

**UNION COUNTY PUBLIC LIBRARY
LIBRARY RENOVATIONS AND ADDITION**

LWC Commission No. 22110.00

**ADDENDUM #04
NOVEMBER 29, 2023**

LWC, Inc.
712 EAST MAIN ST
RICHMOND, IN 47374

To Prospective Bidders:

This addendum is a modification of the Contract Documents for the above referenced project and is hereby incorporated into and becomes a part of said Contract Documents. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification. It is to be considered in the Proposals and covers additions to or changes in the Contract Documents as indicated below.

This addendum consists of the following:

General Items:

- **Bids due Friday December 15, 2023, at 3:00 PM**

Attachments:

- **General:**
 - Pre-Bid Sign-in Sheet
- **Specifications:**
 - 042000 – Unit Masonry
 - 071413 – Hot Fluid-Applied Rubberized Asphalt Waterproofing
 - 073200 – Roof Tile
- **Drawings:**
 - A201 – LOWER LEVEL REFLECTED CEILING PLAN – BASE BID
 - A202 – UPPER LEVEL REFLECTED CEILING PLAN – BASE BID
 - ID101 – LOWER LEVEL – FLOOR FINISH PLAN

SPECIFICATIONS

ITEM NO.1 – 042000 – Unit Masonry

- Updated section to give brick color

ITEM NO.2 – 071413 - Hot Fluid-Applied Rubberized Asphalt Waterproofing

- Added American Hydrotech 6125

ITEM NO.3 – 073200 – Roof Tile

- Struck 20 year warranty information

DRAWINGS

ITEM NO.1 – A201 – Lower Level Reflected Ceiling Plan – Base Bid

- Added Note 39

ITEM NO.2 – A202 – Upper Level Reflected Ceiling Plan – Base Bid

- Added Note 20 location

ITEM NO.3 – ID101 – Lower Level – Floor Finish Plan

- Updated Finish Material Schedule

PRE-BID MEETING

Union County Public Library
Addition and Renovations
November 28, 2023, at 9:00 AM

1) Introductions / Registration sheet

Todd Soprych, LWC

Kevin McCurdy, LWC

Julie Jolliff, UCPL

Mike Perseponko, Perseponko Painting

Cory Brown, Mattcon

Eric Frey, Mattcon

Joey Bastian, Ferguson Construction Joe Charles, Ferguson Construction

John Dashner, Ludowici Roof Tile

2) Project Description

- The addition and renovation work consists of a 14,000 SF, two story addition
- Renovations to 13,400 SF of the existing building.
- New addition is a steel framed structure on conventional spread footings. The exterior envelope is masonry construction with brick and stone veneer with metal clad wood windows.
- Interior construction is metal stud and gypsum board walls and consists of new office, storage, restrooms, and a multipurpose community room on the first floor.
- The second floor houses the main entry, lobby stairway and meeting rooms as well as an Alternate bid running track over the multipurpose room.
- Renovation work includes new partition walls, doors and finishes generally identified in three Alternate Bid scopes of work identified on the plans.

- Site work consists of demolition and grading to the three-quarter acre site. New work includes asphalt pavement, concrete walks, curbs, ramps and stairs. Civil work will include site drainage and other utilities, underground stormwater detention and site lighting.
- 3) Bids are due Friday, December 15, 2023, no later than 3:00 PM. Sealed bids will be received at 2 East Seminary Street, Liberty IN 47353. Address bids to the attention of Julie Jolliff, Director.
 - 4) Addendums Issued to date = 3
 - At least one additional addendum to be issued.
 - a. Notes from today
 - b. Clarifications as needed.
 - Last day for addenda is December 13, 2023
 - a. All questions must be submitted by December 13, 2023.
 - 5) Documents available from the following locations. Contractors may arrange for printed “hard copies” with the printer of their choice, at Contractor’s expense:
 - LWC’s FTP. For access, contact Sherry Jeffers by email at sjeffers@lwcinspires.com
 - 6) Single Prime General Contract
 - 7) Prevailing wage rates **do not** apply.
 - 8) Owner is tax exempt.
 - 9) Bidding and questions:
 - All questions must be submitted in writing to LWC, Inc. via email. No verbal answers will be given. Submit question to Todd Soprych: Tsoprych@lwcinspires.com
 - Additional site visits must be scheduled in advance with the Owner. No exceptions will be made.
 - 10) General Project schedule:
 - Pre-bid Meeting: November 24, 2023, at 9:00 AM
 - Last Day for Bidder Questions: December 13, 2023
 - Date of Last Addendum: December 13, 2023
 - Bids Due: December 15, 2023, at 3:00 PM.
 - Anticipated Contract Award: January 09, 2024
 - Issue Notice to Proceed: January 15, 2024
 - Construction Start: February 01, 2024
 - Substantial Completion Date: approximately August 2025.
 - Punchlist Completed: 4 weeks after Substantial Completion Date

11) Allowances

- Allowance No. 1: Finish Cost Allowance – Elevator Cab Finishes: For the use of the Owner during construction to select interior cab finishes for the elevator modifications work.
- Allowance No. 2: Quantity Allowance – Engineered Fill – 50 Cu Yds.
- Allowance No. 3: Quantity Allowance Structural Steel – 1 Ton.
- Allowance No. 4: Quantity Allowance Miscellaneous Steel – 1 Ton.
- Allowance No. 5: Quantity Allowance – Ductwork – 500 Lbs.

12) Unit Prices

- Unit Price No. 1 - Engineered Fill for Unsuitable Soils.
- Unit Price No. 2 - Flowable Fill for Unsuitable Soils.
- Unit Price No. 3 - Supplemental Structural Steel.
- Unit Price No. 4 - Supplemental Miscellaneous Steel.
- Unit Price No. 5 - Supplemental Ductwork.

13) Alternates

- Alternate #01 – Expand Community Room.
- Alternate #02 – West Parking Area.
- Alternate #03 – Upper Level Track.
- Alternate #04 – Upper Level Staff Area.

14) Special attention to the following:

- INDOT approvals need to be coordinated with sequencing.
- Under drainage of slab for the new addition
- Area on the eastern side of property was known to have a potential underground spring.
- Owner's vendors in specifications shall be coordinated with contractor. Vendor's scope shall be in General Contractors Bid.

- Residence will be occupied during construction. Contractor to coordinate scopes items and sequencing with owner.
 - Existing Library will be unoccupied during construction. Temporary barriers, dust control, and protective measures shall be in place to protect existing areas.
 - The Carnegie portion of the existing library is part of the National Registry of Historic Places. All materials shall match based on approval.
 - Any FFE items shall be removed by owner.
- 15) Temporary facilities as specified.
- 16) Contractor shall ensure site security.
- 17) Coordinate all site activities with Owner to ensure Owner access.
- 18) Personal Protective Equipment requirements by Contractor.
- 19) Bi-weekly progress meetings as stipulated in the project manual.
- Contractor may utilize portion of site for meetings.
- 20) General questions?
- 21) Tour.

Q & A:

General) Existing soffits, eaves, and fascia to get patched and repaired where necessary and repainted.

General) All existing sealants around windows and other exterior penetrations to be removed and new sealants applied.

General) Residence that is part of the Library's property boundary will remain occupied during construction. All work related to fencing needs to be coordinated with the Library Director before any work shall be done.

END OF ADDENDUM #04

Pre-Bid Meeting Sign-in Sheet

Date and Local Time:

November 28, 2023, 9:00 AM

	PRINT NAME & TITLE	COMPANY	ADDRESS	TELEPHONE NOS.	E-MAIL ADDRESS
1	Kevin R. McCurdy, AIA	LWC, Inc.	712 East Main	ofc. 765-966-3546 fax cell 765-277-9738	kmccurdy@lwcinspires.com
2	Todd Soprych	LWC, Inc.	712 East Main	ofc. 765-966-3546 fax cell 912-308-3049	tsoprych@lwcinspires.com
3	JOHN DASNER	LUDWIG ROOFING		ofc. 630. 710. 7092 fax cell johncroof@leak.com	
4	MIKE PERSEPOLKO	Persepolko Painting		ofc. 1-765-966-8024 fax cell persepolkopainting@gmail.com	
5	CORY BROWN ERIC FREY	MATTCON "	CORYB@MATTCONGC.COM ERICF@MATTCONGC.COM	ofc. 317-872-4700 fax 317-872-0428 cell 574-361-5373	
6	Joey Bastian Joe Charles	Ferguson Construction "	jbastian@ferguson-construction.com jcharles@ferguson-construction.com	ofc. fax cell	812-350-3510 317-416-4228
7				ofc. fax cell	
8				ofc. fax cell	
9				ofc. fax cell	
10				ofc. fax cell	
11				ofc. fax cell	
12				ofc. fax cell	
13				ofc. fax cell	
14				ofc. fax cell	
15				ofc. fax	

SECTION 042000 - UNIT MASONRY **(ADD 04)**

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Concrete masonry units.
2. Lintels.
3. Brick.
4. Limestone
5. Mortar and grout materials.
6. Reinforcement.
7. Ties and anchors.
8. Embedded flashing.
9. Accessories.
10. Mortar and grout mixes.

B. Products Installed but not Furnished under This Section:

1. Steel lintels in unit masonry.
2. Steel shelf angles for supporting unit masonry.

C. Related Requirements:

1. Section 014339 "Mockups" for integrated exterior mockup requirements.
2. Section 071900 "Water Repellents" for water repellents applied to unit masonry assemblies.
3. Section 072100 "Thermal Insulation" for cavity wall insulation.
4. Section 076200 "Sheet Metal Flashing and Trim" for exposed sheet metal flashing and for furnishing manufactured reglets installed in masonry joints.

1.2 DEFINITIONS

- A. CMU(s): Concrete masonry unit(s).
- B. Reinforced Masonry: Masonry containing reinforcing steel in grouted cells.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project Site.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For the following:
 - 1. Masonry Units: Indicate sizes, profiles, coursing, and locations of special shapes.
 - 2. Reinforcing Steel: Indicate bending, lap lengths, and placement of unit masonry reinforcing bars. Comply with ACI 315R.
 - 3. Fabricated Flashing: Detail corner units, end-dam units, and other special applications.
- C. Samples for Initial Selection:
 - 1. Face brick, in the form of straps of five or more bricks.
 - 2. Weep/cavity vents.
- D. Samples for Verification: For each type and color of the following:
 - 1. Face brick, in the form of straps of five or more bricks.
 - 2. Stone units, panels, details and watertables
 - 3. Special brick shapes.
 - 4. Weep/cavity vents.
 - 5. Cavity drainage material.
 - 6. Accessories embedded in masonry.
- E. Delegated Design Submittals: For masonry anchors and ties including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.5 INFORMATIONAL SUBMITTALS

- A. List of Materials Used in Constructing Mockups: List generic product names together with manufacturers, manufacturers' product names, model numbers, lot numbers, batch numbers, source of supply, and other information as required to identify materials used. Include mix proportions for mortar and grout and source of aggregates.
 - 1. Submittal is for information only. Receipt of list does not constitute approval of deviations from the Contract Documents unless such deviations are specifically brought to the attention of Architect and approved in writing.
- B. Material Certificates: For each type of the following:
 - 1. Masonry units.
 - a. Include data on material properties, material test reports substantiating compliance with requirements.
 - b. For brick, include size-variation data verifying that actual range of sizes falls within specified tolerances.
 - c. For exposed brick, include test report for efflorescence in accordance with ASTM C67/C67M.

2. Mortar admixtures.
3. Preblended, dry mortar mixes. Include description of type and proportions of ingredients.
4. Grout mixes. Include description of type and proportions of ingredients.
5. Reinforcing bars.
6. Joint reinforcement.
7. Anchors, ties, and metal accessories.

C. Qualification Statements: For testing agency.

D. Delegated design engineer qualifications.

E. Statement of Compressive Strength of Masonry: For each combination of masonry unit type and mortar type, provide statement of average net-area compressive strength of masonry units, mortar type, and resulting net-area compressive strength of masonry determined in accordance with TMS 602.

1.6 QUALITY ASSURANCE

A. Qualifications:

1. Installers: All masonry flashing installers must complete the International Masonry Institute Flashing Upgrade training course.
2. Delegated Design Engineer: A professional engineer who is legally qualified to practice in Indiana where Project is located and who is experienced in providing engineering services of the type indicated.
3. Testing Agency Qualifications: Qualified in accordance with ASTM C1093 for testing indicated.

1.7 MOCKUPS

A. Sample Panel Mockups: Build sample panels to verify selections made under Sample submittals and to demonstrate aesthetic effects. Comply with requirements in Section 014000 "Quality Requirements" for mockups.

1. Build sample panels for typical exterior wall in sizes approximately 48" w x 72"h.
2. Include backing wall and demonstration thru-wall flashing joint installation and terminations.
3. Build sample panels facing south.
4. Where masonry is to match existing, build panels adjacent and parallel to existing surface.
5. Clean exposed faces of panels with masonry cleaner indicated.
6. Protect approved sample panels from the elements with weather-resistant membrane.
7. Approval of sample panels is for color, texture, and blending of masonry units; relationship of mortar and sealant colors to masonry unit colors; tooling of joints;

aesthetic qualities of workmanship; and other material and construction qualities specifically approved by Architect in writing.

- a. Approval of sample panels does not constitute approval of deviations from the Contract Documents contained in sample panels unless Architect specifically approves such deviations in writing.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.
- B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.
- D. Deliver preblended, dry mortar mix in moisture-resistant containers. Store preblended, dry mortar mix in delivery containers on elevated platforms in a dry location or in covered weatherproof dispensing silos.
- E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.9 FIELD CONDITIONS

- A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.
 1. Extend cover a minimum of 24 inches (610 mm) down both sides of walls, and hold cover securely in place.
 2. Where one wythe of multiwythe masonry walls is completed in advance of other wythes, secure cover a minimum of 24 inches (610 mm) down face next to unconstructed wythe, and hold cover in place.
- B. Do not apply uniform floor or roof loads for at least 12 hours and concentrated loads for at least three days after building masonry walls or columns.
- C. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.

1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
 2. Protect sills, ledges, and projections from mortar droppings.
 3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
 4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.
- D. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in TMS 602.
1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F (4 deg C) and higher and will remain so until masonry has dried, but not less than seven days after completing cleaning.
- E. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in TMS 602.

PART 2 - PRODUCTS

2.1 SOURCE LIMITATIONS

- A. **Obtain face brick from the same manufacturer to match existing. (ADDENDUM 04)**
1. **Face Brick Match based on the following product:**
 - a. **Bowerston Dark Red Flash Vertical Matt Modular**
 - b. **Bowerston Plant, Bowerston OH 44695, (740) 269-2921**
- B. Obtain stone trim and veneer units from the same source to match existing.

2.2 PERFORMANCE REQUIREMENTS

- A. Provide unit masonry that develops indicated net-area compressive strengths at 28 days.
1. Determine net-area compressive strength of masonry by testing masonry prisms in accordance with ASTM C1314.

2.3 UNIT MASONRY, GENERAL

- A. Masonry Standard: Comply with TMS 602, except as modified by requirements in the Contract Documents.

- B. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated. Do not use units where such defects are exposed in the completed Work.

2.4 CONCRETE MASONRY UNITS

- A. Shapes: Provide shapes indicated and as follows, with exposed surfaces matching exposed faces of adjacent units unless otherwise indicated.
 - 1. Provide square edge units for outside corners unless otherwise indicated.
- B. CMUs: ASTM C90, normal weight.

2.5 LINTELS

- A. Concrete Lintels: Precast or formed-in-place concrete lintels complying with requirements in structural drawings.
- B. Masonry Lintels: Prefabricated or built-in-place masonry lintels made from bond beam CMUs matching adjacent CMUs in color, texture, and density classification, with reinforcing bars placed as indicated and filled with coarse grout. Cure precast lintels before handling and installing. Temporarily support built-in-place lintels until cured.

2.6 BRICK

- A. General: Provide shapes indicated and as follows, with exposed surfaces matching finish and color of exposed faces of adjacent units:
 - 1. For ends of sills and caps and for similar applications that would otherwise expose unfinished brick surfaces, provide units without cores or frogs and with exposed surfaces finished.
 - 2. Provide special shapes for applications where stretcher units cannot accommodate special conditions, including those at corners, movement joints, bond beams, sashes, and lintels.
- B. Face Brick: ASTM C 216, Grade SW, Type FBS.
 - 1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 3000 psi.
 - 2. Initial Rate of Absorption: Less than 30 g/30 sq. in. per minute when tested per ASTM C 67.
 - 3. Efflorescence: Provide brick that has been tested according to ASTM C 67 and is rated "not effloresced."
 - 4. Provide face brick matching color range, texture, and size of existing adjacent brickwork.
 - a. Preliminary match has been confirmed as (TBD).

- b. Final brick will require custom blend to match color proportions of existing brick. Final blend shall be reviewed and approved by Architect prior to placing final order.

2.7 LIMESTONE

- A. Description: Oolitic limestone.
- B. Varieties and Sources: Indiana limestone quarried in Lawrence, Monroe, or Owen Counties, Indiana.
 - 1. Indiana Limestone Grade and Color: Select Buff or Gray, matching existing stone, according to grade and color classification established by ILI.
- C. Match Architect's samples for color, finish, and other stone characteristics relating to aesthetic effects.

2.8 MORTAR AND GROUT MATERIALS

- A. Refer to Specification Section 040513.10 – Restoration Mortars and Grouts.
- B. Portland Cement: ASTM C 150, Type I. Provide natural color or white cement as required to produce mortar color indicated.
- C. Hydrated Lime: ASTM C 207, Type S.
- D. Portland Cement-Lime Mix: Packaged blend of portland cement complying with ASTM C 150, Type I or Type III, and hydrated lime complying with ASTM C 207, Type S.
- E. Masonry Cement: ASTM C 91.
 - 1. Products:
 - a. Capital Materials Corporation; Flamingo Color Masonry Cement.
 - b. Essroc, Italcementi Group; Brixment.
 - c. Holcim (US) Inc.; Rainbow Mortamix Custom Masonry Cement.
 - d. Lafarge North America Inc.; Lafarge Masonry Cement.
 - e. Lehigh Cement Company; Lehigh Masonry Cement.
 - f. National Cement Company, Inc.; Coosa Masonry Cement.
- F. Mortar Cement: ASTM C 1329.
 - 1. Products:
 - a. Lafarge North America Inc.; Lafarge Mortar Cement.
 - b. Spec Mix Mortar; Spec Mix

- c. Cemex PCL
- G. Mortar Pigments: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar mixes. Use only pigments with a record of satisfactory performance in masonry mortar.
- a. Bayer Corporation, Industrial Chemicals Div.; Bayferrox Iron Oxide Pigments.
 - b. Davis Colors; True Tone Mortar Colors.
 - c. Solomon Grind-Chem Services, Inc.; SGS Mortar Colors.
- H. Colored Cement Product: Packaged blend made from masonry cement or mortar cement and mortar pigments, all complying with specified requirements, and containing no other ingredients.
- 1. Formulate blend as required to produce color indicated or, if not indicated, as selected from manufacturer's standard colors.
 - 2. Pigments shall not exceed 10 percent of portland cement by weight.
 - 3. Pigments shall not exceed 5 percent of masonry cement or mortar cement by weight.
 - 4. Products:
 - a. Colored Portland Cement-Lime Mix:
 - 1) Capital Materials Corporation; Riverton Portland Cement Lime Custom Color.
 - 2) Holcim (US) Inc.; Rainbow Mortamix Custom Color Cement/Lime.
 - 3) Lafarge North America Inc.; Eaglebond.
 - 4) Lehigh Cement Company; Lehigh Custom Color Portland/Lime Cement.
 - b. Colored Masonry Cement:
 - 1) Capital Materials Corporation; Flamingo Color Masonry Cement.
 - 2) Essroc, Italcementi Group; Brixment-in-Color.
 - 3) Holcim (US) Inc.; Rainbow Mortamix Custom Color Masonry Cement.
 - 4) Lafarge North America Inc.; Florida Custom Color Masonry.
 - 5) Lehigh Cement Company; Lehigh Custom Color Masonry Cement.
 - 6) National Cement Company, Inc.; Coosa Masonry Cement.
 - c. Colored Mortar Cement:
 - 1) Lafarge North America Inc.; Magnolia Superbond Mortar Cement.
- I. Aggregate for Mortar: ASTM C 144.
- 1. For mortar that is exposed to view, use washed aggregate consisting of natural sand or crushed stone.
- J. Aggregate for Grout: ASTM C 404.

K. Cold-Weather Admixture: Nonchloride, noncorrosive, accelerating admixture complying with ASTM C 494/C 494M, Type C, and recommended by manufacturer for use in masonry mortar of composition indicated.

1. Products:

- a. Addiment Incorporated; Mortar Kick.
- b. Euclid Chemical Company (The); Accelguard 80.
- c. Grace Construction Products, a unit of W. R. Grace & Co. - Conn.; Morset.
- d. Sonneborn, Div. of ChemRex; Trimix-NCA.

L. Water: Potable.

2.9 REINFORCEMENT

A. Uncoated Steel Reinforcing Bars: ASTM A 615/A 615M, Grade 60.

B. Masonry Joint Reinforcement, General: ASTM A 951.

1. Interior Walls: Hot-dip galvanized, carbon steel.
2. Exterior Walls: Hot-dip galvanized, carbon steel.
3. Wire Size for Side Rods: W1.7 or 0.148-inch except W2.8 or 0.188-inch diameter where indicated.
4. Wire Size for Cross Rods: W1.7 or 0.148-inch diameter.
5. Wire Size for Veneer Ties: W1.7 or 0.148-inch diameter.
6. Spacing of Cross Rods, Tabs, and Cross Ties: Not more than 16 inches o.c.
7. Provide in lengths of not less than 10 feet, with prefabricated corner and tee units.

C. Masonry Joint Reinforcement for Multiwythe Masonry:

1. Adjustable (two-piece) type, either ladder or truss design, with one side rod at each face shell of backing wythe and with separate ties that extend into facing wythe. Ties have two hooks that engage eyes or slots in reinforcement and resist movement perpendicular to wall. Ties extend at least halfway through facing wythe but with at least 5/8-inch cover on outside face. Ties have hooks or clips to engage a continuous horizontal wire in the facing wythe.

2.10 TIES AND ANCHORS

A. Materials: Provide ties and anchors as specified below, unless otherwise indicated.

1. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A 82; with ASTM A 153/A 153M, Class B-2 coating.
2. Steel Sheet, Galvanized after Fabrication: ASTM A 1008/A 1008M, Commercial Steel, hot-dip galvanized after fabrication to comply with ASTM A 153/A 153M.
3. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

2.11 STONE TRIM ANCHORS

- A. Stone Trim Anchors: Units fabricated with tabs or dowels designed to engage kerfs or holes in stone trim units and holes for fasteners or postinstalled anchor bolts for fastening to substrates or framing as indicated.
- B. Materials: Fabricate anchors from stainless steel, ASTM A240/A240M or ASTM A666, Type 304. Fabricate dowels from stainless steel, ASTM A276, Type 304.
- C. Fasteners for Stone Trim Anchors: Annealed stainless steel bolts, nuts, and washers; ASTM F593 (ASTM F738M) for bolts and ASTM F594 (ASTM F836M) for nuts, Alloy Group 1 (A1).
- D. Postinstalled Anchor Bolts for Fastening Stone Trim Anchors: Anchors made from stainless steel components complying with ASTM F593 and ASTM F594, Alloy Group 1 or 2 (ASTM F738M and ASTM F836M, Alloy Group A1 or A4) for bolts and nuts; ASTM A666 or ASTM A276, Type 304 or Type 316, for anchors.

2.12 MISCELLANEOUS ANCHORS

- A. Anchor Bolts: Headed steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers; hot-dip galvanized to comply with ASTM A 153/A 153M, Class C; of dimensions indicated.
- B. Postinstalled Anchors: For tying existing brick to remain to new masonry piers, provide chemical or torque-controlled expansion anchors, with capability to sustain, without failure, a load equal to six times the load imposed when installed in solid or grouted unit masonry and equal to four times the load imposed when installed in concrete, as determined by testing per ASTM E 488 conducted by a qualified independent testing agency.
 - 1. Corrosion Protection: Stainless-steel components complying with ASTM F 593 and ASTM F 594, Alloy Group 1 or 2 for bolts and nuts; ASTM A 666 or ASTM A 276, Type 304 or 316, for anchors.

2.13 EMBEDDED FLASHING

- A. Flexible Flashing: Use one of the following unless otherwise indicated:
 - 1. Copper-Fabric Flashing: 5 oz./sq. ft. copper sheet bonded between two layers of glass-fiber cloth.
 - a. Advanced Building Products – Copper Fabric Flashing
 - b. Hohmann & Barnard – Copper NA
 - c. York Multi-Flash 500
- B. Termination Bars for Flexible Flashing: Stainless steel bars $\frac{1}{8}$ inch by 1- $\frac{1}{8}$ inch.

- C. Stainless steel drip plate: 3" wide, turn down at face of wall.

2.14 ACCESSORIES

- A. Compressible Filler: Premolded filler strips complying with ASTM D1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from neoprene.
- B. Bond-Breaker Strips: Asphalt-saturated felt complying with ASTM D226/D226M, Type I (No. 15 asphalt felt).
- C. Weep/Cavity Vents: Use the following unless otherwise indicated:
 - 1. Cellular Plastic Weep/Vent: One-piece, flexible extrusion made from UV-resistant polypropylene copolymer, full height and width of head joint and depth 1/8 inch (3.2 mm) less than depth of outer wythe, in color selected from manufacturer's standard.
 - a. Advanced Building Products – Mortar Maze
 - b. Mason Pro – Cell Vents
 - c. Mortar Net – WeepVent
- D. Cavity Drainage Material: Free-draining mesh, made from polymer strands that will not degrade within the wall cavity.
 - 1. Mortar Deflector: Strips, 1-1/2 inches to 2 inches thick and 10 inches high, with dovetail-shaped notches that prevent clogging with mortar droppings.
 - a. Advanced Building Products – Mortar Break DT
 - b. Mason Pro – ProNet DT-2
 - c. Mortar Net – Wall Defender
 - d.

2.15 MORTAR AND GROUT MIXES

- A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures, unless otherwise indicated.
 - 1. Do not use calcium chloride in mortar or grout.
 - 2. Limit cementitious materials in mortar to portland cement, mortar cement, and lime.
 - 3. Add cold-weather admixture (if used) at same rate for all mortar that will be exposed to view, regardless of weather conditions, to ensure that mortar color is consistent.
- B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.
- C. Mortar for Unit Masonry: Comply with ASTM C 270, Proportion Specification and Property Specification. Provide the following types of mortar for applications stated unless another type is indicated.

1. For masonry below grade or in contact with earth, use Type M with minimum compressive strength of 1800 psi in 28 days.
 2. For exterior, above-grade, load-bearing and non-load-bearing walls and parapet walls; and for other applications where another type is not indicated, use Type S with minimum compressive strength of 1800 psi in 28 days.
 3. For interior non-load-bearing partitions, Type O may be used instead of Type N with minimum compressive strength of 750 psi in 28 days.
- D. Grout for Unit Masonry: Comply with ASTM C 476.
1. Use grout of type indicated or, if not otherwise indicated, of type (fine or coarse) that will comply with Table 1.15.1 in ACI 530.1/ASCE 6/TMS 602 for dimensions of grout spaces and pour height.
 2. Provide grout with a slump of 8 to 11 inches as measured according to ASTM C 143/C 143M.
 3. Grout shall achieve 3,000 psi minimum compressive strength in 28 days.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.
1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of work.
 2. Verify that foundations are within tolerances specified.
 3. Verify that reinforcing dowels are properly placed.
- B. Before installation, examine rough-in and built-in construction for piping systems to verify actual locations of piping connections.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. Thickness: Build cavity and composite walls and other masonry construction to full thickness of existing construction being replaced.
- B. Tuckpoint full-size masonry into existing masonry.
- C. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.

- D. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures.
- E. Matching Existing Masonry: Match coursing, color, and texture of existing masonry.
- F. Wetting of Brick: Wet brick before laying if initial rate of absorption exceeds 30 g/30 sq. in. per minute when tested per ASTM C 67. Allow units to absorb water so they are damp but not wet at time of laying.
- G. Comply with construction tolerances in ACI 530.1/ASCE 6/TMS 602 and with the following:
 - 1. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2 inch maximum.
 - 2. For vertical alignment of exposed head joints, do not vary from plumb by more than 1/4 inch in 10 feet, or 1/2 inch maximum.
 - 3. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2 inch maximum.
 - 4. For exposed bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch. Do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch.
 - 5. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch. Do not vary from adjacent bed-joint and head-joint thicknesses by more than 1/8 inch.
 - 6. For faces of adjacent exposed masonry units, do not vary from flush alignment by more than 1/16 inch except due to warpage of masonry units within tolerances specified for warpage of units.
 - 7. For exposed bed joints and head joints of stacked bond, do not vary from a straight line by more than 1/16 inch from one masonry unit to the next.
- H. Provide masonry joint reinforcing 16 inches on center vertically unless otherwise indicated.
 - 1. Provide 8 inch spacing in parapets.
 - 2. Lap 8 inches at joints and corners.
 - 3. Stop reinforcing 2 inches from control joints.
 - 4. Provide "T" and "L" shapes at wall intersections and corners, unless otherwise indicated.

3.3 LAYING MASONRY WALLS

- A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.
- B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in running bond; do not use units with less than nominal 4-inch horizontal face dimensions at corners or jambs.

- C. Lay concealed masonry with all units in a wythe in running bond. Bond and interlock each course of each wythe at corners. Do not use units with less than nominal 4-inch horizontal face dimensions at corners or jambs.
- D. Stopping and Resuming Work: Stop work by racking back units in each course from those in course below; do not tooth. When resuming work, clean masonry surfaces that are to receive mortar, remove loose masonry units and mortar, and wet brick if required before laying fresh masonry.
- E. Built-in Work: As construction progresses, build in items penetrating wall and embedded items. Fill in solidly with masonry around built-in items.
- F. Provide an open space not less than ½ inch width between steel frames and masonry, unless otherwise indicated.
- G. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath, wire mesh, or plastic mesh in the joint below and rod mortar or grout into core.

3.4 MORTAR BEDDING AND JOINTING

- A. Lay solid masonry units with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.
- B. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness, unless otherwise indicated.

3.5 MASONRY REINFORCEMENT

- A. Placing Reinforcement: Comply with requirements in ACI 530.1/ASCE 6/TMS 602.
- B. Grouting: Do not place grout until entire height of masonry to be grouted has attained enough strength to resist grout pressure.
 - 1. Comply with requirements in ACI 530.1/ASCE 6/TMS 602 for cleanouts and for grout placement, including minimum grout space.
- C. Temporary Formwork and Shores: Construct formwork and shores as needed to support reinforced masonry elements during construction.
 - 1. Construct formwork to provide shape, line, and dimensions of completed masonry as indicated. Make forms sufficiently tight to prevent leakage of mortar and grout. Brace, tie, and support forms to maintain position and shape during construction and curing of reinforced masonry.

2. Do not remove forms and shores until reinforced masonry members have hardened sufficiently to carry their own weight and other temporary loads that may be placed on them during construction.

3.6 CONTROL AND EXPANSION JOINTS

- A. General: Install control and expansion joint materials in unit masonry as masonry progresses. Except as otherwise indicated, do not allow materials to span control and expansion joints without provision to allow for in-plane wall or partition movement.
- B. Form control joints in concrete masonry as follows:
 1. Install rubber control joints where indicated and fill remainder of joints with premolded joint filler to 1 inch from face of masonry walls, (both sides) to allow for sealant and back-up material.
- C. Form expansion joints in brick made from clay or shale as follows:
 1. Build flanges of metal expansion strips into masonry. Lap each joint 4 inches in direction of water flow. Seal joints below grade and at junctures with horizontal expansion joints if any.
 2. Build flanges of factory-fabricated, expansion-joint units into masonry.
 3. Build in compressible joint fillers where indicated.
 4. Form open joint full depth of brick wythe and of width indicated, but not less than 3/8 inch for installation of sealant and backer rod specified in Division 07 Section "Joint Sealants."

3.7 FLASHING, WEEP HOLES, CAVITY DRAINAGE, AND VENTS

- A. General: Install embedded flashing and weep holes in masonry at shelf angles, lintels, ledges, other obstructions to downward flow of water in wall, and where indicated.
- B. Install flashing as follows, unless otherwise indicated:
 1. Prepare masonry surfaces so they are smooth and free from projections that could puncture flashing. Where flashing is within mortar joint, place through-wall flashing on sloping bed of mortar and cover with mortar. Before covering with mortar, seal penetrations in flashing with adhesive, sealant, or tape as recommended by flashing manufacturer.
 2. At multiwythe masonry walls, including cavity walls, extend flashing through outer wythe, turned up a minimum of 8 inches and through inner wythe to within 1/2 inch of the interior face of wall in exposed masonry. Where interior face of wall is to receive furring or framing, carry flashing completely through inner wythe and turn flashing up approximately 2 inches on interior face.
 3. Interlock end joints of ribbed sheet metal flashing by overlapping ribs not less than 1-1/2 inches or as recommended by flashing manufacturer, and seal lap with elastomeric

sealant complying with requirements in Division 07 Section "Joint Sealants" for application indicated.

- C. Install reglets and nailers for flashing and other related construction as required to match existing construction.
- D. Install weep / vents in head joints in exterior wythes of first course of masonry immediately above embedded flashing and as follows:
 - 1. Use cellular weep / vents in head joints of brick veneer immediately above embedded flashing.
 - 2. Use wicking material to form weep holes above flashing under stone sills. Turn wicking down at lip of sill to be as inconspicuous as possible.
 - 3. Space weep holes 24 inches o.c., unless otherwise indicated.
 - 4. Space weep / vents at 16 inches o.c.
- E. Place cavity drainage material in cavities to comply with configuration requirements for cavity drainage material in Part 2 "Miscellaneous Masonry Accessories" Article.

3.8 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports. Allow inspectors access to scaffolding and work areas, as needed to perform inspections.
 - 1. Payment for these services will be made by Owner.
 - 2. Retesting of materials failing to comply with specified requirements shall be done at Contractor's expense.
 - 3. Place grout only after inspectors have verified compliance of grout spaces and grades, sizes, and locations of reinforcement.

3.9 REPAIRING, POINTING, AND CLEANING

- A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.
- B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.
- C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.
- D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:

1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.
3. Protect adjacent stone and nonmasonry surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
4. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.
5. Clean brick by bucket-and-brush hand-cleaning method described in BIA Technical Notes 20.
6. Clean masonry with a proprietary acidic cleaner applied according to manufacturer's written instructions.
7. Clean concrete masonry by cleaning method indicated in NCMA TEK 8-2A applicable to type of stain on exposed surfaces.
8. Clean stone trim to comply with stone supplier's written instructions.
9. Clean limestone units to comply with recommendations in ILI's "Indiana Limestone Handbook."

3.10 MASONRY WASTE DISPOSAL

- A. Unless otherwise indicated, excess masonry materials are Contractor's property. At completion of unit masonry work, remove from Project site.

END OF SECTION 042000

SECTION 071413 - HOT FLUID-APPLIED RUBBERIZED ASPHALT WATERPROOFING (ADD 04)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Rubberized-asphalt waterproofing membrane, reinforced.
 - 2. Insulation.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated. Include manufacturer's written instructions for evaluating, preparing, and treating substrate, technical data, and tested physical and performance properties of waterproofing.
- B. Shop Drawings: Show locations and extent of waterproofing. Include details for substrate joints and cracks, sheet flashings, penetrations, inside and outside corners, tie-ins to adjoining waterproofing, and other termination conditions.
- C. Samples: For the following products in manufacturer's standard sizes unless otherwise indicated:
 - 1. Flashing sheet.
 - 2. Membrane-reinforcing fabric.
 - 3. Insulation.
 - 4. Drainage panel.
- D. Qualification Data: For qualified Installer and testing agency.
- E. Product Test Reports: For waterproofing, based on evaluation of comprehensive tests performed by a qualified testing agency.
- F. Field quality-control reports.
- G. Warranties: Sample of special warranties.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: A firm that is approved or licensed by manufacturer for installation of waterproofing required for this Project and is eligible to receive special warranties specified.
- B. Source Limitations: Obtain waterproofing materials sheet flashings and insulation from single source from single manufacturer.
- C. Mockups: Install waterproofing to 100 sq. ft. of wall to demonstrate surface preparation, crack and joint treatment, corner treatment, thickness, texture, and execution quality.
 - 1. If Architect determines mockups do not comply with requirements, reapply waterproofing and reinstall overlaying construction until mockups are approved.
 - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 - 3. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
- D. Preinstallation Conference: Conduct conference at Project site.
 - 1. Review waterproofing requirements including surface preparation, substrate condition and pretreatment, minimum curing period, forecasted weather conditions, special details and sheet flashings, installation procedures, testing and inspection procedures, and protection and repairs.
 - 2. Review waterproofing requirement and installation methods for vertical foundation walls as well as horizontal concrete slab surfaces below insulation and pedestal paver system.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by waterproofing manufacturer.
- B. Remove and replace liquid materials that cannot be applied within their stated shelf life.
- C. Protect stored materials from direct sunlight.

1.6 PROJECT CONDITIONS

- A. Environmental Limitations: Apply waterproofing within the range of ambient and substrate temperatures recommended by waterproofing manufacturer. Do not apply waterproofing to a damp or wet substrate, or when temperature is below 0 deg F.
 - 1. Do not apply waterproofing in snow, rain, fog, or mist.

- B. Maintain adequate ventilation during application and curing of waterproofing materials.

1.7 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace waterproofing and sheet flashings that do not comply with requirements or that fail to remain watertight within specified warranty period.
 - 1. Warranty insulation will retain 80 percent of original published thermal value.
 - 2. Warranty includes removing and reinstalling protection board, drainage panels, and insulation.
 - 3. Warranty Period: 10 years from date of Substantial Completion.
- B. Special Installer's Warranty: Specified form signed by Installer, covering Work of this Section, for warranty period of one year.

PART 2 - PRODUCTS

2.1 WATERPROOFING MEMBRANE

- A. Hot Fluid-Applied, Rubberized-Asphalt Waterproofing Membrane: Single component; 100 percent solids; hot fluid-applied, rubberized asphalt.
 - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Carlisle Coatings & Waterproofing Inc.; CCW-500R.
 - b. Soprema
 - c. American Hydrotech 6125 **(ADD 04)**
 - d. Approved Equal.

2.2 FLASHING SHEET MATERIALS

- A. Elastomeric Flashing Sheet: 50-mil- minimum, uncured sheet neoprene as follows:
 - 1. Tensile Strength: 1400 psi minimum; ASTM D 412, Die C.
 - 2. Elongation: 300 percent minimum; ASTM D 412.
 - 3. Tear Resistance: 125 psi minimum; ASTM D 624, Die C.
 - 4. Brittleness: Does not break at minus 30 deg F; ASTM D 2137.

2.3 AUXILIARY MATERIALS

- A. Primer: ASTM D 41, asphaltic primer.

- B. Sealants and Accessories: Manufacturer's recommended sealants and accessories.
- C. Reinforcing Fabric: Manufacturer's recommended, spun-bonded polyester fabric.

2.4 INSULATION

- A. Geotextile-Faced Wall Insulation Drainage Panels: Extruded-polystyrene board insulation complying with ASTM C 578, Type VI, 40-psi minimum compressive strength; fabricated with tongue-and-groove edges and with one side having grooved drainage channels faced with a nonwoven, geotextile filter fabric.
 - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Owens Corning; Insul-Drain (2-1/2" thick) – Foundation walls
 - b. Owens Corning Foamular NGX 604RB (3" thick) – Pedestal pavers
 - c. Or Approved Equal.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
 - 1. Verify that concrete has cured and aged for minimum time period recommended by waterproofing manufacturer.
 - 2. Verify that substrate is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D 4263.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean and prepare substrates according to manufacturer's written instructions. Provide clean, dust-free, and dry substrate for waterproofing application.
- B. Mask off adjoining surfaces not receiving waterproofing to prevent spillage and overspray affecting other construction.
- C. Close off deck drains and other deck penetrations to prevent spillage and migration of waterproofing fluids.

- D. Remove grease, oil, form-release agents, paints, curing compounds, and other penetrating contaminants or film-forming coatings from concrete.
 - 1. Abrasive blast clean concrete surfaces uniformly to expose top surface of fine aggregate according to ASTM D 4259 with a self-contained, recirculating, blast-cleaning apparatus. Remove material to provide a sound surface free of laitance, glaze, efflorescence, curing compounds, concrete hardeners, or form-release agents. Remove remaining loose material and clean surfaces according to ASTM D 4258.
- E. Remove fins, ridges, and other projections and fill honeycomb, aggregate pockets, and other voids.

3.3 JOINTS, CRACKS, AND TERMINATIONS

- A. Prepare and treat substrates to receive waterproofing membrane, including joints and cracks, deck drains, corners, and penetrations according to manufacturer's written instructions.
 - 1. Rout and fill joints and cracks in substrate. Before filling, remove dust and dirt according to ASTM D 4258.
 - 2. Adhere strip of elastomeric sheet to substrate in a layer of hot rubberized asphalt. Extend elastomeric sheet a minimum of 6 inches on each side of moving joints and cracks or joints and cracks exceeding 1/8 inch thick, and beyond deck drains and penetrations. Apply second layer of hot fluid-applied, rubberized asphalt over elastomeric sheet.
 - 3. Embed strip of reinforcing fabric into a layer of hot rubberized asphalt. Extend reinforcing fabric a minimum of 6 inches on each side of nonmoving joints and cracks not exceeding 1/8 inch thick, and beyond roof drains and penetrations.

3.4 FLASHING INSTALLATION

- A. Install elastomeric flashing sheets at terminations of waterproofing membrane according to manufacturer's written instructions.
- B. Prime substrate with asphalt primer.
- C. Install elastomeric flashing sheet and adhere to deck and wall substrates in a layer of hot rubberized asphalt.

3.5 MEMBRANE APPLICATION

- A. Apply primer, at manufacturer's recommended rate, over prepared substrate and allow to dry.
- B. Heat and apply rubberized asphalt according to manufacturer's written instructions.
 - 1. Heat rubberized asphalt in an oil- or air-jacketed melter with mechanical agitator specifically designed for heating rubberized asphalt.

- C. Start application with manufacturer's authorized representative present.
- D. Reinforced Membrane: Apply hot rubberized asphalt to substrates and adjoining surfaces indicated. Spread to a thickness of 90 mils; embed reinforcing fabric, overlapping sheets 2 inches; spread another 125-mil- thick layer to provide a uniform, reinforced, seamless membrane 215 mils thick.
- E. Apply waterproofing over prepared joints and up wall terminations and vertical surfaces to heights indicated or required by manufacturer.

3.6 INSULATION INSTALLATION

- A. Install over waterproofed surfaces. Cut and fit to within 3/4 inch of projections and penetrations.
- B. On vertical surfaces, set insulation units into rubberized asphalt according to manufacturer's written instructions.

3.7 FIELD QUALITY CONTROL

- A. Engage a full-time site representative qualified by waterproofing membrane manufacturer to inspect substrate conditions; surface preparation; and application of the membrane, flashings, protection, and drainage components; furnish daily reports to Architect.

3.8 CLEANING AND PROTECTION

- A. Protect waterproofing from damage and wear during remainder of construction period.
- B. Protect installed insulation from damage due to UV light, harmful weather exposures, physical abuse, and other causes. Provide temporary coverings where insulation will be subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.
- C. Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 071413

SECTION 073200 - ROOF TILE (ADD 04)

PART 1 GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This section includes clay tile and related accessories.
- B. Clay roof tile.
- C. Fasteners.
- D. Underlayment.
- E. Waterproofing Membrane.
- F. Ice Dam Protection.
- G. Flashings and Counterflashings.
- H. Ridge Vents

1.3 REFERENCES

- A. ASTM A 167 - Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
- B. ASTM B 370 - Standard Specification for Copper Sheet and Strip for Building Construction.
- C. ASTM B 749 - Standard Specification for Lead and Lead Alloy Strip, Sheet, and Plate Products.
- D. ASTM C 67 - Standard Test Methods of Sampling and Testing Brick and Structural Clay Tile.
- E. ASTM C 387 - Standard Specification for Packaged, Dry, Combined Materials for Mortar and Concrete.
- F. ASTM C 887 - Standard Specification for Packaged, Dry, Combined Materials for Surface Bonding Mortar.

- G. ASTM C 920 - Standard Specification for Elastomeric Sealants.
- H. ASTM C 1167 - Standard Specification for Clay Roof Tiles.
- I. ASTM D 226 - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.
- J. ASTM D 1970 - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection.
- K. ASTM D 2626 - Standard Specification for Asphalt-Saturated and Coated Organic Felt Base Sheet Used in Roofing.
- L. ASTM D 4586 - Standard Specification for Asphalt Roof Cement, Asbestos-Free.
- M. SMACNA Architectural Sheet Metal Manual; Sheet Metal and Air Conditioning Contractors' National Association, Inc.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's descriptive literature for products specified in this section.
- C. Shop Drawings: Indicate the following:
 - 1. Roof tile:
 - a. Exposure pattern.
 - b. Locations and configurations of special shapes.
 - c. Locations and configuration of each type roof flashing.
 - d.
 - 2. Fabricated sheet metal items:
 - a. Dimensioned profiles.
 - b. Locations and extent of each item; include joint locations.
 - c. Jointing methods and materials.
 - d. Provisions for prevention of electrolytic action between dissimilar materials.
 - e. Interface with adjacent construction.
- D. Selection Samples: Two sets of color charts or samples representing manufacturer's full range of available colors.
- E. Verification Samples: Three full-size tile samples of each type tile specified, representing actual color and finish of products to be installed.
- F. Manufacturer's printed installation instructions for each product, including product storage requirements.

- G. Closeout Submittals: Warranty documents, issued and executed by tile manufacturer, countersigned by Contractor.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in installing roofing of the type specified in this section, with not fewer than three years of documented experience.
- B. Mock-Up:
 - 1. Construct mock-up using materials specified in this section.
 - 2. Construct mock-up as directed, at location indicated or directed.
 - 3. Construct mock-up at location indicated or directed, size 4 feet by 4 feet.
 - 4. Obtain Architect's acceptance of mock-up before beginning construction activities of this section; accepted mock-up will be standard by which completed work of this section is judged.
 - 5. Mock-up may not remain as part of Work.
 - 6. Accepted mock-up may remain as part of Work.
- C. Pre-Installation Meeting:
 - 1. Convene at job site seven (7) calendar days prior to scheduled beginning of construction activities of this section to review requirements of this section.
 - 2. Require attendance by representatives of the following:
 - a. Installer of this section.
 - b. Other entities directly affecting, or affected by, construction activities of this section.
 - 3. Notify Architect four (4) calendar days in advance of scheduled meeting date.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products of this section in manufacturer's unopened packaging until installation.
- B. Maintain storage area conditions for products of this section in accordance with manufacturer's instructions until installation.

1.7 WARRANTY

- A. Special Warranty:
 - 1. The Contractor warrants products of this section, as installed, to be in accordance with the Contract Documents and free from faults and defects in materials and workmanship for a period of 5 years.

- B. Manufacturer's Warranty: Provide tile manufacturer's warranty against defects in product materials; ~~warranty to include reimbursement for labor required for replacement of defective tiles for 20-year period~~, replacement of defective tile materials for 75-year period. **(ADD 04)**

1.8 EXTRA MATERIALS

- A. Provide an additional quantity of roof tile matching tile installed, in the amount of 3 percent of the total installed, but not less than one full carton, for Owner's use in roof maintenance.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Tile Manufacturer: Ludowici Roof Tile; P.O. Box 69, 4757 Tile Plant Road, New Lexington, OH 43764. ASD. Tel: (800) 945-8453. Email: ludowici@saint-gobain.com. www.ludowici.com.
- B. Requests for substitution will be considered in accordance with provisions of Section 01600.
- C. Substitutions: Not permitted.
- D. Unless otherwise specified for an individual product or material, supply all products specified in this section from the same manufacturer.

2.2 ROOF TILE

- A. Interlocking Clay Roof Tile Type:
 - 1. Acceptable product: Celadon Tile.
 - a. Profile: Flat interlocking tile, French Profile
 - b. Nominal size: 9 inches (228 mm) wide by 14 inches (355 mm) long.
 - c. Average exposure: 8-1/4 inches (209 mm) wide by 11 inches (279 mm) long.
- B. Characteristics: Incombustible, vitrified tile manufactured from shale and fire clays, having less than 2.0 percent moisture absorption when tested in accordance with ASTM C 67, and meeting Grade 1 freeze/thaw resistance requirements when tested in accordance with ASTM C 1167.
- C. Color: Santiago Rose
- D. Special Shapes and Fittings: Supply special shapes and fittings of same material and finish as adjacent tile, factory-formed before firing, as indicated on drawings or specified in manufacturer's instructions for project conditions including, but not limited to, the following:

1. Ridge caps.
2. Rake edges.
3. Eave edges
4. Termination caps.
5. Half tile.
6. End Bands.

2.3 ACCESSORY MATERIALS

- A. Underlayment / Waterproofing Membrane:
1. Acceptable products:
 - a. WinterGuard, manufactured by CertainTeed Corporation.
 - b. Grace Ice and Water Shield by WR Grace
- B. Roofing Felts: Double layer No. 30# asphalt impregnated roofing felt.
- C. Wood Stringers: S4S, maximum 19 percent moisture content, nominal 1 inch (25 mm) thick, of height required to support tile.
- D. Flashing: Provide 16 oz. copper flashing accessories and step flashing.
- E. Tile Fasteners: Ring shank copper nails specified in manufacturer's instructions for indicated uses and conditions.
- F. Copper Wire: 18 gage (1.2 mm) minimum.
- G. Cement Mortar for Setting Tile: 1 part Portland cement mortar ASTM C 270 Type M and 4 parts sand.
- H. Grout for Finishing Rake and Eave Edges:
1. Mix the following materials in equal parts:
 - a. Factory-mixed mortar meeting requirements of ASTM C 387, Type N.
 2. Add mineral oxide pigment to match color of roof tile.
 3. Add water and acrylic additive in accordance with mortar materials manufacturers' instructions to obtain correct mix for workability.
- I. Roof Cement: Asphalt roof cement conforming to ASTM D 4586, Type I or II.
- J. Sealant Used in Lieu of Flashing Cement: ASTM C 920 silicone; provide one of the following:
1. Dow Corning 790 Silicone Building Sealant.
 2. GE SilProof.
- K. Screws: No. 8 or No. 9 brass or stainless steel, flathead Phillips or square drive, not less than 1-3/4 inches (45 mm) long.

- L. Nails for Plywood Sheathing: Slater's copper ring shank nail, 11 gage (3 mm), not less than 1-3/4 inches (45 mm) long with 3/8 inch (9.5 mm) head; point must penetrate through underside of deck.
- M. Wood Nailers and Cant Strips: Preservative-treated wood, as specified in Section 06114.
- N. Adhesive: OSI Pro-Series RT-600 Roof Tile Adhesive.
 - 1. Do not expose to ultraviolet rays.
 - 2. Do not allow direct contact with waterproofing shingle underlayment.
- O. Ridge Vents

2.4 FLASHING FABRICATION

- A. Form flashing to profiles indicated on drawings and as required to protect roofing materials from physical damage and shed water and in accordance with manufacturer's instructions for indicated project conditions.
- B. Form sections square and accurate in profile, in maximum possible lengths, free from distortion or defects detrimental to appearance or performance.
- C. Fabricate other indicated sheet metal items as detailed.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that roofing penetrations and plumbing stacks are in place and properly flashed to deck surface.
- B. Verify that roof openings are correctly framed.
- C. Verify that deck surfaces are dry and free of ridges, warps, and voids.

3.2 PREPARATION

- A. Comply with tile manufacturer's recommendations on preparation of acceptable roof deck.
- B. Broom clean deck surfaces prior to installation of underlayment.

3.3 PREPARATION

- A. Waterproofing/Underlayment:

1. Beginning at eave edge, install perpendicular to roof slope; extend minimum of 4 inches (100 mm) over gutters and valley flashing, and minimum 6 inches (150 mm) up abutting vertical surfaces.
 2. Overlap side joints minimum 2-1/2 inches (64 mm); overlap end joints minimum 6 inches (150 mm).
 3. Fasten sides and ends to deck with fasteners spaced at maximum 6 inches (150 mm) on centers.
 4. Install Ice and Water shield waterproofing at all valleys and extending from roof eave to 24" past exterior wall.
 5. Install ice and water shield waterproofing at all hip / ridge locations as recommended by roofing tile manufacturer.
 6. Double layer of No. 30# asphalt impregnated roofing felt, lapped 19" leaving 17" exposure on previous layer.
- B. Install flashing at all locations where roof intersects other roofs, sidewall or parapet walls, ventilators, and similar projections.
- C. Intersections of Roof Surfaces and Abutting Vertical Surfaces:
1. Install continuous metal flashing to extend 3 inches up vertical surface.
 2. At locations where vertical surface will abut top edge of tile, install metal flashing to extend 4 inches up vertical surface, form metal flashing to extend minimum 4 inches over tile, and form 1/2 inch return hem at edge of metal.
 3. Form saddle flashings for protrusions through roof in accordance with manufacturer's instructions.
- D. Fabricated Sheet Metal Items: Install in accordance with shop drawings and SMACNA ASMM.
- E. Cant Strip: Install nominal 1 inch by 2 inches by 48 inches (25 mm by 50 mm by 1220 mm) pressure-treated wood cant strips directly over underlayment at eaves, spacing 1 inch (25 mm) apart for drainage.

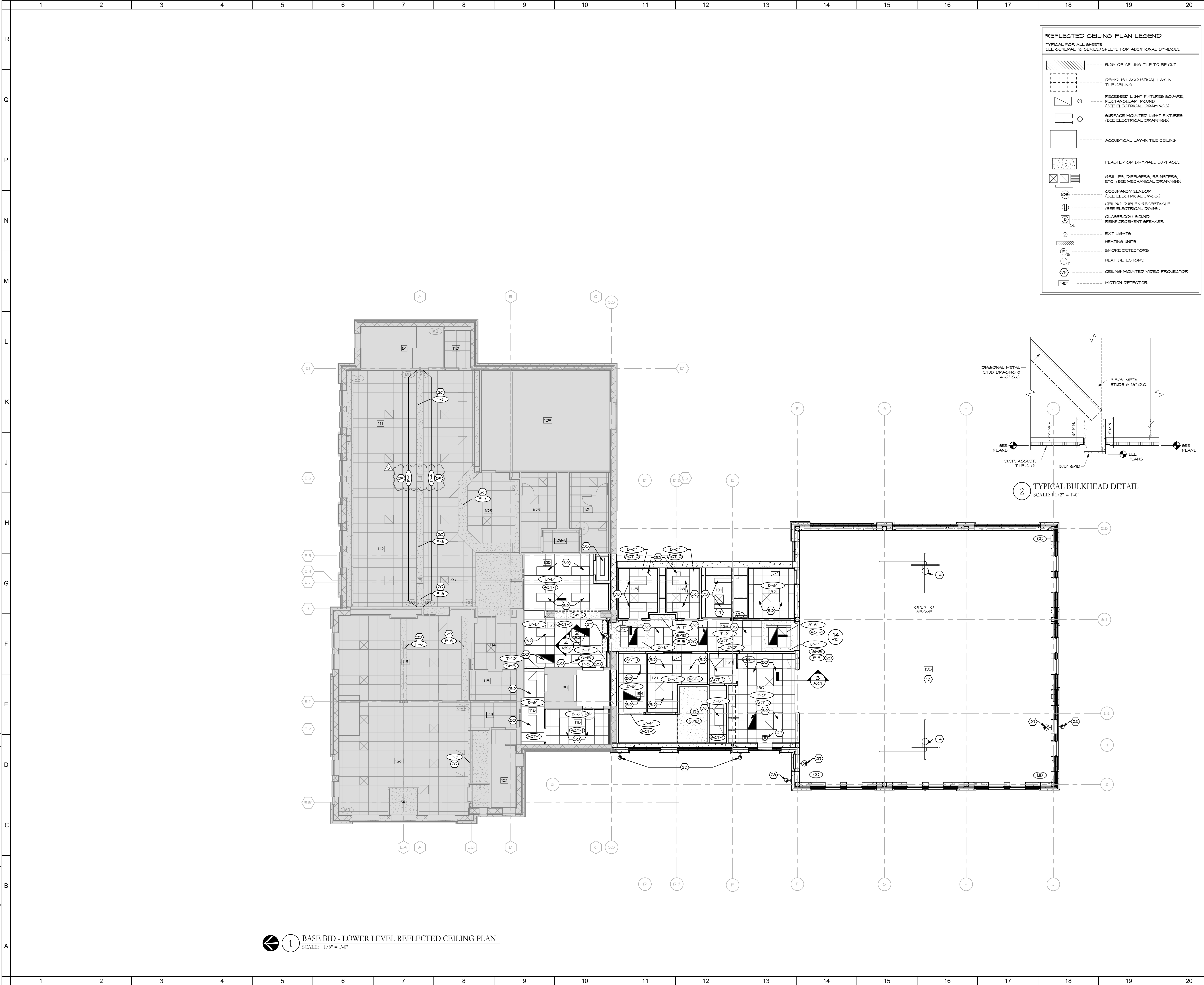
3.4 TILE INSTALLATION

- A. Install tile roofing in strict conformance with manufacturer's instructions.
- B. Install first course over cant strip, with overhang.
1. Do not drive fasteners tightly against tiles, to reduce risk of breakage and to allow natural deck movement.
 2. Allow tile to "hang" on its fasteners.
 3. Provide 3/4 inch (19 mm) to 2 inches (51 mm) overhang, permitting proper flow into gutters.

4. Provide not more than 1/2 inch (13 mm) overhang, unless gutters are in place. If gutters are used, provide just enough overhang to permit proper flow into gutters; provide under-eave tile course or heavy-gage drip edge with extended hemmed lip to reinforce strength of overhang.
 - C. Install each subsequent course with joints centered on tile below, with maximum exposure in each course of 13-1/4 inches (336 mm). Wet cut tile at hips and valleys, using masonry saw with diamond blade.
 - D. At ridge, install bead of adhesive at butt end of each tile, located so it is completely concealed. Install sealant as required at hip and ridge accessories to achieve watertight installation.
 - E. Install snow guards where shown.
- 3.5 PROTECTION
- A. Do not permit traffic over finished roof surface unless absolutely necessary.
 - B. Minimize traffic over finished roof surface. If necessary, wear soft-soled shoes and walk on the "butt" of the tile in order to avoid breakage.
 - C. Replace tile broken due to improper protection or traffic control.

END OF SECTION

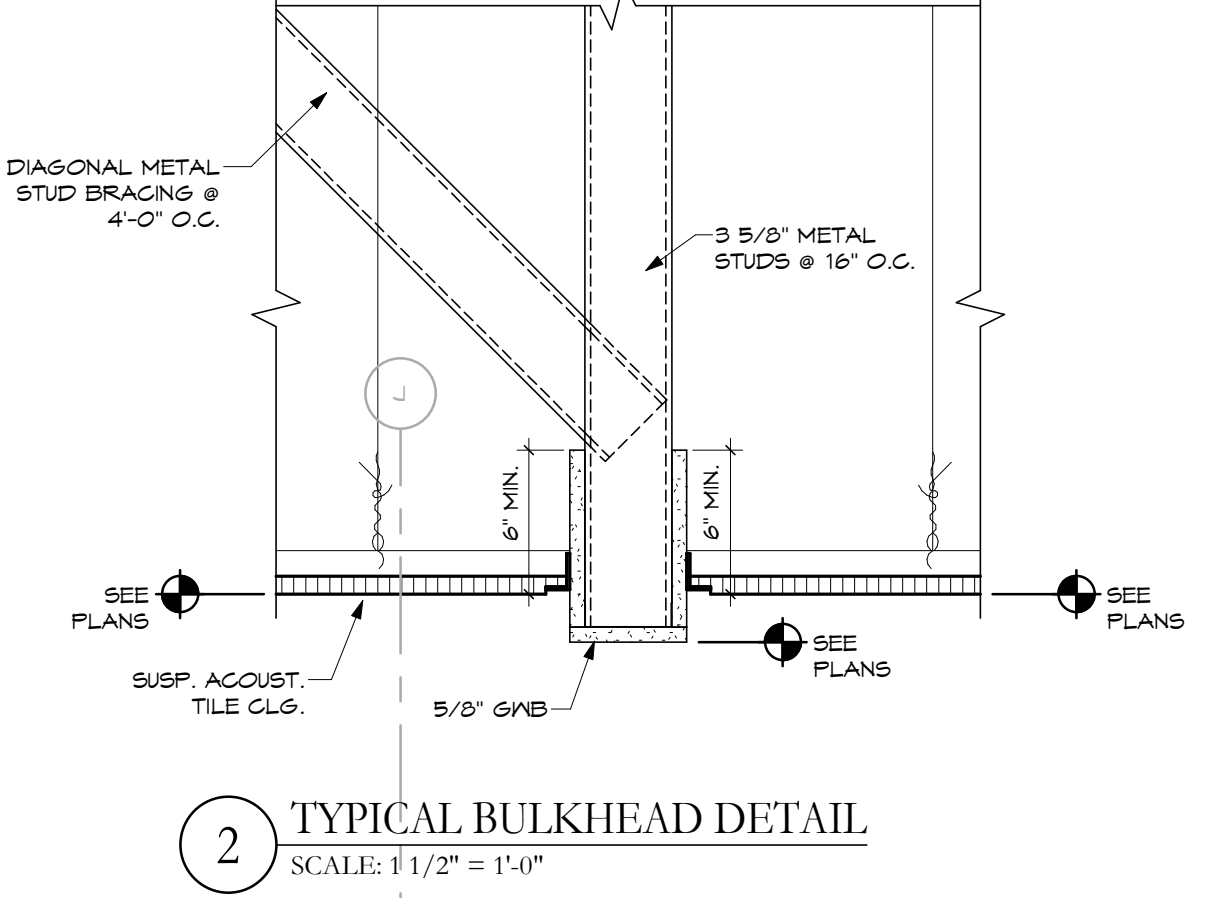
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1 BASE BID - LOWER LEVEL REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"

REFLECTED CEILING PLAN LEGEND
TYPICAL FOR ALL SHEETS.
SEE GENERAL (G SERIES) SHEETS FOR ADDITIONAL SYMBOLS

[Symbol]	ROOF OF CEILING TILE TO BE CUT
[Symbol]	DEMOLISH ACOUSTICAL LAY-IN TILE CEILING
[Symbol]	RECESSED LIGHT FIXTURES SQUARE, RECTANGULAR, ROUND (SEE ELECTRICAL DRAWINGS)
[Symbol]	SURFACE MOUNTED LIGHT FIXTURES (SEE ELECTRICAL DRAWINGS)
[Symbol]	ACOUSTICAL LAY-IN TILE CEILING
[Symbol]	PLASTER OR DRYWALL SURFACES
[Symbol]	GRILLES, DIFFUSERS, REGISTERS, ETC. (SEE MECHANICAL DRAWINGS)
[Symbol]	OCCUPANCY SENSOR (SEE ELECTRICAL DWGS.)
[Symbol]	CLASSROOM SOUND REINFORCEMENT SPEAKER
[Symbol]	EXIT LIGHTS
[Symbol]	HEATING UNITS
[Symbol]	SMOKE DETECTORS
[Symbol]	HEAT DETECTORS
[Symbol]	CEILING MOUNTED VIDEO PROJECTOR
[Symbol]	MOTION DETECTOR



- SHEET NOTES:** ALL NOTES MAY NOT BE USED.
- ALIGN FACE OF NEW AND EXISTING WALL.
 - BOOK RETURN - SEE SPECS.
 - STUD WALL INFILL OF DOOR OPENING, SALVAGE DOOR & TURN OVER TO OWNER.
 - PROVIDE RECESSED SLAB FOR WALK-OFF MAT. SEE FINISH & STRUCTURAL DRAWINGS.
 - NOT USED.
 - INFILL CONCRETE FLOOR SLAB. SEE STRUCT DWGS.
 - RAILING SYSTEM. SEE SPECS & DETAILS.
 - MATCH EXISTING MOOD TRIM ON WALLS. SEE ELEVATIONS. REFINISH ALL MOOD TRIM.
 - INFILL EXISTING OPENING WITH FACE BRICK, 1/2" GYP SHEATHING, 6" METAL STUDS @ 16" O.C. & 5/8" GMB TO MATCH EXISTING. PROVIDE FULL THICK BATT INSULATION.
 - TEMPORARY CONSTRUCTION BARRIERS.
 - BASEBOARDS TO MATCH EXISTING ADJACENT IN COLOR, SIZE, & STYLE - TYP.
 - CONCRETE FAYERS.
 - MOTORIZED RETRACTABLE BASKETBALL GOAL.
 - TERAZZOTTO TILES - TO MATCH EXISTING ADJACENT.
 - ACCESS TO ROOF HATCH.
 - UNDER STAIRS TO BE TYPE "X" GMB.
 - OPEN TO STRUCTURE ABOVE.
 - STRUCTURAL BEAMS ON CEILING IN ROOM 133 TO BE PAINTED P-2 UNO.
 - UNDERSIDE OF SOFFIT TO BE PAINTED AS INDICATED BY FINISH TAG.
 - SOFFIT VENTS.
 - EXISTING SOFFIT, FASCIA, AND TRIM WORK TO BE CLEANED, PREPPED, & REPAINTED - TYP.
 - NEW WINDOW - STAIN GLAZING BY OWNER. CONTRACTOR TO COORDINATE R.O. WITH OWNERS GLAZING.
 - CABINET HEATERS - SEE MECHANICAL.
 - DOOR TO BE REMOVED & REINSTALLED FOR MAG-LOCK.
 - COURT STRIPING - SEE DETAILS.
 - EXIT LIGHT - SEE ELECTRICAL.
 - EXTERIOR LIGHTING - SEE ELECTRICAL.
 - PENDANT DOWN LIGHT - SEE ELECTRICAL.
 - 2X4 LIGHTING FIXTURE - SEE ELECTRICAL.
 - 4" DOWN LIGHT - SEE ELECTRICAL.
 - EXHAUST FAN - SEE MECHANICAL.
 - 1X1 LIGHTING FIXTURE - SEE ELECTRICAL.
 - PATCH IN CEILING TILE AS REQUIRED FOR NEW WORK.
 - SIDES OF SOFFIT TO BE PAINTED AS INDICATED BY FINISH TAG.
 - 2" DOWN LIGHT - SEE ELECTRICAL.
 - RETRACTABLE COIL OUTLET UNDERSIDE OF TRACK - SEE ELECTRICAL.
 - SIDES OF SOFFIT TO BE PAINTED AS INDICATED BY FINISH TAG.

- GENERAL NOTES:**
- SEE PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS FOR ALL ASSOCIATED ITEMS.
 - DIMENSIONS ARE FROM FACE OF FRAMING TO FACE OF FRAMING UNLESS NOTED OTHERWISE.
 - PROTECT ALL EXISTING CONSTRUCTION TO REMAIN. PATCH ALL GMB TO REMAIN WHERE ADJACENT WALLS HAVE BEEN REMOVED TO LEVEL 5 FINISH FRAME AND (2) COATS FINISH PAINT TO COLOR INDICATED ON FINISH PLANS.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL FIRE RATINGS AT EXISTING WALLS & CEILINGS.
 - SEE FINISH PLANS FOR NEW FLOOR AND WALL FINISHES.
 - ALL DIMENSIONS ARE TO FACE OF FRAMING, UNLESS NOTED OTHERWISE.
 - ALL INTERIOR WALLS SHALL RECEIVE FULL-THICK BATT SOUND INSULATION, UNLESS NOTED OTHERWISE.
 - ALL INTERIOR WALLS SHALL EXTEND TO STRUCTURE ABOVE AND SEAL THERE TO, UNLESS NOTED OTHERWISE.
 - ALL WALLS ARE TYPE #2 UNLESS NOTED OTHERWISE.
 - ALL ITEMS PASSING THROUGH RATED WALLS MUST BE SEALED (WITH MATERIALS APPROVED BY ARCHITECT/ENGINEER) BY THE CONTRACTOR INSTALLING THE ITEMS.
 - FOUR (4) GRAF AREAS INDICATE AREAS OF NO WORK. THERE MAY BE SOME OVERLAP OF NEW WORK WITH EXISTING CONDITIONS. CONTRACTOR IS RESPONSIBLE TO COORDINATE AREAS WHERE OVERLAP OCCURS.
 - PROVIDE TAPERED RIGID INSULATION ROOF CRICKETS AT THE HIGH SIDE OF ALL MECHANICAL CURBS.
 - PROVIDE APPROPRIATE CORROSION PROTECTION WHERE EVER DISSIMILAR MATERIALS COME IN CONTACT WITH ONE ANOTHER.
 - NEW GLAZE TILE ROOF SHALL MATCH SLOPE OF EXISTING ROOF (TYP).
 - PROVIDE GUTTER EXPANSION JOINTS AS RECOMMENDED BY SMACNA.

BID DOCUMENTS	11.10.2023	
2 ADDENDUM #03	11.29.2023	
ADDENDUM #04	11.30.2023	
No.	Revisions / Submissions	Date

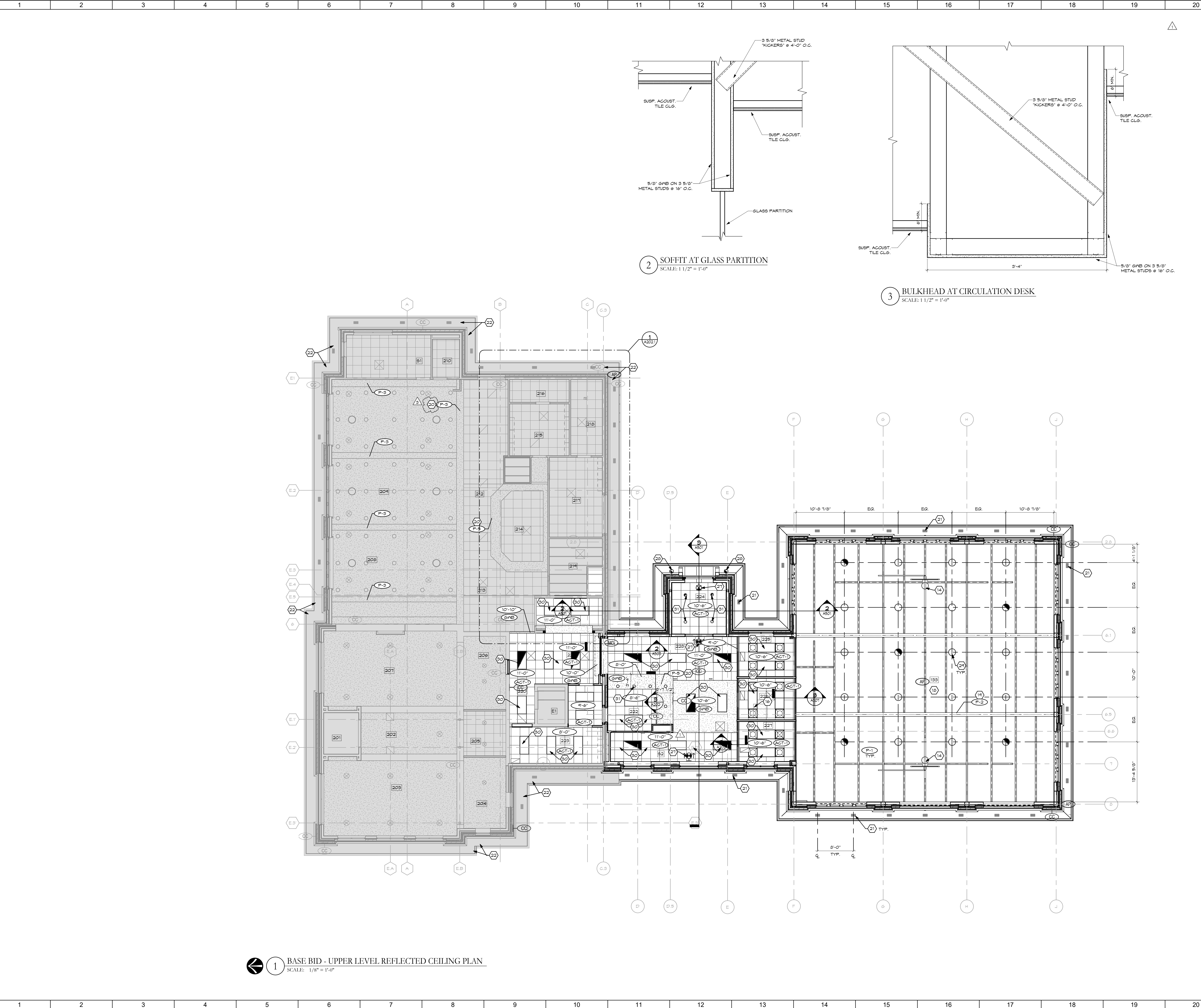
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LOWER LEVEL REFLECTED CEILING PLAN - BASE BID

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2 SOFFIT AT GLASS PARTITION
SCALE: 1 1/2" = 1'-0"

3 BULKHEAD AT CIRCULATION DESK
SCALE: 1 1/2" = 1'-0"

1 BASE BID - UPPER LEVEL REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES: TYPICAL FOR ALL NEW WORK PLAN SHEETS. ALL NOTES MAY NOT BE USED.

- ALIGN FACE OF NEW AND EXISTING WALL.
- BOOK RETURN - SEE SPECS.
- STUD WALL INFILL OF DOOR OPENING, SALVAGE DOOR & TURN OVER TO OWNER.
- PROVIDE RECESSED SLAB FOR WALK-OFF MAT. SEE FINISH & STRUCTURAL DRAWINGS.
- NOT USED.
- INFILL CONCRETE FLOOR SLAB. SEE STRUCT DWGS.
- RAILING SYSTEM. SEE SPECS & DETAILS.
- MATCH EXISTING MOOD TRIM ON WALLS. SEE ELEVATIONS.
- REFINISH ALL MOOD TRIM.
- INFILL EXISTING OPENING WITH FACE BRICK, 1/2" GYP SHEATHING, 6" METAL STUDS @ 16" O.C. & 5/8" GNB TO MATCH EXISTING. PROVIDE FULL THICK BATT INSULATION.
- TEMPORARY CONSTRUCTION BARRIERS.
- BASEBOARDS TO MATCH EXISTING ADJACENT IN COLOR, SIZE, & STYLE - TYP.
- CONCRETE FAYERS.
- MOTORIZED RETRACTABLE BASKETBALL GOAL.
- TERRAZZOTTA TILES - TO MATCH EXISTING ADJACENT.
- ACCESS TO ROOF HATCH.
- UNDER STAIRS TO BE TYPE "X" GNB.
- OPEN TO STRUCTURE ABOVE.
- STRUCTURAL BEAMS ON CEILING IN ROOM 133 TO BE PAINTED P-2 UNO.
- UNDERSIDE OF SOFFIT TO BE PAINTED AS INDICATED BY FINISH TAG.
- SOFFIT VENTS.
- EXISTING SOFFIT, FASCIA, AND TRIM WORK TO BE CLEANED, PREPARED, & REPAINTED - TYP.
- NEW WINDOW - STAIN GLAZING BY OWNER. CONTRACTOR TO COORDINATE R.O. WITH OWNERS GLAZING.
- CABINET HEATERS - SEE MECHANICAL.
- DOOR TO BE REMOVED & REINSTALLED FOR MAG-LOCK.
- GOURT STRIPING - SEE DETAILS.
- EXIT LIGHT - SEE ELECTRICAL.
- EXTERIOR LIGHTING - SEE ELECTRICAL.
- PENDANT DOWN LIGHT - SEE ELECTRICAL.
- 2x4 LIGHTING FIXTURE - SEE ELECTRICAL.
- 4" DOWN LIGHT - SEE ELECTRICAL.
- EXHAUST FAN - SEE MECHANICAL.
- 1x4 LIGHTING FIXTURE - SEE ELECTRICAL.
- PATCH IN CEILING TILE AS REQUIRED FOR NEW WORK.
- SIDES OF SOFFIT TO BE PAINTED AS INDICATED BY FINISH TAG.
- 2" DOWN LIGHT - SEE ELECTRICAL.
- RETRACTABLE COIL OUTLET UNDERSIDE OF TRACK - SEE ELECTRICAL.
- PROJECTION SCREEN.
- SIDES OF SOFFIT TO BE PAINTED AS INDICATED BY FINISH TAG.

GENERAL NOTES:

- SEE PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS FOR ALL ASSOCIATED ITEMS.
- DIMENSIONS ARE FROM FACE OF FRAMING TO FACE OF FRAMING UNLESS NOTED OTHERWISE.
- PROTECT ALL EXISTING CONSTRUCTION TO REMAIN. PATCH ALL GNB TO REMAIN WHERE ADJACENT WALLS HAVE BEEN REMOVED TO LEVEL 5 FINISH FRAME AND (2) COATS FINISH PAINT TO COLOR INDICATED ON FINISH PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL FIRE-RATINGS AT EXISTING WALLS & CEILING.
- SEE FINISH PLANS FOR NEW FLOOR AND WALL FINISHES.
- ALL DIMENSIONS ARE TO FACE OF FRAMING, UNLESS NOTED OTHERWISE.
- ALL INTERIOR WALLS SHALL RECEIVE FULL-THICK BATT SOUND INSULATION, UNLESS NOTED OTHERWISE.
- ALL INTERIOR WALLS SHALL EXTEND TO STRUCTURE ABOVE AND SEAL THERE TO, UNLESS NOTED OTHERWISE.
- ALL WALLS ARE TYPE #2 UNLESS NOTED OTHERWISE.
- ALL ITEMS PASSING THROUGH RATED WALLS MUST BE SEALED (WITH MATERIALS APPROVED BY ARCHITECT/ENGINEER) BY THE CONTRACTOR INSTALLING THE ITEMS.
- FOUR (4) AREAS INDICATE AREAS OF NO WORK. THERE MAY BE SOME OVERLAP OF NEW WORK WITH EXISTING CONDITIONS. CONTRACTOR IS RESPONSIBLE TO COORDINATE AREAS WHERE OVERLAP OCCURS.
- PROVIDE TAPERED RIGID INSULATION ROOF CRICKETS AT THE HIGH SIDE OF ALL MECHANICAL CURBS.
- PROVIDE APPROPRIATE CORROSION PROTECTION WHERE EVER DISSIMILAR MATERIALS COME IN CONTACT WITH ONE ANOTHER.
- NEW GLAZE TILE ROOF SHALL MATCH SLOPE OF EXISTING ROOF (TYP).
- PROVIDE GUTTER EXPANSION JOINTS AS RECOMMENDED BY SMACNA.

No.	Revisions / Submissions	Date
1	ADDENDUM #02	11.10.2023
2	ADDENDUM #03	11.21.2023
3	ADDENDUM #04	11.29.2023

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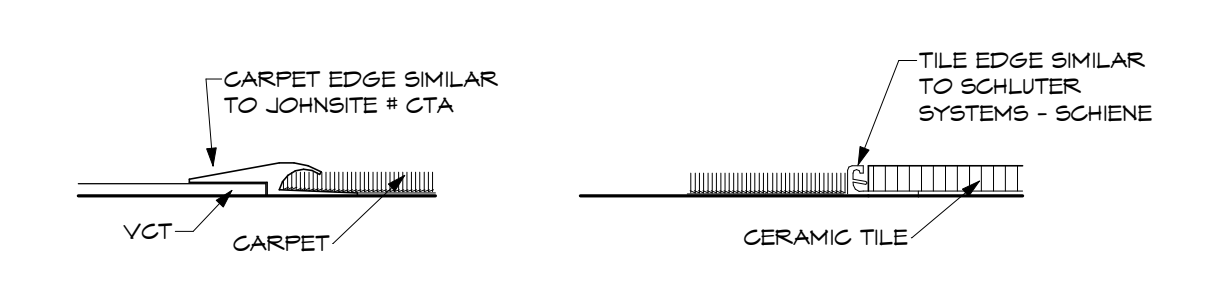
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UPPER LEVEL REFLECTED CEILING PLAN - BASE BID

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Checked	KRM	

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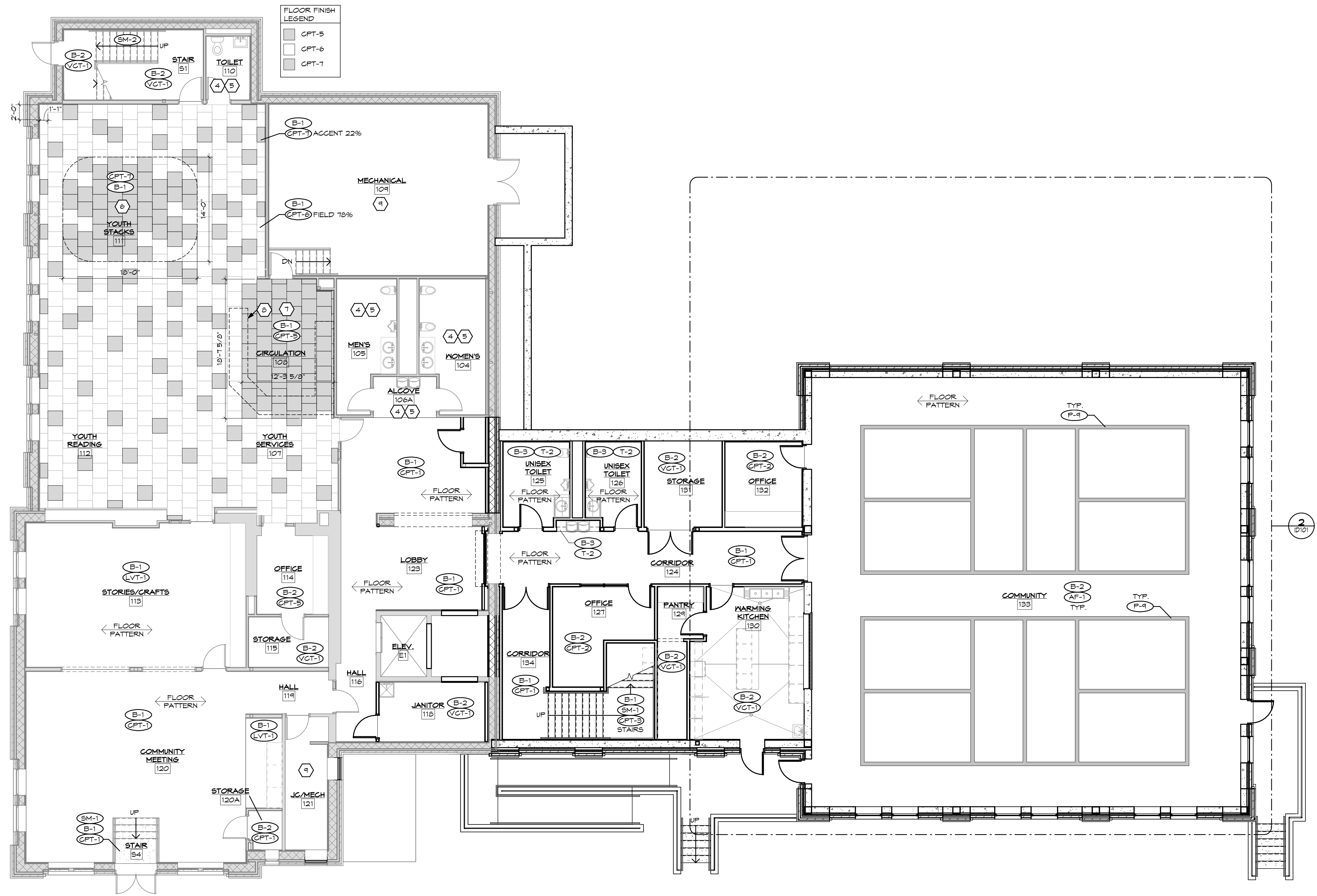


3 FLOOR EDGE DETAILS
SCALE: 6" = 1'-0"

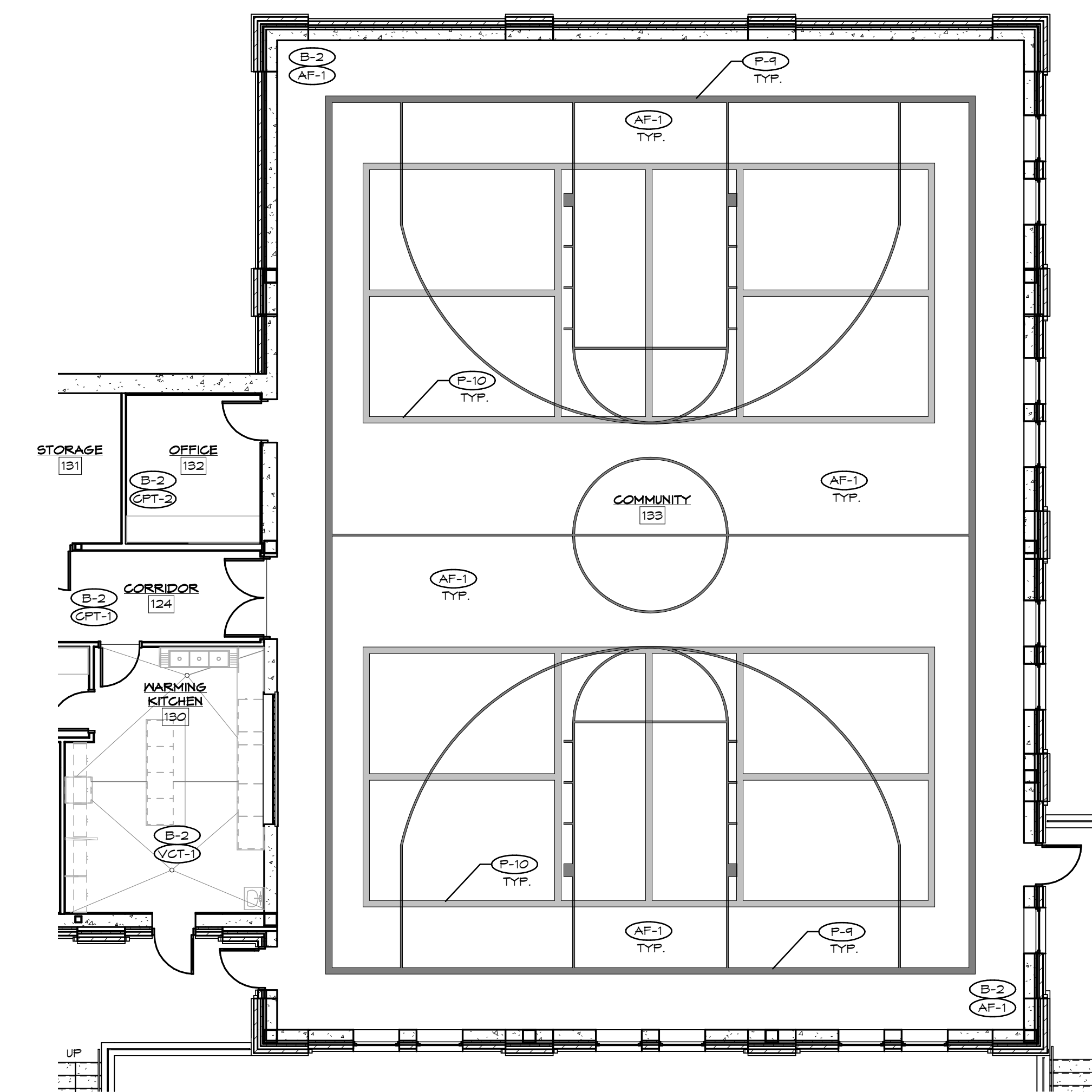
FINISH MATERIAL SCHEDULE table with columns: CODE, MATERIAL, MANUFACTURER, DESCRIPTION / PATTERN, COLOR / MATERIAL, REMARKS. Includes items like acoustic ceiling tile, athletic flooring, carpet, tile, paint, and laminate.

- SHEET NOTES: TYPICAL FOR ALL FLOOR FINISH SHEETS. ALL NOTES MAY NOT BE USED.
1. PREP EXISTING SUBSTRATE TO RECEIVE NEW FLOORING.
2. WALK OFF MAT TO BE CENTERED ON ENTRY DOORS.
3. REUSE SALVAGED BASE WHEN POSSIBLE. NEW WOOD BASE TO MATCH EXISTING.
4. EXISTING TILE TO REMAIN. PROTECT THROUGHOUT CONSTRUCTION.
5. CLEAN TILE AND GROUT IN THIS AREA.
6. CARPET PATTERN TO BE HIGHLY CONCENTRATED WHERE SHOWN AND SPARSALLY DISPERSED OUT. CONCENTRATED AREA TO BE COORDINATED WITH FURNITURE PLAN TO ENSURE IT FALLS WITHIN THE SEAT AREA.
7. CARPET PATTERN TO BE HIGHLY CONCENTRATED WHERE SHOWN AND SHOULD FALL WITHIN THE CIRCULATION DESK AREA.
8. OUTLINE TO SHOW WHERE CIRCULATION DESK IS LOCATED.
9. EXISTING FINISHES TO REMAIN. PROTECT THROUGHOUT CONSTRUCTION.

- GENERAL NOTES:
A. REFER TO INTERIOR FINISH SCHEDULE FOR FINISH INFORMATION.
B. COORDINATE ALL FINISH CONCERNS IN FIELD WITH ARCHITECT PRIOR TO INSTALLATION.
C. CONTRACTOR SHALL PROVIDE MATERIAL SAMPLES FOR ALL SPECIFIED FINISHES PRIOR TO CONSTRUCTION.
D. ALL ACoustICAL CEILING TO BE FINISH CODE ACT-1 UNLESS OTHERWISE NOTED. SEE RCP FOR FURTHER INFORMATION.
E. FLOORING CONTRACTOR SHALL SUBMIT TO ARCHITECT, SHOP DRAWINGS AND/OR MATERIAL SAMPLES INDICATING LAYOUT, PATTERN, COLOR AND SEAM LOCATIONS FOR ALL SPECIFIED FLOOR FINISHES PRIOR TO ORDERING MATERIALS, AND PRIOR TO INSTALLATION.
F. REFER TO FLOOR FINISH PLAN FOR PATTERN LAYOUT AND DIMENSIONS.
G. PERFORM FLOORING MOISTURE TESTS RECOMMENDED BY EACH MFG AND PROCEED WITH INSTALLATION OF FLOORING ONLY AFTER SUBSTRATES PASS TESTING.
H. PREPARE ALL SUBSTRATES ACCORDINGLY TO ITS FINISH MFG'S RECOMMENDATIONS.
I. CONTRACTOR TO INSTALL APPROPRIATE TRANSITION STRIP TYPES BETWEEN MATERIALS AS REQUIRED.
J. FLOOR/FATHER MATERIALS AS NEEDED TO CREATE A LEVEL AND EVEN SURFACE AT ALL TRANSITIONS.
K. CARPET SHALL BE INSTALLED PER MFG'S RECOMMENDATIONS AND/OR CURRENT ORI GUIDELINES.
L. CARPET SHALL BE LAID IN THE INSTALLATION PATTERN (I.E. HANDLING BRICK PATTERN, RANDOM, ECT.) AS SPECIFIED ON THE INTERIOR FINISH SCHEDULE WITH THE PATTERN MATCHED TO MAINTAIN UNIFORMITY OF CARPET DIRECTION AND LAY OF PILE.
M. FLOORING SEAMS SHALL BE KEPT TO A MINIMUM POSITION IN INCONSPICUOUS AREAS IN COMPLIANCE WITH ORI 104 (CARPET & RUS INSTALLATION METHODS) AND MFG'S RECOMMENDATIONS FOR SEAM LOCATIONS AND DIRECTION OF CARPET. FLOORING SEAMS SHALL RUN THE LENGTH OF THE AREA RATHER THAN ACROSS A MAIN TRAFFIC PATTERN WHENEVER POSSIBLE. SEAMS SHALL NOT BE PERPENDICULAR TO DOORWAY OPENINGS.
N. ALL SHEET FLOORING SEAMS TO BE WELDED PER MFG'S RECOMMENDATIONS IN COLOR MATCHING WELD ROD.
O. USE VINYL ENHANCED TILE ADHESIVE AS RECOMMENDED BY TARKETT TO MEET SITE CONDITIONS.
P. PREPARE SUBSTRATES ACCORDING TO JOHNSTONE WRITTEN INSTRUCTIONS TO ENSURE ADHESION OF VINYL ENHANCED TILE.
Q. USE LUXURY VINYL TILE ADHESIVE AS RECOMMENDED BY MFG TO MEET SITE CONDITIONS.
R. PREPARE SUBSTRATES ACCORDING TO MFG'S WRITTEN INSTRUCTIONS TO ENSURE ADHESION OF LUXURY VINYL TILE.
S. BASE TO BE INSTALLED PER MFG'S INSTRUCTION. WIPER ALL CORNERS IN FIELD PER MFG'S INSTALLATION GUIDE USING APPROPRIATE TOOLS.
T. PROVIDE CLEAR SEALANT BETWEEN BASE AND HARD SURFACE FLOOR FINISH.
U. ALL WALLS TO BE PAINTED FINISH CODE P-1 UNLESS NOTED OTHERWISE.
V. ALL DOOR FRAMES TO BE PAINTED FINISH CODE P-1 UNLESS OTHERWISE NOTED.
W. CONTRACTOR TO SUBMIT PAINT DRAWINGS TO ARCHITECT FOR APPROVAL PRIOR TO APPLICATION.
X. APPLY TWO COATS OF FINAL FINISH PRODUCT.
Y. FINISH CERTIFICATION BY THE PAINT MFG THAT PRODUCTS SUPPLIED COMPLY WITH LOCAL REGULATIONS CONTROLLING THE USE OF VOLATILE ORGANIC COMPOUNDS (VOC'S).
Z. EXPOSED STRUCTURE TO BE PAINTED WITH DRY FILL, FLAT PAINT IN ENTIRETY (STRUCTURE, ROOF DECK, DUCTWORK, CONDUIT, PIPING, AND OTHER SIMILAR ITEMS).
AA. WOODGRAIN DIRECTION OF PLASTIC LAMINATE TO BE VERTICAL ON FACE OF CABINETS, HORIZONTAL ON COUNTERTOPS AND SHELF EDGE BAND, UNLESS OTHERWISE NOTED.
BB. ALL SOLID SURFACE SEAMS TO BE HARD SEAM (NO SEAMS SHOWN).
CC. USE MFG'S RECOMMENDED MAXIMUM WIDTHS TO MINIMIZE THE NUMBER OF SEAMS IN SOLID SURFACE.
DD. SOLID SURFACE SIDE BACKPLASHES TO BE INTEGRAL COVERED WITH HARD SEAMS (NO SET ON SIDES, BACKPLASHES, ECT.).
EE. SOLID SURFACE TO HAVE EASED EDGE DETAIL, UNLESS OTHERWISE NOTED.
FF. CONTRACTOR TO SUBMIT ALL TILE SAMPLES TO ARCHITECT FOR APPROVAL PRIOR TO ORDERING.
GG. TILE TO BE INSTALLED PER MFG'S RECOMMENDATIONS AND CURRENT TGA GUIDELINES.



1 BASE BID - LOWER LEVEL FLOOR FINISH PLAN
SCALE: 1/8" = 1'-0"



2 ALTERNATE #01 - COMMUNITY AREA
EXPANSION - LOWER LEVEL FLOOR FINISH PLAN
SCALE: 1/8" = 1'-0"

BID DOCUMENTS table with columns: No., Revisions / Submissions, Date. Includes LWC INCORPORATED contact info and Union County Public Library logo. Project name: UNION COUNTY PUBLIC LIBRARY LIBRARY ADDITION AND RENOVATION. Location: 2 EAST SEMINARY STREET LIBERTY, IN 47353. Lower Level - Floor Finish Plan. Includes a professional seal for Kevin R. McGurey, Licensed Professional Architect, No. 12002136, State of Indiana.

Table with columns: Comm. No., Date, Drawing No., Checked, KRM, ID101. Values: 22106.00, 11.10.2023, M.K.S., KRM, ID101.