MERLOT-RALE

RALEIGH- LOT 00.0193 THE FARM AT NEILL'S CREEK

(MODEL# 1995)

ELEVATION 1- GR

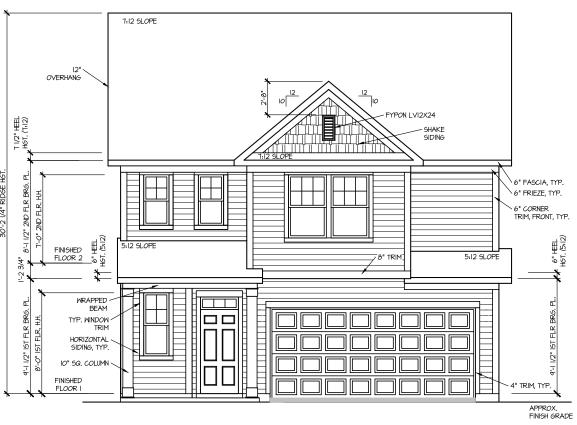
DR3 HOMES

AREA CALCULATIONS ELEVATION 1		HEATED	COVERED / UNHEATED	UNCOVERED
FIRST FLOOR		872 SF		
GARAGE			416 SF	
FRONT PORCH - ELEVATION 1			53 SF	
THOM TORREST ELECTRISTS			00 0.	
SECOND FLOOR		1154 SF		
323313 12331		1101 01		
OPTIONS				
4' BREAKFAST EXTENSION		+56 SF		
	TOTAL	2082 SF	469 SF	

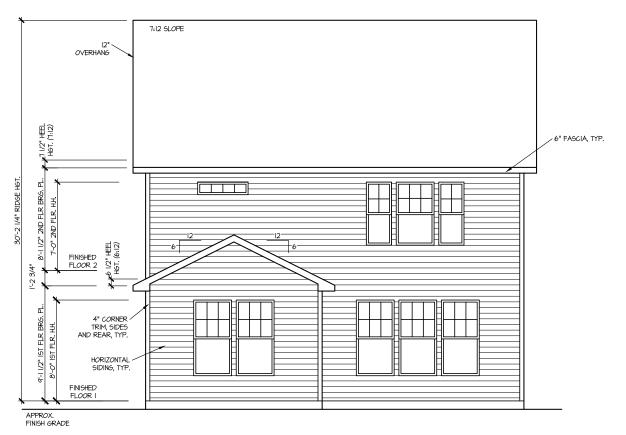
356 Winding Creek Drive

	SPECIFIC	
1	LOT 00.0193	THE FARM AT NEILL'S CREEK
		MERLOT REV. RALE 2 ELEVATION 1
2	ADDRESS	356 WINDING CREEK DR LILLINGTON, NC 27546
	 	
	<u> </u>	
	1	

INDEX



FRONT ELEVATION |



REAR ELEVATION I

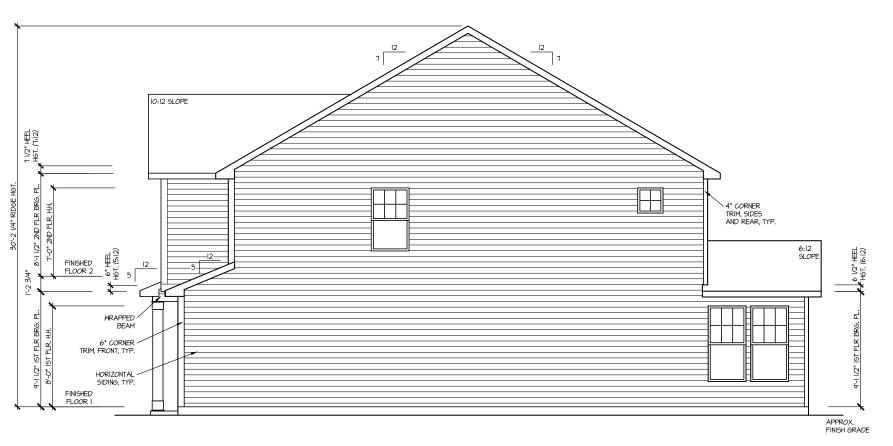
DRAWN BY:

DATE: 02/08/2024 PLAN NO. 1995

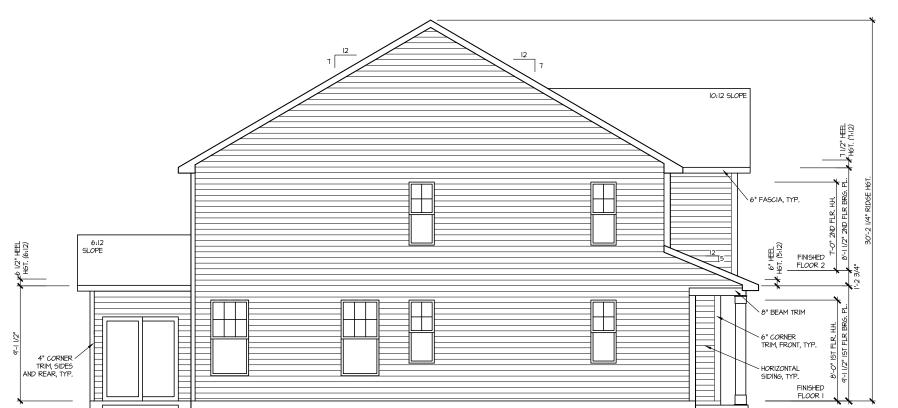
FRONT & REAR ELEVATIONS

HOUSE NAME:
MERLOT
DRAWING TITLE

SHEET No.



RIGHT ELEVATION I SCALE: 1/8" = 1"-0"



LEFT ELEVATION I SCALE: 1/8" = 1'-0"

RIGHT & LEFT ELEVATIONS

SHEET No.

DATE: 02/08/2024

PLAN NO. 1995

UPPER ROOF VENTILATION CALCULATIONS:

ROOF AREA = 1300 SQ. FT.

OVERAL REQUIRED VENTILATION.

1 TO 50 = 861 SQ. FT.

1 10 300 = 453 SQ. FT.

50-80% IN TOP HHIDE = 2.11 - 3.46 SQ. FT. (1 TO 300)

NET FREE AREA OF VENTIES OFFIT = 5.1 SQ. IN / LINEAR FT.

NET FREE AREA OF RIDGE VENT = 16 SQ. IN/ LINEAR FT.

LOHER VENTING. (BOTTOM 2/3 RDS)

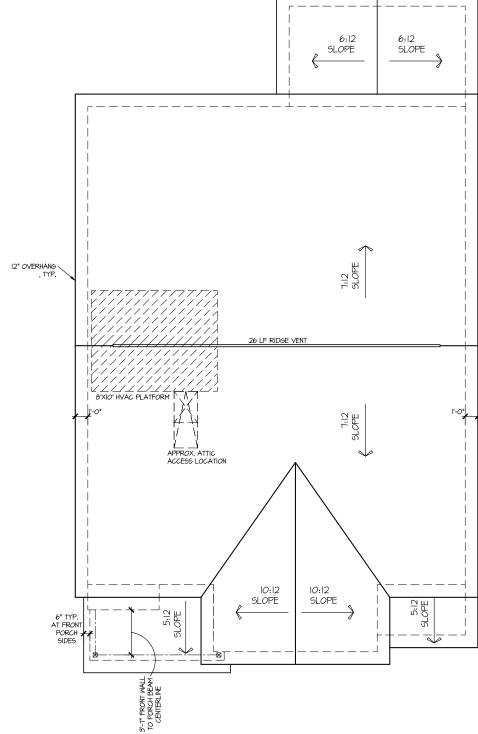
1 INEAR FEET OF SOFFIT X 5.1 50. IN = 2.26 50. FT.

1PPER VENTING. (TOP 1/3 RD)

20 INEAR FEET OF RIDGE X 16 50. IN = 3.25 50. FT.

3.25 50. FT. EEPVEEN 50% - 6.0%

10 300 ALLOPOF VENTILATION. 5.51 50. FT. > 4.33 50. FT. (RdD)



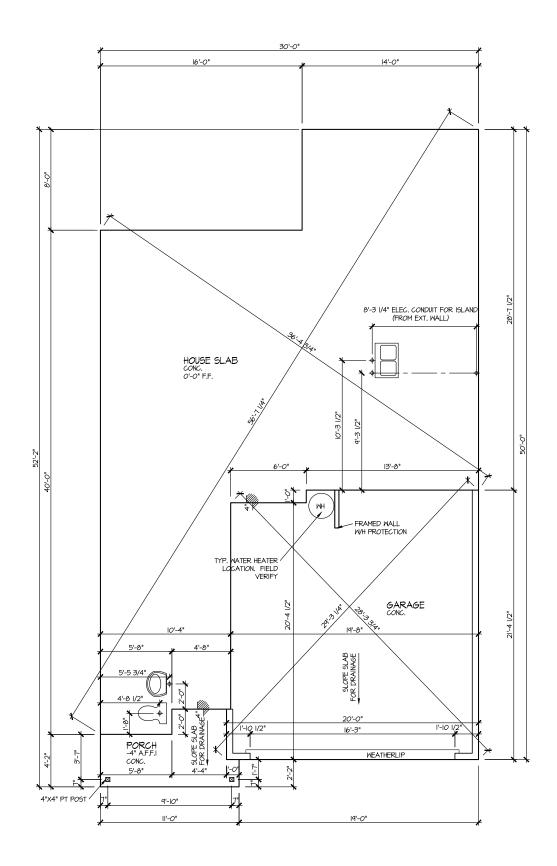
ROOF PLAN ELEV. I

DATE: 02/08/2024 PLAN NO. 1995

DRAWN BY:

HOUSE NAME:
MERLOT
DRAWING TITLE ROOF PLAN

> SHEET No. AI.3



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

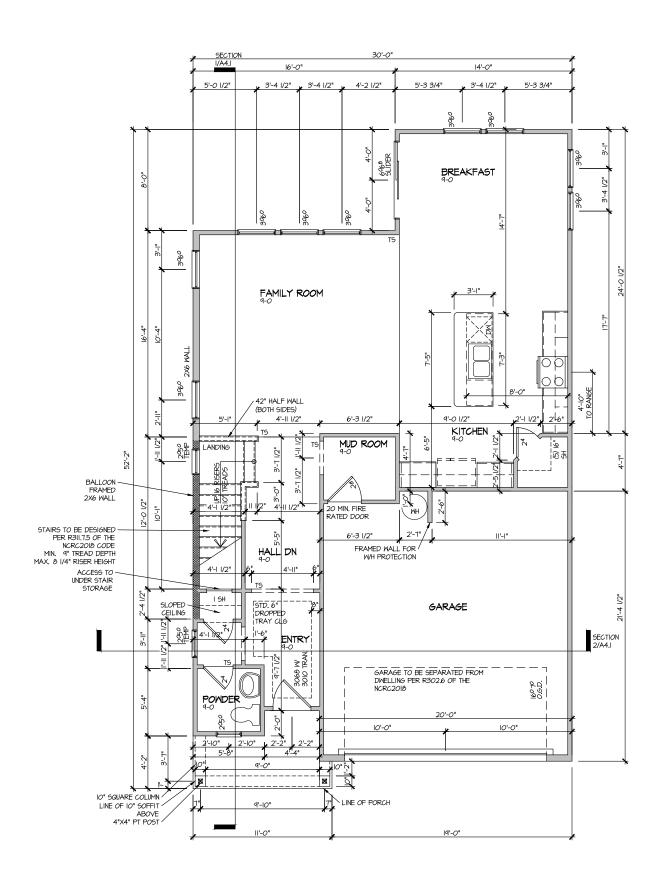
DRAWN BY:

DATE: 02/08/2024 PLAN NO. 1995



HOUSE NAME:
MERLOT
DRAWING TITLE
SLAB PLAN

SHEET No. A2.I



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

E: Lot 00.0193.dwg DATE: 2/8/2024 2:30 PM

HOM ES

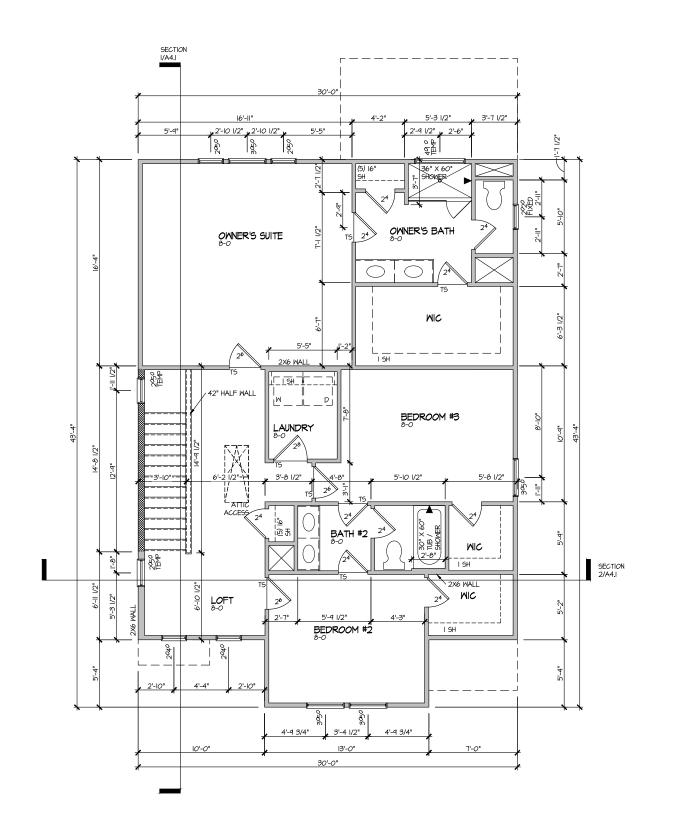
DRAWN BY:

PLAN NO. 1995

DATE: 02/08/2024

HOUSE NAME:
MERLOT
DRAWING TITLE
FIRST FLOOR PLAN

SHEET No.



ELEVATION I SECOND FLOOR PLAN SCALE: 1/8" = 1'-0"

PLAN NO. 1995

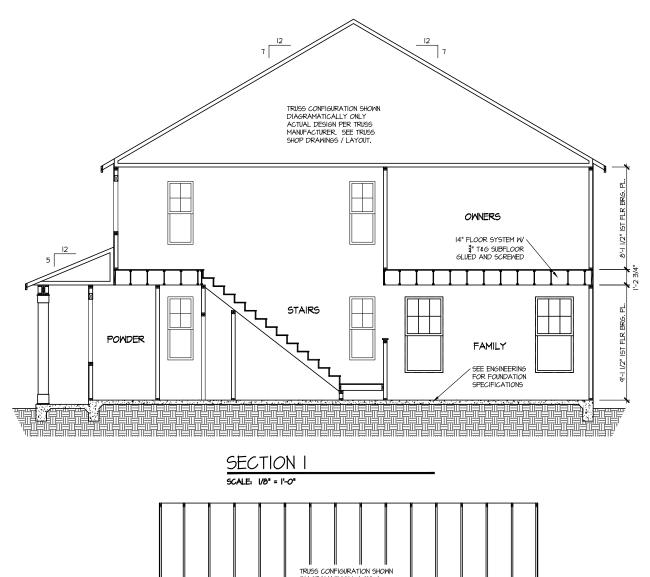
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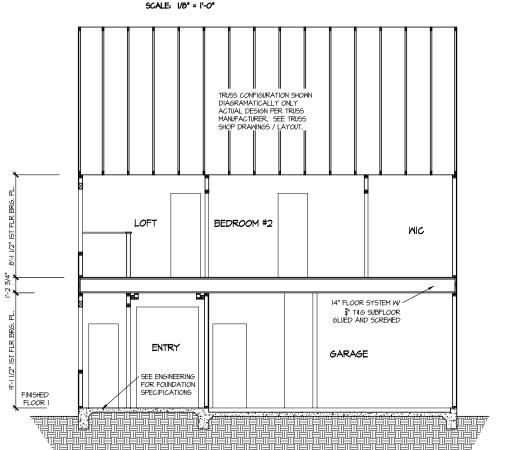
DATE: 02/08/2024

SECOND FLOOR PLAN HOUSE NAME:
MERLOT
DRAWING TITLE

SHEET No.

A3.2





SECTION 2

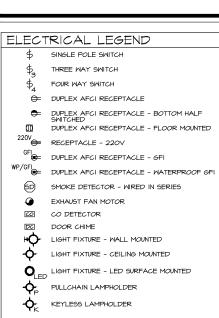
SCALE: 1/8" = 1'-0"

SHEET No.

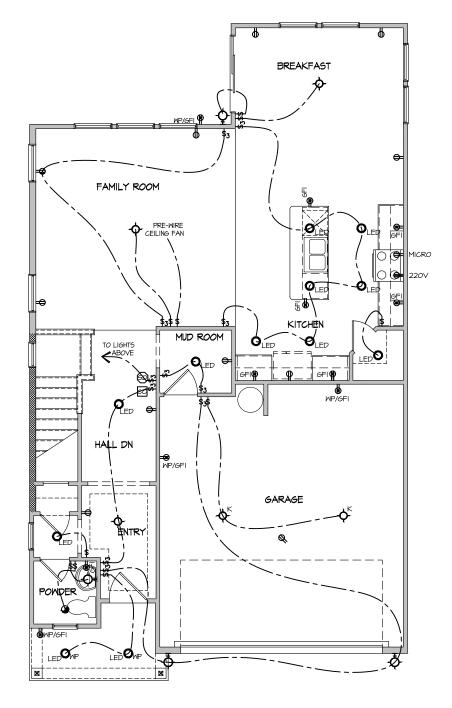
HOUSE NAME:
MERLOT
DRAWING TITLE

BUILDING SECTION

DRAWN BY: ITS DATE: 02/08/2024 PLAN NO. 1995



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.



DRAWN BY:

PLAN NO. 1995

DATE: 02/08/2024

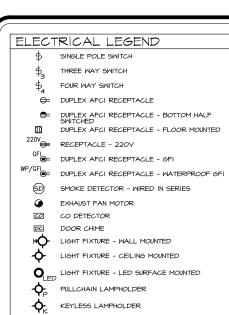
ELECTRICAL

FLOOR

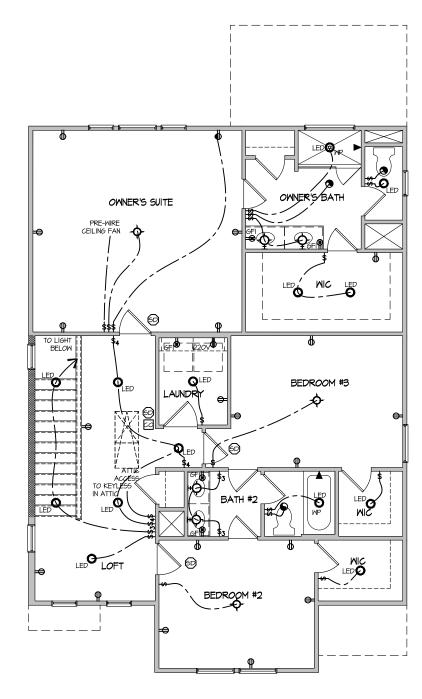
HOUSE NAME:
MERLOT
DRAWING TITLE

SHEET No.

ELECTRICAL PLAN FIRST FLOOR - ELEV. I SCALE: 1/8" = 1'-0"



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 SECOND FLOOR - ELEV. I SCALE: 1/8" = 1'-0"

HOUSE NAME:
MERLOT
DRAWING TITLE SHEET No.

SECOND FLOOR ELECTRICAL

DRAWN BY:

DATE: 02/08/2024 PLAN NO. 1995

DESCRIPTION OF BLDG. ELEMENT	3"x0.131" NAILS	3"x0.120" NAILS
JOIST TO SOLE PLATE	(3) TOENAILS	(3) TOENAILS*
SOLE PLATE TO JOIST/BLK'G.	(3) NAILS @ 4" o.c.	(3) NAILS 0 4" o.c.
STUD TO SOLE PLATE	(2) TOENAILS	(3) TOENAILS*
TOP OR SOLE PLATE TO STUD	(2) NAILS	(3) NAILS
RIM TO TOP PLATE	TOENAILS @ 8" o.c.	TOENAILS @ 6" O.C.*
BLK'G. BTWN. JOISTS TO TOP PL.	(3) TOENAILS	(3) TOENAILS*
DOUBLE STUD	NAILS @ 24" o.c.	NAILS @ 16" O.C.
DOUBLE TOP PLATE	NAILS ⊘ 24" o.c.	NAILS @ 16" O.C.
DOUBLE TOP PLATE LAP SPLICE	(9) NAILS IN LAPPED AREA	(II) NAILS IN LAPPED AREA
TOP PLATE LAP @ CORNERS & INTERSECTING WALLS	(2) NAILS	(2) NAILS

2½"x0.113 IS AN ACCEPTABLE ALTERNATIVE TO A 3"x0.120", SAME SPACING OR NUMBER OF NAILS. (ONLY ACCEPTABLE WHERE * ARE SHOWN)

MEANS & METHODS NOTES

THE STRUCTURE IS DESIGNED TO BE SELE SUPPORTING AND STABLE AFTER THE BUILDING IS FINISHED AND ALL PLAN, DETAIL, AND NOTE SPECIFICATIONS HAVE BEEN COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY DETERMINE THE ERECTION PROCEDURES AND SEQUENCE TO INSURE THE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING CONSTRUCTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS, AND TIE-DOWNS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SHORING AND BRACING REQUIRED TO STABILIZE AND PROTECT EXISTING AND ADJACENT STRUCTURES AND SYSTEMS DURING COURSE OF DEMOLITION AND CONSTRUCTION OF THE PROJECT.

STRUCTURAL DESIGN AND SPECIFICATIONS ASSUME THAT ALL SUPPORTING AND NON-SUPPORTING ELEMEN IN CONTACT WITH FLOOR FRAMING ARE LEVEL, INCLUDING, BUT NOT LIMITED TO: FOUNDATIONS, SLABS ON GRADE, BEAMS, WALLS, AND NON-BEARING ELEMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LEVELNESS AND MAKE ADJUSTMENTS AS NECESSARY, INCLUDING CONSIDERATION OF THOSE AREAS THAT MAY BE WITHIN CONTRACTUAL, INDUSTRY OR WARRANTY TOLERANCES.

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/FLUS BEAMS DO NOT EXCEED THE FOLLOWING:

- A ROOF TRISSES. I/4" DEAD LOAD
- B. FLOOR TRUSSES, ATTIC TRUSSES, & I-JOISTS:
- FLOOR TRUSSES & ATTIC TRUSSES ADJACENT TO FLOOR FRAMING BY OTHERS: LIMIT ABSOLUTE TRUSS DEFLECTION TO 3/16" DEAD LOAD. (NOT DIFFERENTIAL DEFLECTION)

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.

ROOF

DEAD = 7 PSF T.C., IO PSF B.C. LOAD DURATION FACTOR = 1.25

LIVE = 40 PSF (30 PSF @ SLEEPING AREAS) DEAD = 10 PSF (I-JOISTS & SOLID SAWN) IO PSF T.C., 5 PSF B.C. (TRUSSES) (ADD'L IO PSF @ TILE)

LATERAL 120 MPH EXPOSURE B. SEISMIC A/B.

2,000 PSF ASSUMED ALLOWABLE BEARING RESSURE (TO BE VERIFIED BY BUILDER)

GENERAL FRAMING

- ALL TYP, NAIL FASTENER REQUIREMENTS ARE NOTED IN STANDARD DIAMETER AND LENGTH REQUIRED FOR CONNECTION, ALL HANGER DIAMETER AND LENGTH REQUIRED FOR CONNECTION. ALL TRANSLIS 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(I) FOR ALL CONNECTIONS, TYP, U.N.O.
- EXT. & INT. BRG WALLS SHALL BE 2x4 OR 2x6 (AS SHOWN ON PLANS @ 16" O.C. SPF OR SYP "STUD" GRADE LUMBER, OR BETTER, U.N.O. • 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 (SYP) 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., U.N.O.) HEADERS IN NON-LOAD BEARING WALLS SHALL BE:
- (I)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).
- PENGINEERED LUMBER BEAMS TO MEET OR EXCEED THE FOLLOWING
- "LSL" Fb=2325 psi: Fv=3I0 psi: E=I,55xI0^6 psi • 'LVL' - Fb=2600 psi; Fv=285 psi; E=2.0xl0^6 psi
- 'PSL' FB=2900 PSI; FV=290 PSI; E=2.0XIO^6 PSI
- M+K 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 M+K FOR STRUCTURAL REVIEW PRIOR TO FABRICATION, DELIVERY, OR INSTALLATION.
- FOR 2 & 3 PLY BEAMS OF EQUAL WIDTH, FASTEN PLIES TOGETHER WITH 3 ROMS OF 3"X0.120" NAILS @ 8" O/C OR 2 ROMS ¼"X3½" SIMPSON SDS SCREWS (OR 3½" TRUSSLOK 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 $3\,$ ½" OR $5\,$ ¼" BEAMS ARE ACCEPTABLE. USE 2 ROWS OF NAILS FOR 2x6 & 2x8 MEMBERS.
- FOR 4 PLY BEAMS OF EQUAL WIDTH, FASTEN PLIES TOGETHER WITH 3 ROWS OF $\frac{1}{4}$ "x6" SIMPSON SDS SCREWS (OR 6 $\frac{3}{4}$ " TRUSSLOK 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 TRUSSLOK 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
- THE NUMBER OF STUDS SPECIFIED AT A SUPPORT INDICATES THE NUMBER OF JACK STUDS REQUIRED, U.N.O..
- ALL MULTI-PLY STUDS TO BE FASTENED TOGETHER W/ 3"X0.I3I" NAILS @ 24" O.C. (MIN.), EACH PLY.
- PROVIDE SOLID BLOCKING IN FLOOR SYSTEM INDER 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 I/2" DIA. BOLTS @ 48" O.C. STAGGERED.
- ALL EXTERIOR 4x4 WOOD POSTS SHALL HAVE SIMPSON BCS2-2/4 CAP & ABM44Z BASE, U.N.O.

FLOOR FRAMING

- I-JOISTS/TRUSSES SHALL BE DESIGNED BY MANUF. TO MEET OR EXCEED 1 /480 LIVE LOAD DEFLECTION CRITERIA (EXCLUDES MARBLE FLOORS - CONTACT M&K FOR MARBLE FLOOR DESIGNS)
- AT I-JOIST FLOORS, PROVIDE I I/8" MIN. OSB RIM BOARD.
- METAL HANGERS SHALL BE SPECIFIED BY MANUFACTURER, U.N.O.
- FLOOR SHEATHING SHALL BE 23/32" A.P.A. RATED 'STURD-I-FLOOR' 24" O.C. EXPOSURE I (OR APPROVED EQUAL) WITH TONGUE AND GROOVE EDGES. FASTEN TO FRAMING MEMBERS W/ GLUE AND
- 2 1" x 0 131" NAII S @ 6"0 C @ PANEL EDGES & @ 12"0 C FIELD
- 2 3" x 0 120" NAIL S @ 4" O C @ PANEL EDGES & @ 8" O C FIELD - 2 🖁 x 0.113" NAILS 🛭 3" O.C. 🗗 PANEL EDGES 🕻 🗗 6" O.C. IN FIELD.
- 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, U.N.C
- ERECT AND INSTALL ROOF TRUSSES PER WTCA & TPI'S BCSI I-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. (1-JOISTS) - TRUSS VERTICALS w/ (3) 3"x0.131" NAILS @ 19.2" O.C. MAX. (FLOOR TRUSSES)
- ROOF SHEATHING SHALL BE 1/16" A.P.A. RATED SHEATHING 24/16 EXPOSURE I (OR APPROVED EQUAL). FASTEN TO FRAMING MEMBER
- w/ 2 1 x 0.131" NAILS @ 6"04. @ PANEL EDGES & @ 12" 0.6. FIELD.
- w/ 2 📲 x 0.120" NAILS 🧆 4"o.c. 🍑 PANEL EDGES & 🐠 8" O.C. FIELD. - W/ 2 🖥 x 0.113" NAILS @ 3"o.c. @ PANEL EDGES & @ 6" O.C. FIELD.

HOLD-DOWN SCHEDULE

SYMBOL	SPECIFICATION
► HD-I	SIMPSON HTT4 HOLD-DOWN *
► HD-2	SIMPSON MSTC66 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.) (PRE-BENT MSTC66 ALT. WHEN SPECIFIED)
▶ HD-3	SIMPSON STHDI4/I4RJ HOLD-DOWN

ALTERNATIVE TO SSTB24 ANCHOR BOLT SPECIFICATION: UTILIZE SIMPSON "SET" EPOXY SYSTEM TO FASTEN % DIA. THREADED ROD INTO CONCRETE FOUNDATION. PROVIDE 12" MIN. EMBEDMENT INTO CONCRETE. INSTALL PER MANUF. RECOMMENDATIONS. DO NOT LOCATE ANCHORS WITHIN I 3/4" OF EDGE OF FOUNDATION

VENEER LINTEL SCHEDULE

SPAN (MAX)	HEIGHT OF VENEER ABOVE LINTEL	STEEL ANGLE SIZE			
3'-0"	20 FT. MAX	L3"x3"x/4"			
	3 FT. MAX	L3"x3"x/4"			
6'-0"	I2 FT. MAX	L4"x3"x/4"			
	20 FT. MAX	L5"x3½"x¾"			
8'-0"	3 FT. MAX	L4"x4"x/4" *			
0-0	I2 FT. MAX	L5"x3½"x¾"			
	I6 FT. MAX	L6"x3½"x%"			
9'-6"	I2 FT. MAX	L6"x3½"x%"			
16'-0"	2 FT. MAX	L7"x4"x½" **			
	3 FT. MAX	L8"x4"x/5" **			

SHALL SUPPORT 2 %" - 3 ½" VENEER W/ 40 psf MAXIMUM WEIGHT. 16' SHALL HAVE 4" MIN. BEARING

- C. 69 SHALL HAVE 4" MIN. EEARINE 169 SHALL HAVE 0" MIN. EEARINE 169 SHALL BOT EE FASTEIBED BACK TO HOOD HEADER. 169 SHALL EE FASTEIBED BACK TO HOOD HEADER IN HALL 945° a., w/ 5° DIA. x 3 5°. LONG LAW SCHEEPEN IN 2" LONG VERTICALLY SLOTTED HOLES. MAX. YEBER IN APPLES TO ANY FORTION OF PROKE OVER THE OPPINIS. ALL LINTES SHALL BE LONG LEG VERTICAL. BOTH SHEEPEN VERIER C 9" HOLE EE EXTERIOR TOE OF THE HORIZONTAL LEG MAY BE CUT IN THE FILED TO BE 3 3°, MIDE OVER THE BEARING LENGTH ONLY. THIS SET OR ALCHO FOR PROKENTAL JOINT INTERHISE.
- GUEEN VENEER USE L4x3%". R 3½" VENEER ONLY, SEE PLAN FOR VENEER SUPPORT IF VENEER < 3½" THICK

LATERAL BRACING & SHEAR WALL SHEATHING SPECIFICATIONS

- THIS MODEL HAS BEEN DESIGNED TO RESIST LATERAL FORCES RESULTING FROM:
- <u>0 MPH WIND IN 2018 NCSBC:R(</u> (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 R30LL3 OF THE 2018 NGSBC:RC, OR THE SIMPLIFIED PRESCRIPTIVE PROCEDURE IN ACCORDANCE WITH THE 2015 IRC IF THE PARAMETERS OF SECTION R60212 COMPLY CCORDINGLY, 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 NCSBC:RC SECTION R802.II.I.I. THIS MODEL HAS BEEN DETAILED WHERE REQUIRED & ENGINEERED TO RESIST THE WIND UPLIFT LOAD PATH PER SECTIONS R602.3.5& R802.II.

EXT. WALL SHEATHING SPECIFICATION

- 7/16" OSB OR 15/32" PLYWOOD: Fasten Sheathing W/ 2 ¾"x0.113" Nails @ 6" O.C. At Edges & @ 12" O.C. In the Panel Field. Typ, U.N.O.
- 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 1/5" 16 GA STAPLES (1/6" CROWN) @ 3" O.C. AT EDGES & @ 6" O.C IN FIELD.

BLOCKED PANEL EDGES

AT DESIGNATED AREAS - FASTEN SHEATHING W/ 2 3/6" × 0.113" NAILS @ 6" O.C. AT ALL PANEL EDGES AND 12" O.C. IN THE PANEL FIELD OR 1 3/4" 16 GA STAPLES (1/6" 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 NAII S @ 3" OC NO STAPI F AI TERNATIVE 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" OC EDGE FASTENING

- SEE CONNECTION SPECIFICATIONS CHART FOR STANDARD SHEAR TRANSFER DETAILING, IF IT WILL BE SPECIFICALLY NOTED ON PLAN.
- DESIGN ASSUMES 16" O.C MAX. STUD SPACING, U.N.O. 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 SHEARWALL
OR 3" O.C. OSB SHEARWALL.

INDICATES HOLDOWN BELOW.

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 - LITH 17ING
- I/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 IO' 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. SPF OR SYP, "STUD" GRADE OR BETTER.
- CONCRETE DESIGN BASED ON ACL 318 CONCRETE SHALL ATTAIN THE FOLLOWING MIN. COMPRESSIVE STRENGTHS IN 28 DAYS, U.N.O.: 4,000 psi: FOUNDATION WALLS 2,500 psi: FOOTINGS & INTERIOR SLABS ON GRADE
- 3,000 psi: GARAGE & EXTERIOR SLABS ON GRADE 60,000 psi
- BASEMENT FOUNDATION WALL DESIGN BASED ON: . d' OP IO' HEIGHT (AS NOTED ON PLANS)
- TALLER WALLS MUST BE ENGINEERED.
- NOMINAL WIDTH (9 ½" 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, REINFORGEMENT SHALL EXTEND 12" PAST CORNER OF OPENING IN ALL DIRECTIONS
- FOR OPENINGS UP TO 36", PROVIDE MINIMUM IO" CONCRETE
- DEPTH OVER OPENING OR (3)2x10 w/ (2)2x6 JACK STUDS, U.N.O LARGER OPENINGS SHALL BE PER PLAN.
- ALL CONCRETE EXPOSED TO THE WEATHER SHALL NOT HAVE LESS
- ALL FOOTINGS SHALL BEAR AT LEAST 12" BELOW FINISH GRADE.

THAN 5% OR MORE THAN 7% AIR ENTRAINMENT

- 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'-O" OC (MAXIMUM) JOINT GRID PATTERN SHALL BE AS CLOSE TO SQUARES AS
- POSSIBLE (I.I RATIO) WITH A MAXIMIM OF I.I.S RATIO · CONTROL JOINTS SHALL NOT BE INSTALLED IN STRUCTURAL
- CONCRETE MASONRY UNITS (CMU) SHALL BE ASTM C90 WITH A MIN COMPRESSIVE STRENGTH OF 1900 psi (Fm=1500 psi). MORTAR SHALL BE ASTM C270, TYPE S. CMU DESIGN PER ACI 530 \$ 530.I.
- CMU FOUNDATION WALLS SHALL HAVE 'DUR-O-WALL' HORIZONTAL JOINT REINFORCEMENT (OR EQUAL) - 9 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.

SD2.I REFERS TO SD2.IA FOR LVL/PSL/LSL BEAMS OR SD2.IB FOR FLITCH BEAMS OR SD2.IC FOR STEEL BEAMS

H CAR OFESSIO ENGINE EPH T. R

2/22/2

X ENGINE ERN+

Y

1&K project numbe 126-2207

rawn by: KF(sue date: 02-13-2

REVISIONS

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RM

LOT 193 RALEIGE

30'-0"

14'-0"

(SDI.0)

16'-0"



2/22/24

MUCHERN+KULI
RESIDENTIAL STRUCTURAL ENGINEERIN



M&K project number: 126-2207

drawn by: KFG issue date: 02-13-24

REVISIONS:

initial:

CREEK AT NEIL'S (
- MERLOT 1 OUNDATION P

FARM LOT 193 - PRALEIGH, 1

S1.

REFER TO SO.O FOR TYPICAL STRUCTURAL NOTES & SCHEDULES

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.

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

10'-0"

1'-10 1/2"

30'-0"

20'-0"

1'-10 1/2" /

4x4 P.T. POST w/ SIMPSON BCS2-2/4 CAP & ABW44Z

BASE (SEE DETAIL

3/SD3.0) (TYP.)

@ 24" O.C.

W TOP CHORD EXTENSION



14" TJI 110'S OR BCI 4500'S @ 16" o.c. (CANT'D)

PORTAL FRAME
(SEE DETAIL I/SD2.2)

ROOF TRUSSES **②** 24" O.C.

3" O.C. EDGE NAILING



MULHERN+KULI RESIDENTIAL STRUCTURAL ENGINEERIN

2/22/24



M&K project number 126-2207

rawn by: KFG sue date: 02-13-24

> REVISIONS: initial:

LEGEND

SD2.I REFERS TO SD2.IA FOR

LVL/PSL/LSL BEAMS OR SD2.IB

FOR FLITCH BEAMS OR SD2.IC

FOR STEEL BEAMS

- 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.O FOR TYPICAL STRUCTURAL NOTES & SCHEDULES

ENGINEERED BEAM MATERIAL SCHEDULE							
BEAM NUMBER	LVL OPTION	PSL OPTION	LSL OPTION	FLITCH OPTION	STEEL OPTION		
001	(2)13/4"×117/6" - H	3½"xII%" - H	(3)13/4"x113/6" - H	(3)2xl2 + (2) ¼"xll¼" STEEL FLITCH PLATES - H	N/A		
002	(4) 3 <mark>4</mark> "x 4" - F	7"xI4" - F	(5)13/4"×14" - F	(4)2xl2 + (3) ¼"xll½" STEEL FLITCH PLATES - FB	WI2xI9 - F		
003	(2)134"x14" - D	3 ½"x14" - D	(3)13/4"×14" - D	(3)2x12 + (2) %"xIK" STEEL FLITCH PLATES - D	₩8x18 - D		
004	(2)13¼"x14" - F	3½"xl4" - F	(3)194"×14" - F	(2)2xl2 + (I) ½"xli¼" STEEL FLITCH PLATES - FB	WI2xI4 - F		
005	(2)13¼"×16" - H	3 ½"x16" - H	(3)13/4"×16" - H	(3)2xl2 + (2) ¼"xll¼" STEEL FLITCH PLATES - FB	N/A		
006	(2)134"×944" - D	3½"xq¼" - D	(2)134"×114" - D	(2)2xi2 + (i) ¼"xil¼" Steel Flitch Plates - D	W8x10 - 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.

ANS CREEK RAMING OR

AT NEIL'S (MERLOT 1), NC LOT 193 – I RALEIGH, ARM

seal: 2/22/24

MULHERN+KULP

RESIDENTIAL STRUCTURAL ENGINEERING

200 Benedate Ave Builing 4 - Anther, PA 19002

215-04-6001 - mulming-poor

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M&K project number: 126-2207

project mgr: JTF drawn by: KFC issue date: O2-13-24

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ite: initial:

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FARM AT NEIL'S (LOT 193 - MERLOT 1 RALEIGH, NC

S3.0

FRAMING

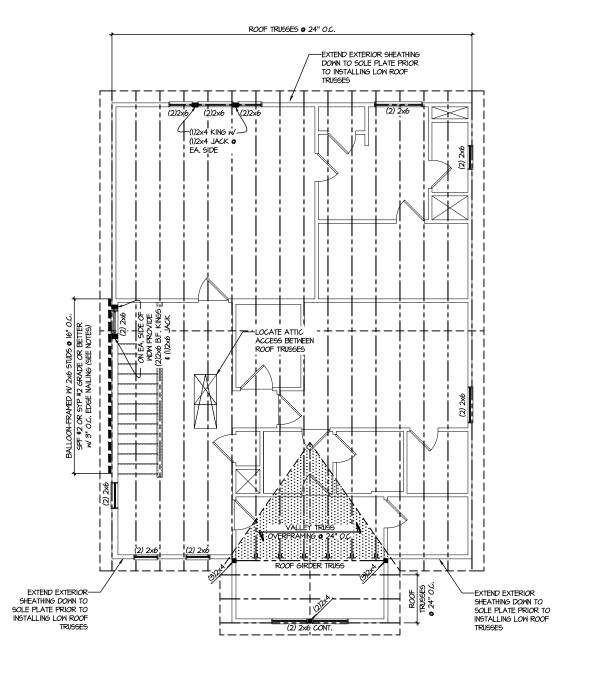
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LEGEND

- 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.

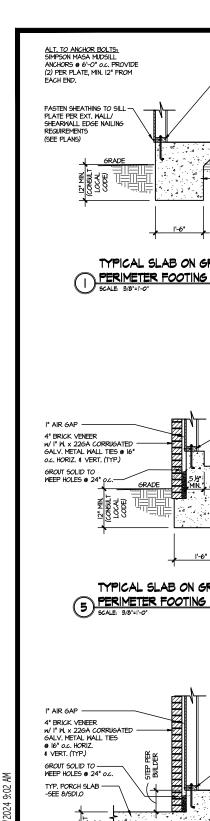
REFER TO SO.O FOR
TYPICAL STRUCTURAL NOTES

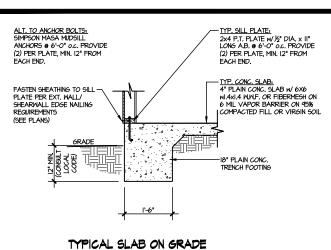
\$ SCHEDULES

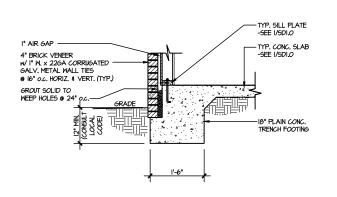


ROOF FRAMING PLAN

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



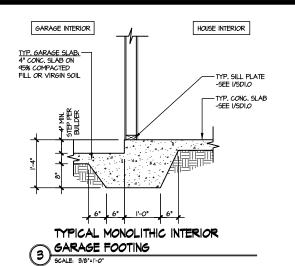


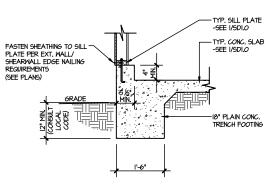


TYPICAL SLAB ON GRADE

PERIMETER FOOTING

SCALE: 3/8"=1"-0"







2/22/24

M&K project number: 126-2207

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TYPICAL SLAB ON GRADE GARAGE

-TYP, SILL PLATE -SEE I/SDI,O

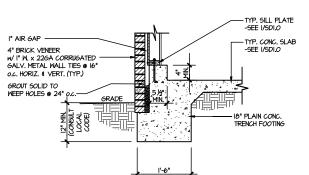
- TYP. CONC. SLAB

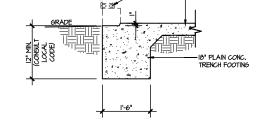
18" PLAIN CONC. TRENCH FOOTING

-SEE I/SDI.O

PERIMETER FOOTING

SCALE: 3/8"=1"-0"





-TYP. SILL PLATE BEYOND -SEE I/SDI.O

-TYP. PORCH SLAB -SEE 4/SDI.O

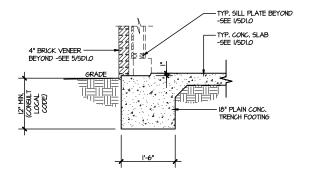
COMPACTED

12" MIN, CONC TRENCH FOOTING

BACKFILL

- TYP. CONC. SLAB

-SEE I/SDI.0



TYPICAL SLAB ON GRADE GARAGE

ENTRY @ PERIMETER FOOTING

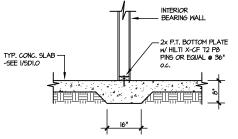


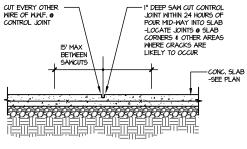
TYPICAL SLAB ON GRADE GARAGE 5 PERIMETER FOOTING SCALE: 3/6"=1"-0"

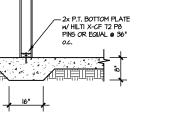
ĔΞ

BACKFILL









TYPICAL SLAB ON GRADE PERIMETER FOOTING @ PORCH/PATIO

TYP, SILL PLATE

- TYP. CONC. SLAB

IS" PLAIN CONC.

-SEE I/SDI.O

-SEE I/SDI.O



TYPICAL THICKENED SLAB @ NITERIOR BEARING WALL

> ALL APPLICABLE AREAS. THESE DETAILS ARE NOT "CUT" ON THE PLANS.

BACKFILL

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

CUT EVERY OTHER WIRE OF W.W.F. @ CONTROL JOINT

TYPICAL CONTROL JOINT SCALE: 9/8"=1"-0" LOCATE @ 15'-O" o.c. MAX, OR CORNERS WHERE CRACKS LIKELY TO DEVELOP

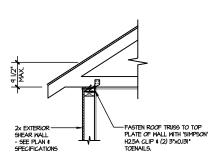
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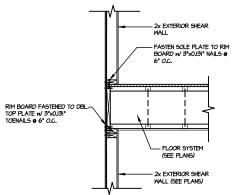
AT NEII Merlot 1 NC

LOT 193 -RALEIGH. ARM

LETTERED DETAILS ARE TYPICAL FOR THIS HOME & SHALL BE IMPLEMENTED IN



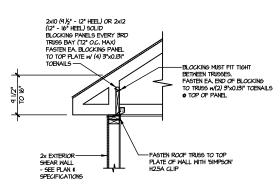
TYPICAL SHEAR TRANSFER DETAIL @ ROOF SCALE: 3/8'1'-0' HEEL HEIGHT LESS THAN 9 ½' NO BLOCKING REOD



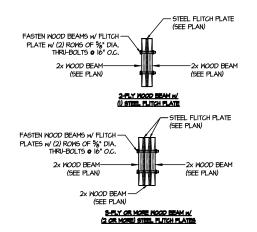
TYPICAL SHEAR TRANSFER DETAIL

BETWEEN FLOORS @ EXTERIOR WALL

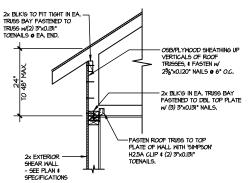
SCALE: 3/8':1'-0'



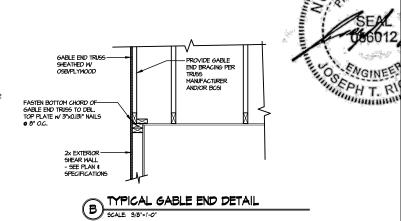
TYPICAL SHEAR TRANSFER DETAIL @ ROOF SCALE: 3/6':1'-0' HEEL HEIGHT BETMEEN 9 1/3' - 16' ELOCKING REQU

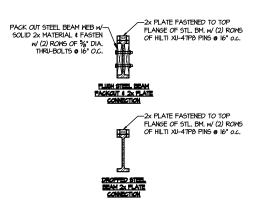


TYPICAL FLITCH BEAM CONNECTION DETAIL

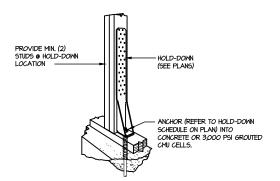














LETTERED DETAILS ARE TYPICAL FOR
THIS HOME & SHALL BE IMPLEMENTED IN
ALL APPLICABLE AREAS. THESE
DETAILS ARE NOT "CUT" ON THE PLANS.

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

2/22/24

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RESIDENTIAL STRUCTURAL ENGINEERING

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M&K project number:

drawn by:

REVISIONS:

126-2207

issue date: 02-13-24

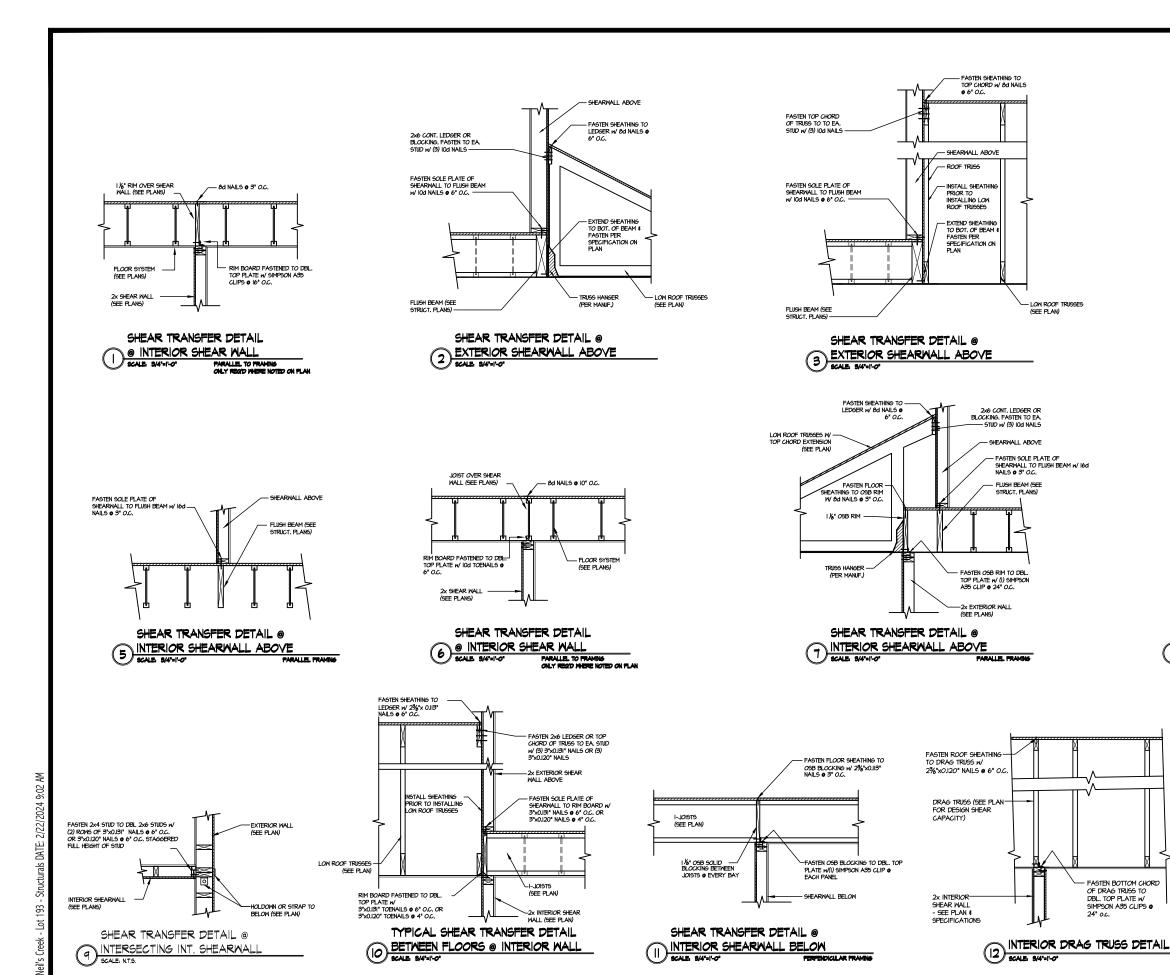
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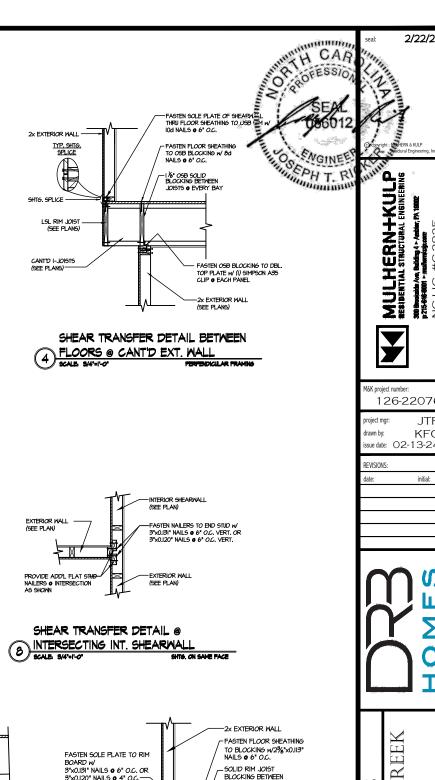
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FRAMING DETAILS
FARM AT NEIL'S CREEI
LOT 193 - MERLOT 1
RALEIGH, NC

sheet:





JOISTS @ EVERY BAY

SHEAR TRANSFER DETAIL @

CANT'D EXTERIOR WALL

- FASTEN BLOCKING TO SILL PLATE w/ (I) SIMPSON A35 CLIP • EACH PANEL

-2x P.T. SILL PLATE

(SEE FND, DETAILS)

3"x0.120" NAILS @ 4" O.C.

CANT'D FLOOR JOISTS (SEE PLANS)

RIM JOIST

 \Box \tilde{N} AT NEIL!
MERLOT 1 LOT 193 -RALEIGH, ARM

2/22/24

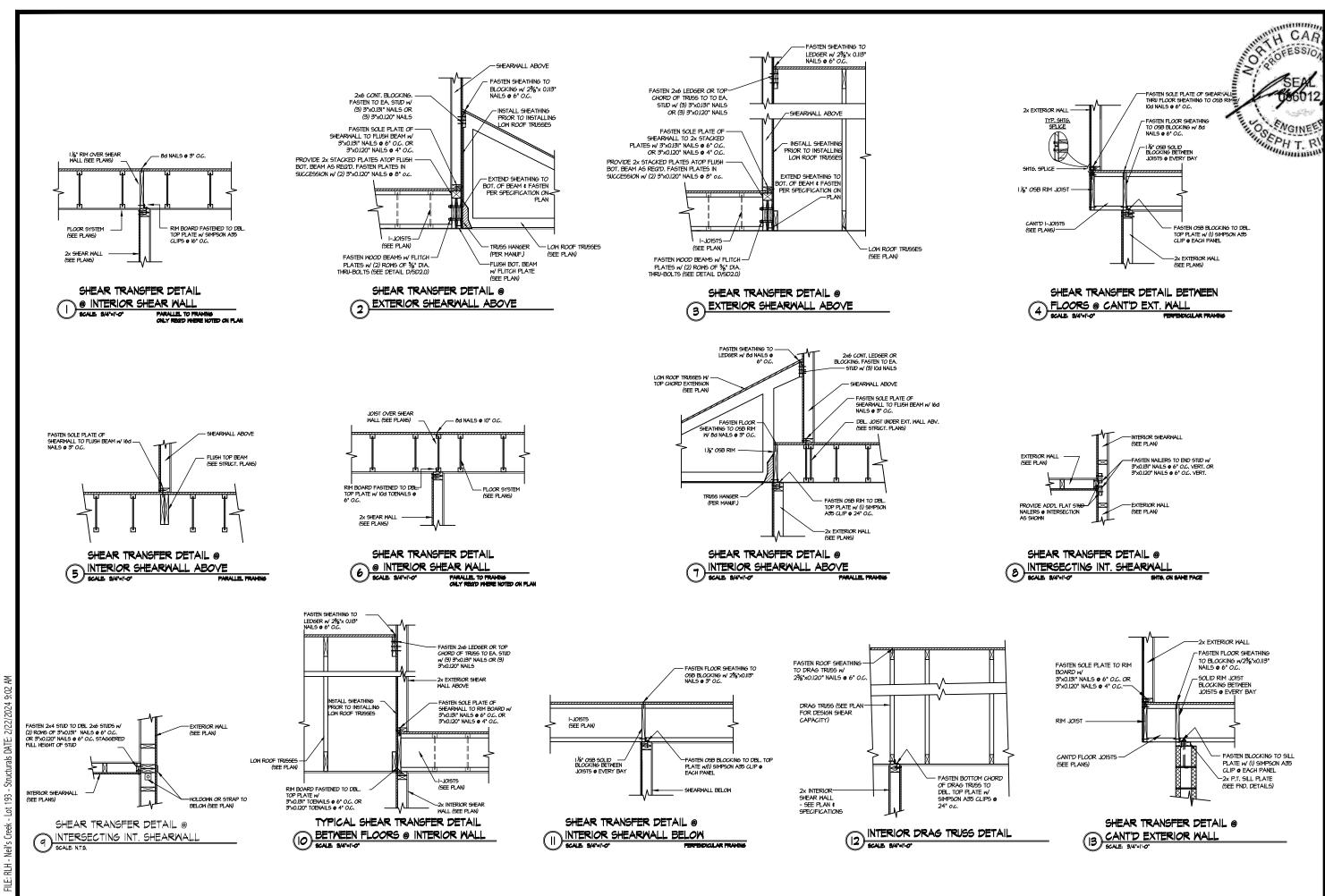
STRUCTURAL ENGINEE

126-2207

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SD2.1A



MACHERING

BESIDENTIAL STRUCTURAL ENGINEERING

126-220-70

Applications Avg. Buildog + Austral, 19, 1800

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Son Brought Avg. Buildog + Austral, 19, 1800

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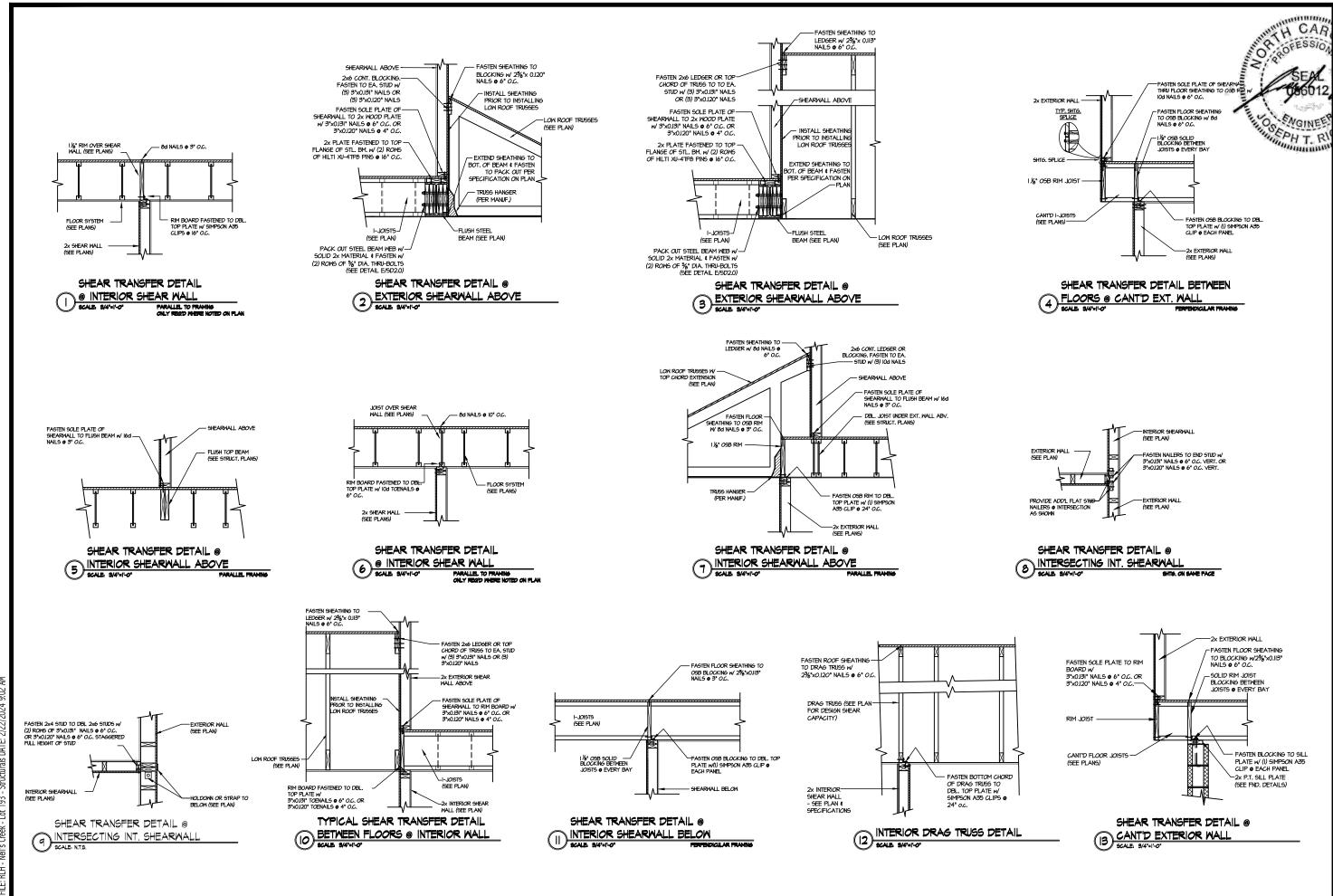
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HOMES

FARM AT NEIL'S CRE LOT 193 - MERLOT 1 RALEIGH, NC

SD2.1B



EIL AT NE MERLOT Ü LOT 193 -RALEIGH, ARM

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M&K project number: 126-2207

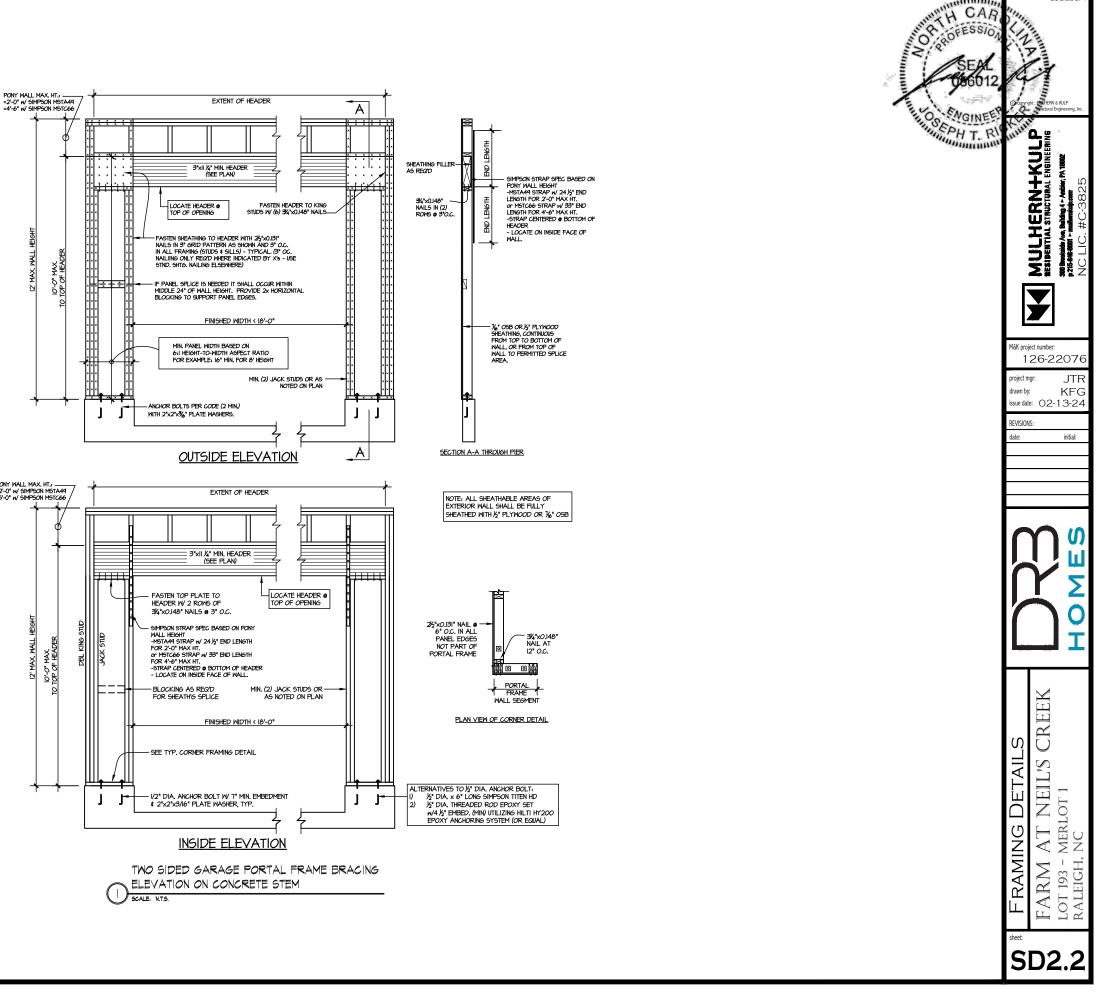
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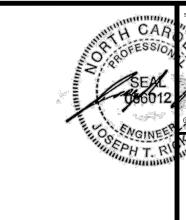
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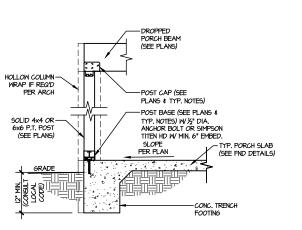
SD2.1C



2/22/24

E: RLH - Neil's Creek - Lot 193 - Structurals DATE: 2/22/2024 9:02 AM





TYPICAL PORCH
POST CONNECTION DETAIL
SCALE: NONE SLAB ON GRADE SHOW SLAB ON GRADE SHOWN (SIM. @ CRAWL & BSMT.)

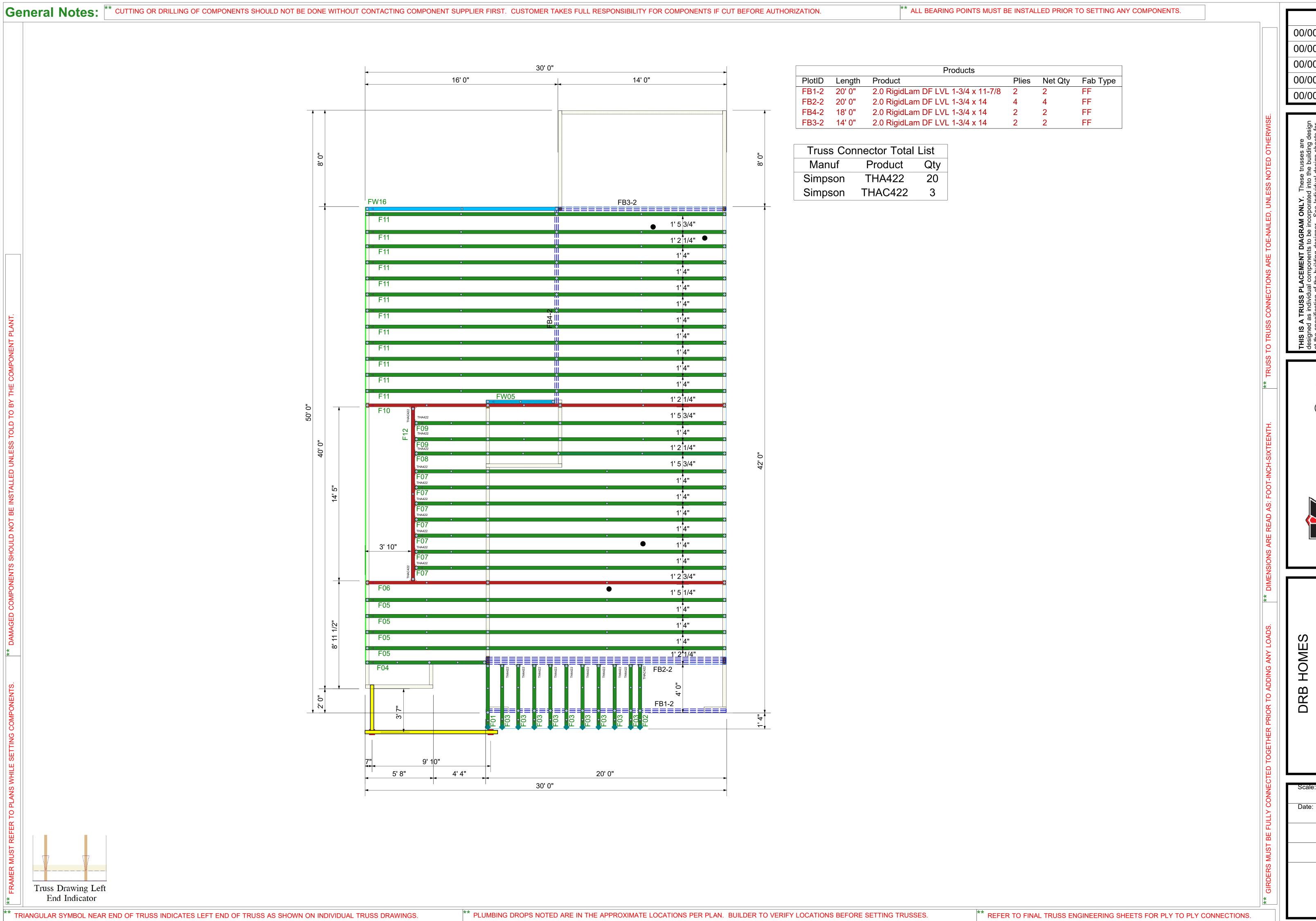
MULHERNHKULP RESIDENTIAL STRUCTURAL ENGINEERING SURMICHES AND DESIGNS AND THE THREE Y

2/22/24

M&K project number: 126-22076

drawn by: KFG issue date: 02-13-24

FARM AT NEIL'S CREEK Lot 193 - Merlot 1 Raleigh, nc



Revisions 00/00/00 Name 00/00/00 Name 00/00/00 Name 00/00/00 Name

00/00/00 Name

2/15/2024 Designer: ND Project Number: 24020063 Sheet Number:

General Notes:



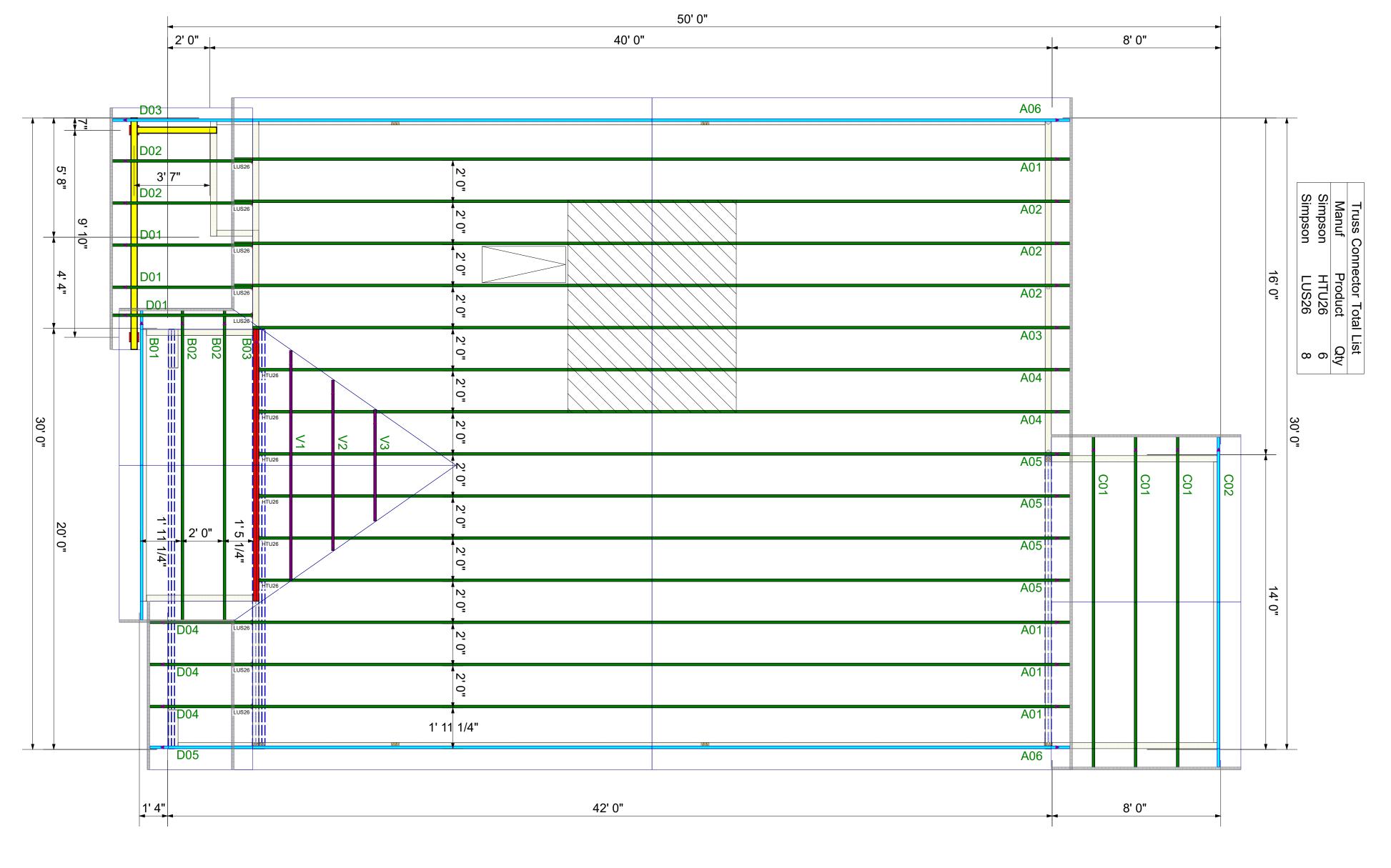
193 FARM AT NEILLS CREEK MERLOT 1

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'Onifrio Drive: Madison, WI 53179

00/00/00	00/00/00	00/00/00	00/00/00	00/00/00	Revisions
Name	Name	Name	Name	Name	sions



** 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.

2/15/2024

Designer:
ND Project Number: 24020063
Sheet Number: NTS

JMBING 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

Drive: Madison, WI 53179