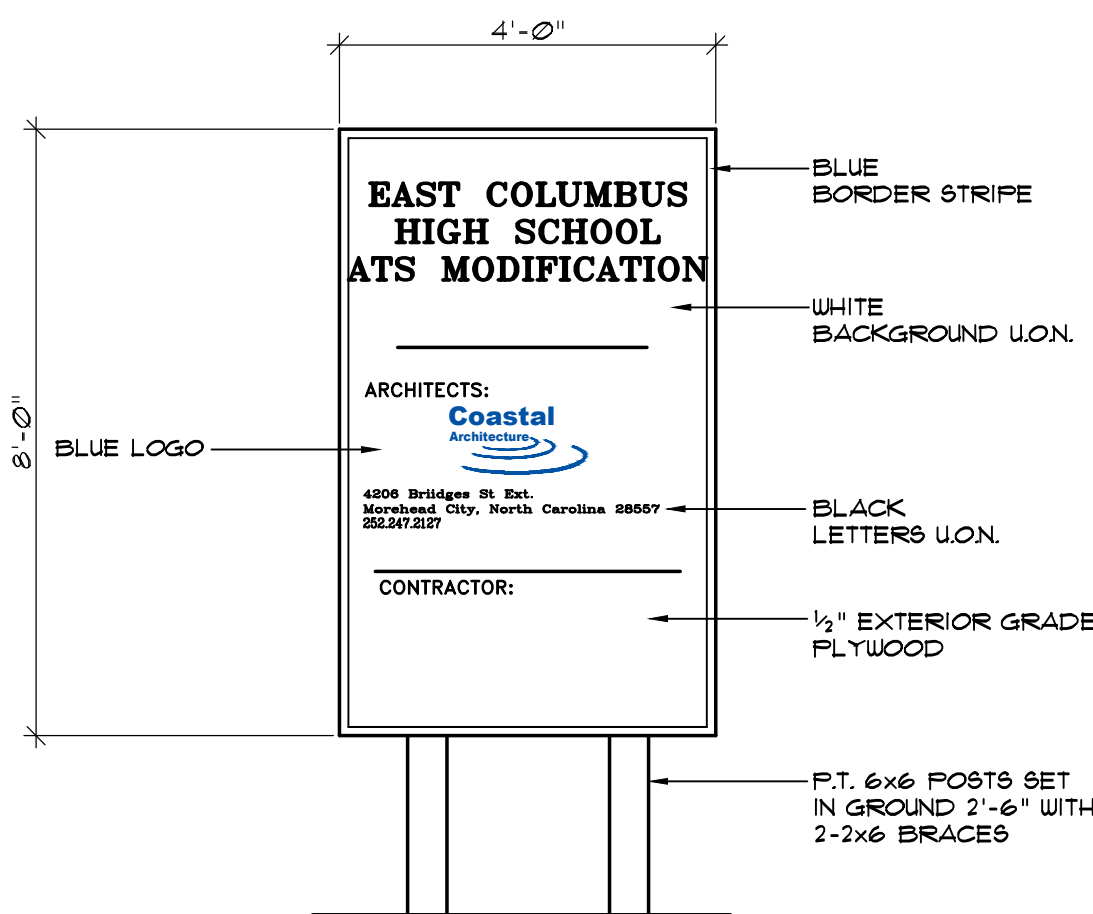


EAST COLUMBUS HIGH SCHOOL ATS MODIFICATION 32 GATOR LANE LAKE WACCAMAW, NORTH CAROLINA

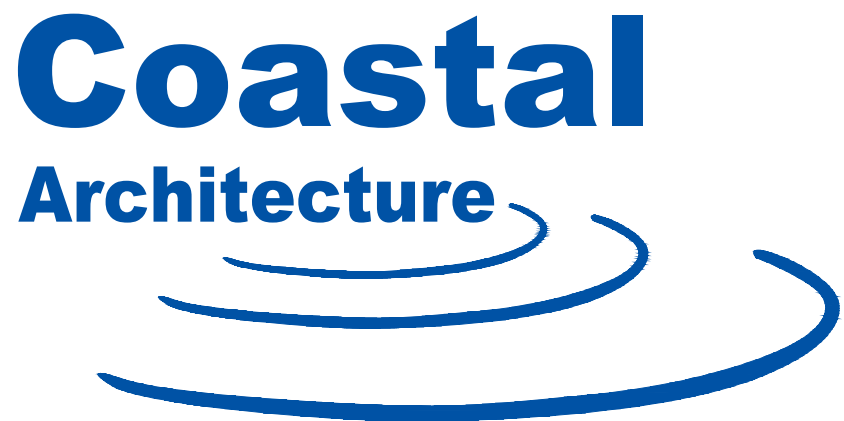
DRAWING LIST

CS-1	COVER SHEET
E1	ELECTRICAL SPECS AND DETAILS
E2.1	ELECTRICAL - PLAN A
E2.2	ELECTRICAL - PLAN B
E3	ELECTRICAL PANELS AND RISERS



PROJECT SIGN
CS-1
NOT TO SCALE

NOTE: SUBMIT SHOP DRAWING FOR COORDINATION OF LETTER HEIGHTS SPECIFIC SIGN COLORS.



Coastal Architecture, ARCHITECT
The Drawings, Specifications and other documents prepared by Coastal Architecture, the Designer, for this project are instruments of service for use solely with respect to this project and, unless otherwise provided, the Designer shall be deemed the author of these documents and shall retain all common law, statutory and other reserved rights, including copyright protection. The Owner shall be permitted to retain copies of the Designer's drawings, Specifications, and other documents for information and reference in connection with the Owner's use and occupancy of this project. No portions in part or in whole of the Drawings, Specifications and other documents shall be duplicated or used by the Owner or others for additions to this Project, completion of this Project by others, or on other Projects without written consent by the Designer.

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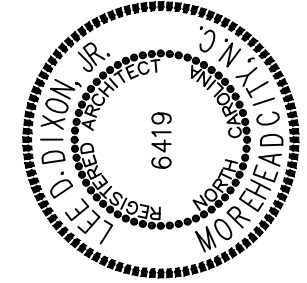
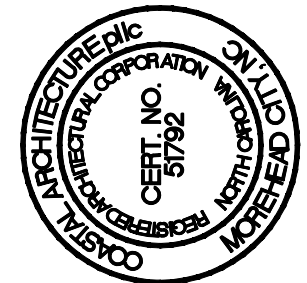
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EAST COLUMBUS HIGH SCHOOL
ATS MODIFICATIONS
LAKE WACCAMAW, NORTH CAROLINA



COVER SHEET

25023

ISSUED: 7/28/2026
DWG BY: MSG
CKD BY: LDD

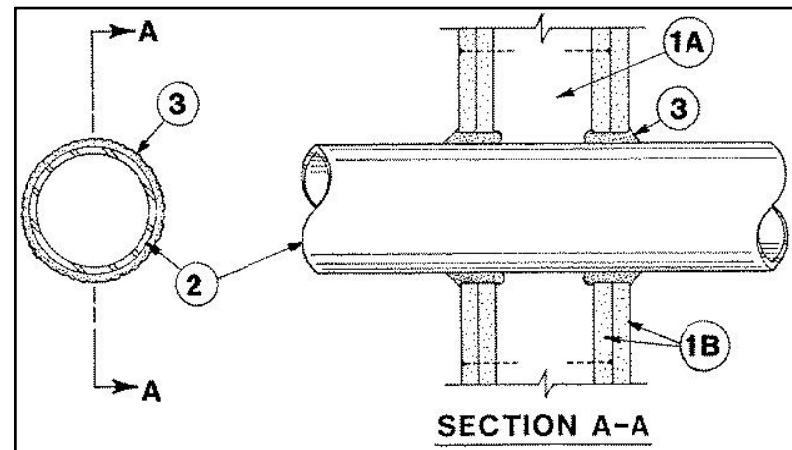
REVISIONS

SHEET NO.
CS-1
OF

System No. W-L-1001
F Ratings --- 1, 2, 3 and 4 Hr (See Items 2 and 3)
T Ratings --- 0, 1, 2, 3, and 4 Hr (See Item 3)

L Rating At Ambient --- less than 1 CFM/sq ft

L Rating At 400 F --- less than 1 CFM/sq ft



1. **Wall Assembly** --- The 1, 2, 3 or 4 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs** --- Wall framing may consist of either wood studs (max 2 hr fire rated assemblies) or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC with nom 2 by 4 in. lumber end plates and cross braces. Steel studs to be min 3-5/8 in. wide by 1-3/8 in. deep channels spaced max 24 in. OC.

B. **Gypsum Boards** --- Nom 1/2 or 5/8 in. thick, 4 ft. wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 26 in.

2. **Through-Penetrant** --- One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit, or tubing and periphery of opening shall be min of 0 in. (point contact) to max 2 in. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

A. **Steel Pipe** --- Nom 24 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. **Iron Pipe** --- Nom 24 in. diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in. diam (or smaller) or Class 50 (or heavier) ductile iron pressure pipe.

C. **Conduit** --- Nom 6 in. diam (or smaller) steel conduit or nom 4 in. diam (or smaller) steel electrical metallic tubing.

D. **Copper Tubing** --- Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.

E. **Copper Pipe** --- Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.

F. **Through Penetrating Products** --- **Flexible Metal Piping** --- The following types of steel flexible metal gas piping may be used:

1. Nom 2 in. diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

OMEGA FLEX INC

2. Nom 1 in. diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

GASTITE, DIV OF TITEXLEX

3. Nom 1 in. diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

WARD MFG LLC

Fire, Void or Empty Materials --- **Caulk or Sealant** --- Min 5/8, 1-1/4, 1-7/8 and 2-1/2 in. thickness of caulk for 1, 2, 3 and 4 hr rated assemblies, respectively, applied within annulus, flush with both surfaces of wall. Min 1/4 in. diam bead of caulk applied to gypsum board/penetrant interface at point contact location on both sides of wall. The hourly F Rating of the firestop system is dependent upon the hourly fire rating of the wall assembly in which it is installed, as shown in the following table. The hourly T Rating of the firestop system is dependent upon the type or size of the pipe or conduit and the hourly fire rating of the wall assembly in which it is installed, as tabulated below:

Max Pipe or Conduit Diam in	F RATING Hr	T RATING Hr
1	1 or 2	0+, 1 or 2
4	3 or 4	3 or 4
6	1 or 2	0
12	3 or 4	0
16	1 or 2	0

+When copper pipe is used, T Rating is 0 hr.

3M COMPANY --- CP 25W6 or FB-3000 WT.

*Bearing the UL Classification Mark

DIVISION 16 - ELECTRICAL

PART 1 - GENERAL

1.1 DESCRIPTION OF THE WORK

- A. Work under this section includes, but is not necessarily limited to, furnishing and installing the following:
1. Electrical service and service equipment.
 2. Lighting and power distribution system.
 3. Provide lighting fixtures selected by owner with lamps to match.
 4. Wiring devices, boxes, cover plates, etc.
 5. Source of power for all items of equipment.
 6. Grounding.
 7. Other requirements and/or systems where shown.

B. All work shall be complete and items, equipment, etc., shall be electrically connected for proper and correct operation.

C. All work under this contract shall be installed in accordance with the latest edition of the following codes and standards insofar as they apply:

1. The 2020 National Electrical Code.
2. The National Electrical Safety Code.
3. Underwriter's Laboratories, Inc., Standards and approved listings.
4. Electrical Testing Laboratories standards.
5. North Carolina Building Code, Latest Edition and Revisions.
6. All local codes and ordinances.

D. The Electrical Contractor shall be licensed in the State of North Carolina and have all local licenses required for the work.

E. Obtain all permits, licenses, inspections, etc., required for the work and pay for the same. Furnish final certificate of inspection and approval from the electrical inspector having jurisdiction prior to acceptance of the work.

F. All work shall be done by skilled mechanics and shall present a neat, trim, workmanlike condition when complete.

1.2 INTENT

A. The intent of these specifications and the accompanying drawings is to convey as reasonably as possible the requirements for a complete job ready for the building to operate. The Electrical Contractor shall take this into consideration and include in his base bid allowance for contingencies as will allow him to provide minor pieces of equipment and labor not specifically indicated but required for the job to operate properly, at no additional cost to the Owner.

1.3 COORDINATION

A. Coordinate work with other contractors. Notify Architect of apparent conflicts early to expedite construction. If structural damage appears imminent, stop work and notify Architect for a decision before resuming operations.

B. Locations shown are approximate. The drawings do not give exact details as to elevations and locations of various pipes, fittings, ducts, conduit, etc., and do not show all offsets and other installation details which may be required. Coordinate all locations with architect before any rough-in.

1.4 SHOP DRAWINGS

A. Shop drawings shall be submitted for panels and service equipment, lighting, wiring devices, and cover plates. These may consist of the manufacturer's standard catalog or tear sheets and shall have the exact items being offered clearly identified.

PART 2 - PRODUCTS AND MATERIALS

2.1 GENERAL

A. All material shall be new and shall bear the manufacturer's name, trade name, and UL label where such standard has been established for the particular material. Materials shall be the standard products of manufacturer's regularly engaged in the manufacture of the required type of equipment and the manufacturer's latest approved design.

1. Boxes installed in concealed locations shall be set flush with the finished surfaces.
2. Provide rated boxes in all fire barriers & walls installed per code.

2.2 NOT USED

2.3 CONDUCTORS

A. Conductors shall be color coded, sizes #8 and larger may be color taped on the job. Color coding shall be: Standard Practice

B. Conductors shall be manufactured by Dodge, Southwire or approved equal. Conductors shall meet the latest requirements of NEMA and ICEA and shall be UL approved.

C. Metallic sheathed "MC" cable may be used where allowed by N.E.C.

D. Conductors shall be applied and taped as follows:

1. Size #10 and #12, use ideal "Wing Nuts" or T&B "Pluggy" connectors. Connectors shall be rated for 150 degrees C for use in recessed lighting fixtures.
2. Size #8 and larger shall be solderless screw and screw-clamping type, smoothly covered and shaped with rubber gum type with final cover vinyl plastic electrical type. In lieu of rubber gum and vinyl plastic type, factory fabricated approved preformed insulating covers may be used. All connectors shall be UL approved.
3. No split-bolt type connectors may be used.

E. All branch wire and connections shall be copper and sized per National Electric Code.

F. All conductors shall be continuous without splice between junction, outlet, device boxes, etc. No splicing will be permitted in panelboard cabinets, safety switches, etc.

G. All wiring in mechanical spaces shall be plenum rated.

H. Provide GFI protection within 6'-0" of any sink.

I. All multi-wire branch circuits shall comply with 2020 NEC, 210-4(B).

J. All wiring at medical facilities shall comply with 2020 NEC, 517.1.

2.4 PANELBOARDS, SAFETY SWITCHES

A. Panelboards shall comply with NEMA Standard PB 1 - Latest Edition and as manufactured by Square D or ITE-Siemens.

B. The contractor shall be responsible for correctly phasing the circuits in the panelboards.

C. Safety switches shall be general duty type, size and rating as required for load service. Safety switches shall be fused or unfused as shown and/or as required. Safety switches serving motor loads shall be horsepower rated for load served.

2.5 NOT USED

2.6 WRING DEVICES

A. Wiring devices shall be commercial grade by Bryant, Leviton, or approved equal. With matching cover. Color by Architect.

B. Wiring devices installed under a Kitchen Hood shall have stainless steel covers.

C. Wiring devices installed over counters shall comply with ANSI A117.1.

2.7 NOT USED

2.8 CONDUIT

- A. PVC conduit will be allowed where N.E.C. approved.
- B. All service conduit shall be rigid where exposed below 8'-0" AFF or exposed to the elements or hazardous conditions.

PART 3 - EXECUTION

3.1 CIRCUIT GROUNDING

A. All circuits shall contain an insulated, green, copper grounding conductor, sized in accordance with Table 250-95 of the NEC. Grounding conductors shall be connected to equipment grounding bus in panelboard and securely attached and grounded to the device or enclosure at the other end.

3.2 GROUNDING TYPE CONVENIENCE OUTLETS AND SWITCHES

A. Outlets and switches shall be solidly grounded to equipment grounding system with a green colored insulated conductor. Electrical connections shall be continuous from equipment ground bus in panelboard to the hex nut on the convenience outlet or switch.

3.3 MOTORS

A. All motors shall be connected to conduit system with short length (minimum length 24" and maximum length 36") of flexible listed conduit.

3.4 NOT USED

3.5 EQUIPMENT LABELING

A. Provide permanent name plates for all panelboards, safety switches, wiring troughs, etc., for identification of equipment controlled, services, etc. Nameplates shall be securely and permanently attached to equipment with stainless steel screws. Nameplates shall include the name of the equipment and where it is fed from.

B. All switch plates, receptacle plates and outlet covers shall be labeled with machine printed vinyl labels identifying the circuit(s) within.

C. All empty conduit runs shall be identified and indicated where they terminate.

D. Provide typewritten directory in each panelboard to clearly identify each circuit, service, etc.

3.6 NOT USED

3.7 NOT USED

3.8 JUNCTION AND/OR PULL BOXES

A. Boxes shall be installed where necessary to avoid excessive runs and/or too many bends between outlets.

3.9 PULL WIRE

A. Leave pull wire in each empty conduit run.

3.10 NOT USED

3.11 GROUNDING

A. All grounding shall be in accordance with Article 250 of the NEC. In addition, the following requirements shall be met:

1. Grounding conductors shall be installed as to permit the shortest and most direct path from equipment to ground. All connections to grounding conductors shall be accessible.
2. Equipment ground continuity shall be maintained through flexible metal conduit.
3. All wiring devices equipped with grounding connection shall be solidly grounded to ground system with grounding conductors.
4. The frame of all lighting fixtures shall be securely grounded to the equipment ground system with grounding conductors.
5. All equipment enclosures, and non-current-carrying metallic parts of electrical equipment, raceway systems, etc., shall be effectively and adequately bonded to ground.
6. All equipment enclosures, and non-current-carrying metallic parts of electrical equipment, raceway systems, etc., shall be effectively and adequately bonded to ground.

3.12 ELECTRICAL WORK IN CONNECTION WITH OTHER WORK

A. **PLUMBING WORK:** The Electrical Contractor shall furnish and install switches and devices as shown and electrically connect electric water heaters, etc. All other electrical work required will be performed by the PLUMBING CONTRACTOR.

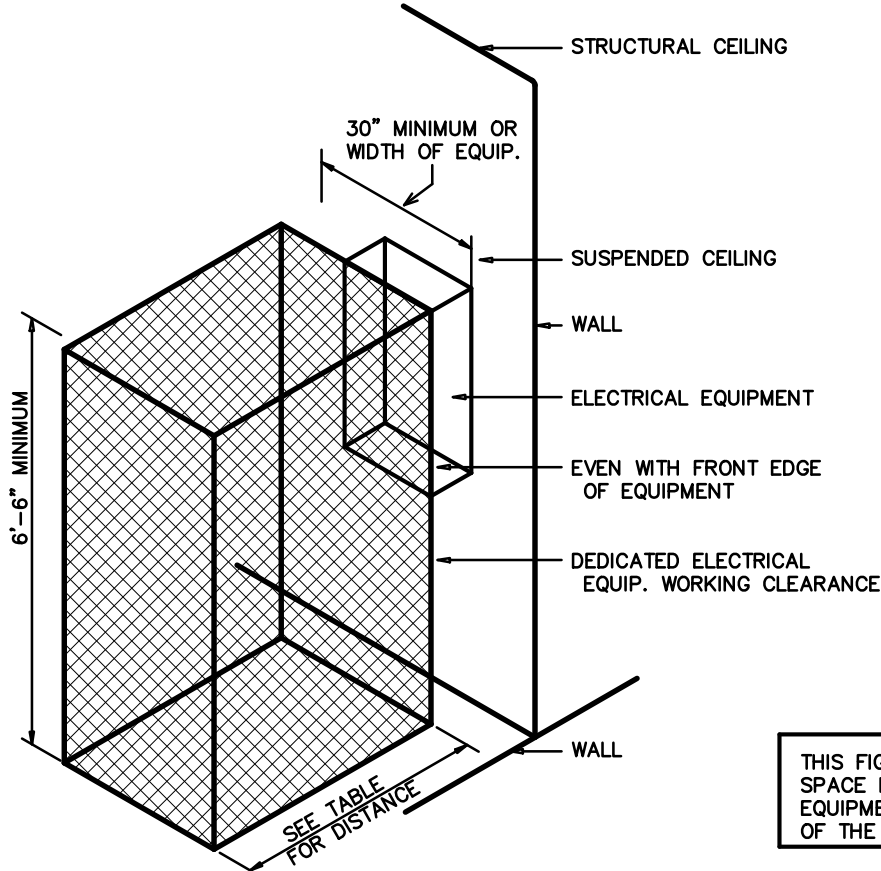
B. **HEATING AND AIR CONDITIONING WORK:** The Electrical Contractor shall provide all disconnect switches, starters, and associated hardware for the equipment furnished including all line and load side wiring and conduit. Final connections to the equipment will be by the HVAC contractor. All control wiring will be accomplished by the HVAC contractor. Coordinate all work associated with the HVAC contractor.

3.13 CLEAN UP

A. During construction, keep the site clean of debris. Upon completion, and before final inspection, clean up the premises to remove all evidence of work. In addition upon completion of construction leave equipment clean.

3.14 GUARANTEE

A. Guarantee all materials and labor included in the electrical work for a period of one year from date of final acceptance by the Owner. Any part or parts of the work or equipment which prove to be defective during the guarantee period shall be replaced at no additional cost to the Owner.



ELECTRICAL EQUIPMENT WORKING CLEARANCE PER ARTICLE 110-26 OF N.E.C.

VOLTAGE TO GROUND NOMINAL	MIN. CLEAR DISTANCE IN FEET
CONDITION: 1	2
2	3
3	3 1/2
4	4

1 ELECTRICAL CLEARANCES

SCALE: NTS

GENERAL NOTES

1 ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND ALL LOCAL CODES HAVING JURISDICTION.

2 ALL BRANCH CIRCUIT CONDUCTORS TO BE COPPER (SERVICE CONDUCTORS MAY BE ALUMINUM WITH SAME AMPACITY AS COPPER CONDUCTORS. RE-SIZE CONDUCTORS AND CONDUIT PER NEC.)

3 ALL CIRCUITS TO BE 2 #12, 1 #12 AND IN 1/2" EMT CONDUIT AS A MINIMUM. PROVIDE WIRING FOR LARGER CIRCUITS AS REQUIRED BY NEC. RIGID CONDUIT IS REQUIRED WHERE EXPOSED BELOW 8'-0" A.F.F.

4 ALL EMPTY CONDUIT RUNS IN EXCESS OF 10 FEET SHALL BE PROVIDED WITH A PULL WIRE OR FISH TAPE/CORD.

5 CONTRACTOR SHALL VERIFY THAT ALL DOOR SWINGS ARE CORRECT BEFORE INSTALLING LIGHT SWITCH OUTLETS.

6 ALL BRANCH CIRCUIT CONDUCTORS FROM THE PANEL TO THE FIRST OUTLET SHALL BE INCREASED TO THE NEXT LARGER SIZE WHERE THE LENGTH OF THE HOME RUN EXCEEDS 120 FEET ON 120V AND 208V CIRCUITS.

7 THE CORRECT NUMBER OF WIRES MAY NOT BE INDICATED FOR ALL CIRCUITS. ONLY THOSE WHERE CLARIFICATION IS NECESSARY. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL WIRES NECESSARY FOR THE PROPER FUNCTION OF THE SYSTEM WHETHER INDICATED ON DRAWINGS OR NOT.

8 THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTLY PHASING THE CIRCUITS IN THE PANELBOARDS.

9 THE ELECTRICAL CONTRACTOR SHALL VERIFY THE TYPE OF CEILING SYSTEM WITH THE GENERAL CONTRACTOR TO INSURE THAT ALL LIGHTING FIXTURES ARE COMPATIBLE WITH THE CEILING SYSTEM BEING INSTALLED. LIGHTING FIXTURES SHOULD NOT BE ORDERED UNTIL TYPE OF CEILING HAS BEEN VERIFIED.

10 ELECTRICAL REQUIREMENTS INDICATED ON DRAWINGS MAY DIFFER FROM ACTUAL EQUIPMENT FURNISHED. IF FURNISHED EQUIPMENT DIFFERS FROM RATINGS ON DRAWINGS CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER FOR APPROPRIATE ACTION TO BE TAKEN.

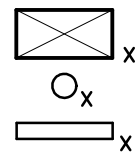
11 IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO COORDINATE EXACT BREAKER REQUIREMENTS FOR ALL EQUIPMENT PRIOR TO ORDERING PANEL. ADJUST BREAKER AND WIRE SIZES AS REQUIRED.

12 PROVIDE BOXES, JACKS, WIRING AND CONDUIT FROM LOCATIONS SHOWN TO MTP LOCATION. VERIFY EXACT REQUIREMENTS WITH OWNER.

13 ELECTRICAL CONTRACTOR SHALL PROVIDE ALL DISCONNECTS FOR MECHANICAL & PLUMBING EQUIPMENT. DISCONNECTS SHALL BE PER MANUFACTURERS RECOMMENDATIONS AND FUSED PER NAME PLATE. PROVIDE NEMA 3R ENCLOSURES ON EXTERIOR. COORDINATE FUSE SIZES.

14 THE EC SHALL MEET WITH THE ARCHITECT AND TENANT PRIOR TO INSTALLING OUTLET BOXES TO VERIFY LOCATIONS AND MOUNTING HEIGHTS OF RECEPTACLES AND TELEPHONE OUTLETS.

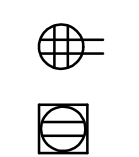
ELECTRICAL LEGEND



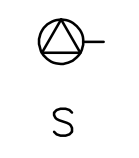
LIGHT FIXTURE: LETTER DENOTES FIXTURE TYPE (REFER TO LIGHTING PLAN AND FIXTURE SCHEDULE).
NL = NIGHT LIGHT (NOT SWITCHED/ALWAYS ON)



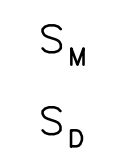
DUPLEX RECEPTACLE - 120V; MOUNT 18" TO CENTER AFF UNLESS NOTED OTHERWISE. "WP" INDICATES WEATHER PROOF, "GFI" INDICATES GROUND FAULT CURRENT INTERRUPT PROTECTED.
"V" INDICATES RECEPTACLE WITH (2) USB PORTS.



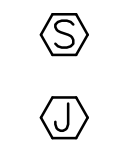
QUADRAPLEX RECEPTACLE - 120V



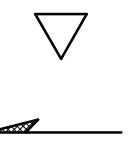
FLOOR OR CEILING OUTLET (AS NOTED) - 120V



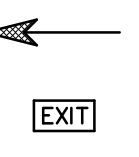
SPECIAL PURPOSE RECEPTACLE - REFER TO POWER PLAN AND PANEL SCHEDULE



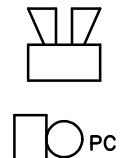
LIGHT SWITCH



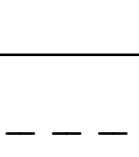
SWITCH WITH INTEGRAL PIR/US MOTION SENSOR FOR AUTOMATIC SHUT-OFF WITH UP TO 2 HOUR ADJUSTABLE DELAY.



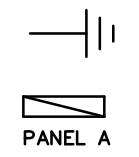
DIMMABLE LIGHT SWITCH



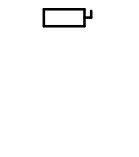
MOTOR RATED SWITCH



JUNCTION BOX



TELE/DATA OUTLET - PROVIDE JUNCTION BOX WITH CONDUIT BACK TO MTP. PROVIDE (1) TELEPHONE JACK AND (1) CAT 5 DATA JACK



SINGLE-POLE HOMERUN TO PANELBOARD



TWO-POLE OR 3-POLE HOMERUN TO PANELBOARD



EXIT LIGHT



EMERGENCY EGRESS FIXTURE



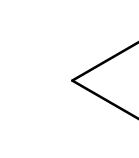
PHOTOCELL (LED COMPLIANT)



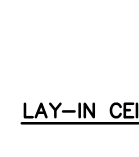
BRANCH CIRCUIT WIRING



SWITCH LEG



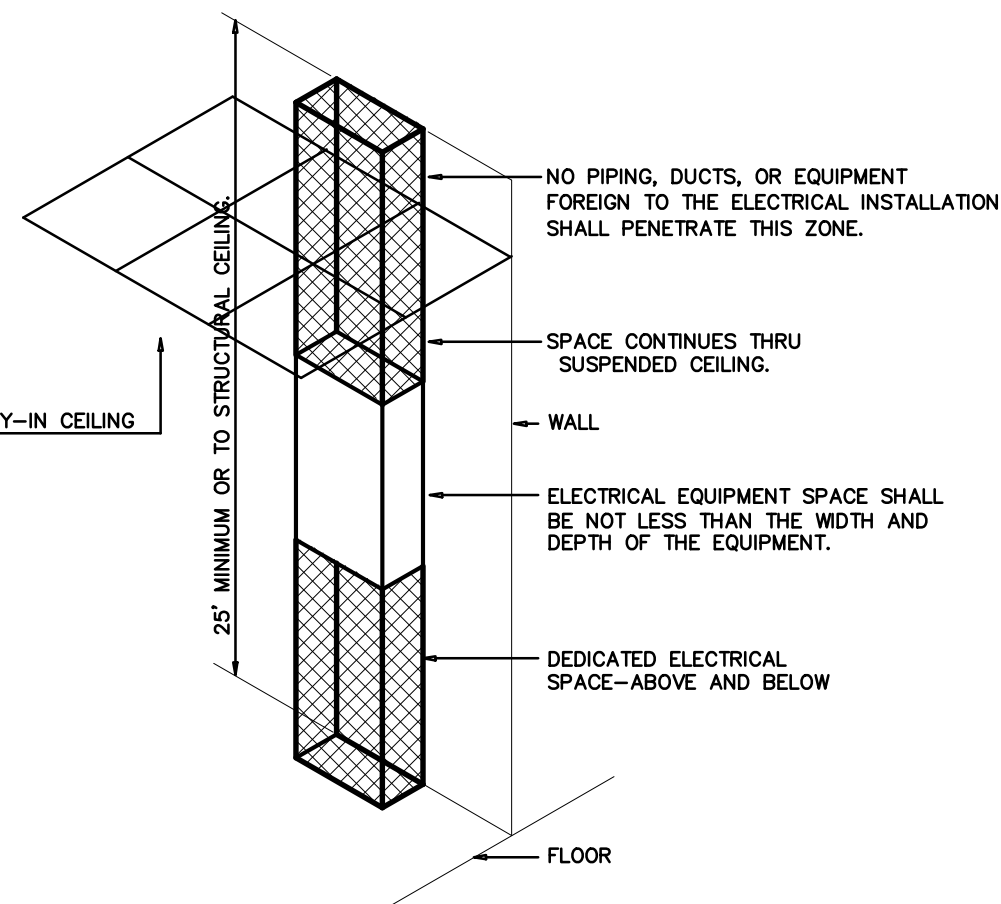
GROUND CONNECTION



DISTRIBUTION PANELBOARD



DISCONNECTING MEANS AS REQUIRED BY CODE



ELECTRICAL EQUIPMENT DEDICATED SPACE PER ARTICLE 110.26.F.1 OF N.E.C.

2 DEDICATED SPACE

SCALE: NTS

NOTE:
PROVIDE LABELING ON EACH
SWITCH NOTING CIRCUIT SERVED.

AUTOMATIC LIGHTING SHUTOFF IS NOT SHOWN IN THE
EXPRESS PATH LIGHTING AS ALLOWED PER 405.2.1-3
EXCEPTION #3, WHERE AUTOMATIC SHUTOFF WOULD
ENDANGER OCCUPANT SAFETY.

TIE ALL EXIT AND EMERGENCY LIGHTS
TO NEAREST AVAILABLE UNSWITCHED
LIGHTING CIRCUIT IN THE AREA SERVED.

VERIFY HEIGHT/LOCATION OF ALL SWITCHES
AND DEVICES PRIOR TO INSTALLATION.

NOTE:
PROVIDE LABELING ON EACH
RECEPTACLE NOTING CIRCUIT SERVED.

NOTE:
THE INFORMATION SHOWN ON THIS DRAWING IS FROM PREVIOUS PERMIT DRAWINGS.
THE CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE AND FIELD VERIFYING ALL RELEVANT INFORMATION.
THE SUBMISSION OF A BID INDICATES ACCEPTANCE OF EXISTING CONDITIONS. NOTIFY THE ENGINEER
OF ANY DISCREPANCIES NOTED.

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Architecture
P.C.

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Planning
Interiors



Member of the American
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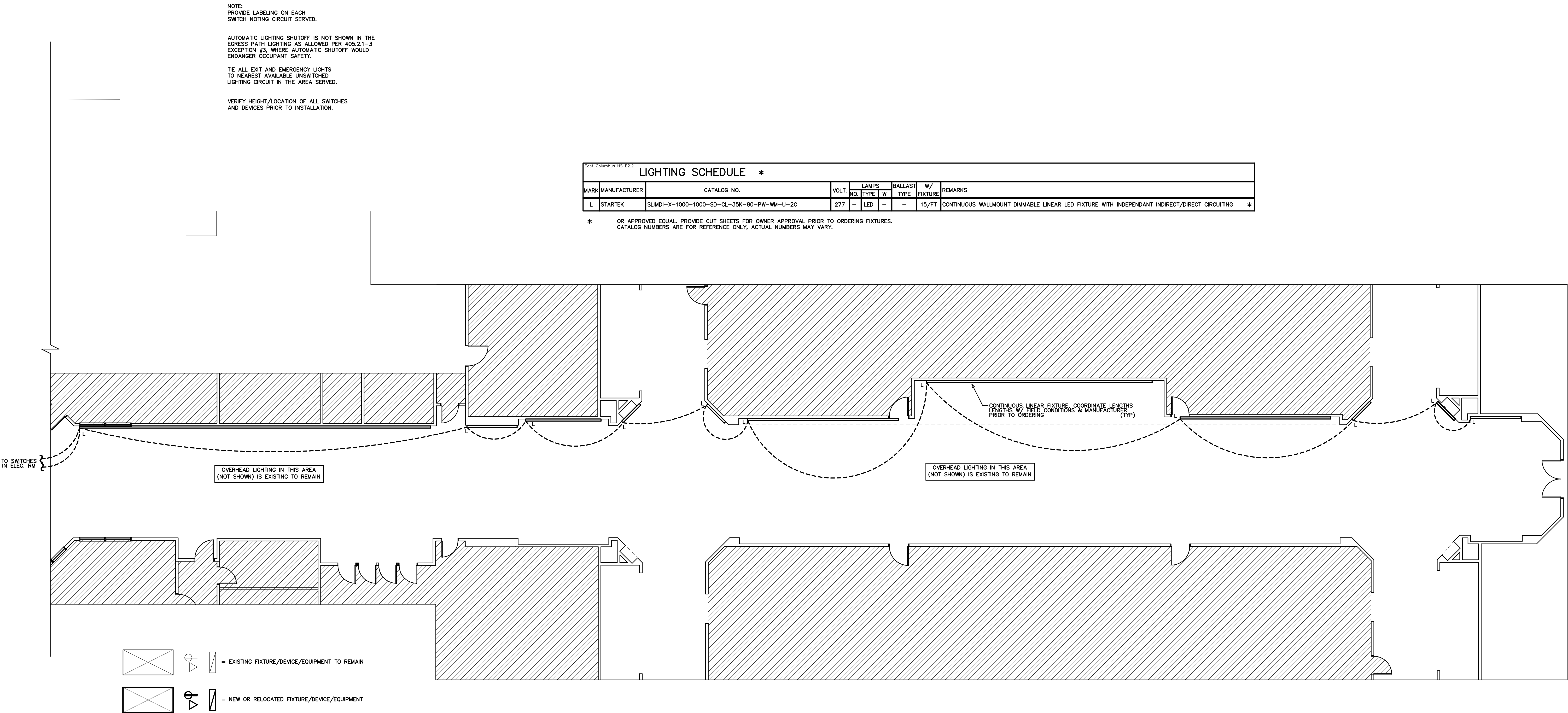
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1 ELECTRICAL PLAN B
SCALE: 1/8" = 1'-0"

NOTE:
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E3