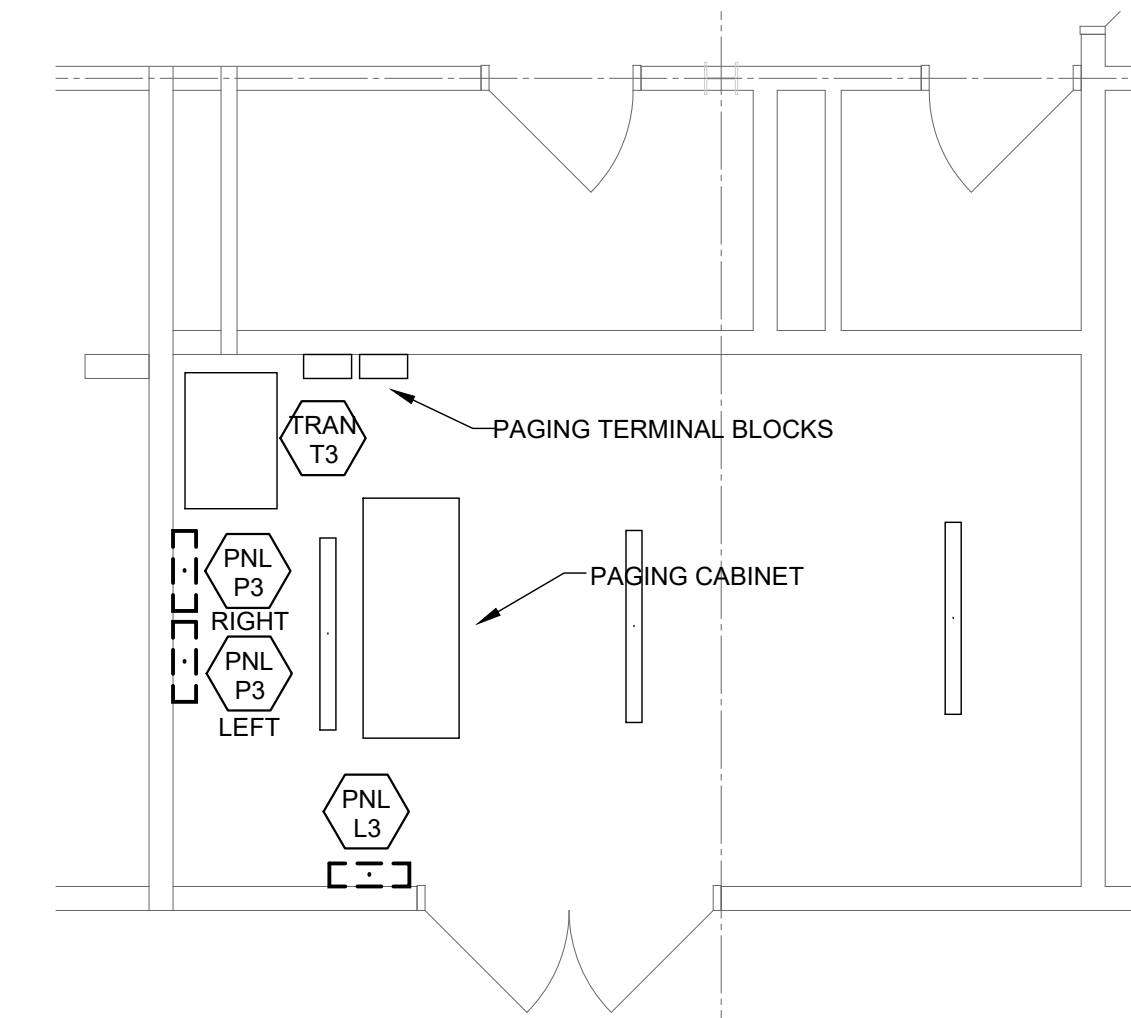


PARTIAL DEMOLITION PLAN - AREA 'A'
 Scale: 1/4" = 1'-0"



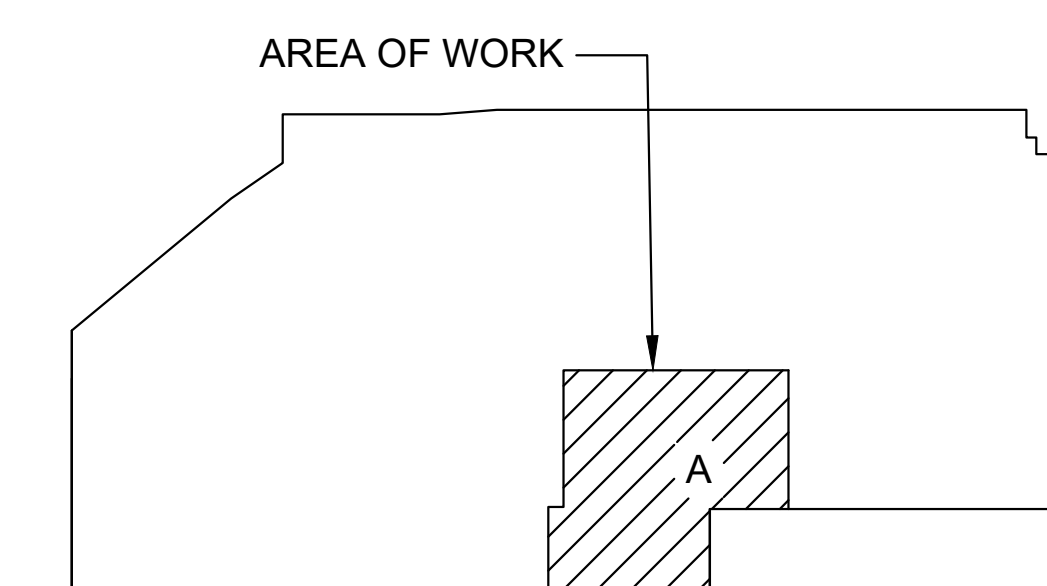
MECH ROOM 144
 Scale: 1/4" = 1'-0"

PLAN NOTES

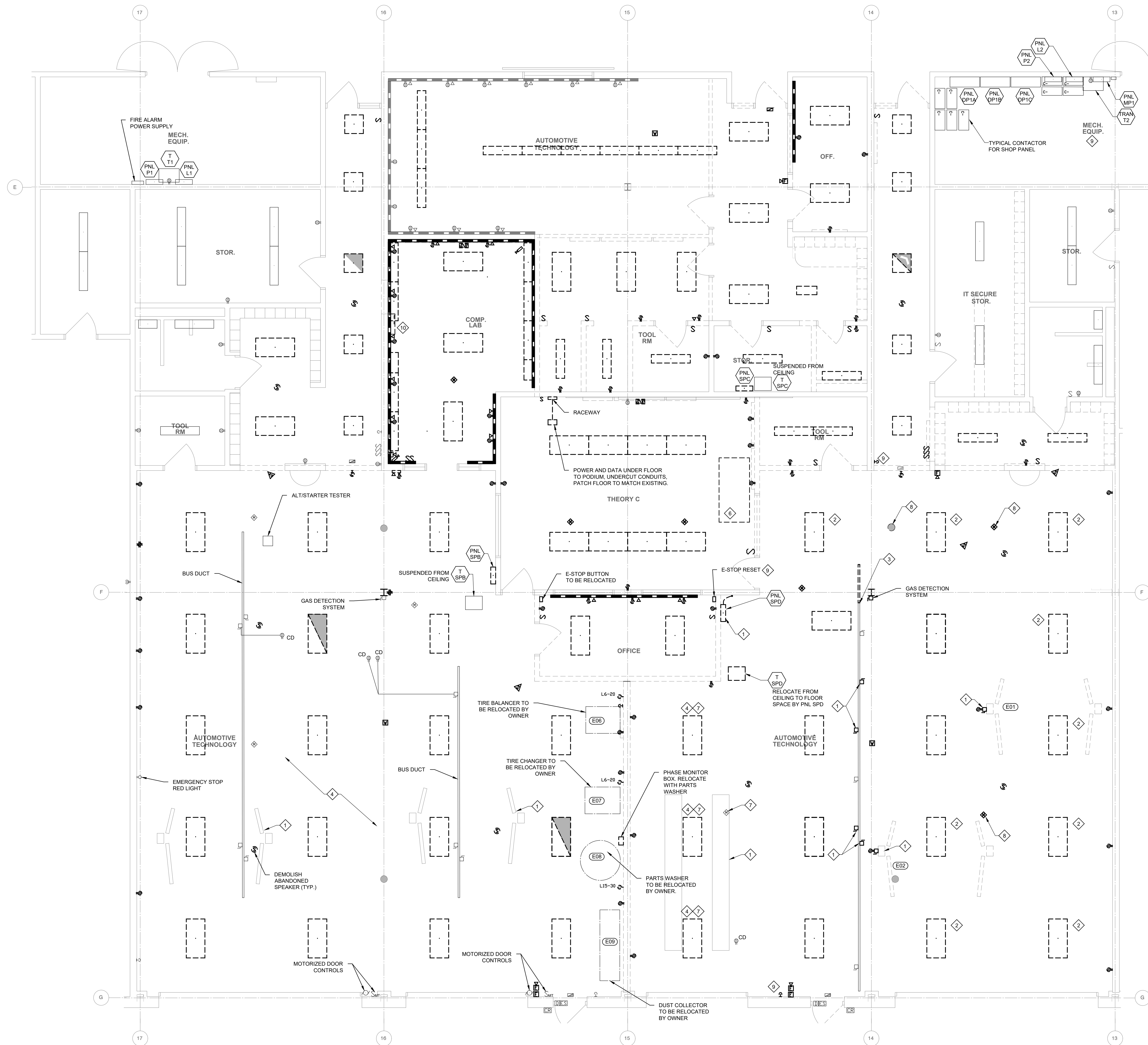
1. IN AREAS WHERE DEMOLITION IS SHOWN:
 - a. DEMOLISH LIGHTING, CONTROLS, AND WIRING. EXTEND LIGHTING CIRCUITS TO NEW LIGHTING AS SHOWN ON THE LIGHTING PLANS.
 - b. DEMOLISH POWER EQUIPMENT AND DEVICES, REMOVE WIRING BACK TO SOURCE, UNLESS DRAWING NOTE OTHERWISE.
 - c. DEMOLISH CLOCKS, SPEAKERS AND ASSOCIATED WIRING BACK TO SOURCE. OWNER TO PROVIDE NEW.
 - d. DEMOLISH TELEDATA JACKS, REMOVE WIRING BACK TO SOURCE. PROVIDE NEW AS SHOWN ON THE LOW-VOLTAGE PLANS. EXCEPTION: MAINTAIN AND RELOCATE WIRELESS ACCESS ANTENNAS WIRING ABOVE CEILING, PROVIDE PROTECTION FROM DIRT AND DUST AT JACK, REINSTALL WIRELESS ACCESS JACKS AND ANTENNAS IN NEW CEILINGS.
 - e. RELOCATE VIDEO CAMERAS WIRING IN CEILING SPACE ABOVE. PROVIDE PROTECTION FROM DIRT AND DUST AT JACK. AFTER NEW CEILINGS ARE INSTALLED, RELOCATE DATA JACK AND CAMERA IN NEW CEILING.
 - f. RELOCATE SECURITY DEVICES IN CEILING SPACE ABOVE. PROVIDE PROTECTION FROM DIRT AND DUST. REINSTALL IN NEW CEILING OR WALL.
 - g. REMOVE AIPHONE (UP-4HD) DOOR INTERCOM MASTER STATIONS. TURN OVER TO OWNER. REMOVE CATEGORY 5E CABLING BACK TO SOURCE. REINSTALL AT LOCATIONS SHOWN ON THE LOW-VOLTAGE PLANS. PROVIDE NEW WIRING TO MASTER STATION FROM LOCAL IDF PATCH PANEL.
 - h. REMOVE FIRE ALARM DEVICES. EXTEND WIRING TO NEW DEVICES SHOWN ON THE LOW-VOLTAGE PLANS.
 - i. OWNER TO PROVIDE DEMOLITION, MODIFICATIONS OR ADDITIONS TO ACCESS CONTROL SYSTEM, UNLESS DRAWINGS INDICATE OTHERWISE.

KEY NOTES

- 1. MECHANICAL EQUIPMENT TO BE DEMOLISHED. SEE MECHANICAL DRAWINGS. DEMOLISH CONDUIT AND WIRING AND ALL ANCILLARY DEVICES BACK TO SOURCE.
- 2. RELOCATE DEVICE AS SHOWN ON THE POWER OR LOW VOLTAGE PLANS. EXTEND WIRING TO NEW LOCATION.
- 3. DEMOLISH IN FLOOR BOX AND DEVICE. REMOVE WIRING BACK TO SOURCE. PATCH FLOOR TO MATCH ADJACENT.
- 4. REPLACE DEVICES AND COVER PLATES IN ROOM WITH NEW TO MATCH ADJACENT SPACES.
- 5. DEMOLISH CONFERENCE ROOM AUDIO AND VIDEO SYSTEMS INCLUDING ALL SPEAKERS, JACKS, USER INTERFACES, CONTROL PANELS AND WIRING.



KEY PLAN
 NOT TO SCALE



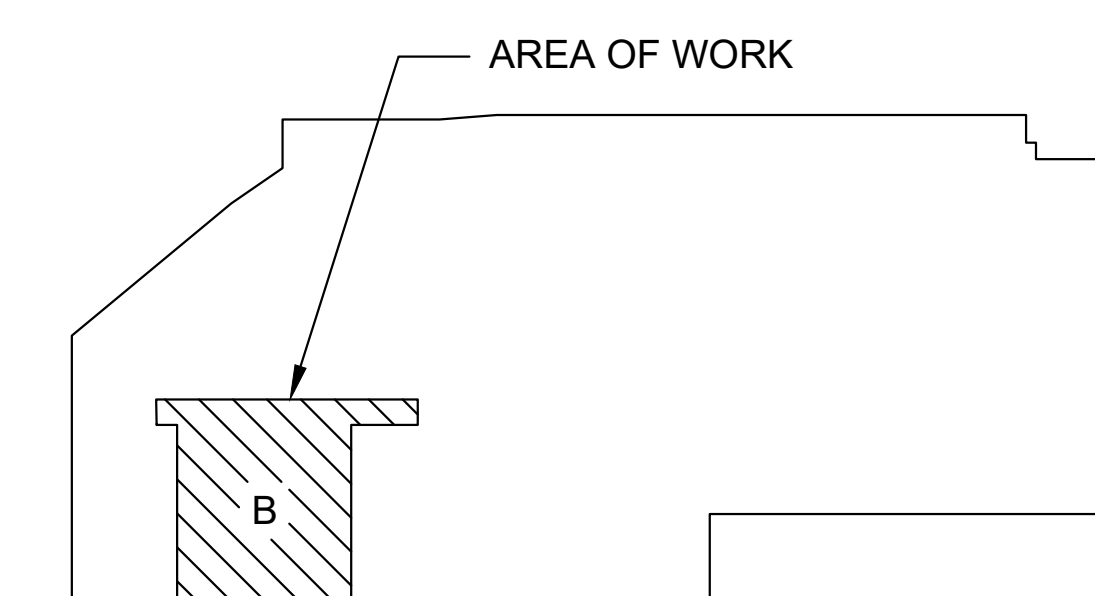
PLAN NOTES

1. IN AREAS WHERE DEMOLITION IS SHOWN:
 - a. DEMOLISH LIGHTING, CONTROLS, AND WIRING. EXTEND LIGHTING CIRCUITS TO NEW LIGHTING AS SHOWN ON THE LIGHTING PLANS.
 - b. DEMOLISH POWER EQUIPMENT AND DEVICES. REMOVE WIRING BACK TO SOURCE, UNLESS DRAWING NOTE OTHERWISE.
 - c. DEMOLISH CLOCKS, SPEAKERS AND ASSOCIATED WIRING BACK TO SOURCE. OWNER TO PROVIDE NEW.
 - d. DEMOLISH TELEDATA JACKS. REMOVE WIRING BACK TO SOURCE. PROVIDE NEW AS SHOWN ON THE LOW-VOLTAGE PLANS. EXCEPTION: MAINTAIN AND RELOCATE WIRELESS ACCESS ANTENNAS WIRING ABOVE CEILING. PROVIDE PROTECTION FROM DIRT AND DUST AT JACK. REINSTALL WIRELESS ACCESS JACKS AND ANTENNAS IN NEW CEILINGS.
 - e. RELOCATE VIDEO CAMERAS WIRING IN CEILING SPACE ABOVE. PROVIDE PROTECTION FROM DIRT AND DUST AT JACK. AFTER NEW CEILING IS INSTALLED, RELOCATE DATA JACK AND CAMERA IN NEW CEILING.
 - f. RELOCATE SECURITY DEVICES IN CEILING SPACE ABOVE. PROVIDE PROTECTION FROM DIRT AND DUST. REINSTALL IN NEW CEILING OR WALL.
 - g. REMOVE AIPHONE (JP-4HD) DOOR INTERCOM MASTER STATIONS. TURN OVER TO OWNER. REMOVE CATEGORY SEE CABLING BACK TO SOURCE. REINSTALL AT LOCATIONS SHOWN ON THE LOW-VOLTAGE PLANS. PROVIDE NEW WIRING TO MASTER STATION FROM LOCAL IDF PATCH PANEL.
 - h. REMOVE FIRE ALARM DEVICES. EXTEND WIRING TO NEW DEVICES SHOWN ON THE LOW-VOLTAGE PLANS.
 - i. OWNER TO PROVIDE DEMOLITION, MODIFICATIONS OR ADDITIONS TO ACCESS CONTROL SYSTEM, UNLESS DRAWINGS INDICATE OTHERWISE.

KEY NOTES

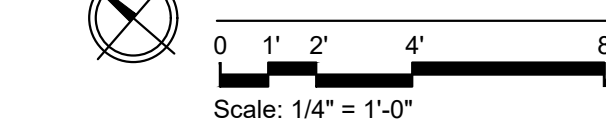
1. OWNER TO REMOVE LIFTS AND POWER FROM LIFT BACK TO BUSWAY DISCONNECT IN CEILING AND RELOCATE IN AUTOMOTIVE SHOP AFTER NEW FLOOR FINISHES ARE APPLIED.
2. SAVE LIGHT FIXTURE FOR RELOCATION. SEE SHEET E202 FOR NEW LOCATION OF FIXTURE.
3. REMOVE SECTION OF OVERHEAD BUS DUCT TO ACCOMMODATE NEW WALL CONSTRUCTION AS SHOWN ON SHEET E302. EXTEND FEEDERS TO BUSWAY. PROVIDE ADDITIONAL BUS DUCT SUPPORTS TO MATCH EXISTING.
4. AUTOMOTIVE TECHNOLOGY HIGH BAY LIGHT FIXTURES SHALL BE DISCONNECTED AND REMOVED WHILE CEILING MATERIAL IS BEING REMOVED. RE-INSTALL FIXTURE TO ORIGINAL POSITION AND CONDITION. COORDINATE WITH GC ON CEILING MATERIAL REMOVAL.
5. EXISTING PANEL SPD TO BE DEMOLISHED TO ACCOMMODATE DEMOLITION OF EXISTING WALL. SEE SHEET E302 FOR NEW REPLACEMENT PANEL SPD LOCATION.
6. MECHANICAL EQUIPMENT TO BE DEMOLISHED. SEE MECHANICAL DRAWINGS. DEMOLISH CONDUIT AND WIRING BACK TO SOURCE.
7. PROVIDE CONTROL OF LIGHTING FROM AUTOMOTIVE TECHNOLOGY B110. EXTEND CONTROL TO EXISTING OCCUPANCY SENSORS.
8. RELOCATE DEVICE AS SHOWN IN RECEIVING B115.
9. DEMOLISH PNL SPD EMERGENCY SHUT-OFF SWITCH AND RESET SWITCH. REMOVE WIRING BACK TO SOURCE. HARDWIRE CONTACTOR IN THE CLOSED POSITION.
10. INDOOR SPLIT SYSTEM COOLING UNIT AND CONDENSATE PUMP TO BE RELOCATED. EXTEND CIRCUITS TO NEW LOCATION IN OFFICE B105. SEE SHEET E302.

(EXX) EQUIPMENT TAG. SEE SHEET E302 FOR EQUIPMENT LIST

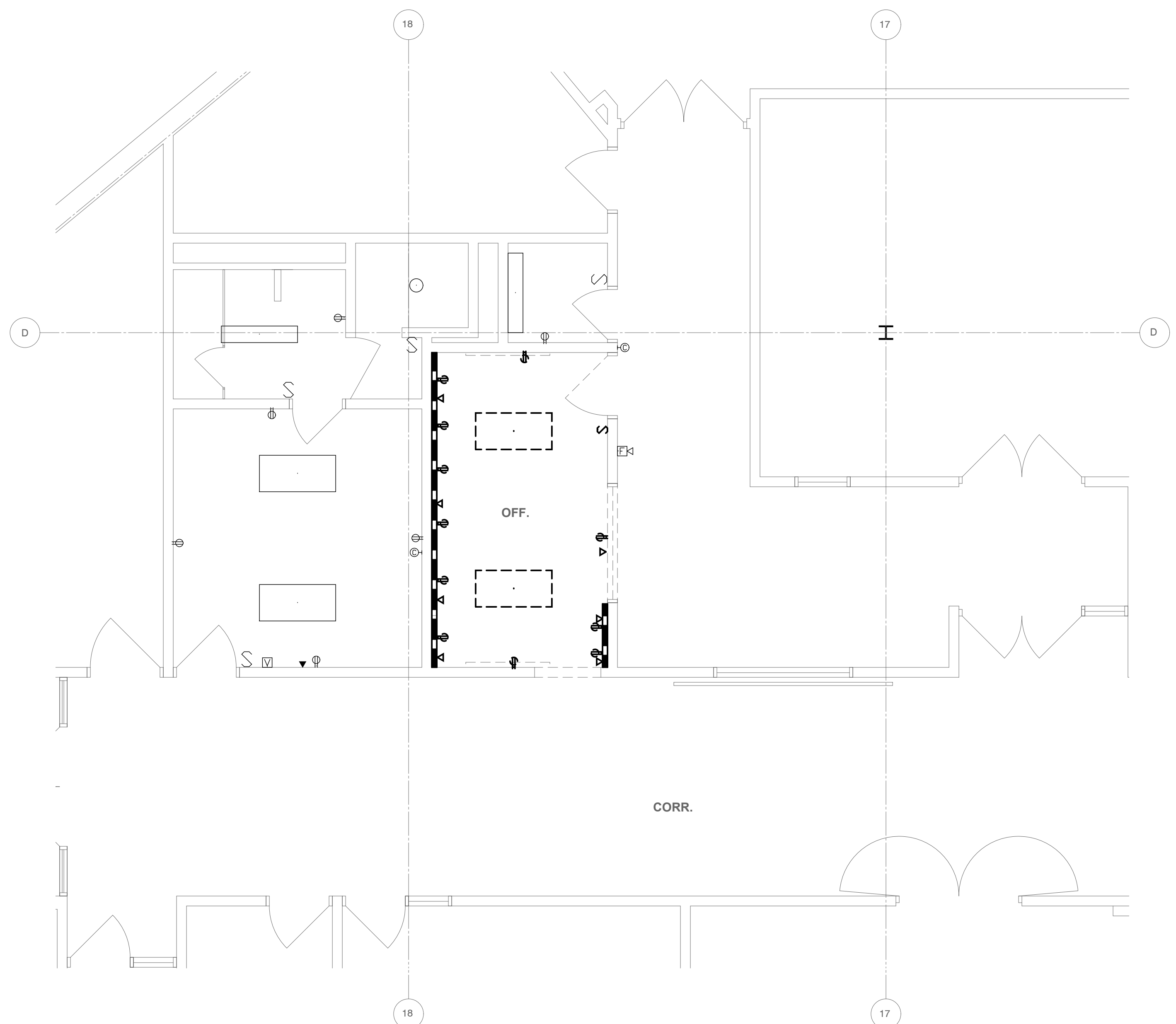


KEY PLAN
NOT TO SCALE

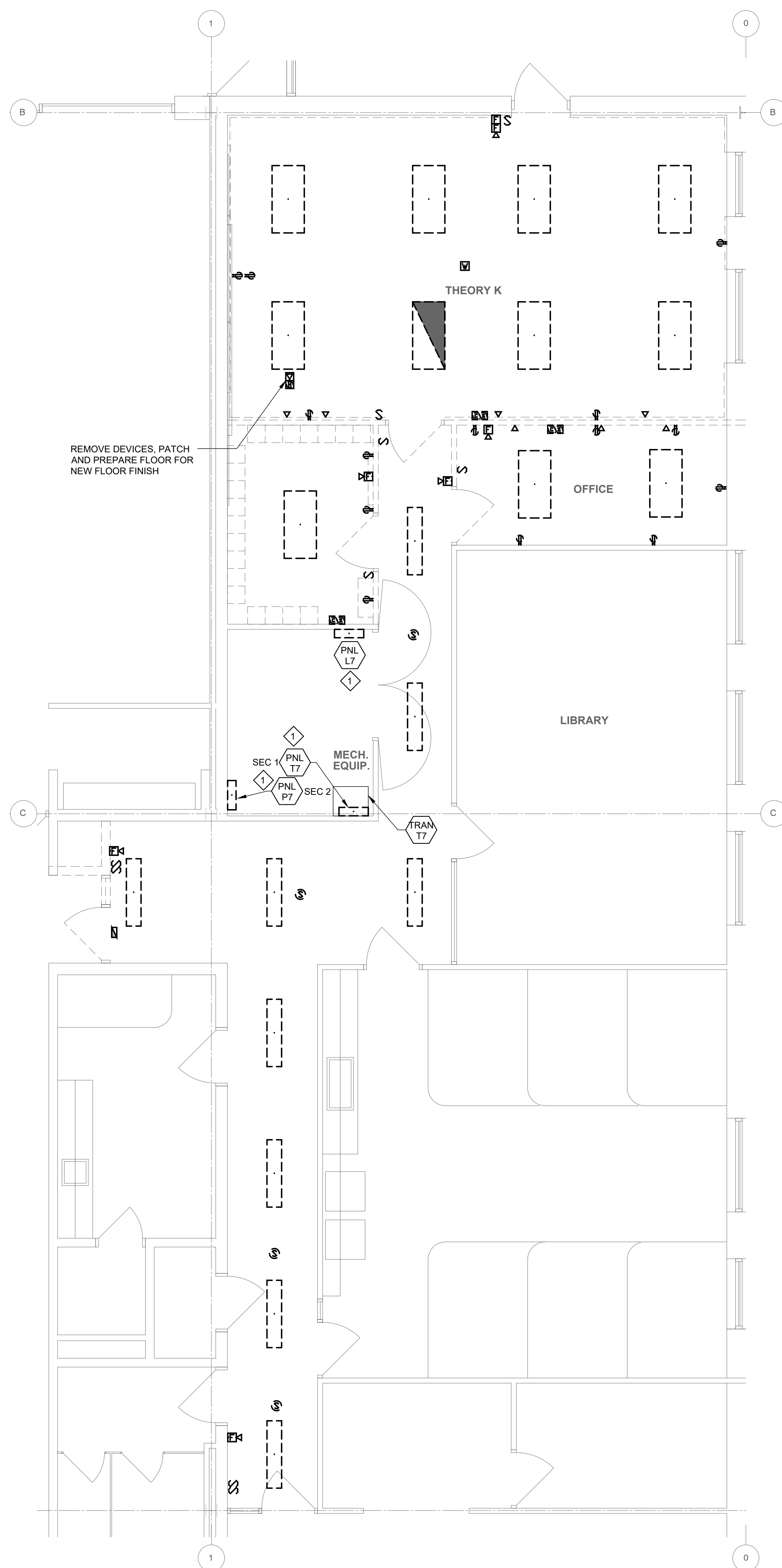
PARTIAL DEMOLITION PLAN - AREA 'B'



PARTIAL DEMOLITION PLAN - AREA 'B'	comm. no.
drawn: JMM	checked: MCD
date: 03-28-2021	designed: JRP



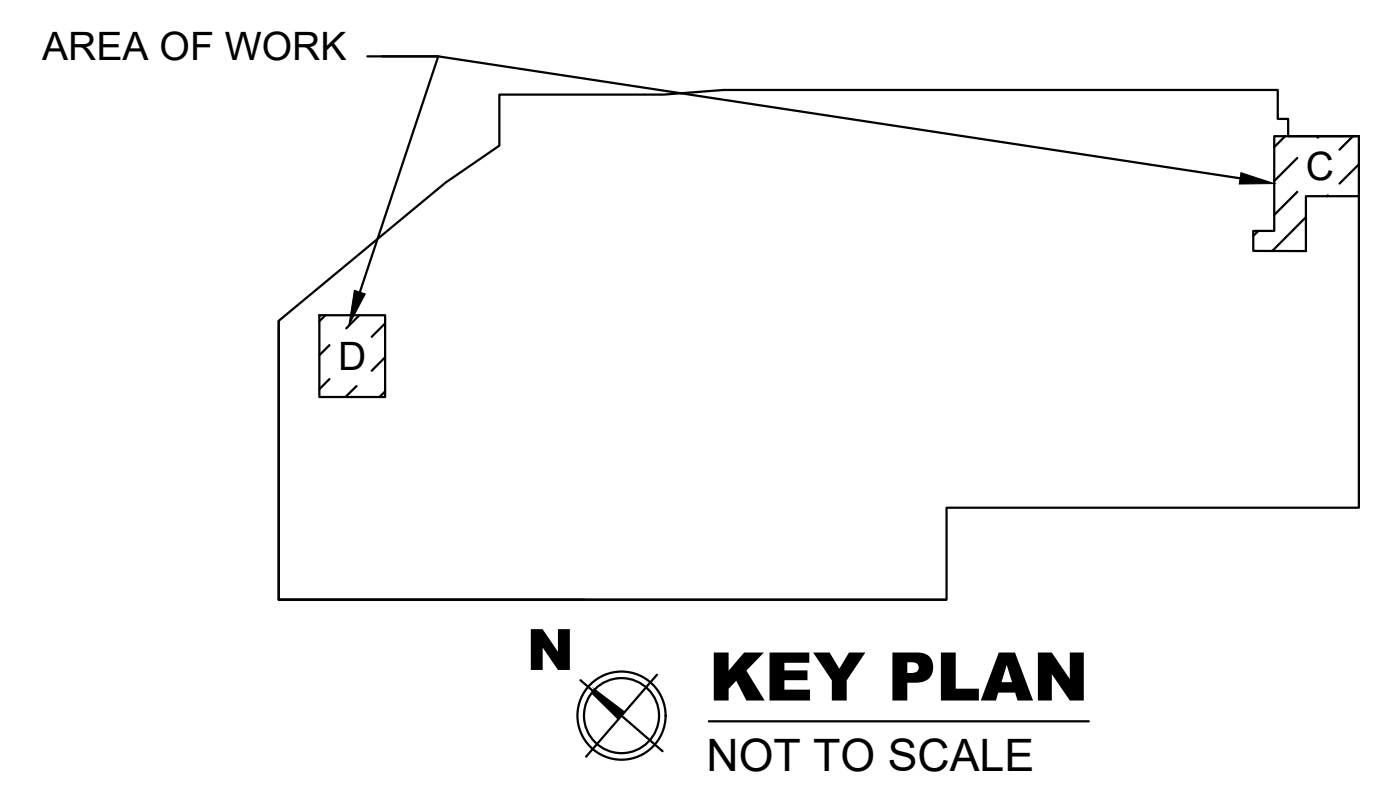
PARTIAL DEMOLITION PLAN - AREA 'D'
 Scale: 1/4" = 1'-0"



PARTIAL DEMOLITION PLAN - AREA 'C'
 Scale: 1/4" = 1'-0"

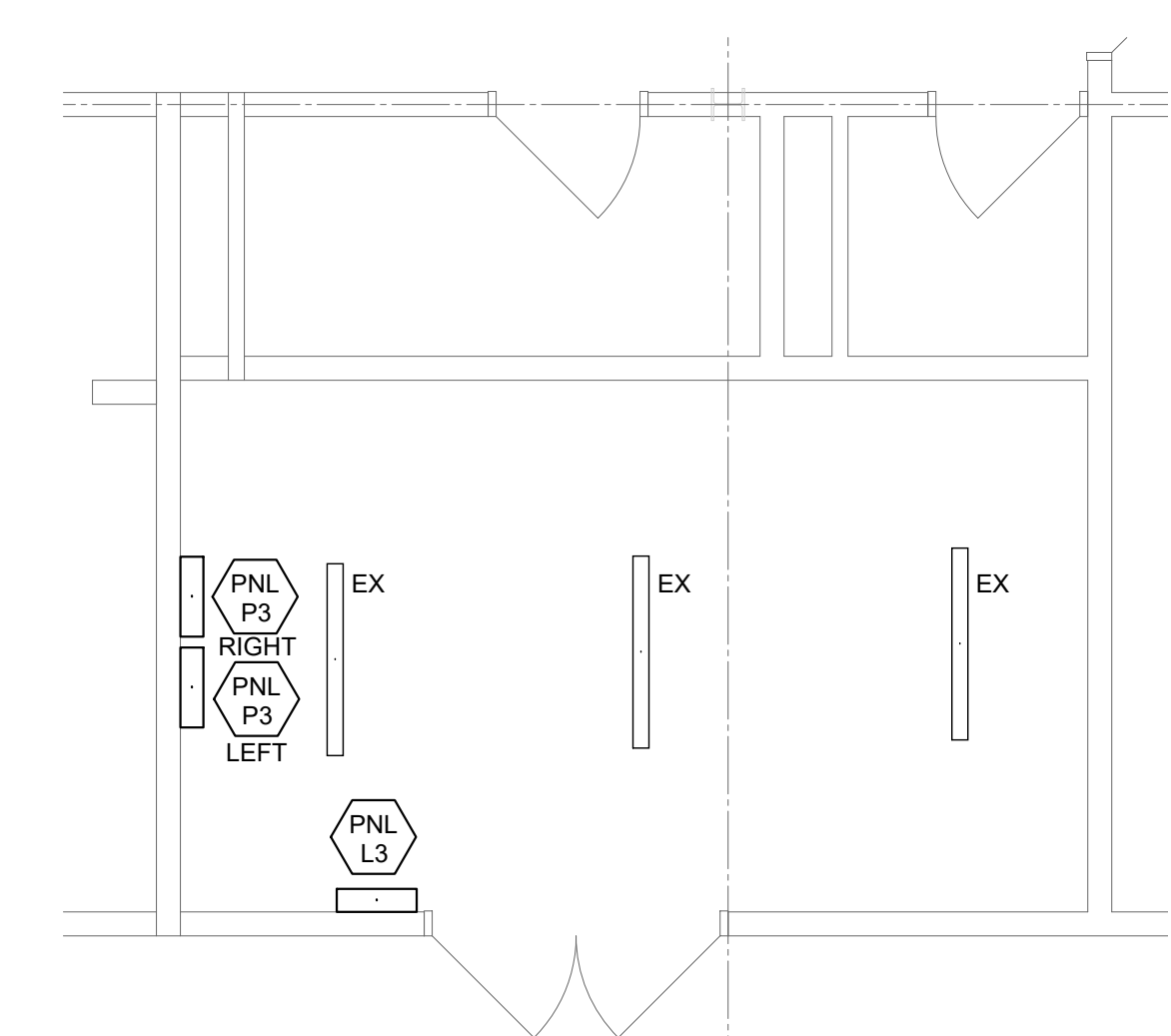
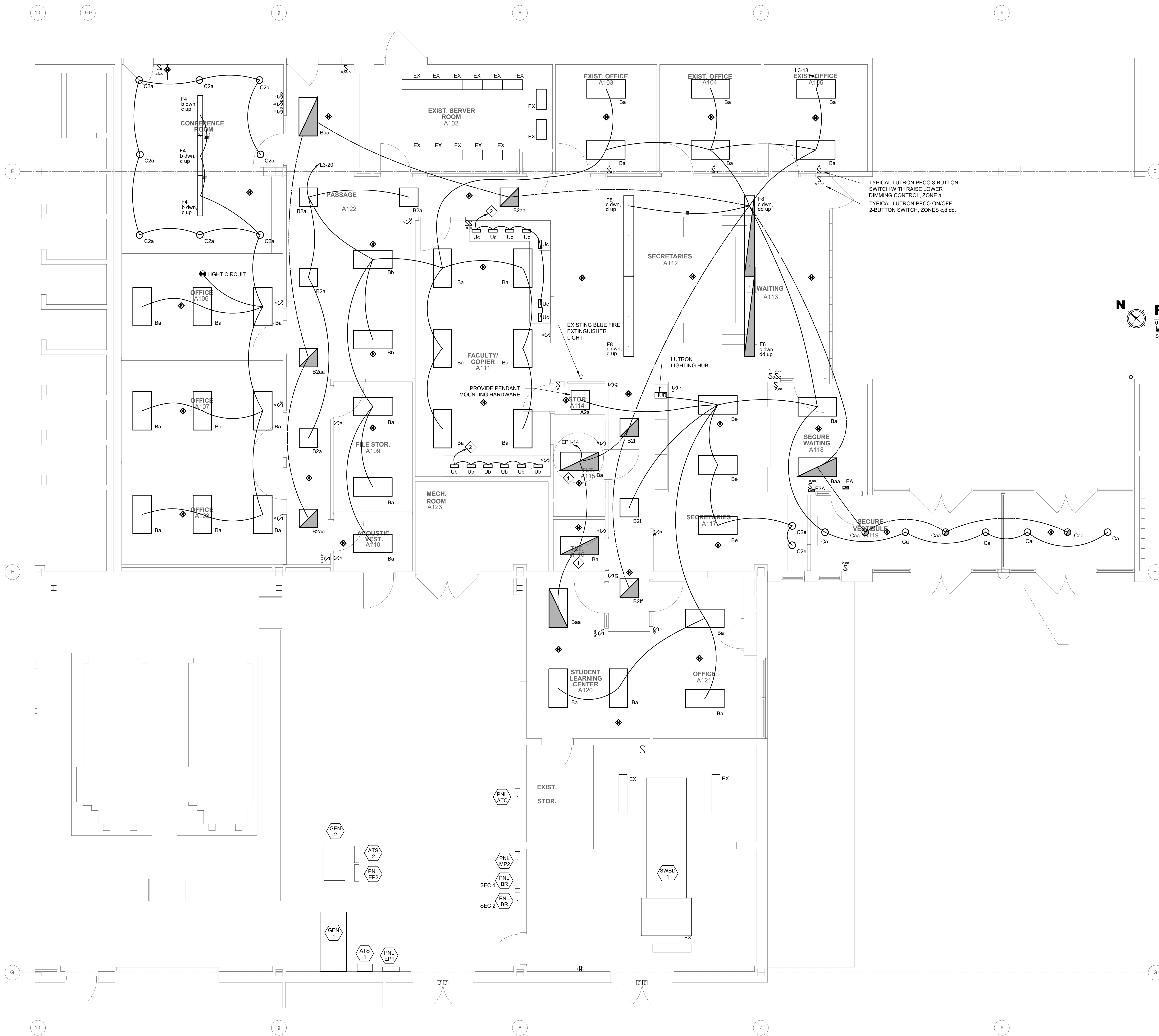
KEY NOTE
 PROVIDE NEMA 1 ENCLOSURE AT LOCATION OF DEMOLISHED PNL. USE DIN RAIL MOUNTED CONNECTORS TO EXTEND BRANCH CIRCUITS TO NEW LOCATION. PROVIDE BATTED CONNECTORS SECURED TO ENCLOSURE TO EXTEND FEEDERS. LABEL EACH CONDUCTOR.

- PLAN NOTES**
1. IN AREAS WHERE DEMOLITION IS SHOWN:
 - a. DEMOLISH LIGHTING, CONTROLS, AND WIRING. EXTEND LIGHTING CIRCUITS TO NEW LIGHTING AS SHOWN ON THE LIGHTING PLANS.
 - b. DEMOLISH POWER EQUIPMENT AND DEVICES. REMOVE WIRING BACK TO SOURCE, UNLESS DRAWING NOTE OTHERWISE.
 - c. DEMOLISH CLOCKS, SPEAKERS AND ASSOCIATED WIRING BACK TO SOURCE. OWNER TO PROVIDE NEW.
 - d. DEMOLISH TELEDATA JACKS. REMOVE WIRING BACK TO SOURCE. PROVIDE NEW AS SHOWN ON THE LOW-VOLTAGE PLANS. EXCEPTION: MAINTAIN AND RELOCATE WIRELESS ACCESS ANTENNAS WIRING ABOVE CEILING. PROVIDE PROTECTION FROM DIRT AND DUST AT JACK. REINSTALL WIRELESS ACCESS JACKS AND ANTENNAS IN NEW CEILINGS.
 - e. RELOCATE VIDEO CAMERAS WIRING IN CEILING SPACE ABOVE. PROVIDE PROTECTION FROM DIRT AND DUST AT JACK. AFTER NEW CEILINGS ARE INSTALLED, RELOCATE DATA JACK AND CAMERA IN NEW CEILING.
 - f. RELOCATE SECURITY DEVICES IN CEILING SPACE ABOVE. PROVIDE PROTECTION FROM DIRT AND DUST. REINSTALL IN NEW CEILING OR WALL.
 - g. REMOVE AIPHONE (JP-4HD) DOOR INTERCOM MASTER STATIONS. TURN OVER TO OWNER. REMOVE CATEGORY SE CABLING BACK TO SOURCE. REINSTALL AT LOCATIONS SHOWN ON THE LOW-VOLTAGE PLANS. PROVIDE NEW WIRING TO MASTER STATION FROM LOCAL IDF PATCH PANEL.
 - h. REMOVE FIRE ALARM DEVICES. EXTEND WIRING TO NEW DEVICES SHOWN ON THE LOW-VOLTAGE PLANS.
 - i. OWNER TO PROVIDE DEMOLITION, MODIFICATIONS OR ADDITIONS TO ACCESS CONTROL SYSTEM, UNLESS DRAWINGS INDICATE OTHERWISE.



PARTIAL DEMOLITION PLAN - AREAS 'C' & 'D'				comm. no.
date	drawn	designed	checked	
03-02-2021	MM	MP	MCD	

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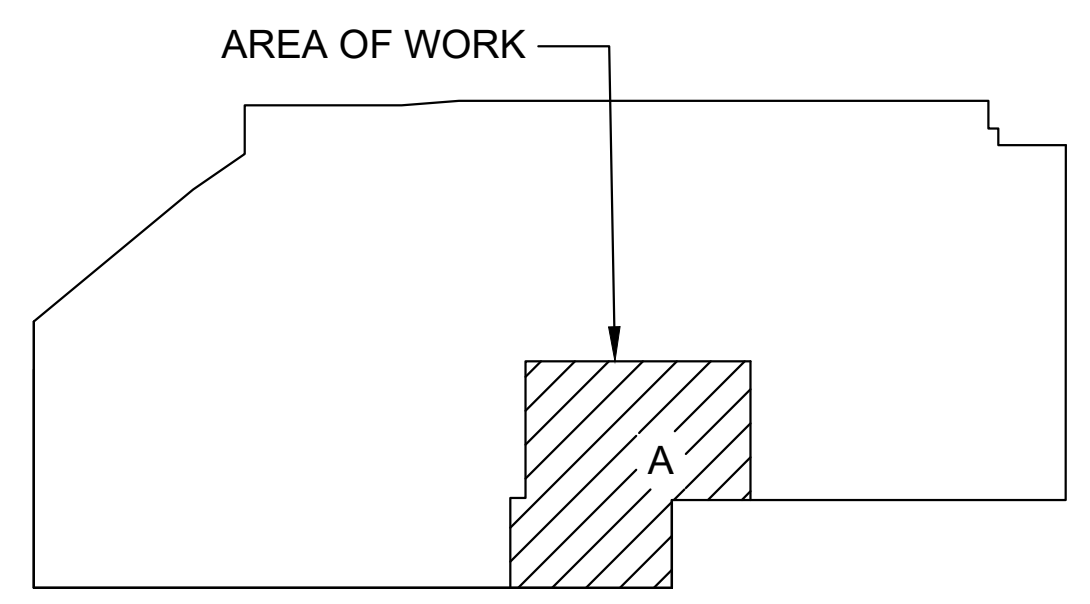
PARTIAL LIGHTING PLAN - AREA 'A'
 Scale: 1/4" = 1'-0"

PLAN NOTES

- SEE ARCHITECTURAL DRAWINGS FOR CEILING TYPES, LOCATION OF CEILINGS AND LOCATION OF LUMINAIRES.
- CIRCUIT EXIT SIGNS FROM SPARE BREAKER IN PNL EP2-20.
- PROVIDE A LUTRON VIVE LIGHTING ROOM CONTROL SYSTEM IN EACH SPACE WITH NEW LUMINAIRES. SYSTEM TO INCLUDING POWER PACKS, OCCUPANCY SENSORS AND SWITCHES. PROVIDE ONE DIMMING POWER PACK PER ZONE IN EACH SPACE. CIRCUIT EMERGENCY LIGHTING THROUGH UL924 POWER PACK, WHERE EMERGENCY LIGHTING IS SHOWN.

KEY NOTES

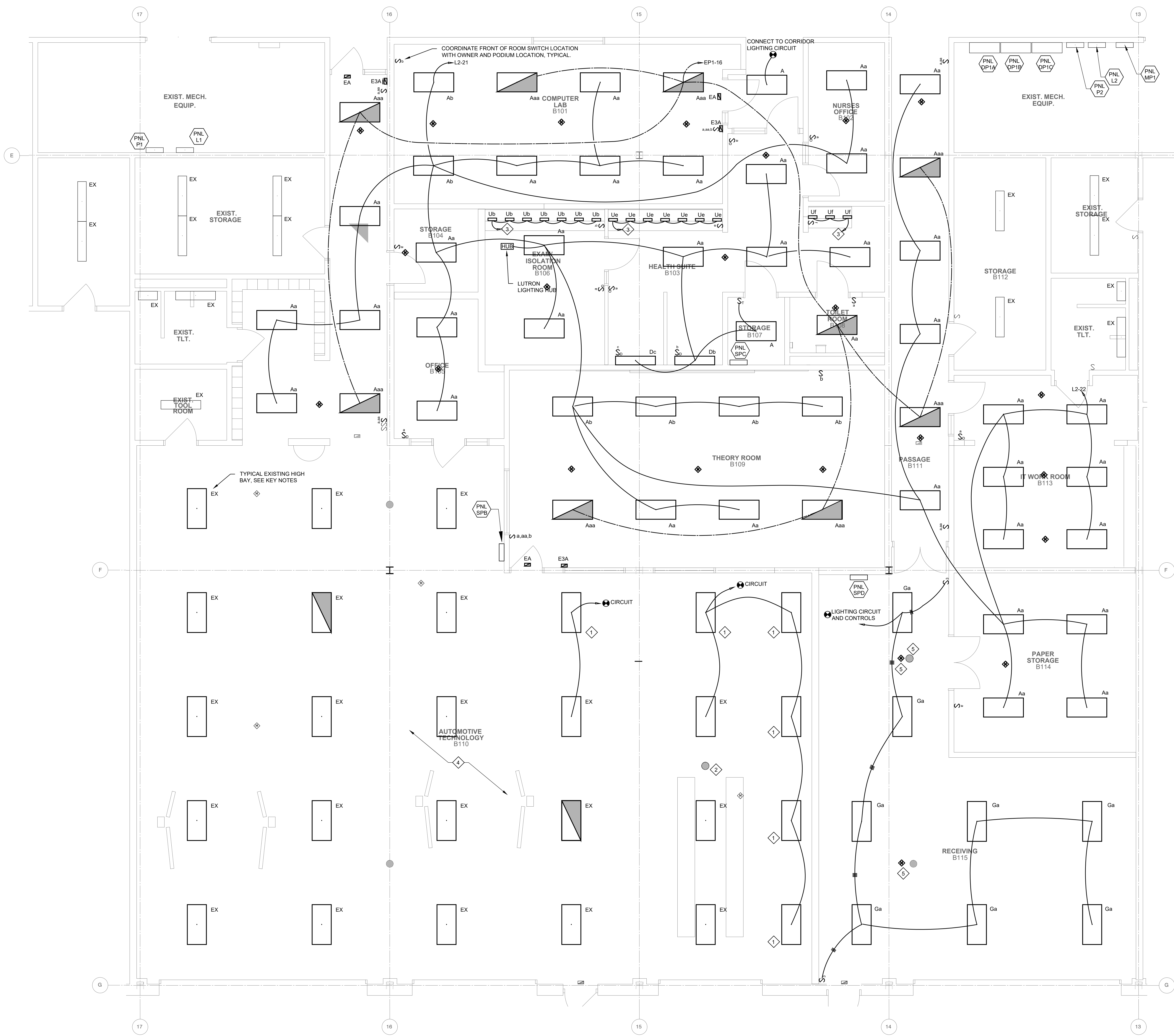
- PROVIDE DEDICATED 120V NORMAL POWER PACK FOR LOCAL EXHAUST FAN. CIRCUIT EXHAUST FAN THROUGH POWER PACK TO FROM LOCAL RECEPTACLE. PROVIDE OCCUPANCY SENSOR ON/OFF CONTROL OF POWER PACK. DO NOT PROVIDE OFF OVERRIDE FROM SWITCH.
- CIRCUIT LIGHTING THROUGH POWER PACK FROM LOCAL CT RECEPTACLE.



KEY PLAN
 NOT TO SCALE

PARTIAL LIGHTING PLAN - AREA 'A'
 Scale: 1/4" = 1'-0"

PARTIAL LIGHTING PLAN - AREA 'A'		comm. no.
drawn	designed	checked
MM	MM	MCD
date		
03-28-2021		



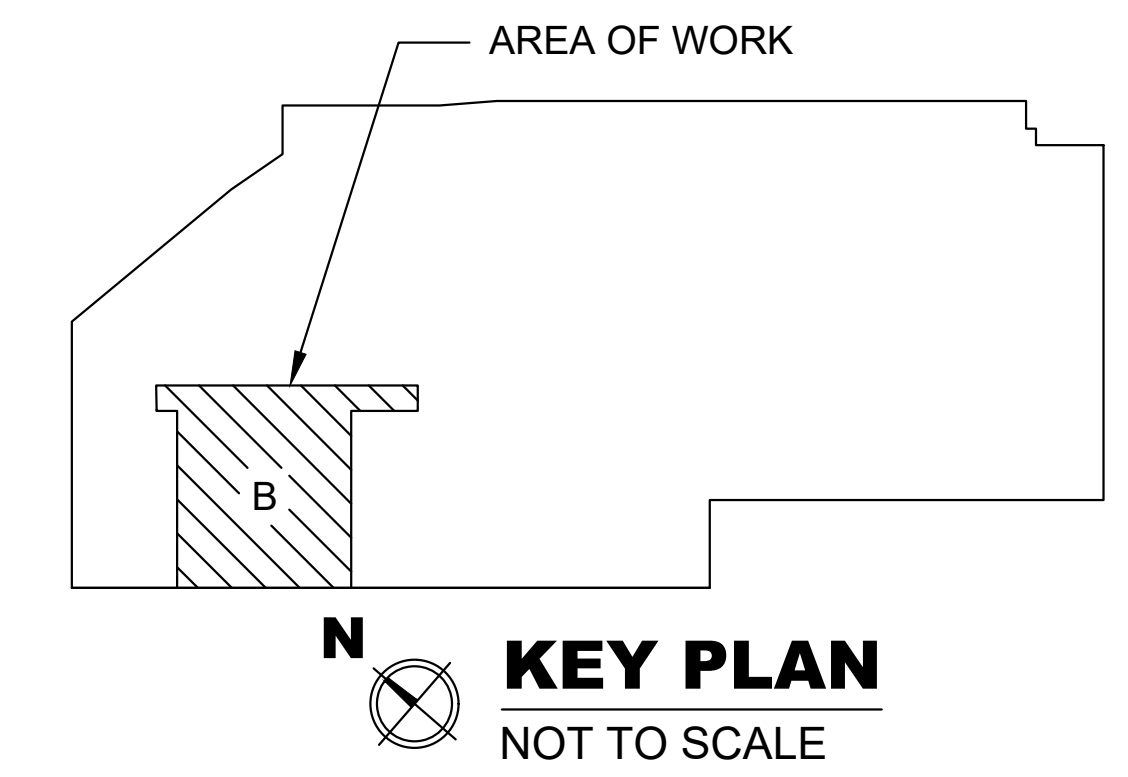
PARTIAL LIGHTING PLAN - AREA 'B'
 Scale: 1/4" = 1'-0"

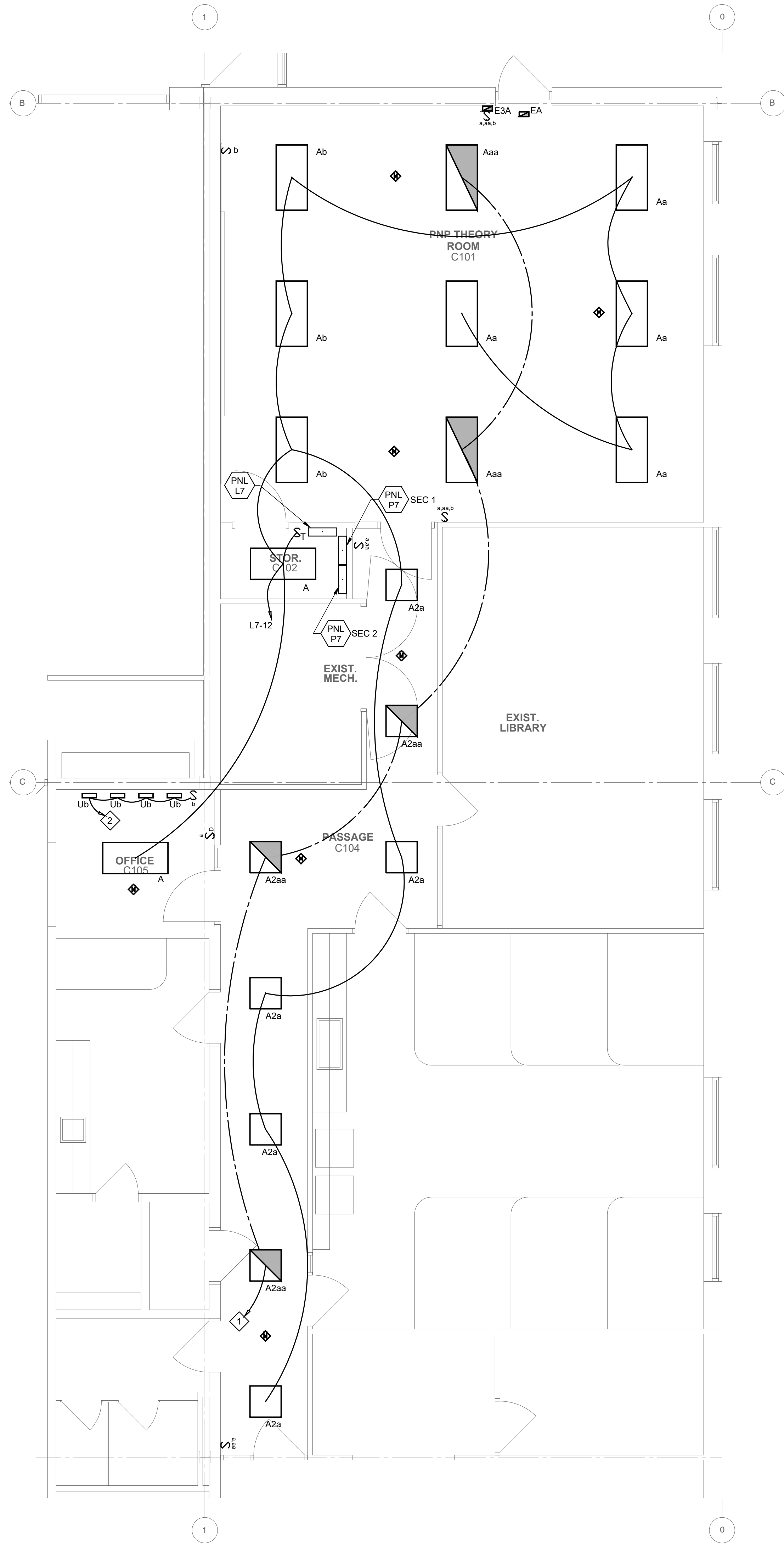
PLAN NOTES

- SEE ARCHITECTURAL DRAWINGS FOR CEILING TYPES, LOCATION OF CEILINGS AND LOCATION OF LUMINAIRES.
- CIRCUIT EXIT SIGNS FROM SPARE BREAKER IN PNL EP2-20.
- PROVIDE A LUTRON VIVE LIGHTING ROOM CONTROL SYSTEM IN EACH SPACE WITH NEW LUMINAIRES. SYSTEM TO INCLUDING POWER PACKS, OCCUPANCY SENSORS AND SWITCHES. PROVIDE ONE DIMMING POWER PACK PER ZONE IN EACH SPACE. CIRCUIT EMERGENCY LIGHTING THROUGH UL024 POWER PACK, WHERE EMERGENCY LIGHTING IS SHOWN.

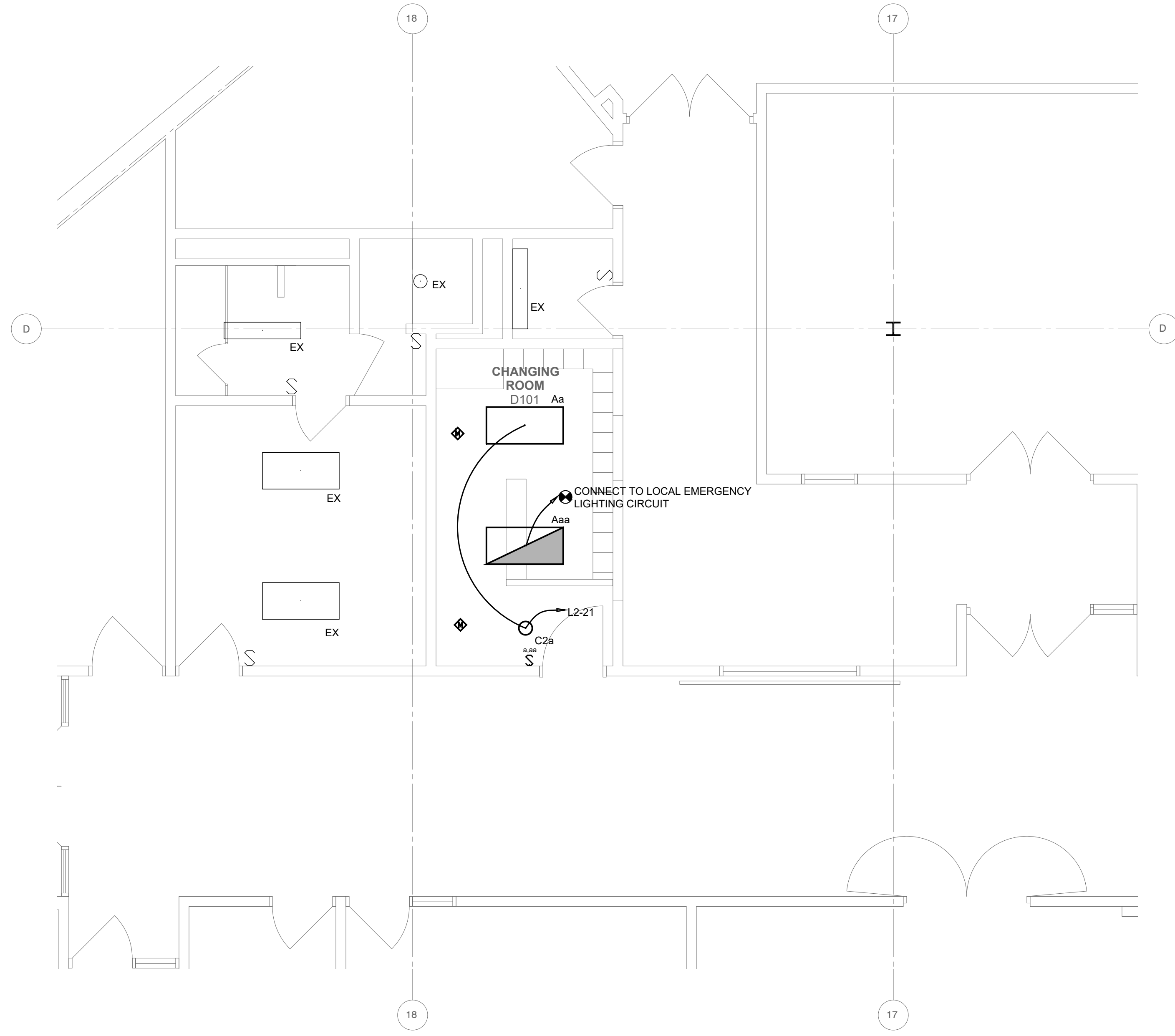
KEY NOTES

- RELOCATED HIGH BAY LIGHT FIXTURE. CONNECT FIXTURE TO EXISTING CONTROL, SWITCHING AND CIRCUITING.
- INSTALL OWNER FURNISHED EMERGENCY ONLY LUMINAIRE, TYPE TO MATCH EXISTING EMERGENCY LUMINAIRES IN THE SHOP. EXTEND WIRING FROM EXISTING EMERGENCY LUMINAIRES TO NEW EMERGENCY LUMINAIRE.
- CIRCUIT LIGHTING THROUGH POWER PACK FROM LOCAL CT RECEPTACLE.
- AUTOMOTIVE TECHNOLOGY HIGH BAY LIGHT FIXTURES SHALL BE DISCONNECTED AND REMOVED WHILE CEILING MATERIAL IS BEING REMOVED. RE-INSTALL FIXTURE TO ORIGINAL POSITION AND CONDITION. COORDINATE WITH GC ON CEILING MATERIAL REMOVAL.
- RE-INSTALL EXISTING DEVICE AT NEW LOCATION. EXTEND WIRING AS REQUIRED.





PARTIAL LIGHTING PLAN - AREA 'C'
 Scale: 1/4" = 1'-0"



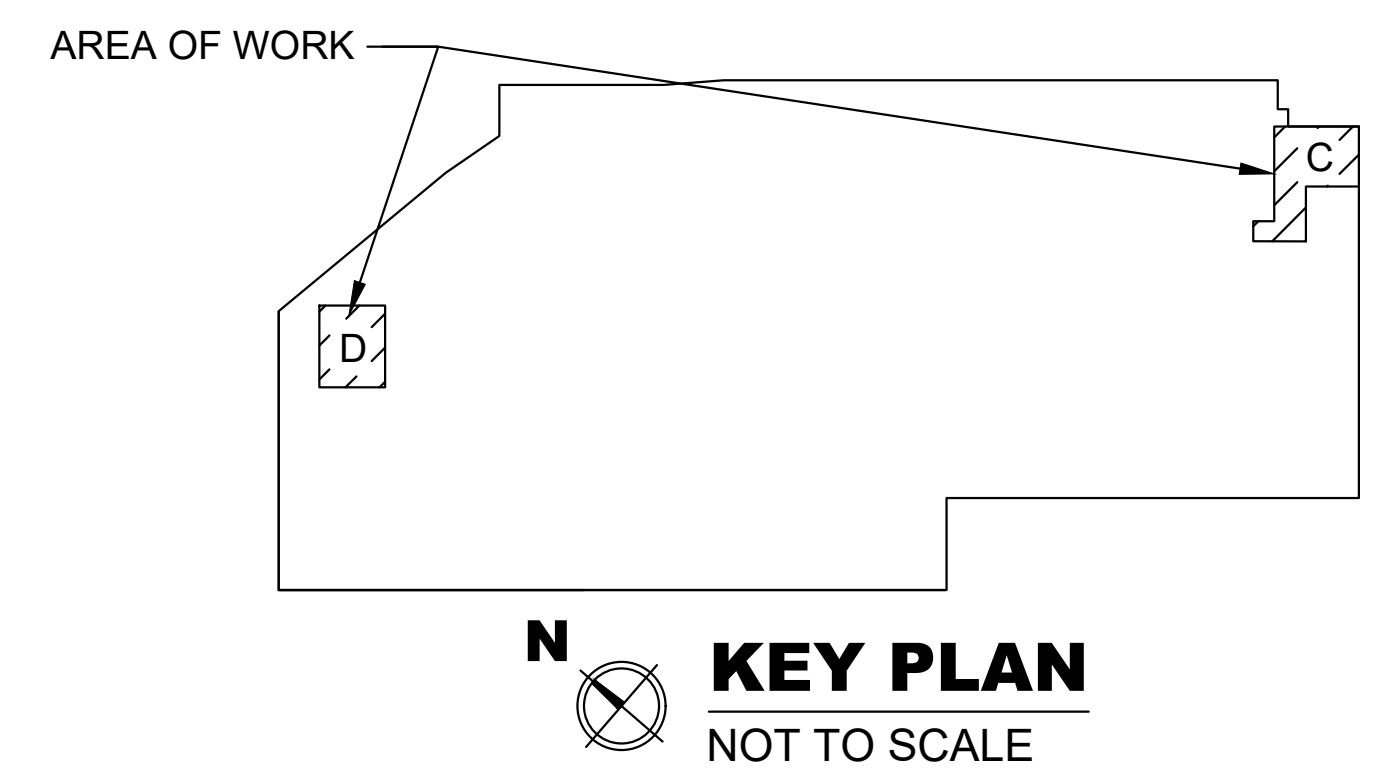
PARTIAL LIGHTING PLAN - AREA 'D'
 Scale: 1/4" = 1'-0"

PLAN NOTES

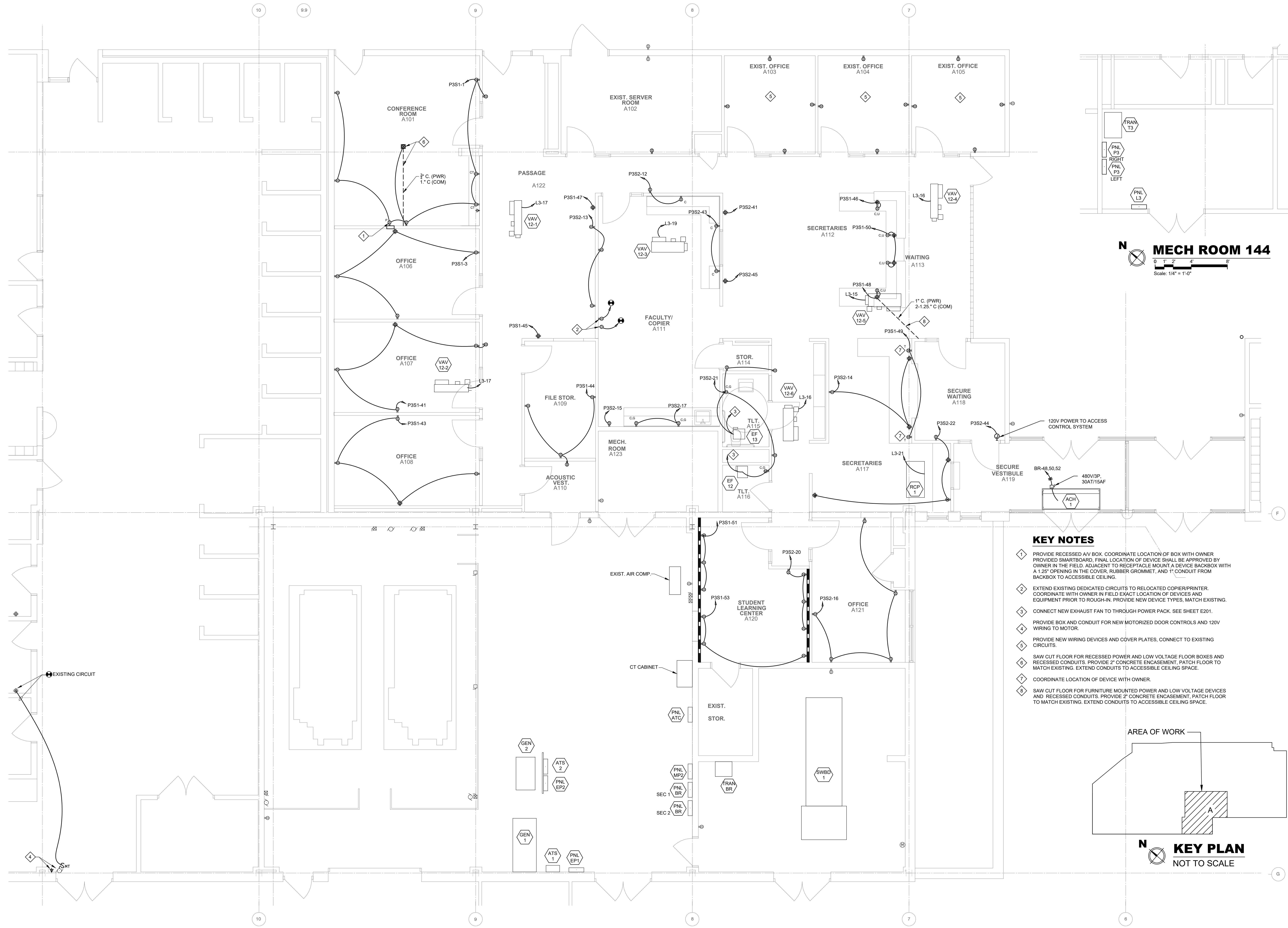
- SEE ARCHITECTURAL DRAWINGS FOR CEILING TYPES, LOCATION OF CEILINGS AND LOCATION OF LUMINAIRES.
- CIRCUIT EXIT SIGNS FROM SPARE BREAKER IN PNL EP2-20 OR NEW 20A/1P BREAKER IN PNL EP1B, SEE DRAWINGS E201 AND E001 FOR PNL LOCATIONS.
- PROVIDE A LUTRON VIVE LIGHTING ROOM CONTROL SYSTEM IN EACH SPACE WITH NEW LUMINAIRES. SYSTEM TO INCLUDING POWER PACKS, OCCUPANCY SENSORS AND SWITCHES. PROVIDE ONE DIMMING POWER PACK PER ZONE IN EACH SPACE. CIRCUIT EMERGENCY LIGHTING THROUGH UL924 POWER PACK, WHERE EMERGENCY LIGHTING IS SHOWN.

KEY NOTES

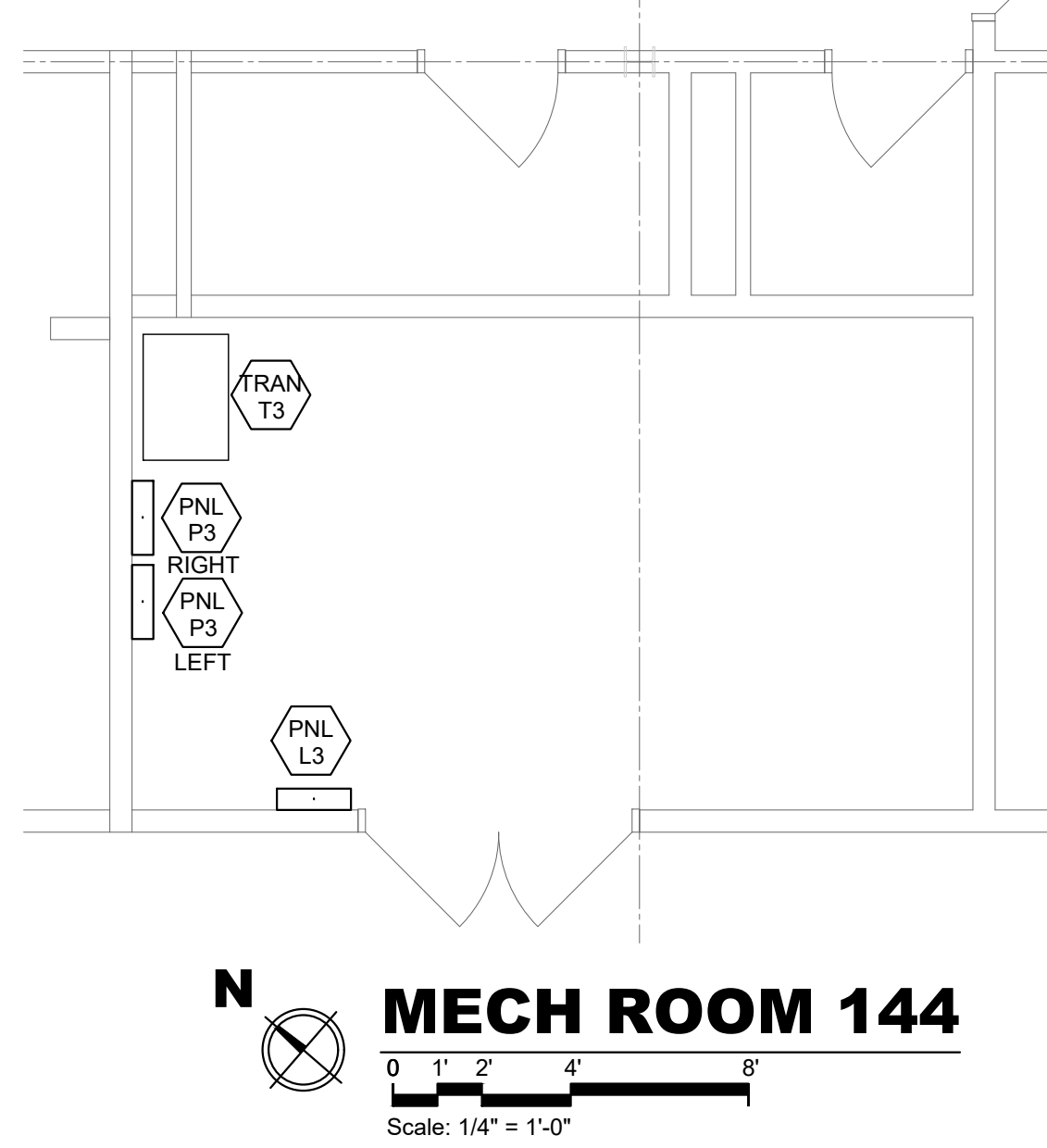
- CIRCUIT EMERGENCY LIGHTING FROM NEW 20A/1P BREAKER IN PNL EP1B, SEE DRAWING E001 FOR PNL LOCATION.
- CIRCUIT LIGHTING THROUGH POWER PACK FROM LOCAL CT RECEPTACLE.



PARTIAL LIGHTING PLAN - AREAS 'C' & 'D'		Comm. no.
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MM	MM	MCD
dlb	03-02-2021	

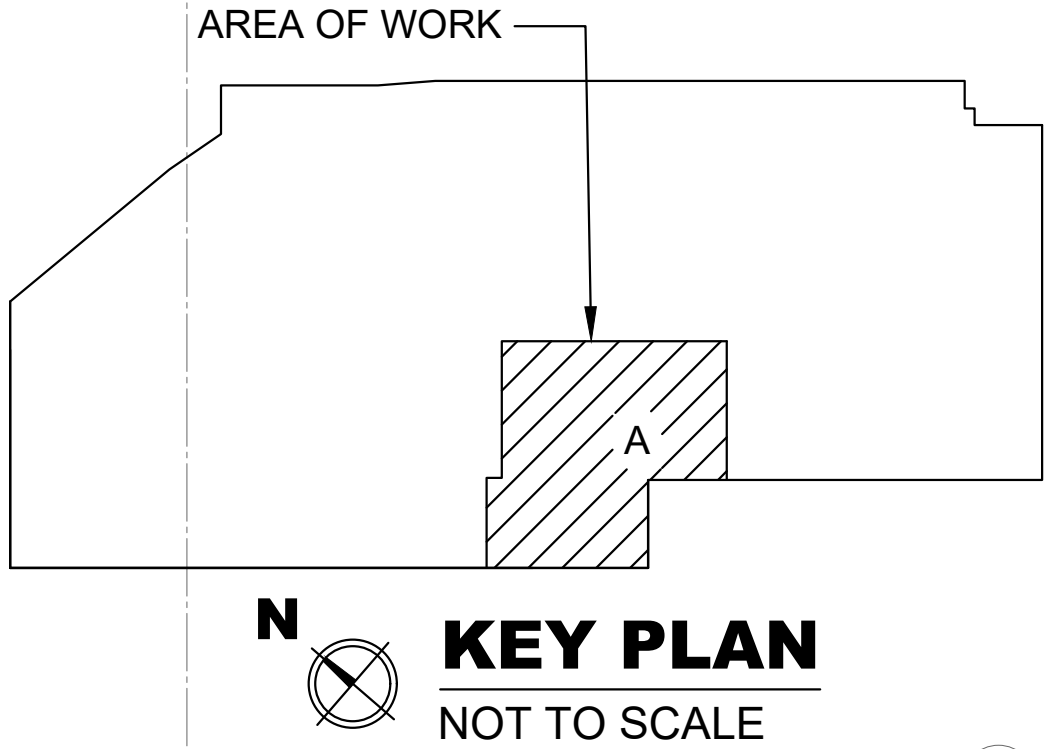


PARTIAL POWER PLAN - AREA 'A'
 Scale: 1/4" = 1'-0"



KEY NOTES

- 1 PROVIDE RECESSED AN BOX. COORDINATE LOCATION OF BOX WITH OWNER PROVIDED SMARTBOARD. FINAL LOCATION OF DEVICE SHALL BE APPROVED BY OWNER IN THE FIELD. ADJACENT TO RECEPTACLE MOUNT A DEVICE BACKBOX WITH A 1.25" OPENING IN THE COVER, RUBBER GROMMET, AND 1" CONDUIT FROM BACKBOX TO ACCESSIBLE CEILING.
- 2 EXTEND EXISTING DEDICATED CIRCUITS TO RELOCATED COPIER/PRINTER. COORDINATE WITH OWNER IN FIELD EXACT LOCATION OF DEVICES AND EQUIPMENT PRIOR TO ROUGH-IN. PROVIDE NEW DEVICE TYPES, MATCH EXISTING.
- 3 CONNECT NEW EXHAUST FAN TO THROUGH POWER PACK. SEE SHEET E201.
- 4 PROVIDE BOX AND CONDUIT FOR NEW MOTORIZED DOOR CONTROLS AND 120V WIRING TO MOTOR.
- 5 PROVIDE NEW WIRING DEVICES AND COVER PLATES, CONNECT TO EXISTING CIRCUITS.
- 6 SAW CUT FLOOR FOR RECESSED POWER AND LOW VOLTAGE FLOOR BOXES AND RECESSED CONDUITS. PROVIDE 2" CONCRETE ENCASUREMENT, PATCH FLOOR TO MATCH EXISTING. EXTEND CONDUITS TO ACCESSIBLE CEILING SPACE.
- 7 COORDINATE LOCATION OF DEVICE WITH OWNER.
- 8 SAW CUT FLOOR FOR FURNITURE MOUNTED POWER AND LOW VOLTAGE DEVICES AND RECESSED CONDUITS. PROVIDE 2" CONCRETE ENCASUREMENT, PATCH FLOOR TO MATCH EXISTING. EXTEND CONDUITS TO ACCESSIBLE CEILING SPACE.



PARTIAL POWER PLAN - AREA 'A'

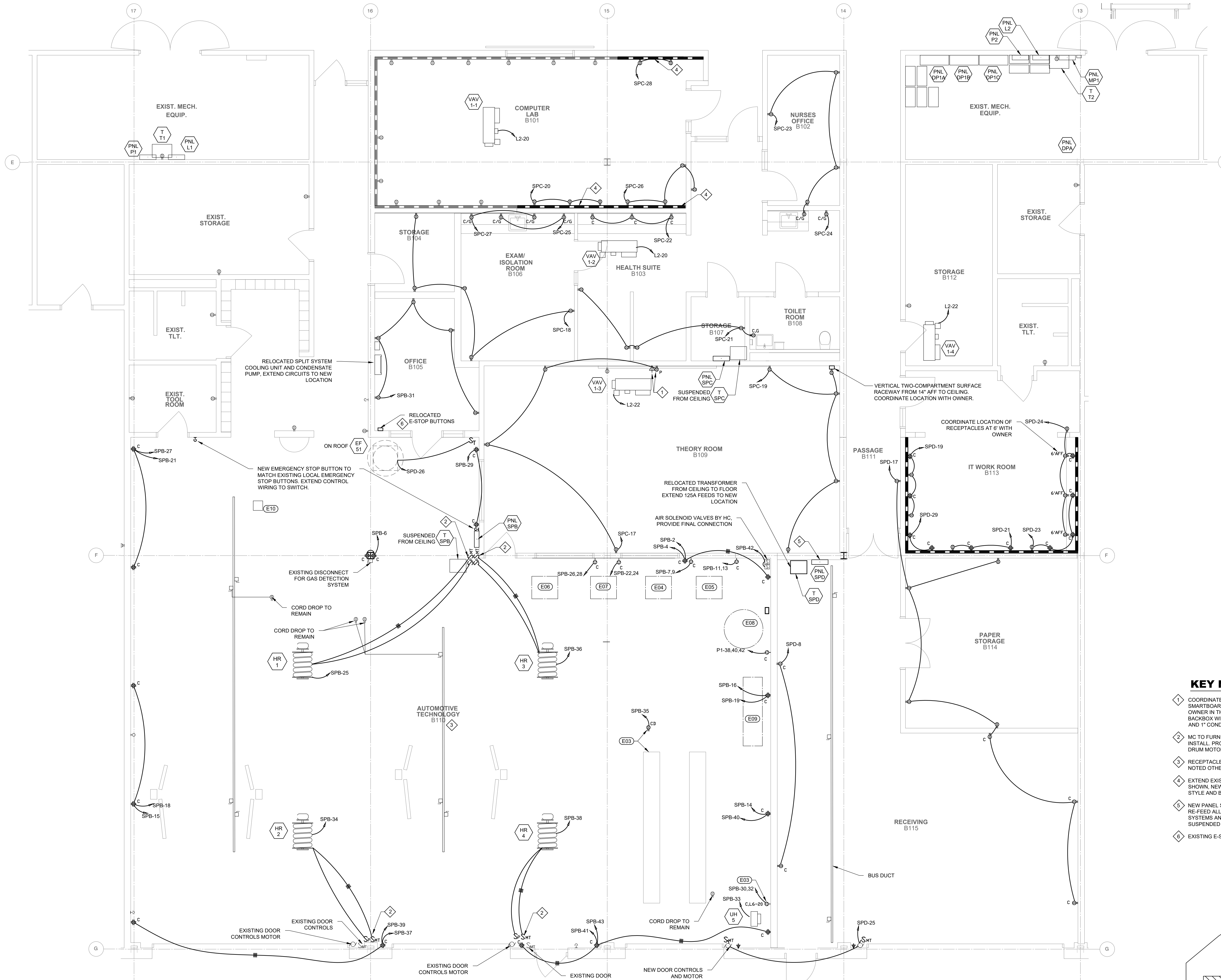
date	drawn	designed	checked	comm. no.
03-28-2021	MM	MM	MM	

LVE - 20142
E301

INTERIOR ALTERATIONS - PHASE 2
 FOR THE
EASTERN CENTER FOR ARTS and TECHNOLOGY
 WILLOW GROVE, MONTGOMERY COUNTY, PENNSYLVANIA

Lehigh Valley Engineering
 Mechanical and Electrical Consultants
 1100 Park Road, Allentown, PA 18106
 T: 610-866-3920 F: 610-866-3930
 E: lve@lve.cc W: www.lve.cc

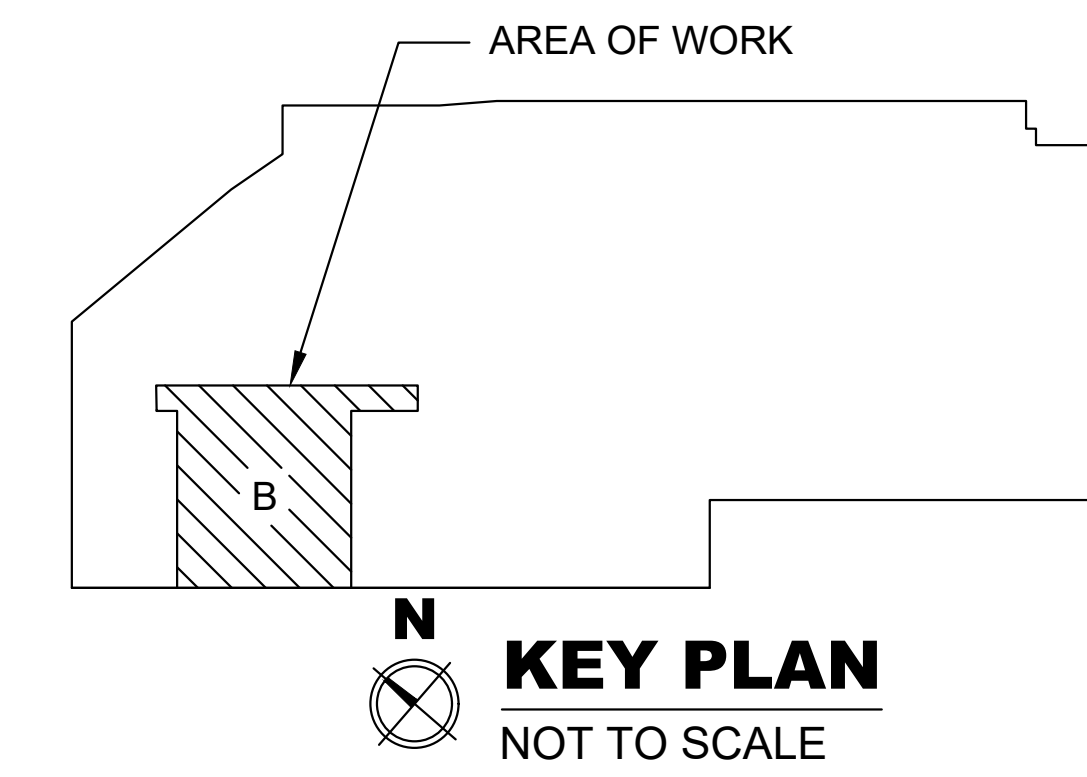
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PARTIAL POWER PLAN - AREA 'B'
 Scale: 1/4" = 1'-0"

ID	EQUIPMENT DESCRIPTION	MANUFACTURER	MODEL NO.	VOLTAGE	PHASE	RECEPTACLE TYPE	LOAD	REMARKS
E01	EXISTING LIFT-1							OWNER TO RELOCATE FROM ADJACENT SHOP
E02	EXISTING LIFT-2							OWNER TO RELOCATE FROM ADJACENT SHOP
E03	EXISTING HUNTER LIFT-3	HUNTER ENGINEERING				NEMA L6-20		PROVIDE NEW MATCHING PLUG ON EXISTING EQUIPMENT CORD. NEW DEVICES SHALL MATCH EXISTING.
E04	NEW TIRE CHANGER	HUNTER ENGINEERING	GSP9722	208	1	NEMA L6-20	10 A	NEW EQUIPMENT PROVIDED BY OWNER
E05	NEW TIRE BALANCER	HUNTER ENGINEERING	TC3700	208	1	NEMA L6-20	10 A	NEW EQUIPMENT PROVIDED BY OWNER
E06	EXISTING TIRE CHANGER	HUNTER ENGINEERING	GSP9722	208	1	NEMA L6-20	10 A	RELOCATED FROM ADJACENT SHOP
E07	EXISTING TIRE BALANCER	HUNTER ENGINEERING	TC3700	208	1	NEMA L6-20	10 A	RELOCATED FROM ADJACENT SHOP
E08	PARTS WASHER	CLIDA	H20-2530	480	3	NEMA L15-30	25 A	RELOCATED FROM ADJACENT SHOP
E09	GLASS BEADER	EMPIRE	DCM-80A	120	1	-	11 A	RELOCATED FROM ADJACENT SHOP
E10	ALTERNATOR/STARTER TESTER	OTC	3643	120	1	-	15 A	

- KEY NOTES**
- COORDINATE LOCATION OF RECEPTACLE WITH OWNER PROVIDED SMARTBOARD. FINAL LOCATION OF DEVICE SHALL BE APPROVED BY OWNER IN THE FIELD. ADJACENT TO RECEPTACLE MOUNT A DEVICE BACKBOX WITH A 1.25" OPENING IN THE COVER, RUBBER GROMMET, AND 1" CONDUIT FROM BACKBOX TO ACCESSIBLE CEILING.
 - MC TO FURNISH DRUM MOTOR SWITCH FOR HOSE REELS. EC TO INSTALL. PROVIDE CONTROL OF EXHAUST FAN ASSOCIATED WITH DRUM MOTOR FROM PILOT SWITCH. REFER TO M801 FOR DETAILS.
 - RECEPTACLES IN SHOP SHALL BE MOUNTED AT CT HEIGHT, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
 - EXTEND EXISTING TWO-COMPARTMENT SURFACE RACEWAY AS SHOWN. NEW RACEWAY SHALL MATCH EXISTING LAYOUT, COLOR AND STYLE AND BE BY THE SAME MANUFACTURER.
 - NEW PANEL SPD TO BE INSTALLED AT POSITION SHOWN ON PLAN. RE-FEED ALL CIRCUITS AS NECESSARY TO MAINTAIN EXISTING SYSTEMS AND CIRCUITS, INCLUDING FROM THE TRANSFORMER TO SUSPENDED FROM CEILING.
 - EXISTING E-STOP RELEASE BUTTONS RELOCATED TO NEW OFFICE.

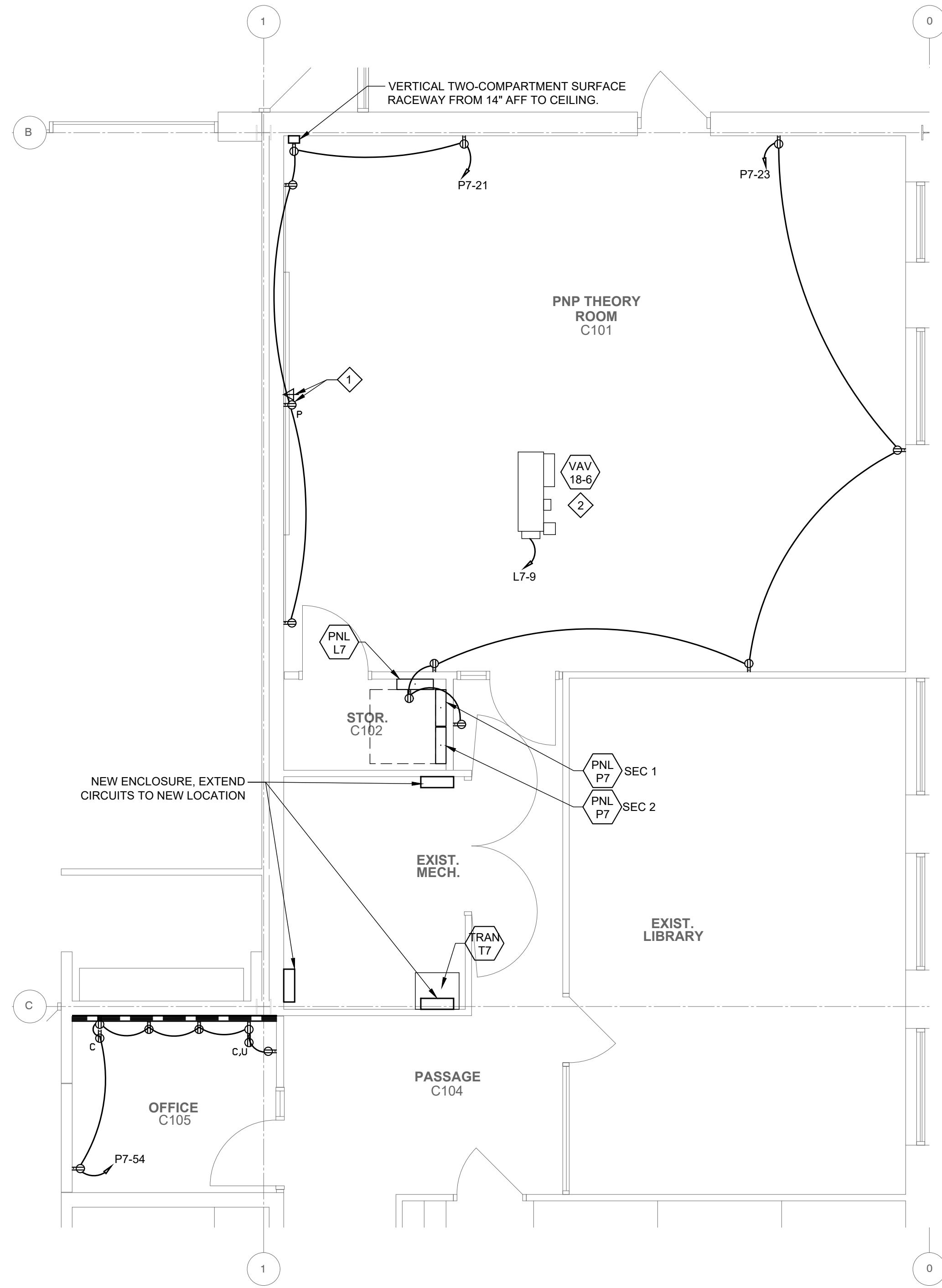


PARTIAL POWER PLAN - AREA 'B'		comm. no.
drawn	designed	checked
date	date	MCD
02-28-2021	02-28-2021	

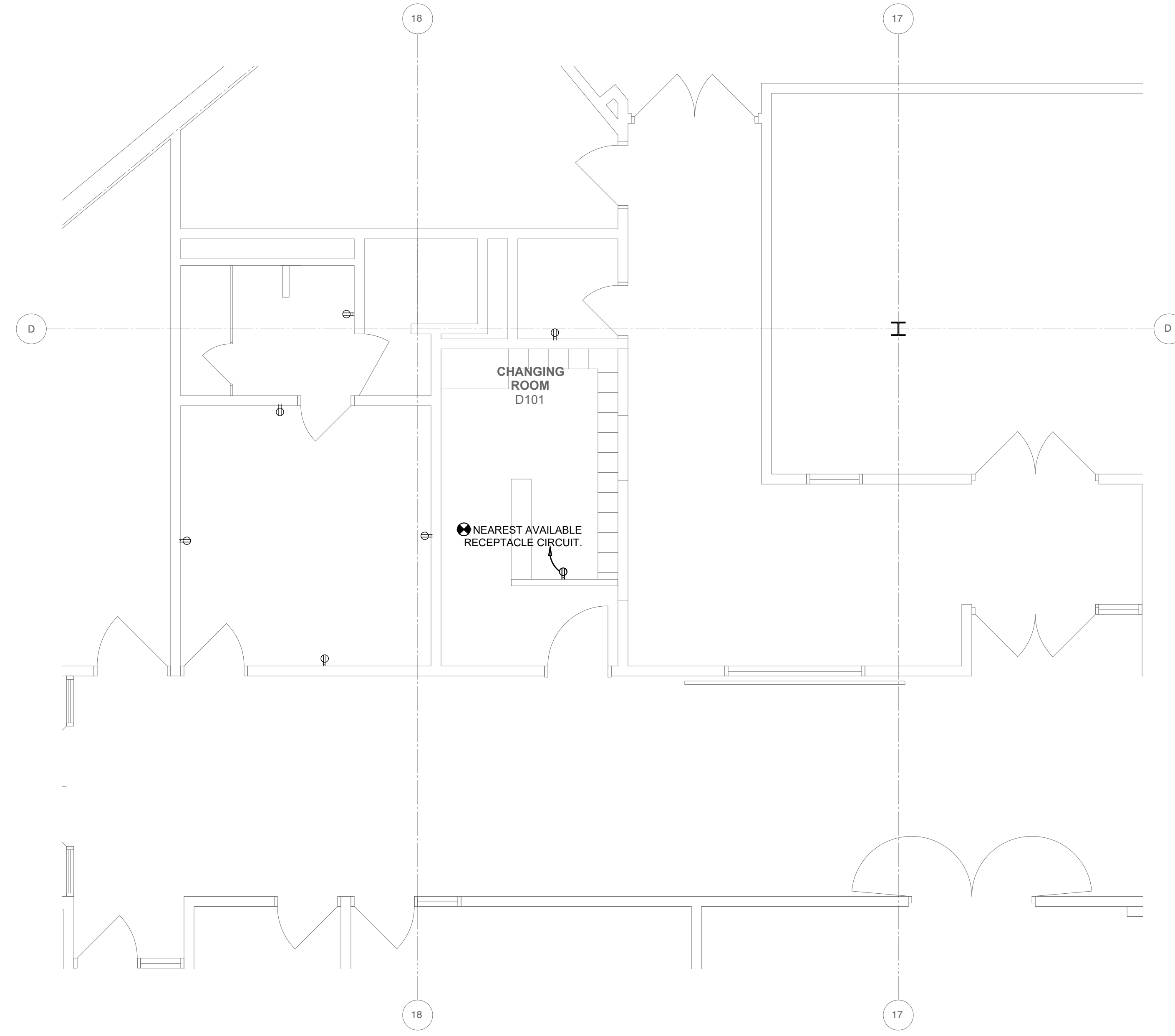
LVE - 20142
E302

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PARTIAL POWER PLAN - AREAS 'C' & 'D'		Comm. no.
drawn	MM	checked
03-02-2021	MM	INCD
dlb		designed
		RP



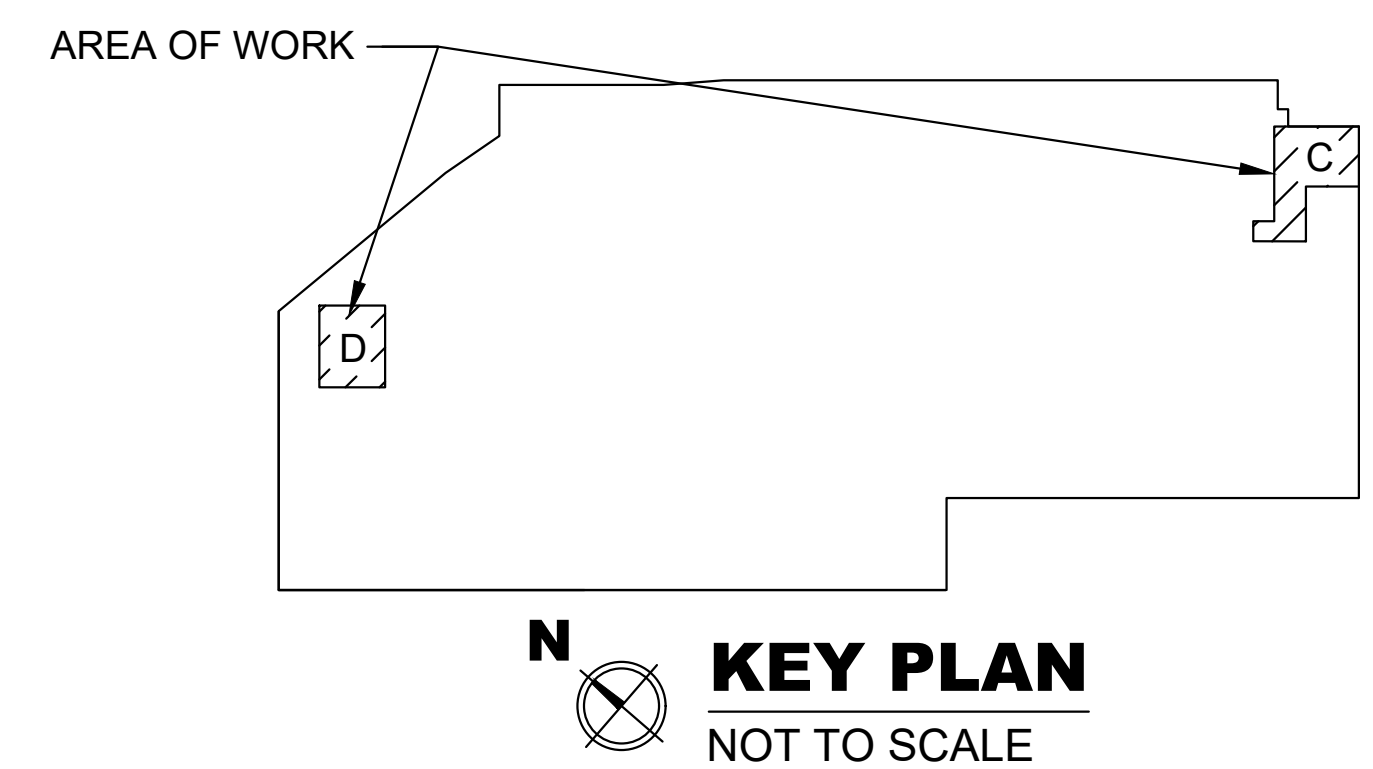
PARTIAL POWER PLAN - AREA 'C'
 Scale: 1/4" = 1'-0"



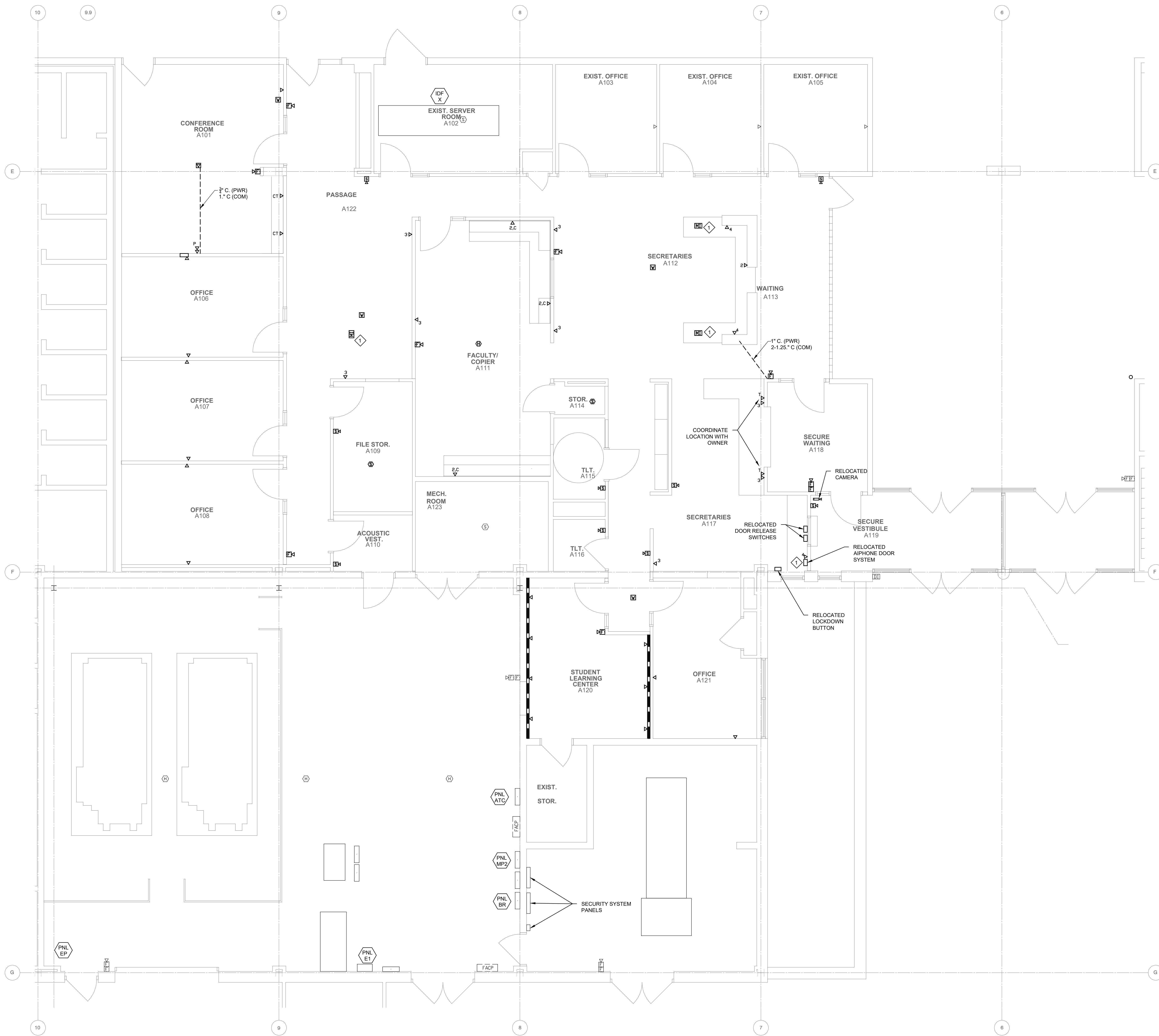
PARTIAL POWER PLAN - AREA 'D'
 Scale: 1/4" = 1'-0"

KEY NOTE

- ◇ COORDINATE LOCATION OF RECEPTACLE WITH OWNER PROVIDED SMARTBOARD, FINAL LOCATION OF DEVICE SHALL BE APPROVED BY OWNER IN THE FIELD. ADJACENT TO RECEPTACLE MOUNT A DEVICE BACKBOX WITH A 1.25" OPENING IN THE COVER, RUBBER GROMMET, AND 1" CONDUIT FROM BACKBOX TO ACCESSIBLE CEILING.
- ◇ DISCONNECT FOR VAV-18-6 TO BE PROVIDED BY MC PER HVAC DRAWINGS, EC TO MAKE ALL CONNECTIONS.

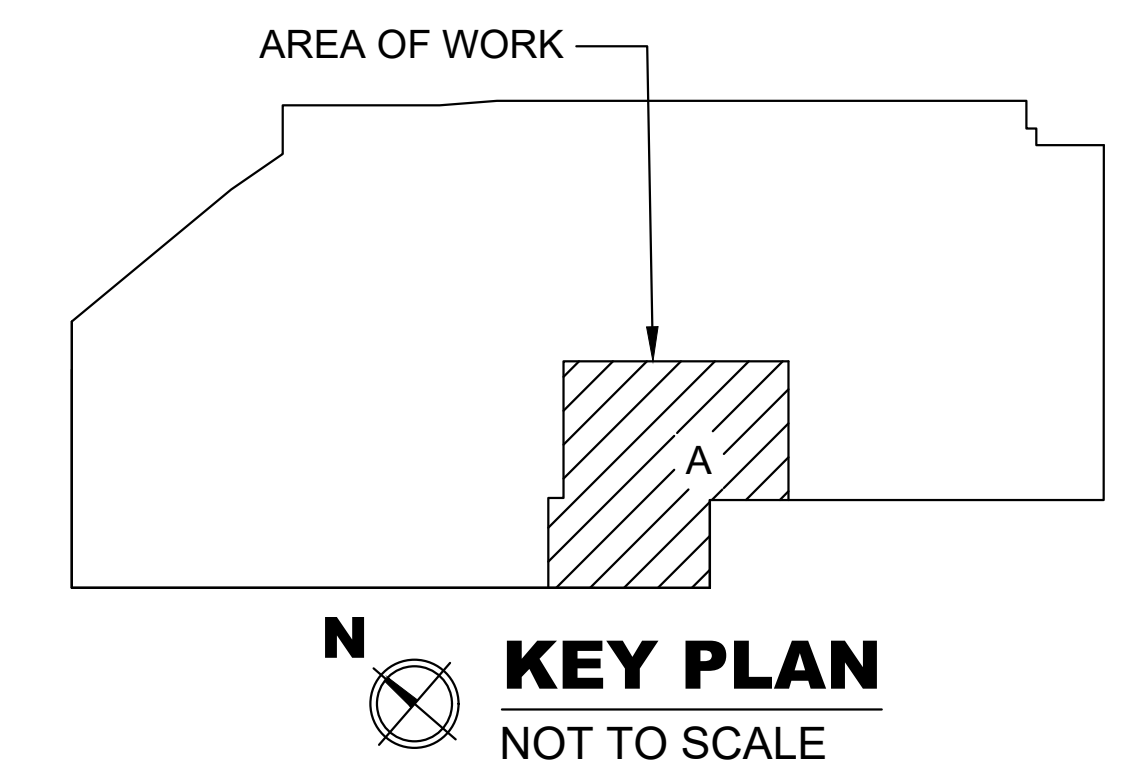


KEY PLAN
 NOT TO SCALE



KEY NOTES

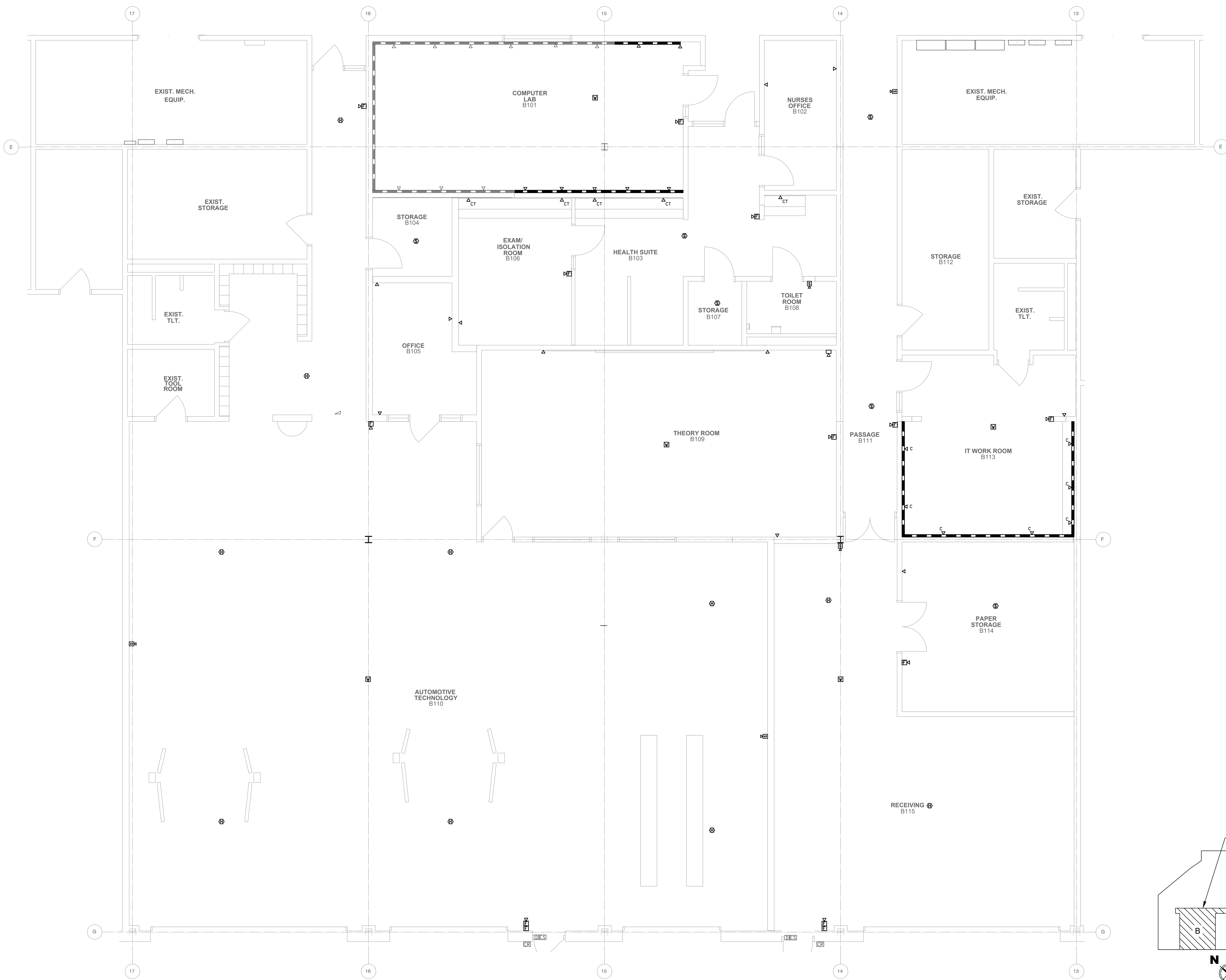
◇ PROVIDE NEW CATEGORY 6 CABLE FROM MASTER INTERCOM TO AIPHONE ADAPTER CARD ABOVE CEILING OR IN THE SERVER ROOM A102. EC TO CONFIRM.



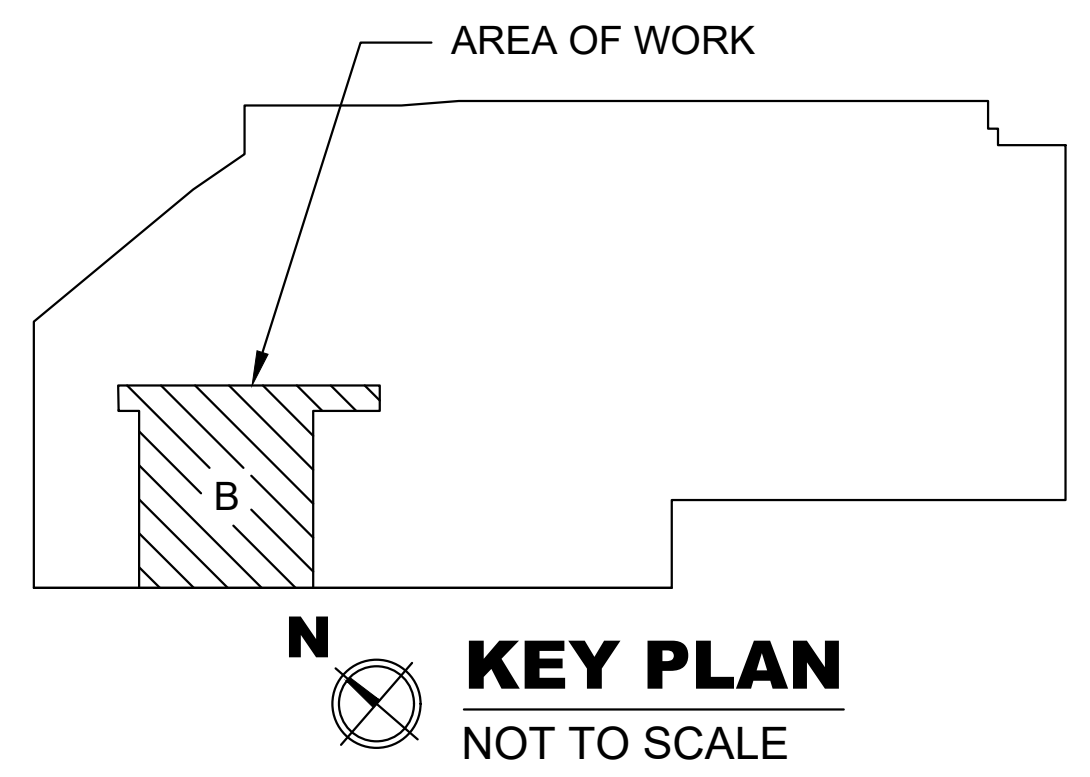
PARTIAL LOW VOLTAGE PLAN - AREA 'A'

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

PARTIAL LOW VOLTAGE PLAN - AREA 'A'		comm. no.
date	drawn	checked
03-28-2021	MM	MD
		DATE



PARTIAL LOW VOLTAGE PLAN - AREA 'B'
 Scale: 1/4" = 1'-0"

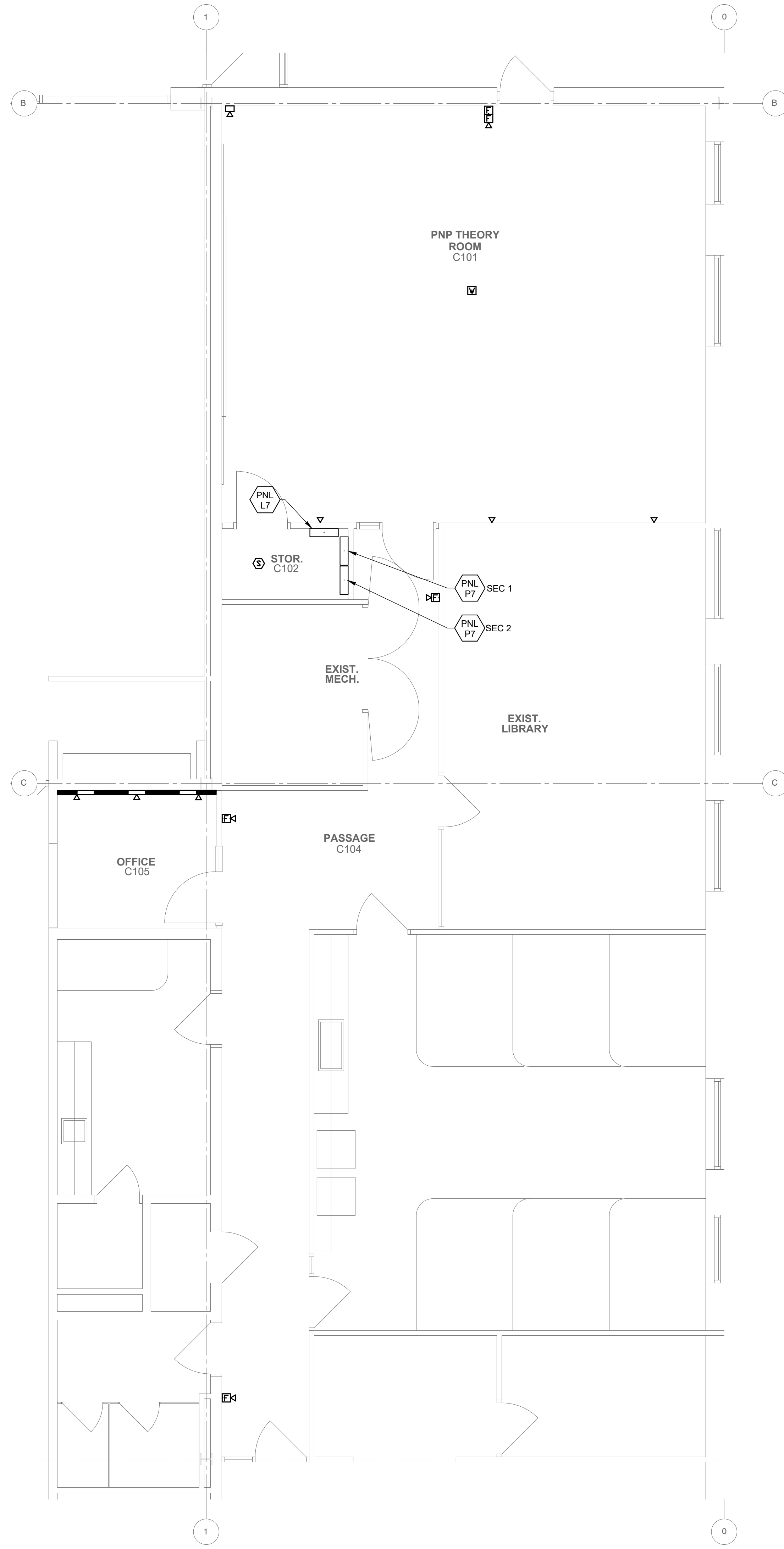


INTERIOR ALTERATIONS - PHASE 2
 FOR THE
EASTERN CENTER FOR ARTS and TECHNOLOGY
 WILLOW GROVE, MONTGOMERY COUNTY, PENNSYLVANIA

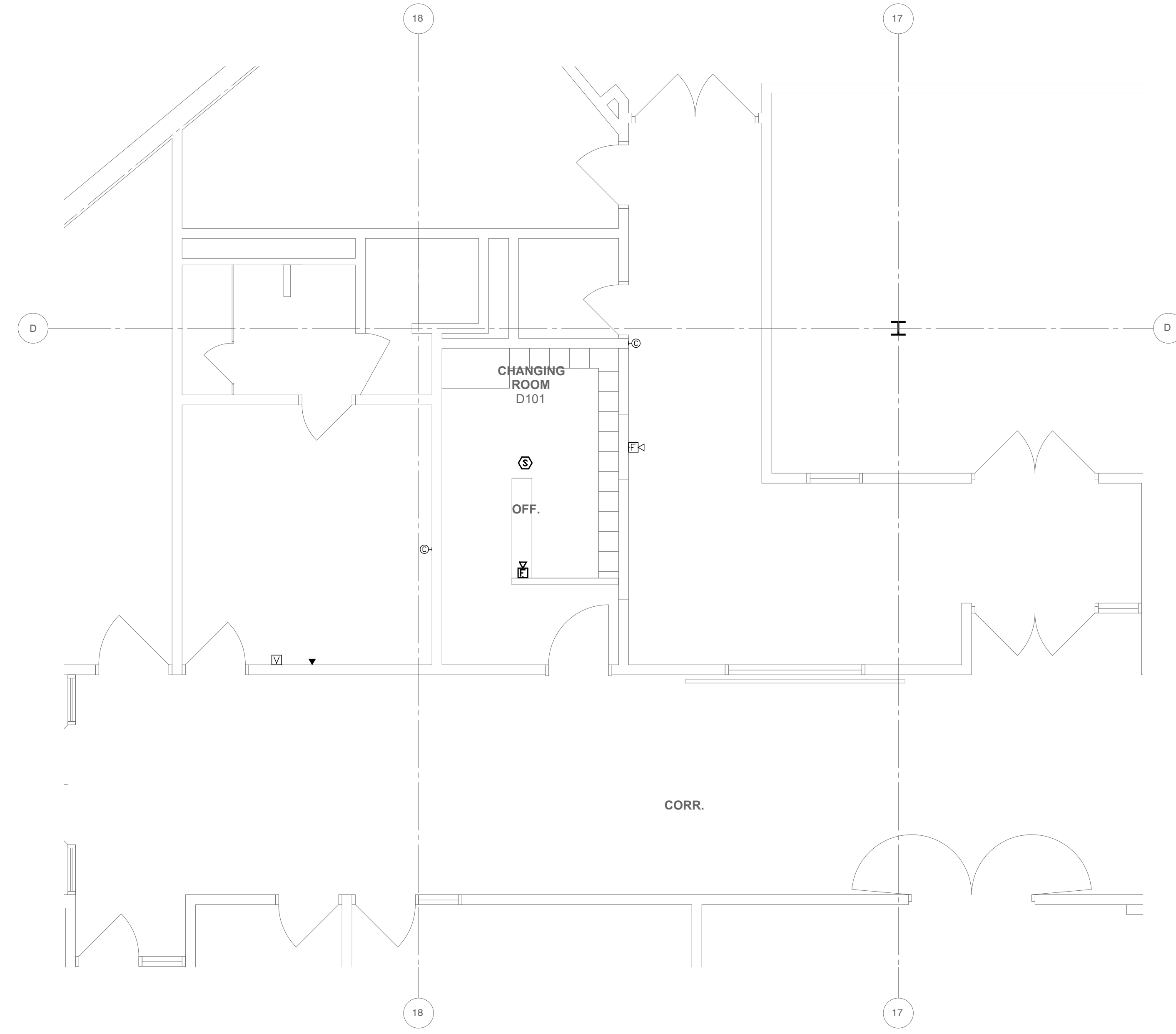
PARTIAL LOW VOLTAGE PLAN - AREA 'B'		comm. no.
drawn	designed	checked
IM	MP	MCD
date	02-28-2021	

LVE - 20142
E402

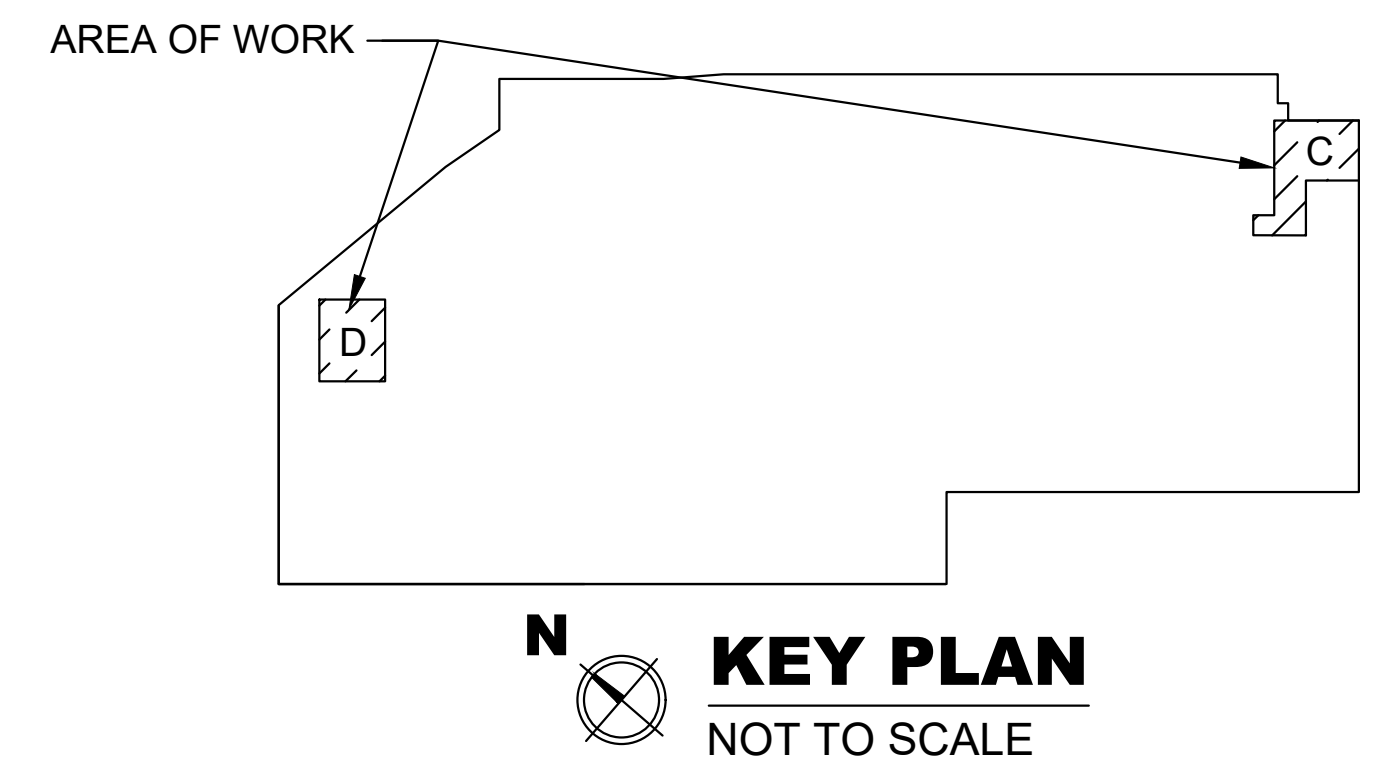
Lehigh Valley Engineering
 Mechanical and Electrical Consultants
 1000 Lehigh Valley Blvd., Suite 100
 Allentown, PA 18106
 T: 610-892-3920 F: 610-892-3930
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PARTIAL LOW VOLTAGE PLAN - AREA 'C'
 Scale: 1/4" = 1'-0"

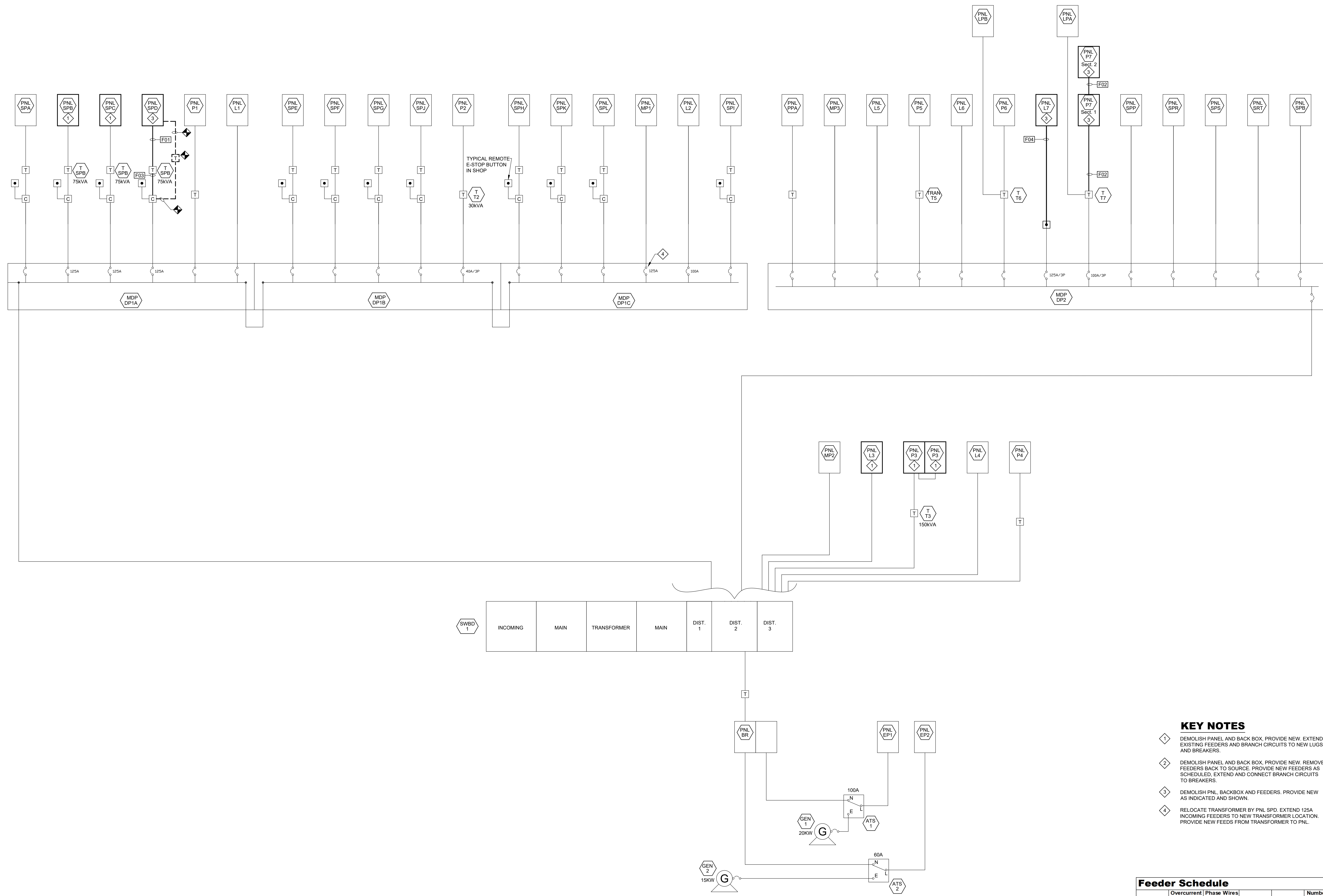


PARTIAL LOW VOLTAGE PLAN - AREA 'D'
 Scale: 1/4" = 1'-0"



KEY PLAN
 NOT TO SCALE

DATE 03-22-2021	DRAWN MM	DESIGNED HP	CHECKED MCD	COMM. NO.

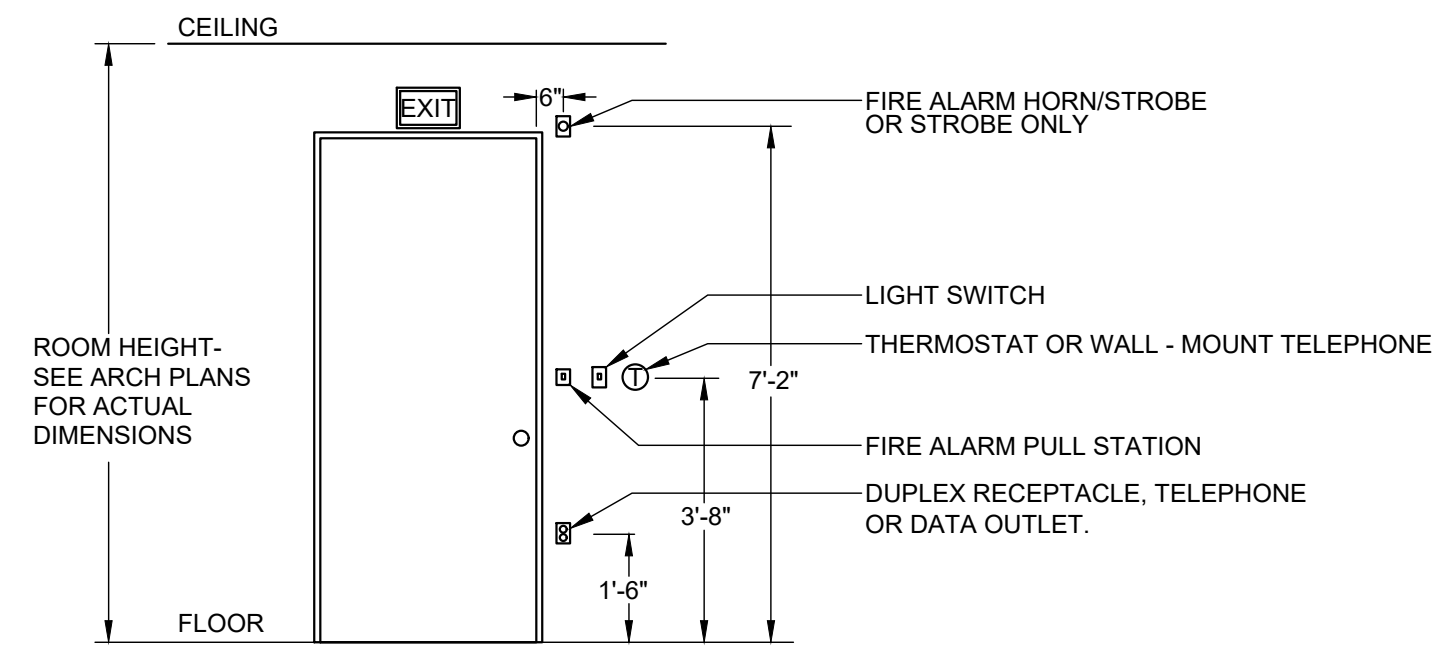


SINGLE LINE DIAGRAM
NO SCALE

- KEY NOTES**
- 1 DEMOLISH PANEL AND BACK BOX, PROVIDE NEW. EXTEND EXISTING FEEDERS AND BRANCH CIRCUITS TO NEW LUGS AND BREAKERS.
 - 2 DEMOLISH PANEL AND BACK BOX, PROVIDE NEW. REMOVE FEEDERS BACK TO SOURCE. PROVIDE NEW FEEDERS AS SCHEDULED, EXTEND AND CONNECT BRANCH CIRCUITS TO BREAKERS.
 - 3 DEMOLISH PNL, BACKBOX AND FEEDERS. PROVIDE NEW AS INDICATED AND SHOWN.
 - 4 RELOCATE TRANSFORMER BY PNL SPD. EXTEND 125A INCOMING FEEDERS TO NEW TRANSFORMER LOCATION. PROVIDE NEW FEEDS FROM TRANSFORMER TO PNL.

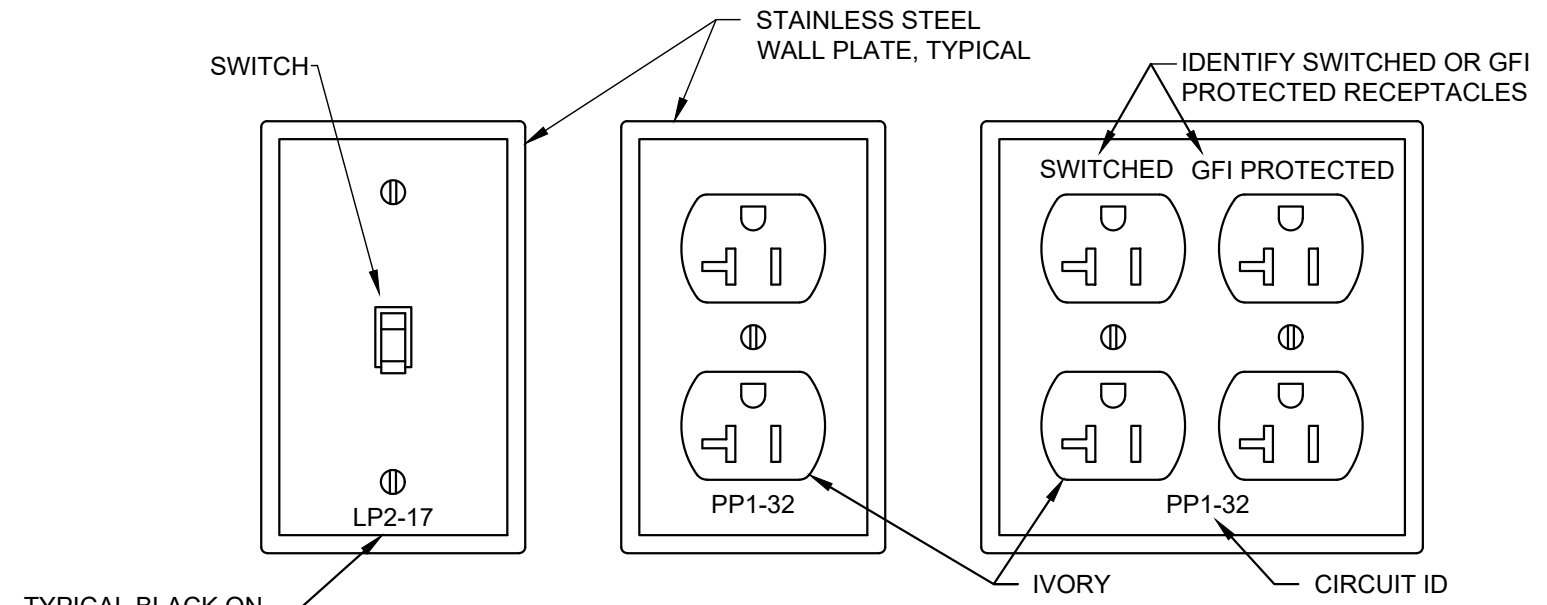
Feeder Schedule

Tag	Overcurrent Protection	Phase Wires (per conduit)	Ground	Conduit	Number of Conduits
F01	200	4-3/0	#6	2"	1
F02	200	4-3/0	#6	2"	1
F03	125	4 #1	#6	2"	1
F04	125	4 #1	#6	2"	1



TYPICAL COMMON AREA DEVICE LAYOUT

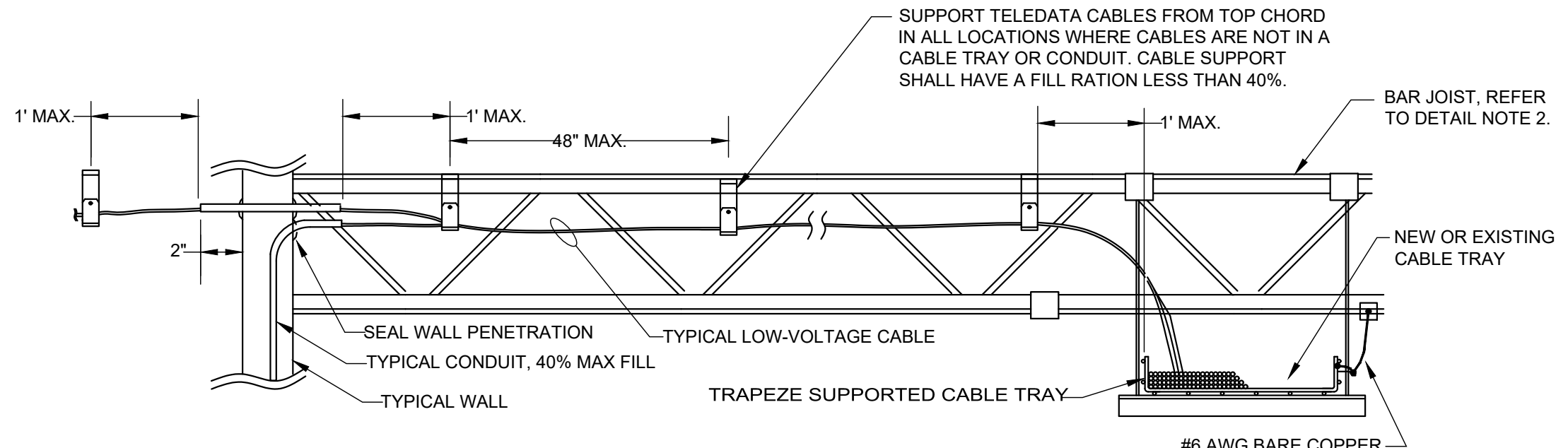
ROOM HEIGHT - SEE ARCH PLANS FOR ACTUAL DIMENSIONS
SCALE: 3/8" = 1'-0"



TYPICAL WIRING DEVICE DETAIL

Scale: 6" = 1'-0"
NOTES:

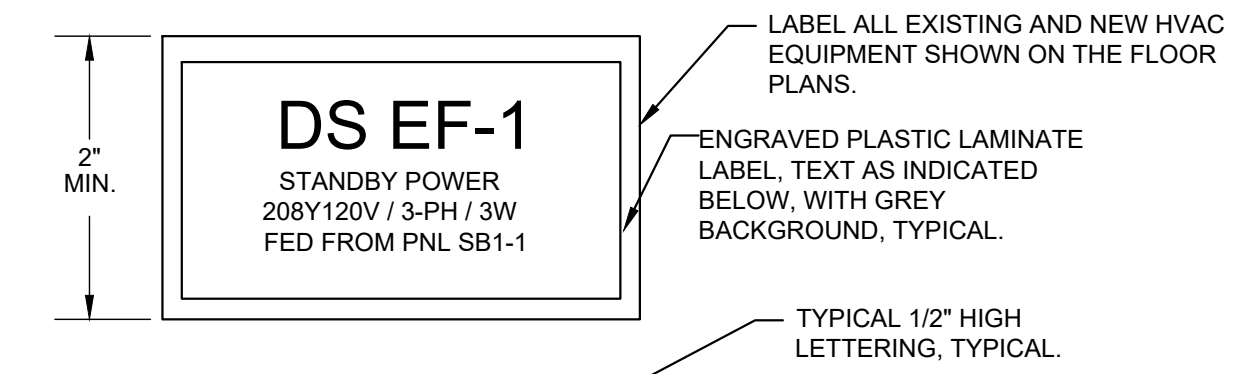
1. LABEL THE FRONT AND BACK OF EACH COVERPLATE.
2. COORDINATE DEVICE COLORS, COVERPLATE MATERIAL TYPE WITH ARCHITECT PRIOR TO INSTALLATION.



TYPICAL TELEDATA SUPPORT DETAIL

NO SCALE

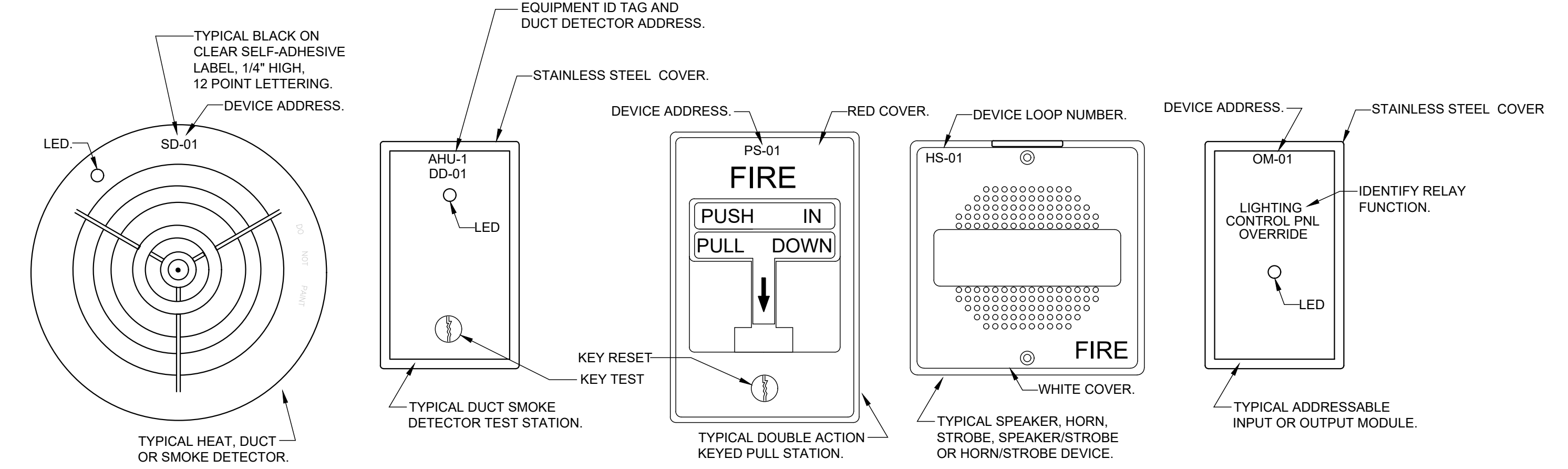
1. RUN TELEDATA CABLE, SUPPORTS, CONDUIT AND CABLE TRAY PARALLEL AND PERPENDICULAR TO BUILDING STEEL. PROVIDE DEDICATED TELEDATA CABLE SUPPORT SYSTEM FOR EACH TELEDATA CABLE.
2. WHERE BUILDING STRUCTURE ABOVE CABLE TRAY IS CONCRETE AND NOT STEEL STRUCTURE, PROVIDE SUPPORTS MEANS LISTED FOR SECURING TO CONCRETE.
3. WHERE CABLE TRAY PENETRATES FIRE RATED WALLS OR FLOOR, PROVIDE 4" EZ-PATH FIRE-RATED PASS THRU DEVICES, 40% MAXIMUM FILL.
4. WHERE CABLES PENETRATE A FIRE OR SMOKE RATED WALL OR FLOOR, COMPLY WITH THE FIRE RATED PENETRATION DETAIL. PROVIDE REMOVABLE FIRE RATED PLUG IN CONDUIT. WHERE WALL IS NOT RATED, PROVIDE CABLE IN CONDUIT THRU WALL. SEAL AROUND CONDUIT AND CABLES. SIZE WALL PENETRATIONS FOR LESS THAN 40% CABLE FILL.
5. PROVIDE #6 AWG BARE COPPER CONDUCTOR RUN PARALLEL TO CABLE TRAY AT ALL TIMES. BOND TRAY TO LOCAL STRUCTURAL STEEL EVERY 50' AND AT THE END OF EACH RUN OF TRAY WITH LISTED GROUND LUGS.
6. WHERE CABLE TRAY STOPS AND STARTS TO AVOID A CONFLICT, BOND TRAY ENDS TO BUILDING STEEL AND EACH OTHER FOR A CONTINUOUS GROUND PATH.
7. WHERE 3-WAY OR 4-WAY TRAY FITTING ARE USED, BOND FITTING TO STRUCTURAL STEEL, CONTINUE WITH GROUND CONDUCTOR RUN PARALLEL TO EACH NEWLY CREATED RUN.
8. WHERE TRAY PASSES THROUGH IN ACCESSIBLE CEILING, REPLACE TRAY WITH 4" EMT WITH CONDUIT VOLUME TO MATCH CABLE TRAY VOLUME. BOND CONDUITS TO CABLE TRAY FOR CONTINUOUS GROUND PATCH.
9. REFER TO OTHER LOW-VOLTAGE BONDING AND GROUNDING DETAILS FOR ADDITIONAL REQUIREMENTS.
10. WHERE HORIZONTAL CABLES PENETRATE A CORRIDOR WALL, PROVIDE CABLE IN CONDUIT, 25% MAXIMUM FILL. SEAL AROUND CONDUIT, PROVIDE FIRE RATED CONDUIT PLUG TO PREVENT THE SPREAD OF SOUND, FIRE OR SMOKE.



TYPICAL EQUIPMENT LABEL DETAIL

NOT TO SCALE

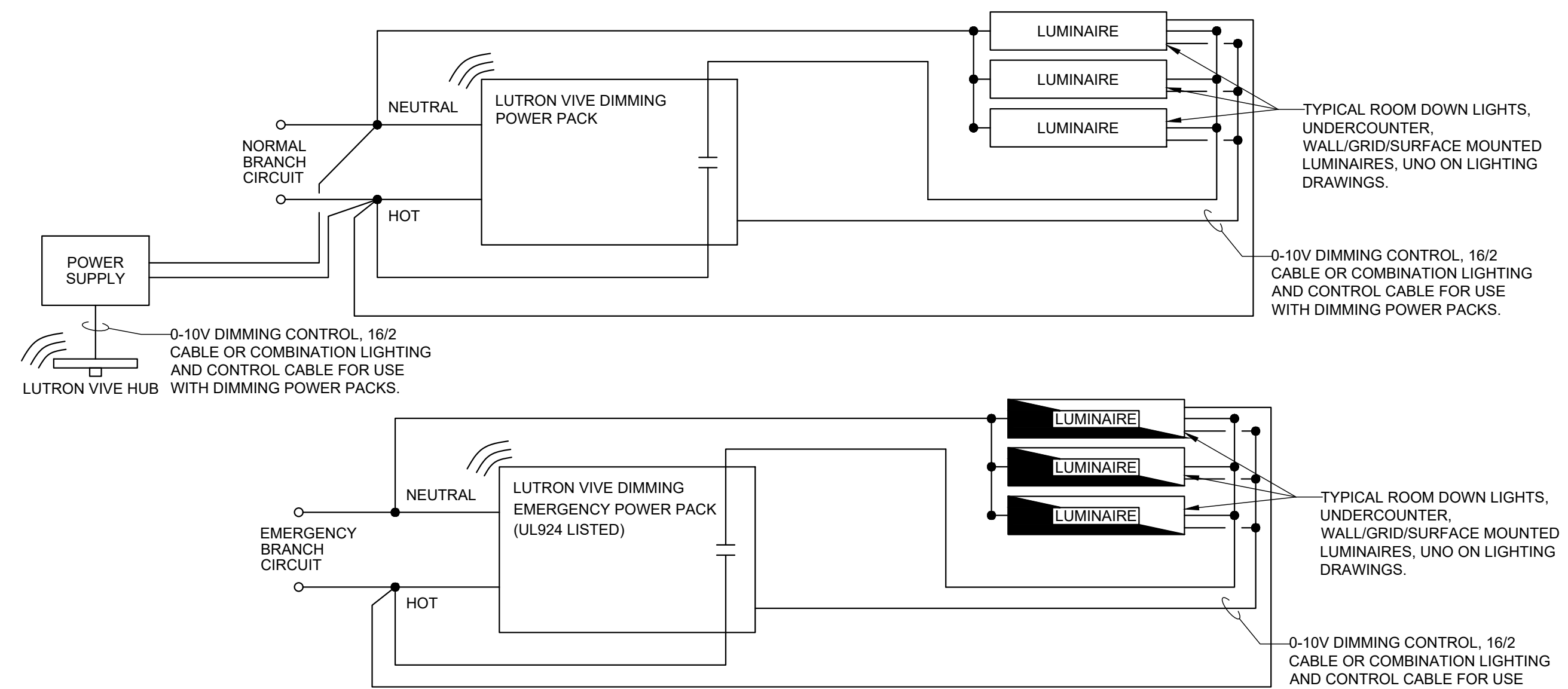
- NOTE:
- IDENTIFY PANELBOARDS, SWITCHBOARDS, SWITCHBOARD BREAKERS, POWER DISTRIBUTION PANEL BREAKERS, TRANSFORMERS, TRANSFER SWITCHES, STARTERS, SAFETY SWITCHES, DISCONNECTS FOR HVAC NEW AND EXISTING EQUIPMENT WITH ENGRAVED LABELS. INDICATE EQUIPMENT ID, WHAT BRANCH OF THE POWER SYSTEM (EMERGENCY, STANDBY OR NORMAL POWER), VOLTAGE AND LOCATION EQUIPMENT IS FED FROM. REDUCE SIZE OF LABEL AND TEXT WHERE LOCATED AT SMALLER DISCONNECTS AND BREAKERS.



TYPICAL FIRE ALARM DEVICE DETAIL

NOT TO SCALE

- NOTES:
1. IDENTIFY ALL NEW AND EXISTING NON-ADDRESSABLE FIRE ALARM DEVICES WITH THE NON-ADDRESS LOOP NUMBER.
 2. IDENTIFY ALL NEW AND EXISTING ADDRESSABLE DEVICES WITH DEVICE ADDRESS.
 3. INCREASE TEXT SIZE FOR DEVICES LOCATED ABOVE 10' AFF TO 1/2" HIGH 14 POINT LETTERING.



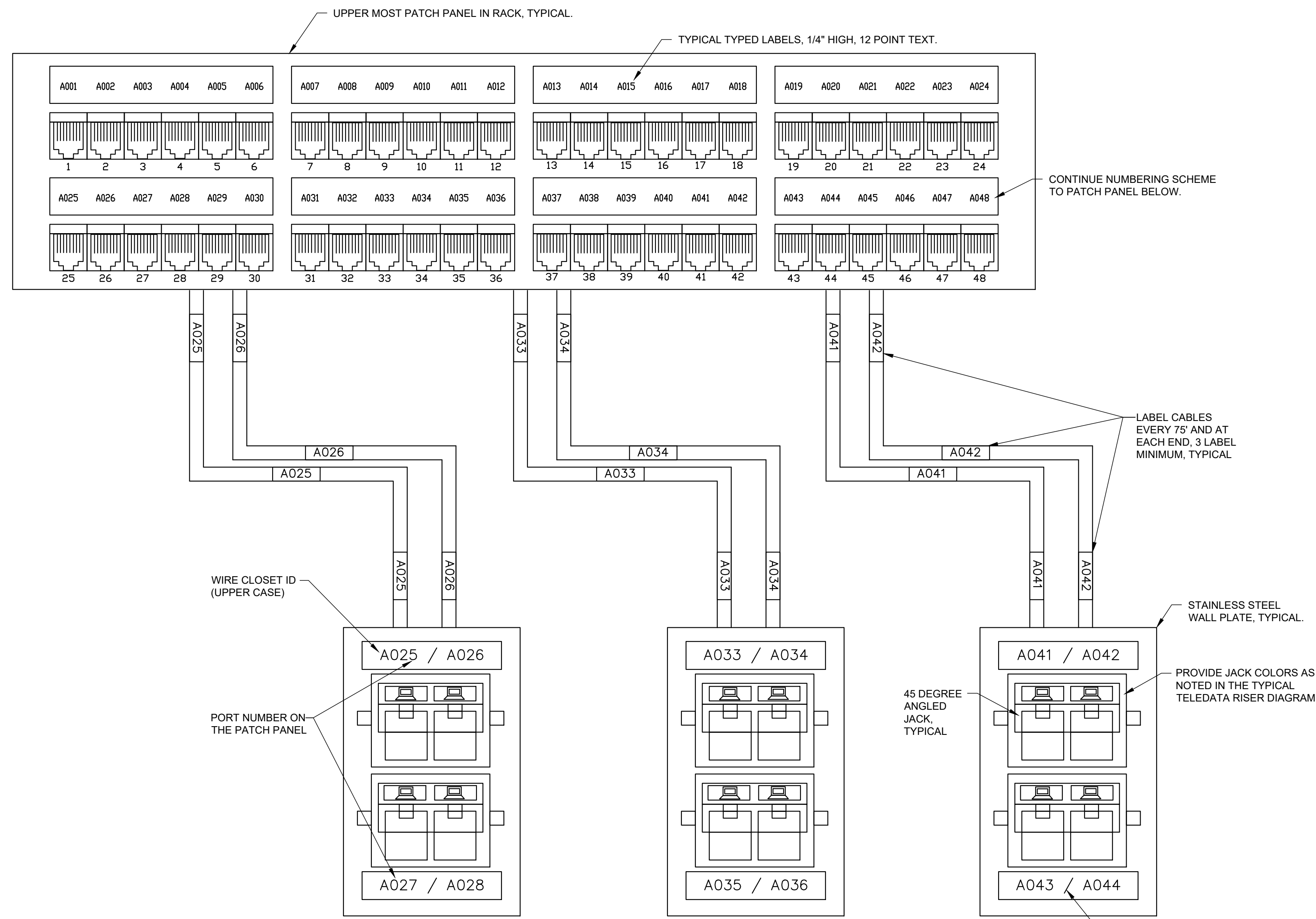
TYPICAL LUTRON POWER PACK DETAILS

No Scale

- NOTES:
1. PROVIDE LUTRON VIVE SYSTEM, COMPONENTS TO MATCH THOSE USED ELSEWHERE IN THE BUILDING.
 2. PROVIDE PROGRAMMING OF SYSTEM COMPONENTS AS COORDINATED WITH OWNER.
 3. PROVIDE DEDICATED POWER PACKS FOR 277V LIGHTING AND 120V LIGHTING. POWER PACKS SHALL BE AT AN ACCESSIBLE LOCATION ABOVE THE CEILING AT MAIN ENTRANCE TO ROOM.
 4. COMPLY WITH MANUFACTURER'S RECOMMENDED WIRING REQUIREMENTS.
 5. LOCAL EMERGENCY LIGHTING SHALL TURN ON TO 100% OUTPUT UPON LOSS OF NORMAL POWER TO THE LOCAL HUB AND LOCAL NORMAL LIGHTING.
 6. INSTALL LUTRON WIRELESS DIMMERS, SWITCHES AND LIGHTING CONTROL DEVICES AS SHOWN ON THE DRAWINGS.

ELECTRICAL DETAILS

date	drawn	designed	checked	comm. no.
03/22/2021	MM	MP	MCD	



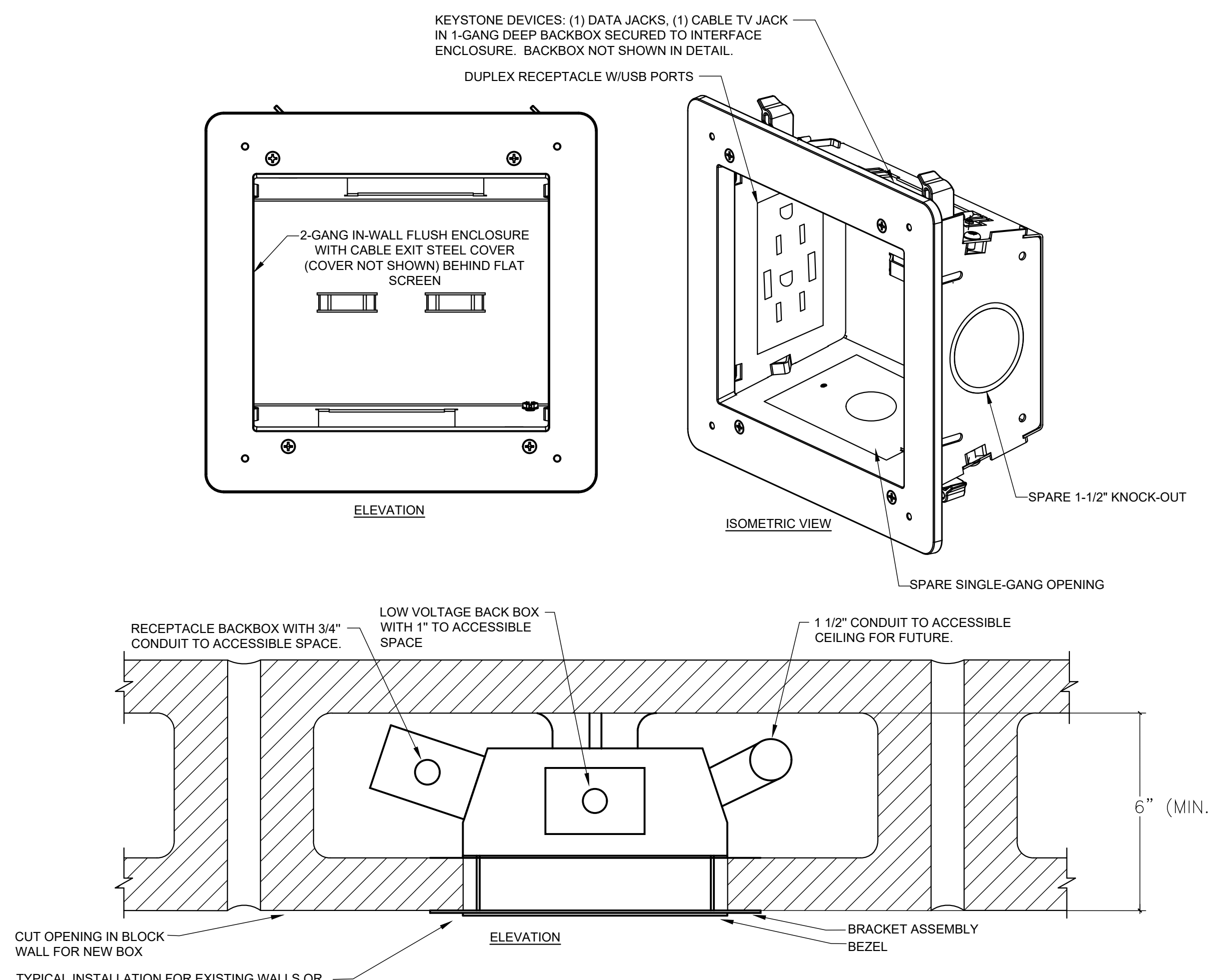
TYPICAL TELEDATA LABELING DETAIL

NOT TO SCALE

NOTES: 1. FILL UNUSED OPENINGS WITH ELECTRICAL IVORY BLANK MODULES.

2. PATCH PANELS ARE TO BE LABELED IN CONSECUTIVE ORDER STARTING AT RACK LETTER, PORT 001. FACE PLATE SHALL IDENTIFY RACK LETTER AND PORT NUMBER FOR EACH JACK.

3. LABELING SCHEME SHOWN IS AN EXAMPLE. PROVIDE LABELING OF TELEDATA CABLES, PATCH PANELS, AND JACKS AS DEFINED BY OWNER IN WRITING IN A COORDINATION MEETING WITH SCHOOL DISTRICT'S DIRECTOR OF TECHNOLOGY OR OTHER IT STAFF.

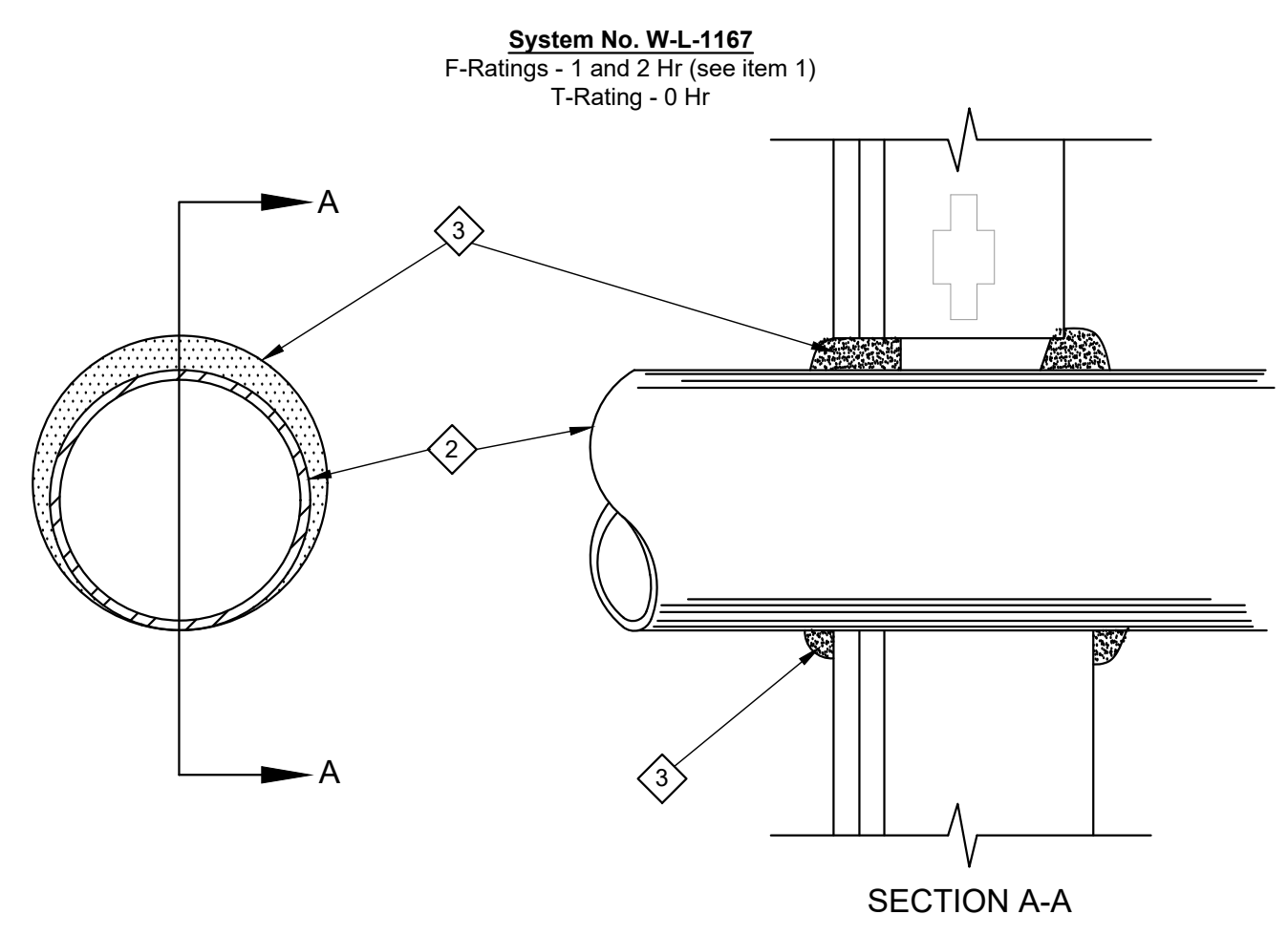


RECESSED A/V BOX DETAIL

NO SCALE

NOTES:

- AT EACH TV LOCATION SHOWN ON THE DRAWINGS, AND OTHER LOCATIONS AS NOTED, PROVIDE THE RESELECT FLAT PANEL CONNECTION 2-GANG RECESSED ENCLOSURE, WITH FLUSH COVER, BY HUBBELL, OR APPROVED EQUAL.
- EACH FLAT SCREEN INTERFACE SHALL BE PROVIDED WITH A MINIMUM OF A DUPLX RECEPTACLE WIUSB POWER PORTS, 1 DATA JACKS, 1 CABLE TV JACK FOR TELEVISION OR MESSAGE BOARD, UNLESS ADDITIONAL DEVICES ARE NOTED ON THE DRAWINGS.
- LOCATE BOX BEHIND EQUIPMENT OR DISPLAYS, LOCATION SHALL ALLOW FOR ACCESSIBILITY AND BE COORDINATED WITH EQUIPMENT OR DISPLAY SUPPORT SYSTEM COMPONENTS.
- LOCATION OF ENCLOSURE SHALL BE APPROVED BY THE OWNER AND ARCHITECT, IN THE FIELD FOR EACH LOCATION, IN ADVANCE OF THE ROUGH-IN FOR THE INTERFACES.
- COVER AND FLANGE SHALL BE CUSTOM PAINTED TO MATCH THE SURFACE IN WHICH IT IS MOUNTED.



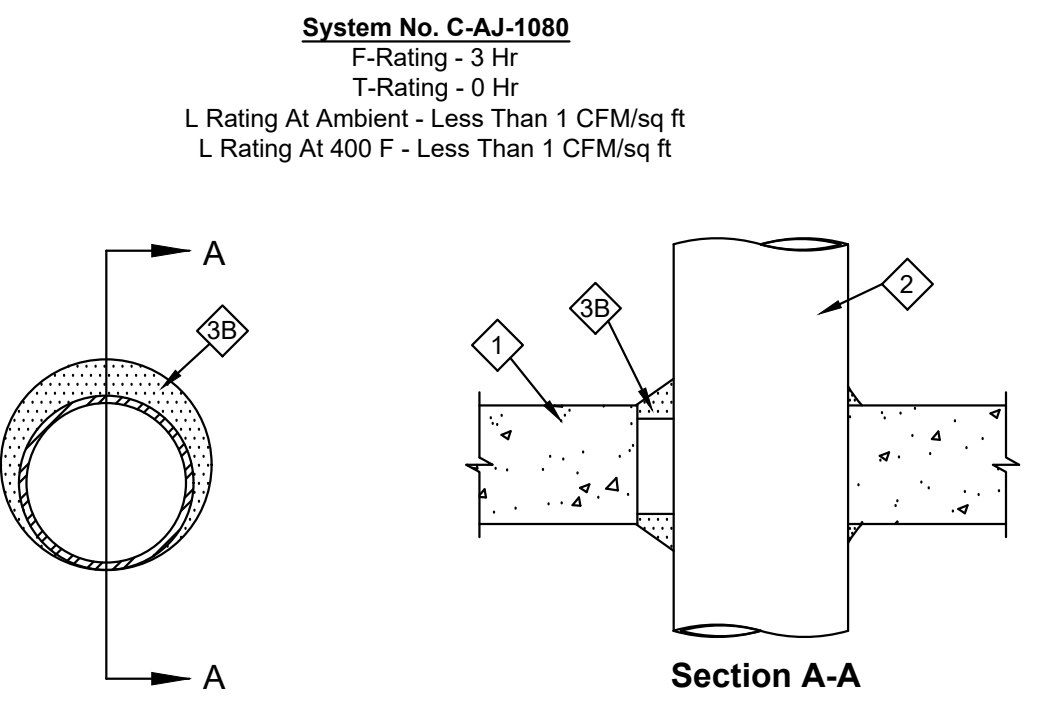
FIRE-RATED PENETRATION DETAIL

NO SCALE

KEY NOTES

- Wall Assembly - The 1 or 2 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 Design in the UL Fire Resistance Directory and shall include the following construction features:
 - Studs - Wall framing may consist of either wood studs 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 3-1/2 in. wide by 1-3/8 in. deep channels spaced max 24 in. OC.
 - Gypsum Board - 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 14 in. The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
- 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 1-3/8 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:
 - Steel Pipe - Nom 12 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - Iron Pipe - Nom 12 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.
 - Conduit - Nom 6 in. diam (or smaller) steel conduit or nom 4 in. diam (or smaller) steel electrical metallic tubing.
 - Copper Tubing - Nom 4 in. diam (or smaller) Type L (or heavier) copper tubing.
 - Copper Pipe - Nom 4 in. diam (or smaller) Regular (or heavier) copper pipe.
- Fill Void or Cavity Materials - Caulk - Min 5/8 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. Min 1/2 in. diam bead of caulk applied to the penetrant/wallboard interface at the point contact location on both sides of wall. MINNESOTA MINING & MFG CO - FD-150+

*Bearing the UL Classification Mark



FIRE-RATED PENETRATION DETAIL

NO SCALE

KEY NOTES

- Floor or Wall Assembly - Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks* Max diam of opening is 32 in. See Concrete Block (CAZT) category in the Fire Resistance Directory for names of manufacturers.
- Through Penetrants - One metallic pipe, conduit or tubing to be centered within the firestop system. The annular space shall range from min 0 in. (point contact) to max 2 in. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
 - Steel Pipe - Nom 30 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.
 - Iron Pipe - Nom 30 in. diam (or smaller) cast or ductile iron pipe.
 - Conduit - Nom 4 in. diam (or smaller) electrical metallic tubing or nom 6 in. diam (or smaller) rigid galv steel conduit.
 - Copper Tubing - Nom 6 in. diam (or smaller) Type M (or heavier) copper tubing.
 - Copper Pipe - Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.
- Firestop System - The firestop system shall consist of the following:
 - Packing Material - (Optional, Not Shown) - Mineral wool batt insulation, polyethylene backer rod or glass fiber batt insulation friction fitted into annular space. Packing material to be recessed from top surface of floor or both surfaces of wall as required to accommodate the required thickness of fill material.
 - Fill, Void or Cavity Material - Caulk - Min 1/2 in. thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall. At point contact location, apply min 1/4 in. diam bead of sealant at the pipe/concrete interface on the top surface of the floor or both surfaces of wall. SPECIFIED TECHNOLOGIES INC - SpecSeal 100, 101, 102, 105, 120 or 129 Sealant

*Bearing the UL Classification Mark

ELECTRICAL DETAILS

DATE	DRAWN	DESIGNED	CHECKED	COMM. NO.
03/22/2021	MM	MP	MCD	

LVE - 20142
E703

INTERIOR ALTERATIONS - PHASE 2
FOR THE
EASTERN CENTER FOR ARTS and TECHNOLOGY
WILLOW GROVE, MONTGOMERY COUNTY, PENNSYLVANIA

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BR Sec 2		480 Y/277V, 3Ø, 4W		Boiler Room					
Circuit Num.	Poles	Size	Load (VA)	Description	Load (VA)	Size	Poles	Circuit Num.	
43	3	100	6000	Shop Compressors	6180			44	
45	-	-	6000	-	6180			46	
47	-	-	6000	-	6581			48	
49	3	50	4960	ATS-2 Panel EP2	5561			54	
51	-	-	4960	-	5481			52	
53	-	-	4680	-	4680			50	
55	1	20	180	Recp-Auto Drain	180			56	
57	1	20	0	Spare	0			58	
59	1	20	0	Spare	0			60	
61	1	20	0	Spare	0			62	
63	1	20	0	Spare	0			64	
65	1	20	0	Spare	0			66	
67	1	20	0	Spare	0			68	
69	1	20	0	Spare	0			70	
71	-	-	0	Space	0			72	
73	-	-	0	Space	0			74	
75	-	-	0	Space	0			76	
79	-	-	0	Space	0			80	
81	2	60	6000	Green House Panel	6000	100	2	82	
83	-	-	0	-	6000			84	
Balanced connected load:					49 A				

SPB		208 Y/120V, 3Ø, 4W		Auto Tech					
Circuit Num.	Poles	Size	Load (VA)	Description	Load (VA)	Size	Poles	Circuit Num.	
1	3	100	4804	Bus Duct	5164			2	
3	-	-	4804	-	5164			4	
5	-	-	4804	-	5524			6	
7	2	20	1040	Tire Balancing Machine	5844			8	
9	-	-	1040	-	5844			10	
11	2	20	1040	Tire Balancing Machine	5844			12	
13	-	-	1040	-	2120			14	
15	1	20	360	Recp-Quad Shop Wall	720			16	
17	1	20	360	Recp-Shop Wall/ Exhaust Unit	720			18	
19	1	20	360	Recp-Shop Wall	1320			20	
21	1	20	360	Recp-Shop Wall	1400			22	
23	1	20	961	Shop Power Light	2001			24	
25	1	20	623	Hose Reels HR-1	1863			26	
27	1	20	1080	Recp-Quad Shop Wall	2120			28	
29	1	20	1440	Recp-Quad Shop Wall	1940			30	
31	1	20	900	Recp-Office B105	1400			32	
33	1	20	216	Unit Heater UH-5	839			34	
35	1	20	180	Vehicle Lift Lift-3	803			36	
37	1	20	360	Recp-Quad Shop Wall	983			38	
39	1	20	360	Recp-Quad Shop Wall	720			40	
41	1	20	360	Recp-Quad Shop Wall	460			42	
43	1	20	360	Recp-Quad Shop Wall	360			44	
45	1	20	0	Spare	0			46	
47	1	20	0	Spare	0			48	
49	1	20	0	Spare	0			50	
51	1	20	0	Spare	0			52	
53	1	20	0	Spare	0			54	
Balanced connected load:					147 A				

SPC		208 Y/120V, 3Ø, 4W		Storage B107					
Circuit Num.	Poles	Size	Load (VA)	Description	Load (VA)	Size	Poles	Circuit Num.	
1	3	100	2402	Bus Duct	961			2	
3	-	-	2402	-	961			4	
5	-	-	2402	-	961			6	
7	1	20	961	Recp-Shop Wall	1921			8	
9	1	20	961	Recp-Shop Wall	1921			10	
11	1	20	961	Recp-Shop Wall	1921			12	
13	1	20	961	Recp-Shop Wall	1921			14	
15	1	20	961	Recp-Shop Wall	961			16	
17	1	20	720	Recp-Theory Room B109	1440			18	
19	1	20	720	Recp-Theory Room B109	1260			20	
21	1	20	720	Recp-Toilet Storage Health Ste	1260			22	
23	1	20	900	Recp-Nurses Office B102	1700			24	
25	1	20	360	Recp-Exam/Isolat Counter	1080			26	
27	1	20	360	Recp-Exam/Isolat Counter	540			28	
29	1	20	0	Spare	0			30	
31	1	20	0	Spare	0			32	
33	1	20	0	Spare	0			34	
35	1	20	0	Spare	0			36	
37	1	20	0	Spare	0			38	
39	1	20	0	Spare	0			40	
41	1	20	0	Spare	0			42	
Balanced connected load:					44 A				

SPD		208 Y/120V, 3Ø, 4W		Receiving					
Circuit Num.	Poles	Size	Load (VA)	Description	Load (VA)	Size	Poles	Circuit Num.	
1	3	100	4797	Chiller Control	5337			2	
3	-	-	4797	-	5337			4	
5	-	-	4797	-	5517			6	
7	1	20	360	Recp-Shop Wall	720			8	
9	1	20	540	Recp-Shop Wall	540			10	
11	1	20	0	Spare	0			12	
13	2	20	0	Spare	0			14	
15	-	-	0	-	0			16	
17	1	20	1080	Recp-Receiving Wall	1080			18	
19	1	20	1440	Recp-IT Work Room	1440			20	
21	1	20	1260	Recp-IT Work Room	1260			22	
23	1	20	1260	Recp-IT Work Room	1980			24	
25	1	20	1000	Motorized Overhead Doors	2120			26	
27	1	20	900	Recp-Office B105	900			28	
29	1	20	720	Recp-IT Work Room	720			30	
31	1	20	0	Spare	0			32	
33	1	20	0	Spare	0			34	
35	1	20	0	Spare	0			36	
37	1	20	0	Spare	0			38	
39	1	20	0	Spare	0			40	
41	1	20	0	Spare	0			42	
Balanced connected load:					75 A				

EP1		208 Y/120V, 3Ø, 4W		Boiler Rm					
Circuit Num.	Poles	Size	Load (VA)	Description	Load (VA)	Size	Poles	Circuit Num.	
1	3	60	2882	PNL EP1B	1441			2	
3	-	-	2882	-	1441			4	
5	-	-	2882	-	1441			6	
7	1	20	90	Em lights shop area exits	1051			8	
9	1	20	961	Em lights shops	1921			10	
11	1	20	961	Em lights lobby and corridor	1921			12	
13	1	20	961	Fan Boiler rm	1646			14	
15	1	20	90	Em lights	1256			16	
17	1	20	961	Em lights - outdoor	961			18	
19	3	30	1441	Em feed boiler #2	1441			20	
21	1	20	1441	-	1441			22	
23	1	20	1441	-	1441			24	
25	1	20	0	Prepared Space	0			26	
27	1	20	0	Prepared Space	0			28	
29	1	20	0	Prepared Space	0			30	
31	1	20	0	Prepared Space	0			32	
33	1	20	0	Prepared Space	0			34	
35	1	20	0	Prepared Space	0			36	
37	1	20	0	Prepared Space	0			38	
39	1	20	0	Prepared Space	0			40	
41	1	20	0	Prepared Space	0			42	
Balanced connected load:					36 A				

L2		480 Y/277V, 3Ø, 4W		Mech 120					
Circuit Num.	Poles	Size	Load (VA)	Description	Load (VA)	Size	Poles	Circuit Num.	
1	1	20	1109	Lights - Automotive 121	2217			2	
3	1	20	1109	Lights - Pro Serv 118	2217			4	
5	1	20	1109	Lights - Con Bay 133	2217			6	
7	1	20	1109	Lights - Masonry 138	2217			8	
9	1	20	1109	Lights - Stor. Office Tool 136, 137	2217			10	
11	1	20	1109	Lights - Storage, Office Tool	2217			12	
13	1	20	1109	Lights - Storage, Office Tool	2217			14	
15	1	20	1109	Lights - Mechanical Rm 120	2217			16	
17	1	20	1109	Lights - Automotive computer lab	2217			18	
19	1	20	3500	VAV-1-3, VAV-1-4	6500			20	
21	1	20	1668	Lights-Comp,Health,Theory	2604			22	
23	1	20	0	Spare	0			24	
25	1	20	0	Spare	0			26	
27	1	20	0	Spare	0			28	
29	1	20	0	Spare	0			30	
31	1	20	0	Spare	0			32	
33	1	20	0	Spare	0			34	
35	1	20	0	Spare	0			36	
37	1	20	0	Spare	0			38	
39	1	20	0	Spare	0			40	
41	1	20	0	Spare	0			42	
Balanced connected load:					35 A				

L3		480 Y/277V, 3Ø, 4W		Mech 120				
Circuit Num.	Poles	Size	Load (VA)	Description	Load (VA)	Size	Poles	Circuit Num.
1	1	20	2217	Lights-Welding Shop Rm 117	4434			2
3	1	20	2217	Lights-Welding Shop Rm 117	4434			4
5	1	20	2217	Lights-Student Hall	4434			6
7	1	20	2217	Lights-Admin Office	4434			8
9	1	20	2217	Lights-Admin Office	4434			10
11	1	20	2217	Lights-Lobby	4434			12
13	1	20	2217	Lights-Welding Booth	4434			14
15	1	20	4000	VAV-12-4, VAV-12-6	7500			16
17	1	20	3000	VAV-12-1, VAV-12-2	3312			18
19	1	20	2500	VAV-12-5	3630			20
21	1	20	500	RCP-1 Heating Panel Sec A117	500			22
23	1	20	0	Prepared Space	0			24
25	1	20	0	Prepared Space	0			26
27	1	20	0	Prepared Space	0			28
29	1	20	0	Prepared Space	0			30
31	1							

Luminaire Schedule

1. All luminaires must be listed and labeled by an NRTL, as required by the NEC.

Type	Manuf.	Model	Mounting	Description	Source	Color	CRI	Lumens	Lumen Maint	Driver	Voltage	VA	W
A	KB Lighting	LEDPNL2X4-35W-5KMV-PRM-CP	Recessed	2x4' Edge-Lit flat panel, furnished by Owner, installed by Electrical Contractor, earthquake clips, 138LPW, DLC premium	LED	5000K	80	4836	L70 /60,000H	0-10V	UNV	44	35
	KB Lighting	LEDPNL2X4-35W-5KMV-PRM-CP		2x2' Edge-Lit flat panel, furnished by Owner, installed by Electrical Contractor, earthquake clips, 138LPW, DLC premium	LED	5000K	80	4836	L70 /60,000H	0-10V	UNV	44	35
B	KB Lighting	2X4RDH-LED-2X4-4480-FR	Recessed	2X4' direct-indirect center perforated center basket with frosted lens, furnished by Owner, installed by Electrical Contractor	LED	3000K	80	4480	L70 /60,000H	0-10V	UNV	30	24
	KB Lighting	2X2RDH-LED-2X2-4350-FR		2X2' direct-indirect center perforated center basket with frosted lens, furnished by Owner, installed by Electrical Contractor	LED	5000K	80	4350	L70 /60,000H	0-10V	UNV	30	24
C	Gotham	EVO4	Recessed Downlight	4" Recessed Downlight, Wide Distribution	LED	5000K	85	2000	L80 /60,000	0-10V	MVOLT	24	19.5
	Gotham	EVO4		4" Recessed Downlight, Wide Distribution	LED	5000K	85	1000	L80 /60,000	0-10V	MVOLT	11	8.8
D	Kenall	MPWUD	Wall Mount	48" Wall mount patient room fixture, up/down, matte white finish, tunable white color	LED	5000K	82	8940	L70 /60,000	0-10V	120-277V	56	45
	Emergi-lite	Preceptor		Surface, universal	Single-faced exit sign, universal mount, black body, aluminum face, die-cast aluminum housing, red lettering, concealed chevron knockouts, AC	LED	-	-	-	-	UNV	4	4
EA	Lithonia	LE series	Surface, universal	Single-faced exit sign, universal mount, white die-cast aluminum housing, red lettering, concealed chevron knockouts, AC	LED	-	-	-	-	UNV	4	4	
	McPhibben	CX series		Single-faced exit sign, universal mount, white die-cast aluminum housing, red lettering, concealed chevron knockouts, AC	LED	-	-	-	-	UNV	4	4	
E3A	Emergi-lite	Prestige	Wall/ Surface	Floor proximity electric exit sign, 6" lettering, located 12" above the floor, aluminum face black body, low-profile, single sided, red legend, field-selectable chevrons, for use in public spaces, AC	LED	-	-	-	-	UNV	4	4	
	Everglow	Prestige		Floor proximity electric exit sign, 6" lettering, located 12" above the floor, white face and white body, low-profile, single sided, red legend, field-selectable chevrons, for use in classrooms and shops, AC	LED	-	-	-	-	UNV	4	4	
E4A	Emergi-lite	PHL1RBAPHLS	Wall/ Surface	Photoluminescent floor proximity non-electric exit sign, 6" lettering, located 12" above the floor, impact resistant and corrosion resistant aluminum frame, 25 year life, single sided, red legend, acrylic shield, field-selectable chevrons, non-radioactive and non-toxic	Photoluminescent	-	-	-	-	-	-	-	
	Lithonia	SLX series		Floor proximity non-electric exit sign, 6" lettering, located 12" above the floor, aluminum frame, 20 year life, single sided, red legend, polycarbonate shield, field-selectable chevrons, for use in public spaces	Phosphor-coated borosilicate tubes filled tritium gas	-	-	-	-	-	-	-	
E5A	Emergi-lite	SLX series	Wall/ Surface	Floor proximity non-electric exit sign, 6" lettering, located 12" above the floor, white ABS frame, 20 year life, single sided, red legend, polycarbonate shield, field-selectable chevrons, for use in classrooms and shops	Phosphor-coated borosilicate tubes filled tritium gas	-	-	-	-	-	-	-	
	Everglow	SLX series		Floor proximity non-electric exit sign, 6" lettering, located 12" above the floor, white ABS frame, 20 year life, single sided, red legend, polycarbonate shield, field-selectable chevrons, for use in classrooms and shops	Phosphor-coated borosilicate tubes filled tritium gas	-	-	-	-	-	-	-	
F4	Finelite	Series 12 LED	Suspended	4' Linear Suspended, WCB shielding, open top optic, Decorative end caps, 3 light engines, high light output, double circuit, low-profile ceiling supports and ceiling grid box, ceiling type as shown on Architectural drawings.	LED	3000K	80	2591lm/ft	L90 /100,000	0-10V	MVOLT	46.5	37
	Finelite	Series 12 LED		8' Linear Suspended, WCB shielding, open top optic, Decorative end caps, 3 light engines, high light output, double circuit, low-profile ceiling supports and ceiling grid box, ceiling type as shown on Architectural drawings.	LED	3000K	80	2591lm/ft	L90 /100,000	0-10V	MVOLT	92.5	74
G	Columbia	Pelaton Highbay	Suspended	24' Suspended Linear LED High bay, integral motion sensor, wide distribution, 1000 Lumens Uplight	LED	5000K	80	12,000	L80 /60,000	0-10V	MVOLT	97.5	78
	Color Kinetics	Profile Gen4		Surface	10" Undercabinet Light, hardwired connection with local switch	LED	95	200	L70 50,000hr	Fixed Output	120V	3	3

P7 Sec1 208 Y/120V, 3Ø, 4W Mech 120

Legally Required Standby Branch											
Circuit					A			B		C	
Num.	Poles	Size	Load (VA)	Description	Description	Load (VA)	Size	Poles	Num.		
1	1	20	554	Recp-Rm 104	Recp-Rm 104	554	20	1	2		
3	1	20	554	Recp-Rm 104	Recp-Rm 104	554	20	1	4		
5	1	20	554	Exh Fan-Recp-Nursing Lab	Recp-Nursing Office	554	20	1	6		
7	1	20	554	Recp-Nursing Office	Recp-Rm 104	554	20	1	8		
9	1	20	554	Unit Vent Office Rm104	Recp-Rm 104	554	20	1	10		
11	1	20	554	Recp-Rm 104	Recp-Rm 104	554	20	1	12		
13	1	20	554	Recp-Rm 103 Bath	Recp-Nursing	554	20	1	14		
15	1	20	554	Recp-Rm 165	Recp-Nursing	554	20	1	16		
17	1	20	554	Recp-Rm 164	Recp-Nursing	554	20	1	18		
19	1	20	554	Recp-Library	Nursing Washing Machine	554	20	1	20		
21	1	20	900	Recp-PNP Theory C101	Library Comp	554	20	1	22		
23	1	20	1080	Recp-PNP Theory C101	Library Comp	554	20	1	24		
Totals					4432	4778	4958				

System Circuit breaker panelboard Balanced connected load: 39 A
 Hinged door-in-door cover
 Bot-on breakers
 225A MCB
 NEMA 1 surface-mounted enclosure
 10KA SCCR
 Ground bar

Non-bold text indicates existing circuits, connect to new breaker.
Bold description and load indicates new circuit and wiring.
Bold size and poles indicates new breaker. Remove existing breaker if necessary.
 Fed from DP2

P7 Sec2 208 Y/120V, 3Ø, 4W Mech 120

Critical Branch											
Circuit					A			B		C	
Num.	Poles	Size	Load (VA)	Description	Description	Load (VA)	Size	Poles	Num.		
25	1	20	0	Lights-Exterior Pole Front	Range Rm 104	7196	60	2	26		
27	1	20	0	Lights-Exterior Pole Front	Recp-Rm 165	7196	-	-	28		
29	2	60	0	Spare	0 Dryer Nursing	0	60	2	30		
31	-	-	0	-	0	0	-	-	32		
33	1	30	0	Spare	Recp-Rm 165	0	20	1	34		
35	1	20	0	Recp-Nursing	Recp-Nursing	0	20	1	36		
37	1	20	0	Unit Vent 103	Recp-Nursing Office	0	20	1	38		
39	1	20	0	Unit Vent 104	Lights-Bathroom	0	20	1	40		
41	1	20	0	Rm 164.1 Fan	Recp-Nursing	0	20	1	42		
43	1	20	0	Recp-Rm103	Recp-Rm 104	0	20	1	44		
45	1	20	0	Exh Fan 164.4	Recp-Rm 104	0	20	1	46		
47	1	20	0	Recp-Nursing	Restaurant Electric Heat	0	20	1	48		
49	1	20	0	Recp-Nursing	Restaurant Electric Heat	0	20	1	50		
51	2	30	0	Restaurant Baseboard Heat	AHU Controls	0	20	1	52		
53	-	-	0	Restaurant Baseboard Heat	1440 Recp-Office C105	1440	20	1	54		
Totals					7196	7196	1440				

Hinged door-in-door cover Balanced connected load: 44 A
 Bot-on breakers
 200A MCB
 NEMA 1 surface-mounted enclosure
 10KA SCCR
 Ground bar

Non-bold text indicates existing circuits, connect to new breaker.
Bold description and load indicates new circuit and wiring.
Bold size and poles indicates new breaker. Remove existing breaker if necessary.
 Fed from DP2

BRESLIN RIDYARD FADERO • ARCHITECTS • PLANNERS • ALLENTOWN • PENNSYLVANIA

INTERIOR ALTERATIONS - PHASE 2
 FOR THE
 EASTERN CENTER FOR ARTS and TECHNOLOGY
 WILLOW GROVE, MONTGOMERY COUNTY, PENNSYLVANIA

ELECTRICAL SCHEDULES	drawn	checked	comm. no.
	date	date	

LVE - 20142
E802

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