

ADDENDUM

Project Name:	Hamtramck Public Schools Holbrook Elementary Kitchen Addition and Renovations	Addendum No:	One (1)
Project Number:	19-105	Issue Date:	February 15, 2023
Project Location:	Hamtramck, Michigan		

This Addendum forms a part of the above described Contract Documents and supersedes, supplements or clarifies parts thereof to the extent defined by the terms set forth in this Addendum.

This addendum consists of (1\3) typed pages and the following attachment:

- General Information: Pre-Bid "Sign-In Sheet" (1 page)
- Specifications: 075419 (8 pages), 116800 (5 pages), 223410 (8 pages), 321816.13 (3 pages)
- Drawings: Architectural: A0-03, A0-04, A1-01, A2-01, A3-01, A3-10, A5-01, A9-01
Mechanical: MD1.0, M2.00, M2.01, M6.3

GENERAL ITEMS:

Item G1 Pre-Bid meeting attendance sign in sheet attached.

Item G2 The following are instructions on how to attend the virtual bid opening:

19-105 HPS Holbrook Elementary Kitchen Addition and Renovation Bid Opening
Tue, Feb 21, 2023 2:00 PM - 2:30 PM (EST)

Please join my meeting from your computer, tablet or smartphone.

<https://meet.goto.com/602852037>

You can also dial in using your phone.

United States: [+1 \(872\) 240-3311](tel:+18722403311)

Access Code: 602-852-037

SPECIFICATIONS:

Item SP1 Specification Section 000200 – Material Finish / Color Schedule (revised but not re-issued)

- A. Revised color of FB-1 to Rosewood Jumbo Blend and FB-2 to Cotta Blend.
- B. Add Exterior Paint Colors PNT-12, SW 7582 Salute, and PNT-13, SW 7103 Whitetail.
- C. Revised height of RB-3 to 6".
- D. Revised PT-2 to a 6" covebase.

Item SP2 Specification Section 075323 – EPDM Roofing (removed in its entirety)

- A. Remove section complete.

Hamtramck Public Schools
Holbrook Elementary Kitchen Addition and Renovations
Addendum # One
February 15, 2023
Page 2 of 3

- Item SP3** Specification Section 075419 – PVC Roofing (issued in its entirety)
- Item SP4** Specification Section 116800 - Play Field Equipment and Structures (issued in its entirety)
- Item SP5** Specification Section 223410 – Condensing Fuel-Fired Domestic Water Heaters (re-issued)
A. Add acceptable manufacturers to Section 2.2 A. 1
- Item SP6** Specification Section 321816.13 – Playground protective Surfacing (issued in its entirety)

ARCHITECTURAL DRAWINGS:

- Item A1** Drawing A0-03; DOOR & ROOM SCHEDULES, DOOR FRAME & WALL TYPES (re-issued)
A. Revised door heights for 102C and 112.
B. Add head and jamb details for 102A, 102B, 104A, 104B, 104C, and 104D.
C. Add key note 3 – add to doors that apply.
D. Revised Room Finish Key Note 4.
E. Add key note 2 and 4 to Room 112 and 113.
F. Revised Ceiling Finish for 114.
G. Add clarification notes for W-1.
H. Revised notes for Wall Type-1 and Wall Type-2.
I. Add Wall Type-1A
- Item A2** Drawing A0-04; OPENING DETAILS (re-issued)
A. Revise details D3, D4, and D5.
B. Add details D6, D7, D8, D9, D10, D11 and D12.
C. Revised door location on T3.
- Item A3** Drawing A1-01; DEMOLITION FLOOR PLANS (re-issued)
A. Add key note #9A and revise tags on floor plan.
B. Add key note #22 and tag on floor plan.
- Item A4** Drawing A2-01; ARCHITECTURAL SITE PLANS (re-issued)
A. Revise key note #AD2.
B. Add key notes 12 through 16 and add tags to plans.
C. Add Detail 5, Alternate #2 – New Work.
- Item A5** Drawing A3-01; LOWER LEVEL FLOOR PLAN (re-issued)
A. Add key notes #AD4 and A2 through A9 and add tags to plans.
B. Revise detail bubble.
C. Add wall tags.
D. Add exterior dimension.
- Item A6** Drawing A3-02; MAIN LEVEL FLOOR PLAN AND ROOF PLAN (revised but not re-issued)
A. Add key notes #R8 to indicate roof saddles at all mechanical equipment.
B. Revise walk pad layout to reflect roof saddle layout.
- Item A7** Drawing A3-10; PLAN DETAILS (re-issued)
A. Add clarification notes.

Hamtramck Public Schools
Holbrook Elementary Kitchen Addition and Renovations
Addendum # One
February 15, 2023
Page 3 of 3

- Item A8** Drawing A4-01; LOWER LEVEL REFLECTED CEILING PLANS (revised but not re-issued)
A. Add key note 8 to read "Cut and trim ceiling tile as needed at column".
B. Add tag to kitchen area at column.
- Item A9** Drawing A5-01; EXTERIOR ELEVATIONS AND BUILDING SECTIONS (re-issued)
A. Clarification on materials.
B. Add key note #14 and show location on north elevation.
C. Revise west elevation to reflect correct building length and masonry infill at windows.
D. Revise and/or add expansion joint locations.
- Item A10** Drawing A9-01; LOWER LEVEL FINISH FLOOR PLAN (re-issued)
A. Add key notes 8,9, and 10 and add tags on plans.
B. Clarification at transitions in materials at adjacent spaces.
C. Add locations of floor drains to serving area and kitchen addition.
D. Revised porcelain and vinyl tile layout.

MECHANICAL DRAWINGS

- Item M1** Drawing MD1.0; LOWER LEVEL MECHANICAL DEMOLITION PLAN – (re-issued)
A. Remove floor drains and cap as indicated.
B. Clarify existing clean out as indicated.
- Item M2** Drawing M2.00; UNDERGROUND PLUMBING PLAN – (re-issued)
A. Reroute sanitary piping for hand sink as indicated.
B. Clarify existing clean out as indicated.
C. Remove floor drain as indicated.
- Item M3** Drawing M2.01; LOWER LEVEL PLUMBING PLAN – (re-issued)
A. Reroute sanitary piping for hand sink as indicated.
B. Clarify existing clean out as indicated.
C. Remove floor drain as indicated.
- Item M4** Drawing M6.03; MECHANICAL DETAILS – (re-issued)
A. Clarify existing gas piping re-connection as indicated.

****END OF ADDENDUM****

**HAMTRAMCK PUBLIC SCHOOLS
HOLBROOK ELEMENTARY KITCHEN ADDITION AND RENOVATION
PARTNERS PROJECT #19-105**

**PRE-BID MEETING SIGN-IN SHEET
February 10, 2023 @ 1:00 p.m.**

Prime Contractor?
Y/N

Y/N	Attendee Name	Company Name	Email Address	Phone / Fax
N	PAUL CARDINAL	Miles-Boldt	paule@Miles-Boldt.com	586-362-3247
N	JOSH MARKO	JM FLOORING	JMFLOORING425@GMAIL.COM	586-945-3584
Y	Steve Goring	Braun Const. Grp	sgoring@braunco.com	248-848-0567
	Jacob Cardie	Blue Star Demo	JCardie@BlueStarDemo.com	586-457-7708
N	JARVIS	WARD	jarvis@wardinc.com	586-727-6065
Y	Leonard Enezel	FORTE Construction	leo@fortekinc.com	313.703.7171

SECTION 075419 - POLYVINYL-CHLORIDE (PVC) ROOFING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Adhered polyvinyl-chloride (PVC) roofing system.
2. Roof insulation.

1.2 DEFINITIONS

- ##### A. Roofing Terminology: Definitions in ASTM D 1079 and glossary in NRCA's "The NRCA Roofing and Waterproofing Manual" apply to work of this Section.

1.3 PREINSTALLATION MEETINGS

- ##### A. Preinstallation Roofing Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

- ##### A. Product Data: For each type of product.
- ##### B. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other work.
- ##### C. Samples for Verification: For the following products:
1. Sheet roofing, of color required.
 2. Walkway pads or rolls, of color required.

1.5 INFORMATIONAL SUBMITTALS

- ##### A. Research/Evaluation Reports: For components of roofing system, from ICC-ES.
- ##### B. Sample Warranties: For manufacturer's special warranties.

1.6 CLOSEOUT SUBMITTALS

- ##### A. Maintenance Data: For roofing system to include in maintenance manuals.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.

1.8 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within specified warranty period, with no dollar limit.

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

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations: Obtain components including roof insulation, fasteners for roofing system from same manufacturer as membrane roofing or manufacturer approved by membrane roofing manufacturer.

2.2 PERFORMANCE REQUIREMENTS

- A. Accelerated Weathering: Roofing system shall withstand 2000 hours of exposure when tested according to ASTM G 152, ASTM G 154, or ASTM G 155.
- B. Impact Resistance: Roofing system shall resist impact damage when tested according to ASTM D 3746 or ASTM D 4272.
- C. Roofing System Design: Tested by a qualified testing agency to resist the following uplift pressures:
1. Corner Uplift Pressure: 120 lbf/sq. ft.
 2. Perimeter Uplift Pressure: 90 lbf/sq. ft.
 3. Field-of-Roof Uplift Pressure: 50 lbf/sq. ft.
- D. Solar Reflectance Index: Not less than 78 when calculated according to ASTM E 1980, based on testing identical products by a qualified testing agency.
- E. Energy Performance: Roofing system shall have an initial solar reflectance of not less than 0.70 and an emissivity of not less than 0.75 when tested according to CRRC-1.
- F. Exterior Fire-Test Exposure: ASTM E 108 or UL 790, Class A; for application and roof slopes indicated; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
- G. Fire-Resistance Ratings: Comply with fire-resistance-rated assembly designs indicated. Identify products with appropriate markings of applicable testing agency.

2.3 PVC ROOFING

- A. PVC Sheet: ASTM D 4434/D 4434M, Type III, fabric reinforced.
1. Basis-of-Design Product: Subject to compliance with requirements, provide Johns Manville; JM PVC 60 MIL / 60 MIL MIN or comparable product by one of the following:
 - a. Carlisle SynTec Incorporated.
 - b. Duro-Last Roofing, Inc.
 - c. Flex Membranes International.
 - d. GAF Materials Corporation.
 - e. GenFlex Roofing Systems.
 - f. Johns Manville.
 - g. Mule-Hide Products Co., Inc.
 - h. Sarnafil Inc.
 2. Thickness: 60 mils (1.5 mm), nominal.
 3. Exposed Face Color: White.

2.4 AUXILIARY ROOFING MATERIALS

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with roofing.
1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.
 2. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the following limits for VOC content:
 - a. Plastic Foam Adhesives: 50 g/L.
 - b. Gypsum Board and Panel Adhesives: 50 g/L.
 - c. Multipurpose Construction Adhesives: 70 g/L.
 - d. Fiberglass Adhesives: 80 g/L.
 - e. Single-Ply Roof Membrane Adhesives: 250 g/L.
 - f. PVC Welding Compounds: 510 g/L.
 - g. Adhesive Primer for Plastic: 650 g/L.
 - h. Single-Ply Roof Membrane Sealants: 450 g/L.
 - i. Nonmembrane Roof Sealants: 300 g/L.
 - j. Sealant Primers for Nonporous Substrates: 250 g/L.
 - k. Sealant Primers for Porous Substrates: 775 g/L.
 - l. Other Adhesives and Sealants: 250 g/L.
 3. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the testing and product requirements of the California Department of Public Health's (formerly, the California Department of Health Services') "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- B. Sheet Flashing: Manufacturer's standard sheet flashing of same material, type, reinforcement, thickness, and color as PVC sheet.

- C. Bonding Adhesive: Manufacturer's standard low VOC membrane adhesive for adhering roof membrane to insulation, cover boards, vertical substrate board.
- D. Slip Sheet: Manufacturer's standard of thickness required for application. Polyester mat 90 oz./yd.² adhered or mechanically fastened.
- E. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Global 4470, designed for fastening roofing to substrate, and acceptable to roofing system manufacturer.
- F. Rainscreen Drainage Mat: 1/8" min. 1/4" max nominal thick polymer core fused filaments bonded to moisture resistant filter fabric with 90% open cavity.
 - 1. Comply with:
 - ASTM C 165-00 compressive properties.
 - ASTM D 4533 Tear shear of geotextiles.
 - ASTM E 84 surface burning characteristics Class B.
 - Fed Stnd. 191A method 5874 cold cracking resistance.
 - 2. Provide fastening materials and bonding adhesives per manufacturer's recommendation.
 - 3. Provide manufacturer's recommended isolation materials for asphaltic surfaces.
 - 4. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the work include, but not limited to the following:
 - a. Home Slicker 10 by Benjamin Obdyke.
 - b. Water Way™ by Stuco-Flex International, Inc.
 - c. Water Alley 18 by Demand Products, Inc.
- G. Miscellaneous Accessories: Provide metal termination bars, metal battens, pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories.

2.5 VERTICAL SUBSTRATE BOARDS

- A. Substrate Board: ASTM C 1177/C 1177M, glass-mat, water-resistant gypsum substrate, 1/4 inch (6 mm) thick.
 - 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. CertainTeed Corporation; GlasRoc Sheathing.
 - b. Georgia-Pacific Corporation; Dens Deck DuraGuard.
 - c. National Gypsum Company; Gold Bond eXP Extended Exposure Sheathing.
 - d. USG Corporation; Securock Glass Mat Roof Board.
- B. Polyisocyanurate Board Insulation: ASTM C 1289, Type II, Class 1, Grade 2, felt or glass-fiber mat facer on both major surfaces.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Atlas Roofing Corporation.

- b. Carlisle SynTec Incorporated.
- c. Dyplast Products.
- d. Firestone Building Products.
- e. GAF Materials Corporation.
- f. Hunter Panels.
- g. Insulfoam LLC; a Carlisle company.
- h. Johns Manville.
- i. Rmax, Inc.

- C. Tapered Insulation: Provide factory-tapered insulation boards fabricated to slope of 1/4 inch per 12 inches (1:48) unless otherwise indicated.
- D. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated.

2.6 INSULATION ACCESSORIES

- A. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Global 4470, designed for fastening roof insulation to cover boards to wood blocking and vertical flashings to substrate, wood blocking, and acceptable to roofing system manufacturer.
- B. Insulation Adhesive: Insulation manufacturer's recommended adhesive formulated to attach roof insulation to single component urethane adhesive to another insulation layer.
- C. Cover Board: Perlite Board Insulation: ASTM C 728, rigid, mineral-aggregate thermal insulation board composed of expanded perlite, cellulosic fibers, binders, and waterproofing agents with top surface seal coated, 1/2".
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. GAF Materials Corporation.
 - b. Johns Manville.
- D. Insulation Substrate Adhesive: Insulation manufacturer's recommended adhesive formulated to attach roof insulation to substrate with asphalt vapor barrier. Two part urethane adhesive JM (RSUA) or similar recommended by insulation manufacturer.
- E. Protection Mat: Woven or nonwoven polypropylene, polyolefin, or polyester fabric, water permeable and resistant to UV degradation, type and weight as recommended by roofing system manufacturer for application.

2.7 ASPHALT MATERIALS

- A. Roofing Asphalt: ASTM D 312, Type III or Type IV.
- B. Asphalt Primer: ASTM D 41/D 41M.

2.8 WALKWAYS

- A. Flexible Walkways: Factory-formed, nonporous, heavy-duty, slip-resisting, surface-textured walkway pads, approximately 1/2 inch thick and acceptable to roofing system manufacturer.

PART 3 - EXECUTION

3.1 ROOFING INSTALLATION, GENERAL

- A. Install roofing system according to roofing system manufacturer's written instructions.
- B. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at end of workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

3.2 INSULATION INSTALLATION

- A. Coordinate installing roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.
- B. Install tapered insulation under area of roofing to conform to slopes indicated.
- C. Install insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2.7 inches (68 mm) or greater, install two or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches (150 mm) in each direction.
1. Where installing composite and noncomposite insulation in two or more layers, install noncomposite board insulation for bottom layer and intermediate layers, if applicable, and install composite board insulation for top layer.
- D. Adhered Insulation: Install each layer of insulation and adhere to substrate as follows:
1. Prime surface of concrete deck with asphalt primer at rate of 3/4 gal./100 sq. ft. (0.3 L/sq. m), and allow primer to dry.
 2. Set each layer of insulation in a solid mopping of hot roofing asphalt, applied within plus or minus 25 deg F (14 deg C) of equiviscous temperature.
 3. Set each layer of insulation in insulation adhesive, firmly pressing and maintaining insulation in place.
- E. Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Offset joints of insulation below a minimum of 6 inches (150 mm) in each direction. Loosely butt cover boards together and adhere to insulation.
1. Fasten cover boards to resist uplift pressure at corners, perimeter, and field of roof.

3.3 ADHERED ROOFING INSTALLATION

- A. Adhere roofing over area to receive roofing according to roofing system manufacturer's written instructions. Unroll roofing and allow to relax before retaining.
 - 1. Install sheet according to ASTM D 5036.
- B. Accurately align roofing, and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- C. Bonding Adhesive: Apply to substrate and underside of roofing at rate required by manufacturer, and allow to partially dry before installing roofing. Do not apply to splice area of roofing.
- D. In addition to adhering, mechanically fasten roofing securely at terminations, penetrations, and perimeter of roofing.
- E. Seams: Clean seam areas, overlap roofing, and hot-air weld side and end laps of roofing and sheet flashings according to manufacturer's written instructions, to ensure a watertight seam installation.
 - 1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of sheet.
 - 2. Verify field strength of seams a minimum of twice daily, and repair seam sample areas.
 - 3. Repair tears, voids, and lapped seams in roofing that do not comply with requirements.
- F. Spread sealant bed over deck-drain flange at roof drains, and securely seal roofing in place with clamping ring.

3.4 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories, and adhere to substrates according to roofing system manufacturer's written instructions.
- B. Install isolation membrane per manufacturer's requirements.
- C. Apply bonding adhesive to substrate and underside of sheet flashing at required rate, and allow to partially dry. Do not apply to seam area of flashing.
- D. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- E. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.
- F. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.

3.5 VENTILATING EXTENDED BASE FLASHING INSTALLATION

- A. Install isolation membrane per manufacturer's requirements to from a breathable separation from residual asphalt materials as required by the rain screen materials manufacturer.

PARTNERS 19-105
POLYVINYL-CHLORIDE (PVC) ROOFING
075419 - 8

- B. Install venting rain screen with filament side to masonry construction. Secure with mechanical fasteners or bonding adhesives to hold rain screen material in place until fully secured with sheathing fasteners. Provide venting filaments or compatible mortar net material to form closure top and bottom of installation.
- C. Cut and fit vertical substrate board over rain screen material with pressure treated 1 by 4 nailers as indicted on drawings. Mechanically fasten substrate board to the existing masonry wall with manufacture recommended fasteners and plate. Seam substrate board joints. Prime substrate board for PVC base flashing fully adhered installation per manufacturers requirements.
- D. Provide additional horizontal 1by 4 flashing nailer strips and fastening for installation of extended base flashing over 36" per base flashing manufacturer requirements. Lap upper flashing section over lower section and seal per flashing manufacturer's requirements.

3.6 WALKWAY INSTALLATION

- A. Flexible Walkways: Install walkway products in locations indicated. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

3.7 PROTECTING AND CLEANING

- A. Protect roofing system from damage and wear during remainder of construction period. When remaining construction does not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.
- B. Correct deficiencies in or remove roofing system that does not comply with requirements, repair substrates, and repair or reinstall roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 075419

SECTION 116800 - PLAY FIELD EQUIPMENT AND STRUCTURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes playground equipment as follows:
 - 1. Freestanding and composite playground equipment.

1.2 DEFINITIONS

- A. Definitions in ASTM F1487 apply to Work of this Section.
- B. IPEMA: International Play Equipment Manufacturers Association.

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. Sustainable Design Submittals:
- C. Shop Drawings: For each type of playground equipment.
 - 1. Include plans, elevations, sections, and attachment details.
 - 2. Include fall heights and use zones for playground equipment, coordinated with the critical-height values of protective surfacing specified in Section 321816.13 "Playground Protective Surfacing."
- D. Samples: For each exposed product and for each color and texture specified.

1.5 INFORMATIONAL SUBMITTALS

- A. Product certificates.
- B. Material certificates.
- C. Field quality-control reports.
- D. Sample warranty.

PARTNERS 19-105
PLAY FIELD EQUIPMENT AND STRUCTURES
116800 - 2

1.6 CLOSEOUT SUBMITTALS

- A. Maintenance data.

1.7 QUALITY ASSURANCE

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

1.8 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of playground equipment that fail in materials or workmanship within specified warranty period.

- 1. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Safety Standard: Provide playground equipment according to ASTM F1487.
- B. Playground equipment and components shall have the IPEMA Certification Seal.

2.2 MANUFACTURERS

- A. Acceptable Manufacturers: Subject to compliance with the requirements, provide the Basis of Design products, or comparable products as manufactured by one of the following:

- 1. American Swing Products.
 - 2. BCI Burke Company, LLC.
 - 3. Columbia Cascade Company.
 - 4. Henderson Recreation Equipment Ltd..
 - 5. Howell Equipment Company.
 - 6. Kidstuff Playsystems, LLC.
 - 7. Kompan.
 - 8. Landscape Structures Inc..
 - 9. L. A. Steelcraft Products, Inc..
 - 10. Little Tikes Commercial Play Systems, Inc..
 - 11. Miracle Recreation Equipment Co., a division of PlayPower, Inc..
 - 12. Park Structures, a PlayCore Company.
 - 13. PlayDesigns.
 - 14. Playland International, LLC, a division of Superior International Industries, Inc..
 - 15. Playworld Systems, Inc..
 - 16. Recreation Creations, Inc..
 - 17. SportsPlay Equipment Inc..

2.3 ELEMENTARY PLAYGROUND EQUIPMENT

- A. Age Appropriateness: Custom Structure for 5-12 year olds
- B. Basis of Design products: Game Time, A Playcore Company. Provide the following:
 - 1. Inground Bench with Back: 6' long – Game Time #28009 – Qty 1
 - 2. Composite Playstructure – Custom Structure
 - a. Bongos #18679 – Qty 1
 - b. Hand Cycler #18689 – Qty 1
 - c. Rung Access Ladder (3'x4') #19028 – Qty 1
 - d. Straight Crawl Tube (2 Deck Span) #19045 – Qty 1
 - e. Wavy Tree (3'-6"x4') #19060 – Qty 1
 - f. 3'-6"/4'00" Zip Swerve Slide Left #19362 – Qty 1
 - g. PT Sensory Wave Up & On (3' & 3'6") #19714 – Qty 1
 - h. Umbra Square Roof #19757 – Qty 1
 - i. Umbra Roof Plug #19762 – Qty 4
 - j. Double Zip slide 4'-0" #19792 – Qty 1
 - k. Up & On Bronze Sensor Package #4668 – Qty 1
 - l. Stepped Deck (6" Rise) #19102 – Qty 1
 - m. 36" Square Punched Deck P/T #18200 – Qty 1
 - n. Modern Transfer / Guard (2'-6" Rise) #19918 – Qty 1
 - o. 3 1/2" UPRT Assembly Galv. (14') #G12069 – Qty 4
 - p. 3 1/2" UPRT Assembly Alum. (10') #12025 – Qty 3
 - q. 3 1/2" UPRT Assembly Alum. (8') #12023 – Qty 2
 - r. 3 1/2" UPRT Assembly Galv (10') #G12025 – Qty 1
 - 3. 12" Playground Border #4862 – Qty 13
Curb Border End Cap #4863 – Qty 1

2.4 MATERIALS

- A. Aluminum: Material, alloy, and temper recommended by manufacturer for type of use and finish indicated.
- B. Steel: Hot-dip galvanized.
- C. Stainless-Steel Sheet: Type 304; finished on exposed faces with No. 2B finish.
- D. Opaque Plastics: Color impregnated, UV stabilized, and mold resistant.
- E. Transparent Plastic: Abrasion-resistant, UV-stabilized polycarbonate sheet; clear, colorless; not less than 3/16 inch (5 mm) thick.
- F. Iron Castings and Hangers: Malleable iron, ASTM A47/A47M, Grade 32510, hot-dip galvanized.
- G. Post Caps: Cast aluminum or color-impregnated, UV-stabilized, mold-resistant polyethylene or polypropylene; color to match posts.
- H. Platform Clamps and Hangers: Cast aluminum or zinc-plated steel, not less than 0.105-inch- (2.7-mm-) nominal thickness.

PARTNERS 19-105
PLAY FIELD EQUIPMENT AND STRUCTURES
116800 - 4

- I. Hardware: Manufacturer's standard; commercial-quality; corrosion-resistant; hot-dip galvanized steel and iron, stainless steel, or aluminum; of a vandal-resistant design.
- J. Fasteners: Manufacturer's standard; corrosion-resistant; hot-dip galvanized or zinc-plated steel and iron, or stainless steel; permanently capped; and theft resistant.

2.5 CAST-IN-PLACE CONCRETE

- A. Concrete Materials and Properties: Comply with requirements in ACI 301.
- B. Concrete Materials and Properties: Dry-packaged concrete mix complying with ASTM C 387.

2.6 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

2.7 ALUMINUM FINISHES

- A. Baked-Enamel Finish: Prepare, treat, and coat metal to comply with paint manufacturer's written instructions.
- B. PVC Finish: Manufacturer's standard, UV-stabilized, mold-resistant, slip-resistant, matte-textured, dipped or sprayed-on, PVC-plastisol finish.
- C. Color: As selected by Architect from manufacturer's full range.

2.8 IRON AND STEEL FINISHES

- A. Galvanizing: Hot-dip galvanize to comply with ASTM A 123/A 123M.
 - 1. Hot-dip galvanize steel and iron hardware indicated to be galvanized to comply with ASTM A 153/A 153M.
 - 2. Galvanized Steel Sheet: Commercial steel sheet, hot-dip galvanized, complying with ASTM A 653/A 653M for not less than G60 (Z180) coating designation; mill phosphatized.
- B. Powder-Coat Finish: Prepare, treat, and coat ferrous metal to comply with resin manufacturer's written instructions.
- C. Baked-Enamel Finish: Apply manufacturer's standard two-coat, baked-enamel finish consisting of prime coat and thermosetting topcoat.
- D. PVC Finish: Manufacturer's standard, UV-stabilized, mold-resistant, slip-resistant, matte-textured, dipped or sprayed-on, PVC-plastisol finish, with minimum dry film thickness of 100 mils (2.5 mm).
- E. Color: As selected by Architect from manufacturer's full range.

2.9 STAINLESS-STEEL FINISHES

- A. Bright, Cold-Rolled, Unpolished Finish: No. 2B finish on exposed faces.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Comply with manufacturer's written installation instructions for each equipment type unless more stringent requirements are indicated. Anchor playground equipment securely, positioned at locations and elevations indicated.
 - 1. Maximum Equipment Height: Coordinate installed fall heights of equipment with finished elevations and critical-height values of protective surfacing. Set equipment so fall heights and elevation requirements for age group use and accessibility are within required limits. Verify that playground equipment elevations comply with requirements for each type and component of equipment.
- B. Post and Footing Excavation: Excavate holes for posts and footings as indicated in firm, undisturbed or compacted subgrade soil.
- C. Post Set with Concrete Footing: Comply with ACI 301 for measuring, batching, mixing, transporting, forming, and placing concrete.
 - 1. Set equipment posts in concrete footing.
 - 2. Embedded Items: Use setting drawings and manufacturer's written instructions to ensure correct installation of anchorages for equipment.

3.2 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Perform the following tests and inspections with the assistance of a factory-authorized service representative.
 - 1. Perform inspection and testing for each type of installed playground equipment according to ASTM F1487.
- C. Playground equipment items will be considered defective if they do not pass tests and inspections.
- D. Prepare test and inspection reports.

END OF SECTION 116800

SECTION 223410 - CONDENSING, FUEL-FIRED DOMESTIC WATER HEATERS

PART 1 - GENERAL 1
 1.1 RELATED DOCUMENTS 1
 1.2 DEFINITIONS 1
 1.3 SUBMITTALS 1
 1.4 QUALITY ASSURANCE 2
 1.5 COORDINATION 2
PART 2 - PRODUCTS 2
 2.1 MANUFACTURERS 2
 2.2 COMMERCIAL, GAS WATER HEATERS 3
 2.3 EXPANSION TANKS 4
 2.4 WATER HEATER ACCESSORIES 5
 2.5 SOURCE QUALITY CONTROL 5
PART 3 - EXECUTION 5
 3.1 WATER HEATER INSTALLATION 6
 3.2 CONNECTIONS 6
 3.3 FIELD QUALITY CONTROL 7
 3.4 DEMONSTRATION 7

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.
- B. Related Section includes the following:
 - 1. Division 20 Section "Mechanical General Requirements."
 - 2. Division 20 Section "Basic Mechanical Materials and Methods."
 - 3. Division 23 Section "Breechings, Chimneys, and Stacks."

1.2 DEFINITIONS

- A. LP Gas: Liquefied-petroleum fuel gas.

1.3 SUBMITTALS

- A. Product Data: For each type and size of water heater indicated. Include rated capacities, operating characteristics, furnished specialties, and accessories.
- B. Shop Drawings: Detail water heater assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection
 - 1. Wiring Diagrams: Power, signal, and control systems. Differentiate between manufacturer-installed and field-installed wiring.

PARTNERS 19-105
CONDENSING FUEL-FIRED DOMESTIC WATER HEATERS
223410 - 2

- C. Product Certificates: For each type of water heater, signed by product manufacturer.
- D. Source quality-control test reports.
- E. Field quality-control test reports.
- F. Operation and Maintenance Data: For water heaters to include in operation and maintenance manuals.

1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain same type of water heaters through one source from a single manufacturer.
- B. Product Options: Drawings indicate size, profiles, and dimensional requirements of water heaters and are based on the specific system indicated. Refer to Division 01 Section "Product Requirements."
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a NRTL acceptable to authorities having jurisdiction, and marked for intended use.
- D. ASME Compliance:
 - 1. Where ASME-code construction is indicated, fabricate and label commercial water heater storage tanks to comply with ASME Boiler and Pressure Vessel Code: Section VIII, Division 1.
 - 2. Where ASME-code construction is indicated, fabricate and label commercial, finned-tube water heaters to comply with ASME Boiler and Pressure Vessel Code: Section IV.
 - 3. Where ASME-code construction is indicated, fabricate and label commercial direct-fired storage water heaters to comply with ASME Boiler and Pressure Vessel Code: Section IV, HLW.
- E. ASHRAE Standards: Comply with performance efficiencies prescribed for the following:
 - 1. ASHRAE 90.1, "Energy Efficient Design of New Buildings except Low-Rise Residential Buildings," for commercial water heaters.
 - 2. ASHRAE 90.2, "Energy Efficient Design of New Low-Rise Residential Buildings," for household water heaters.
- F. Comply with NSF 61, "Drinking Water System Components - Health Effects; Sections 1 through 9" for all components that will be in contact with potable water.

1.5 COORDINATION

- A. Coordinate size and location of concrete bases with Architectural and Structural Drawings.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

2.2 COMMERCIAL, GAS WATER HEATERS

- A. Commercial, Modulating/Condensing, High-Efficiency, Tank-Type Gas Water Heaters: Comply with ANSI Z21.10.3/CSA 4.3.
1. Manufacturers:
 - a. Bradford White Corporation; EF Series.
 - b. Laars Heating Systems; a Subsidiary of Bradford White Corporation; U.H.E. Series.
 - c. Lochinvar Corporation; Shield and TurboCharger Series.
 - d. Smith, A. O. Water Products Company; Cyclone Xi Series.
 - e. Rheem Water Heating; Triton Series
 - f. Heat Transfer Products, Inc. (HTP); Pheonix Series
 - g. Bock Water Heaters, Inc.: OptiTherm Series
 2. Storage-Tank Construction: ASME-code steel or Type 316L stainless steel with 150-psig minimum working-pressure rating.
 - a. Tappings: Factory fabricated of materials compatible with tank. Attach tappings to tank before testing.
 - 1) NPS 2 and Smaller: Threaded ends according to ASME B1.20.1.
 - 2) NPS 2-1/2 and Larger: Flanged ends according to ASME B16.5 for steel and stainless-steel flanges, and according to ASME B16.24 for copper and copper-alloy flanges.
 - b. Lining for Steel Tanks: Glass complying with NSF 61 barrier materials for potable-water tank linings, including extending lining into and through tank fittings and outlets.
 3. Factory-Installed, Storage-Tank Appurtenances:
 - a. Anode Rod: Required for glass-lined tanks.
 - b. Dip Tube: Provide unless cold-water inlet is near bottom of tank.
 - c. Drain Valve: Corrosion-resistant metal complying with ASSE 1005.
 - d. Insulation: Comply with ASHRAE/IESNA 90.1.
 - e. Jacket: Plastic, or steel with enameled finish.
 - f. Combination Temperature and Pressure Relief Valves: ANSI Z21.22/CSA 4.4. Include one or more relief valves with total relieving capacity at least as great as heat input, and include pressure setting less than water heater working-pressure rating.
 4. Burner and Heat Exchanger:
 - a. Pre-mix power burner and submerged combustion chamber.
 - b. Helical or spiral heat exchanger coil.
 - c. Comply with ANSI Z21.10.3, UL 795 or approved NRTL requirements for high-efficiency water heaters and for natural-gas fuel.
 5. Sealed Combustion/Direct Vent: Combustion air is ducted to the combustion chamber from the outdoors.
 6. Temperature Control: Digital display for system monitoring and temperature adjustment.

PARTNERS 19-105
CONDENSING FUEL-FIRED DOMESTIC WATER HEATERS
223410 - 4

7. Safety Controls: Automatic, high-temperature-limit and low-water cutoff devices or systems.
8. Energy Management System Interface: Normally closed dry contacts for enabling and disabling water heater.
9. Capacity and Characteristics: Refer to Schedule on Drawings.

2.3 EXPANSION TANKS

A. Description: Steel, pressure-rated tank constructed with welded joints and factory-installed, butyl-rubber diaphragm. Include air pre-charge to minimum system-operating pressure at tank.

1. Manufacturers:

- a. AMTROL Inc.
- b. Armstrong Pumps, Inc.
- c. Bell & Gossett; Xylem Inc.
- d. Taco, Inc.
- e. Wessels Co.

2. Construction:

- a. Tappings: Factory-fabricated steel, welded to tank before testing and labeling. Include ASME B1.20.1 pipe thread.
- b. Interior Finish: Comply with NSF 61 barrier materials for potable-water tank linings, including extending finish into and through tank fittings and outlets.
- c. Air-Charging Valve: Factory installed.

3. Capacity and Characteristics: Refer to Schedule on Drawings.

B. Description: Steel, pressure-rated tank, ASME-code constructed with welded joints and factory-installed, butyl-rubber diaphragm. Include air pre-charge to minimum system-operating pressure at tank.

1. Manufacturers:

- a. AMTROL Inc.
- b. Armstrong Pumps, Inc.
- c. Bell & Gossett; Xylem Inc.
- d. Taco, Inc.
- e. Wessels Co.

2. Construction:

- a. Tappings: Factory-fabricated steel, welded to tank before testing and labeling. Include ASME B1.20.1 pipe thread.
- b. Interior Finish: Comply with NSF 61 barrier materials for potable-water tank linings, including extending finish into and through tank fittings and outlets.
- c. Air-Charging Valve: Factory installed.

3. Capacity and Characteristics: Refer to Schedule on Drawings.

2.4 WATER HEATER ACCESSORIES

- A. Gas Shutoff Valves: ANSI Z21.15/CGA 9.1, manually operated. Furnish for installation in piping.
- B. Gas Pressure Regulators: ANSI Z21.18, appliance type. Include pressure rating, capacity, and pressure differential required between gas supply and water heater.
- C. Gas Automatic Valves: ANSI Z21.21, appliance, electrically operated, on-off automatic valve.
- D. Combination Temperature and Pressure Relief Valves: Include relieving capacity at least as great as heat input, and include pressure setting less than water heater working-pressure rating. Select each relief valve with sensing element that extends into storage tank.
 - 1. Gas Water Heaters: ANSI Z21.22/CSA 4.4.
- E. Pressure Relief Valves: Include pressure setting less than working-pressure rating of water heater.
 - 1. Gas Water Heaters: ANSI Z21.22/CSA 4.4.
- F. Water Heater Stands: Water heater manufacturer's factory-fabricated steel stand for floor mounting and capable of supporting water heater and water. Provide dimension that will support bottom of water heater a minimum of 18 inches above the floor.
- G. Piping-Type Heat Traps: Field-fabricated piping arrangement according to ASHRAE/IESNA 90.1 or ASHRAE 90.2.
- H. Flue Side Condensate Neutralizer:
 - 1. Description: Designed to raise the PH level of flue side condensate to near neutral prior to condensate entering the sanitary drainage system.
 - 2. Materials: Neutralizer constructed of PVC pipe and fittings mounted on channel strut base with galvanized or stainless steel clamps and hardware; and charged with calcium carbonate.
 - 3. Manufacturers:
 - a. BKI Industries, Inc.; Acid Neutralizer Kits.
 - b. J.J.M. Boiler Works; JM Neutralizing Tubes.
 - c. Any of the approved water heater manufacturers.

2.5 SOURCE QUALITY CONTROL

- A. Test and inspect water heater storage tanks, specified to be ASME-code construction, according to ASME Boiler and Pressure Vessel Code.
- B. Hydrostatically test water heater storage tanks before shipment to minimum of one and one-half times pressure rating.
- C. Prepare test reports.

PART 3 - EXECUTION

3.1 WATER HEATER INSTALLATION

- A. Install commercial water heaters on concrete bases.
 - 1. Exception: Omit concrete bases for commercial water heaters if installation on stand, bracket, suspended platform, or direct on floor is indicated.
 - 2. Concrete base construction requirements are specified in Division 20 Section "Basic Mechanical Materials and Methods."
- B. Install water heaters level and plumb, according to layout drawings, original design, and referenced standards. Maintain manufacturer's recommended clearances. Arrange units so controls and devices needing service are accessible.
- C. Install gas water heaters according to NFPA 54.
- D. Install gas shutoff valves on gas supplies to gas water heaters without shutoff valves.
- E. Install gas pressure regulators on gas supplies to gas water heaters without gas pressure regulators if gas pressure regulators are required to reduce gas pressure at burner.
- F. Install automatic gas valves on gas supplies to gas water heaters, if required for operation of safety control.
- G. Install combination temperature and pressure relief valves in top portion of storage tanks. Use relief valves with sensing elements that extend into tanks. Extend commercial-water-heater, relief-valve outlet, with drain piping same as domestic water piping in continuous downward pitch, and discharge by positive air gap onto closest floor drain.
- H. Install water heater drain piping as indirect waste to spill by positive air gap into open drains or over floor drains. Install hose-end drain valves at low points in water piping for water heaters that do not have tank drains. Refer to Division 20 Section "Valves" for hose-end drain valves.
- I. Install thermometer on outlet piping of water heaters. Refer to Division 20 Section "Meters and Gages" for thermometers.
- J. Install pressure gage(s) on inlet and outlet piping of commercial, fuel-fired water heater piping. Refer to Division 20 Section "Meters and Gages" for pressure gages.
- K. Install piping-type heat traps on inlet and outlet piping of water heater storage tanks without integral or fitting-type heat traps.
- L. Fill water heaters with water.
- M. Install expansion tanks with isolation and drain valves. Charge expansion tanks with air.

3.2 CONNECTIONS

- A. Piping installation requirements are specified in other Division 20 and 22 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Install piping adjacent to water heaters to allow service and maintenance. Arrange piping for easy removal of water heaters.
- C. Connect vent to full size of water heater flue outlet. Refer to Division 23 Section "Breechings, Chimneys, and Stacks" for venting materials.
- D. Ground equipment according to Division 26 Section "Grounding and Bonding."
- E. Connect wiring according to Division 26 Section "Conductors and Cables."

3.3 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust field-assembled components and equipment installation, including connections, and to assist in field testing. Report results in writing.
- B. Perform the following field tests and inspections and prepare test reports:
 - 1. Leak Test: After installation, test for leaks. Repair leaks and retest until no leaks exist.
 - 2. Operational Test: After electrical circuitry has been energized, confirm proper operation.
 - 3. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- C. Remove and replace water heaters that do not pass tests and inspections and retest as specified above.

3.4 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain water heaters. Refer to Division 20 Section "Mechanical General Requirements."

END OF SECTION 223410

PARTNERS 19-105
CONDENSING FUEL-FIRED DOMESTIC WATER HEATERS
223410 - 8

SECTION 321816.13 - PLAYGROUND PROTECTIVE SURFACING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Organic loose-fill surfacing.

1.2 DEFINITIONS

- A. Critical Height: Standard measure of shock attenuation according to ASTM F 2223; same as "critical fall height" in ASTM F 1292.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For each type of protective surfacing.
 - 1. Include plans, sections, placement and penetration] details, and attachment to substrates.
 - 2. Include accessories and edge terminations.
 - 3. Include patterns made by varying colors of surfacing.
 - 4. Include fall heights and use zones for equipment and structures specified in Section 116800 "Play Field Equipment and Structures," coordinated with the critical heights for protective surfacing.
- C. Samples: For each exposed product and for each color and texture specified.

1.4 INFORMATIONAL SUBMITTALS

- A. Material certificates.
- B. Product certificates.
- C. Sample warranty.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance data.

1.6 QUALITY ASSURANCE

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

PARTNERS 19-105
PLAYGROUND PROTECTIVE SURFACING
321816.13 - 2
1.7 WARRANTY

- A. Special Warranty: Manufacturer and Installer agree to repair or replace components of protective surfacing that fail in materials or workmanship within specified warranty period.
 - 1. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Impact Attenuation: Critical fall height tested according to ASTM F 1292.
- B. Accessibility Standard: Minimum surfacing performance according to ASTM F 1951.

2.2 ORGANIC LOOSE-FILL SURFACING

- A. Engineered Wood Fiber: ASTM F 2075; containing no bark, leaves, twigs, or foreign or toxic materials; tested for accessibility according to ASTM F 1951.
 - 1. Subject to compliance with requirements, provide products from one of the following:
 - a. Fibar Group, LLC
 - b. Game Time
 - c. Sof Solutions, Inc.
 - d. Supreme Forest Products
 - e. Zeager Bros., Inc.
 - 2. Critical Height: 8 feet.
 - 3. Uncompressed Material Depth: As required for critical height indicated, but not less than 12 inches deep.

2.3 LOOSE-FILL ACCESSORIES

- A. Edging (for use with Organic Loose Fill Surfacing – Base Bid): Anchored-in-place, weather-resistant containment barrier designed to minimize sharp edges, protrusions, and tripping hazards; formed by interconnected, modular, polyethylene or rubber units.
 - 1. Color: As selected by Architect from manufacturer's full range.
 - 2. Anchor Stakes: Manufacturer's standard, of corrosion-resistant-coated metal or noncorrodible material, designed to be nonprotruding when installed, for connecting units and securing in-place.
- B. Stabilizing Wear Mats: Water-permeable PVC or rubber mats tested for impact attenuation according to ASTM F 1292, with anchoring system designed to anchor mat securely to subgrade through loose fill, and rated for use in the following locations:
 - 1. To be provided at all swings and at the bottom of all slides, in addition to other areas identified on drawings.

2. Mats to be a minimum of 3'-0" x 3'-0" x 1-1/2" thick.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Prepare substrates to receive surfacing products according to protective surfacing manufacturer's written instructions.
 1. Repair: Fill holes and depressions in unsatisfactory surfaces with leveling and patching material.
 2. Terminal Edges: Saw cut [concrete] [asphalt] for terminal edges of protective surfacing.

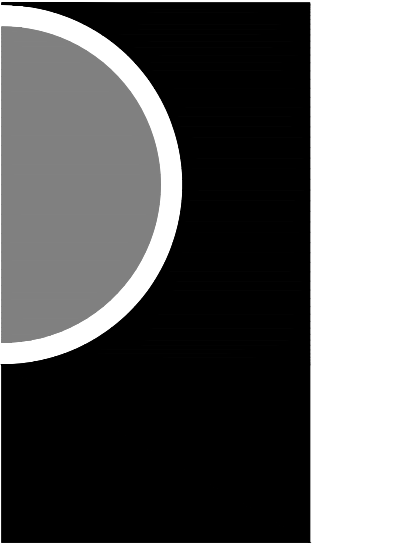
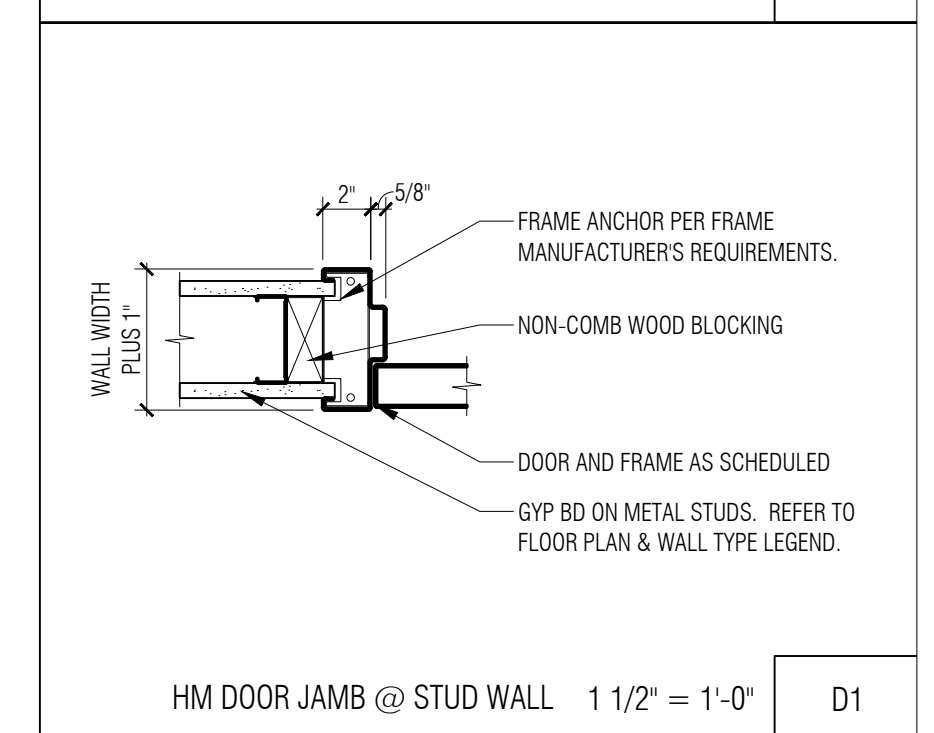
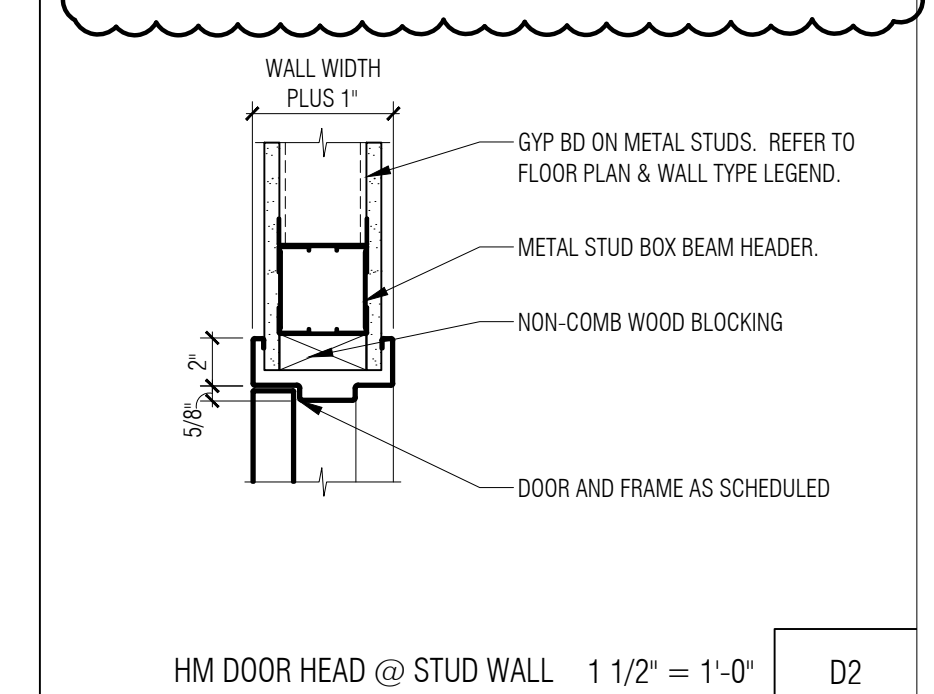
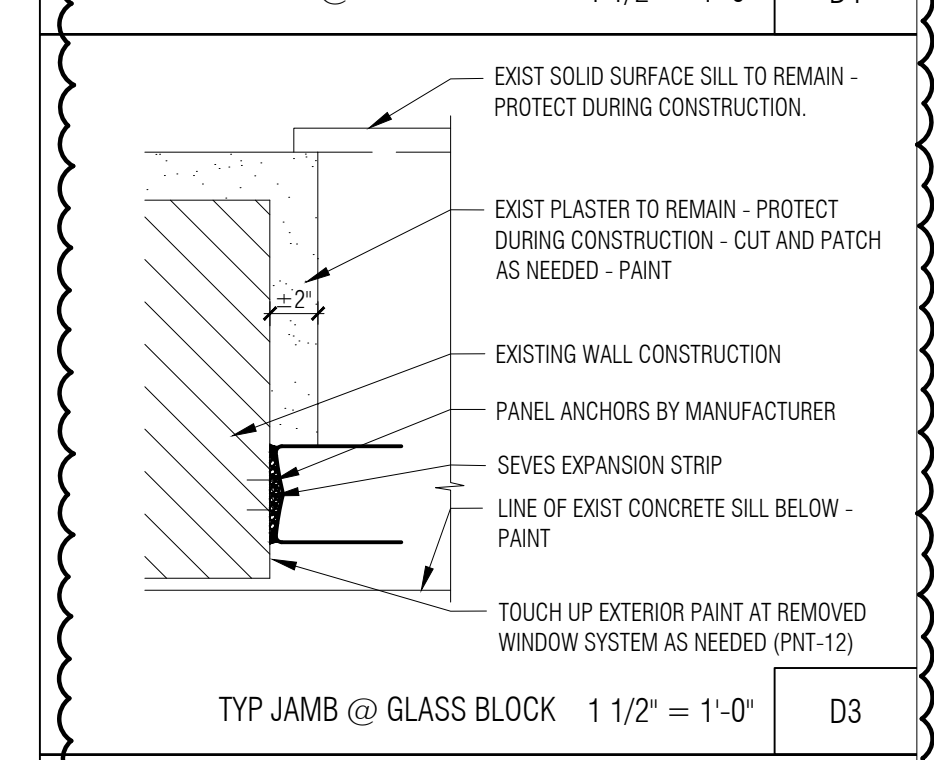
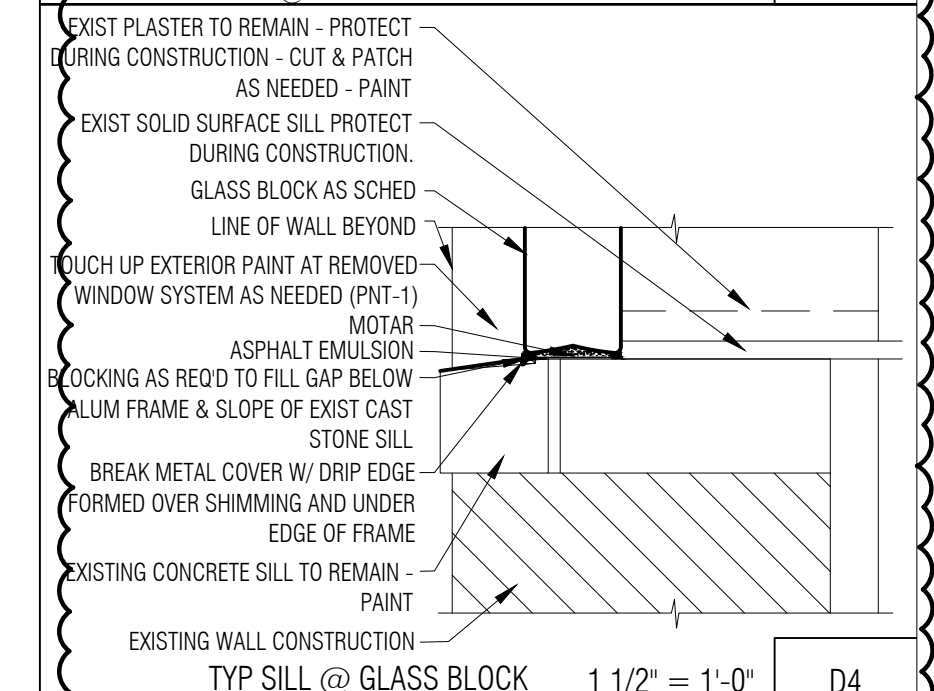
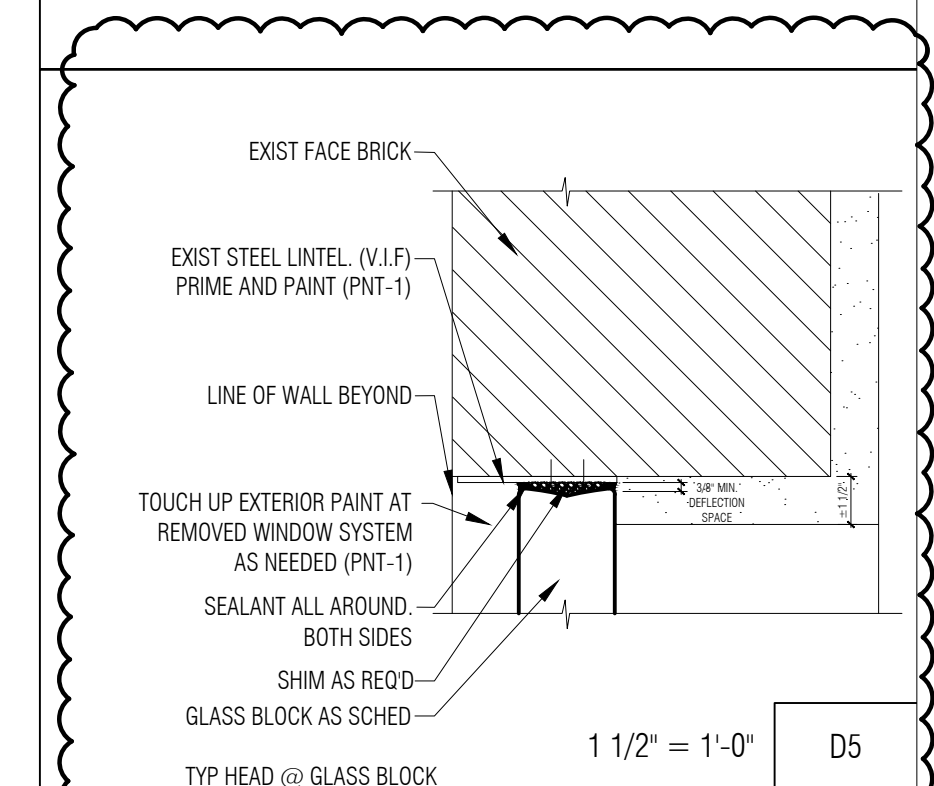
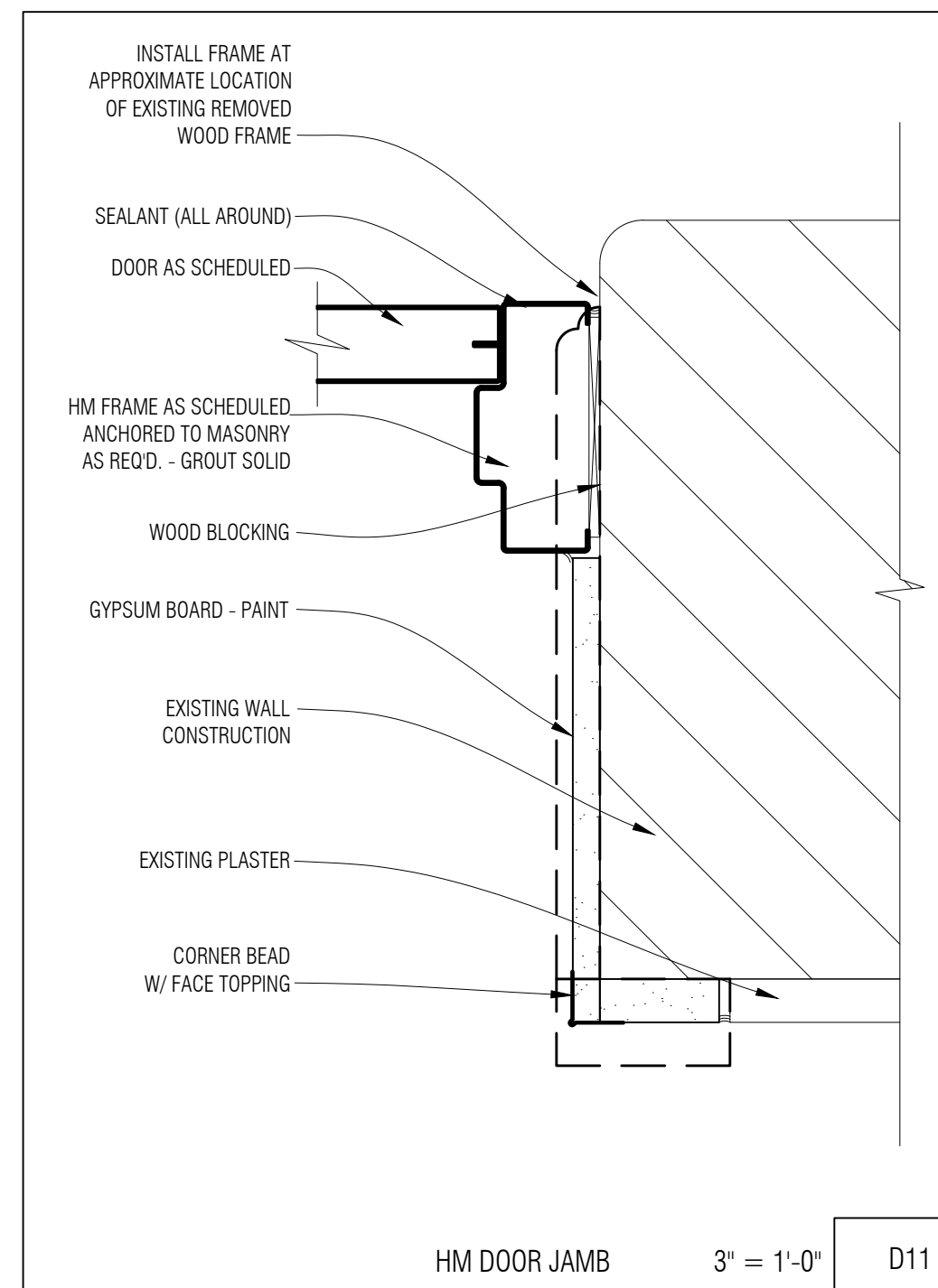
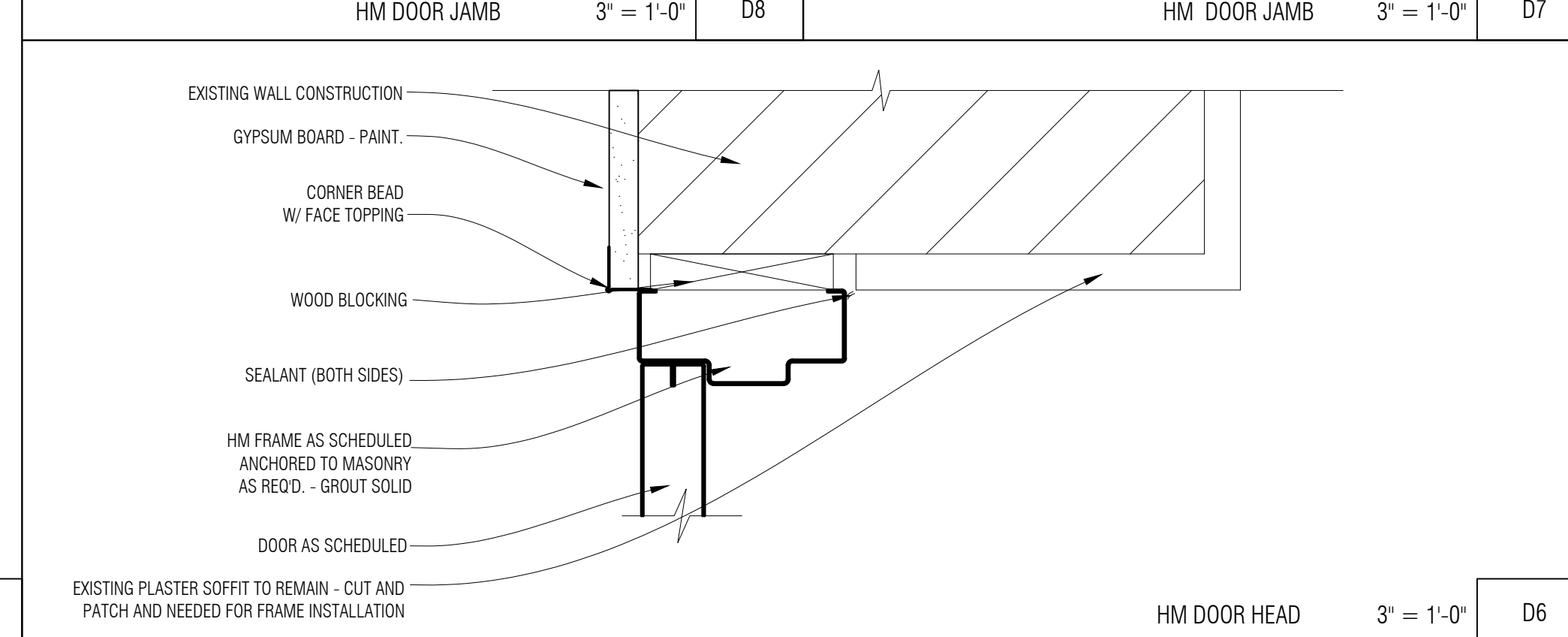
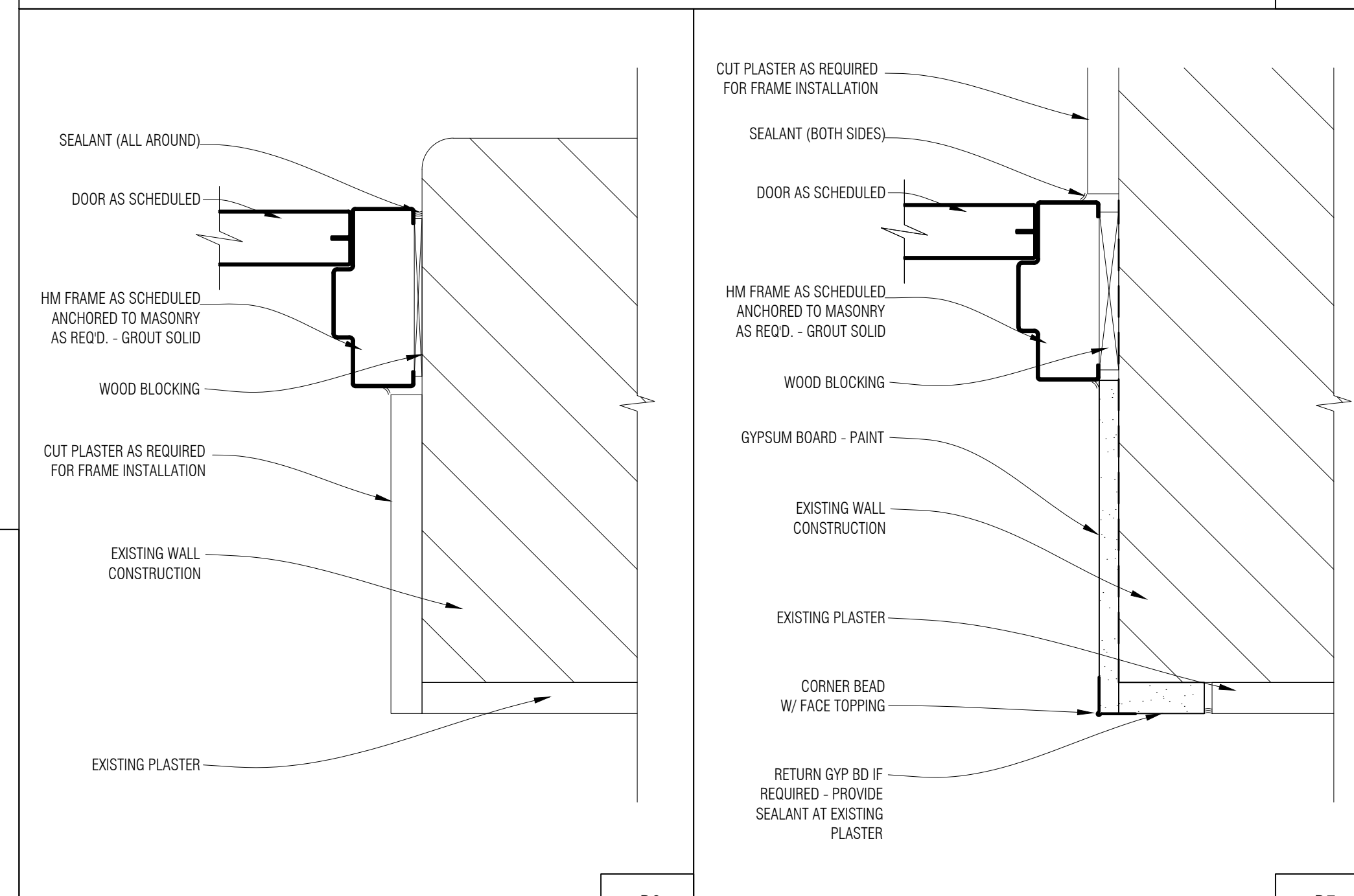
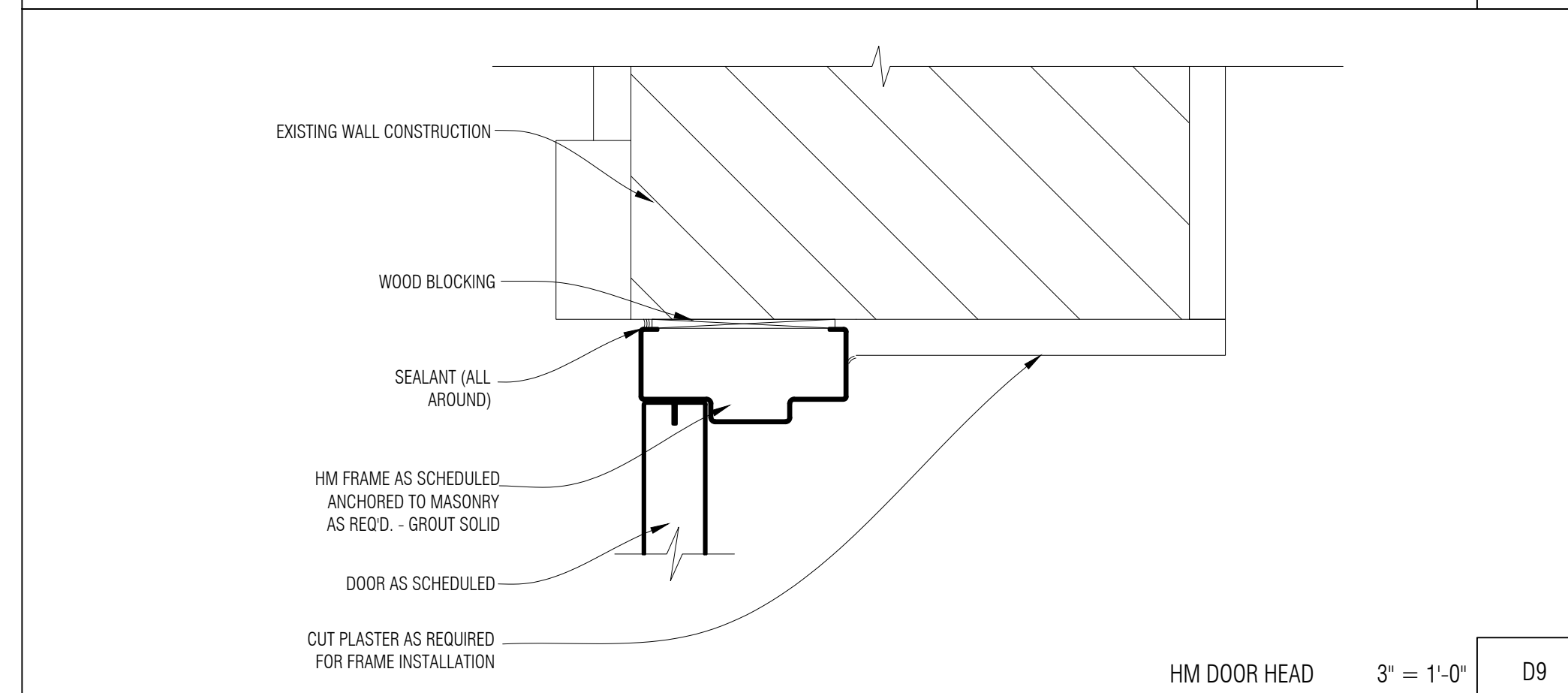
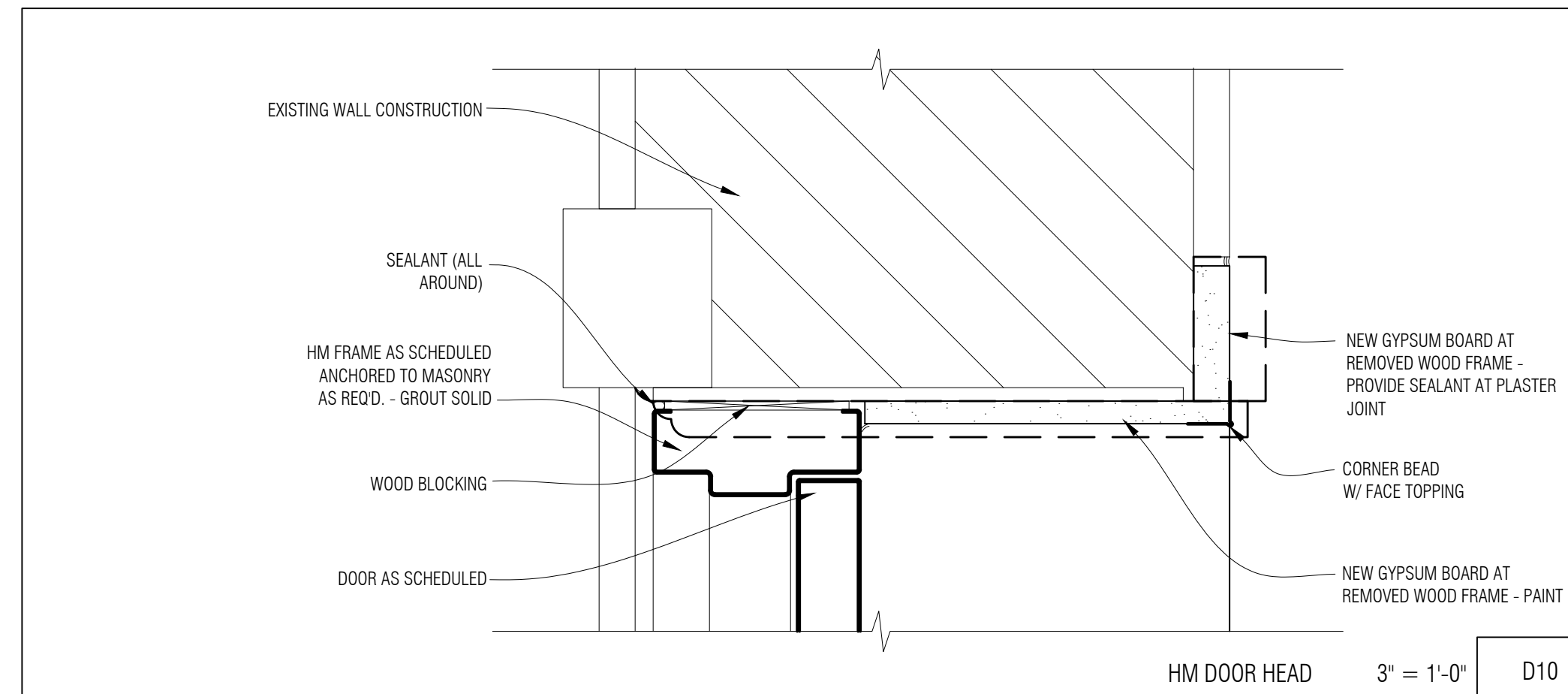
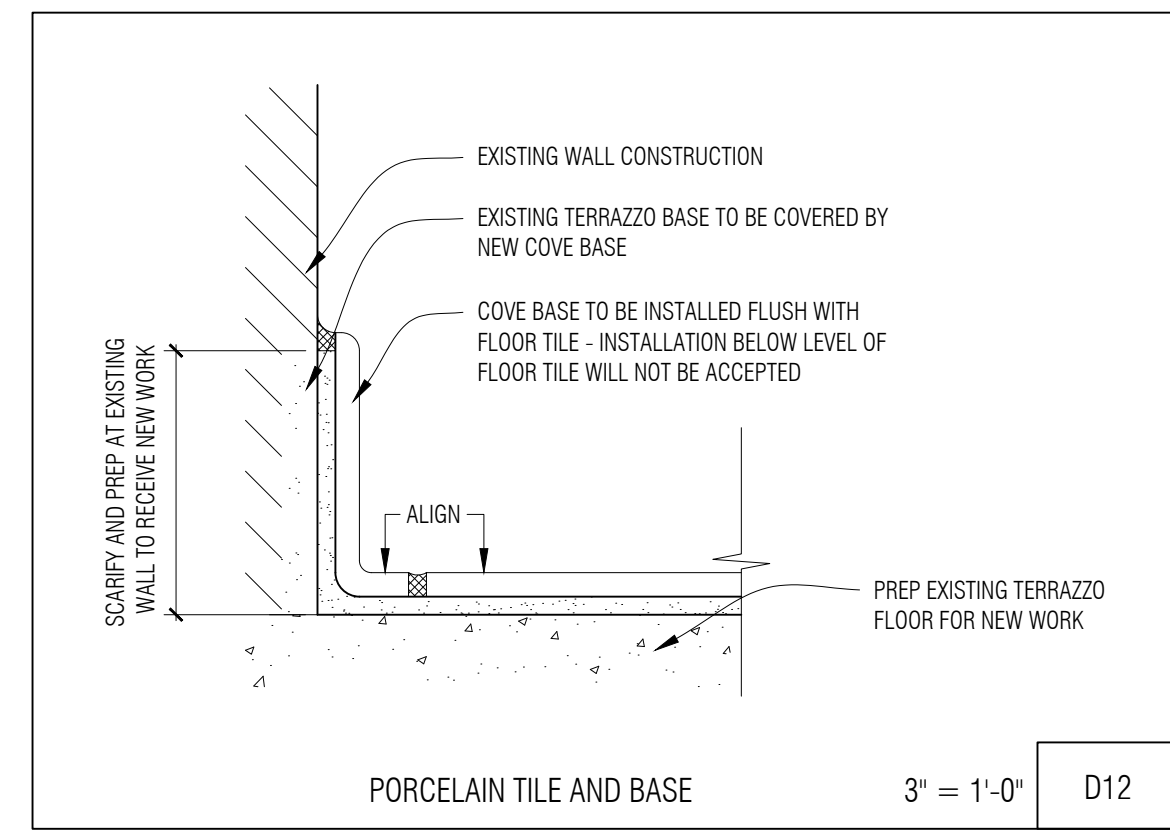
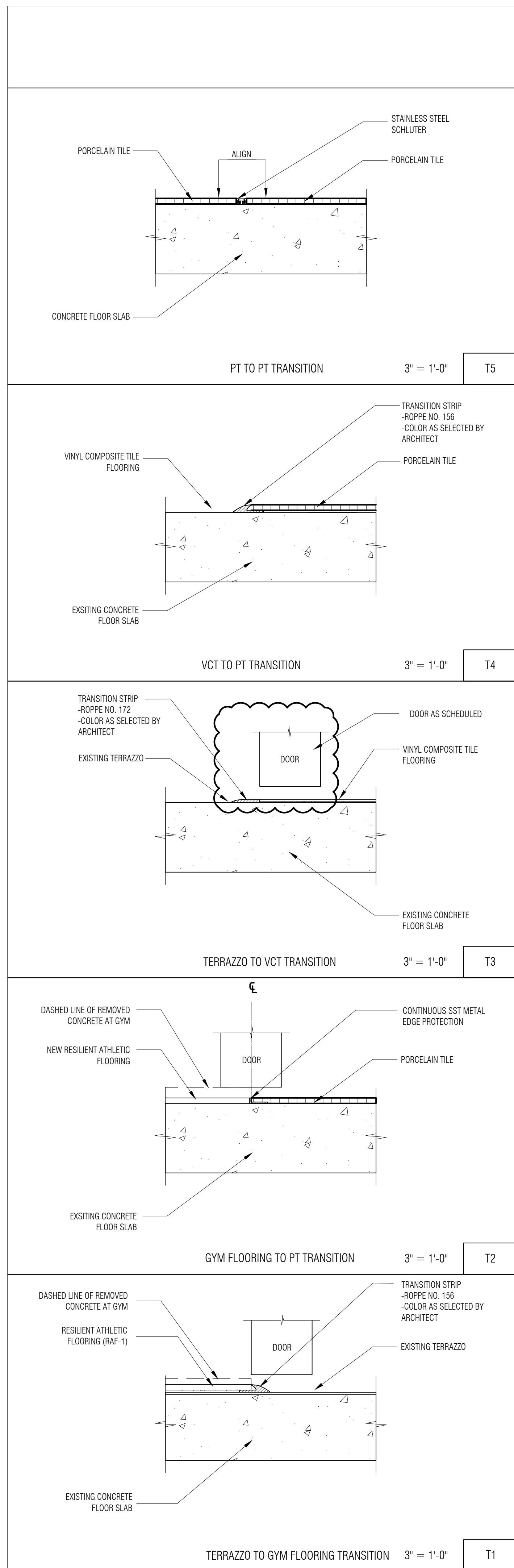
3.2 INSTALLATION OF LOOSE-FILL SURFACING

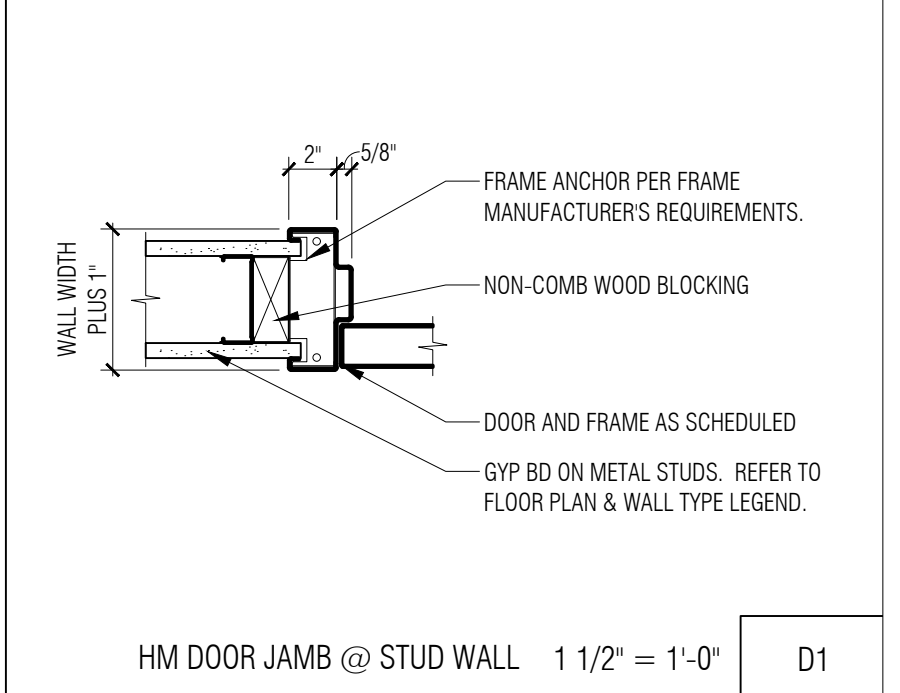
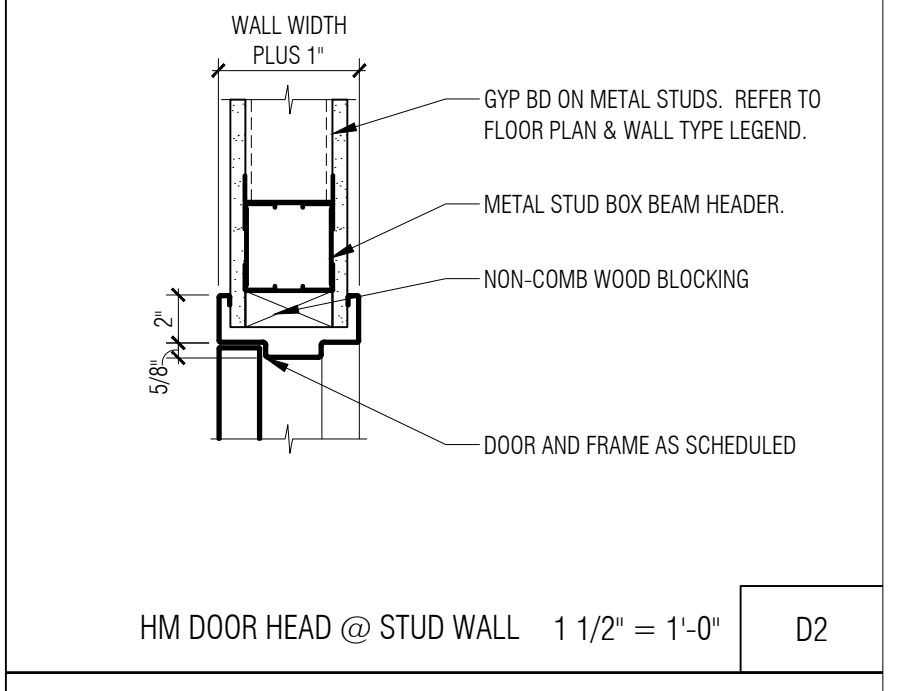
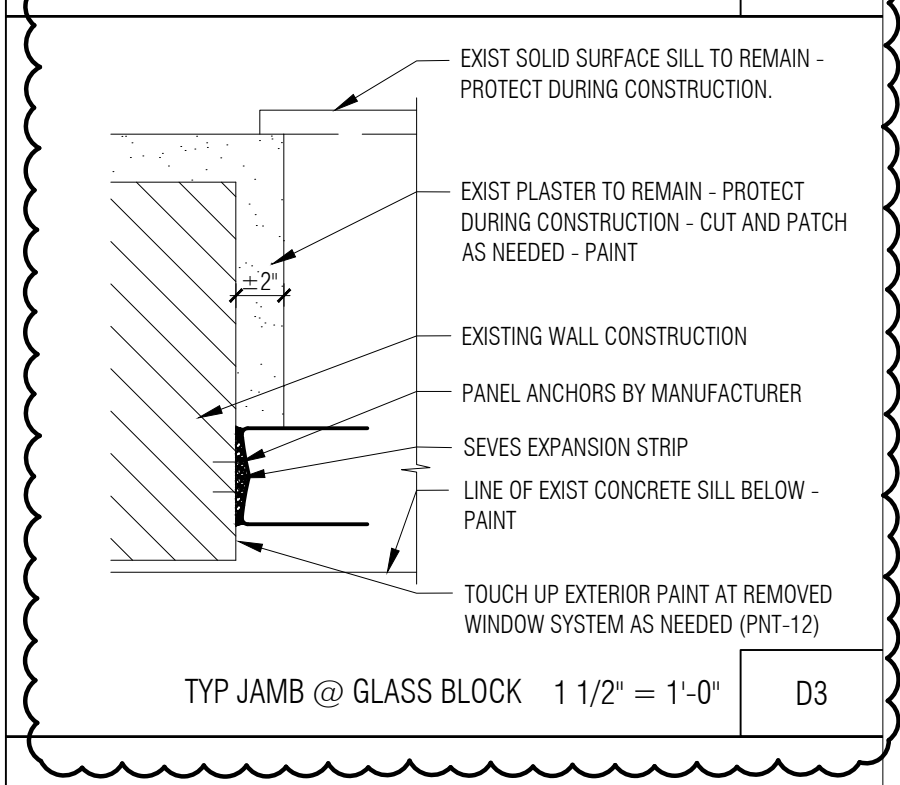
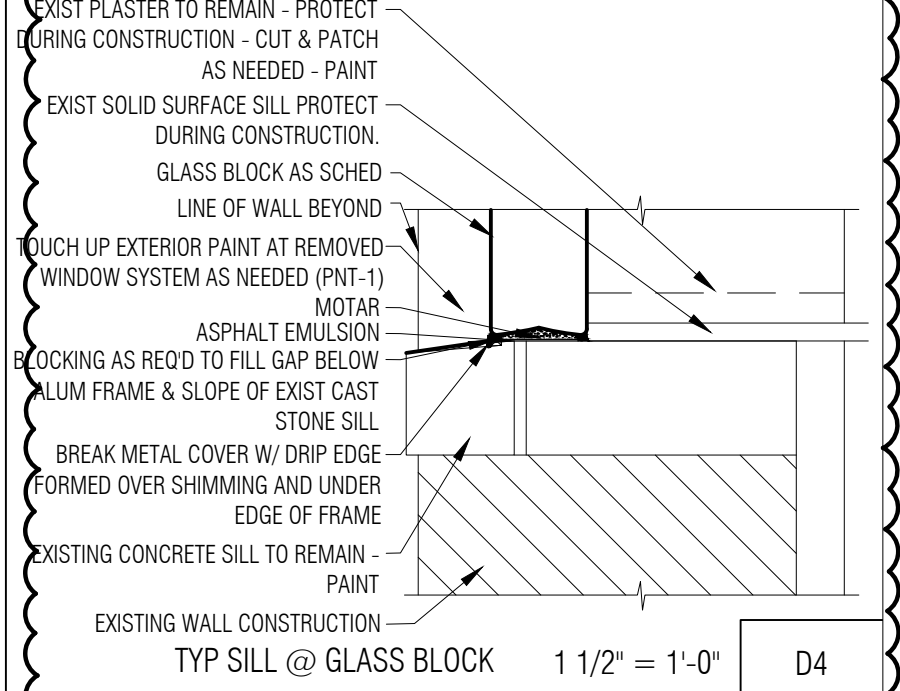
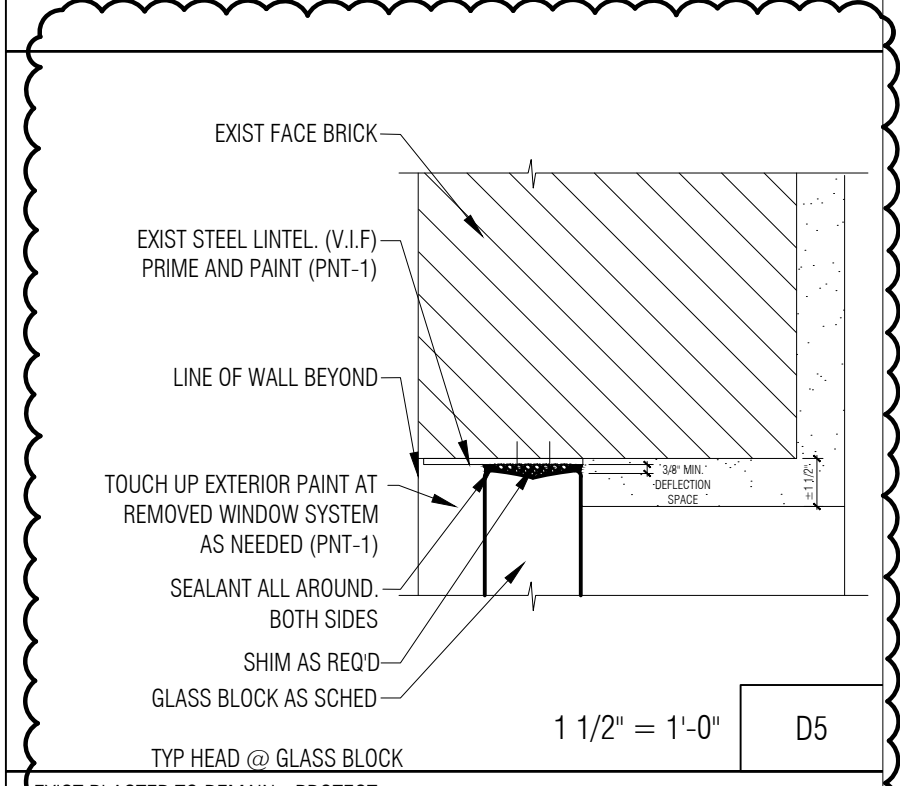
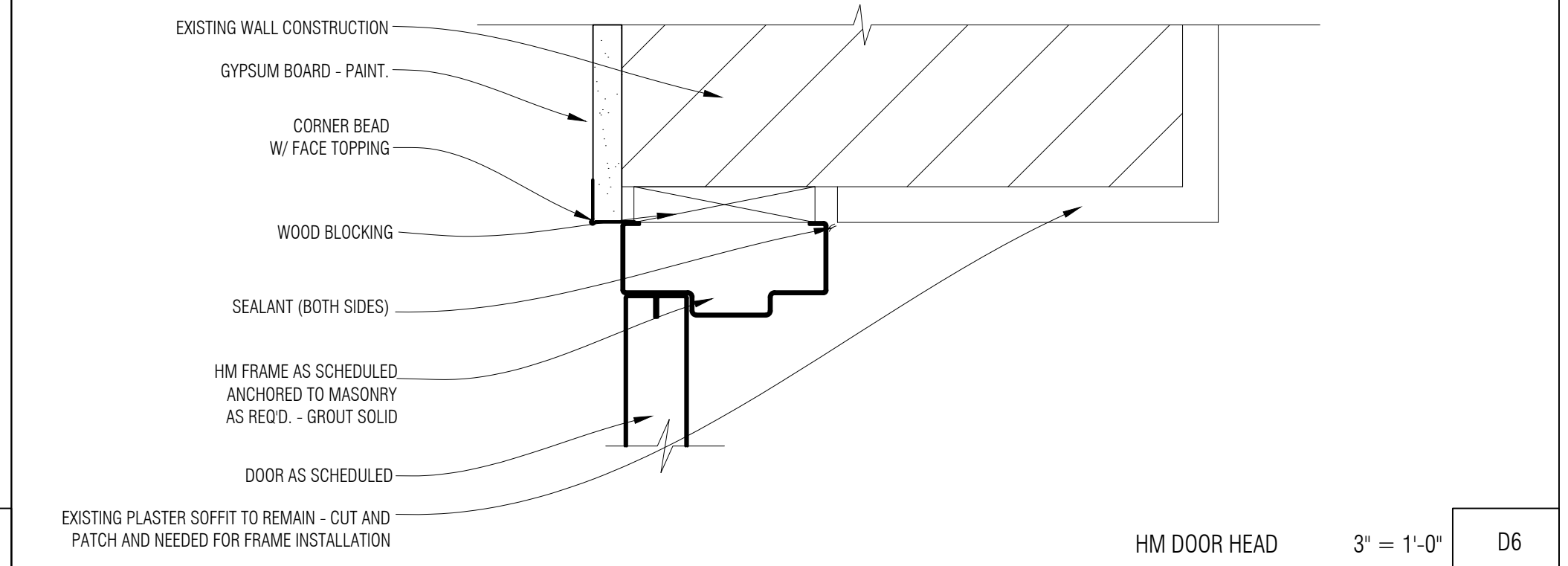
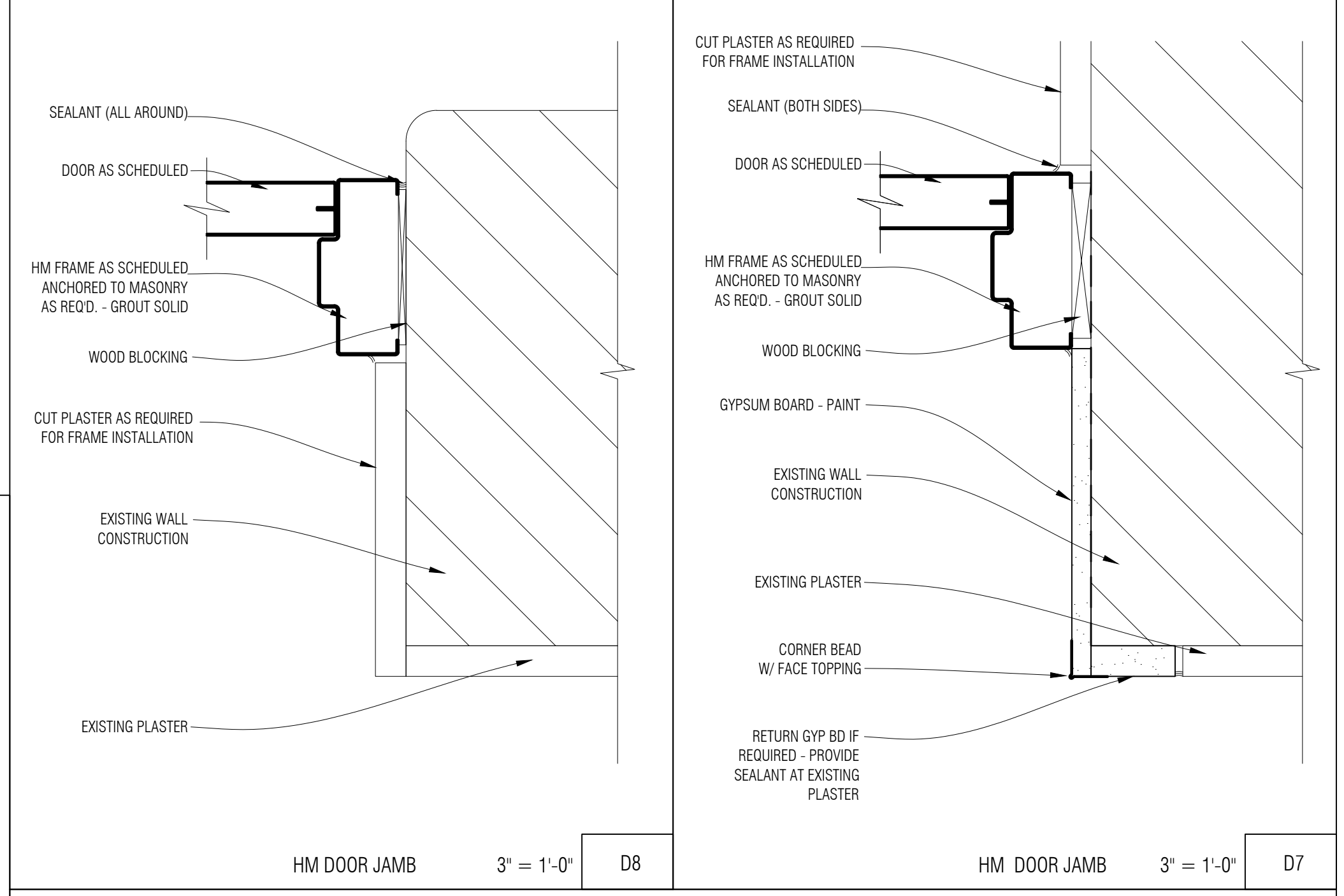
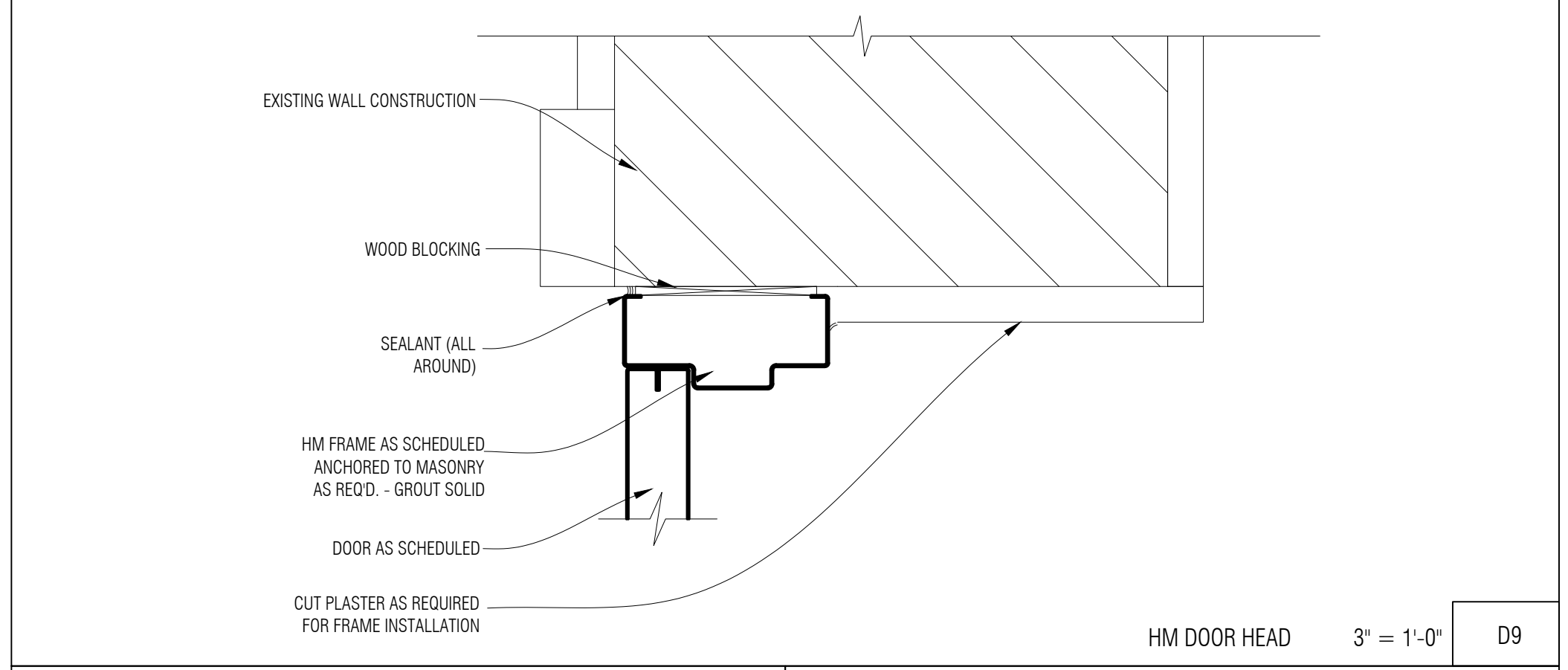
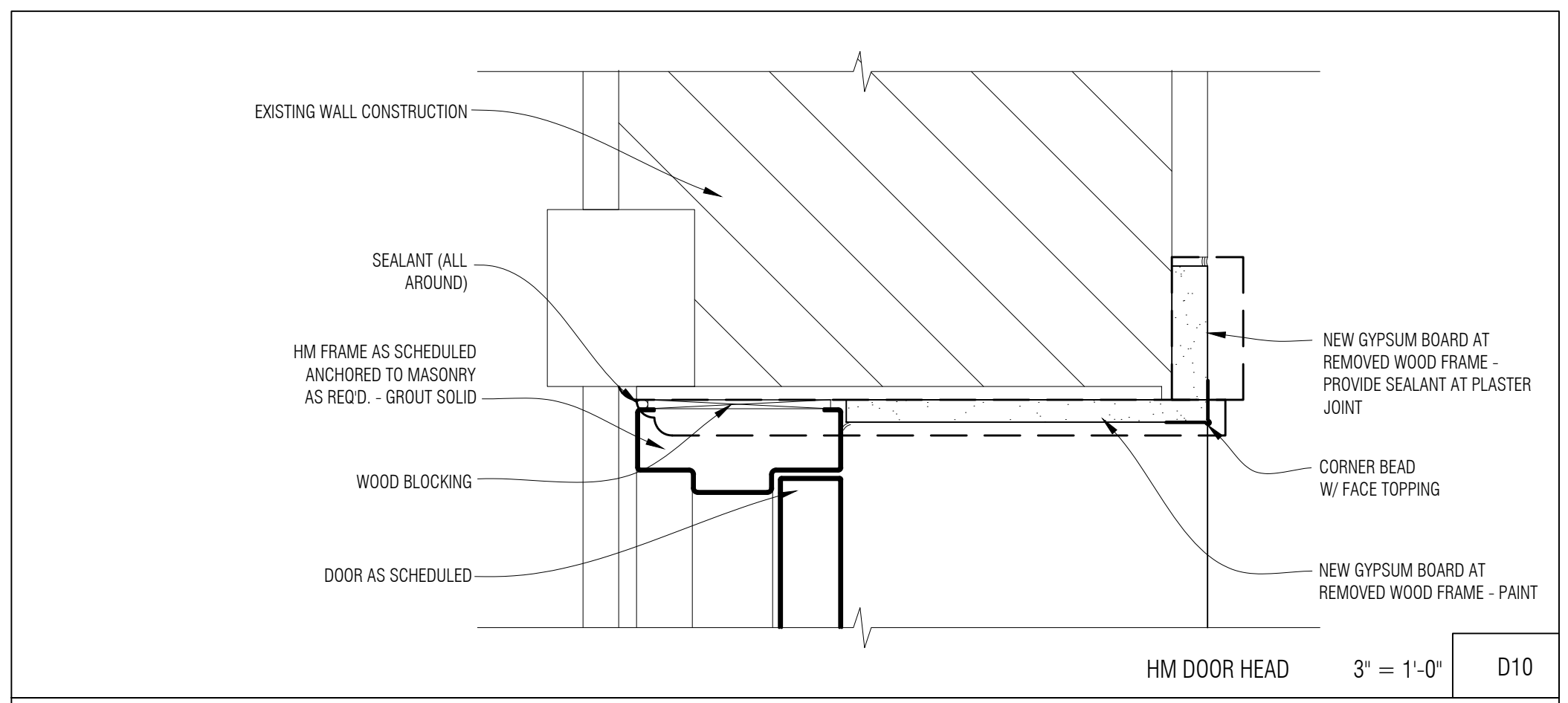
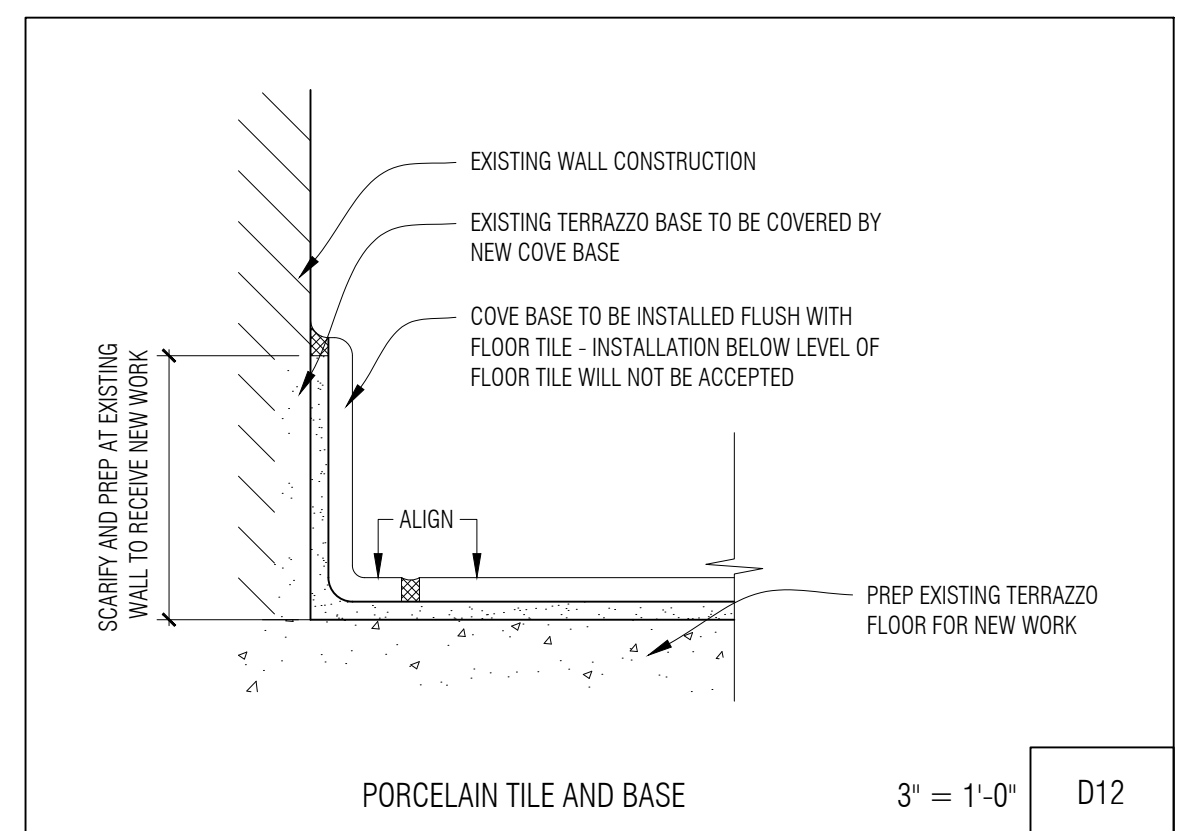
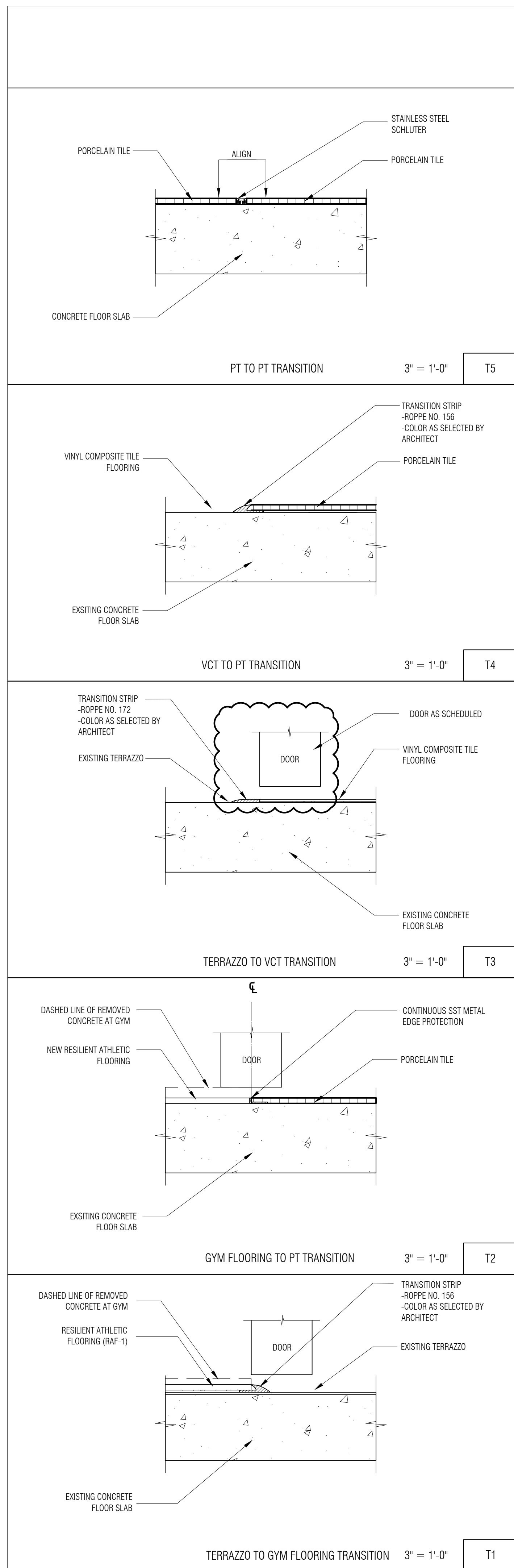
- A. Apply components of loose-fill surfacing according to manufacturer's written instructions to produce a uniform surface.
- B. Edging: Place and permanently secure edging in place, and attach units to each other.
- C. Loose Fill: Place loose-fill materials to required depth after installation of playground equipment support posts and foundations. Include manufacturer's recommended amount of additional material to offset natural compaction over time.
- D. Stabilizing Wear Mats: Coordinate installation of mats and mat anchoring system with placing loose fill.
- E. Compaction: After initial grading, mechanically compact loose fill before finish grading.
- F. Finish Grading: Hand rake to a uniformly smooth finished surface and to required elevations.

3.3 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests.
- B. Perform the following tests with the assistance of a factory-authorized service representative:
 1. Perform "Installed Surface Performance Test" according to ASTM F 1292 for each protective surfacing type and thickness in each playground area.
- C. Playground protective surfacing will be considered defective if it does not pass tests.
- D. Prepare test reports.

END OF SECTION 321816.13





PARTNERS in Architecture, PLC
 65 MARKET STREET
 MOUNT CLEMENS, MI 48043
 P 586.469.3600

Statement of Intellectual Property
 The ideas, concepts, drawings and thoughts conveyed herein are the intellectual property of PARTNERS in Architecture, PLC, 65 Market Street, Mount Clemens, MI, 48043 (P 586.469.3600). This set of drawings, in whole or in part, may not be reproduced, without the written consent of PARTNERS in Architecture, PLC. This information is protected under U.S. Copyright Law, all rights reserved.

© Copyright 2023
 THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNLESS ISSUED BELOW SPECIFICALLY FOR "BIDDING / CONSTRUCTION" CONSULTANT

KEY PLAN

OWNER

Hamtramck Public Schools

PROJECT NAME
 Holbrook Elementary
 Kitchen Addition and
 Renovation

2361 Alice St
 Hamtramck, MI 48212

PROJECT NO.

19-105

ISSUES / REVISIONS
 Bidding - Construction 01/31/2023
 Addendum #1 02/15/2023

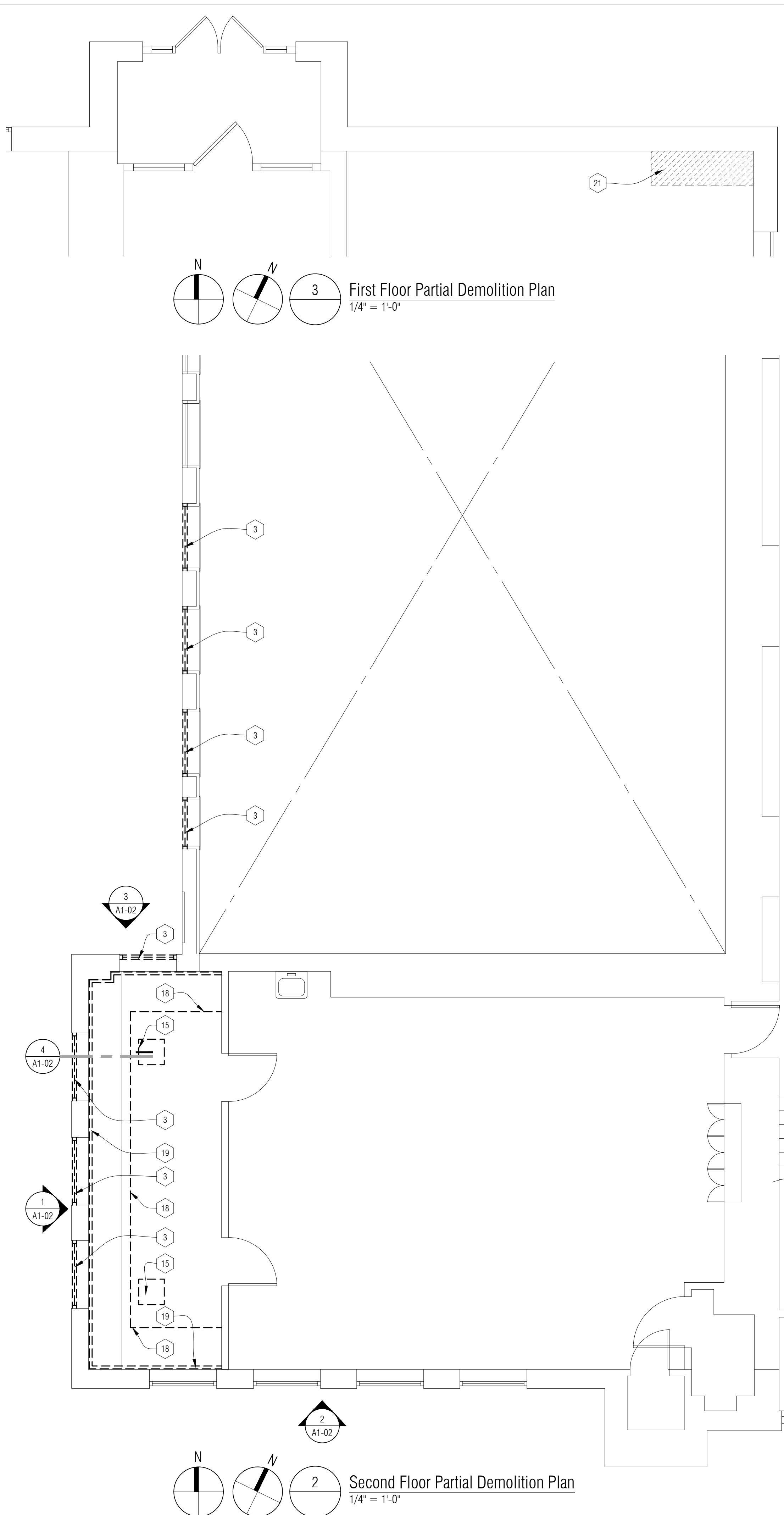
DRAWN BY

CHECKED BY
 ACS

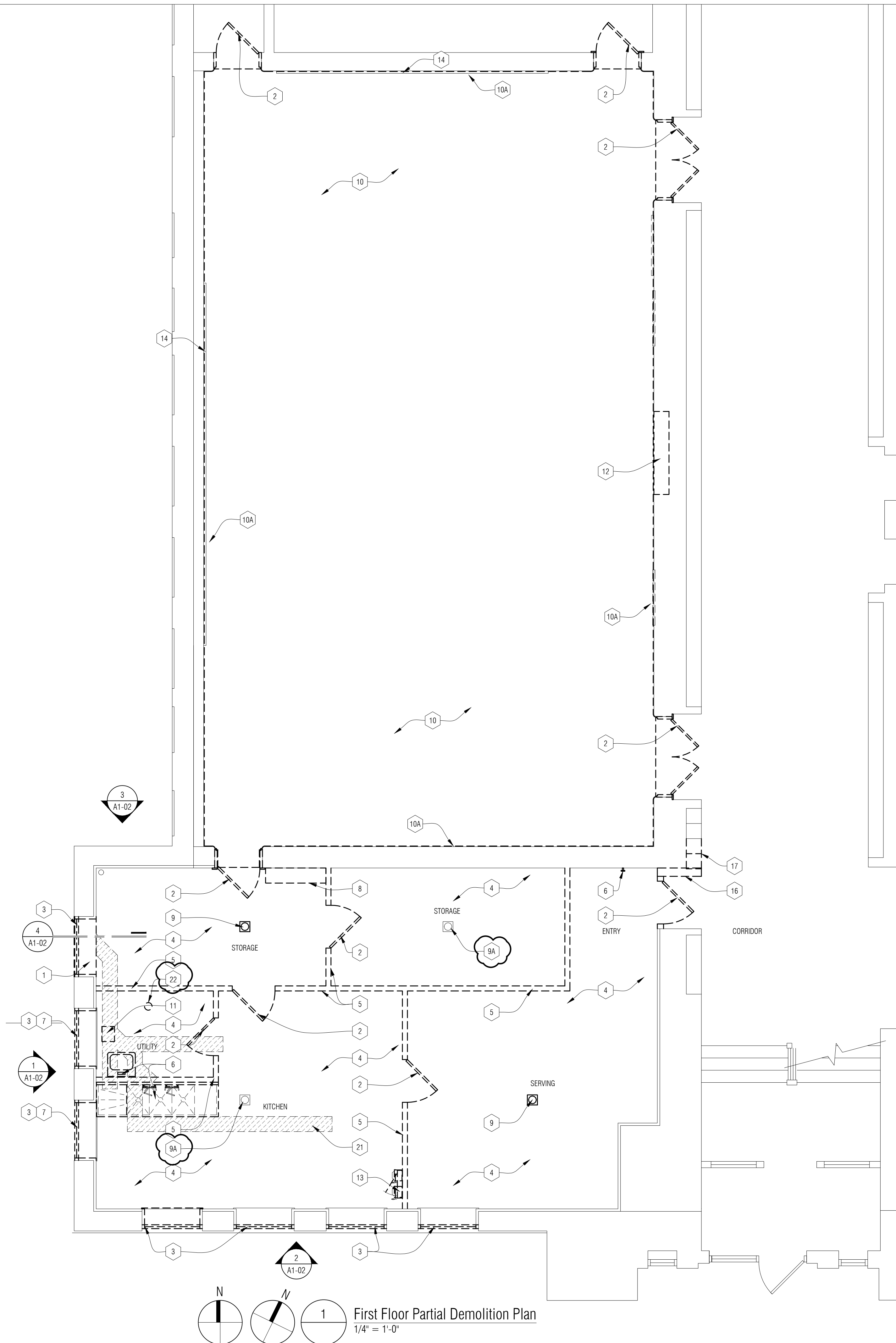
APPROVED BY
 MAM

SHEET NAME
 OPENING DETAILS

SHEET NO.
 A0-04



3 First Floor Partial Demolition Plan
1/4" = 1'-0"



1 First Floor Partial Demolition Plan
1/4" = 1'-0"

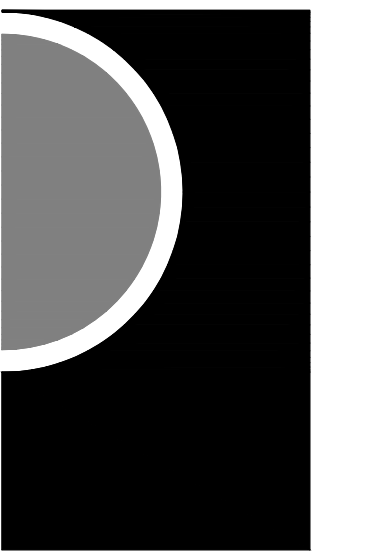
DEMOLITION PLAN - GENERAL NOTES:

- A. ALL DEMOLITION DRAWINGS AND DETAILS ARE PROVIDED TO SHOW THE GENERAL SCOPE OF THE DEMO WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM ALL DEMOLITION WORK NECESSARY TO ACCOMPLISH NEW WORK. THE DEMOLITION DRAWINGS AND DETAILS MAY NOTE TYPICAL ITEMS IN SOME AREAS, WHICH MAY ALSO APPLY IN OTHER AREAS AND ARE DESIGNATED WITH DASHED, HIDDEN OR STRUCK THRU LINES). COORDINATE ALL DEMOLITION WORK WITH ARCH. CIVIL, STRUCT. MECH, ELEC. AND FOOD SERVICE DRAWINGS. CONTRACTOR RESPONSIBLE TO REFERENCE ALL DRAWINGS / SPECIFICATIONS TO CONFIRM EXTENT OF DEMOLITION WORK.
- B. DEMOLITION WORK MAY BE INDICATED ON OTHER DISCIPLINE SHEETS. REFER TO CIVIL, MECH, ELEC. AND FOOD SERVICE DRAWINGS FOR EXTENT OF DEMOLITION AND ADDITIONAL DEMO REQUIREMENTS.
- C. ALL REMOVED ITEMS, WALLS, FLOORS, CEILING, OPENINGS, ETC ARE TO BE PATCHED/REPAIRED AND PREPARED TO RECEIVE NEW WORK AND/OR FINISHES.
- D. ALL DEMOLITION MEANS, METHODS AND SAFETY PRECAUTIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- E. WALL REMOVAL THAT TERMINATES INTO A WALL OR CEILING TO REMAIN SHALL BE COMPLETELY REMOVED FREE OF PROJECTIONS, READY TO RECEIVE NEW WORK.
- F. REMOVE ALL ITEMS PROJECTING FROM EXISTING WALLS OR FLOORS TO REMAIN (BLOOMING, SCREWS, FASTENERS, PIPES, CONDUITS, MOUNTING PLATES, FIXED EQUIPMENT, ETC). PATCH AND REPAIR FOR NEW FINISH (U.O.N.).
- G. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING AND UNDERSTANDING EXISTING CONDITIONS PRIOR TO BIDDING.
- H. CONTRACTOR SHALL PROTECT EXISTING BUILDING ELEMENTS AND SITE FROM DAMAGE CAUSED BY CONSTRUCTION OR CONSTRUCTION TRADES. CONTRACTOR SHALL REPAIR ALL DAMAGED AREAS (IDENTIFIED BY OWNER, ARCHITECT, OR CONSTRUCTION MANAGER) AT NO ADDITIONAL COST.
- I. MAINTAIN EXISTING FIRE RATING WHERE OCCURS AND WHERE POSSIBLE DURING DEMOLITION. REFER TO CODE AND LIFE SAFETY SHEETS FOR MORE INFORMATION.
- J. ASBESTOS AND OTHER HAZARDOUS MATERIALS WILL BE REMOVED BY OWNER'S ABATEMENT CONTRACTOR PRIOR TO START OF CONSTRUCTION. IF ANY SUSPECTED HAZARDOUS MATERIAL IS ENCOUNTERED, STOP WORK IN THAT AREA AND IMMEDIATELY INFORM THE ARCHITECT.
- K. DISPOSE OF ALL DEMOLITION MATERIALS LEGALLY OFF-SITE, U.O.N.
- L. REMOVE ALL WALL HANGINGS AND DEVICES SUCH AS PICTURES, PLAQUES, SECURITY CAMERAS, CLOCKS, DVD, VCR, WIFI ACCESS POINTS, ETC AND THEIR ASSOC. COMPONENTS, AND RETURN TO OWNER.
- M. PREP ALL MASONRY OPENINGS TO RECEIVE NEW TOOTHED-IN MASONRY FOR LIKE NEW APPEARANCE WHERE DEMOLITION OCCURS AND WALL IS VISIBLE.
- N. REMOVE ALL EXISTING EXPOSED CONDUIT NOT IN USE PRIOR TO NEW WORK.
- O. INFILL ALL EXISTING FASTENER HOLES / VOIDS IN WALLS, FLOORS AND CEILING/SOFFITS TO RECEIVE NEW FINISHES.

DEMOLITION PLAN - KEY NOTES:

- 1 MASONRY WALL BELOW EXISTING WINDOW OPENING TO BE REMOVED - SHORE WALL CONSTRUCTION AND PREP MASONRY FOR NEW WORK.
- 2 CAREFULLY REMOVE WOOD DOOR, FRAME, AND WOOD TRIM COMPLETE AS TO SALVAGE EXISTING PLASTER AROUND OPENING - PREP AREA FOR NEW WORK.
- 3 CAREFULLY REMOVE WINDOW SYSTEM AND ALL ASSOCIATED COMPONENTS COMPLETE. CUT INTERIOR AND EXTERIOR CAULK AS TO MINIMIZE INTERIOR PLASTER REPAIR AND TO PRESERVE EXTERIOR HISTORIC PAINT PROJECT - EXISTING SILL TO REMAIN U.O.N. - PREP OPENING FOR NEW WORK.
- 4 REMOVE TERRAZZO FLOORING AND BASE COMPLETE - REMOVE ADDITIONAL CONCRETE AS NEEDED & PREP FLOOR FOR NEW FINISH.
- 5 REMOVE EXISTING CINDER BLOCK WALL CONSTRUCTION - REFER TO GENERAL NOTE E.
- 6 PLUMBING FIXTURE TO BE REMOVED. REFER TO MECHANICAL.
- 7 REMOVE WINDOW MOUNTED EXHAUST FAN, MOUNTING PANEL, ELEC CONDUIT AND CONTROL WIRING - REFER TO ELECTRICAL.
- 8 REMOVE WALL SHELVING.
- 9 EXISTING FLOOR DRAIN TO BE REMOVED - REFER TO MECH.
- 9A EXISTING FLOOR DRAIN TO REMAIN - REFER TO MECH.
- 10 REMOVE FLOOR FINISH, REMOVE CONCRETE SLAB APPROXIMATELY +/- 4". APPLY FLOOR LEVELING COMPOUND AS REQUIRED FOR NEW GYM FLOOR INSTALLATION - FLOOR HEIGHT AFTER LEVELING TO BE FLUSH WITH ADJACENT CORRIDOR.
- 10A REMOVE EXISTING VINYL BASE AND ADHESIVE COMPLETE - PREP FOR NEW BASE INSTALLATION.
- 11 REMOVE GREASE TRAP, PIPING, AND ASSOCIATED WASTE & CONDENSATE PIPING - REMOVE SANITARY WATER PIPING AND THRU FLOOR CONNECTION CAP WASTE PIPING W/ C.D. AND COVER - SAW CUT AND PATCH CONC FLOOR TO RECEIVE NEW C.O. BRONZE FLOOR COVER.
- 12 REMOVE EXISTING RECESSED LOCKERS AND WOOD TRIM COMPLETE - PREP OPENING TO RECEIVE CMU INFILL.
- 13 ELECTRICAL PANEL/CUT OFF SWITCH TO BE REMOVED/RELOCATED - REFER TO ELECTRICAL.
- 14 EXISTING WALL MOUNTED PROTECTION MATS TO REMAIN - PROTECT DURING CONSTRUCTION.
- 15 REMOVE PORTION OF CONCRETE FLOOR CONSTRUCTION FOR DUCT PENETRATION - REFER TO STRUCTURAL - COORDINATE W/ MECH.
- 16 REMOVE PLASTER AND PORTION OF MASONRY WALL TO ALIGN WITH INTERIOR WALL OF ENTRY - PREP TO RECEIVE NEW PLASTER.
- 17 CUT BACK AND REMOVE EXISTING LOCKERS AS NEEDED TO PERFORM NEW WORK - REFER TO NEW WORK PLANS.
- 18 REMOVE BUILT IN TABLE UNIT COMPLETE.
- 19 REMOVE RADIANT HEATING PIPES FOR STORAGE ROOM.
- 20 FENCING AND EXTERIOR SITE ELEMENTS TO BE REMOVED. REFER TO CIVIL DRAWINGS.
- 21 SAW CUT CONCRETE SLAB FOR NEW MECHANICAL AND / OR PLUMBING WORK. REFER TO MECH DRAWINGS FOR MORE INFORMATION.
- 22 EXISTING CLEAN OUT TO REMAIN - CUT PIPE BACK TO ALLOW FOR INSTALLATION OF NEW CAP FLUSH WITH NEW FLOOR FINISH - REFER TO MECH AND FINISH FLOOR PLAN.

PARTNERS



PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600

Statement of Intellectual Property

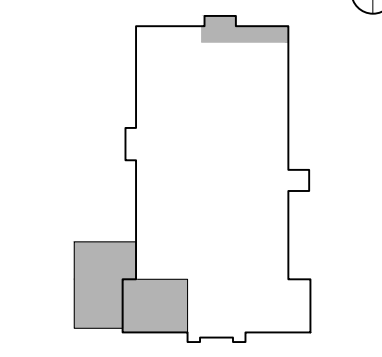
The ideas, concepts, drawings and thoughts conveyed herein are the intellectual property of PARTNERS in Architecture, PLC, 65 Market Street, Mount Clemens, MI, 48043 (P 586.469.3600). This set of drawings, in whole or in part, may not be reproduced, without the written consent of PARTNERS in Architecture, PLC. This information is protected under U.S. Copyright Law, all rights reserved.

© Copyright 2023

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNLESS ISSUED BELOW SPECIFICALLY FOR "BIDDING / CONSTRUCTION"

CONSULTANT

KEY PLAN



OWNER

Hamtramck
Public Schools

PROJECT NAME

Holbrook Elementary
Kitchen Addition and
Renovation

2361 Alice St
Hamtramck, MI 48212

PROJECT NO.

19-105

ISSUES / REVISIONS

Bidding - Construction 01/31/2023
Addendum #1 02/15/2023

DRAWN BY

CWP

CHECKED BY

ACS

APPROVED BY

MAM

SHEET NAME

DEMOLITION
FLOOR PLANS

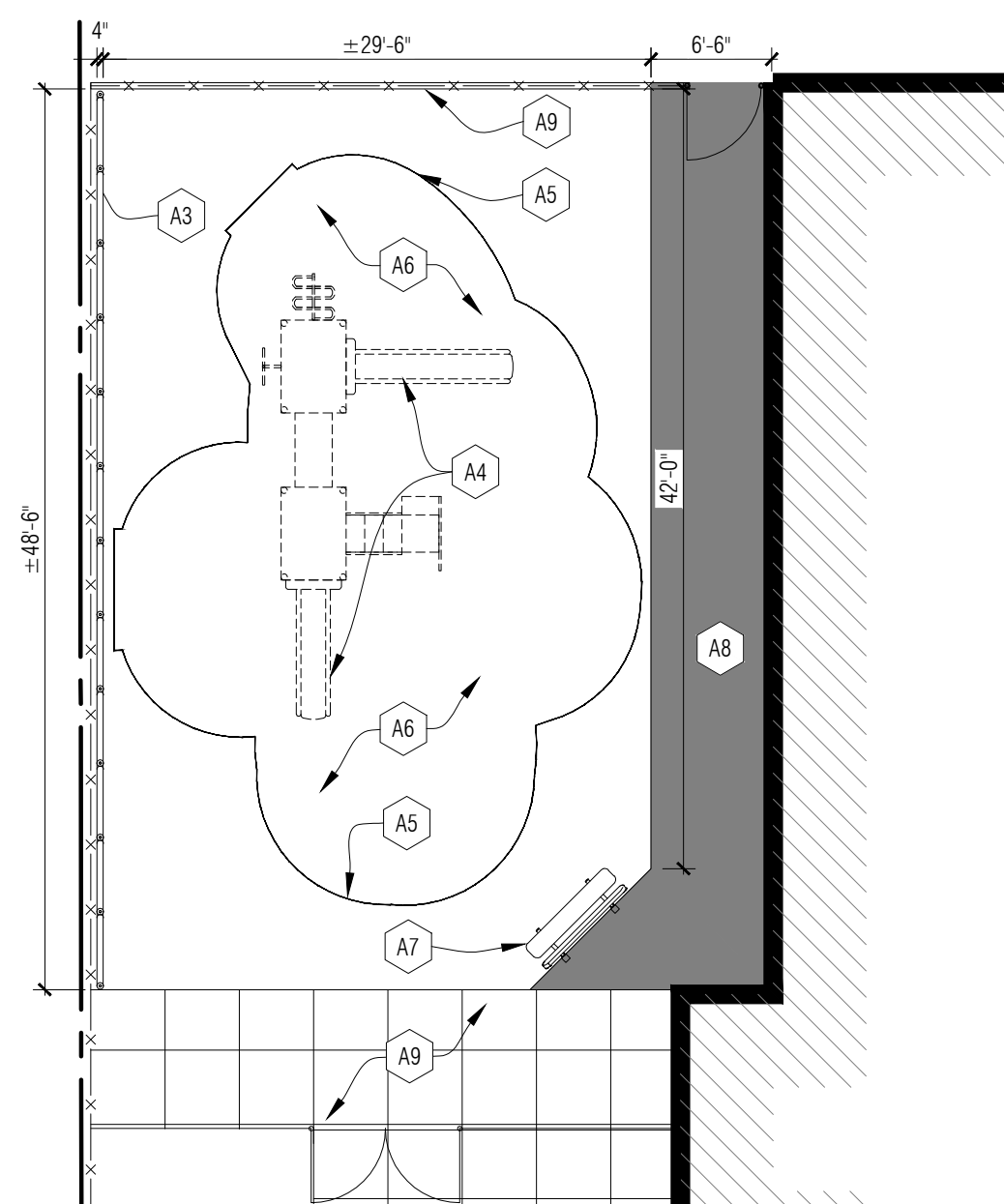
SHEET NO.

A1-01

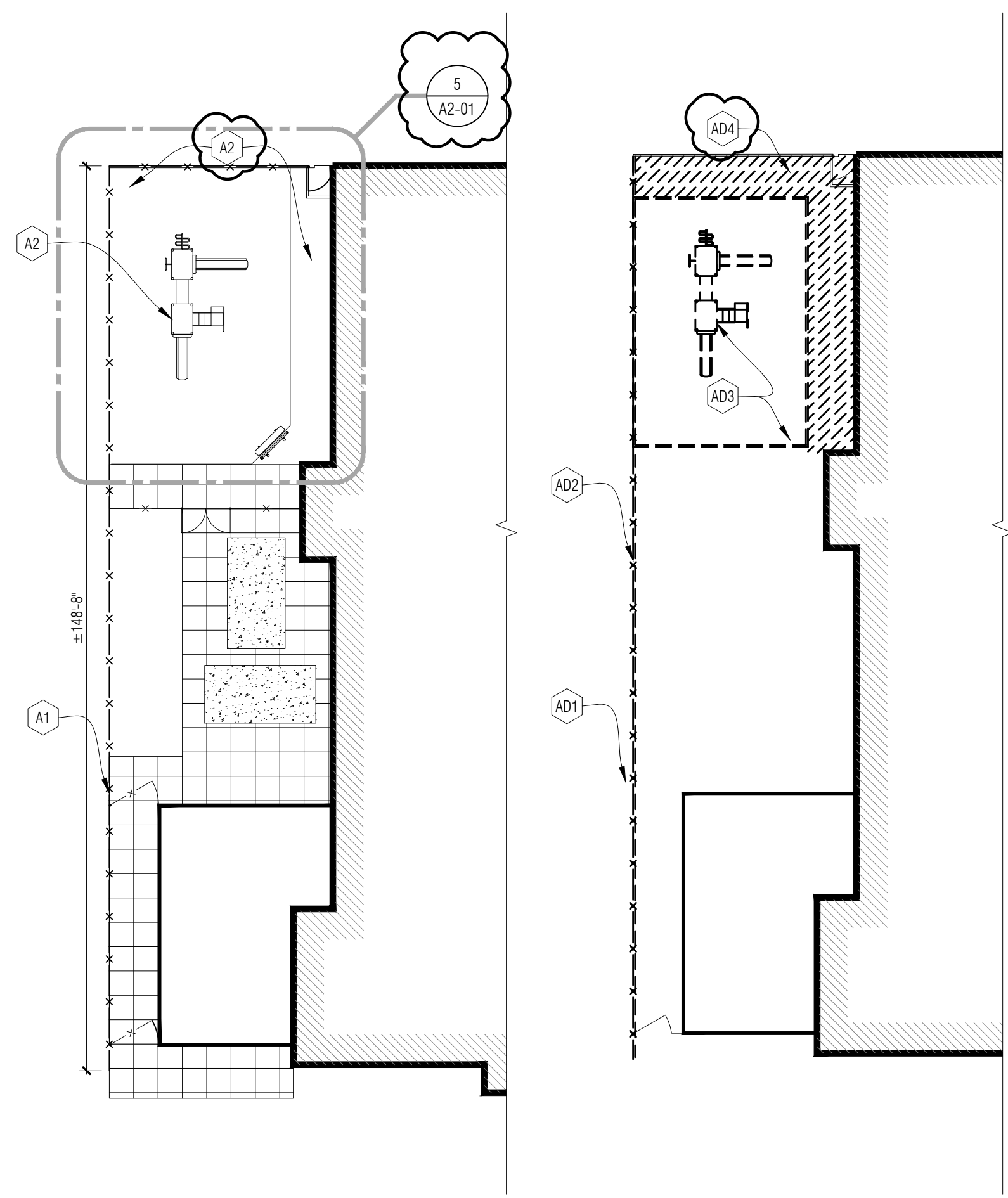
PLAYGROUND EQUIPMENT:

(REFER TO SPECIFICATION FOR QUANTITIES AND ADDITIONAL INFORMATION)

- ITEM 1 SWERVE ZIP SLIDE
MODEL #19362
- ITEM 2 LIMBRA ROOF (SQUARE)
MODEL #19757
- ITEM 3 RUNG ACCESS LADDER
MODEL #19028
- ITEM 4 BONGOS (BELOW)
MODEL #18679
- ITEM 5 STRAIGHT CRAWL TUBE (2 DECK SPAN)
MODEL #19045
- ITEM 6 WAVY TREE CLIMBER
MODEL #19060
- ITEM 7 MODERN TRANSFER PLATFORM W/
GUARDRAIL (2'-6" RISE)
MODEL #19918
- ITEM 8 HAND CYCLER
MODEL #18689
- ITEM 9 BELLS (12" - TWO SIDED)
MODEL #
- ITEM 10 DOUBLE WAVE ZIP SLIDE
MODEL #19792
- ITEM 11 SENSORY WAVE CLIMBER UP & ON
MODEL #19714
- ITEM 12 UP & ON SENSOR PACKAGE (BRONZE)
MODEL #4668

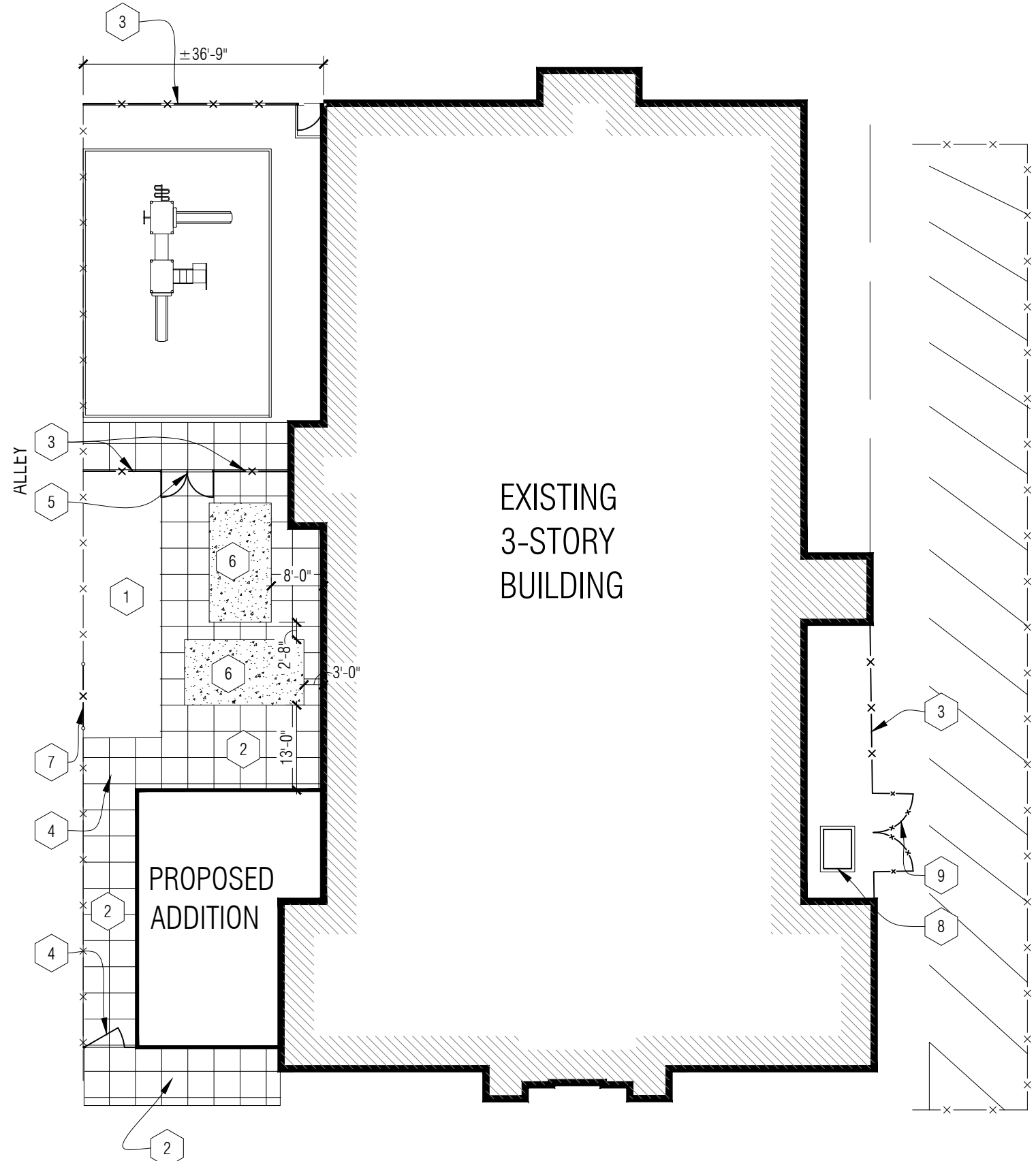


5 Alternate #2 - New Work
A2-01 1" = 10'-0"

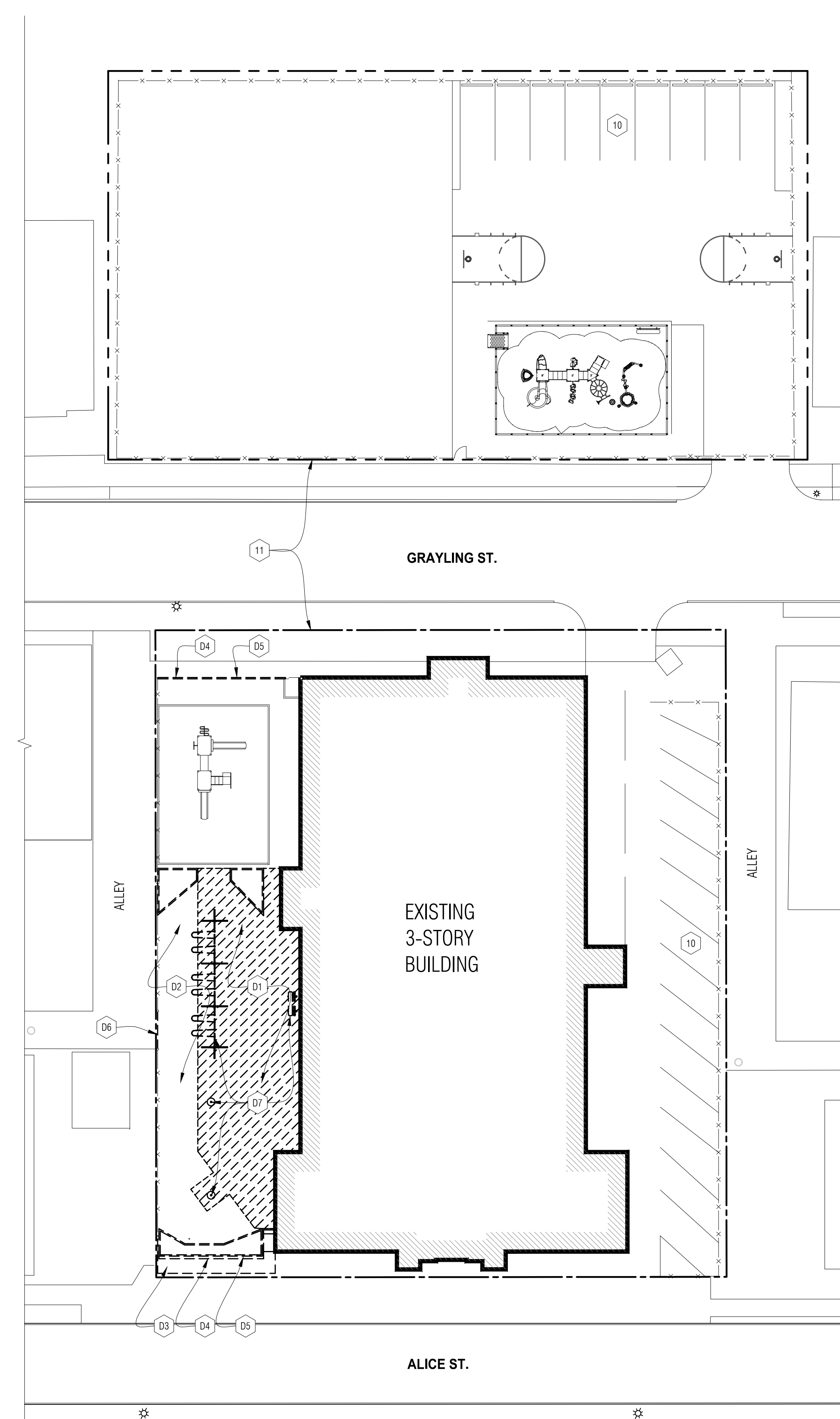


4 Alternate #1 and #2 - New Work
A2-01 1" = 20'-0"

3 Alternate #1 and #2 - Demo Work
A2-01 1" = 20'-0"



2 Architectural Site Plan - New Work
A2-01 1" = 20'-0"



1 Architectural Site Plan - Demo Work
1" = 20'-0"

SITE PLAN - GENERAL NOTES:

- A. REFER TO CIVIL FOR ADDITIONAL INFORMATION.
- B. WORK IN SETBACK AND PUBLIC R.O.W. TO CONFIRM TO THE CITY OF HAMTRACK STANDARDS AND REQUIREMENTS - SITE WORK/UTILITY PERMITS AND REQUIRED REVIEWS TO BE INCLUDED IN BASE BID COST.
- C. PROTECT EXISTING SURROUNDINGS/STRUCTURES - PROVIDE ADDITIONAL TEMPORARY BARRICADES AS REQUIRED TO PREVENT UNAUTHORIZED PERSONNEL/PUBLIC FROM ENTERING PROJECT/CONSTRUCTION SITE.
- D. COORDINATE MATERIAL DELIVERY SCHEDULE WITH OWNER AND SCHOOL DROP OFF AND PICKUP SCHEDULE - ADJUST SCHEDULE AS REQUIRED TO NOT INTERFERE WITH OWNERS OPERATIONAL SCHEDULE.

SITE PLAN DEMOLITION - KEY NOTES:

- D1 REMOVE EXISTING ASPHALT (DESIGNATED BY HATCH) - REFER TO CIVIL.
- D2 REMOVE PORTION OF EXISTING GRASS AREA AND PREP FOR NEW GRASS TO MATCH ADJACENT EXISTING GRASS ELEVATION - REFER TO CIVIL.
- D3 REMOVE PORTION OF EXISTING CONC SIDEWALK AND PREP FOR NEW SIDEWALK TO MATCH EXISTING - REFER TO CIVIL.
- D4 REMOVE EXISTING CONC CURB COMPLETE - REFER TO CIVIL.
- D5 REMOVE EXISTING 6' HIGH CHAIN LINK FENCE AND POSTS COMPLETE. REFER TO CIVIL.
- D6 CUT FENCE FABRIC & REMOVE & SALVAGE INTERMEDIATE HORIZONTAL POST BETWEEN VERTICAL POSTS FOR ACCESS TO ALLEY - COORDINATE LOCATION & EXTENT OF WORK IN FIELD - REFER TO CIVIL - COORDINATE WORK IF ALTERNATE #1 IS ACCEPTED
- D7 REMOVE EXISTING PLAYGROUND EQUIPMENT AND FOUNDATIONS COMPLETE.

SITE PLAN NEW WORK - KEY NOTES:

- S1 AREA OF NEW LAWN AREA - REFER TO CIVIL.
- S2 AREA OF NEW CONC SIDEWALK - REFER TO CIVIL.
- S3 NEW 8' HIGH CHAIN LINK FENCE WITH PRIVACY SLATS.
- S4 NEW 6'-0"W x 8'-0"H MAN GATE WITH PRIVACY SLATS.
- S5 NEW DOUBLE 4'-0"W x 8'-0"H GATES WITH PRIVACY SLATS.
- S6 NEW CONCRETE PADS FOR FUTURE HVAC PROJECT - REFER TO CIVIL.
- S7 INSTALL SALVAGED HORIZ POST & INSTALL NEW FENCE FABRIC - REFER TO SPECIFICATIONS (COORDINATE WORK IF ALTERNATE #1 IS ACCEPTED).
- S8 NEW ELECTRICAL TRANSFORMER ON NEW CONCRETE PAD (THICKNESS AND REINFORCING AS REQUIRED BY DTE) - COORDINATE WITH ELEC.
- S9 NEW DOUBLE 6'-0"W x 8'-0"H MAN GATE WITH PRIVACY SLATS.
- S10 EXISTING STAFF PARKING TO REMAIN.
- S11 PROPERTY BOUNDARY LINE.

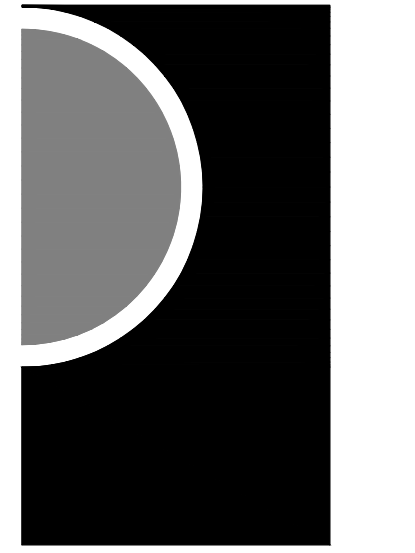
ALTERNATE DEMOLITION - KEY NOTES:

- AD1 ALTERNATE #1: CUT BACK TREES AND VEGETATION FOR FENCE REMOVAL.
- AD2 ALTERNATE #1: REMOVE EXISTING 8' HIGH CHAIN LINK FENCE, POSTS AND CONC CURB (+/- 8') COMPLETE.
- AD3 ALTERNATE #2: REMOVE EXISTING PLAYGROUND EQUIPMENT COMPLETE INCLUDING BORDERS, FOUNDATIONS AND ADDITIONAL SOILS AS NEEDED NEW FOR PLAYGROUND EQUIPMENT INSTALLATION - COORDINATE LOCATION WITH NEW WORK PLAN - COORDINATE WITH PLAYGROUND EQUIPMENT CONTRACTOR - REFER TO CIVIL.
- AD4 ALTERNATE #2: REMOVE EXISTING ASPHALT WALKWAY COMPLETE.

ALTERNATE NEW WORK - KEY NOTES:

- A1 ALTERNATE #1: NEW 20'-0" HIGH FENCE - REFER TO SPECIFICATIONS.
- A2 ALTERNATE #2: NEW PLAYGROUND EQUIPMENT AND ASPHALT WALKWAY.
- A3 ALTERNATE #2: PLAYGROUND CURB BORDER AT FENCE LINE ONLY - REFER TO SPEC. SECTION 116800.
- A4 ALTERNATE #2: COMPOSITE PLAYSTRUCTURE - REFER TO SPEC. SECTION 116800 AND EQUIPMENT LIST ON THIS SHEET.
- A5 ALTERNATE #2: EQUIPMENT USE ZONES.
- A6 ALTERNATE #2: ENGINEERED WOOD FIBER - DEPTH TO BE A MINIMUM OF 12" OR DEEPER AS RECOMMENDED BY MANUF. - REFER TO SPEC. SECTION 321816.13.
- A7 ALTERNATE #2: IN-GROUND BENCH - REFER TO SPEC. SECTION 116800.
- A8 ALTERNATE #2: SHADED AREA OF NEW ASPHALT PAVING - REFER TO CIVIL.
- A9 ALTERNATE #2: SCOPE OF WORK IN BASE BID.

PARTNERS



PARTNERS in Architecture, PLC
65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600

Statement of Intellectual Property
The ideas, concepts, drawings and thoughts conveyed herein are the intellectual property of PARTNERS in Architecture, PLC, 65 Market Street, Mount Clemens, MI, 48043 (P 586.469.3600). This set of drawings, in whole or in part, may not be reproduced, without the written consent of PARTNERS in Architecture, PLC. This information is protected under U.S. Copyright Law, all rights reserved.

© Copyright 2023
THIS DRAWING IS NOT TO BE USED FOR SPECIFICATION UNLESS ISSUED BELOW SPECIFICALLY FOR "BIDDING / CONSTRUCTION" CONSULTANT

KEY PLAN

OWNER
Hamtramck Public Schools

PROJECT NAME
Holbrook Elementary Kitchen Addition and Renovation

2361 Alice St
Hamtramck, MI 48212

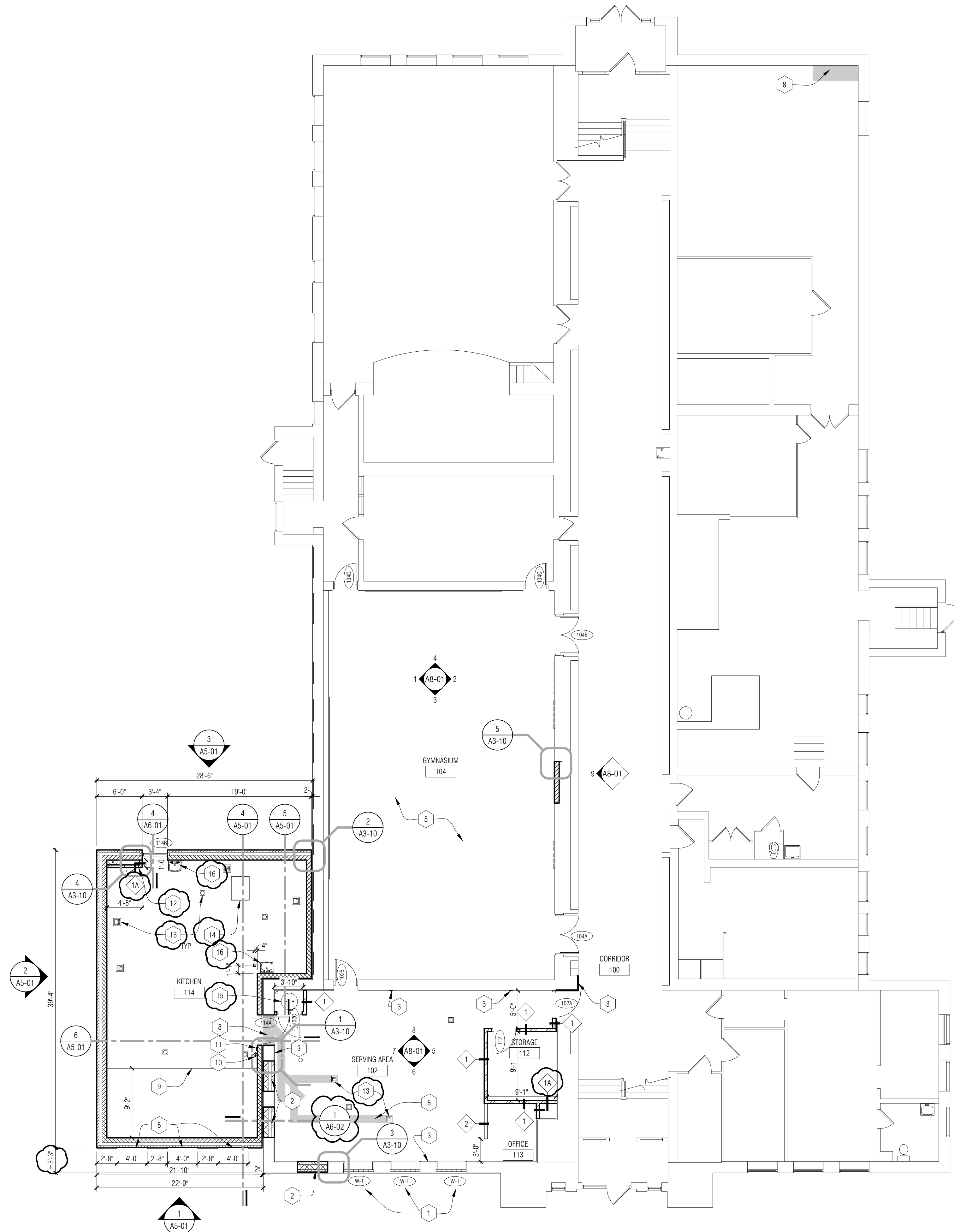
PROJECT NO.
19-105

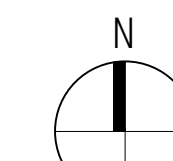
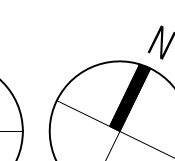
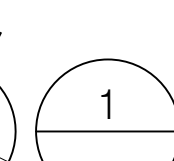
ISSUES / REVISIONS
Bidding - Construction 01/31/2023
Addendum #1 02/15/2023

DRAWN BY
CHECKED BY ACS
APPROVED BY MAM
SHEET NAME

ARCHITECTURAL SITE PLAN

SHEET NO.
A2-01






Lower Level Floor Plan
 1/8" = 1'-0"

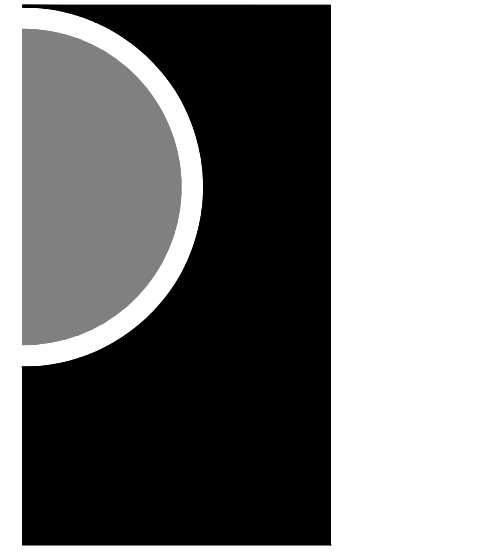
FLOOR PLAN GENERAL NOTES:

- A. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING AND UNDERSTANDING EXISTING CONDITIONS PRIOR TO STARTING WORK.
- B. ASBESTOS AND OTHER HAZARDOUS MATERIALS WILL BE REMOVED BY OWNER'S ABATEMENT CONTRACTOR PRIOR TO START OF CONSTRUCTION. IF ANY SUSPECTED HAZARDOUS MATERIAL IS ENCOUNTERED, STOP WORK IN THAT AREA, AND IMMEDIATELY INFORM THE CONSTRUCTION MANAGER AND THE ARCHITECT.
- C. DO NOT SCALE DRAWINGS. USE DIMENSIONS PROVIDED AND VERIFY IN FIELD. IF A CONFLICT IS ENCOUNTERED OR A REQUIRED DIMENSION IS NOT PROVIDED, REQUEST A CLARIFICATION FROM THE ARCHITECT.
- D. NOTIFY ARCHITECT OF ANY DISCREPANCIES AND/OR CONFLICTS WITH FLOOR PLANS OR EXISTING CONDITIONS PRIOR TO STARTING WORK.
- E. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING BUILDING ELEMENTS AND SITE FROM DAMAGE CAUSED BY CONSTRUCTION OR CONSTRUCTION TRADES, AND SHALL REPAIR ANY DAMAGED AREAS AT NO ADDITIONAL COST TO THE OWNER.
- F. DISPOSE OF ALL DEMOLITION AND CONSTRUCTION MATERIALS LEGALLY OFF SITE.
- G. MAINTAIN EXISTING FIRE RATINGS IN EXISTING BUILDING DURING CONSTRUCTION. REFER TO LIFE SAFETY SHEETS FOR MORE INFORMATION, AS WELL AS CONSTRUCTION MANAGERS INSTRUCTIONS.
- H. ALL CONSTRUCTION AND DEMOLITION MEANS, METHODS AND SAFETY PRECAUTIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- I. ALL EXPOSED OUTSIDE CORNERS OF MASONRY BLOCK ARE TO BE BULLNOSED. ALL MASONRY INFILL IS TO BE TOOTHED IN TO ALIGN WITH EXISTING JOINTING.
- J. REFER TO FINISH FLOOR PLAN FOR ALL FLOOR PATTERNS, FLOOR TRANSITIONS, MARKER/TACK BOARDS DESIGNATIONS, WINDOW TREATMENTS, AND CORNER GUARD LOCATIONS.
- K. RECESS ALL NEW WALL MOUNTED SWITCHES, CONTROLS, ELECTRICAL BOXES TO SUPPORT ELECTRICAL DEVICES. SURFACE MOUNTED BOXES AND RACEWAYS WILL NOT BE ACCEPTED. COORDINATE WITH ELECTRICAL.
- L. COORDINATE SIZE AND LOCATION OF ALL DUCT, SHAFT AND LOUVER OPENINGS IN WALLS AND ROOFS WITH MECHANICAL AND ELECTRICAL. PROVIDE ALL REQUIRED LINTELS FOR OPENINGS IN NEW AND EXISTING MASONRY CONSTRUCTION.

FLOOR PLAN KEY NOTES:

- 1 NEW GLASS MASONRY UNITS IN EXISTING WINDOW OPENING - REFER TO SPECS.
- 2 INFILL EXISTING OPENING WITH NEW WALL CONSTRUCTION. - REFER TO PLAN DETAILS AND SECTIONS.
- 3 REPAIR PLASTER AT REMOVED WALL PRIOR TO FINAL WALL FINISH.
- 4 NEW WALL MOUNTED PROTECTION MATS - REFER TO SPECS AND ELEVATION.
- 5 NEW SPORTS FLOORING - REFER TO FINISH FLOOR PLANS.
- 6 INSET FACE BRICK 1/2". REFER TO EXTERIOR ELEVATIONS.
- 7 NEW PLASTER AT REMOVED WALL - ALIGN SURFACE WITH SERVERY ENTRANCE AND CORRIDOR WALLS - REFER TO INTERIOR ELEVATIONS.
- 8 PATCH CONCRETE SLAB WHERE SAW CUTTING / MASONRY WALL DEMOLITION OCCURRED (SHADED) AND PREP FOR NEW FINISH.
- 9 LINE OF DEPRESSED SLAB FOR WALK-IN COOLER AND FREEZER. COORDINATE DEPTH OF DEPRESSION WITH FOOD SERVICE EQUIPMENT SUPPLIER.
- 10 NEW FIRE EXTINGUISHER LOCATION - REFER TO SPECIFICATIONS
- 11 FIRE SUPPRESSION PULL - REFER TO FOOD SERVICE AND ELECTRICAL.
- 12 NEW ELECTRICAL PANEL - REFER TO ELEC.
- 13 NEW FLOOR DRAINS - REFER TO MECH, FOOD SERVICE AND FINISH FLOOR PLANS.
- 14 NEW GREASE TRAP - REFER TO MECH AND MECH SPECIFICATIONS
- 15 NEW WATER HEATER - REFER TO MECH.
- 16 NEW PLUMBING FIXTURE - REFER TO MECH.

PARTNERS



PARTNERS in Architecture, PLC
 65 MARKET STREET
 MOUNT CLEMENS, MI 48043
 P 586.469.3600

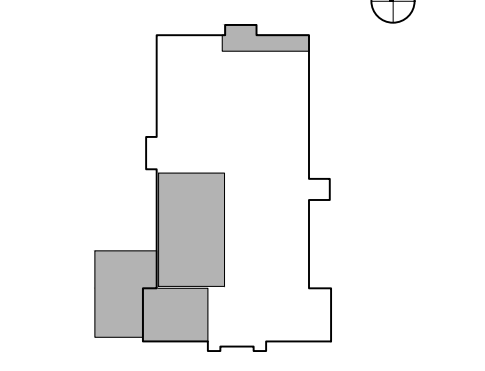
Statement of Intellectual Property
 The ideas, concepts, drawings and thoughts conveyed herein are the intellectual property of PARTNERS in Architecture, PLC, 65 Market Street, Mount Clemens, MI, 48043 P 586.469.3600. This set of drawings, in whole or in part, may not be reproduced, without the written consent of PARTNERS in Architecture, PLC. This information is protected under U.S. Copyright Law, all rights reserved.

© Copyright 2023

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNLESS ISSUED BELOW SPECIFICALLY FOR "BIDDING / CONSTRUCTION"

CONSULTANT

KEY PLAN



OWNER

Hamtramck Public Schools

PROJECT NAME
Holbrook Elementary Kitchen Addition and Renovation

2361 Alice St
 Hamtramck, MI 48212

PROJECT NO.

19-105

ISSUES / REVISIONS

Bidding - Construction 01/31/2023
 Addendum #1 02/15/2023

DRAWN BY

CWP

CHECKED BY

ACS

APPROVED BY

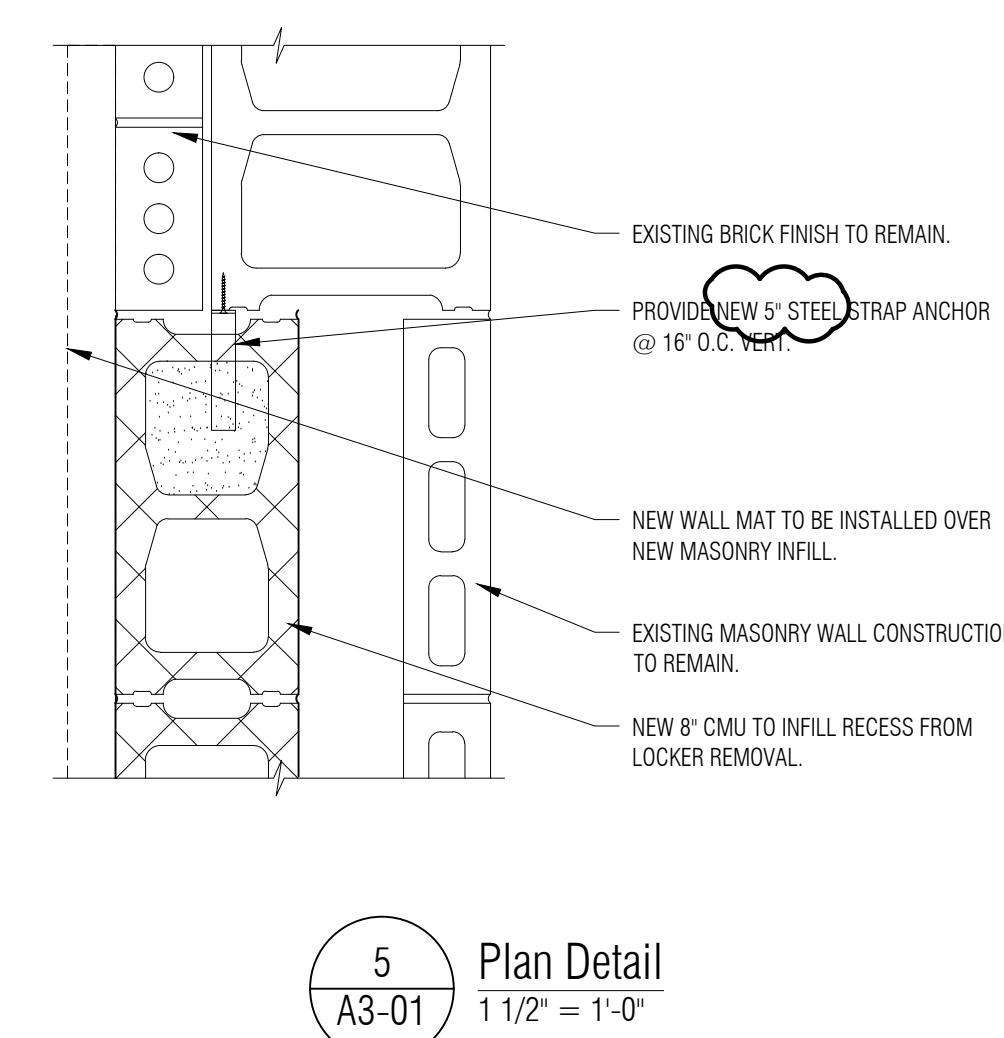
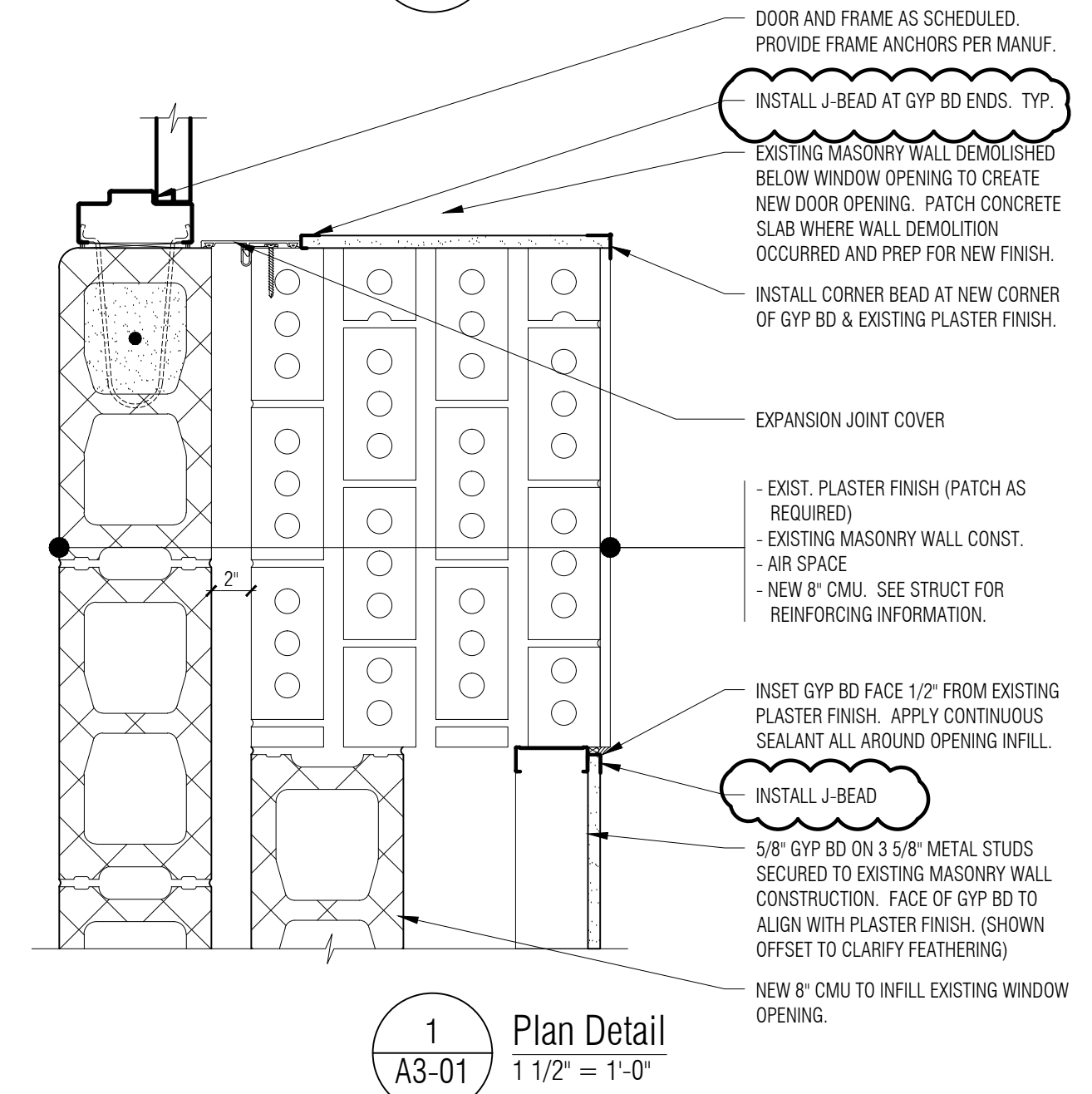
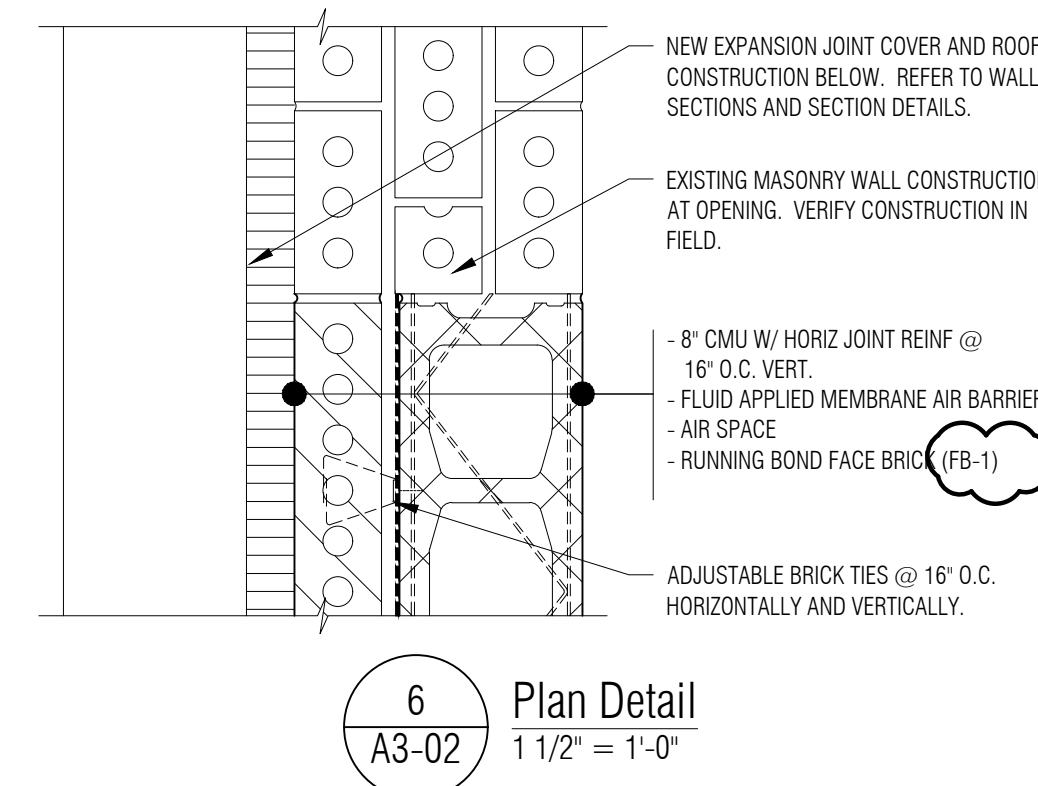
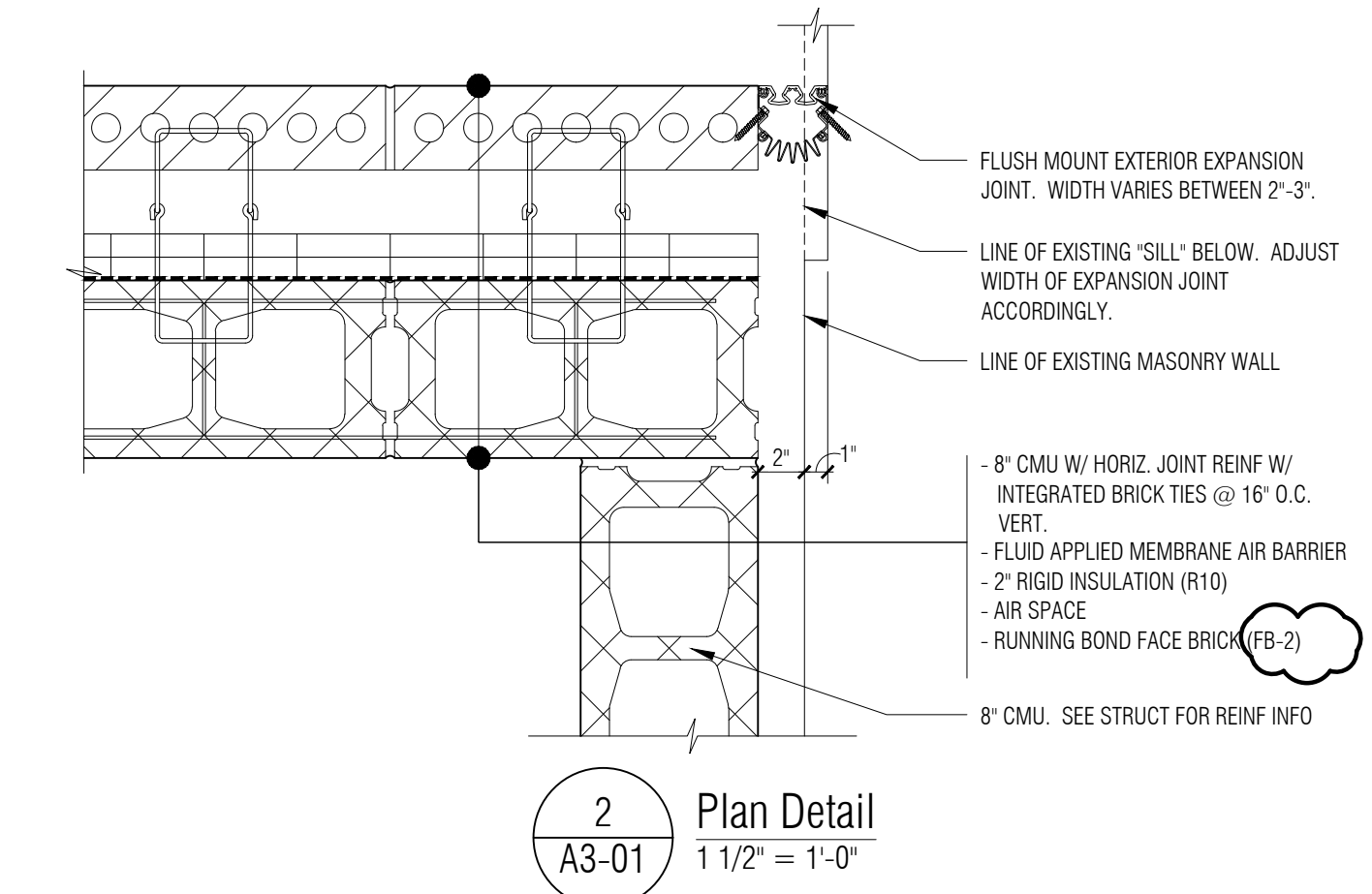
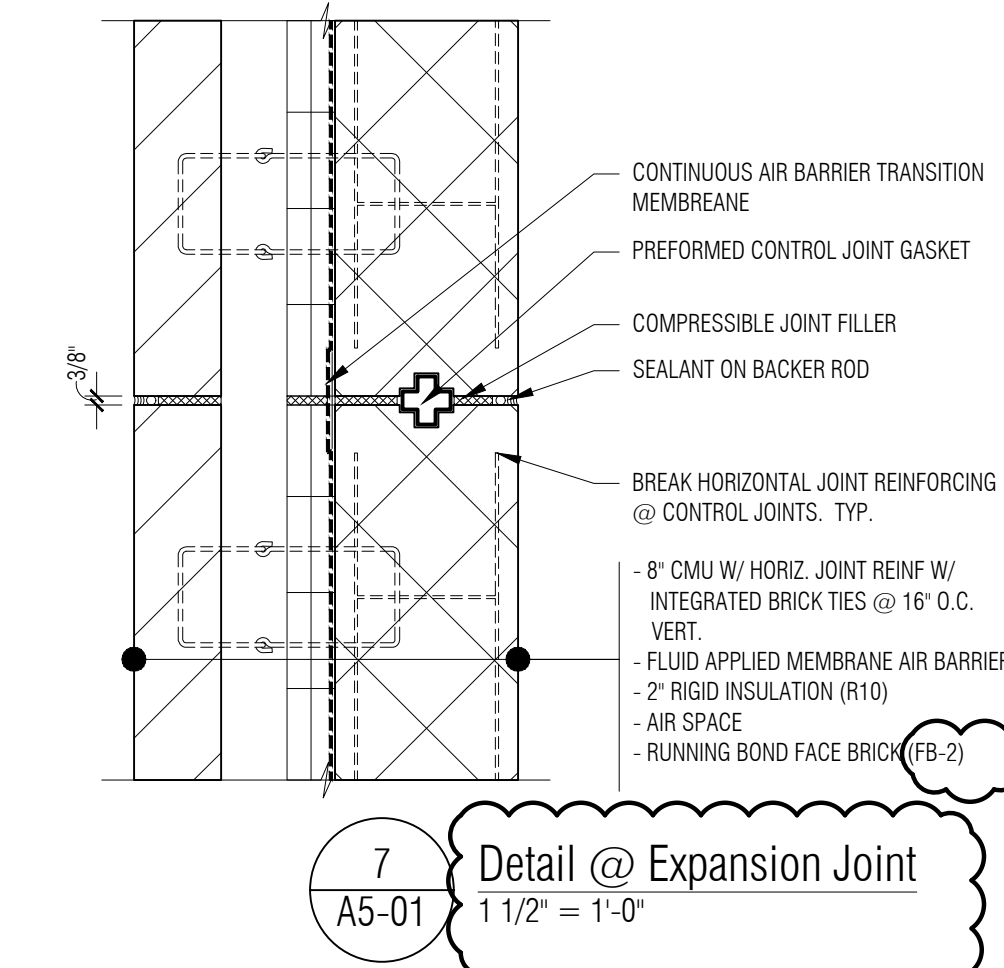
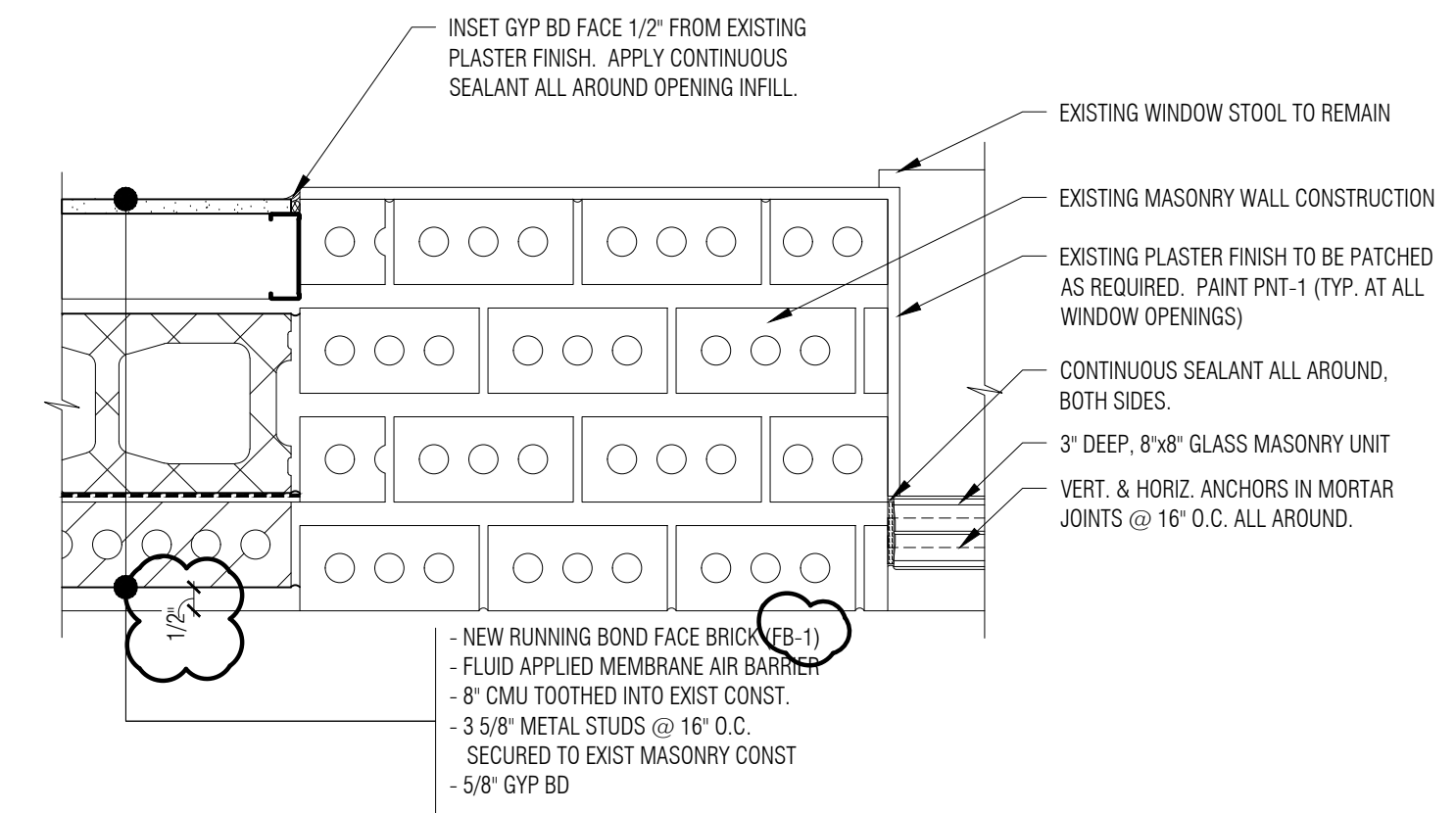
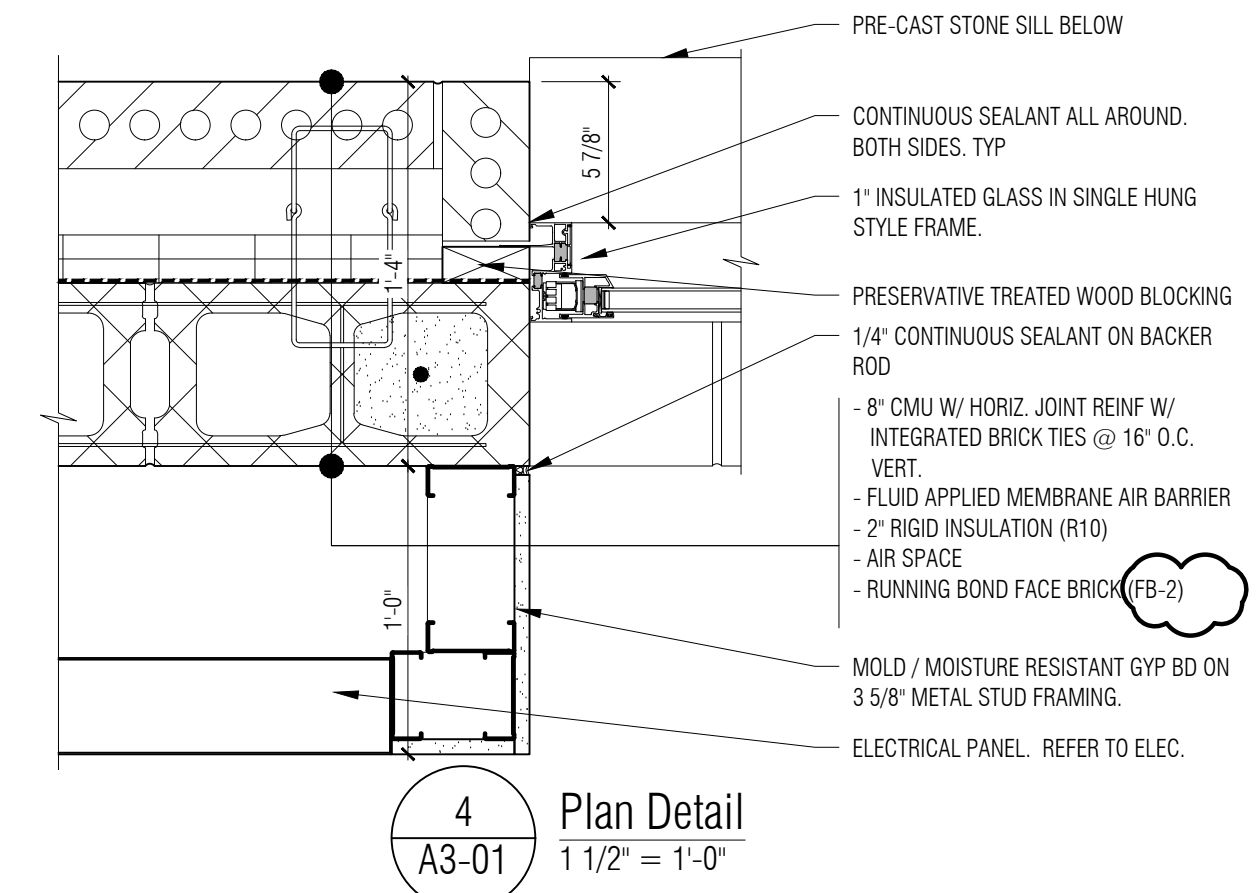
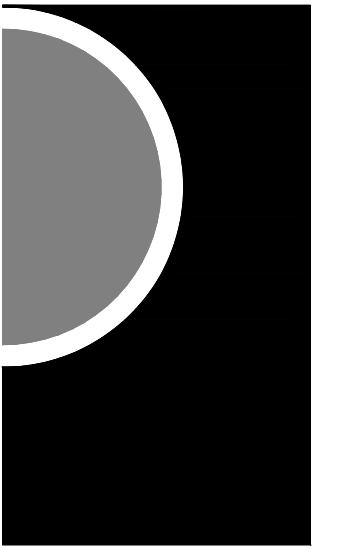
MAM

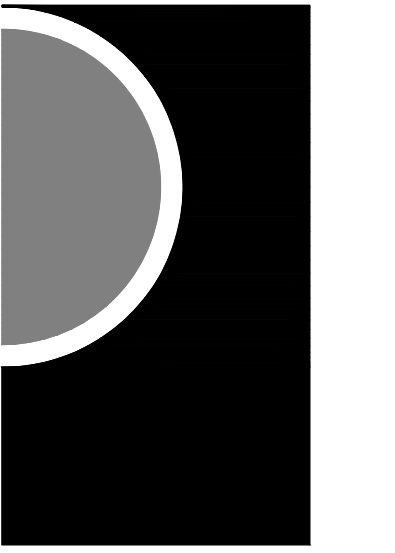
SHEET NAME

LOWER LEVEL FLOOR PLAN

SHEET NO.

A3-01





PARTNERS in Architecture, PLC
 65 MARKET STREET
 MOUNT CLEMENS, MI 48043
 P 586.469.3600

Statement of Intellectual Property
 The ideas, concepts, drawings and thoughts conveyed herein are the intellectual property of PARTNERS in Architecture, PLC, 65 Market Street, Mount Clemens, MI, 48043 (P 586.469.3600). This set of drawings, in whole or in part, may not be reproduced, without the written consent of PARTNERS in Architecture, PLC. This information is protected under U.S. Copyright Law, all rights reserved.

© Copyright 2023

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNLESS ISSUED BELOW SPECIFICALLY FOR "BIDDING / CONSTRUCTION"

CONSULTANT

KEY PLAN

OWNER

Hamtramck Public Schools

PROJECT NAME
Holbrook Elementary Kitchen Addition and Renovation

2361 Alice St
 Hamtramck, MI 48212

PROJECT NO.

19-105

ISSUES / REVISIONS

Bidding - Construction 01/31/2023
 Addendum #1 02/15/2023

DRAWN BY

CWP

CHECKED BY

ACS

APPROVED BY

MAM

SHEET NAME

EXTERIOR ELEVATIONS & BUILDING SECTIONS

SHEET NO.

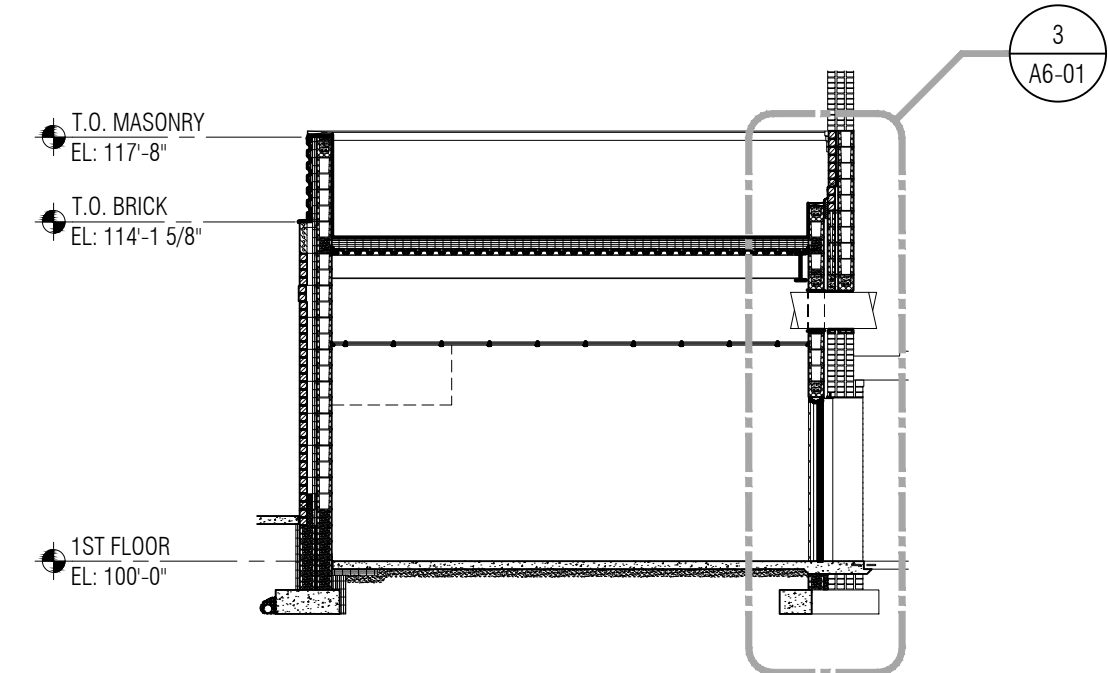
A5-01

EXTERIOR ELEVATIONS GENERAL NOTES:

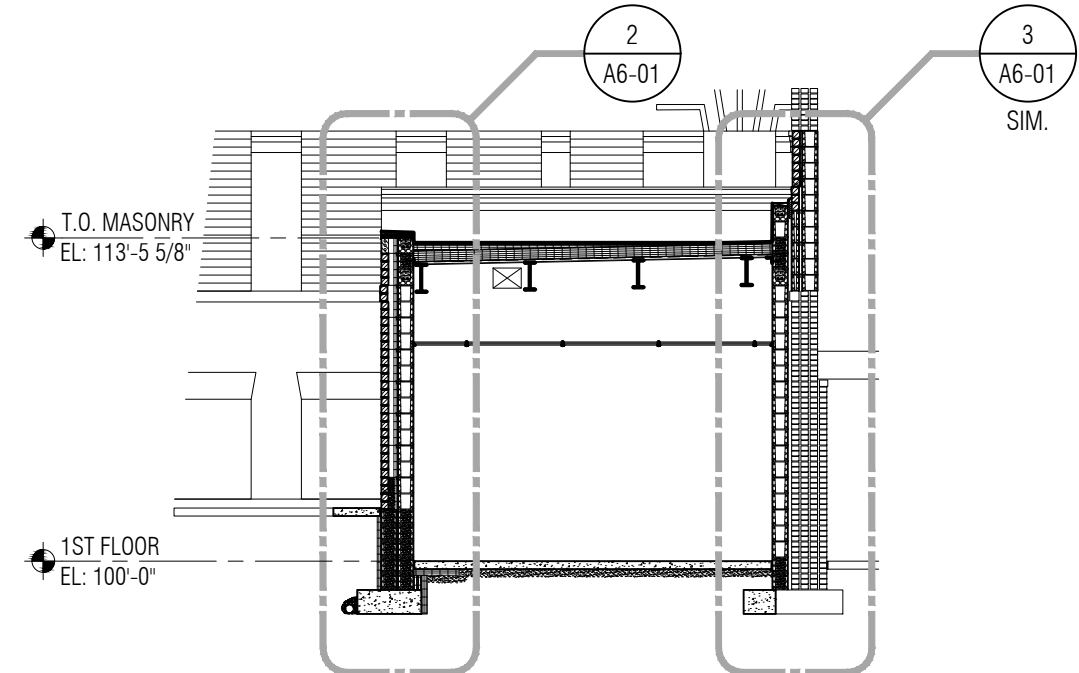
- A. REFER TO MATERIAL FINISH / COLOR SCHEDULE (SPEC SECTION 000200)
- B. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING AND UNDERSTANDING EXISTING CONDITIONS.
- C. FACE BRICK ON ADDITION AND EXISTING OPENING INFILL TO BE MONARCH SIZE: 4x4x16 (3 5/8" x 3 5/8" x 15 5/8")

ELEVATION KEY NOTES:

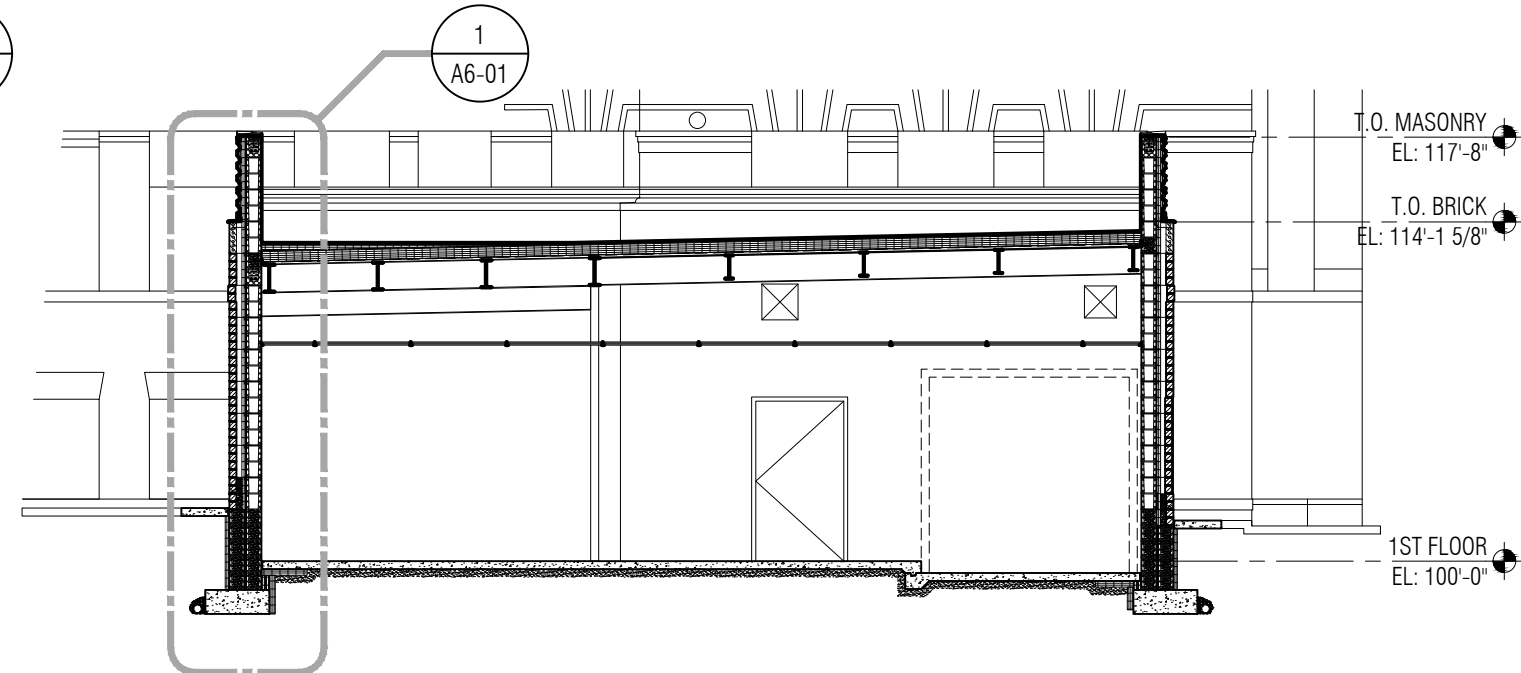
- 1 LINE OF FOUNDATION BELOW.
- 2 RUNNING BOND FACE BRICK (FB-2).
- 3 (2) COURSES OF STACK BOND FACE BRICK (FB-2).
- 4 SOLDIER COURSE BRICK (FB-2).
- 5 PRE-FINISHED CORRUGATED METAL PANEL SYSTEM (MP-1).
- 6 PRE-FINISHED METAL GRAVEL STOP AT LADDER DOCK LOCATION REFER TO SECTIONS.
- 7 PRE-CAST STONE SILL.
- 8 1" INSULATED GLASS IN SINGLE HUNG STYLE FRAME.
- 9 3" DEEP, 8"x8" GLASS MASONRY UNIT TO INFILL EXISTING OPENING. REFER TO PLAN DETAIL SHEET FOR MORE INFORMATION.
- 10 FLUSH MOUNT EXTERIOR EXPANSION JOINT.
- 11 INSET FACE BRICK 1/2"
- 12 INFILL EXISTING OPENING WITH NEW MASONRY CONSTRUCTION. REFER TO WALL SECTIONS, SECTION DETAILS, AND PLAN DETAILS FOR MORE INFORMATION (FB-1).
- 13 CONTINUOUS SEALANT ON BACKER ROD EXPANSION JOINT. REFER TO DETAIL 7/A3-10 FOR MORE INFORMATION.
- 14 ROOF DRAIN AND OVERFLOW NOZZLE - REFER TO MECH.



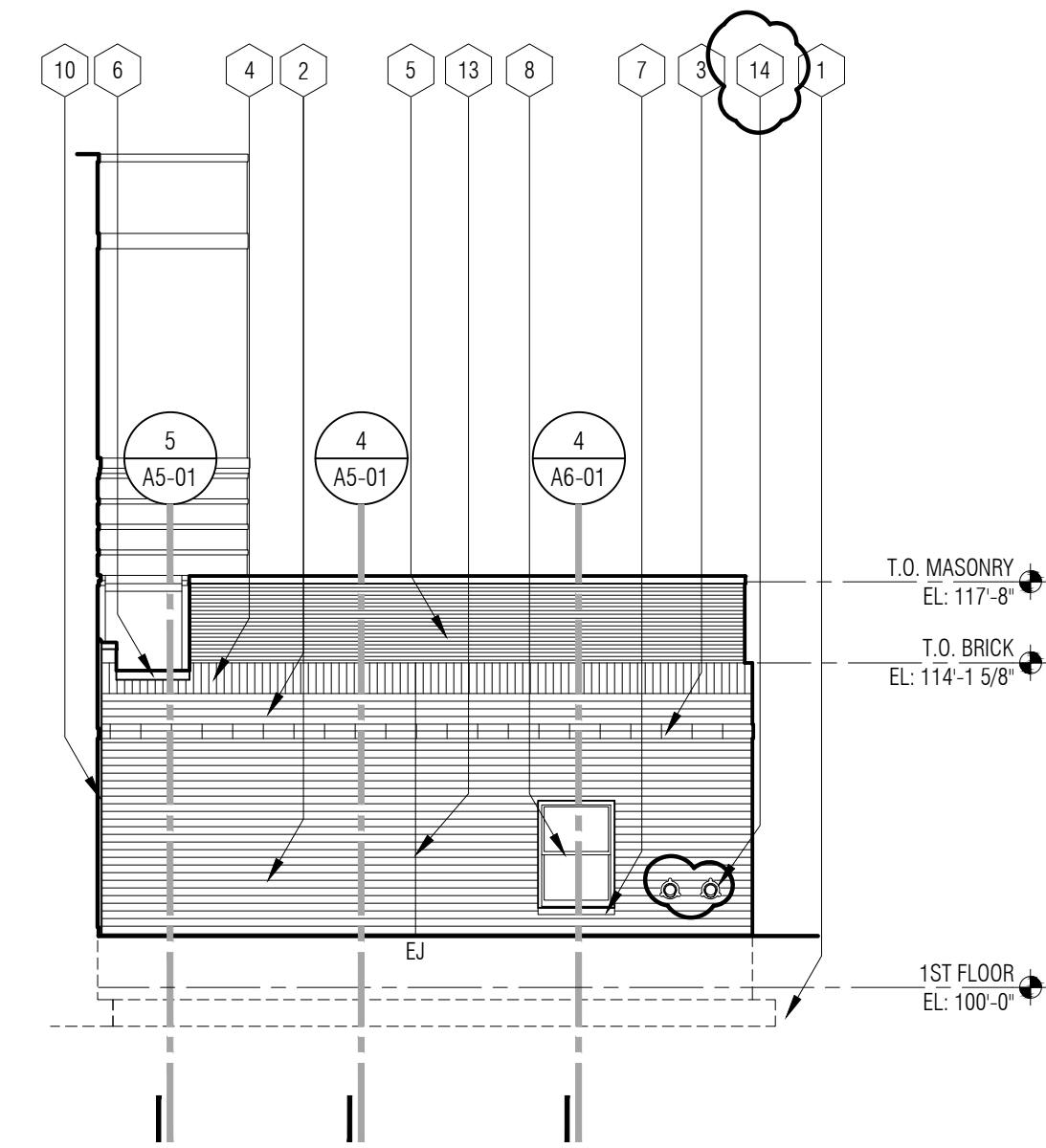
6 Building Section
 A3-01 1/8" = 1'-0"



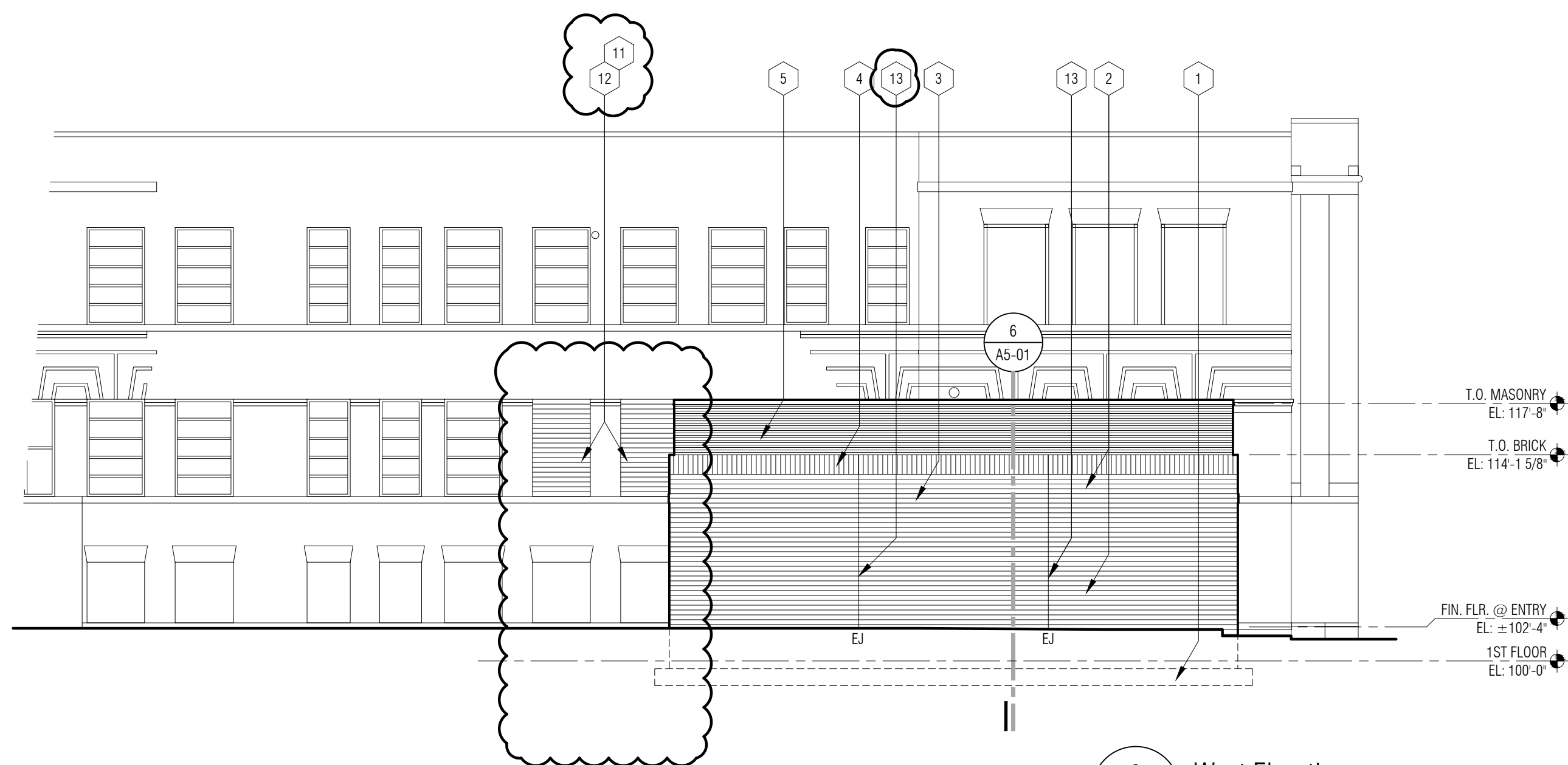
5 Building Section
 A3-01 1/8" = 1'-0"



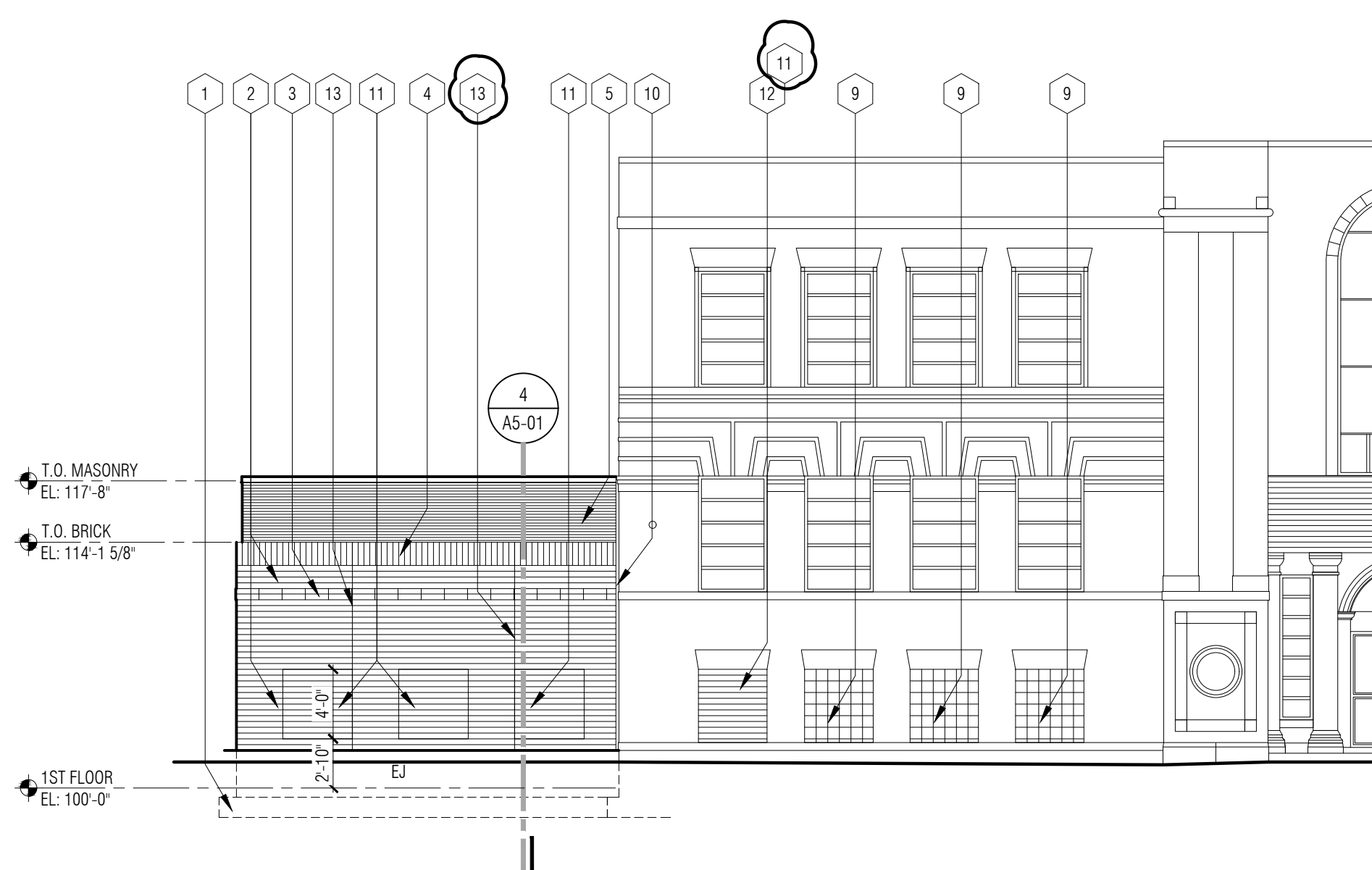
4 Building Section
 A3-01 1/8" = 1'-0"



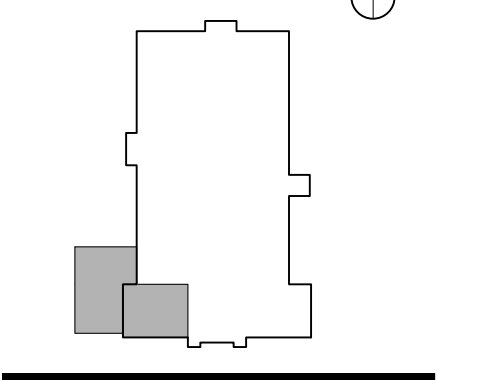
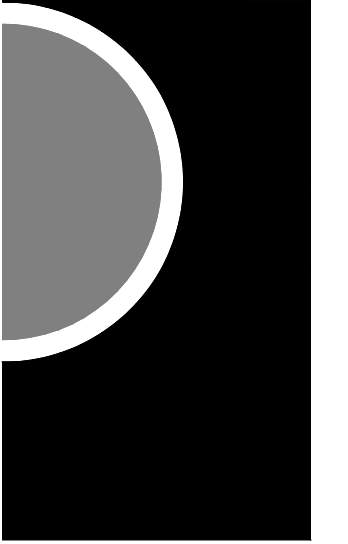
3 North Elevation
 A3-01 1/8" = 1'-0"



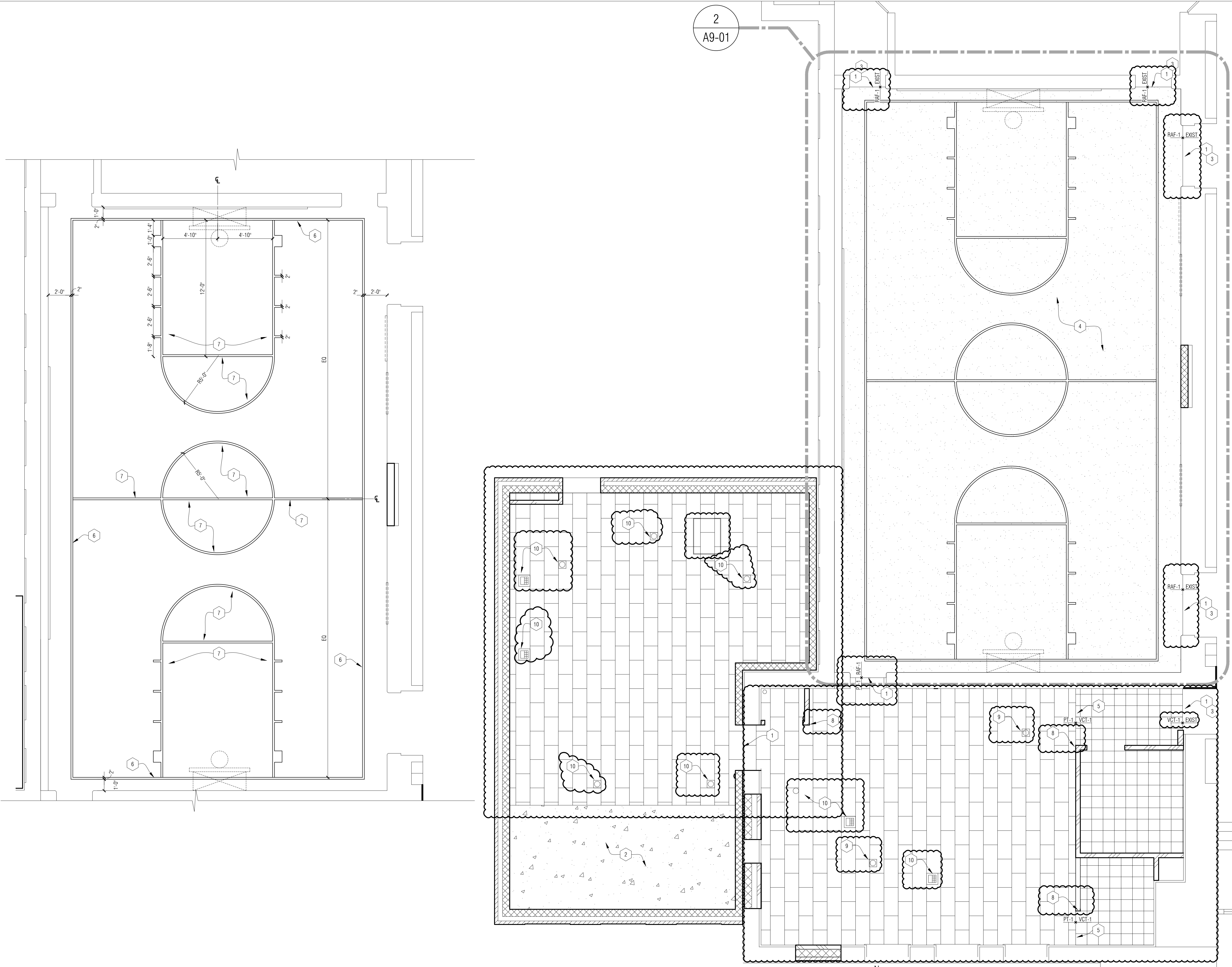
2 West Elevation
 A3-01 1/8" = 1'-0"



1 South Elevation
 A3-01 1/8" = 1'-0"



2
 A9-01



FINISH FLOOR PLAN GENERAL NOTES:

- A. REFERENCE ROOM FINISH SCHEDULE AND MATERIAL FINISH / COLOR SCHEDULE (SPEC SECTION 00200) FOR ADDITIONAL FINISH INFORMATION.
- B. REFER TO SHEET FLOOR PLANS FOR DIMENSIONS.
- C. UNLESS OTHERWISE NOTED, FLOOR FINISHES TRANSITION UNDER THE CENTERLINE OF DOORS (WHEREVER APPLICABLE).
- D. PREP EXISTING FLOOR SUBSTRATE TO RECEIVE NEW FLOORING.

FINISH FLOOR PLAN KEY NOTES:

- 1 THRESHOLD - REFER TO SHEET (A0-04) AND DOOR SCHEDULE
- 2 RECESSED FLOOR SLAB AT FOOD SERVICE EQUIPMENT - PROVIDE THERMAL BREAK AT ALL WALLS - REFER TO FOOD SERVICE DRAWINGS FOR DETAILS.
- 3 EXISTING FLOORING TO BE PROTECTED DURING INSTALLATION OF NEW PORCELAIN TILE
- 4 LINES TO BE PAINTED ON GYMNASIUM FLOOR
- 5 THRESHOLD - REFER TO T4/A0-04 FOR DETAILS
- 6 PERIMETER OF GAMELINE PAINT TO BE 4300 BLUE
- 7 INTERIOR CIRCLES AND LINES OF GAMELINE PAINT TO BE 4100 WHITE
- 8 CORNER GUARDS AS SPECIFIED
- 9 EXISTING FLOOR DRAIN TO REMAIN - REFER TO MECHANICAL - COORDINATE WITH TILE EDGES
- 10 NEW FLOOR DRAIN - REFER TO MECHANICAL AND FOOD SERVICE - COORDINATE LOCATION WITH TILE EDGES

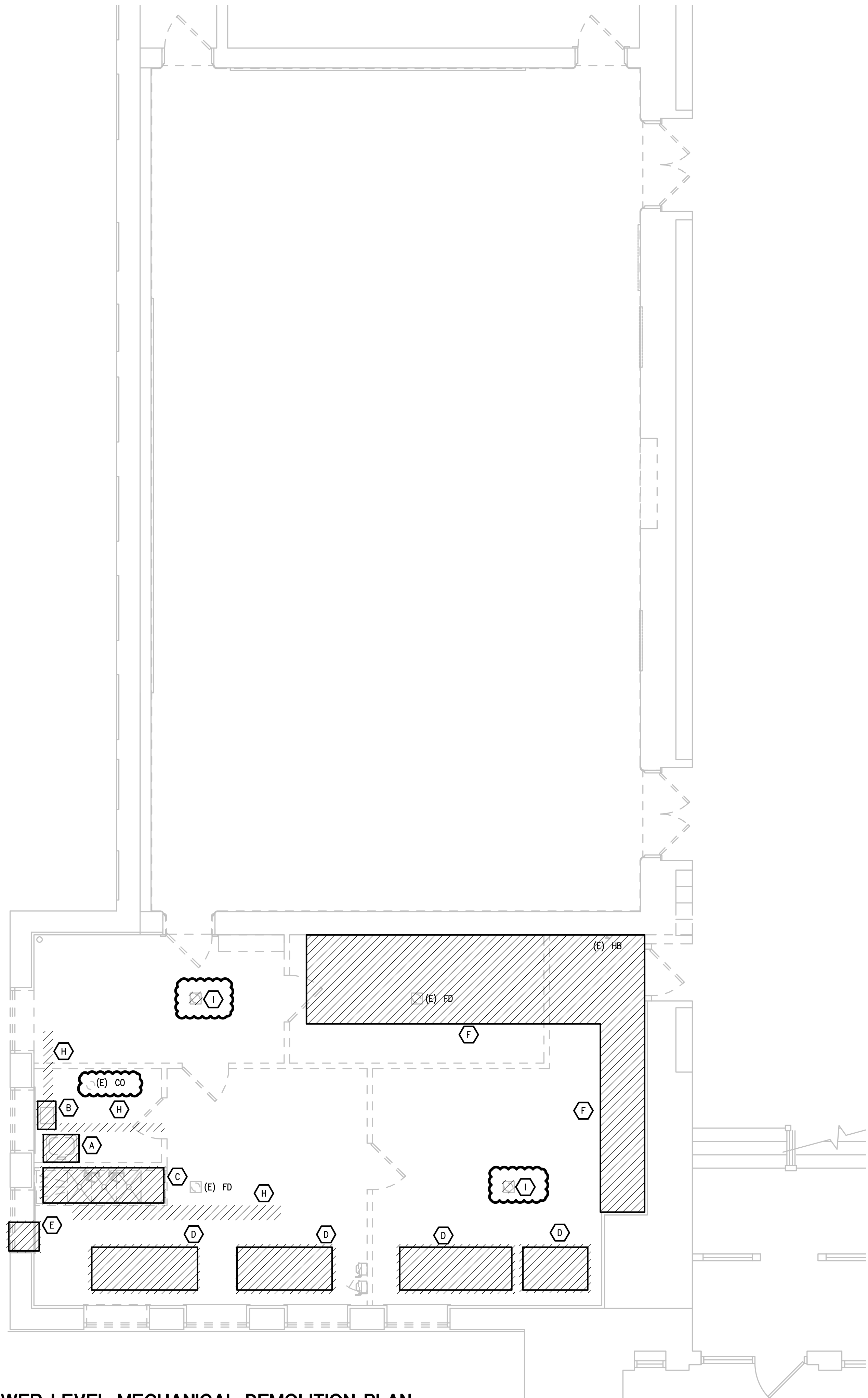
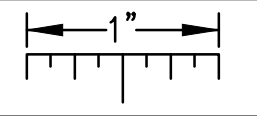
FINISH FLOOR PLAN LEGEND:

- PORCELAIN TILE (PT-1)
- RESILIENT ATHLETIC FLOORING (RAF-1)
- SEALED CONCRETE (SC-1)
- VINYL COMPOSITE TILE (VCT-1)

2 Gymnasium 104
 1/4" = 1'-0"

N
 PROJECT ACTUAL
 1 Lower Level Finish Floor Plan
 1/4" = 1'-0"

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



LOWER LEVEL GAS METER DEMOLITION PLAN
SCALE: 1/4" = 1' - 0"

MECHANICAL DEMOLITION GENERAL NOTES:

1. ANY INTERRUPTION OF EXISTING SERVICES AND/OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE OWNER'S REPRESENTATIVE.
2. THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF THE WORK. ACTUAL ROUTING AND SIZES OF EXISTING PIPING AND DUCTWORK MIGHT DIFFER TO A LIMITED EXTENT FROM WHAT IS SHOWN. MAJOR DISCREPANCIES BETWEEN THE DRAWINGS AND ACTUAL EXISTING CONDITIONS SHALL BE REPORTED TO THE ENGINEER.
3. THE EXACT EXTENT OF DEMOLITION SHALL BE AS REQUIRED BY THE NEW WORK.
4. ALL MECHANICAL ITEMS TO BE REMOVED SHALL BE REMOVED COMPLETE, INCLUDING ALL RELATED ITEMS SUCH AS HANGERS, SUPPORTS, CONTROLS, ETC. CAP ALL OPEN ENDED PIPES AND DUCTWORK.

DEMOLITION KEY NOTES:

- A. REMOVE LAVATORY AND ASSOCIATED BRANCH CW, HW, VENT AND SANITARY PIPING BACK TO MAIN.
- B. REMOVE GREASE TRAP AND ASSOCIATED BRANCH SANITARY LINES.
- C. REMOVE THREE-COMPARTMENT SINK AND ASSOCIATED BRANCH CW, HW, VENT AND SANITARY PIPING BACK TO NEARBY MAIN. PREPARE PIPING FOR NEW WORK.
- D. REMOVE SUSPENDED STEAM RADIATOR AND CONTROLS. CAP STEAM AND CONDENSATE PIPING IN A CONCEALED MANNER.
- E. REMOVE SIDEWALL EXHAUST FAN. COORDINATE WALL PATCHING WITH OTHER TRADES.
- F. REMOVE BULKHEAD AND ASSOCIATED DUCTWORK AND GRILLES.
- G. REMOVE GAS METER LOCATED IN LOWER LEVEL (NORTHEAST CORNER OF BUILDING). PREPARE PIPING FOR NEW GAS METER TO BE LOCATED OUTSIDE ON GRADE. COORDINATE NEW METER WITH UTILITY COMPANY. SEE GAS LOAD PIPING DIAGRAM.
- H. SAW CUT FLOOR.
- I. REMOVE FLOOR DRAIN. CAP PIPING IN A CONCEALED MANNER.

PARTNERS



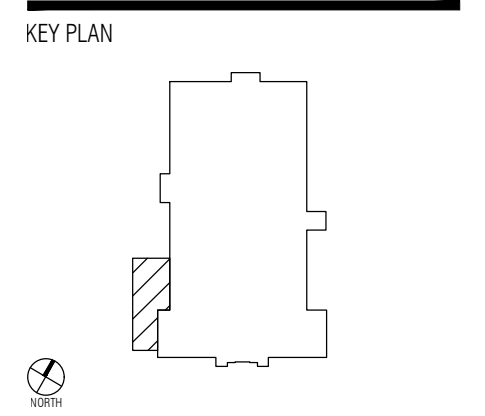
PARTNERS in Architecture, PLC
65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

Statement of Intellectual Property
The ideas, concepts, drawings and thoughts conveyed herein are the intellectual property of PARTNERS in Architecture, PLC. 65 Market Street, Mount Clemens, MI 48043 (P 586.469.3600). This set of drawings, in whole or in part, may not be reproduced, without the written consent of PARTNERS in Architecture, PLC. This information is protected under U.S. Copyright Law, all rights reserved.
© Copyright 2022

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNLESS ISSUED BELOW SPECIFICALLY FOR "BIDDING / CONSTRUCTION"

CONSULTANT

Peter Basso Associates Inc
CONSULTING ENGINEERS
5145 Livemore, Suite 100
Troy, Michigan 48068-3276
Tel: 248-879-5666
Fax: 248-879-0007
www.PeterBassoAssociates.com
PIA Project No. 2022-0376



OWNER
Hamtramck Public Schools

PROJECT NAME
Holbrook Elementary Kitchen Addition and Renovation

2361 Alice St
Hamtramck, MI 48212

PROJECT NO.
19-105

ISSUES / REVISIONS
Bidding - Construction 01/31/2023
Addendum #1 02/15/2023

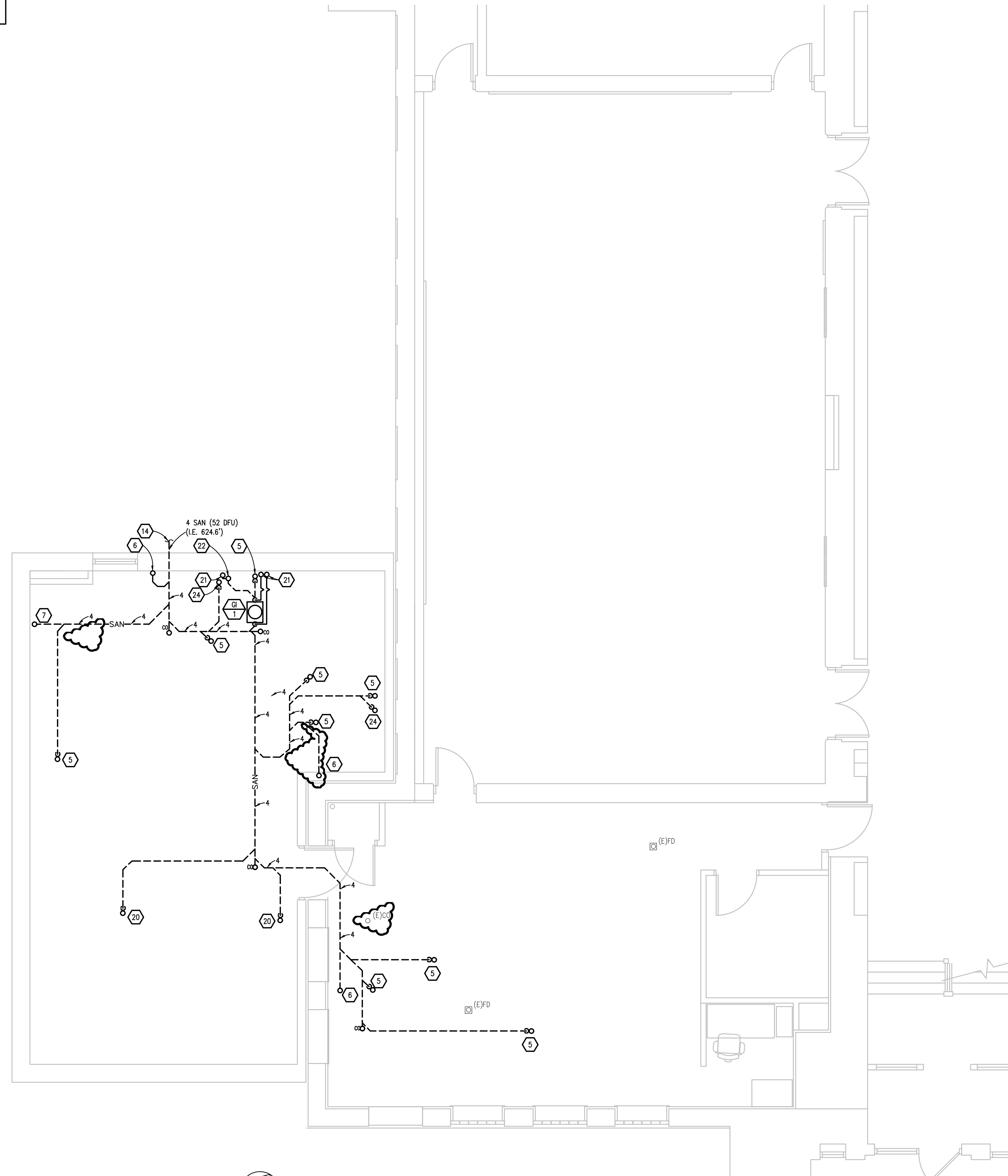
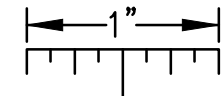
DRAWN BY
JPG
CHECKED BY
SVM
APPROVED BY
SVM
SHEET NAME
LOWER LEVEL MECHANICAL DEMOLITION PLAN

SHEET NO.
MD1.0

G:\2022\2022-0376-00\CAD\2022-0376-MD1-DPO.dwg, MD1.0, 2/14/2023 1:28:40 PM, Joseph P. Giglio, Peter Basso Associates Inc.

LOWER LEVEL MECHANICAL DEMOLITION PLAN
SCALE: 1/4" = 1' - 0"

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



UNDERGROUND PLUMBING PLAN
SCALE: 1/4" = 1' - 0"

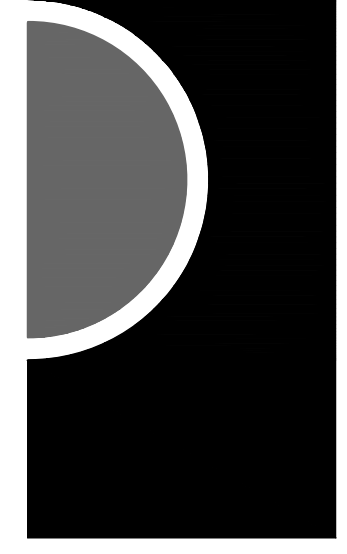
PLUMBING GENERAL NOTES:

1. THESE DRAWINGS ARE DIAGRAMMATIC, AND REPRESENT THE GENERAL INTENT AND ARRANGEMENT OF SYSTEMS. THEY ARE NOT TO BE CONSIDERED FABRICATION/COORDINATION/SHOP DRAWINGS. COORDINATION WITH OTHER TRADES IS REQUIRED. PROVIDE THE ADDITIONAL FITTINGS AND OFFSETS THAT WILL BE REQUIRED TO COMPLETE EACH SYSTEM AND TO AVOID INTERFERENCES WITH ALL OTHER SYSTEMS INCLUDING THE STRUCTURE, SHEET METAL, OTHER PIPING SYSTEMS, ELECTRICAL CONDUITS, BUS DUCTS, CABLE TRAY, LIGHT FIXTURES, ETC. AND/OR OTHER SPACE CONSTRAINTS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL TRANSFORMERS, SWITCHBOARDS, PANELBOARDS OR MOTOR CONTROL CENTERS.
4. COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
5. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
6. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONED LOCATIONS OF PLUMBING FIXTURES.
7. HOT AND COLD WATER PIPING RUN-OUTS TO LAVATORIES AND SINKS SHALL BE 1/2" UNLESS OTHERWISE NOTED.
8. PLUMBING VENT PIPING THROUGH ROOF SHALL BE LOCATED A MINIMUM OF 10'-0" FROM ANY FRESH AIR INTAKE LOCATION AND A MINIMUM OF 18" CLEAR FROM THE INSIDE FACE OF PARAPET.
9. PROVIDE CODE REQUIRED CLEARANCE FOR ALL CLEANOUTS INSTALLED IN SANITARY WASTE AND VENT PIPING.
10. MINIMUM UNDERGROUND PIPE SIZE SHALL BE 3".
11. WATER SERVICE ENTRANCE PIPING SHALL BE BURIED WITH DEPTH OF COVER OVER TOP OF PIPE OF AT LEAST 12" OR WITH TOP OF PIPE AT LEAST 12" BELOW LEVEL OF MAXIMUM FROST PENETRATION, OR AS REQUIRED BY AUTHORITIES HAVING JURISDICTION, WHICHEVER IS DEEPEST.

CONSTRUCTION KEY NOTES:

1. 4 RC UP TO 4 RD.
2. 4 ORC UP TO 4 ORD.
3. 2 V UP TO 3 VTR.
4. 1/2 CW AND 1/2 HW (140F) DN TO WAREWASHER OR WASTE COLLECTOR. PROVIDE CODE COMPLIANT BACKFLOW PREVENTION DEVICE ON HW AND CW. PROVIDE ASSE 1070 THERMOSTATIC MIXING VALVE ON HW SUPPLY TO EQUIPMENT. INDIRECT WASTE DRAIN FROM FIXTURE TO NEARBY FLOOR SINK. REFER TO FOOD SERVICE EQUIPMENT DRAWING "UTILITY SCHEDULE" FOR INDIRECT WASTE SIZE AND PLUMBING REQUIREMENTS.
5. 3 SAN UP TO FLOOR DRAIN OR FLOOR SINK.
6. 3 SAN UP TO HAND SINK.
7. 3 SAN UP TO PRE-RINSE SINK.
8. 1 CW AND 1 HW (140F) DOWN TO 3-COMPARTMENT SINK FAUCET. PROVIDE INDIRECT WASTE DRAINS FROM FIXTURE TO NEARBY FLOOR SINK. REFER TO FOOD SERVICE EQUIPMENT DRAWING "UTILITY SCHEDULE".
9. PROVIDE 3/4 HW (140F) AND 1 CW DOWN TO PREP SINK.
10. 3/4 CW, 1 1/2 V AND 3/4 HW DOWN TO HAND WASH SINK. PROVIDE ASSE 1070 THERMOSTATIC MIXING VALVE ON HW SUPPLY TO FAUCET.
11. 3/4 CW, 1 1/2 V AND 3/4 HW DOWN TO COUNTER SINK. PROVIDE ASSE 1070 THERMOSTATIC MIXING VALVE ON HW SUPPLY TO FAUCET.
12. REFER TO DOMESTIC WATER HEATING PIPING DIAGRAM.
13. 1 1/2 LOW PRESSURE GAS FROM ROOF TO FEED WH.
14. REFER TO CIVIL DRAWINGS FOR CONTINUATION.
15. 3/4 CW FILTERED TO COMBI OVEN.
16. 3/4 CW TO COMBI OVEN.
17. 3/4 CW & HW TO PRE-RINSE FAUCET
18. ROUTE 3/4 CONDENSATE DRAIN FROM EVAPORATOR COIL INTO FUNNEL FLOOR DRAIN.
19. 1/2 CW LINE TO DISPOSER (UNDERNEATH PRE-RINSE BASIN).
20. UP TO FUNNEL FLOOR DRAIN.
21. 2 VENT UP. SEE PLUMBING PLAN M2.01 AND DETAIL.
22. 3 SAN UP TO WASH SINK OF 3 COMPARTMENT SINK. (SEE DETAIL)
23. 2 CW, 2 HW, 2 V AND 3 HWR PENETRATE FLOOR STRUCTURE ABOVE TO ENTER SERVERY ABOVE ACT CEILING.
24. 2 SAN UP TO DISPOSER. (SEE FSE DRAWINGS)

PARTNERS

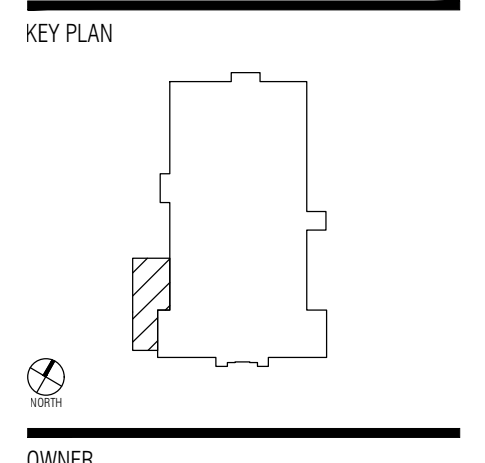


PARTNERS in Architecture, PLC
65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

Statement of Intellectual Property
The ideas, concepts, drawings and thoughts conveyed herein are the intellectual property of PARTNERS in Architecture, PLC, 65 Market Street, Mount Clemens, MI 48043 (P 586.469.3600). This set of drawings, in whole or in part, may not be reproduced, without the written consent of PARTNERS in Architecture, PLC. This information is protected under U.S. Copyright Law, all rights reserved.

© Copyright 2022
THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNLESS ISSUED BELOW SPECIFICALLY FOR "BIDDING / CONSTRUCTION"

CONSULTANT
PBA
Peter Basso Associates Inc
CONSULTING ENGINEERS
5145 Livemore, Suite 100
Troy, Michigan 48068-3276
Tel: 248-879-5666
Fax: 248-879-0007
www.PeterBassoAssociates.com
PBA Project No. 2022-0376



OWNER
Hamtramck Public Schools

PROJECT NAME
Holbrook Elementary Kitchen Addition and Renovation

2361 Alice St
Hamtramck, MI 48212

PROJECT NO.
19-105

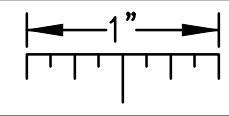
ISSUES / REVISIONS
Bidding - Construction 01/31/2023
Addendum #1 02/15/2023

DRAWN BY
JPG
CHECKED BY
SVM
APPROVED BY
SVM
SHEET NAME
UNDERGROUND PLUMBING PLAN

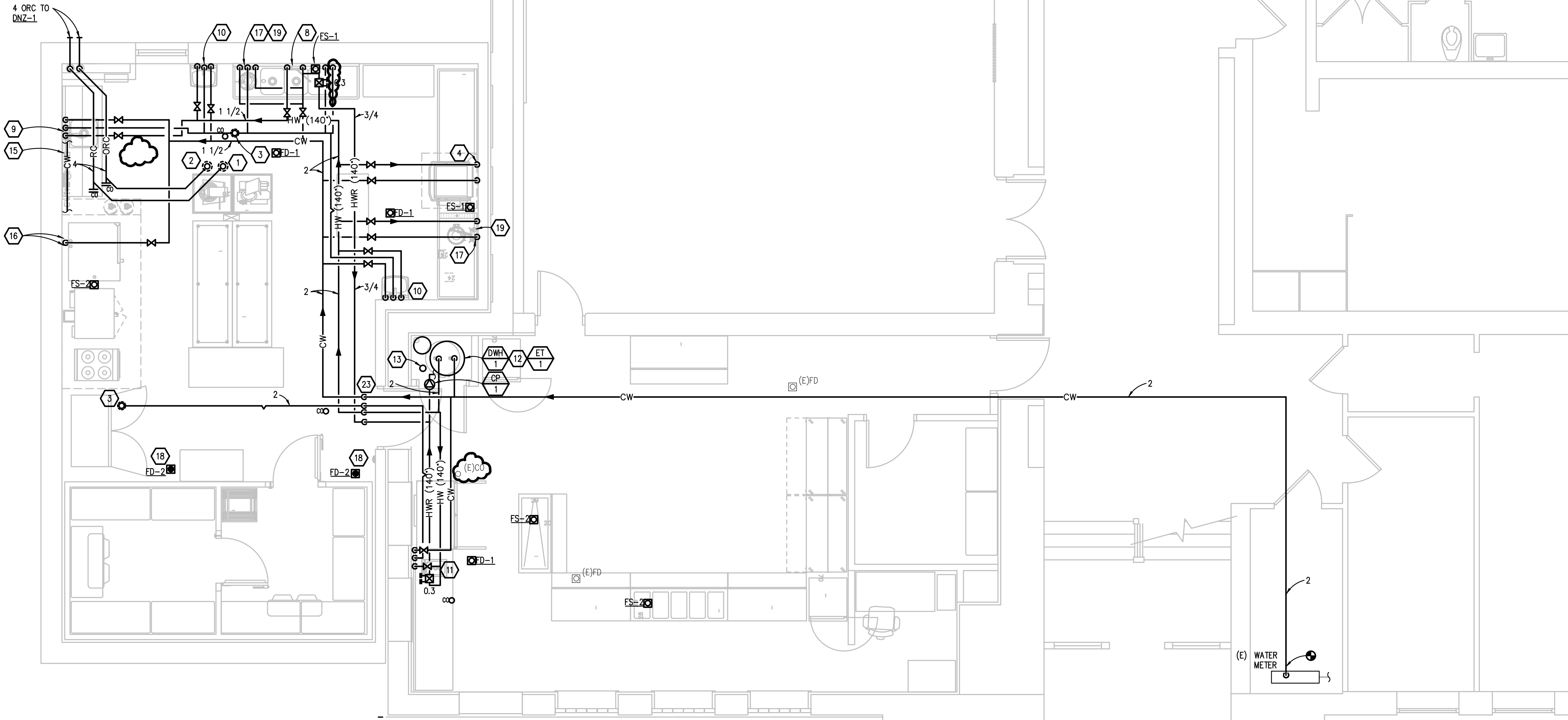
SHEET NO.
M2.00

c:\2022\2022-0376-00\CAD\2022-0376-M2-PL00.dwg, M2.00, 2/14/2023 1:25:27 PM, Joseph P. Giglio, Peter Basso Associates Inc.

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



REFER TO FOOD SERVICE DRAWINGS FOR DOMESTIC WATER PIPING APPLIANCE TERMINATION ELEVATIONS



PLUMBING GENERAL NOTES:

- THESE DRAWINGS ARE DIAGRAMMATIC, AND REPRESENT THE GENERAL INTENT AND ARRANGEMENT OF SYSTEMS. THEY ARE NOT TO BE CONSIDERED FABRICATION/COORDINATION/SHOP DRAWINGS. COORDINATION WITH OTHER TRADES IS REQUIRED. PROVIDE THE ADDITIONAL FITTINGS AND OFFSETS THAT WILL BE REQUIRED TO COMPLETE EACH SYSTEM AND TO AVOID INTERFERENCES WITH ALL OTHER SYSTEMS INCLUDING THE STRUCTURE, SHEET METAL, OTHER PIPING SYSTEMS, ELECTRICAL CONDUITS, BUS DUCTS, CABLE TRAY, LIGHT FIXTURES, ETC. AND/OR OTHER SPACE CONSTRAINTS.
- INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
- PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL TRANSFORMERS, SWITCHBOARDS, PANELBOARDS OR MOTOR CONTROL CENTERS.
- COORDINATE AND PROVIDE ACCESS DOORS WITHIN INACCESSIBLE CEILING, SHAFT, AND CHASE AREAS FOR ALL COMPONENTS WHICH REQUIRE SERVICE ACCESS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
- PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
- REFER TO ARCHITECTURAL PLANS FOR DIMENSIONED LOCATIONS OF PLUMBING FIXTURES.
- HOT AND COLD WATER PIPING RUN-OUTS TO LAVATORIES AND SINKS SHALL BE 1/2" UNLESS OTHERWISE NOTED.
- PLUMBING VENT PIPING THROUGH ROOF SHALL BE LOCATED A MINIMUM OF 10'-0" FROM ANY FRESH AIR INTAKE LOCATION AND A MINIMUM OF 18" CLEAR FROM THE INSIDE FACE OF PARAPET.
- PROVIDE CODE REQUIRED CLEARANCE FOR ALL CLEANOUTS INSTALLED IN SANITARY WASTE AND VENT PIPING.
- MINIMUM UNDERGROUND PIPE SIZE SHALL BE 3".
- WATER SERVICE ENTRANCE PIPING SHALL BE BURIED WITH DEPTH OF COVER OVER TOP OF PIPE OF AT LEAST 12" OR WITH TOP OF PIPE AT LEAST 12" BELOW LEVEL OF MAXIMUM FROST PENETRATION, OR AS REQUIRED BY AUTHORITIES HAVING JURISDICTION, WHICHEVER IS DEEPEST.

CONSTRUCTION KEY NOTES:

- 4 RC UP TO 4 RD.
- 4 ORC UP TO 4 ORD.
- 2 V UP TO 3 VTR.
- 1/2 CW AND 1/2 HW (140F) DN TO WAREWASHER OR WASTE COLLECTOR. PROVIDE CODE COMPLIANT BACKFLOW PREVENTION DEVICE ON HW AND CW. PROVIDE ASSE 1070 THERMOSTATIC MIXING VALVE ON HW SUPPLY TO EQUIPMENT. INDIRECT WASTE DRAIN FROM FIXTURE TO NEARBY FLOOR SINK. REFER TO FOOD SERVICE EQUIPMENT DRAWING "UTILITY SCHEDULE" FOR INDIRECT WASTE SIZE AND PLUMBING REQUIREMENTS.
- 3 SAN UP TO FLOOR DRAIN OR FLOOR SINK.
- 3 SAN UP TO HAND SINK.
- 3 SAN UP TO PRE-RINSE SINK.
- 1 CW AND 1 HW (140F) DOWN TO 3-COMPARTMENT SINK FAUCET. PROVIDE INDIRECT WASTE DRAINS FROM FIXTURE TO NEARBY FLOOR SINK. REFER TO FOOD SERVICE EQUIPMENT DRAWING "UTILITY SCHEDULE".
- PROVIDE 3/4 HW (140F) AND 1 CW DOWN TO PREP SINK.
- 3/4 CW, 1 1/2 V AND 3/4 HW DOWN TO HAND WASH SINK. PROVIDE ASSE 1070 THERMOSTATIC MIXING VALVE ON HW SUPPLY TO FAUCET.
- 3/4 CW, 1 1/2 V AND 3/4 HW DOWN TO COUNTER SINK. PROVIDE ASSE 1070 THERMOSTATIC MIXING VALVE ON HW SUPPLY TO FAUCET.
- REFER TO DOMESTIC WATER HEATING PIPING DIAGRAM.
- 1 1/2 LOW PRESSURE GAS FROM ROOF TO FEED WH.
- REFER TO CIVIL DRAWINGS FOR CONTINUATION.
- 3/4 CW FILTERED TO COMBI OVEN.
- 3/4 CW TO COMBI OVEN.
- 3/4 CW & HW TO PRE-RINSE FAUCET
- ROUTE 3/4 CONDENSATE DRAIN FROM EVAPORATOR COIL INTO FUNNEL FLOOR DRAIN.
- 1/2 CW LINE TO DISPOSER (UNDERNEATH PRE-RINSE BASIN).
- UP TO FUNNEL FLOOR DRAIN.
- 2 VENT UP. SEE PLUMBING PLAN M2.01 AND DETAIL.
- 3 SAN UP TO WASH SINK OF 3 COMPARTMENT SINK. (SEE DETAIL)
- 2 CW, 2 HW, 2 V AND 3 HWR PENETRATE FLOOR STRUCTURE ABOVE TO ENTER SERVERY ABOVE ACT CEILING.
- 2 SAN UP TO DISPOSER. (SEE FSE DRAWINGS)

PARTNERS



PARTNERS in Architecture, PLC
65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600
F 586.469.3607

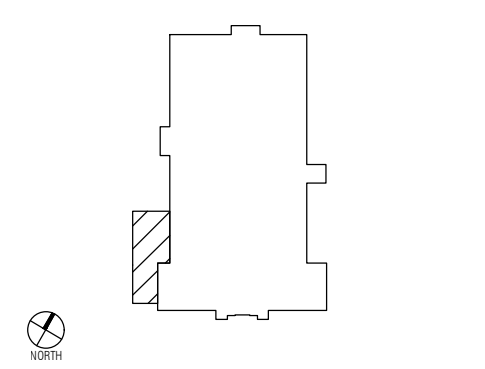
Statement of Intellectual Property
The ideas, concepts, drawings and thoughts conveyed herein are the intellectual property of PARTNERS in Architecture, PLC. 65 Market Street, Mount Clemens, MI 48043 (P 586.469.3600). This set of drawings, in whole or in part, may not be reproduced, without the written consent of PARTNERS in Architecture, PLC. This information is protected under U.S. Copyright Law, all rights reserved.

© Copyright 2022
THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNLESS ISSUED BELOW SPECIFICALLY FOR "BIDDING / CONSTRUCTION"

CONSULTANT



KEY PLAN



OWNER

Hamtramck Public Schools

PROJECT NAME

Holbrook Elementary Kitchen Addition and Renovation

2361 Alice St
Hamtramck, MI 48212

PROJECT NO.

19-105

ISSUES / REVISIONS

Bidding - Construction	01/31/2023
Addendum #1	02/15/2023

DRAWN BY

JPG

CHECKED BY

SVM

APPROVED BY

SVM

SHEET NAME

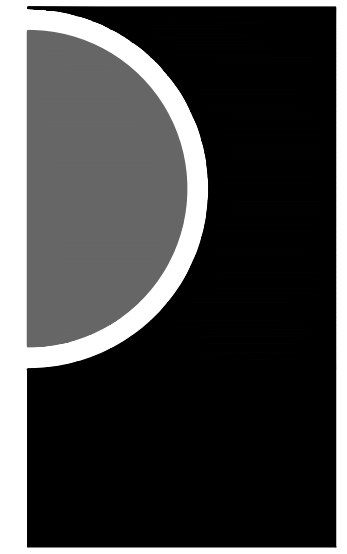
LOWER LEVEL PLUMBING PLAN

SHEET NO.

M2.01

LOWER LEVEL PLUMBING PLAN
SCALE: 1/4" = 1' - 0"

c:\2022\2022-0376-00\CAD\2022-0376-M2-PLD.dwg, M2.01, 2/14/2023 1:26:42 PM, Joseph P. Giglio, Peter Basso Associates Inc.



PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586-469-3600
F 586-469-3607

Statement of Intellectual Property

The ideas, concepts, drawings and thoughts conveyed herein are the intellectual property of PARTNERS in Architecture, PLC. 65 Market Street, Mount Clemens, MI 48043 (P 586-469-3600). This set of drawings, in whole or in part, may not be reproduced, without the written consent of PARTNERS in Architecture, PLC. This information is protected under U.S. Copyright Law, all rights reserved.

© Copyright 2022

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNLESS ISSUED BELOW SPECIFICALLY FOR "BIDDING / CONSTRUCTION"

CONSULTANT



Peter Basso Associates Inc
CONSULTING ENGINEERS
5145 Livernois, Suite 100
Troy, Michigan 48068-3276
Tel: 248-879-5666
Fax: 248-879-0007
www.PeterBassoAssociates.com
PIA Project No. 2022-0376

KEY PLAN

OWNER

Hamtramck
Public Schools

PROJECT NAME

Holbrook Elementary
Kitchen Addition and
Renovation

2361 Alice St
Hamtramck, MI 48212

PROJECT NO.

19-105

ISSUES / REVISIONS

Bidding - Construction 01/31/2023
Addendum #1 02/14/2023

DRAWN BY

JPG

CHECKED BY

SVM

APPROVED BY

SVM

SHEET NAME

MECHANICAL DETAILS

SHEET NO.

M6.3

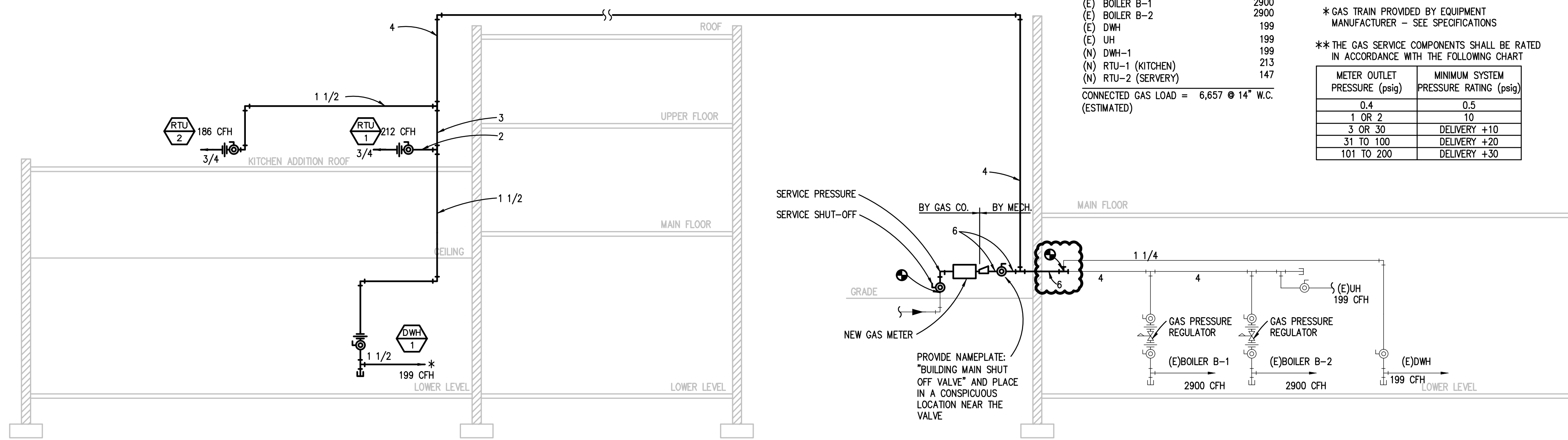
GAS LOAD SCHEDULE

ITEM	TOTAL CFH
(E) BOILER B-1	2900
(E) BOILER B-2	2900
(E) DWH	199
(E) UH	199
(N) DWH-1	199
(N) RTU-1 (KITCHEN)	213
(N) RTU-2 (SERVERY)	147
CONNECTED GAS LOAD = 6,657 @ 14" W.C. (ESTIMATED)	

* GAS TRAIN PROVIDED BY EQUIPMENT
MANUFACTURER - SEE SPECIFICATIONS

** THE GAS SERVICE COMPONENTS SHALL BE RATED
IN ACCORDANCE WITH THE FOLLOWING CHART

METER OUTLET PRESSURE (psig)	MINIMUM SYSTEM PRESSURE RATING (psig)
0.4	0.5
1 OR 2	10
3 OR 30	DELIVERY +10
31 TO 100	DELIVERY +20
101 TO 200	DELIVERY +30



NATURAL GAS PIPING DIAGRAM
NO SCALE