



CLARK
Construction Company

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February 13, 2017

ADDENDUM NO. 1

PROJECT: Delta Mills ECC Remodeling Project
DESCRIPTION: Interior and Exterior Renovation
BID PACKAGE RELEASE NUMBER: 1
CLARK PROJECT NO: 16-2728

BID PROPOSAL DUE DATE/TIME: 2:00 PM, Thursday, March 2, 2017

The following clarifications and/or Changes made to the Contract Documents are hereby made part of the Contract Documents.

The general character of the Work clarified or revised by this Addendum shall be the same as required by the complete set of Contract Documents. All incidentals required in connection with the Work of this Addendum shall be included in the Scope of Work even though not specifically specified.

All bidders shall be held responsible to review the Addendum and to include in its Bid Proposal all Work reasonably inferred to be included in its Scope of Work.

Acknowledge receipt of this Addendum in the space provided on the Bid Proposal Form.

A. Architect/Engineer Documentation:

1. See attached addendum documents.

B. Division 00 – Bidding and Contract Requirement Modifications:

1. **Bid Category No. 1 – General Contractor**

Include:

1. All modifications as shown in drawings and specification.

END OF SECTION

GRAND LEDGE PUBLIC SCHOOLS
DELTA MILLS ECC REMODELING
A/E PROJECT 5-3812



OWNER: GRAND LEDGE PUBLIC SCHOOLS

PROJECT: DELTA MILLS ECC REMODELING

A/E Project 5-3812

PURPOSE

ADDENDUM NO. 1
THIS ADDENDUM SHALL FORM PART OF THE BIDDING DOCUMENTS. CHANGES, ADDITIONS, CLARIFICATIONS OR DELETIONS HEREIN SUPERSEDE THE DRAWINGS AND SPECIFICATIONS. BIDDERS SHALL INCLUDE ON THE PROPOSAL FORM ACKNOWLEDGEMENT OF THE RECEIPT OF THIS ADDENDUM.

ATTACHMENTS Reissued Drawings: E2.01, E5.02

ARCHITECT-ENGINEER

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SPECIFICATION CLARIFICATIONS / REVISIONS

ITEM NO. 1 SECTION 87 10 00 – DOOR HARDWARE
Addendum No. 1

See revised hardware set 23.0.

Set: 23.0

Doors: A123B

Description: Alternate A – Card Reader / Vestibule Door

2	Continuous Hinge	CFM-SLF-HD1		PE
1	Removable Mullion	910KM		RU
1	Exit Device (rim, exit only)	ED5200 M110 M52	630	RU
1	Rim Exit Device	ED5200 K157 x LC M110 M91 MELR M52	630	RU
1	Mort. Cylinder	1000	626	RU
1	Rim Cylinder	3000	626	RU
2	Pull	RM201 Mtg-Type 12XHD	US32D-316	RO
2	Concealed Overhead Stop	6-X36	630	RF
1	Closer (surface)	DC6220	689	RU
2	Drop Plate	188F65	689	RU
1	Door Operator	6020 / 6030 x D	689	NO
1	Electric Power Transfer	EL-CEPT		SU
1	ElectroLynx Harness	QC-C1500P (power transfer to junction box above)		MK
1	ElectroLynx Harness	QC-C (power transfer to exit device rail)		MK
1	Card Reader	- provided by Security Contractor		00
1	Door Switch	505 - wall mount		NO
1	Door Switch	503 - jamb mount		NO
1	Remote Push Button	- provided by Security Contractor		00
Notes: Doors normally closed and locked. Key override outside retracts latch bolt of exit device on active leaf. Exit devices equipped with keyed cylinder dogging inside.				
Authorized use of card reader outside or activation of remote push button will electronically retract latch of exit device. Outside ADA actuator switch will not cycle automatic operator unless latch bolt is retracted.				
Inside ADA actuator switch automatically retracts latch of exit device and cycles automatic operator.				
Free egress always permitted.				
Power supply shall provide power for electrified hardware at Doors A123A, A123B, and A123C. Power supply includes 8 individual output circuits, access control relay, and fire alarm trigger relay.				

DRAWING CLARIFICATIONS / REVISIONS

ITEM NO. 2 SHEET E2.01 FIRST FLOOR POWER & COMMUNICATIONS PLAN

Addendum No. 1

- A. In Kitchen A118 the e.c. is to disconnect and remove an existing floor receptacle under the kitchen island.
- B. E.C. to furnish and install a new/refurbished lockable cover on existing Panel 'C' located Corridor A105. The existing cover is damaged.
- C. In Gymnasium A116 the e.c. is to move the surface mounted raceway from the east side of the gymnasium to the west side of the gymnasium. E.c. to relocate this to the wall that still has the mechanical room on the backside of it for accessibility. The surface mounted raceway needs to be changed to from a 12'0" piece to a 8'-0" piece and be installed vertically instead of horizontally. The bottom shall start at a height of 1'-0" with a communications box and receptacle at 1'-4". The top shall have a communications box and receptacle at a height of 8'-4". The conduit feed for the ceiling shall remain on the east side of the gymnasium.
- D. This section will be providing single gang surface mounted junction boxes with a 1" conduit in six different locations for owner installed cameras. Interior boxes are to be located at a height of 8'-4" to the center of the box.
 - 1. One box will be installed on the interior above the firepull on the east end of Corridor A105 and be stubbed up into drop ceiling for accessibility.
 - 2. The second box will be installed on the north east exterior corner of the building outside of Classroom A101 on the north side. E.c. to feed this box by surface mounting conduit right off the end of the surface raceway in the classroom and stub and seal a conduit right to the exterior of the bldg..
 - 3. The third box will be installed on the south east exterior corner of the building outside of classroom A101. E.c. to stub out from the interior surface mounted raceway to the exterior of the building to the box.
 - 4. The fourth box is to be installed on the exterior outside of Corridor A115 by the light in the south east corner of Mens A122. E.c. to stub into the interior into the Mens A122 accessible ceiling.
 - 5. The fifth box is to be installed on the north east corner of Gymnasium A116 on the exterior of the building. E.c. to install this box just north of the double doors, stubbed into the gymnasium and install surface mounted conduit to the mechanical space A110.
 - 6. The sixth box is to be installed on the interior on the north wall of Corridor A115 next to the fire alarm horn/strobe with a 1" conduit stubbed up to the height of the cable tray.

- E. E.C. to move the MDF quadplex from Workroom A112 to the south east corner of Storage A111. The quadplex will need to be mounted at 6'-0" aff and keynote P02 still applies
- F. In each classroom A108, A106, A101, A102 and A104 the e.c. is to furnish one additional single gang junction box in the conduit run from the hallway to the center of the room for technology. See typical room keynote and floor plan detail. The e.c. is to replicate this same idea in Gymnasium A116.
- G. E.C. to furnish and install a telecommunications box 48" aff in Kitchen A118 on the north wall above the general receptacle.

ITEM NO. 3 SHEET E5.02 LIGHTING FIXTURES & CONTROL SCHEDULES

Addendum No. 1

- A. E.C. to add detail 4/E5.02 LIGHTING/EXHAUST FAN CONTROL FOR CLASSROOMS
- B. On the lighting fixture schedule the following changes shall be made for equals.
 - 1. Fixture type 'INV' approved manufacturers are Iota, Lithonia, Dual lite. E.c. to coordinate with load the correct inverter required.
 - 2. Fixture type 'A1' approved manufacturer is the Lithonia 2BLT4.
 - 3. Fixture type 'B1" approved manufacturer is the Lithonia 2BLT2.
 - 4. Fixture type 'D1' clarification details include single circuiting, fully adjustable mounting, flat endcap with a hard ceiling type.
 - 5. Fixture type 'F2' clarification details include the the driver have linear dimming to 10% minimum.
 - 6. Fixture type 'M' approved manufacturer is Lithonia ZL1DL485000LMFST12040K80CRIWH.

**SECTION 08 71 00
DOOR HARDWARE**

1 GENERAL

1.1 SECTION INCLUDES

- A. Scope of Work: This Section describes all finish hardware required to complete the work as indicated on the Drawings and specified herein. Provide all trim attachments, and fastening specified or required for proper and complete installation.
- B. Related Sections:
 - 1. Section 08 11 13: Hollow Metal Doors and Frames
 - 2. Section 08 14 16: Flush Wood Doors
 - 3. Section 08 43 13: Aluminum Entrances and Storefronts

1.2 SUBMITTALS

- A. Product Data, Shop Drawings, Samples:
 - 1. General: Comply with the provisions of Section 01 33 00.
 - 2. Product Data: Within 15 calendar days after award of the Contract, submit:
 - a. Complete materials list of all items proposed to be furnished and delivered under this Section.
 - (1) Identify each hardware item by manufacturer, the manufacturer's catalog number, the function, finish, and the location of the item in the work.
 - (2) Make the list in form suitable for ready checking by the Architect.
 - (3) Submit wiring diagrams and instruction for each component scheduled.
 - b. Manufacturer's specifications, catalog cuts, and other data required to demonstrate compliance with specified requirements.
- Approval of the hardware list by the Architect/Engineer shall not relieve the Contractor from the responsibility for furnishing all required finish hardware.
- 3. Samples: Within 15 calendar days after being so requested by the Architect/Engineer, deliver to the Architect/Engineer samples of each finish hardware item.
 - 4. Templates: In a timely manner to ensure orderly progress of the work, deliver templates or physical samples of the approved finish hardware items to pertinent manufacturers of interfacing items such as door and frame.

1.3 QUALITY ASSURANCE

- A. Qualifications:
 - 1. Qualifications of Manufacturers: Products used in the work of this Section shall be produced by manufacturers regularly engaged in manufacture of similar items and with a history of successful production acceptable to the Architect/Engineer.
 - 2. Qualification of Suppliers: The supplier shall have a qualified representative readily available to the Architect/Engineer, and/or Owner on short notice for consultation and service during the execution of this work and the warranty period.
 - 3. Qualification of Installers: Use adequate numbers of skilled workmen who are trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and methods needed for proper performance of this Section.

- B. Regulatory Requirements & References: Fire Rated Openings: Comply with the requirements of Underwriter's Laboratories, Inc.
- C. Pre-Installation Conference: Prior to the installation of hardware, manufacturer's representatives for locksets, closers, and exit devices shall arrange and hold a jobsite meeting to instruct the installing contractor's personnel on the proper installation of their respective products. A letter of compliance, indicating when this meeting is held and who is in attendance, shall be sent to the Architect and Owner. Mark's Locksmith to be included in conference as well as electrician and school technology director.
- D. Keying Conference: Prior to the installation of hardware, Mark's Locksmith, the Owner, the School Technology Director, and Construction Manager/Architect to complete keying walk-thru. Deliverables to include a schedule document including:
 - 1. Function of building, purpose of each area and degree of security required.
 - 2. Plans for existing and future key system expansion.
 - 3. Requirements for key control storage and software.
 - 4. Installation of permanent keys, cylinder cores and software.
 - 5. Address and requirements for delivery of keys.

1 .4 DELIVERY, STORAGE, AND HANDLING

- A. Packing and Shipping: Individually package each units of finish hardware, complete with proper fastening and appurtenances, clearly marked on the outside to indicate the contents and specific locations in the work.
- B. Protection: Use all means necessary to protect materials of this Section before, during, and after delivery to the job site and to protect the work and materials of all other trades.
- C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect/Engineer and at no additional cost to the owner.
- D. Deliveries:
 - 1. Stockpile all items sufficiently in advance to ensure their availability, and make all necessary deliveries in a timely manner to ensure orderly progress of the total work.
 - 2. All hardware shall be delivered to a destination as directed by the Construction Manager with sufficient time in advance for proper inspection in order not to delay the scheduled completion date.
 - 3. The Construction Manager shall provide a lockable room with ample shelving for the storage of hardware. Upon receipt of the hardware, the Finish Hardware supplier shall unpack and place on the shelves all hardware in order of item and/or door numbers.

1 .5 SEQUENCING AND SCHEDULING

Coordinate all work with job site superintendent and all applicable trades.

1 .6 WARRANTY

- A. Provide a written warranty in approved form in compliance with the related requirements of the General Conditions, covering all Finish Hardware furnished under this Section against defects in manufacturing and workmanship for a minimum of two (2) years from the final acceptance of the building.
- B. Any material failing to comply with the above guarantee shall be removed and replaced with satisfactory material at the Finish Hardware supplier's expense, including the necessary labor for removing and replacing.

- C. During the Warranty Period, the Finish Hardware supplier shall, upon request, make prompt adjustments, repairs or replacements as required to any hardware installed under this contract, other than normal maintenance service.

2 PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

Product	Specified	Acceptable Alternates
Hinges Continuous Hinges	Ives 5BB series Ives	Hager BB, Stanley FBB Select, Markar
Locks	Schlage L Series	Sargent 8200
Exits	Von Duprin 98/35 series	Sargent 80, Precision Apex
Door Closers	LCN 4040XP Series	Norton 9500, Corbin Russwin DC8000
Push/Pull and Kick Plates	Ives	Any BHMA
Stops	Ives	Any BHMA
Thresholds & Weatherstrip	Zero	National Guard Products, Reese

2.2 MATERIALS

A. General:

1. Proprietary Products: References to specific proprietary products are used to establish minimum standards of utility and quality. Unless otherwise approved by the Architect/Engineer, provide only the specific products. Design is based on the materials specified. Other materials may be considered by the Architect/Engineer in accordance with the provisions of Section 01 33 00.
 2. Fasteners:
 - a. Furnish all finish hardware with all necessary screws, bolts, and other fasteners of suitable size and type to anchor the hardware in position for long life under hard use.
 - b. Furnish fastenings where necessary with expansion shields, toggle bolts, sex bolts, and other anchors approved by the Architect/Engineer, according to the materials to which the hardware is to be applied and the recommendations of the hardware manufacturer.
 - c. All fastenings shall harmonize with the hardware as to materials and finish.
 3. Finishes of all hardware shall match the finish of the locksets. Take special care to coordinate all of the various manufactured items furnished under this Section, to ensure acceptably uniform finish.
 4. Install closers and door holders in hollow metal and wood doors with sex-bolts.
- B. Keying: All lock shall be master keyed as directed by the Architect and Owner. Supply 3 keys per lock, 6 master keys for each master key group and 3 grand master keys.
- C. Tools and Manuals: With the delivery of permanent keys, deliver to the Owner one complete set of adjustment tools and one set of maintenance manuals for locksets, latchsets, closers, and panic devices.

2.3 HANGING DEVICES

- A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles as specified in the Door Hardware Sets.
1. Quantity: Provide the following hinge quantity, unless otherwise indicated:
 - a. Two Hinges: For doors with heights up to 60 inches.
 - b. Three Hinges: For doors with heights 61 to 90 inches.

- c. Four Hinges: For doors with heights 91 to 120 inches.
 - d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
 2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
 - a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
 - b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.
 3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
 - a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
 - b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.
 4. Hinge Options: Comply with the following where indicated in the Hardware Sets or on Drawings:
 - a. Non-removable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.
 5. Acceptable Manufacturers:
 - a. Bommer Industries (BO).
 - b. McKinney Products (MK).
 - c. Stanley Hardware (ST).
- B. Continuous Geared Hinges: ANSI/BHMA A156.26 Grade 1-600 certified continuous geared hinge. with minimum 0.120-inch thick extruded 6060 T6 aluminum alloy hinge leaves and a minimum overall width of 4 inches. Hinges are non-handed, reversible and fabricated to template screw locations. Factory trim hinges to suit door height and prepare for electrical cut-outs.
 1. Acceptable Manufacturers:
 - a. McKinney Products (MK).
 - b. Pemko Manufacturing (PE).

2.4 POWER TRANSFER DEVICES

- A. Concealed Quick Connect Electric Power Transfers: Provide concealed wiring pathway housing mortised into the door and frame for low voltage electrified door hardware. Furnish with Molex™ standardized plug connectors and sufficient number of concealed wires (up to 12) to accommodate the electrified functions specified in the Door Hardware Sets. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Wire nut connections are not acceptable.
 1. Acceptable Manufacturers:
 - a. Securitron (SU) - EL-CEPT Series.
- B. Electric Door Wire Harnesses: Provide electric/data transfer wiring harnesses with standardized plug connectors to accommodate up to twelve (12) wires. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Provide sufficient number and type of concealed wires to accommodate electric function of specified hardware.

Provide a connector for through-door electronic locking devices and from hinge to junction box above the opening. Wire nut connections are not acceptable. Determine the length required for each electrified hardware component for the door type, size and construction, minimum of two per electrified opening.

1. Provide one each of the following tools as part of the base bid contract:
 - a. McKinney Products (MK) - Electrical Connecting Kit: QC-R001.
 - b. McKinney Products (MK) - Connector Hand Tool: QC-R003.
2. Acceptable Manufacturers:
 - a. McKinney Products (MK) – QC-C Series.

2.5 DOOR OPERATING TRIM

- A. Flush Bolts and Surface Bolts: ANSI/BHMA A156.3 and A156.16, Grade 1, certified.
 1. Flush bolts to be furnished with top rod of sufficient length to allow bolt retraction device location approximately six feet from the floor.
 2. Furnish dust proof strikes for bottom bolts.
 3. Surface bolts to be minimum 8" in length and U.L. listed for labeled fire doors and U.L. listed for windstorm components where applicable.
 4. Provide related accessories (mounting brackets, strikes, coordinators, etc.) as required for appropriate installation and operation.
 5. Acceptable Manufacturers:
 - a. Burns Manufacturing (BU).
 - b. Rockwood Manufacturing (RO).
 - c. Trimco (TC).
- B. Coordinators: ANSI/BHMA A156.3 certified door coordinators consisting of active-leaf, hold-open lever and inactive-leaf release trigger. Model as indicated in hardware sets.
 1. Acceptable Manufacturers:
 - a. Burns Manufacturing (BU).
 - b. Rockwood Manufacturing (RO).
 - c. Trimco (TC).
- C. Door Push Plates and Pulls: ANSI/BHMA A156.6 certified door pushes and pulls of type and design specified in the Hardware Sets. Coordinate and provide proper width and height as required where conflicting hardware dictates.
 1. Push/Pull Plates: Minimum .050 inch thick, size as indicated in hardware sets, with beveled edges, secured with exposed screws unless otherwise indicated.
 2. Door Pull and Push Bar Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door unless otherwise indicated.
 3. Offset Pull Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door and offset of 90 degrees unless otherwise indicated.
 4. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets.

5. Acceptable Manufacturers:
 - a. Burns Manufacturing (BU).
 - b. Rockwood Manufacturing (RO).
 - c. Trimco (TC).

2.6 CYLINDERS AND KEYING

- A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.
- B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.
 1. Acceptable Manufacturers:
 - a. Corbin Russwin Hardware (RU).
 - b. No Substitution.
- C. Cylinders: Original manufacturer cylinders complying with the following:
 1. Mortise Type: Threaded cylinders with rings and cams to suit hardware application.
 2. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
 3. Bored-Lock Type: Cylinders with tailpieces to suit locks.
 4. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
 5. Keyway: Match Facility Standard.
- D. Keying System: Each type of lock and cylinders to be factory keyed.
 1. Conduct specified "Keying Conference" to define and document keying system instructions and requirements.
 2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
 3. Existing System: Key locks to Owner's existing system.
- E. Key Quantity: Provide the following minimum number of keys:
 1. Change Keys per Cylinder: Two (2)
 2. Master Keys (per Master Key Level/Group): Five (5).
- F. Construction Cylinders: Provide temporary construction keyed cylinders and keys as required by Construction Manager.
- G. Key Registration List (Bitting List):
 1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
 2. Provide transcript list in writing or electronic file as directed by the Owner.
- H. Key Control Cabinet: Provide a key control system including envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet. Key control cabinet shall have expansion capacity of 150% of the number of locks required for the project.

1. Acceptable Manufacturers:
 - a. Lund Equipment (LU).
 - b. MMF Industries (MM).
 - c. Telkee (TK).

2.7 MECHANICAL LOCKS AND LATCHING DEVICES

- A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 certified. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.
 1. Mortise locks to be certified Security Grade 1.
 2. Extended cycle test: Locks to have been cycle tested in ordinance with ANSI/BHMA 156.13 requirements to 10 million cycles.
 3. Acceptable Manufacturers:
 - a. Corbin Russwin Hardware (RU) – ML2000 Series.
 - b. No Substitution.

2.8 LOCK AND LATCH STRIKES

- A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:
 1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
 2. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
- B. Standards: Comply with the following:
 1. Strikes for Mortise Locks and Latches: BHMA A156.13.
 2. Strikes for Auxiliary Deadlocks: BHMA A156.36.
 3. Dustproof Strikes: BHMA A156.16.

2.9 CONVENTIONAL EXIT DEVICES

- A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:
 1. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.
 2. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer's catalog and template book for specific requirements.
 3. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.
 4. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.

5. Flush End Caps: Provide flush end caps made of architectural metal in the same finish as the devices as in the Hardware Sets. Plastic end caps will not be acceptable.
 6. Electromechanical Options: Subject to same compliance standards and requirements as mechanical exit devices, electrified devices to be of type and design as specified in hardware sets. Include any specific controllers when conventional power supplies are not sufficient to provide the proper inrush current.
 7. Motorized Electric Latch Retraction: Devices with an electric latch retraction feature must use motors which have a maximum current draw of 600mA. Solenoid driven latch retraction is not acceptable.
 8. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.
 - a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
 - b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.
 9. Vertical Rod Exit Devices: Where surface or concealed vertical rod exit devices are used at interior openings, provide as less bottom rod (LBR) unless otherwise indicated. Provide dust proof strikes where thermal pins are required to project into the floor.
 10. Narrow Stile Applications: At doors constructed with narrow stiles, or as specified in Hardware Sets, provide devices designed for maximum 2" wide stiles.
 11. Dummy Push Bar: Nonfunctioning push bar matching functional push bar.
 12. Extended cycle test: Devices to have been cycle tested in ordinance with ANSI/BHMA 156.3 requirements to 9 million cycles.
 13. Rail Sizing: Provide exit device rails factory sized for proper door width application.
 14. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.
- B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 certified panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Exit device latch to be stainless steel, pullman type, with deadlock feature.
1. Acceptable Manufacturers:
 - a. Corbin Russwin Hardware (RU) - ED5000 Series.
 - b. No Substitution.
- C. Tube Steel Removable Mullions: ANSI/BHMA A156.3 removable steel mullions with malleable-iron top and bottom retainers and a primed paint finish.
1. Provide keyed removable feature where specified in the Hardware Sets.
 2. Provide stabilizers and mounting brackets as required.
 3. Provide electrical quick connection wiring options as specified in the hardware sets.
 4. Acceptable Manufacturers:
 - a. Corbin Russwin Hardware (RU) - 900 Series.

2.10 DOOR CLOSERS

- A. All door closers specified herein shall meet or exceed the following criteria:
1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers including installation and adjusting information on inside of cover.
 2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
 3. Cycle Testing: Provide closers which have surpassed 15 million cycles in a test witnessed and verified by UL.
 4. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the physically handicapped, provide units complying with ANSI ICC/A117.1.
 5. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
 6. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
 7. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.
- B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.
1. Acceptable Manufacturers:
 - a. Corbin Russwin Hardware (RU) – DC6000 Series.
 - b. No Substitution.

2.11 AUTOMATIC DOOR OPERATORS

- A. General: Provide operators of size recommended by manufacturer for door size, weight, and movement; for condition of exposure; and for compliance with UL 325. Coordinate operator mechanisms with door operation, hinges, and activation devices.
1. Fire-Rated Doors: Provide door operators for fire-rated door assemblies that comply with NFPA 80 for fire-rated door components and are listed and labeled by a qualified testing agency.
- B. Electrohydraulic Door Operators: Self-contained low-pressure units with rack and pinion design contained within a cast aluminum housing. Door closing speed controlled by independent hydraulic adjustment valves in the sweep and latch range of the closing cycle. Operator is to provide conventional door closer opening and closing forces unless the power operator motor is activated. Unit is to include an adjustable hydraulic backcheck valve to cushion the door speed if opened violently. Non-handed units for both push and pull side applications.
- C. Brackets and Reinforcements: Manufacturer's standard, fabricated from aluminum with nonferrous shims for aligning system components.

- D. Standard: Certified ANSI/BHMA A156.19.
 - 1. Performance Requirements:
 - a. Opening Force if Power Fails: Not more than 15 lbf required to release a latch if provided, not more than 30 lbf required to manually set door in motion, and not more than 15 lbf required to fully open door.
 - b. Entrapment Protection: Not more than 15 lbf required to prevent stopped door from closing or opening.
- E. Configuration: Surface mounted. Door operators to control single swinging and pair of swinging doors.
- F. Operation: Power opening and spring closing operation capable of meeting ANSI A117.1 accessibility guideline. Provide time delay for door to remain open before initiating closing cycle as required by ANSI/BHMA A156.19. When not in automatic mode, door operator to function as manual door closer with fully adjustable opening and closing forces, with or without electrical power.
 - 1. On-off switch to control power to be key switch operated.
- G. Features: Operator units to have full feature adjustments for door opening and closing force and speed, backcheck, motor assist acceleration from 0 to 30 seconds, time delay, vestibule interface delay, obstruction recycle, and hold open time from 0 up to 30 seconds.
- H. Provide outputs and relays on board the operator to allow for coordination of exit device latch retraction, electric strikes, magnetic locks, card readers, safety and motion sensors and specified auxiliary contacts.
- I. Activation Devices: Provide activation devices in accordance with ANSI/BHMA A156.19 standard, for condition of exposure indicated and for long term, maintenance free operation under normal traffic load operation. Coordinate activation control with electrified hardware and access control interfaces. Activation switches are standard SPST, with optional DPDT availability.
- J. Signage: As required by cited ANSI/BHMA A156.19 standard for the type of operator.
 - 1. Acceptable Manufacturers:
 - a. Norton Door Controls (NO) - 6000 Series.

2.12 ARCHITECTURAL TRIM

- A. Door Protective Trim
 - 1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.

Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.
 - 2. Where plates are applied to fire rated doors with the top of the plate more than 16" above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer's catalog and template book for specific requirements for size and applications.
 - 3. Protection Plates: ANSI/BHMA A156.6 certified protection plates (kick, armor, or mop), fabricated from the following:
 - a. Stainless Steel: 300 grade, 050-inch thick.

4. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
5. Acceptable Manufacturers:
 - a. Burns Manufacturing (BU).
 - b. Rockwood Manufacturing (RO).
 - c. Trimco (TC).

2.13 DOOR STOPS AND HOLDERS

- A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.
- B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.
 1. Acceptable Manufacturers:
 - a. Rockwood Manufacturing (RO).
- C. Overhead Door Stops and Holders: ANSI/BHMA A156.6, Grade 1 certified overhead stops and holders to be surface or concealed types as indicated in Hardware Sets. Track, slide, arm and jamb bracket to be constructed of extruded bronze and shock absorber spring of heavy tempered steel. Provide non-handed design with mounting brackets as required for proper operation and function.
 1. Acceptable Manufacturers:
 - a. Rixson Door Controls (RF).
 - b. Rockwood Manufacturing (RO).
 - c. Sargent Manufacturing (SA).

2.14 ARCHITECTURAL SEALS

- A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.
- B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
 1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.
- C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.
 1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NPFA 252, Standard Methods of Fire Tests of Door Assemblies.
- D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.

- E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.
 - 1. Acceptable Manufacturers:
 - a. National Guard Products (NG).
 - b. Pemko Manufacturing (PE).
 - c. Reese Enterprises, Inc. (RE).

2 .15 ELECTRONIC ACCESSORIES

- A. Switching Power Supplies: Provide UL listed or recognized filtered and regulated power supplies. Provide single, dual, or multi-voltage units as shown in the hardware sets. Units must be expandable up to eight Class 2 power limited outputs. Units must include the capability to incorporate a battery backup option with integral battery charging capability in addition to operating the DC load in event of line voltage failure. Provide the least number of units, at the appropriate amperage level, sufficient to exceed the required total draw for the specified electrified hardware and access control equipment.
 - 1. Acceptable Manufacturers:
 - a. Securitron (SU) - AQ Series.

2 .16 FABRICATION

- A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2 .17 FINISHES

- A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.
- B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware
- C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

3 EXECUTION

3 .1 INSTALLATION

- A. Install the materials in strict accordance with the manufacturer's recommendations and schedules.
- B. All doors should swing as far as conditions allow. When mounting door closers, use the mounting that allows doors to swing to the wall or floor bumper. Do not stop the door with the closer arm unless the arm is designed specifically to stop the door. when mounting closers designed with arms to stop the door or overhead door stops, always mount them to allow the door to swing as far as conditions will permit.
- C. Anchor all screws with Loc-Tite to assure permanence of attachment.
- D. All doors and hardware to be left in proper working order and cleaned.
- E. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.

- F. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.
- G. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
 - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
 - 2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
 - 3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
 - 4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.
- H. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
- I. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."
- J. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.2 ADJUSTING AND CLEANING

- A. Final inspections shall be made by the Architect and Finish Hardware Supplier. They shall report any installation adjustments that are to be made to have all hardware in perfect working order. The Finish Hardware Supplier shall verify the keying to the Architect to insure proper location of locksets and cylinders. All closers shall be checked and adjusted for closing.
- B. Prior to final acceptance of the installation, the Finish Hardware Supplier shall make a final inspection to verify that all corrections have been made and that all hardware items are in good working condition.

3.3 DEMONSTRATION

- A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

4 HARDWARE SCHEDULE

Set: 1.0

Doors: A101A, A102A, A106A, A108A
 Description: Classroom

3	Hinge (heavy weight)	T4A3786 x NRP	US26D	MK
1	Mortise Lock (classroom intruder)	ML2052 LSA	626	RU
1	Wall Stop	406	US32D	RO
1	Smoke / Sound Seal	S88D		PE
1	Closer (surface)	DC6210 A2	689	RU
Notes: Key from either side locks and unlocks lever outside.				
Key from either side retracts latch bolt.				
Lever outside retracts latch bolt, except when outside lever is locked by key.				
Lever inside always retracts latch bolt for egress.				

Set: 2.0

Doors: A104A, A104D
 Description: Large Classroom

3	Hinge (heavy weight)	T4A3786 x NRP	US26D	MK
1	Exit Device (rim, classroom)	ED5202 L955	630	RU
1	Mort. Cylinder	1000	626	RU
1	Rim Cylinder	3000	626	RU
1	Closer (surface)	DC6210 A2	689	RU
1	Kick Plate	K1050 10" high x 2" LDW x 4BE x CSK	US32D	RO
1	Wall Stop	406	US32D	RO
1	Smoke / Sound Seal	S88D		PE
Notes: Key outside retracts latch bolt. Key inside locks or unlocks outside lever trim.				
Free egress always permitted.				

Set: 3.0

Doors: A112A
 Description: Work Room

3	Hinge (heavy weight)	T4A3786 x NRP	US26D	MK
1	Mortise Lock (classroom intruder)	ML2052 LSA	626	RU
1	Concealed Overhead Stop	2-X36	652	RF
1	Smoke / Sound Seal	S88D		PE
Notes: Key from either side locks and unlocks lever outside.				
Key from either side retracts latch bolt.				
Lever outside retracts latch bolt, except when outside lever is locked by key.				
Lever inside always retracts latch bolt for egress.				

Set: 4.0

Doors: A101B, A102B, A104B, A104C, A106B, A108B

Description: Classroom Toilet

3	Hinge	TA2714	US26D	MK
1	Mortise Lock (passage)	ML2010 LSA	626	RU
1	Surface Overhead Stop	10-X36	652	RF

Set: 5.0

Doors: A101C, A102C, A106C, A108C

Description: Classroom Closet

3	Hinge	TA2714	US26D	MK
1	Mortise Lock (classroom)	ML2055 LSA	626	RU
1	Surface Overhead Stop	10-X36	652	RF

Notes: Function: Latch bolt by lever either side unless outside lever is locked by key outside. Outside lever remains locked unless unlocked by key. Inside lever always free for egress.

Set: 6.0

Doors: A103, A107, A109, A110A

Description: Mechanical - fire rated

3	Hinge (heavy weight)	T4A3786 x NRP	US26D	MK
1	Storeroom Lock	ML2057 LSA	626	RU
1	Closer (surface)	DC6210 A4	689	RU
1	Kick Plate	K1050 10" high x 2" LDW x 4BE x CSK	US32D	RO
1	Smoke / Sound Seal	S88D		PE

Notes: Function: Latch bolt operated by key outside or lever inside. Outside lever always rigid. Inside lever always free for egress

Set: 7.0

Doors: A117A

Description: Mechanical - fire rated

3	Hinge (heavy weight)	T4A3786 NRP 4-1/2" x 6"	US26D	MK
1	Storeroom Lock	ML2057 LSA	626	RU
1	Closer (surface)	DC6210 A3	689	RU
1	Kick Plate	K1050 10" high x 2" LDW x 4BE x CSK	US32D	RO
1	Wall Stop	406	US32D	RO
1	Smoke / Sound Seal	S88D		PE

Notes: Function: Latch bolt operated by key outside or lever inside. Outside lever always rigid. Inside lever always free for egress

Install Door A117A for 180 degree swing.

Set: 8.0

Doors: A119A

Description: Janitor - fire rated

3	Hinge (heavy weight)	T4A3786 x NRP	US26D	MK
1	Storeroom Lock	ML2057 LSA	626	RU
1	Closer (surface)	DC6200	689	RU
1	Kick Plate	K1050 10" high x 2" LDW x 4BE x CSK	US32D	RO
1	Wall Stop	406	US32D	RO
1	Smoke / Sound Seal	S88D		PE
Notes: Function: Latch bolt operated by key outside or lever inside. Outside lever always rigid. Inside lever always free for egress.				

Set: 9.0

Doors: A102D

Description: Exterior from Classroom

1	Continuous Hinge	CFM-SLF-HD1		PE
1	Exit Device (rim, exit only)	ED5200 M110 M52	630	RU
1	Mort. Cylinder	1000	626	RU
1	Closer (surface)	DC6210 A4	689	RU
1	Kick Plate	K1050 10" high x 2" LDW x 4BE x CSK	US32D	RO
1	Threshold	279x292AFGPK MSES25SS		PE
1	Weatherstrip	2891APK TKSP8		PE
1	Rain Guard	346C TKSP8		PE
1	Door Bottom	216BDCFG TKSP8		PE
Notes: Exit only. Keyed cylinder inside controls dogging of latch bolt. Free egress always permitted.				

Set: 10.0

Doors: A105A

Description: Card Reader - Exterior from Corridor

2	Continuous Hinge	CFM-SLF-HD1 PT		PE
1	Removable Mullion	910KM		RU
1	Rim Exit Device	ED5200 K157 x LC M110 MELR M52	630	RU
1	Exit Device (rim, exit only)	ED5200 M110 MELR M52	630	RU
3	Mort. Cylinder	1000	626	RU
1	Rim Cylinder	3000	626	RU
2	Vandal Resistant Trim	VRT22 C	US32D	RO
2	Vandal Resistant Trim	VRT22	US32D	RO
2	Closer (surface)	DC6210 A3	689	RU
2	Wall Stop	406 EXP	US32D	RO
1	Threshold	1715AK MSES25SS		PE
1	Weatherstrip / Astragal	- integral within construction of aluminum frame and door assembly		00
2	Sweep	29326CNB TKSP8		PE
2	Electric Power Transfer	EL-CEPT		SU
2	ElectroLynx Harness	QC-C1500P (power transfer to junction box above)		MK
2	ElectroLynx Harness	QC-C___ (power transfer to exit device rail)		MK
1	Card Reader	- provided by Security Contractor		00
1	Power Supply	AQM20-8F8R		SU
Notes: Doors normally closed and locked. Key outside retracts latch bolt of exit device on active leaf. Exit devices equipped with keyed cylinder dogging inside for control of push / pull operation.				
Exit devices equipped with electric latch retraction for push / pull operation as scheduled by access control system.				
Free egress always permitted.				
Power supply shall provide power for electrified hardware at Doors A105A, A115C, and A116B. Power supply includes 8 individual output circuits, access control relay, and fire alarm trigger relay.				

Set: 11.0

Doors: A115A, A115B, A123D

Description: Exterior from Corridor

1	Continuous Hinge	CFM-SLF-HD1		PE
1	Exit Device (rim, exit only)	ED5200 M110 M52	630	RU
1	Mort. Cylinder	1000	626	RU
1	Vandal Resistant Trim	VRT22	US32D	RO
1	Concealed Overhead Stop	6-X36	630	RF
1	Closer (surface)	DC6220	689	RU
1	Drop Plate	188F65	689	RU
1	Threshold	1715AK MSES25SS		PE
1	Weatherstrip	- integral within construction of aluminum frame assembly		00
1	Sweep	29326CNB TKSP8		PE
Notes: Exit only. Keyed cylinder inside controls dogging of latch bolt.				
Free egress always permitted.				

Set: 12.0

Doors: A115C

Description: Card Reader / ADA Operator - Exterior from Corridor

1	Continuous Hinge	CFM-SLF-HD1 PT		PE
1	Rim Exit Device	ED5200 K157 x LC M110 M91 MELR M52	630	RU
1	Mort. Cylinder	1000	626	RU
1	Rim Cylinder	3000	626	RU
1	Vandal Resistant Trim	VRT22 C	US32D	RO
1	Concealed Overhead Stop	6-X36	630	RF
1	Door Operator	6020 / 6030 x D	689	NO
1	Threshold	1715AK MSES25SS		PE
1	Weatherstrip	- integral within construction of aluminum frame assembly		00
1	Sweep	29326CNB TKSP8		PE
1	Electric Power Transfer	EL-CEPT		SU
1	ElectroLynx Harness	QC-C1500P (power transfer to junction box above)		MK
1	ElectroLynx Harness	QC-C___ (power transfer to exit device rail)		MK
1	Card Reader	- provided by Security Contractor		00
2	Door Switch	505 - wall mount		NO
1	Remote Push Button	- provided by Security Contractor		00
Notes: Door normally closed and locked. Key override outside retract latch bolt of exit device.				
Authorized use of card reader outside or activation of remote push button will electronically retract latch of exit device. Outside ADA actuator switch will not cycle automatic operator unless latch bolt is retracted.				
Inside ADA actuator switch automatically retracts latch of exit device and cycles automatic operator.				
Free egress always permitted.				
Door bell provided by Security Contractor.				

Set: 13.0

Doors: A111A

Description: Gymnasium Storage

6	Hinge (heavy weight)	T4A3786 x NRP	US26D	MK
1	Set Comb. Flush Bolt	2945	US26D	RO
1	Dust Proof Strike	570	US26D	RO
1	Storeroom Lock	ML2057 LSA	626	RU
1	Coordinator	2672 x Wear Plates	US28	RO
2	Mounting Bracket	2601AB/C	US28	RO
2	Closer (surface)	DC6210 A4	689	RU
2	Kick Plate	K1050 10" high x 2" LDW x 4BE x CSK	US32D	RO
1	Smoke / Sound Seal	S88D		PE
1	Meeting Edge Seal	S772C 7'		PE
Notes: Function: Latch bolt operated by key outside or lever inside. Outside lever always rigid. Inside lever always free for egress.				

Set: 14.0

Doors: A113A
 Description: Office

3	Hinge	TA2714	US26D	MK
1	Mortise Lock (office)	ML2053 LSA	626	RU
1	Concealed Overhead Stop	2-X36	652	RF
Notes: Latch operated by lever either side, unless outside lever is locked or unlocked by key outside or thumb turn inside. Outside lever is unlocked by key outside or thumb turn inside. Latch is retracted by key outside when outside lever is locked. Inside lever always free.				

Set: 15.0

Doors: A114A
 Description: Office

3	Hinge	TA2714	US26D	MK
1	Mortise Lock (office)	ML2053 LSA	626	RU
1	Wall Stop	406	US32D	RO
Notes: Latch operated by lever either side, unless outside lever is locked or unlocked by key outside or thumb turn inside. Outside lever is unlocked by key outside or thumb turn inside. Latch is retracted by key outside when outside lever is locked. Inside lever always free.				

Set: 16.0

Doors: A116A
 Description: Gymnasium

6	Hinge (heavy weight)	T4A3786 x NRP	US26D	MK
1	Surface Vert Rod Exit	ED5470 K157 x LC M55 M110 M52	630	RU
1	Exit Device (surface vertical rod, exit only)	ED5470 M55 M110 M52	630	RU
2	Mort. Cylinder	1000	626	RU
1	Rim Cylinder	3000	626	RU
2	Pull	RM201 Mtg-Type 12XHD	US32D -316	RO
2	Closer (surface)	DC6210 A4	689	RU
2	Kick Plate	K1050 10" high x 2" LDW x 4BE x CSK	US32D	RO
1	Smoke / Sound Seal	S88D		PE
1	Meeting Edge Seal	S772C 7'		PE
Notes: Function: Doors normally closed and locked. Key outside active leaf retracts latch bolt. Exit devices equipped with keyed cylinder inside to control dogging of latch bolt (push / pull operation). Free egress always permitted.				

Set: 17.0

Doors: A116B

Description: Card Reader - Exterior from Gymnasium

2	Continuous Hinge	CFM-HD1 PT		PE
1	Rim Exit Device	ED5200 K157 x LC M110 MELR M52	630	RU
1	Exit Device (rim, exit only)	ED5200 M110 MELR M52	630	RU
2	Mort. Cylinder	1000	626	RU
1	Rim Cylinder	3000	626	RU
1	Vandal Resistant Trim	VRT22 C	US32D	RO
1	Vandal Resistant Trim	VRT22	US32D	RO
2	Closer (surface)	DC6210 A4	689	RU
2	Kick Plate	K1050 10" high x 2" LDW x 4BE x CSK	US32D	RO
2	Threshold	279x292AFGPK MSES25SS		PE
2	Weatherstrip	2891APK TKSP8		PE
2	Door Bottom	216BDCFG TKSP8		PE
2	ElectroLynx Harness	QC-C1500P (power transfer to junction box above)		MK
2	ElectroLynx Harness	QC-C____ (power transfer to exit device rail)		MK
1	Card Reader	- provided by Security Contractor		00
Notes: Frame has center mullion.				
Doors normally closed and locked. Key outside retracts latch bolt of exit device on active leaf. Exit devices equipped with keyed cylinder dogging inside for control of push / pull operation.				
Exit devices equipped with electric latch retraction for push / pull operation as scheduled by access control system				
Free egress always permitted				

Set: 18.0

Doors: A118A, A118B

Description: Kitchen

3	Hinge (heavy weight)	T4A3786 x NRP	US26D	MK
1	Mortise Lock (classroom)	ML2055 LSA	626	RU
1	Closer (surface)	DC6210 A4	689	RU
1	Kick Plate	K1050 10" high x 2" LDW x 4BE x CSK	US32D	RO
Notes: Function: Latch bolt by lever either side unless outside lever is locked by key outside. Outside lever remains locked unless unlocked by key. Inside lever always free for egress.				

Set: 19.0

Doors: A118C

Description: Exterior from Kitchen

1	Continuous Hinge	CFM-HD1		PE
1	Exit Device (rim, exit only)	ED5200 M51 M110	630	RU
1	Rim Cylinder	3000	626	RU
1	Closer (surface)	DC6210 A5	689	RU
1	Kick Plate	K1050 10" high x 2" LDW x 4BE x CSK	US32D	RO
1	Threshold	279x292AFGPK MSES25SS		PE
1	Weatherstrip	2891APK TKSP8		PE
1	Rain Guard	346C TKSP8		PE
1	Door Bottom	216BDCFG TKSP8		PE
Notes: Exit only. No dogging of push rail.				
Free egress always permitted.				

Set: 20.0

Doors: A120A

Description: Staff Toilet

3	Hinge (heavy weight)	T4A3786 x NRP	US26D	MK
1	Keyed Privacy Set	ML2065 LSA M34 M19V	626	RU
1	Closer (surface)	DC6210 A4	689	RU
1	Kick Plate	K1050 10" high x 2" LDW x 4BE x CSK	US32D	RO
1	Smoke / Sound Seal	S88D		PE

Set: 21.0

Doors: A121A, A122A

Description: Womens / Mens

3	Hinge (heavy weight)	T4A3786 x NRP	US26D	MK
1	Pull Plate	BF 111x70B	US32D	RO
1	Push Plate	70F	US32D	RO
1	Closer (surface)	DC6200	689	RU
1	Kick Plate	K1050 10" high x 2" LDW x 4BE x CSK	US32D	RO
1	Wall Stop	406	US32D	RO

Set: 22.0

Doors: A123A

Description: Alternate A - Exterior from Vestibule

2	Continuous Hinge	CFM-SLF-HD1		PE
1	Removable Mullion	910KM		RU
1	Exit Device (rim, exit only)	ED5200 M110 M52	630	RU
1	Rim Exit Device	ED5200 K157 x LC M110 M91 MELR M52	630	RU
3	Mort. Cylinder	1000	626	RU
1	Rim Cylinder	3000	626	RU
1	Vandal Resistant Trim	VRT22 C	US32D	RO
1	Vandal Resistant Trim	VRT22	US32D	RO
2	Concealed Overhead Stop	6-X36	630	RF
1	Closer (surface)	DC6220	689	RU
1	Drop Plate	188F65	689	RU
1	Door Operator	6020 / 6030 x D	689	NO
1	Threshold	1715AK MSES25SS		PE
1	Weatherstrip / Astragal	- integral within construction of aluminum frame and door assembly		00
2	Sweep	29326CNB TKSP8		PE
2	Electric Power Transfer	EL-CEPT		SU
2	ElectroLynx Harness	QC-C1500P (power transfer to junction box above)		MK
2	ElectroLynx Harness	QC-C___ (power transfer to exit device rail)		MK
1	Card Reader	- provided by Security Contractor		00
1	Door Switch	505 - wall mount		NO
1	Door Switch	503 - jamb mount		NO
1	Power Supply	AQD3-4F		SU
Notes: Doors normally closed and locked. Key override outside retracts latch bolt of exit device on active leaf.				
Authorized use of card reader outside will electronically retract latch of exit device. Outside ADA actuator switch will not cycle automatic operator unless latch bolt is retracted.				
Inside ADA actuator switch automatically retracts latch of exit device and cycles automatic operator.				
Free egress always permitted.				
Door bell provided by Security Contractor.				

Set: 23.0

Doors: A123B

Description: Alternate A – Card Reader / Vestibule Door

2	Continuous Hinge	CFM-SLF-HD1		PE
1	Removable Mullion	910KM		RU
1	Exit Device (rim, exit only)	ED5200 M110 M52	630	RU
1	Rim Exit Device	ED5200 K157 x LC M110 M91 MELR M52	630	RU
1	Mort. Cylinder	1000	626	RU
1	Rim Cylinder	3000	626	RU
2	Pull	RM201 Mtg-Type 12XHD	US32D-316	RO
2	Concealed Overhead Stop	6-X36	630	RF

1	Closer (surface)	DC6220	689	RU
2	Drop Plate	188F65	689	RU
1	Door Operator	6020 / 6030 x D	689	NO
1	Electric Power Transfer	EL-CEPT		SU
1	ElectroLynx Harness	QC-C1500P (power transfer to junction box above)		MK
1	ElectroLynx Harness	QC-C (power transfer to exit device rail)		MK
1	Card Reader	- provided by Security Contractor		00
1	Door Switch	505 - wall mount		NO
1	Door Switch	503 - jamb mount		NO
1	Remote Push Button	- provided by Security Contractor		00

Notes: Doors normally closed and locked. Key override outside retracts latch bolt of exit device on active leaf. Exit devices equipped with keyed cylinder dogging inside.
 Authorized use of card reader outside or activation of remote push button will electronically retract latch of exit device. Outside ADA actuator switch will not cycle automatic operator unless latch bolt is retracted. Inside ADA actuator switch automatically retracts latch of exit device and cycles automatic operator. Free egress always permitted.

Power supply shall provide power for electrified hardware at Doors A123A, A123B, and A123C. Power supply includes 8 individual output circuits, access control relay, and fire alarm trigger relay.

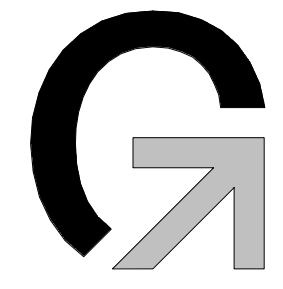
Set: 24.0

Doors: A123C

Description: Alternate A - Vestibule from Office

1	Continuous Hinge	CFM-SLF-HD1		PE
1	Mortise Lock (classroom)	ML2055 LSA	626	RU
1	Concealed Overhead Stop	6-X36	630	RF
1	Closer (surface)	DC6220	689	RU
1	Drop Plate	188F65	689	RU
1	Sweep	29326CNB TKSP8		PE

END OF SECTION



ARCHITECTURE + ENGINEERING

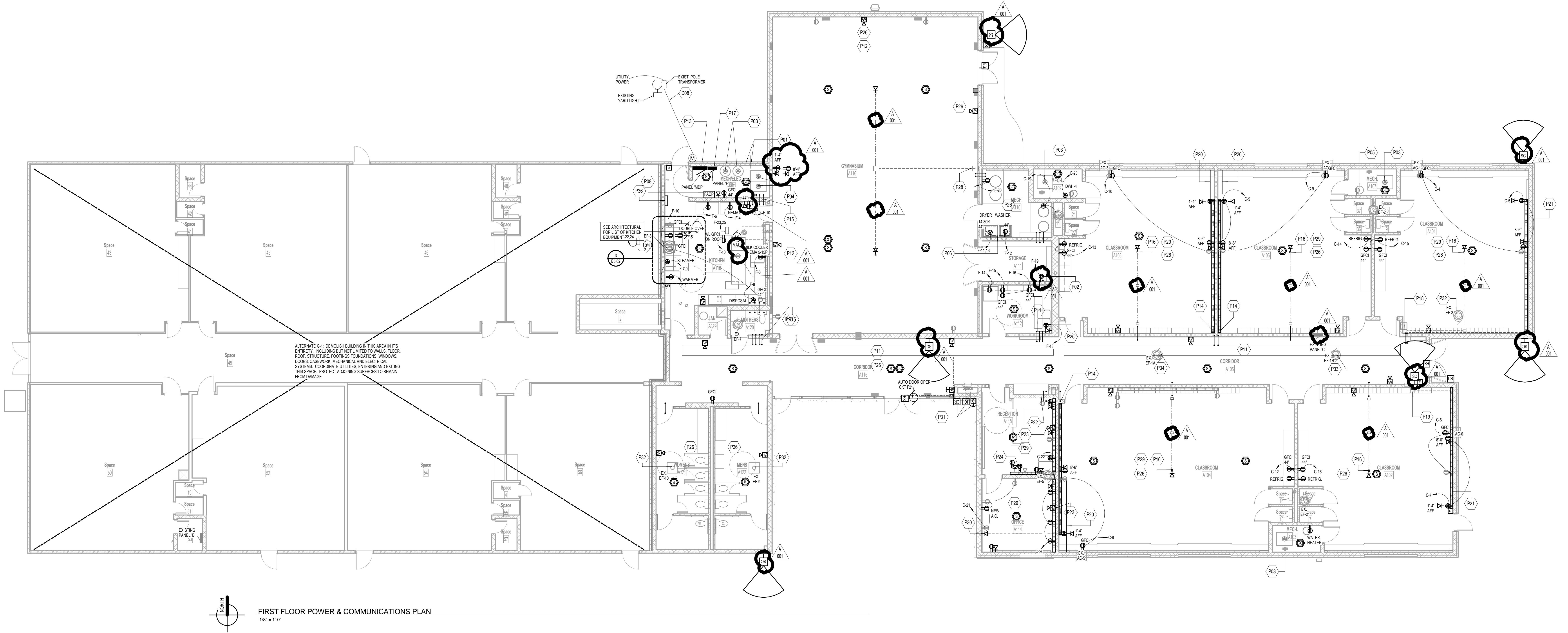
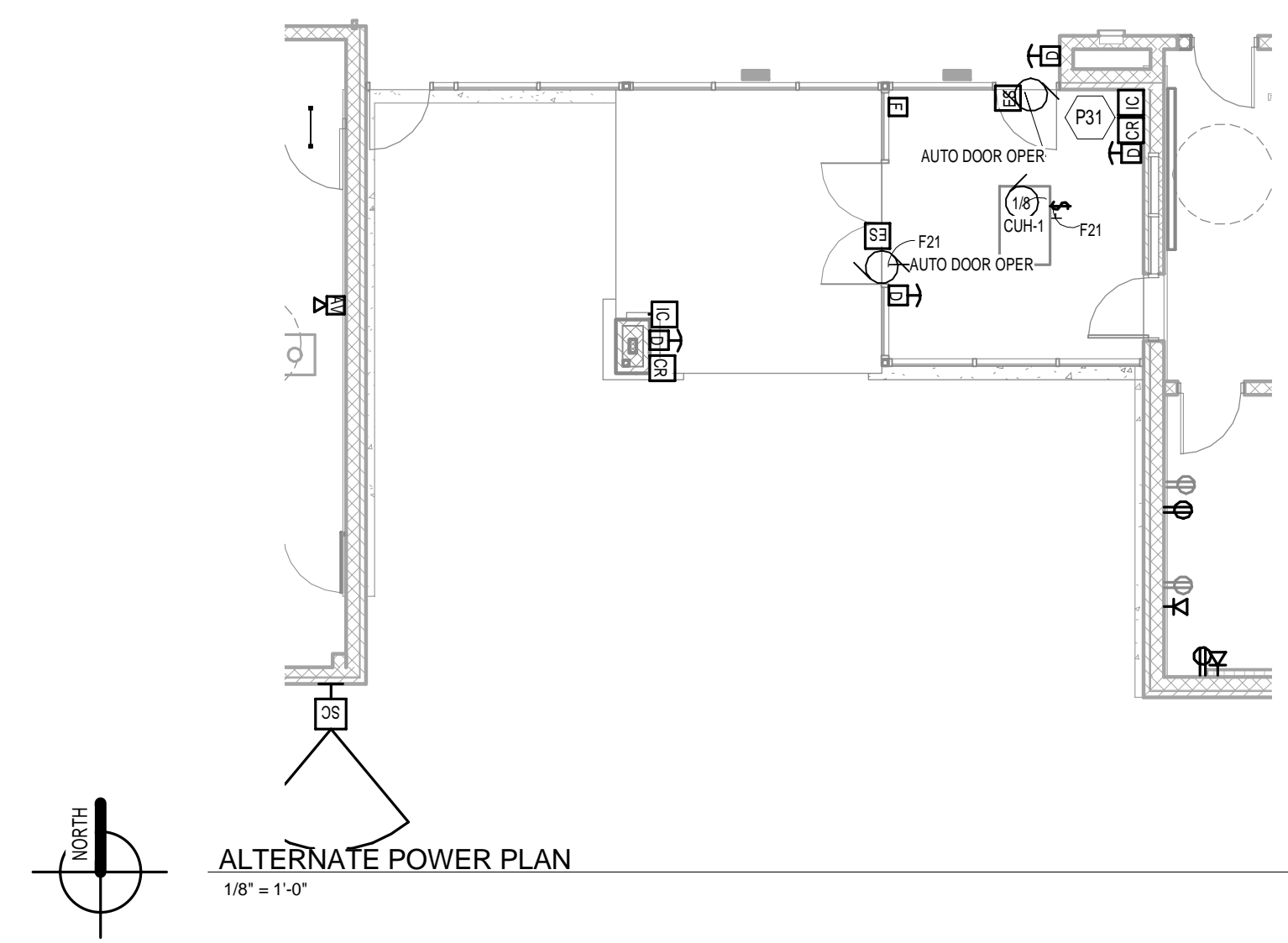
ELECTRICAL KEYNOTES	
D08	THE EXISTING 120/240V 1-PHASE SERVICE SHALL REMAIN INTACT. THIS SERVICE IS BEING FED FROM THE UTILITY VIA A POLE WITH A TRANSFORMER REDETAILED TO THE EXTERIOR OF THE BUILDING. THE EXISTING METER IS INSIDE THE BUILDING. E.C. IS TO FURNISH AND INSTALL A NEW UTILITY METER SOCKET BOX ON THE EXTERIOR OF THE BUILDING AND FROM THAT POINT THE E.C. WILL HAVE TO EXTEND THE SERVICE INTO THE NEW MDR. THIS WILL REQUIRE E.C. TO COORDINATE WITH THE UTILITY FOR THE SWITCHOVER OF THE SERVICE TO THE NEW METER. COORDINATE WITH UTILITY AND OWNER.
P01	EXISTING COMMUNICATIONS AND DATA ENTRANCE. EXISTING TO REMAIN.
P02	E.C. TO INSTALL QUADPLEX 80' AFF FOR MDR (T) CABINET. E.C. TO COORDINATE WITH OWNER BEFORE INSTALLING. OWNER WOULD LIKE THE QUADPLEX INSTALLED INSIDE OF THE CABINET.
P03	EXISTING SOLER TO REMAIN. E.C. TO INVESTIGATE EXISTING SITE TO ENSURE BOILER CONNECTIONS MEET NEC REQUIREMENTS.
P04	EXISTING FURNACE TO REMAIN. E.C. TO INVESTIGATE EXISTING SITE TO ENSURE FURNACE CONNECTIONS MEET NEC REQUIREMENTS.
P05	EXISTING WATER HEATER TO REMAIN. E.C. TO INVESTIGATE EXISTING SITE TO ENSURE WATER HEATER CONNECTIONS MEET NEC REQUIREMENTS.
P06	E.C. TO FURNISH AND INSTALL NEW FIRE ALARM SYSTEM PER SPECIFICATIONS.
P11	E.C. TO FURNISH AND INSTALL CABLETRAY. SEE SPECIFICATIONS.
P12	E.C. TO FURNISH AND INSTALL WIRE GUARD COVERS ON ALL F.A. VISUALS, CLOCK AND SPEAKERS IN THE OYM. THE F.A. PULL WILL REQUIRE A PLASTIC GUARO AS DETAILED IN THE SPECIFICATIONS.

ELECTRICAL KEYNOTES	
P13	E.C. TO INSTALL A NEW 400A 120/208V 3-PHASE PANEL BUT LEAVE THE EXISTING 120/240V 1-PHASE SERVICE FEEDING INTO THE BUILDING. THE THIRD SPACE IN THE PANEL WILL BE BLOCKED OFF.
P14	E.C. TO FURNISH AND INSTALL NEW DUAL CHANNEL SURFACE MTD RACEWAY AND DEVICES AS SHOWN. FEED RACEWAY FROM CORRIDOR THROUGH (1) 2" SLEEVE FOR COMMUNICATIONS AND THE APPROPRIATE CONDUIT FOR ELECTRICAL. FURNISH AND INSTALL THE RACEWAY AT 8'-0" AFF ACROSS THE TOP OF THE ROOM FOR 25'-0" AND THEN FURNISH AND INSTALL SURFACE MTD RACEWAY DOWN VERTICALLY TO 1'-0" AFF FOR TEACHER STATION QUADPLEX AND COMMUNICATION OUTLET.
P15	E.C. TO FEED THE OFFICES THROUGH THE TOP OF THE SHOWCASE. THIS WILL REQUIRE THE E.C. TO FURNISH AND INSTALL (2) 2" SLEEVES FROM THE HALLWAY TO A JB INSIDE OF ROOM AND THEN PORT THRU TO THE OFFICE AREA TO A JB AT 8'-0" AFF WHICH WILL RECEIVE (2) 2" SLEEVES INTO AND THEN OUT OF VERTICAL 1" DOWN TO THE DUAL CHANNEL WIREMOLD AT 2'-0" AFF. E.C. TO PROVIDE CONDUIT FOR POWER PER CODE ALONG THE SAME PATHWAY. SEE ARCH DRWG FOR DETAIL. E.C. TO USE THIS RACEWAY TO FEED THE POWER IN THE SECOND OFFICE.
P16	OWNER PROVIDED WIRELESS ACCESS POINT. E.C. TO FURNISH AND INSTALL A 2" CONDUIT SLEEVE THROUGH THE WALL WITH A DOUBLE GANG JUNCTION BOX WITH COVER INSIDE THE ROOM FOR ACCESS. FROM THIS ACCESS A 1" CONDUIT IS TO BE PROVIDED BETWEEN TWO SINGLE GANG JB POINTS WITH A 1" CONDUIT INSTALLED BETWEEN THE TWO. ALL JBS WILL REQUIRE COVERS.
P17	E.C. TO NOTE THAT ALL EXISTING MECHANICAL THAT WAS FED ORIGINALLY FROM PANEL A WILL BE FED FROM NEW PANEL F. ALL EXISTING FEEDERS TO THE EQUIPMENT SHALL BE EXISTING AND REUSED.
P18	E.C. TO FURNISH AND INSTALL NEW DUAL CHANNEL SURFACE RACEWAY. THIS CLASSROOM WILL REQUIRE THE CONTRACTOR TO INSTALL (2) 2" SLEEVES INTO THE CLASSROOM FROM THE HALLWAY TO TWO JUNCTION BOXES AS ACCESS POINTS FOR COMMUNICATIONS. FROM ONE JUNCTION BOX IS TO RUN (1) 2" CONDUIT TO A JUNCTION BOX IN THE CENTER OF THE WALL. THIS ACCESS POINT WILL HAVE A 2" CONDUIT RUNNING TO THE CENTER OF THE ROOM TO A JB. FOR WIRELESS ACCESS POINT AND RUNNING TO THE SURFACE RACEWAY. E.C. TO FURNISH AND INSTALL (1) MORE 2" CONDUIT FROM THE HALLWAY ENTRANCE JB LOCATION TO THE SURFACE RACEWAY. E.C. TO INSTALL ELECTRICAL FROM THIS LOCATION FROM HALLWAY.
P19	E.C. TO FURNISH AND INSTALL A 2" SLEEVE INTO THIS CLASSROOM TO A JB LOCATION FOR A COMMUNICATIONS PATHWAY. FROM THIS JB THE E.C. IS TO RUN A 2" CONDUIT TO THE SURFACE MTD RACEWAY. E.C. TO FEED THE ELECTRICAL TO THE SURFACE MTD RACEWAY FROM THIS ENTRANCE LOCATION ALSO.

ELECTRICAL KEYNOTES	
P20	EXISTING SURFACE MTD CONDUIT. THIS CONDUIT IS INSTALLED STRAIGHT UP THE WALL FROM THE EXISTING RECEPTACLE AND ACROSS THE ROOM TO THE OUTSIDE WALL TO FEED THE AC UNIT. E.C. TO DISCONNECT EXISTING FEEDER AND CONDUIT BACK TO THE CORNER. E.C. TO REUSE THE FEEDER BUT INSTALL NEW CONDUIT AT 6' AFF TO THE CORNER OF ROOM AND UP TO THE EXISTING CONDUIT IN THE CORNER. THE FEEDER NEEDS TO STAY INTACT AND CONTINUE TO FEED THE A.C. UNIT BUT NEEDS TO BE RELOCATED DUE TO NEW WHITEBOARD INSTALLATIONS.
P21	E.C. TO FURNISH AND INSTALL NEW DUAL CHANNEL SURFACE MTD RACEWAY. FURNISH AND INSTALL THE RACEWAY AT 8'-0" AFF FOR 25'-0" AND THEN INSTALL RACEWAY VERTICALLY DOWN TO 2'-0" AFF ABOVE THE HEATING UNIT ON THE WALL. CONFIRM HEIGHT OF HEATING UNIT FOR CORRECT AFF INSTALLATION.
P22	E.C. TO FEED THE OFFICES THROUGH THE TOP OF THE SHOWCASE. THIS WILL REQUIRE THE E.C. TO FURNISH AND INSTALL (2) 2" SLEEVES FROM THE HALLWAY TO A JB INSIDE OF ROOM AND THEN PORT THRU TO THE OFFICE AREA TO A JB AT 8'-0" AFF WHICH WILL RECEIVE (2) 2" SLEEVES INTO AND THEN OUT OF VERTICAL 1" DOWN TO THE DUAL CHANNEL WIREMOLD AT 2'-0" AFF. E.C. TO PROVIDE CONDUIT FOR POWER PER CODE ALONG THE SAME PATHWAY. SEE ARCH DRWG FOR DETAIL. E.C. TO USE THIS RACEWAY TO FEED THE POWER IN THE SECOND OFFICE.
P23	E.C. TO FEED FIRE ALARM VISUAL FROM ADJACENT CLASSROOM SURFACE RACEWAY.
P24	E.C. TO FURNISH AND INSTALL THE QUADPLEX AND COMMUNICATIONS IN THE SURFACE MTD RACEWAY.
P25	E.C. TO INSTALL POWER FOR COPY MACHINE AT 1'-4" AFF. ALL BOXES WILL BE SURFACE MTD. THE COMMUNICATIONS BOX SHALL BE SURFACE MOUNTED WITH A 1" CONDUIT UP TO A JB AT THE CEILING.
P26	E.C. TO INSTALL SURFACE MTD CONDUIT AND J.B. TO ALL NEW DEVICES, RECEPTABLES AND SWITCHES.
P28	E.C. TO FURNISH AND INSTALL (1) 2" CONDUIT SURFACE MTD UP THE WALL FROM THE SURFACE MTD RACEWAY. AT THE CEILING E.C. IS TO INSTALL A 4"x4" JB. FROM THIS ACCESS POINT THE E.C. IS TO INSTALL A 2" SURFACE MTD CONDUIT TO ANOTHER 4"x4" JB IN THE MIDDLE OF THE GYM. FROM THE CENTER OF THE GYM THE E.C. IS TO INSTALL (1) 1" CONDUIT TO EACH OF THE ACCESS POINTS, WHICH WILL REQUIRE THE INSTALLATION OF SINGLE GANG JB.
P29	E.C. TO FURNISH AND INSTALL NEW TAMPER PROOF RECEPTABLES AND FACEPLATES IN ALL EXISTING TO REMAIN LOCATIONS. ALL RECEPTABLES IN THE BUILDING ARE TO BE TAMPERPROOF RESISTANT.
P30	E.C. TO FURNISH AND INSTALL A NEW SURFACE MTD COMMUNICATIONS JB WITH A 1" CONDUIT UP THE WALL TO A SINGLE GANG JB. FROM THERE E.C. IS TO RUN A 1" CONDUIT ACROSS THE CEILING AND TO A JB AND THEN FEED THROUGH TO THE RACEWAY IN THE ADJACENT ROOM.
P31	E.C. TO FURNISH AND INSTALL (3) SINGLE GANG JUNCTION BOXES SURFACE MTD ON THE EXTERIOR OF THE BUILDING. FROM EACH OF THE JBS THE CONTRACTOR IS TO INSTALL (1) 1" CONDUIT SURFACE MTD INTO THE BUILDING. IN THE BLDG THE E.C. IS TO PROVIDE A 2-GANG JUNCTION BOX AS AN ACCESS POINT TO FEED A 1" CONDUIT INSTALLED TO ABOVE THE DOOR TO A SINGLE GANG J.B. ALL PROVIDED BY E.C.
P32	E.C. TO INTERLOCK OCCUPANCY SENSORS WITH EXHAUST FANS WITH AN AUXILIARY CONTACT. SEE DETAIL 2E5.02.
P33	E.C. TO INTERLOCK OCCUPANCY SENSORS IN ROOM A106 AND A102 WITH EXHAUST FAN EF-1B WITH AN AUXILIARY CONTACT. SEE DETAIL 2E5.02.
P34	E.C. TO INTERLOCK OCCUPANCY SENSORS IN ROOM A106 AND A104 WITH EXHAUST FAN EF-1A WITH AN AUXILIARY CONTACT. SEE DETAIL 2E5.02.
P36	CONTROL PANEL FOR MUA & HOOD FIRE SUPPRESSION. E.C. TO INTERLOCK HOOD FIRE SUPPRESSION SYSTEM WITH ADDRESSABLE RELAY TIED TO FACP SYSTEM.

POWER & COMMUNICATION GENERAL NOTES

1. REFER TO ELECTRICAL GENERAL NOTES ON SHEET E7-01
2. REFER TO CODE COMPLIANCE PLAN FOR LOCATIONS AND RATINGS OF VERTICAL AND HORIZONTAL BUILDING ASSEMBLIES. PROVIDE APPROPRIATE FIRESTOPPING SYSTEMS PER SPECIFICATIONS TO MEET ALL APPLICABLE CODES.
3. REFER TO MECHANICAL DRAWINGS FOR LOCATIONS OF SMOKE DAMPERS AND COMBINATION FIRE/SMOKE DAMPERS. E.C. SHALL PROVIDE 100VA POWER FROM DEDICATED 20A BRANCH CIRCUIT WITH BRACKET LOCKING MECHANISM IN LOCAL PANELBOARD FOR DAMPERS IN EACH AREA (DAMPERS MAY BE GROUPED ON EACH CIRCUIT). TERMINATED W/ BOX COVER FUSIBLE SWITCH AT EACH DAMPER. ALSO PROVIDE FIRE ALARM DUCT SMOKE DETECTOR WITH 5 FEET AND A FIRE ALARM ADDRESSABLE RELAY FOR INTERLOCKING DAMPER W/ CORRESPONDING HAZARD PER CODE REQUIREMENTS.
4. PROVIDE BOX-COVER FUSIBLE DISCONNECT SWITCH ON BUILDING INTERIOR IN ACCESSIBLE LOCATION FOR EACH SMALL (4-12 HP) MECHANICAL AND/OR PLUMBING EQUIPMENT MOTOR LOAD WHERE MORE THAN ONE UNIT IS CONNECTED TO A COMMON BRANCH CIRCUIT. TYPICAL EQUIPMENT TYPES INCLUDE BUT ARE NOT LIMITED TO CABINET HEATERS, DAMPERS, EXHAUST FANS, COOL UNITS, PUMPS, UNIT HEATERS, VAV BOXES, ETC.



DELTA MILLS ECC REMODELING
GRAND LEDGE PUBLIC SCHOOLS
GRAND LEDGE, MICHIGAN

ISSUANCES	
02.03.2017	BIDS & CONSTRUCTION
02.10.2017	ADDENDUM #1

DRAWN	AAM
CHECKED	XXX
APPROVED	GMB

PROJECT NO. 5-3812

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FIRST FLOOR POWER & COMMUNICATIONS PLAN

E2.01

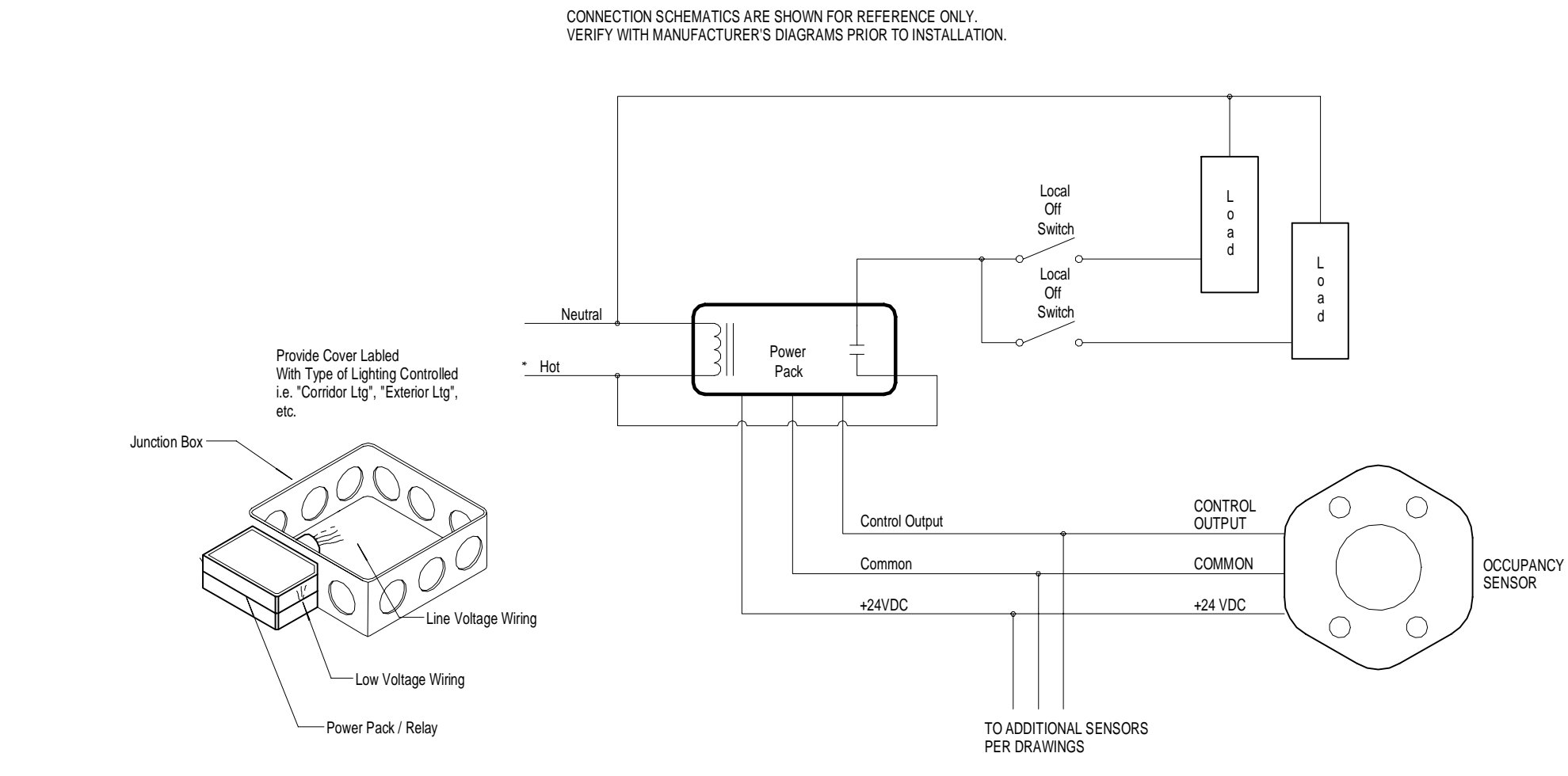
TYPE TAG	DESCRIPTION	BASIS	APPROVED MANUFACTURERS & CATALOG NUMBERS			FINISH	MOUNTING	LIGHT SOURCE			NOTES	
			EQUIVALENT #1	EQUIVALENT #2	EQUIVALENT #3			MIN. DELIVERED LUMENS	TYPE	BALLAST / DRIVER		INPUT VOLTAGE (V)
A1	2x4 RECESSED ARCHITECTURAL EXTRUDED LINEAR PRISMATIC ACRYLIC CENTER OPTIC	LITHONIA: 2BLT14-48L-ADP-EZ1-LP840	METALLUX: 22EN-LD1-34-UNV-L840-CD1	COLUMBIA: L1RE22-40MLG-RFA-EDU-	DAY-BRITE: 2CAG42L840-4-DS-UNV-DI	WHITE	RECESSED IN ACOUSTICAL SUSPEND	4600	4000K LE	DRIVER	120 V	47
B1	2x2 RECESSED ARCHITECTURAL EXTRUDED LINEAR PRISMATIC ACRYLIC CENTER OPTIC	LITHONIA: 2BLT2-33L-ADP-EZ1-LP840	METALLUX: 24EN-LD1-45-UNV-L840-CD	COLUMBIA: L1RE22-40MLG-RFA-EDU-G	DAY-BRITE: 2CAG34L840-2-DS-UNV-DI	WHITE	RECESSED IN ACOUSTICAL SUSPEND	3400	4000 K LE	DRIVER	120 V	35
D1	SUSPENDED INDIRECT/DIRECT LINEAR SYSTEM, RECTANGULAR PROFILE, 20'-0" LENGTH	FINELITE: 20RBLBCA24VIEW	LITECONTROL: 66L-F-103-PA-0035-24-SG	LEDALITE: 20RBLBCA24VIEW	COBELITE: 24-CL-2L35-1D-UNV-AC48-T	WHITE	SUSPENDED ON BRAIDED CABLE FROM HARD CEILING ABOVE, 16' CABLE LENGTH, 200' SECTIONS LENGTHS WITH 4'-0" SECTIONS	3500	4000 K L	0-10V DIMMING	120 V	37
F2	ROUND RECESSED FIXTURE	GOTYAH: EVO3515 NWD LD 120	LIGHTFOULIER: CGL15N18V210V CGL 15200LD35WCCDWVB	PRESCOLITE: L06LED120DM-6LCLD6358		WHITE	RECESSED IN ACOUSTICAL CEILING, DIMMING TO 10% MINIMUM	1500	3500 K L	0-10V DIMMING	120 V	19
G1	16" ROUND RECESSED CAN LIGHT, EXTERIOR CANOPY, LENSED, DAMP LOCATION	GOTYAH: EVO3515 NWD LD 120 DAMPLOCATION	LIGHTFOULIER: CGL15N18V210V CGL 15200LD35WCCDWVB	PRESCOLITE: L06LED120DM-6LCLD6358DAMP		WHITE	RECESSED IN HARD CEILING, NO DIMMING	1500	3500 K L	DRIVER	120 V	19
H	ROUND SURFACE MOUNT FIXTURE	JUNO: 4RLS-900-6-WH	EVENLITE	KOTA	LITHONIA	WHITE	SURFACE MTD. ON HARD LID CEILING, DISPLAY LIGHTING, NO DIMMING	1500	3500 K L	DRIVER	120 V	19
M	LENSED STRIPLIGHT, 4'-0" LENGTH, STEEL CHANNEL BODY, PRISMATIC ACRYLIC LENS, WIDE ANGLE DISTRIBUTION	METALLUX: SNLED-LD1-44-LV-UNV-L840	COLUMBIA: LCL4-40ML-EDU-PAF	LSI: SOL-4-LED-HO-NV-UE-DIM	DAY-BRITE: LF4-FR-4L-40-U-DZT	WHITE	SURFACE MOUNT ON CEILING	4400	4000 K LE	DRIVER	120 V	50
W	EMERGENCY INVERTER	LITHONIA: OF-1LED P2 40K MVOLT1 THK DBXD	DUAL-LITE: SEBRV1	LITHONIA: LS-S-W-1-R-120277-EL-N-S	SURE-LITES: CXT1WHSD	DARK BRONZE	SURFACE WALL	3900	4000K LE	FIXED	120 V	49
X1	EXIT SIGN, DIE-CAST HOUSING, SINGLE FACE, TIED TO EMERGENCY INVERTER, SELF DIAGNOSTIC	DUAL-LITE: SEBRV1	LITHONIA: LS-S-W-1-R-120277-EL-N-S	SURE-LITES: CXT1WHSD	CHLORIDE: SCN1RWICT	WHITE PAINT	SURFACE ON CEILING OR WALL, REFERENCE DRAWINGS	N/A	RED LED	N/A	120 V	4

LIGHTING FIXTURE SCHEDULE GENERAL NOTES:

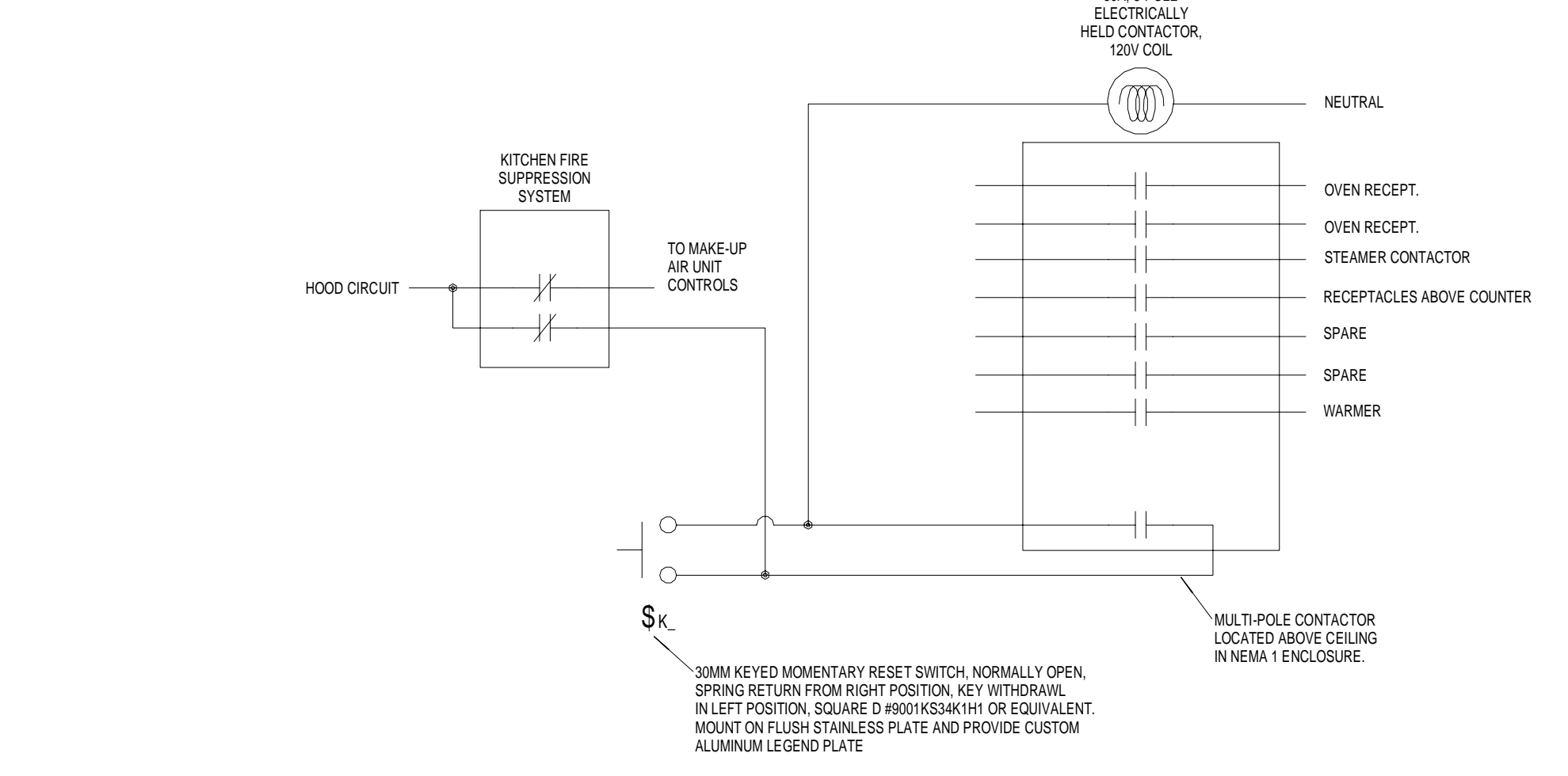
- A. MODEL NUMBERS GIVEN IN THIS SCHEDULE MAY NOT INCLUDE ALL OPTIONS AND ACCESSORIES AS NECESSARY TO MEET THE REQUIREMENTS OF THE DESCRIPTION AND SPECIFICATIONS.
- B. CONTRACTOR SHALL PROVIDE ALL NECESSARY MOUNTING HARDWARE FOR EACH FIXTURE TYPE. COORDINATE WITH CEILING TYPES AND MOUNTING LOCATIONS.
- C. ALL FINISHES SHALL BE CHOSEN FROM THE MANUFACTURER'S CATALOG/STANDARD OPTIONS UNLESS OTHERWISE NOTED.
- D. ALL LIGHT SOURCES SHALL BE 4000K CORRELATED COLOR TEMPERATURE UNLESS OTHERWISE NOTED. ALL INTERIOR LIGHT SOURCES SHALL HAVE COLOR RENDERING INDEX RATING OF 90 OR GREATER.
- E. ALL FIXTURES SHALL BE SUPPLIED WITH UNIVERSAL VOLTAGE INPUT (120/277V) WHERE AVAILABLE FROM THE MANUFACTURER. VOLTAGE LISTED IN THE SCHEDULE IS INTENDED UTILIZATION VOLTAGE.
- F. REFER TO THE PLAN DRAWINGS FOR LOCATION OF EMERGENCY-DUTY FIXTURES, INCLUDING FIXTURES WITH MULTIPLE CIRCUITS AND/OR EMERGENCY-DUTY SUBCIRCUITS. ALL EMERGENCY-DUTY FIXTURES SHALL BE WIRED AND CIRCUITED PER NEC ARTICLE 700 RULES.
- G. TO MAINTAIN A UNIFORM AND COORDINATED APPEARANCE ACROSS THE PROJECT, ONLY ONE APPROVED MANUFACTURER SHALL BE SELECTED FOR MULTIPLE FIXTURE TYPES AMONG WHICH A SIMILAR STYLE OR SERIES IS INTENDED. NON-COORDINANCE SHALL BE JUDGED AT THE ENGINEER'S DISCRETION AND MAY REQUIRE CONTRACTOR'S RESELECTION OF SOME TYPES WITHIN THE LIST OF APPROVED MANUFACTURERS.
- H. A BREAK-OUT COST SHALL BE MADE AVAILABLE TO THE BIDDING CONTRACTOR (S) FOR ANY FIXTURE TYPES WHICH LIST A SINGLE PRODUCT. THIS PRICING SHALL BE FURNISHED TO THE ARCHITECT/ENGINEER, CONSTRUCTION MANAGER, AND/OR OWNER UPON REQUEST.

LIGHTING FIXTURE SCHEDULE LINE ITEM NOTES:

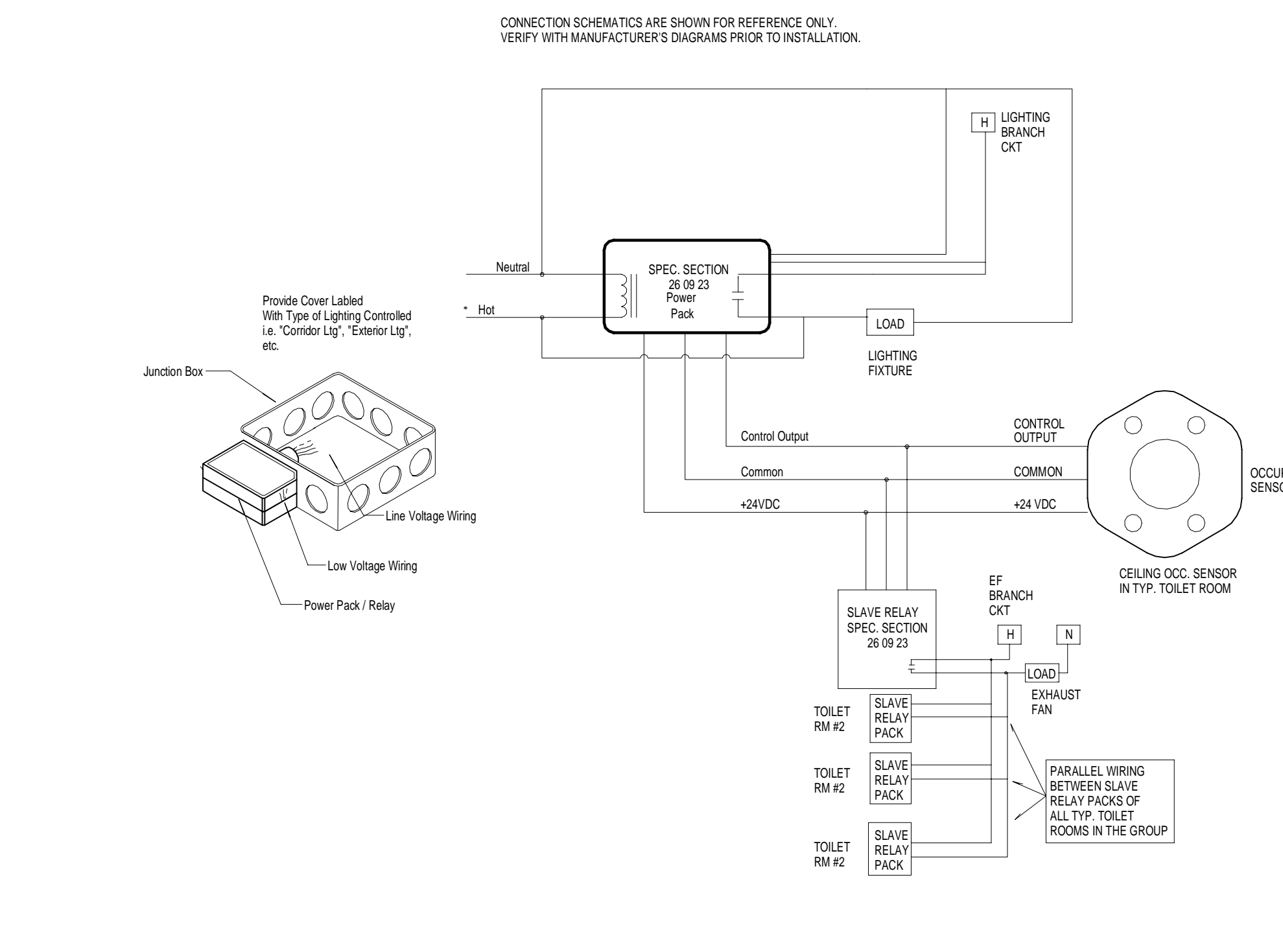
- 1. EMERGENCY BYPASS AND/OR TRANSFER UNITS SHALL BE WIRED WITH SUPPLY FROM EMERGENCY LIGHTING CIRCUIT, AND FROM NORMAL UTILITY LIGHTING CIRCUIT, BOTH LINE AND LOAD SIDE OF ANY ALL CONTROL DEVICES.
- 2. EMERGENCY BATTERY PACKS SHALL HAVE 5-YEAR MANUFACTURER WARRANTY, TEST SWITCH AND CHARGE INDICATOR LIGHT. PROVIDE UNSWITCHED HOT CONDUCTOR FROM RESPECTIVE LOCAL LIGHTING CIRCUIT TO THE BATTERY.
- 3. COORDINATE EXACT LOCATIONS OF FIXTURES IN UTILITY ROOMS WITH EQUIPMENT DISTRIBUTION, PIPING, ETC. IN FIELD TO ACHIEVE UNIFORM ILLUMINATION.
- 4. PROVIDE FEED POINT ON ENTIRE TRACK SYSTEM ARRANGEMENT WITH 3A CURRENT LIMITER DEVICE AS REQUIRED FOR NEC COMPLIANCE.
- 5. PROVIDE FEED POINT ON ENTIRE TRACK SYSTEM ARRANGEMENT WITH 15A CURRENT LIMITER DEVICE AS REQUIRED FOR NEC COMPLIANCE.



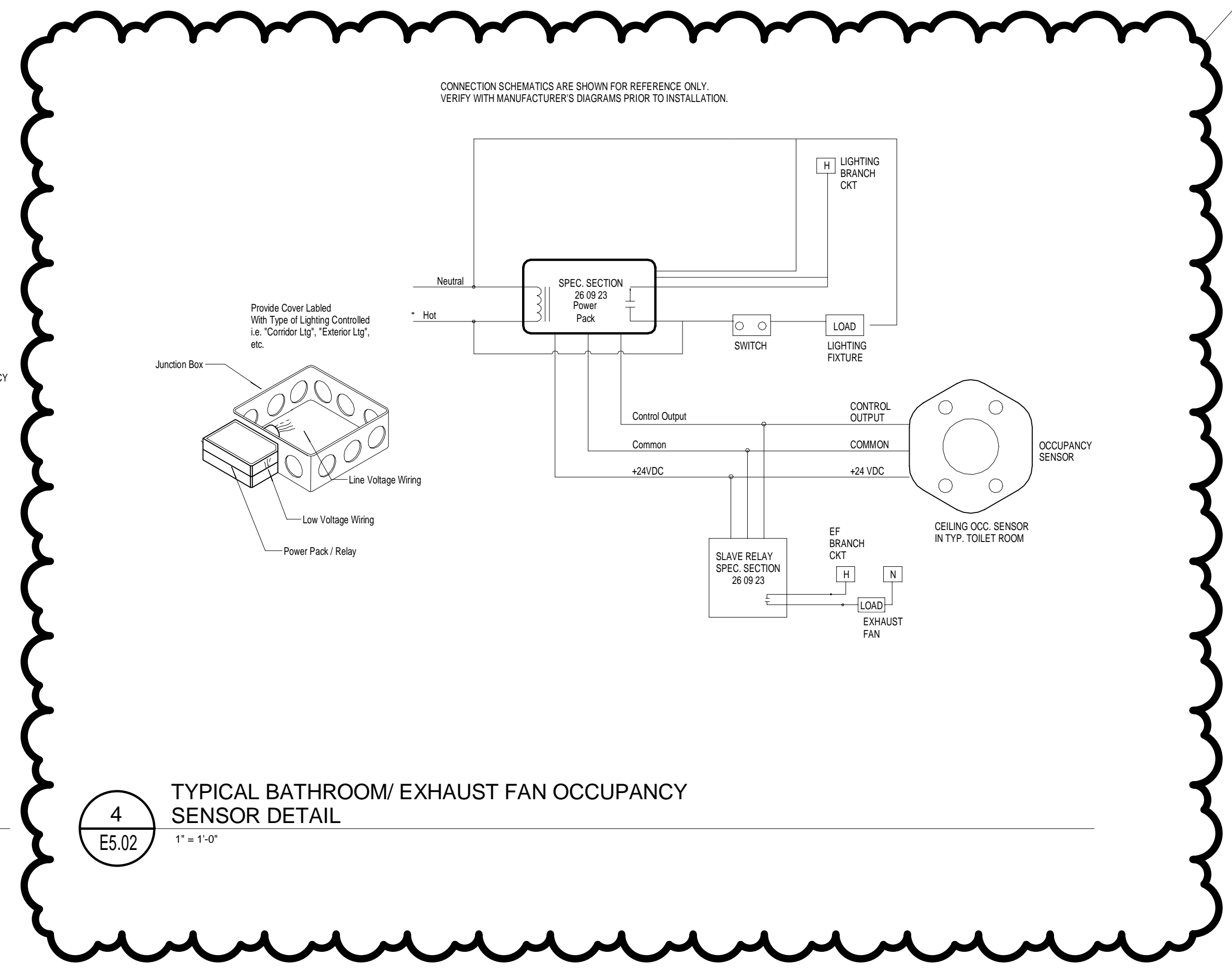
1
E5.02
TYPICAL OCCUPANCY SENSOR CONTROL DETAIL
1" = 1'-0"



3
E5.02
KITCHEN EMERGENCY SHUT-OFF -- EXHAUST HOOD
1/4" = 1'-0"



2
E5.02
TYPICAL LIGHTING/EXHAUST FAN CONTROL FOR MULTIPLE TOILET ROOMS
1" = 1'-0"



4
E5.02
TYPICAL BATHROOM/ EXHAUST FAN OCCUPANCY SENSOR DETAIL
1" = 1'-0"

ISSUANCES	
02.03.2017	BIDS & CONSTRUCTION
02.10.2017	ADDENDUM #1

DRAWN	AAM
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