ADDENDUM No. 03

1.1 PROJECT INFORMATION

A. Project Name: 2024 CAPITAL PROJECT PHASE 1.

B. Building(s): MAIN BUILDING

C. Owner: AFTON CENTRAL SCHOOL DISTRICT.

D. Architect: HIGHLAND ASSOCIATES.

E. Architect Project Number: 2025-005P.

F. Construction Manager: SCHOOLHOUSE CONSTRUCTION SERVICES.

G. Date of Addendum: DECEMBER 5, 2025.

1.2 NOTICE TO BIDDERS

A. This Addendum is issued to all registered plan holders pursuant to the Instructions to Bidders and Conditions of the Contract. This Addendum serves to clarify, revise, and supersede information in the Project Manual, Drawings, and previously issued Addenda. Portions of the Addendum affecting the Contract Documents will be incorporated into the Contract by enumeration of the Addendum in the Owner/Contractor Agreement.

B. The Bidder shall acknowledge receipt of this Addendum in the appropriate space on the Bid Form.

C. The date for receipt of bids is **changed** by this Addendum.

1. Bid Date: **DECEMBER 15, 2025**, at same time and location.

1.3 ATTACHMENTS

A. This Addendum includes the following attached Documents and Specification Sections:

1. Specification Section 011000 Summary, dated 12/01/2025, (re-issued).
2. Specification Section 011200 Multiple Contract Summary, dated 12/01/2025, (new).
3. Specification Section 012100 Allowances, dated 12/01/2025, (re-issued).
4. Specification Section 011200 Multiple Contract Summary, dated 12/01/2025, (new).
5. Specification Section 017100 Cleaning, dated 12/01/2025, (new).
6. Specification Section 083113 Access Doors and Frames, dated 12/01/2025, (new).
7. Specification Section 083613 Sectional Doors, dated 12/01/2025, (new).
8. Specification Section 085113 Aluminum Windows, dated 12/01/2025, (new).
9. Specification Section 095400 Metal Pan Ceilings, dated 12/01/2025, (new).
10. Specification Section 096536.13 ESD Vinyl Tile Flooring, dated 12/01/2025, (new).
11. Specification Section 096723 Resinous Flooring System, dated 12/01/2025, (new).

12. Specification Section 098400 - Cementitious Wood Fiber Ceilings, dated 12/01/2025, (new).

B. This Addendum includes the following attached sheets:

1. Architectural Sheet A-100 Ground Floor Composite Plan (Part A/B), dated 12/03/2025, (re-issued).
2. Architectural Sheet A-402 Agriculture Lab/CTE Enlarged Demo Plan, Reno Plan, & RCP, dated 12/03/2025, (re-issued).
3. Architectural Sheet A-404 Upper Gym, Chorus Room, & Classroom Enlarged Plans & Exterior Stair Plan, dated 12/03/2025, (re-issued).
4. Architectural Sheet A-406 Lower Gym Locker Rooms Demo Plan & Reflected Ceiling Plan, dated 12/03/2025, (re-issued).
5. Architectural Sheet A-601 Door Schedule, Types, & Details, dated 11/21/2025, (re-issued).
6. Architectural Sheet A-602 Window Types & Details, dated 11/21/2025, (re-issued).

END OF ADDENDUM No. 03

SECTION 01 10 00 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Phased construction.
4. Work performed by Owner.
5. Multiple Work Packages.
6. Work under Owner's separate contracts.
7. Future work not part of this Project.
8. Owner's product purchase contracts.
9. Owner-furnished/Contractor-installed (OFCI) products.
10. Owner-furnished/Owner-installed (OFOI) products.
11. Contractor-furnished/Owner-installed (CFOI) products.
12. Contractor's use of site and premises.
13. Coordination with occupants.
14. Work restrictions.
15. Specification and Drawing conventions.
16. Miscellaneous provisions.

B. Related Requirements:

1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.
2. Section 017300 "Execution" for coordination of Owner-installed products.

1.3 PROJECT INFORMATION

A. Project Identification: Afton CSD Main Building 2024 Capital Project Phase 1

1. Project Location: 29 Academy Street, PO Box 5, Afton, NY 13730

B. Owner: Afton Central School District, 29 Academy Street, PO Box 5, Afton, New York 13730

C. Architect: Highland Associates, 102 Highland Avenue, Clarks Summit, PA 18411, 570-586-4334.

1. Architect's Representative: Cheryl Zondlo

D. Architect's Consultants: Architect has retained the following design professionals, who have prepared designated portions of the Contract Documents:
1. None.

E. Construction Manager: School House Construction Services, 20850 State Highway 28, Delhi, NY 13753

1. Construction Manager Representative: Melisa Secord and Connor Fitzgerald
2. Construction Manager has been engaged for this Project to serve as an advisor to Owner and to provide assistance in administering the Contract for construction between Owner and each Contractor, according to a separate contract between Owner and Construction Manager.

1.4 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and includes, but is not limited to, the following:

1. Provide water source hook-up for fire department. (Alternate)
2. Provide dry standpipe system.
3. Select exterior window replacement
4. Select areas of exterior masonry restoration
5. Building wide: replace wire-glass panels in interior doors
6. 1908 / 1955: stair treads/rubber floor replacement
7. 1994: exposed ceiling and ductwork to be repaired and painted in elementary cafetorium
8. 1967: upgrade pool locker room ventilation
9. 1967: upgrade exhaust for pool equipment room and adjacent storage rooms
10. 1967: replace existing PDU and CPDU for pool (Alternate)
11. Building wide: replace metal hangers for piping in crawl space
12. Building wide: testing and balancing of hot water distribution system
13. Building wide: add domestic water isolation valves throughout school to eliminate building shut-down for isolated repairs.
14. Building wide: replace mop sinks in janitors' closets
15. Building-wide: additional lighting in stairways
16. Replace / repair concrete stoop and handrails at door #9
17. Repair and secure retaining wall railing near door #4
18. Repair concrete stairs and handrails at egress door a and b
19. Agriculture CTE program: Renovate and expand existing agriculture lab for new CTE Agriculture Program
20. Multi media, STEAM, and collaboration area grades 6-12: Renovate existing HS/MS library for new media center / STEAM lab.
21. 2002 lower gym – replace ceiling in locker rooms.
22. 1967 Pool Locker Room - Shower Replacement.
23. Update lighting on pedestrian bridge to athletic fields

B. Type of Contract:

1. Project will be constructed under coordinated, concurrent multiple contracts. See Section 011200 "Multiple Contract Summary" for a list of multiple contracts, a description of work included under each of the multiple contracts, and the responsibilities of Project coordinator.

1.5 WORK PERFORMED BY OWNER

A. Cooperate fully with Owner, so work may be carried out smoothly, without interfering with or delaying Work under this Contract or work by Owner. Coordinate the Work of this Contract with work performed by Owner.

B. Preceding Work: Owner will perform the following construction operations at Project site. Those operations are scheduled to be substantially complete before Work under this Contract begins.

1. None

C. Concurrent Work: Owner will perform the following construction operations at Project site. Those operations will be conducted simultaneously with Work under this Contract.

1. None

D. Subsequent Work: Owner will perform the following additional work at site after Substantial Completion. Completion of that work will depend on successful completion of preparatory Work under this Contract.

1. None

1.6 WORK UNDER OWNER'S SEPARATE CONTRACTS

A. Work with Separate Contractors: Owner purchased Gym Equipment, Bleachers, and Lockers:

1. 1955 Upper Gym – Repair existing bleachers.
2. 1955 Upper Gym - Basketball Hoop Replacement – Replace 4 sides plus 2 main court including mechanism replacements
3. 2001 Lower Gym Boys and Girls Locker Room – Lockers
4. Pool Boys and Girls Locker Room - Lockers

B. Concurrent Work: None

C. Subsequent Work: None

D. Future Work Not Part of this Contract: None

1.7 OWNER-FURNISHED/CONTRACTOR-INSTALLED (OFCI) PRODUCTS

A. Owner's Responsibilities: Owner will furnish products indicated and perform the following, as applicable:

1. Provide Contractor Owner-reviewed Product Data, Shop Drawings, and Samples.
2. Provide for delivery of Owner-furnished products to Project site.
3. Upon delivery, inspect, with Contractor present, delivered items.

    a. If Owner-furnished products are damaged, defective, or missing, arrange for replacement.

4. Obtain manufacturer's inspections, service, and warranties.
5. Inform Contractor of earliest available delivery date for Owner-furnished products.

B. Contractor's Responsibilities: The Work includes the following, as applicable:

1. Designate delivery dates of Owner-furnished products in Contractor's construction schedule, utilizing Owner-furnished earliest available delivery dates.
2. Review Owner-reviewed Product Data, Shop Drawings, and Samples, noting discrepancies and other issues in providing for Owner-furnished products in the Work.
3. Receive, unload, handle, store, protect, and install Owner-furnished products.
4. Make building services connections for Owner-furnished products.
5. Protect Owner-furnished products from damage during storage, handling, and installation and prior to Substantial Completion.
6. Repair or replace Owner-furnished products damaged following receipt.

C. Owner-Furnished/Contractor-Installed (OFCI) Products:

1. Toilet Room Accessories
2. **Equipment as noted on Drawings.**

1.8 OWNER-FURNISHED/OWNER-INSTALLED (OFOI) PRODUCTS

A. Owner-Furnished/Owner-Installed (OFOI) Products: None

1.9 CONTRACTOR-FURNISHED/OWNER-INSTALLED (CFOI) PRODUCTS

A. Contractor-Furnished/Owner-Installed (CFOI) Products: None

1.10 CONTRACTOR'S USE OF SITE AND PREMISES

A. Restricted Use of Site: Each Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.

B. Limits on Use of Site: Limit use of Project site areas within the Contract limits indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1. Driveways, Walkways and Entrances: Keep driveways loading areas and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or for storage of materials.

a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.

D. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.

1.11 COORDINATION WITH OCCUPANTS

A. Full Owner Occupancy: Owner will occupy Project site and building(s) during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits unless otherwise indicated.

1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and approval of authorities having jurisdiction.
2. Notify Owner not less than 72 hours in advance of activities that will affect Owner's operations.
3. Architect will prepare a Certificate of Substantial Completion the Work to be occupied after acceptance of the completed Work.

1.12 WORK RESTRICTIONS

A. Comply with restrictions on construction operations.

1. Comply with limitations on use of public streets, work on public streets, rights of way, and other requirements of authorities having jurisdiction.

B. On-Site Work Hours: Limit work to between 7:00 a.m. to 3:30 p.m., Monday through Friday, unless otherwise indicated. Work hours may be modified to meet Project requirements if approved by Owner and authorities having jurisdiction.

1. Generally working hours are first shift from 7:00 a.m. to 3:30 p.m., second shift from 3:00 p.m. to 11:30 p.m., and third shift from 11:00 p.m. to 7:30 a.m. all with one-half hour meal break Monday through Friday. The contractor may use shifts as required to meet the schedule of the project, this shift work will not be an additional cost to the owner and will be included in each contractor's bid price if required to meet the schedule. While the building is occupied for the school year, all work shall be 2nd shift except for where access to the construction areas are directly from the outside. Contractor occupancy of the building must comply with the requirements of NYSED 155.5 "Unified Safety Standards for School Construction and Maintenance Projects." Contractors shall work to the Owners schedule and needs for times of "quiet construction" during school-wide student exams.

2. Weekend Hours: 7:30 a.m. to 3:30 p.m.
3. Early Morning Hours: Per shift work listed and per regulations by authorities having jurisdiction for restrictions on noisy work.
4. Hours for Utility Shutdowns: As scheduled with CM and owner.
5. During the active school year, material deliveries into the work areas that are surrounded by student occupied spaces are to occur prior to 7:00 am and after 3:30 pm or by appointment scheduled with Construction Manager.

C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging for temporary utility services according to requirements indicated:

1. Notify Construction Manager and Owner not less than two 2 days in advance of proposed utility interruptions.
2. Obtain Construction Manager's written permission before proceeding with utility interruptions.

D. Noise, Vibration, Dust, and Odors: Coordinate operations that may result in high levels of noise and vibration, dust, odors, or other disruption to Owner occupancy with Owner.

1. Notify Construction Manager not less than two 2 days in advance of proposed disruptive operations.
2. Obtain Construction Manager's written permission before proceeding with disruptive operations.

E. Smoking and Controlled Substance Restrictions: Use of tobacco products including e-cigarettes and nicotine vapor products, alcoholic beverages, and other controlled substances on Owner's property is strictly prohibited and may result in person being removed from the property.

F. Employee Identification: Provide identification tags for Contractor personnel working on Project site. Require personnel to use identification tags at all times.

G. Employee Screening: Comply with Owner's requirements for drug and background screening of Contractor personnel working on Project site.

1. Maintain list of approved screened personnel with Owner's representative.

1.13 SPECIFICATION AND DRAWING CONVENTIONS

A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
2. Text Color: Text used in the Specifications, including units of measure, manufacturer and product names, and other text may appear in multiple colors or underlined as part of a hyperlink; no emphasis is implied by text with these characteristics.

3. Hypertext: Text used in the Specifications may contain hyperlinks. Hyperlinks may allow for access to linked information that is not residing in the Specifications. Unless otherwise indicated, linked information is not part of the Contract Documents.
4. Specification requirements are to be performed by Contractor unless specifically stated otherwise.

B. Division 00 Contracting Requirements: General provisions of the Contract, including General and Supplementary Conditions, apply to all Sections of the Specifications.

C. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

D. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:

1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings and published as part of the U.S. National CAD Standard.
3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

1.14 MISCELLANEOUS PROVISIONS

A. None

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 10 00

SECTION 01 12 00 – MULTIPLE CONTRACT SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Division 00, General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes a summary of each contract, including responsibilities for coordination and temporary facilities and controls.

B. Specific requirements for Work of each contract are also indicated in individual Specification Sections and on Drawings.

C. Related Requirements:

1. Section 011000 "Summary" for the Work covered by the Contract Documents, restrictions on use of Project site**,** coordination with occupants, and work restrictions.
2. Section 013100 "Project Management and Coordination" for general coordination requirements.

1.3 DEFINITIONS

A. Permanent Enclosure: As determined by Architect, the condition at which roofing is insulated and weathertight; exterior walls are insulated and weathertight; and openings are closed with permanent construction or substantial temporary closures equivalent in weather protection to permanent construction.

1.4 PROJECT COORDINATOR

A. Project coordinator (Lead Contractor) shall be GENERAL CONSTRUCTION CONTRACTOR and shall be responsible for coordination between the General Construction Contract, HVAC Construction Contract, Plumbing Construction Contract, and Electrical Construction Contract.

1.5 COORDINATION

A. Project coordinator shall perform Project coordination activities for the multiple contracts, including, but not limited to, the following:

1. Provide typical overall coordination of the Work with all Prime Contractors.
2. Coordinate shared access to workspaces.
3. Coordinate and schedule interruptions of permanent and temporary utilities, including those necessary to make connections for temporary services with Owner’s approval.

4. Coordinate sequencing and scheduling of the Work. Refer to paragraph 1.7 A.6 for details.

B. The Construction Manager will coordinate the work between the Prime Contractors and the Owner.

C. Coordination by each Prime Contractor: Coordination activities of all Prime Contractors include, but are not limited to, the following:

1. Schedule and sequence their Work activities and coordinate with the Project Coordinator..
2. Preparation and coordination of Coordination Drawings.
3. Coordinate sharing access to workspaces.
4. Coordinate integration of work into limited spaces.
5. Coordinate protection of contractors' work.
6. Coordinate cutting and patching for their work along with cut and patch for the Mechanical / Plumbing Contractor and the Electrical Contractor.
7. Coordinate tests and inspections for their work. Coordinate testing and inspections with the Construction Manager and with the 3rd party inspector.
8. Coordinate staging with the Construction Manager.
9. Coordinate temporary services and facilities.

1.6 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work will be constructed under multiple Prime Contractor Agreements including through public bidding, cooperative purchasing and through state contracts. Cooperative purchasing agreements and state contracts are considered Prime Contracts for this project.

B. One complete set of Contract Documents is issued to cover the multiple Prime Contracts. Prime Contracts are separate Contracts between the District and independent Contractors representing significant construction activities. Each Prime Contract is performed concurrently and closely coordinated with construction activities performed on the Project under other Prime Contracts.

C. Multiple Prime Contracts for this project include:

1. General Construction (GC)
2. HVAC Construction (HC)
3. Plumbing Construction (PC)
4. Electrical Construction (EC)

B. Drawings – For all Contracts:

1. Each drawing is included and integral to each Prime Contract. Complete set of drawings is the responsibility of each contractor. Contractor is to review
   all drawings for that contract’s scope on all drawings.
2. List of Drawings – Refer to Construction Document’s Cover Sheet.

1.7 GENERAL SCOPE OF WORK AND REQUIREMENTS

A. General scope of work and requirements for Prime Contractors shall include, but is not limited to, the following:

1. All Contractors must review all information in the Contract documents and are responsible for their work shown on other Contract's drawings.
2. All Contractors shall visit the site to verify and review existing conditions before bidding the cost of the project.
3. Prime Contractors shall supply all labor, materials, tools, equipment, supervision, layout and survey of their work, and coordination with other prime, trade contractors, Schoolhouse, the Architect, as necessary; in order to complete all of their work as required and detailed in the drawings, specifications, addenda, and all other contract documents.

    a. All workers must meet the requirements of Labor Law 220-h to perform work on the project site.
    b. For identification and security purposes, workers are required to wear photo-identification badges at all times while working at District occupied sites. Each Contractor is responsible for control, maintenance and updating of the badges worn by their personnel and by their subcontractors' personnel.

4. Prime contractors shall provide their own OSHA compliant access to their work through use of staging, scaffolding, personnel lifts, temporary scaffolding, shoring, supports, guys, braces, falsework, cranes and the like to complete the work.
5. Correct any, or all, quality control issues or concerns, which are not deemed acceptable to Schoolhouse, the Architect, and Owner, or are not deemed as a high-quality finished product.
6. Verify that air and surface temperature, moisture, and humidity conditions are suitable for installation of this work, per the requirements of the specifications and product manufacturers. If the conditions prohibit installation, notify Schoolhouse's on-site representative. Documentation of conditions shall be noted within this contractor's daily field reports.
7. All work areas must be coordinated with Schoolhouse's field representative. At no time shall this contractor independently select their schedule and locations of work.
8. Prime Contractors shall provide proposed schedules showing submittals, material procurement (including lead times), and sequence of construction activities. The General Contractor shall integrate draft schedules from the other Prime Contractors into a single master schedule [MS Project] that is reviewed and finalized with Schoolhouse, the Architect, and Owner. The final master schedule shall be accepted by the Project Team and followed in the performance of construction activities. Additionally, contractors will provide schedule updates on a weekly basis, including two-week look- ahead schedules at coordination meetings.
9. Prime Contractors will work overtime, at their own expense, included in their proposal, should they fail to maintain progress in accordance with the project schedule, as determined by Schoolhouse and/or the Architect and Owner.
10. The Prime Contractors understand that during the execution of the work, it is not assumed that construction can be carried out in a continuous, uninterrupted manner. Contractor must include any necessary remobilizations required to successfully complete this work and work around the Owner's operational needs.

11. Any street, roadway, and/or parking lot closures must be coordinated with Schoolhouse's on-site representative and shall be scheduled around other project activities and municipal requirements.
12. All significant material deliveries must be coordinated with Schoolhouse at least 48 hours in advance. Maintenance of traffic and pedestrian protection for deliveries and work performance is the responsibility of this contractor.
13. Storage of materials and equipment at the site shall be permitted only with prior approval received by Schoolhouse's on-site representative. Prime contractors shall only store materials that are to be used in the next 30 days to maintain the ongoing construction activities.
14. Prime contractors are responsible for posting any applicable signage to warn workers and others of potential hazards due to the work, in addition to the standard signs and barricades.
15. Submit daily field reports indicating number of workers by classification, hours worked, construction progress information, weather conditions, etc., to Schoolhouse's on-site representative on a daily basis.
16. Daily Cleaning: Each Prime contractor is 100% responsible for their own daily and final clean-ups. This includes daily (or more often as needed and deemed by Schoolhouse's on-site representative) removal of waste to appropriate dumpsters. Besides general sweeping of work areas, mopping of work areas and affected corridors is required when the Owner intends to use the facilities before the next working shift. Failure to perform clean-up daily may result in back charges and fines to Prime Contractors.
17. Final Cleaning: General Contractor shall include multiple final cleanings of major areas of reconstruction by a professional cleaning company, as may be needed (or requested) in order to prepare spaces for immediate usage by the Owner. General Contractor shall carry an Allowance of $35,000.00 for this work. Refer to Section 011200 Allowances.
18. All Prime Contractors are responsible for their own removal of debris, including the provision of clean- up, hauling, etc. Dumpsters shall be provided by the General Contractor for use by all prime contractors.
19. The District has the right of first refusal for any equipment and/or materials being removed or disposed. The Contractor will move at their own expense, any equipment and/or materials requested by the District to a designated location.
20. All drawings, specifications, and addenda prepared by the Design Team are applicable to the performance of this contract.
21. This contractor agrees to take all precautionary measures necessary to prevent damage to the Owner's property and the work of other trades and contractors and to repair promptly any damage caused by this contractor's action or that of its employees, subcontractors or vendors. If damage is caused by this contractor's action or that of its employees, subcontractors or vendors, this contractor must repair the damage within 1 calendar week*. If this contractor fails to make acceptable repairs within 1 week* of notification, Schoolhouse may direct these repairs to be completed on behalf of this contractor and at this contractor's expense.

    a. In the event that the damage presents a safety, security, or environmental risk, or affects the ability of other contractors to perform their work, the repairs must be made immediately.

22. Each Contractor shall provide temporary shoring, bracing, supports, or protection systems needed to complete the Work of their Contract. All Contractors are responsible, individually and collectively, for maintaining safe-working conditions at all times.
23. Safety:

a. Prime contractors are responsible for developing a Site Specific Safety Plan that is specific to this capital improvement project. Submit this Site Specific Safety Plan within 10 days of award and no later than the start of construction activities. Submission of this material is a prerequisite for first payment.

1) The program shall include company safety philosophy, history, action plan, manuals, hazardous communications sheets, OSHA filings, meeting minutes and a reporting system for any accidents or injuries. Submission of this material is a prerequisite for first payment.

b. Prime Contractors shall conduct regular toolbox talks, as required by OSHA, which are focused on pertinent aspects of the ongoing project and potential areas of safety hazards. Meeting minutes, with attendance records, for respective toolbox talks and safety related meetings shall be maintained by each Prime Contractor.

c. In the event of an incident or injury occurring on-site, the Prime contractor and all subcontractors involved are required to furnish Schoolhouse and the owner with all relevant documentation, including but not limited to forms, reports, and any other records related to the incident.

d. All Contractors are responsible for the safety of their own Workers, Subcontractors and other personnel on site. Each and every Contractor is responsible for maintaining a safe work site, and for maintaining safe work procedures. Protect all District facilities, personnel, students, and activity areas.

24. Provide means for maintaining acceptable indoor air quality and adequate ventilation to eliminate fumes and/or the off gassing of material products, according to OSHA and SED requirements.
25. Means of temporary lighting and power shall be provided by the Electrical Contractor. This includes task specific lighting as required to perform their specific scope of work, and as required by OSHA.
26. Provide means of fastening to existing substrates. Any inadequate or poor surface conditions that prevent adequate attachments shall be pointed out to Schoolhouse's on-site representative and the Architect before proceeding with installations.
27. All prime contractors shall assign a dedicated field superintendent to be on-site whenever their company, or their subcontractors, have on-going construction activities. This individual shall be responsible for enforcing safe work practices, ensuring quality control, daily clean-up, and is responsible for locking and securing all doors, windows, etc. at the end of each work shift. The General Contractor's designated field superintendent shall not be a working technician that is tasked with performing field installations, but rather shall remain focused on coordination and planning of construction activities, oversight of operations, and other supervisory tasks.
28. Weekend and second shift work must be communicated and coordinated with Schoolhouse 48 hours in advance to commencement.
29. All on-site workers shall wear an identification badge while on-site. Badges shall be displayed via a lanyard or other approved means of displaying proper identification. Additionally, workers shall also have proof of their OSHA 10-Hour certification on display with their badge. Copies of OSHA 10-hour card to be provided to Schoolhouse on site.
30. Prime contractors shall coordinate with environmental regulatory agencies, as necessary to perform their scope of work. When in doubt as to specific regulatory requirements, contractors shall proceed with caution and contact pertinent agencies to ensure that they are proceeding in compliance with all environmental requirements. Contractors shall notify the Architect, Schoolhouse, and the Owner before they contact regulatory agencies.

31. The General Contractor Prime shall be responsible for ensuring that all project work areas are fully secured and locked-up at the end of each working shift. Upon completing these checks and confirming that the respective work areas and buildings are secured, the General Contractor shall notify Schoolhouse's project representative in-writing via an email or text messaging.
32. The Prime Contractors shall submit Requests for Information (RFIs), all project submittals/shop drawings, and other key project documentation electronically via the computer-based program implemented by the Design Team and/or Owner. Contractors shall also participate in any training sessions that are requested of them to attend, in order to more effectively use the designated computer-based program.
33. Outside work areas, excavations, and stored materials shall have perimeter fencing (8'-0" chain-link) provided and maintained by the respective contractor performing the work, as directed by Schoolhouse's on-site representative. The General Contract (GC) shall provide fencing at common work areas where multiple prime contractors are working and also surrounding designated material laydown area and zones that accommodate field office trailers and storage units. Other forms of fencing, such as orange snow fencing, is not acceptable.

    a. Chain-Link Fencing: Minimum 2-inch, 0.148-inch-thick, galvanized-steel, chain-link fabric fencing; minimum 8 feet high with galvanized-steel pipe posts; minimum 2-3/8-inch-OD line posts and 2- 7/8-inch-OD corner and pull posts, with 1-5/8-inch-OD top rails. Provide privacy screening for all chain-link fencing applications.

34. Fire Extinguishers: General Contract (GC) shall provide and maintain "general use" fire extinguishers for each building construction area; comply with applicable codes for quantities required. Comply with NFPA for recommended classes for exposure; extinguishers shall be inspected and appropriately tagged prior to being brought on site. Provide stands, painted bright orange, sturdy enough to carry the extinguisher, and built as not to create a tipping hazard.
35. Contractors need to be aware that during the duration of this Project there may be work by other projects occurring simultaneously at the same building(s). Each Prime Contractor must coordinate the execution of their work for this project with the work of other Prime Contractors for this project and other potential projects.
36. Each Prime Contract is responsible for protecting their installations at all times, and to not damage adjacent items and/or the work or items of others. All costs incurred to repair, replace or clean insufficiently protected materials/installations shall be the responsibility of the installing Prime Contract.

    a. This includes a minimum of protective blankets and at least 5/8" plywood being placed over wood or other floor finishes that are susceptible to damages, before major reconstruction and/or manlifts are used on these surfaces.

37. Site restoration: Restoration of any damages caused by construction to lawn and building areas outside the scope of work is the responsibility of such Contractor who performed the work.
38. Prime Contracts shall reach final completion of their contract obligations and complete all remaining punchlist and work items within one month (30 calendar days) of reaching substantial completion. Failure to reach final completion within this timeframe shall be subject to the same penalties associated with not meeting substantial completion.
39. There will be no additional compensation assigned for 2nd shift and/or weekend labor that is necessary to work around the Owner's operations. Coordinate second shift and weekend

work requirements in/at school buildings, or at other locations as required, with the Construction Manager as the schedules of the schools/buildings are slightly different so each school/building schedule slightly affects the permitted work times at that school/building. Work will need to be performed in and on both occupied and unoccupied spaces. Each Prime Contract working second shift shall be responsible for all requirements to allow normal functioning of that space the next day. All other work in occupied spaces shall be scheduled for off-hours, vacations and weekends. Weekend, holiday and/or overtime work shall be performed as indicated in the Construction Documents.

40. Prime Contractors are required to construct the project per the construction schedule. Contractors must complete the site and building for use by the District on or before the dates listed in the construction schedule. All Contractors shall cooperate fully with the intentions of the construction schedule. All Prime Contractors are specifically forewarned that any delays caused directly or indirectly by their acts, omissions, and/or failure to perform will result in the District, or its agents, completing the Prime Contractor's Work by whatever means are needed to complete the Work. The Prime Contractor causing the delay will be responsible for any and all costs associated with such issues including, but not limited to, District, Architectural, Engineering, Construction Manager, Legal, and Inspections, plus costs submitted by Contractors hired to complete the Prime Contractor's Work.
41. In the event that the Contractor shall fail to complete their work according to the Milestone Schedule or within the time (or times) to which such completion may have been extended, the Contractor shall pay the owner and/or the Owner shall be entitled to deduct from any monies due to the Contractor Eight Hundred Fifty and 00/100 ($850.00) Dollars per day as liquidated damages. If the Contractor does not achieve Substantial Completion according to the Milestone Schedule, the Contractor shall pay the Owner and/or the Owner shall be entitled to deduct from any monies due to the Contractor One Thousand and 00/100 ($1,000.00) Dollars per day for each person that the Architect and/or the Construction Manager used to furnish project management or related services beyond the date Substantial Completion was to be attained.
42. Protection of Work Areas: Prime Contractors are required to protect entire work areas during times/days when School is in session. This includes but is not limited to: temporary chain-link fencing (with full privacy screening), temporary partitions (with temp. finishes), plastic curtains/dust barriers, etc., as needed to protect all ongoing work, material(s) and equipment. During times where School is not in session, Contractors are required to protect direct work areas daily and ensure that the project site is safe at all times.

D. Prohibited Work:

1. Contractor is notified that the use of gasoline or diesel powered engines or motors is prohibited within the existing building. The use of gas-powered equipment in the school building is strictly prohibited.
2. Contractors are notified that the dry-cutting of masonry or gypsum based products with rotary cutting equipment is prohibited on the project site.

E. Extent of Contract: Unless the Agreement contains a more specific description of the Work of each Contract, requirements indicated on Drawings and in Specification Sections determine which contract includes a specific element of Project.

1. Unless otherwise indicated, the work described in this Section for each contract shall be complete systems and assemblies, including products, components, accessories, and installation required by the Contract Documents.

2. If two or more Prime Contracts have the same scope of work, the Owner, Construction Manager and A/E will determine which Contract is responsible to perform the work. A credit change order will be executed for the work not required by the other Contracts.
3. Blocking, backing panels, sleeves, and metal fabrication supports for the work of each contract, including for all accessories, ADA hardware, wall mounted devices, casework, etc. shall be the work of each prime contractor for their respective work. Each contract is responsible for identifying blocking sizes and locations for its own work.
4. Sleeves in existing walls roofs and floors furnished and installed by the contractor requiring the sleeve. Sleeves in new walls roofs and floors furnished by the contractor requiring the sleeve and installed by the General Contractor.
5. Furnishing of access panels for the work of each contract shall be the work of each contract for its own work. Installation of access panels shall be the work of the General Construction Contract. General Contractor to review all construction drawings for access panels requiring installation.
6. Painting for the work of each contract shall be the work of the General Construction Contract unless noted otherwise.
7. Through-penetration firestopping for the work of each contract shall be provided by the contractor who performed penetration.
8. Contractor is responsible for dewatering for the work of their contract.
9. Contractors' Startup Construction Schedule: Refer to 01 32 16 Construction Progress Schedule.

1.8 SUBSTITUTIONS

A. Substitutions: Each contractor shall cooperate with other contractors involved to coordinate approved substitutions with remainder of the work. Coordinate with the Architect, Construction Manager and the Owner for any substitutions.

1. Each Prime Contractor shall coordinate their own substitutions. All proposed substitutions shall be submitted to the CM and the A/E within 10 days of contract for approval.

1.9 TEMPORARY FACILITIES AND CONTROLS

A. Temporary Facilities and Controls: In addition to specific responsibilities for temporary facilities and controls indicated in this Section and in Section 015000 "Temporary Facilities and Controls," each contractor is responsible for the following:

1. Installation, operation, maintenance, and removal of each temporary facility necessary for its own normal construction activity, and costs and use charges associated with each facility, except as otherwise provided for in this Section.
2. Plug-in electric power cords and extension cords, supplementary plug-in task lighting, and special lighting necessary exclusively for its own activities.
3. Its own field office, complete with necessary furniture, utilities, and telephone service.
4. Its own storage and fabrication sheds.
5. Temporary enclosures for its own construction activities.
6. Staging and scaffolding for its own construction activities.
7. General hoisting facilities for its own construction activities.
8. Progress cleaning of work areas affected by its operations on a daily basis.
9. Secure lockup of its own tools, materials, and equipment.

10. Construction aids and miscellaneous services and facilities necessary exclusively for its own construction activities.

B. Temporary Heating, Cooling, and Ventilation: Is not required on the interior of the building.

C. Use Charges: Comply with the following:

1. Sewer Service: Owner.
2. Water Service: Owner.
3. Electric Power Service: Owner

1.10 CUTTING AND PATCHING

A. Cutting/Patching: Each Prime Contractor shall provide cutting and patching as required to perform their contract work. This includes openings in existing floors, walls, ceilings.

B. If structural steel is required for roof and/or floor openings the General Construction Contractor is responsible for the structural steel. Cutting of such opening is the responsibility of the General Construction Contractor. Layout of opening is the responsibility of the contractor requiring the opening.

C. Any opening requiring lintels and/or structural steel is the work of the General Construction Contract. Layout of openings to be performed by contractor requiring the opening, cutting of opening and installation of structural steel is the responsibility of the General Construction Contract. Reference all drawings for locations or required lintels.

D. All openings, penetrations, or abandoned locations created by the performance of the work of each contractor, either by cutting, demolition, removals, or for any other reason, including openings that remain after demolition, shall be sealed, filled, repaired, and/or patched to match, to meet or exceed the quality of existing or new adjacent and surrounding finishes, and existing and new material warranties shall be maintained. Patching shall be done by tradesmen qualified in performing the type of work required for the patching.

E. Ceiling Work:

1. Above ceiling work for ceiling schedule to remain: General Contractor is responsible for removing and reinstalling ceiling in order to accommodate mechanical duct work demo and installation. All other above ceiling work: Electrical, plumbing, fire protection, controls, etc. will be the responsibility of each trade performing the work which includes removing, storing and reinstalling of ceiling. Any damage to ceiling tile/grid scheduled to remain to be replaced by the trade responsible.
2. Reinstall of Ceiling Work: General Contractor is responsible for removal, preservation of and reinstallation of existing ceiling system. Electrical Contractor is responsible for removal or suspension of existing electrical ceiling equipment. Existing electrical ceiling equipment to be re-installed by Electrical Contractor. Mechanical Contractor is responsible for removal of all existing grilles and reinstall once new ceiling system is being installed. Coordinate new work before reinstallation with all respective contractors.
3. New Ceiling Work & MEP's to Remain: General Contractor is responsible for demolition and installation of new ceiling systems. Electrical Contractor is responsible for removal or suspension of existing electrical ceiling equipment. Existing electrical ceiling equipment to

be re-installed by Electrical Contractor. General Contractor is responsible for cutting around existing light fixtures, grilles, etc. for installation of new ceiling. Mechanical Contractor responsible for removing and reinstalling any mechanical grills/ equipment in ceiling system. If ceiling elevation lowers and effects Electrical equipment on the walls, Electrical Contractor to lower such equipment to accommodate elevation changes. Electrical equipment is; but not limited to, clocks, speakers, lighting, emergency lighting, fire alarm devices, sensors, etc.

4. This shall include all ceiling types, unless shown in the documents as receiving new ceiling, in which case no reinstallation or replacement is required by this Contractor. Include all other removals and replacement needed for the work of this Contract. Contractor shall verify the locations of existing plaster, sheetrock, acoustic lay in and spline ceilings and adjust their bid accordingly.

F. Roof Work:

1. New Roof Installation and Existing for new Mechanical Equipment and Roof Penetration: At existing roofing to remain General Contractor to remove roofing material and insulation for new Mechanical Equipment installation. General Contractor is responsible for removal of roof deck for through roof penetrations. Layout of the opening will be by the Contractor requiring the work, patch and repair of the roof deck will be by the General Contractor. Where required, General Contractor is responsible for providing and installing structural steel for such openings. The General Contractor is responsible for providing blocking for and install all required equipment curbs. The General Contractor to patch roofing material and maintain roofing warranty. Equipment curbs to be provided by contractor requiring curb.

   a. Electrical Contractor to coordinate and install conduit with General Contractor. The General Contractor is responsible for cutting and patching roof system in areas of Plumbing work. Plumbing Contractor to layout such opening. Any temporary protection after demolition is the work of the contractor who performed the demolition.

2. Roof Work (Demolition of Existing Mechanical Equipment): Removal of existing roof top mechanical equipment not to be re-installed is the responsibility of the Mechanical Contractor. Removal of existing roof-top equipment curbs as well as patching of roof deck and replacement of roofing system in areas of removal is the responsibility of the General Contractor. Any electrical feeds for mechanical units to be sealed by General Contractor per roofing manufacturers specifications. The General Contractor shall employ a certified roofing contractor for installation of roofing systems to maintain the owner's warranty.

G. All Concrete Removal and Trenching for Mechanical, Electrical and Plumbing Utilities: General Contractor is responsible for saw cutting, removal of concrete, excavation, installation of pipe bedding and backfill for all MEP utilities – existing and new construction. Installation for the underground utilities are the responsibility of that contractor. Following testing of MEP utilities, General Contractor is responsible for backfill and patching concrete back flush with existing concrete slab and match adjacent surface finishes. General Contractor to review all MEP contract drawings for locations of existing and new underground utilities

1.11 PRIME CONTRACTS SCOPE OF WORK

A. GENERAL CONSTRUCTION CONTRACT

1. Work of the General Construction Contract includes all building demolitions and General Construction. Provide all material, labor, equipment, supervision, management, and administration required for the total performance of the Work of this Contract including but is not limited to, the following:

   a. All work as shown on STRUCTURAL (S) series drawings and ARCHITECTURAL (A) series drawings unless specifically noted as by another contract.
   b. Remaining work not identified as work under other contracts.
   c. Preparing temporary building egress in accordance with the requirements of NYSED or the drawings and specifications and to accommodate the construction schedule and District use of the buildings.
   d. Protection of existing flooring to remain.
   e. Final professional cleaning of the project before the facilities are turned over to the District for their use. The General Construction Contract will provide construction cleaning throughout the project. Refer to Section 01 50 00 and 01 77 19 for additional information. General Construction Contract to provide a general laborer to clean continuously daily throughout the duration of the project.
   f. Dumpsters for hazardous materials and dumpsters for all construction waste for all trades.
   g. Selective demolition including all items required to be demolished to receive new work and demolition of items not required for future use and completion of systems and spaces.
   h. Foundations, including footings, foundation walls.
   i. Slabs-on-grade, including earthwork.
   j. Exterior concrete stairs and docks and railings.
   k. Construction, including excavation, backfill, and insulation and waterproofing/dampproofing.
   l. Exterior closure, including work at parapets.
   m. Roofing, including roof insulation, coverings, flashings roof specialties and roof accessories.
   n. Furnish and installation, framing, for HVAC Units and framing, flashing in and drainage for roof curbs provided by the Mechanical Contract for installation by General Construction.
   o. Roof Warranty to be provided at completion.
   p. Exterior closure, including walls, parapets, doors, windows. Louvers are furnished and installed by the contractor requiring the louver.
   q. Interior construction, including partitions, doors, door hardware, frames, interior glazed openings, insulation and fittings. Coordination with Electrical Contract, for installation of electronic hardware and system. Preparation of all doors and frames or installation of door hardware and access control system as noted in the Architectural and Electrical Documents.
   r. Fire-protection specialties.
   s. Interior stairs and ramps, including railings and finishes.
   t. Interior finishes, finish carpentry, architectural woodwork, built in casework, wall, floor, base and ceiling finishes, designated FF&E, wall mirrors, benches, lockers, grab bars, toilet partitions and toilet and shower accessories. Blocking for all contractor supplied and Owner supplied equipment. Remove, clean and reinstall existing relief grilles to remain in ceilings being removed and replaced.

u. Interior caulking of all doorframes, windows and sills to adjacent surfaces. Caulk all joints where concrete, masonry and gypsum adjoin. Caulk all casework and countertops to adjacent surfaces after finish painting of all rooms.
v. Miscellaneous items, including concrete equipment bases, vapor emissions control systems, painting of mechanical, plumbing and electrical work.
w. General Contractor shall include all interior slab removals, excavation, pipe bedding, backfill, compaction and floor slab patching, as outlined, to accommodate MEP trades.
x. Install interior separation walls between demolition and construction areas and in areas of separation of areas between occupied spaces.
y. Shall furnish and install all access doors furnished by other contractors, into wall or ceiling assemblies. Coordinate locations with other trades.
z. Review all Mechanical, Electrical and Plumbing drawings for patch required for finishes.
aa. Painting of exposed piping, HVAC ductwork, and electrical conduit in all interior locations. Exterior painting of exposed piping, HVAC ductwork, and electrical conduit shall be by the Contractor providing the exposed piping, HVAC ductwork, and electrical conduit.
bb. Responsible to patch all wall surface defects prior to painting any walls indicated to receive new paint finish on the Contract Documents. This is to include minor dings, scratches, plaster cracks etc. to ensure all walls are free of defects when turned over to the owner.
cc. The Contractor will provide all weather protection and protection systems for remaining adjacent building elements as caused by demolition.
dd. Exterior closure, including walls and louvers and patching and repair of exterior walls.

2. Temporary facilities and controls in the General Construction Contract include, but are not limited to, the following:

a. Security enclosure and lockup. Checking and securing windows, doors and gates for security.
b. Temporary facilities and controls that are not otherwise specifically assigned to other Prime Contracts.
c. Sediment and erosion control.
d. Unpiped sewers and drainage, including drainage ditches, dry wells, stabilization ponds, and containers.
e. Unpiped temporary toilet fixtures, wash facilities, and drinking water facilities, including disposable supplies.
f. Temporary enclosure for building exterior, except as indicated for other primes.
g. Temporary roads and paved areas.
h. Dewatering facilities and drains.
i. Excavation support and protection, unless required solely for the Work of another contract.
j. Special or unusual hoisting requirements for construction activities, including hoisting loads.
k. Project identification and temporary signs.
l. General waste disposal facilities.
m. Pest control.
n. Temporary fire-protection facilities.

o. Barricades, warning signs, and lights.
p. Site enclosure fence.
q. Environmental protection.
r. Maintenance and restoration of Owner's existing facilities and / or property used as temporary facilities.

B. HVAC CONSTRUCTION CONTRACT (Mechanical)

1. Work of the HVAC Construction Contract includes all Mechanical demolition and construction. Provide all material, labor, equipment, supervision, management, and administration required for the total performance of the Work of this Contract including but is not limited to, the following.

a. All work as shown on MECHANICAL series drawings unless specifically noted as by another contract.
b. Exterior painting of exposed piping, HVAC ductwork, and electrical conduit shall be by the Contractor providing the exposed piping, HVAC ductwork, and electrical conduit.
c. HVAC systems and equipment.
d. HVAC instrumentation and controls shall be provided by the Mechanical Contractor. Reference Instrumentation and Controls specification plus the sequence of operation and points list in the contract documents. Coordinate with Electrical as necessary.
e. HVAC testing, adjusting, balancing and commissioning.
f. Building automation system and associated upgrades shall be provided by the Mechanical Contractor.
g. Any work specifically called out for the Mechanical Construction Contract in any other drawings and specifications.
h. Mechanical connections to equipment furnished by the General Construction Contract, Plumbing Contract, HVAC Contract, Electrical Contract and Owner.
i. Furnishing of roof curbs, installation by General Construction Contractor
j. All mechanical demolition, including mechanical units, ductwork including temporary ductwork, equipment, hangars including special hangers for ductwork, piping, insulation, to facilitate, the Mechanical (HVAC) Contractor Scope of Work, or to meet code requirements.
k. The Mechanical (HVAC) Contractor is responsible to remove, clean and re-install all mechanical components such as diffusers, louvers and grilles where ceilings are scheduled to be removed and or replaced. Reconnection of existing systems, ductwork, diffusers and equipment that remain is required throughout the building after demolition and where work is required around work that remains.
l. Coordinate all Mechanical (HVAC) equipment electrical requirements with the Electrical Contractor. The Mechanical Contractor will provide all necessary starters, disconnects, and variable frequency drives required by specified mechanical equipment. The Electrical Contractor will install all necessary starters, disconnects, and variable frequency drives required by specified mechanical equipment. Reference the MEP Equipment Connections Schedule in the Drawings.
m. The Mechanical (HVAC) Contractor shall provide adequate support and protection of the existing Mechanical (HVAC) systems until such time as the new systems are in place and ready for use by the District.

n. The Mechanical (HVAC) Contractor shall provide HVAC equipment filters for all HVAC units around and in the areas of work. These will be changed upon completion of the work.
o. The Mechanical (HVAC) Contractor is notified that final balancing of systems and the submission of final balance reports are required to achieve substantial completion. It is of vital importance this work is completed in a timely manner.
p. The Mechanical (HVAC) Contractor shall remove and replace existing ceilings as required where existing ceilings are not scheduled for removal and replacement by others. The Mechanical (HVAC) Contractor is responsible to replace any components of existing ceilings that are damaged in the removal or replacement process or as a result of being stored improperly after removal. Replacement materials shall match existing materials.

C. PLUMBING / FIRE PROTECTION CONSTRUCTION CONTRACT

1. Work of the Plumbing / Fire Protection Construction contract includes all Plumbing / Fire Protection demolition and construction. Provide all material, labor, equipment, supervision, management, and administration required for the total performance of the Work of this Contract including but is not limited to, the following:

a. All work as shown on FIRE PROTECTION and PLUMBING series drawings unless specifically noted as by another contract.
b. Exterior painting of exposed piping, HVAC ductwork, and electrical conduit shall be by the Contractor providing the exposed piping, HVAC ductwork, and electrical conduit.
c. Any work specifically called out for the Fire Protection and Plumbing Construction Contract in other drawings and specifications.
d. Dry pipe fire suppression system.
e. Pool water source for fire protection.
f. Plumbing fixtures.
g. Domestic water distribution up to five feet outside of the building plus connection to site utility. Piping insulation including reinsulating piping removed by the abatement contractor.
h. Sanitary waste inside and outside of the building plus connection to site utility. Building stormwater drainage after underdrain footer plus connection to drain.
i. Plumbing connections to equipment furnished by the General Construction Contract, Plumbing Contract, HVAC Contract, Site Contract and Owner.
j. All plumbing demolition, including hangars, piping, insulation, fixtures, to facilitate, the Plumbing Contractor's Scope of Work, or to meet code requirements.
k. The Plumbing Contractor shall provide temporary protection for fixtures and plumbing finish items installed under this Contract until time of final cleaning by the General Construction Contractor.
l. Painting of interior exposed piping, HVAC ductwork, and electrical conduit in all locations is by the General Construction Contract. Exterior piping to be painted by the Plumbing Contractor.
m. The Plumbing Contractor shall remove and replace existing ceilings as required where existing ceilings are not scheduled for removal and replacement by others. The Plumbing Contractor is responsible to replace any components of existing ceilings that are damaged in the removal or replacement process or as a result of being stored improperly after removal. Replacement materials shall match existing materials.

2. Temporary facilities and controls in the Plumbing Demolition and Construction Contract include, but are not limited to, the following:
   a. Excavation support and protection, unless required solely for the Work of another contract.
   b. As noted above and in Section 01 50 00.
   c. Piped sewerage and drainage.
   d. Piped gas service.
   e. Piped water service.
   f. Unpiped temporary toilet fixtures, wash facilities, and drinking water facilities will be provided by the General Construction Contract.
   g. Plumbing connections to existing systems and temporary facilities and controls furnished by the General Construction Contract, Plumbing Contract, HVAC Contract, Electrical Contract.

D. ELECTRICAL CONSTRUCTION CONTRACT

1. Work of the Electrical Contract includes, but is not limited to, the following:

   a. Electrical service and distribution.
   b. Demolition of existing lighting, devices, wiring, and conduit.
   c. Electrical connections to equipment furnished by **other Prime Contracts**.
   d. The Electrical Contractor shall provide adequate support and protection of the electrical systems until such time as the new systems are in place and ready for use by the District. Maintain all existing systems including District requirements of power, lighting, safety and communication systems throughout the construction project.
   e. The Electrical Contractor is responsible to tie-up all existing loose wiring and cable to ensure components hang at ceiling.
   f. The Electrical Contractor is responsible to secure and maintain operational all fire alarm, camera, security, data, controls and other devices in existing ceilings that may be disturbed by removal and replacement of ceilings by the Electrical Contractor and by other Contractors. All existing fire alarm, camera, security, data, controls and other devices shall be maintained in operational status for the duration of construction. The Electrical Contractor is responsible to replace existing fire alarm, camera, security, data, controls and other devices in restored and new ceilings following ceiling replacement by the Electrical Contractor and by other Contractors and confirm operational status of all devices following replacement.
   g. The Electrical Contractor is responsible to remove and re-install all electrical components, smoke / heat detectors, occupancy sensors etc. where ceilings are scheduled to be removed and replaced in the Contract Documents and confirm their operation following replacement.
   h. The Electrical Contractor is responsible for wiring of new basketball backstop furnished and installed under separate contract.

2. Temporary facilities and controls in the Electrical Contract include, but are not limited to, the following:

   a. Electric power service and distribution.
   b. Electrical connections to existing systems and temporary facilities and controls furnished by the other Prime Contracts.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 12 00

SECTION 01 21 00 - ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements governing allowances.

1. Allowance amounts for each Prime Contractor shall be included in their Base Bid.

B. Types of allowances include the following:

1. Contingency Allowances.
2. Lump Sum Allowances.

C. Related Requirements:

1. Section 01 26 00 "Contract Modification Procedures" for procedures for submitting and handling Change Orders.

1.3 DEFINITIONS

A. Allowance: A quantity of work or dollar amount included in the Contract, established in lieu of additional requirements, used to defer selection of actual materials and equipment to a later date when direction will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.

1. Costs Included in Allowances: Cost of product to or subcontractor, product delivery to site and handling at the site, including unloading, uncrating, and storage; protection of products from elements and from damage; and labor for installation and finishing. less applicable trade discounts, less applicable taxes, less applicable trade discounts.
2. Costs Not Included in Allowances: Costs for overhead and profit for items purchased and installed under Allowances. It is the responsibility of the Contractor to include overhead and profit as part of the Base Bid.

1.4 ACTION SUBMITTALS

A. Submit proposals for purchase of products or systems included in allowances.

1.5 INFORMATIONAL SUBMITTALS

A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.

B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.

C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.6 CONTINGENCY ALLOWANCES

A. Use the contingency allowance only as directed by Construction Manager for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.

B. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

1.7 LUMP-SUM ALLOWANCES

A. Allowance shall include cost to Contractor for specific scope of work as identified in the Allowance Schedule.

B. At Project closeout, credit unused amounts remaining in the lump-sum allowance to Owner by Change Order.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PREPARATION

A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

B. Responsibilities:

1. Consult with the Owner and Architect for consideration and selection of products, suppliers, and installers.
2. Obtain proposals from suppliers and installers and offer recommendations.
3. Prepare Change Order Proposal.
4. On notification of acceptance, execute purchase agreement with designated supplier and installer.
5. Arrange for and process shop drawings, product data, and samples. Arrange for delivery.

6. Promptly inspect products upon delivery for completeness, damage, and defects. Submit claims for transportation damage.

C. Funds will be drawn from Allowances only by Change Order. Assignment of additional work directed in the field is at the discretion of the Owner.

3.2 SCHEDULE OF ALLOWANCES

A. General Construction

1. Contingency Allowance: Include a contingency allowance of **$100,000.00** for use according to Owner's written instructions.
2. Lump Sum Allowance: Include the sum of **$100,000.00** for abatement of wall in IT Room adjacent to the corridor.
3. Lump Sum Allowance: Include the sum of **$35,000.00** for final cleaning of project as specified in Section 017100 Cleaning.

B. HVAC Construction

1. Contingency Allowance: Include a contingency allowance of **$100,000.00** for use according to Owner's written instructions.

C. Plumbing Construction

1. Contingency Allowance: Include a contingency allowance of **$25,000.00** for use according to Owner's written instructions.
2. Lump Sum Allowance: Include the sum of **$25,000.00** for Ground Floor (Crawl Space) Plumbing Work as detailed on Drawing P-200 and in the Specifications.

    a. Costs Not Included in Allowances: The crawl space inspection and meeting with the Facilities Director to determine the extent of work shall be included in the Base Bid.

D. Electrical Construction

1. Contingency Allowance: Include a contingency allowance of **$50,000.00** for use according to Owner's written instructions.

END OF SECTION 01 21 00

SECTION 01 71 00 - CLEANING

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

A. Execute cleaning and disposal of waste materials, debris, and rubbish during construction.

B. Final cleaning of project.

1.2 RELATED REQUIREMENTS

A. GENERAL CONDITIONS of the CONTRACT: Cleaning Up.

B. Section 01 01 00 – SUMMARY OF WORK

C. Section 01 77 19 – CONTRACT CLOSEOUT PROCEDURES.

1.3 REQUIREMENTS OF REGULATORY AGENCIES

A. Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and anti-pollution laws.

1.4 DESCRIPTION

A. Maintain areas under Contractor's control free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

B. Provide covered containers for deposit of debris and rubbish including periodic disposal of accumulations of extraneous materials.

C. Weekly clean interior areas to provide suitable conditions for finish work.

D. Execute final cleaning prior to inspection for Substantial Completion of the Work.

PART 2 - PRODUCTS

2.1 CLEANING MATERIALS

A. USE ONLY those materials which will not create hazards to health or property, and which will not damage finishes and surfaces.

B. USE ONLY materials and methods recommended by manufacturer of material being cleaned.

PART 3 - EXECUTION

3.1 DURING CONSTRUCTION

A. Execute daily cleaning, or as often as needed, to keep the Work, the site and adjacent properties free from accumulations of waste materials, rubbish and windblown debris, resulting from construction operations.

B. Dispose of waste materials, cartons, crating, debris, and rubbish; which shall be disposed of at legal disposal area away from the site.

C. To maintain a clean and orderly site, contractor personnel will not be allowed to eat meals within the confines of the building.

3.2 DUST CONTROL

A. Contractor shall broom clean interior spaces PRIOR TO THE start of finish painting and continue cleaning on an as-needed basis until painting is finished.

B. Schedule operations so that dust and other contaminants resulting from cleaning process WILL NOT FALL on wet or newly coated surfaces.

3.3 DISPOSAL

A. Contractor will remove collected waste materials, debris, and rubbish from site weekly and dispose of off-site.

3.4 FINAL CLEANING

A. Contractor shall:

1. Employ skilled workers for final cleaning.
2. Remove temporary protection and labels not required to remain.
3. Clean surfaces free of grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces.
4. Clean transparent glossy materials to a polished condition; remove foreign substances. Polish reflective surfaces to a clear shine.
5. Clean surfaces of equipment; remove excess lubrication.
6. Clean plumbing fixtures, food service equipment, and similar equipment to a sanitary condition.
7. Clean light fixtures, lamps and lenses.
8. Remove waste, debris, and surplus materials from site. Clean grounds; remove stains, spills and foreign substances from paved areas and sweep. Rake clean other exterior surfaces.
9. A final cleaning of all interior and exterior surfaces shall be performed by the Contractor no earlier than one (1) week prior to Owner Occupancy of each phase of the Project.

END OF SECTION 01 71 00

SECTION 05 52 13 - PIPE AND TUBE RAILINGS

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. Steel pipe and tube railings.

1.3 COORDINATION

A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are compatible with one another.

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

1.4 ACTION SUBMITTALS

A. Product Data: For the following:

1. Grout, anchoring cement, and paint products.

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For testing agency.

B. Welding certificates.

C. Product Test Reports: For pipe and tube railings, for tests performed by a qualified testing agency, according to ASTM E894 and ASTM E935.

1.6 QUALITY ASSURANCE

A. Welding Qualifications: Qualify procedures and personnel according to the following:

1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."

1.7 DELIVERY, STORAGE, AND HANDLING

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

1.8 FIELD CONDITIONS

A. Field Measurements: Verify actual locations of walls and other construction contiguous with metal fabrications by field measurements before fabrication.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Structural Performance: Railings, including attachment to building construction, shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:

1. Handrails and Top Rails of Guards:

a. Uniform load of 50 lbf/ ft. applied in any direction.
b. Concentrated load of 200 lbf applied in any direction.
c. Uniform and concentrated loads need not be assumed to act concurrently.

2. Infill of Guards:
a. Concentrated load of 50 lbf applied horizontally on an area of 1 sq. ft..
b. Infill load and other loads need not be assumed to act concurrently.

B. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.

1. Temperature Change: 120 deg. F, ambient; 180 deg. F, material surfaces.

2.2 METALS, GENERAL

A. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.

B. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails unless otherwise indicated.

1. Provide type of bracket with flange tapped for concealed anchorage to threaded hanger bolt and that provides 1-1/2-inch clearance from inside face of handrail to finished wall surface.

2.3 STEEL AND IRON

A. Tubing: ASTM A500 (cold formed) or ASTM A513.

B. Pipe: ASTM A53/A53M, Type F or Type S, Grade A, Standard Weight (Schedule 40), unless another grade and weight are required by structural loads.

C. Plates, Shapes, and Bars: ASTM A36/A36M.

D. Provide galvanized finish for exterior installations and where indicated.

2.4 FASTENERS

A. General: Provide the following:

1. Ungalvanized-Steel Railings: Plated steel fasteners complying with ASTM B633 or ASTM F1941, Class Fe/Zn 5 for zinc coating.
2. Hot-Dip Galvanized Railing Components: Type 304 stainless steel or hot-dip zinc-coated steel fasteners complying with ASTM A153/A153M or ASTM F2329/F2329M for zinc coating.

B. Fasteners for Anchoring Railings to Other Construction: Select fasteners of type, grade, and class required to produce connections suitable for anchoring railings to other types of construction indicated and capable of withstanding design loads.

C. Post-Installed Anchors: Torque-controlled expansion anchors or chemical anchors capable of sustaining, without failure, a load equal to 6 times the load imposed when installed in unit masonry and 4 times the load imposed when installed in concrete, as determined by testing according to ASTM E488/E488M, conducted by a qualified independent testing agency.

1. Material for Exterior Locations and Where Stainless Steel Is Indicated: Alloy Group 1 (A1) stainless steel bolts, ASTM F593, and nuts, ASTM F594.

2.5 MISCELLANEOUS MATERIALS

A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.

B. Etching Cleaner for Galvanized Metal: Complying with MPI#25.

C. Galvanizing Repair Paint: High-zinc-dust-content paint, complying with SSPC-Paint 20 and compatible with paints specified to be used over it.

D. Shop Primers: Provide primers that comply with Section 09 91 23 "Interior Painting".

E. Intermediate Coats and Topcoats: Provide products that comply with Section 09 91 23 "Interior Painting."

F. Epoxy Intermediate Coat: Complying with MPI @72 and compatible with undercoat.

G. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D1187.

H. Nonshrink, Exterior Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C1107/C1107M. Provide grout specifically recommended by manufacturer for interior and exterior applications.

I. Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with water at Project site to create pourable anchoring, patching, and grouting compound.

1. Water-Resistant Product: At exterior location, provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating and that is recommended by manufacturer for exterior use.

2.6 FABRICATION

A. General: Fabricate railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.

B. Shop assemble railings to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation. Use connections that maintain structural value of joined pieces.

C. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.

D. Form work true to line and level with accurate angles and surfaces.

E. Fabricate connections that are exposed to weather in a manner that excludes water. Provide weep holes where water may accumulate.

F. Cut, reinforce, drill, and tap as indicated to receive finish hardware, screws, and similar items.

G. Connections: Fabricate railings with welded connections unless otherwise indicated.

H. Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove flux immediately.
4. At exposed connections, finish exposed surfaces smooth and blended so no roughness shows after finishing and welded surface matches contours of adjoining surfaces.

I. Form Changes in Direction as Follows:

1. As detailed or by inserting prefabricated elbow fittings.
2. By bending.

J. For changes in direction made by bending, use jigs to produce uniform curvature for each repetitive configuration required. Maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.

K. Close exposed ends of railing members with prefabricated end fittings.

L. Provide wall returns at ends of wall-mounted handrails unless otherwise indicated. Close ends of returns unless clearance between end of rail and wall is 1/4 inch or less.

M. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work unless otherwise indicated.

1. At brackets and fittings fastened to plaster or gypsum board partitions, provide crush-resistant fillers or other means to transfer loads through wall finishes to structural supports and prevent bracket or fitting rotation and crushing of substrate.

N. Provide inserts and other anchorage devices for connecting railings to concrete or masonry work. Fabricate anchorage devices capable of withstanding loads imposed by railings. Coordinate anchorage devices with supporting structure.

2.7 STEEL AND IRON FINISHES

A. Galvanized Railings:

1. Hot-dip galvanize exterior steel railings, including hardware, after fabrication.
2. Comply with ASTM A123/A123M for hot-dip galvanized railings.
3. Comply with ASTM A153/A153M for hot-dip galvanized hardware.
4. Do not quench or apply post-galvanizing treatments that might interfere with paint adhesion.
5. Fill vent and drain holes that are exposed in the finished Work, unless indicated to remain as weep holes, by plugging with zinc solder and filing off smooth.

B. For galvanized railings, provide hot-dip galvanized fittings, brackets, fasteners, sleeves, and other ferrous components.

C. Preparing Galvanized Railings for Shop Priming: After galvanizing, thoroughly clean railings of grease, dirt, oil, flux, and other foreign matter, and treat with etching cleaner and as follows.

1. Comply with SSPC-SP 16.

D. Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply requirements indicated below:

1. Exterior Railings: SSPC-SP 6/NACE No. 3.
2. Other Railings: SSPC-SP 3.

E. Primer Application: Apply shop primer to prepared surfaces of railings unless otherwise indicated. Comply with requirements in SSPC-PA 1 for shop painting. Primer need not be applied to surfaces to be embedded in concrete or masonry.

1. Shop prime uncoated railings with universal shop primer.
2. Do not apply primer to galvanized surfaces.

F. High-Performance Coating: Apply epoxy intermediate and polyurethane topcoats to prime-coated surfaces. Comply with coating manufacturer's written instructions and with requirements in SSPC-PA 1 for shop painting. Apply at spreading rates recommended by coating manufacturer.

1. Color: As selected by Architect from manufacturer's full range.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Fit exposed connections together to form tight, hairline joints.

B. Perform cutting, drilling, and fitting required for installing railings. Set railings accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.

1. Do not weld, cut, or abrade surfaces of railing components that are coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
2. Set posts plumb within a tolerance of 1/16 inch in 3 feet.
3. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet.

C. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

1. Coat, with a heavy coat of bituminous paint, concealed surfaces of aluminum that are in contact with grout, concrete, masonry, wood, or dissimilar metals.

D. Adjust railings before anchoring to ensure matching alignment at abutting joints.

E. Fastening to In-Place Construction: Use anchorage devices and fasteners where necessary for securing railings and for properly transferring loads to in-place construction.

3.2 RAILING CONNECTIONS

A. Welded Connections: Use fully welded joints for permanently connecting railing components. Comply with requirements for welded connections in "Fabrication" Article whether welding is performed in the shop or in the field.

3.3 ADJUSTING AND CLEANING

A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop painting to comply with SSPC-PA 1 requirements for touching up shop-painted surfaces.

1. Apply by brush or spray to provide a minimum 2.0-mil dry film thickness.

B. Touchup Painting: Cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint are specified in Section 09 91 23 "Interior Painting."

3.4 PROTECTION

A. Protect finishes of railings from damage during construction period with temporary protective coverings approved by railing manufacturer. Remove protective coverings at time of Substantial Completion.

END OF SECTION 05 52 13

SECTION 08 31 13 - ACCESS 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. This Section includes the following:

1. Fire-Rated Access doors and frames for walls and ceilings.

B. Related Sections include the following:

1. Division 01 Section “Unit Prices”.
2. Division 09 Section “Gypsum Board” for wall construction.
3. Division 23 Section "Air Duct Accessories" for heating and air-conditioning duct access doors.

1.3 SUBMITTALS

A. Product Data: For each type of access door and frame indicated. Include construction details, fire ratings**,** materials, individual components and profiles, and finishes.

B. Shop Drawings: Show fabrication and installation details of access doors and frames for each type of substrate. Include plans, elevations, sections, details, and attachments to other work.

C. Access Door and Frame Schedule: Provide complete access door and frame schedule, including types, locations, sizes, latching or locking provisions, and other data pertinent to installation.

1.4 QUALITY ASSURANCE

A. Source Limitations: Obtain each type of access door(s) and frame(s) through one source from a single manufacturer.

B. Fire-Rated Access Doors and Frames: Units complying with NFPA 80 that are identical to access door and frame assemblies tested for fire-test-response characteristics per the following test method and that are listed and labeled by UL or another testing and inspecting agency acceptable to authorities having jurisdiction:

1. NFPA 252 for vertical access doors and frames.
2. ASTM E 119 for horizontal access doors and frames.

C. Size Variations: Obtain Architect's acceptance of manufacturer's standard-size units, which may vary slightly from sizes indicated.

1.5 COORDINATION

A. Verification: Determine specific locations and sizes for access doors needed to gain access to concealed plumbing, mechanical, or other concealed work, and indicate in the schedule specified in "Submittals" Article.

PART 2 - PRODUCTS

2.1 STEEL MATERIALS

A. Metallic-Coated Steel Sheet: ASTM A 653, Commercial Steel (CS) with A60 zinc-iron-alloy (galvannealed) coating or G60 mill-phosphatized zinc coating; stretcher-leveled standard of flatness; with minimum thickness indicated representing specified thickness according to ASTM A 924.

B. Steel Finishes: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

1. Surface Preparation for Metallic-Coated Steel Sheet: Clean surfaces with nonpetroleum solvent so surfaces are free of oil and other contaminants. After cleaning, apply a conversion coating suited to the organic coating to be applied over it. Clean welds, mechanical connections, and abraded areas, and apply galvanizing repair paint specified below to comply with ASTM A 780.

a. Galvanizing Repair Paint: High-zinc-dust-content paint for regalvanizing welds in steel, complying with SSPC-Paint 20.

2. Factory-Primed Finish: Apply shop primer immediately after cleaning and pretreating.

2.2 ACCESS DOORS AND FRAMES FOR WALLS AND CEILINGS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Babcock-Davis; A Cierra Products Co.
2. J. L. Industries, Inc.
3. Larsen's Manufacturing Company.

B. Fire Rated, Uninsulated, Flush Access Doors and Frames with Exposed Trim: Fabricated from metallic-coated steel sheet.

1. Locations: Wall surfaces.
2. Fire-Resistance Rating: Not less than that of adjacent construction.
3. Door: Minimum 0.060-inch thick sheet metal, flush construction.

4. Frame: Minimum 0.060-inch thick sheet metal with 1-inch wide, surface-mounted trim.
5. Hinges: Concealed-pin type.
6. Automatic Closer: Spring type.
7. Lock: Self-latching device with mortise cylinder lock.

    a. Lock Preparation: Prepare door panel to accept cylinder supplied by access door manufacturer.

2.3 FABRICATION

A. General: Provide access door and frame assemblies manufactured as integral units ready for installation.

B. Metal Surfaces: For metal surfaces exposed to view in the completed Work, provide materials with smooth, flat surfaces without blemishes. Do not use materials with exposed pitting, seam marks, roller marks, rolled trade names, or roughness.

C. Doors and Frames: Grind exposed welds smooth and flush with adjacent surfaces. Furnish attachment devices and fasteners of type required to secure access panels to types of supports indicated.

1. Exposed Flanges: Nominal 1 to 1-1/2 inches wide around perimeter of frame.

2. Provide mounting holes in frame for attachment of masonry anchors. Furnish adjustable metal masonry anchors.

D. Latching Mechanisms: Furnish number required to hold doors in flush, smooth plane when closed (2 locks per door when more than 10”).

PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with manufacturer's written instructions for installing access doors and frames.

B. Set frames accurately in position and attach securely to supports with plane of face panels aligned with adjacent finish surfaces.

C. Install doors flush with adjacent finish surfaces or recessed to receive finish material.

3.2 ADJUSTING AND CLEANING

A. Adjust doors and hardware after installation for proper operation.

B. Remove and replace doors and frames that are warped, bowed, or otherwise damaged.

END OF SECTION 08 31 13

SECTION 08 36 00 - SECTIONAL DOORS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Insulated Sectional Overhead Doors.

B. Operating Hardware, tracks, and support.

1.2 REFERENCES

A. ANSI/DASMA 102 - American National Standard Specifications for Sectional Overhead Type Doors.

1.3 DESIGN / PERFORMANCE REQUIREMENTS

A. Wind Loads: Design and size components to withstand loads caused by pressure and suction of wind acting normal to plane of wall as calculated in accordance with applicable code.

1. Design perimeters:

a. Basic Wind Speed 115 mph
b. Exposure Category C

B. Single-Source Responsibility: Provide doors, tracks, and accessories from one manufacturer for each type of door. Provide secondary components from source acceptable to manufacturer of primary components.

1.4 SUBMITTALS

A. Submit under provisions of Section 01 33 00.

B. Product Data: Manufacturer's data sheets on each product to be used, including:

1. Include construction details, material descriptions, dimensions of individual components, profile door sections, and finishes.
2. For power-operated doors, include rated capacities, operating characteristics, electrical characteristics, and furnished accessories.

C. Shop Drawings: Indicate plans and elevations including opening dimensions and required tolerances, connection details, anchorage spacing, hardware locations, and installation details.

D. Samples: For each exposed product and for each color and texture specified, in manufacturer's standard size.

E. Samples for Initial Selection: For units with factory-applied finishes.

1. Include Samples of accessories involving color selection.

F. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

G. Operation and Maintenance Data.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum five years documented experience.

B. Installer Qualifications: Authorized representative of the manufacturer with minimum five years documented experience.

C. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories, Inc. acceptable to authority having jurisdiction as suitable for purpose specified.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened labeled packaging until ready for installation.

B. Protect materials from exposure to moisture until ready for installation.

C. Store materials in a dry, ventilated weathertight location.

1.7 PROJECT CONDITIONS

A. Pre-Installation Conference: Convene a pre-installation conference just prior to commencement of field operations, to establish procedures to maintain optimum working conditions and to coordinate this work with related and adjacent work.

1.8 WARRANTY

A. Warranty: Manufacturer’s limited door and operators System warranty for 10 year against delamination of polyurethane foam from steel face and all other components for 1 year.

PART 2 - PRODUCTS

2.1 SOURCE LIMITATIONS

A. Obtain sectional doors from single source from single manufacturer.

1. Obtain operators and controls from sectional door manufacturer.

2.2 SECTIONAL-DOOR ASSEMBLY

A. Steel Sectional Door: Provide sectional door formed with hinged sections and fabricated so that finished door assembly is rigid and aligned with tight hairline joints; free of warp, twist, and deformation; and complies with requirements in DASMA 102.

B. Basis-of-Design Product: Subject to compliance with requirements, provide Acceptable Manufacturer: Overhead Door Corp., 2501 S. State Hwy. 121, Suite 200, Lewisville, TX 75067. ASD. Tel. Toll Free: (800) 275-3290. Phone: (469) 549-7100. Fax: (972) 906-1499. Web Site: www.overheaddoor.com. E-mail: sales@overheaddoor.com.

1. Basis-of-Design Product: Subject to compliance with requirements, provide Insulated Steel Sectional Overhead Doors: 592 Series Thermacore Insulated Steel Doors by Overhead Door Corporation or comparable product by one of the following:

   a. Raynor Garage Doors
   b. Clopay Building Products

C. Door Assembly: Metal/foam/metal sandwich panel construction, with PVC thermal break and weather-tight ship-lap design meeting joints.

1. Panel Thickness: 2 inches.
2. Exterior Surface: Ribbed, textured.
3. Exterior Steel: .015 inch, hot-dipped galvanized.
4. End Stiles: 16 gauge with thermal break.
5. Spring Counterbalance: Sized to weight of the door, with a helically wound, oil tempered torsion spring mounted on a steel shaft; cable drum of diecast aluminum with high strength galvanized aircraft cable. Sized with a minimum 7 to 1 safety factor.

   a. Standard cycle spring: 10,000 cycles.
   b. High cycle spring: 25,000 cycles.
   c. High cycle spring: 50,000 cycles.
   d. High cycle spring: 75,000 cycles.
   e. High cycle spring: 100,000 cycles.

6. Insulation: CFC-free and HCFC-free polyurethane, fully encapsulated.
7. Thermal Values: R-value of 17.50; U-value of 0.057.
8. Air Infiltration: 0.08 cfm at 15 mph; 0.08 cfm at 25 mph.

D. Finish and Color:
1. Two coat baked-on polyester:
   a. Interior color, selected from manufacturer’s standard color chart.
   b. Exterior color, selected from manufacturer’s standard color chart.

E. Windload Design: Provide to meet the Design/Performance requirements specified.

F. Hardware: Galvanized steel hinges and fixtures. Ball bearing rollers with hardened steel races.

G. Lock:

1. Keyed lock. Cylinder per section 08 71 00

H. Weatherstripping:

1. EPDM bulb-type strip at bottom section.
2. Flexible Jamb seals.
3. Flexible Header seal.

I. Track: Provide track as recommended by manufacturer to suit loading required and clearances available.

1. Size:

a. 2 inch
b. 3 inch

2. Type:

a. Door #034E: Standard Lift Track.
b. Door #034F: Lift Clearance Track.

J. Electric Door Operator:

1. Usage Classification: Standard duty, up to 25 cycles per hour and up to 90 cycles per day.
2. Operator Type: Manufacturer's standard for door requirements.
3. Motor: Reversible-type with controller (disconnect switch).

a. Motor Size: As required to start, accelerate, and operate door in either direction from any position, at a speed not less than 8 in./sec. and not more than 12 in./sec., without exceeding nameplate ratings or service factor [**1/3 hp (246 W)**] [**1/2 hp (373 W)**] [**3/4 hp (559 W)**] [**1 hp (746 W)**].

4. Emergency Manual Operation: Chain type.
5. Obstruction-Detection Device: Automatic [photoelectric sensor] [electric sensor edge on bottom section]
6. Control Station: Interior-side mounted.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Do not begin installation until openings have been properly prepared.

B. Verify wall openings are ready to receive work and opening dimensions and tolerances are within specified limits.

C. Verify electric power is available and of correct characteristics.

D. If preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install overhead doors and track in accordance with approved shop drawings and the manufacturer's printed instructions.

B. Coordinate installation with adjacent work to ensure proper clearances and allow for maintenance.

C. Anchor assembly to wall construction and building framing without distortion or stress.

D. Securely brace door tracks suspended from structure. Secure tracks to structural members only.

E. Fit and align door assembly including hardware.

3.4 CLEANING AND ADJUSTING

A. Adjust door assembly to smooth operation and in full contact with weatherstripping.

B. Clean doors, frames and glass.

C. Remove temporary labels and visible markings.

3.5 PROTECTION

A. Do not permit construction traffic through overhead door openings after adjustment and cleaning.

B. Protect installed products until completion of project.

C. Touch-up, damaged coatings and finishes and repair minor damage before Substantial Completion.

END OF SECTION 08 36 00

SECTION 08 51 13 - ALUMINUM WINDOWS

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Furnish and install aluminum architectural windows complete with hardware and related components as shown on drawings and specified in this section.

1.2 DEFINITIONS

A. Combination Assemblies: An assembly formed by a combination of two or more separate fenestration products whose frames are mulled together utilizing a combination mullion or reinforcing mullion.

B. Combination Mullions: A horizontal or vertical member formed by joining two or more individual fenestration units together without a mullion stiffener.

C. Reinforcing Mullions: A horizontal or vertical member with an added continuous mullion stiffener and joining two or more individual fenestration units along the sides of the mullion stiffener.

1.3 COORDINATION

A. Finish Matching: Coordinate all exposed exterior aluminum components and trim to ensure uniform and consistent color and appearance. Use products specified in this Section as a benchmark. Architect's decision will be final as to whether a proposed product matches.

1.4 LABORATORY TESTING AND PERFORMANCE REQUIREMENTS

A. Test Units

1. Air, water, and structural test unit shall conform to requirements set forth in AAMA/WDMA/CSA 101/I.S.2/A440 – 08 and manufacturer's standard locking/operating hardware and insulated glazing configuration.
2. Thermal test unit sizes:

    a. Horizontal Sliding: shall be 72" x 48". Unit shall consist of a single horizontal sliding window.
    b. Single Hung: shall be 47”x59”. Unit shall consist of a single hung window.

B. Test Procedures and Performances

1. Windows shall conform to all AAMA/WDMA/CSA 101/I.S.2/A440–08 requirements for the window types specified hereinafter. In addition, the following specific performance requirements shall be met.
2. Life Cycle Testing

    a. Test in accordance with AAMA 910. There shall be no damage to fasteners, hardware parts, support arms, activating mechanisms, or any other damage that would cause the window to be inoperable. Air infiltration and water resistance tests shall not exceed specified requirements.

3. Air Infiltration Test

    a. With ventilators closed and locked, test unit in accordance with ASTM E 283 at a static air pressure difference of 6.24 psf (299 Pa).
    b. Air infiltration shall not exceed .10 cfm/SF (.50 l/s•m²) of unit.

4. Water Resistance Test

    a. With ventilators closed and locked, test unit in accordance with ASTM E 331/ASTM E 547 at a static air pressure difference of 15.0 psf (718 Pa).
    b. There shall be no uncontrolled water leakage.

5. Uniform Load Deflection Test

    a. With ventilators closed and locked, test unit in accordance with ASTM E 330 at a static air pressure difference of 70 psf (3351 Pa), positive and negative pressure.
    b. No member shall deflect over L/175 of its span.

6. Uniform Load Structural Test

    a. With ventilators closed and locked, test unit in accordance with ASTM E 330 at a static air pressure difference of 105.0 psf (5027 pa), both positive and negative.
    b. At conclusion of test there shall be no glass breakage, permanent damage to fasteners, hardware parts, support arms or actuating mechanisms, nor any other damage that would cause the window to be inoperable.

7. Forced Entry Resistance

    a. Windows shall be tested in accordance to ASTM F 588 or AAMA 1302.5 and meet the requirements of performance level 40.

8. Condensation Resistance Test – (CRF)

    a. Test unit in accordance with AAMA 1503.1.
    b. Condensation Resistance Factor (CRF) shall not be less than 81 (slider frame), 73 (fixed frame), and 66 (single hung frame) when glazed with .24 center of glass U-Factor.

9. Condensation Resistance (CR)

    a. With ventilators closed and locked, test unit in accordance with NFRC 500-2010.

b. Condensation Resistance (CR) shall not be less than 60 (slider frame), 54 (fixed frame), and 52 (single hung frame) when glazed with .24 center of glass U-Factor.

10. Thermal Transmittance Test (Conductive U-Factor)

a. With ventilators closed and locked, test unit in accordance with NFRC 100-2010.
b. Conductive thermal transmittance (U-Factor) shall not be more than .34 (slider), .35 (hung), and .36 (fixed) BTU/hr•ft^2•°F when glazed with .24 center of glass U-Factor.

C. Project Wind Loads

1. The system shall be designed to withstand the following loads normal to the plane of the wall:

a. Positive pressure of 20 psf at non-corner zones.
b. Negative pressure of 20 psf at non-corner zones.
c. Negative pressure of 20 psf at corner zones.

1.5 FIELD TESTING AND PERFORMANCE REQUIREMENTS

A. Windows shall be field tested in accordance with AAMA 502, "Voluntary Specification for Field Testing of Windows and Sliding Glass Doors," using Test Method B.

1. Test one additional window or two percent of the window installation, whichever is greater, for air infiltration and water penetration as specified.
2. Cost for all successful tests, both original and retest shall be paid by the General Contractor. All unsuccessful tests, both original and retest, shall be paid by the General Contractor.
3. Testing shall be by an AAMA accredited testing agency selected by the architect and window manufacturer and employed by the responsible contractor.
4. Air infiltration field tests shall be conducted at the same uniform static test pressure as the laboratory test unit. The Maximum allowable rate of air leakage shall not exceed 1.5 times the laboratory test unit for hardware and glazing types consistent with the laboratory test unit. Performance values may be reduced due to deviations from the laboratory test unit such as product size, configuration, hardware selected, and glazing configuration. The field test air leakage rate shall not exceed 1.5 times the maximum allowable laboratory performance specified in the testing criteria listed in Section 1.4.A.1 for any configuration.
5. Water penetration field tests shall be conducted at a static test pressure of 2/3 of the laboratory test performance values for hardware and glazing types consistent with the laboratory test unit. Performance values may be reduced due to deviations from the laboratory test unit such as product size, configuration, hardware selected, and glazing variations. The field test water test pressure shall not be less than 2/3 of the minimum allowable laboratory performance specified in the testing criteria listed in Section 1.4.A.1 for any configuration.

1.6 QUALITY ASSURANCE

A. Provide test reports from AAMA accredited laboratories certifying the performance as specified in Section 1.4.

B. Test reports shall be accompanied by the window manufacturer's letter of certification, stating the tested window meets or exceeds the referenced criteria for the appropriate window type listed.

1.7 SUBMITTALS

A. Contractor shall submit shop drawings; finish samples, test reports, and warranties.

1. Samples of materials as may be requested without cost to owner, i.e., metal, glass, fasteners, anchors, frame sections, mullion section, corner section, etc.

B. An NFRC Component Modeling Approach (CMA) generated label certificate shall be provided by the manufacturer. The label certificate shall be project specific and will contain the thermal performance ratings of the manufacturer's framing combined with the specified glass, and the glass spacer used in the fabrication of the glass, at NFRC standard test size as defined in table 4-3 in NFRC 100-2010.

C. Delegated Design Submittals: For reinforcing mullions, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.8 WARRANTIES

A. Total Window Installation

1. The responsible contractor shall assume full responsibility and warrant for one year the satisfactory performance of the total window installation which includes that of the windows, hardware, glass (including insulated units), glazing, anchorage and setting system, sealing, flashing, etc., as it relates to air, water, and structural adequacy as called for in the specifications and approved shop drawings.
2. Any deficiencies due to such elements not meeting the specifications shall be corrected by the responsible contractor at their expense during the warranty period.

B. Window Material and Workmanship

1. Provide written guarantee against defects in material and workmanship for 10 years from the date of final shipment.

C. Glass

1. Provide written warranty for insulated glass units that they will be free from obstruction of vision as a result of dust or film formation on the internal glass surfaces caused by failure of the hermetic seal due to defects in material and workmanship.
2. Warranty period shall be for 10 (ten) years.

D. Finish

1. Warranty period shall be for 10 years from the date of final shipment.

PART 2 - PRODUCTS

2.1 SOURCE LIMITATIONS

A. Obtain aluminum windows from single source from single manufacturer.

B. All products listed in Section 2.3 shall be by the same manufacturer.

2.2 MANUFACTURER

A. All Sliding windows shall be EFCO® Series SX45 Premium Thermal AW-PG70-HS Horizontal Sliding.

B. All fixed windows shall be EFCO® Series 450X Thermal AW-PG150-FW.

C. All Single Hung Tilted Sash windows shall be EFCO® Series HX32 Thermal AW-PG50-H Single Hung.

D. Test reports documenting compliance with requirements of Section 1.05.

E. Acceptable manufactures:

1. Graham
2. Wausau
3. Kawneer

2.3 MATERIALS

A. Aluminum

1. Extruded aluminum shall be 6063-T6 alloy and tempered.

B. Hardware – Sliding Window:

1. Concealed plunger lock in the meeting rail with a flush mounted actuating handle.
2. Sash shall ride on steel ball bearing rollers and a raised track, so dirt will not interfere with normal operation.

C. Hardware - Single Hung Window

1. Sweep latches shall be of die cast metal with a painted finish.

D. Balances – Single Hung Window

1. Balances shall be of appropriate size and capacity to hold sash in position in accordance with AAMA 101, Section 2.2.1.3.2, and AAMA 902, Section 8.1.

2. Balances shall be high performance sash balances that are tested in accordance with AAMA 902 “Voluntary Specification for Sash Balances”.
3. Balances shall meet all minimum AAMA 902 Class 5 requirements with a minimum .30 Manually Applied Force ratio (MAF).
4. Balances shall be attached to a locking carrier system that slides in the jamb channel. Sash shall be field removable for installation and maintenance. Mounting brackets that are screw attached to the sash will not be allowed.

E. Weather-Strip – Sliding Window

1. All primary weather-strip shall be Q-Lon® or equal.
2. Single Hung Window: primary weather-strip shall be FIN-SEAL® or equal.

F. Weather-Strip – Single Hung Window

1. All primary weather-strip shall be FIN-SEAL® or equal.

G. Glass and Glazing

1. Insulated glass shall be 1” thick with a center of glass U-Factor of .24 constructed as follows:

   a. Exterior lite – 1/4” thick, Gray color, Temp glass
   b. Air space of 1/2” inch argon filled.
   c. Interior lite – 1/4” thick, clear color, Temp glass, with a surface coating of Solarban60 or equal on the number #3 surface.

2. All units shall be factory glazed.

H. Thermal Barrier

1. All exterior aluminum shall be separated from interior aluminum by a rigid, structural thermal barrier. For purposes of this specification, a structural thermal barrier is defined as a system that shall transfer shear during bending and, therefore, promote composite action between the exterior and interior extrusions.
2. The thermal barrier shall be thermal struts, consisting of glass reinforced polyamide nylon, mechanically crimped in raceways extruded in the exterior and interior extrusions. Operable windows shall have factory installed extruded foam inserts between the thermal struts and areas as detailed.
3. Poured and debridged urethane thermal barriers shall not be permitted.

2.4 FABRICATION

A. General

1. All aluminum frame and sash extrusions shall have a minimum wall thickness of .062” for operable windows and .125 for fixed windows. Frame sill members shall have a minimum wall thickness of .094” .
2. Depth of frame:

a. Sliding Window: not be less than 4-1/2”.
b. Single Hung Window: not less than 3-1/4”.

3. Mechanical fasteners, welded components, and hardware items shall not bridge thermal barriers. Thermal barriers shall align at all frame and vent corners.
4. All frame and vent members shall be able to accommodate separate interior and exterior finishes and colors.

B. Frame – Sliding Windows

1. Frame components shall be mechanically fastened.
2. Frame and sash shall have a continuous interlock at the meeting rail.

C. Frame – Single Hung Windows

1. Frame components shall be mechanically fastened.

D. Sash – Sliding Windows

1. Sash vertical members shall telescope into the sash horizontals and be mechanically fastened.
2. The sash shall be single or double weather-stripped.

E. Sash – Single Hung Windows

1. All sash extrusions shall have a minimum wall thickness of .062” (1.5 mm).
2. All horizontal sash extrusions shall be tubular.
3. Corner connections shall be mechanically fastened.

F. Screens

1. Half screens only shall be permitted. The screen shall not be surface mounted.
2. Screen frames shall be extruded aluminum.
3. Screen mesh shall be aluminum.
4. Provide Hinge Screens on egress window.

G. Glazing

1. All lites (both sash and fixed) of the horizontal sliding window shall be inside glazed and weeped.
2. All units shall be glazed with the manufacturer's standard sealant process provided the glass is held in place by a removable, extruded aluminum, glazing bead. The glazing bead must be isolated from the glazing material by a gasket.
3. All units shall be glazed with a minimum of 1/2” glass bite.

2.5 Finish

1. Anodic: Finish all exposed areas of aluminum windows and components with electrolytically deposited color in accordance with Aluminum Association Designation AA-M10-C22A41 Color shall be Clear.

PART 3 - EXECUTION

3.1 INSPECTION

A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work. Verify that openings are dimensionally within allowable tolerances, plumb, level, clean, provide a solid anchoring surface, and are in accordance with approved shop drawings

B. Verify rough opening dimensions, levelness of sill plate, and operational clearances.

C. Examine wall flashings, vapor retarders, air and weather barriers, and other built-in components to ensure weathertight window installation.

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

3.2 INSTALLATION

A. Use only skilled tradesmen with work done in accordance with approved shop drawings and specifications.

B. Plumb and align window faces in a single plane for each wall plane, and erect windows and materials square and true. Adequately anchor to maintain positions permanently when subjected to normal thermal movement, specified building movement, and specified wind loads.

C. Furnish and apply sealants to provide a weather tight installation at all joints and intersections and at opening perimeters. Wipe off excess material and leave all exposed surfaces and joints clean and smooth.

D. Mullions: Install combination and reinforcing mullions for combination assemblies in accordance with manufacturer's written instructions.

E. Install windows and components to drain water passing joints and condensation to the exterior.

F. Separate aluminum from sources of corrosion or electrolytic action at points of contact with other materials.

G. Provide egress tags on rescue windows as indicated on the Drawings. See Drawings for egress tag detail.

3.3 ANCHORAGE

A. Adequately anchor to maintain positions permanently when subjected to normal thermal movement, specified building movement, and specified wind loads.

3.4 ADJUSTING

A. Adjust operating sashes and hardware for a tight fit at contact points and weather stripping for smooth operation and weathertight closure.

3.5 CLEANING AND PROTECTION

A. Clean exposed surfaces immediately after installing windows using manufacturer's written instructions. Avoid damaging finishes. Remove excess sealants, glazing materials, dirt, and other substances.

B. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.

C. Protect window surfaces from contact with contaminating substances resulting from construction operations. If contaminating substances do contact window surfaces, remove contaminants immediately in accordance with manufacturer's written instructions.

END OF SECTION 08 51 13

SECTION 08 80 00 - GLAZING

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 glazing for the following products and applications, including those specified in other Sections where glazing requirements are specified by reference to this Section:

1. Windows
2. Doors
3. Interior borrowed lites.

1.3 DEFINITIONS

A. Glass Manufacturers: Firms that produce primary glass, fabricated glass, or both, as defined in referenced glazing publications.

B. Glass Thicknesses: Indicated by thickness designations in millimeters according to ASTM C 1036.

C. Interspace: Space between lites of an insulating-glass unit.

D. Fire-Protection-Rated Glazing: Glazing that prevents spread of fire and smoke and complies with requirements for rated openings; incapable of blocking radiant heat

E. Fire-Resistance-Rated Glazing: Glazing that prevents spread of fire and smoke and radiant heat and complies with requirements for rated walls and rated openings; capable of blocking radiant heat.

1.4 PERFORMANCE REQUIREMENTS

A. General: Installed glazing systems shall withstand normal thermal movement and wind and impact loads (where applicable) without failure, including loss or glass breakage attributable to the following: defective manufacture, fabrication, or installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; or other defects in construction.

B. Delegated Design: Design glass, including comprehensive engineering analysis according to ASTM E 1300 by a qualified professional engineer, using the following design criteria:

1. Design Wind Pressures: Determine design wind pressures applicable to Project according to ASCE/SEI 7, based on heights above grade indicated on Drawings.

    a. Basic Wind Speed: 120 mph
    b. Importance Factor: 1.15
    c. Exposure Category: C

2. Vertical Glazing: For glass surfaces sloped 15 degrees or less from vertical, design glass to resist design wind pressure based on glass type factors for short-duration load.

3. Maximum Lateral Deflection: For glass supported on all four edges, limit center-of-glass deflection at design wind pressure to not more than 1/50 times the short-side length or 1 inch, whichever is less.

4. Differential Shading: Design glass to resist thermal stresses induced by differential shading within individual glass lites.

C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes acting on glass framing members and glazing components.

1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

1.5 SUBMITTALS

A. Product Data: For each glass product and glazing material indicated.

B. Glass Samples: For each type of glass product other than clear monolithic vision glass; 12 inches square.

1. Insulated glass.
2. Fire rated glass.
3. Non-Insulated glass.

C. Glazing Accessory Samples: For gaskets, in 12-inch lengths.

D. Glazing Schedule: List glass types and thicknesses for each size opening and location. Use same designations indicated on Drawings.

E. Qualification Data: For installers.

F. Product Certificates: For glass and glazing products, from manufacturer.

G. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for tinted glass and insulating glass.

1. For glazing sealants, provide test reports based on testing current sealant formulations within previous 36-month period.

H. Preconstruction adhesion and compatibility test report.

I. Warranties: Sample of special warranties.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications for Insulating-Glass Units with Sputter-Coated, Low-E Coatings: A qualified insulating-glass manufacturer who is approved and certified by coated-glass manufacturer.

B. Installer Qualifications: A qualified installer who employs glass installers for this Project who are certified under the National Glass Association's Certified Glass Installer Program.

C. Glass Testing Agency Qualifications: A qualified independent testing agency accredited according to the NFRC CAP 1 Certification Agency Program.

D. Sealant Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing indicated.

E. Source Limitations for Glass: Obtain tinted float glass and insulating glass from single source from single manufacturer for each glass type.

F. Source Limitations for Glazing Accessories: Obtain from single source from single manufacturer for each product and installation method.

G. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below, unless more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this Section or in referenced standards.

1. GANA Publications: GANA's "Glazing Manual."
2. IGMA Publication for Insulating Glass: SIGMA TM-3000, "North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial and Residential Use."
3. NGA Publications: Laminated Glazing Reference Manual.

H. Safety Glazing Labeling: Where safety glazing labeling is indicated, permanently mark glazing with certification label of the SGCC. Label shall indicate manufacturer's name, type of glass, thickness, and safety glazing standard with which glass complies.

I. Insulating-Glass Certification Program: Permanently marked either on spacers or on at least one component lite of units with appropriate certification label of IGCC.

J. Preinstallation Conference: Conduct conference at Project site.

1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
2. Review temporary protection requirements for glazing during and after installation.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Protect glazing materials according to manufacturer's written instructions. Prevent damage to glass and glazing materials from condensation, temperature changes, direct exposure to sun, or other causes.

B. Comply with insulating-glass manufacturer's written recommendations for venting and sealing units to avoid hermetic seal ruptures due to altitude change.

1.8 PROJECT CONDITIONS

A. Environmental Limitations: Do not proceed with glazing when ambient and substrate temperature conditions are outside limits permitted by glazing material manufacturers and when glazing channel substrates are wet from rain, frost, condensation, or other causes.

1. Do not install glazing sealants when ambient and substrate temperature conditions are outside limits permitted by sealant manufacturer or below 40 deg F.

1.9 WARRANTY

A. Manufacturer's Special Warranty on Insulating Glass: Manufacturer's standard form in which insulating-glass manufacturer agrees to replace insulating-glass units that deteriorate within specified warranty period. Deterioration of insulating glass is defined as failure of hermetic seal under normal use that is not attributed to glass breakage or to maintaining and cleaning insulating glass contrary to manufacturer's written instructions. Evidence of failure is the obstruction of vision by dust, moisture, or film on interior surfaces of glass.

1. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 GLASS PRODUCTS, GENERAL

A. Thickness: Where glass thickness is indicated, it is a minimum. Provide glass lites in thicknesses as needed to comply with requirements indicated.

1. Minimum Glass Thickness for Exterior Lites: Not less than 6.0 mm.
2. Thickness of Tinted Glass: Provide same thickness for each tint color indicated throughout Project.

B. Strength: Where float glass is indicated, provide annealed float glass, Kind HS heat-treated float glass, or Kind FT heat-treated float glass. Where heat-strengthened glass is indicated, provide Kind HS heat-treated float glass or Kind FT heat-treated float glass. Where fully tempered glass is indicated, provide Kind FT heat-treated float glass.

C. Thermal and Optical Performance Properties: Provide glass with performance properties specified, as indicated in manufacturer's published test data, based on procedures indicated below:

1. For monolithic-glass lites, properties are based on units with lites 6.0 mm thick.
2. For insulating-glass units, properties are based on units of thickness indicated for overall unit and for each lite.
3. U-Factors: Center-of-glazing values, according to NFRC 100 and based on LBL's WINDOW 5.2 computer program, expressed as Btu/sq. ft. x h x deg F.
4. Solar Heat-Gain Coefficient and Visible Transmittance: Center-of-glazing values, according to NFRC 200 and based on LBL's WINDOW 5.2 computer program.
5. Visible Reflectance: Center-of-glazing values, according to NFRC 300.

2.2 GLASS PRODUCTS

A. Float Glass: ASTM C 1036, Type I, Quality-Q3, Class I of kind and condition indicated on drawings.

1. Manufacturer

a. Guardian
b. PPG
c. Viracon

2. Types:

a. Clear

B. Heat-Treated Float Glass: ASTM C 1048; Type I; Quality-Q3; Class I (clear) unless otherwise indicated; of kind and condition indicated on drawings.

1. Manufacturer:

a. Guardian
b. PPG
c. Viracon

2. Types:

a. Clear

3. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed unless otherwise indicated.
4. For uncoated glass, comply with requirements for Condition A.
5. For coated vision glass, comply with requirements for Condition C (other coated glass).

2.3 INSULATING GLASS

A. Manufacturers: Subject to compliance with requirements:

1. PPG –Solarban 60 (#2 Surface)
2. Viracon –to match Solarban 60 (#2 Surface)
3. Guardian – Sunguard SN68

B. Insulating-Glass Units: Factory-assembled units consisting of sealed lites of glass separated by a dehydrated interspace, qualified according to ASTM E 2190, and complying with other requirements specified.

1. Sealing System: Dual seal, with manufacturer's standard primary and secondary.
2. Spacer: Manufacturer's standard spacer material and construction
3. Desiccant: Molecular sieve or silica gel, or blend of both.

C. Glass: Comply with applicable requirements in "Glass Products" Article as indicated by designations in "Insulating-Glass Types" Article.

2.4 FIRE-PROTECTION-RATED GLASS

A. General:

1. Listed and labeled by a testing agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on positive-pressure testing in accordance with NFPA 257 or UL 9, including hose-stream test, and shall comply with NFPA 80.

B. Basis of Design Product: Safti First (or Equal); Superclear 45; Superlite 11–XL60; Superlite 11–XL90; refer to Drawings for required rating.

C. Light Transmission Rating: 85%.

D. Glazing materials shall be optically clear, colorless and free from visual distortion.

E. Each piece of fire rated glazing material shall be labeled with a permanent logo including name of product, manufacturer, testing laboratory, fire rating period and safety glazing standards.

F. Glazing Accessories: Glazed with EPDM tape or other listed flame resistant gasket materials and calcium silicate setting blocks.

2.5 GLAZING GASKETS

A. Dense Compression Gaskets: Molded or extruded gaskets of profile and hardness required to maintain watertight seal, made from one of the following:

1. Neoprene complying with ASTM C 864.
2. EPDM complying with ASTM C 864.
3. Silicone complying with ASTM C 1115.
4. Thermoplastic polyolefin rubber complying with ASTM C 1115.

B. Lock-Strip Gaskets: Neoprene extrusions in size and shape indicated, fabricated into frames with molded corner units and zipper lock-strips, complying with ASTM C 542, black.

2.6 GLAZING SEALANTS

A. General:

1. Compatibility: Provide glazing sealants that are compatible with one another and with other materials they will contact, including glass products, seals of insulating-glass units, and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.
2. Suitability: Comply with sealant and glass manufacturers' written instructions for selecting glazing sealants suitable for applications indicated and for conditions existing at time of installation.
3. VOC Content: For sealants used inside of the weatherproofing system, not more than 250 g/L when calculated according to 40 CFR 59, Subpart D.
4. Colors of Exposed Glazing Sealants: As selected by Architect from manufacturer's full range.

B. Glazing Sealant: Neutral-curing silicone glazing sealant complying with ASTM C 920, Type S, Grade NS, Class 100/50, use NT.

1. Products: Subject to compliance with requirements, provide one of the following:

a. Pecora Corporation; 890.
b. Sika Corporation, Construction Products Division; SikaSil-C990.
c. Tremco Incorporated; Spectrem 1.

2.7 MISCELLANEOUS GLAZING MATERIALS

A. General: Provide products of material, size, and shape complying with referenced glazing standard, requirements of manufacturers of glass and other glazing materials for application indicated, and with a proven record of compatibility with surfaces contacted in installation.

B. Cleaners, Primers, and Sealers: Types recommended by sealant or gasket manufacturer.

C. Setting Blocks: Elastomeric material with a Shore, Type A durometer hardness of 85, plus or minus 5.

D. Spacers: Elastomeric blocks or continuous extrusions of hardness required by glass manufacturer to maintain glass lites in place for installation indicated.

E. Edge Blocks: Elastomeric material of hardness needed to limit glass lateral movement (side walking).

F. Cylindrical Glazing Sealant Backing: ASTM C 1330, Type O (open-cell material), of size and density to control glazing sealant depth and otherwise produce optimum glazing sealant performance.

2.8 FABRICATION OF GLAZING UNITS

A. Fabricate glazing units in sizes required to fit openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with written instructions of product manufacturer and referenced glazing publications, to comply with system performance requirements.

B. Clean-cut or flat-grind vertical edges of butt-glazed monolithic lites to produce square edges with slight chamfers at junctions of edges and faces.

C. Grind smooth and polish exposed glass edges and corners.

2.9 INSULATING-GLASS TYPES

A. Glass Type: Low-e-coated, Argon Gas filled insulating glass.

1. Exterior lite – 1 /4” thick, clear color, tempered glass, with a surface coating of Solarban 60 or Sunguard SM68 on the number 2 surface.
2. Air Space of 1 /2” (argon filled).

3. Interior lite – 1 /4" thick, clear color, tempered glass.

    a. Technofoam Spacer.

2.10 MONOLITHIC-GLASS TYPES

A. Glass Type: Fire rated glass. Superclear 45; Superlite 11-XL60; ; Superlite 11-XL90 by Safti First or VetroTech USA (or equal).

B. Glass Type: Clear float glass and fully tempered float glass

1. Thickness: 6.0 mm.
2. Provide safety glazing labeling.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine framing, glazing channels, and stops, with Installer present, for compliance with the following:

1. Manufacturing and installation tolerances, including those for size, squareness, and offsets at corners.
2. Presence and functioning of weep systems.
3. Minimum required face and edge clearances.
4. Effective sealing between joints of glass-framing members.

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

3.2 PREPARATION

A. Clean glazing channels and other framing members receiving glass immediately before glazing. Remove coatings not firmly bonded to substrates.

B. Examine glazing units to locate exterior and interior surfaces. Label or mark units as needed so that exterior and interior surfaces are readily identifiable. Do not use materials that will leave visible marks in the completed work.

3.3 GLAZING, GENERAL

A. Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.

B. Adjust glazing channel dimensions as required by Project conditions during installation to provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances.

C. Protect glass edges from damage during handling and installation. Remove damaged glass from Project site and legally dispose of off Project site. Damaged glass is glass with edge damage or other imperfections that, when installed, could weaken glass and impair performance and appearance.

D. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction testing.

E. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.

F. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.

G. Provide spacers for glass lites where length plus width is larger than 50 inches.

1. Locate spacers directly opposite each other on both inside and outside faces of glass. Install correct size and spacing to preserve required face clearances, unless gaskets and glazing tapes are used that have demonstrated ability to maintain required face clearances and to comply with system performance requirements.
2. Provide 1/8-inch minimum bite of spacers on glass and use thickness equal to sealant width. With glazing tape, use thickness slightly less than final compressed thickness of tape.

H. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and according to requirements in referenced glazing publications.

I. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.

J. Set glass lites with proper orientation so that coatings face exterior or interior as specified.

K. Where wedge-shaped gaskets are driven into one side of channel to pressurize sealant or gasket on opposite side, provide adequate anchorage so gasket cannot walk out when installation is subjected to movement.

L. Square cut wedge-shaped gaskets at corners and install gaskets in a manner recommended by gasket manufacturer to prevent corners from pulling away; seal corner joints and butt joints with sealant recommended by gasket manufacturer.

3.4 GASKET GLAZING (DRY)

A. Cut compression gaskets to lengths recommended by gasket manufacturer to fit openings exactly, with allowance for stretch during installation.

B. Insert soft compression gasket between glass and frame or fixed stop so it is securely in place with joints miter cut and bonded together at corners.

C. Installation with Drive-in Wedge Gaskets: Center glass lites in openings on setting blocks and press firmly against soft compression gasket by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners

and work toward centers of openings. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.

D. Installation with Pressure-Glazing Stops: Center glass lites in openings on setting blocks and press firmly against soft compression gasket. Install dense compression gaskets and pressure-glazing stops, applying pressure uniformly to compression gaskets. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.

E. Install gaskets so they protrude past face of glazing stops.

3.5 LOCK-STRIP GASKET GLAZING

A. Comply with ASTM C 716 and gasket manufacturer's written instructions. Provide supplementary wet seal and weep system unless otherwise indicated.

3.6 CLEANING AND PROTECTION

A. Protect exterior glass from damage immediately after installation by attaching crossed streamers to framing held away from glass. Do not apply markers to glass surface. Remove nonpermanent labels and clean surfaces.

B. Protect glass from contact with contaminating substances resulting from construction operations. If, despite such protection, contaminating substances do come into contact with glass, remove substances immediately as recommended in writing by glass manufacturer.

C. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less than once a month, for buildup of dirt, scum, alkaline deposits, or stains; remove as recommended in writing by glass manufacturer.

D. Remove and replace glass that is broken, chipped, cracked, or abraded or that is damaged from natural causes, accidents, and vandalism, during construction period.

E. Wash glass on both exposed surfaces in each area of Project not more than four days before date scheduled for inspections that establish date of Substantial Completion. Wash glass as recommended in writing by glass manufacturer.

END OF SECTION 08 80 00

SECTION 09 54 00 - METAL PAN CEILINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general conditions of Contract, including General and Supplementary Conditions and Divisions-1 Specification sections apply to work of this section.

1.2 SUMMARY

A. Section Includes:

1. Exposed grid suspension system.
2. Wire hangers, fasteners, main runners, cross tees, wall angle moldings and accessories.

B. Related Sections:

1. Section 09 53 00 - Acoustical Ceiling Suspension Assembly
2. Section 09 58 00 – Integrated Ceiling Assemblies
3. Section 09 29 00 - Gypsum Board
4. Section 09 22 16 - Non-Structural Metal Framing
5. Divisions 23 - HVAC
6. Division 26 - Electrical Work

C. Alternates

1. Prior Approval: Unless otherwise provided for in the Contract documents, submit proposed product substitutions no later than TEN (10) working days prior to the date established for receipt of bids. Acceptability of a proposed substitution is contingent upon the Architect’s review and acceptance. Approved products will be set forth by the Addenda. If a substitution is included in a Bid and is not approved by an Addendum, the specified products shall be provided as in place of the substitute without additional compensation.
2. Submittals, which do not provide adequate data for the product evaluation, will not be considered. The proposed substitution must meet all requirements of this section, including but not necessarily limited to, the following: Single source materials suppliers (if specified in Section 1.5); panel design, size, composition, color, and finish; suspension system component profiles and sizes; compliance with the referenced standards.

1.3 REFERENCES

A. American Society for Testing and Materials (ASTM):

1. ASTM A 641 Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire.
2. ASTM A 653 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot- Dip Process.

3. ASTM A 1008 Standard Specification for Steel, Sheet, and Cold Rolled Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
4. ASTM C 635 Standard Specification for Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.
5. ASTM C 636 Recommended Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels.
6. ASTM C 423 Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method
7. ASTM E 84 Standard Test Method for Surface Burning Characteristics of Building Materials.
8. Underwriters Laboratories Incorporated
9. ASTM E 580 Application of Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels in Areas Requiring Seismic Restraint.
10. ASTM E 1264 Classification for Acoustical Ceiling Products.
11. International Building Code
12. ASHRAE Standard 62 1 2004 Ventilation for Acceptable Indoor Air Quality
13. California Department of Public Health CDPH/EHLB Emission Standard Method Version 1.1 2010
14. NFPA 70 National Electrical Code
15. ASCE 7 American Society of Civil Engineers, Minimum Design Loads for Buildings and Other Structures

1.4 SUBMITTALS

A. Product Data: Submit manufacturer's technical data for each type of acoustical ceiling unit and suspension system required.

B. Samples: Minimum 6-inch x 6-inch samples of specified acoustical panel; 8-inch-long samples of exposed wall molding and suspension system, including main runner and 4-foot cross tees.

C. Shop Drawings: Layout and details of acoustical ceilings show locations of items that are to be coordinated with or supported by the ceilings.

D. Acoustical Certifications: Manufacturer's certifications that products comply with specified requirements, including laboratory reports showing compliance with specified tests and standards. For acoustical performance, each carton of material must carry an approved independent laboratory classification, such as Underwriter’s Laboratory (UL), of NRC, CAC, and AC.

1. If the material supplied by the acoustical subcontractor does not have an independent laboratory classification of acoustical performance on every carton, subcontractor shall be required to send material from every production run appearing on the job to an independent or NVLAP approved laboratory for testing, at the architect's or owner's discretion. All products not conforming to manufacturer's current published values must be removed, disposed of, and replaced with complying product at the expense of the Contractor performing the work.

1.5 QUALITY ASSURANCE

A. Single-Source Responsibility: Provide ceiling panel units and grid components by a single manufacturer.

B. Fire Sprinklers: Ceiling systems may obstruct or skew the planned water distribution pattern of fire sprinkler. In addition to creating a delay or accelerating the activation of the sprinkler of fire detection system. Consult with a fire protection engineer for guidance

C. Fire Performance Characteristics: Identify ceiling components with appropriate markings of applicable testing and inspecting organization.

1. Surface Burning Characteristics: As follows, assessed per ASTM E 84 and complying with ASTM E 1264 for Class A products.

a. Flame Spread: 25 or less
b. Smoke Developed: 50 or less

D. Coordination of Work: Coordinate ceiling work with installers of related work including, but not limited to building insulation, gypsum board, light fixtures, mechanical systems, electrical systems, and sprinklers.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver acoustical ceiling units to project site in original, unopened packages and store them in a fully enclosed space where they will be protected against damage from moisture, direct sunlight, surface contamination, and other causes.

B. Before installing acoustical ceiling units, permit them to reach room temperature and a stabilized moisture content.

C. Handle acoustical ceiling units carefully to avoid chipping edges or damaged units in any way.

1.7 PROJECT CONDITIONS

A. Space Enclosure:

1. Installation of ceiling and wall systems, and custom suspension systems for interior applications shall be conducted where the temperature is between 32°F (0°C) and 120°F (49°C). It is not necessary for the area to be enclosed or for HVAC systems to be functioning. The ceiling panels and suspension system shall not be used to support any other material. Ceiling and wall systems, and custom suspension systems for interior applications cannot be used in exterior applications.

1.8 WARRANTY

A. Acoustical Panel: Submit a written warranty executed by the manufacturer, agreeing to repair or replace panels that fail within the warranty period. Failures include, but are not limited to the following:

1. Acoustical Metal Panels: Sagging and warping
2. Grid System: Rusting and manufacturer's defects

B. Warranty Period:

1. Ceiling and wall systems and custom suspension systems for interior applications are warranted to be free from defects in materials or factory workmanship for a period of one (1) year from the date of installation.

C. The Warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under the requirements of the Contract Documents.

1.9 MAINTENANCE

A. Extra Materials: Deliver extra materials to Owner. Furnish extra materials described below that match products installed. Packaged with protective covering for storage and identified with appropriate labels.

1. Ceiling Units: Furnish quality of full-size units equal to 2.0 percent of amount installed.
2. Exposed Suspension System Components: Furnish quantity of each exposed suspension component equal to 1.0 percent of amount installed.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design Vapor Cluster Torsion Spring Large Format System:

1. Arktura, LLC

a. Arktura Ceilings Rep:

1) Ryan Graver (ryan@nolanbrands.com / 609-668-5954)

B. Torsion Spring Suspension Systems:

1. Armstrong World Industries, Inc.

a. Armstrong Ceilings Rep:

1) Benjamin Hinkle (bmhinkle@armstrongceilings.com / 717-719-3764)

2.2 CEILING UNITS

A. Vapor® Panels:

1. Surface Texture: Smooth, factory-applied polyester paint
2. Composition: Aluminum, Poweder-Coated. Overall panel height 1.25”
3. Colors: As noted in Finish Legend in the Construction Documents.
4. Edge Profile: Square Panelized
5. Light Reflectance (LR) White Panel: ASTM E 1477
6. Material Ingredient Transparency: Health Product Declaration (HPD); Declare Label
7. Life Cycle Assessment: Third Party Certified Environment Product Declaration (EPD)
8. Perforation Options: “Cluster Dense”
9. Size: 24” x 48”
10. Flame Spread: Class A
11. Acceptable Product: Vapor Cluster Dense Torsion Spring as listed and manufactured by Arktura, LLC. When specifying or ordering, include the In-Line LED downlighting.

    a. Coordination between Electrical Contractor and Electrical Drawings is required.

B. Accessories: *S*elect all that apply to your project

7215	Box Molding
7147	Torsion Spring Perimeter Trim (Extruded)
7129	Torsion Spring Hook Removal Tool
7130	Torsion Spring Suction Access Tool

2.3 SUSPENSION SYSTEMS

A. Components: All main beams and cross tees shall be commercial quality hot dipped galvanized steel as per ASTM A653. Main beams and cross tees are double-web steel construction with 15/16-inch type exposed flange design. Exposed surfaces chemically cleansed, capping prefinished galvanized steel in baked polyester paint. Main beams and cross tees shall have rotary stitching.

1. Structural Classification: ASTM C635 (Heavy Duty).
2. Attachment Devices: Size for five times design load indicated in ASTM C 635, Table 1, Direct Hung unless otherwise indicated.
3. Wire for Hangers and Ties: ASTM A641, Class 1 zinc coating, soft temper, pre-stretched, with a yield stress load of at least times-three design load, but not less than 12 gauge.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Do not proceed with installation until all wet work such as concrete, terrazzo, plastering and painting has been completed and thoroughly dried out.

B. Proper designs for both supply air and return air, maintenance of the HVAC filters and building interior space are essential to minimize soiling. Before starting the HVAC system, make sure supply air is properly filtered and the building interior is free of construction dust.

3.2 PREPARATION

A. Measure each ceiling area and establish layout of acoustical units to balance border widths at opposite edges of each ceiling. Avoid use of less than half width units at borders and comply with reflected ceiling plans. Coordinate panel layout with mechanical and electrical fixtures.

3.3 INSTALLATION

A. Install suspension system and panels in compliance with ASTM C636, ASTM E580, with the approval of the authorities having jurisdiction, and in accordance with the Manufacturer's Metal Torsion Spring Large Format Installation Instructions.

3.4 ADJUSTING AND CLEANING

A. Replace damaged and broken panels.

B. Clean exposed surfaces of ceilings panels, including trim, edge moldings, and suspension members. Comply with manufacturer's instructions for cleaning and touch up of minor finish damage.

END OF SECTION 09 54 00

SECTION 09 67 23 - RESINOUS FLOORING SYSTEM

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes:

1. High-performance resinous flooring systems.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Installer Certificates for Qualification: Signed by manufacturer stating that installers comply with specified requirements.

C. Material Certificates: For each resinous flooring component, from manufacturer.

D. Maintenance Data: For maintenance manuals.

E. Samples: Submit two 6” X 6” samples of each resinous flooring system applied to a rigid backing. Provide sample which is a true representation of proposed field applied finish. Provide sample color and texture for approval from Owner in writing or approved by General Contractor prior to installation.

F. Product Schedule: For resinous flooring.

1.3 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of flooring systems required for this Project.

1. Engage an installer who is approved in writing by resinous flooring manufacturer as qualified to apply resinous flooring systems indicated.
2. Installer Letter of Qualification: Installer to provide letter stating that they have been in business for at least 5 years and listing 5 projects in the last 2 years of similar scope. For each project provide: project name, location, date of installation, contact information, size of project, and manufacturer of materials with system information.

B. Source Limitations: Obtain primary resinous flooring materials, including primers, resins, hardening agents, grouting coats, and topcoats, from single source from single manufacturer. Provide secondary materials, including patching and fill material, joint sealant, and repair materials, of type and from source recommended by manufacturer of primary materials.

C. Pre-installation Conference: Conduct conference at Project site before work and mockups begin.

D. Mockups: Apply mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution. Do not cover up mockup area.

1. Apply full-thickness mockups on 16 square foot floor area selected by Architect.
2. Finish surfaces for verification of products, color, texture, and sheen.
3. Simulate finished lighting conditions for Architect's review of mockups.
4. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
5. Mockup shall demonstrate desired slip resistance for review and approval by Owner's representative in writing.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in original packages and containers, with seals unbroken, bearing manufacturer's labels indicating brand name and directions for storage and mixing with other components.

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

1.5 PROJECT CONDITIONS

A. Environmental Limitations: Comply with resinous flooring manufacturer's written instructions for substrate temperature, ambient temperature, moisture, ventilation, and other conditions affecting resinous flooring application.

B. Lighting: Provide permanent lighting or, if permanent lighting is not in place, simulate permanent lighting conditions during resinous flooring application.

C. Close spaces to traffic during resinous flooring application and for not less than 24 hours after application unless manufacturer recommends a longer period.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by:

1. The Sherwin Williams Company, Cleveland, OH. Representative Contact: Michael Starner (484) 624-2360 michael.starner@sherwin.com

B. Resuflor Deco Flake BC, 20-30 mils nominal thickness.

1. Primer: Resuprime 3579 at 200-300 sq. ft. per gallon.
2. Body Coat: Resuflor 3746 at 200-300 sq. ft. per gallon.
3. Broadcast: Decorative Flakes 6750 or 6755 to excess at 100-200 lbs. per 1,000 sq. ft.
4. Grout Coat: Resuflor 3746 at 160-250 sq. ft. per gallon.

5. Seal Coat: Resutile 4686 at 250-400 sq. ft. per gallon.

2.2 MATERIALS

A. VOC Content of Resinous Flooring: Provide resinous flooring systems, for use inside the weatherproofing system, that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

1. Resinous Flooring: 100 g/L.

2.3 HIGH-PERFORMANCE RESINOUS FLOORING

A. Resinous Flooring: Abrasion-, impact- and chemical-resistant, high-performance, resin-based, monolithic floor surfacing designed to produce a seamless floor.

B. System Characteristics:

1. Color and Pattern: As indicated from manufacturers listed above.
2. Slip Resistance: Provide slip resistant finish.

PART 3 - EXECUTION

3.1 PREPARATION

A. Inspection: Prior to commencing Work, thoroughly examine all underlying and adjoining work, surfaces and conditions upon which Work is in any way dependent for perfect results. Report all conditions which affect Work. No "waiver of responsibility" for incomplete, inadequate or defective underlaying and adjoining work, surfaces and conditions will be considered, unless notice of such unsatisfactory conditions has been filed and agreed to in writing before Work begins. Commencement of Work constitutes acceptance of surfaces.

B. Surface Preparation: Remove all surface contamination, loose, or weakly adherent particles, laitance, grease, oil, curing compounds, paint, dust and debris by blast track method or approved mechanical means (acid etch not allowed). If surface is questionable, try a test patch. Create a minimum surface profile for the system specified in accordance with the methods described in ICRI No. 03732 to achieve profile numbers as follows:

1.	Thin film, to 10 mils	CSP-1 to CSP-3
2.	Thin and medium films, 10 to 40 mils	CSP-3 to CSP-5
3.	Self-leveling mortars, to 3/16”	CSP-4 to CSP-6
4.	Mortars and laminates, to 1/4” or more	CSP-5 to CSP-10

C. Verify that concrete substrates are dry and moisture-vapor emissions are within acceptable levels according to manufacturer's written instructions.

1. Moisture Testing: Perform tests indicated below.

a. Calcium Chloride Test: Perform anhydrous calcium chloride test per ASTM F 1869. Proceed with installation only after substrates have maximum moisture-vapor-

emission rate of 3 lb of water/1000 sq. ft. in 24 hours. Perform tests so that each test area does not exceed 1000 sq. ft. and perform 3 tests for the first 1000 sq. ft. and one additional test for every additional 1000 sq ft.

b. In-Situ Probe Test: Perform relative-humidity test using in-situ probes per ASTM F 2170. Proceed with installation only after substrates have a maximum 75 percent relative-humidity-level measurement.

3.2 ENVIRONMENTAL CONDITIONS

A. All applicators and all other personnel in the area of the RF installation shall take all required and necessary safety precautions. All manufacturers' installation instructions shall be implicitly instructions shall be implicitly followed.

B. Repair damaged and deteriorated concrete according to resinous flooring manufacturer's written instructions.

C. Alkalinity and Adhesion Testing: Verify that concrete substrates have pH within acceptable range. Perform tests recommended by manufacturer. Proceed with application only after substrates pass testing.

D. Resinous Materials: Mix components and prepare materials according to resinous flooring manufacturer's written instructions.

E. Use patching and fill material to fill holes and depressions in substrates according to manufacturer's written instructions.

F. Treat control joints and other nonmoving substrate cracks to prevent cracks from reflecting through resinous flooring according to manufacturer's written instructions.

3.3 APPLICATIONS

A. Install resinous floor over properly prepared concrete surface in strict accordance with the manufacturer's directions.

1. Install the primer and/or base coats over thoroughly cleaned and prepared concrete.
2. Install topcoat over flooring after excess aggregate has been removed.
3. Maintain a slab temperature of 60°F to 80°F for 24 hours minimum before applying floor topping, or as instructed by manufacturer.

B. Apply components of resinous flooring system according to manufacturer's written instructions to produce a uniform, monolithic wearing surface of thickness indicated.

1. Coordinate application of components to provide optimum adhesion of resinous flooring system to substrate, and optimum intercoat adhesion.
2. Cure resinous flooring components according to manufacturer's written instructions. Prevent contamination during application and curing processes.
3. At substrate expansion and isolation joints, comply with resinous flooring manufacturer's written instructions.

C. Sealant: Saw cut resinous floor topping at expansion joints in concrete slab. Fill sawcuts with sealant prior to final seal coat application. Follow manufacturer's written recommendations.

D. Apply primer over prepared substrate at manufacturer's recommended spreading rate.

E. Slip Resistant Finish: Provide grit for slip resistance.

F. Apply topcoats in number indicated for flooring system and at spreading rates recommended in writing by manufacturer.

3.4 COMPLETED WORK

A. Cleaning: Upon completion of the Work, clean up and remove from the premises surplus materials, tools, appliances, empty cans, cartons and rubbish resulting from the Work. Clean off all spattering and drippings, and all resulting stains.

B. Protection: Protect Work in accordance with manufacturer's directions from damage and wear during the remainder of the construction period. Use protective methods and materials, including temporary covering, recommended in writing by resinous flooring manufacturer.

C. Contractor shall insure that coating is protected from any traffic until it is fully cured to the satisfaction of the coating manufacturer.

END OF SECTION 09 67 23

SECTION 09 84 00 - CEMENTITIOUS WOOD FIBER CEILINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

Drawings and general conditions of Contract, including General and Supplementary Conditions and Divisions-1 Specification sections apply to work of this section.

1.2 SUMMARY

A. Section Includes:

1. Cementitious wood fiber plank acoustical ceiling and wall system

B. Related Sections:

1. Section 09 20 00 –Gypsum Board
2. Divisions 23 – HVAC Air Distribution
3. Division 26 – Electrical

C. Alternates

1. Prior Approval: Unless otherwise provided for in the Contract documents, proposed product substitutions may be submitted no later than TEN (10) working days prior to the date established for receipt of bids. Acceptability of a proposed substitution is contingent upon the Architect's review of the proposal for acceptability and compliance with the basis of design.
2. Submittals that do not provide adequate data for the product evaluation will not be considered. The proposed substitution must meet all requirements of this section, including but not necessarily limited to, the following: Single source materials suppliers (if specified in Section 1.5); Panel design, size, composition, color, and finish; Suspension system component profiles and sizes; Compliance with the referenced standards.

1.3 REFERENCES

A. American Society for Testing and Materials (ASTM)

B. ASTM C 423 Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method

C. ASTM E 84 Standard Test Method for Surface Burning Characteristics of Building Materials

D. ASTM E2768-11(2018) Standard Test Method for Extended Duration Surface Burning Characteristics of Building Materials

E. ASTM E 580 Installation of Metal Suspension Systems in Areas Requiring Moderate Seismic Restraint

F. ASTM C636 / C636M - 19 Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels

G. ASTM C 754 Installation of Steel Framing Members to Receive Screw-Attached Gypsum Board

H. ASTM E 1264 Classification for Acoustical Ceiling Products

I. ASTM D 3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber

J. International Building Code

K. ASHRAE Standard 62.1-2004, "Ventilation for Acceptable Indoor Air Quality"

L. NFPA 70 National Electrical Code

M. ASCE 7 American Society of Civil Engineers, Minimum Design Loads for Buildings and Other Structures

1.4 SUBMITTALS

A. Product Data: Submit manufacturer’s technical data for each type of ceiling or wall panel required.

B. Samples: Minimum 6 inch x 6 inch samples of specified interior panels.

C. Shop Drawings: Layout and details of interior ceiling and/or wall panels; show locations of items that are to be coordinated with the installation as required.

D. Certifications: UL certifications that products comply with specified requirements, including laboratory reports showing compliance with specified tests and standards. Acoustical performance, products must be tested to the A, D-20, C-20, or C-40 method.

E. Country of Origin: Submittals must be accompanied by letter, label or certification indicating the manufacturing country of origin. Comply with Made in USA requirements as applicable for the project.

F. If the material supplied by the acoustical subcontractor does not have an Underwriter's Laboratory classification of acoustical performance as specified in Section 2.2, subcontractor shall be required to send material from every production run appearing on the job, finished as intended to be installed, to an independent or NVLAP approved laboratory for testing, at the architect's or owner's discretion. All products not conforming to manufacturer's current published values must be removed, disposed of and replaced with complying product at the expense of the Contractor performing the work.

1.5 SUSTAINABLE MATERIALS

A. Transparency: Manufacturers will be given preference when they provide third party verified documentation to support sustainable requirements for the following: Material ingredient transparency, Removal of Red List Ingredients per LBCV3, Life Cycle impact information, Low-Emitting Materials, and Clean Air performance.

B. Health Product Declaration. The end use product has a published, complete third party verified Health Product Declaration with disclosure at a minimum of 1000ppm of known hazards in compliance with the Health Product Declaration open Standard.

C. Declare Label. The end use product has a published third party verified Declare label by the International Living Future Institute with disclosure of 100 ppm with a designation of Red List Free or Compliant (less than 1% proprietary ingredients).

D. Low Emitting products with VOC emissions data. Preference will also be given to manufacturers that can provide third party verified emissions data showing their products meet CDHP Standard Method v1.1 (Section 01350).

1.6 QUALITY ASSURANCE

A. Single-Source Responsibility: Provide acoustical panel units and grid components by a single manufacturer.

B. Fire Performance Characteristics: Identify acoustical ceiling components with appropriate UL markings.

1. Surface Burning Characteristics: Tested per ASTM E 84 and complying with ASTM E 1264 Classification.

C. Interior ceiling panels, as with other architectural features located at the ceiling, may obstruct or skew the planned fire sprinkler water distribution pattern through possibly delay or accelerate the activation of the sprinkler or fire detection systems by channeling heat from a fire either toward or away from the device. Designers and installers are advised to consult a fire protection engineer, NFPA 13, or their local codes for guidance where automatic fire detection and suppression systems are present.

D. Coordination of Work: Coordinate acoustical ceiling work with installers of related work including, but not limited to building insulation, gypsum board, light fixtures, mechanical systems, electrical systems, and sprinklers.

1.7 DELIVERY, STORAGE & HANDLING

A. Deliver acoustical ceiling units to project site in original, unopened packages and store them in a fully enclosed space where they will be protected against damage from moisture, direct sunlight, surface contamination, and other causes.

B. Provide labels indicating brand name, style, size and thickness.

C. Before installing acoustical ceiling units, permit them to reach room temperature and a stabilized moisture content.

D. Handle acoustical ceiling units carefully to avoid chipping edges or damaged units in any way.

1.8 PROJECT/SITE CONDITIONS

A. Environmental Requirements:

B. Do not install ceiling panels until building is closed in and HVAC system is operational.

C. Locate materials onsite at least 72 hours before beginning installation to allow materials to reach temperature and moisture content equilibrium.

D. Maintain the following conditions in areas where acoustical materials are to be installed 72 hours before, during and after installation:

1. Relative Humidity: 25 - 85%.
2. Uniform Temperature: 32 - 120 degrees F (0 - 49 degrees C).

1.9 WARRANTY

A. Submit a written warranty executed by the manufacturer, agreeing to repair or replace panels that fail within the warranty period. Failures include, but are not limited to the following:

1. Defects in materials or factory workmanship.

B. Warranty period:

1. Thirty (30) years from date of substantial completion.

C. The Warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under the requirements of the Contract Documents.

1.10 MAINTENANCE

A. Extra Materials: Deliver extra materials to Owner. Furnish extra materials described below that match products installed. Packaged with protective covering for storage and identified with appropriate labels.

1. Furnish quality of full-size units equal to 5.0 percent of amount installed.
2. Also refer to Attic Stock Requirements in the Construction Documents.

PART 2 - PRODUCTS

2.1 Manufacturer

A. Tectum® Direct-Attached Wall or Ceiling Panels:

1. Tectum® by Armstrong World Industries, Inc.

B. Suspension System and Accessories:

1. Armstrong World Industries, Inc.

2.2 TECTUM® DIRECT-ATTACH CEILING PANELS

A. Acoustical Panels Type AP-1:

1. Surface Texture: Coarse
2. Composition: Aspen wood fibers bonded with inorganic hydraulic cement
3. Finish: Surface appearance shall be consistent from panel to panel
4. Color: As noted in the Finish Legend in the Construction Documents.
5. Size: Standard – As noted in the Finish Legend in the Construction Documents.
6. Thickness: Standard – As noted in the Finish Legend in the Construction Documents.
7. Edge Profile: Standard - Long edge/Short edge – Bevel/Square
8. UL Classified Noise Reduction Coefficient (NRC): ASTM C 423; (1”-thick panels mounting method: C-20(0.80); Classified with UL label.
9. UL Classified Flame Spread: ASTM E 1264; Class A. Product must be able to meet this criteria after being painted six times.
10. Light Reflectance (LR) White Panel: ASTM E 1477; Light Reflectance
11. Dimensional Stability/Mold Resistance: HumiGuard Plus and no significant mold growth when tested by ASTM D3273.
12. Sustainable: Third party verified EPD (Environmental Product Declaration) and HPD (Health Product Declaration) and Living Product Imperative Certification.
13. USDA Certified Biobased Product, 98%
14. Acceptable Product: Tectum® Direct-Attach as manufactured by Armstrong World Industries.

2.3 METAL SUSPENSION SYSTEMS

A. Accessories:

1. #6 x 1-5/8” Painted Head Drill Point Screws – Color to match interior panels as noted in the Finish Legend in the Construction Documents, item 8188L16
2. Touch-Up Paint – Color to match interior panels as noted in the Finish Legend in the Construction Documents, item 5456GAL1

B. Attachment Component for Direct Attached to Heavy gauge metal steel

1. 1-5/8" drill point screws, item 8188L16

PART 3 - EXECUTION

3.1 EXAMINATION

A. Do not proceed with installation until all wet work such as concrete, terrazzo, plastering and painting has been completed and thoroughly dried out, unless expressly permitted by manufacturer's printed recommendations.

3.2 PREPARATION

A. Measure each wall area and establish layout of wall units. Coordinate panel layout with mechanical and electrical fixtures.

B. Coordination: Furnish layouts for preset inserts, clips, and other ceiling anchors whose installation is specified in other sections.

1. Furnish concrete inserts and similar devices to other trades for installation well in advance of time needed for coordination of other work.

3.3 INSTALLATION

A. Install Tectum® Direct-Attached Panels in accordance manufacturer's installation instructions.

3.4 ADJUSTING AND CLEANING

A. Replace damaged and broken interior ceiling and/or wall panels..

B. Clean exposed surfaces of acoustical ceilings, including trim, edge moldings, and suspension members. Comply with manufacturer's instructions for cleaning and touch up of minor finish damage. Remove any interior panels that cannot be successfully cleaned and or repaired. Replace with attic stock or new product to eliminate evidence of damage.

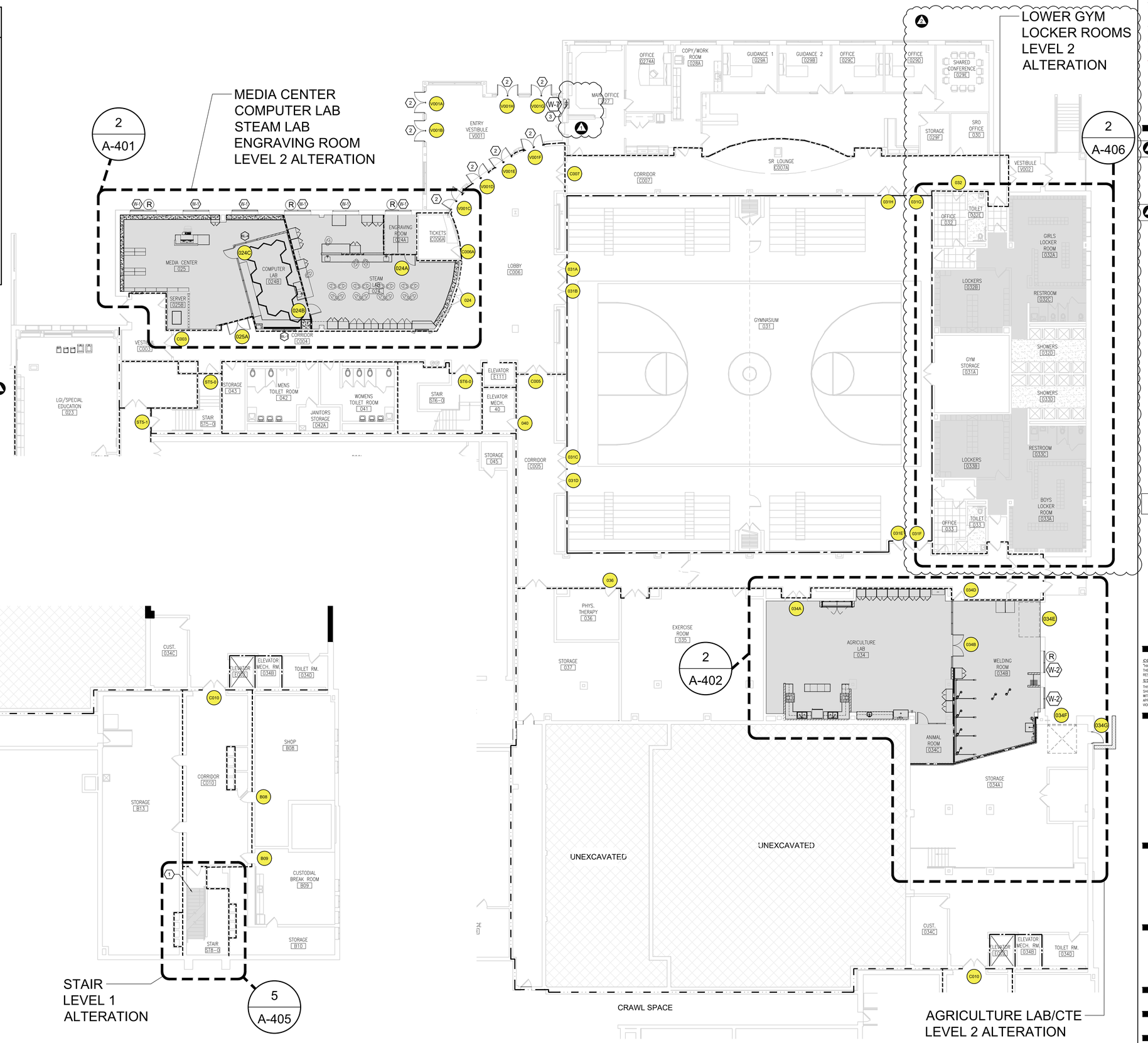
END OF SECTION 09 84 00

DRAWING LEGEND

- INDICATES AREA OF ALTERATION
- EXISTING WALL CONSTRUCTION TO REMAIN
- NEW WALL CONSTRUCTION
- EXISTING DOOR TO REMAIN
- WIRE GLASS REPLACEMENT IN EXISTING DOOR
- XXX
- NEW DOOR AND FRAME
- ROOM NAME / NO. — INDICATES ROOM NAME AND NUMBER
- 000 — INDICATES DOOR NUMBER
- W-X — INDICATES WINDOW TYPE
- X — CONSTRUCTION KEY NOTE INDICATOR
- BL-X — INDICATES BORROWED LITE TYPE

CONSTRUCTION KEY NOTES

1. REPLACE RUBBER STAIR TREADS, RISERS, AND LANDINGS TO MATCH EXISTING.
2. DOORS BY OWNER. NOT IN SCOPE.
3. REMOVE EXISTING SLIDING SERVICE WINDOW AND INSTALL NEW TRANSACTION WINDOW. NEW WINDOW SHALL BE SAME SIZE AS EXISTING.



2 / A-100 GROUND FLOOR COMPOSITE PLAN (PART B)
SCALE: 3/32" - 1'-0"

1 / A-100 GROUND FLOOR COMPOSITE PLAN (PART A)
SCALE: 3/32" - 1'-0"

HIGHLAND ASSOCIATES
architecture | engineering | interior design
102 Highland Avenue
Clarks Summit, PA 18411
570-586-4334
www.highlandassociates.com
New York • Pennsylvania

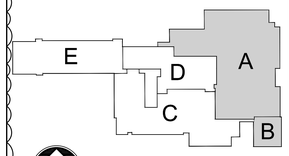
REVISION NO:

1 ADDENDUM #1	11/21/2025

- REVISED TO INCLUDE REMOVAL OF EXISTING SLIDING SERVICE WINDOW AT ELEMENTARY OFFICE AND REPLACE WITH NEW TRANSACTION WINDOW.
- UPDATED NOTE #2 TO INDICATE DOORS NOT IN SCOPE.

3 ADDENDUM #3	12/03/2025

- ADDED LOWER GYM LOCKER ROOMS TO AREAS OF WORK.



KEY PLAN

BID DOCUMENTS
SED # 08-01-01-04-0-001-019

PROJECT TITLE:

Afton Central School District
29 Academy St, Afton, NY 13730

2024 Capital Project
Phase 1

SEALS:

DRAWING TITLE:

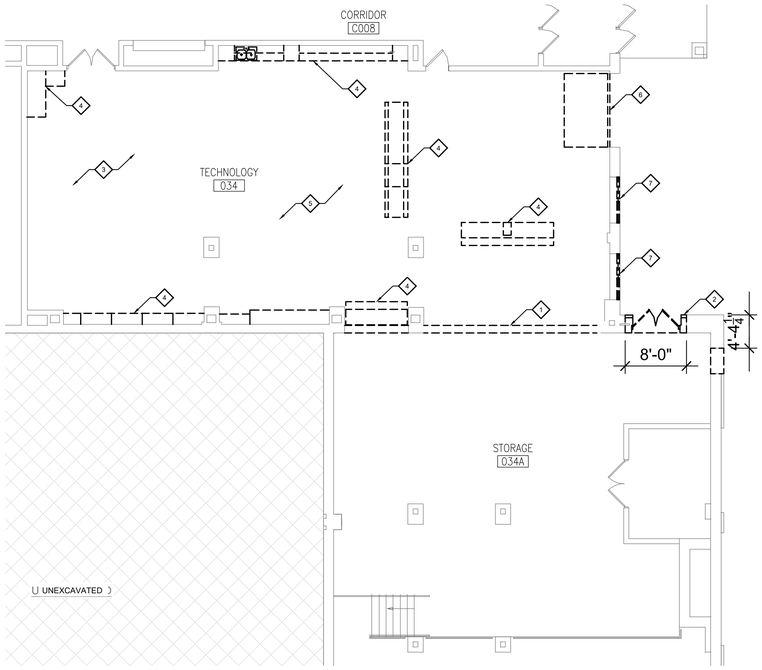
GROUND FLOOR COMPOSITE PLAN (PART A/B)

DRAWN BY:	CHECKED BY:
R.J.C. / A.L.	D.G.
DATE:	PROJECT NO:
11/10/2025	2025-005

DRAWING NO:

A-100

CAD FILE: 5005-A-100.DWG PLOT DATE: 12/2/2025



DEMOLITION LEGEND

- EXISTING WALL CONSTRUCTION TO REMAIN
- EXISTING WALL CONSTRUCTION TO BE DEMOLISHED IN ITS ENTIRETY
- EXISTING DOOR TO REMAIN
- EXISTING DOOR, FRAME, AND HARDWARE TO BE REMOVED IN ITS ENTIRETY UNLESS OTHERWISE SPECIFIED
- DEMOLITION KEY NOTE INDICATOR

DEMOLITION KEY NOTES

1. REMOVE EXISTING INTERIOR MASONRY WALL CONSTRUCTION IN ITS ENTIRETY INCLUDING WALL BASE, MISCELLANEOUS BRACING, ELEC. OUTLETS, WIRING, PIPING, ETC. (COORDINATE WITH ALL MEP DWGS.).
2. REMOVE 8'-0" PORTION OF EXISTING EXTERIOR MASONRY WALL WITH BRICK VENEER CONSTRUCTION. REFER TO STRUCTURAL NOTES.
3. REMOVE EXISTING CEILING SYSTEM(S), LIGHTING, DIFFUSERS AND SOFFITS IN THEIR ENTIRETY AS REQUIRED FOR NEW CONSTRUCTION.
4. REMOVE EXISTING MILLWORK IN ITS ENTIRETY.
5. ALL FLOOR FINISHES TO BE REMOVED. PATCH/REPAIR AND PREP SUBFLOOR FOR NEW FLOOR FINISHES.
6. REMOVE OVERHEAD DOOR IN ITS ENTIRETY.
7. REMOVE EXISTING WINDOW AND FRAME.

1 / A-402 — AGRICULTURE LAB / CTE
DEMOLITION PLAN- GROUND FLOOR
SCALE: 1/8"=1'-0"

CEILING LEGEND

- ROOM NAME / NO. / 9'-0" — INDICATES ROOM NAME AND NUMBER AND CEILING HEIGHT
- X — RCP KEY NOTE INDICATOR
- EXISTING 2'X2' ACT CONSTRUCTION TO REMAIN
- EXISTING 2'X4' ACT CONSTRUCTION TO REMAIN
- NEW 2'x2' ACOUSTICAL GRID WITH NEW ACOUSTIC CEILING TILE
- NEW 2'x4' ACOUSTICAL GRID WITH NEW ACOUSTIC CEILING TILE
- PAINTED GYP CEILING
- PAINTED GYP SOFFIT
- SUPPLY AIR DIFFUSER / RETURN GRILLES. COORDINATE WITH MECH. DWGS.
- LIGHT FIXTURES. COORDINATE WITH ELEC. DWGS.
- EMERGENCY LIGHT FIXTURES. COORDINATE WITH ELEC. DWGS.
- HEXAGON CANOPY PENDANT:
  - INDICATES DIRECT LIGHT SEGMENT
  - INDICATES EMERGENCY LIGHT SEGMENT
  - HATCH WITHIN PENDANTS INDICATES ACOUSTICAL INFILL PANEL (COLORS VARY).
  - INDICATES INFILL PANEL COLOR NUMBER - SEE INTERIOR FINISH LEGEND.
  - COORDINATE WITH ELEC. DWGS.

GENERAL DRAWING NOTES

1. CONTRACTOR TO COORDINATE WITH MEP CONTRACTOR AND DRAWINGS FOR LOCATIONS OF NEW CEILING MOUNTED DEVICES.
2. REFER TO FINISH DRAWINGS FOR FINISH INFORMATION. SEE A-701 FOR FINISH SCHEDULE, LEGEND, AND NOTES.

3 / A-402 — AGRICULTURE LAB / CTE
REFLECTED CEILING PLAN- GROUND FLOOR
SCALE: 1/8"=1'-0"

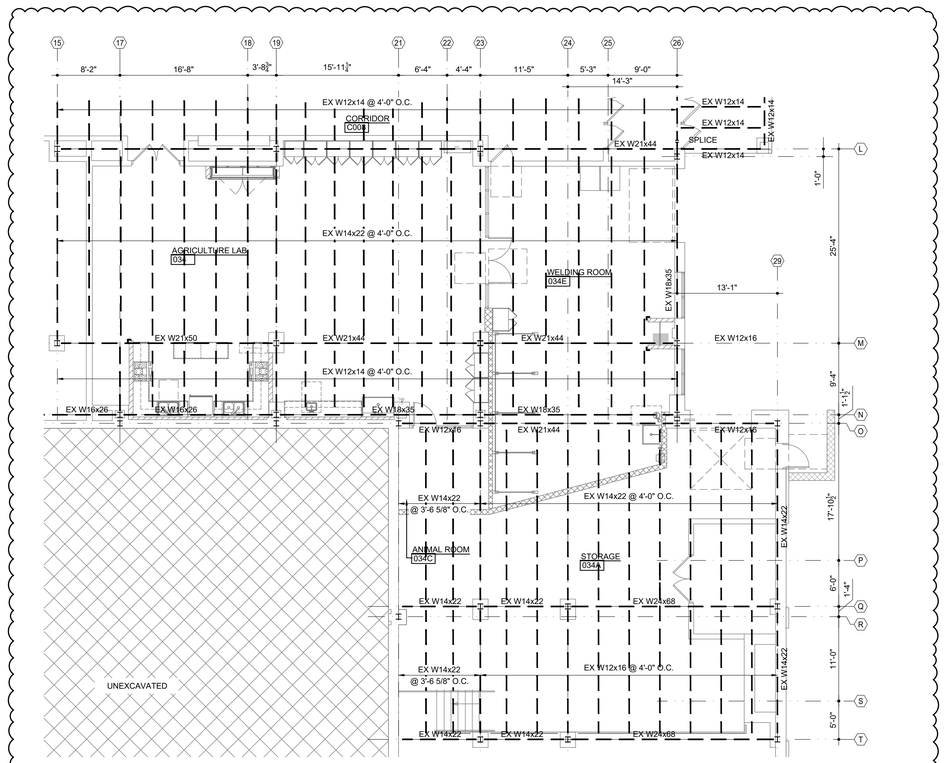
CONSTRUCTION LEGEND

- EXISTING WALL CONSTRUCTION TO REMAIN
- NEW WALL CONSTRUCTION
- EXISTING DOOR TO REMAIN
- NEW DOOR AND FRAME
- ROOM NAME / NO. — INDICATES ROOM NAME AND NUMBER
- NEW S.S. CORNER GUARD (CG-1), TYPICAL. U.O.N. REFER TO FINISH LEGEND FOR SPECIFIC SIZE(S)
- 000 — INDICATES DOOR NUMBER
- BL-X — BORROWED LIGHT WINDOW TYPE
- W-# — WINDOW TAG REFER TO WINDOW TYPES SHEET
- NEW WALL TYPE SEE WALL TYPES SHEET G-003
- X — CONSTRUCTION KEY NOTE INDICATOR

CONSTRUCTION KEY NOTES

1. PROVIDE NEW PARTITIONS AS INDICATED ON PLAN. REFER TO WALL LEGEND FOR WALL TYPE CONSTRUCTION. REFER TO WALL TYPES FOR RATED WALLS.
2. PROVIDE NEW FIRE-RATED FRAMES, DOORS, AND WINDOWS AT NEW WORK AREAS. REFER TO DOOR SCHEDULE FOR DETAILS.
3. PREPARE FLOOR TO RECEIVE NEW FLOOR FINISH. WALL BASE & CEILING PANELS. REFER TO INTERIOR FINISH SCHEDULE.
4. PATCH, REPAIR, PRIME AND PAINT ALL WALLS. FIRE STOP SEAL AT ALL EXISTING WALLS AT 2 HOUR LOCATIONS
5. ADD ADDITIONAL 2 HOUR SPRAY FIRE PROOFING TO STEEL BEAMS, FLOOR DECK, AND STEEL COLUMNS. REFER TO FRAMING PLAN THIS DRAWING.
6. PROVIDE A SIGN AT DOOR 034B, AGRICULTURE LAB SIDE, WHICH READS "EMERGENCY ESCAPE". THE SIGN SHALL HAVE A BRIGHT YELLOW BACKGROUND WITH BLACK LETTERS, MINIMUM SIZE: 5 INCHES BY 8 INCHES.
7. GRADE SITE TO ACCOMMODATE NEW MAN DOOR. SEE STRUCTURAL S-101 FOR RETAINING WALL PLAN AND SECTION.
8. PROVIDE NEW DIRECT-ATTACH ACOUSTIC CEILING PANELS. PANELS TO BE FASTENED TO EXPOSED METAL ROOF DECK W/ 1X FURRING STRIPS AND CAVITY FILLED W/ 1" 3LB DENSITY FIBERGLASS, PER MANUFACTURER'S RECOMMENDED INSTALLATION METHOD. PANELS SHALL BE PLACED BETWEEN EXISTING FRAMING, CENTERED, WITH SHORT ENDS OF THE PANELS ABUTTING ONE ANOTHER. NEW PANELS TO COVER AT LEAST 75% OF THE EXPOSED CEILING SURFACE AREA. PANELS SHALL BE COORDINATED WITH LIGHTING LAYOUTS, CONDUIT, PIPING, DUCTWORK, ETC. LOCATED IN THE CEILING. DIMENSIONS TO BE V.I.F. WITH EXISTING FRAMING. PANELS SHALL BE CLASS A FIRE RATED.

2 / A-402 — AGRICULTURE LAB / CTE
RENOVATION PLAN- GROUND FLOOR
SCALE: 1/8"=1'-0"



2 / A-402 — AGRICULTURE LAB / CTE
FRAMING PLAN - GROUND FLOOR
SCALE: 1/8"=1'-0"

HIGHLAND ASSOCIATES
architecture | engineering | interior design
102 Highland Avenue
Clarks Summit, PA 18411
570-586-4334
www.highlandassociates.com
New York • Pennsylvania

REVISION NO:

ADDENDUM #1	11/21/2025

- ADDED NOTE 8 TO AG LAB/CTE CEILING PLAN.
- REVISED PARTITION TYPE TAGS AT KITCHEN AREA IN AGRICULTURAL LAB 034.
- ADDED S.S. CORNER GUARDS AT WELDING ROOM CLOSET WALLS & AT AG LAB WING WALL.
- ADDED ACOUSTICAL PANEL INFILL COLORS TO REFLECTED CEILING PLAN AT AG LAB.
- UPDATED NOTES FOR ACOUSTICAL INFILL PANELS AT HEXAGON PENDANT LIGHT FIXTURES.
- UPDATED CONSTRUCTION KEY NOTE #7 TO INCLUDE STRUCTURAL PLAN AT RETAINING WALL.

ADDENDUM #3	12/03/2025

- ADDED STRUCTURAL FRAMING PLAN.

KEY PLAN

BID DOCUMENTS
SED # 08-01-01-04-0-001-019

PROJECT TITLE:

Afton Central School District
29 Academy St, Afton, NY 13730

2024 Capital Project
Phase 1

SEALS:

DRAWING TITLE:

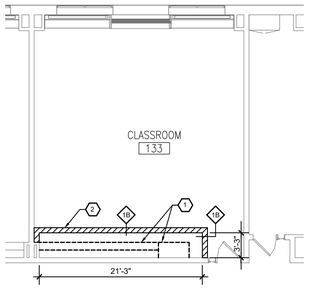
AGRICULTURE LAB / CTE
ENALRGED DEMO PLAN,
RENO PLAN & RCP

DRAWN BY:	CHECKED BY:
A.L.	D.G.
DATE:	PROJECT NO:
11/10/2025	2025-005

DRAWING NO:

A-402

CAD FILE: 5005-A-402.DWG PLOT DATE: 12/4/2025



CLASSROOM 133 RENOVATION PLAN
FIRST FLOOR

3 / A-404

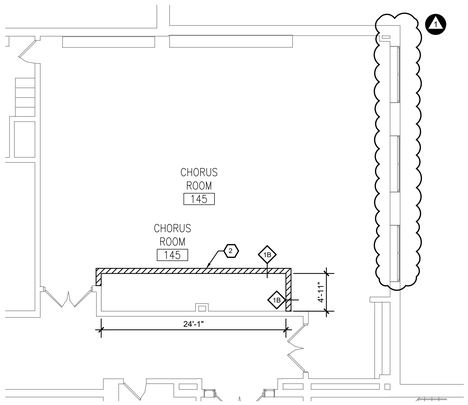
SCALE: 1/8"=1'-0"

CONSTRUCTION LEGEND

- EXISTING WALL CONSTRUCTION TO REMAIN
- NEW WALL CONSTRUCTION
- EXISTING DOOR TO REMAIN
- ROOM NAME / NO. — INDICATES ROOM NAME AND NUMBER
- X — NEW WALL TYPE SEE WALL TYPES SHEET G-003
- W-#? — NEW WINDOW TAG REFER TO WINDOW TYPES SHEET
- X — CONSTRUCTION KEY NOTE INDICATOR

CONSTRUCTION KEY NOTES

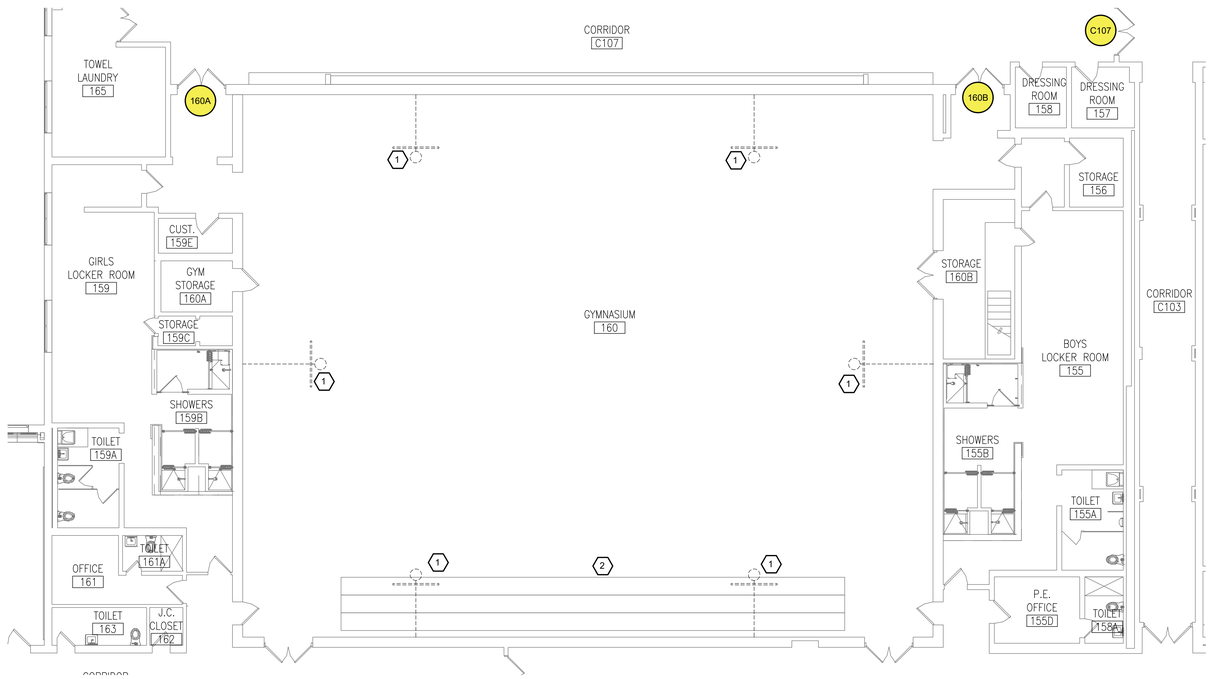
1. REMOVE AND RELOCATE EXISTING SHELVING AND MILLWORK.
2. PROVIDE NEW PARTITIONS AS INDICATED ON PLAN TO ACCOMMODATE NEW CHASE. REFER TO MECHANICAL DRAWINGS FOR LOCATION OF NEW CHASE. REFER TO WALL LEGEND FOR WALL TYPE CONSTRUCTION. REFER TO WALL TYPES FOR RATED WALLS.



CHORUS ROOM RENOVATION PLAN
FIRST FLOOR

2 / A-404

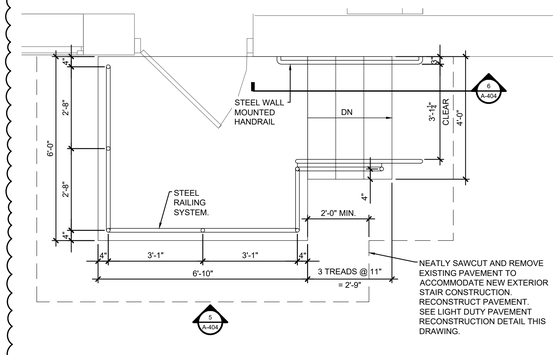
SCALE: 1/8"=1'-0"



GYMNASIUM RENOVATION PLAN
FIRST FLOOR

1 / A-404

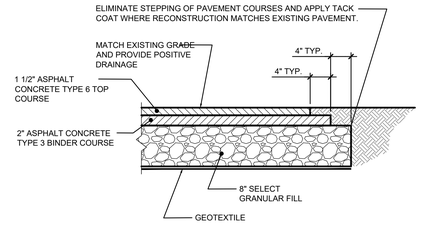
SCALE: 1/8"=1'-0"



DOOR 9 EXTERIOR
ENLARGED STAIR PLAN

4 / A-404

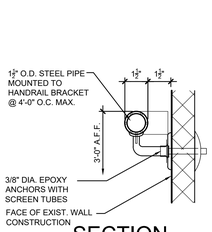
SCALE: 1/2"=1'-0"



1. EXCAVATE AND STOCKPILE ALL EXISTING BITUMINOUS MATERIALS.
2. EXCAVATE AND DISPOSE OF ALL EXISTING SUBBASE MATERIALS.
3. FINE GRADE AND ROLL SUBGRADE.
4. PLACE CONTINUOUS GEOTEXTILE, AMERICAN ENGINEERING FABRICS, INC. STYLE 480 OR EQUIVALENT.
5. PLACE 4" PULVERIZED AND MIXED MATERIAL OR IMPORTED SELECT GRANULAR FILL.
6. PLACE 4" AGGREGATE BASE COURSE.
7. FINE GRADE AND ROLL SUBBASE.
8. PLACE ASPHALT CONCRETE BINDER AND TOP COURSES.

LIGHT DUTY PAVEMENT RECONSTRUCTION DETAIL

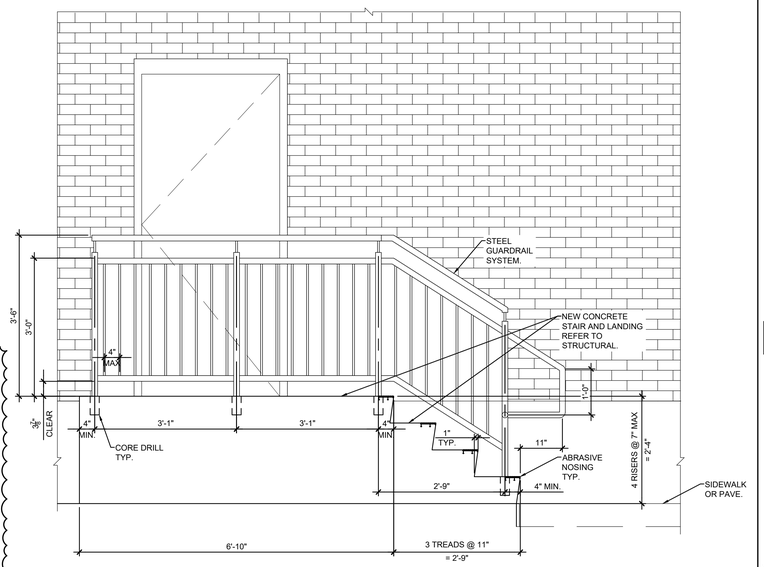
SCALE: 1" = 1'-0"



SECTION
@ WALL MOUNTED RAIL

7 / A-404

SCALE: 3" = 1'-0"



EXTERIOR STAIR ELEVATION

5 / A-404

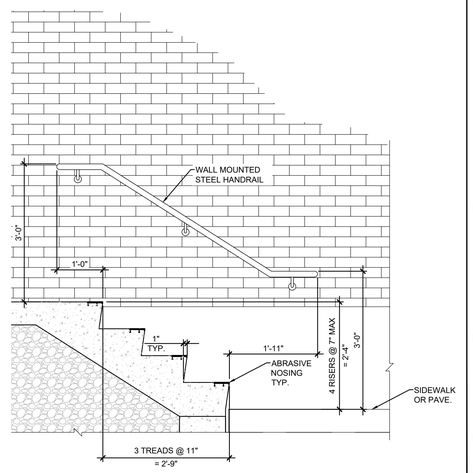
SCALE: 3/4"=1'-0"

CONSTRUCTION LEGEND

- EXISTING WALL CONSTRUCTION TO REMAIN
- EXISTING DOOR TO REMAIN
- XXX — WIRE GLASS REPLACEMENT IN EXISTING DOOR
- ROOM NAME / NO. — INDICATES ROOM NAME AND NUMBER
- 000 — INDICATES DOOR NUMBER REFER TO DOOR SCHEDULE
- X — NEW WALL TYPE SEE WALL TYPES SHEET G-003
- X — CONSTRUCTION KEY NOTE INDICATOR

CONSTRUCTION KEY NOTES

1. MOTORIZED BASKETBALL BACKSTOPS SHALL BE FURNISHED AND INSTALLED BY OWNER UNDER SEPARATE CONTRACT. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR WIRING OF NEW BACKSTOPS.
2. REPAIR OF EXISTING BLEACHERS SHALL BE COMPLETED BY OWNER UNDER SEPARATE CONTRACT.



EXTERIOR STAIR ELEVATION
@ WALL MOUNTED HANDRAIL

6 / A-404

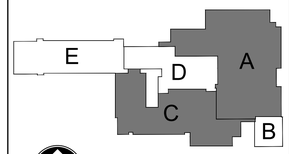
SCALE: 3/4"=1'-0"

HIGHLAND ASSOCIATES
architecture | engineering | interior design
102 Highland Avenue
Clarks Summit, PA 18411
570-586-4334
www.highlandassociates.com
New York • Pennsylvania

REVISION NO:

A	ADDENDUM #3	12/03/2025

- ADDED ENLARGED STAIR PLAN, EXTERIOR STAIR ELEVATION AND WALL MOUNTED HANDRAIL ELEVATION TO SHEET.
- ADDED PAVE RESTORATION DETAIL.
- REVISED CONSTRUCTION KEYED NOTES
- REMOVED REPLACEMENT OF WINDOWS AT CHORUS ROOM FROM SCOPE OF WORK.



KEY PLAN

BID DOCUMENTS
SED # 08-01-01-04-0-001-019

PROJECT TITLE:

Afton Central School District
29 Academy St, Afton, NY 13730

2024 Capital Project
Phase 1

SEALS:

DRAWING TITLE:

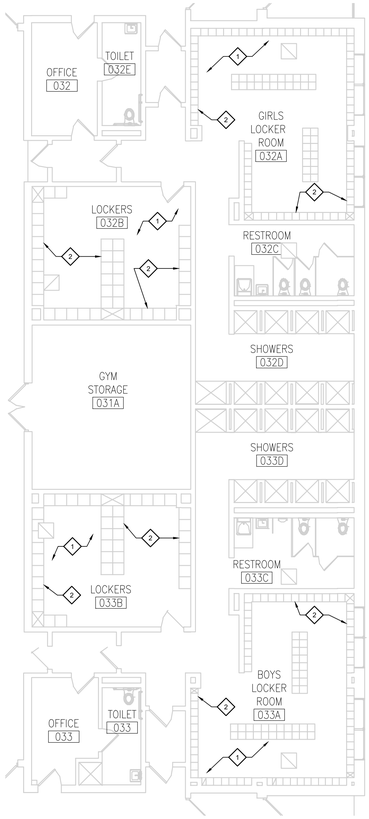
UPPER GYM, CHORUS ROOM & CLASSROOM ENLARGED PLANS & EXTERIOR STAIR PLAN

DRAWN BY:	CHECKED BY:
A.G. / T.M.	C.Z.
DATE:	PROJECT NO:
11/10/2025	2025-005

DRAWING NO:

A-404

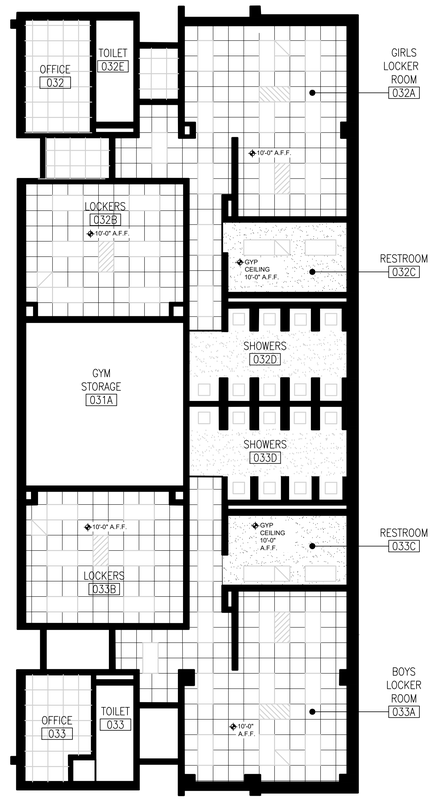
CAD FILE: 5005-A-404.DWG PLOT DATE: 12/4/2025



LOWER GYM LOCKER ROOMS DEMOLITION PLAN GROUND FLOOR

1 / A-406

SCALE: 1/8"=1'-0"



LOWER GYM LOCKER ROOMS R.C.P. GROUND FLOOR

2 / A-406

SCALE: 1/8"=1'-0"

DEMOLITION LEGEND

- EXISTING WALL CONSTRUCTION TO REMAIN
- EXISTING WALL CONSTRUCTION TO BE DEMOLISHED IN ITS ENTIRETY
- EXISTING DOOR TO REMAIN
- DEMOLITION KEY NOTE INDICATOR (X)

DEMOLITION KEY NOTES

1. REMOVE EXISTING CEILING SYSTEM(S) AS REQUIRED FOR NEW CONSTRUCTION. LIGHTING, DIFFUSERS AND SOFFITS TO REMAIN.
2. EXISTING LOCKERS SHALL BE REMOVED BY OWNER AND NEW LOCKERS SHALL BE FURNISHED AND INSTALLED BY OWNER UNDER SEPARATE CONTRACT. TYPICAL.

CEILING LEGEND

- ROOM NAME / NO. — INDICATES ROOM NAME AND NUMBER AND
- EXISTING 2'X2' ACT CONSTRUCTION TO REMAIN
- EXISTING 2'X4' ACT CONSTRUCTION TO REMAIN
- NEW 2'x2' ACOUSTICAL GRID WITH NEW ACOUSTIC CEILING TILE
- NEW 2'x4' ACOUSTICAL GRID WITH NEW ACOUSTIC CEILING TILE
- PAINTED GYP CEILING
- EXISTING PAINTED GYP CEILING
- EXISTING LIGHT FIXTURES.
- EXISTING SUPPLY AIR DIFFUSER / RETURN GRILLES.

GENERAL DRAWING NOTES

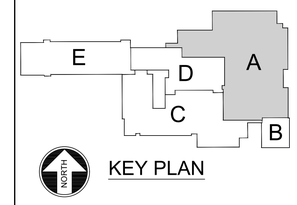
1. CONTRACTOR TO COORDINATE WITH MEP CONTRACTOR AND DRAWINGS FOR LOCATIONS OF NEW CEILING MOUNTED DEVICES.
2. REFER TO FINISH DRAWINGS FOR FINISH INFORMATION. SEE A-701 FOR FINISH SCHEDULE, LEGEND, AND NOTES.

HIGHLAND ASSOCIATES
architecture | engineering | interior design
102 Highland Avenue
Clarks Summit, PA 18411
570-586-4334
www.highlandassociates.com
New York • Pennsylvania

REVISION NO:

A	ADDENDUM #3	12/03/2025

- DRAWING SHEET A-406 LOWER GYM LOCKER ROOMS REFLECTED CEILING PLAN ADDED.



KEY PLAN

BID DOCUMENTS
SED # 08-01-01-04-0-001-019

PROJECT TITLE:

Afton Central School District
29 Academy St, Afton, NY 13730

2024 Capital Project
Phase 1

SEALS:

DRAWING TITLE:

LOWER GYM LOCKER ROOMS DEMO PLAN & REFLECTED CEILING PLAN

DRAWN BY:	CHECKED BY:
S.C.	D.G.
DATE:	PROJECT NO:
11/10/2025	2025-005

DRAWING NO:

A-406

CAD FILE: 5005-A-406.DWG PLOT DATE: 12/3/2025

DOOR SCHEDULE

	DOOR NO.	TYPE	MAT'L	NOMINAL SIZE WIDTH	NOMINAL SIZE HEIGHT	NOMINAL SIZE THKNS.	GLASS TYPE	FRAME TYPE	FRAME MAT'L	JAMB TYPE	JAMB MAT'L	HEAD TYPE	HEAD MAT'L	THRESHOLD TYPE	THRESHOLD MAT'L	HARDWARE SET	FIRE RATING OR FRSG	REMARKS
GROUND FLOOR	V001A	-	-	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	-	DOORS NOT IN SCOPE
	V001B	-	-	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	-	DOORS NOT IN SCOPE
	V001C	-	-	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	-	DOORS NOT IN SCOPE
	V001D	-	-	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	-	DOORS NOT IN SCOPE
	V001E	-	-	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	-	DOORS NOT IN SCOPE
	V001F	-	-	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	-	DOORS NOT IN SCOPE
	V001G	-	-	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	-	DOORS NOT IN SCOPE
	V001H	-	-	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	-	DOORS NOT IN SCOPE
	C003	M	WD	EXIST	EXIST	EXIST	FRSG	F11	EXIST	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR AND HM FRAME
	ST5-0	F	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	ST5-1	D	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	120 MIN.	REPLACE GLASS IN EXISTING DOOR
	ST6-0	E	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	C005	M	WD	EXIST	EXIST	EXIST	FRSG	F11	EXIST	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR AND HM FRAME
	C006A	M	WD	EXIST	EXIST	EXIST	FRSG	F11	EXIST	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR AND HM FRAME
	024	L	WD	EXIST	EXIST	EXIST	FRSG	F14	EXIST	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR AND HM FRAME
	024A	P	WD	3' - 0"	7' - 0"	1 3/4"	FRSG	F4	HM	J-1	HM	H-1	HM	T-1	ALUM.	1	60 MIN.	FIRE RATING OF DOOR IS 45 MIN.
	024B	Q	WD	3' - 0"	7' - 0"	1 3/4"	FRSG	F6	HM	J-1	HM	H-1	HM	T-1	ALUM.	1	60 MIN.	FIRE RATING OF DOOR IS 45 MIN.
	024C	Q	WD	3' - 0"	7' - 0"	1 3/4"	TEMP	F8	HM	J-1	HM	H-1	HM	T-1	ALUM.	2	-	
	025A	R	WD	3' - 0"	7' - 0"	1 3/4"	FRSG	F13	HM	J-1	HM	H-1	HM	T-1	ALUM.	3	60 MIN.	FIRE RATING OF DOOR IS 45 MIN.
	C007	M	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	031A	G	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	120MIN.	REPLACE GLASS IN EXISTING DOOR
	031B	G	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	120 MIN.	REPLACE GLASS IN EXISTING DOOR
	031C	G	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	120 MIN.	REPLACE GLASS IN EXISTING DOOR
	031D	G	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	120 MIN.	REPLACE GLASS IN EXISTING DOOR
	031E	F	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	120 MIN.	REPLACE GLASS IN EXISTING DOOR
	031F	G	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	120MIN.	REPLACE GLASS IN EXISTING DOOR
	031G	G	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	120 MIN.	REPLACE GLASS IN EXISTING DOOR
	031H	G	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	120 MIN.	REPLACE GLASS IN EXISTING DOOR
	032	F	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	034A	E	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	034B	T	WD	(2) 3' - 0"	7' - 0"	1 3/4"	FRSG	F10	HM	J-2	HM	H-2	HM	T-1	ALUM.	4	120 MIN.	MAG DOOR HOLD OPEN TIED INTO FIRE ALARM
	034C	R	WD	3' - 0"	7' - 0"	1 3/4"	FRSG	F5	HM	J-2	HM	H-2	HM	T-1	ALUM.	1	120 MIN.	FIRE RATING OF DOOR IS 90 MIN.
	034D	D	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	1	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	034E	O	AL	9'-7"	8'-0"	1 3/4"	-	-	-	J-5	STL	-	-	-	-	5	-	
	034F	O	AL	8'-0"	8'-0"	1 3/4"	-	-	-	J-5	STL	-	-	-	-	5	-	
	034G	A	HM	3' - 0"	7' - 0"	1 3/4"	FRSG	F1	HM	J-3	HM	H-4	HM	T-1	ALUM.	1	60 MIN.	FIRE RATING OF DOOR IS 45 MIN.
	036	D	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	040	D	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	C010	E	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	120 MIN.	REPLACE GLASS IN EXISTING DOOR
	B08	C	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	-	REPLACE GLASS IN EXISTING DOOR
	B09	C	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	-	REPLACE GLASS IN EXISTING DOOR
	129	D	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
FIRST FLOOR	131	I	WD	EXIST	EXIST	EXIST	FRSG	F3	EXIST	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR AND HM FRAME
	132	I	WD	EXIST	EXIST	EXIST	FRSG	F3	EXIST	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR AND HM FRAME
	133	I	WD	EXIST	EXIST	EXIST	FRSG	F3	EXIST	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR AND HM FRAME
	134A	I	WD	EXIST	EXIST	EXIST	FRSG	F3	EXIST	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR AND HM FRAME
	134B	I	WD	EXIST	EXIST	EXIST	FRSG	F3	EXIST	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR AND HM FRAME
	C100A	G	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	120 MIN.	REPLACE GLASS IN EXISTING DOOR
	C100B	M	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	C102	L	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	C107	G	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	ST6-1	E	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	-	REPLACE GLASS IN EXISTING DOOR
	138	R	WD	3' - 0"	7' - 0"	1 3/4"	TEMP	F1	HM	J-1	HM	H-1	HM	T-1	ALUM.	2	-	
	143	E	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	144	D	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	145A	E	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	145B	E	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	ST9-1	D	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	146A	G	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	146B	G	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	146C	F	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	146D	G	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	146E	G	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	146F	F	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	147	I	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	C103A	M	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	C103B	E	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	C103C	G	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	150	I	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	151	I	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	153D	L	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	ST8-1	L	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	154A	L	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	120 MIN.	REPLACE GLASS IN EXISTING DOOR
	154B	L	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	120 MIN.	REPLACE GLASS IN EXISTING DOOR
	C106	B	WD	EXIST	EXIST	EXIST	FRSG	F12	EXIST	J-2	HM	H-2	HM	T-1	ALUM.	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR AND HM FRAME
	C108	E	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	-	REPLACE GLASS IN EXISTING DOOR
	C115A	M	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	C115B	M	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	116	F	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	ST4-1	I	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	120 MIN.	REPLACE GLASS IN EXISTING DOOR
	160A	E	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	160B	E	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	164	F	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	166	I	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	171	H	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	174	F	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	178	E	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
SECOND FLOOR	201	F	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	ST9-2	D	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	215	F	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	229A	I	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	229B	I	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	C200	G	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	120 MIN.	REPLACE GLASS IN EXISTING DOOR
	ST8-2	K	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	236	I	WD	EXIST	EXIST	EXIST	FRSG	-	-	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR
	ST10-2	M	WD	EXIST	EXIST	EXIST	FRSG	F11	EXIST	-	-	-	-	-	-	-	60 MIN.	REPLACE GLASS IN EXISTING DOOR AND HM FRAME

DOOR & HARDWARE NOTES

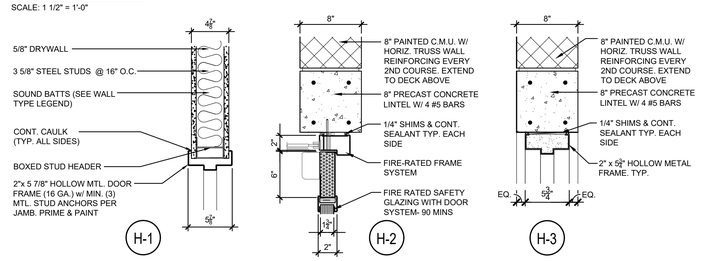
1. GENERAL CONTRACTOR SHALL VERIFY ALL DOOR / FRAME SIZES, DIMENSIONS, DOOR SWINGS, DOOR / FRAME MATERIALS, DOOR / FRAME TYPES, FRAME WIDTH AND DEPTH, THROAT DEPTH AND FRAME HEAD HEIGHT.
2. GENERAL CONTRACTOR SHALL VERIFY AND COORDINATE ALL DOOR HARDWARE REQUIREMENTS FOR ALL FRAMES INDICATED. ALL SUBMITTALS ISSUED TO THE ARCHITECT SHALL REFLECT THIS FIELD VERIFIED COORDINATION.
3. ALL FRAMES SHALL BE SHIMMED / CAULKED IN ACCORDANCE WITH ACCEPTED PRACTICES.
4. ALL EXTERIOR HOLLOW METAL DOORS / FRAMES INDICATED SHALL BE GALVANIZED STEEL AND ALL EXTERIOR DOORS AND FRAMES SHALL BE INSULATED.
5. ALL HOLLOW METAL FRAMES IN MASONRY WALLS ARE TO BE GROUTED SOILD, INCLUDING HEADS.
6. ANY / ALL WOOD DOORS ARE TO BE SOLID CORE. ALL WOOD DOOR EDGES SHALL BE FACTORY FINISHED TO MATCH DOOR FACE VENEER / FINISH.
7. SEE SPECIFICATIONS FOR HARWARE SETS FOR ALL DOORS.
8. REFER TO FINISH SCHEDULE FOR FINISHES.
9. REFER TO FLOOR PLANS FOR APPROPRIATE DOOR SWINGS.
10. ALL HOLLOW METAL FRAMES SHALL BE WELDED, NO KNOCK-DOWN FRAMES WILL BE ACCEPTED.
11. GENERAL CONTRACTOR SHALL VERIFY ALL THRESHOLDS, DOOR UNDERCUTS/LOUVER SIZES, W/ NEW AND EXISTING DOORS.
12. THE USE OF THRU-BOLTING FOR ANY DOOR HARDWARE WILL NOT BE ACCEPTED.
13. GENERAL CONTRACTOR SHALL COORDINATE AND VERIFY DOORS / FRAMES THAT REQUIRE CONDUITS OR WIRING INSTALLATION FOR FUTURE ELECTRICAL CONNECTIONS REQUIRED FOR HARDWARE, LIGHTING, ETC.
14. ALL EXTERIOR DOORS/FRAMES INDICATED SHALL BE HOLLOW METAL AND ALL EXTERIOR DOORS/FRAMES SHALL BE INSULATED AND FRAMES TO BE THERMALLY BROKEN.
15. ALL SEALANTS / CAULK TO BE PICK-RESISTANT CAULK AS MANUFACTURED BY: SUREBOND SB-190 EVERSEAL, BASF MASTEREAL CR 190 OR PECORA DYNAFLEX SC.
16. PROVIDE ACCESS CONTROL.
17. PROVIDE HANDS-FREE OPERATION.

MATERIALS

HOLLOW METAL - H.M.
ALUMINUM - AL., ALUM.
WOOD - WD
STEEL - STL
LAMINATED SAFETY GLASS - LAM
FIRE RATED SAFETY GLASS - FRS
TEMPERED SAFETY GLASS - TEMP

HEAD TYPES

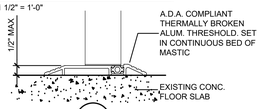
SCALE: 1 1/2" = 1'-0"



H-1 H-2 H-3 H-4

THRESHOLD TYPES

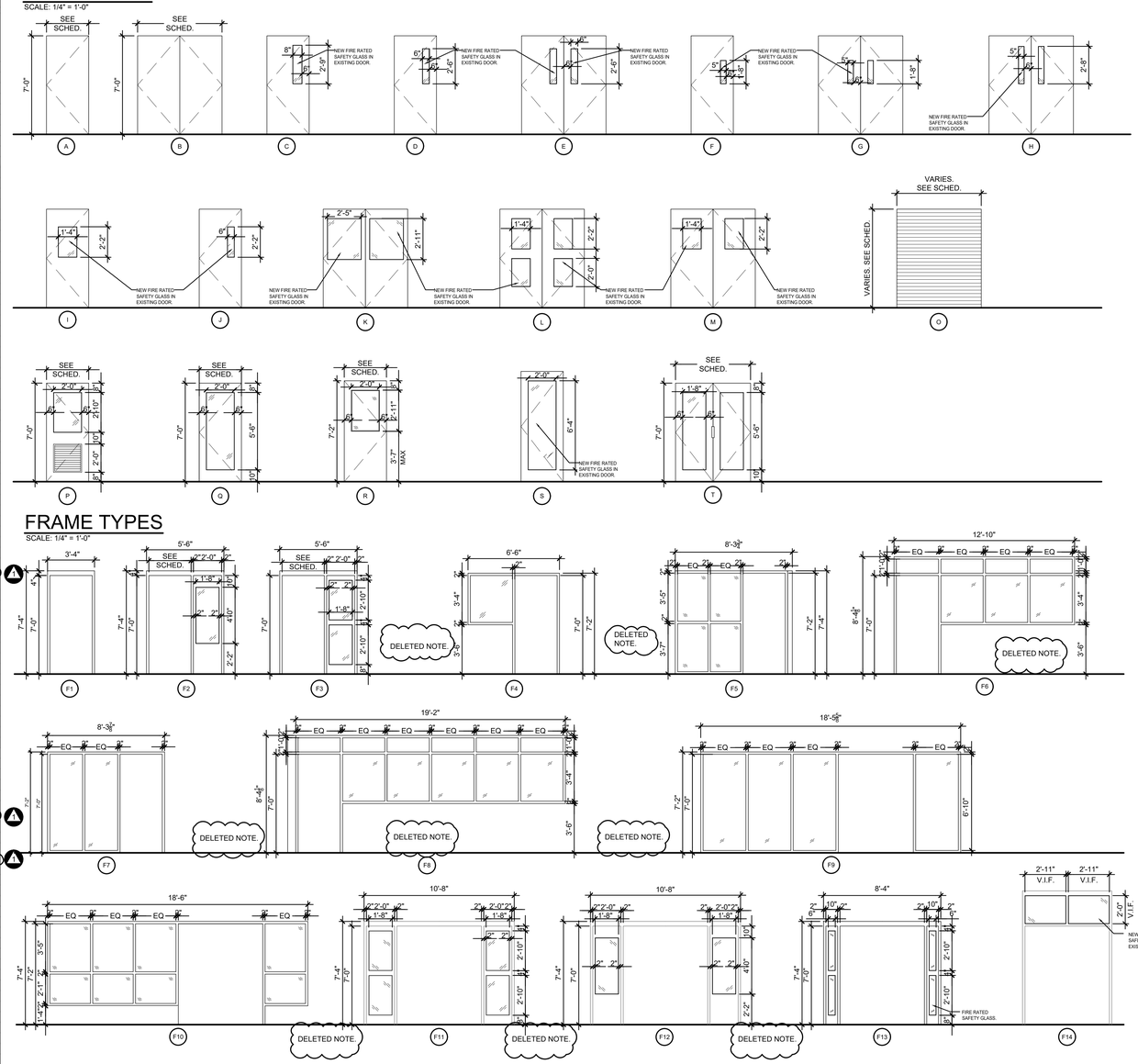
SCALE: 1 1/2" = 1'-0"



T-1

DOOR TYPES

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



A B C D E F G H I J K L M N O P Q R S T

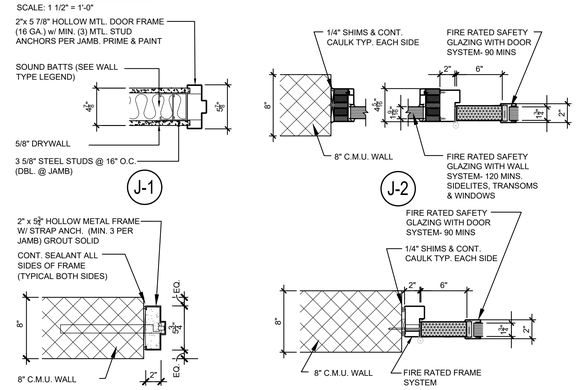
FRAME TYPES

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

F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12 F13 F14

JAMB TYPES

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



J-1 J-2 J-3 J-4 J-5

HIGHLAND ASSOCIATES
architecture | engineering | interior design
102 Highland Avenue
Clarks Summit, PA 18411
570-586-4334
www.highlandassociates.com
New York • Pennsylvania

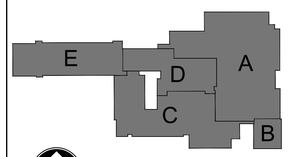
REVISION NO:

A	ADDENDUM #1	11/21/2025

- DOORS 024A, 024B, 024C HEAD DETAIL UPDATED TO H-1
- ADDED DOOR C-108 TO SCHEDULE.
- REVISED DOOR ST8-1 AND C-102 TO REPLACE GLASS IN EXISTING DOOR ONLY - NO GLASS IN FRAME.
- ADDED DOOR TYPES TO SCHEDULE AT DOORS C010, B08, B09.
- DELETED NOTES AT FRAME TYPES. SEE DOOR SCHEDULE FOR MATERIAL TYPE AND FIRE RATINGS.

A	ADDENDUM #3	12/03/2025

- DOOR 025A MATERIAL TYPE CHANGED TO W/OOD IN DOOR SCHEDULE
- REVISED FIRE RATINGS TO FIRE RATING OF FRSG



KEY PLAN

BID DOCUMENTS
SED # 08-01-01-04-0-001-019

PROJECT TITLE:

Afton Central School District
29 Academy St, Afton, NY 13730

2024 Capital Project
Phase 1

SEALS:

DRAWING TITLE:

DOOR SCHEDULE, TYPES & DETAILS

DRAWN BY:	CHECKED BY:
A.L. / T.M. / A.G.	D.G.
DATE:	PROJECT NO:
11/10/2025	2025-005

DRAWING NO:

A-601

CAD FILE: 5005-A-601.DWG PLOT DATE: 12/3/2025

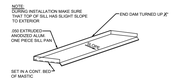
WINDOW LEGEND:

R	RESCUE WINDOW TYPICAL
R / SLIDER	RESCUE WINDOW TO PROVIDE MIN. CLEAR OPENING OF AT LEAST 6 SQ. FT. AND MIN. DIM. OF 24". COMPLY WITH NYSED REQUIREMENT. 7.5 SQ. FT. CLEAR AREA PROVIDED.
5" MIN. MATCH EXISTING SIZE. RESCUE WINDOW 37 MIN. MATCH EXISTING	STICKER TO HAVE BRIGHT YELLOW BACKGROUND W/ BLACK LETTERS TEXT TO BE READABLE FROM BOTH SIDES OF WINDOW. ANY WINDOW COVERINGS ALSO TO HAVE LABELS AND WINDOW OPERATING INSTRUCTIONS IF NOT READILY APPARENT.

SCALE: N.T.S.

NOTE:
REFER TO DRAWINGS FOR RESCUE WINDOW LOCATIONS

NOTE:
1. CONTRACTOR/WINDOW MFG. TO FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION.
2. PROVIDE ALUM. SILL FLASHING BY WINDOW MFGR. TO MATCH EXISTING. FIELD VERIFY ALL EXISTING CONDITIONS.
3. ALL EXISTING INTERIOR WINDOW SILLS TO MATCH EXISTING. WINDOW MFGR TO PROVIDE ALUM. EXTENDER TRIM @ HEAD, JAMB, AND SILL TO MATCH WINDOW SYSTEM.
4. PROVIDE CONTINUOUS SEALANT AT HEAD, JAMBS AND SILL - EXTERIOR AND INTERIOR.



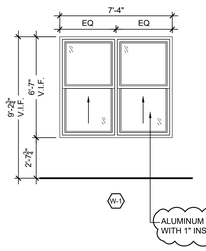
TYPICAL SILL PAN ISO- METRIC DETAIL @ WINDOWS
SCALE: N.T.S.

EXTERIOR WINDOW TYPES

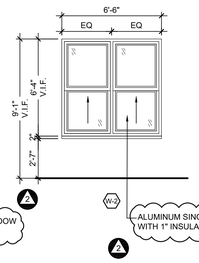
BUILDING PART E 1ST FLOOR (25). ALTERNATE #2

BUILDING PART E 2ND FLOOR (25). ALTERNATE #2

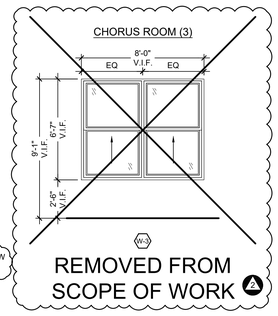
LEARNING COMMONS (6)



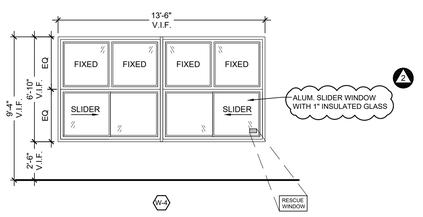
WELDING ROOM (2)



CHORUS ROOM (3)

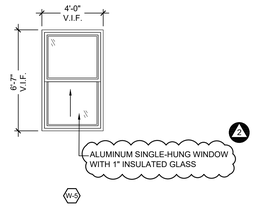


ESPORTS (1)

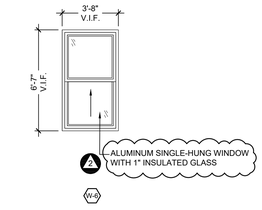


BUILDING PART "E' 1ST FLOOR (4). ALTERNATE #2

BUILDING PART "E" 2ND FLOOR (4). ALTERNATE #2

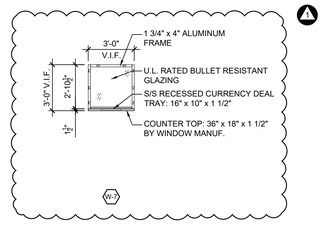


BUILDING PART "E" SECOND FLOOR (2). ALTERNATE #2



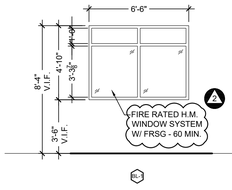
ENTRY VESTIBULE V001 (1)

ELEMENTARY OFFICE (1)

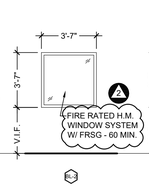


BORROWED LITE TYPES:

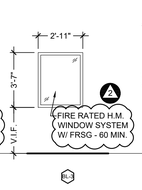
CORRIDOR 4 - C004 (1)



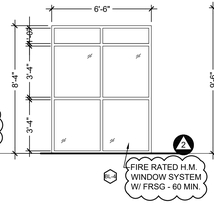
OFFICE - 153D (1)



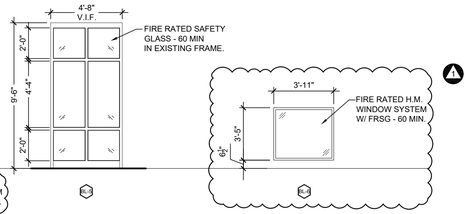
OFFICE - 153D (1)

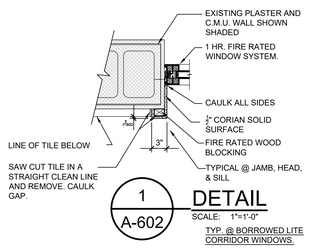


COMPUTER LAB - 024B (1)

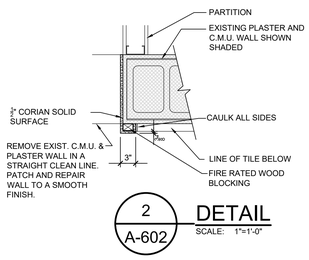


STEAM LAB - 024 (2)

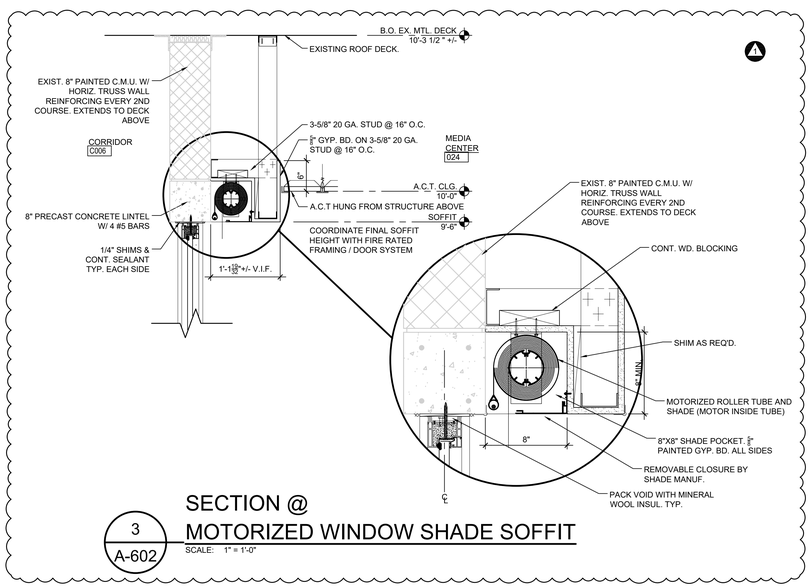




1 / A-602 DETAIL
SCALE: 1"=1'-0"
TYP. @ BORROWED LITE CORRIDOR WINDOWS.



2 / A-602 DETAIL
SCALE: 1"=1'-0"



3 / A-602 SECTION @ MOTORIZED WINDOW SHADE SOFFIT
SCALE: 1" = 1'-0"

HIGHLAND ASSOCIATES
architecture | engineering | interior design
102 Highland Avenue
Clarks Summit, PA 18411
570-586-4334
www.highlandassociates.com
New York • Pennsylvania

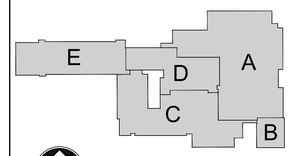
REVISION NO:

ADDENDUM #1	11/21/2025

- ADDED MOTORIZED WINDOW SHADE SOFFIT SECTION DETAIL TO THIS SHEET.
- ADDED WINDOW TYPE W-7 TRANSACTION WINDOW.
- ADDED BORROWED LITE BL-6 AT STEAM LAB DISPLAY CASE.

ADDENDUM #3	12/09/2025

- UPDATED NOTE TO CLARIFY WINDOW AND BORROWED LITE MATERIAL TYPE.
- EXTERIOR WINDOW TYPE W-3 REMOVED FROM SCOPE OF WORK.



NORTH
KEY PLAN

BID DOCUMENTS
SED # 08-01-01-04-0-001-019

PROJECT TITLE:

Afton Central School District
29 Academy St, Afton, NY 13730

2024 Capital Project
Phase 1

SEALS:

DRAWING TITLE:

WINDOW TYPES AND DETAILS

DRAWN BY:	CHECKED BY:
T.M.	D.G.
DATE:	PROJECT NO:
11/10/2025	2025-005

DRAWING NO:

A-602

CAD FILE: 5005-A-602.DWG PLOT DATE: 12/3/2025