GENERAL STRUCTURAL NOTES

1. These drawings and its contents are the property of Queen City Consulting and Design, PLLC, (QC) and the client as noted on this page. Distribution to any other parties for purposes other than those directly concerned with the titled project without prior written consent from QC is strictly prohibited.
2. The engineer's name present on the seal of these drawings is the engineer of record (EOR).
3. Details noted as "Typical" shall be used whenever applicable. Refer to specifications for information not covered by these notes or drawings.
4. It is the responsibility of the contractor to verify all dimensions prior to construction. Furthermore, QC will not be held responsible for the contractor's failure to conform to the construction documents, including this structural set, should any non-conformities occur.
5. The contractor shall assume sole and complete responsibility for job site conditions during the course of construction of this project, including safety of all persons and property.
6. Any omissions and conflicts between the various elements of the structural drawings and/or specifications shall be brought to the attention of, and resolved with, the engineer before proceeding with any work so involved.
7. All construction shall conform to the latest requirements of the North Carolina Residential Code (NCRC), 2018 Edition, plus all local codes and regulations.
8. Seismic design shall be per section R301.2.2 of the 2018 NCRC and is based off of local seismic design categories.

FOOTING AND FOUNDATION NOTES:

1. Foundation Design is based on a minimum allowing bearing capacity of 2,000 PSF. Contact the EOR if bearing capacity is not achieved.
2. No excavation shall occur within a 45 degree line projected from the bottom of the building foundation is permitted, unless it is specifically approved by the EOR.
3. The bottom of all footings shall extend below the frost line for the region, as specified by the local municipality. However, the bottom of all footings shall be a minimum of 12" below grade.
4. Contractor to ensure that all drainage is directed away from the exterior footings (Min. 2% slope).
5. Excavations of footings shall be temporarily protected with a 10 mil polyethylene membrane if concrete is not placed within 24 hours of excavation.
6. Do not place concrete or other cementitious materials against subgrade with any deleterious materials present, including but not limited to: water, ice, frost, or loose material.
7. All footings are to have minimum 2" projection on each side of foundation walls (except for monolithic slab foundations).

CONCRETE:

1. Poured concrete is to have a minimum compressive strength of 3000 psi at 28 days.
2. Aggregates for normal weight concrete shall conform to ASTM C33.
3. All materials used for concrete shall conform to ACI 318, ACI 301, or ASTM C1157.
4. The placing of all concrete shall be in accordance with ACI 318 and ASTM C94 requirements.
5. Admixtures may be used with prior approval of the EOR. Admixtures shall comply with ASTM C494 and C1017.
6. Concrete slabs-on-grade shall be constructed in a manner that complies with ACI 302.1R-96.
7. Control or saw cut joints shall be cut to a minimum of 1/4 of the thickness of the respective concrete element. Control joints located within interior and exterior slabs-on-grade shall be spaced at a maximum of 12' O.C. Control joints shall comply with ACI 301.

CONCRETE REINFORCEMENT:

1. Bar reinforcement shall be conform to ASTM A615, grade 60 steel.
2. The following minimum clear cover shall be provided over reinforcing bars:
   - 2.1. Concrete exposed to earth = 3"
   - 2.2. Concrete exposed to weather = 1-1/2"
   - 2.3. Slabs not exposed to weather = 3/4"
   - 2.4. Concrete Beams & Columns = 1-1/2"
3. Brick and/or porous material shall not be used to support footing steel off the ground. Plastic rebar chairs or precast concrete dobies may be used.
4. Splices in reinforcing steel shall be a minimum of 45x the diameter, up to a #6 rebar. Rebar larger than #6 requires a minimum lap splice of 56x the diameter.
5. All concrete walls shall be doweled to their supporting footings, beams, pads, etc. with bars of the same size and spacing as the vertical bars located within the wall, unless otherwise noted. Anchorage of dowels shall be the equivalent of a bar splice.

GENERAL WOOD FRAMING:

1. All wood framing members are designed to be Spruce-Pine-Fir (SPF) #2, unless otherwise noted on the plan. Grade marks shall be made by a recognized grading agency.
2. Framing members exposed to weather or in direct contact with soil, concrete, or masonry shall be pressure treated Spruce-Pine-Fir #2 and shall comply with the AWPA standard C-15.
3. All fasteners such as nails, bolts, screws, anchor bolts, etc. attaching pressure treated or fire-retardant treated wood shall be hot-dipped zinc coated galvanized or stainless steel (ASTM A153).
4. LVL engineered wood shall have the following minimum design values:
   - 4.1. E = 1,900,000 psi
   - 4.2. Fb = 2600 psi
   - 4.3. Fv = 285 psi
   - 4.4. Ft = 1555 psi
5. PSL engineered wood shall have the following minimum design values:
   - 5.1. E = 2,000,000 psi
   - 5.2. Fb = 2900 psi
   - 5.3. Fv = 290 psi
   - 5.4. Ft = 1755 psi
6. LSL engineered wood shall have the following minimum design values:
   - 6.1. E = 1,550,000 psi
   - 6.2. Fb = 2250 psi
   - 6.3. Fv = 400 psi
   - 6.4. Ft = 1075 psi
7. All bearing headers to be 2-2x6 supported with minimum (1) 2x4 jack stud and (1) 2x4 king stud at each end, unless noted otherwise on the plans. Non-load bearing headers shall be minimum 2-2x4.
8. Solid blocking is to be installed at all point load through floor levels to the foundation or to the nearest structural element.
9. All wood structural members that are specified are minimum sizes. Contractor may install larger sizes for ease of construction, if desired.
10. All nails shall be common nails, unless noted otherwise on plans and details.
11. All lag screws are to be predrilled. Drill diameter is to be 60 percent of the shank diameter. In addition, lag screws shall comply with ANSI/ASME standard B18.2.1-1981.
12. All bolt heads and nuts bearing on wood shall have standard cut washers. Holes for bolts shall be bored 1/16" larger than the nominal bolt diameter.
13. Provide full bearing where all beams meet supporting framing members.
14. Unless otherwise noted on plans, size, height, and spacing of wood studs shall be in accordance with section R602.3.1 of the 2018 North Carolina Residential Code. Wood framed walls shall consist of Spruce-Pine-Fir No.2 graded material.
15. Built-up wood columns consisting of multiple studs shall have each lamination nailed with 16d nails spaced at 9" o.c. For built-up columns consisting of (4) plies or more, secure plies together with horizontal Simpson CS-16 coil straps located at quarter points.
16. Unless otherwise noted, four-ply LVL beams shall have plies fastened together with two rows of 1/2" diameter bolts spaced at 16" o.c. The bolts shall be located a minimum of 2-1/2" and a maximum of 3-1/2" from the top of bottom of the beam.

ROOF FRAMING NOTES

1. Truss Built Roofs
   - 1.1. All roof trusses must be built in accordance with the truss manufacturer's requirements. Tie-down connections to resist uplift shall be installed where required. When roof truss manufacturers do not provide the required connectors, it is the responsibility of the contractor to notify the roof truss engineer or the EOR to provide an adequate connection.
   - 1.2. Roof truss layouts are to be in compliance with the overall design specified on the plans. All deviations are to be brought to the attention of the EOR prior to installation.
   - 1.3. Roof trusses shall be braced per the manufacturer's instructions and per the SBCA Buidling Component Safety Information (BCSI) Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Roof Trusses.
   - 1.4. Provide 2x4 ladder framing spaced at 24" o.c. between adjacent roof trusses where false dormers are located.
   - 1.5. Install minimum 7/16" OSB roof sheathing.
   - 1.6. Install roof trusses per section R802.10 in the 2018 NCRC. Where truss heels exceed 9-1/4" and are located over braced wall panels, blocking is to be installed per section R602.10.5 of the 2018 NCRC.
2. Stick Framed Roofs
   - 2.1. Collar ties shall be 2x6 spaced at 48" o.c. at all ridges unless noted otherwise and connected in the upper third of the attic space using (3) 10d common nails.
   - 2.2. Fur down all ridges as needed so that rafters have full contact.
   - 2.3. Ceiling joists when erected parallel to rafters must be sistered to rafters and secured as per table R802.5.1(a) of the 2018 North Carolina Residential Code.
   - 2.4. In addition to the NCRC fastener schedule, unless noted otherwise on the plan, roof members shall be tied down with additional metal connectors. Install a Simpson H2.5A connector at every rafter to fasten the lower end of the rafter to the top plate or beam below.
   - 2.5. Install minimum 7/16" OSB roof sheathing.

QUEEN CITY
CONSULTING AND DESIGN, PLLC

STRUCTURAL PLANS PREPARED FOR:

0 JASMINE FOUNDATION PLAN

PROJECT ADDRESS:
0 JASMINE ROAD
FUQUAY VARINA, NC 27526

OWNER:

DESIGNER:
Queen City Consulting and Design, PLLC.
2039 Jesup Dr
Charlotte, NC 28208

Revision No.	Date	Description
0	3.1.24	ORIGINAL ENGINEERING

DESIGN SPECIFICATIONS:

Construction Type: Residential

Applicable Building Codes:
- 2018 North Carolina Residential Building Code with All Local Amendments
- ASCE 7-10: Minimum Design Loads for Buildings and Other Structures

Ultimate Design Wind Speed: 130MPH, EXPOSURE B

Assumed Soil Bearing Capacity: 2000psf

Component and Cladding loads shall be derived per Tables R301.2(2) and R301.2(3)

SEAL APPLIES TO STRUCTURAL ONLY

ENGINEERING SEAL APPLIES TO STRUCTURAL COMPONENTS ONLY. QC ASSUMES NO LIABILITY FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, SAFETY PRECAUTIONS, OR DEVIATIONS/DISCREPANCIES THAT MAY OCCUR IN THE PLAN. ANY DEVIATIONS OR DISCREPANCIES ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF QUEEN CITY CONSULTING AND DESIGN, PLLC.

	LIVE LOADS
Roof 2x Conventional	20 PSF
Roof Truss	20 PSF
Attic Roof Truss	60 PSF
Floor Live Typ. Dwelling	40 PSF
Sleeping Areas	30 PSF
Decks	40 PSF
Passenger Vehicle Garage	50 PSF
Balconies	40 PSF
Attics with Storage	20 PSF
Attics without Storage	10 PSF
Ground Snow Load	15 PSF

	DEAD LOADS
Roof 2x Conventional	15 PSF
Roof Truss	20 PSF
Conventional 2x Floor	10 PSF
I-Joist	15 PSF
Floor Truss	15 PSF

PAGE LIST:

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CONSULTING AND DESIGN, PLLC

NORTH CAROLINA
QUEEN CITY CONSULTING AND DESIGN, PLLC
No. P-2435
CERTIFICATE OF AUTHORIZATION

NORTH CAROLINA
PROFESSIONAL
SEAL
052215
CHRISTOPHER T. BATCHELOR
ENGINEER
3/1/24

CLIENT:
Ricky Omana

SHEET NAME:
COVER SHEET

CLIENT:
Ricky Omana

PLAN NAME:
Jasmine Foundation

NEIGHBORHOOD:
TBD

ADDRESS:
0 Jasmine Road
Fuquay-Varina, NC

PROJECT NUMBER:
RO24001

DRAWN BY:
CTB

DATE:
3/1/2024

SCALE:
1/4"=1'-0" ON 22"x34"
1/8"=1'-0" ON 11"x17"

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MONOSLAB FOUNDATION NOTES:

- DISCLAIMER: ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION, PLUS ALL LOCAL CODES AND REGULATIONS.
- THE FOUNDATION HAS BEEN DESIGNED WITH AN ASSUMED 2000 PSF MINIMUM ALLOWABLE SOIL BEARING CAPACITY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOIL BEARING CAPACITY PRIOR TO CONCRETE PLACEMENT. CONTACT QC IF DESIRED BEARING CAPACITY IS NOT ACHIEVED.
- ALL POURED CONCRETE IS TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. PLACE CONCRETE IN ACCORDANCE WITH ACI STANDARD 318.
- THE BOTTOM OF ALL FOOTINGS SHALL EXTEND BELOW THE FROST LINE FOR THE REGION, AS SPECIFIED BY THE LOCAL MUNICIPALITY, HOWEVER, THE BOTTOM OF ALL FOOTINGS SHALL BE A MINIMUM OF 12" BELOW GRADE.
- MAXIMUM DEPTH OF UNBALANCED FILL AGAINST MASONRY WALLS IS 4'. FOR GREATER THAN 4', REFER TO SECTION R404.1 OF THE 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE, OR CONTACT QC FOR ADDITIONAL ENGINEERING.
- PERIMETER INSULATION IS TO BE INSTALLED PER THE 2018 NCRC AND PER LOCAL MUNICIPALITY.
- WOOD SILL PLATES AT LOAD BEARING AND BRACED WALLS SHALL BE ANCHORED TO THE FOUNDATION WITH 1/2" DIAMETER BOLTS SPACED AT A MAXIMUM OF 6' O.C. THERE SHALL BE A MINIMUM OF TWO BOLTS PER PLATE SECTION. BOLTS SHALL EXTEND A MINIMUM OF 7" INTO CONCRETE AND SHALL BE LOCATED WITHIN THE MIDDLE THIRD OF THE PLATE. BOLTS TO BE LOCATED NOT MORE THAN 12" FROM ANY CORNERS OR BREAKS WITHIN THE SILL PLATE.
- ALL FOOTINGS & SLABS ARE TO BEAR ON UNDISTURBED SOIL OR 95% COMPACTED FILL, VERIFIED BY ENGINEER OR CODE OFFICIAL.
- DIMENSIONS SHOWN ON FOUNDATION DRAWINGS ARE TO EDGE OF FRAMING AND NOT TO EDGE OF BRICK VENEER.
- WITH CLASS 1 SOILS (TABLE R405.1), A 4" CRUSHED STONE BASE COURSE IS NOT REQUIRED.
- ALL GRADING AND FOUNDATION WORK MUST BE OBSERVED AND APPROVED PRIOR TO PLACEMENT OF CONCRETE.
- CONCRETE SLABS SHALL BE 4" THICK AND CONSTRUCTED OUT OF 3000 PSI MIN. COMPRESSIVE STRENGTH WITH 6"x6" W1.4xW1.4 WELDED WIRE FABRIC OR FIBERMESH CONCRETE OVER 10 MIL. THICK VAPOR BARRIER ON 95% COMPACTED FILL, VERIFIED BY EITHER ENGINEER OR CODE OFFICIAL.
- CONCRETE CURBS THAT ARE USED TO SUPPORT PORTAL FRAME WALLS SHALL BE A MINIMUM OF 8" WIDE
- ABBREVIATIONS:

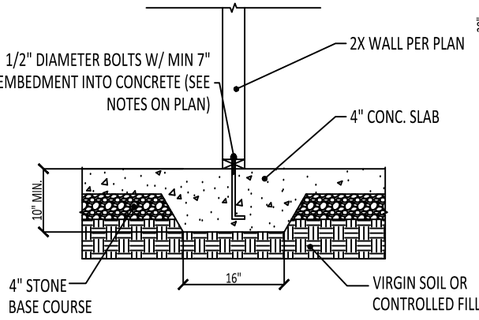
DJ = DOUBLE JOIST	SJ = SINGLE JOIST
GT = GIRDER TRUSS	FT = FLOOR TRUSS
SC = STUD COLUMN	DR = DOUBLE RAFTER
EE = EACH END	TR = TRIPLE RAFTER
TJ = TRIPLE JOIST	OC = ON CENTER
CL = CENTERLINE	PLFA = POINT LOAD FROM ABOVE
COL = COLUMN	NTS = NOT TO SCALE
PT = PRESSURE TREATED	UNO = UNLESS NOTED OTHERWISE
J = JACK STUD	K = KING STUD
CONT = CONTINUOUS	MANUF = MANUFACTURER

ANCHORAGE SCHEDULE

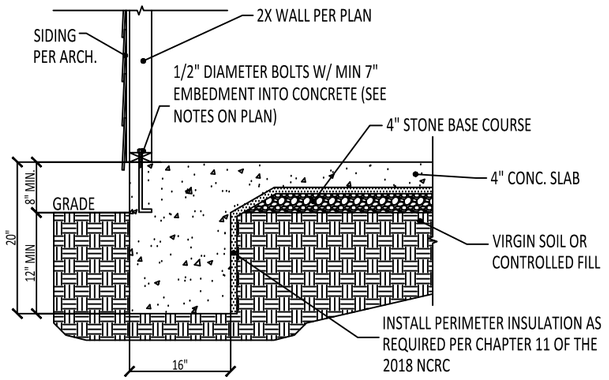
ANCHOR	MIN. SPACING	MIN. CONC. EMBEDMENT
1/2" DIA. A307 BOLTS W/ 90 DEGREE BEND	6'-0"	7"
SIMPSON MASA MUDSILL ANCHOR	6'-0"	4"
1/2" DIAMETER THREADED ROD W/ SET-XP EPOXY	6'-0"	7"
1/2" DIAMETER SIMPSON TITEN CONCRETE SCREWS	6'-0"	4-1/4"

FOOTING SCHEDULE

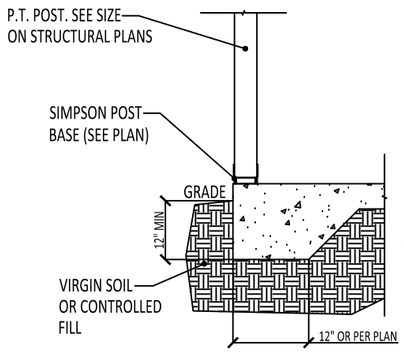
LABEL	SIZE	REBAR
A	24"x24"x10"	N/A
B	30"X30"X10"	N/A
C	36"X36"X12"	#4 @ 8" O.C. EA WAY
D	42"X42"X12"	#4 @ 8" O.C. EA WAY
E	48"X48"X12"	#5 @ 8" O.C. EA WAY

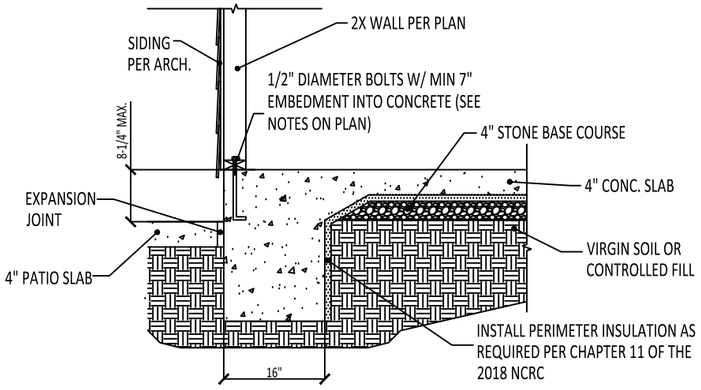


1 TYPICAL TURNDOWN SLAB DETAIL

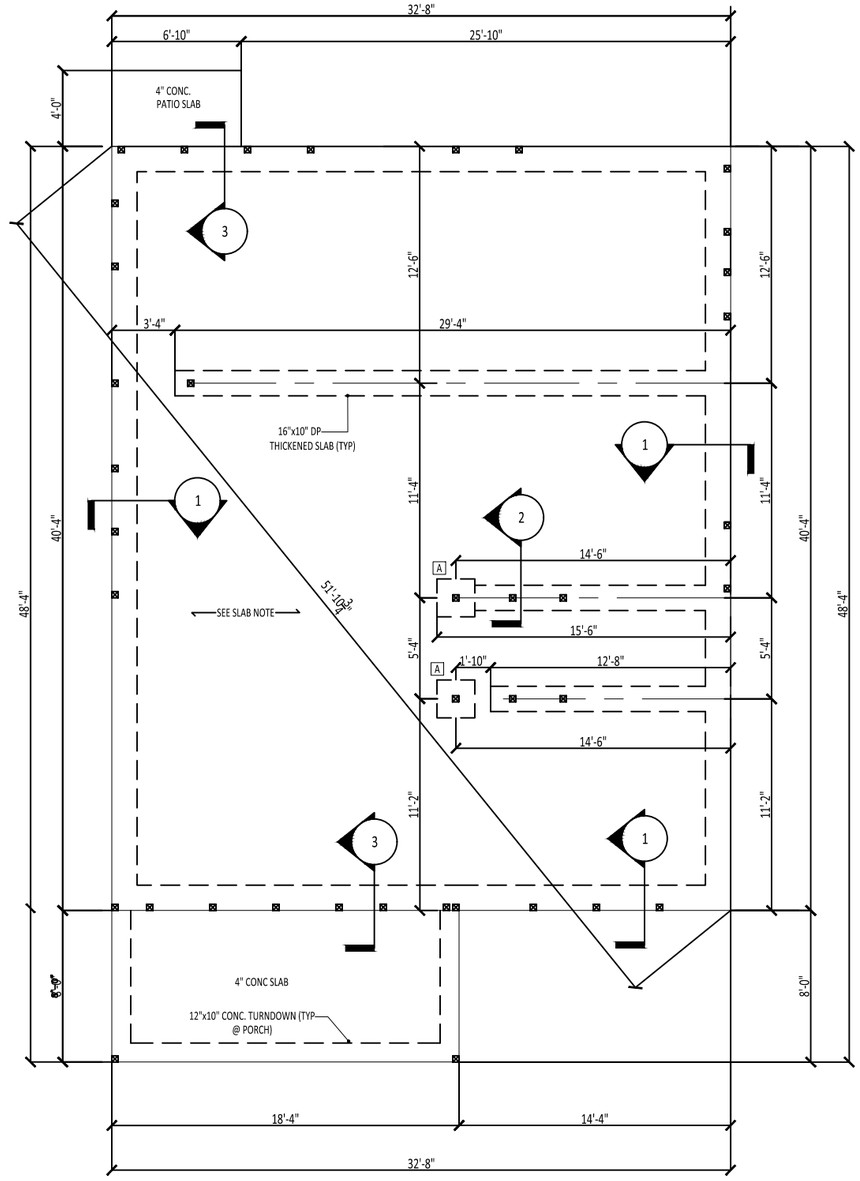


2 TYPICAL THICKENED SLAB DETAIL





3 TYPICAL PATIO SLAB DETAIL



QUEEN CITY CONSULTING AND DESIGN, PLLC

NORTH CAROLINA CERTIFICATE OF AUTHORIZATION — QUEEN CITY CONSULTING AND DESIGN, PLLC No. P-3435

NORTH CAROLINA PROFESSIONAL SEAL 052215 ENGINEER CHRISTOPHER T. BOWELL 3/1/24

CLIENT: Ricky Omana

SHEET NAME: MONOLITHIC SLAB FOUNDATION

CLIENT: Ricky Omana

PLAN NAME: Jasmine Foundation

NEIGHBORHOOD: TBD

ADDRESS: 0 Jasmine Road Fuquay-Varina, NC

PROJECT NUMBER: RO24001

DRAWN BY: CTB

DATE: 3/1/2024

SCALE: 1/4"=1'-0" ON 22"x34" 1/8"=1'-0" ON 11"x17"

PAGE: F-1.1m