DRAYTON-RALE

RALEIGH- LOT 00.0077 THE FARM AT NEILL'S CREEK
(MODEL# 2695)
ELEVATION 5 - GL

227 WINDING CREEK DRIVE

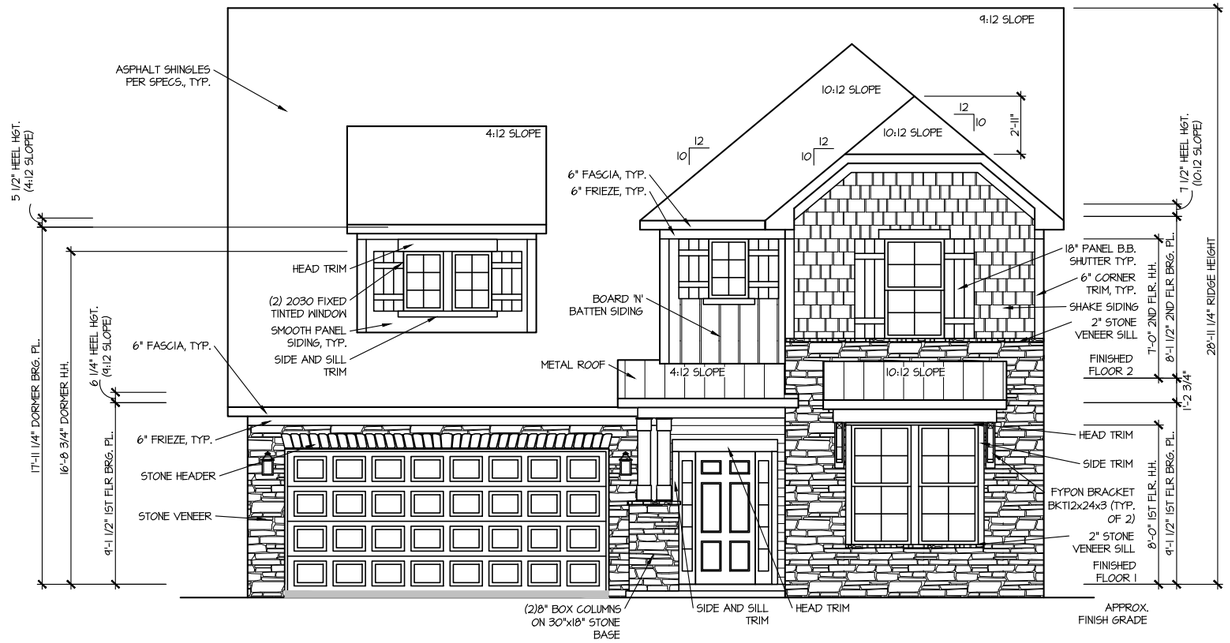
DRB
HOMES

INDEX

AREA CALCULATIONS ELEVATION 5	HEATED	COVERED / UNHEATED	UNCOVERED
FIRST FLOOR	1266 SF		
GARAGE		547 SF	
FRONT PORCH – ELEVATION 5		55 SF	
SECOND FLOOR	1491 SF		
OPTIONS			
EXTENDED BREAKFAST	120 SF		
TOTAL	2877 SF	602 SF	

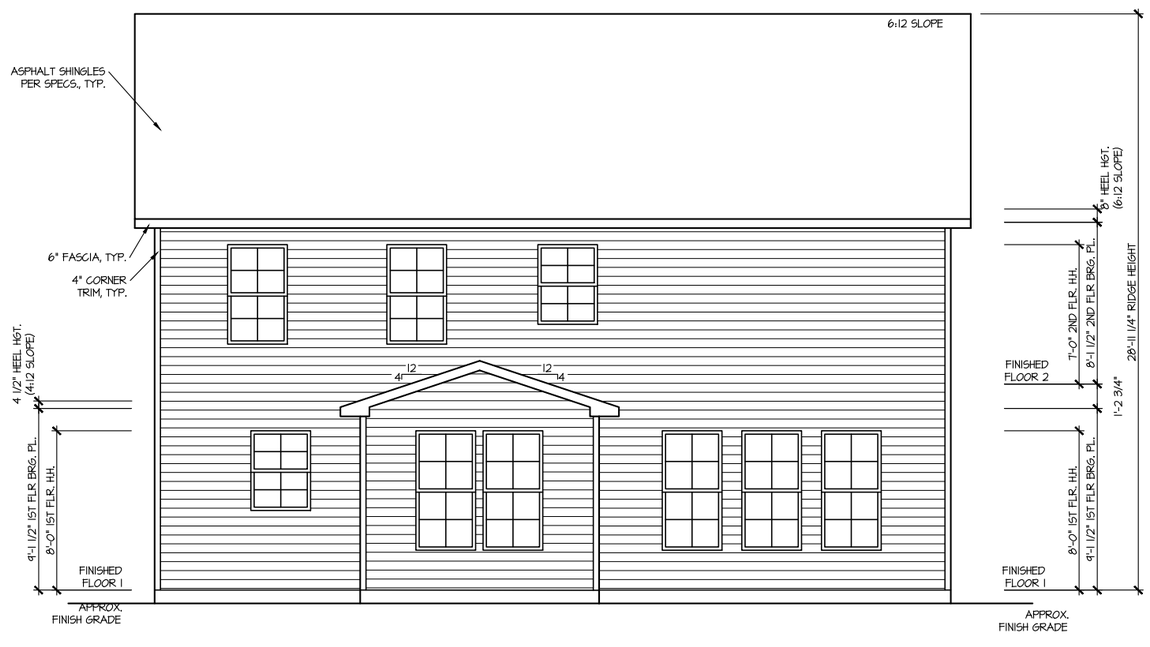
LOT SPECIFIC

1	LOT 00.0077	THE FARM AT NEILL'S CREEK
		DRAYTON REV. RALE 2 ELEVATION 5
2	ADDRESS	227 WINDING CREEK DR LILLINGTON, NC 27546



FRONT ELEVATION 5

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



REAR ELEVATION 5

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

MASTER PLAN INFORMATION		
REVISION	DATE	UPDATED DATE
R2-RALE	3-6-19	2-17-22

DRAWN BY: ITS

DATE: 05/27/2022

PLAN NO. 2695

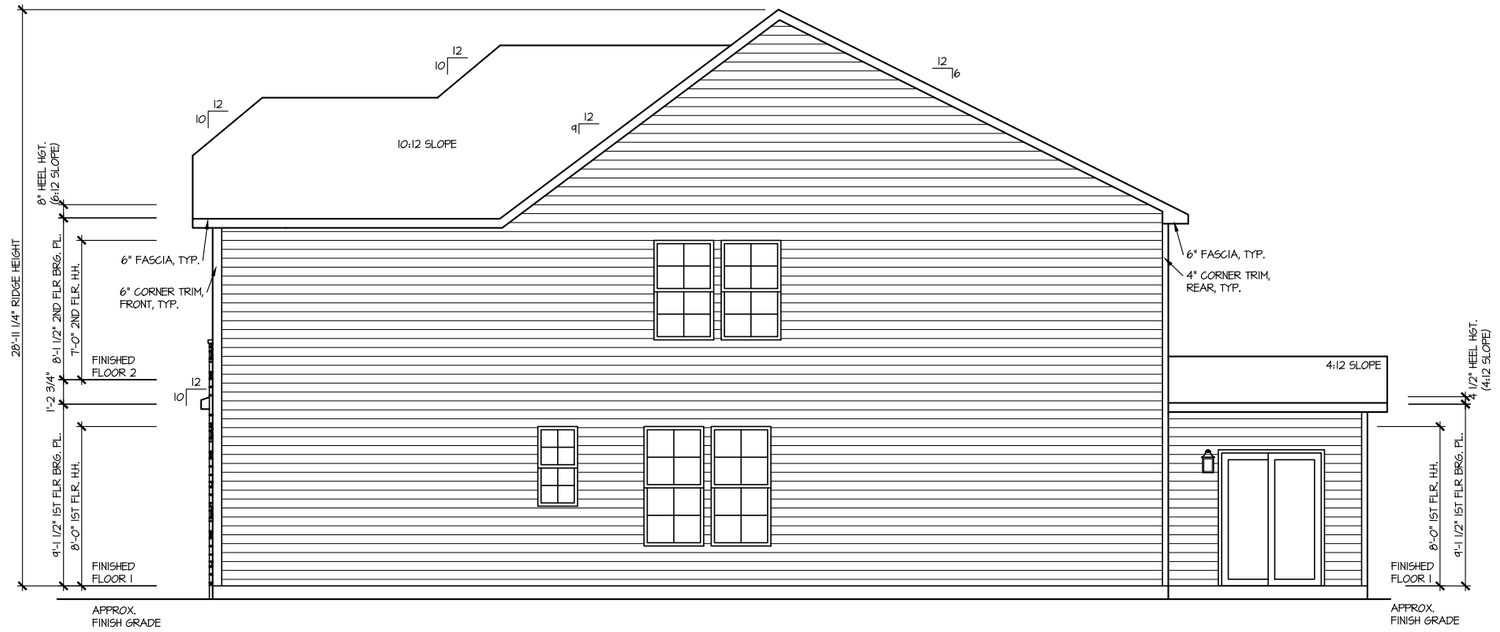
DRB HOMES

HOUSE NAME: DRAYTON

DRAWING TITLE: FRONT & REAR ELEVATIONS

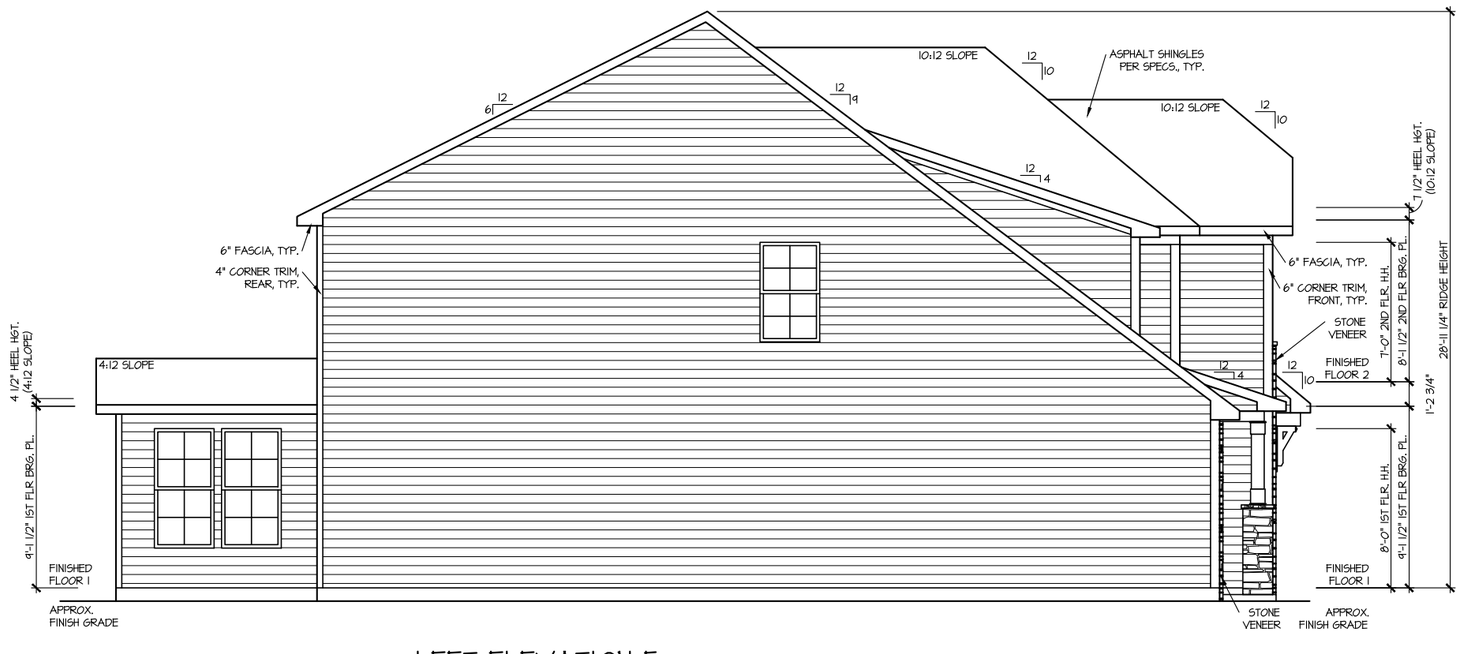
SHEET No. A1.1

FILE: Lot 00.0077.dwg DATE: 5/27/2022 10:32 AM



RIGHT ELEVATION 5

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



LEFT ELEVATION 5

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

MASTER PLAN INFORMATION		
REVISION	DATE	UPDATED DATE
R2-RALE	3-6-19	2-17-22

DRAWN BY: ITS

DATE: 05/27/2022

PLAN NO. 2695

DRB HOMES

HOUSE NAME: DRAYTON

DRAWING TITLE: RIGHT & LEFT ELEVATIONS

SHEET No. A1.2

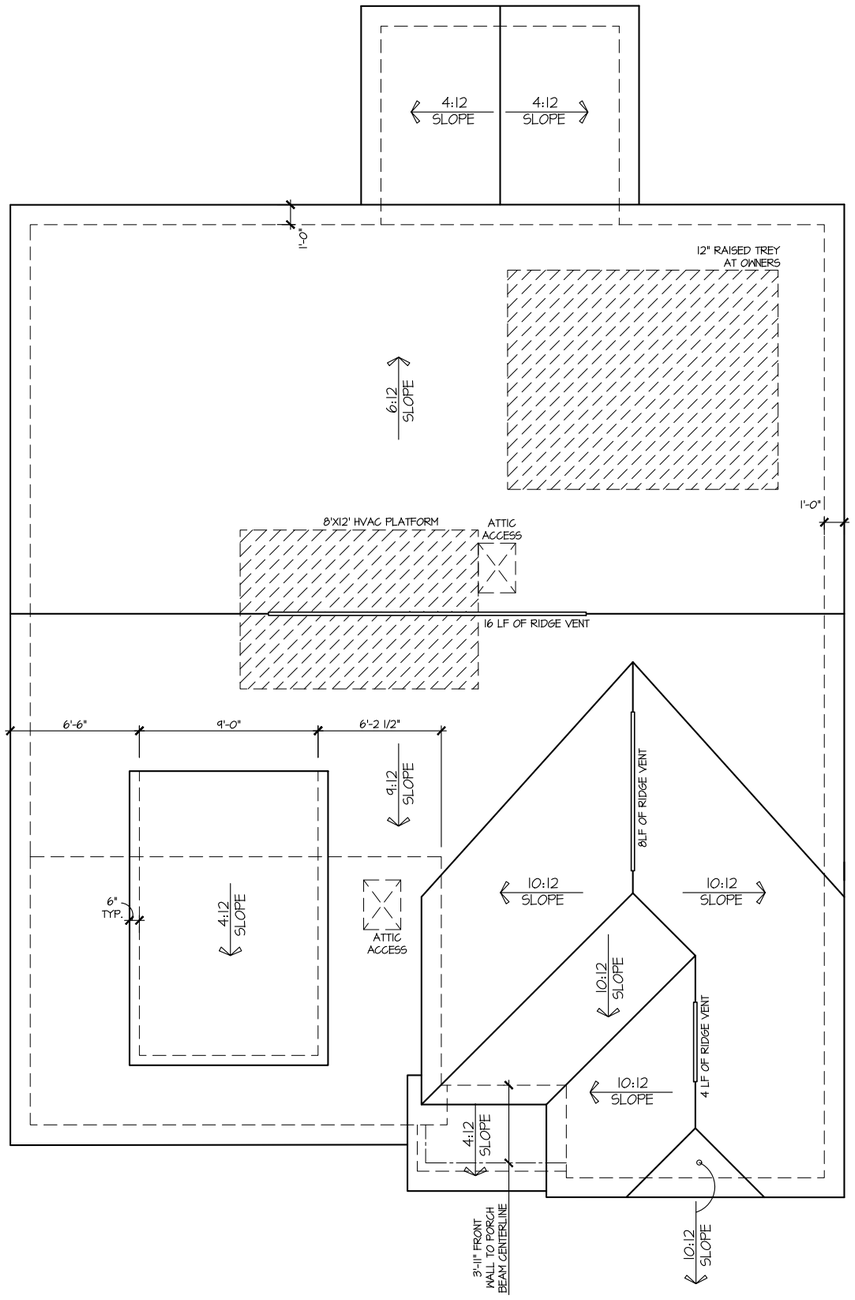
FILE: Lot 00.0077.dwg DATE: 5/27/2022 10:32 AM

ROOF VENTILATION CALCULATIONS:

ROOF AREA = 1836 SQ. FT.
OVERALL REQUIRED VENTILATION:
1 TO 150 = 12.24 SQ. FT.
1 TO 300 = 6.12 SQ. FT.
50-80% IN TOP THIRD = 3.06- 4.90 FT. (1 TO 300)

NET FREE AREA OF VENTED SOFFIT = 5.7 SQ. IN / LINEAR FT.
NET FREE AREA OF RIDGE VENT = 18 SQ. IN/ LINEAR FT.

LOWER VENTING: (BOTTOM 2/3 RDS)
77 LINEAR FEET OF SOFFIT X 5.7 SQ. IN. = 3.05 SQ. FT.
UPPER VENTING: (TOP 1/3 RD)
28 LINEAR FEET OF RIDGE X 18 SQ. IN = 3.5 SQ. FT.
3.5 SQ. FT. BETWEEN 50% - 80%
(1 TO 300 ALLOWED)
TOTAL ROOF VENTILATION: 6.55 SQ. FT. > 6.12 SQ. FT. (RQ'D)



ROOF PLAN ELEV. 5

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

MASTER PLAN INFORMATION		
REVISION	DATE	UPDATED DATE
R2-RALE	3-6-19	2-17-22

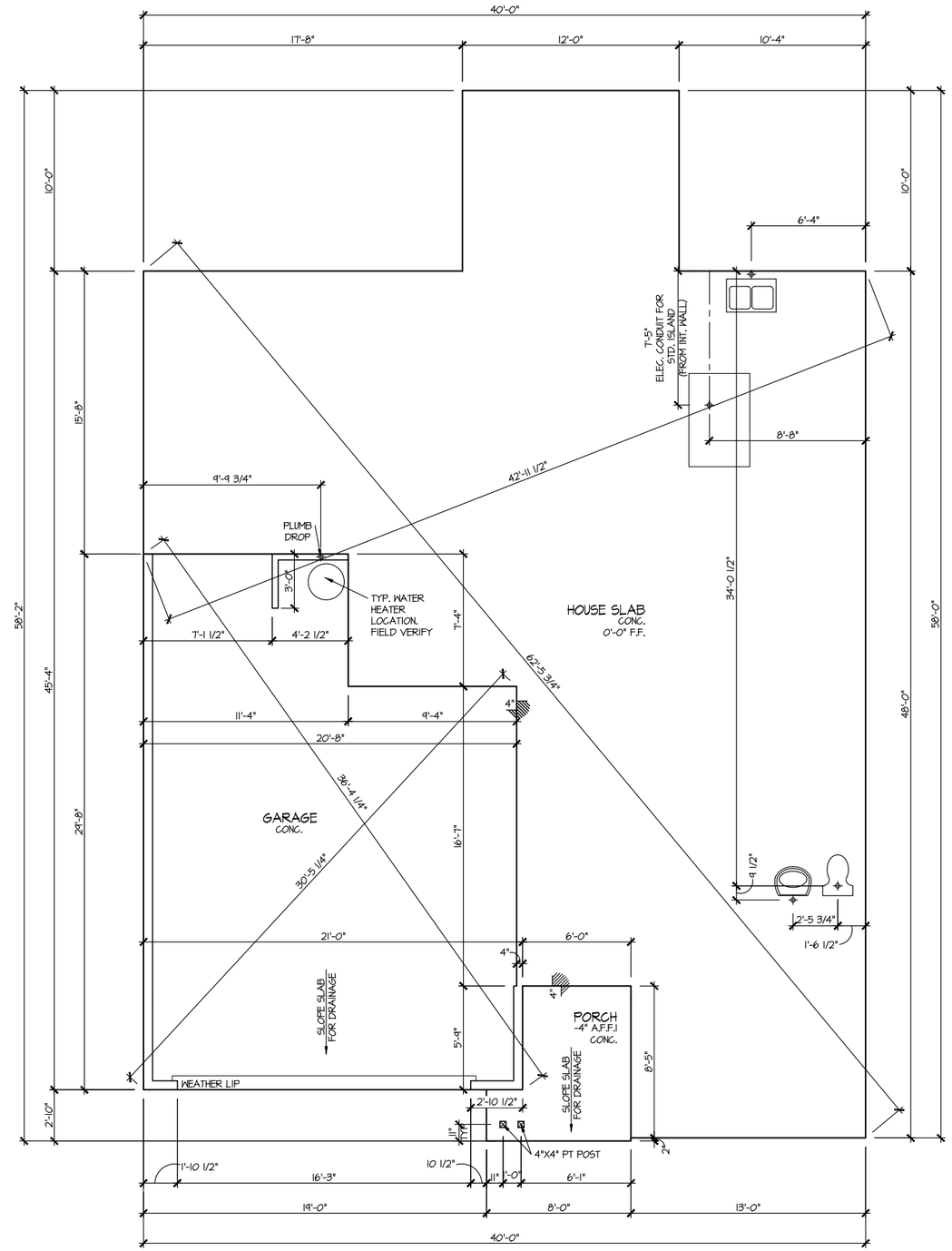
DRAWN BY: ITS
DATE: 05/27/2022
PLAN NO. 2695

DRB HOMES

HOUSE NAME: DRAYTON
DRAWING TITLE: ROOF PLAN

SHEET No. A1.3

FILE: Lot 00.0077.dwg DATE: 5/27/2022 10:32 AM



ELEVATION 5
SLAB PLAN

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

MASTER PLAN INFORMATION		
REVISION	DATE	UPDATED DATE
R2-RALE	3-6-19	2-17-22

DRAWN BY: ITS

DATE: 05/27/2022

PLAN NO. 2695

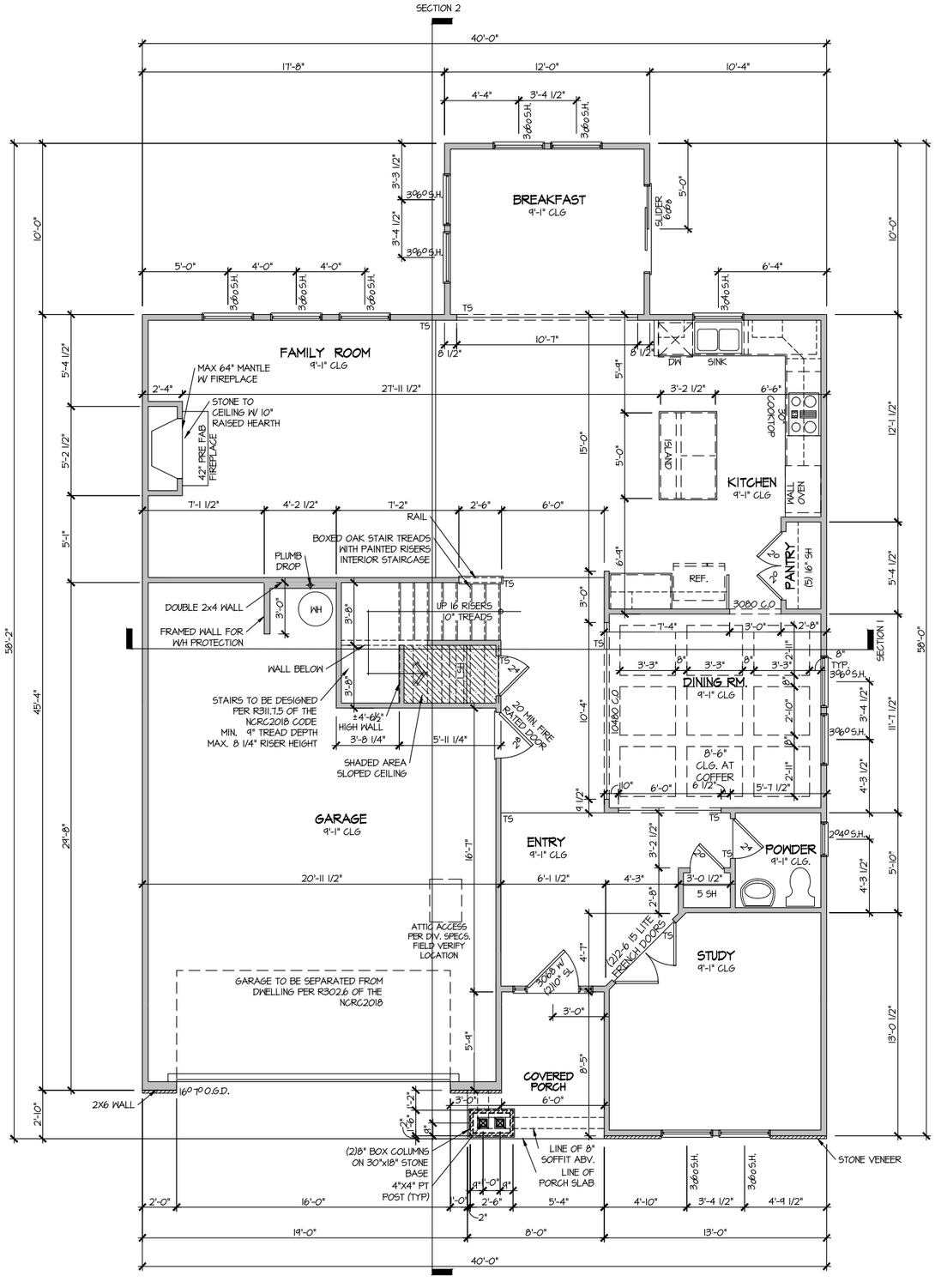
DR HOMES

HOUSE NAME: DRAYTON

DRAWING TITLE: SLAB PLAN

SHEET No. A2.1

FILE: Lot 00.0077.dwg DATE: 5/27/2022 10:32 AM



ELEVATION 5
FIRST FLOOR PLAN

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

FILE: Lot 00.0077.dwg DATE: 5/27/2022 10:32 AM

MASTER PLAN INFORMATION			
REVISION	DATE	UPDATED	DATE
R2-RALE	3-6-19		2-17-22

DRAWN BY: ITS

DATE: 05/27/2022

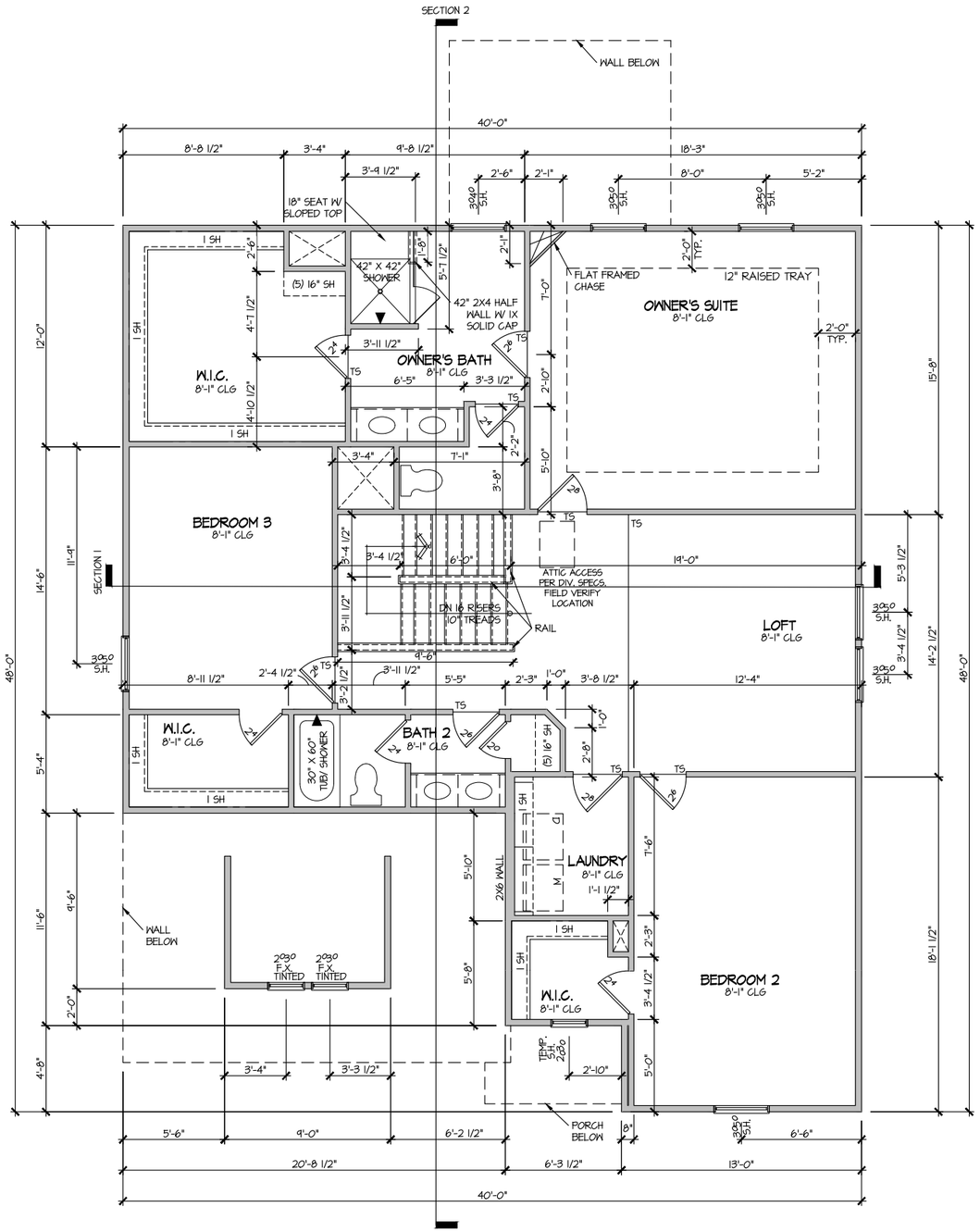
PLAN NO. 2695

DRB HOMES

HOUSE NAME: DRAYTON

DRAWING TITLE: FIRST FLOOR PLAN

SHEET No. A3.1



ELEVATION 5
SECOND FLOOR PLAN

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

MASTER PLAN INFORMATION		
REVISION	DATE	UPDATED DATE
R2-RALE	3-6-19	2-17-22

DRAWN BY: ITS

DATE: 05/27/2022

PLAN NO. 2695

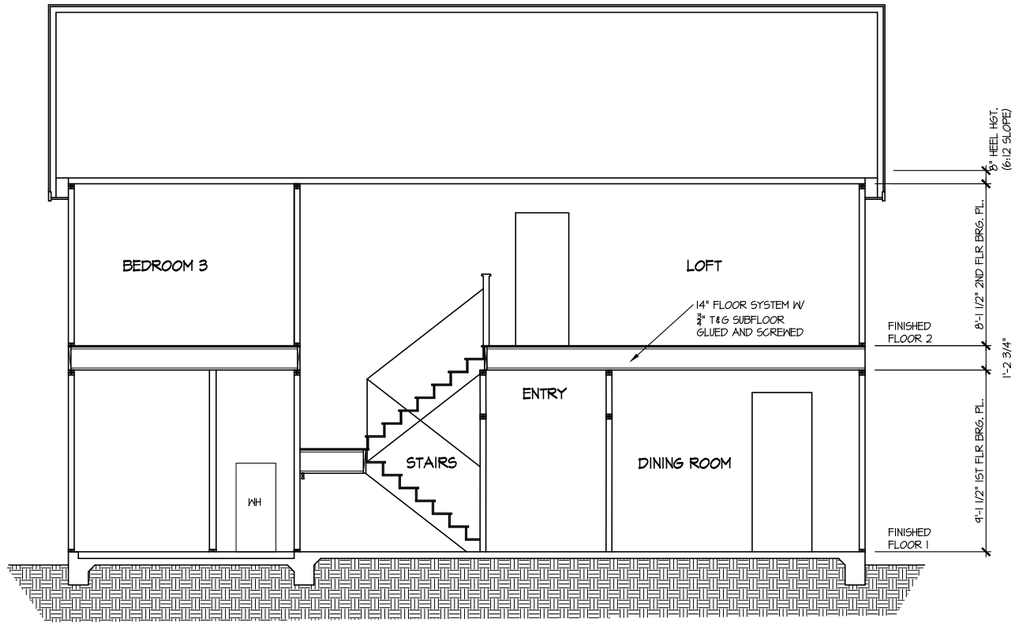
DRB HOMES

HOUSE NAME: DRAYTON

DRAWING TITLE: SECOND FLOOR PLAN

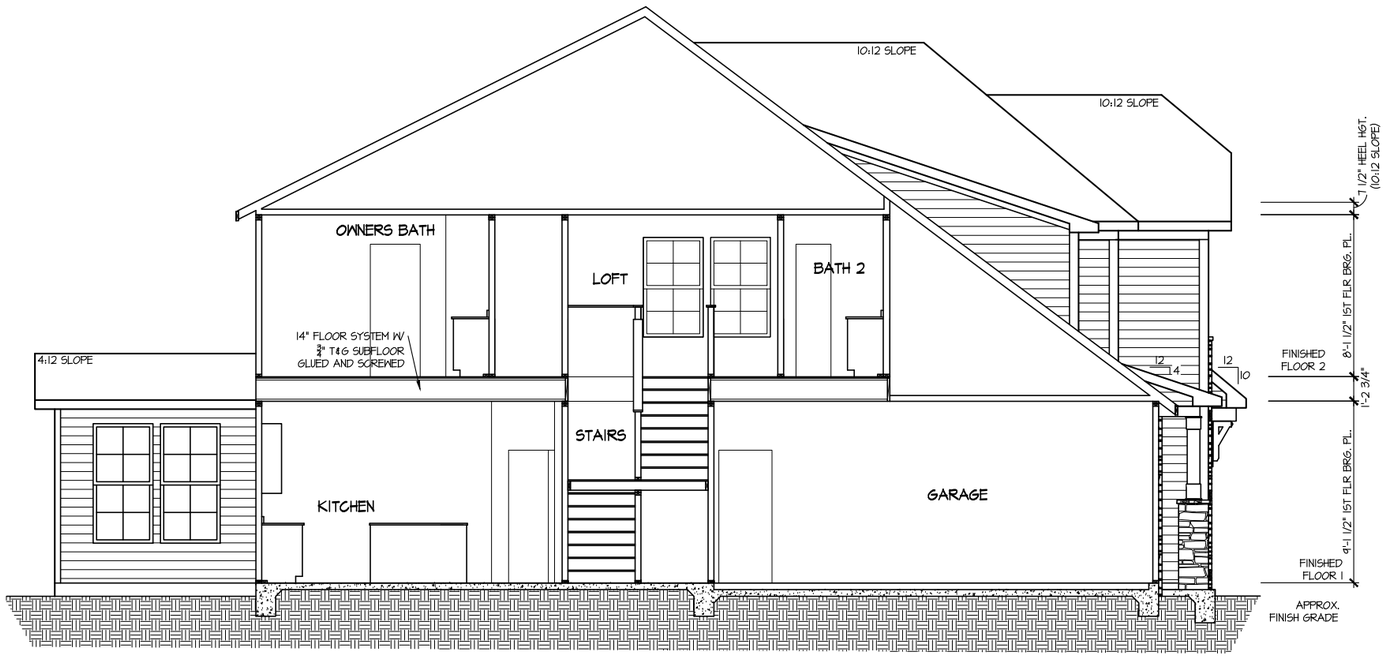
SHEET No. A3.2

FILE: Lot 00.0077.dwg DATE: 5/27/2022 10:32 AM



SECTION 1

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



SECTION 2

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

MASTER PLAN INFORMATION		
REVISION	DATE	UPDATED DATE
R2-RALE	3-6-19	2-17-22

DRAWN BY: ITS

DATE: 05/27/2022

PLAN NO. 2695

DRB HOMES

HOUSE NAME: DRAYTON

DRAWING TITLE: BUILDING SECTION

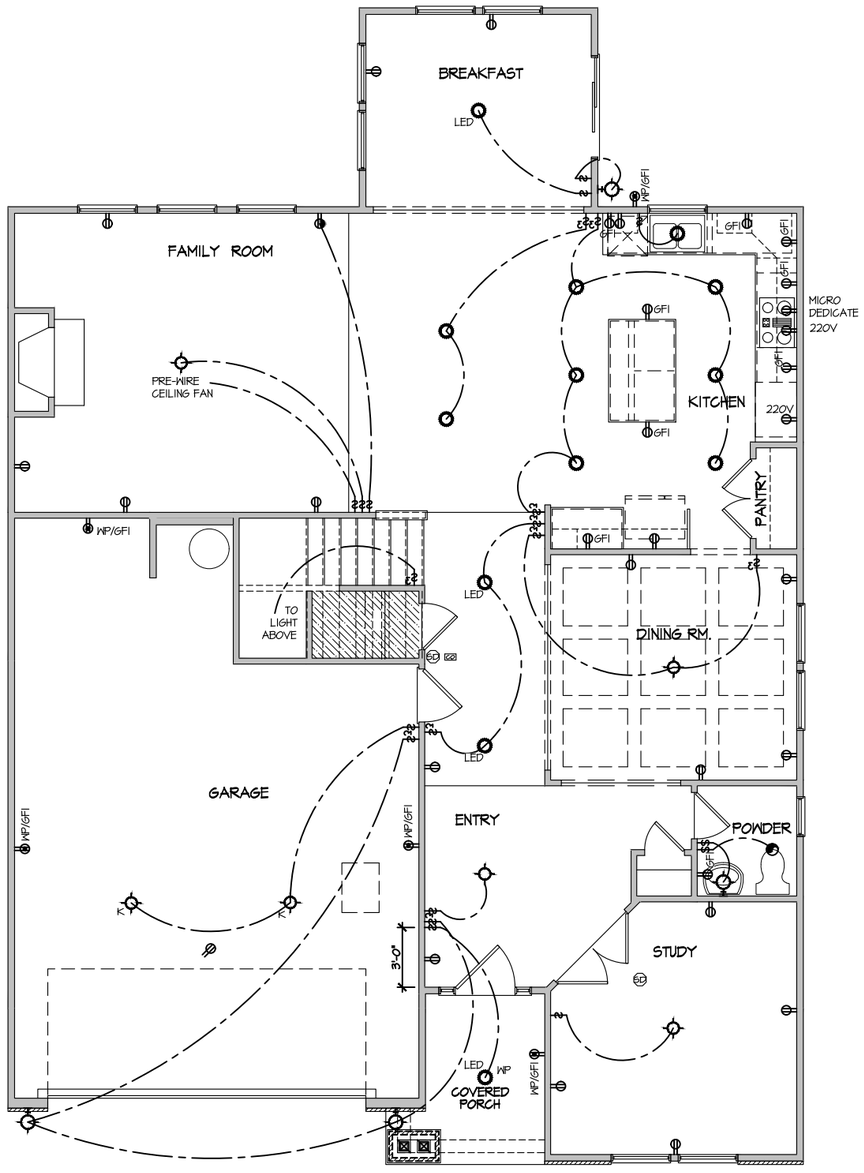
SHEET No. A4.1

FILE: Lot 00.0077.dwg DATE: 5/27/2022 10:32 AM

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
- GFI DUPLEX AFCI RECEPTACLE - GFI
- WP/GFI DUPLEX AFCI RECEPTACLE - WATERPROOF GFI
- SD 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
- P PULLCHAIN 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. 5

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

FILE: Lot 00.0077.dwg DATE: 5/27/2022 10:32 AM

MASTER PLAN INFORMATION		
REVISION	DATE	UPDATED DATE
R2-RALE	3-6-19	2-17-22

DRAWN BY: ITS

DATE: 05/27/2022

PLAN NO. 2695

DR HOMES

HOUSE NAME: DRAYTON

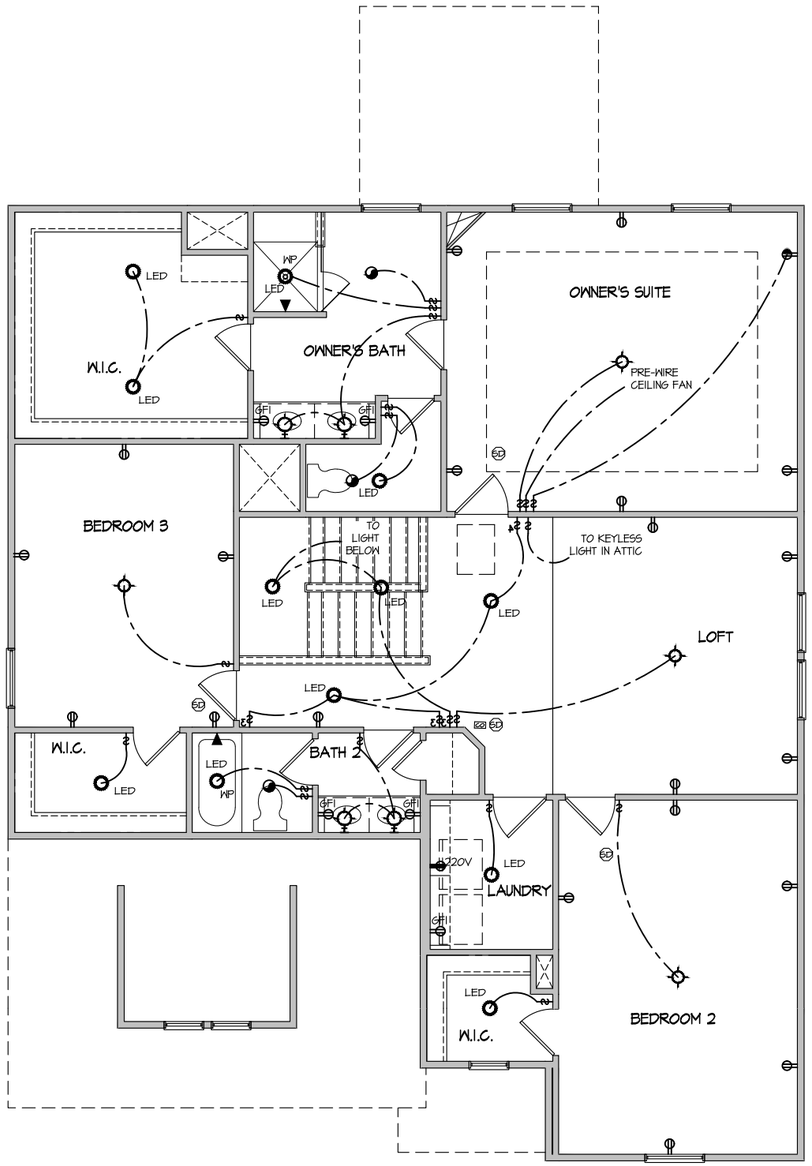
DRAWING TITLE: FIRST FLOOR ELECTRICAL

SHEET No. E1.1

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
- GFI DUPLEX AFCI RECEPTACLE - GFI
- WP/GFI DUPLEX AFCI RECEPTACLE - WATERPROOF GFI
- SD SMOKE DETECTOR - WIRED IN SERIES
- EXHAUST FAN MOTOR
- CO DETECTOR
- DC DOOR CHIME
- H LIGHT FIXTURE - WALL MOUNTED
- LIGHT FIXTURE - CEILING MOUNTED
- LIGHT FIXTURE - RECESSED CAN
- LED LIGHT FIXTURE - LED SURFACE MOUNTED
- P PULLCHAIN 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
SECOND FLOOR - ELEV. 5

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

MASTER PLAN INFORMATION		
REVISION	DATE	UPDATED DATE
R2-RALE	3-6-19	2-17-22

DRAWN BY: ITS

DATE: 05/27/2022

PLAN NO. 2695

DR HOMES

HOUSE NAME: DRAYTON

DRAWING TITLE: SECOND FLOOR ELECTRICAL

SHEET No. E1.2

FILE: Lot 00.0077.dwg DATE: 5/27/2022 10:32 AM

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. 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: (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:
  - 1.9L' - Fb=2325 psi; Fv=310 psi; E=1.55x10^6 psi
  - 1.VL' - Fb=2600 psi; Fv=285 psi; E=2.0x10^6 psi
- FOR 2 PLY & 3 PLY BEAMS OF EQUAL WIDTH, FASTEN PLIES TOGETHER WITH 3 ROWS OF 3"x0.120" NAILS @ 8" O/C OR 2 ROWS 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 3½" OR 5¼" 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 ¼"x6" SIMPSON SDS SCREWS (OR 6 ¾" 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 "I" 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, U.N.O..
- 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 BCS2-2/4 CAP & ABN44Z BASE, U.N.O.

FLOOR FRAMING

- I-JOISTS/TRUSSES SHALL BE DESIGNED BY MANUF. TO MEET OR EXCEED L/480 LIVE LOAD DEFLECTION CRITERIA. (EXCLUDES MARBLE FLOORS - CONTACT MFR FOR MARBLE FLOOR DESIGNS)
- AT I-JOIST FLOORS, PROVIDE 1 1/8" MIN. OSB RIM BOARD.
- METAL HANGERS SHALL BE SPECIFIED BY MANUFACTURER, U.N.O.
- 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 ½" x 0.131" NAILS @ 6"o.c. @ PANEL EDGES & @ 12"o.c. FIELD.
  - 2 ¾" x 0.120" NAILS @ 4" O.C. @ PANEL EDGES & @ 8" O.C. FIELD.
  - 2 ¾" 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 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.O.
- 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 w/2x4 LEDGER FASTENED TO FRAMING w/(2) 3"x0.131" NAILS @ 16" O.C. (MAX 7' SPAN)
- ROOF SHEATHING SHALL BE 7/16" A.P.A. RATED SHEATHING 24/16 EXPOSURE 1 (OR APPROVED EQUAL). FASTEN TO FRAMING MEMBERS
  - w/ 2 ½" x 0.131" NAILS @ 6"o.c. @ PANEL EDGES & @ 12" O.C. FIELD.
  - w/ 2 ¾" x 0.120" NAILS @ 4"o.c. @ PANEL EDGES & @ 8" O.C. FIELD.
  - w/ 2 ¾" x 0.113" NAILS @ 3"o.c. @ PANEL EDGES & @ 6" O.C. FIELD.

LATERAL BRACING & SHEAR WALL SHEATHING SPECIFICATIONS

THIS MODEL HAS BEEN DESIGNED TO RESIST LATERAL FORCES RESULTING FROM:

120 MPH WIND IN 2018 NCSBC: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 1604) & ASCE 7-10, AS PERMITTED BY R301.1.3 OF THE 2018 NCSBC: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 NCSBC:RC SECTION R802.11.1. 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, 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 ½" 16 GA STAPLES (⅞" 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 ¾" 16 GA STAPLES (⅞" 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, 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/ 10d NAILS @ 4" O.C. (THRU ONE SIDE ONLY)

- INDICATES EXTENT OF INT. OSB SHEARWALL OR 3" O.C. OSB SHEARWALL.
- INDICATES HOLDOWN BELOW

VENEER LINTEL SCHEDULE

SPAN (MAX)	HEIGHT OF VENEER ABOVE LINTEL	STEEL ANGLE SIZE
3'-0"	20 FT. MAX	L3"x3"x¼"
	5 FT. MAX	L3"x3"x¼"
6'-0"	12 FT. MAX	L4"x3"x¼"
	20 FT. MAX	L5"x3½"x⅜"
	5 FT. MAX	L4"x4"x¼" *
8'-0"	12 FT. MAX	L5"x3½"x⅜"
	16 FT. MAX	L6"x3½"x⅜"
9'-6"	12 FT. MAX	L6"x3½"x⅜"
16'-0"	2 FT. MAX	L7"x4"x½" **
	5 FT. MAX	L8"x4"x½" **

ALL LINTELS
- SHALL SUPPORT 2 ⅝" - 8 ⅝" VENEER W/ 40 psf MAXIMUM WEIGHT.
- 6" BF SHALL HAVE 4" MIN. BEARING
- >= 16' SHALL HAVE 8" MIN. BEARING
- < 16' SHALL NOT BE FASTENED BACK TO HEADER.
- >= 16' SHALL BE FASTENED BACK TO WOOD HEADER IN WALL @48"o.c. w/ ½" DIA. x 9 ½" LONG LAG SCREWS IN 2" LONG VERTICALLY SLOTTED HOLES.
- MAX. VENEER HT. APPLIES TO ANY PORTION OF BRICK OVER THE OPENING.
- ALL LINTELS SHALL BE LONG LEG VERTICAL.
- WHEN SUPPORTING VENEER < 8" HIDE THE EXTERIOR TOE OF THE HORIZONTAL LEG MAY BE CUT IN THE FIELD TO BE 5 ¼" WIDE OVER THE BEARING LENGTH ONLY. THIS IS TO ALLOW FOR MORTAR JOINT PINCHING.
- SEE STRUCTURAL PLANS FOR ANY LINTEL CONDITION NOT ENCOMPASSED BY THE ABOVE PARAMETERS.

* FOR QUEEN VENEER USE L4x3x¼'.
** FOR 8⅝" VENEER ONLY. SEE PLAN FOR VENEER SUPPORT IF VENEER < 8⅝" THICK.

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.

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

FOUNDATION

- DESIGN IS BASED ON 2018 NORTH CAROLINA STATE BUILDING CODE: RESIDENTIAL CODE.
- FOOTING DESIGN - 2,000 PSF ALLOWABLE SOIL BEARING PRESSURE IS ASSUMED. BUILDER/CONTRACTOR MUST VERIFY.
- FASTEN 2x4/6 SILL PLATES TO FND WITH A MINIMUM OF 2 ANCHORS PER PLATE, 12" MAX. FROM PLATE ENDS - UTILIZING:
  - 1/2" DIA. ANCHOR BOLTS @ 6'-0" O.C., 7" MIN. EMBEDMENT (CONC), 15" MIN. EMBEDMENT (CMU)
  - SIMPSON MASA ANCHOR STRAPS @ 6'-0" O.C. (CONC)
  - SIMPSON MAB23 ANCHOR STRAPS @ 2'-8" O.C. (CMU)

  (REFER TO DETAILS FOR 10' TALL WALL ANCHOR REQUIREMENTS)
- ALL LUMBER EXPOSED TO WEATHER OR IN CONTACT W/ CONCRETE OR CMU SHALL BE PRESERVATIVE TREATED SOUTHERN PINE #2.
- BUILDER TO VERIFY CORROSION-RESISTANCE COMPATIBILITY OF HARDWARE & FASTENERS IN CONTACT W/ PRESERVATIVE-TREATED WOOD. CONTACT LUMBER & HARDWARE SUPPLIERS TO COORD.
- BASEMENT INTERIOR BEARING WALLS & EXTERIOR WALK-OUT BASEMENT WALLS SHALL BE 2x6 @ 16" O.C. SPF OR SYP, 'STUD' GRADE OR BETTER.
- CONCRETE DESIGN BASED ON ACI 318. CONCRETE SHALL ATTAIN THE FOLLOWING MIN. COMPRESSIVE STRENGTHS IN 28 DAYS, U.N.O.:
  - f'c = 4,000 psi: ..... FOUNDATION WALLS
  - 2,500 psi: ..... FOOTINGS & INTERIOR SLABS ON GRADE
  - 3,000 psi: ..... GARAGE & EXTERIOR SLABS ON GRADE
  - fy = 60,000 psi
- BASEMENT FOUNDATION WALL DESIGN BASED ON:
  - 9' OR 10' 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. 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, U.N.O.
  - LARGER OPENINGS SHALL BE PER PLAN.
- ALL CONCRETE EXPOSED TO THE WEATHER SHALL NOT HAVE LESS THAN 5% OR MORE THAN 7% AIR ENTRAINMENT.
- ALL FOOTINGS SHALL BEAR AT LEAST 12" BELOW FINISH GRADE.
- FOOTINGS AND SLABS ON GRADE SHALL BEAR ON VIRGIN SOIL OR 95% COMPACTED FILL.
- PROVIDE CONTROL JOINTS AT ALL INSIDE CORNERS OF SLAB EDGES, AND OTHER LOCATIONS WHERE SLAB CRACKS ARE LIKELY TO DEVELOP.
  - JOINTS SHALL BE LOCATED @ 10'-0" O.C. (RECOMMENDED) OR 15'-0" O.C. (MAXIMUM)
  - JOINT GRID PATTERN SHALL BE AS CLOSE TO SQUARES AS POSSIBLE (1:1 RATIO), WITH A MAXIMUM OF 1:1.5 RATIO
  - CONTROL JOINTS SHALL NOT BE INSTALLED IN STRUCTURAL SLABS
- CONCRETE MASONRY UNITS (CMU) SHALL BE ASTM C90 WITH A MIN. COMPRESSIVE STRENGTH OF 1900 psi (f'm=1500 psi). MORTAR SHALL BE ASTM C270, TYPE S. CMU DESIGN PER ACI 530 & 530.1.
- CMU FOUNDATION WALLS SHALL HAVE 'DUR-O-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.

MEANS & METHODS NOTES

THE STRUCTURE IS DESIGNED TO BE SELF 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 TO 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 ELEMENTS 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. MULHERN & KULP CANNOT BE HELD RESPONSIBLE FOR ANY STRUCTURAL ISSUES RELATED TO ANY BUILDING COMPONENT IF COMPONENT SHOP DRAWINGS ARE NOT SUBMITTED TO MHK FOR REVIEW PRIOR TO FABRICATION, DELIVERY, OR INSTALLATION.

TRUSSES/JOISTS SHALL BE DESIGNED SO THAT DIFFERENTIAL DEFLECTION BETWEEN ADJACENT PARALLEL TRUSSES/JOISTS OR GIRDER TRUSSES/FLUSH BEAMS DO NOT EXCEED THE FOLLOWING:

A. ROOF TRUSSES: ——— 1/4" DEAD LOAD
B. FLOOR TRUSSES, ATTIC TRUSSES, & I-JOISTS: ——— 1/8" DEAD LOAD
C. FLOOR TRUSSES & ATTIC TRUSSES ADJACENT TO FLOOR FRAMING BY OTHERS: — LIMIT ABSOLUTE TRUSS DEFLECTION TO 3/16"** DEAD LOAD. (NOT DIFFERENTIAL DEFLECTION)

11/23/2021

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042188 STEPHEN KULP

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
330 Brookside Ave, Building 9 • Ambler, PA 19002
p 215.619.2000 • mulhernkulp.com
N.C. Lic. #C-3825

M&K project number: 126-21020

project mgr: JTR
drawn by: KL
issue date: 06-12-21

REVISIONS:

date:	initial:

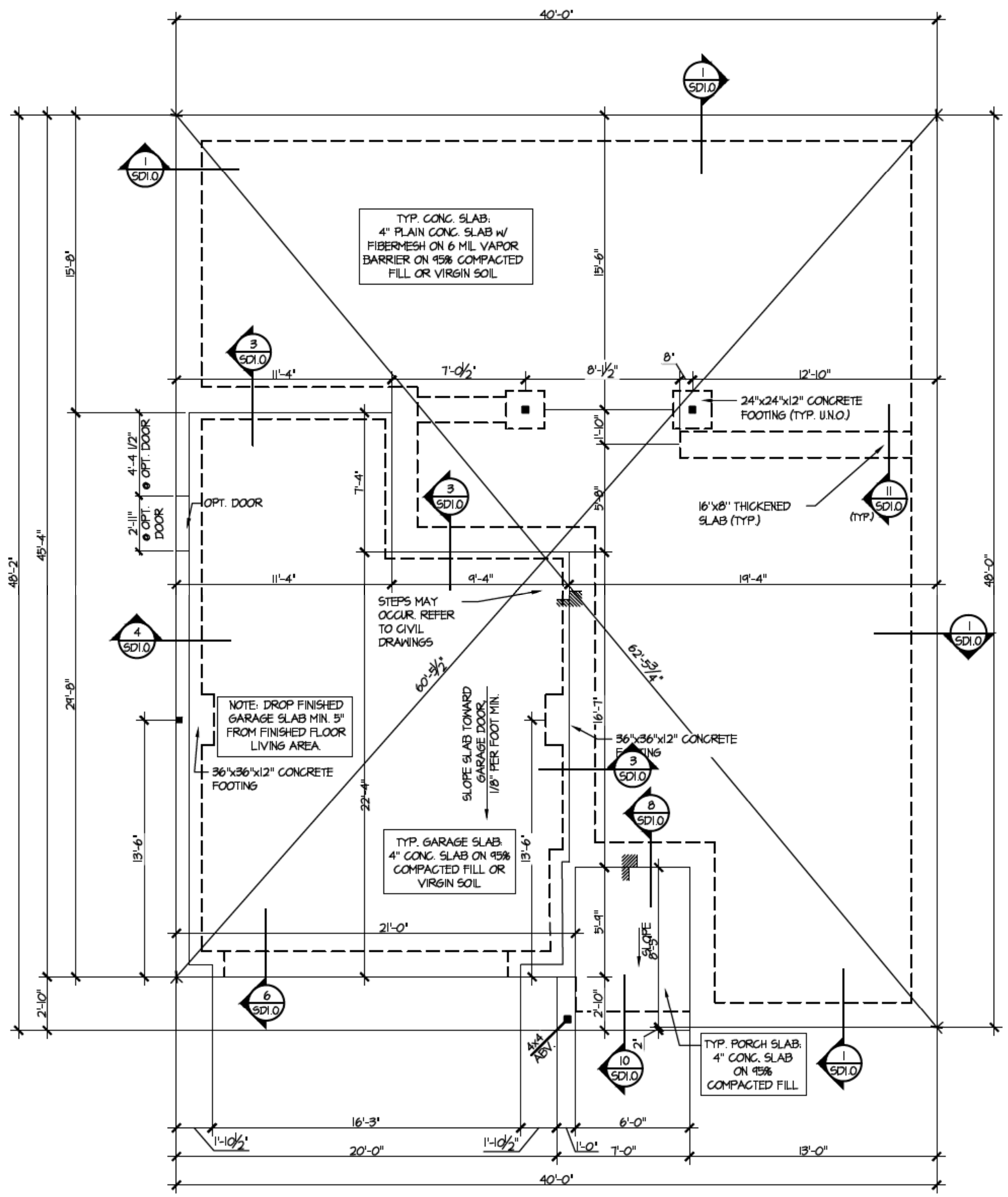
DRB GROUP

FOUNDATION PLANS

DRAYTON
RALEIGH, NC

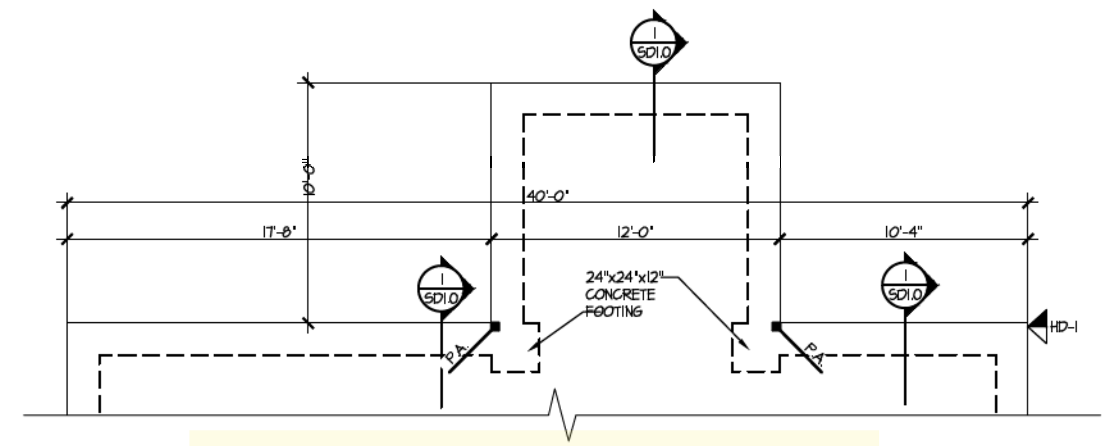
sheet: S0.0

FILE: RLH - Drayton - Structurals DATE: 11/23/2021 12:32 PM



MONO SLAB FOUNDATION PLAN

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



PARTIAL MONO SLAB FOUNDATION PLAN

SCALE: 1/8"=1'-0" OPTIONAL EXT. BREAKFAST

LEGEND

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

REFER TO S0.0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES

11/23/2021

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042183 STEPHEN IVES

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
NC Lic. #C-3825

M&K project number: 126-21020

project mgr: JTR

drawn by: KL

issue date: 06-12-21

REVISIONS:

date: initial:

DRB GROUP

FOUNDATION PLANS

DRAYTON

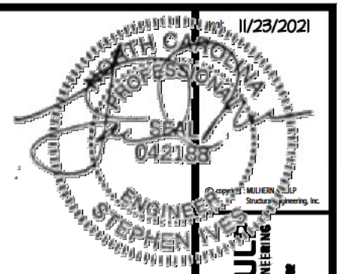
RALEIGH, NC

sheet: LEFT HAND

S1.0

FILE: RLH - Drayton - Structurals DATE: 11/23/2021 12:33 PM

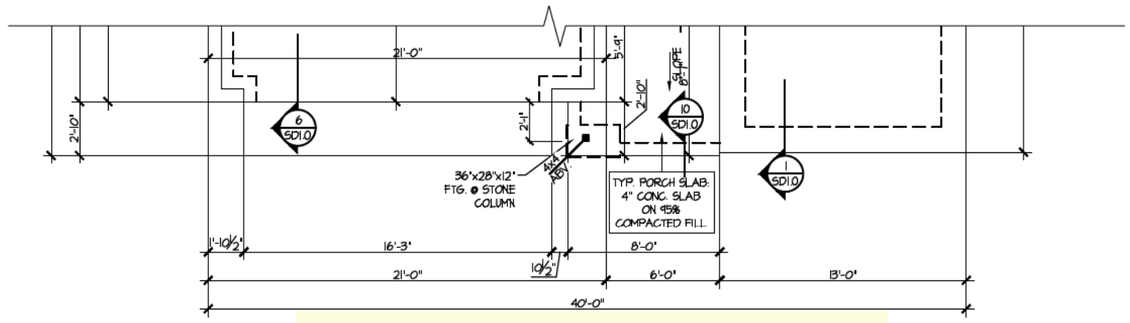
11/23/2021



LEGEND

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

REFER TO S0.0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES



4 PARTIAL MONO SLAB FOUNDATION PLAN
SCALE: 1/8"=1'-0" ELEVATION #5

MULHERN+KLEIN
RESIDENTIAL STRUCTURAL ENGINEERING
N.C. Lic. #C-3825

M&K project number: 126-21020
project mgr: JTR
drawn by: KL
issue date: 06-12-21

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FOUNDATION PLANS

DRAYTON
RALEIGH, NC

sheet: LEFT HAND
S1.1

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REFER TO S0.0 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

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

LEGEND

- INTERIOR BEARING WALL
- BEARING WALL ABOVE
- BEAM / HEADER
- INDICATES SHEAR WALL & EXTENT
- EXTENT OF OVERFRAMING

MH METAL HANGER

* INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.

INDICATES HOLD-DOWN OR STRAP. REFER TO SCHEDULE.

ENGINEERED BEAM MATERIAL SCHEDULE

BEAM NUMBER	LVL OPTION	PSL OPTION	LSL OPTION	FLITCH OPTION	STEEL OPTION
001	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - FB	W12x14 - F
002	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - FB	W12x14 - F
003	(3)1¾"x18" - FB or (2)1¾"x20" - FB	5¼"x18" - FB	N/A	(3)2x12 + (2) ⅜"x11¼" STEEL FLITCH PLATES - FB	W12x26 - F
004	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - FB	W12x14 - F
005	(2)1¾"x11⅞" - H cont.	3½"x11⅞" - H cont.	(2)1¾"x11⅞" - H cont.	(3)2x12 + (2)¼"x11⅞" STEEL FLITCH PLATES - H cont.	N/A
005A	(3)1¾"x14" - H cont.	5¼"x14" - H cont.	N/A	(3)2x12 + (2)¼"x11⅞" STEEL FLITCH PLATES - H cont.	N/A
006	(1)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x14" STEEL FLITCH PLATES - FB	W12x14 - F
007	(2)1¾"x11⅞" - D	3½"x11⅞" - D	(2)1¾"x11⅞" - D	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - D	W10x12 - D
008	(2)1¾"x16" - H cont.	3½"x16" - H cont.	(3)1¾"x16" - H cont.	(3)2x12 + (2)½"x11¼" STEEL FLITCH PLATES - H cont.	N/A
009	(2)1¾"x9¼" - F	3½"x9¼" - F	(2)1¾"x9¼" - F	(2)2x10 + (1)¼"x9¼" STEEL FLITCH PLATES - F	W8x10 - F
010	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - FB	W12x14 - F
011	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - FB	W12x14 - F
012	(2)1¾"x11⅞" - D	3½"x11⅞" - D	(2)1¾"x11⅞" - D	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - D	W10x12 - D

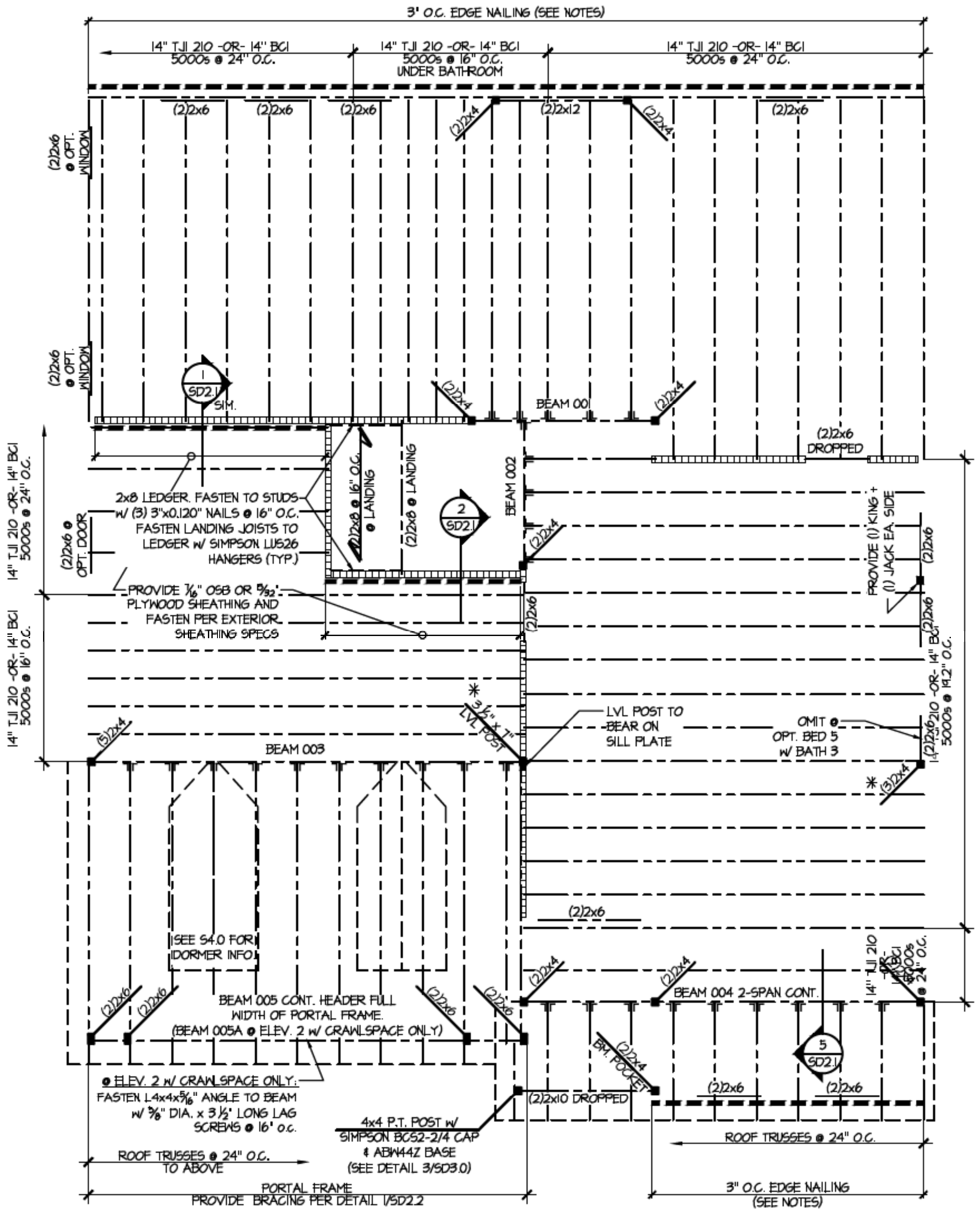
** BEAM NOTATION:
- "F" INDICATES FLUSH BEAM
- "FT" INDICATES FLUSH TOP BEAM
- "FB" INDICATES FLUSH BOTTOM BEAM
- "D" INDICATES DROPPED BEAM
- "H" INDICATES DROPPED OPENING HEADER

** 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.



1 **2ND FLOOR FRAMING PLAN**
SCALE: 1/8"=1'-0" ELEVATIONS #1 + #2

11/23/2021

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042188 STEPHEN IVES

MULHERN+KULP RESIDENTIAL STRUCTURAL ENGINEERING
NC Lic. #C-3825

M&K project number: 126-21020

project mgr: JTR
drawn by: KL
issue date: 06-12-21

REVISIONS:
date: initial:

DRB GROUP

FLOOR FRAMING PLANS
DRAYTON
RALEIGH, NC

sheet: LEFT HAND
S3.0J

FILE: RLH - Drayton - Structurals DATE: 11/23/2021 12:37 PM

REFER TO S0.0 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

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

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.

ENGINEERED BEAM MATERIAL SCHEDULE

BEAM NUMBER	LVL OPTION	PSL OPTION	LSL OPTION	FLITCH OPTION	STEEL OPTION
001	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - FB	W12x14 - F
002	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - FB	W12x14 - F
003	(3)1¾"x18" - FB or (2)1¾"x20" - FB	5¼"x18" - FB	N/A	(3)2x12 + (2) ⅜"x11¼" STEEL FLITCH PLATES - FB	W12x26 - F
004	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - FB	W12x14 - F
005	(2)1¾"x11⅞" - H cont.	3½"x11⅞" - H cont.	(2)1¾"x11⅞" - H cont.	(3)2x12 + (2)¼"x11⅞" STEEL FLITCH PLATES - H cont.	N/A
005A	(3)1¾"x14" - H cont.	5¼"x14" - H cont.	N/A	(3)2x12 + (2)¼"x11⅞" STEEL FLITCH PLATES - H cont.	N/A
006	(1)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x14" STEEL FLITCH PLATES - FB	W12x14 - F
007	(2)1¾"x11⅞" - D	3½"x11⅞" - D	(2)1¾"x11⅞" - D	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - D	W10x12 - D
008	(2)1¾"x16" - H cont.	3½"x16" - H cont.	(3)1¾"x16" - H cont.	(3)2x12 + (2)½"x11¼" STEEL FLITCH PLATES - H cont.	N/A
009	(2)1¾"x9¼" - F	3½"x9¼" - F	(2)1¾"x9¼" - F	(2)2x10 + (1)¼"x9¼" STEEL FLITCH PLATES - F	W8x10 - F
010	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - FB	W12x14 - F
011	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - FB	W12x14 - F
012	(2)1¾"x11⅞" - D	3½"x11⅞" - D	(2)1¾"x11⅞" - D	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - D	W10x12 - D

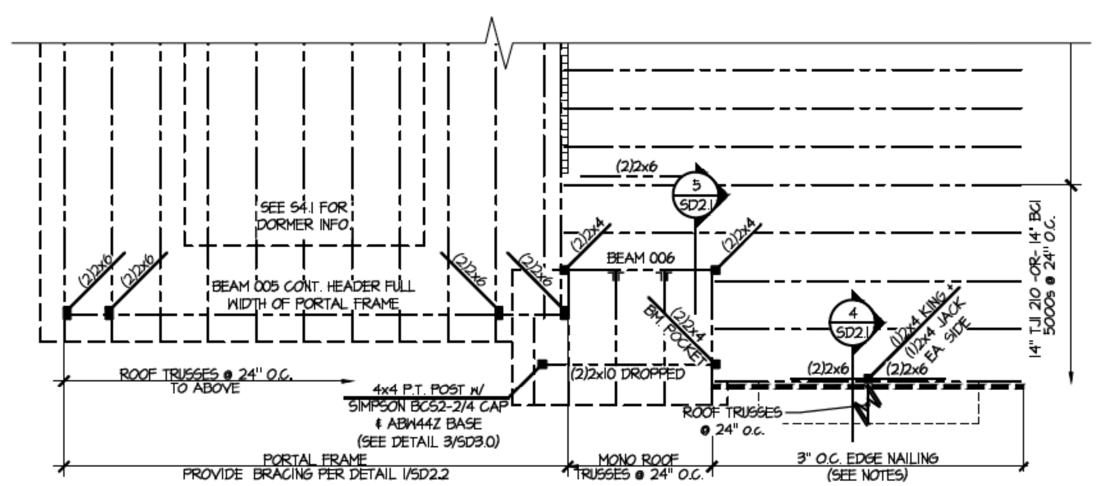
** BEAM NOTATION:
- "F" INDICATES FLUSH BEAM
- "FT" INDICATES FLUSH TOP BEAM
- "FB" INDICATES FLUSH BOTTOM BEAM
- "D" INDICATES DROPPED BEAM
- "H" INDICATES DROPPED OPENING HEADER

** 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.



2 PARTIAL 2ND FLOOR FRAMING PLAN

SCALE: 1/8"=1'-0" ELEVATION #5

11/23/2021

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042183 STEPHEN ...

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RESIDENTIAL STRUCTURAL ENGINEERING
NC Lic. #C-3825

M&K project number: 126-21020

project mgr: JTR
drawn by: KL
issue date: 06-12-21

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date: initial:

DRB GROUP

FLOOR FRAMING PLANS
DRAYTON
RALEIGH, NC

sheet: LEFT HAND
S3.1J

FILE: RLH - Drayton - Structurals DATE: 11/23/2021 12:38 PM

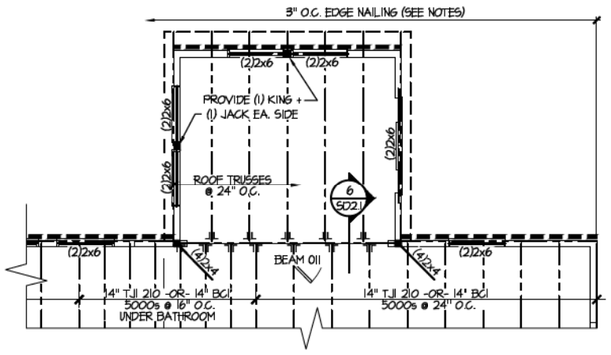
LEGEND

- 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 S0.0 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

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



5 PARTIAL SECOND FLOOR FRAMING PLAN OPTIONAL EXT. BREAKFAST

SCALE: 1/8"=1'-0" ELEV. #1 SHOWN - ALL ELEV. SIM.

ENGINEERED BEAM MATERIAL SCHEDULE

BEAM NUMBER	LVL OPTION	PSL OPTION	LSL OPTION	FLITCH OPTION	STEEL OPTION
001	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)⅜"x11¼" STEEL FLITCH PLATES - FB	W12x14 - F
002	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)⅜"x11¼" STEEL FLITCH PLATES - FB	W12x14 - F
003	(3)1¾"x18" - FB or (2)1¾"x20" - FB	5¼"x18" - FB	N/A	(3)2x12 + (2) ⅜"x11¼" STEEL FLITCH PLATES - FB	W12x26 - F
004	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)⅜"x11¼" STEEL FLITCH PLATES - FB	W12x14 - F
005	(2)1¾"x11⅞" - H cont.	3½"x11⅞" - H cont.	(2)1¾"x11⅞" - H cont.	(3)2x12 + (2)⅜"x11⅞" STEEL FLITCH PLATES - H cont.	N/A
005A	(3)1¾"x14" - H cont.	5¼"x14" - H cont.	N/A	(3)2x12 + (2)⅜"x11⅞" STEEL FLITCH PLATES - H cont.	N/A
006	(1)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)⅜"x14" STEEL FLITCH PLATES - FB	W12x14 - F
007	(2)1¾"x11⅞" - D	3½"x11⅞" - D	(2)1¾"x11⅞" - D	(2)2x12 + (1)⅜"x11¼" STEEL FLITCH PLATES - D	W10x12 - D
008	(2)1¾"x16" - H cont.	5½"x16" - H cont.	(3)1¾"x16" - H cont.	(3)2x12 + (2)⅜"x11¼" STEEL FLITCH PLATES - H cont.	N/A
009	(2)1¾"x9¼" - F	3½"x9¼" - F	(2)1¾"x9¼" - F	(2)2x10 + (1)⅜"x9¼" STEEL FLITCH PLATES - F	W8x10 - F
010	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)⅜"x11¼" STEEL FLITCH PLATES - FB	W12x14 - F
011	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)⅜"x11¼" STEEL FLITCH PLATES - FB	W12x14 - F
012	(2)1¾"x11⅞" - D	3½"x11⅞" - D	(2)1¾"x11⅞" - D	(2)2x12 + (1)⅜"x11¼" STEEL FLITCH PLATES - D	W10x12 - 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.

11/23/2021

NORTH CAROLINA PROFESSIONAL SEAL 042185 ENGINEER STEPHEN V. KUL

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M&K project number: 126-21020

project mgr: JTR
drawn by: KL
issue date: 06-12-21

REVISIONS:

date:	initial:

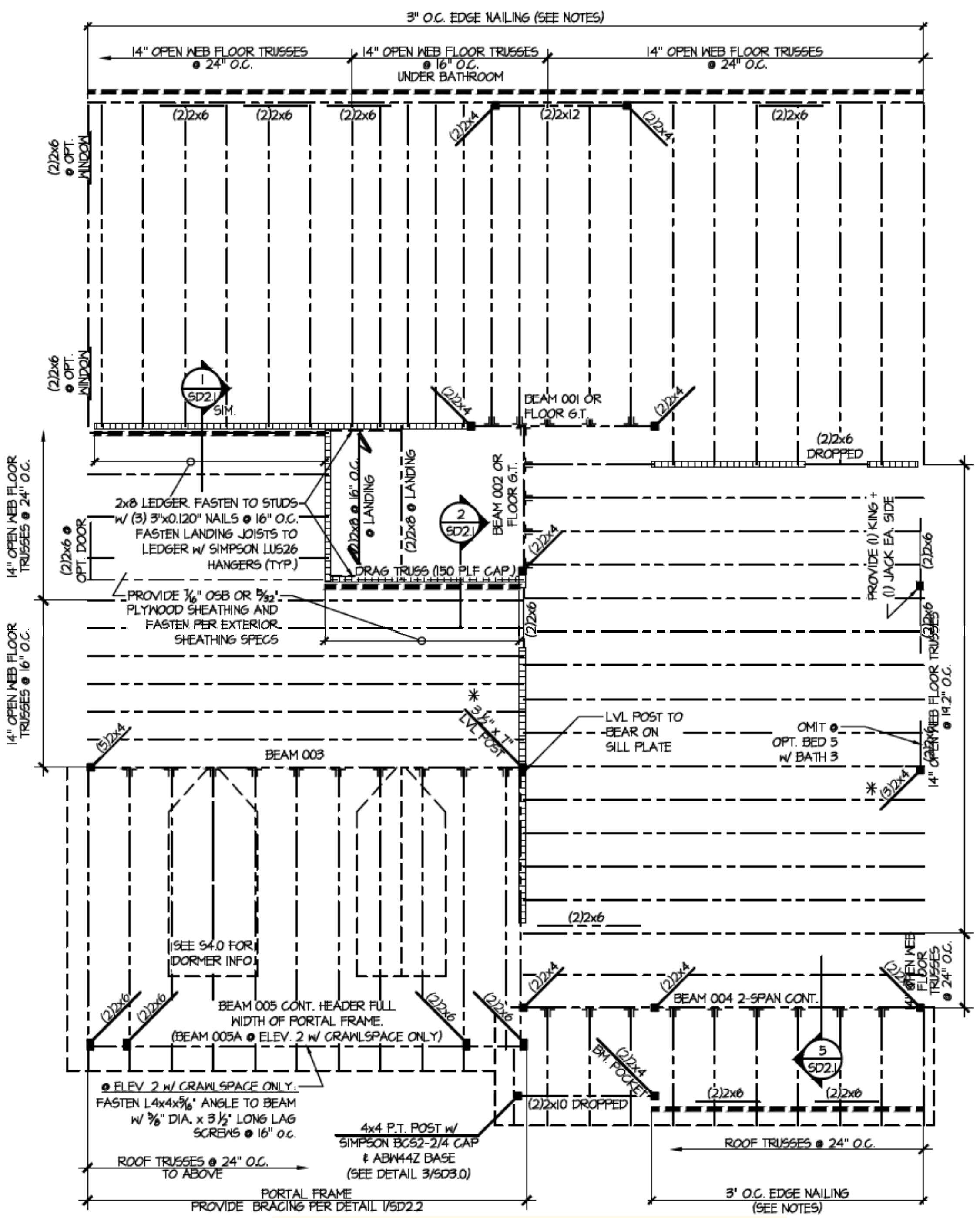
DRB GROUP

OPTION FRAMING PLANS

DRAYTON
RALEIGH, NC

sheet: LEFT HAND
S5.0J

FILE: RLH - Drayton - Structurals DATE: 11/23/2021 12:40 PM



1 2ND FLOOR FRAMING PLAN

SCALE: 1/8"=1'-0" ELEVATIONS #1 + #2

REFER TO S0.0 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

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

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.

ENGINEERED BEAM MATERIAL SCHEDULE

BEAM NUMBER	LVL OPTION	PSL OPTION	LSL OPTION	FLITCH OPTION	STEEL OPTION
001	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - FB	W12x14 - F
002	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - FB	W12x14 - F
003	(3)1¾"x18" - FB or (2)1¾"x20" - FB	5¼"x18" - FB	N/A	(3)2x12 + (2) ⅜"x11¼" STEEL FLITCH PLATES - FB	W12x26 - F
004	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - FB	W12x14 - F
005	(2)1¾"x11⅞" - H cont.	3½"x11⅞" - H cont.	(2)1¾"x11⅞" - H cont.	(3)2x12 + (2)¼"x11⅞" STEEL FLITCH PLATES - H cont.	N/A
005A	(3)1¾"x14" - H cont.	5¼"x14" - H cont.	N/A	(3)2x12 + (2)¼"x11⅞" STEEL FLITCH PLATES - H cont.	N/A
006	(1)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x14" STEEL FLITCH PLATES - FB	W12x14 - F
007	(2)1¾"x11⅞" - D	3½"x11⅞" - D	(2)1¾"x11⅞" - D	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - D	W10x12 - D
008	(2)1¾"x16" - H cont.	3½"x16" - H cont.	(3)1¾"x16" - H cont.	(3)2x12 + (2)½"x11¼" STEEL FLITCH PLATES - H cont.	N/A
009	(2)1¾"x9¼" - F	3½"x9¼" - F	(2)1¾"x9¼" - F	(2)2x10 + (1)¼"x9¼" STEEL FLITCH PLATES - F	W8x10 - F
010	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - FB	W12x14 - F
011	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - FB	W12x14 - F
012	(2)1¾"x11⅞" - D	3½"x11⅞" - D	(2)1¾"x11⅞" - D	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - D	W10x12 - 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.

11/23/2021

NORTH CAROLINA PROFESSIONAL SEAL 042183 ENGINEER STEPHEN WEST

MULHERN+KULP RESIDENTIAL STRUCTURAL ENGINEERING

NC Lic. #C-3825

M&K project number: 126-21020

project mgr: JTR

drawn by: KL

issue date: 06-12-21

REVISIONS:

date: initial:

DRB GROUP

FLOOR FRAMING PLANS

DRAYTON

RALEIGH, NC

sheet: LEFT HAND

S3.0T

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REFER TO S0.0 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

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

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.

ENGINEERED BEAM MATERIAL SCHEDULE

BEAM NUMBER	LVL OPTION	PSL OPTION	LSL OPTION	FLITCH OPTION	STEEL OPTION
001	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x1¼" STEEL FLITCH PLATES - FB	W12x14 - F
002	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x1¼" STEEL FLITCH PLATES - FB	W12x14 - F
003	(3)1¾"x18" - FB or (2)1¾"x20" - FB	5¼"x18" - FB	N/A	(3)2x12 + (2) ⅝"x1¼" STEEL FLITCH PLATES - FB	W12x26 - F
004	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x1¼" STEEL FLITCH PLATES - FB	W12x14 - F
005	(2)1¾"x11⅞" - H cont.	3½"x11⅞" - H cont.	(2)1¾"x11⅞" - H cont.	(3)2x12 + (2)¼"x11⅞" STEEL FLITCH PLATES - H cont.	N/A
005A	(3)1¾"x14" - H cont.	5¼"x14" - H cont.	N/A	(3)2x12 + (2)¼"x11⅞" STEEL FLITCH PLATES - H cont.	N/A
006	(1)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x14" STEEL FLITCH PLATES - FB	W12x14 - F
007	(2)1¾"x11⅞" - D	3½"x11⅞" - D	(2)1¾"x11⅞" - D	(2)2x12 + (1)¼"x1¼" STEEL FLITCH PLATES - D	W10x12 - D
008	(2)1¾"x16" - H cont.	3½"x16" - H cont.	(3)1¾"x16" - H cont.	(3)2x12 + (2)½"x11¼" STEEL FLITCH PLATES - H cont.	N/A
009	(2)1¾"x9¼" - F	3½"x9¼" - F	(2)1¾"x9¼" - F	(2)2x10 + (1)¼"x9¼" STEEL FLITCH PLATES - F	W8x10 - F
010	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x1¼" STEEL FLITCH PLATES - FB	W12x14 - F
011	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x1¼" STEEL FLITCH PLATES - FB	W12x14 - F
012	(2)1¾"x11⅞" - D	3½"x11⅞" - D	(2)1¾"x11⅞" - D	(2)2x12 + (1)¼"x1¼" STEEL FLITCH PLATES - D	W10x12 - D

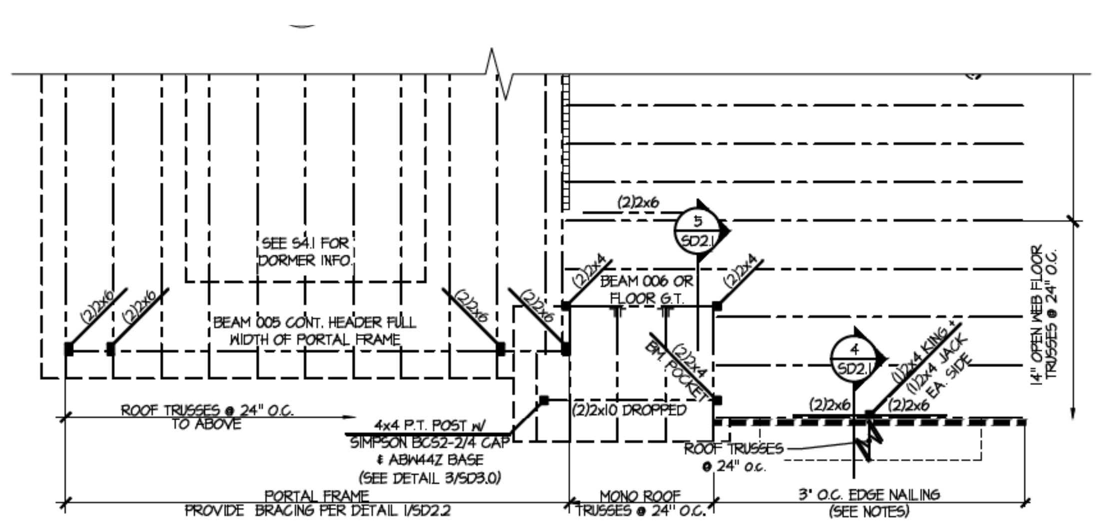
** BEAM NOTATION:
- "F" INDICATES FLUSH BEAM
- "FT" INDICATES FLUSH TOP BEAM
- "FB" INDICATES FLUSH BOTTOM BEAM
- "D" INDICATES DROPPED BEAM
- "H" INDICATES DROPPED OPENING HEADER

** 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.



2 PARTIAL 2ND FLOOR FRAMING PLAN

SCALE: 1/8"=1'-0" ELEVATION #5

11/23/2021

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042183 STEPHEN

MULHERN+KULP RESIDENTIAL STRUCTURAL ENGINEERING

NC Lic. #C-3825

M&K project number: 126-21020

project mgr: JTR

drawn by: KL

issue date: 06-12-21

REVISIONS:

date: initial:

DRB GROUP

FLOOR FRAMING PLANS

DRAYTON

RALEIGH, NC

sheet: LEFT HAND

S3.1T

FILE: RLH - Drayton - Structurals DATE: 11/23/2021 12:39 PM

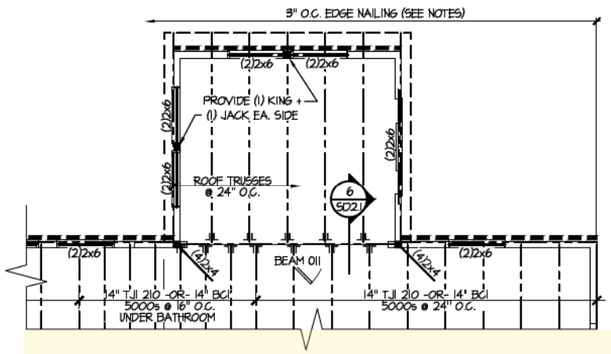
LEGEND

- 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 S0.0 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

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



5 PARTIAL SECOND FLOOR FRAMING PLAN OPTIONAL EXT. BREAKFAST

SCALE: 1/8"=1'-0" ELEV. #1 SHOWN - ALL ELEV. SIM.

ENGINEERED BEAM MATERIAL SCHEDULE

BEAM NUMBER	LVL OPTION	PSL OPTION	LSL OPTION	FLITCH OPTION	STEEL OPTION
001	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - FB	W12x14 - F
002	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - FB	W12x14 - F
003	(3)1¾"x18" - FB or (2)1¾"x20" - FB	5¼"x18" - FB	N/A	(3)2x12 + (2) ⅜"x11¼" STEEL FLITCH PLATES - FB	W12x26 - F
004	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - FB	W12x14 - F
005	(2)1¾"x11⅞" - H cont.	3½"x11⅞" - H cont.	(2)1¾"x11⅞" - H cont.	(3)2x12 + (2)¼"x11⅞" STEEL FLITCH PLATES - H cont.	N/A
005A	(3)1¾"x14" - H cont.	5¼"x14" - H cont.	N/A	(3)2x12 + (2)¼"x11⅞" STEEL FLITCH PLATES - H cont.	N/A
006	(1)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x14" STEEL FLITCH PLATES - FB	W12x14 - F
007	(2)1¾"x11⅞" - D	3½"x11⅞" - D	(2)1¾"x11⅞" - D	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - D	W10x12 - D
008	(2)1¾"x16" - H cont.	5½"x16" - H cont.	(3)1¾"x16" - H cont.	(3)2x12 + (2)½"x11¼" STEEL FLITCH PLATES - H cont.	N/A
009	(2)1¾"x9¼" - F	3½"x9¼" - F	(2)1¾"x9¼" - F	(2)2x10 + (1)¼"x9¼" STEEL FLITCH PLATES - F	W8x10 - F
010	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - FB	W12x14 - F
011	(2)1¾"x14" - F	3½"x14" - F	(2)1¾"x14" - F	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - FB	W12x14 - F
012	(2)1¾"x11⅞" - D	3½"x11⅞" - D	(2)1¾"x11⅞" - D	(2)2x12 + (1)¼"x11¼" STEEL FLITCH PLATES - D	W10x12 - 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.

11/23/2021

NORTH CAROLINA PROFESSIONAL SEAL 042185 ENGINEER STEPHEN T. KULL

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DRB GROUP

OPTION FRAMING PLANS

DRAYTON
RALEIGH, NC

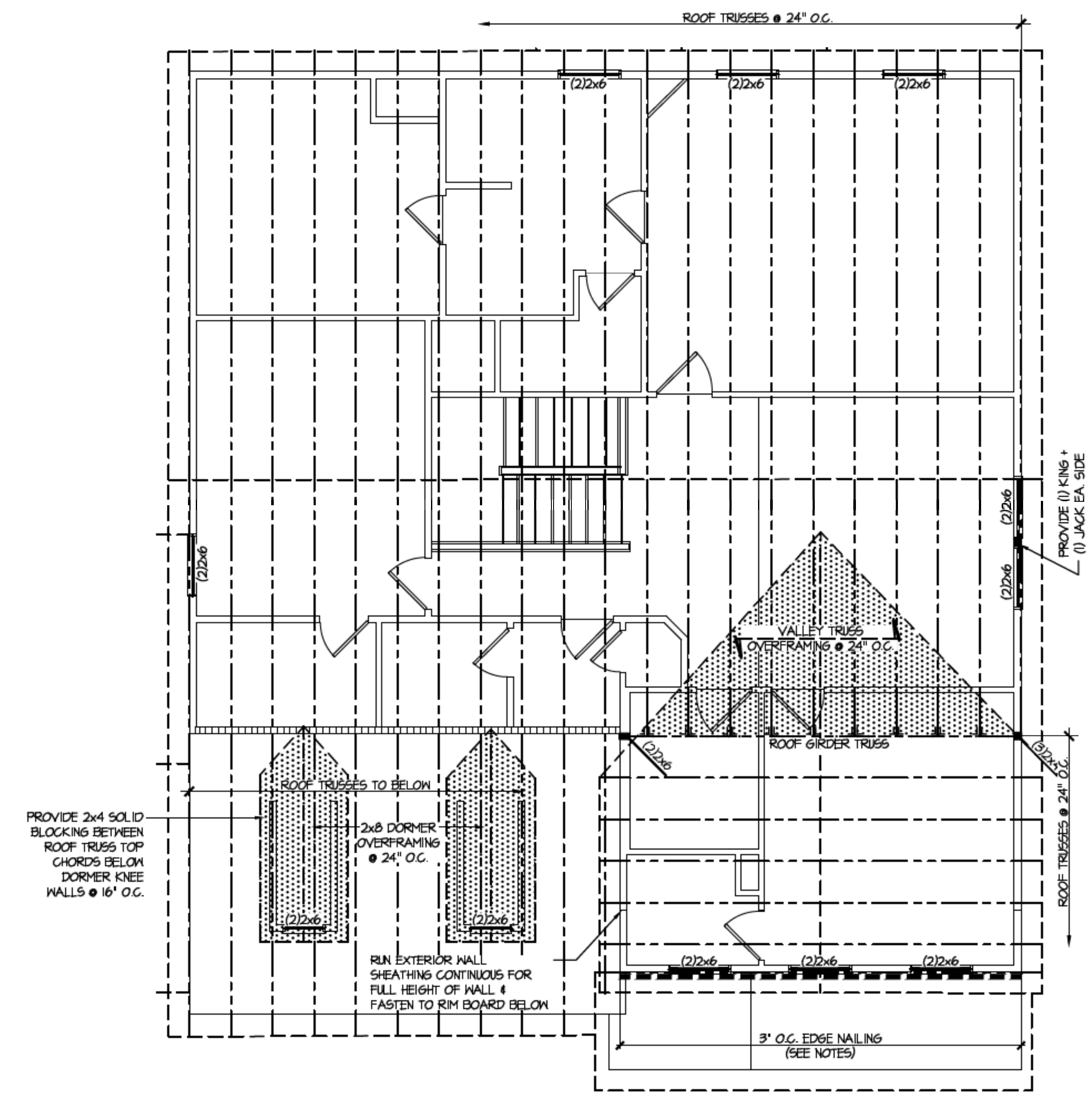
sheet: LEFT HAND
S5.0T

FILE: RLH - Drayton - Structurals DATE: 11/23/2021 12:41 PM

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.



2 PARTIAL ROOF FRAMING PLAN

SCALE: 1/8"=1'-0" ELEVATIONS #2

11/23/2021

NORTH CAROLINA PROFESSIONAL SEAL 042183 ENGINEER STEPHEN IVES

MULHERN+KULP RESIDENTIAL STRUCTURAL ENGINEERING

NC Lic. #C-3825

M&K project number: 126-21020

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DRB GROUP

ROOF FRAMING PLANS

DRAYTON

RALEIGH, NC

sheet: LEFT HAND

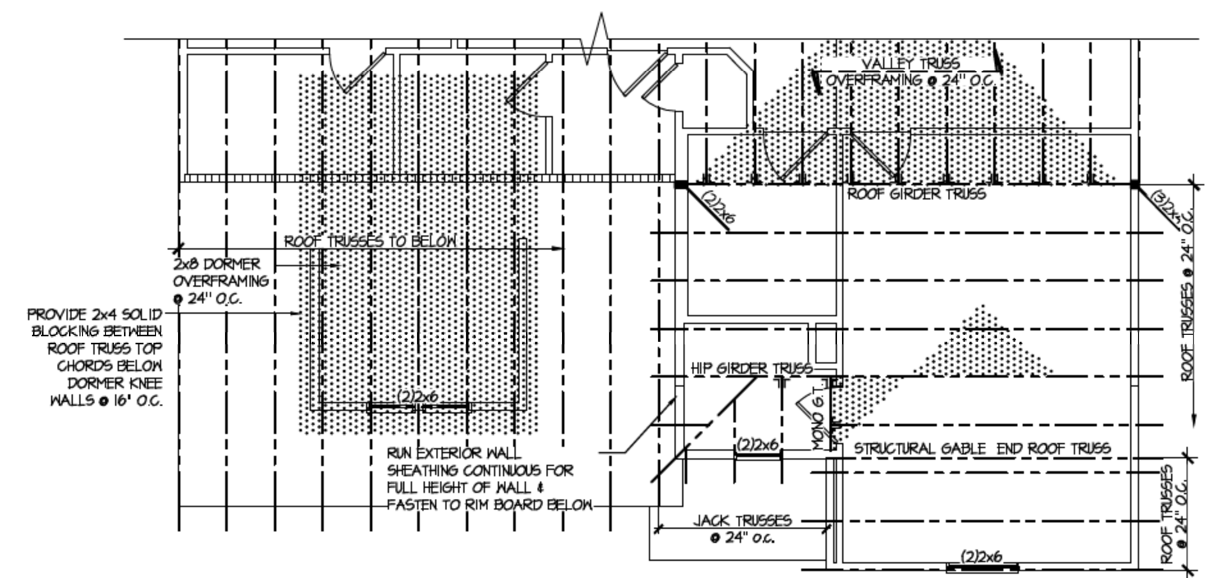
S4.0

FILE: RLH - Drayton - Structurals DATE: 11/23/2021 12:39 PM

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.



3 PARTIAL ROOF FRAMING PLAN

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

ELEVATION #5
ADD'L INFO SEE ELEV. 2

11/23/2021

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042183

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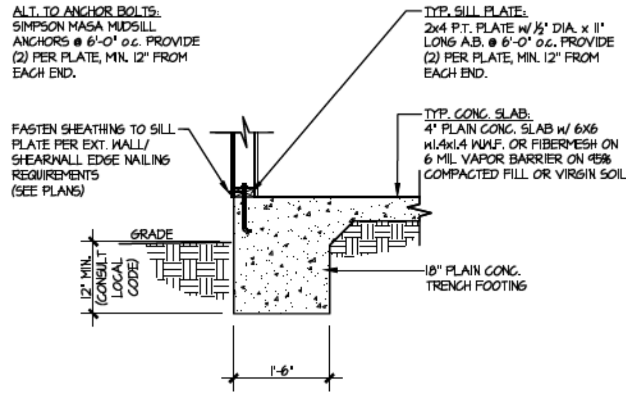
DRB GROUP

ROOF FRAMING PLANS

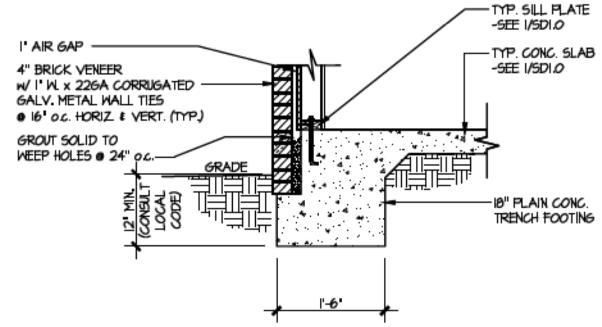
DRAYTON
RALEIGH, NC

sheet: LEFT HAND

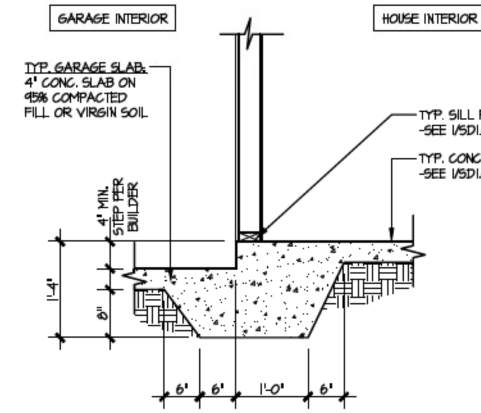
S4.1



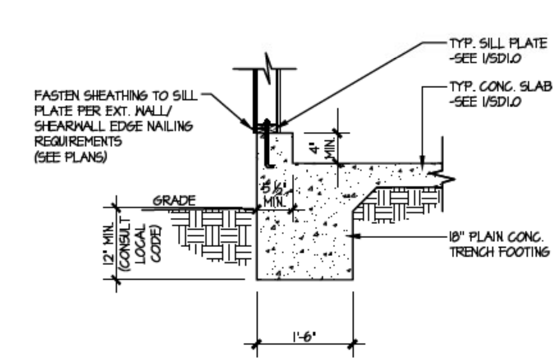
1 TYPICAL SLAB ON GRADE PERIMETER FOOTING
SCALE: 3/8"=1'-0"



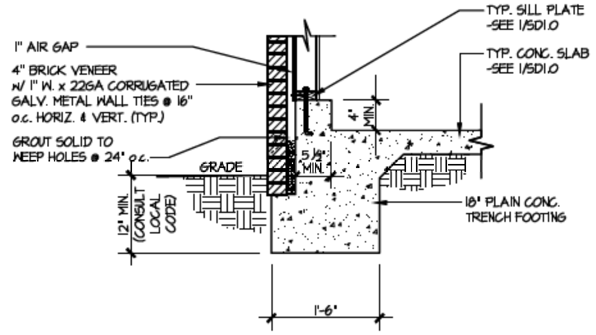
2 TYPICAL SLAB ON GRADE PERIMETER FOOTING
SCALE: 3/8"=1'-0" w/ BRICK VENEER



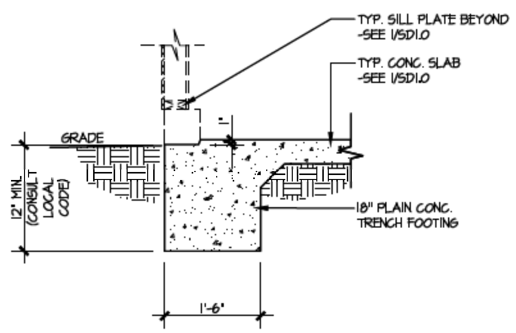
3 TYPICAL MONOLITHIC INTERIOR GARAGE FOOTING
SCALE: 3/8"=1'-0"



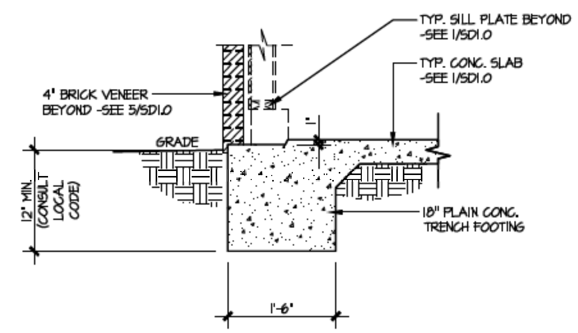
4 TYPICAL SLAB ON GRADE GARAGE PERIMETER FOOTING
SCALE: 3/8"=1'-0"



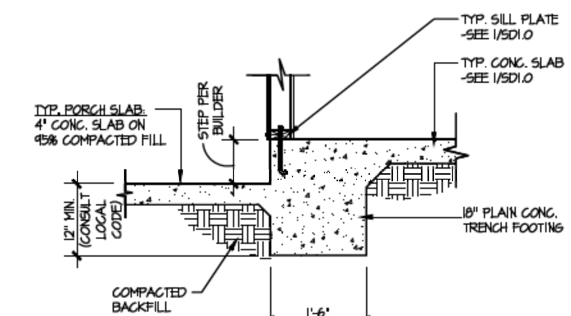
5 TYPICAL SLAB ON GRADE GARAGE PERIMETER FOOTING
SCALE: 3/8"=1'-0" w/ BRICK VENEER



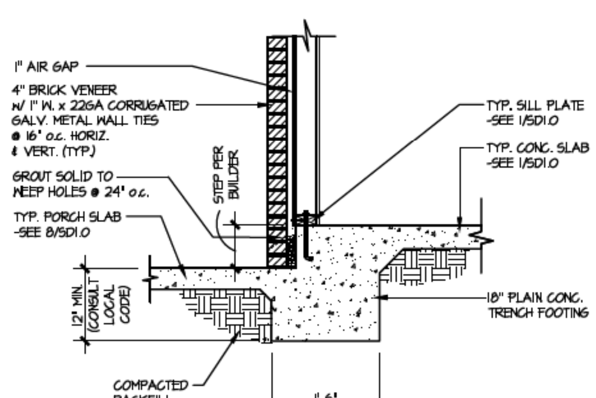
6 TYPICAL SLAB ON GRADE GARAGE ENTRY @ PERIMETER FOOTING
SCALE: 3/8"=1'-0"



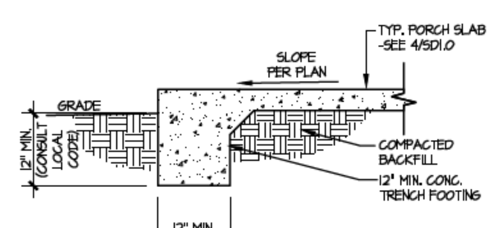
7 TYPICAL SLAB ON GRADE GARAGE ENTRY @ PERIMETER FOOTING
SCALE: 3/8"=1'-0" w/ BRICK VENEER



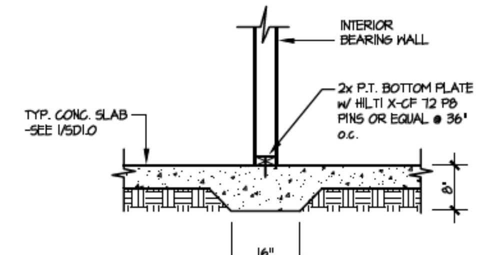
8 TYPICAL SLAB ON GRADE PERIMETER FOOTING @ PORCH/PATIO
SCALE: 3/8"=1'-0"



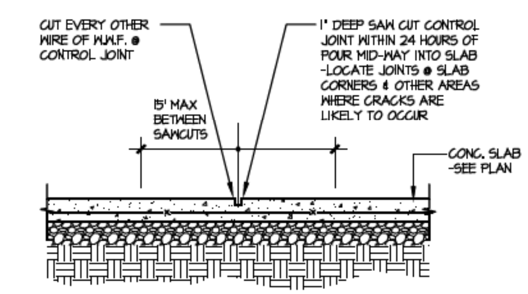
9 TYPICAL SLAB ON GRADE PERIMETER FOOTING @ PORCH/PATIO
SCALE: 3/8"=1'-0" w/ BRICK VENEER



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

11/23/2021
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042188 STEPHEN IVES

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
NC Lic. #C-3825

M&K project number: 126-21020
project mgr: JTR
drawn by: KL
issue date: 06-12-21

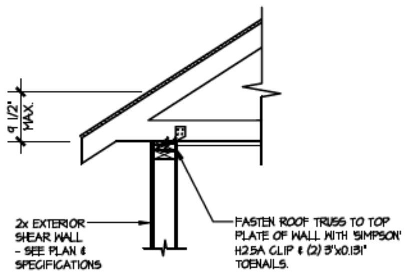
REVISIONS:

date:	initial:

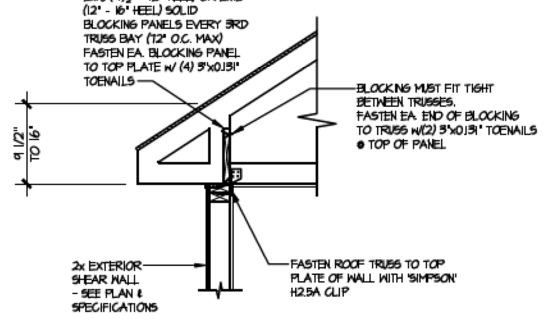
DRB GROUP

FOUNDATION DETAILS
DRAYTON
RALEIGH, NC

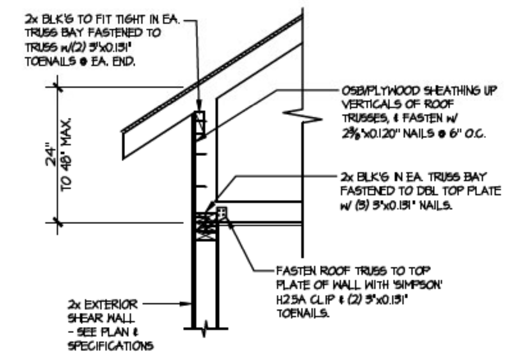
sheet: SD1.0



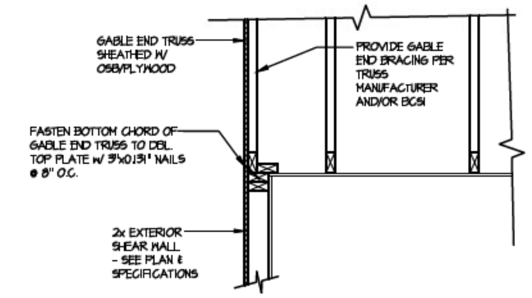
A1 TYPICAL SHEAR TRANSFER DETAIL @ ROOF
SCALE: 3/8"=1'-0" HEEL HEIGHT LESS THAN 9 ½" NO BLOCKING REQ'D



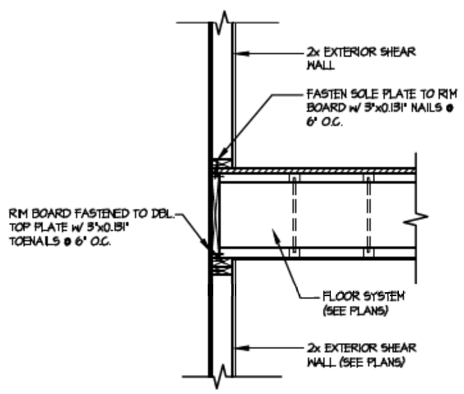
A2 TYPICAL SHEAR TRANSFER DETAIL @ ROOF
SCALE: 3/8"=1'-0" HEEL HEIGHT BETWEEN 9 ½" - 16" BLOCKING REQ'D



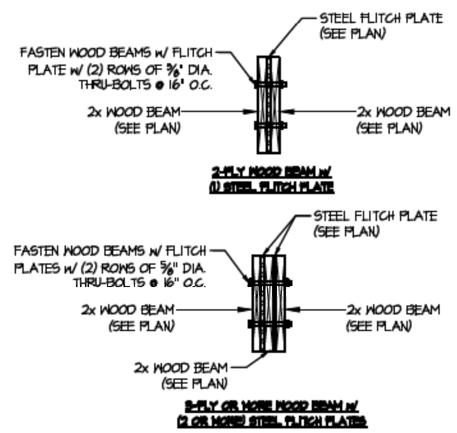
A3 TYPICAL SHEAR TRANSFER DETAIL @ RAISED HEEL TRUSS
SCALE: 3/8"=1'-0" HEEL HEIGHT UP TO 48" MAX.



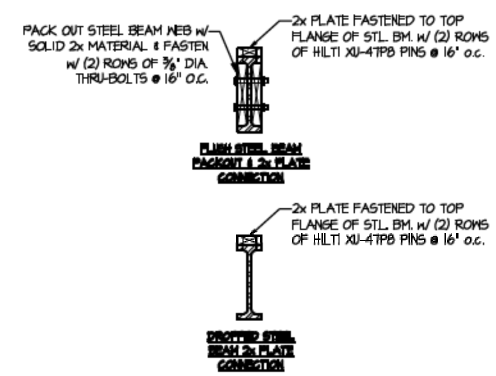
B TYPICAL GABLE END DETAIL
SCALE: 3/8"=1'-0"



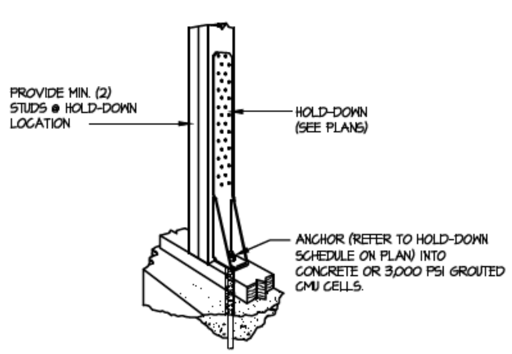
C TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ EXTERIOR WALL
SCALE: 3/8"=1'-0"



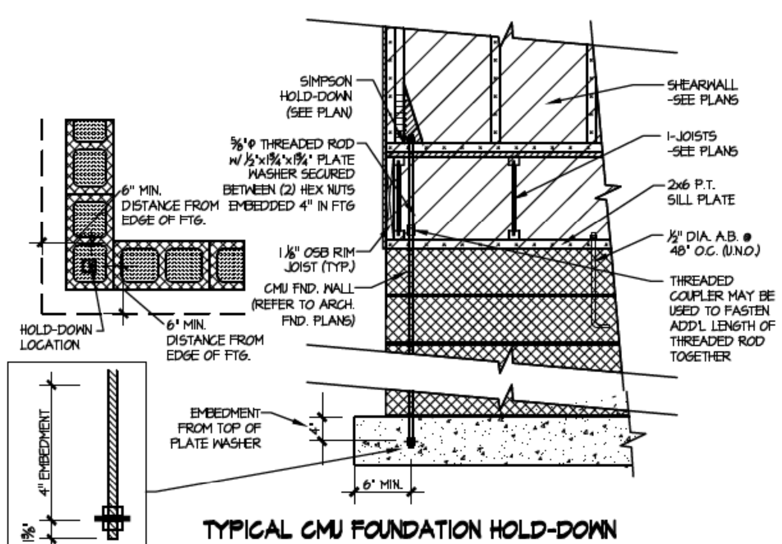
D TYPICAL FLITCH BEAM CONNECTION DETAIL
SCALE: 3/4"=1'-0"



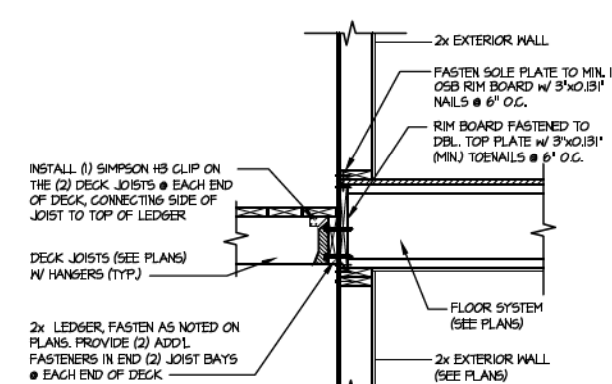
E TYPICAL STEEL BEAM CONNECTION DETAIL
SCALE: 3/4"=1'-0"



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)



G DECK CONNECTION DETAIL
SCALE: 3/4"=1'-0"

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042188 STEPHEN IVES
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M&K project number: 126-21020
project mgr: JTR
drawn by: KL
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REVISIONS:

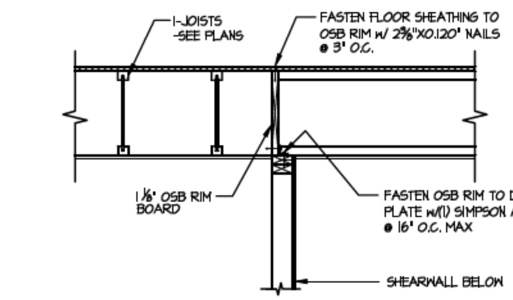
date:	initial:

DRB GROUP

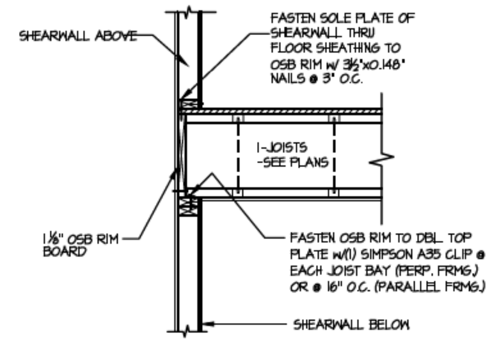
FRAMING DETAILS
DRAYTON
RALEIGH, NC

sheet: **SD2.0J**

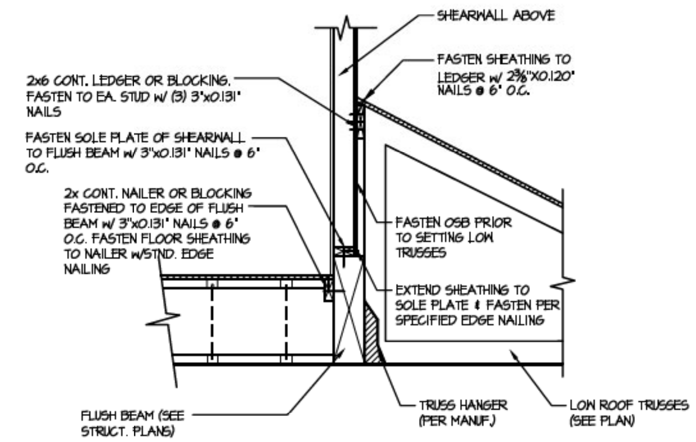
FILE: RLH - Drayton - Structurals DATE: 11/23/2021 12:47 PM



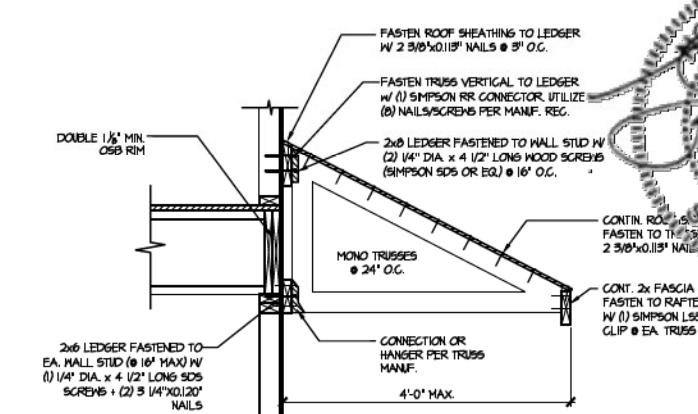
SHEAR TRANSFER DETAIL @ INTERIOR SHEARWALL BELOW
1 SCALE: 3/4"=1'-0" PARALLEL FRAMING



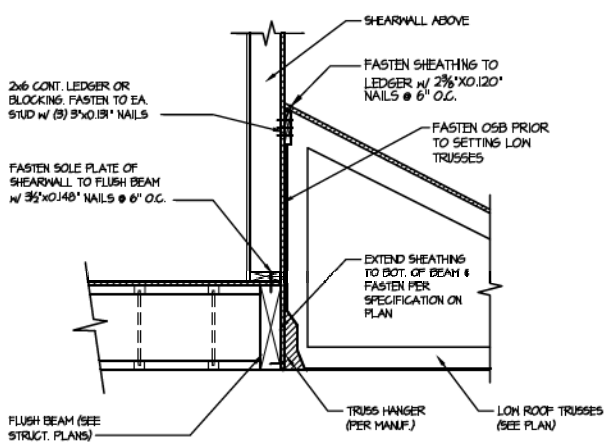
SHEAR TRANSFER DETAIL @ INT. SHEARWALL ABOVE & BELOW
2 SCALE: 3/4"=1'-0" EDGE OF FRAMING



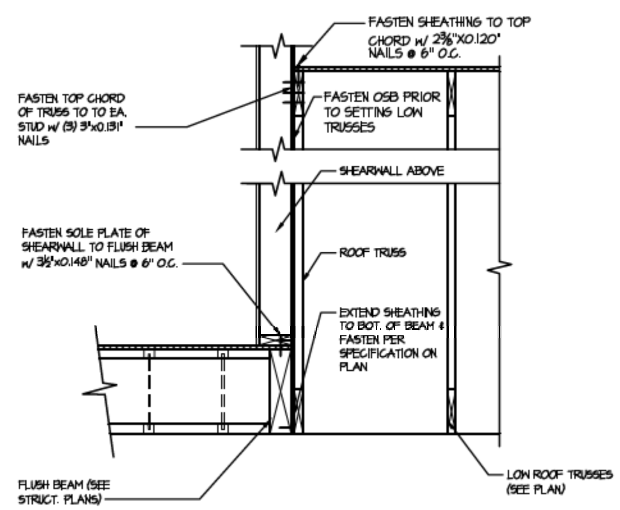
SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE
3 SCALE: 3/4"=1'-0"



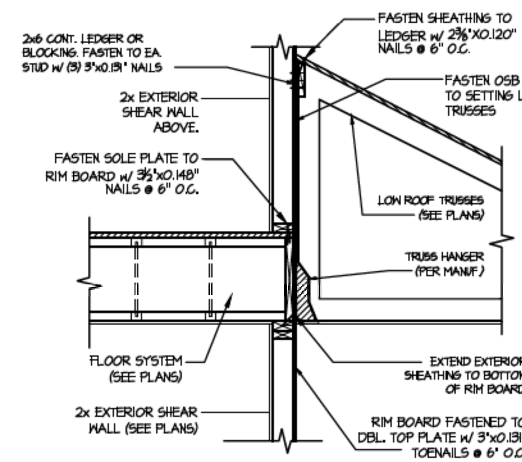
DETAIL @ SHED ROOF
4 SCALE: 3/8"=1'-0"



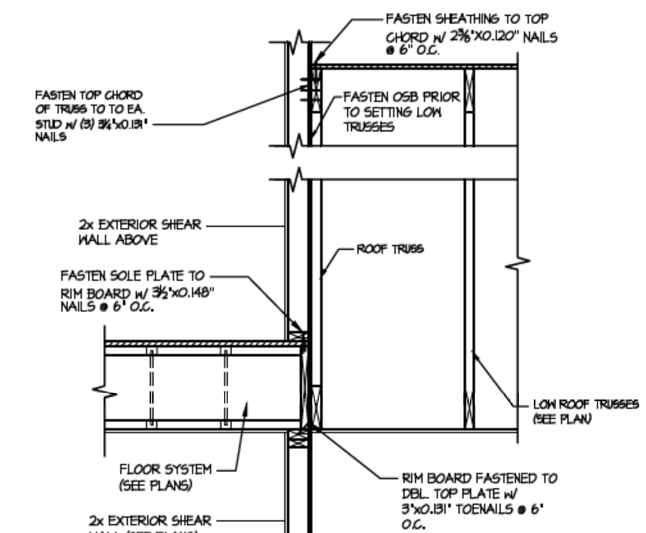
SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE
5 SCALE: 3/4"=1'-0"



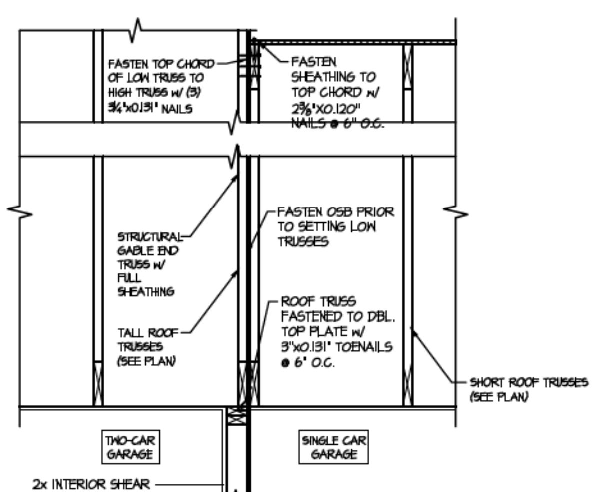
SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE
6 SCALE: 3/4"=1'-0"



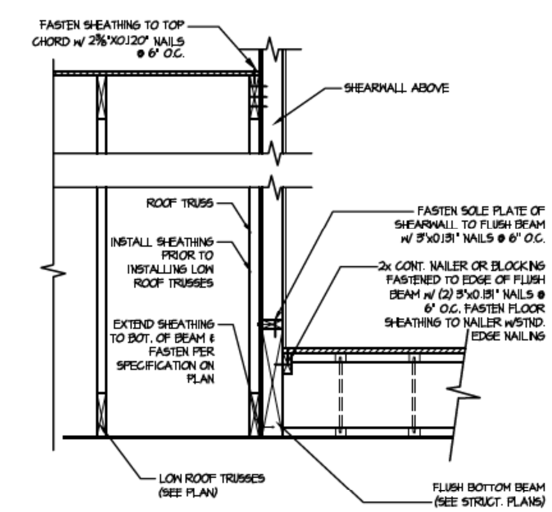
TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ INTERIOR WALL
7 SCALE: 3/4"=1'-0"



TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ INTERIOR WALL
8 SCALE: 3/4"=1'-0"



TYPICAL SHEAR TRANSFER DETAIL BETWEEN GARAGE BAYS
9 SCALE: 3/4"=1'-0"



SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE
13 SCALE: 3/4"=1'-0"

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NORTH CAROLINA PROFESSIONAL SEAL 042185 ENGINEER

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
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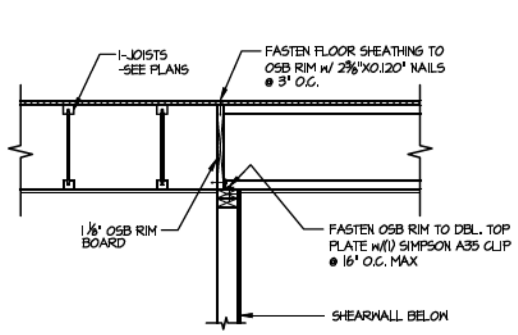
project mgr: JTR
drawn by: KL
issue date: 06-12-21
REVISIONS:
date: initial:

DRB GROUP

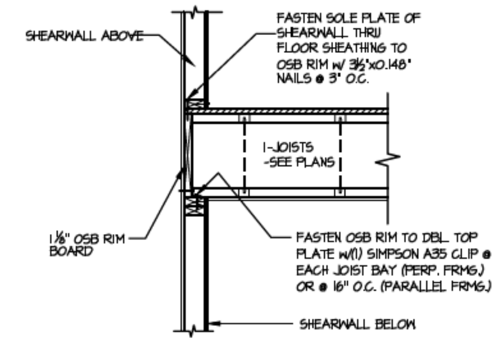
FRAMING DETAILS
DRAYTON
RALEIGH, NC

sheet: SD2.1AJ

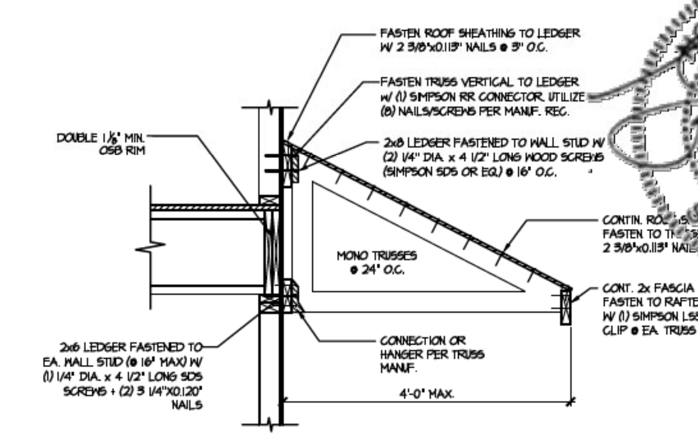
FILE: RLH - Drayton - Structurals DATE: 11/23/2021 12:48 PM



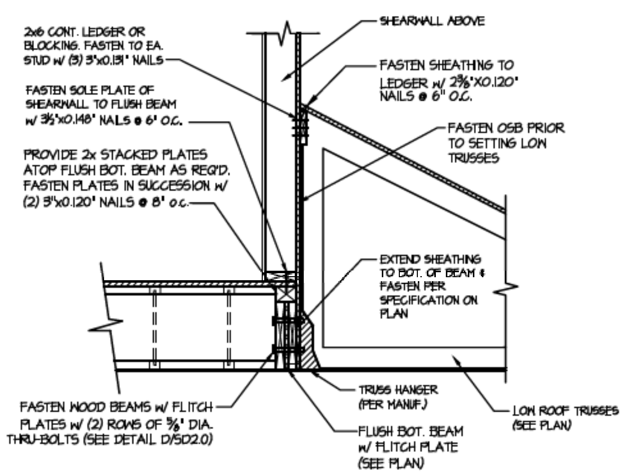
SHEAR TRANSFER DETAIL @ INTERIOR SHEARWALL BELOW
1 — SCALE: 3/4"=1'-0" — PARALLEL FRAMING



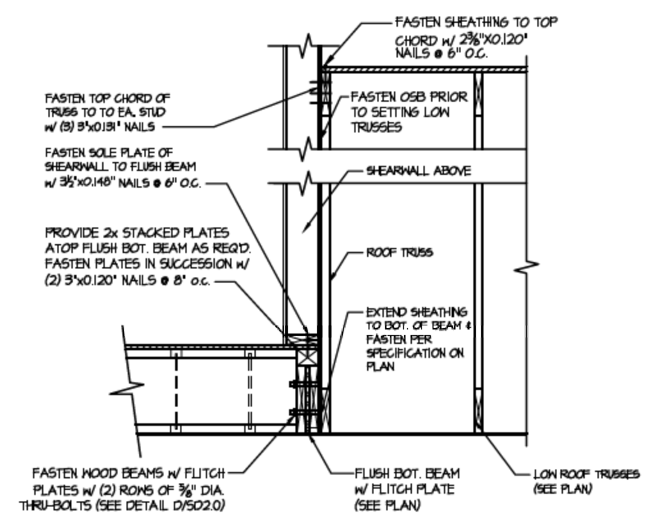
SHEAR TRANSFER DETAIL @ INT. SHEARWALL ABOVE & BELOW
2 — SCALE: 3/4"=1'-0" — EDGE OF FRAMING



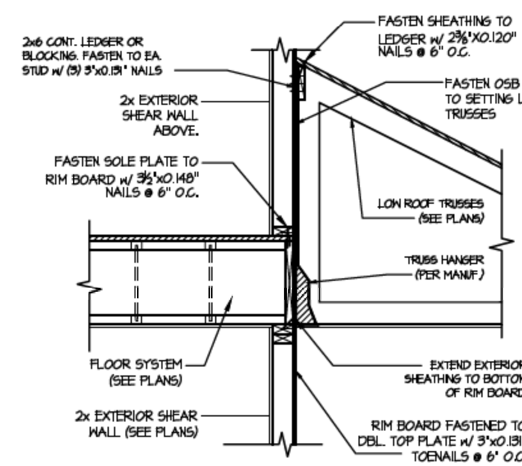
DETAIL @ SHED ROOF
4 — SCALE: 3/8"=1'-0"



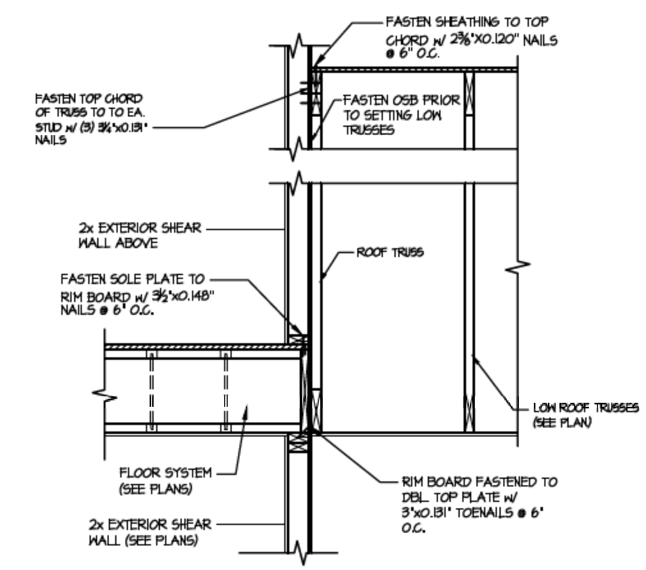
SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE
5 — SCALE: 3/4"=1'-0"



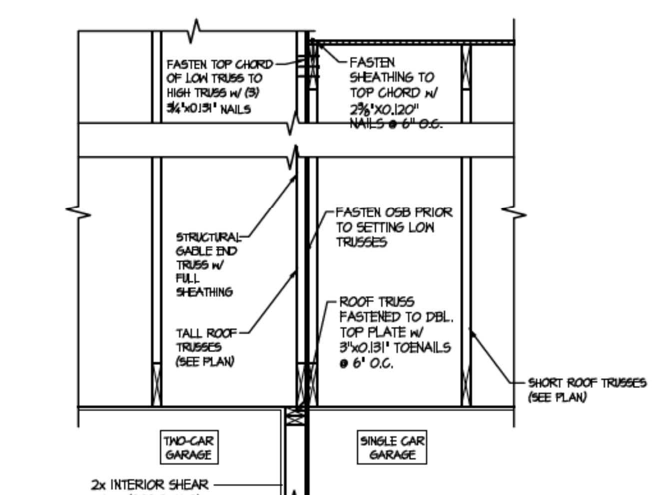
SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE
6 — SCALE: 3/4"=1'-0"



TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ INTERIOR WALL
7 — SCALE: 3/4"=1'-0"



TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ INTERIOR WALL
8 — SCALE: 3/4"=1'-0"



TYPICAL SHEAR TRANSFER DETAIL BETWEEN GARAGE BAYS
9 — SCALE: 3/4"=1'-0"

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042188 STEPHEN IVES

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
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M&K project number: 126-21020
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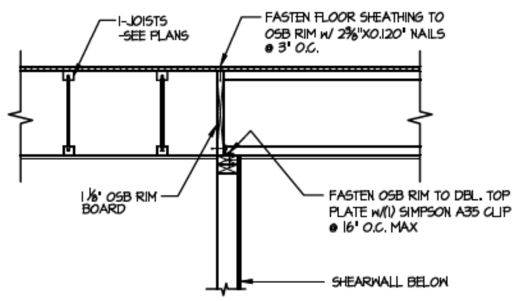
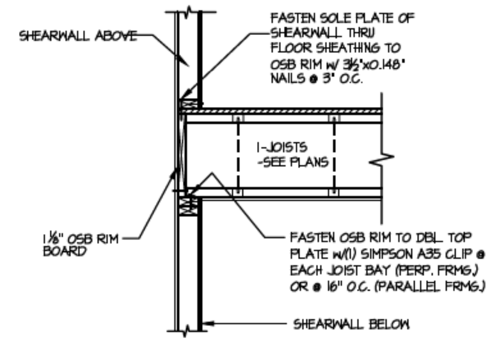
DRB GROUP

FRAMING DETAILS
DRAYTON
RALEIGH, NC

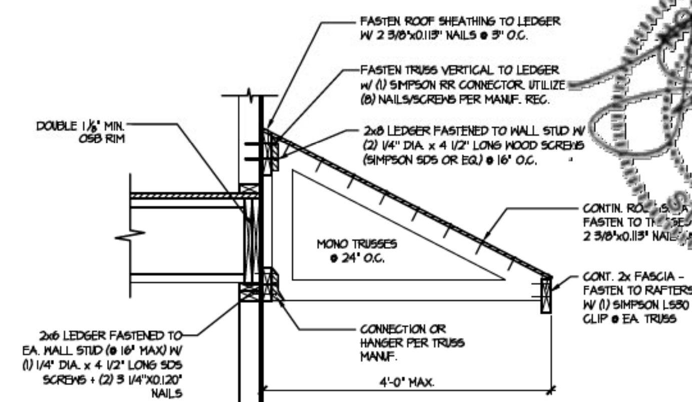
sheet: SD2.1BJ



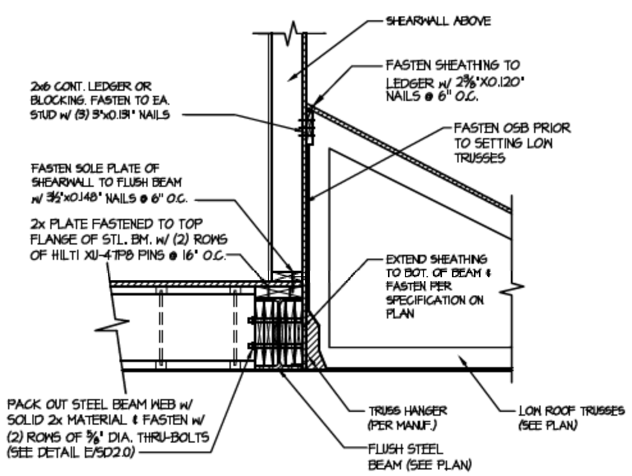
SHEAR TRANSFER DETAIL @ INTERIOR SHEARWALL BELOW
(1) SCALE: 3/4"=1'-0" PARALLEL FRAMING



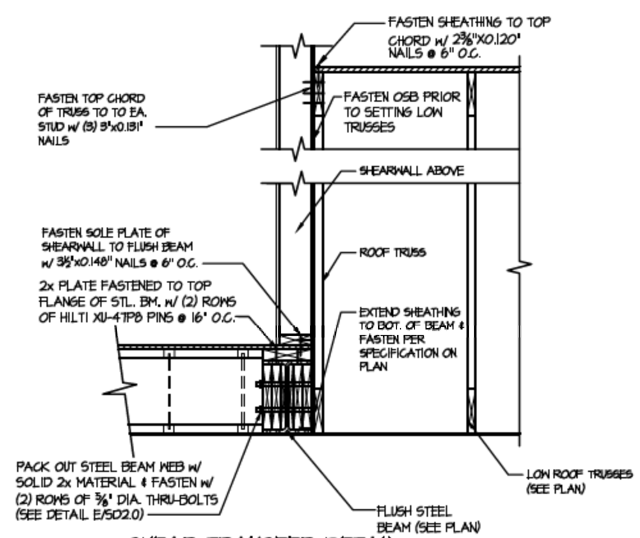
SHEAR TRANSFER DETAIL @ INT. SHEARWALL ABOVE & BELOW
(2) SCALE: 3/4"=1'-0" EDGE OF FRAMING



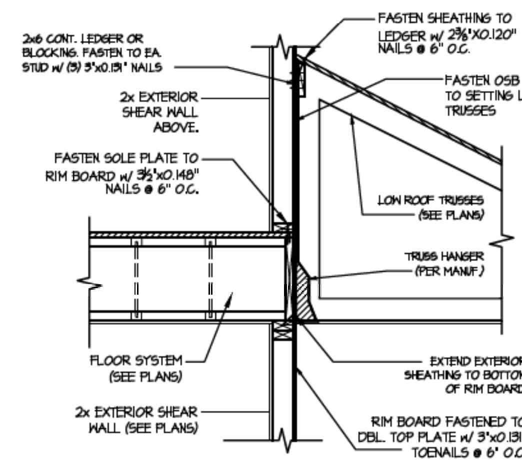
DETAIL @ SHED ROOF
(4) SCALE: 3/8"=1'-0"



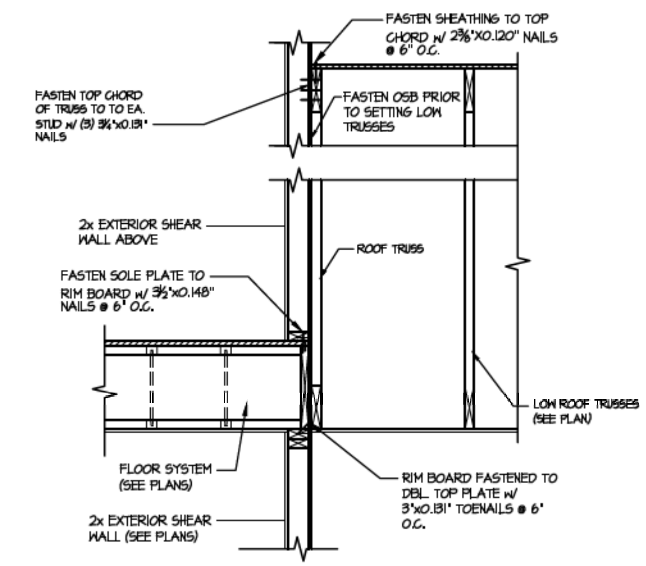
SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE
(5) SCALE: 3/4"=1'-0"



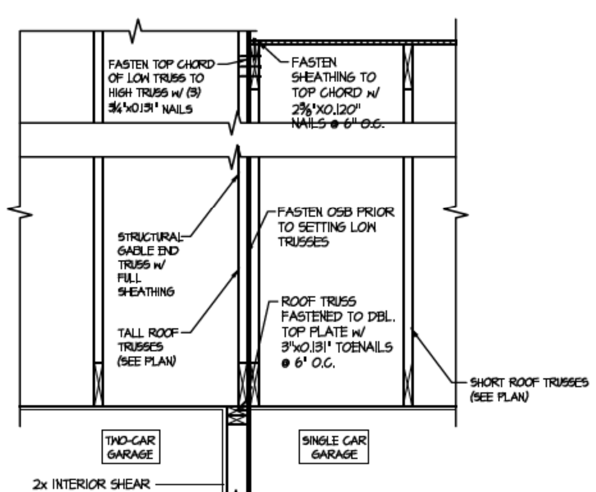
SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE
(6) SCALE: 3/4"=1'-0"



TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ INTERIOR WALL
(7) SCALE: 3/4"=1'-0"



TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ INTERIOR WALL
(8) SCALE: 3/4"=1'-0"



TYPICAL SHEAR TRANSFER DETAIL BETWEEN GARAGE BAYS
(9) SCALE: 3/4"=1'-0"

FILE: RLH - Drayton - Structurals DATE: 11/23/2021 12:49 PM

11/23/2021

MULHERN+KULP
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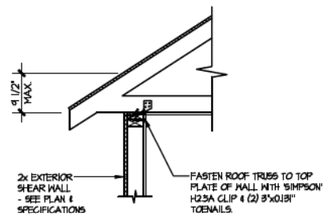
date: initial:

DRB GROUP

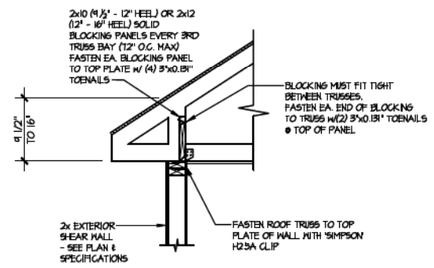
FRAMING DETAILS
DRAYTON
RALEIGH, NC

sheet:
SD2.1CJ



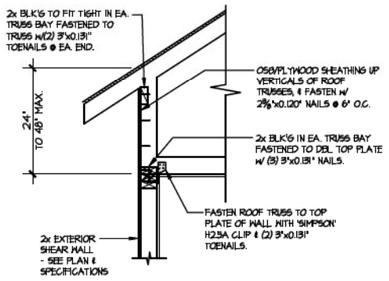
A1 TYPICAL SHEAR TRANSFER DETAIL @ ROOF

SCALE: 3/8"=1'-0" HEEL HEIGHT LESS THAN 4 1/2" NO BLOCKING REQD



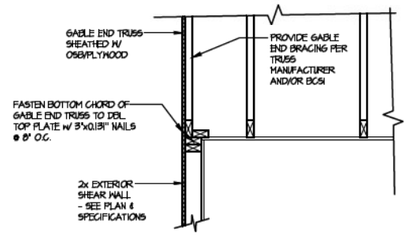
A2 TYPICAL SHEAR TRANSFER DETAIL @ ROOF

SCALE: 3/8"=1'-0" HEEL HEIGHT BETWEEN 9 1/2" - 16" BLOCKING REQD



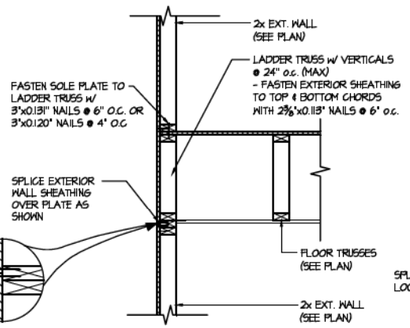
A3 TYPICAL SHEAR TRANSFER DETAIL @ RAISED HEEL TRUSS

SCALE: 3/8"=1'-0" HEEL HEIGHT UP TO 48" MAX.



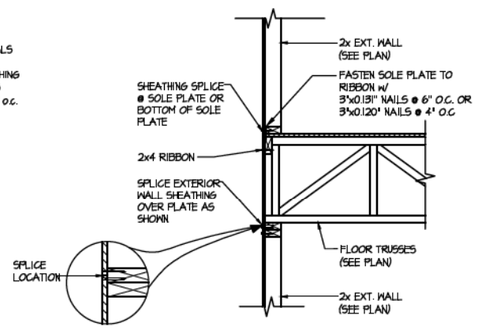
B TYPICAL GABLE END DETAIL

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



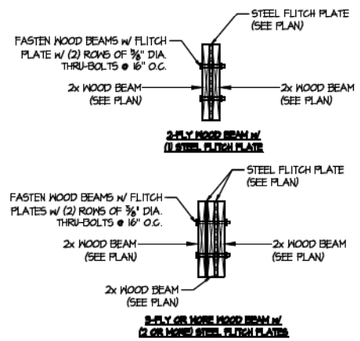
C1 TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ EXTERIOR WALL

SCALE: 3/8"=1'-0" PARALLEL FRMG



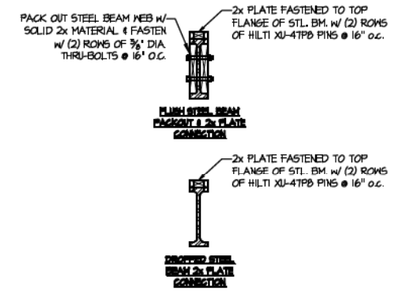
C2 TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ EXTERIOR WALL

SCALE: 3/8"=1'-0" PERPENDICULAR FRMG



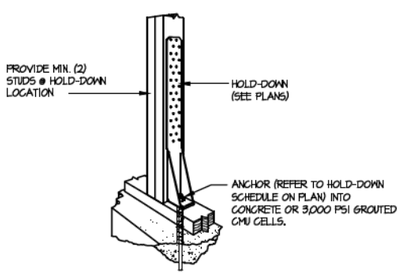
D TYPICAL FLITCH BEAM CONNECTION DETAIL

SCALE: 3/4"=1'-0"



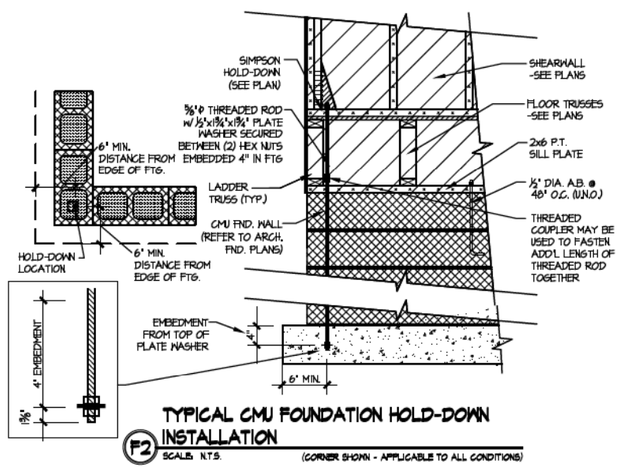
E TYPICAL STEEL BEAM CONNECTION DETAIL

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)

11/23/2021

NORTH CAROLINA PROFESSIONAL SEAL 042185 ENGINEER STEPHEN IVES

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N.C. Lic. #C-3825

M&K project number: 126-21020

project mgr: JTR
drawn by: KL
issue date: 06-12-21

REVISIONS:

date:	initial:

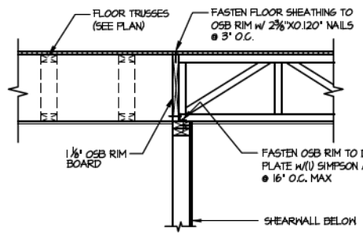
DRB GROUP

FRAMING DETAILS

DRAYTON
RALEIGH, NC

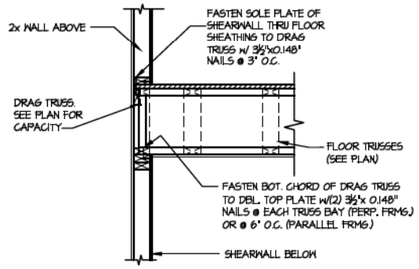
sheet: SD2.0T

FILE: RLH - Drayton - Structurals DATE: 11/23/2021 12:47 PM



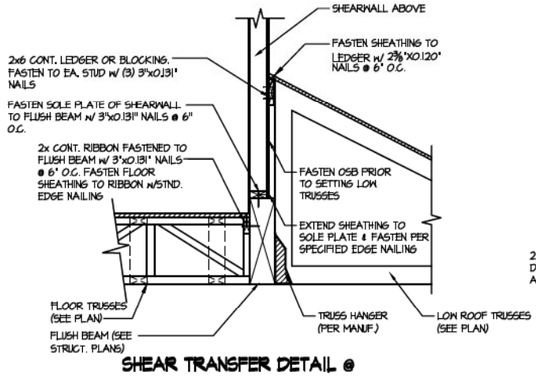
1 SHEAR TRANSFER DETAIL @ INTERIOR SHEARWALL BELOW

SCALE: 3/4"=1'-0" PARALLEL FRAMING



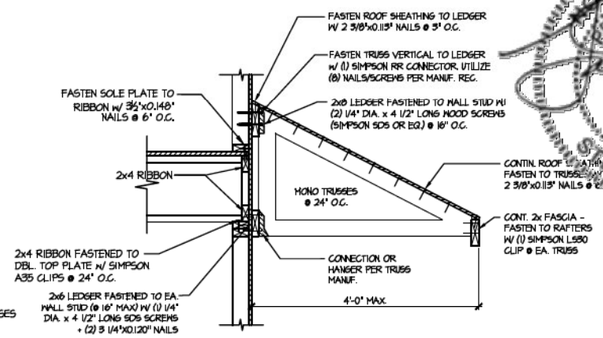
2 SHEAR TRANSFER DETAIL @ INT. SHEARWALL ABOVE & BELOW

SCALE: 3/4"=1'-0" EDGE OF FRAMING



3 SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE

SCALE: 3/4"=1'-0"

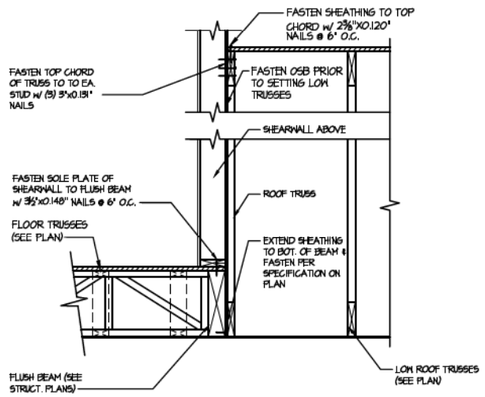


4 DETAIL @ SHED ROOF

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

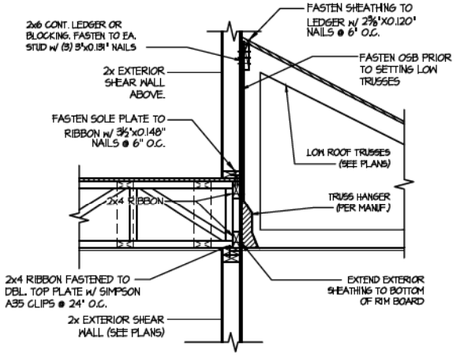
5 SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE

SCALE: 3/4"=1'-0"



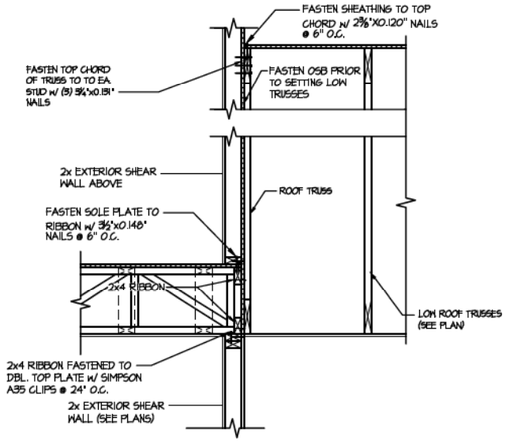
6 SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE

SCALE: 3/4"=1'-0"



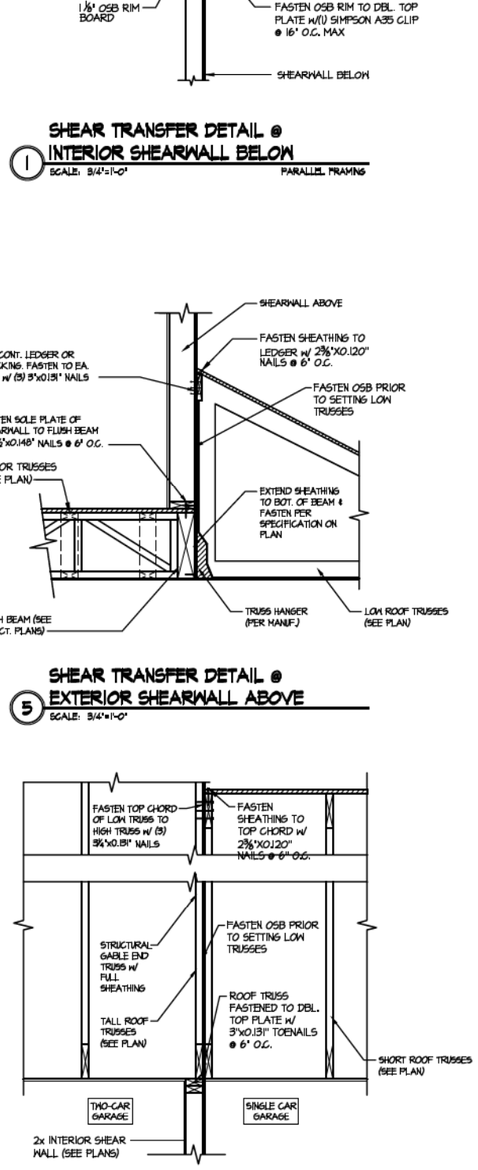
7 TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ INTERIOR WALL

SCALE: 3/4"=1'-0"



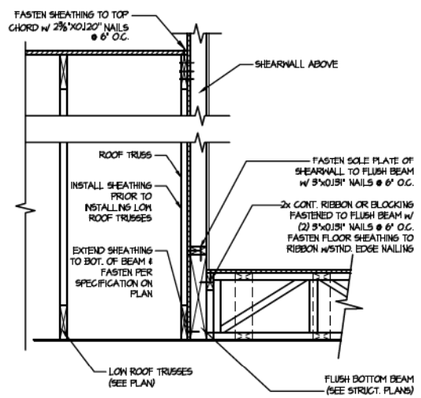
8 TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ INTERIOR WALL

SCALE: 3/4"=1'-0"



9 TYPICAL SHEAR TRANSFER DETAIL BETWEEN GARAGE BAYS

SCALE: 3/4"=1'-0"



13 SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE

SCALE: 3/4"=1'-0"

11/23/2021

NORTH CAROLINA PROFESSIONAL SEAL 042183 ENGINEER STEPHEN VEST

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N.C. Lic. #C-3825

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issue date: 06-12-21

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date:	initial:

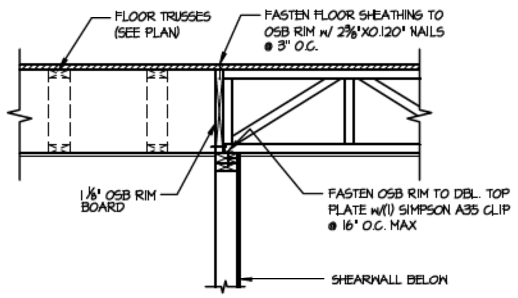
DRB GROUP

FRAMING DETAILS

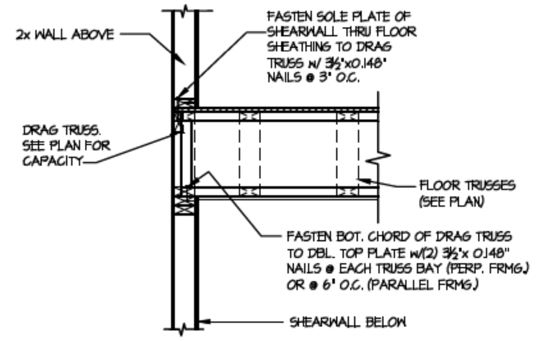
DRAYTON
RALEIGH, NC

sheet: SD2.1AT

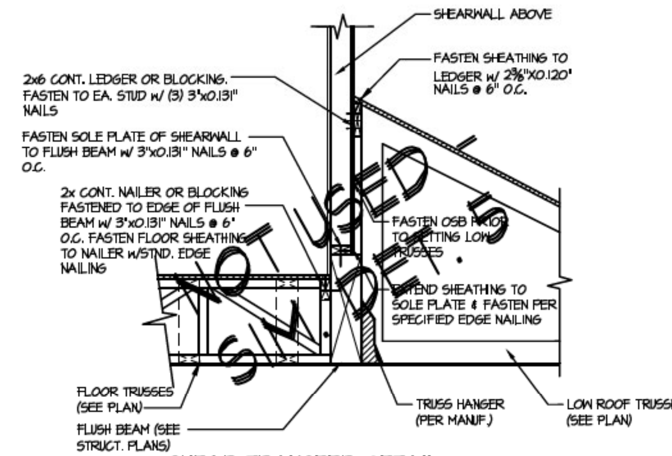
FILE: RLH - Drayton - Structurals DATE: 11/23/2021 12:48 PM



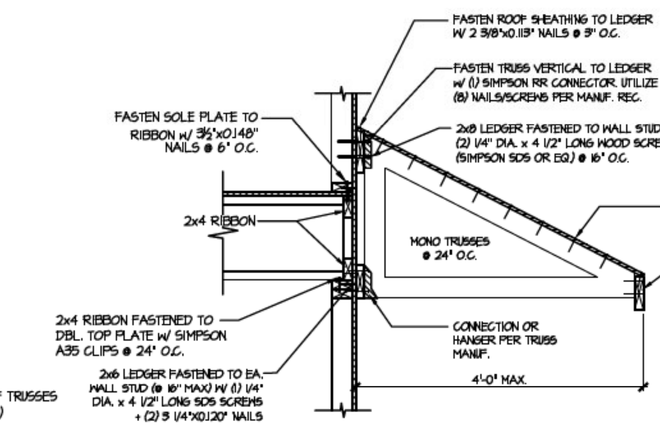
① SHEAR TRANSFER DETAIL @ INTERIOR SHEARWALL BELOW
SCALE: 3/4"=1'-0" PARALLEL FRAMING



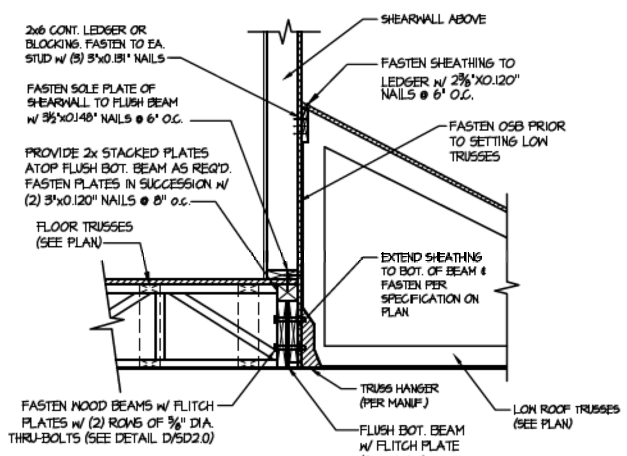
② SHEAR TRANSFER DETAIL @ INT. SHEARWALL ABOVE & BELOW
SCALE: 3/4"=1'-0" EDGE OF FRAMING



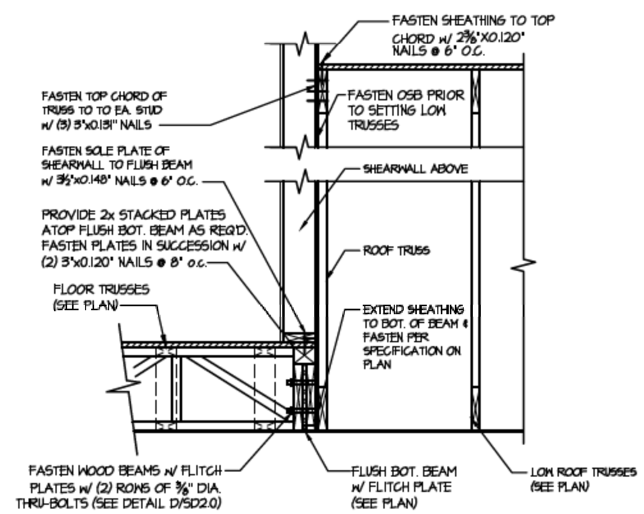
③ SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE
SCALE: 3/4"=1'-0"



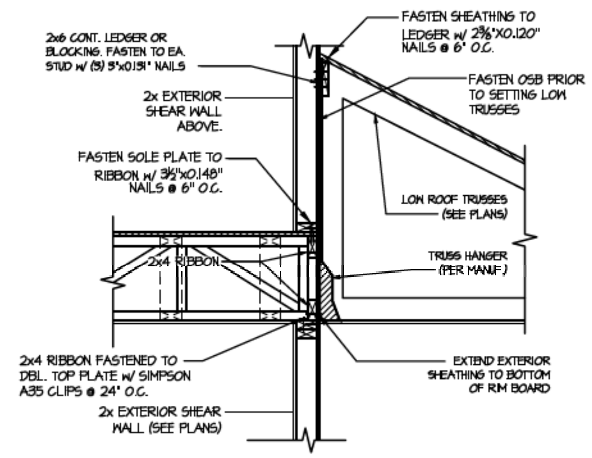
④ DETAIL @ SHED ROOF
SCALE: 3/8"=1'-0"



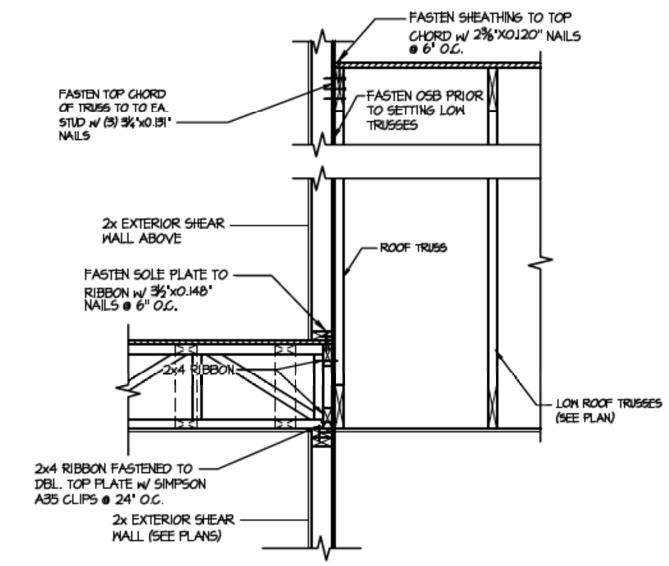
⑤ SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE
SCALE: 3/4"=1'-0"



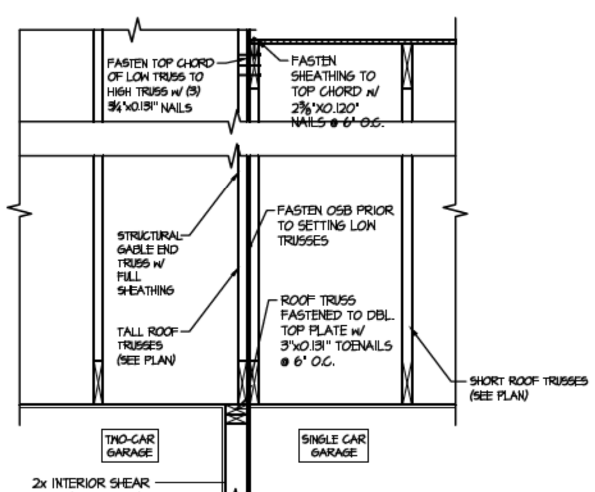
⑥ SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE
SCALE: 3/4"=1'-0"



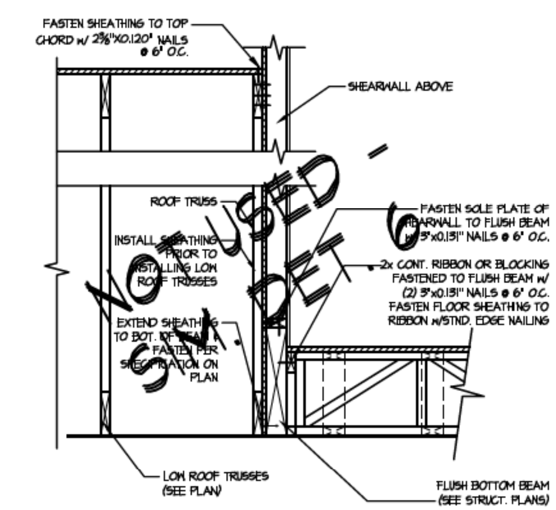
⑦ TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ INTERIOR WALL
SCALE: 3/4"=1'-0"



⑧ TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ INTERIOR WALL
SCALE: 3/4"=1'-0"



⑨ TYPICAL SHEAR TRANSFER DETAIL BETWEEN GARAGE BAYS
SCALE: 3/4"=1'-0"



⑬ SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE
SCALE: 3/4"=1'-0"

11/23/2021

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042183 STEPHEN IVES

MULHERN+KULP RESIDENTIAL STRUCTURAL ENGINEERING
NC Lic. #C-3825

M&K project number: 126-21020
project mgr: JTR
drawn by: KL
issue date: 06-12-21

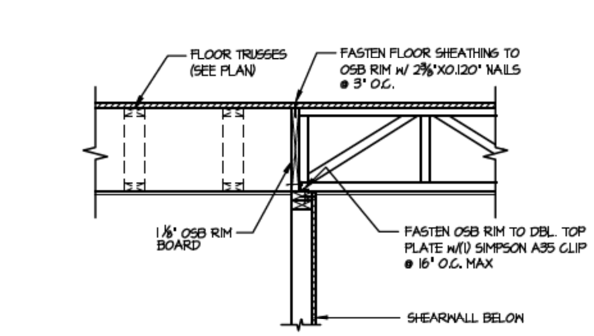
REVISIONS:
date: initial:

DRB GROUP

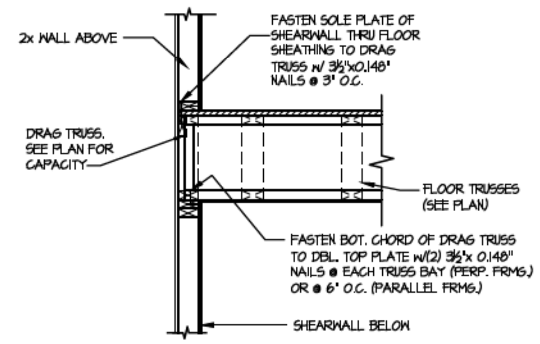
FRAMING DETAILS
DRAYTON
RALEIGH, NC

sheet: SD2.1BT

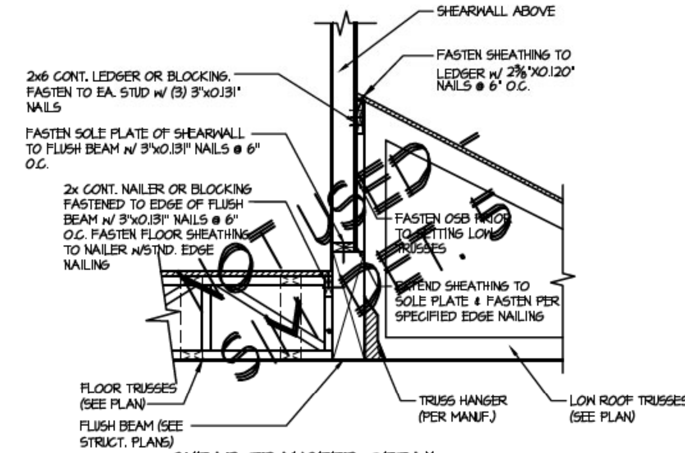
FILE: RLH - Drayton - Structurals DATE: 11/23/2021 12:48 PM



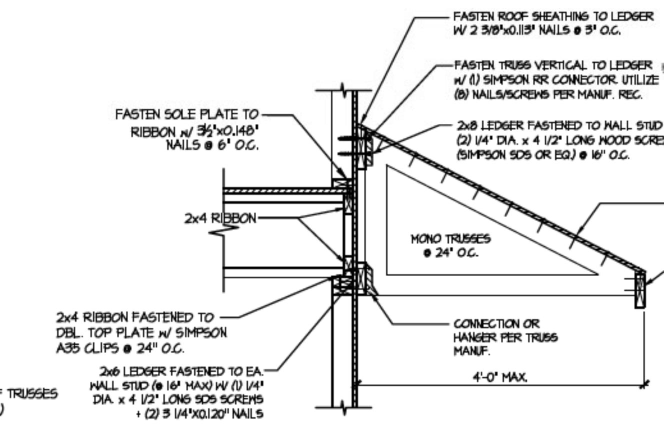
SHEAR TRANSFER DETAIL @ INTERIOR SHEARWALL BELOW
① SCALE: 3/4"=1'-0" PARALLEL FRAMING



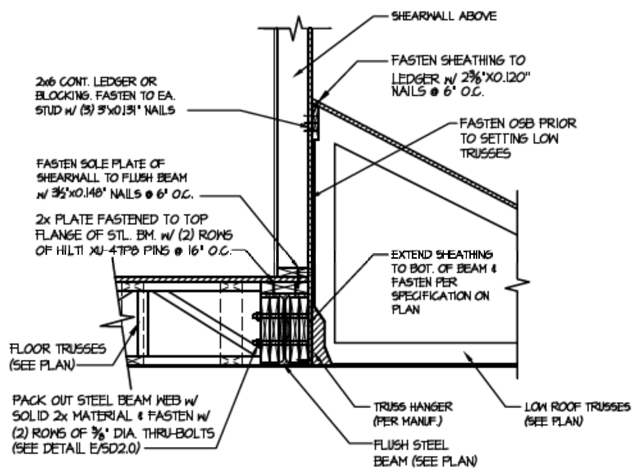
SHEAR TRANSFER DETAIL @ INT. SHEARWALL ABOVE & BELOW
② SCALE: 3/4"=1'-0" EDGE OF FRAMING



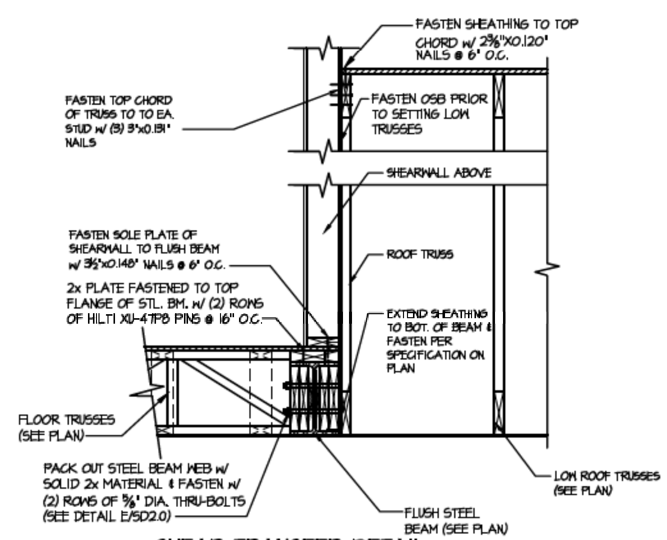
SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE
③ SCALE: 3/4"=1'-0"



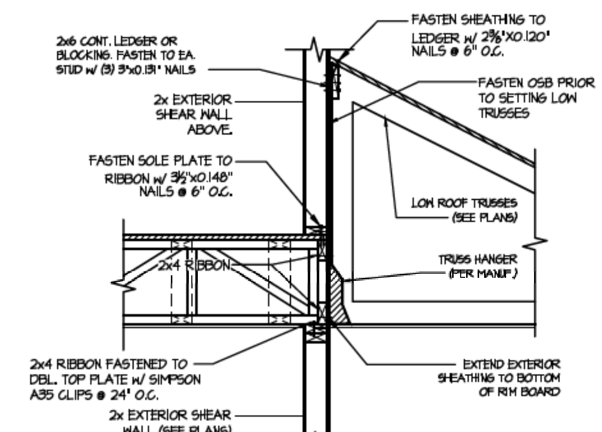
DETAIL @ SHED ROOF
④ SCALE: 3/8"=1'-0"



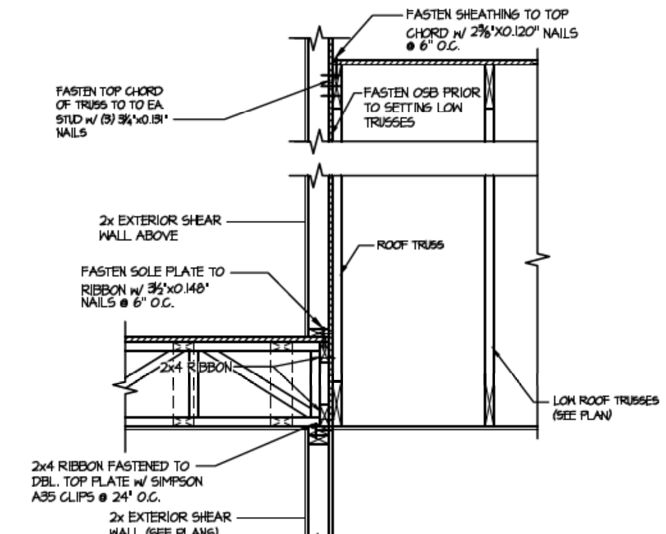
SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE
⑤ SCALE: 3/4"=1'-0"



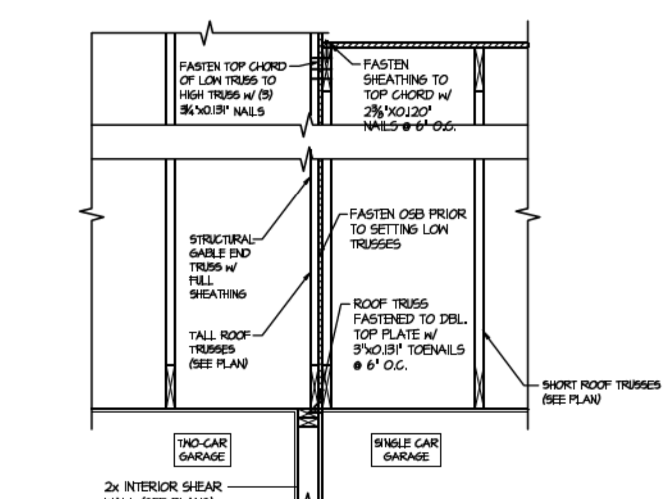
SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE
⑥ SCALE: 3/4"=1'-0"



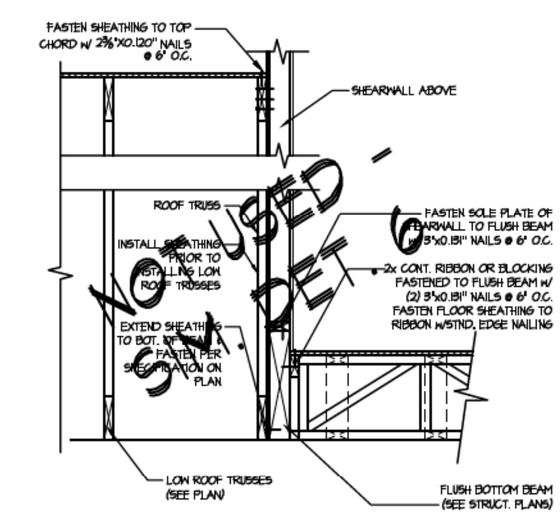
TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ INTERIOR WALL
⑦ SCALE: 3/4"=1'-0"



TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ INTERIOR WALL
⑧ SCALE: 3/4"=1'-0"



TYPICAL SHEAR TRANSFER DETAIL BETWEEN GARAGE BAYS
⑨ SCALE: 3/4"=1'-0"



SHEAR TRANSFER DETAIL @ EXTERIOR SHEARWALL ABOVE
⑬ SCALE: 3/4"=1'-0"

11/23/2021

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042183

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FRAMING DETAILS
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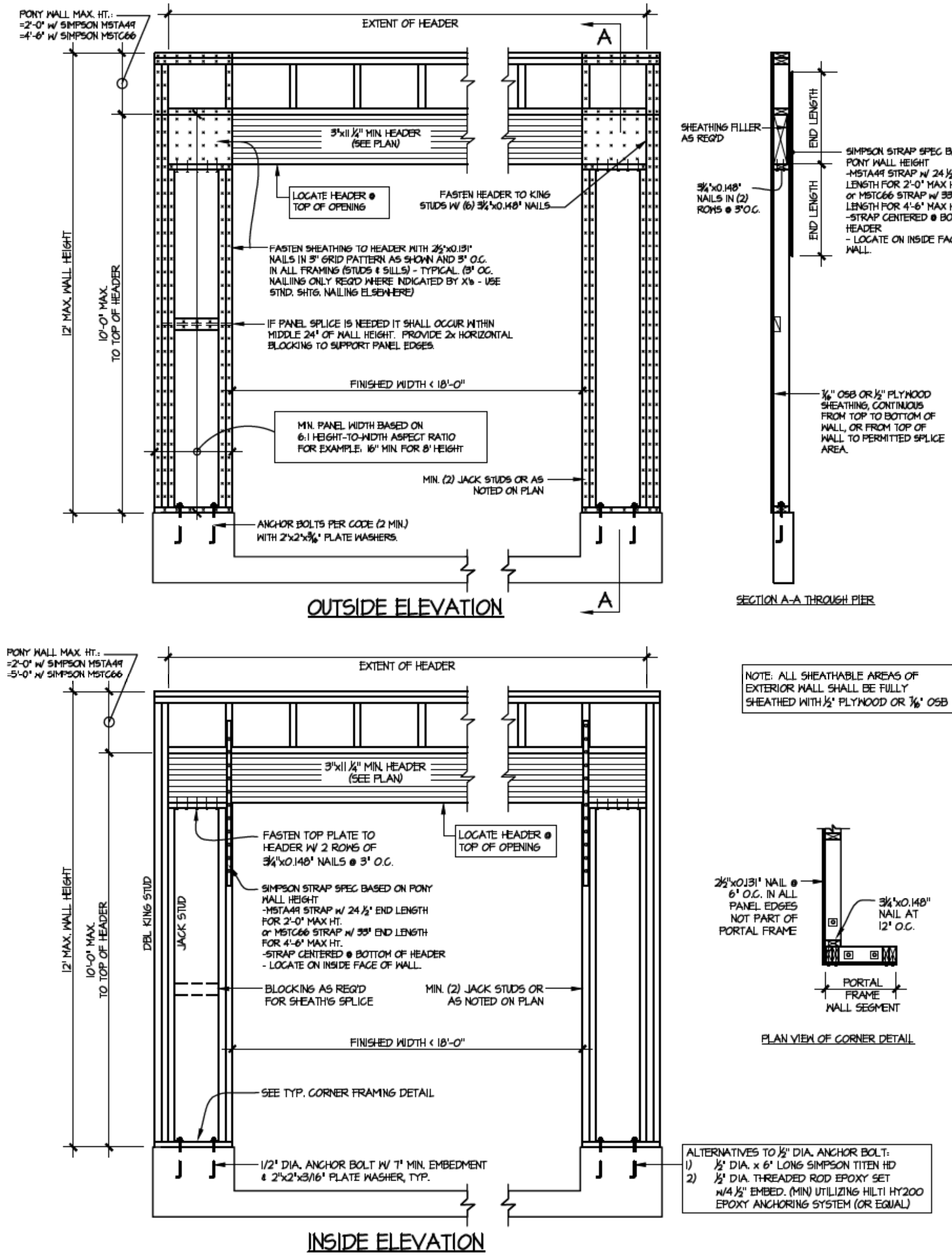
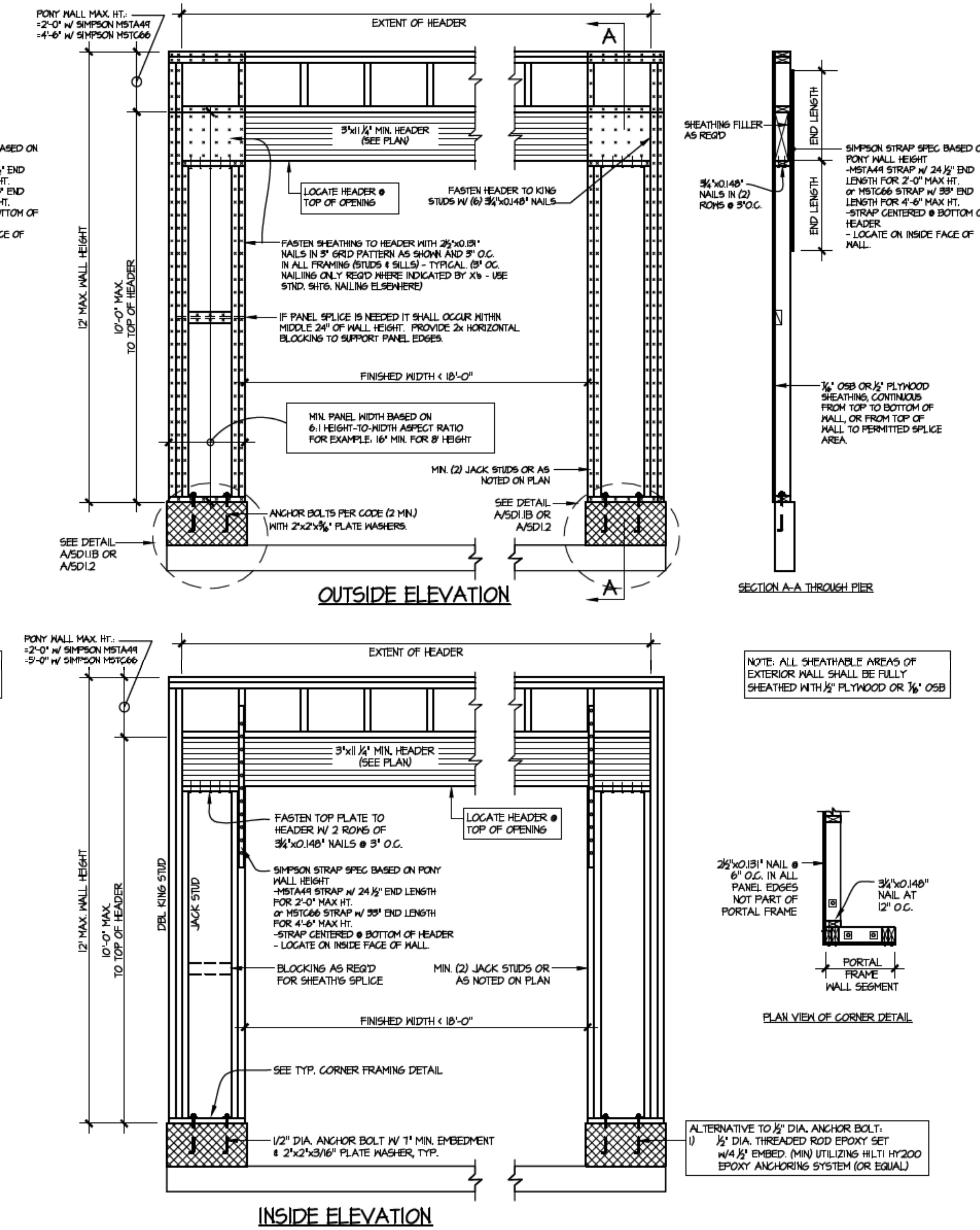
RALEIGH, NC

sheet: SD2.1CT

FILE: RLH - Drayton - Structurals DATE: 11/23/2021 12:49 PM


PONY WALL MAX. HT.:
=2'-0" w/ SIMPSON MSTA49
=4'-6" w/ SIMPSON MSTC66
EXTENT OF HEADER
A
3"x11 1/4" MIN. HEADER (SEE PLAN)
LOCATE HEADER @ TOP OF OPENING
FASTEN HEADER TO KING STUDS W/ (6) 3 1/4"x0.148" NAILS
FASTEN SHEATHING TO HEADER WITH 2 1/2"x0.131" NAILS IN 3" GRID PATTERN AS SHOWN AND 3" O.C. IN ALL FRAMING (STUDS & SILLS) - TYPICAL. (3" O.C. NAILING ONLY REQ'D WHERE INDICATED BY X's - USE STND. SHTG. NAILING ELSEWHERE)
IF PANEL SPLICE IS NEEDED IT SHALL OCCUR WITHIN MIDDLE 24" OF WALL HEIGHT. PROVIDE 2x HORIZONTAL BLOCKING TO SUPPORT PANEL EDGES.
FINISHED WIDTH ≤ 18'-0"
MIN. PANEL WIDTH BASED ON 6:1 HEIGHT-TO-WIDTH ASPECT RATIO FOR EXAMPLE: 16" MIN. FOR 8' HEIGHT
MIN. (2) JACK STUDS OR AS NOTED ON PLAN
ANCHOR BOLTS PER CODE (2 MIN.) WITH 2"x2"x3/16" PLATE WASHERS.
12' MAX. WALL HEIGHT
10'-0" MAX. TO TOP OF HEADER
OUTSIDE ELEVATION
SHEATHING FILLER AS REQ'D
3 1/4"x0.148" NAILS IN (2) ROWS @ 3" O.C.
END LENGTH
SIMPSON STRAP SPEC BASED ON PONY WALL HEIGHT -MSTA49 STRAP w/ 24 1/2" END LENGTH FOR 2'-0" MAX HT. or MSTC66 STRAP w/ 33" END LENGTH FOR 4'-6" MAX HT. -STRAP CENTERED @ BOTTOM OF HEADER - LOCATE ON INSIDE FACE OF WALL.
7/16" OSB OR 1/2" PLYWOOD SHEATHING, CONTINUOUS FROM TOP TO BOTTOM OF WALL, OR FROM TOP OF WALL TO PERMITTED SPLICE AREA.
SECTION A-A THROUGH PIER
PONY WALL MAX. HT.:
=2'-0" w/ SIMPSON MSTA49
=5'-0" w/ SIMPSON MSTC66
EXTENT OF HEADER
3"x11 1/4" MIN. HEADER (SEE PLAN)
FASTEN TOP PLATE TO HEADER W/ 2 ROWS OF 3 1/4"x0.148" NAILS @ 3" O.C.
LOCATE HEADER @ TOP OF OPENING
SIMPSON STRAP SPEC BASED ON PONY WALL HEIGHT -MSTA49 STRAP w/ 24 1/2" END LENGTH FOR 2'-0" MAX HT. or MSTC66 STRAP w/ 33" END LENGTH FOR 4'-6" MAX HT. -STRAP CENTERED @ BOTTOM OF HEADER - LOCATE ON INSIDE FACE OF WALL.
DBL. KING STUD
JACK STUD
BLOCKING AS REQ'D FOR SHEATHG SPLICE
MIN. (2) JACK STUDS OR AS NOTED ON PLAN
FINISHED WIDTH ≤ 18'-0"
SEE TYP. CORNER FRAMING DETAIL
1/2" DIA. ANCHOR BOLT W/ 7" MIN. EMBEDMENT & 2"x2"x3/16" PLATE WASHER, TYP.
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)
INSIDE ELEVATION
NOTE: ALL SHEATHABLE AREAS OF EXTERIOR WALL SHALL BE FULLY SHEATHED WITH 1/2" PLYWOOD OR 7/16" OSB
2 1/2"x0.131" NAIL @ 6" O.C. IN ALL PANEL EDGES NOT PART OF PORTAL FRAME
3 1/4"x0.148" NAIL AT 12" O.C.
PORTAL FRAME WALL SEGMENT
PLAN VIEW OF CORNER DETAIL

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


PONY WALL MAX. HT.:
=2'-0" w/ SIMPSON MSTA49
=4'-6" w/ SIMPSON MSTC66
EXTENT OF HEADER
A
3"x11 1/4" MIN. HEADER (SEE PLAN)
LOCATE HEADER @ TOP OF OPENING
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FASTEN SHEATHING TO HEADER WITH 2 1/2"x0.131" NAILS IN 3" GRID PATTERN AS SHOWN AND 3" O.C. IN ALL FRAMING (STUDS & SILLS) - TYPICAL. (3" O.C. NAILING ONLY REQ'D WHERE INDICATED BY X's - USE STND. SHTG. NAILING ELSEWHERE)
IF PANEL SPLICE IS NEEDED IT SHALL OCCUR WITHIN MIDDLE 24" OF WALL HEIGHT. PROVIDE 2x HORIZONTAL BLOCKING TO SUPPORT PANEL EDGES.
FINISHED WIDTH ≤ 18'-0"
MIN. PANEL WIDTH BASED ON 6:1 HEIGHT-TO-WIDTH ASPECT RATIO FOR EXAMPLE: 16" MIN. FOR 8' HEIGHT
MIN. (2) JACK STUDS OR AS NOTED ON PLAN
ANCHOR BOLTS PER CODE (2 MIN.) WITH 2"x2"x3/16" PLATE WASHERS.
SEE DETAIL A/SD1.1B OR A/SD1.2
12' MAX. WALL HEIGHT
10'-0" MAX. TO TOP OF HEADER
OUTSIDE ELEVATION
SHEATHING FILLER AS REQ'D
3 1/4"x0.148" NAILS IN (2) ROWS @ 3" O.C.
END LENGTH
SIMPSON STRAP SPEC BASED ON PONY WALL HEIGHT -MSTA49 STRAP w/ 24 1/2" END LENGTH FOR 2'-0" MAX HT. or MSTC66 STRAP w/ 33" END LENGTH FOR 4'-6" MAX HT. -STRAP CENTERED @ BOTTOM OF HEADER - LOCATE ON INSIDE FACE OF WALL.
7/16" OSB OR 1/2" PLYWOOD SHEATHING, CONTINUOUS FROM TOP TO BOTTOM OF WALL, OR FROM TOP OF WALL TO PERMITTED SPLICE AREA.
SECTION A-A THROUGH PIER
PONY WALL MAX. HT.:
=2'-0" w/ SIMPSON MSTA49
=5'-0" w/ SIMPSON MSTC66
EXTENT OF HEADER
3"x11 1/4" MIN. HEADER (SEE PLAN)
FASTEN TOP PLATE TO HEADER W/ 2 ROWS OF 3 1/4"x0.148" NAILS @ 3" O.C.
LOCATE HEADER @ TOP OF OPENING
SIMPSON STRAP SPEC BASED ON PONY WALL HEIGHT -MSTA49 STRAP w/ 24 1/2" END LENGTH FOR 2'-0" MAX HT. or MSTC66 STRAP w/ 33" END LENGTH FOR 4'-6" MAX HT. -STRAP CENTERED @ BOTTOM OF HEADER - LOCATE ON INSIDE FACE OF WALL.
DBL. KING STUD
JACK STUD
BLOCKING AS REQ'D FOR SHEATHG SPLICE
MIN. (2) JACK STUDS OR AS NOTED ON PLAN
FINISHED WIDTH ≤ 18'-0"
SEE TYP. CORNER FRAMING DETAIL
1/2" DIA. ANCHOR BOLT W/ 7" MIN. EMBEDMENT & 2"x2"x3/16" PLATE WASHER, TYP.
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)
INSIDE ELEVATION
NOTE: ALL SHEATHABLE AREAS OF EXTERIOR WALL SHALL BE FULLY SHEATHED WITH 1/2" PLYWOOD OR 7/16" OSB
2 1/2"x0.131" NAIL @ 6" O.C. IN ALL PANEL EDGES NOT PART OF PORTAL FRAME
3 1/4"x0.148" NAIL AT 12" O.C.
PORTAL FRAME WALL SEGMENT
PLAN VIEW OF CORNER DETAIL

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

11/23/2021

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042183 STEPHEN WEST

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
NC Lic. #C-3825

M&K project number: 126-21020
project mgr: JTR
drawn by: KL
issue date: 06-12-21

REVISIONS:

date:	initial:

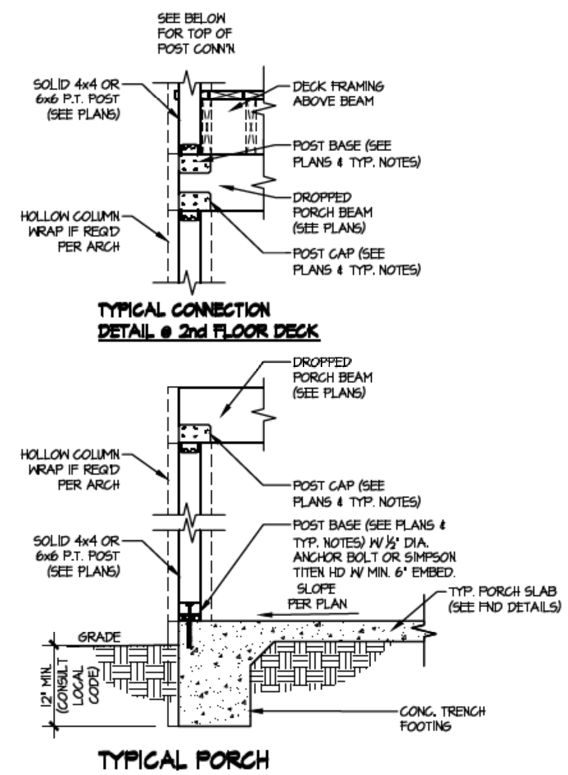
DRB GROUP

FRAMING DETAILS

DRAYTON
RALEIGH, NC

sheet: SD2.2

FILE: RLH - Drayton - Structurals DATE: 11/23/2021 12:49 PM



TYPICAL PORCH POST CONNECTION DETAIL

3 SCALE: NONE — SLAB ON GRADE SHOWN (SIM. @ CRAWL & BSMT.)

11/23/2021

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
NC Lic. #C-3825

M&K project number: 126-21020

project mgr: JTR
drawn by: KL
issue date: 06-12-21

REVISIONS:

date:	initial:

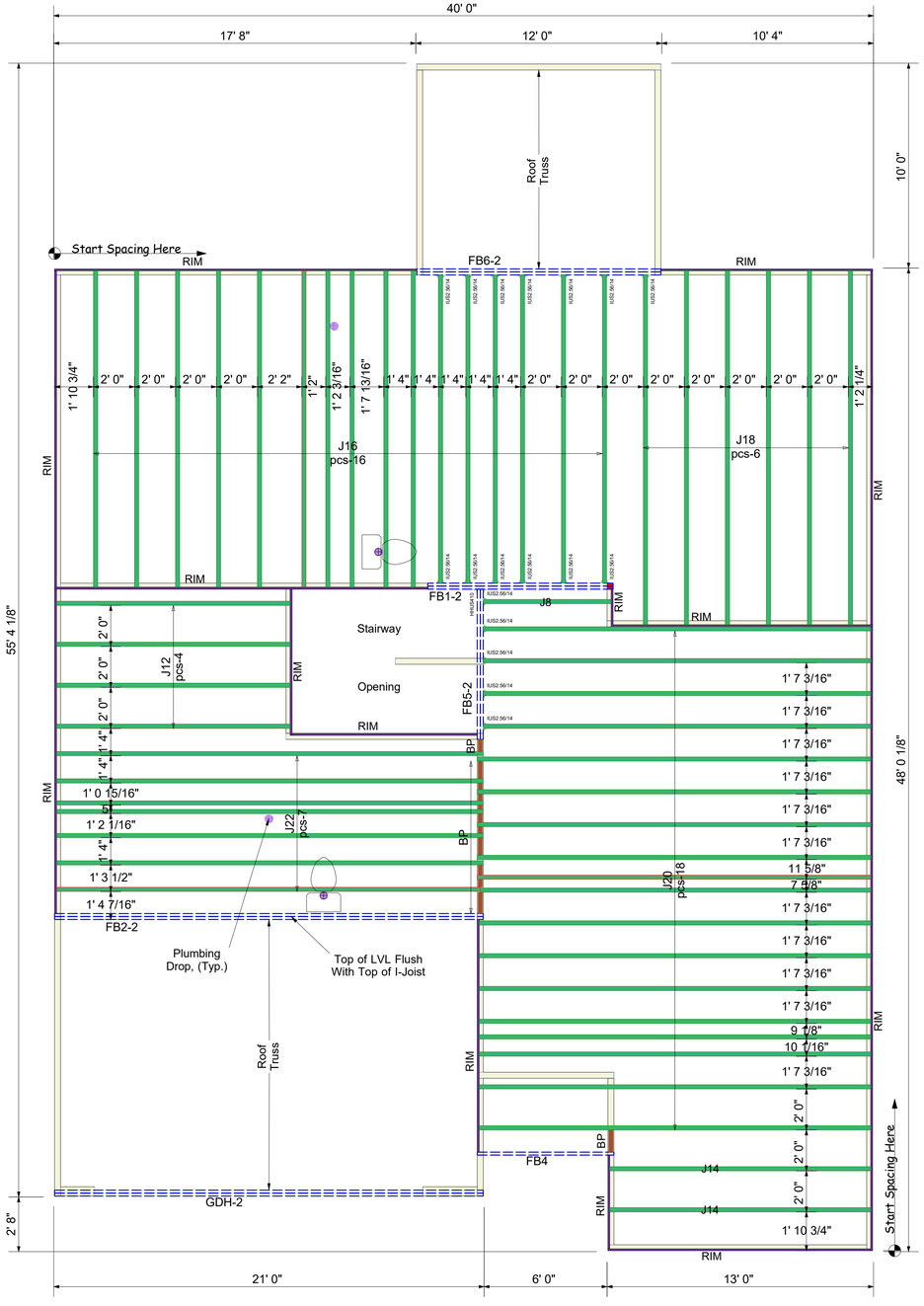
DRB GROUP

FRAMING DETAILS

DRAYTON
RALEIGH, NC

sheet: **SD3.0**

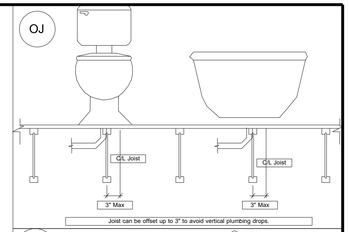
FILE: RLH - Drayton - Structurals DATE: 11/23/2021 12:49 PM



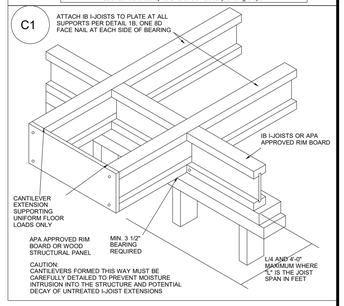
Connector Summary		
Qty	Manuf	Product
1	Simpson	HHUS410
18	Simpson	IUS2.56/14

Products					
PlotID	Length	Product	Plies	Net Qty	Fab Type
J22	22' 0"	14" PJI-40	1	7	MFD
J20	20' 0"	14" PJI-40	1	18	MFD
J18	18' 0"	14" PJI-40	1	6	MFD
J16	16' 0"	14" PJI-40	1	16	MFD
J14	14' 0"	14" PJI-40	1	2	MFD
J12	12' 0"	14" PJI-40	1	4	MFD
J8	8' 0"	14" PJI-40	1	1	MFD
GDH-2	22' 0"	2.0 RigidLam DF LVL 1-3/4 x 11-7/8	2	2	FF
FB6-2	12' 0"	2.0 RigidLam DF LVL 1-3/4 x 14	2	2	FF
FB1-2	10' 0"	2.0 RigidLam DF LVL 1-3/4 x 14	2	2	FF
FB4	8' 0"	2.0 RigidLam DF LVL 1-3/4 x 14	1	1	FF
FB5-2	8' 0"	2.0 RigidLam DF LVL 1-3/4 x 14	2	2	FF
FB2-2	22' 0"	2.0 RigidLam DF LVL 1-3/4 x 20	2	2	FF
RIM	12' 0"	1 1/8" x 14" APA Rim Board	1	16	FF
BP	2' 0"	14" PJI-40	1	4	FF

OJ



C1



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

Kempsville Building Materials
A Division of the Carter Lumber Company

Dan Ryan Builders

77 Farm at Neills Creek (Drytyn 5-GLFE)

2nd FLOOR I-JOIST PLACEMENT PLAN

REVISIONS	
DATE	BY
06.06.22	RKW

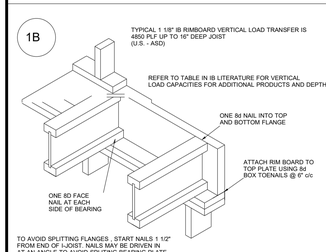
PROJECT NUMBER
22060002

SHEET NUMBER
1 / 1

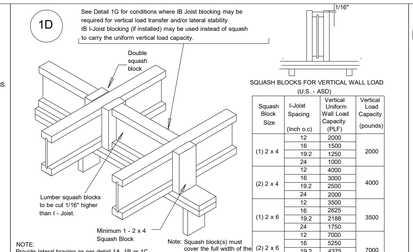
2nd Floor I-Joist

DRAWING SCALE : NTS

1B



1D

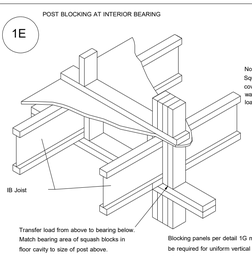


SQUASH BLOCKS FOR VERTICAL WALL LOAD (U.S. - ASD)

Squash Block Size	I-Joist Spacing (Inch o.c)	Vertical Uniform Wall Load Capacity (PLF)	Vertical Load Capacity (pounds)
(1) 2 x 4	12	2000	2000
	16	1500	
	19.2	1250	
	24	1000	
(2) 2 x 4	12	4000	4000
	16	3000	
	19.2	2500	
	24	2000	
(1) 2 x 6	12	3500	3500
	16	2625	
	19.2	2188	
	24	1750	
(2) 2 x 6	12	7000	7000
	16	5250	
	19.2	4375	
	24	3500	

1E

POST BLOCKING AT INTERIOR BEARING

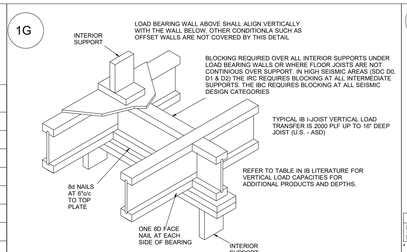


Note: Squash block(s) must cover full width of wall to achieve loads in Table.

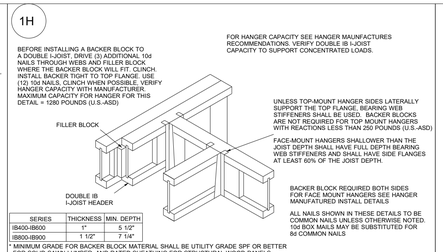
POST BLOCKING (U.S. - ASD)

Squash Block Size	Load (Lb.)
(1) 2 x 4	2,000
(2) 2 x 4	4,000
(3) 2 x 4	6,000
(4) 2 x 4	8,000
(1) 2 x 6	3,500
(2) 2 x 6	7,000
(3) 2 x 6	10,500
(4) 2 x 6	14,000

1G



1H

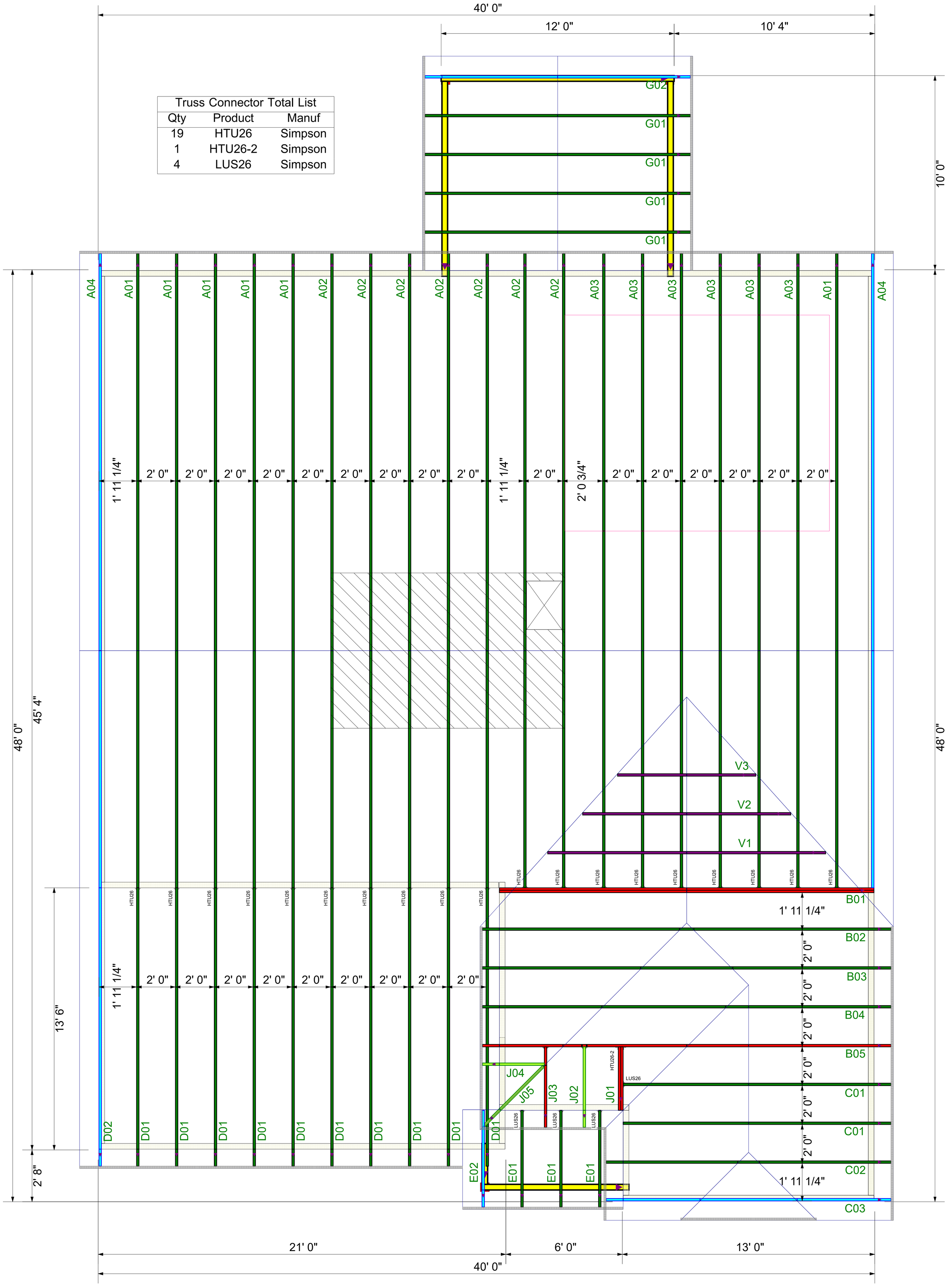


SERIES	THICKNESS	MIN. DEPTH
IB400-IB600	1"	5 1/2"
IB800-IB900	1 1/2"	7 1/4"

* MINIMUM GRADE FOR BACKER BLOCK MATERIAL SHALL BE UTILITY GRADE SPF OR BETTER
- FOR SOLID SAWN LUMBER, AND RATED SHEATHING FOR STRUCTURAL WOOD PANELS.
**FOR FACE-MOUNT HANGERS, USE JOIST DEPTH MINUS 3 1/4".

BBO = Beam by Others
PBO = Post by Others
GBO = Girder by Others
J = I-Joist
FB = Flush Beam
DB = Dropped Beam
BP = Blocking Panels
SB = Squash Blocks

Truss Connector Total List		
Qty	Product	Manuf
19	HTU26	Simpson
1	HTU26-2	Simpson
4	LUS26	Simpson



ROOF LAYOUT

DRAWING SCALE : NTS

PROJECT NUMBER	REVISIONS	
22060002	DATE	BY
SHEET NUMBER	6-6-22	ND
1 / 1		

DRB GROUP

DRAYTON 5 - 77 FARM AT NEILLS CREEK

ROOF TRUSS LAYOUT

Kempsville Building Materials
A Division of the Carter Lumber Company