LOW VOLTAGE

ABOVE COUNTER DOUBLE DUPLEX RECEPTACLE

TWO (2) CAT6 PER LOCATION, ABOVE COUNTER TWO (2) CAT6 PER LOCATION, FLOOR/CEILING TV LOCATION, (1) SHIELDED CAT 6 WITH 3' SERVICE LOOP HOMERUN TO AV RACK. SEE SHEET E200 FOR MORE INFORMATION. MODULAR PLUG TERMINATION ON BOTH ENDS.

FUTURE CELL ANTENNA CHASE, 2½ CONDUIT AND HOME RUN TO AV GOOSENECK MIC CALLBACK, 4 CONDUCTOR SHIELDED, COORDINATE EXACT

TWO (2) CAT6 PER LOCATION UNLESS NOTED OTHERWISE

LOCATION WITH FOOD & BEVERAGE WIRELESS ACCESS POINT, 3/4"C (IN HARD LID LOCATIONS ONLY) TO LV BACKBOARD AT EQUIPMENT PLATFORM, (2) CAT6 PER LOCATION. CAMERA, (1) CAT6 PER LOCATION TO DEDICATED PATCH PANEL IN IDF.

360 CAMERA, (1) CAT6 PER LOCATION TO DEDICATED PATCH PANEL IN LIGHTING

☆ 3W 3-WAY SWITCH 4-WAY SWITCH \$ VS VACANCY SENSOR (WALL MOUNT) OCCUPANCY SENSOR (WALL MOUNT)

SWITCH

DIMMER SWITCH

LOW VOLTAGE MOMENTARY CONTACT SWITCH ¢ OR TIME CLOCK OVER RIDE SWITH

OCCUPANCY SENSOR (CEILING) DAYLIGHT SENSOR (CEILING) BATTERY EMERGENCY LIGHT (WALL MOUNT)

VACANCY SENSOR (CEILING)

BATTERY EMERGENCY LIGHT (CEILING MOUNT) EXIT SIGN UPPERCASE LETTER DENOTES FIXTURE TAG LOWERCASE LETTER DENOTES SWITCH DESIGNATION

FIRE ALARM

CEILING MOUNTED FIRE ALARM VISUAL ANNUNCIATION DEVICE (STROBE) WALL MOUNTED FIRE ALARM VISUAL ANNUNCIATION DEVICE (STROBE CEILING MOUNTED FIRE ALARM AUDIBLE / VISUAL ANNUNCIATION DEVICE (SPEAKER ' HORN STROBE) WALL MOUNTED FIRE ALARM AUDIBLE / VISUAL ANNUNCIATION DEVICE (SPEAKER

/ HORN STROBE) FIRE ALARM SMOKE DETECTOR FIRE ALARM DUCT DETECTOR

FIRE ALARM HEAT DETECTOR (RATE OF RISE) PLUS FIXED TEMPERATURE FIRE ALARM HEAT PULL STATION

FIRE ALARM WATERFLOW SWITCH FIRE ALARM TAMPER SWITCH

FIRE ALARM DUCT DETECTOR TEST STATION (KEYED, AUDIBLE/VISUAL) FARM FR FIRE ALARM ADDRESSABLE RELAY MODULE

FIRE ALARM CONTROL PANEL FIRE ALARM REMOTE ANNUNCIATOR PANEL

FIRE ALARM NAC PANEL FIRE ALARM FAN SHUTDOWN RELAY

MISCELLANEOUS JUNCTION BOX

PULL BOX CONDUIT CONCEALED IN WALL, CEILING OR UNDERGROUND. CENTER LINES DENOTE UNDERGROUND/FLOOR CONDUIT.

DASHED LINES DENOTE DEMOLITION ARROWHEAD DENOTES HOMERUN TO PANE SLASHED DENOTE QUANTITY OF CONDUCTORS DOT DENOTES GROUND

LONG SLASH DENOTES NEUTRAL CONDUCTOR. SHORT SLASH DENOTES PHASE CONDUCTOR, SWITCH LEG OR CONTROL.

FLEXIBLE CONDUIT WHIP - MAX 6'-0" IN LENGTH METER

0____ FUSED SWITCH -CIRCUIT BREAKER FNCLOSED CIRCUIT BREAKER

> FUSED SWITCH DISCONNECT SWITCH FUSED DISCONNECT SWITCH COMBINATION STARTER DISCONNECT SWITCH W/H.O.A

ANNOTATION

KEYED NOTE TAG KEYED NOTE TAG REVISION NOTE TAG

ELECTRICAL ABBREVIATIONS

AFF ABOVE FINISHED FLOOP BOH BACK OF HOUSE CENTER LINE

CIRCUIT DEDICATED ELECTRICAL CONTRACTOR

EX EXISTING ETR EXISTING TO REMAIN ER EXISTING. RELOCATED FAC FIRE ALARM CONTRACTOR

FPC FIRE PROTECTION CONTRACTOR GENERAL CONTRACTOR GFI GROUND FAULT CIRCUIT INTERRUPTER HD HAND DRYFR

LVC LOW VOLTAGE CONTRACTOR MC MECHANICAL CONTRACTOR

MT MOUNT NL NIGHT LIGHT PC PLUMBING CONTRACTOR PL PILOT LIGHT ROOF EQUIPMENT LOCATED ON ROOF ABOVE

TTC TELEPHONE TERMINAL CABINET

W WALL MOUNT AT 48" A.F.F.

SM SURFACE MOUNT

WP WFATHFRPROOF

TC TIMECLOCK

Electrical Specifications: General

A. The requirements set forth in these specifications and contractor drawings are minimum requirements. Any local or national codes and/or building requirements which are stricter or more restrictive in nature shall take precedence. It is the Contractors responsibility to familiarize himself with all the project requirements whether specifically stated or implied prior to the purchase or installation of any electrical equipment or appurtenances.

B. The Electrical Contractor shall provide and pay for all permits, labor, materials, accessories and equipment required for a complete and functional electrical system(s). C. Materials and installation shall comply with all local and

national codes and applicable amendments, all utility requirements, all laws and ordinances, OSHA, NFPA 70E and all AHJ (authorities having jurisdiction) requirements. It is the Electrical Contractors responsibility to becoming familiar with all local Codes and ordinances to ensure compliance. The Electrical Contractor shall not perform any electrical work or install any electrical components which are against Code. D. The Contractor shall guarantee all materials and workmanship for a period of (1) year after final acceptance of the work

E. Clean Up: The contractor is responsible for daily cleanup of all items associated to their trade in order to maintain a "broom swept" condition.

F. Approvals: the contractor is required to test, adjust and retest systems as required in order to obtain approvals from local jurisdictions, Owners insurance and underwriters, and Owners G. The contract documents are not a direction for the contractor

to violate any codes or local amendments. Should the contractor believe a code violation is present in the contract documents he shall bring it to the attention of the engineer immediately with an accompanying code reference or standard. The contractor shall not proceed with any work until the potential conflict has been resolved.

H. The Electrical Contractor shall engage and/or hold the contract of any required sub-contractors (low voltage, fire alarm, etc.) as necessary to fulfill the required electrical contract. The Electrical Contractor shall coordinate scope with the General Contractor. 2. Contract documents and field conditions

A. The drawings shall serve to indicate the general intent of the design and layout of the electrical systems. The design documents may not include all items required. Accessories and other components are diagrammatic unless specifically shown or dimensioned. Existing conditions are reflective of as-built/as-designed drawings and items that were visually observable during the time of the field survey. Due to occupancy, not all areas may have been field surveyed. The Contractor shall review all existing conditions prior to Bid and shall identify all areas in question within his Bid. Items not identified during the bidding process will be assumed to have been field verified and no issues or conflicts exist.

B. As the extent of the Engineer's field survey is visual review in nature, the Contractor shall notify the Engineer immediately o any materials or equipment observed, identified or believed to be inadequate, unsuitable, unsatisfactory or in violation of any existing laws, ordinances or rules prior to installation and/or

C. The Contractor shall be required to examine all contract documents and specifications, of all trades prior to submitting a Bid or commencing work. In addition, the Contractor sha visit the project site and adjacent areas prior to submitting a Bid or commencing work. Identify all discrepancies between immediately upon discovery.

D. Contract documents include drawings, specifications, sketches, meeting minutes, verbal field directives, etc. Where conflicting information exists. the Contractor shall submit an RFI for review and response. In all cases the more stringent of the E. As the Engineer may not be provided a complete project

schedule, it is the Contractors responsibility to contact the Engineer for timely inspections. The Contractor shall not cover. encase or otherwise impeded visual observation of any equipment, conduit, feeders, boxes, etc. which require inspection prior to contacting the Engineer for an inspection. The Contractor shall provide an appropriate notice to the Engineer (a minimum of three days) for proper scheduling of the inspections

3. Where the existing electrical systems are to remain in service. The shut-down of any system or portion of a system, shall be approved in writing from the Owner two weeks prior to the requested shut down. The bid is to include the cost of any temporary wiring and/or connections. The Contractor shall include any costs for temporary connections including temporary panels, generators, etc. as required. Shutdowns shall be assumed to be done on premium time.

4. Within the drawings or specifications, where conflicts in size, quantity or quality occur, the larger size, greater quantity, and superior quality shall govern and be furnished. 5. Change Orders

A. All cost change requests shall be submitted using the latest edition of "RSMeans Electrical Cost Data". All requests shall be submitted broken down based on material cost per item. linear foot, etc.: labor cost including cost per man hour and quantity of hours; overhead and profit percentage; total cost of the change order.

B. All change requests shall be accompanied by the initiating sketch, addenda, bulletin, directive, etc. including number for tracking. All change requirements shall include the date of documents the original, and changes were based off of. C. Any associated costs for drafting to include the document change into the "AS-BUILT" documents shall not exceed 10% of the cost of change request. This shall include three

dimensional drafting or BIM implementation. D. Should the Contractor elect not to use RSMeans, this qualification must be outlined in writing in the Contractors bid. Alternatives to RSMeans shall be submitted in all inclusive (material and labor) unit prices, and each unit price shall be defined in the Contractors bid. All items not defined in the bid shall be reviewed using RSMeans.

E. The Contractor shall coordinate all phasing requirements with the General Contractor and/or Architect during bid. All costs to accommodate required phasing shall be included in bid. F. All projects prepared using Revit or other three dimensional design tool shall not be assumed by the Contractor to be 100% coordinated installation documents. The Contractor shall fully field survey existing conditions and prepare shop drawings coordinated with all other trades.

A. The Contractor shall obtain and pay for all permits, fees,

taxes. inspections. etc. necessary for the completion of the work. Any permit fees excluded shall be outlined in the Contractors bid. 7. Submittals and shop drawings A. Any contractor submittals or calculations required by the local

AHJ, in order to obtain occupancy shall be provided the Electrical Contractor. The Electrical Contractor shall include any fees required for such submission in his bid. B. The Contractor shall prepare and submit to the Authority Having Jurisdiction, the fire alarm documents, including drawings, battery calculations, equipment cuts, etc. Fire alarm drawings provided in the contract documents are provided for the fire alarm contractors use only and are generic in nature. The fire alarm contractor shall provide all required equipment

as is required per local Code and NFPA 72. C. Shop drawings shall include Contractor's name, job address, manufacturers' names, catalog numbers, cuts, diagrams, dimensions and maintenance clearances, etc., required for the proper review of the complete electrical submittals. Submittals shall be in logical groups: for example, all lighting fixtures and associated lighting controls. Contractor shall submit "systems" of components together for complete review. For example, lighting fixtures and controls shall be submitted together so that driver/ballast types can be reviewed with the controls being submitted. An electrical coordination study (where required) shall be submitted with the electrical equipment submittals. The contractor is responsible for submitting components and equipment together for review -

partial submittals shall not be reviewed D. Submittal reviews are a courtesy review for general conformance and do not imply a guarantee of existing conditions or building measurements. A submittal review in no wav alleviates the Contractor of ensuring compatibility and functionality systems, components, or other responsibilities under the contract.

E. Shop drawings will require a minimum of (5) business days for review. The Contractor shall include the required review time in all project and construction schedules. There shall be no additional compensation or consideration for failure to include the proper review time.

F. Shop drawing review by the Engineer or Architect does not relieve the Contractor from providing all required materials, equipment, etc. as indicated in the contractor documents. G. The shop drawing submittals shall be in electronic (.PDF) format unless noted otherwise in the Architectural specifications. Where hard copies are submitted, a minimum of (3) copies will be provided. Electronic shop drawings greater than 1MB in size shall not be submitted via email, but shall be posted to an accessible public site (and the Architects upon request). The following items shall be submitted for review as applicable by project:

7.G.1. Lighting fixtures, lamps and ballasts. 7.G.2. Lighting controls and lighting control systems. 7.G.3. Receptacles, switches, wiring devices, floor fittings,

7.G.4. Fuses, disconnect switches, motor starters. 7.G.5. Panelboards, transformers and other distribution equipment

7.G.6. Fire alarm system, including point-to-point drawings. 7.G.7. Security and access control equipment, CCTV cameras, card readers, proximity, sensors, control 12 panels, etc.

7.G.8. Structured cabling systems including cable tray,

racks, patch panels, etc. 7.G.9. Test results. Failure to submit test results to the engineer shall be interpreted as all tests have been performed and have been found satisfactory or in compliance with all applicable codes, NETA and manufacturers guidelines and requirements.

7.G.10. Electrified items provided by other trades IE, elevators, kitchen equipment, etc. shall also be forwarded to the electrical engineer for review and coordination approval.

H. The Contractor shall submit to the Engineer for review enlarged plans of all electrical and mechanical rooms that contain electrical distribution equipment. These plans shall include all switchgear, switchboards, distribution & panel boards, transformers, ATS', generators, UPS', etc. Plans shall reflect dimensions of equipment consistent with submitted product data. Plans shall include any ductwork, piping, sprinkler lines, etc. so as to reflect maintained code required clearances. Those plans shall be submitted concurrently w/product data for a comprehensive review by the Engineer. Cost to reinstall or replace or repurchase equipment due to the failure to submit these plans will not be approved. . No equipment shall be purchased or installed without a approved shop drawing submitted. Failure to comply with this provision, the Contractor does at his own risk.

J. Substitutions 7.J.1. The Contractor may substitute in accordance with the Architectural general provisions of the specifications. Where no Architect is present in the project, all substitutions must be presented in writing, with the Contractors bid, and indicate the reason for such substitution — schedule impact, product availability, cost savings, etc. No substitutions will be accepted without prior approval

of the Engineer and Architect and/ or Owner. 7.J.2. The Contractor is required to provide equivalent physical size, materials, weight, performance, criteria, as the product specified. In addition, any differences between the product specified and the substitution which may affect other trades IE electrical characteristics, mechanical characteristics etc. shall be accounted for prior to suggesting the substitution. All cost impacts to all other trades, including engineering design fees if any, shall be accounted for in the substitution. No additional costs shall be approved after the approval of the

Requests for Information (RFI) A. Where design intent is unclear, field conditions require change in design, or for any similar issues requiring change to design intent, the contractor shall submit in writing a formal RFI to the engineer for clarification. Assumptions made by the contractor without a confirmed RFI by the Engineer/Owner will preclude the contractor from compensation should these assumptions be determined to be

in error or non-code compliant. B. Where the contractor deviates from code requirements of design intent without approval by the Owner and design team. he does so at his own risk. Failure to meet code requirements or design intent may result in correction of the installation without compensation to the contractor.

C. RFI's or other clarifications will require a minimum of (3) business days for review. The Contractor shall include the required review time in all project and construction schedules. There shall be no additional compensation or consideration for failure to include the proper review time. Responses provided verbally or in email format shall be considered part of the Contract. Additional sketches may or may not be provided at the Engineer's discretion.

9. Cutting, patching and modifications to existing structures A. All cutting, drilling and patching of building concrete, masonry or other structural components shall be included by the Contractor. Under no conditions may structural components be modified or altered in any way without written approval from the Engineer and Structural Engineer.

B. Fire seal all penetrations through rated walls, ceilings and floors with approved firestopping: 3M "Fire Barrier CP-25." or Thomas & Betts "Flame Safe". All fire ratings shall be maintained using an approved, UL listed method and/or

A. All temporary power and connections as required and/or identified by the Owner or Construction Manager, shall be provided by the Electrical Contractor. The Electrical Contractor shall be responsible for providing temporary power, lighting and fire alarm coverage as required throughout the construction period, including the required phasing in order to complete the construction. The Contractor shall provide proper physical separation between existing areas and areas of construction to include temporary partitions, visqueen, etc.

B. All equipment and lugs shall be rated for a minimum temperature of 75°C unless noted otherwise. C. The Electrical Contractor shall disconnect and remove any abandoned or unused electrical equipment within the area of work. All abandoned or unused equipment not identified on

the contract documents shall be approved for removal by the building owner prior to demolition. D. All materials and equipment shall be stored, handled, and installed in accordance with the manufacturers' recommendations and any local ordinances. E. All construction methods, installation, equipment and materials

shall be in compliance with any and all building and/or client standards and all local Codes. In no case shall any building or client standard direct the Electrical Contractor to provide or install any components which are against code or good engineering practices.

F. Backboxes and equipment recessed into opposite sides of a fire rated wall assembly shall be located at least 24" horizontally from each other, or shall be protected with fire wrap/putty pads. Electrical boxes or equipment total openings exceeding 100 square inches within 100 square feet shall be protected with a UL listed material and method to maintain the fire rating. Contractor shall ensure that the fire rating of all assemblies shall be maintained using a UL listed material and method for the application. G. Electrical panels shall not be recessed into fire rated walls. The contractor shall submit in writing a formal RFI in the

event that the plans conflict with this requiremen 11. Demolition and removal of systems A. The Contractor shall review with the Owner prior to removal. all equipment, fixtures, devices, etc., which are to be salvaged. All items to be salvaged shall be removed, protected and stored as required prior to return to the Owner. All items that the Owner does not wish to salvage and/or to be not re-used shall be removed from the site by the Contractor. Include in the bid, the cost of proper disposal of all debris or refuse. Bid shall also include cost to recycle equipment and materials as required IE fluorescent lamps, etc. B. Modify existing equipment as required to facilitate work indicated on the contract documents. Coordinate all work

required with existing equipment manufacturers. C. Where existing electrical work must be removed, it shall be completely removed, back to the first outlet to remain. Conduit that is embedded in concrete or inaccessible may be filled, capped and abandoned in place. Remove all existing wire and identify the conduits at each end as abandoned and provide the date of abandonment. D. The Electrical Contractor shall maintain service to all equipment, lighting fixtures and outlets that are outside the limits of construction. Extend and/or re-route circuits as <u>4" 208 142 103 78 6</u>

13. Conductors E. The Electrical Contractor shall be responsible for damage caused to the existing conditions, new conditions and/or other Contractor's work, including damage outside the limits of construction. The Contractor, at his own cost, shall repair and/or replace any existing equipment that is to remain that is damaged. Contractor shall patch and repair all existing conditions affected by construction to their original condition. The Contractor shall cap all unused raceways, boxes or knockouts and identify immediately any abandoned equipment, feeders or raceways requiring removal.

Raceways - USE ONLY AS ALLOWED BY CODE / AUTHORITY

A. In general, EMT, RMC and IMC shall be used indoors. RMC,

IMC and RNC shall be used outdoors and only as allowed by

local jurisdiction. RMC & IMC shall be used where subject to

physical damage and in mechanical spaces below 10-0" a.f.f.

steel tube, zinc coated shall be used for all power and

lighting branch circuits. EMT fittings shall be of the steel

compression or set screw type. Compression type fittings shall

be used in all plenum areas, hazardous locations and areas

C. Conduit of any size used for communications or data wiring.

located indoors, shall be EMT U.N.O. The raceways shall be

appropriately sized for the intended cabling. Where low voltage

design is not included in the contract documents, the

Contractor shall coordinate with the General Contractor or

Owner, during bid, to determine appropriate size of conduit

D. Rigid metallic conduit (RMC) or intermediate metal conduit

(IMC) Hot dipped galvanized, mild steel tube, zinc coated

threads with an outer coating of zinc bichromate shall be

used for power conduit 3" diameter or larger, or any size

conduit when encased in the floor slab or located in areas

subject to damage (IE mechanical spaces, loading docks, etc.

below 10'-0"). RSC shall be used for incoming electrical

service. U.N.O., any size conduit routed outdoors, or where in

direct contact with the earth. Where exposed to corrosive

environments or liquids, conduit shall be PVC coated IMC with

a zinc supplemental substrate coating. All RSC and IMC

. RNC (PVC) may be used outdoors where allowed by code and

indicated on the contract documents. All PVC conduits shall

contain a dedicated ground wire. All PVC conduits under

parking lots and roadways shall be a minimum schedule 80.

F. Intermediate metal conduit (IMC) Hot dipped galvanized, mild

steel tube, zinc coated threads with an outer coating of zinc

G. Flexible metal conduit (FMC): Galvanized or zinc metalized

steel, single strip interlocked construction with continuous

. Armor clad cable (flexible): (AC) Copper conductor wrapped in

fire retardant moisture resistant paper, 600 volt, thermoplastic

insulation, 90 deg. C, interlocked steel tape armor with

continuous bond conductor, armor + bond conductor listed as

Metal clad cable (flexible): (MC) Copper conductor, 600 volt.

armor with continuous ground conductor wrapped in

polypropylene assembly tape and installed with

J. All empty raceways shall be provided with nylon pull strings

above the ceiling at each panel for future connections.

K. Provide a minimum of (4) 7/4" and (2) 1" conduit stubs

.. Minimum conduit size for interior installations shall be 1/2"

unless otherwise indicated or required by local ordinance.

Where installed outside, minimum conduit size shall be 34".

M. Where "stub-ups" are indicated, conduit shall be run vertically

to a minimum of 6" above finished ceiling or in open areas

a minimum of 10'-0" a.f.f. or 6" below deck or into joist

space. All stubbed conduits, sleeves, and otherwise open

conduits that do not terminate in a fitting or body shall be

N. Communications system and low voltage control cabling

raceway. Provide raceways for all communications circuits as

required. Where allowed by local Code and building

management, cabling, where exposed or above accessible

ceiling may be run in free—air when properly supported from

structure above via bridle rings and/or j-hooks. Provide

D. Temperature controls wiring may be zip tied to the conduit

communications and low voltage cabling shall not be zip tied

to electrical raceway but supported as indicated in part D

P. The raceway system for combination telephone/data outlets

shall utilize a 4" square 2-1/8" deep back box with single

gang flush wall opening with a 3/4" conduit to the raceway

system. Where no raceway system is required, all open air

cabling shall be properly supported by j-hooks, bridle rings,

Q. Contractor shall coordinate all low voltage work with the

Owners low voltage contractors and provide conduit and back

boxes as required, sized per Code. Contractor shall assume a

minimum of (2) low voltage cables (CAT 6) within each

conduit. All low voltage conduit shall be sized per the cable

manufacturer's recommendations, current BICSI standards and

S. Each switch, lighting fixture, receptacle and other

miscellaneous devices shall be provided with a galvanized steel

outlet box. All unused knockouts and openings must be

sealed. Boxes shall be sized per Code and shall allow for

adequate space for devices, wiring and wire nuts. Boxes

shall be securely and adequately supported from adjacent

T. Final connections to motors, transformers and similar

equipment that are subject to vibration or adjustment shall

be made with sections of flexible metal conduit. The minimum

length shall be 18" and the maximum shall be three feet.

Installation of variable frequency drives (VFD's) shall be within

manufacturer recommended distances to prevent harmonic

U. In suspended ceilings where recessed lighting fixtures are

installed, flexible metal conduit may be used to service the

light fixture to an adjacent junction box. The flexible metal

conduit shall be 3/8" minimum, in lengths not exceeding 6'

V. The Contractor may reuse existing raceways wherever possible,

provided they are of adequate size, cleaned, in good condition

and are properly supported. All wiring shall be new. Where

conduit systems are used as a ground path, continuity of

W. In suspended ceilings, provide dedicated support for conduit

and junction boxes directly from the structure. Do not

support electrical systems from ceiling grids, piping, conduit.

ductwork, etc. Provide unistrut racking or other approved

supports sized to support the load required +25% spare

X. Provide expansion joints fittings as required for thermal

specifications and plans for more information.

technology plans for additional information.

expansion and physical movement. Refer to Architectural

Y. Maximum Quantity of Cables In Conduit: Refer to the chart

below for low voltage cabling conduit sizing. Where technology

design is provided as part of the project, refer to the

MAXIMUM QUANTITY OF CABLES IN CONDUIT

Cable Outside Diameter

3/4" 7 5 3 2 2

<u>1" 12 8 6 4 3</u>

<u>1-1/4" 21 14 10 7 6</u>

<u>2-1/2" 82 56 40 31 24</u>

<u>3" 124 85 61 46 36</u>

<u>3-1/2</u>" <u>162 111 80 61 47</u>

- 47 32 23 17 13

Conduit 0.19 0.23 0.27 0.31 0.35

ground shall be tested prior to reuse.

and/or reflected wave issues but shall not exceed 70'.

shall be sized for a maximum of 40% fill capacity.

R. All raceways shall be concealed unless noted otherwise

that serves the equipment being controlled.

thermoplastic insulation, 90 deg. C, interlocked metallic tape

an EGC installed with matchina/recommended fittinas

fittings and couplings shall be threaded.

ground conductor.

anti-short, insulated bushings.

matching/recommended fittings.

unless otherwise indicated.

terminated with bushings.

plenum rated cable as required

etc. from structure above.

subject to significant dust and or chemical use.

B. Electrical metallic tubing (EMT) Hot dipped galvanized, mild

HAVING JURISDICTION.

B. Branch circuit homeruns for 120 volt circuits over 75' long G. The Electrical Contractor shall disconnect and make safe for and for 277 volt circuits over 125' long shall be minimally removal any mechanical, plumbing, or equipment provided by one standard wire size larger than what is required for the others as listed elsewhere in the contract documents. ampere rating of protective device. The Contractor i H. It shall be understood that the contract drawings may not responsible for the adjustment of all feeder sizes as required show all items requiring demolition either due to existing to accommodate voltage drop. Sizes shown on design conditions or the inability to survey all existing areas due to documents are minimum sizes. Voltage drop shall be limited occupancy at the time of design. The contractor shall provide to 3% at the farthest device U.N.O. a reasonable assumption and include an allocation in the bid C. All branch circuits and feeders shall be sized, in parity, to to include the removal of said equipment as part of the

match the over current protective device upstream unless noted otherwise D. Isolated grounding receptacle branch circuit wiring shall consist of a dedicated phase, neutral and isolated (insulated) grounding conductors for each circuit.

. Wire size shown on the contract drawings is a minimum size

A. Interior branch circuit conductors shall be type THHN/THWN

600V rated insulated copper conductors. Wire that is installed

in raceways outdoors, or in damp or wet locations shall be

type XHHW-2, 600 volt insulated copper. No wire smaller than

no. 12 AWG shall be used for lighting or power wiring. Wire

shall not be accepted unless specifically called for in the

no. 10 and larger shall be stranded. Aluminum conductor

<u>design documents</u>. Terminals shall be dual rated CU/AL.

only. The contractor shall adjust the branch circuit size accordingly to account for the voltage drop. Maximum voltage drop allowed= 3% at the final device. Provide dedicated neutrals for all circuits. Sharing of neutrals is not acceptable. A. Provide a dedicated grounding conductor for all circuits. Use

B. Comply with UL467 for grounding and bonding of equipment. C. Comply with all local jurisdictional requirements for grounding D. All service ground connections shall be via a listed non-reversible pressure connector, exothermic welding process

or part of a listed assembly. All main grounding system

of the metallic conduit system as a ground path is not

E. All cable to steel ground connections shall be exothermically The Contractor shall provide photographic evidence of all concealed ground connections prior to cover. G. All exterior buried ground connections shall be provided with

connections shall be accessible for testing.

ground test wells unless noted otherwise.

H. All new building shall be provided with the following ground connections: building steel (where present), connection incoming water service, UFER ground, ground ring and supplementary ground rod (3/4" x 10'-0" steel). All service grounds shall be installed and bonded per NEC Article 250. Unless otherwise noted, all main telecommunication termination points (NETPOP's, MDF's, IDF's, etc.) shall be provided with a TIA-607-C/BICSI standard, minimum 12 "L x 4"H x ¼" thick, predrilled, copper, telecommunications ground bus with 600V insulated standoff's and 1#6AWG ground connection between IDF's/MDF's, to building steel and back to the main building ground unless noted otherwise.

Wiring Devices A. Devices shall be flush mounted, unless otherwise noted. B. Special receptacles shall be as noted on the drawings or as required by specific equipment. Verify equipment requirements prior to installation. The Contractor shall provide all special

C. Receptacles and switches shall be rectangular decorator style with smooth face, 20A rated, specification grade commercial, back and side wired, plated steel wrap-around bridge, rocker type switch operators and thermoplastic nylon face. Where new receptacles are being provided adjacent to existing match existing receptacle style. Standard finder-groove style receptacles may be used in mechanical or unfinished spaces. In finished spaces, standard finder-groove style receptacles maybe substituted where detailed in the Contractors a bid and approved by the Owner/Architect. Unless noted otherwise, all receptacles shall be mounted vertically with the ground prong up. Where installed adjacent to existing to remain devices. match receptacle orientation unless noted otherwise.

D. Faceplates shall be thermoplastic nylon and in kitchens or bars Type 302/304 stainless steel, nonmagnetic. E. The color of receptacles, switches, dimmers and wall plates shall be as specified by Architect. Isolated grounding outlets and cover plates shall be identified with an orange triangle. Provide permanent marking on the inside of cover plate of each wiring device indicating panel and circuit number serving

F. Contractor shall verify with the Architectural plans, equipment cuts, kitchen equipment drawings, etc. wiring device requirements prior to rough—in and provide per the manufacturers requirements. G. Wiring devices shall be manufactured by Hubbell, Leviton or Pass & Seymour-Legrand. H. Unless noted otherwise, provide pilot switch for control of

each exhaust fan. The toggle shall illuminate when the fan is on. Engrave the nameplate with the name of the equipment. I. All exterior receptacles shall be weatherproof and provided with "in-use" covers. I. All single phase receptacles rated 150 volts to ground or less, 50 amps or less and three phase receptacles rated 150

volts to ground or less, 100 amps or less installed in bathrooms, kitchen, outdoors, roof tops, within 6'-0" from the top inside edge of a sink bowl, wet locations, locker rooms containing showers, garages and service bays, crawl spaces and unfinished, uninhabitable portions of basements shall be GFCI. Provide motor rated GFCI breakers in lieu of GFCI receptacles for all kitchen motor and or compressor loads for refrigerators, mixers, blenders, etc. to avoid nuisance tripping. Coordinate availability of combination GFCI/shunt trip devices with specific electrical distribution manufacturer during bid. Provide contactor as required for GFCI devices located underneath ansul based hoods to provide for both GFCI protection and disconnection upon ansul

K. All 15A and 20A, 125V and 250V, non-locking type receptacles located in the following areas shall be tamper resistant: child care facilities, pre-K though elementary schools, business offices, corridors, waiting rooms in medical offices, dental clinics and outpatient facilities, gymnasiums, transportation waiting rooms, auditoriums and dormitories.

M. Where floor fittings require penetration of or installation in the floor slab. they shall be listed for the purpose and shall have a fire rating equal to the floor rating. Coordinate all device locations with Architect, furniture layout, structural beams and floor construction prior to beginning work. Provide all required flanges, covers, devices, etc. as indicated. Finish selection shall be by the Architect. Include minimum cost for brass coverplate and carpet flange in bid unless noted otherwise. Provide fire caulk or other approved materials to maintain floor ratings around poke thru device as required. N Shallow flush floor boxes shall be adjustable, single gang cast iron construction, with round or rectangular satin finish

brass cover plate and matching carpet flange. Manufactured by Wiremold or Hubbell. O. Floor boxes: Provide Wiremold Evolution floor boxes with modules as required for the quantity of devices shown. 14.C.1. Provide brass cover plate and flange finish that matches floor finish type. confirm with architect and owner prior to ordering.

14.C.2. Boxes shall be sealed to match the floor rating 14.C.3. Boxes shall be set level to the finished floor. 14.C.4. Combine power and low voltage devices into the same floor box where possible. 14.C.5. Provide a sketch in writing detailing the quantity and locations of EFB10 floor boxes. 14.C.6. Floor box shall have K.O.'s from 3/4" to 2"

Each gang box can support one duplex or six kevstones max. 14.C.7. Size floor boxes as indicated below: 14.C.7.1. <u>Wiremold EFB6:</u> 6 gangs max. 14.C.7.2. <u>Wiremold EFB8:</u> 8 gangs max. 14.C.7.3. Wiremold EFB10: 10 gangs max. 14.C.7.4. Wi<u>remold EFBFF:</u> provide where furniture

feed/whips are required. P. Poke Thru's: Provide Wiremold Evolution floor boxes with modules as required for the quantity of devices shown. 14.D.1. Provide brass cover plate and flange finish that matches floor finish type, confirm with architect

and owner prior to ordering. 14.D.2. Poke thrus shall be sealed to match the floor

14.D.3. Poke thrus shall be installed level to the finished

14.D.4. Combine power and low voltage devices into the same floor box where possible. 14.D.5. Provide a sketch in writing detailing the quantity and locations of 10AT poke thrus. 14.D.6. Floor box shall have K.O.'s from 3/4" to 2".

Each gang box can support one duplex or six

keystones max. 14.D.7. Size floor boxes as indicated below: 14.D.7.1. <u>Wiremold 6AT:</u> 6 gangs max. 14.D.7.2. <u>Wiremold 8AT:</u> 8 gangs max.

14.D.7.3. <u>Wiremold 10AT:</u> 10 gangs max. 14.D.7.4. Wi<u>remold *ATFF:</u> provide where furniture feed/whips are required. . Remove unused through—floor fittings and patch slab as required to restore its structural integrity. Remove associated conduit raceways and cabling in ceiling space below. Do not

abandon through—floor fittings in place.

wiring devices with EMT within furniture partitions where L. Where connections to Walkerduct systems are provided, refer to plans for additional information.

K. Provide furniture whips from floor boxes for power and

tele/data as required to feed furniture partitions. Provide

A. The Contractor shall verify the ceiling type before ordering lighting fixtures. Fixtures shall be provided with the proper frame or adapter to receive the type of ceiling and come complete with lamps, lenses, end caps, mounting hardware, drivers/power supplies (and enclosures where required) etc. Modify the fixture catalog numbers as required to obtain the necessary options and accessories. B. Continuous runs of linear fixtures shall be arranged such that

fixtures, fittings, and connectors sized as required to provide a continuously lit cove with no visible shadows or breaks. C. Lighting distributor shall provide maximum wattage labels to all fixtures with reduced lamping for energy Code compliance prior to shipping the fixture to the field. D. Provide current limiters for all track lighting. Limiters shall be

that no more than 6" of any end of a run is unlit. Provide

sized to carry the load for the quantity of heads shown to be installed plus two extra heads. Size limiter to the nearest nominal size provided by the manufacturer. E. Each lighting fixture shall be rigidly supported from the building construction and shall include suspension hangers,

devices and other work for fixture support. Fixtures shall not be supported from the ceiling grid system unless the ceiling system is specifically listed for that use and all the required mounting and supporting hardware is provided. F. All light fixtures shall bear the approval of a listed agency such as UL, ETL, CSA, etc. or shall be field tested and labeled in the field prior to installation. Include cost of field

labeling in bid. G. Provide inline fuse for all fluorescent ballasts. Field install fuses in any fixture not manufactured with a fuse. H. Lamp color, where not specified, shall be 3500K. The Contractor must confirm final lamp temperature with the Architect prior to ordering.

Provide dedicated neutrals to all lighting fixtures and for all

dimming zones. J. The Contractor shall provide as all commissioning services required by the 2018 IFCC specifically lighting control. commissioning shall include all functional testing as defined by the IECC and as indicated in the Lighting Control Narrative provided as part of the project. The Contractor shall hire a licensed professional engineer to perform the commissioning portion of the project.

K. All exterior lighting fixture shall be wet or damp listed based on installation location. L. Light switches, sensors, photosensors, and zoning are shown for design intent. The contractor is expected to provide additional/ancillary components required for a compatible and fully functioning system, such as coordinating dimming technology types, providing power packs, wall stations coordinating switch bank elevations, confirming faceplate engraving with the owner, etc. In the event that design intent is unclear or requires clarification to provide the appropriate materials, the contractor shall submit a formal written RFI to

M. Dimmers shall be thin profile with electronic touch switch and linear slide control. Dimmers shall be compatible with the light fixture ballast, driver or low voltage transformers. Where dimmers are installed in a ganged installation or stacked, remove fins between devices. De-rate for heat as required. Install stacked receptacles with a minimum of 4 ½" vertical separation. Provide separate neutrals for each dimmer and one single continuous cover plate for multiple dimmers. N. Dimmers shall be Lutron Nova T, series or approved equal.

Provide dimmers compatible with dimming technology (ELV, MLV, Forward Phase/Triac, 0-10V, etc.). Minimum dimmer wattage rating shall be the maximum available for a single gang. Provide additional power packs, power extenders, dummy loads, large dimmers (2-gang), and all other equipment/accessories as required to control each zone as indicated. Contractor shall provide any ancillary components as required to ensure compatibility and a fully functioning system. It remains the responsibility of the contractor to coordinate and ensure that the lighting controls and devices being controlled (ballasts, low voltage transformers, drivers,

O. All occupancy / vacancy sensors shall be tested and adjusted prior to turn-over to the occupant. The Contractor shall explain to the Client the operation of the device prior to leaving the site and shall instruct the occupant how to adjust the device post-construction. Manual on/off functionality shall be set according to local energy code requirements. Provide additional testing, adjustments, and documentation as required by the latest IECC Energy Code requirements for "Lighting" system functional testing", to be performed by a registered design professional. Include in bid time to return to the project site (30) days and (6) months post-occupancy for the adjustment of all sensor settings.

A. Provide a fully functional extension of the building fire alarm system or new system as indicated on contract drawings. Include all necessary hardware and software improvements and point-to-point wiring diagrams. Provide additional circuits, power supplies and amplification as required. Test, adjust, program and recertify the system at the completion of construction. Update all zone maps & schedules as required. B. All fire alarm devices shall comply with the Americans with Disabilities Act and shall match building standard. C. All fire alarm devices shall fully comply with NFPA 72 and ICC/ANSI A117.1-2003. Section 7.702.

D. All fire alarm strobes within viewing distance shall be synchronized. E. Manufacturer: Match existing or provide new as indicated. F. All new fire alarm systems shall be fully addressable. G. Utilize building approved Contractor where applicable.

H. All fire alarm devices shall be installed per NFPA 72 and local requirements. Devices shown are for reference only. Provide quantity of devices and appropriate candela and/or dB levels as required for proper coverage. l. Provide addressable fire alarm modules at all water flow and tamper switches as required by the fire protection contractor.

Note: due to the design build nature of the fire protection

system, these devices may not be indicated on the electrical plans. Coordinate with the general contractor prior to bid. J. All fire alarm cabling shall be run in conduit. The conduit shall be red in color. Where allowed by local code, fire alarm integrity cable may be provided in lieu of full conduit runs with prior approval from the engineer. Cabling shall be plenum approved in return plenum areas. In all cases, where fire alarm wiring is exposed to damage (IE exposed below 10'-0" a.f.f.), in run in inaccessible areas or above hard ceilings and within walls, the fire alarm cabling shall be run in conduit. K. Include in base bid, cost to install (3) additional audio visual and (3) additional visual devices in additional to those indicated on plan to allow for fire department field requests.

for monitoring as required based on local jurisdictional or Owner requirements. M. The fire alarm contractor, shall become the role of Engineer of Record for the fire alarm system and affix the designers seal or license number as required for permit. The fire alarm

L. The Contractor shall connect the fire alarm to a central

station or local fire department or provide radio equipment

designer shall be either a locally registered Professional Engineer or a level IV NICET certified designer. The fire alarm contractor shall submit the formal fire alarm plans, battery calculation, cut sheets, wiring diagrams, etc. as required to the local Authority Having Jurisdiction for review and approval. The fire alarm contractor shall pay all fees associated with

C. All new circuit breakers for existing panelboards shall be

provided with interrupting ratings exceeding the available short

D. New panelboards shall utilize bolt on type branch circuit

breakers, with withstand ratings exceeding the available short

circuit current. Manufactured by Siemens, General Electric,

Square D, Eaton or approved equal. Provide full length,

copper bussing within panel boards with fully rated neutral.

The Contractor is responsible for providing arc flash labeling

on the cover of all new electrical equipment. Where required

by local Code, the Contractor shall provide detailed arc flash

labels at all new and relocated electrical equipment per

OSHA/NFPA 70E recommendations including, PPE requirements,

serving bathrooms, kitchens, family & living rooms, bedrooms

. Coordinate installation of electrical equipment with other

trades. Do not install electrical equipment below ductwork,

piping, etc. Allow for Code required clearance above all

G. The Contractor shall review the complete contract documents

and provide starters and disconnects as indicated. Where the

plans are ambiguous or unclear, the Contractor shall include

the cost of starters and/or disconnects as required and

identify such ambiguity in his bid. Disconnects and starters

shall be located within sight of the equipment they are

H. The Contractor may, utilize the overcurrent protective devices

within the panel board as the disconnecting means for an

ONLY WHERE APPROVED BY THE AHJ. All OCPD's used as

disconnecting means shall be provided with lock-open devices

Three-phase motor starters shall be of the combination type

consisting of a fused or non-fused disconnect switch and an

across—the—line magnetic starter. Starter contactors shall be

minimum NEMA Size 1. All three-phase motor starters shall

be furnished with solid-state overload relays to protect all

motor it is used with, based on actual nameplate data.

Provide one set of form C auxiliary contacts, (1 N.O. and 1

N.C.) in each starter. Provide internal control transformer as

required. Mount the control transformer inside the starter

enclosure. Both primary and secondary sides of the control

transformer shall be fused. Provide a hand-off-automatic

selector switch on the cover, with motor on/off pilot lights.

Transformers shall be dry type, listed, with aluminum winding

220°C class insulation, 150°C temperature rise, totally enclosed

except for ventilation openings and six (6) 2½% voltage taps.

Provide vibration isolators. Where floor mounted, mount on 4"

concrete pad. Do not mount transformers greater than 45kVA

above dropped ceilings. Manufactured by Square D, General

16.M.1. SPD shall be listed and labeled as defined in

16.M.2. MCOV of the SPD shall not be less than 115%

16.M.3. SPDs installed on the line side of the service

16.M.4. SPDs installed at distribution panels shall be Type

16.M.5. SPDs installed at branch panels shall be Type 3.

16.M.6.1. Internal fusing for SPD protection.

16.M.6.3. Audible alarm with silencing switch.

16.M.6.4. Surge counter with reset switch.

16.M.7. SPDs shall have ratings as follows:

16.M.6. SPDs shall provide the following accessories and

16.M.6.2. Indicator lights for power and protection

16.M.7.1. Distribution level: 160kA per phase, 80kA

16.M.7.2. Branch level: 120kA per phase, 60kA pe

16.M.7.3. Protection modes for L-N, L-G, N-G, L-L

16.M.8. The short circuit interrupting rating of the SPD

16.M.9. Provide a minimum 30A circuit breaker as

the point on the system where installed.

M. Fuses 601 ampere and above shall be 600 volt rated, current

N. Fuses 600 ampere and below shall be current—limiting, dual

O. Provide minimum 4" concrete housekeeping pad for all floor

element, time delay, rejection type, class RK-1, as

17.A.1. Refer to the mechanical drawings for exact

17.A.2. Contractor shall wire, set and connect

individual motors, controls and equipment

disconnects, starters, variable frequency drives, etc. installed

by the Electrical Contractor shall be installed so as to provide

the Code required clearances. Locations are shown for

reference only. The Contractor shall coordinate with all trade

R. Refer to architectural drawings for exact locations and

S. Refer to architects device mounting legend for device

T. All device mounting heights shall comply with the Americans

J. Unless otherwise noted, mounting heights shall be as follows:

Receptacles and communications outlets shall be mounted 1

W. Switches shall be mounted 42" A.F.F. to center or unless

X. Above—counter outlets and switches shall be mounted at

48"A.F.F. to center, but shall be coordinated with the

Y. Wall-mounted telephones shall be mounted 48" A.F.F. to

19.1.1. Audible, visual or combination audible/visual alarm

19.1.2. Manual pull stations shall be wall-mounted 48"

19.1.3. Audible and visual duct detector test stations shall

be wall mounted 48" A.F.F. to center.

AA. Contractor shall give careful consideration to existing

conditions including columns, beams, suspended ceilings, pipes

devices, where wall mounted, shall be mounted

80"A.F.F. to centerline or 6" below ceiling,

with Disabilities Act and/or any local accessibility

mounting heights of the electrical equipment.

A.F.F. to center. Refer to plans for orientation.

whichever is lower.

A.F.F. to center.

indicated differently on the Architectural drawings.

3. Provide local disconnect switches for all motors.

limiting, time delay, class L, as manufactured by Bussmann

with manufacturer.

manufactured by Bussmann or equal.

Mechanical/HVAC/Plumbing/Fire Protection

location of motors.

mounted equipment.

prior to rough-in.

mounting heights.

Z. Fire alarm devices:

19. Execution and completion

shall be greater than the available short circuit of

dedicated disconnecting means for the SPD unless

indicated otherwise. Coordinate exact OCPD size

Integral disconnect for externally mounted

for 480/277V and 125% for 208/120V.

NEC, by UL, and marked for intended location and

entrance OCPD shall be Type 1. SPDs installed on

the load side of the service entrance OCPD shall

K. Transformers shall meet minimum current energy efficiency

Manufactured by Siemens, Square D, or equal.

Electric, Eaton or Hammond.

levels as defined by the DOE.

Surge Protection Devices (SPD's)

also be Type 1.

three phases. The relays shall be adjusted for the particular

appliance or motor ONLY AS ALLOWED BY LOCAL CODE and

E. Provide arc fault circuit breakers for all circuit breakers

and other habitable spaces in residential occupancies

incident energy level, safe working distance, etc.

circuit current. The Contractor shall be responsible for

copper bussing

confirming available fault current.

serving and be accessible.

securing the fire alarm permit and inspections otherwise modify structural members including but not limited to structural slabs/ floors, ceilings, beams, walls, columns, N. The fire alarm contractor shall provide training for the Owner etc. without prior written approval from the electrical engineer prior to turn-over for the proper operation and maintenance of the fire alarm system per the manufacturers Electrical Distribution

and structural engineer and/ or architect. AB. The contractor shall make every effort to minimize noise during construction. Noise shall be kept within maximum OSHA recommended levels and/or other local authorities having A. All electrical distribution shall be provided with fully rated, jurisdiction. Numbered circuits are for convenience of design only; field conditions may vary. Indicate the actual circuit B. All new circuit breakers for existing panelboards shall match numbers used on the "as-built" drawings. existing building panelboard manufacturer and breaker type.

> Electrical Contractor shall comply with all recommended arc flash safety practices per NFPA70E. Utilize appropriately rated personnel protective equipment (PPE) as required Where new electrical distribution equipment is being installed or existing is significantly modified, contractor shall provide updated arc flash boundary hazard warning labels. AD. All work installed within the ceiling plenum shall be in accordance with wiring method requirements for air handling

ductwork, expansion joints, etc. Contractor shall coordinate

with all other trades and install electrical appurtances so a

to maximize headroom and maintain code required clearances

in all cases. The contractor shall notify the Architect

Engineer where conflicts occur prior to rough—in. The

contractor, under no circumstances, shall penetrate c

ceiling spaces. Refer to the mechanical and architectura drawings for plenum areas and additional information. AE. Unless otherwise noted, all floor mounted equipment shall be installed on a 4" concrete housekeeping pad witl appropriate bolts or rods to secure the pad to the floor slab. AF. Provide ground tests as required to ensure grounding

system meets the requirements of the local Electrical Code Adiust as reauired. AG. Insulation resistance testing shall be performed on all reused wiring and equipment. Measured insulation resistance shall conform to the current adopted electrical code and any

AH. The Contractor must check all transformers, power panels, feeders, power and control cables and connections and motors to assure correct phase sequence and rotation. Al. Test all power and control electrical circuits for circuit continuity and functional tests. Acceptance Testing for Electrical Power Distribution Equipment and Systems must be in accordance with NETA

AK. Submit all test results to Engineer for review and AL. All overcurrent protective devices that are to be reused shall be cleaned, exercised and repaired as required.

thermal scanned and a report prepared by a qualified thermal testing agency. Provide test results with recommendations for remediation as required to the Engineer AN. Failure to submit test results to the Engineer for review shall be interpreted as tests have been performed as required and have been found in compliance with code, NETA and manufacturers quidelines.

AM. All existing electrical distribution equipment (panelboards

transformers, breakers, switch and fuses, etc.) shall be

A. Upon completion of construction, the Contractor shall balance each panel so that there is no more than 10% difference between phases. The load shall be monitored during the peak demand period. B. The Contractor shall provide new typewritten panel directories for all panels changed or added. Provide engraved plastic labels permanently attached (no adhesives) for all new panels

and distribution equipment. C. Prior to turn-over, the Contractor shall provide written documentation certifying that all equipment and systems have been properly installed per code, cleaned, adjusted an D. The Contractor shall provide all operation and maintenance

manuals for all equipment at turn-over

E. The Contractor shall provide original "as-built" documents i both hard copy and AutoCAD drawing files. Submit as—buil drawings to Engineer. Cost to produce these documents shall be included in the bid. No additional compensation after the project has been awarded will be provided F. Contractor Final Payment Final payment shall be withheld until the receipt of final certification of occupancy, approval as-builts, and owners training and corrections of a

deficiencies and punch list items have been received.

20.G.1. The Engineer, at his discretion may make portion of the contract documents available in electronic format. These documents are proprietary and remain the Engineer's property and shall be used solely with respect to this project. The documents will be provided for the convenience of the user for use in preparing shop drawings and/or coordination drawings related to the construction of this project only. The engineer shall be held harmless for the use of the electronic documents

by Others. 20.4.2 "As-Built" documents shall include all revisions bulletins, addenda, etc. included as a part of the

THIS PROJECT FALLS UNDER THE PROVISIONS OF SEISMIC

DESIGN CATEGORY D, RISK CATEGORY 2. THE CONTRACTOR

SHALL COMPLY WITH ASCE7-10 FOR ALL FLOOR MOUNTED

ELECTRICAL EQUIPMENT > 400LBS; ON ALL CONDUIT

SYSTEMS 2-1/2" AND LARGER AND ON ALL TRAPEZE

SUPPORTED RACEWAYS SUPPORTING LOADS > 10LBS/FT.

PROVIDE BRACING AND SUPPORTS AS REQUIRED PER THE

COORDINATED SHOP DRAWINGS SHALL

BE PROVIDED BY EACH SUBCONTRACTOR

AND SHALL CONTAIN A LAYOUT OF ALL

DUCTWORK, CONDUIT, PIPING, EQUIPMENT.

STRUCTURE, WALLS, CEILING, ETC. AS

REQUIRED TO REFLECT FULL COORDINATION

SUBMITTED FOR REVIEW, COORDINATED DRAWINGS

ACROSS ALL TRADES AND SHALL BE

NO EQUIPMENT SHALL

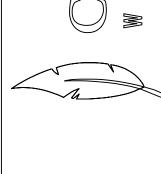
DRAWINGS.

RELEASE FOR CONSTRUCTION AS NOTED ON PLANS REVIE DEVELOPMENT SERVICES LEE'S SUMMIT, MISSOURI 10/14/2021

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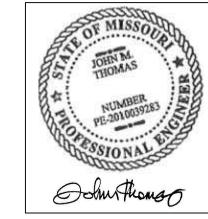
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FIELD VERIFICATION dimensions and conditions at the jol site and notify Aria Group Architects Inc. of any dimensional errors. omissions or discrepancies befor beginning or fabricating any work. D

not scale these drawings COPYRIGHT Aria Group Architects, Inc. shall retain all common law statutory and other reserved rights. These drawings and related documents shall not be duplicated, disclosed or otherwise without written consent of Aria Gro

2021/08/19 ISSUED FOR NO. DATE REMARKS REVISIONS



Drawing Title

ELECTRICAL Job No. Drawn 204530

Date Scale SEE PLANS 08/06/2021

SHALL BE SIGNED OFF BY ALL OTHER TRADES Sheet No. PRIOR TO BEING SUBMITTED FOR REVIEW. PLANS SHALL BE PREPARED AT A MINIMUM OF 1/8" SCALE OR THE SCALE OF THE DESIGN DRAWINGS, WHICHEVER IS LARGER. BE INSTALLED WITHOUT APPROVED SHOP

ELECTRICAL NOTES (DIVISION 26)

- FURNISH AND INSTALL CORD AND PLUG SET(S).
- 2. INSTALL KEC (SECTION 114000) FURNISHED CORD AND PLUG SET(S).
- 3. FURNISH AND INSTALL DEVICE & COVER IN KEC (SECTION 114000) FURNISHED JUNCTION BOX.
- 4. CONNECT TO JUNCTION BOX, DEVICE, & COVER FURNISHED BY KEC (SECTION 114000).
- CONNECT WITH LIQUID TIGHT CONDUIT FROM JUNCTION BOX TO EQUIPMENT/DEVICE(S) FOR A DIRECT CONNECTION.
- 6. CONNECT WITH LIQUID TIGHT CONDUIT FROM JUNCTION BOX THROUGH CONTROL TO EQUIPMENT/DEVICE(S) FOR A DIRECT CONNECTION.
- 7. CONNECT THRU DISPOSER CONTROL TO SOLENOID VALVE AND MOTOR.
- CONNECT THRU KEC (SECTION 114000) FURNISHED REMOTE CONTROL SWITCH(ES).
- 9. FURNISH AND INSTALL SWITCH. CONNECT TO LIGHTS FURNISHED AND INSTALLED BY KEC (SECTION 114000).
- 10. CONNECT POWER SUPPLY TO KEC (SECTION 114000) FURNISHED LOAD CENTER. COUNTER SHALL BE PREWIRED AND SHIPPED IN SECTIONS. CONNECT BETWEEN SECTIONS.
- 11. CONNECT TO KEC (SECTION 114000) FURNISHED JUNCTION BOX AT WALK-IN DOOR ASSEMBLY. LIGHT FIXTURE AT DOOR IS PREWIRED TO FACTORY MOUNTED LIGHT SWITCH. MOUNT ADDITIONAL KEC (SECTION 114000) FURNISHED LIGHTS WHERE INDICATED AND CONNECT TO SWITCH. CONDUIT SHALL BE INSTALLED ABOVE WALK-IN AND NOT EXPOSED ON INTERIOR UNLESS REQ'D. CONDUIT PENETRATING WALK-IN SHALL BE NON-METALLIC OR PVC. .
- 12. FOAM & SEAL INSIDE AND OUTSIDE OF CONDUIT PENETRATIONS THRU WALK-IN.
- 13. CONNECT KEC (SECTION 114000) FURNISHED TEMPERATURE ALARM SYSTEM. COORDINATE WITH BUILDING SYSTEMS.
- 14. FURNISH AND INSTALL FUSED DISCONNECT AT CONDENSING UNIT.
- 15. INSTALL KEC (SECTION 114000) FURNISHED DEFROST TIMER. CONNECT THRU TIMER TO EVAPORATOR COIL.
- 16. CONNECT FROM KEC (SECTION 114000) FURNISHED CONDENSING UNIT, THRU DEFROST TIMER, TO EVAPORATOR COIL. 17. PROVIDE NEMA RECEPTACLE WITH WEATHER COVER BEHIND FREEZER EVAPORATOR COIL FOR DRAIN LINE HEATER.
- 18. CONNECT EXHAUST FAN THRU FAN CONTROL CONTACTS IN DISHWASHER.
- 19. CONNECT TABLE LIMIT SWITCH TO DRY CONTACT ON KEC (SECTION 11400) FURNISHED DISH MACHINE.
- 20. CONNECT DRAIN WATER TEMPERING DEVICE PER MANUFACTURER'S RECOMMENDATIONS.
- 21. CONNECT THRU KEC (SECTION 114000) FURNISHED LIGHT SWITCH MOUNTED IN FACE OF HOOD OR HOOD CONTROL CABINET TO LIGHT FIXTURES IN HOOD(S). INTERWIRE LIGHT FIXTURES BETWEEN HOOD SECTIONS AS REQUIRED.
- 22. CONNECT THRU KEC (SECTION 114000) FURNISHED FAN CONTROL SWITCH MOUNTED IN FACE OF HOOD OR HOOD CONTROL CABINET TO EXHAUST
- FAN(S)/MAKE-UP AIR UNIT(S). INTERWIRE THRU MOTOR STARTER(S)/VARIABLE FREQUENCY DRIVE(S) AND OVERLOAD PROTECTION DEVICE(S) AS REQUIRED. INSTALL AND/OR INTERWIRE THE KEC (SECTION 114000) FURNISHED HOOD HEAT SENSOR(S) AND SMOKE SENSORS AS REQUIRED. 23. CONNECT 120 VOLT FROM KEC (SECTION 114000) FURNISHED MICRO SWITCH IN FIRE SUPPRESSION SYSTEM CONTROL PANEL TO SHUNT TRIP
- BREAKER(S) FOR SHUT DOWN OF POWER TO ALL ELECTRICAL DEVICES UNDER HOOD(S) AND 18" OUTSIDE PERIMETER OF HOOD(S). CONNECT FROM MICRO SWITCH TO DIVISION 26 FURNISHED RELAY(S) OR SWITCHES FOR SHUT DOWN/CONTROL OF HOOD LIGHTS, MAKE-UP AIR FAN, AND FIRE ALARM SYSTEM. EC IS RESPONSIBLE FOR ANY REQUIRED INTERWIRING/CONTROL WIRES FOR THE FIRE SUPPRESSION SYSTEM AND ASSOCIATED ELECTRICAL GAS SOLENOID VALVES.
- 24. CONNECT 120 VOLT FROM KEC (SECTION 114000) FURNISHED MICRO SWITCH IN FIRE SUPPRESSION SYSTEM CONTROL PANEL THRU MANUAL RESET RELAY TO ELECTRIC GAS VALVE. PROVIDE CONTROL/INTERWIRING BETWEEN THE FIRE SUPPRESSION SYSTEM AND ASSOCIATED ELECTRICAL GAS SOLENOID VALVES, RESET RELAYS, AND PULL STATIONS AS REQ'D.
- 25. PROVIDE CONCEALED CONDUIT AND RECESSED OCTAGONAL JUNCTION BOX IN WALL AT 42"-48" AFF FOR REMOTE MANUAL PULL STATION(S). COORDINATE LOCATION(S) WITH FIRE SUPPRESSION SYSTEM CONTRACTOR AND AUTHORITIES HAVING JURISDICTION PRIOR TO ROUGH-IN.
- 26. VERIFY UTILITIES FOR EXISTING/NIC EQUIPMENT AND PROVIDE FOR AS REQ'D.
- 27. INSTALL 3/4" EMPTY CONDUIT AND JUNCTION BOX FOR DATA CONNECTION. VERIFY EXACT REQUIREMENTS AND TERMINATION POINTS PRIOR TO ROUGH-IN.
- 28. PROVIDE AND INSTALL AN APPROVED GFCI RECEPTACLE.

				MEC	CHANIC	AL EQL	JIPMEN	Γ SCHE	DULE	_			
TAG	DESCRIPTION	VOLT/PHASE	PANEL	EQ CKT#	UIPMENT	MCA	OCPD	kW	HP	STARTER	E.C. PROV	IDED FEEDER	REMARKS
AC-1	AIR CURTAIN	120/1	M1	36	11.25	-	20	-	1.1	MFR	MFR	2#12+1#12G-3/4"C	
DFSS-1	DUCT FREE SPLIT SYSTEM	208/1	M1	48/50	-	19	30	-	-	MFR	MFR	2#10+1#10G-3/4"C	INDOOR DISCONNECT BY M
DFSS-2	DUCT FREE SPLIT SYSTEM	208/1	M1	52/54	-	9	20	-	-	MFR	MFR	2#12+1#12G-3/4"C	INDOOR DISCONNECT BY M
EDH-1	ELECTRIC DUCT HEATER	208/3	M1	8/10/12	7.8	-	20	2.8	N.A	MFR	MFR	3#12+1#12G-3/4"C	
EDH-2	ELECTRIC DUCT HEATER	208/3	M1	14/16/18	23.3	_	30	8.4	N.A	MFR	MFR	3#10+1#10G-3/4"C	
	ELECTRIC DUCT HEATER	208/3	M1	20/22/24	7.7	_	20	2.7	N.A	MFR	MFR	3#12+1#12G-3/4"C	
	ELECTRIC CEILING HEATER	120/1	M1	32	13	_	20	0.75	-	_	1P-20A	2#12+1#12G-3/4"C	
	ELECTRIC CEILING HEATER	120/1	M1	34	13	_	20	0.75	_	_	1P-20A	2#12+1#12G-3/4"C	
	ELECTRIC UNIT HEATER	208/3	M1	26/28/30	27.1	_	35	5.6	_	MFR	3P-60A	3#8+1#10G-3/4"C	
	KITCHEN EXHAUST FAN	208/3	M1	37/39/41	4.4	_	20	-	1.5	HOOD CP	MFR	3#12+1#12G-3/4"C	
	KITCHEN EXHAUST FAN		M1	43/45/47	4.4				1.5	HOOD CP	MFR	3#12+1#12G-3/4°C	
		208/3				-	20	_					
	KITCHEN EXHAUST FAN	208/3	M1	49/51/53	4.4	-	20	_	1.5	HOOD CP	MFR	3#12+1#12G-3/4"C	
	KITCHEN EXHAUST FAN	208/3	M1	55/57/59	4.4	-	20	-	1.5	HOOD CP	MFR	3#12+1#12G-3/4"C	
	KITCHEN EXHAUST FAN	208/3	M1	61/63/65	4.4	-	20	-	1.5	HOOD CP	MFR	3#12+1#12G-3/4"C	INTERLOCK WITH
	KITCHEN EXHAUST FAN	120/1	M1	42	8.4	-	20	-	0.5	HOOD CP	MFR	2#12+1#12G-3/4"C	DISHWASHER
	EXHAUST FAN	120/1	M1	44	7.2	-	20	-	1/3	NEMA 1	MFR	2#12+1#12G-3/4"C	
EF-2	EXHAUST FAN	120/1	M1	46	5.8	-	20	-	1/4	NEMA 1	MFR	2#12+1#12G-3/4"C	
MAU-1	MAKE UP UNIT	208/3	M1	1/3/5	27	33.8	60	-	10	HOOD CP	3P-60A	3#6+1#10G-3/4"C	
MAU-1	MAKE UP UNIT CONDENSER 1	208/3	M1	7/9/11	17.4	21.4	30	-	-	N/A	3P-30A	3#10+1#10G-3/4"C	
MAU-1	MAKE UP UNIT CONDENSER 2	208/3	M1	13/15/17	17.4	21.4	30	-	-	N/A	3P-30A	3#10+1#10G-3/4"C	
MAU-1	MAKE UP UNIT CONDENSER 3	208/3	M1	2/4/6	17.4	21.4	30	-	-	N/A	3P-30A	3#10+1#10G-3/4"C	
MAU-1	MAKE UP UNIT CONTROLS	120/1	M1	38	-	-	20	200W	-	N/A	1P-20A	2#12+1#12G-3/4"C	
MAU-2	MAKE UP UNIT	208/3	M1	19/21/23	6.1	7.7	15	-	2	HOOD CP	3P-30A	3#12+1#12G-3/4"C	
MAU-2	MAKE UP UNIT CONDENSER 1	208/3	M1	25/27/29	9.07	11.2	20	-	-	N/A	3P-30A	3#12+1#12G-3/4"C	
MAU-2	MAKE UP UNIT CONDENSER 2	208/3	M1	31/33/35	17.4	21.4	30	-	-	N/A	3P-30A	3#10+1#10G-3/4"C	
MAU-2	MAKE UP UNIT CONTROLS	120/1	M1	40	-	-	20	200VV	-	N/A	1P-20A	2#12+1#12G-3/4"C	
RTU-1	ROOFTOP UNIT	208/3	LDP1	14/16/18	-	66	80	-	-	MFR	100A/3P	3#4+1#8G-1"C	
RTU-2	ROOFTOP UNIT	208/3	LDP1	20/22/24	-	66	80	-	-	MFR	100A/3P	3#4+1#8G-1"C	
RTU-3	ROOFTOP UNIT	208/3	LDP1	26/28/30	-	72	90	-	-	MFR	100A/3P	3#3+1#8G-1"C	
RTU-4	ROOFTOP UNIT	208/3	LDP1	32/34/36	-	30	40	-	-	MFR	60A/3P	3#8+1#10G-3/4"C	
RTU-5	ROOFTOP UNIT	208/3	LDP1	38/40/42	-	115	150	-	-	MFR	200A/3P	3#1/0+1#6G-1-1/2"C	
RTU-6	ROOFTOP UNIT	208/3	LDP1	31/33/35	-	30	40	-	-	MFR	60A/3P	3#8+1#10G-3/4"C	
WH-1	WATER HEATER (TOTAL OF 7)	120/1	LP1	29,31,33,35,37, 39,41	_	_	20	200W	-	MFR	1P-20A	2#12+1#12G-3/4"C	FOR EACH OF (7) WATER HEATERS
RP-1	RECIRCULATION PUMP	120/1	LP1	43	-	-	20	200VV	0.08	MFR	1P-20A	2#12+1#12G-3/4"C	HEATERS
WS-1	WATER SOFTENER	120/1	LP1	9	-	-	20	200W	-	MFR	1P-20A	2#12+1#12G-3/4"C	
PP-1	BOOSTER PUMP	208/3	LP1	45/47/49	10.6	_	20	_	3	VFD BY PC	30A/3P	3#12+1#12G-3/4"C	
ERH (8)	RADIANT HEATER	208/1	M1	73 THRU 80	29	-	40	3	-	-	2P-20A	2#12+1#12G-3/4"C	EC TO PROVIDE (4) 40A/ 208V/1PH FEEDS FROM PANEL TO SOLAIRA CONTROLLER IN MEZZANINI INDIVIDUAL 20A/208V/1PH FEEDS FROM CONTROLLE TO HEATERS. PROVIDE (7 REMOTE CONTROL SWITC PER (2) HEATERS. REFER
													SWITCH BANK DIAGRAM

- 1. REFER TO MECHANICAL PLANS AND SCHEDULES PRIOR TO ROUGH-IN.
- 2. ALL STARTERS SHALL BE COMBINATION STARTER/DISCONNECTS U.N.O. 3. ALL STARTERS/DISCONNECTS SHALL BE LOCATED WITHIN SIGHT OF THE EQUIPMENT SERVED, AT A LOCATION APPROVED BY THE ARCHITECT U.N.O.

- INCLUDE A SECOND GROUND

ISOLATED GROUND.

120/208V | 120/208V

3PH, 4W || 3PH, 4W

400A

MLO

FED

POS

100A

MLO

1 200A '

MLO

CONDUCTOR, 1-#8 CU, FOR

- 4. ALL EXTERIOR STARTERS/DISCONNECTS SHALL BE IN NEMA 3R ENCLOSURES U.N.O. 5. ALL CIRCUIT BREAKERS SERVING MULTI-MOTOR MECHANICAL EQUIPMENT SHALL BE HACR RATED. 6. PROVIDE 3/4" EMPTY CONDUIT AND BACKBOX AT T-STAT OR SENSOR WITH CONDUIT ROUTED BACK TO UNIT SERVED FOR USE BY T.C.C.

400N)

400N

MLO

120/208V

1200A

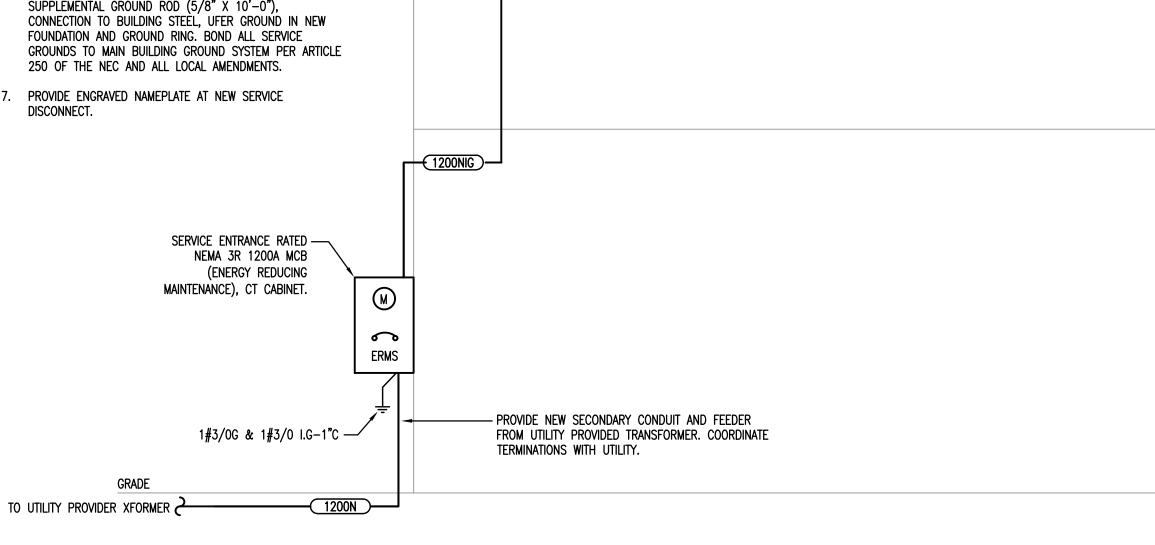
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ELECTRICAL SERVICE NOTES:

1. COORDINATE ALL REQUIREMENTS WITH LOCAL UTILITY.

2. PROVIDE ARC FLASH HAZARD WARNING LABELS PER IEEE

- 1584 AND NFPA 70E (2015) TO INDICATE APPROACH BOUNDARY, INCIDENT ENERGY AVAILABLE, PPE REQUIREMENTS, ETC. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AVAILABLE FAULT CURRENT FROM THE UTILITY AND CALCULATING AVAILABLE FAULT CURRENT/ARC FLASH AT ALL POINTS OF ELECTRICAL DISTRIBUTION.
- 3. ALL EXTERIOR EQUIPMENT SHALL BE NEMA 3R RATED.
- 4. MAINTAIN ALL REQUIRED SERVICE CLEARANCES IN FRONT OF ELECTRICAL EQUIPMENT.
- 5. ALL FEEDERS SHALL BE COPPER. ALUMINUM CONDUCTORS ARE STRICTLY PROHIBITED.
- 6. MAIN BUILDING GROUND SYSTEM. PROVIDE CONNECTION TO INCOMING SIDE OF WATER SERVICE (JUMPER OVER METER), SUPPLEMENTAL GROUND ROD (5/8" X 10'-0"), CONNECTION TO BUILDING STEEL, UFER GROUND IN NEW FOUNDATION AND GROUND RING. BOND ALL SERVICE GROUNDS TO MAIN BUILDING GROUND SYSTEM PER ARTICLE
- PROVIDE ENGRAVED NAMEPLATE AT NEW SERVICE DISCONNECT.



	ELECTRICAL RISER DIAGRAM
\'\	SCALE: NOT TO SCALE

3 PHASE, 4 WIRE										
OCPD	No. Sets	Conductors	EGC	C. (in)	3 WIRE C. (in)					
20	1	4# 12	12	3/4	3/4					
25	1	4#10	10	3/4	3/4					
30	1	4#10	10	3/4	3/4					
35	1	4 #8	10	3/4	3/4					
40	1	4 #8	10	3/4	3/4					
45	1	4 #8	10	3/4	3/4					
50	1	4 #8	10	3/4	3/4					
60	1	4 #6	10	1	3/4					
70	1	4 #4	8	1-1/4	1					
80	1	4 #4	8	1-1/4	1					
90	1	4 #3	8	1-1/4	1					
100	1	4 #2	8	1-1/4	1-1/4					
125	1	4 #1	6	1 1/2	1-1/4					
150	1	4 #1/0	6	2	1-1/2					
175	1	4 #2/0	6	2	1-1/2					
200	1	4 #3/0	6	2	2					
225	1	4 #4/0	4	2-1/2	2					
250	1	4 #250 Kcmil	4	2-1/2	2					
300	1	4 #350 Kcmil	4	3	2-1/2					
400	1	4 #600 Kcmil	3	3-1/2	3					
450	2	4#4/0	2	2-1/2	2					
500	2	4 #250 Kcmil	2	3	2					
600	2	4 #350 Kcmil	1	3	2-1/2					
800	2	4 #600 Kcmil	1/0	3-1/2	3					
1000	3	4 #500 Kcmil	2/0	3-1/2	3					
1200	3	4 #600 Kcmil	3/0	3-1/2	3					
1600	4	4 #600 Kcmil		3-1/2	3					
2000	5	4 #600 Kcmil		3-1/2	3-1/2					
2500	6	4 #600 Kcmil		3-1/2	3-1/2					
3000	8	4 #500 Kcmil	500 Kcmil	3-1/2	3					
4000	10	4 #600 Kcmil	500 Kcmil	4	3-1/2					

FEEDER TAGS: EXAMPLE, "400N" INDICATES 400 OCPD WITH NEUTRAL, 4 WIRE. "400" INDICATES 400 OCPD, 3 WIRE. "400N2" INDICATES 400 OCPD, 5 WIRE (DBL. NEUTRAL). "400NIG" INDICATES 400A OCPD WITH NEUTRAL AND ISOLATED GROUND, 6 WIRE.

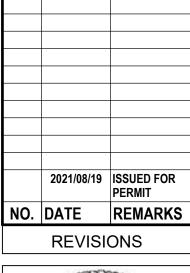
> COORDINATED SHOP DRAWINGS SHALL BE PROVIDED BY EACH SUBCONTRACTOR AND SHALL CONTAIN A LAYOUT OF ALL DUCTWORK, CONDUIT, PIPING, EQUIPMENT, STRUCTURE, WALLS, CEILING, ETC. AS REQUIRED TO REFLECT FULL COORDINATION ACROSS ALL TRADES AND SHALL BE SUBMITTED FOR REVIEW. COORDINATED DRAWINGS SHALL BE SIGNED OFF BY ALL OTHER TRADES PRIOR TO BEING SUBMITTED FOR REVIEW. PLANS SHALL BE PREPARED AT A MINIMUM OF 1/8" SCALE OR THE SCALE OF THE DESIGN DRAWINGS, WHICHEVER IS LARGER. NO EQUIPMENT SHALL BE INSTALLED WITHOUT APPROVED SHOP DRAWINGS.

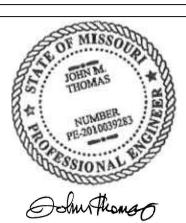
RELEASE FOR CONSTRUCTION **AS NOTED ON PLANS REVIEW** LEE'S SUMMIT, MISSOURI

540 NW CHI ROAD, LEE' MO 64086

FIELD VERIFICATION Contractor shall verify all figured dimensions and conditions at the job site and notify Aria Group Architects, Inc. of any dimensional errors, omissions or discrepancies before beginning or fabricating any work. Do not scale these drawings.

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Drawing Title

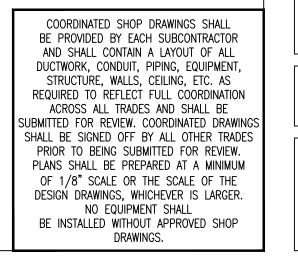
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SEE PLANS 08/06/2021

							FOODSERVI	CE ELECTRICAL	L SCHEDULE		
ITEM NO.	QTY DESCRIPTION	VOLTS	CYCLE	PHASE	KW	HP	AMPS	TYPE	NEMA	HGT AFF	
8	 UNDERBAR BLENDER STATION 4 DOOR REMOTE BACKBAR REFRIGERATED CABINET 	120 120	60 60	1			15.00 2.50	JBW CONDUIT		15" 28"	15.0 AMP CIRCUIT; DIV. 26 TO MOUNT KEC SUPPLIED DUPLEX RECEPTACLE AND BRANCH TO CONNECTION CONNECT W/ LIQUID TIGHT CONDUIT
11 11.1	1 REFRIGERATED BACKBAR CABINET CONDENSING UNIT	208	60	1		3/4	9.10	DISCONNECT		20	NOTE 14; DISCONNECT AT UNIT ON ROOF
12	1 3 DOOR REMOTE BACKBAR REFRIGERATED CABINET	120	60	1			2.00	CONDUIT		28"	CONNECT W/ LIQUID TIGHT CONDUIT
12.1	1 REFRIGERATED BACKBAR CABINET CONDENSING UNIT	208	60 60	1		1/2	7.00	DISCONNECT		20"	NOTE 14; DISCONNECT AT UNIT ON ROOF
12.2 16	1 2 DOOR REFRIGERATED BACKBAR CABINET 1 ROTARY GLASS WASHER	120 120	60	1			1.60 4.30	CONDUIT		28"	CONNECT W/ LIQUID TIGHT CONDUIT DR HEIGHT TIGHT TO BAR TOP: MOUNT DR HORIZONTALLY
18	1 FREEZER	120	60	1				DR		18"	15.0 AMP CIRCUIT
22	1 BUILT-IN WARMING DRAWER	120	60	1			7.50	JBW		18"	
23	1 REACH-IN UNDERCOUNTER REFRIGERATOR 1 ICE CREAM DIPPING CABINET	120 120	60 60	1		1/5	5.00 5.70	DR DR	5-15P 5-15P	18"	
27	1 WALK-IN MEAT COOLER	120	60	1		1/4	3.00	JBH	J-131	10	NOTE 11, 12
27.1	1 WALK-IN MEAT COOLER EVAPORATOR COIL	120	60	1			1.60	JBH			
27.2	1 WALK-IN MEAT COOLER CONDENSING UNIT	208	60	3		1 1/2	11.10	DISCONNECT			NOTE 14; DISCONNECT AT UNIT ON ROOF
28 28.1	1 WALK-IN FREEZER 1 WALK-IN FREEZER EVAPORATOR COIL	120 208	60	1			3.00 9.80	JBH JBH			NOTE 11, 12
28.2	1 WALK-IN FREEZER COOLER CONDENSING UNIT	208	60	3		2	10.80	DISCONNECT			NOTE 14; DISCONNECT AT UNIT ON ROOF
28.3	1 WALK-IN FREEZER COIL DRAIN HEAT TAPE	120	60	1				SR			NOTE 17 (IN USE COVER)
29 29.1	1 WALK-IN PRODUCE COOLER 2 WALK-IN PRODUCE COOLER EVAPORATOR COIL	120 120	60 60	1			3.00 0.80	JBH JBH			NOTE 11, 12
29.2	1 WALK-IN PRODUCE COOLER EVAPORATOR COIL 1 WALK-IN PRODUCE COOLER CONDENSING UNIT	208	60	3		1 1/2	7.70	DISCONNECT			NOTE 14; DISCONNECT AT UNIT ON ROOF
31	1 SINGLE SECTION REACH-IN REFRIGERATOR	120	60	1		1/4	6.00	DR	5-15P	84"	
32	1 BEER COOLER (LIGHTS)	120	60	1			3.00	JBH			NOTE 11, 12
32.1	BEER COOLER EVAPORATOR COIL BEER COOLER CONDENSING UNIT	120 208	60 60	1 3		1 1/2	1.60 11.10	JBH DISCONNECT			NOTE 12, 15; ELECTRIC DFA NOTE 14; DISCONNECT AT UNIT ON ROOF
33	1 99" REFRIGERATED PIZZA TABLE	120	60	1		1/2	14.00	DISCONNECT		18"	THE IT, DISCONTRACT AT ONLY ONE TOOL
34	2 HOT FOOD SERVING COUNTER	208	60	1			8.32	SPR	6-15P	18"	
35	3 68" REFRIGERATED PIZZA TABLE 1 MICROWAYE CONVECTION OVEN	120	60	1		1/3	8.00	DR	5-15P	18"	
37 38	1 MICROWAVE CONVECTION OVEN 1 32' - 0" PASS THRU SHELF	208 120/208	60	1 1		1	40.00	SPR CONDUIT	6-50P	48"	BRANCH TO CONNECTIONS FOR ITEMS # 38.5, #38.6, #38.8, #38.9, & #38.10; DIV. 26 TO MAKE FINAL CONNECTIONS. ELECTRIC DFA; REFER TO CUSTOM SHO
				·		'					DRAWING WIRING DIAGRAM
38.3	3 DROP-IN HOT WELL	120	60	1			4.20	JBW		24"	NOTE 4
38.5 38.6	1 60" HEAT LAMP WITH LIGHTS 1 36" DISPLAY LIGHT	120/208 120	0 60	1 1			16.00 0.08				
38.8	1 72" HEAT LAMP WITH LIGHTS	120/208	60	1			19.60				
38.9	1 66" HEAT LAMP WITH LIGHTS	120/208	60	1			17.50				
38.10	2 54" HEAT LAMP WITH LIGHTS	120/208	60	1			14.00		5.000	0.011	
40 41	1 MICROWAVE OVEN 1 32" REFRIGERATED SANDWICH UNIT	120 120	60	1		1/5	17.70 7.20	DR DR	5-20P 5-15P	66"	
42	1 75" REFRIGERATED EQUIPMENT STAND	120	60	1		1/4	10.00	DR	5-15P	18"	
43	1 36" RANGE W/ CONVECTION OVEN	120	60	1		1/3	4.00	DR		18"	CONVECTION OVEN BASE
46	1 32" REFRIGERATED SANDWICH UNIT	120	60	1		1/5	7.20	DR	5-15P	18"	
47 48	1 36" COUNTERTOP GRIDDLE 1 DECK BROILER	120 120	60 60	1			1.00 2.00	DR DR	5-15P	18" 48"	
52	1 52" REFRIGERATED EQUIPMENT STAND	120	60	1		1/5	8.00	DR	5-15P	18"	
53.1	1 FRYER PUMP	120	60	1			9.00	DR	5-15P	48"	
54	1 27" WORKTOP FREEZER	120	60	1		1/5	5.00	DR	5-15P	18" 18"	
55 56	1 64" REFRIGERATED SANDWICH UNIT 1 PASTA COOKER	120 120	60 60	1		1/2	12.00 2.00	DR DR	5-15P	18"	
58	1 EXHAUST HOOD-MAIN COOKLINE	120	0				2.00	JBH		10	NOTE 21, 22, 23; REFER TO HOOD DRAWINGS; DIV. 26 TO PROVIDE SERVICE DFA THRU EMS ITEM # 93 TO FANS ON ROOF
59	1 EXHAUST HOOD - PREP LINE		0					JBH			NOTE 21, 22, 23; REFER TO HOOD DRAWINGS; DIV. 26 TO PROVIDE SERVICE DFA THRU EMS ITEM # 93 TO FANS ON ROOF
61	1 COOK & HOLD CABINET 1 DOUBLE CONVECTION OVEN	120	60	1	1.90	1/2	16.00 7.90	SR DR	5-20P 5-15P	18"	(2) DDIC (4) AT 40" 9 (4) AT 40"
62 64	1 BOILERLESS STEAMER W/ WATER FILTER	120 208	60	3	10.00	1/2	28.00	SPR	L15-30P	48"	(2) DR'S (1) AT 18" & (1) AT 48"
67	1 30 GAL TILTING SKILLET	120	60	1			5.00	JBW		24"	NOTE 4
69	1 74" WORKTABLE	120	60	1			15.00	DR	5-20R	48"	(2) DUPLEX CONVENIENCE OUTLET
71 73	1 78" WORKTABLE 1 102" WORKTABLE	120 120	60	1			15.00 15.00	DR DR	5-20R 5-20R	48"	DUPLEX CONVENIENCE OUTLET DUPLEX CONVENIENCE OUTLET
75	1 40QT MIXER	220	60	1		2	12.00	SPR	L6-30P	24"	BOI LEX CONVENIENCE COTLET
76	1 TUMBLER	120	60	1			4.00	DR			
81	1 CONVEYOR TYPE DISHWASHER 1 DRAIN WATER TEMPERING KIT, BY VENDOR	208	60	3			48.80	JBW/DISC		64"	NOTE 6, 19, 26; DIV. 26 TO PROVIDE DISCONNECT & INTERWIRE TO DISHMACHINE; COORDINATE ROUGH-IN LOCATION W/ DISCONNECT
81.1 82	1 DRAIN WATER TEMPERING KIT - BY VENDOR 1 BOOSTER HEATER	120 208	60 60	3			15.00 149.90	DR JBW/DISC		12" 12"	NOTE 20, 26; 15.0 AMP CIRCUIT; FOR DRAIN WATER TEMPERING KIT NOTE 4, 26; DIV. 26 TO PROVIDE DISCONNECT & INTERWIRE TO BOOSTER HEATER. COORDINATE ROUGH-IN LOCATION W/ DISCONNECT.
83	1 CONDENSATE HOOD	200	0				170.00	05VV/D100		14	REFER TO HOOD DRAWINGS FOR ADDITIONAL INFO
83.1	2 CONDENSATE HOOD (FAN/LIGHT SWITCH)		0								
86	1 SLICER	120	60	1		1/2	7.00	DR	5-15P	48"	NOTE 22, 20 0 AMD CIDCUIT: ELECTRIC DEA
92 92.1	1 FIRE SUPPRESSION SYSTEM 2 FIRE SUPPRESSION PULL STATION	120	60	1			20.00	JBH		48"	NOTE 23; 20.0 AMP CIRCUIT; ELECTRIC DFA NOTE 25; VERIFY LOCATION W/ FIRE SUPPRESSION CONTRACTOR AND LOCAL INSPECTOR
100	1 GLYCOL CHILLER	120	60	1		1/2	22.70	JBW		, , , , , , , , , , , , , , , , , , , 	
109	1 REFRIGERATED TRUFFLE CASE		60	1	0.76		10.10	SR	5-15P		STUB UP AND BRANCH TO DR IN MILLWORK CABINET SUPPLIED BY KEC
110	2 36" BOTTLE COOLER	120	60	1		1/5	4.60	DR	5-15P	18"	
111	2 UNDERBAR HAND SINK 3 GLASSWASHER	120 120	60	1 1			20.00 12.00	SR		12" 18"	NOTE 1, 26; DIV. 26 TO PROVIDE CORD & PLUG
113	4 24" BOTTLE COOLER	120	60	1		1/6	1.90	JIX	5-15P	10	1.10 1E 1, 20, DIV. 20 10 1 1\0 VIDE 00\D & 1 E00
116.2	1 REMOTE WATER CHILLER	120	60	1		1/5	3.00	DR		18"	
128	1 FOOD PROCESSOR	120	60	1		1 1/2	9.00	DR	- COD	48"	NOTE 26
129 140	1 60" WORK TABLE 1 7 QT MIXER	120 120	60	1			15.00 6.00	DR DR	5-20P	48"	DUPLEX CONVENIENCE OUTLET
145	1 VEGETABLE DRYER	120	60	1			2.70	DR	5-15P	18"	
BL	3 BUG LIGHT	120	60	1			15.00	DR		72"	NOTE 26
C1	3 RECIPE MONITOR						47.00	IDMUDICO		0.4"	NOTE 26
C4 C4.2	1 1800# ICE CUBER 1 ICE MAKER REMOTE CONDENSING UNIT	208 208	60 60	1 1			17.00 1.00	JBW/DISC DISCONNECT		84"	NOTE 5; DIV. 26 TO PROVIDE DISCONNECT IF REQUIRED & INTERWIRE TO ICE MAKER ELECTRICAL POWER TO REMOTE CONDENSER SUPPLIED FROM ICE MACHINE
C4.2	1 SODA DISPENSER	120	60	1			16.00	DISCONNECT	5-20P	12"	NOTE 26
C8	1 ESPRESSO MACHINE	208	60	1	0.00			SPR	L6-30P	42"	NOTE 26; 30 AMP CIRCUIT
C9	1 COFFEE GRINDER	120	60	1			8.00	DR	5-15P	42"	NOTE 26
C10 C12	1 COFFEE MAKER 1 ICED TEA MAKER	208 120	60 60	1			24.30 14.20	SPR SR	L14-30P 5-15P	42" 42"	NOTE 26; 30 AMP CIRCUIT NOTE 26
C12	2 SODA CARBONATOR	120	60	1			14.20	DR	5-15P 5-15P	84"	NOTE 26 NOTE 26; 15.0 AMP CIRCUIT
	1 CO2 TANK		0								NOTE 26
C19		100	00	1			15.00	DR		60"	NOTE 26
C19 C20 C21	1 NITROGEN TANK/BLENDER 1 OIL TANK	120 120	60 60				20.00	QR	5-20P	84"	NOTE 26; W/ ANALOG PHONE JACK AT 84" AFF

EACH PIECE OF KITCHEN EQUIPMENT SHALL BE PROVIDED WITH A RECEPTACLE OR READILY ACCESSIBLE DISCONNECT SWITCH. TYP.
PROVIDE A MUSHROOM STYLE EMERGENCY POWER OFF DEVICES FOR THE BOOSTER HEATER AND DISHWASHER WITH SHUT TRIP BREAKER IN LIEU OF
A LOCAL DISCONNECT. COORDINATE FINAL KEC REQUIRMENTS WITH KITCHEN EQUIPMENT CUTS PRIOR TO ROUGH—IN.

SEE SHEET E101 FOR FOOD SERVICE ELECTRICAL NOTES



RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

10/14/2021

ENGINEERING
PP PLANSING | PRECHANICAL | BECTRICAL | PLUMBING | FIRE PROTECTION

V CHIPMAN , LEE'S SUMMIT,

SA SINIERS HIANNE SA SINIERNI NA

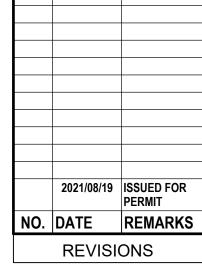
FIELD VERIFICATION
Contractor shall verify all figured dimensions and conditions at the job site and notify Aria Group Architects, line of any dimensional errors

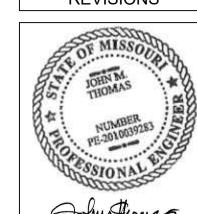
Inc. of any dimensional errors, omissions or discrepancies before beginning or fabricating any work. Do not scale these drawings.

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Architects, Inc.





Drawing Title

ELECTRICAL SCHEDULES

Job No. Drawn
204530 CW

Scale Date
SEE PLANS 08/06/2021

GENERAL NOTES

- 1. BLACK TRIM RINGS TO BE FACTORY PAINTED SHERWIN WILLIAMS CARBIDE BLACK POLANE T (RAL# F63B12), AND ARE NOTED BY A -b IN THE FIXTURE TAG.
- 2. ALL LAMPS SHALL BE SYLVANIA, PHILIPS, SATCO, OR TCP, UNLESS NOTED OTHERWISE AND PROVIDED BY G.C.
- 3. ALL INTERIOR AND EXTERIOR SURFACE AND RECESSED LIGHT FIXTURES SHALL BE LABELED "U.L. LISTED."
- 4. BATTERY PACKS PROVIDED FOR ALL EXIT SIGNS AND EMERGENCY EGRESS FIXTURES SHALL BE RATED FOR MINIMUM 90 MINUTE OPERATION AT FULL OUTPUT.
- 5. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS AND/OR THE MISCELLANEOUS LIGHTING DETAIL SHEETS FOR EXACT LOCATIONS OF LIGHT FIXTURES.
- 6. FOR ALL LIGHTOLIER/DAYBRITE/GARDCO/PHILIPS/CHLORIDE LIGHTING FIXTURES, CONTACT JULIE BLANKENHEIM, 630-488-7403.

			ARCHITEC1	TURAL L	IGHT	FI	KTURE SCHEDULE	
	TYPE	MANUFACTURER / MODEL #	LAMP	VOLTAGE	WATTS	VA	DESCRIPTION	QUANTITY
K1		DAYBRITE 2EVG54LH8304DUNVDIM	INTEGRAL LED	UNIVERSAL	55		2'X4', RECESSED 3000K LED TROFFER, PRISMATIC LENS AND ELECTRONIC BALLAST, @ B.O.H.	29
K1-E M		DAYBRITE 2EVG54LH8304DUNVDIM-EMLED	INTEGRAL LED	UNIVERSAL	55		2'X4', RECESSED 3000K LED TROFFER, PRISMATIC LENS, ELECTRONIC BALLAST AND EMERGENCY BATTERY PACK FOR TWO LAMPS RATED FOR 1100 TO 1400 LUMENS, @ B.O.H.	11
K3)	DAYBRITE T232-UNV-1/2-EB-IOP232-LWN-FKR-126-CG-4 INSTANT START BALLAST	(2) 14WTLED PHILIPS INSTANT FIT- 3000K	UNIVERSAL	28		4'-0", STANDARD STRIP WITH 2-LAMP T8, AND ELECTRONIC BALLAST, WITH WIRE GUARD AND CHAIN HANGER KIT	2
K3-E M	—	DAYBRITE T232-120-1/2-EB10R-E5-FKR-126-CG-4 INSTANT START BALLAST & EMERGENCY BATTERY PACK	(2) 14WTLED PHILIPS INSTANT FIT- 3000K	UNIVERSAL	28		4'-0", STANDARD STRIP WITH 2-LAMP T8, AND ELECTRONIC BALLAST AND EMERGENCY BATTERY PACK, WITH WIRE GUARD AND CHAIN HANGER KIT	2
K4		DAYBRITE 2EVG30L830-2-D-UNV-DIM	(2) 14WTLED PHILIPS INSTANT FIT- 3000K	UNIVERSAL	28		2'X2', RECESSED DIMMABLE 3000K LED @ B.O.H.	1
LS1		NOVA FLEX NF-PRO-0-120-24V-2700K	WARM WHITE LED, LAMP INTEGRAL	12V	PER DRIVER		DIMMING COMPATIBILITY TO BE VERIFIED BY PROJECT, 0-10V AND MLV DIMMING DRIVERS ARE AVAILABLE. REFER TO RCP & MISC. LIGHTING DETAIL SHEETS FOR QUANTITY/LOCATION. LED TAPE LIGHT. SURFACE MOUNTED w/ LOW PROFILE CHANNEL (CONCEALED). CLEAR PANEL USE FOR TASK LIGHTING AND AND SOFT PANEL USED FOR MILLWORK & SUSPENDED BARREL LIGHTING	45 D
LS3		ONMILIGHT FIXTURE: GEN-27-SHO-CC LEADER:- DRIVERS AS REQUIRED PER PLAN	2700K LED	24V	5.3 / FT		DIMMING COMPATIBILITY TO BE VERIFIED BY PROJECT, 0-10V AND MLV DIMMING DRIVERS ARE AVAILABLE. REFER TO RCP & MISC. LIGHTING DETAIL SHEETS FOR QUANTITY/LOCATION. STRIP LIGHT AT MILLWORK WINE DISPLAYS	6
R2-b	0	LIGHTOLIER FRAME: 4RN ENGINE: C4L10827MZ10U TRIM: C4RDLCL - PAINT BLACK	2700K LED	120V	11		4" LED RECESSED DOWNLIGHT - DIMMABLE WITH 0-10V DIMMER (INTERNAL LENS STANDARD IS APPROVED FOR OVER FOOD SERVICE) BLACK FLANGE. MEDIUM SPREAD BEAM. 1000 LUMENS - USE FOR CEILING HEIGHTS BETWEEN 9' AND 12'	90
R3-b	0	LIGHTOLIER FRAME: 3RN ENGINE: C3RA10927NSZ10U TRIM: C3RAPBKBK - PAINT BLACK	2700K LED	120V	13		3" RECESSED ADJUSTABLE PINHOLE APERTURE DOWNLIGHT - DIMMABLE WITH 0-10V DIMMER PINHOLE SPOT LIGHT. BLACK FLANGE 1000 LUMENS - USED TO LIGHT TABLES	32
R5		LIGHTOLIER FRAME: 3RN ENGINE: C3RA10927FLZ10U TRIM: C3RACL	2700K LED	120V	13		3" RECESSED ADJUSTABLE APERTURE 1,000 LUMEN LED ACCENT LIGHT. DIMMABLE WITH 0-10V DIMMER WHITE FLANGE WIDE FLOOD-USED FOR CEILING HEIGHTS 10'-12'	11
R5-b	0	LIGHTOLIER FRAME: 3RN ENGINE: C3RA10927FLZ10U TRIM: C3RACL - PAINTED BLACK	2700K LED	120V	13		3" RECESSED ADJUSTABLE APERTURE 1,000 LUMEN LED ACCENT LIGHT. DIMMABLE WITH 0-10V DIMMER BLACK FLANGE WIDE FLOOD-USED FOR CEILING HEIGHTS 10'-12'	17
R6		LIGHTOLIER LYTECASTER FRAME-IN-KIT: L3NZ10U LIGHT ENGINE: L308927NF ROUND TRIM: L3RAPW	2700K LED	120V			RECESSED ADJUSTABLE LED DOWNLIGHT WITH PINHOLE APERTURE. DIMMABLE WITH 0-10V DIMMER WHITE FLANGE USED FOR CEILING HEIGHTS BETWEEN 8'-10'	6
R7		LIGHTOLIER FRAME IN KIT: 4RN LIGHT ENGINE: P4RDL20827CLZ10U	2700K LED	120V	21		4" ROUND DOWNLIGHT WHITE FLANGE USED IN RESTROOMS	18
S1		LUCIFER LIGHTING COMPANY PUKLED LPK SEMI-RECESSED LED LPK-1-80L-02A-27-B	4.3W AC LED	120V/12V	4.3		SEMI-RECESSED PUK LIGHT WITH BLACK TRIM RING. PROVIDE WITH REMOTE POWER SUPPLY. REFER TO RCP & MISC. LIGHTING DETAIL SHEETS FOR QUANTITY/LOCATION AND INSTALLATION TYPE. USED FOR MILLWORK LIGHTING	20
S3-b		JUNO - TRAC MASTER AVANT GARDE CYLINDRA T254L 27K 80CRI PDIM SP B	2700K 80 CRI 15W LED SP	120V	15		SURFACE MOUNTED MONOPOINT WITH CANOPY AND ELV TRANSFORMER - = MONOPOINT W/ NO STEM a = MONOPOINT W/ 12" STEM b = MONOPOINT W/ 18" STEM c = MONOPOINT W/ 24" STEM	34
	-						* NOTE: STEMS CAN BE COMBINED FOR ADDITIONAL LENGTHS AND ARE NOTED BY TWO LETTERS SURFACE MOUNTED MONOPOINT WITH CANOPY AND ELV TRANSFORMER - = MONOPOINT W/ NO STEM a = MONOPOINT W/ 12" STEM b = MONOPOINT W/ 18" STEM c = MONOPOINT W/ 24" STEM	
T1		LIGHTOLIER MODEL : LTOSPNIESSZEKVA/SOZARK	2700K LED	120V	9		* NOTE: STEMS CAN BE COMBINED FOR ADDITIONAL LENGTHS AND ARE NOTED BY TWO LETTERS LED TRACK HEAD, 2700K IN BLACK NARROW FLOOD DISTRIBUTION, ELV DIMMING	43
	∇	MODEL: LT08RNF827BKVA/6074BK					BLACK FINISH. 18" STEM.	
TR6	TR4	LIGHTOLIER 6006NBK 6' TRACK 6048NBK LIVE END					LIGHTOLIER BASIC LYTESPAN SINGLE CIRCUIT TRACK BLACK FINISH REFER TO PLAN FOR TRACK HEADS	7
TR8	TR4	LIGHTOLIER 6008NBK 8' TRACK 6048NBK LIVE END			96.90		LIGHTOLIER BASIC LYTESPAN SINGLE CIRCUIT TRACK BLACK FINISH REFER TO PLAN FOR TRACK HEADS	4

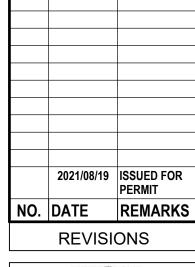
			EXIER	IOK LIGH	II FIX	UI	RE SCHEDULE	
	TYPE	MANUFACTURER / MODEL #	LAMP	VOLTAGE	WATTS	VA	DESCRIPTION	QUANTITY
CF		FANIMATION SPITFIRE (DAMP RATED) MODEL: MA6721BK BLADES: B6720		120V	==		MOTOR ASSEMBLY: MATTE GREIGE FAN ASSEMBLY BLADES: 60" SWEEP SPITFIRE NATURAL WOOD BLADE SET W/ FAN CONTROL BY LUTRON MODEL #DVFSQ-F-BL	4
RH-2		SOLAIRA ICR SERIES MODEL: SICR4024OB-SMART34-DV-SM-WSD		208V	3,000		ELECTRIC HEATER AT PATIO, SOLAIRA SMART 16A DUAL VOLTAGE VARIABLE CONTROL, 34.5"L x 10"W x 4.33"D DUAL VOLTAGE DIGITAL CONTROLLER: SMART34-DV WALL SWITCH FOR SMART34-DV: SM-WSD BLACK FINISH MOUNT HEATER AT 45 DEGREE ANGLE W/ STANDARD FACTORY BRACKET	8
X1-b	0	LIGHTOLIER FRAME: 6RN ENGINE: C6L15927WZ10U TRIM: C6RDLCL PAINTED BLACK		120V/227V			CALCULITE GEN 3 - 6" ROUND RECESSED LED DOWNLIGHT. UL WET LOCATION LISTED. BLACK FLANGE USED FOR EXTERIOR CANOPY DOWNLIGHTING	2
ХЗ	∇	RAB LIGHTING LFP16B	(1) 7 WATT TCP LED7P1627KFL	120V	60		LAMP BEAM ANGLE TO BE 30 DEGREE SPREAD BLACK FINISH SURFACE LIGHTING USED AT REGULAR HARD LID PATIO CANOPIES	20
X5-E M	•	GARDCO 121-16L-700-WW-G4-3-EBPC-120-BK	LED	120V			SURFACE MOUNTED 2 LAMP LED WALL PACK WITH MEDIUM THROW CUT OFF OPTICS AND EMERGENCY BATTERY OPTION. BLACK FINISH	9
XSC1	5	DECORATIVE SCONCE MFR: KUZCO STYLE: MICA MODEL: AT6606	3000K LED	120V	15W		FINISH: BLACK SIZE: 5-1/2" W X 4-1/2" H X 1-1/2"D LOCATION: EXTERIOR WALL REFER TO ELEVATIONS FOR MOUNTING HEIGHT	4

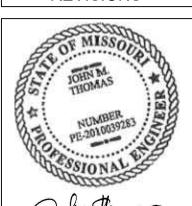
	TYPE	MANUFACTURER / MODEL #	LAMP	VOLTAGE	WATTS	VA	DESCRIPTION	QUANTITY
EM1		EXITRONIX LED-90	LED	120V	12		EMERGENCY LIGHTING FOR FRONT OF HOUSE. WHITE HOUSING	2
M1-b		EXITRONIX LED-90BL	LED	120V	12		EMERGENCY LIGHTING FOR FRONT OF HOUSE. BLACK HOUSING	5
(1	\otimes	PHILIPS - CHLORIDE CALIBER SERIES CN6RWW21C	LED INCLUDED WITH UNIT	120V	3.8		SINGLE-SIDED, WALL OR CEILING MOUNTED, EDGE-LIT, LED EXIT SIGN TO BE USED IN FRONT OF HOUSE. WHITE FINISH	1
⟨1-b	\otimes	PHILIPS - CHLORIDE CALIBER SERIES CN6RWB21C	LED INCLUDED WITH UNIT	120V	3.8		WALL OR CEILING MOUNTED, EDGE-LIT, LED EXIT SIGN TO BE USED IN FRONT OF HOUSE BLACK FINISH	11
(2	\otimes	PHILIPS CHLORIDE VE SERIES VERWEM	LED INCLUDED WITH UNIT	120V	3.62		LED EXIT SIGN WITH THERMOPLASTIC HOUSING AND 2 STENCIL FACES TO BE USED IN BACK OF HOUSE WHITE FINISH	5

TYPE		LAMP	VOLTAGE	WATTS	VA	DESCRIPTION	QUANTITY
	MANUFACTURER / MODEL #		'				
P1	DECORATIVE PENDANT MRF: TROY LIGHTING STYLE: DISTRICT MODEL: F5571	(1) 4.5W DIMMABLE LED / T9 (8") / E26 / CLEAR / 2700K	120V	4.5W		FINISH: SATIN BLACK/TOPAZ GLASS SIZE: 8"W x 15.75"H LOCATION: PRIVATE DINING ROOM, REFER TO ENLARGED PLAN FOR MOUNTING HEIGHTS	5
P2	DECORATIVE PENDANT MRF: TROY LIGHTING STYLE: ELLIOT MODEL: F6223	(3) 4W DIMMABLE LED / G9 WEDGEBASE XENON / 2700K	120V	6W		FINISH: TEXTURED BLACK SIZE: 25" DIA x 20" H LOCATION: BAR DINING, MOUNT AT 8'-4" A.F.F.	5
P3	DECORATIVE PENDANT MRF: TROY LIGHTING STYLE: DISTRICT MODEL: F5571	(1) 4.5W DIMMABLE LED / T9 (8") / E26 / CLEAR / 2700K	120V	4.5W		FINISH: SATIN BLACK/TOPAZ GLASS SIZE: 8"W x 15.75"H LOCATION: PRIVATE DINING ROOM, REFER TO ENLARGED PLAN FOR MOUNTING HEIGHTS	6
P4	DECORATIVE PENDANT MRF: TROY LIGHTING STYLE: DISTRICT MODEL: F5571	(1) 4.5W DIMMABLE LED / T9 (8") / E26 / CLEAR / 2700K	120V	4.5W		FINISH: SATIN BLACK/TOPAZ GLASS SIZE: 8"W x 15.75"H LOCATION: PRIVATE DINING ROOM, REFER TO ENLARGED PLAN FOR MOUNTING HEIGHTS	4
P5	DECORATIVE PENDANT MRF: TROY LIGHTING STYLE: DISTRICT MODEL: F5571	(1) 4.5W DIMMABLE LED / T9 (8") / E26 / CLEAR / 2700K	120V	4.5W		FINISH: SATIN BLACK/TOPAZ GLASS SIZE: 8"W x 15.75"H LOCATION: PRIVATE DINING ROOM, REFER TO ENLARGED PLAN FOR MOUNTING HEIGHTS	10
SC1	WALL SCONCE MFR: ONE FOURTY THREE STYLE: WALLACE LAMP MODEL:	LED				FINISH: BLACK LAMP W/ BRASS SHADE/BRASS HARDWARE SIZE: 5" PLATE X 17" H X 12" D LOCATION: RETAIL	7
SC2	WALL SCONCE MFR: MITZI STYLE: BELINDA MODEL: H415101A-OB	LED				FINISH: OLD BRONZE SIZE: 6" W X 14" W X 7" H LOCATION: BATHROOMS	9
TBL1	TABLE LAMP MFR: PAGE ONE LIGHTING STYLE: CENTURY LED TABLE LAMP MODEL:	3000K LED	120V	7W		FINISH: SATIN FARK GRAY WITH SMOKE GLASS SIZE: 5.9" DIA X 17.6" H LOCATION: HOST STAND	1

FIELD VERIFICATION
Contractor shall verify all figured dimensions and conditions at the job site and notify Aria Group Architects, Inc. of any dimensional errors, omissions or discrepancies before beginning or fabricating any work. Do not scale these drawings.

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Drawing Title

ELECTRICAL SCHEDULES

Job No. 204530

Scale Date
SEE PLANS 08/06/2021

Sheet No.

COORDINATED SHOP DRAWINGS SHALL
BE PROVIDED BY EACH SUBCONTRACTOR
AND SHALL CONTAIN A LAYOUT OF ALL
DUCTWORK, CONDUIT, PIPING, EQUIPMENT,
STRUCTURE, WALLS, CEILING, ETC. AS
REQUIRED TO REFLECT FULL COORDINATION
ACROSS ALL TRADES AND SHALL BE
SUBMITTED FOR REVIEW. COORDINATED DRAWINGS
SHALL BE SIGNED OFF BY ALL OTHER TRADES
PRIOR TO BEING SUBMITTED FOR REVIEW.
PLANS SHALL BE PREPARED AT A MINIMUM
OF 1/8" SCALE OR THE SCALE OF THE
DESIGN DRAWINGS, WHICHEVER IS LARGER.
NO EQUIPMENT SHALL
BE INSTALLED WITHOUT APPROVED SHOP
DRAWINGS.

1. Contractor shall provide adequate withstand rating of equipment per available fault current from the existing utility or distribution. Coordinate with utility. 2. Contractor shall provide a circuit schedule directory in or on the face of electric panel.

Name:	CH Lee S	Summit											
Tag:	M1												
· - 9·	Load											Load	
Load	type	Α	В	С	Amps	No.	No.	Amps	Α	В	С	type	Load
Load		3242			Allipa			Allips	2089				Load
MAU-1, UNIT	H	3242	3242		60	3	4	30	2009	2089		H	MAU-1, COND 3
WYO-I, ONII			3242	2242	00			. 50		2009	2000		WAG-1, GOIND 3
	Н	2000		3242		5	6		007	2 5	2089	H	
MALL 4 COND 4	H	2089	2000		20	7	8	00	937	007		EH	TDU 4
MAU-1, COND 1	Н		2089	0000	30	9	10	20		937	007	EH	EDH-1
	Н	0000		2089		11	12		0700		937	EH	
	Н	2089				13	14		2798			EH	
MAU-1, COND 2	Н		2089		30	15	16	30	7.	2798		EH	EDH-2
	Н			2089		17	18				2798	EH	
	Н	733				19	20		925			EH	
Mau-2, unit	Н		733		15	21	22	20		925		EH	EDH-3
	Н			733		23	24				925	EH	
	Н	1089				25	26		3254	,		EH	
MAU-2, COND 1	Н		1089		20	27	28	35		3254		EH	EUH-1
	Н			1089		29	30				3254	EH	
	Н	2089				31	32	20	1560			EH	ECH-1
MAU-2, COND 2	Н		2089		30	33	34	20		1560		EH	ECH-2
	Н			2089		35	36	20			1350	Н	AC-1
	Н	528				37	38	20	200			Н	MUA-1 CONTROL
KEF-1L	Н		528		20	39	40	20		200		Н	MUA-2 CONTROL
	Н			528		41	42	20			1008	Н	KEF-3
	Н	528		020		43	44	20	864	, ,,	,,,,,,	H	EF-1
KEF-1M	Н	020	528		20	45	46	20		696		Н.	EF-2
	Н		520	528	20	47	48			030	1976	Н	U -Z
		500		320				30	4070	1	1970		DFSS-1
VEE 4D	H	528	500		20	49	50		1976	200		Н	
KEF-1R	Н		528		20	51	52	20		936		Н	DFSS-2
	Н			528		53	54				936	Н	
	Н	528				55	56						
KEF-2L	Н		528		20	57	58						SPACE
	Н			528		59	60]					7
	Н	528				61	62		2882			EQ	
KEF-2R	Н		528		20	63	64	30		2882		EQ	TRASH COMPACTO
	Н		020	528		65	66	-		2002	2882	EQ	
	- 11			520		10.5 0000			2882		2002	I BOWNING L	1
SPACE						67	68	30	2002	2002		EQ	TRASH COMPACTO
SPACE						69	70	30		2882		EQ	TRASH COMPACIO
						71	72				2882	EQ	
(2) PATIO HEATERS	EH	3016			40	73	74	40	3016			EH	(2) PATIO HEATER
/	日		3016			75	76			3016		EH	(=)
(2) PATIO HEATERS	EH			3016	40	77	78	40			3016	EH	(2) PATIO HEATER
(2) FATIO FILATERS	EH	3016			40	79	80	1 40	3016			EH	(2) FATIO HEATER
SPACE						81	82						SPACE
SPACE						83	84				7		SPACE
S 10L													SITIOL
Cubtotal #4		20000	16000	16000					26200	22475	24052		Cubtotal #2
Subtotal #1		20006	16990	16990					<u>26399</u>	<u>22175</u>	<u>24053</u>		Subtotal #2
Subtotal #2		26399	22175						-				-
Subtotal #1 + #2		<u>46405</u>	<u>39165</u>	<u>41043</u>									
Total Panel Load:	126.6	KVA		351.5	Amps	38	6.8	Demand	Amps				
Volts:	120/208V	3ph	4W	Min. wi	thstand:		42k						
Mains:	400	AMLO		Spcl. pro	visions:								
IVIAITIS.													

1. Contractor shall provide adequate withstand rating of equipment per available fault current from the existing utility or distribution. Coordinate with utility.

2. Contractor shall provide a circuit schedule directory in or on the face of electric panel.

	CH Lee S	Summit											
Tag:	LP1												
	Load											Load	
Load	type	Α	В	С	Amps	No.	No.	Amps	Α	В	С	type	Load
RTU GFCI'S	R	720			20	1	2	20	720			L	LIGHTING
TOILET RECEPT	R		360		20	3	4	20		607		L	LIGHTING
TOILET RECEPT	R			360	20	5	6	20			1122	L	LIGHTING
EMPLOYEE TO ILET RECPT	R	540			20	7	8	20	618			L	LIGHTING
WATER SOFTENER (WS-1)	R		200		20	9	10	20		979		L	LIGHTING
GEN REC, MEZZ	R			360	20	11	12	20			1156	L	LIGHTING
GENERAL RECEPT	R	900			20	13	14	20	1103			L	LIGHTING
GENERAL RECEPT	R		720		20	15	16	20		865		L	LIGHTING
KITCHEN GENERAL RECEPT	R			540	20	17	18	20			1240	L	PAIO LIGHTING + FAN
WRA PPING RM RECEPT	R	540			20	19	20	20					SPARE
SPRING RM RECEPT	R		180		20	21	22	20					SPARE
SHADE MOTORS	R			500	20	23	24	20					SPARE
SHADE MOTORS	R	500			20	25	26	20					SPARE
SHADE MOTORS	R		500		20	27	28	20				L	MENU & EASEL BOARD
WH-1	HW			180	20	29	30	20			1200	L	EXTERIOR SIGNAGE
WH-1	HW	180			20	31	32	20	1200			L	EXTERIOR SIGNAGE
WH-1	HW		180		20	33	34	20		1200		L	EXTERIOR SIGNAGE
WH-1	HW			180	20	35	36	20			1200	L	MONUMENT
WH-1	HW	180			20	37	38	20	200			EQ	GREASE PUMP
WH-1	HW		180		20	39	40	20		1000		EQ	POWER DOOR
WH-1	HW			180	20	41	42	20 LO			200	EQ	SECURITY SYSTEM
RP-1	EQ	180			20	43	44	20 LO	200			EQ	CO2 ALARM PANEL
	EQ		1273			45	46	20 LO		400		EQ	ALARM SYSTEM
PP-1	EQ			1273	20	47	48	20 LO			800	EQ	FACP
	EQ	1273				49	50	20 LO	105			L	EXIT SIGNS
SPARE	S				20	51	52	20		393		L	EXTERIOR LIGHTING
SPARE	S				20	53	54				1200	L	200 200 200 CO 200 200 CO 200
SPARE	S				20	55	56	20	1200		1200	L	SITE LIGHTING
SPARE	S				20	57	58	20	1200			S	SPARE
					20			20					SPARE
SPARE	S				20	59	60	20				S	SPARE
Subtotal #1		5013	3593	3573					5346	5444	8118		Subtotal #2
Subtotal #2		5346	5444	8118					3340	<u> </u>	0110		Subtotal #2
Subtotal #1 + #2		<u>10359</u>	9037	<u>11691</u>									
Total Panel Load:	31 1	KVA		86.3	Amps	10	3.1	Demand	Δmns				
	120/208V	3ph 4	\/\		thstand:	10	42k		Armipa				
Mains:		AMLO	y V	Spcl. pro			42K	1					
Mounting:						HIINIT TO	IP AE-AE	REALITE	F=GROUND I	FAULT GC-9	SECTION O	ICK ON	8/1
Notes:	SEE PLA	INO		r I= FEEU I	nnu,51=5	H I I KIU H	ir,Ar=Ah	io FAULI, b	ar =0 m U U N U	гжошт, 6 С=6	aru, LU=LL	ICK UN	8/1
Notes. 1. Contractor shall provide	a damet	o with a tan -l	ratinf		ot no	ع حاطمان	ault acces	ant frame	lha aviatir -	ontilita es el	ا خاندانداندانداندانداندانداندانداندانداندا	. Caau-li	note with utility
1. Contractor shall browde	adequat	e withstand	rating of	equipmei	π per ava	maple f	auit curr	ent from	me existing	utility or d	orugansa	i. Coordi	nate with utility.

Name:	CH Lee	Summit											
Tag:	KP1												
-	Load											Load	
Load	type	Α	В	С	Amps	No.	No.	Amps	Α	В	С	type	Load
#67 GAL TILTING SKILLET	K	600			20	1	2		3362			K	
ST	K				ST	3	4	30		3362		K	#64 BOILERLESS STEAMER
#62 DL. OVEN	K			948	20	5	6				3362	K	
ST	K				ST	7	8	ST				K	ST
#62 DL. OVEN	K		948		20	9	10			5860		K	
ST	K				ST	11	12	70			5860	K	#81 DISHWASHER
#61 COOK AND HOLD OVEN	K	1920			20	13	14		5860			K	
ST	K				ST	15	16	ST				K	ST
#54 27" WORKTOP FREEZER	K			600	20	17	18	20			800	K	#81.1, DRAIN WATER TEMPERING KIT
ST	K		004		ST	19	20	ST		0.10		S	ST
#46 REFRIGERATED SANDWICH UNIT	K		864		20	21	22	20		840	4044	K	#86 SLICER
ST	K	4000			ST 20	23	24	20	4040		1044	K	#140 MIXER +#145 VEGETABLE DRYER
#47 GRIDDLE + #56 COOKER + #43 RANGE + #48 BROILER	K	1080			ST	25	26	30	1248	1248		K	#75 MIXER
ST #42 75" REFRIGERATED EQUIPMENT STAND	K			1200	20	27 29	28 30	20		1240	1008	K	#27 WK-IN COOLER +#27.1 WK-IN EVAP. +#28 WK-IN FREEZ
ST	K			1200	ST	31	32		1019		1006	K K	#21 VVIC-IN COULER *#21.1 VVIC-IN EVAP. *#20 VVIC-IN FREEZ
#52 52" REFRIGERATED EQUIPMENT STAND	K		960		20	33	34	20	1019	1019		K	#28.1WALK-IN FREEZER EVAPPRATOR COIL
ST	K		900		ST	35	36	20		1019	800	K	#28.3, DRAIN HEAT TAPE
#53.1 FRYER PUMP	K	1080			20	37	38	20	744		000	K	#29 WK-IN COOLER + (2) #29.1 WK-IN COOLER EVAP.
ST	K	1000			ST	39	40		1 4 4	946		K	
#55 REFRIGERATED SANDWICH UNIT	K			1440	20	41	42	20		010	946	K	#11.1 REFRIGERATED BACKBAR CABINET CONDENSING UN
#31 REACH-IN REFRIGERATOR	K	720			20	43	44		728			K	
#92 FIRE SUPPRESSION SYSTEM	K		1920		20LO	45	46	20		728		K	-#12.1 REFRIGERATED BACKBAR CABINET CONDENSING UN
#93 FIRE SUPPRESSION SYSTEM	K			1920	20LO	47	48				1333	K	
(2) #69 CON. OUTLETS	K	360			20	49	50	20	1333			K	#27.2 WALK-IN COOLER CONDENSING UNIT
#71 CON. OUTLET	K		180		20	51	52			1333		K	-
#73 CON. OUTLET + #129 CON. OUTLET	K		100	360	20	53	54			1000	1297	K	
#128 FOOD PROCESSOR	K	1080			20	55	56	20	1297		1201	K	#28.2 WALK-IN FREEZER CONDENSING UNIT
(3) #C1	K	1000	540		20	57	58		1201	1297		K	CONTROL OF THE PROPERTY OF THE
#26 ICE CREAM DIPPING CABINET	K		040	684	20	59	60			1201	925	K	
(2) #BL BUGLIGHTS	K	200		004	20	61	62	20	925		323	K	#29.2 WALK-IN PRODUCE COOLER CONDENSING UNIT
#C20 NITROGEN TANK/BLENDER	K	200	1800		20	63	64	-	323	925		K	-
#C18 SODA CARBONATOR	K		1000	1000		65	66			323	1333	K	
#C18 SODA CARBONATOR	K	1000		1000	20	67	68	20	1333		1555	K	#32.2 BEER COOLER CODENSING UNIT
#CI6 SODA CARBONATOR	K	1000	1768		20	69	70	- 20	1333	1333		K	- SEEK GOODEN GODENGING ONIT
#C4 ICE BUBER			1700		25					1333		1540000	
WOO A COMPENSATE HOOD (FAMILIOUT CONTOLL)	K	1500		1768	20	71	72	20	104		104	K	#C4.2 ICE MAKER REMOTE CONDENSING UNIT
#83.1 CONDENSATE HOOD (FAN/LIGHT SWITCH)	K	1500				73	74	20	104			K	ODA DE
EPO (DW, BH)	K		40		20	75	76				400	17	SPARE
SPARE	S	20400			20	77	78	20	2424		480	K	#76 TUMBLER
FEED THRU LOAD TO KP2	K	20190			FEED	79	80	20	2124	4400		K	#40 MICROWAVE OVEN
FEED THRU LOAD TO KP2	K		21978		THRU	81	82	50		4160		K	#37 MICROWAVE CONVECTION OEN
	K			16548		83	84				4160	K	
- 1		00700	00000	00.400					00077	00050	00450		- N
Subtotal #1		29730	30998	26468				-	20077	23052	<u>23452</u>		Subtotal #2
Subtotal #2		20077	23052	23452									
Subtotal #1 + #2		<u>49808</u>	<u>54049</u>	<u>49921</u>									
Total Panel Load:	153.8				Amps		7.5	Demand	d Amps				
	120/208V	3ph	4W		thstand:		42k						
Mains:		AMLO		Spcl. pro									1
Mounting:	SEE PLA	NS		FT=FEED T	HRU,ST=9	SHUNT TR	IP,AF=AF	C FAULT, 0	GF=GROUND	FAULT,GC=	=GFCI,LO=LC	ICK ON	8/17/20
Notes:													

Name:	CH Lee S	Summit											
Гаg:	KP2												
	Load											Load	
Load	type	Α	В	С	Amps	No.	No.	Amps	Α	В	С	type	Load
33 REFRIGERATED PIZZA TABLE	К	1680	3.00		20	1	2	00	1664			K	W00 5 1154 7 1 4 4 15
	K		865		0.0	3	4	20		1664		K	#38.5, HEAT LAMP
#34 HOT FOOD SERVING COUNTER	K			865	20	5	6	0.5			2038	K	W00 0 1154 T 444D
#35 REFRIGERATED PIZZA TABLE	K	960			20	7	8	25	2038			K	#38.8, HEAT LAMP
WALLIOT FOOD OFFINING COUNTED	K		865		0.0	9	10	0.5		1820		K	WOO O HEAT LAND
#34 HOT FOOD SERVING COUNTER	K			865	20	11	12	25			1820	K	#38.9, HEAT LAMP
#35 REFRIGERATED PIZZA TABLE	K	960		50. 43.44	20	13	14	00	1456			K	WOO AO LIEAT LAMB
#35 REFRIGERATED PIZZA TABLE	K		960		20	15	16	20		1456		K	#38.10, HEAT LAMP
#41 REFRIGERATED SANDWICH UNIT	K			864	20	17	18	00			1456	K	WOO AO LIFAT LAMP
WOO ECEDECCO MA CUINE	K	2200			20	19	20	- 20	1456			K	#38.10, HEAT LAMP
#C8 ESPRESSO MACHINE	K		2200		30	21	22	20		400		K	#38.6 + #38.6
#CO CON. OUTLET	K			400	20	23	24	20			300	K	#11 BACKBAR REFRIGERATED CANINET
#C9 COFFEE GRINDER	K	960			20	25	26	20	432			K	#12 + #12.2 (REFRIGERATED CABINETS)
#C40 COFFEE MAVED	K		2527		20	27	28	20		1100		K	#8 UNDERBAR BLENDER STATION
#C10 COFFEE MAKER	K			2527	30	29	30	20			516	K	#16 GLASS WASHER
#23 UC. REFRIGERATOR	K	600			20	31	32	20	800			K	#18 FREEZ ER
(3) #38.3 DRIP-IN HOT WELL	K		1512		20	33	34	20		1440		K	#112 GLASSWASHER
#22 WARMING DRAWER	K			900	20	35	36	20			1100	K	#8 UNDERBAR BLENDER STATION
#C12 ICED TEA MAKER	K	1704			20	37	38	20	648			K	#32 BEER COOLER LIGHT + #32.1 EVAP. CO
#C7 SODA DISPENSER	K		800		20	39	40	30		2724		K	#100 GLY COL CHILLER
#C19 CO2 TANK	K			1000	20	41	42	20			1440	K	#112 GLASSWASHER
#C21 OIL TANK	K	1000			20	43	44	20	1176			K	#109 REFRIGERATED TRUFFLE CASE
SPARE	S				20	45	46	20		1104		K	(2) #110 BOTTLE COOLERS
SPARE	S				20	47	48	20			456	K	(2) #113 BOTTLE COOLERS
SPARE	S				20	49	50	20	456			K	(2) #113 BOTTLE COOLERS
SPARE	S				20	51	52	20		540		K	#116.2 REMOTE WATER CHILLER + #BL
SPARE	S				20	53	54	20				S	SPARE
SPARE	S				20	55	56	20				S	SPARE
SPARE	S				20	57	58	20				S	SPARE
SPARE	S				20	59	60	20				S	SPARE
SPARE	3				20	99	00	20				3	SPARE
Subtotal #4		10064	9730	7422					10126	12240	0126		Subtotal #2
Subtotal #1		10064					-		10120	12248	9126		Subtotal #2
Subtotal #2		10126	12248	9126	-		-						-
Subtotal #1 + #2		<u>20190</u>	<u>21978</u>	<u>16548</u>									
Total Panel Load	: 58.7	KVA		163.0	Amps	10	5.9	Demano	Amps				
	: 120/208V	3ph	4W		thstand:		42k		11-11				
Mains		A MLO		Spcl. pro									
	: SEE PLA					HUNTTR	IP, AF=AF	RC FAULT, G	F=GROUND	FAULT,GC=	GFCI, LO=LO	CKON	8/17/20
Notes:			,										

3. Contractor shall provide a circuit schedule directory in or on the face of electric panel.

Name:	CH Lee	Summit											
Tag:	POS												
	Load											Load	
Load	type	Α	В	С	Amps	No.	No.	Am ps	Α	В	С	type	Load
POS - CHECKING	R	720	A		20	1	2	20	720			R	POS - BAR DINING
POS - CHECKING	R		360		20	3	4	20		1200		R	DIGITAL SIGNS WITH MILLWORK
POS - TASTING BAR	R			720	20	5	6	20		Mar Service	360	R	POS - BACK BAR
TASTING BAR USB OUTLETS	R	720		<i>2</i> - 2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	20	7	8	20	720		,	R	POS - BAR DINING
TASTING BAR USB OUTLETS	R		720		20	9	10	20		720		R	POS - BACK BAR
POS DINING	R			720	20	11	12	20			540	R	HOST
POS DINING	R	720			20	13	14	20	720			R	BAR USB OUTLETS
SPARE	R				20	15	16	20		720		R	BAR USB OUTLETS
AV ROOM	R			360	20	17	18	20				S	SPARE
AV ROOM	R	360			20	19	20	20	1080			R	KDS
AV ROOM	R		360		20	21	22	20		540		R	KDS
(3) TV - BACK BAR	R			1080	20	23	24	20			720	R	KDS
(2) TV - TASTING BAR	R	720			20	25	26	20	800			R	OFFICE COPIER
(2) TV (EXTERIOR)	R		720		20	27	28	20		720		R	OFFICE
(1) TV & RECEPT PDR	R			540	20	29	30	20			720	R	OFFICE
(1) TV & RECEPT PDR	R	540			20	31	32	20	360			R	TV - BREAK AREA
RADIO CHARGER RECEPT.	R		180		20	33	34	20				S	SPARE
SPARE	S				20	35	36	20				S	SPARE
SPARE	S				20	37	38	20				S	SPARE
SPARE	S				20	39	40	20				S	SPARE
SPARE	S				20	41	42	20				S	SPARE
Subtotal #1		3780	2340	3420					4400	3900	2340		Subtotal #2
Subtotal #2		4400	3900	_					1100	5555	20.10		Castotal #2
Subtotal #1 + #2		8180	6240										
Total Panel Load		KVA			Amps		8.8	Demand	Amps				
Volts: 120/208V 3ph 4W				1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	thstand:		42k	C					
Mains: 100 A MLO				Spcl. provisions: I.G. BUS									
Mounting	SEE PLA	NS		FT=FEED T	HRU, ST=S	HUNTTR	IP,AF=AF	RC FAULT, G	F=GROUND F	AULT, GC=0	GFCI,LO=LO	CKON	8/17/202
Notes:													

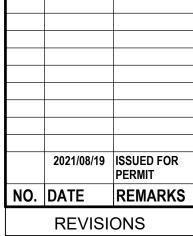
COORDINATED SHOP DRAWINGS SHALL
BE PROVIDED BY EACH SUBCONTRACTOR
AND SHALL CONTAIN A LAYOUT OF ALL
DUCTWORK, CONDUIT, PIPING, EQUIPMENT,
STRUCTURE, WALLS, CEILING, ETC. AS
REQUIRED TO REFLECT FULL COORDINATION
ACROSS ALL TRADES AND SHALL BE
SUBMITTED FOR REVIEW. COORDINATED DRAWINGS
SHALL BE SIGNED OFF BY ALL OTHER TRADES
PRIOR TO BEING SUBMITTED FOR REVIEW.
PLANS SHALL BE PREPARED AT A MINIMUM
OF 1/8" SCALE OR THE SCALE OF THE
DESIGN DRAWINGS, WHICHEVER IS LARGER.
NO EQUIPMENT SHALL NO EQUIPMENT SHALL BE INSTALLED WITHOUT APPROVED SHOP DRAWINGS.

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

540 NW CHIPMAN ROAD, LEE'S SUMMIT MO 64086

FIELD VERIFICATION Contractor shall verify all figured dimensions and conditions at the job site and notify Aria Group Architects, Inc. of any dimensional errors, omissions or discrepancies before

beginning or fabricating any work. Do not scale these drawings. COPYRIGHT Aria Group Architects, Inc. shall retain all common law, statutory and other reserved rights. These drawings and related documents shall not be duplicated, disclosed or otherwise without written consent of Aria Group Architects, Inc.





Drawing Title

Job No. 204530

Scale SEE PLANS 08/06/2021

						Lighting 2		lay Sche	dule				
Zone	Switch bank	Area served	Fixture tag	Load type	Qty.	Fixture wattage	Total Watts	Panel	Relay#	Ckt	Wall Dimmer Model# (Leviton)	Power Extender	Remarks
1		ENTRY VESTIBULE	R2-b	0-10V	2	11	22	LP1	1	LP1:4	IP710-LFZ	-	
2		NOT USED WAITING AREA	TR6 (T1 HEAD)	ELV	1	60	60	LP1	3	LP1:2	VRE06-1LZ		PROVIDE DRIVER AS REQUIREI
4		RETAIL	TR6 (T1 HEAD)	ELV	3	60	l	LP1	4	LP1:2	VRE06-1LZ	-	PROVIDE DRIVER AS REQUIRE
5		RETAIL	SC1	LED	4	15		LP1	5	LP1:2	IPL06-10Z	-	
6 7		RETAIL RETAIL	TR8 (T1 HEAD)	ELV ELV	4	60 60	 	LP1 LP1	6 7	LP1:2 LP1:2	VRE06-1LZ VRE06-1LZ		PROVIDE DRIVER AS REQUIRE PROVIDE DRIVER AS REQUIRE
8		CHECK-OUT	R2-b	0-10 V	4	11		LP1	8	LP1:4	IP710-LFZ		FROVIDE DRIVER AS REQUIRE
9		TASTING BAR	R2-b	0-10 V	10		110	LP1	9	LP1:4	IP710-LFZ	-	
10		TASTING BAR	R5-b	0-10 V	3	13		LP1	10	LP1:4	IP710-LFZ	-	
11 12		TASTING BAR TASTING BAR (BARRELS)	R2-b R5-b	0-10 V 0-10 V	5	11 13		LP1 LP1	11	LP1:4 LP1:4	IP710-LFZ IP710-LFZ	<u>-</u>	
13		HOST	R2-b	0-10 V	3	11	33	LP1	13	LP1:4	IP710-LFZ	-	
14		HOST	R5-b	0-10 V	1	13	13	LP1	14	LP1:4	IP710-LFZ	-	
15 16		HOST BARREL RESERVE	TBL1 R2-b	LED 0-10 V	1 7	7	7 77	LP1 LP1	15 16	LP1:4 LP1:4	IPL06-10Z IP710-LFZ	-	
17		BARREL RESERVE	R5-b	0-10 V	2		 	LP1	17	LP1:4	IP710-LFZ	-	
18		BARREL RESERVE	R2-b	0-10 V	2		 	LP1	18	LP1:4	IP710-LFZ	-	
19		BARREL RESERVE	R5-b	0-10 V	3	- '	 	LP1	19	LP1:4	IP710-LFZ	-	
20 21		TOILET HALL	R2-b R5-b	0-10 V 0-10 V	5	11 13		LP1 LP1	20	LP1:4 LP1:4	IP710-LFZ IP710-LFZ	<u>-</u>	_
22		FAMILY TOILET	R7-b	0-10 V	3	-		LP1	22	LP1:6	IP710-LFZ		
23		FAMILY TOILET	R6-b	0-10V	1	12	12	LP1	23	LP1:6	IP710-LFZ	-	
24		FAMILY TOILET	SC2	LED	2		.	LP1	24	LP1:6	IPL06-10Z	<u>-</u>	 WIRE VIA LOCAL OCC SENSOR
25 26		WOMEN'S TOILET WOMEN'S TOILET	R7-b R6-b	0-10V 0-10V	3			LP1 LP1	25 26	LP1:6 LP1:6	IP710-LFZ IP710-LFZ	<u>-</u>	FOR ON/OFF CONTROL
27		WOMEN'S TOILET	SC2	LED	4	15	.	LP1	27	LP 1:6	IPL06-10Z		_
28	Α	MEN'S TOILET	R7-b	0-10V	8	21	168	LP1	28	LP1:6	IP710-LFZ	-	
29		MEN'S TOILET	R6-b	0-10V	2		l	LP1	29	LP1:6	IP710-LFZ	-	_
30 31		MEN'S TOILET BAR BACK	SC2 R2-b	LED 0-10 V	3	15 11	l	LP1 LP1	30	LP1:6 LP1:8	IPL06-10Z IP710-LFZ	<u>-</u>	
31		BAR BACK	R2-b R5-b	0-10 V	6		-	LP1	31	LP1:8	IP710-LFZ	<u>-</u> -	
33	В	BAR BACK	R2-b	0-10 V	4	11	44	LP1	33	LP1:8	IP710-LFZ	-	
34		BAR BACK	R2-b	0-10 V	6		 	LP1	34	LP1:8	IP710-LFZ	-	
35 36		BAR DINING BAR DINING	S3 S3	ELV ELV	15	15 15	-	LP1 LP1	35 36	LP1:8 LP1:8	VRE06-1LZ VRE06-1LZ	-	
37		NOT USED		LLV	13	13	225		37	Li 1.0	VICEOUTEZ	_	
38		BAR DINING	P1	LED	5	4.5	22.5	LP1	38	LP1:8	IPL06-10Z	-	
39		NOT USED	004	LED		45	45	1.54	39	1.04.40	IDI 00 407		
40 41		DINING	SC1 P2	LED LED	3	15 12	l	LP1 LP1	40	LP1:10 LP1:10	IPL06-10Z IPL06-10Z		
42		DINING	R3-b	0-10V	8	13	-	LP1	42	LP1:10	IP710-LFZ	-	
43		DINING	R3-b	0-10V	24	ł	-	LP1	43	LP1:10	IP710-LFZ	-	
44		DINING	P4	LED	4	4.5		LP1	44	LP1:10	IPL06-10Z	-	
45 46		DINING	P3 R2-b	LED 0-10V	18			LP1 LP1	45 46	LP1:10 LP1:10	IPL06-10Z IP710-LFZ	-	
47		DINING	R5-b	0-10V	3	13	 	LP1	47	LP1:10	IP710-LFZ		
48	E	DINING	R2-b	0-10V	3	11		LP1	48	LP1:10	IP710-LFZ	-	
49		EXPO	R2-b	0-10V	6	1 .		LP1	49	LP1:10	IP710-LFZ	-	
50 51		NOT USED	R2-b	0-10V	7	11	77	LP1	50 51	LP1:10	IP710-LFZ	-	
52		PINOT NOIR ROOM	S3	ELV	6	15	90	LP1	52	LP1:6	VRE06-1LZ	_	
53		PINOT NOIR ROOM	R5-b	0-10V	2	ļ		LP1	53	LP1:6	IP710-LFZ	-	
54		PINOT NOIR ROOM	P5	LED	5	4.5	 	LP1	54	LP1:6	IPL06-10Z	-	
55 56		CHARDONNAY ROOM CHARDONNAY ROOM	S3 R5-b	ELV 0-10V	6			LP1 LP1	55 56	LP1:6 LP1:6	VRE06-1LZ IP710-LFZ	-	
57		CHARDONNAY ROOM	P5	LED	5	4.5	l	LP1	57	LP 1.6	IPL06-10Z		
58		DINING PATIO	X3	HALOGEN	7	60		LP1	58	LP1:18	LEV836700	-	
59		DINING PATIO	X3	HALOGEN	7	60	420	LP1	59	LP1:18	LEV836701	-	
60 61		NOT USED CEILING FANS	CF	N/A	1	100	400	LP1	60	LP1:18	_	_	
62		EMPLOYEE BREAK ROOM	K1	SWITCH	3	55		LP1	N/A	LP1:12	-		
63		EMPLOYEE MEN'S TOILET	K2	SWITCH	1	28		LP1	N/A	LP1:12	-	-	
64		EMPLOYEE WOMEN'S TOILET		SWITCH	1	28		LP1	N/A	LP1:12	-	-	
65 66		PREP/COOKLINE PREP/COOKLINE	K1, K4 K1, K4	SWITCH SWITCH	17 13	.		LP1 LP1	N/A N/A	LP1:12 LP1:14	-	-	
67		DRY STORAGE	K1, K4	SWITCH	4	55	.	LP1	N/A	LP1:14	-	_	
68		NOT USED											
69		OFFICE	K2	SWITCH	2		 	LP1	N/A	LP1:14	-	-	
70 71		WRAPPING ROOM A/V ROOM	K1 K2	SWITCH SWITCH	4	55 28		LP1 LP1	N/A N/A	LP1:6 LP1:6	-	<u>-</u>	
72		SPRINKLER RM	K3	SWITCH	1	28	 	LP1	N/A	LP1:14	-	-	
73		STORAGE	R2-b	0-10V	1	11		LP1	N/A	LP1:6	-	-	
74 75		MECH./ELEC. RM. MENU BOARD	K3	SWITCH	3			LP1 LP1	N/A	LP1:14	-	-	
75 76		EASEL BOARD	SIGN	RELAY/TC RELAY/TC	1 1	400 400	 	LP1 LP1	N/A N/A	LP1:28 LP1:28	-	<u> </u>	
77A		EXTERIOR SIGNAGE	SIGN	RELAY/TC	1	1200		LP1	N/A	LP1:30	-	-	
77B		EXTERIOR SIGNAGE	SIGN	RELAY/TC	1	1200		LP1	N/A	LP1:32	-	-	
77C 78		EXTERIOR SIGNAGE EXTERIOR LIGHTING	SIGN X1-b	RELAY/TC RELAY/TC	1	1200 15		LP1 LP1	N/A N/A	LP1:34 LP1:52	-	<u>-</u>	
78 79		EXTERIOR LIGHTING	X1-b X5	RELAY/TC RELAY/TC	9	37		LP1	N/A N/A	LP1:52 LP1:52	-	<u> </u>	ON/OFF BY PHOTO SENSOR
80A		SITE LIGHTING	A,B,C	RELAY/TC	12	<u> </u>		LP1	N/A	LP1:54/56		-	ON/OFF BY PHOTO SENSOR
80B		MONUMENT	SIGN	RELAY/TC	1	1200	-	LP1	N/A	LP1:36	-	-	
81 82		EXTERIOR LIGHTING LIGHTING ELEVATION	XSC1 LS1	RELAY/TC 0-10V	9	15 3	30 27	LP1	N/A 62	LP1:52 LP1:16	- IP710-LFZ	<u>-</u>	
82	- ' '	LIGHTING ELEVATION	LS1	0-10V 0-10V	7			LP1	63	LP1:16	IP710-LFZ	<u> </u>	
84		TASTING BAR LIGHTING	LS1	0-10V	48		144	LP1	64	LP1:16	IP710-LFZ	-	
85		TASTING BAR LIGHTING	LS1	0-10V	21		63	LP1	65	LP1:16	IP710-LFZ	-	
86 87		HOST CHECK-OUT/CARRY OUT	LS1	0-10V 0-10V	10 16		30 48	LP1 LP1	66 67	LP1:16 LP1:16	IP710-LFZ IP710-LFZ		
87 88		WINE DISPLAY	LS1 LS1	0-10V 0-10V	16	.	48 36	LP1 LP1	68	LP1:16 LP1:16	IP/10-LFZ	<u>-</u>	
89		WINE DISPLAY	LS1	0-10V	8		24	LP1	69	LP1:16	IP710-LFZ		
90		MAIN BAR LIGHTING	LS1	0-10V	31		93	LP1	70	LP1:16	IP710-LFZ	-	
91		MAIN BAR LIGHTING	LS1	0-10V	38		114	LP1	71	LP1:16	IP710-LFZ	<u>-</u>	
92 93		MAIN BAR LIGHTING MAIN BAR LIGHTING	LS3 S1	0-10V REVERSE PHASE	27 13			LP1 LP1	72 73	LP1:16 LP1:16	IP710-LFZ VERIFY	<u>-</u> -	
94		SERVICE STATION	S1	REVERSE PHASE	4	4.3	 	LP1	74	LP1:16	VERIFY	-	
95		LIGHTING ELEVATION	LS1	0-10V	12		36	LP1	75	LP1:16	IP710-LFZ	-	
96 97		LIGHTING ELEVATION	S1	REVERSE PHASE	3	4.3	12.9	LP1	76 77	LP1:16	VERIFY	-	
u/l		NOT USED	1		1				77				+
98		NOT USED					ļ ļ		78		!		

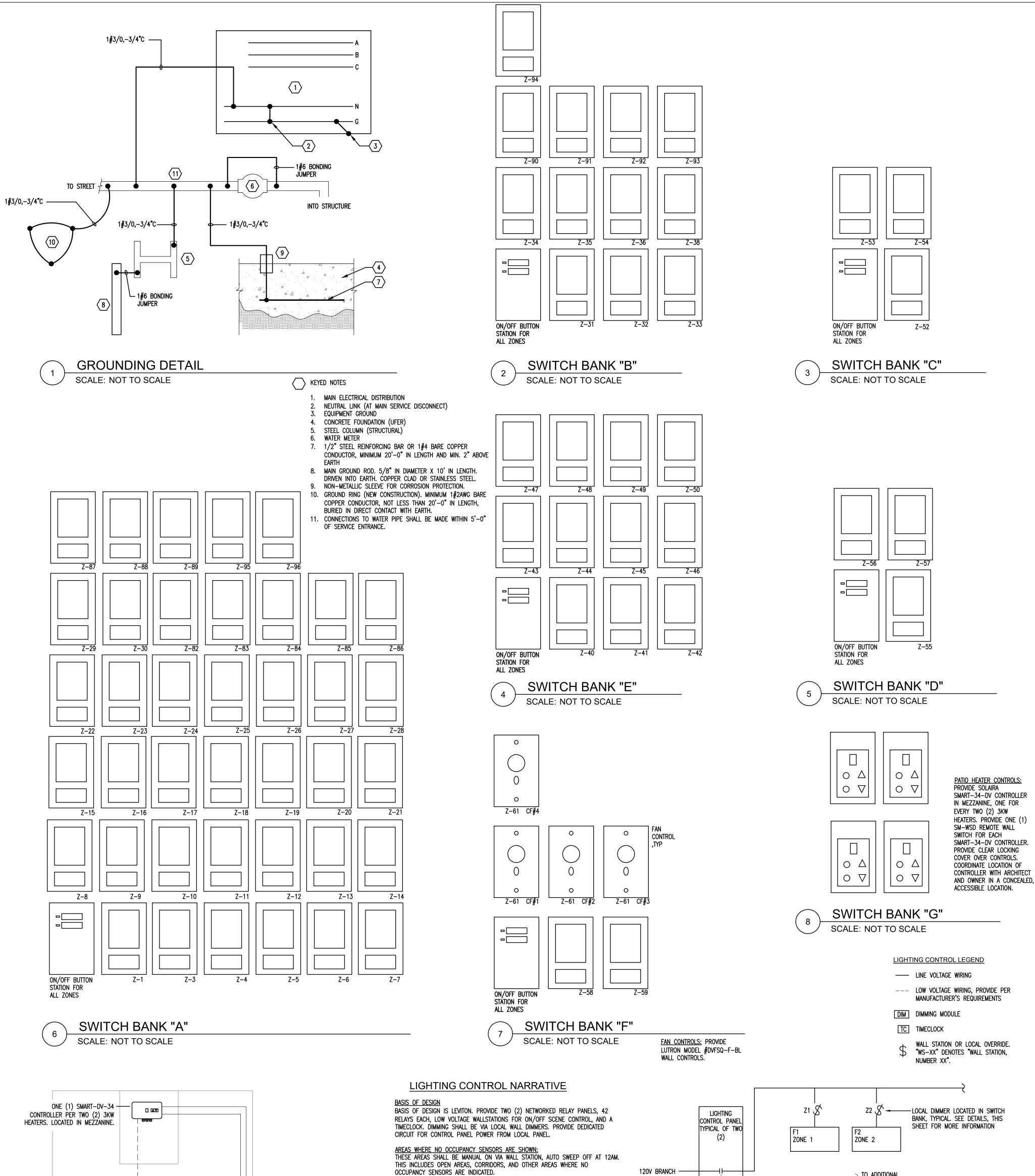
- 1. PROVIDE DIMMER TO MATCH LOAD TYPE AND WATTAGE. VERIFY WITH FINAL LIGHT FIXTURE SHOP DRAWINGS PRIOR TO PURCHASE.
- 2. PROVIDE DEDICATED NEUTRAL FOR EACH CONTROL ZONE. 3. ALL LIGHTING NOT CONTROLLED VIA LOCAL SENSOR SHALL BE ROUTED THROUGH THE RELAY PANEL FOR AUTOMATIC ON/OFF CONTROL. REFER TO DETAIL.
- 4. ALL EMERGENCY LIGHTING SHALL BE CONNECTED TO THE ROOM LIGHTING CIRCUIT IN WHICH IT IS LOCATED, AHEAD OF ANY SWITCH FOR CONTINOUS OPERATION.
- 5. ALL EXIT SIGNS SHALL BE ON A DEDICATED, LOCK-ON, 24/7/365 CIRCUIT. 6. REFER TO PLANS AND DETAILS FOR SWITCH BANK INFORMATION.
- 7. COORDINATE INSTALLATION OF DIMMER SWITCHES WITH MANUFACTURERS REQUIREMENTS. DE-RATE GANGED SWITCHES AS REQUIRED. PROVIDE MINIMUM OF 4 1/2" VERTICAL SPACING BETWEEN DIMMER SWITCHES.

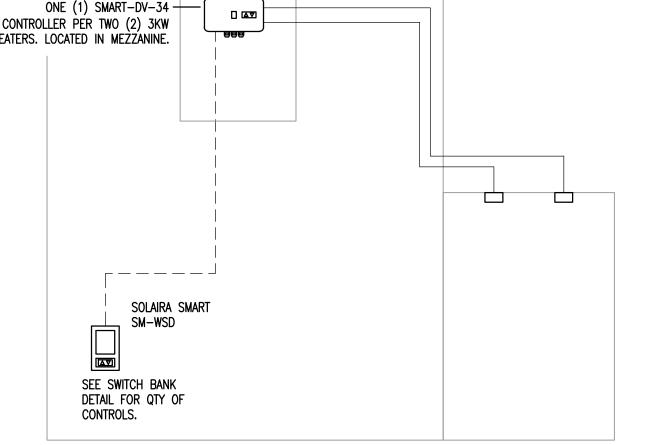
TYPE	WATTAGE	MODEL#	POWER EXTENDER
0-10V	1200VA	IP710-LFZ	PE300-D0W
HALOGEN	600W	LEV836700	
ELV	600W	VRE06-1LZ	PE400-10W
MLV	450W	IPM06-1LZ	PE100-10W
LED	150W	IPL06-10Z	
CFL	150W	IPL06-10Z	
INC.	600W	IPI06-1LZ	PE400-10W/PE100-

DIMMERS FOR EACH LOAD TYPE AND WATTAGE AS INDICATED HERE. PROVIDE POWER EXTENDERS AS REQUIRED. LOCATE POWER EXTENDERS IN AN ACCESSIBLE LOCATION AS DIRECTED BY OWNER AND ARCHITECT TO PRESERVE AESTHETICS. PROVIDE POWER EXTENDERS AS REQUIRED.

COVERS.

THE CONTRACTOR SHALL PROVIDE SINGLE GANG RINGS ON LARGER BOXES FOR PROPER COORDINATION WITH DIMMER SCALE: NOT TO SCALE





SOLAIRA HEATER CONTROLS (ELECTRIC)

AREAS WHERE VACANCY SENSORS (VS) ARE SHOWN: LIGHTING SHALL BE MANUAL ON, AUTO OFF.

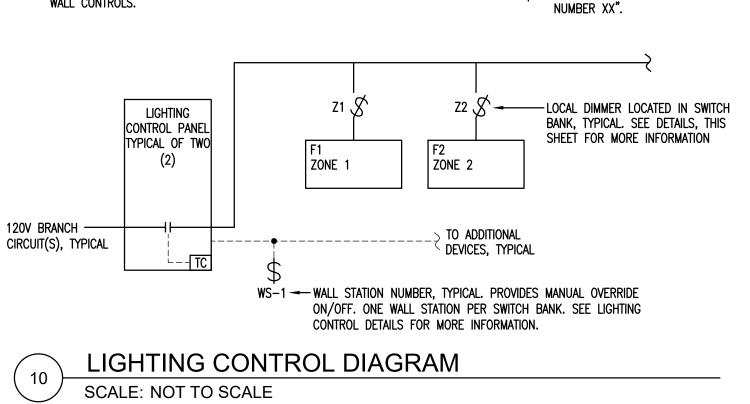
AREAS WHERE OCCUPANCY (OS) SENSORS ARE SHOWN: LIGHTING SHALL BE AUTO ON, AUTO OFF.

SCHEDULES AND TIMING: ALL OCCUPANCY AND VACANCY SENSORS SHALL TIME OUT AFTER 15 MINUTES. TIMECLOCK SHALL BE: INTERIOR, ON AT 7AM, OFF AT 1HR PAST CLOSE, M-F. OFF ON HOLIDAYS. EXTERIOR LIGHTING SHALL BE ON AT 5PM, OFF AT 1AM WEEKDAYS, WEEKENDS, AND HOLIDAYS. LOCAL OVERRIDES SHALL PROVIDE NO MORE THAN 2 HOURS OVERRIDE ON. CONFIRM ALL SETTINGS AND SCHEDULES WITH OWNER.

SWITCH BANKS, WHERE INDICATED: SEE SWITCH BANK DETAILS, THIS SHEET, FOR QUANTITY AND ZONING. DIMMERS SHALL PROVIDE DIMMING FROM 10% OR LOWER TO 100%. PROVIDE A QS WALL STATION AT EVERY SWITCH BANK FOR ON/OFF CONTROL. ALL ZONES CONTROLLED AT THE GIVEN SWITCH BANK SHALL BE CONTROLLED BY THE QS WALL STATION.

EXTERIOR LIGHTS:
LIGHTING SHALL BE AUTO ON BY PHOTO CELL, AUTO OFF AT 2:00AM BY TIME

<u>DIMMER BACKBOXES:</u> PROVIDE SINGLE-GANG RING ON ALL MULTI-GANG BOXES.



LIGHTING CONTROL NOTES

1. FIXTURE TAGS, CONTROLS, ZONES, QUANTITIES, AND CONTROL SCHEMES SHOWN HERE ARE FOR DESIGN INTENT ONLY. SEE FLOOR PLAN FOR ACTUAL FIXTURES, QUANTITIES, CONTROLS,

COORDINATED SHOP DRAWINGS SHALL BE PROVIDED BY EACH SUBCONTRACTOR AND SHALL CONTAIN A LAYOUT OF ALL DUCTWORK, CONDUIT, PIPING, EQUIPMENT, STRUCTURE, WALLS, CEILING, ETC. AS REQUIRED TO REFLECT FULL COORDINATION ACROSS ALL TRADES AND SHALL BE SUBMITTED FOR REVIEW. COORDINATED DRAWINGS SHALL BE SIGNED OFF BY ALL OTHER TRADES PRIOR TO BEING SUBMITTED FOR REVIEW. PLANS SHALL BE PREPARED AT A MINIMUM OF 1/8" SCALE OR THE SCALE OF THE DESIGN DRAWINGS, WHICHEVER IS LARGER. NO EQUIPMENT SHALL BE INSTALLED WITHOUT APPROVED SHOP DRAWINGS.

RELEASE FOR CONSTRUCTION AS NOTED ON PLANS REVIEW DEVELOPMENT SERVICES LEE'S SUMMIT, MISSOURI

540 NW CHIPN ROAD, LEE'S (MO 64086

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Dohn Thomas

Drawing Title

CW 204530 Scale SEE PLANS | 08/06/2021

1 2 YEAR PARTS WARRANTY.

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REVISIONS

DATE: 6/22/2021

DRAWN BY: MAP-52

SCALE: 3/4" = 1'-0"

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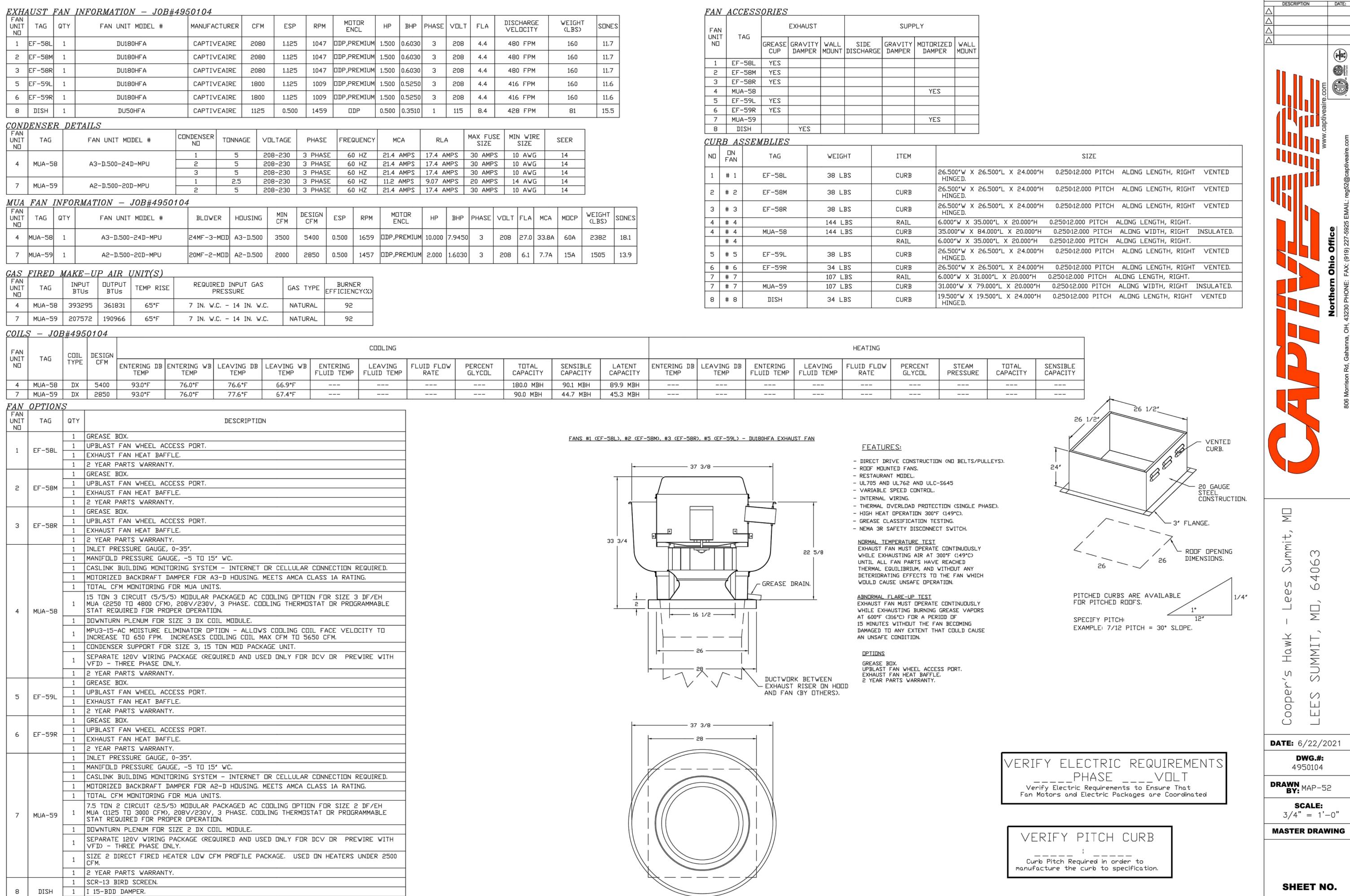
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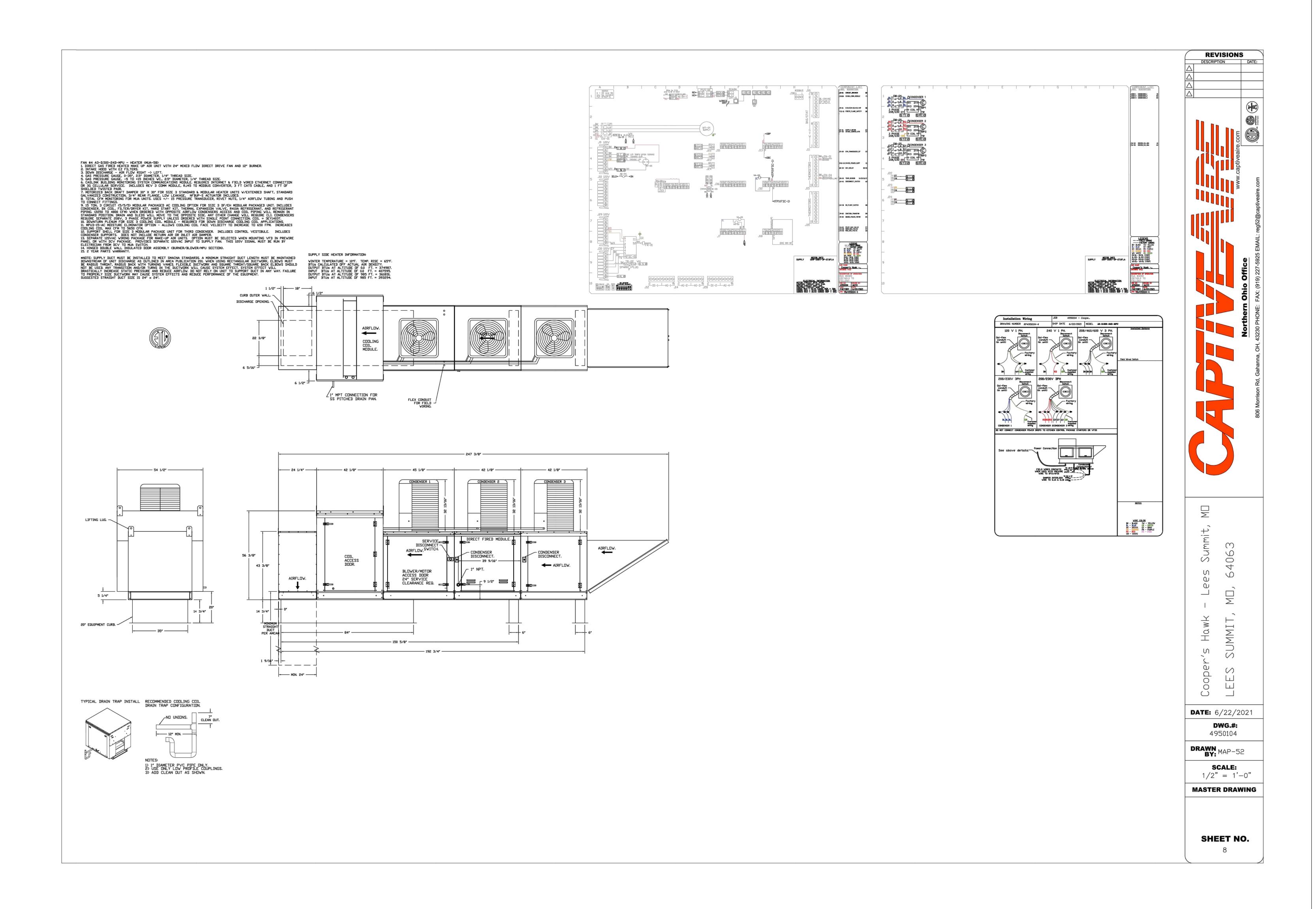
HOOD DETAILS

Job No. 204530 Scale

STRUCTURE, WALLS, CEILING, ETC. AS REQUIRED TO REFLECT FULL COORDINATION SEE PLANS 08/06/2021 ACROSS ALL TRADES AND SHALL BE SUBMITTED FOR REVIEW. COORDINATED DRAWINGS SHALL BE SIGNED OFF BY ALL OTHER TRADES PRIOR TO BEING SUBMITTED FOR REVIEW. Sheet No. PLANS SHALL BE PREPARED AT A MINIMUM OF 1/8" SCALE OR THE SCALE OF THE DESIGN DRAWINGS, WHICHEVER IS LARGER. NO EQUIPMENT SHALL BE INSTALLED WITHOUT APPROVED SHOP



TOP VIEW



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REQUIRED TO REFLECT FULL COORDINATION ACROSS ALL TRADES AND SHALL BE

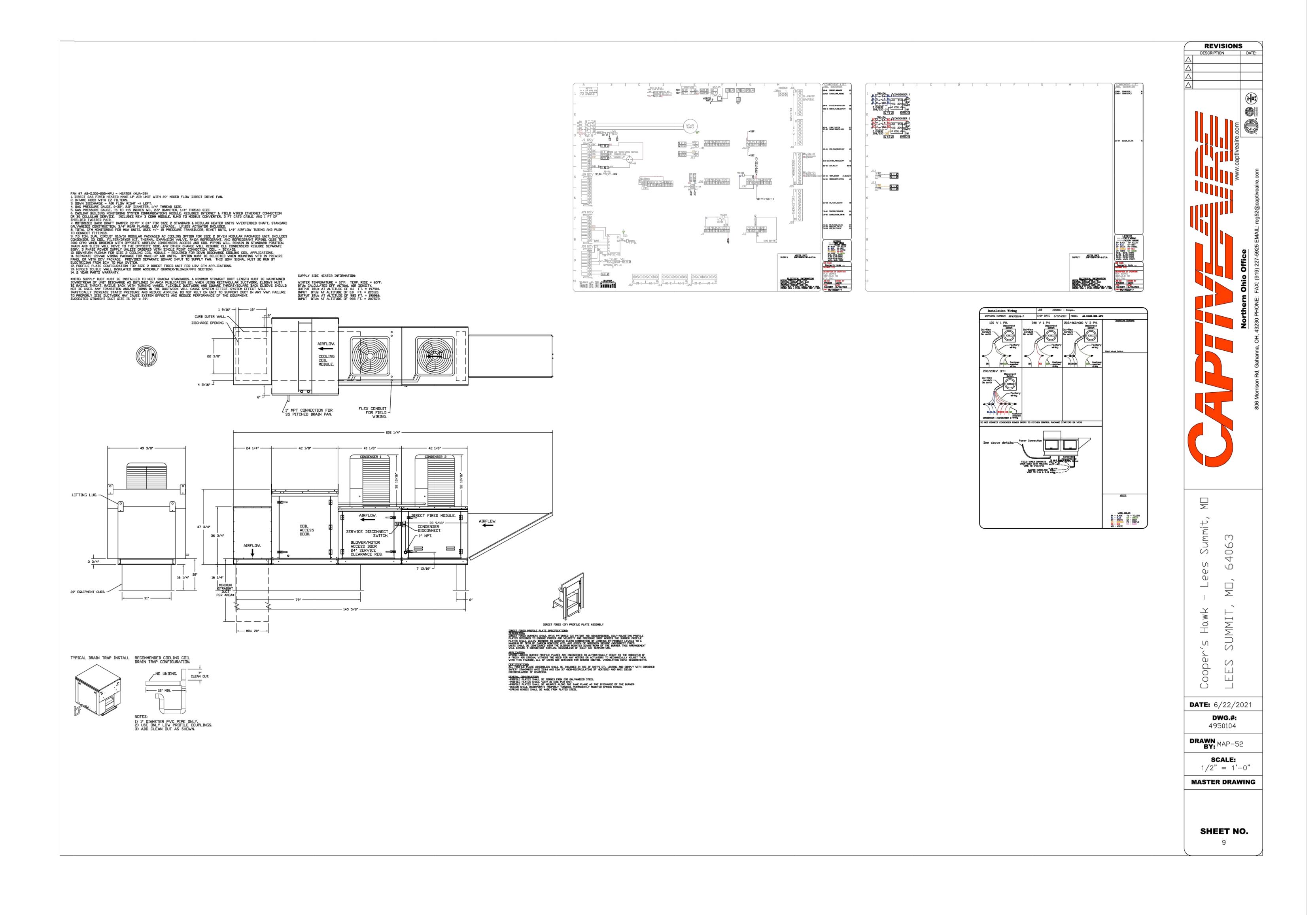
SUBMITTED FOR REVIEW. COORDINATED DRAWINGS SHALL BE SIGNED OFF BY ALL OTHER TRADES PRIOR TO BEING SUBMITTED FOR REVIEW.

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HOOD DETAILS

Job No. 204530

SEE PLANS | 08/06/2021 Sheet No.



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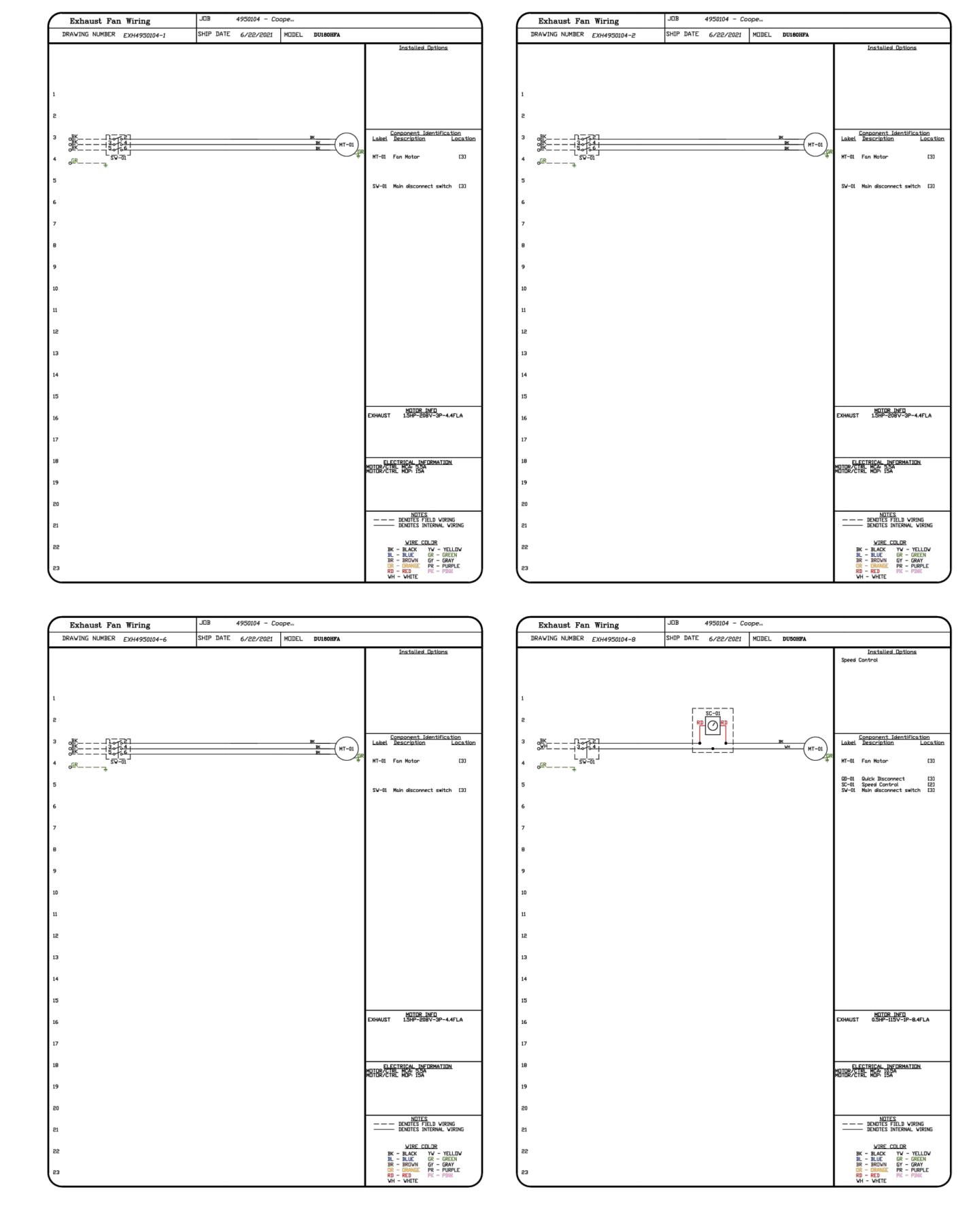
SUBMITTED FOR REVIEW. COORDINATED DRAWINGS
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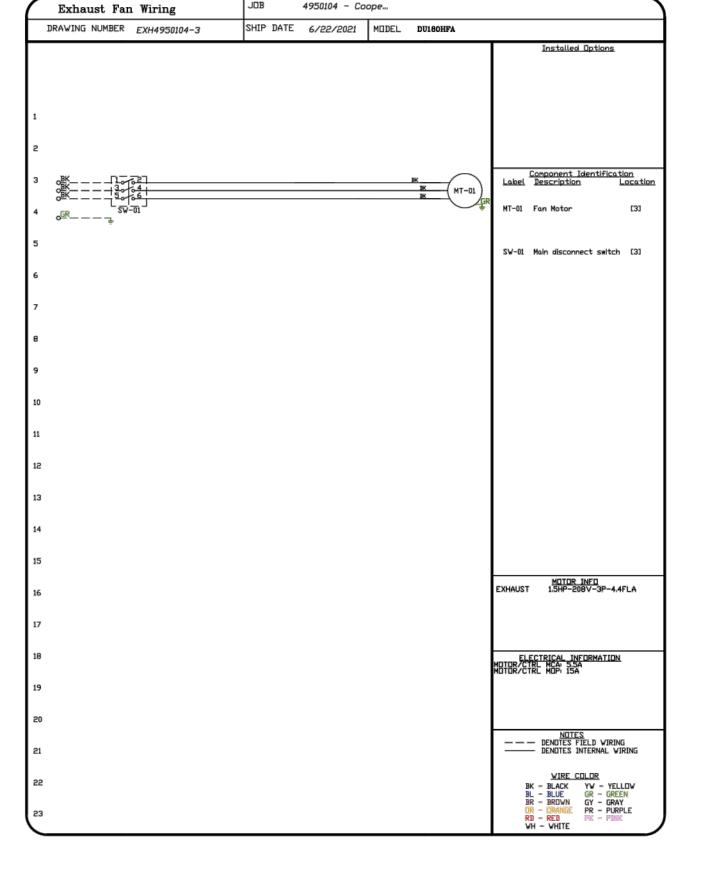
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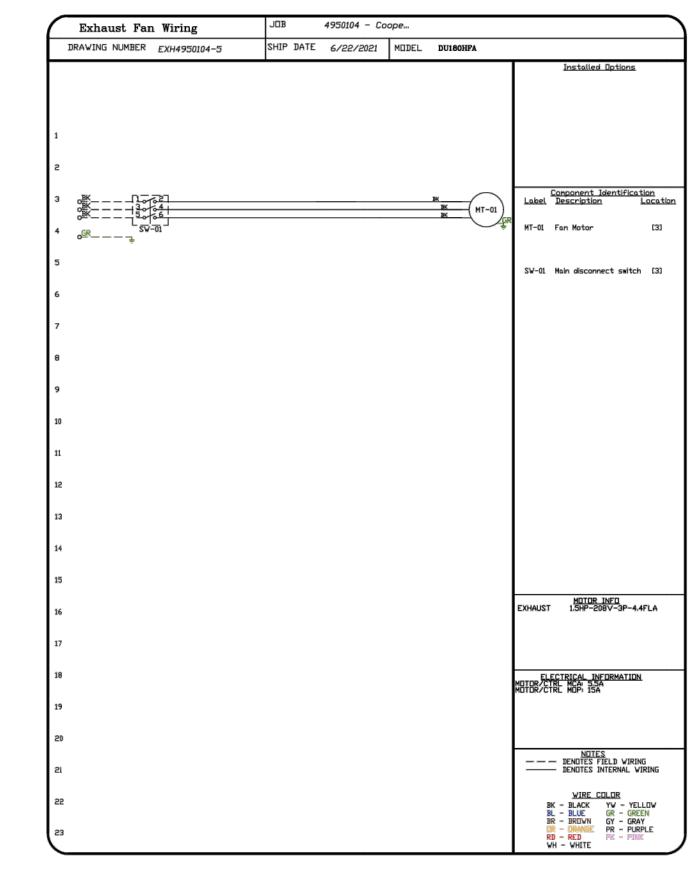
HOOD DETAILS

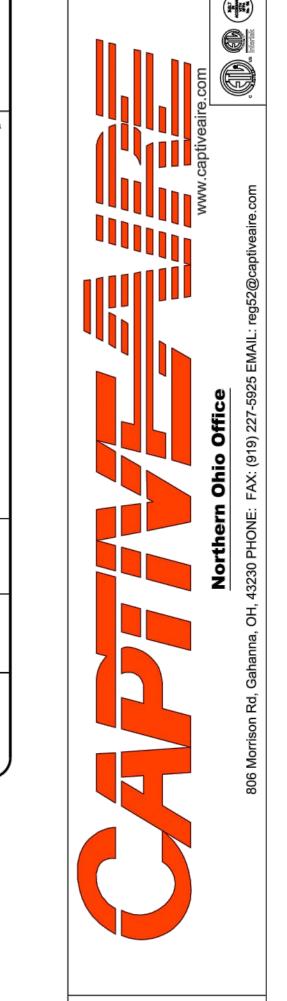
Job No. 204530 Scale

SEE PLANS | 08/06/2021 Sheet No.









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DATE: 6/22/2021

DRAWN BY: MAP-52

DWG.#: 4950104

SCALE:

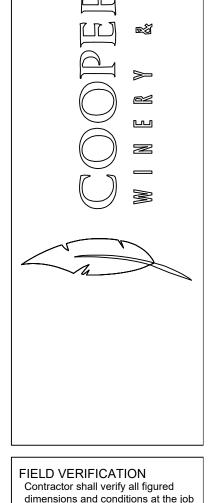
3/4" = 1'-0"

MASTER DRAWING

SHEET NO.

REVISIONS

DESCRIPTION DATE:



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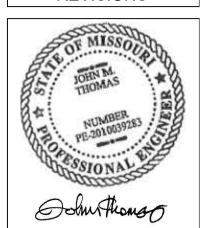
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Job No. Drawn —

Sheet No. **E109**

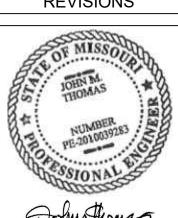
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AND SHALL CONTAIN A LAYOUT OF ALL
DUCTWORK, CONDUIT, PIPING, EQUIPMENT,
STRUCTURE, WALLS, CEILING, ETC. AS
REQUIRED TO REFLECT FULL COORDINATION
ACROSS ALL TRADES AND SHALL BE
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PRIOR TO BEING SUBMITTED FOR REVIEW.
PLANS SHALL BE PREPARED AT A MINIMUM
OF 1/8" SCALE OR THE SCALE OF THE
DESIGN DRAWINGS, WHICHEVER IS LARGER.
NO EQUIPMENT SHALL
BE INSTALLED WITHOUT APPROVED SHOP

DRAWINGS.

10/14/2021

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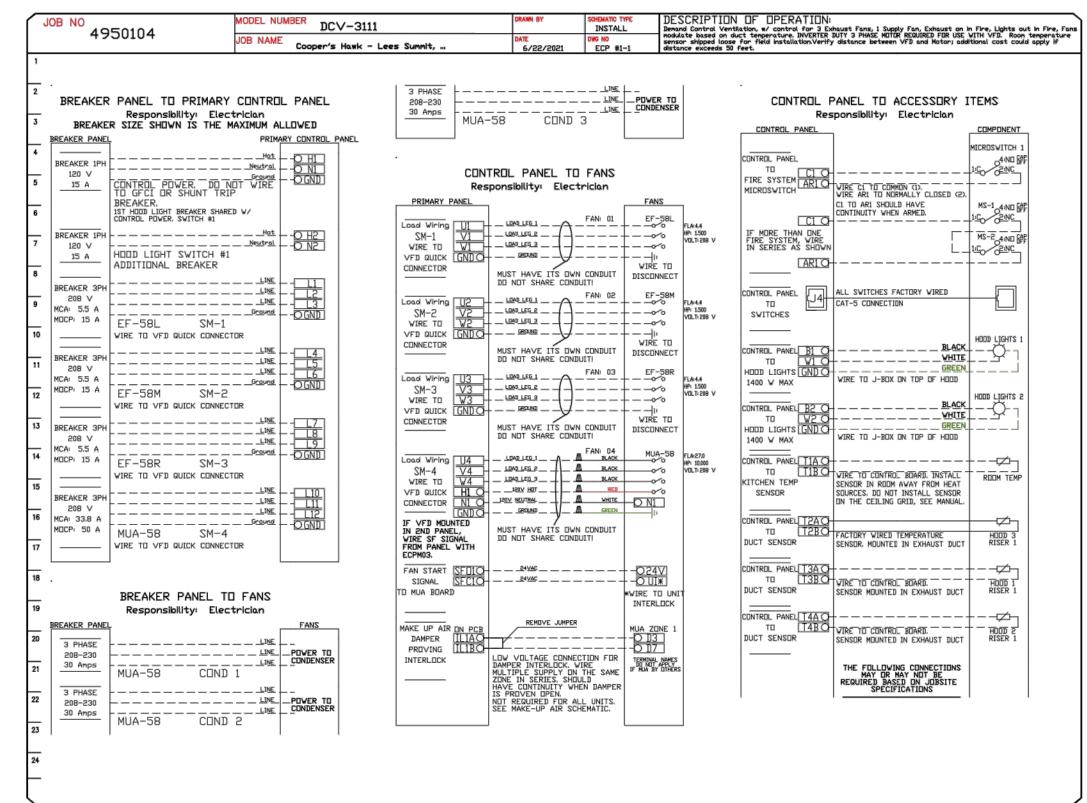
Drawing Title HOOD DETAILS

Job No. 204530 Scale

08/06/2021

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ALL POWER FEED FROM VARIABLE FREQUENCY DRIVES IN HOOD CONTROL PANEL TO FAN MOTORS MUST BE IN SEPARATE STEEL CONDUIT - OR MOTOR/VFD FAILURE MAY OCCUR



SWITCHES

LOCATION

CABINET RIGHT

H00D # 3

04 - UTILITY CABINET RIGHT

H00D # 5

02 - FACE MOUNT RIGHT SIDE OF HOOD

H00D # 6

QUANTITY

1 LIGHT

1 FAN

1 LIGHT

1 FAN

1 LIGHT

1 FAN

OPTION

SMART CONTROLS DCV

SMART CONTROLS DCV

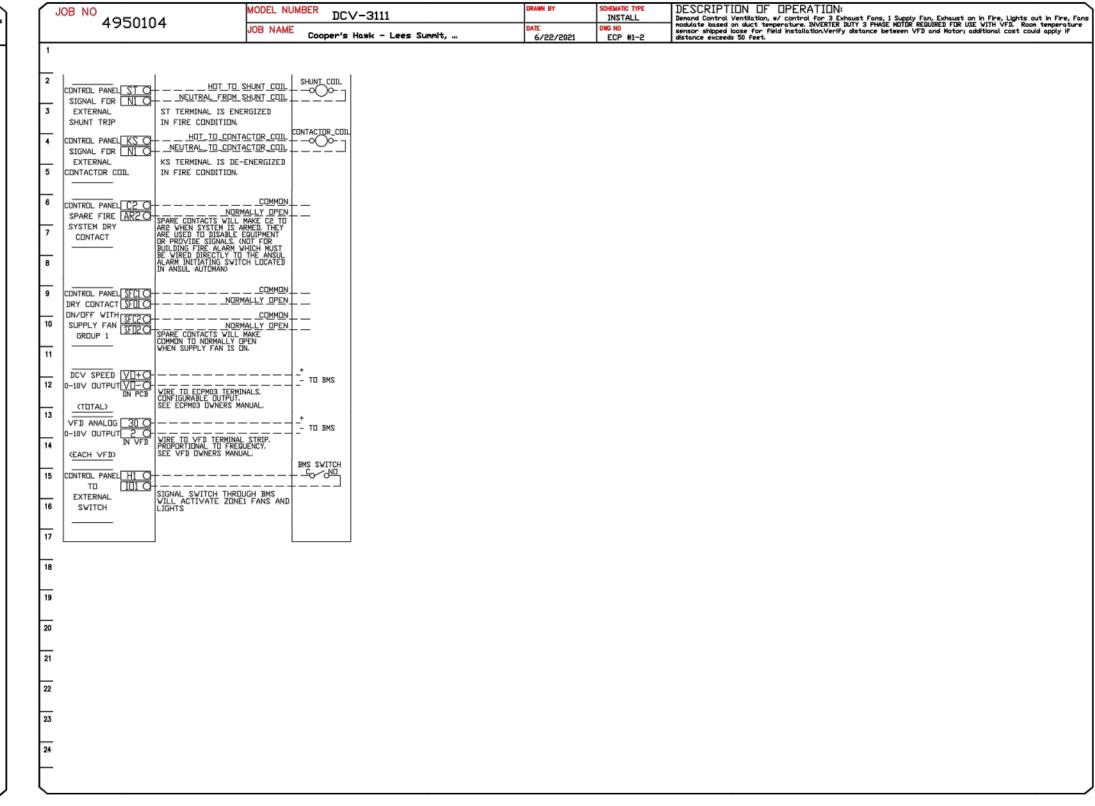
<u> ELECTRICAL PACKAGE - JOB#4950104</u>

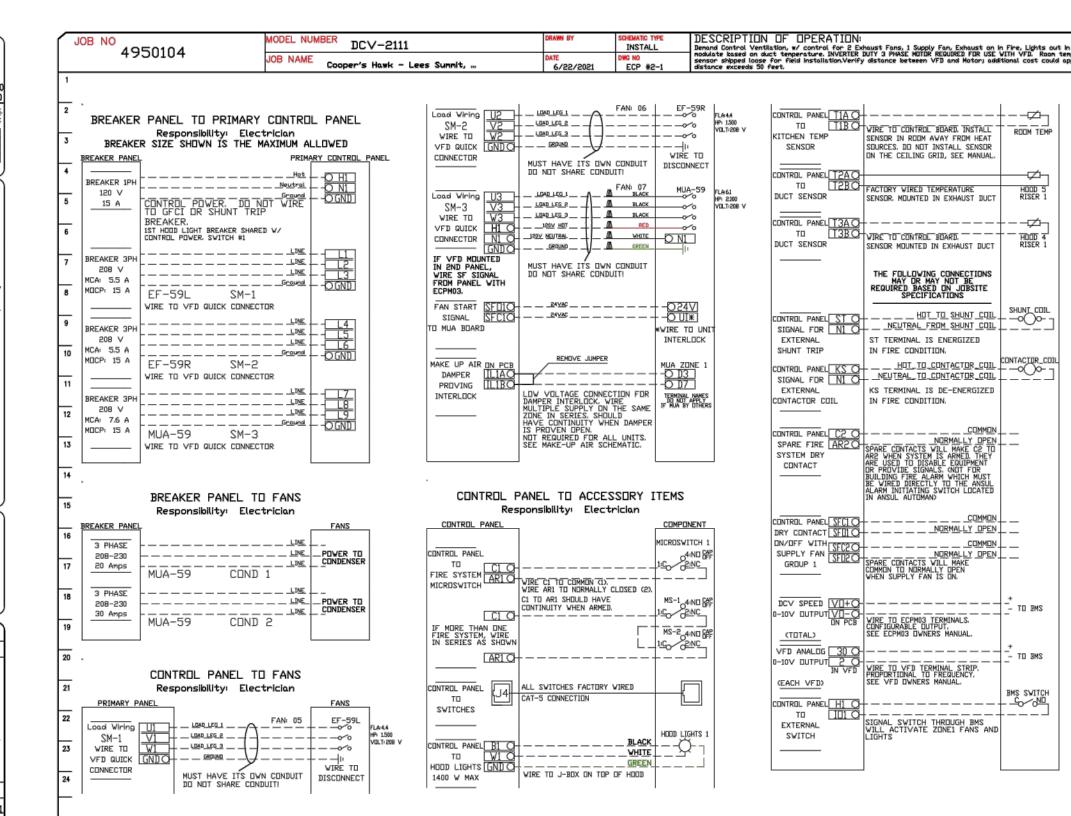
EP-1 DCV-3111 UTILITY CABINET RIGHT

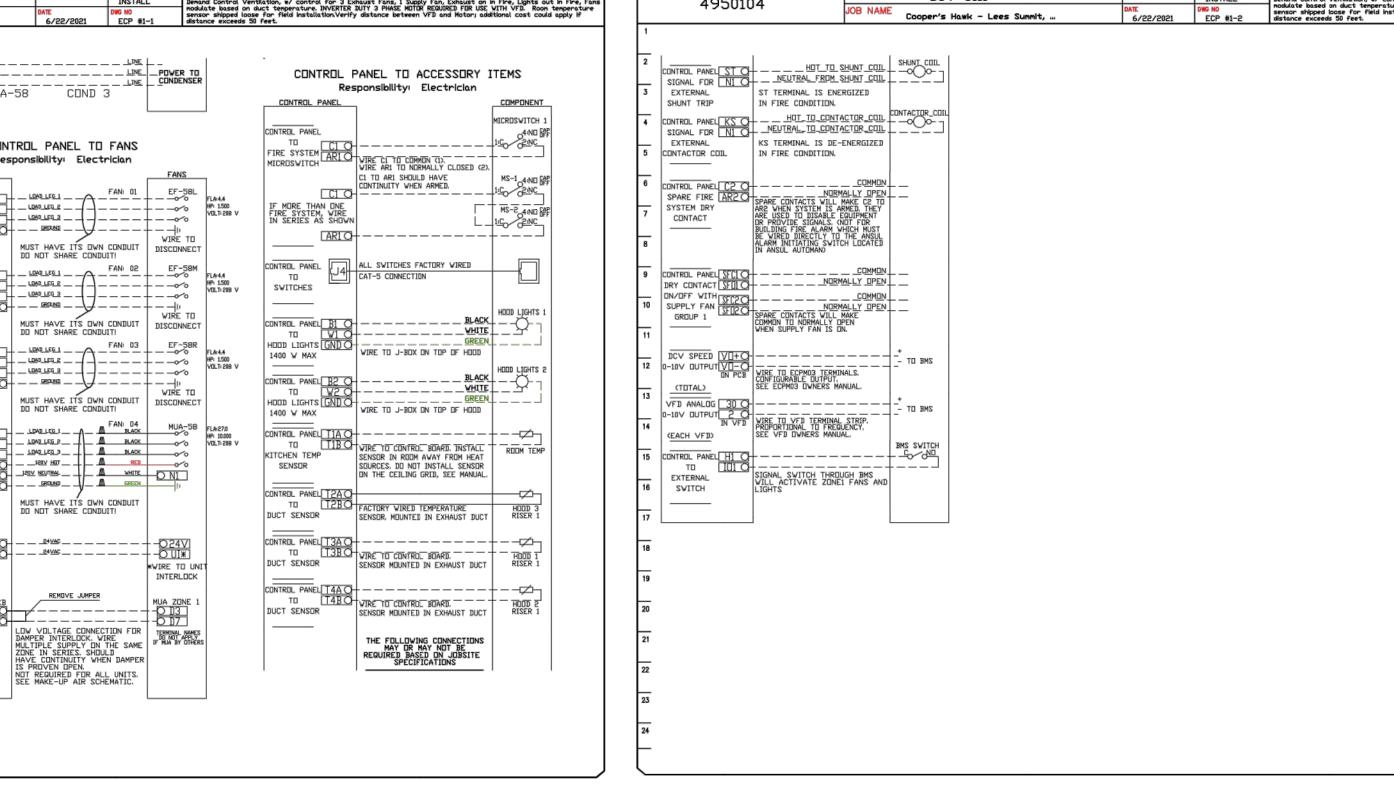
2 | EP-2 | DCV-2111 | UTILITY CABINET RIGHT

PACKAGE #

3 | Item #83 | Switches







FANS CONTROLLED

FAN TAG

EF-58M

EF-58R

MUA-58

EF-59L

MUA-59

TYPE | 0 HP VOLT FLA

EXHAUST 3 1.500 208 4.4

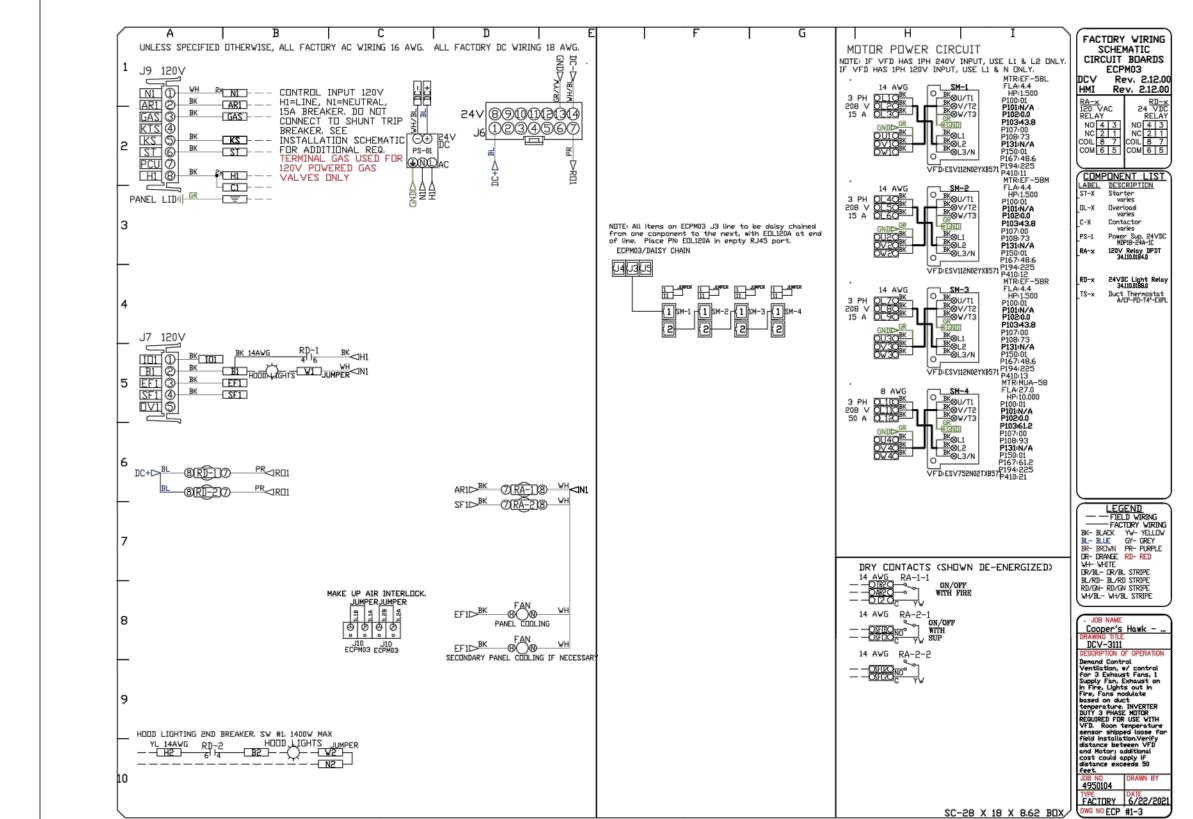
EXHAUST 3 1.500 208 4.4

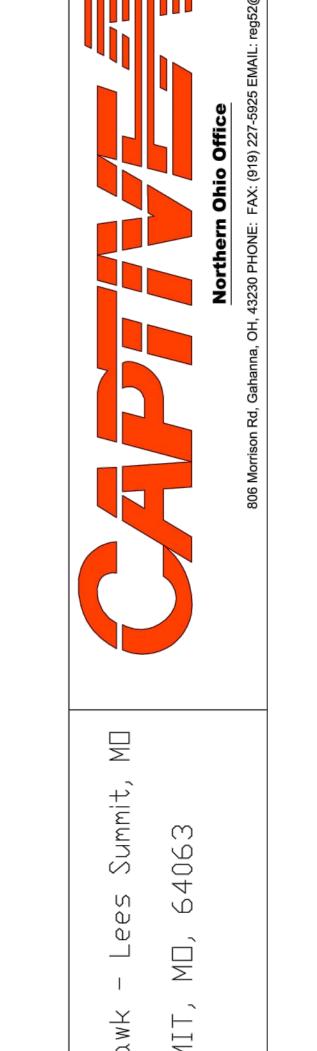
EXHAUST 3 1.500 208 4.4

SUPPLY 3 10.000 208 27.0

EXHAUST 3 1.500 208 4.4

EXHAUST 3 1.500 208 4.4 SUPPLY 3 2.000 208 6.1





DATE: 6/22/2021

4950104

SCALE:

3/4" = 1'-0"

MASTER DRAWING

SHEET NO.

DESIGN DRAWINGS, WHICHEVER IS LARGER. NO EQUIPMENT SHALL BE INSTALLED WITHOUT APPROVED SHOP DRAWINGS.

DWG.#:

REVISIONS

DUCT TEMPERATURE

Provides exhaust air temperature for proper hood control operation. For all

installations excluding a single hood with

factory risers and a hood mounted panel,

duct mounted temperature sensors will

need to be field wired. 2-wire 18 AWG

plenum rated thermistor cable must be

ROOM TEMPERATURE

Provides room override based on

temperature differential between the room and duct. Installed by electrician

the space but not directly under the

the electrical control box) so the reading is accurate for space.

HOOD CONTROL

INTERFACE

hood or close to an appliance (including

The LCD interface provides user control

and hood status. The faceplate is

RJ-45 end-of-line terminator.

connected to the hood control panel

through CAT-5 cable. A faceplate has 2

RJ-45 connectors. One connects to port J4 or J5 in the hood control panel and the other will typically be occupied by a

on a wall, 5'-6' off the finished floor, in

SENSOR

5	CONTACTOR COIL	IN FIRE CONDITION.						
6 7 8	CONTROL PANEL C2 O- SPARE FIRE AR2 O- SYSTEM DRY CONTACT	COMMON SPARE CONTACTS VILL MAKE CZ PTO ARZ WIEN SYSTEM IS ARMED. THEY ARE USED TO DISABLE EQUIPMENT OR PROVIDE SIGNALS. (NOT FOR BUILDING FIRE ALARM WHICH MUST BE VIRED DIRECTLY TO THE ANSUL ALARM INITIATING SWITCH LOCATED IN ANSUL AUTOMAN)	I I					
9 10 11 12 13 14 15	CONTROL PANEL SFCI O- DRY CONTACT SFOILO- DRY CONTACT SFOILO- DRY CONTACT SFOILO- SFOILO- SFOILO- DCV SPEED VII+O- O-10V DUTPUT VII-O- DN PCB (TOTAL) VFD ANALOG 30 O- O-10V DUTPUT 2 O- IN VFD (EACH VFD) CONTROL PANEL H1 O- EXTERNAL	COMMON NORMALLY OPEN COMMON SPARE CONTACTS VILL MAKE COMMON TO NORMALLY OPEN VHEN SUPPLY FAN IS ON. VIRE TO ECPMO3 TERMINALS. CONFIGURABLE OUTPUT. SEE ECPMO3 OWNERS MANUAL. VIRE TO VFD TERMINAL STRIP. PROPORTIONAL TO FREQUENCY. SEE VFD OWNERS MANUAL.	TO BMS TO BMS TO BMS TO BMS					
16 17 18 19	SVITCH	LIGHTS						
21 22 23								
24								
	JOB NO 495	∩1∩4	EL NUMBER DCV-2111 NAME Cooper's Hawk - Lees	DRAWN BY DATE 6/22/2	INSTALL Deno nodu sens	SCRIPTION OF OPERATION: and Control Ventilation, w/ control for 2 Ex ulate based on duct temperature. INVERTER 1 sor shipped loase for field installation.Verify ance exceeds 50 feet.	naust Fans, 1 Supply Fan, Exhaust on in Fire, Lights out DUTY 3 PHASE MUTER REQUIRED FOR USE WITH VFD. Room of distance between VFD and Motory additional cost could	in Fire, Fans tenperature apply if
	BREAKER F	ANEL TO PRIMARY CON	TRUL PANEL	oad Wiring U2 LDAR LEG 1 SM-2 V2 - LDAR LEG 2	FAN: 06 EF-59R	FL944 CONTROL PANEL TIA O- HP 1500 VOLT208 V	VIRE TO CONTROL BOARD, INSTALL ROOM TEMP	

DEMAND CONTROL VENTILATION HOOD CONTROL PANEL SPECIFICATIONS: - CONTROLS SHALL BE LISTED BY ETL (UL 508A) AND SHALL COMPLY WITH DEMAND VENTILATION SYSTEM TURNDOWN REQUIREMENTS OUTLINED IN IECC 403.2.8 (2015).

- THE CONTROL ENCLOSURE SHALL BE NEMA 1 RATED AND LISTED FOR INSTALLATION INSIDE OF THE EXHAUST HOOD UTILITY CABINET, THE CONTROL ENCLOSURE MAY BE CONSTRUCTED OF STAINLESS STEEL OR PAINTED STEEL.

- TEMPERATURE PROBE(S) LOCATED IN THE EXHAUST DUCT RISER(S) SHALL BE CONSTRUCTED OF STAINLESS STEEL,
- A DIGITAL CONTROLLER SHALL BE PROVIDED TO ACTIVATE THE HOOD EXHAUST FANS DYNAMICALLY BASED ON A FIXED DIFFERENTIAL BETWEEN THE AMBIENT AND DUCT TEMPERATURES SENSORS, THIS FUNCTION SHALL MEET THE REQUIREMENTS OF IMC 507.1.1.
- A DIGITAL CONTROLLER SHALL PROVIDE ADJUSTABLE HYSTERESIS SETTINGS TO PREVENT CYCLING OF THE FANS AFTER THE COOKING APPLIANCES HAVE BEEN TURNED OFF AND/OR THE HEAT IN THE EXHAUST SYSTEM IS REDUCED.
- A DIGITAL CONTROLLER SHALL PROVIDE AN ADJUSTABLE MINIMUM FAN RUN-TIME SETTING TO PREVENT FAN CYCLING.
- VARIABLE FREQUENCY DRIVES (VFDS) SHALL BE PROVIDED FOR FANS AS REQUIRED. THE DIGITAL CONTROLLER SHALL MODULATE THE VFDS BETWEEN A MINIMUM SETPOINT AND A MAXIMUM SETPOINT ON DEMAND. THE DUCT TEMPERATURE SENSOR INPUT(S) TO THE DIGITAL CONTROLLER SHALL BE USED TO CALCULATE THE SPEED REFERENCE SIGNAL.

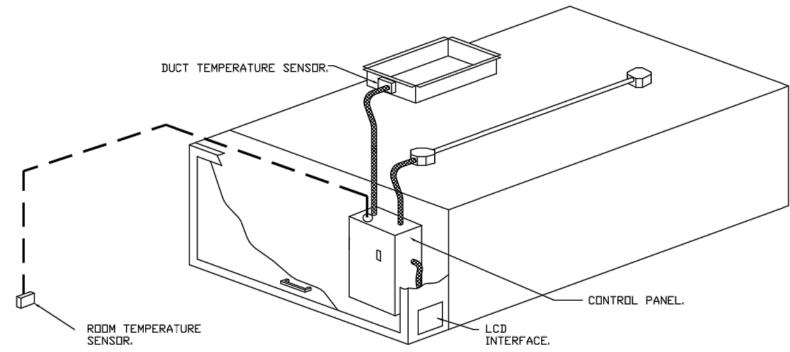
MINIMUM SPEED SET AS REQUIRED TO MEET MINIMUM VENTILATION REQUIREMENTS.

- AN INTERNAL ALGORITHM TO THE DIGITAL CONTROLLER SHALL MODULATE SUPPLY FAN VFD SPEED PROPORTIONAL TO ALL EXHAUST FANS THAT ARE LOCATED IN THE SAME FAN GROUP AS THE SUPPLY FAN.

- THE VFD SPEED RANGE OF OPERATION SHALL BE FROM 0% TO 100% FOR THE SYSTEM, WITH THE ACTUAL

- THE SYSTEM SHALL OPERATE IN PREP MODE DURING LIGHT COOKING LOAD OR COOL DOWN MODE WHEN SUFFICIENT HEAT REMAINS UNDERNEATH THE HOOD SYSTEM AFTER COOKING OPERATIONS HAVE COMPLETED, OPERATION DURING EITHER OF THESE PERIODS WILL DISABLE THE SUPPLY FANS AND PROVIDE AN EXHAUST FAN SPEED THAT IS EQUAL TO THE MINIMUM VENTILATION REQUIREMENT.

- A DIGITAL CONTROLLER SHALL DISABLE THE SUPPLY FAN(S), ACTIVATE THE EXHAUST FAN(S), ACTIVATE THE APPLIANCE SHUNT TRIP, AND DISABLE AN ELECTRIC GAS VALVE AUTOMATICALLY WHEN FIRE CONDITION -IS DETECTED ON A COVERED HOOD.
- A DIGITAL CONTROLLER SHALL ALLOW FOR EXTERNAL BMS FAN CONTROL VIA DRY CONTACT (EXTERNAL CONTROL SHALL NOT OVERRIDE FAN OPERATION LOGIC AS REQUIRED BY CODE).
- AN LCD INTERFACE SHALL BE PROVIDED WITH THE FOLLOWING FEATURES:
- A. ON/OFF PUSH BUTTON FAN & LIGHT SWITCH ACTIVATION. B. INTEGRATED GAS VALVE RESET FOR ELECTRONIC GAS VALVES (NO RESET RELAY REQUIRED).
- C. VFD FAULT DISPLAY WITH AUDIBLE & VISUAL ALARM NOTIFICATION. D. DUCT TEMPERATURE SENSOR FAILURE DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION. E. MIS-WIRED DUCT TEMPERATURE SENSOR DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
- F. A SINGLE LOW VOLTAGE CAT-5 RJ45 WIRING CONNECTION. G. AN ENERGY SAVINGS INDICATOR THAT UTILIZES MEASURED KWH FROM THE VFDS.



TYPICAL HOOD CONTROL PANEL INSTALLATION

SEQUENCE OF OPERATIONS: THE HOOD CONTROL PANEL IS CAPABLE OF OPERATING IN ONE OR MORE OF THE FOLLOWING STATES AT ANY

- AUTOMATIC: THE SYSTEM OPERATES BASED ON THE DIFFERENTIAL BETWEEN ROOM TEMPERATURE AND THE TEMPERATURE AT THE HOOD CAVITY OR EXHAUST DUCT COLLAR, FANS ACTIVATE AT A CONFIGURABLE TEMPERATURE DIFFERENTIAL THRESHOLD, DEPENDING ON THE JOB CONFIGURATION EACH FAN ZONE CAN BE CONFIGURED AS STATIC OR DYNAMIC. THESE TERMS REFER TO WHETHER A VARIABLE MOTOR (SUCH AS EC MOTORS OR VFD DRIVEN MOTORS) MODULATE WITH TEMPERATURE, IF THE PANEL IS EQUIPPED WITH VARIABLE SPEED FANS AND THE ZONE IS DEFINED AS "DYNAMIC", THESE WILL MODULATE WITHIN A USER-DEFINED RANGE BASED ON THE TEMPERATURE DIFFERENTIAL, PANELS EQUIPPED WITH VARIABLE SPEED FANS AND A FAN ZONE DEFINED AS "STATIC", FANS WILL RUN AT A SET SPEED CALCULATED FOR THE DRIVE, DEMAND CONTROL VENTILATION SYSTEMS ARE CAPABLE OF MODULATING EXHAUST AND MAKE UP AIR FAN SPEEDS PER THE REQUIREMENTS DUTLINED IN IECC 403.2.8.
- MANUAL: THE SYSTEM OPERATES BASED ON HUMAN INPUT FROM AN HMI.
- SCHEDULE: A WEEKLY SCHEDULE CAN BE SET TO RUN FANS FOR A SPECIFIED PERIOD THROUGHOUT THE DAY, THERE ARE THREE OCCUPIED TIMES PER DAY TO ALLOW FOR THE USER TO SET UP A TIME THAT IS SUITABLE TO THEIR NEEDS. ANY TIME THAT IS WITHIN THE DEFINED OCCUPIED TIME, THE SYSTEM WILL RUN AT MODULATION MODE AND FOLLOW THE FAN PROCEDURE ALGORITHM BASED ON TEMPERATURE DURING THIS TIME, DURING UNDCCUPIED TIME, THE SYSTEM WILL HAVE AN EXTRA DFFSET TO PREVENT UNINTENDED ACTIVATION OF THE SYSTEM DURING A TIME WHERE THE SYSTEM IS NOT BEING OCCUPIED.
- OTHER: THE SYSTEM OPERATES BASED ON THE INPUT FROM AN EXTERNAL SOURCE (DDC, BMS OR HARD-WIRED INTERLOCK).
- FIRE: UPON ACTIVATION OF THE HOOD FIRE SUPPRESSION SYSTEM, THE EXHAUST FAN WILL COME ON OR CONTINUE TO TO RUN, THE HOOD MAKEUP AIR WILL SHUTDOWN, AND A SIGNAL WILL BE SENT FOR ACTIVATING THE SHUNT TRIP BREAKER PROVIDED BY THE ELECTRICIAN, FUEL GAS WILL SHUT OFF VIA A MECHANICAL/ELECTRICAL GAS VALVE ACTUATED BY THE HOOD FIRE SUPPRESSION SYSTEM.



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DATE: 6/22/2021 DWG.#: 4950104

DRAWN BY: MAP-52 SCALE:

3/4" = 1'-0" MASTER DRAWING

SHEET NO.

Job No. 204530 Scale SEE PLANS

HOOD DETAILS

Drawing Title

08/06/2021

COORDINATED SHOP DRAWINGS SHALL BE PROVIDED BY EACH SUBCONTRACTOR AND SHALL CONTAIN A LAYOUT OF ALL DUCTWORK, CONDUIT, PIPING, EQUIPMENT, STRUCTURE, WALLS, CEILING, ETC. AS REQUIRED TO REFLECT FULL COORDINATION ACROSS ALL TRADES AND SHALL BE SUBMITTED FOR REVIEW. COORDINATED DRAWINGS SHALL BE SIGNED OFF BY ALL OTHER TRADES PRIOR TO BEING SUBMITTED FOR REVIEW. PLANS SHALL BE PREPARED AT A MINIMUM OF 1/8" SCALE OR THE SCALE OF THE DESIGN DRAWINGS, WHICHEVER IS LARGER. NO EQUIPMENT SHALL BE INSTALLED WITHOUT APPROVED SHOP DRAWINGS.

RELEASE FOR CONSTRUCTION AS NOTED ON PLANS REVIEW DEVELOPMENT SERVICES LEE'S SUMMIT, MISSOURI

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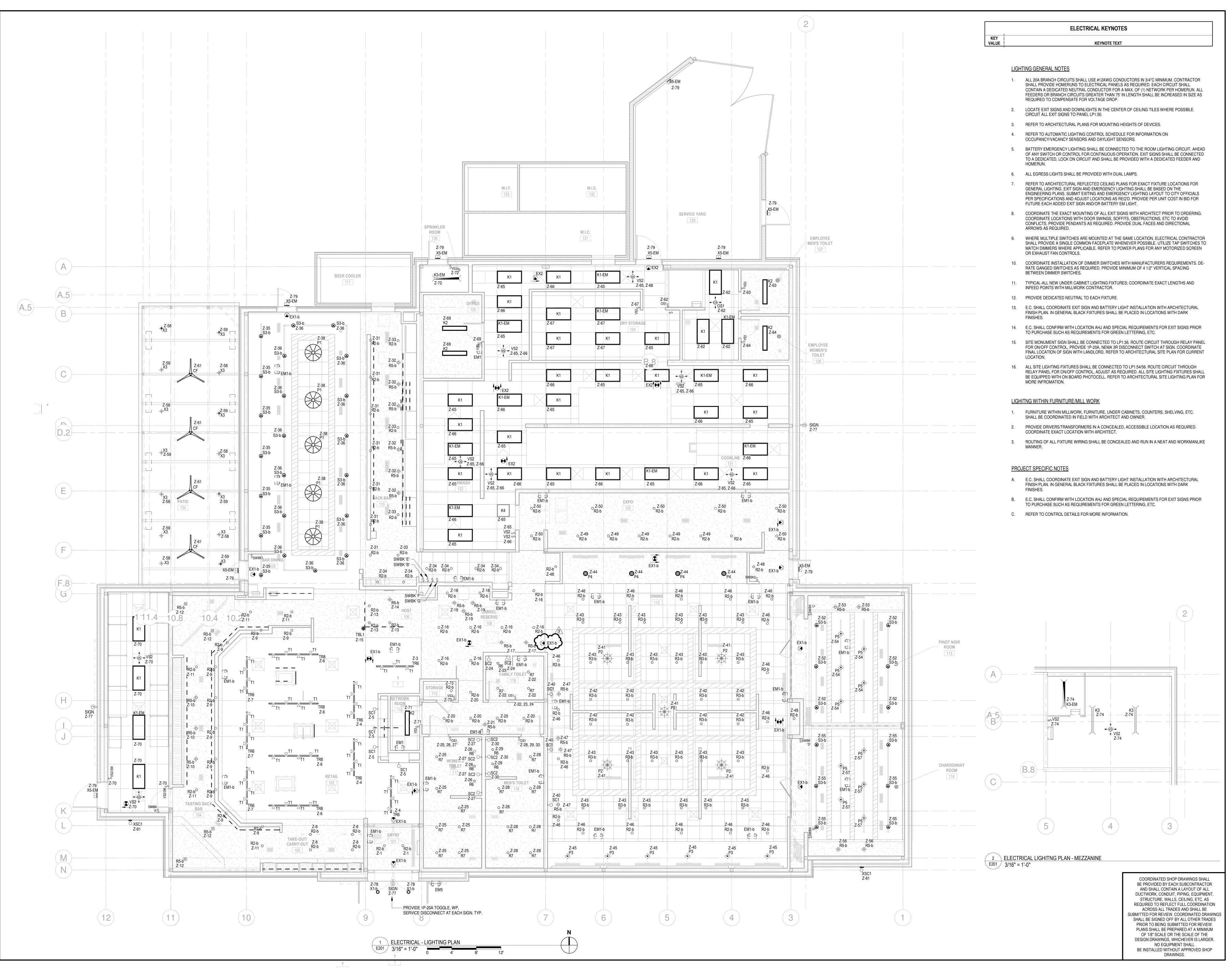
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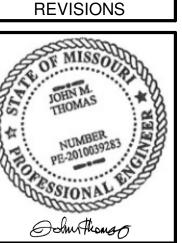
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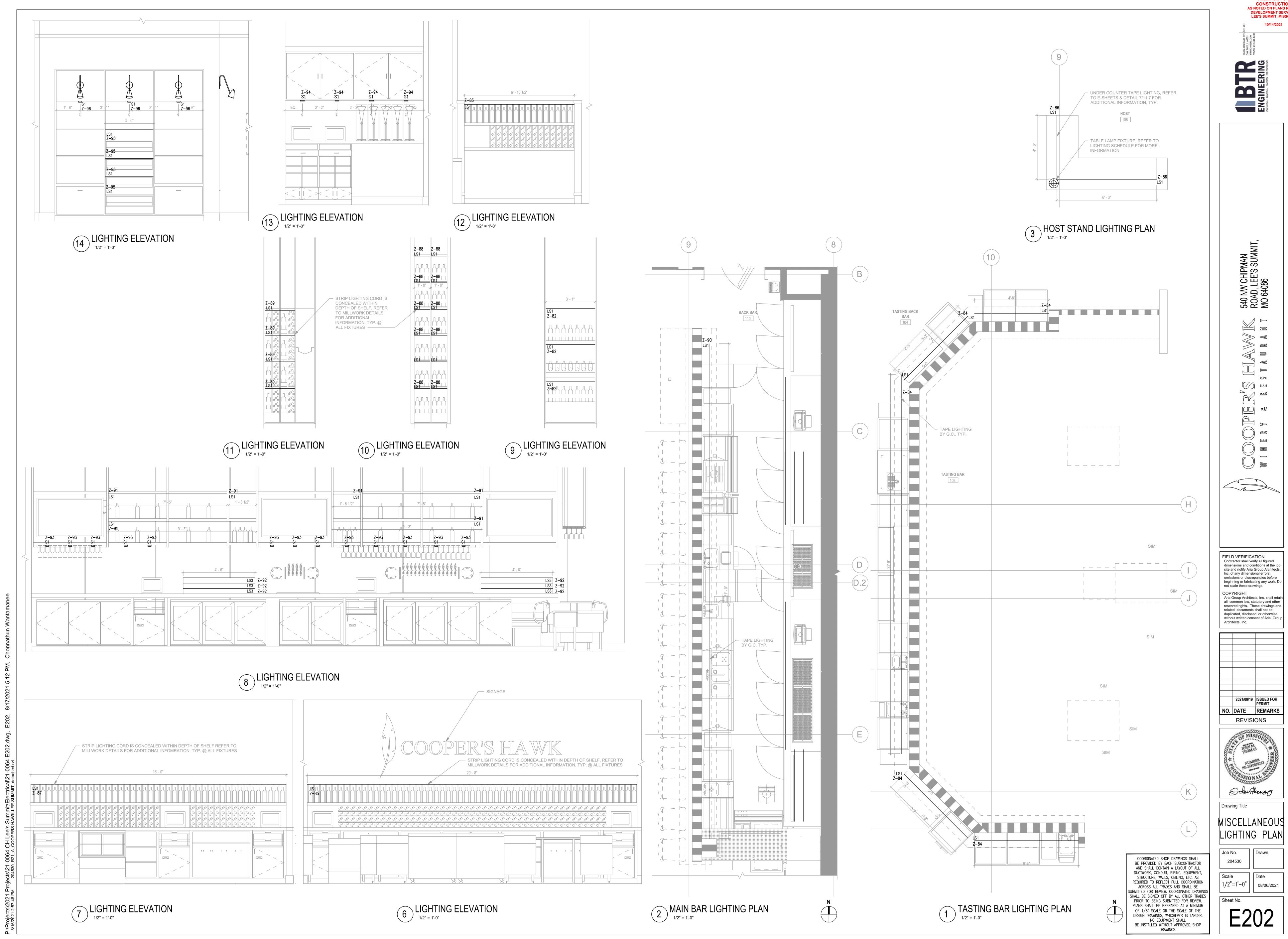
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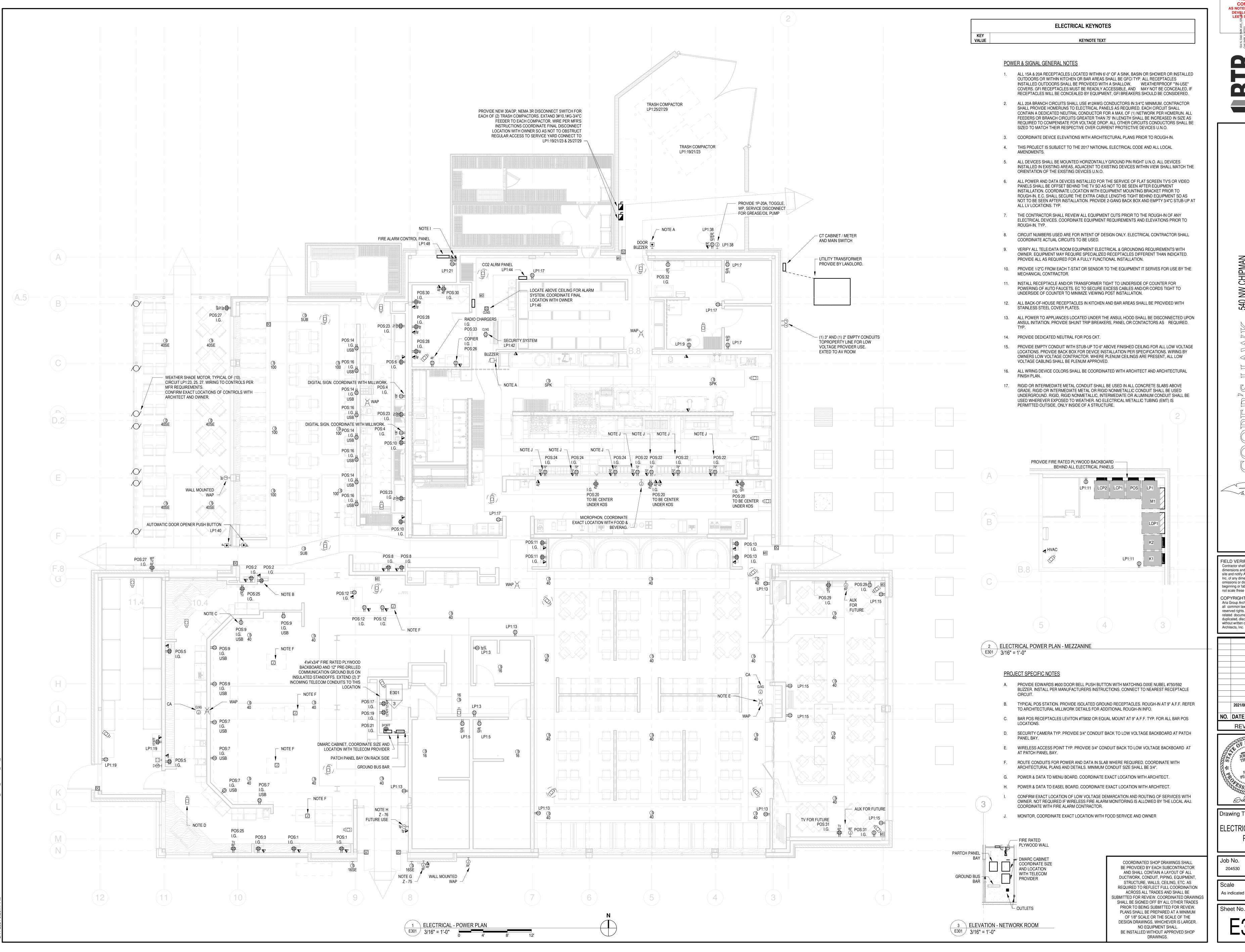


Drawing Title ELECTRICAL -LIGHTING PLAN

Job No. 204530 Scale

As indicated 08/06/2021





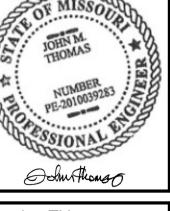
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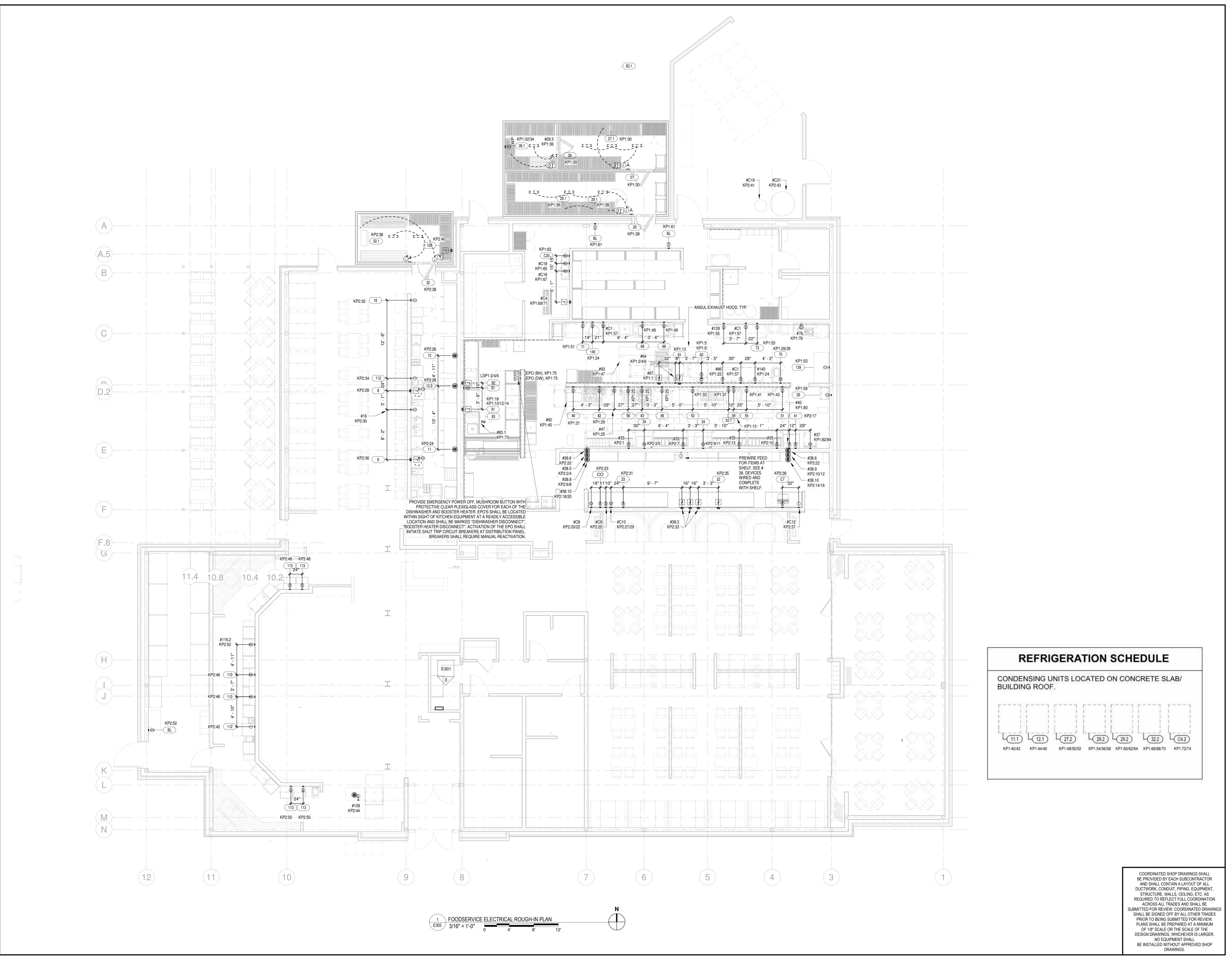
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Drawing Title **ELECTRICAL - POWER**

PLAN

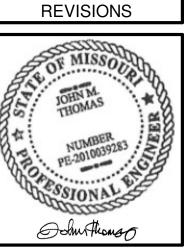
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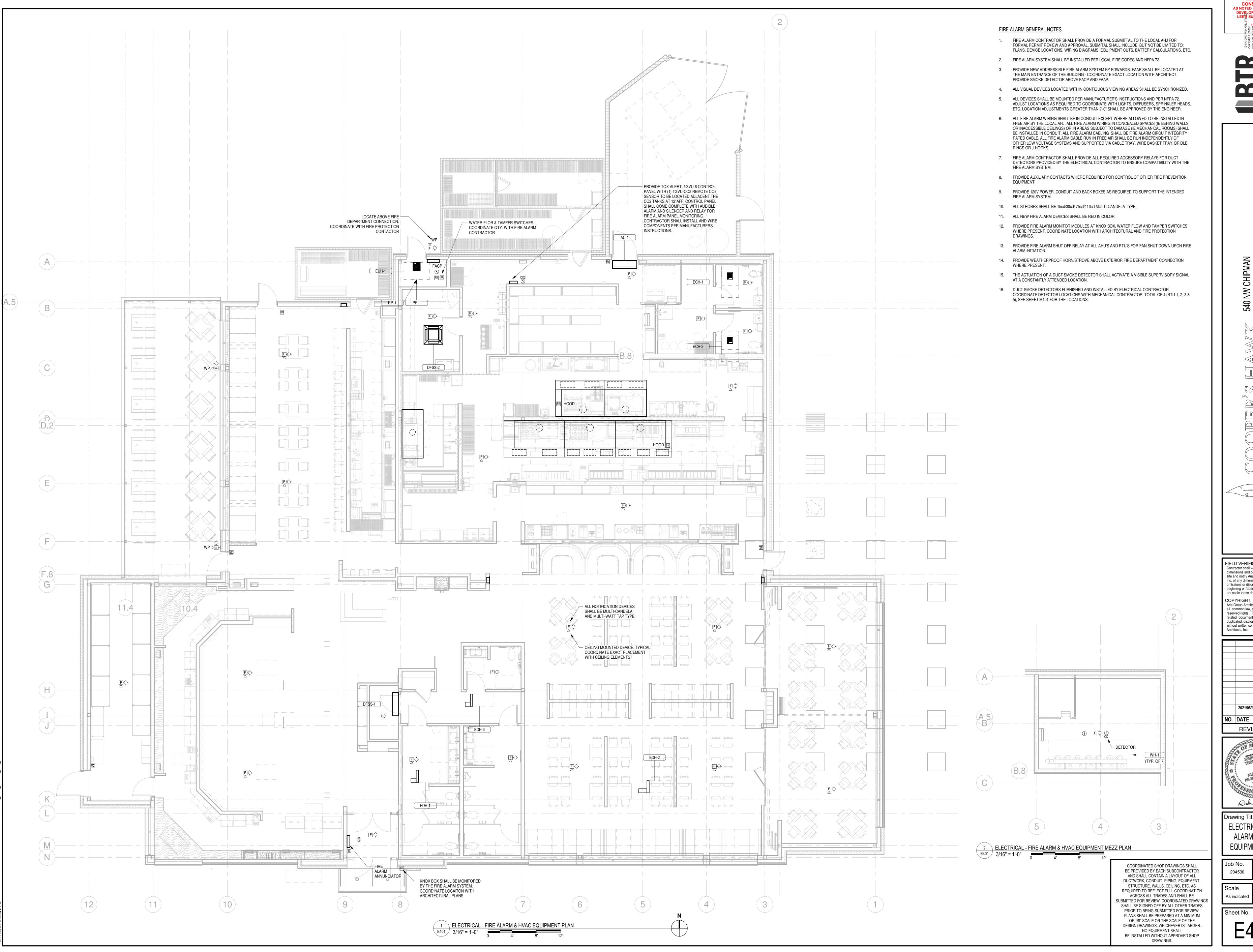


Drawing Title FOODSERVICE **ELECTRICAL** ROUGH-IN PLAN

204530

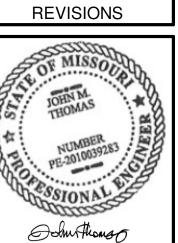
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3/16" = 08/06/2021 1'-0" Sheet No.



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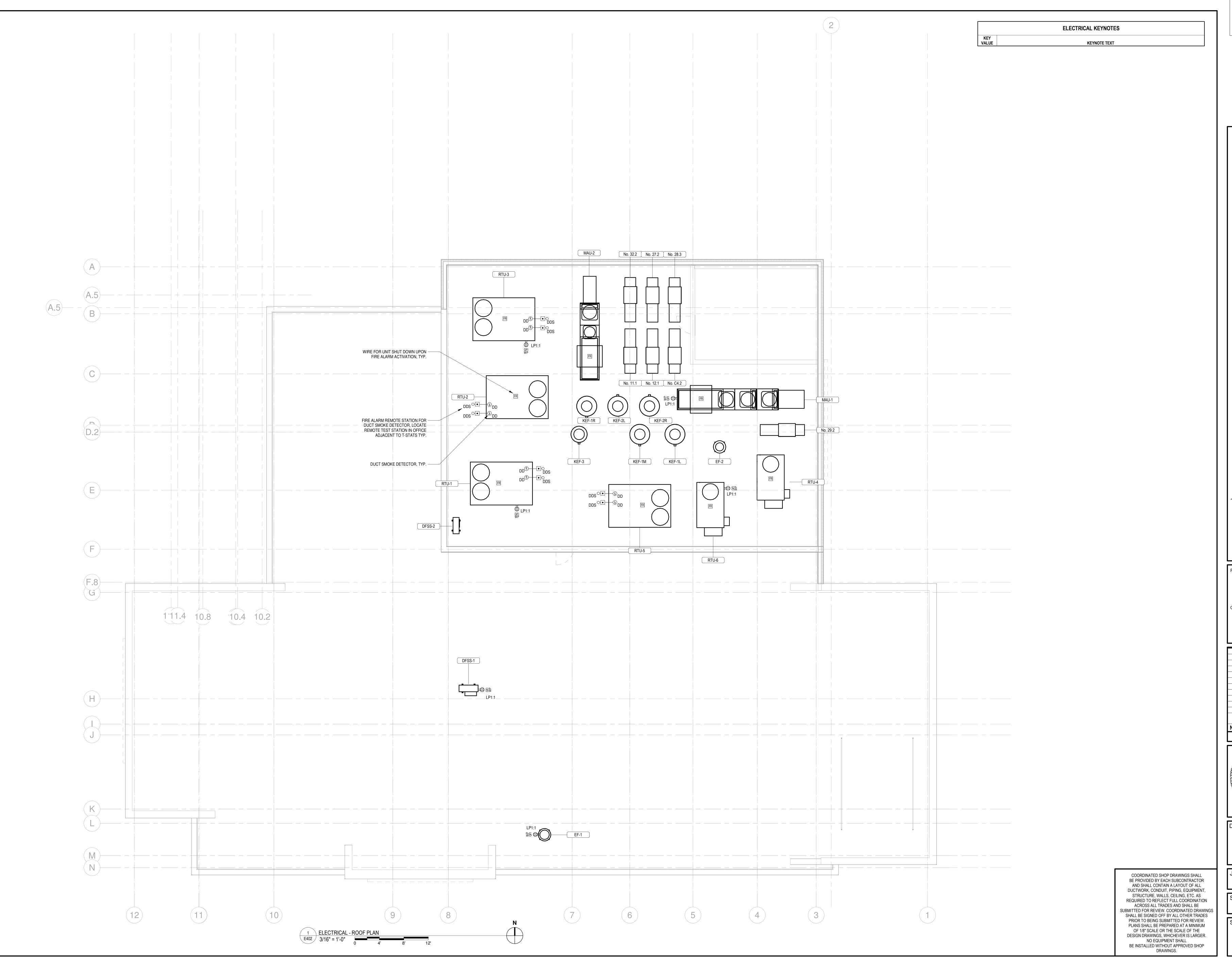


Drawing Title ELECTRICAL - FIRE ALARM & HVAC

EQUIPMENT PLAN

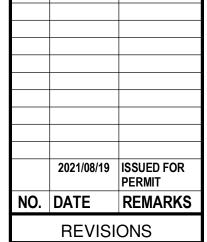
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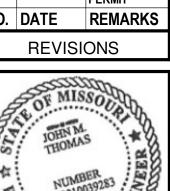
Scale As indicated 08/06/2021

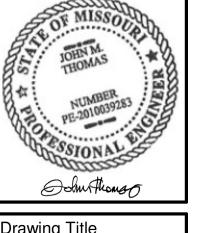


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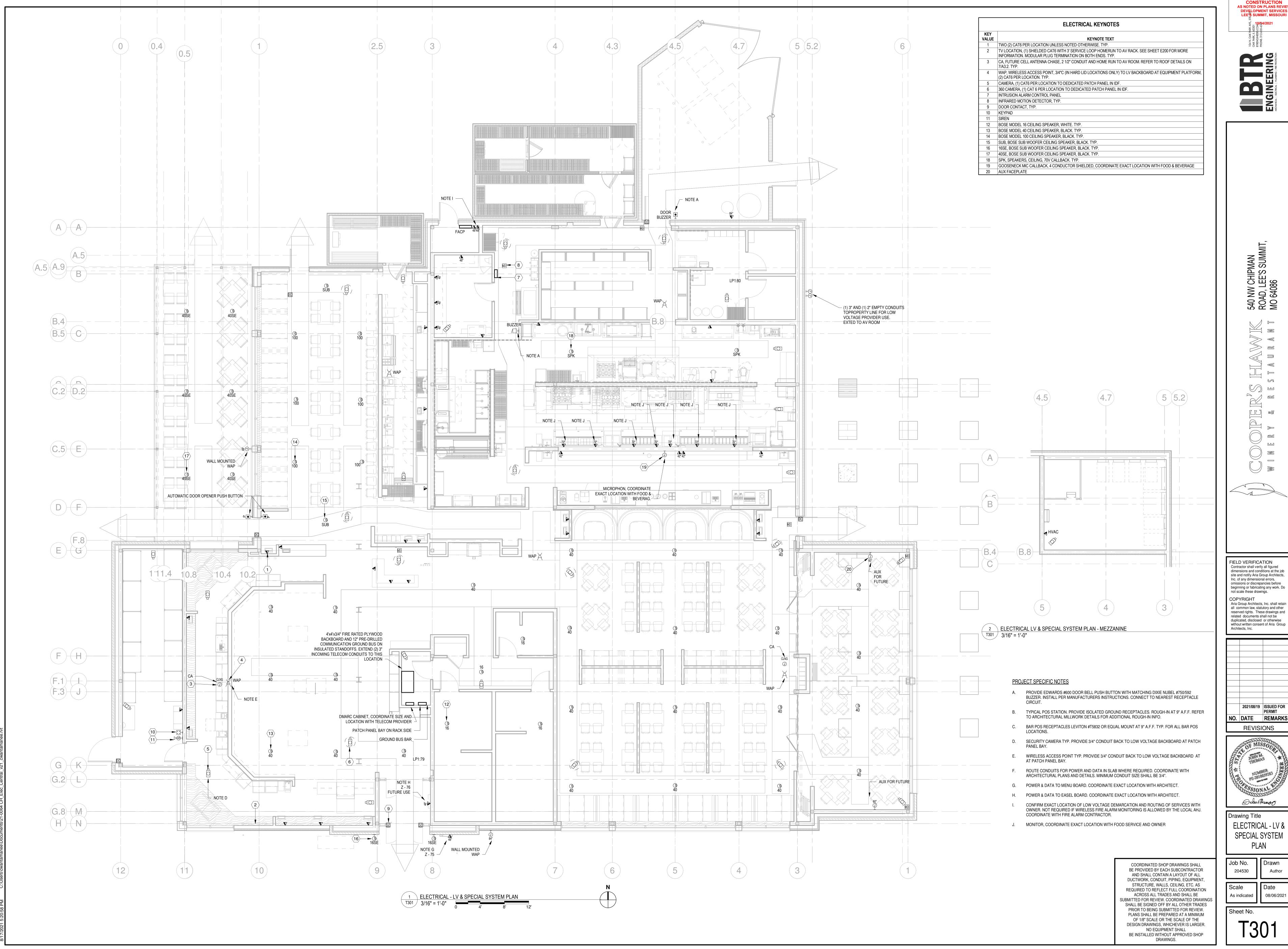


Drawing Title ELECTRICAL - ROOF

PLAN

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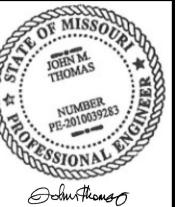


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Drawing Title ELECTRICAL - LV &

SPECIAL SYSTEM PLAN

08/06/2021