

ADDENDUM

06

Lancaster Township Police Department Renovations & Addition Lancaster, PA Date of Addendum: 23 September, 2024

Marotta/Main Architects Project No.: 24-LT-01

The original Project Manuals and Drawings dated 28 August, 2024 for the project noted above, are amended as noted in this Addendum No. 06.

Receipt of this Addendum shall be acknowledged by inserting its number and date in the space provided on the Bid Form.

This Addendum consists of 2 Pages and all attachments listed.

CLARIFICATIONS

- 06.01 Addendum item 04.11 is in addition to the regular floor prep for LVT and Carpet Tile to level areas at existing floor drain to be removed with concrete sloped to the e. drain and to provide some costs in the bid for any other areas of slab that need leveling beyond the standard floor finish prep.
- 06.02 The seat indicated in M SHOWER 112 is not in GC contract, it is by Owner.
- O6.03 There is existing loose insulation at the bottom cord of the existing trusses. With the existing gypsum board ceiling at various heights from 11'-6" to 12'-8" AFF, it is the intent that the large main duct on the Upper Level will be in the truss space. Note on 2/A1.2 indicates to patch and reinstall insulation as required for MEP penetrations.
- 106.04 Include in Base Bid a Single Steel Holding Cell with ceiling per Basis-of-Design Kane Innovations.To be coordinated with toilet and existing building after contract award.

VOLUME 1 – LEGAL SPECIFICATIONS

06.05 Refer to Specification Section INDEX, ADD 03 54 16 HYDRAULIC CEMENT UNDERLAYMENT, 4 Pages.

VOLUME 2 – TECHNICAL SPECIFICATIONS

- 06.06 Refer to Specification Section 03 54 16 HYDRAULIC CEMENT UNDERLAYMENT, ADD to technical specifications.
- 06.07 Refer to Specification Section 04 20 00 UNIT MASONRY, REVISE 2.6.B.1.a. to read as follows: 'a. Basis-of-Design: Glen Gery Cushwa 51-DDX Modular and Cushwa 53-DD modular 50/50 mix or equal match to existing.'
- 06.08 Refer to Specification Section 07 41 13 STANDING-SEAM METAL ROOF PANELS, 2.2.A.1, ADD METAL PANEL SYSTEMS roof panels as approved equal. Specific product to be selected to meet requirements.

DRAWINGS

- 06.09 Refer to Drawing CS1 Cover Sheet, ADD Drawing A4.3 TYPICAL STRUCTURAL DETAILS to the Architectural drawings list.
- 06.10 Refer to Drawing A1.2 LOWER AND UPPER LEVEL FLOOR PLANS, attached with clouded revisions.
- 06.11 Refer to Drawing A1.3 ALTERNATE PARTIAL FLOOR PLAN/SECTION/DETAILS, attached with clouded revisions.
- 06.12 Refer to Drawing A2.1 EXTERIOR ELEVATIONS. REVISE General Masonry Repair/Cleaning
 Notes as follows: 'Brick Clean entire building. Some joints will required repointing, include 500 SF
 of wall area as directed by the architect. **New sealant to be provided at interior corners/joints of existing exterior.** Steel lintels, all existing exterior remove paint, clean, prep and repaint.' 'Brick
 Replacement: Include 50 SF of replacement brick in the Base Bid.'
- 06.13 Refer to Drawing A4.1 WALL SECTIONS, REVISE note for 5/A4.1, to read as follows: /#5 DWLS. @ 32" O.C. 30" H X 10" IN FTG.'
- 06.14 Refer to Drawing A4.2 WALL SECTIONS, attached with clouded revisions.
- 06.15 Refer to Drawing A4.3 TYPICAL STRUCTURAL DETAILS, new sheet for added details.
- 06.16 Refer to Drawing A6.1 UPPER AND LOWER LEVEL REFLECTED CEILING PLAN, 2/A8.1, REVISE Rooms 104 Server and 105 Mech/Elect to note EXIST. EXPOSED.
- 06.17 Refer to Drawing 9/A8.4 ENLARGED WORK ROOM AND STAFF KITCHEN PLANS AND ELEVATIONS, REVISE note to read: 'P.LAM COUNTERTOP & BACKSPLASH'.
- 06.18 Refer to Drawing A10.1 FINISH SCHEDULE, DELETE General Finish Notes 6 and 18. DELETE Paint Note 10. ADD note to Finish Legend, Floor Finish, CONC. To read as follows: 'Sealed Concrete, Basis-of-Design: Clear Acrylic High-Gloss sealer with Anti-Skid additive.'
- 06.19 Refer to Drawing E0.1 ELECTRICAL COVER SHEET, Generator Equipment Schedule, DELETE Nema 3R requirement this is not required. ADD 'Provide a service disconnect'.

END OF ADDENDUM 06

Respectfully Submitted,

Connie King, AIA, ALEP, GGB Principal Architect Marotta/Main Architects, Inc.

Attachments:

03 54 16 HYDRAULIC CEMENT UNDERLAYMENT

A1.2 LOWER AND UPPER LEVEL FLOOR PLANS

A1.3 ALTERNATE PARTIAL FLOOR PLAN/SECTION/DETAILS

A4.2 WALL SECTIONS

A4.3 TYPICAL STRUCTURAL DETAILS

SECTION 03 54 16 - HYDRAULIC CEMENT UNDERLAYMENT, ADDENDUM 06

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes hydraulic-cement-based, polymer-modified, self-leveling underlayment for application below interior floor coverings.

1.3 ACTION SUBMITTALS

- A. Product Data: For the following:
 - 1. Hydraulic cement underlayment.
 - 2. Primer
 - Surface sealer.
- B. Shop Drawings: Include plans indicating substrates, locations, and average depths of underlayment based on survey of substrate conditions.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified Installer.
- B. Product Certificates: Signed by manufacturers of underlayment and floor-covering systems certifying that products are compatible.
- C. Minutes of pre-installation conference.

1.5 QUALITY CONTROL

- A. Installer Qualifications: Installer who is approved by manufacturer for application of underlayment products required for this Project.
- B. Product Compatibility: Manufacturers of underlayment, sub-floor, and floor-covering systems certify in writing that products are compatible.
- C. Pre-installation Conference: Conduct conference at Project site.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store materials to comply with manufacturer's written instructions to prevent deterioration from moisture or other detrimental effects.

1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Comply with manufacturer's written instructions for substrate temperature, ventilation, ambient temperature and humidity, and other conditions affecting underlayment performance.
 - 1. Place hydraulic-cement-based underlayments only when ambient temperature and temperature of substrates are between 50 and 80 deg F.

1.8 COORDINATION

A. Coordinate application of underlayment with requirements of floor-covering products and adhesives, to ensure compatibility of products.

PART 2 - PRODUCTS

2.1 HYDRAULIC-CEMENT-BASED UNDERLAYMENTS

- A. Underlayment: Hydraulic-cement-based, polymer-modified, self-leveling product that can be applied in minimum uniform thickness of 1/4 inch and that can be feathered at edges to match adjacent floor elevations.
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide ARDEX Americas; ARDEX V 1200™ Self-Leveling Underlayment; or comparable product by one of the following:
 - B. Custom Building Products.
 - C. Euclid Chemical Company (The); a subsidiary of RPM International, Inc.
 - D. Laticrete International, Inc.
 - E. Maxxon Corporation.
 - F. USG Corporation.
 - G. Uzin Utz North America, Inc.
 - Cement Binder: ASTM C 150, portland cement, or hydraulic or blended hydraulic cement as defined by ASTM C 219.
 - Compressive Strength: Not less than 4000 psi at 28 days when tested according to ASTM C 109.
 - 3. Underlayment Additive: Resilient-emulsion product of underlayment manufacturer, formulated for use with underlayment when applied to substrate and conditions indicated.
- H. Underlayment: Hydraulic-cement-based, polymer-modified, self-leveling product that can be applied in minimum uniform thickness of 1/4 inch, installs from 1/8 inch to 1 ½ inch neat, and up to 5 inches with aggregate.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Ardex K 15, Finish Self-Drying Cement Based Finish Underlayment or equal.

i. Primer:

- 1. Standard Absorbent Concrete: ARDEX P 51™ Primer or equal.
- 2. Extremely Absorbent Concrete: May require two applications of ARDEX P 51 to minimize the potential for pinholes forming in the ARDEX K 15.
- 3. Wood: ARDEX P 82™ Ultra Prime or equal.
- 4. Metal: ARDEX EP 2000™ Substrate Preparation Epoxy Primer or equal.
- Other Non-Porous Substrates (burnished concrete, terrazzo, well-bonded ceramic, quarry and porcelain tiles, epoxy coating systems and non-water-soluble adhesive residue on concrete and concrete treated with silicate compounds): ARDEX P 82 Ultra Prime ii.
- ii. Performance and Physical Properties: Meet or exceed the following values for material cured at 73° F+/-3°F (23° C+/-3°C) and 50% +/-5% relative humidity:
 - 1. Application: Barrel Mix or Pump.

- 2. Flow Time: 10 minutes.
- 3. Walkable: 2 to 3 hours.
- 4. Compressive Strength: 5,500 psi (385 kg/cm2) at 28 days, ASTM C109M.
- 5. Flexural Strength: 1,200 psi (84 kg/cm2) at 28 days, ASTM C348 6. VOC: 0.
- I. Aggregate: Well-graded, washed gravel, 1/8 to 1/4 inch (3 to 6 mm); or coarse sand as recommended by underlayment manufacturer.
 - 1. Provide aggregate for areas of infill over 1½" thick and when recommended in writing by underlayment manufacturer for underlayment thickness required.
- J. Water: Potable and at a temperature of not more than 70 deg F (21 deg C).
- K. Primer: Product of underlayment manufacturer recommended in writing for substrate, conditions, and application indicated.
 - Primer shall have a VOC content of 200 g/L or less when calculated according to 40 CFR 59, Subpart D.
 - Primer shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- L. Surface Sealer: Designed to reduce porosity as recommended by manufacturer for type of floor covering to be applied to underlayment.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, with Installer present, for conditions affecting performance.
- B. Proceed with application only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. General: Prepare and clean substrate according to manufacturer's written instructions.
 - 1. Treat nonmoving substrate cracks according to manufacturer's written instructions to prevent cracks from telegraphing (reflecting) through underlayment.
 - 2. Fill substrate voids to prevent underlayment from leaking.
- B. Concrete Substrates: Mechanically remove, according to manufacturer's written instructions, laitance, glaze, efflorescence, curing compounds, form-release agents, dust, dirt, grease, oil, and other contaminants that might impair underlayment bond.
 - 1. Moisture Testing: Perform anhydrous calcium chloride test, ASTM F 1869. Proceed with installation only after substrates do not exceed a maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. in 24 hours.
- C. Nonporous Substrates: For ceramic tile, quarry tile, and terrazzo substrates, remove waxes, sealants, and other contaminants that might impair underlayment bond, and prepare surfaces according to manufacturer's written instructions.
- D. Adhesion Tests: After substrate preparation, test substrate for adhesion with underlayment according to manufacturer's written instructions.

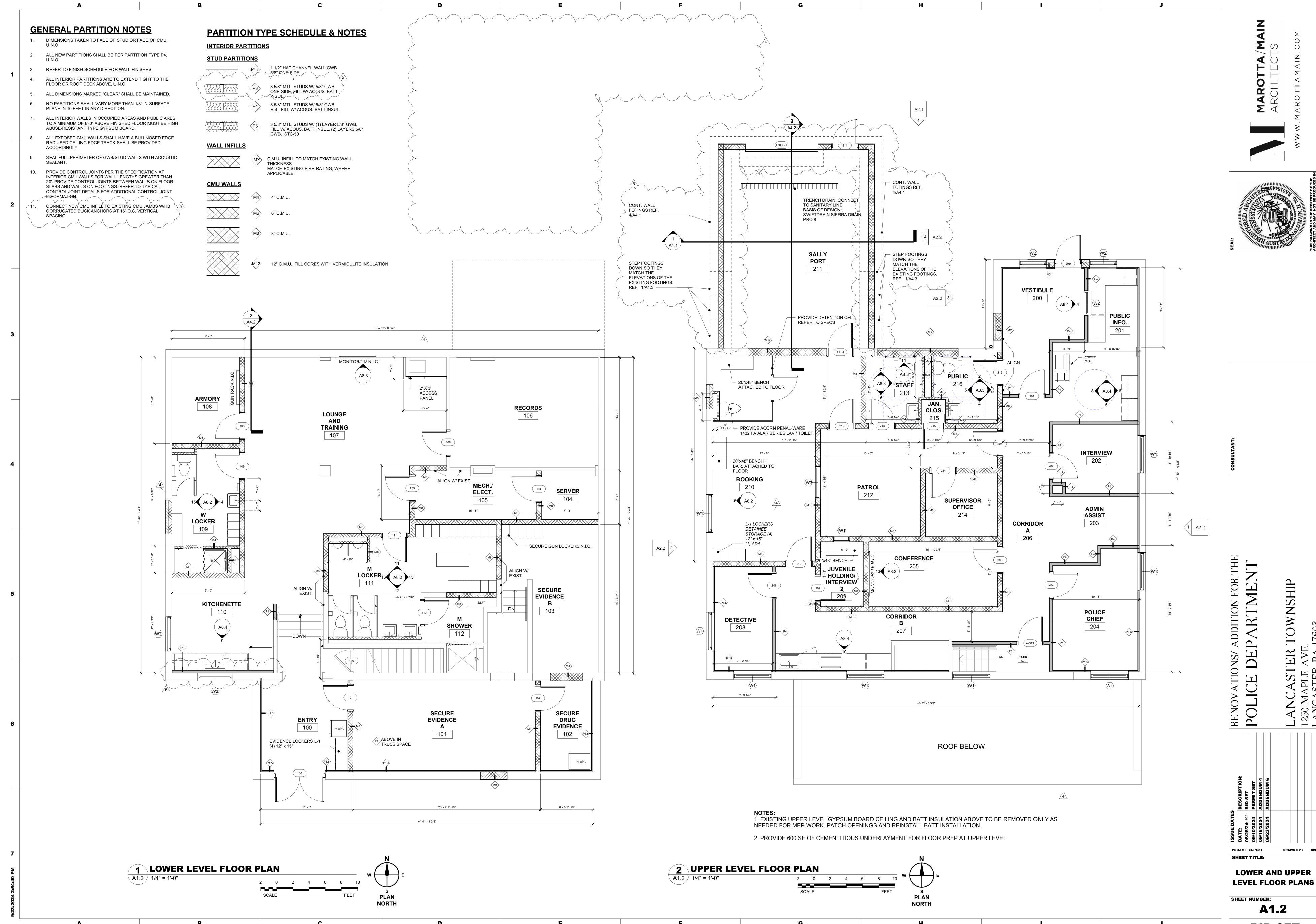
3.3 APPLICATION

- A. General: Mix and apply underlayment components according to manufacturer's written instructions.
 - 1. Close areas to traffic during underlayment application and for time period after application recommended in writing by manufacturer.
 - 2. Coordinate application of components to provide optimum underlayment-to-substrate and intercoat adhesion.
 - 3. At substrate expansion, isolation, and other moving joints, allow joint of same width to continue through underlayment.
- B. Apply primer over prepared substrate at manufacturer's recommended spreading rate.
- C. Apply underlayment to produce uniform, level surface.
 - 1. Apply a final layer without aggregate to product surface.
 - 2. Feather edges to match adjacent floor elevations.
- D. Cure underlayment according to manufacturer's written instructions. Prevent contamination during application and curing processes.
- E. Do not install floor coverings over underlayment until after time period recommended in writing by underlayment manufacturer.
- F. Apply surface sealer at rate recommended by manufacturer.
- G. Remove and replace underlayment areas that evidence lack of bond with substrate, including areas that emit a "hollow" sound when tapped.

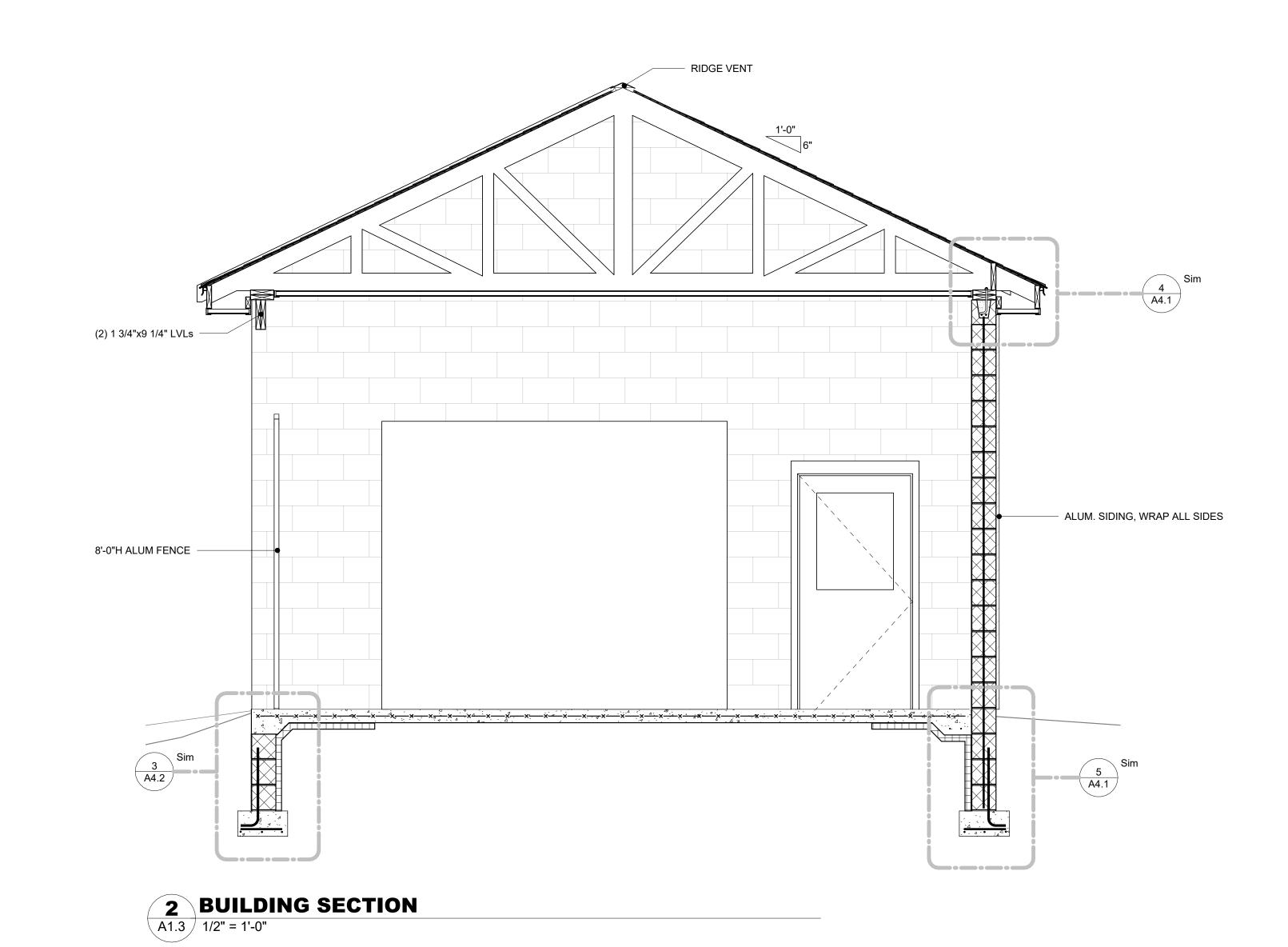
3.4 PROTECTION

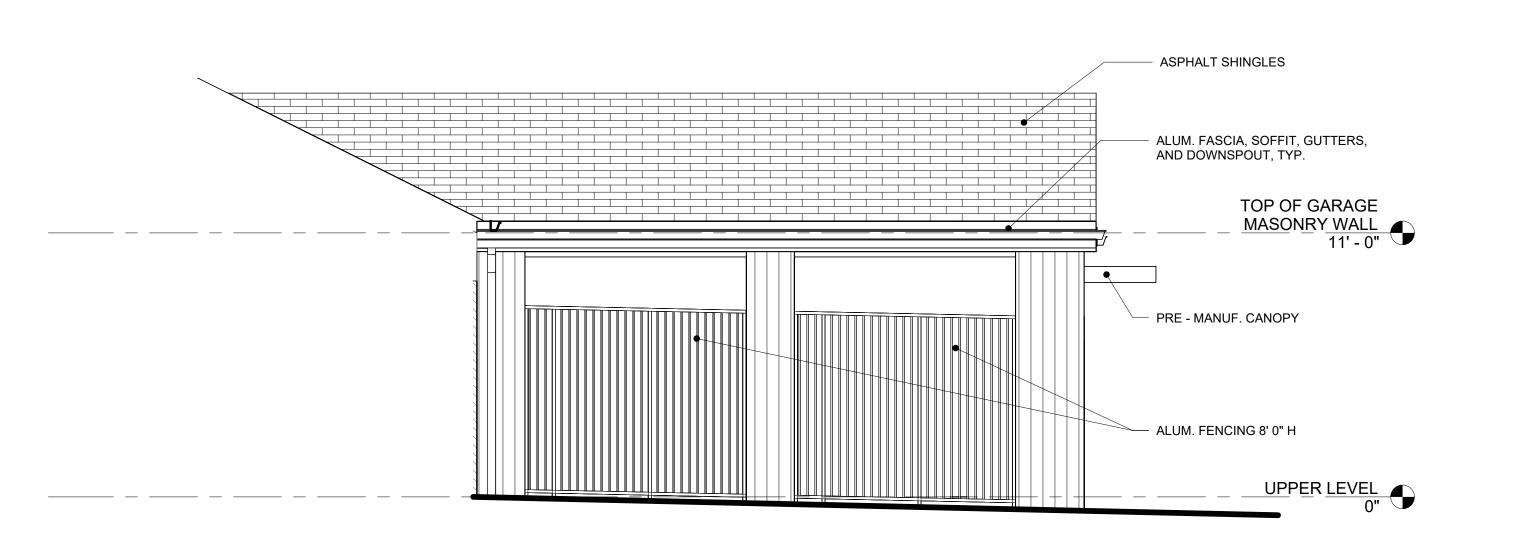
A. Protect underlayment from concentrated and rolling loads for remainder of construction period.

END OF SECTION 03 54 16



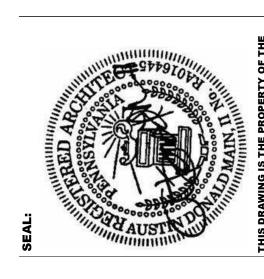
1 PARTIAL UPPER LEVEL FLOOR PLAN ALTERNATE
A1.3 1/4" = 1'-0"





3 ELEVATION A1.3 1/4" = 1'-0"

MAROTTA/MAIN COM



| RENOVATIONS/ ADDITION FOR THE | POLICE DEPARTMENT |

ISSUE DATES

ISSUE DATE:

DATE:

DESCRIPTION:

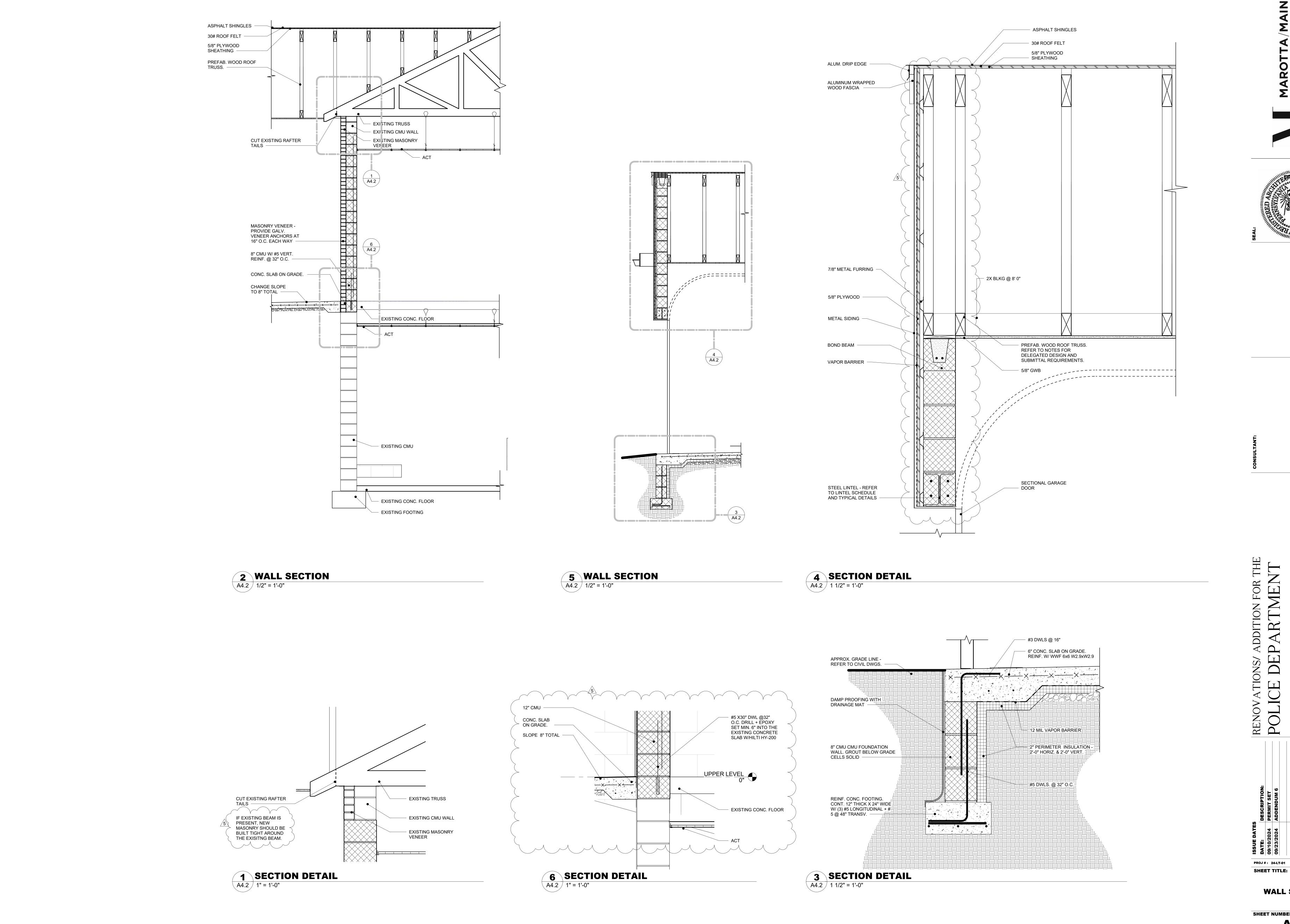
09/10/2024 PERMIT SET

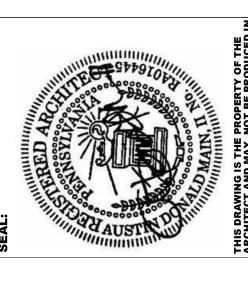
09/23/2024 ADDENDUM 6

SHEEL LITHE:

ALTERNATE PARTIAL FLOOR PLAN/ SECTION/ DETAILS

SHEET NUMBER:





WALL SECTIONS

SHEET NUMBER: **A4.2**

1. The contractor shall verify the requirements of other trades as to sleeves, chases, hangers, inserts, anchors, holes and other items to be placed or set in the structural work. 2. The contractor shall be responsible for complying with all safety precautions and regulations during the work. The engineer will not advise on nor issue direction as to safety precautions and programs. 3. The structural drawings herein represent the finished structure. The contractor shall provide all temporary shoring, guying and bracing required to erect and hold the structure in proper alignment until all structural work and connections have been completed. The investigation, design, safety, adequacy and inspection of erection bracing, shoring, temporary supports, etc. is the sole responsibility of the contractor. 4. The engineer shall not be responsible for the methods, techniques and sequences of procedures to perform the work. The supervision of the work is the sole responsibility of the contractor. 5. Drawings indicate general and typical details of construction. Where conditions are not specifically shown, similar details of construction shall be used,

subject to approval by the engineer 6. All structural systems which are to be composed of components to be field erected shall be supervised by the supplier during manufacturing, delivery, handling, storage and erection in accordance with the supplier's instructions and requirements. 7. Contractor shall provide all temporary supports required for stability and for resistance to wind and seismic forces until the structure is capable of

providing this support. Contractor to refer to the National Concrete Masonry Association technical guide #03-04C, "Bracing concrete masonry walls under construction". 8. Loading applied to the structure during the process of construction shall not exceed the safe load-carrying capacity of the structural members. The live loadings used in the design of this structure are indicated in the "Design Criteria Notes". Do not apply any construction loads until structural framing is

properly connected together and until all temporary bracing is in place. 9. All ASTM and other references are per the latest editions of these standards, unless otherwise noted. 10. In accordance with Section 1704 of IBC 2018, special inspections will be required for this project. Special inspections shall be performed in

accordance with the "Schedule of Special Inspections". All fabricators shall satisfy the "Exception" noted in section 1704.2.5.1, which requires the fabricator to maintain an agreement with an approved independent inspection or quality control agency. The contractor shall notify the special inspector at least 48 hours in advance for work that will require inspection or testing 11. Unless otherwise indicated, all items noted to be demolished shall become the contractor's property and be removed from the site.

SHOP DRAWING NOTES:

1. Shop drawings and other items shall be submitted to the architect/engineer for review prior to fabrication. The architect/engineer's review is to be for conformance with the design concept and general compliance with the relevant contract documents. The architect/engineer's review does not relieve the contractor of the sole responsibility to review, check and coordinate the shop drawings prior to submission. The contractor remains solely responsible for errors and omissions associated with the preparation of shop drawings as they pertain to member sizes, details, dimensions, etc. 2. Submit shop drawings as per note #3 below. In no case shall reproduction of the contract drawings be used as shop drawings. As a minimum, submit the following items for review:

A. Reinforcing steel shop drawings. B. Pre-manufactured wood system/truss shop drawings (see notes).

Other submittals may be required per the "Schedule of Special Inspections" or the separate notes contained herein. 3. Contractor shall submit electronic shop drawings. Any additional shop drawings submitted will not be reviewed or returned. 4. Contractor shall submit a schedule indicating when each set of shop drawings will be submitted to the architect/engineer prior to any shop drawing

5. All notes or questions from the detailer to the engineer or architect shall be clouded, numbered and with the text "Arch/Engr. review." Any notes or questions from the detailer to the contractor shall be clouded, numbered and with the text "G.C. Review." 6. All shop drawings shall be reviewed by the contractor before submittal to the engineer or architect. Shop drawings will be rejected if the contractor has not reviewed the shop drawings prior to submittal to engineer or architect. 7. The contractor shall produce all shop drawings. Copying, scanning and/or reusing any portion of the structural drawings as part of the shop drawings

DESIGN CRITERIA NOTES:

1. The intended design standards and/or criteria are as follows: General: Uniform statewide bldg. code (IBC 2018, Chapter 16 as amended)

Concrete: ACI 318-14 Masonry: TMS 402/602-16

Wood: NDS-2018 Wood Trusses: TPI 1-2014

2. Design gravity dead loads used in the design of this structure are as follows (refer to IBC 2018 section 1606): 20 PSF Max. 12 PSF Min.

Addition Floor On grade All other Actual weight

3. Design gravity <u>live loads</u> used in the design of this structure are as follows (refer to IBC 2018 section 1607):

Addition Floor 4. The structure has been designed as Risk Category IV in accordance with IBC 2018 table 1604.5.

5. Design lateral live loads used in the design of this structure, in accordance with Chapters 11 through 31 of ASCE 7-16, are as follows: Wind – Ultimate, main system: 120 mph, Exposure B, lw = 1.0 Wind – Ultimate, components: 120 mph, Exposure B, lw = 1.0

submittal is not permitted. Submittals that include reproduced portions of the structural drawings will be rejected without review.

6. Design snow loads used in the design of this structure, in accordance with Chapter 7 of ASCE 7-16, are as follows: Pg (ground snow load) = 30 PSF, Ce = 1.0, Is = 1.0, Ct = 1.0

Pf (flat roof) = 30 PSF, Cs = 1.0

Ps (Balanced/sloped roof) = 30 PSF 7. The lateral load resisting system of this building consists of:

8. This structure has been designed with "safety factors" in accordance with generally accepted principles of structural engineering. The fundamental nature of the "safety factor" is to compensate for uncertainties in the design, fabrication and erection of structural building components. It is intended that "safety factors" be used so that the load carrying capacity of the structure does not fall below the design load and that the building will perform under design load without distress. While the use of "safety factors" implies some excess capacity beyond design load, such excess capacity cannot be adequately predicted and SHALL NOT BE RELIED UPON.

EXISTING CONSTRUCTION NOTES:

1. Before proceeding with any work within the existing facility, the contractor shall familiarize himself with existing structural and other conditions. It shall be the contractor's responsibility to provide all necessary bracing, shoring and other safeguards to maintain all parts of the existing work in a safe condition during the process of demolition and construction and to protect from damage those portions of the existing work which are to remain. 2. The contractor shall field verify the dimensions, elevations, etc. necessary for the proper construction and alignment of the new portions of the work to the existing work. The contractor shall make all measurements necessary for fabrication and erection of structural members. Any discrepancy shall be immediately brought to the attention of the engineer.

3. Welding to and within an existing facility presents potential hazards, including: A. Fire hazard - due to the existing construction and building contents.

B. Structural liquefaction - due to welding across the full section of structural steel members. Recommendations to prevent these hazards include:

A. Fire hazard - protect existing combustibles prior to welding. Keep a separate watchman and several fire extinguishers on hand. B. Structural liquefaction - weld in small increments. Allow welds to harden before continuing to the next increment. C. Do not leave the site until satisfied that no fire hazard exists.

5. The contractor shall be responsible for the design and erection of all shoring necessary to safeguard the existing structure. Any shoring shown is a partial and schematic representation of that required. The contractor shall submit a detailed plan for shoring, bracing and protection of the existing

DEMOLITION NOTES:

1. The contractor is to obtain and pay for all necessary permits for the demolition and removal work required. 2. Demolition procedures, shoring requirements, sequences, techniques, etc. either given in or implied to by these drawings are suggestions only. 3. Prior to undertaking any demolition work, the contractor shall ascertain, by survey, the existing conditions of the property and the extent of the

demolition work involved 4. The contractor shall perform all demolition work in such a manner as to protect the existing structure and be responsible to properly repair any damage which may occur as a result of his demolition work. If the contractor damaged the existing structure to remain, he shall notify the owner and engineer immediately and for all repair costs, including design and inspection expenses. 5. The contractor shall cease demolition operations and notify the owner and engineer immediately if it appears that the integrity of the structure has been

affected by the demolition work. 6. The contractor shall not cut or alter any structural members to remain without written authorization by the engineer or as indicated on the structural 7. All existing dimensions (distances, elevations, member sizes, etc.) shown on the drawings shall be verified in the field by the contractor.

8. The contractor shall provide a temporary platform to catch debris from slab removal. Do not allow resulting debris to accumulate in the work area. All debris shall be disposed of in a legal manner with as little disturbance to adjacent spaces and occupants as possible. 9. Cutting of existing concrete slabs shall be performed in a neat professional manner. Drill corners and saw cut straight lines around the perimeter of the

SUBGRADE PREPARATION NOTES:

1. All site preparation shall conform to the requirements of IBC 2018 Chapter 18. 2. Within an area a minimum of 5 feet beyond the building limits, excavate a minimum of 4" of existing soil. Remove all organics, pavement, roots, debris

> 2x4 VERT X-BRACING @ -EA. END OF BLDG. & @

4 JBA - TYP. TRUSS BRACING

A4.3 / 1/8" = 1'-0"

20'-0" O.C. (TYP.)

3. The surface of the exposed subgrade shall be inspected by probing or testing to check for pockets of soft or unsuitable material. Excavate unsuitable soil as directed by the geotechnical engineer/testing agency 4. Fill all excavated areas with approved controlled fill. Place in 8 inch loose lifts and compact to a minimum of 95% of the maximum dry density in

5. All controlled fill material shall be a select granular material free from all organics or otherwise deleterious material with not more than 20% by weight passing a No. 200 sieve (classified as SC, SM, SP or better in accordance with the unified soil classification system) and with a plasticity index not 6. Provide field density tests for each 3,000 s.f. of building area for each lift of controlled fill.

FOUNDATION NOTES:

1. All foundation construction shall conform to the requirements of IBC 2018 Chapter 18. 2. All footings have been designed based upon an assumed soil bearing pressure of 2,000 psf. All footings shall bear on undisturbed, firm natural soil or compacted fill. All foundation excavations shall be evaluated by the geotechnical engineer/testing agency prior to pouring foundation concrete. 3. Top of footing elevation shall be as shown on the foundation plan. These elevations are a maximum and shall be lowered as required to obtain the required design bearing pressure or lowered below new or existing utilities per typical details. 4. All foundation concrete shall obtain a 28 day compressive strength of 3,000 psi. All concrete to be permanently exposed to weather shall be air entrained to 5% (+-1%) with an admixture that conforms to ASTM C-260.

5. All concrete work shall conform to the requirements of ACI 301, "Specification for Structural Concrete Buildings". Hot weather concreting shall be in accordance with ACI 305. Cold weather concreting shall be in accordance with ACI 306. 6. All reinforcing steel shall conform to ASTM A-615, Grade 60. Reinforcing shall be detailed and installed per ACI 315 and CRSI Manual of Standard Practice.

. Unless otherwise noted, the following concrete cover shall be provided for reinforcement. A) Concrete cast against and permanently exposed to earth: 3"

B) Concrete exposed to earth or weather: #6 through #18 bars: 2"

#5 bar, W31 or D31 wire and smaller: 1-1/2" 8. All reinforcing marked continuous (cont.) on the plans and details shall be lapped 36xbar diameters at splices unless otherwise noted.

9. No unbalanced backfilling shall be placed against foundation walls unless walls are securely braced against overturning, either by temporary bracing or by permanent 10. Prior to commencing any foundation work, coordinate work with any existing utilities. Foundations shall be lowered where required to avoid utilities.

SLAB ON GRADE NOTES:

1. Slab-on-grade construction shall conform to the requirements of ACI 301, "Specification for Structural Concrete Buildings" and IBC 2018 Section 1907. 2. Provide concrete slabs as indicated on plans over a 15 mil polyethylene vapor barrier and 4" of porous fill as follows: 6" slab reinforced with 6x6- W2.9xW2.9 welded wire fabric and with 4000 psi mix concrete.

Maximum slump for all concrete slabs shall be 5 inches, using type I cement. 3. All welded wire fabric shall be in accordance with ASTM A-1064. Lap adjoining pieces at least one full mesh.

13. See the architectural drawings for exact locations of depressed slab areas and drains. Slope slab to drains where shown.

4. All porous fill material shall be a clean granular material with 100% passing a 1-1/2" sieve and no more than 5% passing a no. 4 sieve. Porous fill shall be compacted to 95% max. dry density per ASTM D-698. 5. Slab joints shall be filled with approved material. This should take place as late as possible, preferably 4 to 6 weeks after the slab has been cast. Prior to filling, remove all debris from the slab joints, then fill in accordance with the manufacturer's recommendations as follows: fill with epoxy resin. 6. Unless otherwise approved, all welded wire fabric shall be blocked into the position indicated with precast concrete blocks having a compressive strength equal to that of 7. Walkways and other exterior slabs are not indicated on the structural drawings. See the site plan and architectural drawings for locations, dimensions, elevations, jointing

details and finish details. Provide 4" walks reinforced with 6x6 - W1.4xW1.4 WWF unless otherwise noted. 8. Slabs to be permanently exposed to weather shall be air entrained to 5% (+-1%) with an admixture that conforms to ASTM C-260. 9. All concrete work shall conform to the requirements of ACI 301, "Specification for Structural Concrete Buildings". Hot weather concreting shall be in accordance with ACI 305. Cold weather concreting shall be in accordance with ACI 306.

10. In order to avoid concrete shrinkage cracking, the maximum spacing of joints shall be 12'. 11. The alternate wires of the welded wire fabric must be precut at the slab contraction joint locations to create a "weakened plane". Without cutting the alternate wires, the strength of the wire will prevent the slab from cracking (separating) at the joint and the slab may begin to crack elsewhere. 12. The use of polypropylene fibers (in lieu of welded wire fabric) is prohibited without the written authorization of the engineer

14. Slabs shall be constructed in accordance with the following flatness/levelness requirements: Slab Category Specified Local Minimum $F_F = 25$, $F_L = 20$ $F_F = 17$, $F_L = 15$ Straight edged

Floor flatness and levelness tests shall be conducted by the owner in accordance with ASTM E 1155. Results, including acceptance or rejection of the work will be provided to the contractor within 48 hours after data collection. Remedies for out of tolerance work shall be in accordance with the specifications. MASONRY NOTES:

1. Masonry construction shall conform to the requirements of the "Building Code Requirements and Specification for Masonry Structures (TMS 402/602-16)", published by The Masonry Society, Longmont, Colorado, and IBC 2018 Chapter 21. 2. Hollow load-bearing masonry units shall conform to ASTM C-90 and be made with normal weight aggregate. The minimum prism compressive strength (f'm) shall be 2,500 psi at an age of 28 days, as determined by the unit strength method of ACI 530.1 3. Fill all bond beams and reinforced cells solidly with grout. Grout shall conform to ASTM C-476 and shall obtain a min. 28 day compressive strength of 2,500 psi. 4. Reinforcing steel shall be in accordance with ASTM A-615, grade 60. Shop fabricate reinforcing bars which are shown to be hooked or bent. Provide a minimum lap of 48

x bar diameters at all splices, unless indicated otherwise. 5. The use of masonry-cement mortar is strictly prohibited. Mortar shall conform to ASTM C-270, type S. All mortar shall meet the "Proportion Specification" of ASTM C-270 and be made with Portland cement/lime (non air-entrained).

6. Unless otherwise indicated, all walls shall be laid in running bond. Bond corners and intersections of load-bearing walls. 7. Provide vertical reinforcing bars of the given size and spacing as indicated. Provide bars at all wall corners, intersections and opening edges. Masonry walls shall be constructed in accordance with the "low-lift" or "high-lift" methods. "High-lift" masonry construction is limited to specially qualified contractors meeting the following minimum

A. Successful completion of at least 3 previous projects that utilized "high-lift" wall construction. B. Contractor shall submit a detailed "high-lift" wall construction procedure for approval, including the documentation of all personnel who have successfully been trained in 8. Provide rebar dowels from foundations to match vertical reinforcing size and spacing. Dowels shall have standard 90 degree hooks and lap with the first lift of reinforcing. 9. Provide horizontal bond beams with continuous reinforcing as indicated. Discontinue all horizontal reinforcing at control joints except for the bond beams at bearing

10. Provide standard, galvanized 9 gauge horizontal joint reinforcing at 16" on center in all walls. Provide ladder type joints reinforcing for all concrete masonry. Unless otherwise noted, stop all horizontal joint reinforcing at control joints. 11. Provide lintels above all wall openings per typical details and schedule. See the drawings for locations of all door and window openings. 12. Provide CMU control joints as indicated on the architectural drawings, with additional joints such that the spacing between joints does not exceed a spacing of 3 x wall

height (30 feet maximum). Where beams or lintels bear at CMU control joints, offset and lap the vertical reinforcing as indicated. 13. The masonry contractor shall provide all required temporary wall bracing during construction (see "General Structural Notes") 14. Hot weather masonry work shall be in accordance with ACI 530.1. Cold weather masonry work shall be in accordance with ACI 530.1.

PRE-ENGINEERED WOOD TRUSS NOTES:

Wood trusses shall be designed by the manufacturer to support the following loads:

A. Gravity Loading Case Top Chord Loading

Snow Load – 30 PSF (on the horizontal projection) Roof Live Load - 20 psf (on the horizontal projection) Dead Load - 15 psf (on the surface area)

 Additional 5 psf at built-up framing areas **Bottom Chord Loading**

Attic Live Load - 0 psf Dead Load - 5 psf

B. Wind Loading Case (per IBC 2018, Section 1609) See 'Design Criteria Notes' for wind component criteria

2. Wood trusses shall be designed by the manufacturer in accordance with the applicable provisions of the latest edition of the national design specification of the National Forest Products Association, the design specification for metal plate connected wood trusses of the Truss Plate Institute and IBC 2018 Section 2303.4. 3. Wood materials shall be Southern Pine, Douglas Fir or Larch and shall be kiln dried and used at 19% maximum moisture content. Provide Grade No. 2 or as required to satisfy stress requirements. See "Schedule of Required Stress Values" in the wood framing notes section. 4. Connector plates shall not be less than 0.036 inches (20 gauge) in coated thickness, shall meet or exceed ASTM Grade A or higher and shall be hot dipped galvanized

according to ASTM A-2201 (coating G60). Minimum steel yield stress shall be 33,000 psi. 5. Trusses shall be fabricated in a properly equipped manufacturing facility of a permanent nature. Trusses shall be manufactured by experienced workmen, using precision cutting, jigging and pressing equipment under the requirements in Quality Control Standard QST-88 of the Truss Plate Institute. 6. Secondary bending stresses in truss top and bottom chords due to dead, live and wind loads shall be considered in the design. Load duration factors shall be per the "National Design Specification for Wood Construction". 7. Wood trusses shall be erected in accordance with the truss manufacturer's requirements. This work shall be done by a qualified and experienced contractor. Truss erection by an inexperienced or nonqualified contractor can result in construction collapse and/or serious injury and damage. 8. The contractor shall provide all temporary and permanent bracing as required for safe erection and performance of the trusses. The guidelines set forth by the truss plate institute publication "HIB-91, Commentary and Recommendations for Handling, Installing and Bracing Metal Plate Connected Wood Trusses" shall be a minimum 9. Truss members and components shall not be cut, notched, drilled nor otherwise altered in any way without the written approval of the engineer

10. Submit complete shop drawings for all wood trusses showing member sizes, species, grade, moisture content, span, camber, dimensions, chord pitch, bracing requirements and loadings. Shop drawings shall be submitted to the engineer and shall bear the seal of a professional engineer registered in Pennsylvania. Refer to "Shop Drawing Notes" section for additional requirements.

PLYWOOD SHEATHING NOTES:

-TYP. ROOF TRUSS

TO T.O. BOTTOM

- CONT. 2x4 TRUS BOT

CHORD BRACING. NAIL

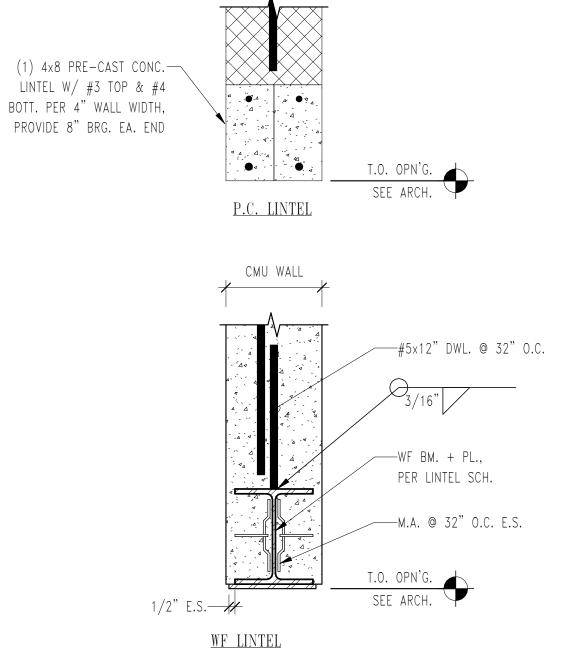
CHORD, LAP MIN (2) TYP. TRUSS BOT. CHORD

— EXTERIOR SIDEWALL

LATERAL BRACING (TYP.)

4. All nailing shall be carefully driven and not overdriven.

1. All plywood construction shall be in accordance with the American Plywood Association (APA) specifications and IBC 2018 Chapter 23. 2. All roof panel sheathing shall be 3/4" (nom.) type CDX, exp. I APA rated sheathing. Suitable edge support shall be provided by use of panel clips or blocking between framing. Unless otherwise noted connect roof sheathing with 8d common nails at 6" o/c at supported panel edges and 6" o/c at intermediate supports. 3. Install all plywood sheathing with the long dimension of the panel across supports and with panel continuous over two or more spans. Stagger panel end joints. Allow 1/8" spacing at panel ends and edges unless otherwise recommended by the sheathing manufacturer.



3 JBA - TYP CMU LINTEL A4.3 / 1 1/2" = 1'-0"

WOOD FRAMING NOTES:

1. All wood framing material shall be surfaced dry and used at 19% maximum moisture content. Allowable stress requirements of all material shall be in accordance with the "Schedule of Required Stress Values", as follows: 2. All stud and wall framing shall be either of the following:

A. No. 2 grade Southern Yellow Pine (syp) B. No. 2 grade Spruce-Pine-Fir (spf)

"Stud" grade material is strictly prohibited from use. 3. All rafter and misc. framing shall be no. 2 grade, Southern Pine. Provide full-depth (or metal) bridging at midspan and at a maximum spacing of 8'-0"

4. All framing exposed to the weather or in contact with masonry or concrete shall be pressure-treated in accordance with the American Wood Preservers Association specifications. Where possible, all cuts and holes should be completed before treatment. Cuts and holes due to on-site fabrication shall be brushed with 2 coats of copper naphthenate solution containing a minimum of 2% metallic copper in solution (per AWPA std. M4). 5. The contractor shall carefully select lumber to be used in loadbearing applications. The length of split on the wide face of 2" nominal loadbearing framing shall be limited to less than 1/2 of the wide face dimension. The length of split on the wide face of 3" (nominal) and thicker lumber shall be limited to 1/2 of the narrow face dimension. 6. Provide header beams of the same size as joists or rafters to frame around openings in the plywood deck unless otherwise indicated.

7. Bolt holes shall be carefully centered and drilled not more than 1/16" larger than the bolt diameter. Bolted connections shall be snugged tight but not to the extent of crushing wood under washers. 8. Prefabricated "micro-lam" lumber headers and beams shall be as manufactured by "Trus Joist MacMillan Corp.", Boise, Idaho or approved equal. Micro-lam material shall be 2.0E, Southern Pine. Do not cut or notch micro-lam material without the manufacturer's approval. 9. Prefabricated metal joist hangers, hurricane clips, hold-down anchors and other accessories shall be as manufactured by "Simpson Strong-Tie Company", Tel. 800-999-5099, or approved equal. Install all accessories per the manufacturer's requirements. All steel shall have a minimum thickness or 0.04 inches (per ASTM A653, Grade A) and be galvanized (coating G60).

10. Nailing shall not be overdriven. 11. Holes and notches drilled or cut into wood framing shall not exceed the requirements of IBC 2018 Sections 2308.4.2.4. 12. All plates, anchors, nails, bolts, nuts, washers, and other miscellaneous hardware shall be hot dip galvanized.

13. All plates, anchors, nails, bolts, nuts, washers, and other miscellaneous hardware to be in permanent contact with wood treated with Alkaline Copper Quat and/or Copper Azole shall be hot dipped galvanized (coating G185) or stainless steel type 304 or 316. Galvanized and stainless steel fasteners and connects shall not be used simultaneously in any one connection. **POST-INSTALLED ANCHOR NOTES:**

1. Except where indicated on the drawings, post-installed anchors shall consist of the following anchor types as provided by HILTI, Inc. Contact HILTI at (800) 879-8000 for product related questions.

A. Anchorage to concrete 1. Adhesive anchors for cracked and uncracked concrete use: A. Adhesives for use:

1. HILTI HIT-HY 200 safe set system with HILTI HIT-Z rod per ICC ESR-3187 2. HILTI HIT-HY 200 safe set system with HILTI hollow drill bit and vacuum with has threaded rod per ICC ESR-3187 B. Steel elements for use with adhesive:

1. HILTI HAS-V-36 grade 36 carbon steel rod 2. HILTI HIT-Z OR HIT-Z-R ROD (with HY 200 only) 2. Basis of design includes the following design parameters:

A. Cracked concrete B. Water-saturated concrete C. Base material temperature of 23-104 degrees Fahrenheit

D. Allowable with hammer-drill, hollow drill bit system, and core drilling methods 3. Medium duty mechanical anchors for cracked and uncracked concrete use: A. HILTI KWIK BOLT-TZ2 expansion anchor safe set system with hollow drill bit and vacuum and SI-AT-A22 tool with adaptive torque for applicable sizes

per ICC ESR-4266 B. Rebar doweling into concrete 1. Adhesive anchors for cracked and uncracked concrete use: A. HILTI HIT-HY 200 safe set system with HILTI hollow drill bit and vacuum with continuously deformed rebar per ICC ESR-318

2. Basis of design includes the following design parameters: A. Cracked concrete B. Water-saturated concrete C. Base material temperature of 23-104 degrees Fahrenheit

D. Allowable with hammer-drill, hollow drill bit system, and core drilling methods E. Current ICC-ES report with approval for development of bar using ACI provisions for embedment depths greater than 20 bar diameters C. Anchorage to solid grouted masonry 1. Adhesive anchors use:

A. HILTI HIT-HY 270 safe set system with HILTI hollow drill bit and vacuum per ICC ESR-4143 B. Steel anchor element shall be HILTI has continuously threaded rod or continuously deformed steel rebar Mechanical anchors use:

A. HILTI KWIK BOLT-TZ2 expansion anchor per ICC ESR-4561 D. Anchorage to hollow/multi-wythe masonry 1. Adhesive anchors use:

Adhesive Anchor Installer Certification Program (HAAICP) is an approved equivalent.

concrete anchors by HILTI PS 1000 or other GPR, X-RAY, chipping or other approved means.

RUBBER GASKET—

WALL, (TYP.)

HORIZ. REINF.—

A4.3 / 1 1/2" = 1'-0"

EX. FTG.

A4.3 / 1/2" = 1'-0"

(2)#5 DWL., DRILL & EPOXY

SET W/ HILIT HIT-HY

2 JBA - TYP. WALLS TO EXTERIOR

200V3, MIN. 8" EMBED.

REFER TO GENERAL NOTES & ARCH. DWGS.

A KEYED CMU MAY BE USED IN LIEU OF

FOR SPACING REQUIREMENTS

RUBBER GASKET SHOWN.

5 JBA - TYP. CMU WALL

A. HILTI HIT-HY 270 safe set system with HILTI hollow drill bit and vacuum per ICC ESR-4143 B. Steel anchor element shall be HILTI has continuously threaded rod or continuously deformed steel rebar.

C. The appropriate size screen tube shall be used per adhesive manufacturer's printed installation instructions. 2. Anchor capacity used in design shall be based on the technical data published by HILTI or other such method as approved by the structural engineer of record. Substitution requests for alternate products must be approved in writing by the structural engineer of record prior to use. Co provide calculations that have been sealed by another licensed engineer demonstrating that the substituted product is capable of meeting the performance of the specified product. Substitutions will be evaluated by their having an ICC ESR showing compliance with the relevant building code for seismic uses, load resistance, installation category, and availability of comprehensive installation instructions. Adhesive anchor evaluation will also consider creep, in-service temperature, installation temperature, moisture condition of concrete, and drilling methods

3. Use of diamond core bit with roughening tool for anchor holes requires approval from engineer of record prior to drilling. Unless otherwise shown in the drawings, all holes shall be drilled perpendicular to the concrete surface. 4. Install anchors per the manufacturer's printed installation instructions, as included in the anchor packaging. 5. Overhead adhesive anchors must be installed using the HILTI Profi Piston Plug System. 6. ACI/CRSI adhesive anchor installer certification is required for all installers of adhesive anchors in horiztonal or upwardly inclined orientation. The HILTI

7. The contractor shall arrange an anchor manufacturer's representative to provide onsite installation training for all anchor products specified. The structural engineer of record must receive documented confirmation that all personnel who install anchors are trained prior to the commencement of anchor installation. 8. Anchor capacity is dependent upon spacing between adjacent anchors and proximity of anchors to edge of concrete. Install anchors in accordance with spacing and edge clearances indicated on the drawings 9. Existing reinforcing bars in the concrete structure may conflict with specific anchor locations. Unless noted on the drawings that the bars can be cut, the contractor shall review the existing structural drawings and shall undertake to locate the position of the reinforcing bars at the locations of the

OF WALL (TYP.)

—STOP HORIZ. REINF. @

CONTROL JT. (TYP.)

-CONT. L6x4x3/8 w/

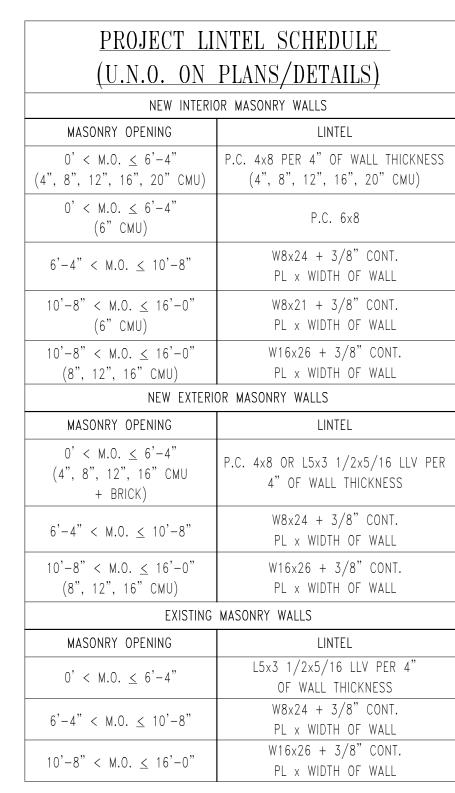
3/4"ø EXP. BOLT @ 32"

O.C., MIN. 6" EMBED.

-FOR FTG. SIZE & REINF.

SEE PLAN & SCH.

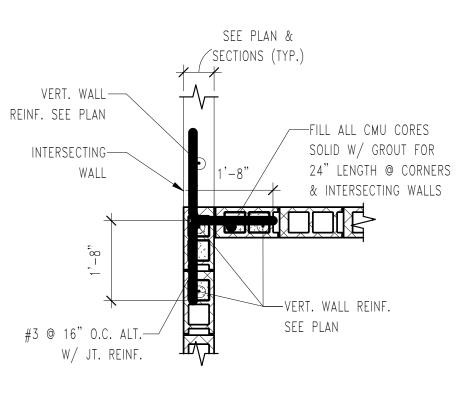
├──CMU, SEE PLAN



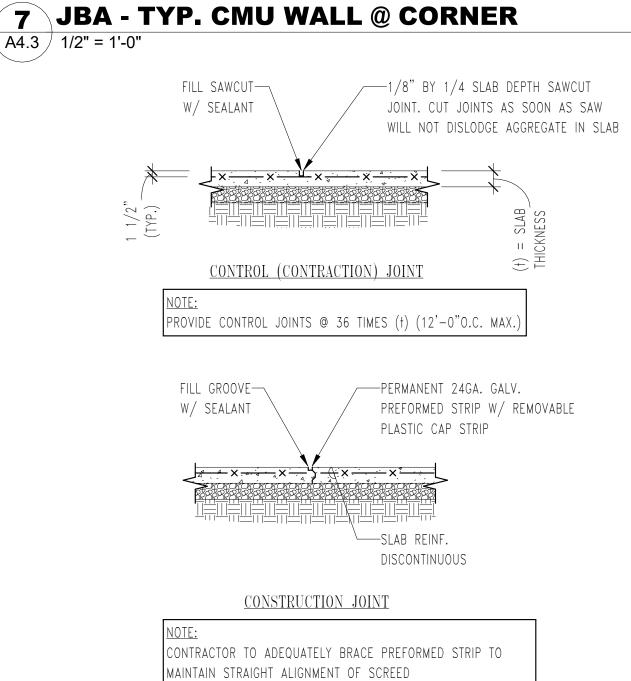
1. ALL STEEL LINTELS IN EXTERIOR WALLS TO BE GALVANIZED. 2. P.C. LINTELS TO BE REINFORCED WITH #3 TOP & #4 BOTTOM U.N.O. 3. PROVIDE MIN. 8" BEARING EACH END OF LINTEL, U.N.O.

4. LINTELS ARE REQUIRED AT OPENINGS OF MORE THAN 12" FOR BRICK-SIZE UNITS AND 24" FOR BLOCK-SIZE UNITS U.N.O. IF LESS THAN 8" OF MASONRY EXISTS BETWEEN ADJACENT OPENINGS THEY SHALL BE CONSIDERED AS ONE SINGLE OPENING.

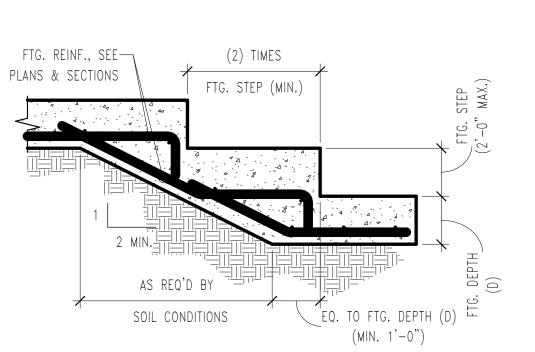
5. REFER TO _/A-_._ FOR TYPICAL LINTEL DETAILS.



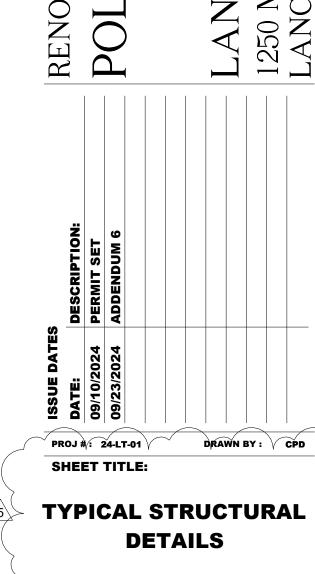
WALL SECTION @ CORNER/INTERSECTION



6 JBA - TYPICAL SOG CONTROL & CONSTRUCTION A4.3 / 1/2" = 1'-0"



1 JBA - TYP. HALF STEP FOOTING A4.3 / 1/2" = 1'-0"



SHEET NUMBER:

A4.3