

Addendum No. 1
May 3, 2022

Project: Webster Area School – 2022 CTE Addition & Remodeling
Webster, South Dakota
Architecture Incorporated Project #2936

Architect: Architecture Incorporated

Letting: Thursday, May 12, 2022
2:00 p.m.
Webster Area School District Business Office, located at 102 East 9th Avenue, Webster, South Dakota

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 055300 – GRATINGS

- a) By receipt of this addendum, all bidders shall acknowledge specification Section 055300 – Gratings (5 pages total) which shall become a part of the Project documents; reference Section 055300 attached to the end of Addendum #1.

2) SECTION 066400 – PLASTIC PANELING

- a) Article 2.2.C.6.a – Location of Installation – In addition to the locations listed, add plastic paneling protection to the mop sinks in Mech. A123 and Jan. C133.

3) SECTION 087100 – DOOR HARDWARE

- a) CLARIFICATION: As indicated per the *GENERAL APPROVALS* listed at the end of Addendum No. 1, Schlage ND series locksets shall be deemed acceptable provided that they are keyed to the Owners existing system.

4) SECTION 093000 – TILING

- a) Add Quarry Tile:

2.2 *TILE PRODUCTS*

B. Products

Basis-of-Design Product: QT-1

- a. *Manufacturer: Daltile*
- b. *Composition: Quarry tile with abrasive surface*
- c. *Style: Quarry Textures*
- d. *Module Size: 8" x 8"*
- e. *Thickness: 1/2"*
- f. *Color: As selected by Architect.*
- g. *Base: Cove Base*
- h. *Location: FACS Lab and Alcove.*
- i. *Transitions: Refer to Drawings.*
- j. *Grout Color: As selected by Architect from manufacturer's full range of colors.*
- k. *Grout Joint Width: As recommended in writing by tile manufacturer.*

2.7 GROUT MATERIALS

B. Products

- (i) *Water-Cleanable Epoxy Grout: ANSI A118.3 [, with a VOC content of 65 g/L or less].*

- 1. *Provide product capable of withstanding continuous and intermittent exposure to temperatures of up to 140 and 212 deg F, respectively, and certified by manufacturer for intended use.*

3.8 INTERIOR TILE INSTALLATION SCHEDULE

E. (Quarry Tile) Typical Commercial Kitchen.

- 1. *Tile Installation: TCNA F115-20: On-Ground Concrete, Epoxy Grout*

- a. *Tile Type: (QT-1)*
- b. *Thin-set Mortar: Mid-level Latex Modified – TEC SuperFlex*
- c. *Grout: Water-Cleanable Epoxy Grout.*
- d. *Tile needs to be sealed*

5) SECTION 099123 – INTERIOR PAINTING

- a) Add the following:

3.7 INTERIOR PAINTING SCHEDULE

G. Dry Fog / Fall (DFPNT):

1. Basis-of-Design:

- a. *Prime Coat: As suggested by the manufacturer for substrate. Primer must have flash rust resistant properties.*
- b. *Intermediate Coat: Same as finish.*
- c. *Top Coat:*

- 1) *PPG Speedhide Super Tech Interior Latex Dry-Fog.*
- 2) *Sherwin Williams Pro Industrial WB Dryfall*

- 6) SECTION 102800 – TOILET, BATH & LAUNDRY ACCESSORIES
- a) Article 2.2.C – Grab Bar (E) - Vertical Grab Bars E at Showers are by Mechanical Shower Enclosure Supplier.
 - b) Article 2.2.D – Shower Grab Bar (T) - Shower Grab Bars T are by Mechanical Shower Enclosure Supplier.
 - c) Article 2.3.C – Folding Shower Seat (U) - Folding Shower Seats U are by Mechanical Shower Enclosure Supplier.
- 7) SECTION 102113 – TOILET COMPARTMENTS
- a) Add the following:
 - 2.1 *PERFORMANCE REQUIREMENTS*
 - A. *Fire Performance: Tested in accordance with, and pass the acceptance criteria of, NFPA 286.*
 - B. *Regulatory Requirements: Comply with applicable provisions in [the U.S. Department of Justice "2010 ADA Standards for Accessible Design" and ICC A117.1 for toilet compartments designated as accessible.*
- 8) SHEET 4.01-B1 – DEMOLITION FLOOR PLAN – AREA B
- a) Classroom (8th) – Add note W3 – Remove Markerboards/Tackboards in this Room.
- 9) SHEET 4.01-C1 – DEMOLITION FLOOR PLAN – AREA C
- a) FACS Classroom – Add note W3 – Remove Markerboards/Tackboards in this Room.
 - b) FACS Classroom, FACS Lab and three adjacent Storerooms – the Owner will remove the floor covering in these rooms. The Contractor shall remove the wall base in these rooms.
- 10) SHEET 4.10-A1 – FLOOR PLAN – AREA A
- a) Pipe bollards – Furnish and install 6” diameter pipe bollards at the interior side of the three sectional overhead doors; one each side for a total of 6 interior pipe bollards.
 - i) Reference Drawing 2.30 – SITE PLAN for location of exterior bollards.
 - b) South and east walls at Finish A118 are wall Type G8.
 - c) Wood Lab A119, Welding Lab A121 and Ag Lab A127 – Provide G8 (8” CMU) walls for plumbing at precast panels as shown on the Floor Plan.
 - d) North wall of Mech/Rec. A115 – Change wall Type to A6.
 - e) Borrowed Lite between FACS Classroom A135 and Storage A133 – Tag this as Borrowed Lite 5.

- 11) SHEET 4.10-A2 – MEZZANINE PLAN – AREA A
- a) Furnish and install 4” concrete pads by GC (coordinate size/location with MC) at the AHUs in Mezzanine A219, A222 and A227.
 - b) Add Alternate #4 - Furnish and install 4” concrete pads by GC (coordinate size/location with MC) at the CUs in Mezzanine A219, A222 and A227.
 - c) Coordinate the location of the CUs and removable rails so that the opening at the removable rail is clear.
- 12) SHEET 4.10-B1 – FLOOR PLAN – AREA B
- a) Add Alternate #2 Area – Gypsum board and steel stud partitions shall be wall type A3 except for the following locations:
 - i) North wall of Office B145 – wall Type A6.
 - ii) South wall of Conf. B153 – wall Type A6.
 - iii) East wall of Janitor B146 and RR B151 – wall Type A6.
 - b) North wall of RR B126 – Change wall to Type E3.
 - c) South and east wall of Life Skills B133A – Wall shall be Type D3.
 - d) South wall of Center Base Class. B128 – Wall shall be Type D3.
- 13) SHEET 4.10-C1 – FLOOR PLAN – AREA C
- a) The east wall of Corridor C129 and Vest. C130 shall be wall Type G4 (4” CMU).
 - b) Change wall Type B1 between Restroom C135 and Restroom C136 to wall Type A6.
 - c) Change wall Type B1 between Changing C139 and Mech/Stor. C138 to wall Type A6.
- 14) SHEET 4.20-A1 – FINISH PLAN – AREA A
- a) Room Finish Schedule – Area A
 - i) A135 FACS Lab and A134 Alcove – Change Floor Finish and Base Finish to Quarry Tile (QT-1).
- 15) SHEET 4.20-C1 – FINISH PLAN – AREA C
- a) Room Finish Schedule – Area C
 - i) Add RB-1 Wall Base to Restrooms C135 and C136, and Changing C139.

- ii) Add RB-1 at new walls in Corridor C129.
- iii) Patch the flooring in Corridor C129 to match existing VCT at the entrances to the Changing Rooms, recess at the new EWC and at the new doorways.

16) SHEET 4.30 – DOOR SCHEDULE

a) Door Schedule

- i) Door A105 - Head and jamb details are similar to details 1 & 2/4.30. Wall thickness is 6 1/8".
- ii) Door A111 – Omit door glass.
- iii) Door A115-2 – Change door jamb thickness to 7". Head and jamb details are similar to details 1 & 2/4.30. Wall thickness is 6".
- iv) Door A134 – Change door jamb thickness to 7". Head and jamb details are similar to details 1 & 2/4.30. Wall thickness is 6".
- v) Door B128-1 – Change sidelight glass to Fire Safety glass.
- vi) Doors B145 and B153 – Change door jamb thickness to 8 1/4".
 - (1) Head and jamb details are similar to details 1 & 2/4.30.
 - (2) Wall thickness is 7 1/4".

17) SHEET 4.31 – DOOR DETAILS

a) Borrowed Lite Types Schedule

- i) Borrowed Lite 1A and 4: Change glass Type to Fire Safety and change Fire Rating to 60 minute.
- ii) Borrowed Lite 3 at Reception B148: Change glass Type to Fire Safety and change Fire Rating to 60 minute.
- iii) Borrowed Lite 3A: In HS SPED B133, change glass Type to 1/4" Safety.
- iv) Add Borrowed Lite 5:
 - (1) Location – Between FACS Classroom A135 and Storage A133.
 - (2) Size: 2'-8" wide x 4'-0" high, sill 3'-4" AFF.
 - (3) Material: HM
 - (4) Glass: 1/4" SFTY.

- (5) Borrowed lite jamb thickness 7". Head, Jamb, Sill details similar to 8, 9 & 10/4.31. Wall thickness is 6".
- b) Detail 1/ 4.31 – 34 – School HE at Classroom Entrance – Furnish and install 1 5/8" steel studs at 16" o.c. at the steel beam.
- c) Detail 14/ 4.31 – Head – Borrowed Lite – Change borrowed lite head shown to 2" high frame.
- d) Detail 17, 18 & 19 – Window Details – Change "Building Wrap" to "Weather Barrier."
- 18) SHEET 4.32 – PLAN DETAILS
- a) Detail 4/4.32 - Change "Building Wrap" to "Weather Barrier."
- b) Detail 5/4.32:
- i) EIFS Subcontractor shall furnish and install EIFS weather barrier where EIFS is installed over sheathing.
- c) Detail 8/4.32:
- i) EIFS Subcontractor shall furnish and install EIFS weather barrier where EIFS is installed over sheathing and CMU.
- ii) Furnish and install ½" gypsum sheathing with weather barrier at the steel studs.
- d) Detail 9/4.32:
- i) EIFS Subcontractor shall furnish and install EIFS weather barrier where EIFS is installed over sheathing and CMU.
- 19) SHEET 4.40 – ENLARGED FLOOR PLANS
- a) 7/4.40 – Area C Enlarged C139 – Add one Clothes Hook (Q) adjacent to the Shower.
- 20) EET 5.12 – STOREFRONT ELEVATIONS AND DETAILS
- a) Detail 11/5.12 - Furnish and install weather barrier at plywood sheathing.
- b) Detail 12/5.12 – Furnish and install weather barrier at gypsum sheathing.
- c) Detail 17/5.12 – Head Detail – Furnish and install breakmetal aluminum (by Aluminum Supplier) to cover wood blocking at storefront framing.
- d) Detail 20/5.12 – Jamb Detail (High) – Furnish and install breakmetal aluminum (by Aluminum Supplier) to cover wood blocking at storefront framing.
- e) Detail 26/5.12 – Sill Detail - Furnish and install weather barrier at CMU.

21) SHEET 5.20 – BUILDING SECTIONS – AREA A

- a) Reference Specification Section 312000 – Earthwork for overexcavation and engineered fill for the footings and floor slabs.

22) SHEET 5.21 – BUILDING SECTIONS - AREAS B & C

- a) Reference Specification Section 312000 – Earthwork for overexcavation and engineered fill for the footings and floor slabs.

23) SHEET 5.22 – STAIR SECTION AND DETAILS

- a) Detail 2/5.22 – Guard Rail Detail – At Mezzanine – Furnish and install 1” round steel pipe horizontal rails at 4” clear width maximum (paint).
- b) Detail 3/5.22 – Guard Rail Detail @ Stair Stringer – Furnish and install 1” round steel pipe horizontal rails at 4” clear width maximum (paint).

24) SHEET 5.30 – SECTION DETAILS

- a) Detail 12/5.30 – Furnish and install 1 5/8” steel studs at 16” o.c. each side of the steel beam.

25) SHEET 5.31 – SECTION DETAILS

- a) Details 8, 11 & 13/5.31 – Metal wall panel / soffit panel supplier shall furnish and install metal subframing, clips and furring required for metal wall panel and soffit panel installation.
- b) Detail 9/5.31
 - i) At the storefront framing, furnish and install 2” rigid insulation over weather barrier over ½” gypsum sheathing. Furnish and install 6” steel studs at 16” o.c. between the tube steel. Furnish and install batt insulation and vapor barrier and 5/8” gypsum board.
 - ii) Furnish and install prefinished metal flashing at the gutter.
- c) Detail 12/5.31 – Furnish and install weather barrier at sheathing.
- d) Detail 14/5.31 - Furnish and install prefinished metal flashing at the gutter.

26) SHEET 5.32 – SECTION DETAILS

- a) Detail 1/5.32 – Kitchen Partial Height Wall
 - ii) At Partial Height CMU walls, furnish and install #4 vertical rebar dowel drilled into the slab on grade at 40” O.C. Rebar dowels shall be embedded 3” into the slab with a Hilti or Simpson adhesive system.
 - iii) Detail 1/5.32 is also used at the Welding stations in A121 Welding Lab, except the top of the wall in the Welding Lab shall be 6’-0” AFF and the wall is constructed of 6” CMU.
- b) Detail 3/5.32 – Trench Drain Detail – Reference Specification Section 055300 – Gratings, attached to this addendum, for galvanized steel grating and angles.

27) SHEET 6.10-B1 – REFLECTED CEILING PLAN – AREA B

- a) The east and north wall of Vestibule B131 shall seal to the deck/structure above.
- b) The east wall of HS SPED B133 shall seal to the deck/structure above.

28) SHEET 6.10-C1 – REFLECTED CEILING PLAN – AREA C

- a) The east wall of Corridor C129 shall seal to the deck/structure above.
- b) Changing C139 – Clarification: Gypsum board ceiling is new ceiling.
- c) Where Detail 3/6.20 is referenced, the ceiling construction is 5/8” gypsum board in lieu of APC ceiling.

29) SHEET 6.20 – CEILING DETAILS

- a) Detail 1/6.20 – Gypsum board bulkhead shall be 2 inches below the lowest ceiling where ceilings are at different heights.

MECHANICAL ITEMS:

1) SPECIFICATION SECTION 211000 – FIRE SUPPRESSION SYSTEMS

- a) By receipt of this addendum, all bidders shall acknowledge specification Section 211000 – Fire Suppression Systems (10 pages total) which shall become a part of the Project documents; reference Section 211000 attached to the end of Addendum #1.

PLAN AND SPECIFICATION CHANGES AND CLARIFICATIONS:

- 2) Section 22 4000 – Plumbing –Paragraph 1.3.A.9 – add the following: “& Compressed Air Hose Reels”
- 3) Section 23 7000 – Ventilation and Air Conditioning – Add part 2.22 Air Cooled Scroll Liquid Chiller as follows:

a) *Air Cooled Scroll Liquid Chiller*

i) *CHILLER MATERIALS AND COMPONENTS*

- (1) *General: Install and commission, as shown on the schedules and plans, factory assembled, charged, and tested air cooled scroll compressor chiller(s) as specified herein. Chiller shall be designed, selected, and constructed using a refrigerant with Flammability rating of "1", as defined by ANSI/ASHRAE STANDARD 34 Number Designation and Safety Classification of Refrigerants. Chiller shall include not less than two refrigerant circuits above 50 tons (200kW), scroll compressors, direct-expansion type evaporator, air-cooled condenser, refrigerant, lubrication system, interconnecting wiring, safety and operating controls including capacity controller, control center, motor starting components and special features as specified herein or required for safe, automatic operation.*
- (2) *Cabinet: External structural members shall be constructed of heavy guage, galvanized steel coated with baked on powder paint which, when subject to ASTM B117, 1000 hour, 5% salt spray test, yields minimum ASTM 1654 rating of "6".*
- (3) *Operating Characteristics: Provide low and high ambient temperature control options*

as required to ensure unit is capable of operation from -10°F to 125°F ambient temperature.

- (4) *Service Isolation valves: Discharge (ball type) isolation valves factory installed per refrigerant circuit. Includes a system high-pressure relief valve in compliance with ASHRAE15.*
- (5) *Pressure Transducers and Readeout Capability*
 - (a) *Discharge Pressure Transducers: Permits unit to sense and display discharge pressure.*
 - (b) *Suction Pressure Transducers: Permits unit to sense and display suction pressure.*
 - (c) *High Ambient Control: Allows units to operate when the ambient temperature is above 115°F (46°C). Includes discharge pressure transducers*

ii) COMPRESSORS

- (1) *Compressors: Shall be hermetic, scroll-type, including:*
 - (a) *Compliant design for axial and radial sealing.*
 - (b) *Refrigerant flow through the compressor with 100% suction cooled motor.*
 - (c) *Large suction side free volume and oil sump to provide liquid handling capability.*
 - (d) *Compressor crankcase heaters to provide extra liquid migration protection.*
 - (e) *Annular discharge check valve and reverse vent assembly to provide low-pressure drop, silent shutdown and reverse rotation protection.*
 - (f) *Initial oil charge.*
 - (g) *Oil level sight glass.*
 - (h) *Vibration isolator mounts for compressors.*
 - (i) *Brazed-type connections for fully hermetic refrigerant circuits.*
 - (j) *Compressor Motor overloads capable of monitoring compressor motor current. Provides extra protection against compressor reverse rotation, phase-loss and phase-imbalance.*
 - (k) *Provide with 5 year compressor warranty.*

iii) REFRIGERANT CIRCUIT COMPONENTS

- (1) *Each refrigerant circuit shall include: a discharge service ball type isolation valve, high side pressure relief, liquid line shutoff valve with charging port, low side pressure relief device, filter-drier, solenoid valve, sight glass with moisture indicator, thermostatic expansion valves, and flexible, closed-cell foam insulated suction line and suction pressure transducer.*

iv) HEAT EXCHANGERS

- (1) *Evaporator:*
 - (a) *Evaporator shall be brazed-plate stainless steel construction capable of refrigerant working pressure of 650 psig (3103 kPa) and liquid side pressure of 150 psig (1034 kPa)*
 - (b) *Brazed plate heat exchangers shall be UL listed.*
 - (c) *Exterior surfaces shall be covered with 3.4" (19mm), flexible, closed cell insulation, thermal conductivity of 0.26k ([BTU/HR-Ft² - °F]/in.) maximum.*
 - (d) *Water nozzles shall be provided with grooves for field provided ANSI/AWWA C-606 mechanical couplings.*
 - (e) *Evaporator shall include vent and drain fittings and thermostatically controlled heaters to protect to -20°F (-29°C) ambient in off-cycle.*

- (f) *A 20-mesh, serviceable wye-strainer and mechanical couplings shall be provided for field installation on evaporator inlet prior to startup.*
 - (g) *Evaporator shall be provided with piping extension kit and mechanical couplings to extend liquid connection from evaporator to edge of unit. Thermal dispersion type flow switch shall be factory installed in the evaporator outlet pipe extension and wired to the unit control panel. Insulation and heat trace on piping shall be responsibility of installing contractor. Extension kit nozzle connections shall be ANSI/AWWA C-606 (grooved).*
- (2) *Air-cooled Condenser:*
- (a) *Coils: Condenser coils shall be constructed of a single material to avoid galvanic corrosion due to dissimilar metals. Coils and headers are brazed as one piece. Integral sub cooling is included. Coils shall be designed for a design working pressure of 650 PSIG (45 bar). Condenser coil shall be washable with potable water under 100 psi (7 bar) pressure.*
 - (b) *Low Sound Fans: Shall be dynamically and statically balanced, direct drive, corrosion resistant glass fiber reinforced composite blades molded into a low noise, full-airfoil cross section, providing vertical air discharge and low sound. Each fan shall be provided in an individual compartment to prevent crossflow during fan cycling. Guards of heavy gauge, PVC (poly- vinylchloride) coated or galvanized steel shall be factory installed.*
 - (c) *Fan Motors: High efficiency, direct drive, 6 pole, 3 phase, insulation class "F", current protected, Totally Enclosed Air-Over (TEAO) , rigid mounted, with double sealed, permanently lubricated, ball bearings.*
 - (d) *Low Sound Fans with Variable Speed Drives. All fans shall be powered by VSDs. Fans shall provide vertical air discharge from extended orifices. Fans shall be composed of corrosion resistant aluminum hub and glass-fiber-reinforced polypropylene composite blades molded into a low-noise airfoil section. Fan impeller shall be dynamically balanced for vibration-free operation. Fan guards of heavy gauge, PVC (polyvinyl chloride) coated or galvanized steel.*

v) **CONTROLS**

- (1) *General: Automatic start, stop, operating, and protection sequences across the range of scheduled conditions and transients.*
- (2) *Power/Control Enclosure: Rain and dust tight NEMA 3R powder painted steel cabinet with hinged, latched, and gasket sealed door.*
- (3) *Microprocessor Control Center:*
 - (a) *Automatic control of compressor start/stop, anti-coincidence and anti-recycle timers, automatic pumpdown at system shutdown, condenser fans, evaporator pump, evaporator heater, unit alarm contacts, and chiller operation from -10°F to 125°F (-23°C to 52°C) ambient. Automatic reset to normal chiller operation after power failure.*
 - (b) *Software stored in non-volatile memory, with programmed setpoints retained in lithium battery backed real-time-clock (RTC) memory for minimum 5 years.*
 - (c) *Forty character liquid crystal display, descriptions in English (or Spanish, French, Italian, or German), numeric data in English (or Metric) units. Sealed keypad with sections for Setpoints, Display/Print, Entry, Unit Options & clock, and On/Off Switch.*
 - (d) *Programmable Setpoints (within Manufacturer limits): display language; chilled liquid temperature setpoint and range, remote reset temperature range, daily schedule/holiday for start/stop, manual override for servicing, low and high*

ambient cutouts, low liquid temperature cutout, low suction pressure cutout, high discharge pressure cutout, anti-recycle timer (compressor start cycle time), and anti-coincident timer (delay compressor starts).

- (e) Display Data: Return and leaving liquid temperatures, low leaving liquid temperature cutout setting, low ambient temperature cutout setting, outdoor air temperature, English or metric data, suction pressure cutout setting, each system suction pressure, liquid temperature reset via a 4-20milliamp or 0-10 VDC input, anti-recycle timer status for each compressor, anti-coincident system start timer condition, compressor run status, no cooling load condition, day, date and time, daily start/stop times, holiday status, automatic or manual system lead/lag control, lead system definition, compressor starts/operating hours (each), status of hot gas valves, evaporator heater and fan operation, run permissive status, number of compressors running, liquid solenoid valve status, load & unload timer status, water pump status.*
- (f) System Safeties: Shall cause individual compressor systems to perform auto shut down; manual reset required after the third trip in 90 minutes. System Safeties include: high discharge pressure, low suction pressure, high pressure switch, and motor protector. Compressor motor protector shall protect against damage due to high input current or thermal overload of windings.*
- (g) Unit Safeties: Shall be automatic reset and cause compressors to shut down if low ambient, low leaving chilled liquid temperature, under voltage, and flow switch operation.*
- (h) Alarm Contacts: Low ambient, low leaving chilled liquid temperature, low voltage, low battery, and (per compressor circuit): high discharge pressure, and low suction pressure.*
- (i) BAS Communications: YORKTalk 2, BACnet MS/TP, Modbus and N2 communication capabilities are standard.*
- (4) Manufacturer shall provide any controls not listed above, necessary for automatic chiller operation. Mechanical Contractor shall provide field control wiring necessary to interface sensors to the chiller control system.*

vi) POWER CONNECTION AND DISTRIBUTION

- (1) Power Panels:*
 - (a) NEMA 3R/12 rain/dust tight, powder painted steel cabinets with hinged, latched, and gasket sealed outer doors. Provide main power connection(s), control power connections, compressor and fan motor start contactors, current overloads, and factory wiring.*
 - (b) Power supply shall enter unit at a single location, be 3 phase of scheduled voltage, and connect to individual terminal blocks per compressor. Separate disconnecting means and/or external branch circuit protection (by Contractor) required per applicable local or national codes.*
- (2) Compressor, control and fan motor power wiring shall be located in an enclosed panel or routed through liquid tight conduit.*

vii) ACCESSORIES AND OPTIONS

- (1) Microprocessor controlled, Factory installed Across-the-Line type compressor motor starters as standard.*
- (2) VSD Condenser Fans: Permits unit operation to -10°F ambient.*
 - (a) High Ambient Control: Permits unit operation above 115°F ambient.*
- (3) Power Supply Connections:*

- (4) *Control Power Transformer: Converts unit power voltage to 120-1-60 (500 VA capacity). Factory-mounting includes primary and secondary wiring between the transformer and the control panel.*
- (5) *Protective Chiller Panels (Factory or Field Mounted)*
 - (a) *Louvered/Wire Panels: Louvered steel panels on external condenser coils painted as per remainder of unit cabinet. Heavy gauge, welded wire-mesh, coated to resist corrosion, around base of machine to restrict unauthorized access.*
- (6) *Thermal Dispersion Flow Switch (Factory installed and wired in piping extension kit): Normally open, 30bar pressure rating, stainless steel 316L construction, IP67, -4°F to 158°F ambient rating.*
- (7) *Low Temperature Process Glycol: Leaving chilled liquid setpoint range 10°F to 50°F (- 12°C to 10°C)*
- (8) *Power Correction Capacitors – Correction to .95 (Factory Installed)*
- (9) *Sound Reduction (Factory installed):*
 - (a) *Compressor Acoustic Sound Blankets*
- (10) *Vibration Isolation (Field installed):*
 - (a) *Neoprene vibration isolation.*

viii) *INSTALLATION*

- (1) *General: Rig and Install in full accordance with Manufacturer’s requirements, Project drawings, and Contract documents.*
- (2) *Location: Locate chiller as indicated on drawings, including cleaning and service maintenance clearance per Manufacturer instructions. Adjust and level chiller on support structure.*
- (3) *Components: Installing Contractor shall provide and install all auxiliary devices and accessories for fully operational chiller.*
- (4) *Electrical: Coordinate electrical requirements and connections for all power feeds with Electrical Contractor (Division 16).*
- (5) *Controls: Coordinate all control requirements and connections with Controls Contractor.*
- (6) *Finish: Installing Contractor shall paint damaged and abraded factory finish with touch- up paint matching factory finish.*

4. SHEET 8.10 – MOTOR SCHEDULE, LEGEND & SHEET INDEX

- a. Motor Schedule: Change “EXG CH-1” to “CH-1” and add Disconnect Switch by VC, Power Wiring by EC and Temp. Control Wiring by TC.
- b. Motor Schedule: Delete the note “Duct Smoke Detector Shutdown by EC” for AHU-2, AHU-4, MAU-2, RTU-1, RTU-2, GF-1 and GF-2.
- c. Motor Schedule: Relabel “EXG CU-5” to “EXG CU-7”.

5. SHEET 8.20 – MECHANICAL SITE PLAN

- a. Replace equipment tag “EXG-CH-1” with hexagon equipment tag for CH-1.
- b. Mechanical Keynotes #6: Revise first sentence to the following: “Ventilation contractor to install new ground mounted air-cooled chiller CH-1 in this location.”

6. SHEET 8.21 – MECHANICAL ROOF PLAN – OVERALL

- a. Replace equipment tag “EXG-CH-1” with hexagon equipment tag for CH-1.

7. SHEET 8.30-B1 – MECHANICAL DEMOLITION PLAN – AREA B
 - a. EXG-CH-1 shall now be removed by the VC in lieu of being relocated.
 - b. Remove and reinstall existing inverted finned tube radiation located in Corridor B109 (2 locations) down on wall to accommodate new lower ACT ceiling, and extend hydronic runouts down as necessary. Coordinate final ceiling height & exact radiation location with general contractor. Maintain 6” between top of inverted finned tube radiation enclosure and ACT ceiling.

8. SHEET 8.30-C1 – MECHANICAL DEMOLITION PLAN – AREA C
 - a. Remove and reinstall existing inverted finned tube radiation located in Corridor B109 (2 locations) down on wall to accommodate new lower ACT ceiling, and extend hydronic runouts down as necessary. Coordinate final ceiling height & exact radiation location with general contractor. Maintain 6” between top of inverted finned tube radiation enclosure and ACT ceiling.

9. SHEET 8.40-A1 – BELOW GRADE PLUMBING – AREA A
 - a. Add 3” floor sink, FS, below the dishwasher in the northwest corner of FACS Lab A132. Connect 3” W to piping shown and provide 2” vent up the north wall connected to above floor venting.

10. SHEET 8.50-C1 – PLUMBING & HYDRONICS – AREA C
 - a. Modify as shown on attached revised drawing.

11. SHEETS 8.60 & 8.60-1C:
 - a. Exterior Horn Strobe Alarm indicated on sheets 8.60 and 8.60-1C shall not be required to be provided. Contractors shall make use of the existing horn/strobe that is currently installed on the same wall.

12. SHEET 8.70-C1 – HVAC PLAN – AREA C
 - a. Delete the note “EXG-CH-1 relocated by VC” and add a hexagon equipment tag for CH- 1 at the chiller location.
 - b. Electrical panel “V” is being relocated to the east wall of Janitor C133 across from the door. Coordinate installation so ductwork is not in front of or above the electrical panel.

13. SHEET 8.80 – PLUMBING FIXTURE SCHEDULE
 - a. GI-1: Change model to Schier GB-50 – 50 GPM polyethylene grease interceptor with Teleglide rise extension kit.

14. SHEET 8.82 – MECHANICAL DETAILS CONTINUED
 - a. Revise details as indicated on attached revised drawing.

15. SHEET 8.83 – MECHANICAL SECTIONS

- a. Section 6/8.83 - Change the note “EXG-CH-1 relocated by VC” to “CH-1 installed by VC”.

16. SHEET 8.90 – MECHANICAL SCHEDULES

- a. Revise schedules as indicated on attached revised drawing.

17. SHEET 8.91 – MECHANICAL SCHEDULES – CONTINUED

- a. Revise schedules as indicated on attached revised drawing.

ELECTRICAL ITEMS:

DRAWING ITEMS:

1) DRAWING SHEET 9.22-B – DEMOLITION PLAN – AREA B – ELECTRICAL

- a) See the attached revision drawing.

2) DRAWING SHEET 9.23-C – DEMOLITION PLAN – AREA C – ELECTRICAL

- a) See the attached revision drawing.

3) DRAWING SHEET 9.31-A1 – FLOOR PLAN – AREA A – LIGHTING

- a) See the attached revision drawing.

4) DRAWING SHEET 9.32-A1 – FLOOR PLAN – AREA A – POWER & SIGNAL

- a) See the attached revision drawing.

5) DRAWING SHEET 9.35-B1 – FLOOR PLAN – AREA B – LIGHTING

- a) See the attached revision drawing.

6) DRAWING SHEET 9.36-B1 – FLOOR PLAN – AREA B – POWER & SIGNAL

- a) See the attached revision drawing.

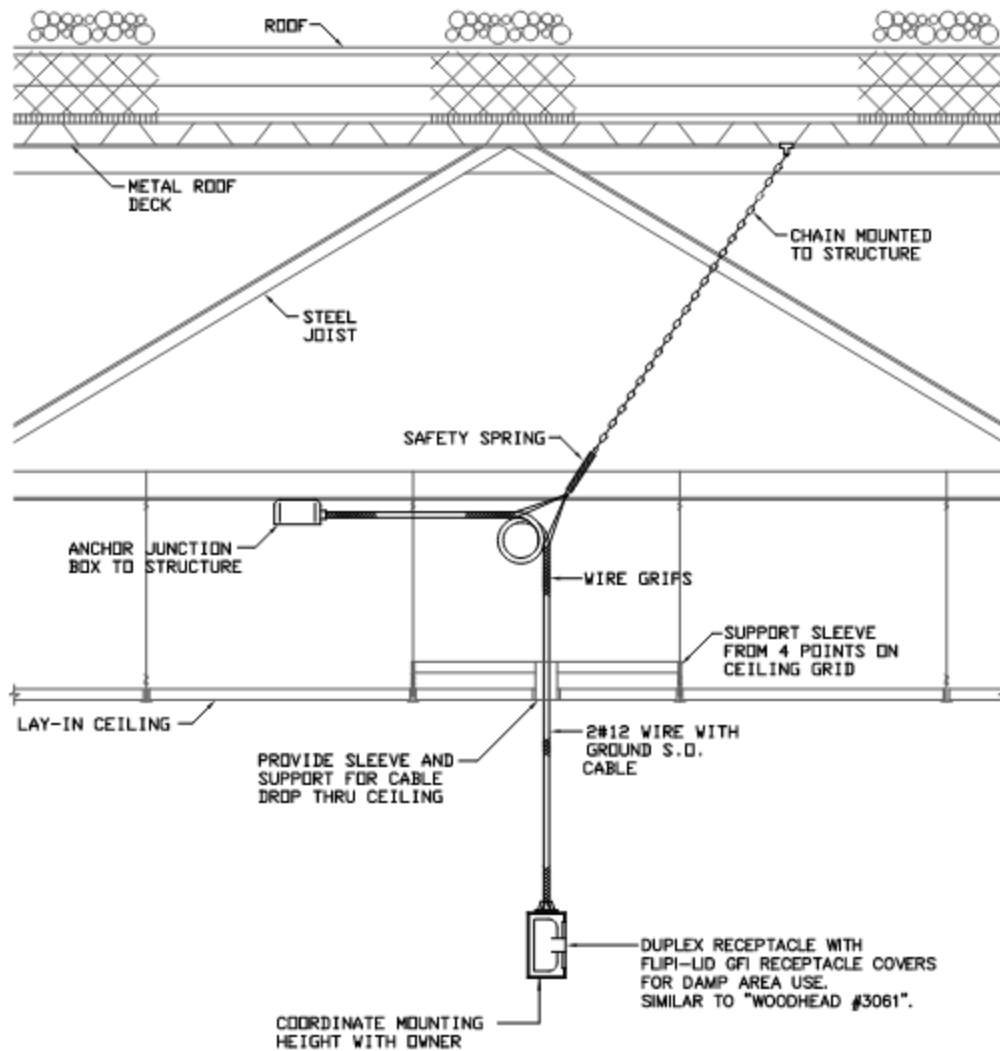
7) DRAWING SHEET 9.39-C1 – FLOOR PLAN – AREA C – LIGHTING

- a) Room C108: Change the 11 type “A” luminaires to type “XA1” luminaires.

8) DRAWING SHEET 9.40-C1 – FLOOR PLAN – AREA C – POWER & SIGNAL

- a) See the attached revision drawing.

- 9) DRAWING SHEET 9.41 – ENLARGED PLANS – POWER & SIGNAL
 - a) See the attached revision drawing.
- 10) DRAWING SHEET 9.50 – ELECTRICAL SYMBOLS & ABBREVIATIONS
 - a) See the attached revision drawing.
- 11) DRAWING SHEET 9.51 – ELECTRICAL SCHEDULES
 - a) See the attached revision drawing.
- 12) DRAWING SHEET 9.52 – ELECTRICAL SCHEDULES
 - a) See the attached revision drawing.
- 13) DRAWING SHEET 9.53 – ELECTRICAL DETAILS
 - a) Add the detail shown below.



DROP CORD RECEPTACLE MOUNTING DETAIL
NO SCALE

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.

<u>SECTION</u>	<u>ITEM</u>	<u>MANUFACTURER</u>
087100	Locksets	Schlage ND (w/ vandal guard)

Mechanical:

1. Double Wall Pressure Rated Boiler Venting: Z-Vent

2. Packaged Rooftop Units: Aeon/Daikin, Lennox
3. Air Handling Unit: Daikin, VTS, Dunham-Bush
4. Condensing Unit: Daikin/Aeon, Dunham-Bush
5. Air Cooled Scroll Liquid Chiller: Daikin, Dunham-Bush
6. Fabric Duct: DuctSox, Prihoda
7. Hot Water Hanging Unit Heater: Beacon Morris
8. Finned Tube Radiation: Beacon Morris
9. Ductless Split System Heat Pump: Lennox
10. Rooftop Makeup Air Units: Greenheck
11. Grease Exhaust Hood: Greenheck

END OF ADDENDUM

SECTION 055300 - GRATINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Metal bar gratings.
 - 2. Metal frames and supports for gratings.

1.3 PERFORMANCE REQUIREMENTS

- A. Structural Performance of Gratings Located in Vehicular Driveways, Subject to Trucking: Provide gratings capable of withstanding the effects of gravity loads according to AASHTO H-20-44 and H-15-44 loading and max axle load of 24,000 lbs whichever is greater. Limit deflection to L/400 or ¼" max whichever is greater.

1.4 SUBMITTALS

- A. Product Data: For the following:
 - 1. Clips and anchorage devices for gratings.
 - 2. Paint products.
- B. Shop Drawings: Include plans, sections, details, and attachments to other work.

1.5 QUALITY ASSURANCE

- A. Metal Bar Grating Standards: Comply with NAAMM MBG 531, "Metal Bar Grating Manual" and NAAMM MBG 532, "Heavy-Duty Metal Bar Grating Manual."
- B. Welding: Qualify procedures and personnel according to the following:
 - 1. AWS D1.1, "Structural Welding Code--Steel."

1.6 PROJECT CONDITIONS

- A. Field Measurements: Verify actual locations of walls and other construction contiguous with gratings by field measurements before fabrication and indicate measurements on Shop Drawings.

1.7 COORDINATION

- A. Coordinate installation of anchorages for gratings, grating frames, and supports. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Metal Bar Gratings:
 - a. Alabama Metal Industries Corporation (AMICO).
 - b. All American Grating, Inc.
 - c. BarnettBates Corp.
 - d. Borden Metal Products (Canada) Limited. or Borden Gratings
 - e. Nucor Grating, a Fisher & Ludlow company
 - f. Grupo Metelmex, S.A. de C.V.
 - g. IKG Industries; a Harsco Company.
 - h. MLP Steel; Laurel Steel Products Division.
 - i. Ohio Gratings, Inc.
 - j. Seidelhuber Metal Products, Inc.

2.2 FERROUS METALS

- A. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.
- B. Wire Rod for Grating Crossbars: **ASTM A 510 (ASTM A 510M)**.

2.3 FASTENERS

- A. General: Unless otherwise indicated, provide Type **[304]** stainless-steel fasteners for exterior and interior use. Provide stainless-steel fasteners for fastening aluminum. Select fasteners for type, grade, and class required.
- B. Steel Bolts and Nuts: Regular hexagon-head bolts, **ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6)**; with hex nuts, **ASTM A 563 (ASTM A 563M)**; and, where indicated, flat washers.
- C. Plain Washers: Round, **ASME B18.22.1 (ASME B18.22M)**.
- D. Lock Washers: Helical, spring type, **ASME B18.21.1 (ASME B18.21.2M)**.
- E. Anchors: Provide **[cast-in-place]** anchors with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry and equal to four times the load imposed when installed in concrete, as determined by testing per ASTM E 488 conducted by a qualified independent testing agency.
 - 1. Material for Anchors in Interior Locations: Carbon-steel components **hot dip galvanized**.

2.4 FABRICATION

- A. Shop Assembly: Fabricate grating sections in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.
- B. Cut, drill, and punch material cleanly and accurately. Remove burrs and ease edges to a radius of approximately **1/32 inch (1 mm)**, unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- C. Form from materials of size, thickness, and shapes indicated, but not less than that needed to support indicated loads.
- D. Fit exposed connections accurately together to form hairline joints.
- E. Welding: Comply with AWS recommendations and the following:
 - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - 2. Obtain fusion without undercut or overlap.
 - 3. Remove welding flux immediately.
- F. Provide for anchorage of type indicated; coordinate with supporting structure. Fabricate and space the anchoring devices to secure gratings, frames, and supports rigidly in place and to support indicated loads.

2.5 METAL BAR GRATINGS

- A. Welded Steel Grating:
 - 1. At continuous trench drains, trench collection boxes, mud pits and other grating locations subject to heavy vehicular loading, provide bearing bars and cross bars to comply with performance requirements specified.
 - a. Metal grating sections at all 1'-0" wide trenches shall be minimum W19-4 1½ x1/4; comply with H-15-44 and H-20-44 loading requirements. Supporting frames shall be sized to accommodate grating sections; L1 ¾ x 1 ¾ x1/4 [**galvanized**] angle framing, unless indicated otherwise.
 - b. Metal grating sections spanning greater than 12" but less than 2'-3" shall be minimum W-19-4 2¼ X 3/8; comply with H-15-44 and H-20-44 loading requirements. At locations greater than 2'-3" span supplier shall provide grating complying with H-15-44 and H-20-44 loading requirements Supporting frames shall be sized to accommodate grating sections; L2½ x2½ x 1/4 [**galvanized**] angle framing, unless indicated otherwise.
 - c. All metal bar gratings shall be banded.
 - d. All metal bar gratings shall be **hot-dipped galvanized**.
 - e. Fabricate bar gratings with a maximum gap of 1/8" between the grating sections and the bearing angles. Fabricate bar gratings with a maximum gap of 1/8" between adjacent sections.
 - f. All grating frames and supports embedded in concrete shall be galvanized.
- B. Removable Grating Sections: Fabricate with banding bars attached by welding to entire perimeter of each section. Include anchors and fasteners of type indicated or, if not indicated, as recommended by manufacturer for attaching to supports.

1. Provide no fewer than four weld lugs for each heavy-duty grating section, with each lug shop welded to two bearing bars.
 2. Furnish threaded bolts with nuts and washers for securing grating to supports.
 3. Furnish self-drilling fasteners with washers for securing grating to supports.
 4. Furnish galvanized malleable-iron flange clamp with galvanized bolt for securing grating to supports. Furnish as a system designed to be installed from above grating by one person.
- C. Fabricate cutouts in grating sections for penetrations indicated. Arrange cutouts to permit grating removal without disturbing items penetrating gratings.
- D. Do not notch bearing bars at supports to maintain elevation.
- E. Fabricate bar gratings with a maximum gap of 1/8" between the grating sections and the bearing angles. Fabricate bar gratings with a maximum gap of 1/8" between adjacent sections.

2.6 GRATING FRAMES AND SUPPORTS

- A. Frames and Supports for Metal Gratings: Fabricate from metal shapes, plates, and bars of welded construction to sizes, shapes, and profiles indicated and as necessary to receive gratings. Miter and weld connections for perimeter angle frames. Cut, drill, and tap units to receive hardware and similar items.
1. Unless otherwise indicated, use shapes made from **[hot-dip galvanized]** steel.
 2. Equip units indicated to be cast into concrete or built into masonry with integrally welded anchors. Unless otherwise indicated, space anchors **24 inches (600 mm)** o.c. and provide minimum anchor units in the form of steel straps **1-1/4 inches (32 mm)** wide by **1/4 inch (6 mm)** thick by **8 inches (200 mm)** long.

2.7 STEEL FINISHES

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Finish gratings, frames, and supports after assembly.
- C. Hot-Dip Galvanized Finish: Apply zinc coating by the hot-dip process to structural steel according to ASTM A 123/ A 123M.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Fastening to In-Place Construction: Provide anchorage devices and fasteners where necessary for securing gratings to in-place construction. Include threaded fasteners for concrete and masonry inserts, through-bolts, lag bolts, and other connectors.
- B. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing gratings. Set units accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.
- C. Provide temporary bracing or anchors in formwork for items that are to be built into concrete or masonry.

- D. Fit exposed connections accurately together to form hairline joints.

3.2 INSTALLING METAL BAR GRATINGS

- A. General: Install gratings to comply with recommendations of referenced metal bar grating standards that apply to grating types and bar sizes indicated, including installation clearances and standard anchoring details.
- B. Fabricate and install grating to be installed in sections and lengths that can be removed. Grating sections shall be laid loose in perimeter frame.

3.3 REPAIRS AND PROTECTION

- A. Repair damaged galvanized coatings on galvanized items with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.
- B. Touchup Painting: After installation, promptly clean, prepare, and prime or reprime field connections, rust spots, and abraded surfaces of prime-painted joists and accessories, bearing plates, and abutting structural steel.
 - 1. Clean and prepare surfaces by SSPC-SP 2 hand-tool cleaning or SSPC-SP 3 power-tool cleaning.
 - 2. Apply a compatible primer of same type as shop primer used on adjacent surfaces.

END OF SECTION 055300

SECTION 21 1000
FIRE SUPPRESSION SYSTEMS

PART 1 GENERAL

1.1 DEFINITIONS

- A. Contractor – Defined as the Contractor, Subcontractor and/or Subcontractors which are responsible for all or any part of the fire suppression system installation specified in Division 21 and/or as shown on the Contract Drawings.
- B. Wet Pipe Sprinkler System – A system in which automatic sprinklers are attached to piping filled with water allowing water to discharge immediately from sprinklers when activated. Sprinklers activate when heat bursts a frangible glass bulb or melts a fusible link. System activation or incidental flow is monitored by flow switches and/or alarm valves. Hose connections are included when required by code.
- C. Dry Pipe Sprinkler System – A system in which automatic sprinklers are attached to piping filled with compressed air until the event that heat from a fire activates a sprinkler by bursting a frangible glass bulb or melting a fusible link. Air that escapes through the activated sprinkler will cause air pressure loss in the system signaling the dry valve to open then delivering water to the piping and corresponding sprinklers. System activation or incidental flow is monitored by pressure switches, flow switches and/or alarm valves.

1.2 SCOPE

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 shall apply to this section.
- B. Where any requirements specified on the plans conflict with the specifications of this section, the specifications indicated on the plans shall govern.
- C. The Contractor shall provide all items, articles, materials, operations or methods listed, mentioned or scheduled on the Drawings and/or herein specified, including all labor, materials, equipment, accessories, wiring and incidentals necessary to be installed in accordance with manufacturer's recommendations except as otherwise approved.
- D. The fire protection system shall be a wet-pipe system consisting of a single zone to protect the building addition as defined by the plans. The system in classroom areas shall be designed for light hazardous classification. The storage and mechanical areas shall be designed for ordinary hazard, group 1 or 2 classification as defined by the plans. Provide coverage for all concealed combustible spaces.
- E. System will be supplied by an 6" underground combined service located in Mechanical C101.
- F. The system(s) shall be complete with, but not limited to, sprinklers, piping, valves, alarm bell/horn, fire department connection, backflow preventer test connection, and controls necessary for a complete system.
- G. See the plans for water supply flow test information.

1.3 CONTRACTOR QUALIFICATIONS

- A. The Contractor for the fire protection installation shall be a qualified Fire Protection Contractor licensed in the State of South Dakota that has been regularly engaged in the installation of similar Automatic Fire Sprinkler Systems and associated fire protection equipment for a minimum of 5 years.

1.4 PERMITS AND SERVICE CHARGES

- A. All permits and service charges necessary for execution of the work under this Contract shall be obtained by and paid for by the Contractor. It shall be the responsibility of the Contractor to determine the permit requirements of the local authorities and utility companies and the cost of required permits, service charges, tap fees and development fees shall be included in the Contractor's bid.
- B. All work shall be executed in accordance with all local, state and national rules, regulations, codes, etc., which are applicable and shall be subject to inspection by the proper authorities.

1.5 CODES AND STANDARDS

- A. All work performed and all equipment furnished under this Division of the Contract shall be manufactured and installed in strict accordance with the most recent editions of all applicable codes and standards, including the applicable provisions of the following codes and standards:
 - 1. Local and State Codes, Standards and Regulations
 - 2. National Fire Protection Association (NFPA)
 - a. NFPA 13 –Installation of Sprinkler Systems
 - b. NFPA 25 – Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems
 - 3. National Electric Code (NEC) (NFPA 70)
 - 4. International Fire Code (IFC)
 - 5. Underwriter's Laboratory (UL)
 - 6. Uniform Plumbing Code
 - 7. International Mechanical Code
 - 8. American Waterworks Association (AWWA)
 - 9. Williams-Steiger Occupational Safety and Health Act of 1970 (OSHA)
 - 10. International Building Code
 - 11. Americans with Disabilities Act (ADA)
- B. Where specific requirements of any code vary with the requirements of another code, the higher standard as determined by the Architect/Engineer shall govern the installation.
- C. All equipment manufactured in accordance with the provisions of the above codes and standards shall bear the label of the respective association bureau thereon.
- D. All materials installed shall have composite fire and smoke hazard ratings as tested by procedures ASTM 84, NFPA 255 and UL 723 not to exceed 25 Flame Spread and 50 Smoke Developed.

1.6 AUTHORITIES AND AGENCIES

- A. All work will be installed for the approval and acceptance of the following:
 - 1. Webster Fire Marshal
 - 2. Owner's Insurance Company
 - 3. Fire Protection Engineer

1.7 DRAWINGS

- A. In general, the Drawings of the fire protection systems and equipment are to scale. However, to determine exact locations of walls and partitions, the Contractor shall consult the architectural and/or structural drawings which are dimensioned. Drawings shall not take precedence over field measurements.
- B. Drawings of piping and sprinklers, although shown on scale drawings, are diagrammatic only. They are intended to indicate size and/or capacity where stipulated, approximate location and/or direction, and approximate general arrangement of one phase of work to another, but not the exact detail or exact arrangement of construction. If it is found, before installation of any or all construction phases, that a more convenient, suitable or workable arrangement of any or all phases of the project would result by varying or altering the arrangement indicated on the Drawings, the Architect/Engineer may require the Contractor to change the location or arrangement of the work without additional cost to the Owner. Such rearrangement shall be in accordance with directions from the Architect/Engineer.
- C. Where discrepancies are discovered after certain portions or phases of the work have been installed, the Architect/Engineer reserves the right to require the Contractor to make changes in pipe, duct, fixture or equipment locations or arrangements to avoid conflicts with work at no additional cost to the Owner.
- D. Because the Drawings are to a relatively small scale to show as large a portion as is practical, the fact that only certain features of the system are indicated does not mean that other similar or different features or details will not be required. The Contractor shall furnish all incidental labor, material or equipment for the systems so that each system is a complete and operating one unless otherwise specifically stipulated in the detailed body of the specifications.
- E. The Contractor, Subcontractor's and their respective trades shall cooperate in laying out their work so it will fit properly into the space provided. Promptly report to the Architect/Engineer any delay or difficulties encountered in the installation of this work which might prevent prompt and proper

installation, or make it unsuitable to connect with or receive the work of others. Failure to so report shall constitute an acceptance of the work of other trades as being fit and proper for the execution of this work.

1.8 SHOP DRAWINGS

- A. Shop drawings to be submitted in electronic PDF format unless indicated otherwise in the General Conditions.
- B. To the extent practical, complete sets of shop drawings for each specification section shall be submitted. In the case that a particular item is required to be expedited, that particular item may be submitted individually.
- C. Submit shop drawings in electronic PDF format.
- D. Furnish Shop Drawings as follows:
 - 1. For all major items of equipment or materials, regardless of whether the item is to be furnished as specified.
 - 2. For all equipment, systems or devices where Shop Drawings are specifically called for.
 - 3. For all minor items of equipment or materials where the Contractor proposes to deviate from the specified and/or scheduled manufacturer or material.
- E. Shop Drawings will be reviewed by the Architect/Engineer, a review letter will be returned to the Contractor. Shop Drawings shall be submitted sufficiently in advance of the construction schedule to allow time for checking Drawings, resubmittal and rechecking when necessary.
- F. Shop Drawings will be reviewed by the Architect/Engineer, and copies of Shop Drawings will be returned to the Contractor. Shop Drawings shall be submitted sufficiently in advance of the construction schedule to allow time for checking Drawings, resubmittal and rechecking when necessary.
- G. Any equipment or material which is installed without authorization by properly processed Shop Drawings will be subject to removal by the Contractor and reinstallation as directed, without cost to the Owner. All cost for repair for damages as may be incurred to the structure as a result of the above correction shall be paid by this Contractor.
- H. Shop drawing material quantities will not be checked by the Architect/Engineer, and review of Shop Drawings by the Architect/Engineer shall not be construed to be verification of the material quantities and sizes shown on the Shop Drawings. Quantities, sizes, dimensions and locations shown on the Drawings and as specified shall determine material requirements.
- I. Hydraulic calculations proving the system is capable of providing the required design densities to accommodate the use and occupancy of each shall be performed by the contractor. The contractor is required to perform and submit hydraulic calculations as part of their submittal packages.

1.9 COORDINATION

- A. The Contractor shall communicate with all other Contractors on this project and shall arrange his work in proper relation to the work of others. Work made necessary as a result of failure to coordinate with other Contractors shall be the responsibility of this contractor and shall first be approved by the Architect/Engineer. The contractor shall coordinate with the General Contractor to maximize the efficiency of the onsite placement and to ensure the safe delivery and storage of the materials.

1.10 CLEANING

- A. The Contractor and/or Subcontractors for the various phases of the work shall clear away all debris, surplus materials, etc., resulting from their work or operations, leaving the job and equipment furnished under any or all contracts in a clean first class condition.

1.11 PAINTING

- A. Painting of materials and equipment furnished shall be as described in DIVISION 9. Contractor shall refinish and restore to the original condition and appearance, all equipment which has sustained damage to the manufacturer's prime and finish coats of enamel or paint. Materials and workmanship shall be equal to the requirements described in DIVISION 9.
- B. Where sprinklers are installed on exposed piping and in other locations where sprinklers are susceptible to paint spray or over-spray, contractor shall cover sprinklers in preparation for painting.

1.12 ACCESS TO EQUIPMENT

- A. Access shall be provided to all motors, valves, controls, specialties, etc., for maintenance purposes. All access doors, access panels, removable sections, etc., required for access shall be provided. The location of the access openings relative to the equipment shall be coordinated to assure proper access to the equipment. The door shall maintain any ratings of the wall, ceiling, etc. that it penetrates.
- B. Access openings are required for valves and other devices requiring access and shall be provided in the housings, tanks, walls, ceilings, etc., under this portion of the Contract.

1.13 INSPECTIONS, TESTING, CERTIFICATES, & WARRANTY

- A. All inspections, examinations and tests required by the authorities and agencies specified shall be arranged and paid for by the Fire Protection Contractor as necessary, to obtain complete and final acceptance of the Fire Protection System per the requirements of NFPA 13 and any other applicable codes. The Contractor shall provide a minimum 1 year warranty on the system effective starting the day of final system acceptance and also at that time be required to provide instruction to the owner or his representative to acquaint that person thoroughly with all system equipment.
- B. After completion of the fire protection installation and at the start of the guarantee year, the Fire Protection Contractor shall execute and file five (5) copies of the "Contractor's Material and Test Certificate, Sprinkler systems - Water Spray Systems" with the Architect/Engineer.

1.14 RECORD DRAWINGS

- A. The Contractor shall keep a complete set of all drawings in the jobsite office for purpose of showing the installation of mechanical systems and equipment. This set of drawings shall be used for no other purpose. Where any equipment or system components are installed different from that shown on the Architect/Engineer's drawings, such differences shall be clearly and neatly shown on this set of drawings using ink or indelible pencil. At the completion of the project, the record set of drawings shall be turned over to the Architect/Engineer and shall become his property. Record drawings may be inspected by the Architect/Engineer at site visits.

1.15 OPERATING INSTRUCTIONS

- A. The Contractor shall furnish the Owner two (2) sets of complete catalog data, manufacturer's literature and detailed manuals covering the operation and maintenance of all equipment specified under this Section. All such literature shall be bound in an amply sized three-ring binder and submitted to the Architect/Engineer for approval and for eventual transmittal to the Owner. The manual shall have a Table of Contents at the front of the manual. In addition to a hard copy of the operating instruction, provide an electronic copy in PDF format to the Owner.
- B. The Contractor shall also supervise the initial operation of all equipment and instruct the operator selected by the Owner in such operation as required to acquaint him thoroughly with the equipment.

PART 2 - PRODUCTS

2.1 PRODUCT OPTIONS

- A. Materials or equipment specified by name of manufacturer, brand, trade name or catalog reference, shall be furnished under the contract unless changed by Addenda or a Contract modification.
- B. Where two (2) or more materials are named, the choice of these shall be limited to the items named. Where the material or equipment named is followed by the phrase "or equal" the required function, dimension, appearance and quality to be met by any proposed substitute is all that is intended to be established.
- C. Proposed substitutions for any named items shall be submitted to the Fire Protection Engineer for approval. No substitution shall be made without the approval of the Fire Protection Engineer. Any proposed substitution requests shall be submitted at least 10 days prior to bid to the Architect/Engineer for approval. Bidders shall not rely upon substitutions made in any other manner.
- D. Should a proposed substitution wish to be made within 10 days of bid the Contractor shall attach his proposed substitution along with the appropriate add or deduct to the Contract amount, should the substitution be accepted. Substitutions proposed by the Contractor will not be considered in the award of the Contract.

- E. All products shall be new and listed for fire protection use and be rated in excess of the maximum expected pressure that will be present in the systems.

2.2 SPRINKLERS

- A. Except where designated otherwise on the drawings, sprinklers shall be as follows:
 - 1. Sprinklers shall be standard semi-recessed white-plated pendant type in all locations where piping is concealed above ceilings.
 - 2. Sprinklers shall be standard upright type where piping is installed exposed in storage, garage and other locations as indicated on the Drawings. Upright sprinklers shall be plain brass finish.
 - 3. Sidewall sprinklers, where permitted, shall be white-plated semi-recessed in finished rooms, plain brass elsewhere.
- B. Temperature rating of sprinklers shall be in accordance with requirements of approving authorities, as noted on the Drawings, and per the requirements of NFPA 13.
- C. Sprinklers shall be installed centered in square ceiling tile and in the narrow dimension of rectangular ceiling tile. In rectangular tiles sprinklers shall be centered or at the quarter points along the longer dimension of the tile.
- D. Sprinklers installed in areas where damage may occur, such as gymnasiums, shall have head guards and as otherwise designated on the drawings. Sprinklers installed at elevations below 7'-0" shall have head guards.
- E. Concealed brass sprinklers with flush white-plated concealer plate shall be installed where noted on the Drawings. Sprinklers shall be Tyco, Reliable, Victaulic, Viking, or equal.

2.3 ESCUTCHEONS

- A. Escutcheons shall be installed as designated on the drawings and shall be the same make as the sprinkler head that is used.
- B. Escutcheons shall be Tyco, Reliable, Victaulic, Viking, or equal.

2.4 PIPE AND PIPE FITTINGS

- A. Furnish and install where shown on the Drawings and required for a complete system, pipe and fittings of type and material for the various services as noted below.
- B. Piping not shown on the Drawings, which is obviously necessary for complete systems, shall be provided and shall be amply sized in accordance with applicable codes and standards.
- C. Wet fire sprinkler system (water-filled) and deluge system (open-type) piping shall be ASTM A-135 standard-weight, black, Schedule 40 with factory or field formed threaded ends for sizes up to 2 inch size. Fittings used on threaded end piping shall be ASME B16.3 Class 150, ductile iron threaded fittings with NPT threads that conform to ANSI B1.20.1. Wet fire sprinkler piping shall be ASTM A-135 Schedule 10, black with factory or field formed roll-grooved ends for sizes 1-1/4" and greater. Grooved fittings shall be standard or short radius ASTM A-536, Grade 65-45-12, ductile iron fittings with cut-grooved ends and non-lead orange enamel coated. Grooved couplings shall include ductile iron, ASTM A-536, Grade 65-45-12, housings with non-lead orange enamel coatings, ASTM A-449 and ASTM A-183 bolts and nuts, and Grade "E" EPDM Type A gaskets. Grooved pipe outlets shall be tee-let, ASTM A-53, ANSI B1.20.1 threaded or cut groove, factory welded outlet fittings. Field installed outlets shall be permitted to be mechanical "T", bolted, ASTM A-536, orange enamel coated ductile iron, with ANSI B1.20.1 threaded or cut groove outlets, Grade "E" EPDM gaskets, and ASTM A-449 and ASTM A-183 bolts and nuts.
- D. Dry fire sprinkler system (compressed air-filled) piping and drain piping shall be ASTM A-135 standard-weight, Schedule 40 with factory or field formed threaded ends for sizes up to 2 inch size. Fittings used on threaded end piping shall be ASME B16.3 Class 150 ductile iron threaded fittings with NPT threads that conform to ANSI B1.20.1. Dry fire sprinkler piping shall be ASTM A-135 Schedule 40 standard-weight with factory or field formed roll-grooved ends for sizes 1-1/4" and greater. Grooved fittings shall be standard or short radius ASTM A-536, Grade 65-45-12, ductile iron fittings with cut-grooved ends. Grooved couplings shall include ductile iron, ASTM A-536, Grade 65-45-12, housings, ASTM A-449 and ASTM A-183 bolts and nuts, and Grade "E" EPDM gaskets. Grooved pipe outlets shall be tee-let, ASTM A-53 ductile iron, and ANSI B1.20.1 threaded or cut groove factory welded outlet

fittings. Factory or field installed outlets shall be permitted to be mechanical "T", bolted, ASTM A-536 ductile iron, ASTM A-153, with ANSI B1.20.1 threaded or cut groove outlets, Grade "E" EPDM gaskets, and ASTM A-449 and ASTM A-183 bolts and nuts.

- E. All piping that penetrates an exterior wall shall be galvanized Schedule 40 minimum.
- F. Plastic CPVC Schedule 80 piping and fittings are not allowed for this installation.
- G. Copper piping shall be installed where designated on the drawings and as per its listing. Copper piping shall be soldered when installed concealed and brazed when installed exposed. Piping shall be Type M Mueller, Cerro, or equal.
- H. Flexible piping is allowed for this project where approved by its listing and proven hydraulically.
- I. All wet and dry system grooved pipe fittings and couplings shall be Victaulic, Anvil Gruvlok, Tyco, Star or equal. Grooved pipe fittings and couplings shall be ductile iron with an orange enamel coating for wet systems and galvanized coating for dry systems. All components shall be supplied by one manufacturer. Pipe fittings and couplings shall be standard or short radius.
- J. All threaded fittings shall be black ductile iron for wet systems and where otherwise required by the drawings. All dry system threaded fittings shall be galvanized ductile iron. Threaded fittings shall be supplied by Tyco, Star, Anvil, or equal.
- K. All welded outlet fittings shall be Merit, Island, or equal.
- L. All flanged fittings shall be ductile iron per ASTM A536. Flanged fittings shall be Anvil, Star, or equal.
- M. Plastic CPVC fittings are not allowed for this installation.
- N. Copper fittings shall be installed where designated on the drawings and as per its listing.
- O. All pipe ends shall be smooth and burr free and cleaned of any loose debris or pipe hole cutouts prior to installation.

2.5 HANGERS AND ATTACHMENTS

- A. All piping 1/2" through 8" shall be hung through the use of galvanized ring style band hangers with a knurled swivel nut. Hangers, spacing, and rod diameters shall be per NFPA 13 requirements.
- B. 3/8" all thread rod shall be used to attach the ring to the structural attachment device for pipe sizes 1/2" through 4", 1/2" all thread rod shall be used for pipe sizes 6" through 8", and 5/8" all thread rod shall be used for pipe sizes 10" through 12".
- C. Rings shall be Tolco, Hilti, Anvil, or equal.
- D. Structural Attachments shall be Sammy, Tolco, Hilti, or equal.

2.6 FIRESTOPPING

- A. Firestopping materials shall be 3M, Hilti, MetaCaulk, Nelson or equal. Firestopping material shall have a rating resistance rating equal to or greater than the wall in the penetration exists that will be sealed with said firestopping.

2.7 WALL, FLOOR AND CEILING PLATES

- A. Furnish and install chrome-plated wall, floor and ceiling plates on all exposed pipes where they pass through walls, floors, or ceilings in finished areas. Finished areas shall be those areas which are painted or have special finishes within the room. The wall plates shall be a minimum of 3/32 inch thickness and shall have set screws or spring locks for clamping to the piping. Flush valves shall have set screw type wall plates. The plates shall be chrome-plated steel, cast iron or brass and shall set tight against the wall.

2.8 CONTROL VALVES

- A. All valves shall be new and listed for fire protection use.
- B. Furnish and install valves in piping where so indicated on the Drawings.
- C. Of the several manufacturers listed, the Contractor is to standardize on one make as much as practical but not to the extent of sacrificing quality listed. Valves shall be Tyco, Milwaukee, Victaulic, Ames, Watts, Wilkins, or equal.

- D. Butterfly valves shall be of the indicating type with two sets of factory installed internal supervisory switches. Valves shall be ductile iron conforming to ASTM A-395 with Grade EPDM "E" encapsulated rubber disc seals. Valves shall be Tyco, Victaulic, or Equal.
- E. Outside Screw and Yoke (OS&Y) gate valves shall be ductile iron, raised face with bolted bonnets. Valve shall be Kennedy, Mueller, Nibco, Watts, or equal.
- F. Ball Valves 1-1/2" and smaller shall be standard port, end entry valves with a brass valve body. The ball shall be chrome plated brass with a stainless steel stem. Valves shall be Watts, Nibco, Milwaukee, Victaulic, or equal.

2.9 WALL POST INDICATOR VALVE

- A. Wall mount indicator post assembly butterfly valve with internal supervisory switch, painted steel wall plate, and grooved ends. Valve to be Nibco GD-4765-8WP or equal.

2.10 RISER MANIFOLDS

- A. Riser manifolds shall be provided for each wet zone designated on the drawings. The manifold shall include a 300 psi water gauge, water flow alarm switch with paddle, Schedule 40 pipe body, ductile iron angle valve with site glass, and pressure relief valve.
- B. Riser manifolds shall be Tyco, Viking, Reliable, or equal.

2.11 AUTOMATIC AIR VENT

- A. Furnish and install an automatic air vent for each wet zone. Automatic air vent shall be located near a high point in the wet system that allows for the maximum amount of air removal from that system. Automatic air vent shall have a minimum connection size of 1/2" and a minimum pressure rating of 175 psi.
- B. The device shall meet the requirements of UL 2573.
- C. Automatic air vent shall be Tyco, Viking, Reliable, or equal.

2.12 WATER FLOW SWITCHES AND ALARMS

- A. Water flow switches for alarm bell/horn and tamper switches shall be furnished and installed by this Contractor. All required wiring shall be installed by the Electrical Contractor.
- B. Water flow and tamper switches shall be Potter.

2.13 EXTERNAL BACKFLOW PREVENTER TEST CONNECTION

- A. Furnish and install a Guardian Series 6900 or equal projecting outlet connection where shown on the Drawings. Wall plate shall read "BACKFLOW PREVENTER TEST CONNECTION." Finish shall be rough brass. Outlets shall be 2-1/2 inch size and inlet shall be 4 inch size.
- B. Connections shall have rough brass plugs and chains. Outlets shall be 36 inches above finished grade or as specified on the drawings. Threads for Fire Department connections shall be National Standard. Verify threads and plug type with the local Fire Department.
- C. External backflow preventer test connection shall be Guardian, Potter Roemer, Central, Elkhart, or equal.

2.14 FIRE DEPARTMENT CONNECTION

- A. Furnish and install a Guardian Series 6100 or equal projecting connection where shown on the Drawings. Wall plate shall read "AUTOMATIC SPRINKLER." Finish shall be rough brass. Inlets shall be 2-1/2 inch size and outlet shall be 4 inch size. Install an automatic ball drips between the connection and the check valve.
- B. Connections shall have rough brass plugs and chains. Locking Fire Department connection plugs shall be provided where required by the fire code official and where the responding fire department carries appropriate key wrenches for removal. Outlets shall be 36 inches above finished grade. Threads for Fire Department connections shall be National Standard. Verify threads and plug type with the local Fire Department.
- C. Fire department connection shall be Guardian, Potter Roemer, Central, Elkhart, or equal.

2.15 DOUBLE CHECK VALVE BACKFLOW PREVENTER

- A. Furnish and install an Ames Fire & Waterworks Colt Series C200 or equal double check backflow preventer where shown on the Drawings. The backflow preventer shall be a complete assembly including tight closing shut-off valves before and after the device and also be protected by a strainer. It shall be a complete assembly including four ball type test cocks.
- B. The device shall meet the requirements of A.S.S.E. standard 1015 and A.W.W.A. standard C506.
- C. Double check valve backflow preventer shall be Ames, Watts, Hersey, Conbraco, Febco, Wilkins or equal.

2.16 PRESSURE GAUGES

- A. Furnish and install U.S. Gauge Model 5105 or equal pressure gauges in pipelines and on equipment as indicated herein and/or where shown on the Drawings. Gauges shall have phosphor bronze bourdon tube with brass movement.
- B. Gauges shall be compound, pressure or vacuum as required with 4-1/2 inch diameter dial. Each gauge shall be complete with Terrice No. 872 pressure snubbers, and brass ball valves.
- C. The normal operating pressure of each gauge shall be 50-70 percent of full scale. The range of the scale shall be suitable for the application.
- D. The gauges shall be located and mounted such that they can be conveniently read by a person standing on the equipment room floor. Accuracy shall be Grade "A". Case shall be aluminum.
- E. Pressure gauges shall be U.S. Gauge, Terrice, Weksler, Ashcroft, Weiss or equal.

PART 3 - EXECUTION

3.1 PIPING CONNECTIONS

- A. Pipe connection shall be through the use of grooved couplings attached to roll or cut grooves on the piping, female threaded fittings screwed on to threaded end pipe, and flanged fittings with bolts, nuts and rubber gaskets. Mechanical joint couplings may be used only with the approval of the Fire Protection Engineer.

3.2 PIPE HANGERS, SUPPORTS AND ANCHORS

- A. Anchors and other attachments to the building structure shall be installed where designated and as detailed on the Drawings and specified herein and/or as required. The hangers shall adequately support the piping system. They shall be located near or at changes in piping direction and as otherwise required by NFPA 13. They shall provide vertical adjustment to maintain pitch required for proper drainage. They shall allow for expansion and contraction of the piping. Hangers shall bear directly on piping.
- B. Pipe hangers shall not be attached to the roof deck. Hangers shall be attached to the structure with beam clamps, beam attachment and brackets bolted to joists and beams, wood lag bolts, steel self tapping screws, and any other approved means of attachment that is rated to support five time the weight of the water filled pipe plus 250 lbs of additional load.
- C. Hanging from one pipe to another is prohibited.

3.3 PIPING INSTALLATION

- A. All pipes shall be round and straight, of required size. Cutting shall be done with proper tools and pipes shall be reamed to full size after cutting.
- B. Piping shall be properly enclosed, supported, guided, anchored, sway braced, connected, tested, cleaned and flushed out and shall be properly insulated and protected where required.
- C. All pipes shall be run with proper grade to provide for easy draining and in group runs where applicable and in a neat and orderly manner, to the satisfaction of the Architect/Engineer. Lines required to be enclosed in ceiling, chase ways or similar spaces shall be installed to permit such enclosure as intended. All pipe runs shall be carefully laid out and scheduled to avoid necessary interferences with other work. If shown, pipe sizes on the Drawings are nominal pipe sizes and not outside diameters.
- D. Pipes shall be run substantially as indicated on the Drawings. However, the Architect/Engineer reserves the right to require this Contractor to make changes in pipe locations where conflicts occur with other trades. Such changes shall be made without extra cost to the Owner.

- E. Piping shall be installed with ample provisions for expansion and contraction to prevent injury to the same and to the building construction. Such provision shall be made by means of piping offsets, changes in direction, expansion loops and/or suitable expansion joints. Suitable anchors and guides shall be provided to permit proper deflection and compression of offset loops and expansion joints. Expansion joints shall not be used in lieu of offsets, changes in direction or loops, except where specified and/or indicated on the Drawings or where otherwise obviously necessary.
- F. Exposed piping shall be installed in a sanitary manner for ease in cleaning. Pipe shall be cut and threaded to fit the installation. Wherever possible, rough-in exposed pipe connections at the wall rather than the floor for ease in cleaning.

3.4 SLEEVES

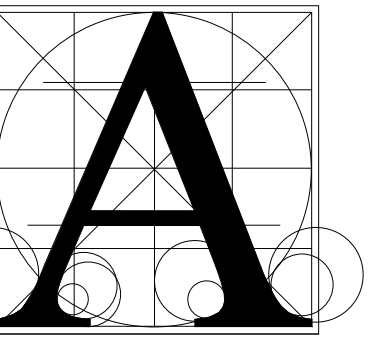
- A. Any pipe passing through building construction including walls, floors, roofs or masonry partitions or as noted on the Drawings shall be encompassed with sleeves. Piping passing through any fire rated barrier, walls, or floor shall be installed as follows:
 - 1. Sleeves shall have an inside diameter 1/2 inch greater than the outside diameter of pipe passing through. All sleeves shall be fabricated from new Schedule 40 steel pipe material cut square and reamed.
 - 2. Sleeves shall be provided in all masonry partition walls including locations above suspended ceilings where masonry partition walls extend from floor slab to slab above. Sleeves shall be Schedule 40 steel pipe finishing flush with the wall surface.
 - 3. Sleeves through exterior building walls shall be Schedule 40 steel pipe with welded flange in the middle of the sleeve and ends finishing flush with finished surfaces. Space between pipe and sleeve shall be packed to provide a watertight joint.
 - 4. Sleeves through roof slabs and floor slabs in concealed locations shall be Schedule 40 galvanized steel or linear polyethylene. Concealed sleeves shall be considered as pipe sleeves in shafts, pipe chases and within walls and partitions.
 - 5. Sleeves through floor slabs in exposed areas shall be Schedule 40 steel pipe and sleeves shall extend 1/4 inch above the finished floor surface. For slabs in equipment rooms and in other wet areas, sleeves shall be Schedule 40 steel pipe and shall extend 2 inches above finished floor surface.
 - 6. Floor sleeves in membraned floors shall be furnished with flashing rings and clamps.
 - 7. All sleeves in exposed locations, except equipment rooms, shall be set so plates specified will cover the sleeves.
 - 8. All pipe sleeves where wet conditions exist, except sleeves through exterior walls, shall be caulked with a plastic caulking, including sleeves in concealed locations. The space between the pipe and the sleeves shall be caulked in both ends of sleeve, even with the ends of the sleeve. The sealer shall be suitable for temperatures from minus 50 degrees to 300 degrees, suitable for painting, non-corrosive and have good adhesion.
- B. Sleeves in fire rated construction, equipment rooms, and/or where designated on the Drawings shall consist of schedule 40 steel pipe. Seal sleeves with a fire retardant sealant. When applied according to manufacturer's recommendations, sealant shall have a 3-hour U.L. fire rating.
- C. All sleeves shall be set and maintained in place by this Contractor during the progress of the work. This Contractor shall be responsible for locating all sleeves at the proper location.
- D. Sleeves are not required for core drilled masonry wall and floor holes, masonry wall and floor holes formed by polyethylene plastic (removable) sleeves, or for masonry holes made in another neat manner except in equipment rooms and other wet areas.
- E. Sleeves are not required in metal or wood stud wall construction. Rated systems shall be provided as required to provide the necessary rating of the penetration.

3.5 DRAINS

- A. Drains shall be located and piped to discharge to the locations designated on the plans. Where required drains are not noted on the plans system drains shall be piped to a floor drain or mop sink where said drains or sinks are capable of accepting full system flow without excessive deflection of discharging water. Drain shall be piped through the wall of the building to atmosphere when a floor drain or mop sink

is not available and where piping through the wall of the building to atmosphere is most convenient and has been approved by the Architect/Engineer.

END OF SECTION 21 1000



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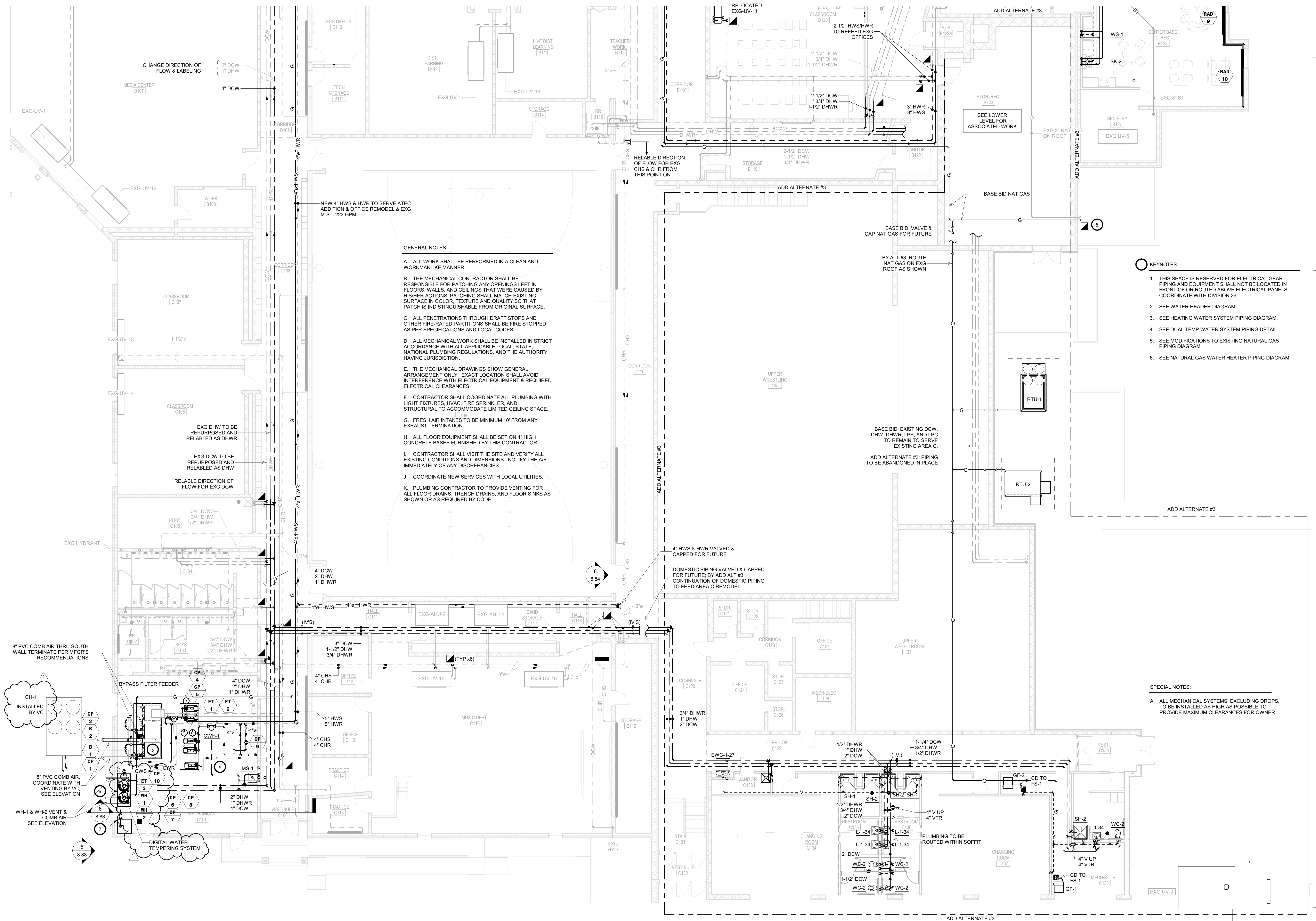


SE PROJECT NO:
210400723

WEBSTER AREA SCHOOL 2022 REMODELING & CTE ADDITION
PLUMBING & HYDRONICS - AREA C

Project number	210400723	
date	04/12/2022	
revision		
drawn	DK	
checked	TS	
NO.	DATE	DESCRIPTION
1	5/3/2022	Addendum M-1

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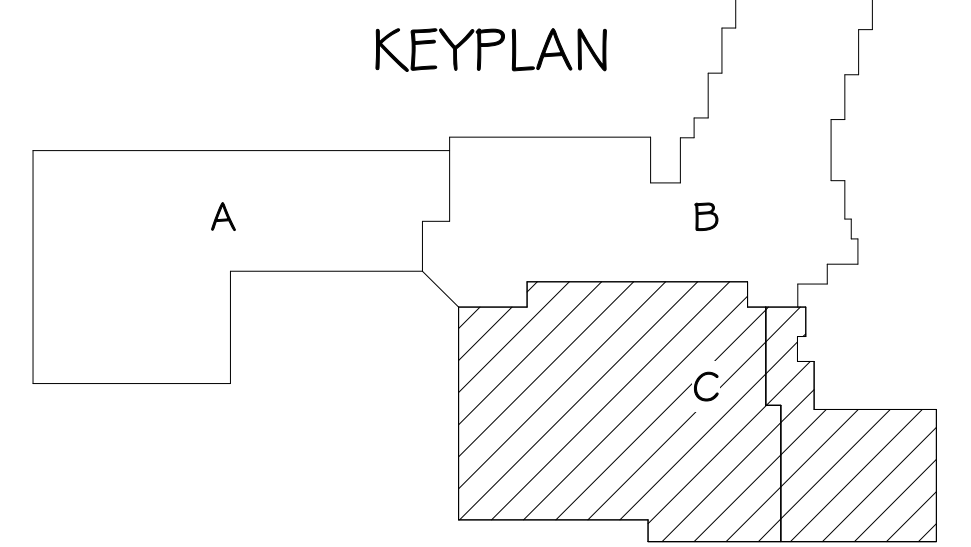


- GENERAL NOTES:**
- A. ALL WORK SHALL BE PERFORMED IN A CLEAN AND WORKMANLIKE MANNER.
 - B. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING ANY OPENINGS LEFT IN FLOORS, WALLS, AND CEILINGS THAT WERE CAUSED BY HIS/HER ACTIONS. PATCHING SHALL MATCH EXISTING SURFACE IN COLOR, TEXTURE AND QUALITY SO THAT PATCH IS INDISTINGUISHABLE FROM ORIGINAL SURFACE.
 - C. ALL PENETRATIONS THROUGH DRAFT STOPS AND OTHER FIRE-RATED PARTITIONS SHALL BE FIRE STOPPED AS PER SPECIFICATIONS AND LOCAL CODES.
 - D. ALL MECHANICAL WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, NATIONAL PLUMBING REGULATIONS, AND THE AUTHORITY HAVING JURISDICTION.
 - E. THE MECHANICAL DRAWINGS SHOW GENERAL ARRANGEMENT ONLY. EXACT LOCATION SHALL AVOID INTERFERENCE WITH ELECTRICAL EQUIPMENT & REQUIRED ELECTRICAL CLEARANCES.
 - F. CONTRACTOR SHALL COORDINATE ALL PLUMBING WITH LIGHT FIXTURES, HVAC, FIRE SPRINKLER, AND STRUCTURAL TO ACCOMMODATE LIMITED CEILING SPACE.
 - G. FRESH AIR INTAKES TO BE MINIMUM 10' FROM ANY EXHAUST TERMINATION.
 - H. ALL FLOOR EQUIPMENT SHALL BE SET ON 4" HIGH CONCRETE BASES FURNISHED BY THIS CONTRACTOR.
 - I. CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY THE A/E IMMEDIATELY OF ANY DISCREPANCIES.
 - J. COORDINATE NEW SERVICES WITH LOCAL UTILITIES.
 - K. PLUMBING CONTRACTOR TO PROVIDE VENTING FOR ALL FLOOR DRAINS, TRENCH DRAINS, AND FLOOR SINKS AS SHOWN OR AS REQUIRED BY CODE.

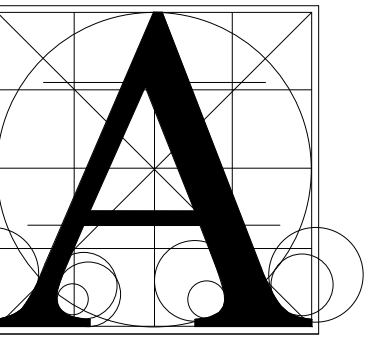
- KEYNOTES:**
1. THIS SPACE IS RESERVED FOR ELECTRICAL GEAR. PIPING AND EQUIPMENT SHALL NOT BE LOCATED IN FRONT OF OR ROUTED ABOVE ELECTRICAL PANELS. COORDINATE WITH DIVISION 26.
 2. SEE WATER HEADER DIAGRAM.
 3. SEE HEATING WATER SYSTEM PIPING DIAGRAM.
 4. SEE DUAL TEMP WATER SYSTEM PIPING DETAIL.
 5. SEE MODIFICATIONS TO EXISTING NATURAL GAS PIPING DIAGRAM.
 6. SEE NATURAL GAS WATER HEATER PIPING DIAGRAM.

- SPECIAL NOTES:**
- A. ALL MECHANICAL SYSTEMS, EXCLUDING DROPS, TO BE INSTALLED AS HIGH AS POSSIBLE TO PROVIDE MAXIMUM CLEARANCES FOR OWNER.

PLUMBING & HYDRONICS PLAN - AREA C
1/8" = 1'-0"



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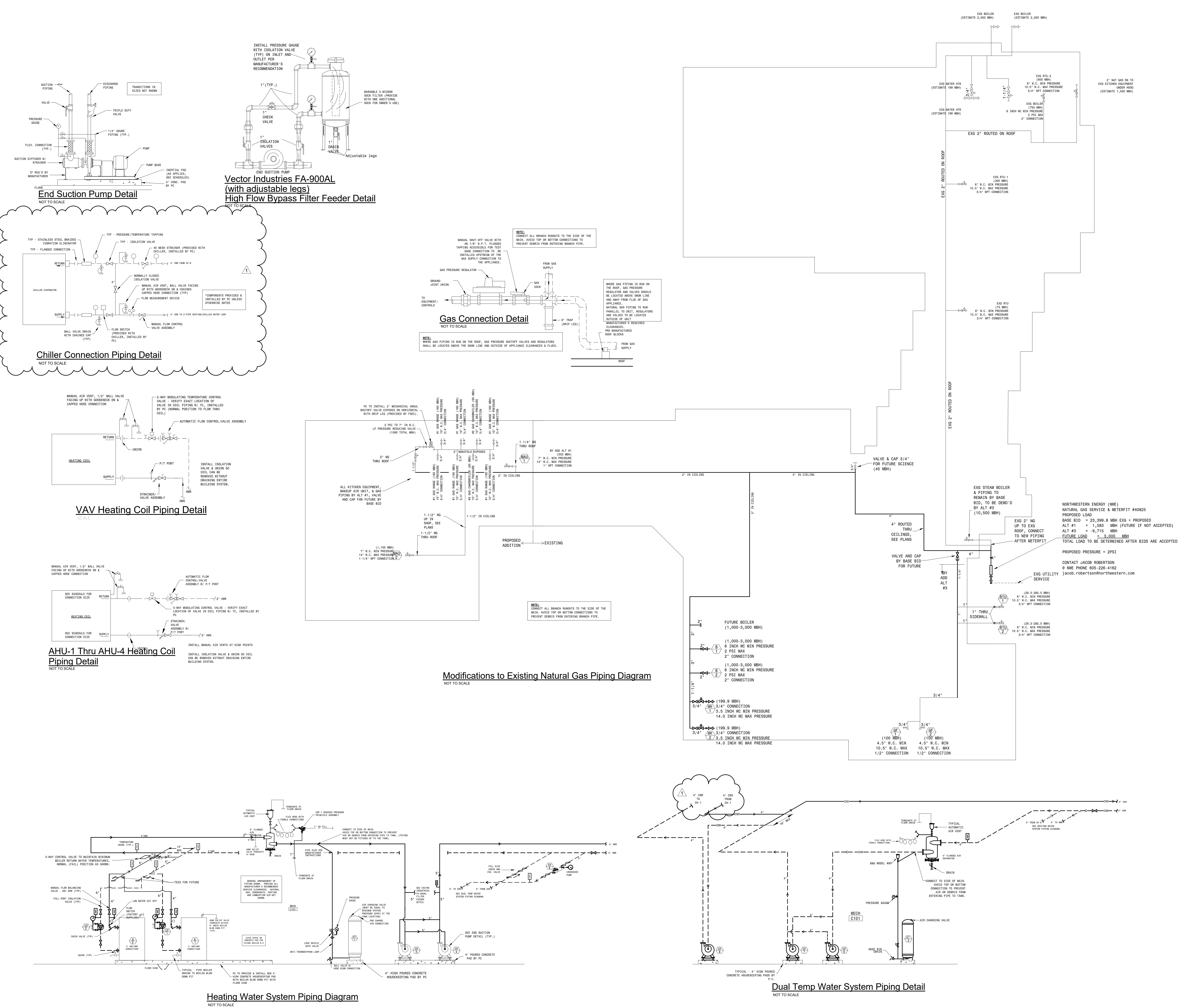


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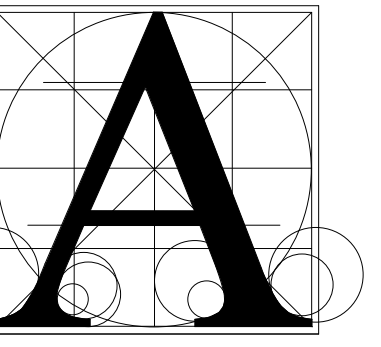
project **WEBSTER AREA SCHOOL 2022 REMODELING & CTE ADDITION**
sheet contents **MECHANICAL DETAILS CONTINUED**

number	210400723
date	04/12/2022
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drawn	DK
checked	TS
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1 5/3/2022 Addendum M-1	

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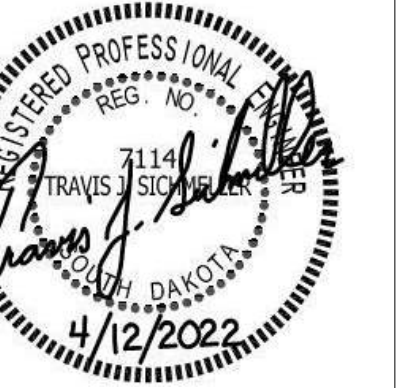
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MECHANICAL SCHEDULES
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AHU SCHEDULE

Table with columns: EQUIP. NO., MANUFACTURER & MODEL, SERVES, SUPPLY FAN/MOTOR, RETURN/EXHAUST FAN/MOTOR, DX COOLING COIL CAP., HEATING COIL CAP. (EWT=100.0'). Includes AHU-1 through AHU-4.

- NOTES: 1. AHU-1 SHALL BE A HORIZONTAL, FLOOR MOUNTED, VARIABLE VOLUME UNIT... 2. AHU-2, 3 & 4 SHALL BE A HORIZONTAL, FLOOR MOUNTED, CONSTANT VOLUME UNIT... 3. I.C. TO PROVIDE VFD FOR ALL FANS, E.C. TO INSTALL.

LOUVER SCHEDULE

Table with columns: EQUIP. NO., MANUFACTURER & MODEL, FUNCTION, SIZE (WxHxD), CFM, S.P. (IN. W.G.), FREE AREA (SQ. FT.), VELOCITY (FPM), INSECT SCREEN, NOTES. Includes LV-1 through LV-5.

- NOTES: 1. HIGH PERFORMANCE 6" FIXED BLADE LOUVER WITH BLADES AT 37° ANGLE. 2. LOUVER TO HAVE BAKED ENAMEL FINISH, ARCHITECT TO SELECT COLOR.

AIR COOLED CONDENSING UNIT SCHEDULE

Table with columns: EQUIP. NO., MANUFACTURER & MODEL, SERVICE, COOLING (TOTAL MBH, AMBIENT TEMP, SECTION TEMP, STAGES, REFRIG TYPE, EER), ELECTRICAL (V./PH./CY., FLA, MCA, MCOCP), UNIT WEIGHT (LBS), NOTES. Includes CU-1 through CU-4.

- NOTES: 1. PROVIDE MATCHING R-410A DX COOLING COIL IN CORRESPONDING AIR HANDLING UNIT. 2. PROVIDE & INSTALL INSULATED REFRIGERATION PIPING & ACCESSORIES PER MANUFACTURER'S RECOMMENDATIONS.

GRILLE - REGISTER - DIFFUSER SCHEDULE

Table with columns: EQUIP. NO., MANUFACTURER & MODEL, NOMINAL SIZE, THROAT SIZE, MAX CFM, MAX APP (IN. W.G.), THROW, NC, FRAME, FINISH, NOTES. Includes S-1 through E-2.

- NOTES: 1. M.C. SHALL COORDINATE MOUNTING AND SURFACE CONSTRUCTION PRIOR TO FURNISHING MATERIAL. M.C. SHALL ALSO COORDINATE EXACT LOCATION OF EQUIPMENT.

INTAKE HOOD SCHEDULE

Table with columns: EQUIP. NO., MANUFACTURER & MODEL, SERVING, CFM, S.P. (IN. W.G.), THROAT SIZE, THROAT VELOCITY (FPM), THROAT FREE AREA (SQ. FT.), WEIGHT (LBS), NOTES. Includes IH-1.

- NOTES: 1. PROVIDE NEPRENE GASKET FOR CURBS, AND EXTENDED THROAT. 2. PROVIDE & INSTALL W/IN 18" HIGH INSULATED, SLOPED ROOF CURB & INSECT SCREEN. CONTRACTOR TO VERIFY ROOF SLOPE PRIOR TO ORDERING.

PACKAGED ROOFTOP UNIT SCHEDULE - NATURAL GAS HEAT

Table with columns: EQUIP. NO., MANUFACTURER & MODEL, LOCATION, SERVING, SUPPLY AIR CFM, OUTSIDE AIR CFM, E.A.P. (IN), T.S.P. (IN), COOLING (TOT MBH, EAT, LAT, EER), NATURAL GAS HEATING (TOT MBH, EAT, LAT, EER), MOTOR (HP, RPM, V./PH./CY., FLA, MCA, MCOCP), UNIT WEIGHT (LBS), NOTES. Includes RTU-1 and RTU-2.

- NOTES: 1. PROVIDE & INSTALL 48 HIGH RISE CURB WITH INSULATION TO REDUCE HEAT LOSS OUT BOTTOM OF RTU. 2. PROVIDE BEST CONTROLS FOR SINGLE ZONE W/ APPLICATION WITH HORIZONTAL DISCONNECT, FACTORY INSTALLED BELT DRIVEN SUPPLY FAN, VFD FOR SUPPLY FAN, FACTORY INSTALLED CONTROLS, SINGLE WALL CONSTRUCTION WITH 1" FOAM GLASS INSULATION, 2" FILTERS, FACTORY INSTALLED ENTHALPY EXCHANGER WITH BAROMETRIC RELIEF, PHASE AND PHASOR PROTECTION, SINGLE POINT POWER CONNECTION, SINGLE POINT POWER CONNECTION, HINGED SERVICE ACCESS PANELS, AND STAINLESS STEEL NATURAL GAS HEAT EXCHANGER.

NATURAL GAS FIRED FURNACE SCHEDULE

Table with columns: EQUIP. NO., MANUFACTURER & MODEL, SUPPLY AIR (CFM), OA (CFM), ESP (IN. W.G.), FUEL TYPE, INPUT (MBH), OUTPUT (MBH), EFFICIENCY A.F.U.E., GAS RATE (CFM), ELECTRICAL (HP, V/PH./CY., MCA, MCOCP), WEIGHT (LBS.), NOTES. Includes GF-1 and GF-2.

- NOTES: 1. NOT USED. 2. TO CONTRACTOR TO PROVIDE & INSTALL NETWORK THERMOSTAT WITH BUILT-IN COMPRESSOR PROTECTION AND AUTO-CHANGEOVER FOR INTEGRATION TO BUILDING DDC SYSTEM.

VAV TERMINAL SCHEDULE

Table with columns: EQUIP. NO., MANUFACTURER & MODEL, SERVED FROM, SERVING, INLET SIZE, MAX CFM, MIN CFM, MAX TERM APP, MAX RAD NC, MAX DISCH NC, HEATING COIL (EWT=100°F) (CFM, MBH, EAT, LAT, FACE VELOC., SUCTN TEMP, REFRIG. TYPE), ELECTRICAL (V./PH./CY., FLA, MCA, MCOCP), UNIT WEIGHT (LBS), NOTES. Includes VAV-A102 through VAV-A136.

- NOTES: 1. SOUND DATA SHALL BE TAKEN FROM ARI STANDARD 880 (LATEST EDITION) PUBLISHED DATA. 2. INLET STATIC PRESSURE FOR TERMINAL SELECTION IS 1.0". TERMINAL S.P. INCLUDES COIL A.P.D.

EXHAUST FAN SCHEDULE

Table with columns: EQUIP. NO., MANUFACTURER & MODEL, SERVING, LOCATION, CFM, GENERAL EXHAUST CFM, STATIC PRESS. (IN. W.G.), SONES, MOTOR (WATTS, HP, FRPH, VOLT./PH./CY., FLA), UNIT WEIGHT (LBS), NOTES. Includes EF-1 through EF-13.

- NOTES: 1. PROVIDE AND INSTALL 120V MOTORIZED BACKDRAFT DAMPER, EC TO POWER OPEN WITH FAN OPERATION. 2. PROVIDE WITH FACTORY INSTALLED DISCONNECT. 3. PROVIDE WITH DIRECT DRIVE FAN WITH EGM MOTOR AND FACTORY INSTALLED FAN SPEED CONTROLLER FOR FAN BALANCING.

CHILLER SCHEDULE

Table with columns: EQUIP. NO., MANUFACTURER & MODEL, TONS, MBH CAP, CFM, EWT, LWT, AMB, WFO (FT), COMPRESSORS (KW, FLA), COND KW, CAP STEPS, EER, OPER. WT., ELECTRICAL (V./PH./CY., MCA, MCOCP, SCGR), UNIT WEIGHT (LBS), NOTES. Includes CH-1.

- NOTES: 1. PERFORMANCE BASED ON 55% PROPILENE GLYCOL. 2. PROVIDE DISCONNECT SWITCH WITH CIRCUIT BREAKER AND 66KA SCGR RATING.

EXISTING DUST COLLECTOR SCHEDULE

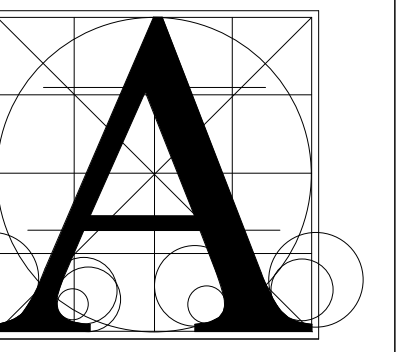
Table with columns: EQUIP. NO., MANUFACTURER & MODEL, SERVING, LOCATION, CFM, STATIC PRESS. (IN. W.G.), SONES, MOTOR (WATTS, HP, FRPH, VOLT./PH./CY., FLA), UNIT WEIGHT (LBS), NOTES. Includes EXG DC-1.

- NOTES: 1. VC TO RELOCATE OWNER'S EXISTING DUST COLLECTOR FROM REMOTE SITE TO MEZZANINE OF WOOD LAB 114.

EXISTING WELDING HOOD SCHEDULE

Table with columns: EQUIP. NO., MANUFACTURER & MODEL, SERVING, LOCATION, EXHAUST AIR (CFM), STATIC PRESSURE LOSS (IN. W.G.), EXHAUST AIR CONNECTION (IN. DIAM), WIDTH (IN), DEPTH (IN), HEIGHT (IN), NO. OF SLOTS, SLOT HEIGHT (IN), UNIT WEIGHT (LBS), NOTES. Includes EXG HD-A.

- NOTES: 1. VC TO RELOCATE OWNER'S EXISTING WELDING HOOD(10) FROM REMOTE SITE TO WELDING LAB A121.



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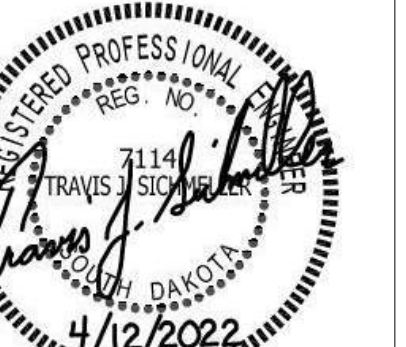
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SEE PROJECT NO:
210400723

WEBSTER AREA SCHOOL 2022 REMODELING &
CTE ADDITION

MECHANICAL SCHEDULES - CONTINUED

project
date
revision
drawn
checked

number
date
revision
description

1
5/3/2022
Addendum M-1

number
date
revision
description

1
5/3/2022
Addendum M-1

number
date
revision
description

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5/3/2022
Addendum M-1

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EXHAUST HOOD SCHEDULE table with columns: EQUIP. NO., MANUFACTURER & MODEL, SERVING, LOCATION, TYPE, EXHAUST AIR (CFM), MAKE-UP AIR (CFM), EXHAUST AIR LENGTH (IN), OVERALL LENGTH W/ANSUL CABINET (IN), EXHAUST AIR WIDTH (IN), OVERALL WIDTH W/MAKEUP AIR FLENUM (IN), EXHAUST AREA (SQ FT), HEIGHT (IN), MAKEUP AIR FLENUM HEIGHT (IN), MATERIAL, FILTERS, LAMPS, ELECTRICAL, UNIT WEIGHT (LBS), ANSUL UTILITY CABINET, NOTES.

(OWNER PROVIDED) NATURAL GAS BOILER SCHEDULE table with columns: EQUIP. NO., MANUFACTURER & MODEL, LOCATION, MEDIA, OPERATING PRESSURE (PSI), RELIEF PRESSURE (PSI), FUEL, INPUT (BTU/H), OUTPUT (BTU/H), ANSUL UTILITY CABINET, VOLUME (GAL), HP, V./PH./CY., FLA, ROUNDOFF SIZE, UNIT WEIGHT (LBS), NOTES.

(OWNER PROVIDED) PUMP SCHEDULE table with columns: EQUIP. NO., MANUFACTURER & MODEL, SERVING, LOCATION, GPM, HEAD, TYPE, HP (IN), HP (W/LOSS), FLA, WEIGHT, NOTES.

(OWNER PROVIDED) EXPANSION TANK SCHEDULE table with columns: EQUIP. NO., MANUFACTURER & MODEL, SERVING, LOCATION, CALCULATED SYSTEM VOLUME (GAL), SYSTEM VOLUME (GAL), TEMP RANGE (°F), PRESSURE RANG (PSI), TANK VOLUME (GAL), SHIPPING WEIGHT (LBS), NOTES.

PUMP SCHEDULE table with columns: EQUIP. NO., MANUFACTURER & MODEL, SERVING, LOCATION, GPM, HEAD, TYPE, HP (IN), HP (W/LOSS), FLA, WEIGHT, NOTES.

ROOFTOP MAKE-UP AIR UNIT SCHEDULE - GAS HEAT table with columns: EQUIP. NO., MANUFACTURER & MODEL, LOCATION, SUPPLY AIR (CFM), MIN. OCC. OUTSIDE AIR (CFM), E.S.P. (IN), NON-TONS, TOTAL TONS, COOLING, NATURAL GAS HEATING, MOTOR, ELECTRICAL, UNIT WEIGHT (LBS), NOTES.

(OWNER PROVIDED) EXPANSION TANK SCHEDULE table with columns: EQUIP. NO., MANUFACTURER & MODEL, SERVING, LOCATION, CALCULATED SYSTEM VOLUME (GAL), SYSTEM VOLUME (GAL), TEMP RANGE (°F), PRESSURE RANG (PSI), TANK VOLUME (GAL), SHIPPING WEIGHT (LBS), NOTES.

PUMP SCHEDULE table with columns: EQUIP. NO., MANUFACTURER & MODEL, SERVING, LOCATION, GPM, HEAD, TYPE, HP (IN), HP (W/LOSS), FLA, WEIGHT, NOTES.

GAS WATER HEATER SCHEDULE table with columns: EQUIP. NO., MANUFACTURER & MODEL, SERVING, LOCATION, STORAGE CAPACITY, RECOVERY R, FUEL, INPUT (BTU/H), PIPING CONNECTIONS, DIMENSIONS, ELECTRICAL, UNIT WEIGHT (LBS), NOTES.

DUCTLESS SPLIT SYSTEM INDOOR UNIT SCHEDULE table with columns: EQUIP. NO., MANUFACTURER & MODEL, SERVING, COOLING CAPACITY (BTU/HR.), HEATING CAPACITY (BTU/HR. @47°F), REFRIGERANT PIPING, ELECTRICAL, DIMENSIONS, UNIT WEIGHT (LBS), NOTES.

(OWNER PROVIDED) EXPANSION TANK SCHEDULE table with columns: EQUIP. NO., MANUFACTURER & MODEL, SERVING, LOCATION, CALCULATED SYSTEM VOLUME (GAL), SYSTEM VOLUME (GAL), TEMP RANGE (°F), PRESSURE RANG (PSI), TANK VOLUME (GAL), SHIPPING WEIGHT (LBS), NOTES.

HOT WATER HANGING UNIT HEATER table with columns: EQUIP. NO., MANUFACTURER & MODEL, LOCATION, CFM, INH, GPM, LAT, EWT, LWT, WPD, ELECTRICAL, ROUNDOFF SIZE, UNIT WEIGHT (LBS), NOTES.

DUCTLESS SPLIT SYSTEM OUTDOOR UNIT SCHEDULE table with columns: EQUIP. NO., MANUFACTURER & MODEL, SERVING, COOLING CAPACITY (BTU/HR.), HEATING CAPACITY (BTU/HR. @47°F), REFRIGERANT PIPING, ELECTRICAL, DIMENSIONS, UNIT WEIGHT (LBS), NOTES.

(OWNER PROVIDED) EXPANSION TANK SCHEDULE table with columns: EQUIP. NO., MANUFACTURER & MODEL, SERVING, LOCATION, CALCULATED SYSTEM VOLUME (GAL), SYSTEM VOLUME (GAL), TEMP RANGE (°F), PRESSURE RANG (PSI), TANK VOLUME (GAL), SHIPPING WEIGHT (LBS), NOTES.

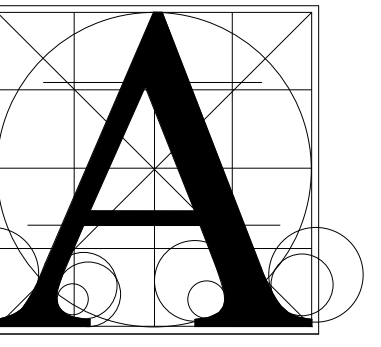
HOT WATER CABINET UNIT HEATER table with columns: EQUIP. NO., MANUFACTURER & MODEL, LOCATION, CFM, INH, GPM, LAT, EWT, LWT, WPD, ELECTRICAL, ROUNDOFF SIZE, UNIT WEIGHT (LBS), NOTES.

HVAC SHEET METAL DUCTWORK CONSTRUCTION & INSULATION SCHEDULE table with columns: SYSTEM, DUCTWORK, INSULATION THICKNESS (EXTERIOR WRAP UNLESS OTHERWISE NOTED), NOTES.

(OWNER PROVIDED) EXPANSION TANK SCHEDULE table with columns: EQUIP. NO., MANUFACTURER & MODEL, SERVING, LOCATION, CALCULATED SYSTEM VOLUME (GAL), SYSTEM VOLUME (GAL), TEMP RANGE (°F), PRESSURE RANG (PSI), TANK VOLUME (GAL), SHIPPING WEIGHT (LBS), NOTES.

FINNED TUBE RADIATION HEATER SCHEDULE table with columns: EQUIP. NO., MANUFACTURER & MODEL, TYPE AND/OR MOUNTING, CAPACITY (BTU/HR), AVG WATER TEMP. (°F), FLOW (GPM), TUBE SIZE, FIN SIZE, FINS/FT, BTU/FT, LENGTH, ROWS, GAUGE, LENGTH, HEIGHT, DEPTH, NOTES.

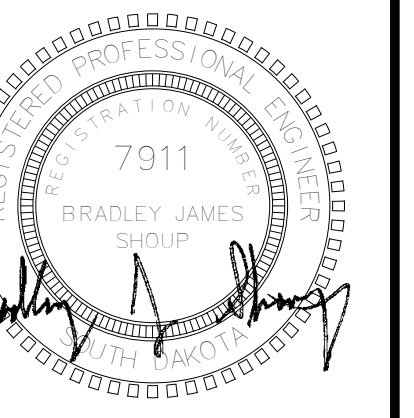
DOMESTIC & HYDRONIC PIPING MATERIAL & INSULATION SCHEDULE table with columns: SYSTEM, PIPING, FITTINGS, INSULATION THICKNESS, PIPE SIZES, PIPE SIZES, PIPE SIZES, NOTES.



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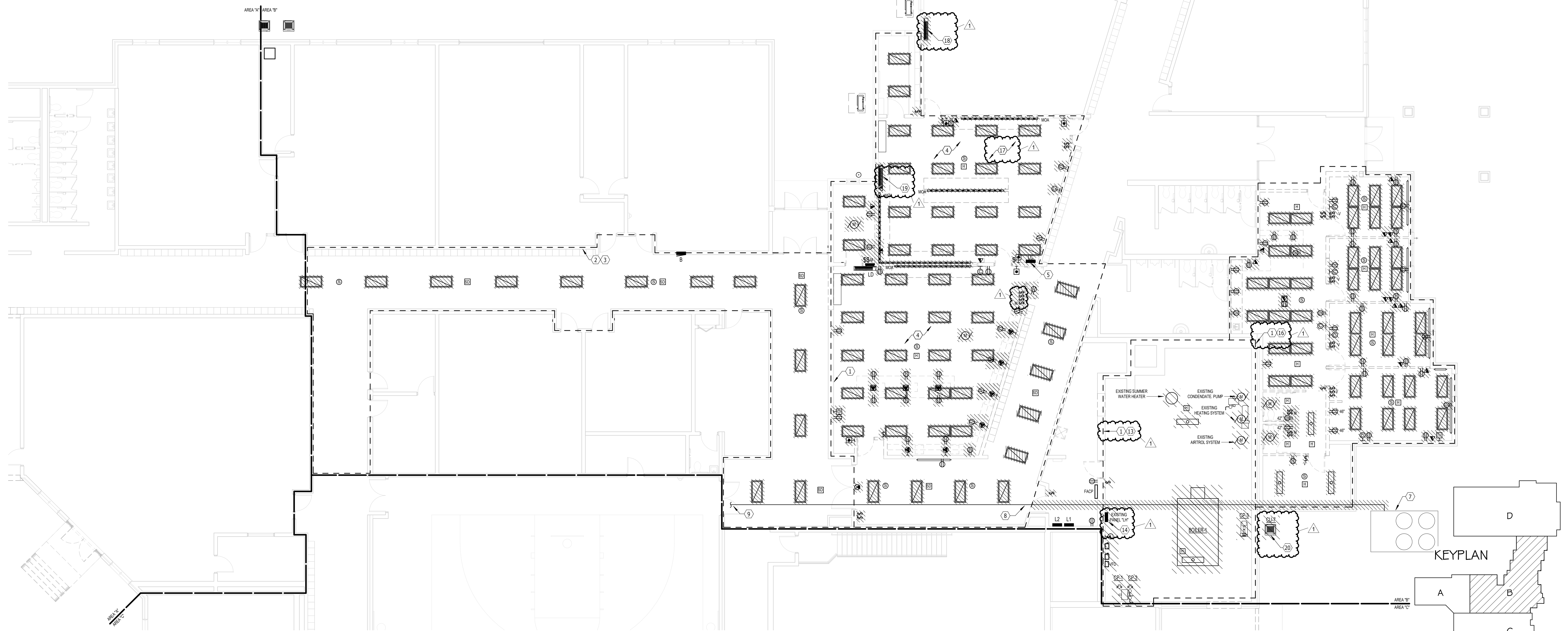
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Project: **WEBSTER AREA SCHOOL 2022 REMODELING & CTE ADDITION**
sheet contents: **DEMOLITION FLOOR PLAN - AREA B - ELECTRICAL**

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date	4-15-2022	
revision		
drawn	ADP	
checked	BJS	
NO.	DATE	DESCRIPTION
I	5-3-22	Addendum 1

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GENERAL DEMOLITION SHEET NOTES		ELECTRICAL NOTES
A. DEMO HATCHED ITEMS.	H. WHERE EXISTING LIGHT FIXTURES ARE TO BE RE-USED, THE CONTRACTOR SHALL CLEAN THE FIXTURES AND REPLACE LAMPS. THE CONTRACTOR SHALL ALSO REPAIR OR REPLACE DEFECTIVE PARTS, INCLUDING LENSES, BALLASTS, ETC. AS REQUIRED SO THAT THE FIXTURES ARE FUNCTIONING CORRECTLY.	1. WITHIN THIS DASHED AREA, UNLESS NOTED OTHERWISE, REMOVE ALL EXISTING ELECTRICAL DEVICES, SYSTEMS, BOXES, RACEWAYS, CONDUCTORS/CABLING, AND CONNECTIONS TO MECHANICAL EQUIPMENT THAT IS BEING REMOVED TO THE EXTENT POSSIBLE.
B. PERFORM ALL DEMOLITION WORK AS REQUIRED AND REMODELING WORK AS SHOWN ON THE DRAWINGS INCLUDING MINOR ITEMS OF MATERIAL OR EQUIPMENT NECESSARY TO MEET THE REQUIREMENTS AND INTENT OF THE PROJECT.	I. WHERE CONDUITS EXTENDING THROUGH FLOORS ARE TO BE ABANDONED, THE CONTRACTOR SHALL CUT AND CAP OR PLUG CONDUIT, SO THAT IT WILL NOT PROTRUDE ABOVE THE FLOOR.	2. WITHIN THIS DASHED AREA, UNLESS NOTED OTHERWISE, REMOVE AND REINSTALL ALL EXISTING CEILING MOUNTED ELECTRICAL DEVICES.
C. PRIOR TO SUBMITTING BID, CONTRACTOR SHALL EXAMINE ALL GENERAL CONSTRUCTION DRAWINGS AND SHOULD HAVE HAD VISITED THE CONSTRUCTION SITE. THE CONTRACTOR SHALL BE FAMILIAR WITH THE EXISTING CONDITIONS UNDER WHICH HE/SHE WILL HAVE TO OPERATE AND WHICH WILL IN ANY WAY AFFECT THE WORK UNDER THIS CONTRACT IN BEHALF OF THE CONTRACTOR FOR ANY ERROR OR NEGLIGENCE ON HIS/HER PART.	J. WHERE EXISTING CONDUIT IS TO BE ABANDONED, THE CONDUIT SHALL BE REMOVED IF IT IS EXPOSED, INTO A CRAWL SPACE OR ACCESSIBLE CEILING WHERE IT IS IMPOSSIBLE TO REMOVE THE CONDUIT, IT SHALL BE CUT OFF AND CAPPED OR PLUGGED.	3. WITHIN THIS DASHED AREA, EXISTING CEILING MOUNTED LUMINAIRES SHALL BE REPLACED WITH NEW.
D. CERTAIN REMODELING OF ELECTRICAL FACILITIES WILL BE REQUIRED IN THE EXISTING BUILDING. EXISTING CONDUIT RUNS ARE GENERALLY NOT SHOWN, ALTHOUGH A FULL ATTEMPT HAS BEEN MADE TO SHOW SOME EXISTING CONDITIONS, OF WHICH INFORMATION HAS BEEN TAKEN FROM EXISTING RECORD DRAWINGS OF THIS PROJECT. THE DRAWINGS SHOWING LOCATIONS OF EXISTING EQUIPMENT, OUTLETS, FIXTURES, ETC. IN EXISTING AREA ARE APPROXIMATE ONLY (FIELD VERIFY).	K. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE PROPER RESTORATION OF ALL EXISTING SURFACES REQUIRING PATCHING, PLASTERING, PAINTING AND/OR OTHER REPAIR DUE TO THE INSTALLATION OF ELECTRICAL WORK UNDER THE TERMS OF THIS CONTRACT. CLOSE ALL OPENINGS, REPAIR ALL SURFACES, ETC. AS REQUIRED.	4. REMOVE EXISTING POWER POLES AND SURFACE MOUNTED RACEWAYS IN THIS ROOM.
E. BRANCH CIRCUITS SHALL BE REUSED WHERE PRACTICAL AND SHALL, IN ADDITION, BE REMODELED AS REQUIRED. THE CONTRACTOR SHALL CONCEAL ALL WORK WHERE POSSIBLE. WHERE EXPOSED WORK IS REQUIRED IN FINISHED AREAS, THE CONTRACTOR SHALL USE SURFACE MOUNTED, MULTI-OUTLET RACEWAY, PANDUIT T70 SERIES. EXISTING RUNS SHALL BE VERIFIED.	L. THE CONTRACTOR SHALL EMPLOY QUALIFIED AND EXPERIENCED WORKMEN FOR THIS WORK. ALL RESTORATION WORK SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT AND/OR THE OWNER.	5. REMOVE EXISTING PANEL. RE-FEED ANY BRANCH CIRCUITS THAT ARE TO REMAIN FROM NEW PANEL "LC".
F. EXISTING ELECTRICAL WIRING WHICH WILL NOT BE MADE OBSOLETE AND WHICH WILL BE DISTURBED DUE TO CONSTRUCTION CHANGES REQUIRED BY THIS CONTRACT SHALL BE RESTORED TO OPERATING CONDITION, AS REQUIRED AND/OR DIRECTED. WHERE REQUIRED, SHOWN AND/OR DIRECTED OUTLETS AND CONDUIT RUNS SHALL BE RELOCATED. IN SOME CASES, IT MAY BE NECESSARY TO EXTEND CONDUITS AND PULL IN NEW WIRING OR INSTALL JUNCTION BOXES AND SPLICE IN NEW WIRING OR REPLACE OLD WIRING WITH NEW.	M. ALL TEMPORARY AND REMODELING WORK SHALL BE CONSIDERED A PART OF THIS CONTRACT AND NO EXTRA CHARGES WILL BE ALLOWED. THIS SHALL INCLUDE MINOR ITEMS OF MATERIAL OR EQUIPMENT NECESSARY TO MEET THE REQUIREMENTS AND INTENT OF THE PROJECT.	6. RELOCATE EXISTING DEVICE, EXTEND/REROUTE EXISTING RACEWAYS AND CONDUCTORS AS REQUIRED.
G. OUTLETS FROM WHICH FIXTURES, SWITCHES, RECEPTACLES, AND/OR OTHER ELECTRICAL DEVICES ARE MOVED AND WHICH ARE NOT REPLACED OR REUSED SHALL BE REMOVED OR, IF NOT POSSIBLE, PROVIDED WITH A BLANK PLATE ON THE OUTLET BOX. WHERE OUTLETS, BOXES, ETC. ARE COMPLETELY REMOVED, THE CONTRACTOR SHALL CUT OFF CONDUITS AND REMOVE WIRING.	N. EXAMINE ARCHITECTURAL, STRUCTURAL AND MECHANICAL DRAWINGS AND SPECIFICATIONS TO DETERMINE THE SEQUENCE OF CONSTRUCTION THROUGHOUT THE PROJECT, INCLUDING EXISTING, TEMPORARY, REMODELED AND NEW AREAS.	7. EXISTING CHILLER CH-1 TO BE RELOCATED.
	O. THE OWNER RESERVES THE RIGHT TO RETAIN ANY SELECTED SALVAGE ITEMS. ALL OTHER ITEMS SHALL BE THE CONTRACTORS RESPONSIBILITY FOR LEGAL DISPOSAL.	8. INTERCEPT EXISTING FEEDER (3 #400KBMIL AND #3 COPPER GROUND IN 3" CONDUIT) FOR NEW FEEDER TO PANEL "LC".
		9. TO AN EXISTING 300A/3P CIRCUIT BRANCH IN "MDP".
		10. WORK WITHIN THIS DASHED AREA SHALL BE PROVIDED UNDER ALTERNATE #2.
		11. UNDER THE BASE BID, UPGRADE EXISTING FIRE ALARM REMOTE ANNUNCIATOR AS REQUIRED FOR SYSTEM UPGRADE/EXPANSION. UNDER ALTERNATE #2, RELOCATE AND UPGRADE.
		12. EXISTING DSA-5 TO BE RELOCATED. EXTEND/REROUTE EXISTING RACEWAYS AND CONDUCTORS AS REQUIRED.
		13. WORK WITHIN THIS DASHED AREA SHALL BE PROVIDED UNDER ADD. ALTERNATE #3.
		14. EXISTING PANEL "LH" IN BOILER ROOM TO BE RELOCATED TO ROOM B123.
		15. THERE ARE 16 TYPE "XA1" LUMINAIRES IN THIS AREA, RE-USE AS SHOWN ON THE NEW LIGHTING PLAN, SALVAGE THE REMAINING LUMINAIRES TO THE OWNER.
		16. THERE ARE 41 TYPE "XA1" LUMINAIRES IN THIS AREA, RE-USE AS SHOWN ON THE NEW LIGHTING PLAN, SALVAGE THE REMAINING LUMINAIRES TO THE OWNER.
		17. IT SHALL BE ACCEPTABLE TO RE-USE MULTI-OUTLET ASSEMBLY BEING REMOVED FROM THIS ROOM. REMOVED FROM THIS ROOM IN ROOM B110 (DEVICES SHALL BE NEW).
		18. EXISTING "DSA" TO BE RELOCATED. EXTEND/REROUTE EXISTING RACEWAYS AND CONDUCTORS AS REQUIRED.
		19. EXISTING "DSA-4" AND UV-11 TO BE RELOCATED. EXTEND/REROUTE EXISTING RACEWAYS AND CONDUCTORS AS REQUIRED.
		20. EXISTING CONDENSING UNIT "CU-7" TO BE RELOCATED. EXTEND/REROUTE EXISTING RACEWAYS AND CONDUCTORS AS REQUIRED.



DEMOLITION FLOOR PLAN - AREA B - ELECTRICAL
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GENERAL DEMOLITION SHEET NOTES

- A. DEMO HATCHED ITEMS.
- B. PERFORM ALL DEMOLITION WORK AS REQUIRED AND REMODELING WORK AS SHOWN ON THE DRAWINGS INCLUDING MINOR ITEMS OF MATERIAL OR EQUIPMENT NECESSARY TO MEET THE REQUIREMENTS AND INTENT OF THE PROJECT.
- C. PRIOR TO SUBMITTING BID, CONTRACTOR SHALL EXAMINE ALL GENERAL CONSTRUCTION DRAWINGS AND SHOULD HAVE HAD VISITED THE CONSTRUCTION SITE. THE CONTRACTOR SHALL BE FAMILIAR WITH THE EXISTING CONDITIONS UNDER WHICH HE/SHE WILL HAVE TO OPERATE AND WHICH WILL IN ANY WAY AFFECT THE WORK UNDER THIS CONTRACT IN BEHALF OF THE CONTRACTOR FOR ANY ERROR OR NEGLIGENCE ON HIS/HER PART.
- D. CERTAIN REMODELING OF ELECTRICAL FACILITIES WILL BE REQUIRED IN THE EXISTING BUILDING. EXISTING CONDUIT RUNS ARE GENERALLY NOT SHOWN, ALTHOUGH A FULL ATTEMPT HAS BEEN MADE TO SHOW SOME EXISTING CONDITIONS, OF WHICH INFORMATION HAS BEEN TAKEN FROM EXISTING RECORD DRAWINGS OF THIS PROJECT. THE DRAWINGS SHOWING LOCATIONS OF EXISTING EQUIPMENT, OUTLETS, FIXTURES, ETC. IN EXISTING AREA ARE APPROXIMATE ONLY (FIELD VERIFY).

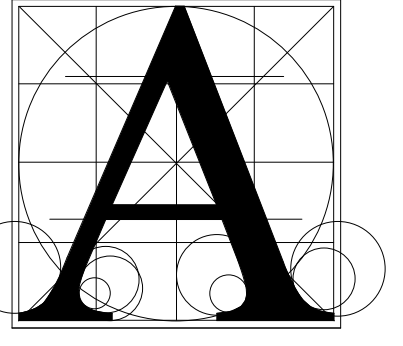
- E. BRANCH CIRCUITS SHALL BE REUSED WHERE PRACTICAL AND SHALL, IN ADDITION, BE REMODELED AS REQUIRED. THE CONTRACTOR SHALL CONCEAL ALL WORK WHERE POSSIBLE. WHERE EXPOSED WORK IS REQUIRED IN FINISHED AREAS, THE CONTRACTOR SHALL USE SURFACE MOUNTED, MULTI-OUTLET RACEWAY, PANDUIT T70 SERIES. EXISTING RUNS SHALL BE VERIFIED.
- F. EXISTING ELECTRICAL WIRING WHICH WILL NOT BE MADE OBSOLETE AND WHICH WILL BE DISTURBED DUE TO CONSTRUCTION CHANGES REQUIRED BY THIS CONTRACT SHALL BE RESTORED TO OPERATING CONDITION, AS REQUIRED AND/OR DIRECTED. WHERE REQUIRED, SHOWN AND/OR DIRECTED, OUTLETS AND CONDUIT RUNS SHALL BE RELOCATED. IN SOME CASES, IT MAY BE NECESSARY TO EXTEND CONDUITS AND PULL IN NEW WIRING OR INSTALL JUNCTION BOXES AND SPLICE IN NEW WIRING OR REPLACE OLD WIRING WITH NEW.
- G. OUTLETS FROM WHICH FIXTURES, SWITCHES, RECEPTACLES, AND/OR OTHER ELECTRICAL DEVICES ARE MOVED AND WHICH ARE NOT REPLACED OR REUSED SHALL BE REMOVED OR, IF NOT POSSIBLE, PROVIDED WITH A BLANK PLATE ON THE OUTLET BOX. WHERE OUTLETS, BOXES, ETC. ARE COMPLETELY REMOVED, THE CONTRACTOR SHALL CUT OFF CONDUITS AND REMOVE WIRING.

- H. WHERE EXISTING LIGHT FIXTURES ARE TO BE RE-USED, THE CONTRACTOR SHALL CLEAN THE FIXTURES AND REPLACE LAMPS. THE CONTRACTOR SHALL ALSO REPAIR OR REPLACE DEFECTIVE PARTS, INCLUDING LENSES, BALLASTS, ETC. AS REQUIRED SO THAT THE FIXTURES ARE FUNCTIONING CORRECTLY.
- I. WHERE CONDUITS EXTENDING THROUGH FLOORS ARE TO BE ABANDONED, THE CONTRACTOR SHALL CUT AND CAP OR PLUG CONDUIT, SO THAT IT WILL NOT PROTRUDE ABOVE THE FLOOR.
- J. WHERE EXISTING CONDUIT IS TO BE ABANDONED, THE CONDUIT SHALL BE REMOVED IF IT IS EXPOSED, INTO A CRAWL SPACE OR ACCESSIBLE CEILING. WHERE IT IS IMPOSSIBLE TO REMOVE THE CONDUIT, IT SHALL BE CUT OFF AND CAPPED OR PLUGGED.
- K. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE PROPER RESTORATION OF ALL EXISTING SURFACES REQUIRING PATCHING, PLASTERING, PAINTING AND/OR OTHER REPAIR DUE TO THE INSTALLATION OF ELECTRICAL WORK UNDER THE TERMS OF THIS CONTRACT. CLOSE ALL OPENINGS, REPAIR ALL SURFACES, ETC. AS REQUIRED.

- L. THE CONTRACTOR SHALL EMPLOY QUALIFIED AND EXPERIENCED WORKMEN FOR THIS WORK. ALL RESTORATION WORK SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT AND/OR THE OWNER.
- M. ALL TEMPORARY AND REMODELING WORK SHALL BE CONSIDERED A PART OF THIS CONTRACT AND NO EXTRA CHARGES WILL BE ALLOWED. THIS SHALL INCLUDE MINOR ITEMS OF MATERIAL OR EQUIPMENT NECESSARY TO MEET THE REQUIREMENTS AND INTENT OF THE PROJECT.
- N. EXAMINE ARCHITECTURAL, STRUCTURAL AND MECHANICAL DRAWINGS AND SPECIFICATIONS TO DETERMINE THE SEQUENCE OF CONSTRUCTION THROUGHOUT THE PROJECT, INCLUDING EXISTING, TEMPORARY, REMODELED AND NEW AREAS.
- O. THE OWNER RESERVES THE RIGHT TO RETAIN ANY SELECTED SALVAGE ITEMS. ALL OTHER ITEMS SHALL BE THE CONTRACTORS RESPONSIBILITY FOR LEGAL DISPOSAL.

ELECTRICAL NOTES

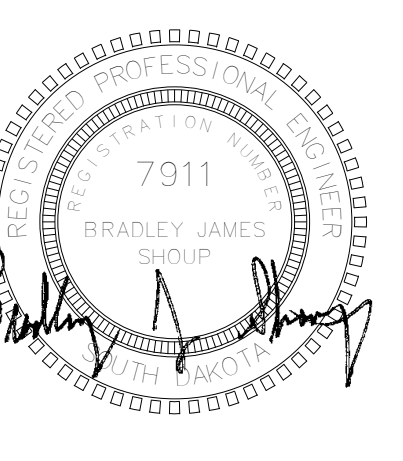
- 1. WITHIN THIS DASHED AREA, UNLESS NOTED OTHERWISE, REMOVE ALL EXISTING ELECTRICAL DEVICES, SYSTEMS, BOXES, RACEWAYS, CONDUCTORS/CABLING, AND CONNECTIONS TO MECHANICAL EQUIPMENT THAT IS BEING REMOVED TO THE EXTENT POSSIBLE.
- 2. WITHIN THIS DASHED AREA, UNLESS NOTED OTHERWISE, REMOVE AND REINSTALL ALL EXISTING CEILING MOUNTED ELECTRICAL DEVICES.
- 3. WITHIN THIS DASHED AREA, EXISTING CEILING MOUNTED LUMINAIRES SHALL BE REPLACED WITH NEW.
- 4. EXISTING PANELS TO BE REMOVED.
- 5. EXISTING DISCONNECTS AND FEEDER TO EXISTING JUNCTION BOX TO BE REMOVED.
- 6. EXISTING JUNCTION BOX ABOVE CEILING, FIELD VERIFY LOCATION.
- 7. EXISTING FEEDER (4-500KCMIL CU N#4 CONDUIT) TO "MOP".
- 8. WORK WITHIN THIS DASHED AREA SHALL BE PROVIDED UNDER ADD. ALTERNATE #5.
- 9. RELOCATE/UPGRADE EXISTING FIRE ALARM REMOTE ANNUNCIATOR AS REQUIRED FOR SYSTEM UPGRADE/EXPANSION.
- 10. THERE ARE 16 TYPE "XA1" LUMINAIRES IN THIS AREA. RE-USE AS SHOWN ON THE NEW LIGHTING PLAN, SALVAGE THE REMAINING LUMINAIRES TO THE OWNER.



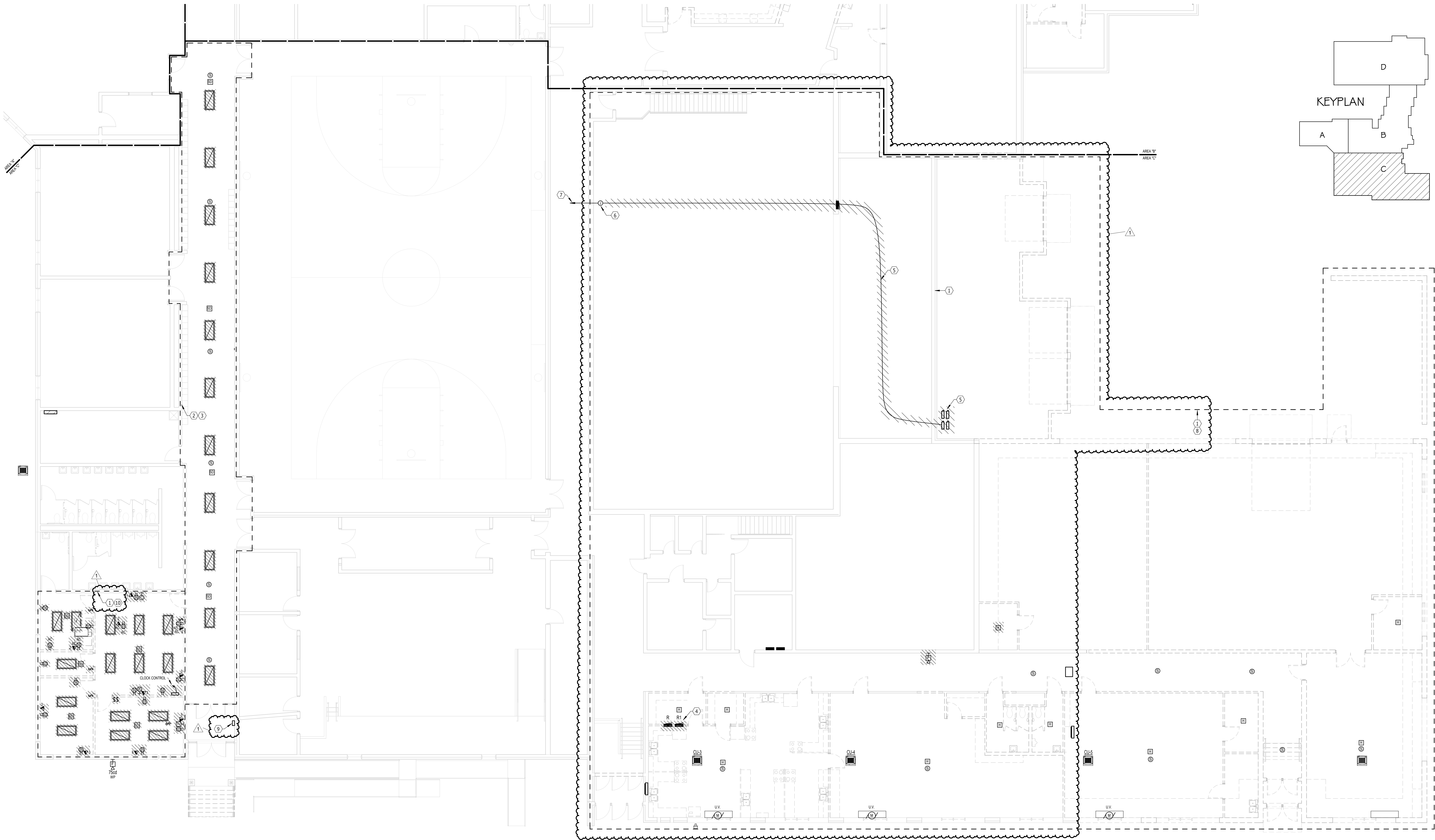
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DEMOLITION FLOOR PLAN - AREA C - ELECTRICAL
SCALE 0 4 8 12 16

Project: WEBSTER AREA SCHOOL 2022 REMODELING & CTE ADDITION
sheet contents: DEMOLITION FLOOR PLAN - AREA C - ELECTRICAL

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date	4-15-2022	
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checked	BJJ	
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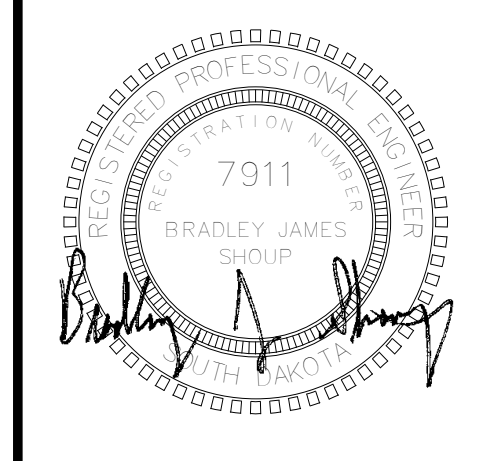

- ELECTRICAL NOTES**
- CONNECT TO UNSWITCHED LIGHTING BRANCH CIRCUIT IN THIS ROOM.
 - UP TO TYPE "M" LUMINAIRE.
 - CONNECT TO EXISTING EXTERIOR LIGHTING BRANCH CIRCUIT.
 - COORDINATE LIGHTING INSTALLATION WITH MECHANICAL EQUIPMENT, SHIFT AS NECESSARY.
 - LOCATE ON EDGE OF ROOF CANOPY.
 - CONNECT TO HOOD CONTROL PANEL.
 - COORDINATE KITCHEN HOOD LIGHTING CONNECTION REQUIREMENTS WITH MECHANICAL CONTRACTOR.

- GENERAL SHEET NOTES**
- THE CEILING SPACE AVAILABLE REQUIRES EXTENSIVE COORDINATION WITH OTHER TRADES. THE CONTRACTOR SHALL PROVIDE ALL OFFSETS AND RELOCATE AS REQUIRED TO COORDINATE THE INSTALLATION OF ALL MATERIALS AND EQUIPMENT WITH OTHER TRADES.
 - WITHIN NEW AND EXISTING WALLS IN FINISHED SPACES, TO THE EXTENT POSSIBLE, ALL NEW BOXES, RACEWAYS, AND CONDUCTORS SHALL BE INSTALLED CONCEALED. WHERE IT IS IMPOSSIBLE TO INSTALL SYSTEMS CONCEALED WITHIN WALLS, WIREMOLD (OR EQUAL SURFACE STEEL RACEWAYS) SHALL BE UTILIZED.
 - UNLESS NOTED OTHERWISE, PROVIDE ROUGH-INS ONLY FOR ACCESS CONTROL SYSTEM DEVICES. COORDINATE REQUIREMENTS WITH THE OWNERS SECURITY SYSTEM SUPPLIER.

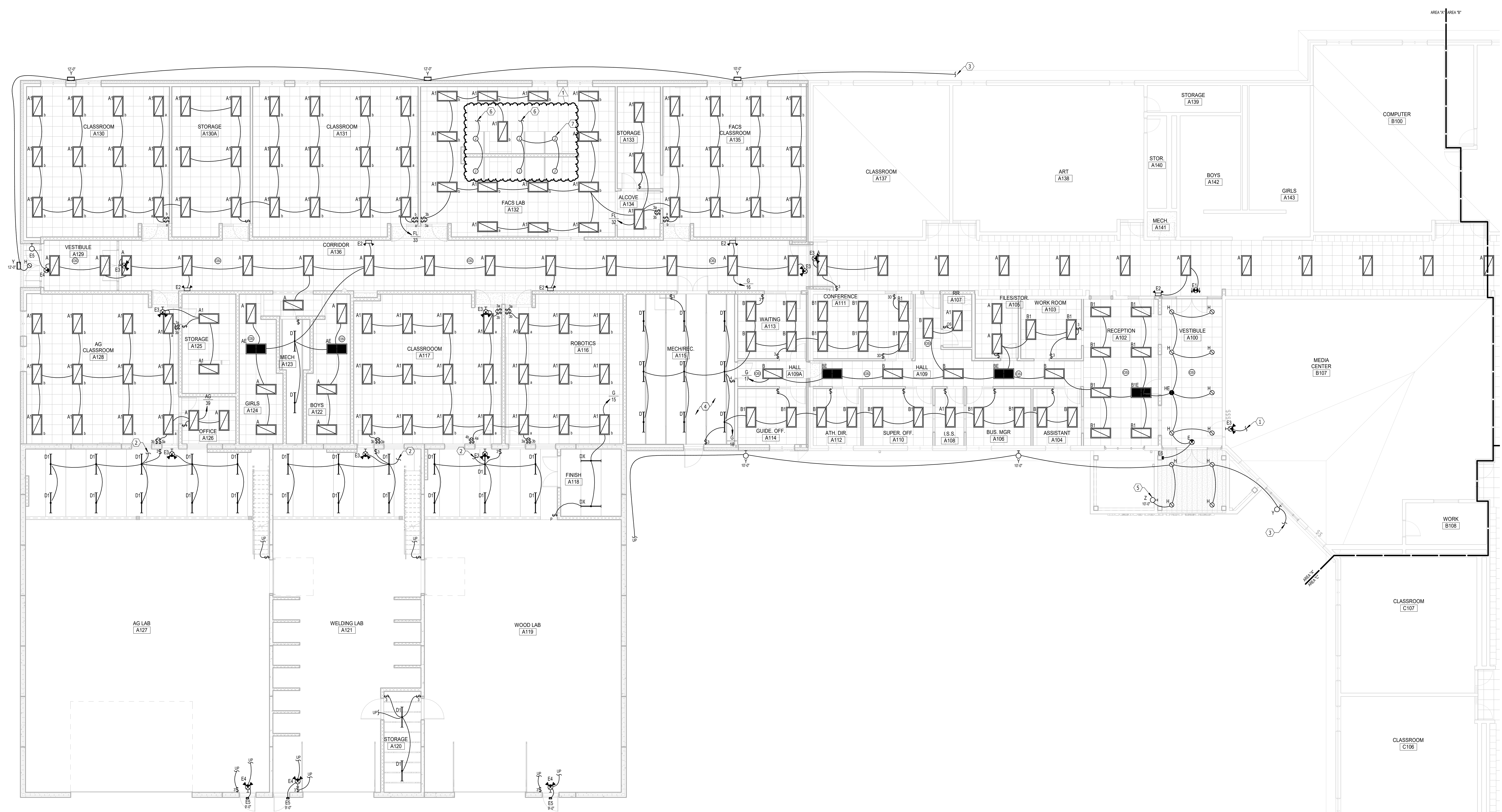


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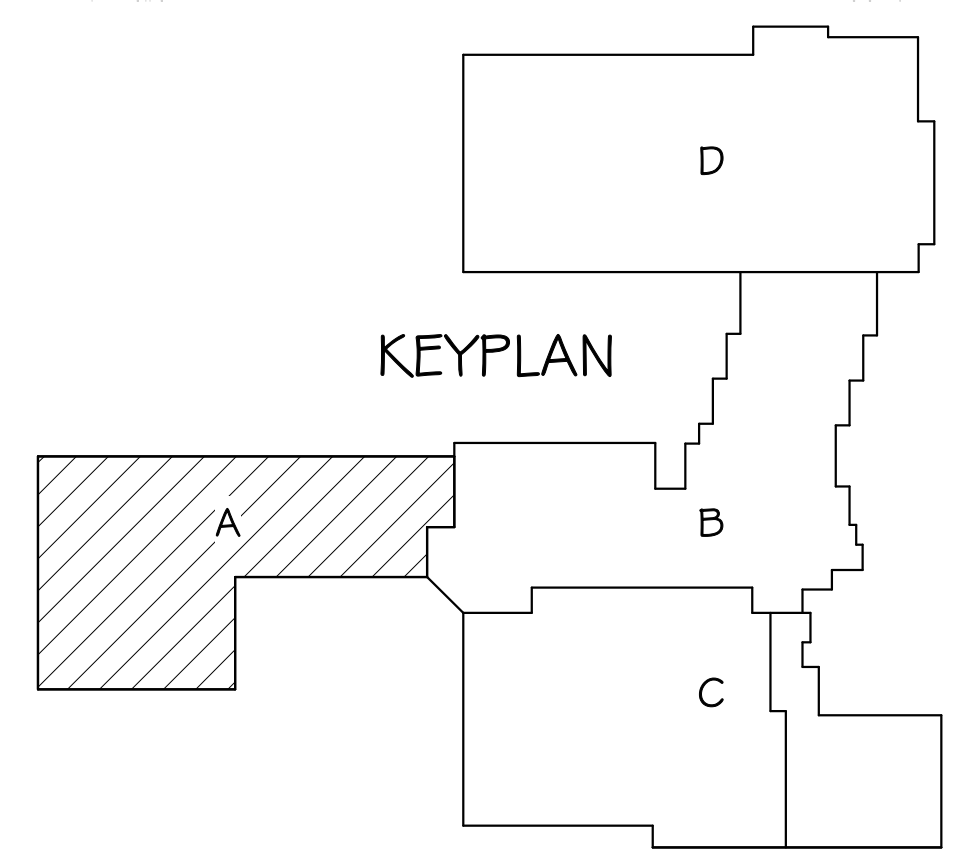
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FLOOR PLAN - AREA A - LIGHTING
 SCALE 0 4 8 12 16

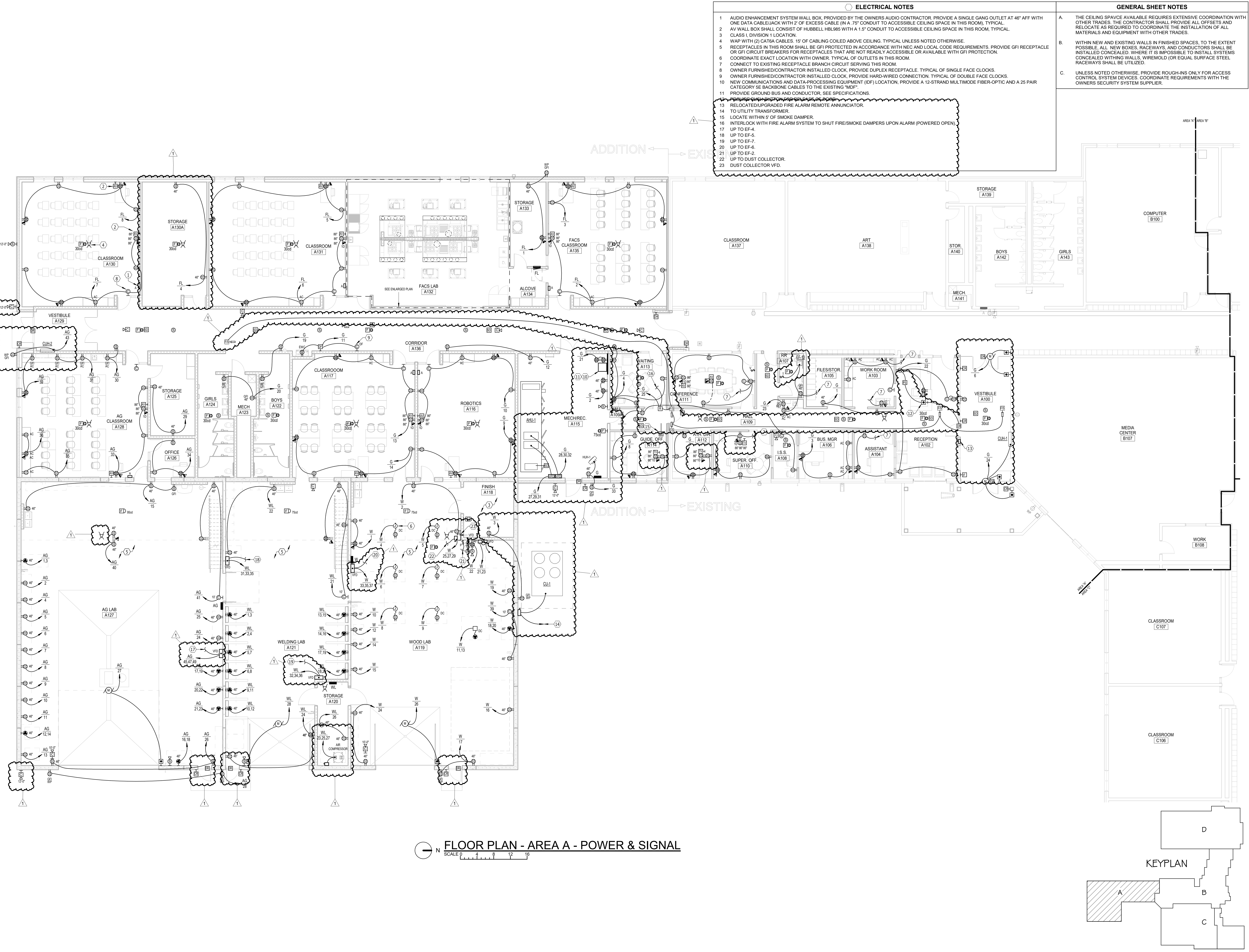


WEBSTER AREA SCHOOL 2022 REMODELING & CTE ADDITION
FLOOR PLAN - AREA A - LIGHTING

Project Number	0421.2936.21
Date	4-15-2022
Revision	
Drawn	ADP
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No.	1
Date	5-3-22
Description	Addendum 1

9.31-A1

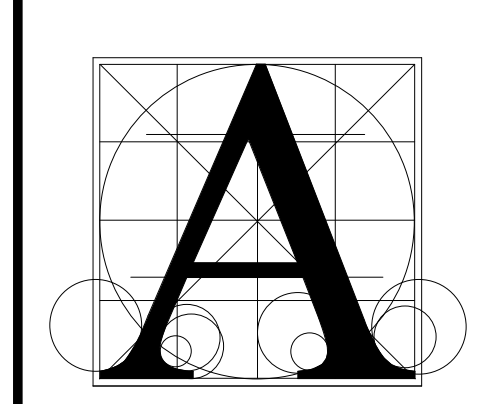
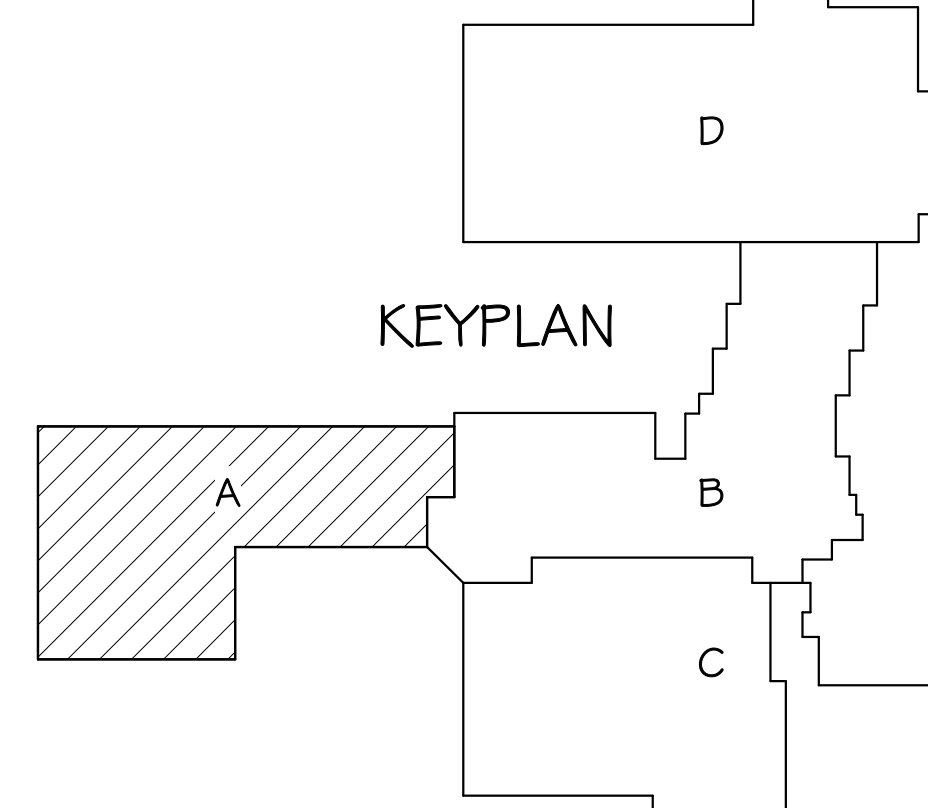
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- ELECTRICAL NOTES**
- AUDIO ENHANCEMENT SYSTEM WALL BOX, PROVIDED BY THE OWNERS AUDIO CONTRACTOR. PROVIDE A SINGLE GANG OUTLET AT 46" AFF WITH ONE DATA CABLE/JACK WITH 2' OF EXCESS CABLE (IN A 75' CONDUIT TO ACCESSIBLE CEILING SPACE IN THIS ROOM), TYPICAL.
 - AV WALL BOX SHALL CONSIST OF HUBBELL HBL985 WITH A 1.5' CONDUIT TO ACCESSIBLE CEILING SPACE IN THIS ROOM, TYPICAL.
 - CLASS 1 DIVISION 1 LOCATION.
 - WAP WITH (2) CAT6A CABLES. 15' OF CABLEING COILED ABOVE CEILING. TYPICAL UNLESS NOTED OTHERWISE.
 - RECEPTACLES IN THIS ROOM SHALL BE GFI PROTECTED IN ACCORDANCE WITH NEC AND LOCAL CODE REQUIREMENTS. PROVIDE GFI RECEPTACLE OR GFI CIRCUIT BREAKERS FOR RECEPTACLES THAT ARE NOT READILY ACCESSIBLE OR AVAILABLE WITH GFI PROTECTION.
 - COORDINATE EXACT LOCATION WITH OWNER. TYPICAL OF OUTLETS IN THIS ROOM.
 - CONNECT TO EXISTING RECEPTACLE BRANCH CIRCUIT SERVING THIS ROOM.
 - OWNER FURNISHED/CONTRACTOR INSTALLED CLOCK, PROVIDE DUPLEX RECEPTACLE. TYPICAL OF SINGLE FACE CLOCKS.
 - OWNER FURNISHED/CONTRACTOR INSTALLED CLOCK, PROVIDE HARD-WIRED CONNECTION. TYPICAL OF DOUBLE FACE CLOCKS.
 - NEW COMMUNICATIONS AND DATA-PROCESSING EQUIPMENT (IDF) LOCATION, PROVIDE A 12-STRAND MULTIMODE FIBER-OPTIC AND A 25 PAIR CATEGORY 5E BACKBONE CABLES TO THE EXISTING 'MDF'.
 - PROVIDE GROUND BUS AND CONDUCTOR. SEE SPECIFICATIONS.
 - RELOCATED/UPGRADED FIRE ALARM REMOTE ANNUNCIATOR TO UTILITY TRANSFORMER.
 - LOCATE WITHIN 5' OF SMOKE DAMPER.
 - INTERLOCK WITH FIRE ALARM SYSTEM TO SHUT FIRE/SMOKE DAMPERS UPON ALARM (POWERED OPEN).
 - UP TO EF-4.
 - UP TO EF-5.
 - UP TO EF-7.
 - UP TO EF-6.
 - UP TO EF-2.
 - UP TO DUST COLLECTOR.
 - DUST COLLECTOR VFD.

- GENERAL SHEET NOTES**
- THE CEILING SPACE AVAILABLE REQUIRES EXTENSIVE COORDINATION WITH OTHER TRADES. THE CONTRACTOR SHALL PROVIDE ALL OFFSETS AND RELOCATE AS REQUIRED TO COORDINATE THE INSTALLATION OF ALL MATERIALS AND EQUIPMENT WITH OTHER TRADES.
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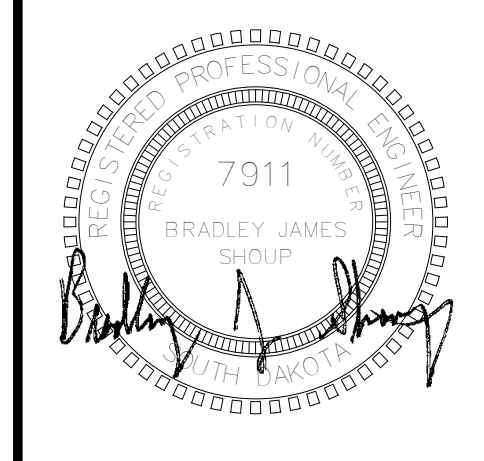
FLOOR PLAN - AREA A - POWER & SIGNAL
SCALE 0 4 8 12 16



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WEBSTER AREA SCHOOL 2022 REMODELING & CTE ADDITION
FLOOR PLAN - AREA A - POWER & SIGNAL

Project Number	0421.2936.21
Date	4-15-2022
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No.	1
Date	5-3-22
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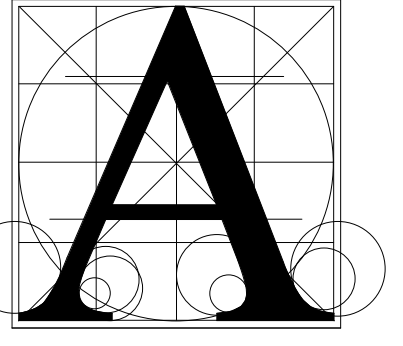
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ELECTRICAL NOTES

2 TO DROP CONTROL PANEL DOWN TO DUST COLLECTOR VFD.

GENERAL SHEET NOTES

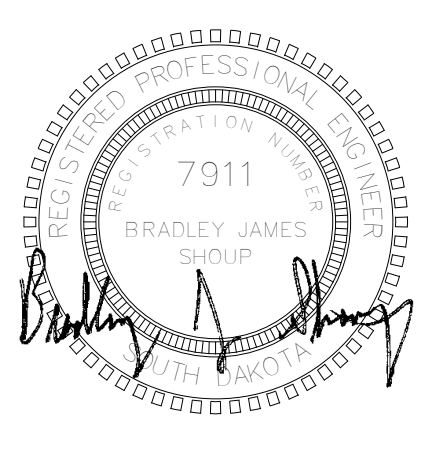
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- B. WITHIN NEW AND EXISTING WALLS IN FINISHED SPACES, TO THE EXTENT POSSIBLE, ALL NEW BOXES, RACEWAYS, AND CONDUCTORS SHALL BE INSTALLED CONCEALED. WHERE IT IS IMPOSSIBLE TO INSTALL SYSTEMS CONCEALED WITHIN WALLS, WIREMOLD (OR EQUAL SURFACE STEEL RACEWAYS) SHALL BE UTILIZED.
- C. UNLESS NOTED OTHERWISE, PROVIDE ROUGH-INS ONLY FOR ACCESS CONTROL SYSTEM DEVICES. COORDINATE REQUIREMENTS WITH THE OWNER'S SECURITY SYSTEM SUPPLIER.



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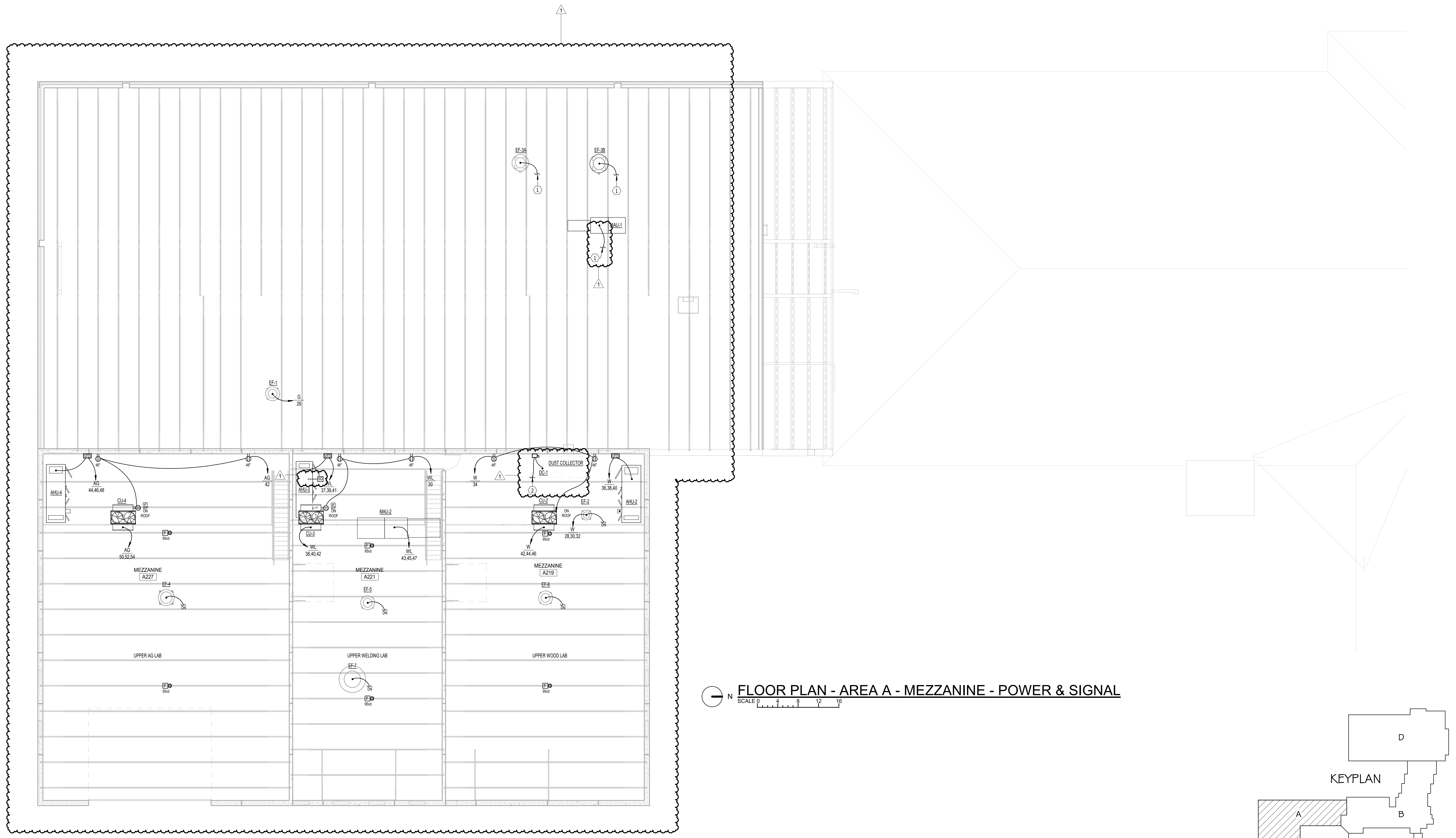
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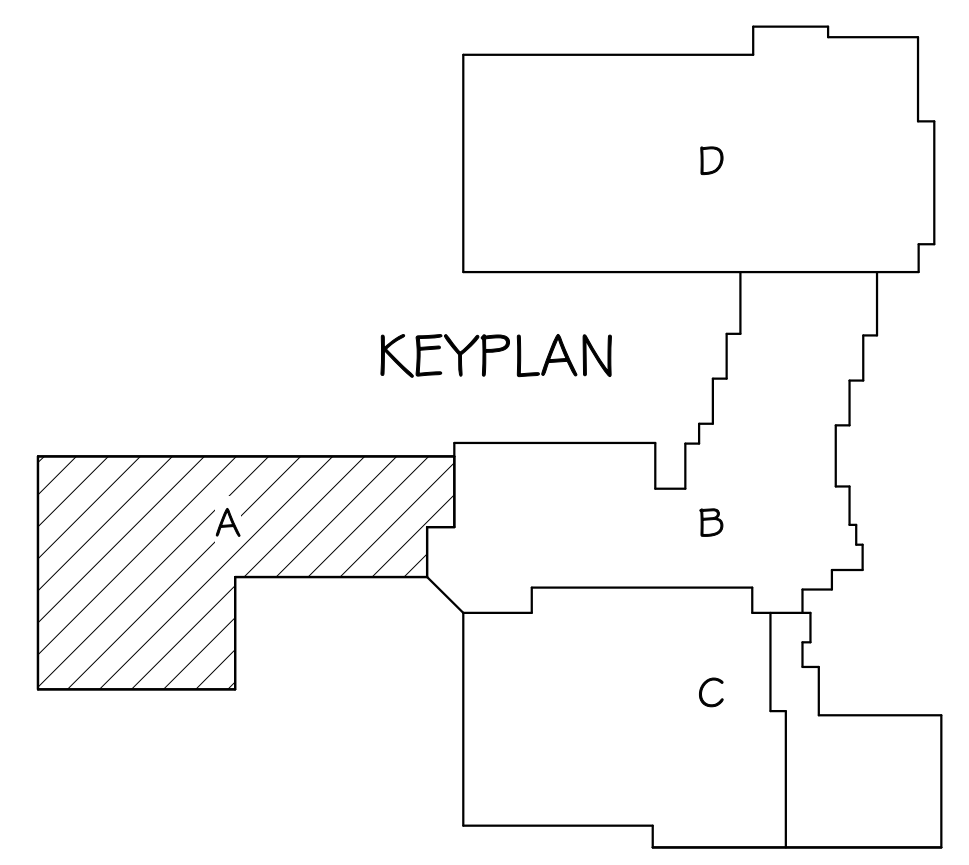


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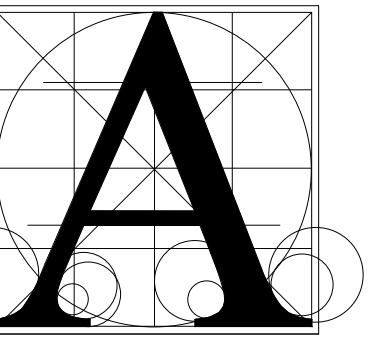
FLOOR PLAN - AREA A - MEZZANINE - POWER & SIGNAL
SCALE 0 4 8 12 16



WEBSTER AREA SCHOOL 2022 REMODELING & CTE ADDITION
MEZZANINE PLAN - AREA A - POWER & SIGNAL

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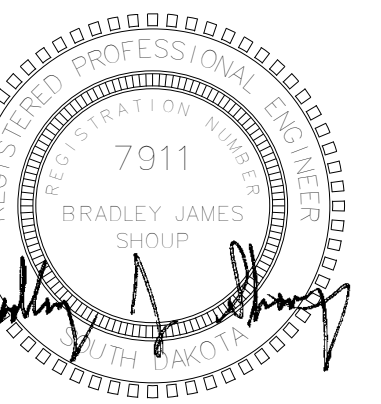
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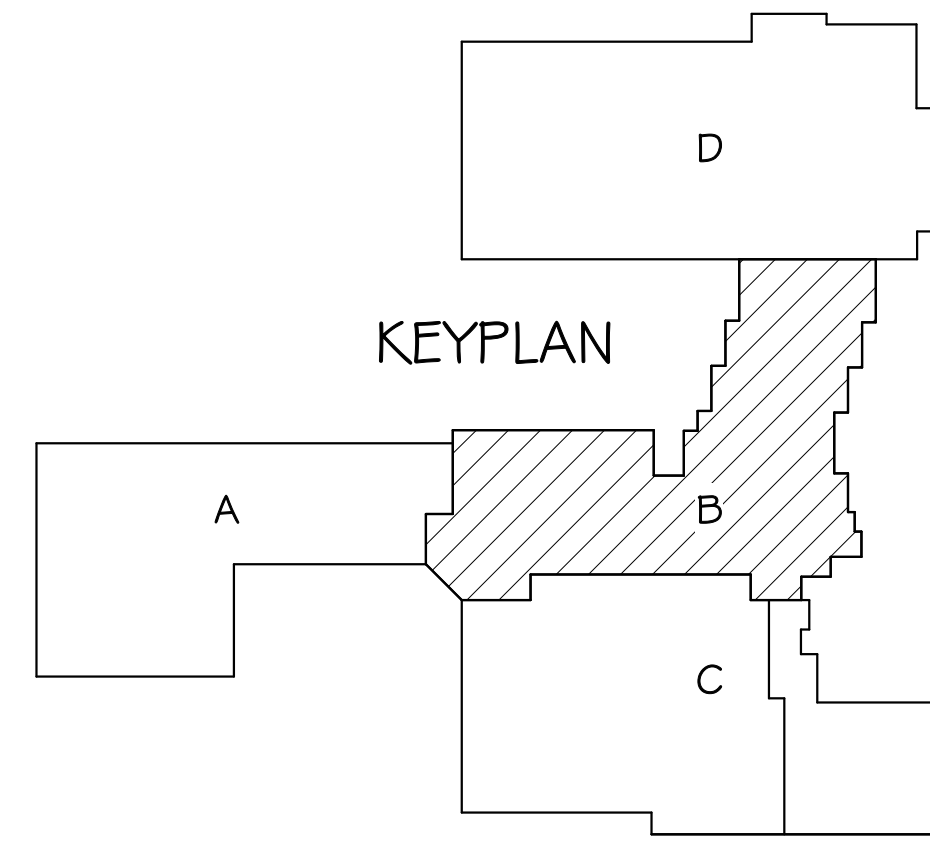
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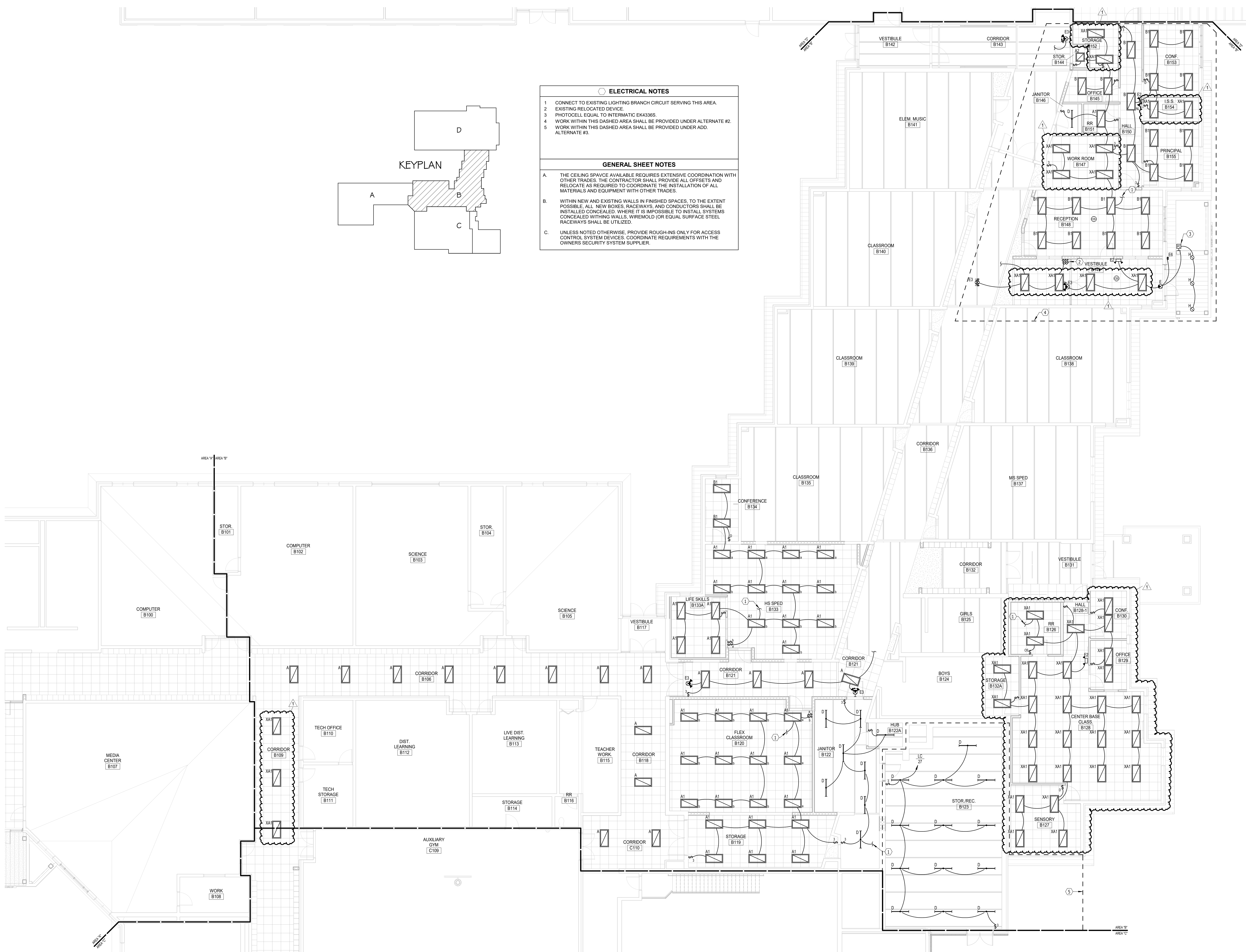
Project: WEBSTER AREA SCHOOL 2022 REMODELING & CTE ADDITION
Sheet: FLOOR PLAN - AREA B - LIGHTING

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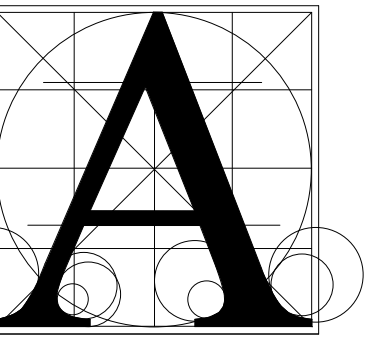


- ELECTRICAL NOTES**
- CONNECT TO EXISTING LIGHTING BRANCH CIRCUIT SERVING THIS AREA.
 - EXISTING RELOCATED DEVICE.
 - PHOTOCELL EQUAL TO INTERMATIC EK4336S.
 - WORK WITHIN THIS DASHED AREA SHALL BE PROVIDED UNDER ALTERNATE #2.
 - WORK WITHIN THIS DASHED AREA SHALL BE PROVIDED UNDER ADD. ALTERNATE #3.
- GENERAL SHEET NOTES**
- THE CEILING SPACE AVAILABLE REQUIRES EXTENSIVE COORDINATION WITH OTHER TRADES. THE CONTRACTOR SHALL PROVIDE ALL OFFSETS AND RELOCATE AS REQUIRED TO COORDINATE THE INSTALLATION OF ALL MATERIALS AND EQUIPMENT WITH OTHER TRADES.
 - WITHIN NEW AND EXISTING WALLS IN FINISHED SPACES, TO THE EXTENT POSSIBLE, ALL NEW BOXES, RACEWAYS, AND CONDUCTORS SHALL BE INSTALLED CONCEALED. WHERE IT IS IMPOSSIBLE TO INSTALL SYSTEMS CONCEALED WITHIN WALLS, WIREMOLD (OR EQUAL SURFACE STEEL RACEWAYS) SHALL BE UTILIZED.
 - UNLESS NOTED OTHERWISE, PROVIDE ROUGH-INS ONLY FOR ACCESS CONTROL SYSTEM DEVICES. COORDINATE REQUIREMENTS WITH THE OWNERS SECURITY SYSTEM SUPPLIER.



FLOOR PLAN - AREA B - LIGHTING
SCALE 0 4 8 12 16

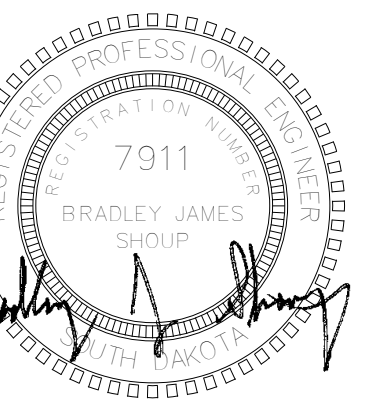
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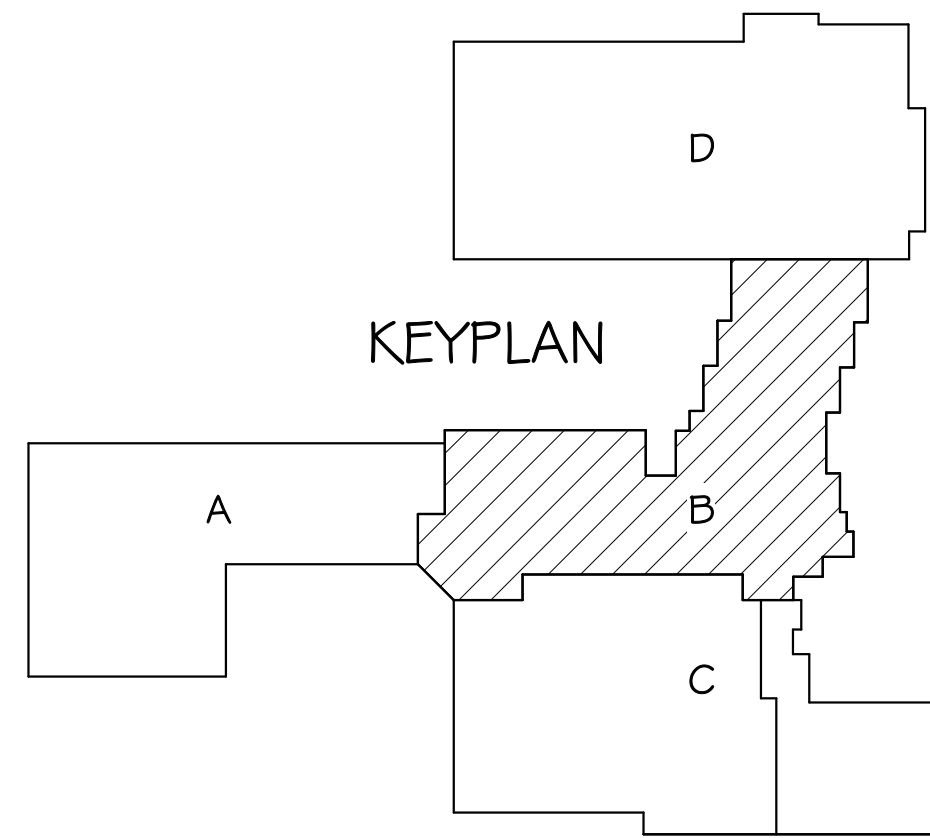


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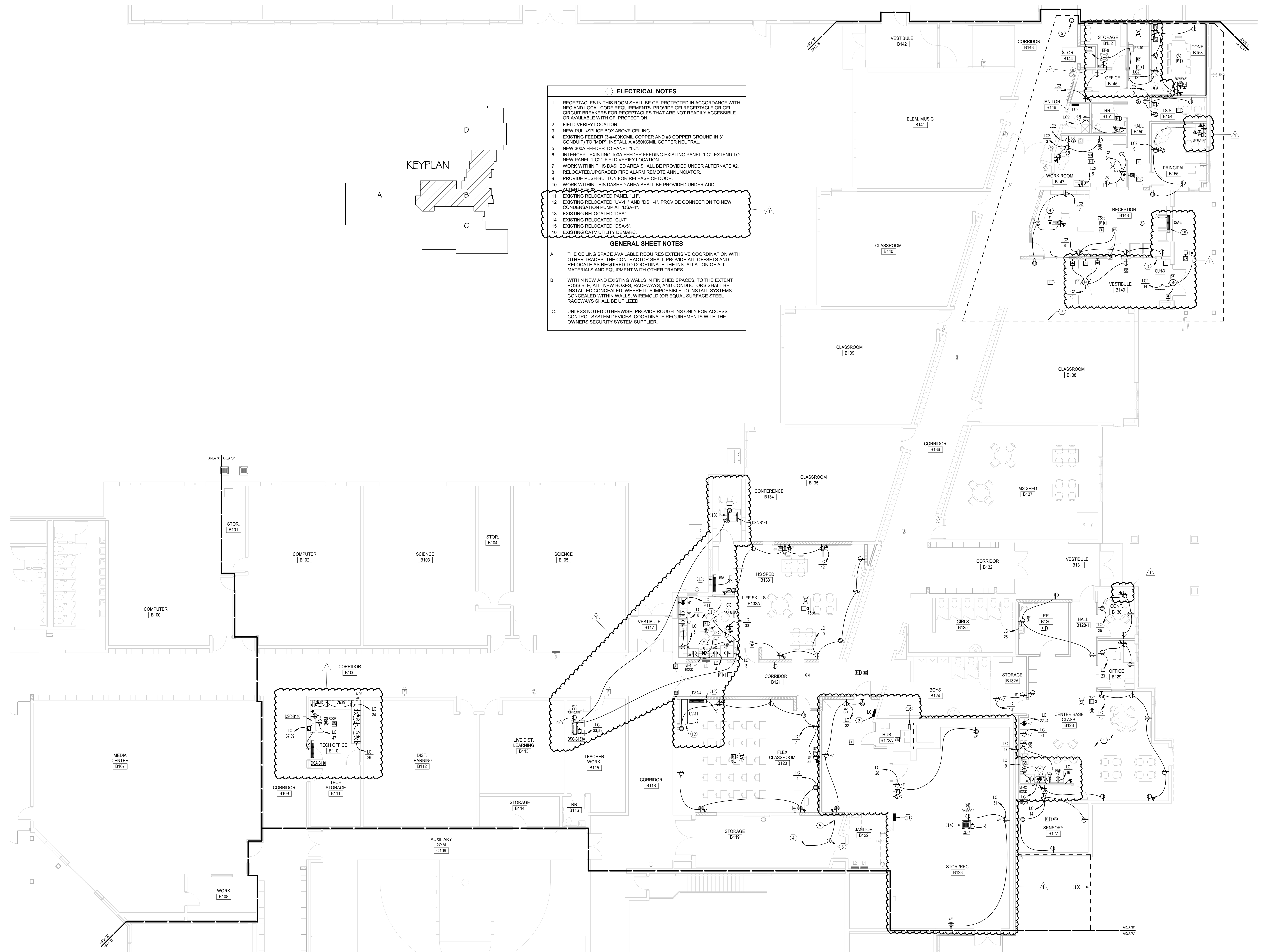
WEBSTER AREA SCHOOL 2022 REMODELING
& CTE ADDITION
FLOOR PLAN - AREA B - POWER & SIGNAL

Project Number	0421.2936.21	
Date	4-15-2022	
Revision		
Drawn	ADP	
Checked	BJS	
No.	DATE	DESCRIPTION
1	5-3-22	Addendum 1

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- ELECTRICAL NOTES**
- RECEPTACLES IN THIS ROOM SHALL BE GFI PROTECTED IN ACCORDANCE WITH NEC AND LOCAL CODE REQUIREMENTS. PROVIDE GFI RECEPTACLE OR GFI CIRCUIT BREAKERS FOR RECEPTACLES THAT ARE NOT READILY ACCESSIBLE OR AVAILABLE WITH GFI PROTECTION.
 - FIELD VERIFY LOCATION.
 - NEW PULL/SPICE BOX ABOVE CEILING.
 - EXISTING FEEDER (3-400KCMIL COPPER AND #3 COPPER GROUND IN 3" CONDUIT) TO "MDP". INSTALL A #350KCMIL COPPER NEUTRAL.
 - NEW 300A FEEDER TO PANEL "LC".
 - INTERCEPT EXISTING 100A FEEDER FEEDING EXISTING PANEL "LC". EXTEND TO NEW PANEL "LC2". FIELD VERIFY LOCATION.
 - WORK WITHIN THIS DASHED AREA SHALL BE PROVIDED UNDER ALTERNATE #2.
 - RELOCATED/UPGRADED FIRE ALARM REMOTE ANNUNCIATOR.
 - PROVIDE PUSH-BUTTON FOR RELEASE OF DOOR.
 - WORK WITHIN THIS DASHED AREA SHALL BE PROVIDED UNDER ADD. ALTERNATE #3.
 - EXISTING RELOCATED PANEL "LH".
 - EXISTING RELOCATED "DU-11" AND "DSH-4". PROVIDE CONNECTION TO NEW CONDENSATION PUMP AT "DSA-4".
 - EXISTING RELOCATED "DSA".
 - EXISTING RELOCATED "CU-7".
 - EXISTING RELOCATED "DSA-5".
 - EXISTING CATV UTILITY DEMARC.
- GENERAL SHEET NOTES**
- THE CEILING SPACE AVAILABLE REQUIRES EXTENSIVE COORDINATION WITH OTHER TRADES. THE CONTRACTOR SHALL PROVIDE ALL OFFSETS AND RELOCATE AS REQUIRED TO COORDINATE THE INSTALLATION OF ALL MATERIALS AND EQUIPMENT WITH OTHER TRADES.
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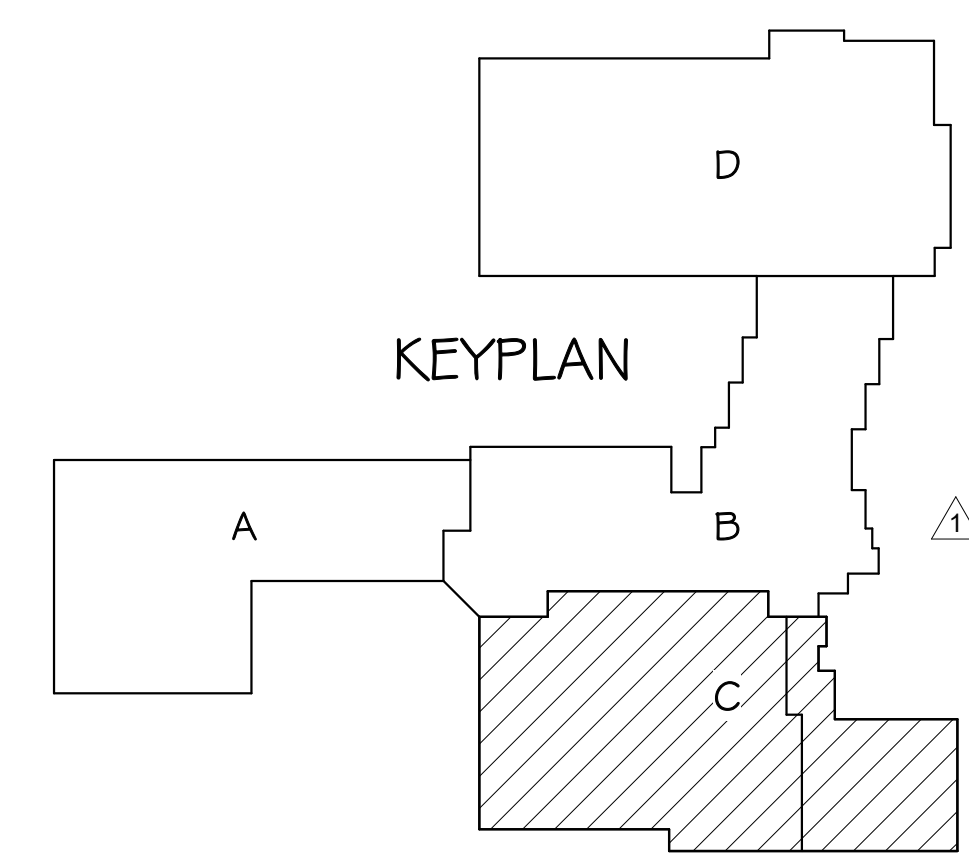
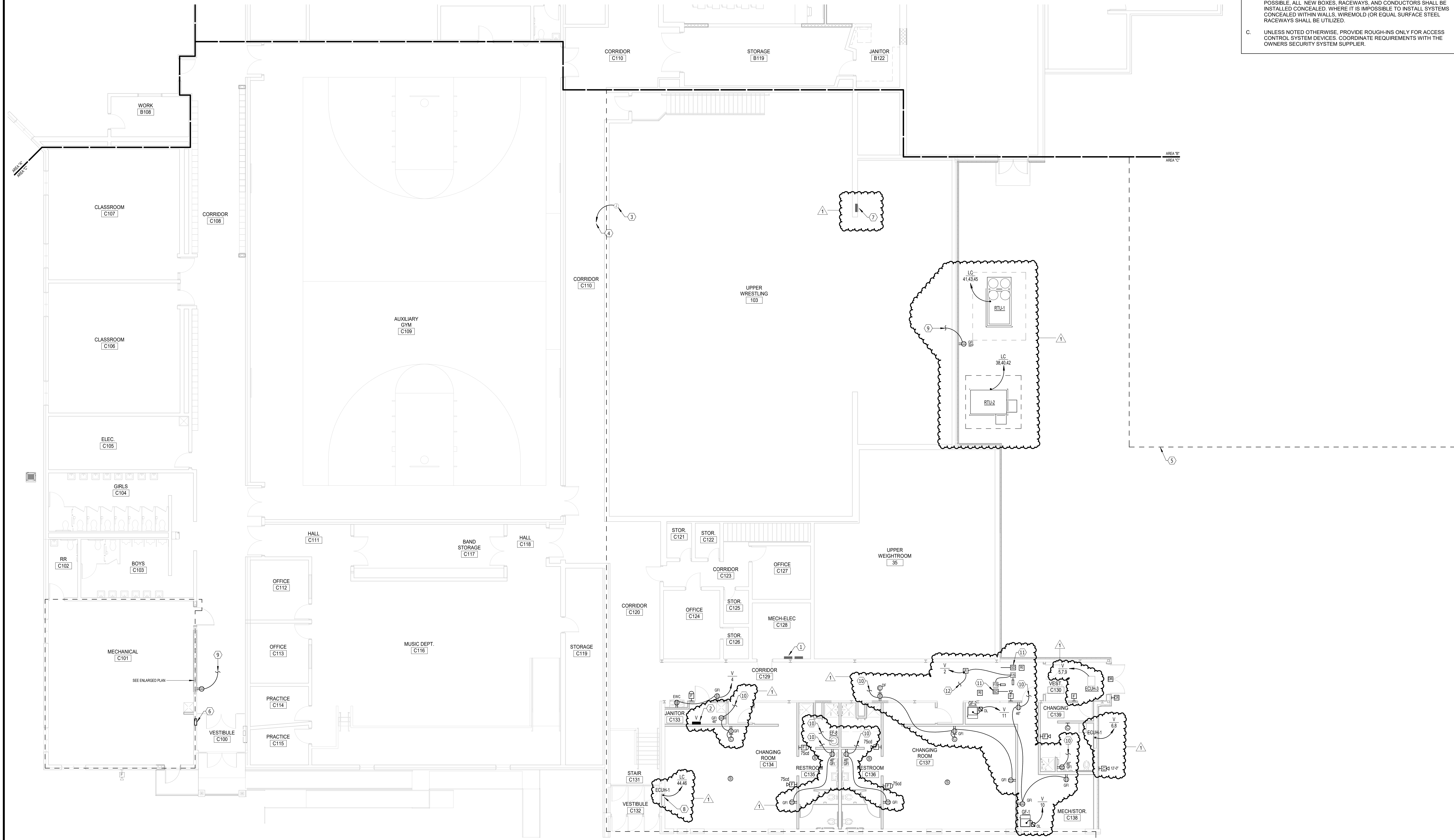


FLOOR PLAN - AREA B - POWER & SIGNAL

SCALE 0 4 8 12 16

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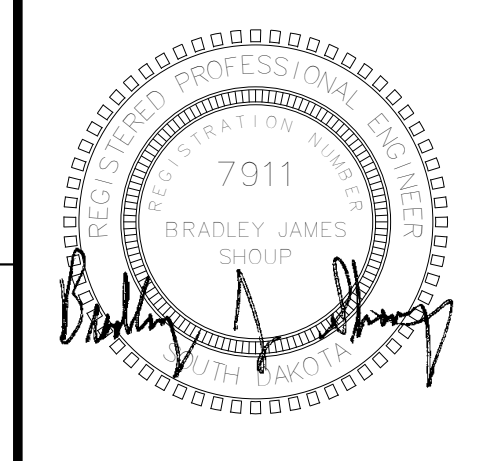


- ELECTRICAL NOTES**
- EXISTING PANEL "V1" (ITE), 200A M.L.O. 120/208V/1PHASE.
 - NEW PANEL "V", FIELD VERIFY LOCATION.
 - EXISTING JUNCTION BOX ABOVE CEILING, FIELD VERIFY LOCATION.
 - NEW 350A FEEDER TO PANEL "V".
 - WORK WITHIN THIS DASHED AREA SHALL BE PROVIDED UNDER ADD. ALTERNATE #3.
 - UPGRADE EXISTING FIRE ALARM REMOTE ANNUNCIATOR AS REQUIRED FOR SYSTEM UPGRADE/EXPANSION.
 - EXISTING PANEL "ST".
 - ROUTE EXPOSED RACEWAY IN CORNER OF VESTIBULE.
 - CONNECT TO EXISTING RECEPTACLE BRANCH CIRCUIT.
 - CONNECT TO EXISTING RECEPTACLE BRANCH CIRCUIT FROM PANEL "V1" SERVING THIS ROOM.
 - LOCATE WITHIN 5' OF FIRE/SMOKE DAMPER.
 - UP TO EF-4.
- GENERAL SHEET NOTES**
- A. THE CEILING SPACE AVAILABLE REQUIRES EXTENSIVE COORDINATION WITH OTHER TRADES. THE CONTRACTOR SHALL PROVIDE ALL OFFSETS AND RELOCATE AS REQUIRED TO COORDINATE THE INSTALLATION OF ALL MATERIALS AND EQUIPMENT WITH OTHER TRADES.
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WEBSTER AREA SCHOOL 2022 REMODELING & CTE ADDITION

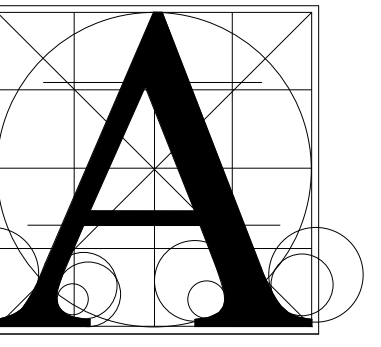
FLOOR PLAN - AREA C - POWER & SIGNAL

Project Number: 0421.2936.2.1
Date: 4-15-2022
Revision:
Drawn: ADP, Checked: BJS
No. 1, Date 5-3-22, Description Addendum 1

FLOOR PLAN - AREA C - POWER & SIGNAL

SCALE 0 4 8 12 16

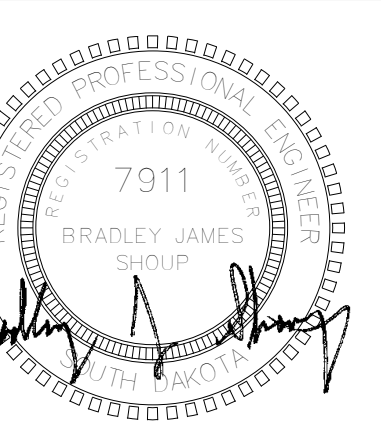
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ELECTRICAL NOTES

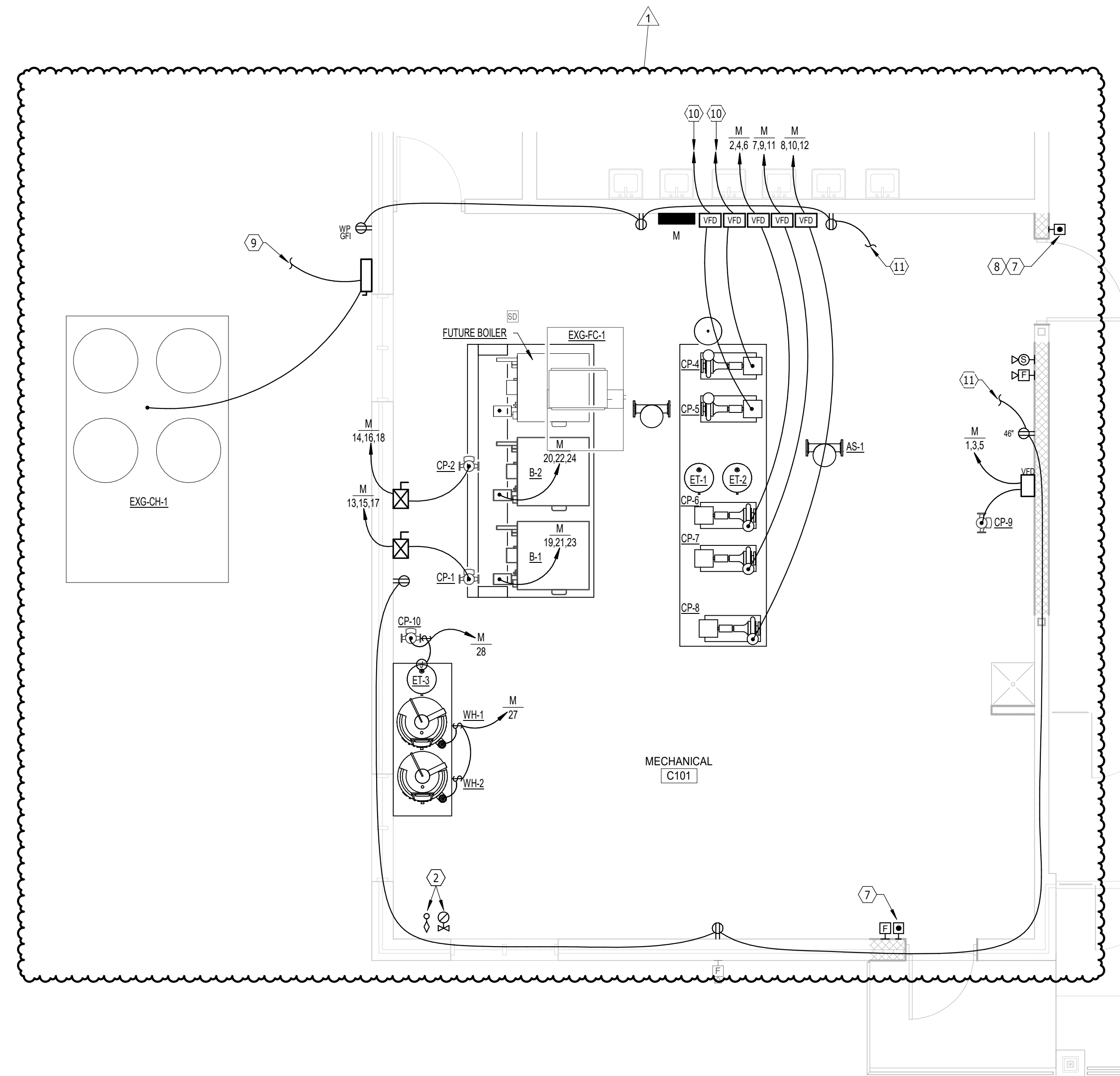
- RECEPTACLES IN THIS ROOM SHALL BE GFI PROTECTED IN ACCORDANCE WITH NEC AND LOCAL CODE REQUIREMENTS. PROVIDE GFI RECEPTACLE OR GFI CIRCUIT BREAKERS FOR RECEPTACLES THAT ARE NOT READILY ACCESSIBLE OR AVAILABLE WITH GFI PROTECTION.
- COORDINATE QUANTITY OF FLOW AND TAMPER SWITCHES WITH FIRE PROTECTION CONTRACTOR.
- FINAL CONNECTION TO EQUIPMENT SHALL BE PROVIDED UNDER ALTERNATE #1. PROVIDE BOXES AND RACEWAYS AS REQUIRED FOR FUTURE INSTALLATION UNDER THE BASE BID.
- HOOD CONTROL PANEL.
- HOOD ANSUL SYSTEM PULL STATION.
- PROVIDE BRANCH CIRCUIT UNDER THE BASE BID. PROVIDE DROP CORD UNDER ALTERNATE #1, TYPICAL.
- BOILER EMERGENCY OFF MUSHROOM HEAD PUSHBUTTON SWITCH. INTERLOCK WITH SHUNT TRIP CIRCUIT BREAKER IN PANEL "M".
- PROVIDE PROTECTIVE COVER SIMILAR TO STI 13020CR.
- TO UTILITY TRANSFORMER.
- TO SPARE 60A/3P CIRCUIT BREAKER IN "MDP".
- CONNECT TO EXISTING RECEPTACLE BRANCH CIRCUIT SERVING THIS ROOM.
- MONITOR HOOD ANSUL SYSTEM WITH FIRE ALARM SYSTEM. INTERLOCK ANSUL SYSTEM WITH APPROPRIATE SHUNT TRIP CIRCUIT BREAKERS IN PANEL "FL".

GENERAL SHEET NOTES

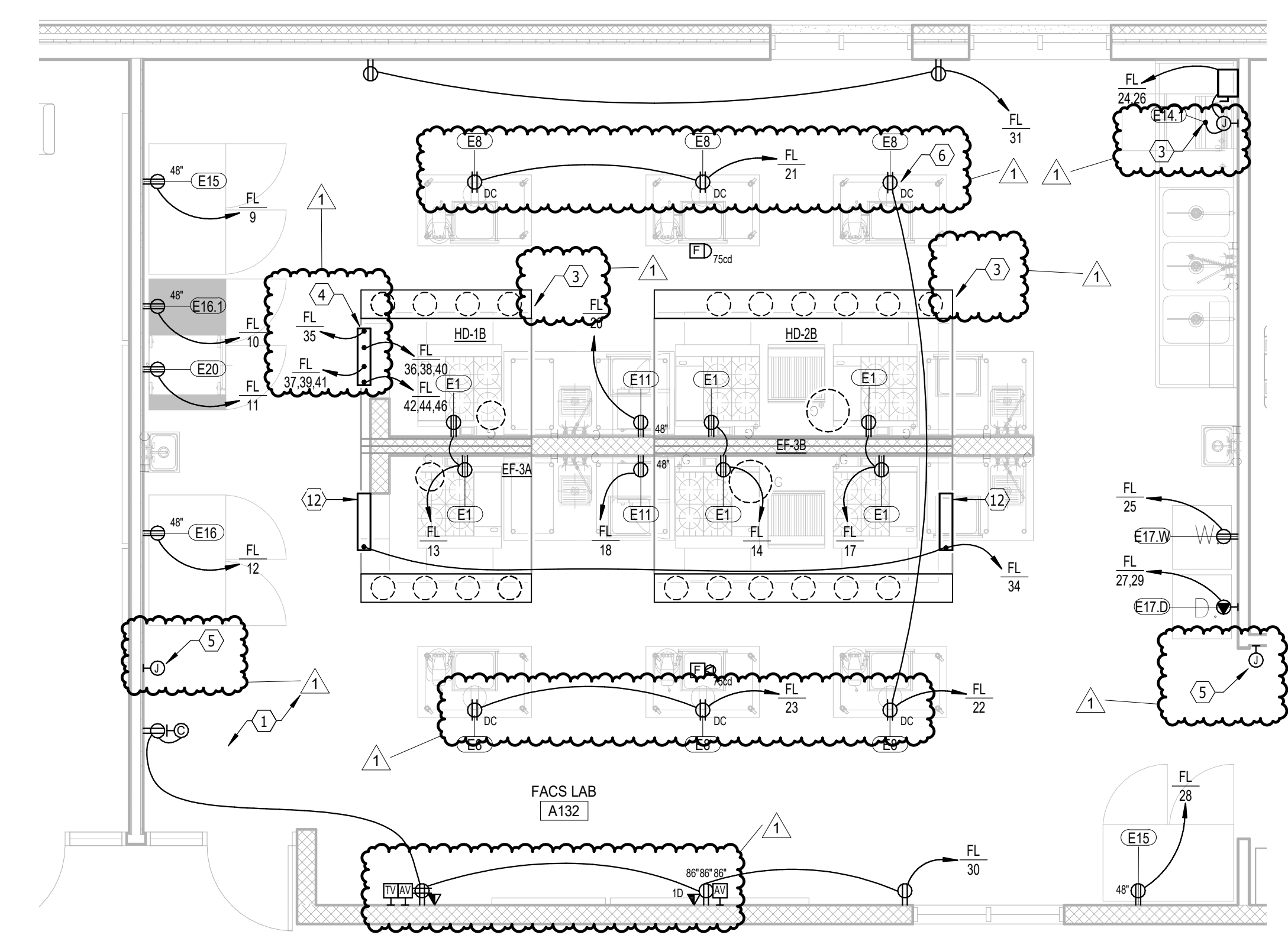
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EQUIPMENT SCHEDULE

ITEM	QTY	DESCRIPTION	VOLTS	PHASE	AMPS	NEUA PLUS CONFIGURATION	ELEC. ROUGH-IN HEIGHT (IN)	EQUIPMENT REMARKS
1	6	RANGE W/ FOUR BURNERS, GRIDDLE & OVEN	120	-	3.4	5-15	18	SIX LOCATIONS
11	(2)	(BY OWNER) MICROWAVE OVEN	115	1	13	5-15	48	TWO LOCATIONS
15	2	REACH-IN REFRIGERATOR	115	1	6.0	5-15	48	TWO LOCATIONS
16	1	REACH-IN FREEZER	115	1	10.0	5-15	48	-
16.1	(1)	(BY OWNER) REACH-IN FREEZER	115	1	10.0	5-15	48	-
17	(1)	(BY OWNER) LAUNDRY WASHER / DRYER	-	-	-	-	-	* REVIEW UTILITY AND VENTING REQUIREMENTS WITH OWNER
20	1	MOBILE HEATED CABINET	120	1	16.7	5-20	18	-



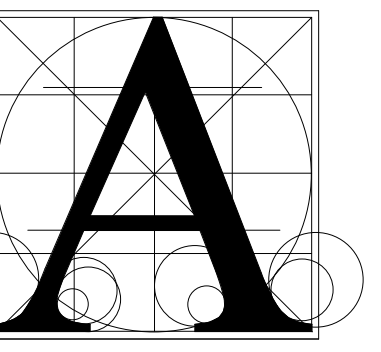
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ENLARGED FACs LAB A132 - POWER & SIGNAL

Project
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revision:
drawn: ADP checked: BJS
NO. DATE DESCRIPTION
1 5-3-22 Addendum 1

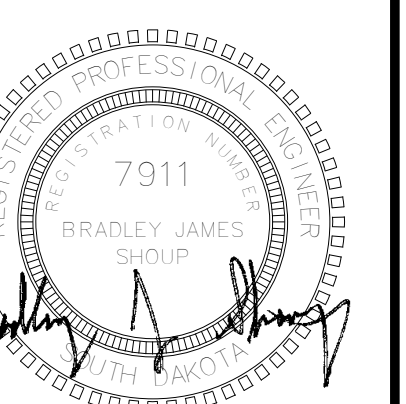
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date:	4-15-2022
revision:	
drawn:	ADP checked: BJS
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1	5-3-22 Addendum 1



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ACEI PROJ. #121121

WEBSTER AREA SCHOOL 2022 REMODELING
& CTE ADDITION
ELECTRICAL SCHEDULES

Project: number 0421.2.936.2.1
date 4-15-2022
revision
drawn ADP checked BJS
NO. DATE DESCRIPTION
1 5-3-22 Addendum 1

9.51

PANELBOARD: G. LOCATION: MECHREC A115. VOLTAGE: 208Y/120 V, 3 ø 4 W. MOUNTING: SURFACE NEMA1. MAIN DEVICE: 400 A MLO. BUS AMPS: 400 AMPS. SPECIAL: 10,000 AMPS SYMMETRICAL. Table with columns: LOAD DESCRIPTION, BKR, POLES, CKT, A, B, C, CKT, POLES, BKR, LOAD DESCRIPTION. Includes sub-totals for connected, demand, and estimated loads, and panel totals.

PANELBOARD: FL. LOCATION: ALCOVE A134. VOLTAGE: 208Y/120 V, 3 ø 4 W. MOUNTING: RECESSED NEMA1. MAIN DEVICE: 200 A MLO. BUS AMPS: 200 AMPS. SPECIAL: 10,000 AMPS SYMMETRICAL. Table with columns: LOAD DESCRIPTION, BKR, POLES, CKT, A, B, C, CKT, POLES, BKR, LOAD DESCRIPTION. Includes sub-totals for connected, demand, and estimated loads, and panel totals.

PANELBOARD: AG. LOCATION: AG LAB A127. VOLTAGE: 208Y/120 V, 3 ø 4 W. MOUNTING: SURFACE NEMA1. MAIN DEVICE: 400 A MLO. BUS AMPS: 400 AMPS. SPECIAL: 10,000 AMPS SYMMETRICAL. Table with columns: LOAD DESCRIPTION, BKR, POLES, CKT, A, B, C, CKT, POLES, BKR, LOAD DESCRIPTION. Includes sub-totals for connected, demand, and estimated loads, and panel totals.

PANELBOARD: V. LOCATION: JANITOR C133. VOLTAGE: 208Y/120 V, 3 ø 4 W. MOUNTING: SURFACE NEMA1. MAIN DEVICE: 400 A MLO. BUS AMPS: 400 AMPS. SPECIAL: 10,000 AMPS SYMMETRICAL. Table with columns: LOAD DESCRIPTION, BKR, POLES, CKT, A, B, C, CKT, POLES, BKR, LOAD DESCRIPTION. Includes sub-totals for connected, demand, and estimated loads, and panel totals.

PANELBOARD: W. LOCATION: WOOD LAB A119. VOLTAGE: 208Y/120 V, 3 ø 4 W. MOUNTING: SURFACE NEMA1. MAIN DEVICE: 200 A MLO. BUS AMPS: 200 A. SPECIAL: 10,000 AMPS SYMMETRICAL. Table with columns: LOAD DESCRIPTION, BKR, POLES, CKT, A, B, C, CKT, POLES, BKR, LOAD DESCRIPTION. Includes sub-totals for connected, demand, and estimated loads, and panel totals.

PANELBOARD: WL. LOCATION: STORAGE A120. VOLTAGE: 208Y/120 V, 3 ø 4 W. MOUNTING: SURFACE NEMA1. MAIN DEVICE: 400 A MLO. BUS AMPS: 400 AMPS. SPECIAL: 10,000 AMPS SYMMETRICAL. Table with columns: LOAD DESCRIPTION, BKR, POLES, CKT, A, B, C, CKT, POLES, BKR, LOAD DESCRIPTION. Includes sub-totals for connected, demand, and estimated loads, and panel totals.

PANELBOARD: M. LOCATION: MECHANICAL C101. VOLTAGE: 208Y/120 V, 3 ø 4 W. MOUNTING: SURFACE NEMA1. MAIN DEVICE: 200 A MLO. BUS AMPS: 200 AMPS. SPECIAL: 10,000 AMPS SYMMETRICAL. Table with columns: LOAD DESCRIPTION, BKR, POLES, CKT, A, B, C, CKT, POLES, BKR, LOAD DESCRIPTION. Includes sub-totals for connected, demand, and estimated loads, and panel totals.

PANELBOARD: LC2. LOCATION: SURFACE NEMA1. VOLTAGE: 208Y/120 V, 3 ø 4 W. MOUNTING: SURFACE NEMA1. MAIN DEVICE: 100 A MLO. BUS AMPS: 100 AMPS. SPECIAL: 10,000 AMPS SYMMETRICAL. Table with columns: LOAD DESCRIPTION, BKR, POLES, CKT, A, B, C, CKT, POLES, BKR, LOAD DESCRIPTION. Includes sub-totals for connected, demand, and estimated loads, and panel totals.

PANELBOARD: LC. LOCATION: JANITOR B122. VOLTAGE: 208Y/120 V, 3 ø 4 W. MOUNTING: SURFACE NEMA1. MAIN DEVICE: 400 A MLO. BUS AMPS: 400 AMPS. SPECIAL: 10,000 AMPS SYMMETRICAL. Table with columns: LOAD DESCRIPTION, BKR, POLES, CKT, A, B, C, CKT, POLES, BKR, LOAD DESCRIPTION. Includes sub-totals for connected, demand, and estimated loads, and panel totals.

NOTES:
1. PROVIDE GFI CIRCUIT BREAKERS AS REQUIRED BY THE NEC AND LOCAL CODE REQUIREMENTS.

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NOTES:
1. SUB-FEED CIRCUIT BREAKER.

NOTES:
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