ADDENDUM NO. 2

TO: PLANS AND SPECIFICATIONS FOR STATE OF MISSOURI

Troop E Headquarters
Renovate Exterior, Headquarters Bldg.,
4947 US 67 North,
Poplar Bluff, MO 63901
PROJECT NO. R2335-01

Bid Opening Date: 1:30 PM, June 17, 2025 (*Not Changed*)

Bidders are hereby informed of the following:

SPECIFICATION CHANGES*:*

1. Section 000110 Table of Contents
    a. REPLACE Section with attached update.

2. Section 012200 Unit Prices
    a. REPLACE Section with attached update.

3. Section 012600 Contract Modification Procedures
    a. REPLACE Section with attached update.

4. Section 013100 Coordination
    a. REPLACE Section with attached update.

5. Section 013115 Project Management Communications
    a. REPLACE Section with attached update.

6. Section 013300 Submittals
    a. REPLACE Section with attached update.
    b. Required submittals have been updated.

7. Section 013513.25 Site Security and Health Requirements (MSHP)
    a. REPLACE Section with attached update.

8. Section 015000 Construction Facilities and Temporary Controls
    a. REPLACE Section with attached update.

9. Section 017900 – Demonstration and Training
    a. ADD Section.

10. Section 081113 Hollow Metal Doors and Frames
    a. ADD Section.

11. Section 084113 Aluminum-Framed Entrances and Storefronts
    a. ADD 2.1, B: Manufacturers: Subject to compliance with requirements, provide products by one of the following:
        i. Kawneer Company, Inc.

ii. Oldcastle Building Envelope
iii. United States Aluminum
iv. Tubelite, Inc.
v. Vistawall Architectural Products
vi. EFCO Corporation
vii. Arch Aluminum & Glass Co., Inc.

b. CHANGE 2.8, A. Aluminum Finishes – Finish of Aluminum Components:
    i. Finish of all exposed areas of aluminum windows and components shall be done in accordance with the appropriate AAMA Voluntary Guide Specification shown.
        a. AA-M10C21A41, Class I, AAMA 611, Clear Anodized (match existing)

12. Section 088000 Glazing
    a. OMIT – Glass Type GL-1.
    b. CHANGE – Glass Type GL-2:
        i. Glazing shall be equal to Solarban 60 Low e Insulated Glass.
        ii. Tinting to be selected by Architect.

13. Appendix A – Hazardous Materials Inspection Report
    a. ADD Section.

14. Section 088100 Spandrel Glass Panels
    a. OMIT Section in its entirety.
    b. Reference Section 088000 Glazing.

DRAWING CHANGES:

1. SHEET C-100

    a. OMIT ADA designated markings at north parking area.
    b. OMIT Keyed Note 5 at front entrance of building.
    c. ADD designated ADA parking areas, markings and signage at south parking lot / entrance.
    d. OMIT ADA designated signage at south officer parking. Dedicated path and striping to remain for existing access walk.
    e. ADD dimension at east of building.
    f. ADD new expansion joint (Keyed Note 3) along drive (south of Maintenance Garage).

2. SHEET C-101

    a. Detail Plan “5” - CHANGE Keyed Note 1 to Keyed Note 4 at walk.
    b. Detail Plan “6” – CHANGE dimensions as shown and omit striping.

3. SHEET A-001

    a. ADD Keyed Note 5 - Demolition of existing steel frame and door at south of building.

4. SHEET A-002

    a. ADD Keyed Note 8 - Demolition of existing interior storefront system.

5. SHEET A-003

    a. ADD Keyed Note 2 – Clarification of existing roof system to remain.
    b. ADD existing antenna and support stand (Keyed Note 12) not shown to roof.
    c. ADD existing HVAC DOAS Unit not shown to roof.

6. SHEET A-004

    a. ADD Keyed Note 7 – Remove existing door and frame.

7. SHEET A-100

    a. ADD Keyed Note 3 – Add new steel door and frame.

8. SHEET A-102

    a. ADD new steel door and frame, Door 001A.
    b. CLARIFICATION – Wall Elevation 1 references ballistic rated frame, glazing, panels, transaction and door. All components by Contractor. Contractor's option to provide components or complete system by Total Security Solutions or other manufacturer meeting the specifications.

9. SHEET A-201

    a. CHANGE General Note 7 – Existing roof penetrations verification.
    b. ADD General Note 9 – Existing steel deck clarification.
    c. ADD General Note 10 – Flash of all roof penetrations clarification.
    d. ADD Keyed Note 2 – Clarification of existing roof system to remain.
    e. ADD existing antenna and support stand (Keyed Note 12) not originally shown. REVISE Keyed Note 12 as shown.
    f. REVISE Keyed Note 13 as shown for new roof clarification.
    g. REVISE Keyed Note 14 as shown for new cricket clarification.

10. SHEET A-301

    a. Glazing Schedule – Revised.
        i. G1 not used.
        ii. Extent of alternates clarified to reflect all glazing.
    b. REVISE Keyed Note 1 to replace "Curtainwall" with "Storefront" System.
    c. OMIT Keyed Note 6.
    d. ADD Keyed Note 7 Alternate for new paint finish extents clarification.
    e. ADD Keyed Note 8 for new steel door and frame.

11. SHEET A-401

    a. CHANGE all references to "Curtainwall" System to "Storefront" System.
    b. ADD detail note for aluminum sub-sill. (typical)

GENERAL:

1. Please contact April Howser, Contract Specialist, at 573-751-0053 or April.Howser@oa.mo.gov for questions about bidding procedures, MBE\WBE\SDVE Goals, and other submittal requirements.

2. The deadline for technical questions is June 3, 2025, at Noon.

3. Changes to, or clarification of, the bid documents are only made as issued in the addenda.

4. All correspondence with respect to this project must include the State of Missouri project number as indicated above.

5. Current Plan Holders list available online at: *Bid Listing/ Electronic Plans (Projects Currently Bidding) | Office of Administration (mo.gov)* R233501 - Troop E Headquarters-Renovate Exterior, Headquarters Building

6. Prospective Bidders contact American Document Solutions, 1400 Forum Blvd Suite 7A, Columbia MO 65203, 573-446-7768 to order official plans and specifications.

7. All bids shall be submitted on the bid form without additional terms and conditions, modifications, or stipulations. Each space on the bid form shall be properly filled including a bid amount for the alternates. Failure to do so will result in rejection of the bid.

8. MBE/WBE/SDVE participation requirements can be found in DIVISION 00. The MBE/WBE/SDVE participation goals are 10%/10%/3%, respectively. Only certified firms as of the bid opening date can be used to satisfy the MBE/WBE/SDVE participation goals for this project. If a bidder is unable to meet a participation goal, a Good Faith Effort Determination Form must be completed. Failure to complete this process will result in rejection of the bid.

ATTACHMENTS:

1. Revised Specification Section 000110 - Table of Contents
2. Revised Specification Section 012200 – Unit Prices
3. Revised Specification Section 012600 – Contract Modification Procedures
4. Revised Specification Section 013100 – Coordination
5. Revised Specification Section 013115 – Project Management Communications
6. Revised Specification Section 013300 – Submittals
7. Revised Specification Section 013513.25 – Site Security and Health Requirements (MSHP)
8. Revised Specification Section 015000 – Construction Facilities and Temporary Controls
9. Specification Section 017900 – Demonstration and Training
10. Specification Section 081113 - Hollow Metal Doors and Frames
11. Revised Specification Section 084113 – Aluminum-Framed Entrances and Storefronts
12. Revised Specification Section 088000 – Glazing
13. Appendix A – Hazardous Materials Inspection Report
14. Revised Sheets C-100, C-101, A-001, A-002, A-003, A-004, A-100, A-102, A-201, A-301 and A-401

By the Order of:

Fred L. Decker Jr., Project Manager
Division of Facilities Management,
Design and Construction
June 11, 2025

END ADDENDUM NO. 2

Addendum #2

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ADDENDUM NO. 02

SECTION 012200 – UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

B. Quantities of Units to be included in the Base Bid are indicated in Section 004322 – Unit Prices.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for Unit Prices.

B. Related Sections include the following:

1. Division 1 Section "Allowances" for procedures for using Unit Prices to adjust quantity allowances.

2. Division 1 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders.

1.3 DEFINITIONS

A. Unit Price is an amount proposed by bidders, stated on the Bid Form Attachment 004322 a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4 PROCEDURES

A. Unit Prices include all necessary material plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.

B. Measurement and Payment: Refer to individual Specification Sections for work that requires establishment of Unit Prices. Methods of measurement and payment for Unit Prices are specified in those Sections.

C. Owner reserves the right to reject Contractor's measurement of Work in-place that involves use of established Unit Prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.

D. List of Unit Prices: A list of Unit Prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each Unit Price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 LIST OF UNIT PRICES

A. Unit Price No. 1 Replacing damaged or deteriorated 2x wood blocking under existing parapet cap system.

1. Description: Remove damaged 2x wood blocking (assume 2 x 8) and replace with new according to Sections 061000 Rough Carpentry. Apply TPO roofing membrane over new blocking according to Section 075423 TPO Roof System
2. Unit of Measurement: Linear feet.
3. Base Bid Quantity: One (1) 2 x 8 x 8'-0".

END OF SECTION 012200

SECTION 012600 – CONTRACT MODIFICATION PROCEDURES

ADDENDUM NO. 02

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section specifies administrative and procedural requirements for handling and processing Contract Modifications.

B. Related Sections include the following:

1. Division 1, Section 012100 "Allowances" for procedural requirements for handling and processing Allowances.
2. Division 1, Section 012200 "Unit Prices" for administrative requirements for using Unit Prices.
3. Division 1, Section 013115 “Project Management Communications” for administrative requirements for communications.
4. Division 0, Section 007213, Article 3.1 "Acceptable Substitutions" for administrative procedures for handling Requests for Substitutions made after Contract award.
5. Division 0, Section 007213, Article 4.0 "Changes in the Work" for Change Order requirements.

1.3 REQUESTS FOR INFORMATION

A. In the event that the Contractor or Subcontractor, at any tier, determines that some portion of the Drawings, Specifications, or other Contract Documents requires clarification or interpretation, the Contractor shall submit a “Request for Information” (RFI) in writing to the Designer. A RFI may only be submitted by the Contractor and shall only be submitted on the RFI forms provided by the Owner. The Contractor shall clearly and concisely set forth the issue for which clarification or interpretation is sought and why a response is needed. In the RFI, the Contractor shall set forth an interpretation or understanding of the requirement along with reasons why such an understanding was reached.

B. Responses to RFI shall be issued within ten (10) working days of receipt of the Request from the Contractor unless the Designer determines that a longer time is necessary to provide an adequate response. If a longer time is determined necessary by the Designer, the Designer will, within five (5) working days of receipt of the request, notify the Contractor of the anticipated response time. If the Contactor submits a RFI on a time sensitive activity on the current project schedule, the Contractor shall not be entitled to any time extension due to the time it takes the Designer to respond to the request provided that the Designer responds within the ten (10) working days set forth above.

C. Responses from the Designer will not change any requirement of the Contract Documents. In the event the Contractor believes that a response to a RFI will cause a change to the requirements of the Contract Document, the Contractor shall give written

notice to the Designer requesting a Change Order for the work. Failure to give such written notice within ten (10) working days, shall waive the Contractor's right to seek additional time or cost under Article 4, "Changes in the Work" of the General Conditions.

1.4 MINOR CHANGES IN THE WORK

A. Designer will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Amount or the Contract Time, on "Designer's Supplemental Instructions" (DSI).

1.5 PROPOSAL REQUESTS

A. The Designer or Owner Representative will issue a detailed description of proposed Changes in the Work that may require adjustment to the Contract Amount or the Contract Time. The proposed Change Description will be issued using the "Request for Proposal" (RFP) form. If necessary, the description will include supplemental or revised Drawings and Specifications.

1. Proposal Requests issued by the Designer or Owner Representative are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.

2. Within ten (10) working days after receipt of Proposal Request, submit a proposal for the cost adjustments to the Contract Amount and the Contract Time necessary to execute the Change. The Contractor shall submit his proposal on the appropriate Change Order Detailed Breakdown form. Subcontractors may use the appropriate Change Order Detailed Breakdown form or submit their proposal on their letterhead provided the same level of detail is included. All proposals shall include:

   a. A detailed breakdown of costs per Article 4.1 of the General Conditions.

   b. If requesting additional time per Article 4.2 of the General Conditions, include an updated Contractor's Construction Schedule that indicates the effect of the Change including, but not limited to, changes in activity duration, start and finish times, and activity relationship.

1.6 CHANGE ORDER PROCEDURES

A. On Owner's approval of a Proposal Request, the Designer or Owner Representative will issue a Change Order for signatures of Owner and Contractor on the "Change Order" form.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

ADDENDUM NO. 02

SECTION 013100 – COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes administrative provisions for coordinating construction operations on Projects including, but not limited to, the following:

1. Coordination Drawings.
2. Administrative and supervisory personnel.
3. Project meetings.

B. Each Contractor shall participate in coordination requirements. Certain areas of responsibility will be assigned to a specific Contractor.

C. Related Sections include the following:

1. Division 1, Section 013200 "Schedules" for preparing and submitting Contractor's Construction Schedule.
2. Articles 1.8.B and 1.8.C of Section 007213 "General Conditions" for coordinating meetings onsite.
3. Article 5.4.H of Section 007213 "General Conditions" for coordinating Closeout of the Contract.

1.3 COORDINATION

A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations included in different Sections, which depend on each other for proper installation, connection, and operation.

B. Coordination: Each Contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the Work. Each Contractor shall coordinate its operations with operations included in different Sections that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components with other Contractors to ensure maximum accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.
4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required

maintenance, service, and repair of all components including mechanical and electrical.

C. Prepare memoranda for distribution to each party involved outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner and separate Contractors if coordination of their Work is required.

D. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other Contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's Construction Schedule.
2. Preparation of the Schedule of Values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Preinstallation conferences.
7. Startup and adjustment of systems.
8. Project Closeout activities.

E. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.

1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. Refer to other Sections for disposition of salvaged materials that are designated as Owner's property.

1.4 SUBMITTALS

A. Coordination Drawings: Prepare Coordination Drawings if limited space availability necessitates maximum utilization of space for efficient installation of different components or if coordination is required for installation of products and materials fabricated by separate entities.

B. Key Personnel Names: Within fifteen (15) work days of starting construction operations, submit a list of key personnel assignments including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.

1. Post copies of list in Project meeting room, in temporary field office, and by each temporary telephone. Keep list current at all times.

1.5 PROJECT MEETINGS

A. The Owner’s Construction Representative will schedule a Pre-Construction Meeting prior to beginning of construction. The date, time, and exact place of this meeting will be determined after Contract Award and notification of all interested parties. The

Contractor shall arrange to have the Job Superintendent and all prime Subcontractors present at the meeting. During the Pre-Construction Meeting, the construction procedures and information necessary for submitting payment requests will be discussed and materials distributed along with any other pertinent information.

1. Minutes: Designer will record and distribute meeting minutes.

B. Progress Meetings: The Owner's Construction Representative will conduct Monthly Progress Meetings as stated in Articles 1.8.B and 1.8.C of Section 007213 "General Conditions".

1. Minutes: Designer will record and distribute to Contractor the meeting minutes.

C. Preinstallation Conferences: Contractor shall conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.

1. Attendees: Installer and representatives of Manufacturers and Fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Designer and Construction Representative of scheduled meeting dates.

2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration including requirements for the following:

    a. Contract Documents

    b. Options

    c. Related RFIs

    d. Related Change Orders

    e. Purchases

    f. Deliveries

    g. Submittals

    h. Review of mockups

    i. Possible conflicts

    j. Compatibility problems

    k. Time schedules

    l. Weather limitations

    m. Manufacturer's written recommendations

    n. Warranty requirements

    o. Compatibility of materials

    p. Acceptability of substrates

    q. Temporary facilities and controls

    r. Space and access limitations

    s. Regulations of authorities having jurisdiction

    t. Testing and inspecting requirements

u. Installation procedures

v. Coordination with other Work

w. Required performance results

x. Protection of adjacent Work

y. Protection of construction and personnel

3. Contractor shall record significant conference discussions, agreements, and disagreements including required corrective measures and actions.

4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.

5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

6. Revise paragraph below if Project requires holding progress meetings at different intervals. Insert special intervals such as "every third Tuesday" to suit special circumstances.

7. Project name

8. Name and address of Contractor

9. Name and address of Designer

10. RFI number including RFIs that were dropped and not submitted

11. RFI description

12. Date the RFI was submitted

13. Date Designer's response was received

14. Identification of related DSI or Proposal Request, as appropriate

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

ADDENDUM NO. 02

SECTION 013115 - PROJECT MANAGEMENT COMMUNICATIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

B. Division 1, Section 013300 - Submittals

C. Division 1, Section 012600 – Contract Modification Procedures

1.2 SUMMARY

A. Project Management Communications: The Contractor shall use the Internet web-based project management communications tool, Trimble Unity Construct® (Formerly eBuilder) ASP software, and protocols included in that software during this project. The use of project management communications as herein described does not replace or change any contractual responsibilities of the participants.

1. Project management communications is available through Trimble Unity Construct® (Formerly eBuilder) as provided by "Trimble Unity Construct®" in the form and manner required by the Owner.
2. The project communications database is on-line and fully functional. User registration, electronic and computer equipment, and Internet connections are the responsibility of each project participant. The sharing of user accounts is prohibited

B. Support: Trimble Unity Construct® (Formerly eBuilder) will provide on-going support through on-line help files.

C. Copyrights and Ownership: Nothing in this specification or the subsequent communications supersedes the parties' obligations and rights for copyright or document ownership as established by the Contract Documents. The use of CAD/BIM files, processes or design information distributed in this system is intended only for the project specified herein.

D. Purpose: The intent of using Trimble Unity Construct®(Formerly eBuilder) is to improve project work efforts by promoting timely initial communications and responses. Secondly, to reduce the number of paper documents while providing improved record keeping by creation of electronic document files

E. Authorized Users: Access to the web site will be by individuals who are authorized users.

1. Individuals shall complete the Trimble Unity Construct (Formerly eBuilder) New Company/User Request Form located at the following web site: https://oa.mo.gov/facilities/vendor-links/contractor-forms. Completed forms shall be emailed to the following email address: OA.FMDCE-BuilderSupport@oa.mo.gov.
2. Authorized users will be contacted directly and assigned a temporary user password.
3. Individuals shall be responsible for the proper use of their passwords and access to data as agents of the company in which they are employed.

F. Administrative Users: Administrative users have access and control of user licenses and all posted items. DO NOT POST PRIVATE OR YOUR COMPANY CONFIDENTIAL ITEMS IN THE DATABASE! Improper or abusive language toward any party or repeated posting of items intended to deceive or disrupt the work of the project will not be tolerated and will result in deletion of the offensive items and revocation of user license at the sole discretion of the Administrative User(s).

G. Communications: The use of fax, email and courier communication for this project is discouraged in favor of using Trimble Unity Construct® (Formerly eBuilder) to send messages. Communication functions are as follows:
1. Document Integrity and Revisions:
   a. Documents, comments, drawings and other records posted to the system shall remain for the project record. The authorship time and date shall be recorded for each document submitted to the system. Submitting a new document or record with a unique ID, authorship, and time stamp shall be the method used to make modifications or corrections.
   b. The system shall make it easy to identify revised or superseded documents and their predecessors.
   c. Server or Client-side software enhancements during the life of the project shall not alter or restrict the content of data published by the system. System upgrades shall not affect access to older documents or software.
2. Document Security:
   a. The system shall provide a method for communication of documents. Documents shall allow security group assignment to respect the contractual parties communication except for Administrative Users. DO NOT POST PRIVATE OR YOUR COMPANY CONFIDENTIAL ITEMS IN THE DATABASE!
3. Document Integration:
   a. Documents of various types shall be logically related to one another and discoverable. For example, requests for information, daily field reports, supplemental sketches and photographs shall be capable of reference as related records.
4. Reporting:
   a. The system shall be capable of generating reports for work in progress, and logs for each document type. Summary reports generated by the system shall be available for team members.
5. Notifications and Distribution:

a. Document distribution to project members shall be accomplished both within the extranet system and via email as appropriate. Project document distribution to parties outside of the project communication system shall be accomplished by secure email of outgoing documents and attachments, readable by a standard email client.

6. Required Document Types:
   a. RFI, Request for Information.
   b. Submittals, including record numbering by drawing and specification section.
   c. Transmittals, including record of documents and materials delivered in hard copy.
   d. Meeting Minutes.
   e. Application for Payments (Draft or Pencil).
   f. Review Comments.
   g. Field Reports.
   h. Construction Photographs.
   i. Drawings.
   j. Supplemental Sketches.
   k. Schedules.
   l. Specifications.
   m. Request for Proposals
   n. Designer's Supplemental Instructions
   o. Punch Lists

H. Record Keeping: Except for paper documents, which require original signatures and large format documents (greater than 8½ x 11 inches), all other 8½ x 11 inches documents shall be submitted by transmission in electronic form to the Trimble Unity Construct® (Formerly eBuilder) web site by licensed users.
   a. The Owner and his representatives, the Designer and his consultants, and the Contractor and his Subcontractors and suppliers at every tier shall respond to documents received in electronic form on the web site and consider them as if received in paper document form.
   b. The Owner and his representatives, the Designer and his consultants, and the Contractor and his Subcontractors and suppliers at every tier reserves the right to and shall reply or respond by transmissions in electronic form on the web site to documents actually received in paper document form.
   c. The Owner and his representatives, the Designer and his consultants, and the Contractor and his Subcontractors and suppliers at every tier reserves the right to and shall copy any paper document into electronic form and make same available on the web site.

I. Minimum Equipment and Internet Connection: In addition to other requirements specified in this Section, the Owner and his representatives, the Construction Manager and his representatives, the Architect and his consultants, and the Contractor and his sub-contractors and suppliers at every tier required to have a user license(s) shall be responsible for the following:

1. Providing suitable computer systems for each licensed user at the users normal work location[1] with high-speed Internet access, i.e. DSL, local cable company's Internet connection, or T1 connection.
2. Each of the above referenced computer systems shall have the following minimum system[2] and software requirements:
    a. Desktop configuration (Laptop configurations are similar and should be equal to or exceed desktop system.)
        1) Operating System: Windows XP or newer
        2) Internet Browser: Internet Explorer 6.01SP2+ (Recommend IE7.0+)
        3) Minimum Recommend Connection Speed: 256K or above
        4) Processor Speed: 1 Gigahertz and above
        5) RAM: 512 mb
        6) Operating system and software shall be properly licensed.
        7) Internet Explorer version 7 (current version is a free distribution for download). This specification is not intended to restrict the host server or client computers provided that industry standard HTTP clients may access the published content.
        8) Adobe Acrobat Reader (current version is a free distribution for download).
        9) Users should have the standard Microsoft Office Suite (current version must be purchased) or the equivalent.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable.)

END OF SECTION 013115

[1] The normal work location is the place where the user is assigned for more than one-half of his time working on this project.
[2] The minimum system herein will not be sufficient for many tasks and may not be able to process all documents and files stored in the Trimble Unity Construct® (Formerly eBuilder) Documents area.

ADDENDUM NO. 02

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

B. Division 1, Section 013115 “Project Management Communications” for administrative requirements for communications.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for submittals required for performance of the Work including the following:

1. Shop Drawings
2. Product Data
3. Samples
4. Quality Assurance Submittals
5. Construction Photographs
6. Operating and Maintenance Manuals
7. Warranties

B. Administrative Submittals: Refer to General and Supplementary Conditions other applicable Division 1 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to, the following:

1. Construction Progress Schedule including Schedule of Values
2. Performance and Payment Bonds
3. Insurance Certificates
4. Applications for Payment
5. Certified Payroll Reports
6. Partial and Final Receipt of Payment and Release Forms
7. Affidavit – Compliance with Prevailing Wage Law
8. Record Drawings
9. Notifications, Permits, etc.

C. The Contractor is obliged and responsible to check all shop drawings and schedules to assure compliance with contract plans and specifications. The Contractor is responsible for the content of the shop drawings and coordination with other contract work. Shop drawings and schedules shall indicate, in detail, all parts of an Item or Work including erection and setting instructions and integration with the Work of other trades.

D. The Contractor shall at all times make a copy, of all approved submittals, available on site to the Construction Representative.

1.3 SUBMITTAL PROCEDURES

A. The Contractor shall comply with the General and Supplementary Conditions and other applicable sections of the Contract Documents. The Contractor shall submit, with such promptness as to cause no delay in his work or in that of any other contractors, all required submittals indicated in Part 3.1 of this section and elsewhere in the Contract Documents. Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.

2. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.

    a. The Designer reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.

B. Each drawing and/or series of drawings submitted must be accompanied by a letter of transmittal giving a list of the titles and numbers of the drawings. Each series shall be numbered consecutively for ready reference and each drawing shall be marked with the following information:

1. Date of Submission

2. Name of Project

3. Location

4. Section Number of Specification

5. State Project Number

6. Name of Submitting Contractor

7. Name of Subcontractor

8. Indicate if Item is submitted as specified or as a substitution

1.4 SHOP DRAWINGS

A. Comply with the General Conditions, Article 3.2.

B. The Contractor shall submit newly prepared information drawn accurately to scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not a Shop Drawing.

C. Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates, and similar drawings including the following information:

1. Dimensions

2. Identification of products and materials included by sheet and detail number

3. Compliance with specified standards

4. Notation of coordination requirements

5. Notation of dimensions established by field measurement

6. Sheet Size: Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on sheets at least 8½"x11" but no larger than 36"x48".

1.5 PRODUCT DATA

A. The Contractor shall comply with the General Conditions, Article 3.2.

B. The Contractor shall collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information, such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams, and performance curves.

1. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products that are not required, mark copies to indicate the applicable information including the following information:

a. Manufacturer's printed recommendations

b. Compliance with Trade Association standards

c. Compliance with recognized Testing Agency standards

d. Application of Testing Agency labels and seals

e. Notation of dimensions verified by field measurement

f. Notation of coordination requirements

2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.

1.6 SAMPLES

A. The Contractor shall comply with the General Conditions, Article 3.2.

B. The Contractor shall submit full-size, fully fabricated samples, cured and finished as specified, and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture, and pattern.

1. The Contractor shall mount or display samples in the manner to facilitate review of qualities indicated. Prepare samples to match the Designer's sample including the following:

a. Specification Section number and reference

b. Generic description of the Sample

c. Sample source

d. Product name or name of the Manufacturer

e. Compliance with recognized standards

f. Availability and delivery time

2. The Contractor shall submit samples for review of size, kind, color, pattern, and texture. Submit samples for a final check of these characteristics with other

elements and a comparison of these characteristics between the final submittal and the actual component as delivered and installed.

a. Where variation in color, pattern, texture, or other characteristic is inherent in the material or product represented, submit at least three (3) multiple units that show approximate limits of the variations.

b. Refer to other Specification Sections for requirements for samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation, and similar construction characteristics.

c. Refer to other Sections for samples to be returned to the Contractor for incorporation in the Work. Such samples must be undamaged at time of use. On the transmittal, indicate special requests regarding disposition of sample submittals.

d. Samples not incorporated into the Work, or otherwise designated as the Owner's property, are the property of the Contractor and shall be removed from the site prior to Substantial Completion.

3. Field samples are full-size examples erected onsite to illustrate finishes, coatings, or finish materials and to establish the Project standard.

a. The Contractor shall comply with submittal requirements to the fullest extent possible. The Contractor shall process transmittal forms to provide a record of activity.

1.7 QUALITY ASSURANCE DOCUMENTS

A. The Contractor shall comply with the General Conditions, Article 3.2

B. The Contractor shall submit quality control submittals including design data, certifications, manufacturer's instructions, manufacturer's field reports, and other quality-control submittals as required under other Sections of the Specifications.

C. Certifications: Where other Sections of the Specifications require certification that a product, material, or installation complies with specified requirements, submit a notarized certification from the Manufacturer certifying compliance with specified requirements.

1. Signature: Certification shall be signed by an officer of the Manufacturer or other individual authorized to contractually bind the Company.

D. Inspection and Test Reports: The Contractor shall submit the required inspection and test reports from independent testing agencies as specified in this Section and in other Sections of the Contract Documents.

E. Construction Photographs: The Contractor shall submit record construction photographs as specified in this Section and in other Sections of the Contract Documents.

1. The Contractor shall submit digital photographs. The Construction Administrator shall determine the quantity and naming convention at the preconstruction meeting.

2. The Contractor shall identify each photograph with project name, location, number, date, time, and orientation.

3. The Contractor shall submit progress photographs monthly unless specified otherwise. Photographs shall be taken one (1) week prior to submitting.

4. The Contractor shall take four (4) site photographs from differing directions and a minimum of five (5) interior photographs indicating the relative progress of the Work.

1.8 OPERATING AND MAINTENANCE MANUALS AND WARRANTIES

A. The Contractor shall submit all required manufacturer's operating instructions, maintenance/service manuals, and warranties in accordance with the General Conditions, Article 3.5, and Supplementary Conditions along with this and other Sections of the Contract Documents.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 REQUIRED SUBMITTALS

A. Contractor shall submit the following information for materials and equipment to be provided under this contract.

SPEC SECTION	TITLE	CATEGORY
013100	Coordination	Shop Drawings
013100	Coordination	List of Subcontractors
013200	Schedules	Construction Schedule
013200	Schedules	Schedule of Values
013200	Schedules	List of Subcontractors
013200	Schedules	Major Material Suppliers
0131513.25	Site Security and Health Requirements	Certification
0131513.25	Site Security and Health Requirements	Construction Schedule
0131513.25	Site Security and Health Requirements	List of Subcontractors
024119	Selective Demolition	Construction Schedule
032000	Concrete Reinforcing	Product Data
032000	Concrete Reinforcing	Shop Drawings
033000	Cast-in-Place Concrete	Product Data
033000	Cast-in-Place Concrete	Test Report
055213	Pipe & Tube Railing	Product Data
055213	Pipe & Tube Railing	Shop Drawings
061000	Rough Carpentry	Product Data
072100	Building Insulation	Product Data
075423	Thermoplastic Polyolefin (TPO) Roofing	Product Data
075423	Thermoplastic Polyolefin (TPO) Roofing	Shop Drawings
075423	Thermoplastic Polyolefin (TPO) Roofing	Certification
075423	Thermoplastic Polyolefin (TPO) Roofing	Warranty
077100	Roof Specialties	Operation / Maintenance Manual
079200	Joint Sealants	Product Data
079200	Joint Sealants	Sample
081113	Hollow Metal Doors and Frames	Product Data
081113	Hollow Metal Doors and Frames	Shop Drawings
083950	Bullet-Resistant Doors and Frames	Product Data
083950	Bullet-Resistant Doors and Frames	Shop Drawings
083950	Bullet-Resistant Doors and Frames	Sample
084113	Aluminum Framed Entrances and Storefronts	Product Data
084113	Aluminum Framed Entrances and Storefronts	Shop Drawings
085113	Aluminum Windows	Shop Drawings
085113	Aluminum Windows	Product Data
085113	Aluminum Windows	Test Report
085653	Blast Resistant Tempered Glass Window	Product Data
085653	Blast Resistant Tempered Glass Window	Shop Drawings
085653	Blast Resistant Tempered Glass Window	Test Report
088753	Security Glazing Film	Test Report
088753	Security Glazing Film	Product Data
088753	Security Glazing Film	Sample
087100	Door Hardware	Product Data
087100	Door Hardware	Shop Drawings
087100	Door Hardware	Operation / Maintenance Manual

SPEC SECTION	TITLE	CATEGORY
088000	Glazing	Product Data
088000	Glazing	Construction Schedule
088000	Glazing	Test Report
088100	Spandrel Glass	Product Data
088100	Spandrel Glass	Shop Drawings
088100	Spandrel Glass	Sample
088853	Bullet-Resistant Glazing	Product Data
088853	Bullet-Resistant Glazing	Shop Drawings
088853	Bullet-Resistant Glazing	Sample
092116	Gypsum Board Assemblies	Product Data
092216	Non-Structural Metal Framing	Product Data
099100	Painting	Product Data
099100	Painting	Sample
321216	Asphalt Paving	Product Data
321313	Concrete Paving	Product Data
321373	Concrete Paving Joint Sealants	Product Data
321373	Concrete Paving Joint Sealants	Sample

END OF SECTION 013300

ADDENDUM NO. 02

SECTION 013513.25 - SITE SECURITY AND HEALTH REQUIREMENTS (MSHP)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUBMITTALS

A. List of required submittals:

1. Materials Safety Data Sheets for all hazardous materials to be brought onsite.
2. Schedule of proposed shutdowns, if applicable.
3. A list of the names of all employees who will submit fingerprints for a background check, and the signed privacy documents identified below for each employee.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 ACCESS TO THE SITE

A. The Contractor shall arrange with Facility Representatives to establish procedures for the controlled entry of workers and materials into the work areas at the Facility.

B. The Contractor shall establish regular working hours with Facility Representatives. The Contractor must report changes in working hours or overtime to Facility Representatives and obtain approval twenty-four (24) hours ahead of time. The Contractor shall report emergency overtime to Facility Representatives as soon as it is evident that overtime is needed. The Contractor must obtain approval from Facility Representatives for all work performed after dark.

C. The Contractor shall provide the name and phone number of the Contractor's employee or agent who is in charge onsite; this individual must be able to be contacted in case of emergency. The Contractor must be able to furnish names and address of all employees upon request.

D. All construction personnel shall visibly display issued identification cards.

3.2 FIRE PROTECTION, SAFETY, AND HEALTH CONTROLS

A. The Contractor shall take all necessary precautions to guard against and eliminate possible fire hazards.

1. Onsite burning is prohibited.

2. The Contractor shall store all flammable or hazardous materials in proper containers located outside the buildings or offsite, if possible.
3. The Contractor shall provide and maintain, in good order, during construction fire extinguishers as required by the National Fire Protection Association. In areas of flammable liquids, asphalt, or electrical hazards, 15-pound carbon dioxide or 20-pound dry chemical extinguishers shall be provided.

B. The Contractor shall not obstruct streets or walks without permission from the Owner's Construction Representative and Facility Representatives.

C. The Contractor's personnel shall not exceed the speed limit of 15 mph while at the Facility unless otherwise posted.

D. The Contractor shall take all necessary, reasonable measures to reduce air and water pollution by any material or equipment used during construction. The Contractor shall keep volatile wastes in covered containers and shall not dispose of volatile wastes or oils in storm or sanitary drains.

E. The Contractor shall keep the project site neat, orderly, and in a safe condition at all times. The Contractor shall immediately remove all hazardous waste and shall not allow rubbish to accumulate. The Contractor shall provide onsite containers for collection of rubbish and shall dispose of it at frequent intervals during the progress of the Work.

F. Fire exits, alarm systems, and sprinkler systems shall remain fully operational at all times, unless written approval is received from the Owner's Construction Representative and the appropriate Facility Representative at least twenty-four (24) hours in advance. The Contractor shall submit a written time schedule for any proposed shutdowns.

G. For all hazardous materials brought onsite, Material Safety Data Sheets shall be on site and readily available upon request at least a day before delivery.

H. Alcoholic beverages, Marijuana (Cannabis) in any form, or illegal substances shall not be brought upon the Facility premises. The Contractor's workers shall not be under the influence of any intoxicating substances while on the Facility premises.

3.3 MSHP SECURITY CLEARANCE REQUIREMENTS

A. Contractor Background Screening Policy: As a normal business activity, the Missouri State Highway Patrol (MSHP) may contract with external companies to perform various duties for the Missouri State Highway Patrol. Any personnel working for a contractor, and who has access to criminal justice information is required to pass a background check prior to beginning work on the contract. A contractor's proposed candidate may also be required to undergo a MSHP approved drug screening. This background check requirement will be included as part of all PAQs or solicitations for bids. The contract/PAQ award is contingent upon the proposed candidate background checks being completed.

B. This background check will include, but not be limited to, state of residency and national fingerprint-based record checks. If the proposed candidate lives outside the United States, the contractor will submit similar documentation from their respective country. Qualification to work on contract will be based upon the following criteria:

1. A felony conviction or guilty plea will be an automatic disapproval of the candidate.
2. Any conviction whether misdemeanor or felony, involving violence, crimes against children, and all sexual crimes regardless of timeframe will be an automatic disapproval of the candidate.
3. Candidates will be disqualified if it is confirmed there are outstanding arrest warrants for the candidate.
4. Any other misdemeanor convictions and guilty pleas may be considered for automatic disapproval. The State CSO (CJIS Security Officer) has final authority regarding if the nature or severity of the misdemeanor offense(s) does or does not warrant a disqualification.

C. For misdemeanors, consideration will be given to the relationship between the information obtained in the background check and the responsibilities of the position. Time and severity of crime may also be considered as factors in a disqualification. Candidates may submit a written request for waiver through their contracting company if they have been disapproved and wish to contest the decision. The request will need to explain the circumstances of the crime and justification for a waiver.

D. Contractors will be required to undergo a background check at a minimum once every five years. If there is a significant gap between contracts, candidates may be required to undergo a background check before working under a new contract.

E. The CSO or their designee will maintain a list of contractors who have been approved to work at the MSHP.

F. If a candidate goes through a background check with one contractor and then goes to work at a different contractor, the candidate will not be required to undergo a separate background check unless the timeframe exceeds five-year limit.

G. The CSO for the MSHP has the right to approve or disapprove any candidate and has the right to revoke a candidate's approval at any time.

H. The FBI CJIS Security Policy requires the MSHP to conduct background checks on all contractors needing MSHP access.

I. Contractors working on-site and/or need escorted access are required to provide name, date of birth and social security number to enable the MSHP to run a name-based background check prior to their arrival on-site.

1. The FBI CJIS Security Policy requires the Missouri State Highway Patrol to conduct fingerprint background checks on vendors and contractors who require, or may require, virtual and/or unescorted physical access to criminal justice information. Provided are background check instructions managed by the MSHP CJIS Security Audit and Compliance Unit. For further assistance please email securityaudit@mshp.dps.mo.gov or call 573-586-6153 x2622. 1)Fingerprint Submission - register online at www.machs.mo.gov

    a. *Fingerprint instructions attached separately*Payment $43.50 is due at registration*Required fingerprint card information below*
    b. 4-digit Registration Number:-9120
    c. Complete Name

d. Date of Birth
e. Social Security Number
f. ORI: MOMHP2300
g. OCA Designation: CONTRACTOR
h. Agency Name: MSHP-SACU

J. Security Awareness Certification - take online at www.cjisonline.com

1. Vendor accounts and Vendor Admin profiles are created by the MSHP SACU, securityaudit@mshp.dps.mo.gov
2. *Vendor Account - Provide company name, mailing address, and phone number of vendor/contractor.
3. *Vendor Admin - Provide name, email address, and phone number you want designated as the Vendor Admin to manage user accounts.

K. Security Addendum Certification - form is attached separately. Signature page may be downloaded to user's account under Certification Details Tab/Documents. If this is not an option, email signature form to securityaudit@mshp.dps.mo.gov.

L. MSHP Required Security Forms - Forms attached separately. Please return signature pages to securityaudit@mshp.dps.mo.gov.

M. The Missouri Central Vendor File: As a normal business activity, Missouri law enforcement agencies may contract with external companies to perform various duties for their agency. Any personnel working for a vendor or contractor, and who has access to criminal justice information, is required to pass a background check prior to beginning work on the contract per FBI CJIS Security Policy. To better streamline this process for vendors and contractors performing work at more than one Missouri law enforcement agency, the Missouri State Highway Patrol has implemented a program to manage these background check files centrally called the Missouri Central Vendor File. This allows contractors to perform fingerprint checks and complete security awareness training requirements one time rather than with each contracting agency. Unless otherwise notified, vendors and contractors who submit background checks using the MSHP Background Check Process will automatically be vetted and added to the MO Central Vendor File. Background results can be provided upon request sent to securityaudit@mshp.dps.mo.gov.

3.4 DISRUPTION OF UTILITIES

A. The Contractor shall give a minimum of seventy-two (72) hours written notice to the Construction Representative and the Facility Representative before disconnecting electric, gas, water, fire protection, or sewer service to any building.

B. The Contractor shall give a minimum of seventy-two (72) hours written notice to the Construction Representative and Facility Representative before closing any access drives, and shall make temporary access available, if possible. The Contractor shall not obstruct streets, walks, or parking.

3.5 PROTECTION OF PERSONS AND PROPERTY

A. SAFETY PRECAUTIONS AND PROGRAMS

1. The Contractor shall at all times conduct operations under this Contract in a manner to avoid the risk of bodily harm to persons or risk of damage to any property. The Contractor shall promptly take precautions which are necessary and adequate against conditions created during the progress of the Contractor's activities hereunder which involve a risk of bodily harm to persons or a risk of damage to property. The Contractor shall continuously inspect Work, materials, and equipment to discover and determine any such conditions and shall be solely responsible for discovery, determination, and correction of any such conditions. The Contractor shall comply with applicable safety laws, standards, codes, and regulations in the jurisdiction where the Work is being performed, specifically, but without limiting the generality of the foregoing, with rules regulations, and standards adopted pursuant to the Williams-Steiger Occupational Safety and Health Act of 1970 and applicable amendments.
2. All contractors, subcontractors and workers on this project are subject to the Construction Safety Training provisions 292.675 RSMo.
3. In the event the Contractor encounters on the site, material reasonably believed to be asbestos, polychlorinated biphenyl (PCB), lead, mercury, or other material known to be hazardous, which has not been rendered harmless, the Contractor shall immediately stop Work in the area affected and report the condition to the Owner's Representative and the Architect in writing. The Work in the affected area shall not thereafter be resumed except by written agreement of the Owner's Representative and Contractor if in fact the material is asbestos or polychlorinated biphenyl (PCB) and has not been rendered harmless. The Work in the affected area shall be resumed in the absence of asbestos or polychlorinated biphenyl (PCB), or when it has been rendered harmless by written agreement of the Owner's Representative and the Contractor. “Rendered Harmless” shall mean that levels of such materials are less than any applicable exposure standards, including but limited to OSHA regulations.

B. SAFETY OF PERSONS AND PROPERTY

1. The Contractor shall take reasonable precautions for safety of, and shall provide protection to prevent damage, injury, or loss to:

    a. clients, staff, the public, construction personnel, and other persons who may be affected thereby;
    b. the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor or the Contractor's Subcontractors of any tier; and
    c. other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

2. The Contractor shall give notices and comply with applicable laws, standards, codes, ordinances, rules, regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury, or loss.
3. The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, safeguards for safety and protection, including, but not limited to, posting danger signs and other warnings against hazards, promulgating safety

regulations, and notifying owners and users of adjacent sites and utilities.

4. When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise the highest degree of care and carry on such activities under supervision of properly qualified personnel.
5. The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in this Section caused in whole or in part by the Contractor, a Subcontractor of any tier, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable, and for which the Contractor is responsible under this Section, except damage or loss attributable solely to acts or omissions of Owner or the Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's other obligations stated elsewhere in the Contract.
6. The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents, and the maintaining, enforcing and supervising of safety precautions and programs. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner's Representative and Architect. The Contractor shall hold regularly scheduled safety meetings to instruct Contractor personnel on safety practices, accident avoidance and prevention, and the Project Safety Program. The Contractor shall furnish safety equipment and enforce the use of such equipment by its employees and its subcontractors of any tier.
7. The Contractor shall not load or permit any part of the construction or site to be loaded so as to endanger its safety.
8. The Contractor shall promptly report in writing to the Owner all accidents arising out of or in connection with the Work which cause death, lost time injury, personal injury, or property damage, giving full details and statements of any witnesses. In addition, if death, serious personal injuries, or serious property damages are caused, the accident shall be reported immediately.
9. The Contractor shall promptly notify in writing to the Owner of any claims for injury or damage to personal property related to the work, either by or against the Contractor.
10. The Owner assumes no responsibility or liability for the physical condition or safety of the Work site, or any improvements located on the Work site. The Contractor shall be solely responsible for providing a safe place for the performance of the Work. The Owner shall not be required to make any adjustment in either the Contract Sum or Contract Time concerning any failure by the Contractor or any Subcontractor to comply with the requirements of this Paragraph.
11. In no event shall the Owner have control over, charge of, or any responsibility for construction means, methods, techniques, sequences or procedures or for safety precautions and programs in connection with the Work, notwithstanding any of the rights and authority granted the Owner in the Contract Documents.
12. The Contractor shall maintain at his own cost and expense, adequate, safe and sufficient walkways, platforms, scaffolds, ladders, hoists and all necessary, proper, and adequate equipment, apparatus, and appliances useful in carrying on the Work and which are necessary to make the place of Work safe and free from avoidable danger for clients, staff, the public and construction personnel, and as may be required by safety provisions of applicable laws, ordinances, rules regulations and building and construction codes.

END OF SECTION 013513.25

ADDENDUM NO. 02

SECTION 015000 – CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes requirements for construction facilities and temporary controls including temporary utilities, support facilities, security, and protection.

B. Temporary utilities include, but are not limited to, the following:

1. Water service and distribution
2. Temporary electric power and light
3. Temporary heat
4. Ventilation
5. Telephone service
6. Sanitary facilities, including drinking water
7. Storm and sanitary sewer

C. Support facilities include, but are not limited to, the following:

1. Field offices and storage sheds
2. Temporary roads and paving
3. Dewatering facilities and drains
4. Temporary enclosures
5. Hoists and temporary elevator use
6. Temporary project identification signs and bulletin boards
7. Waste disposal services
8. Rodent and pest control
9. Construction aids and miscellaneous services and facilities

D. Security and protection facilities include, but are not limited to, to following:

1. Temporary fire protection
2. Barricades, warning signs, and lights
3. Sidewalk bridge or enclosure fence for the site
4. Environmental protection

1.3 SUBMITTALS

A. Temporary Utilities: Submit reports of tests, inspections, meter readings, and similar procedures performed on temporary utilities.

B. Implementation and Termination Schedule: Within (15) days of the date established for commencement of the Work, submit a schedule indicating implementation and termination of each temporary utility.

1.4 QUALITY ASSURANCE

A. Regulations: Comply with industry standards and applicable laws and regulations including, but not limited to, the following:

1. Building code requirements
2. Health and safety regulations
3. Utility company regulations
4. Police, fire department, and rescue squad rules
5. Environmental protection regulations

B. Standards: Comply with NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations". ANSI A10 Series standards for "Safety Requirements for Construction and Demolition", and NECA Electrical Design Library "Temporary Electrical Facilities".

1. Electrical Service: Comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service in compliance with NFPA 70 "National Electric Code".

C. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.5 PROJECT CONDITIONS

A. Temporary Utilities: Prepare a schedule indicating dates for implementation and termination of each temporary utility. At the earliest feasible time, when acceptable to the Owner, change over from use of temporary service to use of permanent service.

B. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Relocate temporary services and facilities as the Work progresses. Do not overload facilities or permit them to interfere with progress. Take necessary fire-prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist onsite.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Provide new materials. If acceptable to the Designer, the Contractor may use undamaged, previously used materials in serviceable condition. Provide materials suitable for use intended.

B. Lumber and Plywood: Comply with requirements in Division 6 Section "Rough Carpentry".

1. For job-built temporary office, shops, and sheds within the construction area, provide UL-labeled, fire-treated lumber and plywood for framing, sheathing, and siding.

2. For signs and directory boards, provide exterior-type, Grade B-B high-density concrete form overlay plywood of sized and thicknesses indicated.

3. For fences and vision barriers, provide minimum 3/9" (9.5mm) thick exterior plywood.

4. For safety barriers, sidewalk bridges, and similar uses, provide minimum 5/8" (16mm) thick exterior plywood.

C. Gypsum Wallboard: Provide gypsum wallboard on interior walls of temporary offices.

D. Roofing Materials: Provide UL Class A standard-weight asphalt shingles or UL Class C mineral-surfaced roll roofing on roofs of job-built temporary office, shops, and shed.

E. Paint: Comply with requirements of Division 9 Section "Painting".

1. For job-built temporary offices, shops, sheds, fences, and other exposed lumber and plywood, provide exterior-grade acrylic-latex emulsion over exterior primer.

2. For sign panels and applying graphics, provide exterior-grade alkyd gloss enamel over exterior primer.

3. For interior walls of temporary offices, provide two (2) quarts interior latex-flat wall paint.

F. Tarpaulins: Provide waterproof, fire-resistant, UL-labeled tarpaulins with flame-spread rating of (15) or less. For temporary enclosures, provide translucent, nylon-reinforced laminated polyethylene or polyvinyl chloride, fire-retardant tarpaulins.

G. Water: Provide potable water approved by local health authorities.

H. Open-Mesh Fencing: Provide 0.120" (3mm) thick, galvanized 2" (50mm) chainlink fabric fencing 6' (2m) high with galvanized steel pipe posts, 1½" (38mm) ID for line posts and 2½" (64mm) ID for corner posts.

2.2 EQUIPMENT

A. General: Provide new equipment. If acceptable to the Designer, the Contractor may use undamaged, previously used equipment in serviceable condition. Provide equipment suitable for use intended.

B. Water Hoses: Provide ¾" (19mm), heavy-duty, abrasion-resistant, flexible rubber hoses 100' (30m) long, with pressure rating greater than the maximum pressure of the water distribution system. Provide adjustable shutoff nozzles at hose discharge.

C. Electrical Outlets: Provide properly configured, NEMA-polarized outlets to prevent insertion of 110 to 120V plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button, and pilot light for connection of power tools and equipment.

D. Electrical Power Cords: Provide grounded extension cords. Use hard-service cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage rating.

E. Lamps and Light Fixtures: Provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered-glass enclosures where exposed to breakage. Provide exterior fixture where exposed to moisture.

F. Heating Units: Provide temporary heating units that have been tested and labeled by UL, FM, or another recognized trade association related to the type of fuel being consumed.

G. Temporary Offices: Provide prefabricated or mobile units or similar job-built construction with lockable entrances, operable windows, and serviceable finishes. Provide heated and air-conditioned units on foundations adequate for normal loading.

H. Temporary Toilet Units: Provide self-contained, single-occupant toilet units of the chemical, aerated re-circulation, or combustion type. Provide units properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.

I. Fire Extinguishers: Provide hand-carried, portable, UL-rated, Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable, UL-rated, Class ABC, dry-chemical extinguishers, or a combination of extinguishers of NFPA-recommended classes for the exposures.

1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.

B. Provide each Facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

A. General: Engage the appropriate local utility company to install temporary service or connect to existing service. Where company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with company recommendations.

1. Arrange with company and existing users for a time when service can be interrupted, if necessary, to make connections for temporary services.

2. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked-in services.

3. Obtain easements to bring temporary utilities to the site where the Owner’s easements cannot be used for that purpose.

4. Use Charges: Cost or use charges for temporary facilities are not chargeable to the Owner or Designer. Neither the Owner nor Designer will accept cost or use charges as a basis of claims for Change Order.

B. Temporary Water Service: Install water service and distribution piping of sizes and pressures adequate for construction until permanent water service is in use.

1. Sterilization: Sterilize temporary water piping prior to use.

C. Temporary Water Service: The Owner will provide water for construction purposes from the existing building system. All required temporary extensions shall be provided and removed by the Contractor. Connection points and methods of connection shall be designated and approved by the Construction Representative.

D. Temporary Electric Power Service: Provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics during construction period. Include meters, transformers, overload-protected disconnects, automatic ground-fault interrupters, and main distribution switch gear.

1. Install electric power service underground, except where overhead service must be used.

2. Power Distribution System: Install wiring overhead and rise vertically where least exposed to damage. Where permitted, wiring circuits not exceeding 125V, AC 20ampere rating, and lighting circuits may be nonmetallic sheathed cable where overhead and exposed for surveillance.

E. Temporary Electric Power Service: The Owner will provide electric power for construction lighting and power tools. Contractors using such services shall pay all costs of temporary services, circuits, outlet, extensions, etc.

F. Temporary Lighting: When overhead floor or roof deck has been installed, provide temporary lighting with local switching.

1. Install and operate temporary lighting that will fulfill security and protection requirements without operating the entire system. Provide temporary lighting that will provide adequate illumination for construction operations and traffic conditions.

G. Temporary Heating: Provide temporary heat required by construction activities for curing or drying of completed installations or for protection of installed construction from adverse effects of low temperatures or high humidity. Select safe equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce the ambient condition required and minimize consumption of energy.

1. Heating Facilities: Except where the Owner authorizes use of the permanent system, provide vented, self-contained, LP gas or fuel-oil heaters with individual space thermostatic control.

2. Use of gasoline-burning space heaters, open flame, or salamander heating units is prohibited.

H. Temporary Heating and Cooling: The normal heating and/or cooling system of the building shall be maintained in operation during the construction. Should the Contractor find it necessary to interrupt the normal HVAC service to spaces, which have not been vacated for construction, such interruptions shall be pre-scheduled with the Construction Representative.

I. Temporary Telephones: Provide temporary telephone service throughout the construction period for all personnel engaged in construction activities.

1. Telephone Lines: Provide telephone lines for the following:

    a. Where an office has more than two (2) occupants, install a telephone for each additional occupant or pair of occupants.

    b. Provide a dedicated telephone for a fax machine in the field office.

    c. Provide a separate line for the Owner's use.

2. At each telephone, post a list of important telephone numbers.

J. Temporary Telephones: The Owner will provide telephones within the facility. All construction personnel will be allowed access only to those specific telephones designated by the Construction Representative.

K. Temporary Toilets: Install self-contained toilet units. Use of pit-type privies will not be permitted. Comply with regulations and health codes for the type, number, location, operation, and maintenance of fixtures and facilities. Install where facilities will best serve the Project's needs.

1. Shield toilets to ensure privacy.

2. Provide separate facilities for male and female personnel.

3. Provide toilet tissue materials for each facility.

L. Temporary Toilets: Use of the Owner's existing toilet facilities will be permitted, so long as facilities are cleaned and maintained in a condition acceptable to the Owner. All construction personnel will be allowed access only to those specific facilities designed by the Construction Representative. At substantial completion, restore these facilities to the condition prevalent at the time of initial use.

M. Temporary Toilets: The Owner will provide toilets and associated facilities within the building. All construction personnel will be allowed access only to those specific facilities designated by the Construction Representative.

N. Wash Facilities: Install wash facilities supplied with potable water at convenient locations for personnel involved in handling materials that require wash-up for a health and sanitary condition. Dispose of drainage properly. Supply cleaning compounds appropriate for each condition.

1. Provide paper towels or similar disposable materials for each facility.

2. Provide covered waste containers for used material.

3. Provide safety showers, eyewash fountains, and similar facilities for convenience, safety, and sanitation of personnel.

O. Wash Facilities: The Owner will provide wash facilities within the building. All construction personnel will be allowed access only to those specific facilities designated by the Construction Representative.

P. Drinking-Water Facilities: Provide drinking-water fountains where indicated, including paper cup supply.

Q. Drinking-Water Facilities: Provide containerized, tap-dispenser, bottled-water drinking-water units, including paper supply.

1. Where power is accessible, provide electric water coolers to maintain dispensed water temperature at 45°F to 55°F (7°C to 13°C).

R. Drinking-Water Facilities: The Owner will provide drinking water facilities within the building. All construction personnel will be allowed access only to those specific facilities designated by the Construction Representative.

S. Provide earthen embankments and similar barriers in and around excavations and subgrade construction, sufficient to prevent flooding by runoff of storm water from heavy rains.

3.3 SUPPORT FACILITIES INSTALLATION

A. General: Locate field offices, storage sheds, and other temporary construction and support facilities for easy access.

1. Maintain support facilities until near Substantial Completion. Remove prior to Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to the Owner.

B. Field Offices: Provide insulated, weathertight temporary offices of sufficient size to accommodate required office personnel at the Project site. Keep the office clean and orderly for use for small progress meetings. Furnish and equip office as follows:

1. Furnish with a desk and chairs, a 4-drawer file cabinet, plan table, plan rack, and a 6-shelf bookcase.

2. Equip with a water cooler and private toilet complete with water closet, lavatory, and medicine cabinet unit with a mirror.

C. Storage facilities: Install storage sheds sized, furnished, and equipped to accommodate materials and equipment involved, including temporary utility service. Sheds may be open shelters or fully enclosed spaces within the building or elsewhere onsite.

D. Storage Facilities: Limited areas for storage of building materials are available onsite. Available storage areas are shown on the drawings. The Contractor shall provide his own security. Specific locations for storage and craning operations will be discussed at the Pre-Bid Meeting and the Pre-Construction Meeting.

E. Storage Facilities: The Owner will provide storage onsite as designated by the Facility Representative or the Construction Representative. Areas for use by the Contractor for storage will be identified at the Pre-Bid Meeting.

F. Storage Facilities: No areas for storage of building materials can be made available onsite except for on the roof. Loads shall not exceed the loading limits as stated on the drawings. Roofing materials must be craned onto the roof from dedicated parking spaces as arranged by the Contractor with the City; costs of all such arrangements shall be paid by the Contractor. The Contractor shall provide his own security as he finds necessary. Specific locations for storage and craning operations will be discussed at the Pre-Bid Meeting and the Pre-Construction Meeting.

G. Storage Facilities: No areas for storage of building materials can be made available onsite. The Contractor shall provide for all storage offsite. All off-site storage locations shall be approved by the Construction Representative. The Contractor shall provide his own security as he finds necessary. The Construction Representative shall have access to the off-site storage at all times.

H. Temporary Paving: Construct and maintain temporary roads and paving to support the indicated loading adequately and to withstand exposure to traffic during the construction period. Locate temporary paving for roads, storage areas, and parking where the same permanent facilities will be located. Review proposed modifications to permanent paving with the Designer.

1. Paving: Comply with Division 2 Section "Hot-Mixed Asphalt Paving" for construction and maintenance of temporary paving.

2. Coordinate temporary paving development with subgrade grading, compaction, installation and stabilization of subbase, and installation of base and finish courses of permanent paving.

3. Install temporary paving to minimize the need to rework the installations and to result in permanent roads and paved areas without damage or deterioration when occupied by the Owner.

4. Delay installation of the final course of permanent asphalt concrete paving until immediately before Substantial Completion. Coordinate with weather conditions to avoid unsatisfactory results.

5. Extend temporary paving in and around the construction area as necessary to accommodate delivery and storage of materials, equipment usage, administration, and supervision.

I. Construction Parking: Parking at the site will be provided in the areas designated at the Pre-Construction Meeting.

J. Construction Parking: Contractors must be prepared to discuss their storage and parking needs at the Pre-Bid Meeting. Parking for construction personnel cannot be provided onsite. All parking will be offsite. The Contractor will have to park on the street, in city-owned lots, or in commercial lots. Under no circumstances will any vehicle be parked in a fire lane. Parking on lawns shall be prohibited.

K. Dewatering Facilities and Drains: For temporary drainage and dewatering facilities and operations not directly associated with construction activities included under individual Sections, comply with dewatering requirements of applicable Division 2 Sections. Where feasible, utilize the same facilities. Maintain the site, excavations, and construction free of water.

L. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities.

1. Where heat is needed and the permanent building enclosure is not complete, provide temporary enclosures where there is no other provision for containment of heat. Coordinate enclosure with ventilating and materials drying or curing requirements to avoid dangerous conditions and effects.

2. Install tarpaulins securely with incombustible wood framing and other materials. Close openings of 25SqFt (2.3SqM) or less with plywood or similar materials.

3. Close openings through floor or roof decks and horizontal surfaces with load-bearing, wood-framed construction.

4. Where temporary wood or plywood enclosure exceeds 100SqFt (9.2SqM) in area, use UL-labeled, fire-retardant-treated material for framing and main sheathing.

M. Temporary Lifts and Hoists: Provide facilities for hoisting materials and employees. Truck cranes and similar devices used for hoisting materials are considered “tools and equipment” and not temporary facilities.

N. Temporary Elevator Use: Refer to Division 14 for Elevators.

O. Temporary Elevator Use: The Owner will allow use of elevators within the building. All construction personnel will be allowed access only to those specific elevators designated by the Construction Representative.

P. Project Identification and Temporary Signs: Prepare project identification and other signs of size indicated. Install signs where indicated to inform the public and persons seeking entrance to the Project. Support on posts or framing of preservative-treated wood or steel. Do not permit installation of unauthorized signs.

1. Project Identification Signs: Engage an experienced sign painter to apply graphics. Comply with details indicated.

2. Temporary Signs: Prepare signs to provide directional information to construction personnel and visitors.

Q. Temporary Exterior Lighting: Install exterior yard and sign lights so signs are visible when Work is being performed.

R. Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than seven (7) days during normal weather or three (3) days when the temperature is expected to rise above 80°F (27°C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material lawfully.

S. Rodent Pest Control: Before deep foundation work has been completed, retain a local exterminator or pest control company to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests. Employ this service to perform extermination and control procedures are regular intervals so the Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using environmentally safe materials.

T. Stairs: Until permanent stairs are available, provide temporary stairs where ladders are not adequate. Cover finished, permanent stairs with a protective covering of plywood or similar material so finishes will be undamaged at the time of acceptance.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Except for use of permanent fire protection as soon as available, do not change over from use of temporary security and protection facilities to permanent facilities until Substantial Completion, or longer, as requested by the Designer.

B. Temporary Fire Protection: Until fire-protection needs are supplied by permanent facilities, install and maintain temporary fire-protection facilities of the types needed to protect against reasonable predictable and controllable fire losses. Comply with NFPA 10 “Standard for Portable Fire Extinguishers” and NFPA 241 “Standard for Safeguarding Construction, Alterations, and Demolition Operations”.

1. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one (1) extinguisher on each floor at or near each usable stairwell.

2. Store combustible materials in containers in fire-safe locations.

3. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes for fighting fires. Prohibit smoking in hazardous fire-exposure areas.

4. Provide supervision of welding operations, combustion-type temporary heating units, and similar sources of fire ignition.

C. Permanent Fire Protection: At the earliest feasible date in each area of the Project complete installation of the permanent fire-protection facility including connected services and place into operation and use. Instruct key personnel on use of facilities.

D. Barricades, Warning Signs, and Lights: Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed, provide lighting including flashing red or amber lights.

E. Enclosure Fence: Before excavation begins, install an enclosure fence with lockable entrance gates. Locate where indicated, or enclose the entire site or the portion determined sufficient to accommodate construction operations. Install in a manner that will prevent people, dogs, and other animals from easily entering the site, except by the entrance gates.

1. Provide open-mesh, chainlink fencing with posts set in a compacted mixture of gravel and earth.

2. Provide plywood fence, 8’ (2.5m) high, framed with (4) 2”x4” (50mm x 100mm) rails, and preservative-treated wood posts spaced not more than 8’ (2.5m) apart.

F. Covered Walkway: Erect a structurally adequate, protective covered walkway for passage of persons along the adjacent public street. Coordinate with entrance gates, other facilities, and obstructions. Comply with regulations of authorities having jurisdiction.

1. Construct covered walkways using scaffold or shoring framing. Provide wood plank overhead decking, protective plywood enclosure walls, handrails, barricades, warning signs, lights, safe and well-drained walkways, and similar provisions for protection and safe passage. Extend the back wall beyond the structure to complete the enclosure fence. Paint and maintain in a manner acceptable to the Owner and the Designer.

G. Security Enclosure and Lockup: Install substantial temporary enclosure of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security.

1. Storage: Where materials and equipment must be stored and are of value or attractive for theft, provide a secure lockup. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.

H. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and minimize the possibility that air, waterways, and subsoil might be contaminated or

polluted or that other undesirable effects might result. Avoid use of tools and equipment that produce harmful noise. Restrict use of noisemaking tools and equipment to hours that will minimize complaints from persons or firms near the site.

3.5 OPERATION, TERMINATION AND REMOVAL

A. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.

B. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.

1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.

2. Protection: Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.

C. Termination and Removal: Unless the Designer requests that it be maintained longer, remove each temporary facility when the need has ended, when replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are the Contractor's property. The Owner reserves the right to take possession of project identification signs.

2. Remove temporary paving not intended for or acceptable for integration into permanent paving. Where the area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil in the area. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at the temporary entrances as required by the governing authority.

3. At Substantial Completion, clean and renovate permanent facilities used during the construction period including, but not limited to, the following:

a. Replace air filters and clean inside of ductwork and housing.

b. Replace significantly worn parts and parts subject to unusual operating conditions.

c. Replace lamps burned out or noticeably dimmed by hours of use.

END OF SECTION 015000

ADDENDUM NO. 02

SECTION 017900 - DEMONSTRATION AND TRAINING

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 for instructing Owner's personnel, including the following:

1. Demonstration of operation of systems, subsystems, and equipment.
2. Training in operation and maintenance of systems, subsystems, and equipment.
3. Demonstration and training video recordings.

1.3 INFORMATIONAL SUBMITTALS

A. Instruction Program: Submit outline of instructional program for demonstration and training, including a list of training modules and a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include learning objective and outline for each training module.

B. Attendance Record: For each training module, submit list of participants and length of instruction time.

C. Evaluations: For each participant and for each training module, submit results and documentation of performance-based test.

1.4 CLOSEOUT SUBMITTALS

A. Demonstration and Training Video Recordings: Submit two copies within seven days of end of each training module.

1. Identification: On each copy, provide an applied label with the following information:

a. Name of Project.
b. Name and address of videographer.
c. Name of Architect.
d. Name of Construction Manager.
e. Name of Contractor.
f. Date of video recording.

2. Transcript: Prepared in PDF electronic format. Include a cover sheet with same label information as the corresponding video recording and a table of contents with links to corresponding training components. Include name of Project and date of video recording on each page.

3. At completion of training, submit complete training manual(s) for Owner's use in PDF electronic file format on compact disc.

1.5 QUALITY ASSURANCE

A. Facilitator Qualifications: A firm or individual experienced in training or educating maintenance personnel in a training program similar in content and extent to that indicated for this Project, and whose work has resulted in training or education with a record of successful learning performance.

B. Instructor Qualifications: A factory-authorized service representative experienced in operation and maintenance procedures and training.

C. Preinstruction Conference: Conduct conference at Project site to comply with requirements in Section 013100 "Coordination". Review methods and procedures related to demonstration and training including, but not limited to, the following:

1. Inspect and discuss locations and other facilities required for instruction.
2. Review and finalize instruction schedule and verify availability of educational materials, instructors' personnel, audiovisual equipment, and facilities needed to avoid delays.
3. Review required content of instruction.
4. For instruction that must occur outside, review weather and forecasted weather conditions and procedures to follow if conditions are unfavorable.

1.6 COORDINATION

A. Coordinate instruction schedule with Owner's operations. Adjust schedule as required to minimize disrupting Owner's operations and to ensure availability of Owner's personnel.

B. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.

C. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until operation and maintenance data has been reviewed and approved by Architect.

PART 2 - PRODUCTS

2.1 INSTRUCTION PROGRAM

A. Program Structure: Develop an instruction program that includes individual training modules for each system and for equipment not part of a system, as required by individual Specification Sections.

B. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following as applicable to the system, equipment, or component:

1. Basis of System Design, Operational Requirements, and Criteria: Include the following:

a. System, subsystem, and equipment descriptions.
b. Performance and design criteria if Contractor is delegated design responsibility.
c. Operating standards.
d. Regulatory requirements.
e. Equipment function.
f. Operating characteristics.
g. Limiting conditions.
h. Performance curves.

2. Documentation: Review the following items in detail:

a. Emergency manuals.
b. Operations manuals.
c. Maintenance manuals.
d. Project record documents.
e. Identification systems.
f. Warranties and bonds.
g. Maintenance service agreements and similar continuing commitments.

3. Emergencies: Include the following, as applicable:

a. Instructions on meaning of warnings, trouble indications, and error messages.
b. Instructions on stopping.
c. Shutdown instructions for each type of emergency.
d. Operating instructions for conditions outside of normal operating limits.
e. Sequences for electric or electronic systems.
f. Special operating instructions and procedures.

4. Operations: Include the following, as applicable:

a. Startup procedures.
b. Equipment or system break-in procedures.
c. Routine and normal operating instructions.
d. Regulation and control procedures.
e. Control sequences.
f. Safety procedures.
g. Instructions on stopping.
h. Normal shutdown instructions.
i. Operating procedures for emergencies.
j. Operating procedures for system, subsystem, or equipment failure.
k. Seasonal and weekend operating instructions.
l. Required sequences for electric or electronic systems.
m. Special operating instructions and procedures.

5. Adjustments: Include the following:

a. Alignments.
b. Checking adjustments.
c. Noise and vibration adjustments.
d. Economy and efficiency adjustments.

6. Troubleshooting: Include the following:

    a. Diagnostic instructions.
    b. Test and inspection procedures.

7. Maintenance: Include the following:

    a. Inspection procedures.
    b. Types of cleaning agents to be used and methods of cleaning.
    c. List of cleaning agents and methods of cleaning detrimental to product.
    d. Procedures for routine cleaning
    e. Procedures for preventive maintenance.
    f. Procedures for routine maintenance.
    g. Instruction on use of special tools.

8. Repairs: Include the following:

    a. Diagnosis instructions.
    b. Repair instructions.
    c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
    d. Instructions for identifying parts and components.
    e. Review of spare parts needed for operation and maintenance.

PART 3 - EXECUTION

3.1 PREPARATION

A. Assemble educational materials necessary for instruction, including documentation and training module. Assemble training modules into a training manual organized in coordination with requirements in Section 007213 "General Conditions".

B. Set up instructional equipment at instruction location.

3.2 INSTRUCTION

A. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.

1. Architect will furnish an instructor to describe basis of system design, operational requirements, criteria, and regulatory requirements.
2. Owner will furnish an instructor to describe Owner's operational philosophy.
3. Owner will furnish Contractor with names and positions of participants.

B. Scheduling: Provide instruction at mutually agreed on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.

1. Schedule training with Owner with at least seven days' advance notice.

C. Training Location and Reference Material: Conduct training on-site in the completed and fully operational facility using the actual equipment in-place. Conduct training using final operation and maintenance data submittals.

D. Cleanup: Collect used and leftover educational materials and remove from Project site. Remove instructional equipment. Restore systems and equipment to condition existing before initial training use.

3.3 DEMONSTRATION AND TRAINING VIDEO RECORDINGS

A. General: Engage a qualified commercial videographer to record demonstration and training video recordings. Record each training module separately. Include classroom instructions and demonstrations, board diagrams, and other visual aids, but not student practice.

1. At beginning of each training module, record each chart containing learning objective and lesson outline.

B. Video: Provide minimum 640 x 480 video resolution converted to format file type acceptable to Owner, on electronic media.

1. Electronic Media: Read-only format compact disc acceptable to Owner, with commercial-grade graphic label.
2. File Hierarchy: Organize folder structure and file locations according to project manual table of contents. Provide complete screen-based menu.
3. File Names: Utilize file names based upon name of equipment generally described in video segment, as identified in Project specifications.
4. Contractor and Installer Contact File: Using appropriate software, create a file for inclusion on the Equipment Demonstration and Training DVD that describes the following for each Contractor involved on the Project, arranged according to Project table of contents:

    a. Name of Contractor/Installer.
    b. Business address.
    c. Business phone number.
    d. Point of contact.
    e. E-mail address.

C. Recording: Mount camera on tripod before starting recording, unless otherwise necessary to adequately cover area of demonstration and training. Display continuous running time.

1. Film training session(s) in segments not to exceed 15 minutes.

    a. Produce segments to present a single significant piece of equipment per segment.
    b. Organize segments with multiple pieces of equipment to follow order of Project Manual table of contents.
    c. Where a training session on a particular piece of equipment exceeds 15 minutes, stop filming and pause training session. Begin training session again upon commencement of new filming segment.

D. Light Levels: Verify light levels are adequate to properly light equipment. Verify equipment markings are clearly visible prior to recording.

1. Furnish additional portable lighting as required.

E. Narration: Describe scenes on video recording by audio narration by microphone while video recording is recorded. Include description of items being viewed.

F. Transcript: Provide a transcript of the narration. Display images and running time captured from videotape opposite the corresponding narration segment.

G. Preproduced Video Recordings: Provide video recordings used as a component of training modules in same format as recordings of live training.

END OF SECTION 017900

ADDENDUM NO. 02

SECTION 081113 – HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes the following products manufactured in accordance with SDI Recommended Standards:
   1. Doors: Flush, hollow or composite construction standard steel doors for exterior locations.
   2. Frames: Pressed steel frames for doors, transoms, sidelights, mullions, interior glazed panels, and other interior and exterior openings of following type:
      a. Welded unit type.
   3. Assemblies: Provide standard steel door and frame assemblies as required for the following:
      a. Thermal rated (insulated).
   4. Provide factory primed doors and frames to be field painted.

B. Painting primed doors and frames is specified in Division 9 Section "Painting."

C. **Prep door to accept existing hardware to be re-used**. Note; existing door has access control equipment installed – prep strike for electric connections and equipment.

1.3 SUBMITTALS

A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.

B. Product data for each type of door and frame specified, including details of construction, materials, dimensions, hardware preparation, core, label compliance, sound ratings, profiles, and finishes.

C. Shop drawings showing fabrication and installation of standard steel doors and frames. Include details of each frame type, elevations of door design types, conditions at openings, details of construction, location and installation requirements of door and frame hardware and reinforcements, and details of joints and connections. Show anchorage and accessory items.
   1. Provide schedule of doors and frames using same reference numbers for details and openings as those on contract drawings.
   2. Indicate coordinate of glazing frames and stops with glass and glazing requirements.

1.4 QUALITY ASSURANCE

A. Provide doors and frames complying with Steel Door Institute "Recommended Specifications Standard Steel Doors and Frames" ANSI/SDI-100 and as herein specified.

B. Fire-Rated Door Assemblies: Units that comply with NFPA 80, are identical to door and frame assemblies whose fire resistance characteristics have been determined per ASTM E 152 and which are labeled and listed by UL, Factory Mutual, Warnock Hersey, or other testing and inspecting organization acceptable to authorities having jurisdiction.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver doors and frames cardboard-wrapped or crated to provide protection during transit and job storage. Provide additional protection to prevent damage to finish of factory-finished doors and frames.

B. Inspect doors and frames upon delivery for damage. Minor damages may be repaired provided refinished items are equal in all respects to new work and acceptable to Architect; otherwise, remove and replace damaged items as directed.

C. Store doors and frames at building site under cover. Place units on minimum 4-inches high wood blocking. Avoid use of non-vented plastic or canvas shelters which could create humidity chamber. If cardboard wrapper on door becomes wet, remove carton immediately. Provide 1/4-inches spaces between stacked doors to promote air circulation.

PART 2 – PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering standard steel doors and frames which may be incorporated in the work include; but are not limited to, the following:
   1. Standard Steel Doors and Frames:
      a. Amweld Building Products, Inc.
      b. Republic Builders Products.
      c. Steelcraft Manufacturing Co.

2.2 MATERIALS

A. Hot-Rolled Steel Sheets and Strip: Commercial quality carbon steel, pickled and oiled, complying with ASTM A 569 and ASTM A 568.
B. Cold-Rolled Steel Sheets: Commercial quality carbon steel, complying with ASTM A 366 and ASTM A 568.
C. Galvanized Steel Sheets: Zinc-coated carbon steel sheets of commercial quality, complying with ASTM A 526, or drawing quality, ASTM A 642, hot dipped galvanized in accordance with ASTM A 525, with A60 or G60 coating designation, mill phosphatized.
D. Supports and Anchors: Fabricate of not less than 18-gage sheet steel; galvanized where used with galvanized frames.
E. Inserts, Bolts, and Fasteners: Manufacturer's standard units. Where items are to be built into exterior walls, hot-dip galvanize in compliance with ASTM A 153, Class C or D as applicable.
F. Shop Applied Paint: Apply after fabrication.
   1. Primer: Rust-inhibitive enamel or paint, either air-drying or baking, suitable as a base for specified finish paints complying with ANSI A224.1, "Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames."

2.3 DOORS

A. Provide metal doors of types and styles or grades and models indicated on drawings or schedules.
B. Provide metal doors of SDI grades and models specified below or as indicated on drawings or schedules:

   1. Insulated Exterior Doors: ANSI/SDI-100, Grade III, extra heavy-duty, Model 4, minimum 16-gage galvanized steel faces.

2.4 FRAMES

A. Provide metal frames for doors, transoms, sidelights, borrowed lights, and other openings, of types and styles as shown on drawings and schedules. Conceal fastenings, unless otherwise indicated. Fabricate frames of minimum 16-gage cold-rolled steel.
   1. Fabricate frames with mitered or coped corners, welded construction for exterior and interior applications.
   2. Form exterior frames from 16-gage galvanized steel.
B. Door Silencers: Except on weather-stripped or smoke gasketed frames, drill stops to receive 3 silencers on strike jambs of single-door frames and 2 silencers on heads of double-door frames.

C. Plaster Guards: Provide minimum 26-gage steel plaster guards or mortar boxes at back of hardware cutouts where mortar or other materials might obstruct hardware operation and to close off interior of openings.

2.5 FABRICATION

A. Fabricate steel door and frame units to be rigid, neat in appearance and free from defects, warp or buckle. Wherever practicable, fit and assemble units in manufacturer's plant. Clearly identify work that cannot be permanently factory-assembled before shipment, to assure proper assembly at project site. Comply with ANSI/SDI-100 requirements.
   1. Internal Construction: Manufacturer's standard honeycomb, polyurethane, polystyrene, unitized steel grid, vertical steel stiffeners, or rigid mineral fiber core with internal sound deadener on inside of face sheets where appropriate in accordance with SDI standards.
   2. Clearances: Not more than 1/8 inch at jambs and heads except between non-fire-rated pairs of doors not more than 1/4 inch. Not more than 3/4 inch at bottom.

B. Fabricate exposed faces of doors and panels, including stiles and rails of nonflush units, from only cold-rolled steel.

C. Tolerances: Comply with SDI 117 "Manufacturing Tolerances Standard Steel Doors and Frames."

D. Fabricate frames, concealed stiffeners, reinforcement, edge channels, louvers and moldings from either cold-rolled or hot-rolled steel.

E. Fabricate exterior doors, panels, and frames from galvanized sheet steel in accordance with SDI-112. Close top and bottom edges of exterior doors as integral part of door construction or by addition of minimum 16-gage inverted steel channels.

F. Exposed Fasteners: Unless otherwise indicated, provide countersunk flat or oval heads for exposed screws and bolts.

G. Thermal-Rated (Insulating) Assemblies: At exterior locations and elsewhere as shown or scheduled, provide doors fabricated as thermal insulating door and frame assemblies and tested in accordance with ASTM C 236 or ASTM C 976 on fully operable door assemblies.
   1. Unless otherwise indicated, provide thermal-rated assemblies with U factor of 0.41 Btu/(hr x sq ft x deg F.) or better.

H. Hardware Preparation: Prepare doors and frames to receive mortised and concealed hardware in accordance with final Door Hardware Schedule and templates provided by hardware supplier. Comply with applicable requirements of ANSI A115 Series Specifications for door and frame preparation for hardware.
   1. For concealed overhead door closers, provide space, cutouts, reinforcing and provisions for fastening in top rail of doors or head of frames, as applicable.

I. Reinforce doors and frames to receive surface-applied hardware. Drilling and tapping for surface-applied hardware may be done at project site.

J. Locate hardware as indicated on final shop drawings or, if not indicated, in accordance with "Recommended Locations for Builder's Hardware on Standard Steel Doors and Frames," published by Door and Hardware Institute.

K. Shop Painting: Clean, treat, and paint exposed surfaces of steel door and frame units, including galvanized surfaces.
   1. Clean steel surfaces of mill scale, rust, oil, grease, dirt, and other foreign materials before application of paint.
   2. Apply shop coat of prime paint of even consistency to provide a uniformly finished surface ready to receive finish paint.

L. Glazing Stops: Minimum 20 gage steel or .040-inch-thick aluminum.
   1. Provide non-removable stops on outside of exterior doors and on secure side of interior doors for glass, louvers, and other panels in doors.

2. Provide security screw applied removable glazing beads on inside of glass, louvers, and other panels in doors.

PART 3 – EXECUTION

3.1 INSTALLATION

A. General: Install standard steel doors, frames, and accessories in accordance with final shop drawings, manufacturer's data, and as herein specified.

B. Placing Frames: Comply with provisions of SDI-105 "Recommended Erection Instructions For Steel Frames," unless otherwise indicated.
   1. Except for frames located at existing concrete, masonry or drywall installations, place frames prior to construction of enclosing walls and ceilings. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is completed, remove temporary braces and spreaders leaving surfaces smooth and undamaged.
   2. In masonry construction, locate 3 wall anchors per jamb adjacent to hinge location on hinge jamb and at corresponding heights on strike jamb. Acceptable anchors include masonry wire anchors and masonry Tee anchors.
   3. At existing concrete or masonry construction, provide 3 completed opening anchors per jamb adjacent to hinge location on hinge jamb and at corresponding heights on strike jamb, set frames and secure to adjacent construction with bolts and masonry anchorage devices.
   4. Install fire-rated frames in accordance with NFPA Standard No. 80.
   5. In metal stud partitions, install at least 3 wall anchors per jamb at hinge and strike levels. In closed steel stud partitions, attach wall anchors to studs with screws.
   6. In in-place drywall partitions install knock down slip-on drywall frames

C. Door Installation: Fit hollow metal doors accurately in frames, within clearances specified in ANSI/SDI-100.
   1. Install fire-rated doors with clearances as specified in NFPA Standard No. 80.

3.2 ADJUST AND CLEAN

A. Prime Coat Touch-up: Immediately after erection, sand smooth any rusted or damaged areas of prime coat and apply touch-up of compatible air-drying primer.

B. Protection Removal: Immediately prior to final inspection, remove protective plastic wrappings from prefinished doors.

C. Final Adjustments: Check and readjust operating hardware items, leaving steel doors and frames undamaged and in complete and proper operating condition.

END OF SECTION 081113

ADDENDUM NO. 02

SECTION 084113 - ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

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. 2” x 6” Thermally broken Storefront framing.

B. Related Requirements:
1. Related Sections:
   a. 079200 – Joint Sealants
   b. 085113 – Aluminum Windows
   c. 088000 – Glazing

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Shop Drawings: For aluminum-framed entrances and storefronts. Include plans, elevations, sections, full-size details, and attachments to other work.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance Data: For aluminum-framed entrances and storefronts to include in maintenance manuals.

B. Maintenance Data for Structural Sealant: For structural-sealant-glazed storefront to include in maintenance manuals. Include ASTM C 1401 recommendations for post-installation-phase quality-control program.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

B. Special Warranty: Installer agrees to repair or replace components of aluminum-framed entrances and storefronts that do not comply with requirements or that fail in materials or workmanship within specified warranty period.

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

a. Structural failures, including, but not limited to, excessive deflection.
b. Noise or vibration created by wind and thermal and structural movements.
c. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
d. Water penetration through fixed glazing and framing areas.
e. Failure of operating components.

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

C. Special Finish Warranty: Standard form in which manufacturer agrees to repair finishes or replace aluminum that shows evidence of deterioration of factory-applied finishes within specified warranty period.

1. Deterioration includes, but is not limited to, the following:

a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.

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

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations: Obtain all components of aluminum-framed entrance and storefront system, including framing and accessories, from single manufacturer.

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Kawneer Company, Inc.
2. Oldcastle Building Envelope
3. United States Aluminum
4. Tubelite, Inc.
5. Vistawall Architectural Products
6. EFCO Corporation
7. Arch Aluminum & Glass Co., Inc.

2.2 PERFORMANCE REQUIREMENTS

A. General Performance: Comply with performance requirements specified, as determined by testing of aluminum-framed entrances and storefronts representing those indicated for this

Project without failure due to defective manufacture, fabrication, installation, or other defects in construction.

1. Aluminum-framed entrances and storefronts shall withstand movements of supporting structure, including, but not limited to, twist, column shortening, long-term creep, and deflection from uniformly distributed and concentrated live loads.
2. Failure also includes the following:

    a. Thermal stresses transferring to building structure.
    b. Glass breakage.
    c. Noise or vibration created by wind and thermal and structural movements.
    d. Loosening or weakening of fasteners, attachments, and other components.
    e. Failure of operating units.

B. Structural Loads:
1. Wind Loads: 30 psf positive and negative; 30 psf negative at corner zones.
2. Other Design Loads: As indicated on Drawings.

C. Deflection of Framing Members: At design wind pressure, as follows:

1. Deflection Normal to Wall Plane: Limited to edge of glass in a direction perpendicular to glass plane not exceeding 1/175 of the glass edge length for each individual glazing lite or an amount that restricts edge deflection of individual glazing lites to 3/4 inch, whichever is less.
2. Deflection Parallel to Glazing Plane: Limited to [1/360 of clear span or 1/8 inch whichever is smaller.

D. Air Infiltration: Test according to ASTM E 283 for infiltration as follows:

1. Fixed Framing and Glass Area:

    a. Maximum air leakage of 0.06 cfm/sq. ft. at a static-air-pressure differential of 1.6 lbf/sq. ft.

E. Water Penetration under Static Pressure: Test according to ASTM E 331 as follows:

1. No evidence of water penetration through fixed glazing and framing areas, including entrance doors, when tested according to a minimum static-air-pressure differential of 20 percent of positive wind-load design pressure, but not less than.

F. Water Penetration under Dynamic Pressure: Test according to AAMA 501.1 as follows:

1. No evidence of water penetration through fixed glazing and framing areas when tested at dynamic pressure equal to 20 percent of positive wind-load design pressure, but not less than 6.24 lbf/sq. ft.
2. Maximum Water Leakage: According to AAMA 501.1. No uncontrolled water penetrating assemblies or water appearing on assemblies' normally exposed interior surfaces from sources other than condensation. Water leakage does not include water controlled by flashing and gutters, or water that is drained to exterior.

G. Seismic Performance: Aluminum-framed entrances and storefronts shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.

1. Seismic Drift Causing Glass Fallout: Complying with criteria for passing based on building occupancy type when tested according to AAMA 501.6 at design displacement and 1.5 times the design displacement.

H. Energy Performance: Certify and label energy performance according to NFRC as follows:

1. Thermal Transmittance (U-factor): Fixed glazing and framing areas as a system shall have U-factor of not more than 0.37 Btu/sq. ft. x h x deg F as determined according to NFRC 100.
2. Solar Heat Gain Coefficient (SHGC): Fixed glazing and framing areas as a system shall have SHGC of no greater than 0.26 as determined according to NFRC 200.
3. Condensation Resistance: Fixed glazing and framing areas as a system shall have an NFRC-certified condensation resistance rating of no less than 15 as determined according to NFRC 500.

I. Impact Resistance Performance:
1. The test specimen shall be tested in accordance with ASTM E 1886, information in ASTM E 1996 and TAS 201/203.
2. Large-Missile Impact: For aluminum-framed systems located within 30 feet (9.1 m) of grade.
3. Small-Missile Impact: For aluminum-framed systems located above 30 feet (9.1 m) of grade.

2.3 STOREFRONT SYSTEMS

A. Framing Members: Manufacturer's extruded- or formed-aluminum framing members of thickness required and reinforced as required to support imposed loads.

1. Exterior Framing Construction: Thermally broken, Center Plane
2. Interior Vestibule Framing Construction: Nonthermal,
3. Glazing System: Retained mechanically with gaskets on four sides.
4. Finish: High-performance organic finish.
5. Fabrication Method: Field-fabricated stick system.
6. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated.
7. Steel Reinforcement: As required by manufacturer.

B. Backer Plates: Manufacturer's standard, continuous backer plates for framing members, if not integral, where framing abuts adjacent construction.

C. Brackets and Reinforcements: Manufacturer's standard high-strength aluminum with nonstaining, nonferrous shims for aligning system components.

2.4 GLAZING

A. Glazing: Comply with Section 088000 "Glazing."

2.5 MATERIALS

A. Sheet and Plate: ASTM B 209.

B. Extruded Bars, Rods, Profiles, and Tubes: ASTM B 221: 6063-T6 alloy and temper.

C. Extruded Structural Pipe and Tubes: ASTM B 429/B 429M.

D. Structural Profiles: ASTM B 308/B 308M.

E. Steel Reinforcement:

1. Structural Shapes, Plates, and Bars: ASTM A 36/A 36M.
2. Cold-Rolled Sheet and Strip: ASTM A 1008/A 1008M.
3. Hot-Rolled Sheet and Strip: ASTM A 1011/A 1011M.
4. Primer: Manufacturer's standard zinc-rich, corrosion-resistant primer complying with SSPC-PS Guide No. 12.00; applied immediately after surface preparation and pretreatment. Select surface preparation methods according to recommendations in SSPC-SP COM, and prepare surfaces according to applicable SSPC standard.

2.6 ACCESSORIES

A. Fasteners and Accessories: Manufacturer's standard corrosion-resistant, non-staining, nonbleeding fasteners and accessories compatible with adjacent materials.

1. Use self-locking devices where fasteners are subject to loosening or turning out from thermal and structural movements, wind loads, or vibration.
2. Reinforce members as required to receive fastener threads.
3. Use exposed fasteners with countersunk Phillips screw heads, finished to match framing system.

B. Anchors: Three-way adjustable anchors with minimum adjustment of 1 inch that accommodate fabrication and installation tolerances in material and finish compatible with adjoining materials and recommended by manufacturer.

1. Concrete and Masonry Inserts: Hot-dip galvanized cast-iron, malleable-iron, or steel inserts complying with ASTM A 123/A 123M or ASTM A 153/A 153M requirements.

C. Concealed Flashing: Manufacturer's standard corrosion-resistant, non-staining, nonbleeding flashing compatible with adjacent materials.

2.7 FABRICATION

A. Form or extrude aluminum shapes before finishing.

B. Weld in concealed locations to greatest extent possible to minimize distortion or discoloration of finish. Remove weld spatter and welding oxides from exposed surfaces by descaling or grinding.

C. Fabricate components that, when assembled, have the following characteristics:

1. Profiles that are sharp, straight, and free of defects or deformations.
2. Accurately fitted joints with ends coped or mitered.
3. Physical and thermal isolation of glazing from framing members.
4. Accommodations for thermal and mechanical movements of glazing and framing to maintain required glazing edge clearances.
5. Fasteners, anchors, and connection devices that are concealed from view to greatest extent possible.

D. Mechanically Glazed Framing Members: Fabricate for flush glazing without projecting stops.

E. Structural-Sealant-Glazed Framing Members: Include accommodations for using temporary support device to retain glazing in place while structural sealant cures.

F. Storefront Framing: Fabricate components for assembly using shear-block system.

G. After fabrication, clearly mark components to identify their locations in Project according to Shop Drawings.

2.8 ALUMINUM FINISHES

A. Aluminum Finishes – Finish of Aluminum Components
1. Finish of all exposed areas of aluminum windows and components shall be done in accordance with the appropriate AAMA Voluntary Guide Specification shown.
a. AA-M10C21A41, Class I, AAMA 611, Clear Anodized (match existing)

2.9 SOURCE QUALITY CONTROL

A. Structural Sealant: Perform quality-control procedures complying with ASTM C 1401 recommendations, including, but not limited to, assembly material qualification procedures, sealant testing, and assembly fabrication reviews and checks.

PART 3 - EXECUTION

3.1 EXAMINATION

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

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

3.2 PREPARATION

A. Prepare surfaces that are in contact with structural sealant according to sealant manufacturer's written instructions, to ensure compatibility and adhesion. Preparation includes, but is not limited to, cleaning and priming surfaces.

3.3 INSTALLATION

A. General:

1. Comply with manufacturer's written instructions.
2. Do not install damaged components.
3. Fit joints to produce hairline joints free of burrs and distortion.
4. Rigidly secure nonmovement joints.
5. Install anchors with separators and isolators to prevent metal corrosion and electrolytic deterioration and to prevent impeding movement of moving joints.
6. Seal perimeter and other joints watertight unless otherwise indicated.

B. Metal Protection:

1. Where aluminum is in contact with dissimilar metals, protect against galvanic action by painting contact surfaces with materials recommended by manufacturer for this purpose or by installing nonconductive spacers.
2. Where aluminum is in contact with concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.

C. Set continuous sill members and flashing in full sealant bed, as specified in Section 079200 "Joint Sealants," to produce weathertight installation.

D. Install components plumb and true in alignment with established lines and grades.

E. Install operable units level and plumb, securely anchored, and without distortion. Adjust weather-stripping contact and hardware movement to produce proper operation.

F. Install glazing as specified in Section 088000 "Glazing."

G. Install weatherseal sealant according to Section 079200 "Joint Sealants" and according to sealant manufacturer's written instructions to produce weatherproof joints. Install joint filler behind sealant as recommended by sealant manufacturer.

3.4 ERECTION TOLERANCES

A. Erection Tolerances: Install aluminum-framed entrances and storefronts to comply with the following maximum tolerances:

1. Plumb: 1/8 inch in 10 feet.
2. Level: 1/8 inch in 20 feet.
3. Alignment:

a. Where surfaces abut in line or are separated by reveal or protruding element up to 1/2 inch wide, limit offset from true alignment to 1/16 inch.
b. Where surfaces are separated by reveal or protruding element from 1/2 to 1 inch wide, limit offset from true alignment to 1/8 inch.
c. Where surfaces are separated by reveal or protruding element of 1 inch wide or more, limit offset from true alignment to 1/4 inch.

4. Location: Limit variation from plane to 1/8 inch in 12 feet; 1/2 inch over total length.

END OF SECTION 084113

ADDENDUM NO. 02

SECTION 088000 - GLAZING

PART 1 - GENERAL

1.1 SUMMARY

A. This 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. Interior borrowed lites.
   2. Storefront framing (including windows, entrances, and vestibules).

1.2 DEFINITIONS

A. Interspace: Space between lites of an insulating-glass unit that contains dehydrated air or a specified gas.

B. Deterioration of Coated Glass: Defects developed from normal use that are attributed to the manufacturing process and not to causes other than glass breakage and practices for maintaining and cleaning coated glass contrary to manufacturer's written instructions. Defects include peeling, cracking, and other indications of deterioration in metallic coating.

C. Deterioration of Insulating Glass: Failure of hermetic seal under normal use that is attributed to the manufacturing process and not to causes other than glass breakage and practices for 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.

1.3 PERFORMANCE REQUIREMENTS

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

B. Glass Design: Glass thickness designations indicated are minimums and are for detailing only. Confirm glass thicknesses by analyzing Project loads and in-service conditions. Provide glass lites in the thickness designations indicated for various size openings, but not less than thicknesses and in strengths (annealed or heat treated) required to meet or exceed the following criteria:

   1. Glass Thicknesses: Select minimum glass thicknesses to comply with ASTM E 1300, according to the following requirements:
      a. Specified Design Wind Loads: Not less than wind loads applicable to Project as required by ASCE 7 "Minimum Design Loads for Buildings and Other Structures": Section 6.0 "Wind Loads."

b. Probability of Breakage for Vertical Glazing: 8 lites per 1000 for lites set vertically or not more than 15 degrees off vertical and under wind action.

1) Load Duration: 3 seconds.

c. Minimum Glass Thickness for Exterior Lites: Not less than 1".
d. Thickness of Tinted and Heat-Absorbing Glass: Provide the same thickness for each tint color indicated throughout Project.

C. Thermal Movements: Provide glazing that allows for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures acting on glass framing members and glazing components. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

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

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

1. For monolithic-glass lites, properties are based on units with lites of thickness indicated.
2. For insulating-glass units, properties are based on units of thickness indicated for overall unit and for each lite 1 inch thick and a nominal wide interspace.
3. Center-of-Glass Values: Based on using LBL-44789 WINDOW 5.0 computer program for the following methodologies:

a. U-Factors: NFRC 100 expressed as Btu/ sq. ft. x h x deg F.
b. Solar Heat Gain Coefficient: NFRC 200.
c. Solar Optical Properties: NFRC 300.

1.4 SUBMITTALS

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

B. Glazing Schedule: Use same designations indicated on Drawings.

C. Preconstruction Adhesion and Compatibility Test Report: From glazing sealant manufacturer.

1.5 QUALITY ASSURANCE

A. Glazing for Fire-Rated Assemblies: Glazing for assemblies that comply with NFPA 80 and that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to NFPA 257.

B. Safety Glazing Products: Comply with testing requirements in 16 CFR 1201.

C. 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 Laminated Division's "Laminated Glass Design Guide" and GANA's "Glazing Manual."
2. IGMA Publication for Insulating Glass: SIGMA TM-3000, "Glazing Guidelines for Sealed Insulating Glass Units."

D. Insulating-Glass Certification Program: Permanently marked either on spacers or on at least one component lite of units with appropriate certification label of the Insulating Glass Certification Council or Associated Laboratories, Inc.

1.6 WARRANTY

A. Manufacturer's Special Warranty on Insulating Glass: Manufacturer's standard form, made out to Owner and signed by insulating-glass manufacturer agreeing to replace insulating-glass units that deteriorate as defined in "Definitions" Article, f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.

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

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:

1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products specified.
2. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.

2.2 INSULATING GLASS

a. Glass Type G-1: Not Used

b. Glass Type G-2: Low-E-coated, clear insulating glass.
   1) Overall Unit Thickness: 1 inch .
   2) Minimum Thickness of Each Glass Lite: 6 mm.
   3) Outdoor Lite: Fully tempered float glass.
   4) Interspace Content: Argon.
   5) Indoor Lite: Fully tempered float glass.
   6) Low-E Coating: Sputtered on second surface.
   7) Winter Nighttime U-Factor: 0.28 maximum.
   8) Summer Daytime U-Factor: 0.26 maximum.
   9) Solar Heat Gain Coefficient: 0.27 maximum.

c. Glass Type G-3: Spandrel, insulating glass.
   1) Overall Unit Thickness: 1 inch .

2) Minimum Thickness of Each Glass Lite: 6 mm.
3) Outdoor Lite: Fully tempered float glass.
4) Interspace Content: Argon.
5) Indoor Lite: Fully tempered float glass.
6) Ceramic Frit Coating: Second surface.
    a) Color to be selected from manufacturer's standard colors.

2.3 FIRE-RATED GLAZING PRODUCTS

A. Fire-Protection Rating: As indicated for the assembly in which glazing material is installed, and permanently labeled by a testing and inspecting agency acceptable to authorities having jurisdiction.

2.4 GLAZING GASKETS

A. Dense Compression Gaskets: Molded or extruded gaskets of material indicated below, complying with standards referenced with name of elastomer indicated below, and of profile and hardness required to maintain watertight seal:

1. Neoprene, ASTM C 864.
2. EPDM, ASTM C 864.
3. Silicone, ASTM C 1115.
4. Thermoplastic polyolefin rubber, ASTM C 1115.
5. Any material indicated above.

B. Soft Compression Gaskets: Extruded or molded, closed-cell, integral-skinned gaskets of material indicated below; complying with ASTM C 509, Type II, black; and of profile and hardness required to maintain watertight seal:

1. Neoprene.
2. EPDM.
3. Silicone.
4. Thermoplastic polyolefin rubber.
5. Any material indicated above.

2.5 GLAZING SEALANTS

A. General: Provide products of type indicated, complying with the following requirements:

1. Compatibility: Select 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. Colors of Exposed Glazing Sealants: As selected by Architect from manufacturer's full range.

B. Elastomeric Glazing Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.

C. Glazing Sealants for Fire-Resistive Glazing Products: Identical to products used in test assemblies to obtain fire-protection rating.

2.6 GLAZING TAPES

A. Back-Bedding Mastic Glazing Tapes: Preformed, butyl-based elastomeric tape with a solids content of 100 percent; nonstaining and nonmigrating in contact with nonporous surfaces; with or without spacer rod as recommended in writing by tape and glass manufacturers for application indicated; packaged on rolls with a release paper backing; and complying with ASTM C 1281 and AAMA 800 for products indicated below:
   1. AAMA 806.3 tape, for glazing applications in which tape is subject to continuous pressure.
   2. AAMA 807.3 tape, for glazing applications in which tape is not subject to continuous pressure.

B. Expanded Cellular Glazing Tapes: Closed-cell, PVC foam tapes; factory coated with adhesive on both surfaces; packaged on rolls with release liner protecting adhesive; and complying with AAMA 800 for the following types:

   1. Type 1, for glazing applications in which tape acts as the primary sealant.
   2. Type 2, for glazing applications in which tape is used in combination with a full bead of liquid sealant.

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 with a Shore, Type A durometer 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. Perimeter Insulation for Fire-Resistive Glazing: Identical to product used in test assembly to obtain fire-resistance rating.

2.8 FABRICATION OF GLAZING UNITS

A. Fabricate glazing units in sizes required to glaze 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.

2.9 INTERIOR CLEAR FLOAT-GLASS UNITS

A. Uncoated Clear Float-Glass Units: Class 1 (clear) annealed or Kind HS (heat-strengthened) float glass where heat strengthening is required to resist thermal stresses induced by differential shading of individual glass lites and to comply with system performance requirements.

PART 3 - EXECUTION

3.1 GLAZING

A. General: 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.

1. Glazing channel dimensions, as indicated on Drawings, provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances. Adjust as required by Project conditions during installation.
2. 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.
3. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction sealant-substrate testing.
4. 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.
5. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.
6. Provide spacers for glass lites where length plus width is larger than 50 inches.
7. 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.

B. Tape Glazing: Position tapes on fixed stops so that, when compressed by glass, their exposed edges are flush with or protrude slightly above sightline of stops. Install tapes continuously, but not necessarily in one continuous length. Do not stretch tapes to make them fit opening.

1. Cover vertical framing joints by applying tapes to heads and sills first and then to jambs. Cover horizontal framing joints by applying tapes to jambs and then to heads and sills.
2. Place joints in tapes at corners of opening with adjoining lengths butted together, not lapped. Seal joints in tapes with compatible sealant approved by tape manufacturer.
3. Apply heel bead of elastomeric sealant.
4. Center glass lites in openings on setting blocks and press firmly against tape 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.
5. Apply cap bead of elastomeric sealant over exposed edge of tape.

C. Gasket Glazing (Dry): Fabricate compression gaskets in lengths recommended by gasket manufacturer to fit openings exactly, with allowance for stretch during installation.

1. 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.
2. 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.
3. Install gaskets so they protrude past face of glazing stops.

D. Sealant Glazing (Wet): Install continuous spacers, or spacers combined with cylindrical sealant backing, between glass lites and glazing stops to maintain glass face clearances and to prevent sealant from extruding into glass channel and blocking weep systems until sealants cure. Secure spacers or spacers and backings in place and in position to control depth of installed sealant relative to edge clearance for optimum sealant performance.

1. Force sealants into glazing channels to eliminate voids and to ensure complete wetting or bond of sealant to glass and channel surfaces.
2. Tool exposed surfaces of sealants to provide a substantial wash away from glass.

3.2 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. Protect glass from contact with contaminating substances resulting from construction operations, including weld splatter. If, despite such protection, contaminating substances do come into contact with glass, remove substances immediately as recommended by glass manufacturer.

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

END OF SECTION 088000

Addendum #2

APPENDIX A

MSHP TROOP E HEADQUARTERS – ROOF & WINDOW REPLACEMENT
LIMITED ASBESTOS MATERIAL AND LEAD BASED PAINT INSPECTION

SITE LOCATION:
MSHP TROOP E HEADQUARTERS, POPLAR BLUFF MO

BUILDING DESCRIPTION:
Inspection is limited to suspect roofing materials and window wall materials. Roofing material is rolled asphalt tar roof with foam core. Window walls are aluminum metal wall with glass from bottom to top.

METHODS AND RESULTS:
The asbestos survey was performed by Mark Bonney licensed Missouri Department of Natural Resources (MDNR) asbestos inspector. Asbestos Inspection was conducted on April 15, 2025.

Samples of suspect asbestos-containing materials (ACMs) were collected utilizing hand tools and placed into individual, labeled plastic bags. Unique bulk suspect ACM samples were sent to SanAir Technologies Laboratory for analysis via Polarized Light Microscopy (PLM) Bulk identification method EPA 600/R-9/116. Materials consisting of additional layers were analyzed separately. SanAir Technologies Laboratory is listed as an accredited laboratory by the National Voluntary Laboratory Accreditation Plan (NVLAP) for bulk sample analysis. Samples were collected in general accordance with US EPA NESHAP Regulations (40 CFR 61 Subpart m) and OSHA Standard 29 CFR 1926.1101

In total, 14 bulk representative samples were submitted to the laboratory of which 16 layers were analyzed. ACM is defined as any building material containing more than one percent (>1%) asbestos as determined using the method specified in Appendix A, Subpart F, 40 CFR Part 763, Section 1, PLM.

A list of the sampled materials and reported results are located in Table 1 below with Laboratory analysis attached.

Table 1: Suspect Materials Lists:

Sample #	Material	Location	Condition	Analysis
W-1-01	Window Bead Glaze Interior	Main Floor Office West Side Interior	Good	< 1 % See Note
W-1-02	Window Bead Glaze Interior	Main Floor Lunch Rm West Side Interior	Good	< 1 %
W-1-03	Window Bead Glaze Interior	Main Floor Office Front West Side Interior	Good	< 1 %
W-2-01	Window Bead Caulk	Exterior Lower Floor Back West	Good	NAD
W-2-02	Window Bead Caulk	Exterior Lower Floor Front East	Good	NAD
W-2-03	Window Beasd Caulk	Exterior Lower Floor Front East	Good	NAD
W-3-01	Window Wall Caulk	Exterior Lower Front East	Good	NAD
W-3-02	Window Wall Caulk	Exterior Lower Front East	Good	NAD
W-3-03	Window Wall Caulk	Exterior Lower Back Best	Good	NAD
W-4-01	Window Glaze	Garage Windows	Good	< 1%
R-1-01	Roof Field	Main Roof Field West Middle	Good	NAD
R-1-02	Roof Field	Main Roof Field East Middle	Good	NAD
R-1-03	Roof Field	Main Roof Field South	Good	NAD
R-1-04	Roof Field	Lower Garage Roof	Good	NAD

*NAD No Asbestos Detected **ACM Asbestos Containing Materials *** < 1% See Inspection Notes

No Asbestos Containing Materials identified.

Inspection Notes:

1. The bead glaze is between the glass and the metal. The bead glaze material is intact unless the glass is to be broken or disturbed for removal. This type of metal window can be removed without breaking the glass and keeping the bead glaze intact.
2. Building materials containing <1% asbestos do not meet the definition of asbestos containing materials (ACM) in OSHA's Construction Asbestos Standard 29 CFR 1926.1101. Hence, removal or disturbance of building materials <1% asbestos does not constitute Class I or II asbestos work. However, the OSHA Standard's definition of asbestos does not have a 1% cutoff; therefore building materials containing <1% asbestos are covered by the standard. Removal/disturbance of these materials is unclassified asbestos work.
3. Negative Assessment Air Monitoring should be conducted during the initial on set of the removal.
4. Disposal for window materials < 1% go out as general construction debris or be salvaged for recycled metal.

To our knowledge, we have located suspect asbestos containing materials in the areas scheduled for renovation. If suspect asbestos containing materials are observed in addition to those reflected in this inspection report, then please advise us immediately so that we may schedule a follow-up inspection.

Asbestos Air Sampling Backgrounds

Air monitoring for background air was conducted on April 15, 2025. Samples Were collected utilizing Asbestos Air PCM 7400 Method. Samples were analyzed by SanAir Technologies Laboratory. All results were reported at < 0.002 fibers/cc see tables 2.1 below

Table 2.1 - Asbestos Containing Material Identified

Date / Times	Locations	Volume	Result
O4-15-2025 8:30AM- 10:30AM	Bathroom Mens Main Level	1,200 Liters 10 lpm	< 0.002 f/cc
O4-15-2025 8:30AM- 10:30AM	Adjacent Hallway Mens Main Level	1,200 Liters 10 lpm	< 0.002 f/cc
O4-15-2025 8:35AM- 10:35AM	Outside Comparison	1,200 Liters 10 lpm	< 0.002 f/cc

LEAD BASED PAINT TESTING:

The lead based paint (LBP) inspection of all painted surfaces to be impacted by window replacement was conducted on April 15, 2025, by Mark S. Bonney, licensed LBP Risk Assessor. Inspection was completed using paint chip sampling for all painted surfaces. Environmental samples were collected and submitted to SanAir Technologies Laboratory, NLLAP certified laboratory. Analytical test results and chain-of-custody documentation are enclosed. The results of the analysis of all samples are summarized in Table 3.

Table 3: Summary of LBP Sampling

Sample Number	Location	Component	Substrate Tested	Paint Color	Condition	Lab Results
L-6	Exterior Back	Wall	Concrete	White	Intact	Negative < 0..009 % wt

A sample result of greater than 0.50% lead by weight classifies the paint as lead bearing.

Inspection Notes:

1. Window are aluminum frame with no painted surfaces
2. Window seals are marble with no painted surfaces

NO LEAD BASED PAINT WAS IDENTIFIED.

Respectfully submitted,

Mark S. Bonney
Lead Risk Assessor #100301-300002736
MDNR Asbestos Inspector # #7118121511MOIR7390

Attachments:

1) Independent Lab Results
2) Licenses

SanAir Technologies Laboratory

The Identification Specialists

Analysis Report
prepared for
Trutest Environmental Solutions, LLC

Report Date: 4/17/2025

Project Name: Window/Roof Replacement

Project #: Troop E Poplar Bluff

SanAir ID#: 25024966

NVLAP TESTING

NVLAP LAB CODE 200870-0

10501 Trade Court, North Chesterfield, Virginia 23236
888.895.1177 | 804.897.1177 | fax: 804.897.0070 | LabReports@SanAir.com | SanAir.com

SanAir ID Number
25024966
FINAL REPORT
4/17/2025 5:23:36 PM

Name: Trutest Environmental Solutions, LLC
Address: PO Box 632
Jackson, MO 63755
Phone: 573-332-0484

Project Number: Troop E Poplar Bluff
P.O. Number:
Project Name: Window/Roof Replacement
Collected Date: 4/15/2025
Received Date: 4/16/2025 10:20:00 AM

Dear Mark Bonney,

We at SanAir would like to thank you for the work you recently submitted. The 14 sample(s) were received on Wednesday, April 16, 2025 via UPS. The final report(s) is enclosed for the following sample(s): W-1-01, W-1-02, W-1-03, W-2-01, W-2-02, W-2-03, W-3-01, W-3-02, W-3-03, R-1-01, R-1-02, R-1-03, R-1-04, W-4-01.

These results only pertain to this job and should not be used in the interpretation of any other job. This report is only complete in its entirety. Refer to the listing below of the pages included in a complete final report.

Sincerely,

Sandra Sobrino
Asbestos & Materials Laboratory Manager
SanAir Technologies Laboratory

Final Report Includes:
- Cover Letter
- Analysis Pages
- Disclaimers and Additional Information

Sample conditions:
- 14 samples in Good condition.

SanAir Technologies Laboratory

SanAir ID Number
25024966
FINAL REPORT
4/17/2025 5:23:36 PM

Name: Trutest Environmental Solutions, LLC
Address: PO Box 632
Jackson, MO 63755
Phone: 573-332-0484

Project Number: Troop E Poplar Bluff
P.O. Number:
Project Name: Window/Roof Replacement
Collected Date: 4/15/2025
Received Date: 4/16/2025 10:20:00 AM

Analyst: Parker, Sarah

Asbestos Bulk PLM EPA 600/R-93/116

	Stereoscopic	Components		
SanAir ID / Description	Appearance	% Fibrous	% Non-fibrous	Asbestos Fibers
W-1-01 / 25024966-001 Window Bead Glaze/Office West Interior	Grey Non-Fibrous Homogeneous		100% Other	< 1% Chrysotile
W-1-02 / 25024966-002 Window Bead Glaze/Lunch Room West Interior	Grey Non-Fibrous Homogeneous		100% Other	< 1% Chrysotile
W-1-03 / 25024966-003 Window Bead Glaze/Office Front East	Grey Non-Fibrous Homogeneous		100% Other	< 1% Chrysotile
W-2-01 / 25024966-004 Window Bead Glaze/Exterior/Lower Back West	Black Non-Fibrous Homogeneous	5% Cellulose	95% Other	None Detected
W-2-02 / 25024966-005 Window Bead Glaze/Exterior/Lower Front East	Black Non-Fibrous Homogeneous	5% Cellulose	95% Other	None Detected
W-2-03 / 25024966-006 Window Bead Glaze/Exterior/Lower Front East	Black Non-Fibrous Homogeneous	5% Cellulose	95% Other	None Detected
W-3-01 / 25024966-007 Window Caulk Exterior/Lower Front East, Caulk	White Non-Fibrous Homogeneous		100% Other	None Detected
W-3-01 / 25024966-007 Window Caulk Exterior/Lower Front East, Caulk	Grey Non-Fibrous Homogeneous		100% Other	None Detected
W-3-02 / 25024966-008 Window Caulk Exterior/Lower Front East, Caulk	White Non-Fibrous Homogeneous		100% Other	None Detected
W-3-02 / 25024966-008 Window Caulk Exterior/Lower Front East, Caulk	Grey Non-Fibrous Homogeneous		100% Other	None Detected

Analyst: Sarah Parker
Analysis Date: 4/17/2025

Approved Signatory: Johnathan Wilson
Date: 4/17/2025

SanAir Technologies Laboratory

SanAir ID Number
25024966
FINAL REPORT
4/17/2025 5:23:36 PM

Name: Trutest Environmental Solutions, LLC
Address: PO Box 632
Jackson, MO 63755
Phone: 573-332-0484

Project Number: Troop E Poplar Bluff
P.O. Number:
Project Name: Window/Roof Replacement
Collected Date: 4/15/2025
Received Date: 4/16/2025 10:20:00 AM

Analyst: Parker, Sarah

Asbestos Bulk PLM EPA 600/R-93/116

	Stereoscopic	Components		
SanAir ID / Description	Appearance	% Fibrous	% Non-fibrous	Asbestos Fibers
W-3-03 / 25024966-009 Window Caulk Exterior/Lower Back West	Grey Non-Fibrous Homogeneous		100% Other	None Detected
R-1-01 / 25024966-010 Roof Field Core/Middle East	Black Non-Fibrous Homogeneous	5% Synthetic 5% Glass	90% Other	None Detected
R-1-02 / 25024966-011 Roof Field Core/Middle West	Black Non-Fibrous Homogeneous	5% Synthetic 5% Glass	90% Other	None Detected
R-1-03 / 25024966-012 Roof Field Core/Middle South	Black Non-Fibrous Homogeneous	5% Synthetic 5% Glass	90% Other	None Detected
R-1-04 / 25024966-013 Roof Field/Lower Roof Garage	Black Non-Fibrous Homogeneous	5% Synthetic 15% Glass	80% Other	None Detected
W-4-01 / 25024966-014 Window Glaze Exterior/Garage Window	White Non-Fibrous Homogeneous		100% Other	< 1% Chrysotile

Analyst: Sarah Parker
Analysis Date: 4/17/2025

Approved Signatory: Johnathan Wilson
Date: 4/17/2025

Disclaimer and Additional Information:
Asbestos Bulk PLM EPA 600/R-93/116

This report is the sole property of the client named on the chain-of-custody (COC) submitted to SanAir Technologies Laboratory, Inc. (SanAir). Results in the report are confidential information intended only for the use by the customer listed on the COC. Neither results nor reports will be discussed with or released to any third party without our client's written permission. The final report shall not be reproduced, except in full, without written approval of the laboratory to assure that parts of the report are not taken out of context. This report and any information contained within shall not be edited, altered, or modified in any way by any persons or agencies receiving, viewing, distributing, or otherwise possessing a copy of this final report. The laboratory reserves the right to perform amendments to any finalized report, of which shall supersede and make obsolete any previous editions. Such changes, modifications, additions, or deletions shall be effective immediately upon notice thereof, which may be given by means including but not limited to posting on the SanAir client portal website, electronic or conventional mail, or by any other means.

The information provided in this report applies only to the samples submitted and is relevant only for the date, time, and location of sampling. The accuracy of the results is dependent upon the client's sampling procedure and information provided to the laboratory by the client on the COC. SanAir assumes no responsibility for the sampling procedure and will provide evaluation reports based solely on the sample(s) in the condition received at the laboratory and information provided by the client on the COC, such as: project number, project name, collection dates, P.O. number, special instructions, samples collected by, sample numbers, sample identifications, sample type, selected analysis type, flow rate, total volume or area, and start-stop times that may affect the validity of the results in this report. Samples were received in good condition unless otherwise noted on the report. When the client requires samples to be tested that deviates from a specific method or condition, all reported results may be affected by the deviation. SanAir assumes no responsibility or liability for the manner in which the results are used or interpreted.

This report does not constitute nor shall not be used by the client to claim product, process, system, or person certification, approval, or endorsement by NVLAP, NIST, NELAC, AIHA LAP, LLC or any other U.S. governmental agencies; all or somet tests contained in this report may not be accredited by every local, state, and federal regulatory agencies. Refer to the SanAir website at www.sanair.com for copies of current certificates and scopes of various accreditations, certifications, and licenses or contact the laboratory for inquiries regarding the status or scope of an accreditation or certification.

Samples are held for a period of 60 days. Fibers smaller than 5 microns cannot be seen with this method due to scope limitations. For NY state samples, method EPA 600/M4-82-020 is performed.

NYELAP Disclaimer:
Polarized-light microscopy is not consistently reliable in detecting asbestos in floor covering and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

Asbestos Accreditations, Certifications, and Licenses
National Voluntary Laboratory Accreditation Program (NVLAP) Lab Code 200870-0
City of Philadelphia Department of Public Health Air Management Services, Certification#ALL-460
Commonwealth of Pennsylvania Department of Environmental Protection Number 68-05397
California State Environmental Laboratory Accreditation Program Certificate Number 2915
Colorado Department of Public Health and Environment Registration Number AL-23143
Connecticut Department of Public Health Environmental Laboratory Registration Number PH-0105
Massachusetts Department of Labor Standards Asbestos Analytical Services License Number: AA000222
State of Maine Department of Environmental Protection License Number: LB-0075
New York State Department of Health Laboratory ID: 11983
State of Rhode Island Department of Health Certification No.: PLM00126
Texas Department of State Health Services License Number: 300440
Commonwealth of Virginia Department of Professional and Occupational Regulation Number: 3333000323
State of Washington Department of Ecology Laboratory ID: C989
State of West Virginia Bureau for Public Health Analytical Laboratory Number: LT000616
Vermont Department of Health License Number: Asb-Co-An-000006
Louisiana Department of Environmental Quality AI Number 212253, LELAP Lab ID #05088

SanAir Technologies Laboratory

10501 Trade Ct., Suite 100
N. Chesterfield, VA 23236
804.897.1177 / 888.895.1177
Fax 804.897.0070
sanair.com

Asbestos Chain of Custody
Form 140, Rev 7, 10/20/2022

SanAir ID Number: 25024966

Company: Trutest Environmental Solutions, LLC		Project #: Troop E Poplar Bluff	Collected by: Mark Bonney
Address: PO Box 632		Project Name: Window / Roof Replacement	Phone #: 573-332-0484
City, St., Zip: Jackson, MO 63755		Date Collected: 04-15-2025	Fax #: 573-332-0484
State of Collection: MO	Account#: 2271	P.O. Number:	Email:

Bulk

ABB	PLM EPA 600/R-93/116	☒
	Positive Stop	☐
ABEPA	PLM EPA 400 Point Count	☐
ABB1K	PLM EPA 1000 Point Count	☐
ABBEN	PLM EPA NOB**	☐
ABBCH	TEM Chatfield**	☐
ABBTM	TEM EPA NOB**	☐
ABQ	PLM Qualitative	☐

** Available on 24-hr. to 5-day TAT

Water

ABHE	EPA 100.2	☐

Air

ABA	PCM NIOSH 7400	☐
ABA-2	OSHA w/ TWA*	☐
ABTEM	TEM AHERA	☐
ABATN	TEM NIOSH 7402	☐
ABT2	TEM Level II	☐
Other:		☐

New York ELAP

ABEPA2	NY ELAP 198.1	☐
ABENY	NY ELAP 198.6 PLM NOB	☐
ABBNY	NY ELAP 198.4 TEM NOB	☐
	Positive Stop	☐

Soil

ABSE	PLM EPA 600/R-93/116 (Qual.)	☐

Vermiculite

ABB	PLM EPA 600/R-93/116	☐
ABEPA3	PLM EPA 400 Point Count	☐
ABCM	Cincinnati Method	☐

Dust

ABWA	TEM Wipe ASTM D-6480	☐
ABDMV	TEM Microvac ASTM D-5755	☐

Matrix	Other	
		☐

Turn Around Times				
	3 HR (4 HR TEM) ☐	6 HR (8HR TEM) ☐	12 HR ☐	1 Day ☒
	☐ 2 Days	☐ 3 Days	☐ 4 Days	☐ 5 Days

Special Instructions

Sample #	Sample Identification/Location	Volume or Area	Sample Date	Flow Rate*	Start – Stop Time*
W-1-01	Window Bead Glaze /	Office	West		Interior
W-1-02	Window Bead Glaze /	Lunch Room	West		Interior
W-1-03	Window Bead Glaze /	Office	Front	East	
W-2-01	Window Bead Glaze Exterior /	Lower	Back	West	
W-2-02	Window Bead Glaze Exterior /	Lower	Front	East	
W-2-03	Window Bead Glaze Exterior /	Lower	Front	East	
W-3-01	Window Caulk Exterior /	Lower	Front	East	
W-3-02	Window Caulk Exterior /	Lower	Front	East	
W-3-03	Window Caulk Exterior /	Lower	Back	West	
R-1-01	Roof Field Core /	Middle	East		
R-1-02	Roof Field Core /	Middle	West		
R-1-03	Roof Field Core /	Middle	South		

Relinquished by	Date	Time	Received by	Date	Time
[signature]	04/15/25	4:15 pm	[signature]	4/16/25	10:20 am

If no technician is provided, then the primary contact for your account will be selected. Unless scheduled, the turnaround time for all samples received after 3 pm EST will be logged in the next business day. Weekend or holiday work must be scheduled ahead of time and is charged at 150% of the 3hr TAT or a minimum charge of $150. A courier charge will be applied for same day and one-day turnaround times for offsite work. SanAir covers Ground and Next Day Air shipping. Shipments billed to SanAir with a faster shipping rate will result in additional charges.

25024966

Sample #	Sample Identification/Location	Volume or Area	Sample Date	Flow Rate*	Start – Stop Time*	
R-1-04	Roof Field / Lower Roof Garage					
W-4-01	Window Glaze Exterior / Garage Window					

Special Instructions	

Relinquished by	Date	Time	Received by	Date	Time
[signature]	04/15/25	4:15p	[signature]	4/16/25	10:20am

If no technician is provided, then the primary contact for your account will be selected. Unless scheduled, the turnaround time for all samples received after 3 pm EST will be logged in the next business day. Weekend or holiday work must be scheduled ahead of time and is charged at 150% of the 3hr TAT or a minimum charge of $150. A courier charge will be applied for same day and one-day turnaround times for offsite work. SanAir covers Ground and Next Day Air shipping. Shipments billed to SanAir with a faster shipping rate will result in additional charges. Page 2 of 2

SanAir Technologies Laboratory

The Identification Specialists

Analysis Report
prepared for
Trutest Environmental Solutions, LLC

Report Date: 4/18/2025

Project Name: Bathrooms/Windows

Project #: Troop E Poplar Bluff

SanAir ID#: 25025243

10501 Trade Court, North Chesterfield, Virginia 23236
888.895.1177 | 804.897.1177 | fax: 804.897.0070 | LabReports@SanAir.com | SanAir.com

SanAir ID Number
25025243
FINAL REPORT
4/18/2025 9:41:31 AM

Name: Trutest Environmental Solutions, LLC
Address: PO Box 632
Jackson, MO 63755
Phone: 573-332-0484

Project Number: Troop E Poplar Bluff
P.O. Number:
Project Name: Bathrooms/Windows
Collected Date: 4/15/2025
Received Date: 4/17/2025 8:00:00 AM

Dear Mark Bonney,

We at SanAir would like to thank you for the work you recently submitted. The 4 sample(s) were received on Thursday, April 17, 2025 via UPS. The final report(s) is enclosed for the following sample(s): L-3, L-4, L-5, L-6.

These results only pertain to this job and should not be used in the interpretation of any other job. This report is only complete in its entirety. Refer to the listing below of the pages included in a complete final report.

Sincerely,

Abisola Kasali
Metals Laboratory Director
SanAir Technologies Laboratory

Final Report Includes:
- Cover Letter
- Chemistry Analysis
- Disclaimers and Additional Information

Sample conditions:
- 4 samples in Good condition.

SanAir Technologies Laboratory

SanAir ID Number
25025243
FINAL REPORT
4/18/2025 9:41:31 AM

Name: Trutest Environmental Solutions, LLC
Address: PO Box 632
Jackson, MO 63755
Phone: 573-332-0484

Project Number: Troop E Poplar Bluff
P.O. Number:
Project Name: Bathrooms/Windows
Collected Date: 4/15/2025
Received Date: 4/17/2025 8:00:00 AM

Analyst: Baird, Marti
Test Method: SW846/M3050B/7000B

Lead Paint Analysis

PAINT Sample	Description	µg Pb In Sample	Sample Size (grams)	Calculated RL	Sample Results	Sample Results
25025243 - 1	L-3 Wall/Blue/Shower Rm	< 10	0.1118	89.4	<89.4 µg/g (ppm)	<0.009 % By Weight
25025243 - 2	L-4 Door Frame/Shower Rm Beige	< 10	0.1022	97.8	<97.8 µg/g (ppm)	<0.010 % By Weight
25025243 - 3	L-5 Painted Floor/Grey/Shower Rm	59	0.1194	83.8	494.8 µg/g (ppm)	0.050 % By Weight
25025243 - 4	L-6 Exterior Wall/White/Back West	< 10	0.1175	85.1	<85.1 µg/g (ppm)	<0.009 % By Weight

Method Reporting Limit <10 µg/0.1 g paint

Signature: Marti Baird
Date: 4/17/2025

Reviewed: Alissa Galardi
Date: 4/17/2025

Disclaimer

SanAir Technologies Laboratory, Inc. participates in the Environmental Lead Accreditation Program (ELAP) administered by AIHA LAP, LLC (Laboratory ID LAP-162952). Refer to our accreditation certificate and scope on our website or www.aihaaccreditedlabs.org for an up to date list of the Fields of Testing for which we are accredited. SanAir also participates in the State of New York's DOH-ELAP (Lab Id 11983), and has met the EPA's NLLAP program standards. This report does not constitute nor shall be used by the client to claim product, process, system, or person certification, approval, or endorsement by AIHA LAP, LLC, NELAC, NIST, and/or any other U.S. governmental agencies; and test results in this report may not be accredited by every local, state or federal regulatory agency.

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AIHA LAP, LLC Lab ID: LAP-162952
Commonwealth of VA Department of General Services DCLS, VELAP Laboratory ID#460251
New York State Department of Health Laboratory ID No: 11983
California State Environmental Laboratory Accreditation Program Certificate No: 2915
State of Connecticut Department of Public Health Environmental Laboratory Registration Number: PH-0105
New Jersey Department of Environment Protection Environmental Laboratory Certification ID# VA014
Ohio Department of Health Environmental Lead Laboratory Approval Number E10049
State of Rhode Island Department of Health Environmental Lead Laboratory No LAO00371

SanAir Technologies Laboratory
10501 Trade Ct.
N. Chesterfield, VA 23236-3993
804.897.1177 / 888.895.1177
Fax 804.897.0070
sanair.com

Metals & Lead Chain of Custody

Form 70, Revision 11, 09/21/21

SanAir ID Number 2502S243

Company: Trutest Environmental Solutions, LLC	Project Name: Troop E Poplar Bluff Bathrooms / Windows		Phone #: 573-332-0484
Address: PO Box 632			Phone #:
City, St., Zip: Jackson, MO 63755	Date Collected: 04/15/25		Fax #: 573-332-0484
Samples Collected By: Mark Bonney	P.O. Number:		Email:
Account #:	U.S. State Collected in:		Email:

Matrix Types

- ☐ **Air** (ug/m³)
- ☐ **Wipe** (ug/ft²)
- ☒ **Paint** ☐ **Soil** ☒ **Bulk** (ug/g or ppm)
- ☐ **Other:**

Metals Analysis Types

- Total Concentration of Lead ☒
- Total Concentration of RCRA 8 Metals ☐
- TCLP for Lead ☐
- TCLP for RCRA 8 Metals ☐
- ☐ ICP-total concentration of metals (please list metals):

Turn Around Time				
	Same Day ☐	1 Day ☐	2 days ☐	3 Days ☐
	☐ 4 Days	☐ Standard (5 day)	☐ Other Test:	

Sample #	Collection Date & Time	Sample Identification/Location	Flow Rate	Start Time	Stop Time	Volume (L) Area (Sq ft)
L-1	04-15-25	Ceramic Wall Tile / Mens		Main Floor		
L-2	04-15-25	Ceramic Floor Tile / Mens		Main Floor		
L-3	04-15-25	Wall / Blue / Shower Rm				
L-4	04-15-25	Door Frame / Shower Rm. Beige				
L-5	04-15-25	Painted Floor / Grey / Shower Rm				
L-6	04-15-25	Exterior Wall / White / ~~From~~ Back west				

Special Instructions

Relinquished by	Date	Time	Received by	Date	Time
[signature]	04/15/25	4:15	12m	4/16/25	10:20a

If no technician is provided, then the primary contact for your account will be selected. Unless scheduled, the turnaround time for all samples received after 3 pm EST will be logged in the next business day. Weekend or holiday work must be scheduled ahead of time and is charged at 150% of the 3hr TAT or a minimum charge of $150. A courier charge will be applied for same day and one-day turnaround times for offsite work. SanAir covers Ground and Next Day Air shipping. Shipments billed to SanAir with a faster shipping rate will result in additional charges.

Page ___ of ____

25025243

Outlook

RE: [Reply Needed] Multiple Projects Received 04/16 - TAT/ANA Confirmation

From mbonney@charter.net <mbonney@charter.net>
Date Wed 4/16/2025 4:46 PM
To Support <support@sanair.com>

EXTERNAL EMAIL: DO NOT CLICK on links or attachments unless you recognize the sender and know the content is safe.

Please Use 1 day TAT
Thanks,
Mark Bonney

From: "Support" <support@sanair.com>
To: <mbonney@charter.net>
Sent: April 16, 2025 at 10:12 AM CDT
Subject: [Reply Needed] Multiple Projects Received 04/16 - TAT/ANA Confirmation
Project Names: 28524 CR 385 & Troop E Popker Bluff

Good Morning,

For the asbestos and metals & lead project mentioned above, the analysis type and/or turnaround is missing from the chain of custody.

For the asbestos project, please confirm you would like this to be analyzed using ABB (PLM EEPA 600/R-93/116).

Please confirm the turnaround time you would like

- 3 Hour
- 6 Hour
- 12 Hour
- 1 Day
- 2 Day
- 3 Day
- 4 Day
- 5 Day

For the metals & lead project, please confirm the turnaround time you would like.

- Same Day
- 1 Day
- 2 Day
- 3 Day
- 4 Day
- 5 Day

Please let me know if you have any questions.

Respectfully,

Cecelia Toler
Customer Service Representative
SanAir Technologies Laboratory, Inc.
10501 Trade Court
N. Chesterfield, VA 23236
Phone 804-897-1177 Ext 208
Fax 804-897-0070
www.SanAir.com

RM 411612S 4:46 pm

MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

Michael L. Parson
Governor

Dru Buntin
Director

August 16, 2024

Mark S Bonney
4595 CR 620
Cape Girardeau, MO 63701

RE: **Missouri Asbestos Occupation Certification Card**

Enclosed is your certification card for Asbestos Inspector, as issued by the Asbestos Unit of the Missouri Department of Natural Resources' Air Pollution Control Program.

Missouri Certification Number: 7118081624MOIR7390
Course Training Date: August 16, 2024
Missouri Certification Approval Date: August 16, 2024
Missouri Certification Expiration Date: August 16, 2025

Note:

- All Missouri-certified asbestos personnel must comply with the following statutes and regulations:
  - Sections 643.225 to 643.250, RSMo;
  - 10 CSR 10-6.241 *Asbestos Projects-Registration, Abatement, Notification, Inspection, Demolition, and Performance Requirements; and*
  - 10 CSR 10-6.250 *Asbestos Projects-Certification, Accreditation and Business Exemption Requirements.*
- To keep your occupation certification up-to-date, you must complete an annual refresher course and submit a renewal application each year.
- In order to be eligible to renew your certification, you must successfully complete a refresher course with a Missouri-accredited training provider within 12 months of the expiration date of your current training certificate. If you exceed this grace period, you will be required to retake a Missouri-accredited initial course in order to be eligible for Missouri certification.

To obtain a copy of the certification renewal application, or review regulations and requirements, please visit our website at http://dnr.mo.gov/env/apcp/asbestos/index.htm.

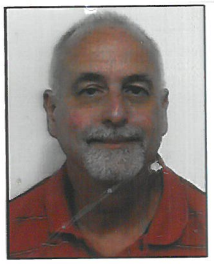
If you have any questions please call the Air Pollution Control Program at 573-751-4817.

AIR POLLUTION CONTROL PROGRAM

Director of Air Pollution Control Program

PO Box 176, Jefferson City, MO 65102-017

CERTIFICATION NUMBER:
7118081624MOIR7390
THIS CERTIFIES
Mark S Bonney
HAS COMPLETED THE CERTIFICATION
REQUIREMENTS FOR
Inspector



APPROVED: **08/16/2024**
EXPIRES: **08/16/2025**
TRAINING DATE: **08/16/2024**

Director of Air Pollution Control Program

STATE OF MISSOURI
DEPARTMENT OF HEALTH AND SENIOR SERVICES

LEAD OCCUPATION LICENSE REGISTRATION

Issued to:

Mark S. Bonney

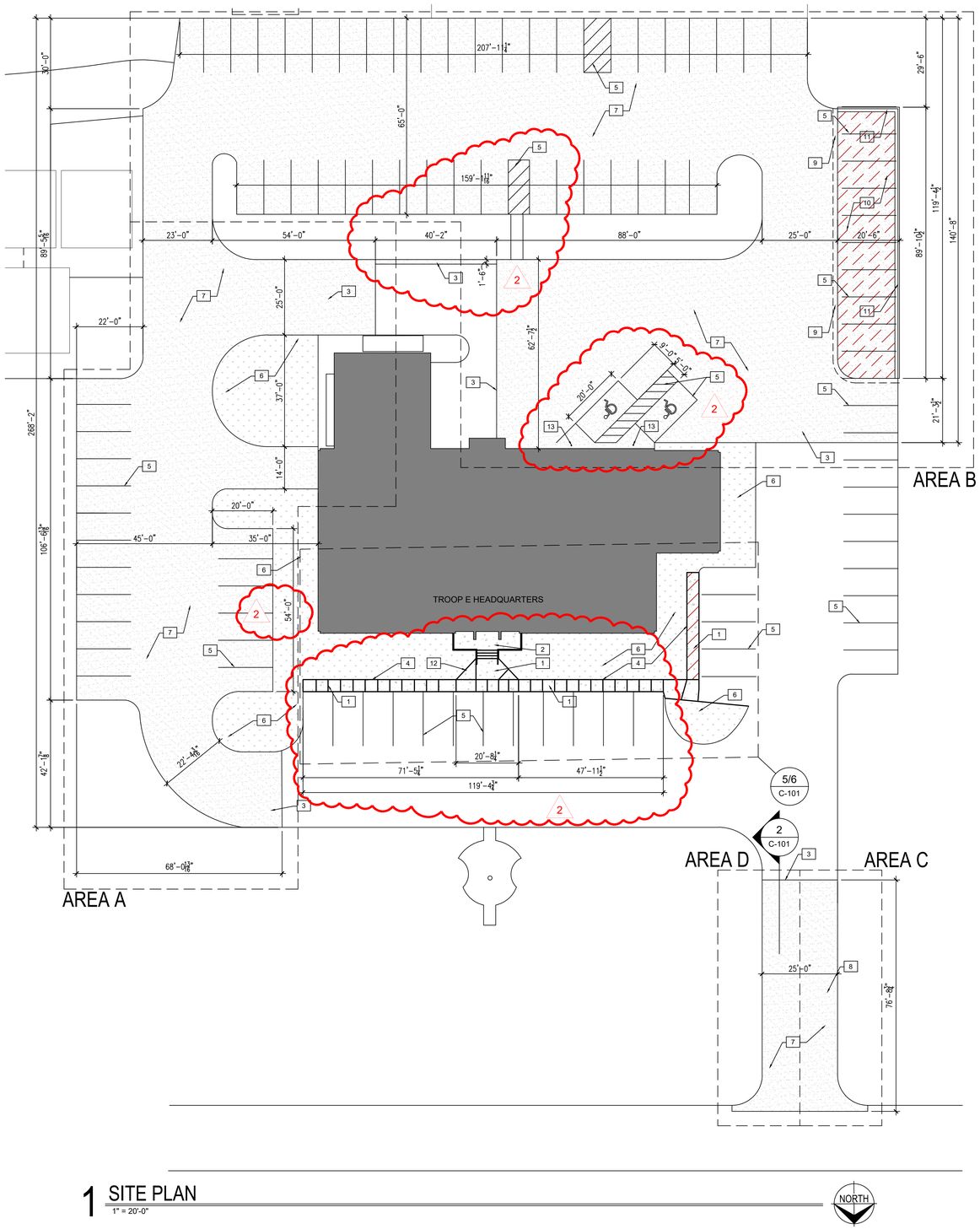
The person, firm or corporation whose name appears on this certificate has fulfilled the requirements for licensure as set forth in the Missouri Revised Statutes 701.300-701.338, as long as not suspended or revoked, and is hereby authorized to engage in the activity listed below.

Lead Risk Assessor
Category of License

Issuance Date:	**3/1/2024**
Expiration Date:	**3/1/2026**
License Number:	**100301-300002736**

Paula F. Nickelson
Director
Department of Health and Senior Services

Lead Licensing Program, PO Box 570, Jefferson City, MO 65102



1 SITE PLAN
1" = 20'-0"

GENERAL SITE PLAN NOTES:

A. ALL GRASSES, AGGREGATE AND CONCRETE SURFACES DISTURBED OR DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION.

B. BURY ELEVATIONS OF UNDERGROUND PIPING AND CONDUITS ARE UNKNOWN. UTILITIES CUT OR DAMAGED DURING CONSTRUCTION ARE TO BE RESTORED TO THEIR ORIGINAL CONDITION.

C. DASHED LINES INDICATE EXISTING CONSTRUCTION TO BE TOTALLY REMOVED BY CONTRACTOR UNLESS OTHERWISE NOTED. DEMO'D ITEMS TO BE REMOVED AND DISPOSED OF IN A SAFE AND LAWFUL MANNER PER AS SPECIFIED.

D. ALSO REFERENCE SHEET G-002 FOR GENERAL NOTES APPLICABLE FOR THE FULL PROJECT.

SYMBOL LEGEND (THIS SHEET ONLY)

- GRASS AREA TO BE RE-GRADED AND PREPPED FOR NEW CONSTRUCTION
- EXISTING GRASS AREA
- NEW REINFORCED CONCRETE
- NEW ASPHALT SURFACE
- 100.00' / 100.00 — FINISH ELEVATION - NEW / ELEVATION - EXISTING

F.F.E.	FINISH FLOOR ELEVATION
BOC	BOTTOM OF CURB
TOC	TOP OF CURB
CJ	CONTROL JOINT
EJ	EXPANSION JOINT
DS	DOWNSPOUT LOCATION

PHASING

NOTE: COORDINATE PHASING OF ASPHALT REPLACEMENT WITH STOREFRONT AND ROOFING SUBCONTRACTORS TO MINIMIZE CONSTRUCTION TRAFFIC ON NEWLY PAVED AREAS.

PHASE 1	MILL EXISTING AREAS A, B, C, AND D.
PHASE 2	RESURFACE AREA A
PHASE 3	RESURFACE AREA B
PHASE 4	RESURFACE AREA C
PHASE 5	RESURFACE AREA D

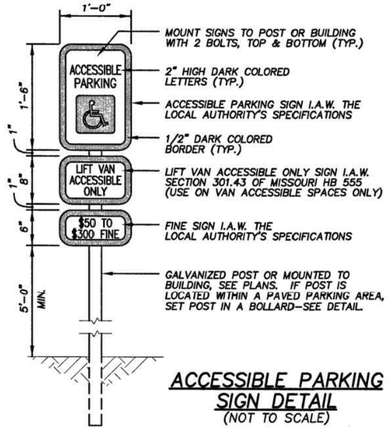
KEYED NOTES (RENOVATION SITE PLAN): X

1. NEW RIGID CONCRETE PAVEMENT, 4"thk w/ 6x6xW2.0xW2.0 WWF AT MID-DEPTH OVER 4" COMPACTED AGGREGATE BASE ON COMPACTED SUB-GRADE.
2. NEW 4" thk CONCRETE STOOP, ELEVATION ½" BELOW BUILDING FINISH FLOOR ELEVATION. REF: STOOP DETAILS 7 AND 8, SHEET C-101.
3. PROVIDE NEW EXPANSION JOINT FILLER & SEALANT BETWEEN EXISTING CONCRETE AND NEW ASPHALT. REF: DETAIL 2, SHEET C-101.
4. 6" THICKENED EDGE WHERE CONCRETE WALK MEETS GRASS AREA. SEE DETAIL 1, SHEET C-101.
5. PAINT 4" WIDE YELLOW PAVEMENT STRIPING AT PARKING AND WALK AREAS AS SHOWN
6. EXISTING GRASS AREA TO REMAIN.
7. RESURFACE EXISTING ASPHALT PARKING AREA. REMOVE EXISTING SURFACE AND INSTALL NEW TO A DEPTH OF 2".
8. PHASE WORK AT THIS AREA TO MAINTAIN ACCESS TO SITE AT ALL TIMES.
9. DEMO EXISTING CONCRETE CURB AND GUTTER AS NECESSARY FOR NEW PARKING AREA INSTALLATION.
10. RE-GRADE EXISTING GRASS AREA FOR INSTALLATION OF NEW CURB AND GUTTER, COMPACTED STONE BASE, AND ASPHALT PARKING AREA TO EXTENTS SHOWN. (APPROX. 10" BELOW CURRENT GRADE ELEVATION) SLOPE NEW PARKING TO SOUTHEAST MAX 2%.
11. NEW CONCRETE CURB AND GUTTER. REFER TO DETAIL 4, SHEET C-101.
12. INSTALL NEW SIGNAGE NOTING ACCESSIBLE PARKING AT REAR. (BY OWNER)
13. INSTALL NEW ADA SIGNAGE AT EXISTING PARKING SPACES AT REAR OF BUILDING. COORDINATE LOCATION WITH OWNER.

NOTES:

1.) SIGNS SHALL BE PRE-PAINTED ON 1/8" THICK SHEET ALUMINUM.

2.) SIGNS SHALL CONFORM TO THE FHWA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), THE MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, AND THE LOCAL AUTHORITY'S SPECIFICATIONS.



ACCESSIBLE PARKING SIGN DETAIL
(NOT TO SCALE)

STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

STATE OF MISSOURI
KRISTEN RAE UHRHAN
NUMBER A-2009027388
LICENSED ARCHITECT
PROFESSIONAL SEAL

DILLEPOLLARD ARCHITECTURE
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Poplar Bluff, MO
ph: 573-778-0033
www.dillepollard.com
266 S. Mt. Auburn Rd.
Cape Girardeau, MO
ph: 573-339-4536
info@dillepollard.com

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT,
DESIGN AND CONSTRUCTION

DEPARTMENT OF PUBLIC SAFETY
MISSOURI STATE HIGHWAY PATROL

RENOVATE EXTERIOR HEADQUARTERS BUILDING

M.S.H.P. TROOP E HEADQUARTERS
4869-5199 US-67
POPLAR BLUFF, MO 63901

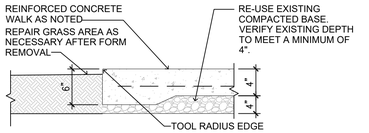
PROJECT #	R2335-01
SITE #	6006
ASSET #	8136006005
BUILDING #	8136006005

REVISION:	1
DATE:	6/5/2025
REVISION:	2
DATE:	6/9/2025
REVISION:	
DATE:	
ISSUE DATE:	September 30, 2024

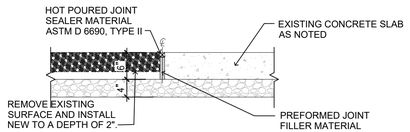
CAD DWG FILE:	C-100.DWG
DRAWN BY:	BB
CHECKED BY:	KU
DESIGNED BY:	KU

SHEET TITLE:
SITE PLAN

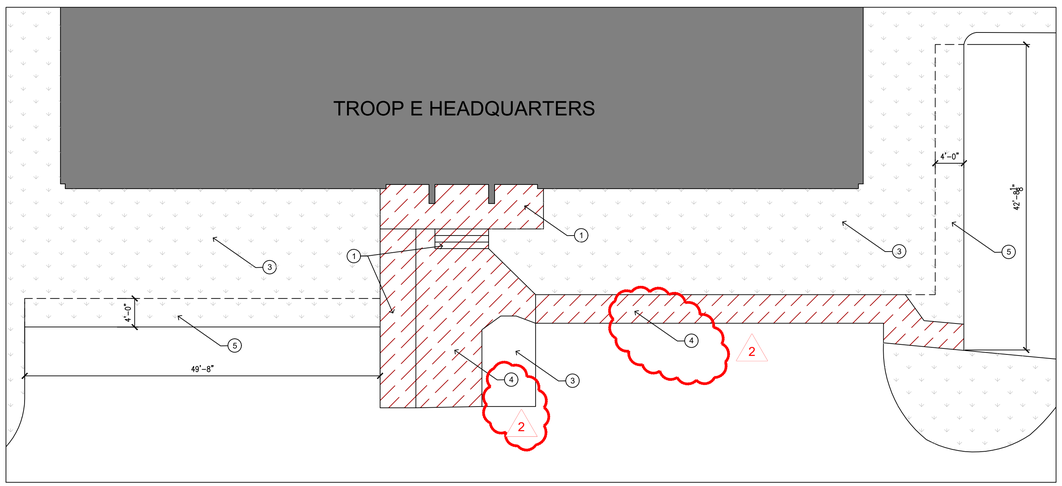
SHEET NUMBER:
C-100



1 PAVING EDGE DETAIL
SCALE: 3/4" = 1'-0"

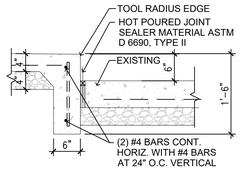


2 EXPANSION JOINT DETAIL
SCALE: 3/4" = 1'-0"

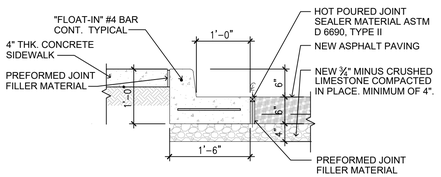


5 PARTIAL SITE PLAN - DEMOLITION
1" = 10'-0"

NORTH



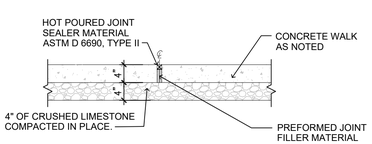
3 TURN DOWN DETAIL
SCALE: 3/4" = 1'-0"



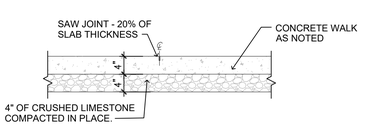
4 CURB / GUTTER DETAIL
SCALE: 3/4" = 1'-0"

6 PARTIAL SITE PLAN - RENOVATION
1" = 10'-0"

NORTH



9 TYPICAL EXPANSION JOIINT
SCALE: 3/4" = 1'-0"



10 TYPICAL CONTROL JOINT
SCALE: 3/4" = 1'-0"

GENERAL SITE PLAN NOTES:

A. ALL GRASSES, AGGREGATE AND CONCRETE SURFACES DISTURBED OR DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION.

B. BURY ELEVATIONS OF UNDERGROUND PIPING AND CONDUITS ARE UNKNOWN. UTILITIES CUT OR DAMAGED DURING CONSTRUCTION ARE TO BE RESTORED TO THEIR ORIGINAL CONDITION.

C. DASHED LINES INDICATE EXISTING CONSTRUCTION TO BE TOTALLY REMOVED BY CONTRACTOR UNLESS OTHERWISE NOTED. DEMO'D ITEMS TO BE REMOVED AND DISPOSED OF IN A SAFE AND LAWFUL MANNER PER AS SPECIFIED.

D. ALSO REFERENCE SHEET G-002 FOR GENERAL NOTES APPLICABLE FOR THE FULL PROJECT.

SYMBOL LEGEND (THIS SHEET ONLY)

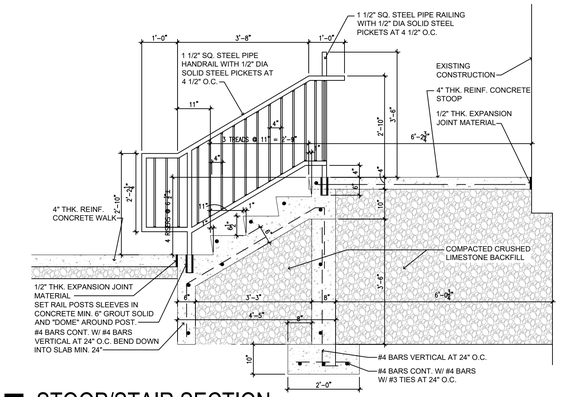
	AREA OF PAVING/WALKS TO BE DEMOLISHED
	EXISTING GRASS AREA
	NEW REINFORCED CONCRETE
	NEW ASPHALT SURFACE
100.00' / 100.00	FINISH ELEVATION - NEW / ELEVATION - EXISTING
F.F.E.	FINISH FLOOR ELEVATION
BOC	BOTTOM OF CURB
TOC	TOP OF CURB
CJ	CONTROL JOINT
EJ	EXPANSION JOINT
DS	DOWNSPOUT LOCATION

KEYED NOTES (DEMOLITION SITE PLAN): (X)

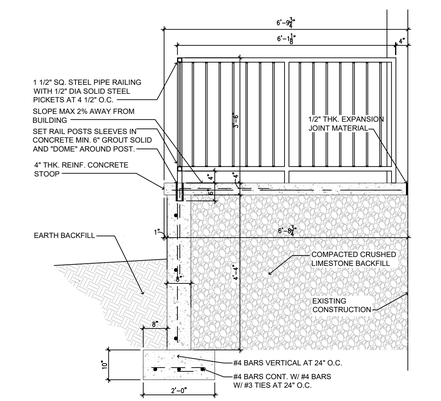
1. REMOVE EXISTING REINFORCED CONCRETE STOOP, RAMP, AND ASSOCIATED STEEL RAILINGS. REFERENCE ALTERATIONS PLAN, THIS SHEET FOR NEW CONCRETE STOOP.
2. EXTENT OF PAVING TO BE RE-SURFACED. TAKE CARE NOT TO DAMAGE EXISTING PAVING TO REMAIN. IF DAMAGED REPAIR TO RESTORE TO ORIGINAL CONDITION.
3. EXISTING GRASS AREA TO REMAIN.
4. SAW CUT AND REMOVE EXISTING CONCRETE WALK TO EXTENTS SHOWN.
5. PREP AREA FOR NEW WALK AND BASE COURSE.

KEYED NOTES (RENOVATION SITE PLAN): X

1. NEW RIGID CONCRETE PAVEMENT, 4"thk w/ 6x6xW2.0xW2.0 WWF AT MID-DEPTH OVER 4" COMPACTED AGGREGATE BASE ON COMPACTED SUB-GRADE.
2. NEW 4" thk CONCRETE STOOP. ELEVATION ½" BELOW BUILDING FINISH FLOOR ELEVATION. REF: STOOP DETAIL 7 AND 8, THIS SHEET.
3. PROVIDE NEW EXPANSION JOINT FILLER & SEALANT BETWEEN NEW CONCRETE AND EXISTING CONCRETE. REF: DETAIL 3, THIS SHEET.
4. 6" THICKENED EDGE WHERE CONCRETE PAD MEETS GRASS AREA. SEE DETAIL 1, THIS SHEET
5. PROVIDE NEW EXPANSION JOINT FILLER & SELF LEVELING SEALANT BETWEEN NEW CONCRETE AND EXISTING CONSTRUCTION.
6. EXISTING GRASS AREA TO REMAIN.
7. RESURFACE EXISTING ASPHALT PARKING AREA. REMOVE EXISTING SURFACE AND INSTALL NEW TO A DEPTH OF 2".
8. PHASE WORK AT THIS AREA TO MAINTAIN ACCESS TO SITE AT ALL TIMES.
9. REMOVE EXISTING STRIPING AND RE-STRIPE PARKING AREA WITH 4" WIDE YELLOW PAVEMENT STRIPING.



7 STOOP/STAIR SECTION
1/2" = 1'-0"



8 STOOP DETAIL
1/2" = 1'-0"

STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

STATE OF MISSOURI
KRISTEN RAE UHRHAN
NUMBER A-2003027366
REGISTERED ARCHITECT

PROFESSIONAL SEAL

DILLEPOLLARD ARCHITECTURE
4061 Highway PP, Ste. 2
Poplar Bluff, MO
ph: 573-778-0033
www.dillepollard.com
266 S. Mt. Auburn Rd.
Cape Girardeau, MO
ph: 573-339-4536
info@dillepollard.com

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT,
DESIGN AND CONSTRUCTION

DEPARTMENT OF PUBLIC SAFETY
MISSOURI STATE HIGHWAY PATROL

RENOVATE EXTERIOR HEADQUARTERS BUILDING

M.S.H.P. TROOP E HEADQUARTERS
4869-5199 US-67
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PROJECT #	R2335-01
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DATE:	6/9/2025
REVISION:	
DATE:	
ISSUE DATE:	September 30, 2024

CAD DWG FILE:	C-101.DWG
DRAWN BY:	BB
CHECKED BY:	KU
DESIGNED BY:	KU

SHEET TITLE:
PARTIAL SITE PLAN AND DETAILS

SHEET NUMBER:
C-101

GENERAL NOTES

1. CONTRACTOR SHALL VISIT THE JOB SITE TO FAMILIARIZE THEMSELVES WITH THE SCOPE OF THE PROJECT AND TO VERIFY EXISTING CONDITIONS. CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS AS NECESSARY TO COMPLETE THE WORK AS DESCRIBED.
2. CONTRACTOR SHALL PROTECT EXISTING SURFACES/EQUIPMENT FROM DUST, DIRT, ETC. DURING ALL CONSTRUCTION ACTIVITIES. AFTER ALL WORK IS COMPLETED, CONTRACTOR SHALL CLEAN ALL AREAS AFFECTED SO THAT THEY ARE FREE OF ANY AND ALL CONSTRUCTION DEBRIS AND DIRT.
3. EXISTING FINISHES TO REMAIN, EXCEPT AS NOTED. TAKE CARE NOT TO DAMAGE.
4. GENERAL CONTRACTOR SHALL COORDINATE ALL WORK WITH MECHANICAL AND ELECTRICAL CONTRACTORS.
5. COORDINATE ALL DEMOLITION ACTIVITIES WITH DESIGNATED OWNER'S REPRESENTATIVE. THE FACILITY WILL REMAIN IN OPERATION 24/7 DURING CONSTRUCTION.
6. MAINTAIN WEATHERTIGHT CONDITIONS. PROVIDE TEMPORARY WEATHER PROTECTION AS REQUIRED.
7. MAINTAIN BUILDING SECURITY THROUGHOUT CONSTRUCTION.
8. INTERIOR PARTITIONS ARE SHOWN FOR REFERENCE ONLY AND HAVE NOT BEEN FIELD VERIFIED.

KEYNOTE LEGEND

(KEYNOTES DO NOT NECESSARILY APPEAR ON ALL SHEETS)

1. REMOVE EXISTING ALUMINUM CURTAINWALL SYSTEM IN ITS ENTIRETY. EXISTING WINDOW STOOL AND WALL BELOW TO REMAIN. TAKE CARE NOT TO DAMAGE. REFER TO SHEET A-004 FOR ADDITIONAL DETAILS AND NOTES
2. REMOVE EXISTING GUTTER, DOWNSPOUT, AND STRAPS.
3. LOOSEN ELECTRICAL CONDUIT FROM GUTTER PRIOR TO GUTTER REMOVAL. SECURE CONDUIT TO PROTECT FROM DAMAGE WHILE WORK PROGRESSES.
4. ALTERNATE BID: REMOVE EXISTING GLAZING IN EXISTING SYSTEM FOR INSTALLATION OF NEW BALLISTIC GLAZING.
5. REMOVE EXISTING STEEL DOOR AND FRAME. RETAIN EXISTING HARDWARE FOR RE-INSTALLATION.

1 GROUND FLOOR - DEMOLITION PLAN

1/8"=1'-0"

NORTH

STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

KRISTEN RAE UHRHAN
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OFFICE OF ADMINISTRATION
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DESIGN AND CONSTRUCTION

DEPARTMENT OF PUBLIC SAFETY
MISSOURI STATE HIGHWAY PATROL

RENOVATE EXTERIOR
HEADQUARTERS BUILDING

M.S.H.P. TROOP E
HEADQUARTERS
4869-5199 US-67
POPLAR BLUFF, MO 63901

PROJECT #	R2335-01
SITE #	6006
ASSET #	8136006005
BUILDING #	8136006005

REVISION:	1
DATE:	6/5/2025
REVISION:	2
DATE:	6/9/2025
REVISION:	
DATE:	
ISSUE DATE:	September 30, 2024

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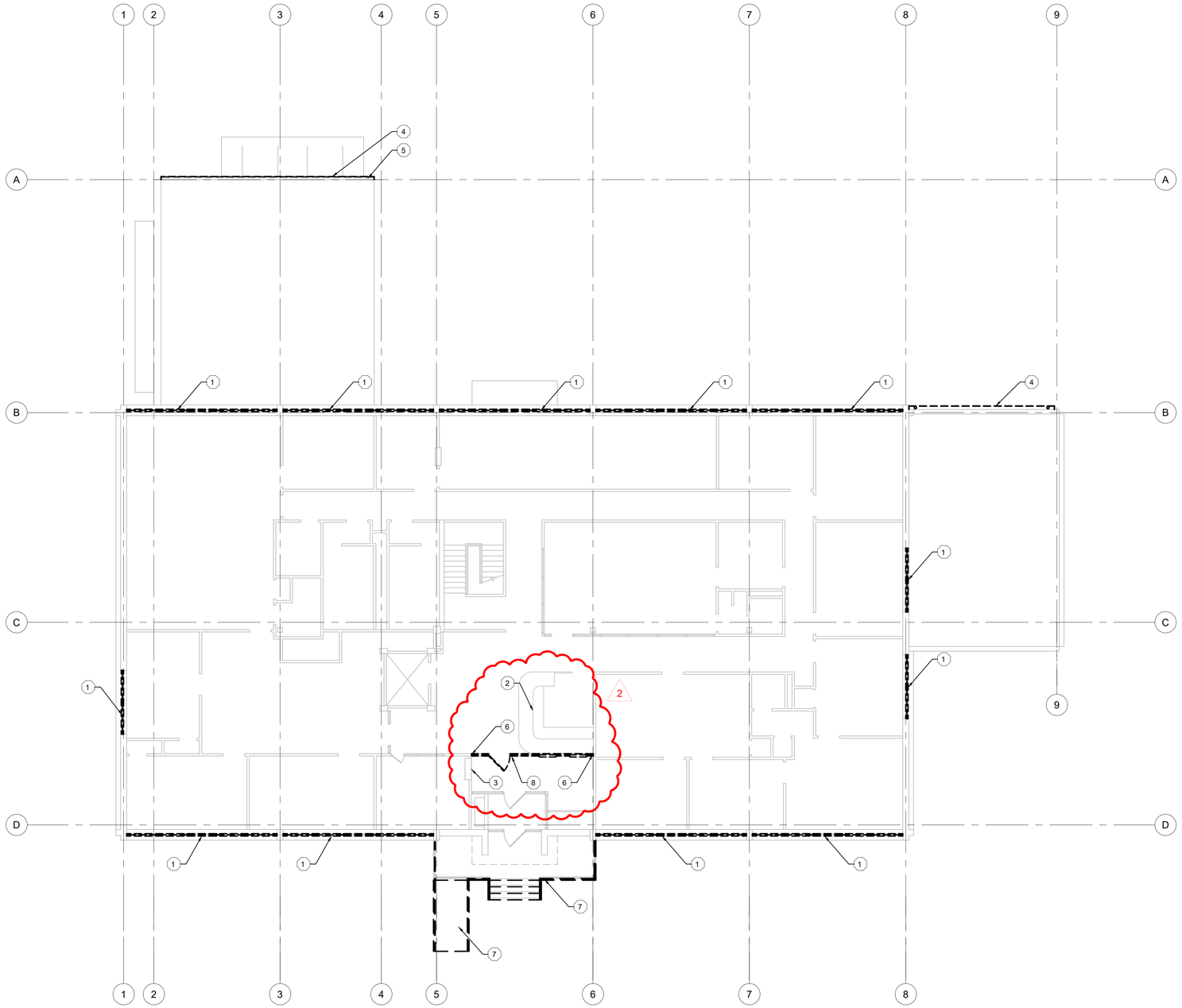
CHECKED BY:	KU
DESIGNED BY:	KU

SHEET TITLE:
GROUND FLOOR DEMOLITION PLAN

SHEET NUMBER:
A-001



1 FIRST FLOOR - DEMOLITION PLAN
NTS

NORTH

GENERAL NOTES

1. CONTRACTOR SHALL VISIT THE JOB SITE TO FAMILIARIZE THEMSELVES WITH THE SCOPE OF THE PROJECT AND TO VERIFY EXISTING CONDITIONS. CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS AS NECESSARY TO COMPLETE THE WORK AS DESCRIBED.
2. CONTRACTOR SHALL PROTECT EXISTING SURFACES/EQUIPMENT FROM DUST, DIRT, ETC. DURING ALL CONSTRUCTION ACTIVITIES. AFTER ALL WORK IS COMPLETED, CONTRACTOR SHALL CLEAN ALL AREAS AFFECTED SO THAT THEY ARE FREE OF ANY AND ALL CONSTRUCTION DEBRIS AND DIRT.
3. EXISTING FINISHES TO REMAIN, EXCEPT AS NOTED. TAKE CARE NOT TO DAMAGE.
4. GENERAL CONTRACTOR SHALL COORDINATE ALL WORK WITH MECHANICAL AND ELECTRICAL CONTRACTORS.
5. COORDINATE ALL DEMOLITION ACTIVITIES WITH DESIGNATED OWNER'S REPRESENTATIVE. THE FACILITY WILL REMAIN IN OPERATION 24/7 DURING CONSTRUCTION.
6. MAINTAIN WEATHERTIGHT CONDITIONS. PROVIDE TEMPORARY WEATHER PROTECTION AS REQUIRED.
7. MAINTAIN BUILDING SECURITY THROUGHOUT CONSTRUCTION.
8. INTERIOR PARTITIONS ARE SHOWN FOR REFERENCE ONLY AND HAVE NOT BEEN FIELD VERIFIED.

KEYNOTE LEGEND

(KEYNOTES DO NOT NECESSARILY APPEAR ON ALL SHEETS)

1. REMOVE EXISTING ALUMINUM CURTAINWALL SYSTEM IN ITS ENTIRETY. EXISTING WINDOW STOOL AND WALL BELOW TO REMAIN. TAKE CARE NOT TO DAMAGE.
2. RELOCATE EXISTING INFORMATION DESK TO PERFORM WORK. SEE SHEET A-101.
3. REMOVE EXISTING PASS THROUGH WINDOW AND REPLACE WITH NEW BALLISTIC RATED WINDOW.
4. REMOVE EXISTING GUTTER, DOWNSPOUT, AND STRAPS.
5. LOOSEN ELECTRICAL CONDUIT FROM GUTTER PRIOR TO GUTTER REMOVAL. SECURE CONDUIT TO PROTECT FROM DAMAGE WHILE WORK PROGRESSES.
6. PREP EXISTING CONSTRUCTION FOR NEW PARTITION.
7. REFER TO CIVIL SHEETS FOR DEMOLITION OF EXISTING STOOP AND RAMPS.
8. REMOVE EXISTING STOREFRONT SYSTEM WITH TRANSACTION WINDOWS IN ITS ENTIRETY. OWNER RESERVES THE FIRST RIGHT OF REFUSAL OF STOREFRONT SYSTEM AND HARDWARE AFTER REMOVAL.

2

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POPLAR BLUFF, MO 63901

PROJECT #	R2335-01
SITE #	6006
ASSET #	8136006005
BUILDING #	8136006005

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DATE:	6/5/2025
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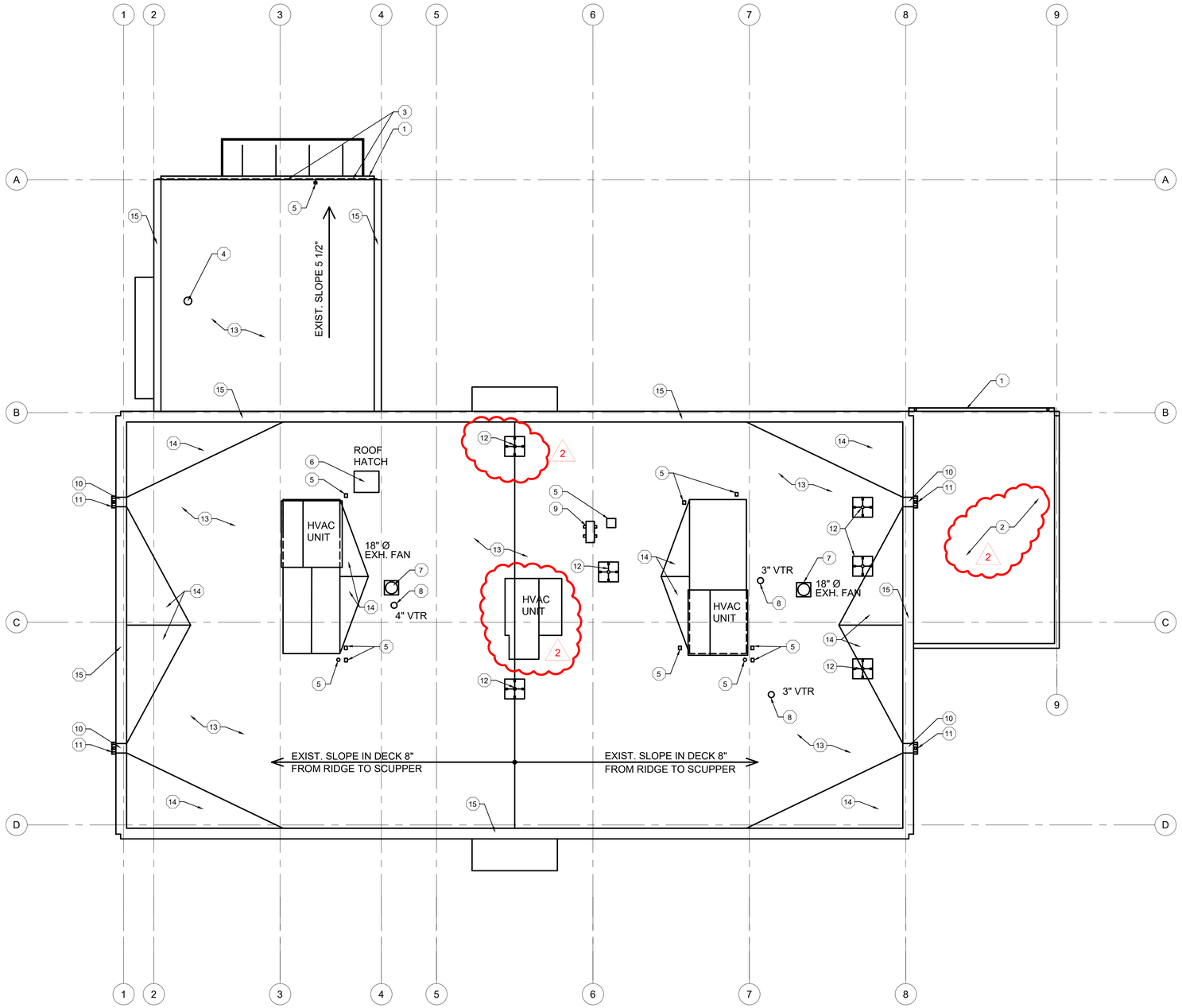
DRAWN BY:	BB
CHECKED BY:	KU
DESIGNED BY:	KU

SHEET TITLE:
FIRST FLOOR DEMOLITION PLAN

SHEET NUMBER:
A-002



1 EXISTING ROOF PLAN - DEMOLITION PLAN
NTS

GENERAL NOTES

1. CONTRACTOR SHALL VISIT THE JOB SITE TO FAMILIARIZE THEMSELVES WITH THE SCOPE OF THE PROJECT AND TO VERIFY EXISTING CONDITIONS. CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS AS NECESSARY TO COMPLETE THE WORK AS DESCRIBED.
2. CONTRACTOR SHALL PROTECT EXISTING SURFACES/EQUIPMENT FROM DUST, DIRT, ETC. DURING ALL CONSTRUCTION ACTIVITIES. AFTER ALL WORK IS COMPLETED, CONTRACTOR SHALL CLEAN ALL AREAS AFFECTED SO THAT THEY ARE FREE OF ANY AND ALL CONSTRUCTION DEBRIS AND DIRT.
3. GENERAL CONTRACTOR SHALL COORDINATE ALL WORK WITH MECHANICAL AND ELECTRICAL CONTRACTORS.
4. COORDINATE ALL DEMOLITION ACTIVITIES WITH DESIGNATED OWNER'S REPRESENTATIVE. THE FACILITY WILL REMAIN IN OPERATION 24/7 DURING CONSTRUCTION.
5. MAINTAIN WEATHERTIGHT CONDITIONS. PROVIDE TEMPORARY WEATHER PROTECTION AS REQUIRED. DO NOT REMOVE MORE OF THE EXISTING ROOF SYSTEM THAN CAN BE REPLACED IN A SINGLE DAY OF WORK.
6. MAINTAIN BUILDING SECURITY THROUGHOUT CONSTRUCTION.
7. EXISTING ANTENNAE TO REMAIN OPERATIONAL THROUGHOUT PROGRESS OF WORK. COORDINATE WITH OWNER'S REPRESENTATIVE FOR TEMPORARY LOCATION WHILE WORKING IN AREA.

KEYNOTE LEGEND

(KEYNOTES DO NOT NECESSARILY APPEAR ON ALL SHEETS)

1. REMOVE EXISTING GUTTER, DOWNSPOUT, AND STRAPS.
2. EXISTING ROOF SYSTEM TO REMAIN. PROTECT AS NECESSARY WHILE WORK IS PERFORMED.
3. LOOSEN ELECTRICAL CONDUIT FROM GUTTER PRIOR TO GUTTER REMOVAL. SECURE CONDUIT TO PROTECT FROM DAMAGE WHILE WORK PROGRESSES.
4. REMOVE EXISTING UNIT HEATER VENT THROUGH ROOF AND PREP FOR INSTALLATION OF NEW NON-COMBUSTIBLE ROOF FLASHING.
5. EXISTING ELECTRICAL CURB WITH CONDUIT PENETRATION TO REMAIN. TAKE CARE NOT TO DAMAGE.
6. EXISTING ROOF ACCESS HATCH AND CURB TO BE REMOVED. ANGLE FRAME AT ROOF DECK TO REMAIN FOR NEW INSTALLATION.
7. EXISTING ROOFTOP VENTILATOR FAN AND CURB TO REMAIN. TAKE CARE NOT TO DAMAGE.
8. EXISTING PLUMBING VENT THROUGH ROOF. VERIFY SIZE AT JOB SITE.
9. EXISTING CONDENSING UNIT ON EQUIPMENT STANDS. TAKE CARE NOT TO DAMAGE.
10. EXISTING THROUGH PARAPET SCUPPER (APPROX. 12"x4") TO BE REMOVED. PREP FOR INSTALLATION OF NEW.
11. EXISTING METAL SCUPPER BOX, DOWNSPOUT, AND BRACKETS TO BE REMOVED.
12. EXISTING ANTENNA AND SUPPORT STAND. TEMPORARILY RELOCATE WHILE WORK IS PERFORMED.
13. REMOVE EXISTING BUILT-UP ROOF SYSTEM FROM DECK AND PARAPET WALLS IN ITS ENTIRETY.
14. EXISTING CRICKET TO BE REMOVED.
15. REMOVE EXISTING PARAPET CAP IN IT'S ENTIRETY.

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RENOVATE EXTERIOR
HEADQUARTERS BUILDING

M.S.H.P. TROOP E
HEADQUARTERS
4869-5199 US-67
POPLAR BLUFF, MO 63901

PROJECT #	R2335-01
SITE #	6006
ASSET #	8136006005
BUILDING #	8136006005

REVISION:	1
DATE:	6/5/2025
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CAD DWG FILE:	A-003.DWG
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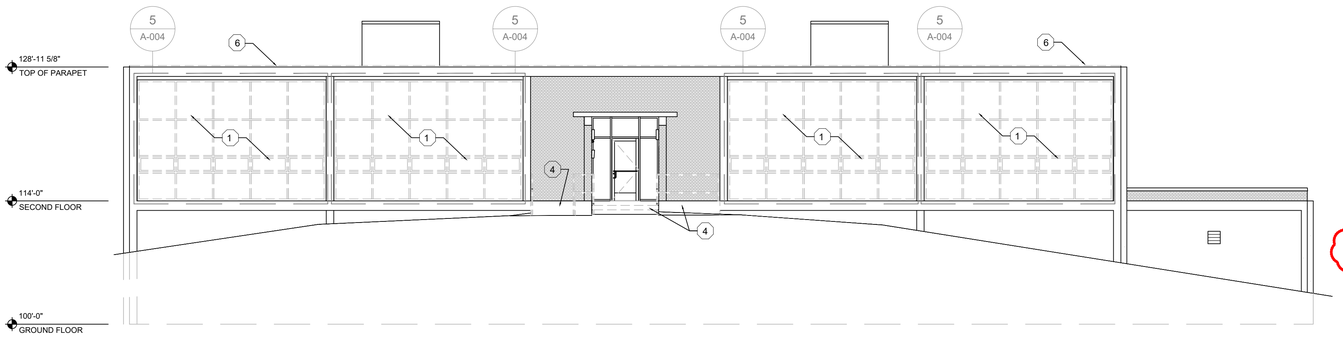
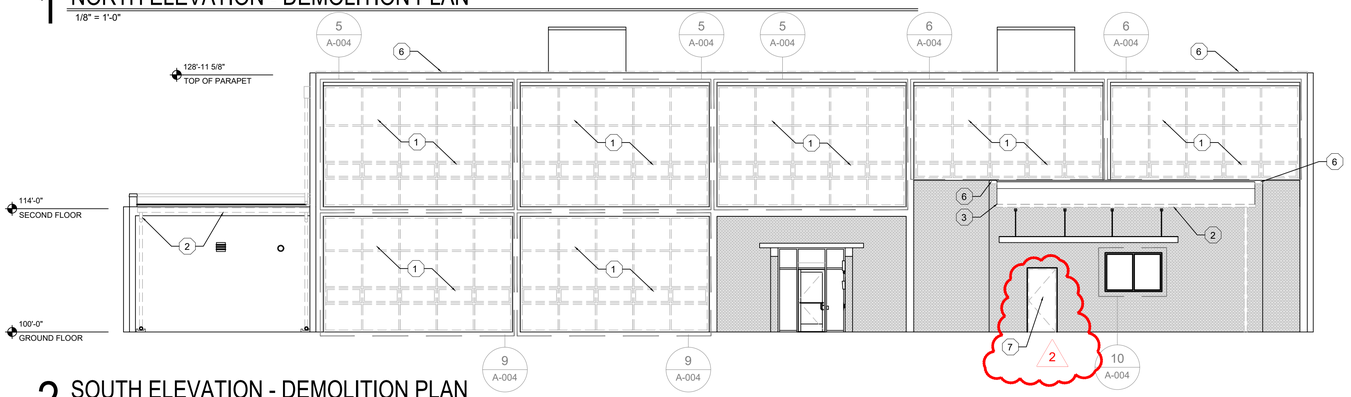
SHEET TITLE:
EXISTING ROOF PLAN - DEMOLITION PLAN

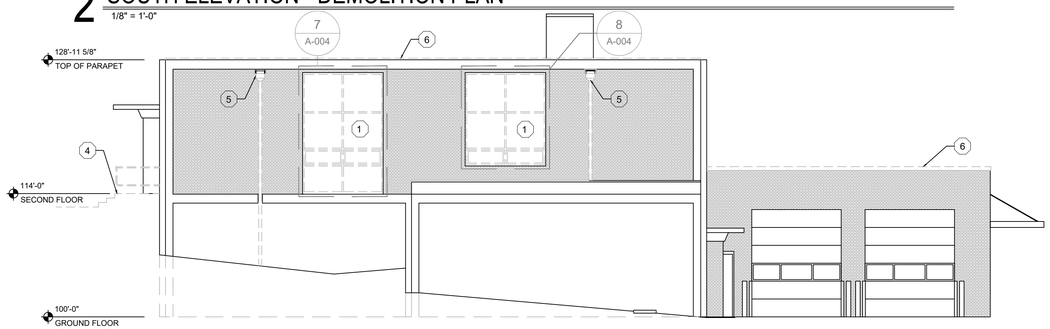
SHEET NUMBER:
A-003



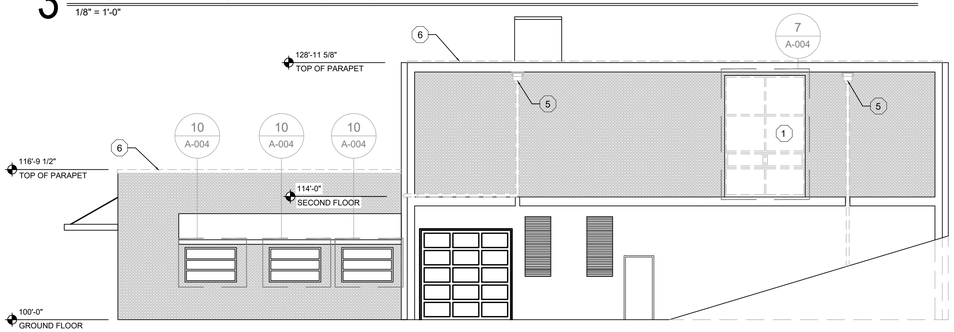
1 NORTH ELEVATION - DEMOLITION PLAN
1/8" = 1'-0"



2 SOUTH ELEVATION - DEMOLITION PLAN
1/8" = 1'-0"



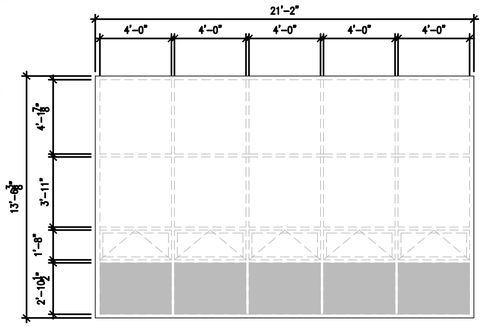
3 WEST ELEVATION - DEMOLITION PLAN
1/8" = 1'-0"



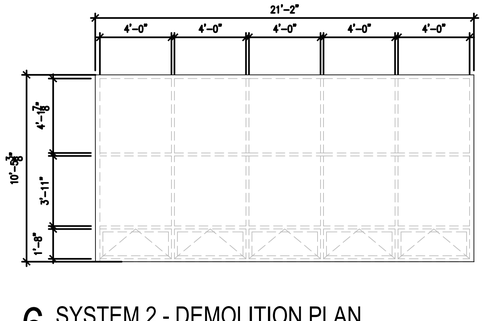
4 EAST ELEVATION - DEMOLITION PLAN
1/8" = 1'-0"

KEYNOTE LEGEND

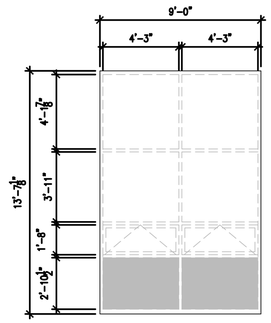
1. REMOVE EXISTING ALUMINUM CURTAINWALL SYSTEM IN ITS ENTIRETY. EXISTING WINDOW STOOL AND WALL BELOW TO REMAIN. TAKE CARE NOT TO DAMAGE.
2. REMOVE EXISTING GUTTER, DOWNSPOUT, AND STRAPS.
3. LOOSEN ELECTRICAL CONDUIT FROM GUTTER PRIOR TO GUTTER REMOVAL. SECURE CONDUIT TO PROTECT FROM DAMAGE WHILE WORK PROGRESSES.
4. DEMOLISH EXISTING STOOP, STEPS, RAMP, STEEL RAILINGS, AND HANDRAIL.
5. EXISTING METAL SCUPPER BOX, DOWNSPOUT, AND BRACKETS TO BE REMOVED.
6. REMOVE EXISTING PARAPET CAP IN IT'S ENTIRETY.
7. REMOVE EXISTING STEEL DOOR AND FRAME. RETAIN EXISTING HARDWARE FOR RE-INSTALLATION.



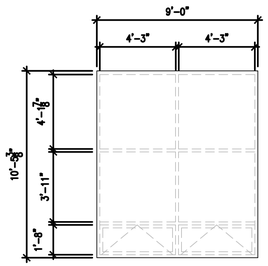
5 SYSTEM 1 - DEMOLITION PLAN
1/4" = 1'-0"



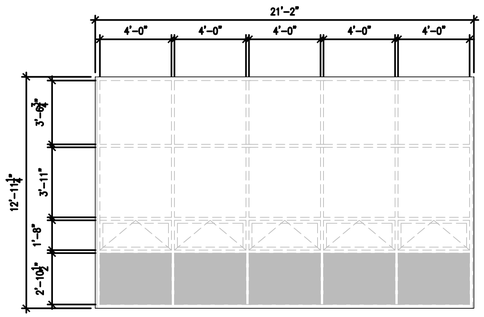
6 SYSTEM 2 - DEMOLITION PLAN
1/4" = 1'-0"



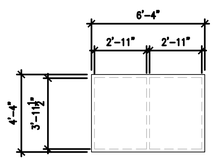
7 SYSTEM 3 - DEMOLITION PLAN
1/4" = 1'-0"



8 SYSTEM 4 DEMOLITION PLAN
1/4" = 1'-0"



9 SYSTEM 5 - DEMOLITION PLAN
1/4" = 1'-0"



10 SYSTEM 6 DEMOLITION PLAN
1/4" = 1'-0"

STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

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POPLAR BLUFF, MO 63901

PROJECT #	R2335-01
SITE #	6006
ASSET #	8136006005
BUILDING #	8136006005

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DATE:	6/5/2025
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DATE:	
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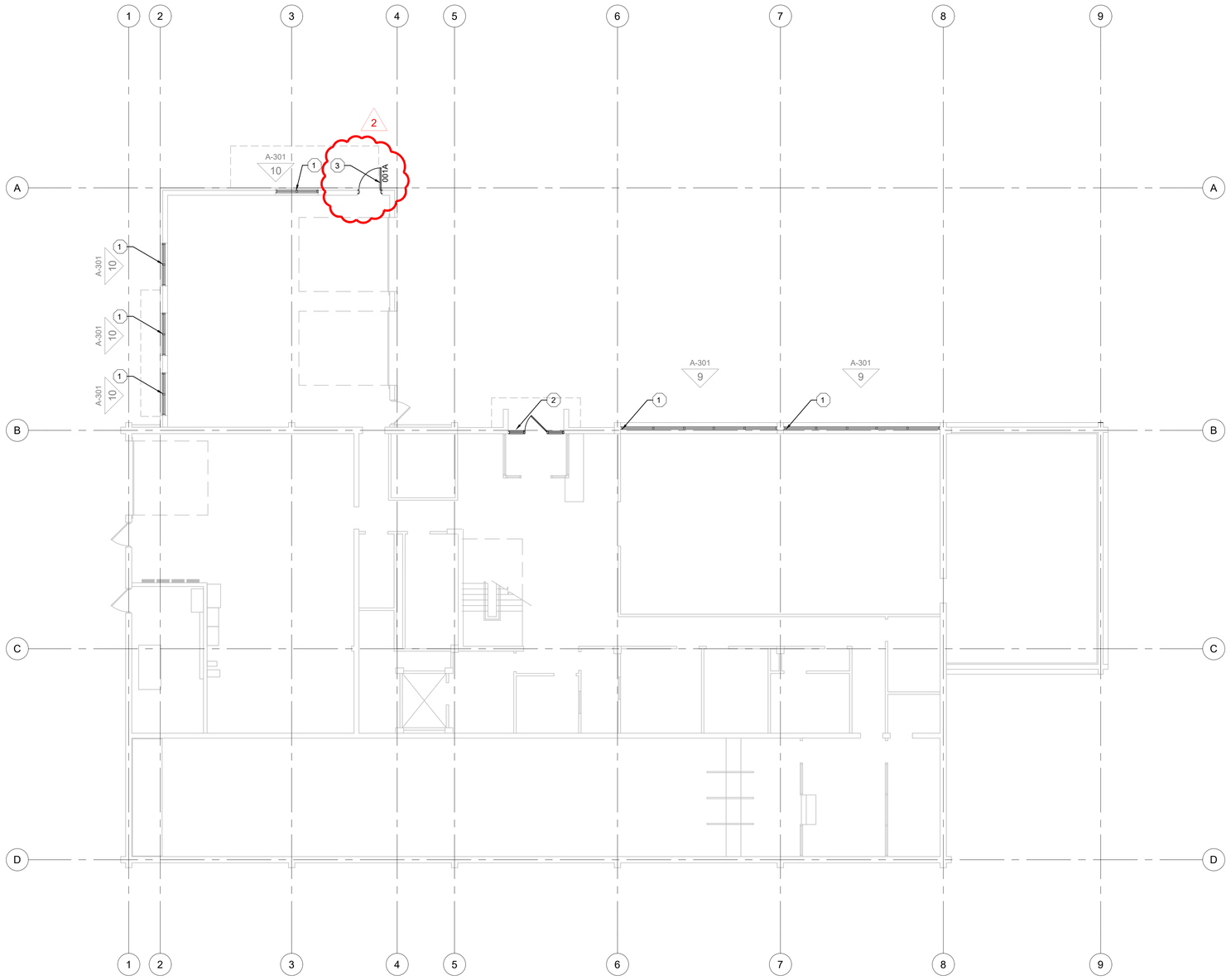
DESIGNED BY:	KU

SHEET TITLE:
EXTERIOR ELEVATIONS AND DETAIL ELEVATIONS - DEMO

SHEET NUMBER:
A-004



KEYNOTE LEGEND

1. INSTALL NEW ALUMINUM CURTAINWALL SYSTEM AS SHOWN. EXISTING WINDOW STOOL AND WALL BELOW TO REMAIN. TAKE CARE NOT TO DAMAGE.
2. ALTERNATE: INSTALL NEW BALLISTIC GLAZING IN ALUMINUM STOREFRONT SYSTEM AND DOOR.
3. INSTALL NEW INSULATED HOLLOW METAL DOOR AND FRAME. REFER TO SHEET A-102 FOR DOOR SCHEDULE.

1 GROUND FLOOR - RENOVATION PLAN

1/8" = 1'-0"

NORTH

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DATE:	
ISSUE DATE:	September 30, 2024

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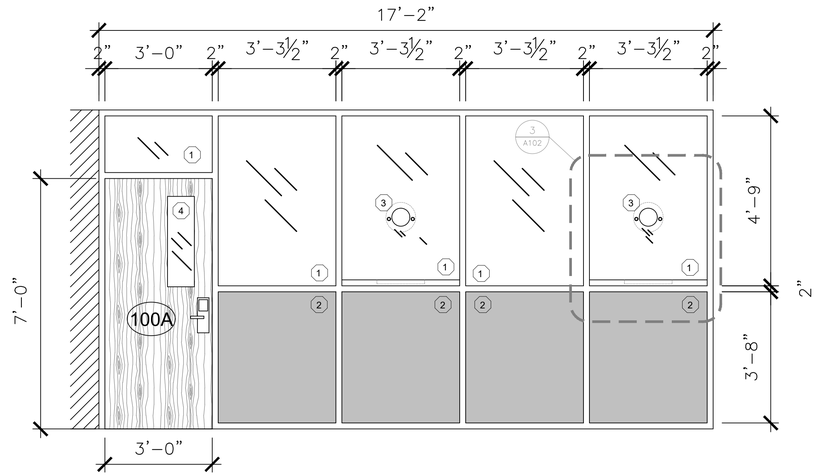
CHECKED BY:	KU
DESIGNED BY:	KU

SHEET TITLE:
GROUND FLOOR
RENOVATION PLAN

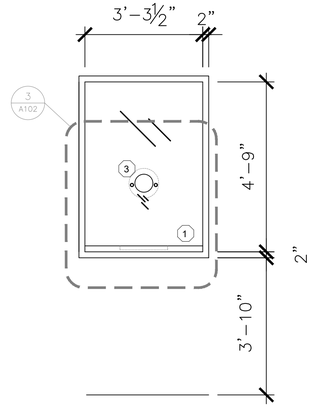
SHEET NUMBER:
A-100

KEYNOTE LEGEND

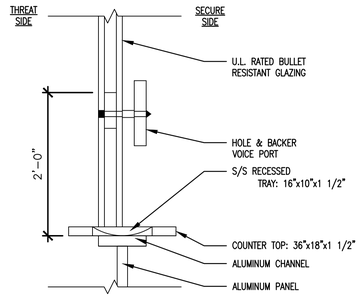
1. BALLISTIC RATED WINDOWS IN BALLISTIC RATED HM FRAME, TYPICAL
2. BALLISTIC RATED ALUMINUM PANELS
3. TRANSACTION WINDOW & PASSING TRAY. (SEE DETAILS 2 AND 3, THIS SHEET)
4. BALLISTIC RATED WOOD DOOR WITH HEAVY DUTY CONTINUOUS HINGE, OVERHEAD CLOSER, & MAGNETIC LOCK CONNECTED TO EXISTING CARD READER



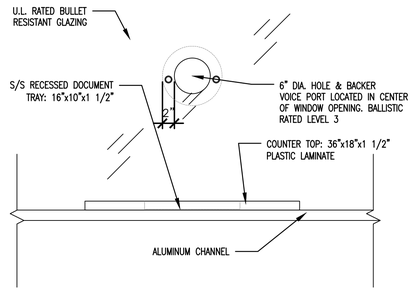
1 WALL ELEVATION
1/2" = 1'-0"



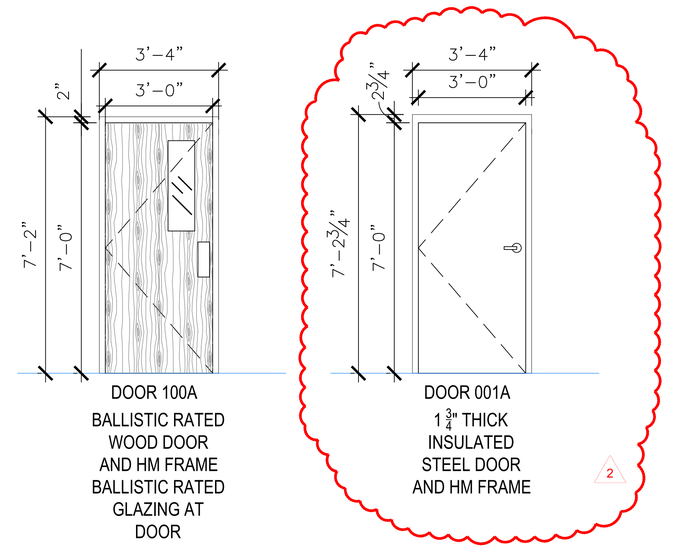
4 WALL ELEVATION
1/2" = 1'-0"



2 SECTION AT PASS THROUGH
1" = 1'-0"



3 DETAIL AT PASS THROUGH
1" = 1'-0"



5 DOOR SCHEDULE
1/2" = 1'-0"

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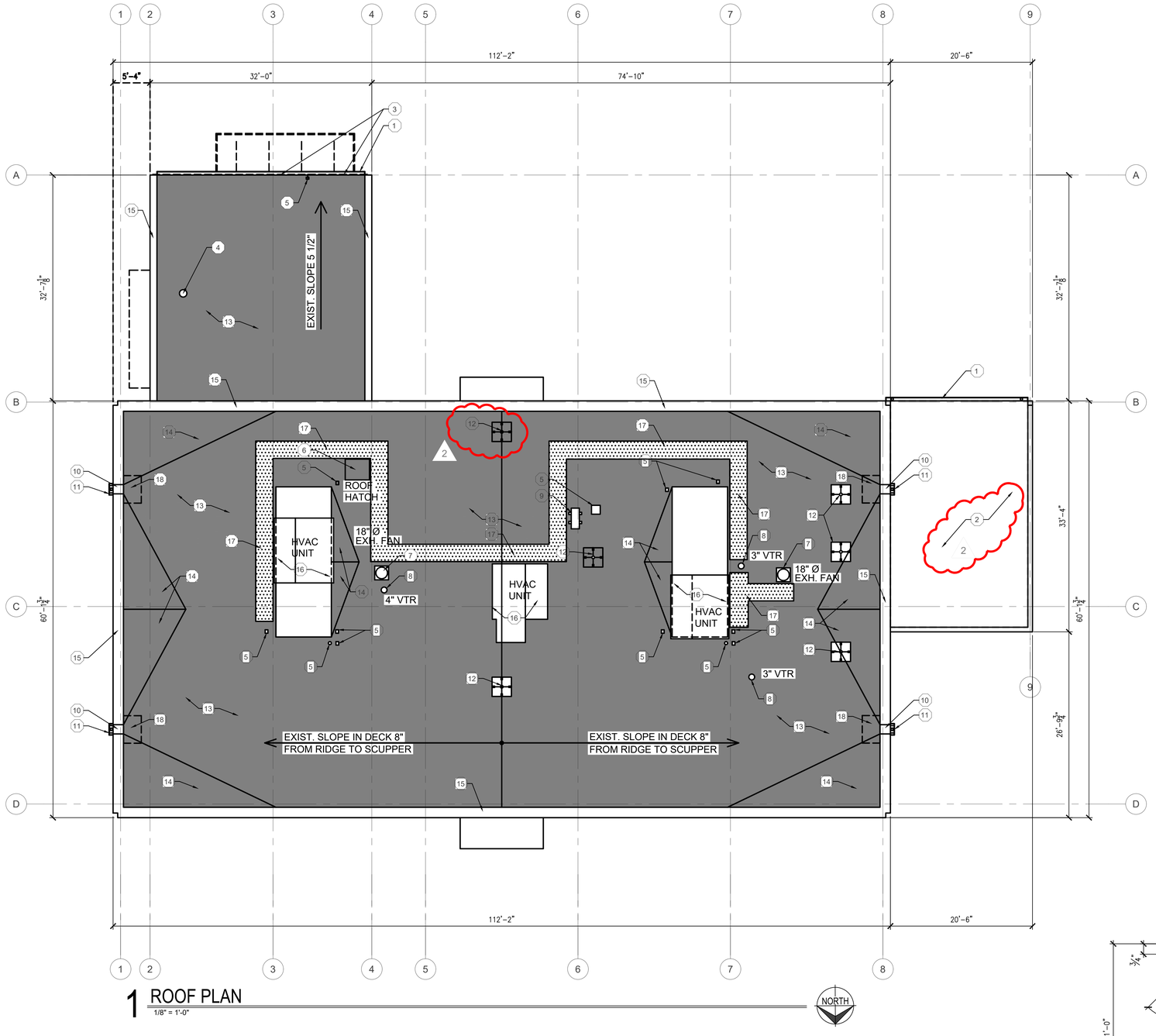
DESIGNED BY:	KU

SHEET TITLE:
INTERIOR ELEVATION AND DETAILS

SHEET NUMBER:
A-102



1 ROOF PLAN
1/8" = 1'-0"

NORTH

GENERAL NOTES

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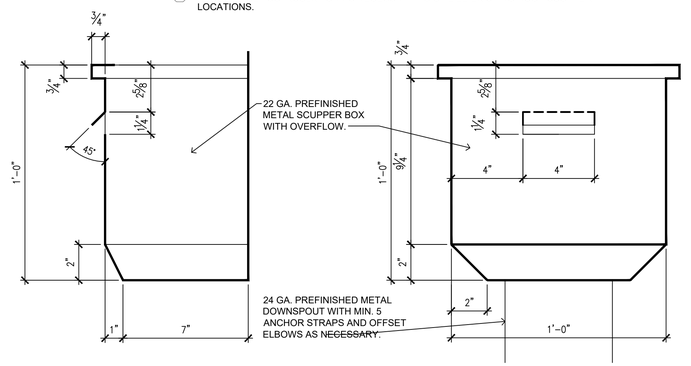
4. COORDINATE ALL DEMOLITION ACTIVITIES WITH DESIGNATED OWNER'S REPRESENTATIVE. THE FACILITY WILL REMAIN IN OPERATION 24/7 DURING CONSTRUCTION.
5. MAINTAIN WEATHERTIGHT CONDITIONS. PROVIDE TEMPORARY WEATHER PROTECTION AS REQUIRED. DO NOT REMOVE MORE OF THE EXISTING ROOF SYSTEM THAN CAN BE REPLACED IN A SINGLE DAY OF WORK.
6. MAINTAIN BUILDING SECURITY THROUGHOUT CONSTRUCTION.
7. CONTRACTOR SHALL CONFIRM QUANTITY, SIZE AND LOCATION OF ALL ROOFTOP PENETRATIONS.
8. MODIFY EXISTING ROOF CURBS AS NECESSARY TO MAINTAIN MINIMUM VERTICAL DISTANCE AS REQUIRED BY ROOF SYSTEM MANUFACTURER.
9. EXISTING STEEL DECKING SLOPES AND IS TO REMAIN. REFERENCE DEMOLITION FOR EXISTING ROOF TO BE REMOVED FOR NEW.
10. FLASH ALL ROOF PENETRATIONS, EDGES AND TRANSITION FLASHING PER ROOFING MANUFACTURER'S DETAILS FOR WARRANTY.

KEYNOTE LEGEND

(KEYNOTES DO NOT NECESSARILY APPEAR ON ALL SHEETS)

1. INSTALL NEW 6" x 24 GA. PRE-FINISHED METAL GUTTER, DOWNSPOUT, AND STRAPS.
2. EXISTING ROOF SYSTEM TO REMAIN. PROTECT AS NECESSARY WHILE WORK IS PERFORMED.
3. RE-INSTALL ELECTRICAL CONDUIT AND SECURE CONDUIT.
4. INSTALL NEW FLASHING AT UNIT HEATER VENT THROUGH ROOF.
5. FLASH ELECTRICAL CURB WITH CONDUIT PENETRATION INTO NEW ROOF SYSTEM.
6. NEW 30"x 36" ROOF ACCESS HATCH, GUARDRAIL, GATE, AND CURB. INSTALL NEW ROOF MEMBRANE ON NEW CURB. INSTALL HATCH, GUARDRAIL, AND GATE ONCE ROOF MEMBRANE IS INSTALLED. REFER TO DETAIL 4, SHEET A-401.
7. EXISTING ROOFTOP VENTILATOR FAN AND CURB. REMOVE AND INSTALL NEW ROOF MEMBRANE ON EXISTING CURB. REINSTALL VENTILATOR ONCE ROOF MEMBRANE IS INSTALLED. REFER TO DETAIL 5, SHEET A-401.
8. INSTALL NEW BOOT AT PLUMBING VENT THROUGH ROOF. VERIFY SIZE AT JOB SITE.
9. FLASH EXISTING CONDENSING UNIT ON EQUIPMENT STANDS INTO NEW ROOF SYSTEM.
10. INSTALL NEW TPO COATED THROUGH PARAPET SCUPPER (APPROX. 12"x4") LINER AND FLASH INTO NEW ROOF MEMBRANE SYSTEM. PROVIDE TERMINATION BARS AT EXTERIOR AS RECOMMENDED BY MANUFACTURER.
11. INSTALL NEW METAL SCUPPER BOX (SEE DETAIL THIS SHEET), 6" SQ. 24 GA. PRE-FINISHED METAL DOWNSPOUT, AND MIN. 5 BRACKETS.
12. RE-INSTALL EXISTING ANTENNA AND SUPPORT STAND. PROVIDE EQUIPMENT PADS UNDER ANTENNA TO PROTECT ROOF MEMBRANE FROM DAMAGE. EXISTING ANTENNAE TO REMAIN OPERATIONAL THROUGHOUT PROGRESS OF WORK. COORDINATE WITH OWNER'S REPRESENTATIVE FOR TEMPORARY LOCATION WHILE WORKING IN AREA.
13. NEW ROOF SYSTEM: INSTALL NEW 60 MIL SINGLE PLY, FULLY ADHERED TPO ROOFING MEMBRANE OVER 1/2" THICK COVER BOARD OVER RIGID INSULATION (MINIMUM R-30CI) MECHANICALLY FASTENED TO EXISTING STEEL DECK ON EXISTING STEEL JOISTS (STRUCTURE SLOPES). EXTEND ROOF MEMBRANE OVER ALL EXISTING EQUPMENT CURBS, PARAPETS AND NEW ROOF HATCH CURBS AS NOTED.
14. INSTALL CRICKETS AS INDICATED AND PER ROOFING MANUFACTURER TO ACHIEVE POSITIVE DRAINAGE TO SCUPPER BOXES. CRICKETS ATTACHED PER ROOFING MANUFACTURER'S RECOMMENDATIONS. SLOPE TO DRAIN, 1/2" PER FOOT SLOPE MAXIMUM.
15. INSTALL NEW 24 GA. PRE-FINISHED METAL PARAPET CAP WITH CONTINUOUS WIND CLIP. MIN. 6" VERTICAL FACE.
16. INSTALL NEW MEMBRANE AT EXISTING MECHANICAL CURB. TERMINATE UNDER EQUIPMENT CURB WITH TERMINATION BAR AND SEAL PER MANUFACTURER'S RECOMMENDATIONS. REFER TO SIMILAR DETAIL 5, SHEET A-401.
17. INSTALL 30" WIDE WALK PADS COMPATIBLE WITH ROOF SYSTEM AS SHOWN.
18. REDUCE POLYISO INSULATION AS NECESSARY TO UTILIZE EXISTING ROOF SCUPPER LOCATIONS.



2 SCUPPER BOX
3" = 1'-0"

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M.S.H.P. TROOP E
HEADQUARTERS
4869-5199 US-67
POPLAR BLUFF, MO 63901

PROJECT #	R2335-01
SITE #	6006
ASSET #	8136006005
BUILDING #	8136006005

REVISION:	1
DATE:	6/5/2025
REVISION:	2
DATE:	6/9/2025
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SHEET TITLE:
ROOF PLAN

SHEET NUMBER:
A-201

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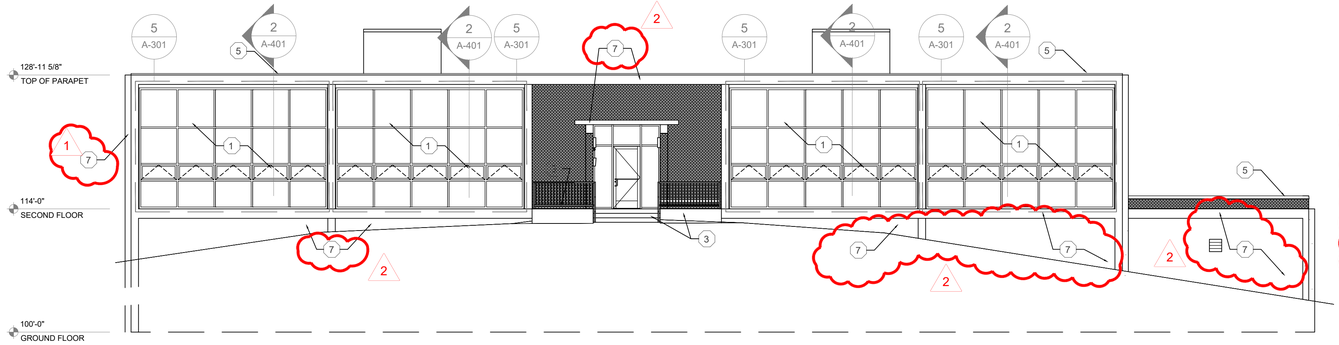
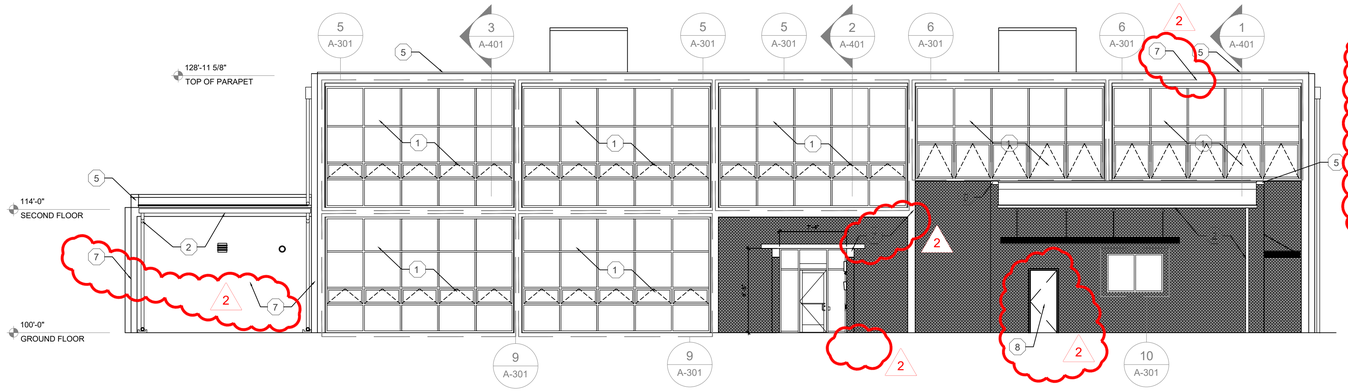
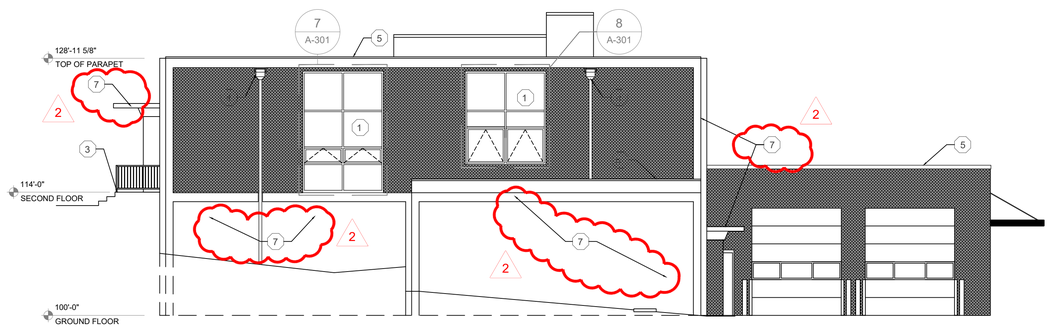


1 NORTH ELEVATION - RENOVATION PLAN
1/8" = 1'-0"



2 SOUTH ELEVATION - RENOVATION PLAN
NTS



3 WEST ELEVATION - RENOVATION PLAN
1/8" = 1'-0"

4 EAST ELEVATION - RENOVATION PLAN
1/8" = 1'-0"

KEYNOTE LEGEND

1. INSTALL NEW ALUMINUM STOREFRONT SYSTEM AS SHOWN. EXISTING WINDOW STOOL AND WALL BELOW TO REMAIN. TAKE CARE NOT TO DAMAGE.
2. INSTALL NEW 6" TYPE "K" GUTTER, 5" SQ. DOWNSPOUT, AND 3 STRAPS.
3. NEW STOOP, STEPS, RAMP, STEEL RAILINGS, AND HANDRAIL. REFER TO CIVIL SHEETS
4. INSTALL NEW METAL SCUPPER BOX, 6" SQ. 26 GA. PRE-FINISHED METAL DOWNSPOUT, AND MIN. 4 BRACKETS.
5. INSTALL NEW PRE-FINISHED METAL PARAPET CAP WITH CONTINUOUS WIND CLIP. MIN. 6" VERTICAL FACE.
6. NOT USED.
7. ALTERNATE: PREP AND RE-PAINT EXISTING STRUCTURAL CONCRETE COLUMNS, BEAMS, CANOPIES, AND CONCRETE WALLS.
8. INSTALL NEW INSULATED STEEL DOOR AND FRAME. REFER TO DOOR SCHEDULE, SHEET A-102

GLAZING SCHEDULE

G1	NOT USED
G2	1" TINTED INSULATED GLASS
G3	SPANDREL GLASS

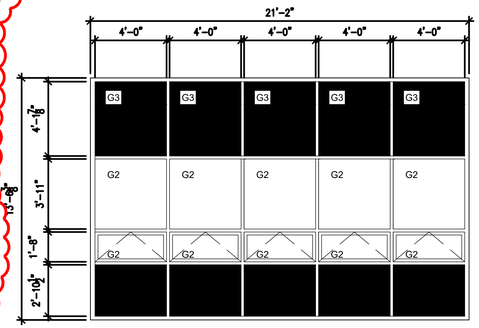
*REFERENCE SECTION 012300 ALTERNATES WHICH APPLIES TO ALL G2 AND G3 GLAZING.

*REFER TO 088000 FOR GLAZING REQUIREMENTS

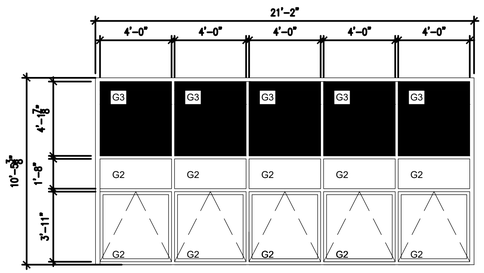
WINDOW SCHEDULE GENERAL NOTES

WINDOW NOTES:

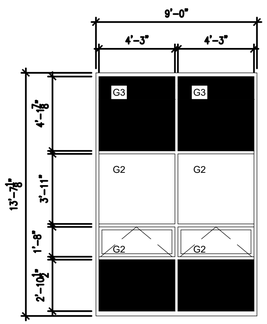
1. REFER TO SCHEDULE ABOVE FOR GLASS TYPES.
2. PROVIDE ALUMINUM SUBSILLS FOR EXTERIOR STOREFRONT SYSTEMS. TYPICAL
3. ALL EXTERIOR GLASS SHALL BE TINTED. REFER TO SPECIFICATION SECTION 088000.



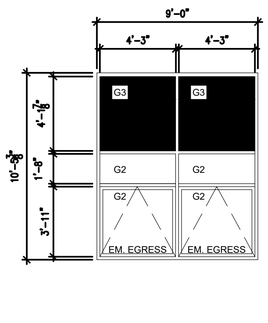
5 SYSTEM 1 - RENOVATION PLAN
1/4" = 1'-0"



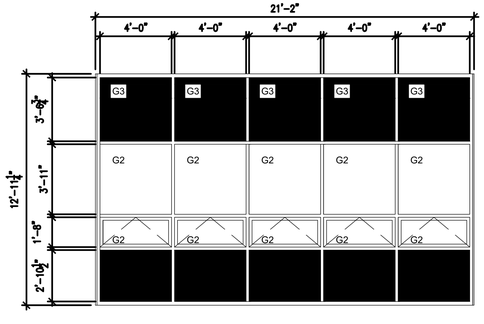
6 SYSTEM 2 - RENOVATION PLAN
1/4" = 1'-0"



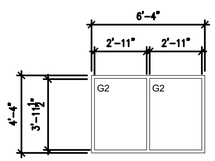
7 SYSTEM 3 - RENOVATION PLAN
1/4" = 1'-0"



8 SYSTEM 4 RENOVATION PLAN
1/4" = 1'-0"



9 SYSTEM 5 - RENOVATION PLAN
1/4" = 1'-0"



10 SYSTEM 6 RENOVATION PLAN
1/4" = 1'-0"

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PROJECT #	R2335-01
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BUILDING #	8136006005

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EXTERIOR ELEVATIONS AND DETAIL ELEVATIONS

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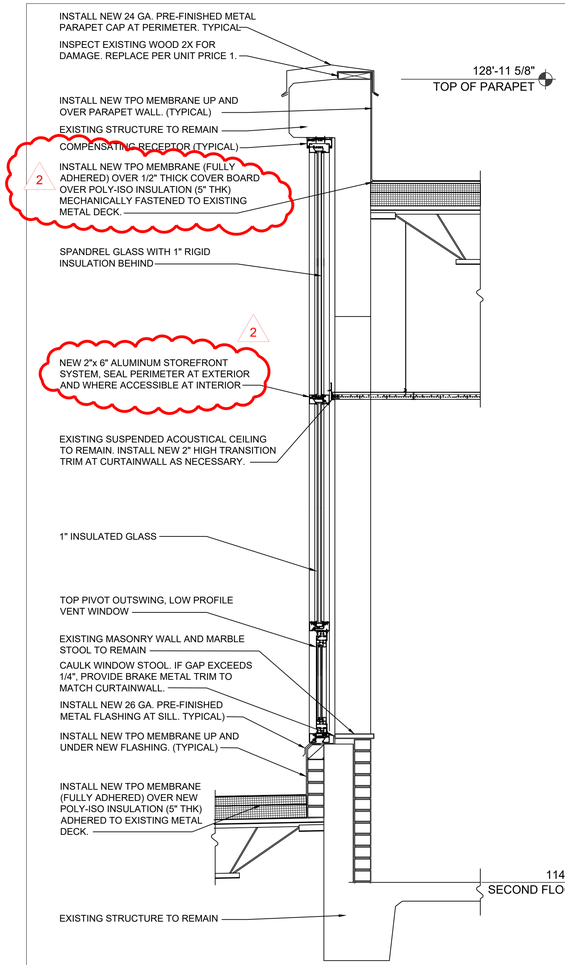
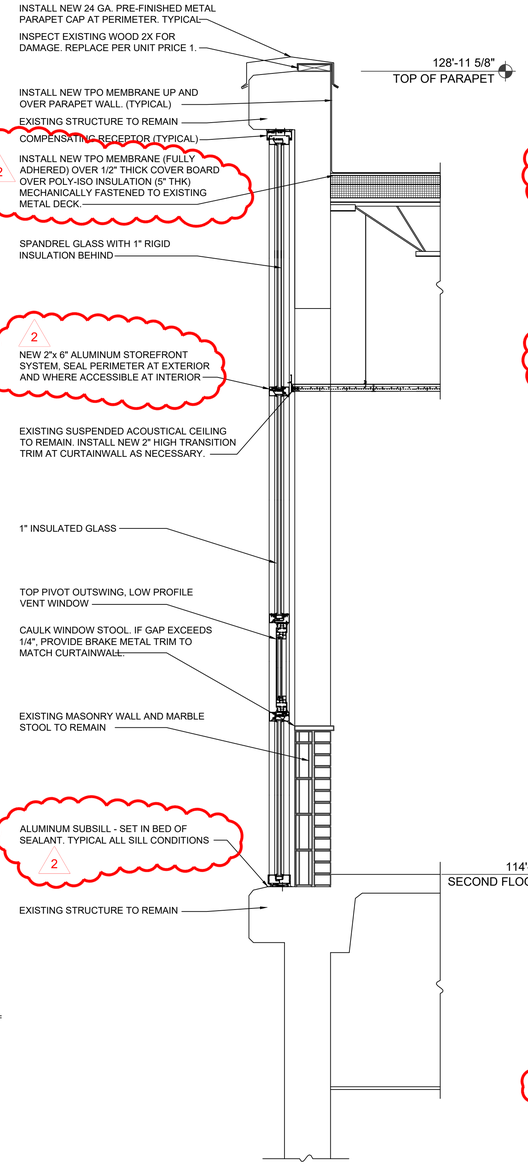
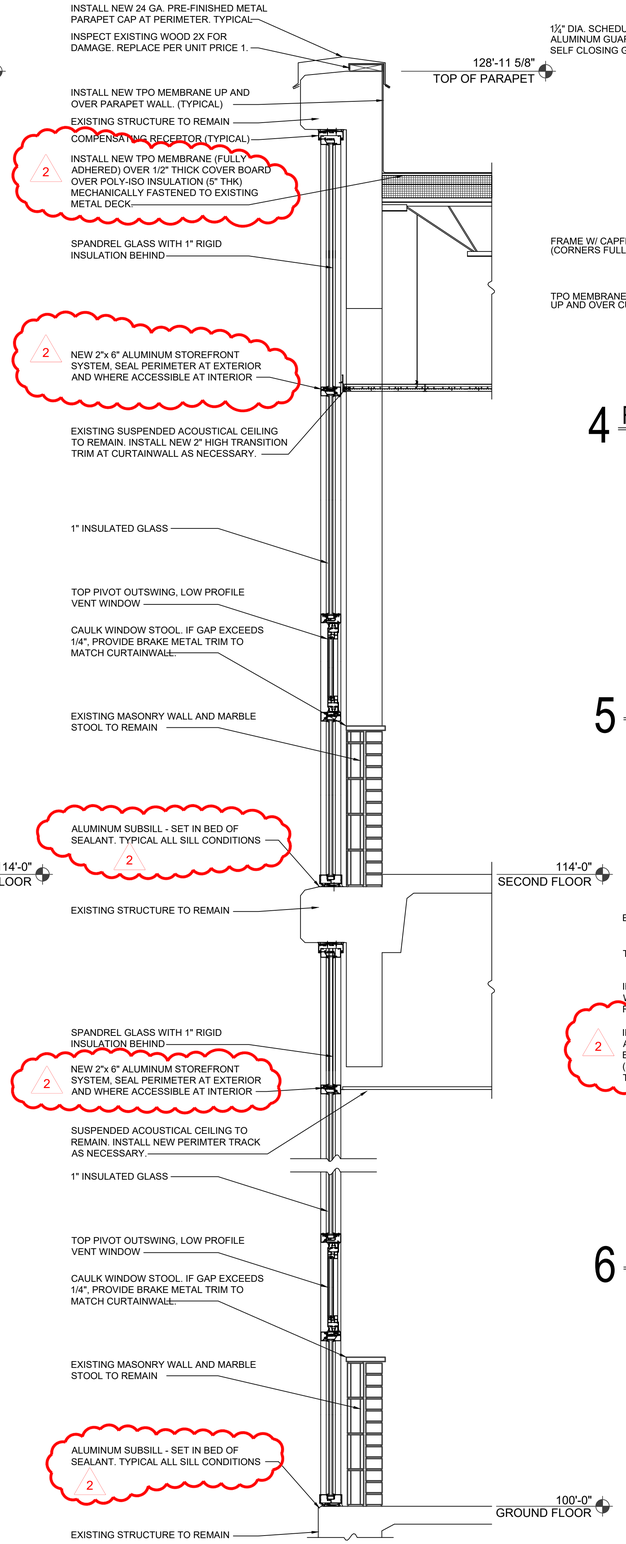


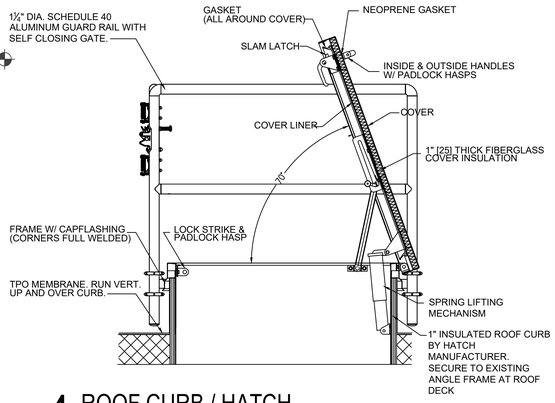
1 WALL SECTION AT LOW ROOF
3/4" = 1'-0"



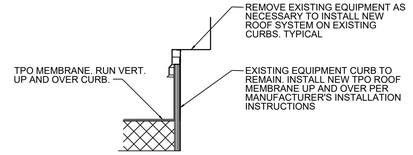
2 WALL SECTION
3/4" = 1'-0"



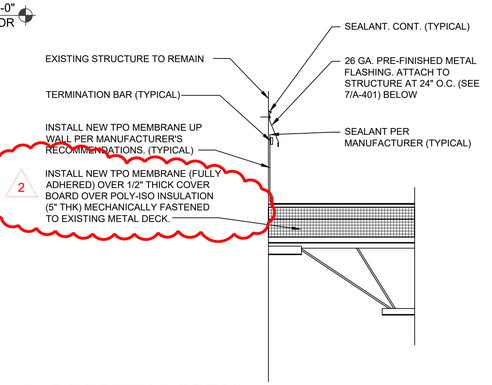
3 WALL SECTION
3/4" = 1'-0"



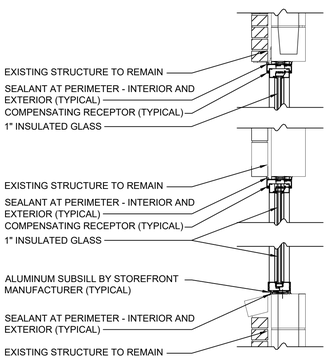
4 ROOF CURB / HATCH
1" = 1'-0"



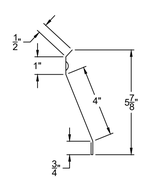
5 ROOF CURB DETAIL
1" = 1'-0"



6 ROOF/WALL DETAIL
1" = 1'-0"



8 DETAIL AT WINDOW
1" = 1'-0"



7 FLASHING AT WALL
1" = 1'-0"

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WALL SECTIONS AND DETAILS

SHEET NUMBER:
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14 OF 14 SHEETS