Addendum No. 1 October 16, 2025

Project: Beresford High School Addition

Beresford, South Dakota

Project #2979

Architect: Architecture Incorporated

Letting: 2:00 p.m. (prevailing local time)

Thursday, October 30, 2025

Beresford High School Front Lobby

301 West Maple Street,

Beresford, South Dakota 57004

Scope of this Addendum:

To all bidders and all others to whom drawings and specifications have been issued by Architecture Incorporated, this Addendum forms a part of the Contract Documents. Acknowledge receipt of this addendum by listing its number and date in the bidder's Form of Proposal. Failure to do so may subject bidder to disqualification. This addendum modifies the drawings and specifications as follows:

GENERAL ITEMS:

1) SECTION – 111000 SUMMARY OF WORK

- a) Page 3, paragraph 1.6.A.3 Work by Owner: Omit owner providing communication, data cabling and final cabling connections for data and security cameras. Contractor shall provide this work as part of base bid. See Electrical drawings and specifications.
- b) Page 3, paragraph 1.6.A.4 Work by Owner: Change scoreboard to scoreboard furnished by Owner, installed by Contractor.

2) SECTION – 126600 TELESCOPING STANDS

a) Page 6, paragraph E.1.b. Aisle Rails: Omit the word removable rail and replace with auto rail or self-stacking rails that do not project in front of bleachers in a closed position.

3) SECTION – 133400 SPORTS NETTING SYSTEMS

a) Page 5, paragraph B.1.2.3: Omit notes and reference to bottom lift cage. Change basis of design for 2 new batting cages from Performance Sports Systems Model #4080BL-70 to Model #4080-70.

4) SECTION – 261480 GYM AND COMMONS LIGHTING CONTROLS

a) Add Electrical Section 261480; reference Section attached to the end of Addendum No. 1.

5) SHEET 2.20 – OVERALL SITE PLAN

a) Reference attached *revised* Sheet 2.20, *revision* dated 10-16-25, which shows Contractor-allowed access to the site from the north for the installation of precast concrete panels. Access is only

allowed for installation of precast. Coordinate scheduling of access with the Owner. All other access remains as shown.

6) SHEET 4.00 – DEMOLITION FLOOR PLAN

- a) Refer to *revised* Sheet 4.00, *revision* dated 10-16-2025, attached to the end of this addendum for revisions to the ceiling plan to remove and replace ceilings for mechanical piping.
- b) Refer to *revised* Sheet 4.00, *revision* dated 10-16-25, attached for revision to the demolition of the existing LVT flooring in the existing Commons. The existing school logo on LVT shall be removed.

7) SHEET 4.10B – AREA B FLOOR PLAN

- a) Paint 4 new steel columns with intumescent fire rated paint at the following Grid locations: L10, L13, L15 and L16. Extend paint from floor line up to bottom of beam.
- b) Add concrete curb around the perimeter of the main fire sprinkler line in the existing boiler room as shown per attached *revised* Sheet 4.10B, *revision* dated 10-16-25.

8) SHEET 4.20B – AREA B FINISH FLOOR PLAN

a) See attached *revised* Sheet 4.20B, *revision* dated 10-16-25, for revisions to the LVT flooring and LVT pattern in the existing Commons area.

9) SHEET 4.60 – INTERIOR ELEVATION

a) Elevation 2/4.60: Change note regarding scoreboard to scoreboard provided by Owner, installed by Contractor.

10) SHEET 4.61 – INTERIOR ELEVATION

a) Elevation 1/4.61: Change note regarding scoreboard to scoreboard provided by Owner, installed by Contractor.

11) SHEET 5.21 – BUILDING SECTION

- a) Reference *revised* sheet 5.21, *revision* dated 10-16-25, attached to the end of this addendum for following modifications:
 - i) Building Section 1/5.21 Section detail reference 10/5.42 has been added as shown in the *revised* drawing.
 - ii) Building Sections 6/5.21, 7/5.21 and 8/5.21 Section detail reference 9/5.42 has been added as shown in the *revised* drawing for the addition of gypsum board around 3 sides of a steel beam.

12) SHEET 5.42 – SECTION DETAILS

a) Reference *revised* sheet 5.42, *revision* dated 10-16-25, attached to the end of this addendum for following modifications:

- i) Detail 9/5.42 Added new section detail 9/5.42; add one layer of 5/8" gypsum board around 3 sides of steel beam as shown in new detail 9/5.42 to comply with one-hour fire rating.
- ii) Detail 10/5.42 Added new section detail 10/5.42 as shown in the revised sheet.

13) <u>SHEET 5.50 – ROOF PLAN</u>

a) See attached *revised* roof plan Sheet 5.50, *revision* dated 10-16-25, for revised locations of the 3 roof top condensing units for the walk in cooler and freezer. Contractor shall provide roof flashing as required to patch existing roof membrane for new refrigerant piping penetrations.

14) SHEET 6.10B – REFLECTED CEILING PLAN – AREA B

a) Refer to *revised* Sheet 6.10B, *revision* dated 10-16-25, attached to the end of this addendum for revisions to the ceiling plan to remove and replace ceilings for mechanical piping.

15) <u>SHEET 11.10 – FOOD SERVICE EQUIPMENT PLAN</u>

- a) See attached *revised* Sheet 11.10, revision dated 10-16-25, for adjustments to the location(s) of the roof top condensing units for the walk-in cooler and freezer. Coordinate final location of units with cooler and freezer manufacturer.
- b) See *revised* electrical Notes #2 and #3. Contractor shall coordinate electrical connections with walk in cooler and freezer manufacturer.
- c) See *revised* plumbing Note #2. Contractor shall coordinate plumbing connections with walk in cooler and freezer manufacturer.

MECHANICAL ITEMS:

1) SHEET 8.21 – DEMOLITION FLOOR PLAN – PLUMBING & HEATING

- a) Refer to revised Sheet 8.21, revision dated 10-16-25 for the following modifications:
 - i) Remove wall hydrant and associated piping. Cap piping at main.
 - ii) Remove can wash faucet, floor drain & associated piping. Cap piping at mains
 - iii) Remove compressor water piping. Cap piping at main.
 - iv) Remove water piping to temperature control box. Cap piping at main.

2) SHEET 8.32 – FIRST FLOOR PLAN – AREA A – PLUMBING & HEATING

a) The fire department connection originally shown on the bottom of the plan shall be moved to the administration office in Area B.

3) <u>SHEET 8.33 – FIRST FLOOR PLAN – AREA B – PLUMBING & HEATING</u>

- a) Refer to *revised* sheet 8.33, *revision* dated 10-16-25 for following modifications:
 - i) Modify HWS & HWR piping into existing Boiler room as shown in revised drawing.
 - ii) Reception B102: Locate fire department connection out north wall as shown per *revised* drawing.
 - iii) Modify HWS & HWR routing serving administration area.

4) SHEET 8.40 – FIRST FLOOR PLAN AREA A – VENTILATION & A/C

a) Regarding Existing Kitchen: Demo existing temperature control panel in Janitor's closet in southwest corner of the kitchen.

5) SHEET 8.41 – FIRST FLOOR PLAN AREA B – VENTILATION & A/C

a) Existing Commons B101A: Provide fire damper and fire blanket for each re-installed ceiling diffuser. Provide fire damper for each re-installed return air grille.

ELECTRICAL ITEMS:

1) SHEET 9.20 - OVERALL FLOOR PLAN – ELECTRICAL

a) Reference attached *revised* drawing Sheet 9.20, *revision* dated 10-16-25, for miscellaneous clouded modifications.

2) <u>SHEET 9.30 – DEMOLITION FIRST FLOOR PLAN – ELECTRICAL</u>

a) Reference attached *revised* drawing Sheet 9.30, *revision* dated 10-16-25, for miscellaneous clouded modifications.

3) <u>SHEET 9.40A – FIRST FLOOR PLAN AREA A - LIGHTING</u>

a) Reference attached *revised* drawing Sheet 9.40A, *revision* dated 10-16-25, for miscellaneous clouded modifications.

4) SHEET 9.41A – FIRST FLOOR PLAN AREA A – POWER & SIGNAL

a) Reference attached *revised* drawing Sheet 9.41A, *revision* dated 10-16-25, for miscellaneous clouded modifications.

5) SHEET 9.42B – FIRST FLOOR PLAN AREA B - LIGHTING

a) Reference attached *revised* drawing Sheet 9.42B, *revision* dated 10-16-25, for miscellaneous clouded modifications.

6) SHEET 9.43B – FIRST FLOOR PLAN AREA B – POWER & SIGNAL

 Reference attached revised drawing Sheet 9.43B, revision dated 10-16-25, for miscellaneous clouded modifications.

7) SHEET 9.44A – UPPER LEVEL PLAN AREA A – LIGHTING

a) Reference attached *revised* drawing Sheet 9.44A, *revision* dated 10-16-25, for miscellaneous clouded modifications.

8) <u>SHEET 9.45A – UPPER LEVEL PLAN AREA A – P</u>OWER & SIGNAL

a) Reference attached *revised* drawing Sheet 9.45A, *revision* dated 10-16-25, for miscellaneous clouded modifications.

9) SHEET 9.46B – CLERESTORY PLAN AREA B - ELECTRICAL

a) Reference attached *revised* drawing Sheet 9.46B, *revision* dated 10-16-25, for miscellaneous clouded modifications.

10) SHEET 9.47A – ROOF PLAN - ELECTRICAL

a) Reference attached *revised* drawing Sheet 9.47A, *revision* dated 10-16-25, for miscellaneous clouded modifications.

11) SHEET 9.50 – ELECTRICAL SYMBOLS AND ABBREVIATIONS

a) Reference attached *revised* drawing Sheet 9.50, *revision* dated 10-16-25, for miscellaneous clouded modifications.

12) <u>SHEET 9.51 – ELECTRICAL SCHEDULES</u>

a) Reference attached *revised* drawing Sheet 9.51, *revision* dated 10-16-25, for miscellaneous clouded modifications.

13) SHEET 9.52 – ELECTRICAL DETAILS

a) Reference attached *revised* drawing Sheet 9.52, *revision* dated 10-16-25, for miscellaneous clouded modifications.

GENERAL APPROVALS:

The following material or equipment furnished by the manufacturers listed, may be substituted as equivalent providing that each item, material, and piece of equipment conforms to the design and requirement of the specifications.

SECTION	ITEM	MANUFACTURER
033000	Under Slab Vapor Barrier	Viper II, Class A
051200	Structural Steel Fabricators	Summit Steel
075323	EPDM Roofing	Duro-Last Roofing; Duro Tuff PVC 60 mil; Charcoal gray
095113	Acoustical Panel Ceilings	USG
	ACT-3	Radar #22521

096813 Tile Carpeting Mohawk Group

WOCPT-1: Defining Pace; Color: TBD.

CPT-1: Side Stripe GT419; Color: 964 Southeast; Size: 24" x 24"

116623	Gymnasium Equipment	ADP Lemco, Inc.
126600	Telescoping Stands	Hussey
220400	Cleanouts, floor drains, floor sinks, roof drains, downspout nozzle	Watts Drainage Products
230800	Air Handling Unit	VTS, Pace
230800	Condensing Units	LG, TempMaster
230800	Fan Powered VAV Terminals	Metal Aire Greenheck
230800	VAV/Reheat Terminals	Metal Aire Greenheck
230800	Fabric Duct	Prihoda
230800	Louver	Nailor
230800	Backdraft Damper	Nailor
265119	Interior Lighting	
	Type L Type W1/W2	Current Lighting Lumark

END OF ADDENDUM No. 1

SECTION 261480

GYMNASIUM AND COMMONS LIGHTING CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Single space wireless lighting control systems and associated components:
 - 1. Wireless occupancy/vacancy sensors.
 - 2. Wireless daylight sensors.
 - 3. Wired load control modules with wireless communication inputs.
 - a. Includes fixture control modules.
 - 4. Wired wall dimmers and switches with wireless communication inputs.
 - 5. Wired wallbox occupancy sensors with wireless communication inputs.
 - 6. Wireless control stations.
- B. Wireless hub(s) for centralized control, monitoring, and system integration.

1.02 RELATED REQUIREMENTS

- Section 260100 Basic Electrical Materials and Methods: Identification products and requirements.
- B. Section 261400 Wiring Devices
 - 1. Finish requirements for wall controls specified in this section.
 - Accessory receptacles and wallplates, to match lighting controls specified in this section.
- C. Section 265119 LED Lighting.

1.03 REFERENCE STANDARDS

- A. 47 CFR 15 Radio Frequency Devices; *current edition*.
- B. ANSI/ESD S20.20 Protection of Electrical and Electronic Parts, Assemblies and Equipment (Excluding Electrically Initiated Explosive Devices); **2014**.
- C. ASTM D4674 Standard Practice for Accelerated Testing for Color Stability of Plastics Exposed to Indoor Office Environments; **2002a** (**Reapproved 2010**).
- D. CSA C22.2 No. 223 Power Supplies with Extra-low-voltage Class 2 Outputs; 2015.
- E. IEC 61000-4-2 Electromagnetic Compatibility (EMC) Part 4-2: Testing and Measurement Techniques Electrostatic Discharge Immunity Test; **2008**.
- F. IEEE 1789 Recommended Practice for Modulating Current in High-Brightness LEDs for Mitigating Health Risks to Viewers: **2015**.
- G. IEEE C62.41.2 Recommended Practice on Characterization of Surges in Low-Voltage (1000 V and less) AC Power Circuits; **2002 (Cor 1, 2012)**.
- H. ISO 9001 Quality Management Systems-Requirements; 2008.
- I. NECA 1 Standard for Good Workmanship in Electrical Construction; 2015.
- J. NECA 130 Standard for Installing and Maintaining Wiring Devices; National Electrical Contractors Association; **2010**.
- K. NEMA 410 Performance Testing for Lighting Controls and Switching Devices with Electronic Drivers and Discharge Ballasts; National Electrical Manufacturers Association; 2015.
- L. NEMA WD 1 General Color Requirements for Wiring Devices; National Electrical Manufacturers Association: 1999 (R 2015).
- M. NFPA 70 National Electrical Code; National Fire Protection Association; *Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements*.
- N. UL 20 General-Use Snap Switches; Current Edition, Including All Revisions.
- O. UL 508 Industrial Control Equipment; Underwriters Laboratories Inc.; *Current Edition, Including All Revisions*.
- P. UL 924 Emergency Lighting and Power Equipment; *Current Edition, Including All Revisions*.
- Q. UL 1310 Class 2 Power Units; Current Edition, Including All Revisions.

- R. UL 1472 Solid-State Dimming Controls; Current Edition, Including All Revisions.
- S. UL 2043 Fire Test for Heat and Visible Smoke Release for Discrete Products and Their Accessories Installed in Air-Handling Spaces; *Current Edition, Including All Revisions*.

1.04 SUBMITTALS

- A. Product Data: Include ratings, configurations, standard wiring diagrams, dimensions, colors, service condition requirements, and installed features.
 - 1. Occupancy/Vacancy Sensors: Include detailed basic motion detection coverage range diagrams.
 - 2. Wall Dimmers: Include derating information for ganged multiple devices.
- B. Project Record Documents: Record actual installed locations and settings for lighting control system components.
- C. Operation and Maintenance Data: Include detailed information on lighting control system operation, equipment programming and setup, replacement parts, and recommended maintenance procedures and intervals.
- D. Warranty: Submit sample of manufacturer's Warranty or Enhanced Warranty as specified in Part 1 under "WARRANTY". Submit documentation of final executed warranty completed in Owner's name and registered with manufacturer.

1.05 QUALITY ASSURANCE

- Conform to requirements of NFPA 70.
- B. Maintain at the project site a copy of each referenced document that prescribes execution requirements.
- C. Manufacturer Qualifications:
 - 1. Company with not less than ten years of experience manufacturing lighting control products using wireless communication between devices.
 - 2. Registered to ISO 9001, including in-house engineering for product design activities.
 - 3. Provides factory direct technical support hotline available 24 hours per day, 7 days per week.
 - 4. Qualified to supply specified products and to honor claims against product presented in accordance with warranty.

1.06 WARRANTY

- A. See **Section 260100 Common Electrical Requirements**, for additional warranty requirements.
- B. Manufacturer's Standard Warranty, With Manufacturer Full-Scope Start-Up; *Lutron Standard 2-Year Warranty; Lutron LSC-B2*:
 - 1. Manufacturer Lighting Control System Components, Except Lighting Management System Computer, Ballasts/Drivers and Ballast Modules:
 - a. First Two Years:
 - 1) 100 percent replacement parts coverage, 100 percent manufacturer labor coverage to troubleshoot and diagnose a lighting issue.
 - 2) First-available on-site or remote response time.
 - 3) Remote diagnostics for applicable systems.
 - b. Telephone Technical Support: Available 24 hours per day, 7 days per week, excluding manufacturer holidays.
 - 2. Lighting Management System Computer: One year 100 percent parts coverage, one year 100 percent manufacturer labor coverage.
 - 3. Ballasts/Drivers and Ballast Modules:
 - a. With Remote Full-Scope Start-Up: Three years 100 percent parts coverage, no manufacturer labor coverage.
 - b. With On-Site Full-Scope Start-Up: Five years 100 percent parts coverage, no manufacturer labor coverage.

PART 2 PRODUCTS 2.01 MANUFACTURERS

- A. Basis of Design Manufacturer: Lutron Electronics Company, Inc; Vive; www.lutron.com.
- B. Other Acceptable Manufacturers:
 - Products by listed manufacturers are subject to compliance with specified requirements and prior approval of Engineer.

C. Substitutions:

- 1. Alternate systems will be considered but would require the replacement of the existing Lutron wireless lighting control system in the existing gymnasium under the scope of this bid without any additional material, labor or warranty costs to the owner so the existing Gym, new Gym and Commons all operate with the same control system and app.
- 2. All proposed substitutions (clearly delineated as such) must be submitted in writing for approval by Engineer a minimum of **7** working days prior to the bid date and must be made available to all bidders. Proposed substitutes must be accompanied by a review of the specification noting compliance on a line-by-line basis.
- 3. By using pre-approved substitutions, Contractor accepts responsibility and associated costs for all required modifications to existing gym equipment and wiring. Provide complete engineered shop drawings (including power wiring) with deviations from the original design highlighted in an alternate color for review and approval by Engineer prior to rough-in.
- D. Source Limitations: Furnish products produced by a single manufacturer and obtained from a single supplier.

2.02 LIGHTING CONTROLS - GENERAL REQUIREMENTS

- A. Provide products listed, classified, and labeled by Underwriter's Laboratories Inc. (UL) as suitable for the purpose indicated.
- B. Unless specifically indicated to be excluded, provide all required equipment, conduit, boxes, wiring, connectors, hardware, supports, accessories, programming, etc. as necessary for a complete operating system that provides the control intent indicated.
- C. Design lighting control equipment for 10 year operational life while operating continually at any temperature in an ambient temperature range of 32 degrees F (0 degrees C) to 104 degrees F (40 degrees C) and 90 percent non-condensing relative humidity.
- D. Electrostatic Discharge Tolerance: Design and test equipment to withstand electrostatic discharges without impairment when tested according to IEC 61000-4-2.
- E. Power Failure Recovery: When power is interrupted and subsequently restored, lights to automatically return to same levels (dimmed setting, full on, or full off) as prior to power interruption.
- F. Wireless Devices:
 - 1. Wireless device family includes area or fixture level sensors, area or fixture level load controls for dimming or switching, and load controls that can be mounted in a wallbox, on a junction box, or at the fixture.
 - 2. Wireless devices including sensors, load controls, and wireless remotes or wall stations, can be set up using simple button press programming without needing any other equipment (e.g. central hub, processor, computer, or other smart device).
 - 3. Wireless hub adds the ability to set up the system using any smart device with a web browser (e.g. smartphone, tablet, PC, or laptop).
 - 4. System does not require a factory technician to set up or program the system.
 - 5. Capable of diagnosing system communications.
 - 6. Capable of having addresses automatically assigned to them.
 - 7. Receives signals from other wireless devices and provides feedback to user.
 - 8. Capable of determining which devices have been addressed.
 - 9. RF Range: 60 feet (18 m) line-of-sight or 30 feet (9 m) through typical construction materials between RF transmitting devices and compatible RF receiving devices.
 - 10. Electromagnetic Interference/Radio Frequency Interference (EMI/RFI) Limits: Comply with FCC requirements of CFR, Title 47, Part 15, for Class B application.
- G. Wireless Network:

- 1. RF Frequency: 434 MHz; operate in FCC governed frequency spectrum for periodic operation; continuous transmission spectrum is not permitted.
 - a. Wireless sensors, wireless wall stations and wireless load control devices do not operate in the noisy 2.4 GHz frequency band where high potential for RF interference exists.
 - b. Wireless devices operate in an uncongested frequency band providing reliable operation.
 - c. Fixed network architecture ensures all associated lights and load controls respond in a simultaneous and coordinated fashion from a button press, sensor signal, or command from the wireless hub (i.e. no popcorning).
- 2. Distributed Architecture: Local room devices communicate directly with each other. If the wireless hub is removed or damaged, local control, sensing, and operation continues to function without interruption.
- 3. Local room devices communicate directly with each other (and not through a central hub or processor) to ensure:
 - a. Reliability of system performance.
 - b. Fast response time to events in the space (e.g. button presses or sensor signals).
 - Independent operation in the event of the wireless hub being removed or damaged.

H. Device Finishes:

 Wall Controls: Match finishes for Wiring Devices in Section 261400, unless otherwise indicated.

2.03 WIRELESS SENSORS

- A. General Requirements:
 - 1. Operational life of 10 years without the need to replace batteries when installed per manufacturer's instructions.
 - 2. Communicates directly to compatible RF receiving devices through use of a radio frequency communications link.
 - 3. Does not require external power packs, power wiring, or communication wiring.
 - 4. Capable of being placed in test mode to verify correct operation from the face of the unit.
- B. Wireless Occupancy/Vacancy Sensors:
 - 1. General Requirements:
 - Provides a clearly visible method of indication to verify that motion is being detected during testing and that the unit is communicating to compatible RF receiving devices.
 - b. Utilize multiple segmented lens, with internal grooves to eliminate dust and residue build-up.
 - c. Sensing Mechanism: Passive infrared coupled with technology for sensing fine motions; *Lutron XCT Technology*. Signal processing technology detects finemotion passive infrared (PIR) signals without the need to change the sensor's sensitivity threshold.
 - d. Provide optional, readily accessible, user-adjustable controls for timeout, automatic/manual-on, and sensitivity.
 - e. Turns off lighting after reasonable and adjustable time delay once the last person to occupy the space vacates a room or area. Provide adjustable timeout settings of 1, 5, 15, and 30 minutes.
 - f. Capable of turning dimmer's lighting load on to an optional locked preset level selectable by the user. Locked preset range to be selectable on the dimmer from 1 percent to 100 percent.
 - g. Color: White.
 - h. Provide all necessary mounting hardware and instructions for both temporary and permanent mounting.

- Provide temporary mounting means for drop ceilings to allow user to check proper performance and relocate as needed before permanently mounting sensor. Temporary mounting method to be design for easy, damage-free removal.
- Sensor lens to illuminate during test mode when motion is detected to allow installer to place sensor in ideal location and to verify coverage prior to permanent mounting.
- k. Ceiling-Mounted Sensors:
 - 1) Provide surface mounting bracket compatible with drywall, plaster, wood, concrete, and compressed fiber ceilings.
 - 2) Provide recessed mounting bracket compatible with drywall and compressed fiber ceilings.
- I. Wall-Mounted Sensors: Provide wall or corner mounting brackets compatible with drywall and plaster walls.
- 2. Wireless Combination Occupancy/Vacancy Sensors:
 - Ceiling-Mounted Sensors: Programmable to operate as an occupancy sensor (automatic-on and automatic-off), an occupancy sensor with low light feature (automatic-on when less than one footcandle of ambient light available and automatic-off), or a vacancy sensor (manual-on and automatic-off).
 - b. Wall-Mounted Sensors: Programmable to operate as an occupancy sensor (automatic-on and automatic-off), or a vacancy sensor (manual-on and automatic-off).
 - c. Product(s):
 - 1) Ceiling-Mounted Occupancy/Vacancy Sensor; Lutron Radio Powr Savr Series, Model LFR2-OCR2B-P-WH. Coverage from 324 square feet (30.2 sq m) to 676 square feet (62.4 sq m) depending on ceiling height from 8 to 12 feet (2.4 to 3.7 m); 360 degree field of view.
 - Wall-Mounted Occupancy/Vacancy Sensor; << Lutron Radio Powr Savr Series, Model LFR2-OWLB-P-WH. Minor motion coverage of 1500 square feet (139.4 sq m) and major motion coverage of 3000 square feet (278.7 sq m) with mounting height of 6 to 8 feet (1.8 to 2.4 m); 180 degree field of view.
 - 3) Corner-Mounted Occupancy/Vacancy Sensor; << Lutron Radio Powr Savr Series, Model LFR2-OKLB-P-WH. Minor motion coverage of 1225 square feet (113.8 sq m) and major motion coverage of 2500 square feet (232.3 sq m) with mounting height of 6 to 8 feet (1.8 to 2.4 m); 90 degree field of view.
 - 4) Hallway Occupancy/Vacancy Sensor; << Lutron Radio Powr Savr Series, Model LFR2-OHLB-P-WH. Major motion coverage of up to 150 feet (45.7 m) with mounting height of 6 to 8 feet (1.8 to 2.4 m); narrow field of view.
- C. Wireless Daylight Sensors:
 - 1. Product: Lutron Radio Powr Savr Series, Model LFR2-DCRB-WH.
 - 2. Open-loop basis for daylight sensor control scheme.
 - 3. Stable output over temperature from 32 degrees F (0 degrees C) to 104 degrees F (40 degrees C).
 - 4. Partially shielded for accurate detection of available daylight to prevent fixture lighting and horizontal light component from skewing sensor detection.
 - 5. Provide linear response from 2 to 150 footcandles.
 - 6. Color: White.
 - 7. Mounting:
 - a. Provide surface mounting bracket compatible with drywall, plaster, wood, concrete, and compressed fiber ceilings.
 - b. Provide all necessary mounting hardware and instructions for both temporary and permanent mounting.

- c. Provide temporary mounting means for drop ceilings to allow user to check proper performance and relocate as needed before permanently mounting sensor. Temporary mounting method to be design for easy, damage-free removal.
- 8. Meets CAL TITLE 24 P6 requirements.

2.04 LOAD CONTROL MODULES

- Provide wireless load control modules as indicated or as required to control the loads as indicated.
- B. Junction Box-Mounted Modules:
 - 1. Plenum rated.
 - 2. 0-10 V Dimming Modules:
 - a. Product(s):
 - 8 A dimming module with 0-10V control, without emergency lighting mode; Lutron PowPak Dimming Module Model RMJS-8T-DV-B.
 - Communicates via radio frequency with up to ten compatible occupancy/vacancy sensors, ten wireless control stations, and one daylight sensor.
 - c. Single low voltage dimming module with Class 1 or Class 2 isolated 0-10V output signal conforming to IEC 60929 Annex E.2; source or sink automatically configures.
 - d. Selectable minimum light level.
 - e. Configurable high- and low-end trim.
 - f. Relay: Rated for 0-10 V ballasts, LED drivers, or fixtures that conform with NEMA 410.

2.05 WIRELESS CONTROL STATIONS

- A. Product(s):
 - 1. 2-Button Control; Lutron Pico Wireless Control Model PJ2-2B.
 - a. Button Marking: For zones as indicated on drawings.
 - 2. 3-Button with Raise/Lower Control; Lutron Pico Wireless Control Model PJ2-3BRL.
 - a. Button Marking: For zones as indicated on drawings.
 - 3. 4-Button; Lutron Pico Wireless Control Model PJ2-4B.
 - a. Button Marking: Scene Selection.
 - 4. Single Pedestal: Lutron Pico Pedestal Model L-PED1.
 - 5. Double Pedestal: Lutron Pico Pedestal Model L-PED2.
 - 6. Triple Pedestal; Lutron Pico Pedestal Model L-PED3.
 - 7. Quadruple Pedestal; Lutron Pico Pedestal Model L-PED4.
 - 8. Screw Mounting Kit; Lutron Model PICO-SM-KIT.
 - 9. Wallbox Adapter; Lutron Model PICO-WBX-ADAPT.
- B. Quantity: Provide one wallbox adapter for each control station on the project.
- C. Communicates directly to compatible RF receiving devices through use of a radio frequency communications link.
- D. Does not require external power packs, power or communication wiring.
- E. Allows for easy reprogramming without replacing unit.
- F. Button Programming:
 - 1. Single action.
 - 2. Toggle action.
- G. Includes LED to indicate button press or programming mode status.
- H. Mounting:
 - 1. Capable of being mounted with a table stand or directly to a wall under a faceplate.
 - 2. Faceplates: Provide concealed mounting hardware.
- I. Power: Battery-operated with minimum ten-year battery life (3-year battery life for night light models).
- J. Finish: Grey.

2.06 WIRELESS HUBS

- A. Product(s):
 - Wireless hub without BACnet; Lutron Vive Hub.
 - a. Flush-mount wireless hub; Model HJS-0-FM; supports up to 70 total paired devices.
- B. Integrated multicolor LED provides feedback on what mode the hub is in for simple identification and diagnosis.
- C. Integrated processor and web server allows hub to set up and operate the system without any external connections to outside processors, servers, or the internet.
- D. Utilizes Ethernet connection for:
 - 1. Networking up to 64 hubs together to create a larger system.
 - 2. Integration with Building Management System (BMS) via native BACnet.
 - 3. Remote connectivity capabilities, including maintaining system date/time and receiving periodic firmware updates (requires internet connection).
- E. A single hub or network of hubs can operate on either a dedicated lighting control only network or can be integrated with an existing building network as a VLAN.
- F. Communicates directly to compatible *Lutron Vive* RF devices through use *Lutron Clear Connect* radio frequency communications link; does not require communication wiring; RF range of 71 feet (23 m) through walls to cover an area of 15836 square feet (1471 sq m) (device and hub must be on the same floor).
- G. Communicates directly to mobile device (smartphone or tablet) or computer using built-in Wi-Fi, 2.4 GHz 802.11b/g; wireless range of 71 feet (23 m) through walls (device and hub must be on the same floor).
 - 1. Does not require external Wi-Fi router for connecting to the hub.
- H. Allows for system setup, control, and monitoring from mobile device or computer using **Vive** web-based software:
 - 1. Supports paired devices up to maximum number indicated including compatible wireless sensors, wireless control stations, and wireless load devices.
 - 2. Allows for timeclock scheduling of events, both time of day and astronomic (sunrise and sunset).
 - a. Timeclock is integrated into the unit and does not require a constant internet connection.
 - b. Retains time and programming information after a power loss.
 - c. 365-day schedulable timeclock allows for:
 - 1) Scheduling of events years in advance.
 - Setting of recurring events with exceptions on holidays.
 - d. Time clock events can be scheduled to:
 - Send lights to a desired level and select the fade rate desired to reach that level.
 - Adjust level lights go to when occupied.
 - 3) Adjust level lights go to when unoccupied.
 - 4) Enable/disable occupancy.
 - 5) Adjust timeout of sensors (requires *Model FC-SENSOR* wired fixture sensor or *Model DFCSJ-OEM-OCC* wireless fixture control dongle with integral sensing capabilities).
 - 6) Control individual devices, areas, or groups of areas. When connected to **Vive Vue** server, only areas or groups of areas can be controlled with timeclock events.
 - 3. Daylighting:
 - a. Daylighting can be enabled/disabled. Can be used to override the control currently taking place in the space.
 - b. Daylight set point can be adjusted with the software to increase or decrease the electric light level in the room based on the same amount of natural light.
 - 4. Allows for control, monitoring, and adjustment from anywhere in the world (*Lutron Vive* wireless hub internet connection required).

- 5. Uses RF signal strength detection to find nearby devices for quick association and programming without having to climb ladders.
 - a. Association and setup does not require a factory technician to perform.
- 6. System using **Lutron Vive** wireless hub(s) can operate with or without connection to the internet.
- 7. Supports energy reporting.
 - a. Reports measured energy data for *PowPak* fixture control modules at accuracy of plus/minus 2 percent or 0.5 W (whichever is higher).
 - b. Reports calculated energy data for *PowPak* junction box mounted modules at accuracy of 10 percent.
 - c. Reports measured energy for **DFCSJ Series** wireless fixture control dongle when paired with driver that supports measured power (measurement accuracy defined by driver specification) or reports calculated power if driver does not have measurement capabilities.
- 8. Supports automatic demand response for load shedding via:
 - a. Local contact closure without need for separate interface.
 - b. OpenADR® 2.0b compliant utility command.
 - BACnet (Lutron Vive Premium wireless hub with BACnet only).
- 9. Wireless hub can be firmware upgraded to provide new software features and system updates.
 - a. Firmware update can be done either locally using a wired Ethernet connection or Wi-Fi connection, or remotely if the wireless hub is connected to the internet.
- I. Lutron Vive Web-Based Application:
 - 1. Accessibility and Platform Support:
 - Web-based; runs on most HTML5 compatible browsers (including Safari and Chrome).
 - b. Supports multiple platforms and devices; runs from a tablet, desktop, laptop, or smartphone.
 - c. User interface supports multi-touch gestures such as pinch to zoom, drag to pan, etc.
 - d. Utilizes HTTPS (industry-standard certificate-based encryption and authentication for security).
 - e. Multi-level Password Protected Access: Individual password protection on both the integrated Wi-Fi network and web-based software.
 - f. WPA2 security for Wi-Fi communication with wireless hub.
 - 2. System Navigation and Status Reporting:
 - Area Tree View: Easy navigation by area name to view status and make programing adjustments through the software.
 - b. Area and device names can be changed in real time.
 - 3. Setup app available for iOS and Android that allows for:
 - a. Job registration to extend product warranty.
 - b. Management of setup for multiple projects in different locations.
 - c. Creation of handoff documents that are sent directly to a facility manager via email once setup is complete.
 - d. Backup of *Vive* wireless hub database to *Lutron* cloud for hub replacement.
 - e. Access to native help and instructions to assist user with **Vive** system setup.
- J. Contact Closure Interface: Provide two contact closure inputs; accepts both momentary and maintained contact closures that can be used for automatic demand response.
- K. Rated for use in air-handling spaces as defined in UL 2043.
- L. Meets CAL TITLE 24 P6 requirements.

2.07 SOURCE QUALITY CONTROL

- A. Factory Testing; *Lutron Standard Factory Testing*:
 - 1. Perform full-function factory testing on all completed assemblies. Statistical sampling is not acceptable.
 - 2. Perform full-function factory testing on 100 percent of all ballasts and LED drivers.

3. Perform factory burn-in of 100 percent of all ballasts at 104 degrees F (40 degrees C).

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as shown on the drawings.
- Verify that ratings and configurations of system components are consistent with the indicated requirements.
- C. Verify that mounting surfaces are ready to receive system components.
- D. Verify that conditions are satisfactory for installation prior to starting work.

3.02 PREPARATION

- A. System and Network Integration Consultation; *Lutron LSC-INT-VISIT*: Include as part of the base bid any additional costs for Lighting Control Manufacturer to conduct meeting with facility representative and other related equipment manufacturers to discuss equipment and integration procedures.
 - 1. Coordinate scheduling of visit with Lighting Control Manufacturer. Manufacturer recommends that this visit be scheduled early in construction phase, after system purchase but prior to system installation.

3.03 INSTALLATION

- A. Perform work in a neat and workmanlike manner in accordance with NECA 1 and, where applicable, NECA 130 including mounting heights specified in those standards unless otherwise indicated.
- B. Install products in accordance with manufacturer's instructions.
- C. Sensor Locations:
 - 1. Where Lighting Control Manufacturer Sensor Layout and Tuning service is specified in Part 2 under "LIGHTING CONTROLS - GENERAL REQUIREMENTS", locate sensors in accordance with layout provided by Lighting Control Manufacturer. Lighting Control Manufacturer may direct Contractor regarding sensor relocation should conditions require a deviation from locations indicated. Where Lighting Control Manufacturer Sensor Layout and Tuning service is not specified, locate sensors in accordance with Drawings.
 - 2. Sensor locations indicated are diagrammatic. Within the design intent, reasonably minor adjustments to locations may be made in order to optimize coverage and avoid conflicts or problems affecting coverage, in accordance with manufacturer's recommendations.
- D. Ensure that daylight sensor placement minimizes sensor view of electric light sources. Locate ceiling-mounted and luminaire-mounted daylight sensors to avoid direct view of luminaires.
- E. Lamp Burn-In: Operate lamps at full output for prescribed period per manufacturer's recommendations prior to use with any dimming controls. Replace lamps that fail prematurely due to improper lamp burn-in.
- F. Lamp Lead Lengths: Do not exceed 3 feet (0.9 m) for T4 4-pin compact and T5 BIAX lamps and 7 feet (2.1 m) for T5, T5-HO, T8 U-bend, and T8 linear fluorescent lamps.
- G. LED Light Engine/Array Lead Length: Do not exceed 100 feet (31 m).
- H. Identify system components in accordance with Section **260100**.

3.04 FIELD QUALITY CONTROL

- A. Manufacturer's Full-Scope Start-Up Service is required.
- B. Manufacturer's Programming Service:
 - Product(s):
 - Remote programming, 4-hour block; Lutron LSC-RMT-PROG4-SP.
- C. Manufacturer's Full-Scope Start-Up Service: **Utilize manufacturer's Remote Full-Scope Start-Up Service where possible.**
 - 1. Remote Full-Scope Start-Up Service; *Lutron LSC-RMT-SU-VIVE*: When available in accordance with manufacturer's guidelines, provide access to manufacturer's certified

remote startup technician to provide instruction and guidance for complete system functional test.

- a. Train Owner's representative on system capabilities, operation, and maintenance, as specified in Part 3 under "Closeout Activities".
- D. Correct defective work, adjust for proper operation, and retest until entire system complies with contract documents.

3.05 ADJUSTING

A. On-Site Scene and Level Tuning; Where Lighting Control Manufacturer Sensor Layout and Tuning service is not specified, Contractor to provide fine-tuning of sensor calibration.

3.06 CLEANING

A. Clean exposed surfaces to remove dirt, paint, or other foreign material and restore to match original factory finish.

3.07 CLOSEOUT ACTIVITIES.

- A. Demonstration:
 - Demonstrate proper operation of lighting control devices to **Owner** and correct deficiencies or make adjustments as directed.
- B. Training:
 - 1. Include services of manufacturer's certified service representative to perform on-site training of Owner's personnel on operation, adjustment, and maintenance of lighting control system as part of system start-up services.

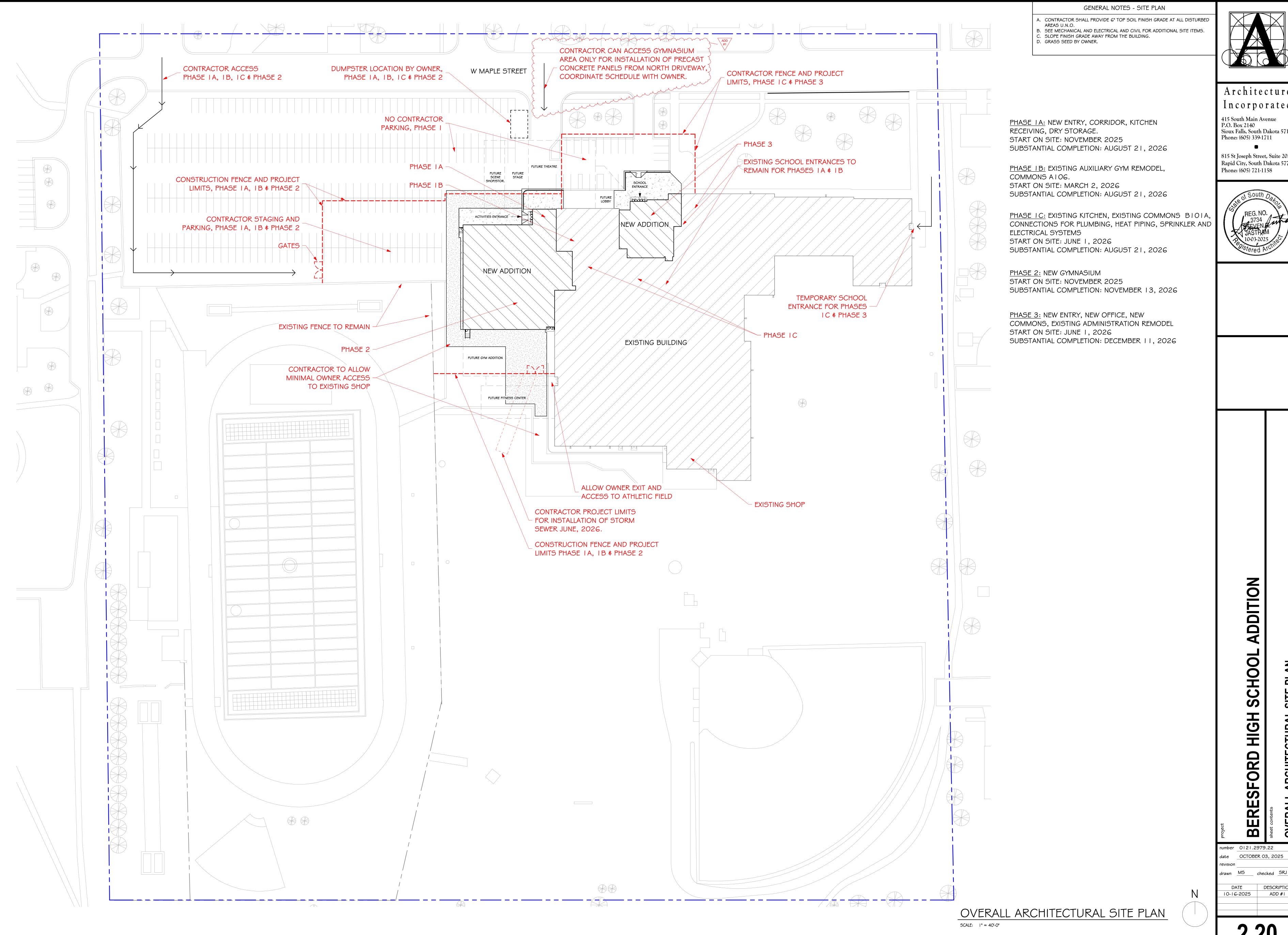
3.08 MAINTENANCE

- A. The Contractor shall furnish the Owner with two (2) sets of complete catalog data (approved shop drawings), manufacturer's literature and detailed manuals covering the operation and maintenance of all equipment specified under this Division
 - 1. Comply with Division 1 requirements.
 - 2. The manual shall indicate the Contractor's name, address, and phone number and include a list of all Subcontractors, including company name, address, and telephone number.
 - 3. The manual shall include, but not be limited to, the following: Installation instructions; maintenance and overhaul instructions; procedures for start, operation, and shut down of equipment and systems; complete wiring and control diagrams; cleaning of lighting fixtures lenses and other equipment; safety precautions; diagrams and illustrations; manufacturers' name and catalog data; test procedures; name and address of authorized service organizations; and parts distributor for all material and equipment installed. Include all special warranty statements for all special warranties required by contract documents.
 - 4. The manual shall include a complete inventory list of all extra materials which are specified to be provided in the Contract.
 - 5. All such literature shall be bound in an amply sized three-ring binder with table of contents and tabbed sections separating and identifying the sections of the manual.

3.09 PROTECTION

A. Protect installed products from subsequent construction operations.

END OF SECTION



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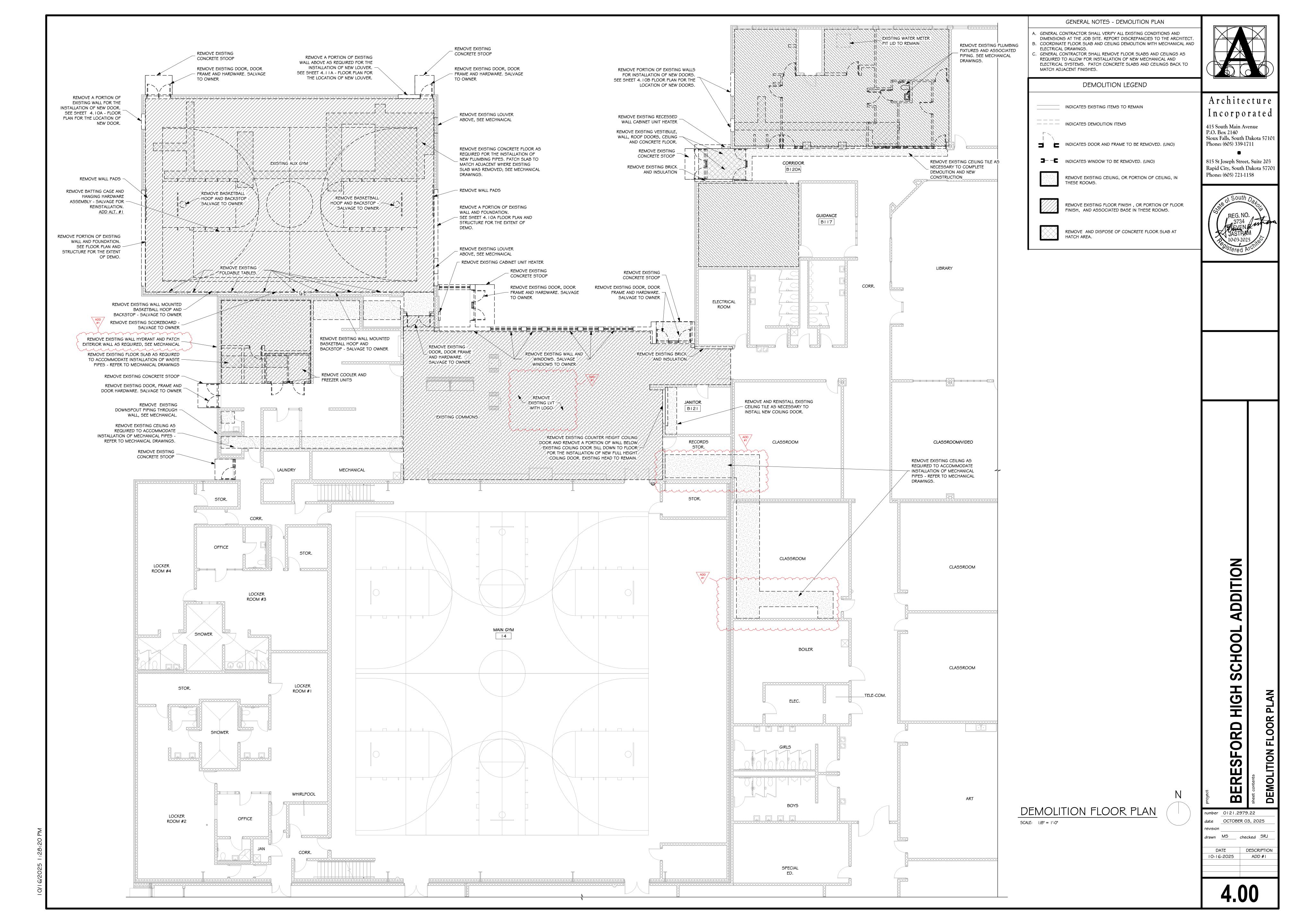
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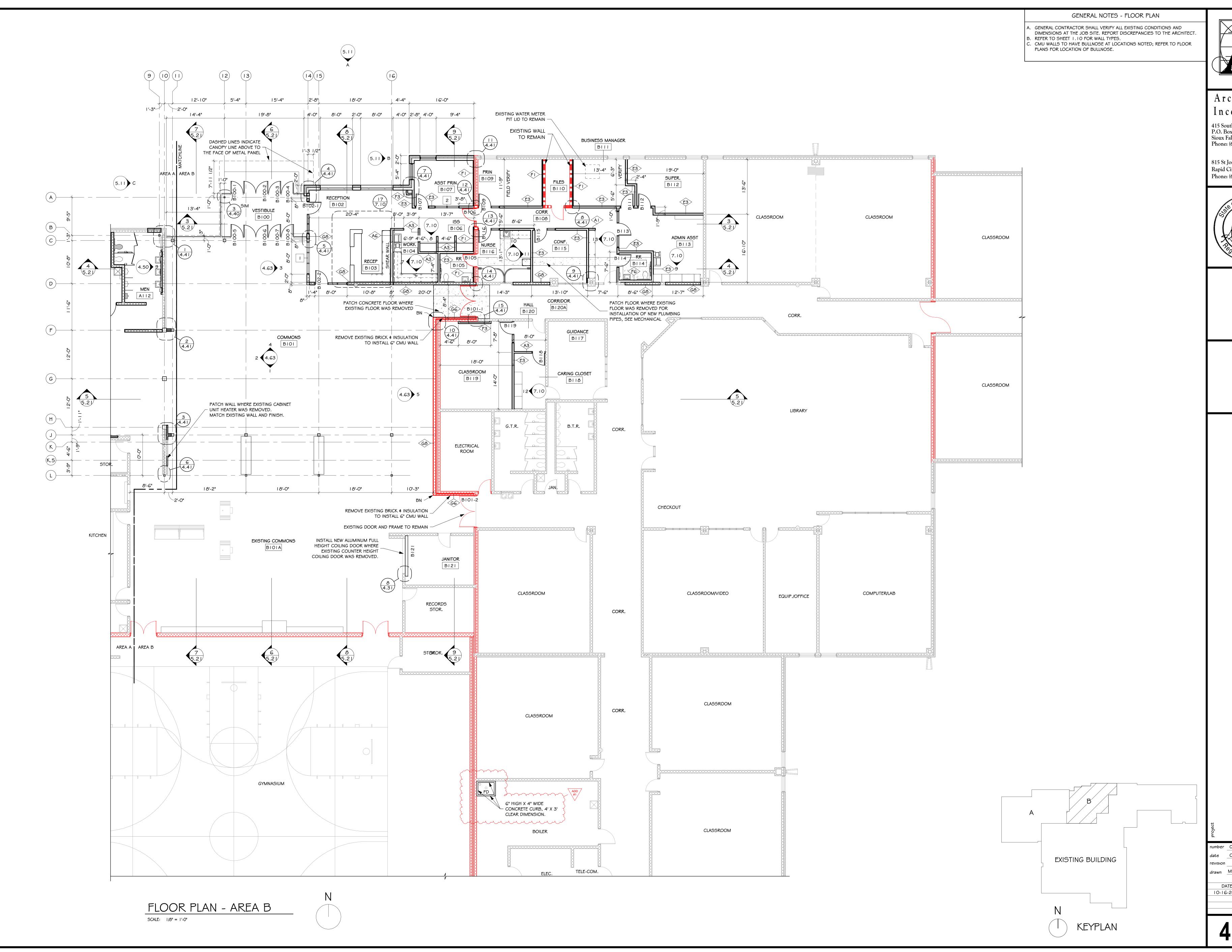


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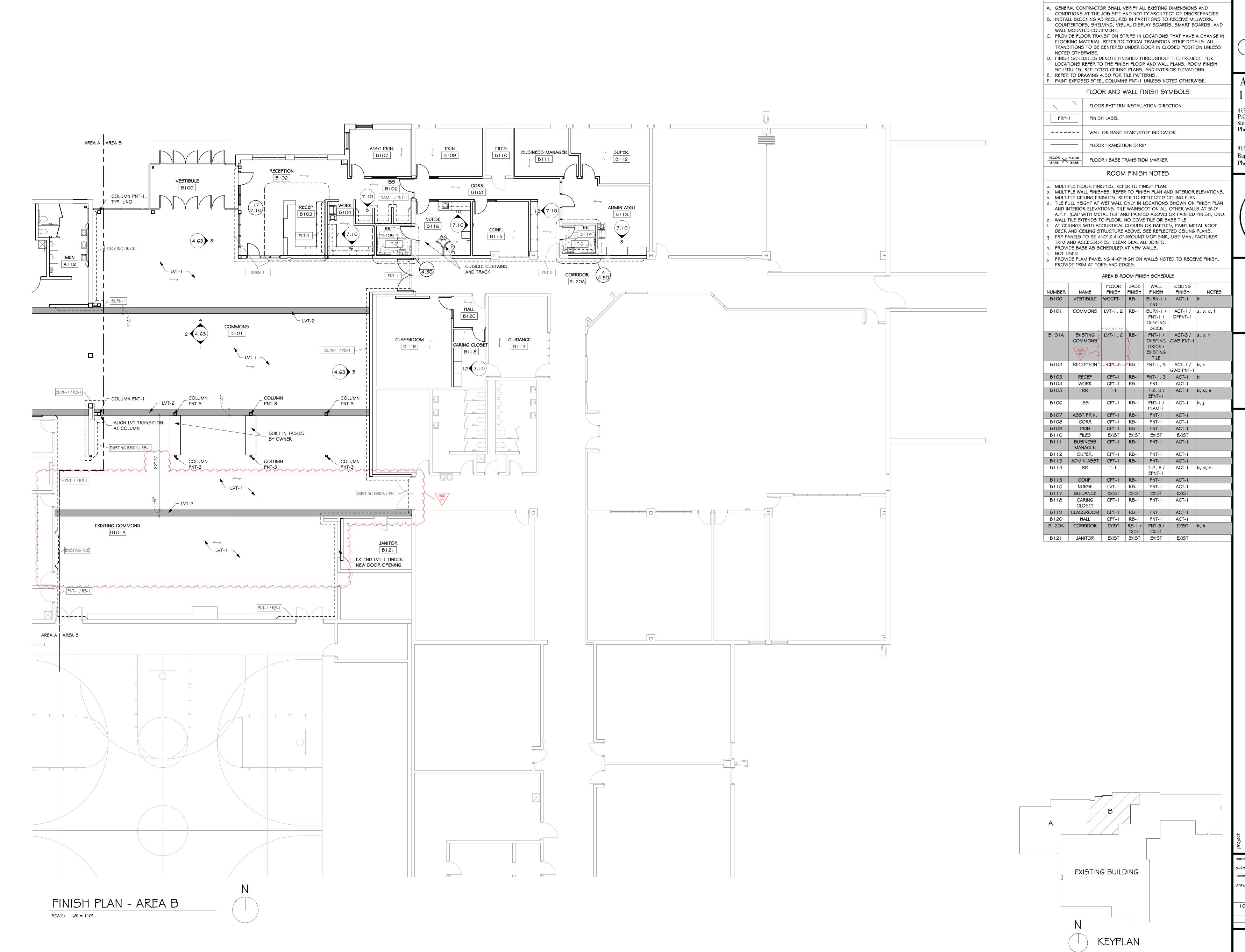
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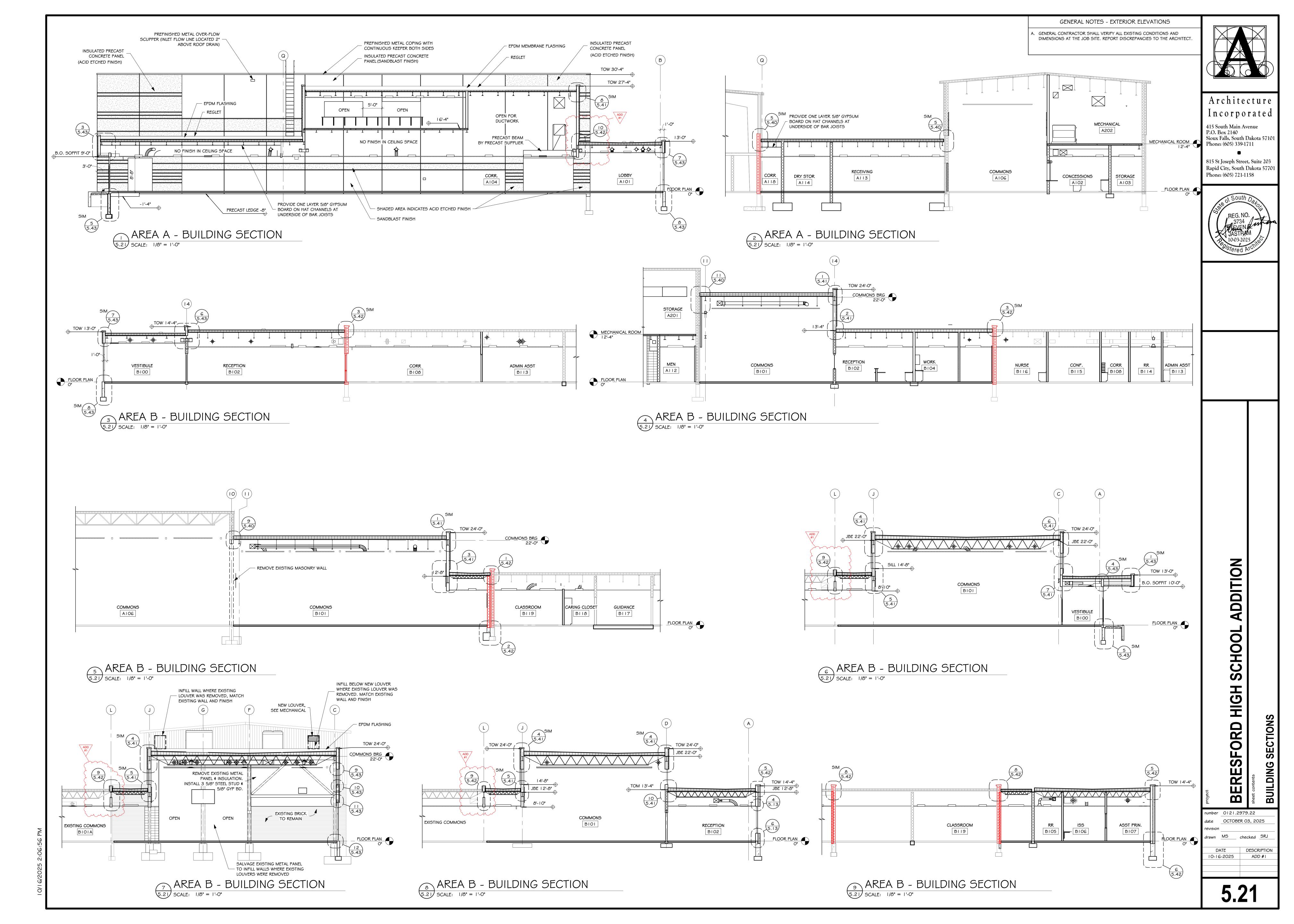
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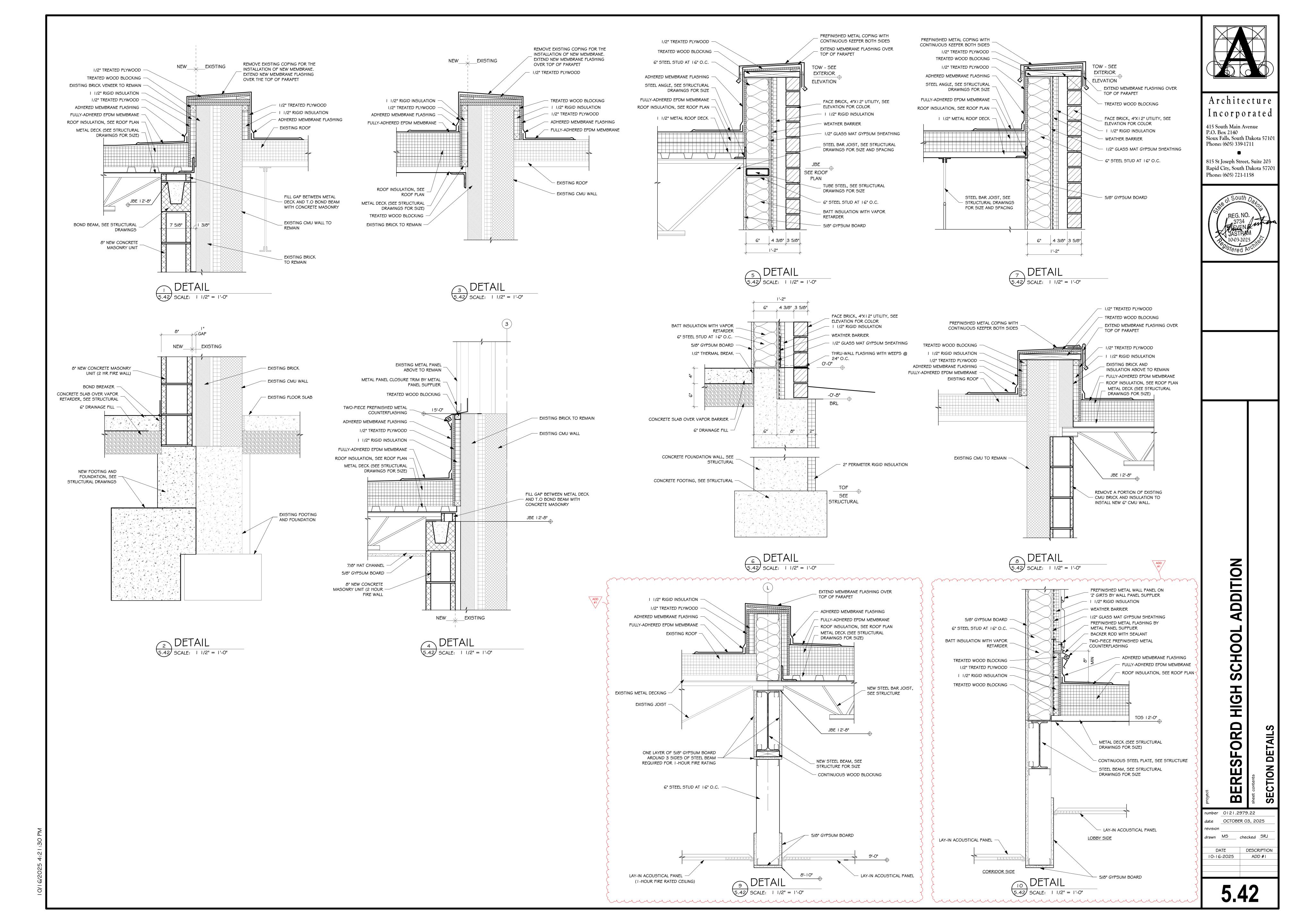


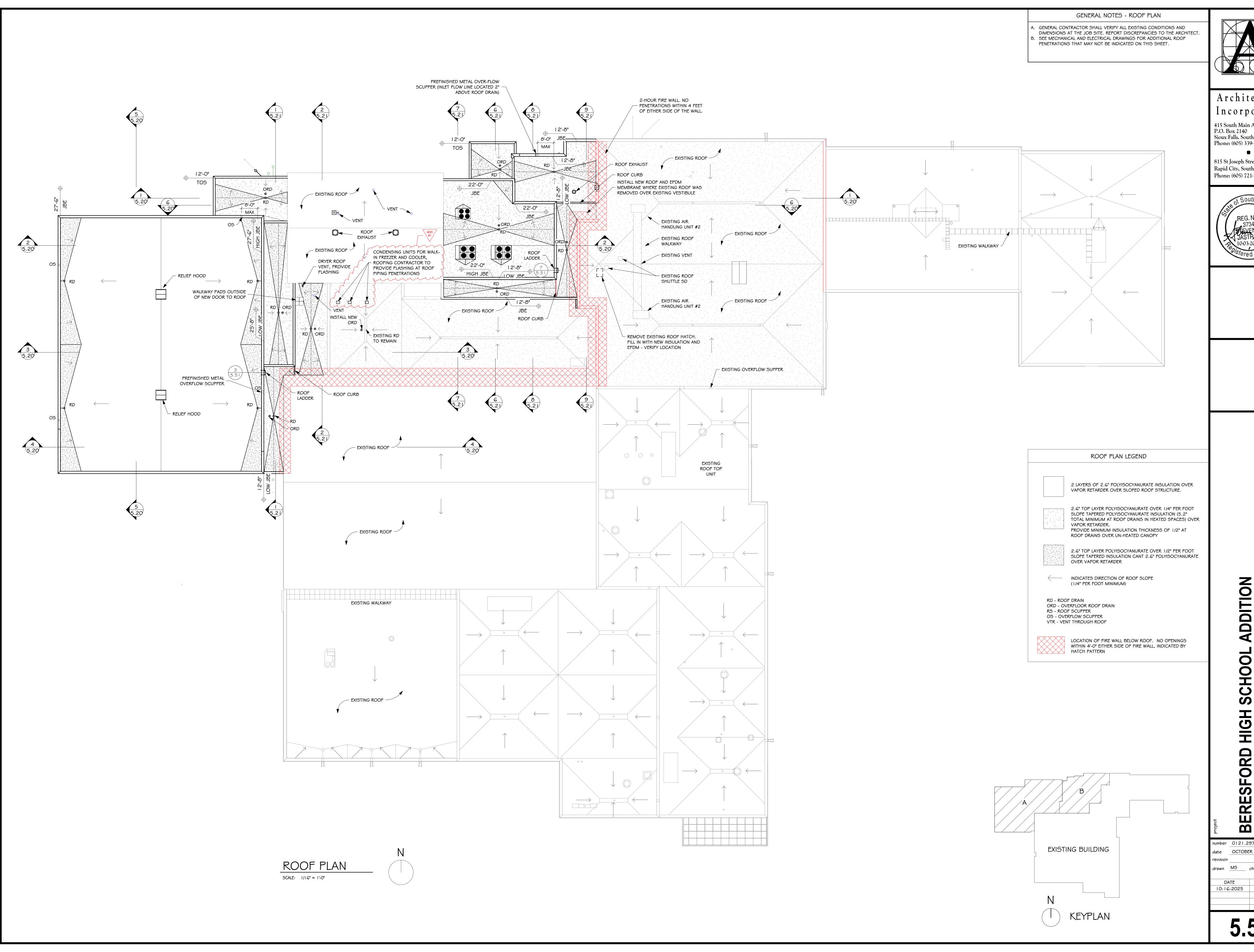
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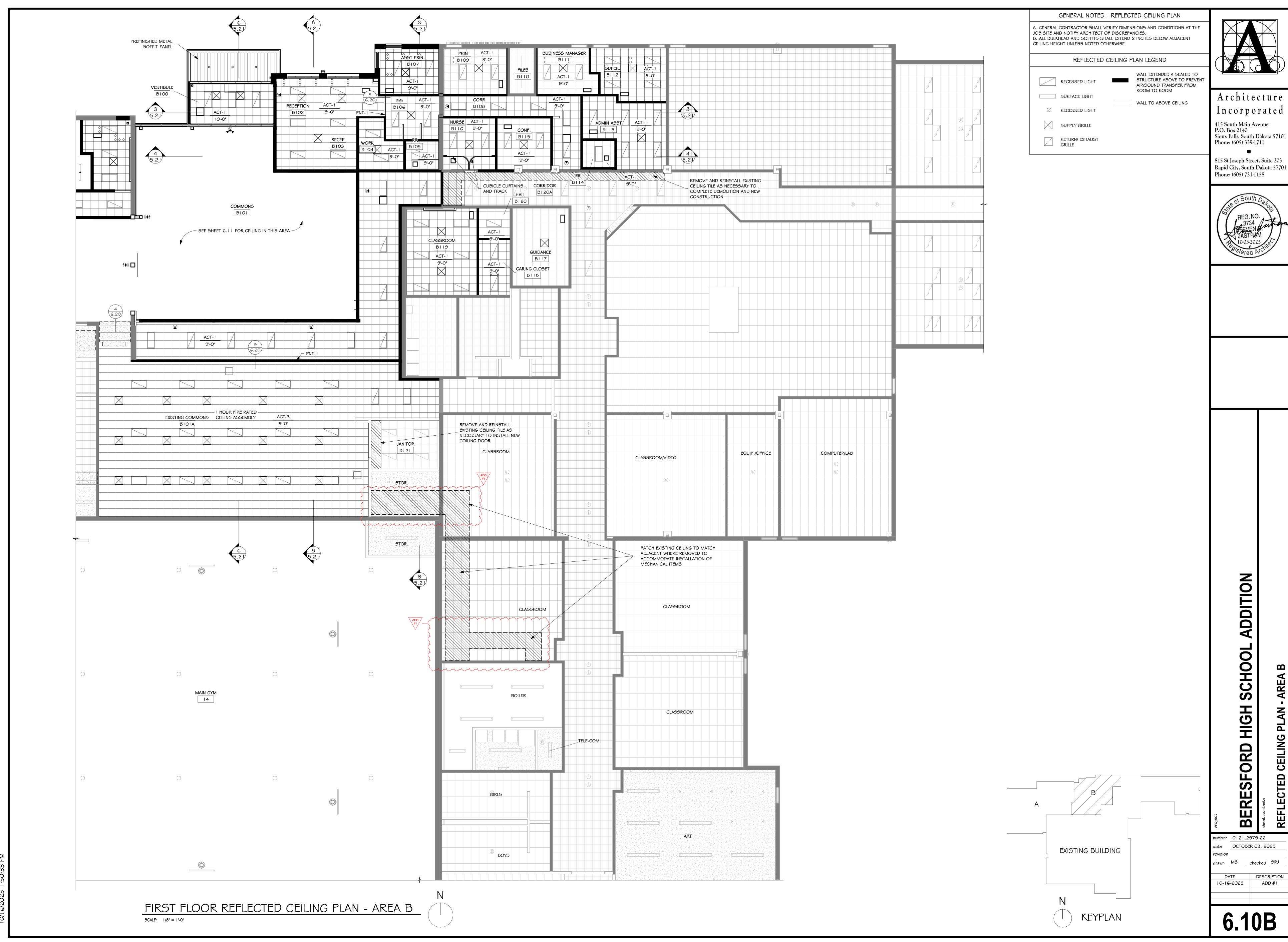


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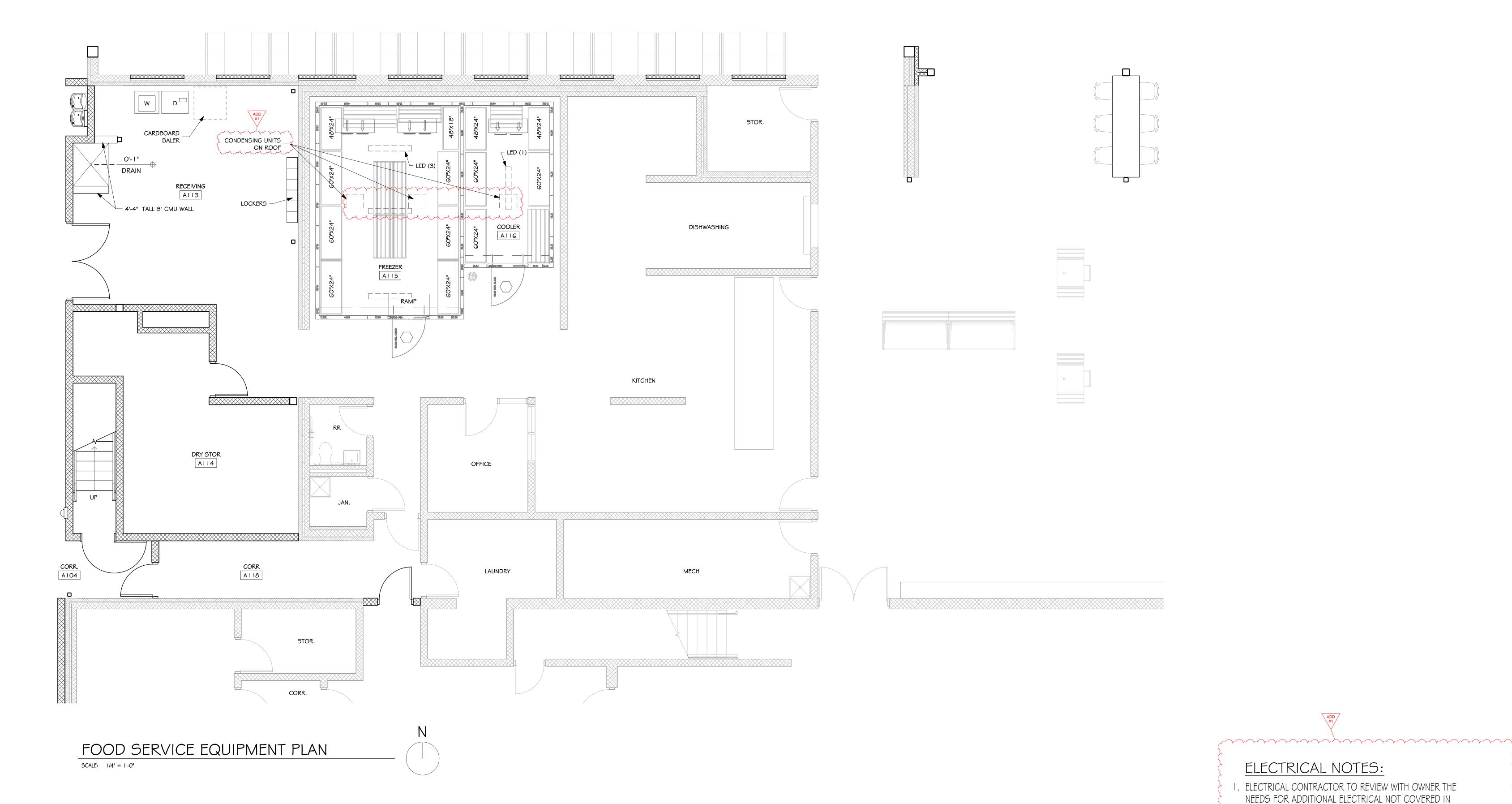


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DESCRIPTION 10-16-2025 ADD #1



EQUIPMENT SCHEDULE													
ITEM QTY DESCRIPTION	VOLTS	PHASE	AMPS NEMA PLUG CONFIGURATION		COLD WATER SIZE (IN)	HOT WATER SIZE (IN) WATER ROUGH-IN HEIGHT (IN)	INDIRECT DRAIN SIZE (IN)	DIRECT DRAIN SIZE (IN)	DRAIN ROUGH-IN HEIGHT (IN)	GAS CONNECTION SIZE (IN)	GAS SUPPLY BTU'S	GAS ROUGH-IN HEIGHT (IN)	EQUIPMENT REMARKS
I I WALK-IN COMBINATION	-	-		-	-			-	-	-	-	-	SEE PLAN FOR FLOOR DRAIN LOCATION
2 FREEZER CONDENSING UNITS	208	3	2.3 -	DIRECT									
2 FREEZER EVAPORATORS	208	1	9.3 -	DFA									
I COOLER CONDENSING UNITS	208	3	5.9 -	DIRECT									
I WALK-IN COOLER DOOR PANEL AND LIGHTS	115	-	6 -	DFA									
I WALK-IN COOLER EVAPORATOR	115	-	1.6 -	DFA									
I WALK-IN FREEZER DOOR PANEL AND LIGHTS	115	-	9 -	DFA									
I HEAT TAPE OUTLET BEHIND EVAPORATORS IN FREEZER	115	-	5 -	-									
2 I LOT FREEZER SHELVING													
3 LOT COOLER SHELVING													
4 I LOT DUNNAGE RACKS													

NOTE:

ALL CONTRACTORS ARE RESPONSIBLE FOR MEETING ALL LOCAL BUILDING CODES OF ALL REGULATING AGENCIES

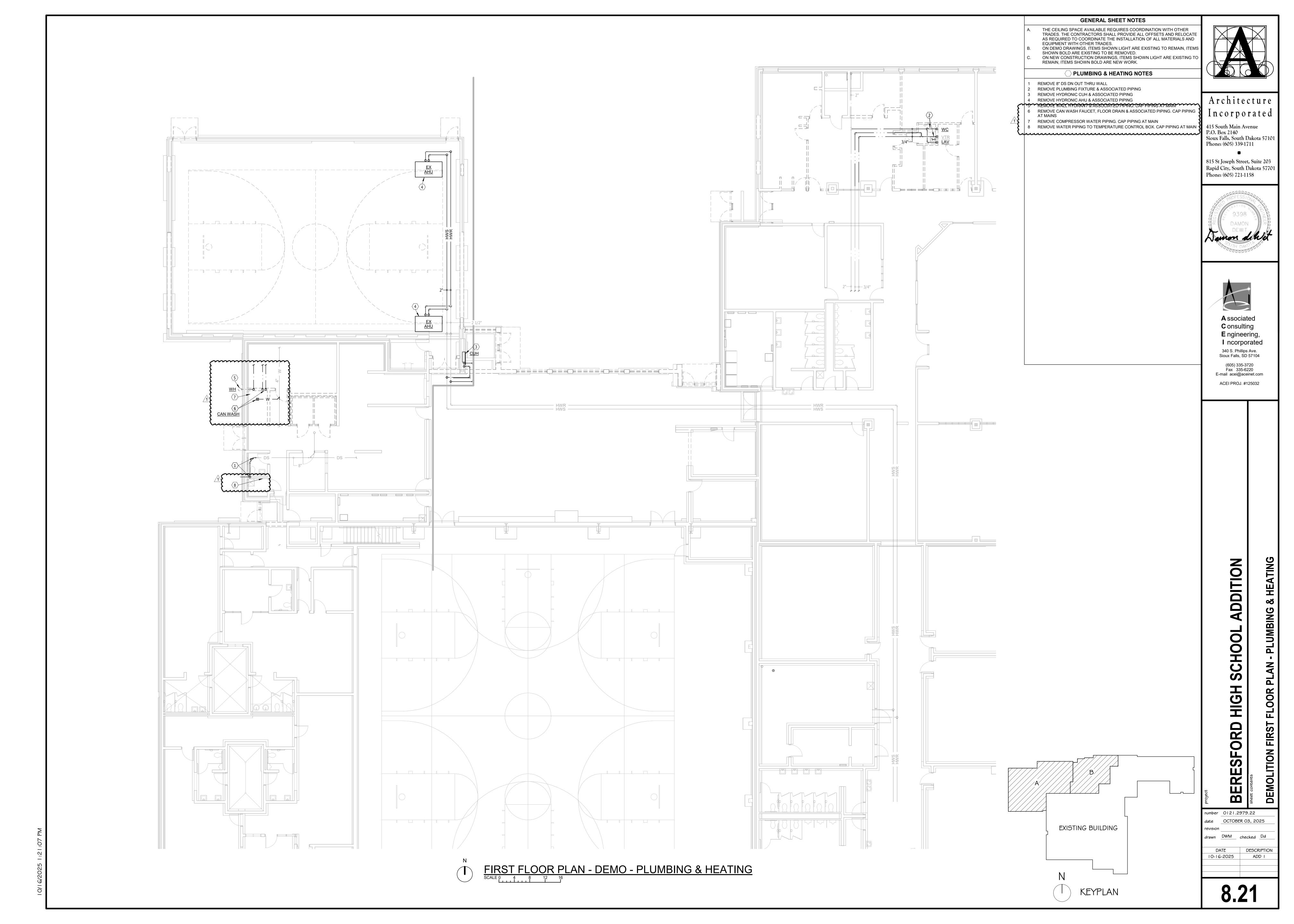
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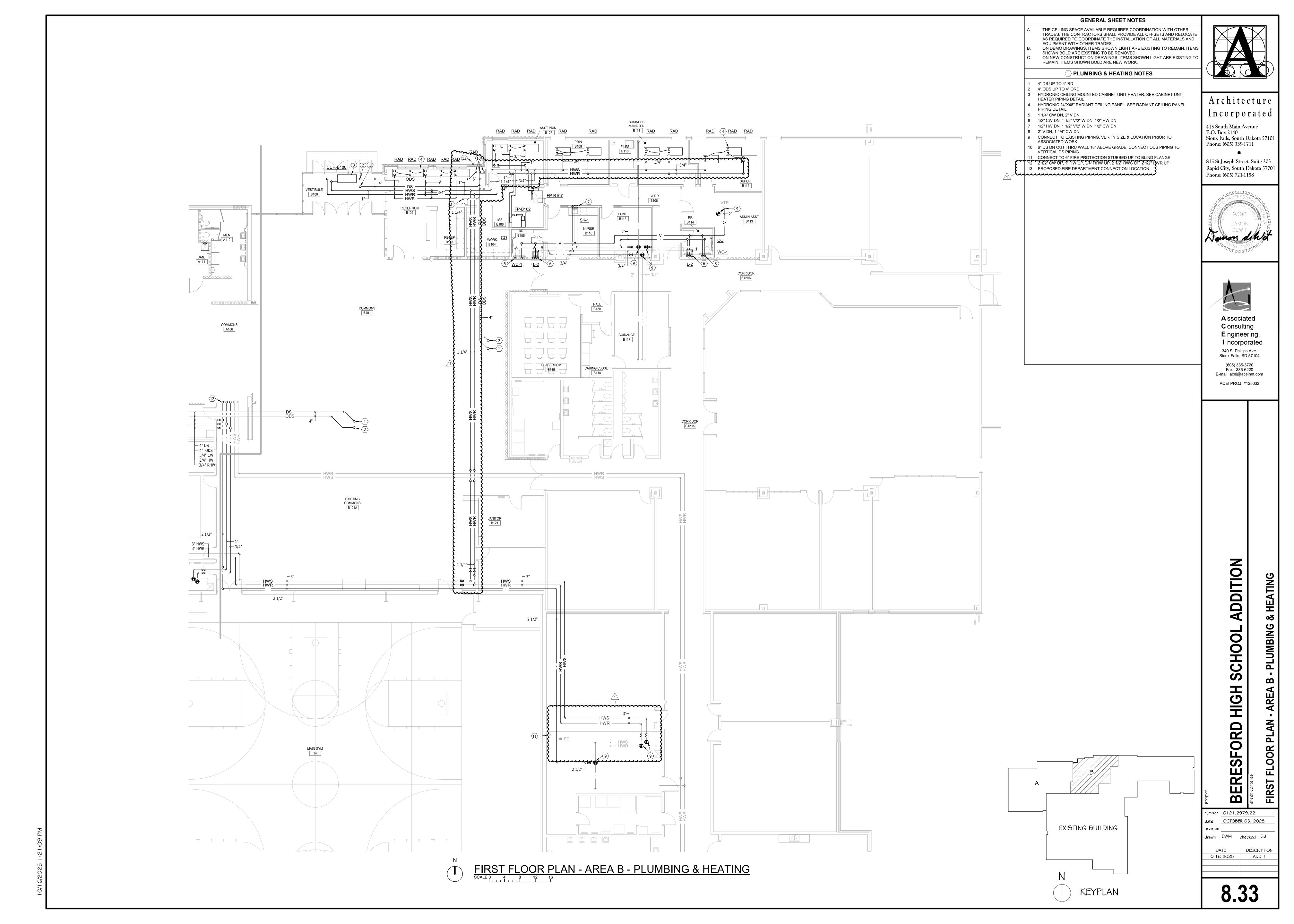
- . ELECTRICAL CONTRACTOR TO REVIEW WITH OWNER THE NEEDS FOR ADDITIONAL ELECTRICAL NOT COVERED IN THIS DRAWING.
- 2. ALL EQUIPMENT TO BE VERIFIED WITH EQUIPMENT SUPPLIER. (EXISTING EQUIPMENT AND EQUIPMENT SUPPLIED BY OTHERS)
- 3. ALL EQUIPMENT TO BE SET IN PLACE READY FOR FINAL CONNECTIONS BY ELECTRICAL CONTR.
- 4. ALL ELECTRICAL SUPPLIES TO MAKE EQUIPMENT FULLY OPERATIONAL AT TIME OF INSTALLATION TO BE SUPPLIED BY ELECTRICAL CONTR.
- 5. REVIEW W/ OWNER RUNS REQUIRED FOR PHONE SYSTEM
- 6. REVIEW W/ OWNER RUNS REQUIRED FOR POINT OF SALE
- 7. REVIEW W/ OWNER KITCHEN LIGHTING REQUIREMENTS
- 8. VERIFY SIZE AND LOCATION OF ALL ELECTRICAL DISCONNECTS WITH EQUIPMENT SUPPLIER PRIOR TO ROUGH INS. DISCONNECTS ARE NOT TO INTERFERE WITH EQUIPMENT INSTALLATION OR OPERATION

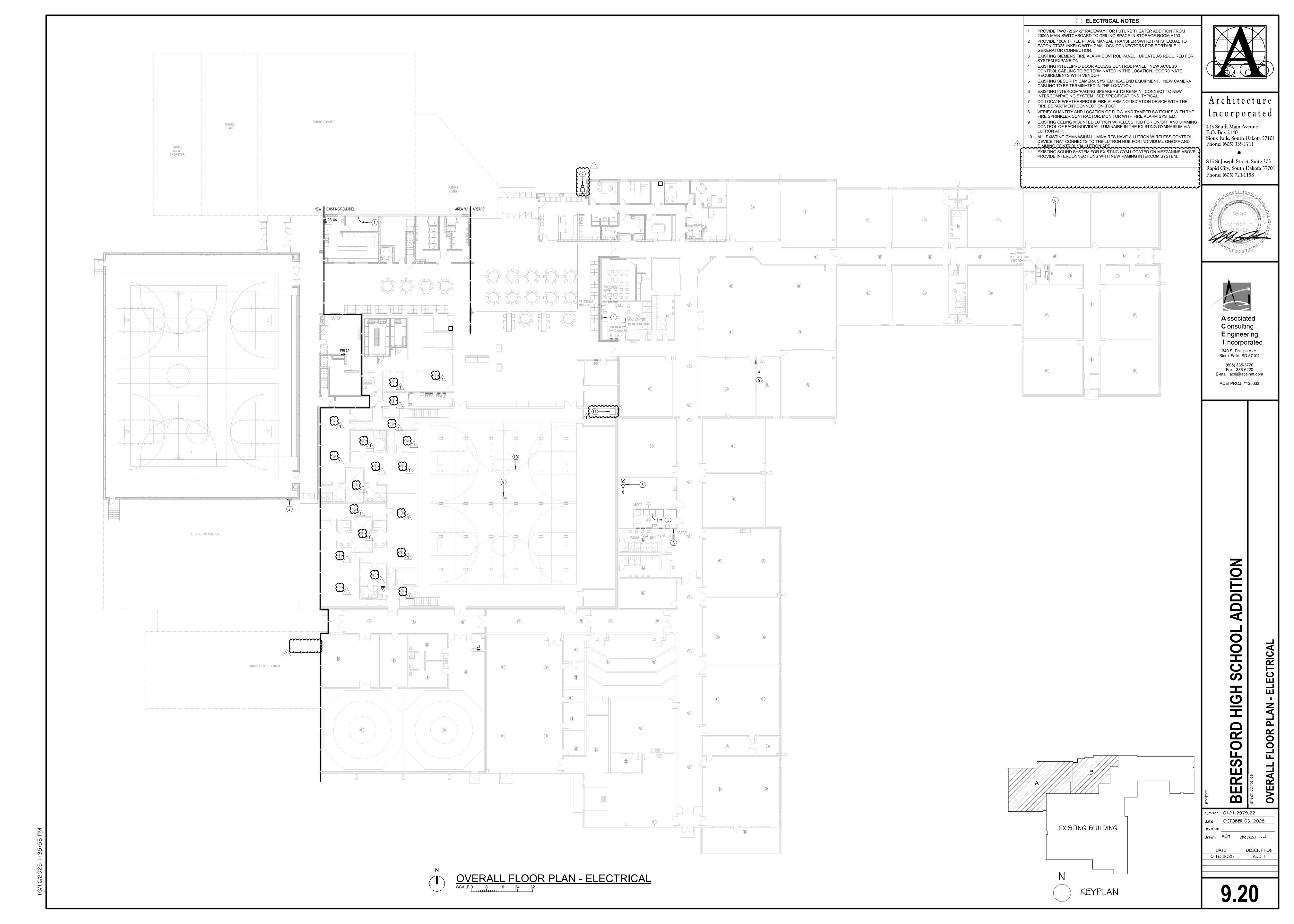
PLUMBING NOTES:

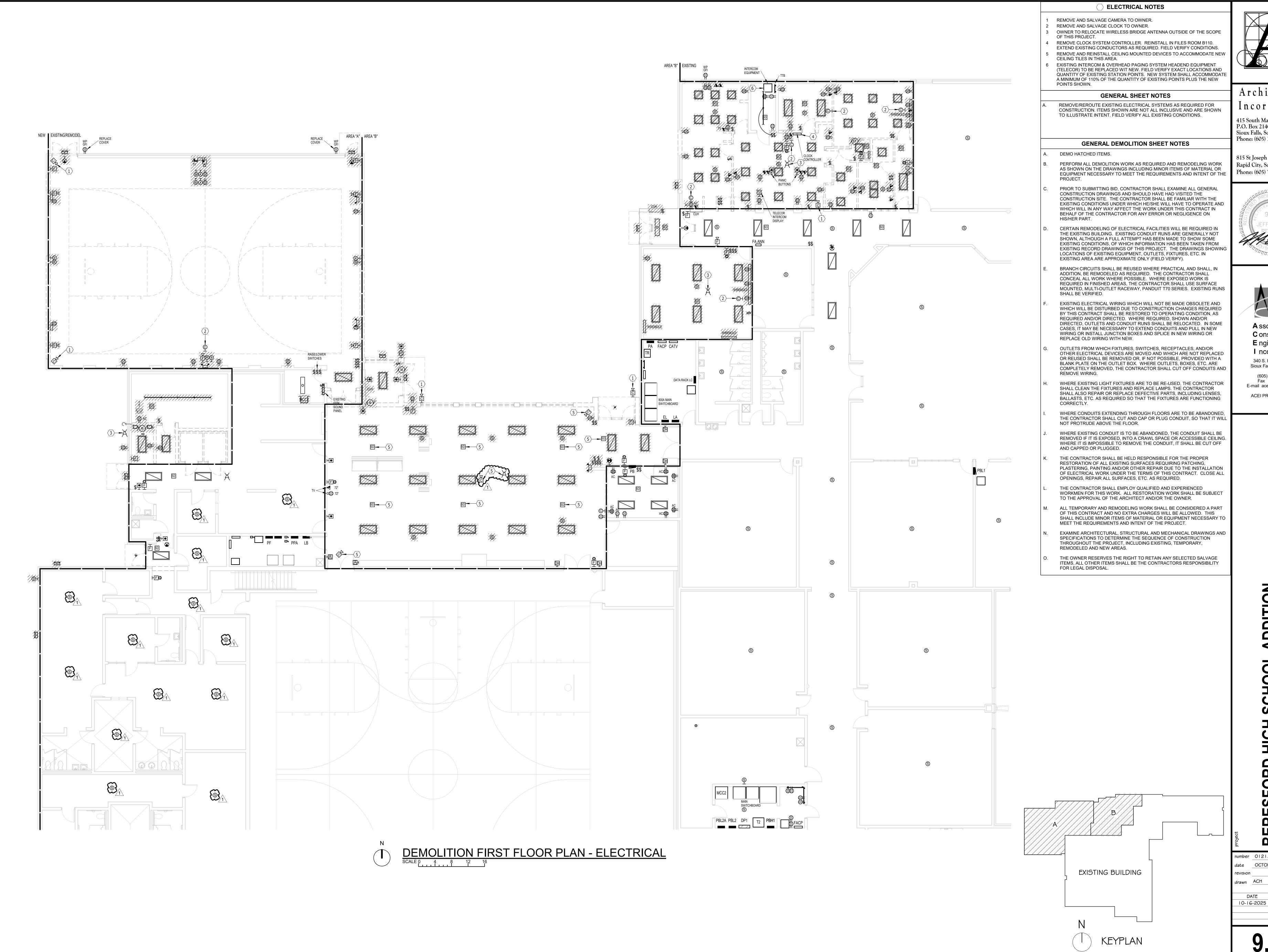
- I. PLUMBING CONTRACTOR TO REVIEW WITH OWNER THE NEEDS FOR ADDITIONAL PLUMBING NOT COVERED IN THIS DRAWING.
- 2. ALL EQUIPMENT TO BE VERIFIED WITH SUPPLIER. (EXISTING EQUIPMENT AND EQUIPMENT SUPPLIED BY OTHERS)
- 3. ALL EQUIPMENT TO BE SET IN PLACE READY FOR FINAL CONNECTIONS BY THE PLUMBING CONTRACTOR.
- 4. PLUMBER TO SUPPLY AND INSTALL ALL NECESSARY PARTS TO MAKE EQUIPMENT FULLY OPERATIONAL.

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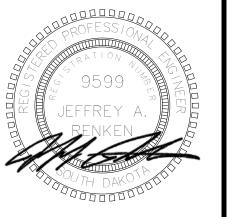


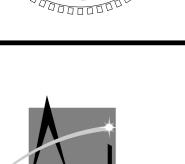


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() ELECTRICAL NOTES

- COORDINATE REMOVAL/INSTALLATION OF EXISTING CEILING MOUNTED ITEMS DUE TO INSTALLATION OF FREEZER AND COOLER UNITS.
 CONNECT WITH CORRIDOR LIGHTING. RECONFIGURE SWITCHING BASED OFF OF EXISTING CONDITIONS.
 PROVIDE LUTRON 3 BUTTON SWITCH MODEL PJ2-3BRL FOR DIMMING AND ON/OFF CONTROL THE COMMONS LIGHTING GROUP INDICATED.
- 9 PROVIDE LUTRON 3 BUTTON SWITCH MODEL PJ2-3BRL FOR DIMMING AND ON/OFF CONTROL THE COMMONS LIGHTING GROUP INDICATED.

 4 PROVIDE LUTRON CORNER MOUNTED OCCUPANCY SENSOR MODEL LRF2-OKLB WITH WIRE GUARD WHERE INDICATED.
- WITH WIRE GUARD WHERE INDICATED.

 5 PROVIDE LUTRON WALL MOUNTED OCCUPANCY SENSOR MODEL LRF2-OWLB WITH WIRE GUARD WHERE INDICATED.

 6 PROVIDE LUTRON 3 BUTTON SWITCH MODEL PJ2-3BRL FOR DIMMING AND
- PROVIDE LUTRON 3 BUTTON SWITCH MODEL PJ2-3BRL FOR DIMMING AND ON/OFF CONTROL THE GYM LIGHTING GROUP INDICATED.
 PROVIDE LUTRON 2 BUTTON SWITCH MODEL PJ2-2B TO TURN COMMONS LIGHTING GROUPS "A", "B", "C", "D" AND "E" ON & OFF TOGETHER AS A GROUP.

GENERAL SHEET NOTES

LIGHTING FIXTURES DENOTED "NL" INDICATE 24/7 NIGHTLIGHT OPERATION FOR SECURITY CONSIDERATIONS. SHADED FIXTURES ARE EMERGENCY LIGHTING FIXTURES WITH INTEGRAL BATTERY BACKUP FOR LIFE SAFETY CODE REQUIREMENTS.

COORDINATE EXACT INSTALLATION OF LIGHT FIXTURES IN ALL SHARED MECHANICAL / STORAGE ROOMS TO ACCOMMODATE MECHANICAL EQUIPMENT. SHIFT AS NECESSARY.

EXISTING BUILDING

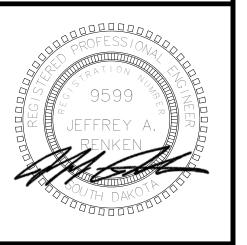
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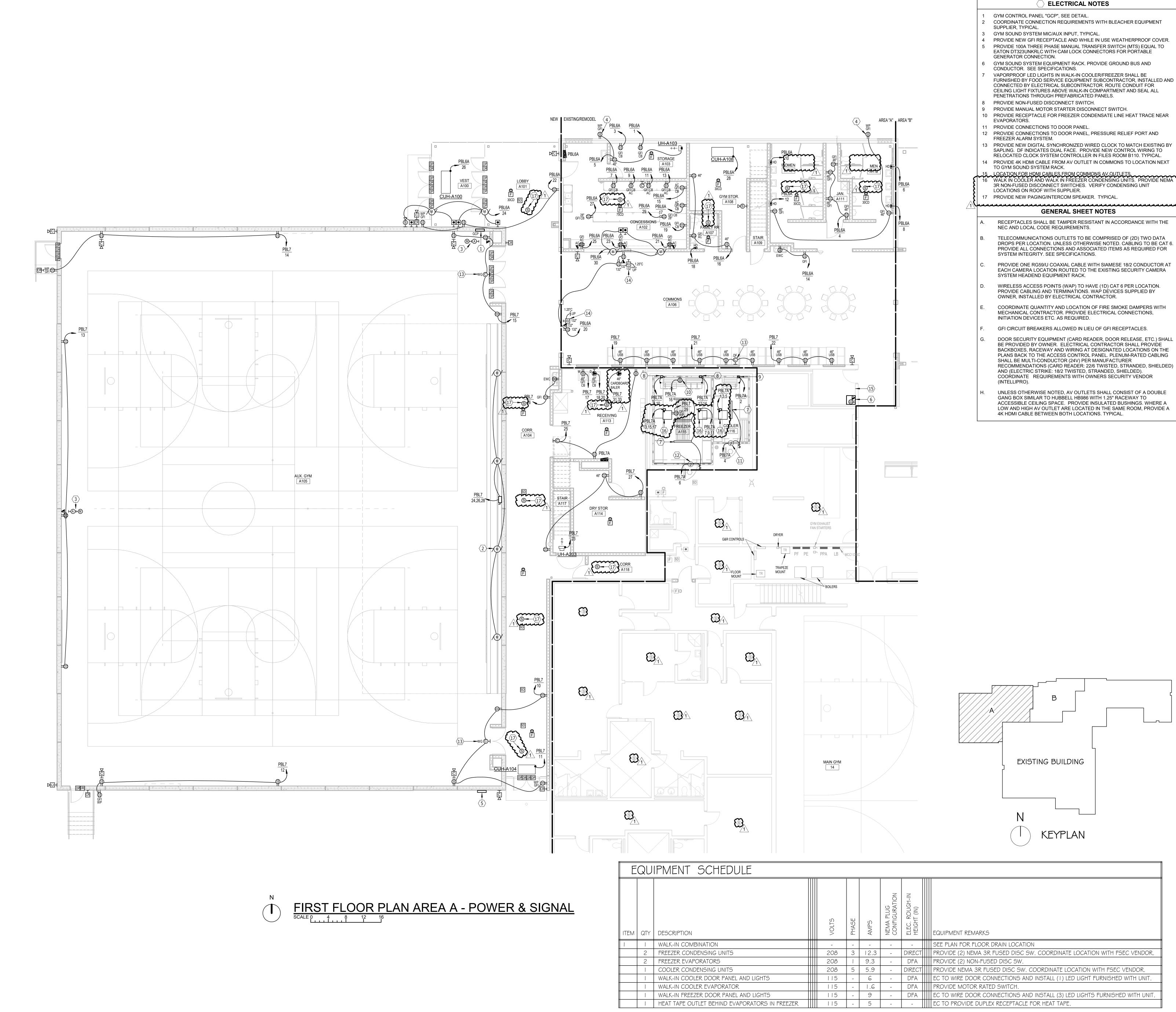
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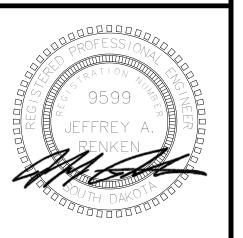
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BERESFORD HIGH SCHOOL ADDITION

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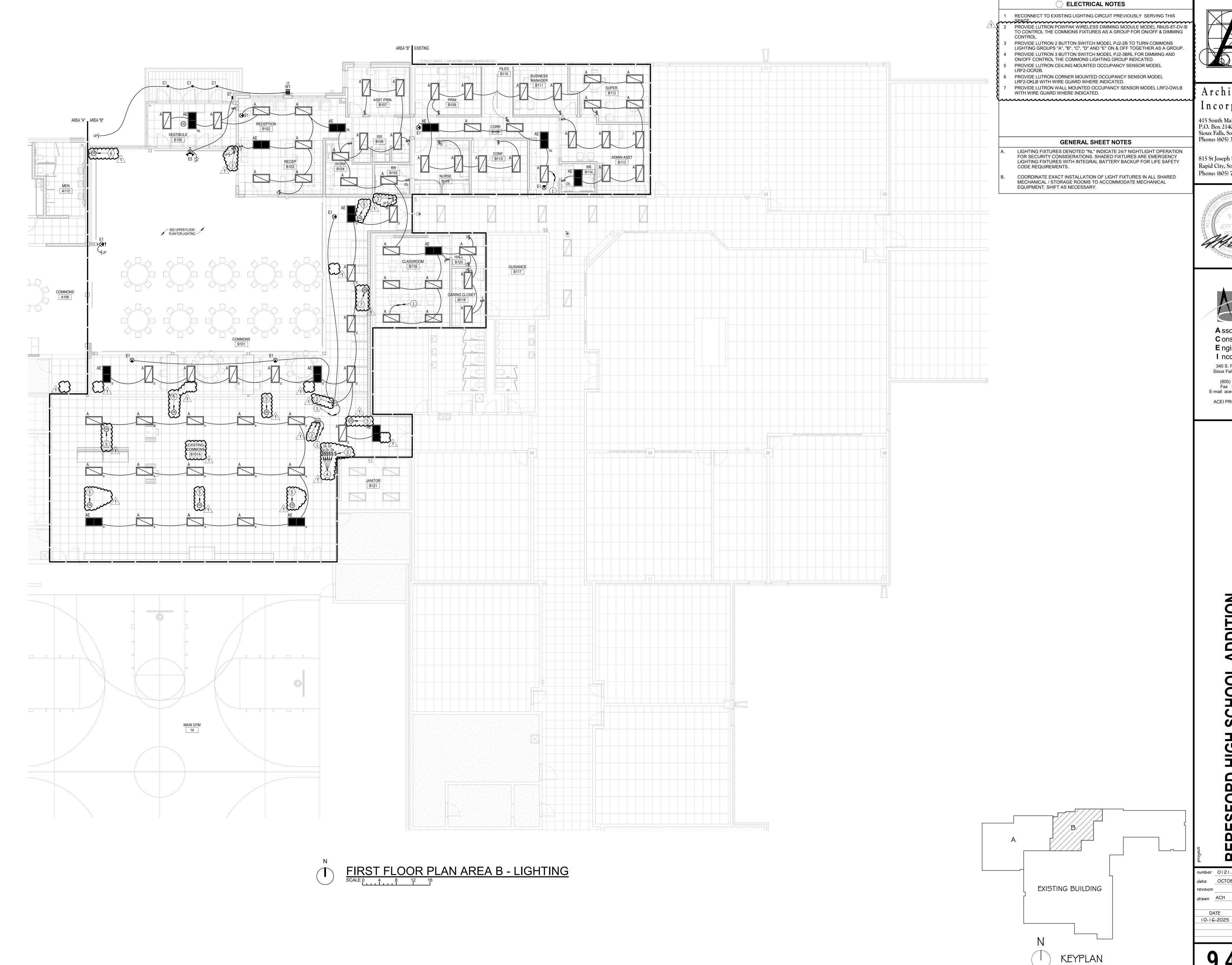
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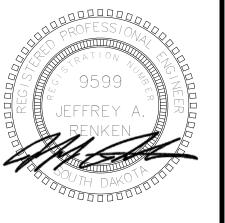
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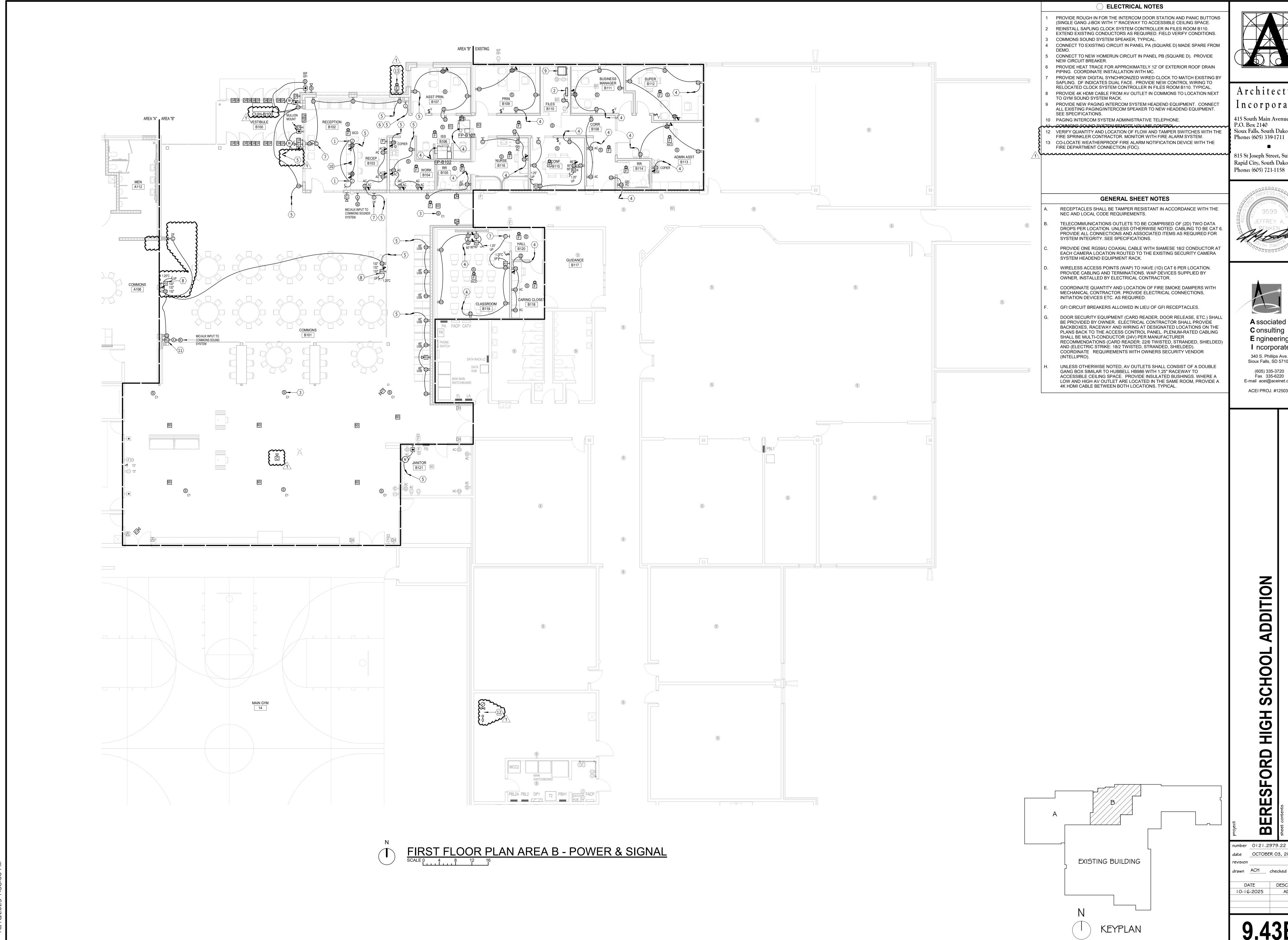


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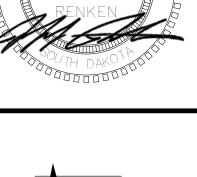
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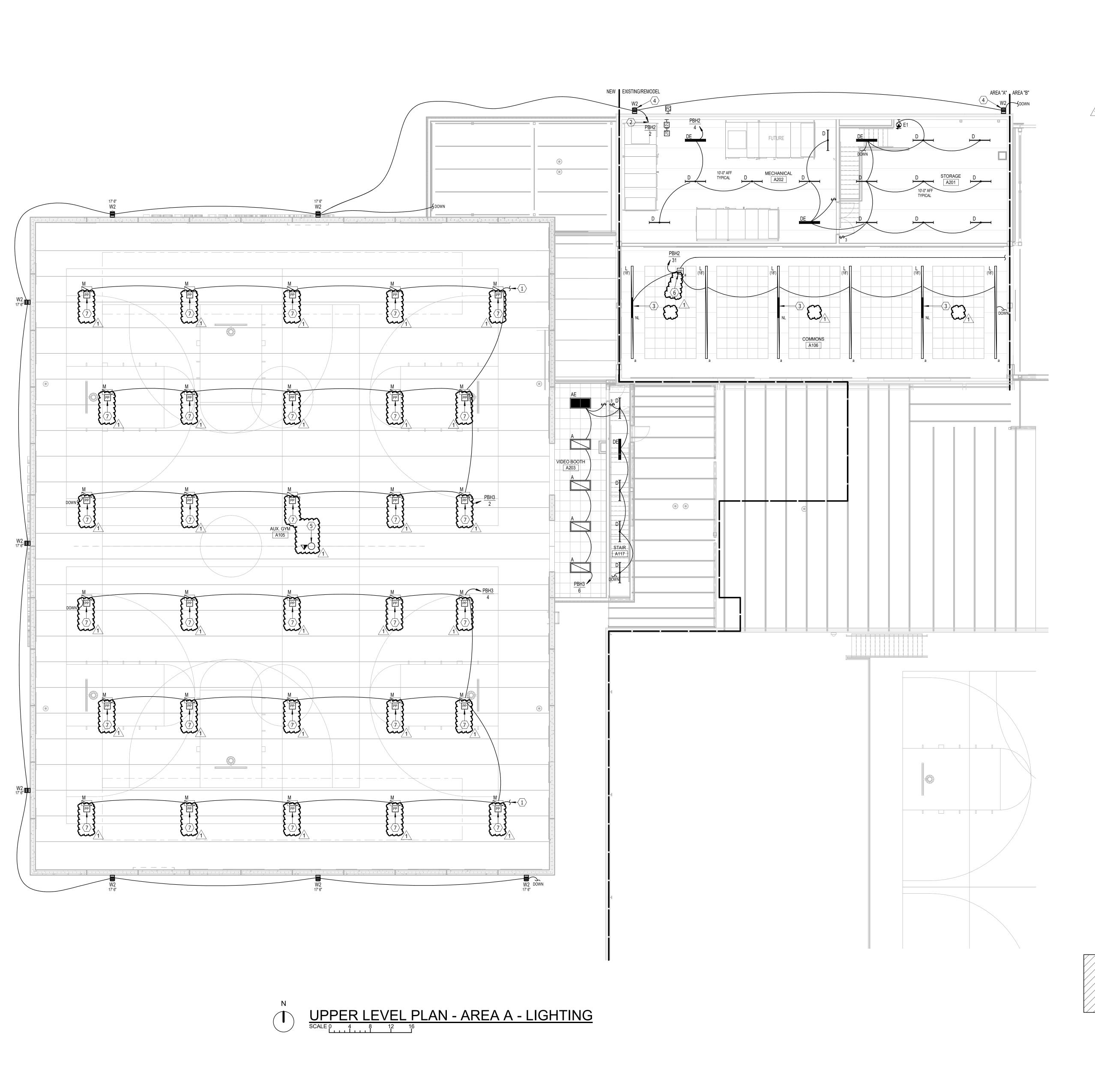
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9.43B



> ELECTRICAL NOTES

- CONNECT TO APPROPRIATE SWITCHES AT ENTRIES TO THIS ROOM. CONTROL VIA BUILDING MOUNTED EXTERIOR LIGHTING CONTACTOR. SEE
- EXTERIOR LIGHTING CONTROL DETAIL. PROVIDE EMERGENCY BATTERY BACKUP AND NIGHTLIGHT THIS 4FT SECTION
- MOUNT AT SAME HEIGHT AS PREVIOUSLY DEMOLISHED FIXTURE. PROVIDE LUTRON VIVE STARTER HUB EQUAL TO HJS-0FM FOR WIRELESS CONTROL OF EACH INDIVIDUAL TYPE M FIXTURE IN THE GYMNASIUM. THE DESIGN INTENT FOR LIGHTING CONTROL IS TO EXTEND THE EXISTING LUTRON

DIMMING SYSTEM FROM THE EXISTING GYM INTO THE NEW GYMNASIUM AND COMMONS WITH A SINGLE APP FOR CONTROL. ALTERNATE SYSTEMS WILL BE CONSIDERED BUT WOULD REQUIRE THE REPLACEMENT OF THE EXISTING GYM

- CONTROL SYSTEM UNDER THE SCOPE OF THIS BID WITHOUT ANY ADDITIONAL COST TO THE OWNER. SEE SPECIFICATIONS AND FIELD VERIFY EXISTING CONDITIONS.

 PROVIDE LUTRON POWPAK WIRELESS DIMMING MODULE MODEL RMJS-8T-DV-B TO CONTROL THE COMMONS FIXTURES AS A GROUP FOR ON/OFF & DIMMING
- PROVIDE LUTRON POWPAK WIRELESS DIMMING MODULE MODEL RMJS-8T-DV-B AT EACH LIGHT FIXTURE LOCATION FOR ON/OFF AND DIMMING CONTROL OF EACH INDIVIDUAL FIXTURE. TYPICAL.

GENERAL SHEET NOTES

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- LIGHTING FIXTURES DENOTED "NL" INDICATE 24/7 NIGHTLIGHT OPERATION FOR SECURITY CONSIDERATIONS. SHADED FIXTURES ARE EMERGENCY LIGHTING FIXTURES WITH INTEGRAL BATTERY BACKUP FOR LIFE SAFETY CODE REQUIREMENTS.
- COORDINATE EXACT INSTALLATION OF LIGHT FIXTURES IN ALL SHARED MECHANICAL / STORAGE ROOMS TO ACCOMMODATE MECHANICAL EQUIPMENT. SHIFT AS NECESSARY.

EXISTING BUILDING

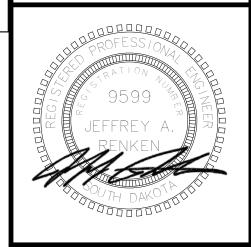
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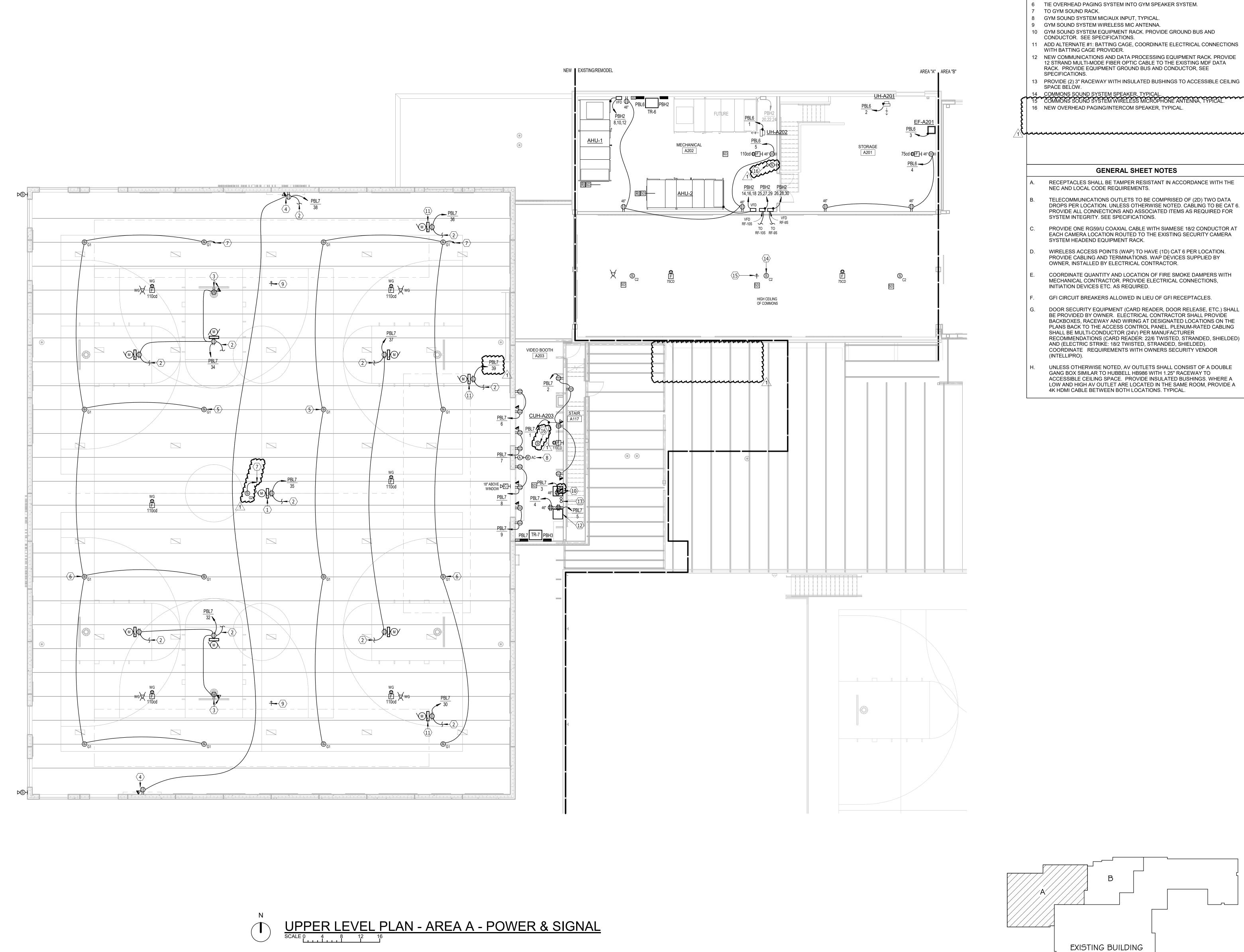
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9.44A



Architecture

Sioux Falls, South Dakota 57101 Phone: (605) 339-1711

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RECEPTACLES SHALL BE TAMPER RESISTANT IN ACCORDANCE WITH THE

ELECTRICAL NOTES

TO SWITCH IN GCP.

SUPPLIERS.

COORDINATE CONNECTION REQUIREMENTS WITH DIVIDER CURTAIN SUPPLIER.

3 COORDINATE INSTALLATION WITH SHOT CLOCK AND BACKBOARD EQUIPMENT

PROVIDE DUPLEX RECEPTACLE AND DATA JACK FOR SCOREBOARD,

COORDINATE MOUNTING HEIGHT WITH OWNER.

5 GYM SOUND SYSTEM SPEAKER, TYPICAL.

TELECOMMUNICATIONS OUTLETS TO BE COMPRISED OF (2D) TWO DATA DROPS PER LOCATION. UNLESS OTHERWISE NOTED. CABLING TO BE CAT 6. PROVIDE ALL CONNECTIONS AND ASSOCIATED ITEMS AS REQUIRED FOR

PROVIDE ONE RG59/U COAXIAL CABLE WITH SIAMESE 18/2 CONDUCTOR AT EACH CAMERA LOCATION ROUTED TO THE EXISTING SECURITY CAMERA

WIRELESS ACCESS POINTS (WAP) TO HAVE (1D) CAT 6 PER LOCATION. PROVIDE CABLING AND TERMINATIONS. WAP DEVICES SUPPLIED BY OWNER, INSTALLED BY ELECTRICAL CONTRACTOR.

COORDINATE QUANTITY AND LOCATION OF FIRE SMOKE DAMPERS WITH MECHANICAL CONTRACTOR. PROVIDE ELECTRICAL CONNECTIONS,

GFI CIRCUIT BREAKERS ALLOWED IN LIEU OF GFI RECEPTACLES.

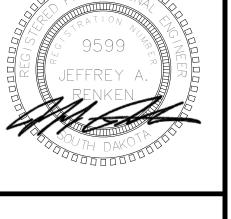
BE PROVIDED BY OWNER. ELECTRICAL CONTRACTOR SHALL PROVIDE BACKBOXES, RACEWAY AND WIRING AT DESIGNATED LOCATIONS ON THE PLANS BACK TO THE ACCESS CONTROL PANEL. PLENUM-RATED CABLING SHALL BE MULTI-CONDUCTOR (24V) PER MANUFACTURER RECOMMENDATIONS (CARD RÈADÉR: 22/6 TWISTED, STRANDED, SHIELDED) AND (ELECTRIC STRIKE: 18/2 TWISTED, STRANDED, SHIELDED). COORDINATE REQUIREMENTS WITH OWNERS SECURITY VENDOR

UNLESS OTHERWISE NOTED, AV OUTLETS SHALL CONSIST OF A DOUBLE GANG BOX SIMILAR TO HUBBELL HB986 WITH 1.25" RACEWAY TO ACCESSIBLE CEILING SPACE. PROVIDE INSULATED BUSHINGS. WHERE A LOW AND HIGH AV OUTLET ARE LOCATED IN THE SAME ROOM, PROVIDE A

KEYPLAN

Incorporated

415 South Main Avenue P.O. Box 2140



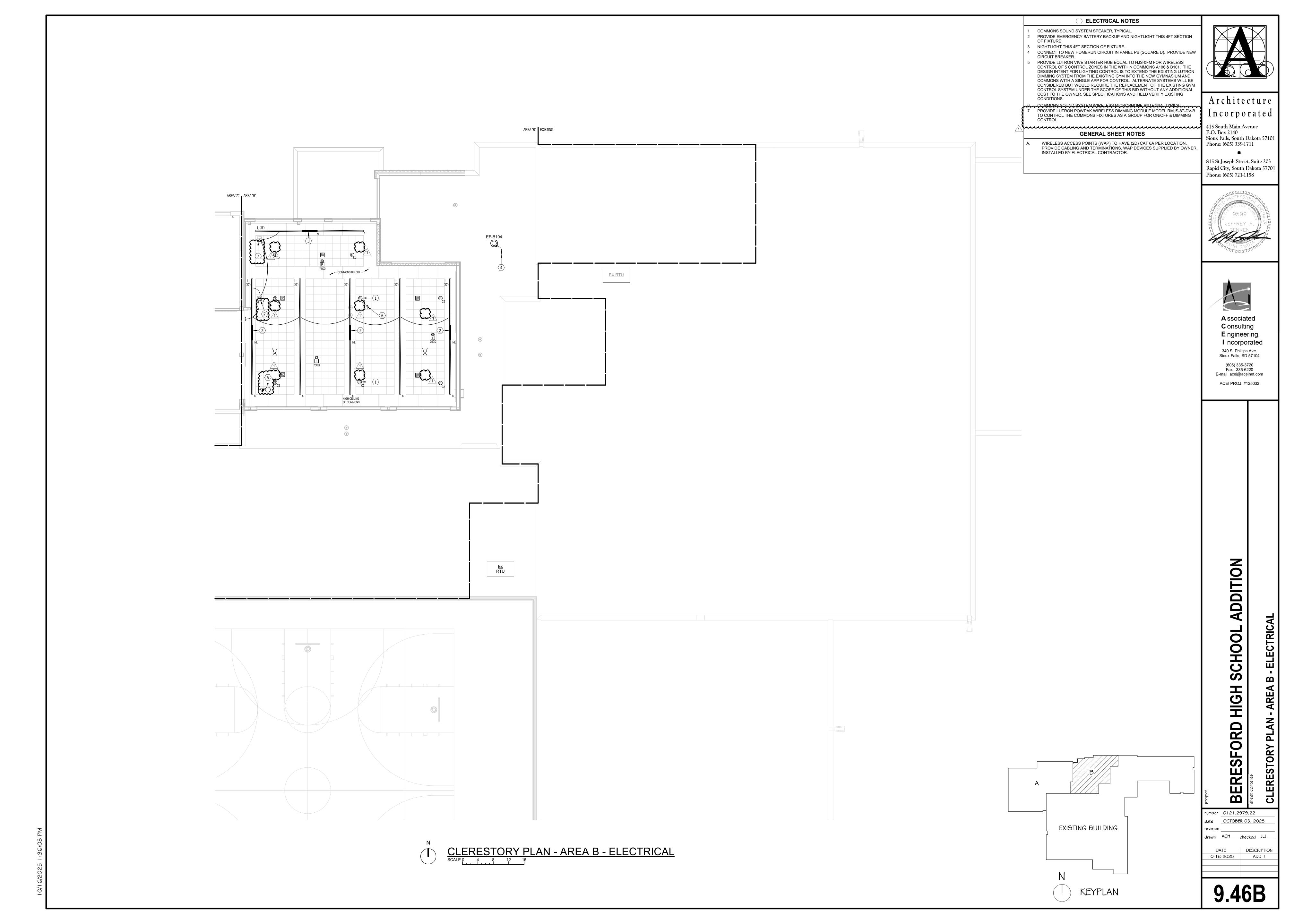


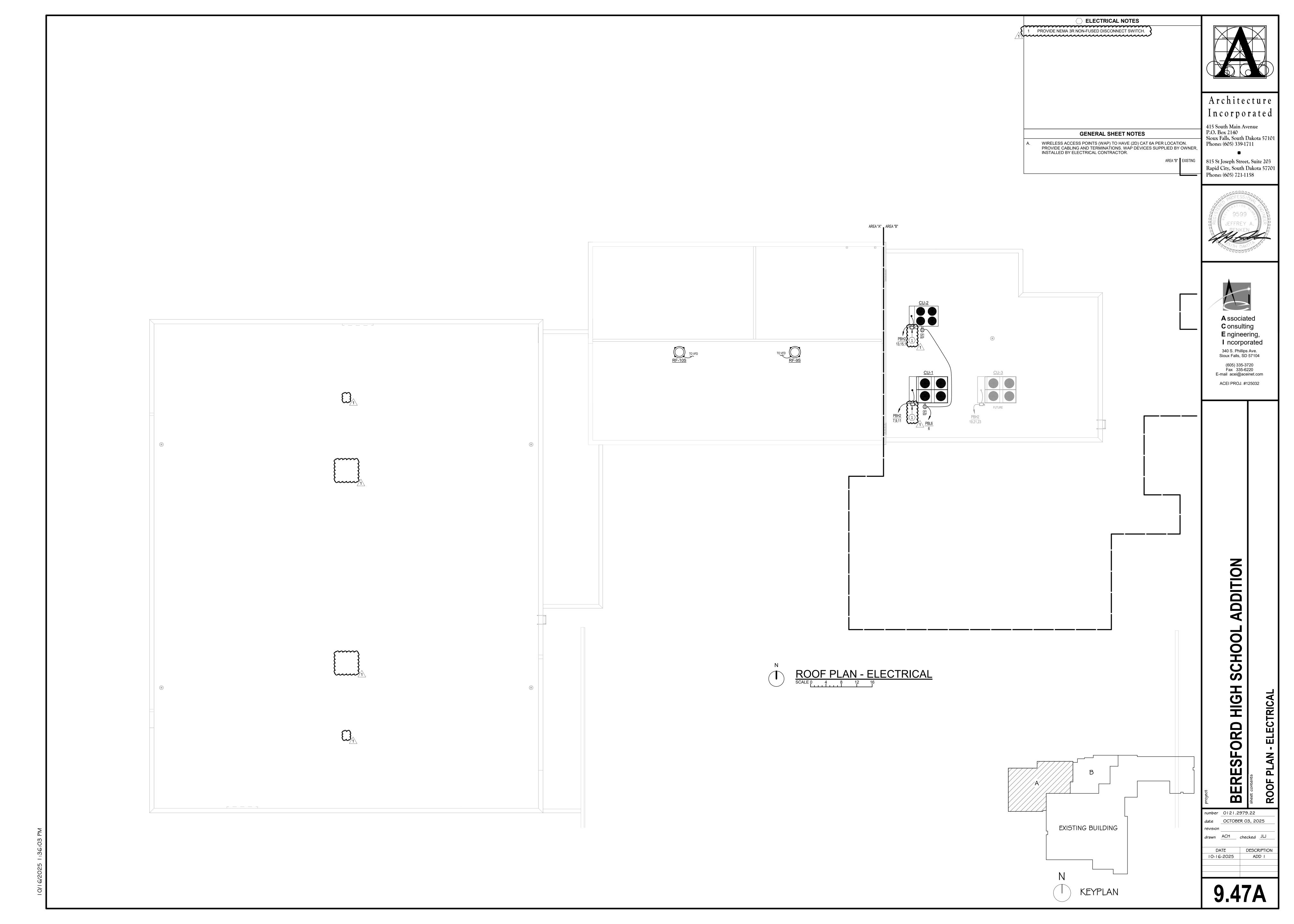
A ssociated **C** onsulting E ngineering, I ncorporated 340 S. Phillips Ave. Sioux Falls, SD 57104

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number 0121.2979.22 date OCTOBER 03, 2025

drawn <u>ACH</u> checked <u>JLJ</u> 10-16-2025





TYPE CO	DUNT	DESCRIPTION	CATALOG NUMBER	MANUFACTURER	ALT	MOUNT	CRI	LED	ССТ	DIRECT LUMENS	VOLTAGE	WATTAGE	DIMMING	NOTES
Α	110	2X4 RECESSED FLAT PANEL	24CGTS-L3C3	METALUX	COLUMBIA DAYBRITE WILLIAMS LITHONIA	RECESSED	80	LED	4000K	3,700 LUMENS	UNV	53W	0-10V DIMMING, 10%	1
AE	25	2X4 RECESSED FLAT PANEL WITH EMERGENCY BACKUP	24CGTS-L3C3-EL14W	METALUX	COLUMBIA DAYBRITE WILLIAMS LITHONIA	RECESSED	80	LED	4000K	3,700 LUMENS	UNV	53W	0-10V DIMMING, 10%	1
C1	7	4" DOWNLIGHT	IV04S-D-15LM-40K-80CRI-WD-MIN10-MVOLT-ZT-OC AT-WL-P-AR-LSS-F	GOTHAM	ALPHABET USAI LIGHTING WILLIAMS LITHONIA	RECESSED	80	LED	4000K	1,500 LUMENS	UNV	16W	0-10V DIMMING, 10%	2
D	25	4' INDUSTRIAL LINEAR	4SNX-57L-LN-UNV-CC83-CD1	METALUX	COLUMBIA DAYBRITE WILLIAMS LITHONIA	SURFACE	80	LED	4000K	5,800 LUMENS	UNV	76W	0-10V DIMMING, 10%	3
DE	4	4' INDUSTRIAL LINEAR WITH EMERGENCY BACKUP	4SNX-57L-LN-UNV-CC83-CD1-EL14W	METALUX	COLUMBIA DAYBRITE WILLIAMS LITHONIA	SURFACE	80	LED	4000K	5,800 LUMENS	UNV	76W	0-10V DIMMING, 10%	3
E1	17	EXIT SIGN - SINGLE FACE	SESRBNE-1	DUAL-LITE	SURE-LITES EMRGI-LITE WILLIAMS LITHONIA	SURFACE		LED			UNV	1W		4
E3	6	EMERGENCY LIGHT	CU2HLSD	COMPASS	DUAL-LITE EMRGI-LITE WILLIAMS LITHONIA	WALL		LED		550 LUMENS	UNV	2.7W		5
E4	3	EXIT SIGN - COMBINATION	WPR-612M-1-R-2-LB-ADNA-BA	PREMIER	DUAL-LITE EMRGI-LITE WILLIAMS LITHONIA	SURFACE		LED			UNV	14W		6
E5	5	EXIT SIGN - COMBINATION	WPR-624M-1-R-2-LB-ADNA-BA	PREMIER	DUAL-LITE EMRGI-LITE WILLIAMS LITHONIA	SURFACE		LED			UNV	14W		7
E7	5	EMERGENCY LIGHTING	BZLUXDC	SURE-LITES	SURE-LITES LIGHTALARMS LITHONIA EMERGILITE	WALL		LED			DC	18W		8
L	12	SUSPENDED PENDANT	S124DP-C1020D840-C10JBXXF0-1-UDD-F-W	NEO-RAY	COLUMBIA DAYBRITE MARK LIGHTING CURRENT	SUSPENDED	80	LED	4000K	1020 LUMENS/FT	UNV	8.8W/FT	0-10V DIMMING, 10%	9,12
М	30	HIGH BAY	SPHB-30SE-W-UNV-L850-PC6/277	METALUX	COLUMBIA DAYBRITE WILLIAMS LITHONIA	SUSPENDED	80	LED	5000K	30,000 LUMENS	UNV	209W	0-10V DIMMING, 10%	10,11
W1	1	WALL PACK	VSC-II-T3-16LC-7-4K-UNV-WM-BZ	VISIONAIRE LIGHTING	COLUMBIA DAYBRITE WILLIAMS LUMARK	WALL	70	LED	4000K	4,200 LUMENS	UNV	37W	0-10V DIMMING, 10%	
W2	10	WALL PACK	VSC-II-T3-32LC-7-4K-UNV-WM-BZ	VISIONAIRE LIGHTING	COLUMBIA DAYBRITE WILLIAMS LUMARK	WALL	70	LED	4000K	8,400 LUMENS	UNV	74W	0-10V DIMMING, 10%)

1	IVIZALAL		4-VVII\L	LLLDLIN			J-VVIIXL	LLULIN			N INAIL	D 4-VVII\L	ILLULIN		IVIZIN
	(AMPS)	SETS	PH	GND	С	SETS	PH	GND	C	SETS	PH	N	GND	С	(AMPS)
	15	1	14	14	0.75	1	14	14	0.75	1	14	12	14	0.75	15
1	20	1	12	12	0.75	1	12	12	0.75	1	12	10	12	0.75	20
	25	1	10	10	0.75	1	10	10	0.75	1	10	8	10	0.75	25
	30	1	10	10	0.75	1	10	10	0.75	1	10	8	10	0.75	30
	35	1	8	10	0.75	1	8	10	0.75	1	8	6	10	0.75	35
	40	1	8	10	0.75	1	8	10	0.75	1	8	4	10	1.00	40
-	45	1	6	10	1.00	1	6	10	0.75	1	6	4	10	1.00	45
	50	1	6	10	1.00	1	6	10	0.75	1	6	3	10	1.00	50
	60	1	6	10	1.00	1	6	10	0.75	1	6	3	10	1.00	60
1	70	1	4	8	1.25	1	4	8	1.00	1	4	1/0	8	1.25	70
	80	1	4	8	1.25	1	4	8	1.00	1	4	1/0	8	1.25	80
	90	1	3	8	1.25	1	3	8	1.25	1	3	2/0	8	1.25	90
	100	1	3	8	1.25	1	3	8	1.25	1	3	2/0	8	1.50	100
	110	1	2	6	1.25	1	2	6	1.25	1	2	3/0	6	1.50	110
-	125	1	1	6	1.50	1	1	6	1.25	1	1	4/0	6	2.00	125
	150	1	1/0	6	2.00	1	1/0	6	1.50	1	1/0	300	6	2.00	150
	175	1	2/0	6	2.00	1	2/0	6	2.00	1	2/0	350	6	2.00	175
1	200	1	3/0	6	2.00	1	3/0	6	2.00	1	3/0	500	6	2.50	200
	225	1	4/0	4	2.50	1	4/0	4	2.00	1	4/0	2-3/0	4	2.50	225
4	250	1	250	4	2.50	1	250	4	2.50	1	250	2-4/0	4	2.50	250
	300	1	350	4	3.00	1	350	4	2.50	1	350	2-300	4	3.00	300
	350	1	500	3	3.00	1	500	3	3.00	1	500	2-400	3	3.50	350
1	400	2	3/0	3	2.00	2	3/0	3	2.00	2	3/0	500	3	2.50	400
	450	2	4/0	2	2.50	2	4/0	2	2.00	2	4/0	2-3/0	2	2.50	450
]	500	2	250	2	2.50	2	250	2	2.50	2	250	2-4/0	2	2.50	500
ጎ	600	2	350	1	3.00	2	350	1	2.50	2	350	2-350	1	3.00	600
8 .	700	2	500	1/0	3.00	2	500	1/0	3.00	2	500	2-400	1/0	3.50	700
<u> </u>	800	3	300	1/0	2.50	3	300	1/0	2.50	3	300	2-4/0	1/0	3.00	800
	900	3	350	2/0	3.00	3	350	2/0	2.50	3	350	2-300	2/0	3.00	900
	1000	3	400	2/0	3.00	3	400	2/0	2.50	3	400	2-350	2/0	3.00	1000
1	1200	4	350	3/0	3.00	4	350	3/0	2.50	4	350	2-300	3/0	3.00	1200
	1600	5	400	4/0	3.00	5	400	4/0	2.50	5	400	2-350	4/0	3.00	1600
	2000	6	400	250	3.00	6	400	250	3.00	6	400	2-350	250	3.50	2000
	2500	7	500	350	3.50	7	500	350	3.00	7	500	2-400	350	3.50	2500
	3000	8	500	400	3.50	8	500	400	3.00	8	500	2-400	400	4.00	3000
」 │	4000	11	500	500	3.50	11	500	500	3.00	11	500	2-400	500	4.00	3000
	5000	14	500	700	3.50	14	500	700	3.00	14	700	2-400	700	4.00	3000
					MOTOR	& APPLIA	ANCE FEE	EDER SCH	HEDULE (100 Amps	& Less)				

FEEDER SCHEDULE

"K" RATED 4-WIRE FEEDER

3-WIRE FEEDER

					(-/		
MARK	MOTOR L	OAD (HP)	4-	WIRE FEEDI	ER	;	3-WIRE FEEDER	₹	MARK
(AMPS)	480V	208V	PH	GND	С	PH	GND	С	(AMPS)
20	7.5 & LESS	3 & LESS	12	12	0.75	12	12	0.75	20
25	10		10	10	0.75	10	10	0.75	25
30	15		10	10	0.75	10	10	0.75	30
35		5	8	10	0.75	8	10	0.75	35
40	15		8	10	0.75	8	10	0.75	40
45			6	10	1.00	6	10	0.75	45
50		7.5	6	10	1.00	6	10	0.75	50
60	20	10	6	10	1.00	6	10	0.75	60
70	25		4	8	1.25	4	8	1.00	70
80	30		4	8	1.25	4	8	1.00	80
90	40	15	3	8	1.25	3	8	1.25	90
100	50	20	3	8	1.25	3	8	1.25	100

- 1. FEEDERS SHALL BE 4-WIRE, UNLESS DENOTED WITH:
 - "-3W" WHICH SHALL BE 3-WIRE (3W)
 "-IG" WHICH SHALL BE 4-WIRE PLUS INSULATED GROUND AND EQUIPMENT GROUND.
- "-K" WHICH SHALL BE 4-WIRE WITH OVERSIZED NEUTRAL.

 2. SERVICE ENTRANCE CONDUCTORS SHALL NOT BE PROVIDED WITH GROUND CONDUCTOR.
- 3. ALL FEEDERS SHALL HAVE EQUIPMENT GROUND CONDUCTOR.4. NEUTRAL SHALL BE SAME SIZE AS PHASE CONDUCTOR, UNLESS OTHERWISE NOTED.
- 5. CONDUCTOR SIZES FOR FEEDERS OVER 40A ARE BASED ON TERMINATIONS TO EQUIPMENT LISTED FOR 75°C, INCREASE FEEDER SIZES AS REQUIRED FOR TERMINATIONS TO EQUIPMENT NOT LISTED FOR 75°C.
- 6. RACEWAY AND CONDUCTOR SIZING IS BASED ON THE USE OF THHN/THWN COPPER CONDUCTORS AND EMT CONDUIT. MODIFY RACEWAY AND CONDUCTOR SIZES AS REQUIRED FOR THE USE OF OTHER RACEWAY AND CONDUCTOR TYPES.
- 7. SEE SPECIFICATIONS FOR ALLOWABLE CONDUCTOR MATERIAL, INSULATION AND RACEWAY TYPES. WHERE ALUMINUM CONDUCTORS ARE ALLOWED THE AMPACITY RATING OF THE SERVICE OR FEEDER SHALL BE EQUAL TO OR GREATER THAN THE CALCULATED AMPACITY RATING OF THE COPPER CONDUCTORS SHOWN IN THIS SCHEDULE.

	AMPACITY NATING OF THE COPPER CONDUCTORS SHOWN IN THIS SCHEDULE.
8	. NOT ALL FEEDER SIZES SHOWN IN THIS SCHEDULE ARE USED IN THIS PROJECT.

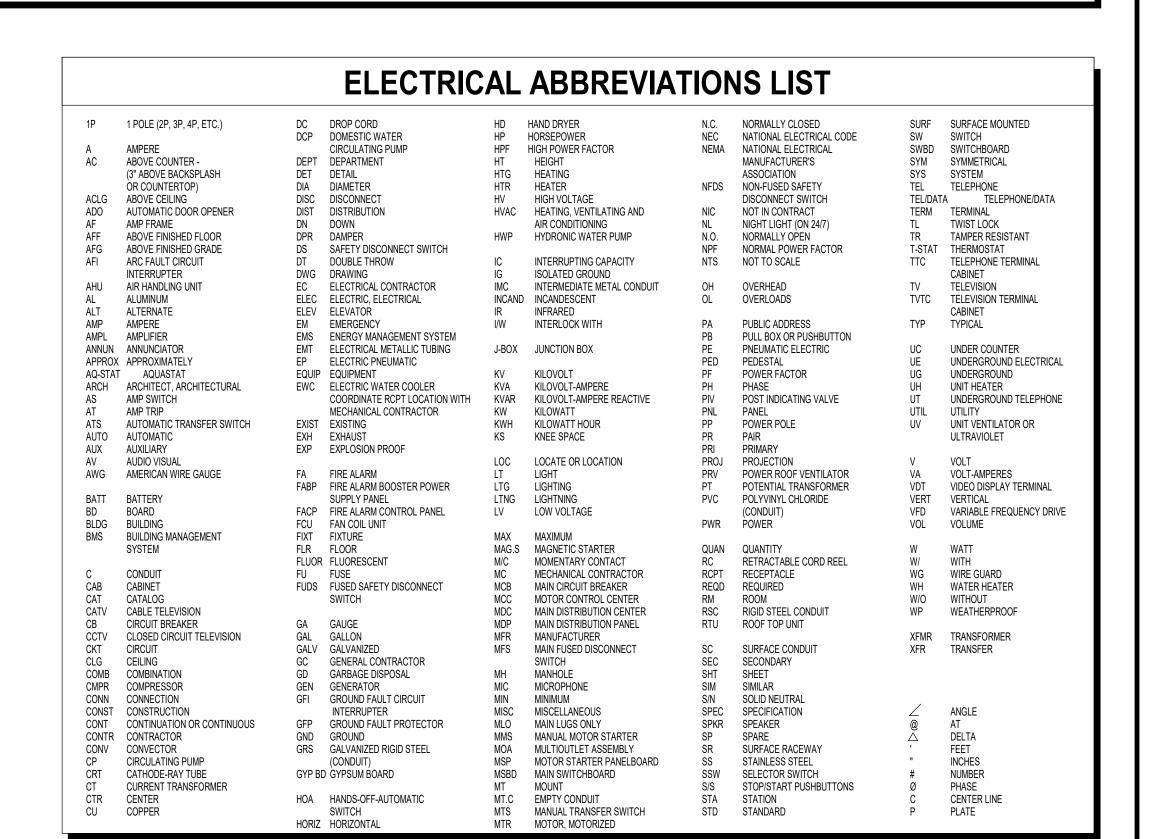
															EQU	IPMEN	T CONN	IECTION	SCHE	ULE									
	Identity		Ele	ctrical									Circuit							Starter			Control			Disconnect			_
			Ар	parent					Pha	se Conduct	ors	Neutral Co	nductor	Ground Con	ductor	Conduit Size													
UNIT	Description	Voltage	Phase P	ower	FLA	MCA (OCP	Runs	No.	Size	Type	Size	Type	Size	Type	Size	Panel	Circuit	Туре	Furnish	Install	Туре	Furnish	Install	Туре	Furnish	Install	Interlock	Notes
AHU-1	AIR HANDLING UNIT	480 V	3 17	5 kVA	21 A	26 A	40 A	1	3	8 AWG	Cu	8 AWG	Cu	10 AWG	Cu	1"	PBH2	8,10,12	VFD	MC	MC	BAS	MC	MC	VFD	MC	MC	FIRE ALARM	1,2
AHU-2	AIR HANDLING UNIT	480 V	3 11	6 kVA	14 A	18 A	25 A	1	3	10 AWG	Cu	10 AWG	Cu	10 AWG	Cu	3/4"	PBH2	14,16,18	VFD	MC	MC	BAS	MC	MC	VFD	MC	MC	FIRE ALARM	1,2
IU-3 (FUTURE)	AIR HANDLING UNIT	480 V	3 22	4 kVA	27 A	34 A	60 A	1	3	8 AWG	Cu	8 AWG	Cu	10 AWG	Cu	1"	PBH2	20,22,24		-									FUTURE
CUH-100	CABINET UNIT HEATER	120 V	1 0.	6 kVA	5 A	6 A	15 A	1	1	12 AWG	Cu	12 AWG	Cu	12 AWG	Cu	3/4"	PBL6A	26		-		BAS	MC	MC	INTEGRAL	MC	MC		
CUH-A104	CABINET UNIT HEATER	120 V	1 0.	6 kVA	5 A	6 A	15 A	1	1	12 AWG	Cu	12 AWG	Cu	12 AWG	Cu	3/4"	PBL7	11		-		BAS	MC	MC	INTEGRAL	MC	MC		
CUH-A108	CABINET UNIT HEATER	120 V	1 0.	6 kVA	5 A	6 A	15 A	1	1	12 AWG	Cu	12 AWG	Cu	12 AWG	Cu	3/4"	PBL6A	28				BAS	MC	MC	INTEGRAL	MC	MC		
CUH-A203	CABINET UNIT HEATER	120 V	1 0.	6 kVA	5 A	6 A	15 A	1	1	12 AWG	Cu	12 AWG	Cu	12 AWG	Cu	3/4"	PBL7	1				BAS	MC	MC	INTEGRAL	MC	MC		-
CUH-B100	CABINET UNIT HEATER	120 V	1 0.	6 kVA	5 A	6 A	15 A	1	1	12 AWG	Cu	12 AWG	Cu	12 AWG	Cu	3/4"	PB	1				BAS	MC	MC	INTEGRAL	MC	MC		
CU-1	CONDENSING UNIT	480 V	3 88	1 kVA	106 A	106 A 1	110 A	1	3	1 AWG	Cu	1 AWG	Cu	6 AWG	Cu	1 1/2"	PBH2	7,9,11				BAS	MC	MC	NEMA 3R, NFDS	EC	EC		
CU-2	CONDENSING UNIT	480 V	3 53	6 kVA	65 A	65 A	80 A	1	3	4 AWG	Cu	4 AWG	Cu	8 AWG	Cu	1 1/4"	PBH2	13,15,17				BAS	MC	MC	NEMA 3R, NFDS	EC	EC		
U-3 (FUTURE)	CONDENSING UNIT	480 V	3 88	1 kVA	106 A	106 A 1	125 A	1	3	1 AWG	Cu	1 AWG	Cu	6 AWG	Cu	1 1/2"	PBH2	19,21,23											FUTURE
EF-A201	EXHAUST FAN	120 V	1 1.	2 kVA	10 A	12 A	15 A	1	1	12 AWG	Cu	12 AWG	Cu	12 AWG	Cu	3/4"	PBL6	3				BAS	MC	MC	INTEGRAL	MC	MC		
EF-B104	EXHAUST FAN	120 V	1 0.	6 kVA	5 A	6 A	15 A	1	1	12 AWG	Cu	12 AWG	Cu	12 AWG	Cu	3/4"	PB	42				BAS	MC	MC	INTEGRAL	MC	MC		
RF-9S	EXHAUST FAN	480 V	3 1.	5 kVA	2 A	2 A	15 A	1	3	12 AWG	Cu	12 AWG	Cu	12 AWG	Cu	3/4"	PBH2	26,28,30	VFD	MC	MC	BAS	MC	MC	VFD	MC	MC		2
RF-10S	EXHAUST FAN	480 V	3 1.	5 kVA	2 A	2 A	15 A	1	3	12 AWG	Cu	12 AWG	Cu	12 AWG	Cu	3/4"	PBH2	25,27,29	VFD	MC	MC	BAS	MC	MC	VFD	MC	MC		2
FP-B102	FAN POWERED VAV	120 V	1 1.	2 kVA	10 A	12 A	15 A	1	1	12 AWG	Cu	12 AWG	Cu	12 AWG	Cu	3/4"	PA	2				BAS	MC	MC	INTEGRAL	MC	MC		
FP-B107	FAN POWERED VAV	120 V	1 1.	2 kVA	10 A	12 A	15 A	1	1	12 AWG	Cu	12 AWG	Cu	12 AWG	Cu	3/4"	PA	1		_		BAS	MC	MC	INTEGRAL	MC	MC		
UH-A103	UNIT HEATER	120 V		1 kVA	1 A	1 A	15 A	1	1	12 AWG	Cu	12 AWG	Cu	12 AWG	Cu	3/4"	PBL6A	5				BAS	MC	MC	INTEGRAL	MC	MC		
UH-A201	UNIT HEATER	120 V	1 0.	1 kVA	1 A	1 A	15 A	1	1	12 AWG	Cu	12 AWG	Cu	12 AWG	Cu	3/4"	PBL6	2				BAS	MC	MC	INTEGRAL	MC	MC		
UH-A202	UNIT HEATER	120 V	1 0.	1 kVA	1 A	1 A	15 A	1	1	12 AWG	Cu	12 AWG	Cu	12 AWG	Cu	3/4"	PBL6	1		_		BAS	MC	MC	INTEGRAL	MC	MC		
UH-A203	UNIT HEATER	120 V		1 kVA	1 A	1 Δ	15 A	1	1	12 AWG	Cu	12 AWG	Cu	12 AWG	Cu	3/4"	PBL7	23				BAS	MC	MC	INTEGRAL	MC.	MC		

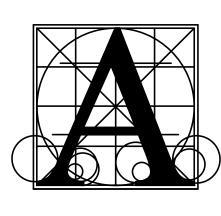
2. PROVIDE CONNECTION TO UNIT.

HT AFF	SYMBOL	DESCRIPTION	HT AFF	<u>SYMBOL</u>	DESCRIPTION	HT AFF	SYMBOL	DESCRIPTION
AS NOTED	HA B	SURFACE LIGHT (TYPE DENOTED)	AS NOTED	⊖ _{CD}	RECEPT ON CORD DROP (DUPLEX SHOWN)		+	ANTENNA
			AS NOTED	⊕ _{CR}	RECEPT ON CORD REEL (DUPLEX SHOWN)		PP	POWER PACK
AS NOTED	⊢√→ F	WALL MOUNTED FLOODLIGHT (TYPE DENOTED)	AS NOTED		MULTIOUTLET ASSEMBLY (TYPE DENOTED)		RD	REMOTE DRIVER
	⊘ R	RECESSED LIGHT (TYPE DENOTED)	AS NOTED	₽ V B	MULTIOUTLET ASSEMBLY (TYPE DENOTED)	86"	⊣ F	FIRE ALARM HORN W/STROBE (CANDELAS)
PER SCHED	● AA	POLE MOUNTED LIGHT (TYPE DENOTED)	94"	H©	CLOCK (TYPE DENOTED)	86"	⊢F⊘ 110cd	FIRE ALARM SPEAKER W/STROBE (CANDELAS)
		· · · · · · · · · · · · · · · · · · ·		P	POWER POLE (OPEN OFFICE STYLE)	86"	HFD 110cd	FIRE ALARM STROBE (CANDELAS)
PER SCHED	↑ ↑ ↑ BB	POLE MOUNTED FLOODLIGHT (TYPE DENOTED)			CIRCUIT BREAKER PANEL	46"	HE	F.A. PULLSTATION
	O G	SURFACE LIGHT (TYPE DENOTED)		(222)	POWER OR DISTRIBUTION PANEL		-SD - > ->SD -	BEAM TYPE SMOKE DETECTORS
P1(•	• P2	SUSPENDED OR PENDANT LIGHT (TYPE DENOTED)			SPECIAL CABINET (TYPE DENOTED)	46"		FIRE ALARM REMOTE ANNUNCIATOR
	H	RECESSED LIGHT (TYPE DENOTED)		T1	TRANSFORMER (TYPE DENOTED)		FA ANNUN - SD SD	SMOKE DETECTOR (TYPE DENOTED)
	ST1	STRIP LIGHT (TYPE DENOTED)		M	MOTOR (SEE SCHEDULE)		НН Н	HEAT DETECTOR
AS NOTED	S1	TRACK AND TRACK LIGHT (TYPES DENOTED)			MANUAL MTR. STR. (W/OVERLOADS)		SD	DUCT SMOKE DETECTOR (TYPE DENOTED)
86"	7 PEM	EMERGENCY BATTERY LIGHT (TYPE DENOTED)		\boxtimes	MAG. MOTOR STARTER OR CONTACTOR		F/S	FIRE/SMOKE DAMPER
	⊢ EM F € E	EXIT SIGN (TYPE DENOTED)		⊠h	COMB. MOTOR STARTER (NON-FUSED)		HRI RI	REMOTE INDICATOR/TEST SWITCH
AS NOTED	H A	LIGHT FIXTURE ON (EM) LIFE SAFETY BRANCH		⊠1 ⊠ 1	COMB. MOTOR STARTER (FUSED)		DH	F.A. DOOR HOLDER
		` '			SAFETY DISC. SW. (NON-FUSED)		\$\$	SPRINKLER FLOW SWITCH
	HO 1279	,		□ i	SAFETY DISC. SW. (FUSED)		<i>>></i>	SPRINKLER VALVE TAMPER SWITCH
AS NOTED		LIGHT FIXTURE WITH EMERGENCY BALLAST	AS NOTED		BUS DUCT WITH PLUG UN DISCONNECT (FUSED)	Ī	⊱ > DR	DOOR RELEASE
AONOILD		LIGHT ON CORD REEL (TYPE DENOTED)	AONOILD	N h VFD	VARIABLE FREQUENCY DRIVE		DP	DOOR POSITION SWITCH
AS NOTED [CLID	LIGHTING CHANNEL WIRE (TYPE DENOTED)		R	RELAY	46"	HCR	CARD READER
46"		SINGLE POLE SW.		(3)	OCCUPANCY SENSOR (TYPE DENOTED)	46"	HKP	KEYPAD
46"	1 0 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 POLE SINGLE THROW SW.		(B)	OCCUPANCY SENSOR POWER PACK	40	HMD	MOTION DETECTOR (TYPE DENOTED)
	1♥ 3	3-WAY SW.			DAYLIGHT SENSOR (TYPE DENOTED)		H <u>ML</u>	ELECTROMAGNETIC LOCK
46"	1 0) 4	4-WAY SW.	AO NOTED	(DS)	PHOTOCELL	-	⊢●	ADA PUSHBUTTON SWITCH
46"			AS NOTED	HPC		46"		NURSE CALL MASTER STATION
46"	₩ ^K	KEYED SW.	46"	HTC	TIME CONTROL SWITCH (TIME SWITCH)	46"	+•••	
46"	₩ ^P	SW. W/PILOT	46"	H	HUMIDISTAT	46"	+€	NURSE CALL EMERG. STATION
46"	₩ ^D	DIMMER SWITCH	46"		THERMOSTAT	46"	+\(\bar{\bar{\bar{\bar{\bar{\bar{\bar{	NURSE CALL CODE BLUE EMERG. STATION
46"	l (∕) OS	OCCUPANCY SENSOR SWITCH	PER SCHED	H2 H2	WALL HEATER (TYPE DENOTED)	46"	+••	NURSE CALL DUTY STATION
46"	l ← OSD	COMBINATION OCCUPANCY SENSOR & DIMMER SW.	PER SCHED	□ D1	HAND OR HAIR DRYER (TYPE DENOTED)	46"	+••	NURSE CALL PATIENT STATION
46"	₩ LVP	LOW VOLTAGE SWITCH	18"	\blacksquare	TELEPHONE OUTLET (TYPE DENOTED)	46"	+\$	NURSE CALL STAFF STATION
46"	₩ LVD	LOW VOLTAGE DIMMER SWITCH	46"	₩	WALL TELEPHONE OUTLET (TYPE DENOTED)	46"	+•••	NURSE CALL BED STATION. SINGLE
46"	⊬ ,	TIMER SWITCH	18"	lacksquare	TELECOM OUTLET (TYPE DENOTED)	46"	$+$ \hat{N}_2	NURSE CALL BED STATION. DOUBLE.
46"	₩	MOTOR HORSEPOWER RATED SWITCH		otin	WIRELESS ACCESS POINT	86"	$ N_2 N_2$	NURSE CALL DOME LIGHT
18"	Ю	SINGLE RECEPT.	46"	+(C)	INTERCOM OUTLET LOCATION		NCC	NURSE CALL EQUIPMENT CABINET
18"	\bowtie	DUPLEX RECEPT.	18"	HTV	TELEVISION OUTLET	46"	NC ANNUN	NURSE CALL ANNUNCIATOR PANEL
18"	₩U	USB DUPLEX RECEPT. SEE SPECS	18"	HAV	A/V OUTLET. SEE SPCIFICATIONS.	AS NOTED	HC□<	CAMERA
18"	\rightleftharpoons	SPLIT DUPLEX RECEPT.	18"		MULTIPLE SERVICE OUTLET (TYPE DENOTED)			CONDUIT CONCEALED IN WALL OR OVERHEAD
18"	₩EM	DUPLEX RECEPT. ON EMERGENCY CIRCUIT			FLOOR BOX, TWO DEVICES (TYPE DENOTED)	-		CONDUIT EXPOSED
18"	\Longrightarrow	FOURPLEX RECEPT.			FLOOR BOX, FOUR DEVICES (TYPE DENOTED)	-		CONDUIT TRANSITION UP
18"	⊨ EM	FOURPLEX RECEPT. ON EMERGENCY CIRCUIT				-		CONDUIT TRANSITION DOWN
18"	₩•	DUPLEX RECEPT, ISOLATED GROUND.	18"	HD	DICTATION OUTLET LOCATION	-	7	CONDUIT STUBBED OUT
18"	⊨	FOURPLEX RECEPT, ISOLATED GROUND.	46"	⊢© ^w	WALL DICTATION OUTLET LOCATION		/-	CONDUIT CONCEALED, "E" INDICATES EMERGENC
46"	HDF	DEAD FRONT GFCI DEVICE	86"	HBO	BELL	<u> </u>		CONDUIT EXPOSED, "E" INDICATES EMERGENCY
AS NOTED	$\vdash \bigcirc$	SPECIAL RECEPT. OR CONN. (SEE SCHEDULE)	86"	HB/	BUZZER		OHE	OVERHEAD ELECTRIC
	$+ \bigcirc$ \bigcirc	JUNCTION BOX	86"	HCO	CHIME			BRANCH CIRCUIT HOME RUN
		DUPLEX FLOOR RECEPT.	46"	H•	PUSH BUTTON			CABLE TRAY (TYPE DENOTED)
		FOURPLEX FLOOR RECEPT.	86"	HS S	SPEAKER (WALL OR CEILING MT.)		E ──∃	CONDUIT SLEEVE (SIZE DENOTED)
	Ф	DUPLEX CEILING RECEPT.	86"	HS\1 S\1	HORN TYPE SPEAKER		1	KEYED NOTE (SEE SCHEDULE)
	"	FOURPLEX CEILING RECEPT.	46"	1	VOLUME CONTROL		/// /	HATCHED SYMBOL INDICATES REMOVED
	.,		18"	$+$ \bigcirc	MICROPHONE OUTLET			
			18"	HA	AUXILIARY OUTLET			

ALL DISTANCES ARE TO CENTER OF DEVICE OR EQUIPMENT UNLESS OTHERWISE NOTED.

ELECTRICAL SYMBOL LEGEND

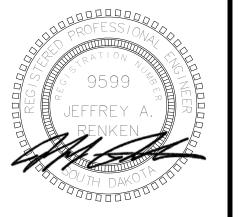


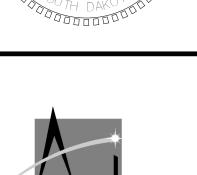


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HIGH SCHOOL ADDITIO

OR

SF

ABBREVIATION

10-16-2025

2. LOW PROFILE (<3.5" DEPTH, AIR TIGHT, IC & WET LOCATION RATED.

1. INTERLOCK WITH FIRE ALARM FOR SHUTDOWN UPON ALARM.

3. CABLE HUNG AT HEIGHTS INDICATED ON PLAN SHEETS.
4. SINGLE STENCIL FACE, RED LETTERS, BLACK HOUSING. SELF-TESTING/SELF-DIAGNOSTIC ELECTRONICS, DIRECTIONAL ARROWS AND MOUNTING AS INDICATED.
5. LED EMERGENCY LIGHTING UNIT, WHITE HOUSING, TWO ADJUSTABLE AIMING HEADS, SELF-TESTING/DIAGNOSTICS, 550 LUMENS (MIN. 50' O.C. SPACING WHEN MOUNTED AT 7.5' AFF.

10. IK10 PATED EIXTURE, PROVIDE CABLE LENGTHS AS REQUIRED FOR MOUNTING AS SHOWN ON TYPE MMOUNTING DETAIL

11. PROVIDE LUTRON POWPAK WIRELESS DIMMING MODULE MODEL RMJS-8T-DV-B AT EACH LIGHT FIXTURE LOCATION FOR ON/OFF AND DIMMING CONTROL OF EACH INDIVIDUAL FIXTURE

11. PROVIDE LUTRON POWPAK WIRELESS DIMMING MODULE MODEL RMJS-8T-DV-B AT EACH LIGHT FIXTURE LOCATION FOR ON/OFF AND DIMMING CONTROL OF EACH INDIVIDUAL FIXTURE

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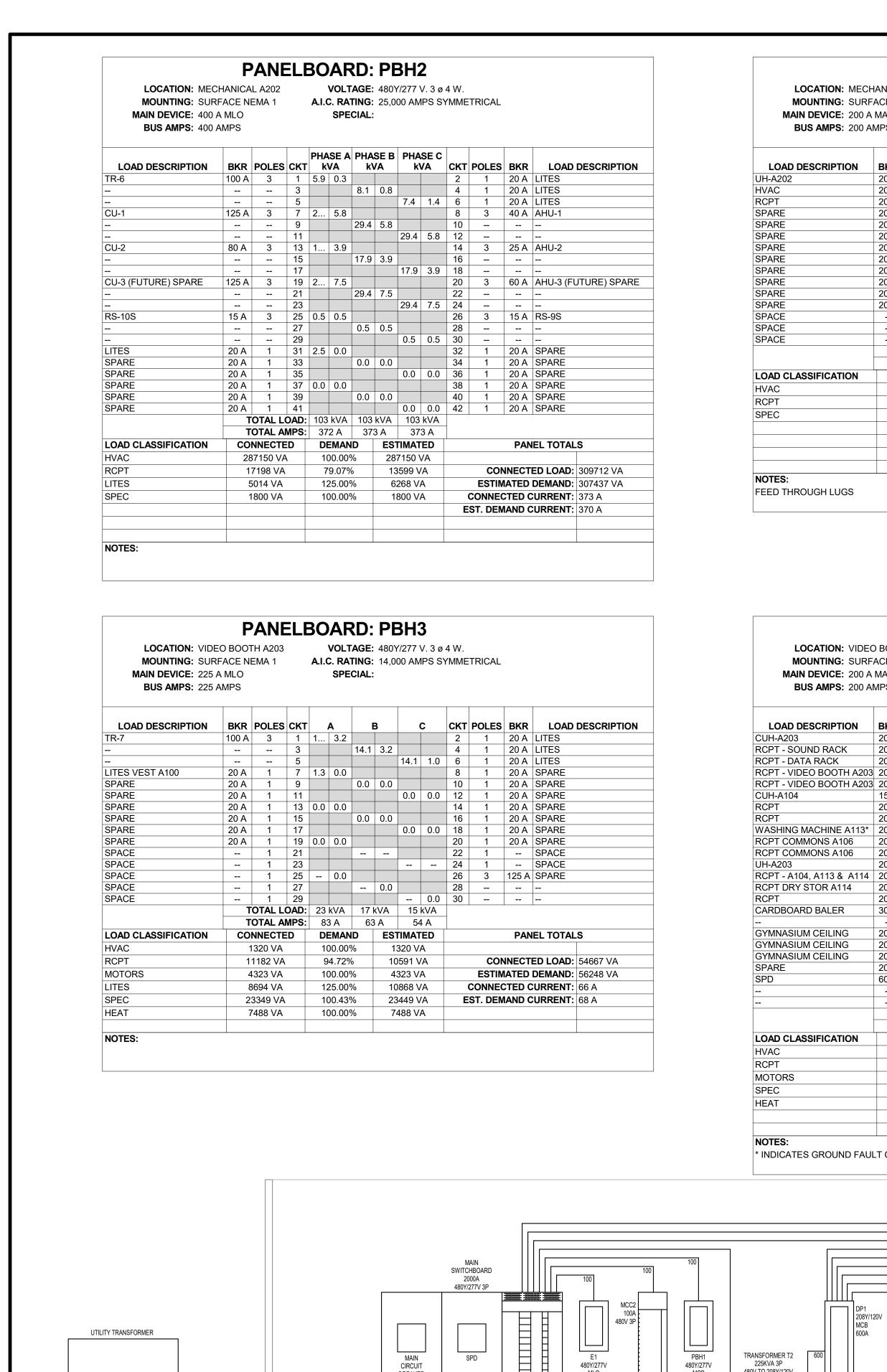
11. PROVIDE LUTRON FOR THE PROVIDE FOR THE

12. PROVIDE EMERGENCY BATTERY BACKUP FOR 4FT SECTIONS AS INDICATED ON PLAN SHEETS.

9. SEE PLAN SHEETS FOR FIXTURE LENGTHS. MOUNT BOTTOM OF FIXTURE LEVEL WITH BOTTOM OF ADJACENT CLOUD CEILING GRID.

8. LED ARCHITECTURAL, LOW PROFILE, EXTERIOR WALL MOUNTED REMOTE EMERGENCY LUMINAIRE, BRONZE FINISH, CONNECT TO INTERIOR EMERGENCY LUMINAIRE, MINIMUM OF 400 LUMENS.

6. LED EXIT/EMERGENCY TANDEM UNIT, SINGLE BRUSHED ALUMINUM FACE, BLACK HOUSING, DIRECTIONAL ARROWS AND MOUNTING AS INDICATED, SELF-TESTING/DIAGNOSTICS, HIGH OUTPUT LAMPS (MIN. 60' O.C. SPACING WHEN MOUNTED AT 8'AFF).



MAIN SWITCHBOARD 2000A 480Y/277V 3P

PBH1 480Y/277V MCB 100A

TRANSFORMER T2 225KVA 3P 480V TO 208Y/120V

PBL7A 208Y/120V MLO 100A

PBL6A 208Y/120V MLO 200A

UTILITY TRANSFORMER

							SE B		SE C					
LOAD DESCRIPTION		POLES			VA	k۱	/A	k\	VA		POLES			DESCRIPTION
UH-A202	20 A	1	1	0.1	0.1					2	1		UH-A201	
HVAC	20 A	1	3			1.2	0.5			4	1		RCPT	
RCPT	20 A	1	5	0.0	0.0			0.5	0.2	6	1		RCPT	
SPARE	20 A	1	7	0.0	0.0					8	1		SPARE	
SPARE	20 A	1	9			0.0	0.0			10	1		SPARE	
SPARE	20 A	1	11					0.0	0.0	12	1		SPARE	
SPARE	20 A	1	13	0.0	0.0					14	1		SPARE	
SPARE	20 A	1	15			0.0	0.0			16	1		SPARE	
SPARE	20 A	1	17					0.0	0.0	18	1		SPARE	
SPARE	20 A	1	19	0.0	0.0					20	1	20 A	SPARE	
SPARE	20 A	1	21			0.0				22	1		SPACE	
SPARE	20 A	1	23					0.0		24	1		SPACE	
SPACE		1	25		0.0					26	3	60 A	SPD	
SPACE		1	27				0.0			28				
SPACE		1	29						0.0	30				
	T	OTAL L	OAD:	6 k	⟨VΑ	8 k	VA	7 k	(VA					
	T	OTAL A	MPS:	49	9 A	70) A	63	3 A					
LOAD CLASSIFICATION	CO	NNECTE	D	DE	EMAN	D	ES1	TAMI	ED			PAN	IEL TOTAL	S
HVAC	2	2734 VA		10	20.00	%	27	734 V	A					
RCPT	1	7198 VA		7	9.07%	6	13	599 V	⁄Α		CON	INECT	ED LOAD:	21391 VA
SPEC		1800 VA		10	00.00	%		300 V			ESTIM	ATFD	DEMAND:	17809 VA
51 25		1000 171		- ' '	30.00	,,,	- ' '	JOO V.					URRENT:	
														0071
											SI. DEN	AND C	URRENT:	49 A

LOCATION: VIDEO) BOO		±∟t		VOLT	AGE:	208	//120 '	V. 3 ø		-TDIO : :			
MOUNTING: SURF. MAIN DEVICE: 200 A BUS AMPS: 200 AI	MAIN			A.I.C		TING: CIAL:		00 AN	IPS S	YMME	TRICAL			
LOAD DESCRIPTION	BKR	POLES	СКТ		A	ı	В		C	СКТ	POLES	BKR	LOAD	DESCRIPTION
CUH-A203	20 A	1	1	0.6	0.7					2	1	20 A	RCPT - VI	DEO BOOTH
RCPT - SOUND RACK	20 A	1	3			0.4	0.4			4	1	20 A	RCPT - D/	ATA RACK
RCPT - DATA RACK	20 A	1	5					0.4	0.4	6	1	20 A	RCPT - VI	DEO BOOTH
RCPT - VIDEO BOOTH A203	20 A	1	7	0.4	0.4					8	1	20 A	RCPT - VI	DEO BOOTH
RCPT - VIDEO BOOTH A203	20 A	1	9			0.4	0.7			10	1	20 A	RCPT CO	RR. A104
CUH-A104	15 A	1	11					0.6	0.5	12	1	20 A	RCPT	
RCPT	20 A	1	13	0.7	0.5					14	1	20 A	RCPT	
RCPT	20 A	1	15			0.5	0.4			16	1	20 A	RCPT - E\	NC & CORR.
WASHING MACHINE A113*	20 A	1	17					1.2	2.5	18	2	30 A	DRYER A	113*
RCPT COMMONS A106	20 A	1	19	0.5	2.5					20				
RCPT COMMONS A106	20 A	1	21			0.5	0.5			22	1	20 A	RCPT CO	MMONS A10
UH-A203	20 A	1	23					0.1	1.4	24	3	20 A	BLEACHE	R MOTORS
RCPT - A104, A113 & A114	20 A	1	25	0.4	1.4					26				
RCPT DRY STOR A114	20 A	1	27			0.5	1.4			28				
RCPT	20 A	1	29					0.2	0.8	30	1		SPEC	
CARDBOARD BALER	30 A	2	31	1.2	1.8					32	1			UM CEILING
			33			1.2	1.8			34	1			UM CEILING
GYMNASIUM CEILING	20 A	1	35					0.8	0.8	36	1			UM CEILING
GYMNASIUM CEILING	20 A	1	37	1.7	0.2					38	1			COREBOARI
GYMNASIUM CEILING	20 A	1	39			8.0	0.0			40	1		SPARE	
SPARE	20 A	1	41					0.0	0.0	42	1		SPARE	
SPD	60 A	3	43	0.0	5.8					44	3		PBL7A VI	A MTS
			45			0.0	4.8			46				
			47	4.0		4.4		0.0	4.6	48				
		OTAL L					kVA		kVA					
		OTAL A			3 A		7 A		8 A					
LOAD CLASSIFICATION		NNECTE	:D		EMAN			ГІМАТ				PAN	IEL TOTAL	.S
HVAC		1320 VA			00.00			320 V						
RCPT	1	1182 VA		9	4.72%	6	10)591 V	/A				ED LOAD:	
MOTORS	4	4323 VA		10	00.00	%	4	323 V	Α		ESTIM	IATED	DEMAND:	46137 VA
SPEC	2	3349 VA		10	00.43°	%	23	3449 V	/A		CONNEC	CTED (URRENT:	129 A
HEAT	1	7488 VA		10	00.00	%	7	488 V	A	Е	ST. DEM	IAND (URRENT:	128 A

PBL4 208Y/120V MLO 200A

PBL3 208Y/120V MLO 100A

PBL2A 208Y/120V MLO 100A

PANELBOARD: PBL6A **VOLTAGE:** 208Y/120 V. 3 ø 4 W. **LOCATION:** COMMONS A106 MOUNTING: RECESSED NEMA1 A.I.C. RATING: 10,000 AMPS SYMMETRICAL MAIN DEVICE: 200 A MLO SPECIAL: BUS AMPS: 200 AMPS LOAD DESCRIPTION BKR POLES CKT A B C CKT POLES BKR LOAD DESCRIPTION **TOTAL AMPS:** 48 A 55 A 57 A CONNECTED DEMAND ESTIMATED LOAD CLASSIFICATION PANEL TOTALS 100.00% 1318 VA 1318 VA CONNECTED LOAD: 18786 VA 81.36% 12973 VA 15945 VA 1800 VA 1800 VA ESTIMATED DEMAND: 15823 VA 100.00% CONNECTED CURRENT: 52 A EST. DEMAND CURRENT: 44 A * INDICATES GROUND FAULT CIRCUIT BREAKER

SWITCHBOARD MSB 800A (1977) 480Y/277V 3P

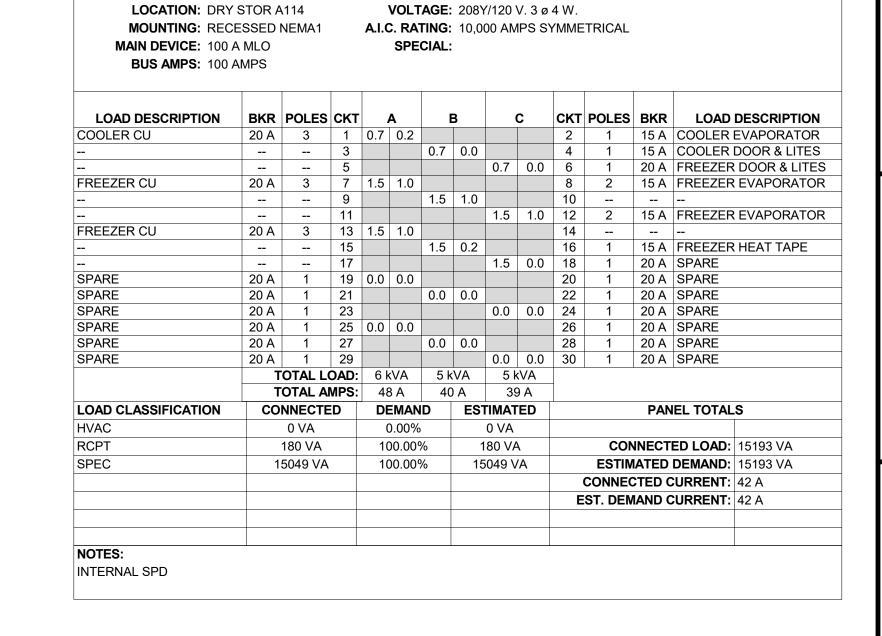
MAIN FUSED SWITCH

LA 480Y/277V MLO 200A

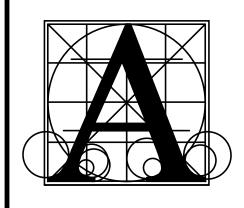
LB 480Y/277V MLO 200A

LC 480Y/277V MLO 200A

P 208Y/120V MCB 100A



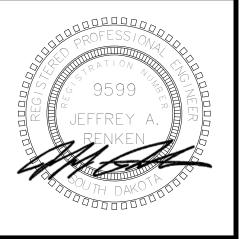
PANELBOARD: PBL7A



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number 0121.2979.22 date OCTOBER 03, 2025 drawn ACH DATE 10-16-2025

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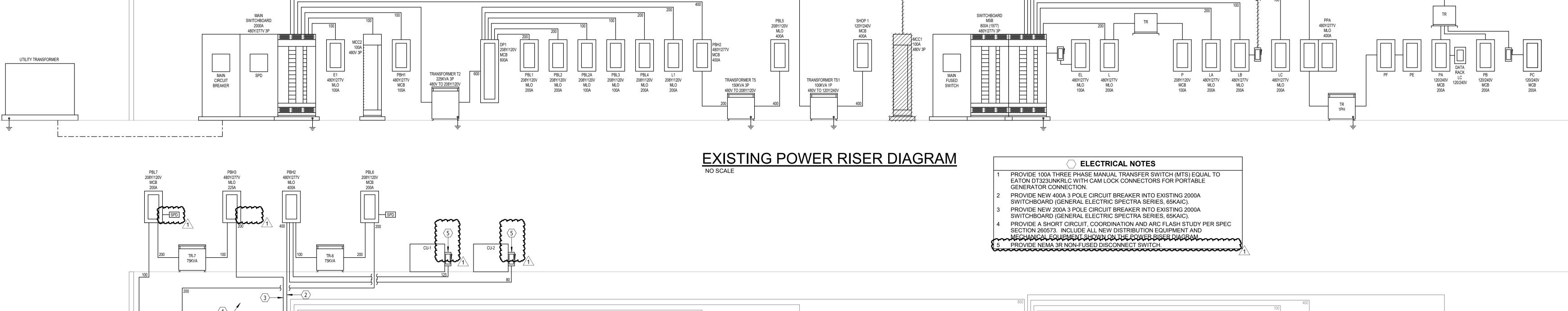
PB 120/240V MCB 200A

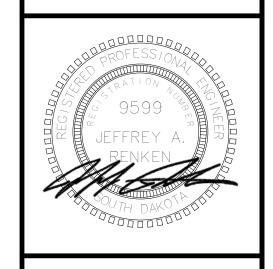
PC 120/240V MCB 200A

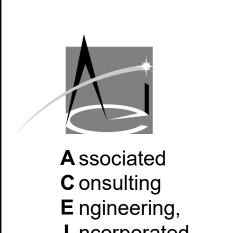
NEW POWER RISER DIAGRAM

TRANSFORMER TS 100KVA 1P 480V TO 120Y/240V

TRANSFORMER TS 150KVA 3P 480V TO 208Y/120\







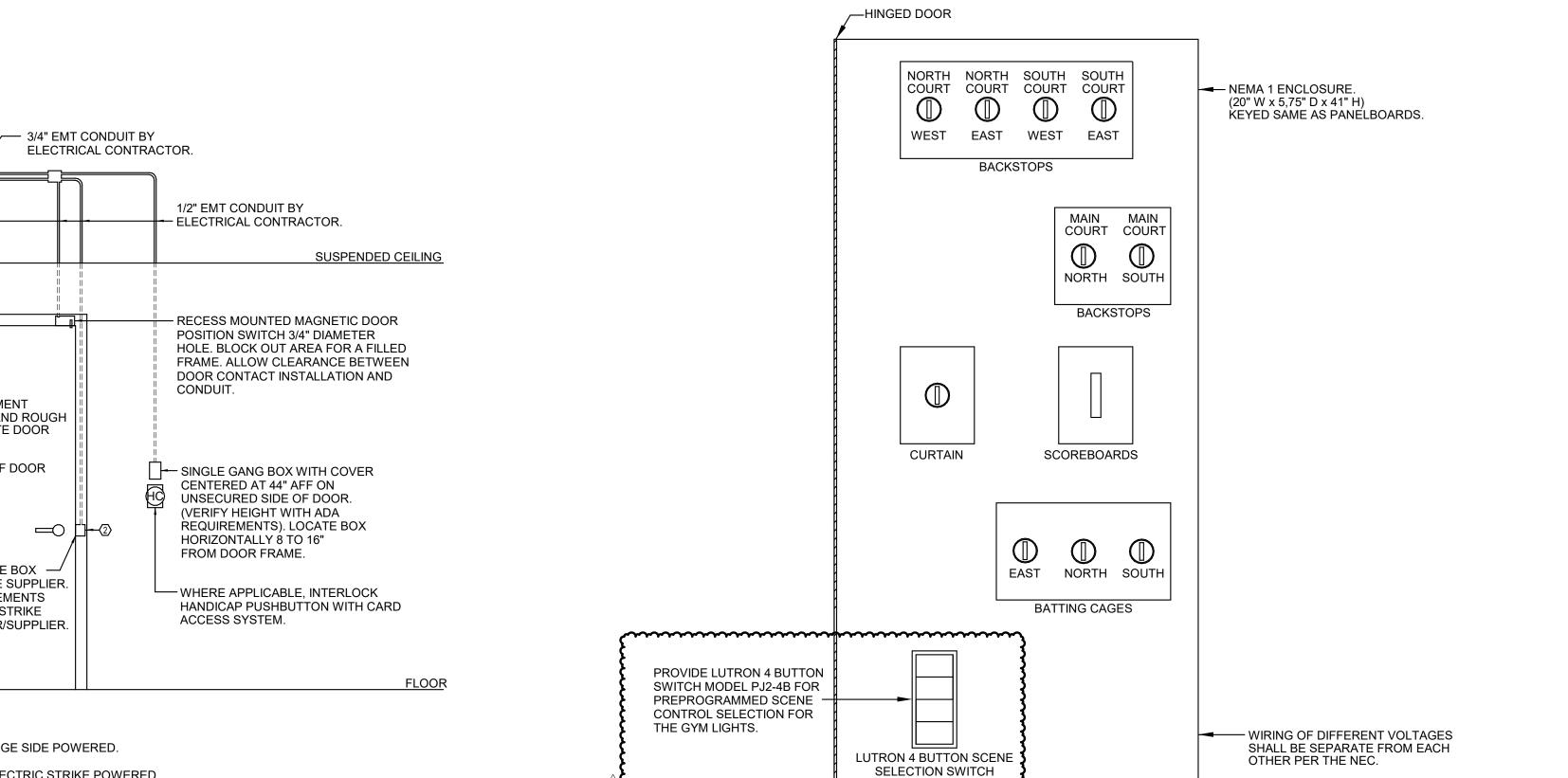
I ncorporated 340 S. Phillips Ave. Sioux Falls, SD 57104 (605) 335-3720 Fax 335-6220

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ADDITION SCHOOL H_GH

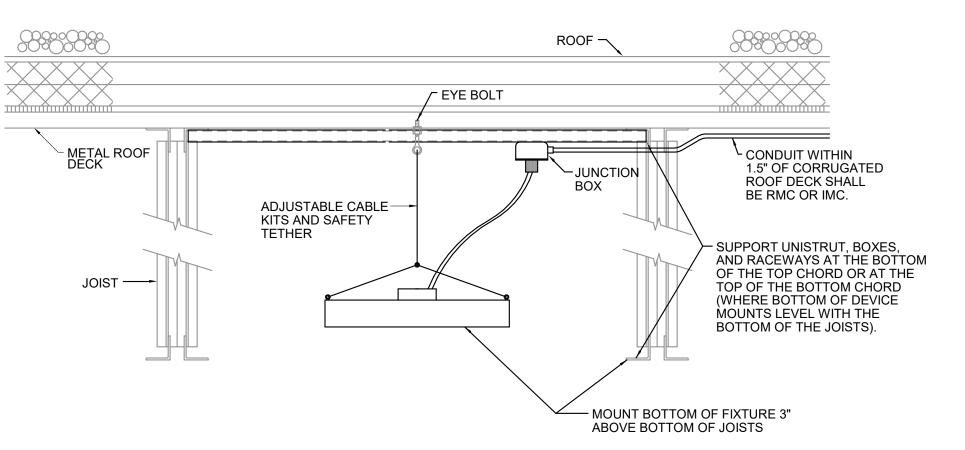
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number 0121.2979.22 date OCTOBER 03, 2025 drawn <u>ACH</u> checked <u>JLJ</u> DATE DESCRIPTION 10-16-2025 ADD I





DEDICATED SPACE FOR SOUND SYSTEM CONTROLS.



ELECT. DEVICES STANDARD MOUNTING HEIGHT

TYPE "M" FIXTURE MOUNTING DETAIL

NURSE CALL - DUTY STATION

WALL MOUNT TELEPHONE OR INTERCOM STAFF STATION

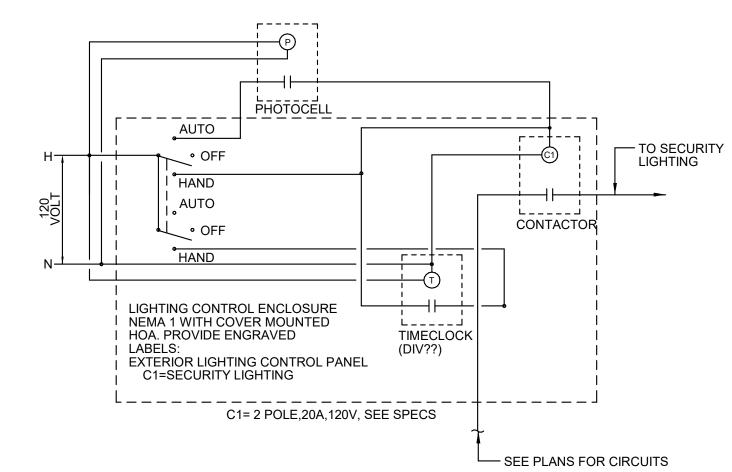
FIRE ALARM

ONLY MOUNT HORIZONTALLY WHERE SPACE IS LIMITED, SEE ARCHITECTURAL ELEVATIONS.

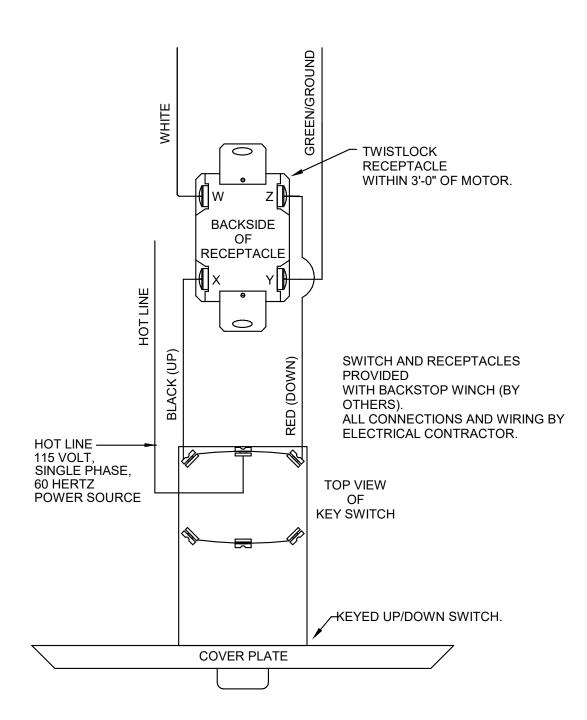
-EMERGENCY LIGHT

RECEPTACLE ABOVE COUNTER

WITH BATTERY PACK



EXTERIOR LIGHTING CONTROL DIAGRAM



EXIT SIGN — ABOVE DOOR

8'-0" HIGH CEILING

DOOR

NURSE CALL DOOR -

LIGHT ABOVE DOOR

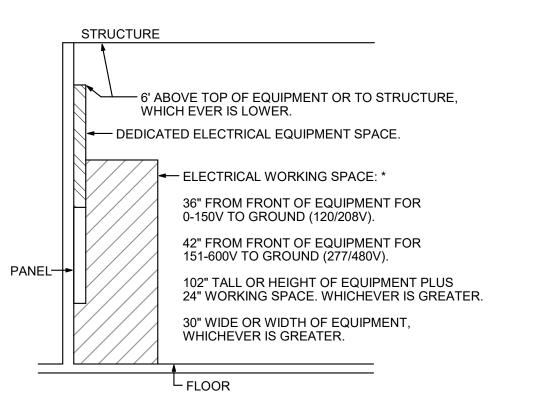
_VOLUME CONTROL

RECEPTACLE, COMMUNICATIONS, AND T.V. OUTLETS.

DO NOT INSTALL
DEVICE IN THE
CORNER OF THE
BLOCK

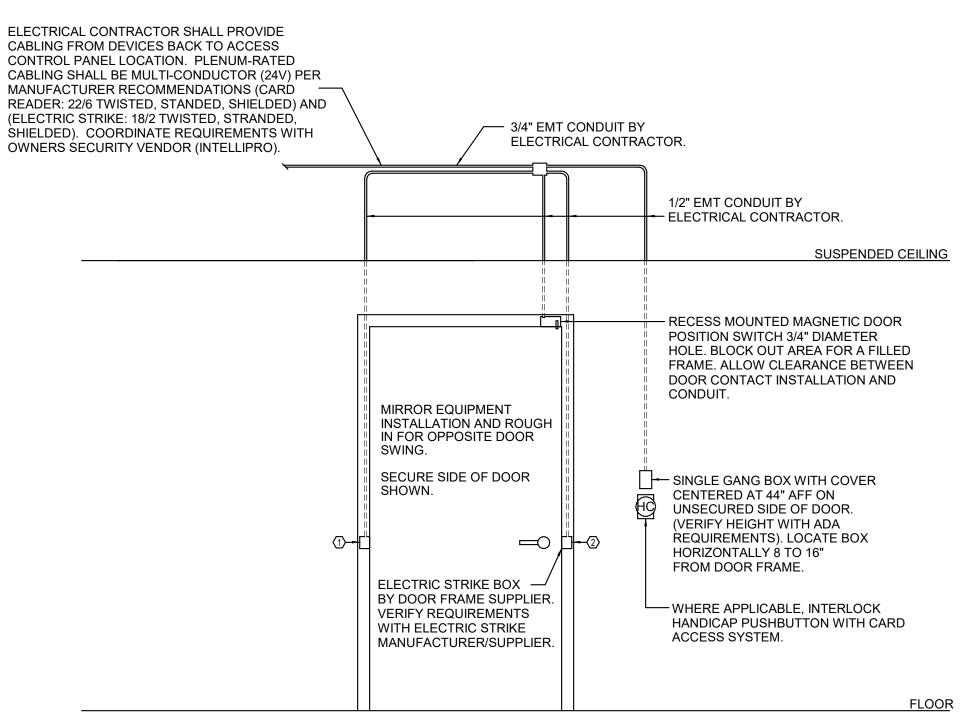
- EMERGENCY NURSE CALL

GYMNASIUM BACKSTOP/DIVIDER **CURTAIN WIRING DIAGRAM**



ELECTRICAL WORKING SPACE

* VERIFY WITH LOCAL CODE REQUIREMENTS, SPECIFICATIONS, AND NATIONAL ELECTRICAL CODE.



NOTE: 1. INTERIOR DOORS - HINGE SIDE POWERED.

2. EXTERIOR DOORS - ELECTRIC STRIKE POWERED.

SECURITY SYSTEM DETAIL

NO SCALE