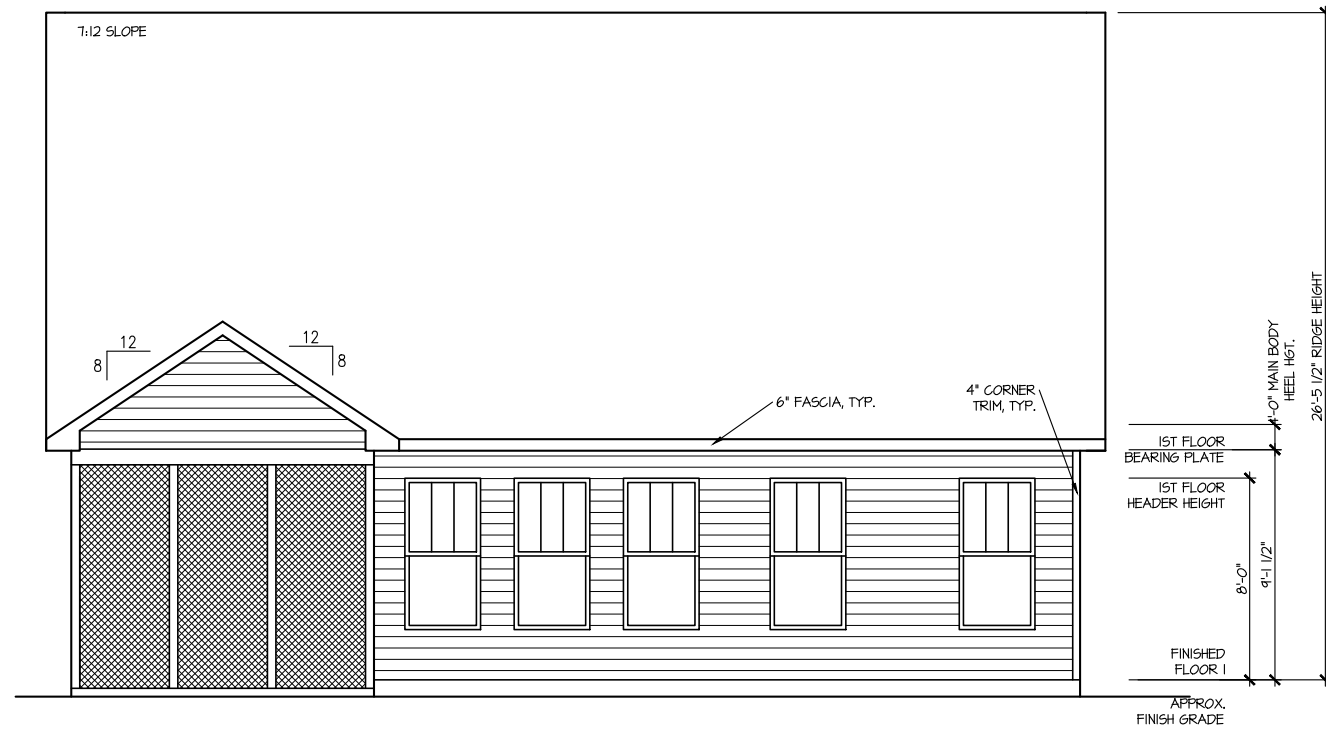


FRONT ELEVATION 6

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



REAR ELEVATION 6

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

MASTER PLAN INFORMATION

REVISION DATE

UPDATED DATE

R3-RALE 10-15-19

06-11-21

DRAWN BY:

ITS

DATE:

03/10/2022

PLAN NO.

1777

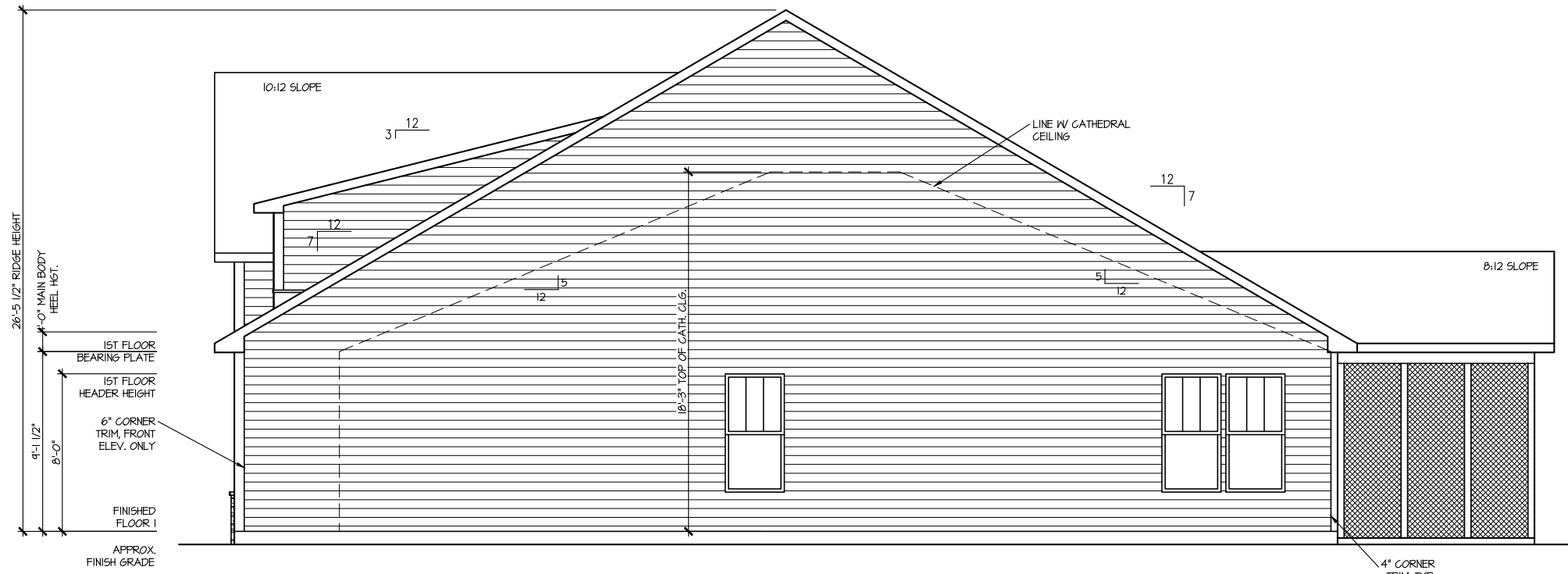


HOUSE NAME:
COOPER 3

DRAWING TITLE
FRONT & REAR ELEVATIONS

SHEET No.

A1.1



RIGHT ELEVATION 6

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



LEFT ELEVATION 6

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

UPDATED DATE
06-11-21

REVISION DATE
R3-RALE 10-15-19

DRAWN BY:
ITS

DATE:
03/10/2022

PLAN NO.
1777



HOUSE NAME:
COOPER 3
DRAWING TITLE
RIGHT & LEFT ELEVATIONS

SHEET No.

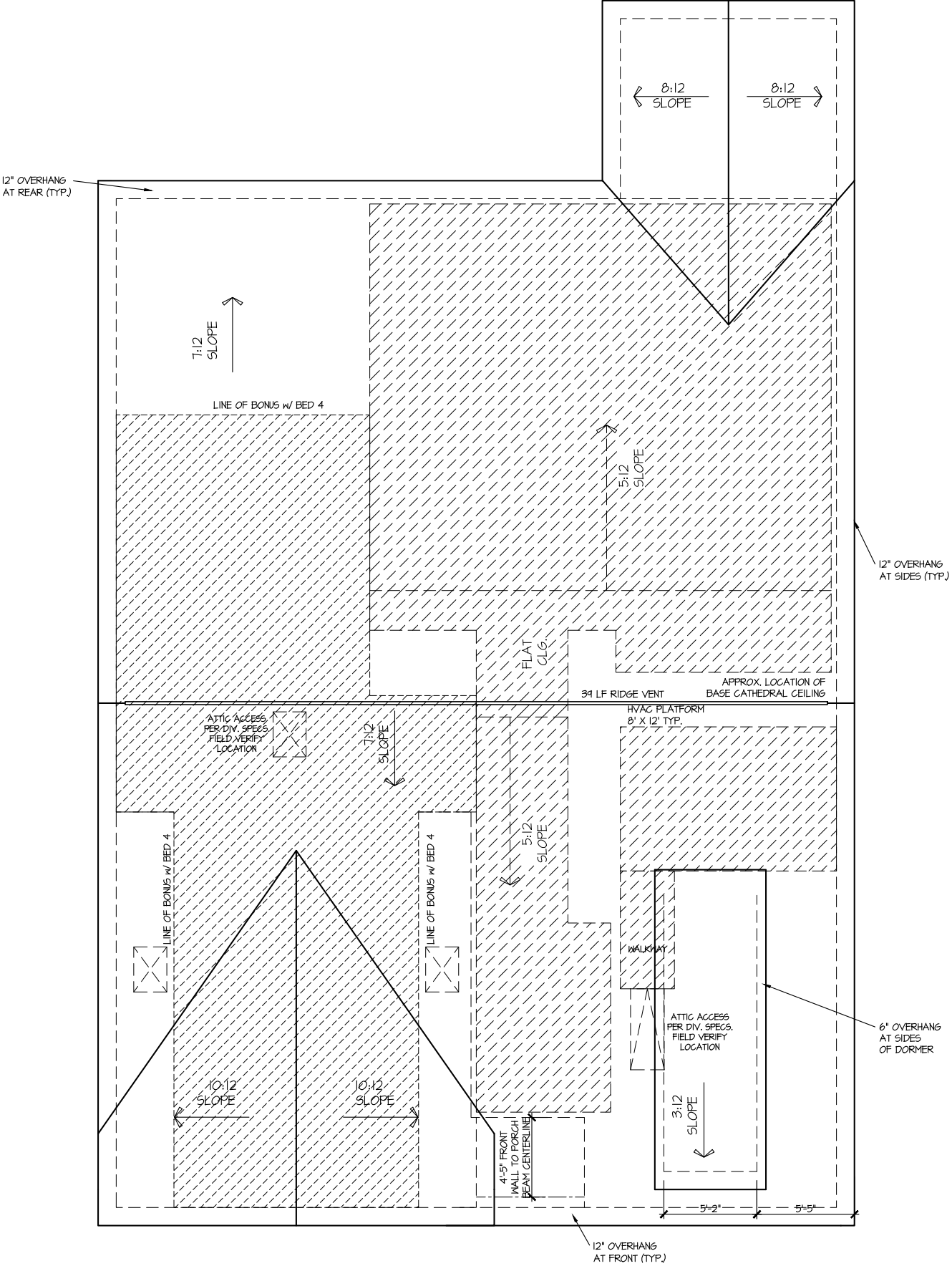
A1.2

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 = 3.86 - 6.18 SQ. FT. (1 TO 300)
 NET FREE AREA OF VENTED SOFFIT = 5.1 SQ. IN. / LINEAR FT.
 NET FREE AREA OF RIDGE VENT = 18 SQ. IN. / LINEAR FT.

LOWER VENTING (BOTTOM 2/3 SDS)
 14 LINEAR FEET OF SOFFIT X 5.1 SQ. IN. = 2.49 SQ. FT.
 UPPER VENTING (TOP 1/3 SDS)
 34 LINEAR FEET OF RIDGE X 18 SQ. IN. = 4.08 SQ. FT.
 4.88 SQ. FT. BETWEEN 50% - 80%
 (1 TO 300 ALLOWED)

TOTAL ROOF VENTILATION: 7.81 SQ. FT. > 7.72 SQ. FT. (REQ'D)



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

FILE: Lot 00.0097.dwg DATE: 3/10/2022

MASTER PLAN INFORMATION		
REVISION	DATE	UPDATED DATE
R3-RALE	10-15-19	06-11-21

DRAWN BY: ITS

DATE: 03/10/2022

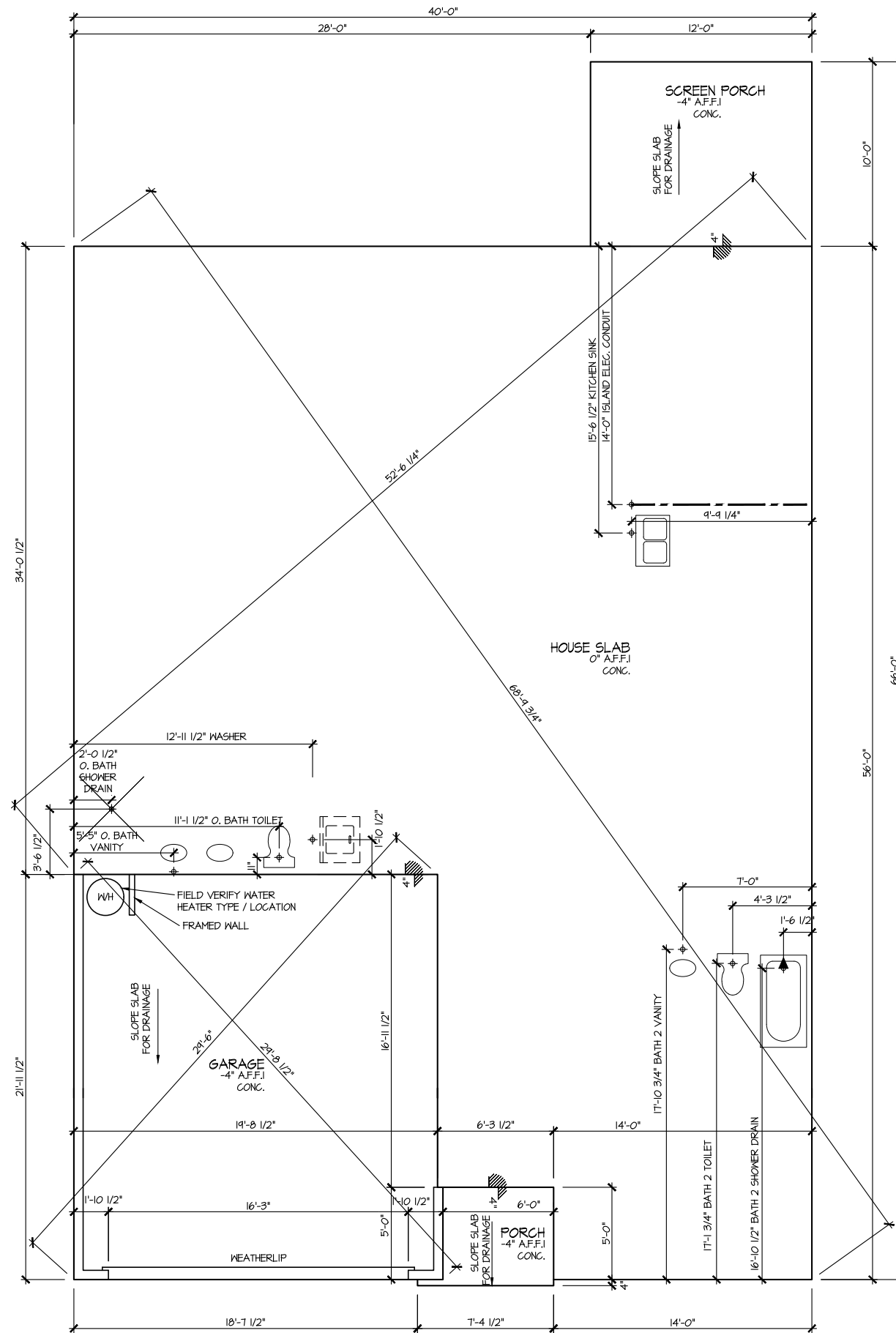
PLAN NO.: 1777

DRB GROUP
 DRB BUILDERS
 DRB CONSULTING

HOUSE NAME: **COOPER 3**

DRAWING TITLE: **ROOF PLAN**

SHEET No. **A.13**



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

MASTER PLAN INFORMATION

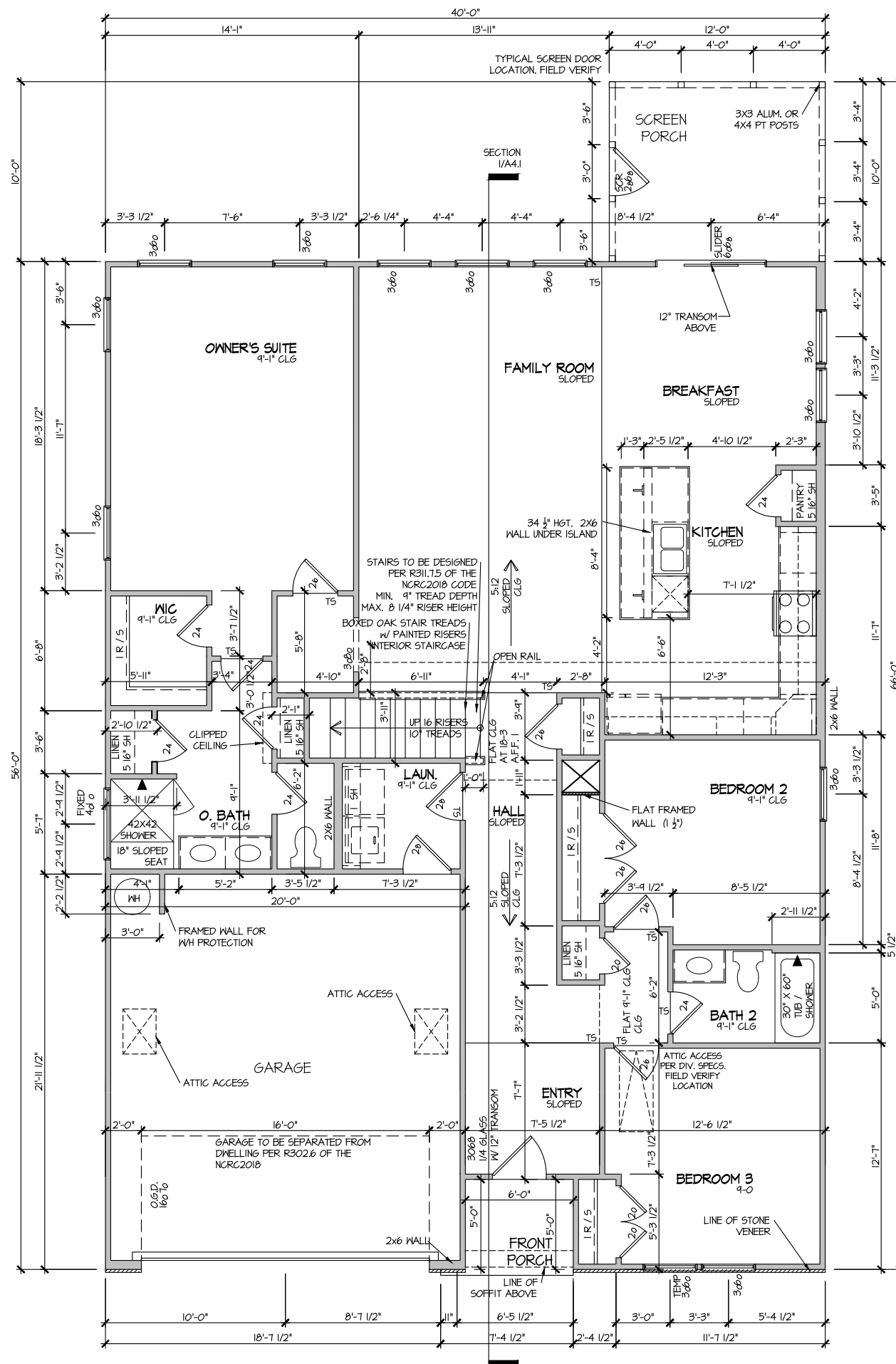
REVISION	DATE	UPDATED DATE
R3-RALE	10-15-19	06-11-21

DRAWN BY:
ITS
DATE:
03/10/2022
PLAN NO.
1777



HOUSE NAME:
COOPER 3
DRAWING TITLE
SLAB PLAN

SHEET No.
A2.1



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

MASTER PLAN INFORMATION

REVISION
 R3-RALE

DATE
 10-15-19

UPDATED DATE
 06-11-21

DRAWN BY:
 ITS

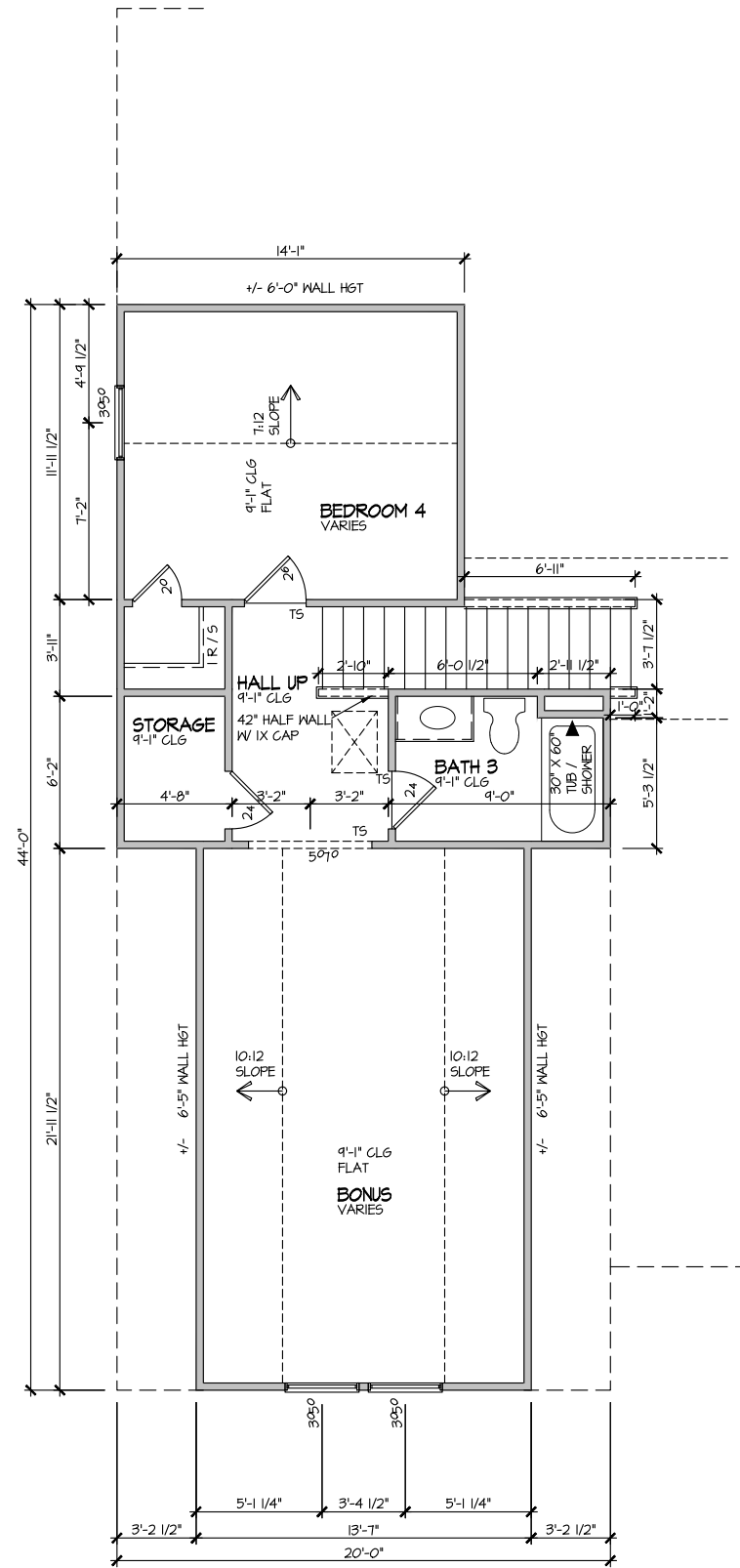
DATE:
 03/10/2022

PLAN NO.
 1777



HOUSE NAME:
COOPER 3
 DRAWING TITLE
FIRST FLOOR PLAN

SHEET No.
A3.1



**ELEVATION 6
SECOND FLOOR PLAN**

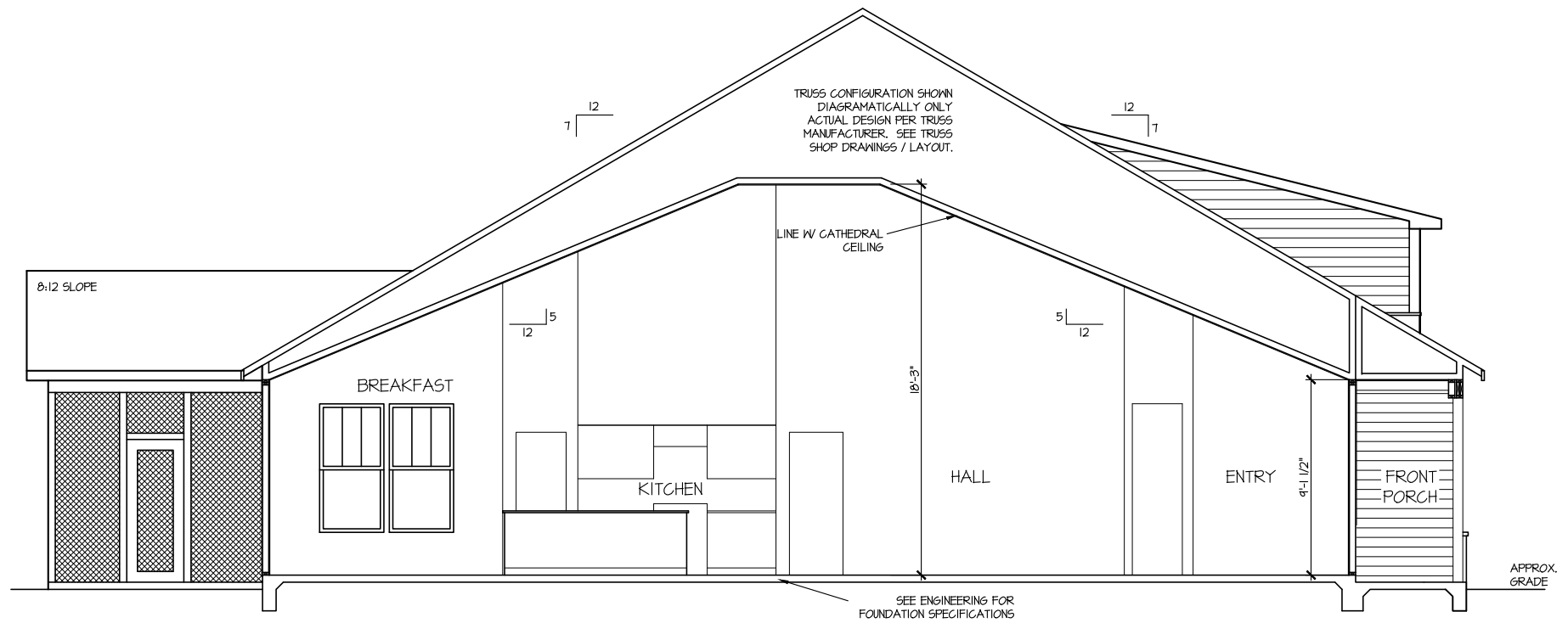
SCALE: 1/8" = 1'-0"

MASTER PLAN INFORMATION	
REVISION	DATE
R3-RALE	10-15-19
UPDATED DATE	06-11-21

DRAWN BY:	ITS
DATE:	03/10/2022
PLAN NO.	1777

HOUSE NAME:	COOPER 3
DRAWING TITLE	SECOND FLOOR PLAN

SHEET No.	A3.2
-----------	------



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

MASTER PLAN INFORMATION	
REVISION	DATE
R3-RALE	10-15-19
UPDATED DATE	06-11-21

DRAWN BY: ITS
 DATE: 03/10/2022
 PLAN NO. 1777

DRB GROUP
 DRB GROUP
 FIELDING
 DRB Coastal
 DRB
 DRB
 DRB

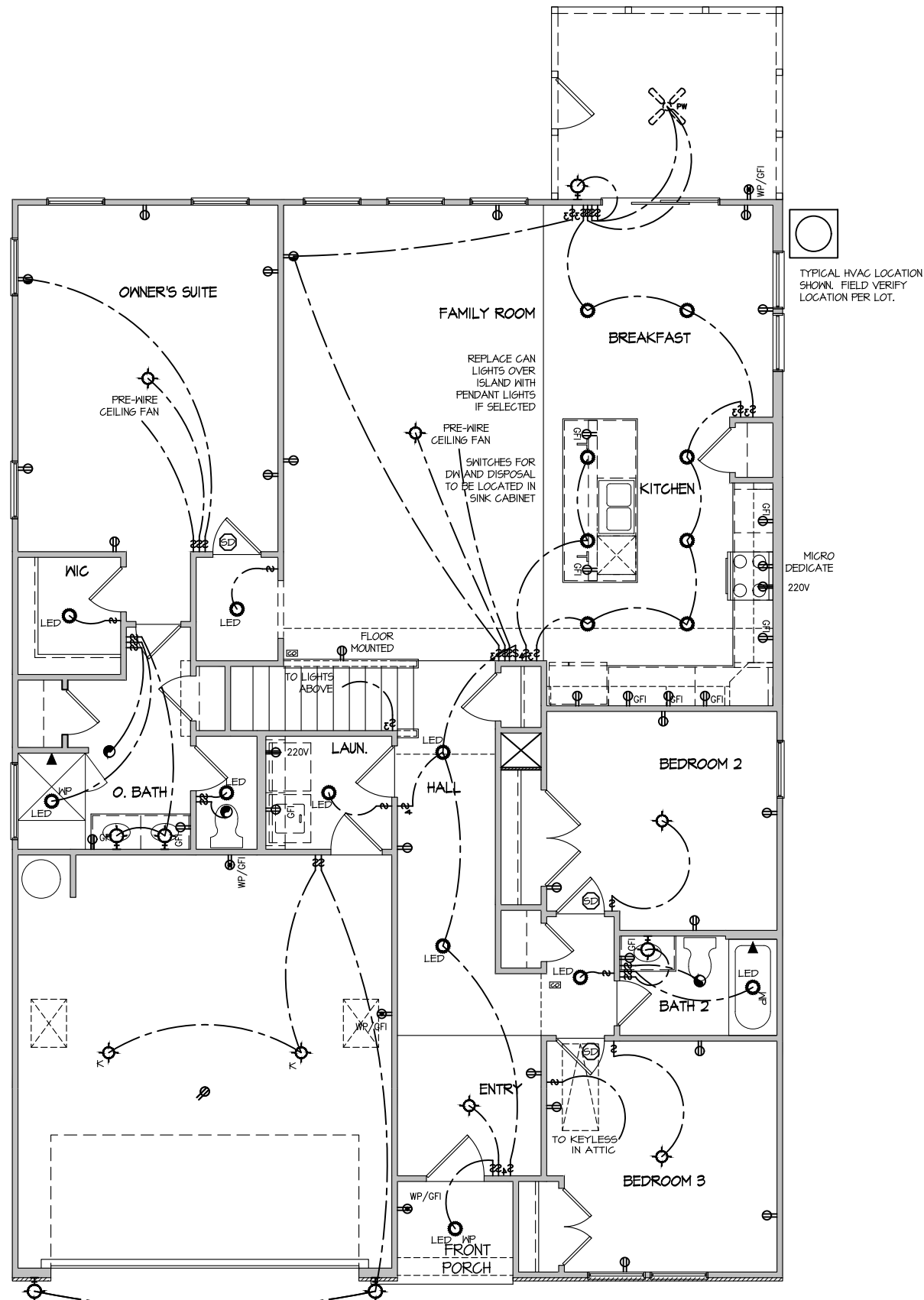
HOUSE NAME: COOPER 3
 DRAWING TITLE: BUILDING SECTION

SHEET No. A4.1

ELECTRICAL LEGEND

- ⊘ SINGLE POLE SWITCH
- ⊘₃ THREE WAY SWITCH
- ⊘₄ FOUR WAY SWITCH
- ⊕ DUPLEX AFCI RECEPTACLE
- ⊕_B DUPLEX AFCI RECEPTACLE - BOTTOM HALF SWITCHED
- ⊕_F DUPLEX AFCI RECEPTACLE - FLOOR MOUNTED
- 220V ⊕ RECEPTACLE - 220V
- ⊕_{GFI} DUPLEX AFCI RECEPTACLE - GFI
- ⊕_{WP/GFI} DUPLEX AFCI RECEPTACLE - WATERPROOF GFI
- ⊕_{SD} SMOKE DETECTOR - WIRED IN SERIES
- ⊕_{EF} EXHAUST FAN MOTOR
- ⊕_{CO} CO DETECTOR
- ⊕_{DC} DOOR CHIME
- ⊕_{LM} LIGHT FIXTURE - WALL MOUNTED
- ⊕_{LC} LIGHT FIXTURE - CEILING MOUNTED
- ⊕_{RC} LIGHT FIXTURE - RECESSED CAN
- ⊕_{LSM} LIGHT FIXTURE - LED SURFACE MOUNTED
- ⊕_{PL} FULLCHAIN LAMPHOLDER
- ⊕_K 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
R3-RALE	10-15-19
UPDATED DATE	06-11-21

DRAWN BY:	ITS
DATE:	03/10/2022
PLAN NO.	1777

DRB GROUP
DRB GROUP
FIELDING GROUP
DRB Coastal
DAN RYAN BUILDERS

HOUSE NAME:	COOPER 3
DRAWING TITLE	FIRST FLOOR ELECTRICAL

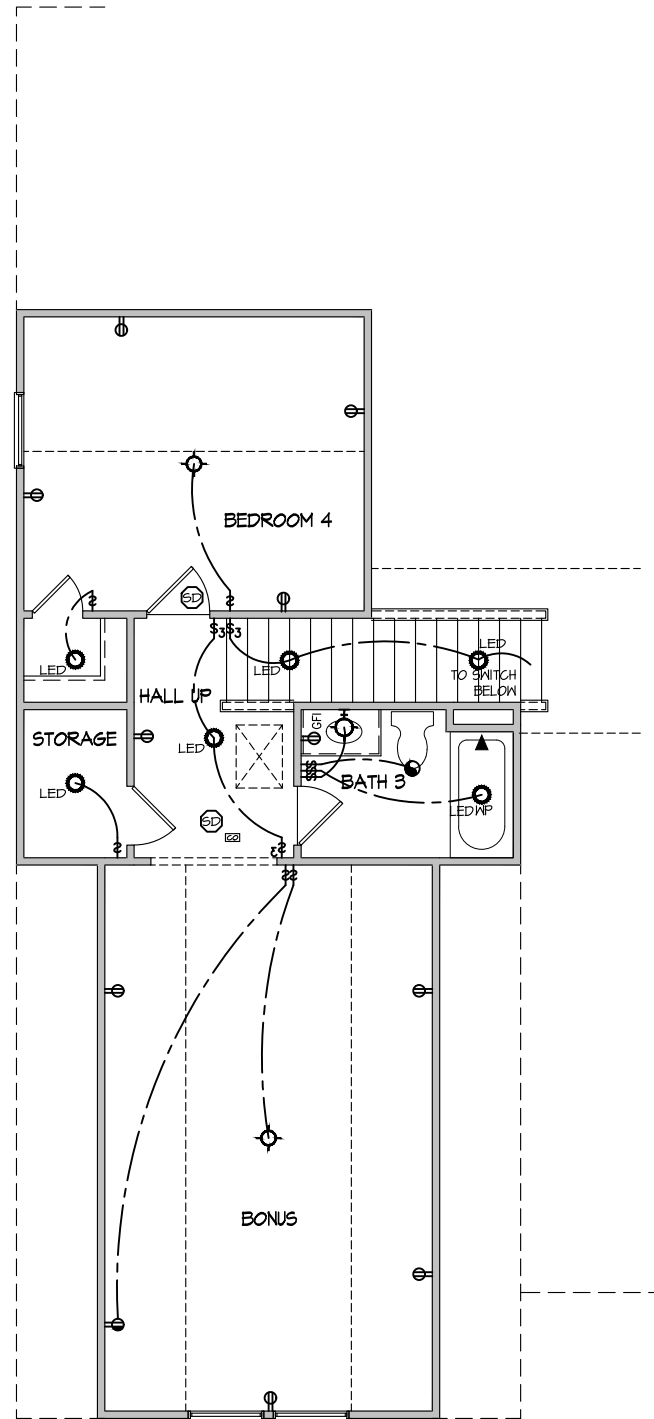
SHEET No.	E.I.
-----------	------

FILE: Lot 00.0097.dwg DATE: 3/10/2022

ELECTRICAL LEGEND

- ⊕ SINGLE POLE SWITCH
- ⊕₃ THREE WAY SWITCH
- ⊕₄ FOUR WAY SWITCH
- ⊕- DUPLEX AFCI RECEPTACLE
- ⊕- DUPLEX AFCI RECEPTACLE - BOTTOM HALF SWITCHED
- ⊕- DUPLEX AFCI RECEPTACLE - FLOOR MOUNTED
- 220V ⊕- RECEPTACLE - 220V
- GF ⊕- DUPLEX AFCI RECEPTACLE - GFI
- WP/GF ⊕- 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
SECOND FLOOR - ELEV. 6**
SCALE: 1/8" = 1'-0"

MASTER PLAN INFORMATION

REVISION	DATE	UPDATED DATE
R3-RALE	10-15-19	06-11-21

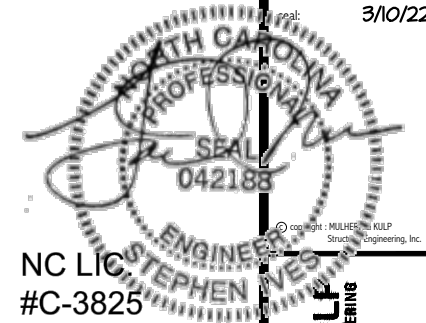
DRAWN BY: ITS

DATE: 03/10/2022

PLAN NO. 1777

HOUSE NAME: **COOPER 3**
DRAWING TITLE: **SECOND FLOOR ELECTRICAL**

SHEET No. **E1.2**



NC LIC #C-3825



M&K project number: 126-21030
project mgr: JTR
drawn by: KL
issue date: 08-20-21
REVISIONS:
date: initial:
03/09/22 JTS



STRUCTURAL NOTES
COOPER 3 MODEL
RALEIGH, NC

sheet: **50.0**

LATERAL BRACING & SHEAR WALL SHEATHING SPECIFICATIONS

THIS MODEL HAS BEEN DESIGNED TO RESIST LATERAL FORCES RESULTING FROM:
120 MPH WIND IN 2018 NC SBC: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 R301.3 OF THE 2018 NC SBC: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 NC SBC:RC SECTION R802.11.1.1. THIS MODEL HAS BEEN DETAILED WHERE REQUIRED & ENGINEERED TO RESIST THE WIND UPLIFT LOAD PATH PER SECTIONS R602.3.5 & R802.11.

EXT. WALL SHEATHING SPECIFICATION

- 7/16" OSB OR 15/32" PLYWOOD: FASTEN SHEATHING W/ 8d NAILS @ 6" O.C. AT EDGES & @ 12" O.C. IN THE PANEL FIELD. TYP. UNO.
- HORIZONTAL BLOCKING OF EXT. WALLS/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/ 8d NAILS @ 6" O.C. AT ALL PANEL EDGES AND 12" O.C. IN THE PANEL FIELD OR 1 1/2" 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/ 10d NAILS @ 4" O.C. (THRU ONE SIDE ONLY)
- INDICATES EXTENT OF INT. OSB SHEARWALL OR 3" O.C. OSB SHEARWALL.
- 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 MKR FOR MARBLE FLOOR DESIGNS)
- AT I-JOIST FLOORS, PROVIDE 1 1/8" MIN. OSB RIM BOARD.
- METAL HANGERS SHALL BE SPECIFIED BY MANUFACTURER, UNO.
- I-JOIST/TRUSS SHOP DWGS. SHALL BE SUBMITTED TO ARCH. & ENG. FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY.
- 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.

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 H25T CLIP (OR APPROVED EQUAL) @ ALL BEARING POINTS. PROVIDE (2) H25T CLIPS AT 2-PLY GIRDER TRUSSES, (3) H25T CLIPS AT 3-PLY GIRDER TRUSSES & ROOF BEAMS - AT ALL BEARING POINTS.
- METAL HANGERS SHALL BE SPECIFIED BY THE MANUFACTURER, UNO.
- ROOF TRUSS SHOP DWGS. SHALL BE SUBMITTED TO ARCH. & ENG. FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY.
- ERECT AND INSTALL ROOF TRUSSES PER WTCA & TPI'S BCSI 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 @ 19.2" 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.)
HD-3	SIMPSON STHD14RJ HOLD-DOWN

ALTERNATIVE TO SSTB24 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 3/4" OF EDGE OF FOUNDATION.

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.

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 SAWN) 10 PSF T.C., 5 PSF B.C. (TRUSSES) (ADD'L 10 PSF @ TILE)
 - LATERAL 120 MPH, EXPOSURE B. SEISMIC A/B.
 - SOIL 2,000 PSF ASSUMED ALLOWABLE BEARING PRESSURE (TO BE VERIFIED BY BUILDER)

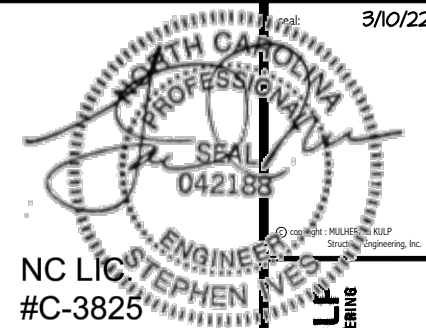
GENERAL FRAMING

- 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 5YP "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 (SPP) 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 TO MEET OR EXCEED THE FOLLOWING:
 - LVL - Fb=2325 psi; Fv=310 psi; E=1.55x10⁶ psi
 - LVL - Fb=2600 psi; Fv=285 psi; E=2.0x10⁶ psi
- 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" 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 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 1/4"x6" SIMPSON SDS SCREWS (OR 6 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 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 BC52-2/4 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., 1" 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 5YP, "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: 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:
 - 9' OR 10' HEIGHT (AS NOTED ON PLANS)
 - TALLER WALLS MUST BE ENGINEERED.
 - NOMINAL WIDTH (1 1/2" FOR 10" THICK WALL).
- BASEMENT WALL DESIGN IS BASED ON 60 PCF BACKFILL SOIL TYPE CLASSIFICATIONS (SC, ML-CI, 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 1% AIR ENTRAINMENT.
- ALL FOOTINGS SHALL BEAR AT LEAST 12" BELOW FINISH GRADE.
- FOOTINGS AND SLABS ON GRADE SHALL BEAR ON VIRGIN SOIL OR 15% 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 (Fm=1500 psi). MORTAR SHALL BE ASTM C270, TYPE S. CMU DESIGN PER ACI 530 & 530.1.
- CMU FOUNDATION WALLS SHALL HAVE "DUR-O-WALL" HORIZONTAL JOINT REINFORCEMENT (OR EQUAL) - 1 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.



MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
300 Beavertide Ave., Building 4 - Amber, PA 19002
P 215-646-8800 • mulhern+kulp.com

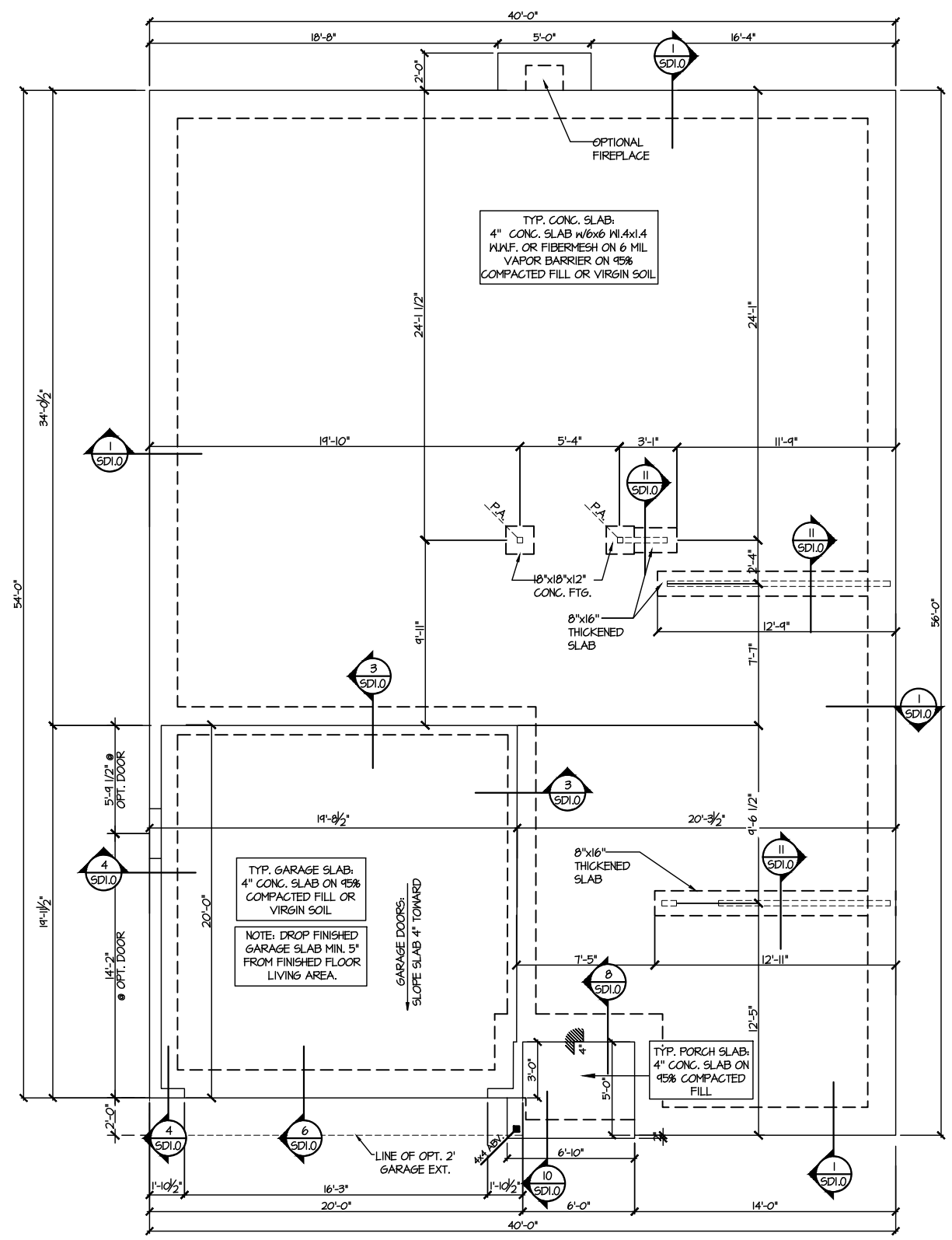
M&K project number:
126-21030
project mgr: JTR
drawn by: KL
issue date: 08-20-21

REVISIONS:
date: initial:
03/09/22 JTS

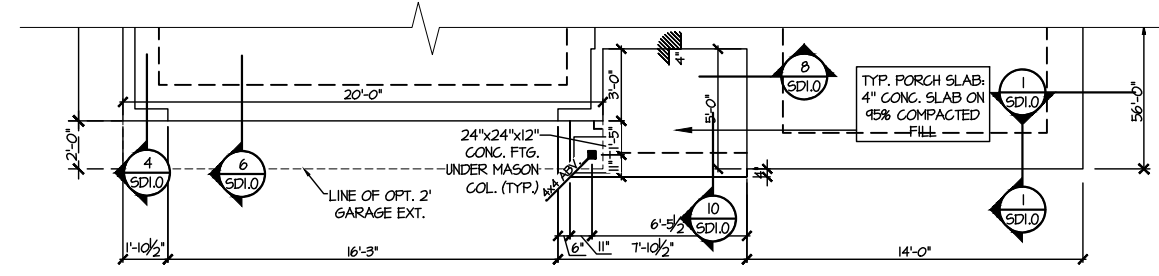


FOUNDATION PLANS
COOPER 3 MODEL
RALEIGH, NC

sheet: LEFT HAND
S1.0



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



3 PARTIAL MONO SLAB FOUNDATION PLAN
SCALE: 1/8"=1'-0" ELEVATION #3

2' Garage Extension

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.

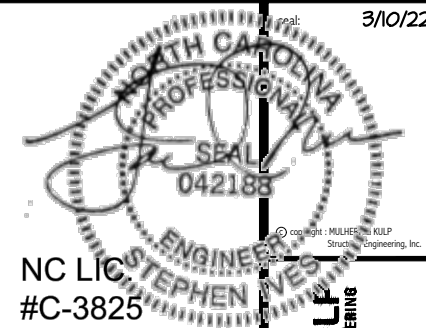
REFER TO SO.O FOR TYPICAL STRUCTURAL NOTES & SCHEDULES

LEGEND

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

• [Symbol] METAL HANGER

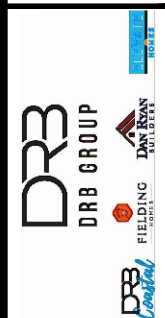
REFER TO 50.0 FOR
TYPICAL STRUCTURAL NOTES
& SCHEDULES



NC LIC #C-3825

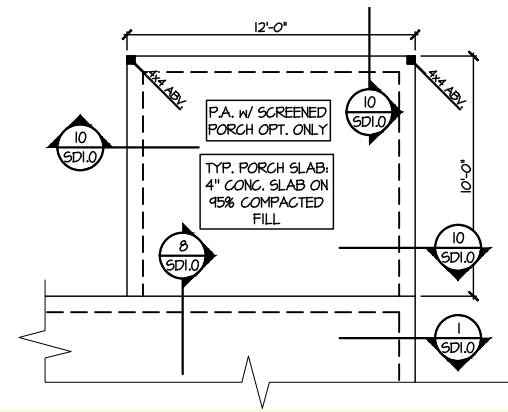
MULHERN+KULF
RESIDENTIAL STRUCTURAL ENGINEERING
300 Beaverton Ave., Building 4 - Asheville, PA 19002
P 215-506-8801 • mulhern+kulf.com

M&K project number:	126-21030
project mgr:	JTR
drawn by:	KL
issue date:	08-20-21
REVISIONS:	
date:	initial:
03/09/22	JTS

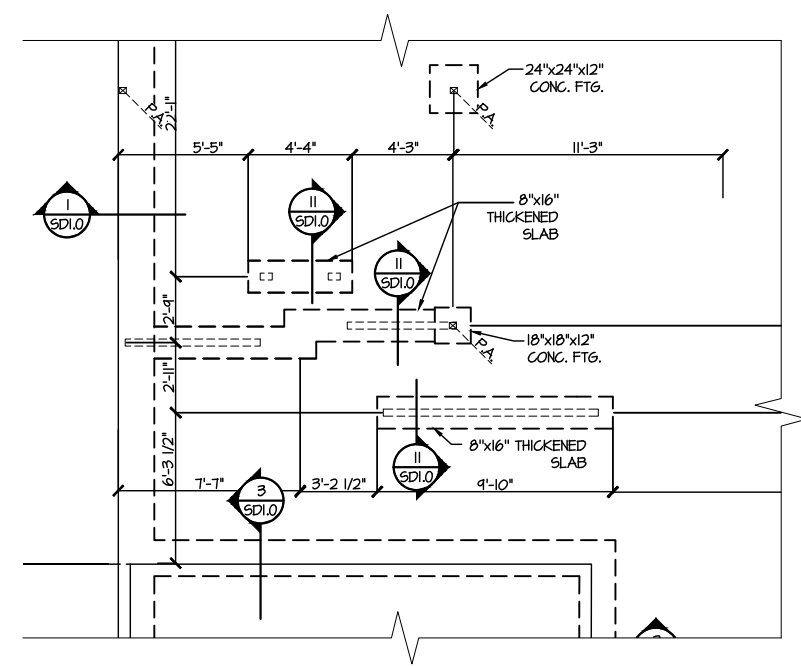


FOUNDATION PLANS
COOPER 3 MODEL
RALEIGH, NC

sheet LEFT HAND
S1.1



3 PARTIAL MONO SLAB FOUNDATION PLAN
SCALE: 1/8"=1'-0" OPTIONAL PATIO & SCREENED PORCH

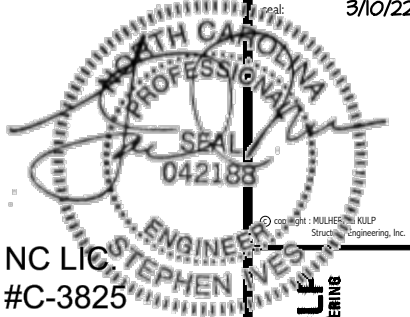


2 PARTIAL MONO SLAB FOUNDATION PLAN
OPT. BONUS ROOM W/ BEDROOM
SCALE: 1/8"=1'-0" ELEV. #1 SHOWN - ALL ELEV. SIM.

REFER TO S0.0 FOR
TYPICAL STRUCTURAL NOTES
& SCHEDULES

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.



MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
330 Beaveshole Ave, Building 4 - Asheville, PA 19802
P 215-546-8891 • mulhern+kulp.com

M&K project number:
126-21030

project mgr: JTR
drawn by: KL
issue date: 08-20-21

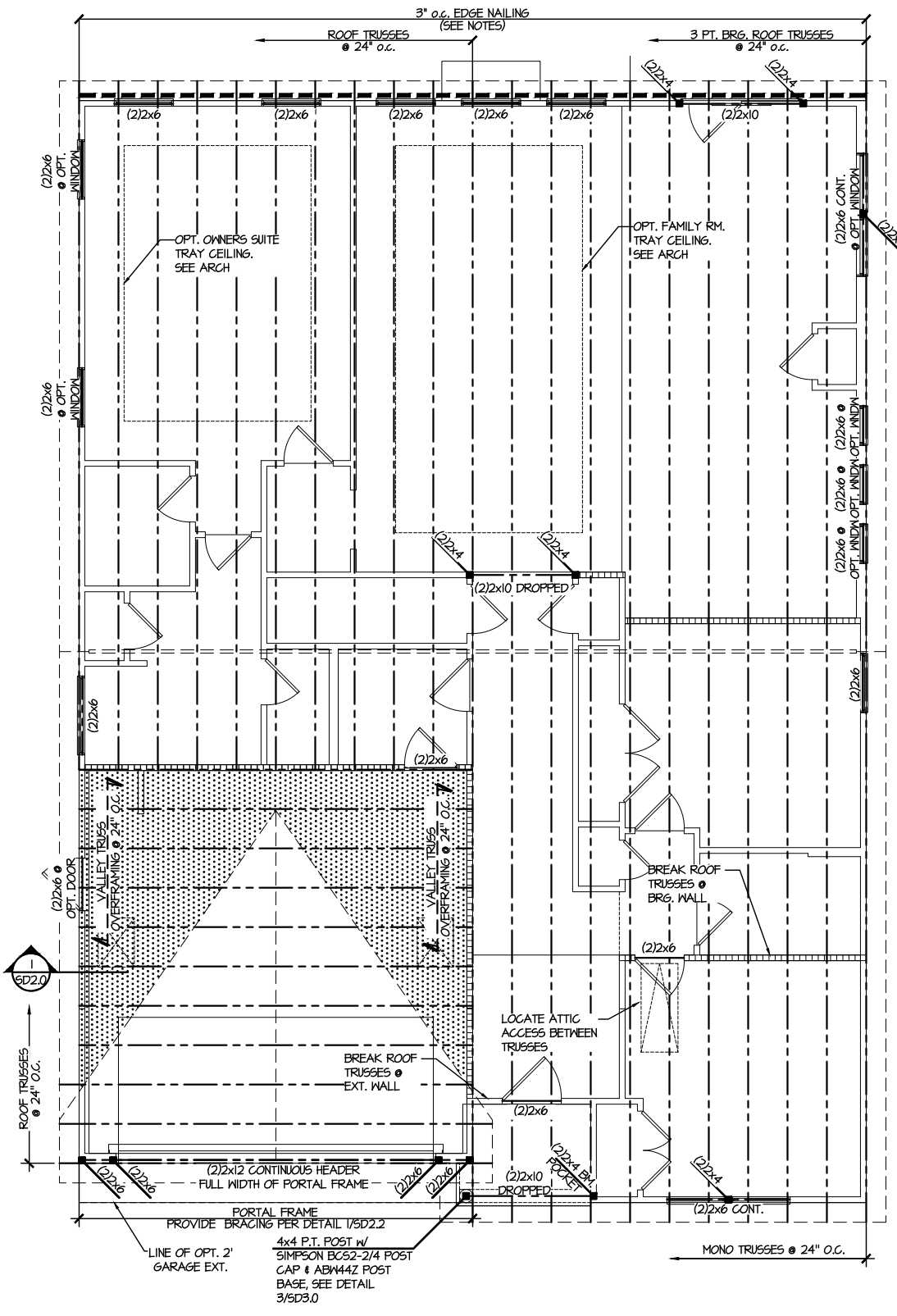
REVISIONS:
date: initial:
03/09/22 JTS



ROOF FRAMING PLANS
COOPER 3 MODEL
RALEIGH, NC

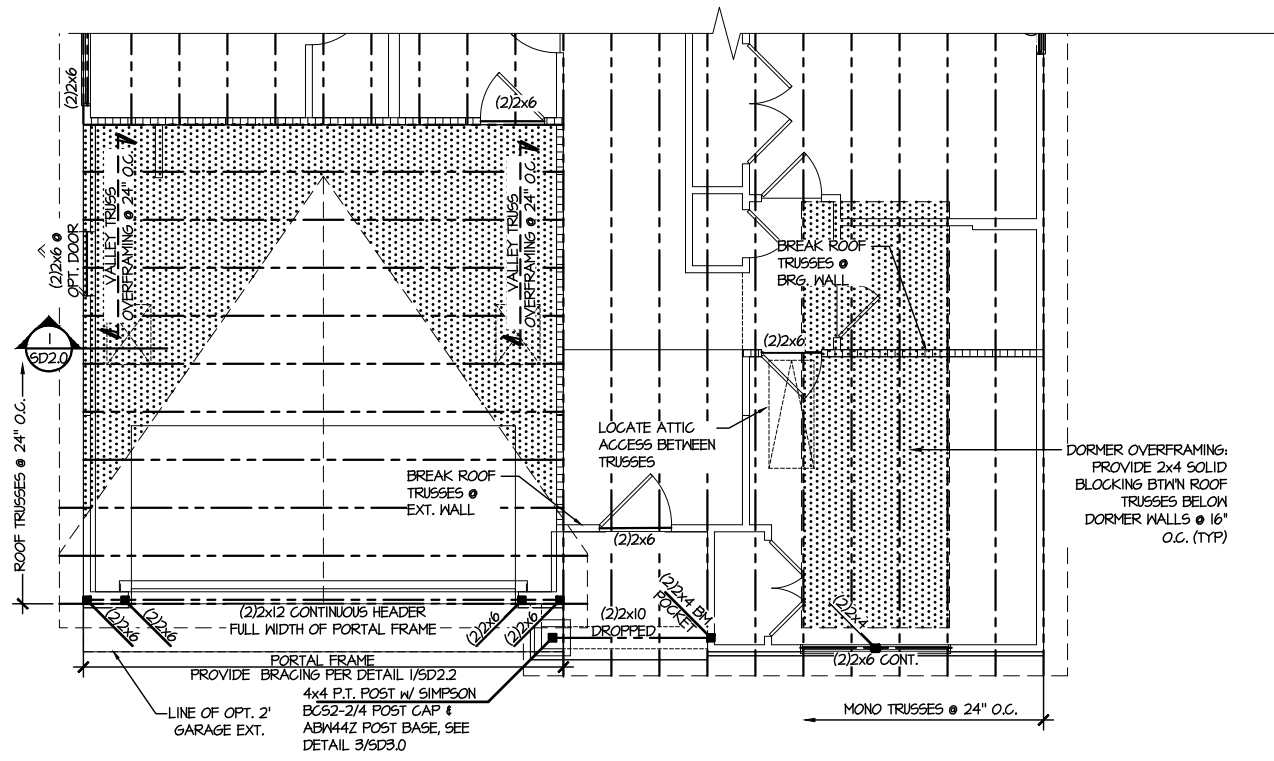
sheet LEFT HAND

S4.0



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

ELEVATION #1
(SIM. & OPT.
DELUXE OWN. BATH
TILE SHOWER
& ROMAN BATH)



REFER TO 50.0 FOR
TYPICAL STRUCTURAL NOTES
& SCHEDULES

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

NC LIC. ENGINEER
#C-3825

1 PARTIAL ROOF FRAMING PLAN
SCALE: 1/8"=1'-0"
ELEVATION #6

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
300 Dovesdale Ave. Building 4 - Asheville, NC 28802
P 215-696-8881 - mulhern+kulp.com

M&K project number:	126-21030
project mgr:	JTR
drawn by:	KL
issue date:	08-20-21
REVISIONS:	
date:	initial:
03/09/22	JTS

DRB GROUP
DRB GROUP
FIELDING
DRB CONSULTING

ROOF FRAMING PLANS
COOPER 3 MODEL
RALEIGH, NC

sheet: LEFT HAND
S4.1

ENGINEERED BEAM MATERIAL SCHEDULE					
BEAM NUMBER	LVL OPTION	PSL OPTION	LSL OPTION	FLITCH OPTION	STEEL OPTION
001	(2)3/4"x11/8" - F	3/2"x11/8" - F	(3)3/4"x11/8" - F	(2)2x12 + (1) 3/8"x11/4" STEEL FLITCH PLATES - F	M12x14 - F
002	(3)3/4"x11/8" - F	3/4"x11/8" - F	(4)3/4"x11/8" - F	(2)2x12 + (1) 3/8"x11/4" STEEL FLITCH PLATES - F	M12x14 - F
003	(2)3/4"x11/8" - F	3/2"x11/8" - F	(3)3/4"x11/8" - F	(2)2x12 + (1) 3/8"x11/4" STEEL FLITCH PLATES - F	M12x14 - F
004	(2)3/4"x11 1/4" - D	3/2"x11 1/4" - D	(2)3/4"x11/8" - D	(2)2x10 + (1) 3/8"x11/4" STEEL FLITCH PLATES - D	M8x10 - 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.

SD2.1J/SD2.1T REFERS TO SD2.1JA/SD2.1TA FOR LVL/PSL/LSL BEAMS OR SD2.1JB/SD2.1TB FOR FLITCH BEAMS OR SD2.1JC/SD2.1TC FOR STEEL BEAMS

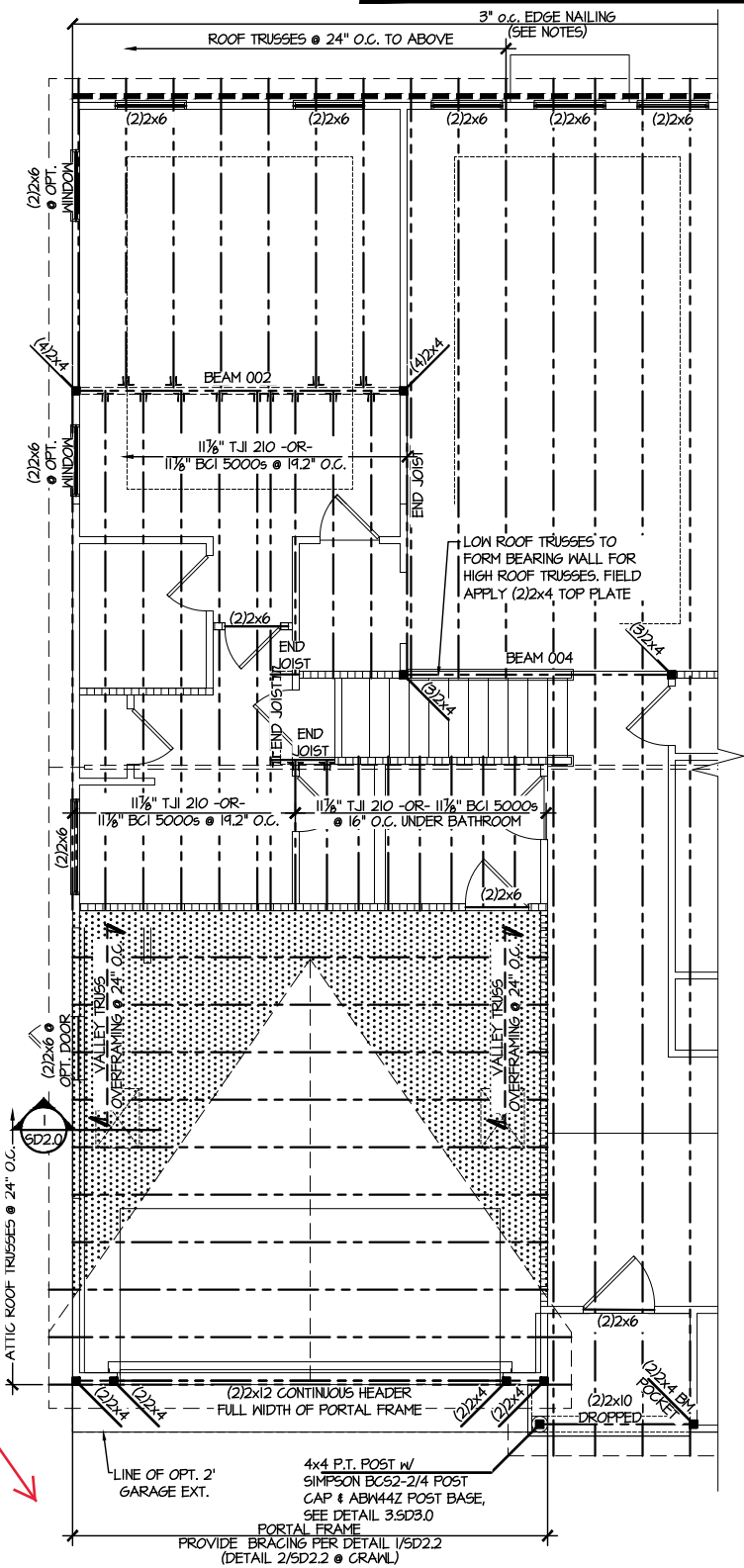
REFER TO 50.0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES

SD2.0 & SD2.1 REFERS TO SD2.0J & SD2.1J FOR I-JOIST FLOOR FRAMING OR SD2.0T & SD2.1T FOR TRUSS FLOOR FRAMING

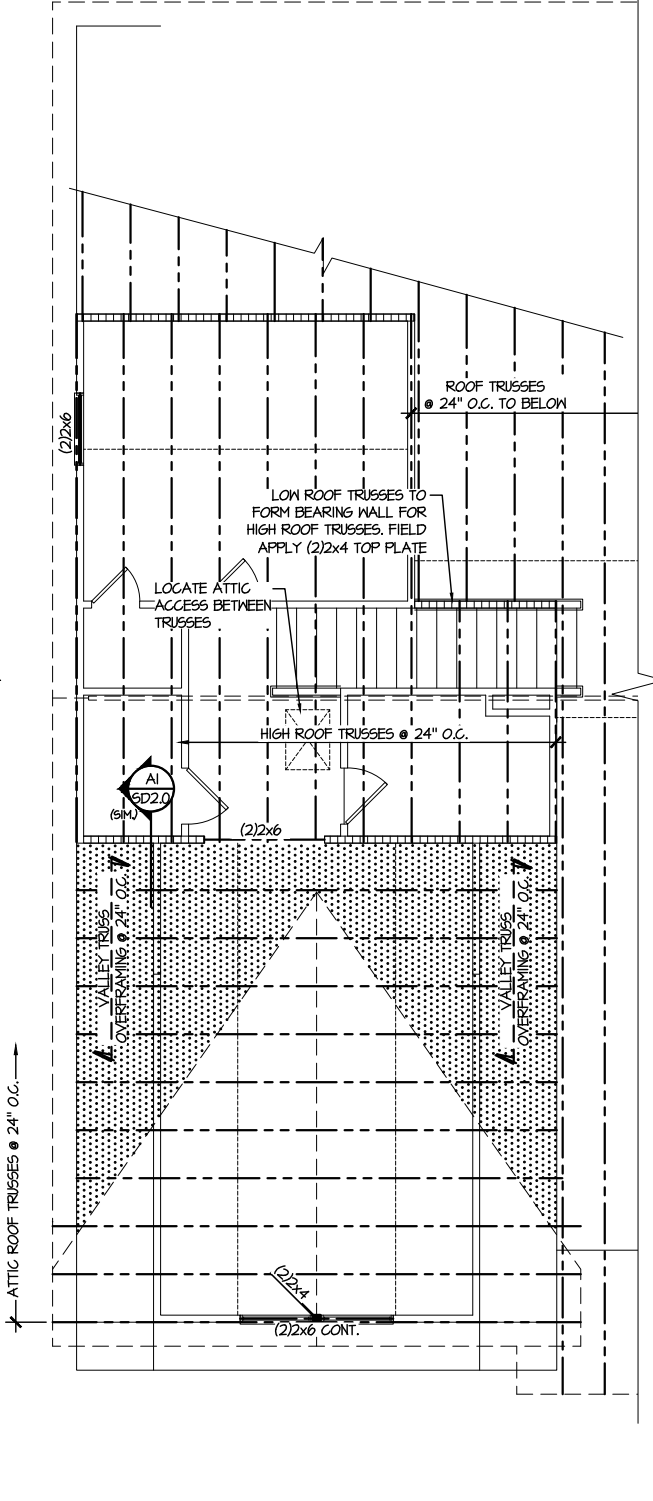
LEGEND

- ▬ 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.

NC LIC. #C-3825
MULHERN+KULP
 RESIDENTIAL STRUCTURAL ENGINEERING
 320 Dovesdale Ave. Building 4 - Asheville, NC 28802
 P: 252-696-8881 | m.kulp@mulhernkulp.com



3 PARTIAL 2ND FLOOR FRAMING PLAN OPT. BONUS ROOM W/ BEDROOM
 SCALE: 1/8"=1'-0" ELEV #1 SHOWN - ALL ELEV. SIMILAR



4 PARTIAL ROOF FRAMING PLAN OPT. BONUS ROOM W/ BEDROOM
 SCALE: 1/8"=1'-0" ELEV #3 SHOWN - ALL ELEV. SIMILAR

2' Ext. Bonus Room

M&K project number: 126-21030

project mgr: JTR
 drawn by: KL
 issue date: 08-20-21

REVISIONS:

date: initial:
 03/09/22 ITS

DRB GROUP
 DRB GROUP
 FIELDING DAY RYAN
 CONSULTANTS

OPTION FRAMING PLANS
 COOPER 3 MODEL
 RALEIGH, NC

sheet: LEFT HAND
S5.0J

ENGINEERED BEAM MATERIAL SCHEDULE

BEAM NUMBER	LVL OPTION	PSL OPTION	LSL OPTION	FLITCH OPTION	STEEL OPTION
001	(2)3/4"x11/8" - F	3/2"x11/8" - F	(3)3/4"x11/8" - F	(2)2x12 + (1) 3/8"x11/4" STEEL FLITCH PLATES - F	M12x14 - F
002	(3)3/4"x11/8" - F	3/4"x11/8" - F	(4)3/4"x11/8" - F	(2)2x12 + (1) 3/8"x11/4" STEEL FLITCH PLATES - F	M12x14 - F
003	(2)3/4"x11/8" - F	3/2"x11/8" - F	(3)3/4"x11/8" - F	(2)2x12 + (1) 3/8"x11/4" STEEL FLITCH PLATES - F	M12x14 - F
004	(2)3/4"x11 1/4" - D	3/2"x11 1/4" - D	(2)3/4"x11/8" - D	(2)2x10 + (1) 3/8"x11/4" STEEL FLITCH PLATES - D	M8x10 - D

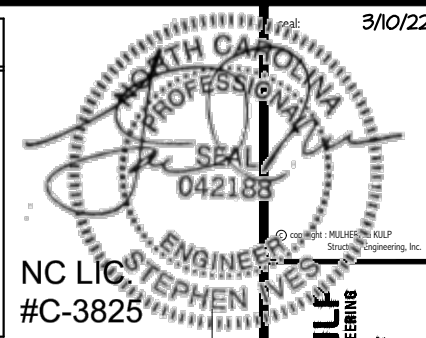
- BEAM NOTATION:
 - "F" INDICATES FLUSH BEAM
 - "FT" INDICATES FLUSH TOP BEAM
 - "FB" INDICATES FLUSH BOTTOM BEAM
 - "D" INDICATES DROPPED BEAM
 - "H" INDICATES DROPPED OPENING HEADER
- REFER TO DETAIL D/SD2.0 FOR TYPICAL FLITCH BEAM CONNECTIONS
- REFER TO DETAIL E/SD2.0 FOR TYPICAL STEEL BEAM CONNECTIONS
- 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.

SD2.1J/SD2.IT REFERS TO SD2.1JA/SD2.ITA FOR LVL/PSL/LSL BEAMS OR SD2.1JB/SD2.ITB FOR FLITCH BEAMS OR SD2.1JC/SD2.ITC FOR STEEL BEAMS

REFER TO 50.0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES

SD2.0 & SD2.1 REFERS TO SD2.0J & SD2.1J FOR I-JOIST FLOOR FRAMING OR SD2.0T & SD2.1T FOR TRUSS FLOOR FRAMING

- ### 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.



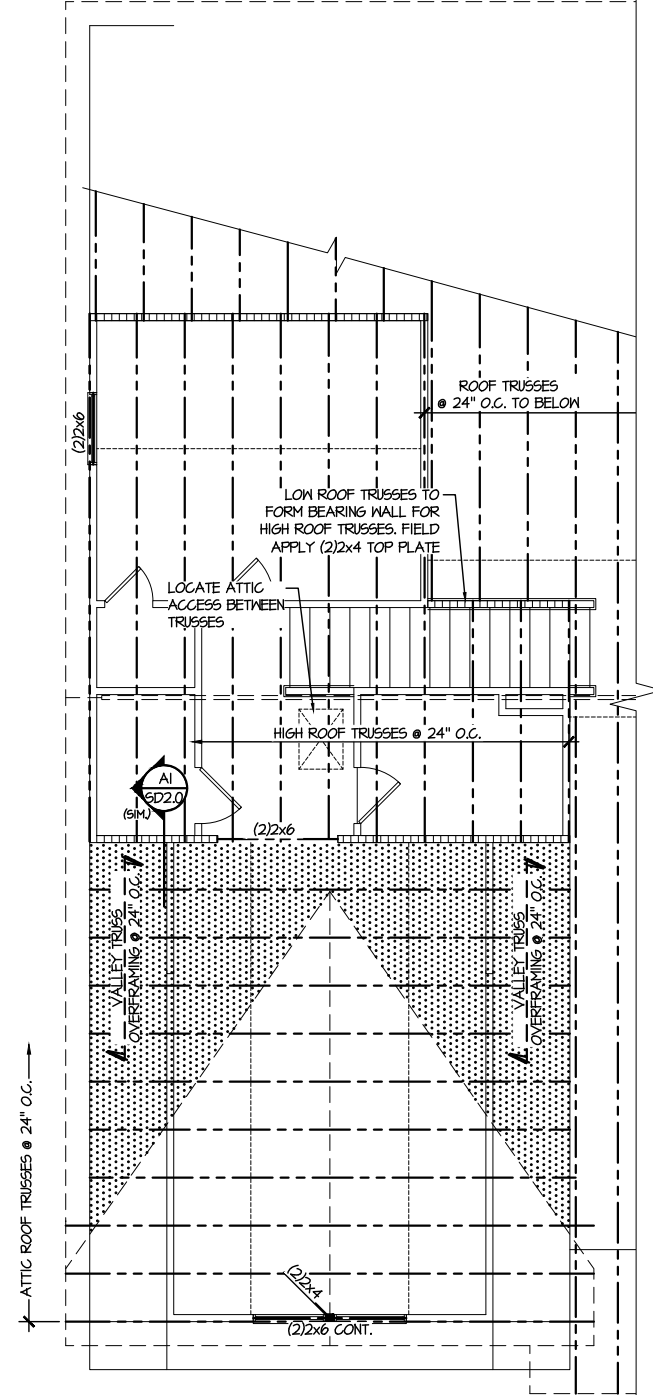
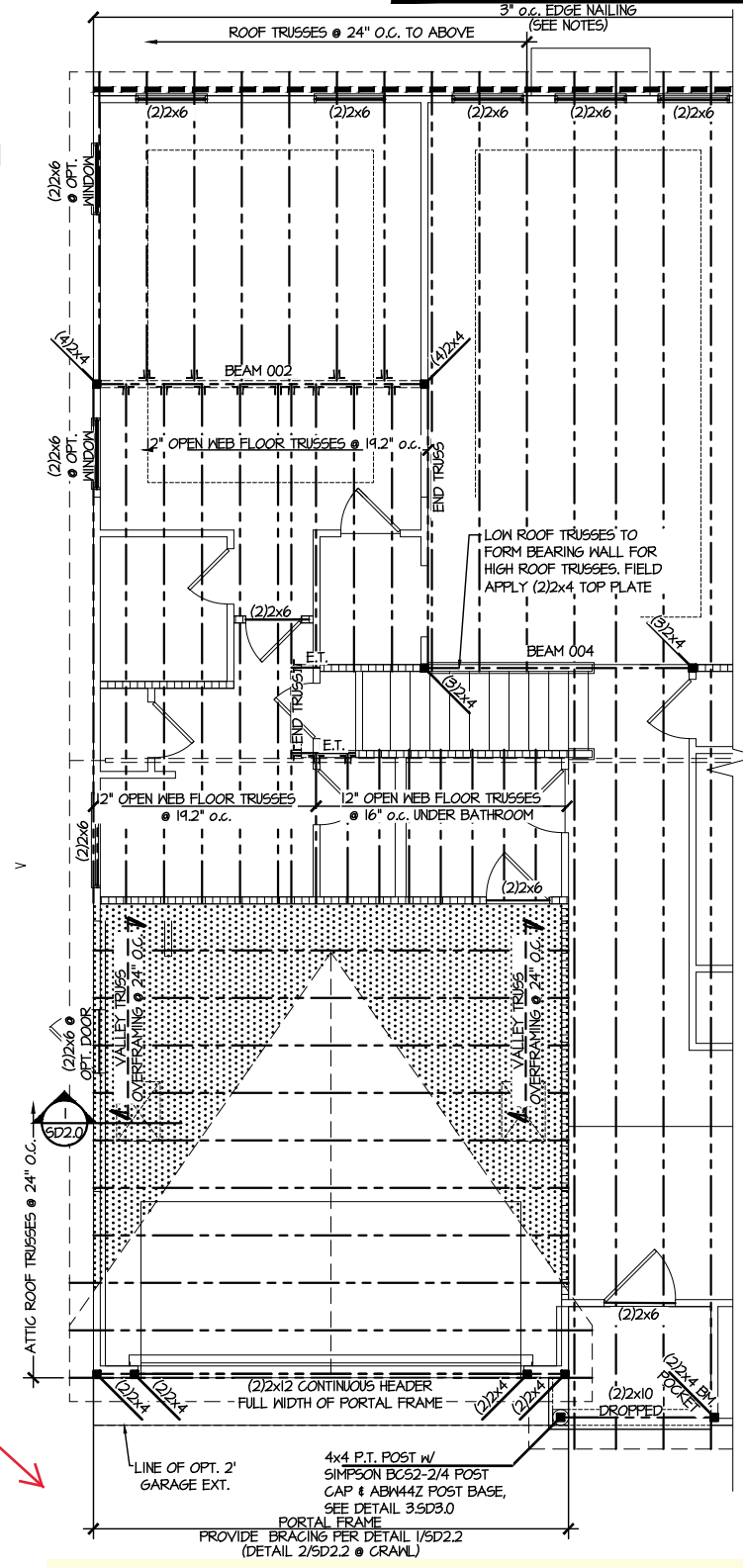
MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
300 Danville Ave., Building 4 - Asheville, NC 28801
P 252-696-8881 E mulhern@mkulpe.com

M&K project number:
126-21030
project mgr: JTR
drawn by: KL
issue date: 08-20-21
REVISIONS:
date: initial:
03/09/22 ITS



OPTION FRAMING PLANS
COOPER 3 MODEL
RALEIGH, NC

sheet: LEFT HAND
S5.0T



2' Ext. Bonus Room

3 PARTIAL 2ND FLOOR FRAMING PLAN OPT. BONUS ROOM W/ BEDROOM
SCALE: 1/8"=1'-0" ELEV #1 SHOWN - ALL ELEV. SIMILAR

4 PARTIAL ROOF FRAMING PLAN OPT. BONUS ROOM W/ BEDROOM
SCALE: 1/8"=1'-0" ELEV #3 SHOWN - ALL ELEV. SIMILAR

REFER TO 50.0 FOR
TYPICAL STRUCTURAL NOTES
& SCHEDULES

LEGEND	
• [dotted pattern]	INTERIOR BEARING WALL
• [dashed pattern]	BEARING WALL ABOVE
• [solid line]	BEAM / HEADER
• [dash-dot line]	INDICATES SHEAR WALL & EXTENT
• [dotted pattern]	EXTENT OF OVERFRAMING
• [T-shape]	⌋L METAL HANGER
• [asterisk]	* INDICATES POST ABOVE, PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
• [triangle]	▶ INDICATES HOLD-DOWN OR STRAP. REFER TO SCHEDULE.

NC LIC #C-3825

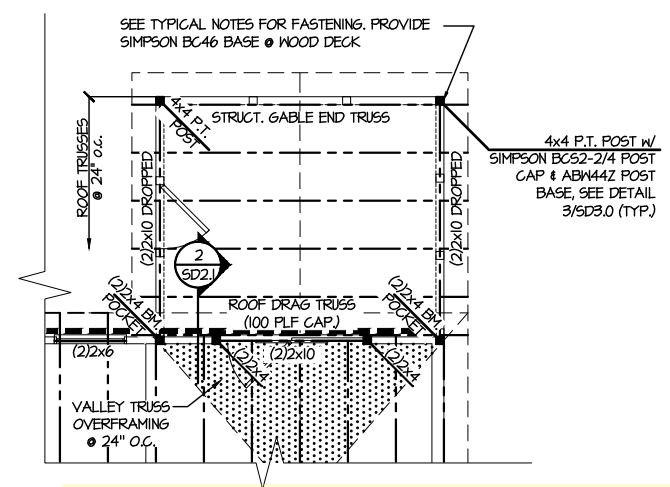
MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
300 Beaverville Ave., Building 4 - Asheville, PA 18002
P 215-606-8801 • mulhern+kulp.com

M&K project number:
126-21030

project mgr: JTR
drawn by: KL
issue date: 08-20-21

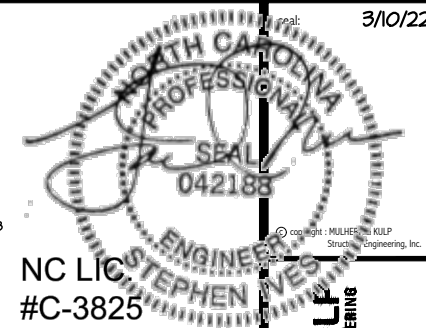
REVISIONS:

date:	initial:
03/09/22	JTS



**2 PARTIAL ROOF FRAMING PLAN
OPTIONAL SCREENED PORCH**
SCALE: 1/8"=1'-0" ELEV #1 SHOWN - ALL ELEV. SIMILAR

OPTION FRAMING PLANS
COOPER 3 MODEL
RALEIGH, NC



MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
300 Beaverton Ave., Building 4 - Asheville, PA 17002
P: 215-548-8881 - mulhern+kulp.com

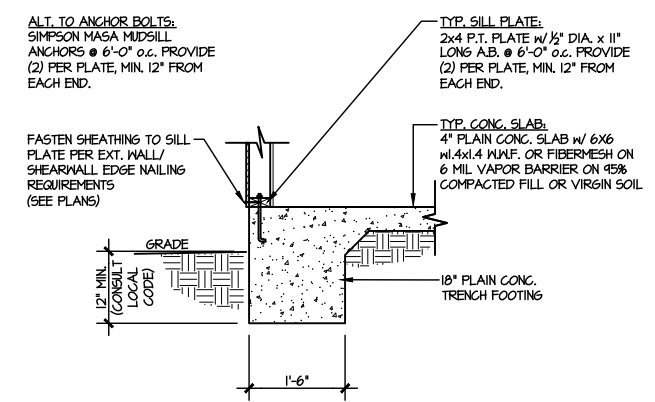
M&K project number:
126-21030
project mgr: JTR
drawn by: KL
issue date: 08-20-21

REVISIONS:
date: initial:
03/09/22 JTS

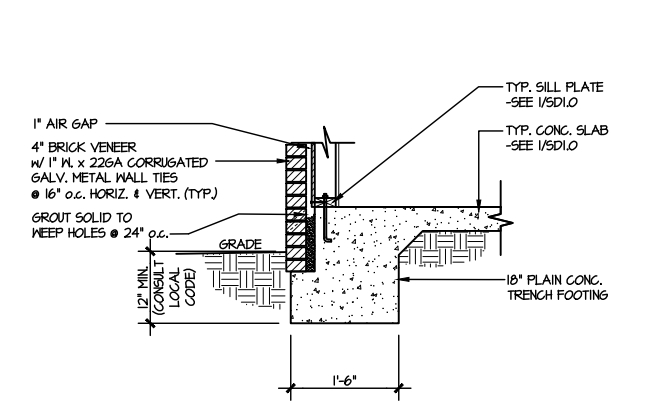


FOUNDATION DETAILS
COOPER 3 MODEL
RALEIGH, NC

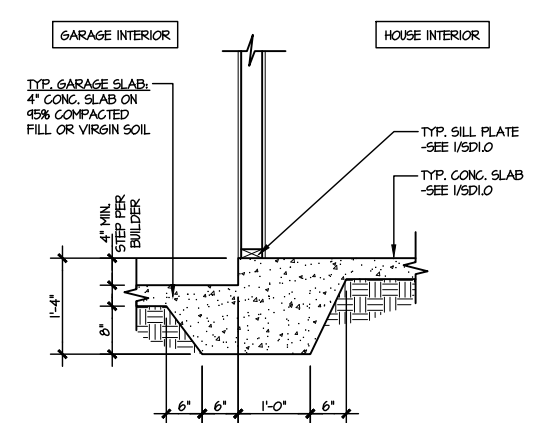
sheet:
SD1.0



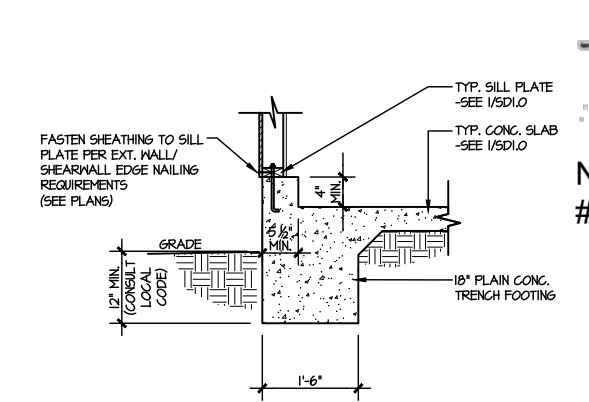
1 TYPICAL SLAB ON GRADE PERIMETER FOOTING
SCALE: 3/8"=1'-0"



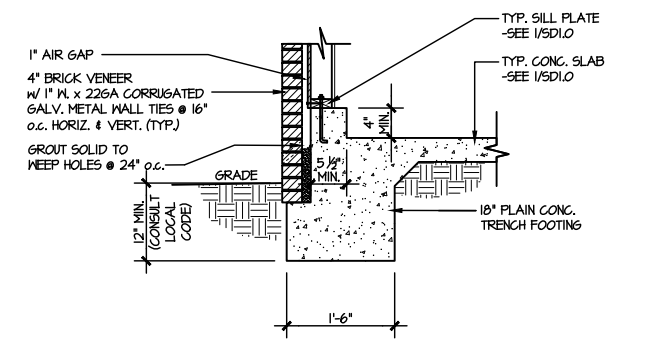
2 TYPICAL SLAB ON GRADE PERIMETER FOOTING
SCALE: 3/8"=1'-0" W/ BRICK VENEER



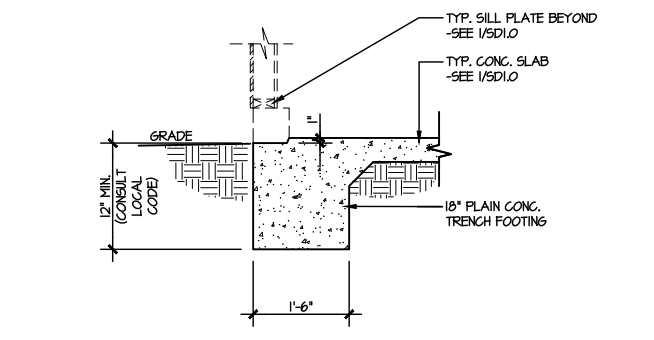
3 TYPICAL MONOLITHIC INTERIOR GARAGE FOOTING
SCALE: 3/8"=1'-0"



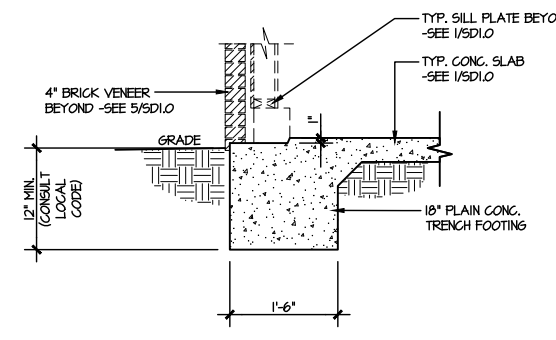
4 TYPICAL SLAB ON GRADE GARAGE PERIMETER FOOTING
SCALE: 3/8"=1'-0"



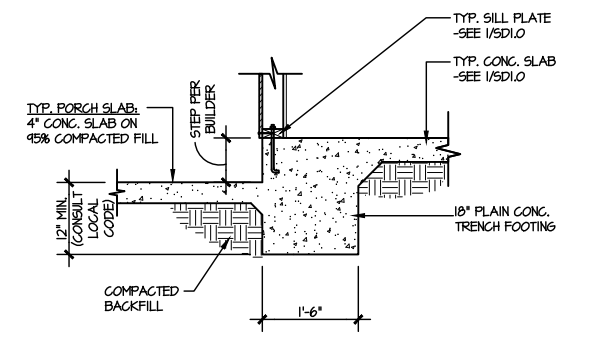
5 TYPICAL SLAB ON GRADE GARAGE PERIMETER FOOTING
SCALE: 3/8"=1'-0" W/ BRICK VENEER



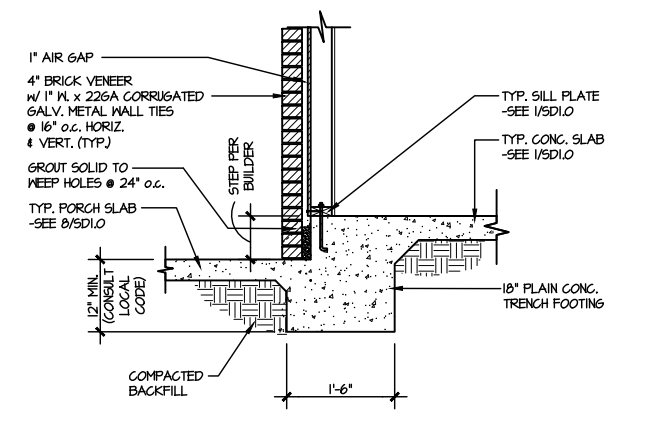
6 TYPICAL SLAB ON GRADE GARAGE ENTRY @ PERIMETER FOOTING
SCALE: 3/8"=1'-0"



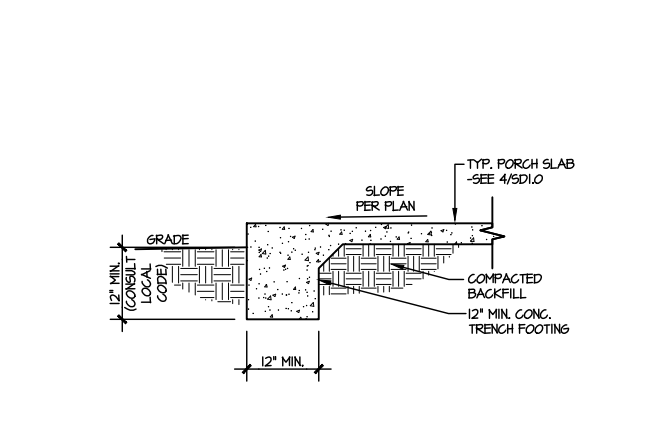
7 TYPICAL SLAB ON GRADE GARAGE ENTRY @ PERIMETER FOOTING
SCALE: 3/8"=1'-0" W/ BRICK VENEER



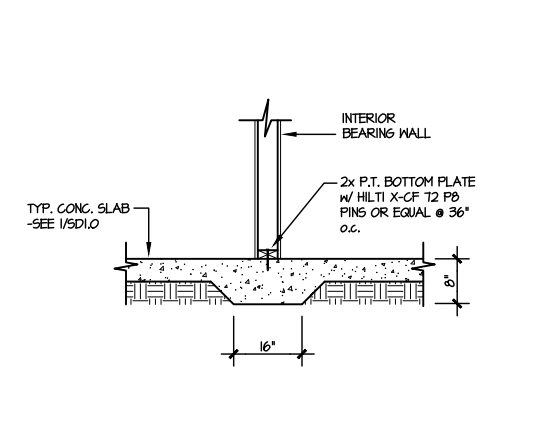
8 TYPICAL SLAB ON GRADE PERIMETER FOOTING @ PORCH/PATIO
SCALE: 3/8"=1'-0"



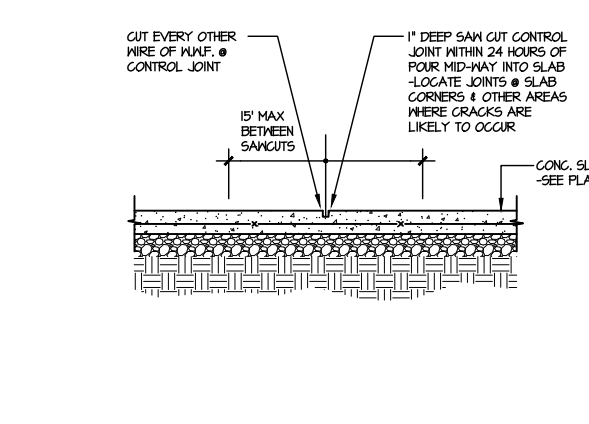
9 TYPICAL SLAB ON GRADE PERIMETER FOOTING @ PORCH/PATIO
SCALE: 3/8"=1'-0" W/ BRICK VENEER



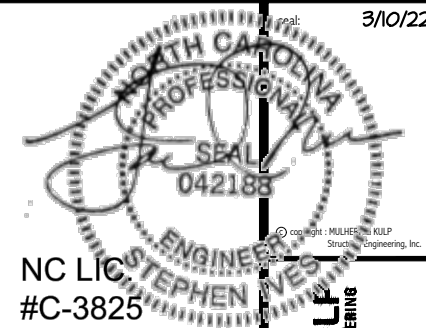
10 TYPICAL FOOTING @ PORCH SLAB
SCALE: 3/8"=1'-0"



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



A TYPICAL CONTROL JOINT
SCALE: 3/8"=1'-0"
LOCATE @ 15'-0" o.c. MAX. OR CORNERS WHERE CRACKS LIKELY TO DEVELOP

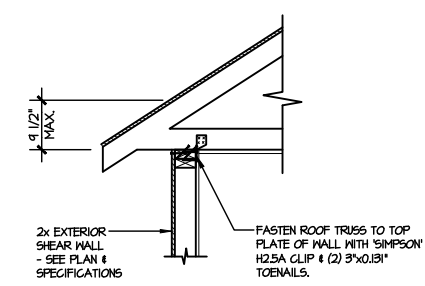


MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
300 Beaverton Ave., Building 4 - Asheville, PA 19002
P 215-948-8881 • mulhern+kulp.com

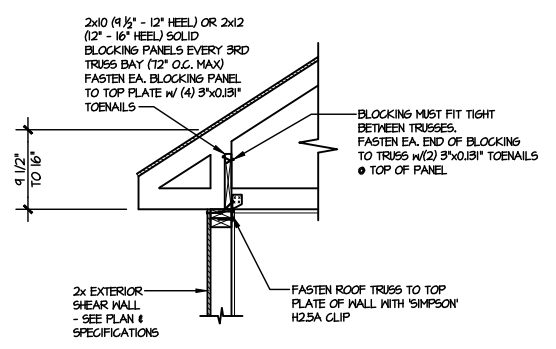
M&K project number:
126-21030
project mgr: JTR
drawn by: KL
issue date: 08-20-21
REVISIONS:
date: initial:
03/09/22 JTS



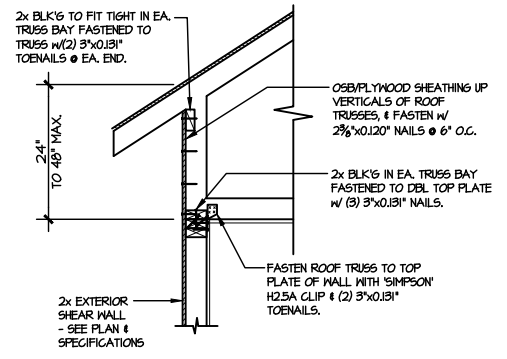
FRAMING DETAILS
COOPER 3 MODEL
RALEIGH, NC



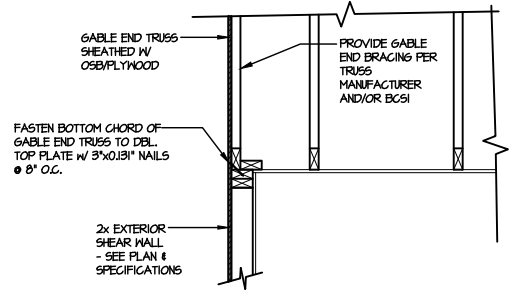
(A1) TYPICAL SHEAR TRANSFER DETAIL @ ROOF
SCALE: 3/8"=1'-0"
HEEL HEIGHT LESS THAN 4 1/2"
NO BLOCKING REQ'D



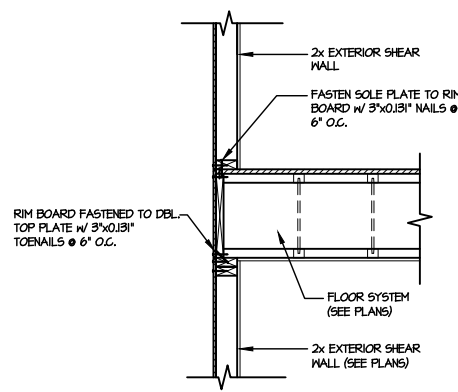
(A2) TYPICAL SHEAR TRANSFER DETAIL @ ROOF
SCALE: 3/8"=1'-0"
HEEL HEIGHT BETWEEN 4 1/2" - 16"
BLOCKING REQ'D



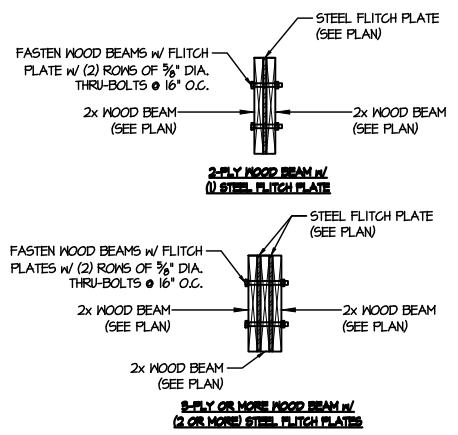
(A3) TYPICAL SHEAR TRANSFER DETAIL @ RAISED HEEL TRUSS
SCALE: 3/8"=1'-0"
HEEL HEIGHT UP TO 48" MAX.



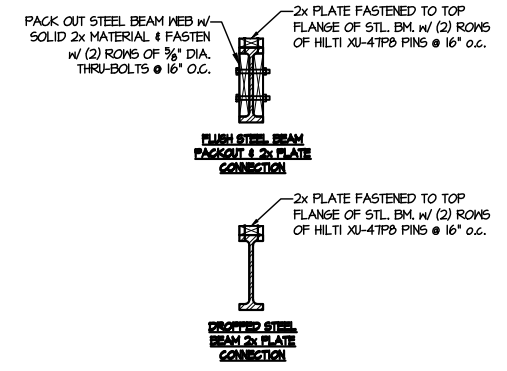
(B) TYPICAL GABLE END DETAIL
SCALE: 3/8"=1'-0"



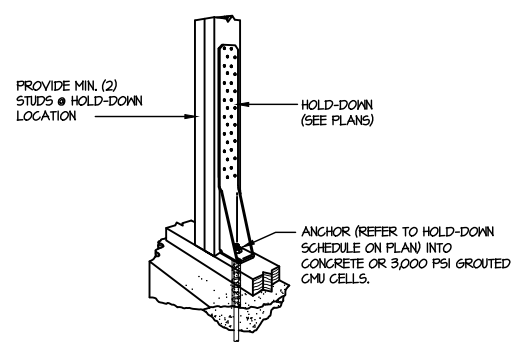
(C) TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ EXTERIOR WALL
SCALE: 3/8"=1'-0"



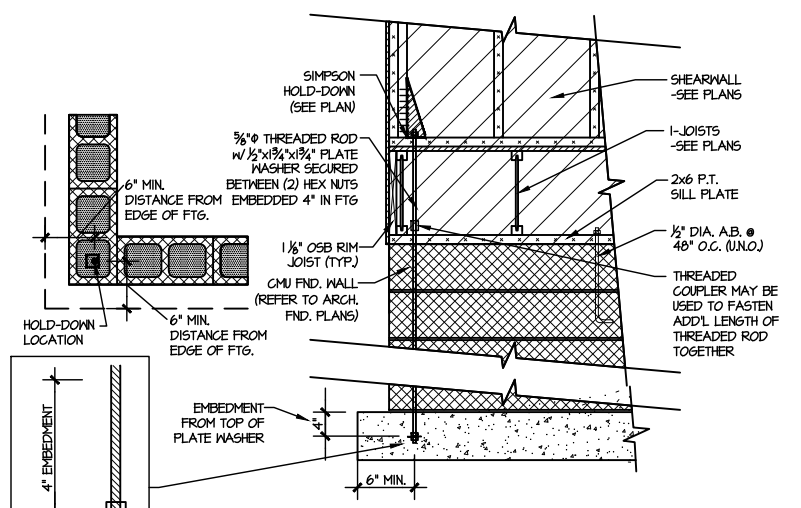
(D) TYPICAL FLITCH BEAM CONNECTION DETAIL
SCALE: 3/4"=1'-0"



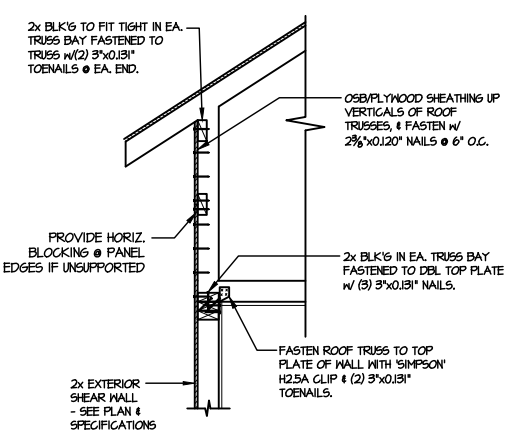
(E) TYPICAL STEEL BEAM CONNECTION DETAIL
SCALE: 3/4"=1'-0"



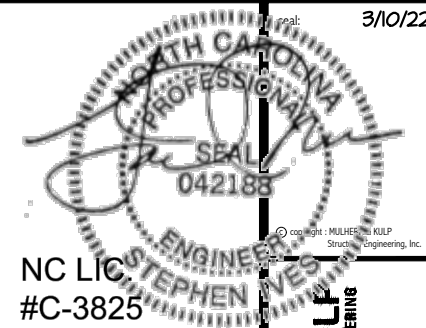
(F1) TYPICAL HOLD DOWN INSTALLATION
SCALE: N.T.S.



(F2) TYPICAL CMU FOUNDATION HOLD-DOWN INSTALLATION
SCALE: N.T.S. (CORNER SHOWN - APPLICABLE TO ALL CONDITIONS)



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



MULHERN+KULF
RESIDENTIAL STRUCTURAL ENGINEERING
300 Beavertown Ave., Building 4 - Asheville, PA 17002
P 215-606-8800



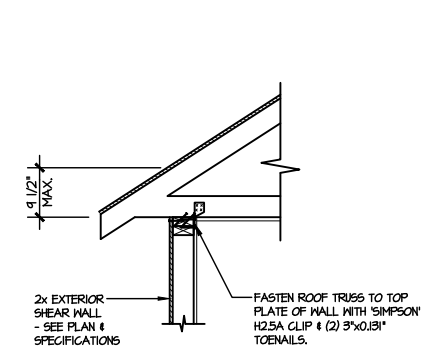
M&K project number:
126-21030
project mgr: JTR
drawn by: KL
issue date: 08-20-21

REVISIONS:
date: initial:
03/09/22 JTS

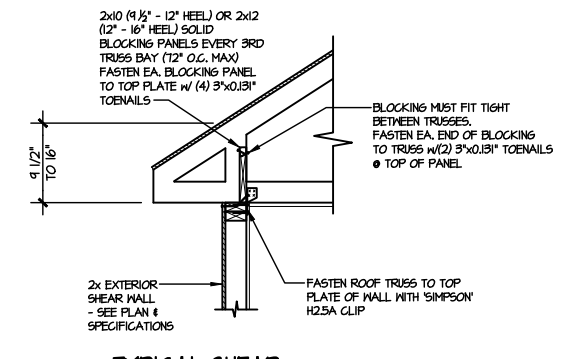
DRB GROUP
DRB GROUP
DRB CONSULTING
DRB CONSULTING

FRAMING DETAILS
COOPER 3 MODEL
RALEIGH, NC

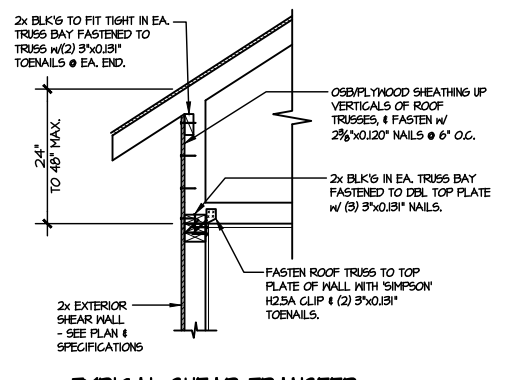
sheet:
SD2.0T



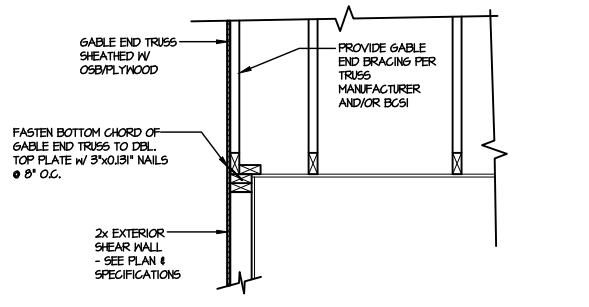
A1 TYPICAL SHEAR TRANSFER DETAIL @ ROOF
SCALE: 3/8"=1'-0"
HEEL HEIGHT LESS THAN 4 1/2" NO BLOCKING REQ'D



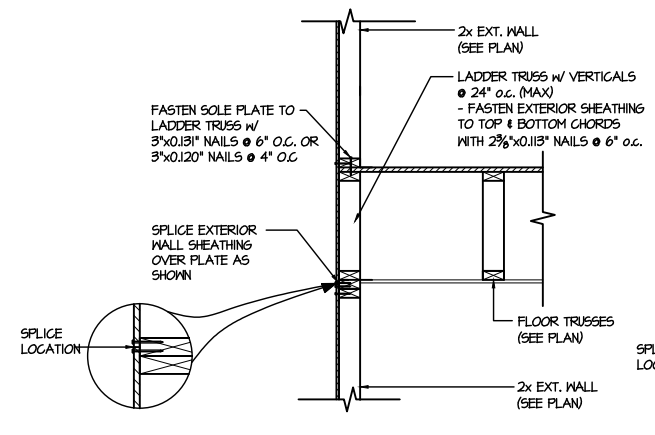
A2 TYPICAL SHEAR TRANSFER DETAIL @ ROOF
SCALE: 3/8"=1'-0"
HEEL HEIGHT BETWEEN 4 1/2" - 16" BLOCKING REQ'D



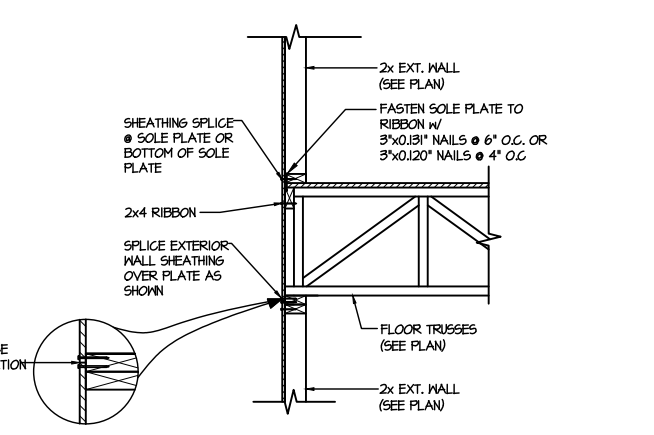
A3 TYPICAL SHEAR TRANSFER DETAIL @ RAISED HEEL TRUSS
SCALE: 3/8"=1'-0"
HEEL HEIGHT UP TO 48" MAX.



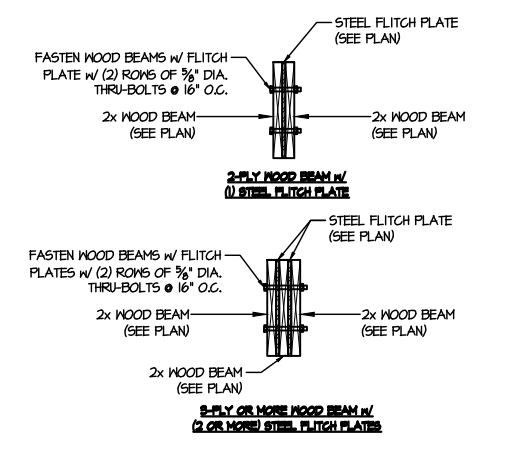
B TYPICAL GABLE END DETAIL
SCALE: 3/8"=1'-0"



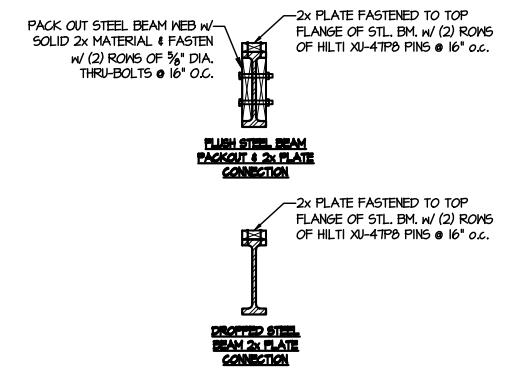
C1 TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ EXTERIOR WALL
SCALE: 3/8"=1'-0"
PARALLEL FRMS



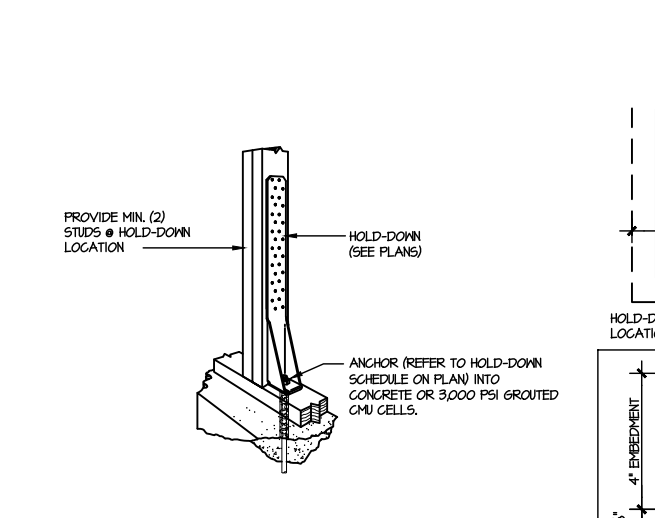
C2 TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ EXTERIOR WALL
SCALE: 3/8"=1'-0"
PERPENDICULAR FRMS



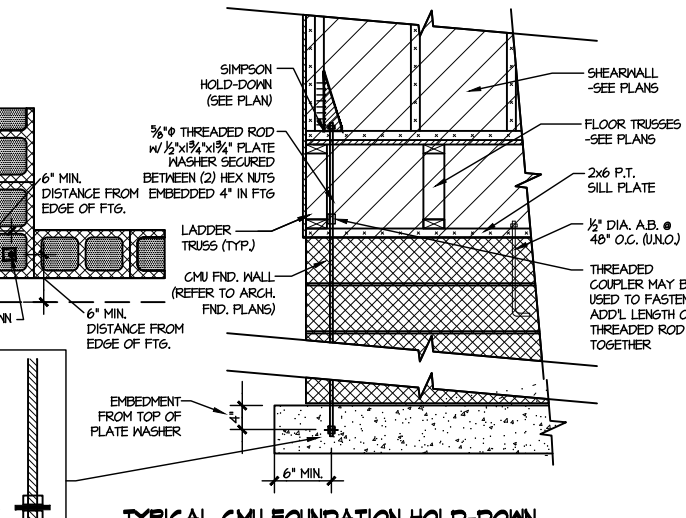
D TYPICAL FLITCH BEAM CONNECTION DETAIL
SCALE: 3/4"=1'-0"



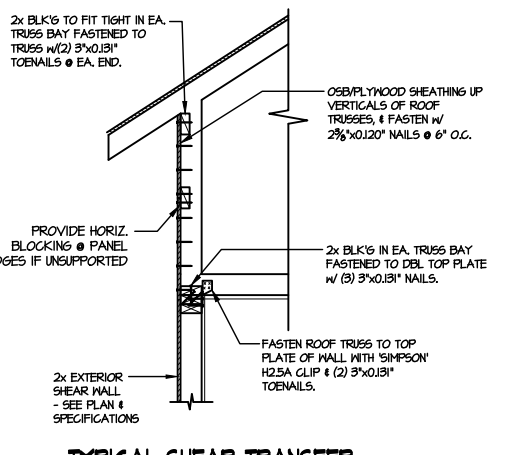
E TYPICAL STEEL BEAM CONNECTION DETAIL
SCALE: 3/4"=1'-0"



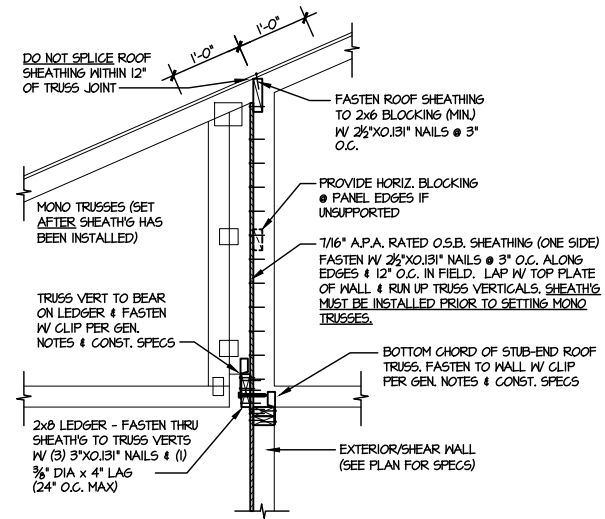
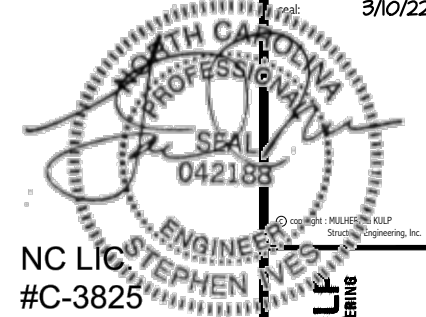
F1 TYPICAL HOLD DOWN INSTALLATION
SCALE: N.T.S.



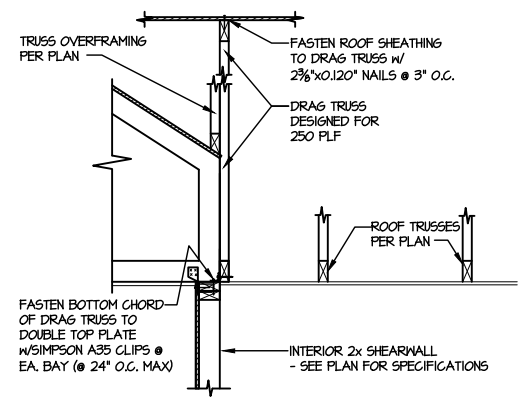
F2 TYPICAL CMU FOUNDATION HOLD-DOWN INSTALLATION
SCALE: N.T.S.
(CORNER SHOWN - APPLICABLE TO ALL CONDITIONS)



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



1 SHEAR TRANSFER DETAIL @ BREAK IN TRUSSES OVER SHEAR WALL
SCALE: 3/4"=1'-0" - 22-84
3/8"=1'-0" - 11d7



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

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
300 Beaverville Ave., Building 4 - Asheville, PA 17002
P 215-546-8800 - mulhern+kulp.com

M&K project number:
126-21030

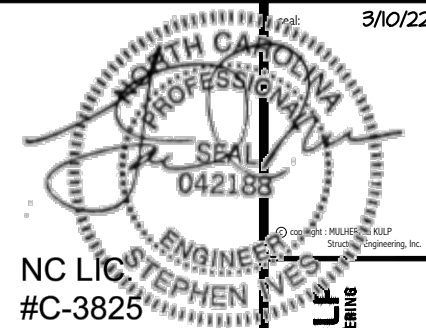
project mgr: JTR
drawn by: KL
issue date: 08-20-21

REVISIONS:

date:	initial:
03/09/22	JTS

FRAMING DETAILS
COOPER 3 MODEL
RALEIGH, NC

sheet:
SD2.1



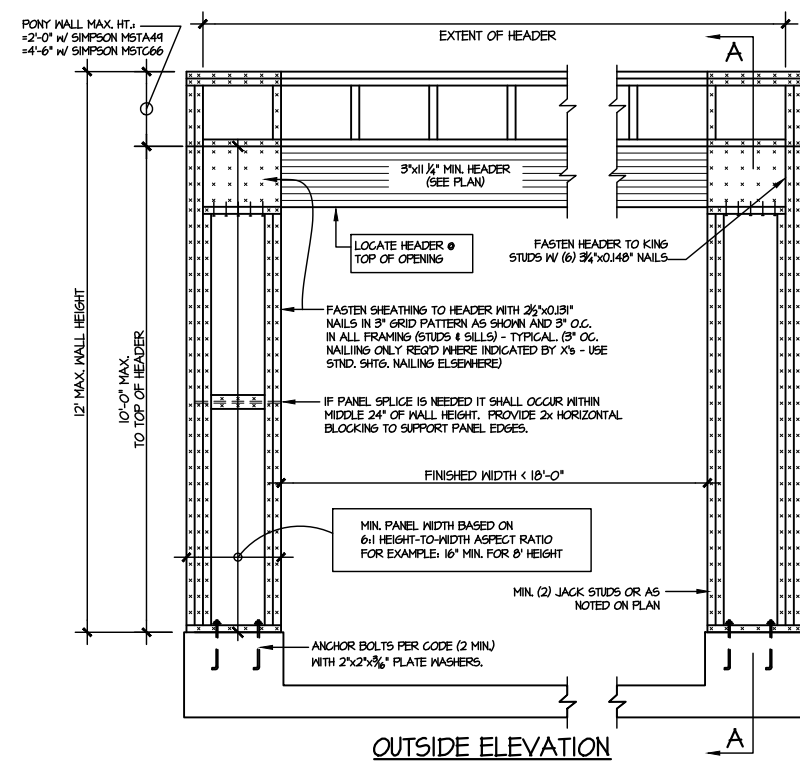
MULHERN+KULF
RESIDENTIAL STRUCTURAL ENGINEERING
300 Beaverton Ave., Building 4 - Asheville, PA 17002
P 215-546-8800 • m+k@mulhernkulf.com

M&K project number:
126-21030
project mgr: JTR
drawn by: KL
issue date: 08-20-21
REVISIONS:
date: initial:
03/09/22 JTS

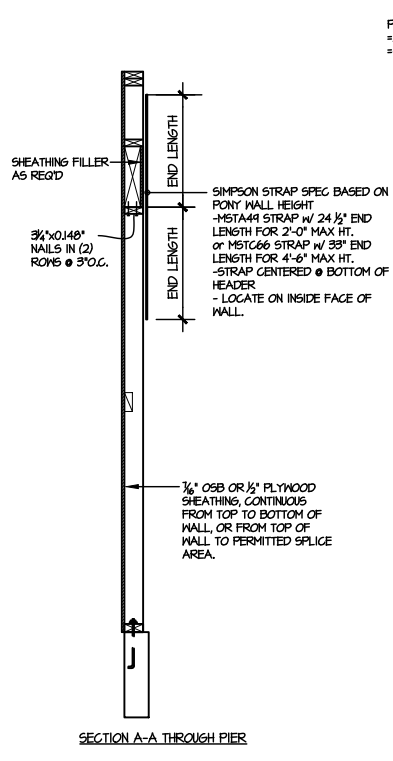


FRAMING DETAILS
COOPER 3 MODEL
RALEIGH, NC

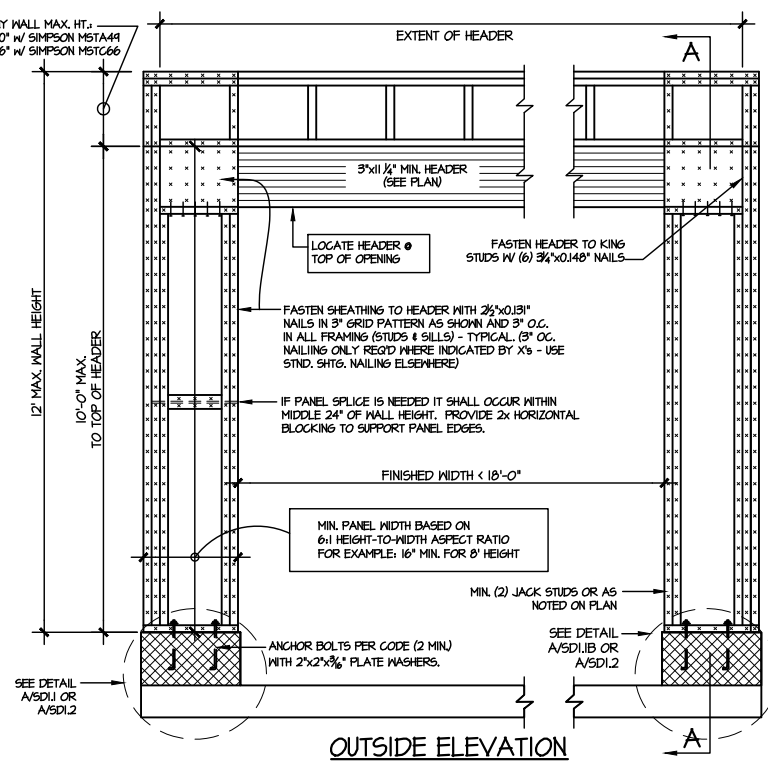
sheet:
SD2.2



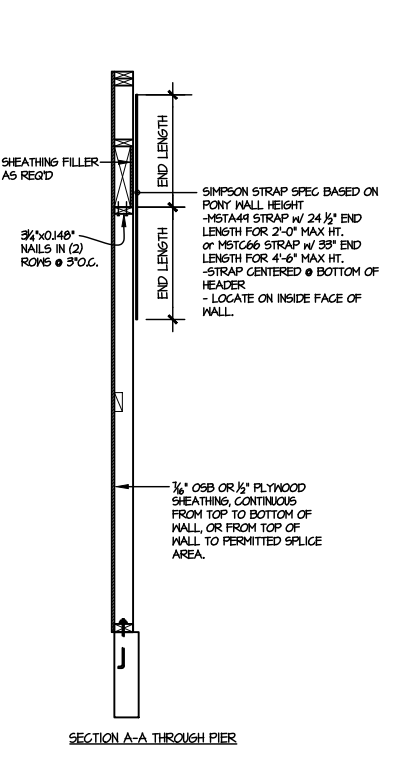
OUTSIDE ELEVATION



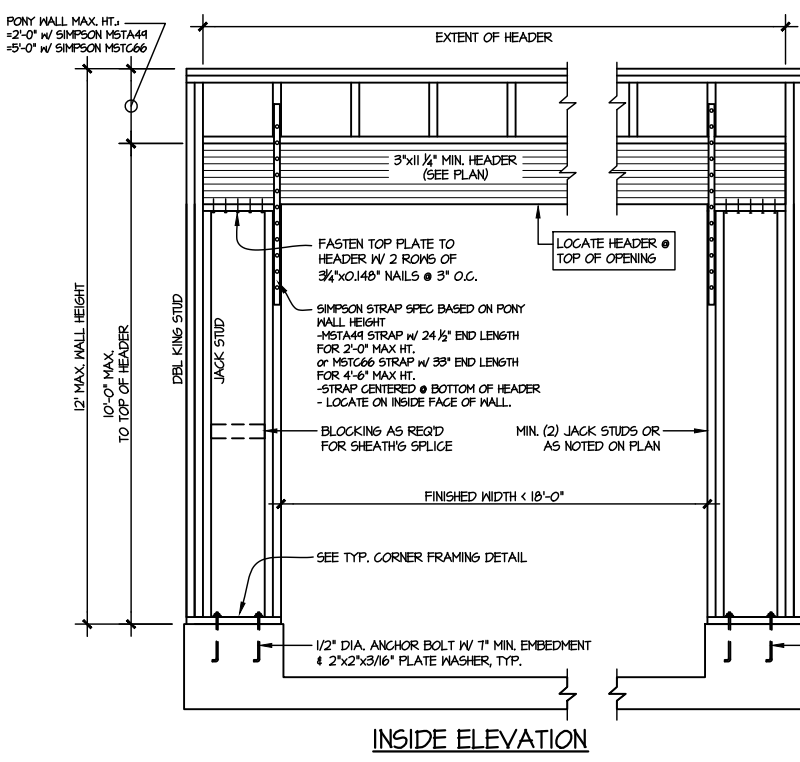
SECTION A-A THROUGH PIER



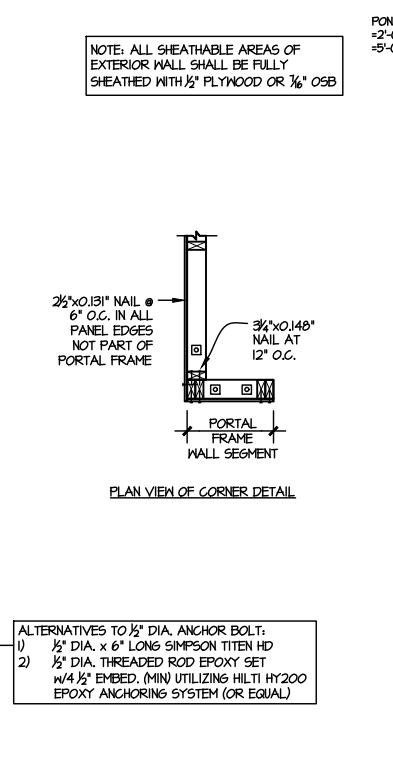
OUTSIDE ELEVATION



SECTION A-A THROUGH PIER



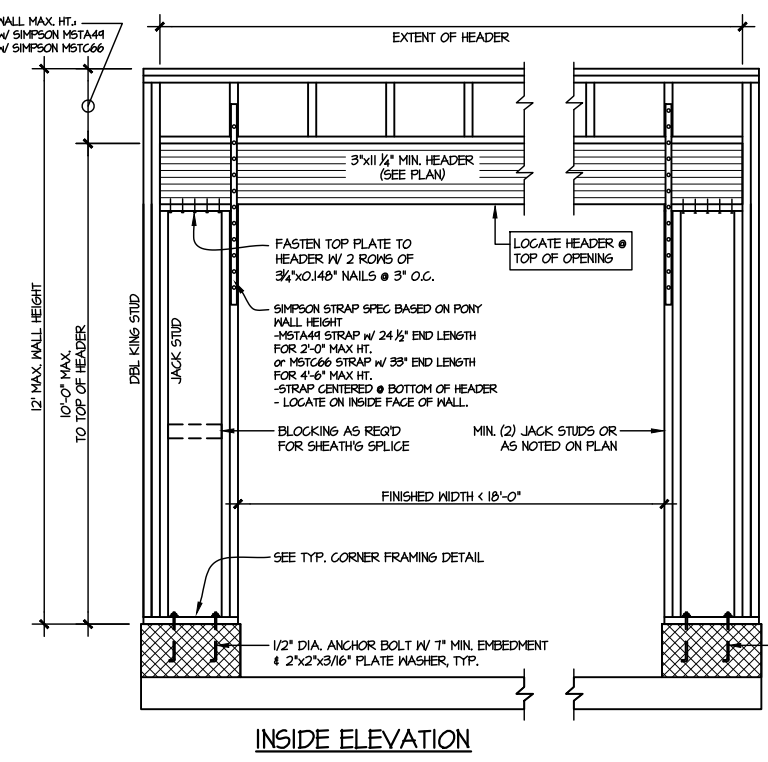
INSIDE ELEVATION



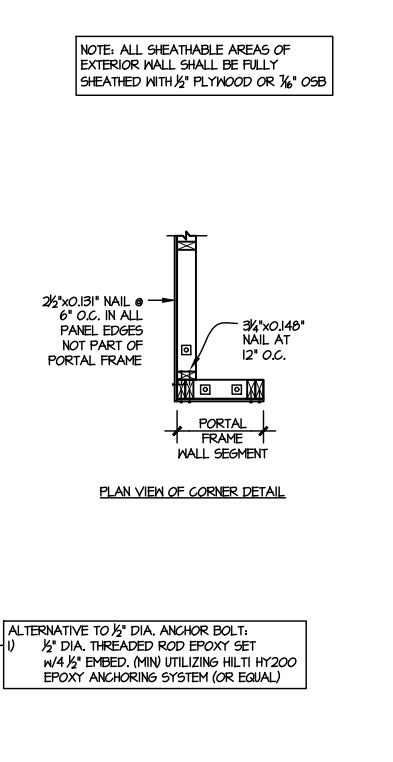
PLAN VIEW OF CORNER DETAIL

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/ 4 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.



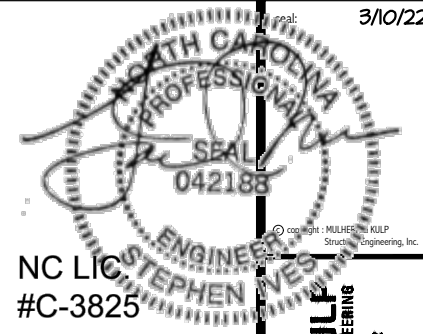
INSIDE ELEVATION



PLAN VIEW OF CORNER DETAIL

ALTERNATIVE TO 1/2" DIA. ANCHOR BOLT:
1) 1/2" DIA. THREADED ROD EPOXY SET W/ 4 1/2" EMBED. (MIN) UTILIZING HILTI HY200 EPOXY ANCHORING SYSTEM (OR EQUAL)

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

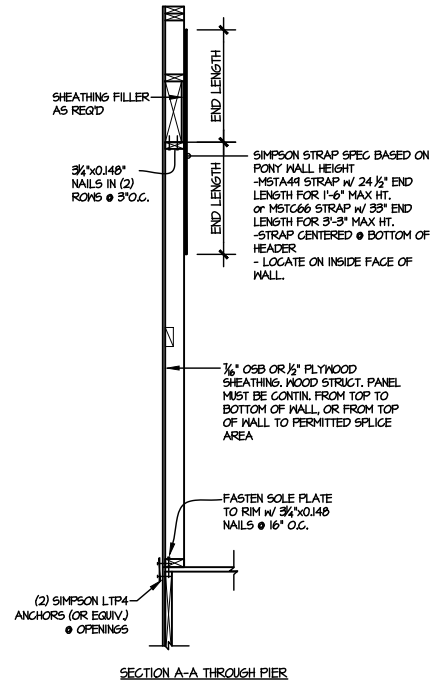
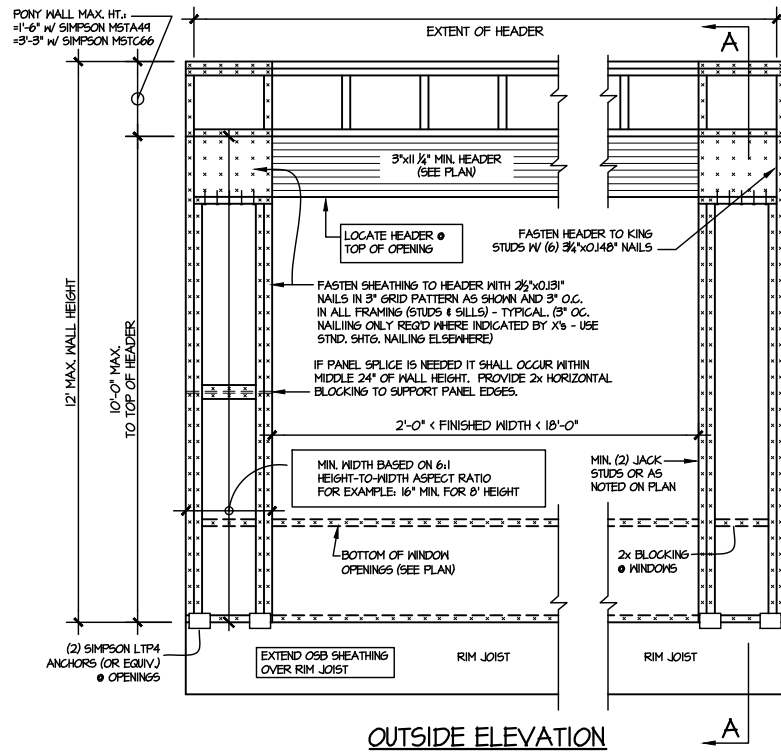


M&K project number:
126-21030
project mgr: JTR
drawn by: KL
issue date: 08-20-21
REVISIONS:
date: initial:
03/09/22 JTS

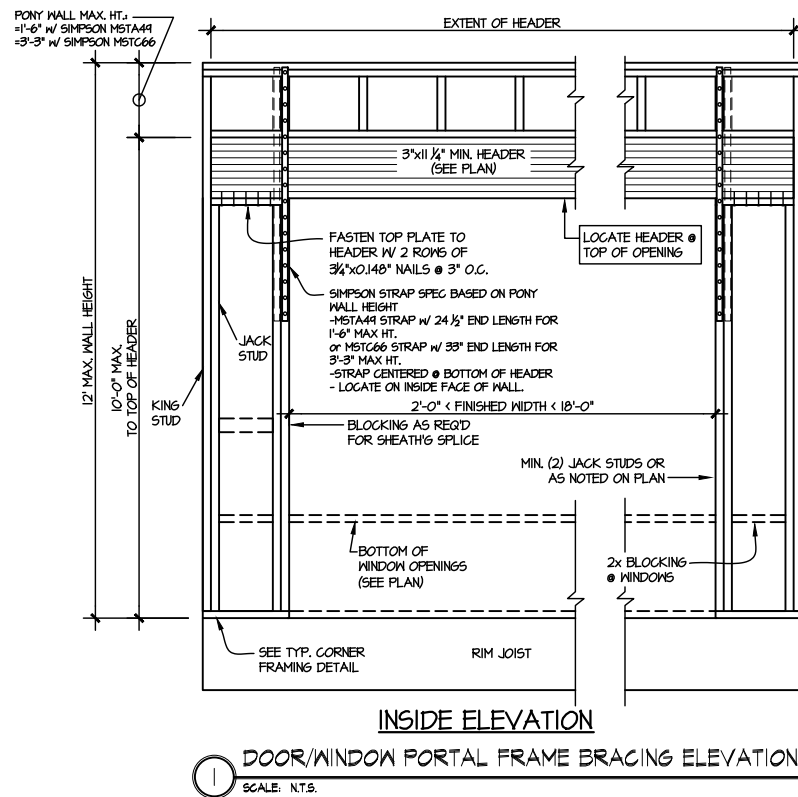
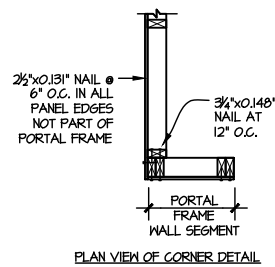


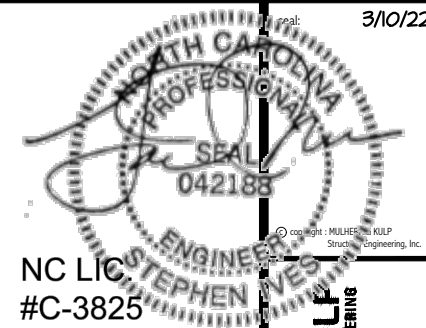
FRAMING DETAILS
COOPER 3 MODEL
RALEIGH, NC

sheet:
SD2.3



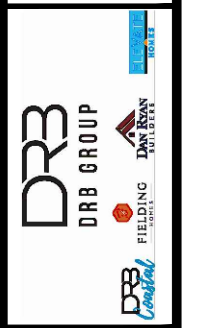
NOTE: ALL SHEATHABLE AREAS OF EXTERIOR WALL SHALL BE FULLY SHEATHED WITH 1/2" PLYWOOD OR 1/4" OSB



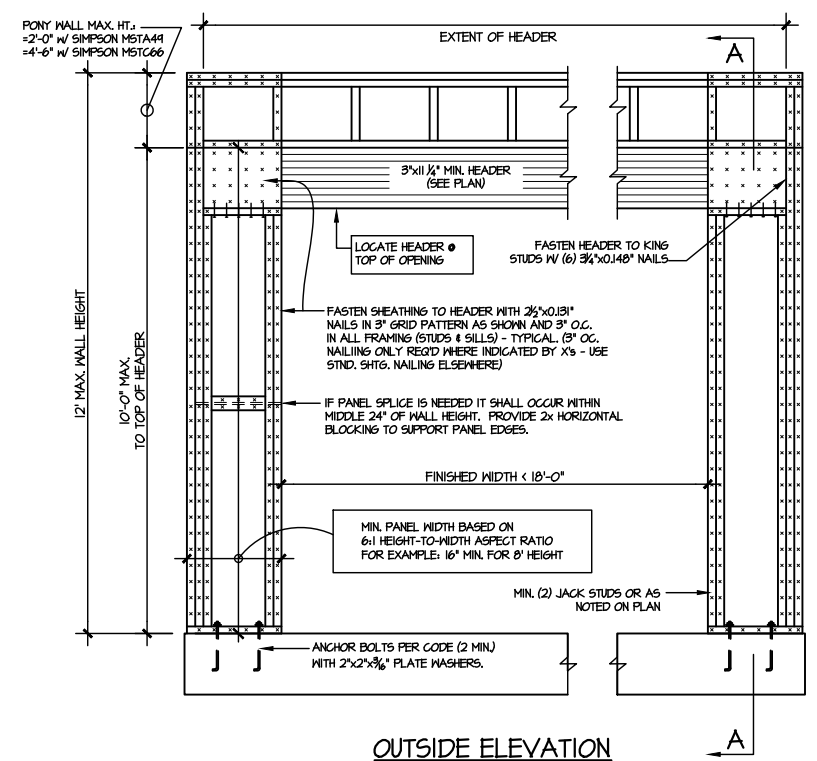


MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
300 Beaverton Ave., Building 4 - Asheville, PA 17002
P 215-948-8881 • mulhern+kulp.com

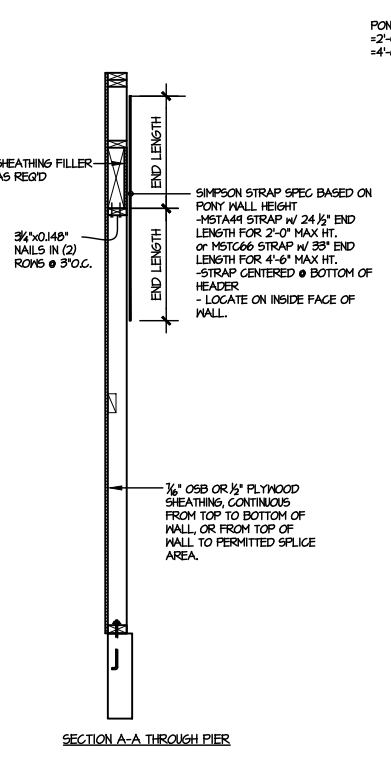
M&K project number:
126-21030
project mgr: JTR
drawn by: KL
issue date: 08-20-21
REVISIONS:
date: initial:
03/09/22 JTS



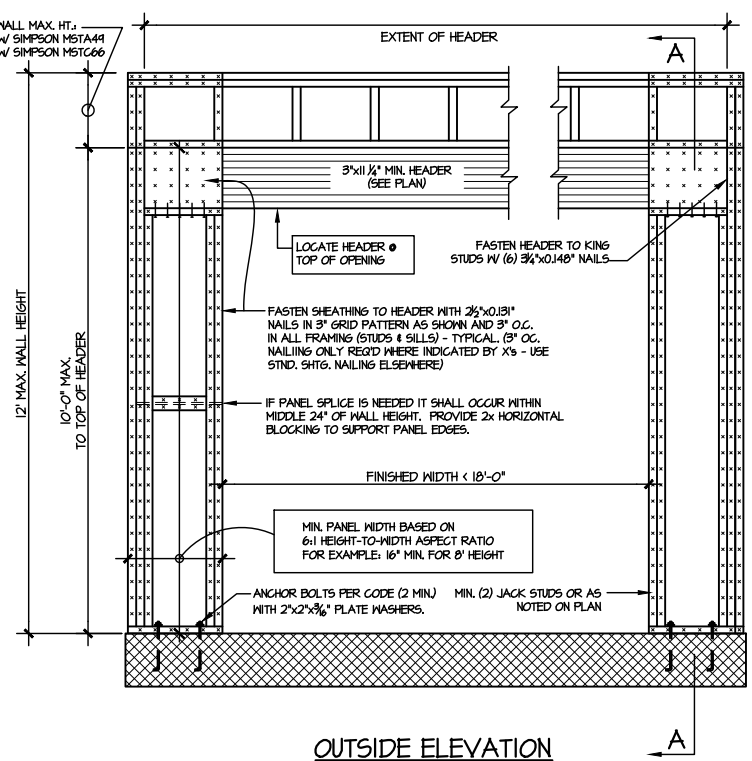
FRAMING DETAILS
COOPER 3 MODEL
RALEIGH, NC



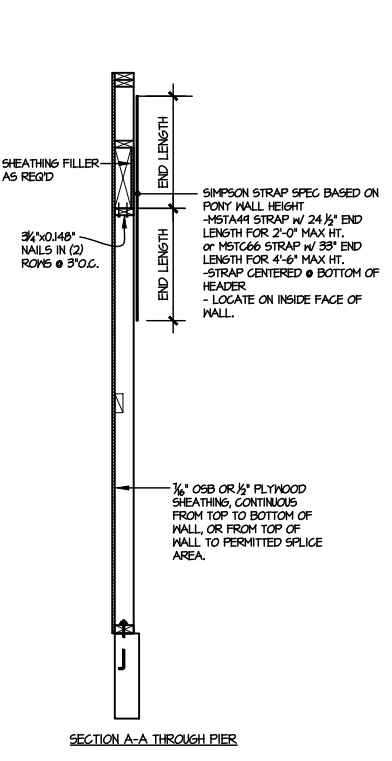
OUTSIDE ELEVATION



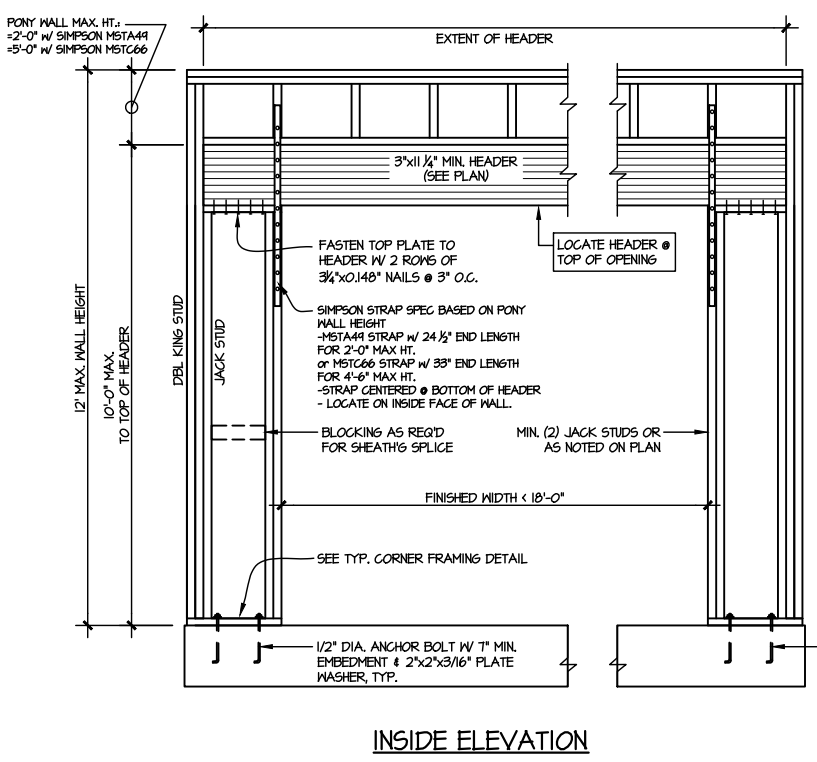
SECTION A-A THROUGH PIER



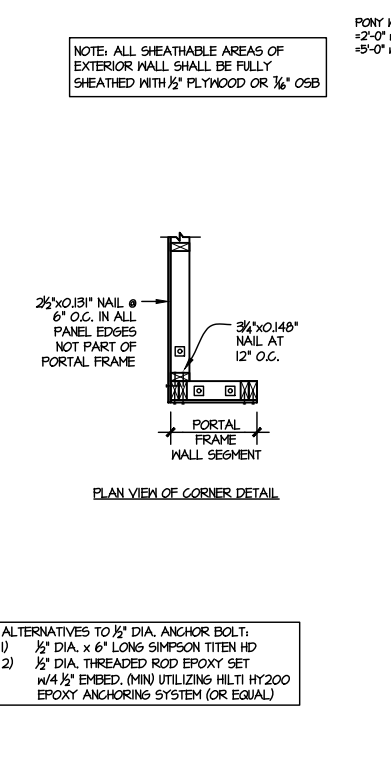
OUTSIDE ELEVATION



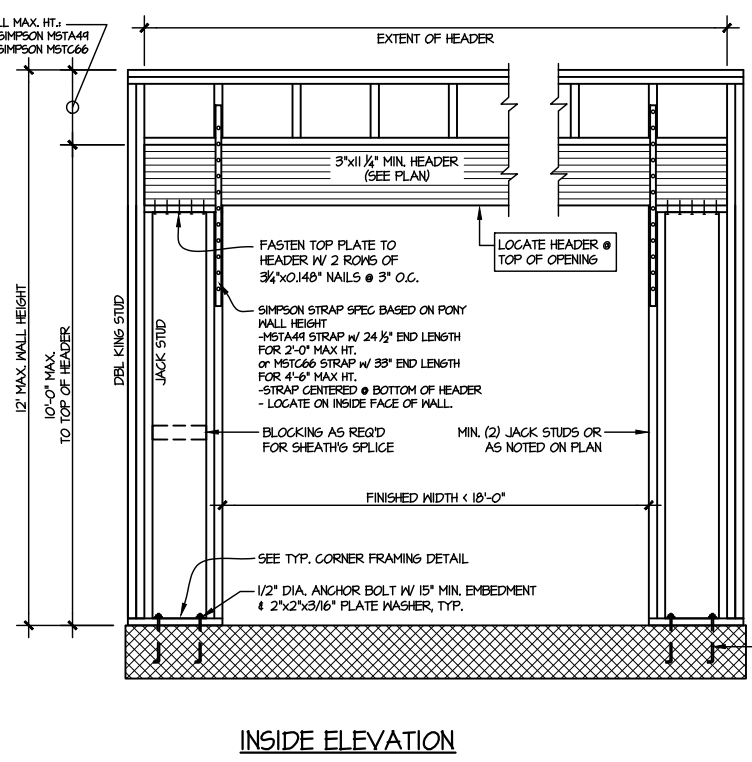
SECTION A-A THROUGH PIER



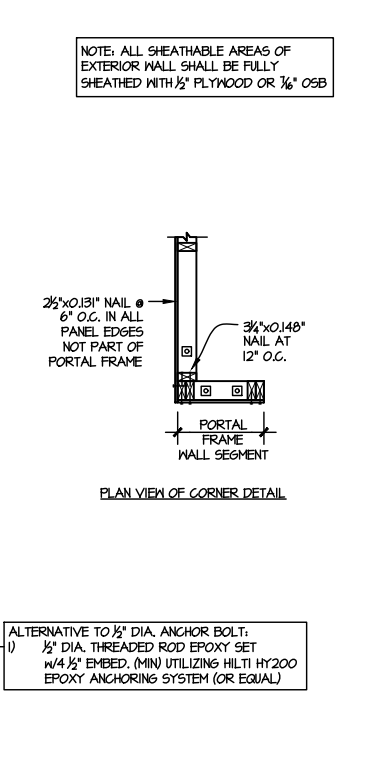
INSIDE ELEVATION



PLAN VIEW OF CORNER DETAIL



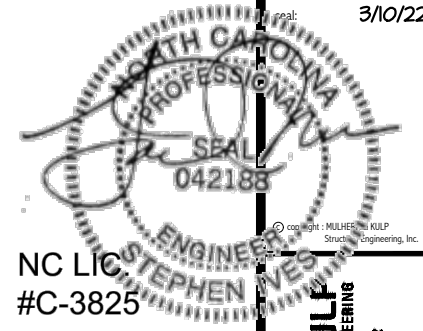
INSIDE ELEVATION



PLAN VIEW OF CORNER DETAIL

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

2 TWO SIDED PORTAL FRAME BRACING
ELEVATION ON CMU STEM
SCALE: N.T.S.



MULHERN+KULF
 RESIDENTIAL STRUCTURAL ENGINEERING
 300 Beavertide Ave, Building 4 - Asheville, PA 19002
 P 215-946-8801 • mulhern+kulf.com



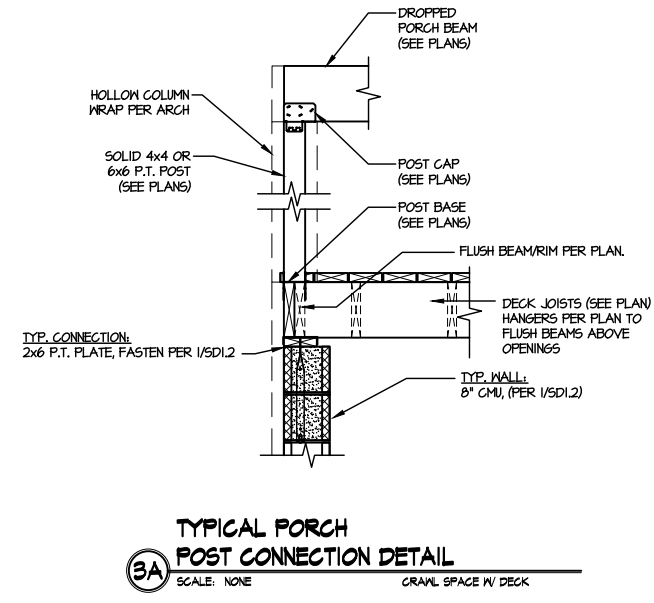
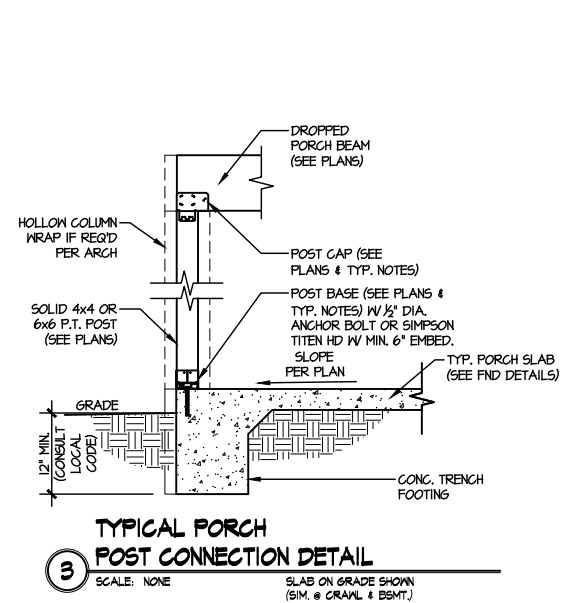
M&K project number:
 126-21030
 project mgr: JTR
 drawn by: KL
 issue date: 08-20-21

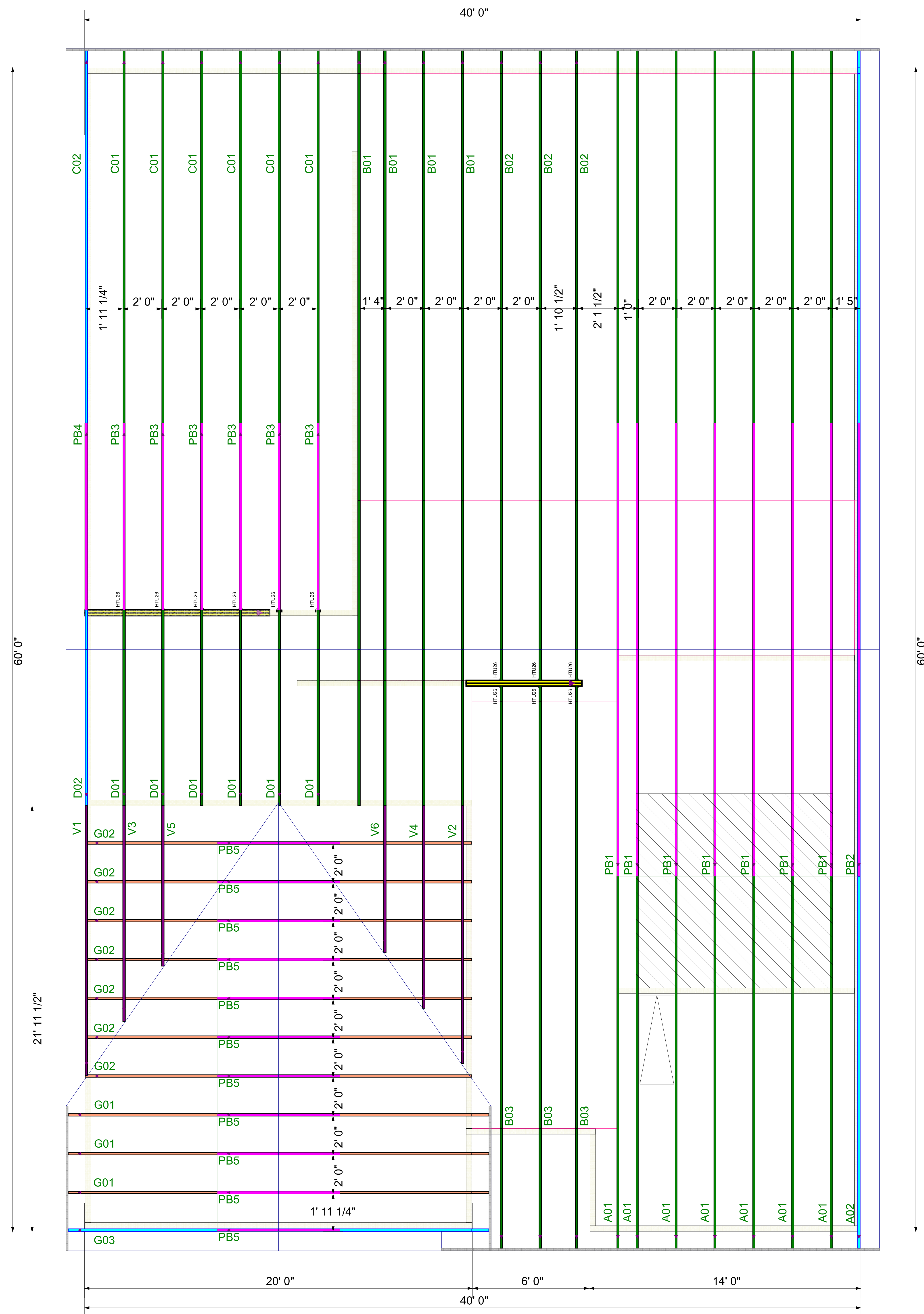
REVISIONS:
 date: initial:
 03/09/22 JTS



FRAMING DETAILS
 COOPER 3 MODEL
 RALEIGH, NC

sheet:
SD3.0





Truss Connector Total List		
Qty	Product	Manuf
12	HTU26	Simpson

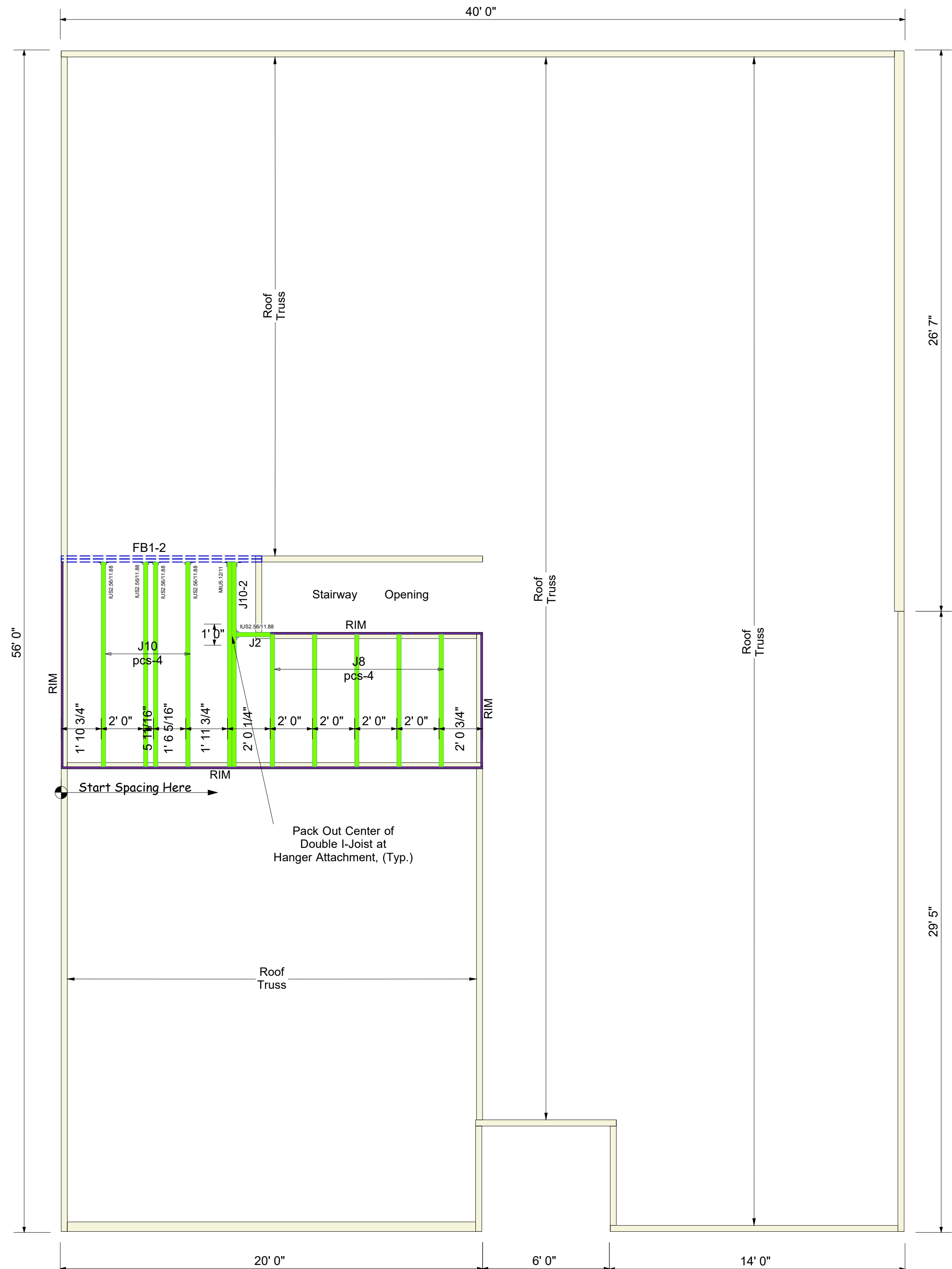
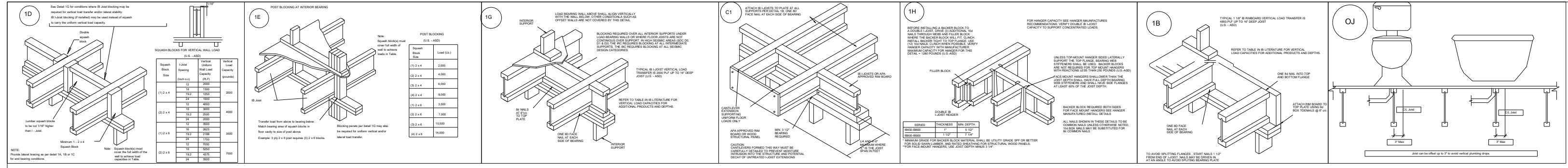
ROOF LAYOUT
DRAWING SCALE : NTS

PROJECT NUMBER 22030101
SHEET NUMBER 1 / 1

REVISIONS	
DATE	BY
4-6-22	ND

DRB
COOPER 6 - 97 FARM AT NEILLS CREEK
ROOF TRUSS LAYOUT





Connector Summary		
Qty	Manuf	Product
5	Simpson	IUS2.56/11.88
1	Simpson	MIU5.12/11

Products					
PlotID	Length	Product	Plies	Net Qty	Fab Type
J10	10' 0"	11 7/8" PJI-40	1	4	MFD
J10-2	10' 0"	11 7/8" PJI-40	2	2	MFD
J8	8' 0"	11 7/8" PJI-40	1	5	MFD
J2	2' 0"	11 7/8" PJI-40	1	1	MFD
FB1-2	10' 0"	2.0 RigidLam DF LVL 1-3/4 x 11-7/8	2	2	FF
RIM	12' 0"	1 1/8" x 11 7/8" APA Rim Board	1	4	FF

BLOCK SOLID UNDER ALL POST /POINT LOADS FROM ABOVE - TYPICAL AT ALL LOCATIONS

2nd Floor I-Joist
DRAWING SCALE : NTS

PROJECT NUMBER 22030101	REVISIONS	
SHEET NUMBER 1 / 1	DATE 03.16.22	BY RKW

Dan Ryan Builders
97 Farm at Neills Creek (Cooper3 6-GLFE)
2nd FLOOR I-JOIST PLACEMENT PLAN

