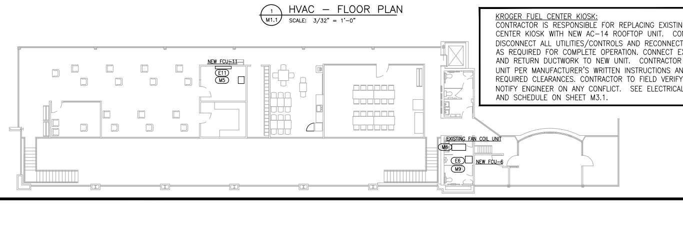
GAS LOAD COMPARISON WITH EXISTING RTUs		
TAG	EXISTING UNIT GAS LOAD	NEW UNIT GAS LOAD
AC-1	N/A	850,000
AC-2	N/A	850,000
AC-3	N/A	850,000
AC-4	N/A	350,000
AC-7	45,000	60,000
AC-8	195,000	120,000
AC-9	60,000	60,000
AC-12	195,000	150,000

NEW GAS LOAD FOR AC-1, 2, 3, 4:
TOTAL: 2,900 CFH

NEW 2 PSI GAS PIPING SIZE IS BASED ON A DEVELOPED LENGTH OF RUN OF 500'-0".

HVAC LEGEND & ABBREVIATIONS	
⊠	SUPPLY DIFFUSER
⧄	RETURN GRILLE
⬡	AIR DISTRIBUTION TAG
Ⓣ	TEMPERATURE SENSOR
Ⓗ	HUMIDITY SENSOR
	MANUAL VOLUME DAMPER
SD	SPLITTER DAMPER
FD	FIRE DAMPER
	DOUBLE THICK TURNING VANE
DL	DOOR LOUVER
RTU-	ROOFTOP UNIT
FCU-	FAN COIL UNIT
EF-	ELECTRIC FAN
GUH-	GAS UNIT HEATER
H-	KITCHEN HOOD
CU-	CONDENSING UNIT

1 / M1.1 HVAC – FLOOR PLAN
SCALE: 3/32" = 1'-0"



2 / M1.1 HVAC – MEZZANINE FLOOR PLAN
SCALE: 3/32" = 1'-0"

KROGER FUEL CENTER KIOSK:
CONTRACTOR IS RESPONSIBLE FOR REPLACING EXISTING UNIT IN FUEL CENTER KIOSK WITH NEW AC-14 ROOFTOP UNIT. CONTRACTOR TO DISCONNECT ALL UTILITIES/CONTROLS AND RECONNECT TO NEW UNIT AS REQUIRED FOR COMPLETE OPERATION. CONNECT EXISTING SUPPLY AND RETURN DUCTWORK TO NEW UNIT. CONTRACTOR TO INSTALL UNIT PER MANUFACTURER'S WRITTEN INSTRUCTIONS AND MAINTAIN ALL REQUIRED CLEARANCES. CONTRACTOR TO FIELD VERIFY LOCATION AND NOTIFY ENGINEER ON ANY CONFLICT. SEE ELECTRICAL KEYNOTE 'E15' AND SCHEDULE ON SHEET M3.1.

ELECTRICAL KEY NOTES

E1 CONTRACTOR TO CONNECT NEW AIR CONDITIONING UNIT (AC-1) TO EXISTING CIRCUIT PREVIOUSLY SERVING DEMOLISHED AIR CONDITIONING UNIT. CONTRACTOR TO VERIFY WIRE SIZE MEETS MINIMUM REQUIREMENTS (3#2/0 + #6G CU, 3#4/0 + #6G ALUM) AND PROVIDE NEW AS REQUIRED. PERFORM VOLTAGE DROP CALCULATIONS TO CONFIRM WIRE SIZE IS ADEQUATE. PROVIDE NEW 175A, CLASS RK-1 FUSE IN EXISTING SWITCH OR 175A BREAKER AS REQUIRED. PROVIDE ALL ELECTRICAL DEVICES AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. MAKE ALL FINAL CONNECTIONS.

E2 CONTRACTOR TO CONNECT NEW AIR CONDITIONING UNIT (AC-2) TO EXISTING CIRCUIT PREVIOUSLY SERVING DEMOLISHED AIR CONDITIONING UNIT. CONTRACTOR TO VERIFY WIRE SIZE MEETS MINIMUM REQUIREMENTS (3#2/0 + #6G CU, 3#4/0 + #6G ALUM) AND PROVIDE NEW AS REQUIRED. PERFORM VOLTAGE DROP CALCULATIONS TO CONFIRM WIRE SIZE IS ADEQUATE. PROVIDE NEW 175A, CLASS RK-1 FUSE IN EXISTING SWITCH OR 175A BREAKER AS REQUIRED. PROVIDE ALL ELECTRICAL DEVICES AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. MAKE ALL FINAL CONNECTIONS.

E3 CONTRACTOR TO CONNECT NEW AIR CONDITIONING UNIT (AC-3) TO EXISTING CIRCUIT PREVIOUSLY SERVING DEMOLISHED AIR CONDITIONING UNIT. CONTRACTOR TO VERIFY WIRE SIZE MEETS MINIMUM REQUIREMENTS (3#2/0 + #6G CU, 3#4/0 + #6G ALUM) AND PROVIDE NEW AS REQUIRED. PERFORM VOLTAGE DROP CALCULATIONS TO CONFIRM WIRE SIZE IS ADEQUATE. PROVIDE NEW 175A, CLASS RK-1 FUSE IN EXISTING SWITCH OR 175A BREAKER AS REQUIRED. PROVIDE ALL ELECTRICAL DEVICES AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. MAKE ALL FINAL CONNECTIONS.

E4 CONTRACTOR TO CONNECT NEW AIR CONDITIONING UNIT (AC-4) TO EXISTING CIRCUIT PREVIOUSLY SERVING DEMOLISHED AIR CONDITIONING UNIT. CONTRACTOR TO VERIFY WIRE SIZE MEETS MINIMUM REQUIREMENTS (3#1 + #6G CU, 3#1/0 + #4G ALUM) AND PROVIDE NEW AS REQUIRED. PERFORM VOLTAGE DROP CALCULATIONS TO CONFIRM WIRE SIZE IS ADEQUATE. PROVIDE NEW 110A, CLASS RK-1 FUSE IN EXISTING SWITCH OR 110A BREAKER AS REQUIRED. PROVIDE ALL ELECTRICAL DEVICES AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. MAKE ALL FINAL CONNECTIONS.

E5 CONTRACTOR TO CONNECT NEW AIR CONDITIONING UNIT (AC-6) TO EXISTING CIRCUIT PREVIOUSLY SERVING DEMOLISHED AIR CONDITIONING UNIT. CONTRACTOR TO VERIFY WIRE SIZE MEETS MINIMUM REQUIREMENTS (2#6 + #10G CU) AND PROVIDE NEW AS REQUIRED. PERFORM VOLTAGE DROP CALCULATIONS TO CONFIRM WIRE SIZE IS ADEQUATE. PROVIDE NEW 50A, CLASS RK-1 FUSE IN EXISTING SWITCH OR 50A BREAKER AS REQUIRED. PROVIDE ALL ELECTRICAL DEVICES AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. MAKE ALL FINAL CONNECTIONS.

E6 CONTRACTOR TO PROVIDE NEW CIRCUIT FROM NEAREST 208Y/120V PANEL WITH AVAILABLE CAPACITY FOR FCU-6. PROVIDE 2#3 + #8G - 1"C. PROVIDE NEW 80A/2P BREAKER AS REQUIRED. PROVIDE DISCONNECT (100/2/NF/1) WITHIN SIGHT OF FCU-6. PERFORM VOLTAGE DROP CALCULATION AND UPSIZE WIRE AS NECESSARY. PROVIDE ALL ELECTRICAL DEVICES AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. MAKE ALL FINAL CONNECTIONS.

E7 CONTRACTOR TO CONNECT NEW AIR CONDITIONING UNIT (AC-7) TO EXISTING CIRCUIT PREVIOUSLY SERVING DEMOLISHED AIR CONDITIONING UNIT. CONTRACTOR TO VERIFY WIRE SIZE MEETS MINIMUM REQUIREMENTS (3#12 + #12G CU) AND PROVIDE NEW AS REQUIRED. PERFORM VOLTAGE DROP CALCULATIONS TO CONFIRM WIRE SIZE IS ADEQUATE. PROVIDE NEW 15A, CLASS RK-1 FUSE IN EXISTING SWITCH OR 15A BREAKER AS REQUIRED. PROVIDE ALL ELECTRICAL DEVICES AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. MAKE ALL FINAL CONNECTIONS.

E8 CONTRACTOR TO CONNECT NEW AIR CONDITIONING UNIT (AC-8) TO EXISTING CIRCUIT PREVIOUSLY SERVING DEMOLISHED AIR CONDITIONING UNIT. CONTRACTOR TO VERIFY WIRE SIZE MEETS MINIMUM REQUIREMENTS (3#10 + #10G CU) AND PROVIDE NEW AS REQUIRED. PERFORM VOLTAGE DROP CALCULATIONS TO CONFIRM WIRE SIZE IS ADEQUATE. PROVIDE NEW 25A, CLASS RK-1 FUSE IN EXISTING SWITCH OR 25A BREAKER AS REQUIRED. PROVIDE ALL ELECTRICAL DEVICES AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. MAKE ALL FINAL CONNECTIONS.

E9 CONTRACTOR TO CONNECT NEW AIR CONDITIONING UNIT (AC-9) TO EXISTING CIRCUIT PREVIOUSLY SERVING DEMOLISHED AIR CONDITIONING UNIT. CONTRACTOR TO VERIFY WIRE SIZE MEETS MINIMUM REQUIREMENTS (3#12 + #12G CU) AND PROVIDE NEW AS REQUIRED. PERFORM VOLTAGE DROP CALCULATIONS TO CONFIRM WIRE SIZE IS ADEQUATE. PROVIDE NEW 15A, CLASS RK-1 FUSE IN EXISTING SWITCH OR 15A BREAKER AS REQUIRED. PROVIDE ALL ELECTRICAL DEVICES AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. MAKE ALL FINAL CONNECTIONS.

E10 CONTRACTOR TO CONNECT NEW AIR CONDITIONING UNIT (AC-11) TO EXISTING CIRCUIT PREVIOUSLY SERVING DEMOLISHED AIR CONDITIONING UNIT. CONTRACTOR TO VERIFY WIRE SIZE MEETS MINIMUM REQUIREMENTS (2#10 + #10G CU) AND PROVIDE NEW AS REQUIRED. PROVIDE NEW 30A/2P BREAKER AS REQUIRED. PROVIDE DISCONNECT (30/2/NF/1) WITHIN SIGHT OF AC-11. PERFORM VOLTAGE DROP CALCULATION AND UPSIZE WIRE AS NECESSARY. PROVIDE ALL ELECTRICAL DEVICES AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. MAKE ALL FINAL CONNECTIONS.

E11 FCU-11 TO BE POWERED FROM ASSOCIATED CONDENSING UNIT (AC-11). PROVIDE 5#12 + #12G - 1"C BETWEEN THE UNITS. PROVIDE ALL ELECTRICAL DEVICES AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. MAKE ALL FINAL CONNECTIONS.

E12 CONTRACTOR TO CONNECT NEW AIR CONDITIONING UNIT (AC-12) TO EXISTING CIRCUIT PREVIOUSLY SERVING DEMOLISHED AIR CONDITIONING UNIT. CONTRACTOR TO VERIFY WIRE SIZE MEETS MINIMUM REQUIREMENTS (3#10 + #10G CU) AND PROVIDE NEW AS REQUIRED. PERFORM VOLTAGE DROP CALCULATIONS TO CONFIRM WIRE SIZE IS ADEQUATE. PROVIDE NEW 25A, CLASS RK-1 FUSE IN EXISTING SWITCH OR 25A BREAKER AS REQUIRED. PROVIDE ALL ELECTRICAL DEVICES AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. MAKE ALL FINAL CONNECTIONS.

E13 CONTRACTOR TO CONNECT NEW AIR CONDITIONING UNIT (AC-13) TO EXISTING CIRCUIT PREVIOUSLY SERVING DEMOLISHED AIR CONDITIONING UNIT. CONTRACTOR TO VERIFY WIRE SIZE MEETS MINIMUM REQUIREMENTS (2#12 + #12G CU) AND PROVIDE NEW AS REQUIRED. PROVIDE NEW 15A/1P BREAKER AS REQUIRED. PROVIDE DISCONNECT (30/1/NF/1) WITHIN SIGHT OF AC-13. PERFORM VOLTAGE DROP CALCULATION AND UPSIZE WIRE AS NECESSARY. PROVIDE ALL ELECTRICAL DEVICES AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. MAKE ALL FINAL CONNECTIONS.

E14 FCU-13 TO BE POWERED FROM ASSOCIATED CONDENSING UNIT (AC-13). PROVIDE 5#12 + #12G - 1"C BETWEEN THE UNITS. PROVIDE ALL ELECTRICAL DEVICES AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. MAKE ALL FINAL CONNECTIONS.

E15 CONTRACTOR TO CONNECT NEW AIR CONDITIONING UNIT (AC-14 FUEL CENTER KIOSK) TO EXISTING CIRCUIT PREVIOUSLY SERVING DEMOLISHED AIR CONDITIONING UNIT. CONTRACTOR TO VERIFY WIRE SIZE MEETS MINIMUM REQUIREMENTS (3#10 + #10G CU) AND PROVIDE NEW AS REQUIRED. PERFORM VOLTAGE DROP CALCULATIONS TO CONFIRM WIRE SIZE IS ADEQUATE. PROVIDE NEW 30A, CLASS RK-1 FUSE IN EXISTING SWITCH OR 30A BREAKER AS REQUIRED. PROVIDE ALL ELECTRICAL DEVICES AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. MAKE ALL FINAL CONNECTIONS.

MECHANICAL KEY NOTES

M1 DEMO EXISTING ROOFTOP UNIT IN THIS LOCATION AND REPLACE UNIT WITH NEW UNIT. SEE JOIST REINFORCING DETAIL ON SHEET M3.1. CONTRACTOR TO PROVIDE ROOF CURB ADAPTER FOR NEW UNIT. CONTRACTOR TO DISCONNECT ALL UTILITIES AND RECONNECT TO NEW UNIT AS REQUIRED. CONNECT EXISTING SUPPLY AND RETURN DUCTWORK TO NEW UNIT. CONTRACTOR TO INSTALL UNIT PER MANUFACTURER'S WRITTEN INSTRUCTIONS AND MAINTAIN ALL REQUIRED CLEARANCES.

M2 PRIOR TO INSTALLATION, CONTRACTOR TO FIELD VERIFY LOCATION OF ROOFTOP UNIT AND BRING ATTENTION TO KROGER ENGINEER ANY CONFLICT BETWEEN EXISTING JOISTS AND SUPPLY/RETURN DUCT RUNS.

M3 DISCONNECT AND RECONNECT EXISTING GAS LINE TO NEW UNIT. FIELD VERIFY EXACT LOCATION AND SIZE. SEE KROGER DETAIL PSD-35 & PSD-55 ON SHEET M3.1 FOR PIPE SUPPORT AND GAS CONNECTION TO NEW ROOFTOP UNIT.

M4 NEW MINI-SPLIT SYSTEM CONDENSING UNIT ON ROOF. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS AND MAINTAIN ALL REQUIRED CLEARANCES. SEE DETAIL HSD-11 ON SHEET M3.1 FOR ADDITIONAL INFORMATION.

M5 NEW WALL MOUNT EVAPORATOR UNIT TO REPLACE EXISTING AT THIS LOCATION. CONTRACTOR TO FIELD VERIFY PROPOSED LOCATION OF WALL MOUNT EVAPORATOR. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS.

M6 EXISTING UNIT TO REMAIN AND REUSED.

M7 CONNECT NEW GAS LINE TO NEW UNIT. FIELD VERIFY EXACT LOCATION AND SIZE. PROVIDE REGULATOR AT GAS CONNECTION. SEE ROOFTOP CONNECTION DETAIL PSD-55/M3.1

M8 NEW CONDENSING UNIT ON ROOF TO REPLACE EXISTING AT THIS LOCATION. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS AND MAINTAIN ALL REQUIRED CLEARANCES.

M9 NEW DUCTED FAN COIL UNIT TO REPLACE EXISTING AT THIS LOCATION. CONTRACTOR TO FIELD VERIFY. CONTRACTOR SHALL CONNECT EXISTING SUPPLY AND RETURN DUCT TO NEW UNIT.

DUCTWORK LEGEND	
SYMBOLS & ABBREV	LEGEND
(hatched dashed line)	EXISTING DUCT WORK, REMOVE AND DISCARD.
(dashed line)	EXISTING DUCT WORK TO REMAIN AND BE REUSED.
(double solid line)	NEW, INSTALLED DUCTWORK

NOTE:
THIS PROJECT IS A RENOVATION OF AN EXISTING FACILITY AND OF NECESSITY, PREVIOUS RECORD DRAWINGS FORM THE BASIS FOR MANY OF THESE DRAWINGS. IT IS THEREFORE EVEN MORE IMPORTANT THAN IN NEW CONSTRUCTION THAT ALL DIMENSIONS SHALL BE FIELD VERIFIED BEFORE FABRICATION OR PURCHASE OF DIMENSION CRITICAL EQUIPMENT, MATERIALS, AND ASSEMBLIES. THERE MAY EXIST FIELD CONDITIONS NOT ACCESSIBLE DURING DESIGN WHICH DIFFER FROM THOSE SHOWN ON THE DRAWINGS. ANY SUCH DEVIATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND KROGER ENGINEER FOR RESOLUTION BEFORE PROCEEDING WITH ANY CONSTRUCTION, FABRICATION, OR MATERIAL/EQUIPMENT PURCHASES WHICH WOULD BE UNUSABLE UNDER THOSE CIRCUMSTANCES.

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07/07/2022

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REVISIONS | # | DATE | DESCRIPTION

SHEET TITLE: HVAC FLOOR PLAN

DATE: 06/30/2022

PROJECT NUMBER: 22126

SHEET NUMBER: M1.1