

POWER	
	DUPLEX RECEPTACLE
	RECEPTACLE SPECIAL, NEMA CONFIGURATION
	FLUSH FLOOR OUTLET
	FLUSH FLOOR BOX, THREE GANG
	EMERGENCY BATTERY UNIT
	RECEPTACLE, SINGLE
	RECEPTACLE, DUPLEX
	RECEPTACLE CEILING MOUNTED, DUPLEX
	RECEPTACLE, QUADPLEX
	RECEPTACLE, DUPLEX WEATHERPROOF (WHILE-IN-USE TYPE)
	RECEPTACLE ON EMERGENCY CIRCUIT, RECEPTACLE AND PLATE SHALL BE RED
	RECEPTACLE, DUPLEX, EMERGENCY RED TWIST LOCK
	RECEPTACLE, DUPLEX, GROUND FAULT CIRCUIT INTERRUPTER
	USB RECEPTACLE
	DOORBELL PUSH BUTTON
	DOOR BELL CHIME
	TRANSFORMER, 120V TO LOW VOLTAGE
	SECURITY ALARM POINT DOOR SWITCH
	SECURITY DOOR LOCK RELEASE - ELECTRIC STRIKE
	SECURITY MOTION DETECTOR
	SECURITY ALARM BELL
	CLOCK OUTLET
	CLOCK OUTLET WITH CONTROL STATION
	TELEVISION OUTLET (RG6)
	JUNCTION BOX 4 11/16 x 4 11/16 x 2 1/8" UNLESS NOTED OTHERWISE
	MAIN DISTRIBUTION OR POWER PANELBOARDS
	FLUSH OR SURFACE MOUNTED BRANCH PANELBOARDS 120/280V
	ELECTRICAL CONNECTION
	DISCONNECT SWITCH
	MOTOR CONTROLLER WITH AUX CONTACTS HOA, PB, PILOT AND CONTROL TRANSFORMER.
	TELEVISION OUTLET (RG6 AND 2-CAT5)
	FUSED DISCONNECT SWITCH
	ELECTRICAL TRANSFORMER
	NON-FUSED DISCONNECT SWITCH RATING AS NOTED
	CIRCUIT POWER TRANSFORMER 480V PRIMARY, 120V SECONDARY
	CIRCUIT BREAKER
	FUSE
	GROUND
	ELECTRICAL MOTOR CONNECTION - VERIFY HP, AND PHASE
	ELECTRICAL CONNECTION

LIGHTS	
	SURFACE MOUNTED OR RECESSED LED FIXTURE
	WALL MOUNTED LED FIXTURE
	SURFACE/RECESSED 1 x 4 LED LIGHT FIXTURE
	SURFACE/RECESSED 2 x 4 LED LIGHT FIXTURE
	PHOTOCELL
	EXIT LIGHT FIXTURE CEILING MOUNTED
	EXIT LIGHT FIXTURE WALL MOUNTED
	LIGHT FIXTURE CONNECTED TO EMERGENCY POWER
	BATTERY OPERATED EMERGENCY LIGHT - WALL MOUNTED
	POLE MOUNTED LIGHT FIXTURE - SINGLE HEAD
	SURFACE / RECESSED LED FIXTURE
	WALL MOUNTED LED FIXTURE
	BOLLARD LIGHT FIXTURE
	FLOOD LIGHT GROUND MOUNTED

WIRE	
	HOMERUN
	WIRING CONCEALED IN CEILING OR WALL
	WIRING CONCEALED UNDER OR IN FLOOR
	WIRING EMERGENCY
	A= GROUND; B= NEUTRAL; C= HOT
	WIRING TURNED UP
	WIRING TURNED DOWN
	WIREMOLD APENDED NOTE DENOTES TYPE
	CABLE TRAY
	HEAT TRACE CABLE
	CARD KEY ACCESS CONTROL
	CEILING MOUNTED FIRE ALARM HORN / STROBE

FIRE	
	IONIZATION SMOKE
	THERMAL DETECTOR 135° FIXED
	PHOTO DETECTOR PHOTO ELECTRIC
	PULL STATION
	STROBE UNIT 30CD
	COMBINATION PHOTOELECTRIC & CARBON MONOXIDE DETECTOR
	FIRE ALARM CONTROL PANEL
	FIRE ALARM ANNUNICATOR PANEL
	FIRE ALARM, TAMPER SWITCH
	FIRE ALARM, FLOW SWITCH
	HORN STROBE
	FIRE ALARM, SPEAKER
	FIRE ALARM, SPEAKER STROBE

SWITCHES	
	SWITCH, SINGLE POLE
	SWITCH, THREE-WAY
	SWITCH, FOUR-WAY
	SWITCH, DIMMER
	SWITCH, DOOR SECURITY
	SWITCH, KEYED
	SWITCH, PILOT LIGHT
	SWITCH, CONTROLLING FIXTURES MARKED WITH a
	SWITCH, MANUAL TIMER
	TT SWITCH FOR MOTORS 1/2HP OR SMALLER
	PUSH BUTTON CONTROL STATION
	PUSH BUTTON "UP-DOWN-DN"
	PANIC BUTTON
	MOTION DETECTOR
	SECURITY GLASS BREAK DETECTOR

	SINGLE CIRCUIT PIR WALL SENSOR 'SCHNEIDER ELECTRIC' #SLSPWS1277UX(COLOR).
	DUAL CIRCUIT PIR WALL SENSOR 'SCHNEIDER ELECTRIC' #SLSPWD1277UX(COLOR).
	LOW VOLTAGE ULTRASONIC CEILING SENSOR 'SCHNEIDER ELECTRIC' #SLSCUS2000 (SENSOR); 'SCHNEIDER ELECTRIC' #SLSPPI277 (POWER PACK)
	LOW VOLTAGE CEILING MOUNT PIR OCCUPANCY SENSOR 'SCHNEIDER ELECTRIC' #SLSCI2000 (SENSOR); 'SCHNEIDER ELECTRIC' #SLSPPI277 (POWER PACK).
	LOW VOLTAGE CEILING MOUNT DUAL-TECHNOLOGY OCCUPANCY SENSOR 'SCHNEIDER ELECTRIC' #SLSCDT2000 (SENSOR); 'SCHNEIDER ELECTRIC' #SLSPPI277 (POWER PACK).

COMMUNICATION / SECURITY	
	TELEPHONE OUTLET BOX AND COVER PLATE
	TELEPHONE OUTLET BOX, AND COVER PLATE, PUBLIC
	TELEPHONE OUTLET FLOOR BOX WITH COVER PLATE
	TELEDATA OUTLET
	TELEDATA OUTLET FLOOR BOX WITH COVER PLATE
	DATA OUTLET
	SPEAKER, FLUSH CEILING MOUNTED
	SPEAKER, WALL MOUNTED
	SPEAKER HORN TYPE, WALL MOUNTED
	SOUND SYSTEM AMPLIFIER
	INTERCOMM HANDSET
	INTERCOMM MASTER PANEL
	INTERCOMM SYSTEM POWER SUPPLY
	DEMO: POINT WHERE EXISTING TO REMAIN STOPS AND DEMOLITION BEGINS REVISED: POINT WHERE NEW WORK CONNECTS TO EXISTING TO REMAIN

	SECURITY CAMERA		SECURITY CAMERA (360°)
	AUDIO/VISUAL WALL DEVICE		AUDIO/VISUAL WALL DEVICE
	WIRELESS ACCESS POINT		

GENERAL NOTES

1. INSTALLATION SHALL COMPLY WITH 2009 INDIANA ELECTRIC CODE. ALL ITEMS/ EQUIPMENT INSTALLED EITHER IN PART OR ASSEMBLY SHALL BE UL/ NRTL LISTED PER CODE.
2. SUBMIT SUBMITTALS ON ALL EQUIPMENT, DEVICES AND MATERIALS.
3. COORDINATE WITH OTHER DISCIPLINES AND OWNER TO VERIFY FINAL LOCATIONS OF DEVICES AND CONNECTIONS.
4. SLOPED PIPING HAS RIGHT OF WAY OVER CONDUIT.
5. INSTALL PENETRATION FIRESTOPPING AS INDICATED AND REQUIRED.
6. HEIGHTS OF SUSPENDED EQUIPMENT SHALL BE TO THE BOTTOM OF THE UNIT.
7. HEIGHTS OF WALL MOUNTED EQUIPMENT SHALL BE TO THE CENTER OF THE UNIT.
8. IF MOUNTING HEIGHT IS NOT INDICATED, INSTALL AS HIGH AS POSSIBLE.
9. INSTALL SLEEVES AS NECESSARY:
 - a. SLEEVES FOR RACEWAYS AND CABLES SHALL BE SCHEDULE 40 GALVANIZED STEEL PIPE SLEEVES, ASTM A53/ A53M TYPE E, GRADE B WITH PLAIN ENDS.
 - b. FOR RECTANGULAR OPENINGS USE GALVANIZED SHEET STEEL WITH A THICKNESS OF 0.052 INCHES FOR OPENINGS SMALLER THAN 50 INCHES IN PERIMETER AND 0.138 INCHES FOR THOSE LARGER.
 - c. SLEEVES SHALL BE FLUSH WITH WALLS.
 - d. EXTEND FLOOR SLEEVES 2" ABOVE FINISHED FLOOR LEVEL.
 - e. IF NECESSARY GROUT SPACE OUTSIDE OF SLEEVE IN CONCRETE AND MASONRY WALLS AND FLOOR.
 - f. IN NON RATED FIRE WALLS AND FLOORS SEAL ANNULAR SPACE WITH JOINT SEALANT.
 - g. ALWAYS MAINTAIN FIRE RATING OF ASSEMBLY.
9. IF REQUIRED FOR HYDROSTATIC PRESSURE REASONS, INSTALL EPDM SEALING ELEMENTS WITH TWO PLASTIC PRESSURE PLATES AND STAINLESS STEEL CONNECTING BOLTS AND NUTS.
10. GROUT SHALL BE NONMETALIC SHRINK-RESISTANT TYPE THAT IS NONSTAINING AND NON CORROSIVE.
11. EXTEND FLOOR SLEEVES 2" ABOVE FINISHED FLOOR.
12. MAINTAIN FIRE RATING OF FIRE-RATED ASSEMBLIES.
13. SEAL PENETRATION OF INDIVIDUAL RACEWAYS AND CABLES WITH FLEXIBLE BOOT-TYPE FLASHING.

DRAWING INDEX	
DRAWING No.	DRAWING TITLE
E001	ELECTRICAL SYMBOLS AND ABBREVIATIONS
E002	ELECTRICAL DETAILS
E101	LIGHTING DEMOLITION PLAN
E102	POWER DEMOLITION PLAN
E201	LIGHTING PLAN
E301	POWER PLAN
E401	ELECTRICAL SCHEDULES
E501	ELECTRICAL SPECIFICATIONS

NEW CLASSROOM RENOVATION
NORTHWEST CONSOLIDATED SCHOOL
DISTRICT OF SHELBY COUNTY
FAIRLAND, IN 46126

PROJECT: 23036
DATE: 04-20-2023
CONCEPTUAL DESIGN

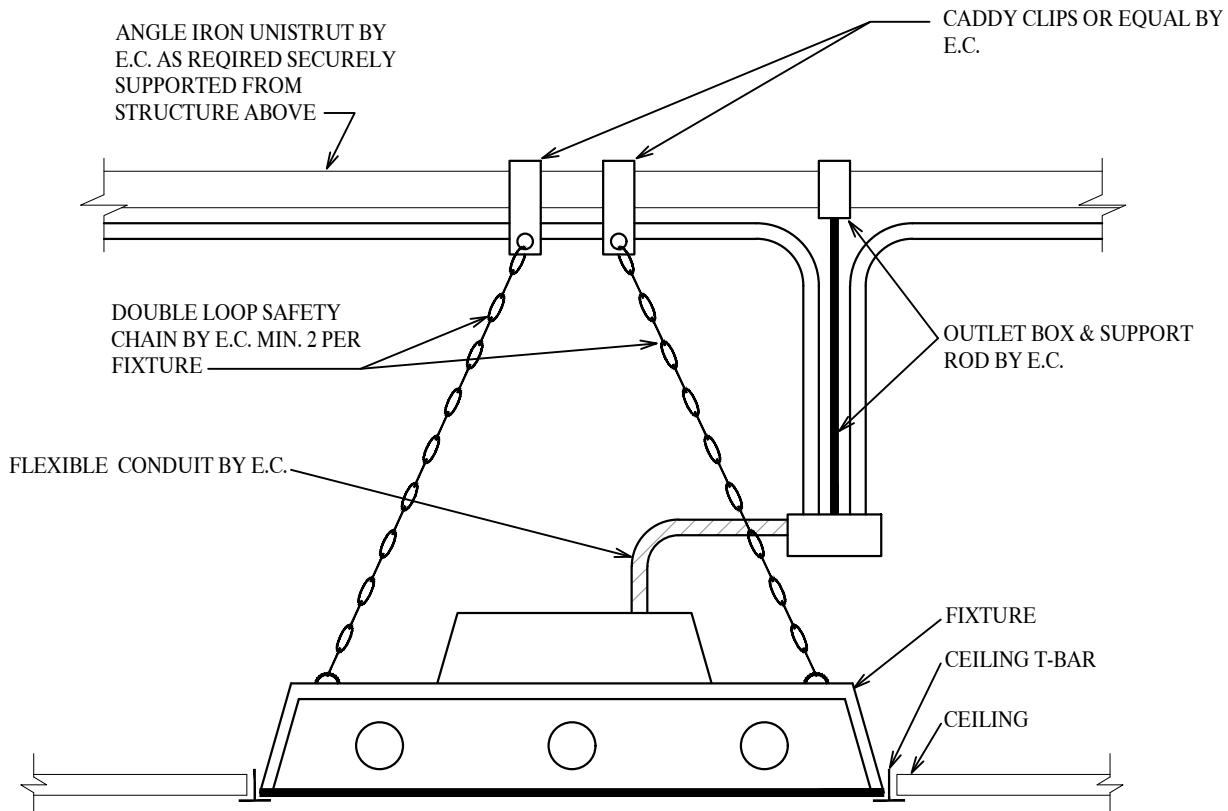
ELECTRICAL
ABBREVIATIONS
& SYMBOLS

E001

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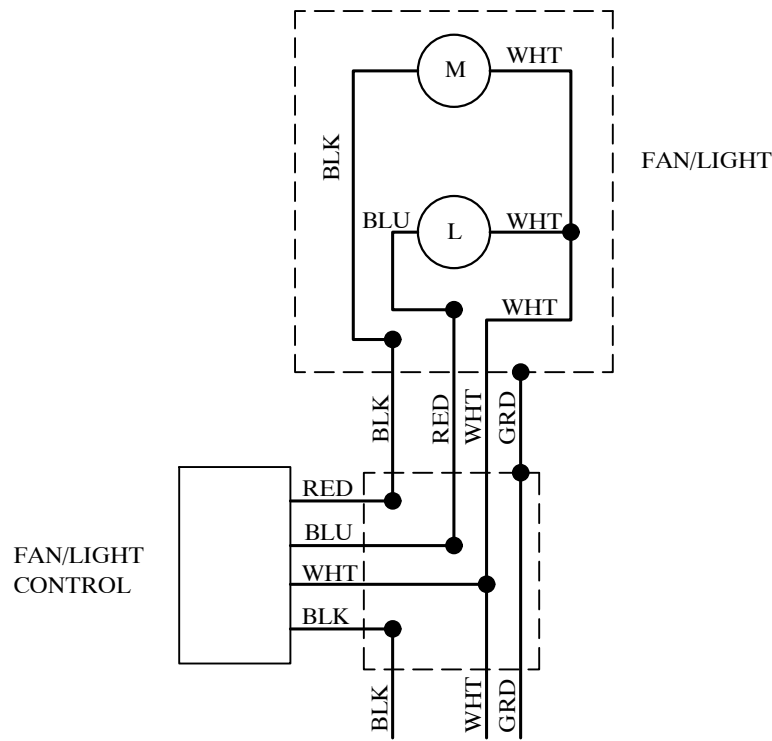
CONDUCTOR INSULATION AND
MULTICONDUCTOR SCHEDULE TABLE

	THHN-THWN	XHHW	MI	NM	MC	UF	AC
SERVICE ENTRANCE	●						
EXPOSED FEEDERS	●						
CONCEALED FEEDERS	●				●		●
FEEDERS BELOW CONCRETE		●					
FEEDERS UNDERGROUND		●					
FEEDERS BELOW RAISED FLOORING	●						
FEEDERS IN CABLE TRAY	●				●		●
EXPOSED BRANCH CIRCUITS	●						
CONCEALED BRANCH CIRCUITS	●				●		●
BRANCH CIRCUITS BELOW CONCRETE	●						
BRANCH CIRCUITS UNDERGROUND		●					
BRANCH CIRCUITS BELOW RAISED FLOORING	●						
BRANCH CIRCUITS IN CABLE TRAY	●						
CLASS 1 CONTROL CIRCUITS	●						
CLASS 2 CONTROL CIRCUITS	●						



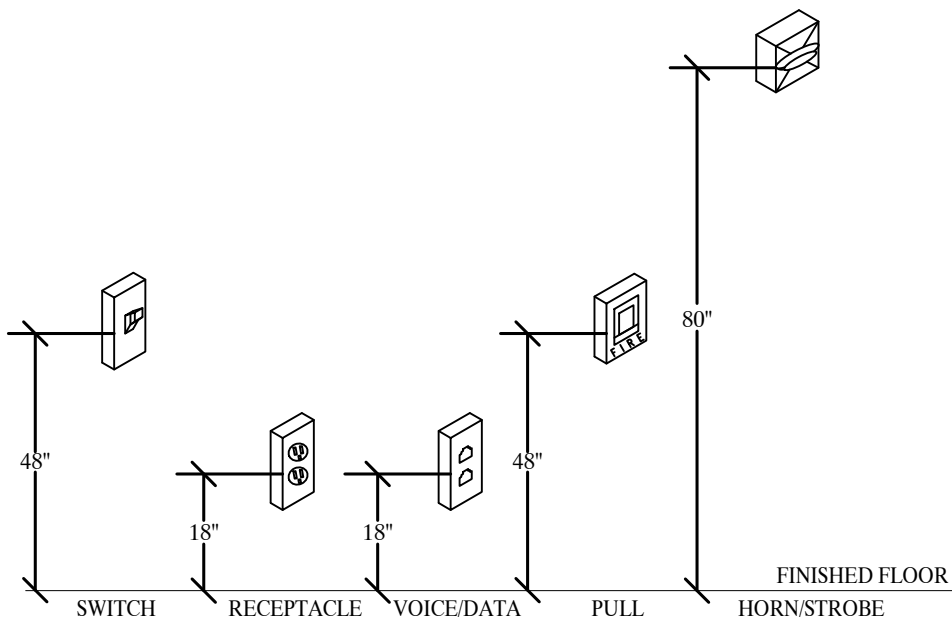
NOTE:
LIGHTING FIXTURES MUST BE SUPPORTED
INDEPENDENTLY OF CEILING SYSTEM.
UPON WRITTEN REQUEST TO THE
ENGINEER, OTHER MEANS OF SUPPORT
WILL BE CONSIDERED FOR APPROVAL.

LAY-IN FIXTURES SUPPORT DETAIL
NOT TO SCALE



AIR KING #AKDT60

FAN/LIGHT SWITCH SCHEMATIC
NOT TO SCALE



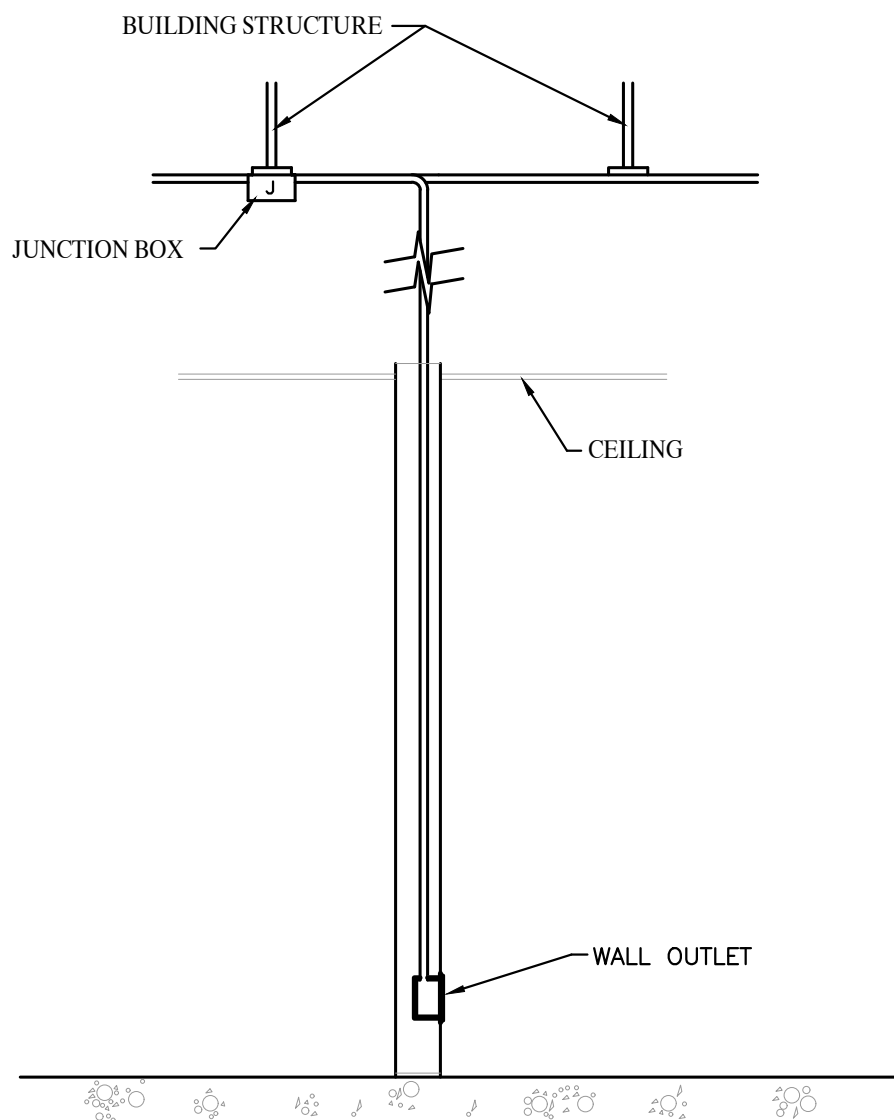
NOTE: ALL DIMENSIONS ARE
TYPICAL FOR GIVEN DEVICE
UNLESS OTHERWISE NOTED ON
PLANS.

OPERABLE DEVICE MOUNTING HEIGHT DETAIL
NOT TO SCALE

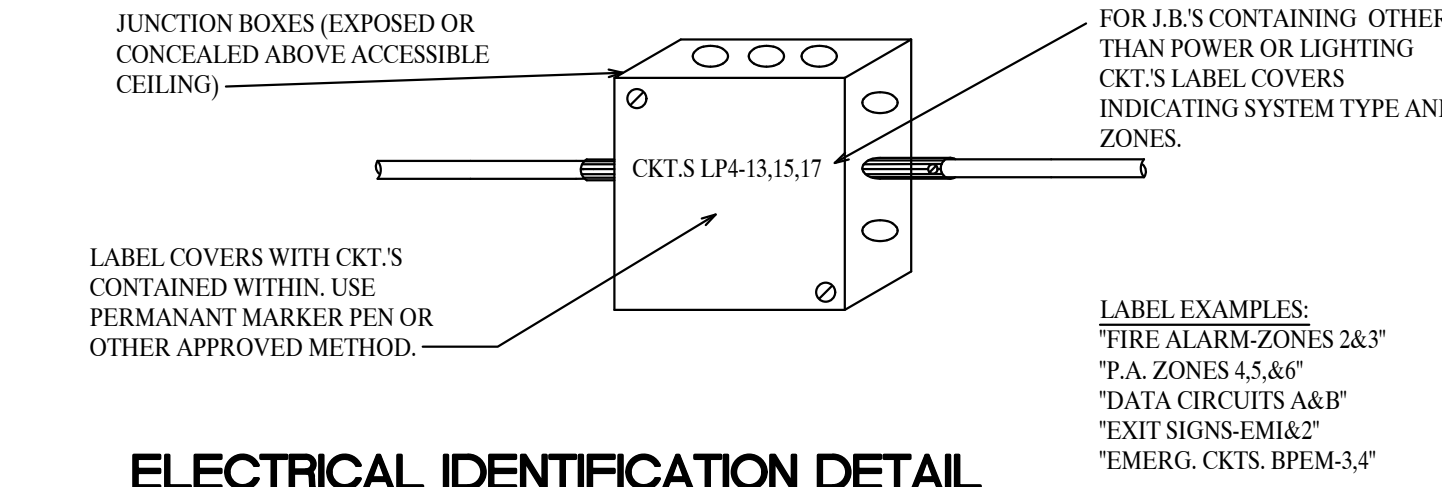
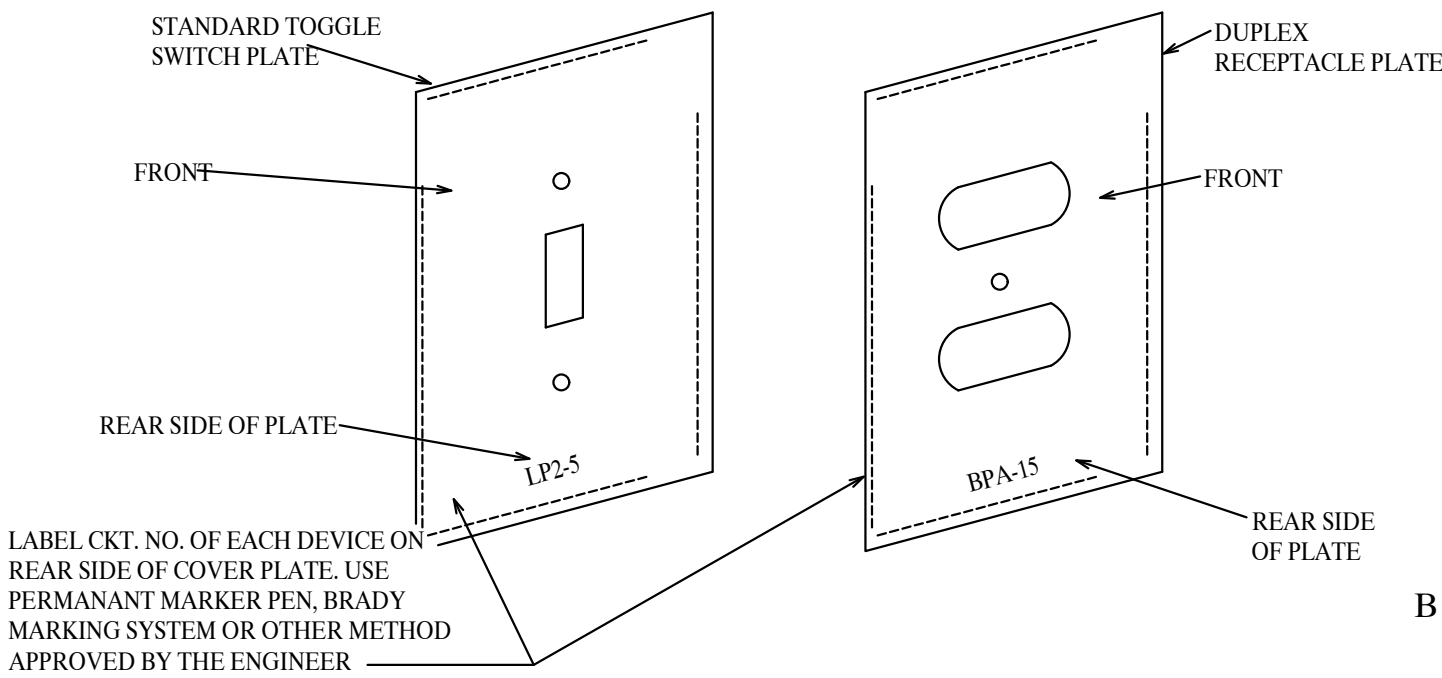
SCHEDULE OF CONDUIT APPLICATIONS

CONDUIT LOCATION OR APPLICATION	CONDUIT TYPE						
	RIGID	INTERMEDIATE	E.M.T.	FLEXIBLE	FLEXIBLE W.W.P. JACKET	P.V.C. SCHED. 40	A.C. CABLE
IN CONCRETE SLAB (NOT LARGER THAN 1")		3					
BELOW LOWEST FLOOR SLAB		3				2	
CONCEALED IN WALLS, ABOVE CEILINGS AND IN FURRED SPACES		3	1				
INSIDE, ABOVE BOTTOM OF ROOF STEEL							○
FEEDER, POWER AND SIGNAL CIRCUITS RUN EXPOSED	3	3					
FINAL CONNECTION TO EQUIP. SUBJECT TO VIBRATION				○			
FINAL CONNECTION TO EQUIP. IN DAMP LOCATIONS					○		
SHORT CONNECTIONS WHERE NON-FLEXIBLE CONDUIT IS IMPRACTICAL				○			

NOTE:
○ - TYPE OF CONDUIT TO BE USED.
1 - E.M.T. SHALL NOT BE USED IN SIZES LARGER THAN 2 INCH.
2 - CONVERT TO RIGID OR INTER. THROUGH SLAB.
3 - USE THREADED FITTINGS ONLY.



TYPICAL DETAIL FOR OVERHEAD FEED TO
INTERIOR WALL OUTLET
NO SCALE



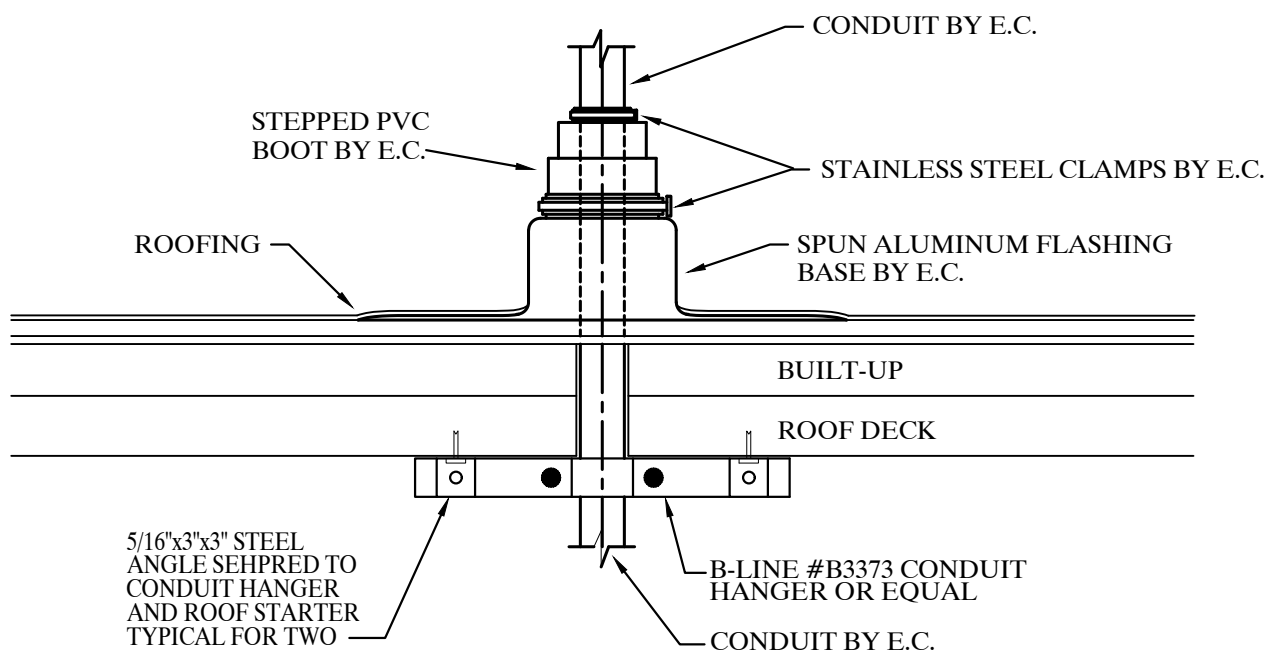
ELECTRICAL IDENTIFICATION DETAIL
NO SCALE

MINIMUM SIZE
EQUIPMENT
GROUNDING
CONDUCTORS FOR
GROUNDING RACEWAY
AND EQUIPMENT

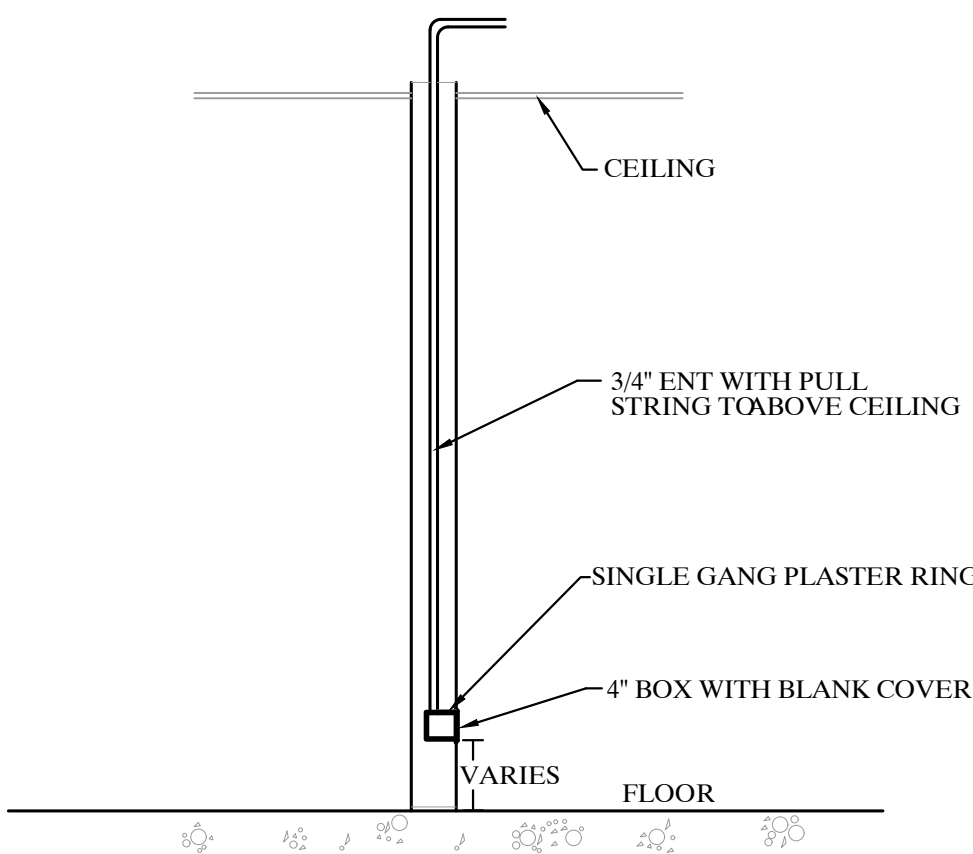
AUTOMATIC OVER CURRENT SETTING (AMPS - NOT EXCEEDING)	SIZE (AWG OR KCMIL)	
	COOPER	ALUMINUM OR COPPER CLAD ALUMINUM
15	14	12
20	12	10
60	10	8
100	8	6
200	6	4
300	4	2
400	3	1
500	2	1/0
600	1	2/0
800	1/0	3/0
1000	2/0	4/0
1200	3/0	250
1600	4/0	350
2000	250	400
2500	350	400
3000	400	600
4000	500	600
5000	700	750
6000	800	1200

CONDUCTOR
SIZING FOR RHW,
THHW, THW, THWN,
XHHW, USE, ZW AT
167°F

SIZE AWG OR KCMIL	COOPER	ALUMINUM
12	25	20
10	35	30
8	50	40
6	65	50
4	85	65
3	100	75
2	115	90
1	130	100
1/0	150	120
2/0	175	135
3/0	200	155
4/0	230	180
250	255	205
300	285	230
350	310	250
400	335	270
500	380	310
600	420	340
700	460	375
750	475	385
800	490	395
900	520	425
1000	545	445
1250	590	485
1500	625	520
1750	650	545
2000	665	560



TYPICAL ROOF PENETRATION
NO SCALE



TYPICAL T.V. OUTLET ROUGH-IN DETAIL
NO SCALE

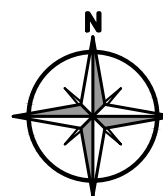
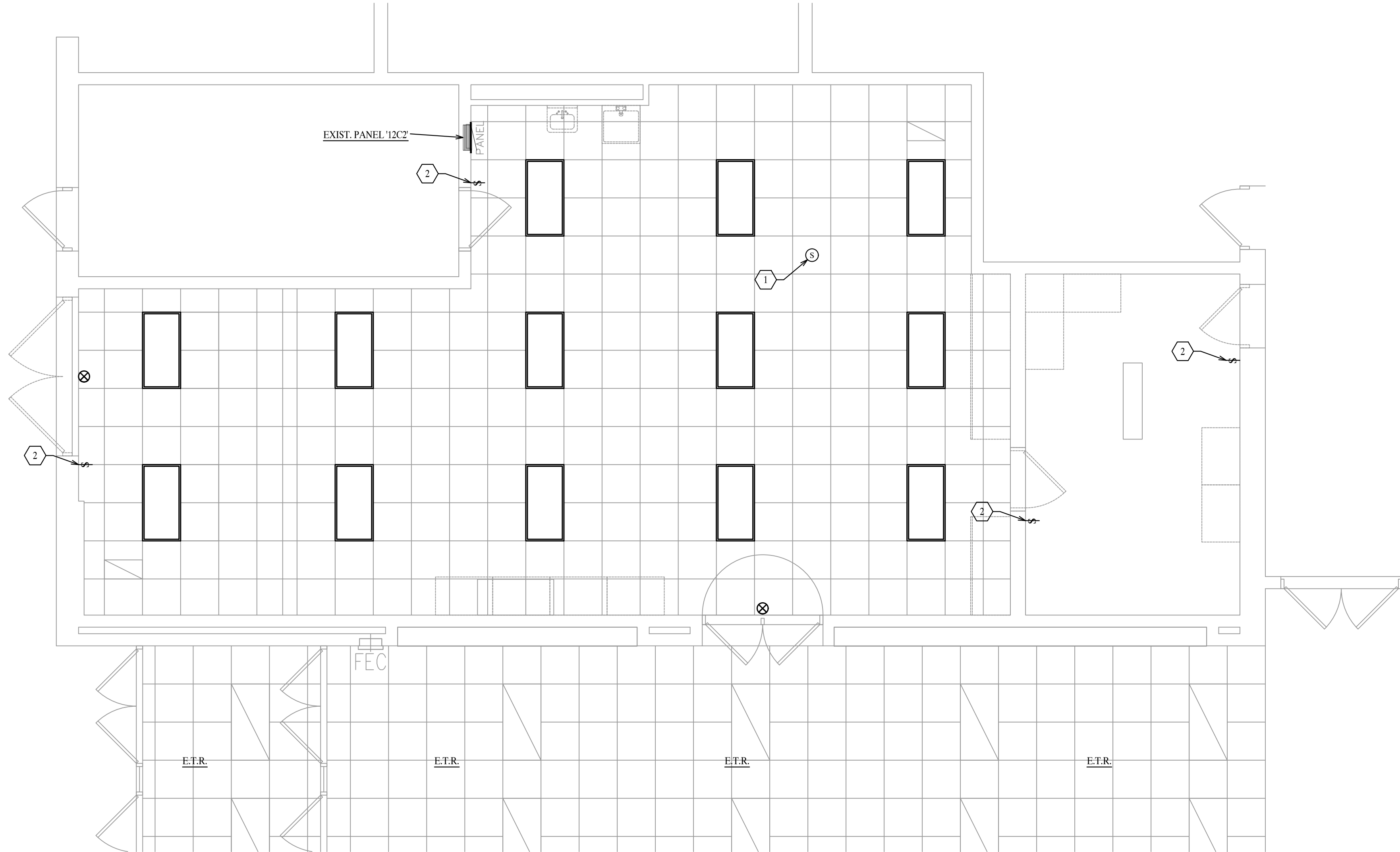
NEW CLASSROOM RENOVATION
NORTHWEST CONSOLIDATED SCHOOL
DISTRICT OF SHELBY COUNTY
FAIRLAND, IN 46126

PROJECT: 23036
DATE: 04-20-2023
CONCEPTUAL DESIGN

ELECTRICAL
DETAILS

E002

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DEMOLITION FLOOR PLAN - LIGHTING

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

GENERAL NOTES:

- A. REMOVE EXISTING LIGHT FIXTURES FROM PROJECT SPACE. EXISTING LIGHTING CIRCUITS SHALL REMAIN TO FEED NEW LIGHT FIXTURES
- B. (E.T.R.) - EXISTING TO REMAIN

PLAN NOTES:

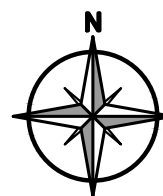
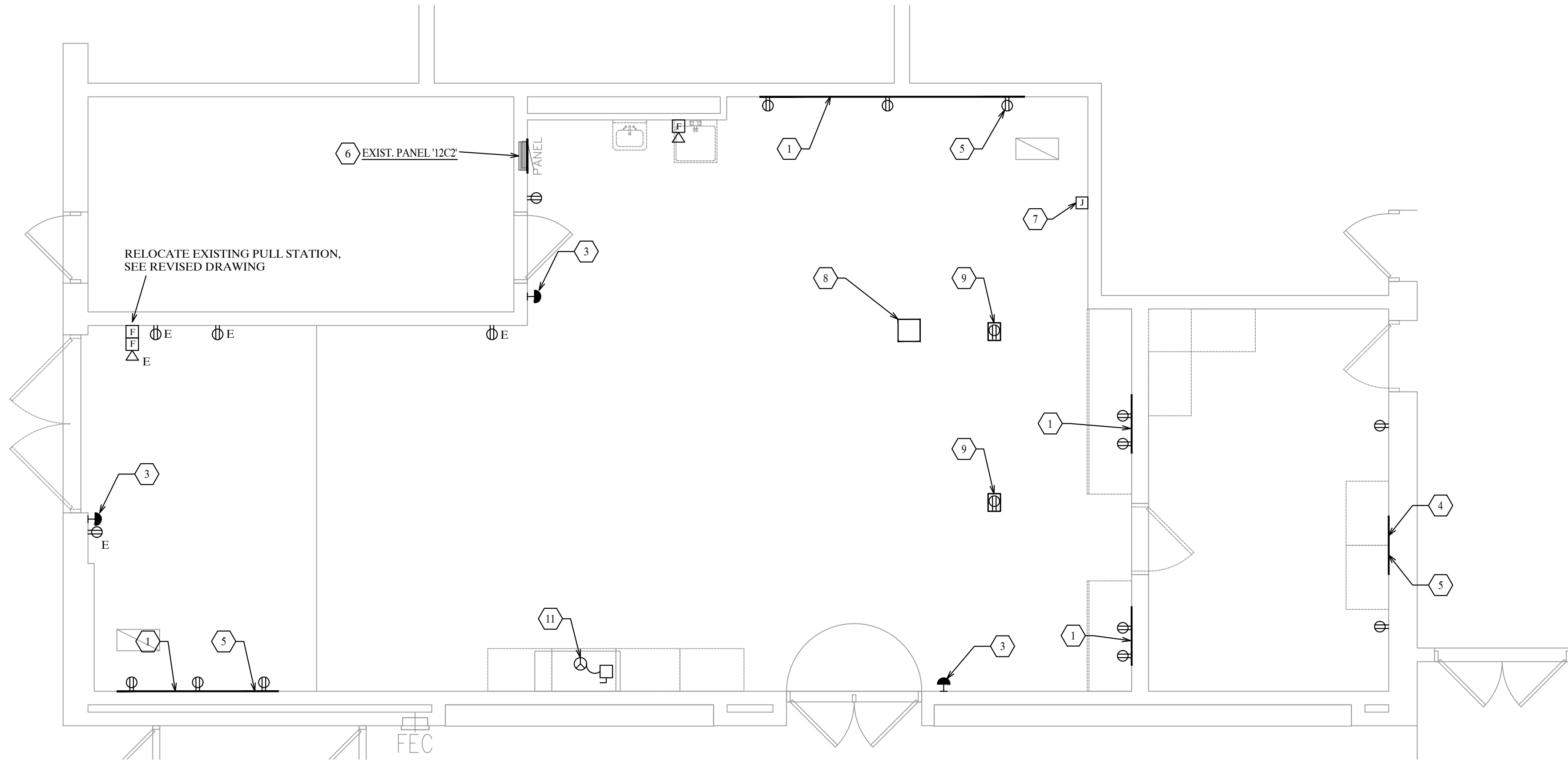
- 1. REMOVE CEILING SPEAKER AND REINSTALL IN NEW CEILING.
- 2. REMOVE EXISTING SWITCH

PROJECT: 23036
DATE: 04-20-2023
CONCEPTUAL DESIGN

ELECTRICAL
DEMOLITION
PLAN LIGHTING

E101

NEW CLASSROOM RENOVATION
NORTHWEST CONSOLIDATED SCHOOL
DISTRICT OF SHELBY COUNTY
FAIRLAND, IN 46126



DEMOLITION FLOOR PLAN - POWER

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

GENERAL NOTES:

- ALL EXISTING ELECTRICAL DEVICES SHALL REMAIN UNLESS OTHERWISE NOTED OR INDICATED.
- CONTRACTOR SHALL REMOVE EXISTING BRANCH CIRCUIT CONDUIT AND WIRE COMPLETE BACK TO THE PANEL FOR DEVICES THAT ARE BEING REMOVED.
- CONTRACTOR SHALL REMOVE EXISTING CEILING SPEAKERS AND RE-INSTALL IN NEW CEILING.
- EXISTING FIRE ALARM DEVICES SHALL REMAIN

PLAN NOTES:

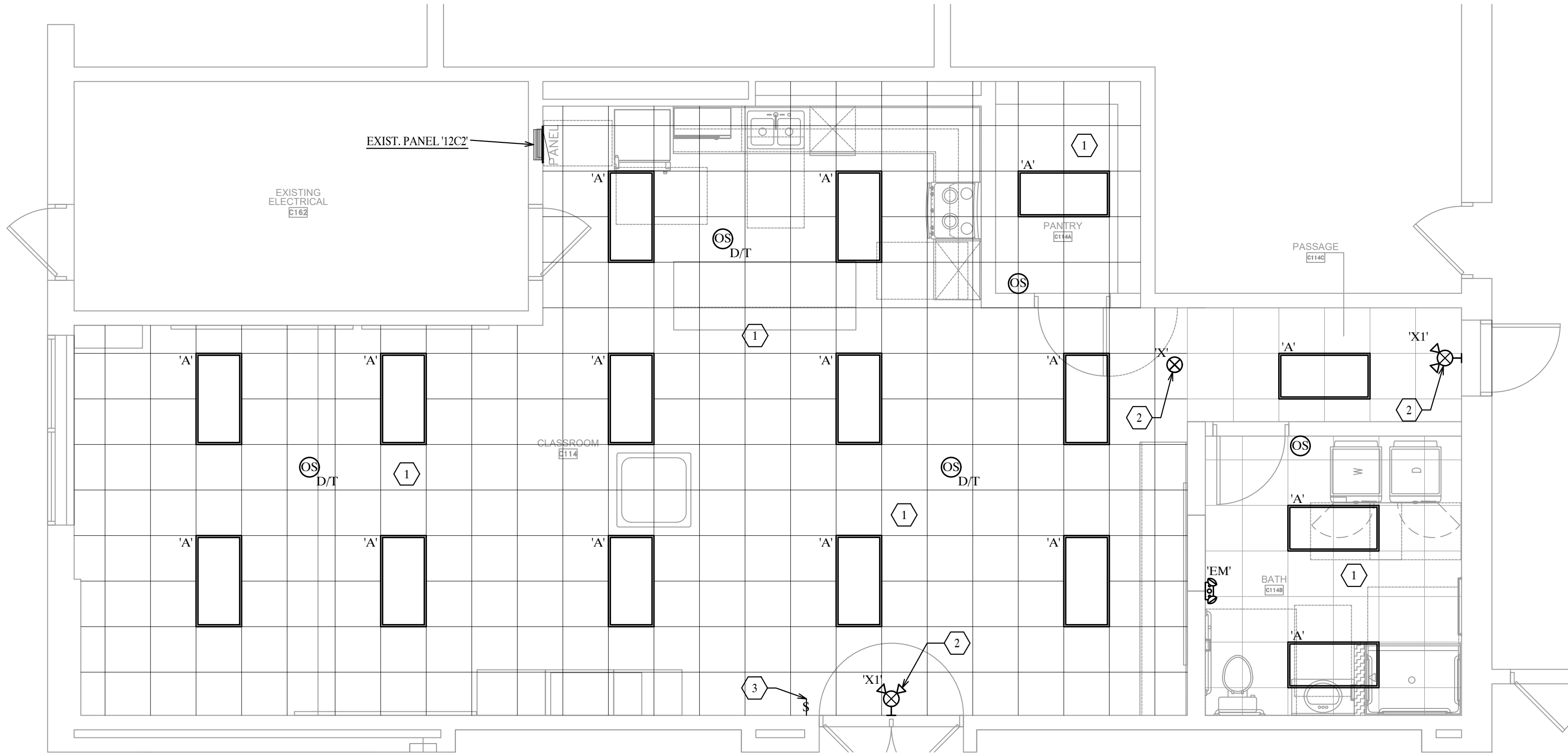
- SURFACE RACEWAY TO BE REMOVED, REMOVE POWER AND LOW-VOLTAGE WIRING.
- EXISTING VRF UNIT TO REMAIN.
- MUSHROOM PUSH-BUTTON TO BE REMOVED.
- NETWORK TERMINAL BLOCK TO BE REMOVED.
- DATA OUTLET TO BE REMOVED.
- EXISTING PANEL TO REMAIN.
- PROVIDE COVER PLATE FOR EXISTING JUNCTION BOX.
- CEILING MOUNTED PROJECTOR TO BE REMOVED.
- CEILING PULL DOWN RETRACTABLE RECEPTACLE TO BE REMOVED.

NEW CLASSROOM RENOVATION
NORTHWEST CONSOLIDATED SCHOOL
DISTRICT OF SHELBY COUNTY
FAIRLAND, IN 46126

PROJECT: 23036
DATE: 04-20-2023
CONCEPTUAL DESIGN

ELECTRICAL
DEMOLITION
PLAN POWER

E102

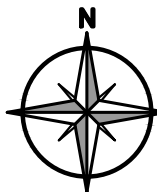
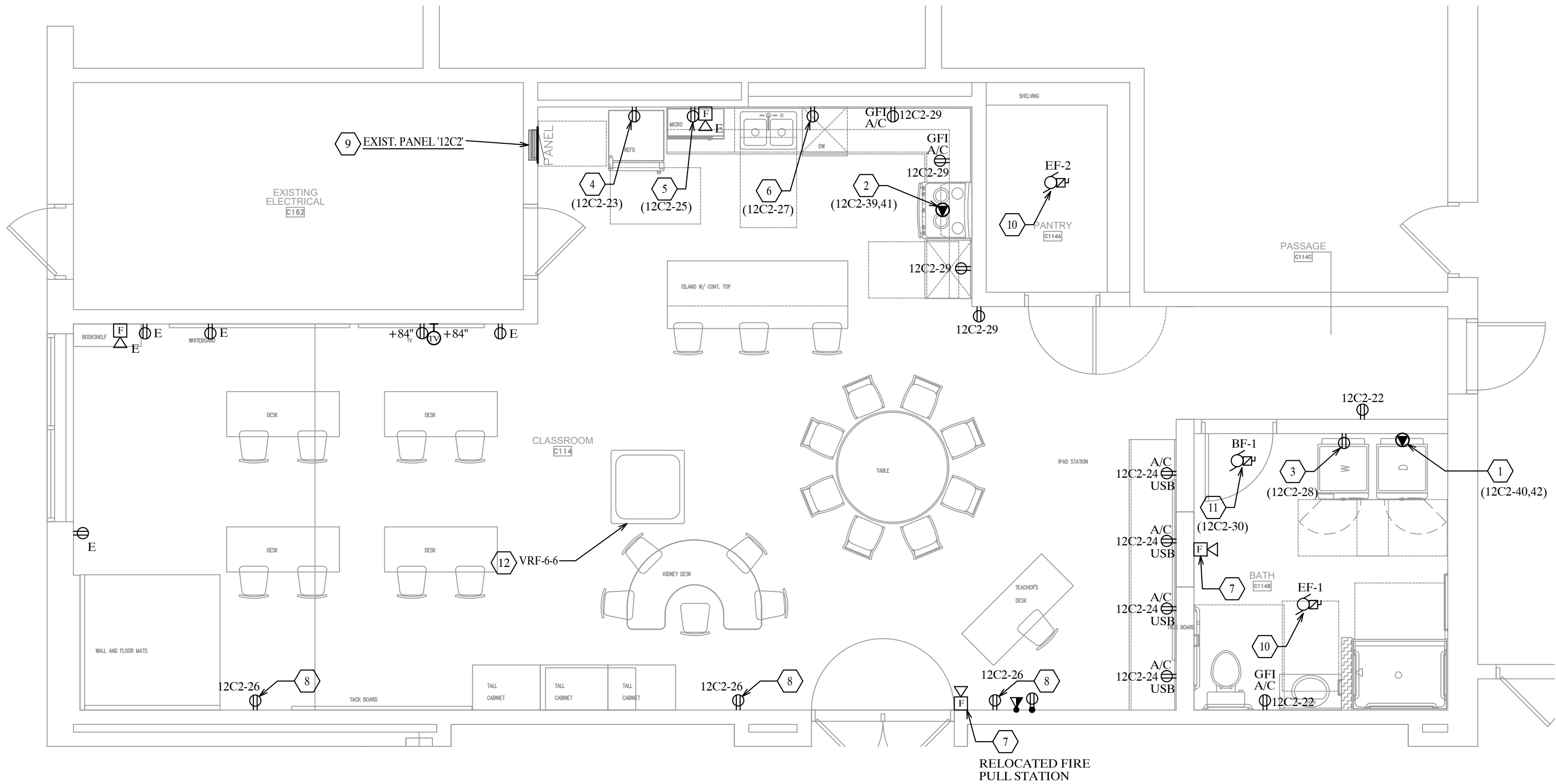


- # PLAN NOTES:
1. CONNECT NEW LIGHT FIXTURES TO EXISTING LIGHTING CIRCUITS IN THIS AREA AND SWITCH AS SHOWN.
 2. CONNECT NEW EXIT/EMERGENCY LIGHT TO EXISTING EXIT LIGHT CIRCUIT.
 3. PROVIDE OVERRIDE SWITCH FOR OCCUPANCY SENSOR.

NEW CLASSROOM RENOVATION
NORTHWEST CONSOLIDATED SCHOOL
DISTRICT OF SHELBY COUNTY
FAIRLAND, IN 46126

PROJECT: 23036
DATE: 04-20-2023
CONCEPTUAL DESIGN

REVISED
FLOOR PLAN
LIGHTING



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

GENERAL NOTES:

- ALL WORK SHALL BE IN ACCORDANCE WITH THE BEST QUALITY STANDARDS OF THE TRADE, AND SHALL CONFORM WITH ALL FEDERAL, STATE, AND LOCAL CODES AND STANDARDS.
- THE CONTRACTOR SHALL INCLUDE IN BID PROPOSAL ALL COSTS REQUIRED TO COMPLETELY AND PROPERLY INSTALL ALL WORK REQUIRED FOR THE PROJECT, AND SHALL EXAMINE THE SCOPE OF WORK OF OTHER TRADES PRIOR TO SUBMITTING A BID PROPOSAL.
- CONSTRUCTION DOCUMENTS SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE, HOWEVER, SYSTEMS HAVE BEEN SHOWN DIAGRAMMATICALLY AND IN SOME CASES, ENLARGED FOR CLARITY. ANY OFFSETS, ADDITIONAL FITTINGS, AND/OR APPURTENANCES REQUIRED TO PROVIDE A COMPLETE AND COORDINATED SYSTEM SHALL BE BORNE BY THE CONTRACTOR.
- ALL CIRCUITS OVER 100' IN LENGTH SHALL BE A MINIMUM #10 AWG CONDUCTOR.
- WIRING SYSTEM SHALL BE CONDUIT AND WIRE. MINIMUM WIRE SIZE SHALL BE #12 AWG. USE SOLID CONDUCTOR FOR #10 AWG AND SMALLER, USE STRANDED IN LARGER SIZES.
- ALL COVER PLATES FOR ELECTRICAL DEVICES SHALL BE OF A COLOR TO MATCH THE AREA COLOR SCHEME AS DIRECTED BY THE OWNER.
- THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY CONDUIT, WIRING, PANELS, LIGHTING, ELECTRICAL DEVICES, SWITCHES AND OTHER COMPONENTS IN COMPLETE COMPLIANCE WITH ALL CURRENT FEDERAL, STATE AND LOCAL CODES AND ORDINANCES.
- INSTALL GROUND WIRE IN ALL FEEDERS AND BRANCH CIRCUITS.
- MINIMUM CONDUIT SIZE SHALL BE 3/4".
- ALL DEDICATED RECEPTACLES SHALL BE 20 AMP RATED.
- 'E' INDICATES EXISTING DEVICE TO REMAIN.
- CONTRACTOR SHALL UPDATE EXISTING PANEL DIRECTORY AFTER NEW WOK IS COMPLETE.

PLAN NOTES:

- 30A-208V-1Ø OUTLET FOR DRYER. INSTALL 2-#10, 1-#10 GND IN A 3/4"C.
- 50A, 208V-1Ø CONNECTION FOR ELECTRICAL RANGE. INSTALL 2-#8, 1-#8 GND IN A 3/4"C.
- DEDICATED RECEPTACLE FOR WASHER.
- DEDICATED RECEPTACLE FOR REFRIGERATOR.
- DEDICATED RECEPTACLE FOR MICROWAVE.
- DEDICATED RECEPTACLE FOR DISHWASHER
- INSTALL NEW FIRE ALARM HORN/STROBE. NEW HORN/STROBE SHALL BE COMPATIBLE WITH 'SIMPLEX' #4100 SERIES FIRE ALARM SYSTEM. CONNECT TO EXISTING SYSTEM.
- NEW DEVICE SHALL BE SURFACE MOUNT AND FED FROM ABOVE WITH 'WIREMOLD' #200. PAINT WIREMOLD TO MATCH WALL.
- INSTALL (1) 30A-2P AND (1) 50A-2P CIRCUIT BREAKER IN EXISTING PANEL '12C2' FOR FEEDS TO NEW RANGE AND DRYER. NEW BREAKERS SHALL BE COMPATIBLE WITH 'SQUARE D' #NQ SERIES PANELBOARD.
- 20A, 120V-1Ø CONNECTION FOR EXHAUST FAN. CONNECT TO LIGHTING CIRCUIT IN THIS ROOM AND CONTROL WITH LIGHTS.
- 20A, 120V-1Ø CONNECTION FOR BOOSTER FAN. INTERLOCK WITH DEVICE CONTROLS.
- 20A, 208V-1Ø CONNECTION FOR NEW VRF. UNIT SHALL BE POWERED FROM EXISTING UNIT.

PROJECT: 23036
DATE: 04-20-2023
CONCEPTUAL DESIGN

REVISED
FLOOR PLAN
POWER

E301

NEW CLASSROOM RENOVATION
NORTHWEST CONSOLIDATED SCHOOL
DISTRICT OF SHELBY COUNTY
FAIRLAND, IN 46126

PANEL: '12C2' (EXISTING)				VOLTS: 120/208				MTG: SURFACE			
				AMPS: 225				PHASE: 3			
				CKTS: 42				WIRE: 4			
LOCATION: CLASSROOM				LUGS: MCB				FEED: BOTTOM/TOP			
REMARKS	<LOAD>			POLE	CIR. NO.	CIR. NO.	POLE	<LOAD>			REMARKS
	ØA	ØB	ØC					ØA	ØB	ØC	
EXIST. LOAD				20	1	2	20				EXIST. LOAD
EXIST. LOAD				20	3	4	20				EXIST. LOAD
EXIST. LOAD				20	5	6	20				EXIST. LOAD
EXIST. LOAD				20	7	8	20				EXIST. LOAD
EXIST. LOAD				20	9	10	20				EXIST. LOAD
EXIST. LOAD				20	11	12	20				EXIST. LOAD
EXIST. LOAD				20	13	14	20				EXIST. LOAD
EXIST. LOAD				20	15	16	20				EXIST. LOAD
EXIST. LOAD				20	17	18	20				EXIST. LOAD
EXIST. LOAD				20	19	20	20				EXIST. LOAD
EXIST. LOAD				20	21	22	20		1.1		RECEPTS
REFRIG.			0.5	20	23	24	20			1.1	RECEPTS
MICRO.	1.0			20	25	26	20	1.1			RECEPTS
DISHWASHER		1.0		20	27	28	20		1.0		WASHER
RECEPTS			1.1	20	29	30	20			0.5	BF-1
SPARE				20	31	32	20				SPARE
SPACE					33	34					SPACE
SPACE					35	36					SPACE
SPACE					37	38					SPACE
ELEC. RANGE		3.2		50	39	40	30		1.8		DRYER
			3.2	2	41	42	2			1.8	
	-	-	-					-	-	-	

LIGHT FIXTURE SCHEDULE						
TYPE	MOUNTING	LAMPS	WATTS	NOMINAL DIMENSION	MFGR & CAT NO. OR ACCEPTABLE EQUIVALENT	REMARKS
A	RECESS	LED	50	2¼4'	LITHONIA #CPANL SERIES	2¼4' RECESSED LED FLAT PANEL
EM	WALL	LED	-	-	LITHONIA #ELM6	LED EMERGENCY WALL PACK
X	UNIV	LED	-	-	LITHONIA #LQM SERIES	LED EXIT/EMERGENCY BATTERY PACK
X1	UNIV	LED	-	-	LITHONIA #LHQM SERIES	LED EXIT/EMERGENCY COMBO UNIT

ELECTRICAL SPECIFICATIONS:

1.0 GENERAL

- 1.1 All materials shall be as specified and approved by Underwriters Laboratories.
- 1.2 Provide a complete electrical system conduit system as indicated herein and/or on the drawings. The latest edition of The National Electric Code shall be the Minimum requirement for all work.

- 1.3 Any substitutions to manufacturers of equipment listed in these specifications must be approved in writing by the Owner's Engineer.

- 1.4 E.C. shall submit shop drawings of electrical switchgear to Architect/Engineer for review.

- 1.5 Shop drawings shall include:
A. Single line riser diagram of electrical system.
B. Completed schedules for all electric panels.

- 1.6 Drawings and Specifications: It shall be the Contractor's duty to examine and have thorough knowledge of the architectural, structural, electrical, mechanical and site work Drawings and Specifications.

- 1.6.1 The commencement of work under this Section indicated that the Contractor has examined and has knowledge of the architectural, structural, electrical, mechanical and site work Drawings and Specifications. The failure of the Contractor to acquaint himself with all available information shall not relieve him of any responsibility for performing his work properly.

- 1.6.2 No additional compensation shall be allowed because of conditions that occur due to the Contractor's failure to become thoroughly familiar with all of the Contract Documents for this project, as described above, and with the job site.

- 1.6.3 It shall be the Contractor's duty to notify the Architect and/or Engineer, in a timely manner, of any discrepancies, errors, omissions, ambiguities, or conflicts which were known or discovered during the course of the preparation of the bid or the conduct of work.

- 1.6.4 Unless expressly stipulated, no additional allowance will be made in the Contractor's and/or manufacturer's favor by virtue of errors, ambiguities and/or omissions which were known to or which should have been known or discovered during the preparation of the bid estimate and directed to the Architect and \ or Engineer's attention in a timely manner.

- 1.6.5 The Drawings and Specifications are intended to supplement one another. Any materials or labor called for in one but not the other shall be furnished as if both were mentioned in the Specifications and shown on the Drawings. Labor and/or materials neither shown nor specified, but necessary for the completion and proper functioning of the systems, shall be furnished and installed by this Contractor.

- 1.6.6 The Drawings are diagrammatic and are intended to depict the approximate locations of equipment, piping and apparatus. Dimensions given on the Drawings, in figures, shall take precedence over scaled dimensions. All dimensions, whether in figures or scaled, shall be verified in the field.

- 1.6.7 The plans show the arrangement of all fixtures, equipment and material and are not intended to show all details. Each and every accessory intended for the purpose of execution of the work is understood to be part of the work.

- 1.6.8 The location of equipment and pipe, as shown on the Drawings, is diagrammatic and schematic and it is the responsibility of the Contractor to make his own fabrication and installation drawings and layouts to eliminate all structural and other physical interferences without detriment to the structural, mechanical and architectural components of the building. The Contractor must organize the physical arrangement of the systems of material in the confines of the space in order for them to function and perform in accordance with the intent of the design. The Contractor is not responsible for the design performance; he is responsible for the development of installation and fabrication drawings for the installation of his equipment and material within the available spaces.

- 1.6.9 The Contractor shall carefully verify all measurements at the site, determine the exact location of all chases, openings, plenums and ceiling cavities required by his work and shall furnish and set all sleeves,inserts and hangers as required for the work herein. The Contractor shall verify actual job dimensions before fabrication of any materials, purchasing or installation of equipment.

- 1.7 Space Conditions:It shall be the Contractor's responsibility to verify that all apparatus, gear, fixtures, conduit, etc, shall fit into that available spaces in the building and must be introduced into the building at such times and in such manner as not to cause damage to the structure.

- 1.7.1 Where minor deviations from plans are required in order to conform to space limitations, such changes shall be made by the Contractor at no additional cost to the Owner and shall be subject to the approval of the Architect and/or Engineer.

- 1.7.2 All equipment normally requiring service shall be easily accessible.

- 1.8 Coordination and Conflicts: The Contractor shall coordinate his work so that it does not interfere with the work of other trades. It shall be the Contractor's responsibility to see that his work is installed in a timely manner.

- 1.8.1 In the event that there is a discrepancy or conflict in the plans or Specifications it shall be the Contractor's responsibility to notify the Architect and/or Engineer of this conflict or discrepancy prior to his acceptance of the project. Unless expressly stipulated, no additional allowance will be made in the Contractor's and/or Manufacturer's favor by virtue of errors, ambiguities and/or omissions which were known to or which should have been known or discovered during the presentation of the bid estimate and directed to the Architect's and/or Engineer's attention in a timely manner.

- 1.9 Guarantee: All equipment shall be started, tested, adjusted and placed in satisfactory operating condition by the Contractor. All equipment shall be covered for the duration of the Manufacturer's guarantee or warranty and the Contractor shall furnish the Owner with all Manufacturer's guarantee warranties.

- 1.9.1 Guarantee all work, materials and equipment for a period of one (1) year from date of acceptance by the Owner's Engineer. The Guarantee shall include full service adjustments, repairs and replacement parts at no expense to Owner, and to the complete satisfaction of the Owner's Engineer.

- 1.9.2 The Contractor shall furnish a letter addressed to the owner outlining the year's guarantees and advising that the completed systems have been installed in accordance with Plans and Specifications and that they are in proper operating condition.

- 1.10 Inspection Authority Certificate of Approval shall be furnished the Owner's Engineer before final acceptance will be given.

- 1.10.1 Provide any inspections and certificates required by local jurisdictional authorities to obtain acceptance of the specified equipment and the installation.

- 1.11 Submittals: Contractor agrees that Shop Drawing Submittals processed by the Engineer are not Change Orders; that the purpose of Shop Drawing Submittals by the Contractor is to demonstrate to the Engineer that the Contractor understands the design concept, that he demonstrates his understanding by indicating which equipment and materials he intends to furnish and install and by detailing the fabrication and installation methods he intends to use.

- 1.11.1 The Contractor further agrees that if deviations, discrepancies or conflicts between Shop Drawings and Specification are discovered either prior to or after Shop Drawing Submittals are processed by the Engineer, the design Drawings and Specifications shall control and shall be followed.

- 1.11.2 Where shop drawings are reviewed, said review does not in any way relieve the Contractor from the responsibility nor the necessity of furnishing material or performing work required by the Contract Drawings and Specifications.

- 1.11.3 Submittal review is considered as general acceptance of the basic applicability of the equipment. Contractor is responsible for the installation of any substituted equipment within a given space. When the Contractor desires to use substituted equipment, he shall be responsible for producing his own coordinated working drawings which depict the substituted equipment accommodated in the space. Where the substituted equipment creates the need for alterations in any portion of the work depicted in the contract documents, it shall be the Contractor's responsibility to notify all of the affected parties and coordinate these items with all other trades. Further, it shall be the Contractor's responsibility to assume any additional cost to the Contract created by the substituted equipment.

- 1.11.3.1. Substituted equipment is any equipment which deviates from the equipment specified herein, as the first named manufacturer or the equipment scheduled on the plans.

5.0 Lighting Controller

- 5.1 Occupancy sensors as shown on plans.

- 5.2 Contactors shall be electrically held of proper capacity. Contactors shall be wired with a relay furnished by the electrical contractor to properly engage and release the contactor based on one channel switching.

- 5.3 All outside and work area lighting and circuits shall include time clock and photocell control 'OTC' as shown, with manual spring wound override switch.

6.0 Method of Wiring

- 6.1 Conduit raceways or M.C. cable shall be used for installation of all wiring where indicated on drawings.

- 6.1.1 Exposed conduit subject to mechanical injury shall be either full weight rigid steel (heavy-wall) type or intermediate metal conduit (I.M.C.) - Any conduits run in the mechanical room or electrical room not concealed in partitions, above finished ceilings or under the floor slab are considered exposed to mechanical injury. Either type shall have galvanized or equal finish. Conduit run exposed and not subject to mechanical injury, concealed above ceiling or in furred spaces may be electrical metallic tubing (E.M.T.) or M.C. cable with galvanized or equal finish Aluminum conduit shall not be used in concrete or masonry, but is permitted for use where exposed and not subject to mechanical injury or where concealed above ceiling or in furred spaces. Conduit joints shall be made with standard conduit couplings, (no running-threads) cadmium plated. Schedule 40 PVC conduit is also permitted for use in masonry or concrete. Any feeder conduits which are PVC must be buried beneath the floor slab - not in the concrete. Any exposed conduit projections out of concrete slab must be changed to rigid steel or I.M.C. at the surface of the slab. Rigid steel or I.M.C. conduit is required in concrete or masonry Construction.

- 6.1.2 Conduit shall not be smaller than 3/4" nominal trade size, except for switch legs or where expressly noted.

- 6.1.3 Install all conduits as near bottom chord of joists as practical. All conduits must be securely fastened and adequately supported. Perforated straps will not be permitted. All suspended conduits must be supported on a trapeze using "Unistrut" and bolted hanger construction. Conduits supported using suspended ceiling system (either tee bars or hanger wires) will not be permitted.

- 6.1.4 All conduit sizing for branch circuits shall be based on the use of Type THW code grade insulation. This method of sizing shall be used regardless of insulation type used in the conduit.

- 6.1.5 All conduits shall be concealed.

- 6.1.6 Pull boxes and junction boxes shall be installed where indicated on the drawings or where required to facilitate wire installation.

- 6.1.7 Cutting of structural concrete or steel to facilitate wiring installation will not be permitted without written approval of the Owner's Engineer.

- 6.1.8 All exposed conduit shall be run rectilinear with building construction using concentric bends.

- 6.1.9 Control circuit conduits (w/pull wires) under floor and in ceiling shall be as shown on drawings or as required.

NEW CLASSROOM RENOVATION
NORTHWEST CONSOLIDATED SCHOOL
DISTRICT OF SHELBY COUNTY
FAIRLAND, IN 46126

PROJECT: 23036
DATE: 04-20-2023
CONCEPTUAL DESIGN

ELECTRICAL
SPECIFICATIONS