DOCUMENT 00 90 00 ADDENDUM

ADDENDUM NO. [2] Date: August 19, 2019

RE: LANESBORO PUBLIC SCHOOLS

ADDITION AND REMODEL 100 KIRKWOOD ST EAST LANESBORO, MN 55949

HSR 18063

FROM: HSR Associates, Inc

100 Milwaukee Street La Crosse, WI 54603 (608) 784-1830

To: Prospective Bidders

This addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated July 2019. Acknowledge receipt of this Addendum in the space provided on the bid form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of [3] pages, [3] specification sections and [21] 30 x 42 drawings.

CHANGES TO PRIOR ADDENDUM: Addendum 1

- 1. Item 14: Delete change to 2.03, B. Subfloor thickness shall be 15/32".
- 2. Sheet A601 DOOR SCHEDULE
 - a. Door 210:
 - i. Change frame material from 'ALUM' to 'STEEL'.
 - ii. Change frame elevation reference from "19A602" to "8A603".
 - iii. Fire rating for door 210 shall be 90 minutes.
- 3. Prior Approvals: Item 4, a: Change "section" to "type".

CHANGES TO SPECIFICATIONS:

- 4. Section 08 31 00 ACCESS DOORS AND PANELS
 - a. Section attached hereto as part of Contract Documents.
- 5. Section 08 45 00 TRANSLUCENT WALL AND ROOF ASSEMBLY
 - a. Skylight shall be comparable to Kalwall, 4 foot s-line, S-420-3A, single slope.
- 6. Section 09 66 23 RESINOUS MATRIX TERRAZZO FLOORING
 - a. Section attached hereto as part of Contract Documents.
- 7. Section 09 84 30 SOUND ABSORBING WALL AND CEILING UNITS
 - a. 2.02, A: Described panels apply to AWP 1 & 2 as located on Drawings.
- 8. Section 12 35 53.19 WOOD LABORATORY CASEWORK
 - a. 2.04, a, 1: Epoxy resin sinks shall be "drop-in" in lieu of under mount.

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9. Section 32 32 23 SEGMENTAL RETAINING WALLS

a. Section attached hereto as part of Contract Documents.

CHANGES TO DRAWINGS

- 10. Sheet A104 UPPER LEVEL REMODELED FLOOR PLAN 30 x 42 attached hereto
 - a. Revisions clouded on Drawing.
- 11. Sheet A112 LOWER LEVEL RCP SEGMENT C
 - a. Revisions clouded on Drawing.
 - b. Exterior metal soffit indicated.
- 12. Sheet A121 ROOF PLAN SEGMENT C 30 x 42 attached hereto
 - a. Revisions clouded on Drawing.
- 13. Section A201 ELEVATIONS 30 x 42 attached hereto
 - a. Revisions clouded on Drawing.
- 14. Sheet A206 INTERIOR ELEVATIONS 30 x 42 attached hereto
 - a. Revisions clouded on Drawing.
- 15. Sheet A210 CASEWORK ELEVATIONS 30 x 42 attached hereto
 - Revisions clouded on Drawing.
- 16. Sheet A300 BUILDING SECTIONS COMMONS 30 x 42 attached hereto
 - a. Revisions clouded on Drawing.
- 17. Sheet A304 GYM AREA SECTIONS 30 x 42 attached hereto
 - a. Revisions clouded on Drawing.
- 18. Sheet A306 WALL SECTIONS 30 x 42 attached hereto
 - a. Revisions clouded on Drawing.
- 19. Sheet A500 SECTION DETAILS 30 x 42 attached hereto
 - a. Revisions clouded on Drawing.
- 20. Sheet A501 SECTION DETAILS 30 x 42 attached hereto
 - a. Revisions clouded on Drawing.
- 21. Sheet A603 INTERIOR FRAME ELEVATIONS 30 x 42 attached hereto
 - a. Revisions clouded on Drawing.
- 22. Sheet ID101 OVERALL LOWER FLOOR FINISH PLAN 30 x 42 attached hereto
 - Revisions clouded on Drawing.
 - b. New flooring for Classroom 167 removed from Project.
- 23. Sheet ID 102 LOWER LEVEL FINISH PLAN SEGMENT A 30 x 42 attached hereto
 - a. Revisions clouded on Drawing.
 - b. New flooring for Classroom 167 removed from Project.
- 24. Sheet ID107 UPPER LEVEL FINISH PLAN SEGMENT B 30 x 42 attached hereto
 - a. Revisions clouded on Drawing.
 - b. Area requiring new terrazzo flooring identified.

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25. Sheet S001 STRUCTURAL NOTES 30 x 42 attached hereto

- a. Revisions clouded on Drawing.
- b. Design wind speed revision

26. Sheet S101 FOUNDATION PLAN - SEGMENT B 30 x 42 attached hereto

- a. Revisions clouded on Drawing.
- b. Top of foundation wall revision for brick ledge.
- c. Section references corrected; 3S801 changed to 2S801. 1S801 changed to 3S801.

27. Sheet S102 FOUNDATION PLAN - SEGMENT C 30 x 42 attached hereto

- a. Revisions clouded on Drawing.
- b. Footing and foundation size revised at northwest corner to accommodate exterior grade change.

28. Sheet S121.1 LOW ROOF FRAMING PLAN SEGMENT C 30 x 42 attached hereto

- a. Revisions clouded on Drawing.
- b. Horizontal structural support added at window opening.

29. Sheet S800 FOUNDATION DETAILS 30 x 42 attached hereto

- a. Revisions clouded on Drawing.
- 30. Sheet S801 FOUNDATION DETAILS 30 x 42 attached hereto
 - a. Revisions clouded on Drawing.
 - b. Retaining wall detail added and reference numbers adjusted.

PRIOR APPROVALS

- 1. Section 22 30 00 WATER SOFTENERS
 - a. Robert B. Hill Co.: HICAP 0110-2
- 2. Section 04 20 00 UNIT MASONRY
 - a. Cemstone Supply Co.: Glen-Gery Sandy Creek Velour
- 3. Section 09 84 30 SOUND-ABSORBING WALL AND CEILING UNITS
 - a. Golden Valley Supply Co.: Golterman & Sabo

END OF DOCUMENT 00 90 00

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SECTION 08 31 00 ACCESS DOORS AND PANELS

PART 1 GENERAL

1.01 SECTION INCLUDES

Wall access door and frame units.

1.02 RELATED REQUIREMENTS

- A. Section 04 20 00 Unit Masonry: Openings in masonry.
- B. Section 09 91 23 Interior Painting: Field paint finish.

1.03 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- Product Data: Provide sizes, types, finishes, hardware, scheduled locations, and details of adjoining work

PART 2 PRODUCTS

2.01 ACCESS DOORS AND PANELS ASSEMBLIES

- A. Fire-Rated Wall-Mounted Units:
 - 1. Location: As indicated on drawings.
 - 2. Wall Fire-Rating: 1-1/2 hour.
 - 3. Material: Steel.
 - 4. Size: As noted on Drawings.
 - 5. Door/Panel: Hinged, standard duty. Insulated double-surface panel, with tool-operated spring or cam lock and no handle.
 - Masonry Mounting Criteria: Provide surface-mounted frame with door surface flush with frame surface.
 - 7. Finish: Primed steel for field finish.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that masonry opening is correctly sized and located.

3.02 INSTALLATION

- A. Install units in accordance with manufacturer's instructions.
- B. Install frames plumb and level in openings, and secure units rigidly in place.
- Position units to provide convenient access to concealed equipment when necessary.

END OF SECTION

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SECTION 09 66 23

RESINOUS MATRIX TERRAZZO FLOORING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Epoxy matrix terrazzo with ground finish, .
- B. Divider strips.

1.02 RELATED REQUIREMENTS

- A. Section 03 30 00 Cast-in-Place Concrete: Concrete subfloor with light steel trowel finish.
- B. Section 07 92 00 Joint Sealants: Sealing joints between terrazzo work and adjacent construction and fixtures.

1.03 REFERENCE STANDARDS

- A. ASTM E1155 Standard Test Method for Determining F(F) Floor Flatness and F(L) Floor Levelness Numbers; 1996 (Reapproved 2008).
- B. ASTM F710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2011.
- C. ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride; 2011.
- D. NTMA (GRAD) Aggregate Gradation Standards; The National Terrazzo and Mosaic Association, Inc; current edition.
- E. NTMA (EPOXY) Epoxy Terrazzo Specifications; The National Terrazzo and Mosaic Association, Inc; Current Edition located at www.ntma.com.
- F. NTMA (SPECS) Terrazzo Specifications; The National Terrazzo and Mosaic Association, Inc.; current edition located at www.ntma.com.

1.04 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data for divider strips, control joint strips, expansion joints, and sealer; include printed copy of current NTMA recommendations for type of terrazzo involved and color plates for initial selection.
- C. Shop Drawings: Indicate divider strip, patterns and control joint layout, and details of adjacent components.
- D. Samples: Submit two samples, 6 inch by 6 inch in size illustrating color, chip size and variation, chip gradation, matrix color, and typical divider strip.
- E. Cleaning and Maintenance Data: Include procedures for stain removal, stripping, and sealing.

1.05 QUALITY ASSURANCE

- A. Perform work in accordance with NTMA recommendations as posted at their web site at www.ntma.com.
- B. Installer Qualifications: Company specializing in performing the type of work specified in this section.

1.06 MOCK-UP

- A. Construct mock-up of terrazzo illustrating appearance of finished work in each configuration required. Size mock-up to be not less than 3 by 3 feet.
- B. Locate where directed.
- C. Mock-up may remain as part of the work.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Store terrazzo materials in a dry, secure area.
- B. Maintain minimum temperature of 60 degrees F.
- C. Keep products away from fire or open flame.

1.08 FIELD CONDITIONS

- A. Do not install terrazzo when temperature is below 50 degrees F or above 90 degrees F.
- B. Maintain temperature within specified range 24 hours before, during, and 72 hours after installation of flooring.
- C. Provide ambient lighting level of 50 ft candles, measured at floor surface.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Basis of Design Resinous Matrix Terrazzo Flooring: Wisconsin Terrazzo; #3118 E: Final mixture to be verified with A/E.
- B. Other Acceptable Manufacturers Resinous Matrix Terrazzo Flooring:
 - Key Resin Company; Key Epoxy Terrazzo System: www.keyresin.com/#sle.
 - 2. General Polymers; Terrazzo 1100: www.generalpolymers.com.
 - 3. Crossfield Products Corp., Dex-O-Tex Division: www.crossfieldproducts.com
 - 4. Master Terrazzo Technologies LLC; Morocite: www.masterterrazzo.com
 - 5. TEC Specialty Construction Brands, Inc.; Tuff-Lite Epoxy Terrazzo: www.tecspecialty.com
 - 6. Terrazzo and Marble Supply Companies; Terroxy Resin Systems: www.tmsupply.com
 - 7. Substitutions: See Section 01 60 00 Product Requirements.

2.02 EPOXY MATRIX TERRAZZO APPLICATIONS

- A. Floors:
 - 1. Thickness: 3/8 inch, nominal.

2.03 MATERIALS

- A. Epoxy Matrix Terrazzo: Aggregate and matrix mix applied to substrate, troweled flat, and ground smooth.
- B. Matrix: Two component resin and epoxy hardener with mineral filler and color pigment, non-volatile, thermo-setting.
- C. Aggregate: Type as indicated; sized in accordance with NTMA aggregate gradation standards; color(s) as indicated, uniform in color.
- D. Finishing Grout: Epoxy, color to match terrazzo matrix.
- E. Epoxy Primer: Two component resin and epoxy hardner, 100% solids.

2.04 ACCESSORIES

- A. Divider Strips: 1/8 inch thick zinc exposed top strip, zinc coated steel concealed bottom strip, with anchoring features.
- B. Control Joint Strips: 1/8 inch nominal width zinc exposed top strips, zinc coated steel concealed bottom strips, 1/8 inch wide neoprene filler strip between vertical strips, with anchoring features.
- C. Divider and Control Joint Strip Height: To suit thickness of terrazzo topping, with allowance for grinding.
- D. Non-Slip Inserts: Provide channel-shaped inserts filled with a mixture of resin and fine, abrasive aggregate.
- E. Cleaner: Neutralizing liquid type, pH of 7.
- F. Sealer: Slip and stain resistant, colorless, non-yellowing, penetrating liquid type to completely seal matrix surface; not detrimental to terrazzo components.
- G. Anchoring Devices
- H. Subfloor Filler: Epoxy aggregate mortar type.
- I. Primer: As recommended by manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that sub-floor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive terrazzo.
- B. Minimum floor flatness performance at completion of cast-in-place concrete is indicated in Section 03 30 00. Maximum allowable floor flatness tolerances shall be no more than 1/8 inch in 10 feet and 1/16 inch in 24 inches. (Approximate minimum FF 50/FL35 per ASTM E1155) Locations not meeting this standard shall have leveling compound installed. Refer to Division 1 Allowances when applicable.
- C. Verify that new concrete sub-floor surfaces are ready for tile installation by testing for moisture emission rate. Obtain instructions if test results are not within limits recommended by tile manufacturer and setting materials manufacturer. Testing procedures shall be as follows:
 - An independent testing agency will perform field quality control tests, as specified in Section 01 40 00.
 - 2. Test methods shall follow ASTM F 2170-02 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes.
 - 3. Maximum allowable moisture levels for each type of floor finish shall be received from flooring suppliers prior to testing.
 - 4. At floors to receive finish materials, perform three tests for the first 1000 square feet and at least one additional test for each additional 1000 square feet.
 - 5. Select test locations to provide information about moisture distribution across the entire floor slab, especially areas of potential high moisture. For slabs on-grade and below-grade, include a test location within three feet of each exterior wall.
- D. Verify that concrete sub-floor surfaces are ready for terrazzo installation by testing for moisture emission rate and alkalinity per ASTM F1869; obtain instructions if test results are not within the following limits:
 - 1. Moisture Vapor Emission: Not greater than 3 lb per 1000 sq ft per 24 hours, tested according to ASTM F1869.
 - 2. Alkalinity: pH range of 5 to 9, tested according to ASTM F710.
- E. Provide sound concrete surfaces free of laitance, glaze, efflorescence, curing compounds, form-release agents, dust, dirt, grease, oil, and other contaminants incompatible with terrazzo.
 - 1. Shot-blast surfaces with an apparatus that abrades the concrete surface, contains the dispensed shot within the apparatus, and recirculates the shot by vacuum pickup.
 - a. Prepared concrete surface shall have an ICRI profile of 2 or higher (texture similar to 80-100 grit sand paper) and sufficient portland cement paste removed to expose aggregate.
 - 2. Repair damaged and deteriorated concrete according to terrazzo manufacturer's written recommendations.
 - 3. Use patching and fill material to fill holes and depressions in substrates according to terrazzo manufacturer's written instructions.
- F. Verify that required floor-mounted utilities are in correct location.
- G. If grinding is required prior to application protect other work from dust generated by grinding operations. Control dust to prevent air pollution and comply with environmental protection regulations.
 - 1. Erect and maintain temporary enclosures and other suitable methods to limit dust migration and to ensure adequate ambient temperatures and ventilation conditions during installation.

3.02 PREPARATION

- A. Clean substrate of foreign matter.
- B. Apply primer in accordance with manufacturer's instructions.

3.03 INSTALLATION

- A. Install control joint strips straight and flat to locations indicated.
- B. Install divider strips according to pattern approved on shop drawings.
- C. Place terrazzo mix over substrate to thickness indicated.

3.04 APPLICATION - TERRAZZO

A. Place terrazzo mix over prepared substrate to thickness indicated.

3.05 CURING

- A. Cure terrazzo overnight prior to grinding.
- B. Close area to allow undisturbed curing.

3.06 FINISHING

- A. Finish terrazzo to NTMA requirements.
- B. Produce terrazzo finish surface to match approved mock-up, with 70 percent chip exposed.
- C. Grind terrazzo surfaces with power disc machine; sequence with coarse to fine grit abrasive, using a wet method or using a dry grinder with vacuum to control dust.
- D. Apply grout mix to match mortar over ground surface to fill honeycomb exposed during grinding.
- E. Remove grout residue by grinding, using a fine grit abrasive.

3.07 TOLERANCES

- A. Maximum Variation from Flat Surface: 1/4 inch in 10 feet.
- B. Maximum Variation from Level (Except Surfaces Sloping to Drain): 1/8 inch.

3.08 CLEANING

- A. Scrub and clean terrazzo surfaces with neutral pH cleaner in accordance with manufacturer's instructions. Let dry.
- B. Immediately after terrazzo has dried, apply sealer in accordance with manufacturer's instructions.
- C. Polish surfaces in accordance with manufacturer's instructions.

3.09 PROTECTION

A. Protect finished terrazzo from damage due to subsequent construction until Date of Substantial Completion.

END OF SECTION

SECTION 32 32 23 SEGMENTAL RETAINING WALLS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Shop drawings.
- B. Retaining wall units.
- C. Cap units.
- D. Shear connectors.
- E. Drainage filter.
- F. Aggregate for leveling pad.
- G. Drainage fill.
- H. Reinforced backfill.
- Drainage pipe.

1.02 RELATED REQUIREMENTS

A. Section 33 41 00 - Subdrainage.

1.03 REFERENCE STANDARDS

- A. AASHTO M 288 Standard Specification for Geosynthetic Specification for Highway Applications; 2017
- B. ASTM C140/C140M Standard Test Methods of Sampling and Testing Concrete Masonry Units and Related Units; 2016.
- C. ASTM C920 Standard Specification for Elastomeric Joint Sealants; 2014a.
- D. ASTM C1372 Standard Specification for Dry-Cast Segmental Retaining Wall Units; 2017.
- E. ASTM D4595 Standard Test Method for Tensile Properties of Geotextiles by the Wide-Width Strip Method; 2017.
- F. ASTM D5262 Standard Test Method for Evaluating the Unconfined Tension Creep and Creep Rupture Behavior of Geosynthetics; 2007 (Reapproved 2016).
- G. ASTM D5818 Standard Practice for Exposure and Retrieval of Samples to Evaluate Installation Damage of Geosynthetics; 2011.
- H. ASTM D6638 Standard Test Method for Determining Connection Strength Between Geosynthetic Reinforcement and Segmental Concrete Units (Modular Concrete Blocks); 2018.
- I. ASTM D6916 Standard Test Method for Determining the Shear Strength Between Segmental Concrete Units (Modular Concrete Blocks); 2018.
- J. ASTM D698 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN-m/m3)); 2012, with Editorial Revision (2015).
- K. ASTM D1241 Standard Specification for Materials for Soil-Aggregate Subbase, Base, and Surface Courses; 2015.
- L. ASTM D2487 Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System); 2011.
- M. ASTM D4318 Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils; 2017.
- N. ASTM D4491 Standard Test Methods for Water Permeability of Geotextiles by Permittivity; 1999a (Reapproved 2014).
- O. ASTM D4751 Standard Test Method for Determining Apparent Opening Size of a Geotextile; 2016.
- P. ASTM D5321/D5321M Standard Test Method for Determining the Shear Strength of Soil-Geosynthetic and Geosynthetic-Geosynthetic Interfaces by Direct Shear; 2017.
- Q. ASTM D7928 Standard Test Method for Particle-Size Distribution (Gradation) of Fine-Grained Soils Using the Sedimentation (Hydrometer) Analysis; 2017.
- R. NCMA TR-127 Design Manual for Segmental Retaining Walls; 2010, Third Edition.

SEGMENTAL RETAINING

1.04 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. Segmental Retaining Wall Units:
 - 1. Manufacturer's product data.
 - 2. Test data on freeze-thaw durability per ASTM C1372.
 - 3. Test data on unit strength and shear resistance between units.
 - 4. Test data on soil reinforcement connection.
 - 5. Manufacturer's certification that units meet requirements of specification.
 - 6. Storage and handling requirements and recommendations.
 - 7. Installation methods.
- C. Shop Drawings: Engineering drawings for installation, including elevations, large-scale details of elevations, typical sections, details, and connections, soil reinforcement, and drainage provisions.
 - 1. Include marked up contract drawings showing exact dimensions for blocks, required coping, and other minor revisions.
 - 2. Design Data: Submit detailed design calculations showing compliance with specified design criteria and material evaluations performed in accordance with specified design standard, signed and sealed by Design Engineer.
- D. Design Engineer's Qualification Statement.
- E. Concrete Unit Manufacturer Qualification Statement.
- F. Installer Qualification Statement.

1.05 QUALITY ASSURANCE

- A. Design Engineer Qualifications: Provide design by or under direct supervision of Professional Engineer experienced in the work of this section and licensed in the State in which the Project is located and:
 - 1. Having minimum of five years documented experience in design of reinforced soil structures.
- B. Manufacturer Qualifications -- Concrete Units: Firm specializing in manufacturing products specified in this section and:
 - 1. With not less than 2 years experience.
- C. Installer Qualifications: Firm specializing in design and installation of segmental retaining walls and:
 - 1. With not less than 2 years documented experience.
 - 2. With a minimum of five previously constructed successful projects, similar in size and magnitude, using specified retaining wall system; provide contact names and numbers.
 - 3. Having site supervisor with verifiable qualified experience suitable for this project.
 - 4. Approved by retaining wall system manufacturer.
- D. Preconstruction Soil Testing: Engage a qualified independent testing agency to test soil reinforcement and backfill materials for compliance with design criteria.
 - 1. Testing Agency Qualifications: As specified in Section 01 40 00.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store products above ground on wood pallets or blocking, in manufacturer's unopened packaging, until ready for installation.
- B. Prevent excessive soil and mud from coming in contact with face of concrete units.
- C. Protect material from damage. Do not use damaged material. Remove damaged material from the site.
- D. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.07 WARRANTY

- A. See Section 01 78 00 Closeout Submittals, for additional warranty requirements.
- B. Correct defective Work within a one year period after Date of Substantial Completion.
- C. Provide five year manufacturer warranty for Segmental Retaining Wall.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Segmental Retaining Walls:
 - 1. Anchor Wall Systems, Inc; Sterling Wall System: www.anchorwall.com/#sle.
 - 2. Keystone Retaining Wall Systems LLC; Keystone Standard, Tri-Plane: www.keystonewalls.com/#sle.
 - 3. Rockwood Retaining Walls; Sapphire 6 & 8: www.rockwoodwalls.com/#sle.
 - 4. Substitutions: See Section 01 60 00 Product Requirements.

2.02 RETAINING WALLS

- A. Contractor is responsible for design of the retaining walls.
- B. Design Standard: Design retaining walls to be capable of withstanding the effects of gravity loads due to soil pressures resulting from grades indicated, determined in accordance with:
 - 1. In addition, comply with applicable local, state, and federal codes and regulations.
 - 2. This design method considers potential failure modes categorized by external, internal, local, compound, and global stability.
 - 3. Provide engineering services as required for analysis for all modes of stability.
 - 4. Use of design software for calculations is permitted.
 - 5. Submit complete shop drawings showing all features of the design.
- C. Mass (Weight) Per Wall Face Area: 35 pounds per square foot, minimum, including filled voids.
- D. Shear Resistance: Design the wall not to exceed the capacity of materials and soils to resist shear:
 - Shear Resistance Between Units: Determine in accordance with ASTM D6916.
 - 2. Connection Between Units and Soil Reinforcement: Determine in accordance with ASTM D6638. Strength shall exceed the maximum tensile force with a Factor of Safety of 1.5.
 - 3. Coefficient for Direct Shear of Reinforcement on Soil: Determine in accordance with ASTM D5321/D5321M using soil similar in gradation and texture to that to be used for fill in the reinforced zone.

E. Soil Reinforcement:

- 1. Test reinforcement to be used in accordance with ASTM D6706 using soil taken from project site.
- 2. Do not use more than one type of reinforcement attached to units within the same wall; do not use products made by different manufacturers in the same wall; minimize the number of different reinforcement and filter products to avoid confusion in placement.
- 3. Walls Less Than 12 feet High: Use only one type of reinforcement of one grade and strength.
- 4. Long Term Design Strength of Reinforcement: LTDS = Tult / (RFd x RFid x RFcr), where:
 - a. Tult = Ultimate (tensile) strength per ASTM D4595.
 - b. RFd = Reduction Factor for chemical and biological durability; minimum 2.0 if durability testing has not been conducted, otherwise 1.1 for High-density polyethylene. (HDPE), and 1.1 for polyethylene terephthalate (PET).
 - c. RFid = Reduction Factor for Installation Damage; minimum 1.1 and 3.0 if testing per ASTM D5818 has not been conducted.
 - RFcr = Reduction Factor for Creep; consistent with test procedure used for determining the ultimate strength per ASTM D5262.
 - e. The product RFd x RFid x RFcr shall be greater than 2.0.
- F. Drainage: Design to prevent water accumulation in retained soil; use drainage fill and drainage pipe as specified in this Section; provide outlet down-grade from west end of north wall.
- G. Minimum Factor of Safety: Design with the following stability requirements:
 - 1. Sliding = 1.5.
 - 2. Pullout = 1.5.
 - 3. Tensile Overstress = 1.5.
 - 4. Overturning = 2.0.
 - 5. Bearing Capacity = 2.0.

2.03 MATERIALS

- A. Retaining Wall Units: Machine-formed concrete blocks of shapes and sizes suitable for the retaining wall configuration required and complying with ASTM C1372 and the following:
 - 1. Face Color: Tan.
 - 2. Texture: Split face, on exposed surfaces.
 - 3. Shear Resistance Mechanism: Manufacturer's standard.
 - 4. Moisture Absorption: 8 percent, maximum.
 - 5. Freeze-Thaw Resistance: Maximum of 1 percent or less weight loss after 100 cycles for each of 5 specimens or maximum of 1.5 percent or less weight loss after 150 cycles for 4 of 5 specimens, when tested in accordance with ASTM C1262.
 - Compressive Strength, 28 Day: 3000 pounds per square inch, minimum in accordance with ASTM C140/C140M.
 - 7. Concrete Density: 125 pounds per cubic foot, minimum, oven dry.
 - 8. Dimensional Tolerances: Plus/minus 1/16 inch from specified dimension.
 - 9. Appearance: No visible chips, cracks, or other imperfections when viewed from 10 feet under diffuse lighting.
- B. Cap Units: Portland cement concrete machine-formed solid blocks, matching segmental retaining wall units, complying with ASTM C1372, with abutting edges saw cut or formed to provide tight fitting, flush end-to-end joints.
 - 1. Height: 4 inches, minimum.
 - 2. Depth: To fully cover wall units.
 - 3. Masonry Adhesive: To secure cap units as top course of wall.
 - a. Expected Life Span: 30 years.
 - b. Provide adhesive conforming to ASTM C920, Type S, Grade NS, Class 25, and as approved by unit manufacturer.
- C. Shear Connectors: Connection method to withstand design stresses and prevent movement of segmental retaining wall units, and to hold soil reinforcement in proper design position during grid pretensioning and backfilling.
 - 1. Flexural Strength: 128,000 pounds per square inch, minimum, determined in accordance with ASTM D6638.
 - Short Beam Shear: 6,400 pounds per square inch, minimum, determined in accordance with ASTM D6638.
 - 3. Maintain strength over design temperature range of minus 10 degrees F to plus 100 degrees F.
- D. Drainage Filter: Geosynthetic textile.
 - Apparent Opening Size: 70 to 100 U.S. Sieve size, when tested in accordance with ASTM D4751.
 - 2. Permittivity: 0.5 per second, minimum, when tested in accordance with ASTM D4491.
 - 3. Durability: Comply with minimum requirements of AASHTO M 288 Class 1; minimum mass of 8 ounces per square yard.
- E. Aggregate for Leveling Pad: Compacted sand, gravel, or crushed rock complying with one of the following:
 - 1. Meeting requirements of ASTM D1241, Gradation C.
 - 2. Do not use pea gravel.
- F. Drainage Fill: Clean, freely draining aggregate placed within, between, or immediately behind segmental retaining wall units; do not use pea gravel; use one of the following:
 - 1. Aggregate meeting requirements of ASTM D448, Size No. 57.
 - 2. Crushed stone or coarse gravel, 3/8 inch; no more than 5 percent passing No. 200 sieve.
 - 3. Crushed stone or coarse gravel, meeting requirements of ASTM D7928.
- G. Reinforced Backfill: Compacted soil placed behind drainage fill within reinforced soil mass; do not use heavy clay or organic soils; comply with one of the following:
 - 1. Use site-excavated or other soil approved by Testing Agency.
 - 2. Granular soil with less than 35 percent passing No. 200 sieve per ASTM D7928.

- 3. Inorganic ASTM D2487 soil types GP, GW, SP, or SM, free of debris.
 - a. Maximum Size: 3/4 inch, unless approved by Design Engineer, and design strength reduced to account for additional installation damage.
 - Plasticity of Fines: Less than 10. Liquid Limit: Less than 40, when tested in accordance with ASTM D4318.
- H. Drainage Pipe: 4 inch Perforated schedule 40 PVC, complying with ASTM D3034; or corrugated HDPE complying with ASTM F405; with geotextile filter wrap.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify location of existing structures and utilities prior to excavation.
- B. Protect adjacent structures from the effects of excavation.
- C. Verify that layout dimensions are correct and substrate is in proper condition for installation.
- D. Notify Architect of unsatisfactory conditions.
- E. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Excavation:
 - 1. Excavate to lines and grades indicated on drawings.
 - 2. Do not disturb embankment or foundation beyond lines. Minimize over-excavation; fill over-excavated areas with compacted reinforced backfill or leveling pad material at Contractor's expense.
 - 3. After excavation, and prior to placement of leveling materials, Geotechnical Engineer will examine bearing soil surface to verify strength meets or exceeds design requirements and assumptions.
 - 4. Replace unsuitable bearing soil as directed by Architect.
 - 5. Provide means of controlling surface water away from excavation during construction.

B. Leveling Pad:

- 1. Depth: 6 inches, minimum or as required by design.
- 2. Width: 6 inches minimum extension beyond front and back faces of units.
- 3. In lieu of pad made solely of aggregate or concrete, pad may be 3 inches, minimum, of thick compacted sand or crushed rock, covered with 2 inches to 3 inches of unreinforced concrete.
- 4. Location: Top of pad at 1 inch below grade for each 8 inches that wall extends above grade.
- 5. Compact aggregate to lines and grades on drawings, in lifts 6 inches thick, maximum.
- 6. Compact aggregate to a minimum of 95 percent standard Proctor density, when determined in accordance with ASTM D698 at moisture content within 2 percent of optimum.
- 7. Use only hand-operated compaction equipment within 36 inches of back of wall.
- C. Verify level grade before proceeding.
- D. Install drainage collection pipe with a continuous fall in the direction of flow. Cap open ends as necessary to prevent soil and debris from entering.

3.03 INSTALLATION

- A. Install in accordance with drawings, manufacturer instructions, and applicable codes and regulations.
- B. Segmental Retaining Wall Units:
 - 1. Place first course of units on leveling pad; check alignment and level. Check for full contact with base and for stability.
 - Place units side by side for full length of wall, aligning back face of straight walls using string line or offset from base line.
 - 3. Do not leave gaps between units.
 - 4. Lay out corners in accordance with manufacturer's instructions. Do not leave gaps to produce wall batter or curvature.
 - 5. Cut blocks with saw; do not split units.
 - 6. Sweep excess material from tops of units before laying succeeding courses.
 - 7. Place a maximum of 2 succeeding courses above level backfill. Check for proper alignment and batter.

- 8. Where top of wall changes elevation, step units to match grade or turn top course into embankment.
- 9. Where bottom of wall changes elevation, step base leveling pad and extend lowest course a minimum of two units into slope.
- 10. Install shear connectors per manufacturer recommendations.
- C. Soil Reinforcement: Install each layer on fully compacted fill.
 - 1. Orient soil reinforcement material with highest strength axis perpendicular to wall alignment.
 - 2. Attach to top of wall units and extend horizontally, full length, over compacted backfill slightly sloping downward away from wall.
 - 3. Install in one piece lengths with 100 percent coverage in each layer at each level. Do not splice or leave gaps between panels or ends of pieces.
 - 4. Pull taut and remove slack prior to backfill placement.
- D. Drainage Fill: Place drainage fill in, between, and behind units.
 - 1. Compact to lines and grades on drawings, in lifts 6 inches thick, maximum; decrease lift thickness where necessary to achieve required density.
 - 2. Extend drainage fill 6 inches beyond back face of units.
 - 3. Base of drainage fill elevation shall not exceed two courses or 16 inches from base of wall units.
- E. Backfill: Place, spread, and compact backfill from behind drainage fill to undisturbed soil while minimizing the development of slack in the soil reinforcement.
 - 1. Use only lightweight hand-operated compaction equipment within 3 feet from back wall face, or one half of wall height, whichever is greater.
 - 2. Place backfill in lifts of maximum 6 inches to 8 inches loose thickness where hand compaction is used and 8 inches to 10 inches where heavy compaction equipment is used.
 - 3. Compact backfill to 95 percent maximum density and upper 2 feet of backfill to 98 percent maximum density, standard Proctor, as determined in accordance with ASTM D698, or as recommended by Geotechnical Engineer.
 - 4. Moisture content of backfill prior to and during compaction to be within plus or minus 2 percentage points dry of optimum and uniform throughout each layer.
 - 5. Do not operate tracked construction equipment directly upon soil reinforcement. Maintain a minimum fill thickness of 6 inches for operation of tracked vehicles over soil reinforcement. Minimize turning of tracked vehicles while over soil reinforcement.
 - 6. Operate wheeled equipment at speeds less than 10 miles per hour over soil reinforcement.
 - 7. Prevent contamination of the filter fabric, unit fill, blanket drains, chimney drains, and/or drainage composite from poor drainage materials such as fine grained silt and clay.
- F. Cap Units: Install with masonry adhesive.
 - Verify in-place top of wall elevation prior to installation of cap units and adjust accordingly.
 - 2. Clear cap units and top course of segmental retaining wall units of debris and standing water before applying adhesive.
 - 3. Apply masonry adhesive to top surface of top unit and place cap into position over projecting pins. Protect wall face from masonry adhesive.
- G. Site Drainage:
 - 1. At end of each day:
 - a. Grade backfill a minimum of 2 percent away from wall to prevent runoff from adjacent areas from entering wall site and to prevent ponding at the wall.
 - b. Construct a berm at the crest of the wall to prevent surface water from overtopping.
 - 2. At completion, if other work adjacent to wall is not to be done immediately (paving, landscaping, etc), grade top of backfill and provide temporary drainage to prevent water runoff toward the wall.
 - Surface water control and groundwater seepage shall be the responsibility of the project Architect.

3.04 FIELD QUALITY CONTROL

- A. See Section 01 40 00 Quality Requirements, for additional requirements.
- B. Provide manufacturer's field representative to observe and inspect concrete units.

- C. Observe and inspect:
 - Concrete units: For correct type, for quality installation with courses that are level and follow the designed batter ratio.
 - 2. Soil backfill: For correct type, for specified compaction with level grading prior to reinforcement installation.
 - 3. Soil reinforcement: For correct type, for solid connection to concrete units, and for smooth and taut installation.
 - 4. Field location in plan and elevation.
- D. General Contractor will engage inspection and testing services, including independent laboratories, to provide quality assurance and testing services during construction. Contractor will secure necessary construction control testing during construction.
- E. Correct work found deficient and not in accordance with drawings and specifications.

3.05 CLEANING

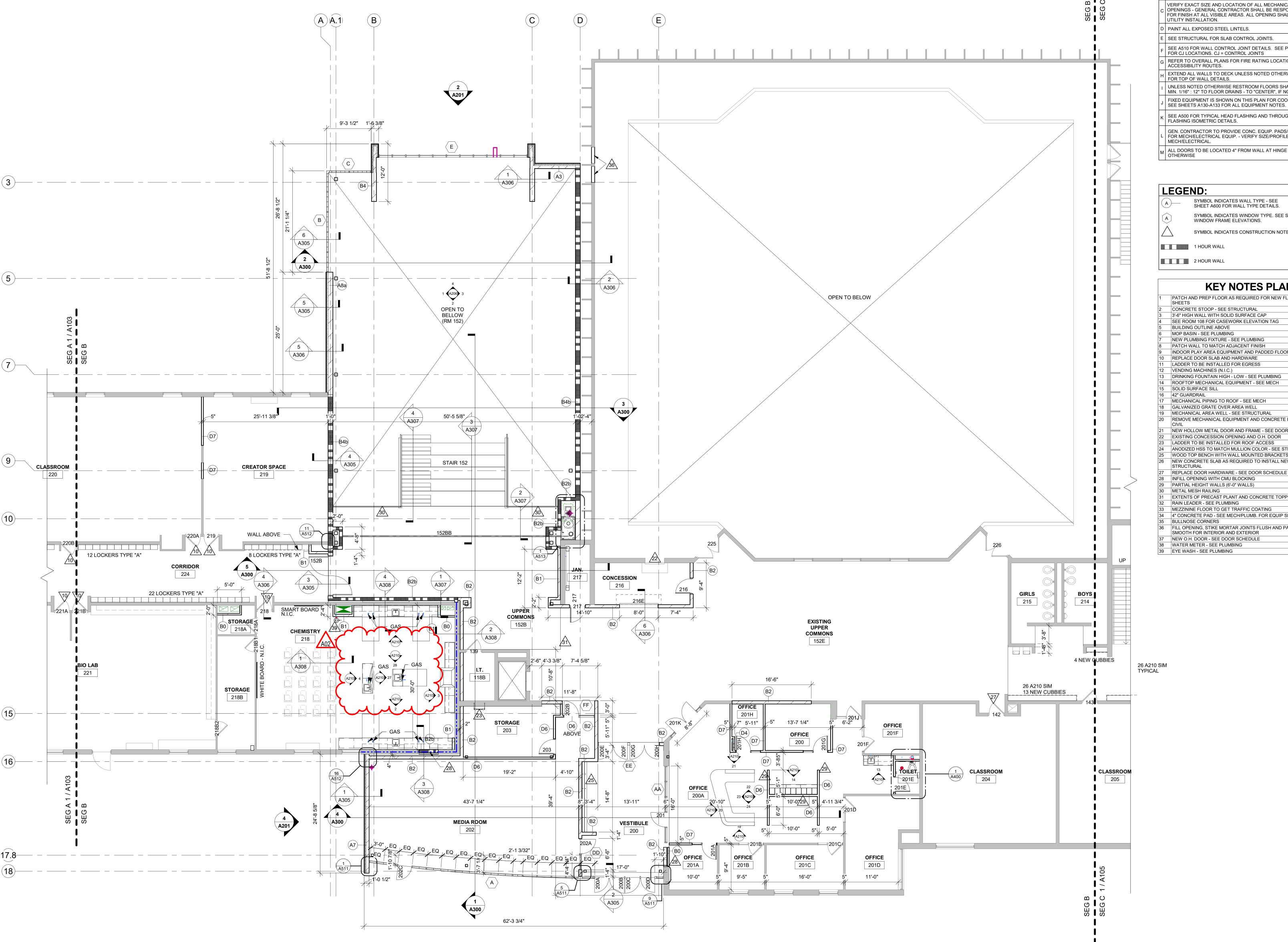
- A. Clean wall face to remove debris and stains.
- B. Leave adjacent paved areas broom clean.

3.06 PROTECTION

- A. Prevent damage to wall and earthwork by subsequent construction and uncontrolled runoff until substantial completion; repair damage due to failure to protect wall or earthwork.
- B. Do not operate equipment with wheel loads in excess of 150 pounds per square foot live load within 10 feet from the wall face.
- C. Do not place temporary soil or fill stockpiles adjacent to wall.

END OF SECTION

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UPPER LEVEL REMODELED FLOOR PLAN - SEG B

1/8" = 1'-0"



- A SEE ID SHEETS FOR FLOOR AND WALL FINISH LAYOUTS. LOOSE FURNISHINGS EXCEPT AS NOTED SHALL BE PROVIDED AND INSTALLED BY THE OWNER.
- VERIFY EXACT SIZE AND LOCATION OF ALL MECHANICAL / PLUMB AND ELEC.
 OPENINGS GENERAL CONTRACTOR SHALL BE RESPONSIBLE
 FOR FINISH AT ALL VISIBLE AREAS. ALL OPENING SHALL BE SEALED AFTER
- UTILITY INSTALLATION.
- PAINT ALL EXPOSED STEEL LINTELS.
- SEE STRUCTURAL FOR SLAB CONTROL JOINTS.
- SEE A510 FOR WALL CONTROL JOINT DETAILS. SEE PLANS AND ELEVATIONS FOR CJ LOCATIONS. CJ = CONTROL JOINTS REFER TO OVERALL PLANS FOR FIRE RATING LOCATIONS AND ACCESSIBILITY ROUTES.
- EXTEND ALL WALLS TO DECK UNLESS NOTED OTHERWISE. SEE A500 FOR TOP OF WALL DETAILS.
- UNLESS NOTED OTHERWISE RESTROOM FLOORS SHALL BE SLOPED A MIN. 1/16" : 12" TO FLOOR DRAINS TO "CENTER", IF NO FLOOR DRAINS. FIXED EQUIPMENT IS SHOWN ON THIS PLAN FOR COORDINATION.
- SEE A500 FOR TYPICAL HEAD FLASHING AND THROUGH-WALL FLASHING ISOMETRIC DETAILS.
- GEN. CONTRACTOR TO PROVIDE CONC. EQUIP. PADS/CURBS AS REQUIRED FOR MECH/ELECTRICAL EQUIP. - VERIFY SIZE/PROFILE/LOCATION WITH MECH/ELECTRICAL.
- ALL DOORS TO BE LOCATED 4" FROM WALL AT HINGE UNLESS NOTED

- SYMBOL INDICATES WALL TYPE SEE
- SHEET A600 FOR WALL TYPE DETAILS. SYMBOL INDICATES WINDOW TYPE. SEE SHEET A601 FOR
- WINDOW FRAME ELEVATIONS. SYMBOL INDICATES CONSTRUCTION NOTE THIS SHEET
- 2 HOUR WALL

KEY NOTES PLAN

- PATCH AND PREP FLOOR AS REQUIRED FOR NEW FLOOR FINISH SEE ID
- CONCRETE STOOP SEE STRUCTURAL 3'-6" HIGH WALL WITH SOLID SURFACE CAP SEE ROOM 108 FOR CASEWORK ELEVATION TAG
- BUILDING OUTLINE ABOVE MOP BASIN - SEE PLUMBING
- NEW PLUMBING FIXTURE SEE PLUMBING PATCH WALL TO MATCH ADJACENT FINISH
- INDOOR PLAY AREA EQUIPMENT AND PADDED FLOORING BY OTHERS REPLACE DOOR SLAB AND HARDWARE
- LADDER TO BE INSTALLED FOR EGRESS VENDING MACHINES (N.I.C.)
- DRINKING FOUNTAIN HIGH LOW SEE PLUMBING ROOFTOP MECHANICAL EQUIPMENT - SEE MECH
- 42" GUARDRAIL MECHANICAL PIPING TO ROOF - SEE MECH
- GALVANIZED GRATE OVER AREA WELL
- 19 MECHANICAL AREA WELL SEE STRUCTURAL REMOVE MECHANICAL EQUIPMENT AND CONCRETE PAD - SEE MECH AND
- NEW HOLLOW METAL DOOR AND FRAME SEE DOOR SCHEDULE
- EXISTING CONCESSION OPENING AND O.H. DOOR LADDER TO BE INSTALLED FOR ROOF ACCESS
- ANODIZED HSS TO MATCH MULLION COLOR SEE STRUCT FOR DETAIL WOOD TOP BENCH WITH WALL MOUNTED BRACKETS 5' O.C. MAX NEW CONCRETE SLAB AS REQUIRED TO INSTALL NEW FOOTINGS - SEE
- REPLACE DOOR HARDWARE SEE DOOR SCHEDULE INFILL OPENING WITH CMU BLOCKING
- PARTIAL HEIGHT WALLS (6'-0" WALLS) METAL MESH RAILING
- EXTENTS OF PRECAST PLANT AND CONCRETE TOPPING RAIN LEADER - SEE PLUMBING
- 4" CONCRETE PAD SEE MECH/PLUMB. FOR EQUIP SIZE. BULLNOSE CORNERS
- FILL OPENING, STIKE MORTAR JOINTS FLUSH AND PARGE BLOCK SURFACE SMOOTH FOR INTERIOR AND EXTERIOR NEW O.H. DOOR - SEE DOOR SCHEDULE
- WATER METER SEE PLUMBING 89 EYE WASH - SEE PLUMBING

INTERIOR DESIGN



LA CROSSE, WISCONSIN PHONE: 608.784.1830

HSR ASSOCIATES INC. 100 MILWAUKEE STREET

FAX: 608.782.5844 www.hsrassociates.com Consultant:

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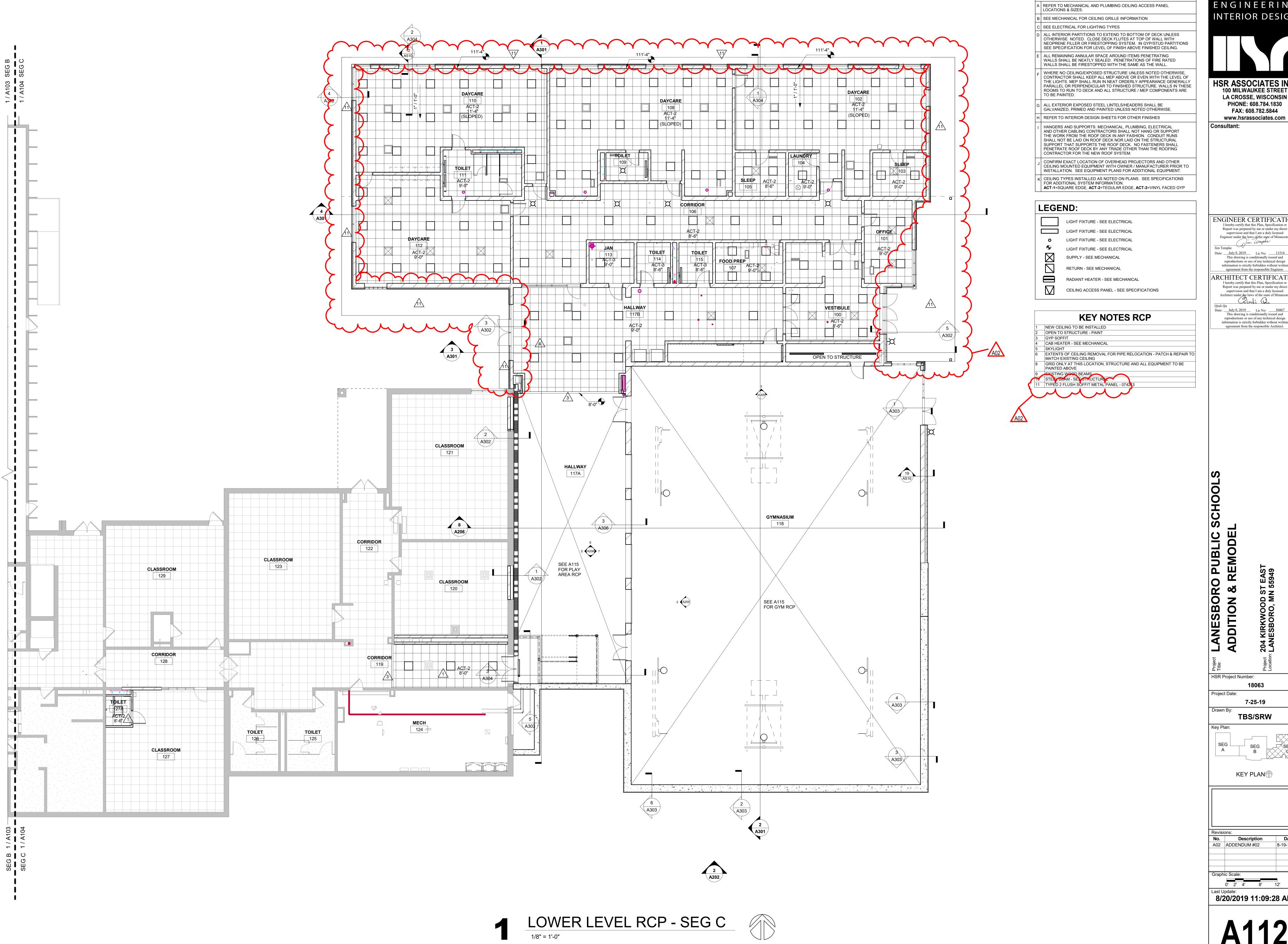
HSR Project Number:

Project Date: 7-25-19

KEY PLAN

A02 ADDENDUM #02

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ARCHITECTURE INTERIOR DESIGN

GENERAL NOTES:

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Consultant:

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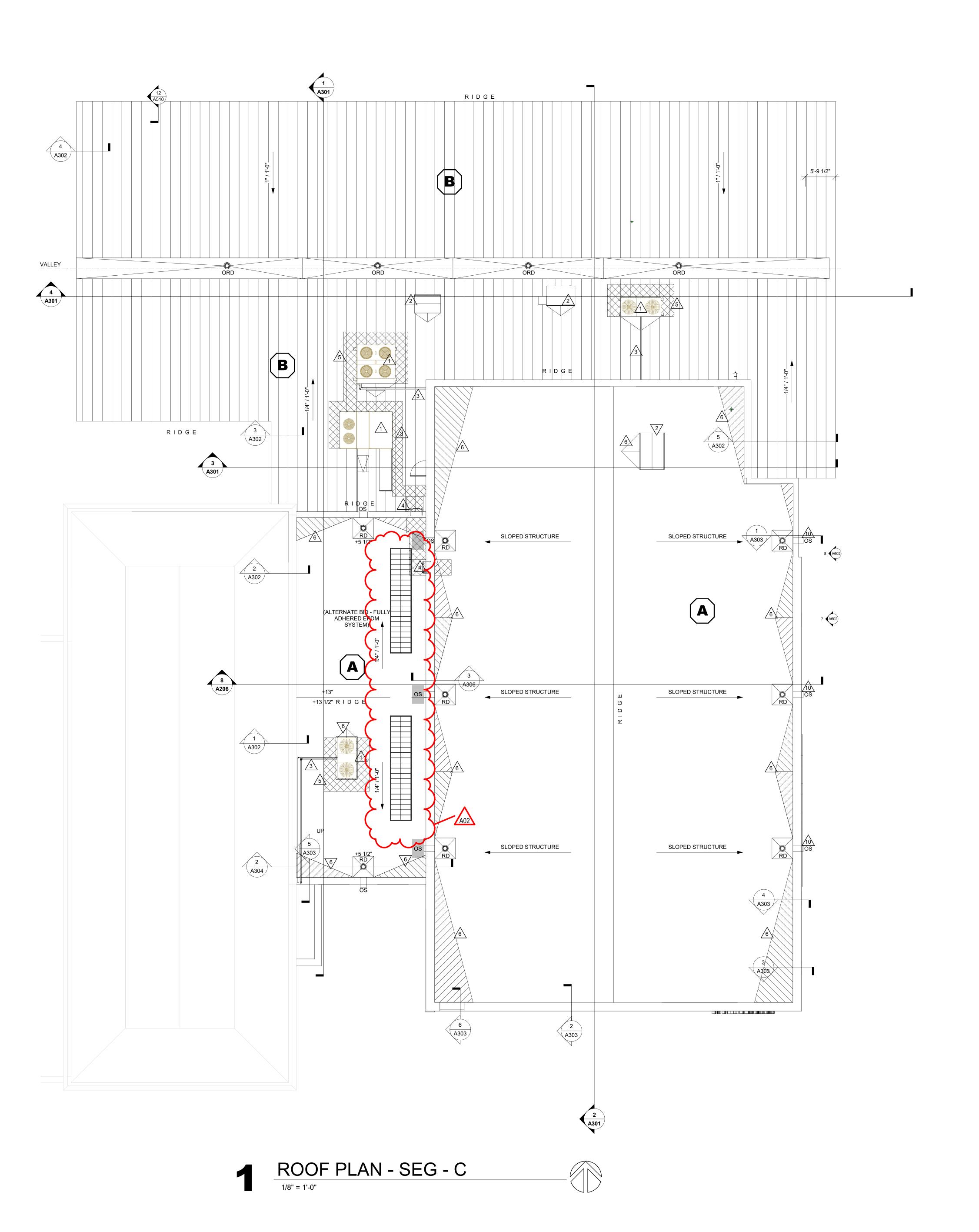
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7-25-19

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No. Description
A02 ADDENDUM #02

Last Update: 8/20/2019 11:09:28 AM



GENERAL ROOF NOTES:

A SEE ROOF SYSTEM NOTES FOR MINIMUM AND AVERAGE INSULATION VALUES.

B ROOFING CONTRACTOR TO VERIFY ALL TAPERED INSULATION DRAWING PLAN DRAIN LOCATIONS WITH PHYSICAL LOCATION OF ROOF DRAIN AS INSTALLED BY PLUMBING TRADE PRIOR TO AE APPROVAL OF TAPERED

INSULATION SUBMITTAL DRAWING

C VERIFY ROOF EQUIPMENT AND PENETRATIONS WITH ALL TRADES. EQUIPMENT SHOWN IS GRAPHIC ONLY.

ALL METAL ITEMS AT ROOF TOPS, UNLESS REQUIRED
OTHERWISE BY EQUIPMENT MANUFACTURER, SHALL BE
PAINTED TO MATCH OTHER TRIM BY THE G.C. - PREPARE,
PRIME AND PAINT AS REQUIRED. PROVIDE FACTORY PRIMED
PRODUCTS WHERE POSSIBLE.

ROOF PENETRATIONS FOR DRAINS, VENTS, ETC. SHALL BE COMPLETED AS PER CURRENT SMACNA REQUIREMENTS AND THE ROOF MANUFACTURERS APPROVED DETAILS FOR WARRANTY SATISFACTION. COORDINATE QUANTITY AND LOCATIONS WITH MEP CONTRACTOR. PROVIDE CURBS WHERE REQUIRED.

ALL METAL ROOF AND FLASHING, SHALL MEET CURRENT SMACNA REQUIREMENTS AND MANUFACTURER'S SPECIFIED WARRANTY.

WHERE MEMBRANE IS SHOWN OVER TOP OF WALL EXTEND DOWN OPPOSITE SIDE AND SECURE TO BLOCKING.

TOP OF WALL BLOCKING SHOWN IS GRAPHIC. PROVIDE BLOCKING THAT SHALL BE ANCHORED TO WALL BELOW AS RECOMMENDED BY ROOFING SYSTEM MANUFACTURER TO WITHSTAND WIND UPLIFT AS STATED IN CODE. TOP OF WALLS SHALL SLOPE TOWARDS ROOF.

I INSTALL BOND BREAK BETWEEN ALL WOOD BLOCKING AND CMU OR CONCRETE.

WHERE ROOF DRAINS PENETRATE ABOVE ROOMS W/ NO

THE GENERAL CONTRACTOR, ROOFING CONTRACTOR AND MEP CONTRACTOR SHALL MEET TO PLAN AND DISCOUNS WITHOUT TO PLAN AND DISCOUNS WITHOUT THE GENERAL CONTRACTOR, ROOFING CONTRACTOR AND MEP CONTRACTORS SHALL MEET TO PLAN AND DISCOUNS THAN OF METALL SHALL MEET TO PLAN AND DISCOUNS THAN OF METALL SHALL MEET TO PLAN AND DISCOUNS THAN OF METALL SHALL MEET TO PLAN AND DISCOUNS THAN OF METALL SHALL MEET TO PLAN AND DISCOUNS THAN OF METALL SHALL MEET TO PLAN AND DISCOUNS THAN OF METALL SHALL MEET TO PLAN AND DISCOUNS THAN OF METALL SHALL MEET TO PLAN AND DISCOUNS THAN OF METALL SHALL SHALL MEET TO PLAN AND DISCOUNS THAN OF METALL SHALL MEET TO PLAN AND DISCOUNS THAN OF METALL SHALL SH

MEP CONTRACTORS SHALL MEET TO PLAN AND DISCUSS FINAL ROOF EQPT. LOCATIONS. TIMING OF MEETING SHALL OCCUR BEFORE INSTALLATION OF ROOF DRAIN LEADERS TO ALLOW FOR ANY REQUIRED ADJUSTMENTS.

THE GENERAL CONTRACTOR, ROOFING CONTRACTOR AND PLUMBING CONTRACTORS SHALL MEET TO PLAN AND DISCUSS FINAL ROOF DRAIN LOCATIONS. TAPERED INSULATION DRAWING SHALL BE RE-SUBMITTED TO THE A/E AFTER DRAIN LOCATIONS ARE APPROVED BY ALL IN WRITING. TAPERED INSULATION INSTALLED CONTRARY TO THE LOW POINT OF THE DRAIN, OVER FLOW OR SCUPPER LOCATIONS SHALL BE CAUSE FOR REJECTION OF WORK.

ROOF SYSTEM DESCRIPTIONS:

A INDUCTION WELDED, SINGLE KEE MEMBRANE ROOFING SYSTEM OVER 5 1/2" POLYISOCYANURATE (MIN. 2 LAYERS) INSULATION OVER VAPOR BARRIER OVER METAL DECK. VAPOR BARRIER SHALL BE TAPED SEAL AT PERIMETER AND OVERLAPPED SEAMS.

(ALTERNATE BID: INSTALL FULLY ADHERED EPDM SYSTEM. SEE 012300)

B

FULLY ADHERED, SINGLE KEE MEMBRANE ROOFING SYSTEM OVER 1/2" HIGH DENSITY COVER BOARD OVER 5 1/2"
POLYISOCYANURATE (MIN. 2 LAYERS) INSULATION OVER VAPOR BARRIER OVER METAL DECK OVER SLOPED STRUCTURE. VAPOR BARRIER SHALL BE TAPED SEAL AT PERIMETER AND OVERLAPPED SEAMS. INSTALL SIMULATED STANDING SEAM RIBS OVER MEMBRANE.

ROOF EQUIPMENT LEGEND:

ACCU AIR COOLED CONDENSING UNIT-SEE MECHANICAL.

EXHAUST VENT HOOD-SEE MECHANICAL.

AIR INTAKE/EXHAUST VENT-SEE MECHANICAL.
 PLUMBING VENT-SEE PLUMBING.

ORD = ROOF DRAIN WITH 4' SQUARE SUMP. INSTALL TO OS = MEET ROOF WARRANTY REQUIREMENT - SEE

KEY NOTES ROOF

1 ROOF TOP MECHANICAL EQUIPMENT - SEE MECHANICAL 2 ROOF INTAKE/EXHAUST - SEE MECHANICAL

PIPING FOR MECHINCAL UNITS - SEE MECHANICAL STEEL ROOF ACCESS LADDER - PAINT INSTALL WALKWAY PADS

5 INSTALL WALKWAY PADS
6 TAPERED INSULATION CRICKET
7 ROOF ACCESS HATCH - PAINT

B EXISTING METAL ROOF
NO ROOF PENITRATIONS IN THIS AREA
OVERFLOW SCUPPER - SEE 54120

ARCHITECTURE ENGINEERING



INTERIOR DESIGN

HSR ASSOCIATES INC.

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WOOD ST EAST ORO, MN 55949

HSR Project Number:

18063

Project Date:

7-25-19
Drawn By:
TBS

Key Plan:

Revisions:

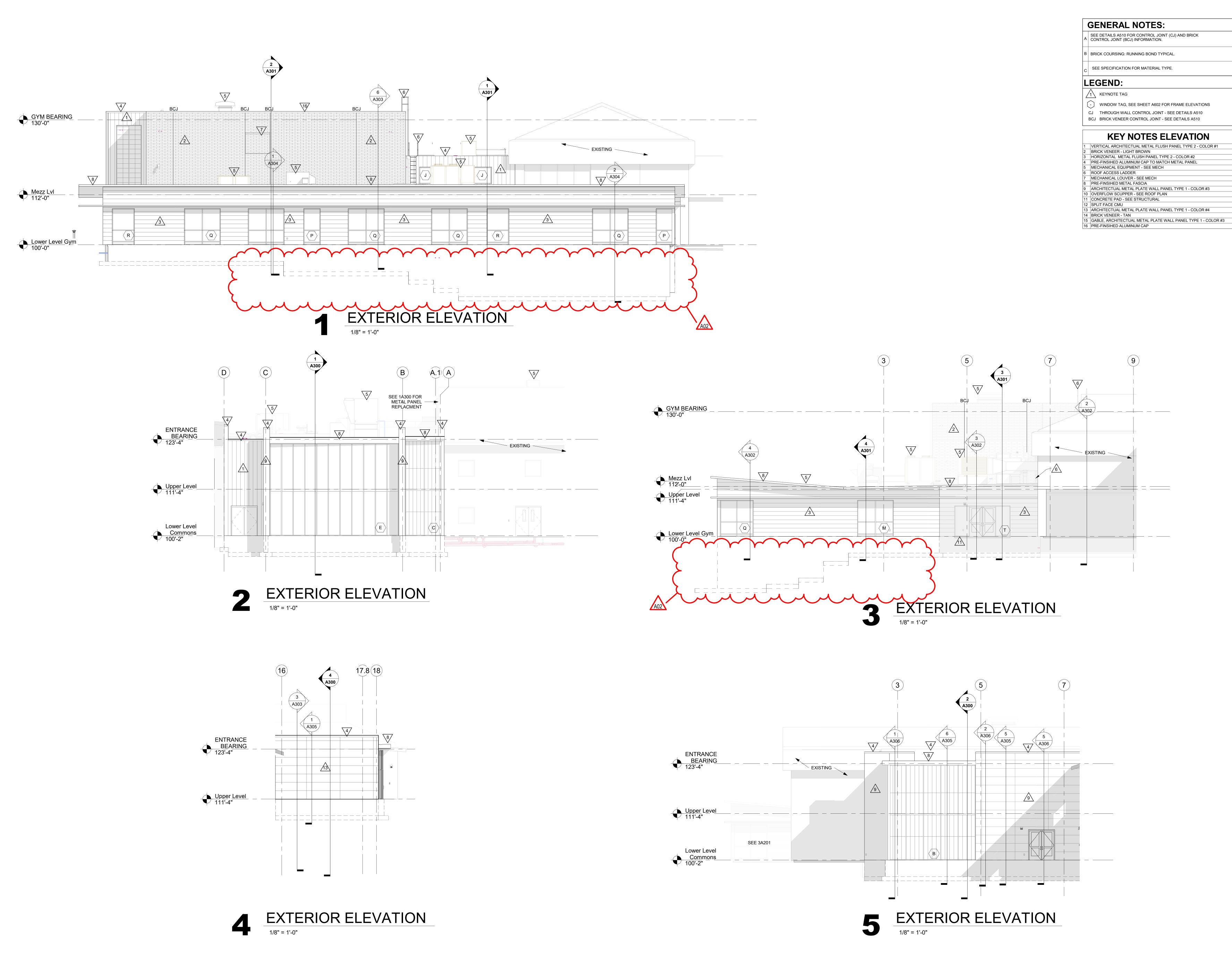
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A02 ADDENDUM #02 8-19-19

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A121



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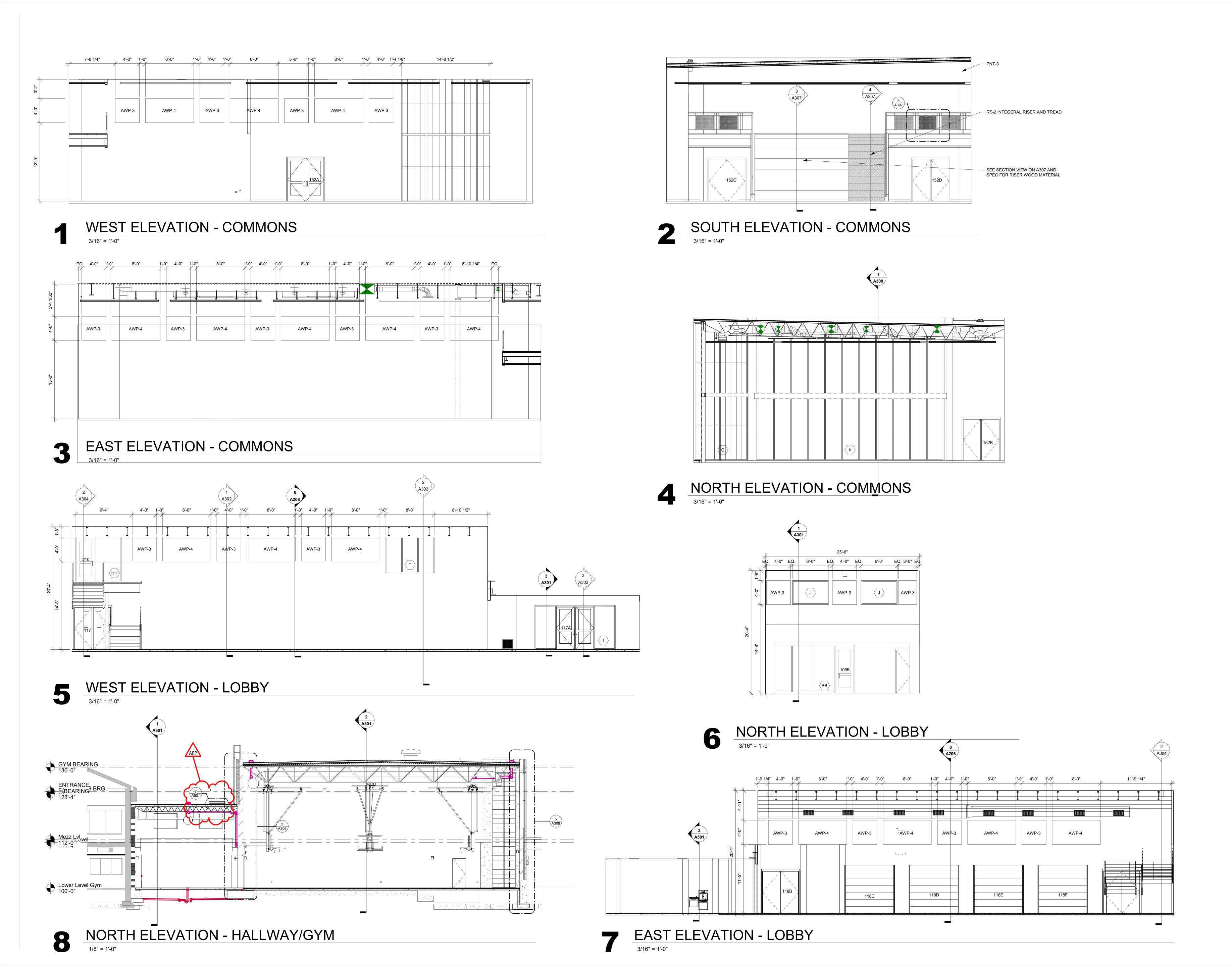
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TBS/SRW

A01 ADDENDUM #01

A02 ADDENDUM #02

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LANESBORO PUBLIC SCHOOLS
ADDITION & REMODEL

Title: ADDITION

Location: LANESBORO,

Location: LANESBORO,

7-25-19
Drawn By:

HSR

Key Plan:

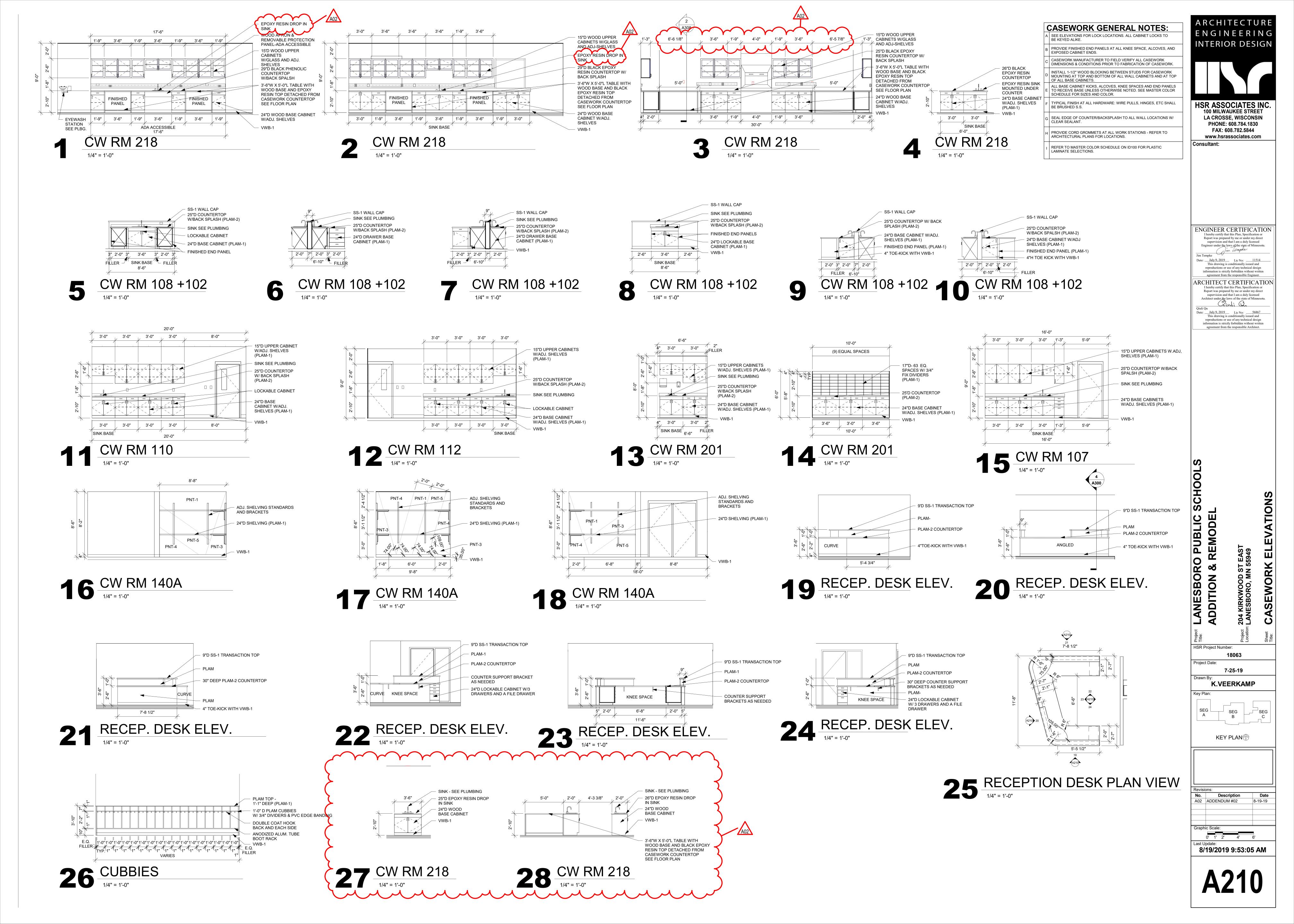
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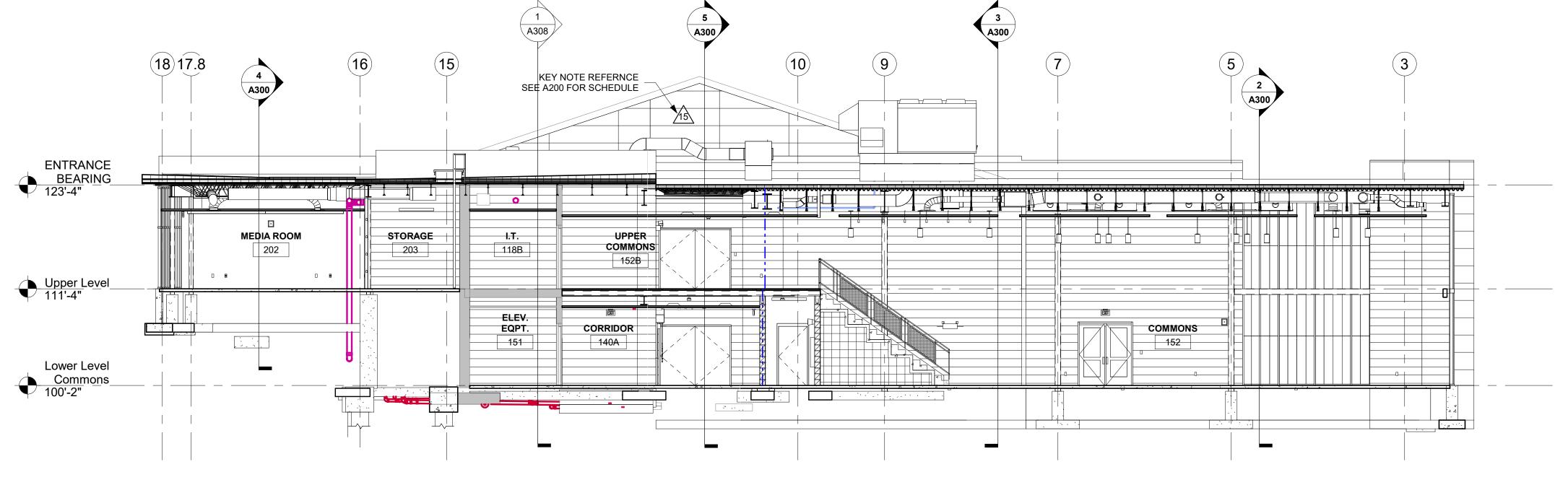
No. Description Date
A02 ADDENDUM #02 8-19-19

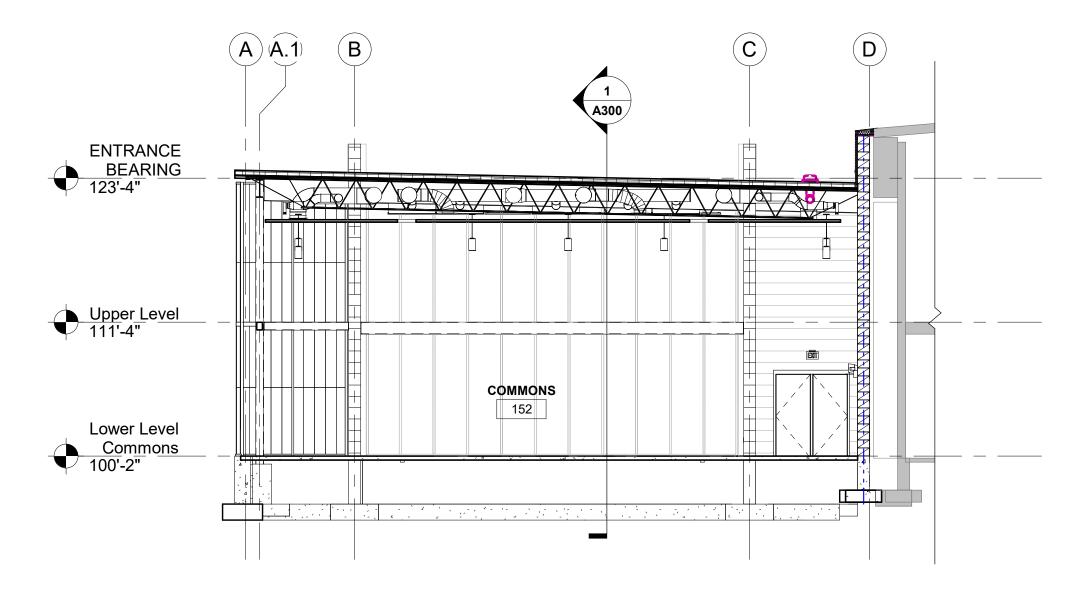
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8/19/2019 3:24:23 PM

A206



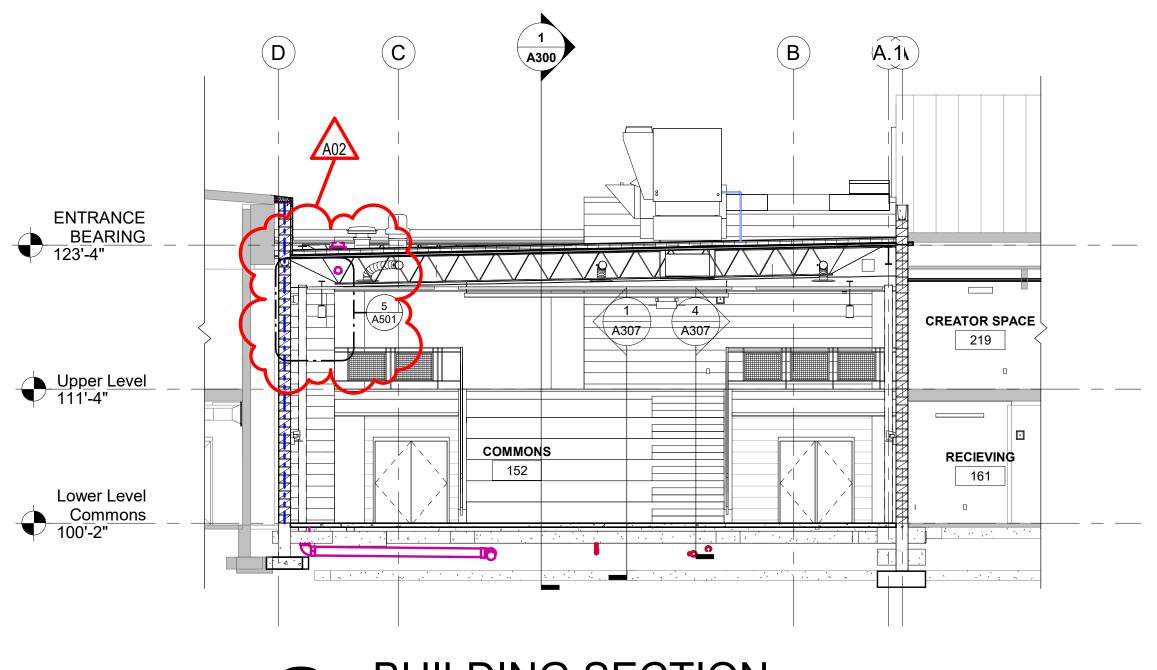




BUILDING SECTION

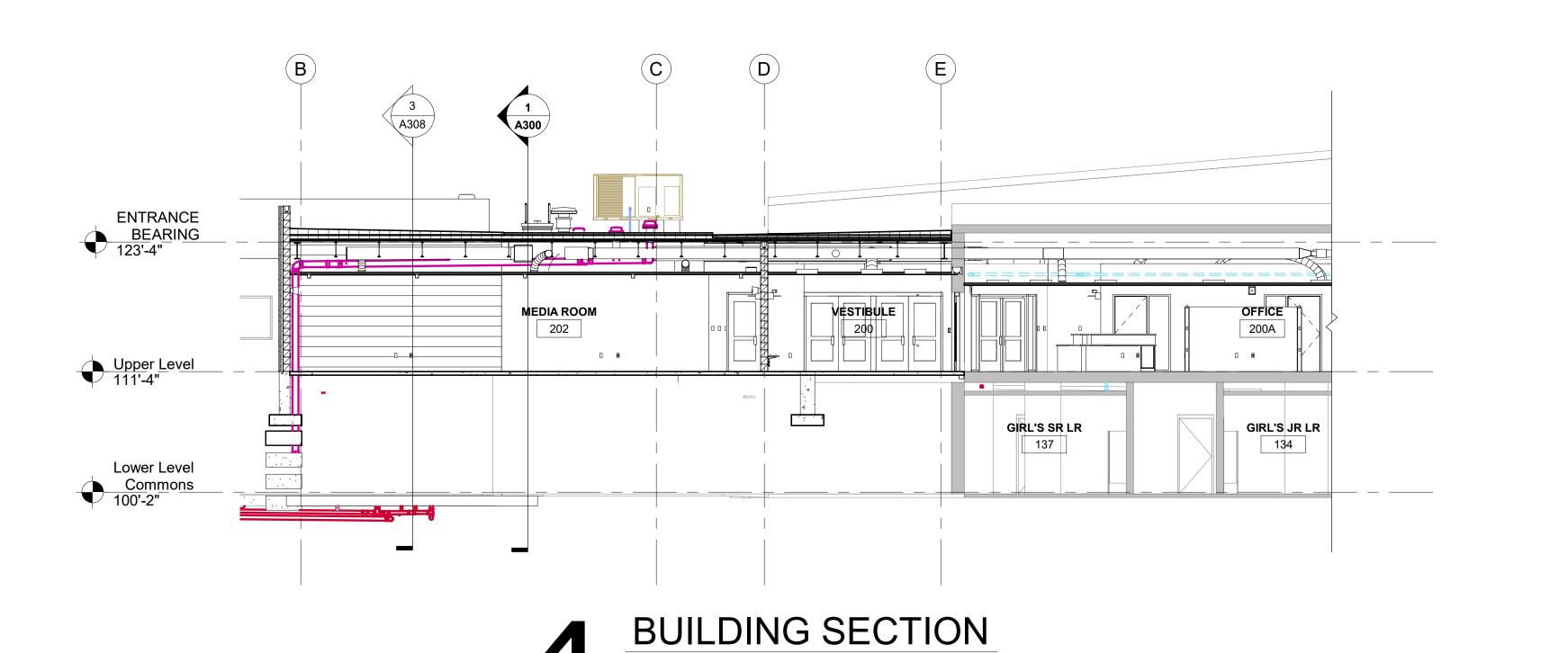
2 BUILDING SECTION

1/8" = 1'-0"



BUILDING SECTION

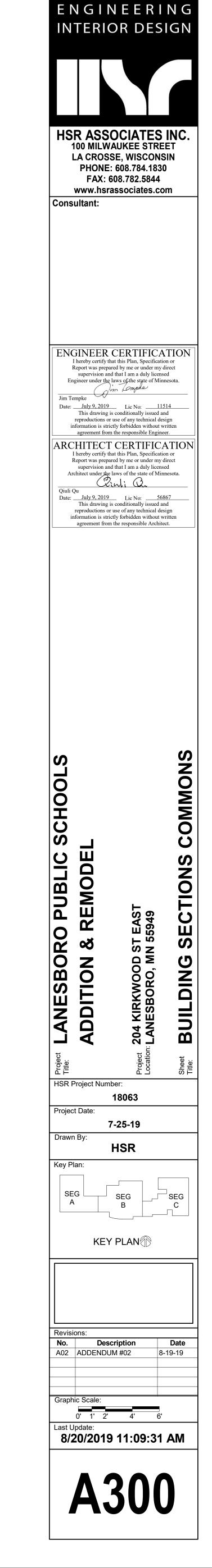
1/8" = 1'-0"



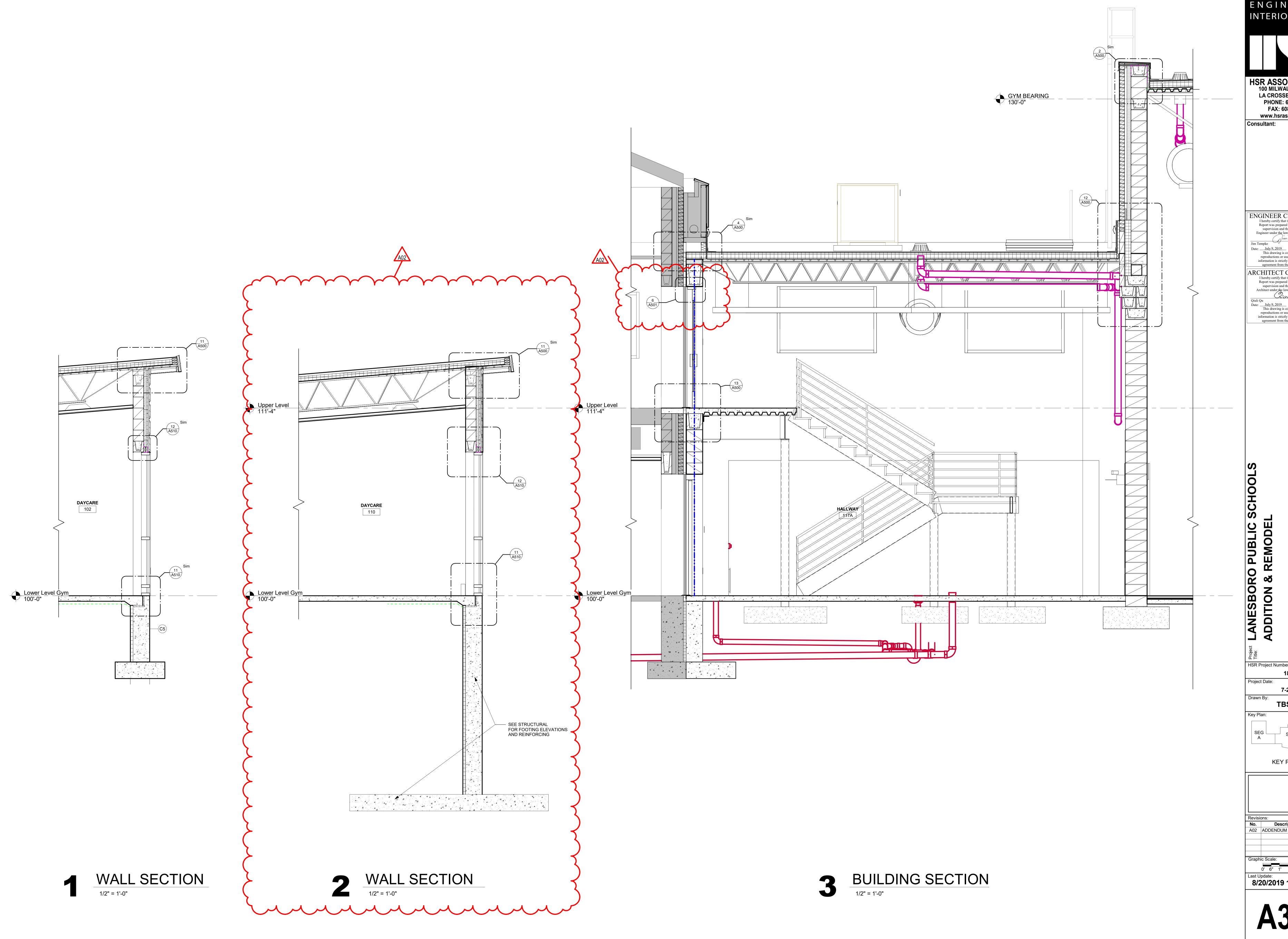
ENTRANCE BEARING
123'-4"
CORRIDOR
224
Upper Level
111'-4"
Lower Level
Commons
100'-2"
HOT WATER
149

5 BUILDING SECTION

1/8" = 1'-0"



ARCHITECTURE



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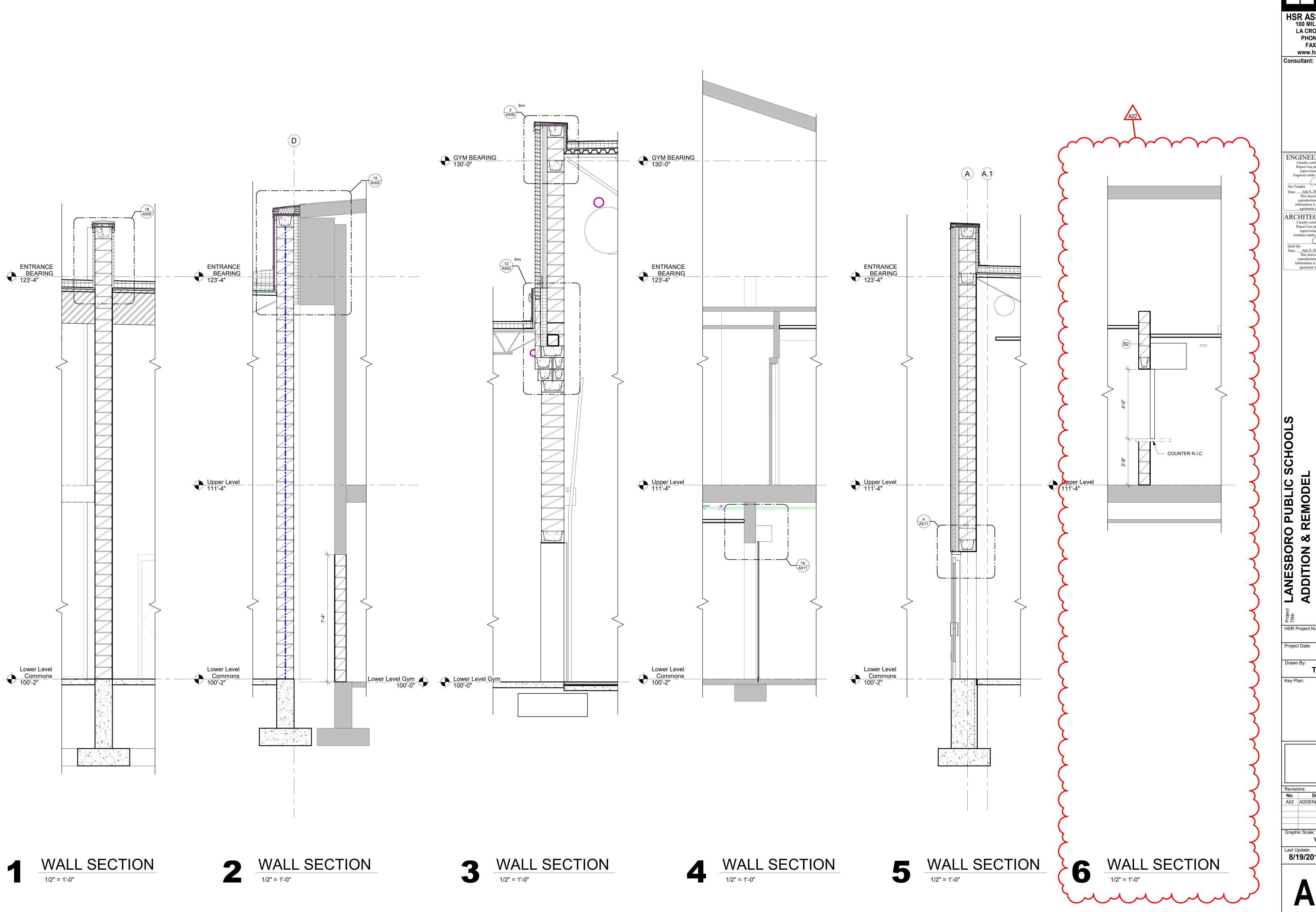
KEY PLAN

Revisions:

No. Description

A02 ADDENDUM #02

8/20/2019 11:09:33 AM



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Ojuli Ou

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O PUBLIC SCHOOLS
REMODEL

HSR Project Number:

7-25-19

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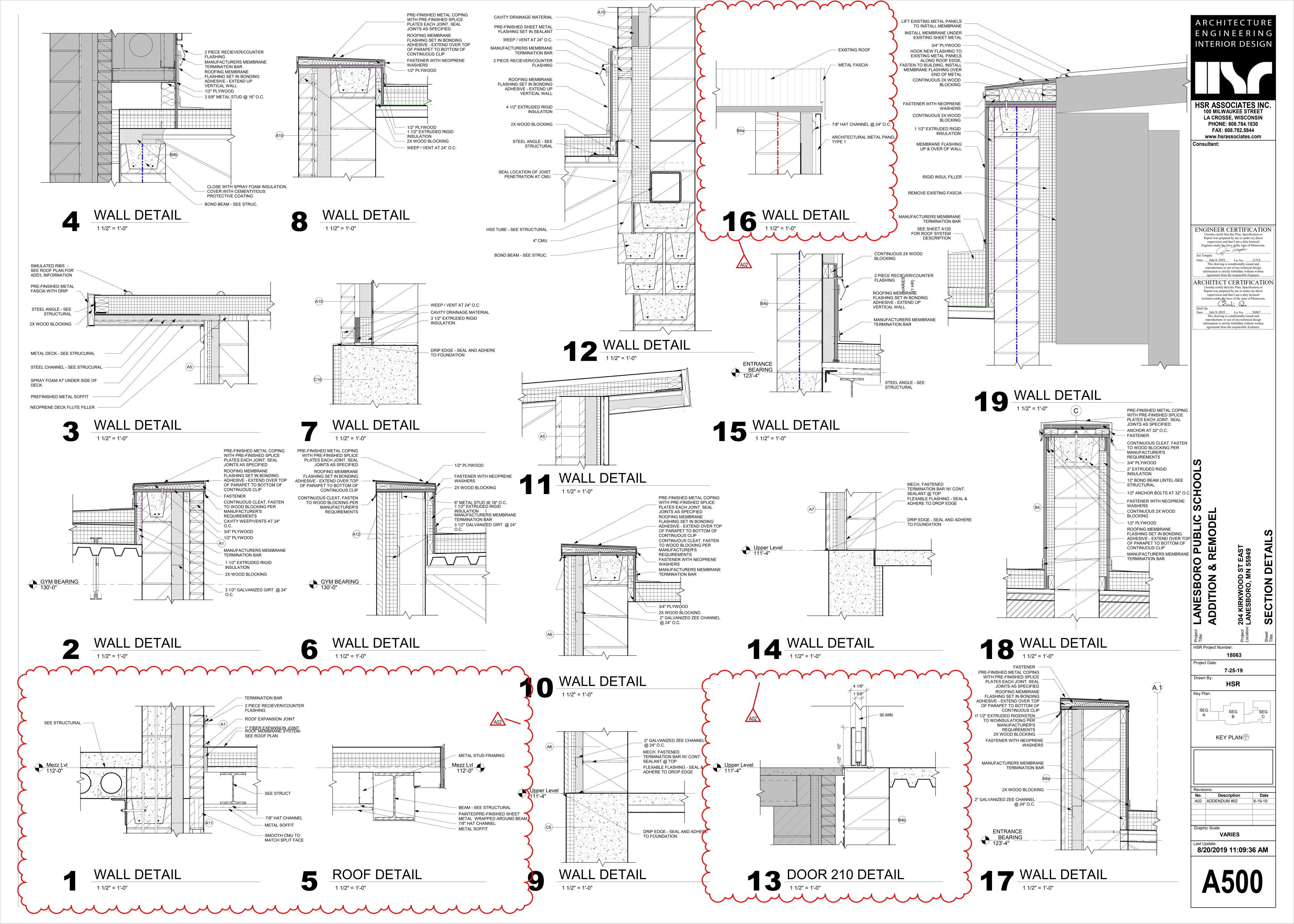
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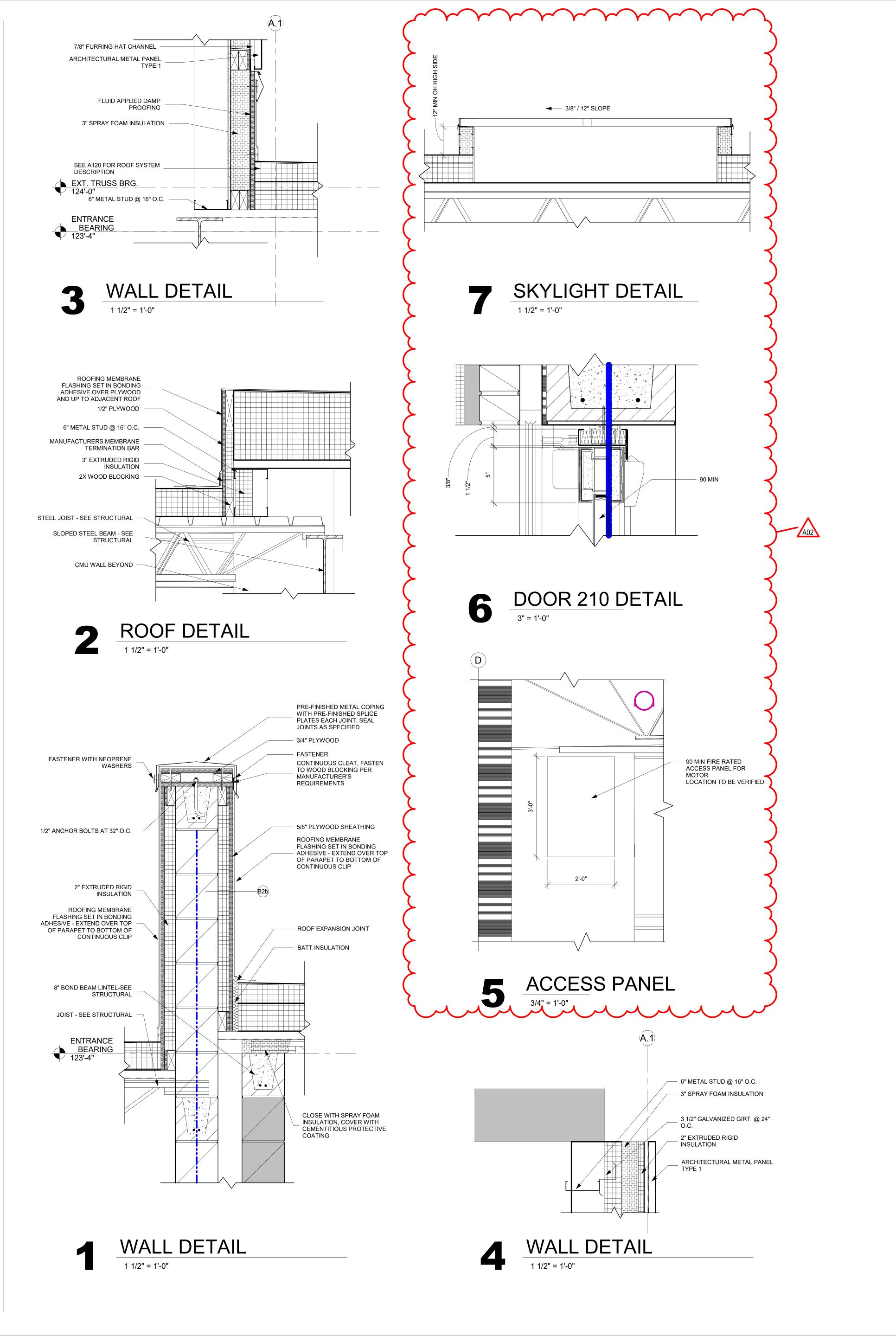
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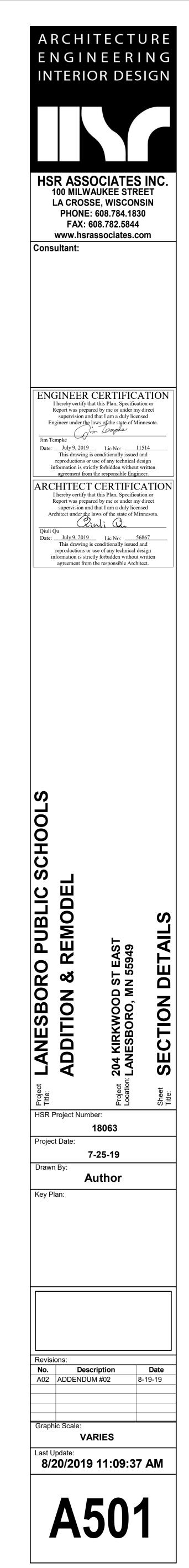
A02 ADDENDUM #02

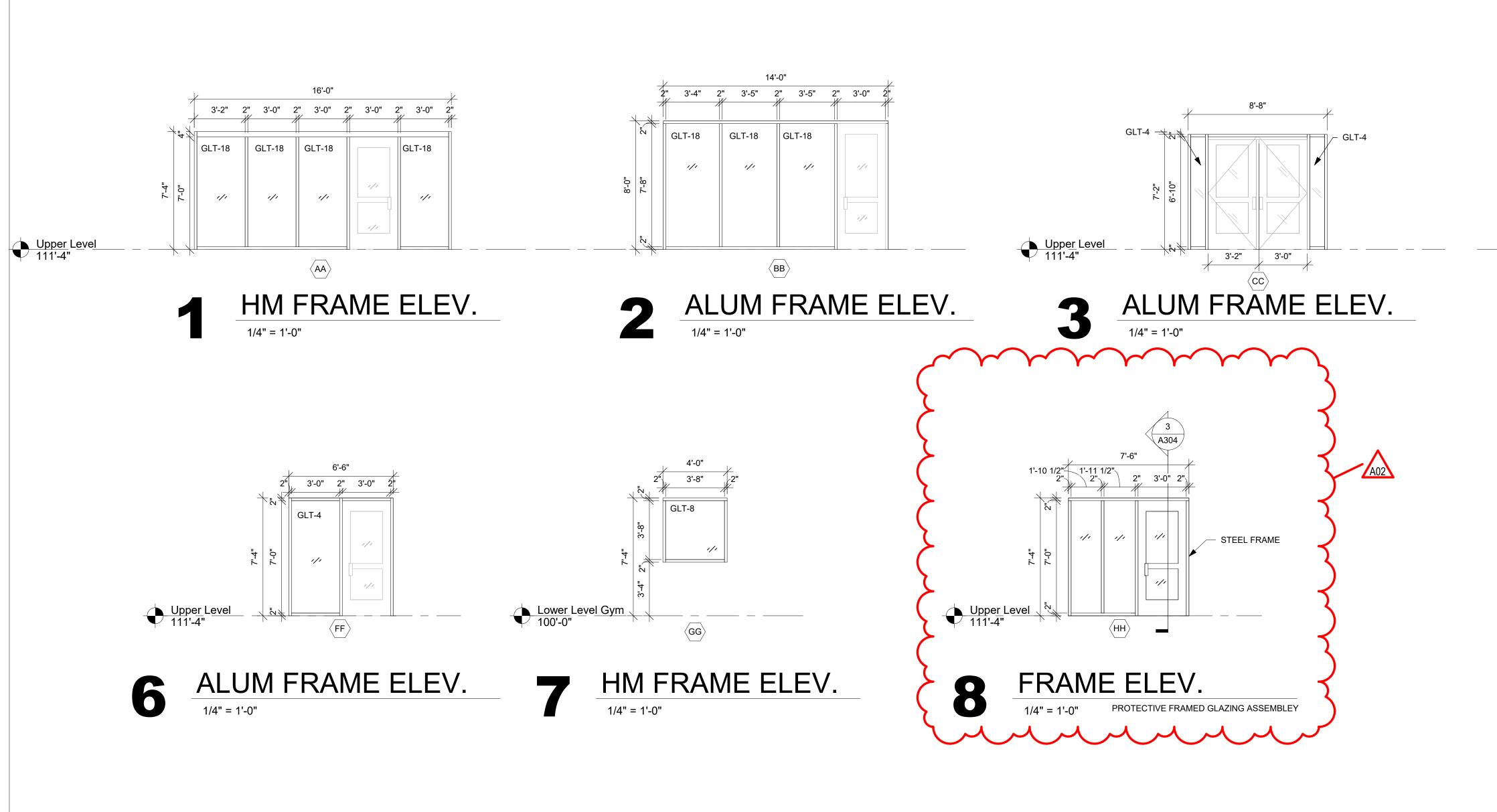
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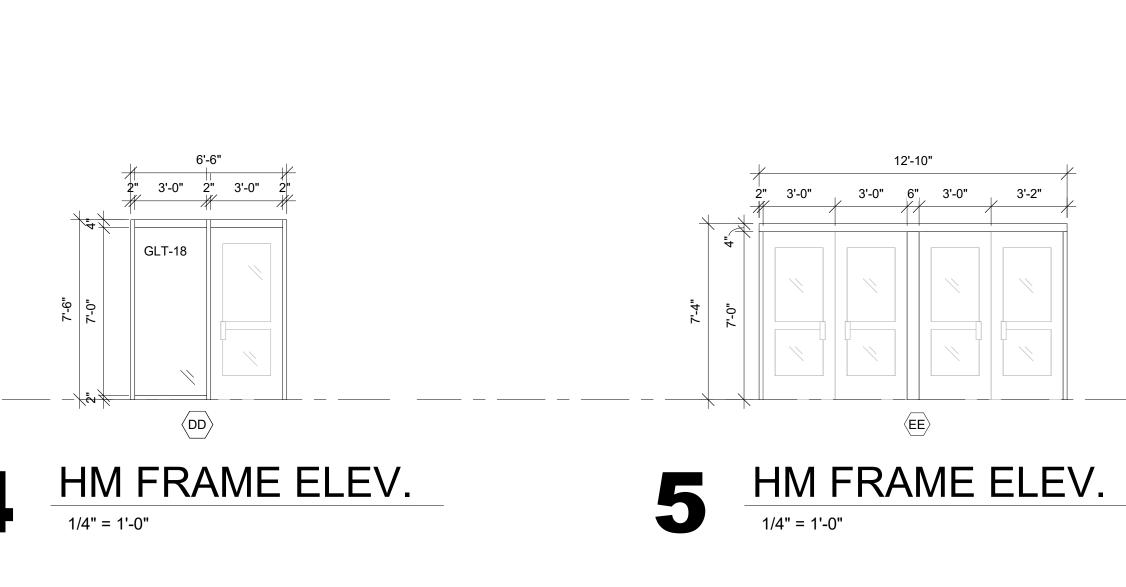
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ARCHITECTURE

ENGINEERING

ENGINEER CERTIFICATION

I hereby certify that this Plan, Specification or Report was prepared by me or under my direct supervision and that I am a duly licensed Engineer under the laws of the state of Minnesota.

Jim Tempke

Date: July 9, 2019 Lic No: 11514

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Report was prepared by me or under my direct
supervision and that I am a duly licensed
Architect under the laws of the state of Minnesota.

Oiuli Ou

Qiuli Qu
Date: July 9, 2019 Lic No: 56867

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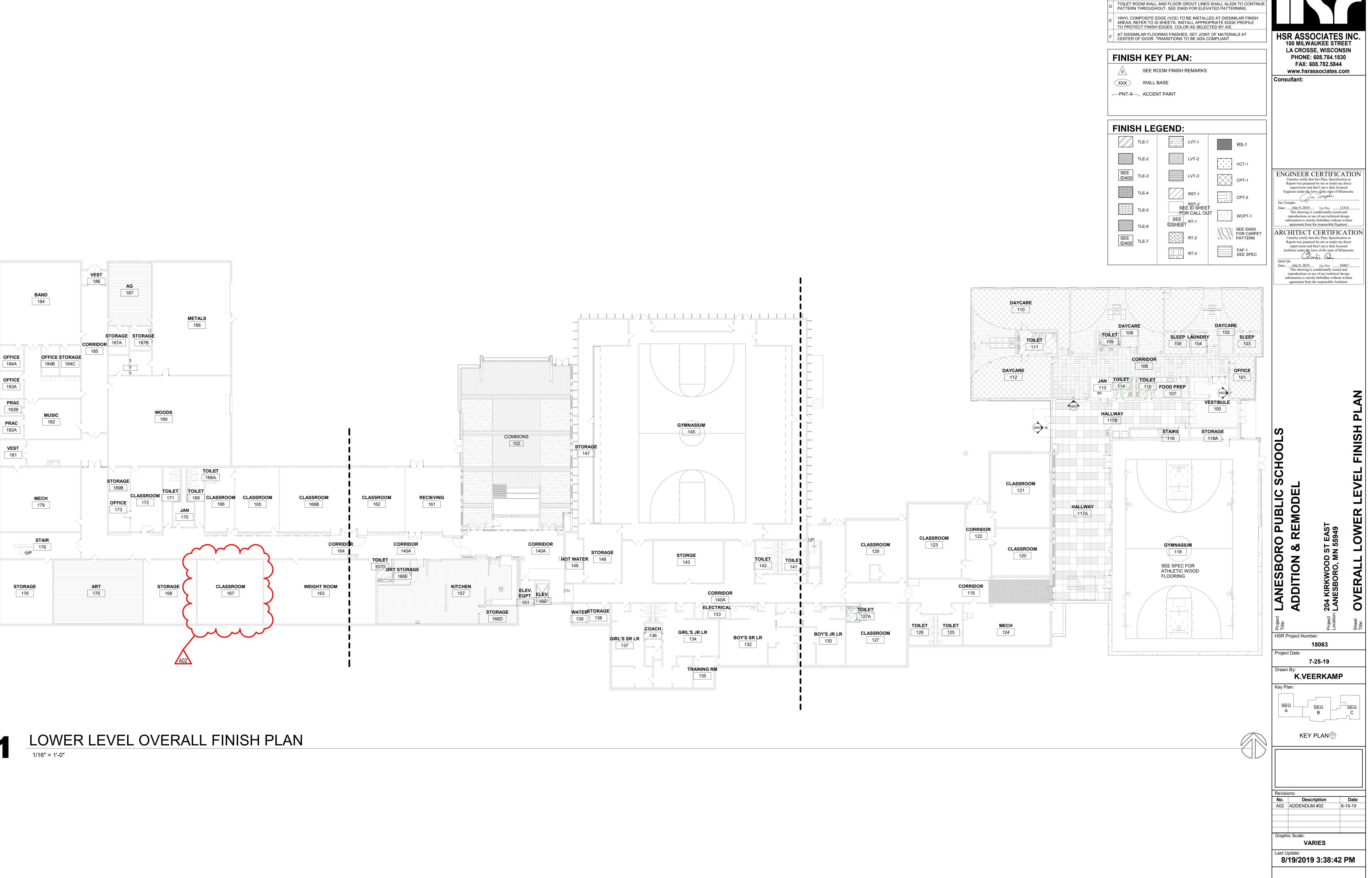
LANESBORO PUBLIC SCHOOLS ADDITION & REMODEL HSR Project Number:

7-25-19

KEY PLAN

No. Description
A02 ADDENDUM #02

Last Update: 8/20/2019 11:09:37 AM



ARCHITECTURE ENGINEERING INTERIOR DESIGN

INTERIOR GENERAL NOTES:

BE IDENTIFIED IN THE ARCHITECTURAL SPECIFICATIONS.

REFERENCES TO PAINT PERTAIN TO COLOR ONLY; PAINT TYPE SHALL

REFER TO MASTER COLOR SCHEDULE ON ID600 FOR MATERIAL FINISH SPECIFICATIONS, ANNOTATIONS, AND ADDITIONAL INFORMATION.

PNT-1 FIELD PAINT; ACCENT PAINT AS INDICATED. SEE ID SHEETS.



INTERIOR GENERAL NOTES:

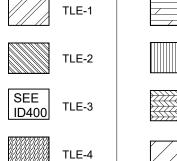
- REFERENCES TO PAINT PERTAIN TO COLOR ONLY; PAINT TYPE SHALL BE IDENTIFIED IN THE ARCHITECTURAL SPECIFICATIONS.
- B PNT-1 FIELD PAINT; ACCENT PAINT AS INDICATED. SEE ID SHEETS.
- REFER TO MASTER COLOR SCHEDULE ON ID600 FOR MATERIAL FINISH SPECIFICATIONS, ANNOTATIONS, AND ADDITIONAL INFORMATION.
- TOILET ROOM WALL AND FLOOR GROUT LINES SHALL ALIGN TO CONTINUE
- PATTERN THROUGHOUT. SEE ID400 FOR ELEVATED PATTERNING. VINYL COMPOSITE EDGE (VCE) TO BE INSTALLED AT DISSIMILAR FINISH AREAS; REFER TO ID SHEETS. INSTALL APPROPRIATE EDGE PROFILE
- TO PROTECT FINISH EDGES. COLOR AS SELECTED BY A/E. AT DISSIMILAR FLOORING FINISHES, SET JOINT OF MATERIALS AT CENTER OF DOOR. TRANSITIONS TO BE ADA COMPLIANT.

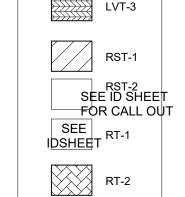
FINISH KEY PLAN:

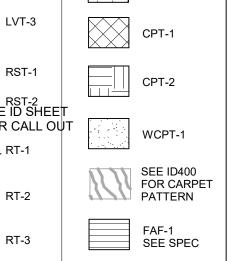
SEE ROOM FINISH REMARKS XXX WALL BASE

—PNT-X— ACCENT PAINT

FINISH LEGEND:







+ + VCT-1

ROOM FINISH REMARKS

- PAINT ALL WALLS PNT-1, ACCENT AS INDICATED ON PLANS. PATCH FLOORING TO MATCH EXISTING
- EXISTING FLOORING REMAINS. PATCH AS NEEDED
- PAINT ALL WALLS PNT-1 EPOXY. FULL HEIGHT TILE ON WET WALLS. 4'-0"H TILE WITH 3" BULLNOSE ON REMAINING WALLS. SEE ID400
- TOUCH UP PAINT AS NEEDED FULL HEIGHT TILE ON WET WALLS. 8" TILE BASE WITH SCHLUTER CAPPING
- TRIM ON REMAINING WALLS. SEE ID400

 8 SEE ELEVATIONS FOR ACCENT PAINT DESIGN

ARCHITECTURE INTERIOR DESIGN



HSR ASSOCIATES INC. 100 MILWAUKEE STREET LA CROSSE, WISCONSIN PHONE: 608.784.1830 FAX: 608.782.5844

www.hsrassociates.com

Consultant:

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Qiuli Qu
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LANESBORO PUBLIC SCHOOL ADDITION & REMODEL

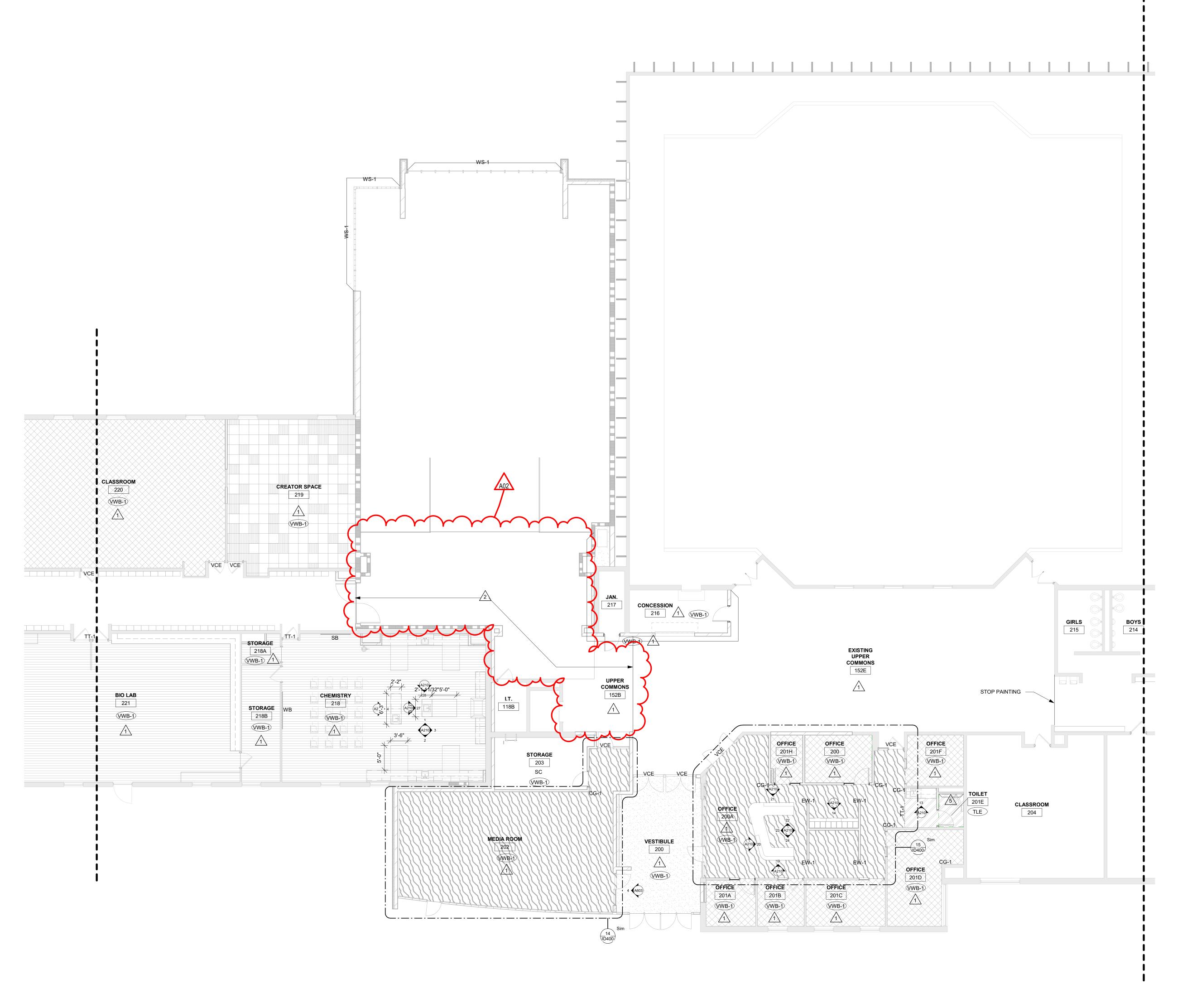
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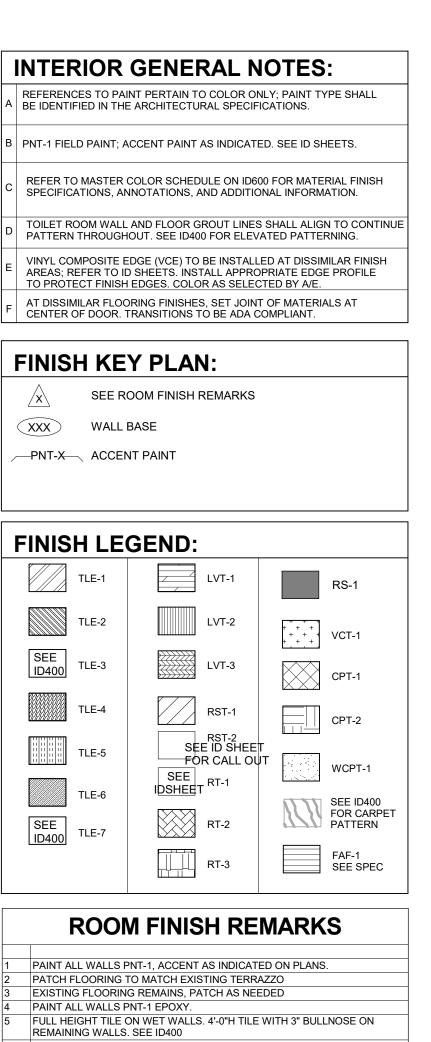
7-25-19

KEY PLAN

No. Description
A02 ADDENDUM #02

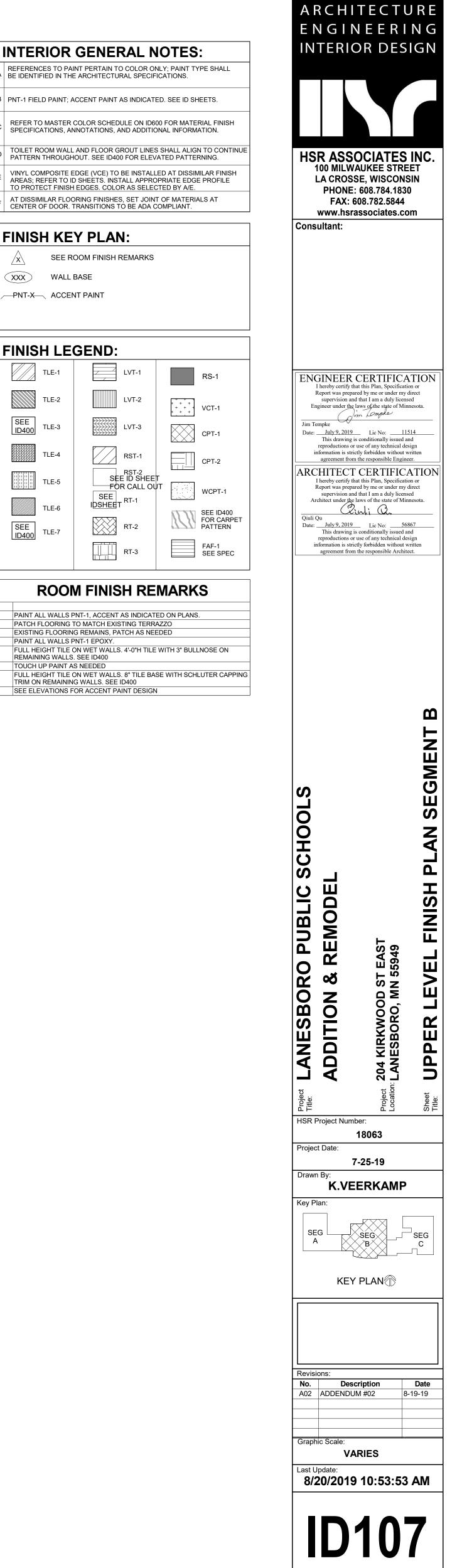
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ID400

TOUCH UP PAINT AS NEEDED



SEG B- UPPER LEVEL FINISH PLAN

THE MATERIAL STRENGTHS AND STANDARDS LISTED HERE REPRESENT A SELECTED SUMMARY OF THE REQUIREMENTS NOTED IN THE SPECIFICATIONS. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION. IN CASE OF DISCREPANCY BETWEEN THESE NOTES AND THE SPECIFICATIONS, THESE NOTES SHALL GOVERN. DESIGN SOIL READING CAPACITY FOR SPREAD/STRIP FOOTINGS 3 UUU DCE

	DESIGN SOIL BEARING CAPACITY FOR SPREAD/ST MODULUS OF SUB-GRADE REACTION	RIP FOOTINGS		3,000 PSF 100 PCI				
	COEFFICIENT OF SLIDING FRICTION (CONCRETE -	SOIL)		0.50				
•	CONCRETE (28 DAY STRENGTH)	/						
	FOOTINGS, DRILLED PIERS, STEEL PILE FILL			f`c = 3,000 PSI				
	FOUNDATION WALLS, INTEGRAL PIERS			f`c = 4,000 PSI				
	CONCRETE SLAB ON METAL DECK			f`c = 4,000 PSI				
	PRECAST CONCRETE TOPPING			f`c = 4,000 PSI				
	INTERIOR SLAB-ON-GRADE			f`c = 4,000 PSI				
	EXTERIOR SLAB-ON-GRADE			f'c = 4,500 PSI				
•	REINFORCING STEEL			- ,				
	WELDED WIRE FABRIC, PROVIDED IN FLAT SHEETS	S ONLY (ASTM A18	5)	$f_y = 65,000 \text{ PSI}$				
	DEFORMED BARS (ASTM A615, GRADE 60)	•	,	$f_y = 60,000 \text{ PSI}$				
•	MASONRY			,				
	CONCRETE MASONRY UNIT ASSEMBLY			f`m = 2,500 PSI				
	CONCRETE MASONRY UNIT (ASTM C90 - LIGHT	ΓWEIGHT)		3,275 PSI				
	MORTAR (ASTM C270)	,		SEE SPECIFICATIONS				
	GROUT (ASTM C476)			f`c = 3,000 PSI				
	ANCHOR RODS (ASTM F1554, GRADE 36)			$f_y = 36,000 \text{ PSI}$				
•	STRUCTURAL STEEL (SHAPES)							
	WF, WT SECTIONS (ASTM A992)			$F_v = 50,000 \text{ PSI}; F_u = 65,000 \text{ PSI}$				
	M, S, HP SECTIONS, CHANNELS, ANGLES, PLATES ((ASTM A36)		$F_y = 36,000 \text{ PSI}; F_u = 58,000 \text{ PSI}$				
	HSS SHAPES - RECTANGULAR (ASTM A500, GRADE			$F_y = 50,000 \text{ PSI}$; $F_u = 62,000 \text{ PSI}$				
	HSS SHAPES - ROUND (ASTM A500, GRADE C)			$F_y = 46,000 \text{ PSI}$; $F_u = 62,000 \text{ PSI}$				
	STEEL PIPE (ASTM A53, GRADE B)			$F_y = 35,000 \text{ PSI}; F_u = 60,000 \text{ PSI}$				
	PLATES (ASTM A36)			$F_y = 36,000 \text{ PSI}; F_u = 58,000 \text{ PSI}$				
•	STRUCTURAL STEEL (CONNECTIONS)							
	ANCHOR RODS (ASTM F1554, GRADE 36)			$F_y = 36,000 \text{ PSI}$				
	HIGH STRENGTH BOLTS (1 1/2" MAXIMUM DIAMETE	R)		AS NOTED				
	TENSION CONTROL BOLTS			AS NOTED				
	WELDING ELECTRODES			E70XX				
	SHEAR STUD CONNECTORS (ASTM A108, GRADE 1	010 THROUGH 102	0)	$F_y = 50,000 \text{ PSI}$				
	DOWEL BAR ANCHORS (ASTM A496)			$F_y = 70,000 \text{ PSI}$				
	THREADED RODS (ASTM A36)		$F_y = 36,000 \text{ PSI}$					
	GROUT (ASTM C1107)		f`c = 5,000 PSI					
•	COLD-FORMED METAL FRAMING							
	COLD-FORMED MATERIAL - 18 GAUGE AND THINNE							
	COLD-FORMED MATERIAL - 16 GAUGE AND THICKE	R (ASTM A653, GR	ADE 50)					
	ANCHOR RODS (ASTM F1554, GRADE 36)			f _y = 36,000 PSI				
	CONNECTOR PLATES (ASTM A36)			f _y = 36,000 PSI				
	CONNECTOR BOLTS (ASTM A307, GRADE A)			F _u = 36,000 PSI				
	WELDING ELECTRODES			E60XX				
	GALVANIZING THICKNESS			G60				
•	WOOD	F = [675 DOI]		F [725 DC]] F - [4 200 000	DCII			
	WALL STUDS (SPF, STUD GRADE)	F _b = [675 PSI]	E - [425	$F_c II = [725 PSI] E = [1,200,000]$	-			
	JOISTS/HEADERS (SPF, NO. 2 OR BETTER)	$F_b = [875 PSI]$		[FI] $F_c \perp = [425 \text{ PSI}]$ $E = [1,400,000]$				
	LAMINATED VENEER LUMBER (LSL)	$F_b = [2,600 \text{ PSI}]$		PSI] $F_c \perp = [880 \text{ PSI}]$ $E = [1,700,000]$				
	LAMINATED VENEER LUMBER (LVL)	$F_b = [3,100 \text{ PSI}]$	r _v =[285	For $F_c \perp = [750 \text{ PSI}]$ $E = [2,000,000]$				
	POSTS AND TIMBERS (SPF, NO.2 OR BETTER)	F _b = [500 PSI]	E - [105	$F_c II = [500 PSI]$ $E = [1,000,000]$	-			
	BEAMS AND STRINGERS (SPF, NO.2 OR BETTER)	$F_b = [600 PSI]$	rv-[125	[FI] $F_c \perp = [425 \text{ PSI}]$ $E = [1,000,000]$	r31]			

► GENERAL NOTES EXISTING CONDITIONS

COMPLETENESS

BOLTS AND LAG SCREWS (ASTM A307, GRADE A)

INFORMATION PERTAINING TO EXISTING CONDITIONS GIVEN ON THE STRUCTURAL DRAWINGS REPRESENTS THE ACTUAL EXISTING FIELD CONDITION TO THE BEST OF OUR KNOWLEDGE. R.A. SMITH, INC. MAKES NO WARRANTY AS TO THEIR ACCURACY. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS, DIMENSIONS AND BUILDING CONDITIONS AFFECTING THE WORK BY DIRECT SURVEY AND MEASUREMENT PRIOR TO THE FABRICATION, ERECTION OR CONSTRUCTION OF ANY ITEM IMPACTED BY EXISTING CONDITIONS. REPORT DISCREPANCIES BETWEEN THE CONTRACT DOCUMENTS AND FIELD CONDITIONS FOR REVIEW. ANY WORK PERFORMED PRIOR TO THE RESOLUTION OF THE DISCREPANCIES IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTORS EXPENSE.

 $F_v = 36,000 \text{ PSI}$

EXISTING STRUCTURE TO REMAIN IS SHOWN WITH LIGHT GRAY LINES. EXISTING STRUCTURE TO BE REMOVED IS NOT GENERALLY SHOWN ON STRUCTURAL DRAWINGS - SEE ARCHITECTURAL DRAWINGS FOR DEMOLITION DRAWINGS. ALL EXISTING STRUCTURE TO REMAIN TO BE SUPPORTED BY NEW CONSTRUCTION SHALL BE SHORED UNTIL NEW

CONSTRUCTION IS IN PLACE, COMPLETED, AND CAPABLE OF SUPPORTING THE EXISTING STRUCTURE. EXISTING STRUCTURE TO REMAIN THAT IS AFFECTED, BUT NOT SUPPORTED, BY NEW CONSTRUCTION SHALL BE SHORED UNTIL IT IS NO LONGER AFFECTED BY CONSTRUCTION ACTIVITIES. CONSTRUCTION

UNLESS SPECIFICALLY NOTED OTHERWISE, BUILDING STRUCTURE HAS BEEN DESIGNED FOR THE FINAL COMPLETED CONDITION ONLY, AND HAS NOT BEEN ANALYZED, INVESTIGATED OR DESIGNED FOR OVERALL STRUCTURE, OR INDIVIDUAL MEMBER, STABILITY DURING CONSTRUCTION. CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY BRACING AND SUPPORTS FOR ALL STRUCTURAL ELEMENTS, BOTH INDIVIDUALLY AND COLLECTIVELY, AS REQUIRED AT EVERY STAGE OF CONSTRUCTION UNTIL THE FINAL COMPLETION OF THE STRUCTURE. NO PORTION OF THE BUILDING STRUCTURE. WHILE UNDER CONSTRUCTION IS INTENDED TO BE STABLE IN THE ABSENCE OF THE CONTRACTORS TEMPORARY BRACES AND SUPPORTS, WHICH SHALL ADDITIONALLY PROVIDE SUPPORT FOR ALL CONSTRUCTION LOADING. MATERIALS AND EQUIPMENT SHALL BE STORED, TRANSPORTED AND INSTALLED IN A MANNER THAT WILL NOT EXCEED THE DESIGN FLOOR LOADING.

CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION INCLUDING, BUT NOT LIMITED TO, TEMPORARY BRACING, SUPPORTS, SHORING, FORMING TO SUPPORT IMPOSED CONSTRUCTION LOADS, AND OTHER SIMILAR ITEMS.

STRUCTURAL DOCUMENTS MAY REFER TO OSHA REQUIREMENTS. SUCH REFERENCES ARE INCIDENTAL, AND ARE NOT INTENDED TO IDENTIFY ALL APPLICABLE OSHA REQUIREMENTS.

INFORMATION CONTAINED IN THE GENERAL NOTES IS ONLY A PARTIAL SUMMARY OF PROJECT REQUIREMENTS. SEE SPECIFICATIONS, PLANS AND DETAILS FOR ADDITIONAL REQUIREMENTS.

USE ONLY DIMENSIONS INDICATED ON THE DRAWINGS. DO NOT MANUALLY SCALE THE DRAWINGS OR USE ANY

UNLESS NOTED OTHERWISE, CENTERLINE OF FLOOR FRAMING ELEMENTS COINCIDES WITH COLUMN

CENTERLINES. AND FRAMING ELEMENTS ARE EQUALLY SPACED BETWEEN ADJACENT COLUMN CENTERLINES.

MAJOR OPENING LOCATIONS AND SIZES ARE INDICATED ON THE STRUCTURAL DRAWINGS - SMALLER OPENINGS AND SLEEVES REQUIRED TO ACCOMMODATE VARIOUS BUILDING SERVICES MAY NOT BE NOTED. CONTRACTOR TO VERIFY THE SIZE AND LOCATION OF ALL ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING OPENINGS, INCLUDING CLEARANCE REQUIREMENTS CONTAINED IN THE RESPECTIVE DISCIPLINE DOCUMENTS FOR INSTALLATION AND IN-PLACE OPERATION OF THE RESPECTIVE EQUIPMENT OR ITEMS. UNDER NO CIRCUMSTANCES MAY PENETRATIONS BE MADE IN ANY STRUCTURAL ELEMENT AFTER FINAL PLACEMENT IN THE BUILDING STRUCTURE WITHOUT WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.

CONSULT ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS AND MANUFACTURERS SPEC SHEETS FOR LOCATIONS AND DIMENSIONS OF PADS, CURBS, EQUIPMENT SUPPORTS, DEPRESSIONS, INSERTS, DRIPS, REGLETS, REVEALS, FINISHES AND OTHER MISCELLANEOUS PROJECT REQUIREMENTS THAT NECESSITATE INCIDENTAL ACCOMMODATION BY THE BUILDING STRUCTURE BUT ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS.

▶ GENERAL NOTES (CONTINUED)

 GENERAL THE STRUCTURE HAS BEEN DESIGNED AS UNRESTRAINED FOR THE PURPOSE OF FIRE RATING AND FIREPROOFING

STRUCTURAL COMPONENTS HAVE NOT BEEN DESIGNED FOR VIBRATORY EQUIPMENT UNLESS NOTED OTHERWISE. PLACE VIBRATORY EQUIPMENT AND EQUIPMENT SENSITIVE TO VIBRATIONS ON VIBRATION ISOLATORS SPECIFICALLY DESIGNED FOR THE EQUIPMENT.

LATERAL BRACING FOR NON-STRUCTURAL ELEMENTS DESIGNED AND DETAILED BY COMPONENT SUPPLIERS SHALL BE DESIGNED TO APPLY LOADS DIRECTLY TO FLOOR OR ROOF DIAPHRAGMS. BRACES SHALL NOT ATTACH DIRECTLY TO BOTTOM FLANGES OF BEAMS OR BOTTOM CHORDS OF JOISTS UNLESS THE COMPONENT SUPPLIER PROVIDES

HOLES, NOTCHES, BLOCK-OUTS AND OTHER SIMILAR FIELD MODIFICATIONS TO STRUCTURAL MEMBERS NOT SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED SHOP DRAWINGS ARE NOT PERMITTED.

ADDITIONAL BRACING FROM THOSE ELEMENTS TO THE FLOOR OR ROOF DIAPHRAGM AT EACH ATTACHMENT POINT.

ALL FUTURE EXPANSION IS ASSUMED TO BE COMPLETELY SELF SUPPORTING FOR BOTH

▶ SYSTEM NOTES

ASSEMBLY EVALUATIONS.

GRAVITY AND LATERAL LOADS.

 FOUNDATIONS AND EARTHWORK REMOVE EXISTING SURFICIAL TOP SOIL AND VEGETATION FROM WITHIN THE BUILDING AREA AND A MINIMUM OF TEN FEET BEYOND. EXCAVATE MATERIAL TO PROPOSED SLAB-ON-GRADE SUBGRADE. PROOFROLL WITH A HEAVY RUBBER TIRED VEHICLE. SOILS WHICH HEAVE, PUMP, OR DO NOT READILY COMPACT SHALL BE EXCAVATED AND REPLACED WITH ENGINEERED FILL.

SUBGRADE PREPARATION FOR FOOTINGS SHALL CONSIST OF EXCAVATION TO REQUIRED ALLOWABLE BEARING CAPACITY SOILS AT OR NEAR DESIGN FOOTING ELEVATIONS. WHERE UNSUITABLE SOIL IS ENCOUNTERED AT NOMINAL BEARINGDEPTH, SEE OVER EXCAVATION DETAIL.

ALL COMPACTION REQUIREMENTS REFER TO % OF MAXIMUM DRY DENSITY PER ASTM D-1557 MODIFIED PROCTOR. GRANULAR STRUCTURAL FILL BENEATH FOOTINGS SHALL BE PLACED IN LAYERS NO MORE THAN 8" THICK, AND EACH LAYER SHALL BE COMPACTED TO 95%. COHESIVE FILL APPROVED BY THE GEOTECHNICAL CONSULTANT SHALL BE PLACED IN LAYERS NO THICKER THAN 8", AND EACH LAYER SHALL BE COMPACTED TO 95%. MOISTURE CONDITION FILL MATERIALS AS REQUIRED TO OBTAIN PROPER COMPACTION. COHESIVE SOILS OR GRANULAR SOILS WITH A SIGNIFICANT PERCENT OF COHESIVE FINES SHALL BE CONDITIONED TO WITHIN 3% OF OPTIMUM MOISTURE CONTENT AT COMPACTION.

FOR GENERAL INFORMATION AND SPECIFIC RECOMMENDATIONS AND REQUIREMENTS PERTAINING TO THE PROJECT SITE, REFER TO THE PROJECT GEOTECHNICAL REPORT PREPARED BY CHOSEN VALLEY TESTING, INC., JOB NUMBER 14514.19.MNR, DATED MAY 14, 2019

ALL ACTIVITIES CONCERNING PREPARATION AND VERIFICATION OF BEARING SOILS FOR SLAB-ON-GRADE AND FOOTINGS SHALL BE SUPERVISED AND APPROVED BY A QUALIFIED GEOTECHNICAL ENGINEER.

COLUMNS, PIERS, AND SPREAD FOOTINGS ARE CENTERED ON GRIDLINES UNLESS NOTED OTHERWISE. CONTINUOUS FOOTINGS ARE CENTERED ON WALLS ABOVE UNLESS NOTED OTHERWISE.

BACKFILL UNIFORMLY ON EACH SIDE OF FOUNDATION WALLS, GRADE BEAMS AND OTHER SIMILAR ELEMENTS. DO NOT BACKFILL AGAINST ANY STRUCTURAL ELEMENT UNTIL THAT ELEMENT HAS ATTAINED FULL DESIGN STRENGTH. DO NOT BACKFILL AGAINST BASEMENT WALLS UNTIL TOP AND BOTTOM OF WALL IS BRACED BY FLOOR FRAMING AND SLAB-ON-GRADE.

TOP OF FOOTING ELEVATION NOTED ON DRAWINGS REPRESENT CONSIDERED ENGINEERING JUDGMENTS ABOUT PROTECTION FROM FROST AND MINIMUM DEPTH TO SOILS CAPABLE OF PROVIDING DESIGN SOIL BEARING CAPACITY. UNCERTAINTIES INHERENT IN DETERMINING THE ELEVATION OF SOILS ADEQUATE TO PROVIDE DESIGN BEARING CAPACITY MAY REQUIRE FOUNDATIONS TO BE LOWERED - IN NO CASE SHALL TOP OF FOOTING BE HIGHER THAN NOTED. A GEOTECHNICAL ENGINEER SHALL VERIFY THAT SOIL AT THE FOOTING BASE IS ADEQUATE TO PROVIDE THE REQUIRED DESIGN SOIL BEARING CAPACITY.

 CAST-IN-PLACE CONCRETE DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF ACI 318 -11 05 EXCEPT WHERE MORE RESTRICTIVE REQUIREMENTS ARE NOTED.

REINFORCING CLEAR COVER SHALL BE AS NOTED BELOW UNLESS SPECIFICALLY NOTED OTHERWISE ON STRUCTURAL CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3" CONCRETE EXPOSED TO EARTH OR WEATHER #3 - #5 BARS #6 - #18 BARS CONCRETE NOT EXPOSED TO EARTH OR WEATHER WALLS - #3 THRU #11 BARS

PROVIDE (2) #5 BARS AROUND ALL OPENINGS AND (2) #5 DIAGONAL BARS AT ALL OPENING AND RE-ENTRANT

WALLS - #14 THRU #18 BARS

COLUMN/PIER MAIN REINFORCING

COLUMN/PIER TIES

ALL BAR SPLICES SHALL BE CONTACT LAP SPLICED USING CLASS B TENSION LAP LENGTHS, WITH ADJACENT LAPS STAGGERED A MINIMUM OF 3'-0" UNLESS DETAILED OTHERWISE.

FIELD WELDING OF ASTM A615 REINFORCING STEEL IS NOT PERMITTED. FIELD BENDING OF REINFORCING STEEL IS NOT PERMITTED EXCEPT WHERE SPECIFICALLY DETAILED ON STRUCTURAL DRAWINGS.

CORING OF COLUMNS, WALLS, BEAMS, JOISTS AND SLABS IS NOT PERMITTED. PROVIDE STEEL SLEEVES FOR ALL PENETRATIONS AT ALL LOCATIONS APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO PLACING CONCRETE.

 CONCRETE MASONRY DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF ACI 530 -11 AND ACI 530.1 -11 EXCEPT WHERE MORE RESTRICTIVE REQUIREMENTS ARE NOTED.

ALL CMU SHALL BE PLACED IN RUNNING BOND. UNLESS NOTED OTHERWISE PROVIDE CONTINUOUS LADDER TYPE REINFORCEMENT WITH 9 GAUGE SIDE AND CROSS RODS AT 16" OC VERTICALLY IN ALL WALLS AND PIERS. AND AT 8" OC VERTICALLY AT PARAPETS. WHERE VERTICAL BARS ARE REQUIRED. CONSTRUCT CMU WALL TO PROVIDE A CONTINUOUS UNOBSTRUCTED CELL FROM BOTTOM TO TOP OF BAR. CELL CONTAINING A SINGLE BAR SHALL NOT BE LESS THAN 3" X 4" IN PLAN AREA.

PORTIONS OF CMU CONSTRUCTION REQUIRING STRUCTURAL FILL SHALL USE GROUT ONLY. USE OF CONCRETE FILL IN CMU CONSTRUCTION IS NOT PERMITTED. WHERE CLEARANCES AND CONGESTION PERMIT, USE COARSE GROUT WITH PEA GRAVEL AGGREGATE; OTHERWISE USE FINE GROUT.

REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION OF ALL VERTICAL CONTROL JOINTS IN EXTERIOR WYTHES OF PERIMETER WALLS AND FOR EXTERIOR WALLS.

PROVIDE STEEL PIPE SLEEVES AT ALL LOCATIONS WHERE PIPING PASSES THROUGH CMU WALL.

WHERE BOND BEAMS INTERSECT AT WALL CORNERS AT DIFFERENT ELEVATIONS, RUN EACH BOND BEAM AROUND THE CORNER FOR A MINIMUM OF TWO FULL BLOCK LENGTHS BEFORE TERMINATING. WHERE BOND BEAMS ADJOIN ON THE SAME WALL AT DIFFERENT ELEVATIONS, RUN BOND BEAMS PAST ONE ANOTHER A MINIMUM OF FOUR FULL BLOCK LENGTHS BEFORE TERMINATING

 STRUCTURAL STEEL DESIGN, DETAILING, AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS AISC 360 -10, THE CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES AISC 303 -10, AND THE STEEL CONSTRUCTION MANUAL FOURTEENTH EDITION.

TYPICAL DETAILS INDICATE GENERAL CRITERIA FOR DESIGN AND DETAILING OF CONNECTIONS. THEY ARE NOT INTENDED TO CONVEY COMPLETE INFORMATION CONCERNING SIZE AND QUANTITY OF CONNECTORS, PLATES, ANGLES, WELDS AND SIMILAR ITEMS THAT ARE DEVELOPED THROUGH THE DESIGN OF AN INDIVIDUAL CONNECTION FOR A SPECIFIC SET OF LOADS AND COMBINATIONS. DETAILS THAT CONVEY SPECIFIC COMPONENT INFORMATION ESTABLISH MINIMUM REQUIREMENTS AND ARE NOT INTENDED TO CONVEY A COMPLETE DESIGN UNLESS NOTED.

UNLESS OTHERWISE NOTED, ALL STEEL TO STEEL FRAMING HAS BEEN SELECTED ASSUMING ATTACHMENTS FOR SHEAR ONLY, USING DOUBLE ANGLE OR DOUBLE BENT PLATE CONNECTIONS SHOP WELDED TO FRAMING MEMBER AND FIELD BOLTED TO SUPPORTING MEMBER WITH HIGH STRENGTH BOLTS IN BEARING. CONNECTIONS SHALL BE SYMMETRICAL ABOUT THE BEAM WEB. FABRICATORS PROPOSING TO USE ALTERNATIVE METHODS OF ATTACHMENT NOT SPECIFICALLY DETAILED ON STRUCTURAL DRAWINGS SHALL SUBMIT ALTERNATIVE FOR CONSIDERATION DURING BIDDING, AND SHALL BEAR ALL COSTS ASSOCIATED WITH REVIEW, ENGINEERING REDESIGN, AND APPROVAL OF ALTERNATIVE CONNECTIONS

SIDE OF A SUPPORT MEMBER IS MATCHED BY A SIMILAR CONNECTION ON THE OPPOSITE SIDE OF THE SAME SUPPORT MEMBER, AND WHERE BEAM SPANS DO NOT DIFFER BY MORE THAN 50% OF THE LARGER SPAN. SINGLE PLATE SHEAR TABS MAY NOT BE USED FOR CONNECTION OF FRAMING MEMBERS TO COLUMNS OR TO SPANDREL (EDGE) SUPPORT MEMBERS UNLESS SPECIFICALLY DETAILED ON DRAWINGS. CONNECTIONS FOR ALL STRUCTURAL STEEL BEAMS AND GIRDERS NOT SHOWN OR COMPLETELY DETAILED ON THE

SINGLE PLATE SHEAR TAB CONNECTIONS MAY BE USED IN LIEU OF DOUBLE ANGLE OR DOUBLE BENT PLATE

CONNECTIONS WHERE SPECIFICALLY NOTED ON DRAWINGS OR WHERE CONNECTION OF FRAMING MEMBER TO ONE

STRUCTURAL DRAWINGS SHALL BE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE OF [STATE] WISCONSIN AND RETAINED BY THE FABRICATOR. USING THE REACTIONS SHOWN. IF NO REACTION IS SHOWN. BEAM CONNECTIONS SHALL BE DESIGNED FOR 50 % OF THE TOTAL UNIFORM LOAD CAPACITY FOR THE GIVEN MEMBER SIZE, SPAN AND GRADE OF STEEL.

ALL BRACED STEEL FRAME CONNECTIONS NOT COMPLETELY DETAILED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGNED AND DETAILED BY AN ENGINEER REGISTERED IN THE STATE OF MINNESOTA AND RETAINED BY THE FABRICATOR, USING THE LOADS SHOWN. WORK POINTS OCCUR AT INTERSECTION OF MEMBER CENTERLINES UNLESS

ALL MOMENT CONNECTIONS SHALL BE DESIGNED AND DETAILED BY AN ENGINEER REGISTERED IN THE STATE OF MINNESOTA AND RETAINED BY THE FABRICATOR, USING THE REACTIONS AND MOMENTS SHOWN. WHERE REACTIONS AND MOMENTS ARE NOT SHOWN, CONNECTION SHALL BE DESIGNED TO DEVELOP THE FULL CAPACITY OF THE BEAM IN MOMENT AND SHEAR.

DESIGN OF STAIRS, HANDRAILS AND GUARDRAILS SHALL BE BY THE STEEL SUPPLIER.

REFER TO ARCHITECTURAL DRAWINGS FOR MISCELLANEOUS STRUCTURAL STEEL NOT NOTED ON STRUCTURAL

PROVIDE CLEVISES, PINS, RODS AND TURNBUCKLES WITH CAPACITIES NOT LESS THAN THOSE LISTED IN THE AISC

STEEL CONSTRUCTION MANUAL. PROVIDE HOLES IN BEAMS TO ACCOMMODATE WOOD CONNECTIONS TO STEEL.

SYSTEM NOTES (CONTINUED)

ALL STANDARD K, LH AND DLH SERIES JOISTS SHALL BE DESIGNED FOR A SHEAR CAPACITY EQUAL TO THE REACTION, AND VARYING LINEARLY TO 25% OF THE REACTION AT THE MIDSPAN OF THE JOIST. IN ORDER TO ACCOUNT FOR POTENTIAL STRESS REVERSALS THE SHEAR CAPACITY OF THE JOIST SHALL BE MAINTAINED AT THE 25% VALUE FOR A DISTANCE BEYOND THE MIDSPAN EQUAL TO MINIMUM OF ONE PANEL WIDTH, ROUNDED UP TO THE NEXT PANEL POINT.

WHERE JOISTS ARE DESIGNATED BY DEPTH, SERIES AND TOTAL LOAD / LIVE LOAD, FINAL DESIGN SHALL BE PER NOTED LOAD PLUS SELF WEIGHT OF JOIST AND IS THE RESPONSIBILITY OF THE JOIST SUPPLIER.

WHERE JOIST DESIGNATION INCLUDES "SP", FINAL DESIGN SHALL BE PER LOADING DIAGRAM PROVIDED PLUS SELF WEIGHT OF JOIST AND IS THE RESPONSIBILITY OF THE JOIST SUPPLIER.

WHERE STANDARD JOIST DESIGNATION FOR DEPTH, SERIES AND SIZE OCCURS PRIOR TO THE DESIGNATION "SP", FINAL DESIGN SHALL BE PER LOADING DIAGRAM PROVIDED PLUS SELF WEIGHT OF JOIST, SHALL AT A MINIMUM USE THE STANDARD CHORDS AND WEB MEMBERS FOR THE DEPTH AND SERIES NOTED, AND IS THE RESPONSIBILITY OF THE

UPLIFT DESIGN OF JOISTS AND BRIDGING SHALL NOT UTILIZE A 1/3 STRESS INCREASE.

WHERE BRIDGING INTERFERES WITH MECHANICAL OR OTHER TRADE INSTALLATION, CONTRACTOR MAY REMOVE BRIDGING AFTER METAL DECK IS COMPLETE IN PLACE, UPON RECIEPT OF WRITTEN APPROVAL FROM THE ENGINEER. BRIDGING REMOVED SHALL BE REPLACED AS DIRECTED BY THE ENGINEER, INCLUDING ADDITIONAL SUPPLEMENTAL BRACING AS MAY BE NECESSARY IN THE SOLE JUDGEMENT OF THE ENGINEER.

NO FIELD DRILLED HOLES OR CUTS ARE PERMITTED IN ANY JOIST CHORD OR WEB MEMBER.

MAXIMUM HANGER LOAD TO BE LOCATED ALONG BAR JOIST TOP CHORD BETWEEN PANEL POINTS IS 100 POUNDS.

SIZE FIRE PROTECTION LINE MAY NOT BE MORE THAN 15'.

ALL CONCENTRATED LOADS EXCEEDING 100 POUNDS SHALL BE APPLIED AT A JOIST PANEL POINT UNLESS LOADS ARE INDICATED ON LOAD DIAGRAMS AND CHORDS HAVE BEEN SPECIFICALLY DESIGNED FOR CONCENTRATED LOADS, OR UNLESS SUPPLEMENTAL CHORD BRACING IS PROVIDED. SUPPLEMENTAL CHORD BRACING SHALL BE PROVIDED AS DETAILED ON THE DRAWINGS BY THE CONTRACTOR RESPONSIBLE FOR THE CONCENTRATED LOADS NOT APPLIED AT

JOISTS AND SEAT CONNECTIONS SHALL BE DESIGNED TO RESIST AXIAL LOADS INDICATED, OR RESIST A HORIZONTAL FORCE ACTING PARALLEL TO THE JOIST NOT LESS THAN 5% OF THE (DEAD + LIVE) LOAD REACTION, WHICHEVER IS

WHERE FIRE PROTECTION LINE RUNS PARALLEL TO A BAR JOIST, LINES UP TO AND INCLUDING 4" MAY BE SUPPORTED BY A SINGLE JOIST. LINES LARGER THAN 4" SHALL BE HUNG BETWEEN BAR JOISTS USING TRAPEZE HANGER. UNLESS SPECIFICALLY NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS, MAXIMUM SPACING OF HANGERS ON ANY

 METAL DECKING PROVIDE ANGLE SUPPORTS FOR METAL DECK AT ALL COLUMN FACES WHERE SUPPORT IS REQUIRED, AND IS NOT

PROVIDED BY MEMBERS FRAMING TO COLUMN. ANGLE FRAMING SHALL BE A MINIMUM OF L2x2x3/16. NO LOADS FROM ARCHITECTURAL. MECHANICAL. ELECTRICAL OR PLUMBING ITEMS. SINGLY OR IN AGGREGATE. IN EXCESS OF 25 POUNDS SHALL BE HUNG FROM METAL ROOF DECK IN ANY 4 SQUARE FOOT AREA. LOADS EXCEEDING THIS LIMIT REQUIRE SUPPLEMENTAL FRAMING ATTACHED DIRECTLY TO STRUCTURAL FRAMING.

SPLICES AT CONTINUOUS DIAPHRAGM CHORD ANGLES SHALL BE FULL PENETRATION WELDS UNLESS NOTED. COLD-FORMED METAL FRAMING COLD-FORMED METAL FRAMING IS PERFORMANCE BASED. AND SHALL BE COMPLETELY DESIGNED AND DETAILED BY A

PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MINNESOTA AND RETAINED BY THE COLD-FORMED SUPPLIER. DESIGN SHALL BE SUBJECT TO THE LIMITATIONS NOTED. COLD-FORMED MEMBERS NOTED SHOULD BE CONSIDERED MINIMUM SIZES. CONNECTION DETAILS INDICATE INTENT FOR CONNECTION BEHAVIOR ONLY.

FOR RIGID VENEER, LIMIT THE MAXIMUM SIMPLE SPAN LATERAL DEFLECTION OF COLD-FORMED METAL PROVIDING LATERAL SUPPORT TO SPAN/720 - LIMIT THE MAXIMUM CANTILEVER LATERAL DEFLECTION TO CANTILEVER SPAN/360 AT THE WINDOW HEAD AND SILL. IN ALL CASES, THE COLD-FORMED METAL FRAMING ALONE SHALL TAKE ALL THE LATERAL LOAD - NO COMPOSITE ACTION WITH SHEATHING, BRICK, CMU, STONE, OR ANY RIGID VENEER MATERIAL IS PERMITTED.

FOR FLEXIBLE VENEER, LIMIT THE MAXIMUM SIMPLE SPAN LATERAL DEFLECTION OF COLD-FORMED METAL PROVIDING LATERAL SUPPORT TO SPAN/360 - LIMIT THE MAXIMUM CANTILEVER LATERAL DEFLECTION TO CANTILEVER SPAN/240 AT THE WINDOW HEAD AND SILL. IN ALL CASES, THE COLD-FORMED METAL FRAMING ALONE SHALL TAKE ALL THE LATERAL LOAD - NO COMPOSITE ACTION WITH SHEATHING MATERIAL IS PERMITTED.

LIMIT VERTICAL DEFLECTION OF STUD LINTEL ASSEMBLIES TO 1/8 INCH AT THE HEAD OF WINDOWS OR OPENINGS. HEADERS AND JAMBS AT OPENING MAY CONSIST OF BUILT-UP COLD-FORMED METAL FRAMING OR HOT-ROLLED STEEL SECTIONS AS DETERMINED BY THE COLD-FORMED FRAMING DESIGNER. SOME CONDITIONS MAY NECESSITATE HOT-

ROLLED SECTIONS. WHICH ARE TO BE SUPPLIED AND INSTALLED BY THE COLD-FORMED METAL CONTRACTOR.

 WOOD FRAMING DESIGN AND CONSTRUCTION OF WOOD FRAMED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF THE 2012 EDITION OF THE NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION, INCLUDING THE 2012 EDITION OF THE NDS SUPPLEMENT DESIGN VALUES FOR WOOD CONSTRUCTION. AND THE 2008 EDITION OF THE SPECIAL DESIGN PROVISIONS FOR WIND AND SEISMIC STANDARD, EXCEPT WHERE MORE RESTRICTIVE REQUIREMENTS ARE NOTED.

USE STEEL WASHERS BETWEEN HEAD AND NUT OF BOLT AND WOOD, AND BETWEEN HEAD OF LAG SCREW AND WOOD. WOOD SILL PLATES AND OTHER WOOD MEMBERS, INCLUDING PLYWOOD, DIRECTLY EXPOSED TO MOISTURE OR IN DIRECT CONTRACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED.

CONDUIT AND SLEEVES IN CONCRETE

THE USE OF ALUMINUM CONDUITS EMBEDDED IN STRUCTURAL CONCRETE ELEMENTS (COLUMNS, WALLS, BEAMS, AND SUSPENDED SLABS, INCLUDING SLABS-ON-METAL DECK) IS PROHIBITED.

WHERE SPECIFICALLY APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO THE PLACEMENT OF SLEEVES, CONDUIT OF ANY TYPE MAY PASS PERPENDICULARLY THROUGH A STRUCTURAL CONCRETE ELEMENT PROVIDED THAT A SCHEDULE 40 STEEL SLEEVE IS PROVIDED WITH AN INSIDE DIAMETER NO LESS THAN 1" LARGER THAN THE CONDUIT OUTSIDE DIAMETER. APPROVAL WILL GENERALLY NOT BE GIVEN FOR SLEEVE PENETRATIONS THROUGH CONCRETE COLUMNS AND BEAMS, AND FOR CONDUIT GROUPS WITH A COMBINED DIAMETER GREATER THAN 12" AT ONE LOCATION THROUGH SLABS, UNLESS SPECIFICALLY INCORPORATED BY REFERENCE IN THE DRAWINGS.

CONDUITS EMBEDDED IN STRUCTURAL CONCRETE ELEMENTS, SHALL SATISFY THE FOLLOWING CRITERIA: - THEY ARE UNCOATED OR GALVANIZED IRON OR STEEL NOT THINNER THAN STANDARD SCHEDULE 40 STEEL PIPE. - THEY SHALL NOT BE LARGER IN OUTSIDE DIAMETER THAN 1/3 THE OVERALL THICKNESS OF THE SLAB, WALL OR BEAM IN WHICH THEY ARE EMBEDDED, OR 4" OUTSIDE DIAMETER, WHICHEVER IS SMALLER. FOR SLABS-ON-METAL DFCK. THICKNESS SHALL BE THE CONCRETE DEPTH ABOVE FLUTES. - SPECIFIED CONCRETE COVER FOR PIPES, CONDUITS AND FITTINGS SHALL NOT BE LESS THAN 2" FOR CONCRETE EXPOSED TO EARTH OR WEATHER, NOR LESS THAN 1" FOR CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND.

- MULTIPLE CONDUITS SHALL NOT BE CLOSELY GROUPED. WHERE IT IS DESIRED TO PLACE MULTIPLE CONDUITS CLOSELY TOGETHER, INDIVIDUAL CONDUITS SHALL NOT BE SPACED CLOSER THAN FOUR OUTSIDE DIAMETERS OF THE LARGEST CONDUIT IN THE GROUP ON CENTER. NO MORE THAN FOUR (4) CONDUITS MAY BE PLACED IN A GROUP. CONDUIT GROUPS SHALL BE SEPARATED BY A MINIMUM CLEAR DISTANCE OF 30 INCHES. CONDUITS MAY NOT BE STACKED VERTICALLY. - PIPING AND CONDUIT SHALL BE FABRICATED AND INSTALLED SO THAT CUTTING, BENDING OR DISPLACEMENT OF REINFORCEMENT OR OTHER EMBEDMENTS FROM THEIR PROPER LOCATION WILL NOT BE REQUIRED. - DO NOT TIE CONDUIT TO REINFORCEMENT STEEL. PROVIDE A MINIMUM OF 2" CLEARANCE FOR CONCRETE FLOW BETWEEN CONDUIT AND REINFORCEMENT STEEL.

SYSTEM NOTES (CONTINUED)

 POST-INSTALLED ANCHORAGE ALL POST-INSTALLED ANCHORS MUST BE INSTALLED IN STRICT CONFORMANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS INCLUDING, BUT NOT LIMITED TO, DRILL TYPE, HOLE CLEANING, INSTALLATION TORQUE, AND TEMPERATURE CONSTRAINTS.

ALL PERSONNEL INSTALLING POST-INSTALLED ANCHORS SHALL BE TRAINED BY THE MANUFACTURER ON PROPER INSTALLATION TECHNIQUE. CONTRACTOR SHALL COORDINATE ANY ON-SITE TRAINING WITH THE ANCHOR MANUFACTURER. TRAINING DOCUMENTATION SHALL BE AVAILABLE UPON REQUEST.

WHEN A SPECIFIC PRODUCT AND MANUFACTURER IS REFERENCED IN THE CONTRACT DOCUMENTS. THAT SPECIFIC PRODUCT SHALL BE USED UNLESS NOTED OTHERWISE. BELOW CONTAINS A LIST OF PRE-APPROVED ANCHORS FOR USE AS AN EQUAL (WHERE "OR EQUAL" IS INDICATED) OR WHERE POST-INSTALLED ANCHORAGE IS REFERRED TO IN THE DOCUMENTS GENERICALLY (E.G. "ADHESIVE ANCHOR").

PROVIDE SPECIAL INSPECTION FOR ALL POST-INSTALLED ANCHORS PER THE EVALUATION REPORT OR AS INDICATED OTHERWISE. THE ANCHOR MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING THE INITIAL INSTALLATION OF EACH TYPE OF ANCHOR TO REVIEW AND APPROVE THE CONTRACTOR'S INSTALLATION PROCEDURES.

PRIOR TO INSTALLING POST-INSTALLED ANCHORS. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF OF 2,500 PSI AND BE 21 DAYS OLD. ADHERE TO MANUFACTURER'S REQUIREMENTS FOR REQUIRED INSTALLATION TEMPERATURES AND HOLE CONDITION (WET, DRY, SATURATED).

EXPANSION ANCHORS FOR USE IN CONCRETE INCLUDE HILTI: KWIK-BOLT TZ SIMPSON STRONG-TIE: STRONG-BOLT 2 DEWALT/POWERS: POWER-STUD+SD2

SCREW ANCHORS FOR USE IN CONCRETE INCLUDE:

HILTI: HUS-EZ SIMPSON STRONG-TIE: TITEN HD

ADHESIVE ANCHORS FOR USE IN CONCRETE INCLUDE:

DEWALT/POWERS: SCREW-BOLT+

HILTI: HIT-RE 500 V3 OR HIT-HY 200 SIMPSON STRONG-TIE: SET-XP OR AT-XP DEWALT/POWERS: PURE110+ OR AC200+ GOLD

DO NOT USE ADHESIVE ANCHORS IN OVERHEAD APPLICATIONS UNLESS SPECIFICALLY INDICATED ON THE CONTRACT DOCUMENTS. FOR ADHESIVE ANCHORS INSTALLED HORIZONTALLY OR UPWARDLY INCLINED, INSTALLER SHALL HOLD AN ACTIVE ACI/CRSI ISSUED ADHESIVE ANCHOR INSTALLER CERTIFICATION IN ADDITION TO TRAINING BY THE ANCHOR MANUFACTURER. CONTINUOUS SPECIAL INSPECTION FOR ADHESIVE ANCHORS INSTALLED AT THESE ANGLES IS REQUIRED. THE SPECIAL INSPECTOR SHALL PROVIDE A REPORT TO THE STRUCTURAL ENGINEER OF RECORD INDICATING THAT THE MATERIALS USED AND INSTALLATION PROCEDURES CONFORM WITH THE CONSTRUCTION DOCUMENTS AND MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS.

ALL OTHER POST-INSTALLED ANCHORS SHALL HAVE PERIODIC SPECIAL INSPECTION AT A MINIMUM UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED IN THE SPECIFIC ANCHOR'S EVALUATION REPORT.

INSTALLATION OF POST-INSTALLED ANCHORAGE INTO GROUTED CELLS SHALL BE MADE ONCE GROUT HAS REACHED A COMPRESSIVE STRENGTH OF 2,000 PSI.

ADHESIVE ANCHORS TO SOLID, GROUTED, OR HOLLOW CMU AND UNREINFORCED BRICK INCLUDE:

PERIODIC SPECIAL INSPECTION IS REQUIRED FOR ALL POST-INSTALLED ANCHORAGE INTO MASONRY. IF MORE STRINGENT REQUIREMENTS ARE INDICATED IN THE SPECIFIC ANCHOR'S EVALUATION REPORT, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.

EXPANSION ANCHORS TO SOLID OR GROUTED CMU INCLUDE HILTI: KWIK-BOLT 3

SIMPSON STRONG-TIE: STRONG-BOLT 2 DEWALT/POWERS: POWER-STUD+SD1

SCREW ANCHORS TO SOLID OR GROUTED CMU INCLUDE: HILTI: KWIK-HUS-EZ

HILTI: HIT-HY 70

SIMPSON STRONG-TIE: TITEN HD DEWALT/POWERS: SCREW-BOLT+

SIMPSON STRONG-TIE: SET-XP (CMU ONLY) SIMPSON STRONG-TIE: AT (BRICK ONLY) DEWALT/POWERS: AC100+ GOLD

COMPONENTS AND CLADDING WIND PRESSURES (PSF) ROOF SLOPE ZONE 0° TO 7° 7° TO 27° 27° TO 45° AREA (SF) AREA (SF) 10.5 | 25.9 | 14.9 | 23.7 | 23.7 | 25.9 25.9 9.9 25.2 13.6 23.0 23.0 24.7 9.0 24.4 11.9 22.2 22.2 23.2 50 8.3 23.7 10.5 21.5 100 22.0

2	10	10.5	43.5	14.9	41.3	23.7	30.3	5		10	25.	.9	34.7
2	20	9.9	38.8	13.6	38.0	23.0	29.0	5		20	24.	.7	32.4
2	50	9.0	32.7	11.9	33.6	22.2	27.2	5		50	23.	.2	29.3
2	100	8.3	28.1	10.5	30.3	21.5	25.9	5		100	22.	.0	26.9
3	10	10.5	65.4	14.9	61.0	23.7	30.3	А	ADJUSTMENT FACTOR (λ)				
3	20	9.9	54.2	13.6	57.1	23.0	29.0	MEAN ROOF HEIGHT (FT)		EXPOSURE			
3	50	9.0	39.3	11.9	51.8	22.2	27.2			В		С	
3	100	8.3	28.1	10.5	47.9	21.5	25.9	15		1.00		1.21	
	(-) WIND PRESSURE ON ROOF OVERHANGS									20 1.00		1.29	
										1.00		1.35	
LOCATION	WIND	WIND ROOF SLOPE					30		1.00			1.40	
LOCATION	AREA (SF)	0° T	TO 7° 7° TO 27°		27° TO 45°		35		1.05		1.45		
		ZONE 2	ZONE 3	ZONE 2	ZONE 3	ZONE 2	ZONE 3	40		1.09			1.49
OVERHANG	10	37.2	61.4	48.2	80.9	43.7	43.7	45		1.12			1.53
OVERHANG	20	36.6	48.1	48.2	73.0	42.4	42.4	50		1.16			1.56
OVEDHANC	50	25.7	20.7	10.0	62.6	<i>1</i> 0.7	<i>1</i> 0.7	55		1 10			1 50

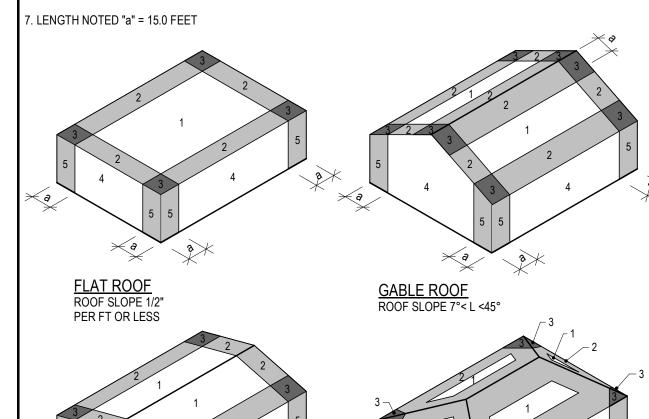
. TABULATED LOADS ARE BASED ON ASCE 7-10 SIMPLIFIED PROVISIONS FOR ENCLOSED REGULAR-SHAPED BUILDINGS WITH THE FOLLOWING PARAMETERS: WIND SPEED = 120 MPH, MEAN ROOF HEIGHT = 30'-0", EXPOSURE B, Kzt = 1.0. . FOR DIFFERENT MEAN ROOF HEIGHTS OR EXPOSURES, TABULATED VALUES SHALL BE MULTIPLIED BY THE ADJUST FACTOR (λ) CONTAINED WITHING THE ABOVE TABLE.

FOR WIND PRESSURES BELOW 16 PSF AFTER ALL ADJUSTMENT FACTORS HAVE BEEN TAKEN INTO ACCOUNT, A MINIMUM WIND PRESSURE OF 16 PSF SHALL BE USED FOR DESIGN. THOSE PRESSURES INDICATED BY IN THE ABOVE TABLE ARE THOSE THAT FALL BELOW THE MINIMUM VALUE BASED ON NO ADJUSTMENTS.

4. WIND PRESSURES INDICATED ARE STRENGTH LEVEL VALUES

• (+) = POSITIVE (INWARD) PRESSURE (-) = NEGATIVE (OUTWARD) PRESSURE SF = SQUARE FEET

. FOR EFFECTIVE MEMBER AREAS NOT SPECIFICALLY LISTED, INTERPOLATE OR USE LARGEST VALUE OF WIND PRESSURI / SUCTION NOTED. DO NOT USE 1/3 STRESS INCREASE FOR MEMBER DESIGN WITH VALUES NOTED IN THIS TABLE.



STRUCTURAL SHEET INDEX

S001 STRUCTURAL NOTES

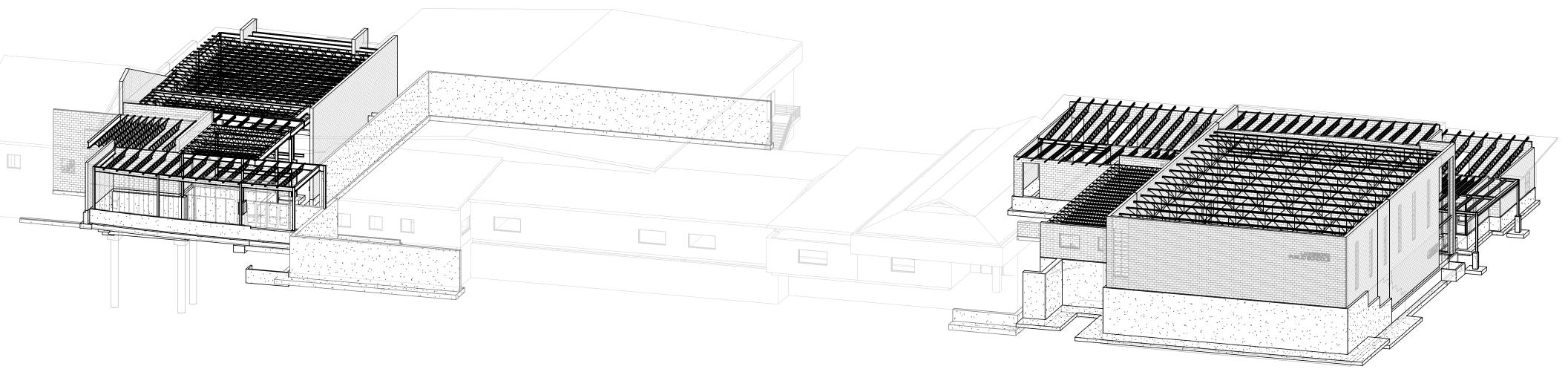
S102 FOUNDATION PLAN - SEG C S103 FLOOR FRAMING SEG B S104 ROOF FRAMING PLAN - SEG B S121.1 LOW ROOF FRAMING PLAN - SEG C

S801 FOUNDATION DETAILS S810 FRAMING DETAILS

S002 STRUCTURAL SCHEDULES S003 SPECIAL INSPECTIONS S101 FOUNDATION PLAN - SEG B

S121.2 UPPER ROOF FRAMING PLAN - SEG C S800 FOUNDATION DETAILS

S811 FRAMING DETAILS S820 FRAMING DETAILS



ISOMETRIC

INTERIOR DESIGN

100 MILWAUKEE STREET LA CROSSE, WISCONSIN PHONE: 608.784.1830 FAX: 608.782.5844 www.hsrassociates.com

Consultant:

Madison, WI 53718-8345 CREATIVITY BEYOND ENGINEERING rasmith.com project number: 1180777 Contractors are responsible for the means, methods, techniques sequences and procedures of construction including, but not limited to temporary supports, shoring, forming to support imposed loads and

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HSR Project Number: 18063 Project Date: 7-25-2019 Drawn By

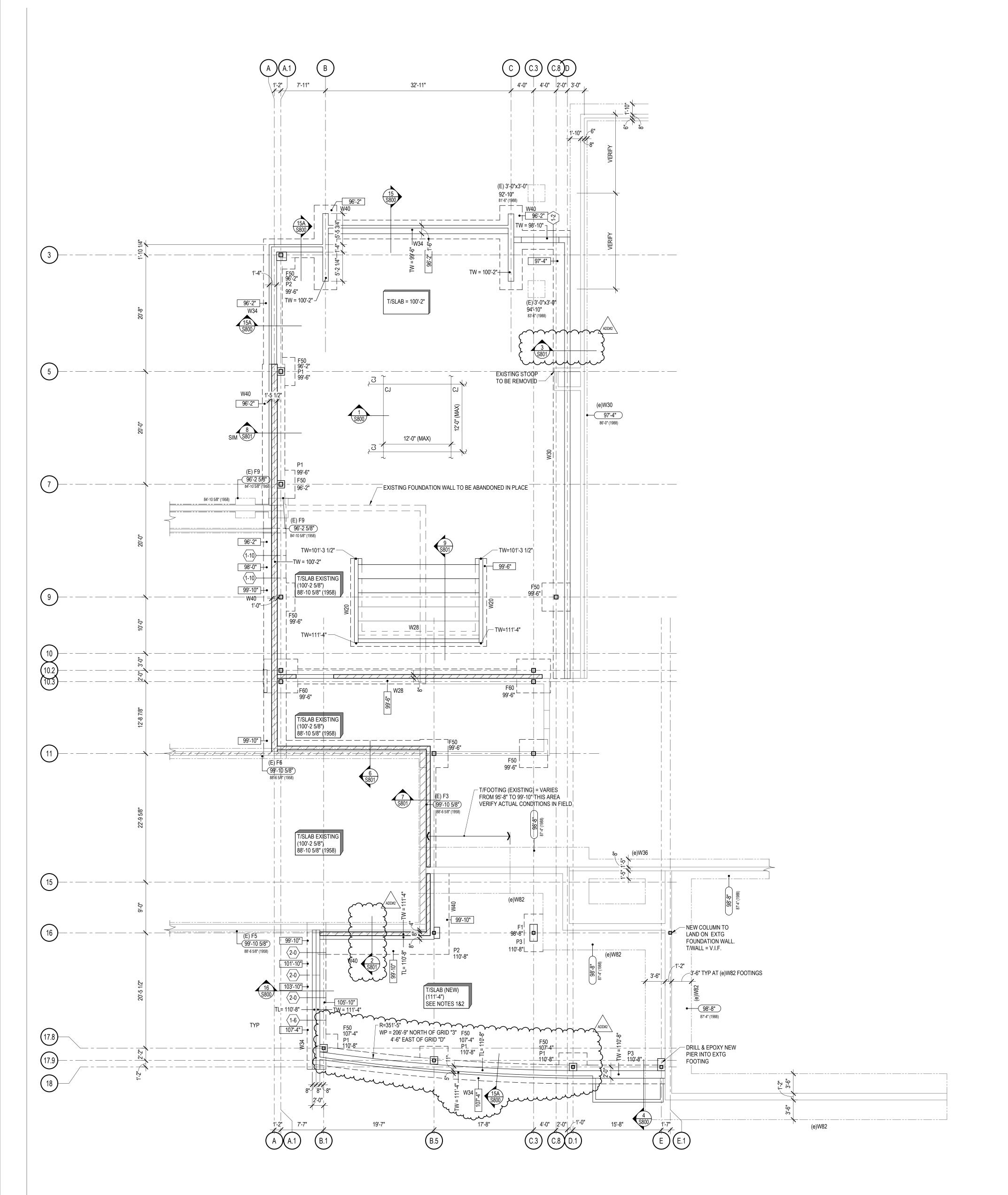
raSmith Key Plan:

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Graphic Scale:

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VARIES



FOUNDATION PLAN - SEG B

Storing Stori



COLUMN FOOTING ARK

COLUMN FOOTING MARK

TOP OF COLUMN FOOTING ELEVATION

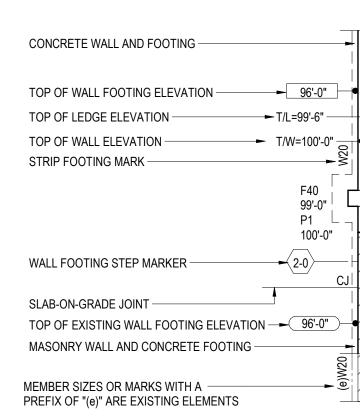
CONCRETE PIER MARK

TOP OF PIER ELEVATION

TOP OF PIER ELEVATION

TOP OF PIER ELEVATION

TOP OF PIER ELEVATION



FOUNDATION PLAN NOTES

- 1. FINISH SLAB ELEVATION = AS SHOWN ON PLANS. TOP OF FOOTING ELEVATION AT EXTERIOR WALLS = AS SHOWN ON PLANS.
- SLAB-ON-GRADE TO BE 4" THICK WITH 5#/CU YD MACRO POLYPROPYLENE SYNTHETIC FIBERS (REFER TO SPECIFICATION) ON 15 MIL MINIMUM VAPOR BARRIER ON 6" OF COMPACTED GRANULAR FILL UNLESS NOTED OTHERWISE.
- 3. IN AREA SHOWN AS (AT GYM) SLAB-ON-GRADE TO BE 5" THICK WITH 5#/CU YD MACRO POLYPROPYLENE SYNTHETIC FIBERS (REFER TO SPECIFICATION) ON 15 MIL MINIMUM VAPOR BARRIER ON 6" OF COMPACTED GRANULAR FILL. TOP OF SLAB INDICATED IS APPROXIMATE AND SHOULD BE COORDINATED WITH WOOD FLOORING SUPPLIER.
- (SOG THICKNESS) ISOLATION FILLER STRIP. SET STRIP 1/4" BELOW FINISH SLAB ELEVATION OR USE PRE-SCORED REMOVABLE TOP STRIP ISOLATION BOARD.

4. TYPICAL WHERE SLAB-ON-GRADE ABUTS WALL OR COLUMN, PROVIDE 1/4" x

- 5. OVER-EXCAVATION PER DETAIL 5/S800 MAY BE REQUIRED TO REMOVE EXISTING UNDOCUMENTED FILL AND UNSUITABLE BEARING SOIL.
- 6. TYPICAL DETAILS THAT APPLY TO PLAN INCLUDE:
 1/S800 SLAB-ON-GRADE JOINT DETAIL
 2/S800 WALL/FOOTING CORNER DETAIL
 3/S800 PIPE PASSING UNDER WALL FOOTING DETAIL
 10/S800 FOOTING STEP DETAIL
 11/S800 ADDED REINF AT WALL OPENING DETAIL
 12/S800 CONCRETE WALL JOINT DETAIL
 13/S800 ISOLATION JOINT AT COLUMNS
- 7. CONTROL JOINTS ON ALL SLABS. 12"-0" OC MAX AT 4" SLABS 15'-0" OC MAX AT 5" SLABS
- 8. = MASONRY PIER ABOVE

ARCHITECTURE ENGINEERING INTERIOR DESIGN

HSR ASSOCIATES INC.
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Consultant:

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www.hsrassociates.com

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Wayne W. Vandenbergh
Date: July 9, 2019 Lic No: 43493
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NAN - SEG B

KIRKWOOD ST E ESBORO, MN 55949

HSR Project Number:

Project Number:

18063

Project Date:
7-25-2019
Drawn By:
raSmith

Key Plan:

KEY PLAN

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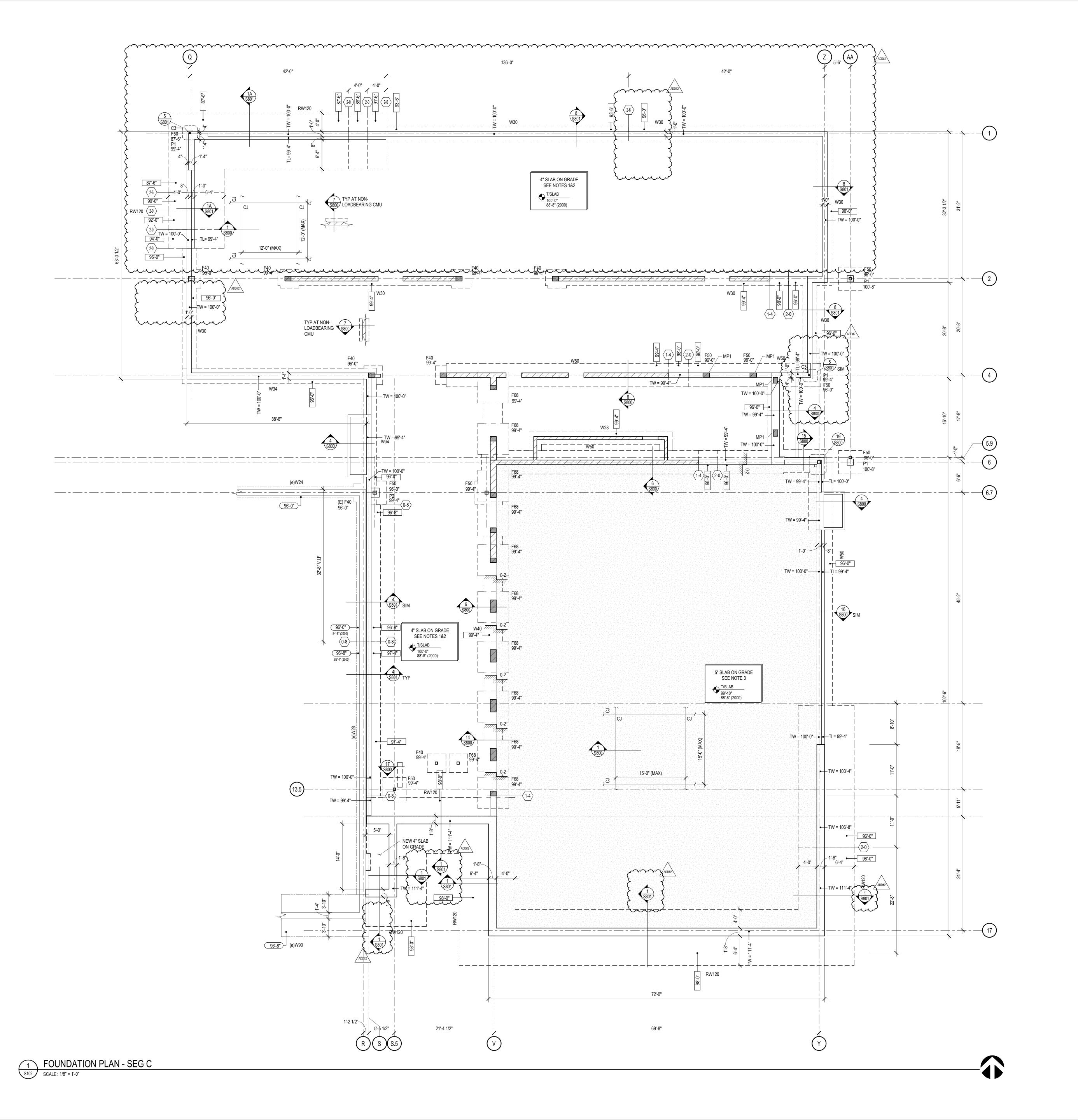
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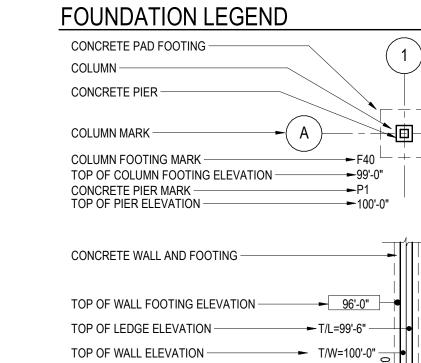
No. Description

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S101





STRIP FOOTING MARK — WALL FOOTING STEP MARKER -SLAB-ON-GRADE JOINT -TOP OF EXISTING WALL FOOTING ELEVATION — 96'-0" MASONRY WALL AND CONCRETE FOOTING -MEMBER SIZES OR MARKS WITH A -PREFIX OF "(e)" ARE EXISTING ELEMENTS

FOUNDATION PLAN NOTES

- 1. FINISH SLAB ELEVATION = AS SHOWN ON PLANS. TOP OF FOOTING ELEVATION AT EXTERIOR WALLS = AS SHOWN ON PLANS.
- 2. SLAB-ON-GRADE TO BE 4" THICK WITH 5#/CU YD MACRO POLYPROPYLENE SYNTHETIC FIBERS (REFER TO SPECIFICATION) ON 15 MIL MINIMUM VAPOR BARRIER ON 6" OF COMPACTED GRANULAR FILL UNLESS NOTED OTHERWISE.
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4. TYPICAL WHERE SLAB-ON-GRADE ABUTS WALL OR COLUMN, PROVIDE 1/4" x

(SOG THICKNESS) ISOLATION FILLER STRIP. SET STRIP 1/4" BELOW FINISH

- SLAB ELEVATION OR USE PRE-SCORED REMOVABLE TOP STRIP ISOLATION 5. OVER-EXCAVATION PER DETAIL 5/S800 MAY BE REQUIRED TO REMOVE
- EXISTING UNDOCUMENTED FILL AND UNSUITABLE BEARING SOIL. 6. TYPICAL DETAILS THAT APPLY TO PLAN INCLUDE: 1/S800 SLAB-ON-GRADE JOINT DETAIL 2/S800 WALL/FOOTING CORNER DETAIL
- 3/S800 PIPE PASSING UNDER WALL FOOTING DETAIL 10/S800 FOOTING STEP DETAIL 11/S800 ADDED REINF AT WALL OPENING DETAIL 12/S800 CONCRETE WALL JOINT DETAIL 13/S800 ISOLATION JOINT AT COLUMNS
- 12"-0" OC MAX AT 4" SLABS 15'-0" OC MAX AT 5" SLABS

7. CONTROL JOINTS ON ALL SLABS.

8. = MASONRY PIER ABOVE

INTERIOR DESIGN



HSR ASSOCIATES INC. 100 MILWAUKEE STREET LA CROSSE, WISCONSIN PHONE: 608.784.1830 FAX: 608.782.5844 www.hsrassociates.com

Consultant:

5250 E. Terrace Dr., Ste. 108 raSmith Madison, WI 53718-8345 (608) 467-3034 CREATIVITY BEYOND ENGINEERING rasmith.com project number: 1180777 Contractors are responsible for the means, methods, techniques, sequences and procedures of construction including, but not limited to, temporary supports, shoring, forming to support imposed loads and other similar items.

ENGINEER CERTIFICATION I hereby certify that this Plan, Specification or Report was prepared by me or under my direct supervision and that I am a duly licensed Engineer under the laws of the state of Minnesota.

Wayne W. Vandenbergh Date: July 9, 2019 Lic No: 43493 This drawing is conditionally issued and reproductions or use of any technical design information is strictly forbidden without written agreement from the responsible Engineer.

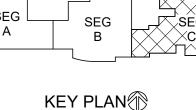
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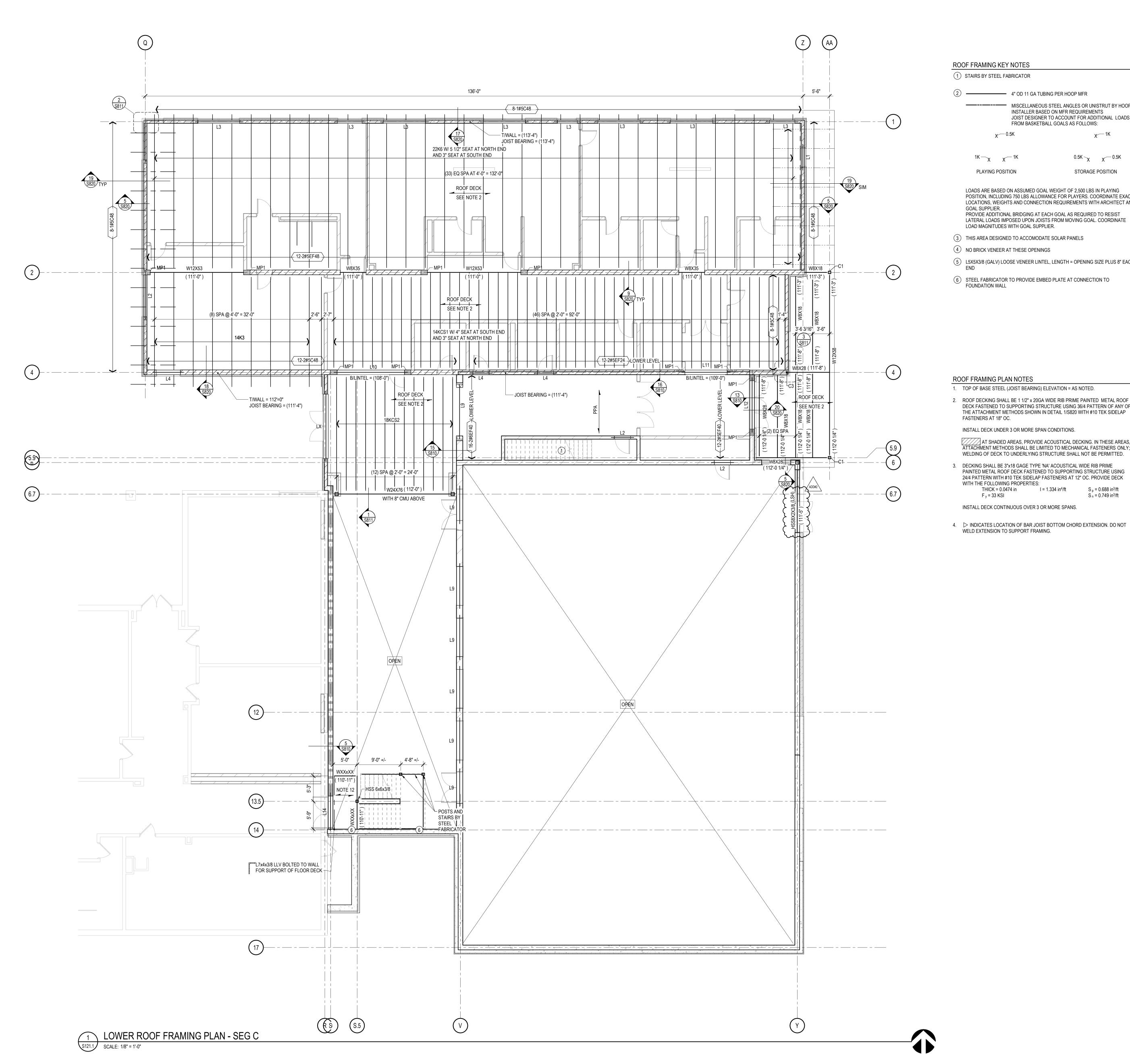
Project Date: 7-25-2019



Revisions:

No. Description
ADD#2 ADDENDUM #2

Last Update: 8/20/2019 10:01:17 AM



STRUCTURAL STEEL LEGEND

INDICATES BEAM FRAMING OVER -OR THRU HSS OR WF COLUMN INDICATES BEAM FRAMING INTO -SIDE OF HSS OR WF COLUMN COLUMN MARK / COLUMN SIZE — C1 / W14x90 -INDICATES BEAM-TO-COLUMN MOMENT FRAME CONNECTION -TOP OF STEEL ELEVATION — SHOP CAMBER — FIELD APPLIED SHEAR STUDS BETWEEN -BEAM ENDS AND/OR CONCENTRATED LOADS BEAM DESIGNATION — JOIST GIRDER DESIGNATION -INDICATED LOCATION OF BEAM SPLICE INDICATES EXISTING BEAM / JOIST

> INDICATES MOMENT CONNECTION BETWEEN BEAMS ACROSS GIRDER IN SAME HORIZONTAL PLANE —

MEMBER SIZES OR MARKS WITH A -

PREFIX OF "(e)" ARE EXISTING ELEMENTS

LOADS ARE BASED ON ASSUMED GOAL WEIGHT OF 2,500 LBS IN PLAYING POSITION, INCLUDING 750 LBS ALLOWANCE FOR PLAYERS. COORDINATE EXACT LOCATIONS, WEIGHTS AND CONNECTION REQUIREMENTS WITH ARCHITECT AND PROVIDE ADDITIONAL BRIDGING AT EACH GOAL AS REQUIRED TO RESIST LATERAL LOADS IMPOSED UPON JOISTS FROM MOVING GOAL. COORDINATE LOAD MAGNITUDES WITH GOAL SUPPLIER.

MISCELLANEOUS STEEL ANGLES OR UNISTRUT BY HOOP

JOIST DESIGNER TO ACCOUNT FOR ADDITIONAL LOADS

 $0.5K \chi \chi = 0.5K$

STORAGE POSITION

INSTALLER BASED ON MFR REQUIREMENTS

FROM BASKETBALL GOALS AS FOLLOWS:

(3) THIS AREA DESIGNED TO ACCOMODATE SOLAR PANELS

4" OD 11 GA TUBING PER HOOP MFR

(4) NO BRICK VENEER AT THESE OPENINGS

FASTENERS AT 18" OC.

 $1K - \chi \qquad \chi - 1K$

PLAYING POSITION

(5) L5X5X3/8 (GALV) LOOSE VENEER LINTEL, LENGTH = OPENING SIZE PLUS 8" EACH

DECK FASTENED TO SUPPORTING STRUCTURE USING 36/4 PATTERN OF ANY OF

THE ATTACHMENT METHODS SHOWN IN DETAIL 1/S820 WITH #10 TEK SIDELAP

ATTACHMENT METHODS SHALL BE LIMITED TO MECHANICAL FASTENERS ONLY; WELDING OF DECK TO UNDERLYING STRUCTURE SHALL NOT BE PERMITTED.

PAINTED METAL ROOF DECK FASTENED TO SUPPORTING STRUCTURE USING

I = 1.334 in⁴/ft

 $S_p = 0.688 \text{ in}^3/\text{ft}$

 $S_n = 0.749 \text{ in}^3/\text{ft}$

INSTALL DECK UNDER 3 OR MORE SPAN CONDITIONS.

INSTALL DECK CONTINUOUS OVER 3 OR MORE SPANS.

WITH THE FOLLOWING PROPERTIES:

 $F_y = 33 \text{ KSI}$

THICK = 0.0474 in

WELD EXTENSION TO SUPPORT FRAMING.

(6) STEEL FABRICATOR TO PROVIDE EMBED PLATE AT CONNECTION TO

PROVIDE 8" HIGH BOND BEAM WITH (2) #5 CONTINUOUS AT AND ADJACENT TO JOIST BEARING ELEVATIONS UNLESS NOTED OTHERWISE. WHERE JOIST BEARING IS NOT AT COURSING. PROVIDE PARTIAL HEIGHT BLOCK GROUTED SOLID TO TOP OF BOND BEAM. WIDTH OF BOND BEAM TO MATCH WALL THICKNESS AND IS TO RUN CONTINUOUS THROUGH CONTROL JOINTS. PROVIDE CORNER BARS WHERE THEY OCCUR AND LAP ALL BOND BEAM STEPS

- 6. JOIST SUPPLIER TO PROVIDE CONTINUOUS TOP AND BOTTOM CHORD AT SHADED AREAS, PROVIDE ACOUSTICAL DECKING. IN THESE AREAS, HORIZONTAL ANGLE BRIDGING AS REQUIRED. PROVIDE DIAGONAL X-BRIDGING
 - 7. PROVIDE ANGLE FRAME SUPPORT AT ALL ROOF OPENINGS IN ACCORDANCE WITH DETAIL 4/S820.
- 24/4 PATTERN WITH #10 TEK SIDELAP FASTENERS AT 12" OC. PROVIDE DECK 8. ALL BAR JOISTS AND JOIST GIRDERS TO BE DESIGNED FOR A NET UPLIFT LOAD OF 15 PSF IN ADDITION TO GRAVITY VERTICAL LOADS REQUIRED BY THE BAR JOIST DESIGNATION.
 - 9. REFER TO SHEET S002 FOR COLUMN SCHEDULE.

A MINIMUM OF 24".

- 10. PROVIDE (2) C6 BELOW ROOFTOP UNIT CURB AND REINFORCE JOIST AS NEEDED AT CURB LOCATION IN ACCORDANCE WITH DETAIL 3/S820 (TYPICAL).
- 11. BRACE TOP OF NON-LOAD BEARING CMU WALLS IN ACCORDANCE WITH DETAILS 6/S820 AND 7/S820.
- 12. TYPICAL SLAB TO BE 5" TOTAL THICKNESS CONCRETE REINFORCED WITH EITHER MACRO POLYPROPYLENE FIBERS OR WELDED WIRE FABRIC ON 1.5" 20 GAUGE COMPOSITE METAL DECKING SPANNING ACROSS BR JOISTS. IN AREAS MARKED ON PLAN WITH (POLISHED CONCRETE) MUST USE 6"x6" W2.9xW2.9 WELDED WIRE FABRIC IN SLABS (NO FIBERS ALLOWED). VERIFY POLISHED CONCRETE LOCATIONS WITH ARCHITECTURAL PLANS. AT SIM, 8" TOTAL CONCRETE THICKNESS; REINFORCE WITH #4 BARS AT 12" OC, EACH WAY

FRAMING INTO SIDE OF NEW GIRDER -INDICATES BEAM / JOIST FRAMING INTO SIDE OF GIRDER -INDICATES BEAM / JOIST -FRAMING OVER GIRDER

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ARCHITECTURE

ENGINEERING

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KEY PLAN

No. Description
ADD#2 ADDENDUM #2

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