CSARCH

Addendum No. 2

November 17, 2023
Valley Central CSD - 2021 Capital Project
CSArch Project No. 187-2103
SED Control No. 44-13-01-06-0-015-031

This Addendum No. 2 forms part of the Contract Documents and modifies the original bidding documents dated October 31, 2023.

REVISIONS TO THE PROJECT MANUAL

1. 081113 Hollow Metal Doors and Frames **ADD** 081113 Hollow Metal Doors and Frames.
2. 087100 Door Hardware **ADD** 087100 Door Hardware.
3. 099123 - Interior painting **ADD** 099123 - Interior painting.
4. 123216 - Manuf plastic-laminate-faced casework **ADD** 123216 - Manuf plastic-laminate-faced casework
5. 123553.13 - METAL LABORATORY CASEWORK **ADD** 123553.13 - METAL LABORATORY CASEWORK

REVISIONS TO THE CONTRACT DRAWINGS

1. HSMS AD103– REPLACE sheet with attached HSMS AD103.
2. HSMS A601– REPLACE sheet with attached HSMS A601.
3. HSMS A602– REPLACE sheet with attached HSMS A602.
4. HSMS A603– REPLACE sheet with attached HSMS A603.
5. HSMS A901– REPLACE sheet with attached HSMS A901.
6. HSMS AF101– REPLACE sheet with attached HSMS AF101.
7. HSMS ALT100– REPLACE sheet with attached HSMS ALT100.

FOR CLARIFICATION

1. See attached sign in sheet and agenda from pre bid walk thru.

END OF ADDENDUM NO. 2

SECTION 123553.13 - METAL LABORATORY CASEWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Metal laboratory casework.
2. Filler and closure panels.

B. Related Requirements:

1. Section 123619 Wood Countertops.

1.3 DEFINITIONS

A. MDF: Medium-density fiberboard.

B. Hardwood Plywood: A panel product composed of layers, or plies, of veneer, or of veneers in combination with lumber core, hardboard core, MDF core, or particleboard core, joined with adhesive and faced both front and back with hardwood veneers.

1.4 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

B. Keying Conference: Conduct conference at Project site. Incorporate keying conference decisions into final keying requirements.

1.5 COORDINATION

A. Coordinate layout and installation of framing and reinforcements for support of laboratory casework.

B. Coordinate installation of laboratory casework with installation of room equipment.

1.6 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For laboratory casework. Include plans, elevations, sections, and attachment details.

1. Indicate types and sizes of cabinets.
2. Indicate locations of hardware and keying of locks.
3. Indicate locations and types of service fittings.
4. Indicate locations of blocking and reinforcements required for installing laboratory casework.
5. Include details of utility spaces showing supports for conduits and piping.
6. Include details of support framing system.
7. Include details of exposed conduits, if required.
8. Indicate locations of and clearances from adjacent walls, doors, windows, other building components, and other laboratory equipment.
9. Include coordinated dimensions for room equipment specified in other Sections.

C. Keying Schedule: Include schematic keying diagram and index each key set to unique designations that are coordinated with the Contract Documents.

D. Samples for Initial Selection: For factory-applied finishes and other materials requiring color selection.

E. Samples for Verification: For each type of cabinet finish in manufacturer's standard sizes.

1.7 INFORMATIONAL SUBMITTALS

A. Qualification Data: For manufacturer.

B. Product Test Reports for Casework: Based on evaluation of comprehensive tests performed by a qualified testing agency, indicating compliance of laboratory casework with requirements of specified product standard and system structural performance specified in "Performance Requirements" Article.

1.8 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish complete touchup kit for each type and color of metal laboratory casework provided. Include fillers, primers, paints, and other materials necessary to perform permanent repairs to damaged laboratory casework finish.

B. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Cabinet Mounting Clips and Related Hardware: Quantity equal to 5 percent of amount installed, but no fewer than 20 of each type.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Protect finished surfaces during handling and installation with protective covering of polyethylene film or other suitable material.

1.10 FIELD CONDITIONS

A. Environmental Limitations: Do not deliver or install laboratory casework until building is enclosed, utility roughing-in and wet work are complete and dry, and temporary HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

B. Locate concealed framing, blocking, and reinforcements that support casework by field measurements before being enclosed, and indicate measurements on Shop Drawings.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Casework: Basis-of-Design Product: Subject to compliance with requirements, provide Kewaunee Scientific Corporation, or Architect approved equal.

B. Source Limitations: Obtain laboratory casework from single source from single manufacturer unless otherwise indicated.

C. Product Designations: Drawings indicate sizes and configurations of laboratory casework by referencing designated manufacturer's catalog numbers. Other manufacturers' laboratory casework of similar sizes and similar door and drawer configurations and complying with Specifications may be considered.

2.2 PERFORMANCE REQUIREMENTS

A. System Structural Performance: Laboratory casework and support framing system shall withstand the effects of the following gravity loads and stresses without permanent deformation, excessive deflection, or binding of drawers and doors:

1. Base Cabinets: 200 lb/ft.
2. Wall Cabinets (Upper Cabinets): 160 lb/ft. Shelves: 40 lb/sq. ft.

2.3 CASEWORK, GENERAL

A. Casework Product Standard: Comply with SEFA 8 M, "Laboratory Grade Metal Casework."

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

2.4 METAL CABINET AND TABLE LEG MATERIALS

A. Metal: Cold-rolled, commercial steel (CS) sheet, complying with ASTM A 1008/A 1008M; matte finish; suitable for exposed applications.

B. Nominal Metal Gauges:

1. 18 gauge furniture grade sheet metal, with structural reinforcement members of 12 and 14 gauge.

2.5 COUNTERTOP MATERIALS

A. Countertop Support Brackets: Provide 18 inch by 18 inch pre-manufactured, factory welded L-shaped aluminum legs with pre-punched holes for anchors.

1. Aluminum angles: 2 inch x 2 inch.
2. Thickness: 3/16 inch minimum.
3. Finish: Mill finish aluminum.
4. Ends: Rounded bottoms and exposed front edges.
5. Pre-punched holes: 2 for wood screws, 3 for wall anchors.

2.6 METAL CABINETS AND TABLE LEGS

A. Fabrication: Assemble and finish units at point of manufacture. Use precision dies for interchangeability of like-size drawers, doors, and similar parts. Perform assembly on precision jigs to provide units that are square. Reinforce units with angles, gussets, and channels. Except where otherwise specified, integrally frame and weld cabinet bodies to form dirt- and vermin-resistant enclosures. Where applicable, reinforce base cabinets for sink support. Maintain uniform clearance around door and drawer fronts of 1/16 to 3/32 inch (1.5 to 2.4 mm).

B. Flush Doors: Outer and inner pans that nest into box formation, with full-height channel reinforcements at center of door. Fill doors with noncombustible, sound-deadening material.

C. Hinged Doors: Mortise for hinges and reinforce with angles welded inside inner pans at hinge edge.

D. Drawers: Fronts made from outer and inner pans that nest into box formation, with no raw metal edges at top. Sides, back, and bottom fabricated in one piece with rolled or formed top of sides for stiffening and comfortable grasp for drawer removal. Provide drawers with rubber bumpers, polymer roller slides, and positive stops to prevent metal-to-metal contact or accidental removal.

E. Adjustable Shelves: Front, back, and ends formed down, with edges returned horizontally at front and back to form reinforcing channels.

F. Toe Space: Fully enclosed, 4 inches (100 mm) high by 3 inches (75 mm) deep, with no open gaps or pockets.

G. Peninsula Countertop Table Legs: Welded tubing legs, not less than 2 inches (50 mm) square with channel stretchers as needed to comply with product standard. Weld or bolt stretchers to legs and cross-stretchers, and bolt legs to table aprons. Provide leveling device welded to bottom of each leg.

1. Leg Shoes: Black vinyl or rubber, open-bottom, slip-on type.

H. Utilities: Provide space, cutouts, and holes for pipes, conduits, and fittings in cabinet bodies to accommodate utility services and their support-strut assemblies.

1. Provide base cabinets with removable backs for access to utility space.

I. Utility-Space Framing: Steel framing units consisting of two steel slotted channels complying with MFMA-4, not less than 1-5/8 inches (41 mm) square by 0.105-inch (2.66-mm) nominal thickness, that are connected at top and bottom by U-shaped brackets made from 1-1/4-by-1/4-inch (32-by-6-mm) steel flat bars. Framing units may be made by welding specified channel material into rectangular frames instead of using U-shaped brackets.

J. Filler and Closure Panels: Provide where indicated and as needed to close spaces between cabinets and walls, ceilings, and indicated equipment. Fabricate from same material and with same finish as cabinets and with hemmed or flanged edges unless otherwise indicated.

1. Provide knee-space panels (modesty panels) at spaces between base cabinets, where cabinets are not installed against a wall or where space is not otherwise closed. Fabricate from back-to-back panels or of hollow construction to eliminate exposed hemmed or flanged edges.

2.7 METAL CABINET FINISH

A. General: Prepare, treat, and finish welded assemblies after assembling. Prepare, treat, and finish components that are to be assembled with mechanical fasteners before assembling. Prepare, treat, and finish concealed surfaces same as exposed surfaces.

B. Preparation: After assembly, clean surfaces of mill scale, rust, oil, and other contaminants. After cleaning, apply a conversion coating suited to the organic coating to be applied over it.

C. Chemical-Resistant Finish: Immediately after cleaning and pretreating, apply laboratory casework manufacturer's standard two-coat, chemical-resistant, baked-on finish consisting of prime coat and thermosetting topcoat. Comply with coating manufacturer's written instructions for applying and baking to achieve a minimum dry film thickness of 2 mils (0.05 mm).

1. Chemical and Physical Resistance of Finish System: Finish complies with acceptance levels of cabinet surface finish tests in SEFA 8 M. Acceptance level for chemical spot test shall be no more than four Level 3 conditions.
2. Colors for Metal Laboratory Casework Finish: As selected by Architect from manufacturer's full range.

2.8 HARDWARE

A. General: Provide laboratory casework manufacturer's standard, commercial-quality, heavy-duty hardware complying with requirements indicated for each type.

B. Hinges: Stainless-steel, five-knuckle hinges complying with BHMA A156.9, Grade 1, with antifriction bearings and rounded tips. Provide two for doors 48 inches (1200 mm) high or less and three for doors more than 48 inches (1200 mm) high.

C. Hinged Door and Drawer Pulls: Solid-aluminum, stainless-steel, or chrome-plated-brass, back-mounted pulls. Provide two pulls for drawers more than 24 inches (600 mm) wide.

1. Design: As selected from manufacturer's full range.
2. Overall Size: As selected from manufacturer's full range.

D. Door Catches: Dual, self-aligning, permanent magnet catches. Provide two catches on doors more than 48 inches (1200 mm) high.

E. Drawer Slides: Side mounted, epoxy-coated steel, self-closing; designed to prevent rebound when drawers are closed; complying with BHMA A156.9, Type B05091.

1. Provide Grade 1HD-100; for drawers not more than 6 inches (150 mm) high and 24 inches (600 mm) wide.
2. Provide Grade 1HD-200; for drawers more than 6 inches (150 mm) high or 24 inches (600 mm) wide.
3. Standard Duty (Grade 1): Full-extension type, with polymer rollers.
4. Heavy Duty (Grade 1HD-100 and Grade 1HD-200): Full-extension, ball-bearing type.

F. Locks: Cam or half-mortise type, permanently attached cams, high security type, with five-pin tumbler, brass with chrome-plated finish.

1. Provide a minimum of three keys per lock and two master keys.
2. Provide on all drawers and doors.
3. Keying: Key locks alike within each room; key each room separately.
4. Master Key System: Key all locks to be operable by master key.

G. Stickers for Casework: Provide Accessible symbol sticker at all wheelchair accessible sink units. Units indicated on floor plans.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas, with Installer present, for compliance with requirements for installation tolerances, location of reinforcements, and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION OF CABINETS

A. Comply with installation requirements in SEFA 2.3. Install level, plumb, and true; shim as required, using concealed shims. Where laboratory casework abuts other finished work, apply filler strips and scribe for accurate fit, with fasteners concealed where practical. Do not exceed the following tolerances:

1. Variation of Tops of Base Cabinets from Level: 1/16 inch in 10 feet (1.5 mm in 3 m).
2. Variation of Bottoms of Upper Cabinets from Level: 1/8 inch in 10 feet (3 mm in 3 m).
3. Variation of Faces of Cabinets from a True Plane: 1/8 inch in 10 feet (3 mm in 3 m).
4. Variation of Adjacent Surfaces from a True Plane (Lippage): 1/32 inch (0.8 mm).
5. Variation in Alignment of Adjacent Door and Drawer Edges: 1/16 inch (1.5 mm).

B. Base Cabinets: Fasten cabinets to utility-space framing, partition framing, wood blocking, or reinforcements in partitions, with fasteners spaced not more than 16 inches (400 mm) o.c. Bolt adjacent cabinets together with joints flush, tight, and uniform.

1. Where base cabinets are installed away from walls, fasten to floor at toe space at not more than 24 inches (600 mm) o.c. and at sides of cabinets with not less than two fasteners per side.

C. Wall Cabinets: Fasten to hanging strips, masonry, partition framing, blocking, or reinforcements in partitions. Fasten each cabinet through back, near top, at not less than 16 inches (400 mm) o.c.

D. Install hardware uniformly and precisely. Set hinges snug and flat in mortises.

E. Adjust laboratory casework and hardware so doors and drawers align and operate smoothly without warp or bind and contact points meet accurately. Lubricate operating hardware as recommended by manufacturer.

3.3 INSTALLATION OF COUNTERTOPS

A. Comply with installation requirements in SEFA 2.3. Abut top and edge surfaces in one true plane with flush hairline joints and with internal supports placed to prevent deflection. Locate joints only where indicated on Shop Drawings.

B. Field Jointing: Only when conditions at time of installation require changes to Shop Drawings. Make in same manner as shop-made joints, using cam-locks, dowels, splines, fasteners and adhesives as recommended by manufacturer. Shop prepare edges for field-made joints.

C. Fastening:

1. Secure countertops to cabinets with Z-type fasteners or equivalent, using two or more fasteners at each cabinet front, end, and back.

D. Provide required holes and cutouts for service fittings.

E. Seal unfinished edges and cutouts in wood countertops with heavy coat of polyurethane varnish.

F. Provide countertop metal bracket supports within 15 inches of square abutting panels. Provide one bracket support within 12 inches of an interior wall corner which supports both abutting mitered panels.

G. Carefully dress joints smooth, remove surface scratches, and clean entire surface.

3.4 CLEANING AND PROTECTING

A. Clean finished surfaces, touch up as required, and remove or refinish damaged or soiled areas to match original factory finish, as approved by Architect.

B. Protect countertop surfaces during construction with 6-mil (0.15-mm) plastic or other suitable water-resistant covering. Tape to underside of countertop at a minimum of 48 inches (1200 mm) on center.

END OF SECTION 123553.13

SECTION 081113 - HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes:

1. Interior standard steel doors and frames.

B. Related Requirements:

1. Retain subparagraphs below to cross-reference requirements Contractor might expect to find in this Section but are specified in other Sections.
2. Section 087100 Door Hardware for door hardware for hollow-metal doors.

1.3 DEFINITIONS

A. Minimum Thickness: Minimum thickness of base metal without coatings according to NAAMM-HMMA 803 or SDI A250.8.

1.4 COORDINATION

A. Coordinate anchorage installation for hollow-metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.

B. Coordinate requirements for installation of door hardware, electrified door hardware, and access control and security systems.

1.5 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at [Project site] <Insert location>.

1.6 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, core descriptions, fire-resistance ratings, temperature-rise ratings, and finishes.

B. Shop Drawings: Include the following:

1. Elevations of each door type.
2. Details of doors, including vertical- and horizontal-edge details and metal thicknesses.
3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
4. Locations of reinforcement and preparations for hardware.
5. Details of each different wall opening condition.
6. Details of electrical raceway and preparation for electrified hardware, access control systems, and security systems.
7. Details of anchorages, joints, field splices, and connections.
8. Details of accessories.
9. Details of moldings, removable stops, and glazing.

C. Product Schedule: For hollow-metal doors and frames, prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with final door hardware schedule.

1.7 INFORMATIONAL SUBMITTALS

A. Product Test Reports: For each type of hollow-metal door and frame assembly, for tests performed by a qualified testing agency.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver hollow-metal doors and frames palletized, packaged, or crated to provide protection during transit and Project-site storage. Do not use non-vented plastic.

1. Provide additional protection to prevent damage to factory-finished units.

B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.

C. Store hollow-metal doors and frames vertically under cover at Project site with head up. Place on minimum 4-inch- high wood blocking. Provide minimum 1/4-inch space between each stacked door to permit air circulation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Curries

B. Ceco

C. Republic

D. Mesker

2.2 PERFORMANCE REQUIREMENTS

A. Fire-Rated Assemblies: Complying with NFPA 80 and listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction for fire-protection ratings and temperature-rise limits indicated, based on testing at positive pressure according to NFPA 252 or UL 10C.

1. Smoke- and Draft-Control Assemblies: Provide assemblies with gaskets listed and labeled for smoke and draft control by a qualified testing agency acceptable to authorities having jurisdiction, based on testing according to UL 1784 and installed in compliance with NFPA 105.
2. Oversize Fire-Rated Door Assemblies: For units exceeding sizes of tested assemblies, provide certification by a qualified testing agency that doors comply with standard construction requirements for tested and labeled fire-rated door assemblies except for size.
3. Temperature-Rise Limit: Where indicated and at vertical exit enclosures and exit passageways, provide doors that have a maximum transmitted temperature end point of not more than 450 deg F above ambient after 30 minutes of standard fire-test exposure.

B. Fire-Rated, Borrowed-Lite Assemblies: Complying with NFPA 80 and listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing according to NFPA 257 or UL 9.

2.3 HOLLOW METAL DOORS AND FRAMES

A. Construct hollow-metal doors and frames to comply with standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.

B. Extra-Heavy-Duty Doors and Frames: SDI A250.8, Level 3; SDI A250.4, Level A.

1. Doors:

a. Type: As indicated in the Door and Frame Schedule.
b. Thickness: 1-3/4 inches.
c. Face: Uncoated steel sheet, minimum thickness of 16 gauge

d. Edge Construction: Model 2, Seamless (Continuously Welded)
e. Edge Bevel: Bevel lock and hinge edges 1/8 inch in 2 inches.
   1) Exception provide square edges in inactive leaf of pairs of doors.
f. Core: Manufacturer's standard
g. Fire-Rated Core: Manufacturer's standard as required to meet rating requirements.

2. Frames:

a. Materials: Uncoated steel sheet, minimum thickness of 14 gauge.
b. Construction: Full profile welded.

3. Exposed Finish: Prime.

2.4 FRAME ANCHORS

A. Jamb Anchors:

1. Type: Anchors of minimum size and type required by applicable door and frame standard, and suitable for performance level indicated.
2. Quantity: Minimum of four (4) anchors per jamb, with one additional anchor for frames with no floor anchor. Provide one additional anchor for each 24 inches of frame height above 7 feet.
3. Post-installed Expansion Anchor: Minimum 3/8-inch-diameter bolts with expansion shields or inserts, with manufacturer's standard pipe spacer.

B. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor.

C. Floor Anchors for Concrete Slabs with Underlayment: Adjustable-type anchors with extension clips, allowing not less than 2-inch height adjustment. Terminate bottom of frames at top of underlayment.

D. Material: ASTM A 879/A 879M, Commercial Steel (CS), 04Z coating designation; mill phosphatized.

1. For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M; hot-dip galvanized according to ASTM A 153/A 153M, Class B.

2.5 MATERIALS

A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.

B. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.

C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B.

D. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.

E. Power-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hollow-metal frames of type indicated.

F. Glazing: Comply with requirements in Section 088000 "Glazing."

2.6 FABRICATION

A. Door Astragals: Provide overlapping astragal on one leaf of pairs of doors where indicated in hardware specification section 087100. Extend minimum 3/4 inch beyond edge of door on which astragal is mounted or as required to comply with published listing of qualified testing agency.

B. Hollow-Metal Frames: Fabricate in one piece except where handling and shipping limitations require multiple sections. Where frames are fabricated in sections, provide alignment plates or angles at each joint, fabricated of metal of same or greater thickness as frames.
   1. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.

C. Hardware Preparation: Factory prepare hollow-metal doors and frames to receive templated mortised hardware, and electrical wiring; include cutouts, reinforcement, mortising, drilling, and tapping according to SDI A250.6, the Door Hardware Schedule, and templates.

   1. Reinforce doors and frames to receive non-templated, mortised, and surface-mounted door hardware.
   2. Comply with BHMA A156.115 for preparing hollow-metal doors and frames for hardware.

2.7 STEEL FINISHES

A. Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.

   1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with SDI A250.10; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.

PART 3 - EXECUTION

3.1 PREPARATION

A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces. Touch up factory-applied finishes where spreaders are removed.

B. Drill and tap doors and frames to receive non-templated, mortised, and surface-mounted door hardware.

3.2 INSTALLATION

A. General: Install hollow-metal doors and frames plumb, rigid, properly aligned, and securely fastened in place. Comply with approved Shop Drawings and with manufacturer's written instructions.

B. Hollow-Metal Frames: Comply with SDI A250.11

1. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces without damage to completed Work.

    a. Where frames are fabricated in sections, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces. Touch-up finishes.
    b. Install frames with removable stops located on secure side of opening.

2. Fire-Rated Openings: Install frames according to NFPA 80.
3. Floor Anchors: Secure with post-installed expansion anchors.

    a. Floor anchors may be set with power-actuated fasteners instead of post-installed expansion anchors if so indicated and approved on Shop Drawings.

4. Solidly pack mineral-fiber insulation inside frames.
5. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with grout or mortar.
6. In-Place Concrete or Masonry Construction: Secure frames in place with post-installed expansion anchors. Countersink anchors, and fill and make smooth, flush, and invisible on exposed faces.
7. Installation Tolerances: Adjust hollow-metal frames to the following tolerances:

    a. Squareness: Plus, or minus 1/32 inch measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
    b. Alignment: Plus or minus 1/32 inch, measured at jambs on a horizontal line parallel to plane of wall.
    c. Twist: Plus or minus 1/32 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
    d. Plumbness: Plus or minus 1/32 inch, measured at jambs at floor.

C. Hollow-Metal Doors: Fit and adjust hollow-metal doors accurately in frames, within clearances specified below.
1. Fire-Rated Doors: Install doors with clearances according to NFPA 80.
2. Smoke-Control Doors: Install doors according to NFPA 105.

3.3 CLEANING AND TOUCHUP

A. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.

B. Metallic-Coated Surface Touchup: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.

C. Factory-Finish Touchup: Clean abraded areas and repair with same material used for factory finish according to manufacturer's written instructions.

D. Touchup Painting: Cleaning and touchup painting of abraded areas of paint are specified in painting Sections.

END OF SECTION 081113

SECTION 123216 - MANUFACTURED PLASTIC-LAMINATE-FACED CASEWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes plastic-laminate-faced cabinets of stock design.

1.3 DEFINITIONS

A. Definitions in the AWI's, AWMAC's, and WI's "Architectural Woodwork Standards" apply to the work of this Section.

B. MDF: Medium-density fiberboard.

C. Hardwood Plywood: A panel product composed of layers or plies of veneer, or of veneers in combination with lumber core, hardboard core, MDF core, or particleboard core, joined with adhesive, and faced both front and back with hardwood veneers.

1.4 COORDINATION

A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that casework can be supported and installed as indicated.

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Product Data: For adhesives, indicating that product contains no urea formaldehyde.
2. Laboratory Test Reports: For adhesives, indicating compliance with requirements for low-emitting materials.
3. Product Data: For composite wood products, indicating that product contains no urea formaldehyde.
4. Laboratory Test Reports: For composite wood products, indicating compliance with requirements for low-emitting materials.

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work. Show fabrication details, including types and locations of hardware. Show installation details, including field joints and filler panels. Indicate manufacturer's catalog numbers for casework.

C. Samples: For cabinet finishes.

D. Samples for Initial Selection: For cabinet finishes.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Sample Warranty: For special warranty.

1.7 QUALITY ASSURANCE

A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer for installation of units required for this Project.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver casework only after painting, utility roughing-in, and similar operations that could damage, soil, or deteriorate casework have been completed in installation areas. If casework must be stored in other than installation areas, store only in areas where environmental conditions meet requirements specified in "Project Conditions" Article.

B. Keep finished surfaces covered with polyethylene film or other protective covering during handling and installation.

1.9 FIELD CONDITIONS

A. Environmental Limitations: Do not deliver or install casework until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

B. Established Dimensions: Where casework is indicated to fit to other construction, establish dimensions for areas where woodwork is to fit. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.

C. Locate concealed framing, blocking, and reinforcements that support casework by field measurements before being enclosed, and indicate measurements on Shop Drawings.

1.10 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace components of casework that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Delamination of components or other failures of glue bond.
b. Warping of components.

c. Failure of operating hardware.

2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis-of-Design Product: Subject to compliance with requirements, provide LSI Corporation of America; products or a comparable product by one of the following:

1. Case Systems Inc.
2. Stevens Industries, Inc.
3. Terrill Manufacturing Company.
4. Windham Millwork, Inc.

B. Source Limitations: Obtain plastic-laminate-faced cabinets from single manufacturer.

2.2 CASEWORK, GENERAL

A. Quality Standard: Unless otherwise indicated, comply with the AWI's, AWMAC's, and WI's "Architectural Woodwork Standards" for grades of casework indicated for construction, finishes, installation, and other requirements.

1. Grade: Custom.

B. Product Designations: Drawings indicate configurations of manufactured plastic-laminate-faced cabinets by referencing designations of Casework Design Series numbering system in Appendix A of the AWI's, AWMAC's, and WI's "Architectural Woodwork Standards."

2.3 CASEWORK

A. Design:

1. Flush overlay.

B. Grain Direction for Wood Grain Plastic Laminate:

1. Vertical on both doors and drawer fronts, with continuous vertical matching.
2. Vertical on doors, horizontal on drawer fronts.
3. Lengthwise on face frame members.
4. Vertical on end panels.
5. Side to side on bottoms and tops of units.
6. Vertical on knee-space panels.
7. Horizontal on aprons.

C. Exposed Materials:

1. Plastic Laminate: Grade HGS.

    a. Colors and Patterns: As selected by Architect from manufacturer's full range.

2. Unless otherwise indicated, provide specified edgebanding on all exposed edges.

D. Semiexposed Materials:

1. Plastic Laminate: Grade VGS unless otherwise indicated. Provide plastic laminate for semiexposed surfaces unless otherwise indicated.

    a. Provide plastic laminate of same grade as exposed surfaces for interior faces of doors and drawer fronts and other locations where opposite side of component is exposed.

2. Hardboard: Use only for cabinet backs where exterior side of back is not exposed.
3. Unless otherwise indicated, provide specified edgebanding on all semiexposed edges.

E. Concealed Materials:
1. Particleboard.
2. MDF.
3. Hardboard.

2.4 MATERIALS

A. Composite Wood Products: Products shall be made without urea formaldehyde.

B. Maximum Moisture Content for Lumber: 7 percent for hardwood and 12 percent for softwood.

C. Particleboard: ANSI A208.1, Grade M-2.

D. MDF: ANSI A208.2, Grade 130 .

E. Hardboard: ANSI A135.4, Class 1 Tempered.

F. Plastic Laminate: High-pressure decorative laminate complying with NEMA LD 3.

1. Basis-of-Design Product: Subject to compliance with requirements, provide Formica Corporation products or a comparable product by one of the following:

    a. Abet Laminati Inc.
    b. Arborite.
    c. Nevamar; a Panolam Industries International, Inc. brand.
    d. Wilsonart LLC.

G. Edgebanding for Plastic Laminate: Plastic laminate matching adjacent surfaces.

H. Adhesives: Do not use adhesives that contain urea formaldehyde.

2.5 COLORS AND FINISHES

A. Plastic-Laminate Colors, Patterns, and Finishes: As selected by Architect from plastic-laminate manufacturer's full range.

B. PVC Edgebanding Color: As selected from casework manufacturer's full range.

2.6 FABRICATION

A. Plastic-Laminate-Faced Cabinet Construction: As required by referenced quality standard, but not less than the following:

1. Bottoms and Ends of Cabinets, and Tops of Wall Cabinets and Tall Cabinets: 3/4-inch (19-mm) particleboard.
2. Shelves: 3/4-inch- (19-mm-) thick plywood or 1-inch- (25-mm-) thick particleboard.
3. Backs of Cabinets: 1/2-inch- (12.7-mm-) thick particleboard or MDF where exposed, 1/4-inch (6.4-mm) hardboard dadoed into sides, bottoms, and tops where not exposed.
4. Drawer Fronts: 3/4-inch (19-mm) particleboard.
5. Drawer Sides and Backs: 1/2-inch (12.7-mm) solid-wood or veneer-core hardwood plywood, with glued dovetail or multiple-dowel joints.
6. Drawer Bottoms: 1/4-inch (6.4-mm) hardwood plywood glued and dadoed into front, back, and sides of drawers. Use 1/2-inch (12.7-mm) material for drawers more than 24 inches (600 mm) wide.
7. Doors 48 Inches (1200 mm) High or Less: 3/4 inch (19 mm) thick, with particleboard or MDF cores.
8. Doors More Than 48 Inches (1200 mm) High: 1-1/8 inches (29 mm) thick, with particleboard cores.

B. Filler Strips: Provide as needed to close spaces between cabinets and walls, ceilings, and indicated equipment. Fabricate from same material and with same finish as cabinets.

2.7 CASEWORK HARDWARE AND ACCESSORIES

A. Hardware, General: Unless otherwise indicated, provide manufacturer's standard satin-finish, commercial-quality, heavy-duty hardware.

1. Use threaded metal or plastic inserts with machine screws for fastening to particleboard except where hardware is through-bolted from back side.

B. Frameless Concealed Hinges (European Type): BHMA A156.9, Type B01602, 170 degrees of opening, self-closing. Provide two hinges for doors less than 48 inches (1220 mm) high, and provide three hinges for doors more than 48 inches (1220 mm) high.

C. Pulls: Solid aluminum wire pulls, fastened from back with two screws. For sliding doors, provide recessed stainless-steel flush pulls. Provide two pulls for drawers more than 24 inches (600 mm) wide.

D. Drawer Slides: BHMA A156.9, Type B05091.

1. Heavy Duty (Grade 1HD-100 and Grade 1HD-200): Side mounted; full-overtravel-extension type; zinc-plated, steel ball-bearing slides.

E. Drawer and Hinged Door Locks: Cylindrical (cam) type, five-pin tumbler, brass with chrome-plated finish, and complying with BHMA A156.11, Grade 1.

1. Provide a minimum of four keys.
2. Provide locks on all doors and drawers, operated by the same key.

F. Adjustable Shelf Supports: Mortise-type, zinc-plated steel standards and shelf rests complying with BHMA A156.9, Types B04071 and B04091.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas, with Installer present, for compliance with requirements for installation tolerances, location of framing and reinforcements, and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 CASEWORK INSTALLATION

A. Grade: Install cabinets to comply with same grade as item to be installed.

B. Install casework level, plumb, and true; shim as required, using concealed shims. Where casework abuts other finished work, apply filler strips and scribe for accurate fit, with fasteners concealed where practical.

C. Base Cabinets: Set cabinets straight, level, and plumb. Adjust subtops within 1/16 inch (1.5 mm) of a single plane. Align similar adjoining doors and drawers to a tolerance of 1/16 inch (1.5 mm). Bolt adjacent cabinets together with joints flush, tight, and uniform.

D. Wall Cabinets: Hang cabinets straight, level, and plumb. Adjust fronts and bottoms within 1/16 inch (1.5 mm) of a single plane. Fasten to hanging strips, masonry, framing, wood blocking, or reinforcements in walls and partitions. Align similar adjoining doors to a tolerance of 1/16 inch (1.5 mm).

E. Fasten cabinets to adjacent cabinets and to masonry, framing, wood blocking, or reinforcements in walls and partitions to comply with the AWI's, AWMAC's, and WI's "Architectural Woodwork Standards."

F. Install hardware uniformly and precisely. Set hinges snug and flat in mortises unless otherwise indicated. Adjust and align hardware so moving parts operate freely and contact points meet accurately. Allow for final adjustment after installation.

G. Adjust casework and hardware so doors and drawers operate smoothly without warp or bind. Lubricate operating hardware as recommended by manufacturer.

3.3 CLEANING

A. Repair or remove and replace defective work as directed on completion of installation.

B. Clean finished surfaces, touch up as required, and remove or refinish damaged or soiled areas to match original factory finish, as approved by Architect.

END OF SECTION 123216

SECTION 099123 - INTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes surface preparation and the application of paint systems on interior substrates.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product. Include preparation requirements and application instructions.

B. Samples for Initial Selection: For each type of topcoat product.

C. Samples for Verification: For each type of paint system and in each color and gloss of topcoat.

1. Submit Samples on rigid backing, 8 inches (200 mm) square.
2. Step coats on Samples to show each coat required for system.
3. Label each coat of each Sample.
4. Label each Sample for location and application area.

1.4 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Paint: 5 percent, but not less than 1 gal. (3.8 L) of each material and color applied.

1.5 QUALITY ASSURANCE

A. Mockups: Apply mockups of each paint system indicated and each color and finish selected to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Architect will select one surface to represent surfaces and conditions for application of each paint system specified in Part 3.
   a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft. (9 sq. m).
   b. Other Items: Architect will designate items or areas required.
2. Final approval of color selections will be based on mockups.
   a. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.
3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).

1. Maintain containers in clean condition, free of foreign materials and residue.
2. Remove rags and waste from storage areas daily.

1.7 FIELD CONDITIONS

A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).

B. Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design Products: See Material Legends on drawings for locations, colors, finishes.
   1. Sherwin-Williams Company.

2.2 PAINT, GENERAL

A. See Part 3 for Paint products.

B. Material Compatibility:

   1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
   2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

C. VOC Content: Products shall comply with VOC limits of authorities having jurisdiction and, for interior paints and coatings applied at Project site, the following VOC limits, exclusive of colorants added to a tint base, when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

   1. Flat Paints and Coatings: 50 g/L.
   2. Nonflat Paints and Coatings: 150 g/L.
   3. Dry-Fog Coatings: 400 g/L.
   4. Primers, Sealers, and Undercoaters: 200 g/L.
   5. Anticorrosive and Antirust Paints Applied to Ferrous Metals: 250 g/L.
   6. Zinc-Rich Industrial Maintenance Primers: 340 g/L.
   7. Pretreatment Wash Primers: 420 g/L.
   8. Floor Coatings: 100 g/L.

D. Colors: Match Architect's samples and or As indicated in a color schedule.

2.3 SOURCE QUALITY CONTROL

A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure:

   1. Owner will engage the services of a qualified testing agency to sample paint materials. Contractor will be notified in advance and may be present when

samples are taken. If paint materials have already been delivered to Project site, samples may be taken at Project site. Samples will be identified, sealed, and certified by testing agency.

2. Testing agency will perform tests for compliance with product requirements.
3. Owner may direct Contractor to stop applying coatings if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will be required to remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

1. Concrete: 12 percent.
2. Masonry (Clay and CMU): 12 percent.
3. Wood: 15 percent.
4. Gypsum Board: 12 percent.
5. Plaster: 12 percent.

C. Gypsum Board Substrates: Verify that finishing compound is sanded smooth.

D. Plaster Substrates: Verify that plaster is fully cured.

E. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

F. Proceed with coating application only after unsatisfactory conditions have been corrected.

1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates indicated.

B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.

C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.

D. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.

E. Masonry Substrates: Remove efflorescence and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces or mortar joints exceed that permitted in manufacturer's written instructions.

F. Steel Substrates: Remove rust, loose mill scale, and shop primer, if any. Clean using methods recommended in writing by paint manufacturer.

1. SSPC-SP 2, "Hand Tool Cleaning."
2. SSPC-SP 3, "Power Tool Cleaning."
3. SSPC-SP 7/NACE No. 4, "Brush-off Blast Cleaning."
4. SSPC-SP 11, "Power Tool Cleaning to Bare Metal."

G. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.

H. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal fabricated from coil stock by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.

I. Aluminum Substrates: Remove loose surface oxidation.

J. Wood Substrates:

1. Scrape and clean knots, and apply coat of knot sealer before applying primer.
2. Sand surfaces that will be exposed to view, and dust off.
3. Prime edges, ends, faces, undersides, and backsides of wood.
4. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.

3.3 APPLICATION

A. Apply paints according to manufacturer's written instructions and to recommendations in "MPI Manual."

1. Use applicators and techniques suited for paint and substrate indicated.
2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
4. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
5. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.

B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.

C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.

D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

E. Painting Fire Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and Security Work:

1. Paint the following work where exposed in equipment rooms:
   a. Equipment, including panelboards.

b. Uninsulated metal piping.
c. Uninsulated plastic piping.
d. Pipe hangers and supports.
e. Metal conduit.
f. Plastic conduit.
g. Tanks that do not have factory-applied final finishes.
h. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.

2. Paint the following work where exposed in occupied spaces:
a. Equipment, including panelboards.
b. Uninsulated metal piping.
c. Uninsulated plastic piping.
d. Pipe hangers and supports.
e. Metal conduit.
f. Plastic conduit.
g. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.
h. Other items as directed by Architect.

3. Paint portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets that are visible from occupied spaces.

3.4 FIELD QUALITY CONTROL

A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.

1. Contractor shall touch up and restore painted surfaces damaged by testing.
2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written recommendations.

3.5 CLEANING AND PROTECTION

A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.6 INTERIOR PAINTING SCHEDULE

A. Any building components not listed, but scheduled to be painted: Paint system to be provided by the Architect.

B. CMU – Concrete Masonry Units

1. Eg-Shell Finish:
   a. Primer: PrepRite® Block Filler, B25W25.
   b. 1st Coat: ProMar® 200 Zero VOC Interior Latex Eg-Shel, B20-2600 Series.
   c. 2nd Coat: ProMar 200 Zero VOC Interior Latex Eg-Shel, B31-2600 Series.

C. Gypsum Board and Plaster Finished – Walls

1. Eg-Shel Finish.
   a. Primer: ProMar 200 Zero VOC Latex Primer, B28W2600.
   b. 1st Coat: ProMar 200 Zero VOC Interior Latex Eg-Shel, B20-2600 Series.
   c. 2nd Coat: ProMar 200 Zero VOC Interior Latex Eg-Shel, B20-2600 Series.

D. Gypsum Board – Ceilings and Soffits

1. Flat Finish.
   a. Primer: ProMar 200 Zero VOC Latex Primer, B28W2600.
   b. 1st Coat: ProMar 200 Zero VOC Interior Latex Flat, B30-2600 Series.
   c. 2nd Coat: ProMar 200 Zero VOC Interior Latex Flat, B30-2600 Series.

E. Ferrous Metal – Doors, Frames and Miscellaneous Metals

1. Semi-Gloss Finish.
   a. Primer: Pro Industrial™ ProCryl® Universal Primer, B66-310 Series.
   b. 1st Coat: Pro Industrial Acrylic Semi-Gloss, B66-650 Series.
   c. 2nd Coat: Pro Industrial Acrylic Semi-Gloss, B66-650 Series.
2. Eg-Shell Finish:
   a. Primer: Pro Industrial™ ProCryl® Universal Primer, B66-310 Series.
   b. 1st Coat: Pro Industrial Acrylic Eg-Shel, B66-660 Series.
   c. 2nd Coat: Pro Industrial Acrylic Eg-Shel, B66-660 Series.

F. Non-Ferrous Metal – Galvanized/Aluminum Metal Surfaces

1. Eg-Shel Finish.
   a. Primer: Pro Industrial ProCryl Universal Primer, B66-310 Series
   b. 1st Coat: Pro Industrial Acrylic Eg-Shel, B66-660 Series.
   c. 2nd Coat: Pro Industrial Acrylic Eg-Shel, B66-660 Series.

G. Exposed Ceilings and Decking

1. Ferrous Metal Decking – Including Bar Joists/Structural Steel
   a. Flat Finish.
      1) Primer: Pro Industrial ProCryl Universal Primer, B66-310 Series.
      2) 1st Coat: Pro Industrial Waterborne Acrylic Dryfall, Flat, B42-80 Series.
      3) 2nd Coat: Pro Industrial Waterborne Acrylic Dryfall, Flat, B42-80 Series.
2. Non-Ferrous Metal Decking
   a. Flat Finish.
      1) 1st Coat: Pro Industrial Waterborne Acrylic Dryfall, Flat B42-80 Series.
      2) 2nd Coat: Pro Industrial Waterborne Acrylic Dryfall, Flat B42-80 Series.

H. Concrete Floors – Pigmented.

1. 1st Coat: Armor Seal 1000 HS Epoxy G67-2000 Series.
2. 2nd Coat: Armor Seal 1000 HS Epoxy G67-2000Series.

END OF SECTION 099123

SECTION 087100 – DOOR HARDWARE

Part 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes but not limited to the following:

1. Mechanical and/or electrical hardware.
2. Cylinder for hardware specified in other sections.

B. Related Requirements

1. Division 01 Section “Closeout Procedures”
2. Division 06 Section “Rough Carpentry”.
3. Division 06 Section “Finish Carpentry”.
4. Division 08 Section “Hollow Metal Doors and Frames”.

C. 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 80 - Fire Doors and Windows.
4. NFPA 101 - Life Safety Code.
5. NFPA 105 - Installation of Smoke Door Assemblies.
6. NYS SED – Manual of Planning Standards (MPS).
7. State Building Codes, Local Amendments.

1.3 COORDINATION

A. Installation Templates: Distribute for doors, frames, and other work specified to be factory prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

B. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.

C. Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to power supplies and building safety and security systems.

D. Existing Openings: Where hardware components are scheduled for application to existing construction or where modifications to existing door hardware are required, field verify

existing conditions and coordinate installation of door hardware to suit opening conditions and to provide proper door operation.

1.4 COORDINATION AND MEETINGS

A. Location: Conduct conferences on project site or other location as directed by the Architect/Owner.

B. Preinstallation Conference

1. Purpose of the Preinstallation conference is to:

    a. Coordinate between trades, so all understand their responsibilities.
    b. To instruct the installing contractors' personnel on the proper installation and adjustment of their respective products.
        1. The hardware supplier is responsible for bringing the installation instructions to the meeting.
    c. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
    d. Review sequence of operation narratives for each unique access-controlled opening.
    e. Review the requirements for local and state building codes and how they apply to doors, frames, and hardware.
        1. Gap requirements around the doors to follow NFPA 80.
        2. Opening forces to follow DOJ’s “2010 ADA Standards for accessible design”.
    f. Review any special applications.

2. Conference participants shall include but not limited to:

    a. General Contractor.
    b. Installer for doors, frames, and hardware.
    c. Supplier Representative.
    d. Owner and/or Owners Representative.
    e. Construction Manager (if applicable).
    f. Architect and/or Architects Consultant.

1.5 SUBMITTALS

A. Submittal Sequence to follow in this order and each are to be submitted under separate cover:
1. Information Submittal.
2. Door Hardware Schedule.
3. Hardware Product Data.
4. Samples.
5. Closeout Submittals.
6. Submit door hardware schedule concurrent with submissions of Product Data, Samples.

B. Information Submittals:

1. Qualification Data: Submit qualification data for the Installer and Supplier as defined under Quality Assurance of the Section.
2. Product Certifications:
    a. Certify that door hardware for use on each type and size of labeled fire-rated doors complies with listed fire-rated door assemblies.
3. Product Test Reports: For compliance with accessibility requirements, for tests performed by manufacturer and witnessed by a qualified testing agency.

C. 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: Use same scheduling sequence and use same door numbers as in the Contract Documents.

2. Content: Include the following information:
   a. Index of openings showing hardware set assignments.
   b. Identification number, location, hand, fire rating, size, degree of opening, and material of each door and frame.
   c. Locations of each door hardware set, cross-referenced to floor plans, and to door and frame schedule.
   d. Complete designations, including name and manufacturer, type, style, function, size, quantity, function, and finish of each door hardware product.
   e. Description of electrified door hardware sequences of operation and interfaces with other building control systems.
   f. Fastenings and other installation information.
   g. Explanation of abbreviations, symbols, and designations contained in door hardware schedule.
   h. Mounting locations for door hardware.
   i. Complete list of related door devices specified or supplied in other Sections for each door and frame.

D. Door Hardware Product Data: Prepared by or under the supervision of supplier.
1. Provide an index of products used grouped by manufacturer.
2. Each product shall be highlighted or marked accordingly.
   a. Do not include pages or products that are not applicable to the project. If they appear on the same page as a product being used, they shall be crossed out.

E. Samples:

1. Provide a finish sample for each exposed product in each finish specified, in manufacturer's standard size.

2. Tag Samples with full product description to coordinate samples with the door hardware schedule.

F. Closeout Submittals:

1. After final approval is received from the architect, submit a Record Copy of the Door and Hardware Schedule with all the content as previously required.
   a. Submittal must be stamped “RECORD COPY.”
   b. The Record Copy will be given to the installer for the installation of the hardware.

2. Warranty Submittal: Warranty information to include the following information:
   a. Original factory order number.
   b. Date order was placed.
   c. Date of installation (approximately if unknown).

3. Operating and Maintenance Manuals:
   a. Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Procedures.

G. Submittals that do not comply with all the requirements above will be rejected and will have to be resubmitted. Any project delays caused by incorrect/incomplete submittals will be the responsibility of the General Contractor and Hardware Supplier.

1.6 QUALITY ASSURANCE

A. Installer Qualifications:

1. A minimum 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.

B. Door Hardware Supplier Qualifications:

1. Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project.
2. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity.
3. 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.

1.7 DELIVERY AND STORAGE

A. All hardware for field installation shall be delivered to the project site.

1. Any hardware that is required to be factory installed shall be delivered to the factory at the cost of the supplier of the doors or frames requiring the factory installation.

B. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site.

1. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.
2. The storage area must maintain low humidity and a temperature between 60 to 90 degrees Fahrenheit.

C. 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.

D. 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".

1.8 WARRANTY

A. General Warranty: Reference Division 01, 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. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.

D. Special Warranty Periods:

1. Ten (10) years for mechanical mortise locks.
2. Thirty (30) years for mechanical, manual overhead door closers.
3. Two (2) years for electromechanical door hardware.

1.9 MAINTENANCE

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

Part 2 – PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations: Obtain each type of door hardware from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

A. Fire-Rated Door Assemblies: Where fire-rated doors are indicated, provide door hardware complying with NFPA 80 that is listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to NFPA 252 or UL 10C.

B. Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that complies with requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.

C. Means of Egress Doors: Latches do not require more than 15 lbf to release the latch. Locks do not require use of a key, tool, or special knowledge for operation.

D. Accessibility Requirements: For door hardware on doors in an accessible route, comply with the DOJ's "2010 ADA Standards for Accessible Design".

1. Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf.
2. Comply with the following maximum opening-force requirements:
   a. Interior, Hinged Doors: 5 lbf applied perpendicular to door.
   b. Sliding or Folding Doors: 5 lbf applied parallel to door at latch.
   c. Provide thresholds not more than 1/2 inch high.

d. Adjust door closer sweep periods so that, from an open position of 90 degrees, the door will take at least 5 seconds to move to a position of 12 degrees from the latch.
e. Adjust spring hinges so that, from an open position of 70 degrees, the door will take at least 1.5 seconds to move to the closed position.

2.3 SCHEDULED DOOR HARDWARE

A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.

B. For products furnished, but not installed, under this Section, Coordinating, purchasing, delivering, and scheduling remain requirements of this Section.

C. Equals: Requests for equals and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

D. Substitutions: Are not allowed unless the specified product(s) are no longer available.

2.4 CONTINUOUS HINGES

A. General Requirements:

1. Continuous Hinges are to meet or exceed ANSI/BHMA A156.26 Grade 1 Requirements.
2. Fabricated to full height of door and to template screw locations; with components finished after milling and drilling are complete.
3. Hinges are to be non-handed.
4. Factories to prepare for electrical cut-outs.
5. Hinge Type: Provide the type listed in the hardware sets.
6. Coordinate with door manufacturers for the exact type required, as it varies between door manufacturers and application.
7. Fasteners: All of the fasteners are to be fabricated from corrosion resistant materials.
   a. Provide either 12-24 x 3/4" self-drilling, thread-forming or 12-24 x 1/2" thread-forming screws that are made of 410 stainless-steel with an undercut head.

B. Continuous, Pin-and-Barrel Type:

1. Provide hinge leaves with a minimum 14-gauge Type 304 stainless steel hinge leaves.
2. Both the top and bottom of pins are to be permanently welded.
3. Pins are to be manufactured out of stainless steel with a minimum diameter of 3/16” (.1875”).
4. Manufacturers:

   a. Architectural Builders Hardware (AH).
   b. Hager Companies (HA).
   c. Markar (MK).
   d. Select (SE).

2.5 CYLINDERS AND KEYING

A. Cylinders: Original manufacturer cylinders complying with the following:

1. Tumbler type, constructed from brass or bronze, stainless steel, or nickel silver.
2. Meet or exceed ANSI/BHMA A156.5 Grade 1 requirements.

3. Mortise Type: Threaded cylinders with rings and cams to suit hardware application.
4. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
    a. 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. Stamped collars are not allowed.
5. Face finished to match lockset.
6. Core Type: Small Format Interchangeable.
7. **Final cores supplied by the owner, GC to install.**

B. Construction Cores:

1. Construction Cores: Provide keyed construction cores that are replaceable by permanent cores.
    a. Provide 10 construction master keys.
    b. Provide 2 Construction Core Removal Keys.

2.6 MECHANICAL LOCK AND LATCHING DEVICE

A. Mortise Locksets:

1. Locks shall meet or exceed ANSI/BHMA A156.13, Series 1000, Operational Grade 1, and Security.
2. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.
3. Extended cycle test: Locks to have been cycle tested in ordinance with ANSI/BHMA 156.13 requirements to a minimum of 10 million cycles.
4. Lock trim and function as shown in hardware sets.
5. Manufacturers:

    a. Corbin Russwin (RU) ML2000 Series.
    b. Best (BE) 45H Series.
    c. Schlage (SC) L9000 Series.

2.7 SURFACE CLOSERS

A. Surface Closers shall meet or exceed ANSI/BHMA A156.4, Grade 1 requirements.

B. Surface Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.

C. 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.

D. Provide Surface Closers complying the Americans with Disabilities Act, ANSI ICC/A117.1.

E. Extended cycle test: Surface Closers to have been cycle tested to 10 million cycles.

F. Provide metal closer covers.

G. Closers shall not be installed on exterior or corridor side of doors.

1. Where a conflict exists, bring it to the attention of the Architect prior to installation.

H. Provide accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation and operation.

I. Coordinate with Overhead Holder/Stop installation, provide special templates as required to avoid hardware conflicts.

J. When installing Mullions in Aluminum or Fiberglass Framing, install using Rivnuts and Stainless-Steel machine screws.

K. Provide Through Bolts for Surface Closers installed on wood doors.

L. Manufacturers:

1. LCN (LC) 4050 Series.
2. Norton (NO) 7500 Series.
3. Sargent (SA) 351 Series.

2.8 OVERHEAD STOPS AND HOLDERS

A. Stops and Holders shall meet or exceed ANSI/BHMA A156.8, Grade 1 requirements.

B. Provide units that are through bolted on all Wood Door applications.

C. Coordinate with door closer installation, special templating may be required.

D. Where stops and holders are specified, coordinate with door manufacturer to insure proper application, installation, and operation.

E. Function as show in Hardware Sets.

F. Manufacturers:

1. Architectural Builders Hardware (AH).
2. Glynn Johnson (GJ).
3. Rixson (RF).

2.9 ARCHITECTURAL TRIM

A. Protective Plates (kick, armor, or mop):

1. Shall meet ANSI/BHMA A156.6 requirements.

2. Protective plates, fabricated from the following:
a. Stainless Steel: 300 grade, 050-inch thick.

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.

4. Kick and Armor Plates are to be installed on the push side of the door, unless stated otherwise.

5. Mop Plates are to be installed on the pull side of the door.

6. Size: Fabricate protection plates 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.

7. Provide Plates with self-adhesive fasteners.

8. Provide Plates are to be beveled on all 4 edges.

9. Height: 10”, unless noted otherwise.

10. Manufacturers:

    a. Burns Manufacturing (BU).
    b. Rockwood Products (RO).
    c. Trimco (TC).

B. Metal Edges and Astragals:

1. Provide Metal Edges and Astragals on both leaf’s of doors that have flush bolts.
2. Fabricated from the following:
   a. Steel: 050-inch thick.

3. Size: Height to match door Height.

4. Finish: Standard Color as selected by Architect.

5. Prepare Metal Edges and Astragals for hardware as required.

6. Provide Metal Edges and Astragals to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.

7. Manufacturers:

    a. Architectural Builders Hardware (AH).
    b. National Guard (NG).
    c. Rockwood Products (RO).

2.10 GASKETING

A. Door Gasketing shall comply with ANSI/BHMA A156.22 requirements.

B. Provide with resilient or flexible seal strips that are easily replaceable and readily available from stocks maintained by manufacturer.

C. Perimeter gasketing should not be cut around door hardware. Gaskets must maintain a continuous seal at the top and vertical edges. Adjust hardware templates accordingly.

D. 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.

E. 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.

F. Maximum Air Leakage: When tested according to ASTM E 283 with tested pressure differential of 0.3-inch wg (75 Pa), as follows:

1. Smoke-Rated Gasketing: 0.3 cfm/sq. ft. (3 cu. m per minute/sq. m) of door opening.
2. Gasketing on Single Doors: 0.3 cfm/sq. ft. (3 cu. m per minute/sq. m) of door opening.

3. Gasketing on Double Doors: 0.50 cfm per foot (0.000774 cu. m/s per m) of door opening.

G. Manufacturers:

1. National Guard (NG).
2. Pemko (PE).
3. Reese (RE).

2.11 FABRICATION

A. Manufacturer's Nameplate: Do not provide products that have manufacturer's name or trade name displayed in a visible location except in conjunction with required fire-rating labels and as otherwise approved by Architect.

1. Manufacturer's identification is permitted on rim of lock cylinders only.

B. Base Metals: Produce door hardware units of base metal indicated, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18.

1. The use of Aluminum or Brass/Bronze based screws is not acceptable.

C. Fasteners: Provided by door hardware manufacturer, to comply with published installation instructions, templates and as test for fire rated applications.

1. The use of other fasteners will be rejected.

2. Provide Phillips flat-head screws with finished heads to match surface of door hardware unless otherwise indicated.

3. Concealed Fasteners: For door hardware units that are exposed when door is closed, except for units already specified with concealed fasteners.

4. Where hardware is being attached to Aluminum or FRP doors and frames Rivnuts (Rivet Nuts) and machine screws must be used.

5. Gasket Fasteners: Provide Stainless Steel fasteners.

6. Continuous Hinge Fasteners:

a. All of the fasteners are to be fabricated from corrosion resistant materials.
b. Provide either 12-24 x 3/4" self-drilling, thread-forming or 12-24 x 1/2" thread-forming screws that are made of 410 stainless-steel with an undercut head.

2.12 FINISHES

A. Provide finishes complying with ANSI/BHMA A156.18 as indicated in door hardware schedule.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable

variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

Part 3 – EXECUTION

3.1 EXAMINATION

A. Examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance of the Work.

B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware.

C. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.2 PREPARATION

A. Steel Doors and Frames: For surface-applied door hardware, drill and tap doors and frames according to ANSI/SDI A250.6.

3.3 INSTALLATION

A. Install each door hardware item to comply with manufacturer's 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. Do not install surface-mounted items until finishes have been completed on substrates involved.

B. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.

C. 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. Comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities".

D. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

E. Self-closing doors must close and latch completely from the fully opened position.

F. Lock Cylinders:

1. Install keyed construction cores to secure building and areas during construction period.
2. Replace construction cores with permanent cores as directed by Owner.

G. Gaps: Gaps around the head and vertical edges of the doors shall meet the following requirements:

1. Hollow Metal Doors: 1/8” +/- 1/16” top, vertical edge, and in between paired doors.

2. Where shimming is required to adjust the gaps the shim material must be steel. Cardboard, paper, and other materials are not acceptable.

3. Bottom of door (Undercut) shall not exceed 1” on non-rated openings and ¾” on rated openings.

H. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.

1. Do not notch or cut perimeter gasketing to install other surface-applied hardware.

I. Door Closers: Adjust closers to follow opening forces listed under this section’s Performance Requirements.

1. Degree of opening: Template the closer to allow for the maximum degree of opening the conditions will allow.

2. Back Check valve shall be adjusted so it engages 10 degrees prior to the door reaching full swing.

3. The Latch Speed valve shall be adjusted so the door latches properly without slamming.

4. When through-bolts are used on wood doors, do not overtighten, and crush the door. If this happens the door is to be replaced.

5. Where closers or arms are installed on Aluminum or FRP doors and/or frames, install using Rivnuts (Rivet Nuts).

3.4 FIELD QUALITY CONTROL

A. 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.

B. 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.
1. Submit documentation of incomplete items in PDF electronic format.

C. Fire Door Assembly Inspection: Reference Division 01 Sections "Closeout Procedures" for stipulations requiring an initial fire door assembly inspection, including documentation reporting, upon completion of door hardware installation according to NFPA 80 Standard for Fire Doors and Other Opening Protectives, paragraph 5.2.4, requirements.

3.5 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.

1. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.

3.6 CLEANING AND PROTECTION

A. Clean adjacent surfaces soiled by door hardware installation.

B. Clean operating items as necessary to restore proper function and finish.

C. Provide final protection and maintain conditions that ensure that door hardware is without damage or deterioration at time of Substantial Completion.

3.7 MAINTENANCE SERVICE

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

3.8 DEMONSTRATION

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

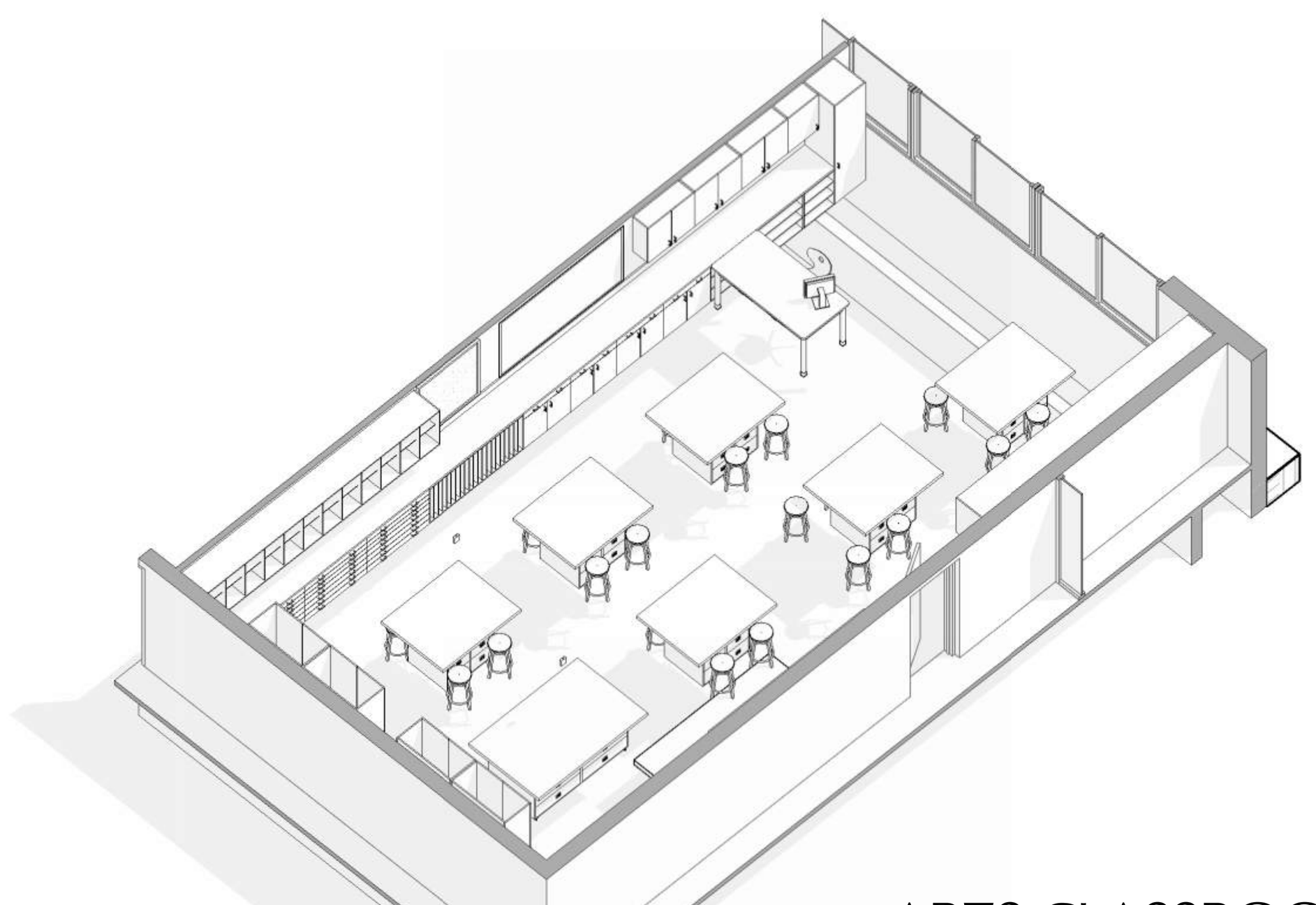
3.9 DOOR HARDWARE SCHEDULE

A. The hardware sets represent the design intent and direction of the owner and architect. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process.

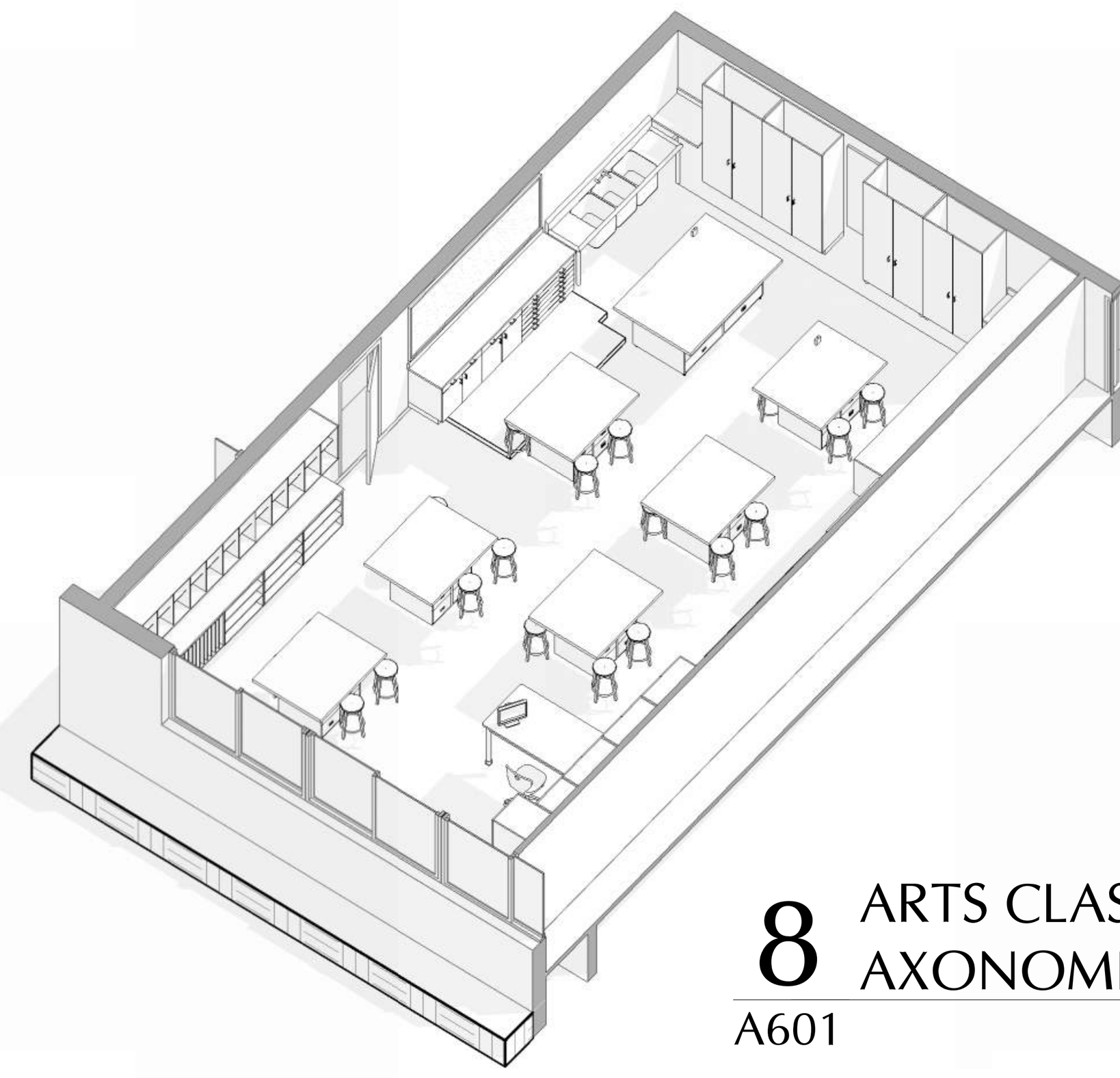
B. At existing openings with new hardware the supplier shall field inspect existing conditions prior to the submittal stage to verify the specified hardware will work as required.

C. HARDWARE SETS:

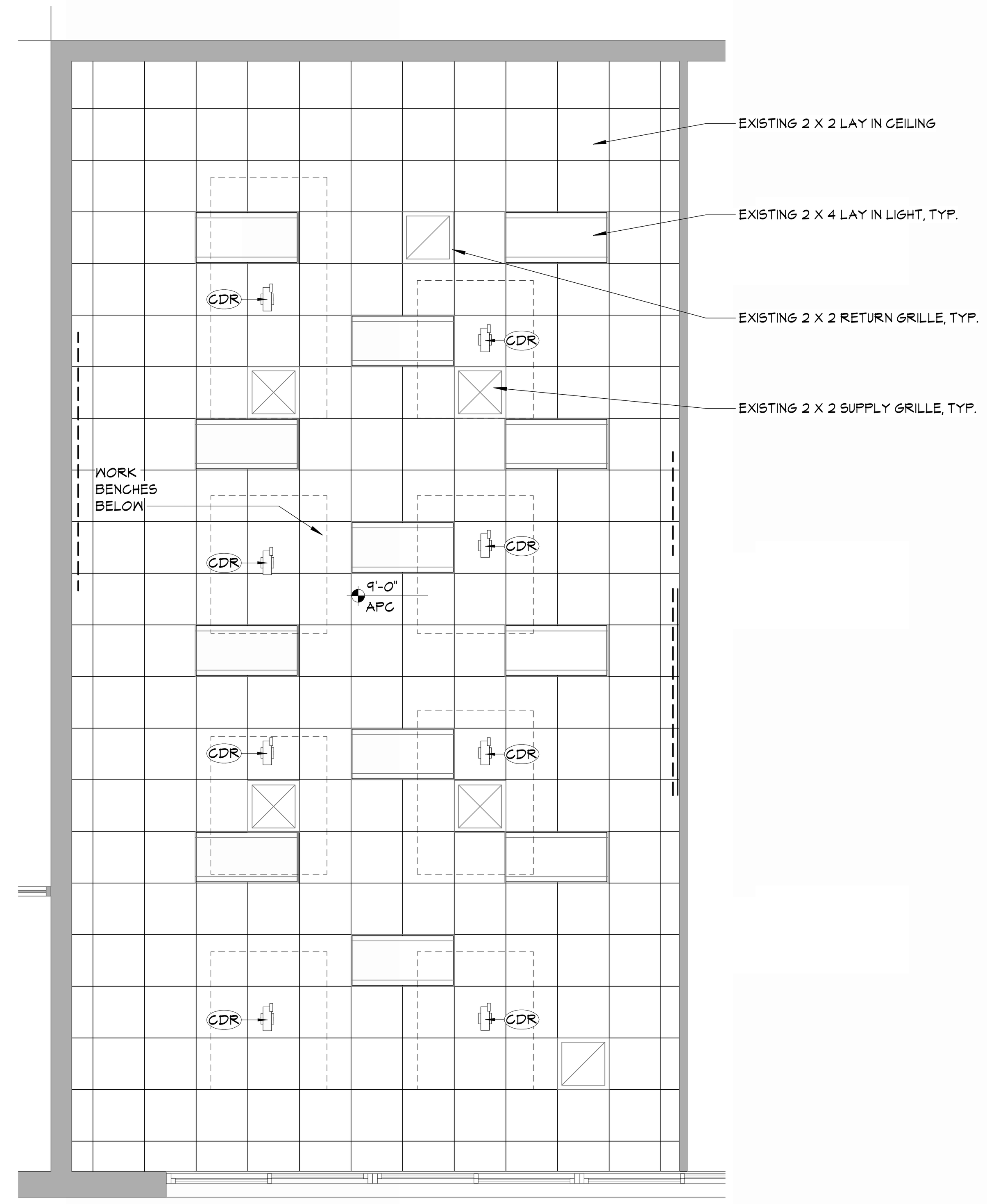
Hardware set 1: Door 261				
2	Continuous Hinge	A505 AS	US32D	ABH
1	Astragal	562 x Strike, strike lip and flush bolt cutouts	TBD	National Guard
1	Metal Edge	542 x lock cutout	TBD	National Guard
1	Manual Flush Bolt	1855P	US32D	ABH
1	Dust-proof Strike	1870	US32D	ABH
1	Classroom Lock	ML2055 NSA CT7SB	US26D	Corbin Russwin
1	Core	By Owner		
1	Perimeter Gasket	700S	A	National Guard
1	Closer/stop	UNI7500	689	Norton
1	Overhead Stop	9022A	US32D	ABH
2	Kick Plates	K0050 ADH 10” x 35”	US32D	Trimco
1	Astragal Seal	5020	C	National Guard
Notes: Install the perimeter gasket prior to the door closer and overhead stop to maintain a continuous seal around the head and jambs. Adjust the templates on the closer and overhead stop accordingly.				



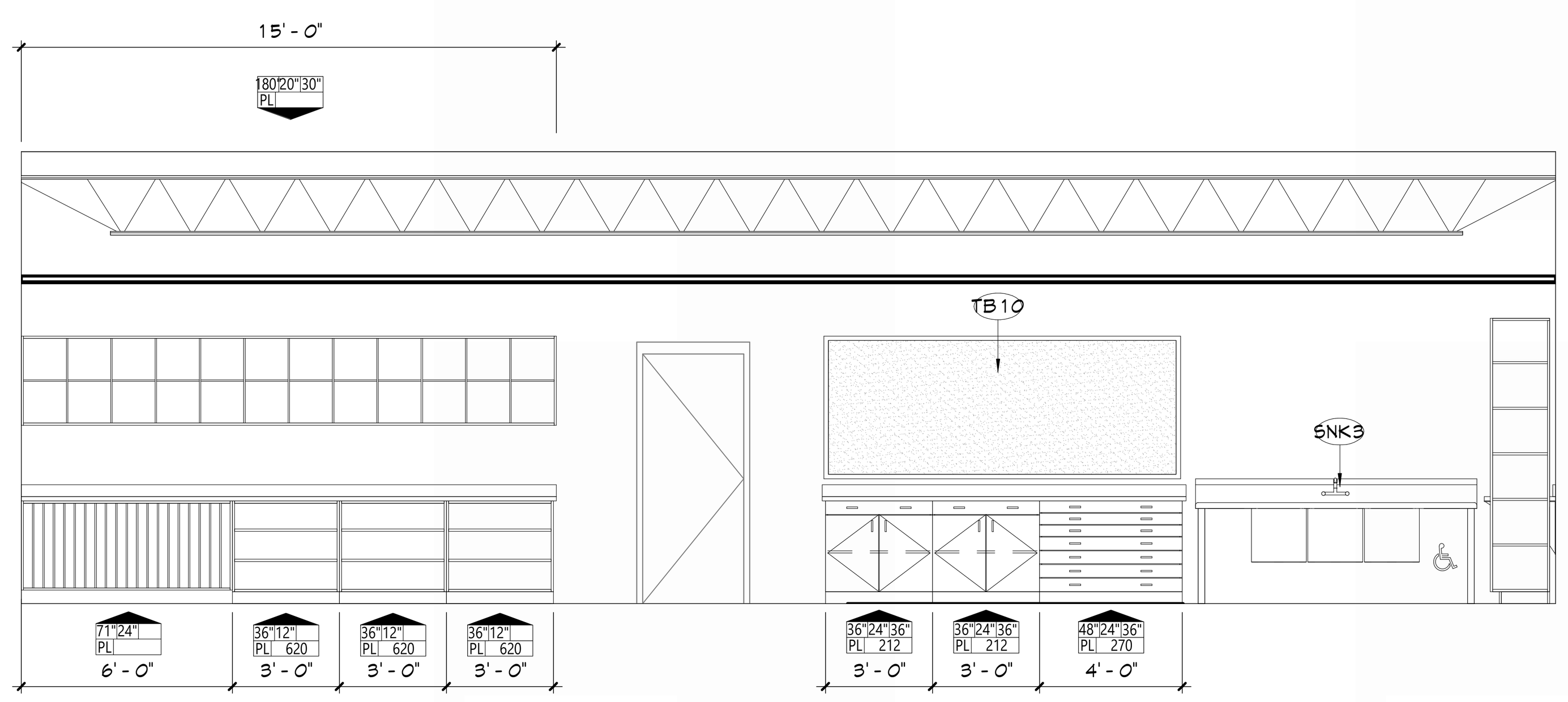
7 ARTS CLASSROOM AXONOMETRIC
A601



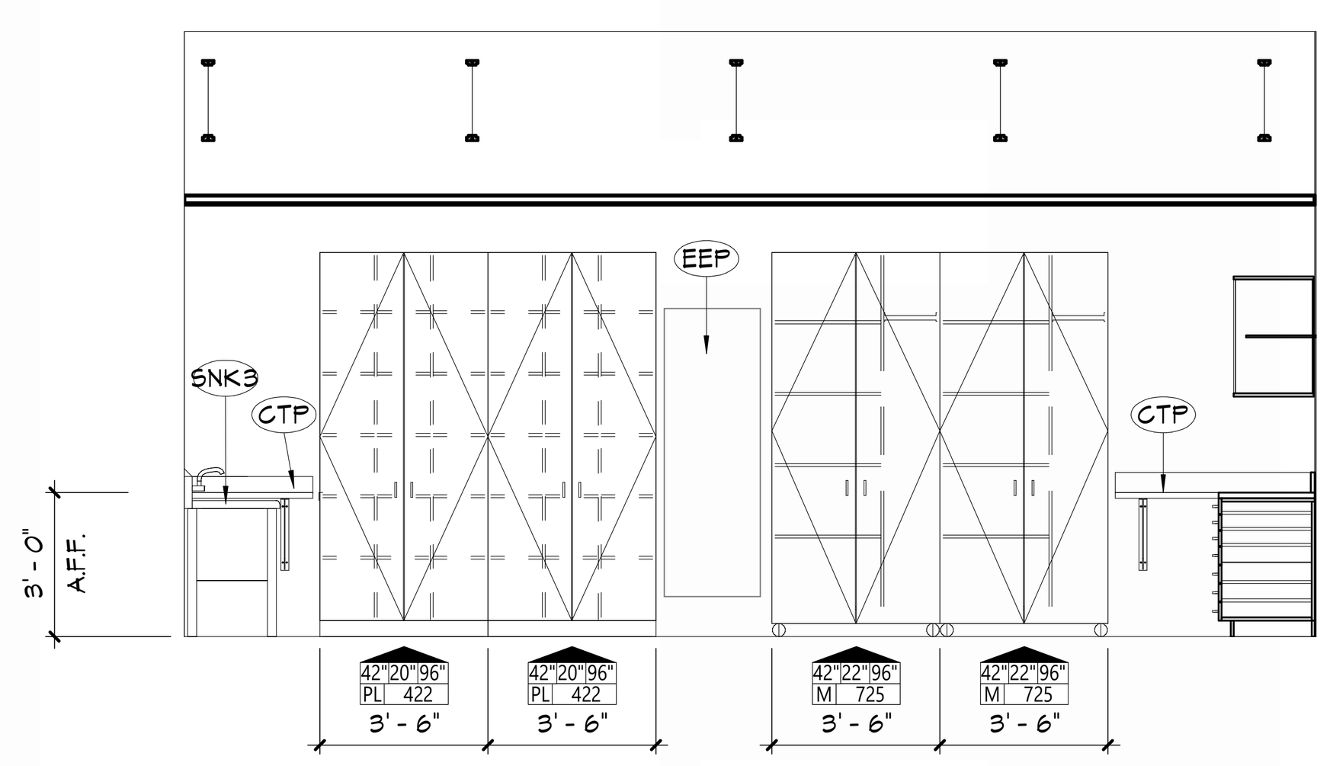
8 ARTS CLASSROOM AXONOMETRIC
A601



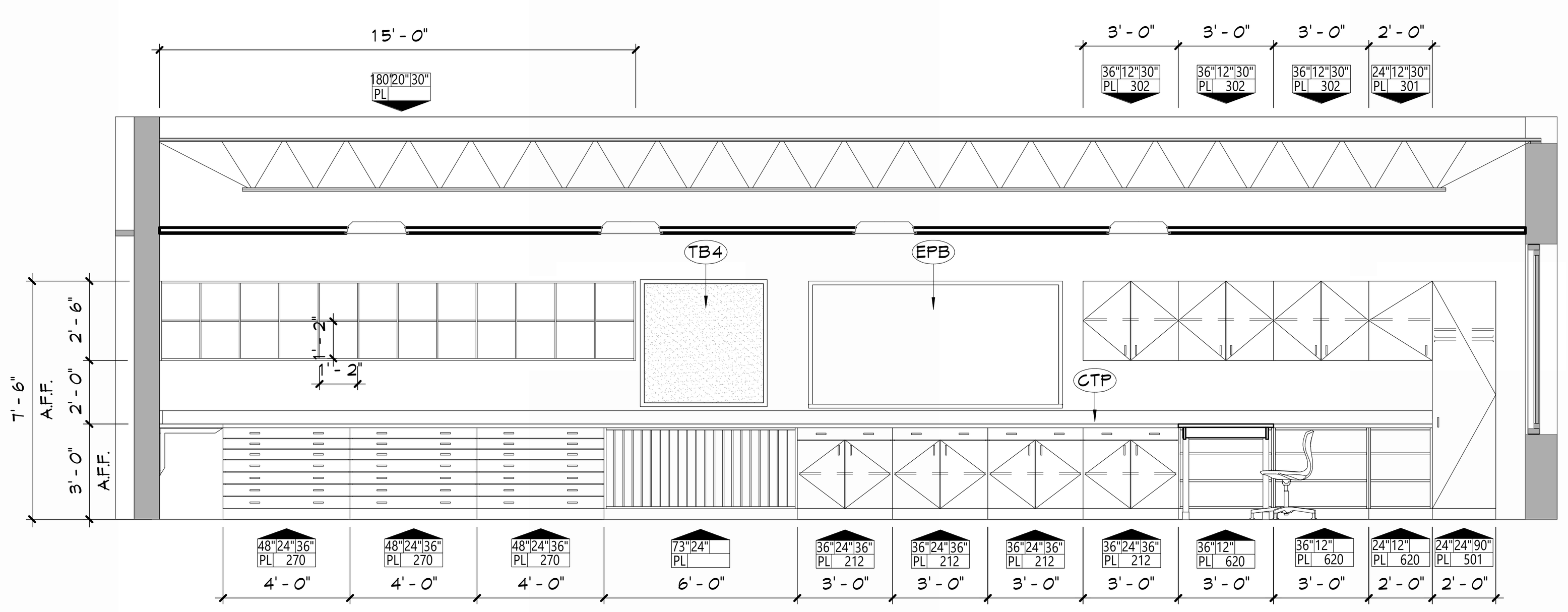
2 PARTIAL REFLECTED CEILING PLAN ARTS CLASSROOM
A601 1/4" = 1'-0"



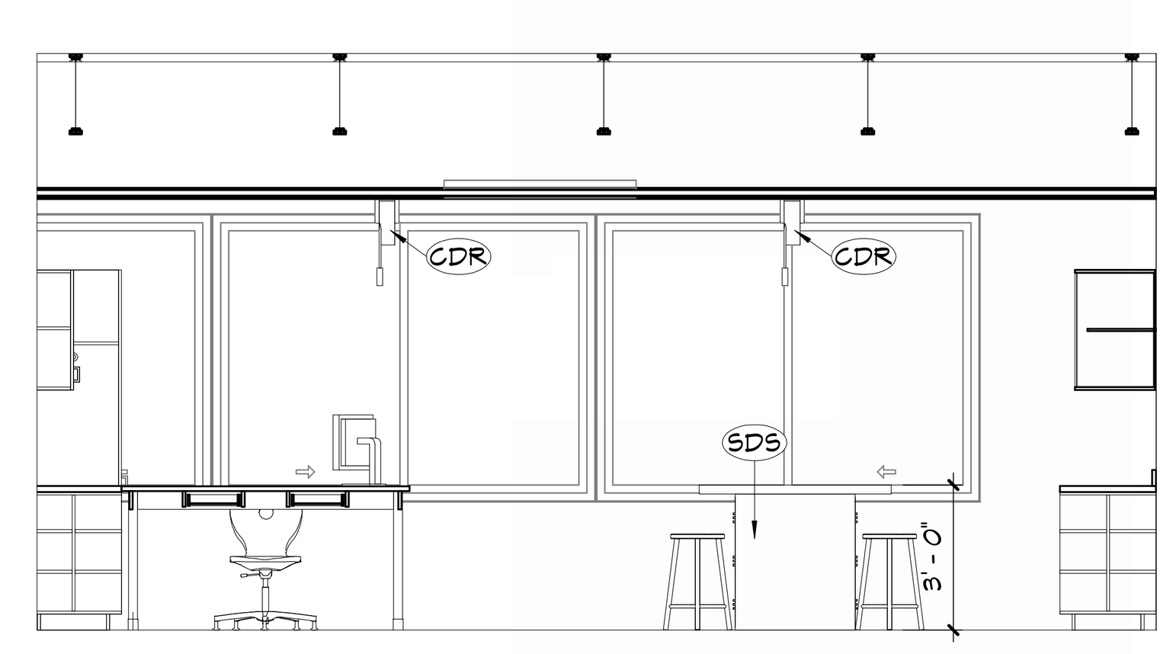
6 INTERIOR ELEVATION CLASSROOM WEST
A601 1/4" = 1'-0"



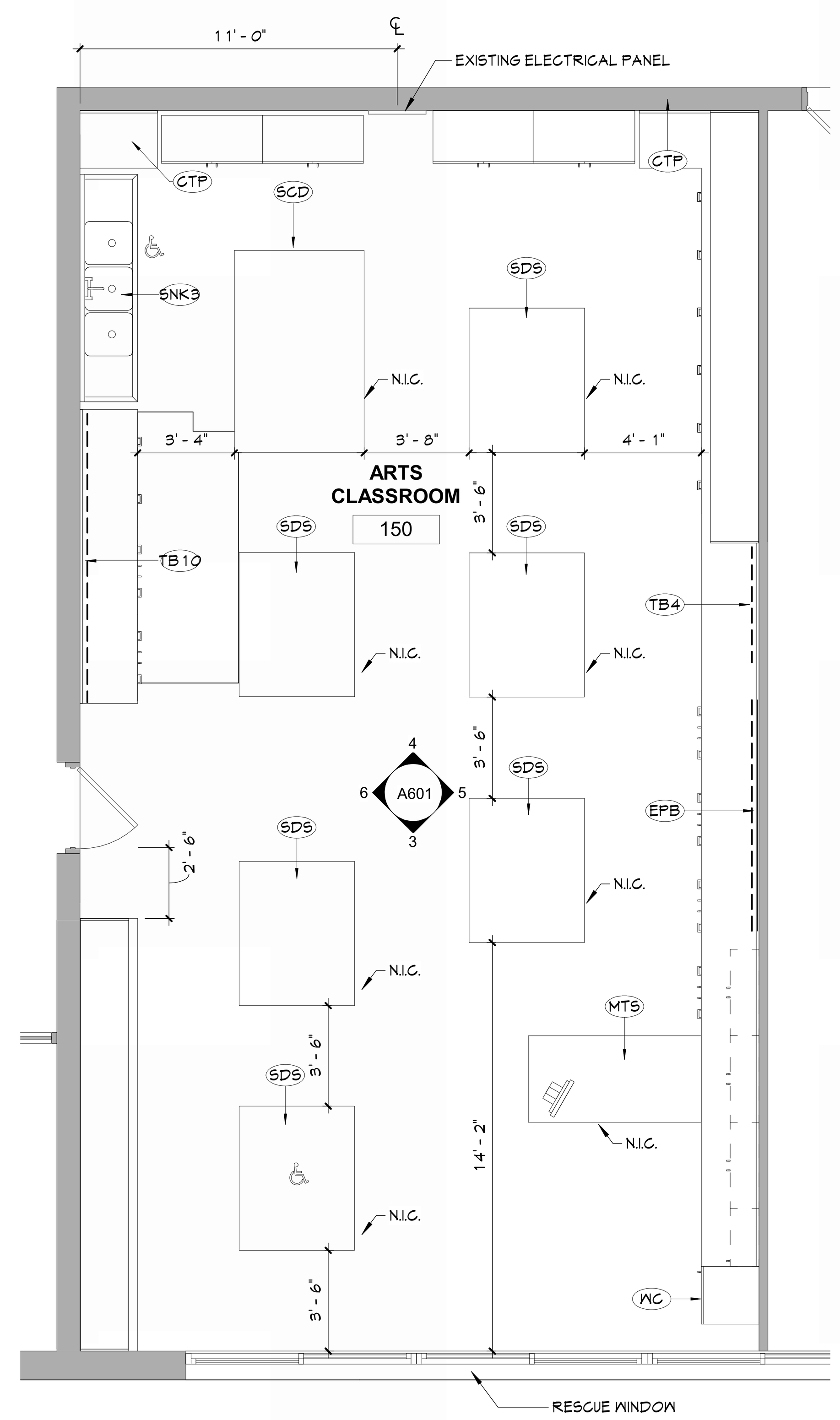
4 INTERIOR ELEVATION CLASSROOM NORTH
A601 1/4" = 1'-0"



5 INTERIOR ELEVATION CLASSROOM EAST
A601 1/4" = 1'-0"



3 INTERIOR ELEVATION CLASSROOM SOUTH
A601 1/4" = 1'-0"



1 ENLARGED FLOOR PLAN ARTS CLASSROOM
A601 1/4" = 1'-0"

GENERAL NOTES

1. ALL CASEWORK SHALL HAVE PLASTIC LAMINATE (PLAM) COUNTERTOPS AND 4" BACK SPLASHES, UNO.
2. INSTALL MATCHING FILLER PANELS IN LOCATIONS SHOWN. ADD MATCHING FILLER PANELS AS REQUIRED FOR FINAL FIT/FINISH.
3. PROVIDE BLOCKING IN ALL ADJACENT WALLS AS REQUIRED TO INSTALL ALL CASEWORK.
4. PROVIDE FINISHED END PANEL AT ALL EXPOSED FACES OF CASEWORK.
5. PROVIDE WALL BASE AS SCHEDULED ON ALL EXPOSED TOE KICK SPACES AND EXPOSED END PANELS.

CASEWORK NOTES

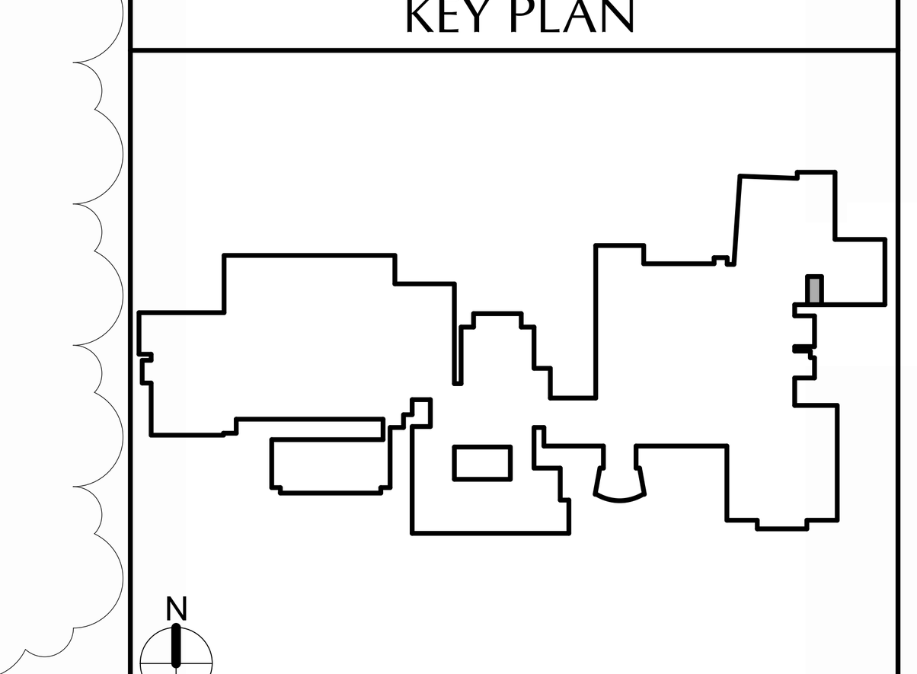
W" H" D" / XX XXXX — AWI DESIGN NUMBER (INDICATES ELEVATION LAYOUT ONLY, REFER TO DETAILS AND SPECIFICATIONS FOR CASEWORK CONSTRUCTION REQUIREMENTS)

TYPE OF CASEWORK
- PL = PLASTIC LAMINATE
- M = METAL
- W = WOOD

KEYNOTES

#	DESCRIPTION
CDR	CORD REEL
CTP	COUNTERTOP
EEP	EXISTING ELECTRICAL PANEL
EPB	EXISTING PROMETHEAN BOARD TO BE RELOCATED AS SHOWN
MTS	MOBILE TEACHER STATION
SCD	STUDENT COLLABORATION DESK, NOT IN CONTRACT. SHOWN FOR INFORMATION ONLY.
SDS	STUDENT DESK, NOT IN CONTRACT. SHOWN FOR INFORMATION ONLY.
SNK3	TRIPLE SINK
TB4	4' TACKBOARD
TB10	10' TACKBOARD
WC	WARDROBE CABINET

KEY PLAN



CSARCH
40 Beaver St. · Albany · New York 12207-1511
518 · 463 · 8068 www.csarchpc.com

Consultant

Project Title
VALLEY CENTRAL SCHOOL DISTRICT
VALLEY CENTRAL HIGH SCHOOL
ART ROOM AND WOODSHOP ALTERATIONS

#	DATE	DESCRIPTION
2	11/17/23	Bid Add #2

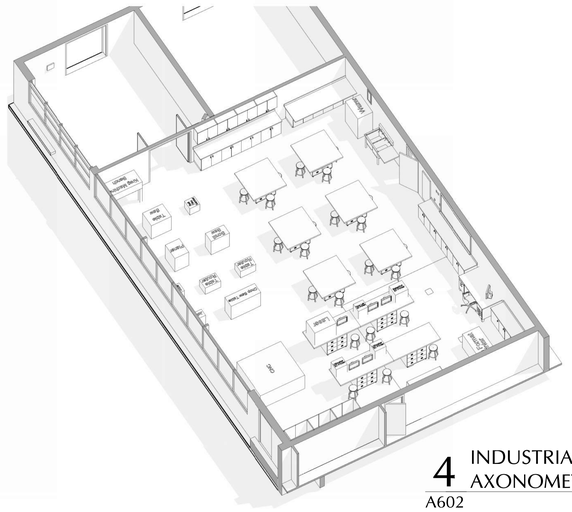
Drawn By:	RWP
Checked By:	
Proj. #:	44-13-01-06-0-015-031
CSArch Proj. #:	187-2103
Issued for Bid:	10/31/2023

Sheet Title
ENLARGED PLANS AND INTERIOR DETAILS - ART CLASSROOM

Sheet No.
HSMS A601

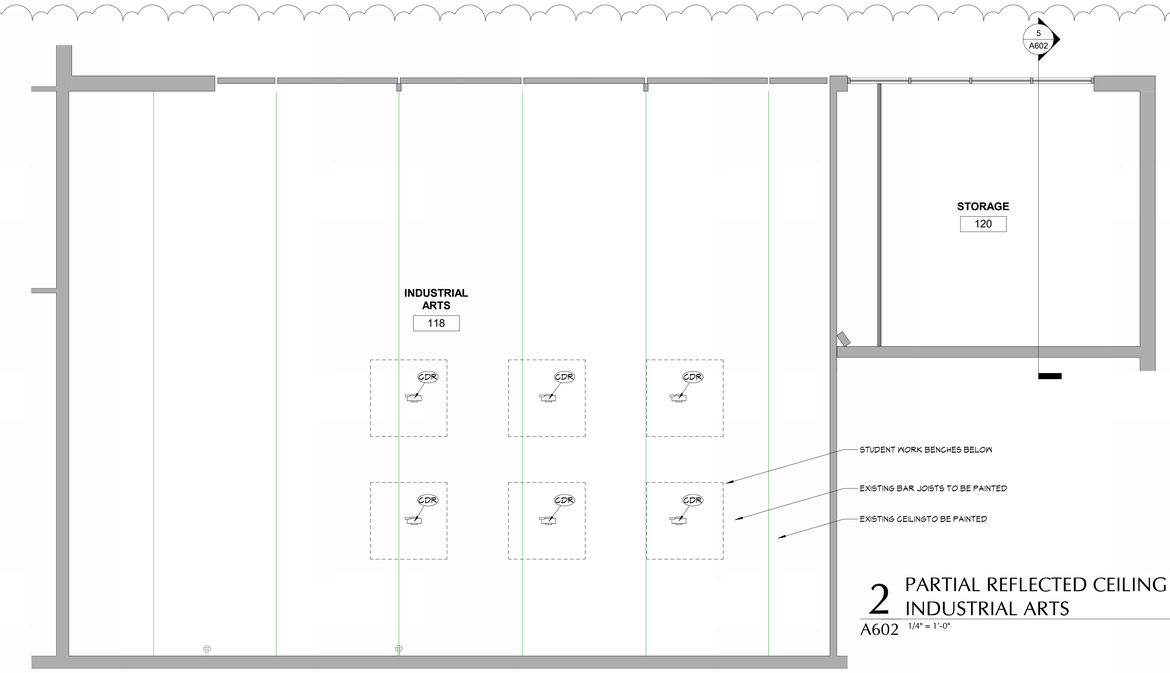
CONSTRUCTION DOCUMENTS

C:\Users\public\Documents\187-2103 VCSD HS-MS_shollands.rvt

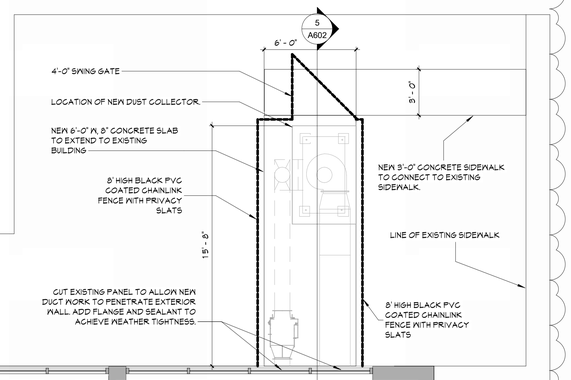


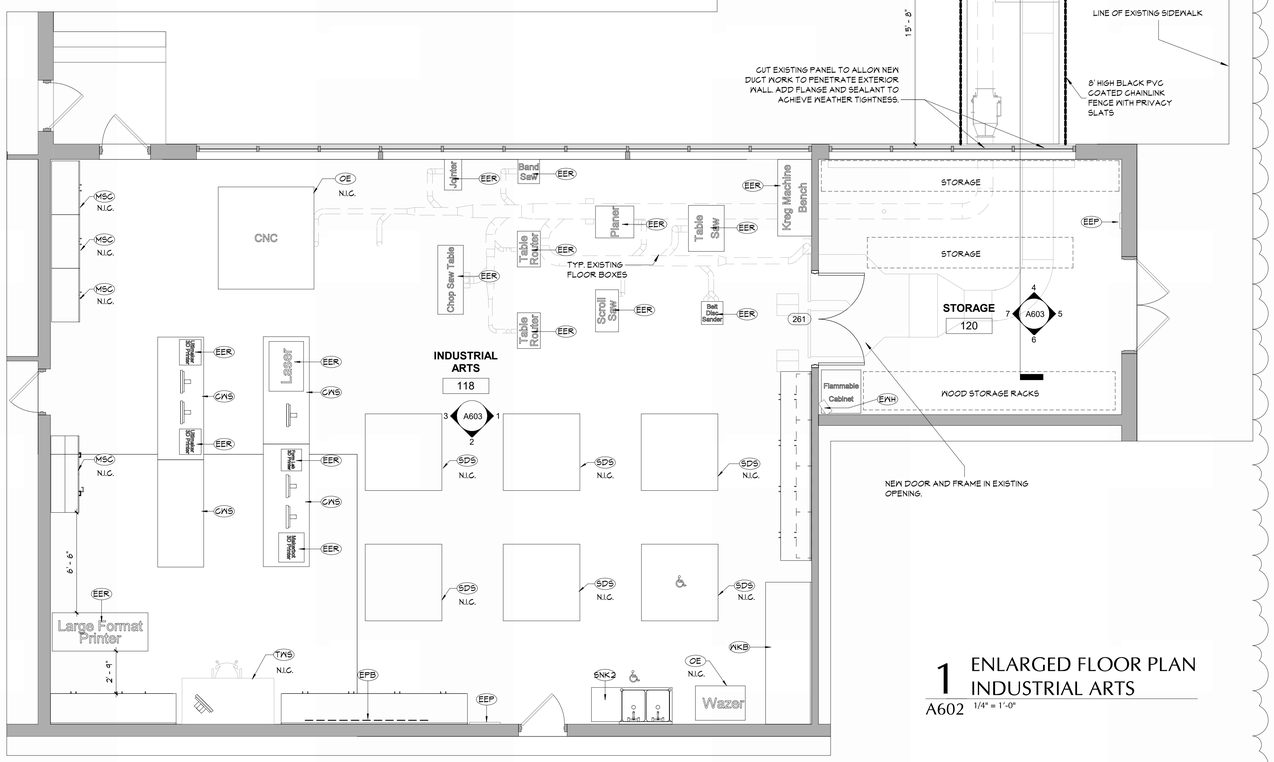
4 INDUSTRIAL ARTS AXONOMETRIC
A602

3 INDUSTRIAL ARTS AXONOMETRIC
A602



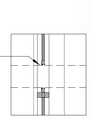
2 PARTIAL REFLECTED CEILING PLAN INDUSTRIAL ARTS
A602 1/4" = 1'-0"



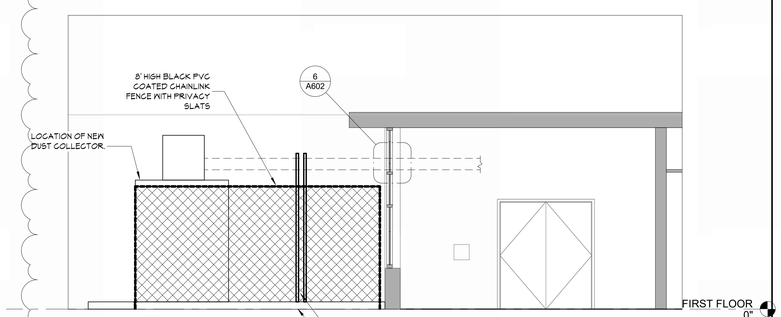


1 ENLARGED FLOOR PLAN INDUSTRIAL ARTS
A602 1/4" = 1'-0"

GUT EXISTING PANEL TO ALLOW NEW DUCT WORK TO PENETRATE EXTERIOR WALL. ADD FLANGE AND SEALANT TO ACHIEVE WEATHER TIGHTNESS



6 Section 4 - Callout 1
A602 1/2" = 1'-0"



5 Section 4
A602 1/4" = 1'-0"

GENERAL NOTES

1. ALL CASEWORK SHALL HAVE PLASTIC LAMINATE (PLAM) COUNTERTOPS AND 4" BACK SPLASHES, UNO.
2. INSTALL MATCHING FILLER PANELS IN LOCATIONS SHOWN. ADD MATCHING FILLER PANELS AS REQUIRED FOR FINAL FIT/FINISH.
3. PROVIDE BLOCKING IN ALL ADJACENT WALLS AS REQUIRED TO INSTALL ALL CASEWORK.
4. PROVIDE FINISHED END PANEL AT ALL EXPOSED FACES OF CASEWORK.
5. PROVIDE WALL BASE AS SCHEDULED ON ALL EXPOSED TOE KICK SPACES AND EXPOSED END PANELS.

CASEWORK NOTES

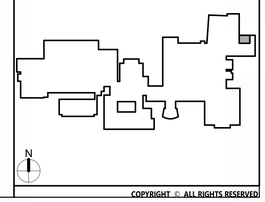
AXN DESIGN NUMBER (INDICATES ELEVATION LAYOUT ONLY, REFER TO DETAILS AND SPECIFICATIONS FOR CASEWORK CONSTRUCTION REQUIREMENTS)

TYPE OF CASEWORK
PL = PLASTIC LAMINATE
M = METAL
W = WOOD

KEYNOTES

#	DESCRIPTION
CDR	CORD REEL
CNS	COMPUTER WORK STATION - NOT IN CONTRACT
EEP	EXISTING ELECTRICAL PANEL
EER	EXISTING EQUIPMENT RELOCATED AS SHOWN
EPB	EXISTING PROMETHEAN BOARD TO BE RELOCATED AS SHOWN
EWH	EXISTING WALL HEATER
MSC	METAL STORAGE CABINET, NOT IN CONTRACT, SHOWN FOR INFORMATION ONLY.
OE	OWNER SUPPLIED EQUIPMENT, LOCATED AS SHOWN
SDS	STUDENT DESK, NOT IN CONTRACT, SHOWN FOR INFORMATION ONLY.
SNK2	DOUBLE SINK
TWS	TEACHER WORK STATION
WKB	METAL WORK BENCH

KEY PLAN



CSARCH
40 Beaver St. - Albany - New York 12207-1511
518 -463 - 8068 www.csarchpc.com

Consultant

Project Title
VALLEY CENTRAL SCHOOL DISTRICT
VALLEY CENTRAL HIGH SCHOOL
ART ROOM AND WOODSHOP ALTERATIONS

#	DATE	DESCRIPTION
2	11/17/23	Bid Add #2

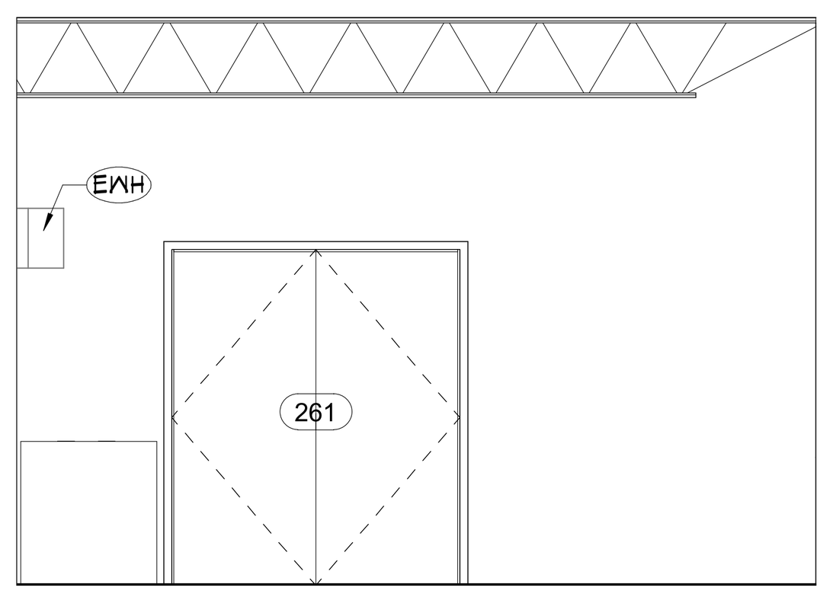
Drawn By:	RWP
Checked By:	
Proj. #:	44-13-01-06-0-015-031
CSArch Proj. #:	187-2103
Issued for Bid:	10/31/2023

Sheet Title
ENLARGED PLANS & AXONOMETRIC - IND. ARTS

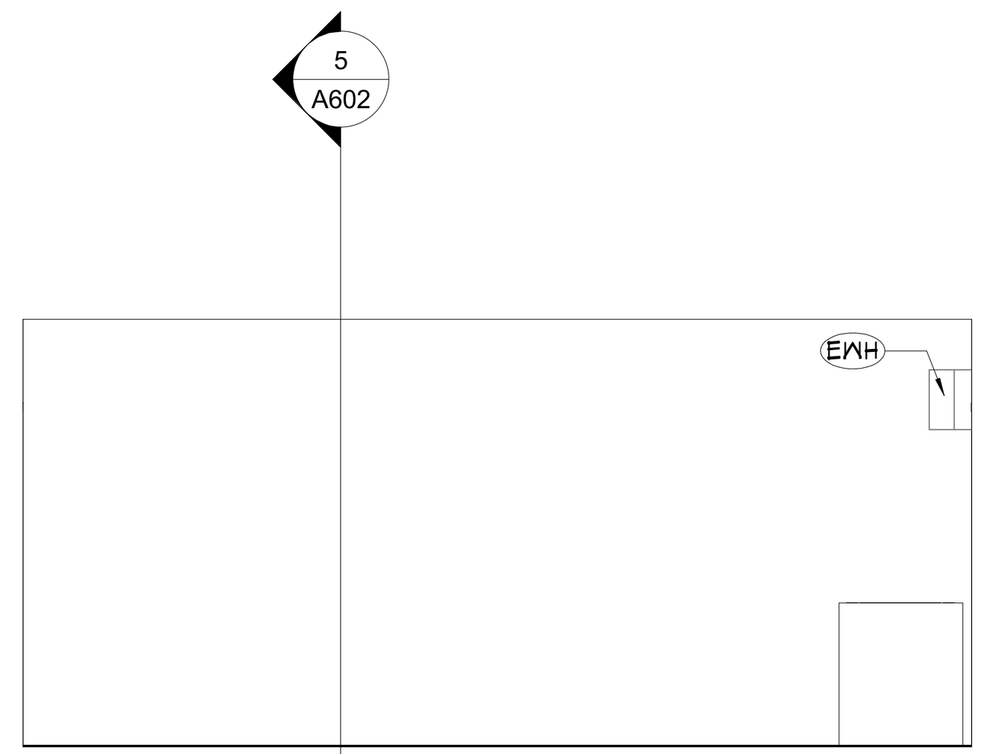
Sheet No.
HSMS
A602

CONSTRUCTION DOCUMENTS

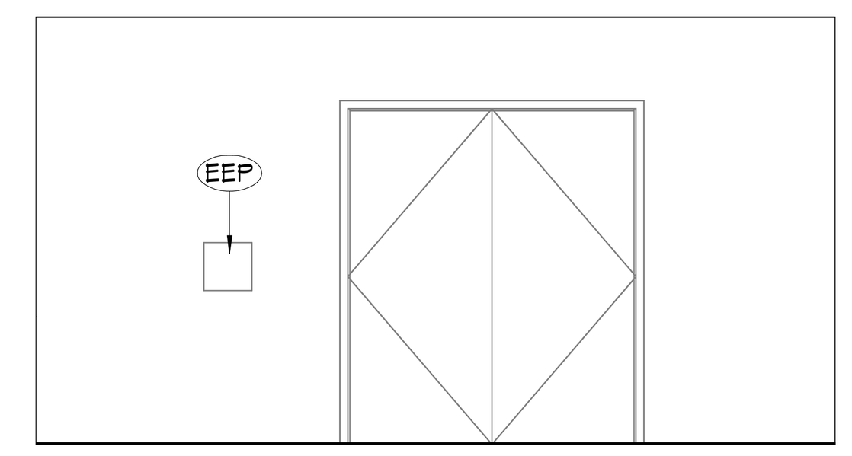
C:\Users\pablic\Documents\187-2103 VCSD HS MS_sholland5.rvt



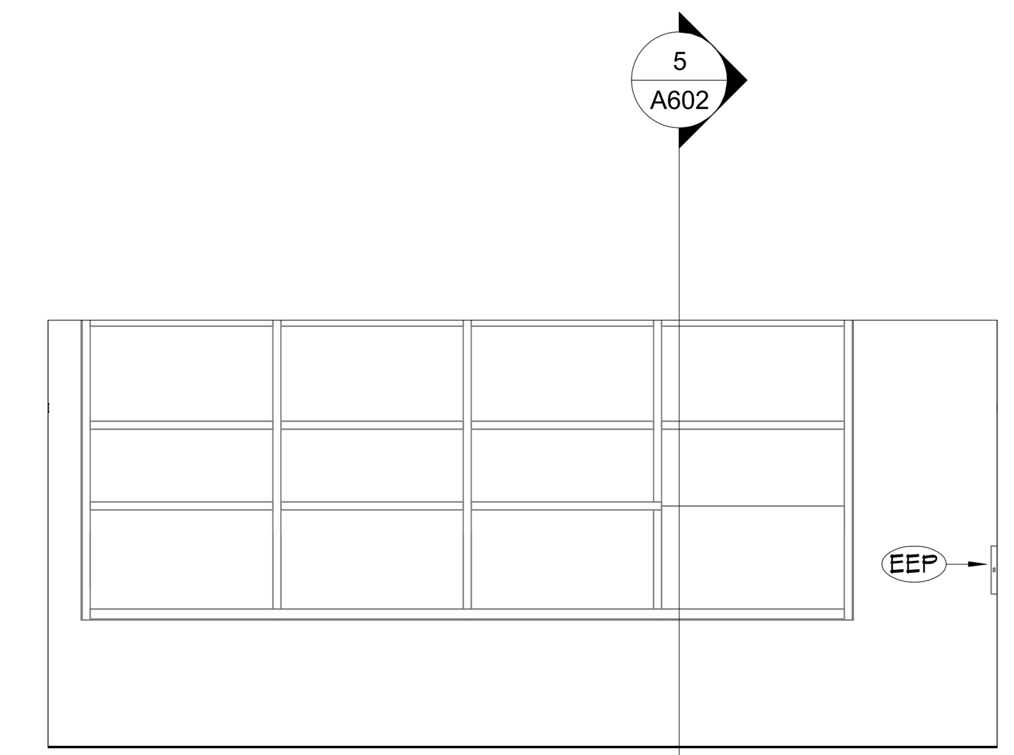
7 STORAGE ROOM - WEST
A603 1/4" = 1'-0"



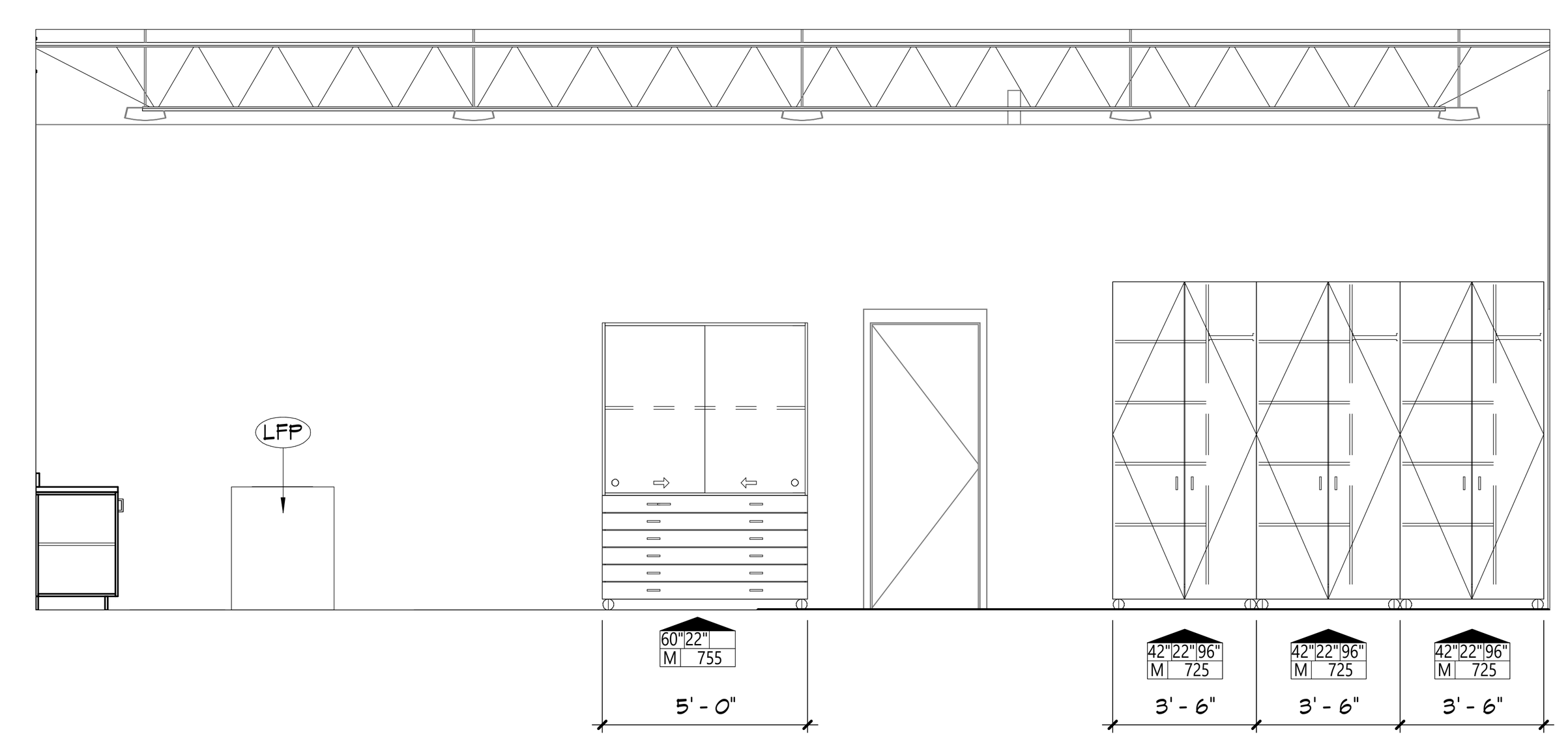
6 STORAGE ROOM - SOUTH
A603 1/4" = 1'-0"



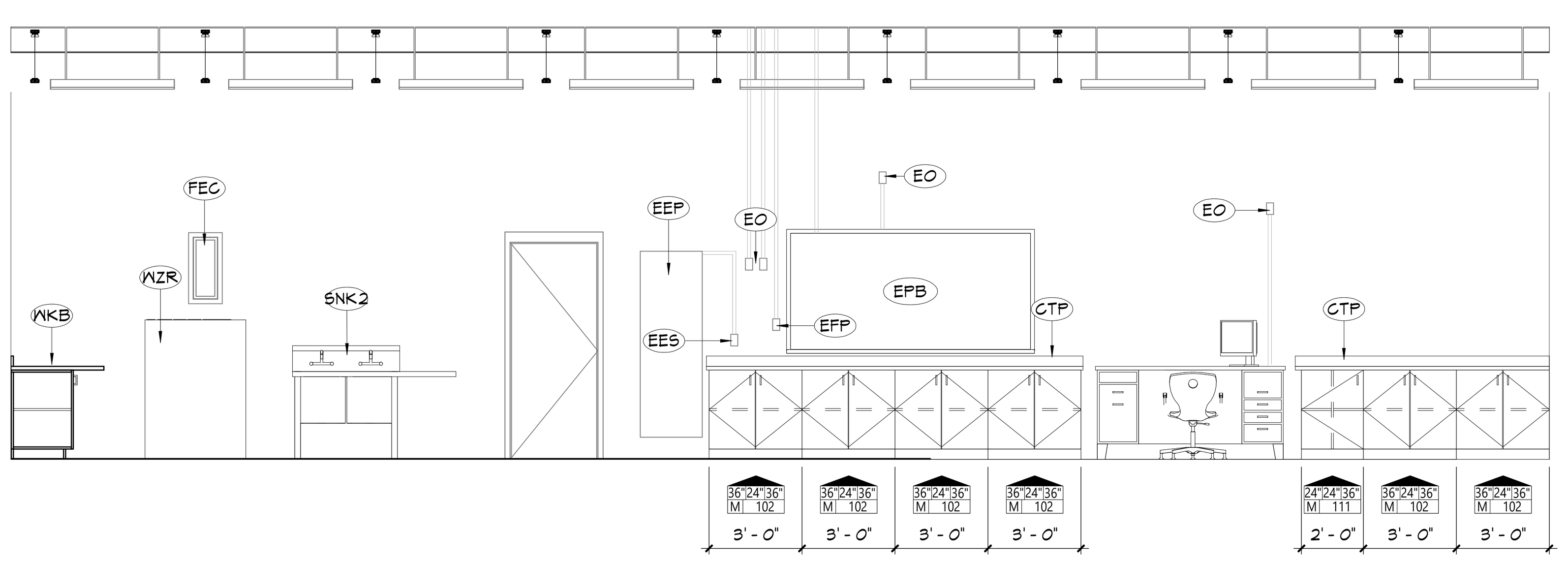
5 STORAGE ROOM - EAST
A603 1/4" = 1'-0"



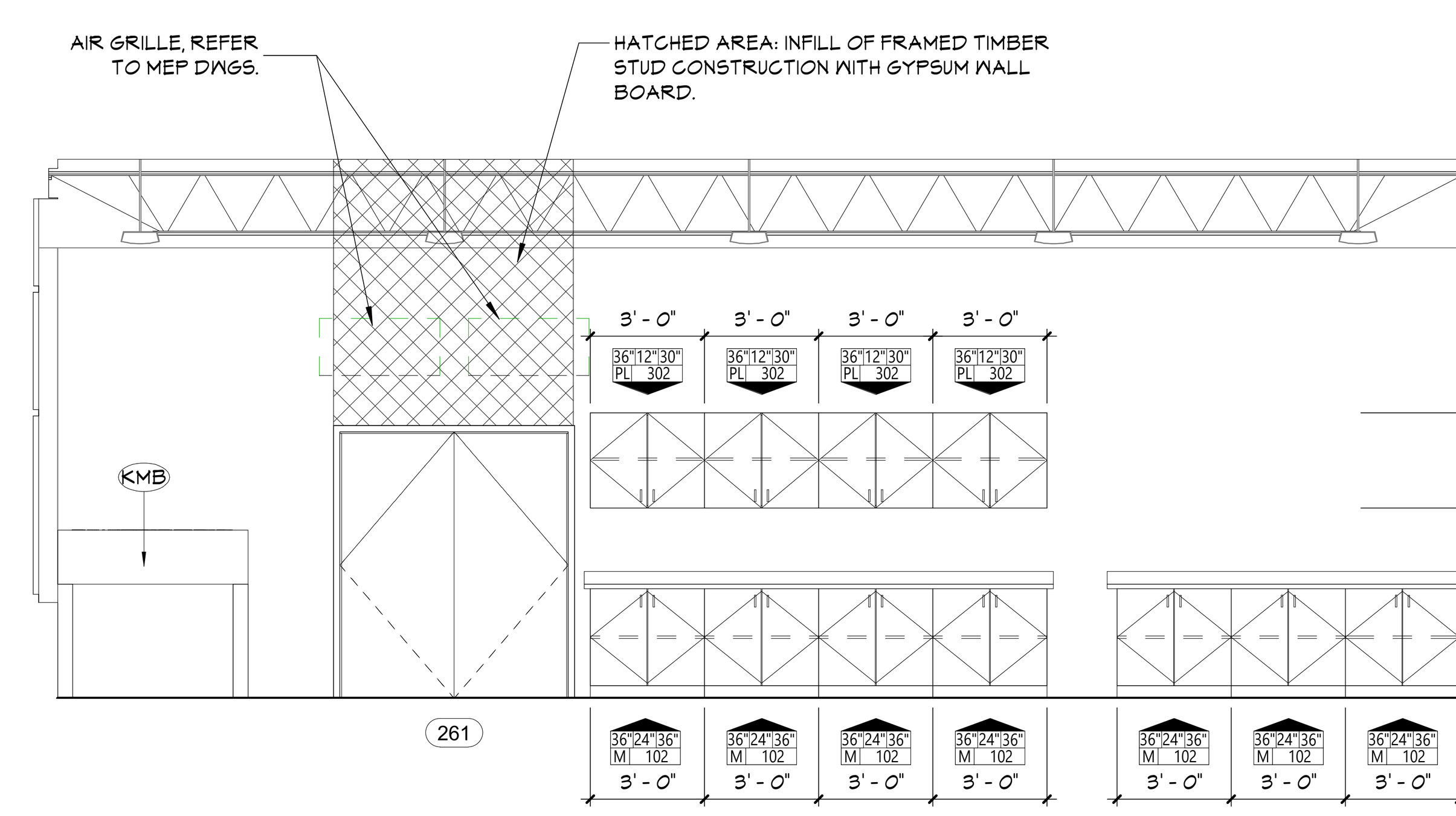
4 STORAGE ROOM - NORTH
A603 1/4" = 1'-0"



3 INTERIOR ELEVATION INDUSTRIAL ARTS WEST
A603 1/4" = 1'-0"



2 INTERIOR ELEVATION INDUSTRIAL ARTS SOUTH
A603 1/4" = 1'-0"



1 INTERIOR ELEVATION INDUSTRIAL ARTS EAST
A603 1/4" = 1'-0"

GENERAL NOTES

1. ALL CASEWORK SHALL HAVE PLASTIC LAMINATE (PLAM) COUNTERTOPS AND 4" BACK SPLASHES, UNO.
2. INSTALL MATCHING FILLER PANELS IN LOCATIONS SHOWN. ADD MATCHING FILLER PANELS AS REQUIRED FOR FINAL FIT/FINISH.
3. PROVIDE BLOCKING IN ALL ADJACENT WALLS AS REQUIRED TO INSTALL ALL CASEWORK.
4. PROVIDE FINISHED END PANEL AT ALL EXPOSED FACES OF CASEWORK.
5. PROVIDE WALL BASE AS SCHEDULED ON ALL EXPOSED TOE KICK SPACES AND EXPOSED END PANELS.

CASEWORK NOTES

W" H" D" / XX XXXX

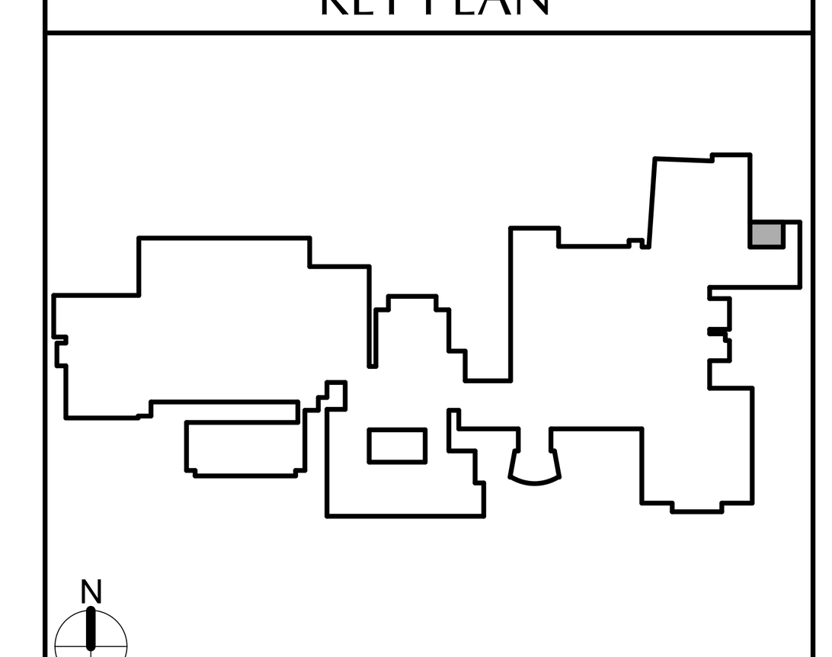
AWI DESIGN NUMBER (INDICATES ELEVATION LAYOUT ONLY, REFER TO DETAILS AND SPECIFICATIONS FOR CASEWORK CONSTRUCTION REQUIREMENTS)

TYPE OF CASEWORK
- PL = PLASTIC LAMINATE
- M = METAL
- W = WOOD

KEYNOTES

#	DESCRIPTION
CTP	COUNTERTOP
EEP	EXISTING ELECTRICAL PANEL
EES	EXISTING EMERGENCY SHUT OFF
EFP	EXISTING FIRE PULL ALARM
EO	EXISTING OUTLETS
EPB	EXISTING PROMETHEAN BOARD TO BE RELOCATED AS SHOWN
EWH	EXISTING WALL HEATER
FEC	EXISTING EXTINGUISHER CABINET
KMB	KREG MACHINING BENCH
LFP	LARGE FORMAT PRINTER
SNK2	DOUBLE SINK
WKB	METAL WORK BENCH
WZR	WAZER

KEY PLAN



CSARCH
40 Beaver St. · Albany · New York 12207-1511
518 · 463 · 8068 www.csarchpc.com

Consultant

Project Title
VALLEY CENTRAL SCHOOL DISTRICT
VALLEY CENTRAL HIGH SCHOOL
ART ROOM AND WOODSHOP ALTERATIONS

#	DATE	DESCRIPTION
2	11/17/23	Bid Add #2

Drawn By:	RWP
Checked By:	
Proj. #:	44-13-01-06-0-015-031
CSArch Proj. #:	187-2103
Issued for Bid:	10/31/2023

Sheet Title
INTERIOR ELEVATIONS - INDUSTRIAL ARTS

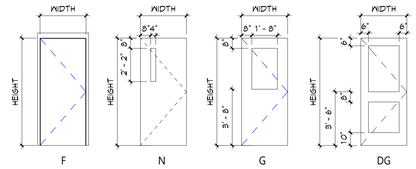
Sheet No.
HSMS A603

CONSTRUCTION DOCUMENTS

C:\Users\public\Documents\187-2103 VCSD HS-MS_shollands.rvt

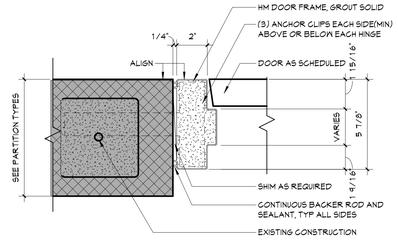
DOOR SCHEDULE

DOOR NUMBER	DOOR QUANTITY	DOOR FROM		DOOR TO		DOOR WIDTH	DOOR HEIGHT	DOOR THICKNESS	DOOR TYPE	DOOR MATERIAL	DOOR FINISH	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	FRAME HEAD DETAIL	FRAME JAMB DETAIL	FRAME SILL DETAIL	LABEL (MIN)	GLAZING	HARDWARE	MAG HOLD-OPEN	ACCESS CONTROL	REMARKS	DOOR NUMBER
261	PR	118	INDUSTRIAL ARTS	120	STORAGE	3' - 0"	7' - 0"	1 3/4"	F	HM	PNT	D	HM	PNT	2/901	3/901		45		1				261

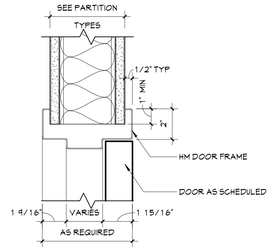


GLAZING TYPES

GGL	LOW-E COATED, INSULATED GLASS
GI	CLEAR INSULATED GLASS
FR	FIRE RATED GLASS
FT	FULLY TEMPERED GLASS
LM	LAMINATED GLASS
SP	SPANDREL GLASS



3 HEAD DETAIL
A901 3" = 1'-0"



2 HEAD DETAIL
A901 3" = 1'-0"

CSARCH
40 Beaver St. - Albany - New York 12207-1511
518 - 463 - 8068 www.csarchpc.com

Consultant

VALLEY CENTRAL SCHOOL DISTRICT
VALLEY CENTRAL HIGH SCHOOL
ART ROOM AND WOODSHOP ALTERATIONS

Project Title

No.	DATE	DESCRIPTION
2	11/17/23	Bid Add #2

Drawn By:	Author
Checked By:	Checker
Proj. #:	44-13-01-06-0-015-031
CSArch Proj. #:	187-2103
Issued for Bid:	10/31/2023

Sheet Title

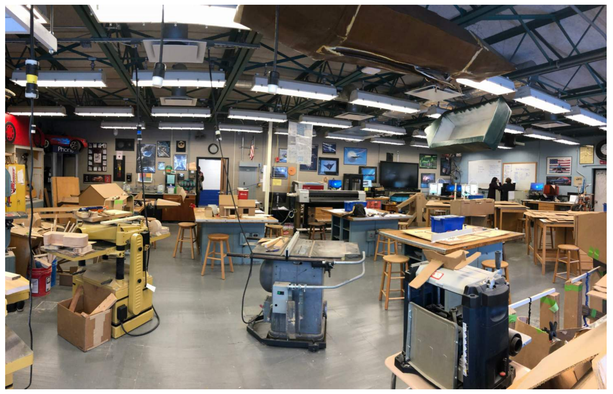
DOOR SCHEDULE, ELEVATIONS, AND DETAILS

Sheet No.

HSMS
A901

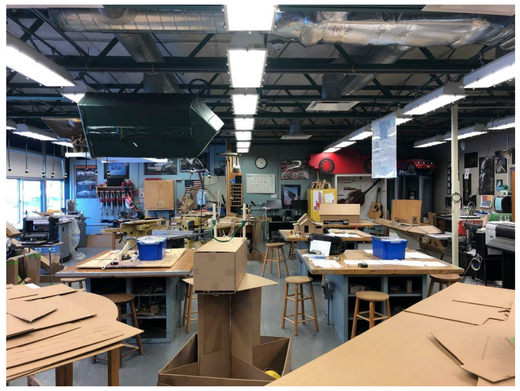
CONSTRUCTION DOCUMENTS

C:\Users\public\Documents\187-2103 VCSD HS-MS_shellands.rvt

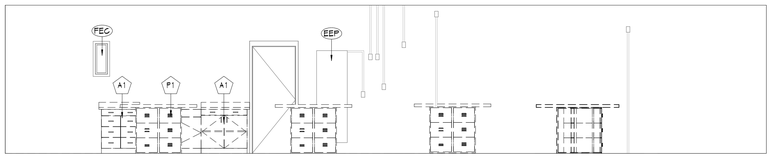


WEST WALL

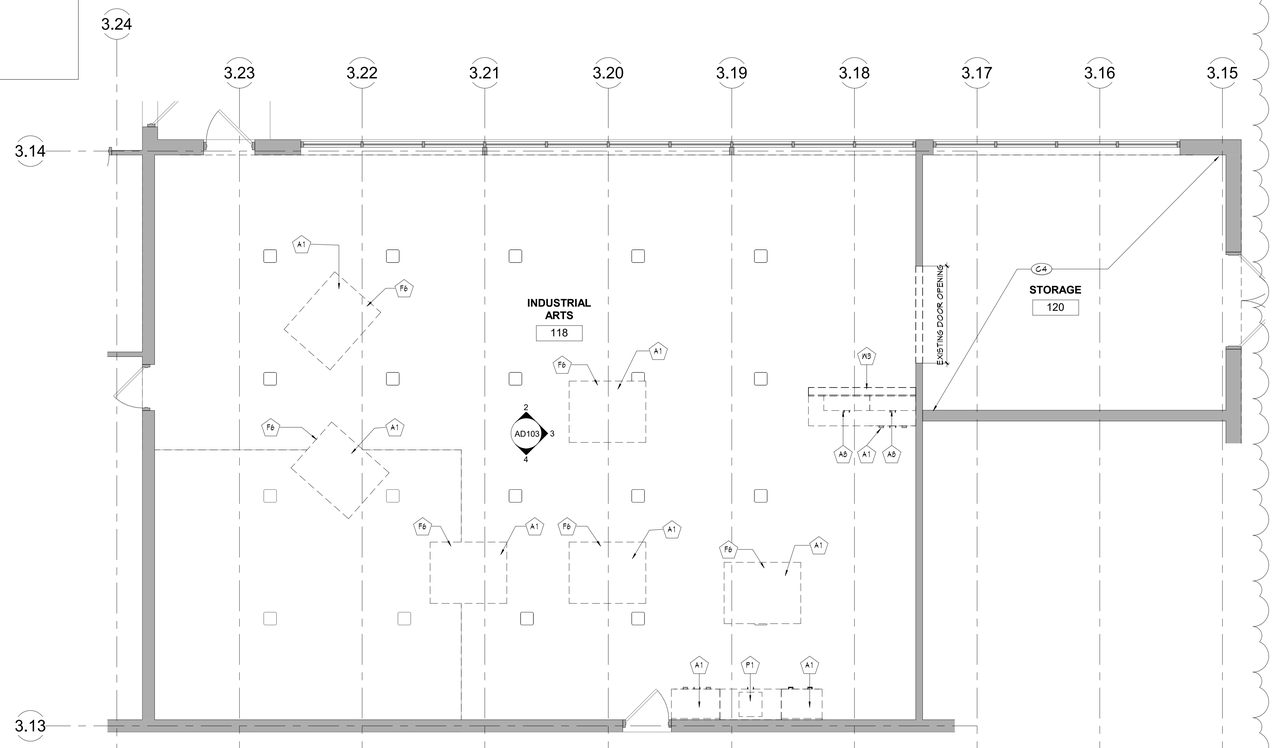
NORTH WALL



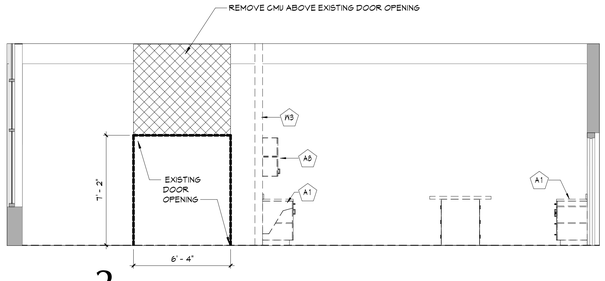
EAST WALL



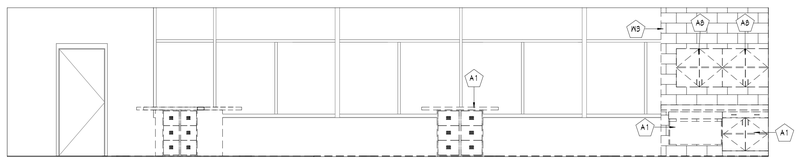
4 WORK SHOP DEMO ELEVATION - EAST
AD103 1/4" = 1'-0"



1 WORK SHOP DEMO PLAN
AD103 1/4" = 1'-0"



3 WORK SHOP DEMO ELEVATION - WEST
AD103 1/4" = 1'-0"



2 WORK SHOP DEMO ELEVATION - NORTH
AD103 1/4" = 1'-0"

GENERAL DEMOLITION NOTES

1. COORDINATE ALL REMOVALS WITH NEW CONSTRUCTION.
2. PATCH AND REPLACE EXISTING AND NEWLY CREATED HOLES IN WALLS (DUE TO REMOVAL) WITH MATERIALS TO MATCH EXISTING CONSTRUCTION.
3. SALVAGED ITEMS SHALL BE TURNED OVER TO OWNER, UNO
4. ALL KEYED REMOVALS SHALL INCLUDE REMOVAL OF ANY AND ALL ANCHORING SYSTEMS INCLUDING OBJECTS EMBEDDED INTO EXISTING WALLS.
5. REFER MEP DRAWINGS FOR ADDITIONAL REMOVAL INFORMATION.
6. PROVIDE TEMPORARY SHORING AS NECESSARY AT ALL AREAS OF WALL REMOVAL AND NEW WALL PENETRATIONS.
7. DRILL CORNERS OF ALL NEW SAWCUT OPENING PRIOR TO SAWCUTTING, TO PREVENT CUTTING INTO SCHEDULED CONSTRUCTION TO REMAIN.
8. CONTRACTOR TO REMOVE ALL EXISTING ELECTRICAL BOXES AND ASSOCIATED WIRING.

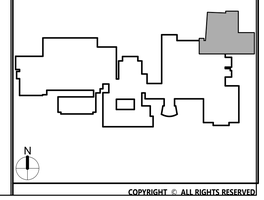
DEMOLITION KEYNOTES

#	DESCRIPTION
A1	REMOVE CASEWORK AND COUNTERTOP IN ITS ENTIRETY.
A5	REMOVE WALL MOUNTED CASEWORK IN ITS ENTIRETY.
C4	REMOVE EXISTING ACM PLASTER CEILING SYSTEM IN IT'S ENTIERETY, INCLUDING ALL FRAMING AND FASTENERS. REFER TO HAZ MAT DRAWING.
EEP	EXISTING ELECTRICAL PANEL
F6	PATCH AND REPAIR FLOOR AS NECESSARY, TO MATCH EXISTING.
FEC	EXISTING EXTINGUISHER CABINET
P1	REMOVE PLUMBING FIXTURE. COORDINATE WITH PLUMBING DRAWINGS.
W3	REMOVE STUD PARTITION IN ITS ENTIRETY.

DEMOLITION LEGEND

- WALL REMOVAL
- WALL EXISTING TO REMAIN
- REMOVE FLOOR SYSTEM TO ITS ENTIRETY DOWN TO SLAB.

KEY PLAN



CSARCH
40 Beaver St - Albany - New York 12207-1511
518 - 463 - 8068 www.csarchpc.com

Consultant

Project Title
VALLEY CENTRAL SCHOOL DISTRICT
VALLEY CENTRAL HIGH SCHOOL
ART ROOM AND WOODSHOP ALTERATIONS

#	DATE	DESCRIPTION
2	11/17/23	Bid Add #2

Drawn By:	Author
Checked By:	Checker
Proj. #:	44-13-01-06-0-015-031
CSArch Proj. #:	187-2103
Issued for Bid:	10/31/2023

Sheet Title
WORK SHOP ROOM DEMOLITION PLANS & ELEVATIONS

Sheet No.
HSMS AD103

CONSTRUCTION DOCUMENTS

C:\Users\public\Documents\187-2103 VCSD HS-MS_shollands.rvt

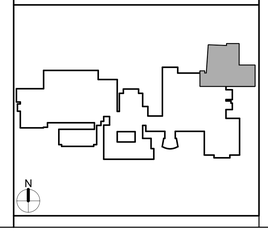
1 FIRST FLOOR PARTIAL FINISH PLAN

AF101 1/8" = 1'-0"

2

MATERIAL	MANUFACTURER	MODEL	COLOR/NAME	SIZE	NOTE
PNT-1	SHERWIN WILLIAMS	EGGSHELL	SW-7551 GREEK VILLA		
PNT-2	RUST-OLEUM 367598	SEMI-GLOSS	PEARL GRAY		FLOOR PAINT
PNT-3	SHERWIN WILLIAMS	CEILING FLAT	SW-6966 'BLUEBLOOD'		CEILING PAINT FOR TECTUM CEILING/BAR JOISTS/DUCTWORK

KEY PLAN



DISCLAIMER NOTE

MANUFACTURER'S NAMES AND FINISH INFORMATION ARE INDICATED AS REFERENCED TO THE ARCHITECTS BASIS-OF-DESIGN SELECTIONS AND HAVE BEEN DETERMINED PRIOR TO BID. THE CONTRACTOR AND OWNER ARE HEREBY NOTIFIED THAT FINISHES INSTALLED IN THE WORK ARE SUBJECT TO CHANGE IN RESPONSE TO SUBMITTALS, CONFIRMED SELECTIONS, PRODUCT AVAILABILITY AND THE SUBSEQUENT COORDINATION OF FINISHES BY ARCHITECT AND MAY DIFFER FROM PRODUCTS LISTED HEREIN.

ABBREVIATIONS

ACMU	ARCHITECTURAL CONCRETE MASONRY UNIT
ACT	ACOUSTICAL CEILING TILE
APC	ACOUSTICAL PANEL CEILING
BBT	BIO-BASED TILE
BRK	BRICK
CFT	CERAMIC FLOOR TILE
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
CPT	CARPET
CTB	CERAMIC TILE BASE
CWT	CERAMIC WALL TILE
ETR	EXISTING TO REMAIN
EXP	EXPOSED
EXST	EXISTING
FAC/FF	FACTORY FINISH
GWB	GYPSUM WALL BOARD
LMC	LINEAR METAL CEILING
MSS	MUSIC STORAGE SYSTEM
MWP	METAL WALL PANEL
PCON	POLISHED CONCRETE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PNT	PAINT
RAF	RESILIENT ATHLETIC FLOORING
RB	RUBBER BASE
RF	RESINOUS FLOORING
RST	RUBBER STAIR TREAD / LANDING
RT	RUBBER TILE FLOORING
SCONC	SEALED CONCRETE
SS	STAINLESS STEEL
STF	SYNTHETIC TURF FLOORING
STL	STEEL
TERR	TERRAZZO
TP	TOILET PARTITIONS
TYP	TYPICAL
VCT	VINYL COMPOSITION TILE
VCTAS	VINYL COMPOSITION TILE ANTI-STATIC
VWC	VINYL WALLCOVERING
WAF	WOOD ATHLETIC FLOORING
WD	WOOD
WOM	WALK-OFF MAT

GENERAL FINISH NOTES

1. ALL EXPOSED SURFACES OF NEW PARTITIONS ARE TO BE PAINTED.
2. WHEN ANY WORK IS PERFORMED ON ANY EXISTING WALL, THE ENTIRE WALL SURFACE IS TO BE PAINTED GORNER TO CORNER, UNLESS NOTED OTHERWISE.
3. ALL ELECTRIC, MECHANICAL COMPONENTS AND TELEPHONE PANELS EXPOSED IN A ROOM TO MATCH WALL COLOR.
4. ALL NEW GWB CEILINGS, FASCIAS, AND SOFFITS TO BE PAINTED PNT-2, UNO.
5. ALL EXPOSED CEILING STRUCTURE, DECK, DUCTWORK, CONDUIT AND PIPING TO BE PAINTED PNT-2, UNO.
6. ALL STEEL COLUMNS IN AREAS OF WORK ARE TO BE PAINTED.
7. ALL EXPOSED STEEL ASSOCIATED WITH STAIRS TO BE PAINTED PNT-8 , INCLUDING STRINGERS, CHANNELS, RISERS, COLUMNS, PLATES, TUBES, GUARDRAILS, POSTS, UNDERSIDES OF FLOORS, LANDINGS, DECKS, AND STAIR PANS WITH THE EXCEPTION OF SS & PF, UNO.
8. NEW HM DOORS, DOOR FRAMES AND WINDOW FRAMES AND ETR CORRIDOR DOOR & WINDOW FRAMES AS SCHEDULED ON A800 SERIES DRAWINGS, PNT-7.
9. ALL EXPOSED GROUND FACE CMU LOCATIONS TO RECEIVE GRAFFITIT COATING, TYPICAL FOR INTERIOR LOCATIONS.

FINISH KEYNOTES

#	DESCRIPTION

FINISH KEYS

Room Number / Room Name	
BASE	Base Finish
FLOOR	Floor Finish
FLOOR ACC	Floor Accent
WALL	Wall Finish
WALL ACC	Wall Accent

- Finish Tag

PNT-# ACCENT PAINT LOCATION

CSARCH
40 Beaver St - Albany - New York 12207-1511
518 463 - 8068 www.csarchpc.com

Consultant

Project Title

VALLEY CENTRAL SCHOOL DISTRICT
VALLEY CENTRAL HIGH SCHOOL
ART ROOM AND WOODSHOP ALTERATIONS

#	DATE	DESCRIPTION
2	11/17/23	Bid Add #2

Drawn By:	
Checked By:	
Proj. #:	44-13-01-06-0-015-031
CSArch Proj. #:	187-2103
Issued for Bid:	10/31/2023

Sheet Title

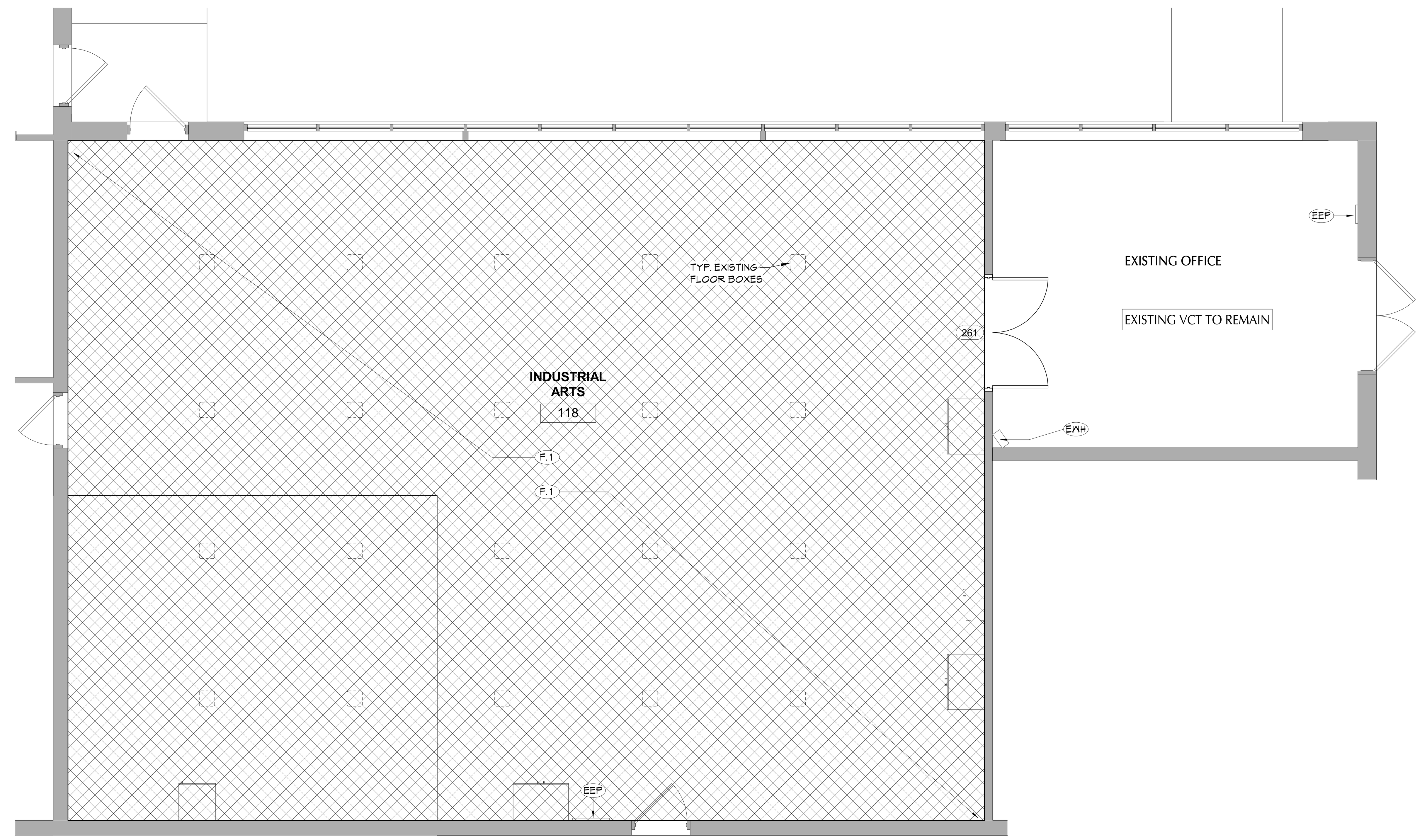
FIRST FLOOR PARTIAL FINISH PLAN

Sheet No.

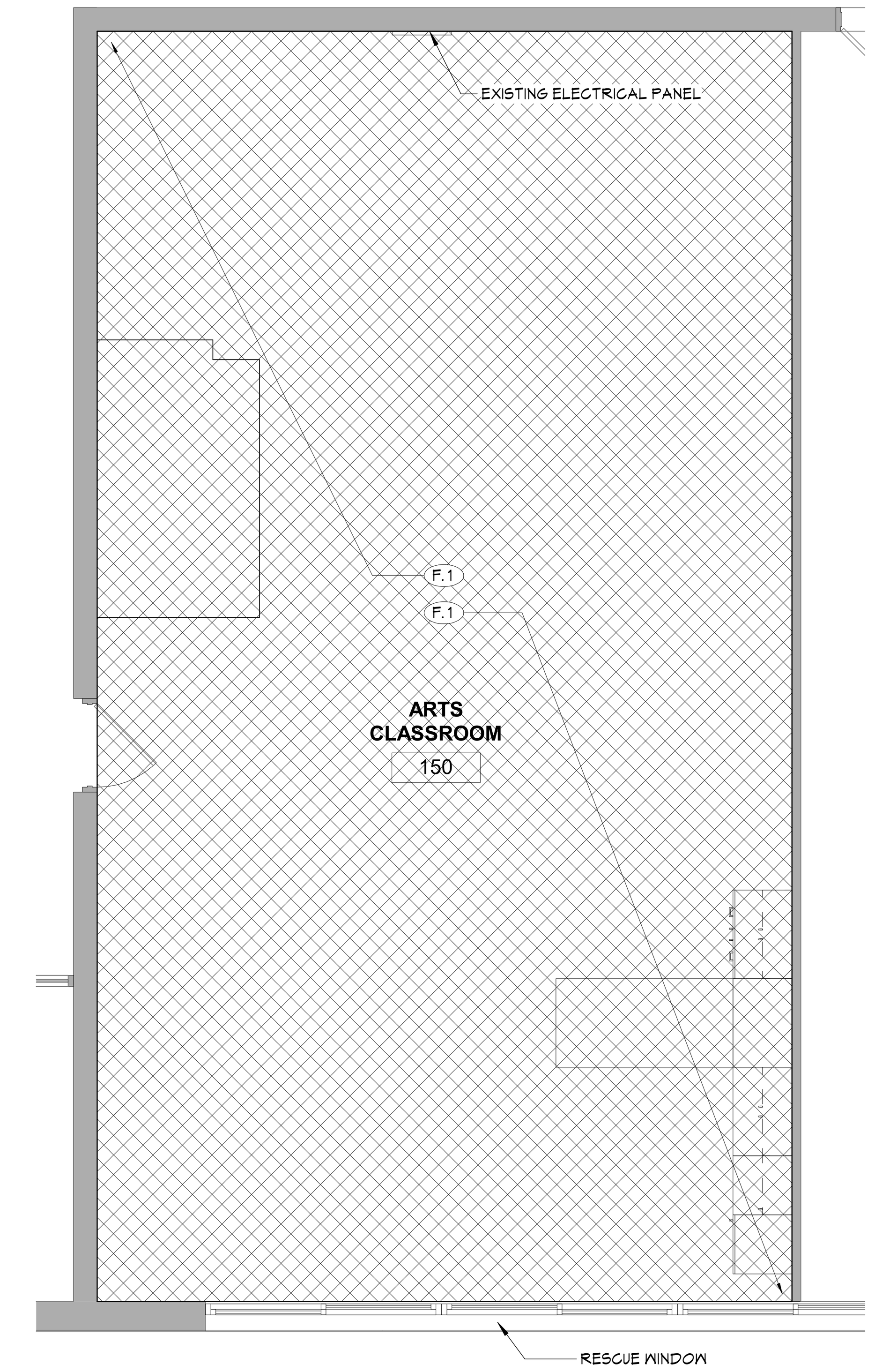
HSMS
AF101

CONSTRUCTION DOCUMENTS

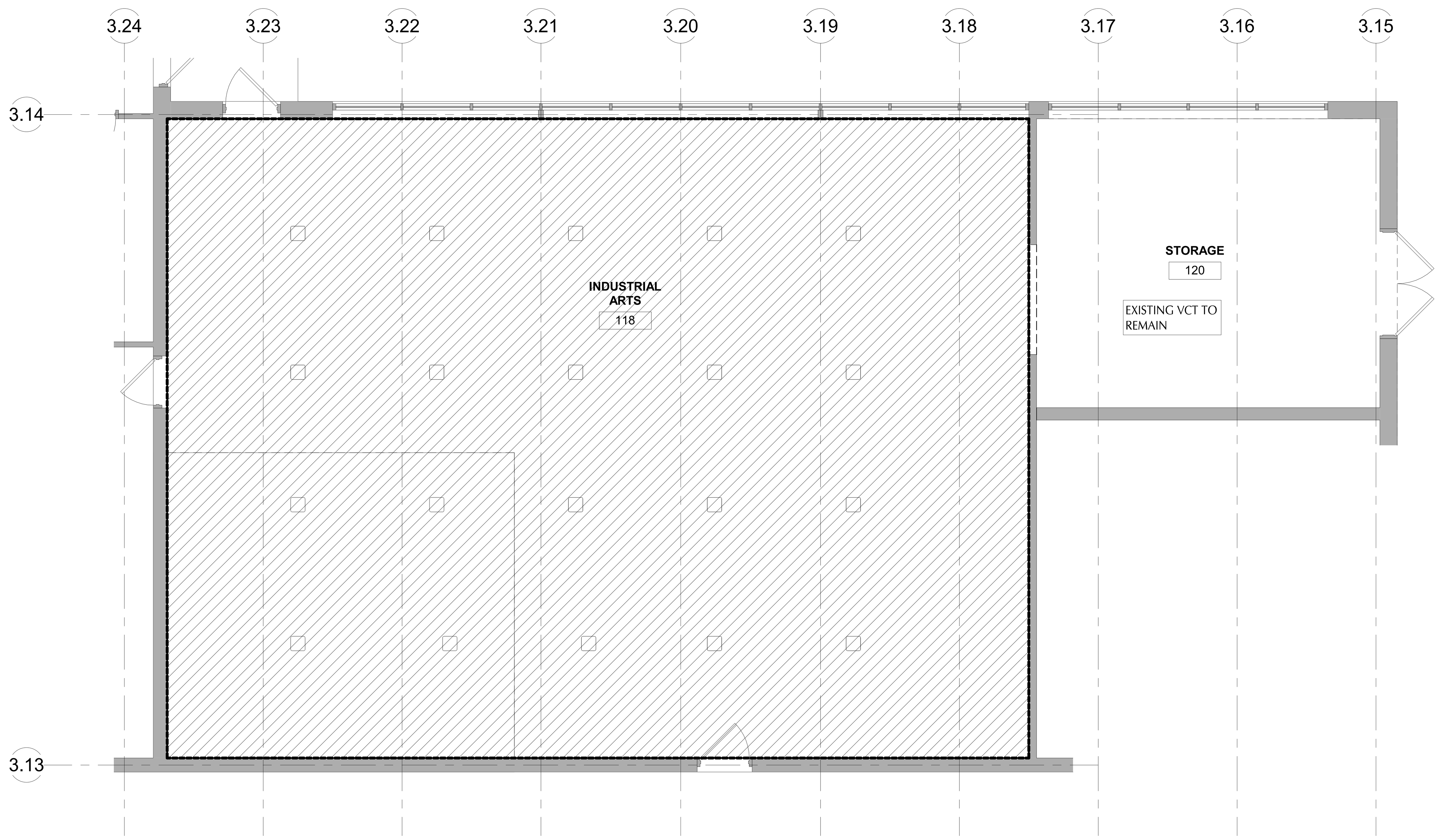
C:\Users\public\Documents\187-2103 VCSD HS-MS_shotlands.rvt



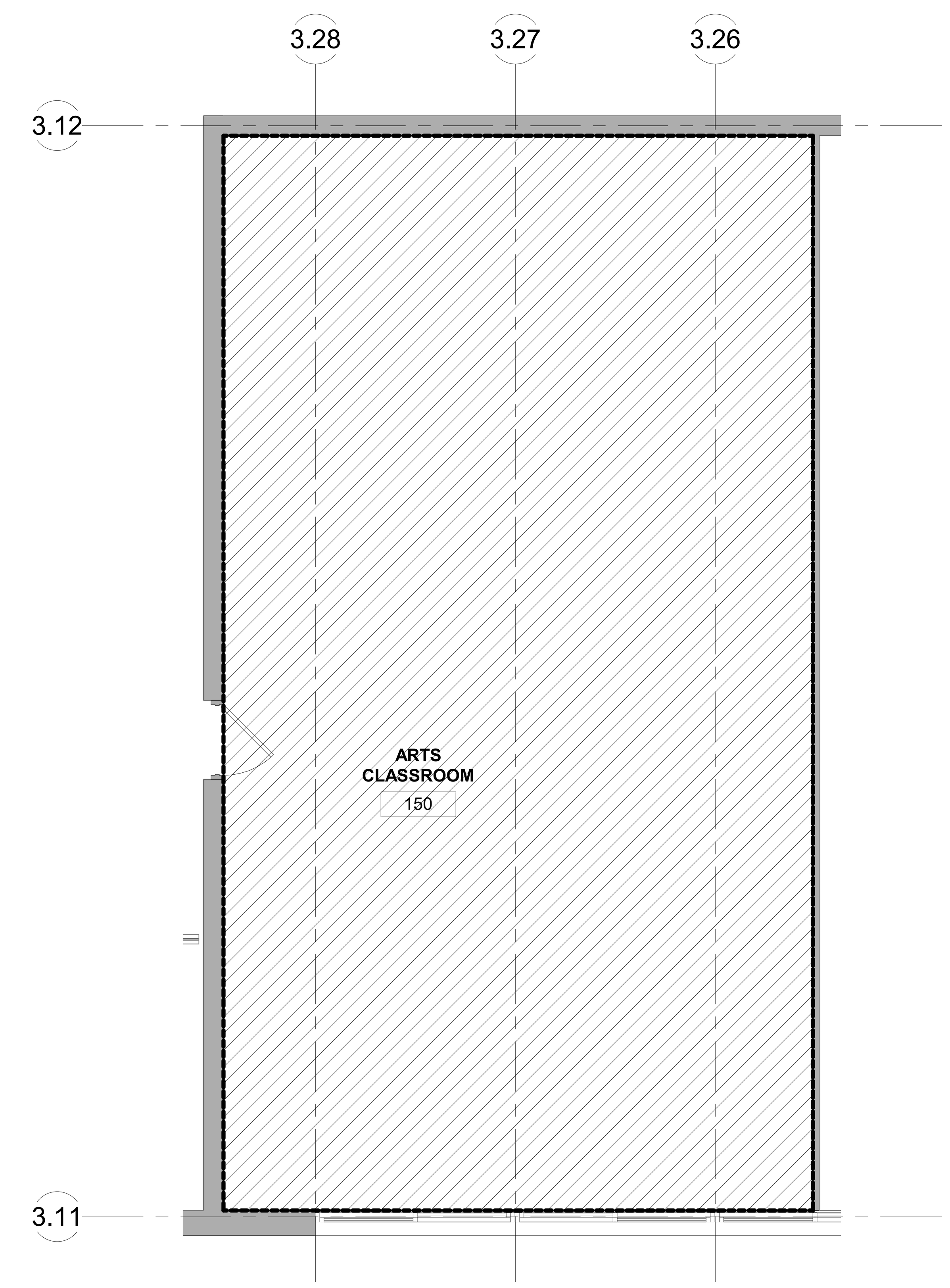
4 ENLARGED FLOOR PLAN
INDUSTRIAL ARTS - ADD ALTERNATE #1
ALT100 1/4" = 1'-0"



3 ENLARGED FLOOR PLAN
ARTS CLASSROOM - ADD ALTERNATE # 1
ALT100 1/4" = 1'-0"



2 WORK SHOP DEMO PLAN - ADD ALTERNATE #1
ALT100 1/4" = 1'-0"



1 ART ROOM DEMO PLAN - ADD ALTERNATE #1
ALT100 1/4" = 1'-0"

GENERAL DEMOLITION NOTES

1. COORDINATE ALL REMOVALS WITH NEW CONSTRUCTION.
2. PATCH AND REPLACE EXISTING AND NEWLY CREATED HOLES IN WALLS (DUE TO REMOVAL) WITH MATERIALS TO MATCH EXISTING CONSTRUCTION.
3. SALVAGED ITEMS SHALL BE TURNED OVER TO OWNER, UNO
4. ALL KEYED REMOVALS SHALL INCLUDE REMOVAL OF ANY AND ALL ANCHORING SYSTEMS INCLUDING OBJECTS EMBEDDED INTO EXISTING WALLS.
5. REFER MEP DRAWINGS FOR ADDITIONAL REMOVAL INFORMATION.
6. PROVIDE TEMPORARY SHORING AS NECESSARY AT ALL AREAS OF WALL REMOVAL AND NEW WALL PENETRATIONS.
7. DRILL CORNERS OF ALL NEW SAWCUT OPENING PRIOR TO SAWCUTTING, TO PREVENT CUTTING INTO SCHEDULED CONSTRUCTION TO REMAIN.
8. CONTRACTOR TO REMOVE ALL EXISTING ELECTRICAL BOXES AND ASSOCIATED WIRING.

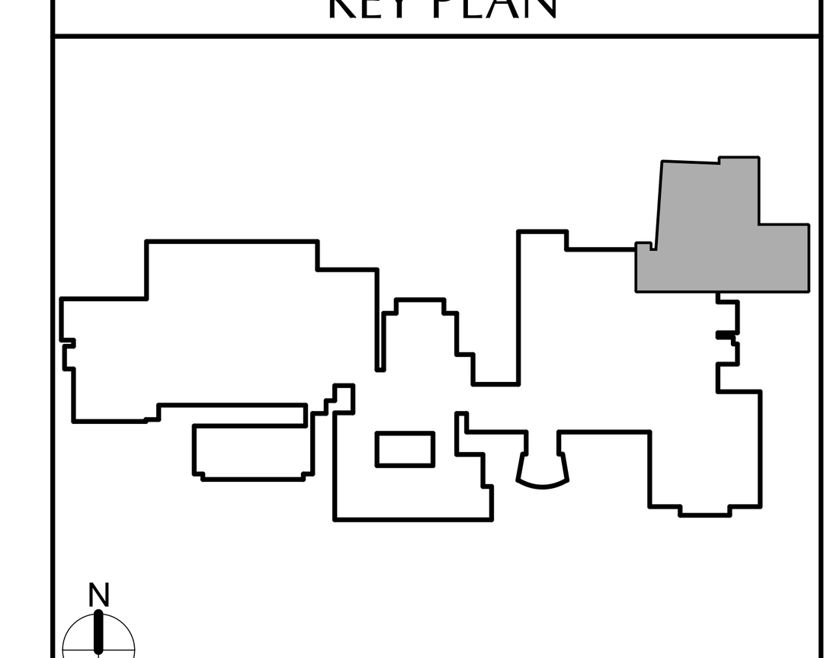
DEMOLITION LEGEND

- WALL REMOVAL
- WALL EXISTING TO REMAIN
- REMOVE FLOOR SYSTEM TO ITS ENTIRETY DOWN TO SLAB.

KEYNOTES

#	DESCRIPTION
EEP	EXISTING ELECTRICAL PANEL
EWH	EXISTING WALL HEATER
F.1	NEW FLOOR SYSTEM CONSISTING OF 2 LAYERS OF 1/2" PLYWOOD WITH RESINOUS SYSTEM APPILED TO NEW SUBSTRATE. INCLUDE NEW COVE BASE.

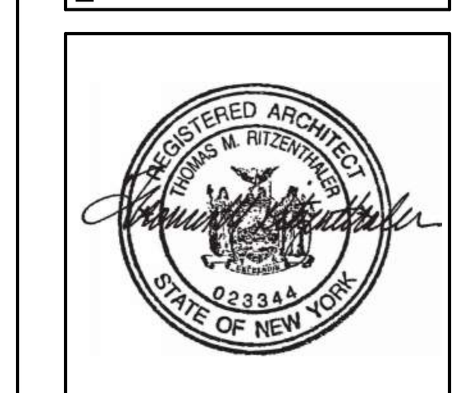
KEY PLAN



CSARCH
40 Beaver St. · Albany · New York 12207-1511
518 · 463 · 8068 www.csarchpc.com

Consultant

Project Title
VALLEY CENTRAL SCHOOL DISTRICT
VALLEY CENTRAL HIGH SCHOOL
ART ROOM AND WOODSHOP ALTERATIONS



#	DATE	DESCRIPTION
2	11/17/23	Bid Add #2

Drawn By:	Author
Checked By:	Checker
Proj. #:	44-13-01-06-0-015-031
CSArch Proj. #:	187-2103
Issued for Bid:	10/31/2023

Sheet Title
ADD ALTERNATE #1

Sheet No.
HSMS ALT100

CONSTRUCTION DOCUMENTS

C:\Users\public\Documents\187-2103 VCSD HS-MS_shollands.rvt

the Palombo Group

Sign In Sheet

Meeting: VCSD – Pre-Bid Walk Thru Art & Woodshop Alterations
Date: 11/14/2023 at 3:00PM

Name	Company/Trade	Cell/Email
Dawn Ryan	TPG/CM	845-594-5328/dryan@thepalombogroup.com
Bill Devine	TPG/CM	845-857-5494/wdevine@thepalombogroup.com
Steve Hollands	CSArch	
Steve Coretta	Pro Solutions	570-618-3016 SCoretta@ProSolutionsContractors.com
Chad Burnham	Pro Solutions	570-351-5060 CBurnham@ProSolutionsContractors.com
Bernard Caparelli	W I T Electric	845 576 3486 W.I.T.Electric.NY@gmail
Joe Barone	BCL	845-691-2244 Joseph.barone@bclmgc.com
Mark Figliuzzi	Transitional Builders	845-773-9440 TBI1987@Yahoo.com
Broderick Knoell	Blake Engineering	845 820 3431 bknoell@blakeengineeringpllc.com
Mike Furia	Precise Enterprises II LTD	845-604-3161 precise@frontiernet.net
Ted Brennan	Wallkill Group	973-512-4882 estimating@wallkillgroup.com
WD Haskell	DSM AE	914-742-0910 x118 bhaskell@dsmhvac.com

the Palombo Group CSARCH

PRE-BID WALK THRU MEETING

AGENDA

VALLEY CENTRAL SD
VALLEY CENTRAL – Art & Woodshop Alterations
Tuesday, November 14, 2023 – 3:00PM

1. SIGN IN SHEET

2. INTRODUCTIONS – BILL DEVINE – THE PALOMBO GROUP

   VALLEY CENTRAL SD – OWNERS
   CS Arch – ARCHITECTS
   THE PALOMBO GROUP – CONSTRUCTION MANAGERS

3. DATE / TIME / LOCATION OF WHERE BIDS ARE DUE

   Tuesday, November 28, 2023 – 3:00 PM
   VCSD Board of Education, 944 State Rt. 17K, Montgomery, NY 12549
   Attention:
   BRAD CONKLIN, SCHOOL BUSINESS OFFICAL

   All proposals shall be sealed and in an opaque envelope distinct on the outside as follows:

   VALLEY CENTRAL SD
   VALLEY CENTRAL SCHOOL DISTRICT – ART & WOODSHOP ALTERATIONS
   Bid Opening Date: November 28, 2023, 3:00 PM
   Contract Number
   Name of Bidder
   Trade
   Marked "SEALED BID"

If mailing your bid, please make sure you leave plenty of time for it to arrive at the district office by **2pm.** Make sure the envelope is marked "Sealed Bid", "VALLEY CENTRAL SCHOOL DISTRICT – ART & WOODSHOP ALTERATIONS"

4. BID DOCUMENT AVAILIBILITY

   - Digital download can be obtained by REV, 28 Church Steet, Unit #7, Warwick, NY 10990 for $100.00
   - Please note Rev (www.revplans.biddyhq.com) is the designated location and means for distributing and obtaining all bid package information. All bidders are urged to register to ensure receipt of all necessary information, including bid addenda.

5. PROJECT OVERVIEW - TPG – BILL DEVINE

    1. General Construction

6. TRADE ESTIMATES – BILL DEVINE – THE PALOMBO GROUP

    Contract 1: GENERAL CONSTRUCTION RANGE: $295,000.00

7. MISCELLANEOUS REQUIRMENTS – BILL DEVINE – THE PALOMBO GROUP

    - APPRENTICSHIP PROGRAM LANGUAGE IN PLACE
    - PERFORMANCE AND PAYMENT BONDS ARE REQUIRED
    - ALL ADDENDUM MUST BE ACKNOWLEDGED ON THE BID FORM
    - ALLOWANCES IS TO BE INCLUDED IN YOUR BASE BID
    - RFI PROCEDURES

8. GENERAL DISCUSSION – Q&A

9. SITE VISIT