C. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, EQUIPMENT, RIGGING, AND MISCELLANEOUS ITEMS AS REQUIRED FOR A COMPLETE, OPERATIONAL AND FUNCTIONAL ELECTRICAL INSTALLATION AS SHOWN ON THE DRAWINGS AND AS SPECIFIED IN THESE

LANDLORDS REQUIREMENTS

A. ALL WORK OF THIS CONTRACT SHALL BE COMPLETED IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THE LANDLORD'S CONSTRUCTION CRITERIA AND/OR THE TENANT/LANDLORD AGREEMENT. THIS CONTRACTOR SHALL EXAMINE THE LANDLORD SUBMITTALS CRITERIA AND THE TENANT/LANDLORD AGREEMENT.

B. ALL APPLICABLE REQUIREMENTS OF THE LANDLORDS CONSTRUCTION CRITERIA AND/OR THE TENANT/LANDLORD AGREEMENT DOCUMENTS SHALL BE CONSIDERED PART OF

EXISTING CONDITIONS

A. THE CONTRACT DOCUMENTS ARE BASED ON INFORMATION PROVIDED TO THE CONSULTANT AT THE TIME OF DESIGN. THIS CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS.

BIDS AND SUBSTITUTIONS

A. PRIOR TO SUBMISSION OF A BID PROPOSAL, CONTRACTOR SHALL THOROUGHLY REVIEW THE BID INSTRUCTIONS AND ALL CIVIL, ARCHITECTURAL, STRUCTURAL, AND MEPFP CONSTRUCTION DOCUMENTS.

B. SHOULD THE CONTRACTOR WISH TO SUBMIT AN ALTERNATE PRODUCT TO THE MANUFACTURERS NAMED IN THESE SPECIFICATIONS OR ON THE DRAWINGS FOR ANY EQUIPMENT, THE CONTRACTOR SHALL SUBMIT A VOLUNTARY ALTERNATIVE A MINIMUM OF SEVEN (7) CALENDAR DAYS PRIOR TO BID, STATING THE MANUFACTURER'S NAME, MODEL NUMBER, WRITTEN, DETAILED PRODUCT DATA.

. WORK PERFORMED OR CONSTRUCTED WITH UNAPPROVED EQUALS IS AT CONTRACTOR'S RISK AND ANY REQUIRED CORRECTION OF WORK INCORPORATING UNAPPROVED EQUALS SHALL BE AT CONTRACTOR'S SOLE COST AND EXPENSE

D. NO SUBSTITUTIONS PERMITTED FOR LIGHTING FIXTURES.

QUALITY ASSURANCE

A. ALL MATERIALS AND EQUIPMENT SHALL BE NEW.

B. PROVIDE PERMITS, INSPECTIONS, FINAL CERTIFICATES OF INSPECTION BY THE AUTHORITY N. PREPARE ELETRICAL COORDINATION DRAWINGS AS REQUIRED BY THE WORK AND AS D. ALL LINE VOLTAGE WIRING AND FINAL CONNECTIONS TO COMPLETE MECHANICAL HAVING JURISDICTION, PERMIT AND INSPECTION FEES AND ALL MATERIALS, EQUIPMENT AND LABOR AS REQUIRED FOR A COMPLETE, FUNCTIONAL AND FULLY OPERATIONAL ELECTRICAL SYSTEM.

C. THIS CONTRACTOR SHALL PROVIDE ALL MATERIALS AND ACCESSORIES FOR CODE COMPLIANT SUPPORT OF THE ELECTRICAL WORK, WHETHER OR NOT SHOWN ON THE DRAWINGS OR SPECIFIED IN THESE SPECIFICATIONS.

D. REQUIREMENTS OF REGULATORY AGENCIES:

1. PERMITS: ARRANGE AND PAY FOR ALL PERMITS, INSPECTIONS AND UTILITY

A. PROVIDE COMPUTER-BASED, POWER SYSTEM STUDIES THAT INCLUDES

2. PROVIDE ALL TESTS AND INSPECTIONS REQUIRED BY THE AUTHORITY HAVING

3. PROVIDE A SIGNED CERTIFICATE OF INSPECTION AT THE COMPLETION OF THE PROJECT. INCLUDE IN OPERATION AND MAINTENANCE MANUALS.

E. CODES AND STANDARDS

1. COMPLY WITH SPECIFIED CODES AND STANDARDS. IF CONFLICT EXISTS BETWEEN CODES OR STANDARDS AND DRAWINGS, PROJECT MANUAL OR ADDENDA MANUAL CALCULATIONS ARE UNACCEPTABLE.

STANDARDS LISTED INCLUDING ALL SUBSEQUENTLY PUBLISHED AMENDMENTS HERETO ISSUED PRIOR TO THE DATE OF THE BIDDING DOCUMENTS.

2. CONFORM TO THE INSTALLATION RULES AND REGULATIONS OF THE CODES AND

3. CONFORM TO THE REQUIREMENTS OF ALL LOCAL, STATE AND FEDERAL AGENCIES

WHICH HAVE AUTHORITY OVER THIS PROJECT. 4. COMPLY WITH THE APPLICABLE EDITION OF THE FOLLOWING CODES AND

HAVING JURISDICTION:

a. INTERNATIONAL BUILDING CODE. b. INTERNATIONAL ENERGY CONSERVATION CODE

c. INTERNATIONAL MECHANICAL CODE

d. NATIONAL ELECTRICAL CODE

e. INTERNATIONAL FIRE CODE f. LIFE SAFETY CODE, NFPA 101

g. AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES

h. ALL LOCAL CODES AND ORDINANCES ADOPTED AND ENFORCED BY THE AUTHORITY HAVING JURISDICTION.

F. UNDERWRITERS LABORATORIES, INC. (UL) REFERENCED STANDARDS:

1. ALL EQUIPMENT, APPARATUS, MATERIALS AND SYSTEMS SHALL BE RATED, TESTED, FABRICATED AND INSTALLED WITH THE APPLICABLE INDUSTRY STANDARDS.

2. ALL EQUIPMENT, APPARATUS, MATERIALS AND SYSTEMS SHALL BE UL LISTED AND LABELED.

ELECTRICAL CONTRACT DOCUMENTS

A. THE ELECTRICAL DRAWINGS (DRAWINGS) AND THE SPECIFICATIONS SHALL TOGETHER FORM A SET OF CONTRACT DOCUMENTS FOR THE ELECTRICAL WORK. NEITHER THE C. FOR EXISTING RELOCATED EQUIPMENT AND EXISTING EQUIPMENT THAT IS EXISTING TO DRAWINGS OR THE SPECIFICATIONS SHALL BE COMPLETE WITHOUT THE OTHER. ANY ITEM SHOWN ON THE DRAWINGS OR SPECIFIED IN THE SPECIFICATIONS SHALL BE CONSIDERED AS IF SHOWN AND SPECIFIED IN BOTH.

B. ELECTRICAL DRAWINGS AND SPECIFICATIONS: COMPLY WITH THE FOLLOWING

REQUIREMENTS: 1. CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH ALL DRAWINGS AND COMPLY WITH RECOMMENDATIONS IN IEEE 551 AS TO THE AMOUNT OF DETAIL THAT IS SPECIFICATIONS WITHIN THE CONTRACT DOCUMENTS, INCLUDING, BUT NOT

STRUCTURAL, FOOD SERVICE, MECHANICAL, PLUMBING AND FIRE PROTECTION

DRAWINGS AND SPECIFICATIONS. 2. THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE INTENDED TO INDICATE APPROXIMATE LOCATION ONLY OF ELECTRICAL WORK. THE ACTUAL LOCATION OF ANY ELECTRICAL WORK SHALL NOT INTERFERE WITH THE LOCATION, ARC FLASH HAZARD STUDY

CLEARANCES, ETC. REQUIRED BY THE WORK OF OTHER TRADES.

C. DEFINITIONS: THE FOLLOWING TERMS ARE USED ON THE ELECTRICAL DRAWINGS AND IN

SUPPORT STUDY. COMPLY WITH RECOMMENDATIONS IN IEEE 1584 AND NFPA 70E AS TO

THE SPECIFICATIONS AND SHALL BE DEFINED AS FOLLOWS:

1. CONTRACTOR - THE ELECTRICAL CONTRACTOR OR ANY OF THEIR SUB-CONTRACTORS. C. FOR NEW EQUIPMENT, USE CHARACTERISTICS SUBMITTED UNDER THE PROVISIONS OF

2. WORK - ALL MATERIAL, LABOR, TRANSPORTATION OF THE ELECRICAL CONTRACTOR OR ANY OF THEIR SUB-CONTRACTORS.

3. FURNISH - PURCHASE, SUBMIT FOR REVIEW AND APPROVAL, COORDINATE WITH THE CONTRACT DOCUMENTS AND DELIVER TO THE PROJECT SITE IN NEW, UNDAMAGED

4. INSTALL - TO STORE AS DIRECTED, PROTECT FROM DAMAGE, INSTALL IN PLACE, MAKE READY FOR CONNECTION TO THE REQUIRED SERVICE.

CONNECT - CONNECT TO THE REQUIRED SERVICE AS REQUIRED FOR PROPER 1. LOCATION DESIGNATION. OPERATION, TEST FOR PROPER OPERATION AND FUNCTIONALITY IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS AND REQUIREMENTS SPECIFIED WITHIN THESE SPECIFICATIONS AND TURN OVER TO THE OWNER IN FULL OPERATING

NOMINAL VOLTAGE.

INCIDENT ENERGY.

WORKING DISTANCE.

ORDERS, AND ENGINEERS

COORDINATION WITH LANDLORD AND UTILITY COMPANIES

COMPANY STANDARDS TO BE COMPLIED WITH, ETC.

CONVENIENT AND PROPER INSTALLATION OF THE WORK

OF THE WORK OF ANY CONTRACTOR ON THE PROJECT.

TRADES PRIOR TO THEIR ORDERING OF EQUIPMENT.

DURING THE WORK OF THIS CONTRACT

COMPONENTS AND THE PROJECT PHASING PLAN.

COMPONENTS THEY FURNISH AS FOLLOWS:

SEQUENCING AND SCHEDULING

CONTRACTS.

CONTRACTOR.

SYSTEMS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.

CABLE/SATELLITE TV SERVICE PROVIDERS.

HAZARD RISK CATEGORY.

3. FLASH PROTECTION BOUNDARY.

ENGINEERING REPORT NUMBER, REVISION NUMBER, AND ISSUE DATE

A. DURING THE PROGRESS OF THE WORK, CONTRACTOR SHALL MAINTAIN A CURRENT

A. ELECTRICAL WORK SHALL BE INSTALLED SO AS TO NOT CONFLICT WIH THE WORK OF

CONFER WITH THE OTHER CONTRACTORS REGARDING THE LOCATION AND SIZE OF PIPES,

THAT THERE MAY BE NO INTERFERENCES BETWEEN THE INSTALLATION OR THE PROGRESS

THE NEMA PLUG CONFIGURATION OF THE CORD/PLUG ASSEMBLY FURNISHED WITH THE

G. PROVIDE FINAL COORDINATION OF AVAILABLE POWER (VOLTAGE/PHASE) WITH OTHER

A. PROVIDE ALL EQUIPMENT REQUIRED FOR ELECTRICITY METERING BY UTILITY COMPANY

1. COMPLY WITH REQUIREMENTS OF UTILITIES PROVIDING ELECTRICAL POWER

2. COORDINATE INSTALLATION AND CONNECTION OF UTILITIES AND SERVICES,

. METERS SHALL BE FURNISHED BY UTILITY COMPANY; INSTALLED BY ELECTRICAL

E. INSTALL ALL CONDUITS AND EQUIPMENT ACCORDING TO UTILITY COMPANY'S WRITTEN

REQUIREMENTS. PROVIDE EMPTY CONDUITS FOR METERING LEADS AND EXTEND

EQUIPMENT THROUGH FIRE-RATED VERTICAL BARRIERS (WALLS AND PARTITIONS) HORIZONTAL BARRIERS (FLOOR/CEILING ASSEMBLIES) AND VERTICAL SHAFT WALLS AND

814 OR UL 1479 TESTED ASSEMBLIES THAT PROVIDE A FIRE RATING EQUAL TO OR

STRICT ACCORDANCE WITH THE APPLICABLE BUILDING CODE AND THE REQUIREMENTS

. SUBMIT ALL REQUIRED DETAILS TO THE AUTHORITY HAVING JURISDICTION FOR REVIEW

INSTALLATION OF THE ELECTRICAL WORK. STRUCTURAL COMPONENTS, INCLUDING BUT

B. PATCH SURROUNDING AREAS FLUSH WITH ADJACENT SURFACES AND PREPARE TO

RECEIVE SPECIFIED FINISHES. PATCH AND REPAIR ROOF TO MATCH EXISTING ROOFING SYSTEM. ALL ROOF WORK SHALL BE PERFORMED TO MEET THE WARRANTY

NOT NECESSARILY LIMITED TO, COLUMNS, BEAMS, GIRDIRS, PLATES OR JOISTS SHALL NOT

INCLUDING PROVISION FOR ELECTRICITY-METERING COMPONENTS.

GROUNDING CONNECTIONS AS REQUIRED BY UTILITY COMPANY.

GREATER THAN THAT OF THE CONSTRUCTION BEING PENETRATED.

OF THE AUTHORITY HAVING JURISDICTION.

REQUIREMENTS OF THE EXISTING ROOFING SYSTEM.

CUTTING & PATCHING

THAT MATCHES THE NEMA CONFIGURATION OF THE PLUG ON THE EQUIPMENT.

(DAILY) AS-BUILT SET OF THE DRAWINGS AND SPECIFICATIONS, INDICATING THEREON ALL

WORK INSTALLED AT VARIANCE WITH SUCH CONTRACT DOCUMENTS INCLUDING,

PROVIDE - FURNISH, INSTALL AND CONNECT AS DEFINED ABOVE FOR A COMPLETE, FUNCTIONAL AND CODE COMPLIANT INSTALLATION READY FOR INTENDED USE.

7. FINISHED SPACE - SPACES HAVING WALLS PAINTED OR FINISHED WITH WALL COVERING, LAY-IN OR DRYWALL CEILINGS, AND FINISHED FLOORING MATERIALS EXAMPLES OF FINISHED SPACES INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, ALL SPACES IN A DWELLING UNIT, OFFICES, LOBBIES, CORRIDORS, TOILET ROOMS

UNFINISHED SPACES - SPACES WITH UNFINISHED WALLS AND FLOORS AND TYPICALLY ARE NOT EQUIPPED WITH A CEILING. EXAMPLES INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, MECHANICAL ROOMS, ELECTRICAL ROOMS, SERVICE G. LABELS SHALL BE MACHINE PRINTED, WITH NO FIELD-APPLIED MARKINGS.

SHALL - ACTION THAT IS REQUIRED WITHOUT OPTION OR QUALIFICATION.

A. REVIEW OF THE SHOP DRAWINGS IS RENDERED AS A SERVICE ONLY AND SHALL NOT BE CONSIDERED AS A GUARANTEE OF MEASUREMENTS OR OF BUILDING CONDITIONS; NOR SHALL IT BE CONSTRUED AS RELIEVING THE CONTRACTOR'S OF BASIC RESPONSIBILITIES UNDER HIS CONTRACT. ARCHITECT/ENGINEER WILL REVIEW SHOP DRAWINGS ONLY FOR B. CONTRACTOR SHALL PROVIDE THE TENANT WITH THE FINAL AS-BUILT SET OF DRAWINGS CONFORMANCE WITH DESIGN CONCEPT OF THE PROJECT. REVIEW BY THE AT THE COMPLETION OF THE WORK. ARCHITECT/ENGINEER SHALL NOT BE CONSTRUED:

 AS PERMITTING ANY DEPARTURE FROM THE CONTRACT REQUIREMENTS. 2. AS RELIEVING THE CONTRACTOR OF THE RESPONSIBILITY FOR ANY ERROR IN DETAILS,

3. AS APPROVED DEPARTURES FROM ADDITIONAL DETAILS OR INSTRUCTIONS PREVIOUSLY FURNISHED BY THE ARCHITECT/ENGINEER.

DIMENSIONS OR OTHERWISE THAT MAY EXIST.

THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND DESCRIPTIVE LITERATURE OF EQUIPMENT TO BE FURNISHED UNDER THIS CONTRACT. DRAWINGS SHALL STATE CAPACITIES, SIZES, ETC., OF ALL EQUIPMENT AND SHALL BE CERTIFIED. SEE GENERAL **COORDINATION WITH OTHER TRADES** CONDITIONS AND SUPPLEMENTARY CONDITIONS FOR ADDITIONAL REQUIREMENTS.

PROVIDE SUBMITTALS FOR LIGHTING FIXTURES, PANELBOARDS, LIGHTING CONTROL DEVICES, CONTACTORS, WIRING DEVICES, POWER SYSTEM STUDY.

B. SET ALL SLEEVES AND CUT AND PATCH ALL MISCELLANEOUS HOLES NECESSARY FOR THE C. THE CONTRACTOR SHALL PERFORM NO PORTION OF THE WORK REQUIRING SUBMITTAL AND REVIEW OF SHOP DRAWINGS, PRODUCT DATA, SAMPLES OR SIMILAR SUBMITTALS UNTIL THE RESPECTIVE SUBMITTALS HAS BEEN APPROVED BY THE ENGINEER.

ELECTRICAL COORDINATION DRAWINGS

DIRECTED BY THE GENERAL CONTRACTOR.

O. MEET WITH REPRESENTATIVES OF THE OTHER DISCIPLINES/TRADES TO COORDINATE THE E. PROVIDE FINAL ELECTRICAL CONNECTIONS TO EQUIPMENT FURNISHED/PROVIDED BY I. CONDUIT SHALL BE SUPPORTED FROM STRUCTURE ONLY. ELECTRICAL WORK WITH THE WORK OF EACH DISCIPLINE AND TO OBTAIN INFORMATION OTHERS, (HVAC EQUIPMENT, PLUMBING EQUIPMENT, COMMERCIAL KITCHEN J. PVC CONDUIT SHALL ONLY BE USED BELOW GRADE. REGARDING THEIR WORK THAT IS TO BE INDICATED ON THE COORDINATION DRAWINGS.

POWER SYSTEM STUDIES - GENERAL

1. A SHORT CIRCUIT STUDY TO DETERMINE THE MINIMUM INTERRUPTING CAPACITY OF CIRCUIT PROTECTIVE DEVICES;

2. AN ARC-FLASH STUDY TO DETERMINE THE ARC-FLASH HAZARD DISTANCE AND THE INCIDENT ENERGY TO WHICH PERSONNEL COULD BE EXPOSED DURING WORK ON OR TEMPORARY POWER NEAR ELECTRICAL EQUIPMENT.

B. STUDIES SHALL BE PERFORMED UTILIZING COMPUTER PROGRAMS THAT ARE

DISTRIBUTED NATIONALLY AND ARE IN WIDE USE. SOFTWARE ALGORITHMS SHALL

COMPLY WITH REQUIREMENTS OF STANDARDS AND GUIDES SPECIFIED IN THIS SECTION.

C. SOFTWARE DEVELOPERS: SUBJECT TO COMPLIANCE WITH SPECIFIED REQUIREMENTS,

PERFORM STUDIES UTILIZING SOFTWARE PRODUCTS BY ONE OF THE FOLLOWING:

2. POWER ANALYTICS CORPORATION

STANDARDS THAT HAVE BEEN ADOPTED BY AND ARE ENFORCED BY THE AUTHORITY D. ALL STUDIES SHALL BE BASED ON THE DEVICE CHARACTERISTICS OF ACTUAL EXISTING UTILITY COMPANY METERING EQUIPMENT COMPONENTS AND THE NEW COMPONENTS BEING INSTALLED.

E. PROVIDE ALL FIELD LABOR AS REQUIRED TO OBTAIN ALL DATA NECESSARY TO CONDUCT B. ELECTRICAL SERVICE CONNECTIONS: COORDINATE WITH UTILITY COMPANIES AND THE STUDIES SPECIFIED HEREIN. F. SUBMIT STUDIES FOR REVIEW BEFORE SUBMITTING THE SYSTEM OVERCURRENT

PROTECTIVE DEVICE AND POWER DISTRIBUTION EQUIPMENT SUBMITTALS. SUBMIT STUDY REPORT FOR REVIEW PRIOR TO RECEIVING FINAL APPROVAL OF THE OVERCURRENT ROTECTIVE DEVICE AND DISTRIBUTION EQUIPMENT SUBMITTALS.

G. WHERE FORMAL COMPLETION OF STUDIES WILL CAUSE A DELAY IN THE ORDERING AND MANUFACTURING OF OVERCURRENT PROTECTIVE DEVICES AND POWER DISTRIBUTION C EQUIPMENT, OBTAIN APPROVAL FROM ENGINEER FOR PRELIMINARY SUBMITTAL OF SUFFICIENT STUDY DATA TO ENSURE THAT THE SELECTION OF DEVICES AND ASSOCIATED CHARACTERISTICS IS SATISFACTORY AND IN COMPLIANCE WITH THE RESULTS OF THE D. METER SOCKETS: COMPLY WITH REQUIREMENTS OF ELECTRICAL-POWER UTILITY STUDIES BEING PERFORMED.

SHORT CIRCUIT STUDY

A. PROVIDE A COMPUTER-BASED, SHORT CIRCUIT STUDY TO DETERMINE THE MINIMUM INTERRUPTING CAPACITY OF CIRCUIT PROTECTIVE DEVICES. B. FOR NEW EQUIPMENT, USE CHARACTERISTICS SUBMITTED UNDER THE PROVISIONS OF

ACTION SUBMITTALS AND INFORMATION SUBMITTALS FOR THIS PROJECT. A. PROVIDE FIRE STOPPING FOR PENETRATIONS BY CONDUIT OR CABLES AND OTHER

REMAIN, OBTAIN REQUIRED ELECTRICAL DISTRIBUTION SYSTEM DATA BY FIELD INVESTIGATION AND SURVEYS, CONDUCTED BY QUALIFIED TECHNICIANS AND ENGINEERS THE QUALIFICATIONS OF TECHNICIANS AND ENGINEERS SHALL BE QUALIFIED AS DEFINED B. FIRESTOP SYSTEM INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF ASTM E BY NFPA 70E. D. GATHER AND TABULATE ALL REQUIRED DATA TO SUPPORT THE SHORT-CIRCUIT STUDY

REQUIRED TO BE ACQUIRED IN THE FIELD. NECESSARILY LIMITED TO, GEOTECHNICAL, LANDSCAPE, CIVIL, ARCHITECTURAL, E. BEGIN SHORT-CIRCUIT CURRENT ANALYSIS AT THE SERVICE, EXTENDING DOWN TO THE A. PROVIDE SEISMIC RESTRAINT FOR ELECTRICAL WORK AND SYSTEMS AND EQUIPMENT IN

> SYSTEM OVERCURRENT PROTECTIVE DEVICES AS FOLLOWS: TO NORMAL SYSTEM LOW-VOLTAGE LOAD BUSES WHERE FAULT CURRENT IS 10 KA

A. PROVIDE A COMPUTER-BASED, ARC-FLASH HAZARD STUDY TO DETERMINE THE 3. PRIOR TO ROUGH-IN, CONTRACTOR SHALL COORDINATE ALL DEVICE LOCATIONS ARC-FLASH HAZARD DISTANCE AND THE INCIDENT ENERGY TO WHICH PERSONNEL COULD A. CORE-DRILL OR SAW-CUT EXISTING FLOORS, WALLS, ROOF, ETC., AS REQUIRED FOR THE WITH THE ARCHITECTURAL WALL ELEVATIONS AND THE FINAL, APPROVED FOOD

BE EXPOSED DURING WORK ON OR NEAR EXISTING AND NEW ELECTRICAL EQUIPMENT.

B. ELECTRICAL SURVEY DATA: GATHER AND TABULATE ALL REQUIRED INPUT DATA TO THE AMOUNT OF DETAIL THAT IS REQUIRED TO BE ACQUIRED IN THE FIELD.

ACTION SUBMITTALS AND INFORMATION SUBMITTALS FOR THIS PROJECT. D. FOR EXISTING EQUIPMENT, WHETHER OR NOT RELOCATED, OBTAIN REQUIRED

ELECTRICAL DISTRIBUTION SYSTEM DATA BY FIELD INVESTIGATION AND SURVEYS, GROUNDING CONDUCTED BY QUALIFIED TECHNICIANS AND ENGINEERS. E. HAZARD LABELS SHALL HAVE AN ORANGE HEADER WITH THE WORDING, "WARNING, APPLICABLE N.E.C. REQUIREMENTS.

DIRECTLY FROM THE ARC-FLASH HAZARD ANALYSIS:

A. PROVIDE ELECTRICAL SYSTEM AND EQUIPMENT GROUNDING IN ACCORDANCE WITH ARC-FLASH HAZARD," AND SHALL INCLUDE THE FOLLOWING INFORMATION TAKEN B. PROVIDE AN INSULATED EQUIPMENT GROUND CONDUCTOR WITHIN ALL FEEDERS AND

BRANCH CIRCUITS

C. PROVIDE AN ISOLATED GROUND CONDUCTOR IN ADDITION TO THE EQUIPMENT GROUNDING CONDUCTOR IN SELECT BRANCH CIRCUITS AS NOTED ON THE DRAWINGS.

D. PROVIDE A #6 AWG GREEN INSULATED GROUNDING CONDUCTOR FROM THE GROUND BAR AT TELEPHONE TERMINAL BOARD TO THE ELECTRICAL SERVICE GROUND.

E. PROVIDE A COPPER GROUNDING BAR AT THE TELEPHONE TERMINAL BACKBOARD. GROUNDING BAR SHALL BE 1/4 INCH X 4 INCHES X 12 INCHES, PRE-DRILLED FOR CONDUCTOR TERMINATIONS, WITH NON-METALLIC STAND-OFF BRACKETS WITH INSULATORS. CHATSWORTH PRODUCTS 10622-012 OR APPROVED EQUAL.

ARC FLASH HAZARD WARNING LABELS SHALL BE A 3.5-BY-5-INCH THERMAL TRANSFER EQUIPMENT IDENTIFICATION

LABEL OF HIGH-ADHESION POLYESTER FOR EACH WORK LOCATION INCLUDED IN THE A. PROVIDE EQUIPMENT LABELS ON PANELBOARDS, DISCONNECT SWITCHES, CONTACTORS, CONTROLS, ETC. EQUIPMENT LABELS SHALL BE ENGRAVED PHENOLIC RESIN NAMEPLATES ATTACHED TO ENCLOSURE WITH MECHANICAL FASTENERS. SELF-ADHESIVE NAMEPLATES ARE NOT ACCEPTABLE. LETTERING SHALL BE 1/2" HIGH, BLACK TEXT ON WHITE BACKGROUND

> B. THE COVERS OF ALL OUTLET AND JUNCTION BOXES INSTALLED ABOVE CEILINGS AND INSTALLED EXPOSED IN UNFINISHED SPACES SHALL BE LABELED TO IDENTIFY THE SERVING PANEL, VOLTAGE, PHASE AND CIRCUIT NUMBERS CONTAINED WITHIN THE BOX. LABEL SHALL BE LEGIBLY HANDWRITTEN WITH BLACK, FELT TIP PERMANENT MARKER.

> C. THE COVER PLATES OF ALL WIRING DEVICES SHALL BE LABELED TO IDENTIFY THE SERVING PANEL AND THE CIRCUITS SERVING THE DEVICE. LABELS SHALL BE MACHINE PRINTED, BLACK TEXT ON A CLEAR, SELF ADHESIVE LABEL.

CONDUIT AND FITTINGS

A. ALL INTERIOR AND EXTERIOR CONDUITS SHALL BE INSTALLED AND SUPPORTED IN A. PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL COORDINATE THE WORK OF ACCORDANCE WITH N.E.C. REQUIREMENTS.

THIS CONTRACT WITH THE LANDLORD'S AUTHORIZED REPRESENTATIVE AND AUTHORIZED REPRESENTATIVES OF EACH SERVING UTILITY THAT WILL PROVIDE SERVICE TO THIS SITE, B. MINIMUM CONDUIT SIZE SHALL BE 3/4" TRADE SIZE. SWITCH LEGS SHALL BE 1/2" TRADE INCLUDING BUT NOT NECESSARILY LIMITED TO, ELECTRIC, TELEPHONE AND SIZE.

C. WITHIN INTERIOR FINISHED AREAS, ALL CONDUIT SHALL BE INSTALLED CONCEALED B. CONTRACTOR SHALL MEET WITH AUTHORIZED REPRESENTATIVES OF THE LANDLORD AND WITHIN NEW AND EXISTING WALLS AND ABOVE NEW AND EXISTING CEILINGS. EACH UTILITY TO DISCUSS UTILITY COMPANY SCOPE OF WORK, CONTRACTOR SCOPE OF WORK, POINT OF SERVICE PICK-UP, DETAILS REGARDING SYSTEM INTERFACE, UTILITY D. CONDUIT INSTALLED WITHIN THE INTERIOR OF THE BUILDING SHALL BE GALVANIZED ELECTRICAL METALLIC TUBING (EMT). CONDUIT FITTINGS FOR INDOOR EMT CONDUITS

> E. EMT SHALL BE USED FOR INTERIOR FEEDERS AND BRANCH CIRCUITS INSTALLED CONCEALED ABOVE CEILINGS OR CONCEALED WITHIN EXISTING AND NEW INTERIOR

> F. CONDUITS INSTALLED EXPOSED ON THE EXTERIOR OF THE BUILDING SHALL BE GALVANIZED RIGID STEEL. FITTINGS SHALL BE THREADED TYPE.

G. CONDUITS INSTALLED UNDER SLAB ON GRADE CONSTRUCTION SHALL BE RIGID NON-METALLIC (RNC), SCHEDULE 40 PVC. RNC COMPLYING WITH NEMA TC 2 AND UL 651 EQUIPMENT, DUCTS, OPENINGS AND SPECIAL ARCHITECTURAL TREATMENTS IN ORDER UNLESS OTHERWISE INDICATED. FITTINGS FOR RIGID NON-METALLIC CONDUIT SHALL

> H. PROVIDE CONDUIT EXPANSION FITTINGS IN ALL CONDUIT RUNS THAT EXTEND ACROSS BUILDING EXPANSION JOINTS AND WHERE MOVEMENT MAY BE ENCOUNTERED.

K. PROVIDE FLEXIBLE METAL CONDUIT FOR CONNECTIONS TO VIBRATING EQUIPMENT. COORDINATE THE NEMA CONFIGURATION OF THE RECEPTACLE TO BE PROVIDED WITH

EQUIPMENT TO BE INSTALLED. PROVIDE RECEPTACLES HAVING A NEMA CONFIGURATION L. PROVIDE LIQUID-TIGHT FLEXIBLE METAL CONDUIT FOR CONNECTIONS TO VIBRATING EQUIPMENT IN WET OR OUTDOOR LOCATIONS. MAXIMUM CONDUIT LENGTH SHALL BE

> M. PROVIDE FLEXIBLE METAL CONDUIT FOR FINAL CONNECTIONS TO RECESSED LIGHT FIXTURES (FIXTURE WHIPS). MAXIMUM CONDUIT LENGTH SHALL BE 72 INCHES.

N. PROVIDE LIQUID-TIGHT FLEXIBLE METAL CONDUIT FOR FINAL ELECTRICAL CONNECTIONS TO FOOD SERVICE EQUIPMENT. A. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED TEMPORARY POWER AND LIGHTING TO ALLOW ALL CONTRACTORS AND SUB-CONTRACTORS TO PERFORM THE WORK OF THEIR

EQUIPMENT CURB. COORDINATE ELECTRICAL WORK WITH MECHANICAL EQUIPMENT B. PRIOR TO THE SUBMISSION OF A BID PROPOSAL, THE CONTRACTOR SHALL CONTACT THE GENERAL CONTRACTOR TO COORDINATE THE TYPE OF EQUIPMENT TO BE UTILIZED

> P. PROVIDE CONDUIT SEALING FITTINGS IN ALL CONDUITS THAT EXTEND FROM NON-REFRIGERATED SPACES TO REFRIGERATED SPACES.

Q. ALL CONDUITS INSTALLED IN ASSOCIATION WITH THE WALK-IN COOLER FREEZER SHALL BE A. COORDINATE ELECTRICAL EQUIPMENT INSTALLATION WITH OTHER BUILDING INSTALLED IN ACCORDANCE WITH THE WALK-IN MANUFACTURERS RECOMMENDATIONS AND REQUIREMENTS. COORDINATE ALL CONDUIT INSTALLATION WITH WALK-IN

> R. ACCEPTABLE MANUFACTURERS FOR GALVANIZED RIGID CONDUIT, EMT, FLEXIBLE METAL CONDUITS AND LIQUID-TIGHT FLEXIBLE METAL CONDUITS SHALL BE ALLIED, REPUBLIC, WHEATLAND, ELECTRI-FLEX AND ANACONDA.

WITHOUT LIMITATION, WORK COVERED BY ADDENDA, FIELD WORK ORDERS, CHANGE

SHALL BE CAST METAL, COMPRESSION TYPE.

COMPLY WITH NEMA TC 3; MATCH TO CONDUIT TYPE AND MATERIAL

APPROVED EQUAL.

MAXIMUM CONDUIT LENGTH SHALL BE 36 INCHES.

O. CONDUITS THAT EXTEND UP TO THE ROOF LEVEL TO SERVE ROOF MOUNTED MECHANICAL EQUIPMENT INSTALLED ON A CURB SHALL BE ROUTED WITHIN THE

S. ACCEPTABLE MANUFACTURERS FOR CONDUIT FITTINGS SHALL BE THOMAS AND BETTS OR



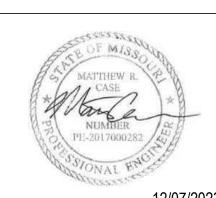
St. Louis, MO 63026 F 636.349.1730 CERTIFICATE OF AUTHORITY NO. 001498

4 Client Comments 12/07/2023

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FOR PERMI

Client Approval

Drawn by

Checked by

ELECTRICAL SPECIFICATIONS

Project#

	1
а	CONDUCTORS
	A. ALL CONDUCTORS SHA B. CONDUCTORS #12 AN
_	STRANDED.
	C. THE USE OF ALUMINU D. EXPOSED, INTERIOR FE
b	E. FEEDERS INSTALLED C SINGLE CONDUCTORS
	F. FEEDERS INSTALLED UNDERGROUND: TYPE
	G. EXPOSED, INTERIOR, CONDUIT.
	H. BRANCH CIRCUITS CON TYPE THHN-THWN, SIN
С	I. BRANCH CIRCUITS (
_	J. ACCEPTABLE MANUFA
	ANACONDA, ROME, SO K. CLASS 1 CONTROL CIRO
d	L. CLASS 2 CONTROL CIF BUILDING FINISHES.
	M. THE USE OF NON-MET OR BX) IS NOT ACCEPT
_	N. WIRE CONNECTORS S THOMAS AND BETTS L
	O. PROVIDE #10 AWG CO
е	P. SIZE OF CONDUCTORS
_	GAGE (AWG - BROWN Q. TYPE MC CABLE: 600V
	APPLICABLE), AND 15 INTERLOCKED ARMOR METHOD 1, WITH GRE
f	R. INSTALL ALL WIRING SPECIFIED OR INDICA
	INDICATED, SPECIFIED S. SUPPORT ALL CONDUCTION
	NFPA-70, BY INSTALLIN WIRE-MESH SAFETY GI
	T. INSTALL ALL CONDUCTURE SPLICES. SPLICE OR TA
g	SOLDERLESS CONNEC CONTROL WIRING, AN AND JOINTS AS REQUI
_	U. ALL MATERIALS USE
	PROPERLY SIZED, AND INSTRECOMMENDATIONS,
h	V. WHERE WIRING IS II "FUTURE" OR "BY OTH
	FOOT "PIGTAIL" AT TH
_	TYPE MC CABLE MAY ON
	A. IN LIEU OF FLEXIBLE CEILINGS TO JUNCTION
j	CEILING. PROVIDE CAI EACH LIGHT FIXTURE V
_	EXCEEDING 6' FEE IN U B. FOR VERTICAL DROPS I
	C. DO NOT USE MC CABL D1. HOMERUNS TO P
k	D2. WHERE EXPOSED D3. WHERE EXPOSED
	D4. HAZARDOUS LOC D5. WET LOCATIONS.
_	D6. WHEN RESTRICT THE LOCAL AHJ, OWI
	D. PROPERLY IDENTIFY AI WITH VINYL STICK-ON
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	INDICATED AS LARGER F. PROVIDE AN EQUIP
m	APPLICABLE, IN ALL BF 70 TABLES 250.66 OR DRAWINGS.
	G. VOLTAGE DROP IN BRA
_	CONDUCTOR COLOR COL
	A. PROVIDE COLOR COD CIRCUITS AND USED A:
n	B. COLOR CODING FOR CODED THERMOPLAST
_	C. COLOR CODING FOR C ADHESIVE TAPE OF TH
	D. 120/208V: PHASE EQUIPMENT GROUND
•	YELLOW MARKINGS. BOXES AND FITTINGS
р	A. ALL OUTLET BOXES S

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	CONDUCTOR	25			
a		UCTORS SHALL B	E SOFT DRAWN	N, ANNEALED	COPPER, #12 AV
	B. CONDUCT STRANDEI	ORS #12 AND # D.	‡10 AWG SHA	LL BE SOLID;	#8 AWG AND
		OF ALUMINUM CO			
	E. FEEDERS	INTERIOR FEEDE INSTALLED CONC ONDUCTORS IN C	CEALED IN CEIL	•	
	F. FEEDERS	INSTALLED CO	NCEALED IN		
	G. EXPOSED, CONDUIT.	INTERIOR, BRAI	NCH CIRCUITS:	TYPE THHN	N-THWN, SINGL
		CIRCUITS CONCEA N-THWN, SINGLE			
	TYPE THH	CIRCUITS CON N-THWN, SINGLE	CONDUCTORS	IN CONDUIT.	
	ANACONE	BLE MANUFACTU DA, ROME, SOUTH	HWIRE.		
		ONTROL CIRCUIT		•	
	M. THE USE (OF NON-METALLI NOT ACCEPTABLE		ABLE (TYPE N	M) AND ARMOI
	N. WIRE COI	NNECTORS SHAL	L BE EQUAL T		OCK FOR #8 A
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	APPLICAB INTERLOC	CABLE: 600V, UN LE), AND 1569, KED ARMOR; TH 1, WITH GREEN II	NFPA 70 ART HN- OR XHHW	TICLE 330; AI /-INSULATED	LUMINUM OR CONDUCTORS;
	SPECIFIED	ALL WIRING IN OR INDICATED, D, SPECIFIED AS A	FOR LOW-VO	LTAGE WIRIN	
-	NFPA-70,	ALL CONDUCTOR BY INSTALLING C SH SAFETY GRIPS.	ABLE SUPPORT		
	SPLICES. SOLDERLE CONTROL	ILL CONDUCTORS SPLICE OR TAP C SS CONNECTOR WIRING, AND KE TS AS REQUIRED	ONLY IN APPRO S, OR CRIMP EP TO THE MIN	VED BOXES A	AND ENCLOSURI RS AND TERM
	PROPERLY INVOLVED	ERIALS USED T SIZED, AND UL D, AND INSTALL ENDATIONS, USIN	. LISTED FOR [*] ED IN STRICT	THE SPECIFIC ACCORDAN	APPLICATION CE WITH THE
	"FUTURE"	VIRING IS INDIC OR "BY OTHER I	DIVISION, TRAI	DES, OR CONT	TRACTS", LEAVE
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-		ICAL DROPS IN ST ISE MC CABLE FO		ING:	
	D1. HOM D2. WHE D3. WHE	MERUNS TO PANE ERE EXPOSED TO ERE EXPOSED TO	LBOARDS. VIEW. DAMAGE.		
	D5. WET	ARDOUS LOCATIO LOCATIONS. EN RESTRICTED O			HEN SDECIEICAI
1	THE LOC	CAL AHJ, OWNER ('IDENTIFY ALL TE	OR BOTH.	•	
	WITH VIN PROPOSEI	IYL STICK-ON MA D IDENTIFYING NI	ARKERS OR EQ UMBERS FOR R	UIVALENT. PF EVIEW PRIOR	ROVIDE ENGINE TO INSTALLING
	APPLICAB ACCORDA	AN EQUIPMEN LE, IN ALL FE NCE WITH NFP, D AS LARGER ON	EDER AND 1 A 70 TABLES	NON-LIGHTIN 250.66 OR	G BRANCH C
	F. PROVIDE APPLICAB	AN EQUIPMEN LE, IN ALL BRANC	IT-GROUNDING CH CIRCUITS AI	CONDUCTO	SIZED IN ACCOR
	DRAWING	S 250.66 OR 250 S. DROP IN BRANCH	·	,	
		R COLOR CODING		I LACE!	J. LNCLINI.
	A. PROVIDE	COLOR CODING COLOR CODING AND USED AS A B	- SYSTEM AS L		
	B. COLOR CO	DING FOR COND	UCTOR #12 AV	VG THROUGH	#6 AWG SHALL

SOFT DRAWN, ANNEALED COPPER, #12 AWG MINIMUM 10 AWG SHALL BE SOLID; #8 AWG AND LARGER SHALL BE NDUCTORS IS NOT ACCEPTABLE. S: TYPE THHN-THWN, SINGLE CONDUCTORS IN CONDUIT. EALED IN CEILINGS, WALLS, PARTITIONS: TYPE THHN-THWN, ICEALED IN CONCRETE. BELOW SLABS-ON-GRADE AND N-THWN, SINGLE CONDUCTORS IN PVC CONDUIT. ICH CIRCUITS: TYPE THHN-THWN, SINGLE CONDUCTORS IN ED IN EXISTING AND NEW CEILINGS, WALLS, AND PARTITIONS CONDUCTORS IN CONDUIT. EALED BELOW SLABS-ON-GRADE, AND UNDERGROUND: CONDUCTORS IN CONDUIT. AT SELECT CIRCUIT BREAKERS. RERS FOR CONDUCTORS: GENERAL CABLE COMPANY, CAROL, C. CIRCUIT BREAKERS SHALL HAVE A MINIMUM AMPERE INTERRUPTING CAPACITY (AIC) OF 22,000 AMPERES FOR 120/208V SYSTEMS. TYPE THHN-THWN, IN CONDUIT. POWER-LIMITED PLENUM RATED CABLE, CONCEALED IN POWER SYSTEM STUDY. -SHEATHED CABLE (TYPE NM) AND ARMORED CABLE (TYPE AC BE EQUAL TO SCOTCH LOCK FOR #8 AWG AND SMALLER, F. PANELBOARDS SHALL BE EQUIPPED WITH FLUSH TYPE LOCK AND CATCH. ALL LOCKS TITE FOR #6 AND LARGER. SHALL BE KEYED ALIKE, WITH TWO KEYS SUPPLIED WITH EACH LOCK. CTORS FOR BRANCH CIRCUITS HAVING A CONDUCTOR LENGTH $_{
m G.}$ CIRCUIT BREAKERS SERVING LIGHTING CIRCUITS SHALL BE RATED FOR SWITCH DUTY. CIRCUIT BREAKERS SERVING HVAC EQUIPMENT SHALL BE HACR RATED. CABLES INDICATED OR SPECIFIED ARE IN AMERICAN WIRE ACKETED: ANSI E119 AND E814, UL STANDARDS 44 OR 83 (AS J. PROVIDE NEW CIRCUIT DIRECTORIES WITHIN NEW AND EXISTING PANELS TO REFLECT THE NFPA 70 ARTICLE 330; ALUMINUM OR GALVANIZED STEEL WORK OF THIS CONTRACT. DIRECTORY SHALL BE TYPEWRITTEN OR COMPUTER IN- OR XHHW-INSULATED CONDUCTORS; COLOR CODE: ICEA GENERATED. HANDWRITTEN CIRCUIT DIRECTORIES ARE NOT ACCEPTABLE. SULATED GROUNDING CONDUCTOR. APPROVED RACEWAY AND ENCLOSURES, EXCEPT WHERE WITHIN THE CIRCUIT DIRECTORIES. FOR LOW-VOLTAGE WIRING OR, WHERE TYPE MC CABLE IS CCEPTABLE, OR BOTH. S AND CABLES IN VERTICAL INSTALLATIONS, AS REQUIRED BY REQUIREMENT: ABLE SUPPORTS OR PLUG-TYPE CONDUIT RISER SUPPORTS, OR AND CABLE IN RACEWAYS CONTINUOUS WITHOUT TAPS OR NLY IN APPROVED BOXES AND ENCLOSURES WITH APPROVED SELF ADHESIVE TAPE. INSTALL LABEL ADJACENT TO PANELBOARDS ENGRAVED OR CRIMP CONNECTORS AND TERMINAL BLOCKS FOR NAMEPLATE. EP TO THE MINIMUM REQUIRED. INSULATE ALL SPLICES, TAPS, TERMINATE, SPLICE OR TAP CONDUCTORS: DESIGNED, TO BE PERFORMED. LISTED FOR THE SPECIFIC APPLICATION AND CONDUCTORS D IN STRICT ACCORDANCE WITH THE MANUFACTURER'S O. ALL "SPARE" CIRCUIT BREAKERS SHALL BE SET TO THE "OFF" POSITION. THE MANUFACTURER'S RECOMMENDED TOOLS. STUBBED UP TO ABOVE ACCESSIBLE CEILING. ATED AS INSTALLED, BUT THE CONNECTION IS INDICATED IVISION, TRADES, OR CONTRACTS", LEAVE A MINIMUM OF 3' (, TAPE THE ENDS OF CONDUCTORS, AND COVER THE BOX. CIRCUITS SHALL NOT EXCEED 3 PERCENT. ON CIRCUIT BREAKERS. DUIT AND WIRING FROM LIGHT FIXTURES IN ACCESSIBLE SWITCHES BOXES (ATTACHED TO BUILDING STRUCTURE) ABOVE THE VHIPS OF SUFFICIENT LENGTHS TO ALLOW FOR RELOCATING IN A 5' FOOT RADIUS OF ITS INSTALLED LOCATION, BUT NOT

PPORTED LENGTHS.

JD WALLS. THE FOLLOWING: BOARDS.

THERWISE ABOVE, AND WHEN SPECIFICALLY DISALLOWED BY **RECEPTACLES** RKERS OR EQUIVALENT. PROVIDE ENGINEER WITH A LIST OF

IMBERS FOR REVIEW PRIOR TO INSTALLING MARKERS. GROUNDING CONDUCTOR, OR BONDING JUMPER, AS 70 TABLES 250.66 OR 250.122, AS APPLICABLE, UNLESS

INCHES DEEP.

- SYSTEM AS LISTED BELOW FOR ALL FEEDERS AND BRANCH SIS FOR BALANCING LOAD ON PANELS.
- TIC INSULATION OF THE COLORS SPECIFIED HEREIN. CONDUCTORS #8 AWG AND LARGER SHALL BE FIELD APPLIED SELF
- IE COLOR SPECIFIED HEREIN FOR THE PARTICULAR PHASE.
- A. ALL OUTLET BOXES SHALL BE UL LISTED AND LABELED FOR USE IN THE SPACE THEY DEVICE THAT THE PLATE WILL BE INSTALLED ON. OCCUPY AND THE PURPOSE THEY SERVE. B. SHEET METAL OUTLET AND DEVICE BOXES FOR DRY, INTERIOR APPLICATIONS: COMPLY
- WITH NEMA OS 1 AND UL 514A. C. CAST-METAL OUTLET AND DEVICE BOXES FOR EXTERIOR APPLICATIONS: COMPLY WITH NEMA FB 1, FERROUS ALLOY, TYPE FS OR FD, WITH GASKETED COVER.
- D. OUTLET BOXES INSTALLED WITHIN FIRE RATED ASSEMBLIES SHALL HAVE A FIRE RATING A. DEVICES AND EQUIPMENT SHALL BE INSTALLED AT THE MOUNTING HEIGHTS NOTED EQUAL TO OR GREATER THAN THE RATING OF THE WALL IN WHICH IT IS INSTALLED.
- E. OUTLET BOXES SHALL BE 4 INCHES SQUARE BY 2 1/8 INCHES DEEP , EXCEPT FOR 2"
- PARTITIONS SHALL BE AT LEAST 1-1/2" DEEP. OUTLET BOXES FOR VOICE AND DATA DEVICES SHALL BE 4 11/16 INCHES SQUARE BY 2 1/8
- G. ALL PULLBOXES SHALL BE CONSTRUCTED OF GALVANIZED STEEL, OF METAL GAUGE AND PHYSICAL SIZE AS REQUIRED BY THE N.E.C. FOR THE NUMBER AND SIZE OF CONDUITS AND CONDUCTORS ASSOCIATED WITH THE PULLBOX.

- H. FIXTURE OUTLET BOXES IN/OR ON CEILINGS SHALL NOT BE LESS THAN 1-1/2" DEEP OF LESS THAN 4" SQUARE. ALL OUTLET BOXES INTENDED TO SUPPORT FIXTURES SHALL BE EQUIPPED WITH 3/8" FIXTURE STUDS FASTENED THROUGH THE BOTTOM OF THE BOX
- NEW OUTLET BOXES INSTALLED WITHIN NEW OR EXISTING STUD WALL CONSTRUCTION SHALL BE MOUNTED TO A STUD OR MOUNTED IN A BRACKET THAT SPANS STUD-TO-STUD, CADDY TSGB BRACKET OR APPROVED EQUAL

J. ACCEPTABLE MANUFACTURERS FOR BOXES: APPLETON, STEEL CITY, RACO.

A. PANELBOARDS SHALL BE LIGHTING AND APPLIANCE TYPE, DEAD FRONT, SAFETY TYPE, B. DISCONNECT SWITCHES SHALL HAVE NEMA 1 ENCLOSURES FOR DRY, INDOOR OPERATION AND MAINTENANCE MANUALS

FURNISHED WITH BRANCH CIRCUIT BREAKER OVERCURRENT PROTECTIVE DEVICES, COPPER PHASE, NEUTRAL AND EQUIPMENT GROUNDING BUS BARS, MAIN CIRCUIT BREAKER OR MAIN LUG ONLY AS NOTED ON THE DRAWINGS. MAIN BUSES AND CONNECTORS SHALL BE HARD DRAWN COPPER OF 98% CONDUCTIVITY, LOAD CENTERS

3. CIRCUIT BREAKERS SHALL BE MOLDED CASE, BOLT-ON TYPE SUITABLE FOR VOLTAGE AND AMPERE RATINGS INDICATED ON DRAWINGS AND IN PANEL SCHEDULES. REFER TO THE PANEL SCHEDULES ON THE DRAWINGS FOR ADDITIONAL ACCESSORIES TO BE PROVIDED |

EXISTING AND NEW PANELS THAT ARE HIGHER THAN THE MINIMUM AIC RATINGS MOTORS RATED FOR 600 VOLTS AND LESS. SPECIFIED HEREIN, PROVIDE CIRCUIT BREAKERS IN THE PANELS THAT HAVE AIC RATINGS GREATER THAN THE AVAILABLE FAULT CURRENT AT THE PANEL AS DETERMINED BY THE B. FRACTIONAL HORSEPOWER MANUAL CONTROLLERS: "QUICK-MAKE, QUICK-BREAK"

- E. PROVIDE NEMA 1 ENCLOSURES FOR INTERIOR PANELS.
- I. ALL LUGS SHALL BE OF THE SOLDERLESS TYPE AND RATED AT A MINIMUM OF 75°C.
- K. UTILIZE FINAL, OWNER ASSIGNED ROOM NAMES AND NUMBERS TO IDENTIFY SPACES
- PANEL CIRCUITS SHALL BE CONFIGURED SUCH THAT THE LOAD IS DISTRUBUTED EVENLY ACROSS ALL THREE PHASES TO WITHIN 10% IN ACCORDANCE WITH N.E.C.
- M. ALL NEW AND EXISTING PANELBOARDS SHALL BE LABELED TO IDENTIFY THE AMOUNT OF C. CARTRIDGE FUSE APPLICATIONS: FAULT CURRENT AVAILABLE AT THE PANEL AS DETERMINED BY THE POWER SYSTEM STUDY TO BE PERFORMED. LABEL SHALL BE MACHINE PRINTED, BLACK TEXT ON CLEAR,
- N. ALL NEW AND EXISTING PANELBOARDS SHALL BE LABELED TO IDENTIFY THE ARC FLASH HAZARD CHARACTERISTICS AT THE PANEL AS DETERMINED BY THE POWER SYSTEM STUDY
- P. PROVIDE THREE (3) EMPTY 1 INCH CONDUITS FROM EACH FLUSH MOUNTED PANEL
- Q. ACCEPTABLE MANUFACTURERS FOR PANELBOARDS BY SCHNEIDER, ABB, SIEMENS OR
- R. BASIS OF DESIGN PRODUCT: SCHNEIDER TYPE NOOD WITH TYOE QO-VH (22,000 AIC) BOLT COMPLETE WITH HANGERS, PLASTER FRAMES, AND ALL OTHER NECESSARY ACCESSORIES
- A. TOGGLE SWITCHES SHALL BE SINGLE POLE, 3-WAY OR 4-WAY AS NOTED ON THE DRAWINGS, 20 AMPERES, 120/277 VOLT AC TYPE, SPECIFICATION GRADE WITH SCREW TERMINALS. HUBBELL 1221-X, 1223-X OR 1224-X OR APPROVED EQUIVALENT BY ONE OF E. THE CONTRACTOR SHALL PROVIDE LIGHTING CONTROL DEVICES (DIMMERS) THA ARE
- THE ADDITIONAL MANUFACTURERS SPECIFIED HEREIN. B. TOGGLE SWITCHES SHALL BE MOUNTED AT DOORS, INSTALLED ADJACENT TO THE TRIM ON THE STRIKING SIDE OF THE DOOR, REGARDLESS OF THE LOCATION INDICATED ON THE LIGHTING CONTROLS
- C. DEVICE COLOR SHALL BE AS SELECTED BY THE OWNER/ARCHITECT.
- D. ADDITIONAL ACCEPTABLE MANUFACTURERS FOR SWITCHES: LEGRAND, LEVITON.

- A. RECEPTACLES SHALL BE 20 AMP, 125 VOLT, 2-POLE, 3-WIRE, GROUNDING TYPE, NEMA RMINAL BLOCKS AND WIRE TERMINALS FOR CONTROL WIRING 5-20R WITH SCREW TERMINALS. HUBBELL 5362-W OR APPROVED EQUAL BY ONE OF THE ADDITIONAL MANUFACTURERS SPECIFIED HEREIN.
- B. GFI RECEPTACLES SHALL BE 20 AMP, 125 VOLT, 2-POLE, 3-WIRE, GROUNDING TYPE, FEED THROUGH TYPE CAPABLE OF PROTECTING DOWNSTREAM RECEPTACLES ON A SINGLE EDER AND NON-LIGHTING BRANCH CIRCUITS, SIZED IN CIRCUIT, SOLID STATE GROUND FAULT SENSING AND SIGNALING, 5 MILLIAMP TRIP LEVEL, C. OUTLET BOXES FOR TELEPHONE AND DATA DEVICES SHALL CONSIST OF 4 11/16 IN NEMA 5-20R WITH SCREW TERMINALS. HUBBELL GF5362-X OR APPREOVED EQUAL BY ONE OF THE ADDITIONAL MANUFACTURERS SPECIFIED HEREIN.
- GROUNDING CONDUCTOR, OR BONDING JUMPER, AS C. ISOLATED GROUND RECEPTACLES SHALL BE ORANGE, 20 AMP, 125 VOLT, 2-POLE, 3-WIRE, CIRCUITS AND FEEDERS, SIZED IN ACCORDANCE WITH NFPA GROUNDING TYPE, NEMA 5-20R WITH SCREW TERMINALS. HUBBELL IG-5362-W OR 122, AS APPLICABLE, UNLESS INDICATED AS LARGER ON THE APPREOVED EQUAL BY ONE OF THE ADDITIONAL MANUFACTURERS SPECIFIED HEREIN.
 - D. PROVIDE SPECIAL PURPOSE RECEPTACLES HAVING NEMA CONFIGURATIONS THAT MATE AND MATCH THE NEMA PLUG CONFIGURATION PROVIDED WITH THE EQUIPMENT TO BE
 - E. COVER PLATES FOR EXTERIOR RECEPTACLES SHALL BE RATED FOR "WEATHERPROOF WHILE IN USE".
 - F. DEVICE COLOR SHALL BE AS SELECTED BY THE OWNER/ARCHITECT
- CONDUCTOR #12 AWG THROUGH #6 AWG SHALL CONSIST OF COLOR G. ADDITIONAL ACCEPTABLE MANUFACTURERS FOR SWITCHES AND RECEPTACLES: LEGRAND, LEVITON.

COVER PLATES FOR TOGGLE SWITCHES AND RECEPTACLES

- A--BLACK, PHASE B--RED, PHASE C--BLUE, NEUTRAL--WHITE, A. COVER PLATES WITHIN NON-FOOD SERVICE AREAS SHALL BE NYLON, OF CONFIGURATION D--GREEN, ISOLATED GROUND--GREEN WITH DISTINCTIVE WHITE OR TO MATCH THE WIRING DEVICE. B. COVER PLATES WITHIN THE FOOD SERVICE AREA SHALL BE STAINLESS STEEL WTH
 - STAINLESS STEEL HARDWARE, UNLESS OTHERWISE NOTED. C. CONFIGURATION AND COLOR OF COVER PLATE SHALL MATCH THAT OF THE WIRNG
 - D. COVER PLATE COLOR SHALL BE AS SELECTED BY THE OWNER/ARCHITECT. E. ADDITIONAL ACCEPTABLE MANUFACTURERS FOR COVER PLATES: LEGRAND, LEVITON.

MOUNTING HEIGHTS FOR ELECTRICAL DEVICES AND EQUIPMENT

- BELOW UNLESS NOTED OTHERWISE ON THE DRAWINGS OR REQUIRED BY APPLICABLE I. REFER TO DETAILS ON MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
- 1. TOGGLE SWITCHES, WALL SWITCH OCCUPANCY SENSORS AND DIMMERS FOR TESTING LIGHTING CONTROL - TOP OF DEVICE 48" AFF
- 2. CONVENIENCE RECEPTACLES -TOP OF DEVICE 18" AFF

- APPROVED FOOD SERVICE SHOP DRAWINGS. 5. TELEPHONE AND DATA OUTLETS - TOP OF DEVICE 18" AFF OR AS REQUIRED BY THE
- ADJACENT CASEWORK
- 6. DISCONNECT SWITCHES TOP OF ENCLOSURE 66" AFF

7. PANELBOARDS - TOP OF ENCLOSURE 72" AFF

- A. DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE, UL LISTED AND LABELED, EQUIPPED WITH A LUG FOR TERMINATION OF THE EQUIPMENT GROUNDING CONDUCTOR.
- APPLICATIONS; NEMA 3R ENCLOSURES FOR OUTDOOR OR WET LOCATION APPLICATIONS. . DISCONNECT SWITCHES INSTALLED EXPOSED IN FOOR SERVICE AREAS SHALL BE NEMA 4X STAINLESS STEEL.
- IDENTIFY THE SERVING PANEL, CIRCUIT NUMBERS AND THE LOAD SERVED BY THE ACCEPTABLE MANUFACTURERS FOR DISCONNECT SWITCHES: SCHNEIDER, ABB, SIEMENS

- TOGGLE OR PUSH-BUTTON ACTION; PILOT LIGHT TO INDICATE "MOTOR RUNNING", MARKED TO SHOW WHETHER UNIT IS OFF, ON, OR TRIPPED.
- 1. CONFIGURATION: NON-REVERSING. 2. OVERLOAD RELAYS: INVERSE-TIME-CURRENT CHARACTERISTICS; NEMA ICS 2, CLASS 10 TRIPPING CHARACTERISTICS; HEATERS MATCHED TO NAMEPLATE FULL-LOAD CURRENT OF ACTUAL PROTECTED MOTOR; EXTERNAL RESET PUSH
- 3. FLUSH MOUNTED WITHIN FINISHED SPACES; SURFACE MOUNTED WITHIN
- UNFINISHED SPACES.

4. ACCEPTABLE MANUFACTURERS: SCHNEIDER, ABB, SIEMENS, EATON.

- A. PROVIDE CARTRIDGE FUSES RATED FOR 250 V AC AND 600 V AC AND LESS FOR USE AS
- B. COORDINATE FUSE RATINGS WITH UTILIZATION EQUIPMENT NAMEPLATE LIMITATIONS OF MAXIMUM FUSE SIZE AND WITH SYSTEM SHORT-CIRCUIT CURRENT LEVELS.

- FEEDERS, UP TO AND INCLUDING 600 AMPS: CLASS RK1, BUSSMANN LPN-RK-SP FOR 250 VOLTS, BUSSMANN LPS-RK-SP FOR 600 VOLTS.
- 2. CONTROL POWER TRANSFORMER (CPT) CIRCUITS: CLASS CC, TIME DELAY, CONTROL TRANSFORMER DUTY.
- 3. BASIS OF DESIGN FOR FUSES SHALL BE BUSSMANN. ADDITIONAL ACCEPTABLE FIRE ALARM WORK. MANUFACTURERS FOR SPECIFIED FUSES SHALL BE LITTLEFUSE AND MERSEN.

- A. ALL LIGHTING FIXTURES AND LIGHT SOURCES SHALL BE FURNISHED, INSTALLED AND CONNECTED BY THE ELECTRICAL CONTRACTOR, UNLESS NOTED OTHERWISE.
- THIS CONTRACTOR SHALL INSTALL LIGHTING FIXTURES AND LIGHT SOURCES AS INDICATED ON THE DRAWINGS AND AS SPECIFIED BELOW. PROVIDE LIGHTING FIXTURES
- C. LED DRIVERS SHALL BE SOLID STATE AND ACCEPT 120 THROUGH 277 VAC AT 60 HZ INPUT.
- D. THE LED LIGHT SOURCE SHALL BE FULLY DIMMABLE WITH USE OF COMPATIBLE DIMMER SWITCH DESIGNATED FOR LOW VOLTAGE LOADS.
- COMPATIBLE WITH LED DRIVER BEING PROVIDED WITH THE FIXTURE.

- DRAWINGS. VERIFY ALL DOOR SWINGS PRIOR TO INSTALLATION OF OUTLET BOXES FOR A. TIME SWITCHES, PHOTOCELLS AND CONTACTORS SHALL BE AS DETAILED ON DRAWINGS.
 - B. WALL SWITCH OCCUPANCY SENSORS SHALL BE WATT STOPPER WS-250 OR APPROVED EQUAL.

ROUGH-IN SYSTEM FOR VOICE AND DATA

- A. PROVIDE A ROUGH-IN SYSTEM AS SPECIFIED HEREIN FOR SERVICE TO THE OWNER'S VOICE AND DATA NETWORK.
- PROVIDE A PLYWOOD BACKBOARD FOR TERMINATION OF TELEPHONE SERVICE AND DISTRIBUTION COMPONENTS. PLYWOOD BACKBOARD SHALL BE 2' X 3' X 3/4", FIRE RATED, PAINTED WITH TWO (2) COATS OF LIGHT GRAY ENAMEL PAINT. MASK FIRE RATED LABEL TO PREVENT THE LABEL FROM BEING PAINTED OVER.
- SQUARE BY 2 1/8 INCH DEEP OUTLET BOXES WITH SINGLE DEVICE COVER. D. PROVIDE A 3" EMPTY CONDUIT WITH PULLSTRING FROM THE WALL MOUNTED PLYWOOD TELEPHONE TERMINAL BOARD IN THE TENANT SPACE TO THE LANDLORDS TELEPHONE DISTRIBUTION OR POINT OF SERVICE DELIVERY. PROVIDE A NYLON BUSHING ON EACH END OF CONDUIT FOR CABLE PROTECTION.
- ROUGH-IN FOR WIRING DROPS TO WALL MOUNTED VOICE AND DATA DEVICES SHALL BE INSTALLED WITHIN EMT CONDUIT, 1". PROVIDE A CONDUIT STUB FROM THE DEVICE BOX TO ABOVE ACCESSIBLE CEILING. PROVIDE A PLENUM RATED NYLON BUSHING ON THE END OF THE CONDUIT STUB FOR PROTECTION OF THE WIRING.
- F. PRIOR TO BEGINNING WORK, THIS CONTRACTOR SHALL FULLY COORDINATE HIS CONSTRUCTION OPERATIONS AND ALL TERMINATION LOCATIONS WITH AUTHORIZED REPRESENTATIVE OF THE TELEPHONE UTILITY COMPANY AND THE OWNER'S DATA NETWORK PROVIDER BY TIMELY NOTICE OR SCHEDULING OF SERVICE EQUIPMENT DATES, SERVICE MODIFICATION DATES AND NOTIFICATION OF REQUIRED OWNER AUTHORIZATIONS INVOLVING THE UTILITY COMPANY.

DUCT MOUNTED SMOKE DETECTORS

- E. PROVIDE A 120 VOLT POWER SOURCE TO ALL DUCT MOUNTED SMOKE DETECTORS INSTALLED WITHIN NEW AND EXISTING ROOF TOP UNITS.
- F. PROVIDE A DUCT MOUNTED SMOKE DETECTORS WITHIN NEW AND EXISTING MECHANICAL EQUIPMENT AS REQUIRED BY APPLICABLE CODES. FINAL ELECTRICAL CONNECTION AND ALL INTERLOCK WIRING BY THE ELECTRICAL CONTRACTOR.
- G. PROVIDE ALL INTERLOCK WIRING IN CONDUIT BETWEEN ALL DUCT DETECTORS SUCH THAT UPON DETECTING SMOKE IN ANY ONE DETECTOR, ALL ROOF TOP UNITS SHALL BE
- H. PROVIDE TEST/RESET SWITCH AND PIEZO ALERT SOUNDER AND REMOTE ANNUNCIATOR ALARM LED MOUNTED AS DIRECTED BY LOCATION AHJ. EC TO PROVIDE ALL REQUIRED INTERLOCK WIRING BETWEEN DUCT DETECTOR AND REMOTE SWITCH.

A. PROVIDE ALL TESTS AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION

- B. PROVIDE THE TESTS AS OUTLINED HEREINAFTER AND OTHER TESTS REQUIRED TO 3. CONVENIENCE RECEPTACLES AT COUNTERTOPS - BOTTOM OF DEVICE 44" AFF OR AS ESATBLISH THE ADEQUACY, QUALITY, SAFETY, COMPLETED STATUS AND SUITABLE OPERATION OF EACH SYSTEM.
- 4. RECEPTACLES AT FOOD SERVICE EQUIPMENT AS INDICATED ON THE FINAL, C. PROMPTLY CORRECT ANY FAILURES, DEFICIENCIES AND/OR DEFECTS REVEALED BY THESE

TESTS. AFTER CORRECTING FAILURES, DEFICIENCIES OF DEFECTS, CONDUCT NEW TESTING TO VERIFY THAT THE DEFICIENCY HAS BEEN RECTIFIED AND THE SYSTEM IS FUNCTIONING

- D. NEW AND EXISTING PANELBOARDS SHALL HAVE PHASE CURRENTS BALANCED TO WITHIN +/- 10% VARIATION BETWEEN AVERAGE PHASE CURRENT AND MEASURED INDIVIDUAL
- E. AN OPERATIONAL TEST OF THE EMERGENCY LIGHTING/EXIT SIGNAGE SYSTEM SHALL BE PERFORMED IN THE PRESENCE OF THE OWNER AND THE AUTHORITY HAVING JURISDICTION TO DEMONSTRATE PROPER OPERATION AND COMPLIANCE WITH APPLICABLE CODES AND SPECIFIED REQUIREMENTS.

- A. THIRTY (30) DAYS PRIOR TO SUBSTANTIAL COMPLETION, SUBMIT OPERATING AND MAINTENANCE MANUALS FOR EQUIPMENT TO ENGINEER FOR APPROVAL. INCLUDE ONE COPY OF EACH FINAL APPROVED SUBMITTAL FOR RECORD PURPOSES, INDICATING THE ACTUAL PRODUCT INSTALLED. INCLUDE SIGNIFICANT CHANGES IN THE PRODUCT D. ALL DISCONNECT SWITCHES SHALL BE EQUIPPED WITH AN ENGRAVED NAMEPLATE TO DELIVERED TO PROJECT SITE AND CHANGES IN MANUFACTURER'S WRITTEN INSTRUCTIONS FOR INSTALLATION.
 - B. PROVIDE COMPREHENSIVE CONTACT LIST INCLUDING CONTRACTOR AND SUBCONTRACTOR'S NAMES, ADDRESSES, TELEPHONE AND CONTACT PERSON FOR OWNER'S USE.

- D. WHERE THE POWER SYSTEM STUDY IDENTIFIES AVAILABLE FAULT CURRENT VALUES AT A. PROVIDE ENCLOSED MOTOR CONTROLLERS AS SPECIFIED HEREIN FOR CONTROL OF A. THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS, EQUIPMENT AND THE INSTALLATION TO BE FREE OF DEFECTS THAT MAY DEVELOP IN ANY PART OF THEIR WORK CAUSED BY FAULTY WORKMANSHIP, MATERIAL OR EQUIPMENT FAILURES, FOR A MINIMUM OF ONE (1) YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION OR FOR AS LONG AS NORMAL EQUIPMENT MANUFACTURER WARRANTIES ARE IN EFFECT FROM THE DATE OF OWNER ACCEPTANCE OF THE PROJECT, WHICHEVER IS LATER.
 - B. DURING THE ONE (1) YEAR WARRANTY PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE PREMISES CAUSED BY DEFECTS IN WORKMANSHIP OR DEFECTS IN THE WORK OR EQUIPMENT FURNISHED AND/OR INSTALLED UNDER THE WORK OF THE ELECTRICAL CONTRACT.

THE ELECTRICAL SCOPE OF WORK.

- A. FIRE ALARM SYSTEM WORK IS A DELEGATED DESIGN AND IS NOT INCLUDED AS PART OF
- B. FIRE ALARM SYSTEM WORK SHALL BE PROVIDED BY THE GENERAL CONTRACTOR AS A
- DELEGATED DESIGN. C. GENERAL CONTRACTOR (GC) SHALL BE RESPONSIBLE FOR RETAINING THE SERVICES OF A FIRE ALARM SYSTEM VENDOR/DESIGN PROFESSIONAL TO PREPARE THE FIRE ALARM
- AND THE AUTHORITY HAVING JURISDICTION. D. GC/VENDOR/DESIGN PROFESSIONAL SHALL BE RESPONSIBLE FOR VERIFYING ALL APPLICABLE CODE REQUIREMENTS AND ALL LOCAL FIRE ALARM SYSTEM REQUIREMENTS

SYSTEM DESIGN, DETAILS, CALCULATIONS, ETC. AS REQUIRED BY ALL APPLICABLE CODES

- WITH THE LOCAL AUTHORITY HAVING JURSIDICTION. E. GC/VENDOR/DESIGN PROFESSIONAL SHALL BE RESPONSIBLE FOR PROVIDING ALL REQUIRED SUBMITTAL DRAWINGS TO THE AUTHORITY HAVING JURISDICTION FOR
- F. GC/VENDOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS FOR THE

REVIEW AND APPROVAL PRIOR TO COMMENCING WORK.

ELECTRICAL SYMBOLS DESCRIPTION ABOVE COUNTER CEILING MOUNTED GC GENERAL CONTRACTOR **ELECTRICAL CONTRACTOR** MECHANICAL CONTRACTOR **WEATHERPROOF** NIGHT LIGHT (CONNECT TO UNSWITCHED LEG OF CIRCUIT NOTED) GROUND FAULT CURRENT INTERRUPTER PROTECTED DEVICE SHUNT TRIP CIRCUIT AFF ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE TELEPHONE TERMINAL BOARD FURNISH AND INSTALL COMPLETE **PROVIDE** TAMPER RESISTANT JUNCTION BOX, MOUNTING HEIGHT 20A, 1P, 125V, GROUNDING TYPE DOUBLE DUPLEX RECEPTACLE 20A, 1P, 125V, GFCI TYPE DUPLEX RECEPTACLE SPECIAL USE RECEPTACLE, COORDINATE WITH EQUIPMENT SUPPLIER

CEILING MOUNTED DAYLIGHT SENSOR SWITCH

PANELBOARD

CONDUIT RUN CONCEALED IN CEILING OR WALL. NUMBER OF HASH MARKS INDICATE NUMBER OF #12 WIRES WHEN MORE THAN TWO ARE REQUIRED UNLESS NOTED OTHERWISE. ALL CIRCUITS SHALL INCLUDE EQUIPMENT GROUND SIZED PER NEC. HASH MARK AHEAD OF NEUTRAL INDICATES UNSWITCHED LEG. CURLED

HASH MARK INDICATES DEDICATED GROUND WIRE REQUIRED. 12" ABOVE FINISHED FLOOR TO CENTERLINE

TYPE (SEE FIXTURE SCHEDULE) THE NUMBER '5' INDICATES THE CIRCUIT IN THE PANEL NOTED AND THE LOWER CASE LETTER 'a' INDICATES THE SWITCH LEG TO CONNECT THE FIXTURE TO.

LIGHTING FIXTURE SWITCHING DESIGNATION — LETTER 'F' INDICATES THE FIXTURE

PANELBOARD MULTI-COMPARTMENT FLOOR BOX - BOX SHALL BE STEEL, FULLY ADJUSTABLE

> AFTER THE POUR. CONDUIT INSTALLED BELOW FLOOR SLAB

20A, 1P, 125V, GROUNDING TYPE DUPLEX RECEPTACLE (+18" AFF UNO) CEILING MOUNTED EXHAUST FAN WITH MANUAL DISCONNECT DISCONNECT SWITCH: 30 AMP, NON-FUSED, 3 POLE LIGHT SWITCH LIGHT SWITCH (3 WAY) LIGHT SWITCH (4 WAY) WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR SWITCH AT 3'-6" AFF TO CENTERLINE (WATT STOPPER #DW100-WH OR EQUAL) (WATT STOPPER #DT-355 OR EQUAL) SMOKE/DUCT DETECTOR - COORDINATE WITH MECHANICAL CONTRACTOR/PLANS DIMMER SWITCH: LUTRON NOVA SERIES DIMMERS COMPATIBLE WITH LOW VOLTAGE LIGHTING FIXTURES AND RATED FOR LOAD NOTED IN PANEL SCHEDULE REFER TO LOADS AT PANELBOARD SCHEDULE. MOUNTING HEIGHT AS INDICATED COMMUNICATIONS JUNCTION BOX FOR DATA/COMM. DEVICE PLATE. EC TO ROUTE 3/4" CONDUIT WITH PULL STRING TO 6" ABOVE ACCESSIBLE CEILING AND BEND AT 90° TOWARDS TTB. EC TO PROVIDE PLASTIC BUSHING ON END OF CONDUIT.

St. Louis, MO 63026

F 636.349.1730 CERTIFICATE OF AUTHORITY NO. 001498

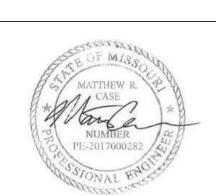
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4 Client Comments 12/07/2023

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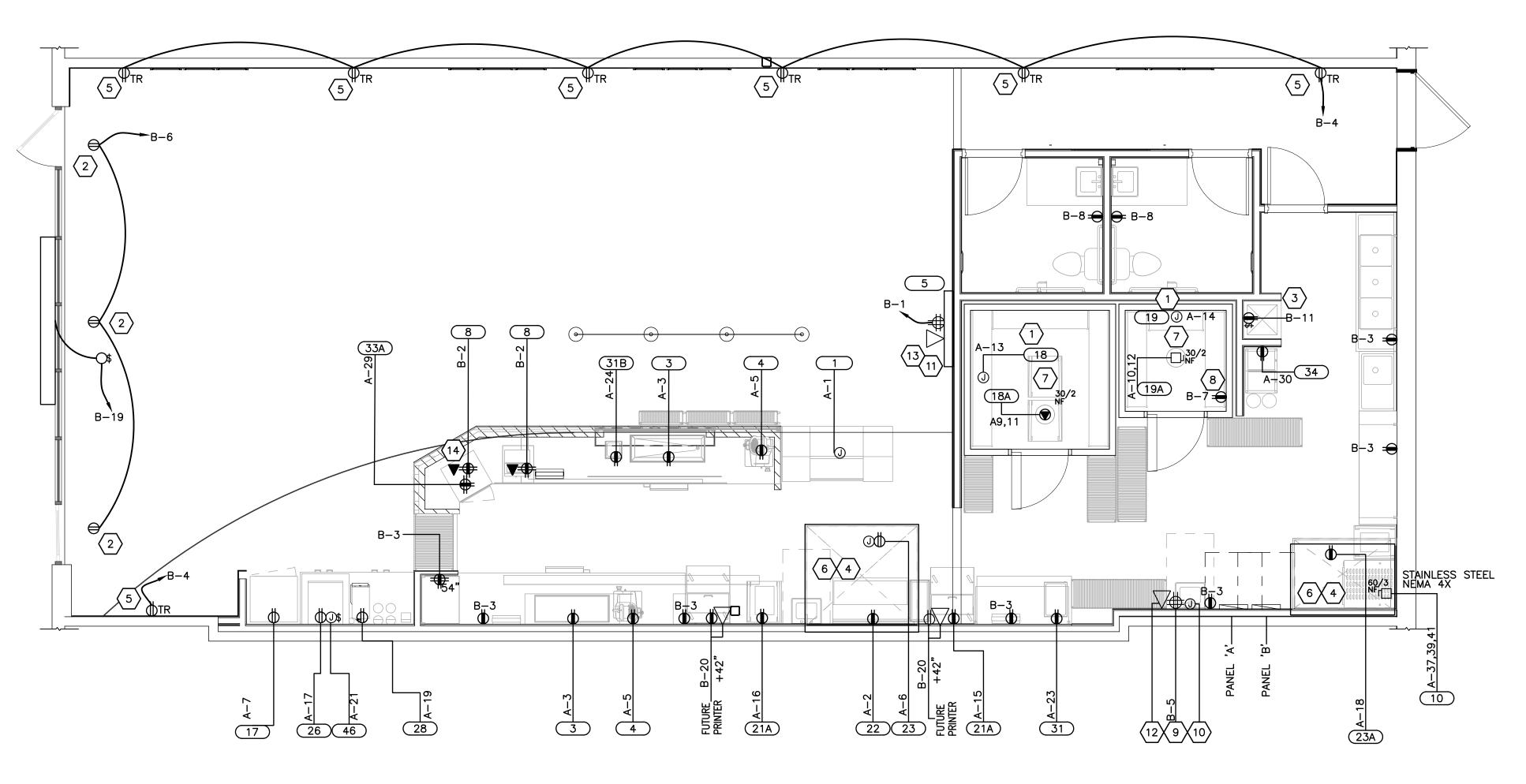
Client Approval

ELECTRICAL SPECIFICATIONS

Project# Issue Date

As indicated

Drawn by Checked by



ELECTRICAL POWER PLAN SCALE: 1/4" = 1'-0"

						EQUIP	MEN	NT SC	HEDULE					
PLAN MARK	QTY	EQUIPMENT SERVED	LOAD	VOLT/ PHASE	FED BY	DISC BY	MCA	MOCPD	FEEDER	MANUFACTURER	MODEL	NEMA	ROUGH-IN	REMARKS
1	1	6' MEATCASE	1.04KVA	120/1	PANEL A	SWITCH	8.7A	20A	(2)#12,#12G 3/4"C	HOWARD MCCRAY	SC-CDS34N-6-JM			
3	2	4' DROP IN COLD UNIT	0.90KVA	120/1	PANEL A	SWITCH	7.5A	20A	(2)#12,#12G 3/4"C	DELFIELD	N8148-EFN		REC @ 18" A.F.F.	REC @ 18" A.F.F.
4	2	SLICER	0.42KVA	120/1	PANEL A	скт	3.5A	20A	(2)#12,#12G 3/4"C	BIZBERA	GSP-H33 W/LIFT			
5	1	MENU BOARD	#VALUE!	120/1	PANEL A	BUILT IN	N/A	20A	(2)#12,#12G 3/4"C	JMFS	JMFS			
8	1	CASH REGISTER	0.60KVA	120/1	PANEL A	скт	5.0A	20A	(2)#12,#12G 3/4"C	INFOSOFT	UP700		DEDICATED GROUND, REC @ 18" A.F.F.	DEDICATED GROUND, REC @ 18" A.F.F.
10	1	BREAD OVEN	10.45KVA	208/3	PANEL A	SWITCH	29.0A	40A	(3)#8,#10G 3/4"C	NUVU	QB 5/10 AUTOMIST			AUTOMIST REQUIRED
17	1	1 DOOR PEPSI COOLER	0.86KVA	120/1	PANEL A	скт	7.2A	20A	(2)#12,#12G 3/4"C	PEPSI	1160			
18	1	WALK IN COOLER	1.80KVA	120/1	PANEL A	BUILT IN	15.0A	20A	(2)#12,#12G 3/4"C	NORLAKE	JM7S88-CR-J-36-CP			
18A	1	COOLER CAPSUL PACK	1.93KVA	208/1	PANEL A	BUILT IN	9.3A	20A	(2)#12,#12G 3/4"C	NORLAKE	CPB075JC-S-4-EV	6-15P		
19	1	STEP IN FREEZER	1.80KVA	120/1	PANEL A	BUILT IN	15.0A	20A	(2)#12,#12G 3/4"C	NORLAKE	JMF7766-CL-J-36- CP			
19A	1	FREEZER CAPSUL PACK	3.10KVA	208/1	PANEL A	BUILT IN	14.9A	15A	(2)#12,#12G 3/4"C	NORLAKE	CPF-100JC-S-4-EV	6-15P		CONFIRM WITH ARCH
21A	2	SANDWHICH UNIT	0.86KVA	120/1	PANEL A	BUILT IN	7.2A	15A	(2)#12,#12G 3/4"C	ENTRÉE	JM-ST-27E-2DX	5-15P		3
22	1	GRILLE	0.72KVA	120/1	PANEL A	BUILT IN	6.0A	20A	(2)#12,#12G 3/4"C	IMPERIAL	IR-G48T-XB-JMII			CONFIRM NATURAL/LP GAS
23	1	EXHAUST HOOD/FIRE SYSTEM	0.60KVA	120/1	PANEL A	BUILT IN	5.0A	20A	(2)#12,#12G 3/4"C	CAPTIVE AIRE	ANSUL			3
23A	1	CONDENSATE HOOD	0.86KVA	120/1	PANEL A	SWITCH	7.2A	20A	(2)#12,#12G 3/4"C	CAPTIVE AIRE	5424VHB			1, 5
26	1	DRINK DISPENSER & ADAPTER KIT	1.12KVA	120/1	PANEL A	SWITCH	9.3A	20A	(2)#12,#12G 3/4"C	PEPSI	DISPENSER: IDC255 ADAPTOR: 80002957		REC @ 42" A.F.F.	
28	1	ICED TEA BREWER/DISPENSER	1.73KVA	120/1	PANEL A	скт	14.4A	20A	(2)#12,#12G 3/4"C	BUNN	TB3Q		REC @ 42" A.F.F.	-1
31	1	COUNTERTOP FOOD WARMER	0.70KVA	120/1	PANEL A	BUILT IN	5.8A	20A	(2)#12,#12G 3/4"C	HOSHIZAKI	71001 MODEL 1001		REC @ 42" A.F.F.	
31B	1	RECESSED BACON WARMER	0.42KVA	120/1	PANEL A	скт	3.5A	20A	(2)#12,#12G 3/4"C	MARSHALL	JM8001K	5-15P		
33A	1	UNDER-COUNTER REFRIDGERATOR	0.31KVA	120/1	PANEL A	скт	2.6A	20A	(2)#12,#12G 3/4"C	HOSHIZAKI	CZ3N-1	5-15P		
34	1	BAG IN BOX SYSTEM	0.50KVA	120/1	PANEL A	скт	4.2A	20A	(2)#12,#12G 3/4"C	PEPSI	PEPSI		REC @ 80" A.F.F.	
46	1	ICE MAKER	1.27KVA	120/1	PANEL	СКТ	10.6A	20A	(2)#12,#12G 3/4"C	HOSHIZAKI	KM-520MAJ		REC @ 48" A.F.F.	

POWER PLAN KEYED NOTES

- PROVIDE 120V. CONNECTION FOR LIGHTS, DOOR HEATER, FAN, AND/OR DRAIN LINE HEATER. PROVIDE CONNECTIONS PER MANUFACTURERS REQUIREMENTS AND N.E.C. ARTICLE 300-7.
- PROVIDE RECEPTACLE HORIZONTALLY MOUNTED WITHIN 18 INCHES OF THE TOP OF THE WINDOW AS REQUIRED TO MEET THE N.E.C. SHOW WINDOW REQUIREMENTS.
- PROVIDE A MOTOR RATED SWITCH AS DISCONNECTING MEANS FOR RE-CIRC PUMP LOCATED ABOVE CEILING. COORDINATE EXACT LOCATION WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN. RE-CIRC PUMP SHALL BE CONTROLLED BY AUTOMATIC TIMER KIT PROVIDED BY MANUFACTURER, CIRCUIT PER MANUFACTURER RECOMMENDATIONS. EC TO COORDINATE LOCATION WITH PLUMBING CONTRACTOR
- EXHAUST FAN HOOD. CONTRACTOR SHALL PROVIDE "SHUNT-TRIP" CIRCUIT BREAKERS ON ALL ELECTRICAL EQUIPMENT UNDER THE HOOL FAN(S) INTERLOCK AND SHUNT-TRIP SHALL BE WIRED THRU HOOD FIRE SUPPRESSION SYSTEM CONTROL. SEE MECHANICAL HOOD DRAWINGS FOR MORE INFORMATION AND ADDITIONAL REQUIREMENTS.
- FINAL LOCATION OF TAMPER-RESISTANT OUTLETS IN DINING SHALL B DETERMINED BY OWNER.
- HOOD SYSTEM CONTROLLER. VERIFY EXACT LOCATION WITH EQUIPMENT SUPPLIER. COORDINATE ALL WIRING REQUIREMENTS AND UNIT INTERLOCKS WITH MECHANICAL HOOD DRAWINGS
- CIRCULATION OF AIR FROM WARMER TO COLDER SECTIONS OF INTERIOR RACEWAY SYSTEM EXPOSED TO WIDELY DIFFERENT TEMPERATURES SHALL BE PREVENTED. SEAL AS REQUIRED PER N.E.C 300.7(A). PROVIDE EXPANSION JOINTS FOR CONDUIT AS REQUIRED TO COMPENSATE FOR THERMAL EXPANSION AND CONTRACTION.
- MOUNT WP, GFCI DUPLEX RECEPTACLE IN FREEZER BELOW EVAPORATOR FOR CORD & PLUG CONNECTION OF HEAT TRACE; PROVIDE "GARD1-N #W51-24P" HEAT TRACE (24'-0"); WRAP FREEZER DRAINPIPE FROM EVAP IN FREEZER TO HUB DRAIN OR EXIT OF FREEZER AS REQUIRED.
- PROVIDE DEDICATED QUAD RECEPTACLE AT TELEPHONE/DATA/MODEM SHELF ON NEW SOFFIT. MOUNT 6" BELOW CEILING. COORDINATE EXACT LOCATION.
- 10. FIELD VERIFY LOCATION OF EXISTING 1" CONDUIT WITH PULL-STRING TO LANDLORD TELEPHONE DEMARC.
- 11. CAT6 DATA OUTLET. PROVIDE 1/2" CONDUIT WITH CAT6 CABLE TO TELEPHONE/DATA/TV SHELF.
- 12. PROVIDE CAT6 DATA OUTLET AT TELEPHONE/DATA/TV/MODEM SHELF ON NEW SOFFIT. MOUNT 6" BELOW CEILING. COORDINATE EXACT LOCATION.
- 13. EC TO COORDINATE MENUBOARD PLACEMENT AND POWER/DATA REQUIREMENTS WITH OWNER AND RELEVANT CONTRACTORS.
- 14. EC TO PROVIDE GFI QUAD RECEPTACLE AND DATA FOR FUTURE POS LOCATION. COORDINATE EXACT LOCATION WITH GENERAL CONTRACTOR AND OWNER REPRESENTATIVE.

KITCHEN RECEPTACLE NOTES

- ALL KITCHEN SINGLE PHASE RECEPTACLES RATED 150 VOLTS TO GROUND OR LESS, 50 AMPERES OR LESS AND THREE PHASE RECEPTACLES RATED 150 VOLTS TO GROUND OR LESS, 100 AMPERES OR LESS SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL PER NEC SECTION 210.8 (B) (1)-(10).
- ALL GFCI RECEPTACLES SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION OR A GFCI CIRCUIT BREAKER OR A DEAD FRONT GFI DEVICE INSTALLED IN A READILY ACCESSBILE LOCATION SHALL USED TO FEED THE CIRCUIT NOTED.
- ALL 125V, 15A AND 20A CIRCUITS TO KITCHEN EQUIPMENT SHALL BE FED WITH A DEDICATED NEUTRAL WIRE.

POWER PLAN GENERAL ELECTRICAL NOTES

- EXACT LOCATION, CUT-OUTS AND MOUNTING HEIGHTS FOR WIRING DEVICES IN CASEWORK SHALL BE COORDINATED WITH OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN.
- VERIFY ALL EXISTING CONDITIONS IN THE FIELD PRIOR TO BID. NOTIFY OWNER OF ANY DISCREPANCIES. IF ACCEPTABLE TO OWNER'S REPRESENTATIVE, EXISTING EQUIPMENT MAY BE RE-USED. IF NOT
- ACCEPTABLE, FURNISH AND INSTALL NEW. ALL RECEPTACLES, DATA AND TELEPHONE OUTLETS ARE TO BE MOUNTED AT +18" ABOVE FINISHED FLOOR UNLESS NOTED

OTHERWISE.

- PRIOR TO CONNECTION EC SHALL VERIFY THE VOLTAGE AND AMPERAGE REQUIREMENTS OF ALL EQUIPMENT DELIVERED TO THE SITE. EC SHALL NOTIFY OWNER OF ANY DIFFERENCE.
- EC TO VERIFY PLUG TYPE, AMPERAGE, VOLTAGE, AND LOCATION PRIOR TO BID AND ROUGH IN.
- EC TO VERIFY ALL POWER REQUIREMENTS WITH EQUIPMENT MANUFACTURER. PROVIDE HACR BREAKERS AS REQUIRED.

DRAWINGS FOR COUNTER TOP HEIGHTS.

WHEN POSSIBLE, OUTLETS TO BE MOUNTED ABOVE BACKSPLASH FOR COUNTER TOP EQUIPMENT AND BELOW COUNTER FOR UNDER COUNTER EQUIPMENT. PROVIDE POWER BELOW COUNTER FOR FRONT SERVING LINE COUNTER TOP EQUIPMENT. SEE ARCHITECTURAL

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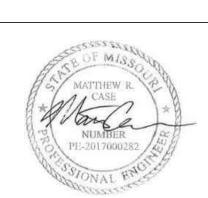


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Client Approval

ELECTRICAL POWER PLAN

43423-MO03 Project# 07/10/2023 Issue Date Scale As indicated

Drawn by

Checked by MTJ

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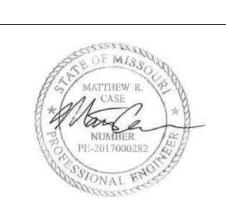
Engineering Inc.

St. Louis, MO 63026 F 636.349.1730 CERTIFICATE OF AUTHORITY NO. 001498

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ELECTRICAL LIGHTING PLAN

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WATTSTOPPER #TS-400, OR APPROVED EQUAL REC-SHOW WINDOW MANUAL OVERRIDE SWITCH (2 HOUR MAX.) FOR OVEŔRIDING TIME-SWITCH LTG-DINING TRACK LTG-DINING SCONCE LTG-DAYLIGHTING LTG-DAYLIGHTING 2 LTG-DINING GENERAL LTG- BOH SPARE

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

PANEL "B"

LIGHTING CONTROL DIAGRAM

LIGHTING PLAN KEYED NOTES

- EMERGENCY EGRESS/EXIT FIXTURES SHALL BE CONNECTED TO A NON-SWITCHED LEG OF LOCAL CIRCUIT.
- TIMECLOCK AND LIGHTING CONTACTOR MOUNTED NEAR PANELS. SEE LIGHTING CONTROL DIAGRAM', THIS SHEET. COORDINATE WITH OWNER FOR CONTROL SCHEDULE(S) AND OTHER REQUIREMENTS.
- CONTRACTOR TO PROVIDE A WALL MOUNTED "PIR" OCCUPANCY SENSOR (WATTSTOPPER #PW-100, OR ENGINEER APPROVED EQUAL) FOR LOCAL LIGHTING CONTROL.
- RESTROOM EXHAUST FANS ARE TO BE CONTROLLED BY OCCUPANCY SENSOR. EC TO PROVIDE 20A/1PH DISCONNECT.
- NOT USED.
- EXHAUST HOOD LIGHTS SUPPLIED WITH HOOD AND MOUNTED IN PRE-WIRED J-BOX. COMPLETE CIRCUITING. SEE MECHANICAL HOOD SHOP DRAWINGS FOR MORE INFORMATION.
- HOOD SYSTEM CONTROLLER. VERIFY EXACT LOCATION WITH EQUIPMENT SUPPLIER. SEE MECHANICAL HOOD SHOP DRAWINGS FOR ADDITIONAL CIRCUITING REQUIREMENTS.
- WEATHER-PROOF PHOTOCELL MOUNTED ON ROOF FACING NORTH FOR CONTROL OF EXTERIOR SIGNAGE. COORDINATE EXACT LOCATION IN FIELD. SEE 'LIGHTING CONTROL DIAGRAM', THIS SHEET, FOR MORE
- INFORMATION. PROVIDE A 1-AMP CURRENT LIMITER END FEED CONNECTION COMPATIBLE WITH TRACK.
- . MANUAL OVERRIDE SWITCH. REFER TO LIGHTING CONTROL DIAGRAM DETAIL THIS SHEET.
- . EC TO PROVIDE WEATHERPROOF EXTERIOR EGRESS LIGHT.
- E. EC TO PROVIDE CEILING MOUNTED DIMMING MODULE. EC TO PROVIDE CAT 5E CABLES AS REQUIRED TO INTERCONNECT DIMMER MODULE AND PHOTOSENSOR.

GENERAL ELECTRICAL NOTES

- . PLACEMENT OF LIGHT FIXTURES SHALL BE SET AS DIMENSIONED & AS SCHEDULED.
- LIGHT FIXTURES SHALL BE SUPPLIED AS SCHEDULED WITH NO EXCEPTIONS.
 - ALL EMERGENCY AND EXIT LIGHTING SHALL BE WIRED AHEAD OF THE SWITCHING. EMERGENCY LIGHTING SHALL BE ON THE SAME CIRCUITRY AS THE GENERAL LIGHTING IN THE AREA THEY SERVE. EMERGENCY LIGHTING WIRING SHALL BE IDENTIFIED (MARKED) PER N.E.C. 700.9. PROVIDE GENERAL LIGHTING CIRCUITS, WHICH HAVE EMERGENCY
 - LIGHTING CONNECTIONS, WITH LOCK-OUT ON BREAKER. 4. EC TO TEST ALL LIGHTING SYSTEMS TO ENSURE PROPER CALIBRATIONS, ADJUSTMENT, PROGRAMING, AND OPERATION.
 - ALL EMERGENCY, EXIT LIGHTS IN SUPPORT AREAS SHALL BE CIRCUITED TO LIGHTING CIRCUIT SERVICING SAME AREA WITH A LOCK

ELECTRICAL LIGHTING PLAN SCALE: 1/4" = 1'-0"

DAYLIGHTING ZONE 2

W1e W1e W1e

		LIGHT FIX	TURE SCHEDULE			LA	MP S	CHE	DULE] ,
SYMBOL	TYPE	CATALOG NUMBER	DESCRIPTION	VOLTS	MOUNTING	LAMP/ FIXT	WATTS/ LAMP	FIXTURE WATTS	LAMP TYPE.	1
	А	FSG-2X4FLPNL	2'X4' LED FIXTURE W/PRISMATIC LENS IN BOH/KITCHEN	UNIV	LAY-IN	1	45	45	LED	1
	B1	FSG-2X2FLPLI	2'X2' LED FIXTURE W/PARABOLIC LENS IN CUSTOMER AREA	UNIV	LAY-IN	1	30	30	LED	1 1
	T1	FSG-THL9MW	LED TRACK ABOVE COUNTER	120	TRACK	1	9	0	LED	
$\vdash \bigcirc$	W1	**86703506	WALL SCONCE POLISHED NICKEL G40 LED FILAMENT BULB	120	WALL	1	6	6	LED	brack
	E1	FSG-BEWH	BUG EYE EMERGENCY FIXTURE WHITE	UNIV	WALL	2	1	2	LED	
\otimes	E2	LPX7-R5-SD	EXIT RED LETTERS, WHITE HOUSING LED EXIT, WITH BATTERY BACKUP	UNIV	WALL	1	2	2	LED	
25	RH	SRP/SRM25D	DUAL-HEAD REMOTE EMERGENCY FIXTURE, WHITE HOUSING, 6V, LAMPS	UNIV	SURFACE	2	5	10	LED	

LUMINAIRE SCHEDULE NOTES:

1. ALL LIGHTING FIXTURES AND LAMPS IN THE ABOVE SCHEDULE (UNLESS NOTED WITH **) ARE PROVIDED BY THE CONTRACTOR VIA A NATIONAL CONTRACT WITH FSG LIGHTING NATIONAL ACCOUNTS. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE LIGHTING FIXTURES. ANY QUESTIONS REGARDING FIXTURE AND LAMP TYPES, INSTALLATION REQUIREMENTS, AND ORDERS SHALL BE WITH LEON MOWADIA OF FSG AT

(212) 776-7900 X21113, OR (848) 203-7175, OR BY EMAIL LEON.MOWADIA@FSGI.COM 2. **LIGHTING FIXTURES AND LAMPS IN THE ABOVE SCHEDULE INDICATED WITH (**) ARE PROVIDED BY THE CONTRACTOR VIA A NATIONAL ACCOUNT WITH HERMITAGE LIGHTING NATIONAL ACCOUNTS. THE CONTRACTOR IS RESPONSIBLE FOR PURCHASING AND INSTALLING THE LIGHTING FIXTURES. ANY QUESTIONS REGARDING FIXTURE AND LAMP TYPES, INSTALLATION REQUIREMENTS, AND ORDERS SHALL BE WITH WYATT CULVER

DAYLIGHTING ZONE 1

B1b

OF HERMITAGE LIGHTING AT (800) 264-3383, OR (615) 843-3379 OR LEE DANIELS AT (615) 843-3364.

ON DEVICE AT THE BREAKER PER N.E.C. 700.12.

ELECTRICAL HVAC PLAN KEYED NOTES

- MECHANICAL CONTRACTOR SHALL VERIFY AND/OR PROVIDE DUCT MOUNTED SMOKE DETECTOR. ELECTRICAL SHALL INSTALL FIRE ALARM DUCT SMOKE DETECTOR IN RETURN AIR WITH REMOTE AUDIO/VISUAL INDICATOR MOUNTED AT LOCATION THAT CAN BE SEEN AND HEARD. DETECTOR TO SHUT OFF AIR HANDLING UNIT UPON ACTIVATION. EC TO VERIFY AND/OR PROVIDE DEDICATED 20AMP, 120V CIRCUIT FOR SERVICE TO SMOKE DETECTORS. PROVIDE ALL INTERLOCK WIRING IN CONDUIT BETWEEN DETECTOR AND UNIT FOR SHUT DOWN AND BETWEEN DETECTOR AND REMOTE AUDIO/VISUAL INDICATOR.
- 2. NEW RTU-1, RTU-2 UNIT TO BE PROVIDED BY MECHANICAL CONTRACTOR. EC TO VERIFY LOCATION OF NEW UNITS WITH MECHANICAL CONTRACTOR. EC TO PROVIDE UNITS WITH 60A NONFUSED SWITCH DISCONNECT, AND GFCI RECEPTACLES IN WATERPROOF COVER. PROVIDE (3) #8 CU, (1) #10 CU GND. IN 1-1/4" CONDUIT TO PROVIDED DISCONNECT SWITCHES. IF MOUNTÉD TO UNIT THE RECEPTACLE SHALL BE INSTALLED AWAY FROM SERVICE PANELS. PROVIDE INTERLOCK WIRING WITH EXHAUST FANS.
- . E.C. TO COORDINATE INSTALLATION OF EF-1, EF-2 WITH MECHANICAL CONTRACTOR. PROVIDE #12 CONDUCTORS TO MANUFACTURER PROVIDED DISCONNECT SWITCHES. PROVIDE INTERLOCK WIRING WITH RTU-1, RTU-2, ANSUL SYSTEM.
- 4. PROVIDE JUNCTION BOX AND CONDUIT WITH PULL STRING TO ABOVE CEILING FOR THERMOSTAT. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
- 5. NEW MAU-1 UNIT TO BE PROVIDED BY MECHANICAL CONTRACTOR, EX TO VERIFY LOCATION IN FIELD, EC TO PROVIDE NEW UNIT WITH 30A NON FUSED SWITCH DISCONNECT AND GFCI RECEPTACLES IN WATERPROOF COVER. PROVIDE (3) #10 CU, (1) #8 CU GND, IN 3" CONDUIT TO PROVIDED SWITCH DISCONNECT. IF MOUNTED TO UNIT, THE RECEPTACLE SHALL BE INSTALLED AWAY FROM SERVICE PANELS. PROVIDE INTERLOCK WIRING WITH EXHAUST FANS.

ELECTRICAL HVAC PLAN KEYED NOTES		 				
1. MECHANICAL CONTRACTOR SHALL VERIFY AND/OR PROVIDED DUCT MOUNTED SMOKE DETECTOR. ELECTRICAL SHALL INSERTED FIRE ALARM DUCT SMOKE DETECTOR IN RETURN AIR WITH REMOTE AUDIO/VISUAL INDICATOR MOUNTED AT LOCATION THAT CAN BE SEEN AND HEARD. DETECTOR TO SHUT OF HANDLING UNIT UPON ACTIVATION. EC TO VERIFY AND/OF PROVIDE DEDICATED 20AMP, 120V CIRCUIT FOR SERVICE SMOKE DETECTORS. PROVIDE ALL INTERLOCK WIRING IN CONDUIT BETWEEN DETECTOR AND UNIT FOR SHUT DOWN BETWEEN DETECTOR AND REMOTE AUDIO/VISUAL INDICATOR.	TALL TAIR TO AND	1) B=10			B-17	B-17
2. NEW RTU-1, RTU-2 UNIT TO BE PROVIDED BY MECHANIC CONTRACTOR. EC TO VERIFY LOCATION OF NEW UNITS WIT MECHANICAL CONTRACTOR. EC TO PROVIDE UNITS WITH 6 NONFUSED SWITCH DISCONNECT, AND GFCI RECEPTACLES WATERPROOF COVER. PROVIDE (3) #8 CU, (1) #10 CU (IN 1-1/4" CONDUIT TO PROVIDED DISCONNECT SWITCHES MOUNTED TO UNIT THE RECEPTACLE SHALL BE INSTALLED AWAY FROM SERVICE PANELS. PROVIDE INTERLOCK WIRING EXHAUST FANS.	H A N ND. IF	RTU 1 B-12 WP A-31,33,35	4) (1) (10-2)		EF 3	EF 4 B=10 1 SD 1
 E.C. TO COORDINATE INSTALLATION OF EF-1, EF-2 WITH MECHANICAL CONTRACTOR. PROVIDE #12 CONDUCTORS TO MANUFACTURER PROVIDED DISCONNECT SWITCHES. PROVIDE INTERLOCK WIRING WITH RTU-1, RTU-2, ANSUL SYSTEM. PROVIDE JUNCTION BOX AND CONDUIT WITH PULL STRING ABOVE CEILING FOR THERMOSTAT. COORDINATE EXACT LOW WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN. 	то	2 A-31,33,35 60AS/50AF 3P		MAU	B-10 1 SDB-12 WP A-25 30A/NF	2 X B-12 WP A-32,34,36 60AS/50AF 3P
5. NEW MAU-1 UNIT TO BE PROVIDED BY MECHANICAL CONTRACTOR. EX TO VERIFY LOCATION IN FIELD. EC TO PROVIDE NEW UNIT WITH 30A NON FUSED SWITCH DISCOI AND GFCI RECEPTACLES IN WATERPROOF COVER. PROVIDE #10 CU, (1) #8 CU GND, IN ½" CONDUIT TO PROVIDED SUBSCONNECT. IF MOUNTED TO UNIT, THE RECEPTACLE SHABE INSTALLED AWAY FROM SERVICE PANELS. PROVIDE INTERLOCK WIRING WITH EXHAUST FANS.	(3) WITCH		B-13 EF 1			B-14
<u>A</u>			3 (<u>D</u>)			3

1	M	DUNT:	SURF	ACE	120	/208	3-PHASE, 4W	P	ANEL	-	-	4	CAPACITY:	200A		IN.	T CAP:	EXIST	ING	
LC	OCA	TION:	BOH/	KITCHI	EN			L	UGS:	2	00A	MLO	DEMAND LOAD:	180A		AV. F	AULT:	EXIST	ING	
0	CKT	LTG	REC	HVAC	MISC	KIT	DESCRIPTION	AMP	POL	ф	AMP	POLE	DESCRIPTION	LTG	REC	HVAC	MISC	KIT	CKT	1
	1					1.04	MEATCASE 6' [1]	20	1	Α	20	1	GRILLE [22]					0.72	2	T
	3					1.80	4' DROP-IN COLD UNIT [3]	20	1	В	20	1	SPARE						4	T
	5					0.84	SLICERS [4]	20	1	С	20	1	HOOD [23]			0.60			6	T
	7					0.86	1 DOOR PEPSI COOLER [17]	20	1	Α	20	1	SPARE						8	T
_	9			0.97			COOLER CAPSUL PAK [18A]	20	2	В	15	2	FREEZER CAPSUL PAK [19A]			1.55 1.55			10 12	Ŧ
_	13			1.80	1		COOLER DOOR/LTG [18]	20	1	A	20	1	FREEZER DOOR/LTG [19]			1.80			14	t
-	15					0.86	SANDWHICH UNIT [21A]	20	1	В	20	1	SANDWHICH UNIT [19A]	1				0.86	16	t
_	17				 	1.12	DRINK DISPENSER/ADAPTOR [26]	20	1	C	20	1	CONDENSATE HOOD [23A]	1		0.86			18	t
	19					1.73	ICE TEA BREWER [28]	20	1	A	20	1	SPARE	1					20	t
	21					1.27	ICE MAKER [46]	20	1	В	20	1	SPARE	1					22	t
_	23		S 73			0.70	COUNTERTOP FOOD WARMER [31]	20	1	С	20	1	RECESSED BACON WARMER [31B]	1) c	0.42	24	t
-	25			1.91			MAU-1	20	1	Α	20	1	SPARE						26	t
	27						SPARE	20	1	В	20	1	SPARE						28	t
	29		*			0.31	UNCERCOUNTER FRIDGE [33A]	20	1	С	20	1	BAG-IN-BOX [34]					0.50	30	t
																				t
					SP		BUS						SPLI	ТВ	US					
	31		5.04		SP		BUS			Α				ТВ	US	5.16			32	
	33		5.04 5.04		SP			50	3	В	50	3	SPLI ⁻	ТВ	US	5.16			34	
	33 35				SP		BUS	50	3	B	50	3		ТВ	US				34 36	
-	33 35 37		5.04		SP	3.48	BUS RTU-1	20	1	B C A		3	RTU-2	T B	1.0	5.16 5.16 0.6	1.0	0.0	34 36 38	
3	33 35 37 39		5.04		SP	3.48 3.48	BUS	20	1	B C A B	50	3		1.7	1.0	5.16 5.16 0.6 0.2	0.0	0.5	34 36 38 40	
	33 35 37 39 41		5.04		SP	3.48	BUS RTU-1 BREAD OVEN [10]	20 20 20	1 1 1	B C A B C	100	3	RTU-2 PANEL-B	1.7	1.0	5.16 5.16 0.6		11000000	34 36 38 40 42	
	33 35 37 39 41 43		5.04		SP	3.48 3.48	BUS RTU-1 BREAD OVEN [10] SPARE	20 20 20 20	1 1 1 1	B C A B C	100	3	PANEL-B SPARE	1.7	1.0	5.16 5.16 0.6 0.2	0.0	0.5	34 36 38 40 42 44	
	33 35 37 39 41 43 45		5.04		SP	3.48 3.48	BUS RTU-1 BREAD OVEN [10] SPARE SPARE	20 20 20 20 20 20	1 1 1 1	B C A B C A B	100 20 20	3 1 1	PANEL-B SPARE SPARE	1.7	1.0	5.16 5.16 0.6 0.2	0.0	0.5	34 36 38 40 42 44 46	
	33 35 37 39 41 43 45		5.04		SP	3.48 3.48	BUS RTU-1 BREAD OVEN [10] SPARE SPARE SPARE SPARE	20 20 20 20 20 20 20	1 1 1 1 1 1 1	B C A B C A B	100 20 20 20	3 1 1 1 1	PANEL-B SPARE SPARE SPARE SPARE	1.7	1.0	5.16 5.16 0.6 0.2	0.0	0.5	34 36 38 40 42 44 46 48	
	33 35 37 39 41 43 45 47		5.04		SP	3.48 3.48	BUS RTU-1 BREAD OVEN [10] SPARE SPARE SPARE SPARE SPARE SPARE	20 20 20 20 20 20 20 20	1 1 1 1 1 1 1 1	B C A B C A B C	100 20 20 20 20	3 1 1 1	PANEL-B SPARE SPARE SPARE SPARE SPARE SPARE	1.7	1.0	5.16 5.16 0.6 0.2	0.0	0.5	34 36 38 40 42 44 46 48 50	
	33 35 37 39 41 43 45 47 49		5.04		SP	3.48 3.48	BUS RTU-1 BREAD OVEN [10] SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE	20 20 20 20 20 20 20 20 20 20	1 1 1 1 1 1 1 1	B C A B C A B C	100 20 20 20 20 20 20	3 1 1 1 1 1 1 1 1	PANEL-B SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE	1.7	1.0	5.16 5.16 0.6 0.2	0.0	0.5	34 36 38 40 42 44 46 48 50	
	33 35 37 39 41 43 45 47		5.04			3.48 3.48 3.48	BUS RTU-1 BREAD OVEN [10] SPARE	20 20 20 20 20 20 20 20 20 20 20	1 1 1 1 1 1 1 1	B C A B C A B C	100 20 20 20 20 20 20 20	3 1 1 1 1 1 1 1 1 1	PANEL-B SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE	1.7	1.0	5.16 5.16 0.6 0.2 0.0	0.0	0.5	34 36 38 40 42 44 46 48 50 52	
	33 35 37 39 41 43 45 47 49 51	IASE B	5.04 5.04	CE	LOAD	3.48 3.48 3.48	BUS RTU-1 BREAD OVEN [10] SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE	20 20 20 20 20 20 20 20 20 20 20	1 1 1 1 1 1 1 1 1 1	B C A B C A B C	100 20 20 20 20 20 20 20	3 1 1 1 1 1 1 1 DEMA	PANEL-B SPARE	1.7	1.0	5.16 5.16 0.6 0.2 0.0	0.0 0.5	0.5 0.0	34 36 38 40 42 44 46 48 50 52	
	33 35 37 39 41 43 45 47 49 51	IASE B	5.04 5.04	CE		3.48 3.48 3.48	BUS RTU-1 BREAD OVEN [10] SPARE	20 20 20 20 20 20 20 20 20 20 20	1 1 1 1 1 1 1 1	B C A B C A B C	100 20 20 20 20 20 20 20	3 1 1 1 1 1 1 1 DEMA	PANEL-B SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE SPARE	1.7	1.0	5.16 5.16 0.6 0.2 0.0	0.0	0.5	34 36 38 40 42 44 46 48 50 52	

15.1 KVA

15.6 KVA

10KVA + 50% REMAINDER NEC 220.44

LOAD X 100% NEC 210.19 NON-CONT.

65% PER NEC TABLE 220.56

LOAD X 100% (USED MCA IN CALCULATION)

77.4 KVA 64.8KVA

214.8A 179.9A

CASE Engineering Inc.

S	M	OUNT:	SURF	ACE	120	/208	3-PHASE, 4W	P	ANEL		E	3	CAPACITY:	100A		INT	CAP:	22KA		9
NOTES	LOCA	TION:	ELEC	ROOM	ĺ			LU	JGS:	10	00A	MLO	DEMAND LOAD:	30A		AV. F	AULT:	11.3K	A	910
2	CKT	LTG	REC	HVAC	MISC	KIT	DESCRIPTION	AMP	POLE	ф	AMP	POLE	DESCRIPTION	LTG	REC	HVAC	MISC	KIT	CKT	1
	1	0.50					MENUBOARD [5]	20	1	Α	20	1	CASHWRAP [8]		0.60				2	Γ
	3		1.44				BOH CONV. REC	20	1	В	20	1	FOH CONV. REC		1.26				4	Γ
	5		0.36				JM IT RACK/PHONEBOARD	20	1	С	20	1	SHOW WINDOW REC		0.54				6	Г
В	7				0.50		HEAT TRACE	20	1	Α	20	1	BATHROOM REC		0.36				8	Г
	9	0.20					TIMECLOCK	20	1	В	20	1	DUCT DETECTORS			0.20			10	L
	11	6			0.50		WATER HTR/RECIRC PUMP	20	1	С	20	1	ROOF REC		0.36				12	
	13			0.30			EF-1	20	1	Α	20	1	EF-2			0.30			14	L
	15		3				SPARE	20	1	В	20	1	LTG-BOH	0.39					16	L
	17	0.16					LTG- BATHROOM	20	1	С	20	1	LTG- TRACK	0.12					18	L
	19	0.50					LTG- STOREFRONT SIGN	20	1	Α	20	1	FUTURE PRINTER				0.50		20	L
	21						SPARE	20	1	В	20	1	SPARE						22	L
	23	0.96	in .				LTG- FOH	20	1	C	20	1	SPARE	0		ļ.			24	L
	DI	ASE E	ΙΑΛ ΙΛΝ	CE	LOAD	TYPE	CONNECTED		DEM/	AND		DEM	AND FORMULA			Ü	TOTAL	LOAD	V.	
	5,4,18,	IASE E	ALAN	CL	LIGH	ITING	2.8 KVA		3.5 K	VA		LOAD	X 125% NEC 210.19 CONTINUOUS			CONN	ECTED	DEM	AND	
	ф	LO	AD	%	RECEP	TACLE	4.9 KVA		4.9 K	CVA		10KV	A + 50% REMAINDER NEC 220.44			10.1	KVA	10.8	KVA]
	Α	3.6	KVA	35%	HV	AC	0.8 KVA		0.8 K	VΑ		LOAD	X 100% (USED MCA IN CALCULATION)			27	.9A	29.	9A]
	В	3.5	KVA	35%	MI	sc	1.5 KVA		1.5 K	VΑ		LOAD	X 100% NEC 210.19 NON-CONT.				A	S	E	1
	С	3.0	KVA	30%	K	IT	0.0 KVA		0.0 H	VA		65% F	PER NEC TABLE 220.56				ginee			L

EXISTING 200A UTILITY SERVICE METER TO SWITCH DISCONNECT TO REMAIN ROOF LINE EXISTING EXISTING FEEDER TO 400A SWITCH / (4)#3,#8G,1 $\frac{1}{4}$ "C REMAIN DISCONNECT TO REMAIN EXISTING EXISTING 400A WIREWAY PANEL PANEL TO REMAIN TO EXISTING UTILITY PANEL PANEL TRANSFORMER ` SCHEDULE ~~~~~~~~~~<u>/4</u>\ FLOOR LINE

> ONE-LINE DIAGRAM SCALE: NOT TO SCALE

— NEW EQUIPMENT - EXISTING TO REMAIL

WHEN NEW CIRCUIT BREAKERS ARE ADDED TO AN EXISTING PANEL, THE NEW CIRCUIT BREAKERS SHALL BE OF THE SAME MANUFACTURE AS THE EXISTING PANEL, SHALL BE OF A 'LETTER TYPE' COMPATIBLE WITH THE EXISTING PANEL SUCH THAT THE UL LISTING OF THE EXISTING PANEL IS MAINTAINED AND SHALL HAVE AN AIC RATING EQUAL TO OR GREATER THAN THE AIC RATING OF THE EXISTING OVERCURRENT PROTECTIVE DEVICES WITHIN THE EXISTING PANEL.

EC SHALL PROVIDE ARC FLASH LABELS FOR SWITCHBOARDS AND PANELBOARDS AS PER N.E.C. REQUIREMENTS. EC SHALL PROVIDE AVAILABLE FAULT CURRENT LABELS FOR SWITCHBOARDS AND PANELBOARDS AS PER N.E.C. REQUIREMENTS.

PANEL SCHEDULE DETAIL

B. 30mA GFCI CIRCUIT BREAKER FOR EQUIPMENT PROTECTION

SCALE: NOT TO SCALE

LOAD

A 27.8 KVA 36%

C 24.6 KVA 32%

25.0 KVA 32%

% RECEPTACLE

A. CIRCUIT BREAKER GFCI - INDICATES 5mA TRIP GFCI TYPE CIRCUIT BREAKER.

B. PROVIDE DEAD FRONT GFI DEVICE IN READILY ACESSIBLE LOCATION

20.1 KVA

28.3 KVA

24.0 KVA

1.5 KVA

St. Louis, MO 63026

CH

Description

4 Client Comments 12/07/2023

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parts of the architectural or engineering project. Additionally these

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certification relating to the performance of products and materials beyond those provided by their respective manufacturer.

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CERTIFICATE OF AUTHORITY NO. 001498

F 636.349.1730

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Client Approval

ELECTRICAL RISER DIAGRAM

43423-MO03 Project # 07/10/2023 Issue Date

Scale As indicated TS Drawn by

Checked by

☐Not Observable

□Not Applicable

☐Not Observable

☐Not Applicable

☐Not Applicable

☐Not Observable

☐Not Observable ☐Not Applicable

☐ Complies

☐ Complies

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

□Does Not

☐ Complies

□Does Not

□Does Not

Comments/Assumptions

Exception: Requirement does not apply.

Exception: Requirement does not apply.

Requirement will be met.

Requirement will be met.

Requirement will be met.

Report date: 07/31/23

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Rough-In Electrical Inspection

C405.2.4. individual controls that control the Does Not lights independent of general area

[EL27]¹ allowed for special functions per the ☐Does Not

minimum efficiency requirements of

C405.7(1) through C405.7(4).

Efficiency verified through certification

Under an approved certification

permitted speed in accordance with Not Applicable

have lamp efficacy >= 65 lm/W or luminaires with efficacy >= 45 lm/W or comply with C405.2.4 or C405.3.

C405.2.4. lighting. See code section C405.2.3

Daylight-responsive controls for [EL23]² applicable spaces, C405.2.3.1 Daylight responsive control function and section C405.2.3.2 Sidelit zone. C405.2.5 Additional interior lighting power

approved lighting plans and is

separated from general lighting.

electric transformers meet the

C405.7(1) through C405.7(4).

under an approved certification

ratings shall be provided by motor manufacturer (where certification

program or the equipment efficiency

C405.9.1, Escalators and moving walks comply Complies

C405.9.2 with ASME A17.1/CSA B44 and have Does Not

[EL29]² combination of feeders and branch ☐Does Not

[EL30]² permanently installed lighting shall Does Not

[EL31]² conference rooms, copy rooms, break rooms, classrooms and workstations and > 25% of branch circuit feeders

automatically controlled and

C405.7 Low-voltage dry-type distribution

[EL27]² efficiency requirements of Tables

programs do not exist).

[EL28]² automatic controls configured to

passengers. C405.10 Total voltage drop across the

circuits <= 5%.

C405.1.1 At least 90% of dwelling unit

C405.11, 50% of 15/20 amp receptacles

for modular furniture will have

automatic receptacle control in accordance with C405.11.1. Additional Comments/Assumptions:

Project Title: OCU-MO-5-23, KANSAS CITY JM

Data filename:

C405.11.1 installed in enclosed offices,

reduce speed to the minimum

ASME A17.1/CSA B44 or applicable local code when not conveying

Table C405.6.

& Req.ID

[EL26]²

The state of the s	₩	Inspection Energy Code: 2021 IEC	Check		IcheckWeb	
Req.ID Plans, specifications, and/or Complies? Comments/Assumptions	Text in th	e "Comments/Assumptions" columnent, the user certifies that a code re	is provided by the	he user in the met and h	he COMcheck Requireme low that is documented, o	or that an exception
Complex Comp	#	Plan Review	Complies?		Comments/Assumpt	ions
1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3) Project Title: OCU-MO-5-23, KANSAS CITY JM Report date: 07/31/23	C103.2	calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and	□Does Not □Not Observable			
Project Title: OCU-MO-5-23, KANSAS CITY JM Report date: 07/31/23						
Project Title: OCU-MO-5-23, KANSAS CITY JM Report date: 07/31/23		1 High Impact (Tier 1)	2 Medium Impa	act (Tier 2)	3 Low Impact (Tier 3)	
rage 201 5	Project Title Data filena				Re	oort date: 07/31/23 Page 2 of 5

Section #	Final Inspection	Compliant	Commonts/Assumptions
# & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3,	Furnished O&M instructions for	Complies	
C408.2.5. 2	systems and equipment to the building owner or designated	□Does Not	
[FI17] ³	representative.	□Not Observable	
	*	□Not Applicable	
C408.1.1	Building operations and maintenance	Complies	Requirement will be met.
[FI57] ¹	documents will be provided to the owner. Documents will cover	□Does Not	
	manufacturers' information,	□Not Observable	
	specifications, programming procedures and means of illustrating	□Not Applicable	
	to owner how building, equipment and		
	systems are intended to be installed,		
C408.2.5	maintained, and operated. Furnished as-built drawings for	Complies	
[FI16] ³	electric power systems within 90 days	Does Not	
	of system acceptance.	□Not Observable	
		□Not Applicable	
C408.3	Lighting systems have been tested to	Complies	
[FI33] ¹	ensure proper calibration, adjustment, programming, and operation.	E CONTROLOGICA ANTONIO	
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	☐Not Observable ☐Not Applicable	

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
75-54-11-11-11-11-11-11-11-11-11-11-11-11-11	Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern >= 50 percent.	□Complies □Does Not □Not Observable □Not Applicable	
	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, corridors, warehouse storage areas, and other spaces <= 300 sqft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces.	□Complies □Does Not □Not Observable □Not Applicable	
C405.2.1. 2 [EL19] ¹	Occupancy sensors control function in warehouses: In warehouses, the lighting in aisleways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more within 20 minutes of when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor. Lights not turned off by occupant sensors is done so by timeswitch.	□Complies □Does Not □Not Observable □Not Applicable	
C405.2.1. 3 [EL20] ¹	Occupant sensor control function in open plan office areas: Occupant sensor controls in open office spaces >= 300 sq.ft. have controls 1) configured so that general lighting can be controlled separately in control zones with floor areas <= 600 sq.ft. within the space, 2) general lighting in each zone permitted to turn on upon occupancy in control zone, 3) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 4) are configured so that general lighting power in each control zone is reduced by >= 80% of the full zone general lighting power within 20 minutes of all occupants leaving that control zone.	□Complies □Does Not □Not Observable □Not Applicable	
	Each area not served by occupancy sensors (per C405.2.1.1) have timeswitch controls and functions detailed in sections C405.2.2.1.	□Complies □Does Not □Not Observable □Not Applicable	

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Report date: 07/31/23

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Project Title: OCU-MO-5-23, KANSAS CITY JM

Data filename:





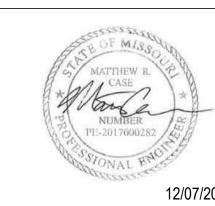
St. Louis, MO 63026 F 636.349.1730 CERTIFICATE OF AUTHORITY NO. 001498

CH KANSAS

4 Client Comments 12/07/2023

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FOR PERMIT

Client Approval

Checked by

ELECTRICAL COMCHECK

Project# 43423-MO03 07/10/2023 Issue Date Scale As indicated TS Drawn by