

# THE BLANCO

# NORTH CAROLINA

#### SQUARE FOOTAGES

FIRST FLOOR (HTD.)	= 1316 sf
GARAGE FRONT PORCH REAR PORCH	= 401 sf = 80 sf = 81 sf
TOTAL	= 1878 sf

#### INDEX OF SHEETS

- A1.0 COVER SHEET
- GENERAL NOTES A1.1
- FLOOR PLAN & NOTES A2.0
- **EXTERIOR ELEVATIONS & NOTES** A3.0
- EXTERIOR ELEVATIONS A3.1
- E1.0 ELECTRICAL PLAN

# INDEX OF SHEETS (CONT.)

COVER SHEET, SPECIFICATIONS, REVS. CS F1.1m FOUNDATION PLAN - MONOLITHIC CONC. SLAB S1.1 FRAMING & BRACING PLAN COVER SHEET - STANDARD DETAILS CS-D DETAILS - MONO. CONC. SLAB D-1m DETAILS - MONO. CONC. SLAB (CONT.) D-2m DETAILS - FRAMING D-1f **DETAILS - FRAMING** D-2f

# GENERAL CONTRACTOR

#### LGI HOMES

SCOTT STERLING V.P. OF CONSTRUCTION FOR NC / SC 704-953-3824

## ARCHITECT

## COX ARCHITECTURE & DESIGN, PLLC

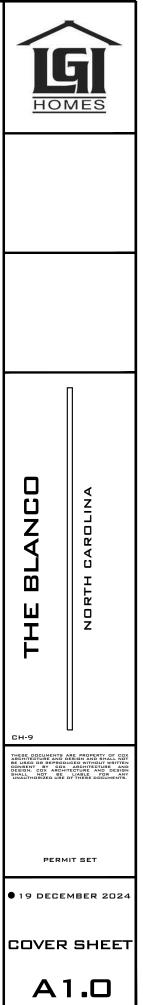
R. CRAIG COX 1310 SOUTH TRYON STREET SUITE 111 CHARLOTTE, NC 28203 980-237-3827

WWW.COXARCHITECTURE.COM CRAIG@COXARCHITECTURE.COM

# ENGINEER

# QUEEN CITY CONSULTING & DESIGN, PLLC

2459 WILKINSON BLVD. SUITE 300 CHARLOTTE, NC 28208 828-381-3091 WWW.QC-DESIGNS.COM





#### GENERAL NOTES

#### -DO NOT SCALE DRAWINGS; DESIGNATED DIMENSIONS SHALL BE USED IN PREFERENCE TO MEASUREMENTS BY SCALE.

-GENERAL CONTRACTOR SHALL VERIFY AND COMPLY TO ALL LOCAL & NATIONAL BUILDING CODES. CONTACT ARCHITECT IF INSPECTORS REQUIRE REVISIONS OR ALTERATIONS TO DRAWINGS. -ALL SUB-CONTRACTORS SHALL BE RESPONSIBLE FOR DAMAGE

TO OTHER TRADES.

#### DESIGN SPECIFICATIONS

USE GROUP: (2018 NCBC:R) "RESIDENTIAL" ONE & TWO FAMILY DWELLING CONSTRUCTION CLASS: (2018 NCBC:R) "RESIDENTIAL" HEIGHT & AREA LIMIT: (LOCAL ZONING) 35' MAXIMUM 2-STORY HEIGHT EMERGENCY ESCAPE: (2018 NCBC:R) EGRESS OR RESCUE WINDOWS FROM SLEEPING ROOMS SHALL HAVE MINIMUM OF 5.7 SQ. FT. NET CLEAR OPENING (5.0 SQ. FT. NET OPENING @ GRADE FLOOR) MINIMUM 20" WIDTH. MINIMUM 24" HEIGHT. MAXIMUM 44" SILL HEIGHT GARAGE / HOUSE CEILING / ASSEMBLY: ½" GYPSUM WALL BOARD % Type "X" Gypsum board ceiling where living is above 20 MINUTE RATED GARAGE / HOUSE DOOR ATTIC VENTILATION: [TOTAL ATTIC SQ. FT.] / [300] = SQ. FT. AREA REQUIRED RIDGE VENT: [LINEAR FEET OF VENT] X [18 SQUARE INCHES IN FREE AREA] / 12 = SQ. FT. PROVIDED SOFFIT VENT: [LINEAR FEET OF VENT] X [7 SQUARE INCHES IN FREE AREA] / 12 = SQ. FT. PROVIDED EDGE SHINGLE OVER VENT: [LINEAR FEET OF VENT] X [9 SQUARE INCHES IN FREE AREA] / 12 = SQ. FT. PROVIDED ROOF LOUVER VENTS: [NUMBER OF VENTS] X [70 SQUARE INCHES IN FREE AREA] / 12 = SQ. FT. PROVIDED CRAWL SPACE VENTILATION: [TOTAL CRAWL SPACE SQ. FT.] / [300] = SQ. FT. AREA REQUIRED FOUNDATION VENT: FREE SPACE PROVIDED BY VENT = F [FREE AREA REQUIRED] / F = NUMBER OF VENTS REQUIRED

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#### INSULATION NOTES

INSULATION VALUES PER NCRC ECC 2018 CH. 11 ENERGY CONSERVATION CODE (2024 ECC STILL UNDER LEGISLATIVE REVIEW)

CLIMATE ZONE 4A CLIMATE ZONE 3A TARLE N1100 1 0 TARLE N1100 1 0

TABLE N1	102.1.2	TABLE N1	102.1.2
CEILING:		CEILING: FLOOR:	R-38 R-19
FLOOR: WALL:	R-19 R-15	WALL:	R-19 R-15
SLAB:	R-0	SLAB:	R-10

#### STAIR NOTES

-STAIR FABRICATOR / INSTALLER TO VERIFY THAT STAIRS MEET ALL REQ'D CODES

-ADJUSTMENTS TO STAIR TO BE CONFIRMED W/ ARCHITECT & CONTRACTOR PRIOR TO STAIR CONSTRUCTION

#### CEILING HEIGHT NOTES

9' - 1 1/2" CEILING HEIGHTS ON FIRST FLOOR

MEASURED FROM TOP OF SUBFLOOR / CONCRETE SLAB TO BOTTOM OF FLOOR JOISTS / ROOF TRUSSES

#### COLUMN NOTES

COLUMNS TO BE: AFCO OR COLUMN OF EQUAL BEARING CAPACITY. (6000 # MINIMUM) TOP CONNECTION: (2) #8 - ¼" x 3" STAINLESS STEEL SCREWS PER SIDE INSERTED INTO BEAM. BOTTOM CONNECTION: (3) UBS - #18043 BRACKETS FASTENED WITH (2) 1/4" x 1 1/4" SCREWS INTO COLUMN & (2) 1/2" x 3 3/2" CONCRETE SCREWS THROUGH FASTENER INTO CONCRETE

#### ELECTRICAL PANEL/METER

MAXIMUM DISTANCE BETWEEN ELECTRICAL PANEL & ELECTRICAL METER (NEC 230.70) TO BE DETERMINED BY LOCAL AUTHORITY.

#### DOOR & WINDOW LEGEND

30 68 HEIGHT: 6'-8" WIDTH: 3'-0" DOORS P = POCKET WINDOWS: SH = SINGLE HUNG F = FIXFD

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#### DOOR NOTES

-ATTIC ACCESS DOORS TO INCLUDE WEATHER STRIPPING & INSULATION

-TOP OF INTERIOR CASING @ ADJACENT DOORS & WINDOWS TO ALIGN WHEN HEADER CALL OUTS ARE EQUAL

-DOOR SUPPLIER TO SPECIFY & ORDER TEMPERED GLASS IN DOORS AS REQUIRED BY LOCAL CODE.

### WINDOW NOTES

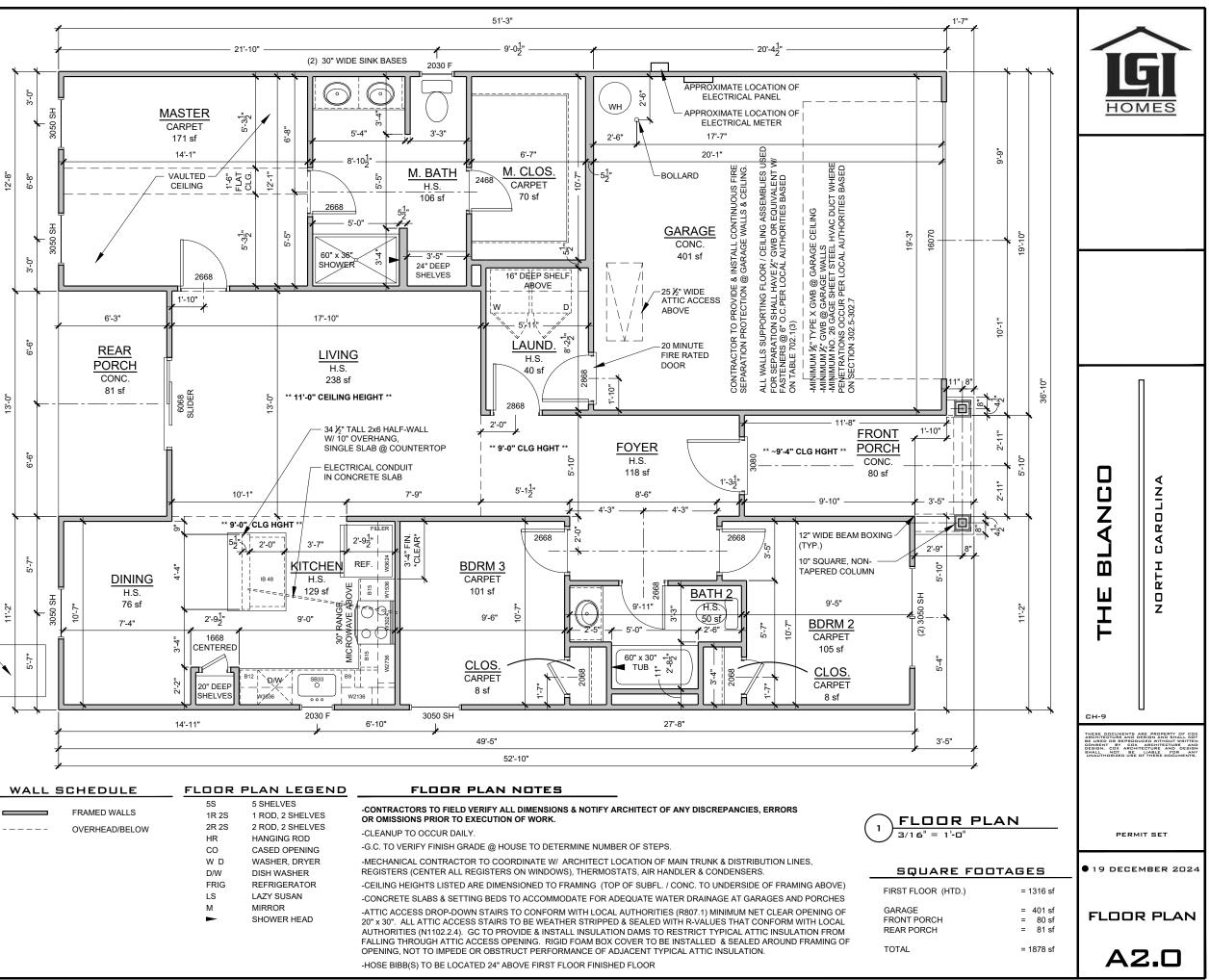
-ALL WINDOW DIMENSIONS ARE BASED ON M.I. WINDOW ROUGH OPENING CALL OUTS, UNO. FINAL SELECTION OF WINDOW SIZES ARE TO BE VERIFIED IN FIELD.

-WINDOWS TO BE INSTALLED BY CERTIFIED WINDOW INS PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

-WINDOW SUPPLIER TO SPECIFY & ORDER TEMPERED GI IN WINDOWS AS REQUIRED BY LOCAL CODE.

-G.C. AND WINDOW SUPPLIER TO VERIFY THAT EACH BEE HAVE A MINIMUM OF ONE WINDOW WHICH MEETS EMERG EGRESS AS REQUIRED BY LOCAL AUTHORITIES. WINDOW TO ADD EGRESS HARDWARE TO CASEMENT WINDOWS I NECESSARY

-TOP OF INTERIOR CASING @ ADJACENT DOORS & WIND TO ALIGN WHEN HEADER CALL OUTS ARE EQUAL



	WALL S	SCHEDULE	FLOOR	PLAN LEGEND	FLOOR PLAN NOTES
W OF		FRAMED WALLS OVERHEAD/BELOW	5S 1R 2S 2R 2S	5 SHELVES 1 ROD, 2 SHELVES 2 ROD, 2 SHELVES	-CONTRACTORS TO FIELD VERIFY ALL DIMENSIONS & NOTIFY ARCHITECT OF ANY DISCREPANCIES, ERRORS OR OMISSIONS PRIOR TO EXECUTION OF WORK.
NSTALLER			HR CO W D	HANGING ROD CASED OPENING WASHER, DRYER	-CLEANUP TO OCCUR DAILY. -G.C. TO VERIFY FINISH GRADE @ HOUSE TO DETERMINE NUMBER OF STEPS. -MECHANICAL CONTRACTOR TO COORDINATE W/ ARCHITECT LOCATION OF MAIN TRUNK & DISTRIBUTION LINES.
GLASS			D/W FRIG	DISH WASHER REFRIGERATOR	REGISTERS (CENTER ALL REGISTERS ON WINDOWS), THERMOSTATS, AIR HANDLER & CONDENSERS. -CEILING HEIGHTS LISTED ARE DIMENSIONED TO FRAMING (TOP OF SUBFL. / CONC. TO UNDERSIDE OF FRAMING ABOV
BEDROOM TO RGENCY OW SUPPLIER			LS M	LAZY SUSAN MIRROR SHOWER HEAD	-CONCRETE SLABS & SETTING BEDS TO ACCOMMODATE FOR ADEQUATE WATER DRAINAGE AT GARAGES AND PORCHE -ATTIC ACCESS DROP-DOWN STAIRS TO CONFORM WITH LOCAL AUTHORITIES (R807.1) MINIMUM NET CLEAR OPENING ( 20" x 30". ALL ATTIC ACCESS STAIRS TO BE WEATHER STRIPPED & SEALED WITH R-VALUES THAT CONFORM WITH LOCAL
IDOWS					AUTHORITIES (N1102.2.4). GC TO PROVIDE & INSTALL INSULATION DAMS TO RESTRICT TYPICAL ATTIC INSULATION FRC FALLING THROUGH ATTIC ACCESS OPENING. RIGID FOAM BOX COVER TO BE INSTALLED & SEALED AROUND FRAMING

#### ROOF NOTES

-CONTRACTORS TO FIELD VERIFY ALL DIMENSIONS & NOTIFY ARCHITECT OF ANY DISCREPANCIES, ERRORS OR OMISSIONS PRIOR TO EXECUTION OF WORK.

-ALL ROOF PENETRATIONS TO BE PLACED ON REAR SIDE OF MAIN RIDGE OR AS SPECIFIED BY ARCHITECT. PAINT TO MATCH SHINGLE COLOR.

-ATTIC INSULATION TO BE BATT. INSUL. PER CODE, PROVIDE BAFFLES @ PERIMETER TO ALLOW 2" FOR AIRFLOW FROM EAVE VENTS TO RIDGE VENTS.

-ROOF SHEATHING TO BE 1/2" T&G PLYWOOD W/ METAL CLIPS @ ENDS.

-ALL BATHROOM & DRYER VENT PENETRATIONS TO RUN TOWARD REAR OF HOUSE & VENT IN REAR OUTSIDE WALL OR ROOF BEHIND MAIN RIDGE.

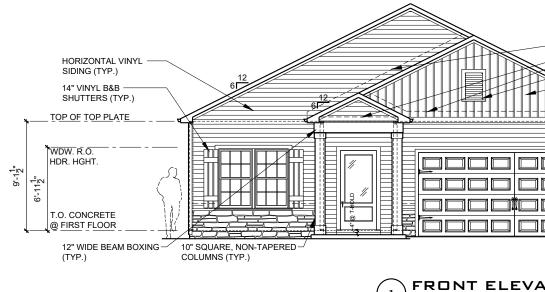
-GUTTER & DOWNSPOUT INSTALLER TO PROVIDE ADEQUATE UNITS PER MANUFACTURER SPECIFICATIONS BASED ON ROOF COVERAGE. SUB-CONTACTOR TO VERIFY NUMBER & LOCATION OF DOWNSPOUTS

-ALL SHINGLED ROOFS WITH A PITCH OF 4:12 OR LESS REQUIRE (2) LAYERS OF 30# FELT PAPER PER LOCAL AUTHORITIES

## INSULATION NOTES

INSULATION VALUES PER NCRC ECC 2018	
CH. 11 ENERGY CONSERVATION CODE	
(2024 ECC STILL UNDER LEGISLATIVE REVIEW)	

CLIMATE ZO	NE 3A	CLIMATE Z	ONE 4A
TABLE N1102	2.1.2	TABLE N1	102.1.2
FLOOR: F	-38 R-19 R-15 R-0	CEILING: FLOOR: WALL: SLAB:	R-38 R-19 R-15 R-10



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1/8" = 1'-0"

IN CONSTRUCTION USING VINYL OR ALUMINUM SOFFIT MATERIAL. THE FOLLOWING APPLICATION SHALL APPLY. SOFFIT ASSEMBLIES MUST BE SECURELY ATTACHED TO FRAMING MEMBERS AND APPLIED OVER FIRE-RETARDANT-TREATED WOOD, 23/32-INCH WOOD SHEATHING OR 5/8-INCH EXTERIOR GRADE OR MOISTURE RESISTANT GYPSUM BOARD. VENTING REQUIREMENTS SHALL BE PROVIDED IN BOTH SOFFIT AND UNDERLAYMENT. VENTS SHALL BE EITHER NOMINAL 2-INCH CONTINUOUS OR EQUIVALENT INTERMITTENT AND SHALL NOT EXCEED THE MINIMUM NET FREE AIR REQUIREMENTS ESTABLISHED IN SECTION R806.2 BY MORE THAN 50 PERCENT. TOWNHOME CONSTRUCTION SHALL MEET ADDITIONAL REQUIREMENTS OF SECTIONS R302.2.5 AND R302.2.6.

## ELEVATION NOTES

-ALL REPRESENTATIONS OF GRADE LEVELS ARE FOR DRAWING PURPOSES ONLY, AND TO BE VERIFIED IN FIELD.

-ALL EXTERIOR ELEVATION DIMENSIONS ARE FRAMING DIMENSIONS, UNO. G.C. TO FIELD VERIFY DIMENSIONS LOCATED AT SLOPED FRAMING AND / OR CONCRETE SLABS & PADS

-ALL TRUSS PROFILE DIMENSIONS TO BE VERIFIED BY TRUSS MANUFACTURER. TRUSS MANUFACTURER TO NOTIFY ARCHITECT IF TRUSS PROFILES / DIMENSIONS CHANGE.

-ALL BUILDINGS CONSTRUCTED WITH LESS THAN A 10' FIRE SEPARATION DISTANCE BETWEEN SHALL COMPLY WITH LOCAL AUTHORITIES (R302.1.1):

### CEILING HEIGHT NOTES

9' - 1 ½" CEILING HEIGHTS ON FIRST FLOOR

MEASURED FROM TOP OF SUBFLOOR / CONCRETE SLAB TO BOTTOM OF FLOOR JOISTS / ROOF TRUSSES

### COLUMN NOTES

COLUMNS TO BE: AFCO OR COLUMN OF EQUAL BEARING CAPACITY. (6000 # MINIMUM)  $\frac{\text{TOP CONNECTION:}}{\text{STEEL SCREWS PER SIDE INSERTED INTO BEAM.}}$ BOTTOM CONNECTION: (3) UBS - #18043 BRACKETS FASTENED WITH (2) 1/4" x 1 1/4" SCREWS INTO COLUMN & (2) 1/4" x 3 3/4" CONCRETE SCREWS THROUGH FASTENER INTO CONCRETE

REC VEF SID COU W// MA	TAL FLASHING (TYP.) CTANGULAR VENT RTICAL VINYL ING (TYP.) NTINUOUS VENTED SOFFIT NON-COMBUSTIBLE TERIALS NO ALUMINUM HERE REQUIRED BY CODE)	СН-9 Тиеве, расимента на насности че соружи сомаем та у сору сомаем та у сору сомаем та у сору сомаем та у соружи сомаем та у соружи сомает та у соружи совущи совущи совущи совущи сов	BIGN AND SHALL NOT ED WITHOUT WRITTEN ARCHITECTURE AND CTURE AND DESIGN
		PERMI	T SET
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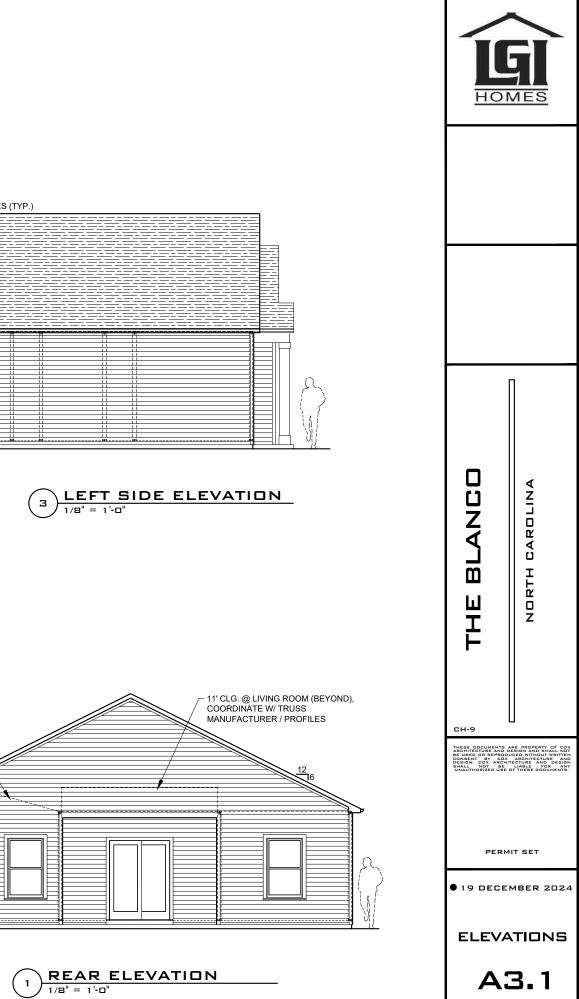
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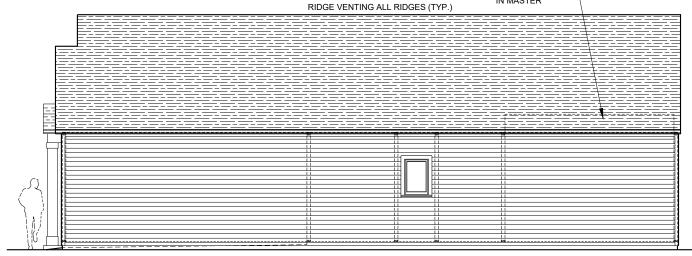
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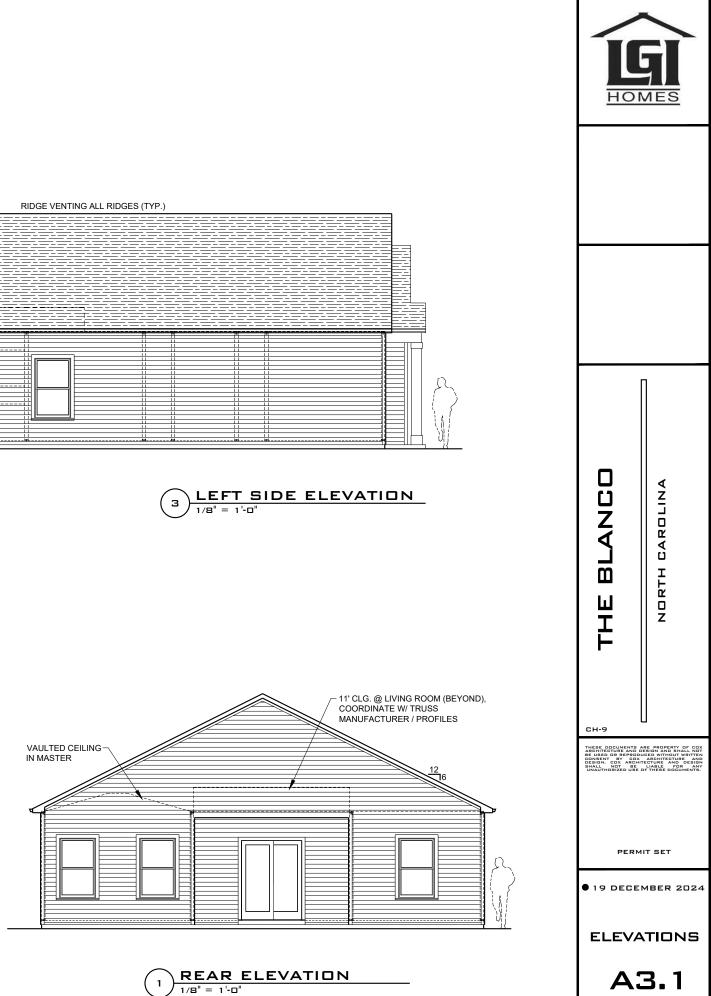
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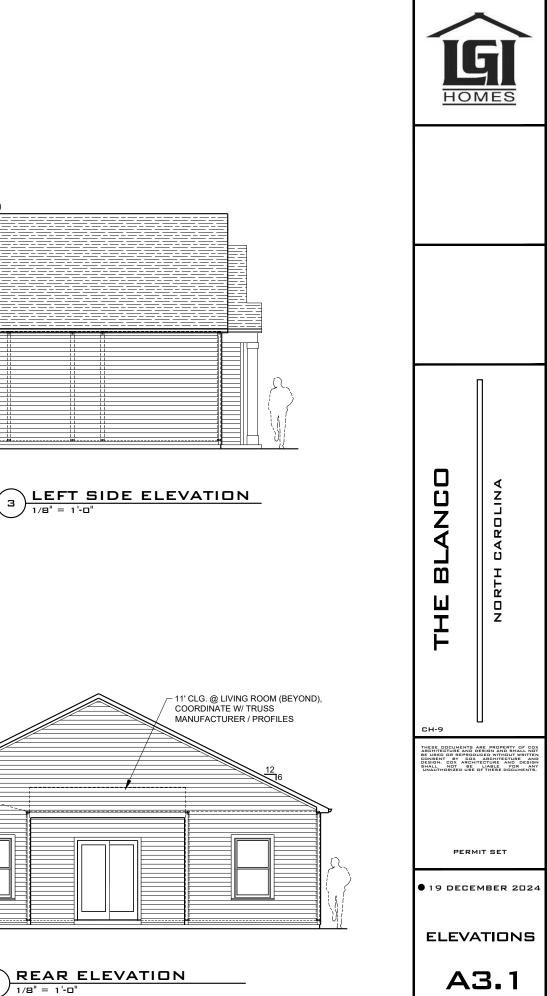
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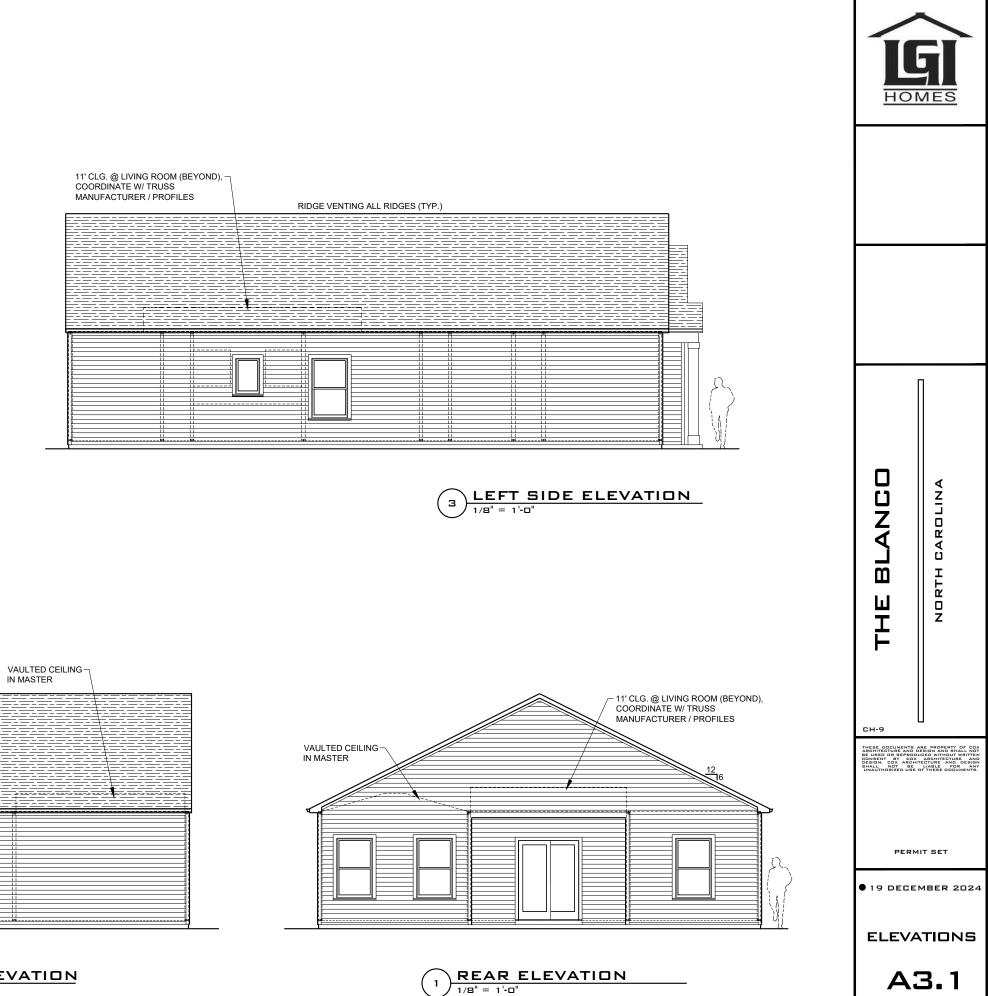


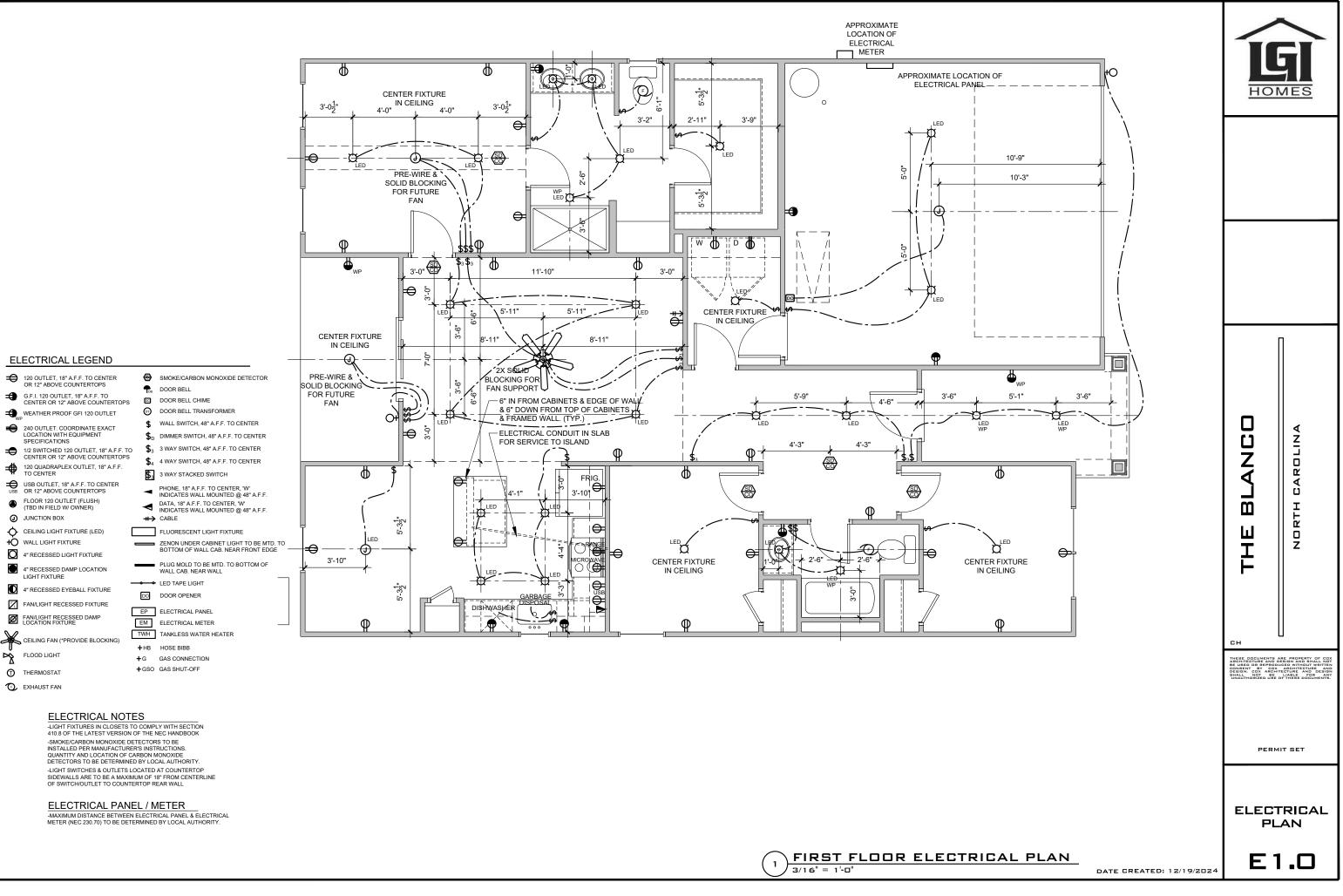












#### GENERAL STRUCTURAL NOTES

- 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.
- The engineer's name present on the seal of these drawings is the engineer of record (EOR).
- 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.
- 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:

- Foundation Design is based on a minimum allowing bearing capacity of 2,000 PSF. Contact the EOR if bearing capacity is not achieved.
- 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.
- 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.
- Contractor to ensure that all drainage is directed away from the exterior footings (Min. 2% slope).
- Excavations of footings shall be temporarily protected with a 10 mil polyethylene membrane if concrete is not placed within 24 hours of excavation. 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

- Poured concrete is to have a minimum compressive strength of 3000 psi at 28 days.
- Aggregates for normal weight concrete shall conform to ASTM C33.
- All materials used for concrete shall conform to ACI 318, ACI 301, or ASTM C1157.
- The placing of all concrete shall be in accordance with ACI 318 and ASTM C94 requirements
- Admixtures may be used with prior approval of the EOR. Admixtures shall comply with ASTM C494 and C1017.
- Concrete slabs-on-grade shall be constructed in a manner that complies with ACI 302.1R-96.
- 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:

- Bar reinforcement shall be conform to ASTM A615, grade 60 steel.
- 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"
- 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.
- 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. 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. 5. 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
- 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:
  - = 1,900,000 psi 4.1.E
  - 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 5.4. Ft = 290 psi
  - = 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 ps

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.

- Solid blocking is to be installed at all point load through floor levels to the foundation or to the nearest structural element
- 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. 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:

- 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 Building 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.



# CONSULTING AND DESIGN, PLLC

STRUCTURAL PLANS PREPARED FOR:

### **BLANCO - RH VERSION**

PROJECT ADDRESS:

OWNER: LGI Home: 7201 Creedmore Rd. Suite 147 Raleigh, NC 27613

DESIGNER

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#### DESIGN SPECIFICATIONS:

- Construction Type: Residential
- Applicable Building Codes
- 2018 North Carolina Residential Building Code with All Loc 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( 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, O 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 PLIC

THE ARCHITECTURAL PLANS USED FOR STRUCTURAL DRAWINGS AN ANALYSIS HAVE BEEN PROVIDED BY COX ARCHITECTURE AND DESIGN, PLLC AND HAVE BEEN COMPLETED/REVISED ON 1/22/24. NOTIFY QC OF ANY ALTERATIONS MADE TO THE PLANS AFTER THE DATE SHOWN HEREIN

Page Symbol	Description
CS	Cover Sheet, Specifications, Revisions
F-1m	Monolithic Slab Foundation
S-1	First Floor Framing Plan
D-1m	Monolithic Slab Details
D-1f	Framing Details

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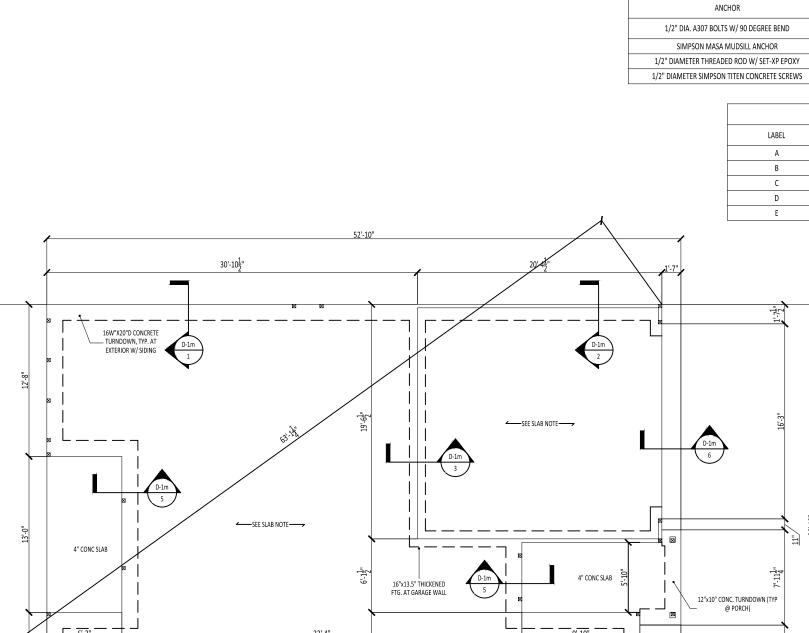
[		LIVE LOADS
	Roof 2x Conventional	20 PSF
[	Roof Truss	20 PSF
[	Attic Roof Truss	60 PSF
[	Floor Live Typ. Dwelling	40 PSF
[	Sleeping Areas	30 PSF
[	Decks	40 PSF
[	Passenger Vehicle Garage	50 PSF
d [	Balconies	40 PSF
	Attics with Storage	20 PSF
	Attics without Storage	10 PSF
[	Ground Snow Load	15 PSF
ſ		DEAD LOADS
ł	Roof 2x Conventional	15 PSF
İ	Roof Truss	20 PSF
Ī	Conventional 2x Floor	10 PSF
Ī	I-Joist	15 PSF
Ī	Floor Truss	15 PSF

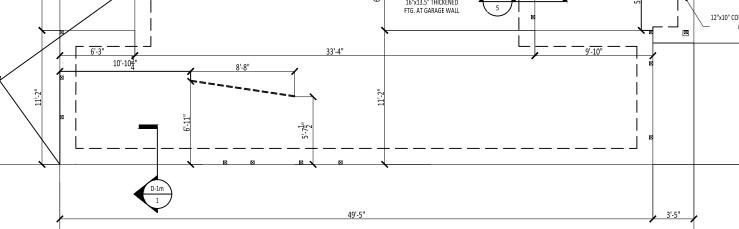
GLEBNETT CARES CONSULTING AND DESIGN FLUE RG. PSRSS
SEAL 052215 052215 052215 052214 052215 052215 052215 052215 052215 052215
CLENT: LOI Homes
SHEET NAME: COVER SHEET
CLIENT: LGI Homes
PLAN NAME: BLANCO - RH VERSION NEIGHBORHOOD: TBD LOT AND ADDRESS: LOT # TBD
PROJECT NUMBER: LGI240008
DRAWN BY: CTB DATE:
SCALE: 1/22/2024 SCALE: 1/4"=1'-0" ON 22"x34" 1/8"=1'-0" ON 11"x17"
PAGE: CS

#### 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 REGLUATIONS. 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.
- ACHIEVED. ALL POURED CONCRETE IS TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
- ALL POURED CONCRETE IS TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF SUULYSTAL 28 UAYS PLACE CONCRETE IN ACCORDANCE WITH ALS 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 MINIMUM DEPTH OF UNBALANCED FILL AGAINST MASONRY WALLS IS 4', FOR GREATER THAN 4', DESCRIPTION ON ADDR.
- MAXIMUM DEPITIO U ONBALANCED FILL AGAINST MASUMRY WALLS IS 4. FUR GREATEN THAN 4', REFER TO SECTION RAGA1, OF THE 2018 NORTH CARQUIAN RESIDENTIAL BUILDING CODE, OR CONTACT QC FOR ADDITIONAL ENGINEERING. PERIMETER INSULATION IS TO BE INSTALLED FRI THE 2018 NCRC AND PER LOCAL MUNICIPALITY. WOOD SILL PLATES AT LOAD BERNIG AND BRACED WALLS SHALLE RANCHORED 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 ENVINCEN UN CUDE UPFICIAL. DIMENSIONS SHOWN ON FOUNDATION DRAWINGS ARE TO EDGE OF FRAMING AND <u>NOT</u> TO EDGE OF BRICK VENEER.
- OF BRICK VENEER. WITH CLASS 1 SOLIS (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.
- 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 YAPOR BARRIER ON 95% COMPACTED FLIL, 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





52'-10"

ANCHORAGE SCHEDULE				
	MIN. SPACING	MIN. CONC. EMBEDMENT		
DEGREE BEND	6'-0"	7"		
L ANCHOR	6'-0"	4"		
W/ SET-XP EPOXY	6'-0"	7"		
CONCRETE SCREWS	6'-0"	4-1/4"		

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

 $10' - 1\frac{1}{4}"$ 

SLEEN GTV GLEEN GTV DEENEN, FLLC OF ALL MILLIN
SEAL 052215 052550000 052215 052215 052215 052215 052215 052215 052215 052215 052215 052215 052215 052215 052215 052215 0525 052
CLIENT: LGI Homes
SHEET NAME: MONOLITHIC SLAB FOUNDATION
CLIENT: LGI Homes
PLAN NAME: BLANCO - RH VERSION
NEIGHBORHOOD: TBD
LOT AND ADDRESS: LOT # TBD
PROJECT NUMBER: LGI240008
DRAWN BY: CTB
DATE: 1/22/2024 SCALE:
1/4"=1'-0" ON 22"x34" 1/8"=1'-0" ON 11"x17" PAGE:
F-1.1m

#### 6' MAX L3"x3"x1/4" 12' MAX 20' MAX L4"x3"x1/4" L5"x3-1/2"x5/16" 3'-0" TO 6'-0" 6' MAX 12' MAX L5"x3-1/2"x5/16" L6x3-1/2"x5/16" 6'-0" TO 12'-0" 12'-0" TO 16'-0" 12' MAX L8"x4"x1/2" 3.5" LONG 1/2" DIAMETER LAG SCREWS AT 16" O.C. ENDS OF LINTEL SHALL BEAR AT LEAST 3.5" IN THE ADJACENT BRICK NOTE: WALL BRACING HAS BEEN ANALYZED USING CS-WSP PER SECTION R602.10 OF THE 2018 NCRC. MIXED METHODS PER TABLE R602.10.1 ARE DESIGNATED ON THE PLAN.

## BRICK LINTEL SCHEDULE: HEIGHT OF BRICK SPAN LINTEL L3"x3"x1/4" 3'-0" OR LESS 20' MAX ATTACH ALL LINTELS TO THE SUPPORTING HEADER WITH (2) ROWS OF MINIMUM

HEIGHT (PLATE TO PLATE)	STUD SIZE	SPACING	i.
12'-0"	2X4	12" O.C.	1
15'-0"	2X6	16" O.C.	i.
17'-0"	(2) 2X4/2X6	12" O.C./12" O.C.	l.
21'-0"	(2) 2X6/2X8	16" O.C./12" O.C.	1
25'-0"	(2) 2X6	12" O.C.	

- 9'-0" TO 12'-0" (4) 12'-0" TO 16'-0" (6)

MINIMUM KING STUDS E.E.

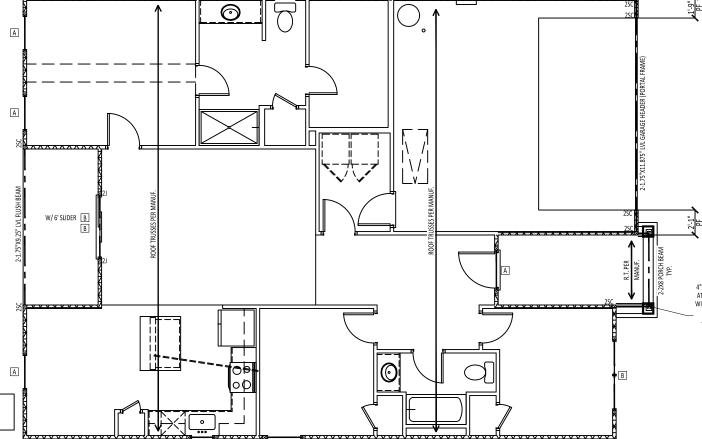
(3)

- WALL STUD NOTES:

- ALL STRUCT
- O.C. U.N.O. I
  ALL NON LO.

	•	U.N.O. FOR UP TO 10' WALLS ST BALLOON FRAMED WALLS SHALL B 16" O.C. WITH CROSS BRACING AT	E CONSTRUCTED WITH 2X4	STUDS AT 12" O.C. OR 2X6 STU	DS A
		HEIGHT (PLATE TO PLATE)	STUD SIZE	SPACING	
1		101.01			

<b>-</b>	
TURAL LOAD BEARING WALLS SHALL BE CONSTRUCTED OUT OF 2X4 OR 2X6 STUDS AT 16"	
FOR UP TO 10' WALLS	
DAD BEARING WALLS SHALL BE CONSTRUCTED OUT OF 2X4 OR 2X6 STUDS AT 24" O.C.	
UP TO 10' WALLS	
RAMED WALLS SHALL BE CONSTRUCTED WITH 2X4 STUDS AT 12" O.C. OR 2X6 STUDS AT	
TH CROSS BRACING AT 6'-0" O.C. VERTICALLY OR ACCORDING TO THE CHART BELOW:	



A

Α

Α

TRUSSED ROOF FR REFER TO COV • ALL ROOF TRU PER MANUFAC

4"x4" MIN. P.T. POST ATTACHED TO BEAM WITH SST BC4 CAP OR

EQUIV. AND SST ABA44z BASE OR

EQUIV.

- GREATER. ROOF TRUSSE • ROOF TRUSSES .

- ATTIC PLATFORM.

#### FRAMING NOTES

QUARTER POINTS.

STRUCTURAL PROPERTIES.

ABBREVIATIONS: DJ = DOUBLE JOIST GT = GIRDER TRUSS

SC = STUD COLUMN EE = EACH END

TJ = TRIPLE JOIST

CL = CENTERLINE COL = COLUMN

#J # OF JACK STUDS STUD COLUMN POINT LOAD FROM ABOVE LOAD BEARING WALL NON LOAD BEARING WALL

HEADER SCHEDULE: LABEL

D

KING STUD SCHEDULE:

HEADER SPAN

3'-0" OR LESS

3'-0" TO 6'-0"

6'-0" TO 9'-0"

LEGEND:

PT = PRESSURE TREATED J = JACK STUD CONT = CONTINUOUS

ALL LOAD BEARING WALLS TO BE 2X4 U.N.O.

GREATER THAN THE SUPPORT ABOVE.

REFER TO COVER PAGE FOR ADDITIONAL NOTES ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NORTH CAROLINA RESIDENTIAL CODE (NCRC), 2018 EDITION, PLUS ALL LOCAL CODES AND REGULATIONS. THE EOR SHALL REVIEW EWP AND TRUSS LAYOUTS FOR ACCURACY PRIOR TO CONSTRUCTION.

SOLID BLOCKING IS TO BE INSTALLED AT ALL POINT LOADS THROUGH FLOOR LEVELS TO THE FOUNDATION OR TO THE NEAREST STRUCTURAL ELEMENT. BLOCKING SHALL BE EQUAL TO OR

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

CONTRACTOR SHALL ENSURE THAT ALL BEAMS, HEADERS, AND STRUCTURAL COMPONENTS ARE FULLY BEARING ON THE SUPPORTING MEMBERS, ANY GAPS IN THE FRAMING SHALL BE SHIMMED APPROPRIATELY WITH EITHER METAL SHIMS OF WOOD SHIMS AS NECESSARY. HEADER SIZES SHOWN ON PLANS ARE MINIMUMS, ANY HEADERS INSTALLED THAT ARE GREATER IN SIZE ARE AN ADEQUATE REPLACEMENTS PROVIDED THE MATERIAL IS OF THE SAME OR GREATER

WHERE TOP PLATE HAS BEEN CUT TO ACCOMMODATE FLUSH HEADERS/BEAMS, INSTALL A MINIMUM 16" LONG HORIZONTAL CS-16 STRAP EXTENDING 12" PAST THE BREAK ON EACH SIDE. UNLESS OTHERWISE NOTED, FOUR-PLY LVL BEAMS SHALL HAVE PLIES FASTENED TOGETHER WITH TWO (2) 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 AND BOTTOM OF THE BEAM.

SJ = SINGLE JOIST FT = FLOOR TRUSS

OC = ON CENTER

DR = DOUBLE RAFTER TR = TRIPLE RAFTER

PLFA = POINT LOAD FROM ABOVE NTS = NOT TO SCALE UNO = UNLESS NOTED OTHERWISE

K = KING STUD MANUF = MANUFACTURER

SIZE 2x6 W/ (1) JACK STUD E.E 2x8 W/ (2) JACK STUDS E.E.\* 2x10 W/ (2) JACK STUDS E.E.\*

2x12 W/ (2) JACK STUDS E.E.\* 9-1/4" LVL W/ (3) JACK STUDS E.E.' 11-7/8" LVL W/ (3) JACK STUDS E.E. \*

\*THE AMOUNT OF PLYS FOR THE HEADER IS DETERMINED BY THE

WIDTH OF THE WALL (2X4 WALL=2 PLYS, 2X6 WALL=3 PLYS, ETC.). AMOUNT OF JACK STUDS SHOWN ON PLAN TAKE PRECEDENCE OVER TABLE.

	TYPICAL HANGERS FOR JOIST & BEAMS			
	MEMBERS			HANGER
	2x8 2x10 2x12		LUS28 LUS210 LUS210	JUS28 JUS210 JUS210
	2-2x8 2-2x10 2-2x12		HUS28-2 HUS210-2 HUS212-2	JUS28-2 JUS210-2 JUS212-2
	3-2x8 3-2x10		LUS28-3 LUS210-3	JUS28-3 JUS210-3
	3-2x12 2-1∛4"x9¼" LV	ι	HU212-3 MIN. HGUS410	JUS212-3 MIN. THDH410
	2-1¼"x9½" LV 2-1¼"x11¼" L 2-1¼"x11½" L	VL	HGUS410 HGUS412 HGUS412	THDH410 THDH412
	2-1% x11% U 2-1% x14" LV 2-1% x16" LV		HGUS412 HGUS414 HGUS414	THDH412 THDH414 THDH414
	2-1%*x18" LVI 2-1%*x24" LVI		HGUS414 HGUS414	THDH414 THDH414
	3-1¾"x9¼" LV 3-1¾"x9½" LV	1	HGUS5.50/10 HGUS5.50/10	THDH610 THDH610
	3-1¼"x11¼" L 3-1¼"x11½" L	VL	HGUS5.50/12 HGUS5.50/12	THDH612 THDH612
	3-1¼"x14" LVI 3-1¼"x16" LVI 3-1¼"x18" LVI		HGUS5.50/14 HGUS5.50/14 HGUS5.50/14	THDH614 THDH614 THDH614
	3-1¼"x24" LV 4-1¾"x9¼" LV		HGUS5.50/14 HGUS5.50/14 HGUS7.25/10	THDH614 THDH7210
	4-1¾"x9½" LV 4-1¾"x11½" L	l. VL	HGUS7.25/10 HGUS7.25/12	THDH7210 THDH7212
	4-1¾"x11½" L 4-1¾"x14" LV		HGUS7.25/12 HGUS7.25/14	THDH7212 THDH7214
	4-1¾"x16" LV 4-1¾"x18" LV		HGUS7.25/14 HGUS7.25/14	THDH7214 THDH7214
		NOTE: ALL HANGERS - NAME EQUIVALENT	BY SIMPSON STRONG TIE C 5 ACCEPTABLE)	O., INC. (BRAND
	TRI	JSS UPLIFT C	ONNECTOR S	CHEDULE
	MAX. UPLIFT	ROOF TO WALL	FLOOR TO FLOO	R FLOOR TO FND
	600 LBS 1200 LBS	H2.5A (2) H2.5A	PER WALL SHE CS16 (END = 11	ATHING & FASTENERS
	1450 LBS	HTS20	CS16 (END = 11	) DTT2Z
	2000 LBS 2900 LBS	(2) MTS20 (2) HTS20	(2) CS16 (END = 1 (2) CS16 (END = 1	
	3685 LBS	LGT3-SDS2.5	MSTC52	HTT4 PRODUCTS MAY BE USED PI
VALL BRACING NOTES: REFER TO COVER PAG BRACING DESIGN COT WIND SPEED OF 130 WALL BRACING HAS I COMMON BRACING THA SHOWN WITHIN TAB	HOLD DOWN  BRACE   IX4 STUD COLUMN T , OR EQUIVALENT H/ D WALL NOTES. 8 NCRC AND ALL LOC ONES A-C SECTION R602.10 01 RE APPLICABLE. MIX	AL AMENDMENTS FC	DR A MAXIMUM WSP IS THE	
ALL BRACING COMPONENTS SHALL COMPLY TO SECTION R602.10.10 F THE 2018 NCRC.  MINIMUM PANEL LENGTH SHALL BE 24" OR THE MINIMUM AS STATED IN R602.10.1 OF THE 2018 NCRC.  BRACED WALL PANELS SHALL BE WITHIN 12'.0" FROM THE ENDS OF A BRACED WALL LINE AND SPACED NO GREATER THAN 21'.  INTERIOR OF EXTERIOR BRACED WALLS SHALL BE SHEATHED CONTINUOUSLY WITH 1/2" THICK GYPSUM, U.N.O.  HOLD DOWNS SHALL BE INSTALLED FOR BRACED WALL END CONDITIONS PER SECTION R602.10.4 AND FIGURE R602.10.3(3) OF THE 2018 NCRC.  REFER TO THE CHART BELOW FOR BRACED WALL METHODS AND CONNECTIONS.				
METHOD	MATERIAL	MIN. THIC	KNESS REQUI	RED CONNECTION
CONTINUOUS SHEATHING WOOD STRUCTURAL PANEL (CS-WSP)	WOOD STRUCTURAL	PANEL 3/8"		ON NAILS AT 6" O.C. ON ID 12" O.C. ON FIELD
GYPSUM BOARD (GB)	GYPSUM BOAR	D 1/2"		R NAILS AT 7" O.C. ON GE AND FIELD
WOOD STRUCTURAL PANEL (WSP)	WOOD STRUCTURAL	PANEL 3/8"		ON NAILS AT 6" O.C. ON ID 12" O.C. ON FIELD
PORTAL FRAME (PF)	WOOD STRUCTURAL	PANEL 7/16	SEE	DETAIL 1/D-1f
TRUSSED ROOF FRAMING N REFER TO COVER PAG ALL ROOF TRUSSES SH PER MANUFACTURER GREATER. ROOF TRUSSES ARE TT ROOF TRUSSES SHALL BUILDING COMPONEI	EFOR ADDITIONAL V HALL BE ATTACHED T 'S INSTRUCTIONS OR O BE INSTALLED PER BE BRACED PER THE NT SAFETY INFORMA	O WALL PLATES WITH PER SECTION R802.1 SECTION R802.10 IN MANUFACTURER'S I	H MINIMUM (1) SIMP 1 OF THE 2018 NCRC, THE 2018 NCRC NSTRUCTIONS AND PI D GOOD PRACTICE FO	WHICHEVER IS ER THE SBCA

ROOF TRUSS MANUFACTURER SHALL VERIFY AND DESIGN FOR POSITION OF PULL DOWN STAIRS AND

WHERE TRUSS HEELS EXCEED 9-1/4" AND ARE LOCATED OVER BRACED WALL PANELS AS SHOWN ON THE PLANS, BLOCKING SHALL BE INSTALLED PER SECTION R602.10.5 OF THE 2018 NCRC.

QUEEN CITY
SLEEN GTY CONSULTING AND IN A PANE OF ALL OF
1/22/24
G PLAN
SHEET NAME: FIRST FLOOR FRAMIN
CLIENT: LGI Homes
PLAN NAME: BLANCO - RH VERSION NEIGHBORHOOD:
TBD LOT AND ADDRESS: LOT # TBD
PROJECT NUMBER: LGI240008
DRAWN BY: CTB DATE: 1/22/2024
1/22/2024 SCALE: 1/4"=1'-0" ON 22"x34" 1/8"=1'-0" ON 11"x17"
PAGE: S-1.1

#### GENERAL STRUCTURAL NOTES:

- 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.
- The engineer's name present on the seal of these drawings is the engineer of record (EOR).
- 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. 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:

- Foundation Design is based on a minimum allowing bearing capacity of 2,000 PSF. Contact the EOR if bearing capacity is not achieved. 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:

- Poured concrete is to have a minimum compressive strength of 3000 psi at 28 days. Aggregates for normal weight concrete shall conform to ASTM C33.
- All materials used for concrete shall conform to ACI 318, ACI 301, or ASTM C1157.
- The placing of all concrete shall be in accordance with ACI 318 and ASTM C94 requirements
- Admixtures may be used with prior approval of the EOR. Admixtures shall comply with ASTM C494 and C1017. Concrete slabs-on-grade shall be constructed in a manner that complies with ACI 302.1R-96.
- 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:

- Bar reinforcement shall be conform to ASTM A615, grade 60 steel.
- The following minimum clear cover shall be provided over reinforcing bars:
  - 2.1. Concrete exposed to earth
  - Concrete exposed to weather = 1 1/222
  - Slabs not exposed to weather = 3/42.3. 24
  - 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 4. Solices 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. 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:

- 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:
  - E = 1,900,000 psi Fb = 2600 psi
  - 4.2.
  - Fv = 285 psi Ft = 1555 psi 4.3. = 1555 psi 4.4.
- 5. PSL engineered wood shall have the following minimum design values:
- = 2,000,000 psi
  - 52 Fb = 2900 psi
  - 5.3. Fv = 290 psi
- = 1755 psi 5.4 Et
- 6. LSL engineered wood shall have the following minimum design values:
  - E = 1,550,000 psiFb = 2250 psi
  - 6.2. 6.3.
  - Fv = 400 psi Ft = 1075 psi 64
- 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.
- Solid blocking is to be installed at all point load through floor levels to the foundation or to the nearest structural element.
- 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. 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 contracto o 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 Building 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
  - 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 2.1. using (3) 10d common nails.
  - Fur down all ridges as needed so that rafters have full contact. 2.2.
  - 23 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
  - 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.





STRUCTURAL PLANS PREPARED FOR:

STANDARD DETAILS

PROJECT ADDRESS:

OWNER:

DESIGNER: QUEEN CITY CONSULTING AND DESIGN, PLLC. 2459 WILKINSON BLVD SUITE 300 CHARLOTTE NC 28208

#### 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

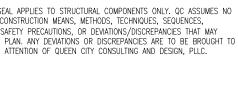
OCCUR IN THE PLAN. ANY DEVIATIONS OR DISCREPANCIES ARE TO BE BROUGHT TO

	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

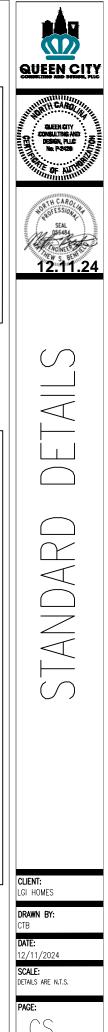


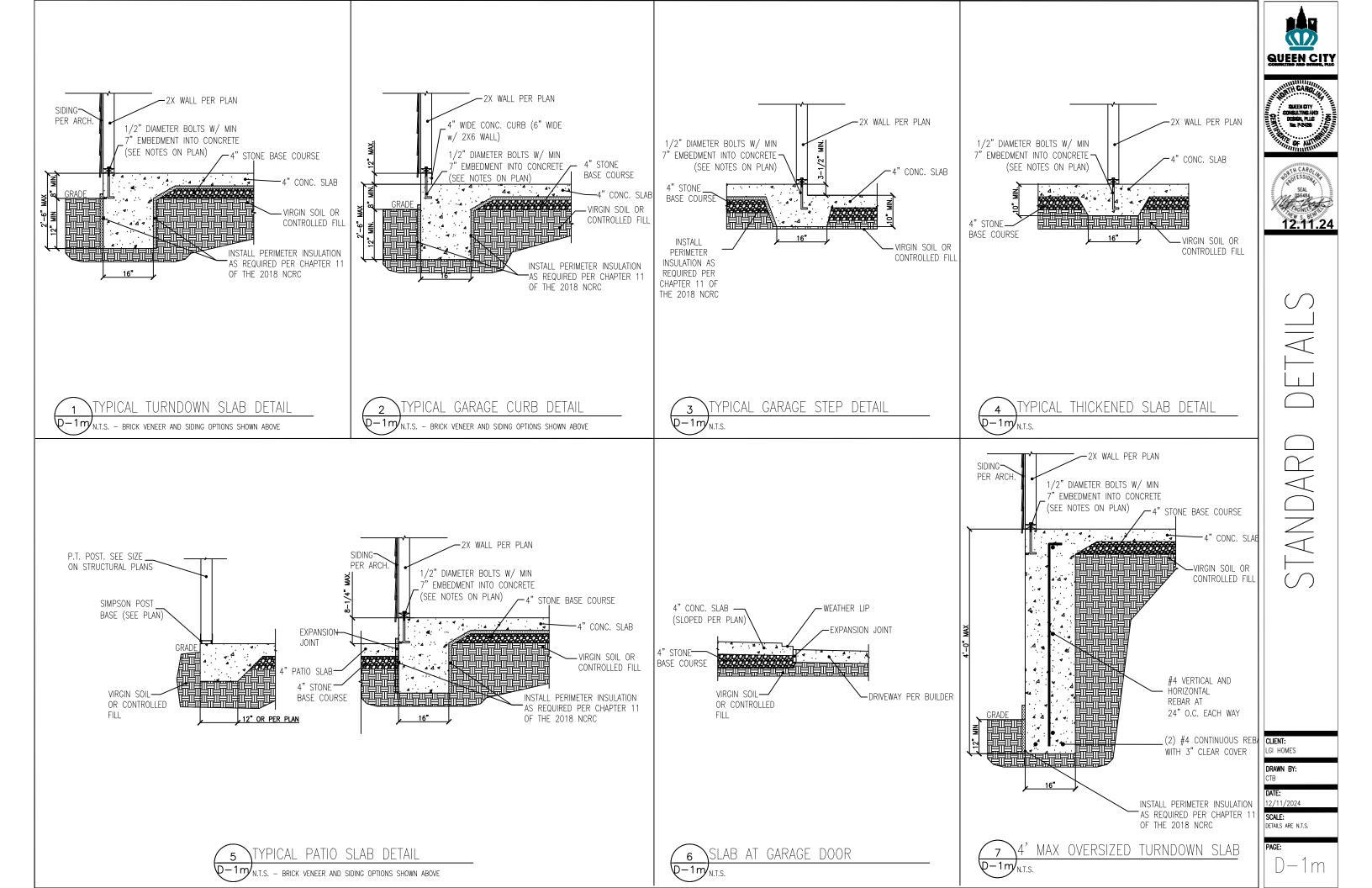
ENGINEERING SEAL APPLIES TO STRUCTURAL COMPONENTS ONLY. QC ASSUMES NO LIABILITY FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, SAFETY PRECAUTIONS, OR DEVIATIONS/DISCREPANCIES THAT MAY THE IMMEDIATE ATTENTION OF QUEEN CITY CONSULTING AND DESIGN. PLLC.

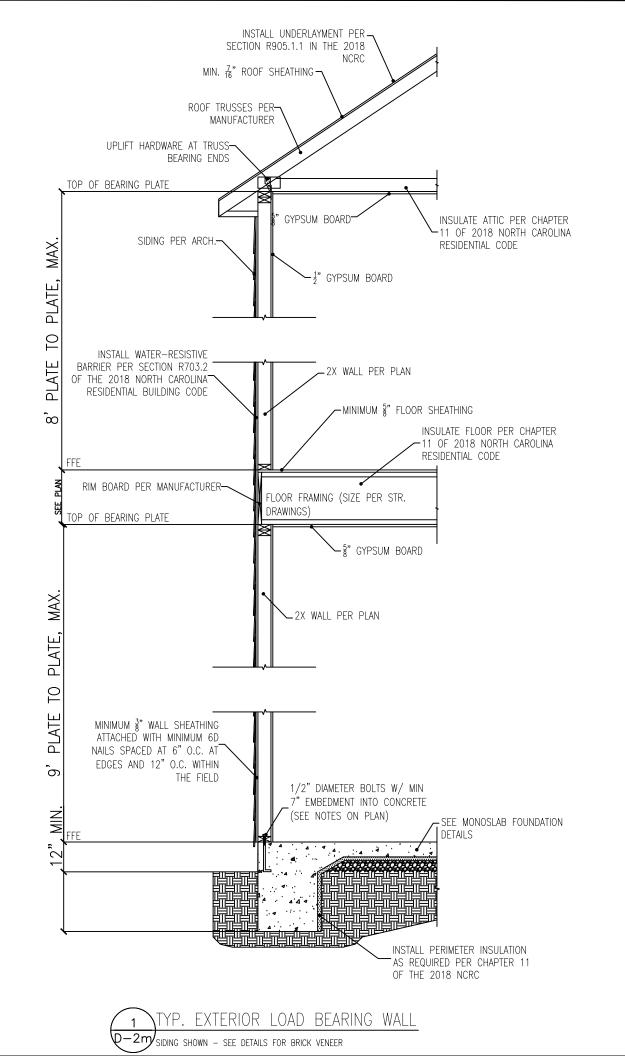


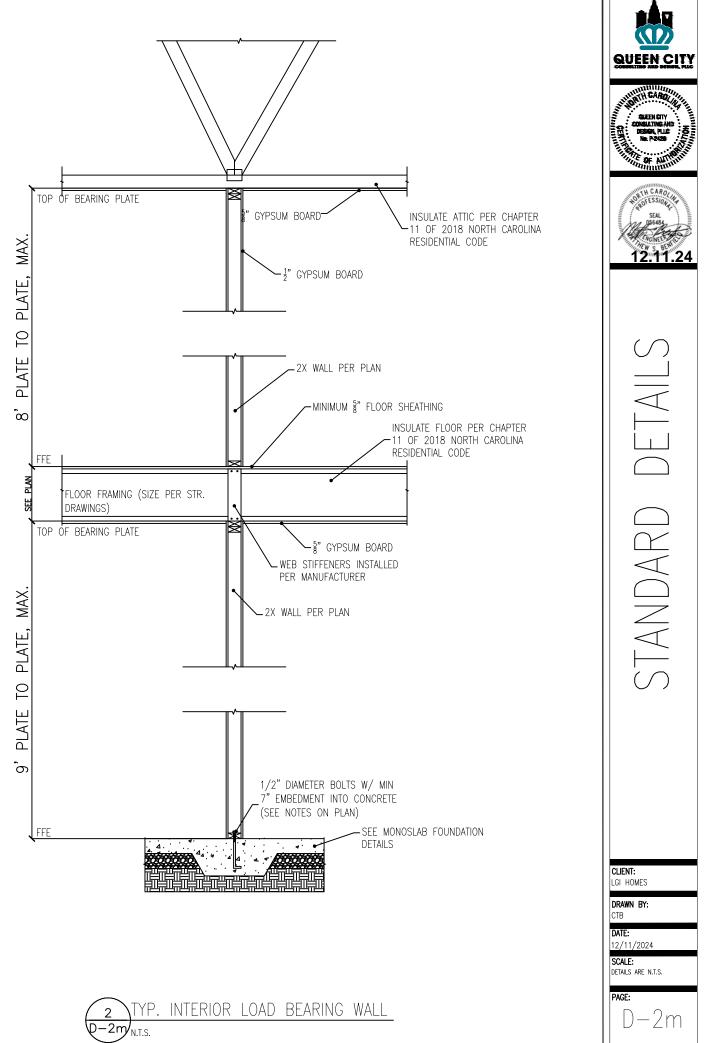
PAGE_LIST:	
Page Symbol	Description
CS	Cover Sheet, Specifications, Revisions
D-1m	Monolithic Slab Details
D-1s	Stemwall Slab Details
D-1c	Crawlspace Details
D-1b	Basement Details
D-1f	Framing Details

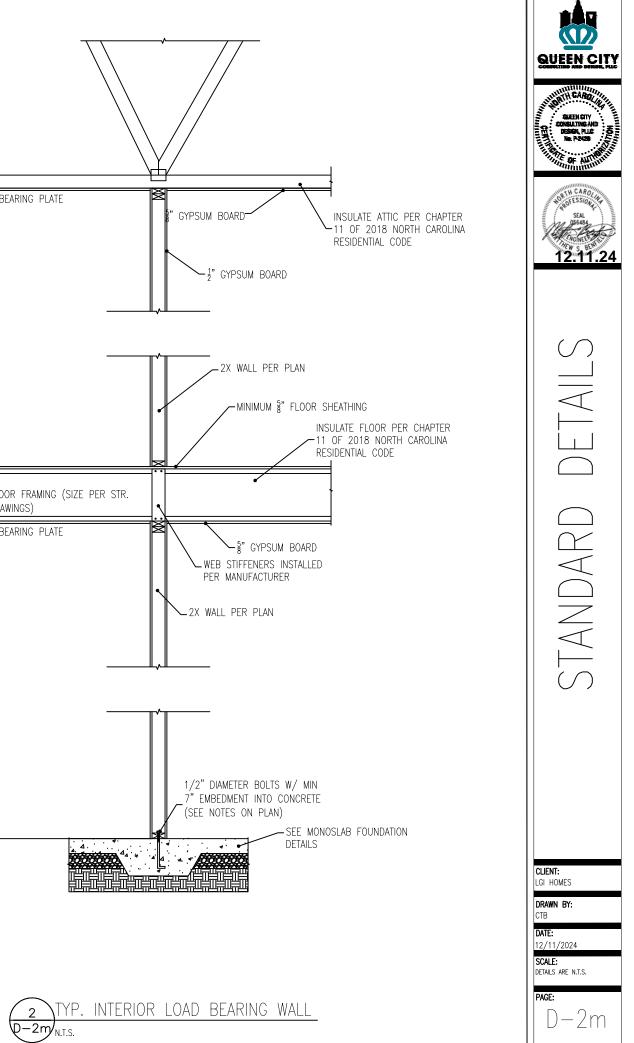
Revision No.	Date	Description	
0	12.26.23	ORIGINAL ENGINEERING	
1	05.05.24	Added Stem Wall Details	
2	05.16.24	ADDED BRICK CRAWL SPACE DETAILS	
3	08.30.24	ADDED STAIR DETAIL AND TURNDOWN DETAIL	
4	12.11.24	ADDED BASEMENT DETAILS	

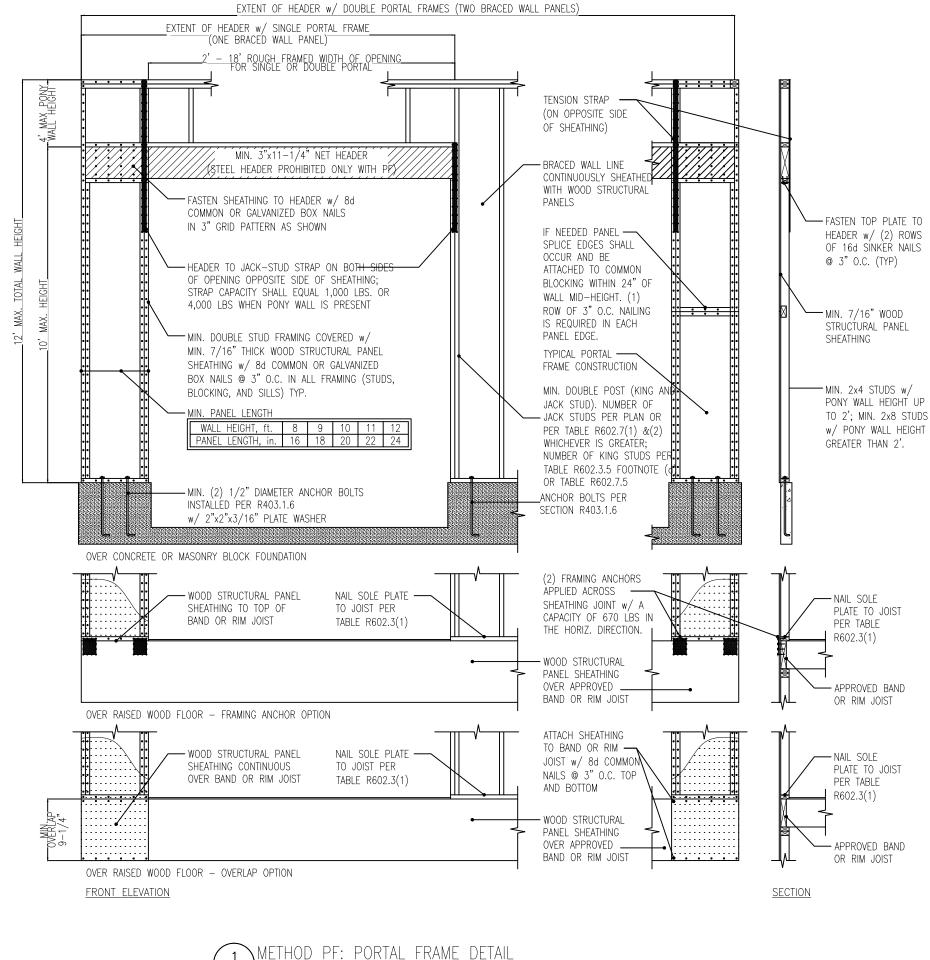






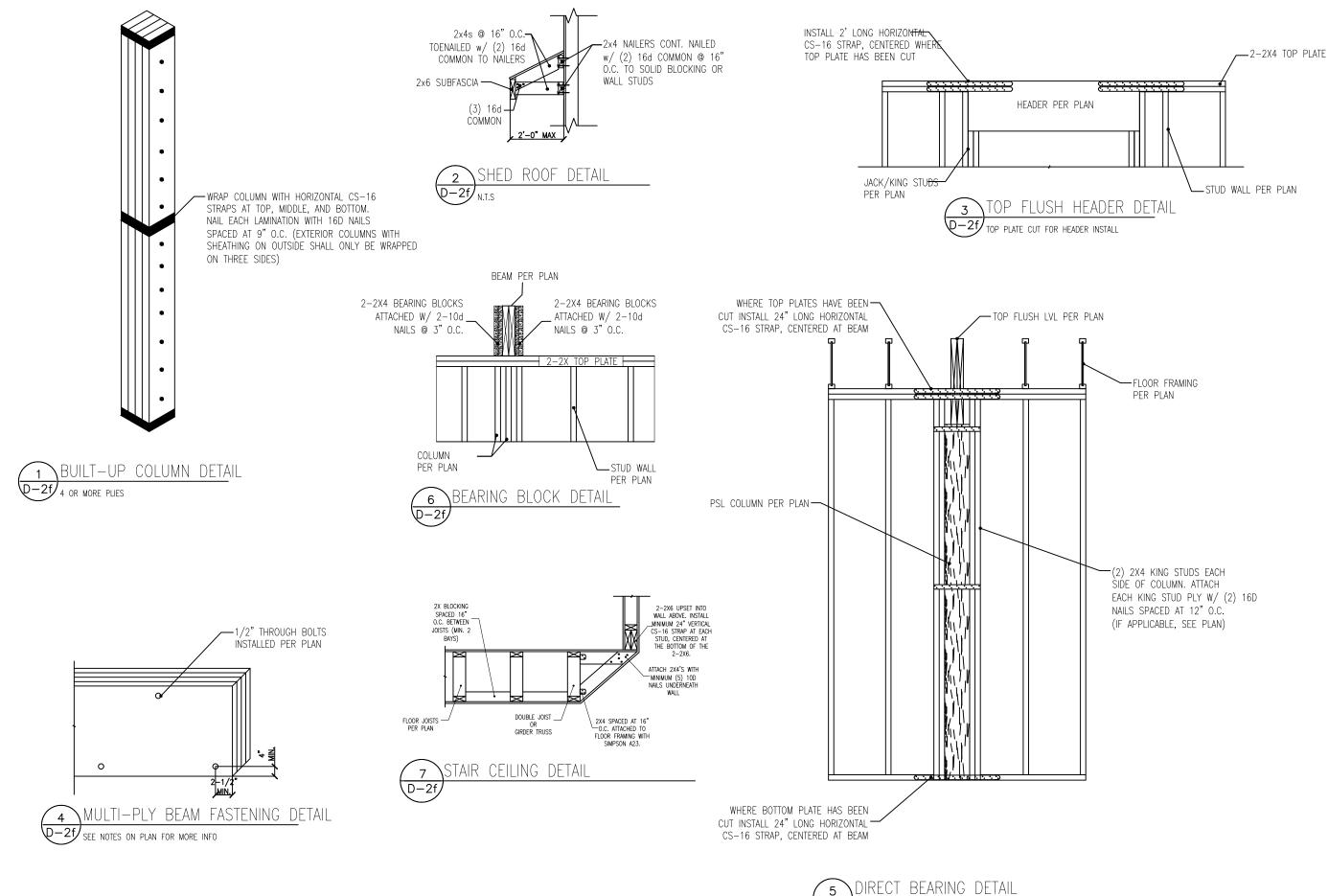






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