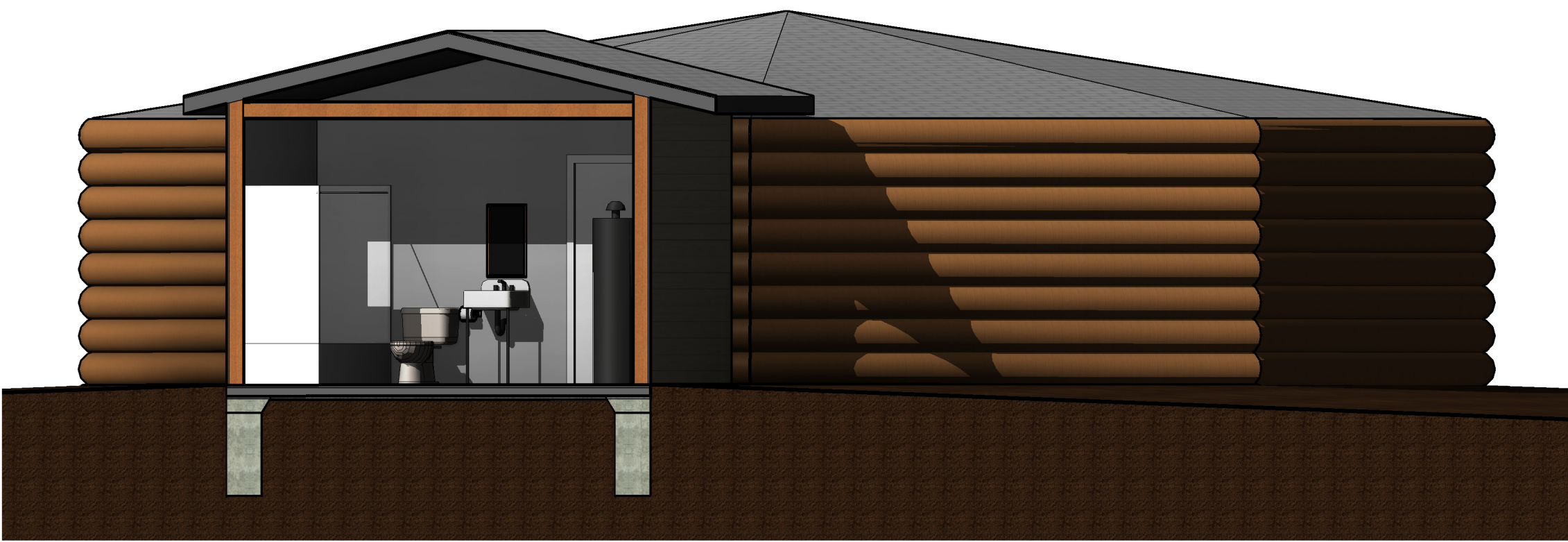
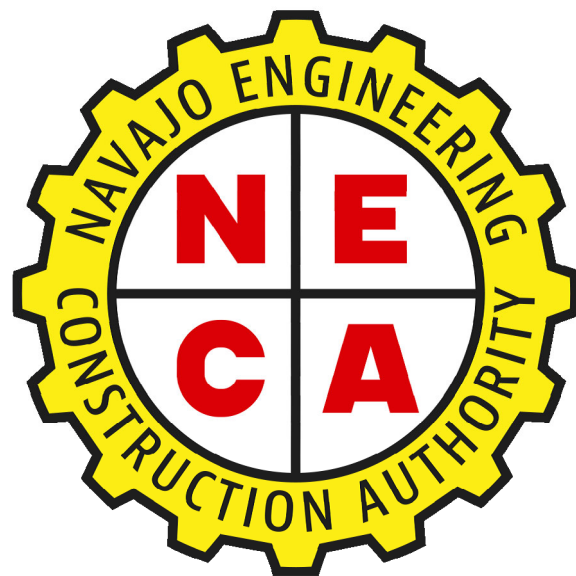


# NAVAJO NATION BATHROOM ADDITIONS

NAVAJO ENGINEERING AND CONSTRUCTION AUTHORITY  
CONSTRUCTION DOCUMENTS  
NAVAJO NATION



## PROJECT TEAM

**ARCHITECT**  
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4110 VOLCOTT AVE NE STE. C, ALBUQUERQUE, NM  
87109  
CONTACT: ANTONIO LUCHINI

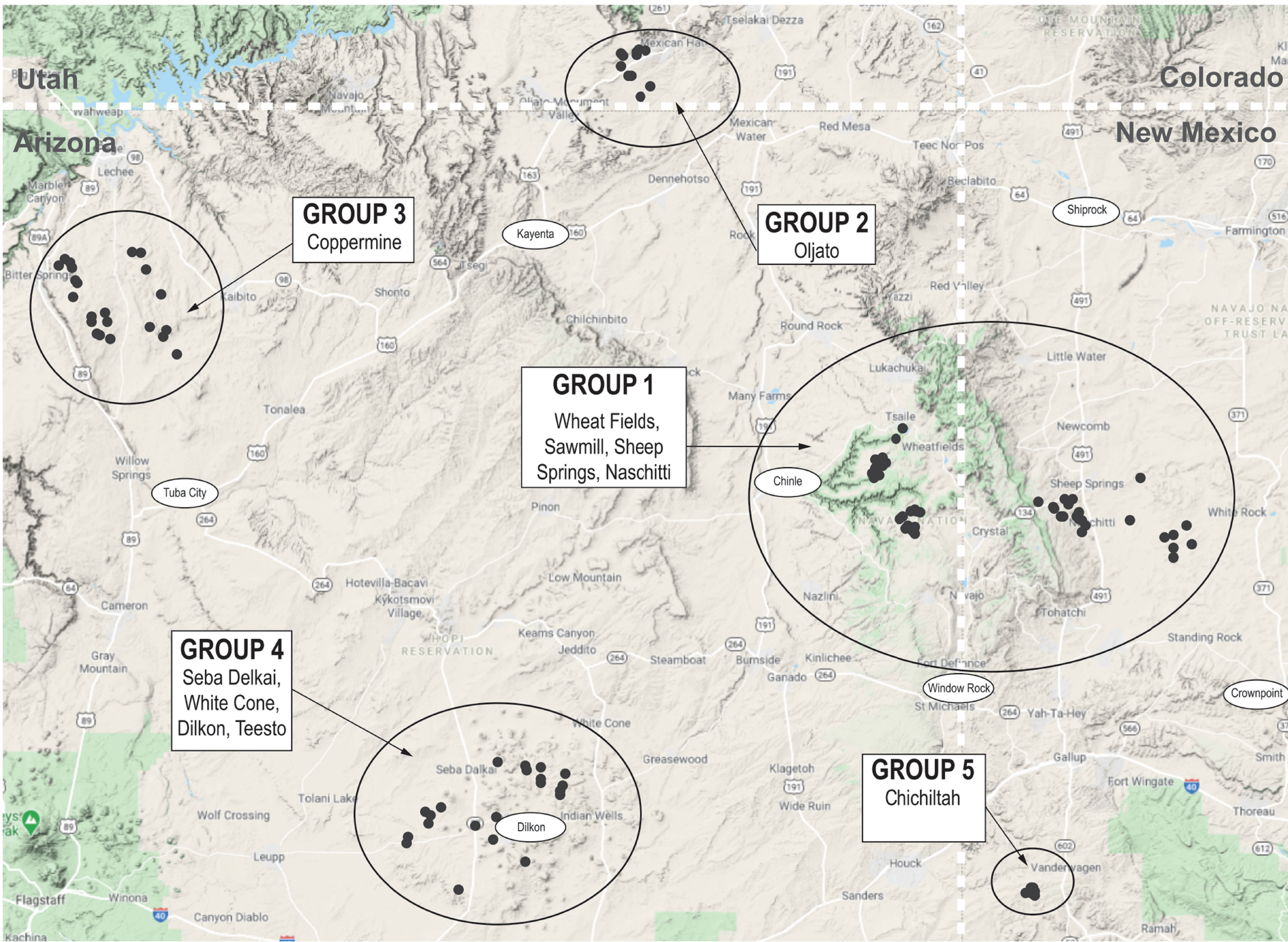
**MECHANICAL ELECTRICAL AND PLUMBING**  
QA ENGINEERING  
1409 ORTIZ DR SE, ALBUQUERQUE NM 87108  
CONTACT: NERISSA MUUS

## DRAWING INDEX

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NAVAJO NATION BATHROOM ADDITIONS

NAVAJO NATION  
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OWNER:  
NAVAJO ENG & CONSTRUCTION AUTHORITY

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**G-001**  
Sequence of



STRUCTURAL OUTLINE SPECIFICATIONS FOR NECA 150 BATHROOM ADDITIONS, SANTA FE, NM

I. DESIGN CRITERIA & GENERAL NOTES

- A. Design Codes and Manuals:
- 2015 International Building Code (IBC)
  - ASCE 7-10, Minimum Design Loads for Buildings and Other Structures
  - ACI 318-14, Building Code Requirements for Reinforced Concrete
  - American Wood Council, National Design Specification for Wood Construction 2015

B. VERTICAL DESIGN LOADS:

- Live Loads
  - Floor.....40 PSF
- Live Roof Loads
  - Roof.....20 PSF
    - Unreduced Live Load, L<sub>o</sub>.....20 PSF
- Snow Loads
  - Roof Snow Load.....20 PSF
    - Ground Snow Load, p<sub>g</sub>.....20 PSF
    - Risk Category.....II
- Dead Loads
  - Roof.....25 PSF
  - Floor.....25 PSF

C. HORIZONTAL DESIGN LOADS:

- Wind Loads
  - Risk Category II
  - Exposure "C"
  - Ultimate Design Wind Speed (V) - (3 SECOND GUST) - 115 MPH
  - Design Wind Pressures for Components and Cladding:
    - Roof:
      - Zone 1. p = -28.6 psf / na
      - Zone 2. p = -60.6 psf / na
      - Zone 3. p = -82.6 psf / na
    - Roof Overhang:
      - Zone 2. p = -41.5 psf
      - Zone 3. p = -68.3 psf
    - Walls:
      - Zone 4. p = -26.4 psf / +26.4 psf
      - Zone 5. p = -48.4 psf / +26.4 psf
    - Effective Wind Area = 10 sf

D. GENERAL NOTES

- Drawings
  - Do not scale drawings.
  - See architectural, mechanical, electrical and plumbing drawings for exact location and arrangement of any pads, support frames, etc., required for mechanical and electrical equipment and not with other trades concerning plates, anchors, notches, etc., to be placed in concrete.
  - Any conflict between the structural drawings and specifications, and/or other discipline plans and/or specifications shall be brought to the attention of the architect prior to proceeding with the work affected.
  - Contractor shall verify all edge form setting dimensions as well as the location of elevation changes, off-sets, brick ledges, and block-outs with other disciplines and notify this office of any discrepancies that may exist prior to commencing construction.
- OPENINGS
  - Openings, sleeves, etc. to be placed through any structural member shall first be approved by the structural engineer. Sleeves shall be provided for openings prior to placing of concrete. Cutting of hardened concrete shall not be permitted except by special structural approval which will be on an individual basis.
- EXISTING STRUCTURES
  - Contract documents have been prepared using available drawings and site observations as permitted by access restrictions during design.
  - During construction, the contractor may encounter existing conditions which are not known or are at variance with project documentation. Contractor shall notify the architect of all conditions not per the contract documents, including but not limited to:
    - Sizes and dimensions other than those shown.
    - Damage or deterioration to materials and components
    - Conditions of instability or lack of support.
    - Items noted as existing on the drawings, but not found in the field.
  - Prepare dimensional drawings of all discovered items.
  - Contractor shall field verify all existing structural conditions prior to submitting shop drawings.
  - Submit a dimensioned drawing of all new openings through existing structure and secure approval prior to cutting. Drawing shall show vertical and horizontal location and size of proposed opening(s).
- The contractor shall provide all measures necessary to protect the structure during construction. Such measures shall include, but not be limited to bracing and shoring for loads due to hydrostatic, earth, wind or seismic forces, construction equipment, etc. Observation visits to the site by the structural engineer shall not include inspection of the above items.
- Cost of additional field and office work necessitated by requests by the contractor for an option of due to errors or omissions in construction shall be borne by the contractor. Options are for contractor's convenience, he shall be responsible for all changes necessary if he chooses an option and he shall coordinate all details.

E. Foundation Notes

- Geotechnical engineering study and recommendations for this project have not been performed. Design is based on the assumed values below. A geotechnical study shall be completed for each site prior to construction for the verification of all soil design values and for verification of the applicability of the foundation system shown
  - Important additional information concerning specific soil conditions is contained in this report and shall be reviewed prior to the start of construction.
- Design is based on recommendations provided by the geotechnical engineering study:
  - Allowable soil Bearing Pressure = 1500 psf
  - Frost Depth / Minimum Exterior Footing Embedment = 24"
  - Building pad shall be over-excavated a minimum of 2'-0" below bottom of footing and

- replaced with engineered fill. Excavation should extend laterally 2'-0" beyond building perimeter
- Requirements for granular base and capillary (vapor) barriers is specified in this report. Areas where the capillary barriers are required shall be coordinated with the architect prior to construction. The barrier shall have a minimum thickness of 10 mils and shall conform to the requirements of ACI 302.1R-04.
  - Contractor shall be responsible for providing positive water drainage away from structures, during and after construction.

- It is important to understand that the performance of the foundation is linked directly to the consistency of the moisture content in the soil. The geotechnical engineering study provides recommendations for natural ground preparation, remedial earthwork, drainage, grading, and landscaping.

- When a geotechnical engineering study is not obtained the owner must either obtain a geotechnical study or concede that even with proper compaction of native soils listed in steps below, will not ensure differential settlement is mitigated. Suggested site preparation on the structural drawings does not ensure differential settlement is mitigated. Typical geotechnical studies contain specific requirements concerning clearing and grubbing, site, subfloor and bearing surface preparation, structural fill requirements, compaction requirements, and drainage and sloping requirements not necessarily shown on these drawings. Refer to structural recommendations for suggested site prep and consult a geotechnical engineer as required.
  - The contractor shall engage and bear the cost of a geotechnical engineer or designated representative to monitor site preparation, foundation construction and retaining wall construction. The geotechnical engineer shall provide continuous on-site observation by experienced personnel during construction of controlled earthwork. The contractor shall notify the geotechnical engineer at least two working days in advance of any field operations of controlled earthwork or of any resumption of operations after stoppages. Tests of fill materials and embankments shall be made in accordance to the recommendations for observation and testing provided within the geotechnical recommendations, and at the following suggested minimum rates:
    - At least one moisture-density (proctor) test, atterberg limits test, and percent finer than #200 sieve test should be performed per each subgrade soil type and engineered fill material. The geotechnical engineer must review the test results for conformance with specifications and approve of fill materials and their intended use, prior to construction.
    - A minimum of one field density and moisture test should be performed per 2000 square feet of building pad fill or pavement subgrade per each 1 foot of compacted fill thickness (or at least one test per each 1 foot of compacted fill thickness in each area worked per day if smaller sections).
    - A minimum of one field density and moisture test should be performed per 50 linear feet of foundation excavation bottom prior to placement of reinforcing steel and concrete (or at least one test per area worked per day if smaller sections).
    - A minimum of one field density and moisture test should be performed per 100 linear feet of retaining wall backfill and/or utility trench backfill per each 1 foot of compacted fill thickness (or at least one test per each 1 foot of compacted fill thickness in each area worked per day if smaller sections).

II. QUALITY ASSURANCE & STATEMENT OF SPECIAL INSPECTION

- The contractor shall engage qualified independent inspectors to implement special inspection. Special inspection shall conform to the IBC, chapter 17.
- After each inspection and test, promptly submit copy of laboratory report to owner, architect/engineer, and to contractor. Report shall include:
  - Date issued, Project title and number, Name of inspector, Date and time of sampling or inspection, Identification of project specifications section, Location of project, Type of inspection or test, Date of tests, Results of tests, Conformance with contract documents
- Required inspections:
  - Soils - as outlined in Outline Specifications Section titled "Foundation Notes"
  - Concrete - as outlined in the Outline Specifications Section titled "Structural Concrete"
    - Installation of embedded bolts and plates supporting structure
    - Reinforcing steel placement
    - Field bending of reinforcing steel
    - Reinforcing couplers
    - Anchored rebar or threaded rods into hardened concrete
  - Wood
    - Hold down anchors/strap ties
    - Shear wall/diaphragm fastening
    - Metal connectors

- Special inspection is to be provided in addition to inspections conducted by the building department and shall not be construed to relieve the owner or his authorized agent from requesting the period and called inspections required by section 1704 of the International Building Code.

- Periodic inspection is defined as the part-time or intermittent observation of work requiring inspection by an approved inspector who is present in the area where the work has been or is being performed at the completion of work.
- Special inspection is required for the following:
  - Steel construction
    - High strength bolts.....periodic
    - Welding.....periodic
    - Structural Steel & Cold-Formed Steel Deck.....periodic
  - Concrete construction
    - Reinforcing steel.....periodic
    - Bolts installed prior to and during concrete placement.....periodic
    - Mix design(s).....periodic
    - At the time fresh concrete is sampled.....periodic
    - Inspection of concrete placement.....periodic
    - Inspection for maintenance of specified curing techniques.....periodic
  - Special case
    - Expansion or adhesive anchor.....periodic

III. SHOP DRAWING SUBMITTAL

- Contractor to submit to Structural Engineer:

- Concrete Mix Designs
- Anchor Bolts
- Reinforcing Bars

- All shop drawings and submittals must be reviewed and stamped by the contractor prior to submittal. Shop drawings and submittals shall be accompanied by sealed calculations as required by the specifications. No fabrications shall proceed before shop drawings covering that work have been approved. Allow at least 10 days for shop drawing review.

IV. STRUCTURAL CONCRETE

- All concrete edges shall be chamfered 3/4" on exposed corners unless otherwise noted.

- Basis for design, strength at 28 days:

- Unless indicated otherwise, all concrete shall be ready- mixed concrete with standard stone aggregate (144 PCF), and Type III cement- high early strength when desired.
- Air entrainment shall conform to the requirements of ACI 318-14 Table 19.3.3.1
- Structural design is based upon ACI 318-14 and construction shall conform to ACI 301 and ACI 302, latest edition(s).
  - F'c = 4000 psi (normal weight)
    - All slabs on grade and sonotube footings
- Unless otherwise indicated, concrete cover shall be:
  - Foundations.....3"
  - Slabs (Not exposed to weather) .....3/4"

C. REINFORCING STEEL

- Deformed Bars.....ASTM A615 / Grade 60
- Placing of reinforcing shall conform to CRSI, latest edition.
- All reinforcing shall be held securely in position with standard accessories during placing of concrete.
- Slab and beam bolsters and hi-chairs shall have vinyl-tipped turned-up legs where soffits/underside of slab is exposed.
- All field bending of reinforcing shall be done cold. Heating of bars will not be permitted.
- Unless otherwise indicated, splice reinforcing as follows:
  - Reinforcing Bars.....48 Bar Diameters
  - Welded Wire Fabric.....6"

D. WALLS

- Exposed site walls, retaining walls, and stem walls greater than 30 feet in length shall have control joints installed and spaced no greater than 25 feet on center. Install joints within 10 feet of all wall corners.
- Contractor shall submit to architect, final locations of all control joints for approval, prior to construction.

E. SLAB-ON-GROUND CRITERIA

- Strict adherence to the specified water-to-cement ratio of 0.45 is required. Water shall not be added to the mix at the time of placement.
- Shrinkage shall not exceed 0.02% per ASTM C 157 at 28 days. Shrinkage-compensating concrete shall conform to the recommendations of ACI 223.
- Moist curing of slabs-on-ground is required.
- Care shall be taken to prevent water intrusion into the subgrade both prior to and after slab pours.
- Contraction joints (control joints) shall be installed on all concrete slabs on grade. Verify locations of all joints with Architect prior to placing concrete. The joints shall be spaced no further than 36 times the slab thickness or 15 ft. L or T shapes be avoided when placing crack control joints. If the shape of the area contained by the crack control joints is not square, the aspect ratio of this area should not exceed 1.5 to 1. The control joints should be placed such that they are continuous and not staggered or offset. Placement shall be in accordance to ACI 302.1.
  - Timing of early entry slab saw cuts is critical to slab curing performance. Saw cuts for control joints (contraction joints) shall be made at the earliest possible time that the concrete will support the weight of saw cutting equipment and operations. Timing of early entry saw cuts shall vary between 1 hour in hot weather and 4 hours in cold weather. Early entry dry cut saws shall use a skid plate to prevent spalling.
  - Early entry dry cut saw should be 1 inch into the depth of the slab. The slab shall be cut to ¼ of the slab depth to deepen the 1 inch nominal early entry saw cut within 24 hours.
  - A construction or smooth doweled saw cut contraction joint shall be placed at a maximum of 125 ft.
  - All joints shall be filled to the full joint depth with semi-rigid joint filler in areas exposed to vehicular traffic. Overfill joint and trim joint filler flush with top of joint after hardening.
- Concrete containing air-entraining admixture shall not be trowel finished.

F. CONCRETE PLACEMENT & TESTING

- Unless otherwise indicated, five test cylinders shall be made every fifty cubic yards of concrete or fraction thereof on each day's pour. One cylinder shall be tested at 7 days and three at 28 days. The remaining cylinder shall be held in reserve as a spare. The making and testing of cylinders shall be conducted by an approved testing laboratory; contractor shall bear the cost of testing.
  - Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301.
  - Do not add water to concrete after adding high-range water-reducing admixtures to mixture.
- Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.
- Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.
- Maintain ALL reinforcement in position on chairs during concrete placement.

G. COLD WEATHER CONCRETING

- All cold weather concrete work shall meet the requirements of ACI Committee 306, latest edition for cold weather concreting, if, for 3 consecutive days the average daily temperature drops below 40°F and stays below 50°F for more than one-half of any 24 hour period.
- Do not use frozen materials containing ice or snow.
- Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
- The use of calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators is not permitted; contractor shall utilize a high early strength mix design.

H. HOT WEATHER CONCRETING

- All hot weather concrete work shall be in accordance with ACI 301. Maintain concrete temperature below 90°F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water.
- Fog-spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.

I. EMBEDDED CONDUIT

- Embedded conduits and/or pipes shall not be installed in slabs or columns, unless approved by the structural engineer, prior to construction.
- Conduits and/or pipes shall be protected against rusting. Aluminum conduits and/or pipes shall not be embedded in concrete.

V. CARPENTRY

- Dimensional lumber shall conform to the grading standard of the Western Wood Products Association (WWPA), surface dry, seasoned 90 days, and 19 percent maximum moisture content.

- Wood-Preservative-Treated Lumber shall be utilized as follows:

- Items in contact with concrete or masonry.
  - Framing less than 18" above ground in crawlspaces.
  - Floor plates installed over concrete slabs-on-grade.
- Preservative Treatment: AWPA C2 with chemicals containing no arsenic or chromium.
    - AWPA C31 inorganic boron may be used in protected locations.

B. Wood Design Values

- Hem Fir #2 (studs, floor framing and roof framing)
  - Fb = 850 psi, Ft = 525 psi, Fv = 150 psi, Fc = 1,300 psi, E = 1,300,000 psi
- Roof sheathing shall be 19/32" O.S.B., Structural 1, unblocked. Nailing pattern = 10d common nails @ 6" o.c. edges and 12" o.c. field w/ edge supporting clips, UON. Fire rated O.S.B. shall be provided to 4'-0" on each side of party walls at the roof level.
- Wall sheathing shall be 7/16" O.S.B., Structural 1, blocked. Nailing pattern = 8d common nails @ 6" o.c. edges and 12" o.c. field, UON.
- Plywood backing panels for telephone and electrical equipment.
- All pre-fab connectors (Simpson, etc.) shall be fully fastened using type, size and quantity specified by the manufacturer. All exterior connectors shall be galvanized. General contractor to submit connection schedule to architect/engineer prior to installation.

C. FASTENING

- All fastening to be in accordance with IBC Fastening Schedule Table 2304.10.1, UON.

VI. POST-INSTALLED ANCHORS

- Except where indicated on the drawings, post-installed anchors shall consist of the following anchor types as provided by Simpson Strong-Tie Company, Inc.
  - Anchorage to concrete
    - Adhesive anchors for cracked and uncracked concrete with Set-3G™ technology:
      - Simpson Set-3G/Set-XP/Set-X adhesive anchoring system installed using the Simpson carbide-drill bit meeting the diameter requirements of ANSI B212.15.
      - Adhesive anchors for cracked and uncracked concrete with standard cleaning procedures use:
        - Simpson Set-XP Adhesive anchoring system with HAS-E threaded rod or deformed rebar per ICC-ES ESR-2508 for fast cure applications.
        - Simpson Set-XP Adhesive anchoring system with HAS-E threaded rod or deformed rebar per ICC-ES ESR-2508 for slow cure applications.
    - Anchorage to solid grouted masonry
      - Adhesive anchors use:
        - Simpson Set-3G/Set-XP/Set-X adhesive anchoring system installed using the Simpson carbide-drill bit meeting the diameter requirements of ANSI B212.15.
        - Steel anchor element shall be Simpson HAS-E continuously threaded rod or continuousl deformed steel rebar
        - Mechanical anchors use:
          - Simpson Titen HD® per ICC-ES ESR 1056
          - Simpson Wedge-All® per ICC-ES ESR 1396
      - Anchor capacity used in design shall be based on the technical data published by Simpson Strong-Tie or such other method as approved by the structural engineer of record. Substitution requests for alternate products must be approved in writing by the structural engineer of record prior to use. Contractor shall provide calculations demonstrating that the substituted product is capable of achieving the performance values of the specified product. Substitutions will be evaluated by their having an ICC ESR showing compliance with the relevant building code for seismic uses, load resistance, installation category, and availability of comprehensive installation instructions. Adhesive anchor evaluation will also consider creep, in-service temperature and installation temperature.

- Install anchors per the manufacturer instructions, as included in the anchor packaging.

- Anchor capacity is dependent upon spacing between adjacent anchors and proximity of anchors to edge of concrete. Install anchors in accordance with spacing and edge clearances indicated on the drawings.

- Existing reinforcing bars in the concrete structure may conflict with specific anchor locations. Unless noted on the drawings that the bars can be cut, the contractor shall review the existing structural drawings and shall undertake to locate the position of the reinforcing bars at the locations of the concrete anchors, GPR, X-ray, chipping or other means.

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CONSTRUCTION  
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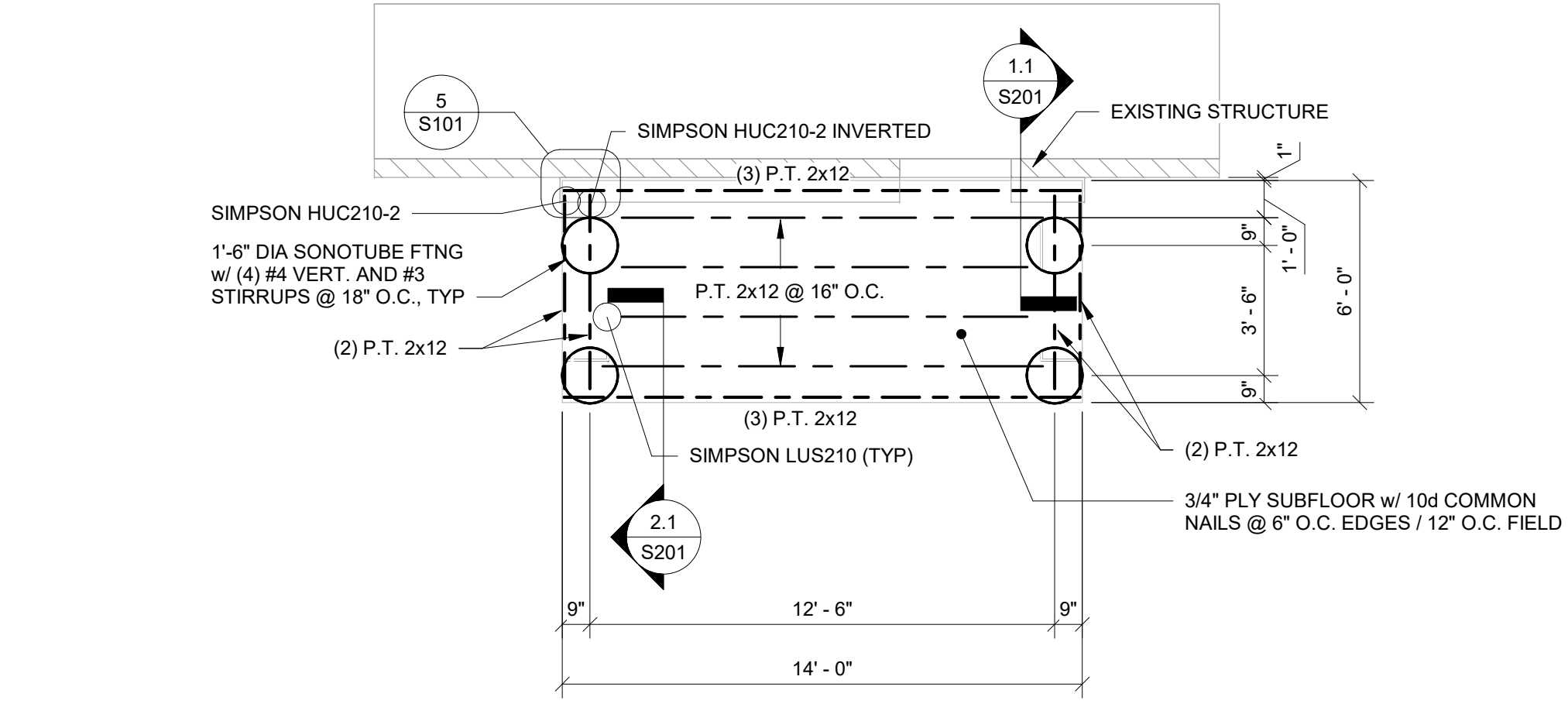
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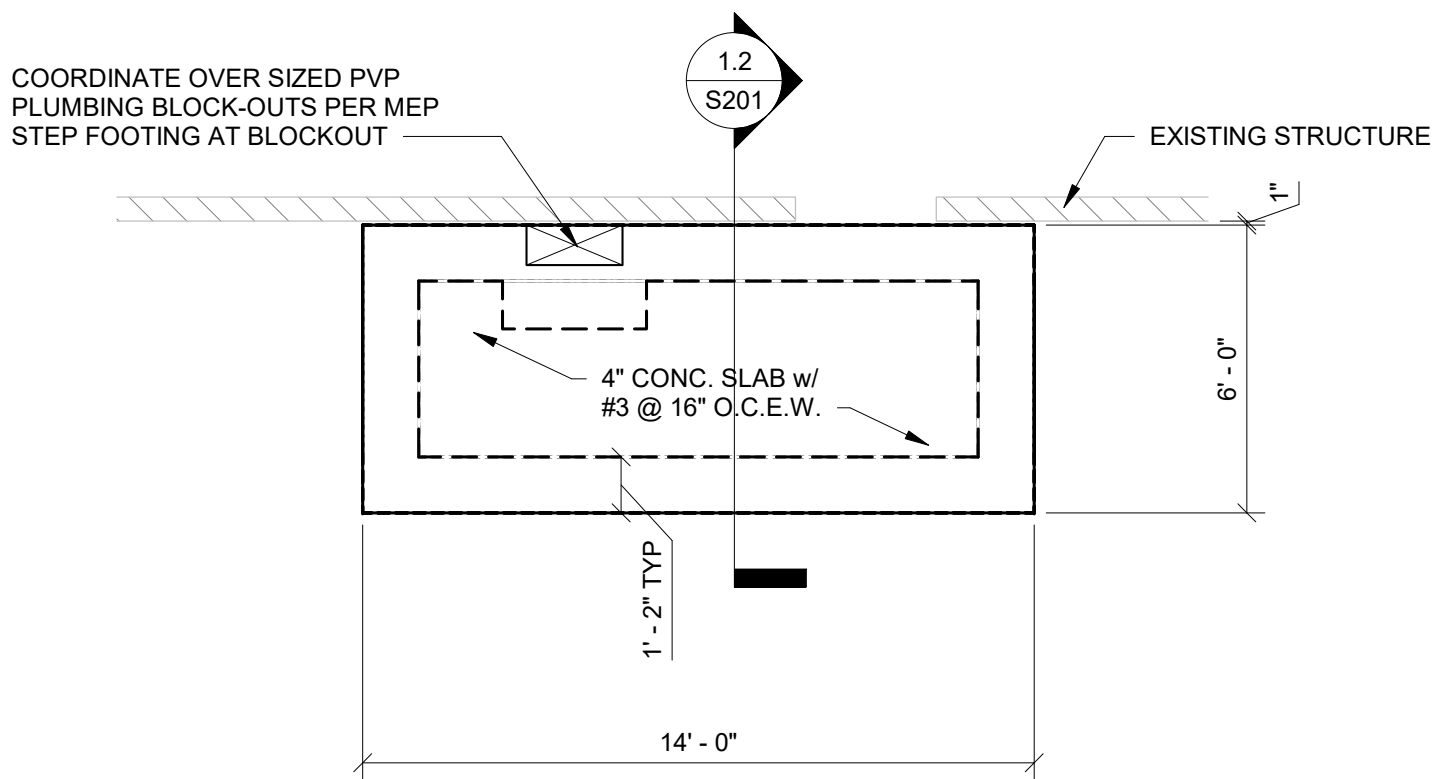
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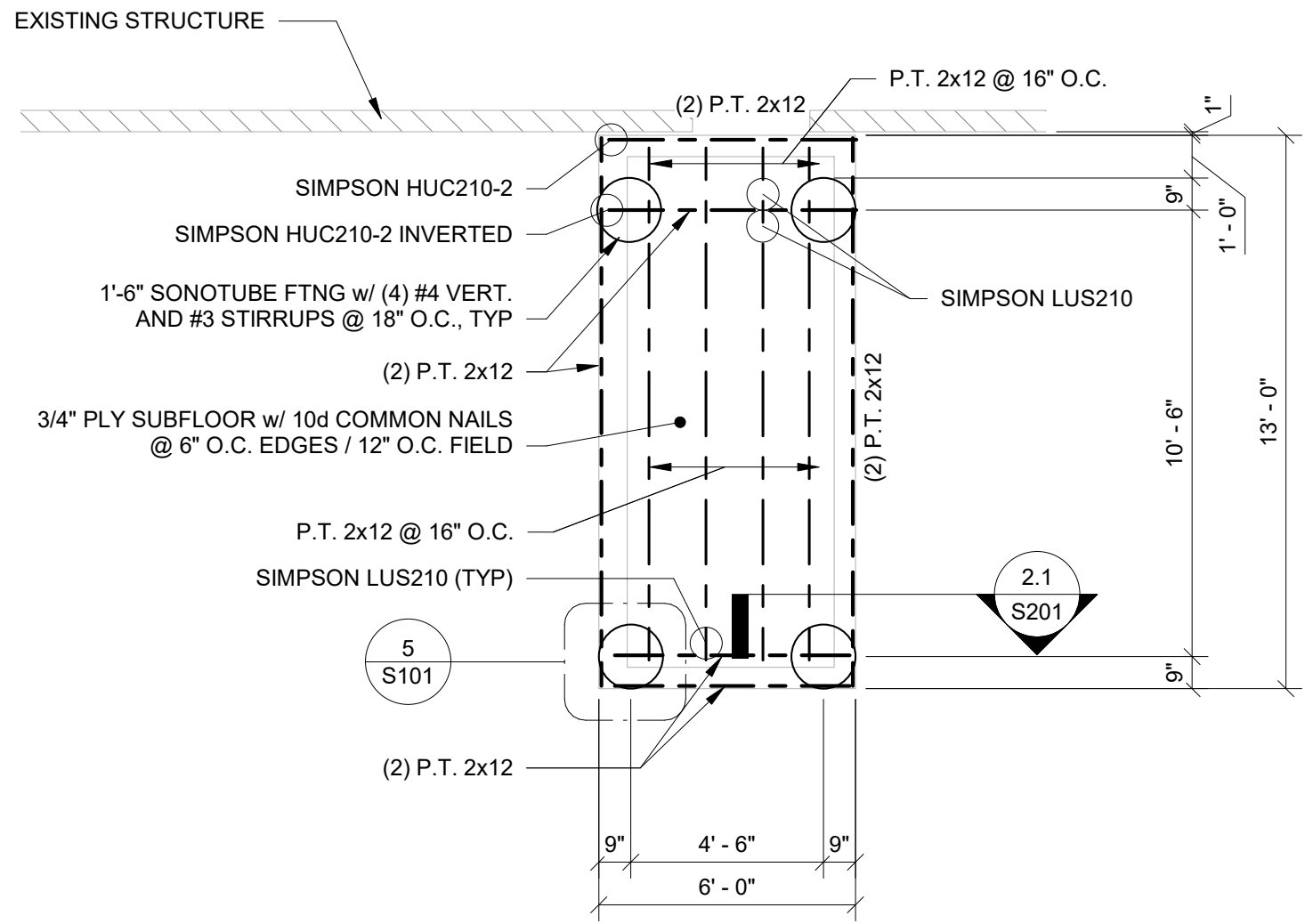
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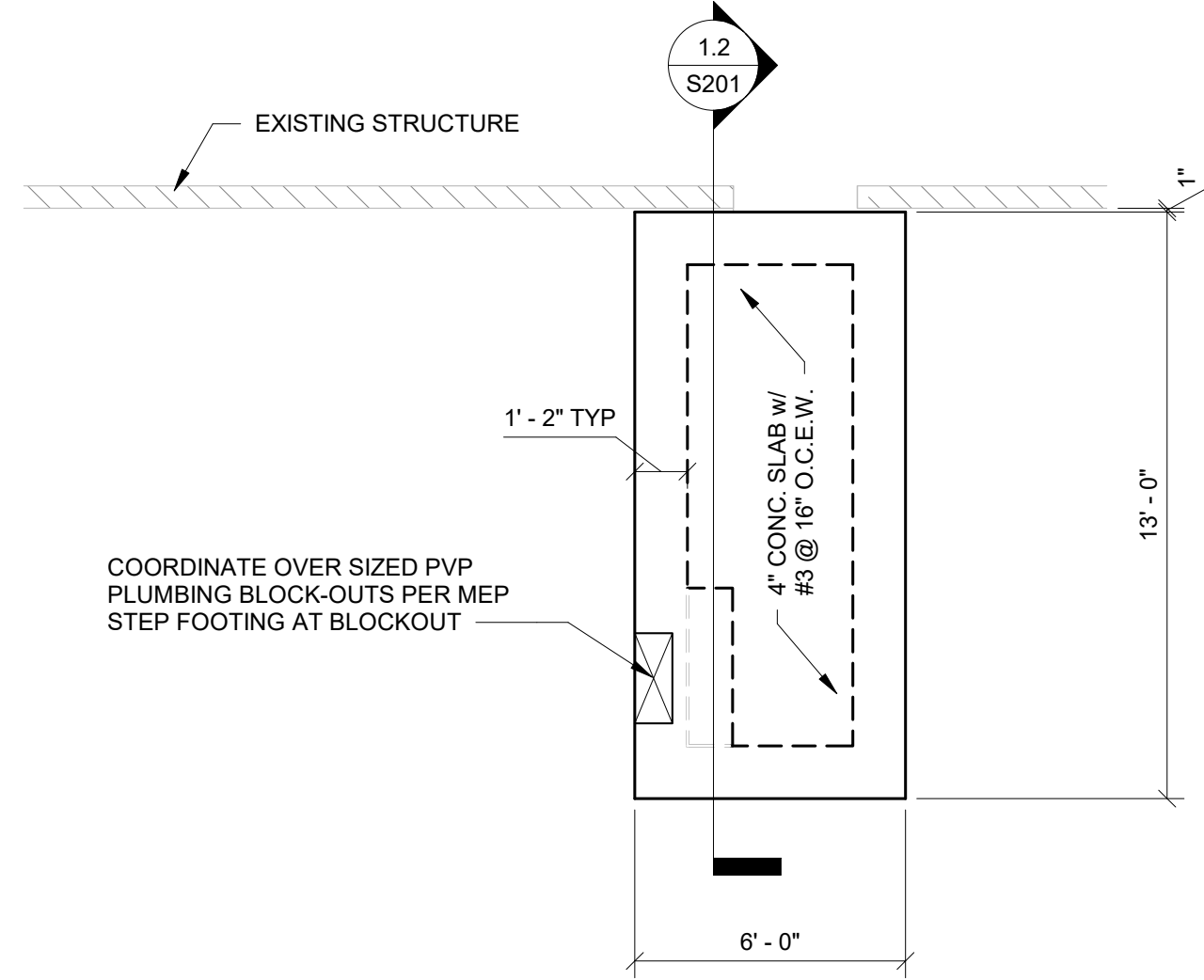
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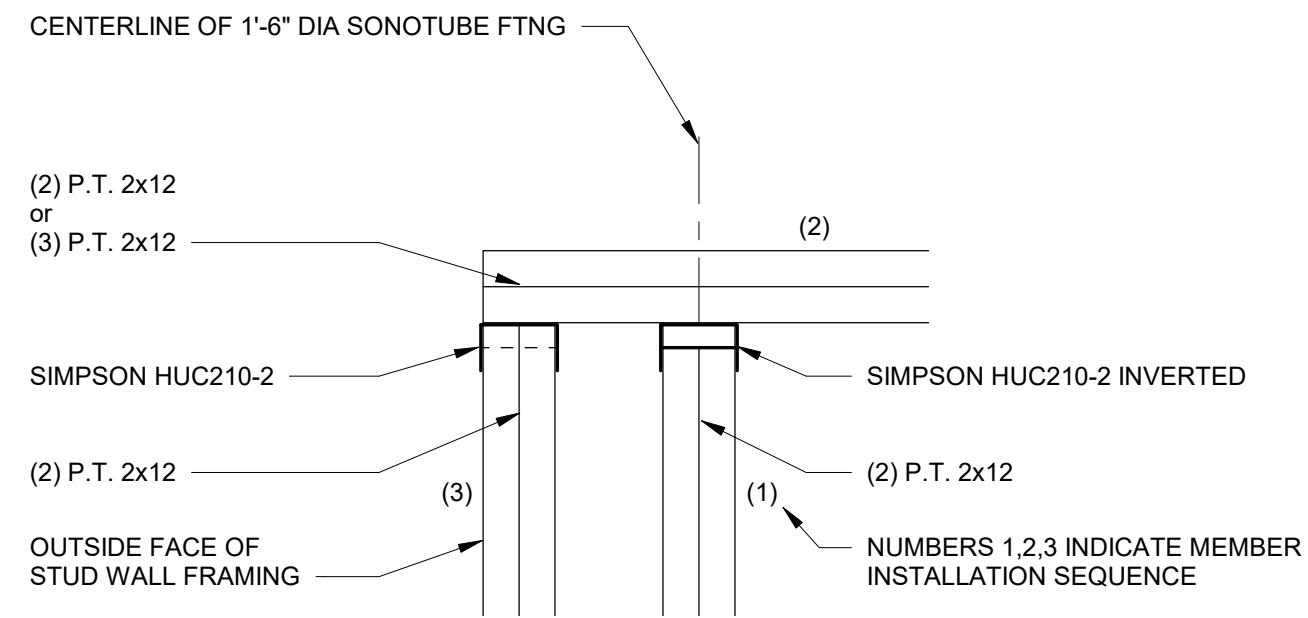
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1/4" = 1'-0"



3 Foundation - Sonotube Option B  
1/4" = 1'-0"



4 Foundation - Turndown Option B  
1/4" = 1'-0"



5 Floor Beam Intersection  
1 1/2" = 1'-0"

GENERAL NOTES:

FOUNDATION DESIGN HAS BEEN PERFORMED WITH ASSUMED SOIL PROPERTIES. ASSUMED VALUES MAY NOT CHARACTERIZE ALL POSSIBLE CONSTRUCTION LOCATIONS. VARYING SOIL PROPERTIES MAY RESULT IN DIFFERENTIAL FOUNDATION MOVEMENT RESULTING IN UNEVEN FLOORS AND/OR CRACKING OF FINISHES. WHERE THIS IS NOT ACCEPTABLE TO THE OWNER, A SITE-SPECIFIC SOIL INVESTIGATION SHOULD BE PERFORMED PRIOR TO CONSTRUCTION, FOR THE VERIFICATION OF SOIL DESIGN VALUES AND CHARACTERISTICS.

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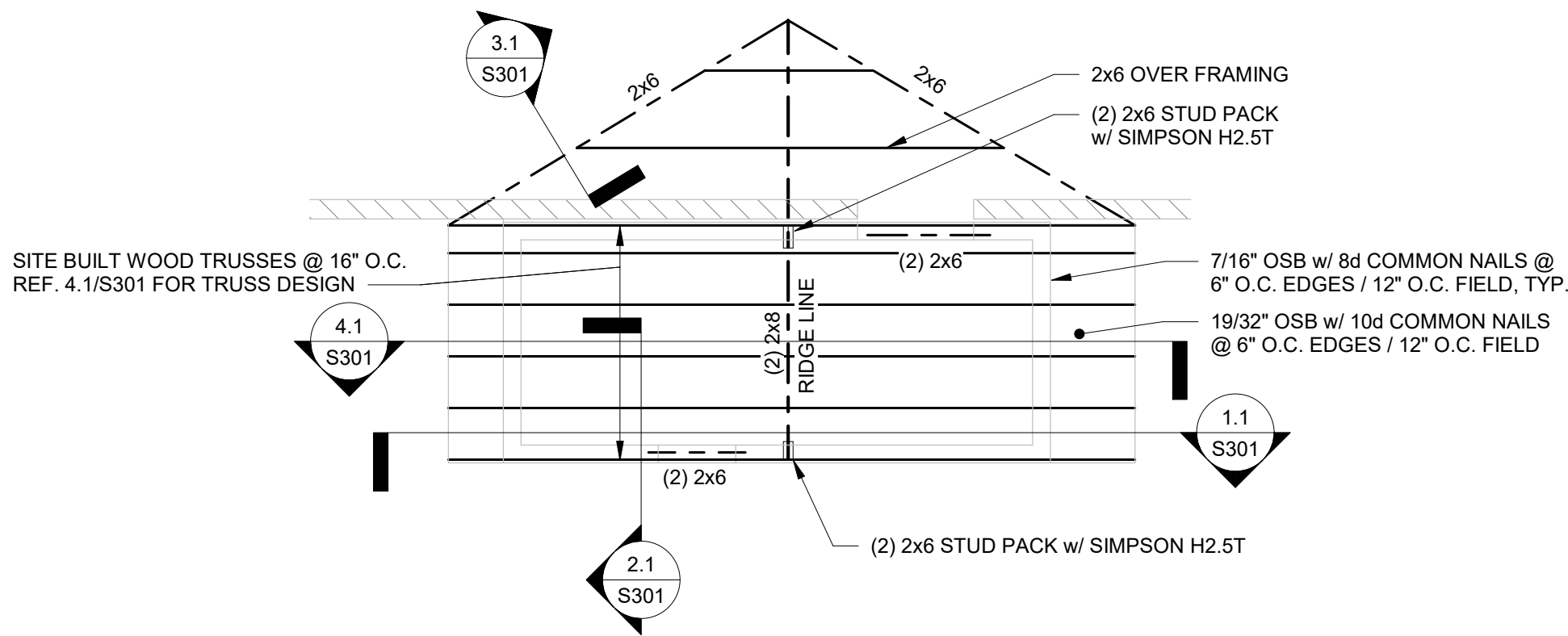
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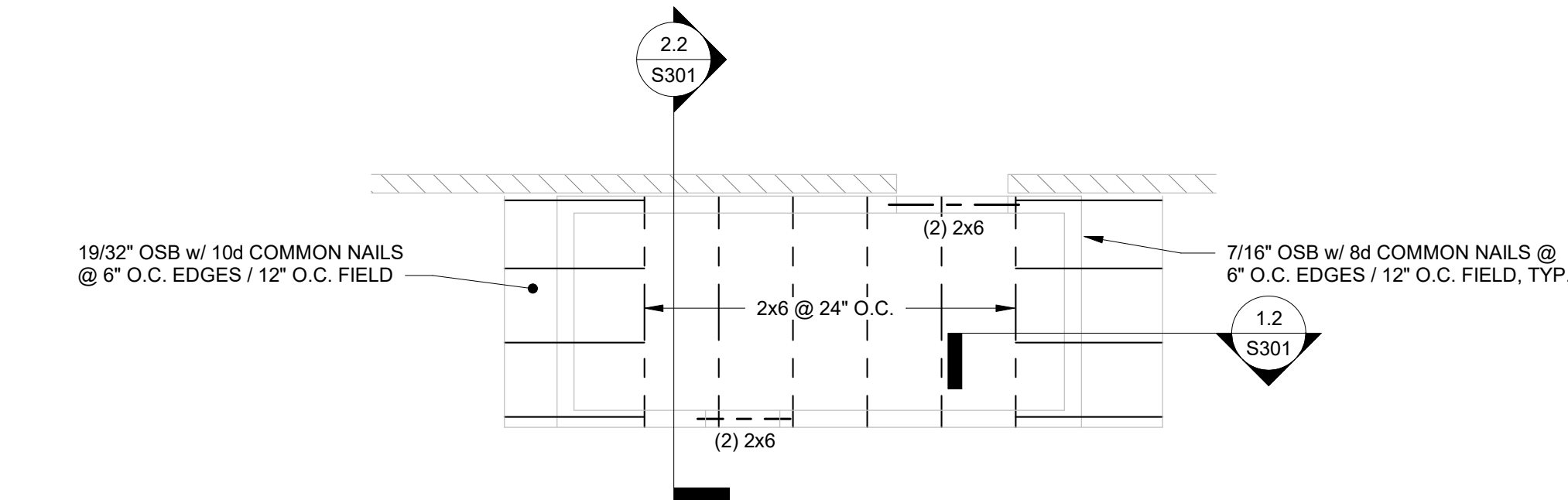
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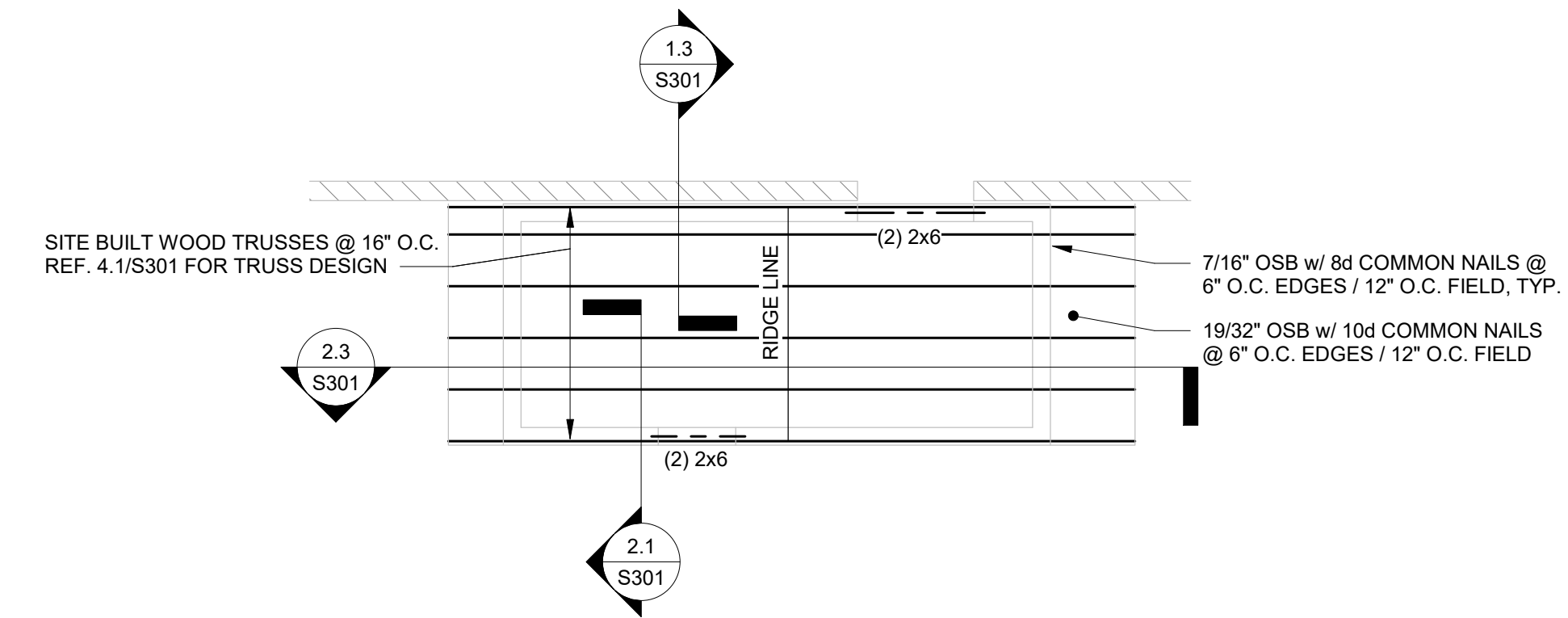
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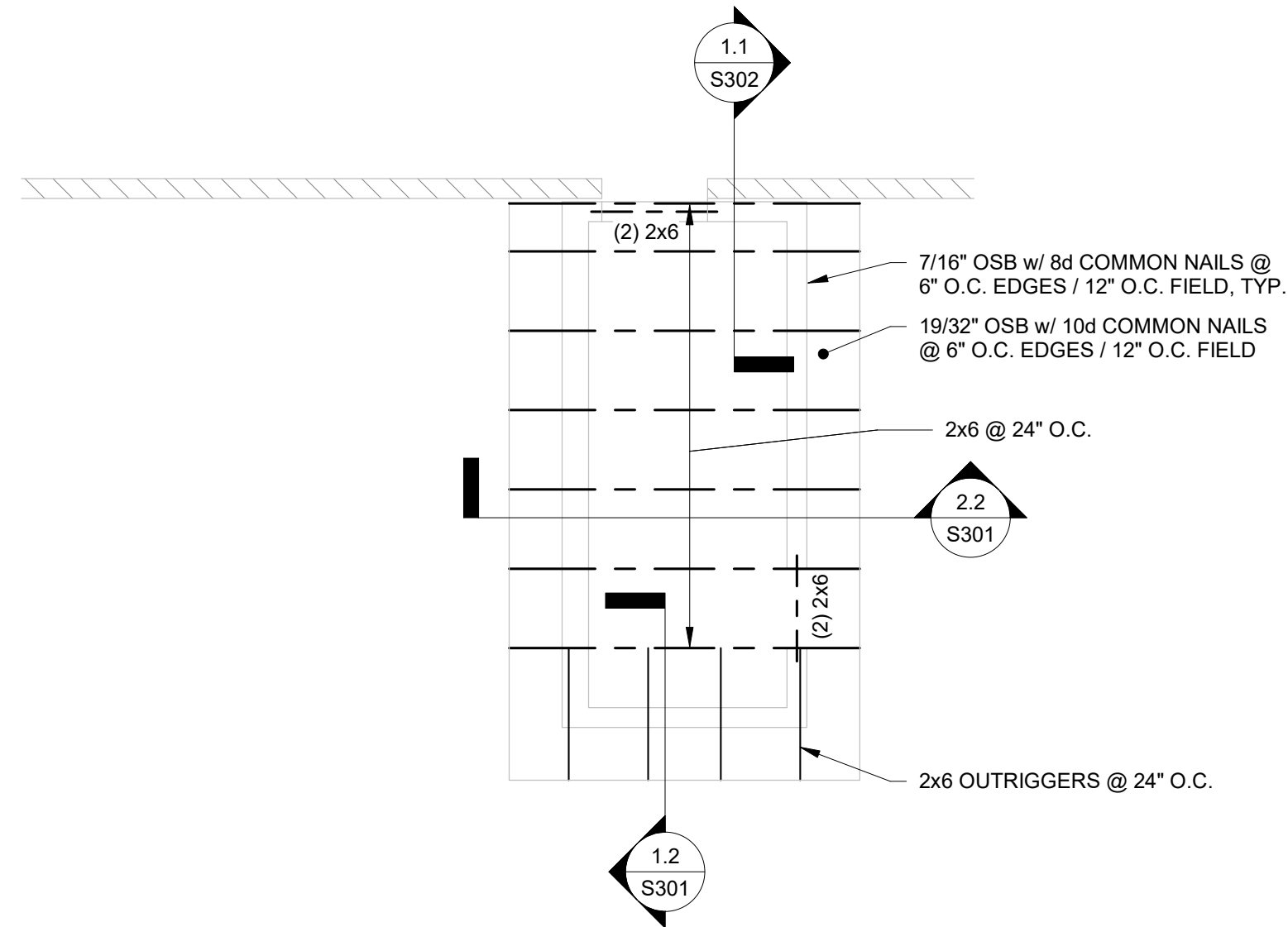
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1/4" = 1'-0"



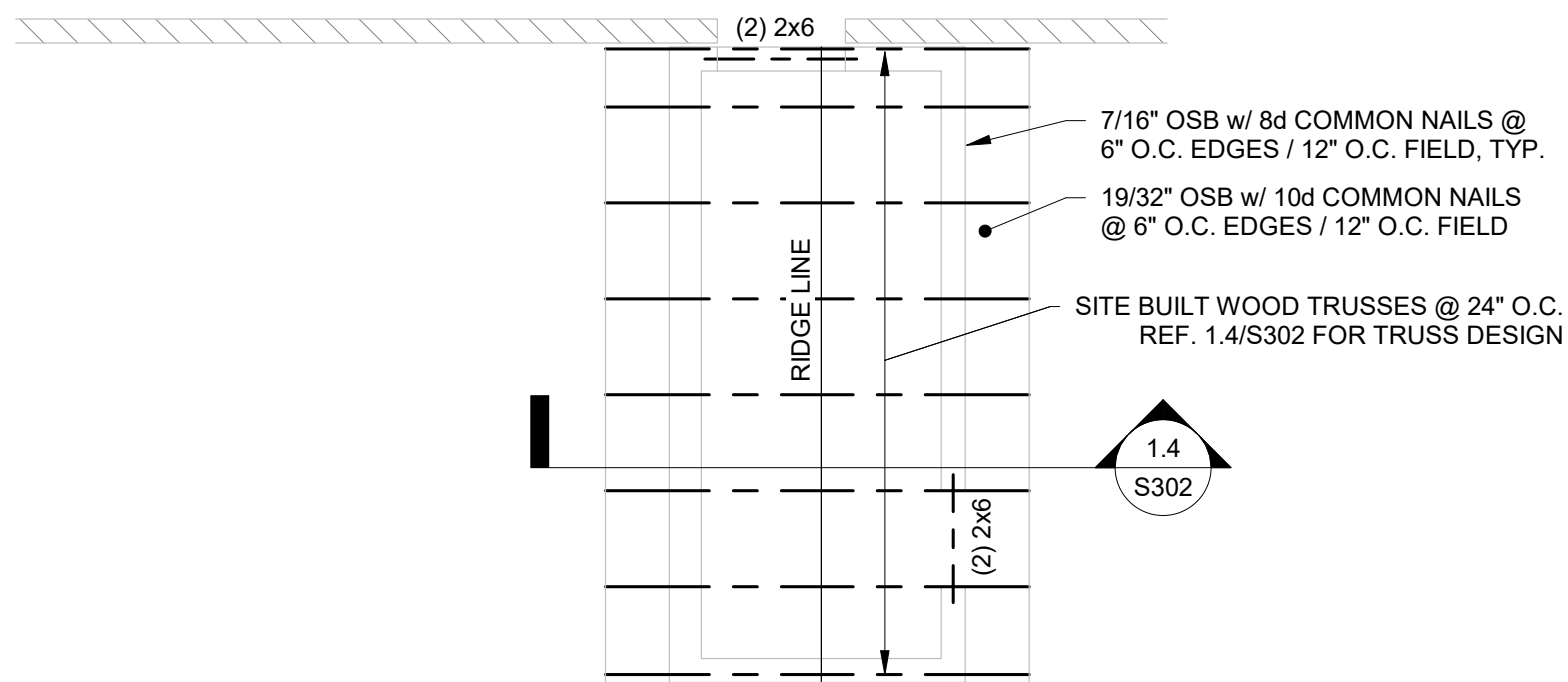
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3 Roof Framing C GABLE TRUSS ROOF  
1/4" = 1'-0"



4 Roof Framing D MONOSLOPE ROOF  
1/4" = 1'-0"



5 Roof Framing E GABLE TRUSS ROOF  
1/4" = 1'-0"

## NAVAJO NATION BATHROOM ADDITIONS

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## ROOF FRAMING

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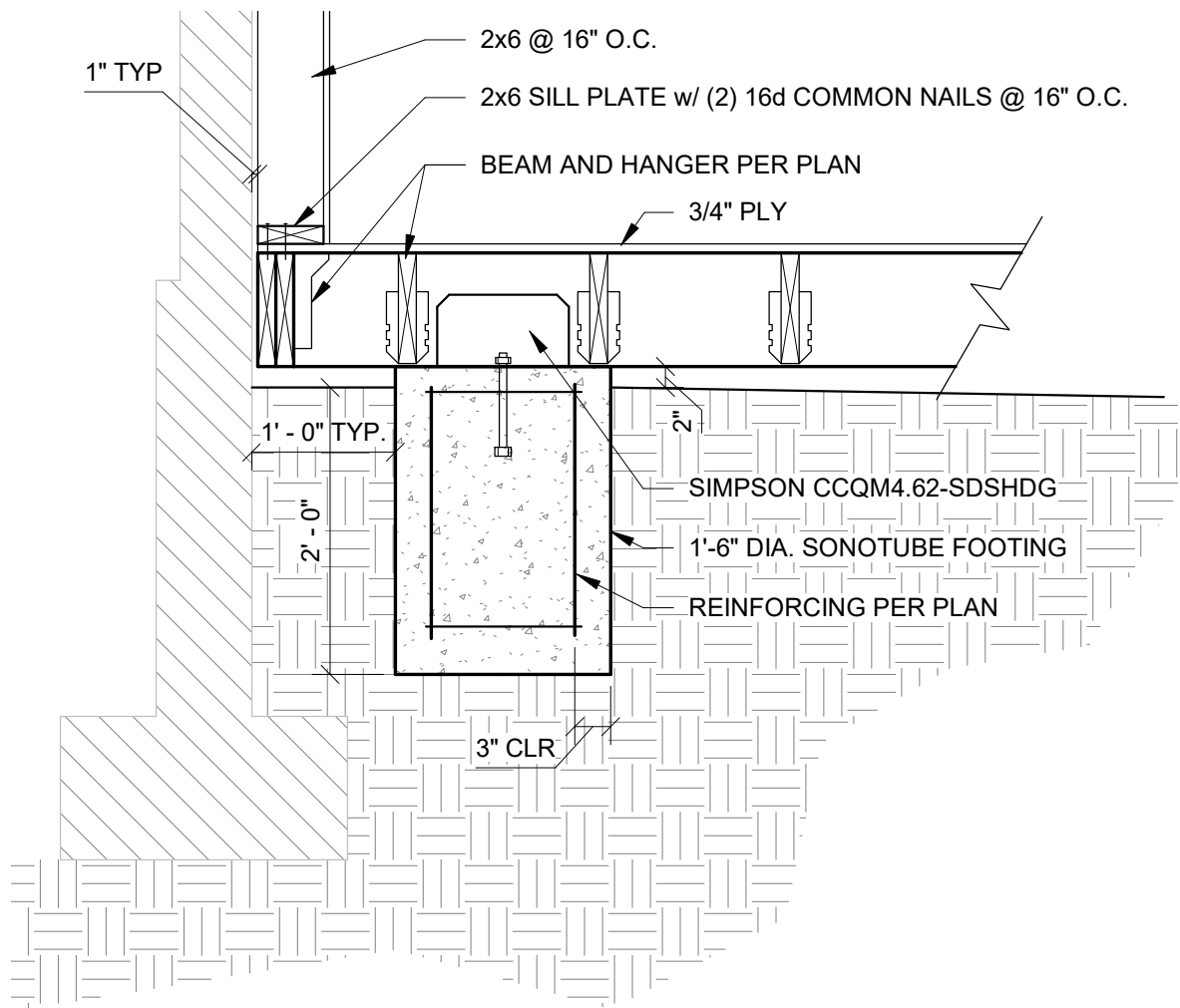
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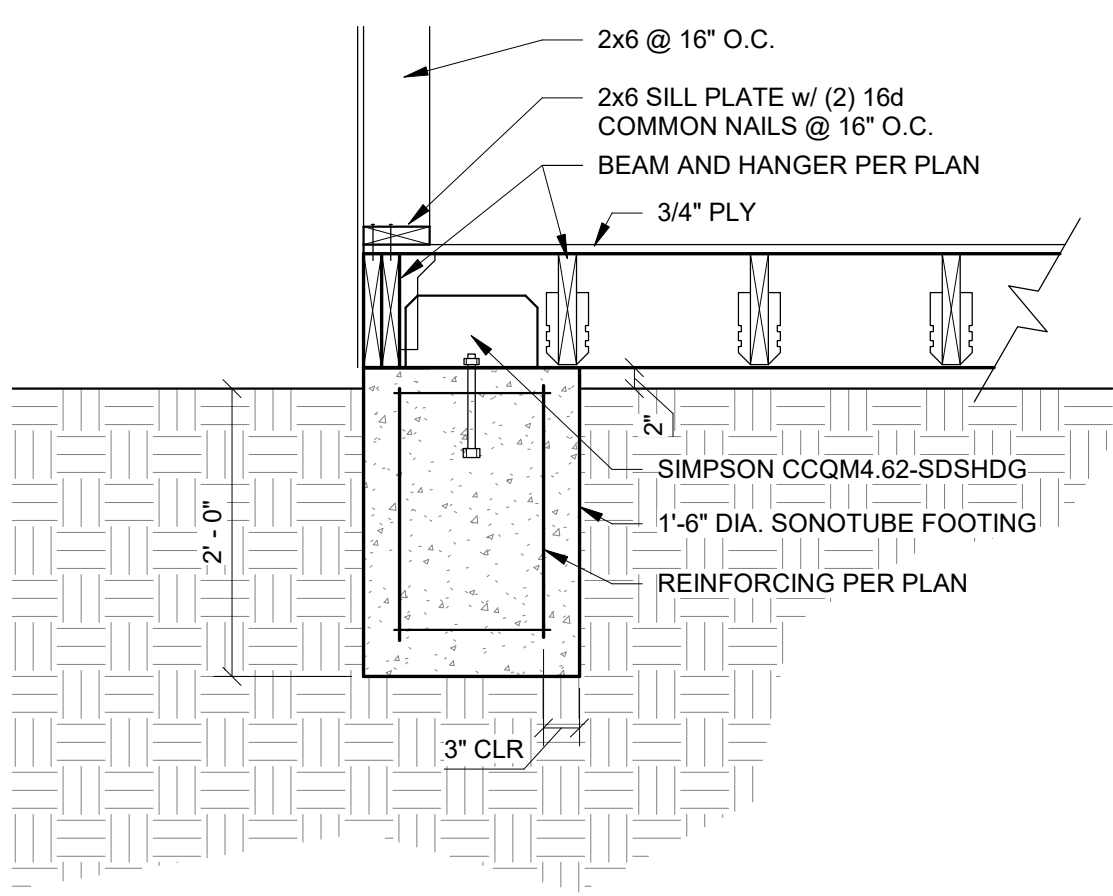
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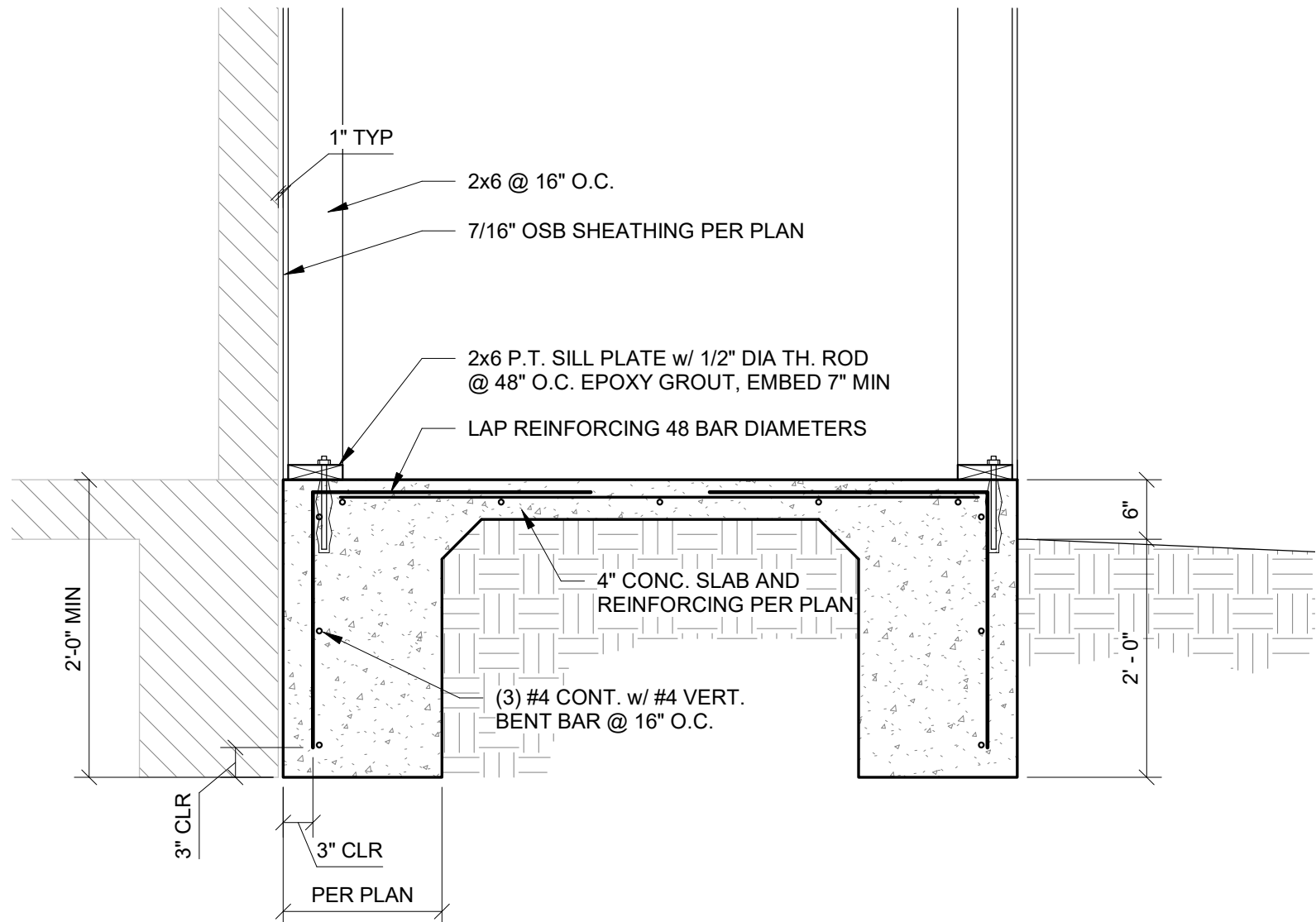
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1.1 TYPICAL SONOTUBE PIER  
3/4" = 1'-0"



2.1 FLOOR FRAMING TO SONOTUBE FOOTING  
3/4" = 1'-0"



1.2 TYPICAL MONOLITHIC TURN DOWN  
3/4" = 1'-0"

NAVAJO NATION BATHROOM ADDITIONS

NAVAJO NATION  
CONSTRUCTION DOCUMENTS

OWNER: NAVAJO ENG & CONSTRUCTION AUTHORITY

INDIGENOUS DESIGN STUDIO +  
ARCHITECTURE, LLC



8008 Pennsylvania Cir NE  
Albuquerque, NM 87110  
Tel 505.226.2565  
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CONSTRUCTION  
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ARCHITECT

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	Issue Date	

PROJECT NUMBER: M0-36  
DRAWING FILE:  
DRAWN BY: JAR  
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FOUNDATION  
DETAILS

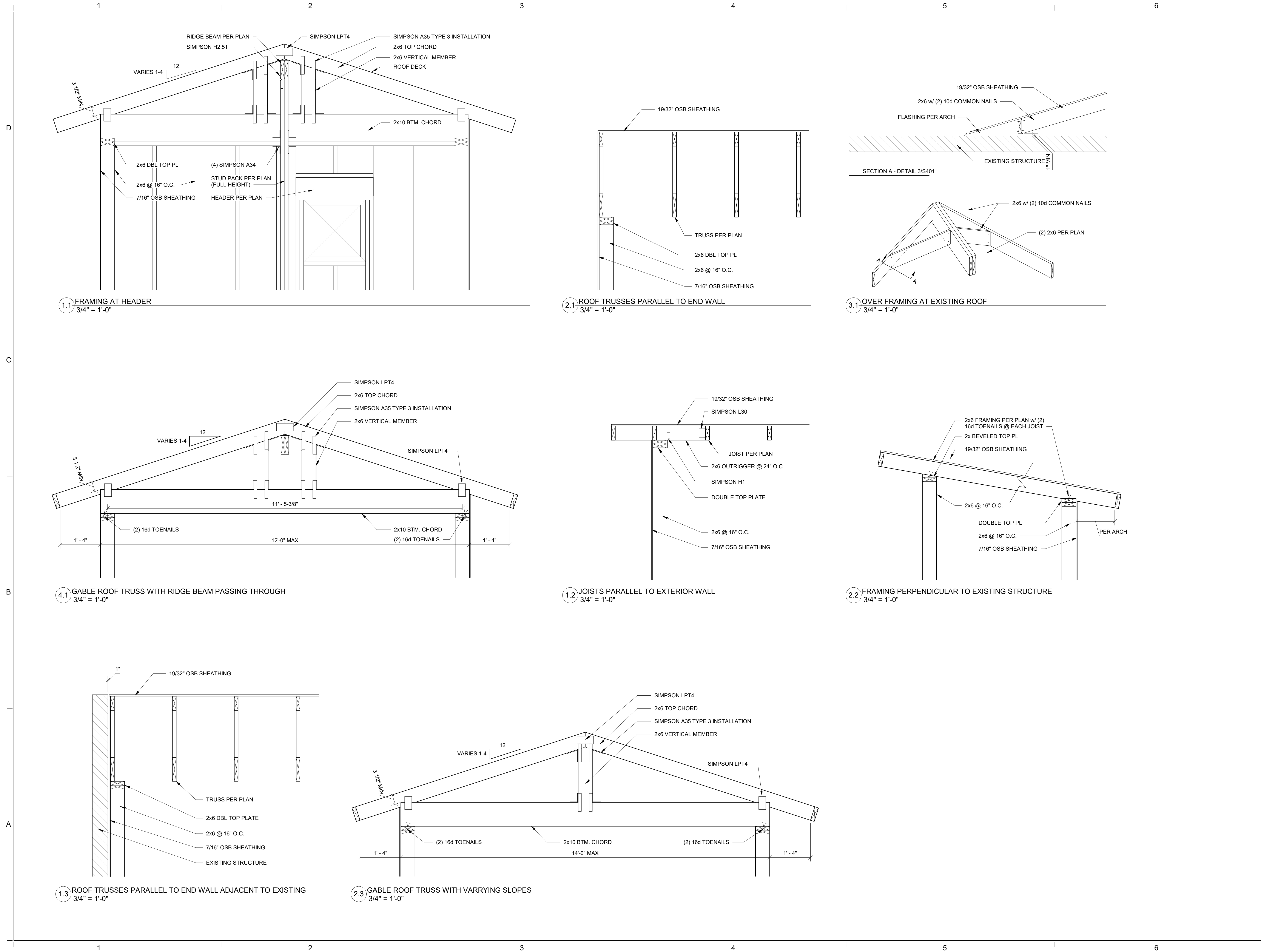
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NAVAJO NATION BATHROOM ADDITIONS

NAVAJO NATION  
CONSTRUCTION DOCUMENTS

OWNER: NAVAJO ENG & CONSTRUCTION AUTHORITY

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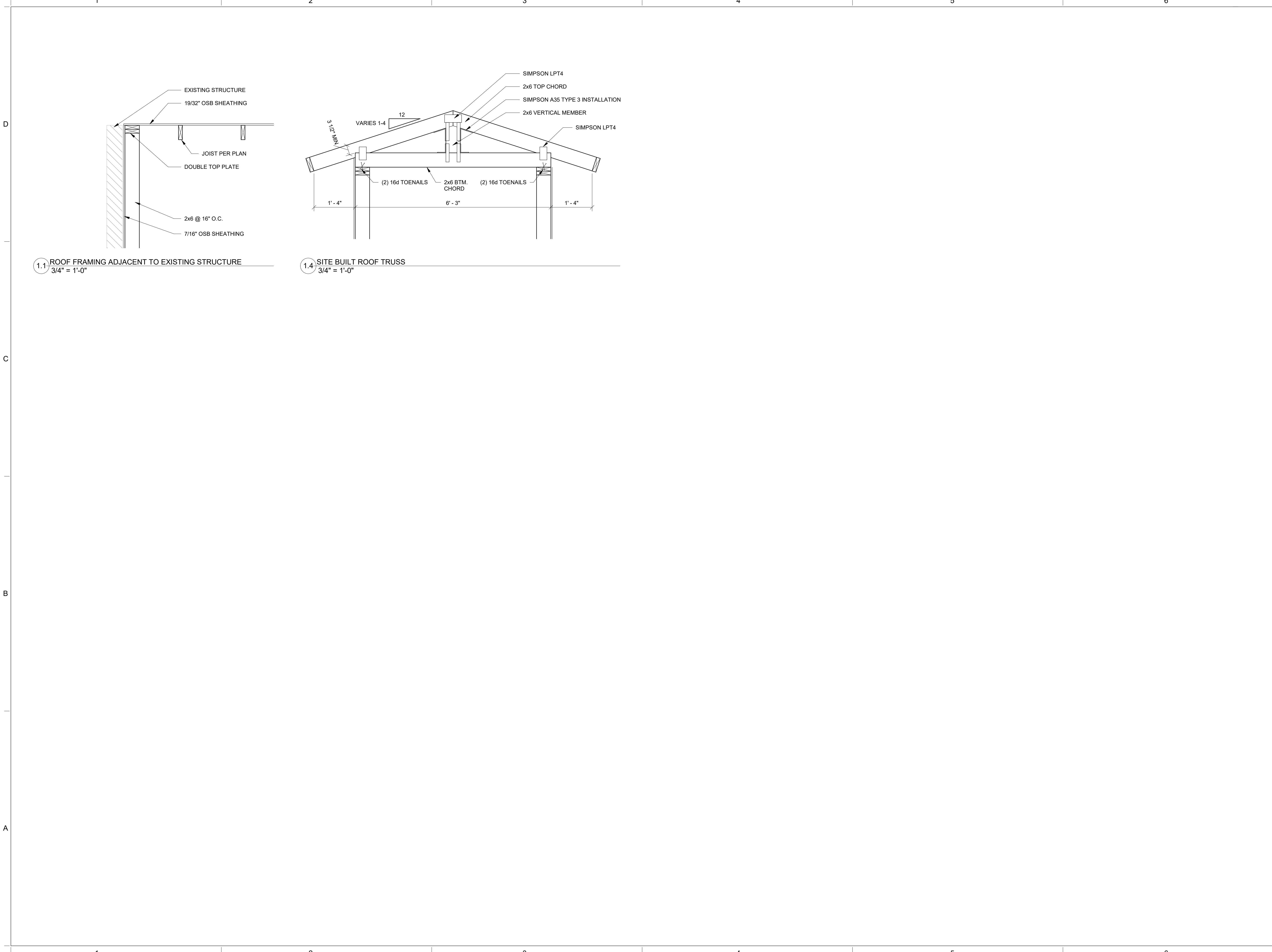
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NAVAJO NATION BATHROOM ADDITIONS  
NAVAJO NATION  
CONSTRUCTION DOCUMENTS  
OWNER: NAVAJO ENG & CONSTRUCTION AUTHORITY

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CONSTRUCTION SET  
ARCHITECT

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	Issue Date	

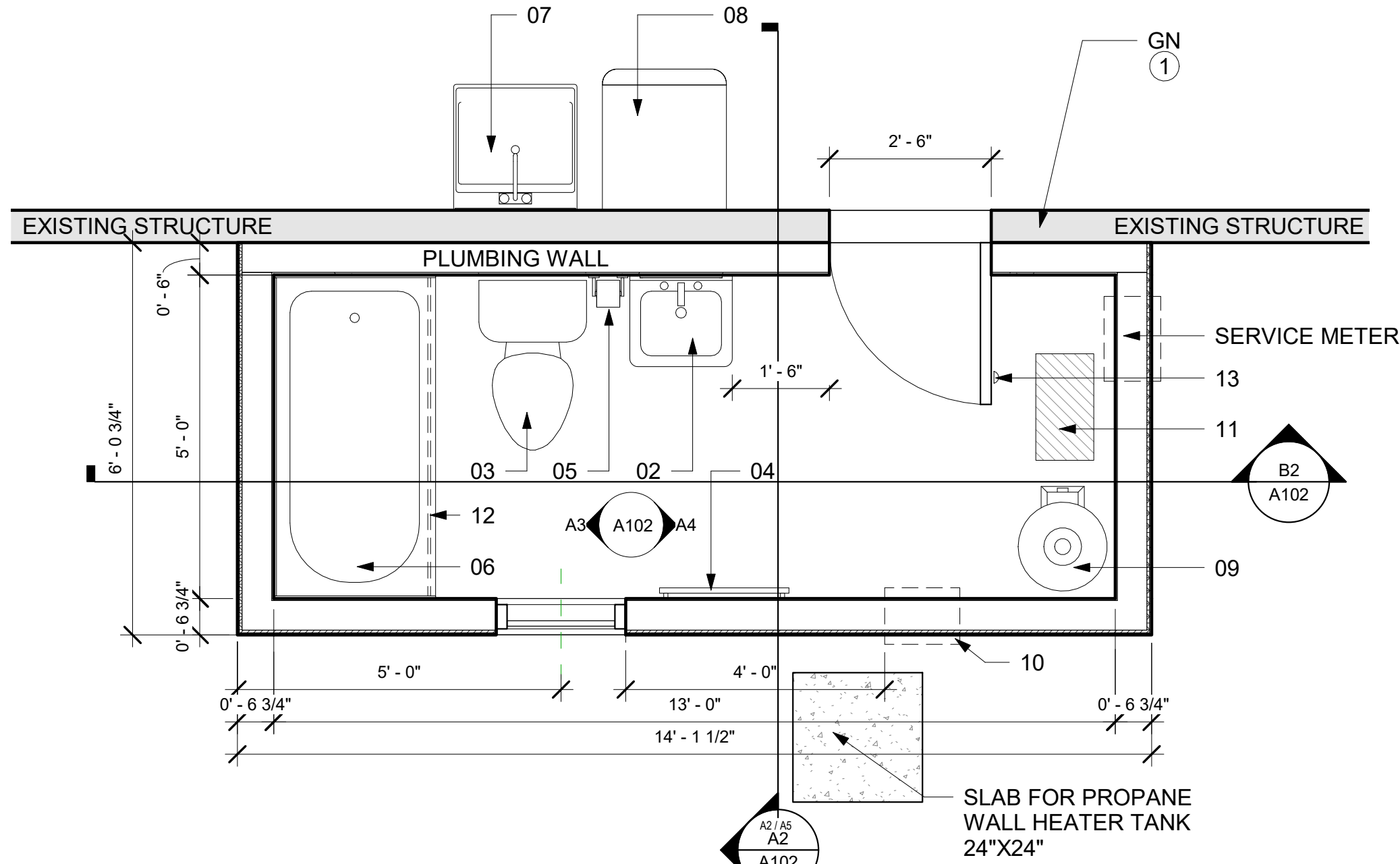
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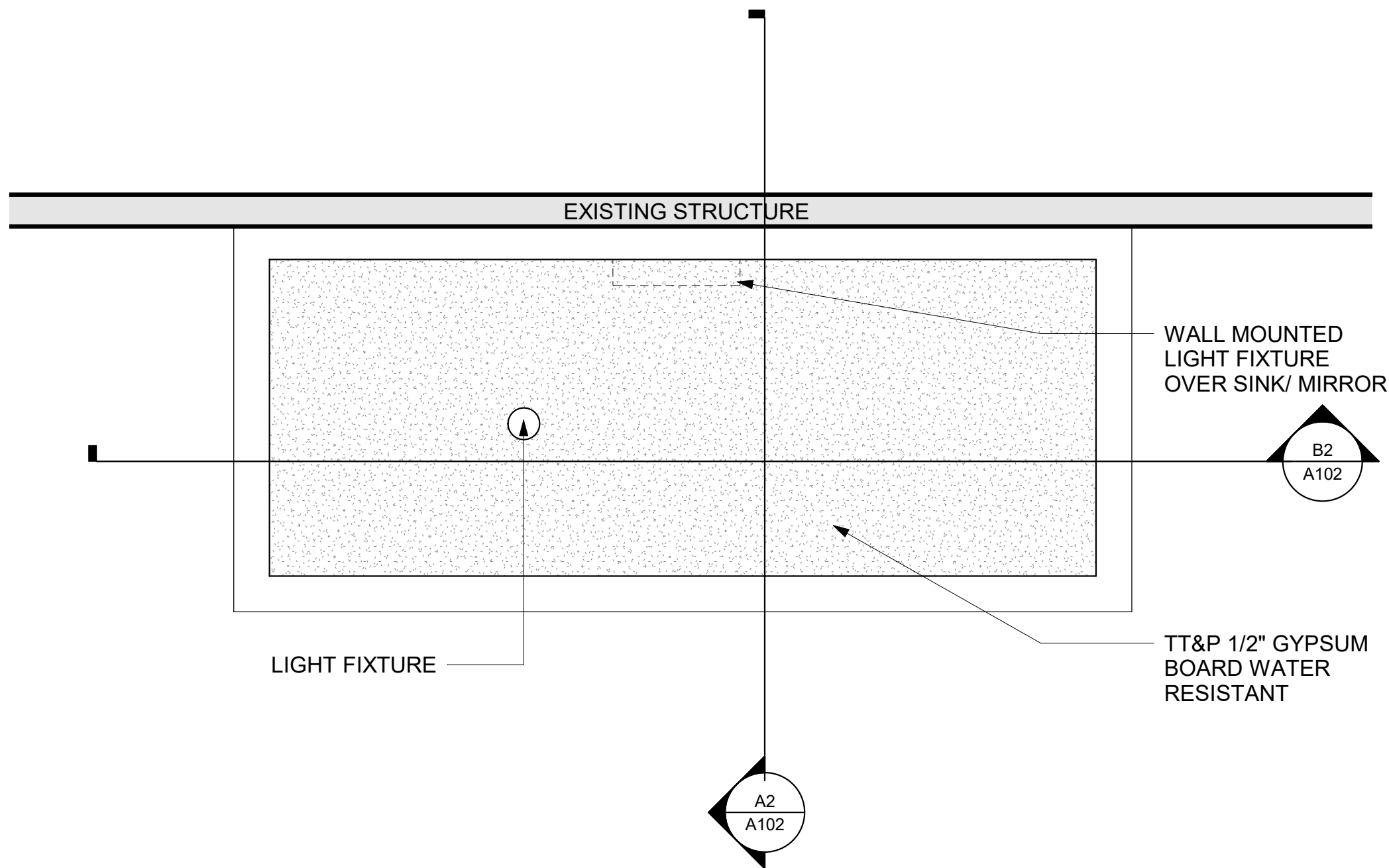
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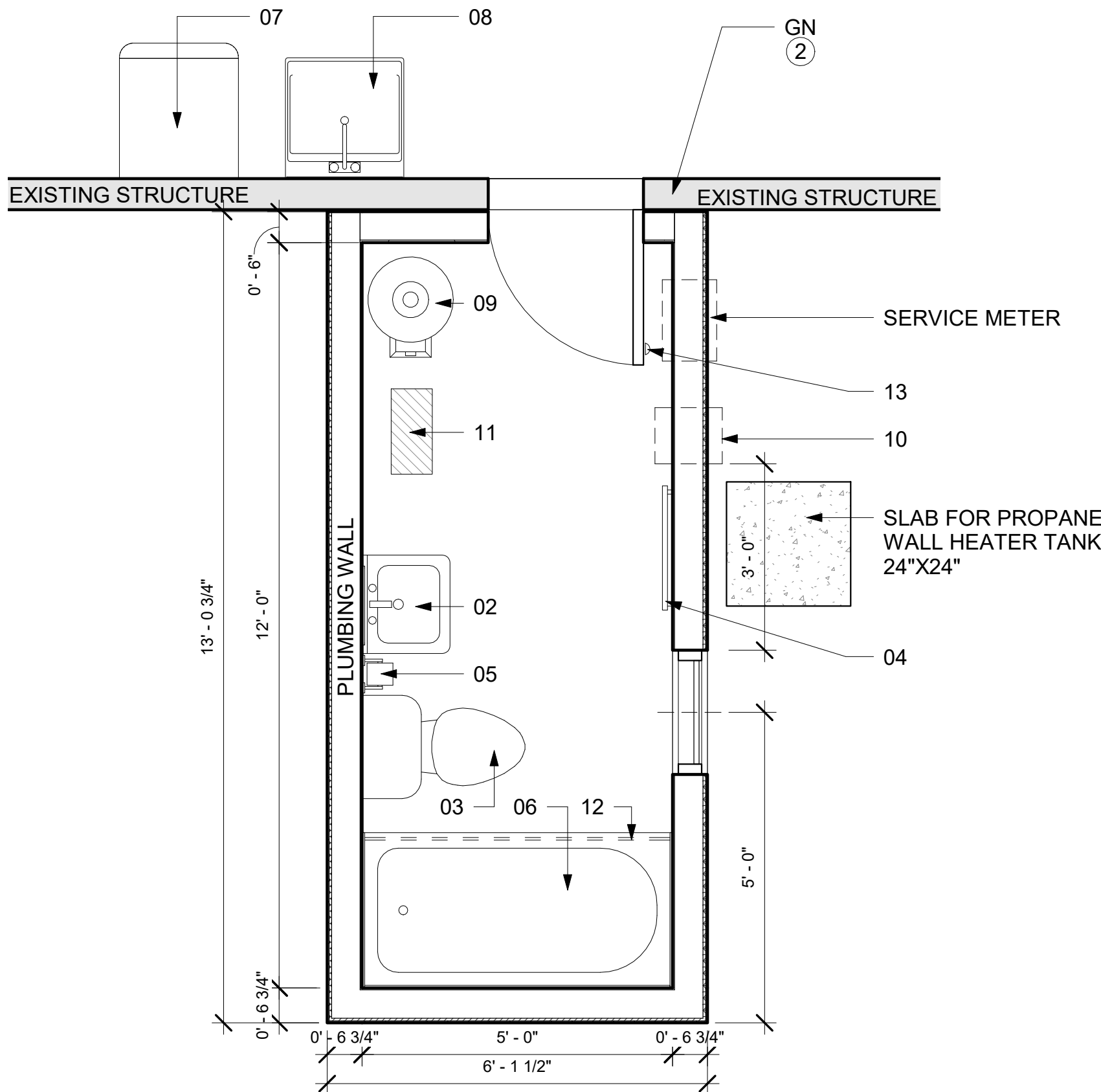
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C1 FLOOR PLAN GN1  
1/2" = 1'-0"



C3 REFLECTED CEILING PLAN  
1/2" = 1'-0"



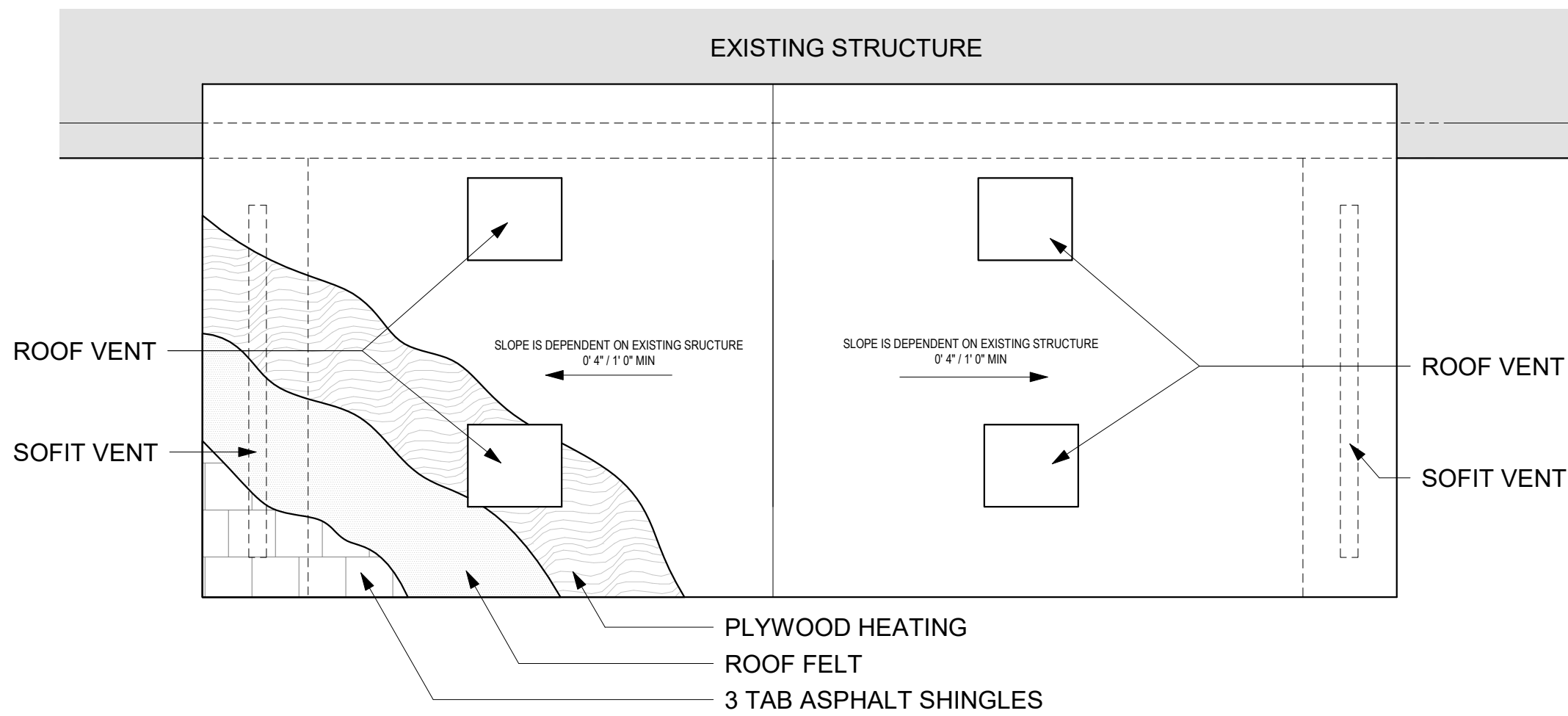
B1 FLOOR PLAN GN2  
1/2" = 1'-0"

Material and Finish Schedule				
Key Name	Type	Manufacture	Model Number	Color
B1	Base	Alexandria Moulding	03112-93192C	White Primed Pine
E1	Exterior Siding	LP SmartSide	27874	Tan
E2	Vinyl Skirting		555210	White
F1	Vinyl Sheet Flooring	Traffic Master	U6890.258C903P144	White Marble
P1	Base Paint	Behr	105005	Painters White
R1	Asphalt Shingles	Owens Corning	HK59	Amber
R2	Roll Roofing	GAF	3489920	White
R3	3 Tab Roofing Shingles	GAF	0304050	Autum Brown

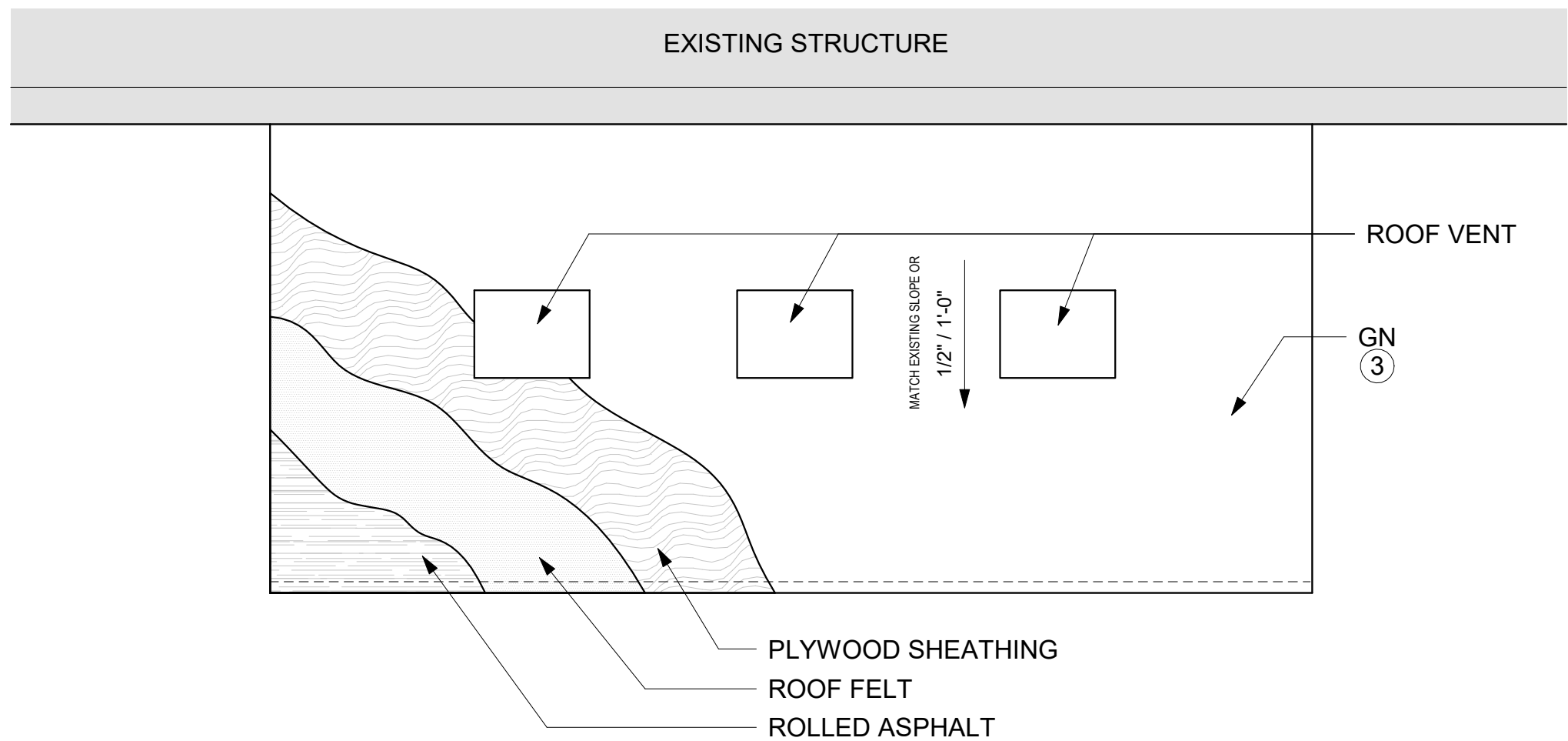
Door Schedule						
Type	Manufacturer	Model	Width	Height	Thickness	Color/ Finish
2 - Panel Square Hollow Core	Masonite	18092	2' - 6"	6' - 8"	0' - 2"	White

Window Style Schedule					
Window Type	Window Model Type	Sill Height	Head Height	Width	Comments
Sliding Vinyl Window	Ply Gem 400 Series Vinyl	5' - 0"	7' - 0"	2' - 0"	Vinyl Frame Window With Frosted Privacy Glazing

Fixture Schedule				
Key Number	Type	Manufacture	Model Number	Finish
01	Medicine Cabinet With Mirror	Glacier Bay	45399	White
02	24" Towel Bar	Franklin Brass	D2424SN	Brushed Nickel
03	Toilet Roll Holder	Franklin Brass	127772	Brushed Nickel
04	Tub and Shower Curtain Bar	Franklin Brass	185-5SN	Brushed Nickel
05	Door Stop	Design House	204735	Satin Nickel
06	Door Hardware	Schlage	F40 GEO 619	Satin Nickel
07	Cistern Pump			
08	Wall Mounted Bathroom Sink			
09	Water Closet			
10	Shower and Tub Insert			
11	Kitchen Sink			
12	Single Door Refrigerator			
13	Water Heater			
14	Propane Wall Heater			



B3 ROOF PLAN OPTION 1 - GABLE  
1/2" = 1'-0"



A3 ROOF PLAN OPTION 2 - SHED  
1/2" = 1'-0"

## GENERAL NOTES

GN 1- FLOOR PLAN OPTION TO BE USED WHERE ADJOINING EXISTING WALL IS GREATER OR EQUAL TO 12' 0".

GN 2 - FLOOR PLAN OPTION TO BE USED WHERE ADJOINING EXISTING WALL IS LESS THAN 12' 0".

GN 3 - ROLL ROOFING IS TO BE INSTALLED ON ROOFS WHOSE SLOPE NO LESS THAN 0' 2" / 1' 0" AND NO MORE THAN 0' 4" / 1' 0". ASPHALT SHINGLES ARE TO BE INSTALLED ON ROOFS WHOSE SLOPE IS NO LESS THAN 0' 4" / 1' 0"

NAVAJO NATION BATHROOM ADDITIONS

NAVAJO NATION  
CONSTRUCTION DOCUMENTS

OWNER: NAVAJO ENG & CONSTRUCTION AUTHORITY

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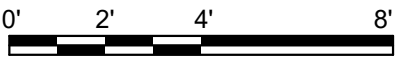
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## FLOOR, ROOF PLANS & SCHEDULES

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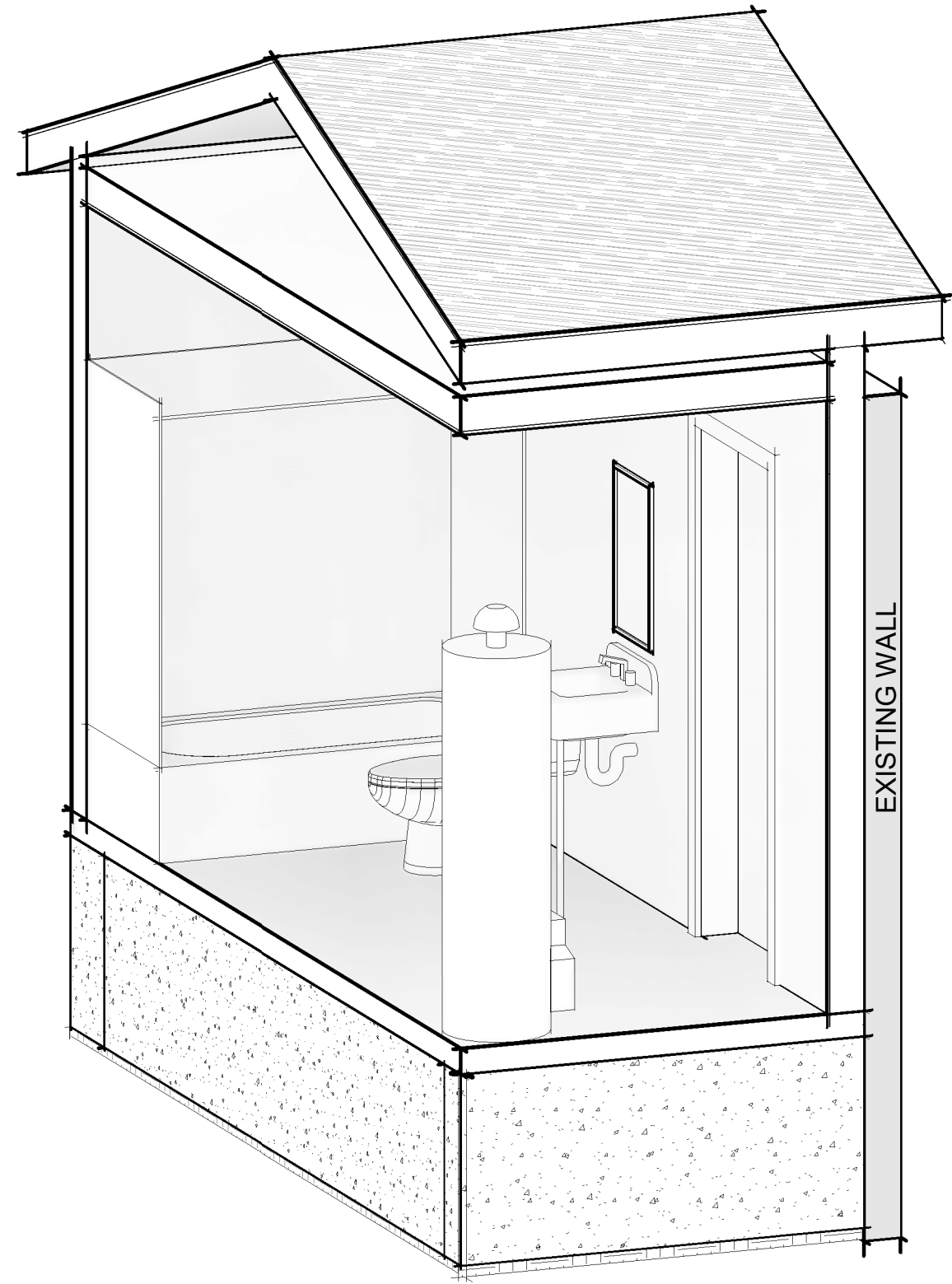
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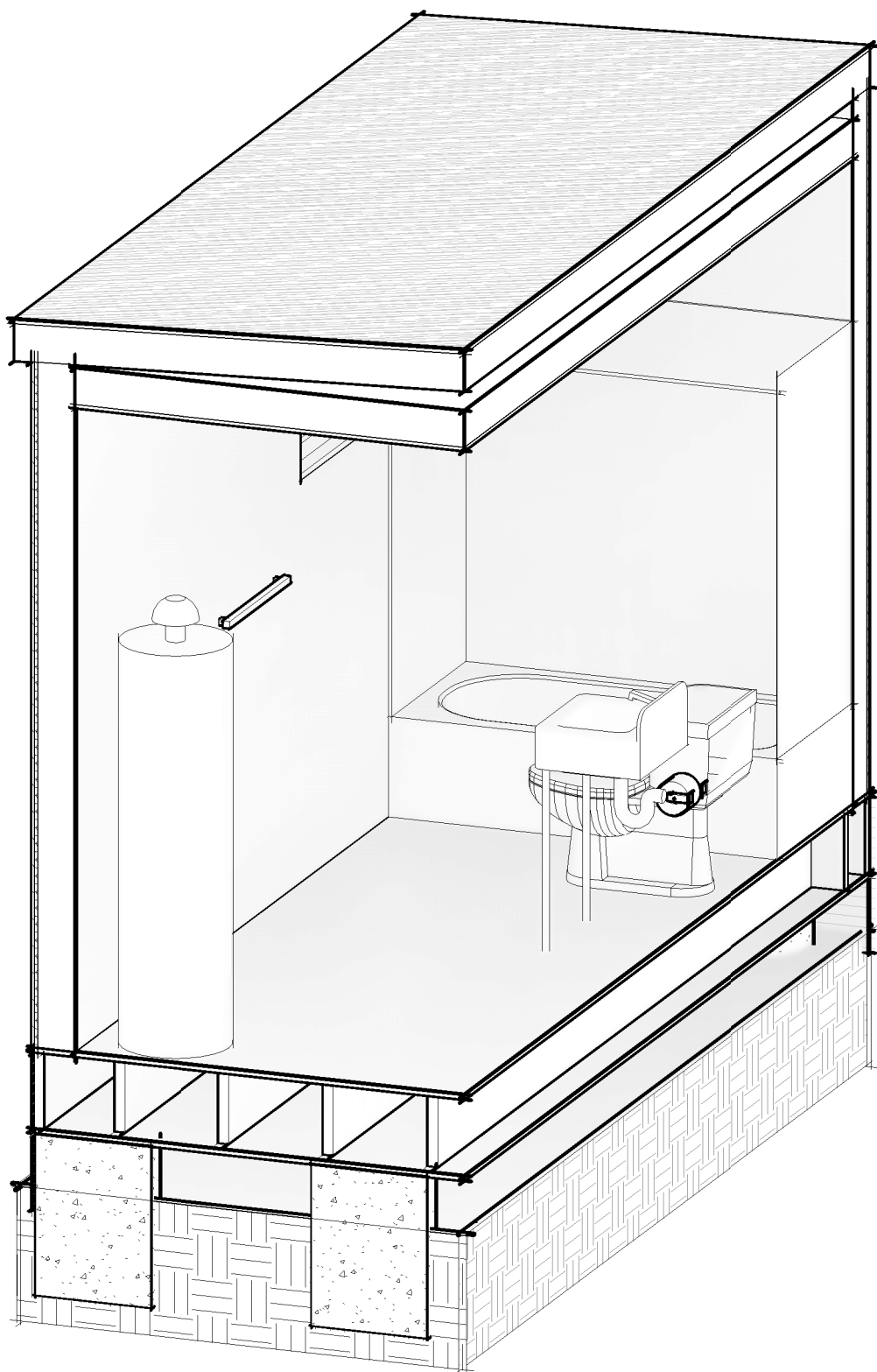




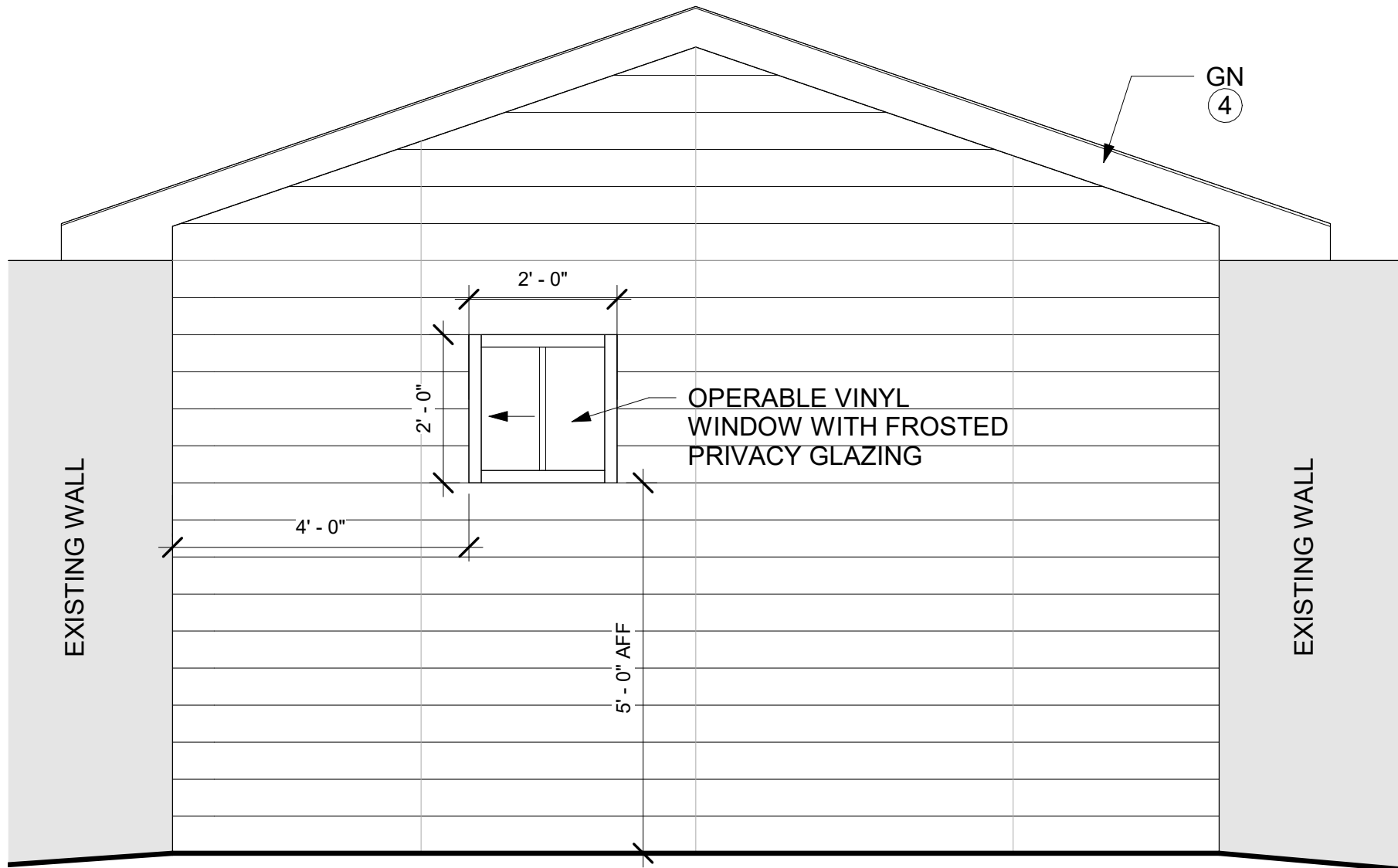
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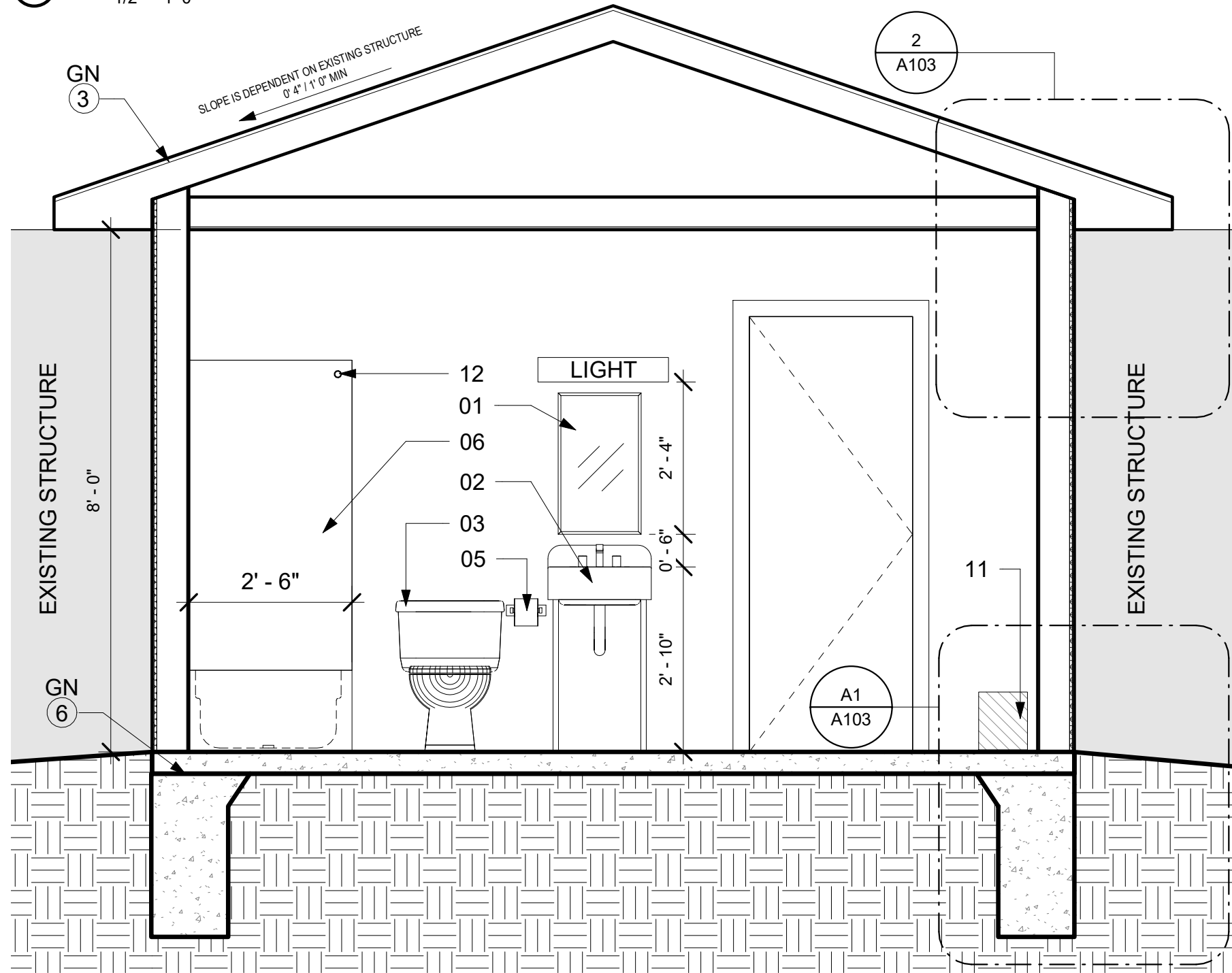
C1 PERSPECTIVE OPTION - GABLE



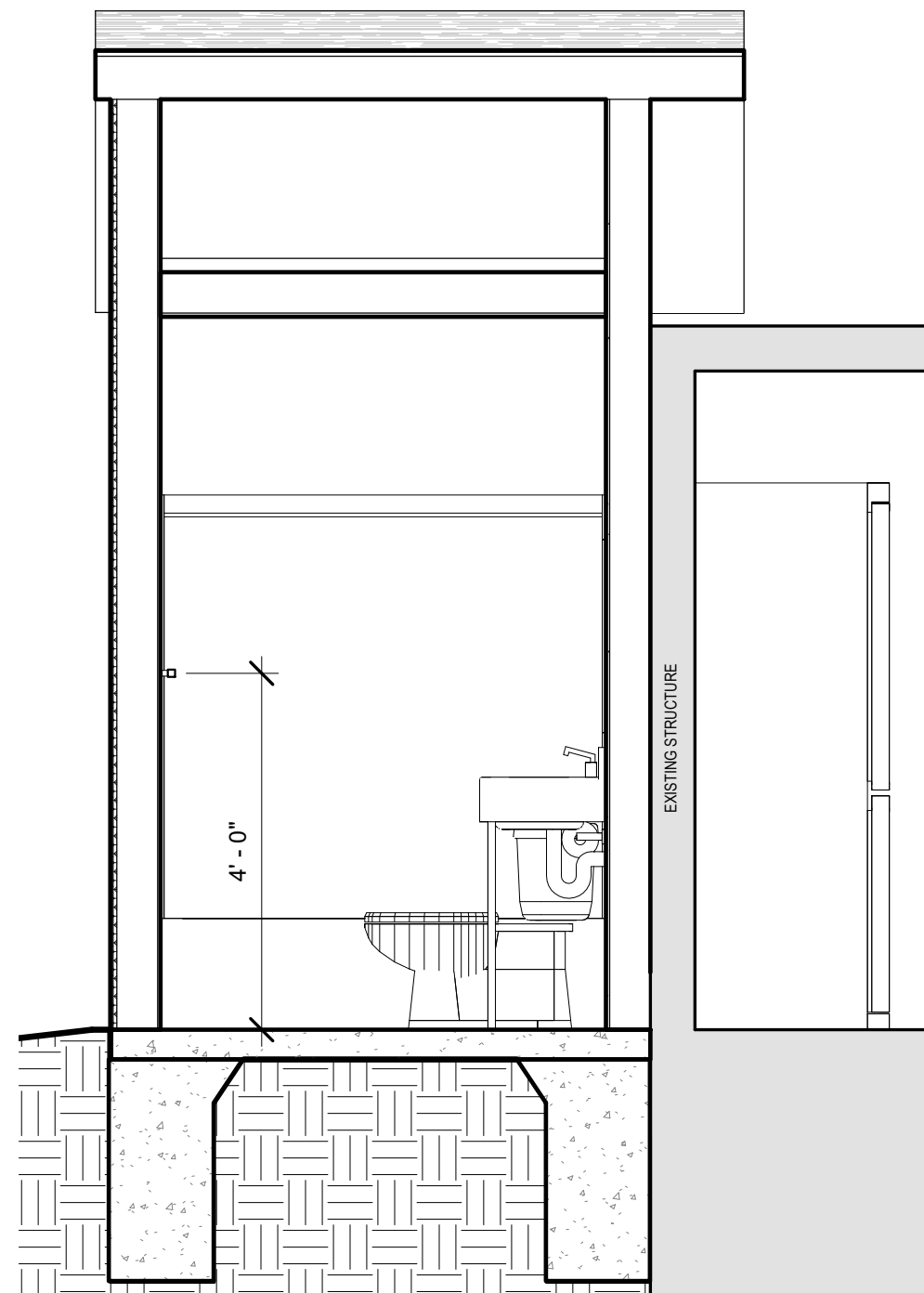
A1 PERSPECTIVE OPTIO - SHED



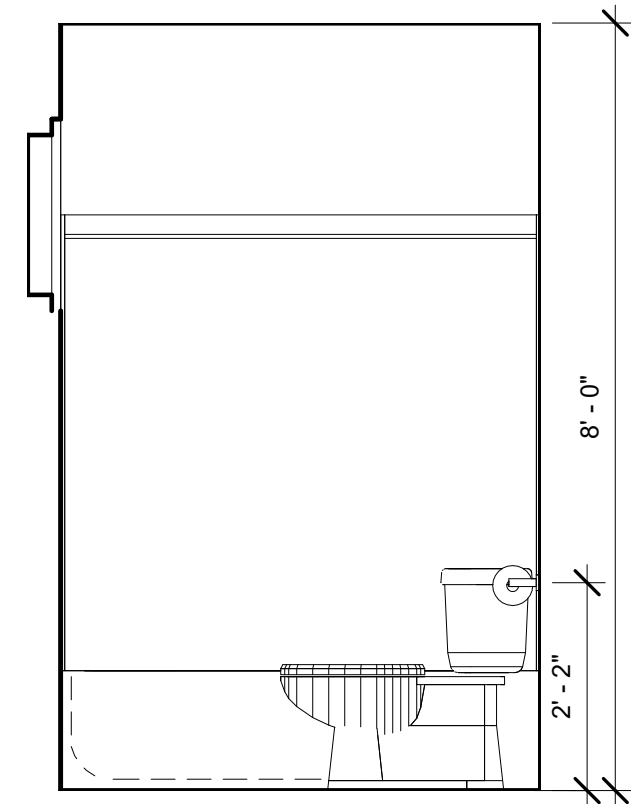
C2 EXTERIOR ELEVATION OPTION 1 - GABLE  
1/2" = 1'-0"



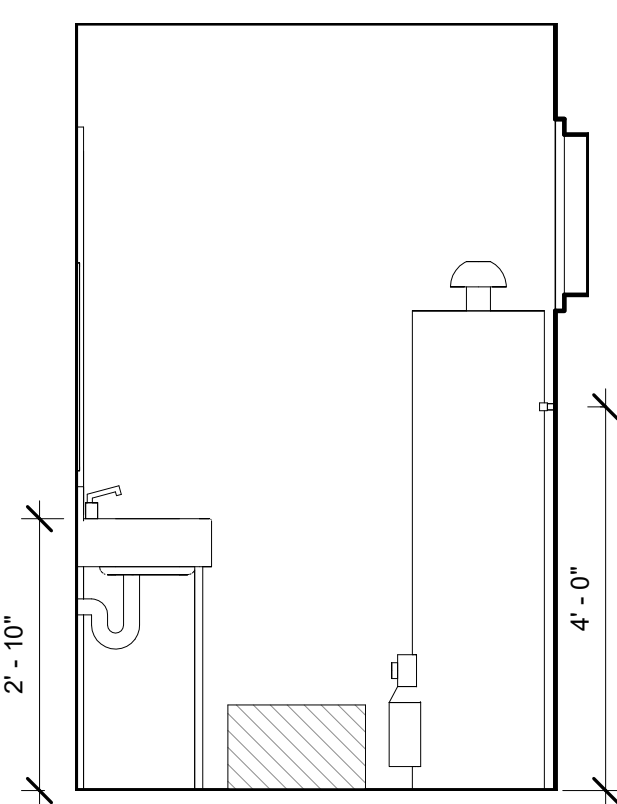
B2 SECTION OPTION 1 - GABLE  
1/2" = 1'-0"



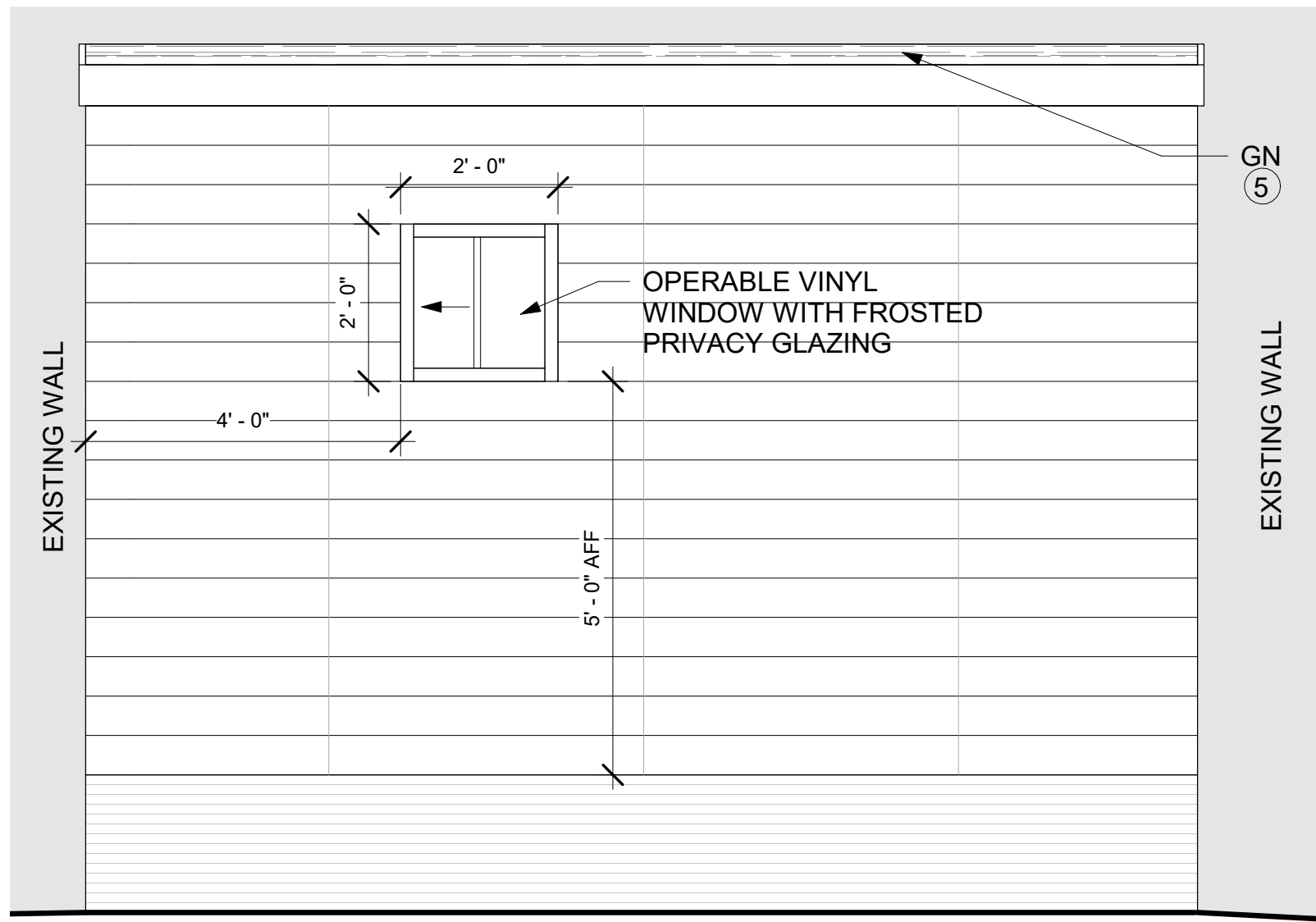
A2 SECTION OPTION 1 - GABLE  
1/2" = 1'-0"



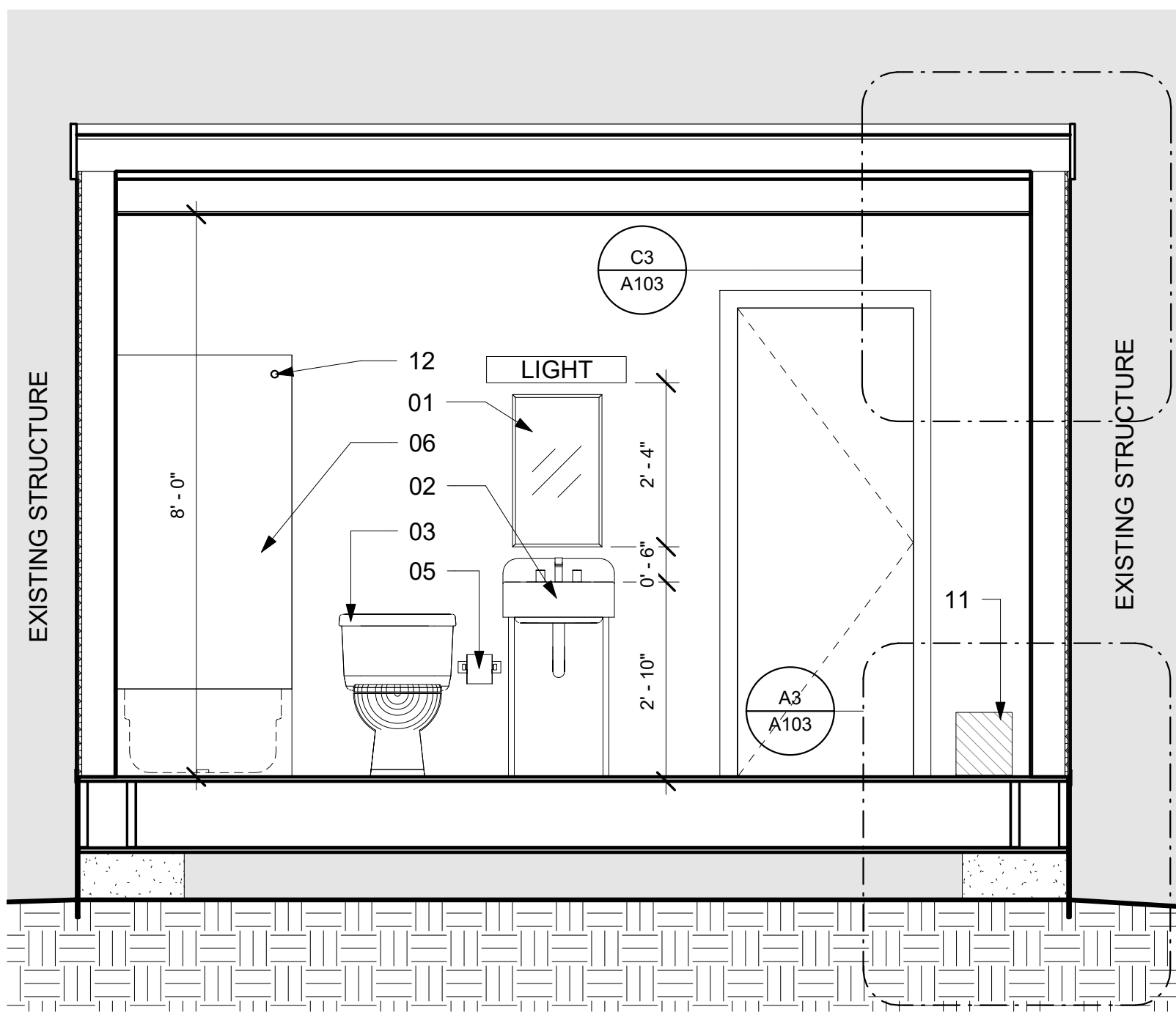
A3 INTERIOR ELEVATION  
1/2" = 1'-0"



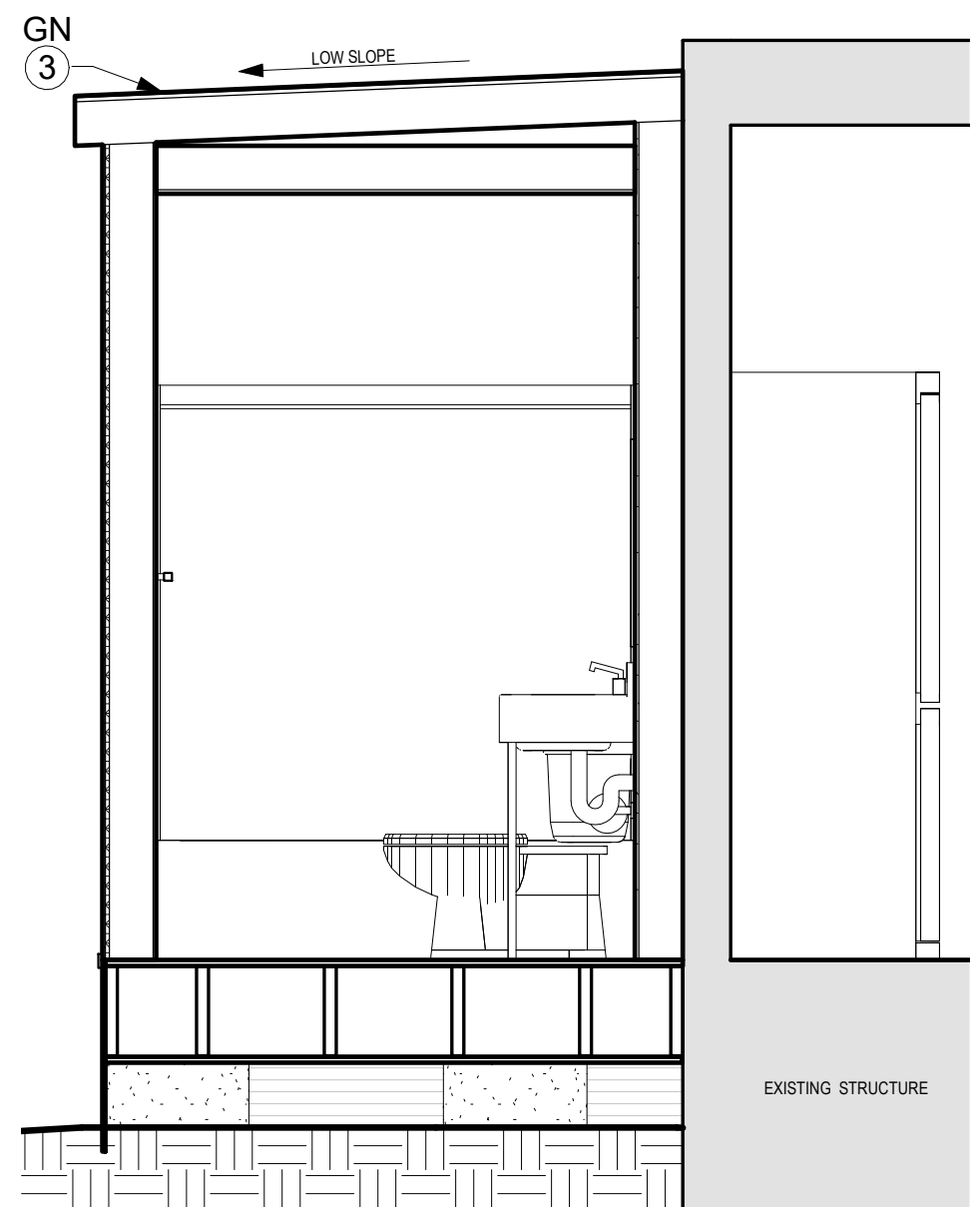
A4 INTERIOR ELEVATION  
1/2" = 1'-0"



C4 EXTERIOR ELEVATION OPTION 2 - SHED  
1/2" = 1'-0"



B4 SECTION OPTION 2 - SHED ROOF  
1/2" = 1'-0"



A5 SECTION OPTION 2 - SHED  
1/2" = 1'-0"

## GENERAL NOTES

GN 3 - ROLL ROOFING IS TO BE INSTALLED ON ROOFS WHOSE SLOPE NO LESS THAN 0' 2" / 1' 0" AND NO MORE THAN 0' 4" / 1' 0". ASPHALT SHINGLES ARE TO BE INSTALLED ON ROOFS WHOSE SLOPE IS NO LESS THAN 0' 4" / 1' 0"

GN 4 - GABLE ROOF OPTION TO BE USED WHERE ADJOINING EXISTING WALL IS AT LOWER HEIGHT THAN TOP OF THE PITCH GABLE PITCH

GN 4.5 - GABLE ROOF OPTION TO BE USED WITH CORRESPONDING VIEWS; DISREGARD VIEWS REGARDING SHED ROOF OPTION.

GN 5 - SHED ROOF OPTION TO BE USED WHERE EXISTING ADJOINING WALL IS HIGHER THAN HIGHEST POINT OF PITCH.

GN 5.5 - SHED ROOF OPTION TO BE USED WITH CORRESPONDING VIEWS ; DISREGARD VIEWS REGARDING GABLE ROOF OPTION

GN 6 - GABLE ROOF OPTION SHOWN WITH SLAB-ON-GRADE FOUNDATION TYPE DEPENDING ON ASSESSMENT OR BUILDER FOR STABILITY OF STRUCTURAL FOUNDATION OPTION, GABLE ROOF MAY BE COMBINED WITH PIER FOUNDATION OPTION.

## NAVAJO NATION BATHROOM ADDITIONS

## NAVAJO NATION CONSTRUION DOCUMENTS

OWNER: NAVAJO ENG & CONSTRUCTION AUTHORITY

## INDIGENOUS DESIGN STUDIO + ARCHITECTURE, LLC



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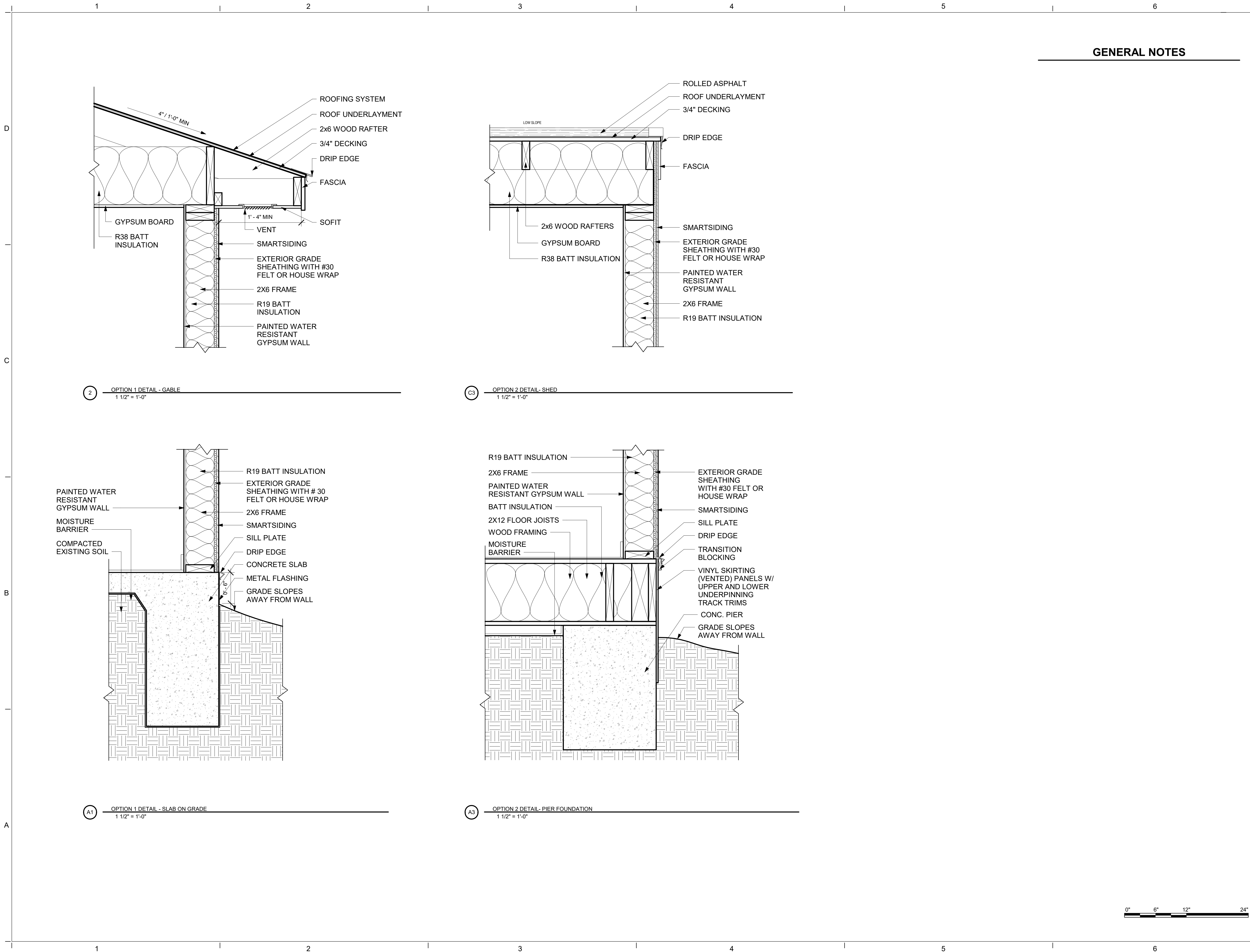
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0' 2' 4' 8'



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NAVAJO NATION BATHROOM ADDITIONS

NAVAJO NATION  
CONSTRUCTION DOCUMENTS

OWNER:  
NAVAJO ENG & CONSTRUCTION AUTHORITY

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SHEET T  
A  
**ROOF AND  
FOUNDATION  
DETAILS**

SHEET NUMBER

**A103**

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## ELECTRICAL, MECHANICAL & PLUMBING OUTLINE SPECIFICATIONS

### MECHANICAL AND PLUMBING

1. THESE DRAWING NOTES ACCOMPANY THE PUBLISHED CONSTRUCTION DOCUMENT.
2. DO NOT SCALE DRAWINGS. VERIFY DIMENSIONS IN FIELD PRIOR TO COMMENCEMENT OF WORK. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
3. ALL SUBCONTRACTORS SHALL BE LICENSED, EXPERIENCED, AND THOROUGHLY KNOWLEDGEABLE IN THEIR RESPECTIVE AREAS OF THE CONSTRUCTION INDUSTRY AND SHALL PERFORM IN A RESPONSIBLE MANNER WITH ESTABLISHED CONSTRUCTION SEQUENCE. SHALL RECOGNIZE THE PRIORITY OF THE CONSTRUCTION DOCUMENTS, AND SHALL INFORM THE PRIME CONTRACTOR OF POTENTIAL PROBLEMS WHEN THE CONSTRUCTION DOCUMENTS ARE UNCLEAR OR INCONSISTENT.
4. EXAMINATION OF BIDDING DOCUMENTS:
  - 4.1. EACH BIDDER SHALL EXAMINE THE BIDDING DOCUMENTS CAREFULLY, AND NOT LATER THAN SEVEN (7) DAYS PRIOR TO THE DATE OF RECEIPT OF BIDS, SHALL MAKE WRITTEN REQUEST TO THE ARCHITECT FOR INTERPRETATION OR CORRECTION OF ANY DISCREPANCIES, AMBIGUITIES, INCONSISTENCIES, OR ERRORS THEREIN WHICH THEY MAY DISCOVER. THE ARCHITECT WILL ISSUE ANY INTERPRETATION OR CORRECTION AS AN ADDENDUM. ONLY A WRITTEN INTERPRETATION OR CORRECTION BY ADDENDUM SHALL BE BINDING. NO BIDDER SHALL RELY UPON INTERPRETATIONS OR CORRECTIONS GIVEN BY ANY OTHER METHOD.
  - 4.2. FAILURE TO REQUEST CLARIFICATION DURING THE BID PERIOD OF ANY INADEQUACY, OMISSION, OR CONFLICT WILL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES.
5. PROVIDE A BASE BID WHICH SHALL INCLUDE ONLY SPECIFIED EQUIPMENT OR EQUIPMENT LISTED AS EQUIVALENT. NO SUBSTITUTIONS FOR THE LISTED EQUIPMENT SHALL BE ALLOWED IN THE BASE BID.
  - 5.1. THE MANUFACTURER OF EQUIPMENT OR MATERIALS FIRST NAMED ON THE DRAWINGS AS THE BASIS OF DESIGN. OTHER MANUFACTURERS LISTED ARE CONSIDERED GENERAL EQUIVALENTS ONLY.
  - 5.2. PROVIDE NECESSARY ADDITIONAL ITEMS SO THAT SELECTED OR SUBSTITUTED ITEM OPERATES EQUIVALENT TO THE BASIS OF DESIGN AND PROPERLY FITS IN THE AVAILABLE SPACE ALLOCATED FOR THE BASIS OF DESIGN.
    - 5.2.1. PROVIDE ALL FEATURES WHICH ARE STANDARD ON THE BASIS OF DESIGN PLUS ANY SPECIFIED OPTIONS.
    - 5.2.2. BE RESPONSIBLE FOR ASSURING THAT PIPING, CONDUIT, DUCT, FLUE, AND OTHER SERVICE LOCATIONS FOR GENERAL EQUIVALENTS OR SUBSTITUTIONS DO NOT CAUSE ACCESS, SERVICE, OR OPERATIONAL DIFFICULTIES ANY GREATER THAT WOULD BE ENCOUNTERED WITH THE BASE DESIGN.
6. OFFSET PIPING, DUCTWORK, ETC. AS NECESSARY TO ACCOMMODATE STRUCTURE, BEAMS, AND COLUMNS, AND EQUIPMENT.
7. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER TO THE SATISFACTION OF THE ARCHITECT, OWNER, AND ENGINEER.
8. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM HIS/HER WORK IN CONFORMANCE WITH ALL APPLICABLE CODES, ORDINANCES AND LIFE SAFETY FEATURES AS REQUIRED BY LOCAL, STATE, OR NATIONAL AUTHORITIES. THE CONTRACTOR SHALL VERIFY WITH THE ARCHITECT IF MODIFICATION OF HIS/HER WORK IS REQUIRED FOR COMPLIANCE.
9. SUBMIT RECORD DOCUMENTS TO ARCHITECT. DOCUMENTS SHALL INCLUDE ALL ADDENDUM ITEMS, CHANGE ORDERS, ALTERATIONS, RE-ROUTINGS, ETC.
10. SYSTEMS SHALL BE COMPLETE, OPERABLE, AND READY FOR CONTINUOUS OPERATION PRIOR TO ACCEPTANCE BY THE OWNER.
11. SYSTEMS SHALL BE TESTED FOR PROPER OPERATION. PERFORM AT A MINIMUM ALL CODE REQUIRED TESTS OR SYSTEMS. IF TESTS OF WORK ARE DEFECTIVE, CONTRACTOR SHALL MAKE CORRECTIONS NECESSARY AT NO ADDITIONAL COST TO OWNER.
12. ALL MATERIALS AND/OR EQUIPMENT SHALL BE HANDLED AND INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
13. PROVIDE NECESSARY TRENCHING, BACKFILL, EXCAVATION, SUPPORTS, SAW-CUTTING AND PATCHING, CONCRETE/PAVING, ETC., AS REQUIRED. BACKFILL TRENCHES IN 6" LAYERS AND TO 90% COMPACTION AND PATCH TO MATCH EXISTING GRADE.
14. CAREFULLY VERIFY ELECTRICAL SERVICE VOLTAGE AND PHASE AVAILABLE.
15. DUCTWORK: (LOW VELOCITY)
  - 15.1. FLEXIBLE DUCTWORK SHALL HAVE AN OUTER JACKET OF FIRE RETARDANT POLYETHYLENE VAPOR BARRIER MATERIAL, UNIFORM LAYER OF FIBERGLASS INSULATION, HIGH-STRENGTH GALVANIZED STEEL HELIX ENCAPSULATED IN REINFORCED "RIP STOP" ALUMINUM LAMINATE INTERIOR CORE, UL LISTED AND LABELED, CLASS 1 AIR DUCT. FLEXIBLE CONNECTION: EQUIVALENT TO VENTFAB, FIREPROOF GLASS CLOTH, 10" W.C. RATED.
  - 15.2. ROUND DUCT: SPIRAL SEAM, GALVANIZED STEEL. DIE STAMPED OR 5 GORE ELBOWS, "SNAP-LOCK" LONGITUDINAL SEAM DUCT, OR ADJUSTABLE FITTINGS ARE ACCEPTABLE ON INDIVIDUAL GRILLE/DIFFUSER RUNOUTS ONLY.
  - 15.3. DUCTWORK: G60 GALVANIZED SHEET STEEL; LOCK FORMING QUALITY; CONSTRUCTED TO THE LATEST EDITION OF SMACNA "HVAC DUCT CONSTRUCTION STANDARDS"; +/- 1" W.C. PRESSURE CLASSIFICATION, SEAL CLASS "C"; WITH GALVANIZED STEEL FASTENERS, ANCHORS, ANGLES, STRAPS, ETC.
  - 15.4. SEAL ALL SEAMS (LONGITUDINAL AND TRANSVERSE) AIRTIGHT WITH UNITED MCGILL "UNI-GRIP" UL LISTED, WATER BASED, NON-HARDENING, ELASTIC SEALANT OR EQUIVALENT. TAPE NOT ALLOWED.
16. PROVIDE 1/4" GALVANIZED MESH SCREEN ON ALL COMBUSTION AIR DUCTS OR OPENINGS, AND ALL OPEN END RETURN AND EXHAUST DUCTS.
17. ALL DUCTWORK DIMENSIONS ARE INSIDE FREE AREA DIMENSIONS.
18. SUPPORT PIPE WITH ROD AND CLEVIS, RING HANGERS, TRAPEZE, OR CLAMPS. NO PIPE TAPE OR STRAPPING ALLOWED. ALL HANGERS SHALL BE SIZED FOR OUTSIDE OF INSULATION, IF ANY. PROTECT INSULATED LINES WITH 20 GA SHEET METAL SHIELDS FOR PIPING 1-1/2" AND LESS. PROVIDE CALCIUM SILICATE INSULATION INSERTS FOR ALL INSULATED PIPING 2" AND LARGER. MAINTAIN VAPOR BARRIER ON ALL COLD LINES. ISOLATE BARE COPPER LINES FROM HANGERS WITH VIBRASORB OR EQUIVALENT, COPPER COATED HANGERS ARE NOT SUFFICIENT. WRAPPING PIPE WITH TAPE NOT ACCEPTABLE.
19. COPPER PIPE VALVES AND SPECIALTIES:
  - 19.1. GATE VALVES - BRONZE, CLASS 125, 200 LB. W.O.G.
  - 19.2. BALL VALVES - BRONZE, CLASS 125, 600 LB. W.O.G.
  - 19.3. CHECK VALVES - BRONZE, CLASS 125, 200 LB. W.O.G.
  - 19.4. BALANCING VALVES - 125 PSI W.P. FOR 250 DEGREE FAHRENHEIT SERVICE TIGHT SHUTOFF, TOUR AND ANDERSON STA, ARMSTRONG CBV, GERAND, OR FLOWSET, BELL AND GOSSETT CIRCUIT SETTER.
  - 19.5. DIRECT UNIONS: FURNISH AND INSTALL A DIELECTRIC UNION AT EACH CONNECTION BETWEEN DISSIMILAR METALS.

### MATERIALS: SOIL, WASTE, AND VENT PIPING (INSIDE BUILDING)

- 20.1. LINES ABOVE GROUND--STANDARD WEIGHT, C.I. SOIL PIPE, AND FITTINGS. NO HUB WITH HEAVY DUTY CLAMPS. UP THROUGH 2-1/2" MAY BE STANDARD WEIGHT. GALVANIZED STEEL PIPE WITH BLACK, W.I. DRAIN FITTINGS, OR DWV COPPER TUBE WITH DWV FITTINGS AND 95-5 NO LEAD SOLDER.
- 20.2. CONDENSATE DRAIN LINES INSIDE BUILDING TO BE COPPER TUBE WITH 95-5 NO LEAD SOLDER.
- 20.3. CONDENSATE DRAIN LINES OUTSIDE BUILDING TO BE PVC WITH UV-PROTECTIVE COATING, LATEX PAINT OR EQUAL.
21. GAS PIPING--SCHEDULE 40 BLACK STEEL PIPE, WELDED FITTINGS WITH ALL PIPING COATED AND WRAPPED ON BURIED PIPE.
22. GAS VALVES--NON-LUBRICATED BALL STYLE VALVE WITH RESILIENT SEATS, AND ADJUSTABLE GLAND PACKING NUT, AGA AND UL LISTED FOR NATURAL GAS SERVICE.
23. DRAIN PAN PIPING--NOT BURIED--TYPE "M" COPPER, WROUGHT COPPER FITTINGS, AND 95-5 SOLDER.
24. SUPPORT BASE MOUNTED CISTERN PUMP BY MASON INDUSTRIES OR EQUIVALENT SPRING TYPE SEISMICALLY RESTRAINED VIBRATION ISOLATORS.
25. INSULATE ALL DOMESTIC HOT AND COLD WATER PIPING WITH U.L. APPROVED, WHITE, ALL SERVICE, GLASS FIBER, SNAP-ON, PIPE INSULATION. INSULATE FITTINGS WITH GLASS FIBER BLANKET INSULATION AND PREMOLDED P.V.C. COVERS. ALL MATERIALS SHALL HAVE A SMOKE DEVELOPED RATING OF 50 OR LESS AND A FLAME SPREAD RATING OF 25 OR LESS. INSULATION SHALL PASS UNINTERRUPTED THROUGH HANGERS. VAPOR BARRIERS SHALL BE CONTINUOUS, AND SEALED WITH "NON-BREATHING" MASTIC ON COLD PIPING. ALL RAW EDGES OF INSULATION SHALL BE NEATLY TRIMMED AND SEALED WITH MASTIC.
  - 25.1. INSULATION THICKNESS:
    - 25.1.1. DOMESTIC COLD WATER: 1" THICK
    - 25.1.2. DOMESTIC HOT WATER: 1" THICK
    - 25.1.3. REFRIGERANT PIPING: 1" THICK FLEXIBLE ELASTOMERIC
26. EQUIPMENT LABELS: LABEL ALL PIPING AND EQUIPMENT. PROVIDE FULL BAND OR STRIP TYPE MARKERS AND FLOW ARROWS ON PIPING. PROVIDE ENGRAVED PLASTIC VALVE TAGS WITH VALVE NUMBER AND ATTACH WITH STANDARD CHAIN OR S-HOOKS. PROVIDE ENGRAVED PLASTIC SIGN ON OR NEAR SPECIFIED EQUIPMENT.
27. FIRE PROTECTION DESIGN/BUILD REQUIREMENTS:
  - 27.1. PROVIDE NEW AUTOMATIC SPRINKLER SYSTEM TO FULLY SPRINKLE BUILDING. COMPLETE DRAWINGS, SPECIFICATIONS, AND DETAILS SHALL BE SUBMITTED BY THE FIRE SPRINKLER DESIGN-BUILD CONTRACTOR.
  - 27.2. THE FIRE SPRINKLER CONTRACTOR SHALL SERVE AS THE ENGINEER OF RECORD FOR ALL WORK PERFORMED UNDER THIS DIVISION. IF REQUIRED BY THE AUTHORITY HAVING JURISDICTION, (A.H.J.) SUBMIT COMPLETE FIRE SPRINKLER SYSTEM SHOP DRAWINGS AND HYDRAULIC CALCULATIONS, GENERATED BY CONTRACTOR. SHOP DRAWINGS SHALL BE A MINIMUM 1/8" SCALE, AND SHALL SHOW DEVICE AND APPLIANCE LOCATIONS, BUILDING BACKGROUND INFORMATION, ROOM OCCUPANCY DESCRIPTIONS, DOOR SWINGS, FIRE RATINGS AND FIRE PROTECTION SYSTEM LAYOUT AND DETAILS. SHOP DRAWINGS AND HYDRAULIC CALCULATIONS SHALL BE SEALED BY A NICET III LICENSED TECHNICIAN OR PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF ARIZONA. SUBMIT SHOP DRAWINGS AND HYDRAULIC CALCULATIONS TO THE BUILDING AND FIRE DEPARTMENTS AS A DEFERRED SUBMITTAL AND OBTAIN THEIR APPROVAL BEFORE SUBMISSION TO THE ARCHITECT.
  - 27.3. WHERE REQUIRED BY THE A.H.J., ALL NEW SPRINKLER HEADS SHOULD HAVE THE CONNECTING MAIN AND BRANCH PIPE SIZES SHOWN.
    - 27.3.1. SHOW THE CONNECTING MAIN AND BRANCH PIPE SIZES FOR ALL NEW SPRINKLER HEADS.
    - 27.3.2. CONFORM TO LIGHT HAZARD OCCUPANCY REQUIREMENTS OF NFPA 13.
    - 27.3.3. PROVIDE FLOW TEST INDICATING STATIC AND RESIDUAL PRESSURED DEVELOPED UNDER FIRE FLOW CONDITIONS AS REQUIRED BY A.H.J., AUTHORITY HAVING JURISDICTION.
  - 27.4. ADD NEW SPRINKLER HEADS IN ACCORDANCE WITH NFPA 13, ALL APPLICABLE CODES AND ORDINANCES TO COMPLETE THE NEW WORK.
  - 27.5. SYSTEM SHALL BE INSTALLED COMPLETE AND OPERATIONAL, INCLUDING WATER FLOW INDICATOR, CONNECTIONS TO EXISTING ALARM, DRAIN PIPING, IDENTIFICATION SIGNS, ETC.
  - 27.6. WORK SHALL BE PERFORMED BY A QUALIFIED FIRE SPRINKLER INSTALLER WITH A MINIMUM OF FIVE (5) YEARS EXPERIENCE IN SIMILAR INSTALLATIONS.
  - 27.7. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO AND DURING INSTALLATION.
  - 27.8. PROVIDE AN EXTRA STOCK OF SIX (6) SPRINKLER HEADS, THREE (3) OF EACH TYPE, AND A SPRINKLER WRENCH. SPRINKLER HEADS SHALL MATCH EXISTING IN ADJACENT AREAS.

## UTILITY NOTES

FULL COORDINATION WITH NTUA, NAVAJO TRIBAL UTILITY AUTHORITY SHALL BE FOLLOWED THROUGHOUT THIS PROJECT. CODE COMPLIANCE WITH NTUA'S DESIGN AND CONSTRUCTION STANDARDS AND UTILITY REQUIREMENTS ARE MET. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY WITH THE LATEST EDITION OF NEC, NATIONAL ELECTRIC CODE. ANY UNDERGROUND SYSTEM(S) AND METHODS OF INSTALLATION AND INSPECTION(S) SHALL COMPLY WITH SPECIFICATIONS AS NOTED IN THE NTUA COMMERCIAL DRAWINGS MANUAL.

- A. ALL EXISTING MAINLINE UTILITIES ARE TO REMAIN IN PLACE AND ARE TO BE PROTECTED DURING DEMOLITION AND CONSTRUCTION UNLESS OTHERWISE NOTED.
- B. IF ANY UTILITY LINES, PIPELINES, OR ANY UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED TO THE ENGINEER BY OTHERS, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ANY UTILITY LINE, PIPELINE OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK.
- C. CONTRACTOR SHALL COORDINATE ELECTRICAL, WATER, AND COMMUNICATION SERVICES AND EXTENSIONS WITH LOCAL UTILITY SERVICE PROVIDERS.
- D. THE CONTRACTOR SHALL NOTIFY ALL APPLICABLE UTILITY COMPANIES AT LEAST TWO (2) DAYS PRIOR TO ANY DIGGING OR EXCAVATION.
- E. ALL UTILITY WORK SHALL FOLLOW NTUA, NAVAJO TRIBAL UTILITY AUTHORITY.
- F. VERTICAL SEPARATION OF WATER AND SEWER LINES (INCLUDES SERVICE LINES):
  - F.A. WATER ABOVE SEWER: WHEN WATER LINES CROSS SEWER LINES, THE WATER LINE SHALL CROSS ABOVE THE SEWER LINE WITH A MINIMUM VERTICAL SEPARATION OF 12 INCHES (O.D. TO O.D.). IF NECESSARY, THE DEPTH OF BURY FOR THE WATER LINE MAY BE REDUCED TO 36 INCHES (NORMALLY 42 INCHES) AT THE CROSSING TO MAINTAIN THE 12 INCH VERTICAL SEPARATION. WHEN THE MINIMUM 12 INCH VERTICAL SEPARATION IS NOT POSSIBLE, THE WATER LINE IS NOT POSSIBLE, THE WATER LINES SHALL BE PERMITTED WITHIN 10 FEET OF CROSSING A SEWER LINE.
  - F.B. SEWER ABOVE WATER: WHEN A WATER LINE MUST CROSS BELOW A SEWER LINE, THE MINIMUM VERTICAL SEPARATION BETWEEN THE LINES IS 12-INCHES BACKFILL OF THE TRENCHES SHALL BE COMPACTED TO PROVIDE ADEQUATE SUPPORT TO PREVENT SETTLING OF THE SEWER LINE AND DAMAGING THE WATER LINE. ALL NEW WATER LINES SHALL BE NORMAL PVC OR PE WATER DISTRIBUTION PIPE WITH A 20-FOOT (MINIMUM) PIPE SECTION CENTERED ON THE SEWER CROSSING. NO JOINTS OF NEW WATER LINE CONSTRUCTION SHALL BE PERMITTED WITHIN 9-FEET OF CROSSING A SEWER LINE. WHILE IT IS DESIRABLE TO HAVE CROSSINGS PERPENDICULAR, NEW WATER LINE (CENTERED ON THE CROSSING) MAY CROSS UNDER A SEWER LINE AT A MAXIMUM OF 25 DEGREES FROM PERPENDICULAR.
  - F.D. THE NEW SEWER LINE SHALL BE DUCTILE IRON PIPE WITH GASKET JOINTS, OR APPROVED EQUAL, WITH AN 18-FOOT SECTION CENTERED ON THE CROSSING, NO JOINTS IN THE NEW SEWER LINE CONSTRUCTION SHALL BE PERMITTED WITHIN 9-FEET OF CROSSING WATER LINE.

## PROJECT GENERAL NOTES

### ELECTRICAL

- A. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE THEMSELVES WITH THE ENTIRE PROJECT PRIOR TO BID. THIS IS TO ALLOW FOR A COMPLETE AND ACCURATE BID PERTAINING TO SCOPE INDICATED ON THE DESIGN DRAWINGS & SPECIFICATIONS. ANY QUESTIONS THAT MAY ARISE IN REGARDS TO THE SCOPE OF WORK INDICATED, WHAT THE CONTRACTOR'S FUNCTIONS ARE OR ANY OTHER ISSUE RELATED TO THE PROJECT ITSELF SHALL BE IDENTIFIED DURING THE BID PERIOD AND COMMUNICATED TO THE ENGINEER FOR CLARIFICATION PRIOR TO AWARD OF CONTRACT.
- B. IT WILL BE THE CONTRACTOR'S OBLIGATION TO INCLUDE IN THEIR BID THE COSTS FOR INSTALLATION OF JUNCTION BOXES, CONDUIT SUPPORTS, OUTLET COVER PLATES, COORDINATION WITH OTHER TRADES, AND OTHER MISCELLANEOUS ITEMS THAT PERTAIN TO THE SCOPE OF WORK INDICATED.
- C. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC).
- D. LOCATIONS OF ELECTRICAL EQUIPMENT AND ALL OTHER DEVICES SHOWN ON THE PLANS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH ALL TRADES FOR EXACT LOCATION OF OTHER EQUIPMENT THAT REQUIRE ELECTRICAL CONNECTIONS.
- E. ALL CONDUIT ROUTINGS SHOWN ON THE PLAN DRAWINGS ARE APPROXIMATE. EXACT ROUTINGS AND LOCATION OF CONDUITS SHALL BE COORDINATED IN THE FIELD AND INSTALLED AS FIELD CONDITIONS ALLOW.
- F. ALL HOME RUN CIRCUITING SHALL BE 1/2" EMT CONDUIT, WITH #12 THHN COPPER WIRING (MINIMUM), UNLESS OTHERWISE NOTED.
- G. THE MOUNTING HEIGHTS INDICATED ON THE DRAWINGS ARE APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE OTHER TRADES AND REFERENCE THE ARCHITECTURAL INFORMATION FOR EXACT HEIGHTS OF DEVICES PRIOR TO ELECTRICAL ROUGH-IN. UNLESS OTHERWISE NOTED, THIS ALSO PERTAINS TO LOCATIONS OF WALL BOXES, SENSORS, T-STATS, SWITCHES, ETC.
- H. SHOULD CONTRACTOR AT ANY TIME NOTICE THAT THE ACTUAL FIELD CONDITIONS DO NOT CORRESPOND TO THE INFORMATION INDICATED ON THE DRAWINGS, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER FOR CLARIFICATION AND DIRECTION PRIOR TO COMMENCING WORK.
- I. THE WORD "PROVIDE" SHALL MEAN TO FURNISH AND INSTALL. EXCEPTIONS SHALL BE NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS.
- J. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER DISCIPLINES PRIOR TO COMMENCEMENT OF WORK AND INSTALLATION OF EQUIPMENT.
- K. ALL PIPING SHALL BE CONCEALED WHERE POSSIBLE. ALL EXPOSED PIPING, WHERE CONCEALMENT IS NOT POSSIBLE SHALL BE INSTALLED IN A NEAT AND PROFESSIONAL MANNER.

### MECHANICAL

- L. ALL DUCT SIZES SHOWN ARE INSIDE FREE AREA DIMENSIONS. INSTALL DUCTWORK IN ATTIC SPACE AND ROUTED IN BETWEEN JOIST AND IN JOIST WEBBING. SUPPORT FROM TOP CHORD OF TRUSSES. PROVIDE SUFFICIENT CLEARANCE FOR INSULATION THICKNESS.
- M. PROVIDE ALL NECESSARY FITTINGS FOR RISES AND OFFSETS IN DUCTWORK REQUIRED FOR PROPER INSTALLATION WHETHER OR NOT SHOWN ON DRAWINGS.
- N. ALL 90-DEG. SQUARE ELBOWS SHALL BE PROVIDED WITH DOUBLE THICK TURNING VANES.
- O. WALL MOUNTED THERMOSTATS SHALL BE MOUNTED 48" ABOVE FINISHED FLOOR, UNLESS OTHERWISE NOTED.
- P. ALL DUCT IN ATTIC SPACES SHALL BE INSULATED WITH MINIMUM R-6 EXTERNAL INSULATION WRAP.
- Q. PROVIDE EQUIPMENT WITH ALL REQUIRED SERVICE AND OPERATIONAL CLEARANCES, INCLUDING ALL REQUIRED CLEARANCES TO COMBUSTIBLES (WHERE APPLICABLE) AND ALL CLEARANCES REQUIRED BY NEC ARTICLE 110.
- R. COORDINATE WORK WITH OTHER TRADES TO MINIMIZE CONFLICTS.

### PLUMBING

- S. NO WATER PIPING SHALL BE LOCATED IN OUTSIDE WALLS, UNLESS SHOWN TO BE AND THEN PIPING TO BE INSULATED AND LOCATED AS CLOSE AS POSSIBLE TO INSIDE OF WALL CAVITY WITH ADDITIONAL INSULATION BETWEEN PIPING AND EXTERIOR OF WALL.
- T. ALL PLUMBING FIXTURES WITH THE EXCEPTION OF SHOWERS SHALL HAVE SHUT-OFF VALVES TO ALLOW FOR MAINTENANCE TO INDIVIDUAL FIXTURES WITHOUT SHUTTING WATER OFF.
- U. ALL PLUMBING FIXTURES SHALL BE PROVIDED WITH ANGLE WALL STOPS ON THE WATER LINES, AND P-TRAPS AND TAILPIECES ON THE WATER PIPING.
- V. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS OF ANY WALL MOUNTED PLUMBING FIXTURES.
- W. ALL SEWER PIPING AND SEWER VENT PIPING SHALL BE PVC. PVC PIPING SHALL BE INSTALLED PER CURRENT ASTM STANDARD PRACTICE FOR INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS.
- X. ALL BRANCHES SHALL BE VALVED AND ALL VALVES SHALL HAVE UNIONS ADJACENT. ACCESS PANELS AND DOORS SHALL BE FURNISHED TO GENERAL CONTRACTOR FOR INSTALLATION AND ACCESS TO VALVES WHERE REQUIRED. LOCATE ADDITIONAL VALVES AS SHOWN ON DRAWINGS. SEE SPECIFICATIONS FOR ACCESS DOOR REQUIREMENTS.
- Y. ALL PIPING SHALL PITCH TO DRAIN AND CONTRACTOR SHALL PROVIDE VALVING FOR SYSTEM DRAINAGE.
- Z. DOMESTIC WATER SHALL BE ROUTED THROUGHOUT BUILDING ABOVE CEILING AND DOWN IN WALLS OR CHASE, SERVING PLUMBING FIXTURES WITH THE USE OF COPPER. PIPING SHALL HAVE JACKETED INSULATION AND LABELED.
- AA. ALL WORK PROVIDED BY THE CONTRACTOR SHALL HAVE A WARRANTY PERIOD OF ONE YEAR.
- AB. PLUMBING CONTRACTOR SHALL REFER TO CIVIL PLANS PRIOR TO PIPING INSTALLATION FOR ALL SERVICE UTILITIES FOR POINT OF CONNECTION, ROUTING AND SERVICE ENTRANCE.

## NAVAJO NATION BATHROOM ADDITIONS NAVAJO NATION CONSTRUCTION DOCUMENTS

OWNER:  
NAVAJO ENG & CONSTRUCTION AUTHORITY

### INDIGENOUS DESIGN STUDIO + ARCHITECTURE, LLC



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ARCHITECT

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PROJECT NUMBER: M0-36  
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### SHEET TITLE OUTLINE SPECIFICATIONS & PROJECT NOTES

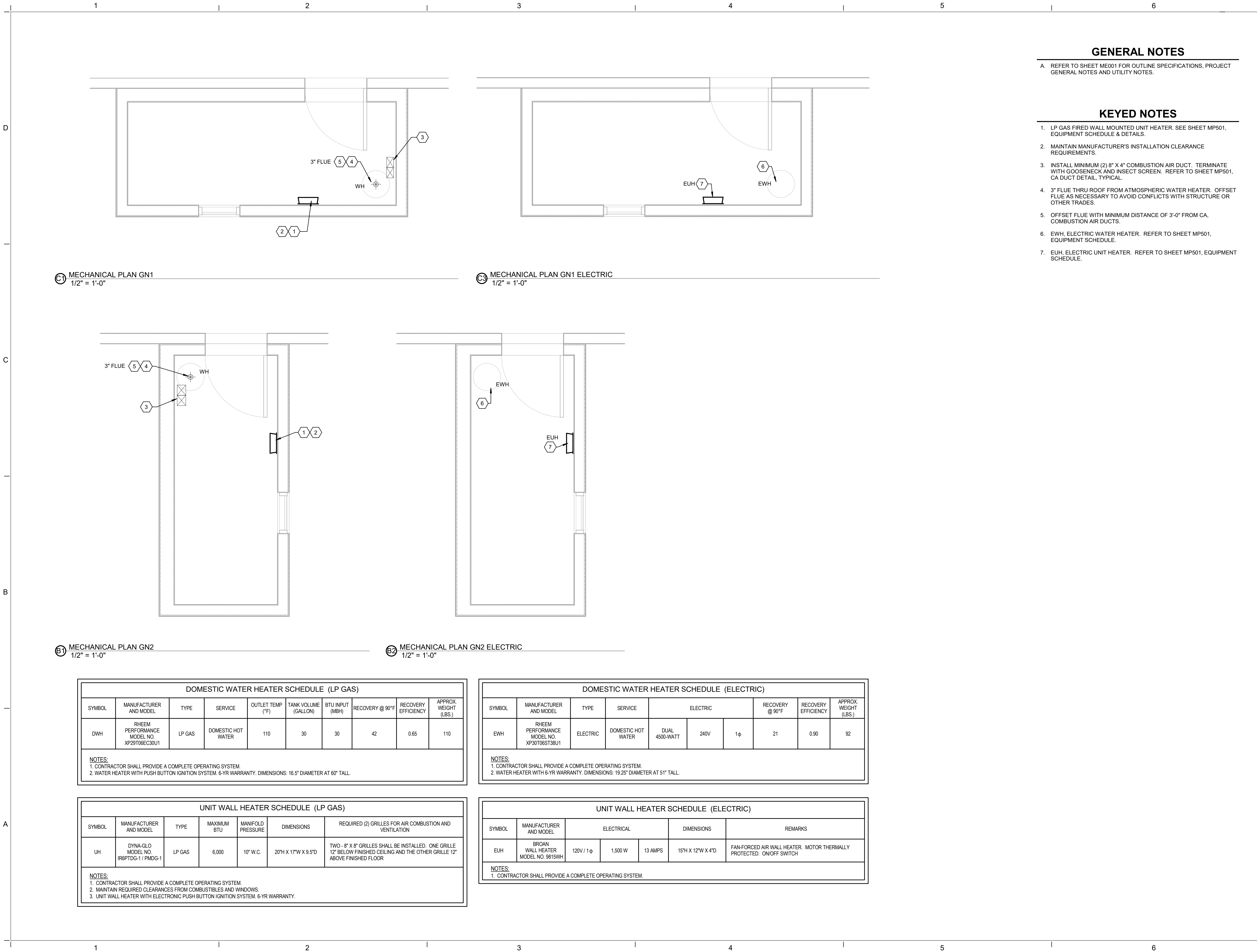
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MEP001

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GENERAL NOTES

- A. REFER TO SHEET ME001 FOR OUTLINE SPECIFICATIONS, PROJECT GENERAL NOTES AND UTILITY NOTES.

KEYED NOTES

1. LP GAS FIRED WALL MOUNTED UNIT HEATER. SEE SHEET MP501, EQUIPMENT SCHEDULE & DETAILS.
2. MAINTAIN MANUFACTURER'S INSTALLATION CLEARANCE REQUIREMENTS.
3. INSTALL MINIMUM (2) 8" X 4" COMBUSTION AIR DUCT. TERMINATE WITH GOOSENECK AND INSECT SCREEN. REFER TO SHEET MP501, CA DUCT DETAIL, TYPICAL.
4. 3" FLUE THRU ROOF FROM ATMOSPHERIC WATER HEATER. OFFSET FLUE AS NECESSARY TO AVOID CONFLICTS WITH STRUCTURE OR OTHER TRADES.
5. OFFSET FLUE WITH MINIMUM DISTANCE OF 3'-0" FROM CA, COMBUSTION AIR DUCTS.
6. EWH, ELECTRIC WATER HEATER. REFER TO SHEET MP501, EQUIPMENT SCHEDULE.
7. EUH, ELECTRIC UNIT HEATER. REFER TO SHEET MP501, EQUIPMENT SCHEDULE.

NAVAJO NATION BATHROOM ADDITIONS

NAVAJO NATION  
CONSTRUCTION DOCUMENTS

OWNER:  
NAVAJO ENG & CONSTRUCTION AUTHORITY

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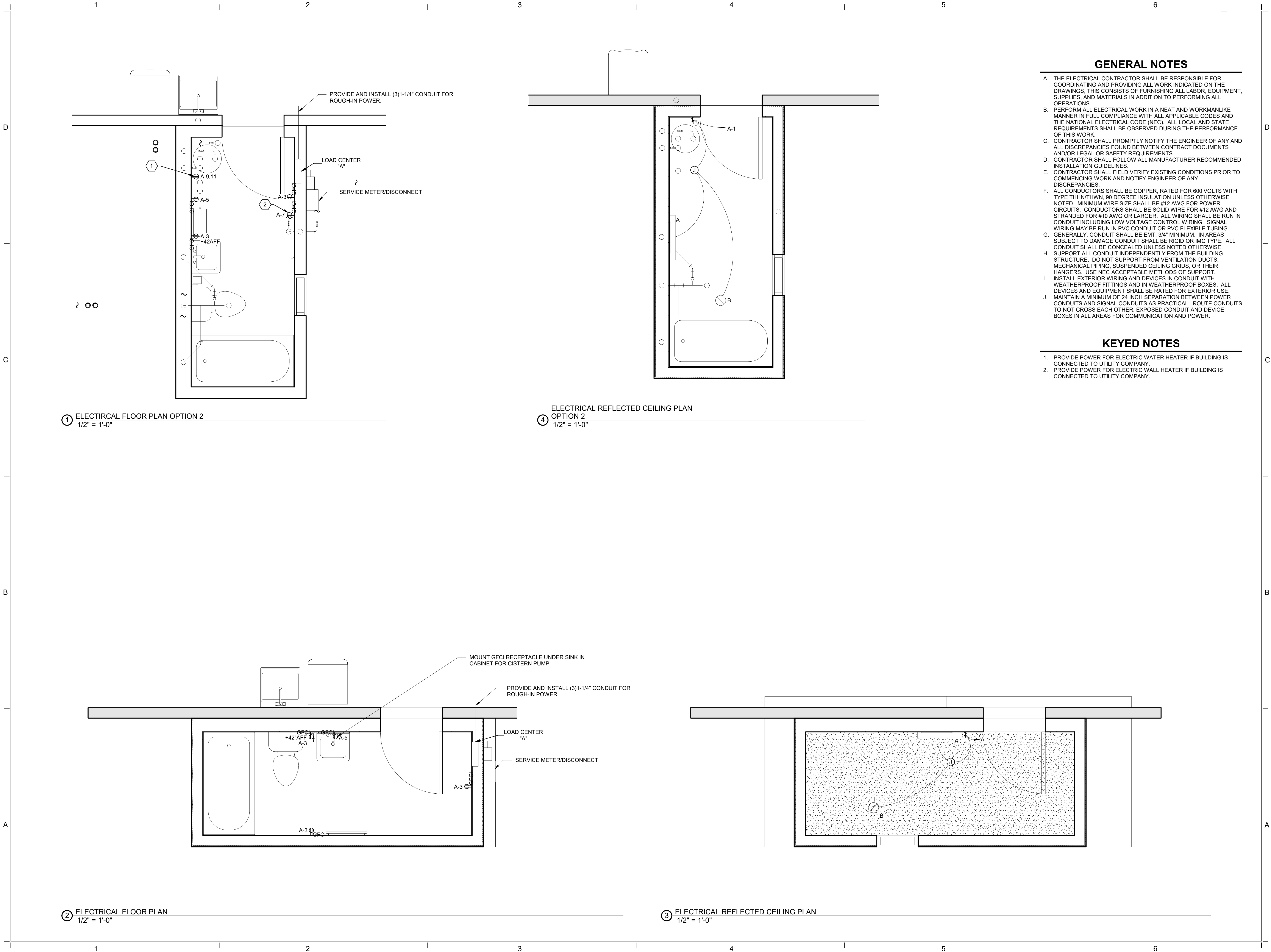
MECHANICAL  
FLOOR PLAN

SHEET NUMBER

M101

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### GENERAL NOTES

- THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND PROVIDING ALL WORK INDICATED ON THE DRAWINGS. THIS CONSISTS OF FURNISHING ALL LABOR, EQUIPMENT, SUPPLIES, AND MATERIALS IN ADDITION TO PERFORMING ALL OPERATIONS.
- PERFORM ALL ELECTRICAL WORK IN A NEAT AND WORKMANLIKE MANNER IN FULL COMPLIANCE WITH ALL APPLICABLE CODES AND THE NATIONAL ELECTRICAL CODE (NEC). ALL LOCAL AND STATE REQUIREMENTS SHALL BE OBSERVED DURING THE PERFORMANCE OF THIS WORK.
- CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER OF ANY AND ALL DISCREPANCIES FOUND BETWEEN CONTRACT DOCUMENTS AND/OR LEGAL OR SAFETY REQUIREMENTS.
- CONTRACTOR SHALL FOLLOW ALL MANUFACTURER RECOMMENDED INSTALLATION GUIDELINES.
- CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING WORK AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
- ALL CONDUCTORS SHALL BE COPPER, RATED FOR 600 VOLTS WITH TYPE THHN/THWN, 90 DEGREE INSULATION UNLESS OTHERWISE NOTED. MINIMUM WIRE SIZE SHALL BE #12 AWG FOR POWER CIRCUITS. CONDUCTORS SHALL BE SOLID WIRE FOR #12 AWG AND STRANDED FOR #10 AWG OR LARGER. ALL WIRING SHALL BE RUN IN CONDUIT INCLUDING LOW VOLTAGE CONTROL WIRING. SIGNAL WIRING MAY BE RUN IN PVC CONDUIT OR PVC FLEXIBLE TUBING.
- GENERALLY, CONDUIT SHALL BE EMT, 3/4" MINIMUM. IN AREAS SUBJECT TO DAMAGE CONDUIT SHALL BE RIGID OR IMC TYPE. ALL CONDUIT SHALL BE CONCEALED UNLESS NOTED OTHERWISE.
- SUPPORT ALL CONDUIT INDEPENDENTLY FROM THE BUILDING STRUCTURE. DO NOT SUPPORT FROM VENTILATION DUCTS, MECHANICAL PIPING, SUSPENDED CEILING GRIDS, OR THEIR HANGERS. USE NEC ACCEPTABLE METHODS OF SUPPORT.
- INSTALL EXTERIOR WIRINGS AND DEVICES IN CONDUIT WITH WEATHERPROOF FITTINGS AND IN WEATHERPROOF BOXES. ALL DEVICES AND EQUIPMENT SHALL BE RATED FOR EXTERIOR USE.
- MAINTAIN A MINIMUM OF 24 INCH SEPARATION BETWEEN POWER CONDUITS AND SIGNAL CONDUITS AS PRACTICAL. ROUTE CONDUITS TO NOT CROSS EACH OTHER. EXPOSED CONDUIT AND DEVICE BOXES IN ALL AREAS FOR COMMUNICATION AND POWER.

### KEYED NOTES

- PROVIDE POWER FOR ELECTRIC WATER HEATER IF BUILDING IS CONNECTED TO UTILITY COMPANY.
- PROVIDE POWER FOR ELECTRIC WALL HEATER IF BUILDING IS CONNECTED TO UTILITY COMPANY.

## NAVAJO NATION BATHROOM ADDITIONS

## NAVAJO NATION CONSTRUCTION DOCUMENTS

OWNER:  
NAVAJO ENG & CONSTRUCTION AUTHORITY

### INDIGENOUS DESIGN STUDIO + ARCHITECTURE, LLC



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### SHEET TITLE

## ELECTRICAL FLOOR PLANS

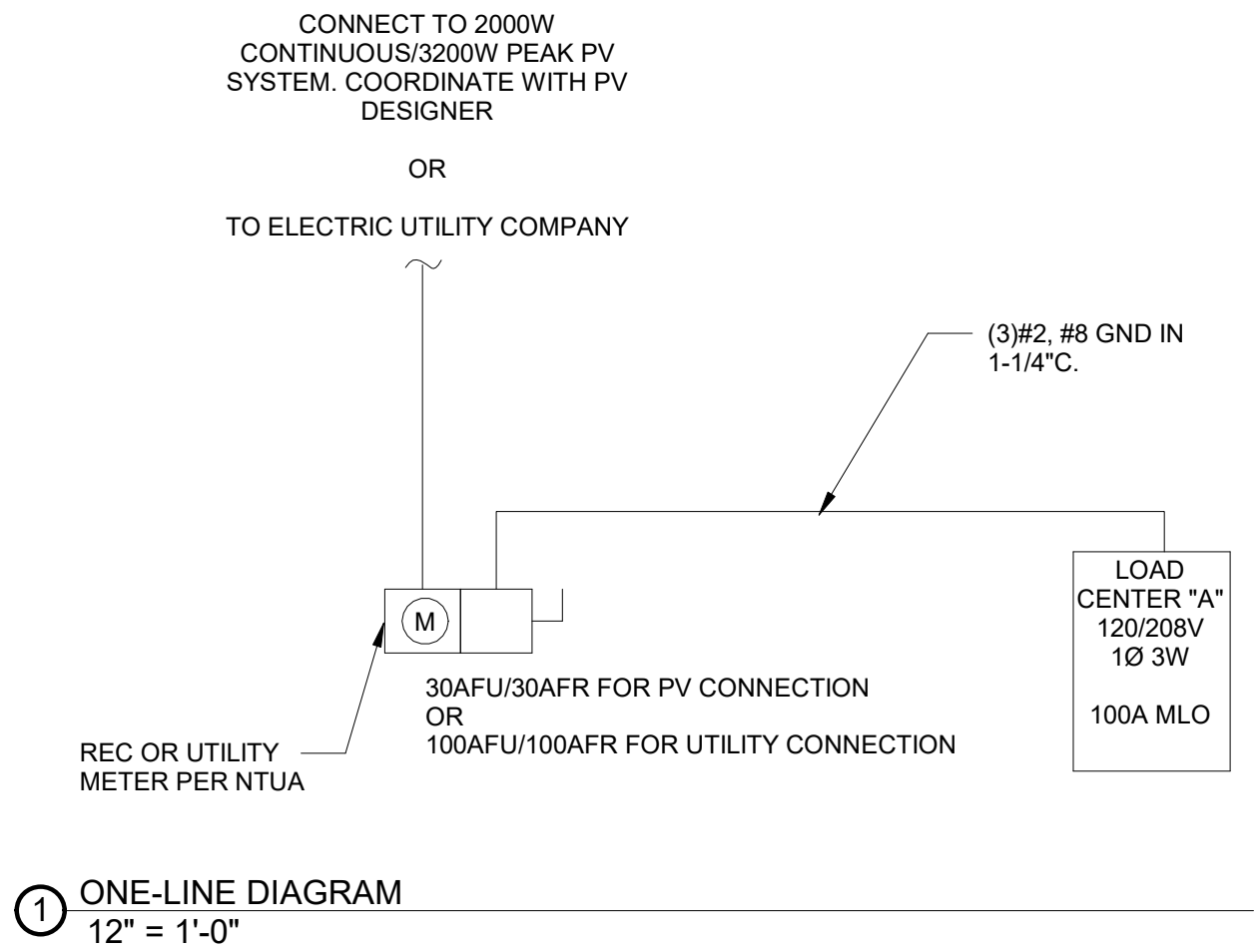
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### LUMINAIRE SCHEDULE

- ABBREVIATIONS: C=CEILING; P=PENDANT; R=RECESSED; S=SURFACE; T=TRACK; W=WALL; AI=AS INDICATED; CB=CONCRETE BASE.
- SINGLE NUMERAL PREFIX IN LAMP COLUMN INDICATES NUMBER OF LAMPS IN LUMINAIRE (e.g., (2) F32T8/SPX35/ECO).
- LAMPS ARE SPECIFIED BY MFG'S LAMP ORDERING CODE, NOT ANSI CODE NUMBER. LAMPS LISTED ARE OSRAM SYLVANIA UNLESS OTHERWISE NOTED.
- MANUFACTURER AND CATALOG NUMBER LISTED ARE PRIMARY SPECIFICATION AND INDICATE DESIGN INTENT. ALTERNATE MANUFACTURERS ARE GIVEN BY NAME ONLY.
- " \* \* " DENOTES MANUFACTURER'S CATALOG NUMBER LISTING FOR CEILING TYPE MOUNTING OPTION. CONTRACTOR SHALL COORDINATE WITH FINAL ARCHITECTURAL RCP. PRIOR TO ORDERING.
- FIRST NAMED MANUFACTURER AND CATALOG NUMBER CONSTITUTE BASIS OF DESIGN. ALTERNATE MANUFACTURERS SUBMITTED MUST MEET CONSTRUCTION, OPERABILITY, PHOTOMETRIC AND AESTHETIC CRITERIA SET FORTH BY BASIS OF DESIGN PUBLISHED INFORMATION.

TYPE	MANUFACTURER/#	ALTERNATE MFG'R	DESCRIPTION	MTG.	LAMPING	VOLTS	WATTS
A	Home Decorators Collection	APPROVED EQUAL	2' Wide Vanity, 3000K, 730 Lumens, damp rated.	R	INTEGRAL LED	UNV	12
	Model: Roland 22837						
B	Halo LED Downlight: RL560WH6930R Recessed Can Housing: H7ICT	APPROVED EQUAL	6" Recessed can, 3000K, 610 Lumens, wet location listing.	R	INTEGRAL LED	UNV	8

### NEW LOAD CENTER 'A' TO PV SYSTEM

VOLTAGE:	120V	FRAME:	100A	MIN AIC RATING:	22,000				
PHASE:	1 PHASE	MAIN:	MLO	CIRCUITS:	12				
WIRE:	3 WIRE	ENCLOSURE:	NEMA 1	MOUNTING:	RECESSED				
FEED:	TOP	LOCATION:	INTRIOR						
CKT NO	BKR RTNG	LOAD DESCRIPTION	VA	CONNECTED VA LOAD		VA	LOAD DESCRIPTION	BKR RTNG	CKT NO
				A	B				
1	20A/1	RESTROOM LIGHTING	40	40		0	FUTURE RECEPTACLES	-	2
3	20A/1	RESTROOM RECEPTACLES/WALL HEATER	378		378	0	FUTURE LIGHTS	-	4
5	20A/1	CISTERN PUMP	684	684		0	FUTURE FRIDGE	-	6
7	-	Space			0	0	Space	-	8
9	-	Space		0		0	Space	-	10
11	-	Space			0		Space	-	12
CONNECTED LOAD (VA) PER PHASE				724	378	1102	TOTAL CONNECTED LOAD (VA)		
						9.2	TOTAL CONNECTED LOAD (AMPS)		

### NEW LOAD CENTER 'A' TO UTILITY

VOLTAGE:	120/240V	FRAME:	100A	MIN AIC RATING:	22,000				
PHASE:	1 PHASE	MAIN:	MLO	CIRCUITS:	12				
WIRE:	3 WIRE	ENCLOSURE:	NEMA 1	MOUNTING:	RECESSED				
FEED:	TOP	LOCATION:	INTRIOR						
CKT NO	BKR RTNG	LOAD DESCRIPTION	VA	CONNECTED VA LOAD		VA	LOAD DESCRIPTION	BKR RTNG	CKT NO
				A	B				
1	20A/1	RESTROOM LIGHTING	40	40		0	FUTURE RECEPTACLES	-	2
3	20A/1	RESTROOM RECEPTACLES/WALL HEATER	378		378	0	FUTURE LIGHTS	-	4
5	20A/1	CISTERN PUMP	684	684		0	FUTURE FRIDGE	-	6
7	20A/1	ELECTRIC WALL HEATER (OPTIONAL)	1500		1500	0	Space	-	8
9	50A/2	ELECTRIC WATER HEATER (OPTIONAL)	4500	4500		0	Space	-	10
11			4500		4500		Space	-	12
CONNECTED LOAD (VA) PER PHASE				5224	6378	11602	TOTAL CONNECTED LOAD (VA)		
						48.3	TOTAL CONNECTED LOAD (AMPS)		

### GENERAL NOTES

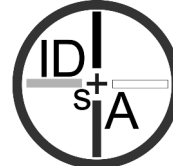
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NAVAJO NATION BATHROOM ADDITIONS

NAVAJO NATION  
CONSTRUCTION DOCUMENTS

OWNER:  
NAVAJO ENG & CONSTRUCTION AUTHORITY

INDIGENOUS DESIGN STUDIO +  
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SHEET TITLE

**ELECTRICAL  
SCHEDULES &  
ONLINE DIAGRAM**

SHEET NUMBER

**E601**

Sequence of

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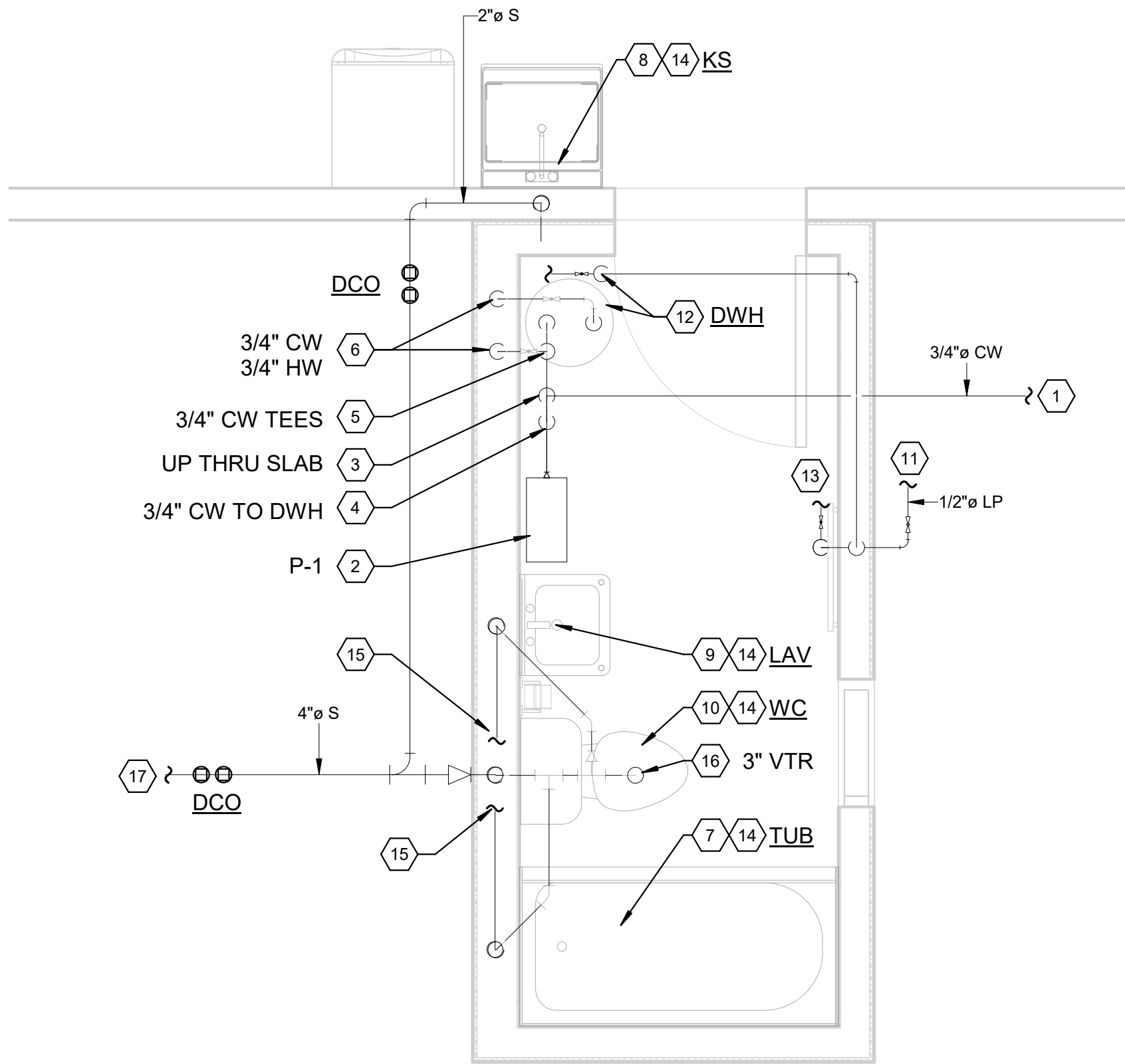
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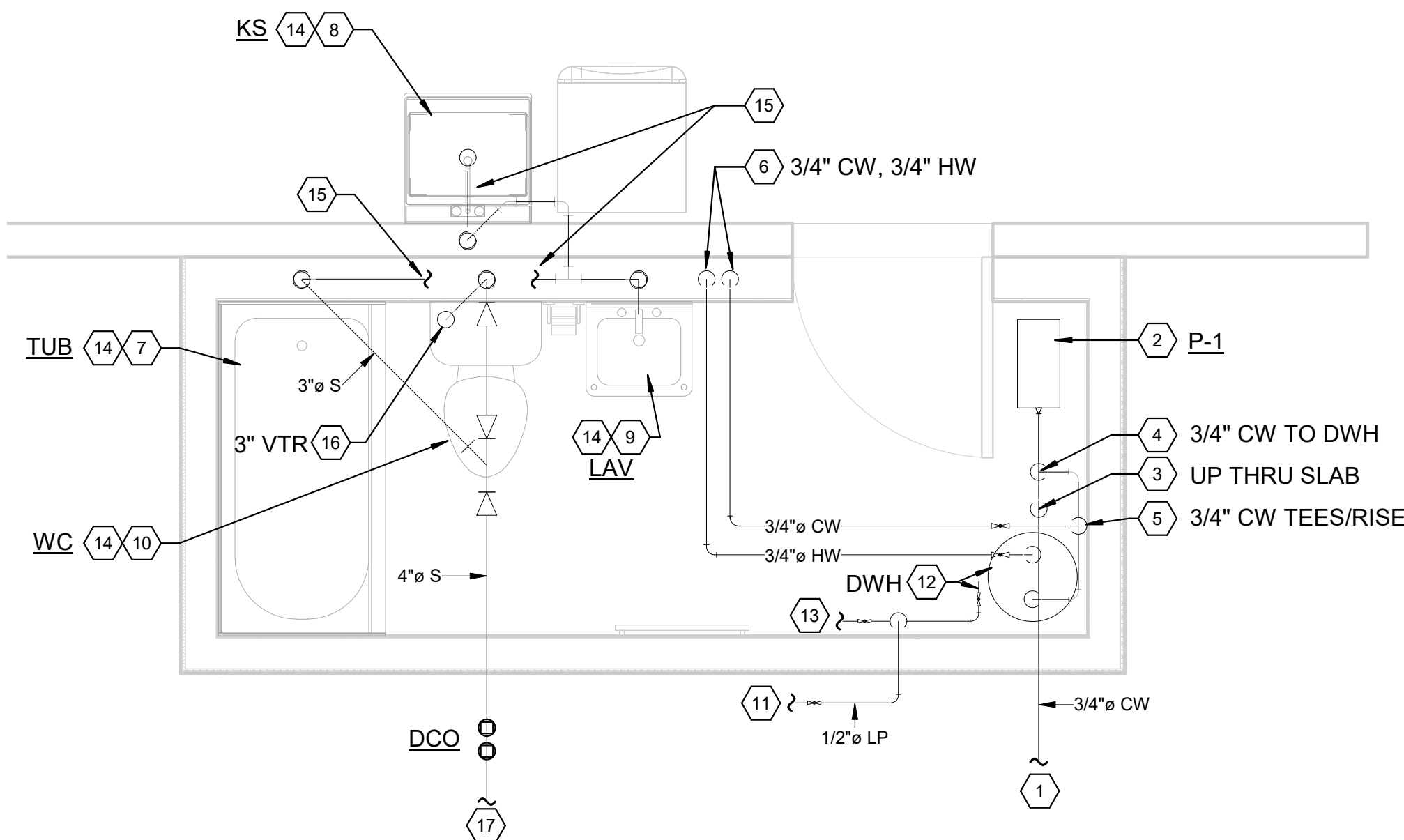
C

B

A



1 PLUMBING PLAN GN2  
1/2" = 1'-0"



1 PLUMBING PLAN GN1  
1/2" = 1'-0"

## GENERAL NOTES

- A. REFER TO SHEET ME001 FOR OUTLINE SPECIFICATIONS, PROJECT GENERAL NOTES AND UTILITY NOTES.

## KEYED NOTES

1. WATER SUPPLY PIPING AT -42" BELOW GRADE. COORDINATE INSTALLATION WITH NTUA AND NECA SUPERINTENDENT. PLUMBING CONTRACTOR SHALL FOLLOW NTUA UTILITY INSTALLATION REQUIREMENTS.
2. SELF-PRIMING CISTERN PUMP. SECURE PUMP TO FINISH FLOOR AS RECOMMENDED BY MFG. INSTALL WITH RUBBER PAD TO DAMPEN VIBRATION. REFER TO MANUFACTURER'S INSTALLATION MANUAL.
3. 3/4" WATER RISES UP THRU SLAB TO SHUT-OFF VALVE, CHECK-VALVE, PRE-FILTER THEN TO PUMP INLET. THIS ASSEMBLY SHOWN ON SCHEMATIC FOR CLARITY PURPOSES. REFER TO SCHEMATIC, THIS SHEET.
4. 3/4" CW FROM PUMP DISCHARGE WITH SHUT-OFF VALVE AT RISE. 3/4" CW CONTINUES UP AND ROUTES TO DWH, DOMESTIC WATER HEATER.
5. 3/4" CW TEES OFF TO PLUMBING WALL, RISES AND ROUTES IN CEILING SPACE. ROUTING IS DIAGRAMMATICAL.
6. 3/4" CW AND 3/4" HW DROPS AND EXTENDS TO PLUMBING FIXTURE(S).
7. PROVIDE 1/2" CW AND 1/2" HW TO TUB.
8. PROVIDE 1/2" CW AND 1/2" HW TO KS, KITCHEN SINK.
9. PROVIDE 1/2" CW AND 1/2" HW TO LAV.
10. PROVIDE 1/2" CW TO WC, WATER CLOSET.
11. 1/2" LP GAS PIPING THRU WALL FROM PROPANE TANK. PROPANE TANK PROVIDED BY OTHERS.
12. ROUTE 1/2" LP GAS TO WATER HEATER. PROVIDE SHUT-OFF VALVE, TYPICAL. REFER TO SHEET MP501 FOR DETAILS.
13. ROUTE 1/2" LP GAS TO UH, UNIT HEATER. REFER TO MANUFACTURER'S INSTALLATION MANUAL AND RECOMMENDED CLEARANCES FROM COMBUSTIBLES. SEE SHEET M101, EQUIPMENT SCHEDULE. COORDINATE INSTALLATION WITH HVAC CONTRACTOR.
14. REFER TO SHEET MP501 FOR WASTE AND VENT PIPE SIZE CONNECTIONS. PROVIDE WCO, WALL CLEANOUT TYPICAL.
15. TIE INTO MAIN WASTE PIPING FROM WC, WATER CLOSET.
16. 3" VTR, VENT THRU ROOF. OFFSET AS NECESSARY TO AVOID CONFLICT WITH STRUCTURE.
17. ROUTE 4" WASTE PIPING TO SEPTIC TANK. FIELD VERIFY INVERT ELEVATION OF EXISTING SEPTIC TANK OR LEECH FIELD FOR POSITIVE FLOW.

NAVAJO NATION BATHROOM ADDITIONS

NAVAJO NATION  
CONSTRUCTION DOCUMENTS

OWNER:  
NAVAJO ENG & CONSTRUCTION AUTHORITY

INDIGENOUS DESIGN STUDIO +  
ARCHITECTURE, LLC



8008 Pennsylvania Cir NE  
Albuquerque, NM 87110  
Tel 505.226.2565  
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ARCHITECT

MARK	DATE	DESCRIPTION
	Issue Date	

PROJECT NUMBER: M0-36  
DRAWING FILE:  
DRAWN BY: Author  
CHECKED BY: Checker  
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Architecture, LLC.

SHEET TITLE

PLUMBING PLANS

SHEET NUMBER

P101

Sequence of

SUCTION FROM A WELL

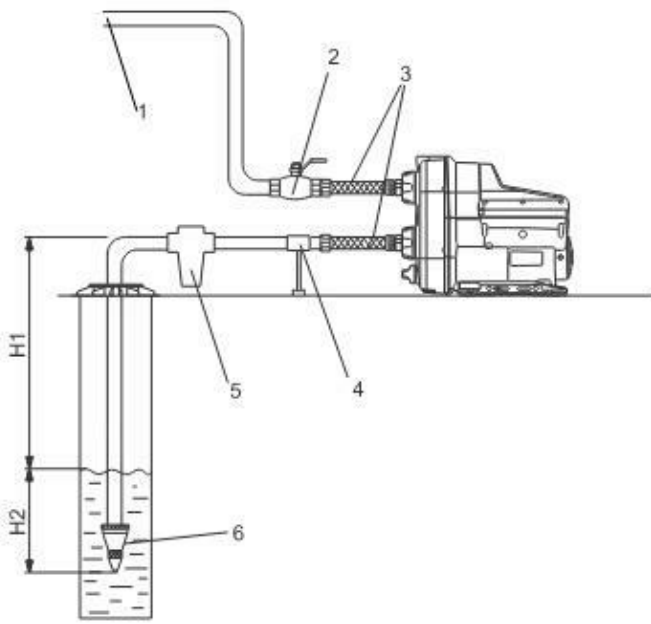


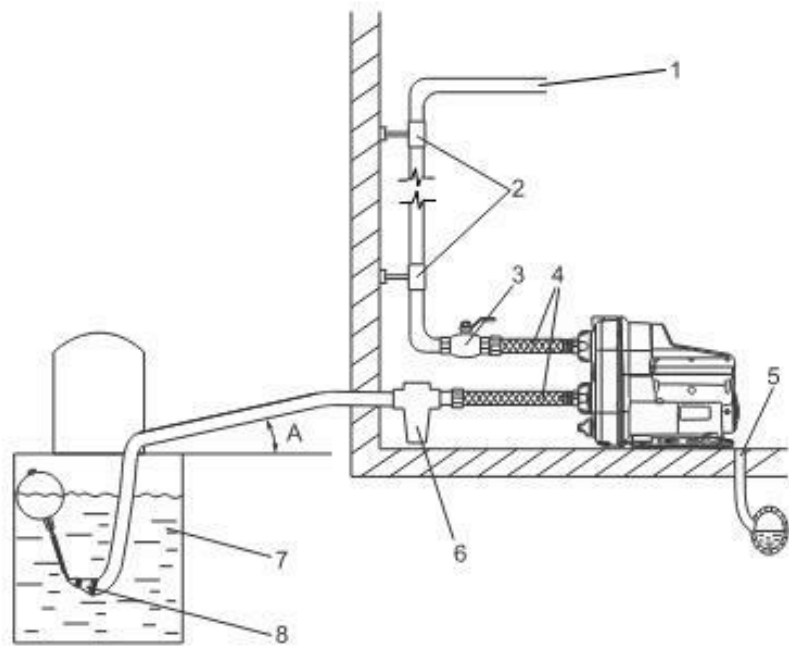
Fig. 6 Suction from a well

Pos.	Description
1	To Water Heater
2	Pipe hangers
3	Flexible hoses
4	Pipe support
5	Inlet filter. If the water may contain sand, gravel or other debris, please install a filter on the inlet side to protect the pump and installation.
6	Foot valve with strainer (recommended).
H1	Maximum suction lift is 8 m (26 ft).
H2	Inlet pipe must be submersed at least 0.5 m (1.64 ft).

SUCTION FROM WELL  
(NOT ALL VALVES AND APPURTENANCES ARE SHOWN)  
SCALE: N.T.S.

A  
P-101

SUCTION FROM FRESH WATER TANK



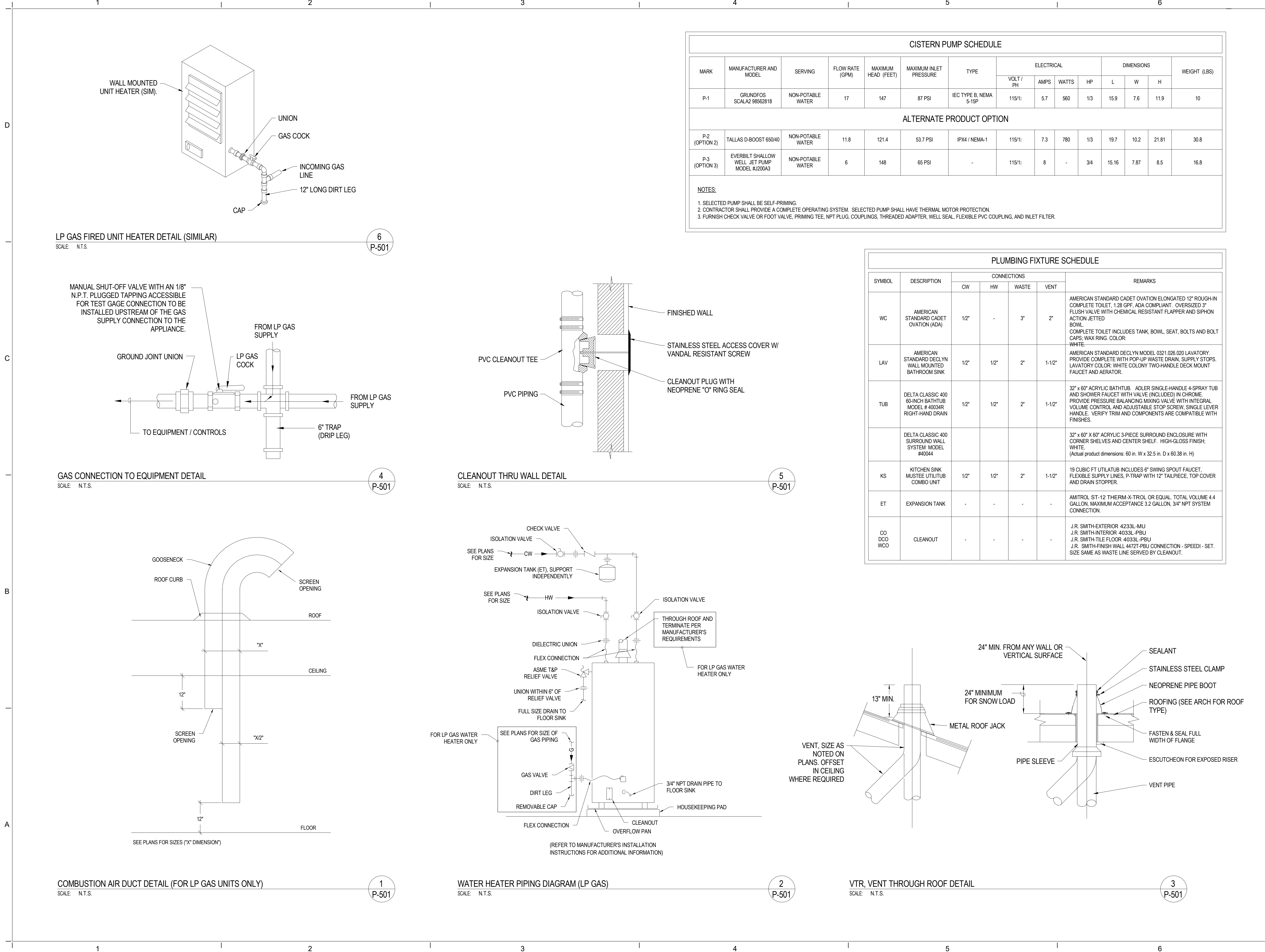
Pos.	Description
1	To Water Heater
2	Pipe hangers
3	Isolating valve
4	Flexible hoses
5	Drain to sewer
6	Inlet filter. If the water may contain sand, gravel or other debris, please install a filter on the inlet side to protect the pump and installation.
7	Freshwater tank
8	Foot valve with strainer (recommended)
A	Minimum 1" inclination

SUCTION FROM FRESH WATER TANK  
(NOT ALL VALVES AND APPURTENANCES ARE SHOWN)  
SCALE: N.T.S.

B  
P-101



C:\Users\nerissa\Documents\NECA 150 Bathroom Additions\_MEP\_V2020\_nerissa82A5Q.rvt





8008 PENNSYLVANIA CIRCLE NE  
ALBUQUERQUE, NM 87110  
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# Architectural Materials and Equipment Cut Sheets

September 10, 2020

Construction Documents

SEAL / CERTIFICATION

## 150 BATHROOM ADDITIONS

Navajo Nation Division of Community Development

SEQUENCE \_\_\_1\_\_\_ OF \_\_\_2\_\_\_

SET NUMBER



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# B1- Base

9/8/2020

Alexandria Moulding 7/16 in. x 3-1/4 in. x 96 in. Primed Pine Finger-Jointed Base Moulding-03112-93192C - The Home Depot

[Home](#) / [Building Materials](#) / [Moulding & Millwork](#) / [Moulding](#) / [Baseboard](#)

Internet #205576573

Model # 03112-93192C



## Alexandria Moulding

7/16 in. x 3-1/4 in. x 96 in. Primed Pine Finger-Jointed Base Moulding

**\$10<sup>78</sup>** /piece

## Product Overview



Sleek design provides a modern look  
Constructed of solid pine for strength and durability  
Primed and ready to receive the paint of your choice



**Model #:** 03112-93192C

**Internet #:** 205576573

Add warmth and character to any room by applying an elegant seamless feature where the awkward lines of a floor and wall meet. The addition of a baseboard protects the walls from kicks, bumps and cleaning machinery. It neatly covers up the gap between the flooring and drywall. Add a base shoe to cover up any unevenness in the floor and add a professional look to your project.

- Finger-jointed pine has workability similar to solid pine
- Primed surface - ready to paint
- Coated with a high hide water based primer allowing for superior paint adherence
- Common mouldings fastened where walls meet floors, protects the wall from furniture, kicks
- Moulding installs in a snap using brad nails
- California residents [see Prop 65 WARNINGS](#)



# E1- Exterior Siding

Internet #100055901

Model # 27874

Store SKU #509095



**LP SmartSide**

[View the Collection](#)

SmartSide 48 in. x 96 in. Strand Panel Siding

(643)

[Write a Review](#)

**\$32<sup>32</sup>**

## Product Overview



Pre-primed for exceptional paint adhesion  
Resists fungal decay and termites  
Renewable resource from environmentally managed forests

**Model #:** 27874

**Sku #:** 509095

**Internet #:** 100055901

LP® SmartSide® products combine the rich cedar-grain texture of traditional wood siding with the advanced performance of treated engineered wood — to help extend its curb appeal for years to come.

- Rated for structural use by the Engineered Wood Association
- Shiplap edges with advanced bead system for easier alignment
- Pre-primed for exceptional paint adhesion
- Significantly lighter than comparable fiber cement panel
- Strong enough to be nailed directly to stud, making additional sheathing unnecessary in many applications
- Eliminates need for additional bracing on load-bearing walls



# E2- Vinyl Skirting

Internet #202090411

Model # 555210

Store SKU #229335



[Save to Favorites](#)

Gp 8 ft. White Ctrvent Parkside Skirting (432-Wh)

## Product Overview



Offers a perfectly finished look with vented option  
Features patented pop-up top rail for easy storage access  
Durable Vinyl material resists dents and insect damage

**Model #:** 555210

**Sku #:** 229335

**Internet #:** 202090411

Finish your home with style. Looking for the perfect finishing touch for a home, deck or hot tub. Parkside Vinyl Skirting is a beautiful solution, offering a finished look with a vented option. Parkside Skirting will add value to your project.

- Product has authentic wood grain emboss
- Ventilated skirting features built-in center vents
- Patented pop-up top rail gives easy access to storage and utilities
- Low maintenance vinyl washes clean with a garden hose, resists dents and insect damage



# F1- Vinyl Sheet Flooring

Internet #205610178

Model # U6890.258C903P144

Store SKU #1001107266

Store SO SKU #1001070980



## TrafficMASTER

White Marble Vinyl Sheet, Sold by 12 ft. Wide x Custom Length

**99¢** /sq. ft.

Covers 9 sq. ft.

**\$8.91** /square yard

## Product Overview



Beautiful white marble square tile look

Urethane wear layer protects against stains, scuffs and scratches

Purchase qty sq yds (if desired amount is 9 sq ft, then qty is 1)

**Model #:** U6890.258C903P144

9/11/2020

TrafficMASTER White Marble Vinyl Sheet, Sold by 12 ft. Wide x Custom Length-U6890.258C903P144 - The Home Depot

**Sku #:** 1001107266

**Internet #:** 205610178

Featuring a light and versatile design, this White Marble Vinyl Sheet from TrafficMASTER brings classic beauty to any space. Easy to install, this flooring option offers exceptional comfort with its thick, cushioned backing that also helps reduce sound throughout your room. A special, urethane wear layer provides tough protection against common household accidents for long-lasting appearance and functionality.

- 25-year limited residential warranty
- Maximum order quantity for this product is 93.33 sq. yds. ; If you need more than 93.33 sq. yds. for your project, you will need to place additional separate orders
- Super-thick backing provides additional comfort underfoot and sound reduction within the room
- Urethane stain shield delivers ultimate stain, scuff and scratch resistance, making it easy to maintain/clean
- PVC wear layer repels dirt and grime and resists cuts, dents, scrapes and scratches
- Resistant to moisture and mildew for added longevity
- Flexible and dimensionally stable - lays flat with no expansion, contraction, cracking or curling
- Easy to install - faster and less expensive with minimal sub-floor/underlayment preparation
- For best results, install with a fully releasable, pressure-sensitive adhesive; releasable installation makes repairs and replacement easy
- Orders are sold in increments of 1 square yard; Minimum order quantity is 5 square yards
- Actual item color may vary from device screen representation; we recommend that you order a sample and view it in the room where your flooring will be installed
- Check out our helpful guide to learn more about vinyl flooring.

# P1- Base Paint



## BEHR PREMIUM PLUS >

5 gal. #PPU18-08 Painters White Flat Low Odor Interior Paint and Primer in One

★★★★★ (553) ✓

[Write a Review](#)

[Ask the first question](#)

Internet #300405446

Model # 105005

Store SKU #923794



# Product Overview

For a classic, scrubbable finish in low-traffic areas like living rooms and bedrooms, choose BEHR PREMIUM PLUS Low Odor, Paint & Primer in One Flat Interior paint. This traditional flat sheen creates an all-purpose finish that covers and touches up easily. The non-reflective finish also makes it perfect for ceilings.

- Ideal for family rooms, living rooms, dining rooms, bedrooms and ceilings
- Flat sheen provides a non-reflective appearance to help hide surface imperfections and make walls appear smoother
- 5 gal. cover up to 2,000 sq. ft. depending on application, color and surface porosity
- Use a high quality 3/8 in. - 1/2 in. nap roller cover, nylon/polyester brush or airless sprayer 0.015 in. - 0.019 in. spray tip and 60 mesh filter
- For best results - to enhance color fidelity, cover stains/oil-based or glossy surfaces or seal highly porous substrates - please use a BEHR primer such as BEHR interior kitchen, bath and trim stain blocking primer and sealer No. 75 to prep prior to painting
- Apply when air and surface temperatures are between 50°F-90°F (10°C-32°C)
- Low odor for safer air quality
- Paint and Primer in One finish seals the surface
- 100% acrylic base provides mildew resistant finish
- High-quality pigments and thickeners improve hide and color quality
- Painters white is a cool white with a subtle gray undertone; depending on the light source or time of day, it may appear as a light gray on the walls
- Part of the BEHR 2020 TRENDS palette
- Easy soap and water cleanup
- BEHR Premium Plus is a GREENGUARD GOLD Certified product, it is certified to GREENGUARD standards for low chemical emissions into indoor air during product usage; for more information, visit [ul.com/gg](http://ul.com/gg)
- Actual paint colors may vary from on-screen and printer representations
- Online Price includes Paint Care fee in the following states: CA, CO, CT, DC, ME, MN, OR, RI, VT
- BEHR Premium Plus is backed with a lifetime limited warranty

# R1- Asphalt Shingles

9/9/2020

Owens Corning Oakridge Amber Laminate Architectural Shingles (32.8 sq. ft. per Bundle)-HK59 - The Home Depot

[Home](#) / [Building Materials](#) / [Roofing & Gutters](#) / [Roofing](#) / [Roof Shingles](#)

Internet #205655921   Model # HK59   Store SKU #1001187451



**Owens Corning**

[View the Collection](#)

Oakridge Amber Laminate Architectural Shingles (32.8 sq. ft. per Bundle)

(511)

[Write a Review](#)

**\$32<sup>00</sup>** /bundle  
Buy 39 or more **\$25.60** /bundle

Save up to \$100° on your qualifying purchase.

[Apply for a Home Depot Consumer Card](#)

Color/Finish: **Amber**



Laminate architectural shingles for a step up from 3-tab shingles  
 Have 110/130 MPH wind resistance and limited lifetime warranties  
 Easy to install, durable, shingles for a warm inviting look

**Model #:** HK59  
**Sku #:** 1001187451  
**Internet #:** 205655921

Oakridge laminated shingles have a warm, inviting look in popular colors for a step up from traditional 3-tab shingles. Oakridge shingles are designed to provide long-lasting performance and striking beauty. In addition to a wide range of inviting, popular colors, they also offer the following features and benefits.

- Limited lifetime warranty (for as long as you own your home)
- 110 MPH wind resistance limited warranty
- Great looks and protection that will last for many years
- Serve as the first layer of defense against the forces of nature, they also help define the character of your home
- Shop Owens Corning Total Protection Roofing System:
- Step 1: Seal – **Ice & Water Barrier and Underlayment** properly seals your roof and helps prevent rot and mold
- Step 2: Defend – Owens Corning **shingles** add a tough, yet beautiful layer of defense with strong adhesion that resists blow offs and helps shed water away
- Step 3: Breathe – **proper ventilation** reduces heat and moisture buildup to prevent ice damming, roof deterioration, and mold infestation
- Step 4: Comfort – Add comfort and energy performance with **proper attic insulation**
- In order to meet the requirements for the Total Protection Roofing System Limited Warranty, Owens Corning shingles, Owens Corning Hip & Ridges shingles and two additional Owens Corning roofing accessories must be installed.



# R2- Rolled Roofing

9/11/2020

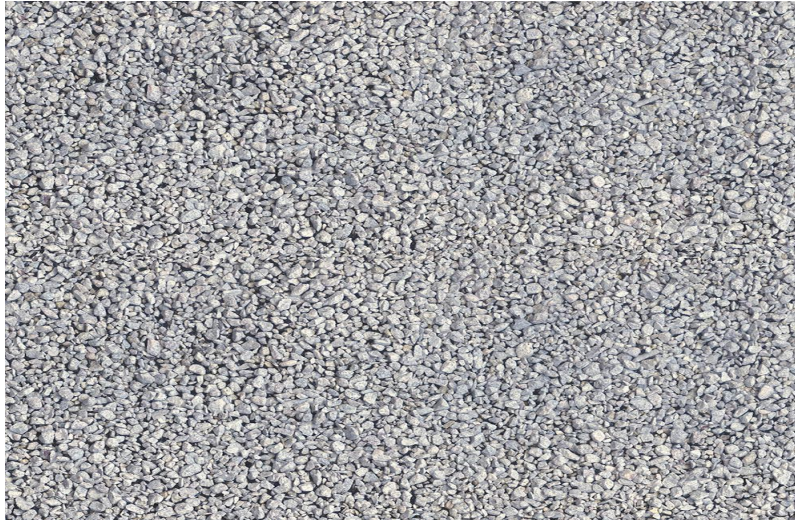
GAF Tri-Ply BUR Granular Cap Sheet 39.38in. x 32.56 ft. (100 sq. ft. net) Rolled Roofing For Low Slope Roofs in White-3489920 - The H...

[Home](#) / [Building Materials](#) / [Roofing & Gutters](#) / [Roofing](#) / [Roll Roofing](#)

Internet #100087030

Model # 3489920

Store SKU #667179



**GAF**

Tri-Ply BUR Granular Cap Sheet 39.38in. x 32.56 ft. (100 sq. ft. net) Rolled Roofing For Low Slope Roofs in White

(27)

[Write a Review](#)

**\$43<sup>98</sup>**  
/roll

## Product Overview



Use as top ply in hot-applied built-up roofs or flashing assembly

Durable reinforced mat resists splitting and cracking

Requires no additional surface coatings



**Model #:** 3489920

**Sku #:** 667179

**Internet #:** 100087030

Tri-Ply BUR Granule Cap Sheet is designed for use as the surfacing ply in the application of hot-applied built-up roofing and as a top ply in base flashing construction. Its fiberglass reinforcement resists the effects of moisture on the roof system while its granule surface helps to protect against UV damage. Tri-Ply BUR granule cap sheet's granule surface provides an ultraviolet protective surface.

- Granule surfacing protects against weathering
- Used as a cap sheet or for flashings in hot applied systems
- Meets ASTM D3909
- FM approved
- UL classified
- Miami-Dade county product control approved

# R3- 3 Tab Asphalt Shingles

9/9/2020 GAF Marquis WeatherMax Autumn Brown 3-Tab Roofing Shingles (33.3 sq. ft. per Bundle) (26-pieces)-0304050 - The Home Depot

[Home](#) / [Building Materials](#) / [Roofing & Gutters](#) / [Roofing](#) / [Roof Shingles](#)

Internet #207038196 Model # 0304050



**GAF**

Marquis WeatherMax Autumn Brown 3-Tab Roofing Shingles (33.3 sq. ft. per Bundle) (26-pieces)

(14) [Write a Review](#)

**\$44<sup>09</sup>**  
/bundle



## Product Overview



Top of the line in traditional 3-tab shingles  
UL Class A Fire Rating and passes the industry's top wind tests  
30-year ltd. transferable warranty with Smart Choice protection

**Model #:** 0304050

**Internet #:** 207038196

Marquis WeatherMax Shingles are the top of the line in traditional 3-tab shingles. They are designed for the discriminating homeowner who demands classic details and a traditional appeal. For the professionals, Marquis WeatherMax is twice as sturdy as standard shingles, so they lie flatter and look better. These shingles are excellent for reroofing or complete tear-offs.

- Long-lasting beauty may increase your home's resale value
- Passes the industry's 2 toughest wind tests: ASTMs 110 MPH and 150 MPH (under controlled laboratory conditions)
- Color lock ceramic firing (granules) help maintain the true shingle color
- 30-year limited transferable warranty with smart choice protection (non-prorated material and installation labor coverage) for the first 5-years

# 01- Medicine Cabinet With Mirror

Internet #302967979

Model #45399

Store SKU #1002749433



**Exclusive**

15-1/4 in. W x 26 in. H Framed Surface-Mount Bathroom Medicine

Cabinet in White

by **Glacier Bay** >

**\$36<sup>98</sup>**

Color/Finish: **White**



## Product Overview

For a quick and easy way to customize space in your home, try the 15-1/4 in. W x 26 in. H Glacier Bay Framed Surface-Mount Bathroom Medicine Cabinet in Java. It is already fully assembled for added convenience, and makes a great addition to your bathroom or powder room. It features 2 adjustable shelves and double shelf pegs to offer flexibility in storing your toiletries. The durably constructed Wood Composite frame ensures exceptional strength with the ability to be mounted open left or right.

- Java finish
- Surface mount
- Includes 2 adjustable shelves
- Can be installed for left or right opening
- Fully assembled for easy installation



# 02- 24" Towel Bar

9/8/2020

Franklin Brass Futura 24 in. Towel Bar in Brushed Nickel - D2424SN - The Home Depot

[Home](#) / [Bath](#) / [Bath Accessories](#) / [Bathroom Hardware](#) / [Towel Bars](#)

Internet #202545880

Model # D2424SN

Store SO SKU #1000634542



**Franklin Brass**

[View the Collection](#)

Futura 24 in. Towel Bar in Brushed Nickel

**\$19<sup>14</sup>**

## Product Overview



Brushed nickel finish complements almost any bathroom décor  
Easy and sturdy installation with set screw mounting hardware  
Complete the look with the rest of the Futura Bath Collection

**Model #:** D2424SN

**Internet #:** 202545880

Designed with simplicity in mind, the Franklin Brass Futura bath collection brings a traditional and timeless look to almost any space. The 24 in. towel bar highlights smooth features while bringing functionality to your fingertips and organization to your bathroom. Complete your look with the rest of the Futura bath collection (sold separately).

- Wall mounted design for bathroom convenience and organization
- Brushed nickel has subtle warm undertones and a low-gloss surface for an alluring, neutral addition to your bath
- Has durable, long-lasting finish to help prevent corrosion, tarnish or discolor, so you can enjoy a look you love for life
- Zinc die cast construction provides reliability and durability
- Holds one large towel or multiple hand towels to maximize space
- Coordinates perfectly with the rest of the Futura bath collection
- Features a set screw mounting system for added durability
- Included mounting hardware and hanging template makes installation simple

# 03- Toilet Roll Holder

9/8/2020

Franklin Brass Astra Toilet Paper Holder in Brushed Nickel-127772 - The Home Depot

[Home](#) / [Bath](#) / [Bath Accessories](#) / [Bathroom Hardware](#) / [Toilet Paper Holders](#)

Internet #202545870    Model # 127772    Store SO SKU #1000946892



## Franklin Brass

Astra Toilet Paper Holder in Brushed Nickel

**\$12<sup>82</sup>**

Color/Finish: **Brushed Nickel**



# Product Overview

---

The minimalist design of the Astra collection evokes the sleek elegance of contemporary art. The geometric details and unique, rounded shape of this toilet paper holder is ideal for bringing an affordable upgrade to the modern bathroom. Complete your space with the coordinating accessories from the Astra bath collection (sold separately).

- Wall mounted design for bathroom convenience and organization
- Brushed nickel has very subtle warm undertones and a low-gloss surface for an alluring, neutral addition to your bath. Its delicate touches lend it toward more traditional décor, but it can easily be paired with transitional spaces
- Has durable, long-lasting finish to help prevent corrosion, tarnish or discolor, so you can enjoy a look you love for life
- Crafted from zinc die cast to ensure long lasting quality
- Designed to hold one roll of tissue and features an easy-to-use spring loaded replacement system
- Coordinates perfectly with the rest of the Astra bath collection
- Features a easy clip mounting system to make installation a breeze
- Instructions and mounting hardware included for easy installation
- Classic design coordinates with multiple faucets (sold separately)
- Shop with confidence knowing this comes with a limited lifetime warranty



# 04 - Tub and Shower Curtain Rod

9/11/2020

Franklin Brass 60 in. x 1 in. Beveled-Edge Stainless Steel Shower Rod in Brushed Nickel-185-5SN - The Home Depot

[Home](#) / [Bath](#) / [Bath Accessories](#) / [Shower Accessories](#) / [Shower Curtain Rods](#)

Internet #300092899

Model # 185-5SN



## Franklin Brass

60 in. x 1 in. Beveled-Edge Stainless Steel Shower Rod in Brushed Nickel

**\$34<sup>47</sup>**

## Product Overview

Straight rod style

Fits most 5 foot enclosures

Great for commercial or residential use

**Model #:** 185-5SN

**Internet #:** 300092899

Add a subtle design element to your bathtub or shower with this decorative shower rod. This straight rod has a 1-inch diameter and fits standard five foot enclosures. The classic step-style flange design and brushed nickel finish coordinate beautifully with other bathroom fixtures.

- All mounting hardware included
- Crafted from stainless steel for enduring quality
- Concealed mounting for a clean look
- Confidently backed by our limited lifetime warranty
- Designed to stand up to the wear and tear of commercial and everyday use
- Coordinating Franklin Brass bath accessories available

# 05 - Door Stop

9/11/2020

Design House Satin Nickel Floor Mount Dome Door Stop-204735 - The Home Depot

[Home](#) / [Hardware](#) / [Door Hardware](#) / [Door Accessories](#) / [Door Stops](#)

Internet #203447415    Model # 204735



**Design House**

Satin Nickel Floor Mount Dome Door Stop

**\$3<sup>91</sup>**

## Product Overview

Boasts a sleek, satin nickel finish

Unobtrusive, low profile design

Mounting hardware included for simple installation

**Model #:** 204735

**Internet #:** 203447415

The Design House hardware program, a comprehensive collection of basic hardware in trumatch finishing will complete projects seamlessly. This floor mounted low profile door stop helps keep doors from hitting walls. A fashionable yet functionable addition to a rooms decor.

- Attractive, sturdy and easy to install
- Low profile design
- Satin nickel finish
- Easy to install with the included mounting hardware
- 1 year limited warranty



# 06 - Door Hardware

9/2/2020

Schlage Georgian Satin Nickel Privacy Bed/Bath Door Knob-F40 GEO 619 - The Home Depot

[Home](#) / [Hardware](#) / [Door Hardware](#) / [Door Knobs](#) / [Privacy Door Knobs](#)

Internet #100076011    Model # F40 GEO 619    Store SKU #779758



## **Schlage**

### Georgian Satin Nickel Privacy Bed/Bath Door Knob

- Locking knob for bedroom/bathroom doors where privacy is needed
- Works with both right & left-handed doors
- Limited lifetime warranty on the mechanics and finish

## Product Overview



Locking knob for bedroom/bathroom doors where privacy is needed  
Works with both right & left-handed doors  
Limited lifetime warranty on the mechanics and finish

**Model #:** F40 GEO 619

**Sku #:** 779758

**Internet #:** 100076011

The Schlage Georgian Satin Nickel Privacy Door Knob is perfect for interior doors where locking is needed, such as bedroom and bathroom doors. The Georgian Knob features symmetrical detailing for a distinguished look in your home- especially when wrapped in our versatile Satin Nickel finish. The universal design of this privacy knob set allows it to be mounted to left or right swing doors and the finish coordinates nicely with other Satin Nickel fixtures in your house for a cohesive look. The workmanship and lustrous finish are protected by a lifetime limited warranty, certain to provide decades of dependable use and allure.

- Push button privacy door lock ideal for use on bedroom and bathroom doors
- Universal handing works on right-handed and left-handed doors
- Use with 1-3/8 in. to 1-3/4 in. door
- Guaranteed to fit on existing, standard pre-drilled doors
- Easy installation with Philips screwdriver
- Self-aligning screw holes make installation easy and hassle-free
- Pin key included for easy unlocking
- Mechanics and finish backed by limited lifetime warranty
- Meets ANSI Grade 1 for highest level of security
- Coordinate with other Georgian Satin Nickel products
- Lever design pairs well with the modern, clean lines of contemporary and urban design
- Available in other finishes
- Don't forget your door stops and wall protectors



# Door - 2 Panel Square Hollow Core

[Home](#) / [Doors & Windows](#) / [Interior & Closet Doors](#) / [Prehung Doors](#)

Internet #202872523    Model # 18092



**Masonite**    [View the Collection](#)

30 in. x 80 in. 2-Panel Square Top Right-Handed Hollow-Core Smooth Primed Composite Single Prehung Interior Door

- Hollow-core composite resists warping, shrinking and cracking
- Single bored for your choice of lockset (sold separately)

## Product Overview



Hollow-core composite resists warping, shrinking and cracking

Single bored for your choice of lockset (sold separately)

Comes pre-primed and ready to paint

**Model #:** 18092

**Internet #:** 202872523

Enjoy refined style and easy elegance with the Masonite Smooth 2-Panel Square Hollow Core Primed Composite Prehung Interior Door. The industry benchmark for all composite wood doors, expert construction results in a more durable door that resists warping, shrinking, and cracking better than a solid wood door. Select designs offered in coordinating bi-fold and factory double prehung units.

- Composite wood with classic panel design resists warping, shrinking and cracking
- Molded panels provide architectural detailing and elegance
- Smooth and pre-primed finish perfect for painting and decorating
- Supplied pre-assembled in a 4-9/16 in. door frame
- Interior door slab is single bored for lockset - not included
- Door panel must be sealed on all six sides
- Shop all [Masonite Interior Doors](#) here
- [Click here to check out our project guide on installing an interior door](#)



# Window - Sliding Vinyl Window

Internet #302662000    Model # Ply Gem 400 Series Vinyl    Store SKU #1002703280



## **Ply Gem**

23.5 in. x 23.5 in. 400 Series Left-Hand Sliding Vinyl Window - White HPSC Glass Obscure No Grilles with Screens

**\$98<sup>00</sup>**

## Product Overview

Vinyl-window frame is resistant to rust and corrosion

Double-pane insulated glazing is energy-efficient

Insect screen prevents pests/insects from entering indoors

**Model #:** Ply Gem 400 Series Vinyl

**Sku #:** 1002703280

**Internet #:** 302662000

Ply Gem Classic Series windows are available in a wide variety of styles and three standard colors. Upgrade to our Auto-Lock a positive action device that locks in place by simply closing the unit. Additional options include grilles between the glasses.

- Instructions included for new construction or replacement
- ENERGY STAR qualified
- Ergonomic auto locking hardware
- Limited lifetime warranty



