



This addendum is hereby made part of the Contract Documents as though it were originally included therein and must be acknowledged by the bidder in the proper place on the bid form.

Project Manual – VOL I

1. **Reference AIA Document AIA A132-2019 Sample Agreement**
 - A. **DELETE** reference to SED Control Numbers. **SUBSTITUTE** the following SED Control Numbers:
22-14-01-04-0-001-014 Main Building
22-14-01-04-5-003-002 Bus Garage
2. **Reference AIA Document AIA A232-2019 General Conditions**
 - A. **DELETE** reference to SED Control Numbers. **SUBSTITUTE** the following SED Control Numbers:
22-14-01-04-0-001-014 Main Building
22-14-01-04-5-003-002 Bus Garage
3. **Reference Specification Section 04 2000 – Unit Masonry**
 - A. **DELETE** in its entirety. **SUBSTITUTE** the attached revised Section 02 4000 – Unit Masonry

Project Manual – VOL II

4. **Reference Specification Section 08 7100 – Door Hardware**
 - A. **DELETE** in its entirety. **SUBSTITUTE** the attached revised Section 08 7100 – Door Hardware.

Contract Drawings – VOLUME I

5. **Reference Sheet No. AD2/AA103 – Architectural General Notes, Abbreviations and Legends**
 - A. **ADD** the following General Sheet Note: *“The roof abatement work is to be completed by the Roof Contractor.”*
6. **Reference Sheet No. AS000 – Architectural General Notes, Abbreviations and Legends**
 - A. **DELETE** in its entirety. **SUBSTITUTE** the attached revised Sheet No. AS000.
7. **Reference Sheet No. AD100 – First Floor Demolition Reference Plan**
 - A. **ADD** Detail 1 from the attached Sheet No. AD3-A1 – Partial Basement Floor Plan.
8. **Reference Sheet No. A102 – First Floor Plan – Area B**
 - A. **DELETE** in its entirety. **SUBSTITUTE** the attached revised Sheet No. A102.
9. **Reference Sheet No. A800 – Schedules and Details**
 - A. **DELETE** in its entirety. **SUBSTITUTE** the attached revised Sheet No. A800.
10. **Reference Sheet No. FS-101 – Foodservice Equipment Layout**
 - A. On Foodservice Equipment Schedule, **ADD** the following to Item No. 21 and Item No. 67: *“(Furnished By Owner, installed by GC).”*
CLARIFICATION: These pieces of equipment will be purchased by the owner. The equipment installation and connections remain in the scope of work of the respective contractors.



Contract Drawings – VOLUME II

11. Refer to Sheet M113 – Roof Plan:

A. **ADD** the following General Note:

“2. *The Mechanical Contractor is responsible for the temporary removal and/or disconnection of roof top equipment as required to accommodate the roof recovery system. Coordinate with Roof Contractor.*”

12. Refer to Sheet E700 – Electrical Riser Diagram:

A. Referring to Wiring Legend; **DELETE** General Cabling Note #1 in its entirety. **SUBSTITUTE** with the following:

“1. *All fire alarm cabling shall be as follows: Use red MC cable for cabling in concealed spaces, red EMT conduit in unfinished spaces and basement, and single channel wire mold with matching boxes for devices in finished space.*”

Respectfully submitted,

Taylor J. Woolf, AIA, NCARB
Associate / Project Architect

TJW:lr
Enclosures

**SECTION 04 2000
UNIT MASONRY**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Concrete Block.
- B. Mortar and Grout.
- C. Reinforcement and Anchorage.
- D. Lintels.

1.02 RELATED REQUIREMENTS

- A. Section 03 2000 - Concrete Reinforcing: Reinforcing steel for grouted masonry.
- B. Section 04 0511 - Mortar and Masonry Grout.
- C. Section 05 5000 - Metal Fabrications: Loose steel lintels.

1.03 REFERENCE STANDARDS

- A. TMS 402/602 - Building Code Requirements and Specification for Masonry Structures 2022, with Errata.
- B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware 2023.
- C. ASTM A641/A641M - Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire 2019.
- D. ASTM C90 - Standard Specification for Loadbearing Concrete Masonry Units 2022.
- E. ASTM C91/C91M - Standard Specification for Masonry Cement 2023.
- F. ASTM C129 - Standard Specification for Nonloadbearing Concrete Masonry Units 2022.
- G. ASTM C144 - Standard Specification for Aggregate for Masonry Mortar 2018.
- H. ASTM C150/C150M - Standard Specification for Portland Cement 2022.
- I. ASTM C207 - Standard Specification for Hydrated Lime for Masonry Purposes 2018.
- J. ASTM C270 - Standard Specification for Mortar for Unit Masonry 2019a, with Editorial Revision.
- K. ASTM C404 - Standard Specification for Aggregates for Masonry Grout 2018.
- L. ASTM C476 - Standard Specification for Grout for Masonry 2023.
- M. ASTM C979/C979M - Standard Specification for Pigments for Integrally Colored Concrete 2016.
- N. TMS 402/602 - Building Code Requirements and Specification for Masonry Structures 2022, with Errata.
- O. IMIAWC (CW) - Recommended Practices & Guide Specifications for Cold Weather Masonry Construction; International Masonry Industry All-Weather Council; 1993.
- P. IMIAWC (HW) - Recommended Practices & Guide Specifications for Hot Weather Masonry Construction; International Masonry Industry All-Weather Council; current edition.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal process.
- B. Product Data: Provide data for masonry units, fabricated wire reinforcement, mortar, and masonry accessories.
- C. Samples: Submit four (4) samples of facing brick units to illustrate finish and appearance, color, texture, and extremes of color range for each type or color of brick or CMU selected.
- D. Manufacturer's Certificate: Certify that masonry units meet or exceed Specified Requirements.

1.05 QUALITY ASSURANCE

- A. Comply with provisions of TMS 402/602, except where exceeded by Requirements of the Contract Documents.
 - 1. Maintain one copy of each document on Project Site.

1.06 MOCK-UP

- A. Construct a masonry wall as a mock-up panel sized 4 feet long by 4 feet high, which includes all Specified masonry unit types, mortar and accessories and structural backup.
- B. Locate where directed.
- C. Mock-up, if acceptable, may remain as part of the Work.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, handle, and store masonry units by means that will prevent mechanical damage and contamination by other materials.

PART 2 PRODUCTS

2.01 CONCRETE MASONRY UNITS

- A. Concrete Block: Comply with Referenced Standards and as follows:
 - 1. Size: Standard units with nominal face dimensions of 16 by 8 inches and nominal depths as indicated on Drawings for specific locations.
 - 2. Integral Water Repellent: All concrete masonry units used in exterior cavity wall, including lintel block shall contain the recommended amount of integral water-repellent known as the "Dry-Block System, admix", as manufactured by W.R. Grace Chemical Company or equal.
 - 3. Special Shapes: At all external corners at interior walls, concrete block shall be provided with bull-nosed corners.
 - 4. Load-Bearing Units: ASTM C90, normal weight.
 - a. Hollow block, as indicated shall be two core standard unit and shall be a minimum of twenty-eight (28) days old.
 - b. Exposed faces: Manufacturer's standard neutral color and texture where indicated.
 - 5. Non-Loadbearing Units: ASTM C129.
 - a. Hollow block, as indicated shall be two core standard unit and shall be a minimum of twenty-eight (28) days old.
 - b. Normal weight.
 - 6. Color: As selected by Architect/Engineer.
 - 7. Comply with ASTM C90 for finish and appearance requirements. Do not include units in the Work which do not meet the minimum established Requirements.

2.02 BRICK UNITS

- A. Manufacturers:
 - 1. Belden Brick; Belcrest: www.beldenbrick.com/#sle.
 - 2. General Clay or approved equal.
 - 3. Substitutions: See Section 01 600 - Product Requirements.
- B. Facing Brick: ASTM C216, Type FBS, Grade Sw.
 - 1. Color and texture as selected by Architect/Engineer or match existing units at each site.
 - 2. Actual Size as indicated on Drawings.
 - 3. Special Shapes: Molded units as required by conditions indicated unless standard units can be sawn to produce equivalent effect.
 - 4. Compressive strength as indicated on drawings, measured in accordance with ASTM C67/C76M.
- C. Building (Common) Brick: ASTM C62, Grade SW; solid units.
 - 1. Nominal size as indicated on Drawings.
 - 2. Compressive strength as indicated on Drawings, measured in accordance with ASTM C67/C67M.
- D. Hollow Facing and Building Brick: ASTM C652, Grade SW; Type HBS; Class H40V.
 - 1. Color and texture as selected by Architect/Engineer or match existing units at each site.
 - 2. Nominal size as indicated on Drawings.
 - 3. Compressive strength as indicated on Drawings, measured in accordance with ASTM C67/C67M.

2.03 MORTAR AND GROUT MATERIALS

- A. Mortar mix shall consist of prepackaged blend of portland cement and hydrated lime.
 - 1. Portland Cement: ASTM C150/C150M, Type I; color as required to produce approved color sample.
 - 2. Hydrated Lime: ASTM C207, Type N.

3. Grout Aggregate: ASTM C404.
- B. Sand shall conform to the requirements of ASTM C 144, except that grading shall comply with the following limits.
 1. No. 4 Sieve: 100 percent passing.
 2. No. 8 Sieve: 95 to 100 percent passing.
 3. No. 16 Sieve: 60 to 100 percent passing.
 4. No. 30 Sieve: 35 to 70 percent passing.
 5. No. 50 Sieve: 15 to 35 percent passing.
 6. No. 100 Sieve: 2 to 15 percent passing.
 7. No. 200 Sieve: 0 to 2 percent passing.
- C. Pigments for Colored Mortar: Iron or chromium oxides with demonstrated stability and colorfastness. Pigments for colored mortar shall be nonfading and alkali proof and in accordance with ASTM C 979 and approved by the Architect/Engineer.
- D. Water: Clean and potable.
- E. Calcium Chloride: Calcium chloride or admixtures containing calcium chloride shall not be used.
- F. Other Admixtures: Air entraining agents, accelerators, retarders, or other admixtures shall not be used without the express written consent of the Architect/Engineer.
- G. Moisture-Resistant Admixture: Water repellent compound designed to reduce capillarity.
 1. Acceptable Product: Dry Block or equal.

2.04 REINFORCEMENT AND ANCHORAGE

- A. Reinforcing Steel: ASTM A615/A615M, Grade 60 (60,000 psi), deformed billet bars; galvanized.
- B. Single Wythe Joint Reinforcement: Truss type; ASTM A 82/A 82M steel wire, hot dip galvanized after fabrication to ASTM A 153/A 153M, Class B; 3/16-inch/0.1875 inch side rods with 9 gauge/ 0.1483 inch cross rods; width as required to provide not more than 1 inch and not less than 1/2 inch of mortar coverage on each exposure. Single wythe joint reinforcement shall be Dur-O-Wal D/A 3100 truss type as manufactured by Dur-O-Wal, Inc. or approved equal.
- C. Masonry Veneer Anchors: 2-piece anchors that permit differential movement between masonry veneer and structural backup, hot dip galvanized to ASTM A 153/A 153M, Class B2. Wood/Metal stud or Concrete block back-up shall be X-SEAL Anchor with X-Seal Tape as manufactured by Hohmann & Barnard or equal. Structural Steel back-up shall be #359 as manufactured by Hohmann & Barnard or equal.
 1. Anchor plates: Not less than 0.075 inch thick, designed for fastening to structural backup through sheathing by two fasteners; provide design with legs that penetrate sheathing and insulation to provide positive anchorage.
 2. Wire ties: Triangular shape, 0.1875 inch thick. Vee Byna-Tie as manufactured by Hohmann & Barnard Inc. or equal.
 3. Vertical adjustment: Not less than 2 inches.

2.05 ACCESSORIES

- A. Preformed Control Joints: Rubber material. Provide with corner and tee accessories, fused joints.
- B. Joint Filler: Closed cell polyvinyl chloride; oversized 50 percent to joint width; self expanding; 1 inch wide by maximum lengths available.
- C. Mortar Maze Cell Vents: 3/8 inch x 2-1/2 inch x 3-3/8 inch Durable polypropylene as manufactured by Advanced Building Products or equal. Color as selected by Architect/Engineer.
- D. Air Space Maintenance and Drainage System: Dovetail Mortar Trap by Hohmann & Barnard or equal.
 1. Required thickness of mat for air space between insulation and exterior wythe.
 - a. 3/4 inch for air spaces 1 inch to 1-1/8 inch.
 - b. 1 inch for air spaces 1-1/4 inch to 1-3/8 inch.
 - c. 1-1/4 inches for air spaces greater than or equal to 1-1/2 inches.
- E. Cleaning Solution: Non-acidic, not harmful to masonry work or adjacent materials.

2.06 MORTAR AND GROUT MIXES

- A. Mortar for Unit Masonry: ASTM C270, using the Proportion Specification.
 1. Masonry below grade and in contact with earth: Type S.

2. Exterior, loadbearing masonry: Type N.
 3. Exterior, non-loadbearing masonry: Type N.
 4. Interior, loadbearing masonry: Type N.
 5. Interior, non-loadbearing masonry: Type N.
 6. Masonry Shear Walls: Type M
- B. Grout: ASTM C476; consistency required to fill completely volumes indicated for grouting; fine grout for spaces with smallest horizontal dimension of 2 inches or less; coarse grout for spaces with smallest horizontal dimension greater than 2 inches.
- C. Admixtures: Add to mixture at manufacturer's recommended rate and in accordance with manufacturer's instructions; mix uniformly.
1. Minimum 28 Day Compressive Strength: 2500 psi.
- D. Mixing: Use mechanical batch mixer and comply with referenced standards. Mix for at least three (3) minutes after all ingredients are in the drum, and at least long enough to make a thorough, complete intimate mix of materials.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive masonry. Correct conditions detrimental to timely and proper Completion of the Work. Do not proceed until unsatisfactory conditions are corrected.
- B. Verify that related items provided under other sections are properly sized and located.
- C. Do not commence installation until foundations are clean, rough and level. Remove all laitance and foreign material.
- D. Verify that the foundation elevation is such that the bed joint thickness will be between 1/4 inch and 3/4 inch and that the foundation is true to line with masonry not projecting over more than 1/4 inch.
- E. Verify that built-in items are in proper location, and ready for roughing into Masonry Work.
- F. Clean projecting dowels free from loose scale, dirt, concrete and other material that will inhibit bond.

3.02 PREPARATION

- A. Direct and coordinate placement of metal anchors supplied for installation under other Sections.
- B. Provide temporary bracing during installation of Masonry Work. Maintain in place until building structure provides permanent bracing.

3.03 MORTAR MIXING

- A. Measuring of materials shall be either by weight or volume such that the Specified proportions of mortar materials can be controlled and accurately maintained.
- B. Sand shall not be measured by the shovel.
- C. Mortar shall be mixed in a mechanical batch mixer for at least three (3) minutes, but not more than five
 1. (5) minutes with the maximum amount of water which will produce a workable consistency.
- D. If, within two (2) hours of mixing, excessive water is lost from the mortar by evaporation, retemper the mortar.
- E. Discard all mortar which is more than two and one-half (2-1/2) hours old.

3.04 COURSING

- A. Establish lines, levels, and coursing indicated. Protect from displacement.
- B. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.
- C. Concrete Masonry Units:
 1. Bond: Running, or as otherwise indicated.
 2. Coursing: One unit and one mortar joint to equal 8 inch.
 3. Mortar Joints: Concave.

3.05 PLACING AND BONDING

- A. Lay hollow masonry units with face shell bedding on head and bed joints.
- B. Lay all masonry in running bond unless otherwise shown on the Contract Drawings. Use only brick that are clean and free from dust and other foreign matter.
- C. Furrowing of bed joints shall not be permitted.
- D. Remove excess mortar as Work progresses. Do not permit mortar to drop and accumulate into cavity air space or to plug weeps.
- E. Do not shift or tap masonry units after mortar has achieved initial set. Where adjustment must be made, remove mortar and replace.
- F. Perform job site cutting of masonry units with proper tools to provide straight, clean, unchipped edges. Prevent broken masonry unit corners or edges.

3.06 MINIMUM REQUIREMENTS OF COLD WEATHER CONSTRUCTION

- A. Air Temperature (degrees F):
 - 1. Above 40:
 - a. Heating of Materials: Normal masonry procedures.
 - b. Protection: Cover walls with plastic or canvas at end of workday to prevent water entering masonry.
 - 2. Below 40:
 - a. Do not lay masonry units having a temperature below 20 degrees F. Remove visible ice on masonry units before the unit is laid in the masonry.
 - b. Heating of Materials: Heat mortar sand or mixing water to maintain mortar temperatures between 40 and 120 degrees F at the time of mixing. Maintain mortar above freezing until used in masonry.
 - c. Protection: Cover walls with plastic or canvas at end of workday to prevent water entering masonry.
 - d. Mean daily temperature is between 40 and 32 degrees F:
 - 1) Protect completed masonry from rain or snow by covering with a weather resistive membrane for twenty-four (24) hours after construction.
 - 3. Below 32:
 - a. Heating of Materials: In addition to the above, heat the sand. Frozen sand and frozen wet masonry units must be thawed.
 - b. Protection: With wind velocities over 10 mph, provide windbreaks during the workday and cover walls and materials at the end of the workday to prevent wetting and freezing.
 - c. Mean daily temperature is between 32 and 25 degrees F:
 - 1) Completely cover masonry with a weather resistive membrane for twenty-four (24) hours after construction.
 - d. Mean daily temperature is between 25 and 20 degrees F:
 - 1) Completely cover completed masonry with insulation blankets or equal protection for twenty-four (24) hours after construction.
 - e. Ambient Temperature Between 25 and 20 degrees F:
 - 1) Use heat sources on both sides of the masonry under construction and install wind breaks when wind velocity is in excess of 10 mph.
 - f. Mean daily temperature is below 20 degrees F:
 - 1) Maintain masonry temperature above 32 degrees F for a twenty-four (24) hour period after construction by enclosure with supplementary heat, by electric heating blankets, by infrared heat lamps, or by other acceptable methods as approved by the Architect/Engineer.
 - g. Ambient Temperature Below 20 degrees F:
 - 1) Provide an enclosure for the masonry under construction and use heat source to maintain temperatures above 32 degrees F within the enclosure.

3.07 MINIMUM REQUIREMENTS OF HOT WEATHER CONSTRUCTION

- A. Preparation:
 - 1. When Ambient temperature exceeds 100 degrees F, or exceeds 90 degrees F with a wind velocity greater than 8 mph:
 - a. Maintain sand piles in a damp, loose condition.

- b. Provide necessary conditions and equipment to produce mortar having a temperature below 120 degrees F.
 - 2. When Ambient temperature exceeds 115 degrees F, or exceeds 105 degrees F with a wind velocity greater than 8 mph:
 - a. Maintain sand piles in a damp, loose condition.
 - b. Provide necessary conditions and equipment to produce mortar having a temperature below 120 degrees F and shade materials and mixing equipment from direct sunlight.
- B. During Construction:
 - 1. When Ambient temperature exceeds 100 degrees F, or exceeds 90 degrees F with a wind velocity greater than 8 mph:
 - a. Maintain temperature of mortar and grout below 120 degrees F.
 - b. Flush mixer, mortar transport container, and mortar boards with cool water before they come into contact with mortar ingredients or mortar.
 - c. Maintain mortar consistency by re-tempering with cool water.
 - d. Use mortar within two (2) hours of initial mixing.
 - 2. When Ambient temperature exceeds 115 degrees F, or exceeds 105 degrees F with a wind velocity greater than 8 mph:
 - a. Maintain temperature of mortar and grout below 120 degrees F.
 - b. Flush mixer, mortar transport container, and mortar boards with cool water before they come into contact with mortar ingredients or mortar.
 - c. Maintain mortar consistency by re-tempering with cool water.
 - d. Use mortar within two (2) hours of initial mixing.
 - e. Use cool mixing water for mortar and grout.
 - f. Ice is permitted in the mixing water prior to use. Do not permit ice in the mixing water when added to the other mortar or grout materials.
- C. Protection:
 - 1. When Ambient temperature exceeds 100 degrees F, or exceeds 90 degrees F with a wind velocity greater than 8 mph:
 - a. Fog spray all newly constructed masonry until damp, at least three times a day until the masonry is three (3) days old.

3.08 REINFORCEMENT AND ANCHORAGE - SINGLE WYTHE MASONRY

- A. Install horizontal joint reinforcement 16 inches on vertical center.
- B. Place masonry joint reinforcement in first and second horizontal joints above and below openings. Extend minimum 16 inches each side of opening.
- C. Place continuous joint reinforcement in first and second joint below top of walls.
- D. Lap joint reinforcement ends minimum 6 inches.
- E. Reinforce stacked bonded unit joint corners and intersections with strap anchors 16 inches on center.

3.09 REINFORCEMENT AND ANCHORAGE - MASONRY VENEER

- A. Install horizontal joint reinforcement 16 inch on vertical center.
- B. Place masonry joint reinforcement in first and second horizontal joints above and below openings. Extend minimum 16 inches each side of opening.
- C. Place continuous joint reinforcement in first and second joint below top of walls.
- D. Lap joint reinforcement ends minimum 6 inches.
- E. Masonry Back-Up: Embed anchors to bond veneer at maximum 16 inches on center vertically and 24 inches on center horizontally. Place additional anchors at perimeter of openings and ends of panels, so maximum spacing of anchors is 8 inches on center vertically.
- F. Stud Back-Up: Secure veneer anchors to stud framed back-up and embed into masonry veneer at maximum 16 inches on center vertically and 16 inches on center horizontally. Place additional anchors at perimeter of openings and ends of panels, so maximum spacing of anchors is 8 inches on center.
- G. Reinforce stacked bonded unit joint corners and intersections with strap anchors 16 inches on center.

3.10 REINFORCEMENT AND ANCHORAGES - MULTIPLE WYTHE UNIT MASONRY

- A. Install horizontal joint reinforcement 16 inches on vertical center.
- B. Place masonry joint reinforcement in first and second horizontal joints above and below openings. Extend minimum 16 inches each side of opening.
- C. Place continuous joint reinforcement in first and second joint below top of walls.
- D. Lap joint reinforcement ends minimum 6 inches.

3.11 LINTELS

- A. Install loose steel lintels over openings. Provide steel lintels in accordance with the lintel schedule as indicated in the Contract Drawings.

3.12 GROUTED COMPONENTS

- A. Timing: Do not grout until masonry has cured at least twenty-four (24) hours.
- B. At bearing locations, fill masonry cores with grout for a minimum 12 inches either side of opening.

3.13 SITE TOLERANCES

- A. Erect masonry within the following tolerances from the Specified dimensions.
 - 1. Dimension of elements:
 - a. In cross section or elevation: -1/4 inch, + 1/2 inch.
 - b. bed: +/- 1/8 inch.
 - 1) head: - 1/4", + 3/8 inch. 3) collar: - 1/4", + 3/8 inch.
 - c. Grout space of cavity width, except for masonry walls passing framed construction: -1/4", + 3/8".
 - 2. Elements:
 - a. Variation from level:
 - 1) bed joints: +/- 1/4 inch in 10 feet; +/- 1/2 inch maximum.
 - 2) top surfacing of bearing walls: +/- 1/4 inch in 10 feet; +/- 1/2 inch maximum.
 - b. Variation from plumb:
 - 1) +/- 1/4 inch in 10 feet; +/- 3/8 inch in 20 feet; +/- 1/2 inch maximum.
 - c. True to a line:
 - 1) +/- 1/4 inch in 10 feet; +/- 3/8 inch in 20 feet; +/- 1/2 inch maximum.
 - d. Alignment of columns and walls (bottom versus top):
 - 1) bearing walls: +/- 1/2 inch.
 - 2) non-bearing walls: +/- 3/4 inch.
 - 3. Locations of elements:
 - a. Indicated in plan: +/- 1/2 inch in 20 feet; +/- 3/4 inch maximum.
 - b. Indicated in elevation: +/- 1/2 inch in story height; +/- 3/4 inch maximum.
 - 4. If the above conditions cannot be met due to previous construction, notify the Architect/Engineer.

3.14 CLEANING

- A. Remove excess mortar and mortar droppings.
- B. At the completion of this portion of the Work, visually inspect the Work of this Section. Point or cut out and repoint if necessary, all holes and defective joints.
- C. Replace defective mortar. Match adjacent Work.
- D. Replace defective masonry units not conforming to ASTM appearance Requirements.
- E. Thoroughly clean all brick surfaces to be left exposed in the finished work by brush, water, and an approved cleaning solution, removing all traces of mortar, grout efflorescence, and foreign matter. In the event ordinary cleaning is not adequate, provide acid cleaning when so directed by the Architect/Engineer and at no additional cost to the Owner.

3.15 PROTECTION

- A. Without damaging Completed Work, provide protective boards at exposed external corners which may be subject to damage by construction activities.

END OF SECTION

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**SECTION 08 7100
DOOR HARDWARE**

PART 1 GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

- A. This Section includes commercial door hardware for the following:
 - 1. Swinging doors.
 - 2. Other doors to the extent indicated.
- B. Door hardware includes, but is not necessarily limited to, the following:
 - 1. Mechanical door hardware.
 - 2. Electromechanical door hardware.
 - 3. Cylinders specified for doors in other sections.
- C. Related Sections:
 - 1. Section 08 1213 – Hollow Metal Frames.
 - 2. Section 08 1313.53 – Custom Hollow Metal Doors.
 - 3. Section 08 1416 - Flush Wood Doors.
 - 4. Section 08 4313 – Aluminum-Framed Storefronts.
- D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
 - 1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
 - 2. ICC/IBC - International Building Code.
 - 3. NFPA 70 - National Electrical Code.
 - 4. NFPA 80 - Fire Doors and Windows.
 - 5. NFPA 101 - Life Safety Code.
 - 6. NFPA 105 - Installation of Smoke Door Assemblies.
 - 7. State Building Codes, Local Amendments.
- E. Standards: All hardware specified herein shall comply with the following industry standards as applicable. Any undated reference to a standard shall be interpreted as referring to the latest edition of that standard:
 - 1. ANSI/BHMA Certified Product Standards - A156 Series.
 - 2. UL10C - Positive Pressure Fire Tests of Door Assemblies.
 - 3. ANSI/UL 294 - Access Control System Units.
 - 4. UL 305 - Panic Hardware.
 - 5. ANSI/UL 437- Key Locks.

1.03 SUBMITTALS

- A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.
- B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing, fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
 - 1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
 - 2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
 - 3. Content: Include the following information:
 - a. Type, style, function, size, label, hand, and finish of each door hardware item.
 - b. Manufacturer of each item.
 - c. Fastenings and other pertinent information.

- d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
 - e. Explanation of abbreviations, symbols, and codes contained in schedule.
 - f. Mounting locations for door hardware.
 - g. Door and frame sizes and materials.
 - h. Warranty information for each product.
4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.
- C. Shop Drawings: Details of electrified access control hardware indicating the following:
- 1. Wiring Diagrams: Upon receipt of approved schedules, submit detailed system wiring diagrams for power, signaling, monitoring, communication, and control of the access control system electrified hardware. Differentiate between manufacturer-installed and field-installed wiring. Include the following:
 - a. Elevation diagram of each unique access controlled opening showing location and interconnection of major system components with respect to their placement in the respective door openings.
 - b. Complete (risers, point-to-point) access control system block wiring diagrams.
 - c. Wiring instructions for each electronic component scheduled herein.
 - 2. Electrical Coordination: Coordinate with related sections the voltages and wiring details required at electrically controlled and operated hardware openings.
- D. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.
- E. Informational Submittals:
- 1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.
- F. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Section 01 7000 – Execution and Closeout Requirements.

1.04 QUALITY ASSURANCE

- A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum of 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.
- B. Certified Products: Where specified, products must maintain a current listing in the Builders Hardware Manufacturers Association (BHMA) Certified Products Directory (CPD).
- C. Installer Qualifications: A minimum of 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- D. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum of 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.
- E. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.
 - 1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.

2. Provide electromechanical door hardware from the same manufacturer as mechanical door hardware, unless otherwise indicated.
- F. Each unit to bear third party permanent label indicating compliance with the referenced testing standards.
- G. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:
1. Function of building, purpose of each area and degree of security required.
 2. Plans for existing and future key system expansion.
 3. Requirements for key control storage and software.
 4. Installation of permanent keys, cylinder cores and software.
 5. Address and requirements for delivery of keys.
 6. Coordinate and assist Owner with core/key acquisition from security vendor.
- H. At completion of installation, provide written documentation that components were applied according to manufacturer's instructions and recommendations and according to approved schedule.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.
- B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.
- C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.06 COORDINATION

- A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.
- B. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.07 WARRANTY

- A. General Warranty: Reference Section 01 0000 – General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
1. Structural failures including excessive deflection, cracking, or breakage.
 2. Faulty operation of the hardware.
 3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 4. Electrical component defects and failures within the systems operation.
- C. Warranty Period: Unless otherwise indicated, warranty shall be 1 year from date of Substantial Completion.

PART 2 PRODUCTS

2.01 BUTT HINGES

- A. Hinges: ANSI/BHMA A156.1 butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.
1. Quantity: Provide the following hinge quantity:

- a. Two (2) hinges for doors with heights up to 60".
 - b. Three (3) hinges for doors with heights 61 to 90".
 - c. Four (4) hinges for doors with heights 91 to 120".
 - d. For doors with heights more than 120", provide four (4) hinges, plus one (1) hinge for every 30" of door height greater than 120".
2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
 - a. Widths up to 3'-0": 4-1/2" heavy weight as specified.
 - b. Sizes from 3'-1" to 4'-0": 5" heavy weight as specified.
 3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
 - a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges.
 - b. Interior Doors: Heavy duty weight, steel, ball bearing or oil impregnated bearing hinges unless.
 4. Hinge Options: Comply with the following:
 - a. Non-removable Pins: With the exception of electric through wire hinges, provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors. Hospital tip.
 5. Manufacturers:
 - a. Hager Companies (HA) - BB Series, 5 knuckle.
 - b. McKinney (MK) - TA/T4A Series, 5 knuckle.
 - c. Or approved equal.

2.02 CONTINUOUS HINGES

- A. Continuous Geared Hinges: ANSI/BHMA A156.26 Grade 1-600 continuous geared hinge with a minimum of 0.120" thick extruded 6063-T6 aluminum alloy hinge leaves and a minimum overall width of 4". Hinges are non-handed, reversible and fabricated to template screw locations. Factory trim hinges to suit door height and prepare for electrical cut-outs.
 1. Manufacturers:
 - a. Ives (IV).
 - b. Pemko (PE).
 - c. Or approved equal.

2.03 POWER TRANSFER DEVICES

- A. Concealed Quick Connect Electric Power Transfers: Provide concealed wiring pathway housing mortised into the door and frame for low voltage electrified door hardware. Furnish with Molex™ standardized plug connectors and sufficient number of concealed wires (up to 12) to accommodate the electrified functions specified in the Door Hardware Sets. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Wire nut connections are not acceptable.
 1. Manufacturers:
 - a. Pemko (PE) - EL-CEPT Series.
 - b. Securitron (SU) - EL-CEPT Series.
 - c. Or approved equal.
- B. Electric Door Wire Harnesses: Provide electric/data transfer wiring harnesses with standardized plug connectors to accommodate up to twelve (12) wires. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Provide sufficient number and type of concealed wires to accommodate electric function of specified hardware. Provide a connector for through-door electronic locking devices and from hinge to junction box above the opening. Wire nut connections are not acceptable. Determine the length required for each electrified hardware component for the door type, size and construction, minimum of two (2) per electrified opening.
 1. Provide one each of the following tools as part of the base bid contract:
 - a. McKinney (MK) - Electrical Connecting Kit: QC-R001.
 - b. McKinney (MK) - Connector Hand Tool: QC-R003.
 2. Manufacturers:
 - a. Hager Companies (HA) - Quick Connect.
 - b. McKinney (MK) - QC-C Series.
 - c. Or approved equal.

2.04 DOOR OPERATING TRIM

- A. Flush Bolts and Surface Bolts: Provide products conforming to ANSI/BHMA A156.3 and A156.16, Grade 1.
 - 1. Flush bolts to be furnished with top rod of sufficient length to allow bolt retraction device location approximately 6' from the floor.
 - 2. Furnish dust proof strikes for bottom bolts.
 - 3. Provide related accessories (mounting brackets, strikes, coordinators, etc.) as required for appropriate installation and operation.
 - 4. Manufacturers:
 - a. Ives (IV).
 - b. Rockwood (RO).
 - c. Or approved equal.
- B. Coordinators: ANSI/BHMA A156.3 door coordinators consisting of active-leaf, hold-open lever and inactive-leaf release trigger. Model as indicated in hardware sets.
 - 1. Manufacturers:
 - a. Ives (IV).
 - b. Rockwood (RO).
 - c. Or approved equal.
- C. Door Push Plates and Pulls: ANSI/BHMA A156.6 door pushes and pull units of type and design specified in the Hardware Sets. Coordinate and provide proper width and height as required where conflicting hardware dictates.
 - 1. Push/Pull Plates: Minimum .050" thick, size as indicated in hardware sets, with beveled edges, secured with exposed screws unless otherwise indicated.
 - 2. Door Pull and Push Bar Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2-1/2" from face of door unless otherwise indicated.
 - 3. Offset Pull Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2-1/2" from face of door and offset of 90 degrees unless otherwise indicated.
 - 4. Pulls, where applicable, shall be provided with a 10" clearance from the finished floor on the push side to accommodate wheelchair accessibility.
 - 5. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets.
 - 6. Manufacturers:
 - a. Ives (IV).
 - b. Rockwood (RO).
 - c. Or approved equal.

2.05 CYLINDERS AND KEYING

- A. General: Cylinder manufacturer to have a minimum of 10 years experience designing secured master key systems and have on record a published security keying system policy.
 - 1. Manufacturers:
 - a. dormakaba Best (BE).
 - b. Match Existing, Field Verify.
 - c. Or approved equal.
- B. Cylinder Types: Original manufacturer cylinders able to supply the following cylinder formats and types:
 - 1. Threaded mortise cylinders with rings and cams to suit hardware application.
 - 2. Rim cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
 - 3. Bored or cylindrical lock cylinders with tailpieces as required to suit locks.
 - 4. Tubular deadlocks and other auxiliary locks.
 - 5. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
 - 6. Keyway: Match Facility Standard.
 - 7. Provide removable core for each cylinder; coordinate with Owner as required.
- C. Small Format Interchangeable Cores: Provide small format interchangeable cores (SFIC) as specified, core insert, removable by use of a special key; usable with other manufacturers' cylinders.
 - 1. Match facility pin orientation.

- D. Keying System: Each type of lock and cylinders to be factory keyed.
 - 1. Supplier shall conduct a "Keying Conference" to define and document keying system instructions and requirements.
 - 2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
 - 3. Existing System: Field verify and key cylinders to match Owner's existing system.
- E. Key Quantity: Provide the following minimum number of keys:
 - 1. Change Keys per Cylinder: Two (2)
 - 2. Master Keys (per Master Key Level/Group): Five (5).
 - 3. Construction Control Keys (where required): Two (2).
 - 4. Permanent Control Keys (where required): Two (2).
- F. Construction Keying: Provide temporary keyed construction cores.
- G. Key Registration List (Bitting List):
 - 1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
 - 2. Provide transcript list in writing or electronic file as directed by the Owner.

2.06 MORTISE LOCKS AND LATCHING DEVICES

- A. Mortise Locksets, Grade 1 (Heavy Duty): Provide ANSI/BHMA A156.13, Series 1000, Operational Grade 1 Certified Products Directory (CPD) listed mortise locksets. Listed manufacturers shall meet all features and functionality as specified herein.
 - 1. Manufacturers:
 - a. Corbin Russwin Hardware (RU) - ML2000 Series.
 - b. Sargent Manufacturing (SA) - 8200 Series.
 - c. Schlage (SC) - L9000 Series.
 - d. Or approved equal.

2.07 LOCK AND LATCH STRIKES

- A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:
 - 1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
 - 2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
 - 3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
 - 4. Double-lipped Strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.
- B. Standards: Comply with the following:
 - 1. Strikes for Mortise Locks and Latches: BHMA A156.13.
 - 2. Strikes for Bored Locks and Latches: BHMA A156.2.
 - 3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
 - 4. Dustproof Strikes: BHMA A156.16.

2.08 ELECTRIC STRIKES

- A. Surface Mounted Rim Electric Strikes: Surface mounted rim exit device electric strikes conforming to ANSI/BHMA A156.31, Grade 1, and UL Listed for both Burglary Resistance and for use on fire rated door assemblies. Construction includes internally mounted solenoid with two heavy-duty, stainless steel locking mechanisms operating independently to provide tamper resistance. Strikes tested for a minimum of 500,000 operating cycles. Provide strikes with 12 or 24 VDC capability supplied standard as fail-secure unless otherwise specified. Option available for latchbolt and latchbolt strike monitoring indicating both the position of the latchbolt and locked condition of the strike. Strike requires no cutting to the jamb prior to installation.
 - 1. Manufacturers:
 - a. HES (HS) - 9400/9500/9600/9700/9800 Series.
 - b. Von Duprin (VD) - VD3146/6200/6300 Series.
 - c. Or approved equal.

- B. Provide electric strikes with in-line power controller and surge suppressor by the same manufacturer as the strike with the combined products having a 5 year warranty.

2.09 CONVENTIONAL EXIT DEVICES

- A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:
 - 1. Exit devices shall have a 5 year warranty.
 - 2. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.
 - 3. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer's catalog and template book for specific requirements.
 - 4. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.
 - 5. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.
 - 6. Flush End Caps: Provide flush end caps made of architectural metal in the same finish as the devices as in the Hardware Sets. Plastic end caps will not be acceptable.
 - 7. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.
 - a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
 - b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.
 - 8. Vertical Rod Exit Devices: Where surface or concealed vertical rod exit devices are used at interior openings, provide as less bottom rod (LBR) unless otherwise indicated. Provide dust proof strikes where thermal pins are required to project into the floor.
 - 9. Narrow Stile Applications: At doors constructed with narrow stiles, or as specified in Hardware Sets, provide devices designed for maximum 2" wide stiles.
 - 10. Dummy Push Bar: Non-functioning push bar matching functional push bar.
 - 11. Rail Sizing: Provide exit device rails factory sized for proper door width application.
 - 12. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.
- B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 Certified Products Directory (CPD) listed panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Exit device latch to be stainless steel, pullman type, with deadlock feature.
 - 1. Manufacturers:
 - a. Corbin Russwin Hardware (RU) - ED4000 / ED5000 Series.
 - b. Sargent Manufacturing (SA) - 80 Series.
 - c. Von Duprin (VD) - 35A/98 XP Series.
 - d. Or approved equal.

2.10 DOOR CLOSERS

- A. All door closers specified herein shall meet or exceed the following criteria:
 - 1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers.
 - 2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
 - 3. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the Americans with Disabilities Act, provide units complying with ANSI ICC/A117.1.
 - 4. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets. Parallel arm.

5. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
 6. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.
- B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 Certified Products Directory (CPD) listed surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.
1. Heavy duty surface mounted door closers shall have a 30 year warranty.
 2. Manufacturers:
 - a. Corbin Russwin Hardware (RU) - DC6000 Series.
 - b. Norton Rixson (NO) - 7500 Series.
 - c. Sargent Manufacturing (SA) - 351 Series.
 - d. Or approved equal

2.11 ARCHITECTURAL TRIM

- A. Door Protective Trim:
1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.
 2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.
 3. Where plates are applied to fire rated doors with the top of the plate more than 16" above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer's catalog and template book for specific requirements for size and applications.
 4. Protection Plates: A NSI/BHMA A156.6 protection plates (kick, armor, or mop), fabricated from the following:
 - a. Stainless Steel: 300 grade, 050" thick.
 5. Options and Fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
 6. Manufacturers:
 - a. Ives (IV).
 - b. Rockwood (RO).
 - c. Or approved equal.

2.12 DOOR STOPS AND HOLDERS

- A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.
- B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.
1. Manufacturers:
 - a. Ives (IV).
 - b. Rockwood (RO).
 - c. Or approved equal.
- C. Overhead Door Stops and Holders: ANSI/BHMA A156.8, Grade 1 Certified Products Directory (CPD) listed overhead stops and holders to be surface or concealed types as indicated in Hardware Sets. Track, slide, arm and jamb bracket to be constructed of extruded bronze and shock absorber spring of heavy tempered steel. Provide non-handed design with mounting brackets as required for proper operation and function.
1. Manufacturers:
 - a. Norton Rixson (RF).

- b. Sargent Manufacturing (SA).
- c. Or approved equal.

2.13 ARCHITECTURAL SEALS

- A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.
- B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
 - 1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.
- C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.
 - 1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NPFA 252, Standard Methods of Fire Tests of Door Assemblies.
- D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.
- E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.
- F. Manufacturers:
 - 1. Pemko (PE).
 - 2. Reese Enterprises, Inc. (RE).
 - 3. Or approved equal.

2.14 ELECTRONIC ACCESSORIES

- A. Intelligent Switching Power Supplies: Provide power supplies with single, dual or multi-voltage configurations at 12 and/or 24VDC. Power Supply shall have battery backup function with an integrated battery charging circuit. The power supply shall have a standard, integrated Fire Alarm Interface (FAI). The power supply shall provide capability for secondary voltage, power distribution, direct lock control and network monitoring through add on modules. The power supply shall be expandable up to 16 individually protected outputs. Output modules shall provide individually protected, continuous outputs and/or individually protected, relay controlled outputs. Network modules shall provide remote monitoring functions such as status reporting, fault reporting and information logging.
 - 1. Provide the least number of units, at the appropriate amperage level, sufficient to exceed the required total draw for the specified electrified hardware and access control equipment.
 - 2. Manufacturers:
 - a. Securitron (SU) - AQL Series.
 - b. Or approved equal.

2.15 FABRICATION

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

2.16 FINISHES

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

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.02 PREPARATION

- A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.
- B. Wood Doors: Comply with ANSI/DHI A115-W series.

3.03 INSTALLATION

- A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to Specifications.
 - 1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.
- B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
 - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames".
 - 2. DHI TDH-007-20: Installation Guide for Doors and Hardware.
 - 3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities".
 - 4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.
- C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
- D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Section 07 9000 – Joint Sealants.
- E. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.04 FIELD QUALITY CONTROL

- A. Field Inspection (Punch Report): Reference 01 7000 – Execution and Closeout Requirements. Produce project punch report for each installed door opening indicating compliance with approved submittals and verification hardware is properly installed, operating and adjusted. Include list of items to be completed and corrected, indicating the reasons or deficiencies causing the Work to be incomplete or rejected.
 - 1. Organization of List: Include separate Door Opening and Deficiencies and Corrective Action Lists organized by Mark, Opening Remarks and Comments, and related Opening Images and Video Recordings.

3.05 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.06 CLEANING AND PROTECTION

- A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.

- B. Clean adjacent surfaces soiled by door hardware installation.
- C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.07 DEMONSTRATION

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

3.08 DOOR HARDWARE SETS

- A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.
 - 1. Quantities listed are for each pair of doors, or for each single door.
 - 2. The supplier is responsible for handing and sizing all products.
 - 3. Where multiple options for a piece of hardware are given in a single line item, the supplier shall provide the appropriate application for the opening.
 - 4. At existing openings with new hardware the supplier shall field inspect existing conditions prior to the submittal stage to verify the specified hardware will work as required. Provide alternate solutions and proposals as needed.
- B. Manufacturer's Abbreviations:
 - 1. MK – McKinney
 - 2. PE – Pemko
 - 3. RO – Rockwood
 - 4. SA – Sargent
 - 5. HS – HES
 - 6. SU – Securitron
 - 7. OT - Other

Hardware Sets				
General Note: Infill and finish, conceal, or sleeve original fastener holes as required where exposed.				
Set 1.0		Door 140		
1	Continuous Hinge	CFM_HD1 EL-CEPT x Length Required		PE
1	Rim Exit Device, Storeroom	16 43 72 8804 Less Pull	US32D	SA
1	Small Format Inter Core	Match existing	US15	SA
1	Electric Strike	9600	630	HS
1	SMART Pac Bridge Rectifier	2005M3		HS
1	Offset Pull	RM222 Mtg-Type 12XHD	US32D	RO
1	Concealed Overhead Stop	690S	EN	SA
1	Surface Closer	351 P10	EN	SA
1	Gasketing	290APK x 2891APK		PE
1	Sweep	3452CNB x Length Required		PE
1	Threshold	2750A x Length (field verify width)		PE
1	ElectroLynx Harness - Frame	QC-C1500P		MK
1	Card Reader	Signo 40 series		HID
1	Power Supply	AQL4-R8E1 x Relays as Required		SU
1	Wiring Diagram	Elevation and Point to Point as Specified		OT
Notes: Operational narrative: - Door normally closed and secure.				

- Authorized access by presentation of valid credentials releases electric strike for a predetermined amount of time.
- Egress free more immediate exit.
- Electric strike remains locked (fail secure) in the event of power loss or fire alarm activation.
- Keyed cylinder override for emergency access.

Set 2.0 Doors 144A, 144B

2	Continuous Hinges	CFM_SLF-HD1-M		PE
1	Mullion	980	A	SA
1	Rim Exit Device, Classroom	CPC 43 72 8810 16 ETL (NC-E35)	US32D	SA
1	Rim Exit Device, Classroom	CPC 43 72 8813 16 ETL (NC-E35)	US32D	SA
3	Small Format Inter Cores	Match existing	US15	SA
3	Cylinders	72 980C1	US26D	SA
2	Surface Closers	351 OTB	EN	SA
2	Wall Stops	RM860 (or) RM861 (as required)	US26D	RO
2	Sweeps	3452CNB x Length Required		PE
1	Threshold	273x224AFGT x Length Required x MSES25SS		PE

Note:

- - Provide Perimeter/meeting seals by frame/door supplier.

Set 3.0 Doors 128A, 128B

2	Continuous Hinge	CFM_SLF-HD1-M		PE
2	Surface Vert Rods Exit, Classroom	[12] 43 72 NB8713 ETL	US32D	SA
2	Small Format Inter Cores	Match existing	US15	SA
2	Surface Closers	351 P10	EN	SA
2	Kick Plates	K1050 10" high BEV CSK	US32D	RO
2	Wall Stops	RM860 (or) RM861 (as required)	US26D	RO
2	Astragals	S772C x Door Height (mechanically attached)		PE
2	Gasketing	S88BL (head and jambs)		PE

Set 4.0 Door 135A

2	Continuous Hinges	CFM_SLF-HD1-M	US26D	PE
2	Rim Exit Devices, Classroom	12 CPC 43 72 8813 16 ETL (NC-E35)		SA
2	Small Format Inter Cores	Match existing	US15	SA
2	Concealed Overhead Stops	690S	EN	SA
2	Surface Closers	351 CPS	EN	SA
2	Astragals	S772C x Door Height (mechanically attached)		PE
2	Gasketing	S88BL (head and jambs)		PE
2	Sweeps	3452CNB x Length Required		PE

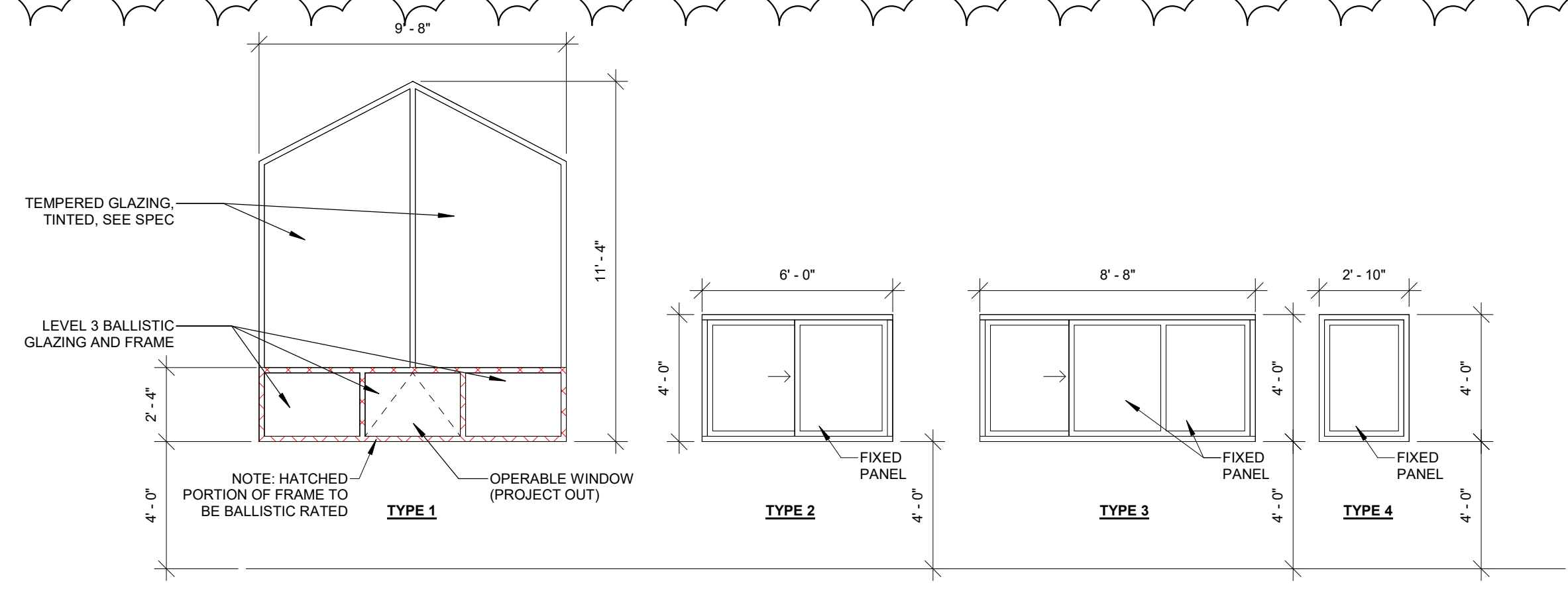
Set 5.0 Door 135C

3	Hinges, Full Mortise	TA2714 [NRP] FT	US26D	MK
1	Storeroom/Closet Lock	72 8204 LL	US26D	SA
1	Small Format Inter Core	Match existing	US15	SA

1	Surface Closer	351 UO	EN	SA
1	Kick Plate	K1050 10" high BEV CSK	US32D	RO
1	Wall Stop	RM860 (or) RM861 (as required)	US26D	RO
1	Gasketing	S88BL (head and jambs)		PE
Set 6.0 Door 124DA				
3	Hinges, Full Mortise	TA2714 [NRP] FT	US26D	MK
1	Classroom Lock	72 8237 LL	US26D	SA
1	Surface Closer	351 UO	EN	SA
1	Wall Stop	RM860 (or) RM861 (as required)	US26D	RO
1	Gasketing	S88BL (head and jambs)		PE
Set 7.0 Doors 140A, 140B				
3	Hinges, Full Mortise	TA2714 [NRP] FT	US26D	MK
1	Institutional Privacy Lock	LB V21 72 8267 LL	US26D	SA
1	Small Format Inter Core	Match existing	US15	SA
1	Surface Closer	351 UO	EN	SA
1	Kick Plate	K1050 10" high BEV CSK	US32D	RO
1	Wall Stop	RM860 (or) RM861 (As Required)	US26D	RO
1	Gasketing	S88BL (head and jambs)		PE
Set 8.0 Doors 128C, 128D				
1	Door Hardware	Hardware by others (cylinder and core as required by General Contractor)		OT
Set 9.0 Gym Door				
1	Sweep	3452CNB x Length Required		PE
1	Astragal	S772C x Door Height (mechanically attach)		PE
1	Gasketing	S88BL (head and jambs)		PE
1	Perimeter Seal	Pemko 88		
General Note:				
- Provide two (2) items each for door pairs.				

END OF SECTION

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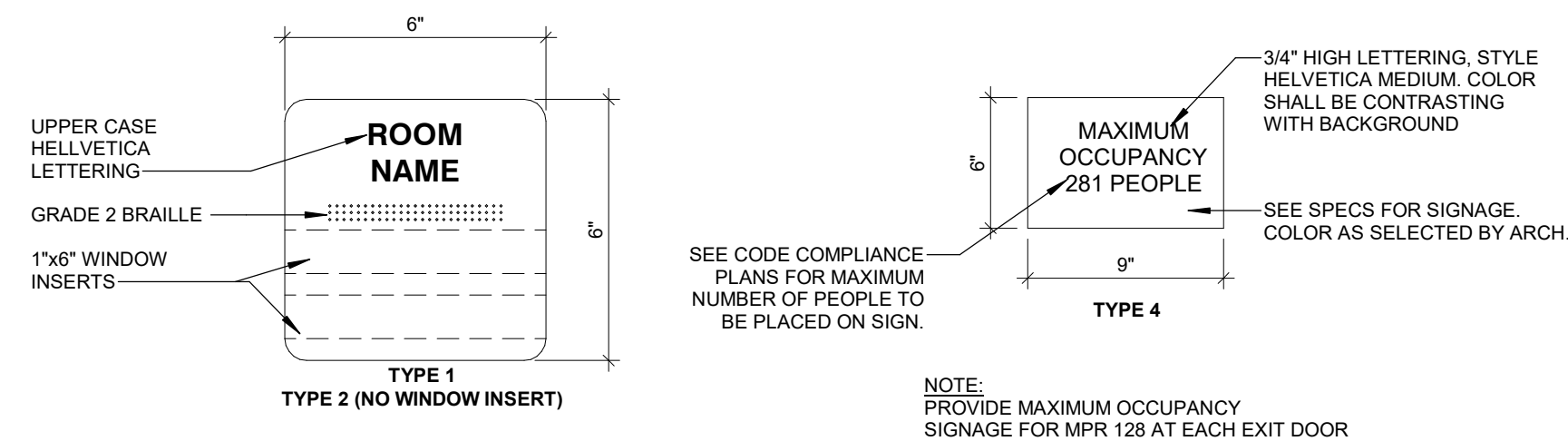


* NOTE: WINDOWS TO BE INSTALLED IN EXISTING OPENINGS. VERIFY EXACT SIZES IN FIELD.

WINDOW TYPES

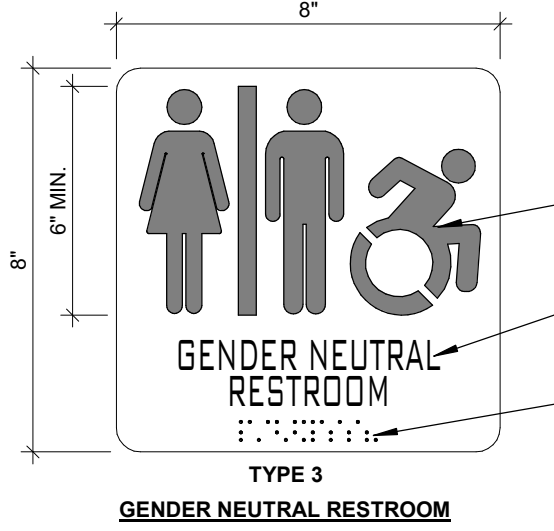
SCALE: 1/4" = 1'-0"

CONSTRUCTION ROOM NO.	CONSTRUCTION ROOM NAME	SIGN TYPE	ACTUAL SIGN LANGUAGE DESCRIPTION	ROOM NO.
120	DISTANCE LEARNING	2	TBD	TBD
124	KITCHEN	1	TBD	TBD
124C	FOOD STO.	2	TBD	TBD
124D	SERVING	1	TBD	TBD
128	MULTI-PURPOSE	1/4	TBD	TBD
135C	IT STORAGE	2	TBD	TBD
140	STRENGTH & COND.	1	TBD	TBD
140A	CHANGING ROOM	2	TBD	TBD
140B	TRISHOWER	2	TBD	TBD
144A	TOILET	3	TBD	TBD
144B	TOILET	3	TBD	TBD



OCCUPANCY SIGNAGE TYPES

SCALE: 1 1/2" = 1'-0"



SIGNAGE SCHEDULE

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

SIGN TYPES

SCALE: 3" = 1'-0"

- #### PARTITION NOTES
- ALL CMU PARTITIONS SHALL BE 1-HOUR RATED UNLESS SPECIFICALLY INDICATED OTHERWISE.
 - ALL PARTITIONS SHALL EXTEND TO THE UNDERSIDE OF DECK (ROOF OR FLOOR) UNLESS OTHERWISE NOTED. PARTITIONS WITH AN (F) SHALL STOP 6" ABOVE THE CEILING.
 - ALL GYPSUM BOARD LOCATED IN TOILET ROOMS, VESTIBULES, & JANITOR CLOSETS SHALL BE MOISTURE RESISTANT. THIS APPLIES TO ALL WALLS, CEILING, & SOFFITS. SHOWER WALLS SHALL BE CEMENTITIOUS BACKER BOARD.
 - EXISTING PARTITIONS, EQUIPMENT ETC. TO BE REMOVED ARE INDICATED W/ DASHED LINES UNLESS OTHERWISE NOTED.
 - PROVIDE STEEL BLOCKING BACKER BARS (CLARK DIETRICH, BAILEY, TSN OR EQUIV) FOR MOUNTING HANDRAILS, GUARDS, GRAB BARS, SHOWER SEATS, WALL MOUNTED CABINETS, SHELVING, TELEVISION/MONITOR MOUNTING BRACKETS, PLUMBING FIXTURES AND OTHER WALL MOUNTED EQUIPMENT LOCATIONS IMPOSING HEAVY LOADS ON THE PARTITION AS REQUIRED BY CODE. STUD SPACING, AND PER MANUFACTURERS WRITTEN INSTRUCTIONS.
 - PROVIDE THROUGH-PENETRATION AND MEMBRANE FIRESTOPPING SYSTEMS FOR ALL WORK PENETRATING VERTICAL AND HORIZONTAL FIRE-RATED AND SMOKE-RATED ASSEMBLIES. PROVIDE FIRESTOPPING SYSTEMS AT OPENINGS (VOIDS) MADE BY DEMOLITION WORK AT FIRE-RATED AND SMOKE-RATED ASSEMBLIES. PROVIDE JOINT FIRESTOPPING SYSTEMS AT ALL FIRE-RATED INTERSECTIONS AND JUNCTIONS BETWEEN FIRE-RATED ASSEMBLIES, AND BETWEEN FIRE-RATED TO NON-FIRE-RATED ASSEMBLIES. REFERENCE CODE COMPLIANCE (C) DRAWINGS FOR FIRE-RATED AND SMOKE-RATED ASSEMBLIES AND THEIR LOCATIONS. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
 - THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL DUCTWORK WITH THE MECHANICAL CONTRACTOR FOR ALL WALL PENETRATIONS FOR BOTH INTERIOR OR EXTERIOR WALLS, WHETHER INDICATED ON THE ARCH. PLANS OR NOT. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY UNITS IN MASONRY WALLS & HEADERS AND BOX FRAMES IN METAL STUD PARTITIONS.

DESIGNATION	FIRE RATING	DESCRIPTION
6	NON-RATED	6" HOLLOW CORE CONCRETE MASONRY UNIT WITH LIMESTONE, CINDERS, OR SLAG AGGREGATES ONLY. FIRE RATING OF CMU SHALL BE IN ACCORDANCE WITH AC108-17 STANDARD METHOD FOR DETERMINING FIRE RESISTANCE OF CONCRETE AND MASONRY CONSTRUCTION.
6a	1-HOUR, UL NO. U906	
8	NON-RATED	8" HOLLOW CORE CONCRETE MASONRY UNIT WITH LIMESTONE, CINDERS, OR SLAG AGGREGATES ONLY. FIRE RATING OF CMU SHALL BE IN ACCORDANCE WITH AC108-17 STANDARD METHOD FOR DETERMINING FIRE RESISTANCE OF CONCRETE AND MASONRY CONSTRUCTION.
8a	1-HOUR, UL NO. U906	
4	NON-RATED (STC 35)	(1) LAYER OF 5/8" GYP. BOARD, EACH SIDE. SCREW ATTACHED @ 12" O.C. W/ STAGGERED VERTICAL JOINTS OVER 3 5/8" METAL STUDS 22ga @ 16" O.C., W/ 3 5/8" SOUND ATTENUATION BATTS. PERIMETER CAULKED.
4a	1 HOUR, UL NO. U465 (STC 45) 22 ga.	(1) LAYER OF 5/8" TYPE-X GYP. BOARD, EACH SIDE. SCREW ATTACHED @ 12" O.C. W/ STAGGERED VERTICAL JOINTS OVER 3 5/8" METAL STUDS 22ga @ 16" O.C., W/ 3 5/8" SOUND ATTENUATION BATTS. PERIMETER CAULKED.
4b	NON-RATED	(1) LAYER OF 5/8" GYP. BOARD, ONE SIDE. SCREW ATTACHED @ 12" O.C. W/ STAGGERED VERTICAL JOINTS OVER 3 5/8" METAL STUDS 22ga @ 16" O.C. PERIMETER CAULKED.
6	NON-RATED (STC 45)	(1) LAYER OF 5/8" GYP. BOARD, EACH SIDE. SCREW ATTACHED @ 12" O.C. W/ STAGGERED VERTICAL JOINTS OVER 6" METAL STUDS 22ga @ 16" O.C., W/ 6" SOUND ATTENUATION BATTS. PERIMETER CAULKED.
6a	1 HOUR, UL NO. U465 (STC 51)	(1) LAYER OF 5/8" TYPE-X GYP. BOARD, EACH SIDE. SCREW ATTACHED @ 12" O.C. W/ STAGGERED VERTICAL JOINTS OVER 6" METAL STUDS 22ga @ 16" O.C., W/ 6" SOUND ATTENUATION BATTS. PERIMETER CAULKED.

PARTITION TYPES

SCALE: 1/2" = 1'-0"

MATERIAL INDICATORS

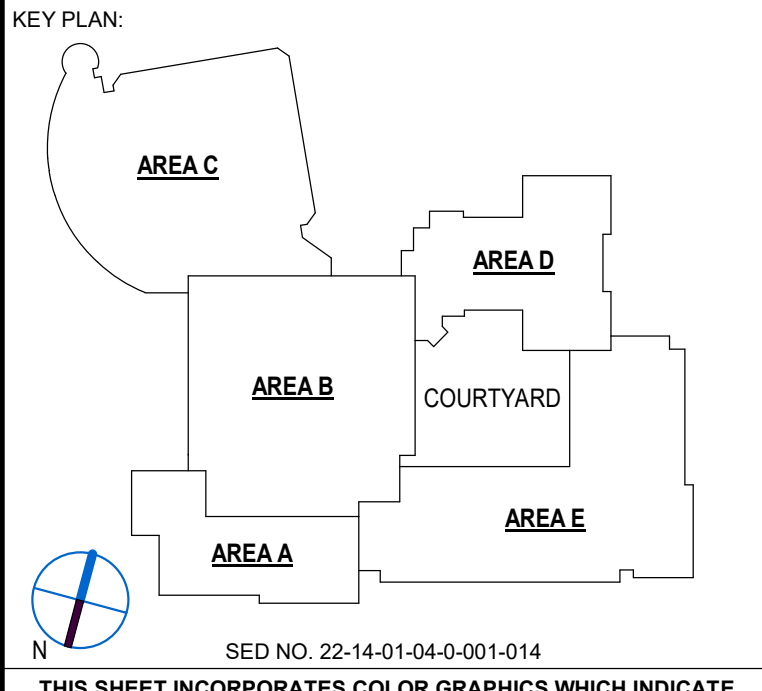
- STEEL
- BRICK
- UNEXCAVATED EARTH
- CONCRETE
- GWB
- PLYWOOD
- CONCRETE BLOCK
- CONCRETE BLOCK (SECTION)
- BATT INSULATION
- RIGID WALL INSULATION
- ROOF INSULATION
- WOOD BLOCKING
- FIXTURE ID

SYMBOL LEGEND

- ROOM NAME & NUMBER
- DOOR NUMBER
- EXISTING CONSTRUCTION/ DOOR ASSEMBLY
- NEW CONSTRUCTION/ DOOR ASSEMBLY
- DEMOLISHED CONSTRUCTION/ DOOR ASSEMBLY
- WINDOW TYPE TAG
- DEMOLITION TAG
- KEYNOTE TAG
- WALL TYPE TAG
- INTERIOR ELEVATIONS
- EXTERIOR ELEVATIONS
- DETAIL MARK
- WALL SECTION MARK
- BUILDING SECTION MARK
- REFERENCE ELEVATION
- FIRE EXTINGUISHERS (E = EXISTING, N = NEW)

LIST OF ABBREVIATIONS

- # & @
- AAC ASBESTOS ABATEMENT CONTRACTOR
- AASC ASBESTOS ABATEMENT SUB-CONTRACTOR
- AB ANCHOR BOLT
- AC AIR CONDITIONING
- ACBM ASBESTOS CONTAINING BUILDING MATERIAL
- ACM ASBESTOS CONTAINING MATERIAL
- LP ACUSTIC CEILING TILE
- AD AREA DRAIN
- ADA AMERICAN WITH DISABILITIES ACT
- ADJ ADJUSTABLE
- AFF ABOVE FINISHED FLOOR
- AHJ AUTHORITY HAVING JURISDICTION
- AHU AIR HANDLING UNIT
- ALT ALTERNATE
- ALUM ALUMINUM
- ANOD ANODIZED
- ARCH ARCHITECTURAL
- ASB ASBESTOS
- BD BOARD
- BLDG BUILDING
- BLKG BLOCKING
- BO BOTTOM OF
- BOT BOTTOM
- BSMT BASEMENT
- BRG BEARING
- BUR BUILT-UP ROOF
- BYND BEYOND
- BIS BOTH SIDES
- CBB CEMENTITIOUS BACKER BOARD
- CB CHALKBOARD
- CC CENTER TO CENTER
- CEM PLAS CEMENT PLASTER
- CP CAST IN PLACE
- CHNL CHANNEL
- CJ CONTROL JOINT
- CL CENTER LINE
- CLG CEILING
- CLR CLEAR
- CONSTR CONSTRUCTION MANAGER
- CONC CONCRETE MASONRY UNIT
- COL COLUMN
- COMP COMPRESSIBLE
- CONC CONCRETE
- CONT CONTINUOUS
- CONTR CONSTRUCTION LIMIT LINE
- CLL CARPET
- CT CERAMIC TILE
- CRS COURSE (S), (ING)
- CUH CABINET UNIT HEATER
- D DEMO
- DEMO DEMOLISH OR DEMOLITION
- DET DETAIL
- DF DRINKING FOUNTAIN
- DIA DIAMETER
- DIM DIMENSION
- DIMS DIMENSIONS
- DL DEAD LOAD
- DN DOWN
- DAMP DAMP-PROOFING
- DR DOOR
- DS DOWNSPOUT
- DWG DRAWING
- E EAST
- EXIST EXISTING
- EACH EACH
- EA EXPANSION BOLT
- EL ELECTRICAL CONTRACTOR
- EFC EACH FACE
- EFE EXISTING FIRE EXTINGUISHER
- EH EXHAUST HOOD
- EFS EXTERIOR FINISH & INSULATION SYSTEM
- EJ EXPANSION JOINT
- EL ELEVATION
- ELEC ELECTRICAL
- ELEV ELEVATOR OR ELEVATION
- EP ELECTRIC PANEL
- EPNT EPOXY PAINT
- EPDM ETHYLENE PROPYLENE DIENE M-C CLASS
- EQ EQUAL, EQUALLY
- EQUIP EQUIPMENT
- ES EXPOSED STRUCTURE
- ETF EPOXY TERRAZZO FLOOR
- ETR EXISTING TO REMAIN
- EW EACH WAY
- EWC ELECTRIC WATER COOLER
- EXC EXCAVATE
- EXIST EXIST
- EXP EXPANSION, EXPOSED
- EXP JT EXPANSION JOINT
- EXT EXTERIOR
- FB FIRE BARRIER
- FBO FURNISHED BY OTHERS
- FD FLOOR DRAIN OR FIRE DEPARTMENT FOUNDATION
- FDN FOUNDATION
- FE FIRE EXTINGUISHER
- FEG FIRE EXTINGUISHER CABINET
- FF FINISH FLOOR ELEVATION
- FFAE FIXTURES, FURNISHINGS & EQUIPMENT
- FIN FIRE HOSE CABINET
- FIN (ED) FINISH (ED)
- FIX FIXTURE
- FLOOR FLOOR
- FM FILLED METAL
- FO FACE OF
- FND FOUNDATION
- FR FIRE RATED
- FRFP FIREPROOF(ING)
- FRTW FIRE-RETARDANT TREATED WOOD
- FT FOOT OR FEET
- FTG FOOTING
- FW FABRIC WALL COVERING
- GA GAUGE
- GALV GALVANIZED
- GB GLAZED BLOCK OR GRAB BAR
- GC GENERAL CONTRACTOR
- GL GLASS
- GLZ CMU GLAZED CMU
- GW GYPSUM WALL BOARD
- GT GLAZED TILE
- GYP GYPSUM
- HC HOLLOW CORE
- HDW HARDWOOD
- HI HOLLOW METAL
- HM HORIZONTAL
- HP HIGH POINT
- HR HOUR
- HS HIGH SCHOOL
- HT HEIGHT
- HVAC HEATING, VENTILATING, AND AIR CONDITIONING
- ID INSIDE DIAMETER
- IGL INSULATED GLASS
- IMP INSULATED METAL PANEL
- IN INCHES
- INC INCLUDING
- IRGWB IMPACT RESISTANT GYPSUM WALL BOARD
- IN INCH
- INFO INFORMATION
- INSUL INSULATED OR INSULATION
- INT INTERIOR
- JST JOIST
- L LAMINATE(D)
- LAV LAVATORY
- LBP LEAD BASED PAINT
- LF LINEAR FEET
- LL LIVE LOAD
- LLH LONG LEG HORIZONTAL
- LLV LONG LEG VERTICAL
- LMET LINEAR METAL
- LO LOW
- LP LOW POINT
- LOU LOUVER
- LVL LAMINATED VENEER LUMBER
- LVT LUXURY VINYL TILE
- MATL MATERIAL
- MAX MAXIMUM
- MB MARKERBOARD
- MC MECHANICAL CONTRACTOR
- MFR MANUFACTURER
- MH MANHOLE
- MO MASONRY OPENING
- MECH MECHANICAL
- MEMBR MEMBRANE
- MEZZ MEZZANINE
- MIN MINIMUM
- MR MOISTURE RESISTANT
- MRGWB MOISTURE-RESISTANT GYPSUM WALL BOARD
- MTD MOUNTED
- MTL METAL
- N NORTH
- NA NOT APPLICABLE
- NIC NOT IN CONTRACT
- NUM NUMBER
- NOM NOMINAL
- NR NON RATED
- NTS NOT TO SCALE
- NYS NEW YORK STATE
- OC ON CENTER
- OD OUTSIDE DIAMETER
- OFCI OWNER FURNISHED CONTRACTOR
- OFCI INSTALLED
- OFOI OWNER FURNISHED OWNER INSTALLED
- OH OVERHANG
- OPH OPPOSITE HAND
- OPNG OPENING
- OPP OPPOSITE
- OVHD OVERHEAD
- OZ OUNCE
- PACM PRESUMED ASBESTOS CONTAINING MATERIAL
- PBD PARTICLE BOARD
- PC PLUMBING CONTRACTOR
- PCB POLYCHLORINATED BIPHENYLS
- PCC PRE-CAST CONCRETE
- PVC POLYVINYL CHLORIDE
- PVT PAVEMENT
- PWT PORCELAIN WALL TILE
- R RISER OR RADIUS
- RAF RESILIENT ATHLETIC FLOOR
- RB RUBBER BASE
- RBR RUBBER
- RCD REFLECTED CEILING PLAN
- ROOF ROOF
- ROOF DRAIN ROOF DRAIN
- REBAR REINFORCING BAR
- REF REFERENCE
- REFRIG REFRIGERATOR
- REIN(ED), (ING) REINFORCED, (ING)
- REQD REQUIRED
- REV REVISION(S), REVISED
- RFE RECESSED FIRE EXTINGUISHER
- RH ROOF HATCH
- RM ROOM
- RO ROUGH OPENING
- RTU ROOF TOP UNIT
- S SOUTH
- SB SMOKE BARRIER
- SC SITE CONTRACTOR
- SCHED SCHEDULE
- SF SQUARE FOOT (FEET)
- SGT STRUCTURAL GLAZED TILE
- SIM SIMILAR
- SNACM SELECTED MISCELLANEOUS ASBESTOS CONTAINING MATERIAL
- SOG SLAB-ON-GRADE
- SPEC SPECIFICATION OR SPECIFICATION
- SPKR SPRINKLER OR SPEAKER
- SQ SQUARE
- SQ SURF SURFACE
- SST STAINLESS STEEL
- STC SOUND TRANSMISSION CLASS
- STD STANDARD
- STL STEEL
- STOR STORAGE
- STRUC STRUCTURE OR STRUCTURAL
- SUSP SUSPENDED
- SV SHEET VINYL
- T TREAD
- T&S TOP AND BOTTOM
- TB TACK BOARD
- TBD TO BE DETERMINED
- TBR TO BE REMOVED
- TC TECHNOLOGY CONTRACTOR
- TEL TELEPHONE
- TEMP TEMPORARY
- TERR TERRAZZO
- THK THICK(NESS)
- THRU THROUGH
- TOILET TOILET
- TLT TO MATCH EXISTING
- TIME TOP OF
- TOB TOP OF BEAM
- TOC TOP OF CONCRETE
- TOF TOP OF FOOTING
- TOU TOP OF JOIST
- TOM TOP OF MASONRY
- TOS TOP OF STEEL
- TOW TOP OF WALL
- TPD TOILET PAPER DISPENSER
- TID TELEPHONE/DATA
- TS TUBE STEEL
- TYP TYPICAL
- UNO UNLESS NOTED OTHERWISE (UNFINISHED)
- UNFIN UNFINISHED
- VAR VARNISHED
- VB VAPOR BARRIER
- VCB VINYL COVE BASE
- VCT VCT VINYL COMPOSITION TILE
- VERT VERTICAL
- VIF VERIFY IN FIELD
- VSB VINYL STRAIGHT BASE
- VSF VINYL SHEET FLOORING
- VWC VINYL WALL COVERING
- VP VENT PIPE
- W WEST, WIDE OR WASHER
- WB WHITEBOARD
- WC WATER CLOSET OR WALL COVERING
- WD WOOD
- WF WIDE FLANGE
- WP WORK POINT
- WR WATER RESISTANT
- WWM WELDED WIRE MESH



THIS SHEET INCORPORATES COLOR GRAPHICS WHICH INDICATE IMPORTANT INFORMATION AND SHALL BE PRINTED IN COLOR IF REPRODUCED BY A CONTRACTOR.

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LAFARGEVILLE CSD
 CAPITAL IMPROVEMENT PROJECT
 K12 BUILDING
 LAFARGEVILLE - JEFFERSON - NEW YORK

REV	DATE	DESCRIPTION
Δ	4/15/2024	BD Addendum #3

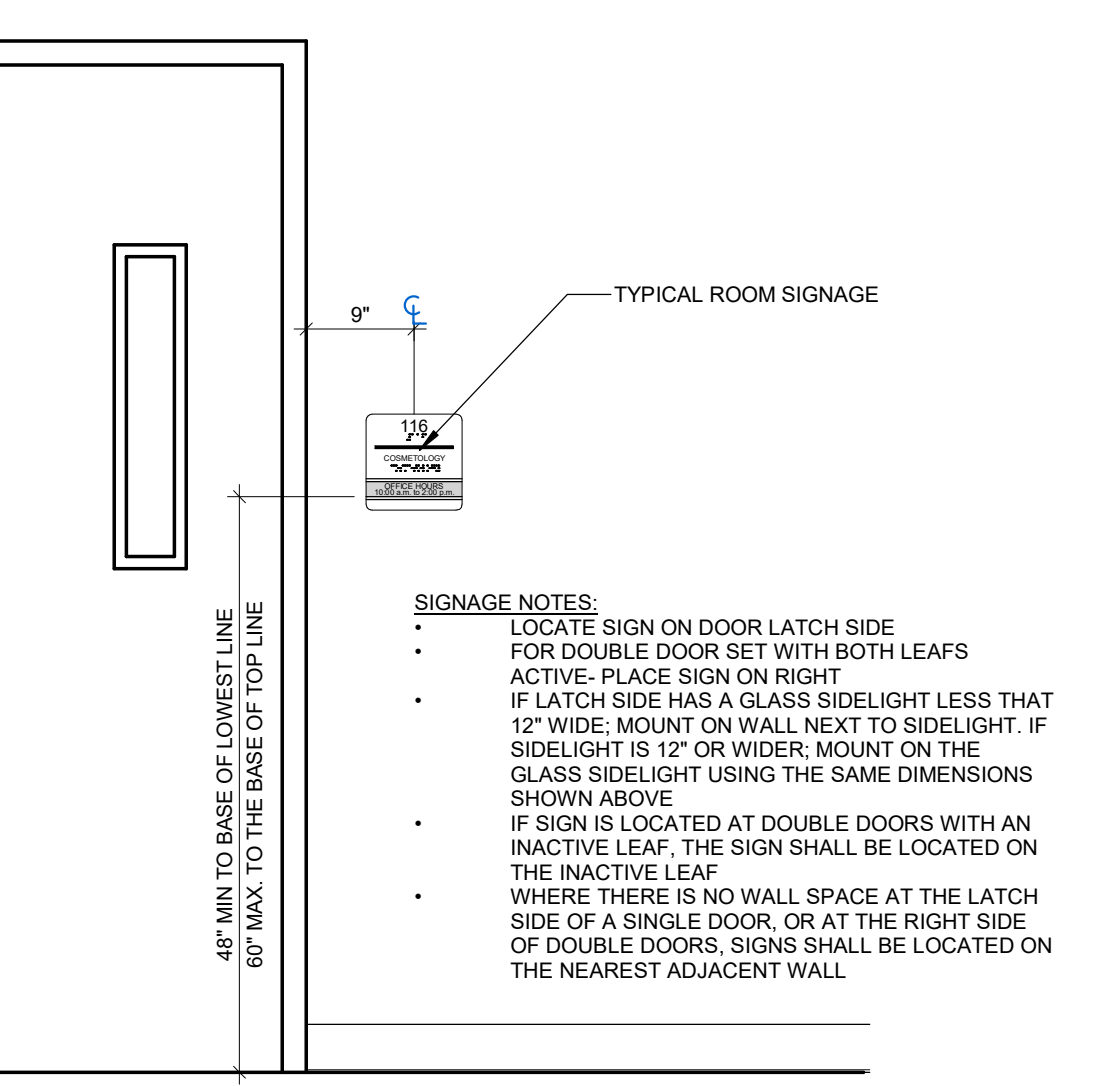
DRAWN BY: Author
 CHECKED BY: Checker
 PROJECT NUMBER: 2022-052
 DATE: 4/5/2024

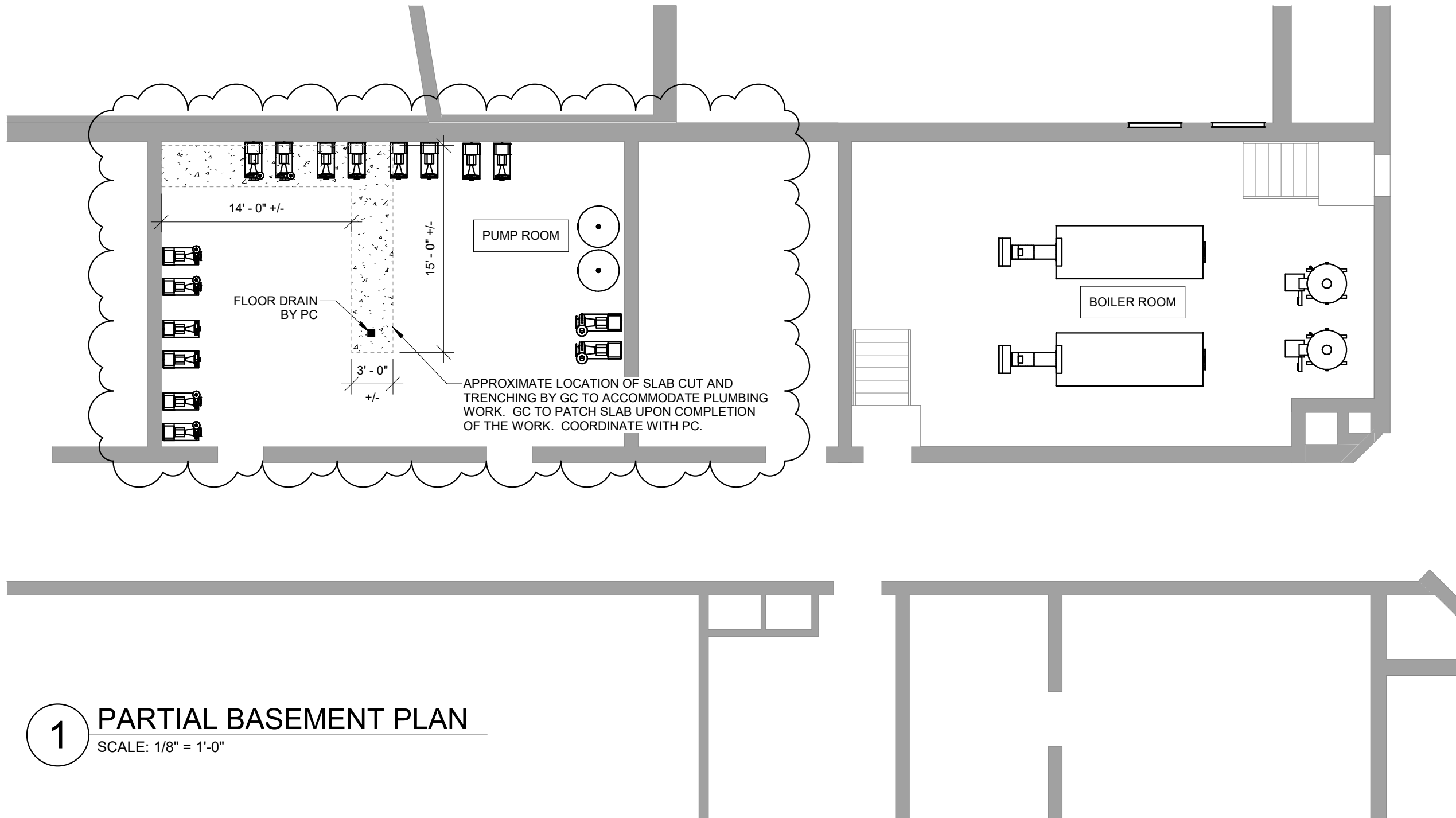
ARCHITECTURAL GENERAL NOTES, ABBREVIATIONS AND LEGENDS

AS000
 BID SET

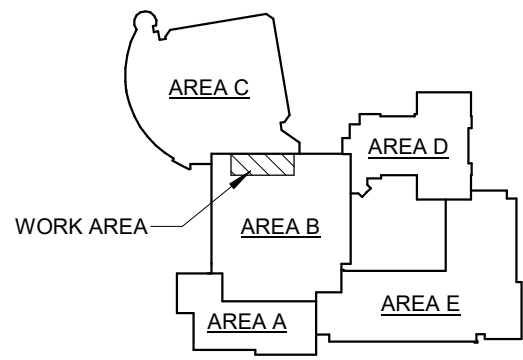
SIGNAGE MOUNT DETAIL

SCALE: 3/4" = 1'-0"





1 PARTIAL BASEMENT PLAN
SCALE: 1/8" = 1'-0"



LAFARGEVILLE CSD
CAPITAL IMPROVEMENT PROJECT
K-12 BUILDING
LaFargeville - Jefferson - New York

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THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS ALL DIMENSIONS AT THE SITE & NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES.

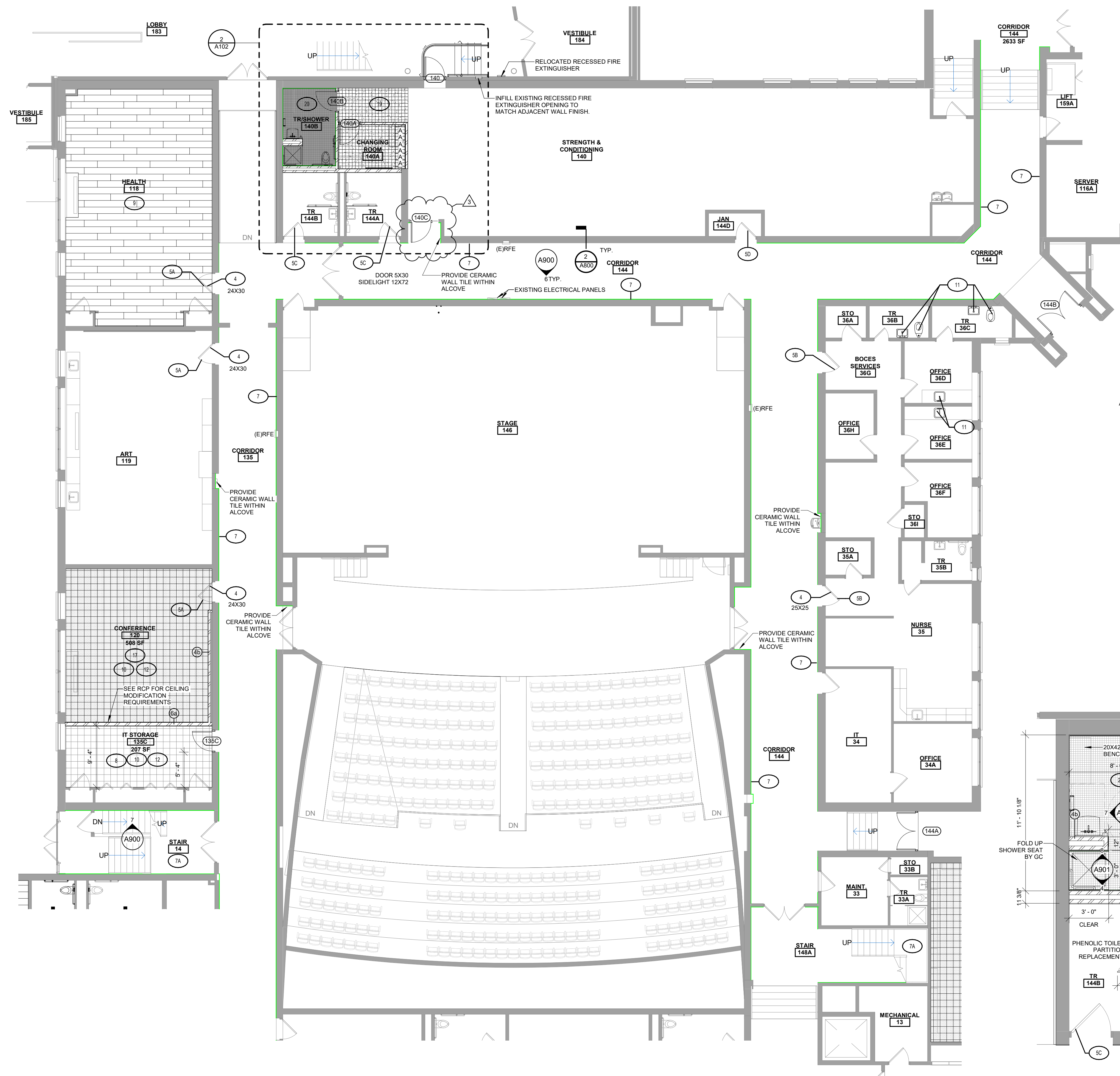


REVISIONS:	
3	BID Addendum #3
DESIGNED BY:	CHECKED BY:
TJW	
SCALE:	DATE:
	04/15/2024
PROJECT NUMBER	
2022-052	

PARTIAL BASEMENT PLAN

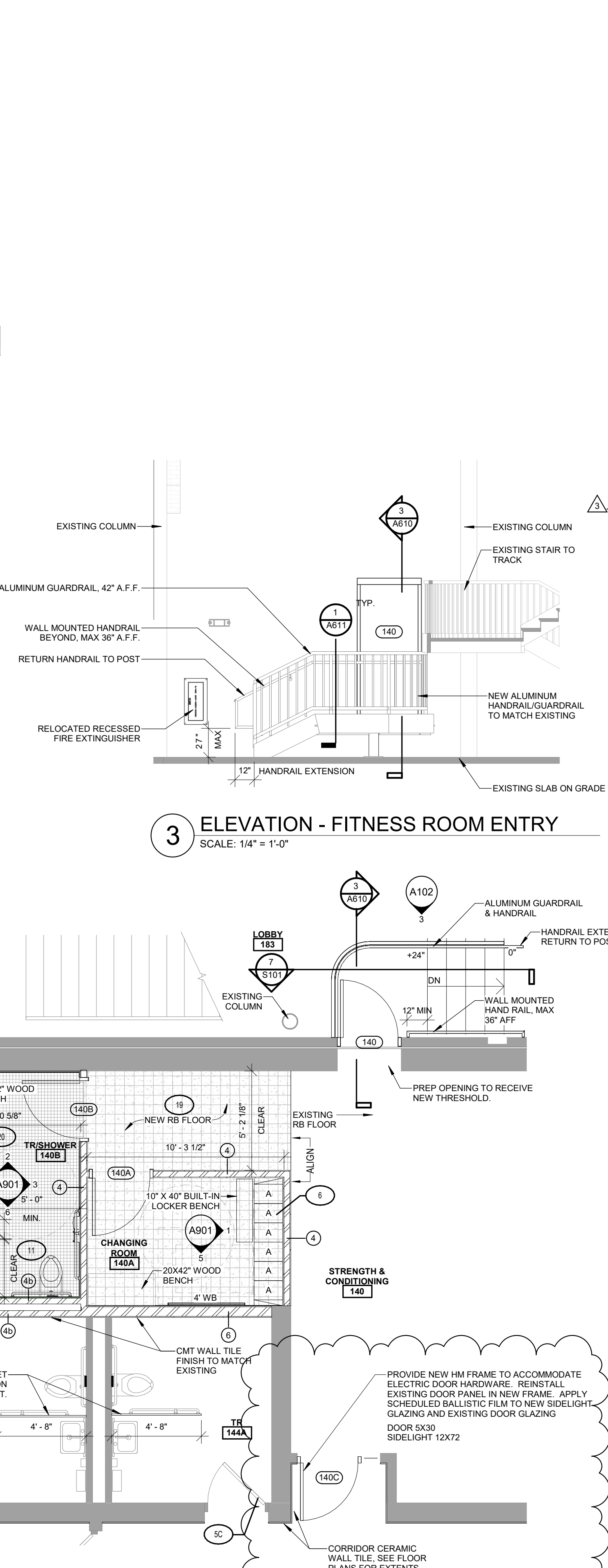
BUILDING	SHEET NO.
	AD3-A1
BID SET	

4/15/2024 1:44:09 PM



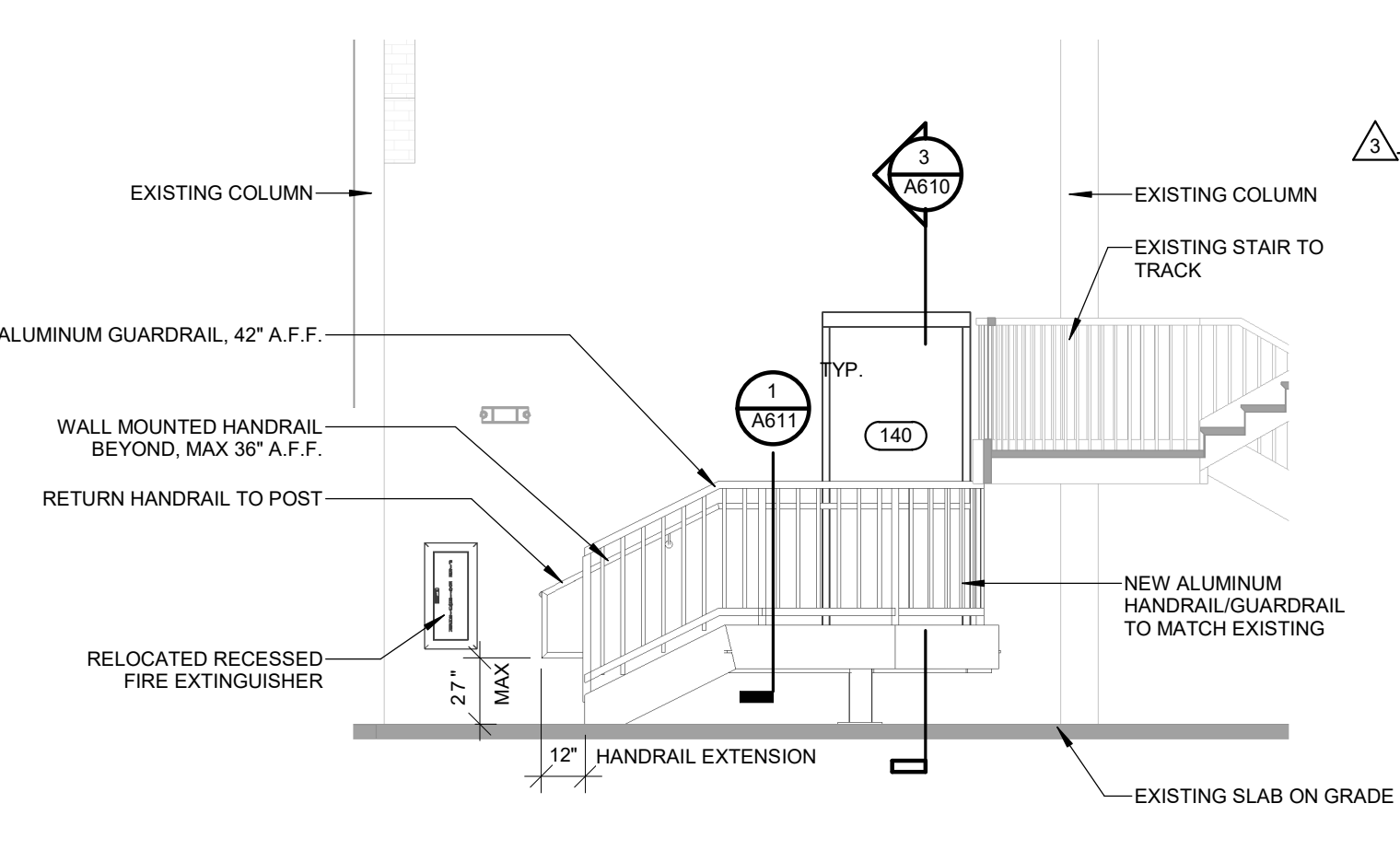
FIRST FLOOR PLAN - AREA B
SCALE: 1/8" = 1'-0"

5X30



2 ENLARGED FLOOR PLAN - CHANGING/TR
SCALE: 1/4" = 1'-0"

3 ELEVATION - FITNESS ROOM ENTRY
SCALE: 1/4" = 1'-0"



KEYNOTE LEGEND

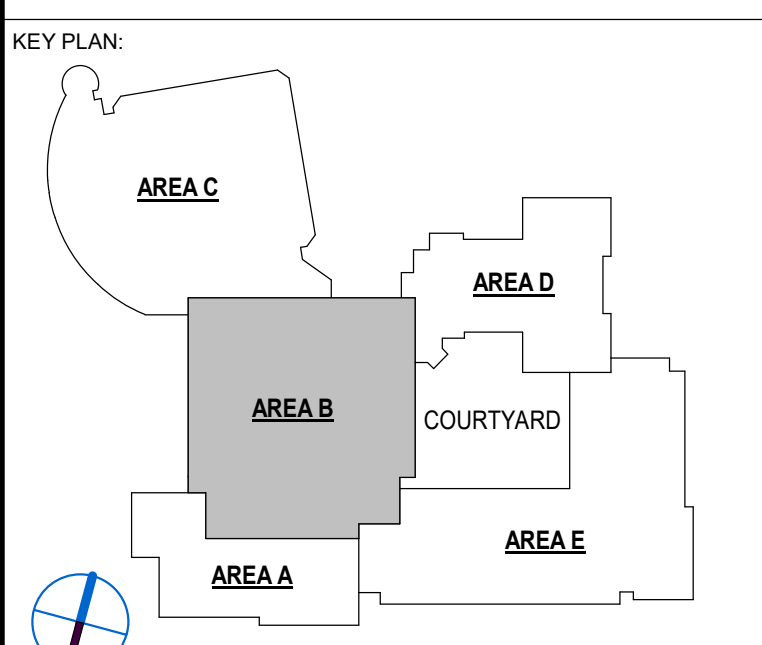
4	INSTALL LEVEL 2 BALLISTIC FILM OVER EXISTING DOOR/WINDOW GLAZING.
5A	INSTALL NEW LOCKSET AND EXISTING CORE. CLASSROOM HARDWARE GROUP - V01 72 829 LL. INCLUDE RETROFITTING EXISTING DOOR TO ACCOMMODATE MORTISE LOCK.
5B	INSTALL NEW LOCKSET AND EXISTING CORE. OFFICE HARDWARE GROUP - L8 V01 72 824S LL. INCLUDE RETROFITTING EXISTING DOOR TO ACCOMMODATE MORTISE LOCK.
5C	INSTALL NEW LOCKSET AND EXISTING CORE. PRIVACY HARDWARE GROUP - L8 V01 72 824S LL. INCLUDE RETROFITTING EXISTING DOOR TO ACCOMMODATE MORTISE LOCK.
5D	INSTALL NEW LOCKSET AND EXISTING CORE. STORAGE HARDWARE GROUP - 72 8204 LL US290 SA.
6	INSTALL LOCKERS TO THE EXTENTS SHOWN. PATCH ANY FINISHED DISTURBED AS PART OF EXISTING LOCKER REMOVAL TO MATCH ADJACENT FINISH.
7	PROVIDE CERAMIC WALL TILE TO EXTENTS SHOWN. REFER TO TYPICAL CORRIDOR WALL TILE PATTERN. PAINT GYPSUM WALL ABOVE TILE TO CEILING LEVEL.
7A	PROVIDE CERAMIC WALL TILE WITHIN STAIR, INCLUDING ALONG STAIR RUNS AND LANDING AREAS. REFER TO TYPICAL CORRIDOR WALL TILE PATTERN. PAINT GYPSUM WALL ABOVE TILE TO CEILING LEVEL.
8	PROVIDE VCT FLOOR FINISH AND RUBBER BASE.
9	PROVIDE LVT FLOOR FINISH AND RUBBER BASE.
10	REFER TO MECHANICAL DRAWINGS FOR WORK BY MECHANICAL CONTRACTOR.
11	REFER TO PLUMBING DRAWINGS FOR WORK BY PLUMBING CONTRACTOR.
12	REFER TO ELECTRICAL DRAWINGS FOR WORK BY ELECTRICAL CONTRACTOR.
17	PROVIDE CPT FLOOR FINISH AND RUBBER BASE.
19	PROVIDE RFT FLOOR FINISH AND RUBBER BASE.
20	PROVIDE CMT FLOOR TILE AND COVE BASE.

GENERAL FLOOR PLAN NOTES

EXTENTS OF PORCELAIN WALL TILE, SEE FINISH PLANS

KEYNOTE

NOTE: GC SHALL COORDINATE CARD ACCESS EQUIPMENT WITH THE DISTRICT'S EXISTING CARD ACCESS VENDOR. ALL TECH INTEGRATIONS AT 888-692-8483. COORDINATE WITH EC ON FINAL CONNECTIONS AND POWER REQUIREMENTS.



KEY PLAN:

AREA C
AREA B
COURTYARD
AREA D
AREA A

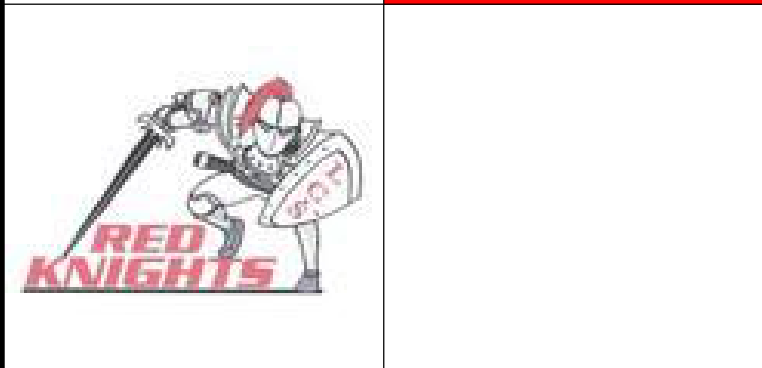
SED NO. 22-14-01-04-0-001-014

THIS SHEET INCORPORATES COLOR GRAPHICS WHICH INDICATE IMPORTANT INFORMATION AND SHALL BE PRINTED IN COLOR IF REPRODUCED BY A CONTRACTOR.

BCA Architects & Engineers
Watertown | Ithaca | Saratoga Springs | Rochester
WWW.THEBCGROUP.COM

BCA ARCHITECTS & ENGINEERS, WARNING - IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW FOR ANY UNAUTHORIZED ALTERATIONS TO THIS DOCUMENT AS PER ARTICLE 145 AND 147.

BCA ARCHITECTS ENGINEERS



LAFARGEVILLE CSD
CAPITAL IMPROVEMENT PROJECT
K12 BUILDING
LAFARGEVILLE - JEFFERSON - NEW YORK

REV	DATE	DESCRIPTION
4	4/15/2024	BID Addendum #3

DRAWN BY	PROJECT NUMBER
Author	2022-052
CHECKED BY	DATE
Checker	4/5/2024

FIRST FLOOR PLAN - AREA B

SHEET NUMBER

A102
BID SET

4/15/2024 3:41:40 PM

