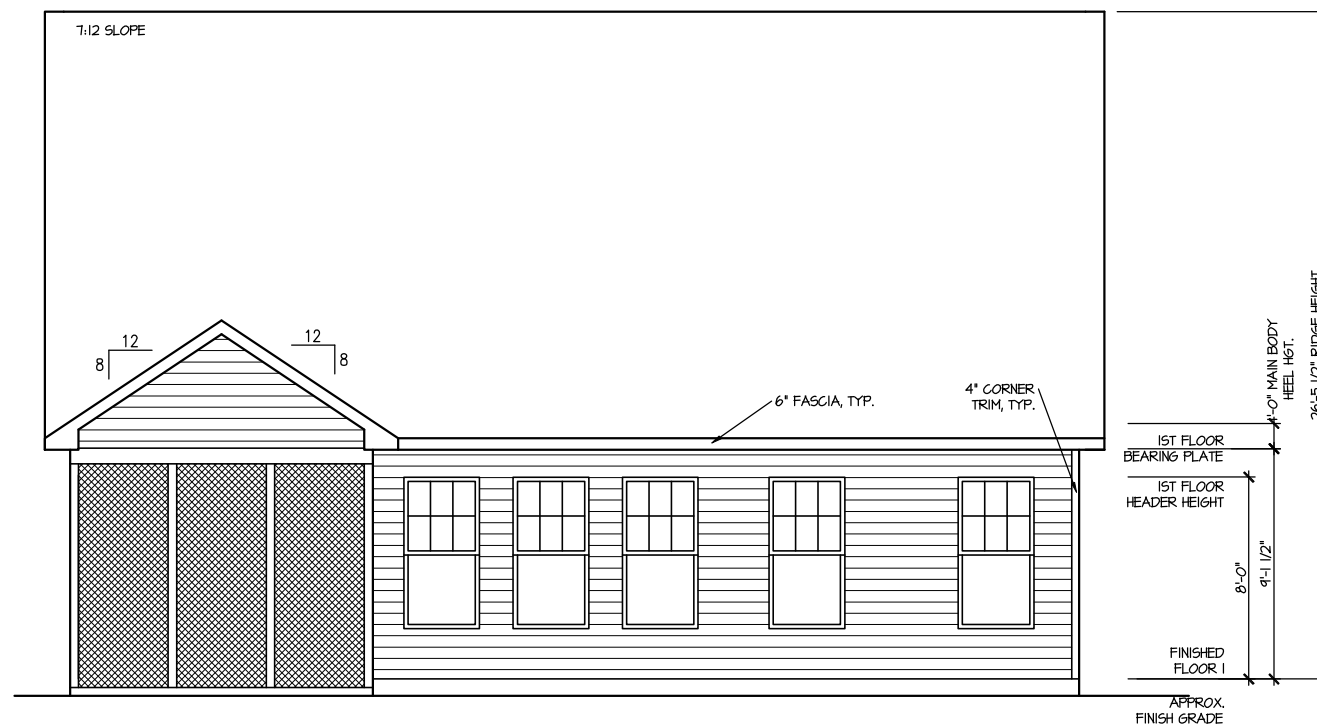


**FRONT ELEVATION 6**

SCALE: 1/8" = 1'-0"



**REAR ELEVATION 6**

SCALE: 1/8" = 1'-0"

UPDATED DATE  
4-20-2022

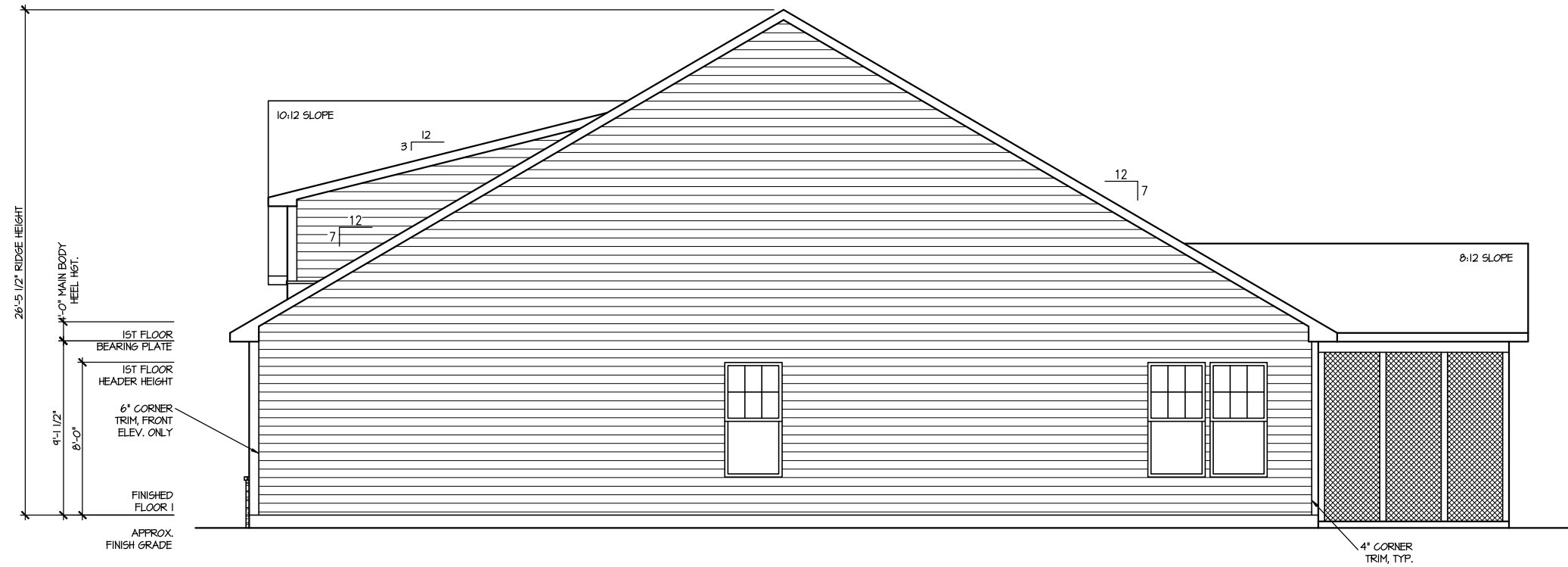
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REVISION DATE  
4-RALE 2-24-2022

DRAWN BY:  
ITS  
DATE:  
12/19/2023  
PLAN NO.  
1776



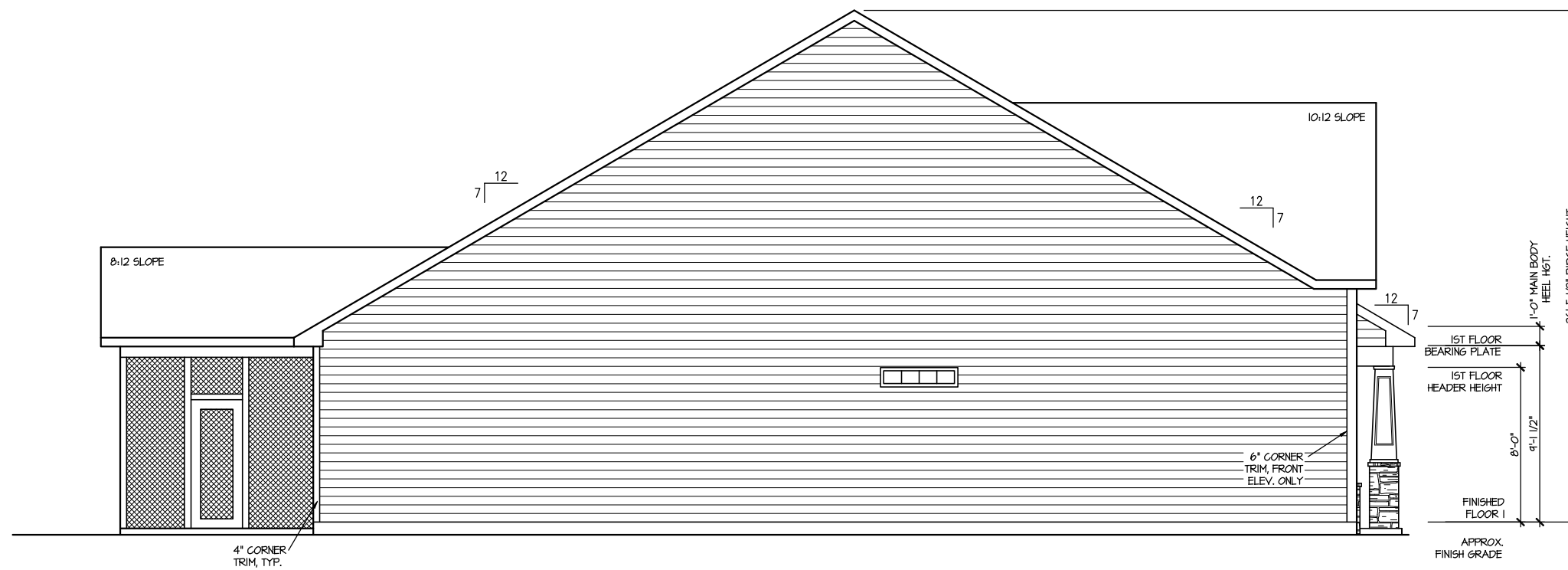
HOUSE NAME:  
**COOPER 3**  
DRAWING TITLE  
FRONT & REAR ELEVATIONS

SHEET No.  
**A.I.**



**RIGHT ELEVATION 6**

SCALE: 1/8" = 1'-0"



**LEFT ELEVATION 6**

SCALE: 1/8" = 1'-0"

UPDATED DATE  
4-20-2022

MASTER PLAN INFORMATION  
REVISION DATE 2-24-2022  
4-RALE

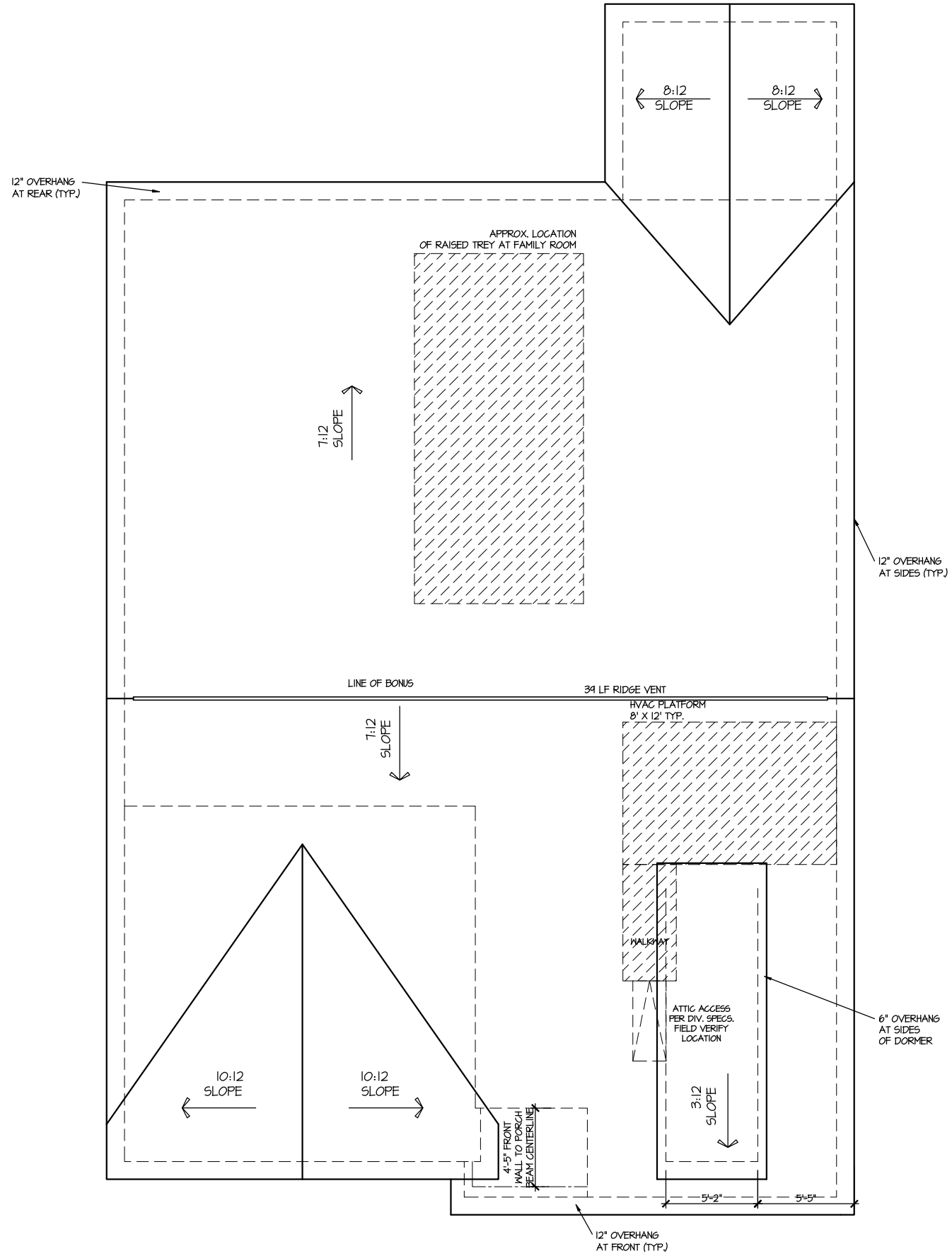
DRAWN BY: ITS  
DATE: 12/19/2023  
PLAN NO. 1776



HOUSE NAME: COOPER 3  
DRAWING TITLE: RIGHT & LEFT ELEVATIONS

SHEET No. A1.2

**ROOF VENTILATION CALCULATIONS:**  
 ROOF AREA = 2316 SQ. FT.  
 OVERALL REQUIRED VENTILATION:  
 1 TO 150 = 15.44 SQ. FT.  
 1 TO 300 = 7.72 SQ. FT.  
 50-80% IN TOP THIRD = 3.66 - 6.18 SQ. FT. (1 TO 300)  
 NET FREE AREA OF VENTED SOFFIT = 5.7 SQ. IN. / LINEAR FT.  
 NET FREE AREA OF RIDGE VENT = 18 SQ. IN. / LINEAR FT.  
 LOWER VENTING (BOTTOM 2/3 RDS):  
 14 LINEAR FEET OF SOFFIT X 5.7 SQ. IN. = 2.48 SQ. FT.  
 UPPER VENTING (TOP 1/3 RDS):  
 34 LINEAR FEET OF RIDGE X 18 SQ. IN. = 4.88 SQ. FT.  
 4.88 SQ. FT. BETWEEN 50% - 80%  
 (1 TO 300 ALLOWED)  
 TOTAL ROOF VENTILATION: 7.36 SQ. FT. > 7.72 SQ. FT. (REQ'D)



**ROOF PLAN ELEV. 6**  
 SCALE: 1/8" = 1'-0"

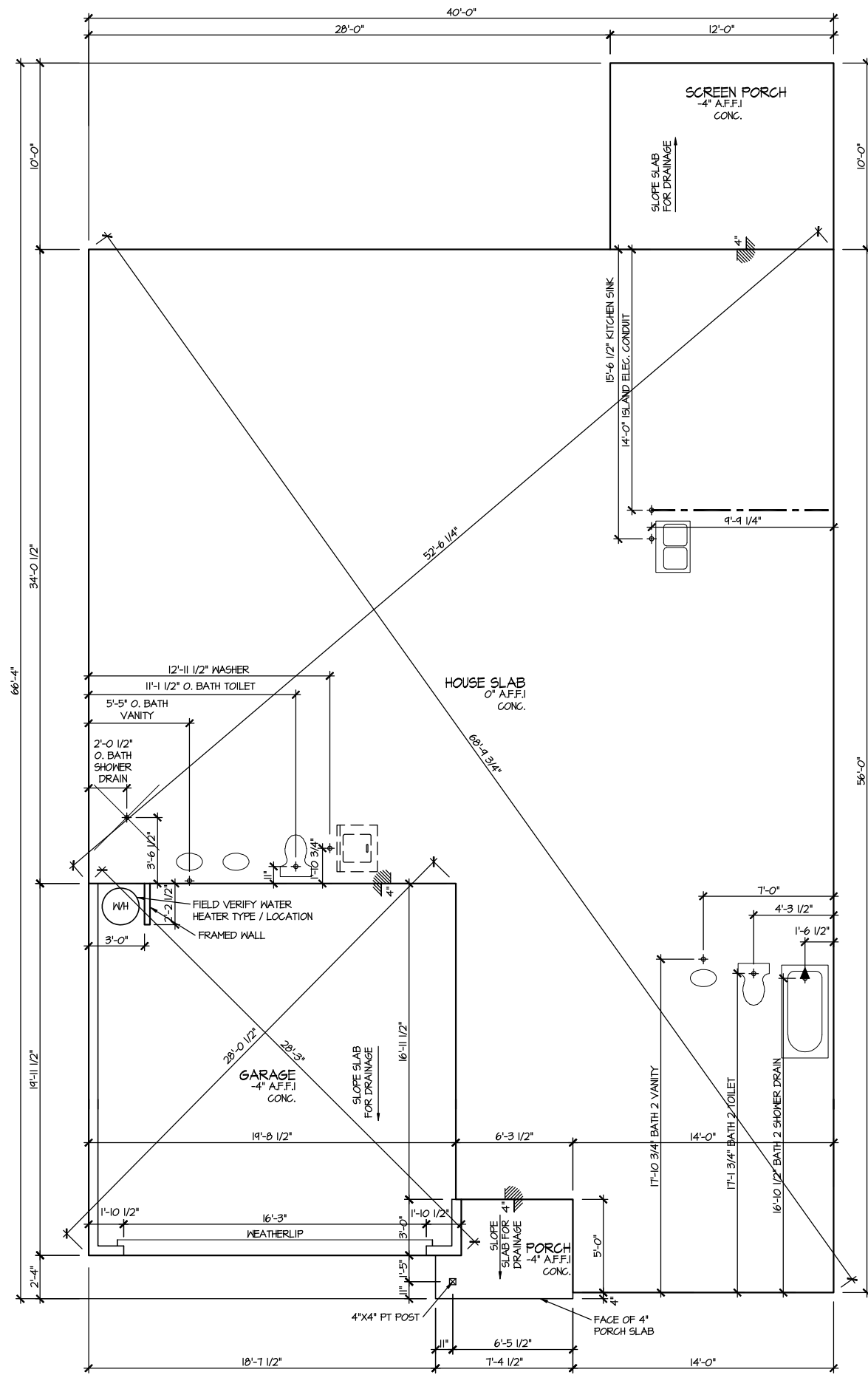
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|-------------------------|-----------|--------------|
| REVISION                | DATE      | 4-20-2022    |
| 4-RALE                  | 2-24-2022 |              |

DRAWN BY: ITS  
 DATE: 12/19/2023  
 PLAN NO. 1776



HOUSE NAME: COOPER 3  
 DRAWING TITLE: ROOF PLAN

SHEET No. A13



ELEVATION 6  
SLAB PLAN  
SCALE: 1/8" = 1'-0"

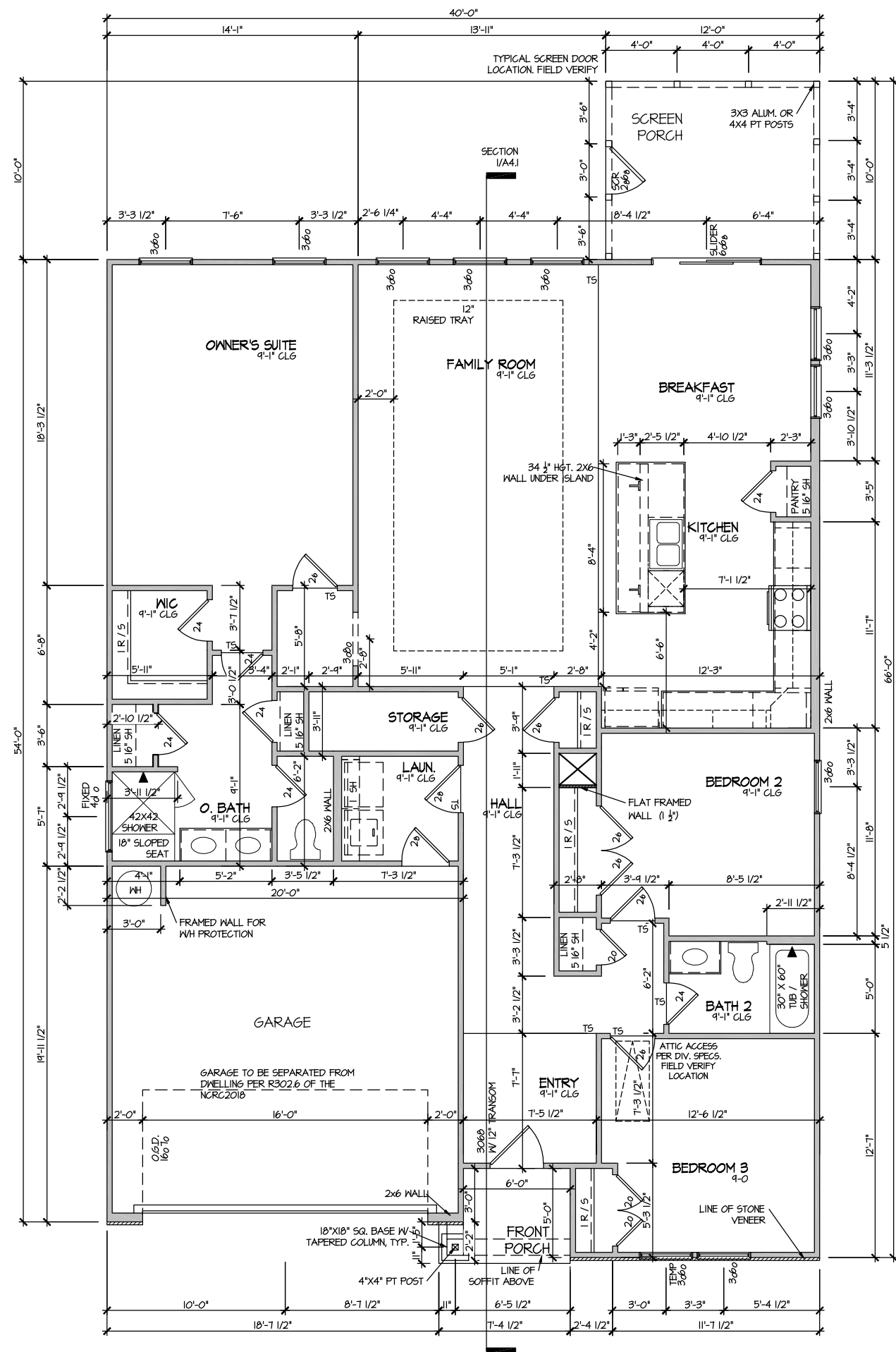
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|-------------------------|-----------|
| REVISION                | DATE      |
| 4-RALE                  | 2-24-2022 |
| UPDATED DATE            | 4-20-2022 |

DRAWN BY: ITS  
DATE: 12/19/2023  
PLAN NO. 1776



HOUSE NAME: COOPER 3  
DRAWING TITLE: SLAB PLAN

SHEET No. A2.1



ELEVATION 6  
 FIRST FLOOR PLAN  
 SCALE: 1/8" = 1'-0"

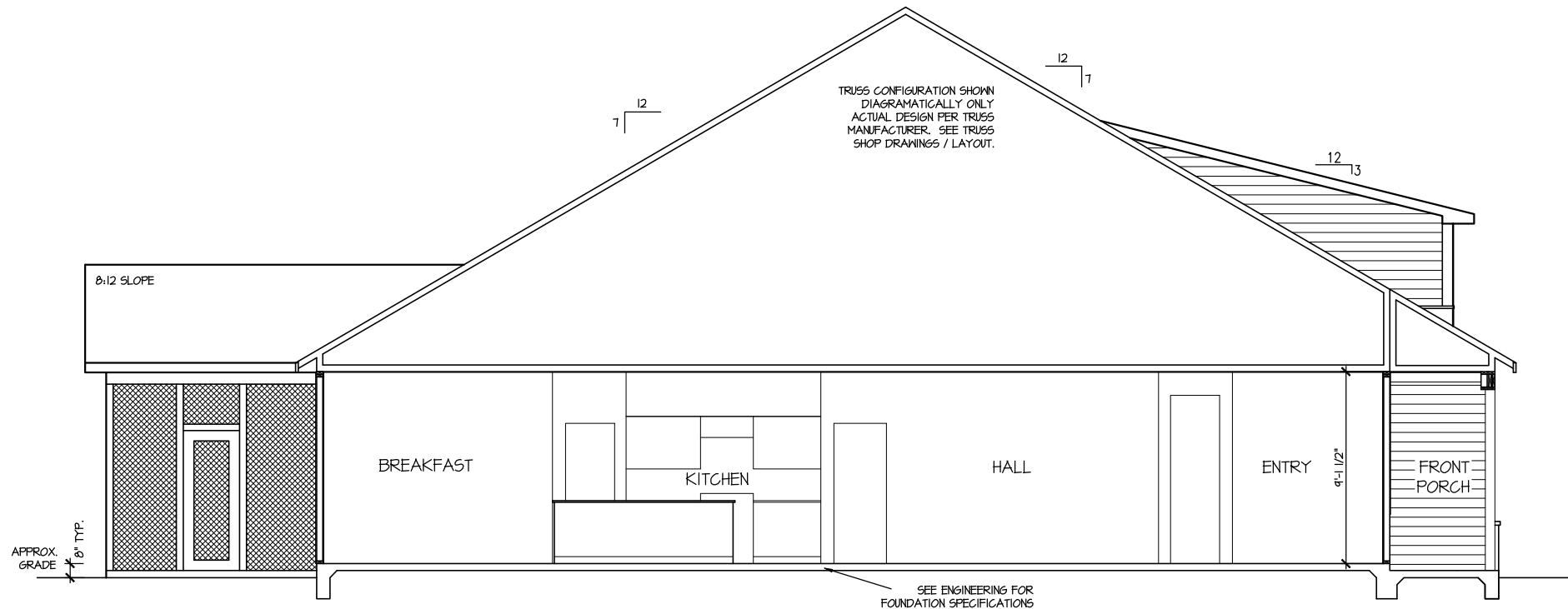
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|-------------------------|-----------|
| REVISION                | DATE      |
| 4-RALE                  | 2-24-2022 |
| UPDATED DATE            | 4-20-2022 |

|           |            |
|-----------|------------|
| DRAWN BY: | ITS        |
| DATE:     | 12/19/2023 |
| PLAN NO.  | 1776       |



|               |                  |
|---------------|------------------|
| HOUSE NAME:   | COOPER 3         |
| DRAWING TITLE | FIRST FLOOR PLAN |

|           |      |
|-----------|------|
| SHEET No. | A3.1 |
|-----------|------|



SECTION I

SCALE: 1/8" = 1'-0"

UPDATED DATE  
4-20-2022

MASTER PLAN INFORMATION  
REVISION DATE  
4-RALE 2-24-2022

DRAWN BY:  
ITS  
DATE: 12/19/2023  
PLAN NO.  
1776

**DRB**  
**HOMES**

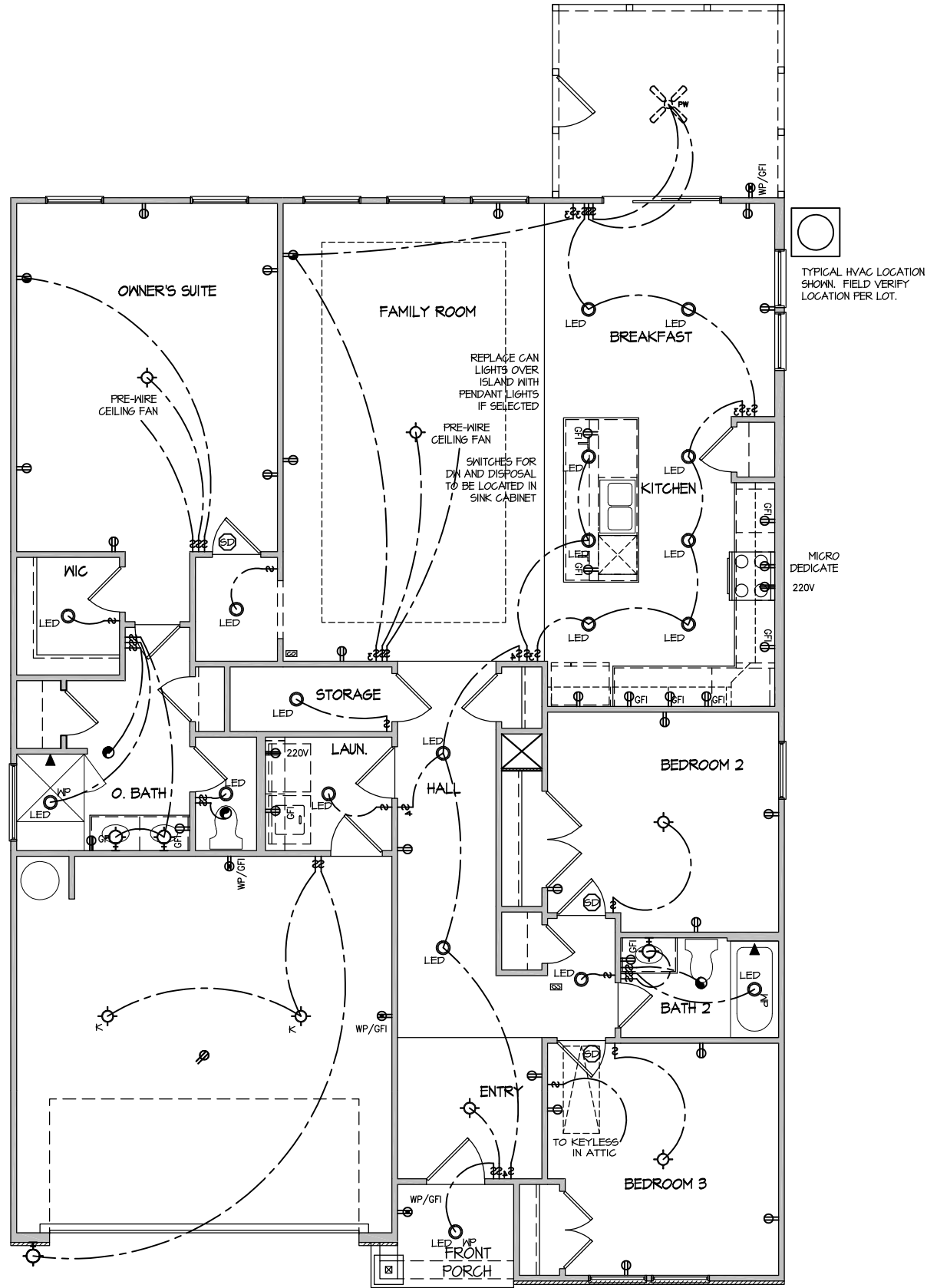
HOUSE NAME:  
**COOPER 3**  
DRAWING TITLE  
BUILDING SECTION

SHEET No.  
**A4.1**

**ELECTRICAL LEGEND**

- ⊕ SINGLE POLE SWITCH
- ⊕<sub>3</sub> THREE WAY SWITCH
- ⊕<sub>4</sub> FOUR WAY SWITCH
- ⊕ DUPLEX AFCI RECEPTACLE
- ⊕ DUPLEX AFCI RECEPTACLE - BOTTOM HALF SWITCHED
- ⊕ DUPLEX AFCI RECEPTACLE - FLOOR MOUNTED
- 220V ⊕ RECEPTACLE - 220V
- GFI ⊕ DUPLEX AFCI RECEPTACLE - GFI
- WP/GFI ⊕ DUPLEX AFCI RECEPTACLE - WATERPROOF GFI
- ⊕ SMOKE DETECTOR - WIRED IN SERIES
- ⊕ EXHAUST FAN MOTOR
- ⊕ CO DETECTOR
- ⊕ DOOR CHIME
- ⊕ LIGHT FIXTURE - WALL MOUNTED
- ⊕ LIGHT FIXTURE - CEILING MOUNTED
- ⊕ LIGHT FIXTURE - RECESSED CAN
- LED ⊕ LIGHT FIXTURE - LED SURFACE MOUNTED
- ⊕ FULLCHAIN LAMPHOLDER
- ⊕ KEYLESS LAMPHOLDER

NOTE: ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE ADOPTED VERSION OF THE NATIONAL ELECTRICAL CODE, THE LOCAL POWER COMPANY AND TO ALL APPLICABLE LOCAL REGULATIONS.



**ELECTRICAL PLAN  
FIRST FLOOR - ELEV. 6**

SCALE: 1/8" = 1'-0"

| MASTER PLAN INFORMATION |           |
|-------------------------|-----------|
| REVISION DATE           | 2-24-2022 |
| 4-RALE                  |           |
| UPDATED DATE            | 4-20-2022 |

|           |            |
|-----------|------------|
| DRAWN BY: | ITS        |
| DATE:     | 12/19/2023 |
| PLAN NO.  | 1776       |

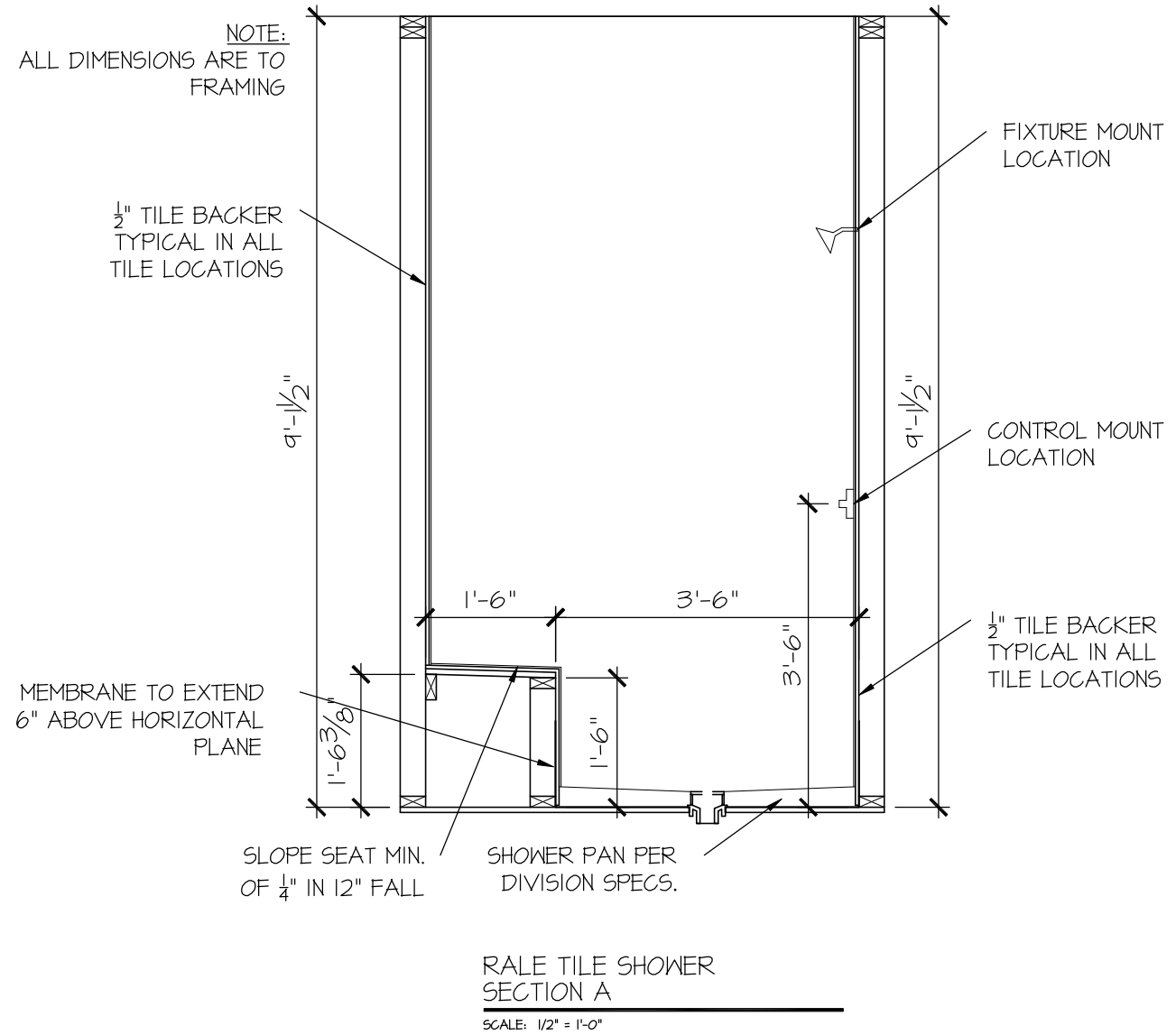
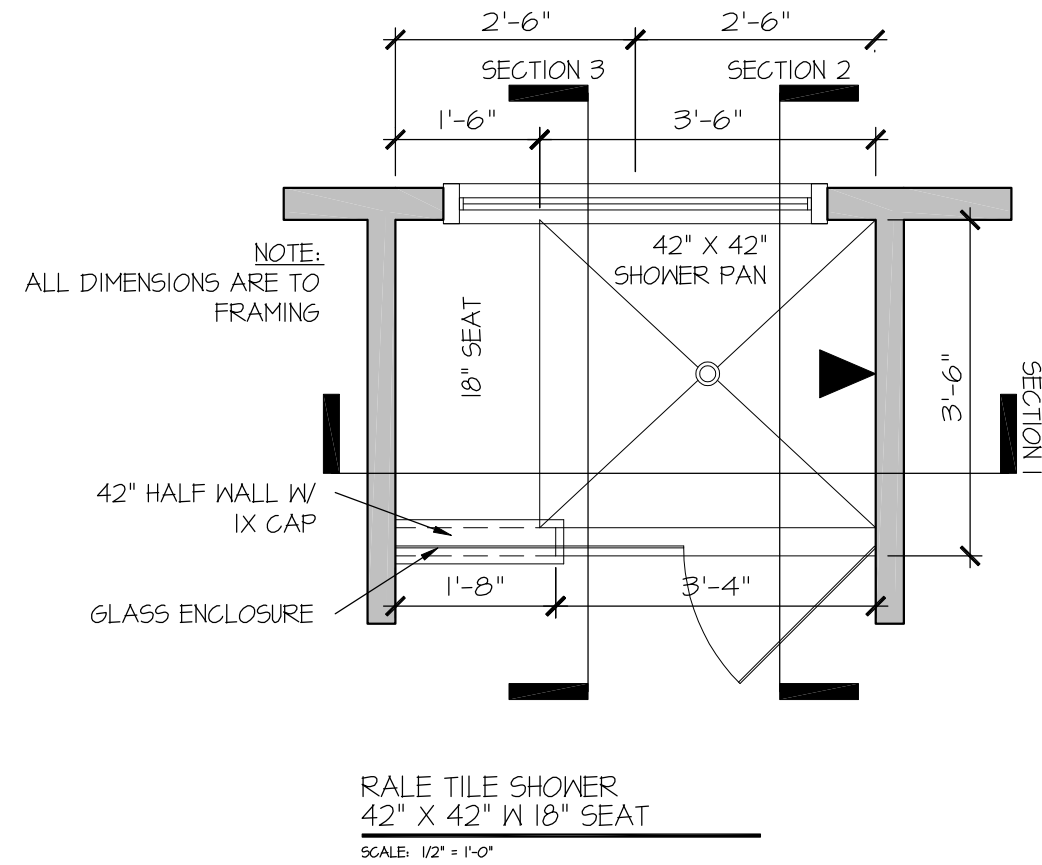


|               |                        |
|---------------|------------------------|
| HOUSE NAME:   | COOPER 3               |
| DRAWING TITLE | FIRST FLOOR ELECTRICAL |

|           |      |
|-----------|------|
| SHEET No. | EI.1 |
|-----------|------|

FILE: Lot 00.0081.dwg DATE: 12/19/2023 10:43 AM



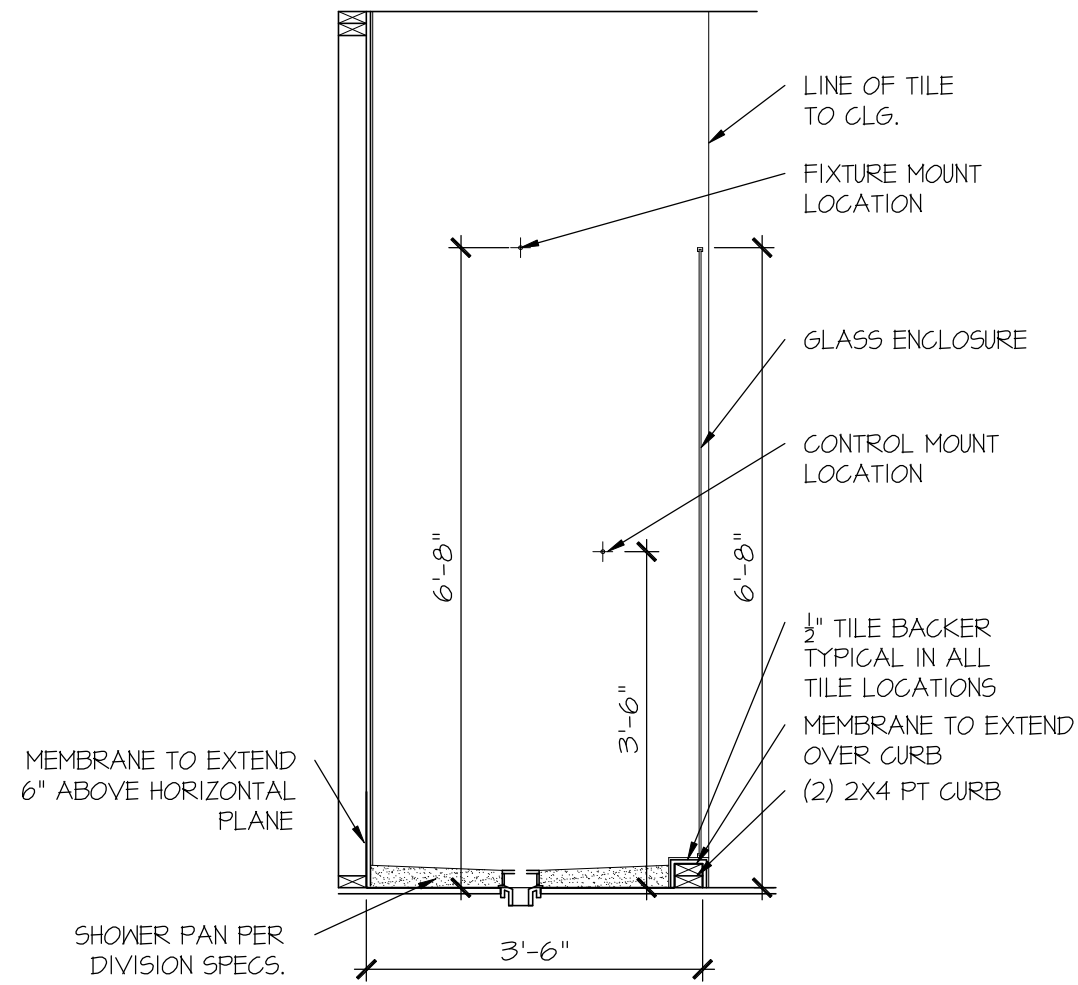


DRAWN BY:  
L. BEAVERS  
DATE: 9/1/22  
PLAN NO.  
11 X 17 SCALE  
24 X 36 SCALE

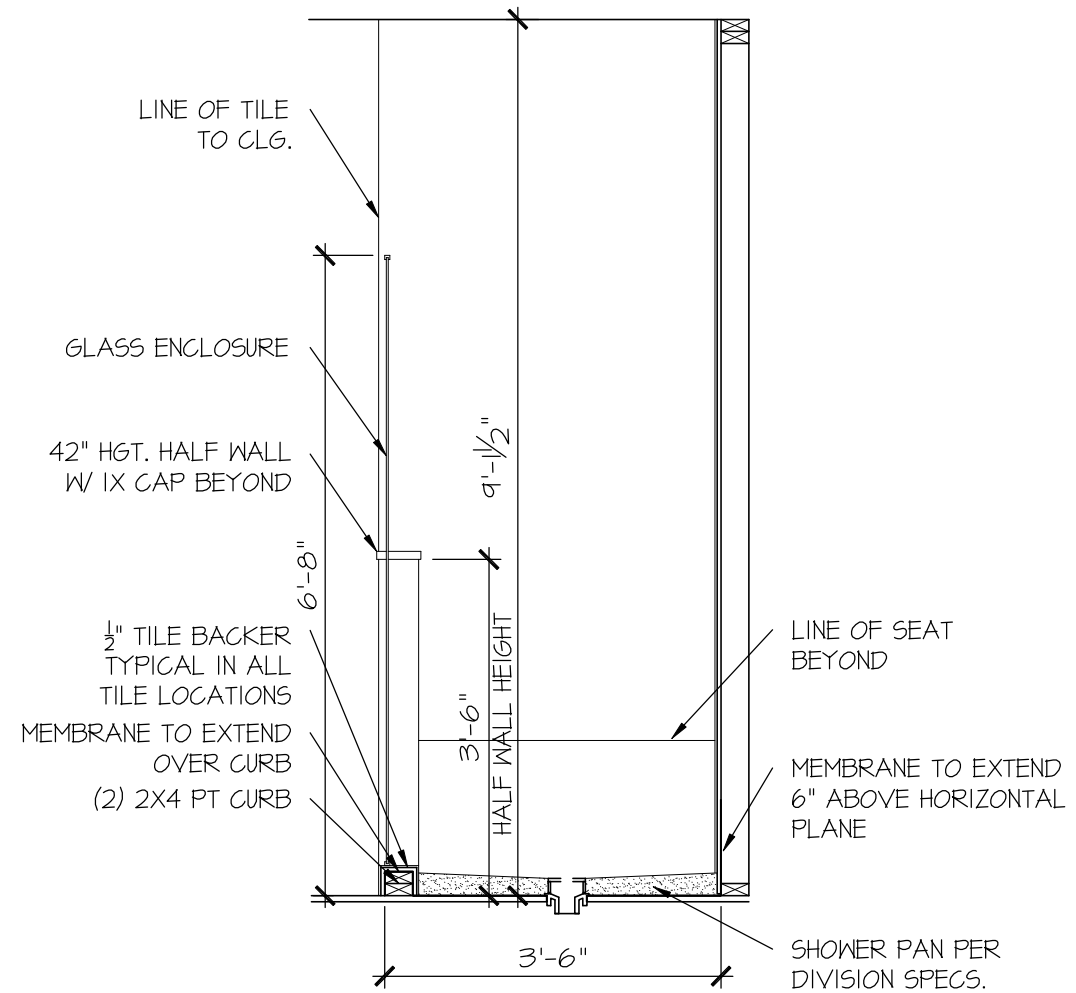


HOUSE NAME:  
DRAWING TITLE  
RALE TILE SHOWER DETAIL

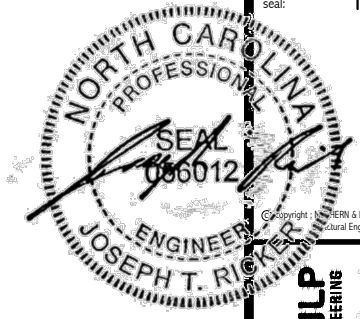
SHEET No.  
01.12



RALE TILE SHOWER  
SECTION B  
SCALE: 1/2" = 1'-0"



RALE TILE SHOWER  
SECTION C  
SCALE: 1/2" = 1'-0"



MULHERN+KULP  
RESIDENTIAL STRUCTURAL ENGINEERING  
380 Boushale Ave, Building 4 - Asheville, PA 18003  
P: 718-998-0001 | m+k@mulhernkulp.com  
NC LICENSE #C-3825

M&K project number:  
126-22076  
project mgr: JTR  
drawn by: LAN  
issue date: 01-11-24

REVISIONS:  
date: initial:



STRUCTURAL NOTES  
FARM AT NEILS CREEK  
LOT 81 - COOPER 6  
RALEIGH, NC

sheet:  
SO.0

### ADDITIONAL NOTES FOR TRUSS & I-JOIST MANUFACTURER

ROOF TRUSS, FLOOR TRUSS AND ENGINEERED JOISTS SHALL BE DESIGNED TO MEET THE DIFFERENTIAL DEFLECTION CRITERIA BELOW, UNLESS NOTED OTHERWISE ON PLAN.  
TRUSSES/JOISTS SHALL BE DESIGNED SO THAT DIFFERENTIAL DEFLECTION BETWEEN ADJACENT PARALLEL TRUSSES/JOISTS OR GIRDER TRUSSES/FLUSH BEAMS DO NOT EXCEED THE FOLLOWING:  
A. ROOF TRUSSES:  
1/4" DEAD LOAD  
B. FLOOR TRUSSES, ATTIC TRUSSES, & I-JOISTS:  
1/8" DEAD LOAD  
C. FLOOR TRUSSES & ATTIC TRUSSES ADJACENT TO FLOOR FRAMING BY OTHERS:  
LIMIT ABSOLUTE TRUSS DEFLECTION TO 3/16" DEAD LOAD. (NOT DIFFERENTIAL DEFLECTION)

### LATERAL BRACING & SHEAR WALL SHEATHING SPECIFICATIONS

THIS MODEL HAS BEEN DESIGNED TO RESIST LATERAL FORCES RESULTING FROM:  
**120 MPH WIND IN 2018 NC5BC:RC**  
(120 MPH WIND SPEED IN ASCE 7-10 WIND MAP, PER IRC R301.2.1.1) EXP. B, RISK CAT. 2 & SEISMIC CAT. A/B.  
THE DESIGN WAS COMPLETED PER 2015 IBC (SECTION 1609) & ASCE 7-10, AS PERMITTED BY R301.1.3 OF THE 2018 NC5BC:RC, OR THE SIMPLIFIED PRESCRIPTIVE PROCEDURE IN ACCORDANCE WITH THE 2015 IRC IF THE PARAMETERS OF SECTION R602.12 COMPLY. ACCORDINGLY, THIS MODEL, AS DOCUMENTED AND DETAILED HEREWITHIN, IS ADEQUATE TO RESIST THE CODE REQUIRED LATERAL FORCES.  
DESIGN WIND UPLIFT LOADS HAVE BEEN CALCULATED UTILIZING ASCE 7-10 (ACCEPTED ENGINEERING PRACTICE) AS ALLOWED PER 2018 NC5BC:RC SECTION R802.11.1. THIS MODEL HAS BEEN DETAILED WHERE REQUIRED & ENGINEERED TO RESIST THE WIND UPLIFT LOAD PER SECTIONS R602.3.5 & R802.11.

DESIGN WIND UPLIFT LOADS HAVE BEEN CALCULATED UTILIZING ASCE 7-10 (ACCEPTED ENGINEERING PRACTICE) AS ALLOWED PER 2018 NC5BC:RC SECTION R802.11.1. THIS MODEL HAS BEEN DETAILED WHERE REQUIRED & ENGINEERED TO RESIST THE WIND UPLIFT LOAD PER SECTIONS R602.3.5 & R802.11.

### EXT. WALL SHEATHING SPECIFICATION

• 7/16" OSB OR 15/32" PLYWOOD:  
FASTEN SHEATHING w/ 2 3/8"x0.131" NAILS @ 6" O.C. AT EDGES & @ 12" O.C. IN THE PANEL FIELD. TYP. UNO.  
• HORIZONTAL BLOCKING OF EXT. WALL/SHEAR WALL PANEL EDGES IS NOT REQUIRED BY THIS DESIGN EXCEPT FOR THOSE AREAS SPECIFICALLY NOTED.  
• ALL EXT. WALLS SHALL BE CONTINUOUSLY SHEATHED AND ARE CONSIDERED SHEAR WALLS.  
• ALT. STAPLE CONNECTION SPEC: 1 1/2" 16 GA STAPLES (1/8" CROWN) @ 3" O.C. AT EDGES & @ 6" O.C. IN FIELD.

### BLOCKED PANEL EDGES

• AT DESIGNATED AREAS - FASTEN SHEATHING w/ 2 3/8" x 0.131" NAILS @ 6" O.C. AT ALL PANEL EDGES AND 12" O.C. IN THE PANEL FIELD OR 1 3/4" 16 GA STAPLES (1/8" CROWN) @ 3" O.C. AT EDGES & @ 6" O.C. IN FIELD. ALL SHEATHING PANELS SHALL BE ORIENTED AND INSTALLED FULL HEIGHT OF SHEAR WALL OR 2x HORIZONTAL BLOCKING SHALL BE PROVIDED TO SUPPORT ALL UNSUPPORTED PANEL EDGES & EDGE FASTENING.

### 3" O.C. EDGE NAILING

• AT DESIGNATED AREAS - FASTEN PANEL EDGES OF WOOD STRUCTURAL WALL SHEATHING TO FRAMING w/ 8d NAILS @ 3" O.C. NO STAPLE ALTERNATIVE AVAILABLE AT THIS SPEC. ALL SHEATHING PANELS SHALL BE ORIENTED AND INSTALLED FULL HEIGHT OF SHEAR WALL OR 2x HORIZONTAL BLOCKING SHALL BE PROVIDED TO SUPPORT UNSUPPORTED PANEL EDGES AND 3" O.C. EDGE FASTENING.

### NOTES

• SEE CONNECTION SPECIFICATIONS CHART FOR STANDARD SHEAR TRANSFER DETAILING. IF ADDITIONAL CAPACITY IS REQUIRED BY DESIGN, IT WILL BE SPECIFICALLY NOTED ON PLAN.  
• DESIGN ASSUMES 16" O.C. MAX. STUD SPACING, UNO.  
• ALL STRUCTURAL PANELS ARE TO BE DIRECTLY APPLIED TO STUD FRAMING.  
• PRE-MANUFACTURED PANELIZED WALLS:  
FASTEN TOGETHER END STUDS OF WALL PANELS SHEATHED w/ OSB OR PLYWOOD w/ 3" x 0.120" NAILS @ 4" O.C. (THRU ONE SIDE ONLY)  
--- INDICATES EXTENT OF INT. OSB SHEARNWALL OR 3" O.C. OSB SHEARNWALL.  
▶ INDICATES HOLD-DOWN BELOW

### FLOOR FRAMING

• I-JOISTS/TRUSSES SHALL BE DESIGNED BY MANUF. TO MEET OR EXCEED L/480 LIVE LOAD DEFLECTION CRITERIA. (EXCLUDES MARBLE FLOORS - CONTACT MKF FOR MARBLE FLOOR DESIGNS)  
• AT I-JOIST FLOORS, PROVIDE 1 1/8" MIN. OSB RIM BOARD.  
• METAL HANGERS SHALL BE SPECIFIED BY MANUFACTURER, UNO.  
• FLOOR SHEATHING SHALL BE 23/32" A.P.A. RATED 'STURD-I-FLOOR' 24" O.C. EXPOSURE 1 (OR APPROVED EQUAL) WITH TONGUE AND GROOVE EDGES. FASTEN TO FRAMING MEMBERS w/ GLUE AND - 2 1/2" x 0.131" NAILS @ 6" O.C. @ PANEL EDGES & @ 12" O.C. FIELD.  
- 2 3/8" x 0.120" NAILS @ 4" O.C. @ PANEL EDGES & @ 8" O.C. FIELD.  
- 2 3/8" x 0.113" NAILS @ 3" O.C. @ PANEL EDGES & @ 6" O.C. IN FIELD.  
- #6 x 2" MIN. SCREWS @ 6" O.C. @ PANEL EDGES & @ 12" O.C. FIELD.

### ROOF FRAMING

• BAY WINDOWS & SHED ROOFS (UP TO 6' SPAN) CAN BE 2x4 OR 2x6 RAFTERS & CEILING JOISTS @ 16/24" O.C.  
• FASTEN EACH ROOF TRUSS TO TOP PLATE w/ SIMPSON H2.5T CLIP (OR APPROVED EQUAL) @ ALL BEARING POINTS. PROVIDE (2) H2.5T CLIPS AT 2-PLY GIRDER TRUSSES, (3) H2.5T CLIPS AT 3-PLY GIRDER TRUSSES & ROOF BEAMS - AT ALL BEARING POINTS.  
• METAL HANGERS SHALL BE SPECIFIED BY THE MANUFACTURER, UNO.  
• ERECT AND INSTALL ROOF TRUSSES PER MTCA & TP1'S BC91 1-08 \*GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES.\*  
• SUPPORT PORCH & SHORT SPAN ROOF TRUSSES (MAX 7' SPAN) w/ 2x4 LEDGER FASTENED TO:  
- RIM BOARD w/ (2) 3"x0.131" NAILS @ 16" O.C. MAX. (I-JOISTS)  
- TRUSS VERTICALS w/ (3) 3"x0.131" NAILS @ 14.2" O.C. MAX. (FLOOR TRUSSES)  
• ROOF SHEATHING SHALL BE 7/16" A.P.A. RATED SHEATHING 24/16 EXPOSURE 1 (OR APPROVED EQUAL). FASTEN TO FRAMING MEMBERS  
- w/ 2 1/2" x 0.131" NAILS @ 6" O.C. @ PANEL EDGES & @ 12" O.C. FIELD.  
- w/ 2 3/8" x 0.120" NAILS @ 4" O.C. @ PANEL EDGES & @ 8" O.C. FIELD.  
- w/ 2 3/8" x 0.113" NAILS @ 3" O.C. @ PANEL EDGES & @ 6" O.C. FIELD.

### HOLD-DOWN SCHEDULE

| SYMBOL | SPECIFICATION  |
|--------|--|
| ▶ HD-1 | SIMPSON HTT4 HOLD-DOWN *   |
| ▶ HD-2 | SIMPSON MSTC66 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM UNO.) (PRE-BENT MSTC66 ALT. WHEN SPECIFIED) |
| ▶ HD-3 | SIMPSON STHD44/4RJ HOLD-DOWN   |

ALTERNATIVE TO S5T24 ANCHOR BOLT SPECIFICATION:  
• UTILIZE SIMPSON "SET" EPOXY SYSTEM TO FASTEN 3/8" DIA. THREADED ROD INTO CONCRETE FOUNDATION. PROVIDE 12" MIN. EMBEDMENT INTO CONCRETE. INSTALL PER MANUF. RECOMMENDATIONS. DO NOT LOCATE ANCHORS WITHIN 1/4" OF EDGE OF FOUNDATION.

### LEGEND

- ▬ INTERIOR BEARING WALL
- ▬ BEARING WALL ABOVE
- ▬ BEAM / HEADER
- ▬ INDICATES SHEAR WALL & EXTENT
- ▬ EXTENT OF OVERFRAMING
- J.L. METAL HANGER
  - INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR LAMB ABOVE.
- ▶ INDICATES HOLD-DOWN OR STRAP. REFER TO SCHEDULE.

### NON-BEARING HEADER SCHEDULE

| SPAN        | 2x4 NON-BEARING PARTITION WALL | 2x6 NON-BEARING PARTITION WALL |
|-------------|--------------------------------|--------------------------------|
| UP TO 3'-0" | (1)2x4 FLAT                    | (1)2x6 FLAT                    |
| UP TO 6'-0" | (2)2x4                         | (3)2x4                         |
| UP TO 8'-0" | (2)2x6                         | (3)2x6                         |

NOTES:  
• ALL NON-BEARING INTERIOR STUD WALLS SHALL BE CONSTRUCTED WITH 2x 'STUD' GRADE MEMBERS SPACED @ 24" O.C. (MAX.)

### GENERAL STRUCTURAL NOTES

• DESIGN IS BASED ON 2018 NORTH CAROLINA STATE BUILDING CODE, RESIDENTIAL CODE.  
• WOOD FRAME ENGINEERING IS BASED ON NDS, "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" - LATEST EDITION.  
• DESIGN LOADS:  
ROOF DEAD = 7 PSF T.C., 10 PSF B.C.  
LIVE = 16 PSF  
LOAD DURATION FACTOR = 1.25  
FLOOR LIVE = 40 PSF (30 PSF @ SLEEPING AREAS)  
DEAD = 10 PSF (I-JOISTS & SOLID SAMN)  
10 PSF T.C., 5 PSF B.C. (TRUSSES)  
(ADDL. 10 PSF @ TILE)  
LATERAL 120 MPH, EXPOSURE B. SEISMIC A/B.  
SOIL 2,000 PSF ASSUMED ALLOWABLE BEARING PRESSURE (TO BE VERIFIED BY BUILDER)

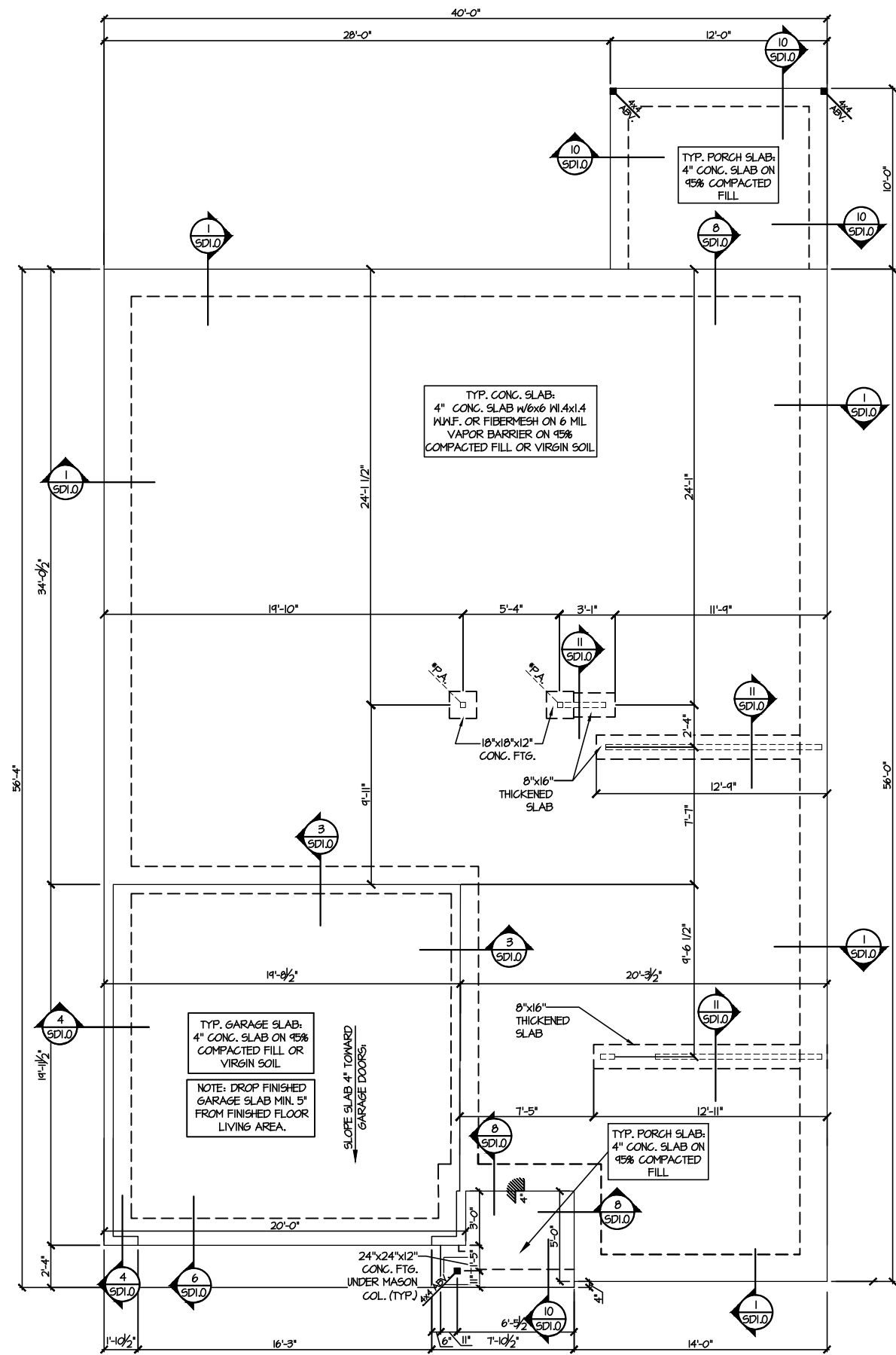
### GENERAL FRAMING

• ALL TYP. NAIL FASTENER REQUIREMENTS ARE NOTED IN STANDARD CONNECTIONS TABLE OR ON PLANS. ALL NAILS SPECIFIED ARE MIN DIAMETER AND LENGTH REQUIRED FOR CONNECTION. ALL HANGER NAILS SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS FOR MAX CHARTED CAPACITY. NOTE: HANGERS USE COMMON NAIL DIAMETERS NOT TYPICAL FRAMING GUN NAILS.  
• REFER TO FASTENING SCHEDULE TABLE R602.3(1) FOR ALL CONNECTIONS, TYP. UNO.  
• EXT. & INT. BRG WALLS SHALL BE 2x4 OR 2x6 (AS SHOWN ON PLANS) @ 16" O.C. SFF OR SYP "STUD" GRADE LUMBER, OR BETTER, UNO.  
• WALLS OVER 12' TALL SHALL BE PER PLAN.  
• ALL HEADERS, BEAMS & OTHER STRUCTURAL MEMBERS SHALL BE SPRUCE-PINE-FIR #2 (SPF) OR SOUTHERN PINE #2 (SP) LUMBER, OR BETTER (KILN-DRIED). ALL HEADERS HAVE BEEN DESIGNED BASED ON CALCULATED LOADS & SIZED ACCORDINGLY. CODE TABLES HAVE NOT BEEN USED.  
• ALL NON-BEARING INTERIOR STUD WALLS SHALL BE CONSTRUCTED WITH 2x 'STUD' GRADE MEMBERS SPACED @ 16" O.C. (MAX, UNO.)  
• HEADERS IN NON-LOAD BEARING WALLS SHALL BE:  
(1)2x4/6 FLAT @ OPENINGS UP TO 4'; (2)2x4/6 FLAT UP TO 8'.  
• ALL FRAMING LUMBER SHALL BE DRIED TO 15% MC (KD-15).  
• ENGINEERED LUMBER BEAMS TO MEET OR EXCEED THE FOLLOWING:  
• 'LSL' - Fb=2325 psi; Fv=310 psi; E=1.55x10<sup>6</sup> psi  
• 'LVL' - Fb=2600 psi; Fv=285 psi; E=2.0x10<sup>6</sup> psi  
• 'PSL' - Fb=2400 psi; Fv=240 psi; E=2.0x10<sup>6</sup> psi  
• MKF SHALL BE FULLY INDEMNIFIED FOR ANY AND ALL ISSUES RESULTING FROM OR RELATED TO ANY BUILDING COMPONENT IF THE OWNER DOES NOT SUBMIT THE COMPONENT SHOP DRAWINGS TO MKF FOR STRUCTURAL REVIEW PRIOR TO FABRICATION, DELIVERY, OR INSTALLATION.  
• FOR 2 & 3 PLY BEAMS OF EQUAL WIDTH, FASTEN PLYS TOGETHER WITH 3 ROWS OF 3"x0.120" NAILS @ 8" O.C. OR 2 ROWS 1/4"x3/8" SIMPSON SDS SCREWS (OR 3/8" TRUSSELOK SCREWS) @ 16" O.C. USE A MINIMUM OF 3 ROWS FOR BEAM DEPTHS OF 14" OR GREATER. APPLY FASTENING AT BOTH FACES FOR 3-PLY CONDITION. LOCATE TOP & BOTTOM NAILS/SCREWS 2" FROM EDGE. SOLID 3 1/2" OR 5 1/4" BEAMS ARE ACCEPTABLE. USE 2 ROWS OF NAILS FOR 2x6 & 2x8 MEMBERS.  
• FOR 4 PLY BEAMS OF EQUAL WIDTH, FASTEN PLYS TOGETHER WITH 3 ROWS OF 1/2"x6" SIMPSON SDS SCREWS (OR 6 3/4" TRUSSELOK SCREWS) @ 16" O.C. USE A MINIMUM OF 4 ROWS FOR BEAM DEPTHS OF 14" OR GREATER. APPLY FASTENING AT BOTH FACES (ONE SIDE ONLY FOR TRUSSELOK SCREWS). LOCATE TOP AND BOTTOM SCREWS 2" FROM EDGE. A SOLID 7" BEAM IS ACCEPTABLE.  
• ALL HEADERS SHALL BE SUPPORTED BY (1)2x JACK STUD & (1)2x KING STUD, MINIMUM.  
- THE NUMBER OF STUDS SPECIFIED AT A SUPPORT INDICATES THE NUMBER OF JACK STUDS REQUIRED, UNO.  
• ALL MULTI-PLY STUDS TO BE FASTENED TOGETHER w/ 3"x0.131" NAILS @ 24" O.C. (MIN.), EACH PLY.  
• PROVIDE SOLID BLOCKING IN FLOOR SYSTEM UNDER ALL POSTS CONTINUOUS TO FND/BEARING. BLOCKING TO MATCH POST ABOVE.  
• FASTEN 2x WOOD PLATES TO TOP FLANGE OF STEEL BEAMS WITH P.A.F.'s (HILTI' X-CF PINS OR EQUAL) @ 16" O.C. STAGGERED, OR 1/2" DIA. BOLTS @ 48" O.C. STAGGERED.  
• ALL EXTERIOR 4x4 WOOD POSTS SHALL HAVE SIMPSON BC62-2/4 CAP & ABW44Z BASE, UNO.

### GENERAL STRUCTURAL NOTES

#### FOUNDATION

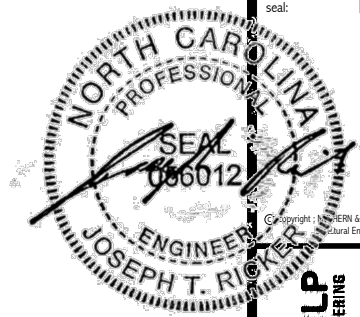
• DESIGN IS BASED ON 2018 NORTH CAROLINA STATE BUILDING CODE, RESIDENTIAL CODE.  
• FOOTING DESIGN - 2,000 PSF ALLOWABLE SOIL BEARING PRESSURE IS ASSUMED. BUILDER/CONTRACTOR MUST VERIFY.  
• FASTEN 2x4/6 SILL PLATES TO FND WITH A MINIMUM OF 2 ANCHORS PER PLATE, 12" MAX. FROM PLATE ENDS - UTILIZING:  
• 1/2" DIA. ANCHOR BOLTS @ 6'-0" O.C., 7" MIN. EMBEDMENT (CONC), 15" MIN. EMBEDMENT (CMU)  
• SIMPSON MASA ANCHOR STRAPS @ 6'-0" O.C. (CONC.)  
• SIMPSON MAB23 ANCHOR STRAPS @ 2'-8" O.C. (CMU)  
(REFER TO DETAILS FOR 10' TALL WALL ANCHOR REQUIREMENTS)  
• ALL LUMBER EXPOSED TO WEATHER OR IN CONTACT w/ CONCRETE OR CMU SHALL BE PRESERVATIVE TREATED SOUTHERN PINE #2.  
• BUILDER TO VERIFY CORROSION-RESISTANCE COMPATIBILITY OF HARDWARE & FASTENERS IN CONTACT w/ PRESERVATIVE-TREATED WOOD. CONTACT LUMBER & HARDWARE SUPPLIERS TO COORD.  
• BASEMENT INTERIOR BEARING WALLS & EXTERIOR WALK-OUT BASEMENT WALLS SHALL BE 2x6 @ 16" O.C. SFF OR SYP, "STUD" GRADE OR BETTER.  
• CONCRETE DESIGN BASED ON ACI 318. CONCRETE SHALL ATTAIN THE FOLLOWING MIN. COMPRESSIVE STRENGTHS IN 28 DAYS, UNO.:  
f'c = 4,000 psi: FND. FOUNDATION WALLS  
2,500 psi: FOOTINGS & INTERIOR SLABS ON GRADE  
3,000 psi: GARAGE & EXTERIOR SLABS ON GRADE  
f'y = 60,000 psi  
• BASEMENT FOUNDATION WALL DESIGN BASED ON:  
• 4' OR 10' HEIGHT (AS NOTED ON PLANS)  
- TALLER WALLS MUST BE ENGINEERED.  
• NOMINAL WIDTH (4 1/2" FOR 10" THICK WALL).  
• BASEMENT WALL DESIGN IS BASED ON 60 PCF BACKFILL SOIL TYPE CLASSIFICATIONS (SC, ML-CL, OR CL).  
• BASEMENT WALLS SHALL BE BRACED, PRIOR TO BACKFILLING, BY ADEQUATE TEMPORARY BRACING OR INSTALL 1st FLOOR DECK.  
• PROVIDE (2) #5 BARS AROUND ALL SIDES OF OPENINGS IN CONCRETE BSMT. FND. WALL WITH 2" CLEAR. REINFORCEMENT SHALL EXTEND 12" PAST CORNER OF OPENING IN ALL DIRECTIONS.  
• FOR OPENINGS UP TO 36", PROVIDE MINIMUM 10" CONCRETE DEPTH OVER OPENING OR (3)2x10 w/ (2)2x6 JACK STUDS, UNO.  
• LARGER OPENINGS SHALL BE PER PLAN.  
• ALL CONCRETE EXPOSED TO THE WEATHER SHALL NOT HAVE LESS THAN 5% OR MORE THAN 7% AIR ENTRAINMENT.  
• ALL FOOTINGS SHALL BEAR AT LEAST 12" BELOW FINISH GRADE.  
• FOOTINGS AND SLABS ON GRADE SHALL BEAR ON VIRGIN SOIL OR 95% COMPACTED FILL.  
• PROVIDE CONTROL JOINTS AT ALL INSIDE CORNERS OF SLAB EDGES, AND OTHER LOCATIONS WHERE SLAB CRACKS ARE LIKELY TO DEVELOP.  
• JOINTS SHALL BE LOCATED @ 10'-0" O.C. (RECOMMENDED) OR 15'-0" O.C. (MAXIMUM)  
• JOINT GRID PATTERN SHALL BE AS CLOSE TO SQUARES AS POSSIBLE (1:1 RATIO), WITH A MAXIMUM OF 1:1.5 RATIO  
• CONTROL JOINTS SHALL NOT BE INSTALLED IN STRUCTURAL SLABS  
• CONCRETE MASONRY UNITS (CMU) SHALL BE ASTM C90 WITH A MIN. COMPRESSIVE STRENGTH OF 1900 psi (F'm=1500 psi). MORTAR SHALL BE ASTM C270, TYPE S. CMU DESIGN PER ACI 530 & 530.1.  
• CMU FOUNDATION WALLS SHALL HAVE 'DUR-O-HALL' HORIZONTAL JOINT REINFORCEMENT (OR EQUAL) - 4 GA. MINIMUM @ 16" O.C.  
• PROVIDE 2x8 x 16" LONG P.T. PLATE ON TOP OF ALL CRAWL SPACE PIERS. ALL PIERS SHALL BE GROUTED SOLID.  
• PROVIDE 2x6 P.T. PLATE ON INTERIOR CRAWL SPACE WALLS, FASTENED PER ANCHORAGE SPECIFICATION NOTED ABOVE.  
• DIMENSIONS BY OTHERS, BUILDER TO VERIFY.  
• BUILDER TO VERIFY THAT MODEL HAS BEEN ADEQUATELY TREATED BY A LICENSED AND BONDED PEST CONTROL COMPANY FOR SUBTERRANEAN TERMITES. METHOD AND TYPE OF TREATMENT TO BE DETERMINED BY PEST CONTROL COMPANY.



**1** MONO SLAB FOUNDATION PLAN  
SCALE: 1/8"=1'-0"

| LEGEND |  |
|--------|--|
|        | INTERIOR BEARING WALL  |
|        | BEARING WALL ABOVE   |
|        | BEAM / HEADER  |
|        | INDICATES SHEAR WALL & EXTENT  |
|        | EXTENT OF OVERFRAMING  |
|        | JL METAL HANGER  |
|        | INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE. |
|        | INDICATES HOLD-DOWN OR STRAP. REFER TO SCHEDULE.                       |

REFER TO SO.0 FOR  
TYPICAL STRUCTURAL NOTES  
& SCHEDULES



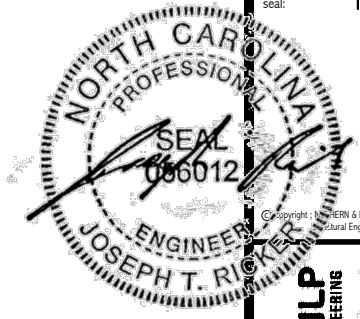
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126-22076  
project mgr: JTR  
drawn by: LAN  
issue date: 01-11-24

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FOUNDATION PLANS  
FARM AT NEILS CREEK  
LOT 81 - COOPER 6  
RALEIGH, NC

sheet:  
**S1.0**



M&K project number: 126-22076  
project mgr: JTR  
drawn by: LAN  
issue date: 01-11-24

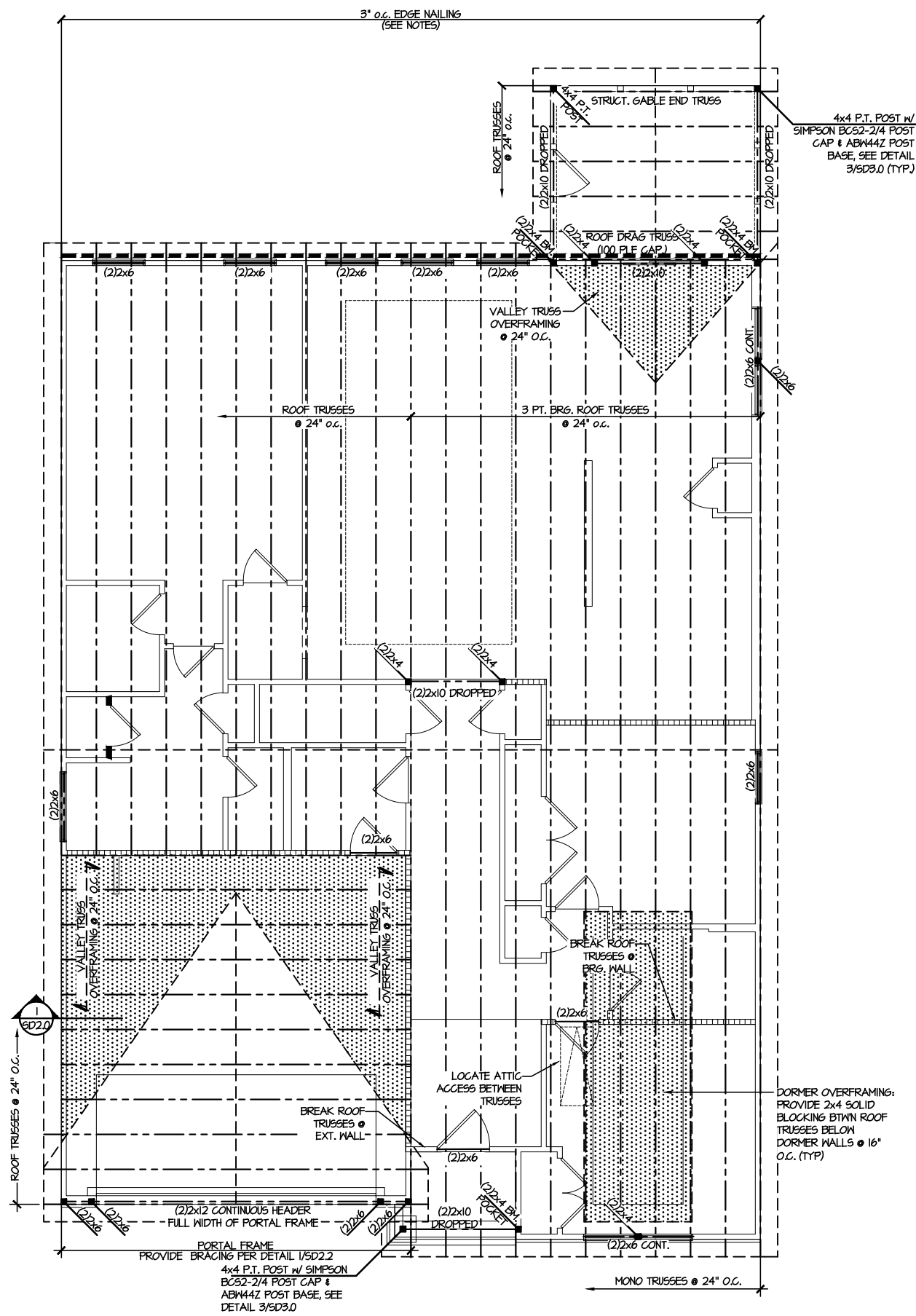
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ROOF FRAMING PLANS  
FARM AT NEIL'S CREEK  
LOT 81 - COOPER 6  
RALEIGH, NC

sheet: **S2.0**



4x4 P.T. POST W/ SIMPSON BC52-2/4 POST CAP & ABW44Z POST BASE, SEE DETAIL 3/SD3.0 (TYP.)

### ENGINEERED BEAM MATERIAL SCHEDULE

| BEAM NUMBER | LVL OPTION          | PSL OPTION       | LSL OPTION          | FLITCH OPTION                                      | STEEL OPTION |
|-------------|---------------------|------------------|---------------------|--|--------------|
| 001         | (2)3/4"x11 1/8" - F | 3/2"x11 1/8" - F | (3)3/4"x11 1/8" - F | (2)2x12 + (1) 3/4"x11 1/8" STEEL FLITCH PLATES - F | W2x14 - F    |
| 002         | (3)3/4"x11 1/8" - F | 5/4"x11 1/8" - F | (4)3/4"x11 1/8" - F | (2)2x12 + (1) 3/4"x11 1/8" STEEL FLITCH PLATES - F | W2x14 - F    |
| 003         | (2)3/4"x11 1/8" - F | 3/2"x11 1/8" - F | (3)3/4"x11 1/8" - F | (2)2x12 + (1) 3/4"x11 1/8" STEEL FLITCH PLATES - F | W2x14 - F    |
| 004         | (2)3/4"x11 1/4" - D | 3/2"x11 1/4" - D | (2)3/4"x11 1/8" - D | (2)2x10 + (1) 3/4"x11 1/8" STEEL FLITCH PLATES - D | H8x10 - D    |

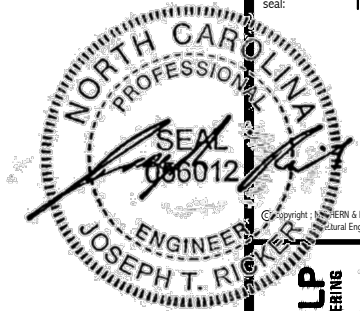
- BEAM NOTATION:
  - "F" INDICATES FLUSH BEAM
  - "FT" INDICATES FLUSH TOP BEAM
  - "FB" INDICATES FLUSH BOTTOM BEAM
  - "D" INDICATES DROPPED BEAM
  - "H" INDICATES DROPPED OPENING HEADER
- REFER TO DETAIL D/SD2.0 FOR TYPICAL FLITCH BEAM CONNECTIONS
- REFER TO DETAIL E/SD2.0 FOR TYPICAL STEEL BEAM CONNECTIONS
- FOR FLUSH TOP BEAMS PROVIDE 2X STACKED PLATES BENEATH BEAM AS REQ'D. FASTEN PLATES IN SUCCESSION W/ (2) 3"x0.120" NAILS @ 8" O.C.
- FOR FLUSH BOTTOM BEAMS PROVIDE 2X STACKED PLATES ATOP BEAM AS REQ'D. FASTEN PLATES IN SUCCESSION W/ (2) 3"x0.120" NAILS @ 8" O.C.

### LEGEND

- INTERIOR BEARING WALL
- BEARING WALL ABOVE
- BEAM / HEADER
- INDICATES SHEAR WALL & EXTENT
- EXTENT OF OVERFRAMING
- METAL HANGER
- INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
- INDICATES HOLD-DOWN OR STRAP. REFER TO SCHEDULE.

REFER TO SO.0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES

**1 ROOF FRAMING PLAN**  
SCALE: 1/8"=1'-0"



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RESIDENTIAL STRUCTURAL ENGINEERING  
380 Bannockburn Ave. Building 4 - Asheville, PA 18007  
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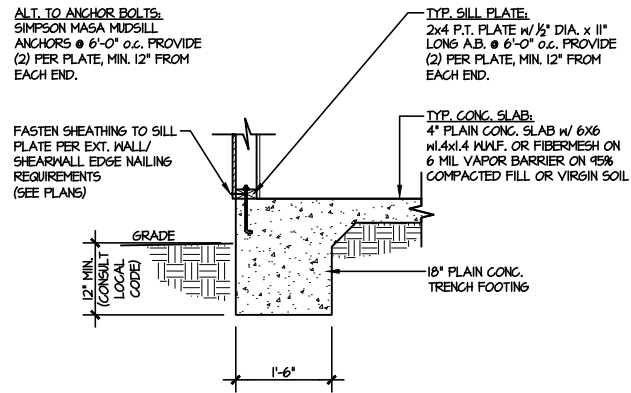
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**126-22076**  
project mgr: **JTR**  
drawn by: **LAN**  
issue date: **01-11-24**

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date:           initial:

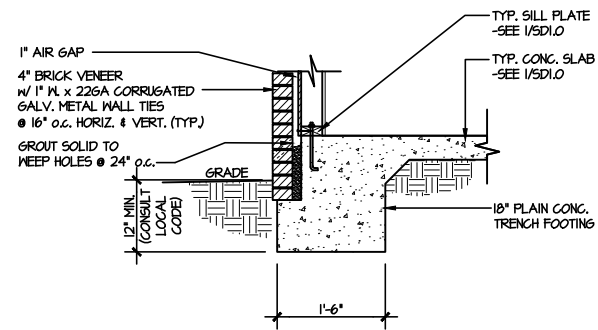


FOUNDATION DETAILS  
**FARM AT NEIL'S CREEK**  
LOT 81 - COOPER 6  
RALEIGH, NC

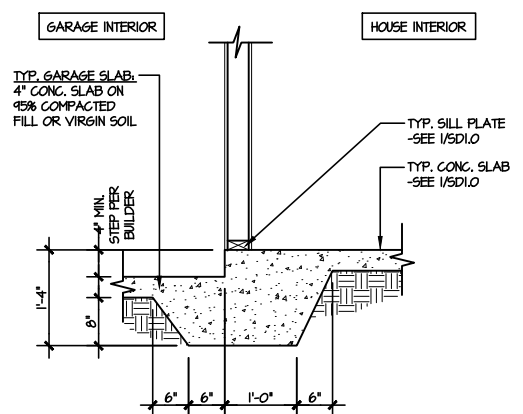
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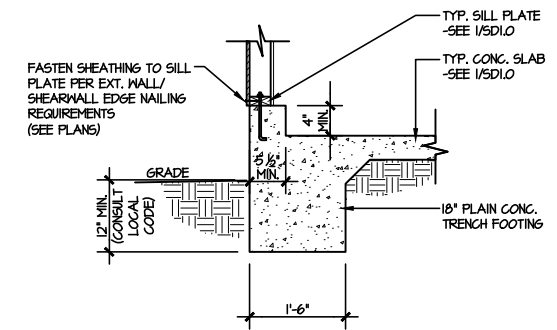
**1** TYPICAL SLAB ON GRADE PERIMETER FOOTINGS  
SCALE: 3/8"=1'-0"



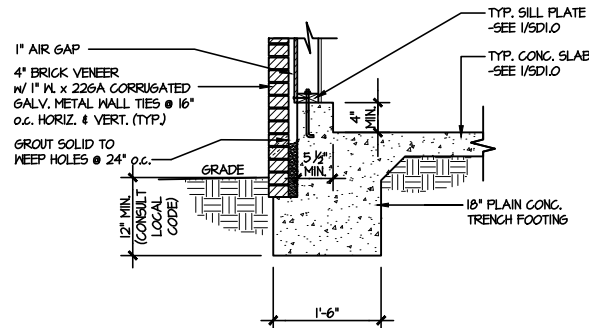
**2** TYPICAL SLAB ON GRADE PERIMETER FOOTING w/ BRICK VENEER  
SCALE: 3/8"=1'-0"



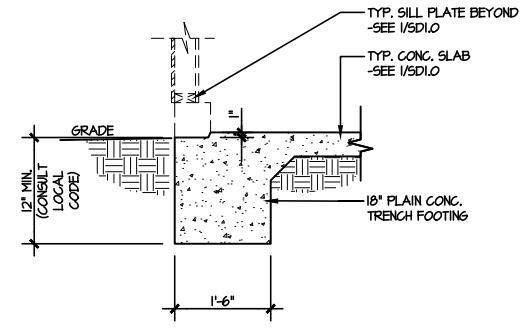
**3** TYPICAL MONOLITHIC INTERIOR GARAGE FOOTING  
SCALE: 3/8"=1'-0"



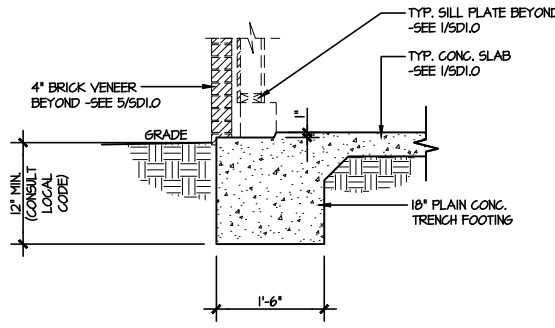
**4** TYPICAL SLAB ON GRADE GARAGE PERIMETER FOOTING  
SCALE: 3/8"=1'-0"



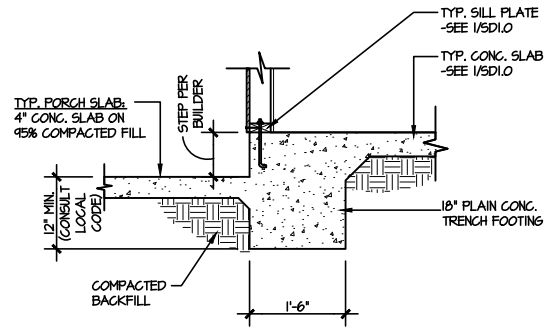
**5** TYPICAL SLAB ON GRADE GARAGE PERIMETER FOOTING w/ BRICK VENEER  
SCALE: 3/8"=1'-0"



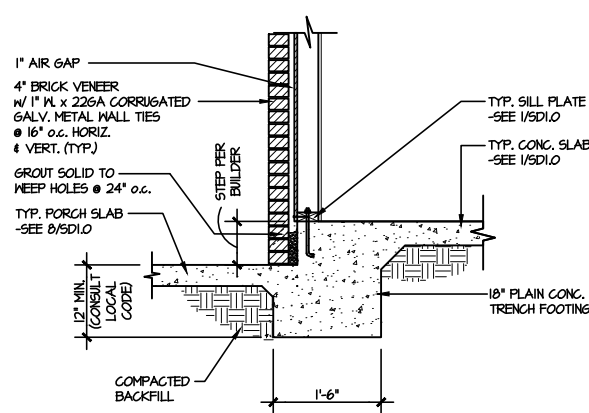
**6** TYPICAL SLAB ON GRADE GARAGE ENTRY @ PERIMETER FOOTING  
SCALE: 3/8"=1'-0"



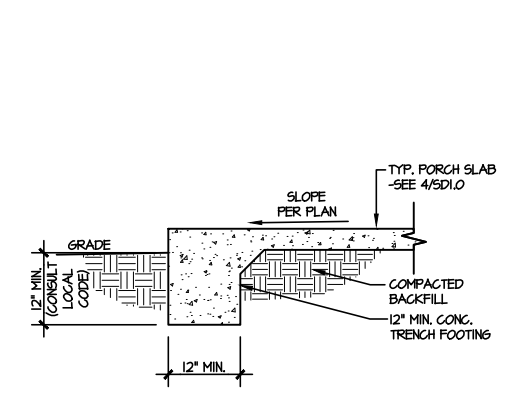
**7** TYPICAL SLAB ON GRADE GARAGE ENTRY @ PERIMETER FOOTING w/ BRICK VENEER  
SCALE: 3/8"=1'-0"



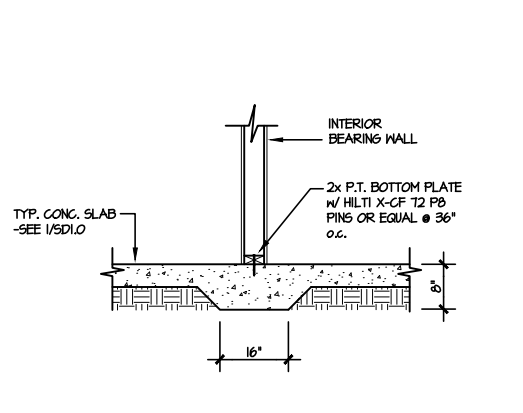
**8** TYPICAL SLAB ON GRADE PERIMETER FOOTING @ PORCH/PATIO  
SCALE: 3/8"=1'-0"



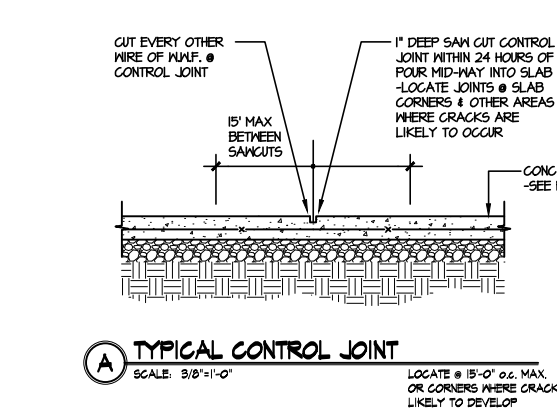
**9** TYPICAL SLAB ON GRADE PERIMETER FOOTING @ PORCH/PATIO  
SCALE: 3/8"=1'-0"



**10** TYPICAL FOOTING @ PORCH SLAB  
SCALE: 3/8"=1'-0"



**11** TYPICAL THICKENED SLAB @ INTERIOR BEARING WALL  
SCALE: 3/8"=1'-0"

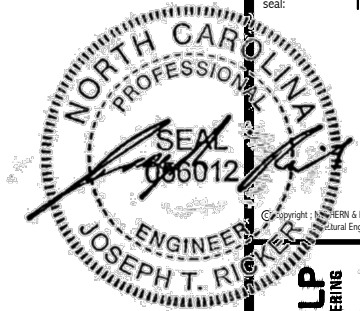


**A** TYPICAL CONTROL JOINT  
SCALE: 3/8"=1'-0"

LETTERED DETAILS ARE TYPICAL FOR THIS HOME & SHALL BE IMPLEMENTED IN ALL APPLICABLE AREAS. THESE DETAILS ARE NOT "CUT" ON THE PLANS.

NUMBERED DETAILS ARE PLAN SPECIFIC AND ARE ONLY REQUIRED WHERE SPECIFICALLY INDICATED ("CUT") ON THE PLANS.

FILE: RLH - Neils Creek - Lot 81 - Structural DATE: 1/12/2024 11:36 AM



M&K project number:  
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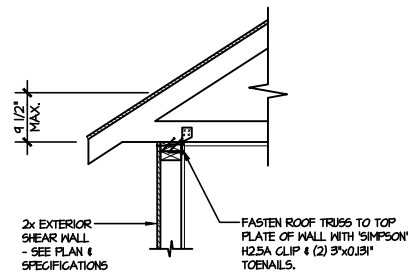
project mgr: JTR  
drawn by: LAN  
issue date: 01-11-24

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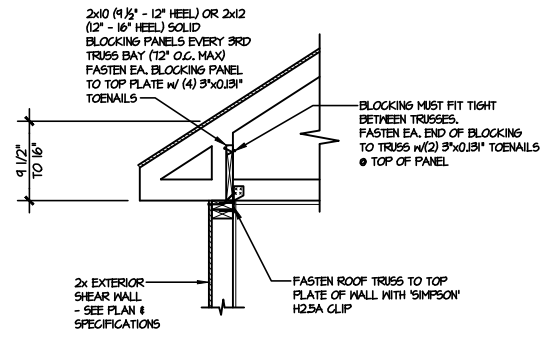


FRAMING DETAILS  
FARM AT NEIL'S CREEK  
LOT 81 - COOPER 6  
RALEIGH, NC

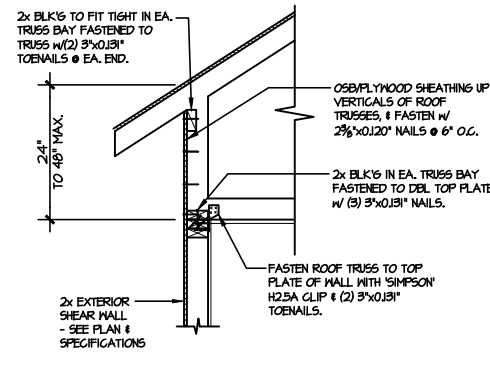
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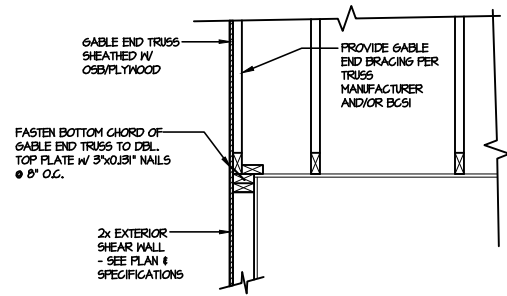
**A1** TYPICAL SHEAR TRANSFER DETAIL @ ROOF  
SCALE: 3/8"=1'-0"  
HEEL HEIGHT LESS THAN 9 1/2"  
NO BLOCKING REQ'D



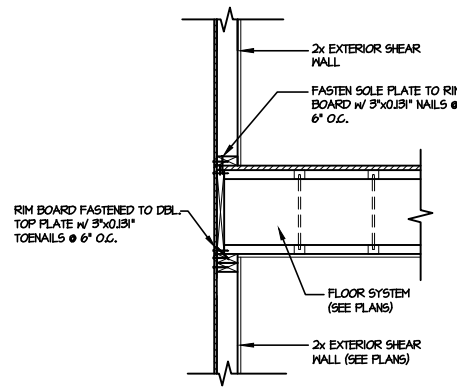
**A2** TYPICAL SHEAR TRANSFER DETAIL @ ROOF  
SCALE: 3/8"=1'-0"  
HEEL HEIGHT BETWEEN 9 1/2" - 16"  
BLOCKING REQ'D



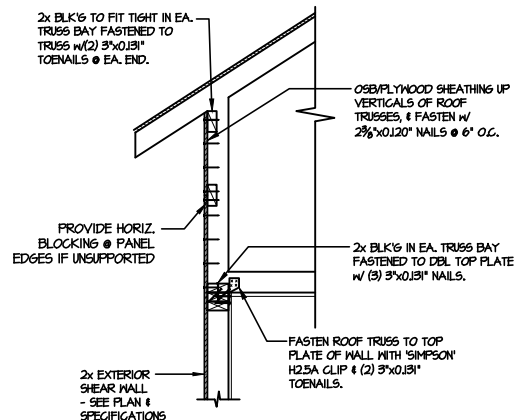
**A3** TYPICAL SHEAR TRANSFER DETAIL @ RAISED HEEL TRUSS  
SCALE: 3/8"=1'-0"  
HEEL HEIGHT UP TO 48" MAX.



**B** TYPICAL GABLE END DETAIL  
SCALE: 3/8"=1'-0"



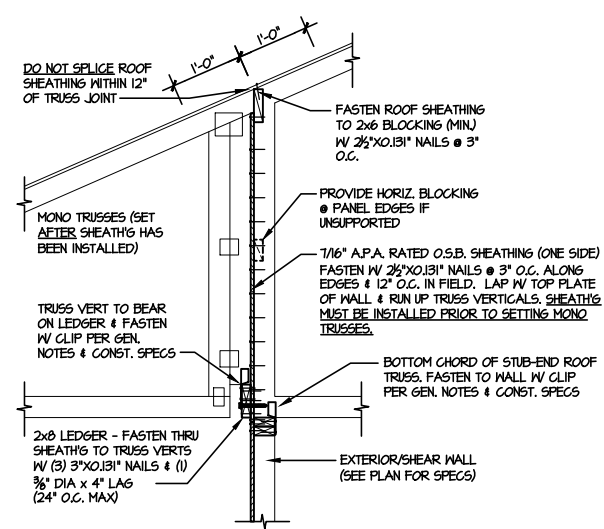
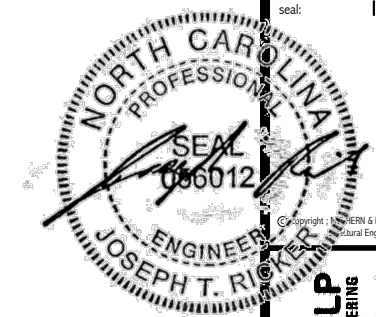
**C** TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ EXTERIOR WALL  
SCALE: 3/8"=1'-0"



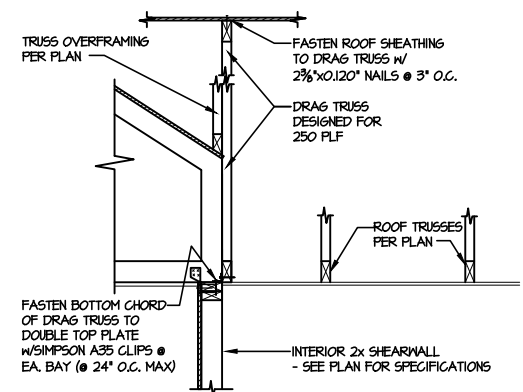
**1** TYPICAL SHEAR TRANSFER DETAIL @ RAISED HEEL TRUSS  
SCALE: 3/8"=1'-0"  
HEEL HEIGHT GREATER THAN 48"

LETTERED DETAILS ARE TYPICAL FOR THIS HOME & SHALL BE IMPLEMENTED IN ALL APPLICABLE AREAS. THESE DETAILS ARE NOT "CUT" ON THE PLANS.

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**1** SHEAR TRANSFER DETAIL @  
BREAK IN TRUSSES OVER SHEAR WALL  
SCALE: 3/4"=1'-0" - 22-24  
3/8"=1'-0" - 11x17



**2** SHEAR TRANSFER DETAIL  
AT INTERIOR SHEARWALL BELOW  
SCALE: 3/4"=1'-0"

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p 718-948-8001 - mulhernt+kulp.com  
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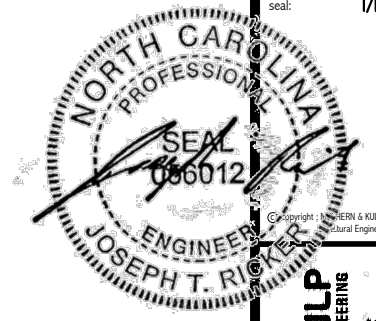
FRAMING DETAILS  
FARM AT NEIL'S CREEK  
LOT 81 - COOPER 6  
RALEIGH, NC

sheet:  
**SD2.1**

LETTERED DETAILS ARE TYPICAL FOR THIS HOME & SHALL BE IMPLEMENTED IN ALL APPLICABLE AREAS. THESE DETAILS ARE NOT "CUT" ON THE PLANS.

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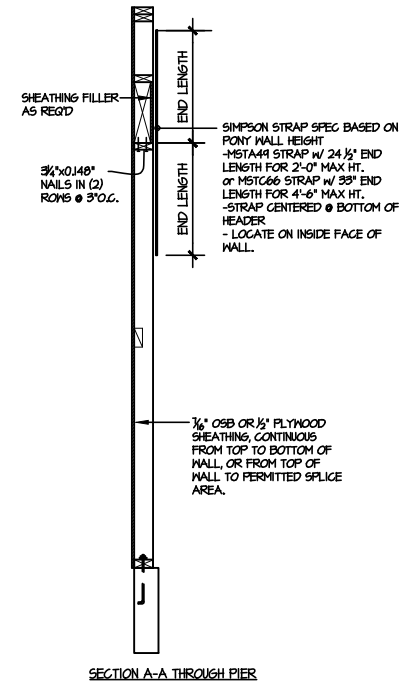
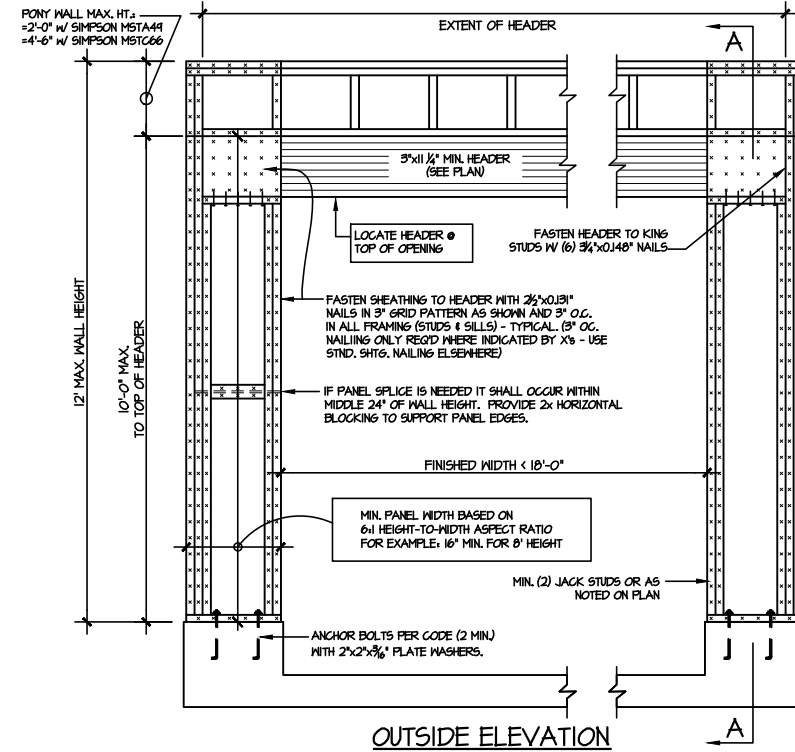


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126-22076  
project mgr: JTR  
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REVISIONS:  
date: initial:

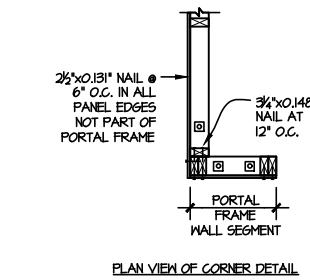
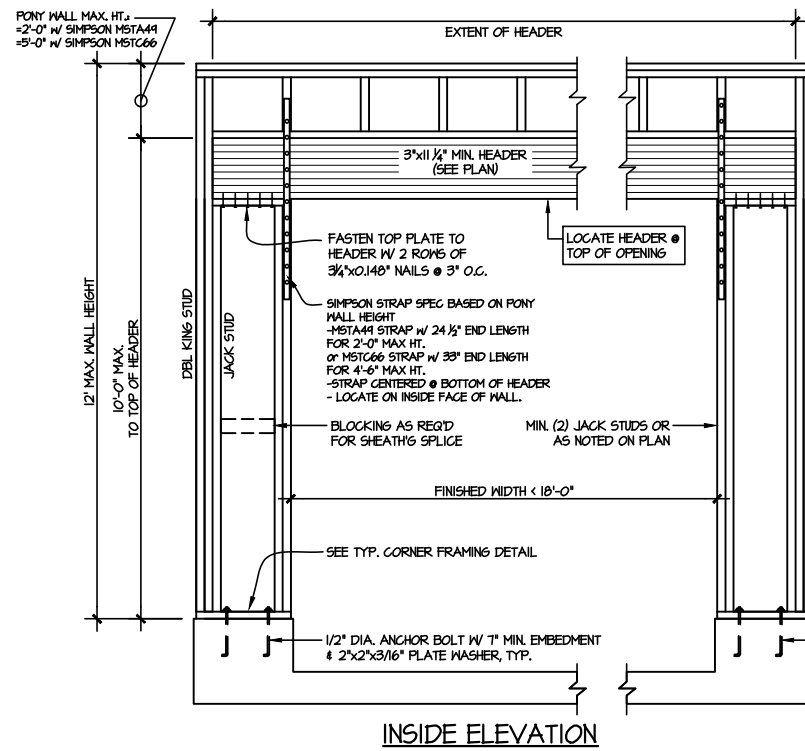


FRAMING DETAILS  
FARM AT NEILS CREEK  
LOT 81 - COOPER 6  
RALEIGH, NC

sheet:  
**SD2.2**

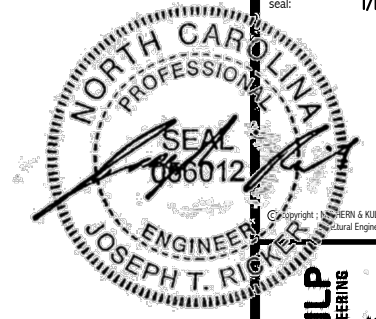


NOTE: ALL SHEATHABLE AREAS OF EXTERIOR WALL SHALL BE FULLY SHEATHED WITH 1/2" PLYWOOD OR 1/2" OSB



ALTERNATIVES TO 1/2" DIA. ANCHOR BOLT:  
1) 1/2" DIA. x 6" LONG SIMPSON TITEN HD  
2) 1/2" DIA. THREADED ROD EPOXY SET W/ 1/2" EMBED. (MIN UTILIZING HILTI HY200 EPOXY ANCHORING SYSTEM (OR EQUAL)

TWO SIDED GARAGE PORTAL FRAME BRACING  
ELEVATION ON CONCRETE STEM  
SCALE: N.T.S.



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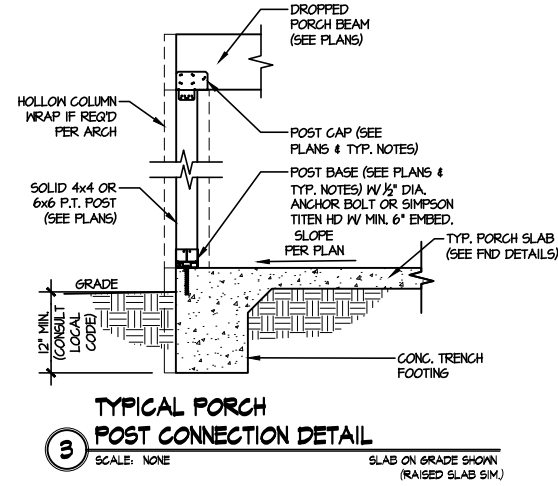
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issue date: 01-11-24

REVISIONS:  
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FRAMING DETAILS  
FARM AT NEILS CREEK  
LOT 81 - COOPER 6  
RALEIGH, NC

sheet:  
**SD3.0**



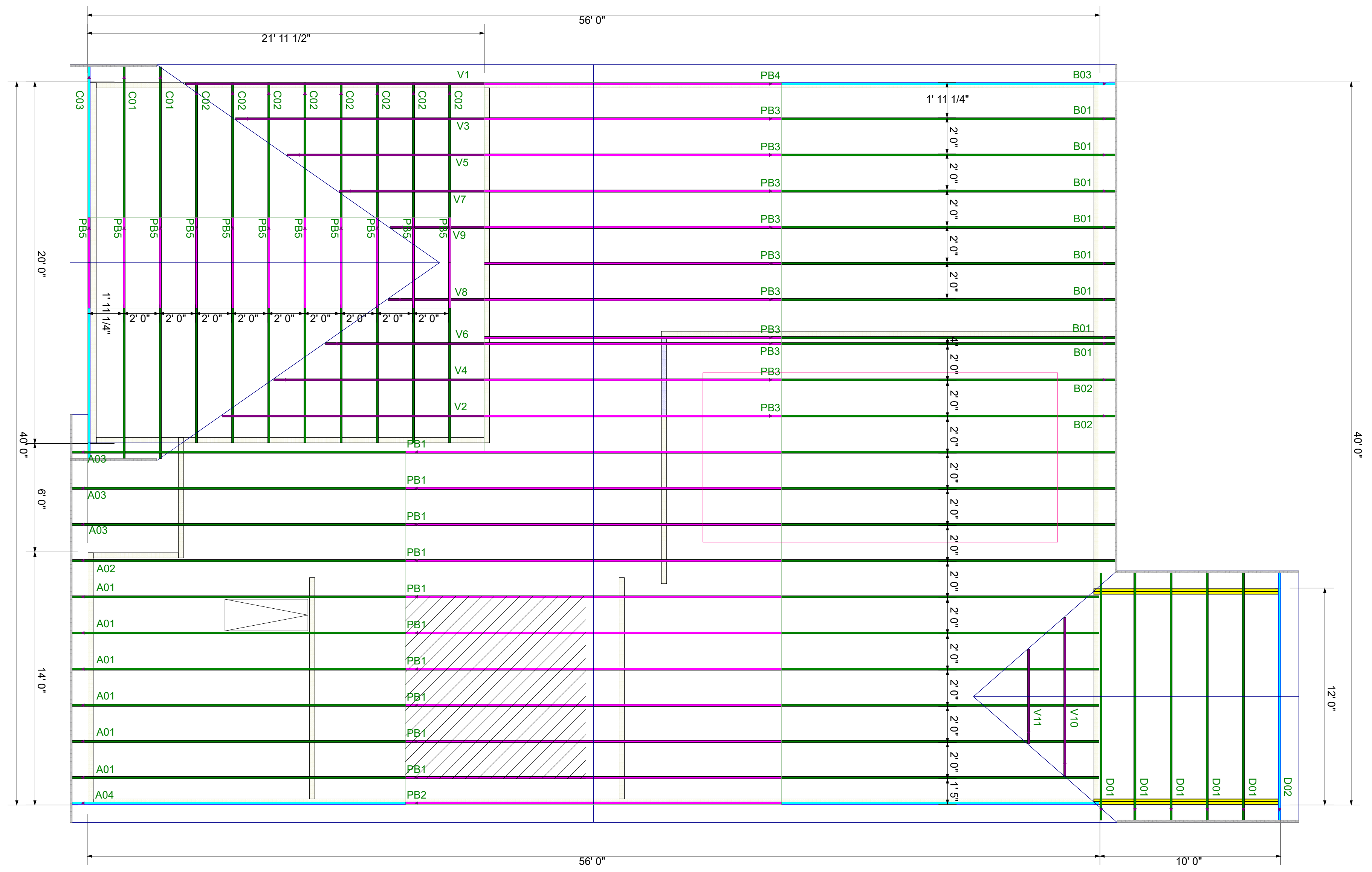
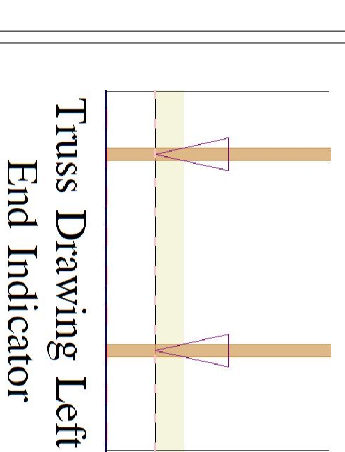
\*\* DAMAGED COMPONENTS SHOULD NOT BE INSTALLED UNLESS TOLD TO BY THE COMPONENT PLANT.

\*\* FRAMER MUST REFER TO PLANS WHILE SETTING COMPONENTS.

\*\* TRIANGULAR SYMBOL NEAR END OF TRUSS INDICATES LEFT END OF TRUSS AS SHOWN ON INDIVIDUAL TRUSS DRAWINGS.

\*\* PLUMBING DROPS NOTED ARE IN THE APPROXIMATE LOCATIONS PER PLAN. BUILDER TO VERIFY LOCATIONS BEFORE SETTING TRUSSES.

\*\* REFER TO FINAL TRUSS ENGINEERING SHEETS FOR PLY TO PLY CONNECTIONS.



\*\* GIRDERS MUST BE FULLY CONNECTED TOGETHER PRIOR TO ADDING ANY LOADS.

\*\* DIMENSIONS ARE READ AS: FOOT-INCH-SIXTEENTH.

\*\* TRUSS TO TRUSS CONNECTIONS ARE TOE-NAILED, UNLESS NOTED OTHERWISE.

|                 |           |
|-----------------|-----------|
| Scale:          | NTS       |
| Date:           | 1/10/2024 |
| Designer:       | ND        |
| Project Number: | 23120147  |
| Sheet Number:   | 1/1       |

DRB HOMES

81 FaNC  
COOPER 3 - ELV 6

**COMPONENT  
PLACEMENT PLAN**



**THIS IS A TRUSS PLACEMENT DIAGRAM ONLY.** These trusses are designed as individual components to be incorporated into the building design at the specification of the building designer. See Individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor systems and for the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding the bracing, consult "Bracing of Wood Truss" available from the Truss Plate Institute, 583 D'Onofrio Drive: Madison, WI 53179

| Revisions |      |
|-----------|------|
| 00/00/00  | Name |
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