD\Main Bldg\22-1043 M211.dwg User: eric.heinrich



1 M212 SECOND FLOOR PLAN - MECHANICAL - PIPING
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

A. PROVIDE TRANSFER OPENINGS FOR RETURN AIR SIZED AT 300 FPM IN FULL HEIGHT WALLS SEE ARCHITECTURAL DRAWINGS.

B. PROVIDE VOLUME DAMPER AT EACH BRANCH OUTLET/INLET.

C. RUN DUCTS AND PIPING CONCEALED, UNLESS SPECIFIED OTHERWISE, AND CLEAR OF CEILING INSERTS. ALL DUCTWORK SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO WALL AND UNDERSIDE OF BEAMS AND JOISTS.

D. ALL WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. OFFSETS IN PIPING AND DUCTS (INCLUDING DIVIDED DUCTS) AND TRANSITIONS AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.

E. VERIFY ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. VERIFY AND PROVIDE DUCT TRANSITIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DIMENSIONS BEFORE FABRICATION.

F. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF AIR DEVICES.

G. ALL DETAILS APPLY TO THIS SHEET WHETHER TAGGED OR NOT.

H. PIPING SHALL BE LARGEST SIZE SHOWN UNTIL SMALLER PIPE SIZE IS INDICATED INCLUDING MAINS AND BRANCH PIPING.

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06/23/2023

REVISIONS

MARK	DATE	DESCRIPTION

PROJECT NUMBER	22-1043
CHECKED BY	DW

SHEET NAME
SECOND FLOOR PLAN - MECHANICAL - PIPING

SHEET NUMBER
M212

Date: 6/23/23 Time: 11:18am File: P:\2022\22-1043 – Kaiser PLP Rooftop Unit Replacement\01 Production\02 CAD\Main Bldg\22-1043 M212.dwg User: eric.helmrich

STANDARD ELECTRICAL ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	KVA	KILOVOLT AMP
A	AMPERE (AMP)	KVAR	KILOVOLT AMPS REACTIVE
AL	ALUMINUM	LA	LIGHTNING ARRESTOR
ARCH	ARCHITECT / ARCHITECTURAL	LTG	LIGHTING
AS	AMP SWITCH	LV	LOW VOLTAGE
ATS	AUTOMATIC TRANSFER SWITCH	MATV	MASTER ANTENNA TELEVISION
CB	CIRCUIT BREAKER	MCA	MINIMUM CIRCUIT AMPS
C	CONDUIT	MCB	MAIN CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION	MCC	MOTOR CONTROL CENTER
CKT	CIRCUIT	MDP	MAIN DISTRIBUTION PANEL
CLG	CEILING	MECH	MECHANICAL
CT	CURRENT TRANSFORMER	MH	METAL HALIDE
CU	COPPER	MLO	MAIN LUGS ONLY
DN	DOWN	MRS	MOTOR RATED SWITCH
EMERG	EMERGENCY	MV	MERCURY VAPOR
EMT	ELECTRIC METALLIC TUBING	MTS	MANUAL TRANSFER SWITCH
EP	EXPLOSION PROOF	NIC	NOT IN CONTRACT
EPO	EMERGENCY POWER OFF	NL	NIGHT LIGHT CIRCUIT
EWC	ELECTRIC WATER COOLER	PA	PUBLIC ADDRESS
FA	FIRE ALARM	PE	PHOTO ELECTRIC CELL
FLA	FULL LOAD AMPS	PF	POWER FACTOR
FLUOR	FLUORESCENT	PNL	PANELBOARD
FCIC	FURNISHED BY CONTRACTOR INSTALLED BY CONTRACTOR	PVC	POLYVINYL CHLORIDE CONDUIT
		PWR	POWER
FOIC	FURNISHED BY OWNER INSTALLED BY CONTRACTOR	SDP	SUB-DISTRIBUTION PANEL
		STR	STARTER
FOIO	FURNISHED BY OWNER INSTALLED BY OWNER	SV	SOLENOID VALVE
		SW	SWITCH
GFP	GROUND FAULT PROTECTION	TD	TIME DELAY
GFI	GROUND FAULT INTERRUPTER	TP	TAMPERPROOF
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	TTB	TELEPHONE TERMINAL BOARD
		TTC	TELEPHONE TERMINAL CABINET
GRC	GALVANIZED RIGID CONDUIT	TV	TELEVISION
GRD	GROUND	TYP	TYPICAL
HP	HORSEPOWER	UG	UNDERGROUND
HPS	HIGH PRESSURE SODIUM	UPS	UNINTERRUPTABLE POWER SUPPLY
HV	HIGH VOLTAGE		
HZ	HERTZ	V	VOLTAGE
IG	ISOLATED GROUND	VA	VOLT AMPERES
INC	INCANDESCENT	VP	VAPOR PROOF
JB	JUNCTION BOX	W	WATTS
KW	KILOWATT	WP	WEATHER PROOF
KWH	KILOWATT HOUR	XFMR	TRANSFORMER
KV	KILOVOLT	XFSW	TRANSFER SWITCH

POWER

- WALL RECEPTACLE: SINGLE, DUPLEX
- WALL RECEPTACLE: EMERGENCY, 4-PLEX
- WALL RECEPTACLE: ISOLATED GROUND
- CEILING RECEPTACLE: DUPLEX
- FIRE RATED FLOOR POKE-THRU
- CONNECTION TO EQUIPMENT PROVIDED BY OTHERS
- DENOTES RECEPTACLE ABOVE COUNTER
- SPECIAL PURPOSE OUTLET AS NOTED, EMERGENCY
- JUNCTION BOX
- FLUSH IN-FLOOR OUTLET: DUPLEX, COMBINATION
- PEDESTAL OUTLET: POWER, SIGNAL, COMBINATION
- SURFACE OUTLET STRIP: DIMENSION AS SHOWN
- TELEPOWER POLE, POWER, COMBINATION
- CLOCK HANGER RECEPTACLE
- DISCONNECT SWITCH: FUSED, NON-FUSED
- MOTOR STARTER: MANUAL, MAGNETIC, COMBINATION
- MOTOR CONNECTION
- CONTACTOR, RELAY, SOLENOID
- PUSH BUTTON STATION
- WIRING CONCEALED IN CEILING OR WALL
- WIRING CONCEALED IN FLOOR OR UNDERGROUND
- INDICATES INSULATED GREEN GROUND WIRE
- HOME RUN DESTINATION SHOWN
- CONDUIT ELL: UP, DN.

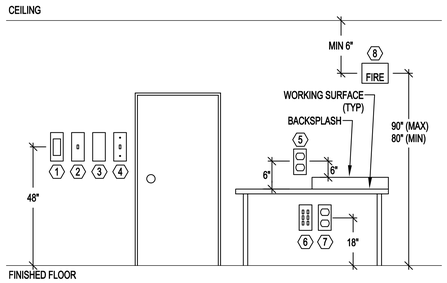
EQUIPMENT

- ELECTRICAL EQUIPMENT
- PANELBOARD: SURFACE, RECESSED
- CABINET: SURFACE, RECESSED
- TRANSFORMER
- GROUND ROD, IN TEST WELL
- GROUND PAD
- EQUIPMENT WITH DERIVED GROUND
- VOLTMETER, AMMETER
- SELECTOR SWITCH: VOLTMETER, AMMETER
- METER: KILOWATT HOUR, POWER FACTOR
- POTENTIAL TRANSFORMER
- CURRENT TRANSFORMER
- CABLE TRAY: CENTER SUPPORT, OUTER SUPPORTS

ONE-LINE

- CIRCUIT BREAKER
- SWITCH, FUSED SWITCH
- BUSS
- AUTOMATIC SWITCH
- METER
- PANEL
- FEEDER CALLOUT
- FAULT CURRENT CALLOUT
- GENERATOR

DEVICE MOUNTING HEIGHTS



GENERAL NOTES:

A. LOCATE ALL FIRE ALARM DEVICES PER CODE.

B. LOCATE ALL ACCESSIBLE SWITCHES PER ADA GUIDELINES.

C. FIELD COORDINATE ALL ABOVE COUNTER DEVICES WITH MILLWORK CONTRACTOR.

D. IF APPLICABLE, TELCOM CONSULTANTS DRAWINGS TAKE PRECEDENCE OVER THIS DETAIL FOR TELCOM DEVICES.

NOTES:

1. FIRE ALARM PULL STATION
2. LIGHT SWITCH
3. CARD READER
4. WALL PHONE
5. ABOVE COUNTER DEVICE MAINTAIN A CONSISTENT HEIGHT THROUGHOUT SPACE
6. TELECOM OUTLET
7. RECEPTACLE
8. FIRE ALARM STROBE

GENERAL NOTE

THIS IS A STANDARD LEGEND SHEET, THEREFORE, SOME SYMBOLS MAY APPEAR ON THIS SHEET THAT DO NOT APPEAR ON THE DRAWINGS.

FOR ALL LOCATIONS REQUIRING ACCESS FROM BELOW THE CEILING, PATCH, PAINT, AND REPAIR ALL EXISTING GYPSUM BOARD CEILINGS AND WALLS TO MATCH ADJACENT WALL FINISH, FOR ACCESS AT EXISTING ACOUSTIC CEILING TILE LOCATIONS, TAKE SPECIAL CARE WHEN REMOVING TILES. REINSTALL ALL EXISTING CEILING TILES IN THEIR ORIGINAL LOCATION AND ORIENTATION.

DESIGNATION SYMBOLS

- 123 — EQUIPMENT DESIGNATOR SEE SCHEDULE.
- E / X — EXISTING TO REMAIN, EXISTING TO BE REMOVED
- R / F — EXISTING TO BE RELOCATED, FUTURE
- N / C — NEW, CONNECT TO
- 1 — NOTE

ELECTRICAL SHEET LIST

SHEET #	SHEET NAME
E001	SYMBOLS, LEGENDS AND ABBREVIATIONS - ELECTRICAL
E002	M&E SCHEDULES - ELECTRICAL
E103	ROOF PLAN - ELECTRICAL - DEMO
E201	FIRST FLOOR PLAN - ELECTRICAL
E202	SECOND FLOOR PLAN - ELECTRICAL
E203	ROOF PLAN - ELECTRICAL
E701	DIAGRAMS - ELECTRICAL
E702	DIAGRAMS - ELECTRICAL
E703	DIAGRAMS - ELECTRICAL
E801	PANEL SCHEDULES - ELECTRICAL
E802	PANEL SCHEDULES - ELECTRICAL
E803	LOAD SUMMARY - ELECTRICAL

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MARK	DATE	DESCRIPTION

PROJECT NUMBER 22-1043

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SHEET NAME

SYMBOLS, LEGENDS AND ABBREVIATIONS - ELECTRICAL

SHEET NUMBER

E001

Date: 6/22/23 Time: 3:09pm File: P:\2022\22-1043 - Kaiser PLP Rooftop Unit Replacement\01 Production\02 CAD\Main Bldg\22-1043 E001.dwg User: erichehrich

EQUIPMENT CONNECTION SCHEDULE

EQUIPMENT DESCRIPTIONS			ELECTRICAL CHARACTERISTICS							CONNECTION CHARACTERISTICS					FEEDER CHARACTERISTICS			PANEL INFORMATION		SCCR	NOTES
TAG	DESCRIPTION	LOCATION	KW	HP	FLA	MCA	MOCP	VOLTS	PHASE	VFD	1-POINT CONNECT	STARTER DIVISION	DISCONNECT DIVISION	DISCONNECT TYPE/SIZE	CONDUIT DIA (INCH)	PHASE CONDUCTORS	GROUND CONDUCTOR	PANEL NAME	CIRCUIT NUMBER(S)	AVAILABLE FAULT AT EQUIPMENT (AMPS)	
DEMO - MECHANICAL																					
CU-01A	VRF ROOFTOP CONDENSER, MODULE 1	NORTH ROOF				27	40	480	3	NO	YES	-	-	-	-	-	-	RM1	13,15,17	-	
CU-01B	VRF ROOFTOP CONDENSER, MODULE 2	NORTH ROOF				27	40	480	3	NO	YES	-	-	-	-	-	-	RM1	19,21,23	-	
CU-02A	VRF ROOFTOP CONDENSER, MODULE 1	NORTH ROOF				16	25	480	3	NO	YES	-	-	-	-	-	-	RM1	8,10,12	-	
CU-02B	VRF ROOFTOP CONDENSER, MODULE 2	NORTH ROOF				13	15	480	3	NO	YES	-	-	-	-	-	-	RM1	14,16,18	-	
CU-03	VRF ROOFTOP CONDENSER	SOUTH ROOF				27	40	480	3	NO	YES	-	-	-	-	-	-	RM2	7,9,11	-	
CU-04A	VRF ROOFTOP CONDENSER, MODULE 1	SOUTH ROOF				23	30	480	3	NO	YES	-	-	-	-	-	-	RM2	19,21,23	-	
CU-04B	VRF ROOFTOP CONDENSER, MODULE 2	SOUTH ROOF				23	30	480	3	NO	YES	-	-	-	-	-	-	RM2	25,27,29	-	
CU-05A	VRF ROOFTOP CONDENSER, MODULE 1	NORTH ROOF				23	30	480	3	NO	YES	-	-	-	-	-	-	RM1	25,27,29	-	
CU-05B	VRF ROOFTOP CONDENSER, MODULE 2	NORTH ROOF				23	30	480	3	NO	YES	-	-	-	-	-	-	RM1	31,33,35	-	
CU-06A	VRF ROOFTOP CONDENSER, MODULE 1	NORTH ROOF				16	25	480	3	NO	YES	-	-	-	-	-	-	RM1	20,22,24	-	
CU-06B	VRF ROOFTOP CONDENSER, MODULE 2	NORTH ROOF				16	25	480	3	NO	YES	-	-	-	-	-	-	RM1	26,28,30	-	
CU-07	VRF ROOFTOP CONDENSER	SOUTH ROOF				27	40	480	3	NO	YES	-	-	-	-	-	-	RM2	31,33,35	-	
CU-08	VRF ROOFTOP CONDENSER	SOUTH ROOF				27	40	480	3	NO	YES	-	-	-	-	-	-	RM2	37,39,41	-	
NEW - MECHANICAL																					
CU-01A	VRF ROOFTOP CONDENSER, MODULE 1	NORTH ROOF				24	30	480	3	NO	YES	23	26	30AS	3/4"	(4) #10 CU	#10 CU	RM1	13,15,17	1,100 AIC	1, 2
CU-01B	VRF ROOFTOP CONDENSER, MODULE 2	NORTH ROOF				24	30	480	3	NO	YES	23	26	30AS	3/4"	(4) #10 CU	#10 CU	RM1	19,21,23	1,100 AIC	1, 2
CU-02A	VRF ROOFTOP CONDENSER, MODULE 1	NORTH ROOF				15	20	480	3	NO	YES	23	26	30AS	3/4"	(4) #12 CU	#12 CU	RM1	8,10,12	1,100 AIC	1, 2
CU-02B	VRF ROOFTOP CONDENSER, MODULE 2	NORTH ROOF				15	20	480	3	NO	YES	23	26	30AS	3/4"	(4) #12 CU	#12 CU	RM1	14,16,18	1,100 AIC	1, 2
CU-03	VRF ROOFTOP CONDENSER	SOUTH ROOF				24	30	480	3	NO	YES	23	26	30AS	3/4"	(4) #10 CU	#10 CU	RM2	7,9,11	1,100 AIC	1, 2
CU-04A	VRF ROOFTOP CONDENSER, MODULE 1	SOUTH ROOF				21	25	480	3	NO	YES	23	26	30AS	3/4"	(4) #10 CU	#10 CU	RM2	19,21,23	1,100 AIC	1, 2
CU-04B	VRF ROOFTOP CONDENSER, MODULE 2	SOUTH ROOF				21	25	480	3	NO	YES	23	26	30AS	3/4"	(4) #10 CU	#10 CU	RM2	25,27,29	1,100 AIC	1, 2
CU-05A	VRF ROOFTOP CONDENSER, MODULE 1	NORTH ROOF				21	25	480	3	NO	YES	23	26	30AS	3/4"	(4) #10 CU	#10 CU	RM1	25,27,29	1,100 AIC	1, 2
CU-05B	VRF ROOFTOP CONDENSER, MODULE 2	NORTH ROOF				21	25	480	3	NO	YES	23	26	30AS	3/4"	(4) #10 CU	#10 CU	RM1	31,33,35	1,100 AIC	1, 2
CU-06A	VRF ROOFTOP CONDENSER, MODULE 1	NORTH ROOF				15	20	480	3	NO	YES	23	26	30AS	3/4"	(4) #12 CU	#12 CU	RM1	20,22,24	1,100 AIC	1, 2
CU-06B	VRF ROOFTOP CONDENSER, MODULE 2	NORTH ROOF				15	20	480	3	NO	YES	23	26	30AS	3/4"	(4) #12 CU	#12 CU	RM1	26,28,30	1,100 AIC	1, 2
CU-07	VRF ROOFTOP CONDENSER	SOUTH ROOF				24	30	480	3	NO	YES	23	26	30AS	3/4"	(4) #10 CU	#10 CU	RM2	31,33,35	1,100 AIC	1, 2
CU-08	VRF ROOFTOP CONDENSER	SOUTH ROOF				24	30	480	3	NO	YES	23	26	30AS	3/4"	(4) #10 CU	#10 CU	RM2	37,39,41	1,100 AIC	1, 2
FCU-1112	CEILING CASSETTE	LEVEL 1 PHARM, OFC B122				0.24	15	208	1	NO	YES	23	26	MRS	3/4"	(2) #12 CU	#12 CU	1M2	34,36	1,455 AIC	
FCU-1113	CEILING CASSETTE	LEVEL 1 PHARM, STOR B127				0.24	15	208	1	NO	YES	23	26	MRS	3/4"	(2) #12 CU	#12 CU	1M2	34,36	1,016 AIC	
FCU-2510	WALL MOUNTED INDOOR UNIT	LEVEL 2 MEDS, MEDPR H225				0.30	15	208	1	NO	YES	23	26	MRS	3/4"	(2) #12 CU	#12 CU	2M2	10,12	966 AIC	
FCU-2609	WALL MOUNTED INDOOR UNIT	LEVEL 2 MEDS, MED PR J215				0.30	15	208	1	NO	YES	23	26	MRS	3/4"	(2) #12 CU	#12 CU	2M2	10,12	685 AIC	
FCU-2708	WALL MOUNTED INDOOR UNIT	LEVEL 2 MEDS, MEDPR K275				0.30	15	208	1	NO	YES	23	26	MRS	3/4"	(2) #12 CU	#12 CU	2M2	10,12	531 AIC	

GENERAL NOTES: (SOME MAY NOT BE USED ON THIS SHEET)

A. REFER TO ONE-LINE DIAGRAM OR PANEL SCHEDULES FOR OVERCURRENT PROTECTION CHARACTERISTICS AND CIRCUIT NUMBERS.

B. COORDINATE ALL EQUIPMENT CONNECTION REQUIREMENTS WITH INSTALLING CONTRACTOR PRIOR TO THE INSTALLATION OF ANY ELECTRICAL WORK.

C. VFD'S ARE FURNISHED BY DIVISION 23. INSTALL VFD AND PROVIDE PROVIDE LINE AND LOAD SIDE FEEDERS IN ELECTRICAL WORK.

D. COMBINATION STARTER/DISCONNECTS AND DISCONNECT SWITCHES SHALL BE LOCATED WITHIN SIGHT OF AND ADJACENT TO EQUIPMENT SERVED. COORDINATE DISCONNECT INSTALLATION AND LOCATION WITH EQUIPMENT INSTALLER.

E. NOT ALL EQUIPMENT IDENTIFIED HERE IS SHOWN ON FLOOR PLANS. REFER TO DRAWINGS IN OTHER DISCIPLINES FOR EQUIPMENT LOCATIONS.

NOTES:

1. PROVIDE 30A LOW-PEAK LPJ CLASS J 600VAC DUAL ELEMENT TIME-DELAY FUSES WITHIN NEW NEMA 3R FUSED DISCONNECT TO LIMIT AVAILABLE FAULT CURRENT AT EQUIPMENT TO BELOW 5KA SHORT CIRCUIT CURRENT RATING. PROVIDE FUSE REJECTION CLIPS WITHIN FUSED DISCONNECTS TO LIMIT TYPE OF FUSE THAT CAN BE INSTALLED IN ALIGNMENT WITH NEC 240.60(B).
2. BRANCH CIRCUITS SERVING EXISTING EQUIPMENT MAY BE REUSED. CONTRACTOR TO VERIFY EXISTING CONDUIT AND WIRING ALIGNS WITH SIZING DESCRIBED IN THIS SCHEDULE AND PROVIDE NEW CONDUIT AND WIRING IF NEEDED. CONTRACTOR TO VERIFY WITH FINAL EQUIPMENT SELECTION IF NEUTRAL CONDUCTOR IS REQUIRED AND REDUCE QUANTITY OF PHASE CONDUCTORS IF ACCEPTABLE.

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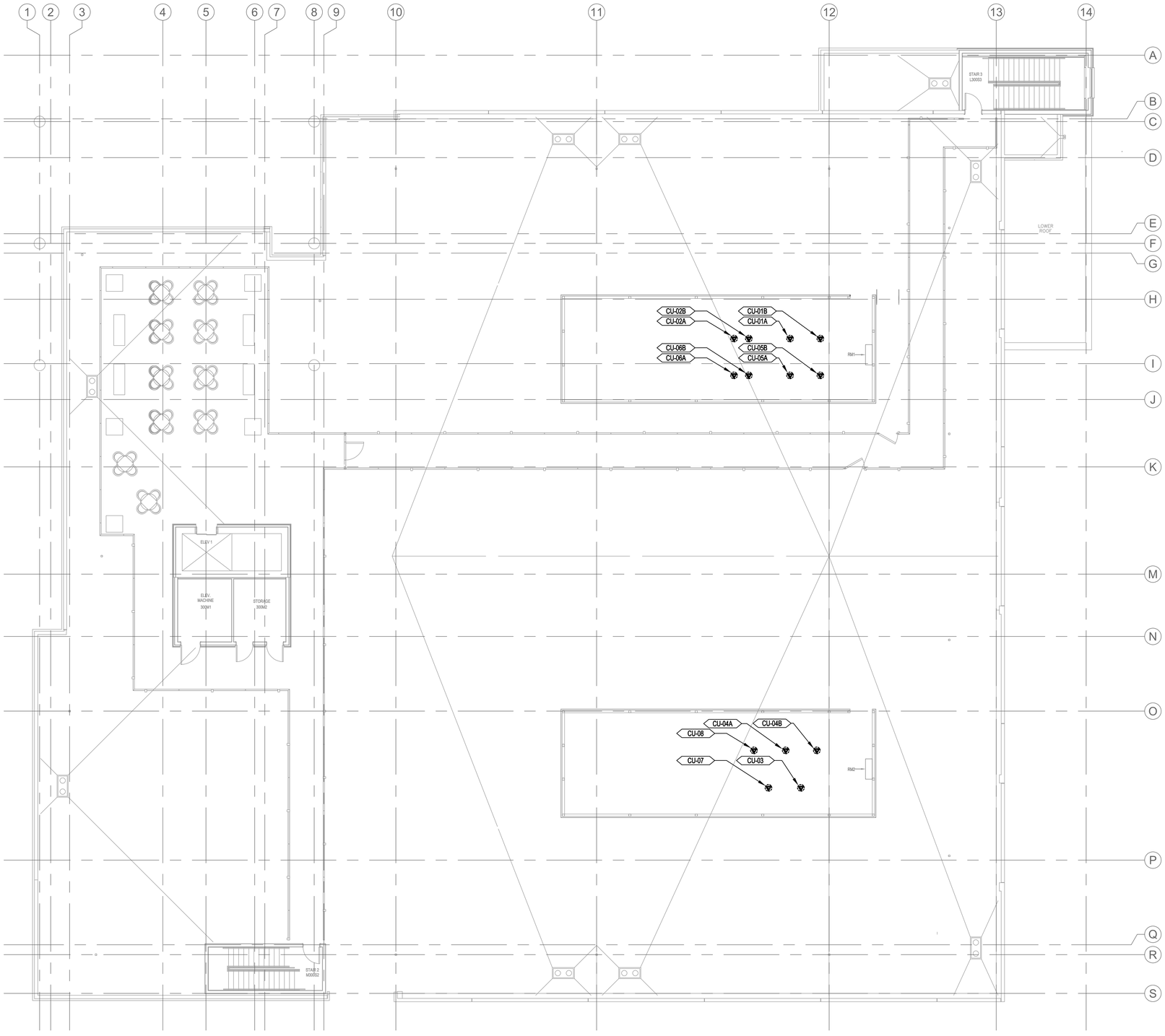
PROJECT ISSUE DATE
06/23/2023

REVISIONS

MARK	DATE	DESCRIPTION

PROJECT NUMBER 22-1043
CHECKED BY MJ
SHEET NAME
M&E SCHEDULES - ELECTRICAL
SHEET NUMBER
E002

Date: 6/22/23 Time: 3:08pm File: P:\2022\22-1043 - Kaiser PLP Rooftop Unit Replacement\01 Production\02 CAD\Main Bldg\22-1043 E002.dwg User: eric.heinrich



1 E103 ROOF PLAN - ELECTRICAL - DEMO

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

GENERAL NOTES:

A. SEE SHEET E002 FOR DEMOLITION MECHANICAL EQUIPMENT CONNECTIONS.

B. EQUIPMENT SHOWN IN LIGHT LINEWEIGHT IS EXISTING TO REMAIN. EQUIPMENT SHOWN IN DARK LINEWEIGHT IS TO BE DEMOLISHED.

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206-413-7770

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206-596-8606

STRUCTURAL:
PCS STRUCTURAL
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REGISTERED PROFESSIONAL ENGINEER
06/23/23

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KPWA PLP ROOF TOP UNIT REPLACEMENT & MECHANICAL IMPROVEMENTS

CONSTRUCTION DOCUMENTS

PROJECT ISSUE DATE
06/23/2023

REVISIONS

MARK	DATE	DESCRIPTION

PROJECT NUMBER	22-1043
CHECKED BY	MJ

SHEET NAME
ROOF PLAN - ELECTRICAL - DEMO

SHEET NUMBER
E103

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

Date: 6/22/23 Time: 3:08pm File: P:\2022\22-1043 - Kaiser PLP Rooftop Unit Replacement\01 Production\02 CAD\Main Bldg\22-1043 E103.dwg User: eric.heinrich

1 E201 FIRST FLOOR PLAN - ELECTRICAL
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

A. SEE SHEET E002 FOR NEW MECHANICAL EQUIPMENT CONNECTIONS.

B. EQUIPMENT SHOWN IN LIGHT LINEWEIGHT IS EXISTING TO REMAIN. EQUIPMENT SHOWN IN DARK LINEWEIGHT IS AFFECTED BY SCOPE OF WORK.

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PROJECT ISSUE DATE
06/23/2023

REVISIONS

MARK	DATE	DESCRIPTION

PROJECT NUMBER 22-1043
CHECKED BY MJ

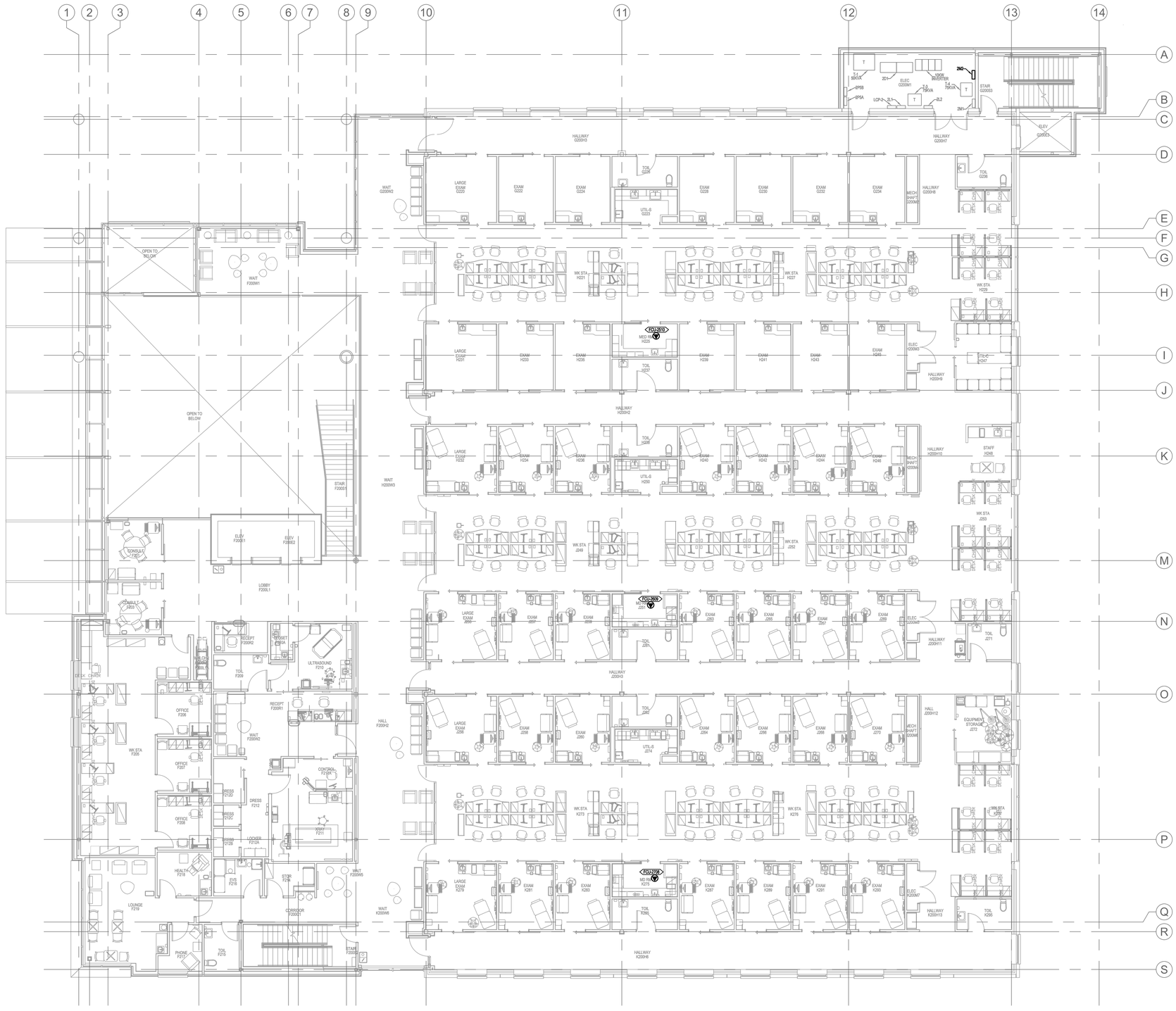
SHEET NAME
FIRST FLOOR PLAN - ELECTRICAL

SHEET NUMBER
E201

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

Date: 6/22/23 Time: 3:07pm File: P:\2022\22-1043 - Kaiser PLP Rooftop Unit Replacement\01 Production\02 CAD\Main Bldg\22-1043 E201.dwg User: eric.heinrich



1 E202 SECOND FLOOR PLAN - ELECTRICAL
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

A. SEE SHEET E002 FOR NEW MECHANICAL EQUIPMENT CONNECTIONS.

B. EQUIPMENT SHOWN IN LIGHT LINEWEIGHT IS EXISTING TO REMAIN. EQUIPMENT SHOWN IN DARK LINEWEIGHT IS AFFECTED BY SCOPE OF WORK.

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PROJECT ISSUE DATE
06/23/2023

REVISIONS

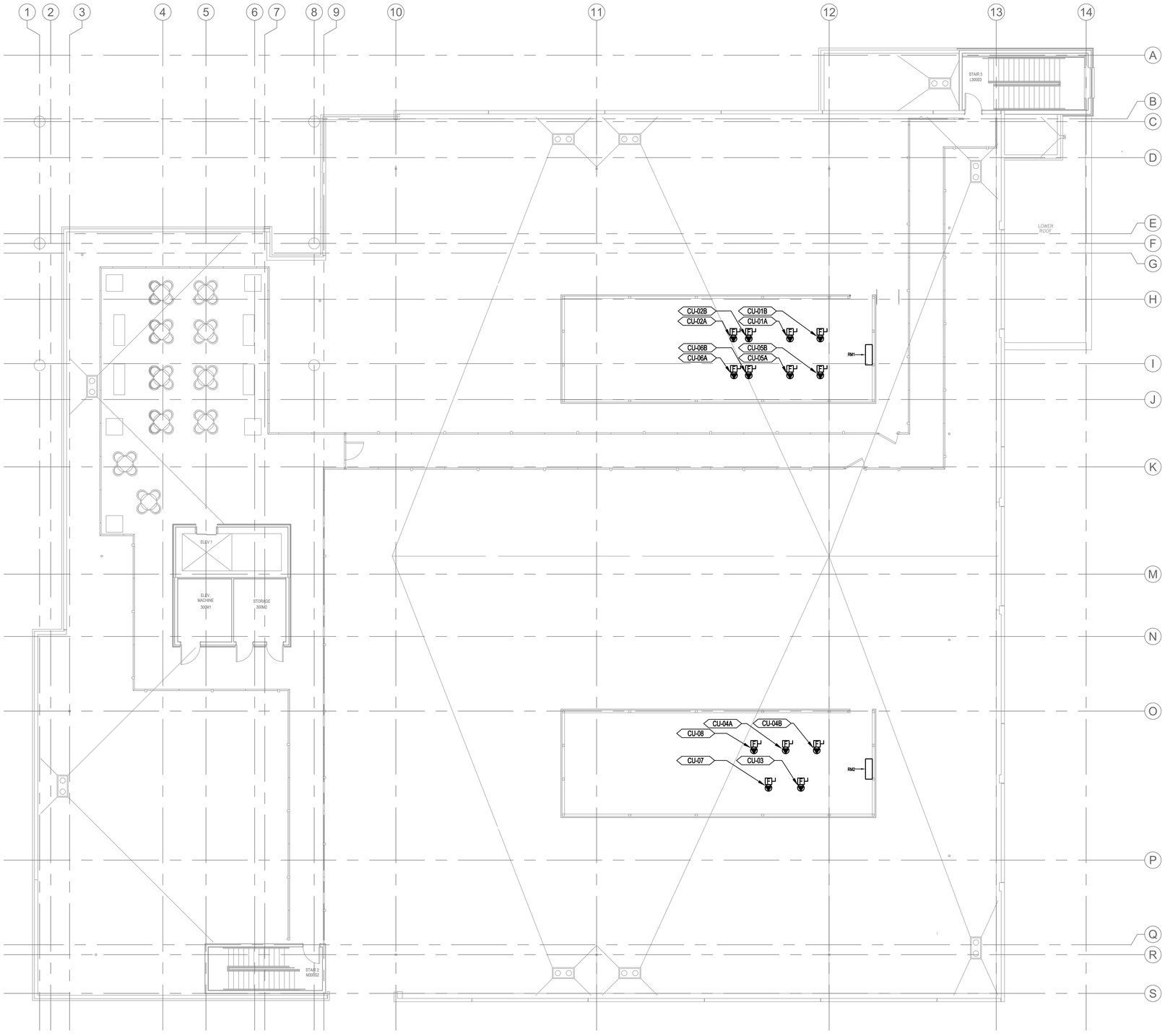
MARK	DATE	DESCRIPTION

PROJECT NUMBER 22-1043
CHECKED BY MJ

SHEET NAME
SECOND FLOOR PLAN - ELECTRICAL

SHEET NUMBER
E202

Date: 6/22/23 Time: 3:07pm File: P:\2022\22-1043 - Kaiser PLP Rooftop Unit Replacement\01 Production\02 CAD\Main Bldg\22-1043 E202.dwg User: eric.heinrich



1 E203 ROOF PLAN - ELECTRICAL
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

A. SEE SHEET E002 FOR NEW MECHANICAL EQUIPMENT CONNECTIONS.

B. EQUIPMENT SHOWN IN LIGHT LINEWEIGHT IS EXISTING TO REMAIN. EQUIPMENT SHOWN IN DARK LINEWEIGHT IS AFFECTED BY SCOPE OF WORK.

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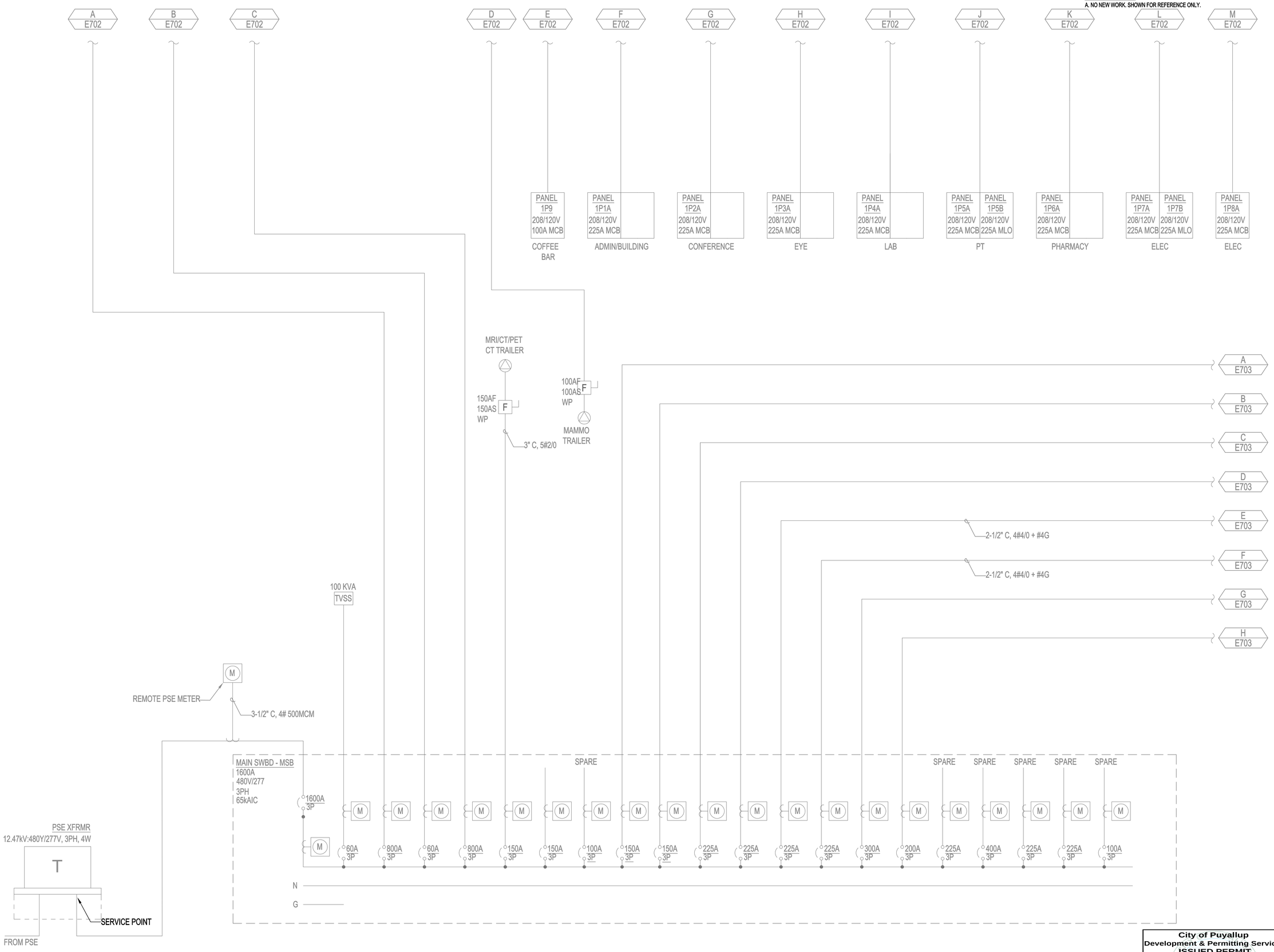
REVISIONS

MARK	DATE	DESCRIPTION

PROJECT NUMBER 22-1043
CHECKED BY MJ
SHEET NAME
ROOF PLAN - ELECTRICAL
SHEET NUMBER
E203

Date: 6/22/23 Time: 3:06pm File: P:\2022\22-1043 - Kaiser PLP Rooftop Unit Replacement\01 Production\02 CAD\Main Bldg\22-1043 E203.dwg User: eric.heinrich

GENERAL NOTES:
A. NO NEW WORK. SHOWN FOR REFERENCE ONLY.



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06/23/2023

REVISIONS

MARK	DATE	DESCRIPTION

PROJECT NUMBER 22-1043
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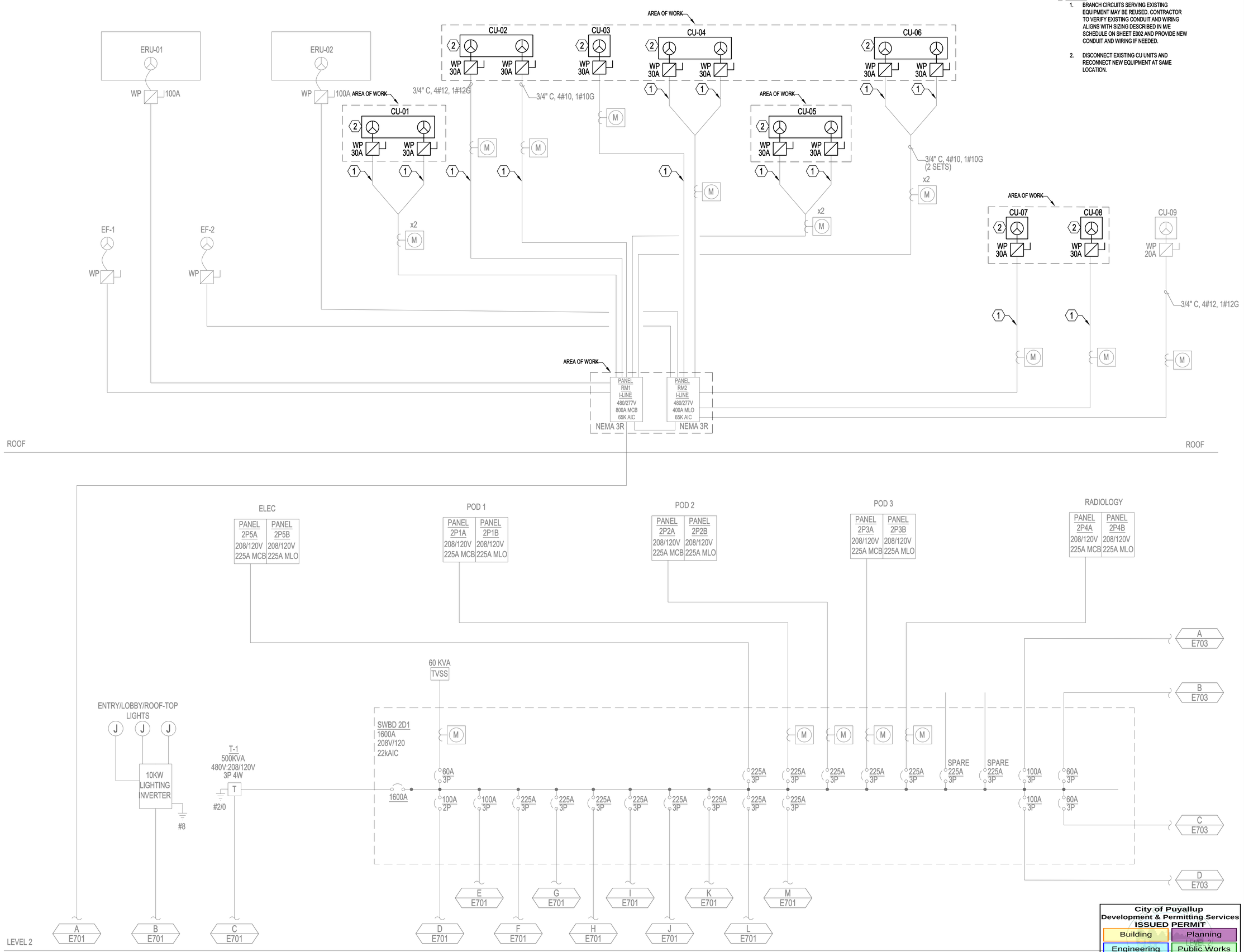
SHEET NAME
DIAGRAMS - ELECTRICAL
SHEET NUMBER
E701

Date: 6/22/23 Time: 3:05pm File: P:\2022\22-1043 - Kaiser PLP Rooftop Unit Replacement\01 Production\02 CAD\Main Bldg\22-1043 E701.dwg User: eric.heinrich

NOTES:

1. BRANCH CIRCUITS SERVING EXISTING EQUIPMENT MAY BE REUSED. CONTRACTOR TO VERIFY EXISTING CONDUIT AND WIRING ALIGNS WITH SIZING DESCRIBED IN M/E SCHEDULE ON SHEET E002 AND PROVIDE NEW CONDUIT AND WIRING IF NEEDED.
2. DISCONNECT EXISTING CU UNITS AND RECONNECT NEW EQUIPMENT AT SAME LOCATION.



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MARK	DATE	DESCRIPTION

PROJECT NUMBER 22-1043

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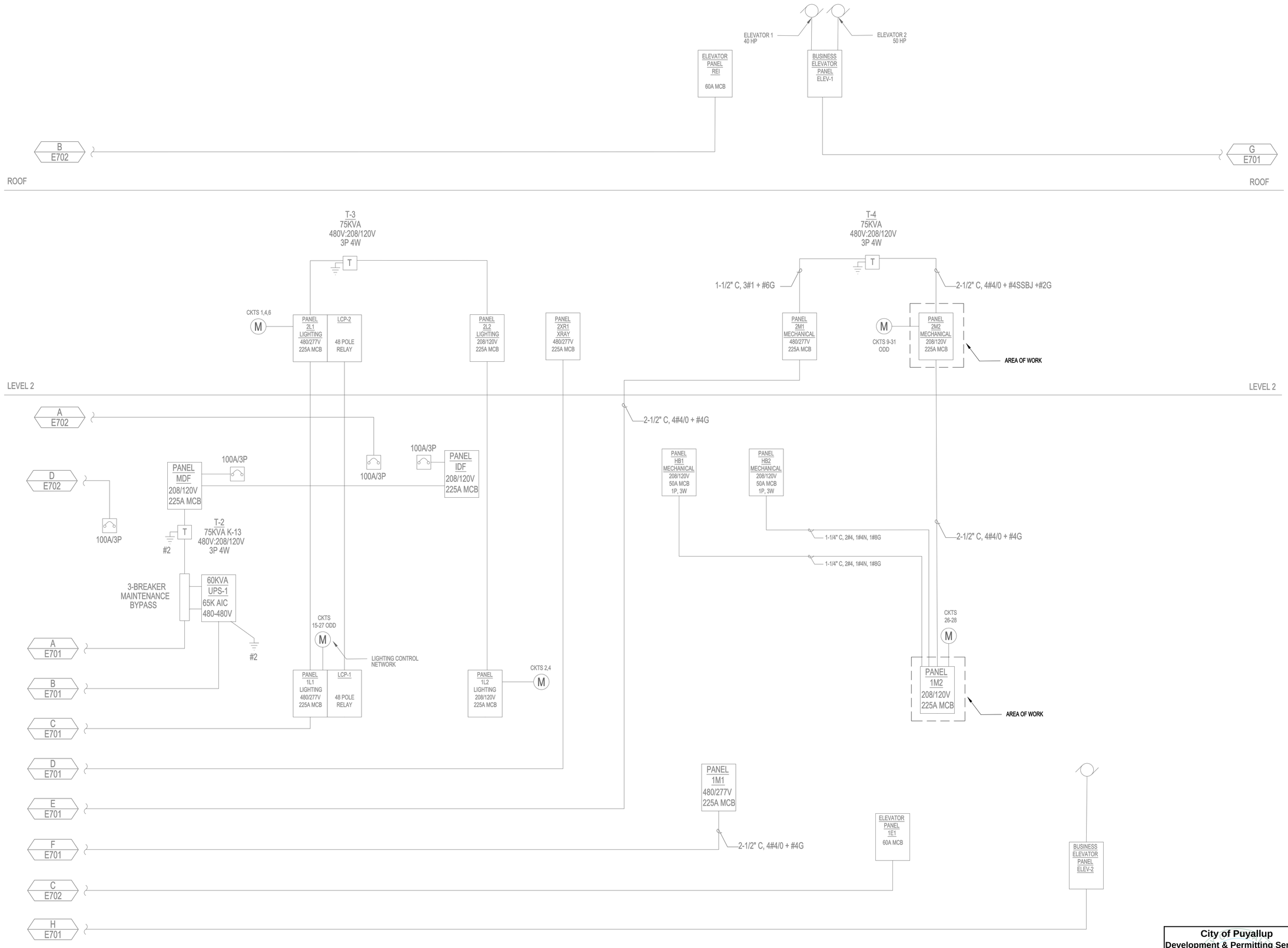
SHEET NAME
DIAGRAMS - ELECTRICAL

SHEET NUMBER
E702

Date: 6/22/23 Time: 3:05pm File: P:\2022\22-1043 - Kaiser PLP Rooftop Unit Replacement\01 Production\02 CAD\Main Bldg\22-1043 E702.dwg User: eric.heinrich



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CONSTRUCTION DOCUMENTS

PROJECT ISSUE DATE
06/23/2023

REVISIONS

MARK	DATE	DESCRIPTION

PROJECT NUMBER 22-1043

CHECKED BY MJ

SHEET NAME
DIAGRAMS - ELECTRICAL

SHEET NUMBER
E703

City of Puyallup
Development & Permitting Services
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Engineering	Public Works
Fire	Traffic

Date: 6/22/23 Time: 3:04pm File: P:\2022\22-1043 - Kaiser PLP Rooftop Unit Replacement\01 Production\02 CAD\Main Bldg\22-1043 E703.dwg User: eric.hehrich

PANELBOARD SCHEDULE

PANEL: 2M2 (EXISTING CONDITIONS) LOCATION: LEVEL 2 VOLTAGE: 208 Y/ 120 P: 3 W: 4 AIC RATING: 10 kA

AMP: 225 MLO [ ] MCB [X] MOUNTING: [X] SURFACE [ ] FLUSH

TYPE: EXISTING [X] NEW [ ] STYLE: PANELBOARD NEUTRAL: 100% FED FROM: T4

CIRCUIT DESCRIPTION	LOAD TYPE	LOAD KVA	CKT BKR	P	CIR #	PH	CIR #	P	CKT BKR	LOAD KVA	LOAD TYPE	CIRCUIT DESCRIPTION
MECH NE FCU-2501,5203.1,2503.2,VBC-5	MTR	1.46	20	2	1	A	2	2	20	0.88	MTR	MECH FCU-3-1
FCI-2501,2503.1,2503.2,VBC-5	MTR	1.46	-	-	3	B	4	-	-	0.88	MTR	-
MECH FA AIR COMPRESSOR (1/3HP)			20	1	5	C	6	1	20			SPARE
SPARE			20	1	7	A	8	1	20	0.50	MISC	BRANCH CIRCUIT MONITOR
MECH POD 1 FCU-2501,02,04,05,06	MISC	1.05	15	2	9	B	10	1	20			SPARE
-	MISC	1.05	-	-	11	C	12	1	20			SPARE
MECH POD 1 FCU-2507-2509,2601	MISC	1.00	15	2	13	A	14	1	20	1.00	MISC	EQUIP NORTH FSDS
-	MISC	1.00	-	-	15	B	16	1	20	1.00	MISC	EQUIP NORTH FSDS
MECH POD 2 FCU-2602-2605	MISC	0.66	15	2	17	C	18	1	20			SPARE
-	MISC	0.66	-	-	19	A	20	1	20			SPARE
MECH POD 2 FCU-2606-2608	MISC	0.89	15	2	21	B	22	1	20			SPARE
-	MISC	0.89	-	-	23	C	24	1	20			SPARE
MECH POD 3 FCU-2701-2704	MISC	0.70	15	2	25	A	26	1	20			SPARE
-	MISC	0.70	-	-	27	B	28	1	20			SPARE
MECH POD 3 FCU-2705-2707	MISC	1.11	15	2	29	C	30	1	20			SPARE
-	MISC	1.11	-	-	31	A	32	1	20			SPARE
MECH RAD -FCU 2804,06,2601	MISC	0.78	15	2	33	B	34	1	20			SPARE
-	MISC	0.78	-	-	35	C	36	1	20			SPARE
MECH RAD -FCU 2801,02,03,05	MISC	1.02	15	2	37	A	38	1	20			SPARE
-	MISC	1.02	-	-	39	B	40	1	20			SPARE
SPARE			20	1	41	C	42	1	20			SPARE

ESTIMATED MAXIMUM DEMAND (EMD) CALCULATIONS

LOAD SUMMARY:	LOAD TYPE	CONNECTED	NEC DEMAND
LIGHTING	LTG	0.0 KVA	0.0 KVA (125%)
RESIDENT LTG/REC	RES	0.0 KVA	0.0 KVA (100/35/25%)
SMALL APPLIANCE	RES	0.0 KVA	0.0 KVA (100/35/25%)
LARGEST MOTOR	MTR	KVA	0.0 KVA (125%)
REMAINING MOTORS	MTR	28.9 KVA	28.9 KVA (100%)
GEN PURPOSE REC	REC	0.0 KVA	0.0 KVA (50% > 10KVA)
COMPUTER REC	MISC	0.0 KVA	0.0 KVA (100%)
EQUIP/OTHER	MISC	35.0 KVA	35.0 KVA (100%)
HEATING	MISC	0.0 KVA	0.0 KVA (100%)
ELEVATOR	ELEV	0.0 KVA	0.0 KVA (100%)
KITCHEN EQPT	KITCH	0.0 KVA	0.0 KVA (100%)
ELEC VEHICLE	EV	0.0 KVA	0.0 KVA (125%)
TOTALS:		64.0 KVA	64.0 KVA
		177.6 AMP	177.6 AMP

CONNECTED PHASE LOADING

PHASE A: 20.09 KVA
PHASE B: 26.31 KVA
PHASE C: 17.57 KVA

NOTES:

PANELBOARD SCHEDULE

PANEL: 2M1 (EXISTING CONDITIONS) LOCATION: LEVEL 1 VOLTAGE: 480 Y/ 277 P: 3 W: 4 AIC RATING: 42 kA

AMP: 225 MLO [ ] MCB [X] MOUNTING: [X] SURFACE [ ] FLUSH

TYPE: EXISTING [X] NEW [ ] STYLE: PANELBOARD NEUTRAL: 100% FED FROM: MAIN SWBD- MSB

CIRCUIT DESCRIPTION	LOAD TYPE	LOAD KVA	CKT BKR	P	CIR #	PH	CIR #	P	CKT BKR	LOAD KVA	LOAD TYPE	CIRCUIT DESCRIPTION
SPARE			20	1	1	A	2	1	20			SPARE
SPARE			20	1	3	B	4	1	20			SPARE
SPARE			20	2	5	C	6	1	20			SPARE
SPARE			20	-	7	A	8	1	20			SPARE
SPARE			20	2	9	B	10	1	40			SPARE
SPARE			20	-	11	C	12	1	20			SPARE
SPARE			20	1	13	A	14	1	20			SPARE
SPARE			20	2	15	B	16	1	20			SPARE
SPARE			20	-	17	C	18	1	20			SPARE
SPARE			20	2	19	A	20	1	20			SPARE
SPARE			20	-	21	B	22	1	20			SPARE
SPARE			20	2	23	C	24	1	20			SPARE
SPARE			50	3	25	A	26	1	20			SPARE
SPARE			-	-	27	B	28	1	20			SPARE
SPARE			-	-	29	C	30	1	20			SPARE
SPARE			30	3	31	A	32	1	20			SPARE
SPACE			-	-	33	B	34	1	20			SPARE
SPACE			-	-	35	C	36	1	20			SPARE
EQUIP TVSS			30	2	37	A	38	3	125	20.09	COMB	PANEL 2M2
EQUIP TVSS			-	-	39	B	40	-	-	26.31	COMB	PANEL 2M2
EQUIP TVSS			-	-	41	C	42	-	-	17.57	COMB	PANEL 2M2

ESTIMATED MAXIMUM DEMAND (EMD) CALCULATIONS

LOAD SUMMARY:	LOAD TYPE	CONNECTED	NEC DEMAND
LIGHTING	LTG	0.0 KVA	0.0 KVA (125%)
RESIDENT LTG/REC	RES	0.0 KVA	0.0 KVA (100/35/25%)
SMALL APPLIANCE	RES	0.0 KVA	0.0 KVA (100/35/25%)
LARGEST MOTOR	MTR	KVA	0.0 KVA (125%)
REMAINING MOTORS	MTR	28.9 KVA	28.9 KVA (100%)
GEN PURPOSE REC	REC	0.0 KVA	0.0 KVA (50% > 10KVA)
COMPUTER REC	MISC	0.0 KVA	0.0 KVA (100%)
EQUIP/OTHER	MISC	35.0 KVA	35.0 KVA (100%)
HEATING	MISC	0.0 KVA	0.0 KVA (100%)
ELEVATOR	ELEV	0.0 KVA	0.0 KVA (100%)
KITCHEN EQPT	KITCH	0.0 KVA	0.0 KVA (100%)
ELEC VEHICLE	EV	0.0 KVA	0.0 KVA (125%)
TOTALS:		64.0 KVA	64.0 KVA
		76.9 AMP	76.9 AMP

CONNECTED PHASE LOADING

PHASE A: 20.09 KVA
PHASE B: 26.31 KVA
PHASE C: 17.57 KVA

NOTES:

PANELBOARD SCHEDULE

PANEL: 2M2 (REVISED CONDITIONS) LOCATION: LEVEL 2 VOLTAGE: 208 Y/ 120 P: 3 W: 4 AIC RATING: 10 kA

AMP: 225 MLO [ ] MCB [X] MOUNTING: [X] SURFACE [ ] FLUSH

TYPE: EXISTING [X] NEW [ ] STYLE: PANELBOARD NEUTRAL: 100% FED FROM: T4

CIRCUIT DESCRIPTION	LOAD TYPE	LOAD KVA	CKT BKR	P	CIR #	PH	CIR #	P	CKT BKR	LOAD KVA	LOAD TYPE	CIRCUIT DESCRIPTION
MECH NE FCU-2501,5203.1,2503.2,VBC-5	MTR	1.46	20	2	1	A	2	2	20	0.88	MTR	MECH FCU-3-1
FCI-2501,2503.1,2503.2,VBC-5	MTR	1.46	-	-	3	B	4	-	-	0.88	MTR	-
MECH FA AIR COMPRESSOR (1/3HP)	MTR	0.86	20	1	5	C	6	1	20			SPARE
SPARE			20	1	7	A	8	1	20	0.50	MISC	BRANCH CIRCUIT MONITOR
MECH POD 1 FCU-2501,02,04,05,06	MISC	1.05	15	2	9	B	10	**2**	**15**	**0.09**	**MTR**	**FCU-2510, 2609 & 2708 (NOTE 1)**
-	MISC	1.05	-	-	11	C	12	**-**	**-**	**0.09**	**MTR**	**-**
MECH POD 1 FCU-2507-2509,2601	MISC	1.00	15	2	13	A	14	1	20	1.00	MISC	EQUIP NORTH FSDS
-	MISC	1.00	-	-	15	B	16	1	20	1.00	MISC	EQUIP NORTH FSDS
MECH POD 2 FCU-2602-2605	MISC	0.66	15	2	17	C	18	1	20			SPARE
-	MISC	0.66	-	-	19	A	20	1	20			SPARE
MECH POD 2 FCU-2606-2608	MISC	0.89	15	2	21	B	22	1	20			SPARE
-	MISC	0.89	-	-	23	C	24	1	20			SPARE
MECH POD 3 FCU-2701-2704	MISC	0.70	15	2	25	A	26	1	20			SPARE
-	MISC	0.70	-	-	27	B	28	1	20			SPARE
MECH POD 3 FCU-2705-2707	MISC	1.11	15	2	29	C	30	1	20			SPARE
-	MISC	1.11	-	-	31	A	32	1	20			SPARE
MECH RAD -FCU 2804,06,2601	MISC	0.78	15	2	33	B	34	1	20			SPARE
-	MISC	0.78	-	-	35	C	36	1	20			SPARE
MECH RAD -FCU 2801,02,03,05	MISC	1.02	15	2	37	A	38	1	20			SPARE
-	MISC	1.02	-	-	39	B	40	1	20			SPARE
SPARE			20	1	41	C	42	1	20			SPARE

ESTIMATED MAXIMUM DEMAND (EMD) CALCULATIONS

LOAD SUMMARY:	LOAD TYPE	CONNECTED	NEC DEMAND
LIGHTING	LTG	0.0 KVA	0.0 KVA (125%)
RESIDENT LTG/REC	RES	0.0 KVA	0.0 KVA (100/35/25%)
SMALL APPLIANCE	RES	0.0 KVA	0.0 KVA (100/35/25%)
LARGEST MOTOR	MTR	0.0 KVA	0.0 KVA (125%)
REMAINING MOTORS	MTR	30.1 KVA	30.1 KVA (100%)
GEN PURPOSE REC	REC	0.0 KVA	0.0 KVA (50% > 10KVA)
COMPUTER REC	MISC	0.0 KVA	0.0 KVA (100%)
EQUIP/OTHER	MISC	35.0 KVA	35.0 KVA (100%)
HEATING	MISC	0.0 KVA	0.0 KVA (100%)
ELEVATOR	ELEV	0.0 KVA	0.0 KVA (100%)
KITCHEN EQPT	KITCH	0.0 KVA	0.0 KVA (100%)
ELEC VEHICLE	EV	0.0 KVA	0.0 KVA (125%)
TOTALS:		65.1 KVA	65.1 KVA
		180.7 AMP	180.7 AMP

CONNECTED PHASE LOADING

PHASE A: 20.09 KVA
PHASE B: 26.45 KVA
PHASE C: 18.57 KVA

NOTES:

1. PROVIDE NEW CIRCUIT BREAKER AS INDICATED IN PANEL SCHEDULE. MANUFACTURER AND AIC RATING OF NEW BREAKER TO MATCH EXISTING PANEL.

PANELBOARD SCHEDULE

PANEL: 2M1 (REVISED CONDITIONS) LOCATION: LEVEL 1 VOLTAGE: 480 Y/ 277 P: 3 W: 4 AIC RATING: 42 kA

AMP: 225 MLO [ ] MCB [X] MOUNTING: [X] SURFACE [ ] FLUSH

TYPE: EXISTING [X] NEW [ ] STYLE: PANELBOARD NEUTRAL: 100% FED FROM: MAIN SWBD- MSB

CIRCUIT DESCRIPTION	LOAD TYPE	LOAD KVA	CKT BKR	P	CIR #	PH	CIR #	P	CKT BKR	LOAD KVA	LOAD TYPE	CIRCUIT DESCRIPTION
SPARE			20	1	1	A	2	1	20			SPARE
SPARE			20	1	3	B	4	1	20			SPARE
SPARE			20	2	5	C	6	1	20			SPARE
SPARE			20	-	7	A	8	1	20			SPARE
SPARE			20	2	9	B	10	1	40			SPARE
SPARE			20	-	11	C	12	1	20			SPARE
SPARE			20	1	13	A	14	1	20			SPARE
SPARE			20	2	15	B	16	1	20			SPARE
SPARE			20	-	17	C	18	1	20			SPARE
SPARE			20	2	19	A	20	1	20			SPARE
SPARE			20	-	21	B	22	1	20			SPARE
SPARE			20	2	23	C	24	1	20			SPARE
SPARE			50	3	25	A	26	1	20			SPARE
SPARE			-	-	27	B	28	1	20			SPARE
SPARE			-	-	29	C	30	1	20			SPARE
SPARE			30	3	31	A	32	1	20			SPARE
SPACE			-	-	33	B	34	1	20			SPARE
SPACE			-	-	35	C	36	1	20			SPARE
EQUIP TVSS			30	2	37	A	38	3	125	23.73	COMB	PANEL 2M2
EQUIP TVSS			-	-	39	B	40	-	-	26.45	COMB	PANEL 2M2
EQUIP TVSS			-	-	41	C	42	-	-	22.21	COMB	PANEL 2M2

ESTIMATED MAXIMUM DEMAND (EMD) CALCULATIONS

LOAD SUMMARY:	LOAD TYPE	CONNECTED	NEC DEMAND
LIGHTING	LTG	0.0 KVA	0.0 KVA (125%)
RESIDENT LTG/REC	RES	0.0 KVA	0.0 KVA (100/35/25%)
SMALL APPLIANCE	RES	0.0 KVA	0.0 KVA (100/35/25%)
LARGEST MOTOR	MTR	0.0 KVA	0.0 KVA (125%)
REMAINING MOTORS	MTR	37.4 KVA	37.4 KVA (100%)
GEN PURPOSE REC	REC	0.0 KVA	0.0 KVA (50% > 10KVA)
COMPUTER REC	MISC	0.0 KVA	0.0 KVA (100%)
EQUIP/OTHER	MISC	35.0 KVA	35.0 KVA (100%)
HEATING	MISC	0.0 KVA	0.0 KVA (100%)
ELEVATOR	ELEV	0.0 KVA	0.0 KVA (100%)
KITCHEN EQPT	KITCH	0.0 KVA	0.0 KVA (100%)
ELEC VEHICLE	EV	0.0 KVA	0.0 KVA (125%)
TOTALS:		72.4 KVA	72.4 KVA
		87.1 AMP	87.1 AMP

CONNECTED PHASE LOADING

PHASE A: 23.73 KVA
PHASE B: 26.45 KVA
PHASE C: 22.21 KVA

NOTES:

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning | Engineering | Public Works | Fire | Traffic

2M2 (E)	2M1 (E)
2M2 (R)	2M1 (R)

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06/23/23

KAISER PERMANENTE

KPWA PLP ROOF TOP UNIT REPLACEMENT & MECHANICAL IMPROVEMENTS

CONSTRUCTION DOCUMENTS

PROJECT ISSUE DATE
06/23/2023

REVISIONS

MARK	DATE	DESCRIPTION

PROJECT NUMBER 22-1043

CHECKED BY MJ

SHEET NAME
PANEL SCHEDULES - ELECTRICAL

SHEET NUMBER
E801

Date: 6/22/23 Time: 3:03pm File: P:\2022\22-1043 - Kaiser PLP Rooftop Unit Replacement\01 Production\02 CAD\Main Bldg\22-1043 E801.dwg User: eric.hebrich

PANELBOARD SCHEDULE

PANEL: RM1 (EXISTING CONDITIONS) | LOCATION: ROOF | VOLTAGE: 480 Y/ 277 | P: 3 | W: 4 | AIC RATING: 65 kA
AMP: 800 | MLO [ ] | MCB [X] | MOUNTING: [X] SURFACE [ ] FLUSH
TYPE: EXISTING [X] NEW [ ] | STYLE: PANELBOARD | NEUTRAL: 100% | FED FROM: MSB

CIRCUIT DESCRIPTION	LOAD TYPE	LOAD KVA	CKT BKR	P	CIR #	PH	CIR #	P	CKT BKR	LOAD KVA	LOAD TYPE	CIRCUIT DESCRIPTION
MECH EF-01 (2HP)	MTR	0.58	15	3	1	A	2	3	80	16.91	MTR	MECH ERU-01 (61MCA)
-	MTR	0.58	-	-	3	B	4	-	-	16.91	MTR	-
-	MTR	0.58	-	-	5	C	6	-	-	16.91	MTR	-
MECH CU-09	MTR	2.94	20	3	7	A	8	3	15	3.61	MTR	MECH CU-02
-	MTR	2.94	-	-	9	B	10	-	-	3.61	MTR	-
-	MTR	2.94	-	-	11	C	12	-	-	3.61	MTR	-
MECH CU-01	MTR	7.50	40	3	13	A	14	3	25	4.44	MTR	MECH CU-02
-	MTR	7.50	-	-	15	B	16	-	-	4.44	MTR	-
-	MTR	7.50	-	-	17	C	18	-	-	4.44	MTR	-
MECH CU-01	MTR	7.50	40	3	19	A	20	3	25	4.44	MTR	MECH CU-06
-	MTR	7.50	-	-	21	B	22	-	-	4.44	MTR	-
-	MTR	7.50	-	-	23	C	24	-	-	4.44	MTR	-
MECH CU-05	MTR	6.38	30	3	25	A	26	3	25	4.44	MTR	MECH CU-06
-	MTR	6.38	-	-	27	B	28	-	-	4.44	MTR	-
-	MTR	6.38	-	-	29	C	30	-	-	4.44	MTR	-
MECH CU-05	MTR	6.38	30	3	31	A	32	3	30			TVSS
-	MTR	6.38	-	-	33	B	34	-	-			-
-	MTR	6.38	-	-	35	C	36	-	-			-
PANEL RM2	COMB	84.38	400	3	37	A	38	1				SPACE
-	COMB	83.38	-	-	39	B	40	1	15	1.00	MISC	UNKNOWN LOAD
-	COMB	83.38	-	-	41	C	42	1	20	1.25	MISC	EUH-6

ESTIMATED MAXIMUM DEMAND (EMD) CALCULATIONS

LOAD SUMMARY:	LOAD TYPE	CONNECTED	NEC DEMAND
LIGHTING	LTG	0.0 KVA	0.0 KVA (125%)
RESIDENT LTG/REC	RES	0.0 KVA	0.0 KVA (100/35/25%)
SMALL APPLIANCE	RES	0.0 KVA	0.0 KVA (100/35/25%)
LARGEST MOTOR	MTR	50.7 KVA	63.4 KVA (125%)
REMAINING MOTORS	MTR	306.3 KVA	306.3 KVA (100%)
GEN PURPOSE REC	REC	0.0 KVA	0.0 KVA (50% > 10KVA)
COMPUTER REC	MISC	0.0 KVA	0.0 KVA (100%)
EQUIP/OTHER	MISC	90.5 KVA	90.5 KVA (100%)
HEATING	MISC	1.3 KVA	1.3 KVA (100%)
ELEVATOR	ELEV	0.0 KVA	0.0 KVA (100%)
KITCHEN EQPT	KITCH	0.0 KVA	0.0 KVA (100%)
ELEC VEHICLE	EV	0.0 KVA	0.0 KVA (125%)
TOTALS:		448.8 KVA	461.4 KVA
		539.8 AMP	555.0 AMP

CONNECTED PHASE LOADING
PHASE A: 149.50 KVA
PHASE B: 149.50 KVA
PHASE C: 149.75 KVA

NOTES:

PANELBOARD SCHEDULE

PANEL: 1M2 (EXISTING CONDITIONS) | LOCATION: MECHANICAL LOADS LEVEL 1 | VOLTAGE: 208 Y/ 120 | P: 3 | W: 4 | AIC RATING: 10 kA
AMP: 225 | MLO [ ] | MCB [X] | MOUNTING: [X] SURFACE [ ] FLUSH
TYPE: EXISTING [X] NEW [ ] | STYLE: PANELBOARD | NEUTRAL: 100% | FED FROM: [ ]

CIRCUIT DESCRIPTION	LOAD TYPE	LOAD KVA	CKT BKR	P	CIR #	PH	CIR #	P	CKT BKR	LOAD KVA	LOAD TYPE	CIRCUIT DESCRIPTION
MECH EF-3(1/12HP)	MTR	0.20	20	1	1	A	2	1	20	0.50	MISC	CIRC. PUMP
EQUIP FIRE PLACE CONTROLS	MISC	0.75	20	1	3	B	4	1	20	0.50	MISC	UNKNOWN LOAD
MECH FCU-1101,1103,1110, VBC-1	MTR	1.00	15	2	5	C	6	1	20			SPARE
-	MTR	1.00	-	-	7	A	8	1	20			SPARE
MECH FCU-1401,1405, VBC-4	MTR	0.99	15	2	9	B	10	1	40	2.16	MISC	EQUIP LOADING DOCK LEVELER 1-1/4HP
-	MTR	0.99	-	-	11	C	12	1	20			SPARE
MECH EF-4 (1/4HP)	MTR	0.70	20	1	13	A	14	2	15			SPARE
MECH EU H-7(6KW)	MTR	3.00	40	2	15	B	16	-	-			-
-	MTR	3.00	-	-	17	C	18	2	15	0.73	MTR	MECH FCUS 1205,06,07
MECH N. FCUS 1104, 05,02,06 VBC1201	MTR	0.92	15	2	19	A	20	-	-	0.73	MTR	-
-	MTR	0.92	-	-	21	B	22	2	15	0.94	MTR	MECH SE FCUS 1208,1307,08
MECH NE FCUS 1107.1,07.2,08,09	MTR	1.07	15	2	23	C	24	-	-	0.94	MTR	-
-	MTR	1.07	-	-	25	A	26	2	15	1.18	MTR	MECH S FCUS 1301 - 1306
MEC FUS 1111, 1202, 03, 04	MTR	0.59	15	2	27	B	28	-	-	1.18	MTR	-
-	MTR	0.59	-	-	29	C	30	2	15	1.26	MTR	MECH SW FCUS 1401-1404
EQUIP EUE CLINIC FIRE SHUTTER	MISC	1.20	20	1	31	A	32	-	-	1.26	MTR	-
MECH FSDS NORTH SECTION	MISC	0.50	20	1	33	B	34	1	20			SPARE
MECH FSDS SOUTH SECTION PHARM FIRE DOOR	MISC	0.50	20	1	35	C	36	1	20			SPARE
PANEL HB1 EAST	MISC	3.00	50	2	37	A	38	1	20			SPARE
-	MISC	3.00	-	-	39	B	40	2	50	3.00	MISC	PANEL HB2 WEST
METER POWER			20	1	41	C	42	-	-	3.00	MISC	SPACE

ESTIMATED MAXIMUM DEMAND (EMD) CALCULATIONS

LOAD SUMMARY:	LOAD TYPE	CONNECTED	NEC DEMAND
LIGHTING	LTG	0.0 KVA	0.0 KVA (125%)
RESIDENT LTG/REC	RES	0.0 KVA	0.0 KVA (100/35/25%)
SMALL APPLIANCE	RES	0.0 KVA	0.0 KVA (100/35/25%)
LARGEST MOTOR	MTR	KVA	0.0 KVA (125%)
REMAINING MOTORS	MTR	24.3 KVA	24.3 KVA (100%)
GEN PURPOSE REC	REC	0.0 KVA	0.0 KVA (50% > 10KVA)
COMPUTER REC	MISC	0.0 KVA	0.0 KVA (100%)
EQUIP/OTHER	MISC	18.1 KVA	18.1 KVA (100%)
HEATING	MISC	0.0 KVA	0.0 KVA (100%)
ELEVATOR	ELEV	0.0 KVA	0.0 KVA (100%)
KITCHEN EQPT	KITCH	0.0 KVA	0.0 KVA (100%)
ELEC VEHICLE	EV	0.0 KVA	0.0 KVA (125%)
TOTALS:		42.4 KVA	42.4 KVA
		117.6 AMP	117.6 AMP

CONNECTED PHASE LOADING
PHASE A: 11.76 KVA
PHASE B: 17.53 KVA
PHASE C: 13.08 KVA

NOTES:

PANELBOARD SCHEDULE

PANEL: RM1 (REVISED CONDITIONS) | LOCATION: ROOF | VOLTAGE: 480 Y/ 277 | P: 3 | W: 4 | AIC RATING: 65 kA
AMP: 800 | MLO [ ] | MCB [X] | MOUNTING: [X] SURFACE [ ] FLUSH
TYPE: EXISTING [X] NEW [ ] | STYLE: PANELBOARD | NEUTRAL: 100% | FED FROM: MSB

CIRCUIT DESCRIPTION	LOAD TYPE	LOAD KVA	CKT BKR	P	CIR #	PH	CIR #	P	CKT BKR	LOAD KVA	LOAD TYPE	CIRCUIT DESCRIPTION
MECH EF-01 (2HP)	MTR	0.58	15	3	1	A	2	3	80	16.91	MTR	MECH ERU-01 (61MCA)
-	MTR	0.58	-	-	3	B	4	-	-	16.91	MTR	-
-	MTR	0.58	-	-	5	C	6	-	-	16.91	MTR	-
MECH CU-09	MTR	2.94	20	3	7	A	8	**3**	**20**	**4.15**	**MTR**	**MECH CU-02 (NOTE 1)**
-	MTR	2.94	-	-	9	B	10	**-**	**-**	**4.15**	**MTR**	**-**
-	MTR	2.94	-	-	11	C	12	**-**	**-**	**4.15**	**MTR**	**-**
MECH CU-01 (NOTE 1)	**MTR**	**6.64**	**30**	**3**	13	A	14	**3**	**20**	**4.15**	**MTR**	**MECH CU-02 (NOTE 1)**
-	**MTR**	**6.64**	**-**	**-**	15	B	16	**-**	**-**	**4.15**	**MTR**	**-**
-	**MTR**	**6.64**	**-**	**-**	17	C	18	**-**	**-**	**4.15**	**MTR**	**-**
MECH CU-01 (NOTE 1)	**MTR**	**6.64**	**30**	**3**	19	A	20	**3**	**20**	**4.15**	**MTR**	**MECH CU-06 (NOTE 1)**
-	**MTR**	**6.64**	**-**	**-**	21	B	22	**-**	**-**	**4.15**	**MTR**	**-**
-	**MTR**	**6.64**	**-**	**-**	23	C	24	**-**	**-**	**4.15**	**MTR**	**-**
MECH CU-05 (NOTE 1)	**MTR**	**5.81**	**25**	**3**	25	A	26	**3**	**20**	**4.15**	**MTR**	**MECH CU-06 (NOTE 1)**
-	**MTR**	**5.81**	**-**	**-**	27	B	28	**-**	**-**	**4.15**	**MTR**	**-**
-	**MTR**	**5.81**	**-**	**-**	29	C	30	**-**	**-**	**4.15**	**MTR**	**-**
MECH CU-05 (NOTE 1)	**MTR**	**5.81**	**25**	**3**	31	A	32	3	30			TVSS
-	**MTR**	**5.81**	**-**	**-**	33	B	34	-	-			-
-	**MTR**	**5.81**	**-**	**-**	35	C	36	-	-			-
PANEL RM2	COMB	79.55	400	3	37	A	38	1				SPACE
-	COMB	78.55	-	-	39	B	40	1	15	1.00	MISC	UNKNOWN LOAD
-	COMB	78.55	-	-	41	C	42	1	20	1.25	MISC	EUH-6

ESTIMATED MAXIMUM DEMAND (EMD) CALCULATIONS

LOAD SUMMARY:	LOAD TYPE	CONNECTED	NEC DEMAND
LIGHTING	LTG	0.0 KVA	0.0 KVA (125%)
RESIDENT LTG/REC	RES	0.0 KVA	0.0 KVA (100/35/25%)
SMALL APPLIANCE	RES	0.0 KVA	0.0 KVA (100/35/25%)
LARGEST MOTOR	MTR	50.7 KVA	63.4 KVA (125%)
REMAINING MOTORS	MTR	282.3 KVA	282.3 KVA (100%)
GEN PURPOSE REC	REC	0.0 KVA	0.0 KVA (50% > 10KVA)
COMPUTER REC	MISC	0.0 KVA	0.0 KVA (100%)
EQUIP/OTHER	MISC	90.5 KVA	90.5 KVA (100%)
HEATING	MISC	1.3 KVA	1.3 KVA (100%)
ELEVATOR	ELEV	0.0 KVA	0.0 KVA (100%)
KITCHEN EQPT	KITCH	0.0 KVA	0.0 KVA (100%)
ELEC VEHICLE	EV	0.0 KVA	0.0 KVA (125%)
TOTALS:		424.7 KVA	437.4 KVA
		510.9 AMP	526.1 AMP

CONNECTED PHASE LOADING
PHASE A: 141.50 KVA
PHASE B: 141.50 KVA
PHASE C: 141.75 KVA

NOTES:
1. PROVIDE NEW CIRCUIT BREAKER AS INDICATED IN PANEL SCHEDULE. MANUFACTURER AND AIC RATING OF NEW BREAKER TO MATCH EXISTING PANEL.

PANELBOARD SCHEDULE

PANEL: 1M2 (REVISED CONDITIONS) | LOCATION: MECHANICAL LOADS LEVEL 1 | VOLTAGE: 208 Y/ 120 | P: 3 | W: 4 | AIC RATING: 10 kA
AMP: 225 | MLO [ ] | MCB [X] | MOUNTING: [X] SURFACE [ ] FLUSH
TYPE: EXISTING [X] NEW [ ] | STYLE: PANELBOARD | NEUTRAL: 100% | FED FROM: [ ]

CIRCUIT DESCRIPTION	LOAD TYPE	LOAD KVA	CKT BKR	P	CIR #	PH	CIR #	P	CKT BKR	LOAD KVA	LOAD TYPE	CIRCUIT DESCRIPTION
MECH EF-3(1/12HP)	MTR	0.20	20	1	1	A	2	1	20	0.50	MISC	CIRC. PUMP
EQUIP FIRE PLACE CONTROLS	MISC	0.75	20	1	3	B	4	1	20	0.50	MISC	UNKNOWN LOAD
MECH FCU-1101,1103,1110, VBC-1	MTR	1.00	15	2	5	C	6	1	20			SPARE
-	MTR	1.00	-	-	7	A	8	1	20			SPARE
MECH FCU-1401,1405, VBC-4	MTR	0.99	15	2	9	B	10	1	40	2.16	MISC	EQUIP LOADING DOCK LEVELER 1-1/4HP
-	MTR	0.99	-	-	11	C	12	1	20			SPARE
MECH EF-4 (1/4HP)	MTR	0.70	20	1	13	A	14	2	15			SPARE
MECH EU H-7(6KW)	MTR	3.00	40	2	15	B	16	-	-			-
-	MTR	3.00	-	-	17	C	18	2	15	0.73	MTR	MECH FCUS 1205,06,07
MECH N. FCUS 1104, 05,02,06 VBC1201	MTR	0.92	15	2	19	A	20	-	-	0.73	MTR	-
-	MTR	0.92	-	-	21	B	22	2	15	0.94	MTR	MECH SE FCUS 1208,1307,08
MECH NE FCUS 1107.1,07.2,08,09	MTR	1.07	15	2	23	C	24	-	-	0.94	MTR	-
-	MTR	1.07	-	-	25	A	26	2	15	1.18	MTR	MECH S FCUS 1301 - 1306
MEC FUS 1111, 1202, 03, 04	MTR	0.59	15	2	27	B	28	-	-	1.18	MTR	-
-	MTR	0.59	-	-	29	C	30	2	15	1.26	MTR	MECH SW FCUS 1401-1404
EQUIP EUE CLINIC FIRE SHUTTER	MISC	1.20	20	1	31	A	32	-	-	1.26	MTR	-
MECH FSDS NORTH SECTION	MISC	0.50	20	1	33	B	34	**1**	**15**	**0.05**	**MTR**	**FCU-1112 & 1113 (NOTE 1)**
MECH FSDS SOUTH SECTION PHARM FIRE DOOR	MISC	0.50	20	1	35	C	36	**-**	**-**	**0.05**	**MTR**	**-**
PANEL HB1 EAST	MISC	3.00	50	2	37	A	38	1	20			SPARE
-	MISC	3.00	-	-	39	B	40	2	50	3.00	MISC	PANEL HB2 WEST
METER POWER			20	1	41	C	42	-	-	3.00	MISC	-

ESTIMATED MAXIMUM DEMAND (EMD) CALCULATIONS

LOAD SUMMARY:	LOAD TYPE	CONNECTED	NEC DEMAND
LIGHTING	LTG	0.0 KVA	0.0 KVA (125%)
RESIDENT LTG/REC	RES	0.0 KVA	0.0 KVA (100/35/25%)
SMALL APPLIANCE	RES	0.0 KVA	0.0 KVA (100/35/25%)
LARGEST MOTOR	MTR	0.0 KVA	0.0 KVA (125%)
REMAINING MOTORS	MTR	24.4 KVA	24.4 KVA (100%)
GEN PURPOSE REC	REC	0.0 KVA	0.0 KVA (50% > 10KVA)
COMPUTER REC	MISC	0.0 KVA	0.0 KVA (100%)
EQUIP/OTHER	MISC	18.1 KVA	18.1 KVA (100%)
HEATING	MISC	0.0 KVA	0.0 KVA (100%)
ELEVATOR	ELEV	0.0 KVA	0.0 KVA (100%)
KITCHEN EQPT	KITCH	0.0 KVA	0.0 KVA (100%)
ELEC VEHICLE	EV	0.0 KVA	0.0 KVA (125%)
TOTALS:		42.5 KVA	42.5 KVA
		117.9 AMP	117.9 AMP

CONNECTED PHASE LOADING
PHASE A: 11.76 KVA
PHASE B: 17.58 KVA
PHASE C: 13.13 KVA

NOTES:
1. PROVIDE NEW CIRCUIT BREAKER AS INDICATED IN PANEL SCHEDULE. MANUFACTURER AND AIC RATING OF NEW BREAKER TO MATCH EXISTING PANEL.

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06/23/23

KAISER PERMANENTE

KPWA PLP ROOF TOP UNIT REPLACEMENT & MECHANICAL IMPROVEMENTS

CONSTRUCTION DOCUMENTS

PROJECT ISSUE DATE
06/23/2023

REVISIONS

MARK	DATE	DESCRIPTION

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning
Engineering | Public Works
Fire | Traffic

RM1 (E) 1M2 (E)
RM1 (R) 1M2 (R)

PROJECT NUMBER 22-1043
CHECKED BY MJ
SHEET NAME
PANEL SCHEDULES - ELECTRICAL

SHEET NUMBER
E802

Date: 6/22/23 Time: 3:03pm File: P:\2022\22-1043 – Kaiser PLP Rooftop Unit Replacement\01 Production\02 CAD\Main Bldg\22-1043 E802.dwg User: eric.heinrich

LOAD SUMMARY

Meter Point	Panel/Equipment	Voltage	Amp Rating	Metering Date	Metered Demand kW	PF Adjustment	Seasonal Adjustment Factor	NEC Demand Factor	kVA Demand	Load Removed	New Load Added	Total Demand Load	Total Demand Amps	Notes:
-	Panel 1M2	208V	225A	-	-	-	-	-	42.4 kVA	-	.1 kVA	42.5 kVA	118.0A	2,3
-	Panel 2M2	208V	225A	-	-	-	-	-	64.0 kVA		1.1 kVA	65.1 kVA	180.9A	2,3
-	Panel 2M1	480V	225A	-	-	-	-	-	64.0 kVA	-	1.1 kVA	65.1 kVA	78.4A	2,3
-	Panel RM1	480V	800A	-	-	-	-	-	461.4 kVA	-24.0 kVA	-	437.4 kVA	526.4A	2,3
-	Panel RM2	480V	400A	-	-	-	-	-	263.8 kVA	-14.5 kVA	-	249.3 kVA	300.0A	2,3
-	MSB	480V	1600A	6/1/2022	268.4 kW	0.90	1.00	1.25	372.8 kVA	-24.0 kVA	1.1 kVA	350.0 kVA	421.1A	1

GENERAL NOTES:

A METERED DATA BASED ON PEAK 12-MONTH UTILITY DEMAND.

B DEMAND LOAD TAKEN PER NEC.

NOTES:

1 LOAD SHOWN HERE IS CALCULATED BASED ON UTILITY SERVICE DATA.

2 LOAD SHOWN HERE IS CALCULATED BASED ON PANEL SCHEDULES.

3 SEE PANEL SCHEDULES FOR EXISTING AND NEW LOADS BEING ADDED.

PANELBOARD SCHEDULE

PANEL: RM2 (EXISTING CONDITIONS) LOCATION: ROOF VOLTAGE: 480 Y/ 277 P: 3 W: 4 A/C RATING: 65 kA

AMP: 400 MLO X MCB MOUNTING: X SURFACE FLUSH

TYPE: EXISTING X NEW STYLE: PANELBOARD NEUTRAL: 100% FED FROM: RM1

CIRCUIT DESCRIPTION	LOAD TYPE	LOAD KVA	CKT BKR	P	CIR #	P H	CIR #	P	CKT BKR	LOAD KVA	LOAD TYPE	CIRCUIT DESCRIPTION
MECH EF-02 (1HP)	MTR	0.58	15	3	1	A	2	3	80	16.91	MTR	MECH ERU-02 (61MCA)
-	MTR	0.58	-	-	3	B	4	-	-	16.91	MTR	-
-	MTR	0.58	-	-	5	C	6	-	-	16.91	MTR	-
MECH CU-03	MTR	6.39	40	3	7	A	8	3	15	0.50	MISC	METER POWER
-	MTR	6.39	-	-	9	B	10	-	-	0.50	MISC	-
-	MTR	6.39	-	-	11	C	12	-	-	0.50	MISC	-
UNKNOWN LOAD	MISC	4.00	20	3	13	A	14	3	40	8.00	MISC	UNKNOWN LOAD
-	MISC	4.00	-	-	15	B	16	-	-	8.00	MISC	-
-	MISC	4.00	-	-	17	C	18	-	-	8.00	MISC	-
MECH CU-04	MTR	7.50	30	3	19	A	20	3	25	5.00	MISC	UNKNOWN LOAD
-	MTR	7.50	-	-	21	B	22	-	-	5.00	MISC	-
-	MTR	7.50	-	-	23	C	24	-	-	5.00	MISC	-
MECH CU-04	MTR	7.50	30	3	25	A	26	3	30	6.00	MISC	UNKNOWN LOAD
-	MTR	7.50	-	-	27	B	28	-	-	6.00	MISC	-
-	MTR	7.50	-	-	29	C	30	-	-	6.00	MISC	-
MECH CU-07	MTR	7.50	40	3	31	A	32	3	30	6.00	MISC	UNKNOWN LOAD
-	MTR	7.50	-	-	33	B	34	-	-	6.00	MISC	-
-	MTR	7.50	-	-	35	C	36	-	-	6.00	MISC	-
MECH CU-08	MTR	7.50	40	3	37	A	38	1	15	1.00	MISC	UNKNOWN LOAD
-	MTR	7.50	-	-	39	B	40	1				SPACE
-	MTR	7.50	-	-	41	C	42	1				SPACE

ESTIMATED MAXIMUM DEMAND (EMD) CALCULATIONS

LOAD SUMMARY:	LOAD TYPE	CONNECTED	NEC DEMAND
LIGHTING	LTG	0.0 KVA	0.0 KVA (125%)
RESIDENT LTG/REC	RES	0.0 KVA	0.0 KVA (100/35/25%)
SMALL APPLIANCE	RES	0.0 KVA	0.0 KVA (100/35/25%)
LARGEST MOTOR	MTR	50.7 KVA	63.4 KVA (125%)
REMAINING MOTORS	MTR	110.9 KVA	110.9 KVA (100%)
GEN PURPOSE REC	REC	0.0 KVA	0.0 KVA (50% > 10KVA)
COMPUTER REC	MISC	0.0 KVA	0.0 KVA (100%)
EQUIP/OTHER	MISC	89.5 KVA	89.5 KVA (100%)
HEATING	MISC	0.0 KVA	0.0 KVA (100%)
ELEVATOR	ELEV	0.0 KVA	0.0 KVA (100%)
KITCHEN EQPT	KITCH	0.0 KVA	0.0 KVA (100%)
ELEC VEHICLE	EV	0.0 KVA	0.0 KVA (125%)
TOTALS:		251.1 KVA	263.8 KVA
		302.1 AMP	317.3 AMP

CONNECTED PHASE LOADING

PHASE A: 84.38 KVA

PHASE B: 83.38 KVA

PHASE C: 83.38 KVA

NOTES:

PANELBOARD SCHEDULE

PANEL: RM2 (REVISED CONDITIONS) LOCATION: ROOF VOLTAGE: 480 Y/ 277 P: 3 W: 4 A/C RATING: 65 kA

AMP: 400 MLO X MCB MOUNTING: X SURFACE FLUSH

TYPE: EXISTING X NEW STYLE: PANELBOARD NEUTRAL: 100% FED FROM: RM1

CIRCUIT DESCRIPTION	LOAD TYPE	LOAD KVA	CKT BKR	P	CIR #	P H	CIR #	P	CKT BKR	LOAD KVA	LOAD TYPE	CIRCUIT DESCRIPTION
MECH EF-02 (1HP)	MTR	0.58	15	3	1	A	2	3	80	16.91	MTR	MECH ERU-02 (61MCA)
-	MTR	0.58	-	-	3	B	4	-	-	16.91	MTR	ERU-02 (61MCA)
-	MTR	0.58	-	-	5	C	6	-	-	16.91	MTR	ERU-02 (61MCA)
MECH CU-03 (NOTE 1)	**MTR**	**6.64**	**30**	**3**	7	A	8	3	15	0.50	MISC	METER POWER
-	**MTR**	**6.64**	-	-	9	B	10	-	-	0.50	MISC	-
-	**MTR**	**6.64**	-	-	11	C	12	-	-	0.50	MISC	-
UNKNOWN LOAD	MISC	4.00	20	3	13	A	14	3	40	8.00	MISC	UNKNOWN LOAD
-	MISC	4.00	-	-	15	B	16	-	-	8.00	MISC	-
-	MISC	4.00	-	-	17	C	18	-	-	8.00	MISC	-
MECH CU-04 (NOTE 1)	**MTR**	**5.81**	**25**	**3**	19	A	20	3	25	5.00	MISC	UNKNOWN LOAD
-	**MTR**	**5.81**	-	-	21	B	22	-	-	5.00	MISC	-
-	**MTR**	**5.81**	-	-	23	C	24	-	-	5.00	MISC	-
MECH CU-04 (NOTE 1)	**MTR**	**5.81**	**25**	**3**	25	A	26	3	30	6.00	MISC	UNKNOWN LOAD
-	**MTR**	**5.81**	-	-	27	B	28	-	-	6.00	MISC	-
-	**MTR**	**5.81**	-	-	29	C	30	-	-	6.00	MISC	-
MECH CU-07 (NOTE 1)	**MTR**	**6.64**	**30**	**3**	31	A	32	3	30	6.00	MISC	UNKNOWN LOAD
-	**MTR**	**6.64**	-	-	33	B	34	-	-	6.00	MISC	-
-	**MTR**	**6.64**	-	-	35	C	36	-	-	6.00	MISC	-
MECH CU-08 (NOTE 1)	**MTR**	**6.64**	**30**	**3**	37	A	38	1	15	1.00	MISC	UNKNOWN LOAD
-	**MTR**	**6.64**	-	-	39	B	40	1				SPACE
-	**MTR**	**6.64**	-	-	41	C	42	1				SPACE

ESTIMATED MAXIMUM DEMAND (EMD) CALCULATIONS

LOAD SUMMARY:	LOAD TYPE	CONNECTED	NEC DEMAND
LIGHTING	LTG	0.0 KVA	0.0 KVA (125%)
RESIDENT LTG/REC	RES	0.0 KVA	0.0 KVA (100/35/25%)
SMALL APPLIANCE	RES	0.0 KVA	0.0 KVA (100/35/25%)
LARGEST MOTOR	MTR	50.7 KVA	63.4 KVA (125%)
REMAINING MOTORS	MTR	96.4 KVA	96.4 KVA (100%)
GEN PURPOSE REC	REC	0.0 KVA	0.0 KVA (50% > 10KVA)
COMPUTER REC	MISC	0.0 KVA	0.0 KVA (100%)
EQUIP/OTHER	MISC	89.5 KVA	89.5 KVA (100%)
HEATING	MISC	0.0 KVA	0.0 KVA (100%)
ELEVATOR	ELEV	0.0 KVA	0.0 KVA (100%)
KITCHEN EQPT	KITCH	0.0 KVA	0.0 KVA (100%)
ELEC VEHICLE	EV	0.0 KVA	0.0 KVA (125%)
TOTALS:		236.6 KVA	249.3 KVA
		284.6 AMP	299.9 AMP

CONNECTED PHASE LOADING

PHASE A: 79.55 KVA

PHASE B: 78.55 KVA

PHASE C: 78.55 KVA

NOTES:

1. PROVIDE NEW CIRCUIT BREAKER AS INDICATED IN PANEL SCHEDULE. MANUFACTURER AND AIC RATING OF NEW BREAKER TO MATCH EXISTING PANEL.

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-	RM2 (E)
-	RM2 (R)

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PROJECT ISSUE DATE
06/23/2023

REVISIONS

MARK	DATE	DESCRIPTION

PROJECT NUMBER 22-1043

CHECKED BY MJ

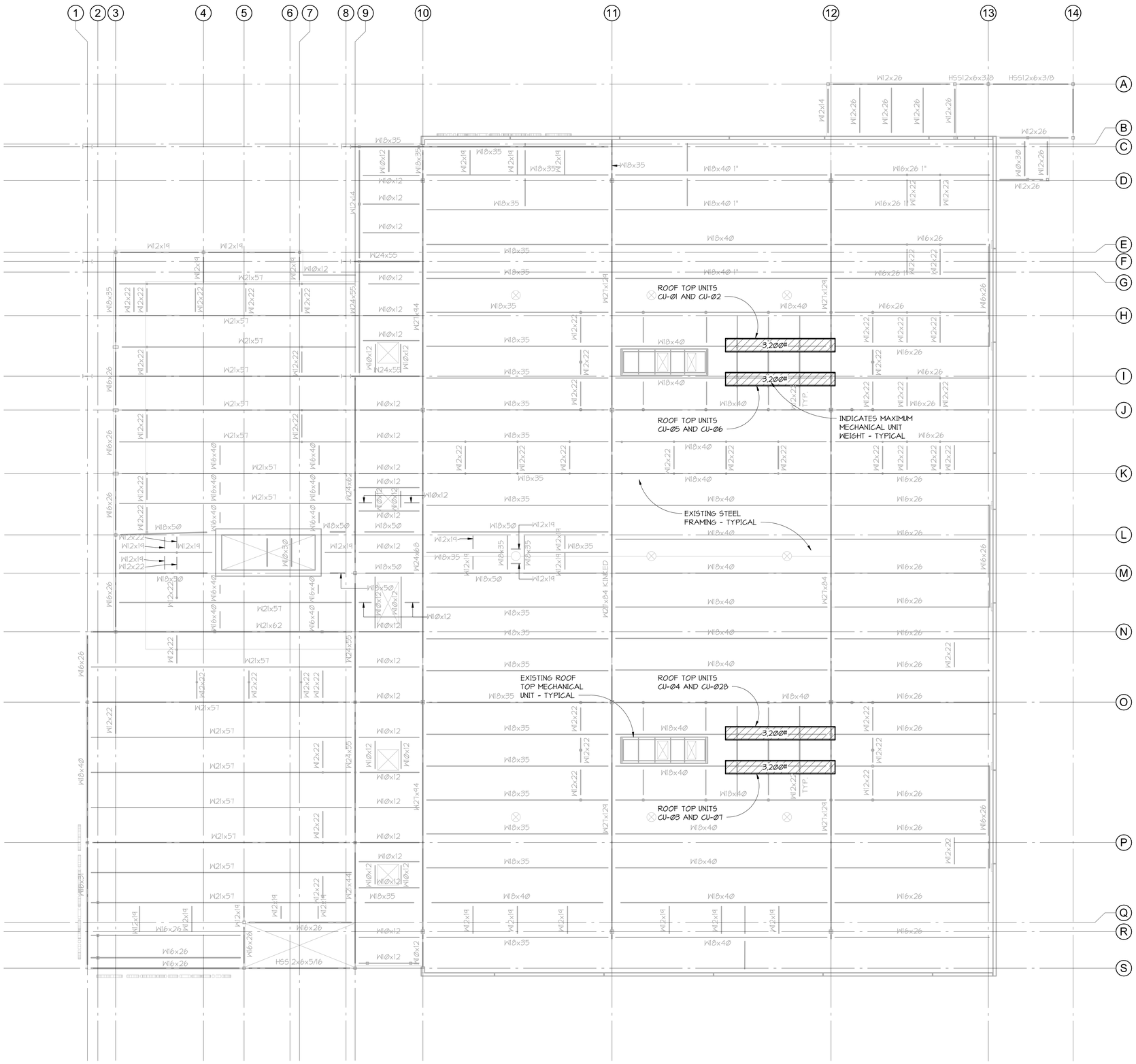
SHEET NAME

LOAD SUMMARY - ELECTRICAL

SHEET NUMBER

E803

Date: 6/22/23 Time: 3:02pm File: P:\2022\22-1043 - Kaiser PLP Rooftop Unit Replacement\01 Production\02 CAD\Main Bldg\22-1043 E803.dwg User: eric.heinrich



1 S203 ROOF PLAN
1/8" = 1'-0"

NOTE: ALL STEEL FRAMING SHOWN IS EXISTING UNLESS NOTED OTHERWISE

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PROJECT ISSUE DATE
06/23/23

REVISIONS

MARK	DATE	DESCRIPTION

PROJECT NUMBER 102908.00
PROJECT ENGINEER DMB

DWG.
ROOF PLAN

SHEET NUMBER
S203

6/22/2023 3:27:09 PM C:_Revit Models\23391 Kaiser Puyallup RTU Replacement R2022 (Central)_DanH-PCS.rvt