DESIGN & CONSTRUCTION GROUP
THE GOVERNOR NELSON A. ROCKEFELLER
EMPIRE STATE PLAZA
ALBANY, NY 12242

ADDENDUM NO. 3 TO PROJECT NO. 47510

CONSTRUCTION, HVAC, PLUMBING, AND ELECTRICAL WORK
PROVIDE STORAGE BUILDING
DOT REGION 5, ERIE COUNTY
75 EVANS ST
HAMBURG, NY

June 29, 2026

NOTE: This Addendum forms a part of the Contract Documents. Insert it in the Project Manual. Acknowledge receipt of this Addendum in the space provided on the Bid Form.

CONSTRUCTION WORK SPECIFICATIONS

1. SECTION 054000 COLD-FORMED METAL FRAMING: Add the accompanying Section (pages 054000 – 1 thru 054000 – 11) to the Project Manual.

2. SECTION 074400 CONCRETE FACED INSULATION PANELS: Add the accompanying Section (pages 074400 – 1 thru 074400 – 4) to the Project Manual.

3. SECTION 096723 - RESINOUS FLOORING: Add the accompanying Section (pages 096723 - 1 through 096723 - 7) to the Project Manual.

4. SECTION 133419 METAL BUILDING SYSTEMS: Discard this Section bound in the Project Manual and substitute the accompanying Section (pages 133419 - 1 through 133419 – 23) noted "Addendum #3 6/17/2026."

5. SECTION 315100 REMOVAL, TRANSPORT AND DISPOSAL OF CONTAMINATED SOIL: Add the accompanying Section (pages 315100 - 1 through 315100 - 23) to the Project Manual.

CONSTRUCTION WORK DRAWINGS

6. Revised Drawings:
   a. Drawing Nos. S-103, A-001, and A-310 noted Addendum 3, dated 6/17/2026, accompanies this Addendum and supersedes the same numbered previously issued drawings.

b. Drawing No. C-112 noted Addendum 3, dated 6/19/2026, accompanies this Addendum and supersedes the same numbered previously issued drawing.

END OF ADDENDUM

Brady Sherlock, P.E.
Director, Division of Design
Design & Construction

SECTION 054000 - COLD-FORMED METAL FRAMING

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. Load bearing wall framing.
2. Ceiling joist framing.

1.3 SUBMITTALS

A. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.

B. Manufacturer's installation instructions shall be provided along with product data.

C. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).

D. Product Data: For the following:

1. Cold-formed steel framing materials.
2. Load-bearing wall framing.
3. Vertical deflection clips.
4. Connection components
5. Single deflection track.
6. Double deflection track.
7. Drift clips.
8. Ceiling joist framing.
9. self-drilling screw fasteners.
10. Post-installed anchors.
11. Sill sealer gasket.

E. Submit an Environmental Product Declaration (EPD) from the manufacturer for steel framing within this specification section, if available. A statement of the contractor's good faith effort to obtain the EPD shall be provided if not available.

1. Manufacturer-provided EPDs must be Product Specific Type III (Third-Party Reviewed), in adherence with ISO 14025 *Environmental labels and declarations*, ISO 14044

Environmental management – Life cycle assessment, and ISO 21930 *Core rules for environmental product declarations of construction products and services.*

F. Shop Drawings: Designate member sizes per Steel Stud Manufacturers Association (SSMA) standard conventions.

1. Include layout, spacings, sizes, thicknesses, and types of cold-formed steel framing; fabrication; and fastening and anchorage details, including mechanical fasteners.
2. Indicate reinforcing channels, opening framing, supplemental framing, strapping, bracing, bridging, splices, accessories, connection details, and attachment to adjoining work.

G. Delegated-Design Submittal: Shop drawings and calculations for cold-formed steel framing indicated on Drawings to comply with design loads, include analysis data signed and sealed by an engineer registered in New York State and responsible for their preparation.

H. Qualification Data: For testing agency.

I. Welding certificates.

J. Product Certificates: For each type of code-compliance certification for studs and tracks.

K. Product Test Reports: For each listed product, for tests performed by manufacturer and witnessed by a qualified testing agency.

1. Steel sheet.
2. Expansion anchors.
3. Mechanical fasteners.
4. Vertical deflection clips.
5. Horizontal drift deflection clips
6. Miscellaneous structural clips and accessories.

L. Research Reports:

1. For nonstandard cold-formed steel framing post-installed anchors and power-actuated fasteners, from ICC-ES or other qualified testing agency acceptable to authorities having jurisdiction.
2. For sill sealer gasket/termite barrier, showing compliance with ICC-ES AC380.

A. Source quality-control reports.

1. Documentation to confirm compliance with General Conditions Article 25.4 Domestic Steel.

1.4 QUALITY ASSURANCE

A. Testing Agency Qualifications: Qualified according to ASTM E329 for testing indicated.

B. Product Tests: Mill certificates or data from a qualified independent testing agency, or in-house testing with calibrated test equipment, indicating steel sheet complies with requirements,

including base-metal thickness, yield strength, tensile strength, total elongation, chemical requirements, and metallic-coating thickness.

C. Code-Compliance Certification of Studs and Tracks: Provide documentation that framing members are certified according to the product-certification program of the Certified Steel Stud Association or the Steel Framing Industry Association or the Steel Stud Manufacturers Association.

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

1. AWS D1.1, "Structural Welding Code - Steel."
2. AWS D1.3, "Structural Welding Code - Sheet Steel."

E. If the value of the contract exceeds $100,000 all structural steel, reinforcing steel and other major steel items to be incorporated in the Work of this Contract shall be produced and made in whole or substantial part in the United States, its territories or possessions.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

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

1. ClarkDietrich.
2. MarinoWARE.
3. Super Stud Building Products Inc.
4. The Steel Network, Inc.
5. Approved equivalent.

2.2 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, licensed and registered to practice in New York State, to design cold-formed steel framing.

B. Structural Performance: Provide cold-formed steel framing capable of withstanding design loads within limits and under conditions indicated.

1. Design Parameters and Loads: As indicated on Drawings.
2. Deflection Limits: Design framing systems to withstand design loads without deflections greater than the following:

a. Interior Non-Load-Bearing Framing: Horizontal deflection of 1/360 of the wall height under a horizontal load of 5 lbf/sq. ft..
b. Ceiling Joist Framing: Vertical deflection of 1/360 of the span for live loads and 1/240 for total loads of the span.

3. Design framing systems to provide for movement of framing members located outside the insulated building envelope without damage or overstressing, sheathing failure, connection failure, undue strain on fasteners and anchors, or other detrimental effects when subject to a maximum ambient temperature change of 120 deg F.
4. Design framing system to maintain clearances at openings, to allow for construction tolerances, and to accommodate live load deflection of primary building structure as follows:

    a. Upward and downward movement : L/300 for floors and L/200 for roofs.

C. Cold-Formed Steel Framing Standards: Unless more stringent requirements are indicated, framing shall comply with AISI S100, AISI S200, and the following:

1. Floor and Roof Systems: AISI S210.
2. Wall Studs: AISI S211.
3. Headers: AISI S212.
4. Lateral Design: AISI S213.

D. Fire-Resistance Ratings: Comply with ASTM E119; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Indicate design designations from UL's "Fire Resistance Directory" or from the listings of another qualified testing agency acceptable to authorities having jurisdiction.

2.3 COLD-FORMED STEEL FRAMING MATERIALS

A. Steel Sheet: ASTM A1003, Structural Grade, Type H, metallic coated, of grade and coating designation as follows:

1. Grade: As required by structural performance.
2. Coating: G90.

B. Steel Sheet for Vertical Deflection Clips: ASTM A653, structural steel, zinc coated, of grade and coating as follows:

1. Grade: As required by structural performance.
2. Coating: G90.

2.4 LOAD-BEARING WALL FRAMING

A. Steel Studs: Manufacturer's standard C-shaped steel studs, of web depths indicated, punched, with stiffened flanges to meet minimum requirement for 600S162-97-P, and as follows:

1. Minimum Base-Metal Thickness: 0.0966 inch (12 ga).
2. Flange Width: 1-5/8 inches (162).

B. Steel Track: Manufacturer's standard U-shaped steel track, of web depths indicated, unpunched, with straight flanges, and as follows:

1. Minimum Base-Metal Thickness: Matching steel studs.
2. Flange Width: 1-1/4 inches (125)

C. Steel Box or Back-to-Back Headers: Manufacturer's standard C-shapes used to form header beams, of web depths indicated, unpunched, with stiffened flanges, and as follows:

1. Minimum Base-Metal Thickness: 0.0966 inch (12 ga).
2. Flange Width: Coordinate with wall width and steel studs.

D. Steel Single- or Double-L Headers: Manufacturer's standard L-shapes used to form header beams, of web depths indicated, and as follows:

1. Minimum Base-Metal Thickness: 0.0966 inch (12 ga).
2. Top Flange Width: Coordinate with wall width and steel studs

2.5 CEILING JOIST FRAMING

A. Steel Ceiling Joists: Manufacturer's standard C-shaped steel sections to meet 800S162-54 requirements.

1. Minimum Base-Metal Thickness: 0.0538 inch (16 ga).
2. Flange Width: 1-5/8 inches (162), minimum.
3. Section Properties: to meet 800S162-54

2.6 FRAMING ACCESSORIES

A. Fabricate steel-framing accessories from ASTM A1003, Structural Grade, Type H, metallic coated steel sheet, of same grade and coating designation used for framing members.

B. Provide accessories of manufacturer's standard thickness and configuration, unless otherwise indicated, as follows:

1. Supplementary framing.
2. Bracing, bridging, and solid blocking.
3. Web stiffeners.
4. Anchor clips.
5. End clips.
6. Foundation clips.
7. Gusset plates.
8. Stud kickers and knee braces.
9. Joist hangers and end closures.
10. Hole-reinforcing plates.
11. Backer plates.

2.7 ANCHORS, CLIPS, AND FASTENERS

A. Steel Shapes and Clips: ASTM A36, zinc coated by hot-dip process according to ASTM A123.

B. Anchor Bolts: ASTM F1554 carbon-steel nuts, and flat, hardened-steel washers; zinc coated by hot-dip process according to ASTM A153, Class C.

C. Post-Installed Anchors: Fastener systems with bolts of same basic metal as fastened metal, if visible, unless otherwise indicated; with working capacity greater than or equal to the design load, according to an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC193 or ICC-ES AC308 as appropriate for the substrate.

1. Uses: Securing cold-formed steel framing to structure.
2. Type: Torque-controlled expansion anchor or torque-controlled adhesive anchor.
3. Material for Interior Locations: Carbon-steel components zinc plated to comply with ASTM B633 or ASTM F1941, Class Fe/Zn 5, unless otherwise indicated.
4. Material for Exterior or Interior Locations and Where Stainless Steel Is Indicated: Alloy Group 1 stainless-steel bolts, ASTM F593, and nuts, ASTM F594.

D. Mechanical Fasteners: ASTM C1513, corrosion-resistant-coated, self-drilling, self-tapping, steel drill screws.

1. Head Type: Low-profile head beneath sheathing; manufacturer's standard elsewhere.

E. Welding Electrodes: Comply with AWS standards.

2.8 MISCELLANEOUS MATERIALS

A. Galvanizing Repair Paint: ASTM A780.

B. Shims: Load-bearing, high-density, multimonomer, nonleaching plastic; or cold-formed steel of same grade and metallic coating as framing members supported by shims.

C. Sill Sealer Gasket: Closed-cell neoprene foam, 1/4 inch thick, selected from manufacturer's standard widths to match width of bottom track or rim track members as required.

2.9 FABRICATION

A. Fabricate cold-formed steel framing and accessories plumb, square, and true to line, and with connections securely fastened, according to referenced AISI's specifications and standards, manufacturer's written instructions, and requirements in this Section.

1. Fabricate framing assemblies using jigs or templates.
2. Cut framing members by sawing or shearing; do not torch cut in the field.
3. Fasten cold-formed steel framing members by welding, screw fastening, clinch fastening, pneumatic pin fastening, or riveting as standard with fabricator. Wire tying of framing members is not permitted.

    a. Comply with AWS D1.3 requirements and procedures for welding, appearance and quality of welds, and methods used in correcting welding work.
    b. Locate mechanical fasteners and install according to Shop Drawings, with screws penetrating joined members by no fewer than three exposed screw threads.

4. Fasten other materials to cold-formed steel framing by welding, bolting, pneumatic pin fastening, or screw fastening, according to Shop Drawings.

B. Reinforce, stiffen, and brace framing assemblies to withstand handling, delivery, and erection stresses. Lift fabricated assemblies by means that prevent damage or permanent distortion.

C. Tolerances: Fabricate assemblies level, plumb, and true to line to a maximum allowable variation of 1/8 inch in 10 feet and as follows:

1. Spacing: Space individual framing members no more than plus or minus 1/8 inch from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials.
2. Squareness: Fabricate each cold-formed steel framing assembly to a maximum out-of-square tolerance of 1/8 inch.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, conditions, and abutting structural framing 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. Install load-bearing shims or grout between the underside of load-bearing wall bottom track and the top of foundation wall or slab at locations with a gap larger than 1/4 inch to ensure a uniform bearing surface on supporting concrete or masonry construction.

B. Install sill sealer gasket at the underside of wall bottom track or rim track and at the top of foundation wall or slab at stud or joist locations.

3.3 INSTALLATION, GENERAL

A. Cold-formed steel framing may be shop or field fabricated for installation, or it may be field assembled.

B. Install cold-formed steel framing according to AISI S200, AISI S202, and manufacturer's written instructions unless more stringent requirements are indicated.

C. Install shop- or field-fabricated, cold-formed framing and securely anchor to supporting structure.

1. Screw, bolt, or weld wall panels at horizontal and vertical junctures to produce flush, even, true-to-line joints with maximum variation in plane and true position between fabricated panels not exceeding 1/16 inch.

D. Install cold-formed steel framing and accessories plumb, square, and true to line, and with connections securely fastened.

1. Cut framing members by sawing or shearing; do not torch cut in the field.
2. Fasten cold-formed steel framing members by welding, screw fastening, clinch fastening, or riveting. Wire tying of framing members is not permitted.

a. Comply with AWS D1.3 requirements and procedures for welding, appearance and quality of welds, and methods used in correcting welding work.
b. Locate mechanical fasteners, install according to Shop Drawings, and comply with requirements for spacing, edge distances, and screw penetration.

E. Install framing members in one-piece lengths unless splice connections are indicated for track or tension members.

F. Install temporary bracing and supports to secure framing and support loads equal to those for which structure was designed. Maintain braces and supports in place, undisturbed, until entire integrated supporting structure has been completed and permanent connections to framing are secured.

G. Install insulation, specified in Section 072100 "Thermal Insulation," in framing-assembly members, such as headers, sills, boxed joists, and multiple studs at openings, that are inaccessible on completion of framing work.

H. Fasten hole-reinforcing plate over web penetrations that exceed size of manufacturer's approved or standard punched openings.

3.4 INSTALLATION OF LOAD-BEARING WALL FRAMING

A. Install continuous top and bottom tracks sized to match studs. Align tracks accurately and securely anchor at corners and ends, and at spacings as follows:

1. Anchor Spacing: To match stud spacing.

B. Squarely seat studs against top and bottom tracks, with gap not exceeding 1/8 inch between the end of wall-framing member and the web of track.

1. Fasten both flanges of studs to top and bottom tracks.
2. Space studs as follows:

a. Stud Spacing: 16 inches

C. Set studs plumb, except as needed for diagonal bracing or required for nonplumb walls or warped surfaces and similar configurations.

D. Align studs vertically where floor framing interrupts wall-framing continuity. Where studs cannot be aligned, continuously reinforce track to transfer loads.

E. Align floor and roof framing over studs according to AISI S200, Section C1. Where framing cannot be aligned, continuously reinforce track to transfer loads.

F. Anchor studs abutting structural columns or walls, including masonry walls, to supporting structure.

G. Install headers over wall openings wider than stud spacing. Locate headers above openings. Fabricate headers of compound shapes indicated or required to transfer load to supporting studs, complete with clip-angle connectors, web stiffeners, or gusset plates.

1. Frame wall openings with not less than a double stud at each jamb of frame. Fasten jamb members together to uniformly distribute loads.
2. Install tracks and jack studs above and below wall openings. Anchor tracks to jamb studs with clip angles or by welding, and space jack studs same as full-height wall studs.

H. Install supplementary framing, blocking, and bracing in stud framing indicated to support fixtures, equipment, services, casework, heavy trim, furnishings, and similar work requiring attachment to framing.

1. If type of supplementary support is not indicated, comply with stud manufacturer's written recommendations and industry standards in each case, considering weight or load resulting from item supported.

I. Install horizontal bridging in stud system, spaced vertically 48 inches. Fasten at each stud intersection.

1. Channel Bridging: Cold-rolled steel channel, welded or mechanically fastened to webs of punched studs with a minimum of two screws into each flange of the clip angle for framing members up to 6 inches deep.

J. Install miscellaneous framing and connections, including supplementary framing, web stiffeners, clip angles, continuous angles, anchors, and fasteners, to provide a complete and stable wall-framing system.

3.5 INSTALLATION OF JOIST FRAMING

A. Install perimeter joist track sized to match joists. Align and securely anchor or fasten track to supporting structure at corners, ends, and spacings indicated on Shop Drawings.

B. Install joists bearing on supporting frame, level, straight, and plumb; adjust to final position, brace, and reinforce. Fasten joists to both flanges of joist track.

1. Install joists over supporting frame with a minimum end bearing of 1-1/2 inches.
2. Reinforce ends and bearing points of joists with web stiffeners, end clips, joist hangers, steel clip angles, or steel-stud sections.

C. Space joists not more than 2 inches from abutting walls, and as follows:

1. Joist Spacing: As indicated on Drawings.

D. Frame openings with built-up joist headers, consisting of joist and joist track or another combination of connected joists if indicated.

E. Install joist reinforcement at interior supports with single, short length of joist section located directly over interior support, with lapped joists of equal length to joist reinforcement.

1. Install web stiffeners to transfer axial loads of walls above.

F. Install bridging at intervals indicated on Shop Drawings. Fasten bridging at each joist intersection as follows:

1. Joist-Track Solid Bridging: Joist-track solid blocking of width and thickness indicated, secured to joist webs.

G. Secure joists to load-bearing interior walls to prevent lateral movement of bottom flange.

H. Install miscellaneous joist framing and connections, including web stiffeners, closure pieces, clip angles, continuous angles, hold-down angles, anchors, and fasteners, to provide a complete and stable joist-framing assembly.

3.6 INSTALLATION TOLERANCES

A. Install cold-formed steel framing level, plumb, and true to line to a maximum allowable tolerance variation of 1/8 inch in 10 feet and as follows:

1. Space individual framing members no more than plus or minus 1/8 inch from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials.

3.7 REPAIR

A. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on fabricated and installed cold-formed steel framing with galvanized repair paint according to ASTM A780 and manufacturer's written instructions.

3.8 FIELD QUALITY CONTROL

A. Special Inspections: Director’s Representative will engage a special inspector and a qualified testing agency to perform tests and inspections in accordance with the requirements of BDC 406 Summary of Special Inspections and BDC 406.1 Statement of Special Inspections and as directed by the Code Compliance Manager.

B. Cold-formed steel framing will be considered defective if it does not pass tests and inspections.

C. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.9 PROTECTION

A. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure that cold-formed steel framing is without damage or deterioration at time of Substantial Completion.

END OF SECTION 054000

SECTION 074400 – CONCRETE FACED INSULATION PANELS

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. Concrete Faced Insulation Panels.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site

1.4 SUBMITTALS

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

a. Preparation instructions and recommendations.
b. Storage and handling requirements and recommendations.
c. Installation methods.

B. Samples: a. Color chips representing manufacturer's full range of available colors and patterns. b. After color selection submit 12 x 12 inch samples of each color and patterns.

C. Shop Drawings:

1. Include fabrication and installation layouts of concrete faced insulation panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.
2. Accessories: Include details of flashing, trim, and anchorage systems, at a scale of not less than 1-1/2 inches per 12 inches.

D. Quality Control Submittals:

1. Qualification Data: For Installer.
2. Product Test Reports: For each product, tests are performed by a qualified testing agency.
3. Sample Warranties: For special warranties.

E. Contract Closeout Submittals

1. Maintenance Data: For concrete faced insulation panels to be included in maintenance manuals.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Minimum 10 years experience in work of this Section.

B. Manufacturer: Provides design, engineering, fabrication, and testing of required components and assemblies for complete system.

C. Mockup: Provide mockup for evaluation of surface preparation techniques and application workmanship.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Protect materials from exposure to harmful weather conditions and at temperature and humidity conditions recommended by manufacturer.

B. Store panels flat.

C. Do not drop panels.

1.7 FIELD CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of concrete faced insulation panels to be performed according to manufacturers' written instructions and warranty requirements.

1.8 COORDINATION

A. Coordinate metal panel installation with rain drainage work, flashing, trim, construction of walls, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

1.9 WARRANTY

A. Manufacturer’s standard year warranty against defects in materials and workmanship

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design:

1. WallGUARD Concrete-Faced Foundation Panels from TClear.

2.2 MATERIALS

A. Concrete Faced Insulation Panels:

1. Source: WallGUARD Concrete Faced Insulated Perimeter Wall Panels by T. Clear Corporation.
2. Construction:

a. Extruded polystyrene board, ASTM C578, Type IV, rigid, closed cell, with integral high density skin, with integral 5/16 inch thick latex-modified concrete facing.
b. Board Size: 2 x 4 feet x 3 inches thick.
c. Edges: Tongue-and-groove sides, square ends. d. thermal resistance: Long term aged R-value of 5 per inch, tested to ASTM C518.
d. Foam compressive strength: Minimum 35 PSI, tested to ASTM D1621. f. Compressive strength: Minimum 40 PSI, tested to ASTM D 1621.
e. Water absorption: Maximum 0.7 percent by volume, tested ASTM D2842.
f. Water vapor permeance: 0.8, tested to ASTM E96/E96M.
g. Coefficient of lineal thermal Expansion: 3.5 x 10-5 inches per inch x degree F, tested to ASTM D696.
h. Accessories: a. Metal cap flashing: 24 gage galvanized steel J-channel; 2-1/4 inches wide, 4 inch long leg and 2-1/4 inch short leg; prefinished, color to be selected.

2.3 MISCELLANEOUS MATERIALS

A. Panel Accessories: Provide components required for a complete, weathertight panel system including trim, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items as per manufacturer’s recommendations.

B. Panel Fasteners: Provide fastener types recommended by manufacturer

C. Panel Sealants: Provide sealant types recommended by manufacturer that are compatible with panel materials, are nonstaining, and do not damage panel finish.

PART 3 - EXECUTION

3.1 INSTALLATION - GENERAL

A. Install in accordance with manufacturer's instructions.

3.2 INSTALLATION - CONCRETE FACED INSULATION PANELS

A. Surfaces to Receive Panels: Flat, sound, clean, and free from irregularities and or jagged surfaces.

B. Lay out panels to maximize board sizes. Do not use boards less than 6 inches wide.

C. Install panels in orientation to maximize full sheets.

D. Install fastening clips and cap flashings.

3.3 CLEANING AND PROTECTION

A. Remove temporary protective coverings and strippable films, if any, as concrete faced insulation panels are installed unless otherwise indicated in manufacturer's written installation instructions. On completion of panel installation, clean finished surfaces as recommended by manufacturer. Maintain in a clean condition during construction.

B. Protect installed products from damage during construction.

END OF SECTION 07 44 00

SECTION 096723 - RESINOUS FLOORING

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. Resinous flooring.
2. Integral cove base accessories.

1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1. Review manufacturer's written instructions for substrate preparation and environmental conditions affecting resinous flooring installation.
2. Review details of integral cove bases.
3. Review manufacturer's written instructions for installing resinous flooring systems.
4. Review protection measures for adjacent construction and installed flooring, floor drainage requirements, curbs, base details, and so forth.

1.4 SUBMITTALS

A. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.

B. Manufacturer’s installation instructions shall be provided along with product data.

C. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).

D. Product Data: For each type of product.

1. Include manufacturer's technical data, installation instructions, and recommendations for each resinous flooring component required.

E. Samples: For each resinous floor system required and for each color and texture specified, 6 inches square in size, applied to a rigid backing by Installer for this Project.

F. Samples for Initial Selection: For each type of exposed finish required.

G. Samples for Verification: For each resinous flooring system required and for each color and texture specified, 6 inches square, applied to a rigid backing by Installer for this Project.

H. Qualification Data: For Installer.

I. Material Certificates: For each resinous flooring component.

J. Material Test Reports: For each resinous flooring system, by a qualified testing agency.

K. Field quality-control reports.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For resinous flooring to include in maintenance manuals.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.

1. Engage an installer who is certified in writing by resinous flooring manufacturer as qualified to apply resinous flooring systems indicated.

B. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.

1. Apply full-thickness mockups on 96-inch- square floor area selected by Director’s Representative.

a. Include 96-inch length of integral cove base with inside corner.

2. Simulate finished lighting conditions for Director’s Representative's review of mockups.
3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Director’s Representative specifically approves such deviations in writing.
4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.7 DELIVERY, STORAGE, AND HANDLING

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

1.8 FIELD CONDITIONS

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

B. Close spaces to traffic during resinous flooring installation and for 24 hours after installation unless manufacturer recommends a longer period.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Flammability: Self-extinguishing in accordance with ASTM D635.

2.2 RESINOUS FLOORING <RF1>

A. Resinous Flooring System: Abrasion-, impact-, and chemical-resistant, aggregate-filled, resin-based monolithic floor surfacing designed to produce a seamless floor and integral cove base.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   a. Basis of Design product Stonhard – StonClad GS, Inc.
   b. Delta Polymers, Inc.
   c. DUDICK Inc.
   d. Key Resin Company.
   e. Sherwin-Williams Company
   f. Sika Corporation; Flooring.
   g. Approved equivalent.

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

C. System Characteristics:

1. Color and Pattern: As indicated on drawings..
2. Wearing Surface: Manufacturer's standard wearing surface.
3. Overall System Thickness: 1/4 inch.

D. System Physical Properties: Provide resinous flooring system with the following minimum physical property requirements when tested in accordance with test methods indicated:

1. Compressive Strength: 10,000 psi min, after 7 days, in accordance with ASTM C-579..
2. Tensile Strength: 1750 psi min in accordance with ASTM C-307
3. Flexural Modulus of Elasticity: 2 X 10^6 psi minimum in accordance with ASTM C580.

4. Water Absorption: 0.2 percent maximum in accordance with ASTM C413.
5. Impact Resistance: >160 in./lbs. (ASTM D-2794)
6. Abrasion Resistance: 0.1 gm (ASTM D-4060, CS-17)
7. Flammability: Class 1 (ASTM E-648)
8. Thermal Coefficient of Linear Expansion: 1.4 x 10-5 in./in.˚F (ASTM C-531)
9. Hardness: 60 minimum, Shore D in accordance with ASTM D2240.

E. System Chemical Resistance: Test specimens of cured resinous flooring system are unaffected when tested in accordance with ASTM D543, Procedure A, for immersion in the selected reagents for no fewer than seven days.

F. Primer: Type recommended in writing by resinous flooring manufacturer for substrate and resinous flooring system indicated.

G. Waterproofing Membrane: Type recommended in writing by resinous flooring manufacturer for substrate and resinous flooring system indicated.

H. Reinforcing Membrane: Type recommended in writing by resinous flooring manufacturer for substrate and resinous flooring system indicated.

I. Patching and Fill Material: Resinous product of or approved by resinous flooring manufacturer and recommended in writing by manufacturer for installation indicated.

J. Grout Coat: As recommended by manufacturer

K. Topcoats: Sealing or finish coats as recommended by the manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

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

1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resinous flooring systems.

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

3.2 PREPARATION

A. Prepare and clean substrates in accordance with resinous flooring manufacturer's written instructions for substrate indicated to ensure adhesion.

B. Concrete Substrates: Provide sound concrete surfaces free of laitance, glaze, efflorescence, curing compounds, form-release agents, dust, dirt, grease, oil, and other contaminants incompatible with resinous flooring.

1. Roughen concrete substrates as follows:
    a. Comply with requirements in SSPC-SP 13/NACE No. 6, with a Concrete Surface Profile of 3 or greater in accordance with ICRI Technical Guideline No. 310.2R, unless manufacturer's written instructions are more stringent.

2. Repair damaged and deteriorated concrete in accordance with resinous flooring manufacturer's written instructions.
3. Moisture Testing: Perform tests so that each test area does not exceed 1000 sq. ft., and perform no fewer than three tests in each installation area and with test areas evenly spaced in installation areas.

    a. Relative Humidity Test: Using in-situ probes, ASTM F2170. Proceed with installation only after substrates have a maximum 75 percent relative humidity level measurement.

4. Alkalinity and Adhesion Testing: Perform tests recommended in writing by resinous flooring manufacturer. Proceed with installation only after substrate alkalinity is not less than 6 or more than 8 pH unless otherwise recommended in writing by flooring manufacturer,

C. Patching and Filling: Use patching and fill material to fill holes and depressions in substrates in accordance with manufacturer's written instructions.

1. Control Joint Treatment: Treat control joints and other nonmoving substrate cracks to prevent cracks from reflecting through resinous flooring in accordance with manufacturer's written instructions.

D. Resinous Materials: Mix components and prepare materials in accordance with resinous flooring manufacturer's written instructions.

3.3 INSTALLATION

A. Apply components of resinous flooring system in accordance with manufacturer's written instructions to produce a uniform, monolithic wearing surface of thickness specified.

1. Coordinate installation of components to provide optimum adhesion of resinous flooring system to substrate, and optimum intercoat adhesion.
2. Cure resinous flooring components in accordance with manufacturer's written instructions. Prevent contamination during installation and curing processes.
3. Expansion and Isolation Joint Treatment: At substrate expansion and isolation joints, comply with resinous flooring manufacturer's written instructions.

B. Primer: Apply primer over prepared substrate at spreading rate recommended in writing by manufacturer.

C. Waterproofing Membrane: Apply waterproofing membrane over entire substrate surface, in thickness recommended in writing by manufacturer.

1. Apply waterproofing membrane to integral cove base substrates.

D. Reinforcing Membrane: Apply reinforcing membrane to entire substrate surface.

E. Integral Cove Base Accessories: Adhesively install precast accessories before applying flooring coats and in accordance with manufacturer's written instructions.

F. Field-Formed Integral Cove Base: Apply cove base mix to wall surfaces before applying flooring coats. Apply in accordance with manufacturer's written instructions and details, including those for taping, mixing, priming, troweling, sanding, and topcoating of cove base. Round internal and external corners.

1. Integral Cove Base: As indicated on drawings.

G. Self-Leveling Body Coats: Apply self-leveling slurry body coats in thickness specified for flooring system.

H. Troweled or Screeded Body Coats: Apply troweled or screeded body coats in thickness specified for flooring system. Hand or power trowel and grout to fill voids. When body coats are cured, remove trowel marks and roughness using method recommended in writing by manufacturer.

I. Grout Coat: Apply grout coat to fill voids in surface of final body coat as per manufacturer’s instructions.

J. Topcoats: Apply topcoats in number indicated for flooring system specified, at spreading rates recommended in writing by manufacturer, and to produce wearing surface specified.

3.4 FIELD QUALITY CONTROL

A. Material Sampling: The Director’s Representative may, at any time and any number of times during resinous flooring installation, require material samples for testing for compliance with requirements.

1. The State will engage an independent testing agency to take samples of materials being used. Material samples will be taken, identified, sealed, and certified in presence of Contractor.
2. Testing agency will test samples for compliance with requirements, using applicable referenced testing procedures or, if not referenced, using testing procedures listed in manufacturer's product data.
3. If test results show applied materials do not comply with specified requirements, pay for testing, remove noncomplying materials, prepare surfaces coated with unacceptable materials, and reinstall flooring materials to comply with requirements.

B. Core Sampling: At the Director’s Representative’s direction and at locations designated by the Director’s Representative, take one core sample per 1000 sq. ft. of resinous flooring, or portion of, to verify thickness. For each sample that fails to comply with requirements, take two additional samples. Repair damage caused by coring. Correct deficiencies in installed flooring as indicated by testing.

3.5 PROTECTION

A. Protect resinous flooring from damage and wear during the remainder of construction period. Use protective methods and materials, including temporary covering, recommended in writing by resinous flooring manufacturer.

END OF SECTION 096723

SECTION 133419 - METAL BUILDING SYSTEMS

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. Structural-steel framing.
2. Insulated Metal Roof Panels
3. Insulated Metal Wall Panels.
4. Accessories.

B. Related Requirements:

1. Section 077253 "Snow Guards" for prefabricated devices designed to hold snow on the roof surface.
2. Section083612 Insulated Sectional Steel Overhead Doors for coiling vehicular doors in metal building systems.

1.3 DEFINITIONS

A. Terminology Standard: See MBMA's "Metal Building Systems Manual" for definitions of terms for metal building system construction not otherwise defined in this Section or in standards referenced by this Section.

1.4 COORDINATION

A. Coordinate sizes and locations of concrete foundations and casting of anchor-rod inserts into foundation walls and footings. Anchor rod installation, concrete, reinforcement, and formwork requirements are specified in Section 033000 – Cast-in-Place Concrete.

B. Coordinate metal panel assemblies with rain drainage work, flashing, trim, and construction of supports and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

1.5 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1. Review methods and procedures related to metal building systems including, but not limited to, the following:

    a. Condition of foundations and other preparatory work performed by other trades.
    b. Structural load limitations.
    c. Construction schedule. Verify availability of materials and erector's personnel, equipment, and facilities needed to make progress and avoid delays.
    d. Required tests, inspections, and certifications.
    e. Unfavorable weather and forecasted weather conditions and impact on construction schedule.

2. Review methods and procedures related to metal roof panel assemblies including, but not limited to, the following:

    a. Compliance with requirements for purlin and rafter conditions, including flatness and attachment to structural members.
    b. Structural limitations of purlins and rafters during and after roofing.
    c. Flashings, special roof details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect metal roof panels.
    d. Temporary protection requirements for metal roof panel assembly during and after installation.
    e. Roof observation and repair after metal roof panel installation.

3. Review methods and procedures related to metal wall panel assemblies including, but not limited to, the following:

    a. Compliance with requirements for support conditions, including alignment between and attachment to structural members.
    b. Structural limitations of girts and columns during and after wall panel installation.
    c. Flashings, special siding details, wall penetrations, openings, and condition of other construction that will affect metal wall panels.
    d. Temporary protection requirements for metal wall panel assembly during and after installation.
    e. Wall observation and repair after metal wall panel installation.

1.6 SUBMITTALS

A. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.

B. Manufacturer’s installation instructions shall be provided along with product data.

C. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).

D. Product Data: For each type of metal building system component.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for the following:

a. Insulated Metal roof panels.
b. Insulated Metal wall panels.

E. Submit an Environmental Product Declaration (EPD) from the manufacturer for whole structure or individual components (structural steel framing, steel roof panels, steel wall panels) within this specification section, if available. A statement of the contractor's good faith effort to obtain the EPD shall be provided if not available.

1. Manufacturer-provided EPDs must be Product Specific Type III (Third-Party Reviewed), in adherence with ISO 14025 *Environmental labels and declarations*, ISO 14044 *Environmental management – Life cycle assessment*, and ISO 21930 *Core rules for environmental product declarations of construction products and services.*

F. Shop Drawings: Indicate components by others. Include full building plan, elevations, sections, details and the following:

1. Anchor-Rod Plans: Submit anchor-rod plans and templates before foundation work begins. Include location, diameter, and minimum required projection of anchor rods required to attach metal building to foundation. Indicate column reactions at each location.
2. Structural-Framing Drawings: Show complete fabrication of primary and secondary framing; include provisions for openings. Indicate welds and bolted connections, distinguishing between shop and field applications. Include transverse cross-sections.

a. Show provisions for attaching service walkways platforms and pipe racks.

3. Metal Roof and Wall Panel Layout Drawings: Show layouts of panels including methods of support. Include details of edge conditions, joints, panel profiles, corners, anchorages, clip spacing, trim, flashings, closures, and special details. Distinguish between factory- and field-assembled work; show locations of exposed fasteners.

a. Show roof-mounted items including roof hatches, equipment supports, pipe supports and penetrations, lighting fixtures, and items mounted on roof curbs.
b. Show wall-mounted items including personnel doors, vehicular doors, windows, louvers, and lighting fixtures.
c. Show translucent panels.

4. Accessory Drawings: Include details of the following items, at a scale of not less than 1-1/2 inches per 12 inches:

a. Flashing and trim.
b. Gutters.
c. Downspouts.

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

H. Samples for Verification: For the following products:

1. Panels: Nominal 12 inches long by actual panel width. Include fasteners, closures, and other exposed panel accessories.
2. Flashing and Trim: Nominal 12 inches long. Include fasteners and other exposed accessories.

3. Vapor-Retarder Facings: Nominal 6-inch- square Samples.
4. Windows: Full-size, nominal 12-inch- long frame Samples showing typical profile.
5. Accessories: Nominal 12-inch- long Samples for each type of accessory.

I. Door Schedule: For doors and frames. Use same designations indicated on Drawings. Include details of reinforcement.

1. Door Hardware Schedule: Include details of fabrication and assembly of door hardware. Organize schedule into door hardware sets indicating complete designations of every item required for each door or opening.
2. Keying Schedule: Detail State's final keying instructions for locks. Include schematic keying diagram and index each key set to unique door designations.

J. Delegated-Design Submittal: For metal building systems.

1. Include analysis data indicating compliance with performance requirements and design data signed and sealed by the qualified professional engineer, licensed in the State of New York, responsible for their preparation.

K. Welding certificates.

L. Letter of Design Certification: Signed and sealed by a qualified Professional Engineer, licensed in the State of New York. Include the following:

1. Name and location of Project.
2. Order number.
3. Name of manufacturer.
4. Name of Contractor.
5. Building dimensions including width, length, height, and roof slope.
6. Indicate compliance with AISC standards for hot-rolled steel and AISI standards for cold-rolled steel, including edition dates of each standard.
7. Governing building code and year of edition.
8. Design Loads: Include dead load, roof live load, collateral loads, roof snow load, deflection, wind loads/speeds and exposure, seismic design category or effective peak velocity-related acceleration/peak acceleration, and auxiliary loads (cranes).
9. Load Combinations: Indicate that loads were applied acting simultaneously with concentrated loads, according to governing building code.
10. Building-Use Category: Indicate category of building use and its effect on load importance factors.

M. Erector Certificates: For qualified erector, from manufacturer.

N. Material Test Reports: For each of the following products:

1. Structural steel including chemical and physical properties.
2. Bolts, nuts, and washers including mechanical properties and chemical analysis.
3. Tension-control, high-strength, bolt-nut-washer assemblies.
4. Shop primers.
5. Nonshrink grout.

O. Source quality-control reports.

P. Field Quality-Control Reports.

Q. Surveys: Show final elevations and locations of major members. Indicate discrepancies between actual installation and the Contract Documents. Have surveyor who performed surveys certify their accuracy.

R. Sample Warranties: For special warranties.

1.7 CLOSEOUT SUBMITTALS

A. Maintenance Data: For metal panel finishes and door hardware to include in maintenance manuals.

1.8 QUALITY ASSURANCE

A. Manufacturer Qualifications: A qualified manufacturer.

1. Accreditation: Manufacturer's facility accredited according to the International Accreditation Service's AC472, "Accreditation Criteria for Inspection Programs for Manufacturers of Metal Building Systems."
2. Engineering Responsibility: Preparation of comprehensive engineering analysis and Shop Drawings by a professional engineer who is legally qualified to practice in the State of New York.

B. Erector Qualifications: An experienced erector who specializes in erecting and installing work similar in material, design, and extent to that indicated for this Project and who is acceptable to manufacturer.

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

1. AWS D1.1, "Structural Welding Code - Steel."
2. AWS D1.3, "Structural Welding Code - Sheet Steel."

D. Land Surveyor Qualifications: A professional Land Surveyor who practices in jurisdiction where Project is located and who is experienced in providing surveying services of the kind indicated.

E. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.

1. Build mockup of typical wall area as shown on Drawings.
2. Build mockups for typical wall metal panel including accessories.

    a. Size: 48 inches long by 48 inches.

3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Director’s Representative specifically approves such deviations in writing.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Deliver components, sheets, panels, and other manufactured items so as not to be damaged or deformed. Package metal panels for protection during transportation and handling.

B. Unload, store, and erect metal panels in a manner to prevent bending, warping, twisting, and surface damage.

C. Stack metal panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal panels to ensure dryness, with positive slope for drainage of water. Do not store metal panels in contact with other materials that might cause staining, denting, or other surface damage.

D. Protect foam-plastic insulation as follows:

1. Do not expose to sunlight, except to extent necessary for period of installation and concealment.
2. Protect against ignition at all times. Do not deliver foam-plastic insulation materials to Project site before installation time.
3. Complete installation and concealment of foam-plastic materials as rapidly as possible in each area of construction.

1.10 FIELD CONDITIONS

A. Weather Limitations: Proceed with panel installation only when weather conditions permit metal panels to be installed according to manufacturers' written instructions and warranty requirements.

1.11 WARRANTY

A. Special Warranty on Metal Panel Finishes: Manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.

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

a. Color fading more than 5 Hunter units when tested according to ASTM D2244.
b. Chalking in excess of a No. 8 rating when tested according to ASTM D4214.
c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.

2. Finish Warranty Period: 25 years from date of Substantial Completion.

B. Special Weathertightness Warranty for CFR Standing-Seam Metal Roof Panels: Manufacturer agrees to repair or replace standing-seam metal roof panel assemblies that leak or otherwise fail to remain weathertight within specified warranty period.

1. Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturer shall have a minimum of ten years documented experience producing insulated metal panel systems and shall be IAS AC472 accredited.

B. Source Limitations: Obtain metal building system components, including primary and secondary framing and metal panel assemblies, from single source from single manufacturer.

2.2 SYSTEM DESCRIPTION

A. Provide a complete, integrated set of mutually dependent components and assemblies that form a metal building system capable of withstanding structural and other loads, thermally induced movement, and exposure to weather without failure or infiltration of water into building interior.

B. Primary-Frame Type: a combination of the two below as indicated on drawings.

1. Rigid Clear Span: Solid-member, structural-framing system without interior columns in Parking area.
2. Rigid Modular: Solid-member, structural-framing system with interior columns in administrative office area.

C. End-Wall Framing: Manufacturer's standard, for buildings not required to be expandable, consisting of primary frame, capable of supporting one-half of a bay design load, and end-wall columns.

D. End-Wall Framing: Engineer end walls to be expandable. Provide primary frame, capable of supporting full-bay design loads, and end-wall columns.

E. Secondary-Frame Type: Manufacturer's standard purlins and joists and exterior-framed (bypass) girts.

F. Eave Height: Manufacturer's standard height, as indicated by nominal height on Drawings.

G. Bay Spacing: As indicated on Drawings.

H. Roof Slope: As indicated on Drawings.

I. Roof System: Nucor Insulated Panel Group (Metl-Span) CFR Insulated Roof Panel.

J. Exterior Wall System: Nucor Insulated Panel Group (Metl-Span) CF Mesa Insulated Wall Panel.

K. Insulated metal panel assemblies shall serve as the primary air barrier, vapor retarder, and thermal envelope where indicated.

L. Coordinate snow guard attachment system with CFR roof panel manufacturer. Penetrating snow retention devices shall not void roof weathertightness warranty.

2.3 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a Professional Engineer, licensed in the State of New York, to design metal building system.

B. Structural Performance: Metal building systems shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated according to procedures in MBMA's "Metal Building Systems Manual."

1. Design Loads: As indicated on Drawings.
2. Deflection and Drift Limits: Design metal building system assemblies to withstand serviceability design loads without exceeding deflections and drift limits recommended in AISC Steel Design Guide No. 3 "Serviceability Design Considerations for Steel Buildings."
3. Deflection and Drift Limits: No greater than the following:

    a. Purlins and Rafters: Vertical deflection of 1/360 of the span.
    b. Girts: Horizontal deflection of 1/240 of the span.
    c. Metal Roof Panels: Vertical deflection of 1/360 of the span.
    d. Metal Wall Panels: Horizontal deflection of 1/240 of the span.
    e. Design secondary-framing system to accommodate deflection of primary framing and construction tolerances, and to maintain clearances at openings.
    f. Lateral Drift: Maximum of 1/200 of the building height.

C. Seismic Performance: Metal building system shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.

D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

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

E. Fire-Resistance Ratings: Where assemblies are indicated to have a fire-resistance rating, provide metal panel assemblies identical to those of assemblies tested for fire resistance per ASTM E119 or ASTM E108 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Indicate design designations from UL's "Fire Resistance Directory," FM Global's "Approval Guide," or from the listings of another qualified testing agency.

F. Fire Propagation Characteristics: Exterior wall assemblies containing foam plastics pass NFPA 285 fire test.

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

1. Oversize Fire-Rated Door Assemblies: For units exceeding sizes of tested assemblies, provide certification by a qualified testing agency that doors comply with standard construction requirements for tested and labeled fire-rated door assemblies except for size.

H. Structural Performance for Metal Roof and Wall Panels: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E1592:

1. Wind Loads: As indicated on Drawings.

I. Air Infiltration for Metal Roof Panels: Air leakage of not more than 0.06 cfm/sq. ft. when tested according to ASTM E1680 at the following test-pressure difference:

1. Test-Pressure Difference: 1.57 lbf/sq. ft..

J. Air Infiltration for Metal Wall Panels: Air leakage of not more than 0.06 cfm/sq. ft. when tested according to ASTM E283 at the following test-pressure difference:

1. Test-Pressure Difference: 1.57 lbf/sq. ft..

K. Water Penetration for Metal Roof Panels: No water penetration when tested according to ASTM E1646at the following test-pressure difference:

1. Test-Pressure Difference: 6.24 lbf/sq. ft..

L. Water Penetration for Metal Wall Panels: No water penetration when tested according to ASTM E331 at the following test-pressure difference:

1. Test-Pressure Difference: 6.24 lbf/sq. ft..

M. Wind-Uplift Resistance: Provide metal roof panel assemblies that comply with UL 580 for wind-uplift-resistance class indicated.

1. Uplift Rating: UL 90.

N. FM Global Listing: Provide metal roof panels and component materials that comply with requirements in FM Global 4471 as part of a panel roofing system and that are listed in FM Global's "Approval Guide" for Class 1 or noncombustible construction, as applicable. Identify materials with FM Global markings.

1. Fire/Windstorm Classification: Class 1A-90.
2. Hail Resistance: SH.

O. Energy Star Listing: Roof panels that are listed on the DOE's ENERGY STAR "Roof Products Qualified Product List" for low-slope roof products.

P. Energy Performance: Provide roof panels according to one of the following when tested according to CRRC-1:

1. Three-year, aged, solar reflectance of not less than 0.55and emissivity of not less than 0.25.
2. Three-year, aged, Solar Reflectance Index of not less than **78**when calculated according to ASTM E1980.

Q. Thermal Performance for Opaque Elements: Provide the following maximum U-factors and minimum R-values when tested according to ASTM C1363 or ASTM C518:

1. Roof:
   a. R-Value: 52.5

2. Walls:
   a. R-Value: 26.2.

2.4 STRUCTURAL-STEEL FRAMING

A. Structural Steel: Comply with AISC 360, "Specification for Structural Steel Buildings."

B. Bolted Connections: Comply with RCSC's "Specification for Structural Joints Using High-Strength Bolts."

C. Cold-Formed Steel: Comply with AISI's "North American Specification for the Design of Cold-Formed Steel Structural Members" for design requirements and allowable stresses.

D. Primary Framing: Manufacturer's standard primary-framing system, designed to withstand required loads and specified requirements. Primary framing includes transverse and lean-to frames; rafters, rake, and canopy beams; sidewall, intermediate, end-wall, and corner columns; and wind bracing.

1. General: Provide frames with attachment plates, bearing plates, and splice members. Factory drill for field-bolted assembly. Provide frame span and spacing indicated.

   a. Slight variations in span and spacing may be acceptable if necessary to comply with manufacturer's standard, as approved by Director’s Representative.

2. Rigid Clear-Span Frames: I-shaped frame sections fabricated from shop-welded, built-up steel plates or structural-steel shapes. Interior columns are not permitted.
3. Rigid Modular Frames: I-shaped frame sections fabricated from shop-welded, built-up steel plates or structural-steel shapes. Provide interior columns fabricated from round steel pipes or tubes, or shop-welded, built-up steel plates.
4. Truss-Frame, Clear-Span Frames: Rafter frames fabricated from joist girders, and I-shaped column sections fabricated from shop-welded, built-up steel plates or structural-steel shapes. Interior columns are not permitted.
5. Truss-Frame Modular Frames: Rafter frames fabricated from joist girders, and I-shaped column sections fabricated from shop-welded, built-up steel plates or structural-steel shapes. Provide interior columns fabricated from round steel pipes or tubes, or shop-welded, built-up steel plates.

6. Long-Bay Frames: I-shaped frame sections fabricated from shop-welded, built-up steel plates or structural-steel shapes. Provide interior columns fabricated from round steel pipes or tubes, or shop-welded, built-up steel plates.
7. Frame Configuration: One-directional, sloped.
8. Exterior Column: Straight
9. Rafter: Tapered.

E. End-Wall Framing: Manufacturer's standard primary end-wall framing fabricated for field-bolted assembly to comply with the following:

1. End-Wall and Corner Columns: I-shaped sections fabricated from structural-steel shapes; shop-welded, built-up steel plates; or C-shaped, cold-formed, structural-steel sheet.
2. End-Wall Rafters: C-shaped, cold-formed, structural-steel sheet; or I-shaped sections fabricated from shop-welded, built-up steel plates or structural-steel shapes.

F. Secondary Framing: Manufacturer's standard secondary framing, including purlins, girts, eave struts, flange bracing, base members, gable angles, clips, headers, jambs, and other miscellaneous structural members. Unless otherwise indicated, fabricate framing from either cold-formed, structural-steel sheet or roll-formed, metallic-coated steel sheet, prepainted with coil coating, to comply with the following:

1. Purlins: C- or Z-shaped sections; fabricated from built-up steel plates, steel sheet, or structural-steel shapes; minimum 2-1/2-inch- wide flanges.

    a. Depth: As indicated on Drawings and as needed to comply with system performance requirements.

2. Purlins: Steel joists of depths indicated on Drawings.
3. Girts: C- or Z-shaped sections; fabricated from built-up steel plates, steel sheet, or structural-steel shapes. Form ends of Z-sections with stiffening lips angled 40 to 50 degrees from flange, with minimum 2-1/2-inch- wide flanges.

    a. Depth: As indicated on Drawings and as required to comply with system performance requirements.

4. Eave Struts: Unequal-flange, C-shaped sections; fabricated from built-up steel plates, steel sheet, or structural-steel shapes; to provide adequate backup for metal panels.
5. Flange Bracing: Minimum 2-by-2-by-1/8-inch structural-steel angles or 1-inch- diameter, cold-formed structural tubing to stiffen primary-frame flanges.
6. Sag Bracing: Minimum 1-by-1-by-1/8-inch structural-steel angles.
7. Base or Sill Angles: Manufacturer's standard base angle, minimum 3-by-2-inch, fabricated from zinc-coated (hot dipped galvanized) steel sheet.
8. Purlin and Girt Clips: Manufacturer's standard clips fabricated from steel sheet. Provide galvanized clips where clips are connected to galvanized framing members.
9. Framing for Openings: Channel shapes; fabricated from cold-formed, structural-steel sheet or structural-steel shapes. Frame head and jamb of door openings and head, jamb, and sill of other openings.
10. Miscellaneous Structural Members: Manufacturer's standard sections fabricated from cold-formed, structural-steel sheet; built-up steel plates; or zinc-coated (hot dipped galvanized) steel sheet; designed to withstand required loads.

G. Canopy Framing: Manufacturer's standard structural-framing system, designed to withstand required loads; fabricated from shop-welded, built-up steel plates or structural-steel shapes. Provide frames with attachment plates and splice members, factory drilled for field-bolted assembly.

1. Type: Straight-beam, eave type.

H. Bracing: Provide adjustable wind bracing using any method as follows:

1. Rods: ASTM A36; ASTM A572, Grade 50; or ASTM A529, Grade 50; minimum 1/2-inch- diameter steel; threaded full length or threaded a minimum of 6 inches at each end.
2. Cable: ASTM A475, minimum 1/4-inch- diameter, extra-high-strength grade, Class B, zinc-coated, seven-strand steel; with threaded end anchors.
3. Angles: Fabricated from structural-steel shapes to match primary framing, of size required to withstand design loads.
4. Rigid Portal Frames: Fabricated from shop-welded, built-up steel plates or structural-steel shapes to match primary framing; of size required to withstand design loads.
5. Fixed-Base Columns: Fabricated from shop-welded, built-up steel plates or structural-steel shapes to match primary framing; of size required to withstand design loads.
6. Diaphragm Action of Metal Panels: Design metal building to resist wind forces through diaphragm action of metal panels.

I. Anchor Rods: Headed anchor rods as indicated in Anchor Rod Plan for attachment of metal building to foundation.

J. Materials:

1. W-Shapes: ASTM A992; ASTM A572, Grade 50 or 55; or ASTM A529, Grade 50 or 55.
2. Channels, Angles, M-Shapes, and S-Shapes: ASTM A36; ASTM A572, Grade 50 or 55; or ASTM A529, Grade 50 or 55.
3. Plate and Bar: ASTM A36; ASTM A572, Grade 50 or 55; or ASTM A529, Grade 50 or 55.
4. Steel Pipe: ASTM A53, Type E or S, Grade B.
5. Cold-Formed Hollow Structural Sections: ASTM A500, Grade B or C, structural tubing.
6. Structural-Steel Sheet: Hot-rolled, ASTM A1011, Structural Steel (SS), Grades 30 through 55, or High-Strength Low-Alloy Steel (HSLAS) or High-Strength Low-Alloy Steel with Improved Formability (HSLAS-F), Grades 45 through 70; or cold-rolled, ASTM A1008, Structural Steel (SS), Grades 25 through 80, or HSLAS, Grades 45 through 70.
7. Metallic-Coated Steel Sheet: ASTM A653, SS, Grades 33 through 80, or HSLAS or HSLAS-F, Grades 50 through 80; with G60 coating designation; mill phosphatized.
8. Metallic-Coated Steel Sheet Prepainted with Coil Coating: Steel sheet, metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A755.

    a. Zinc-Coated (Hot Dipped Galvanized) Steel Sheet: ASTM A653, SS, Grades 33 through 80, or HSLAS or HSLAS-F, Grades 50 through 80; with G90 coating designation.
    b. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A792, SS, Grade 50 or 80; with Class AZ50 coating.

9. Joist Girders: Manufactured according to "Standard Specifications for Joist Girders," in SJI's "Standard Specifications and Load Tables for Steel Joists and Joist Girders"; with steel-angle, top- and bottom-chord members, and end- and top-chord arrangements as indicated on Drawings and required for primary framing.
10. Steel Joists: Manufactured according to "Standard Specifications for Open Web Steel Joists, K-Series," in SJI's "Standard Specifications and Load Tables for Steel Joists and Joist Girders"; with steel-angle, top- and bottom-chord members, and end- and top-chord arrangements as indicated on Drawings and required for secondary framing.
11. Non-High-Strength Bolts, Nuts, and Washers: ASTM A307, Grade A, carbon-steel, hex-head bolts; ASTM A563 carbon-steel hex nuts; and ASTM F844 plain (flat) steel washers.

    a. Finish: Plain.

12. High-Strength Bolts, Nuts, and Washers: ASTM F3125,Grade A325, Type 1, heavy-hex steel structural bolts; ASTM A563, Grade DH, heavy-hex carbon-steel nuts; and ASTM F436, Type 1, hardened carbon-steel washers.

    a. Finish: Hot-dip galvanized zinc coating, ASTM F2329, Class C.

13. High-Strength Bolts, Nuts, and Washers: ASTM F3125, Grade A490, Type 1, heavy-hex steel structural bolts or Grade F2280 tension-control, bolt-nut-washer assemblies with splined ends; ASTM A563, Grade DH, heavy-hex carbon-steel nuts; and ASTM F436, Type 1, hardened carbon-steel washers; all with plain finish.
14. Tension-Control, High-Strength Bolt-Nut-Washer Assemblies: ASTM F3125, Grade F1852, Type 1, heavy-hex head assemblies consisting of steel structural bolts with splined ends; ASTM A563, Grade DH, heavy-hex carbon-steel nuts; and ASTM F436, Type 1 hardened carbon-steel washers.

    a. Finish: Hot-dip galvanized zinc coating, ASTM F2329, Class C

15. Headed Anchor Rods: ASTM F1554, Grade 36.

    a. Configuration: Straight.
    b. Nuts: ASTM A563 heavy-hex carbon steel.
    c. Plate Washers: ASTM A36 carbon steel.
    d. Washers: ASTM F436 hardened carbon steel.
    e. Finish: Hot-dip galvanized zinc coating, ASTM F2329, Class C.

16. Threaded Rods: ASTM A307, Grade A.

    a. Nuts: ASTM A563 heavy-hex carbon steel.
    b. Washers: ASTM F436 hardened carbon steel.
    c. Finish: Plain.

K. Finish: Factory primed. Apply specified primer immediately after cleaning and pretreating.

1. Clean and prepare in accordance with SSPC-SP2.
2. Coat with manufacturer's standard primer. Apply primer to primary and secondary framing to a minimum dry film thickness of 1 mil.

a. Prime secondary framing formed from uncoated steel sheet to a minimum dry film thickness of 0.5 mil on each side.

2.5 INSULATED METAL ROOF PANELS.

A. Basis of Design:
1. Nucor Insulated Panel Group (Metl-Span) CFR Insulated Roof Panel.
2. Roof panel thickness: 6 inches.
3. Standing seam, concealed-fastener insulated metal roof panel system.
4. Factory foamed-in-place polyisocyanurate core.
5. Panel coverage: 42 inches nominal.
6. Exterior Profile: 2" high standing seam with a Mesa profile between the seams, embossed
7. Exterior finish: AZ-55 aluminum-zinc coated steel in 22 Ga, with Kynar 500® / Hylar 5000® PVDF fluoropolymer coating
8. Interior Profile: Mesa Nominal 1/8” deep, embossed.
9. Interior Finish: AZ-50 aluminum-Zinc coated steel in 22 GA with Kynar 500® / Hylar 5000® PVDF fluoropolymer coating
10. Color: As selected by Director's Representative.

2.6 INSULATED METAL WALL PANELS.

A. Basis of Design:
1. Nucor Insulated Panel Group (Metl-Span) CF Mesa Insulated Wall Panel.
2. Concealed-fastener insulated metal wall panel system.
3. Factory foamed-in-place polyisocyanurate core.
4. Panel thickness: 3 inches.
5. Panel module width: 36 inches.
6. Exterior profile: Longitudinal planks spaced at nominal 4" on center, nominal 1/8" deep, embossed
7. Exterior Face: AZ-55 aluminum-zinc coated steel in 22 Ga, Kynar 500® / Hylar 5000® PVDF fluoropolymer coating.
8. Interior profile: Mesa, nominal 1/8" deep, embossed.
9. Interior Face: AZ-50 aluminum-zinc coated steel in 22 Ga with Kynar 500® / Hylar 5000® PVDF fluoropolymer coating.
10. Color: As selected by Director's Representative.

2.7 ACCESSORIES

A. General: Provide accessories as standard with metal building system manufacturer and as specified. Fabricate and finish accessories at the factory to greatest extent possible, by manufacturer's standard procedures and processes. Comply with indicated profiles and with dimensional and structural requirements.

1. Form exposed sheet metal accessories that are without excessive oil-canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.

B. Roof Panel Accessories: Provide components required for a complete metal roof panel assembly including copings, fasciae, corner units, ridge closures, clips, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal roof panels unless otherwise indicated.

1. Closures: Provide closures at eaves and ridges, fabricated of same material as metal roof panels.
2. Clips: Manufacturer's standard, formed from stainless-steel sheet, designed to withstand negative-load requirements.
3. Cleats: Manufacturer's standard, mechanically seamed cleats formed from stainless-steel sheet or nylon-coated aluminum sheet.
4. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
5. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch- thick, flexible closure strips; cut or premolded to match metal roof panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.
6. Thermal Spacer Blocks: Where metal panels attach directly to purlins, provide thermal spacer blocks of thickness required to provide 1-inch standoff; fabricated from extruded polystyrene.

C. Wall Panel Accessories: Provide components required for a complete metal wall panel assembly including copings, fasciae, mullions, sills, corner units, clips, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal wall panels unless otherwise indicated.

1. Closures: Provide closures at eaves and rakes, fabricated of same material as metal wall panels.
2. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
3. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch- thick, flexible closure strips; cut or premolded to match metal wall panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.

D. Flashing and Trim: Zinc-coated (hot dipped galvanized) or aluminum-zinc alloy-coated steel sheet, 0.018-inch nominal uncoated steel thickness, prepainted with coil coating; finished to match adjacent metal panels.

1. Provide flashing and trim as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, eaves, rakes, corners, bases, framed openings, ridges, fasciae, and fillers.
2. Opening Trim: Zinc-coated (hot dipped galvanized) or aluminum-zinc alloy-coated steel sheet, 0.030-inchnominal uncoated steel thickness, prepainted with coil coating. Trim head and jamb of door openings, and head, jamb, and sill of other openings.

E. Gutters: Zinc-coated (hot dipped galvanized) or aluminum-zinc alloy-coated steel sheet, 24 Ga. steel thickness, prepainted with coil coating; finished to match roof fascia and rake trim. Match profile of gable trim, complete with end pieces, outlet tubes, and other special pieces as required.

Fabricate in minimum 96-inch- long sections, sized according to SMACNA's "Architectural Sheet Metal Manual."

1. Gutter Supports: Fabricated from same material and finish as gutters.
2. Strainers: Bronze, copper, or aluminum wire ball type at outlets.

F. Downspouts: Zinc-coated (hot dipped galvanized) or aluminum-zinc alloy-coated steel sheet, 24 Ga. steel thickness, prepainted with coil coating; finished to match metal wall panels. Fabricate in minimum 10-foot- long sections, complete with formed elbows and offsets.

1. Mounting Straps: Fabricated from same material and finish as gutters.

G. Pipe Flashing: Premolded, EPDM pipe collar with flexible aluminum ring bonded to base.

H. Materials:

1. Fasteners: Self-tapping screws, bolts, nuts, self-locking rivets and bolts, end-welded studs, and other suitable fasteners designed to withstand design loads. Provide fasteners with heads matching color of materials being fastened by means of plastic caps or factory-applied coating.

    a. Fasteners for Metal Roof Panels: Self-drilling or self-tapping, hot dipped galvanized zinc coating, hex-head carbon-steel screws, with a stainless-steel cap or zinc-aluminum-alloy head and EPDM sealing washer.
    b. Fasteners for Metal Wall Panels: Self-drilling or self-tapping, hot dipped galvanized zinc coating, hex-head carbon-steel screws**,** with EPDM sealing washers bearing on weather side of metal panels.
    c. Fasteners for Flashing and Trim: Blind fasteners or self-drilling screws with hex washer head.
    d. Blind Fasteners: High-strength aluminum or stainless-steel rivets.

2. Corrosion-Resistant Coating: Cold-applied asphalt mastic, compounded for 15-mil dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.
3. Nonmetallic, Shrinkage-Resistant Grout: ASTM C1107, factory-packaged, nonmetallic aggregate grout, noncorrosive, nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.
4. Metal Panel Sealants:

    a. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene-compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape of manufacturer's standard size.
    b. Joint Sealant: ASTM C920; one part elastomeric polyurethane or polysulfide; of type, grade, class, and use classifications required to seal joints in metal panels and remain weathertight; and as recommended by metal building system manufacturer.

2.8 FABRICATION

A. General: Design components and field connections required for erection to permit easy assembly.

1. Mark each piece and part of the assembly to correspond with previously prepared erection drawings, diagrams, and instruction manuals.
2. Fabricate structural framing to produce clean, smooth cuts and bends. Punch holes of proper size, shape, and location. Members shall be free of cracks, tears, and ruptures.

B. Tolerances: Comply with MBMA's "Metal Building Systems Manual" for fabrication and erection tolerances.

C. Primary Framing: Shop fabricate framing components to indicated size and section, with baseplates, bearing plates, stiffeners, and other items required for erection welded into place. Cut, form, punch, drill, and weld framing for bolted field assembly.

1. Make shop connections by welding or by using high-strength bolts.
2. Join flanges to webs of built-up members by a continuous, submerged arc-welding process.
3. Brace compression flange of primary framing with steel angles or cold-formed structural tubing between frame web and purlin web or girt web, so flange compressive strength is within allowable limits for any combination of loadings.
4. Weld clips to frames for attaching secondary framing if applicable, or punch for bolts.
5. Shop Priming: Prepare surfaces for shop priming according to SSPC-SP 2. Shop prime primary framing with specified primer after fabrication.

D. Secondary Framing: Shop fabricate framing components to indicated size and section by roll forming or break forming, with baseplates, bearing plates, stiffeners, and other plates required for erection welded into place. Cut, form, punch, drill, and weld secondary framing for bolted field connections to primary framing.

1. Make shop connections by welding or by using non-high-strength bolts.
2. Shop Priming: Prepare uncoated surfaces for shop priming according to SSPC-SP 2. Shop prime uncoated secondary framing with specified primer after fabrication.

E. Metal Panels: Fabricate and finish metal panels at the factory to greatest extent possible, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements. Comply with indicated profiles and with dimensional and structural requirements.

1. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of metal panel.

2.9 SOURCE QUALITY CONTROL

A. Special Inspection: Director’s Representative will engage a qualified special inspector to perform source quality control inspections and to submit reports.

1. Accredited Manufacturers: Special inspections will not be required if fabrication is performed by an IAS AC472-accredited manufacturer approved by authorities having jurisdiction to perform such Work without special inspection.

a. After fabrication, submit copy of certificate of compliance to authorities having jurisdiction, certifying that Work was performed according to Contract requirements.

PART 3 - EXECUTION

3.1 EXAMINATION

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

B. Before erection proceeds, survey elevations and locations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments to receive structural framing, with erector present, for compliance with requirements and metal building system manufacturer's tolerances.

1. Engage Land Surveyor to perform surveying.

C. Proceed with erection only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition.

B. Provide temporary shores, guys, braces, and other supports during erection to keep structural framing secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads. Remove temporary supports when permanent structural framing, connections, and bracing are in place unless otherwise indicated.

3.3 ERECTION OF STRUCTURAL FRAMING

A. Erect metal building system according to manufacturer's written instructions and drawings.

B. Do not field cut, drill, or alter structural members without written approval from metal building system manufacturer's professional engineer.

C. Set structural framing accurately in locations and to elevations indicated, according to AISC specifications referenced in this Section. Maintain structural stability of frame during erection.

D. Base and Bearing Plates: Clean concrete- and masonry-bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting plates. Clean bottom surface of plates.

1. Set plates for structural members on wedges, shims, or setting nuts as required.
2. Tighten anchor rods after supported members have been positioned and plumbed. Do not remove wedges or shims but, if protruding, cut off flush with edge of plate before packing with grout.
3. Promptly pack grout solidly between bearing surfaces and plates so no voids remain. Neatly finish exposed surfaces; protect grout and allow to cure. Comply with manufacturer's written installation instructions for shrinkage-resistant grouts.

E. Align and adjust structural framing before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that will be in permanent contact with framing. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.

1. Level and plumb individual members of structure.
2. Make allowances for difference between temperature at time of erection and mean temperature when structure will be completed and in service.

F. Primary Framing and End Walls: Erect framing level, plumb, rigid, secure, and true to line. Level baseplates to a true even plane with full bearing to supporting structures, set with double-nutted anchor bolts. Use grout to obtain uniform bearing and to maintain a level base-line elevation. Moist-cure grout for not less than seven days after placement.

1. Make field connections using high-strength bolts installed according to RCSC's "Specification for Structural Joints Using High-Strength Bolts" for bolt type and joint type specified.

    a. Joint Type: Snug tightened or pretensioned as required by manufacturer.

G. Secondary Framing: Erect framing level, plumb, rigid, secure, and true to line. Field bolt secondary framing to clips attached to primary framing.

1. Provide rake or gable purlins with tight-fitting closure channels and fasciae.
2. Locate and space wall girts to suit openings such as doors and windows.
3. Provide supplemental framing at entire perimeter of openings, including doors, windows, louvers, ventilators, and other penetrations of roof and walls.

H. Steel Joists and Joist Girders: Install joists, girders, and accessories plumb, square, and true to line; securely fasten to supporting construction according to SJI's "Standard Specifications and Load Tables for Steel Joists and Joist Girders," joist manufacturer's written instructions, and requirements in this Section.

1. Before installation, splice joists delivered to Project site in more than one piece.
2. Space, adjust, and align joists accurately in location before permanently fastening.
3. Install temporary bracing and erection bridging, connections, and anchors to ensure that joists are stabilized during construction.
4. Joist Installation: Bolt joists to supporting steel framework using carbon-steel bolts unless otherwise indicated.
5. Joist Installation: Bolt joists to supporting steel framework using high-strength structural bolts unless otherwise indicated. Comply with RCSC's "Specification for Structural Joints Using High-Strength Bolts" for high-strength structural bolt installation and tightening requirements.
6. Joist Installation: Weld joist seats to supporting steel framework.
7. Install and connect bridging concurrently with joist erection, before construction loads are applied. Anchor ends of bridging lines at top and bottom chords if terminating at walls or beams.

I. Bracing: Install bracing in roof and sidewalls where indicated on erection drawings.

1. Tighten rod and cable bracing to avoid sag.
2. Locate interior end-bay bracing only where indicated.

J. Framing for Openings: Provide shapes of proper design and size to reinforce openings and to carry loads and vibrations imposed, including equipment furnished under mechanical and electrical work. Securely attach to structural framing.

K. Erection Tolerances: Maintain erection tolerances of structural framing within AISC 303.

3.4 INSULATED METAL WALL PANEL INSTALLATION, GENERAL

A. Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.

B. On-Site Fabrication: Subject to compliance with requirements of this Section, metal panels may be fabricated on-site using UL-certified, portable roll-forming equipment if panels are of same profile and warranted by manufacturer to be equal to factory-formed panels. Fabricate according to equipment manufacturer's written instructions and to comply with details shown.

C. Examination: Examine primary and secondary framing to verify that structural-panel support members and anchorages have been installed within alignment tolerances required by manufacturer.

1. Examine roughing-in for components and systems penetrating metal panels, to verify actual locations of penetrations relative to seams before metal panel installation.

D. General: Anchor metal panels and other components of the Work securely in place, with provisions for thermal and structural movement.

1. Field cut metal panels as required for doors, windows, and other openings. Cut openings as small as possible, neatly to size required, and without damage to adjacent metal panel finishes.

    a. Field cutting of metal panels by torch is not permitted unless approved in writing by manufacturer.

2. Install metal panels perpendicular to structural supports unless otherwise indicated.
3. Flash and seal metal panels with weather closures at perimeter of openings and similar elements. Fasten with self-tapping screws.
4. Locate and space fastenings in uniform vertical and horizontal alignment.
5. Locate metal panel splices over structural supports with end laps in alignment.
6. Lap metal flashing over metal panels to allow moisture to run over and off the material.

E. Install concealed-fastener insulated wall panels in accordance with manufacturer's written instructions utilizing concealed clips and fasteners. Exposed fasteners shall not be permitted except where required at trim and flashing locations.

F. Metal Protection: Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with corrosion-resistant coating, by applying rubberized-asphalt underlayment to each contact surface, or by other permanent separation as recommended by metal roof panel manufacturer.

G. Joint Sealers: Install gaskets, joint fillers, and sealants where indicated and where required for weatherproof performance of metal panel assemblies. Provide types of gaskets, fillers, and sealants indicated; or, if not indicated, provide types recommended by metal panel manufacturer.

1. Seal metal panel end laps with double beads of tape or sealant the full width of panel. Seal side joints where recommended by metal panel manufacturer.
2. Prepare joints and apply sealants to comply with requirements in Section 079200 "Joint Sealants."

3.5 INSULATED METAL ROOF PANEL INSTALLATION

A. General: Provide metal roof panels of full length from eave to ridge unless otherwise indicated or restricted by shipping limitations.

1. .
2. Flash and seal metal roof panels with weather closures at eaves and rakes. Fasten with self-tapping screws.

B. Standing-Seam Insulated Roof Panels: Install in accordance with manufacturer's published installation requirements. Mechanically seamed roof panel joints shall be installed utilizing manufacturer's approved seaming equipment and accessories.

C. Metal Fascia Panels: Align bottom of metal panels and fasten with blind rivets, bolts, or self-drilling or self-tapping screws. Flash and seal metal panels with weather closures where fasciae meet soffits, along lower panel edges, and at perimeter of all openings.

D. Metal Roof Panel Installation Tolerances: Shim and align metal roof panels within installed tolerance of 1/4 inch in 20 feet on slope and location lines and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

3.6 ACCESSORY INSTALLATION

A. General: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.

1. Install components required for a complete metal roof panel assembly, including trim, copings, ridge closures, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.
2. Install components for a complete metal wall panel assembly, including trim, copings, corners, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.
3. Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with corrosion-resistant coating, by applying rubberized-asphalt underlayment to each contact surface, or by other permanent separation as recommended by manufacturer.

B. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.

1. Install exposed flashing and trim that is without excessive oil-canning, buckling, and tool marks and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and to result in waterproof and weather-resistant performance.
2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped or bayonet-type expansion provisions cannot be used or would not be sufficiently weather resistant and waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic sealant (concealed within joints).

C. Gutters: Join sections with riveted-and-soldered or lapped-and-sealed joints. Attach gutters to eave with gutter hangers spaced as required for gutter size, but not more than 36 inches o.c. using manufacturer's standard fasteners. Provide end closures and seal watertight with sealant. Provide for thermal expansion.

D. Downspouts: Join sections with 1-1/2-inch telescoping joints. Provide fasteners designed to hold downspouts securely 1 inch away from walls; locate fasteners at top and bottom and at approximately 60 inches o.c. in between.

1. Provide elbows at base of downspouts to direct water away from building.
2. Tie downspouts to underground drainage system indicated.

E. Circular Roof Ventilators: Set ventilators complete with necessary hardware, anchors, dampers, weather guards, rain caps, and equipment supports. Mount ventilators on flat level base. Install preformed filler strips at base to seal ventilator to metal roof panels.

F. Continuous Roof Ventilators: Set ventilators complete with necessary hardware, anchors, dampers, weather guards, rain caps, and equipment supports. Join sections with splice plates and end-cap skirt assemblies where required to achieve indicated length. Install preformed filler strips at base to seal ventilator to metal roof panels.

G. Louvers: Locate and place louver units level, plumb, and at indicated alignment with adjacent work.

1. Use concealed anchorages where possible. Provide brass or lead washers fitted to screws where required to protect metal surfaces and to make a weathertight connection.
2. Provide perimeter reveals and openings of uniform width for sealants and joint fillers.
3. Protect galvanized- and nonferrous-metal surfaces from corrosion or galvanic action by applying a heavy coating of corrosion-resistant paint on surfaces that will be in contact with concrete, masonry, or dissimilar metals.
4. Install concealed gaskets, flashings, joint fillers, and insulation as louver installation progresses, where weathertight louver joints are required. Comply with Section 079200 "Joint Sealants" for sealants applied during louver installation.

H. Roof Curbs: Install curbs at locations indicated on Drawings. Install flashing around bases where they meet metal roof panels.

I. Pipe Flashing: Form flashing around pipe penetration and metal roof panels. Fasten and seal to panel as recommended by manufacturer.

3.7 FIELD QUALITY CONTROL

A. Special Inspections: Director's Representative will engage a qualified special inspector to perform field quality control special inspections and to submit reports.

B. Product will be considered defective if it does not pass tests and inspections.

C. Prepare test and inspection reports.

3.8 CLEANING AND PROTECTION

A. Repair damaged galvanized coatings on galvanized items with galvanized repair paint according to ASTM A780 and manufacturer's written instructions.

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

C. Touchup Painting: After erection, promptly clean, prepare, and prime or reprime field connections, rust spots, and abraded surfaces of prime-painted structural framing, bearing plates, and accessories.

1. Clean and prepare surfaces by SSPC-SP 2, "Hand Tool Cleaning," or by SSPC-SP 3, "Power Tool Cleaning."
2. Apply a compatible primer of same type as shop primer used on adjacent surfaces.

D. Touchup Painting: Cleaning and touchup painting are specified in Section 099114 "Exterior Painting" and Section 099123 "Interior Painting."

E. Metal Panels: Remove temporary protective coverings and strippable films, if any, as metal panels are installed. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.

1. Replace metal panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 133419

SECTION 315100

REMOVAL, TRANSPORT AND DISPOSAL OF CONTAMINATED SOIL

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. The Environmental Consultant for this project is TRC Engineers, Inc. (TRC). The Owners' Engineer/Architect for this project is Architectural Resources, D.P.C. The Owners of this project are the New York State Office of General Services (NYSOGS) and the New York State Department of Transportation (NYSDOT).

B. This Project will include the excavation, handling, stockpiling, temporary on-site storage, loading, transportation, and off-site disposal of spoils generated during construction activities that will not be reused on-site at the 75 Evans Street Site, Hamburg, NY.

C. The work shall include but not be limited to the removal of the following materials:

Excavation Area	Description of Soil to be Removed (Category of waste/type of contaminant)	Depth of Soil Removal	Approximate Quantity (cubic yards and tons)
±42-feet by ±93-feet	Non-native anthropogenic soil/fill	±4.0 feet	±580 CYs (or ±930 tons)
		Total	±580 CYs (or ±930 tons)

D. Upon excavation completion, spoils volume will be determined (in cubic yards and tons), and waste characterization sampling will be completed by the Environmental Consultant. A brief description of soil boring locations and sampling scheme are provided below.

1. Three geotechnical/environmental soil borings (identified as B-1, B-2, and B-3) were advanced at the Site by the Glynn Group Engineering & Architecture, PLLC (Glynn) with environmental oversight provided by Encorus Group (Encorus). Glynn described the unconsolidated subsurface material as being similar at all three boring locations, with soil/fill material encountered from grade to approximately 4.0 feet below ground surface (ft bgs), followed by loose to dense sand to approximately 12.0 ft bgs, compact to dense granular glacial till to approximately 18.5 ft bgs, where refusal at a shale bedrock unit was noted. Glynn described the soil/fill as a black, moist unit containing cinders and slag intermixed with silty sand and gravel. Groundwater was initially identified at a depth of 13.4 ft bgs at boring B-1, 15.6 ft bgs at boring B-2, and 10.8 ft bgs at boring B-3. However, the Glynn geotechnical report estimated the depth to shallow groundwater to be 4.0 ft bgs based on their assessment of moisture content of recovered soil samples. Glynn's geotechnical report further stated that groundwater control during construction should be anticipated.
2. The Encorus *Contaminated Soil Screening Sampling and Geotechnical Report (dated December 17, 2024)* indicated that two soil samples were collected from each of the

geotechnical borings (B-1 through B-3) for laboratory analysis. However, the sample depth and/or subsurface unit(s) represented by these samples were not identified in the Report. The Environmental Consultant assumed that one soil sample was collected from the unsaturated zone (assumed to be the soil/fill unit, or from 0.0 to 4.0 ft bgs) and the other from the saturated zone (assumed to be the sand unit, or from 4.0 to 12.0 ft bgs). Encorus's report is provided in **Appendix A**.

3. Analytical results provided in the Encorus Report were summarized by the Environmental Consultant as presented in the Table 1 provided in **Appendix B**. Examination of Table 1 indicates there are only three exceedances of the Part 375 Unrestricted Use Soil Cleanup Objectives (UUSCOs), which include total arsenic (SAMPLE 1, boring B-1), total copper (SAMPLE 1, boring B-1), and total nickel (SAMPLE 3, boring B-2). The Environmental Consultant assumes that these samples are representative of the "SOIL/FILL" unit (unsaturated unit) identified in the boring logs. Due to the projected commercial end-use (versus an unrestricted end-use) of the Site and the building excavation that will be limited to the upper four feet (e.g., soil/fill unit only), the soil sample analytical results were also compared to the Part 375 Commercial Use Soil Cleanup Objectives (CUSCOs) presented in Table 1. There are no exceedances of the CUSCOs for any of the soil samples analyzed. However, due to the anthropogenic nature of the soil/fill (i.e., slag, cinders, and fill) as well as UUSCO exceedances, excess soil/fill material excavated during construction will be considered a solid waste and field screening, stockpiling, segregating, and off-site disposal of generated soil/fill spoils will be required.
4. Constituents of Potential Concern (COPCs) in on-site soil include arsenic, copper, nickel, and potentially technologically enhanced naturally occurring radiological material (TENORM) slag (see 1.8 B. of this specification).

E. The Contractor shall be aware of all conditions of the Project and is responsible for verifying quantities and locations of all Work to be performed. Failure to do so shall not relieve the Contractor of their obligation to furnish all labor and materials necessary to perform the Work.

F. All Work shall be performed in strict accordance with the Project Documents and all governing codes, rules, and regulations. Where conflicts occur between the Project Documents and applicable codes, rules, and regulations, the more stringent shall apply.

G. Working hours shall be as required and approved by the Owners. Soil excavation activities including, but not limited to, pre-work area preparation, excavation activities, stockpiling, and waste removal may need to be performed during 'off-hours' (including nights and weekends). In addition, multiple mobilizations may be required to perform the work identified in this Project. The Contractor shall coordinate and schedule all Work with the facility and Owners' representative.

H. The Contractor shall provide labor, materials, equipment, and incidentals required for the excavation, transportation, and off-site disposal of materials generated during construction activities that are deemed unsuitable for reuse.

1.2 SPECIAL JOB CONDITIONS

A. Any special job conditions are described below.

1. Excess excavated soil/fill cannot be reused onsite.
2. Groundwater control during foundation excavation may be required in consultation with the Owners and Environmental Consultant. Groundwater and/or perched water encountered during excavation work that cannot be adequately managed via field

stabilization and mixing, will require additional action. Based on the Environmental Consultant's experience, groundwater management from contaminated sites must be managed in accordance with local, state, and/or federal storm/sanitary sewer agency regulations (i.e., Erie County Sewer Authority, ECSA), and, if applicable, in consultation with the New York State Department of Environmental Conservation (NYSDEC). Typically, this will involve pumping excavation groundwater to a temporary on-site holding tank followed by treatment via filtration and granular activated carbon (GAC) prior to discharge to the local utility. Treated water is sampled and results verified to meet either NYS groundwater and/or utility discharge standards prior to sanitary sewer discharge, and a permit will be required from the utility prior to discharge.

B. 40-Hour HAZWOPER Training. Contractor personnel performing environmental activities at the Site (such as, but not limited to, equipment operators, general laborers, etc.) and who may be exposed to hazardous substances, health hazards, or safety hazards and their supervisors/managers responsible for the Site shall receive training in accordance with 29 CFR 1910.120(e) before they are permitted to engage in operations in the exclusion zone or contaminant reduction zone. This training includes an initial 40-hour Hazardous Waste Site Worker Protection Course (HAZWOPER), an 8-hour Annual Refresher Course subsequent to the initial 40-hour training, and 3 days of actual field experience under the direct supervision of a trained, experienced supervisor. Contractor will be required to present requisite certifications to the Owners' Engineer/Architect and Environmental Consultant prior to beginning any work activities.

C. Contractor shall designate a Site Safety Representative responsible for implementing environmental requirements.

D. Personal Protective Equipment (PPE). PPE will be donned when work activities may result in exposure to physical or chemical hazards beyond acceptable limits, and when such exposure can be mitigated through appropriate PPE. The selection of PPE will be based on an evaluation of the performance characteristics of the PPE relative to the requirements and limitations of the Site, the task-specific conditions and duration, and the hazards and potential hazards identified at the Site.

Equipment designed to protect the body against contact with known or suspected chemical hazards are grouped into four categories according to the degree of protection afforded. These categories, designated A through D, are consistent with United States Environmental Protection Agency (USEPA) Level of Protection designation, and include:

1. **Level A:** Should be selected when the highest level of respiratory, skin and eye protection is needed.
2. **Level B:** Should be selected when the highest level of respiratory protection is needed, but a lesser level of skin protection is required. Level B protection is the minimum level recommended on initial Site entries until the hazards have been further defined by on-site studies. Level B (or Level A) is also necessary for oxygen-deficient atmospheres.
3. **Level C:** Should be selected when the types of airborne substances are known, the concentrations have been measured and the criteria for using air-purifying respirators are met. In atmospheres where no airborne contaminants are present, Level C provides dermal protection only.
4. **Level D:** Should not be worn on any Site with elevated respiratory or skin hazards. This is generally a work uniform providing minimal protection.

It is anticipated that during site activities, anyone entering the Exclusion (Work) Zone will be wearing level D personal PPE during site activities (i.e., hard hat, safety glasses, steel toe work shoes, and high-visibility vest). Escalation of PPE due to Site conditions will be determined by Environmental Consultant field screening results and as required by the Contractor's Health and Safety Plan.

1.3 STANDARDS AND REFERENCES

The Contractor shall comply with the following codes and standards, except where more stringent requirements are shown or specified:

A. Federal Regulations:

1. 42 USC §6901 et. Seq.
2. 15 USC §2601
3. 29 CFR 1910.1200, "Hazard Communication" (OSHA)
4. 29 CFR 1926, "Construction Industry" (OSHA)
5. 29 CFR 1926 Subpart P "Excavations"
6. 29 CFR 1926.500 "Guardrails, Handrails and Covers" (OSHA)
7. 49 CFR 171-172, Transportation Standards (DOT)
8. 29 CFR 1910.146 Confined Space
9. 29 CFR 1926.21 Safety Training and Education

B. New York State Regulations:

1. Title 6 NYCRR, Parts 360, 364, Disposal and Transportation (NYSDEC)
2. Title 6 NYCRR Parts 370-374
3. Title 6 NYCRR Part 375
4. Title 6 NYCRR Parts 610-614
5. NYSDEC DER-10: Technical Guidance for Site Investigation and Remediation
6. NYSDOH Generic Community Air Monitoring Plan (see **Appendix C**)

C. Latest version of the New York State Uniform Fire Prevention and Building Code.

D. Latest version of American Society for Testing and Materials (ASTM) standards.

1.4 PERMITS AND COMPLIANCE

A. The Contractor shall assume full responsibility and liability for compliance with all applicable Federal, State, and Local laws, rules, and regulations pertaining to Work practices, protection of Workers, authorized visitors to the Site, persons, and property adjacent to the Work.

B. Obtain all required permits and notifications for removals (excavation/dewatering), on-site storage, transportation, and disposal of contaminated waste, including sanitary sewer discharge.

C. Perform contaminated soil excavation related Work in accordance with NYSDEC Division of Environmental Remediation (DER)-10 Technical Guidance for Site Investigation and

Remediation. Where more stringent requirements are specified, adhere to the more stringent requirements. See Section 1.1 E.

D. The Contractor shall comply with all applicable regulations of the OSHA in performance of the work and take all required precautions to ensure the safety and health of personnel. The Contractor has been provided with information on current Site conditions for the Contractor to prepare a Site Health and Safety Plan (HASP) for the execution of the work.

E. The Contractor shall be responsible for compliance with The New York State Uniform Fire Prevention and Building Code, or its successor during all Work at the Site.

F. Contractor shall be responsible for notification to the Environmental Consultant for the collection and sampling of wastewater (for permit compliance or disposal facility requirements). Contractor is responsible for treatment (if necessary), and disposal of generated wastewater. Wastewater disposal may be permitted for sanitary sewer discharge or taken off-site for disposal at a licensed facility.

1.5 SUBMITTALS

A. Pre-Work Submittals: Within seven (7) days prior to the pre-construction conference, the Contractor shall submit an electronic copy of the documents listed below to the Owners' Project Manager, the Owners' Engineer/Architect, and the Environmental Consultant for review and approval prior to the commencement of removal/excavation activities:

1. The Contractor shall submit a schedule, arranged in chronological order, by dates required by the construction schedule.
2. The Contractor shall prepare and submit to the Owners a Health and Safety Plan (HASP) for work associated with any potential contaminated soils at the Site, as defined in Section 1.7. This plan shall address all the activities which the Contractor will perform in fulfillment of the contract and shall comply in all aspects with OSHA regulations for solid and hazardous waste operations (29 CFR 1910.120). The Contractor shall make the HASP available to authorized personnel who require access to any contaminated area or exclusion zone. The health and safety of the Contractor's employees remain solely the responsibility of the Contractor. The Contractors HASP shall be consistent with the Environmental Consultants HASP requirements.
3. The Contractor shall perform excavation mark outs and contact Dig Safely New York (DSNY) as required by law. Contractor shall provide valid DSNY ticket numbers along with associated documentation.
4. The Contractor shall prepare and submit to the Owners a Soil/Fill Management Plan (SFMP) including re-use and disposal options prepared in accordance with Section 4.1 B. of this Specification.
    a. SFMP shall include a site plan showing stockpile locations and protection methods, soil grid, dust control plan, equipment decontamination locations, excavation methods, dewatering, wastewater storage, and traffic direction at the site for trucks.
    b. SFMP shall also include names and qualifications of Contractor environmental personnel.
5. The Contractor shall prepare and maintain all material shipment records required by applicable Federal, State, and Local laws and regulations. These records shall include but not be limited to scale tickets, bill of ladings, and manifests. The Contractor shall provide

copies of all documentation to the Owners' Project Manager, the Owners' Engineer/Architect, and the Environmental Consultant. Drafts of the following documents (as applicable) related to waste soil transport shall be submitted for prior review and approval:

a. A draft shipping document.

b. NYSDEC waste tracking document.

c. NYSDEC Notification of Fill Material Reuse form, if applicable.

d. NYSDEC Use of Predetermined Beneficial Use Determination form, if applicable.

Copies of these forms are provided in **Appendix D**.

6. Disposal facility approvals and transporter permits.
7. Transfer Facility Permit (if applicable) and letter of acknowledgement from the Transfer Facility stating they intend to accept the material.
8. Treatment Facility Permit (if applicable) and letter of acknowledgement from the Treatment Facility stating they intend to accept the material.
9. Disposal Facility Permit for material disposed of at an off-site facility (if applicable) and letter of acknowledgement from the Disposal Facility stating they intend to accept the material.
10. Copy of a valid NYSDEC Waste Transporter Permit for all other State(s) the material will travel through to reach the disposal facility.
11. Valid US DOT permit for haulers, if applicable.
12. Final disposal manifests and landfill scale receipts.
13. The geotechnical engineer (Glynn) indicated that groundwater is expected to be encountered. As such, Contractor will provide a Spills Management Plan and a Spills Kit with on-site accessibility.

B. On-Site Submittals: The Contractor shall maintain the following documentation on-site during site activities at a location approved by the Project Manager.

1. Copy of the Approved Pre-Work Submittal, as described in Section 1.5 A.
2. Health and Safety Plan (HASP) for work associated with any potential contaminated soils at the Site. This plan shall address all the activities which the Contractor will perform in fulfillment of the contract and shall comply with all aspects of applicable OSHA regulations for solid and hazardous waste operations (29 CFR 1910.120).
3. Proof of worker training in accordance with OSHA 29 CFR 1910.120 for all workers with the potential to encounter contaminated soils and hazardous materials.
4. Soil/Fill Management Plan (SFMP). See Section 4.2(B).

C. Close-Out Submittals

1. Within two (2) business days of receipt from the Owners, the Contractor shall submit copies of all receipts and other paperwork from disposal/treatment facilities which indicate the actual quantity of waste received.

2. Within 30 days of the completion of the project, the Contractor shall submit one electronic copy of the documents listed below to the Owners' Project Manager, the Owners' Engineer/Architect, and the Environmental Consultant for review and approval prior to Contractor's final payment. Once approved, the Contractor shall provide three hard copy sets of the approved close-out documents (double-sided and bound) to the Owner's Project Manager, the Owners' Engineer/Architect, and the Environmental Consultant, including one set to be distributed to the Owners.

    a. All Waste Shipment Records, Forms, and Waste Shipment Record Logs.

    b. Completed waste tracking documents, as applicable.

    c. Daily progress log.

    d. Transfer/Treatment/Disposal Site/Landfill Permits from applicable regulatory agency.

    e. Copy of NYSDEC Waste Transporter Permit and permits for any other State(s) the material traveled through to reach the disposal facility.

1.6 PRE-CONSTRUCTION MEETING

A. Prior to start of preparatory Work under this Contract, the Contractor shall attend a pre-construction meeting attended by the Owners, Facility Personnel, and Environmental Consultant.

B. Agenda for this conference shall include but not necessarily be limited to:

1. Contractor's scope of Work, Work plan, and schedule.
2. Contractor's safety and health precautions, including protective clothing, equipment, and decontamination procedures.
3. OSHA excavation and trenching requirements if applicable ($\geq$ 4 feet and $\geq$ 5 feet in depth, respectively)
4. Environmental Consultant's duties, functions, and authority.
5. Contractor's Work procedures, including:
    a. Methods of job site preparation and removal methods.
    b. Contacting Dig Safely New York for Utility Clearance (if necessary).
    c. Equipment and process of initial clearing of vegetation (if necessary).
    d. Process of clearing the construction areas, excavation pathways for subgrade materials, stockpiling soil, separating waste from earthen materials, etc.
    e. Truck loading procedure near active roadway/traffic controls/safety.
    f. Disposal procedures.
    g. Cleanup procedures.
    h. Emergency procedures.
6. Contractor's required pre-work and on-site submittals, and documentation.
7. Contractor's plan for 24-hour Project security both for prevention of theft and for barring entry of unauthorized personnel into work areas.

8. Waste disposal requirements and procedures.

C. In conjunction with the meeting, the Contractor shall accompany the Owners and Environmental Consultant on a pre-construction walk-through documenting work to be completed at the Site.

1.7 DEFINITIONS

A. Qualified Environmental Professional (per NYSDEC DER-10 Section 1.3(b)(49): means a person, including a firm headed by such person, who possesses sufficient specific education, training, and experience necessary to exercise professional judgment to develop opinions and conclusions regarding the presence of releases or threatened releases to the surface or subsurface of a site or off-site areas, sufficient to meet the objectives and performance factors for the areas of practice identified by this guidance. Such a person must:

1. Hold a current professional engineer's or a professional geologist's license or registration and have the equivalent of three (3) years of full-time relevant experience in site investigation and remediation of the type detailed in NYSDEC DER-10; or

2. Be a site remediation professional licensed or certified by the federal government, a state, or a recognized accrediting agency, to perform investigation or remediation tasks identified by NYSDEC DER-10 and have the equivalent of three (3) years of full-time relevant experience. Examples of such license or certificate include the following titles:

   a. Licensed Site Professional, by the State of Massachusetts;

   b. Licensed Environmental Professional, by the State of Connecticut;

   c. Qualified Environmental Professional by the Institute of Professional Environmental Practice; or

   d. Certified Hazardous Materials Manager, by the Institute of Hazardous Materials Management.

B. Wherever the word “excavating”, “excavate”, “excavation”, “carried down”, or “remove” are used, they shall be understood to include the removal of all existing work, including brick work, rubble work, former foundation remnants, rubbish, and earth as well as rock, boulders, steel grillages, concrete and all other materials and obstructions encountered. They shall also be understood to include all sheet piling, bracing, pumping, operations, and items needed for the proper execution of the work.

C. Rough grading consists of cutting or filling to the elevation established on the Contract Drawings.

D. Material Definitions

1. Non-Hazardous Excavated Contaminated Soil: Soil that may include or contain mixtures of the following: soil (including, but not limited to, natural undisturbed soil), Clean (below SCOs), and Contaminated (above SCOs). This material includes material that will exceed 6 NYCRR 375-6 Restricted Residential Use Soil Cleanup Objectives and NYSDEC CP-51: Soil Cleanup Guidance Supplemental Soil Cleanup Objectives.

2. Non-Hazardous Excavated Soil (Clean Fill): Soil that is at or below the SCOs for unrestricted use. This material includes material defined in Title 6 NYCRR 375-6.3 and does not exceed NYSDEC CP-51: Soil Cleanup Guidance Supplemental Soil Cleanup Objectives

3. Petroleum-Contaminated Soil: Material (soil, concrete, sediment, UST contents, fill, debris, etc.) that meets the NYSDEC DER-10 and Part 375 definition of petroleum-contaminated material from known source areas. Petroleum-contaminated material shall be evidenced by the following observations and be from a known source area: producing higher than background responses on a portable vapor meter such as a photoionization detector (PID) or flame ionization detector (FID), petroleum-like odor, visual impacts (e.g., staining or discoloration), proximity to known releases from existing or historic petroleum storage tanks or systems, and exceed the soil cleanup levels for gasoline and/or fuel oil contaminated soil provided in the NYSDEC CP-51: Soil Cleanup Guidance. The determination as to whether the excavated material is petroleum-contaminated or is non-petroleum contaminated material will be made by analytical testing of representative material samples. The Environmental Consultant shall perform all required sample collection and analytical testing. The Environmental Consultant shall make the final determination as to whether (or not) the material is petroleum-contaminated and the appropriate disposal.

4. Hazardous Waste: Material meeting the definition of a Resource Conservation and Recovery Act (RCRA) hazardous waste as defined in 40 CFR Part 261, New York State ECL Section 27-09 or 6 NYCRR Part 371.

1.8 PROJECT CONDITIONS

A. Preliminary waste characterization sampling at the Site was completed by Encorus Group with results provided in their Contaminated Soil Screening Sampling and Geotechnical Report (dated December 17, 2024) (see Appendices A). Analytical results from the Encorus Report were summarized by the Environmental Consultant as presented in **Appendix B**. Examination of this data indicates there are only three exceedances of the Part 375 Unrestricted Use Soil Cleanup Objectives (UUSCOs), which include total arsenic (SAMPLE 1, boring B-1), total copper (SAMPLE 1, boring B-1), and total nickel (SAMPLE 3, boring B-2). The Environmental Consultant assumes that these samples are representative of the "SOIL/FILL" unit (unsaturated unit) identified in the boring logs. Because the planned new building (and development) will be a commercial end-use (versus unrestricted residential use) and the building excavation is expected be limited to the upper four feet (e.g., soil/fill unit only), the soil sample analytical results were also compared to the Part 375 Commercial Use Soil Cleanup Objectives (CUSCOs) in **Appendix B**. There are no exceedances of the CUSCOs for any of the soil samples analyzed. However, due to the anthropogenic nature of the soil/fill (i.e., slag, cinders, and fill) as well as UUSCO exceedances, excess soil/fill material excavated during construction is considered a solid waste. As such, the Environmental Consultant will perform field screening and waste characterization sampling, and the Contractor will perform stockpiling, segregating, and off-site disposal of generated soil/fill spoils. The Environmental Consultant will also oversee Contractor activities.

B. Slag was also identified by Encorus Group in each boring at the Site. Depending on the source of the slag, it has the potential to be technologically enhanced naturally occurring radiological material (TENORM). In general, TENORM emits low-level radiological activity and contains radionuclides that are present naturally in rocks, soils, water, and minerals and that have become concentrated and/or exposed to the accessible environment due to human activities such as manufacturing, water treatment, or mining operations. Although the source is unknown, it is possible that the slag material identified at the Site is a byproduct of former iron and steel manufacturing operations conducted at nearby facilities in Erie County (i.e., Former Bethlehem Steel, Republic Steel, Donner Hanna, etc.) which processed and co-processed NORM-containing

ores and mined materials. The primary TENORM isotope associated with metal producing slag is Radium-226. Radium (chemical symbol Ra) is a naturally occurring radioactive metal with the most common isotopes being Ra-226, Ra-224, and Ra-228. Radium-226, Ra-228 and their respective progeny, emit alpha and beta particles as well as gamma radiation when undergoing radioactive decay. TENORM assessment, laboratory analysis, and field screening will be performed by the Environmental Consultant.

C. To identify the location(s) of potential TENORM contaminated slag material prior to planned intrusive activities in support of storage building construction, the Environmental Consultant's radiological support subcontractor will perform a radiological gamma survey of accessible surface area across the Site utilizing a Ludlum 2221 rate meter (with a 44-10 detector) in general accordance with NYSDEC DMM-5, *Management of Soils Contaminated with TENORM*. This survey report will be used as a guide to locate TENORM slag during construction excavation activities.

D. Any additional waste characterization sampling required to complete the excavation and disposal of material generated during the project will be directed by the Contractor and, upon consultation and concurrence with the Architect/Owners, will be performed by the Environmental Consultant.

E. The Contractor, by careful examination, shall inform themselves as to the nature and location of the work; the conformation of the ground; the nature of the subsurface conditions; the locations of the groundwater table; the character, quality and quantity of the materials to be encountered; the character of the equipment and facilities needed preliminary to and during the execution of the work; and all other matters which can in any way affect the work.

F. The Contractor shall have visited the site and familiarized themselves with the existing conditions of adjoining properties, utilities, and buildings.

G. The Contractor shall investigate the conditions of public thoroughfares and roads as to availability, clearances, loads, limits, restrictions, and other limitations affecting transportation to, ingress and egress of the site of the work. The Contractor shall conform to all Federal, State and Local regulations regarding the transportation of materials to and from and at the job site and shall secure in advance such permits as may be required.

H. Existing Utilities: The Contractor shall locate existing underground utilities in and beyond the areas of work. This shall include, at a minimum, notification to Dig Safely New York (DSNY) as required by law. The Contractor shall mark out the project areas and allot three business days for the ticket request to be completed; such off-set time shall be included in the proposed schedule. The DSNY ticket number shall be recorded for inclusion in project record documentation. If utilities are indicated to remain in place, provide adequate means of support and protection during the work.

1. Should uncharted, or incorrectly charted, piping, or other utilities be encountered during excavation, immediately cease excavation activities and consult with the utility owner for directions. Cooperate with Owners and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility owner or compensate repair of same at Contractor's cost.

2. Do not interrupt existing utilities serving facilities occupied by Owners or others, during occupied hours, except when permitted in writing by the Construction Manager and then only after acceptable temporary utility services have been provided. Provide minimum of 48-hour notice to the Construction Manager and receive written notice to proceed before interrupting any utility.

I. The Contractor shall examine drawings to determine sequence of operations, and relation to work of other trades. Start of work will signify acceptance of field conditions and will acknowledge coordination with other trades.

J. The Contractor shall comply with the Work Plan and associated documentation in the Approved Pre-Work Submittal, all Federal, State and Local environmental regulations, and health and safety regulations, including but not limited to OSHA.

1.9 ENVIRONMENTAL CONTROLS

A. Contractor shall prevent migration of contaminated soil, dust, and slag materials beyond the limits of disturbance.

B. Contractor shall implement dust suppression measures throughout excavation, loading, transport, and stockpile operations.

C. Contractor shall cover stockpiles at the end of each workday and during inactive periods.

D. Contractor shall prevent stormwater contact with stockpiled materials.

1.10 PROTECTION

A. The work shall be executed so that no damage or injury will occur to the existing public and adjoining or adjacent structures, streets, paving, sewers, gas, water, electric or any other pipes. Should any damage or injury be caused by the Contractor, or anyone in the Contractor's employ, or by the work under this Contract occur, the Contractor shall repair such damage and shall assume all responsibility for such injury and costs.

B. The above shall also include the protection of all existing utilities (including but not limited to sewers, water lines, electrical lines, and telecommunication lines) to remain in use within and adjacent to the area affected by the work of this project.

C. Monuments, benchmarks, and other reference features on streets bounding this project shall be protected. Should these be disturbed in any manner, the Contractor shall have them replaced.

D. Excavation sides of any pits within the site and adjacent structure foundations shall be protected by means of adequate bracing, shoring, and anchoring at all times in accordance with applicable OSHA regulations. No site excavation shall proceed until adequate support for excavation sides is provided. The Contractor is solely responsible for the stability, safety, and protection of excavation sides.

E. The Contractor shall provide barricades, warning lights, and barriers to prevent accidents, and to prevent all hazards to protect the public and property at all times, including Saturdays, Sundays, and Holidays.

F. It is the Contractor's responsibility to ensure that contaminated materials will not be spilled, placed, or otherwise discharged into areas other than those specified in the Contract Documents. Any unauthorized placement, spill, or discharge of contaminated material by the Contractor will be completely and properly removed by the Contractor at their own expense.

G. It is the Contractor's responsibility to ensure that adequate erosion control and stockpile protection measures are put in place and maintained at the Site.

H. Any unauthorized placement, spill, or discharge of contaminated material by the Contractor must be reported immediately to the Owners' Project Manager, the Owners' Engineer/Architect, and the Environmental Consultant.

I. All costs associated with repairing any damage will be the Contractor's sole responsibility, and such repairs will be made to the satisfaction of the respective Owners.

1.11 ERRORS IN DEPTH

A. In the event that any part of the excavation is carried, through error, beyond the depth and the dimensions indicated on the drawings or called for in the specifications, then the Contractor, at his own expense, shall furnish and install certified clean fill, gravel, stone, or structural concrete with which to backfill to the required level at all locations, subject to approval of the Owners and Geotechnical Engineer.

1.12 SUBSURFACE STRUCTURES AND UTILITIES

A. The Contractor shall become acquainted with the existence and location of all surface and subsurface structures and utilities within the project area and beneath the surrounding streets. The Contractor shall not damage any of those utilities that are to remain and shall leave them accessible and make the necessary provision by sheeting, hanging, supporting or other means necessary to obtain this result, subject to the approval of the New York City Building Department (NYC only), the New York State Department of Transportation, and the utility companies involved.

1.13 PROJECT SUPERVISOR

A. The Contractor shall designate a full-time Project Supervisor who shall meet the following qualifications:

1. If excavated soils are determined by sample analysis to be contaminated, the Project Supervisor shall be an OSHA competent person for excavation. The OSHA Construction Standard defines a competent person as someone who is: capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.
2. The Project Supervisor shall have a minimum of one year’s experience as a supervisor.
3. The Project Supervisor must be able to read and write English fluently, as well as communicate in the primary language of the Workers.

B. If the Project Supervisor is not on-site at any time whatsoever, all Work shall be stopped. The Project Supervisor shall remain on-site until the Project is complete. The Project Supervisor cannot be removed from the Project without the written consent of the Owners’ Project Manager, the Owners’ Engineer/Architect, and the Environmental Consultant. The Project Supervisor shall be removed from the Project if requested by the Owners.

C. The Project Supervisor shall maintain a bound Daily Project Log that includes a Waste Shipment Record Log included in **Appendix D**.

D. The Project Supervisor shall be responsible for the performance of the Work and shall represent the Contractor in all respects at the Project site. The Supervisor shall be the Contractor’s primary point of contact for the Environmental Consultant.

E. As required by applicable regulations, prior to assignment of work, instruct each employee regarding the hazards of the generated waste, safety and health precautions, and the use and requirements of protective clothing and equipment, as well as the Contractor’s HASP.

PART 2 - EXECUTION

2.1 PREPARATION OF PROJECT SITE

A. Obtain all necessary permits to perform the work from the appropriate authorities and agencies prior to start of such work. Obey all applicable Federal, State, and Local work safety rules and regulations. Ensure DSNY markings indicative of utilities are maintained and visible in areas not impacted by the work.

B. Install all necessary protective equipment and structures such as fences, signs, scaffolding, etc. prior to start of work.

C. Remove all existing structures, utilities, and pavement in accordance with the Contract Documents.

D. Protect all utility lines, which are not to be disturbed or abandoned. Contractor shall be solely responsible for any damage to utilities that may occur.

E. Protective Clothing in accordance with generally accepted construction practices as well as the Contractor's HASP.

1. Provide personnel utilized during the Project with disposable protective whole-body clothing, head coverings, and foot coverings. Provide appropriate disposable gloves suitable to protect hands and prevent skin contact.
2. Eye protection and hard hats shall be provided and made available for all personnel entering any Work Area.
3. Authorized visitors shall be provided with suitable protective clothing, headgear, eye protection, and footwear whenever they enter the Area, if necessary.
4. Provide ladders as required by the Environmental Consultant for the purpose of performing required inspections.

2.2 DAILY PROJECT LOG

A. Provide a Daily Project Log. The log shall contain on the title page the NYSOGS Project name and number; the name, address and phone number of the Owners; the name, address and phone number of the Environmental Consultant; the name, address and phone number of the Contractor; and emergency numbers including, but not limited to, local Fire/Rescue department. The log shall also include the DSNY Ticket number along with a summary of the utilities in the vicinity of the work.

B. All entries into the log shall be made in non-washable, permanent ink and such pen shall be strung to or otherwise attached to the log to prevent removal from the log-in area. Under no circumstances shall pencil entries be permitted.

C. The Project Supervisor shall document all Work performed daily and note all inspections.

2.3 GENERAL EXCAVATION

A. General

1. Contractor shall perform all excavation required to complete the Work as shown and specified. All material excavated shall be non-classified. It shall include all materials such as but not limited to earth, sand, clay, gravel, hardpan, boulders, organic materials, rock, miscellaneous fill, and debris.
2. Excavations shall be open type, sheeted, shored, and braced or sloped where necessary to prevent injury to workers and to new and existing structures or pipelines.

3. All excavations shall be made in dry material. Excavations shall be conducted in a manner that minimizes dust generation and cross-contamination.
4. Excavated material shall be placed on, and be covered with adequately ballasted, polyethylene tarps. Contractor shall be responsible for maintaining the integrity of the polyethylene tarp cover.
5. All equipment shall be decontaminated and free from debris, caked soil, contamination, and any other foreign materials prior to mobilization to the site. Equipment utilized during the excavation of contaminated materials shall be decontaminated in accordance with project decontamination requirements.
6. The bottom of excavations shall be leveled off and graded to receive foundations, slabs, pits, trenches, and grade beams.
7. Should bedrock be encountered prior to excavation completion, the Owners' Project Manager, Owners' Architect/Engineer, and Environmental Consultant will be notified.
8. All excavation work must also adhere to the Construction Health and Safety Plan.

PART 3 - HANDLING AND MANAGEMENT OF CONTAMINATED MATERIALS

3.1 GENERAL INSTRUCTIONS

A. This Section is a description of responsibilities for proper handling and management of contaminated materials on Site. The requirements of the Contract Documents, including Scope of Work, will apply to the Work in this Section.

B. The Contractor will be required to manage environmentally contaminated materials at the Site in compliance with all Federal, State and Local regulations. Contractor's Work will include handling these contaminated materials.

1. For the purpose of this Specification, contaminant levels shall be compared to NYSDEC UUSCOs and CUSCOs (NYSDEC Regulation 6 NYCRR Subpart 375-6) and the approved disposal facility acceptance criteria.

C. The Environmental Consultant shall perform upwind and downwind ambient air monitoring in general accordance with NYSDOH's Generic Community Air Monitoring Plan (CAMP), as required by the Owners' Project Management, to manage real-time monitoring for respirable organic vapor and particulates at the upwind and downwind perimeters of the work zone. The Environmental Consultant will also utilize a handheld photoionization detector (PID) within the work zone to monitor ambient air within the breathing zone. CAMP organic vapor and particulate monitoring and work zone PID screening must be employed during the handling of waste or contaminated soil, during all intrusive activities, and especially when activities may generate fugitive dust from exposed waste or contaminated soil. At a minimum, Contractor shall comply with the NYSDOH Generic CAMP (see **Appendix C**).

D. Engineering Inspections and Observations:

1. The Owners' Engineer/Architect and Environmental Consultant will inspect the movement and handling of all contaminated materials. Contractor will notify Construction Manager, Owners' Engineer/Architect, and Environmental Consultant a minimum of 72 hours prior to start of Work involving handling of contaminated materials.
2. Owners' Engineer/Architect and/or Environmental Consultant will observe the contaminated material removal procedures and methods and will notify the Contractor, Construction Manager, and Owners of any part of the Work of this Section not in compliance with these specifications. Such notification will not relieve the Contractor from

the responsibility of properly implementing, performing, and maintaining contaminated material removal as specified herein and as required by the Work.

3. Contractor will cooperate with the Construction Manager, Owners' Engineer/Architect, and Environmental Consultant to facilitate the progress of the Work.

4. Contractor will provide at least one supervisory person who must be present at all times during execution of the Work and who is thoroughly familiar with the type of work being performed and its best methods for completion. This person will have the authority to act on behalf of Contractor.

3.2 CONTAMINATED MATERIAL MANAGEMENT (ON-SITE)

A. Stockpiling. Contractor will place all excavated spoils on polyethylene tarps at a designated location by Owner's Engineer/Architect in consultation with Environmental Consultant.

B. Stockpile Cover. Upon the completion of each day, completion of excavation activities, and/or prior to load-out and off-site disposal, Contractor shall cover the stockpile with polyethylene tarp with adequate ballast to prevent potential erosion and sediment laden runoff. Stormwater and sediment controls related to the stockpile are also the responsibility of the Contractor. The Contractor shall be responsible for maintaining and managing the polyethylene cover, ballast, and sediment/erosion controls.

3.3 ADDITIONAL PROVISIONS

A. Truck Wash Station. Due to the nature of the project activities, a truck washing station is not deemed necessary. However, should the Owners' Engineer/Architect and/or Environmental Consultant determine that a truck washing station is necessary, a design of the planned station will be submitted to the Owners' Engineer/Architect for review and approval and to be constructed by the Contractor. At a minimum, the truck washing station must be constructed on an imperious surface (i.e., asphalt and concrete) with a secondary containment adequate to contain wash and rinse water and allow collected wash water to be containerized appropriately for waste characterization sampling and analysis by the Environmental Consultant. Laboratory analysis will be reviewed by the Environmental Consultant to determine disposal options. Off-site disposal will be the responsibility of the Contractor, should off-site disposal be required.

B. A truck wash, if deemed necessary, will be operated on-site. The Contractor's qualified environmental professional will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the site until the excavation activities are complete.

PART 4 - SOIL CHARACTERIZATION, MANAGEMENT, AND DISPOSAL

4.1 SOIL CHARACTERIZATION

A. Soil Characterization

1. The Contractor, in consultation with the Environmental Consultant, shall confirm with the disposal facility that a sufficient quantity of soil samples was obtained to fully characterize the site soils scheduled for disposal prior to removing any soils from the site. The Contractor shall notify the Environmental Consultant on-site representative if additional waste characterization samples are needed to satisfy targeted disposal facility requirements. Any additional samples that are required will be collected by the Environmental Consultant. The results of all waste characterization analyses shall be submitted to the Owners prior to removal of soils from Site.

2. In-situ soil characterization should be completed in accordance with the sampling procedures in the Soil/Fill Management Plan (SFMP) (see Section 4.2 B. of this

specification). Sampling should be biased to soil that exhibits staining, free product and/or elevated photoionization detector (PID) readings.

3. Soils proposed for reuse on-Site will be managed as directed by the Environmental Consultant.

B. Uncontaminated, non-hazardous soil (i.e., soil meeting NYSDEC's Unrestricted Use Soil Cleanup Objectives cited in 6 NYCRR Part 375-6.3) is not subject to approval from NYSDEC's Division of Hazardous Materials Management. If the material is stockpiled on-Site, it must follow the stockpiling procedures set forth in the SFMP (see Section 4.2 B. of this specification).

C. The Contractor shall protect and maintain excavation areas until completion of the work and acceptance by the Owners' Engineer/Architect and Environmental Consultant.

4.2 TRANSPORTATION AND DISPOSAL OF EXCAVATED MATERIAL

A. Description of Work

1. Non-Hazardous Excavated Material, as defined in Section 1.7, that has been excavated as part of the construction project and slated for disposal shall be transported to an off-site disposal facility meeting the requirements of 6 NYCRR Part 360, or equivalent out-of-state facility, approved by the appropriate regulatory agency of that State with a permit to receive non-hazardous excavated material. This facility shall be identified and approved in the Pre-Work Submittal referenced in Section 1.5 A. prior to the start of work.

2. Clean Fill for reuse, as defined by NYSDEC under 6 NYRR Part 360 Article 12 Beneficial Use as material that is not considered Solid Waste when a Pre-determined Beneficial Use or a Case-specific Beneficial Use is determined for the excavated material.

3. All petroleum-contaminated material, as defined in 6 NYCRR Part 360 Article 1.5, if discovered, shall be transported to an off-site disposal facility permitted to receive petroleum-contaminated material from known source areas. All hazardous waste, as defined in Article 1.5, if discovered, shall be transported to an off-site disposal facility meeting the requirements of 40 CFR Part 265 and 6 NYCRR Part 373, or equivalent out-of-state facility, approved by the appropriate regulatory agency of that State with a permit to receive hazardous waste. This facility shall be identified and approved in the Pre-Work Submittal referenced in Section 1.5 A. prior to the start of work.

4. Reuse of excavated fill or soil is not planned as part of this project. If reuse is considered, excavated soil/fill will only be reused if certain conditions are met, and reuse will be coordinated in advance with the Environmental Consultant. Excavated material may be acceptable for reuse if it is not grossly-contaminated (including soil with non-aqueous phase liquid (NAPL)) and it is sampled and meets the lower of the Restricted Use Restricted-Residential Use (RURR) Soil Cleanup Objectives (SCO) and Protection of Groundwater (PGW) SCOs. Excavated material that cannot be reused will be appropriately characterized and transported for off-site disposal at a facility with a permit to accept the waste upon consultation and concurrence with the Environmental Consultant.

5. The Contractor must inform the Owners' Engineer/Architect, and the Environmental Consultant a minimum of one week prior to the start of excavation activities. The Environmental Consultant must supervise excavation and disposal activities.

B. Soil/Fill Management Plan (SFMP): A Soil/Fill Management Plan (SFMP) shall be prepared by the Contractor and approved by the Environmental Consultant for non-hazardous excavated material a minimum of 7 days prior to the start of excavation. A separate Material Disposal Plan for any additional categories of material (petroleum-contaminated or hazardous), as defined in Section 1.7 C. 3. and 1.7 C. 4., if encountered during excavation, shall be prepared by the Contractor and approved by the Environmental Consultant prior to removing the material off-

site. Soil may be re-used on-site in accordance with NYSDEC Beneficial Use Determination (BUD) regulation. There are twenty-eight predetermined BUDs listed in 6 NYCRR Part 360.12(c). Refer to Section 1.5 for submittal requirements. In the Soil/Fill Management Plan (SFMP), the Contractor shall, at a minimum:

1. Indicate how buried utilities (e.g., electric, gas, water, sewers, telephone, etc.) will be located and provide copies of the resulting information to the Owners.
2. Provide a to-scale figure indicating the excavation areas, the estimated depths of excavation, and estimated quantities of excavated material.
3. Provide a listing, including company name, name of Owners contact, phone number, and address of facility, of the off-site disposal facility(ies) meeting the requirements listed in Item A above, for each specific material to be disposed and a copy of each facility's permit (NYSDEC or equivalent out of state).
4. Provide a listing, including company contact name, phone number, and address, of proposed waste haulers. Provide a copy of the valid 6 NYCRR 364 Waste Transporter Permit for each proposed waste hauler.
5. Provide a certification from the proposed waste disposal facility(ies) that material from the site is acceptable for disposal. This letter must be on the disposal facility letterhead and must be received prior to removal of excavation material from the site.
6. Provide a plan for re-use of uncontaminated soil on-site, dependent upon the appropriate SCO determination, prior to excavation.

C. All excess material, including earth, rock, and fill, shall be removed from site and legally disposed of by the Contractor.

D. All lumber, forms, and metal work shall be removed immediately after completion of local areas. The Contractor shall be responsible for removal of all debris produced by work to this section from the site.

E. Sidewalk and streets adjoining the property shall be broom cleaned and free of debris, rubbish, trash, and obstructions of any kind caused by the work of this Section by the Contractor.

F. The Contractor must confirm characterizing for disposal has been performed on all material prior to removing material from the Site. The Environmental Consultant will collect additional waste characterization samples, if needed, to satisfy targeted disposal facility requirements. The results of all waste characterization analyses shall be submitted to the Owners prior to removal of waste from the Site.

G. The Contractor shall be responsible for handling and transporting contaminated materials removed from the Site using permitted haulers (e.g., 9A) to a NYSDEC-permitted disposal/treatment facility. Materials removed from the Site shall only be transported to facilities which have received prior approval of the Owners, and which have provided written approvals indicating they are permitted to accept such materials.

H. No materials shall be added to or removed from transport vehicles between their time of departure from the Site and their time of arrival at the approved facility for their disposal.

I. The Contractor shall use only properly permitted Owners-approved waste transporters. All vehicles and drivers shall be permitted and licensed in accordance with all applicable Federal, State and Local laws and regulations including the laws and regulations of governing agencies which have jurisdiction over areas through which the waste will be transported.

J. Vehicles shall be designed, equipped, operated, and maintained to prevent leakage, spillage, or airborne emissions of waste during transport. Appropriate controls shall be used to contain odors during loading and shipping of waste. Only safe, suitable, and well-maintained vehicles, which

are properly labeled/placarded, staffed, permitted, and registered to perform the required transportation services shall be used. All vehicles shall be decontaminated as necessary, including truck tires and undercarriages, prior to leaving the Site. The Contractor shall be responsible for supplying all labor, materials, equipment and supplies for decontaminating the vehicles used and shall be responsible for the off-site disposal of wastes resulting from any decontamination.

K. Certified weight scale tickets showing the weight of the vehicle at the time of arrival and departure from the disposal facility shall be provided for all waste material transported off-site. The weight tickets shall be signed and dated by a representative of the Contractor certifying the accuracy of all measurements, the date and time of arrival and departure of each vehicle, the disposal location, and the vehicle identification number.

L. The Contractor shall continuously monitor the regulatory compliance status of all waste transporters and disposal facilities used and proposed for use. If, at any time, the Contractor becomes aware of a potential or actual change in the regulatory compliance status of any waste transporters or disposal facilities used or proposed for use, the Contractor shall immediately notify the Owners' Engineer/Architect, and the Environmental Consultant of such potential or actual change and, in consultation with the Owners, make arrangements to divert waste to alternate approved transporters and disposal facilities.

M. The Contractor shall complete all required manifest forms and bills of lading as required by applicable laws and regulations for transportation and disposal of materials off-site. The Contractor shall provide completed copies of all required manifests and bills of lading to the Owners and Environmental Consultant along with all requested backup documentation. The Environmental Consultant shall sign manifests and bills of lading as the designated agent for the Owners via third part authorization. The Contractor shall be responsible for assuring that all notifications, labeling, documentation, sampling, analysis, transportation and disposal requirements of the disposal facility, and Federal, State and Local governments are complied with and properly documented.

N. The Owners and Environmental Consultant shall approve the Contractor's designated waste hauler and off-site disposal location.

O. The Contractor shall give 24-hour notification prior to removing any waste from the site. Waste shall be removed from the site only during normal working hours unless otherwise specified. No waste may be taken from the site unless the Contractor and Environmental Consultant are present and the Environmental Consultant authorizes the release of the waste as described herein.

P. The Environmental Consultant shall verify the landfill to be used for waste disposal with the waste transporter (driver) and Contractor prior to the waste storage trailer/dumpster leaving the site. The Environmental Consultant shall confirm the waste transporter firm and landfill are listed on the regulatory notifications for the Project and the waste transport vehicle license number is listed on the current NYSDEC Waste Transporter permit.

Q. Payment for disposal of contaminated soils will not be made until a signed copy of all required manifests and bills of lading from the treatment or disposal facility certifying the volume (in US tons) of contaminated soils delivered is returned for each load removed from the site. This original manifest and bill of lading documentation as well as the waste disposal log originals must be provided to the Owners and Environmental Consultant, and appropriate state if applicable.

PART 5 - SITE RESTORATION

A. Following completion of excavation activities, restore disturbed areas in accordance with project requirements.

B. Remove temporary environmental controls and stockpile areas.

C. Dispose of contaminated control materials in accordance with applicable regulations.

END OF SECTION 315100

APPENDIX A

Contaminated Soil Screening Sampling and
Geotechnical Report (dated December 17, 2024)
Prepared by Encorus Group

APPENDIX B

Table 1: Investigation Soil/Fill Sample Results

APPENDIX C

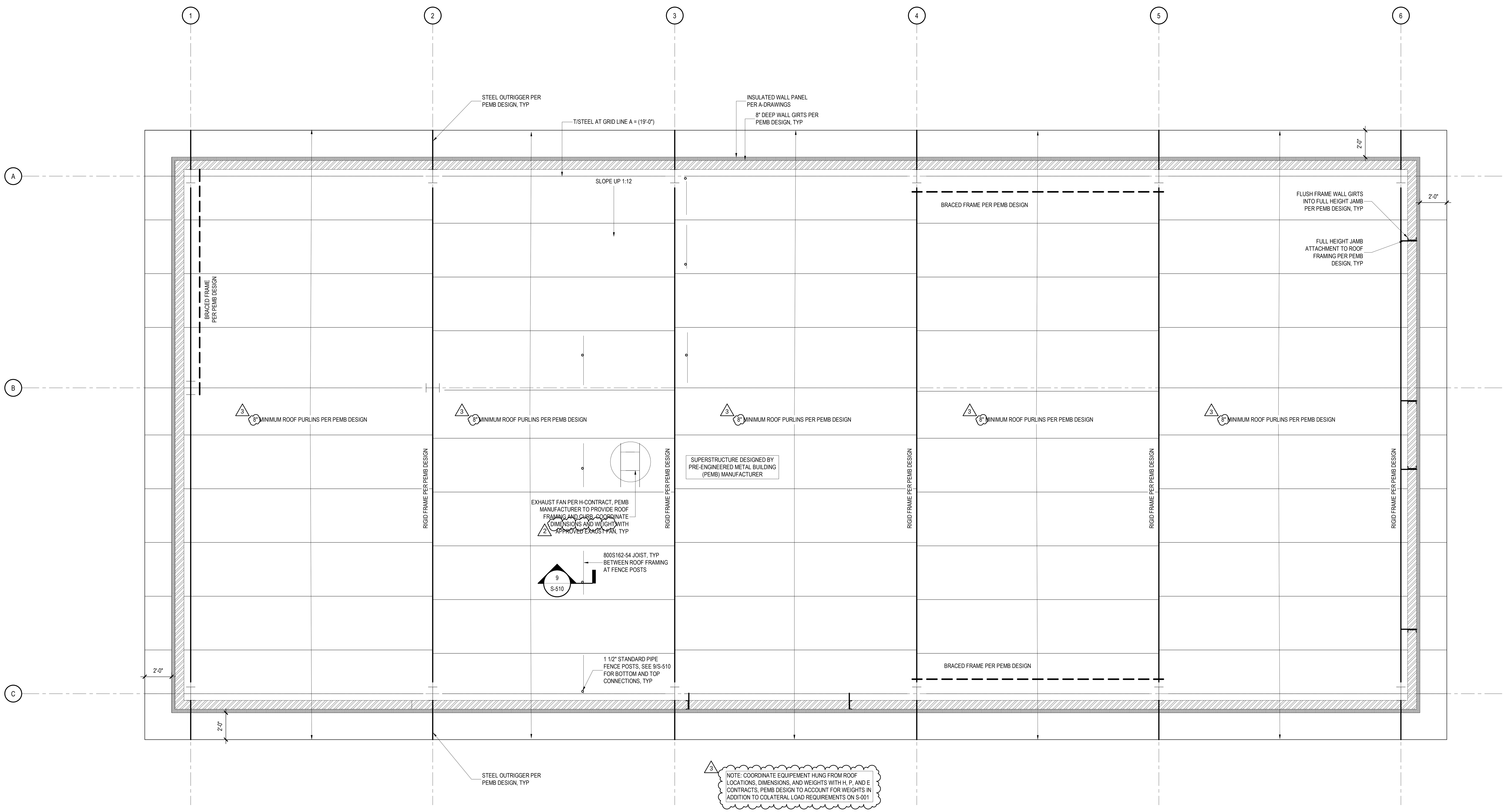
NYSDOH

Generic Community Air Monitoring Plan

(CAMP)

APPENDIX D

Soil Transport Forms



ROOF FRAMING PLAN NOTES

1. PROJECT REFERENCE ELEVATION = 0'-0" AT TOP OF FIRST FLOOR SLAB.
2. ELEVATIONS OF MEMBERS NOTED THUS +/-( ) ON THIS PLAN ARE ABOVE OR BELOW THE REFERENCE ELEVATION IN NOTE 1.
3. SEE PLAN FOR FLOOR DECK / SLAB REQUIREMENTS.
4. COORDINATE FLOOR DECK / SLAB OPENING QUANTITY, SIZES, AND LOCATIONS WITH MEP AND A-SERIES DWGS, AND WITH APPROVED SHOP DRAWINGS FOR ALL TRADES.
5. SEE NOTE ON S-001 FOR ADDITIONAL REQUIREMENTS.

REVISED DRAWING 6/17/2026

1 ROOF FRAMING PLAN

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

PLAN NORTH

NEW YORK STATE OF OPPORTUNITY. Office of General Services

DESIGN & CONSTRUCTION

CONSULTANT

CERTIFICATE OF AUTHORIZATION No.: 0022677

SPRING LINE DESIGN
ARCHITECTURE + ENGINEERING

Architectural Resources

WARNING:

THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS 'A' MISDEMEANOR.

STATE OF NEW YORK · CHRISTOPHER D. SNYDER · LICENSED PROFESSIONAL ENGINEER

REGISTRATION EXPIRES: 11/30/2028

WE HEREBY AFFIRM THAT TO THE BEST OF OUR KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE AND THE 2020 NEW YORK STATE UNIFORM BUILDING CODE.

CONTRACT: CONSTRUCTION

TITLE: **PROVIDE STORAGE BUILDING DOT REGION 5, ERIE COUNTY**

LOCATION: 75 EVANS STREET HAMBURG, NY 14075-6103

CLIENT: NEW YORK STATE DEPARTMENT OF TRANSPORTATION

MARK	DATE	DESCRIPTION
3	06/17/2026	ADDENDUM 3
	02/04/2026	BID DOCUMENTS

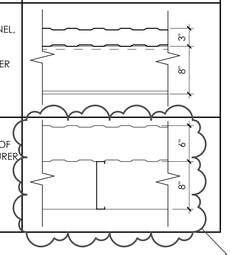
PROJECT NUMBER:	47510 - C
DESIGNED BY:	CDS
DRAWN BY:	JPS
FIELD CHECK:	
APPROVED:	

SHEET TITLE: ROOF FRAMING PLAN

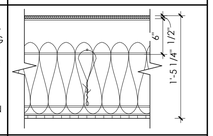
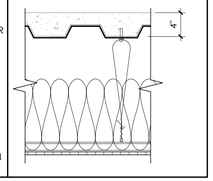
DRAWING NUMBER: S-103

SHEET 17 OF 56

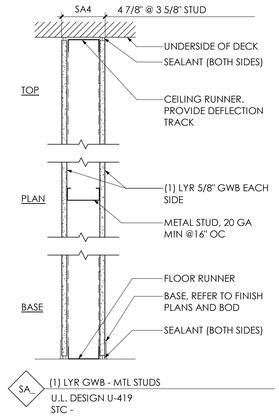
EXTERIOR ASSEMBLIES

TYPE	MARK	R-VALUE	DESCRIPTION	ASSEMBLY
WALL	W1	26.2	EXTERIOR • 3 INCH INSULATED METAL PANEL, BY PEMB MANUFACTURER • 8 INCH HORIZONTAL WALL Z-GIRT, BY PEMB MANUFACTURER INTERIOR	
ROOF	R1	3 / 52.5 / 3	EXTERIOR • 6 INCH INSULATED METAL ROOF PANEL BY PEMB MANUFACTURER • 8 INCH LIGHT GUAGE METAL PURLIN, BY PEMB MANUFACTURER INTERIOR	

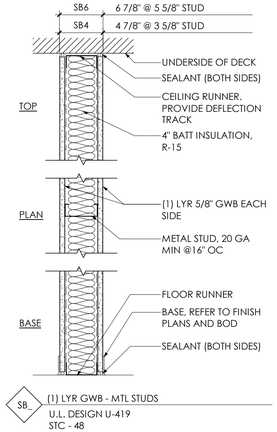
INTERIOR ASSEMBLIES

TYPE	MARK	R-VALUE	DESCRIPTION	ASSEMBLY
CEILING	C1	38	ABOVE • 1/2 INCH PHYWOOD SHEATHING • 6 INCH COLD FORMED FRAMING AT 24 INCHES O.C. • 2 SLACK #12 SAFETY WIRES AT 24 INCHES O.C., BOTH DIRECTIONS • 12 INCH BATT INSULATION R-38 • 24 INCH BY 24 INCH ACT AND GRID, REFER TO BASIS OF DESIGN BELOW	
CEILING	C2	38	ABOVE • 2 INCH STEEL DECKING AND 2 INCH POURED CONCRETE FLOOR PER STRUCTURAL DRAWINGS • 1/4 INCH EXPANSION ANCHOR W/ TIE WIRE HEAD AT 24 INCHES O.C., BOTH DIRECTIONS • 2 SLACK #12 SAFETY WIRE AT 24 INCHES O.C. BOTH DIRECTIONS • 12 INCH BATT INSULATION, R-38 • 1 5/8 INCH METAL C-STUD FRAMING AT 24 INCHES O.C. • 24 INCH BY 24 INCH ACT AND GRID, REFER TO BASIS OF DESIGN BELOW	

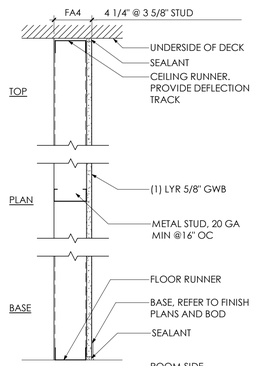
PARTITION TYPES



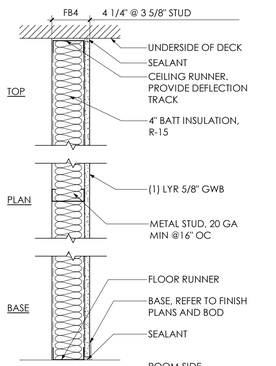
SA_ (1) LYR GWB - MTL STUDS
U.L. DESIGN U-419
STC -



SB_ (1) LYR GWB - MTL STUDS
U.L. DESIGN U-419
STC - 48



FA_ (1) LYR FURRING WALL - MTL STUDS
U.L. DESIGN U493
STC 15



FB_ (1) LYR FURRING WALL - MTL STUDS
U.L. DESIGN U493
STC 15

GENERAL WALL NOTES:

A. PROVIDE GLASSMAT BOARD AT ALL WET / TILE LOCATIONS (TOILET ROOMS, UTILITY, ETC)

B. PROVIDE WATERPROOFING SHEET MEMBRANE AT ALL WET, TILED LOCATIONS IN TOILET RMS FULL HEIGHT OF WALLS.

C. GYPSUM WALL BOARD TO EXTEND TO UNDERSIDE OF DECK, UNO.

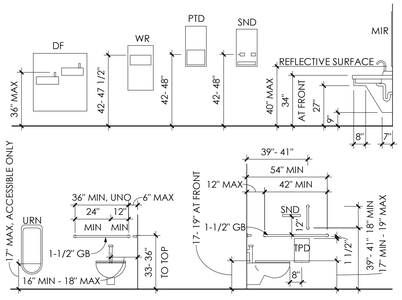
D. WHERE FIRE SEALANT IS REQUIRED, PROVIDE CONTINUOUS INSTALLATION AT BOTH SIDES OF PARTITION, TOP AND BOTTOM WITH REQUIRED BACKING AND TO MATCH U.L. REQUIREMENTS. FOR NON RATED PARTITIONS PROVIDE ACOUSTICAL SEALANT.

E. WHERE ACOUSTICAL BATTEN INSULATION IS INDICATED, PROVIDE BATT THAT IS FULL WIDTH OF STUD CAVITY. AT NOTED STC PARTITIONS RATINGS ARE MINIMUM ACOUSTICAL PERFORMANCE REQUIREMENTS FOR SYSTEMS

F. AT INTERSECTIONS OF DISSIMILAR PARTITION TYPES, THE HIGHEST RATED PARTITION IS TO RUN THROUGH THE INTERSECTION TO MAINTAIN ENCLOSURE AND CONTINUITY OF THE HIGHEST FIRE AND ACOUSTIC RATING. MAINTAIN CONTINUITY OF FIRE AND SOUND RATING OF RATED PARTITIONS AT INTERSECTIONS WITH COLUMN ENCLOSURES BY EXTENDING THE PARTITION AROUND THE COLUMN.

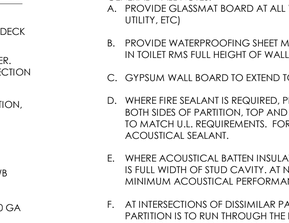
G. AT WALL MOUNTED DEVICE LOCATIONS PROVIDE FIRE RETARDANT WOOD BLOCKING FULL WIDTH OF STUD CAVITY. COORDINATED HEIGHT REQUIREMENTS WITH ALL DEVICES.

FIXTURE MOUNTING HEIGHTS

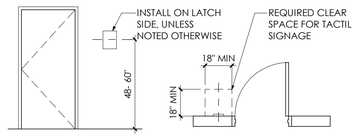


PROVIDE BUILT IN FIRE RETARDANT SOLID WOOD BLOCKING FOR HANDRAILS, COUNTERTOPS, ACCESSORIES AND ALL OTHER MISCELLANEOUS ITEMS THAT REQUIRE ANCHORAGE AT WALLS. AT MASONRY PARTITIONS, GROUT BLOCK SOLID AS REQUIRED. REFER TO ANSI AND ADA FOR ALL APPLICABLE DEVICES

MOUNTING STANDARDS



SIGNAGE REQUIREMENTS



A. SIGN SHALL BE INSTALLED ON WALL ADJACENT TO THE LATCH SIDE OF THE DOOR OR TO THE RIGHT OF THE RIGHT-HAND DOOR AT DOUBLE DOORS. WHERE THERE IS NO WALL SPACE ON THE LATCH SIDE OF A SINGLE DOOR OR TO THE RIGHT SIDE OF DOUBLE DOORS, SIGNS SHOULD BE ON THE NEAREST ADJACENT WALL. CHARACTER MOUNTING HEIGHT SHALL BE 48" AFF (MIN.) TO 60" AFF (MAX.). SIGNS CONTAINING TACTILE CHARACTERS SHALL HAVE AN 18"x18" MIN. SPACE ON THE GROUND, CENTERED ON THE SIGN, BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED AND 45 DEGREE OPEN POSITION.

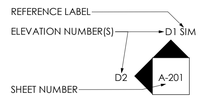
B. TACTILE CHARACTERS SHALL BE SANS SERIF AND SHALL BE ACCOMPANIED BY GRADE II BRAILLE. TACTILE CHARACTERS SHALL BE RAISED 1/32" MIN. ABOVE THEIR BACKGROUND. CHARACTERS SHALL BE 5/8" MIN. AND 2" MAX.

C. PICTOGRAMS SHALL HAVE A HEIGHT OF 6". CHARACTERS OR BRAILLE SHALL NOT BE IN THE PICTOGRAM FIELD. WHERE TEXT DESCRIPTORS FOR PICTOGRAMS ARE REQUIRED, THEY SHALL BE DIRECTLY BELOW OR ADJACENT TO THE PICTOGRAM.

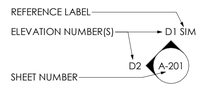
D. CHARACTERS AND THEIR BACKGROUNDS SHALL HAVE A NON-GLARE FINISH. CHARACTERS SHALL CONTRAST WITH THEIR BACKGROUND, WITH EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND.

E. LOCATIONS REQUIRING SIGNAGE:
- ACCESSIBLE WOMEN'S, MEN'S, AND ALL GENDER TOILET ROOMS
- PARKING WHEN >5 SPACES ARE PROVIDED
- SIGNAGE AS NOTED IN THE CONTRACT DOCUMENTS

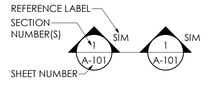
DRAWING ANNOTATION LEGEND



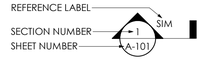
EXTERIOR ELEVATION MARK



INTERIOR ELEVATION MARK

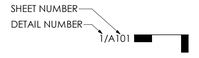


BUILDING SECTION MARK

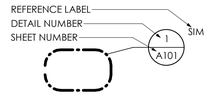


WALL SECTION MARK

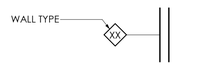
SECTION DETAIL MARK



FLOOR PLAN REFER MARK

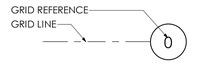


LARGE SCALE BLOWUP OF PLAN OR DETAIL



WALL TAG

ROOM TAG

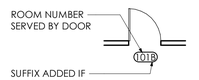


NEW COLUMN GRID AND MARK

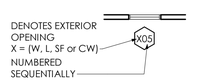
EXISTING COLUMN GRID AND MARK

DRAWING NOTE

DEMOLITION NOTE



DOOR TAG



EXTERIOR OPENING TAG
WINDOW (W)
LOUVER (L)
STOREFRONT (SF)
CURTAINWALL (CW)

NORTH ARROW

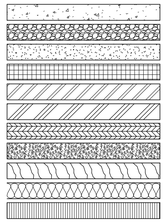
CENTERLINE

ELEVATION MARK

SPOT ELEVATION MARK

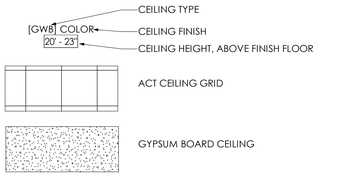
SIGNAGE EXAMPLES

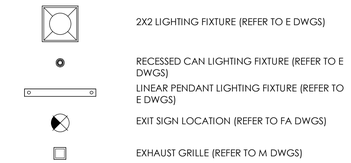
ARCHITECTURAL SYMBOLS



CONCRETE
STONE
GWB
RIGID INSULATION
STEEL
ALUMINUM
PLYWOOD
TILE (SECTION)
WOOD
INSULATION
CARPET (SECTION)

RCP LEGEND





REVISED DRAWING 6/17/2026

NEW YORK STATE | Office of General Services
DESIGN & CONSTRUCTION

CONSULTANT:
CERTIFICATE OF AUTHORIZATION: 1127432

Architectural Resources

SPRING LINE DESIGN
ARCHITECTURE + ENGINEERING

PDG
POPLI DESIGN GROUP

REGISTERED ARCHITECT KEVIN D. MURRETT 015991 STATE OF NEW YORK
12.31.2026

WE HEREBY AFFIRM THAT TO THE BEST OF OUR KNOWLEDGE, BELIEF, AND PROFESSIONAL JUDGEMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE AND THE 2020 NEW YORK STATE UNIFORM BUILDING CODE.

CONTRACT: CONSTRUCTION

TITLE: **PROVIDE STORAGE BUILDING**

LOCATION:
DOT REGION 5, ERIE COUNTY
75 EVANS STREET
HAMBURG, NY

CLIENT:
NEW YORK STATE DEPARTMENT OF TRANSPORTATION

MARK	DATE	DESCRIPTION
3	06/17/2026	ADDENDUM 3
	02/04/2026	BID DOCUMENTS

PROJECT NUMBER:	47510 - C
DESIGNED BY:	MPA
DRAWN BY:	AWP
FIELD CHECK:	
APPROVED:	

SHEET TITLE:
LEGENDS AND PARTITION TYPES

DRAWING NUMBER:
A-001

SHEET 20 OF 55

DRAWING NOTES

108	BOLLARD, PROVIDED BY C CONTRACT, REFER TO CIVIL DRAWINGS
111	60 INCH BY 36 INCH LIGHTED OVERHEAD DOOR CANOPY, PROVIDED BY C CONTRACT, COORDINATE WITH ELECTRICAL DRAWINGS

GENERAL NOTES

A. ALL DIMENSIONS ARE TO THE FINISHED FACE OF SURFACES UNLESS OTHERWISE NOTED.

B. DO NOT SCALE DRAWINGS OR DETAILS.

C. COORDINATE ALL WORK PROCEDURES WITH THE DIRECTOR'S REPRESENTATIVE.

D. PROTECT CONDITIONS AND MATERIALS WITHIN THE PROPOSED CONSTRUCITON AREA, THE CONTRACTOR SHALL DESIGN AND INSTALL ADEQUATE SHORING AND BRACING FOR STRUCTURAL OR REMOVAL TASKS.

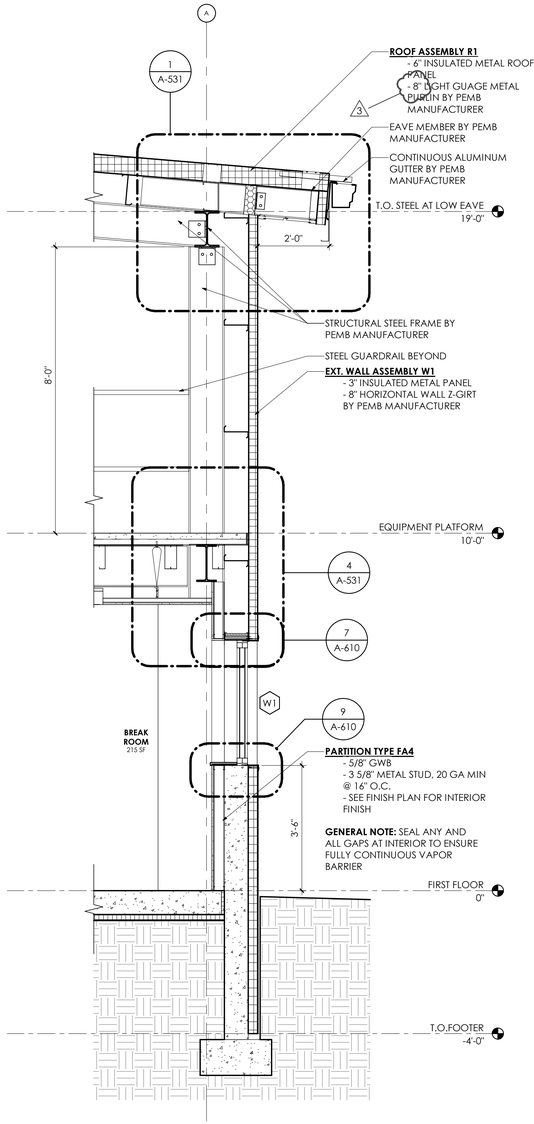
E. PERFORM ALL CUTTING, PATCHING, REPAIRING AS REQUIRED TO PERFORM ALL OF THE WORK INDICATED ON THE DRAWINGS.

F. REFER TO G-001 FOR WALL TYPES INFORMATION.

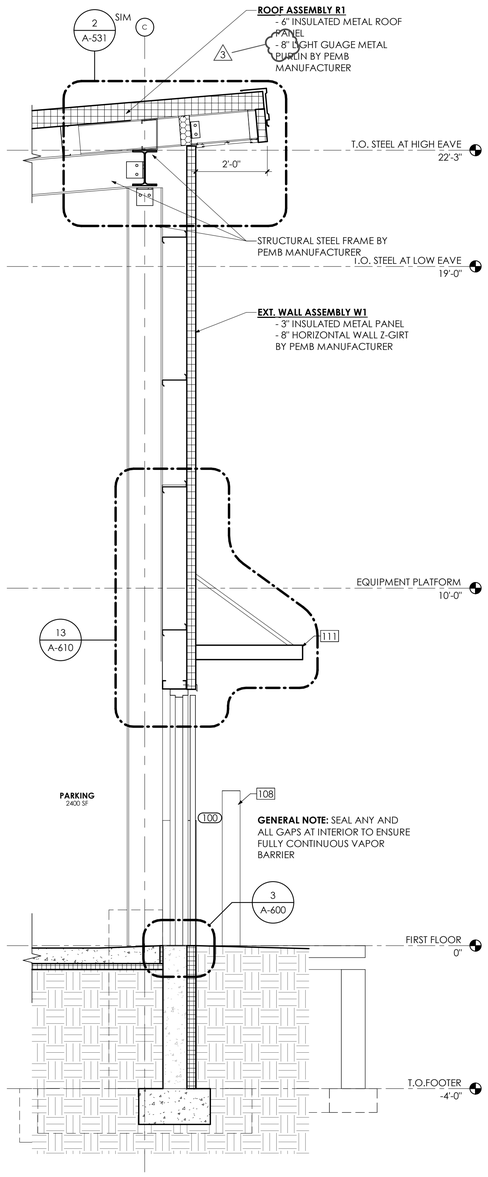
G. DOORS ARE LOCATED 6 INCHES FROM WALL UNLESS OTHERWISE NOTED.

H. REFER TO G-001 FOR TYPICAL MOUNTING INFORMATION

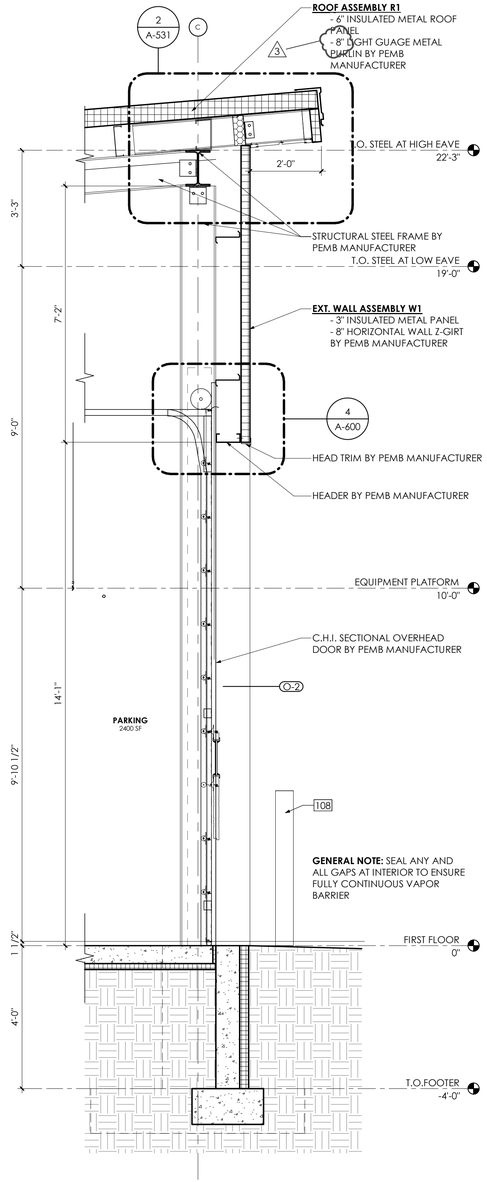
J. SEE CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL SCOPE.



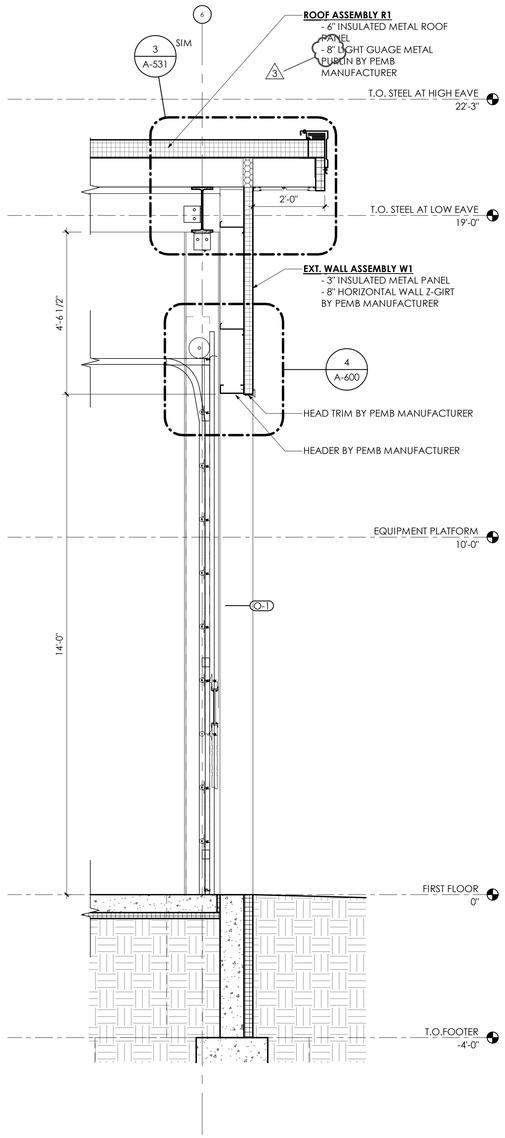
1 **WALL SECTION**
1/2" = 1'-0"



2 **WALL SECTION- EGRESS DOOR**
1/2" = 1'-0"



3 **WALL SECTION- OVERHEAD DOOR**
1/2" = 1'-0"



4 **WALL SECTION - OVERHEAD DOOR AT RAKE**
1/2" = 1'-0"

REVISED DRAWING 6/17/2026

NEW YORK STATE | Office of General Services
DESIGN & CONSTRUCTION

CONSULTANT:

CERTIFICATE OF AUTHORIZATION: 1127432

Ar Architectural Resources

SPRING LINE DESIGN
ARCHITECTURE + ENGINEERING

PDG POPLI DESIGN GROUP

WARNING:
THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS 'A' MISDEMEANOR.

REGISTERED ARCHITECT KEVIN D. MURRETT 015991 STATE OF NEW YORK
12.31.2026

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HAMBURG, NY

CLIENT:
NEW YORK STATE DEPARTMENT OF TRANSPORTATION

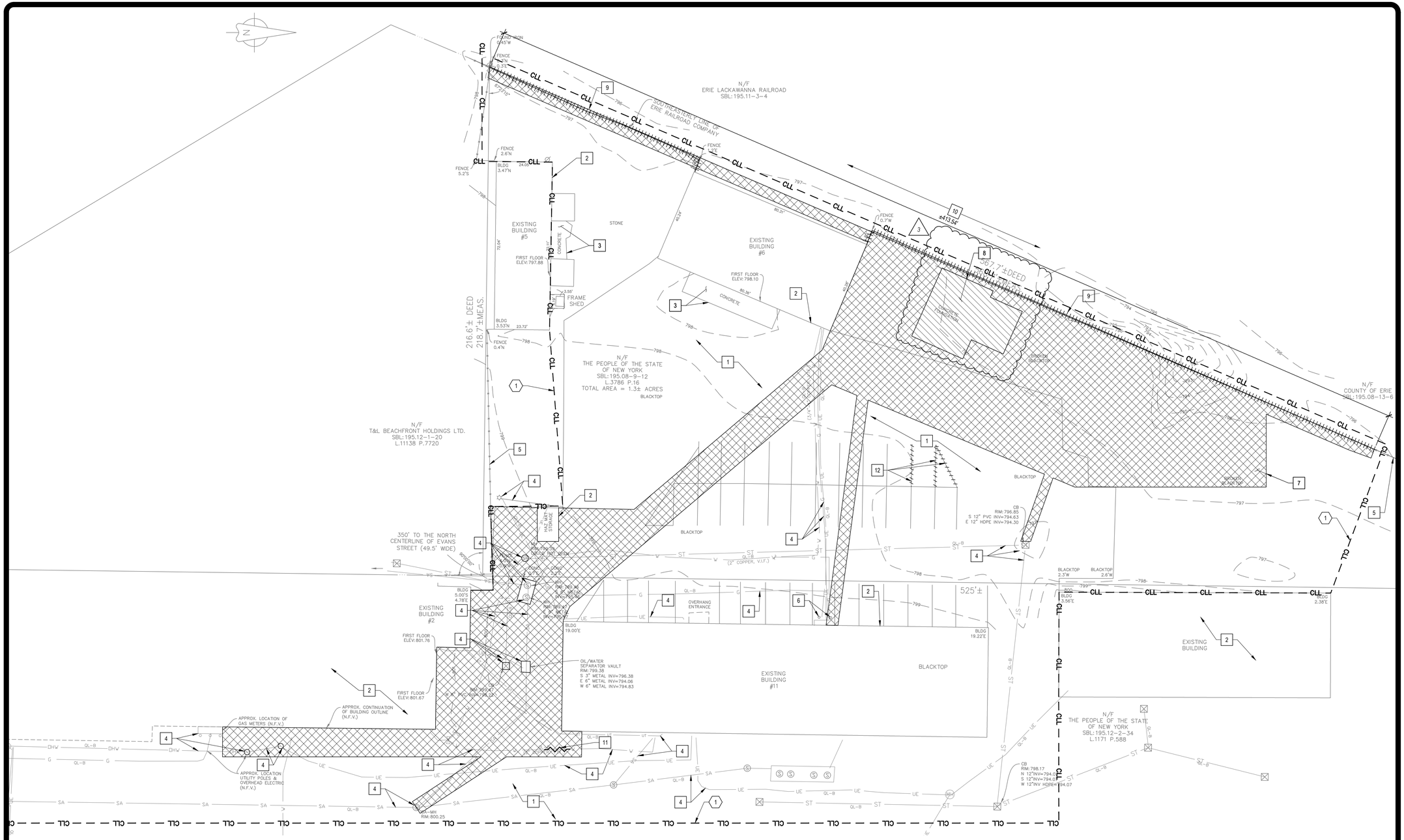
MARK	DATE	DESCRIPTION
3	06/17/2026	ADDENDUM 3
	02/04/2026	BID DOCUMENTS

PROJECT NUMBER:	47510 - C
DESIGNED BY:	MPA
DRAWN BY:	AWP/NES
FIELD CHECK:	
APPROVED:	

SHEET TITLE:
WALL SECTIONS

DRAWING NUMBER:
A-310

SHEET 39 OF 55



REMOVAL NOTES (X):

1. PROTECT EXISTING ASPHALT TO REMAIN.
2. PROTECT EXISTING BUILDING TO REMAIN.
3. PROTECT EXISTING CONCRETE TO REMAIN.
4. PROTECT EXISTING UTILITY TO REMAIN.
5. PROTECT EXISTING FENCE TO REMAIN.
6. PROTECT EXISTING BOLLARD TO REMAIN.
7. NEATLY SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT AND SUBBASE. EXCAVATE TO REQUIRED SUBGRADE.
8. REMOVE EXISTING CONCRETE FOUNDATION (APPROXIMATELY 550 CUBIC FEET MINIMUM). APPROXIMATE EXTENTS DERIVED FROM AERIAL IMAGERY. VERIFY IN FIELD. EXCAVATE TO REQUIRED SUBGRADE.
9. REMOVE EXISTING FENCE AND FOUNDATIONS IN THEIR ENTIRETY TO THE NEAREST POST.
10. REMOVE EXISTING TREES (±15 MATURE TREES) AND BRUSH ALONG FENCE LINE. CONFIRM EXTENT / QUANTITY OF TREE AND BRUSH REMOVAL WITH THE DIRECTOR'S REPRESENTATIVE.
11. REMOVE ±5'-0" OF EXISTING 2-INCH COPPER WATER LINE FOR SERVICE CONNECTION.
12. REMOVE EXISTING PAVEMENT MARKING.

DRAWING NOTES (X):

1. LIMITS OF CONSTRUCTION. CONTINUOUSLY MAINTAIN THE WORK AREA IN A CLEAN AND SAFE CONDITION. TAKE NECESSARY PRECAUTIONS TO MAINTAIN PROTECTED ACCESS FOR FACILITIES, ITS EMPLOYEES, AND PUBLIC USING FACILITIES AS WORK PROCEEDS. PROVIDE AND MAINTAIN TEMPORARY BARRICADES, WARNING SIGNS, AND OTHER TEMPORARY PROTECTIVE MEASURES THROUGHOUT THE WORK.

REMOVAL PLAN

1" = 20'

NEW YORK STATE | Office of General Services

CONSULTANT: POPLI DESIGN GROUP

CERTIFICATE OF AUTHORIZATION: 021331

Architectural Resources

SPRING LINE DESIGN
ARCHITECTURE + ENGINEERING

POPLI DESIGN GROUP

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STATE OF NEW YORK · JOHN HOHL-SHANKO · 106174 · LICENSED PROFESSIONAL ENGINEER

Registration Exp. Date: 9/30/2027

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LOCATION: DOT REGION 5, ERIE COUNTY
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HAMBURG, NY

CLIENT: NEW YORK STATE DEPARTMENT OF TRANSPORTATION

MARK	DATE	DESCRIPTION
	02/04/2026	BID DOCUMENTS
	06/19/2026	ADDENDUM 3

PROJECT NUMBER:	47510-C
DESIGNED BY:	ESH
DRAWN BY:	ESH
FIELD CHECK:	
APPROVED:	

SHEET TITLE: REMOVAL PLAN

DRAWING NUMBER: C-112

SHEET 6 OF 56