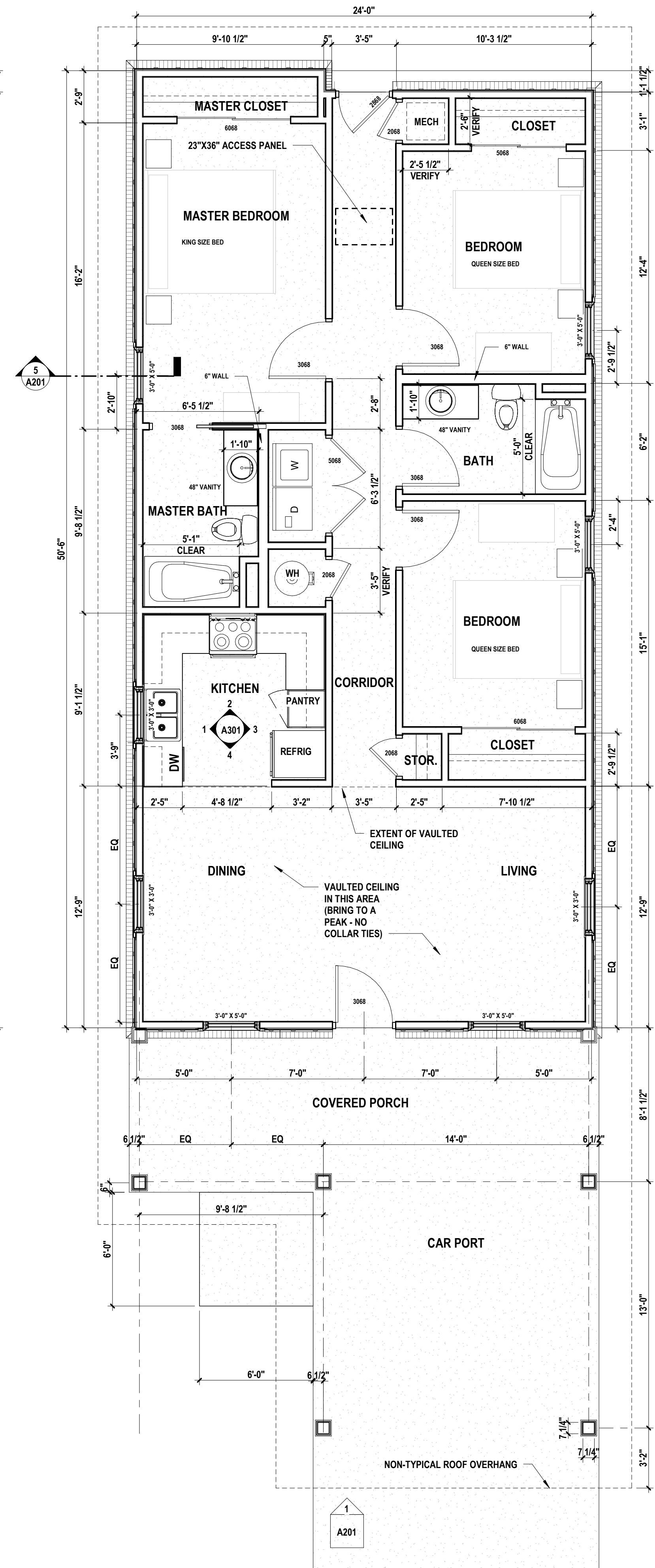




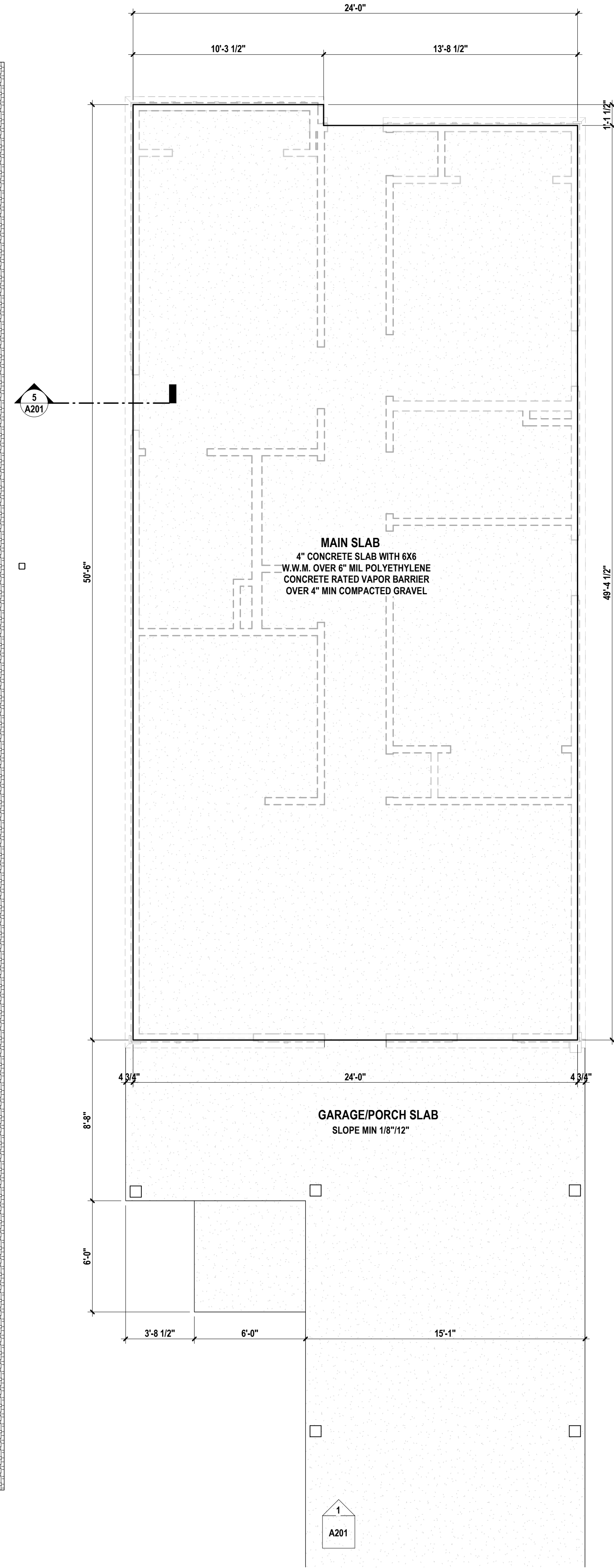
**WD HABITAT HOME - TRADITIONAL - SMALL/RIGHT**

A NEW BUILDING  
NORTH LITTLE ROCK, ARKANSAS  
HABITAT FOR HUMANITY

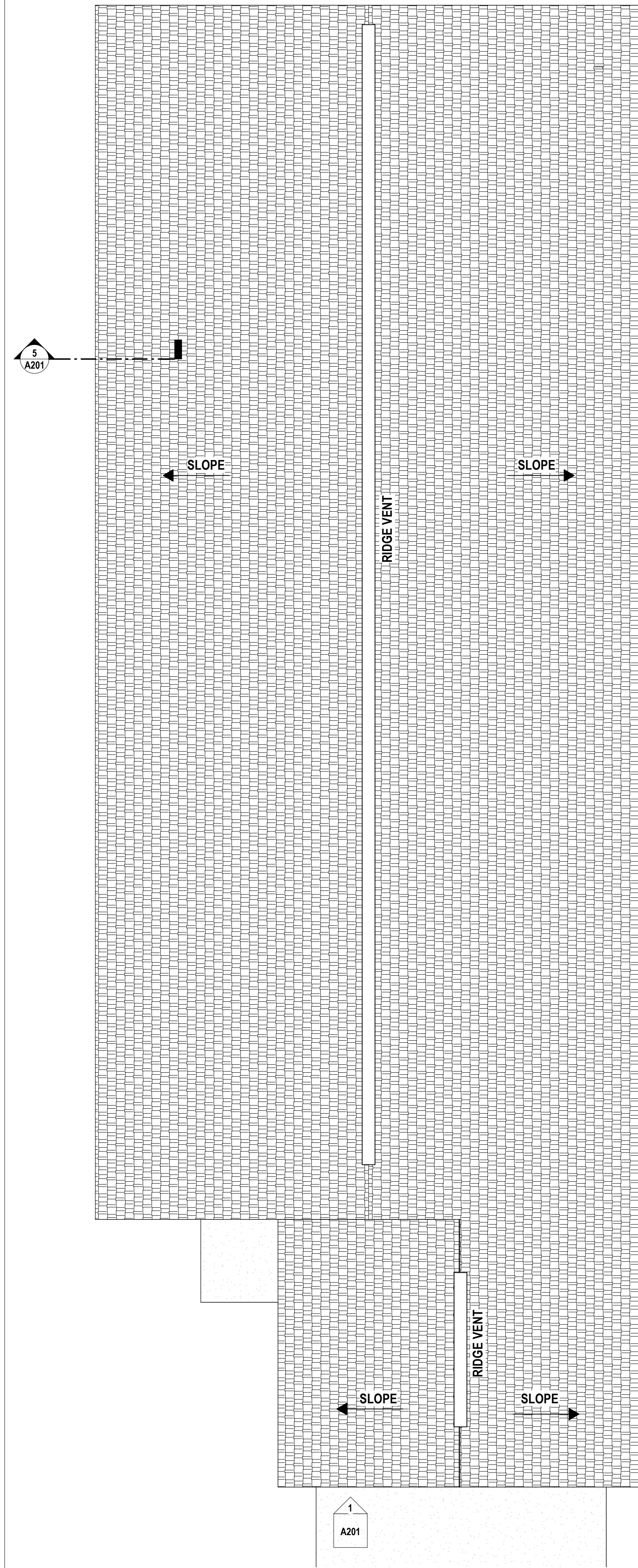
SQUARE FOOTAGE	
NAME	AREA
APPRAISED FOOTAGE	APPRAISED FOOTAGE
CONDITIONED	1143 SQ. FT.
COVERED PORCH AND CARPORT	441 SQ. FT.
STORAGE	5 SQ. FT.
TOTAL UNDER ROOF	1589 SQ. FT.



**1 FLOOR PLAN**  
1/4" = 1'-0"



**2 FOUNDATION PLAN**  
1/4" = 1'-0"



**3 ROOF PLAN**  
1/4" = 1'-0"

:STAMP

**CONSTRUCTION DRAWINGS**  
:SHEET TITLE  
**FLOOR, FOUNDATION & ROOF PLAN**

:REVISIONS

NO.	DESCRIPTION	DATE

21 OCT 2024 :ISSUE DATE

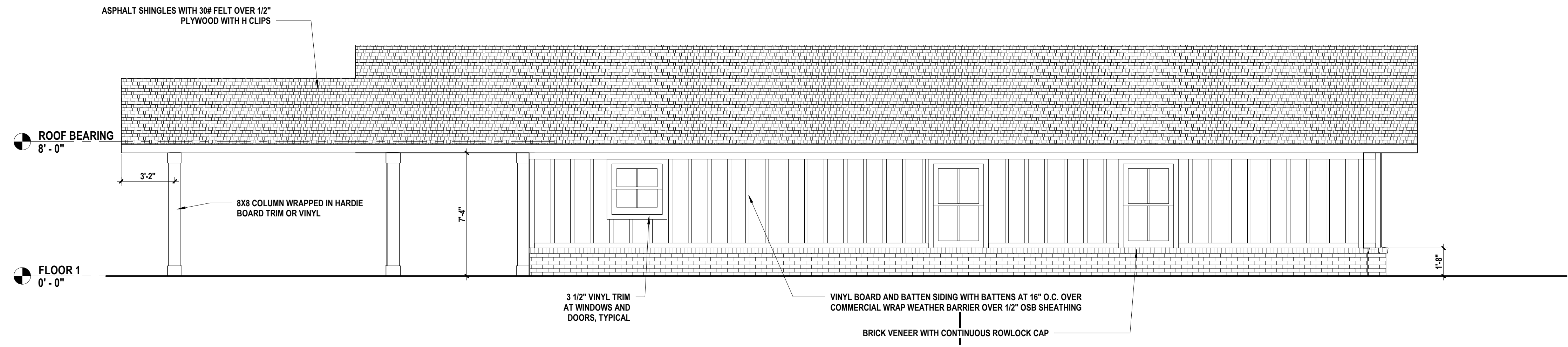
24-053 :PROJECT NUMBER

:SHEET NUMBER

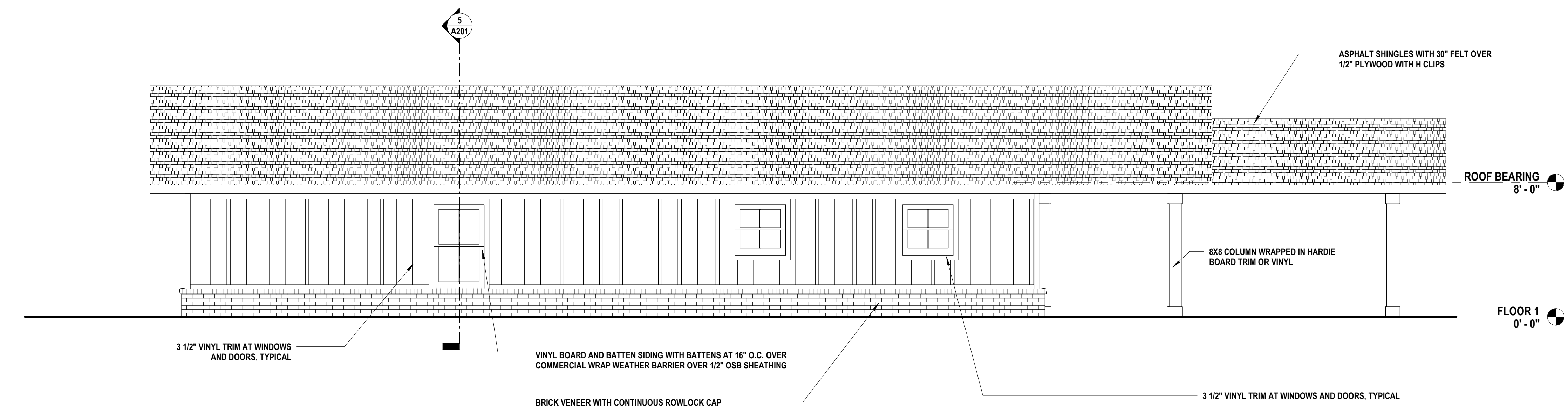
**A101**



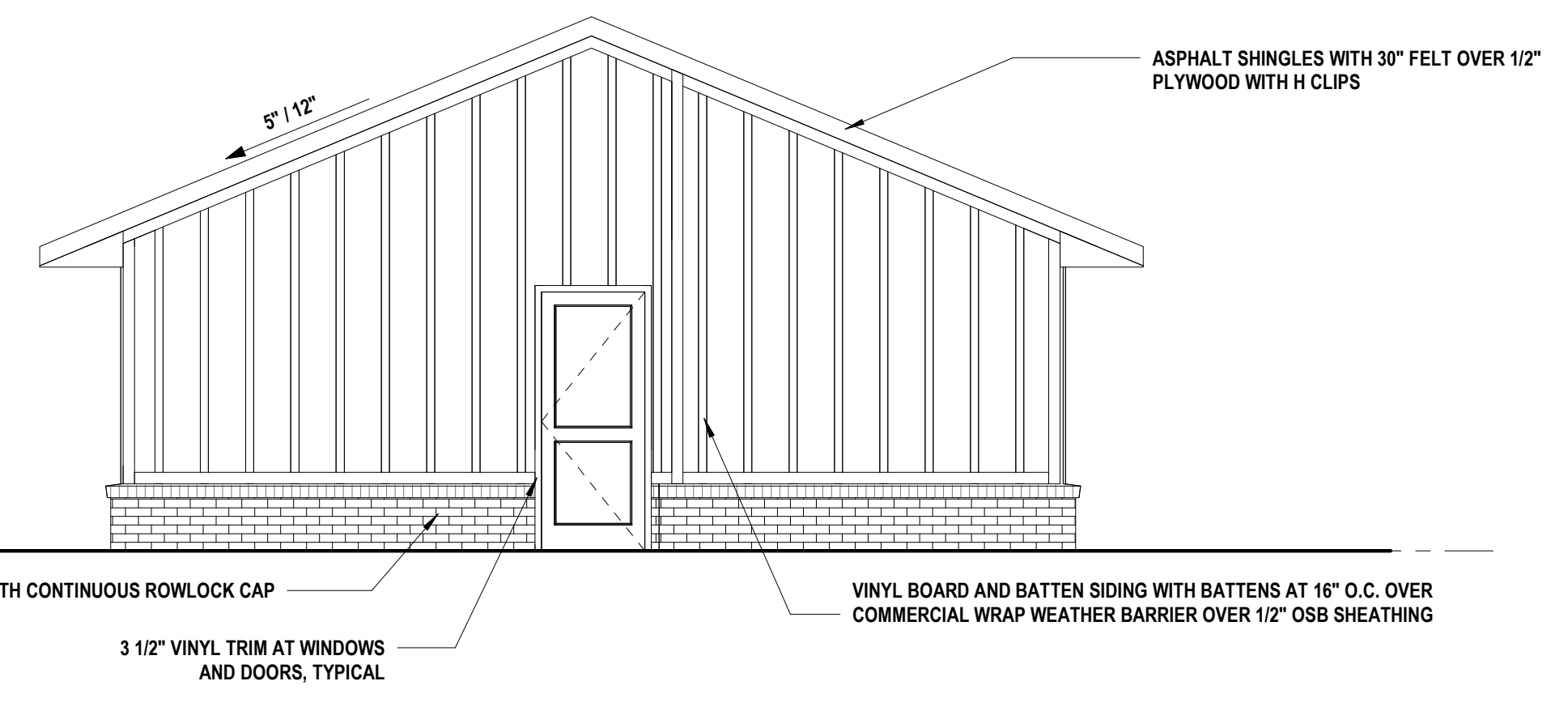
A NEW BUILDING  
WD HABITAT HOME - TRADITIONAL - SMALL/RIGHT  
NORTH LITTLE ROCK, ARKANSAS  
HABITAT FOR HUMANITY



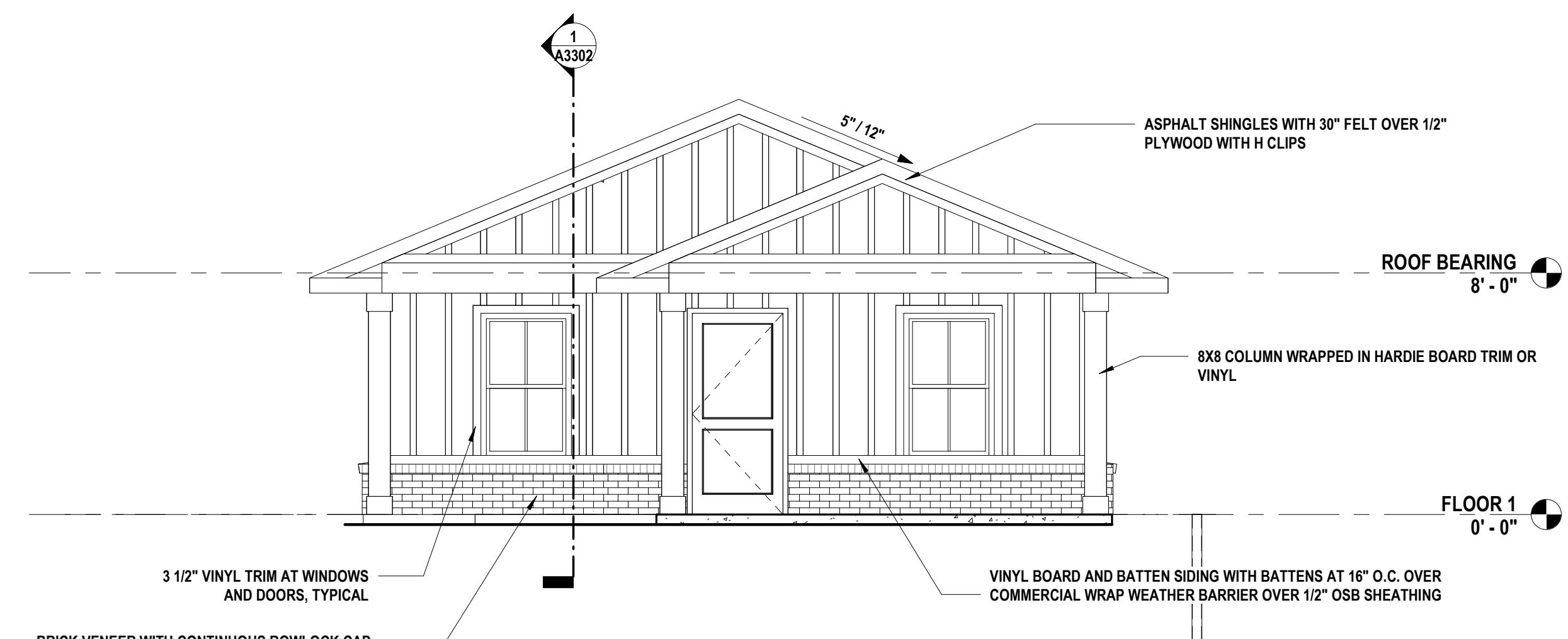
4 EAST ELEVATION  
1/4" = 1'-0"



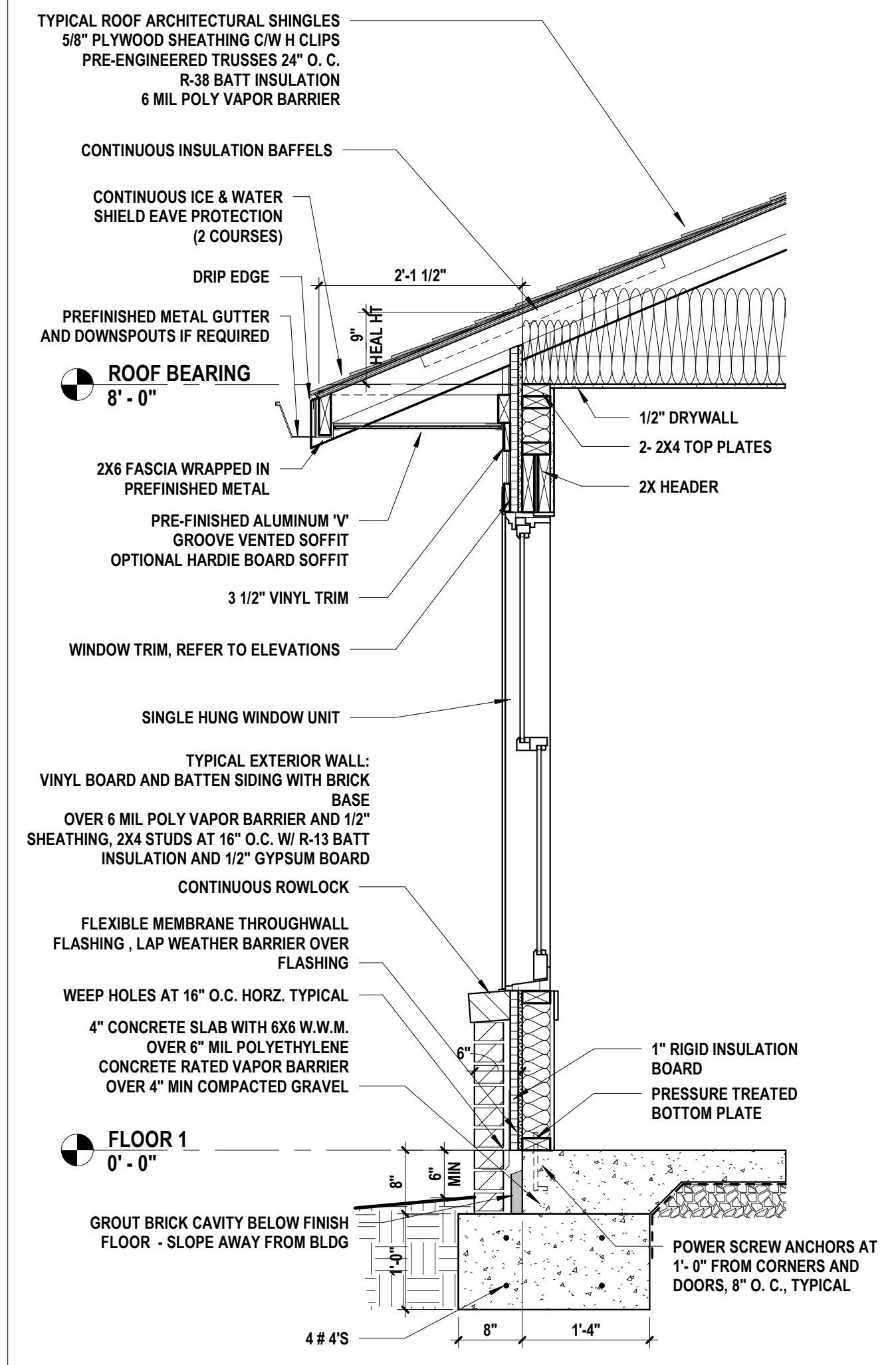
3 WEST ELEVATION  
1/4" = 1'-0"



2 NORTH ELEVATION  
1/4" = 1'-0"



1 SOUTH ELEVATION  
1/4" = 1'-0"



5 WALL SECTION  
3/4" = 1'-0"

:STAMP

CONSTRUCTION DRAWINGS

SHEET TITLE  
BUILDING ELEVATIONS

:REVISIONS

NO.	DESCRIPTION	DATE

21 OCT 2024 :ISSUE DATE

24-053 :PROJECT NUMBER

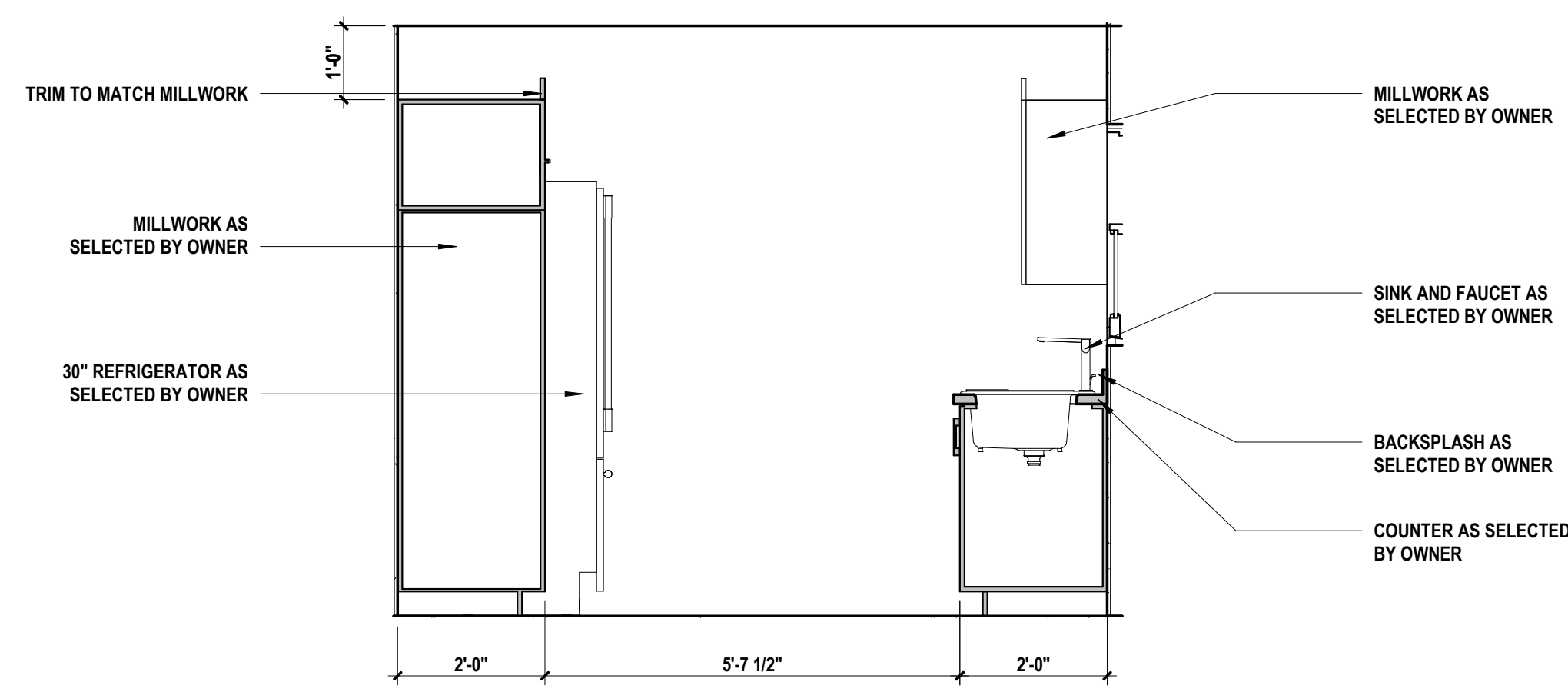
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A201

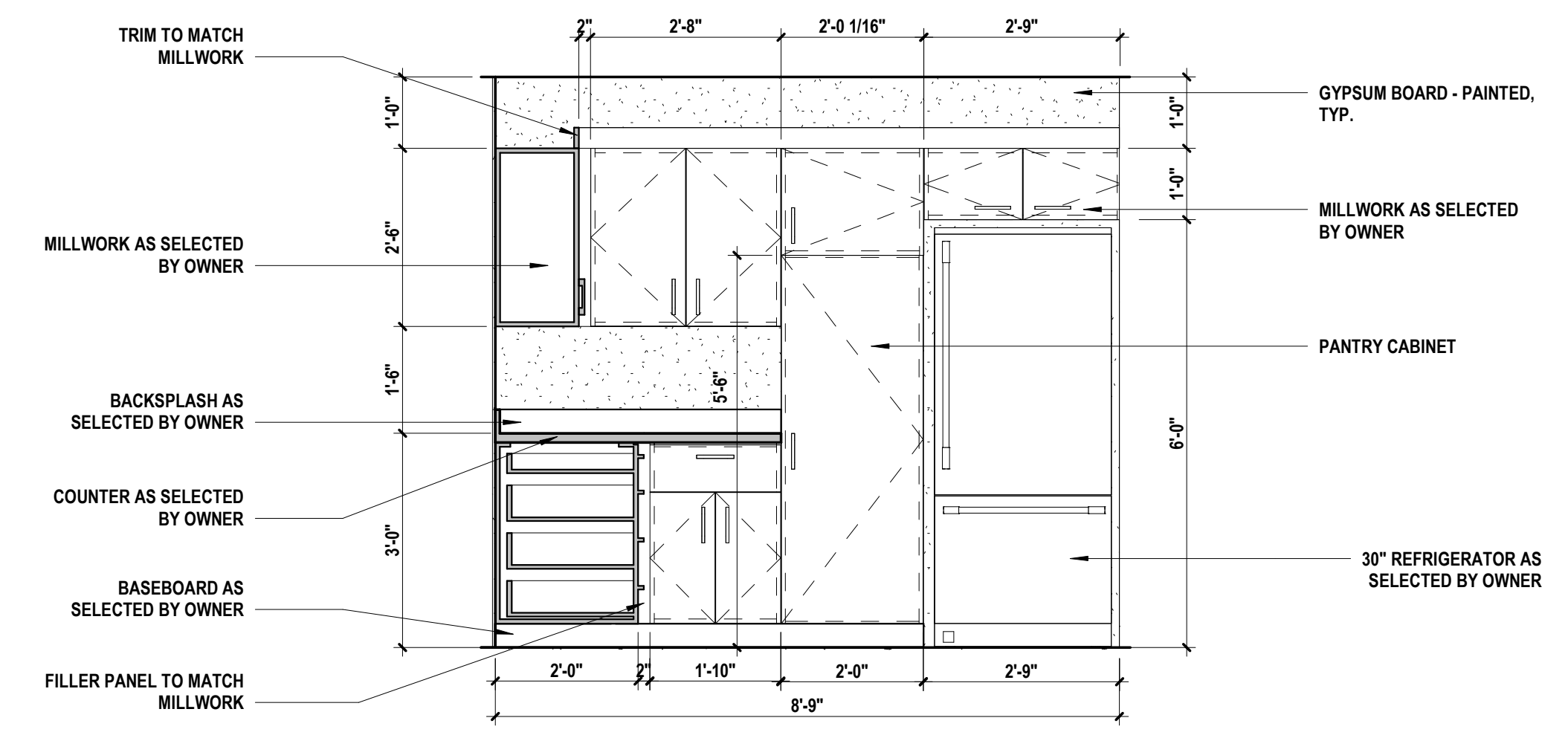
**GENERAL MILLWORK & INTERIOR ELEVATION NOTES**

1. ALL DIMENSIONS ARE GIVEN FROM FACE OF FINISHED WALL.
2. ALL DRAWERS TO HAVE FULL EXTENSION GLIDES.
3. ALL COUNTER TOP & WORK SURFACES TO BE 24" UNLESS OTHERWISE NOTED.
4. CONTRACTOR TO VERIFY CUSTOMER'S APPLIANCES & EQUIPMENT SIZES.
5. MILLWORK CABINETS TO BE TOUCH MAGNETIC RELEASE.

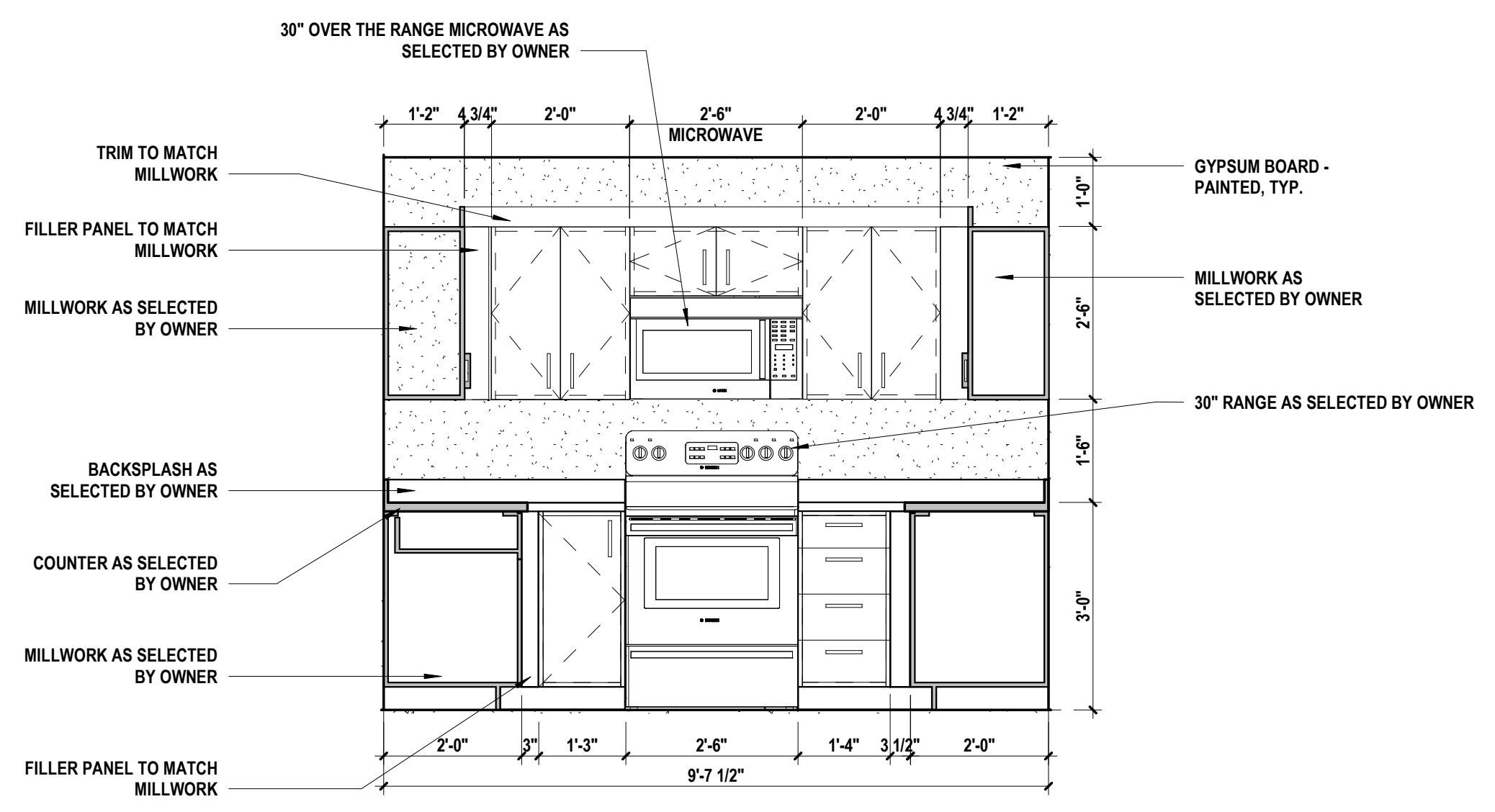
**A NEW BUILDING**  
**WD HABITAT HOME - TRADITIONAL - SMALL/RIGHT**  
 NORTH LITTLE ROCK, ARKANSAS  
 HABITAT FOR HUMANITY



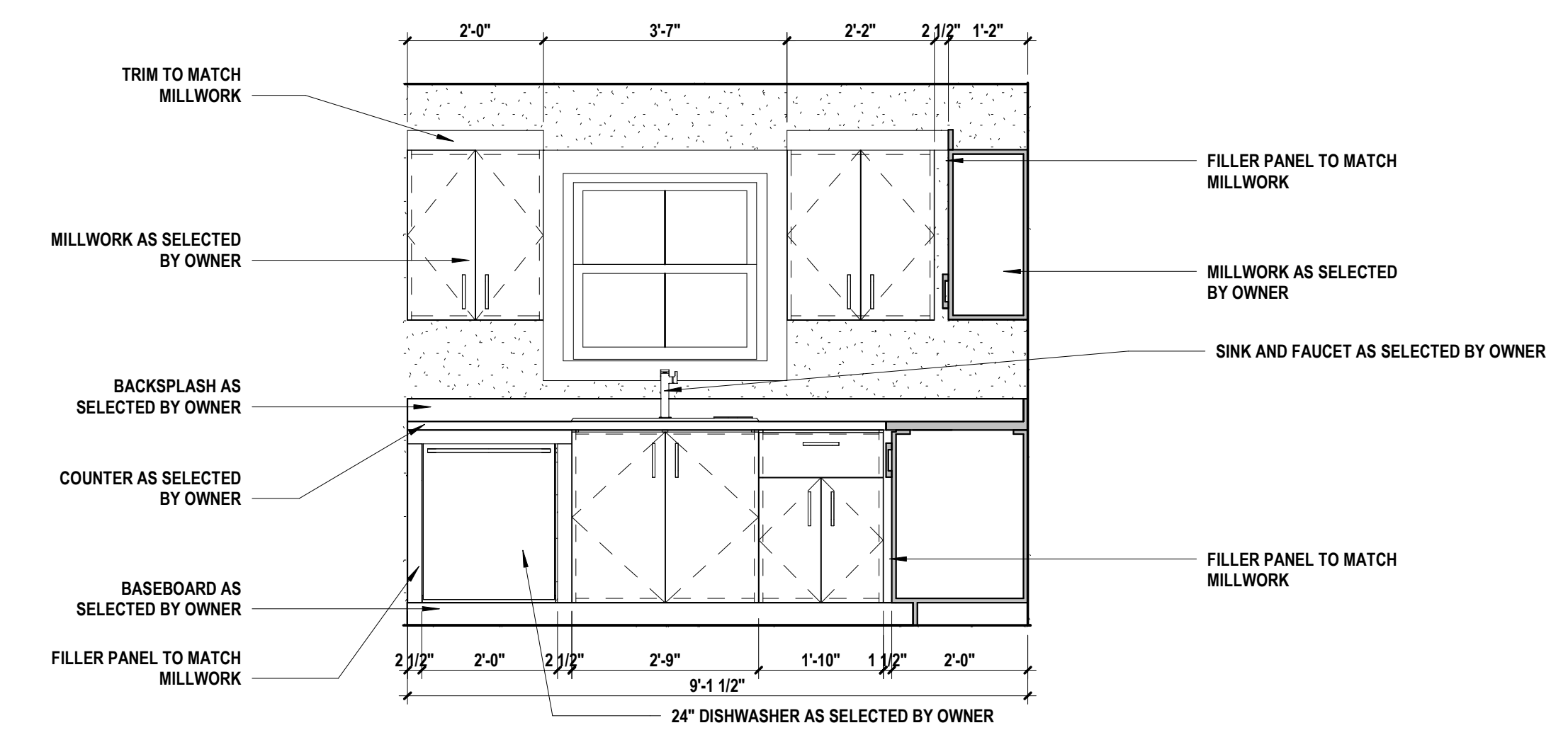
**4 KITCHEN**  
1/2" = 1'-0"



**3 KITCHEN**  
1/2" = 1'-0"



**2 KITCHEN - RANGE WALL**  
1/2" = 1'-0"



**1 KITCHEN - SINK WALL**  
1/2" = 1'-0"

:STAMP

**CONSTRUCTION DRAWINGS**  
SHEET TITLE  
**INTERIOR ELEVATIONS**

:REVISIONS

NO.	DESCRIPTION	DATE

**21 OCT 2024** :ISSUE DATE

**24-053** :PROJECT NUMBER

:SHEET NUMBER

**A301**



MEMBER NATIONAL SOCIETY  
PROFESSIONAL ENGINEERS

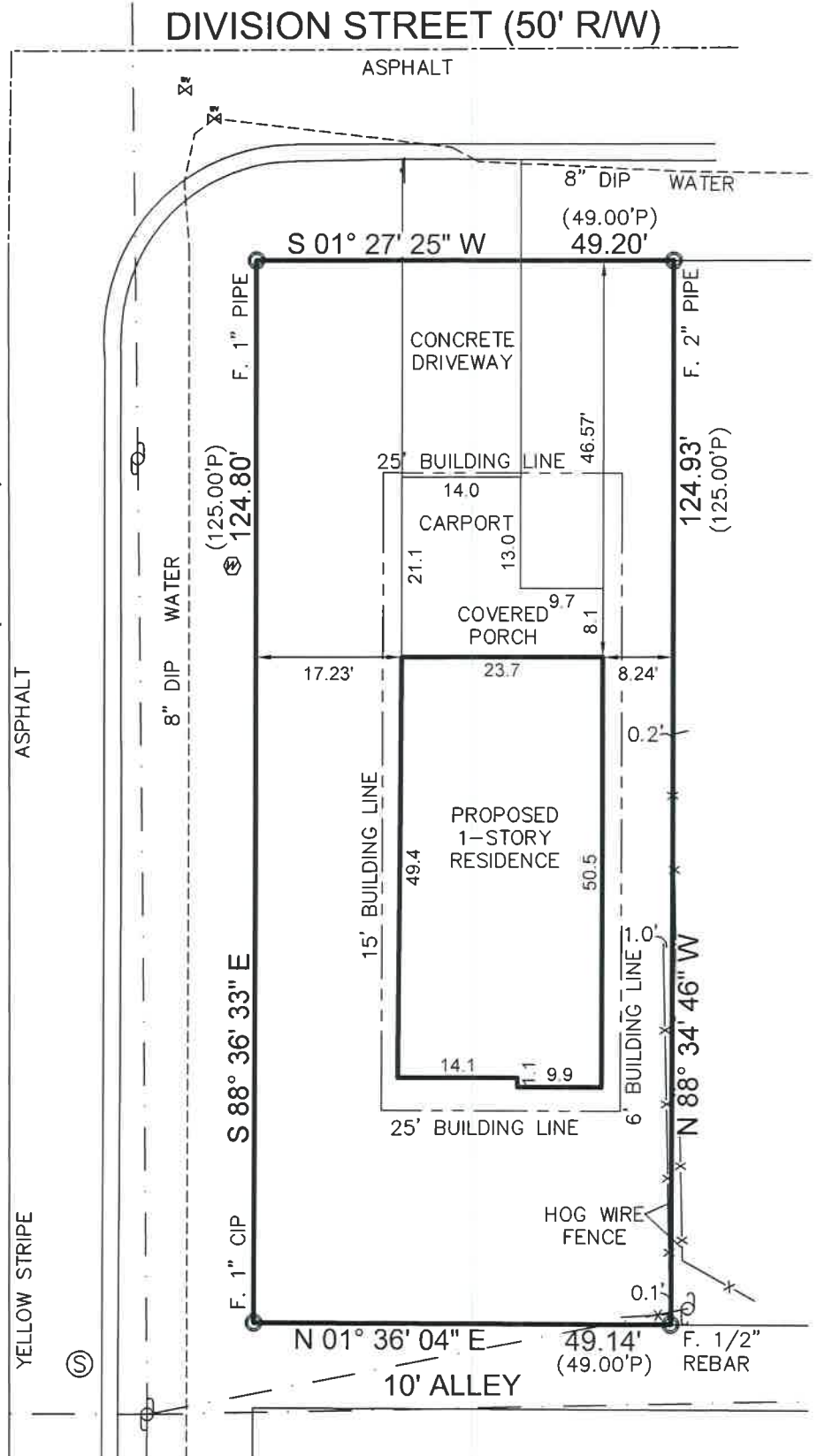
**THOMAS ENGINEERING COMPANY**

3810 LOOKOUT ROAD  
NORTH LITTLE ROCK, ARKANSAS 72116  
TELE. No. 501-753-4483

CIVIL ENGINEERS—LAND SURVEYORS  
LAND PLANNING & DEVELOPMENT  
RESIDENTIAL—COMMERCIAL—INDUSTRIAL

**DIVISION STREET (50' R/W)**

**W. 13TH STREET (50' R/W)**



**NOTES:**

1. ALL PROPERTY CORNERS MARKED AS SHOWN.



**SURVEY OF**

**LOT 1, BLOCK 8, BARING CROSS ADDITION**

**City of North Little Rock, Pulaski County, Arkansas**

This is to certify that the above described land has been surveyed. The corners are marked as shown and are in accordance with existing monuments in the vicinity. This certification is for and limited to the parties shown hereon.

This lot is not shown in the 100 year flood plain as per F.I.R.M. No. 050182 0343 G dated JULY 6, 2015.

10/22/24 REVISED PROPOSED RESIDENCE.

8/23/24 REVISED SETBACKS & MOVED RESIDENCE.

7/29/24 ADDED PROPOSED RESIDENCE.

7/24/24 UPDATED SETBACKS, PER R-4 ZONING.

DATE: 5/15/24

SCALE: 1" = 20'

FOR USE & BENEFIT OF: HABITAT FOR HUMANITY OF CENTRAL ARKANSAS

**CONSTRUCTION SPECIFICATIONS**  
**1223 Division Street, North Little Rock, AR 72114**  
**“WD Habitat Home – Traditional – Small/Right”**

**CONTRACTOR GUIDELINES FOR**  
**NEW CONSTRUCTION OF RESIDENTIAL STRUCTURE**

**GENERAL PROJECT OVERVIEW**

Habitat for Humanity of Central Arkansas (Owner) will execute a contract with a Contractor to construct a three-bedroom, two-bathroom house (“**WD Habitat Home – Traditional – Small/Right**”) in Central Arkansas according to the Construction Plans & Specifications. It is the intent to construct the house with the potential buyer in mind and allow aesthetic input where available. Owner may receive some donated materials and supplies, contract for the materials, or pull from bulk purchases of those supplies to achieve the desired outcome for the house. Habitat looks forward to partnering with a General Contractor to build an aesthetically pleasing, quality home in keeping with the neighborhood’s existing appearance and future potential.

This contract will include the construction of a monolithic slab and the new construction of a residential structure on a parcel located within the city of North Little Rock, AR. The property address is: **1223 Division Street, North Little Rock, AR 72114.**

The property’s Legal Description is: Lot 1, Block 8, Baring Cross Addition to the City of North Little Rock, Pulaski County, Arkansas.

**GENERAL REQUIREMENTS**

1. The Contractor shall provide all labor and materials necessary to fully operate and maintain all equipment necessary to provide residential construction services.
2. The Contractor shall provide the crews for the timely execution of the contract beginning on the Effective Date of the executed contract. Time is of the essence on this project.
3. The Contractor shall conduct the work so as not to interfere with any public utilities or any public right-of ways.
4. The Contractor shall comply with local, State, and Federal safety and health requirements.
5. The Contractor shall obtain all required permits. The Contractor will call One Call (811) for utility location prior to start of work.

6. **Secure Structure:** Contractor is fully responsible for the building, its contents, site, and outbuilding from the point of receiving the Notice to Proceed until the Certificate of Occupancy is issued and final payment is made.
7. **LED Bulbs:** All light fixtures in the house, both interior and exterior, shall have 9-Watt or less, 60-Watt equivalent LED Bulbs of the shape and type appropriate for the light fixture.
8. **Energy Efficiency Audit:** House will be built to Energy Star 3.1 Standards. Contractor shall make property available for evaluating building energy use, heat loss infiltration rate, and develop recommendations to improve efficiency per the Home Performance Standards for Warm Climates.
9. **Blower Door Test:** Any blower door testing must show that the house meets Energy Star 3.1 Standards. The Owner may have a blower door test performed and the air sealing must produce test results of less than 0.30 CFM @50Pa per SF of envelope (floors, walls, and ceiling). Contractor will be responsible for additional costs if additional work or tests are required.
10. **HVAC Manual J Calculation:** Provide Owner with the evaluation report establishing satisfactory heating and cooling loads for the structure using a computer program modeling the Manual J protocols on “tight” setting with the thermostat set at 75 degrees for cooling.
11. **Duct Leakage Test:** Allow performance of a duct leakage test with a “duct blaster” for the HVAC distribution system. The test must show that the system meets Energy Star 3.1 Standards. Contractor will be responsible for additional costs if additional work or tests are required.
12. **Radon Test:** House will be tested for radon levels by a certified inspector. The test must show that radon levels in the house are less than 4 pCi/L. House will be constructed with radon-resistant construction methods in mind, including a gas-permeable layer of gravel underneath the slab with a polyethylene sheeting vapor barrier, and sealing and caulking for moisture reduction, as detailed in Specifications below. If the testing results in levels at or above 4 pCi/L, then mitigation must occur to remove or reduce radon in the house. Contractor will be responsible for additional costs if mitigation or additional tests are required.
13. **Energy Star 3.1 Checklists:** Thermal enclosure system checklist, HVAC system quality installation contractor checklist, and water management system checklist to be completed by Contractor.
14. **Manufacturer’s Specs Prevail:** All materials shall be installed in full accordance with the manufacturer’s most recent specifications for working conditions, surface preparation, methods, protection, and testing.

15. **Substitution Approval Process:** Any requests for substitutions of specified proprietary items must accompany the initial proposal and shall include: the manufacturer's specifications; full installation instructions and warranties; and the proposed bid price differential. The agency and Owner will notify the Contractor of decision at contract award.
16. **Line-Item Breakdown:** The apparent winning bidders shall provide the Owner with a line-item cost breakdown that will become the schedule of values to be used in calculating periodic payments within three working days of a request which will be subject to review by Owner's construction team. Unbalanced bids will not be approved and could cause immediate disqualification of bid.
17. **Verify Quantities/Take-offs:** The Contractor will be responsible for all Quantities and Quantity take-offs calculations, which will be used to compute the bid items listed. Any change in Quantities or bid amount must be submitted in writing to the owner prior to the time of the Bid Opening. Claims for additional funds due to discrepancies in Quantities shall not be honored if submitted after the date and time of the Bid Opening.
18. **Building Permit Required:** The Contractor is responsible for submitting the Owner-provided house plans, survey, and plot plan to the building department, as well as applying for, paying for, and receiving a building permit prior to starting any work. Copy of permit will be given to Owner.
19. **Electrical Permit Required:** Prior to the start of electrical work, the Contractor shall create any documentation necessary to apply for, pay for, and receive an electrical permit on behalf of the Owner. Copy of permit will be given to Owner.
20. **Plumbing Permit Required:** Prior to the start of plumbing work, the Contractor shall apply for, pay for, and receive a plumbing permit on behalf of the Owner. Copy of permit will be given to Owner.
21. **HVAC Permit Required:** Prior to the start of the heating/cooling work, the Contractor shall create a heating distribution layout and perform heat/cooling loss calculations and all other documentation needed to apply for, pay for, and receive and HVAC permit on behalf of the Owner. Copy of permit will be given to Owner.
22. **Contractor Pre-Bid Site Visit:** The Contractor or a representative of the Contractor must inspect the property. Submission of a bid is presumptive evidence that the bidder has thoroughly examined the site and is conversant with the requirements of the local jurisdiction.
23. **Builder's Risk:** Contractor shall provide Owner with a Certificate of Builder's Risk Insurance coverage equal to the structure's replacement value of the contract price prior to commencing work. Certificate shall name Habitat for Humanity of Central Arkansas as additional insured.

24. **Worker's Compensation:** The Contractor shall purchase, maintain, & provide Certification of Worker's Compensation coverage to the Owner with the following limits: Coverage A – Provide Statutory Minimum Employer's Liability, \$500,000 each accident; Coverage B – \$500,000 disease per employee. Certificates shall indicate contingent liability coverage and Owner's & Contractor's Protective Liability coverage is in force.
25. **Disallowed Materials and Methods:** The following construction materials and methods are prohibited from any job sponsored by this Owner: lead paint, lead solder in drinking water supply, burning of construction debris, explosives in excavation, flex duct in HVAC, vacuum breakers in plumbing vent lines, staples in roofing or siding materials, and concrete additives unless prior approval from Owner is obtained. The only allowable ventilation through the roof are the vents required by local building codes.
26. **Close-In Inspections Required:** Call the proper agency for inspection of all work that will be concealed from view before it is closed in. This type of inspection frequently includes, but is not limited to, footings, roof sheathing & flashing prior to installation of new felt & shingles, framing & decking prior to installation of underlayment & floor coverings, and prior to insulation and prior to drywall.
27. **One-Year General Warranty:** Contractor shall remedy any defect due to faulty material or workmanship and pay for all damage to other work resulting therefrom, which appear within one year from final payment. Further, CONTRACTOR SHALL FURNISH OWNER WITH ALL MANUFACTURERS' AND SUPPLIERS' WRITTEN WARRANTIES covering items furnished under this contract prior to release of the final payment (e.g.: roofing warranty must be registered and printed).
28. **100% Payment and Performance Bond:** Prior to commencing work, Contractor shall provide Owner with a bond written on the AIA form for 100% of the contract, callable in the event of either non-performance or non-payment.
29. **Portable Toilet:** Provide temporary toilet facilities from job start until approval of permanent facilities.

### **PERFORMANCE SCHEDULE**

The Contractor shall be prepared to commence mobilization immediately upon award of the contract and designation of work areas by Habitat for Humanity of Central Arkansas and will begin construction operations within ten (10) days of Effective Date of the executed contract.

The Contractor may work at any time of the day on any day of the week if such work adheres with any and all local, State, and Federal laws, including, but not limited to, noise ordinances.



The Contractor shall not solicit work from private citizens or others to be performed in the designated work area during the period of this contract.

The Contractor shall complete, free of liens or rights of liens of contractors, mechanics, materialmen or laborers, all work detailed in the specifications executed contract efficiently and without delays (including strikes, acts of God, or other reasons beyond the control of the Owner or Contractor). The Contractor agrees that time is of the essence in regard to the contract.

### **EQUIPMENT**

All equipment on the job site must comply with all local, State, and Federal rules and regulations.

### **OTHER CONSIDERATIONS**

The Contractor shall supervise and direct the work, using qualified labor and proper equipment for all tasks. Safety of the Contractor's personnel and equipment is the responsibility of the Contractor.

The Contractor must be duly licensed in accordance with all local requirements as well as the State of Arkansas's statutory requirements to perform the work. The Contractor shall obtain all permits necessary to complete the work. The Contractor shall be responsible for determining what permits are necessary to perform under the contract. All necessary permits shall be verified by Owner prior to beginning work on that phase of construction.

The Contractor shall be responsible for taking corrective action for any notices of violations issued as a result of the Contractor's or any subcontractors' actions or operations during the performance of the contract. Corrections for any such violations shall be at no additional expense to Owner.

The Contractor shall be responsible for control of pedestrian and vehicular traffic in the work area. The Contractor shall provide flag persons, signs, equipment, and other devices necessary to meet local, State, and Federal requirements. The traffic control personnel and equipment shall be in addition to the personnel and equipment required in other parts of these specifications.

Contractor will provide closeout documents at the completion of each house. Those items will include standard documents, including the following:

- Lien releases from subcontractors;
- Certificate of Occupancy;
- One-Year General Warranty;
- Operation manual for HVAC equipment;
- Warranty on products included in the project (e.g.: shingles, water heater, HVAC equipment, siding, electrical appliances, windows furnished by the builder, etc.);
- and Termite Treatment and Contract.

## **PAYMENT**

The Contractor shall be entitled to submit a payment request/invoice making up four (4) progress payments. Such progress payments shall be disbursed within thirty (30) days of submission of approved payment request from Contractor to Owner. Payments will be disbursed in the amounts specified in the Payment Schedule after inspection and approvals of the work by Owner. Final payment shall be dispersed upon satisfactory completion and acceptance by the Owner, permit sign-off, issuance of Certificate of Occupancy, lien releases, and submission of all warranties and guarantees. The Owner shall not withhold payment to the Contractor except for noncompliance with the terms of the Contract and shall not request the Contractor to perform work outside the scope of the Contract as a condition of receiving payment.

Owner will withhold a 10% cumulative retainage on all requested draws until the project is completed to the approval of the Owner and all approving agents, at which point retention will be released and final payment will be dispersed.

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## **SPECIFICATIONS**

### **01-1 ALLOWANCES**

- 1. Construction Allowances:** The Contractor will provide the Owner with allowances for brick, hardware, fixtures, lighting, flooring, cabinets, and countertops, and any other items necessary as determined by the Contractor.

### **02-2 EXTERMINATION**

- 2. Exterminate Termites:** Provide termite treatment with a 1-year contract beginning at issuance of Certificate of Occupancy.

### **02-8 SITE WORK**

- 3. Sod/Seed:** Lay fresh sod for complete coverage in the front yard and 25 feet on the side of the house from the front toward the back. Sod will be placed 3' around the remainder of the house on the rest of the side and rear of the house. The remainder of the side and back yards not being sodded will be seeded and covered with a light covering of straw. Contractor will maintain grass for thirty (30) days after completion of project, including watering, mowing, fertilizing, and/or replacing as required to insure viability. Responsibility for landscaping transfers to Owner after the 30-day maintenance period.

### **03-3 CONCRETE & PAVING**

- 4. Monolithic Slab – Subgrade:** The Subgrade will be sound and solid undisturbed earth free of all organic material and rocks larger than 3 inches. If the subsurface is not sound or is disturbed or undercutting is required to place compacted fill, the fill material will be compacted to a 95% modified proctor.
- 5. Monolithic Slab – Perimeter Trench:** The perimeter trench will be dug along the perimeter of the slab to create the thickened edge of a monolithic slab. Must meet building code for the trench depth and width and conform to plans.
- 6. Monolithic Slab – Compacted Gravel:** Compacted gravel is to be spread to a depth 4” minimum beneath the slab and in the trenches per plans. A typical choice is a well-draining gravel with aggregate ranging from 3/8” to 3/4”.
- 7. Monolithic Slab – Reinforcement Steel & Fabric, and Vapor Barrier:** A 6” Mil polyethylene concrete rated vapor barrier will be laid over the 4” minimum compacted gravel. Four continuous bars (#4 rebar) are to be placed side-by-side in the lower third of the trench, with one bar in the upper third. Rebar must be placed in the trenches, lapped a minimum of 2’, be Grade 40 steel, and be tied in a continuous fashion. Install reinforcement per plans. Install bars required by the most strenuous requirement of this section or city code. Welded wire mesh (WWM) will be placed on the interior of the slab. WWM will be a minimum of Grade 10 steel with 6”x6” in spacing. All steel will be free of rust or dirt and will be placed on chairs or concrete bricks. Clay bricks are not allowed.
- 8. Concrete:** The concrete will be a 3000 PSI concrete mix as determined by a compression test at 28 days. Owner may pull cylinders to satisfy our knowledge that the concrete meets these standards. The concrete will be placed with a slump between 3” and 4”. Concrete over 1’ thick will be tamped or vibrated to preclude honeycombs or voids. The concrete will be placed when the ambient temperature is above 40 degrees and less than 95 degrees Fahrenheit. The finishing of the concrete will be performed such that there are no bird baths, dips, rolls, or grout piles. The finished concrete will be protected for 24 hours to complete the initial set.
- 9. Footings:** Excavate a square, straightened trench below frost line to solid bearing. Form and pour a 3000 psi footing reinforced with four bars (#4 rebar) securely wired and set on chairs. Remove forms after concrete has fully cured.
- 10. Concrete Block:** Blocks will be placed with even level courses and tooled mortar joints of a consistent thickness of 3/8<sup>th</sup> inch. Mortar cubes should have a compression strength of 5000 psi at 28 days. Reinforcement will be placed in between every course of blocks.

Blocks will be battered on all four edges and the head and tail joints between adjacent blocks. Trailing and mortar drips will be cleaned up on the exterior face.

**11. Concrete Foundation:** All concrete shall exhibit 3000 psi at 28 days and have a slump less than 4'. Formed concrete thicker than 4" must be mechanically vibrated. Finished slab will be smooth, level, and free from bird bath pockets, bumps, ridges, or deviations. There will be a front porch slope minimum of 1/8" per 12" and a 6" curb slab at the back of the structure per plans.

**12. Driveway – Concrete:** Driveway will sit 6" lower than slab per plans. Level surface, prepare a 3" gravel base over a uniformly graded and compacted subgrade. Form and pour 3000 psi air entrained concrete, 4" thick by 15' wide driveway. Provide #10 welded wire mesh, expansion joints at 10' intervals, and a broom finish surface that directs water away from the building. Remove forms. Regrade disturbed areas.

### **06-1 ROUGH CARPENTRY**

**13. Partition – 8' Wood Bearing:** Frame a 8' high 2"x4" wood partition with studs 24" on center, double top, and single treated bottom plate.

**14. Partition – Ladder Blocking:** Where interior walls meet exterior walls, only use ladder blocking to connect the two systems, i.e., horizontal 2x4s at 2', 4', and 6' from the floor. Blocking will be used behind bath and kitchen cabinets. This allows for maximum insulating ability.

**15. Partition – California Corners:** All exterior corner framing must utilize three studs per corner, with two studs being the end of the long wall unit, and a single stud in the end of the adjoining wall.

**16. Partition – Structural Sheathing 7/16 OSB:** Attach sheets of OSB sheathing to outside of entire exterior walls with 8d nails.

**17. Bottom Plate Gasket:** A continuous foam gasket shall be installed under treated external bottom plate. Bottom plate must then be sealed to foundation with caulk.

**18. Anchor Screws in Bottom Plate:** Power screw anchors 1' from corners and doors, 8" O.C.

**19. Attic Access:** Frame out an attic hatch 36" x 23" in the hallway or location designated by Owner. Install a 1/4" plywood door insulated to R-30 and sealed.

**20. Foam Sheathing:** Install a continuous 1" layer of DOW R-5 Styrofoam sheathing with tight fitting seams sealed with the manufacturer's seam tape, included all corners on all

exterior walls. The foam board sheathing will become the drainage plane for the wall so all flashing details must direct water to naturally drain over the foam. Provide insulation dam up to 1" below roof decking if trusses are used.

- 21. Roof System-Pitched – New:** Install 5/12 (5 inches per foot) pitched, gable end roof using engineered 2'x4' raised-heel trusses as indicated on the drawings. The roof must overhang min of two feet at the gable ends and one foot on the sides. If roof is stick-framed, use double 2'x10' band joist over top of ceiling joists to raise roof height to allow higher level of insulation. Install insulation barrier 2' high and full-length on each side.
- 22. Roof Sheathing 5/8" with Reflective Layer:** Install 5/8" plywood sheathing with a reflective layer (solar board), nailed 8" on center using plywood H clips, reflective side down. Leave 3" wide opening at ridge for ridge vent.
- 23. Brick Skirt:** Install brick veneer around the house according to the plans. Brick will be installed with a continuous Rowlock Cap. Brick color will coordinate with siding and be approved by Owner.
- 24. Posts:** Install 8x8 post columns on front porch and carport with appropriate metal bases attached to concrete with correct concrete screws according to plans. Columns will be wrapped in Hardie Board trim or Vinyl siding, approved by owner.

## **06-2 FINISH CARPENTRY**

- 25. Interior Trim & Finish:** Install all doors, locksets, hinges, door molding, baseboard molding, window ledge & apron, and trim, molding, covers, or escutcheons not supplied by the electrical, mechanical, or plumbing work. The trim will be #356 2-1/4' casing and #623 4-1/4' base.

## **06-4 CABINETS & COUNTERTOPS**

- 26. Cabinets:** Install cabinets in kitchen, bathrooms, and laundry room per plans. All cabinets will have solid wood doors and hardwood face frames, with MDF or plywood shelves, sides, and backing. Cabinets will be primed and painted with a paint approved by Owner.
- 27. Countertops:** Install countertops in kitchen, bathrooms, and laundry room per plans. Countertops will be laminate countertops or better as manufactured by Formica or Wilson Art or approved equal. Please refer to section 01-1 Allowances.

## **07-2 INSULATION**

- 28. Wall Insulation:** Install loose fill adhesive impregnated Borate treated exterior wall insulation. A separate process will be employed to insulate the ceiling with Borate treated blown-in insulation to achieve an R-13 minimum rating measured by bags, not height. The insulation will maintain ventilation routes from the soffit and other vents with baffles. The insulation will be fire retardant, pest resistant, and free from extraneous materials. Insulation must be inspected before the wall finish is installed. ALL EXTERIOR WALLS – NOT INTERIOR WALLS.
- 29. Attic Insulation:** Install blown-in Borate treated (no ammonium sulfate permitted), cellulose insulation per manufacturer’s specifications to R-38 measured by bags, not height. Maintain ventilation routes from soffit and other vents with baffles.
- 30. Air-Seal Building Envelope:** Seal all accessible cracks, gaps, and holes in the building envelope with low VOC caulk (if less than ¼”) or expanding foam (if greater than ¼”). Seal all top plate and bottom plate penetrations. If the foundation masonry wall is open core concrete block, seal the tops of the block with expanding foam. Seal all penetrations created by plumbing, gas lines, electrical boxes, and outlets. Seal accessible gaps between the structure and window and door units with low expansive foam. Take care to seal all joints without excess sealant. Seal any gaps in the building envelope adjacent to flues with carefully cut to fit sheet metal collars that are securely fastened to framing sealing all seams and gaps with fire rated caulk. Seal any entries to attic space using weather stripping on attic doors or hatches if inside home. Air sealing must be completed prior to the installation of insulation. The Owner may have a blower door test performed and the air sealing must produce test results of less than 0.30 CFM @50Pa per SF of envelope (floors, walls, and ceiling). Contractor will be responsible for additional costs if additional work or tests are required.

## **07-3 ROOFING**

- 31. Roofing Shingles:** Install Architectural shingles with a 25-year warranty over synthetic underlayment. Overhang 1” on gable ends and 1 ½” on sides. Use roofing nails only. Ice and water shield must be used in all valleys, and up two courses at all eaves.
- 32. Ridge Vent:** Install ridge vent with flex vent per manufacturer’s specifications. Ridge vent should be equal to a TAMCO Nail-on Ridge Vent-48” or approved equivalent.

#### **07-4 SIDING**

- 33. Siding – Installation:** Hang siding in accordance with manufacturer’s recommendations. Conform to local, State, and Federal requirements for ladder and scaffold operations. Staples will not be used.
- 34. Soffit – Installation:** Hang soffit in accordance with manufacturer’s recommendations with every panel being vented or perforated and the solid soffit on the gable ends.
- 35. Wrap Trim – Aluminum:** Enclose fascia board, trim, and any exposed wood with aluminum coil stock in color corresponding to siding. Caulk all seams with appropriate siliconized acrylic to create an air-tight installation.
- 36. Siding & Soffit Specs:** Vinyl board and batten siding as indicated on drawings. All siding must be installed according to manufacturer’s specifications. Vinyl soffit 12” wide vented or solid, as specified. All siding, soffit, and aluminum trim will match or coordinate in color with approval by Owner.

#### **08-1 & 5 WINDOWS AND DOORS**

- 37. Windows:** Install a single-hung, double-glazed, vinyl with j-rail where needed, double-pane argon filled Low E ENERGY STAR window with a U-value of 0.35, SHGC of 0.30, properly flashed with approved tape and sealed with expanding foam and caulk. Refer muntin pattern as indicated on drawings.
- 38. Front Door & Back Door from Carport:** Install an ENERGY STAR certified insulated pre-hung steel door, clear low e wagon wheel glass, a passage latch, and double cylinder dead bolt keyed to match the deadbolts of other exterior doors. Door lockets will be heavy duty brushed bronze finish. Hinges will be heavy duty for the exterior doors with three hinges. Refer to drawings for door sizes.
- 39. Interior Doors:** Install standard quality interior doors using two or more hinges per door. All doors will be pre-hung manufactured framed doors. Interior doors will be hollow core Masonite doors with a smooth or woodgrain finish, but all will be of the same finish. All interior door hardware will match.

#### **09-2 DRYWALL & PLASTER**

- 40. Drywall – General Requirements:** All materials shall be applied dry with the temperature between 55-100 degrees F. Set all nail and screw heads. Apply tape and filler. Feather all edges. Wet sand, ready for paint.

- 41. Drywall – ½ Inch:** Hang, tape, and 3-coat finish ½” standard drywall on all walls excepting those requiring “Green Board”. Run boards with long dimension perpendicular to framing members. Sand and texture, ready for paint.
- 42. Drywall – Water Resistant “Green Board”:** Hang, tape, and 3-coat finish ½” water resistant “Green Board” drywall on all walls in both bathrooms, laundry room, behind lower kitchen cabinets, and anywhere else required by code. Fiberglass joint tape shall be used to finish the joints and a setting-type compound shall be used for the first coat over the fiberglass mesh tap. Sand and texture, ready for paint.
- 43. Drywall – ENERGY STAR:** Ceiling drywall will be sealed at the top plate at all attic/wall interfaces using caulk, foam, or equivalent – apply sealant directly between drywall and top plate or to the seam between the two from the attic above. Seal any cuts in top plate to produce a continuous top plate. Construction adhesive shall not be used. Sand and texture, ready for paint.

#### **09-6 FLOOR COVERINGS**

- 44. Vinyl Sheet Goods:** Install 8 mil. Vinyl laminate flooring in kitchen, baths, hallways, and living room/dining room. Laminate may be used in bedrooms if approved by Owner. The laminate will be a quality brand, such as Artistek Floors, luxury resilient plank with a 7-year limited residential warranty in the color buckboard, or approved equal, with no formaldehyde off gas. Vinyl thickness will be a minimum of 8 mil. facing with a fibrous backing. If the manufacturer recommends an underlayment for this type of flooring, it will be included and rolled out as per the manufacturer’s recommendation. Visual gaps, misalignments, buckles, bubbles, or cracks will not be acceptable.
- 45. Carpet & Pad:** Install pad and carpet in all bedrooms, unless Owner approves laminate. The pad will be a minimum of ½” thick foam carpet pad installed per the manufacturer’s recommendation. The carpet will be similar to Mohawk continuous nylon filament and stain resistant with a 10-year limited wear warranty.

#### **09-9 PAINT**

- 46. Prep & Paint Surface:** Fill holes and cracks. Seal off all ducts, cover windows and doors. Prime all new materials with acrylic latex. Paint the Interior Walls and Trim with Owner’s choice of white, satin, low-VOC acrylic latex paint & primer. The same color, but with a flat sheen, will be used on ceilings.



## **10-1 HARDWARE & TOILET ACCESSORIES**

- 47. Door Hardware:** Door locksets will be heavy duty. Hinges will be heavy duty for the exterior doors with three hinges, and interior doors will be standard quality two or more hinges per door. Bedroom and bathroom doors will have a button push privacy lockset on the doorknobs. All interior door hardware will match. Doors to closets, laundry rooms, and HVAC Access door will be entry/exit locksets only without a locking mechanism. Exterior doors will be with heavy duty hinges and a matched key lockset for the day entry and deadbolt on all exterior doors. Finish to be selected by owner.
- 48. Bathroom Hardware:** Install a surface-mount medicine cabinet in both bathrooms, along with a metal accessory set, including a toilet paper hanger, towel bar, and shower rod. The material will be the same for each of the fixtures. All fixtures will have a lifetime finish to be approved by Owner.

## **12-1 APPLIANCES**

- 49. Appliances – General Requirements:** All appliances shall be ENERGY STAR certified. Owner will provide an Electric Stove (#52), a Range Hood-Microwave Combo (#52), and Dishwasher (#54); Contractor is responsible for the installation of Owner-supplied Appliances.
- 50. Electric Stove – 30” – ENERGY STAR:** Install an ENERGY STAR 30" wide electric stove including oven and electrical connections. (Owner-supplied Appliance.)
- 51. Range Hood-Microwave Combo – Exterior Vented – ENERGY STAR:** Install an exterior ducted ENERGY STAR range hood-microwave combo capable of a minimum 100 CFM after installation. Attach hood to cabinet with screws. Include galvanized metal vent with all seams sealed with duct mastic, and damper assembly flashed appropriately for the exterior finish. Vent out rear gable end. (Owner-supplied Appliance.)
- 52. Refrigerator – 18 CF – ENERGY STAR:** Install an ENERGY STAR approved 2-door, top freezer, frost-free refrigerator with at least 17.5 cubic feet matching in color with Owner-supplied Appliances.
- 53. Dishwasher – Two Cycle – ENERGY STAR:** Provide and install a 24”, 2 cycle, built-in ENERGY STAR labeled dishwasher including all alterations and connections to plumbing and electric systems. (Owner-supplied Appliance.)
- 54. Disposal – ½ HP:** Install a ½ horsepower, garbage disposal with reset button and hand crank, as manufactured by ISE or equal. Include plumbing and electrical connections.

**55. Equipment:** All equipment will be installed in accordance with the manufacturer's recommendations. Care shall be taken to not scratch, dent, or damage the equipment upon receipt and installation. Damage as a result to the lack of care of the Contractor will result in the Contractor being assessed for the damage.

#### **15-4 PLUMBING**

**56. Plumbing:** Install sinks, faucets, tubs, enclosures, shower heads, and faucet sets, toilets, valves, and fixtures in the kitchen and bathrooms, as well as the valves and drain set in the laundry room.

**57. Plumbing – General Requirements:** Unless otherwise specified, all materials shall be copper, PEX, or PVC. All items shall operate without leakage, noise, vibration, or hammering. All penetration of building components shall be neat, sleeved, & fire stopped. No solder containing lead shall be used in any pipe or fixture. Damage to structural members from drilling or notching shall be repaired to the acceptance of the Owner. One vent through roof. No vacuum breakers (study vents).

**58. Supply – PEX:** Install flexible PEX piping with a minimum number of couplings to fixtures. Install mechanical connectors and shut off valves at all fixtures. Size pipe to 1990 CABO minimums per table 2406.5.

**59. Water Heater – 40 Gal. Electric:** Install a 40-gallon, glass-lined, insulated to R-7, double-element, 0.92 EF electric water heater with 10-year warranty. Include pressure and temperature relief valve, discharge tube to outside of structure, shut-off valve and electric supply.

**60. Dripless Center Washer Hookup:** Install PVC stand pipe, hot and cold hose bibbs, and 20 amp outlet on a separate circuit to service a washing machine.

**61. Sink & Disposal – Complete with Water-Saving Faucet:** Install a 22 gauge 33"x22"x7" double bowl, stainless steel, self-rimming kitchen sink including a steel, metal body faucet, rated at 2.0 GPM or less, with a 15-year drip-free warranty, full port ball type shut-off valves & escutcheon plates on all supply and drain lines. Include a ¾ hp, continuous feed garbage disposal with electric supply, wall mounted switch and a 7-year warranty. In some cases, Owner may have the opportunity to provide a sink and disposal; in those instances, a Bid Price reduction will be negotiated and agreed upon by Contractor and Owner.

**62. Bathtub/Shower:** Install according to plans either a 5' fiberglass tub-and-shower unit or an ADA Roll-in shower. Exterior wall behind the unit should be properly insulated as specified in the insulation and have house wrap of Tyvek or similar Greater Plastic Sheeting entirely between the unit and the wall sealed to the studs, top, & bottom plates

with caulk. The tub-and-shower unit shall be equal to Model G-60x32 TSHS or approved equivalent.

**63. Vent Fan/Light Fixture – ENERGY STAR:** Install an ENERGY STAR approved ceiling mounted vent fan/light fixture capable of min. 50 CFM operating at 3 Sones or less after installation, with an integral damper, and vented to the rear gable end. All duct seams shall be sealed with duct mastic. Insulate the ductwork with R-6 minimum duct insulation. Fan/fixtures will be installed in both bathrooms.

**64. Dryer Vent:** Install dryer vent per code.

**65. Showerheads – 1.5 GPM:** In each bathroom install a 1.5 GPM Showerhead in chrome such as the Niagara Conservation Earth Massage. Include arm where required. In some cases, Owner may have the opportunity to provide a sink and disposal; in those instances, a Bid Price reduction will be negotiated and agreed upon by Contractor and Owner.

**66. Commodes & Vanities:** Install a close coupled white commode with a flush volume of 1.28 GPM or less in each bathroom. Commode should have bowl equivalent to Briggs 4868-130, tank equivalent to Briggs 4450-130 and seat equivalent to Briggs ML1525 Pro000 or approved equivalent. Install a vanity with sink and a metal bodied single lever faucet rated at 2.0 GPM or less in each bath. The hall bath is to have a 32” high by 24” wide vanity and the master bath a 32” high by 40” wide vanity. Vanities to be approved by Owner.

**67. Drainage:** All water supplies shall have separate shut-off valves for the hot and cold water supply. Sinks, toilets, and tubs shall be mounted square and plumb insuring a please appearance and a positive drainage toward the drain. Toilets and tubs or showers will be properly seated to ensure drainage and secure foundation to eliminate rocking, voids, or future damage.

## **15-6 HVAC**

**68. HVAC – General Requirements:** Equipment shall operate safely without leakage, noise, or vibration. All penetration of building components shall be neat, sleeved, and fire stopped and shall not compromise structural integrity. Contractor shall submit a diagram showing equipment selection and proposed layout of distribution system within ten (10) days of bid award.

**69. HVAC System:** After completed the Manual J (on “tight” setting & indoor temp. at 75 degrees), install minimum 15 SEER, 8.2 HSPF air source heat pump and condensing unit that is Energy Star qualified. Ductwork should be rigid with R-6 insulation, and all joints, boots, and air handler will be sealed with mastic/mastic tap (UL listed). Provide a

programmable thermostat with adaptive recovery. Provide copy of all calculations to Owner. NO FLEX DUCT ALLOWED. Prior to installing ceiling grills, seal gap between boots and sheetrock.

## **16-1 ELECTRIC**

- 70. Electric Service – 150 amp:** Install a 150-amp, single phase, 30 space CBPC electric service. Include a main disconnect, meter socket, weather head, service cable, and ground rod and cable. Seal exterior service penetration.
- 71. LED Bulbs – Entire Interior & Exterior:** Install 9-Watt or less, 60-Watt equivalent LED bulbs in all interior and exterior light fixtures of the appropriate style for the fixture.
- 72. ENERGY STAR Ceiling Fan Light Fixture:** Install ENERGY STAR-approved white ceiling fan/light fixtures in master bedroom and living room. Provide proper support for fan installation and switching in all bedrooms.
- 73. Doorbell System:** Install a doorbell system containing a low voltage transformer, power connection, buzzer, and front door button.
- 74. Flood Light -Double Bulb:** Install a building mounted, double lamp, dusk-to-dawn LED flood light at each gable end.
- 75. Entrance Light:** Install an exterior, waterproof, wall-mounted, single bulb fixture outside the front and back exterior doors. Use LED bulb.
- 76. Smoke/Carbon monoxide Alarm:** Install a combination smoke/carbon monoxide alarm in kitchen area and in the hallway close to the bedrooms and the mechanical closet.