ELECTRICAL SYMBOL LIST

POWER SYMBOLS

SYMBOL	DESCRIPTION
	DUPLEX RECEPTACLE, 120V. 20A. GROUNDING TYPE
C	DUPLEX RECEPTACLE, 120V. 20A. GROUNDING TYPE, CEILING MOUNTED RECEPTACLE.
F	FLUSH FLOOR MOUNTED 120V. 20A. CONVENIENCE RECEPTACLE. HUBBELL #B2537 WITH #S3082/S3925 COVER ASSY.
M	MEDIA RECEPTACLE
WP	WEATHERPROOF RECEPTACLE
IG	COMPUTER GRADE RECEPTACLE, 120V. 20A., WITH ISOLATED GROUND
	SWITCHED DUPLEX RECEPTACLE, 120V. 20A. GROUNDING TYPE
	DUPLEX RECEPTACLE, 120V. 20A. GROUNDING TYPE
G	DUPLEX RECEPTACLE, GFCI TYPE,120V. 20A., GROUNDING TYPE
IG	COMPUTER GRADE RECEPTACLE, 120V. 20A. WITH ISOLATED GROUND
	DOUBLE DUPLEX RECEPTACLE, 120V. 20A. GROUNDING TYPE
	DOUBLE DUPLEX RECEPTACLE 120V. 20A. GROUNDING TYPE
F	FLOOR POKE-THROUGH POWER/DATA/TELEPHONE DEVICE
	FLUSH FLOOR MOUNTED TELE/DATA OUTLET. HUBBELL #B2537 WITH #S3082/S2925 COVER ASSY. PROVIDE 3/4"C. TO CEILING SPACE.
F	FLUSH FLOOR MOUNTED RECEPTACLE IN NONMETALLIC RECTANGULAR FLOOR BOX WITH 1-1/4" KNOCK-OUTS AND REDUCERS FOR USE WITH 1/2", 3/4" & 1" CONDUITS. PROVIDE WITH BRASS CARPET FLANGE, USE MULTI-GANG WHERE DEVICES ARE SHOWN ADJACENT TO EACH OTHER. PROVIDE BRASS RECTANGULAR COVER PLATE, WITH 120V-20A DUPLEX RECEPTACLE. WIREMOLD 880MP.
F	FLUSH FLOOR MOUNTED DATA OUTLET IN NONMETALLIC RECTANGULAR FLOOR BOX WITH 1-1/4" KNOCK-OUTS AND REDUCERS FOR USE WITH 1/2", 3/4" & 1" CONDUITS. PROVIDE WITH BRASS CARPET FLANGE, USE MULTI-GANG WHERE DEVICES ARE SHOWN ADJACENT TO EACH OTHER. PROVIDE BRASS GFI COVER PLATE, WITH COMMUNICATIONS MOUNTING PLATE. WIREMOLD 880MP.
F	FLUSH FLOOR MOUNTED POWER/DATA OUTLET. HUBBELL #B4233 CAST IRON FLOOR BOX WITH #S3825 FLUSH COVER FOR POWER AND #S2825 FLUSH COVER PLATE FOR TELE/DATA. PROVIDE 120V. 20A DUPLEX RECEPTACLE.
	SPECIAL RECEPTACLE, TYPE & MOUNTING HEIGHT AS NOTED
J	JUNCTION BOX - CEILING MOUNTED
JF	JUNCTION BOX - FLOOR MOUNTED
J	JUNCTION BOX - WALL MOUNTED, HEIGHT AS NOTED
M	KWH METER
BF	BASE FEED TO SYSTEM FURNITURE WITH POWER, TELEPHONE AND DATA CONNECTIONS TO CEILING SPACE
BFF	FLOOR MOUNTED BASE FEED TO SYSTEM FURNITURE WITH POWER, TELEPHONE AND DATA CONNECTIONS TO CEILING SPACE
P/P	(2) SECTION TELE / POWER POLE TO SYSTEM FURNITURE WITH POWER, TELEPHONE AND DATA CONNECTIONS TO CEILING SPACE
	OVER HEAD BUSWAY
	WALL MOUNTED SURFACE RACE WAY
30/10	FUSIBLE DISCONNECT SWITCH - UPPER NUMERAL DENOTES SWITCH SIZE, LOWER NUMERAL DENOTES FUSE SIZE
30	NON-FUSED DISCONNECT SWITCH - NUMERAL DENOTES SWITCH SIZE
	MAGNETIC MOTOR STARTER
	COMBINATION MOTOR STARTER
SMP	MOTOR CONTROL SWITCH WITH PILOT LIGHT
SM	MANUAL MOTOR STARTER, OR ON MOTORIZED EQUIP.
	MOTOR CONNECTION
	LOAD CENTER
	PANELBOARD
	DISTRIBUTION PANELBOARD
	MAIN SWITCHBOARD
T	TRANSFORMER
	CONTROL PANEL
	CEILING FAN
MH	MANHOLE
HH	HAND HOLE
	UTILITY POLE

LIGHTING SYMBOLS

SYMBOL	DESCRIPTION
S	SINGLE POLE TOGGLE SWITCH
S3	THREE-WAY TOGGLE SWITCH
S4	FOUR-WAY TOGGLE SWITCH
SK	KEY OPERATED SWITCH
SD	WALL DIMMER, DIMMING TECHNOLOGY AS REQUIRED, WATTAGE REQUIRED EQUAL TO CONNECTED LOAD PLUS 25 PERCENT
SP	SWITCH WITH PILOT LIGHT
	RECESSED TROFFER
	EMERGENCY LIGHT
	SURFACE MOUNTED LIGHT
	RECESSED TROFFER
	EMERGENCY LIGHT
	SURFACE MOUNTED LIGHT
	WALL MOUNTED LUMINAIRE, HEIGHT AS NOTED
	SURFACE MOUNTED LIGHT FIXTURE
	PENDANT MOUNTED LIGHT FIXTURE
	RECESSED DOWNLIGHT
	STRIP LIGHT
	SINGLE FACE EXIT SIGN, CEILING MTD. ARROWS AS INDICATED
	DOUBLE FACE EXIT SIGN, CEILING MTD. ARROWS AS INDICATED
	SINGLE FACE EXIT SIGN, WALL MTD. ARROWS AS INDICATED
	DOUBLE FACE EXIT SIGN, WALL MTD. ARROWS AS INDICATED
	BATTERY OPERATED EMERGENCY LIGHT
	COMBINATION EXIT / EMERGENCY LIGHT
	REMOTE EMERGENCY LIGHT
	TWIN HEAD REMOTE EMERGENCY LIGHT
	SITE LIGHTING BOLLARD
	OUTDOOR LIGHTING POLE & LUMINAIRE

FIRE ALARM SYMBOLS

SYMBOL	DESCRIPTION
TS	SPRINKLER SYSTEM TAMPER SWITCH
WS	SPRINKLER SYSTEM WATER FLOW
B	FIRE ALARM BELL
F	FIRE ALARM AUDIBLE/VISUAL COMBINATION DEVICE
V	FIRE ALARM VISUAL DEVICE
FC	CEILING MOUNTED FIRE ALARM AUDIBLE/VISUAL DEVICE
VC	CEILING MOUNTED FIRE ALARM VISUAL DEVICE
R	FIRE ALARM SYSTEM RELAY INTERFACE
IF	520 HZ LOW FREQUENCY SOUNDER
SD	DUCT SMOKE DETECTOR
SDR	RETURN AIR DUCT SMOKE DETECTOR AND ADDRESSABLE RELAY MODULE
S	SYSTEM SMOKE DETECTOR
SE	SMOKE DETECTOR FOR ELEVATOR RECALL
SR	SINGLE-STATION SMOKE DETECTOR
SRCO	SINGLE-STATION SMOKE DETECTOR WITH CARBON MONOXIDE

FIRE ALARM SYMBOLS

SYMBOL	DESCRIPTION
CO	CARBON MONOXIDE DETECTOR
H	HEAT DETECTOR
H	DOOR HOLD OPEN DEVICE
F	FIRE ALARM MANUAL PULL STATION
FACP	FIRE ALARM CONTROL PANEL
FAA	FIRE ALARM ANNUNCIATOR PANEL
CELL	CELLULAR COMMUNICATOR
APS	AUXILARY POWER SUPPLY
2W	TWO-WAY EMERGENCY COMMUNICATION OUTLET

ONE-LINE DIAGRAM SYMBOLS

SYMBOL	DESCRIPTION
200AF 175AT	CIRCUIT BREAKER - UPPER NUMERAL DENOTES AMPERAGE FRAME RATING AND LOWER NUMERAL INDICATES TRIP RATING
200 110	FUSIBLE DISCONNECT SWITCH - UPPER NUMERAL DENOTES SWITCH SIZE, LOWER NUMERAL DENOTES FUSE SIZE
G	GENERATOR
	GROUND
K	KIRK-KEY INTERLOCK
14,874 A. SYM. 3Ø	INDICATES AVAILABLE FAULT CURRENT IN 3-PHASE SYMMETRICAL AMPERES
	TRANSFORMER
	AUTOMATIC TRANSFER SWITCH

WIRING & CONDUIT SYMBOLS

SYMBOL	DESCRIPTION
	CONDUIT RUN IN WALL OR ABOVE CEILING
	CONDUIT RUN BELOW GRADE OR CONCRETE SLAB
G	ISOLATED GROUND CONDUCTOR & SAFETY GROUND CONDUCTOR
	BRANCH CIRCUIT HOMERUN
	LOW VOLTAGE WIRING FOR LIGHTING CONTROL
G	BRANCH CIRCUIT HOMERUN WITH (3) LINE CONDUCTORS, (1) NEUTRAL CONDUCTOR, (1) SAFETY GROUND CONDUCTOR & (1) ISOLATED GROUND CONDUCTOR
	NOTE: ANY CIRCUIT WITHOUT FURTHER IDENTIFICATION IS 2-WIRE PLUS GROUND WIRE. A GREATER NUMBER OF WIRES IS INDICATED BY HASH MARKS.
E	NIGHT LIGHT CIRCUIT ON EMERGENCY ELECTRIC SYSTEM
T	TELEPHONE RACEWAY
D	DATA SYSTEM RACEWAY
P	PRIMARY UNDERGROUND DUCT
	EXISTING TO BE REMOVED OR ABANDONED
	MATCHLINE

LOW VOLTAGE SYMBOLS

SYMBOL	DESCRIPTION
	COMMUNICATIONS OUTLET, MTG HEIGHT TO MATCH ADJACENT OUTLETS. OUTLET TO INCLUDE EMPTY 1"C. TO CEILING SPACE
F	FIRE MANS PHONE
IC	INTERCOM OUTLET WITH 3/4"C. EMPTY CONDUIT (WITH PULLSTRING) TO CEILING SPACE
MC	MASTER INTERCOM OUTLET WITH 3/4"C. EMPTY CONDUIT (WITH PULLSTRING) TO CEILING SPACE
TV	TELEVISION OUTLET BOX
S	CEILING SPEAKER ASSEMBLY
L	CLOCK OUTLET
M	MICROPHONE OUTLET
C	SECURITY CAMERA
C	WALL MOUNTED SECURITY CAMERA
VC	VOLUME CONTROL
PR	PROXIMITY READER OUTLET
K	SECURITY KEYPAD

BUILDING FIRE ALARM SYSTEM NOTES

1. ACTUAL CONDUIT SIZES AND ROUTING TO BE AS DIRECTED BY THE FIRE ALARM CONTRACTOR.
2. ACTUAL WIRE SIZES AND QUANTITIES TO BE AS DIRECTED BY FIRE ALARM CONTRACTOR.
3. REFER TO FLOOR PLANS FOR EXACT QUANTITY AND LOCATIONS OF ALL FIRE ALARM DEVICES.
4. PROVIDE VISUAL NOTIFICATION DEVICES WITH CANDELA RATINGS SIZED PER NFPA.
5. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY NAC PANELS, ACCESSORIES, CIRCUITS AS REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM.
6. ALL FIRE ALARM WIRING SHALL COMPLY WITH ARCTICLE 760.

PROJECT SPECIFIC NOTES

1. APPLICABLE CODES INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, THE FOLLOWING:
   - 1.1. 2015 MICHIGAN BUILDING CODE
   - 1.2. 2017 NEC WITH MICHIGAN PART 8 AMENDMENTS (INCLUDING NEC ART. 708)
   - 1.3. 2017 MICHIGAN ENERGY CODE (IECC 2015 / ASHRAE 90.1 - 2013)
   - 1.4. 2009 ICC ANSI STANDARD A117.1-2009
   - 1.5. 2015 INTERNATIONAL FIRE CODE
   - 1.6. 2013 NFPA 72 - NATIONAL FIRE ALARM AND SIGNALING CODE
   - 1.7. 2017 NFPA 780 - STANDARD FOR THE INSTALLATION OF LIGHTNING PROTECTION SYSTEMS
   - 1.8. 2013 NFPA 110 - STANDARD FOR EMERGENCY AND STANDBY POWER SYSTEMS.
2. OVERCURRENT PROTECTIVE DEVICES SERVING EMERGENCY SYSTEMS SHALL BE SELECTIVELY COORDINATED WITH ALL SUPPLY-SIDE OVERCURRENT PROTECTIVE DEVICES.
3. A SHORT-CIRCUIT, ARC-FLASH AND OVERCURRENT PROTECTIVE DEVICE COORDINATION STUDY SHALL BE PROVIDED BY THE CONTRACTOR AT THE SAME TIME SUBMITTALS ARE PREPARED.
4. CONTRACTOR SHALL PROVIDE NAMEPLATES FOR ALL ELECTRICAL EQUIPMENT AND ARC-FLASH LABELS INDICATING REQUIRED PPE PROTECTION.
5. ALL WIRING AND BUSSING SHALL BE COPPER, UNLESS OTHERWISE NOTED.
6. SURGE PROTECTION DEVICES SHALL BE PROVIDED WHERE INDICATED ON THE DRAWINGS AND/OR SPECIFICATIONS. SURGE PROTECTION DEVICES SHALL BE COMPATIBLE WITH THE LIGHTNING PROTECTION SYSTEM AND SHALL INCLUDE SURGE COUNTERS AND PROVISIONS FOR REMOTE MONITORING. ROUTE LOW-VOLTAGE CABLE FOR MONITORING BACK TO SERVER ROOM.
7. A SEPARATE EQUIPMENT GROUNDING CONDUCTORS, SIZED PER NEC, SHALL BE INSTALLED WITH ALL CIRCUIT CONDUCTORS.
8. PROVIDE A THERMAL-ADHESIVE LABEL ON EACH DEVICE (LIGHT SWITCH, RECEPTACLE, ETC.) INDICATING THE SOURCE PANEL AND CIRCUIT NUMBER.

GENERAL NOTES

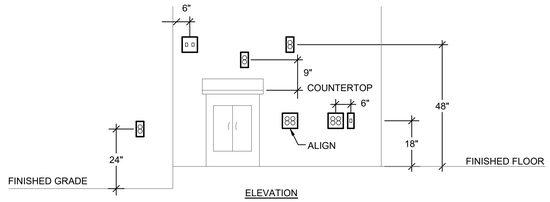
1. THE CONTRACTOR SHALL ABIDE BY ALL FEDERAL, STATE, AND/OR LOCAL CODES. IF A DISCREPANCY BETWEEN CODES OCCURS, THE MOST STRINGENT SHALL PREVAIL.
2. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO THE COMMENCEMENT OF ANY WORK. SHOULD DISCREPANCIES BE DISCOVERED, THE CONTRACTOR SHALL VERIFY INTENT WITH THE ENGINEER/OWNER BEFORE PROCEEDING.
3. COORDINATE LOCATIONS OF ALL CEILING MOUNTED DEVICES WITH OTHER TRADES PRIOR TO INSTALLATION.
4. COORDINATE ALL ROUGH-IN REQUIREMENTS FOR OWNER FURNISHED EQUIPMENT WITH THE OWNER PRIOR TO BEGINNING WORK. THESE DRAWINGS ARE BASED ON THE BEST INFORMATION AVAILABLE DURING THE DESIGN PHASE OF THE PROJECT.
5. COORDINATE WITH MILLWORK CONTRACTOR TO DETERMINE THE EXACT LOCATION OF OUTLETS BEING PLACED IN MILLWORK.
6. ALL DEVICES ARE TO BE FLUSH MOUNTED UNLESS NOTED OTHERWISE.
7. DEVICES NOTED "GFI" SHALL INCLUDE GROUND FAULT INTERRUPTING DEVICES.
8. DEVICES NOTED "WP" SHALL BE WEATHERPROOF, "WHILE-IN-USE" TYPE WHERE APPLICABLE.
9. DEVICES NOTED "NL" SHALL BE NIGHT LIGHTS. PROVIDE UN-SWITCHED BRANCH CIRCUIT CONDUCTORS TO EACH FIXTURE.
10. CONNECT ALL EXIT AND EMERGENCY LIGHTING FIXTURES TO LOCAL LIGHTING CIRCUIT, AHEAD OF ALL SWITCHES, PER NEC.
11. ELECTRICAL CONTRACTOR SHALL PROVIDE SAFETY DISCONNECT SWITCHES FOR ALL MECHANICAL AND PLUMBING EQUIPMENT.
12. MULTI-WIRE BRANCH CIRCUITS SHALL BE PROVIDED WITH THE MEANS TO SIMULTANEOUSLY DISCONNECT ALL UNDERGROUND CONDUCTORS AT THE POINT WHERE THE BRANCH CIRCUIT ORIGINATES. REFER TO 2017 NEC 210.4 (B). THIS APPLIES TO ALL MULTI-WIRE BRANCH CIRCUITS SUPPLYING ANY LOAD.
13. DEDICATED NEUTRAL CONDUCTORS SHALL BE CONSIDERED CURRENT-CARRYING CONDUCTORS. HOMERUNS CONTAINING MORE THAN THREE CURRENT-CARRYING CONDUCTORS SHALL BE DERATED IN ACCORDANCE WITH THE 2017 NEC.
14. BRANCH CIRCUIT HOMERUN CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH THE 2017 NEC. THE MAXIMUM ALLOWABLE VOLTAGE DROP ON A FEEDER IS 2% AND THE MAXIMUM ALLOWABLE VOLTAGE DROP ON A BRANCH CIRCUIT IS 3%. PROVIDE BRANCH CIRCUIT CONDUCTORS SIZED TO ENSURE THE TOTAL VOLTAGE DROP FROM THE SOURCE TO THE POINT OF UTILIZATION IS LESS THAN OR EQUAL TO 5%.
15. DEDICATED NEUTRALS SHALL BE PROVIDED FOR ALL BRANCH CIRCUITS, EXCEPT WHERE A MULTI-WIRE CIRCUIT IS REQUIRED TO SERVE THE LOAD (I.E. SYSTEMS FURNITURE). WHEN SHARING THE NEUTRAL CONDUCTOR IN A MULTI-WIRE CIRCUIT, THE NEUTRAL SIZE SHALL BE INCREASED 177%.
16. ALL MOUNTING HEIGHTS PROVIDED ARE TO CENTER OF DEVICE, UNLESS OTHERWISE INDICATED.

GENERAL NOTES - DEMOLITION

1. CERTAIN AREAS IN THE EXISTING BUILDING SHALL BE MODIFIED TO SUIT THE NEW REQUIREMENTS. THESE DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO INDICATE THE SCOPE OF WORK REQUIRED TO COMPLETE A SAFE REMOVAL OF THE ELECTRICAL SYSTEMS AS INDICATED BY THE NOTES ON THIS DRAWING.
2. WORK IN THE AREA SHALL INCLUDE THE DISCONNECTION, REMOVAL, RELOCATION, AND RECONNECTION COMPLETE IN ALL RESPECTS OF ALL ITEMS REQUIRED TO SUIT THE DESIGN INTENT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE PROJECT SITE TO CORRECTLY ASCERTAIN THE SCOPE OF SERVICES AND TO INCLUDE ALL PERTINENT COSTS IN HIS BID. NO EXTRAS WILL BE ALLOWED.
3. ALL ELECTRICAL WORK INTERFERING WITH AND REQUIRING MODIFICATION FOR THE NEW REQUIREMENTS SHALL BE RELOCATED AS DIRECTED BY BUILDING MANAGEMENT PERSONNEL AND REINSTALLED AND REWIRED AS NECESSARY TO THE SATISFACTION OF THE BUILDING OWNER.
4. PROVIDE ALL EQUIPMENT, MATERIALS, LABOR AND SUPERVISION NECESSARY TO PROVIDE A SAFE ELECTRICAL INSTALLATION. ALL ELECTRICAL DEVICES AND SYSTEMS THAT ARE INDICATED AS EXISTING TO REMAIN SHALL BE IN SAFE WORKING ORDER.
5. OBTAIN NECESSARY PERMITS FROM THE LOCAL AUTHORITY HAVING JURISDICTION BEFORE PROCEEDING WITH ANY WORK IN THE FIELD.
6. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, OSHA AND OTHER ELECTRICAL SAFETY STANDARDS AND GUIDELINES. CONFORM TO ALL STATE AND LOCAL CODES AND STANDARDS.
7. ALL EQUIPMENT AND WIRING NOT IN RENOVATION AREAS BUT AFFECTED BY WORK IN RENOVATION AREAS SHALL BE RECONNECTED AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
8. ABANDONED AND INACTIVE CONDUITS, WIRE, DEVICES, EQUIPMENT, ETC., SHALL BE REMOVED IN THEIR ENTIRETY. IN ADDITION TO THESE ITEMS, THIS CONTRACTOR SHALL REMOVE ALL ITEMS AS INDICATED ON THE PLANS, OR AS REQUIRED TO CLEAN UP THE ENTIRE AREA OF UNUSED, ABANDONED, OR INACTIVE MATERIALS. CONDUIT AND WIRING FEEDING DEVICES AND EQUIPMENT TO BE REMOVED SHALL ALSO BE REMOVED UP TO THE NEXT ACTIVE PULLBOX, JUNCTION BOX, OR PANELBOARD. HANGERS, MESSENGER CABLE, BRACKETS, ETC, SUPPORTING ITEMS TO BE REMOVED SHALL ALSO BE UNFASTENED AND REMOVED. OPEN HOLES IN DUCTS, BOXES, PANELBOARDS, AND KNOCKOUTS SHALL BE CLOSED WITH SUITABLE SNAP PLUGS OR FILLER PLATES.
9. THE CONTRACTOR SHALL REMOVE AND DELIVER TO A PLACE DESIGNATED BY THE OWNER ALL EXISTING ELECTRICAL EQUIPMENT NO LONGER INTENDED FOR USE. THIS EQUIPMENT REMAINS THE PROPERTY OF THE OWNER.
10. ANY EQUIPMENT, DEVICES, MATERIALS, ETC., THE OWNER ELECTS NOT TO RETAIN SHALL BE LEGALLY DISPOSED OF BY THE CONTRACTOR OFF THE OWNER'S PREMISES.
11. AT COMPLETION OF ALL ELECTRICAL WORK, UPDATE CIRCUIT DIRECTORIES IN PANELS AFFECTED BY NEW WORK WITH NEW TYPEWRITTEN CIRCUIT DESCRIPTIONS. CIRCUIT DIRECTORIES SHALL BE MOUNTED ON INSIDE OF FRONT PANEL COVER IN A CLEAR PLASTIC ENCLOSURE.
12. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, AND IN ACCORDANCE WITH THEIR LISTING OR LABELING REQUIREMENTS. ANY PENETRATIONS THROUGH FIRE RATED ASSEMBLIES THAT ARE CREATED BY THE ELECTRICAL DEMOLITION, SHALL BE SEALED AND RESTORED IN ACCORDANCE WITH THE UL FIRE RESISTANCE DIRECTORY.
13. WHERE CONDUIT AND/OR OUTLET BOXES INDICATED FOR DEMOLITION ARE EMBEDDED IN CONCRETE OR BELOW CONCRETE SLAB, ABANDON IN PLACE. CUT BACK AND SEAL EXPOSED CONDUIT. PROVIDE BLANK COVERS FOR ABANDONED BOXES. REMOVE ALL ASSOCIATED WIRING BACK TO SOURCE.

ELECTRICAL ABBREVIATIONS

A.C.	ALTERNATING CURRENT
AC	ABOVE COUNTERTOP
AFCI	ARC FAULT CIRCUIT INTERRUPTER
AFF	ABOVE FINISHED FLOOR TO CENTERLINE
AFG	ABOVE FINISHED GRADE TO CENTERLINE
BC	BLANK COVER PLATE
C	CONDUIT
CKT/CIRC	CIRCUIT
CTC	CURRENT TRANSFORMER CABINET
DP	DISTRIBUTION PANEL
(E)	EXISTING
(ER)	EXISTING RELOCATED
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EWC	ELECTRIC WATER COOLER
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FURN	FURNACE
G/GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GRD	GROUNDED
IG	ISOLATED GROUND
MDP	MAIN DISTRIBUTION PANEL
NL	NIGHT LIGHT
PP	POWER PANEL
P/P	POWER POLE
RIO	ROUGHED-IN ONLY
RTU	ROOFTOP UNIT
(R)	RELOCATED
S	SURFACE MOUNTED
UC	UNDER COUNTER
UON	UNLESS OTHERWISE NOTED
WH	WATER HEATER
WP	WEATHERPROOF



TYPICAL OUTLET INSTALLATION STANDARD

N.T.S.

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PROPOSED RESTAURANT TENANT SPACE
YUMM
2365 AUBURN ROAD, AUBURN HILLS, MICHIGAN 48326
ELECTRICAL NOTES, SYMBOLS & ABBREVIATIONS

PROJECT
17/1508

DATE
07/13/2021 45% Review

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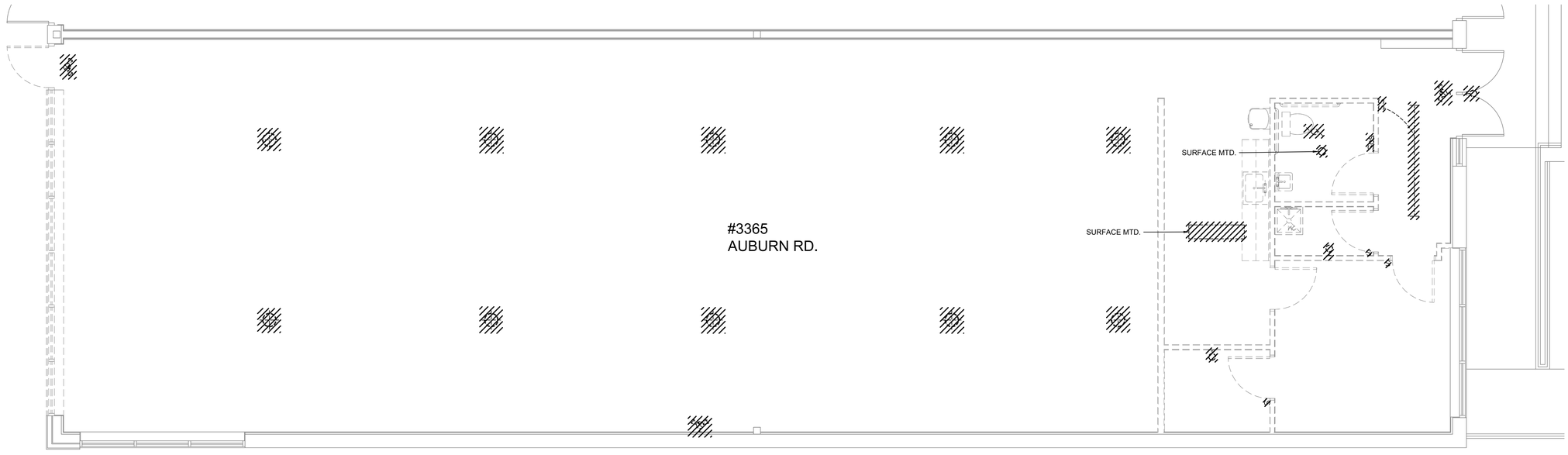
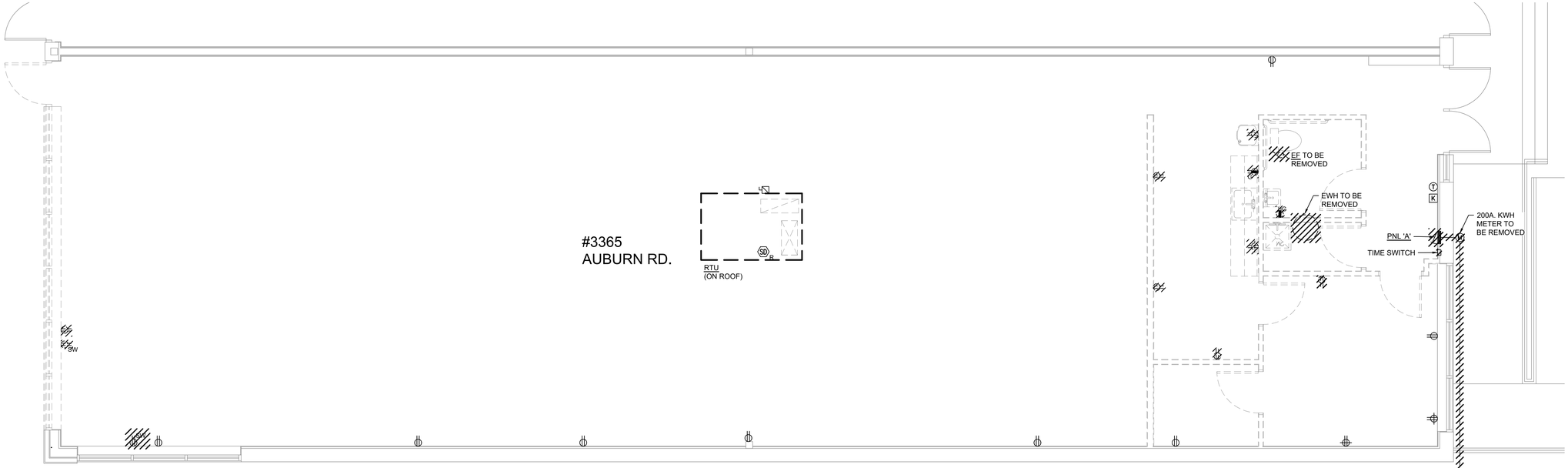


FLOOR PLAN - LIGHTING DEMOLITION

SCALE: 1/4" = 1'-0"

NORTH



FLOOR PLAN - POWER & SYSTEMS DEMOLITION

SCALE: 1/4" = 1'-0"

NORTH

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PROPOSED RESTAURANT TENANT SPACE
YUMM
3365 AUBURN ROAD, AUBURN HILLS, MICHIGAN 48326
FLOOR PLANS - ELECTRICAL DEMOLITION

PROJECT
17/1508

DATE
07/13/2021 95% Review

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SHEET
ED01.01

KITCHEN HOOD FIRE SYSTEM DISCHARGE SEQUENCE OF OPERATION

1. When the following conditions occur, there will be a trigger of the fire suppression system:
   - 1.a. The inlet aperture air duct fusible links fails.
   - 1.b. The temperature high limit switch is activated.
   - 1.c. The fire pull station is activated.

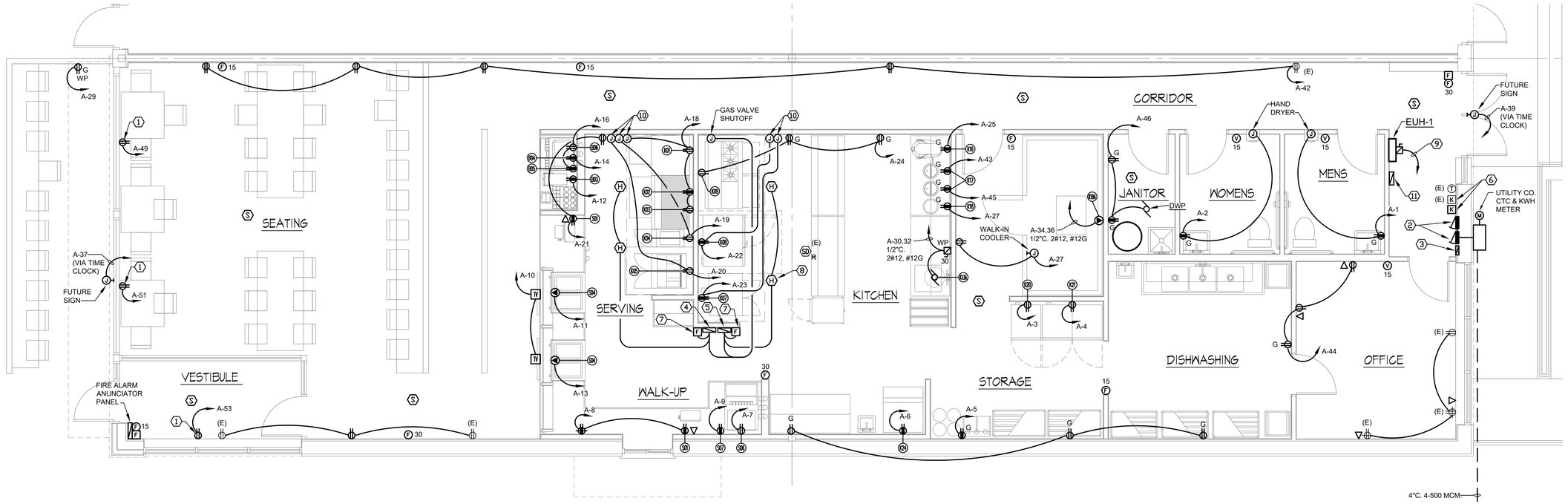
2. When the fire suppression system triggers, the following sequence occurs:
   - 2.a. The fire suppression system is discharged through nozzles directed at the cooking surfaces.
   - 2.b. The relay disengages electrical power to the kitchen equipment under the hood and the gas valve closes.
   - 2.c. The fire alarm micro switch is energized notifying the event.
   - 2.d. The LCD display panel micro switch contact is energized providing visual notification to the operator that the fire system has been discharged,
   - 2.e. The ventilation fan system continues operation to pull fire suppression chemical into the inlet aperture and into the duct system thereby removing fire from the cooking surface (confirm with local AHJ).

POWER GENERAL NOTES:

1. REFER TO SHEET E00.01 FOR ELECTRICAL SYMBOL LIST, ABBREVIATIONS AND PROJECT NOTES.
2. CONFIRM EXACT LOCATION AND MOUNTING HEIGHT FOR ALL OUTLETS WITH OWNER/ARCHITECT/TENANT PRIOR TO ROUGH-IN.
3. CONFIRM EXACT LOCATION FOR ALL FLOOR BOXES WITH FURNITURE VENDOR/OWNER/ARCHITECT/TENANT PRIOR TO INSTALLATION.
4. ELECTRICAL CONTRACTOR SHALL PROVIDE POWER, BOXES AND RACEWAYS FOR COMMUNICATION AND SECURITY SYSTEMS, EQUIPMENT, DEVICES, FACEPLATES AND CABLING BY OTHERS.
5. PROVIDE PULL STRING IN ALL EMPTY CONDUITS.
6. REFER TO POWER ONE-LINE DIAGRAM AND PANELBOARD SCHEDULES FOR ADDITIONAL INFORMATION.
7. ALL OUTLETS MOUNTED IN 1-HOUR FIRE RATED ASSEMBLIES SHALL BE PROVIDED WITH FIRE STOP PUTTY PADS BEHIND OUTLETS TO MAINTAIN THE 1-HOUR FIRE RATING. ALL FIRE STOPPING MATERIALS USED ON THE PROJECT SHALL MEET THE APPROVAL OF THE LOCAL AUTHORITY HAVING JURISDICTION.
8. PROVIDE AIR-VAPOR BARRIER BOXES FOR ALL BOXES INSTALLED IN WALLS WITH VAPOR BARRIERS. PROVIDE SEALANT AROUND WIRE PENETRATIONS AND TAPE TO SEAL VAPOR BARRIER TO BOX.
9. WHERE ENCLOSURES OR RACEWAYS ARE INSTALLED OUTDOORS ABOVE OR BELOW GRADE, THE INTERIOR OF THE RACEWAY SHALL BE CONSIDERED A WET LOCATION. PROVIDE CONDUCTORS THAT ARE LISTED FOR USE IN WET LOCATIONS.
10. CONDUCTORS INSTALLED IN CONDUIT EXPOSED TO SUNLIGHT ON OR ABOVE THE ROOFTOP SHALL HAVE THEIR AMPACITY DERATED IN ACCORDANCE WITH NEC 310.15(B)(2)(c).

KEY NOTES: (#)

1. SHOW WINDOW RECEPTACLE TO BE INSTALLED WITHIN 18" FROM TOP OF WINDOW.
2. PANEL 'RP-A' SECTIONS 1 & 2.
3. nLIGHT #ARP-INTENC08-NLT-4SPR-MVOLT-HLK-FM-DTC LIGHTING RELAY CONTROL PANEL (TIME CLOCK). SEE LIGHTING CONTROL RISER DIAGRAM, SHEET E04.01 FOR MORE DETAIL.
4. HOOD #1 EXHAUST AND FIRE CONTROL PANEL. PROVIDE WIRING TO EXHAUST FAN, HOOD LIGHTS AND POWER SYSTEM CONTROL, PER VENDOR'S SHOP DRAWINGS. WIRE POWER & ECM CONTROLS FOR EXHAUST FAN KEF-1 THRU THIS PANEL. INTERLOCK WITH SHUNT-TRIPS UNDER HOOD AND GAS VALVE SOLENOID. FEED CONTROL PANEL FROM BREAKER A-47.
5. HOOD #2 EXHAUST FAN AND FIRE CONTROL PANEL. PROVIDE WIRING TO EXHAUST FANS, HOOD LIGHTS AND POWER SYSTEM CONTROL, PER VENDOR'S SHOP DRAWINGS. WIRE POWER & ECM CONTROLS FOR EXHAUST FANS KEF-2 & KEF-3 THRU THIS PANEL. INTERLOCK WITH SHUNT-TRIPS UNDER HOOD AND GAS VALVE SOLENOID. FEED CONTROL PANEL FROM BREAKER A-48.
6. REMOTE STATION FOR EXISTING RTU AND NEW DOAS SMOKE DETECTORS.
7. HOOD FIRE SUPPRESSION PULL STATION.
8. HEAT DETECTORS IN HOOD BY OTHERS, WIRING BY ELECTRICAL CONTRACTOR (TYPICAL).
9. CIRCUIT A-61,63,65. 3/4"C. 3#12, #12G.
10. PROVIDE FACELESS GFCI DEVICE TO PROVIDE GFCI PROTECTION T RECEPTACLES BEHIND KITCHEN EQUIPMENT.
11. FIRE ALARM CONTROL PANEL. FEED FROM CIRCUIT A-66.



FLOOR PLAN - POWER NEW WORK

SCALE: 1/4" = 1'-0"

NORTH

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PROPOSED RESTAURANT TENANT SPACE
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FLOOR PLAN - POWER NEW WORK

PROJECT
17/1508

DATE
07/13/2021 45% Review

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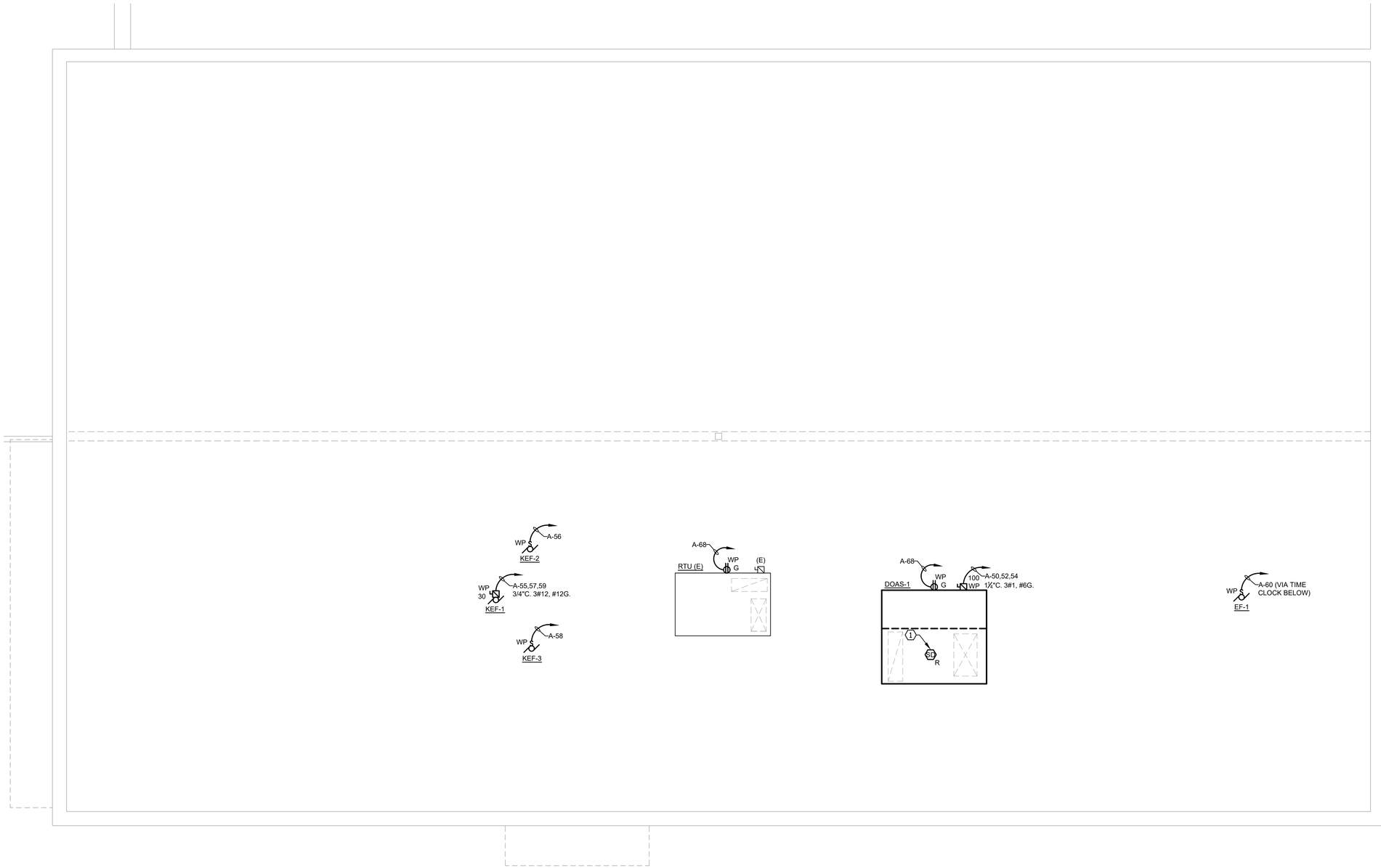
MEEC JOB #21-0129

SHEET
E01.01



ROOF GENERAL NOTES:

1. REFER TO SHEET E00.01 FOR ELECTRICAL SYMBOL LIST, ABBREVIATIONS AND PROJECT NOTES.
2. REFER TO POWER ONE-LINE DIAGRAM AND PANELBOARD SCHEDULES FOR ADDITIONAL INFORMATION.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL DISCONNECT SWITCHES, STARTERS, CONDUITS AND WIRING, ETC. FOR ALL ROOFTOP EQUIPMENT UNLESS OTHERWISE NOTED.
4. ALL BRANCH CIRCUIT WIRING SERVING EQUIPMENT AT THE ROOF SHALL BE PROVIDED WITH SEAL IN ACCORDANCE WITH NEC 300.7(A). FILL RACEWAY WITH A PLIABLE COMPOUND AT A CONDUIT BODY OR J-BOX AT THE POINT WHERE THE CONDUIT PASSES FROM THE INTERIOR TO EXTERIOR OF THE BUILDING, SEAL OFF FITTINGS ARE NOT REQUIRED.
5. WHERE RACEWAYS ARE INSTALLED OUTDOORS ABOVE GRADE, THE INTERIOR OF THE RACEWAY SHALL BE CONSIDERED A WET LOCATION PER NEC. 300.9. PROVIDE CONDUCTORS THAT ARE LISTED FOR USE IN WET LOCATIONS, AS PER NEC 310.9(C).
6. CONDUCTORS INSTALLED IN CONDUIT EXPOSED TO SUNLIGHT ON OR ABOVE THE ROOFTOP SHALL HAVE THEIR AMPACITY DERATED IN ACCORDANCE WITH NEC 310.15(B)(2)(c).
7. INSTALL AND SUPPORT FEEDERS AND BRANCH CIRCUITS SO THERE IS NOT LESS THAN 1-1/2 INCHES FROM THE LOWEST SURFACE OF THE ROOF DECKING TO THE TOP OF THE CABLE, RACEWAY OR BOX. A CABLE, RACEWAY OR BAOX SHALL NOT BE INSTALLED IN CONCEALED LOCATIONS IN METAL-CORRUGATED SHEET DECKING-TYPE ROOF.

KEY NOTES: (#)

1. FACTORY-MOUNTED RETURN AIR DUCT SMOKE DETECTOR. WIRE TO REMOTE TEST/ANNUNCIATOR STATION ON LEVEL BELOW. CIRCUIT A-64.

ROOF PLAN - POWER NEW WORK

SCALE: 1/4" = 1'-0"

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ROOF PLAN - POWER NEW WORK

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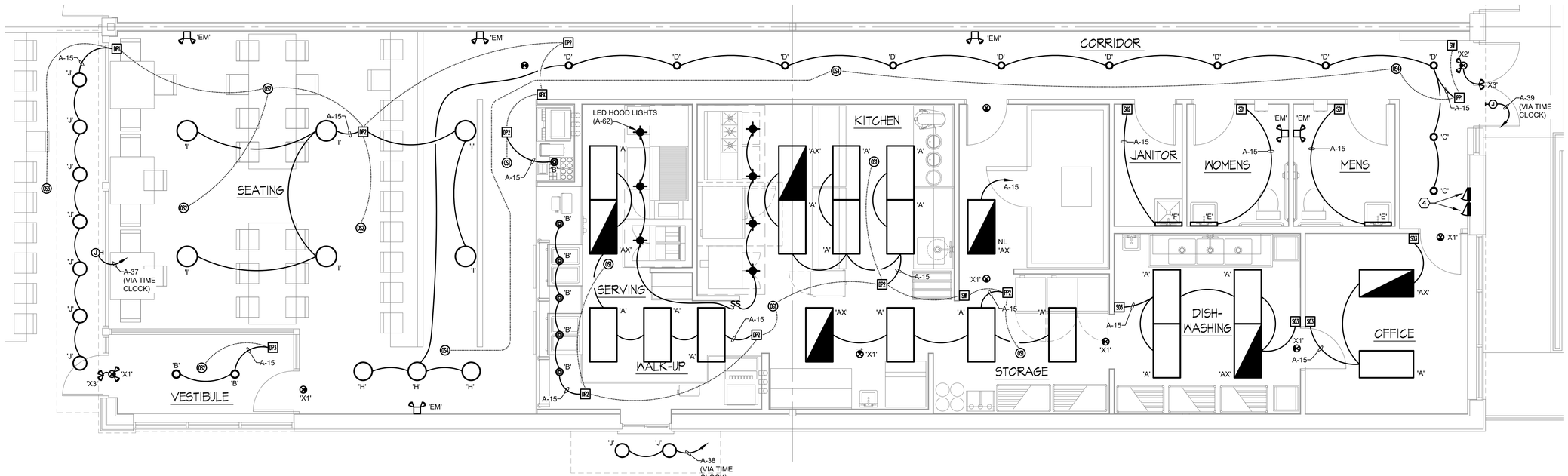
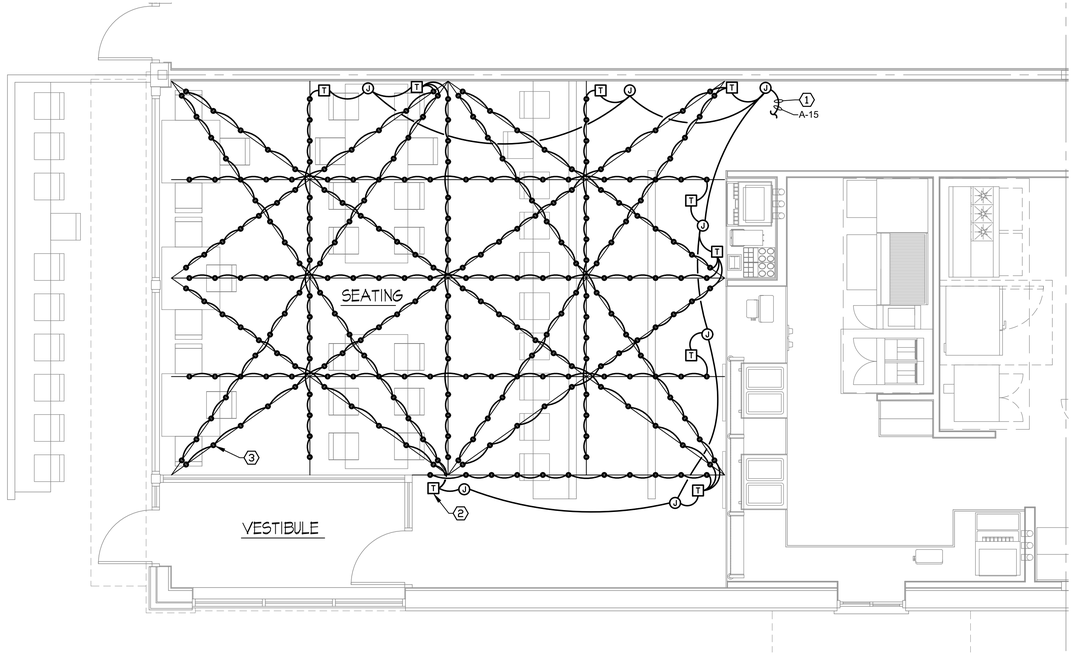


FLOOR PLAN - LIGHTING NEW WORK

SCALE: 1/4" = 1'-0"

NORTH



FLOOR PLAN - ADDITIONAL DINING LIGHTING NEW WORK

SCALE: 1/4" = 1'-0"

NORTH

LIGHTING GENERAL NOTES:

1. REFER TO SHEET E00.01 FOR ELECTRICAL SYMBOL LIST, ABBREVIATIONS AND PROJECT NOTES.
2. REFER TO SHEET E05.01 FOR LIGHTING FIXTURE SCHEDULE AND CONTROLS LEGEND.
3. EXIT SIGNS AND EMERGENCY LIGHTING FIXTURES SHALL BE CONNECTED TO LINE SIDE OF CIRCUIT SERVING THE LOCAL AREA LIGHTING, AHEAD OF ALL SWITCHES/RELAYS/CONTROLS.
4. ALL EXIT AND EMERGENCY LIGHTING SHALL BE UL-924 LISTED AND SHALL PROVIDED MINIMUM 90-MINUTE BATTERY BACKUP.
5. REFER TO ARCHITECTUAL ELEVATIONS FOR EXACT LOCATION AND MOUNTING HEIGHT OF ALL EXTERIOR BUILDING MOUNTED LIGHTING FIXTURES.

KEY NOTES: (#)

1. CONTINUE TO DIMMING POWER PACK 'DP2' SEEN ON DRAWING 'LIGHTING - NEW WORK', THIS SHEET.
2. TIVOLI #ADNM-320-4-5-12-DOT 120/277VAC-12VDC TRANSFORMER (TYPICAL). SEE SHEET E04.01 FOR WIRING DIAGRAM.
3. LIGHT FIXTURE 'G' (TYPICAL). SEE SHEET E03.01 FOR SUSPENSION DETAILS.
4. PANEL 'RP-A' SECTIONS 1 & 2.

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FLOOR PLAN - LIGHTING NEW WORK

PROJECT
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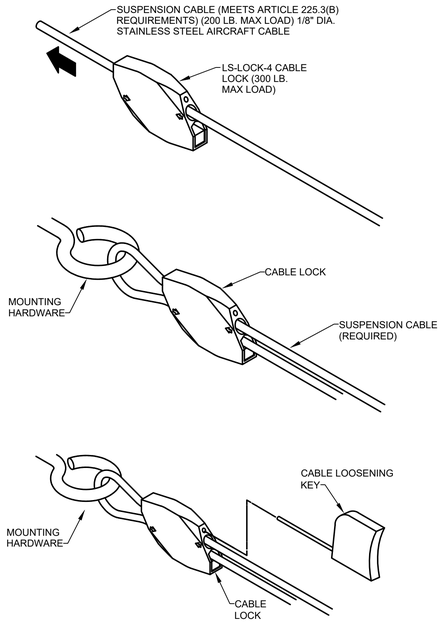
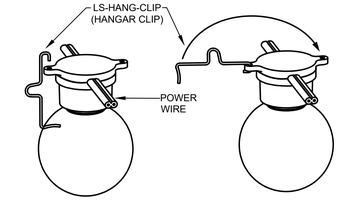
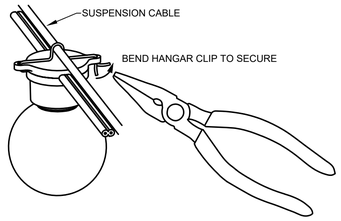
E02.01

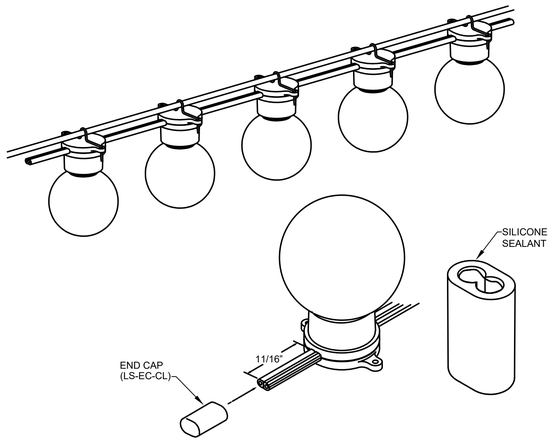


AIRCRAFT CABLE SUSPENSION DETAIL

N.T.S.

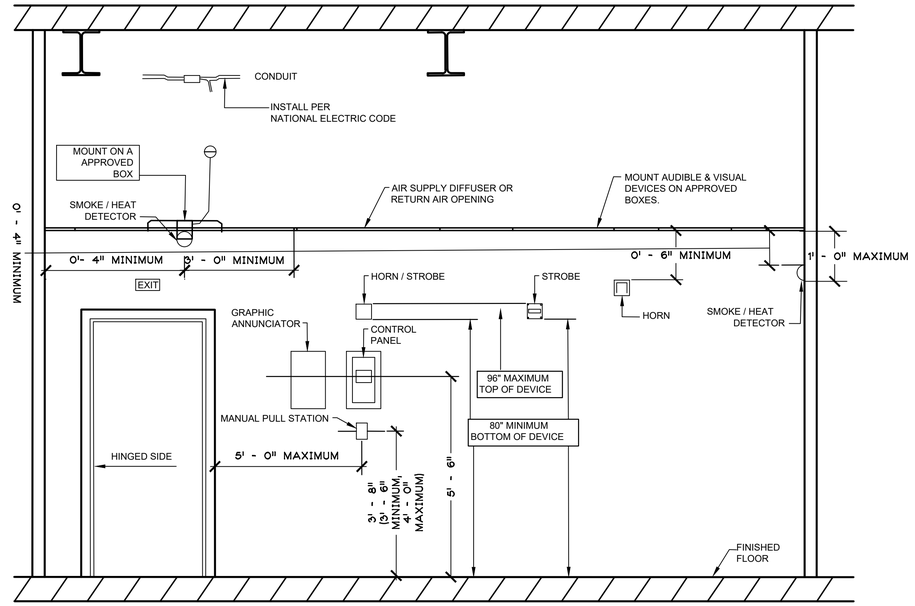






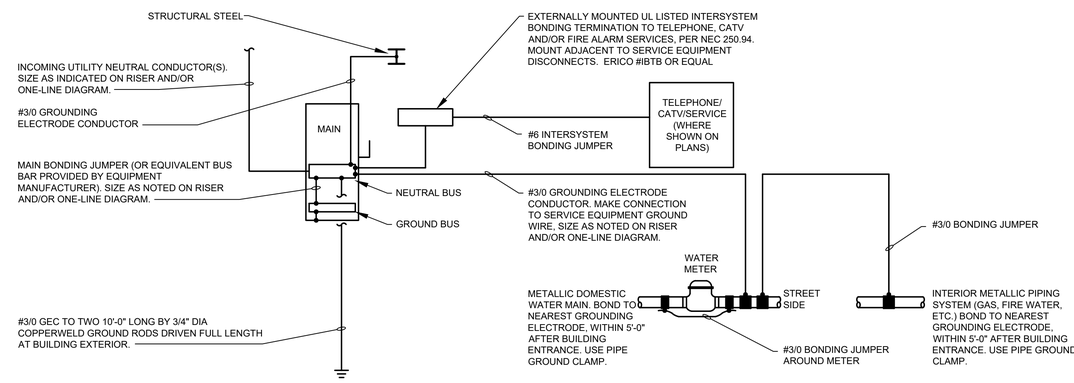
STRING LIGHT SUSPENSION DETAIL

N.T.S.



FIRE ALARM DEVICE DETAIL

N.T.S.

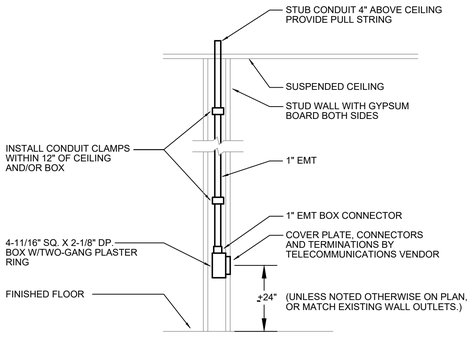


ELECTRICAL GROUNDING & BONDING DETAIL

N.T.S.

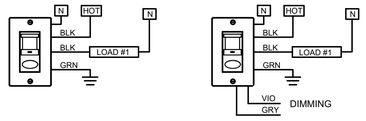
NOTES:

1. COMPLETE GROUNDING INSTALLATION SHALL COMPLY WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.
2. ALL CONDUCTORS ARE BARE STRANDED COPPER, UNLESS NOTED OTHERWISE.
3. ALL UNDERGROUND CONNECTIONS AND CONNECTIONS IN INACCESSIBLE LOCATIONS SHALL BE EXOTHERMIC WELD TYPE. UL LISTED MECHANICAL CONNECTORS CAN BE USED ABOVE GRADE IN ACCESSIBLE LOCATIONS, WHERE ALLOWABLE BY NEC.
4. PROVIDE SUPPLY-SIDE BONDING JUMPERS IN ALL SERVICE EQUIPMENT BETWEEN LINE SIDE CONDUIT GROUNDING BUSHINGS AND NEUTRAL/EQUIPMENT GROUND BUS. WIRE SIZE SHALL BE EQUIVALENT TO THE MAIN BONDING JUMPER AND SERVICE EQUIPMENT GROUND WIRE SIZE AS NOTED ON THE RISER DIAGRAM AND/OR ONE-LINE DIAGRAM.



TYPICAL COMMUNICATIONS OUTLET DETAIL

N.T.S.



TYPICAL OCCUPANCY WALL SWITCH WIRING DETAIL

N.T.S.

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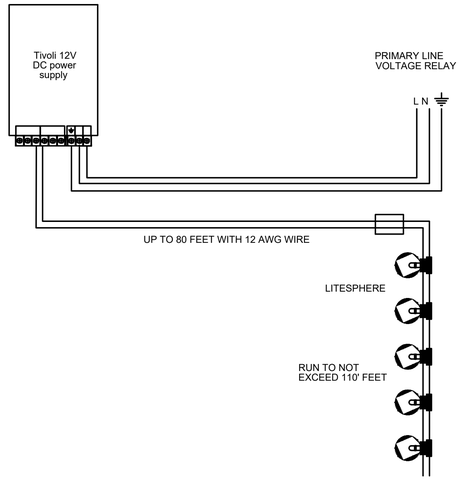
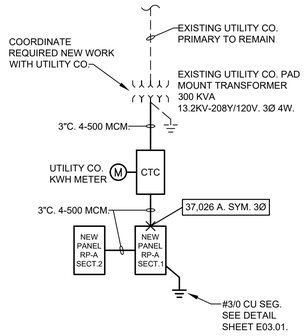


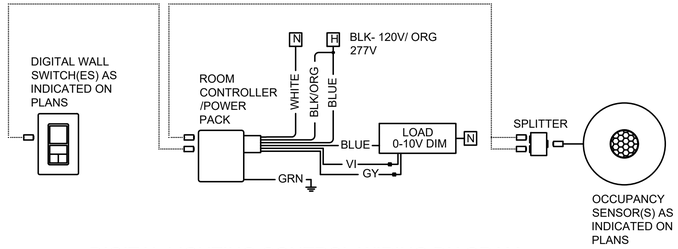
STRING LIGHT WIRING DIAGRAM
N.T.S.



ONE-LINE DIAGRAM
N.T.S.

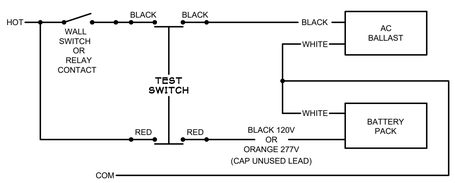
POWER ONE-LINE DIAGRAM GENERAL NOTES:

1. REFER TO SHEET E00.01 FOR ELECTRICAL SYMBOL LIST, ABBREVIATIONS AND PROJECT NOTES.
2. ALL WIRING SHALL BE COPPER UNLESS OTHERWISE NOTED.
3. ALL WORK SHALL BE COORDINATED WITH THE LOCAL ELECTRIC UTILITY COMPANY REPRESENTATIVE AND PROVIDED IN ACCORDANCE WITH THEIR REQUIREMENTS.
4. PROVIDE ENGRAVED NAMEPLATES FOR ALL ELECTRICAL EQUIPMENT (SWITCHBOARDS, TRANSFORMERS, PANELBOARDS, SAFETY SWITCHES, MOTOR STARTERS, ETC.) INDICATING THE IDENTITY OF THE EQUIPMENT AND TRHE POWER SOURCE FOR EACH.
5. ELECTRICAL SYSTEM SHALL BE LABELED WITH TEH INSTALLING CONTRACTOR'S NAME AND CONTACT INFORMATION.
6. PROVIDE TYPE-WRITTEN DIRECTORY FOR ALL PANELBOARDS.
7. ALL TERMINATIONS SHALL COMPLY WITH THE REQUIREMENTS OF NEC ARTICLE 110.14(C)(1).
8. PROVIDE WARNING LABEL INDICATING THE AVAILABLE FAULT CURRENT AND THE DATE THE CALCULATION WAS PERFORMED PER NEC ARTICLE 110.24(A).
9. PROVIDE ARC-FLASH HAZARD WARNING LABEL PER NEC ARTICLE 110.16(1) OR 110.16(B) AS APPLICABLE.

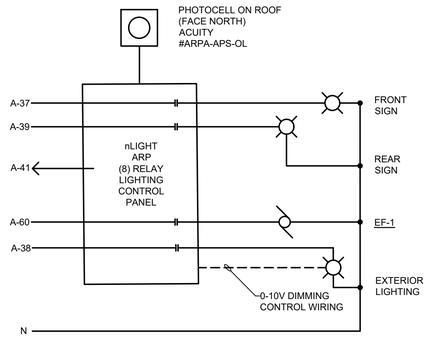


DIGITAL LIGHTING CONTROL WIRING DIAGRAM
N.T.S.

NOTES:
1. REFER TO FLOOR PLANS FOR ACTUAL DEVICE QUANTITY AND SPECIFICATION.



EMERGENCY LIGHTING BATTERY BACK-UP WIRING DIAGRAM
N.T.S.



LIGHTING CONTROL RISER DIAGRAM
N.T.S.

LIGHTING CONTROL NOTES:

1. CIRCUITS A-37 AND A-39 ARE INTENDED FOR ON/OFF PHOTOCELL CONTROL FROM DUSK TILL DAWN.
2. CIRCUIT A-38 SHALL TURN ON AT DUSK VIA PHOTOCELL, AND DIM TO 50% OUTPUT BETWEEN MIDNIGHT AND 6:00 AM. PHOTOCELL SHALL DE-ENERGIZE CIRCUIT WHEN SUFFICIENT DAYLIGHT IS AVAILABLE.
3. ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE MICHIGAN ENERGY CODE (ASHRAE 90.1-2013).

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ELECTRICAL DIAGRAMS

PROJECT
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SHEET
E04.01

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	LAMP TYPE	LAMP INITIAL LUMEN OUTPUT	CCT	CRI	VOLTAGE	INPUT WATTAGE	BALLAST TYPE	BASIS OF DESIGN	NOTES
A	2'x4' LAY-IN FIXTURE	LED	4800	3500	80	120-277V	36W	0-10V LED DRIVER	LITHONIA #GTL-4-48L-A12125-LP835-GZ1-LP835	
AX	2'x4' LAY-IN FIXTURE W/ BATTERY BACKUP	LED	4800	3500	80	120-277V	36W	0-10V LED DRIVER	LITHONIA #GTL-4-48L-A12125-LP835-GZ1-LP835-EL14L	
B	4" RECESSED DOWNLIGHT	LED	500	3500	80	120-277V	6W	0-10V LED DRIVER	LITHONIA #LDN4-35/05-L04-AR-LD-MVOLT-GZ1	
C	6" PENDANT ROUND CAN DOWNLIGHT	LED	1500	3000	80	120-277V	18W	0-10V LED DRIVER	LITHONIA #LDN6CYL-30/05-L06-AR-LD-MVOLT-GZ1	
D	6" PENDANT ROUND CAN WALLWASH DOWNLIGHT	LED	1500	3000	80	120-277V	18W	0-10V LED DRIVER	LITHONIA #LDN6CYL-30/05-L06-WR-LD-MVOLT-GZ1	
E	2' WALL MOUNT FIXTURE	LED	1900	3500	82	120-277V	16W	0-10V LED DRIVER	BROWNLEE #5165-24-BN-H16-35K	WALL MOUNTED
F	2' WALL MOUNT FIXTURE	LED	2000	3500	80	120-277V	13W	0-10V LED DRIVER	LITHONIA #FEM-L24-2000LM-LPAFL-MD-MVOLT-GZ10-35K-80CRI	WALL MOUNTED
G	STRING LIGHTS	LED	10/ft	3000	80	12VDC	0.15W/ft	0-10V LED DRIVER	TIVOLI #LSL-B-15-H-30-C-12	ORDER LENGTHS AS NEEDED, NOT EXCEEDING 110' FEET.
H	DECORATIVE PENDANT FIXTURE (TBD)	LED								
I	DECK MOUNTED HOUSE LIGHT FIXTURE	LED	9000	3500	80	120-277V	63W	0-10V LED DRIVER	LITHONIA #JCBL-9000LM-ACCR-MVOLT-GZ10-35K-80CRI-SC6-DBLXD	SUSPEND FROM CEILING, ABOVE STRING LIGHTING
J	CANOPY FIXTURE	LED	1076	4000	80	120V	17W	LED DRIVER	LITHONIA #OLCFM-15-DDB	
EM	COMMERCIAL EMERGENCY LIGHT	LED	--	--	--	120-277V	<5W	LED DRIVER	LITHONIA #ELM4L	WALL MOUNTED
X1	UNIVERSAL MOUNT EXIT SIGN	LED	--	--	--	120-277V	<5W	LED DRIVER	LITHONIA #LQM-S-3-R-120/277-EL-N	THERMOPLASTIC WHITE HOUSING, RED LETTERS AND EMERGENCY BATTERY BACKUP.
X2	UNIVERSAL MOUNT COMBINATION EXIT SIGN/ EMERGENCY BATTERY UNIT WITH (2) HEADS	LED	--	--	--	120-277V	<5W	LED DRIVER	LITHONIA #LHQM-LED-R-HORO	THERMOPLASTIC WHITE HOUSING, RED LETTERS AND EMERGENCY BATTERY BACKUP.
X3	REMOTE EMERGENCY HEAD (TWIN) (POWER FROM 'X2')	LED	--	--	--	--	<5W	LED DRIVER	LITHONIA #ERE-GY-T-RD-WP	FIELD WIRE TO EXIT SIGN TYPE 'X2'

LIGHTING FIXTURE NOTES:

1. ALTERNATE LIGHTING MANUFACTURER'S EQUIPMENT BY ACUITY, COOPER, PHILIPS OR HUBBELL, SHALL BE SIMILAR IN PERFORMANCE, PHYSICAL APPEARANCE AND CONSTRUCTION TO BE CONSIDERED AS EQUAL TO UNITS SPECIFIED.
2. ALTERNATE LIGHTING FIXTURE TYPES PROPOSED TO BE SUBSTITUTED BY BIDDING CONTRACTOR MUST BE PRE-APPROVED DURING BIDDING. CONTRACTOR, OR LIGHTING REPRESENTATIVE SHALL EMAIL ALL SUCH REQUESTS WITH FIXTURE CUTS TO ENGINEER AT LEAST ONE WEEK PRIOR TO SUBMITTING BIDS. ENGINEER SHALL REVIEW THE PROPOSED ALTERNATE LIGHTING FIXTURES AND ISSUE A WRITTEN ACCEPTANCE OR DENIAL BY RETURN EMAIL. VERBAL APPROVAL WILL NOT BE ACCEPTABLE.
3. ALL SHOP DRAWINGS SUBMITTED AFTER AWARD OF CONTRACTOR FOR LIGHTING FIXTURES WHICH WERE NOT PRE-APPROVED WILL BE REJECTED.

AUTOMATIC LIGHTING CONTROL LEGEND

(CATALOG NUMBERS BASED ON 'ACUITY BRAND CONTROLS' EQUIPMENT)

WALL CONTROLLERS

- GFX — nPOD GFX WH
  LOW VOLTAGE GRAPHIC WALLPOD,
  MULTI-CHANNEL, RAISE / LOWER DIMMING
- SO1 — WSXA PDT WH
  WALL SWITCH SENSOR, PASSIVE DUAL
  TECHNOLOGY, AUTO-ON, AUTO OFF
- SO2 — WSXA PDT SA WH
  WALL SWITCH SENSOR, PASSIVE DUAL
  TECHNOLOGY, MANUAL-ON, AUTO OFF
- SO3 — WSXA MWO PDT D SA WH
  WALL SWITCH SENSOR, MULTI-WAY SWITCHING,
  PASSIVE DUAL TECHNOLOGY, 0-10V DIMMING,
  MANUAL-ON, AUTO OFF
- SW1 — nPODMA WH
  LOW VOLTAGE PUSH-BUTTON WALLPOD,
  4-CHANNEL, RAISE / LOWER DIMMING
- SW2 — nPODMA 4P DX WH
  LOW VOLTAGE PUSH-BUTTON WALLPOD,
  4-CHANNEL, RAISE / LOWER DIMMING

LOAD CONTROLLERS

- DP1 — nPP16 D EFP SA
  POWER/ RELAY PACK, OCCUPANCY CONTROLLED
  DIMMING (VIA CHASE NIPPLE), EXTERNAL FAULT
  PROTECTION, MANUAL- ON, AUTO OFF
- DP2 — nPP16 DS EFP SA
  POWER/ RELAY PACK, OCCUPANCY CONTROLLED
  DIMMING (VIA SIDE SLOT), EXTERNAL FAULT
  PROTECTION, MANUAL- ON, AUTO OFF
- PP1 — nPP16 EFP
  POWER/ RELAY PACK, EXTERNAL FAULT
  PROTECTION, AUTO-ON, AUTO-OFF
- PP2 — nPP16 EFP SA
  POWER/ RELAY PACK, EXTERNAL FAULT
  PROTECTION, MANUAL-ON, AUTO-OFF

SENSORS

- OS1 — nCM PDT 9 AR RJB
  LOW VOLTAGE CEILING MOUNT SENSOR, PASSIVE
  DUAL TECHNOLOGY, STANDARD RANGE SMALL
  MOTION 360° LENS
- OS2 — nCM PDT 9 ADCX AR RJB
  LOW VOLTAGE CEILING MOUNT SENSOR, STANDARD
  RANGE SMALL MOTION 360° LENS, AUTOMATIC
  DAYLIGHT HARVESTING
- OS3 — nCM PDT 9 ADCX AR LT RJB
  LOW VOLTAGE CEILING MOUNT SENSOR, STANDARD
  RANGE SMALL MOTION 360° LEN, AUTOMATIC
  DAYLIGHT HARVESTING, LOW TEMP/HIGH HUMIDITY
- OS4 — nCM PDT 10 RJB
  LOW VOLTAGE CEILING MOUNT SENSOR, STANDARD
  RANGE LARGE MOTION 360° LENS

PANEL BOARD: RP-A (SECTION 1) | VOLTAGE: 208Y/120V 3Ø 4W | SYM. A.I.C. MIN.: 42,000 | MOUNTING: FLUSH
MAIN BREAKER: 400A | MAIN LUGS: 208Y/120V 3Ø 4W

	LOAD - V.A. A	LOAD - V.A. B	LOAD - V.A. C	CKT BRKR	CKT #	CKT #	CKT BRKR	LOAD - V.A. A	LOAD - V.A. B	LOAD - V.A. C	LOAD SERVED	
LOAD SERVED												
	MENS RESTRROM	1620			20	1	2	20	1620			WOMENS RESTROOM	
G	SINGLE DOOR FREEZER		960		20	3	4	20		1080		DOUBLE DOOR FREEZER	G
	SYRUP & C02 AREA RECEPT.			180	20	5	6	20			1380	ICE MAKER	
G	WALK-UP CARBONATOR	780			20	7	8	20	720			WALK-UP RECEPT. & POS	
G	WALK-UP COKE FOUNTAIN		1200		20	9	10	20		360		MONITORS	
G	HOT/COLD FOOD UNIT			2000	30	11	12	20			1680	ICE TEA BREWER	G
G	HOT/COLD FOOD UNIT	2000			30	13	14	20	1200			SERVING COKE FOUNTIAN	G
	LIGHTING		1,680		20	15	16	20		912		ICE CUBER & CARBONATOR	G
G	KITCHEN RECEPT & COOLER LTG.			360	20	17	18	20			900	CHARBROILER & REFRIG. CABS.	ST
ST	SPREADER CABINET	756			20	19	20	20	1080			DOUBLE DEEP FRYER	ST
G	SERVING RECEPT.		360		20	21	22	20		936		COMBI. OVEN/STEAMER	ST
ST	DOUBLE STACK OVEN			948	20	23	24	20			1068	RANGE & KITCHEN RECEPT.	ST
	TABLE MOUNTED MIXER	960			20	25	26	20	540			KITCHEN RECEPT.	(E)
	CREPE MAKER		1800		20	27	28	20		540		GENERAL RECEPT.	(E)
	EXTERIOR SEATING RECEPT.			180	20	29	30	15			499	GARBAGE DISPOSAL	G
	RTU	4804			45	31	32	2	499				
			4804			33	34	20		801		WALK-IN COOLER CONDENSING/EVAPORATION UNIT	G
				4804	3	35	36	2			801		
	FRONT SIGN	1200			20	37	38	20	38			EXTERIOR LIGHITNG	
	REAR SIGN		1200		20	39	40	20		900		OFFICE RECEPT.	(E)
	TIME CLOCK			350	20	41	42	20			900	GENERAL RECEPT.	

PANEL BOARD: RP-A (SECTION 2) | VOLTAGE: 208Y/120V 3Ø 4W | SYM. A.I.C. MIN.: 42,000 | MOUNTING: FLUSH
MAIN BREAKER: | MAIN LUGS: 400A

	LOAD - V.A. A	LOAD - V.A. B	LOAD - V.A. C	CKT BRKR	CKT #	CKT #	CKT BRKR	LOAD - V.A. A	LOAD - V.A. B	LOAD - V.A. C	LOAD SERVED	
LOAD SERVED												
	RICE COOKER	1440			20	43	44	20	540			OFFICE RECEPT.	
	RICE COOKER		1440		20	45	46	20		540		J.C. & WATER HEATER RECEPT.	
L	HOOD #1 CONTROL PANEL			1000	15	47	48	15			1000	HOOD #2 CONTROL PANEL	L
	SHOW WINDOW RECEPT.	180			20	49	50	110	11421			DOAS	
	SHOW WINDOW RECEPT.		180		20	51	52			11421			
	SHOW WINDOW RECEPT.			180	20	53	54	3			11421		
	KEF-1	721			15	55	56	30	1920			KEF-2	
			721			57	58	20		1176		KEF-3	
				721	3	59	60	20			528	EF-1	
	EUH-1	1667			20	61	62	20	156			HOOD LIGHTS	
			1667			63	64	20		180		AIR DUCT SMOKE DETECTORS	L
				1667	3	65	66	20			350	FIRE ALARM CONTROL PANEL	
	SPARE				20	67	68	20	360			ROOFTOP RECEPT.	
	SPARE				20	69	70	20				SPARE	
	SPARE				20	71	72	20				SPARE	
	SPARE				20	73	74	20				SPARE	
	SPARE				20	75	76	20				SPARE	
	SPARE				20	77	78	20				SPARE	
	SPARE				20	79	80	20				SPARE	
	SPARE				20	81	82	20				SPARE	
	SPARE				20	83	84	20				SPARE	

LOAD DESCRIPTION	DEMAND FACTOR D.F.	VOLT-AMPS CONNECTED	VOLT-AMPS DEMAND		
				97,678	TOTAL DEMAND LOAD
LIGHTING	NON-COINCIDENTAL	4,274	4,230	1,058	25% LIGHTING LOAD
RECEPTACLES	NEC	5,760	5,760	16,549	SPARE
SMALL MOTORS	1.00	59,226	59,226		
KITCHEN EQUIPMENT	NEC	27,088	17,607		
MISC. EQUIPMENT	1.00	6,480	6,480	115,285	DESIGN LOAD
SHOW WINDOWS	NEC	540	4,375	320	DESIGN AMPS
	TOTAL	103,368	97,678		

(E) - EXISTING CIRCUIT
G - GFCI TYPE (5 mA TRIP) CIRCUIT BREAKER
L - LOCK-ON TAB (RED)
ST - SHUNT TRIP CIRCUIT BREAKER

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PROPOSED RESTAURANT TENANT SPACE
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3385 AUBURN ROAD, AUBURN HILLS, MICHIGAN 48326
LIGHTING & PANELBOARD SCHEDULES

PROJECT
17/1508

DATE
07/13/2021 45% Review

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BEVERAGE EQUIPMENT SCHEDULE

ITEM	EQUIPMENT NAME	MANUFACTURER / MODEL NO.	QTY	ELECTRICAL VOLTAGE	ELECTRICAL PHASE	ELECTRICAL AMPERAGE	ELECTRICAL PLUG / DISCONNECT	ELECTRICAL PLUG / DISCONNECT RATING (AMPS)	ELECTRICAL LOAD (KVA)	NOTES:
B-03	ICE TEA BREWER	BUNN / 41400.0002	1	120	1	14.0	P	20	1.68	PROVIDE GFCI PROTECTION
B-04	8 FLAVOR BEVERAGE / ICE DISPENSER	COCA-COLA / ICEBEV COMBO 8V	1	120	1	20.0	P	20	2.40	PROVIDE GFCI PROTECTION
B-05	ICE CUBER	MANITOWOC / IBF-0820C	1	120	1	1.1	P	20	0.13	PROVIDE GFCI PROTECTION
B-06	CARBONATOR	MCCANNS / 43-6002	1	120	1	6.5	P	20	0.78	PROVIDE GFCI PROTECTION

KITCHEN EQUIPMENT SCHEDULE

ITEM	EQUIPMENT NAME	MANUFACTURER / MODEL NO.	QTY	ELECTRICAL VOLTAGE	ELECTRICAL PHASE	ELECTRICAL AMPERAGE	ELECTRICAL PLUG / DISCONNECT	ELECTRICAL PLUG / DISCONNECT RATING (AMPS)	ELECTRICAL LOAD (KVA)	NOTES:
K-01	REFRIGERATED BASE CABINET	NOR-LAKE / NLCB36	1	120	1	3.0	P	20	0.36	PROVIDE GFCI PROTECTION
K-02	CHARBROILER	SOUTHBEND /	1	120	1	1.5	P	20	0.18	PROVIDE GFCI PROTECTION
K-03	REFRIGERATED BASE CABINET	NOR-LAKE / NLCB48	1	120	1	3.0	P	20	0.36	PROVIDE GFCI PROTECTION
K-04	SPREADER CABINET	FRYMASTER / SPRED	1	120	1	6.3	P	20	0.76	PROVIDE GFCI PROTECTION
K-05	DEEP FRYER SYSTEM W/ 2 FRYERS	FRYMASTER / FMJ250	1	120	1	9.0	P	20	1.08	PROVIDE GFCI PROTECTION
K-07	CONVECTION DOUBLE STACK OVEN	SOUTHBEND / SLGS/22SC	1	120	1	7.9	P	20	0.95	PROVIDE GFCI PROTECTION
K-08	COMBINATION OVEN / STEAMER	ANGELO PO / FX82G3T	1	120	1	7.8	P	20	0.94	PROVIDE GFCI PROTECTION
K-09	6 BURNER RANGE W/ OVEN	SOUTHBEND / S6ODD-2G/T	1	120	1	5.9	P	20	0.71	PROVIDE GFCI PROTECTION
K-13A	UNDER SINK DISPOSAL	WASTE KING / 1000-3	1	208	1	4.8	D	15	1.00	PROVIDE GFCI PROTECTION
K-16	TABLE MOUNTED MIXER	HOBART / HL200	1	120	1	8.0	P	20	0.96	PROVIDE GFCI PROTECTION
K-17	RICE COOKER / WARMER	GLOBE / RC-1	2	120	1	12.0	P	20	1.44	PROVIDE GFCI PROTECTION
K-18	CREPE MAKER	WARING / WSC160X-1	1	120	1	15.0	P	20	1.80	PROVIDE GFCI PROTECTION
K-19A	CEILING MOUNT CONDENSING / EVAPORATION UNIT	NOR-LAKE / CPBO75DC-A	1	208	1	7.7	6-20R	20	1.60	INDOOR EVAPORATOR/CONDENSING UNIT
K-20	SINGLE DOOR REACH-IN FREEZER	NOR-LAKE / GPF231SSS/OA	1	120	1	8.0	P	20	0.96	PROVIDE GFCI PROTECTION
K-21	DOUBLE DOOR REACH-IN FREEZER	NOR-LAKE / GPF492SSS/OA	1	120	1	9.0	P	20	1.08	PROVIDE GFCI PROTECTION
K-24	ICE MAKER	MANITOWOC / IDT0500A	1	120	1	11.5	P	20	1.38	PROVIDE GFCI PROTECTION
K-27	HEATER / PROOFER CABINET	SENTINEL / SNHPIS-3836	1	120	1	12.5	P	20	1.5	PROVIDE GFCI PROTECTION

SERVING EQUIPMENT SCHEDULE

ITEM	EQUIPMENT NAME	MANUFACTURER / MODEL NO.	QTY	ELECTRICAL VOLTAGE	ELECTRICAL PHASE	ELECTRICAL AMPERAGE	ELECTRICAL PLUG / DISCONNECT	ELECTRICAL PLUG / DISCONNECT RATING (AMPS)	ELECTRICAL LOAD (KVA)	NOTES:
S-01	POS SYSTEM	TOAST / 22/10 WHITE	2	120	1	14.0	P	20	1.68	PROVIDE GFCI PROTECTION
S-04	HOT / COLD FOOD UNIT	ATLAS METAL / CAHC-2	1	120	1	16.7	L5-30R	30	2.00	PROVIDE GFCI PROTECTION
S-06	CARBONATOR	MCCANNS / 43-6002	2	120	1	6.5	P	20	0.78	PROVIDE GFCI PROTECTION
S-07	8 FLAVOR BEVERAGE / ICE DISPENSER	COCA-COLA / ICEBEV COMBO 8V	1	120	1	20.0	P	20	2.40	PROVIDE GFCI PROTECTION

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EQUIPMENT SCHEDULES

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