



## THE BLANCO

AT ATHERSTONE - NORTH CAROLINA

#### SQUARE FOOTAGES

FIRST FLOOR (HTD.) = 1316 sf

GARAGE = 401 sf
FRONT PORCH = 80 sf
REAR PORCH = 81 sf

TOTAL = 1878 sf

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A3.0 EXTERIOR ELEVATIONS & NOTES
A3.1 EXTERIOR ELEVATIONS
E1.0 ELECTRICAL PLAN

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S3.0 FIRST FLOOR FRAMING PLAN
S7.0 FIRST FLOOR BRACING PLAN
D1-D7 STANDARD DETAILS

#### **ENGINEER**

#### SUMMIT ENGINEERING

2520 WHITEHALL PARK DRIVE - SUITE 250 CHARLOTTE, NC 28273 704-504-1717

#### 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

#### GENERAL CONTRACTOR

#### LGI HOMES

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

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30 SEPTEMBER 2022

COVER SHEET

A1.0



#### **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: (IBC 310)

"R-3" ONE & TWO FAMILY DWELLING

CONSTRUCTION CLASS: (IBC 601)

"TYPE V-B" UNPROTECTED

HEIGHT & AREA LIMIT: (LOCAL ZONING)

35' MAXIMUM 2 STORY HEIGHT

EMERGENCY ESCAPE: (IRC 310-311)

EGRESS OR RESCUE WINDOWS FROM SLEEPING ROOMS

SHALL HAVE MINIMUM OF 4.0 SQ. FT. NET CLEAR OPENING.

MINIMUM 20" WIDTH.

MINIMUM 22" HEIGHT.

MAXIMUM 44" SILL HEIGHT

GARAGE / HOUSE CEILING / ASSEMBLY: (IRC 702)

½" GYPSUM WALL BOARD

% Type "X" Gypsum board ceiling where Living is above

20 MINUTE RATED GARAGE / HOUSE DOOR

ATTIC VENTILATION: (IRC 806)

[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: (IRC 408)

[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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● 30 SEPTEMBER 2022

GENERAL NOTES

A1.1

#### WALL SCHEDULE

FRAMED WALLS

OVERHEAD/BELOW

#### 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

8' - 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 - 1/4" 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) 1/4" x 3 3/4" 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

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

#### 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 REQ'D 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 INSTALLER PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

-WINDOW SUPPLIER TO SPECIFY & ORDER TEMPERED GLASS IN WINDOWS AS REQ'D BY LOCAL CODE.

-G.C. AND WINDOW SUPPLIER TO VERIFY THAT EACH BEDROOM TO HAVE A MINIMUM OF ONE WINDOW WHICH MEETS EMERGENCY EGRESS AS REQUIRED BY LOCAL AUTHORITY BASED ON THE IRC. WINDOW SUPPLIER TO ADD EGRESS HARDWARE TO CASEMENT WINDOWS IF NECESSARY

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

INSULATION VALUES PER 2018 NCRC CH. 11 ENERGY CONSERVATION CODE CLIMATE ZONE 3A CLIMATE ZONE 4A

TABLE N1102.1.2 TABLE N1102.1.2 CEILING: R-38 CEILING: FLOOR: FLOOR: R-19 WALL: WALL: SLAB: R-0 SLAB: R-10

5 SHELVES 1R 2S 1 ROD, 2 SHELVES 2R 2S 2 ROD, 2 SHELVES HR HANGING ROD CASED OPENING CO W D WASHER DRYER D/W DISH WASHER FRIG REFRIGERATOR LS LAZY SUSAN M MIRROR SHOWER HEAD RAIN HEAD TEMPERED GLASS

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

-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. 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 ABOVE) -CONCRETE SLABS & SETTING BEDS TO ACCOMMODATE FOR ADEQUATE WATER DRAINAGE AT GARAGES AND PORCHES

-ATTIC ACCESS DROP-DOWN STAIRS TO CONFORM WITH LOCAL AUTHORITIES BASED ON IRC (R807.1) MINIMUM NET CLEAR OPENING OF 20" x 30". ALL ATTIC ACCESS STAIRS TO BE WEATHER STRIPPED & SEALED WITH R-VALUES THAT CONFORM WITH LOCAL AUTHORITIES BASED ON IRC (N1102.2.4). GC TO PROVIDE & INSTALL INSULATION DAMS TO RESTRICT TYPICAL ATTIC INSULATION FROM FALLING THROUGH ATTIC ACCESS OPENING. RIGID FOAM BOX COVER TO BE INSTALLED & SEALED AROUND FRAMING OF OPENING, NOT TO IMPEDE OR OBSTRUCT PERFORMANCE OF ADJACENT TYPICAL ATTIC INSULATION. -HOSE BIBB(S) TO BE LOCATED 24" ABOVE FIRST FLOOR FINISHED FLOOR



## SQUARE FOOTAGES

FIRST FLOOR (HTD.) = 1316 sf

GARAGE = 401 sf FRONT PORCH = 80 sf REAR PORCH = 81 sf

TOTAL = 1878 sf

PERMIT SET FOR CONSTRUCTION

30 SEPTEMBER 2022

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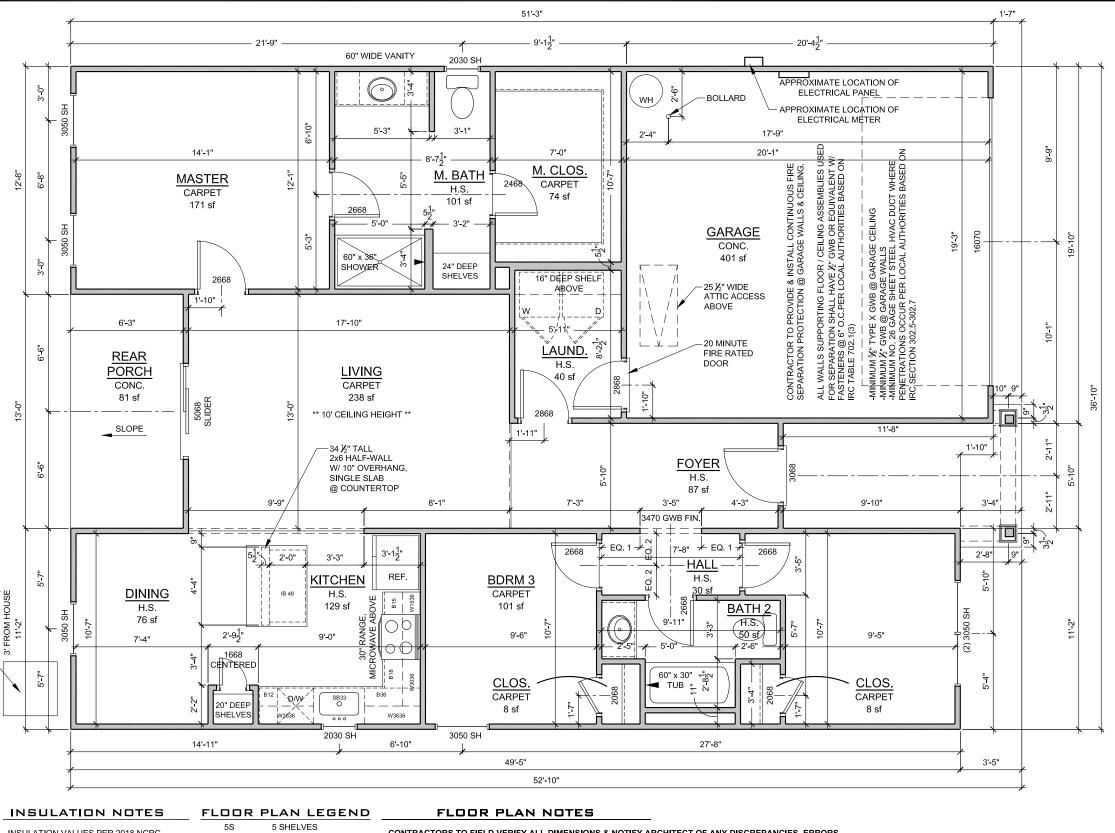
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FLOOR PLAN

A2.0



#### **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 ½" 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 BASED ON IRC

#### 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 FILED 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 BASED ON IRC (R302.1.1):

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.

#### CEILING HEIGHT NOTES

8' - 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 - ½" x 3" STAINLESS
STEEL SCREWS PER SIDE INSERTED INTO BEAM.

BOTTOM CONNECTION: (3) UBS - #18043

BRACKETS FASTENED WITH (2) ½" x 1½"

SCREWS INTO COLUMN & (2) ½" x 3 ½"

CONCRETE SCREWS THROUGH FASTENER

INTO CONCRETE

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● 30 SEPTEMBER 2022

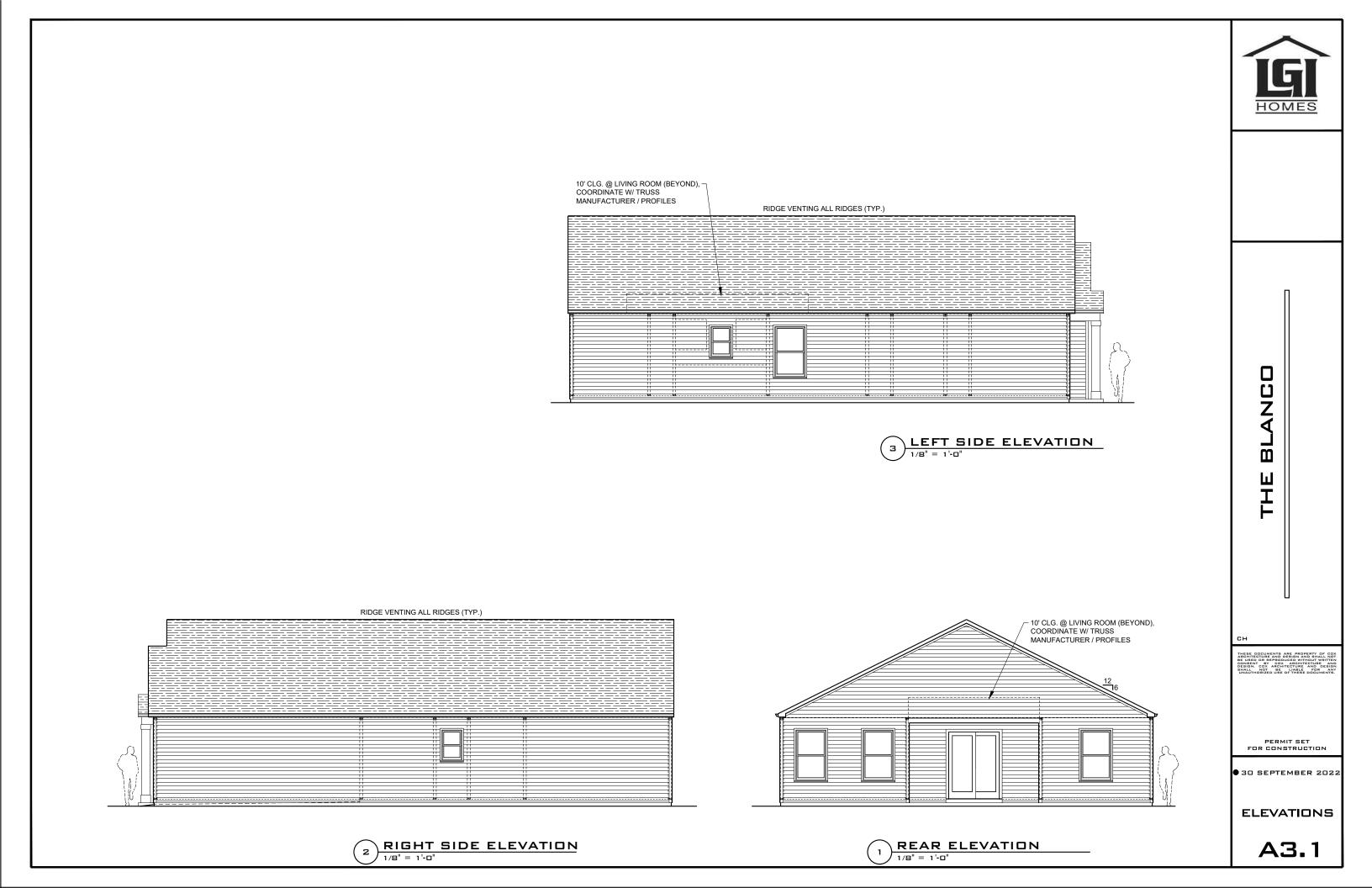
ELEVATIONS

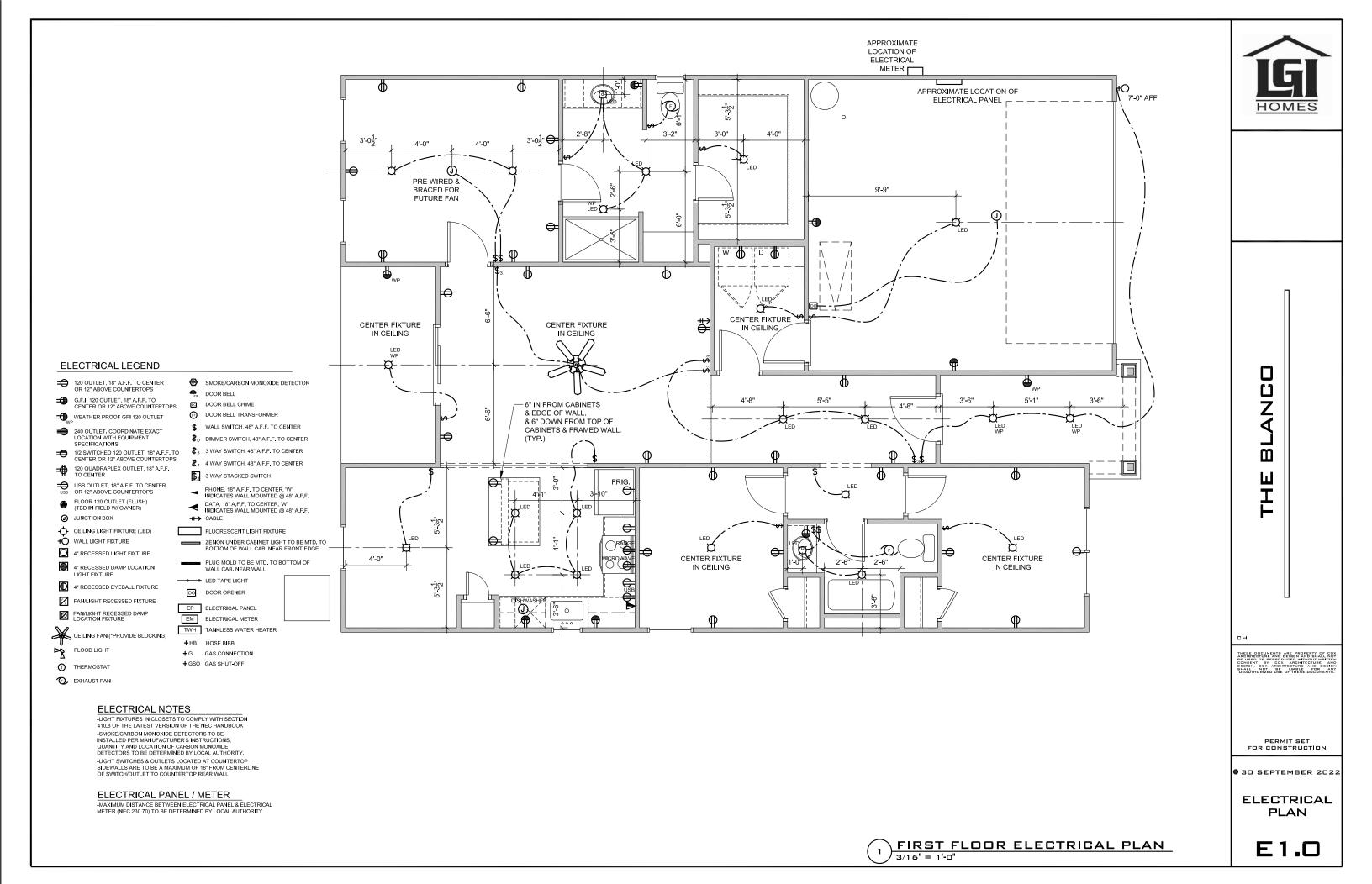
A3.0



FRONT ELEVATION

1/8" = 1'-0'





#### DESIGN SPECIFICATIONS:

Construction Type: Commerical □ 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

#### Design Loads:

gn ∟	.0aas:		
~ I.	Roof	Live Loads	
	1.1.	Conventional 2x	20 PSF
	1.2.	Truss	. 20 PSF
		1.2.1. Attic Truss	
2.	Roof	Dead Loads	
	2.1.	Conventional 2x	10 PSF
	2.2.	Truss	
3.			
	3.1.	Importance Factor	1.0
4.	Floor	Live Loads	
	4.1.	Typ. Dwelling	. 40 PSF
	4.2.	Sleeping Areas	30 PSF
	4.3.	Decks	. 40 PSF
	4.4.	Passenger Garage	50 PSF
5.		Dead Loads	
	5.1.	Conventional 2x	10 PSF
	5.2.	I-Joist	15 PSF
	5.3.	Floor Truss	
6.	Ultima	te Design Wind Speed (3 sec. gust)	130 MPH
		Exposure	
		Importance Factor	
		Wind Base Shear	
		6.3.l. Vx =	
		6.3.2.Vy =	
_	-	. 101 11 (1	

MEAN ROOF HT.	UP TO 30'	30'1"-35'	35'1"-40'	40'1"-45'
ZONE 1	16.7,-18.0	17.5,-18.9	18.2,-19.6	18.7,-20.2
ZONE 2	16.7,-21.0	17.5,-22.1	18.2,-22.9	18.7,-23.5
ZONE 3	16.7,-21.0	17.5,-22.1	18.2,-22.9	18.7,-23.5
ZONE 4	18.2,-19.0	19.2,-20.0	19.9,-20.7	20.4,-21.3
ZONE 5	18.2,-24.0	19.2,-25.2	19.9,-26.1	20.4,-26.9

8.	Seism	íc
	8.1.	Site
	0.0	D

8.I.	Site Class	レ
8.2.	Design Category	С
8.3.	Importance Factor	1.0
8.4.	Seismic Use Group	1

8.5. Spectral Response Acceleration

8.5.1. Sms = %g 8.5.2. Sml = %g

7. Component and Cladding (in PSF)

8.6. Seismic Base Shear

8.6.1. VX = 8.6.2. Vy =

8.7. Basic Structural System (check one)

Bearing Wall

□ Building Frame

☐ Moment Frame☐ Dual w/ Special Moment Frame

Dual w/ Intermediate R/C or Special Steel

☐ Inverted Pendulum

8.8. Arch/Mech Components Anchored No. No. Lateral Design Control: Seismic  $\square$  Wind  $\boxtimes$ 

 SUMMIT ENGINEERING • LABORATORY • TESTING

STRUCTURAL PLANS PREPARED FOR:

A Universal Engineering Sciences Company

## BLANCO RH

PROJECT ADDRESS: TBD

OWNER:
LGI Homes
7201 Creedmoor Road, Suite 147
Raleigh, NC 27613

ARCHITECT/DESIGNER:

COX Architecture & Design, PLLC 1310 South Tryon Street, Suite 111 Charlotte, NC 28203

These drawings are to be coordinated with the architectural, mechanical, plumbing, electrical, and civil drawings. This coordination is not the responsibility of the structural engineering of record (SER). Should any discrepancies become apparent, the contractor shall notify SUMMIT Engineering, Laboratory & Testing, INC. before construction begins.

#### PLAN ABBREVIATIONS:

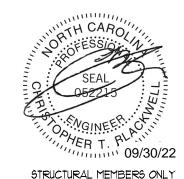
AB	ANCHOR BOLT	<u>_</u>	PRESSURE TREATED
AFF	ABOVE FINISHED FLOOR	RS	ROOF SUPPORT
CJ	CEILING JOIST	SC	STUD COLUMN
CLR	CLEAR	SJ	SINGLE JOIST
DJ	DOUBLE JOIST	SPF	SPRUCE PINE FIR
DSP	DOUBLE STUD POCKET	SST	SIMPSON STRONG-TIE
EE	EACH END	SYP	SOUTHERN YELLOW PINE
ΕW	EACH WAY	ŤJ	TRIPLE JOIST
NTS	NOT TO SCALE	TSP	TRIPLE STUD POCKET
OC	ON CENTER	TYP	TYPICAL
PSF	POUNDS PER SQUARE FOOT	UNO	UNLESS NOTED OTHERWISE
PSI	POUNDS PER SQUARE INCH	WWF	WELDED WIRE FABRIC

Roof truss and floor joist layouts, and their corresponding loading details, were not provided to SUMMIT Engineering, Laboratory & Testing, INC. (SUMMIT) prior to the initial design. Therefore, truss and joist directions were assumed based on the information provided by LGI HOMES. Subsequent plan revisions based on roof truss and floor joist layouts shall be noted in the revision list, indicating the date the layouts were provided. Should any discrepancies become apparent, the contractor shall notify SUMMIT immediately.

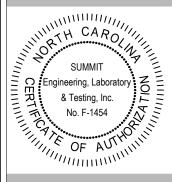
#### SHEET LIST:

Sheet No.	Description
CS1	Cover Sheet, Specifications, Revisions
CS2	Specifications Continued
S1.Øm	Monolithic Slab Foundation
S1.Øs	Stem Wall Foundation
91.0c	Crawl Space Foundation
S1.Ø.4b	4-Sides Brick Crawl Space Foundation
51.0b	Basement Foundation
S2.Ø	Basement Framing Plan
S3.Ø	First Floor Framing Plan
S4.Ø	Second Floor Framing Plan
S5.Ø	Roof Framing Plan
S6.Ø	Basement Bracing Plan
5T.Ø	First Floor Bracing Plan
S8.Ø	Second Floor Bracing Plan

Revision No.	Date	Project No.	Description
0	5.23.22	T0499	Original Engineering
1	9.30.22	T0506	Revised per Updated Architectural's



SUMMIT
ENGINEERING · LABORATORY · TESTING
A Universal Engineering Sciences Company
2520 Whitehall Park Dr, Suite 250
Charlotte, NC 28273
Office: 704.504.1717
Fax: 704.504.1125
www.summit-companies.com



LGI Homes 7201 Creedmoor Road, Suite 14 Raleigh, NC 27613

CURRENT DRAWING

DATE: 09/30/2022

Coversheet

Blanco RH

SCALE: 1/8"=1'-0"
PROJECT #: 3554.T0506

DRAWN BY: JV

CHECKED BY: CTB

ORIGINAL DRAWING

DATE 5/23/2022 PROJECT # T0499

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

C. IEE

CS1

#### GENERAL STRUCTURAL NOTES:

- The design professional whose seal appears on these drawings is the structural engineer of record (SER) for this project. The SER bears the responsibility of the primary structural elements and the performance of this structure. No other party may revise, alter, or delete any structural aspects of these construction documents without written permission of SUMMIT Engineering, Laboratory & Testing, INC. (SUMMIT) or the SER. For the purposes of these construction documents the SER and SUMMIT shall be considered the same entity.
- The structure is only stable in its completed form. The contractor shall provide all required temporary bracing during construction to stabilize the structure.
- The SER is not responsible for construction sequences, methods, or techniques in connection with the construction of this structure.
   The SER will not be held responsible for the contractor's failure to conform to the contract documents, should any non-conformities occur.
- 4. Any structural elements or details not fully developed on the construction drawings shall be completed under the direction of a licensed professional engineer. These shop drawings shall be submitted to SUMMIT for review before any construction begins. The shop drawings will be reviewed for overall compliance as it relates to the structural design of this project. Verification of the shop drawings for dimensions, or for actual field conditions, is not the responsibility of the SER or SUMMIT.
- Verification of assumed field conditions is not the responsibility
  of the SER. The contractor shall verify the field conditions for
  accuracy and report any discrepancies to SUMMIT before
  construction begins.
- The SER is not responsible for any secondary structural elements or non-structural elements, except for the elements specifically noted on the structural drawings.
- This structure and all construction shall conform to all applicable sections of the international residential code.
- This structure and all construction shall conform to all applicable sections of local building codes.
- All structural assemblies are to meet or exceed to requirements of the current local building code.

#### <u>FOUNDATION</u>

- The structural engineer has not performed a subsurface investigation. Verification of this assumed value is the responsibility of the owner or the contractor. Should any adverse soil condition be encountered the SER must be contacted before proceeding.
- The bottom of all footings shall extend below the frost line for the region in which the structure is to be constructed. However, the bottom of all footings shall be a minimum of 12" below grade.
- Any fill shall be placed under the direction or recommendation of a licensed professional engineer.
- The resulting soil shall be compacted to a minimum of 95% maximum dry density.
- Excavations of footings shall be lined temporarily with a 6 mil polyethylene membrane if placement of concrete does not occur within 24 hours of excavation.
- 6. No concrete shall be placed against any subgrade containing water, ice, frost, or loose material.

#### STRUCTURAL STEEL

- Structural steel shall be fabricated and erected in accordance with the American Institute of Steel Construction "Code of Standard Practice for Steel Buildings and Bridges" and the manual of Steel Construction "Load Resistance Factor Design" latest editions.
- Structural steel shall receive one coat of shop applied rust-inhibitive paint.
- 3. All steel shall have a minimum yield stress  $(F_y)$  of 36 ksi unless otherwise noted
- 4. Welding shall conform to the latest edition of the American Welding Society's Structural Welding Code AWS D.I. Electrodes for shop and field welding shall be class ETØXX. All welding shall be performed by a certified welder per the above standards.

#### CONCRETE

- Concrete shall have a normal weight aggregate and a minimum compressive strength (f'c) at 28 days of 3000 psi, unless otherwise noted on the plan.
- Concrete shall be proportioned, mixed, and placed in accordance with the latest editions of ACI 318: "Building Code Requirements for Reinforced Concrete" and ACI 301: "Specifications for Structural Concrete for Buildings".
- Air entrained concrete must be used for all structural elements exposed to freeze/thaw cycles and deicing chemicals. Air entrainment amounts (in percent) shall be within -1% to +2% of target values as follows:
  - 3.1. Footings: 5%
  - 3.2. Exterior Slabs: 5%
- 4. No admixtures shall be added to any structural concrete without written permission of the SER.
- Concrete slabs-on-grade shall be constructed in accordance with ACI 302IR-96: "Guide for Concrete Slab and Slab Construction".
- 6. The concrete slab-on-grade has been designed using a subgrade modulus of k=250 pci and a design loading of 200 psf. The SER is not responsible for differential settlement, slab cracking or other future defects resulting from unreported conditions not in accordance with the above assumptions.
- 7. Control or saw cut joints shall be spaced in interior slabs-on-grade at a maximum of 15'-0" O.C. and in exterior slabs-on-grade at a maximum of 10'-0" unless otherwise noted.
- 8. Control or saw cut joints shall be produced using conventional process within 4 to 12 hours after the slab has been finished
- Reinforcing steel may not extend through a control joint.
   Reinforcing steel may extend through a saw cut joint.
- IØ. All welded wire fabric (WWF.) for concrete slabs-on-grade shall be placed at mid-depth of slab. The WWF, shall be securely supported during the concrete pour.

#### CONCRETE REINFORCEMENT:

- Fibrous concrete reinforcement, or fibermesh, specified in concrete slabs-on-grade may be used for control of cracking due to shrinkage and thermal expansion/contraction, lowered water migration, an increase in impact capacity, increased abrasion resistance, and residual strength.
- Fibermesh reinforcing to be 100% virgin polypropylene fibers containing no reprocessed olefin materials and specifically manufactured for use as concrete secondary reinforcement.
- Application of fibermesh per cubic yard of concrete shall equal a minimum of 0.1% by volume (1.5 pounds per cubic yard)
- Fibermesh shall comply with ASTM CIllo, any local building code requirements, and shall meet or exceed the current industry standard.
- 5. Steel reinforcing bars shall be new billet steel conforming to ASTM
  A615, grade 60.
- 6. Detailing, fabrication, and placement of reinforcing steel shall be in accordance with the latest edition of ACI 315: "Manual of Standard Practice for Detailing Concrete Structures"
- Horizontal footing and wall reinforcement shall be continuous and shall have 90° bends, or corner bars with the same size/spacing as the horizontal reinforcement with a class B tension splice.
- Lap reinforcement as required, a minimum of 40 bar diameters for tension or compression unless otherwise noted. Splices in masonry shall be a minimum of 48 bar diameters.
- Where reinforcing dowels are required, they shall be equivalent in size and spacing to the vertical reinforcement. The dowel shall extend 48 bar diameters vertically and 20 bar diameters into the footing.
- 10. Where reinforcing steel is required vertically, dowels shall be provided unless otherwise noted.

#### WOOD FRAMING:

- Solid sawn wood framing members shall conform to the specifications listed in the latest edition of the "National Design Specification for Wood Construction" (NDS). Unless otherwise noted, all wood framing members are designed to be Southern-Yellow-Pine (SYP) #2.
- LVL or PSL engineered wood shall have the following minimum design values:
  - 2.1. E = 1,900,000 psi
  - 2.2. Fb = 2600 psi
  - 2.3. Fv = 285 psi 2.4 Fc = 700 psi
- Wood in contact with concrete, masonry, or earth shall be pressure treated in accordance with AWPA standard C-15. All other moisture exposed wood shall be treated in accordance with AWPA standard C-2
- 4. Nails shall be common wire nails unless otherwise noted.
- Lag screws shall conform to ANSI/ASME standard BI82,1-1981. Lead holes for lag screws shall be in accordance with NDS specifications
- All beams shall have full bearing on supporting framing members unless otherwise noted.
- T. Exterior and load bearing stud walls are to be 2x4 SYP \*2 @ 16" O.C. unless otherwise noted. Studs shall be continuous from the sole plate to the double top plate. Studs shall only be discontinuous at headers for window/door openings. A minimum of one king stud shall be placed at each end of the header. King studs shall be continuous.
- Individual studs forming a column shall be attached with one IOd
  nail @ 6" O.C. staggered. The stud column shall be continuous to
  the foundation or beam. The column shall be properly blocked at
  all floor levels to ensure proper load transfer.
- Multi-ply beams shall have each ply attached with (3) lod nails a 24" O.C.
- 10. Four and five ply beams shall be bolted together with (2) rows of 1/2" diameter through bolts staggered @ 16" O.C. unless noted otherwise

#### WOOD TRUSSES:

- I. The wood truss manufacturer/fabricator is responsible for the design of the wood trusses. Submit sealed shop drawings and supporting calculations to the SER for review prior to fabrication. The SER shall have a minimum of five (5) days for review. The review by the SER shall review for overall compliance with the design documents. The SER shall assume no responsibility for the correctness for the structural design for the wood trusses.
- 2. The wood trusses shall be designed for all required loadings as specified in the local building code, the ASCE Standard "Minimum Design Loads for Buildings and Other Structures." (ASCE 7-10), and the loading requirements shown on these specifications. The truss drawings shall be coordinated with all other construction documents and provisions provided for loads shown on these drawings including but not limited to HVAC equipment, piping, and architectural fixtures attached to the trusses.
- The trusses shall be designed, fabricated, and erected in accordance with the latest edition of the "National Design Specification for Wood Construction." (NDS) and "Design Specification for Metal Plate Connected Wood Trusses."
- 4. The truss manufacturer shall provide adequate bracing information in accordance with "Commentary and Recommendations for Handling, Installing, and Bracing Metal Plate Connected Wood Trusses" (HIB-91). This bracing, both temporary and permanent, shall be shown on the shop drawings. Also, the shop drawings shall show the required attachments for the trusses.
- Any chords or truss webs shown on these drawings have been shown as a reference only. The final design of the trusses shall be per the manufacturer.

#### EXTERIOR WOOD FRAMED DECKS:

 Decks are to be framed in accordance with local building codes and as referenced on the structural plans, either through code references or construction details.

#### WOOD STRUCTURAL PANELS:

- Fabrication and placement of structural wood sheathing shall be in accordance with the APA Design/Construction Guide "Residential and Commercial," and all other applicable APA standards.
- All structurally required wood sheathing shall bear the mark of the APA.
- 3. Wood wall sheathing shall comply with the requirements of local building codes for the appropriate state as indicated on these drawings. Refer to wall bracing notes in plan set for more information. Sheathing shall be applied with the long direction perpendicular to framing, unless noted otherwise.
- Roof sheathing shall be APA rated sheathing exposure 1 or 2. Roof sheathing shall be continuous over two supports and attached to its supporting roof framing with (1)-8d CC nail at 6"o/c at panel edges and at 12"o/c in panel field unless otherwise noted on the plans. Sheathing shall be applied with the long direction perpendicular to framing. Sheathing shall have a span rating consistent with the framing spacing. Use suitable edge support by use of plywood clips or lumber blocking unless otherwise noted. Panel end joints shall occur over framing. Apply building paper over the sheathing as required by the state Building Code.
- 5. Wood floor sheathing shall be APA rated sheathing exposure I or 2. Attach sheathing to its supporting framing with (I)-8d CC ringshank nail at 6"o/c at panel edges and at 12"o/c in panel field unless otherwise noted on the plans. Sheathing shall be applied perpendicular to framing. Sheathing shall have a span rating consistent with the framing spacing. Use suitable edge support by use of T&G plywood or lumber blocking unless otherwise noted. Panel end joints shall occur over framing. Apply building paper over the sheathing as required by the state Building Code.
- Sheathing shall have a 1/8<sup>ii</sup> gap at panel ends and edges as recommended in accordance with the APA.

#### STRUCTURAL FIBERBOARD PANELS:

- Fabrication and placement of structural fiberboard sheathing shall be in accordance with the applicable AFA standards.
- All structurally required fiberboard sheathing shall bear the mark of the AFA.
- Fiberboard wall sheathing shall comply with the requirements of local building codes for the appropriate state as indicated on these drawings. Refer to wall bracing notes in plan set for more information.
- Sheathing shall have a 1/8" gap at panel ends and edges are recommended in accordance with the AFA.





LGI Homes 7201 Creedmoor Road, Suite 14 Raleigh, NC 27613

CURRENT DRAWING

DATE: 09/30/2022

Coversheet

Blanco RH

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

DRAWN BY: 1V

PROJECT #: 3554.T0506

CHECKED BY: CTB

ORIGINAL DRAWING

DATE 5/23/2022 PROJECT # T0499

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

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CS2



STRUCTURAL MEMBERS ONLY

#### FOUNDATION NOTES

- FOUNDATIONS TO BE CONSTRUCTED IN ACCORDANCE W CHAPTER 4 OF THE 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE W ALL LOCAL AMENDMENTS. STRUCTURAL CONCRETE TO BE F. 3000 PGI, PREPARED AND PLACED IN ACCORDANCE WITH ACI STANDARD 318.

  FOOTINGS TO BE FLACED ON NODSTRURED EARTH, BEARING A NINIMM OF IZING ADJACANT SINGHED GRADE, OR AS OTHERWISE DIRECTED BY THE CODE EXPONENTIAL CHIEF OF THE CODE EXPONE
- BELOW ADJACENT FINISHED GRADE, OR AS OTHERWISE DIRECTED BY THE CODE 
  ENPORCEMENT OFFICIAL.
  FOOTNAS SIZES BASED ON A PRESUMENTIVE SOIL BEARING CAPACITY OF 2000
  FIS. CONTRACTOR IS SOLELY RESPONSIBLE FOR VERETHING THE SUITABILITY OF 
  THE STIE SOIL CONDITIONS AT THE TIME OF CONSTRUCTION.
  FOOTNAS AND PIERS SHALL BE CENTIFEED UNDER THEIR RESPECTIVE ELEMENTS.
  FROVIDE 2" INNIMIM FOOTNAS PROJECTION FROM THE FACE OF MASOWEY.
  MAXIMUM DEPTH OF UNBAL MACED FILL AGAINST MASORYS WILLS TO BE AS 
  SPECIFIED IN SECTION RADA! OF THE 2008 NORTH CAROLINA RESIDENTIAL 
  BUILDING COST.

- SPECIFIED IN SECTION RADIAL OF THE 2009 NORTH CAROLINA RESIDENTIAL DEPARTMENT OF THE 2009 NORTH CAROLINA RESIDENTIAL PUBLISHED TO PERMETER FOUNDATION WALL.

  PROVIDE POUNDATION WAILENERSONS, AND DRAIN WITH POSITIVE SLOPE TO OUTLET AS REQUIRED BY SITE CANDITIONS.

  PROVIDED PERMETER NISULATION FOR ALL FOUNDATIONS PER 2009 NORTH CAROLINA RESIDENTIAL BUILDING CODE.

  CORRELL FOUNDATION WALL AS REQUIRED TO ACCOMMODATE BRICK VENEERS.

  CRAWL SPACE TO BE GRADED LEVEL, AND CLEARED OF ALL DEBRIS.

  FOUNDATION ANCHORAGE SHALL BE CONSTRUCTED PER THE 2009 NORTH CAROLINA RESIDENTIAL CODE SECTION REVISION. INITIALITY O'D AS OWNER OF SPACED AT 6 -60" ON CENTER WITH A THINIMAL PREDITENT INTO NASONRY OR CONCRETE INITIALITY O'D AS OUT O'D RESIDENTIAL COORS BOLT SPECIAL SECTION AND IN JUSTICAL PROVIDED NOT MORE THAN 12" REPORT THE CONTRET AND IN THE CONTRET HISTORY OF THE PLATE.
- DJ = DOUBLE JOIST GT = GIRDER TRUSS 9C = STUD COLUMN EE = EACH END TJ = TRIPLE JOIST CL = CENTER LINE
- SJ = SINGLE JOIST FT = FLOOR TRUSS DR = DOUBLE RAFTER TR = TRIPLE RAFTER
- OC = ON CENTER PL = POINT LOAD
- 14. ALL PIERS TO BE 16 "XI6" MASONRY AND ALL PILASTERS TO BE 8 "XI6" MASONRY
- THE REST TO BE IN THE THEORY AND ALL TILLISTERS TO BE 3 NO THEORY TYPICAL, (MISO)

  UNLL POOTINGS TO BE CONTINUOUS CONCRETE, SIZES PER STRUCTURAL PLAN A POUNDATION EXCAVATION OBSERVATION SHOULD BE CONDUCTED BY A PROFESSIONAL GEOTECHNICAL ENGINEER OR HIS QUILL PIED REPRESENTATIVE. SOLATED AREAS OF THEILDING MATERIALS, SMOOTO POOTENTIALT EXPANSIVE SOILS ARE OBSERVED IN THE FOOTING EXCAVATIONS AT THE TIME OF SOLIS ARE LOSSENCED IN THE FOUND EXCAVATION AT THE TIME CONSTRUCTION, SUPPLIES HE FOUNDED THE OPPORTUNITY TO REVIEW THE FOOTING DESIGN PRIOR TO CONCRETE FACEFRISH.

  ALL FOOTINGS 1 SLASS ARE TO BEAR ON UNDISTURBED SOIL OR 95% COMPACTED FILL, VERIFIED BY ENGINEER OR CODE OPPICIAL.

REFER TO BRACED WALL PLAN FOR PANEL LOCATIONS AND ANY REQUIRED HOLD-DOWNS. ADDITIONAL INFORMATION PER SECTION R602.10.8 AND FIGURE R602.10.1 OF THE 2015 IRC.

NOTE: ALL EXTERIOR FOUNDATION DIMENSIONS ARE TO FRAMING AND <u>NOT</u> BRICK VENEER, UNO

NOTE: A 4" CRUSHED STONE BASE COURSE IS NOT REQUIRED WHEN \$LAB IS NISTALLED ON WELL-DRAINED OR SAND-GRAVEL MIXTURE SOILS CLASSFIED AS GROUP I PER TABLE R405J

NOTE: FOUNDATION ANCHORAGE HAS BEEN DESIGNED TO RESIST THE CONTINUOUS UNID UPLIFT LOAD PATH IN ACCORDANCE WITH METHOD 3 OF SECTION R602.35 OF THE 2018 NCRC.

ROOF TRUSS AND FLOOR JOIST LAYOUTS, AND THEIR CORRESPONDING LOADING DETAILS WERE NOT PROVIDED TO SUMMIT ENGINEERING. LABORATORY & TESTING, INC. (SUMMIT) PRIOR TO THE INITIAL DESIGN. THEREFORE, TRUSS AND JOIST DIRECTIONS WERE ASSUMED BASED ON THE INFORMATION PROVIDED BY LGI HOMES, SUBSEQUENT PLAN REVISIONS BASED ON ROOF TRUSS AND FLOOR JOIST LAYOUTS SHALL BE NOTED IN THE REVISION LIST, INDICATING THE DATE THE LAYOUTS WERE PROVIDED. SHOULD ANY DISCREPANCIES BECOME APPARENT, THE CONTRACTOR SHALL NOTIFY SUMMIT IMMEDIATELY.

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY LGI HOMES COMPLETED/REVISED ON 09/30/22. IT IS THE RESPONSIBILITY OF THE CLIENT TO NOTIFY SUMMIT ENGINEERING, LABORATORY & TESTING, INC. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. SUMMIT CANNOT GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

MONOLITHIC SLAB FOUNDATION SCALE: 1/8"=1"

WALL ANCHOR OPTION SCHEDULE FOR MONO SLAB				
ANCHORS	MIN. CONC. EMBEDMENT	5PACING	INTERIOR WALL	EXTERIOR WALL
1/2"ø A307 BOLTS w/ STD. 90° BEND	7"	6'-0"	YES	YES
1/2"¢ HILTI KWIK BOLT, SST WEDGE-ALL, OR EQUIVALENT WEDGE ANCHOR	4"	6'-0"	YES	YES <sup>3</sup>
1/2"¢ THREADED ROD w/ SST SET EPOXY	4"	6'-0"	YES	YES

#### NOTE: I. INSTALL ALL ANCHORS 12" MAX, FROM ALL BOTTOM WALL PLATE ENDS 4

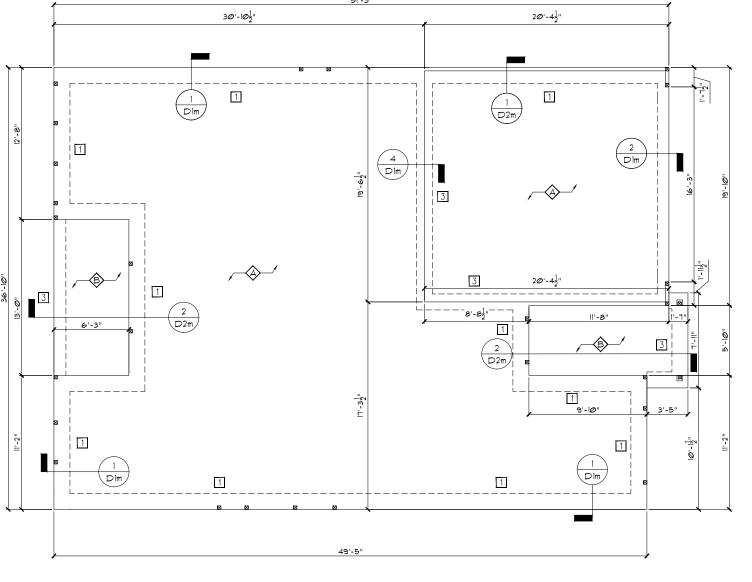
- JOINTS.

  2. MINITURI CONCRETE EMBEDMENT AND SPACINGS SHOUN ARE TYPICAL. IF DIFFERENT EMBEDMENTS OR SPACINGS ARE EXPLICITLY CALLED FOR ON THE PLAN OR DETAILS, DEFER TO THOSE.

  3. EXPLANSION ANCHORS MAY BE INSTALLED ONLY AS ALLOWED PER EXPLANSION ANCHORS MAY BE INSTALLED ONLY AS ALLOWED PER EXPLANSION ANCHORS MAY BE INSTALLED ONLY AS ALLOWED.
- MANUFACTURE SPECIFICATIONS.

FOUNDATION SCHEDULE			
TAG	DESCRIPTION	REBAR REQ'D	
1	16"W x 20"D MONO	(2) #3 CONT.	
2	24"SQ x 10"D	NONE	
3	16"W x 10"D LUG (13.5"D @ GARAGE INTERIOR)	(2) #3 CONT.	
4	30"SQ x 10"D	NONE	
5	36"SQ x 12"D	(5) #4 E.W.	
6	16"SQ x10"D	NONE	
7	PLAN SPECIFIC	NONE	
<b>*</b>	4" THICK POURED CONCRETE SLAB w/ FIBER MESH ON 6 MIL POLY ON COMPACTED SOIL		
<b>\Pi</b>	4" THICK POURED CONCRETE SLAB ON COMPACTED SOIL		

<u>ABBREVIATIONS</u>, W = WIDTH, D = DEPTH, SQ =SQUARE BD. = BOTH DIRECTIONS, CONT. = CONTINUOUS, MONO = MONOLITHIC SLAB FOOTING



ALL ELEVATIONS



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Suite Road, 3 Creedmoor gh, NC 27613 I Homes 01 Creed leigh, NC LGI 720: Rale

4

CURRENT DRAWING

Fnd

lab

 $\overline{S}$ 

Monolithic

RH

Blanco

DATE: 09/30/2022

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

PRO1ECT #: 3554 T0506

DRAWN BY: JV

CHECKED BY: CTB

ORIGINAL DRAWING

DATE 5/23/2022

T0499

PROJECT #

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

S1.0m

#### GENERAL STRUCTURAL NOTES:

- ENERGI., STRUCTURAL NOTES

  CONSTRUCTION SHALL COMPORT TO 2019 NORTH CAROLINA RESIDENTIAL
  BUILDING CODE WITH ALL LOCAL, AMENDMENTS.
  CONTRACTOR SHALL VERRY ALL DIMENSIONS, CONTRACTOR SHALL COMPLY WITH
  HE CONTRINTS OF THE DRAWING FOR THIS SPECIFIC PROJECT, ENSINEER IS NOT
  RESPONSIBLE FOR ANY DEVIATIONS FROM THIS PLAN.
  CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY BRACING REQUIRED
  TO RESIST ALL PORCES ENCONTENED DURING ERECTION.
  PROMPETTES USED IN THE DESION ARE AS FOLLOUS.
  MICROLLAM (LV.), 5, 5, 2600 PSI, 15, 250 PSI, 15, 1500 PSI
  TIMERSTRAND (1.9.), 5, 5, 2300 PSI, 15, 250 PSI, 15, 1500 PSI
  PARALLAM (PSI, 15, 5, 2300 PSI, 15, 120 PSI, 15, 1500 PSI
  ALL MOOD PHEMERS SHALL BE E, 25 PSI (MICRO).
  ALL MOOD PSIALL BE SUPPORTED WITH A (2) 24 M 5 YPS STUD COLUMN AT EACH
  BND UNLESS NOTED OTHERWISE.
  ALL REPORTS HALL BE SUPPORTED WITH A (2) 24 M 5 YPS STUD COLUMN AT EACH
  BND UNLESS NOTED OTHERWISE.

- ALL CEAR OF SHALL BE SUFFICIENT WITH A 177.06 Y 3 PT 5 BIOL COLOR AT EACH POR DILLEGE NOTICE OF THE SHALL BE GRADE 60 BARS CONFORTING TO ASTIT A65 AND SHALL HAVE A MINIMUM COVER OF 3'.
  FOUNDATION ANCHORAGE SHALL BE CONSTRUCTED FER THE 2018 NORTH CAROLINA RESPONTING COST SECTION RADIJE, MINIMUM 12' DIA BOLTO SPACED AT 6'-0" ON CENTER WITH A 1" MINIMUM EMBEDMENT INTO MASONRY OR CONCRETE. MINIMUM (2) MACHOR BOLTO FER LATE SECTION AND (1) LOCATED NOT MORE THAN 10" FROM THE CORNER ANCHOR BOLTO SHALL BE LOCATED IN THE CENTER THIRD OF THE FLATE.
  CONTRACTOR TO PROVIDED LOCKOUTS WHEN CEILING JOISTS SPAN PERPENDICID AS TO ASTITED
- PERPENDICULAR TO RAFTERS. FLITCH BEAMS, 4-PLY LVLS AND 3-PLY SIDE LOADED LVLS SHALL BE BOLTED
- IDENTICH BEATIN, 4-H-T, TUS AND "ATT. THE CADED UTUS SHALL BE BOTTED TOGETHER WITH 12" DIA THRU BOLTS SPACED AT 74" O.C. (MAX) STAGGERED OR EQUIVALENT CONNECTIONS FER DETAIL I/DTI, MIN. EDGE DISTANCE SHALL BE 2" AND (2) BOLTS SHALL BE LOCATED MINIMUM 6" FROM EACH BOL OF THE BEAM II. ALL NON-LOAD BEARING HEADERS SHALL BE (1) FLAT 724 STP 72, PROPPED. FOR NON-LOAD BEARING HEADERS SHALL BE (1) FLAT 724 STP 73, PROPPED, CIVIL EGG NOTED OTHERWISE)

  12. ABBREVIATIONS.

DJ = DOUBLE JOIST	SJ = SINGLE JOIST
GT = GIRDER TRUSS	FT = FLOOR TRUSS
SC = STUD COLUMN	DR = DOUBLE RAFT
EE = EACH END	TR = TRIPLE RAFTER
TJ = TRIPLE JOIST	OC = ON CENTER
CL = CENTER LINE	PL = POINT LOAD

WALL STUD SCHEDULE (IØ FT HEIGHT)				
STUD SIZE STUD SPACING (O.C.)				
	ROOF ONLY	ROOF # 1 FLOOR	ROOF & 2 FLOORS	NON-LOAD BEARING
2x4	24"	16"	12"	24"
2x6	24"	24"	16"	24"

NOTES:

I. BRACED WALLS STUDS SHALL BE A MAX OF 16" O.C.

2. STUDS SUPPORTS OPTIONAL WALK-UP ATTIC SHALL BE
SPACED A THAX OF 16" O.C.

3. TUDS 510" WALLS SHALL BE FRAMED W 2x4 STUDS 6" 12"
O.C. OR 2x5 STUDS 6 16" O.C. BALLOON FRAMED W
HORIZONTAL BLOCKING 6" 6" O.C. KETICALLY.

LINTEL SCHEDULE				
TAG	SIZE	OPENING SIZE		
0	L3x3x1/4"	LESS THAN 6'-0"		
2	L5x3x1/4"	6'-0" TO 10'-0"		
3	L5x3-1/2x5/16"	GREATER THAN 10'-0'		
4	L5x3-1/2x5/16" ROLLED OR EQUIV.	ALL ARCHED OPENINGS		

NOTES:

1 SECURE LINTEL TO HEADER W (2) 12° DIAMETER LAG
SCREWS STAGGERED AT 16° OC. (TYP FOR OPENINGS
GREATER THAN 10° -0°.

2. ALL HEADERS WHERE BRICK IS PRESENT, TO BE ① (UNO.)

SHADED WALLS INDICATED LOAD BEARING WALLS

NOTE: REDUCE JOIST SPACING UNDER TILE FLOORS, GRANITE COUNTERTOPS AND/OR ISLANDS.

NOTE:

\_\_\_\_\_ DESIGNATES JOIST SUPPORTED LOAD
BEARING WALL ABOVE, PROVIDE BLOCKING UNDER
JOIST SUPPORTED LOAD BEARING WALL.

ROOF TRUSS AND FLOOR JOIST LAYOUTS, AND THEIR CORRESPONDING LOADING DETAILS, WERE NOT PROVIDED TO SUMMIT ENGINEERING, LABORATORY & TESTING, INC. (SUMMIT) PRIOR TO THE INITIAL DESIGN. THEREFORE, TRUSS AND JOIST DIRECTIONS WERE ASSUMED BASED ON THE INFORMATION PROVIDED BY LGI HOMES, SUBSEQUENT PLAN REVISIONS BASED ON ROOF TRUSS AND FLOOR JOIST LAYOUTS SHALL BE NOTED IN THE REVISION LIST INDICATING THE DATE THE LAYOUTS WERE PROVIDED. SHOULD ANY DISCREPANCIES BECOME APPARENT, THE CONTRACTOR SHALL NOTIFY SUMMIT IMMEDIATELY.

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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

FIRST FLOOR FRAMING PLAN SCALE: 1/8"=1"

BEAM SCHEDULE					
TAG	SIZE				
ВІ	(1) II-1/8" FLOOR JOIST OR FLOOR TRUSS				
B2	(2) II-7/8" FLOOR JOIST OR FLOOR TRUSS				
B3	(1) 14" FLOOR JOIST OR FLOOR TRUSS				
B4	(2) 14" FLOOR JOIST OR FLOOR TRUSS				
B5	(1) 9-1/4" LSL/LVL				
B6	(2) 9-I/4" L6L/LVL				
B1	(I) II-7/8" L9L/LVL				
B8	(2) II-7/8" LSL/LVL				
B9	(1) 14" LSL/LVL				
BIØ	(2) I4" L5L/LVL				
BII	BII (2) 2xlØ				
NOTES					

HEADER SCHEDULE			
TAG	SIZE	JACKS (EACH END)	
А	(2) 2x6	(1)	
В	(2) 2x8	(2)	
С	(2) 2xlØ	(2)	
D	(2) 2x12	(2)	
E	(2) 9-1/4" LSL/LVL	(3)	
F	(2) 11-1/8" LSL/LVL	(3)	
G	(3) 2x8	(2)	
н	(3) 2xlØ	(2)	
ı	(3) 2xl2	(2)	

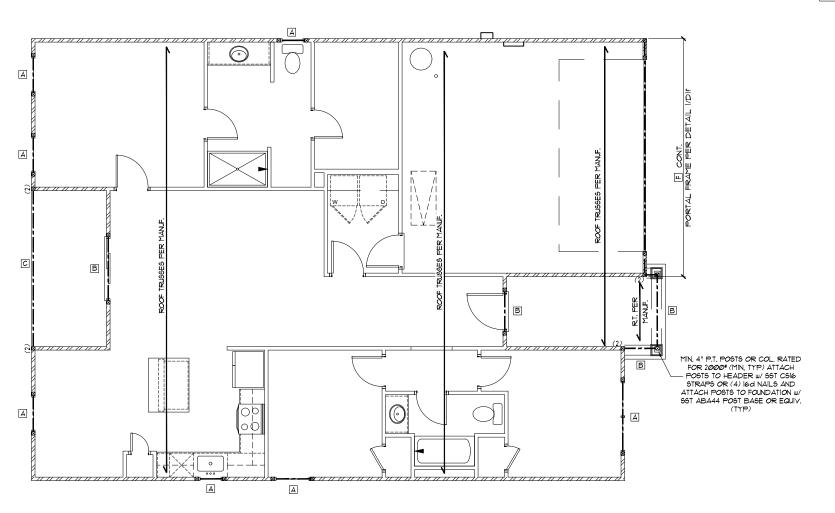
NOTES.

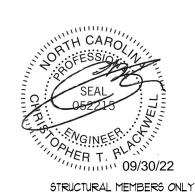
I HEADER SIZES HOWN ON PLANS ARE MINIMAYS. GREATER HEADER SIZES MAY BE USED FOR EASE OF CONSTRUCTION.

2. ALL HEADERS TO BE DROPPED (UND.).

3. SITUD COLUMNS NOTED ON PLAN OVERRIDE STUD COLUMNS LISTED ABOVE (UND.).

KING STUD SCHEDULE			
MAXIMUM HEADER SPAN	MINIMUM KING STUDS E.E.		
3'-Ø"	(1)		
4'-0"	(2)		
8'-0"	(3)		
12'-@"	(5)		
16'-0"	(6)		
KING STUD REQUIREMENT LISTED ABOVE DO NOT APPLY TO			





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Suite Road, 3 Framing Creedmoor gh, NC 27613 I Homes 01 Creed leigh, NC Floor First LGI 720: Rale

4

CURRENT DRAWING

RH

Blanco

DATE: 09/30/2022

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

PRO1ECT #: 3554 T0506

DRAWN BY: JV

CHECKED BY: CTB

ORIGINAL DRAWING

DATE

PROJECT # 5/23/2022 T0499

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET

S3.0

	REQUIRED BRACED WALL PANEL CONNECTIONS				
	MIN.		REQUIRED CONNECTION		
METHOD	MATERIAL	THICKNESS	@ PANEL EDGES	@ INTERMEDIATE SUPPORTS	
CS-WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS! @ 6" O.C.	6d COMMON NAILS: 9 12" O.C.	
GB	GYP9UM BOARD	1/2"	5d COOLER NAILS**  # 7" O.C.	5d COOLER NAILS**  ® T" O.C.	
WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS! @ 6" O.C.	6d COMMON NAILS: 9 12" O.C.	
PF	WOOD STRUCTURAL PANEL	7/16"	PER FIGURE R602.10.6.4	PER FIGURE R602.106.4	
"BASED ON 16" OC STUD SPACING "OR EQUIVALENT PER TABLE RT0235					

#### FIRST FLOOR BRACING (FT) REQUIRED FRONT SIDE 8.8 10.6 RIGHT SIDE 6.3 60.9 REAR SIDE 8.8 19.5 54.2 LEFT SIDE 6.3

# RIGHT

#### BRACED WALL NOTES:

- 1) WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10 FROM THE 2015 INTERNATIONAL RESIDENTIAL CODE AS ALLOWED PER SECTION R602.10 OF THE 2018 NC
- WALLS ARE DESIGNED FOR SEISMIC ZONES A-C AND MAXIMUM WIND SPEEDS OF 130
- 3) BRACING MATERIALS, METHODS AND FASTENERS SHALL BE IN ACCORDANCE WITH IRC TABLE R602.10.4.
- 4) REFER TO ARCHITECTURAL PLAN FOR DOOR/UNDOW OPENING SIZES.
  5) ALL BRACED WALL PANELS SHALL BE FULL WALL HEIGHT AND SHALL NOT EXCEED 10 FEET FOR ISOLATED PANEL METHOD AND 12 FEET FOR CONTINUOUS SHEATHING METHOD
- WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
  MINIMUM PANEL LENGTH SHALL BE PER TABLE R602,10.5.
- 1) THE INTERIOR SIDE OF EXTERIOR WALLS AND BOTH SIDES OF INTERIOR WALLS SHALL BE SHEATHED CONTINUOUSLY WITH MINIMUM 1/2" GYPSUM BOARD (UNO).

  8) FOR CONTINUOUS SHEATHING METHOD, EXTERIOR WALLS SHALL BE SHEATHED ON ALL
- SHEATHABLE SURFACES INCLUDING INFILL AREAS BETWEEN BRACED WALL PANELS, ABOVE AND BELOW WALL OPENINGS, AND ON GABLE END WALLS.
  FLOORS SHALL NOT BE CANTILEVERED MORE THAN 24" BEYOND THE FOUNDATION OR
- BEARING WALL BELOW WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.

  10) A BRACED WALL PANEL SHALL BEGIN WITHIN 10 FEET FROM EACH END OF A BRACED
- WALL LINE.
  THE DISTANCE BETWEEN ADJACENT EDGES OF BRACED WALL PANELS ALONG A
  BRACED WALL LINE SHALL BE NO GREATER THAN 20 FEET.
- DECOMPTION OF THE THE STATE OF THE STATE THAT THE THE TENT THAT THE TOP TH
- PRACED WALL PANEL SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.109.

  BRACED WALL PANEL CONNECTIONS TO FLOOR/CEILING SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.108 (SEE DETAIL 1/D5) FROM DETAIL PACKAGE).
- IB) BRACED WALL PANEL CONNECTIONS TO ROOF SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602:1082 AND FIGURES R602:108(1)4(2)4(3).
- 16) CRIPPLE WALLS AND WALK OUT BASEMENT WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10.11

  17) PORTAL WALLS SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.6.4 (UNO)
- 18) ON SCHEMATIC, SHADED WALLS INDICATE BRACED WALL PANELS.
- ABBREVIATIONS: GB = GYP9UM BOARD

CS-XXX = CONT. SHEATHED PF = PORTAL FRAME

WSP = WOOD STRUCTURAL PANEL ENG = ENGINEERED SOLUTION ENG-PF = ENGINEERED PORTAL FRAME

INSTALL HOLD-DOWNS FOR BRACED WALL END CONDITIONS PER SECTION R602:10.8 AND FIGURE R602:10.1 OF THE 2015 IRC.

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY LGI HOMES COMPLETED/REVISED ON 09/30/22. IT IS THE RESPONSIBILITY OF THE CLIENT TO NOTIFY SUMMIT ENGINEERING, LABORATORY & TESTING, INC. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION SUMMIT CANNOT GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

#### STRUCTURAL MEMBERS ONLY

ENGINEERING SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS ON THIS DOCUMENT, SEAL DOES NOT INCLUDE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS. ANY DEVIATIONS OR DISCREPANCIES ON PLANS ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF SUMMIT ENGINEERING, LABORATORY & TESTING, INC. FAILURE TO DO SO WILL VOID SUMMIT LIABILITY.

STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

FIRST FLOOR BRACING PLAN SCALE: 1/8"=1"

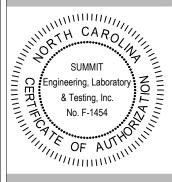
555565555555555555555555555555555555  $\odot$ CS-WSF 6'-3" CS-WSP 4'-1" CS-WSP

CS-WSF

CS-WSF



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14

CURRENT DRAWING

Bracing

Floor

First

RH

Blanco

DATE: 09/30/2022

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

PRO1ECT #: 3554 T0506

DRAWN BY: JV

CHECKED BY: CTB

ORIGINAL DRAWING

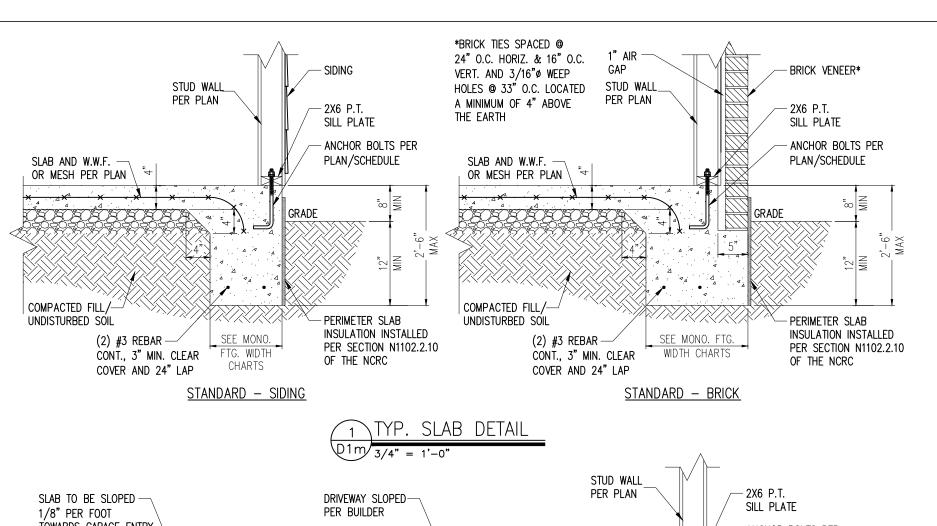
DATE 5/23/2022

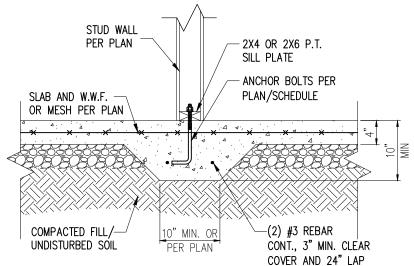
PROJECT #

T0499

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

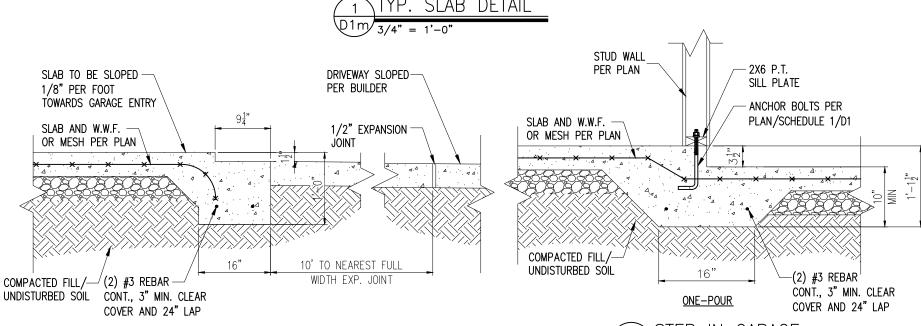
S7.0





TYP. THICKENED SLAB DETAIL

1 1 3 4" = 1'-0"



#### WALL ANCHOR SCHEDULE

TYPE OF ANCHOR	MIN. CONC.	SPACING	INTERIOR	EXTERIOR
	EMBEDMENT	EMBEDMENT	WALL	WALL
1/2"ø A307 BOLTS w/	7"	6'-0"	YES	YES
STD. 90° BEND				
SST - MASA	4"	6'-0"	NO	YES
1/2"ø THREADED ROD w/	7"	6'-0"	YES	YES
w/ SST SET-XP EPOXY				
1/2"ø SST TITEN HD	4-1/4"	6'-0"	YES	YES

#### NOTE

AB AT GARAGE DOOR

1. REFER TO GENERAL NOTES & SPECIFICATIONS ON SHEET CS2

2. PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.

3. SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS,

FOR ADDITIONAL INFORMATION.

SLOPES AND DEPRESSIONS.

- 1) INSTALL ALL ANCHORS 12" MAX. FROM ALL BOTTOM PLATE ENDS AND JOINTS.
- 2) EQUIVALENT ANCHORS MAY BE USED. SIZE & SPACING PER MANUF. SPECS.

#### MONOLITHIC FOOTING WIDTH

# OF STORIES	WIDTH BASED ON SOIL BEARING CAPACITY			
	1500 PSF	2000 PSF	2500 PSF	
1 STORY — STD.	16"	16"	16"	
1 STORY - BRICK VENEER	21"*	21"*	21"*	
2 STORY - STD.	16"	16"	16"	
2 STORY - BRICK VENEER	21"*	21"*	21"*	
3 STORY - STD.	23"	18"	18"	
3 STORY - BRICK VENEER	32"*	24"*	24"*	
*E" PRIOR LEDGE HAS BEEN ARRED TO THE MONOLITHIS				

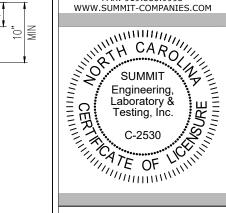
\*5" BRICK LEDGE HAS BEEN ADDED TO THE MONOLITHIC FOOTING WIDTH FOR BRICK SUPPORT



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Standard Details
Monolithic Slab Details
LGI Homes
3037 Sherman Drive
Lancaster, SC 29720

CURRENT DRAWING

DATE: 09.30.22

SCALE: NTS

PROJECT #: 3554.T0040

DRAWN BY: MSB

CHECKED BY: JCEF

ORIGINAL DRAWING

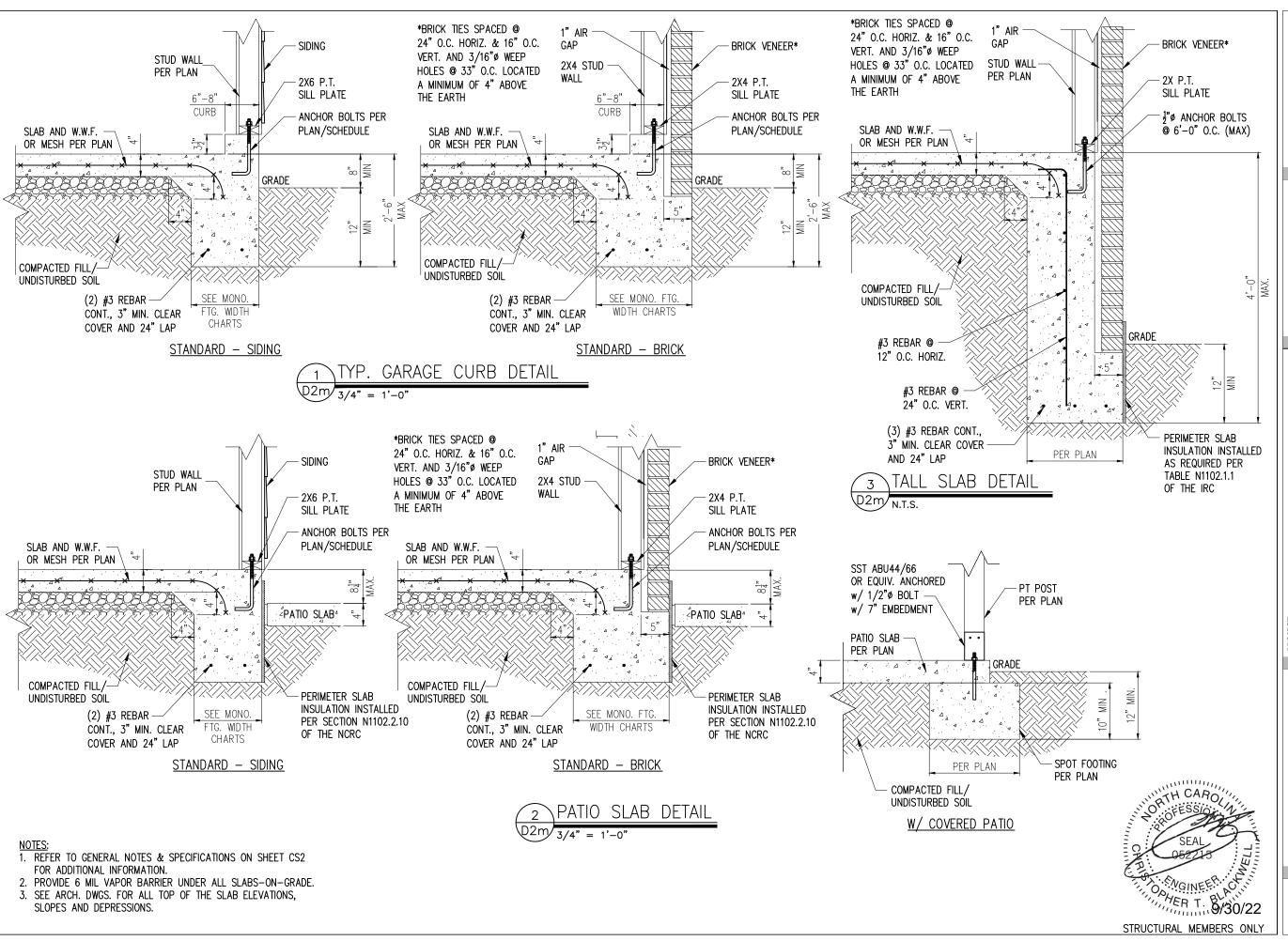
DATE 10/01/19

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PROJECT #

24512

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Standard Details
Monolithic Slab Details
LGI Homes
3037 Sherman Drive
Lancaster, SC 29720

CURRENT DRAWING

DATE: 09.30.22

SCALE: NTS

PROJECT #: 3554.T0040

DRAWN BY: MSB
CHECKED BY: JCEF

ORIGINAL DRAWING

DATE 10/01/19

REFER TO COVER SHEET FOR A

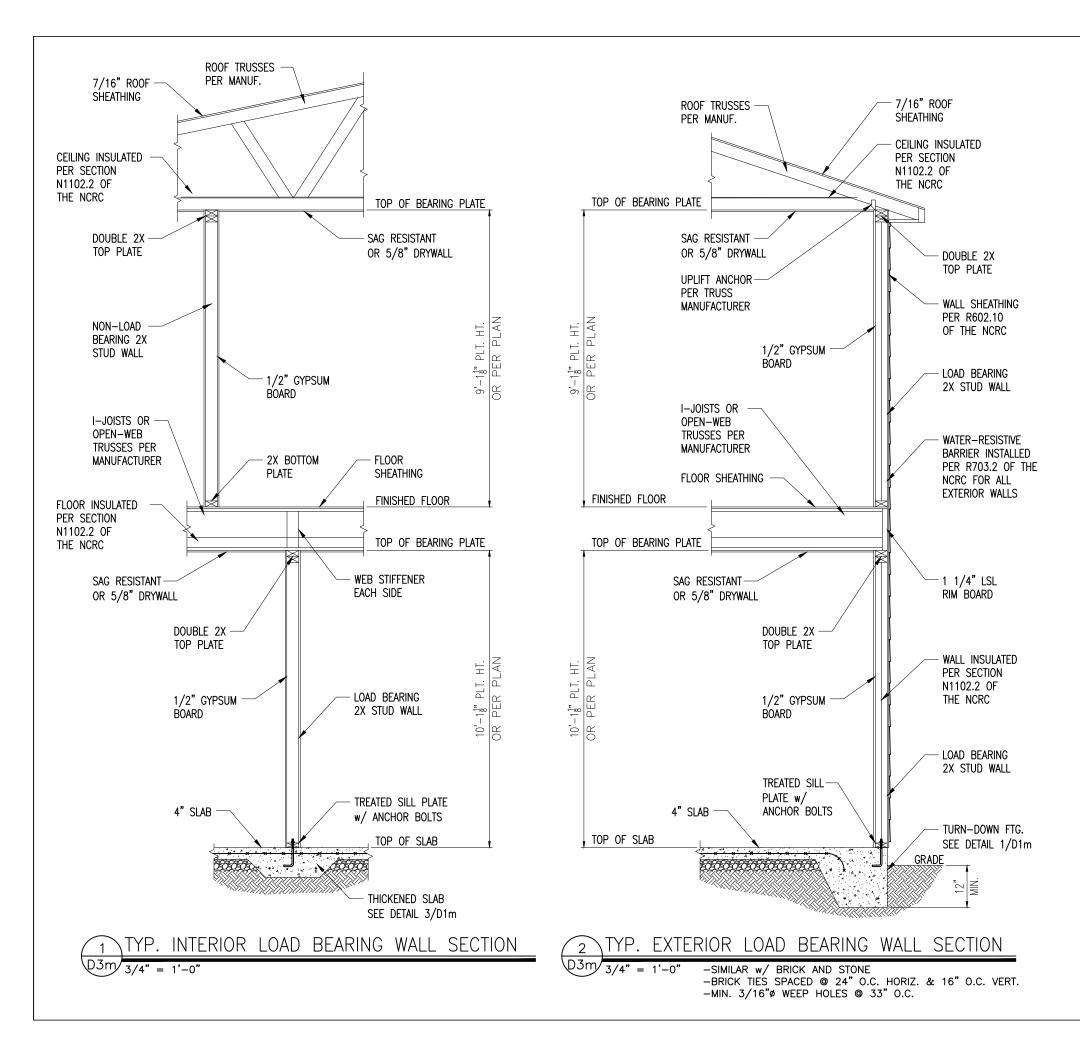
PROJECT #

24512

COMPLETE LIST OF REVISIONS

SHEE

D<sub>2</sub>m





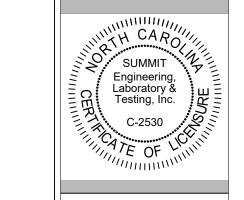
- NOTES: 1. REFER TO GENERAL NOTES & SPECIFICATIONS ON SHEET CS2 FOR ADDITIONAL INFORMATION.
- 2. PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
- 3. SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.



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Details LGI Homes 3037 Sherman Drive Lancaster, SC 29720 Slab Standard Details Monolithic

CURRENT DRAWING

DATE: 09.30.22

SCALE: NTS

PROJECT #: 3554.T0040

DRAWN BY: MSB

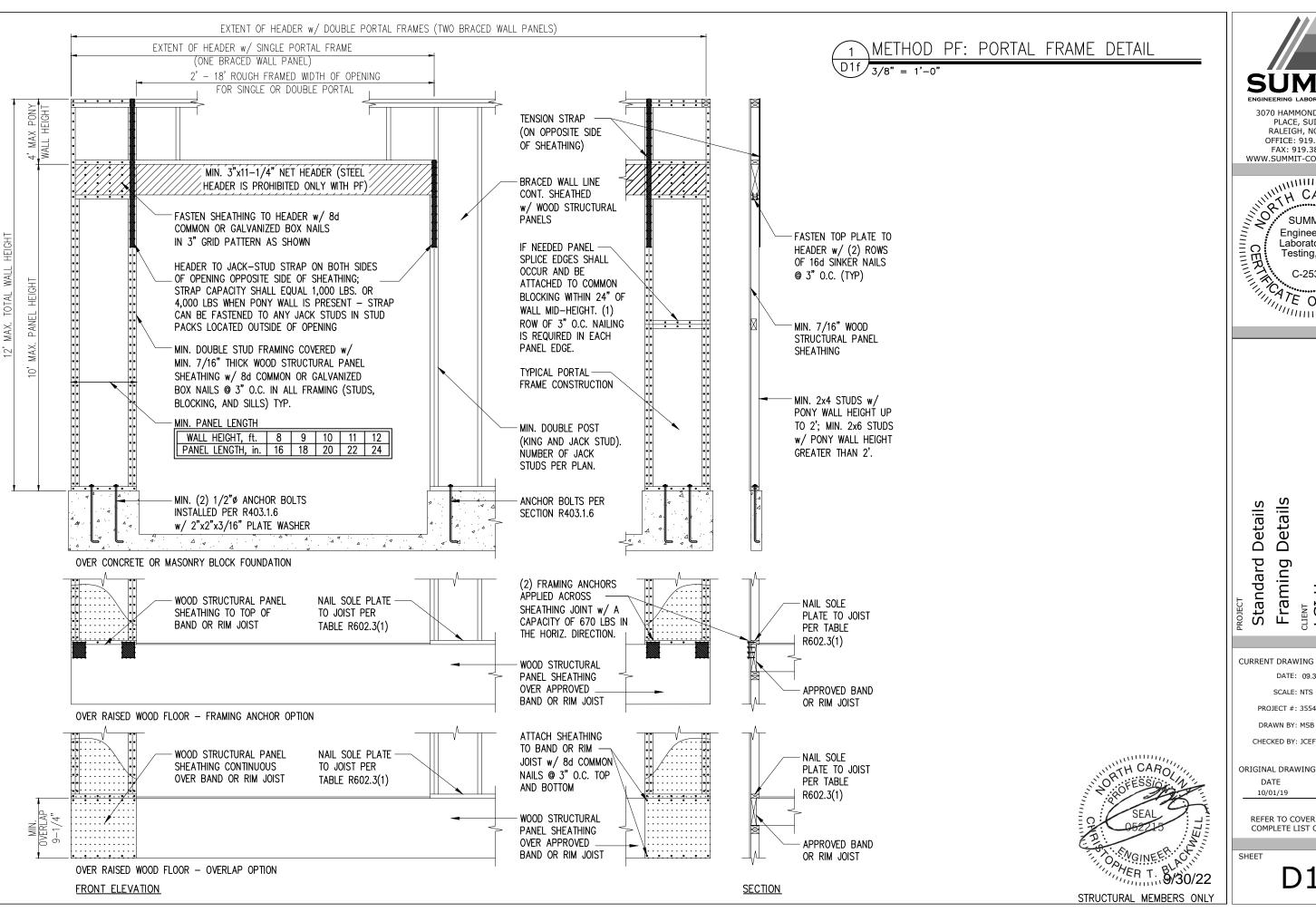
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ORIGINAL DRAWING

DATE 10/01/19 PROJECT # 24512

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D<sub>3</sub>m





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> Details Details CLGI Homes 3037 Sherma Lancaster, SC Framing Standard

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DATE: 09.30.22

SCALE: NTS

PRO1ECT #: 3554 T0040

DRAWN BY: MSB

ORIGINAL DRAWING DATE

10/01/19

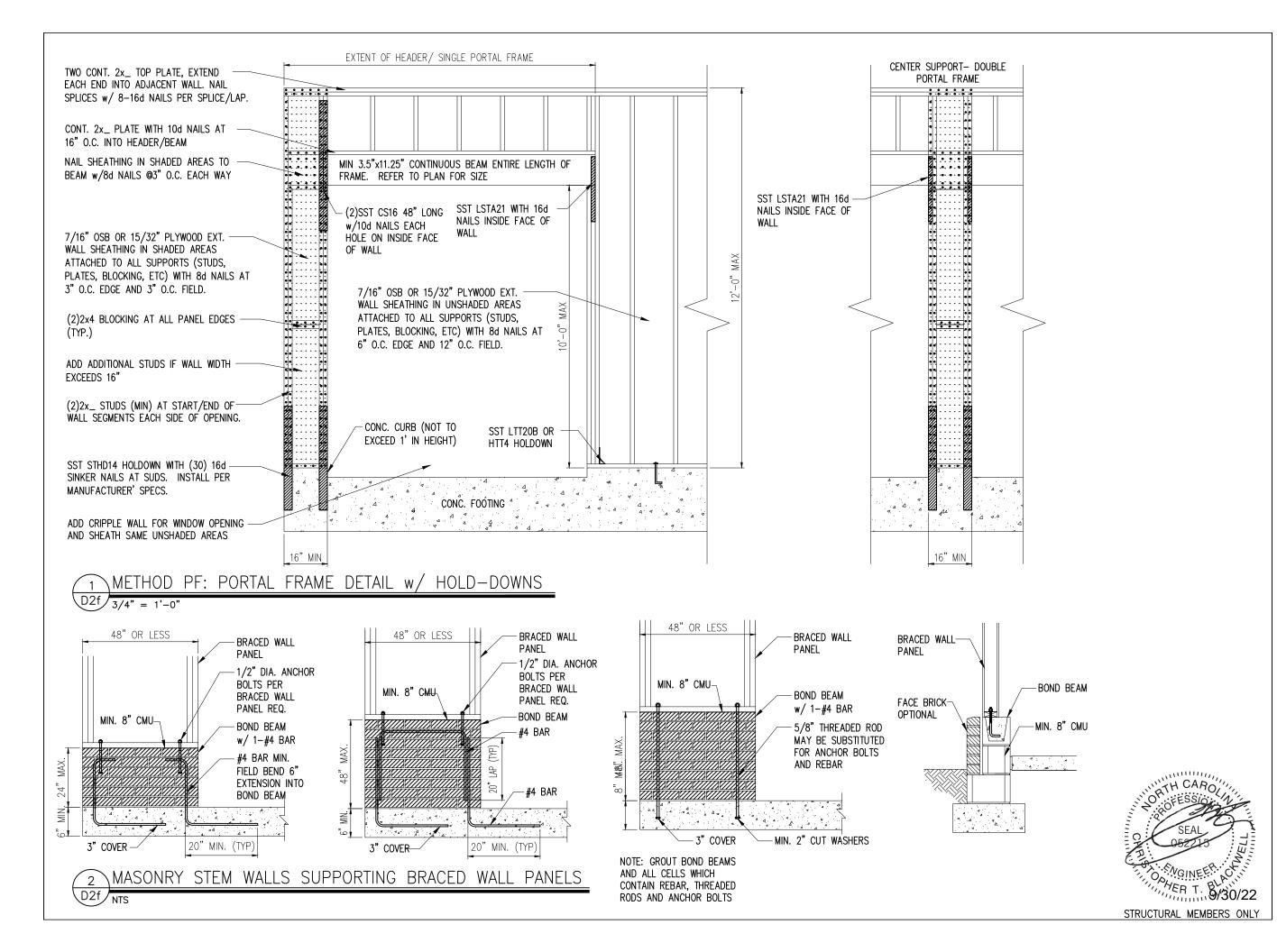
PROJECT # 24512

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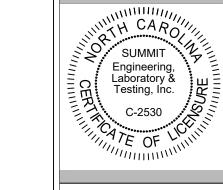
SHEET

D1f





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PROJECT #: 3554.T0040

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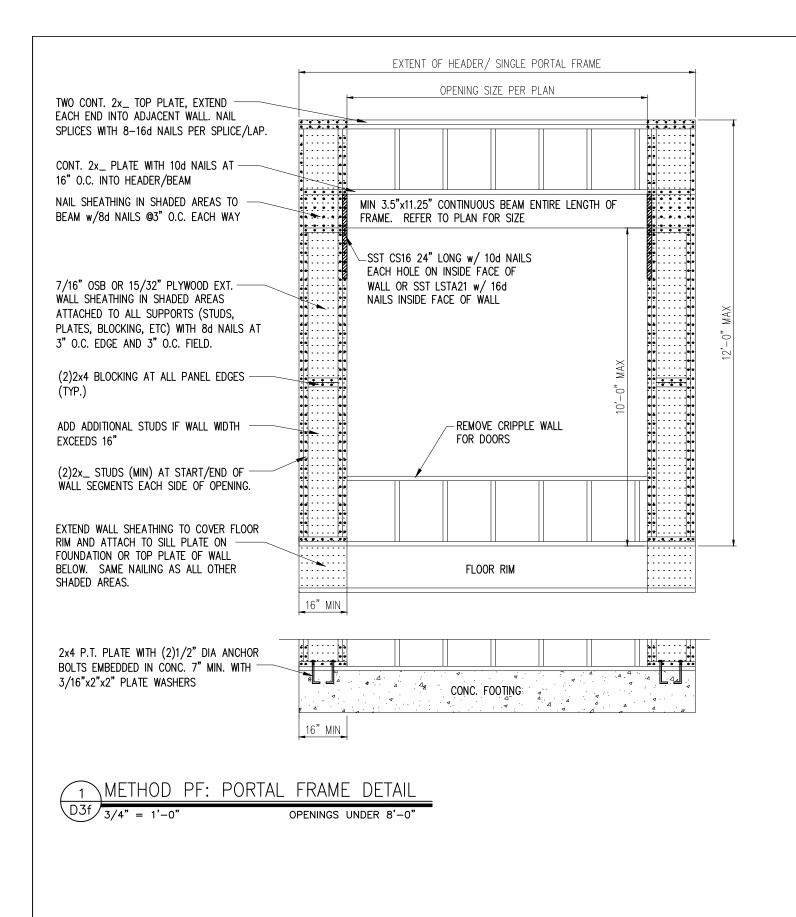
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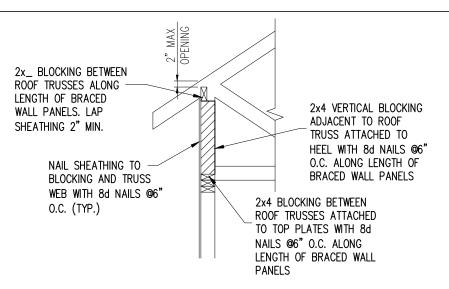
DATE 10/01/19 PROJECT # 24512

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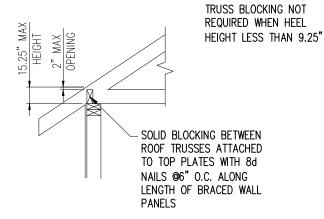
SHEET

D2f





#### HEEL HEIGHT BETWEEN 15.25" AND 48"

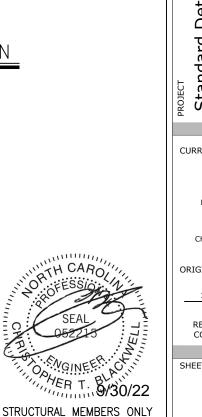


HEEL HEIGHT BETWEEN 9.25" AND 15.25"

TYP. WALL PANEL TO

2 ROOF TRUSS CONNECTION

D3f 1" = 1'-0"





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3037 Sherman Drive
Lancaster, SC 29720

CURRENT DRAWING

DATE: 09.30.22

SCALE: NTS

PROJECT #: 3554.T0040

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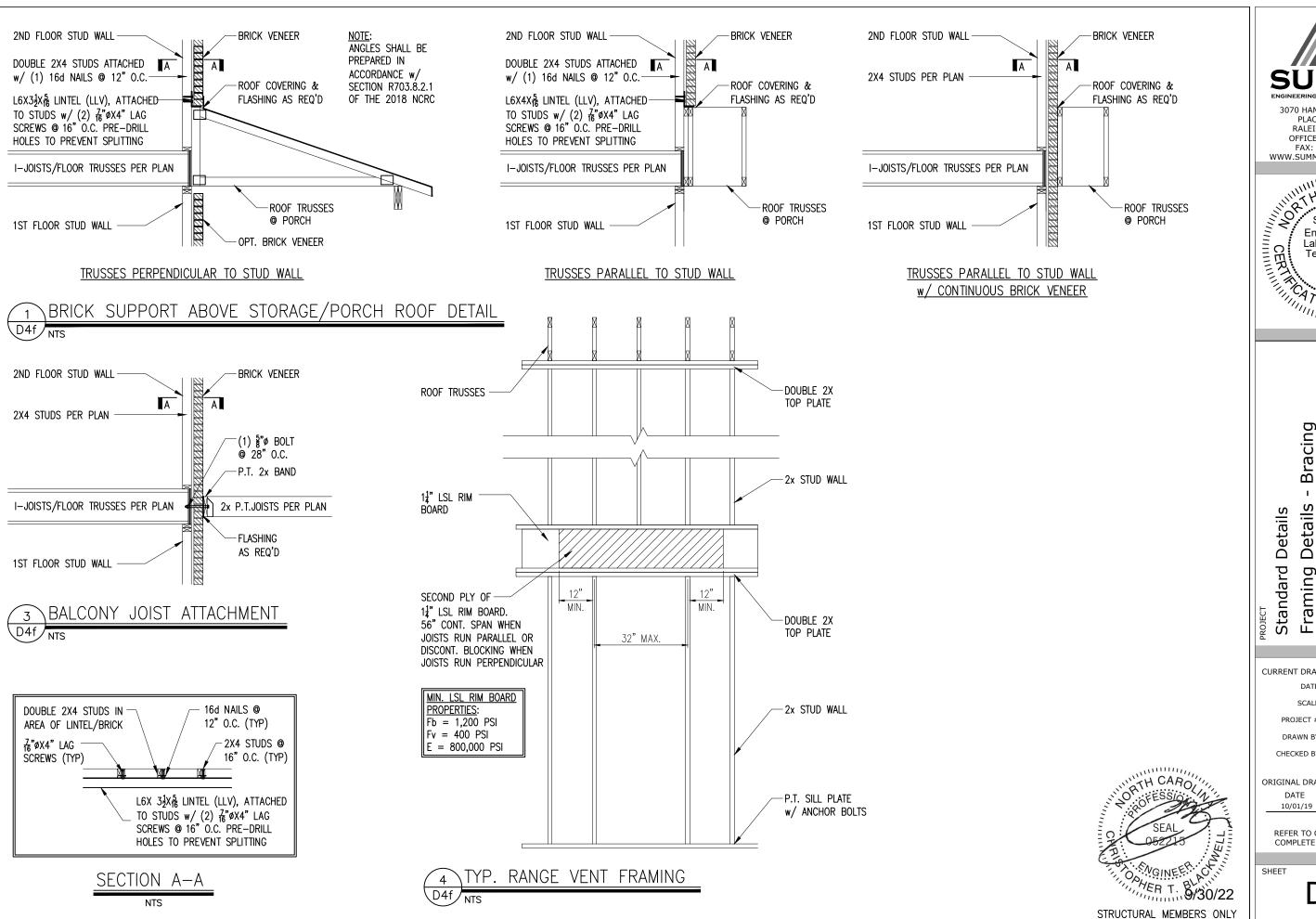
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D3f



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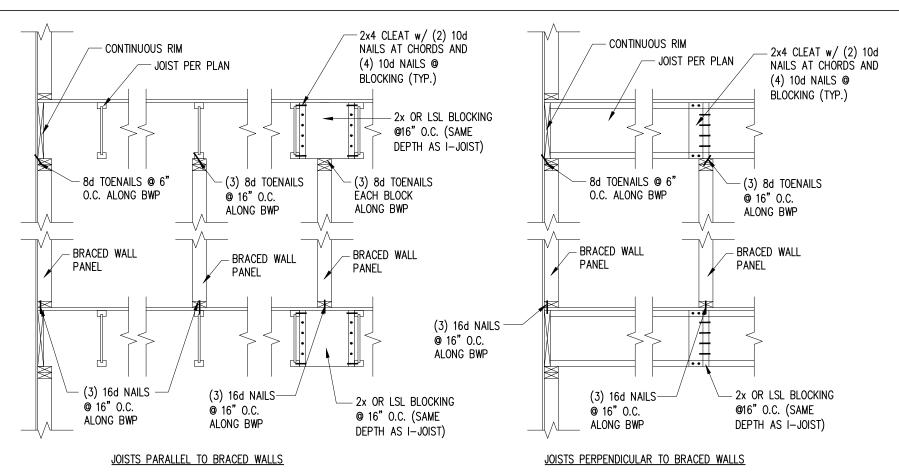
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D4f



PER PLAN SPECS. TYP. HOLD DOWN DETAIL

BRACED WALL

PANEL. REFER TO

PLAN FOR SPECS.

SST HOLD DOWN

PER PLAN SPECS.

2x FULL HEIGHT

STUDS w/ 16d

NAILS @ 6" O.C.

SST HOLD DOWN

BRACED WALL

PANEL. REFER TO PLAN FOR SPECS.

#### 2x BLOCKING (2) 2x6 BEAM-@ 16" O.C. (UPSET) MIN. (2) BAYS

(2) 2x FULL HEIGHT

STUDS w/ 10d NAILS

@ 6" O.C. EACH PLY

2x FULL HEIGHT

STUDS w/ 16d

NAILS @ 6" O.C.

(2) 2x FULL HEIGHT

STUDS w/ 10d NAILS

@ 6" O.C. EACH PLY

STRAP EACH 2x4 C.J. TO STUD IN WALL ABOVE w/ SST CS16 (13" MIN. END LENGTH) OR EQUIV.

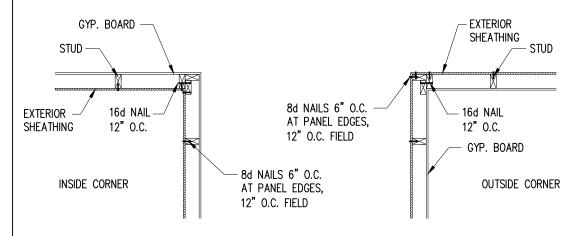
2x4s @ 16" O.C. ATTACH TO BEAM w/ SST LS30 w/ (6) 10d NAILS (OR EQUIV.) ATTACH TO EACH OTHER w/(4)10d NAILS

FRAMING OVER STAIRS

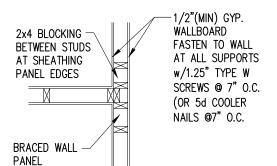
(2) 2X12 BEAM-

(FURRED DOWN)

#### TYP. WALL PANEL TO FLOOR/CEILING CONNECTION D5f



TYP. EXTERIOR CORNER FRAMING





D5f





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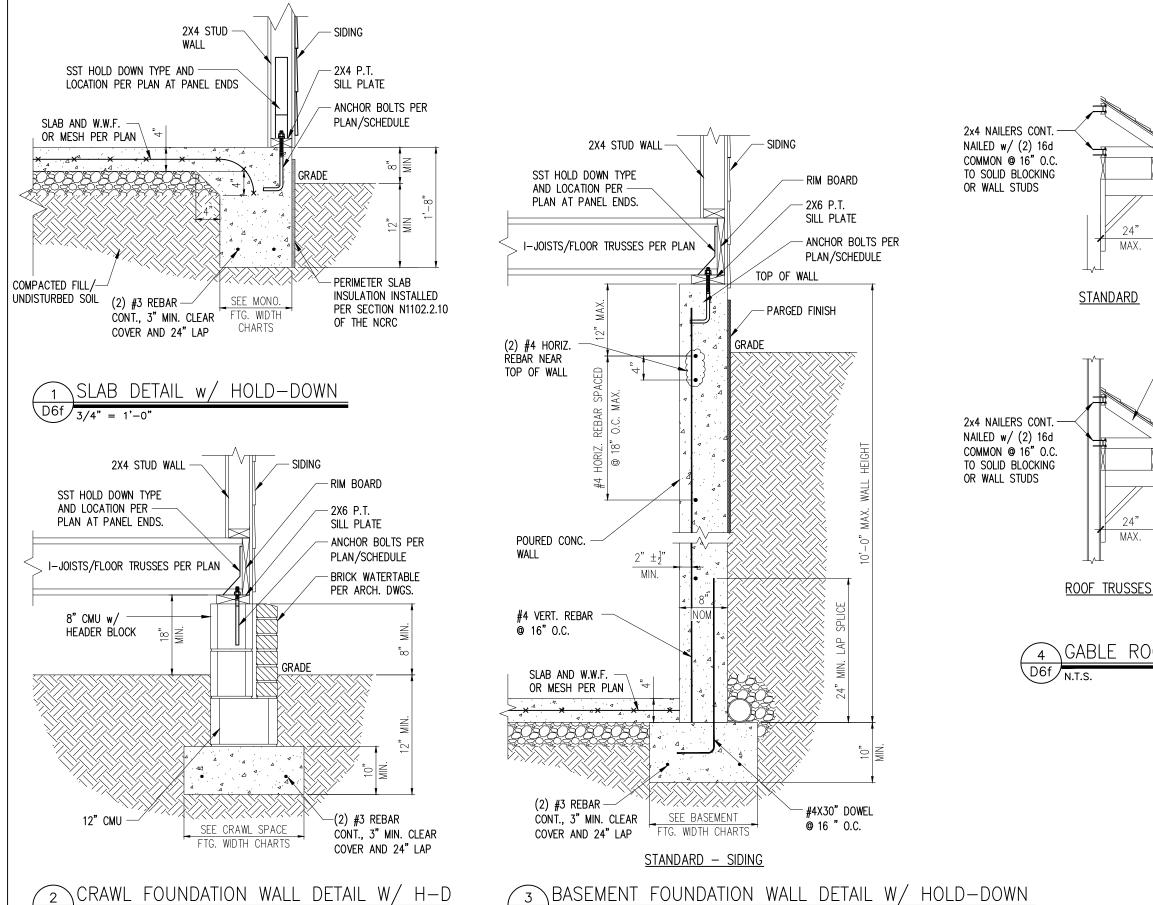
CHECKED BY: JCEF

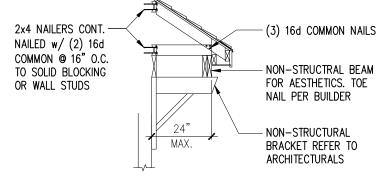
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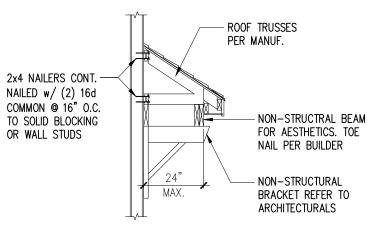
DATE 10/01/19 PROJECT # 24512

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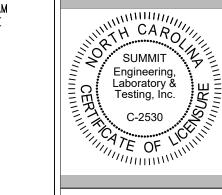








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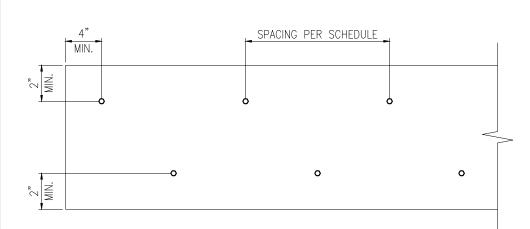
ORIGINAL DRAWING

DATE 10/01/19 PROJECT # 24512

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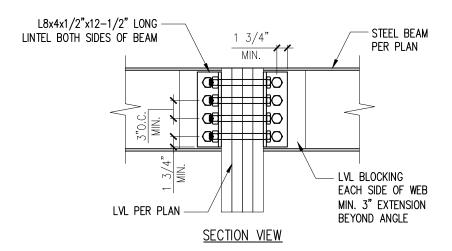
D6f

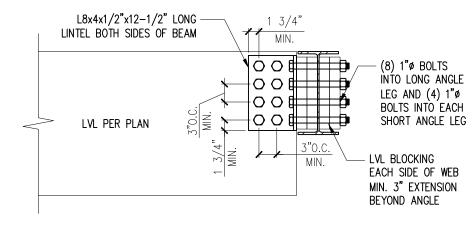
BASEMENT FOUNDATION WALL DETAIL W/ HOLD-DOWN



**ELEVATION VIEW** 

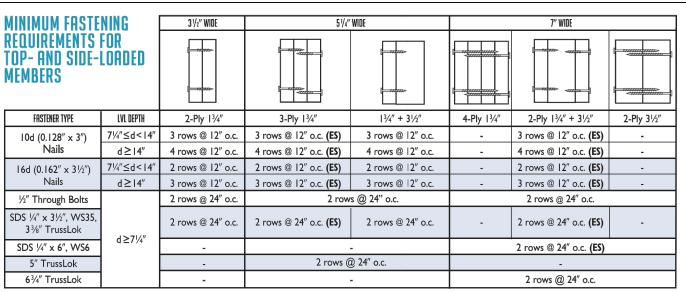
# MULTI-PLY BEAM CONNECTION DETAIL





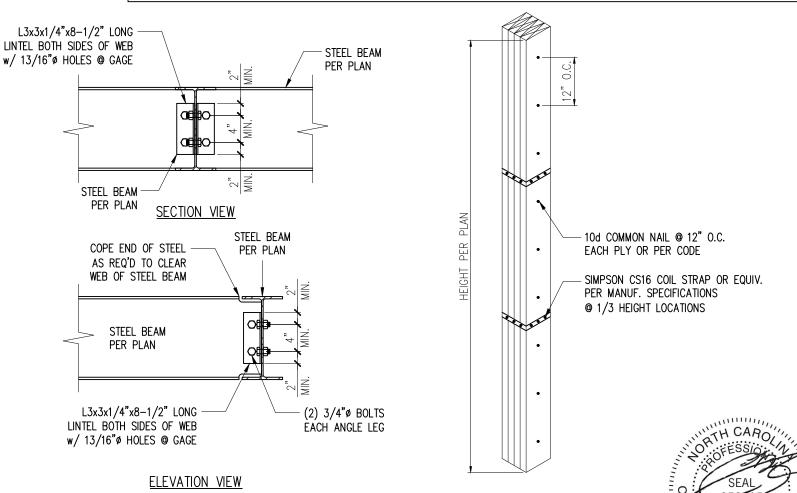
**ELEVATION VIEW** 

TO STEEL DETAIL



STEEL TO STEEL DETAIL

- multiple-ply members must meet the minimum fastening and side-loading capacity requirements given on page 48.
- 2. Minimum fastening requirements for depths less than  $7\frac{1}{4}$  require special consideration. Please contact your technical representative
- 3. Three general rules for staggering or offsetting for a certain fastener schedule: (1) if staggering or offsetting is not referenced, then none is required;
- (2) if staggering is referenced, then fasteners installed in adjacent rows on the front side are to be staggered up to one-half the o.c. spacing, but maintaining the fastener clearances above; and
- (3) if "ES" is referenced, then the fastener schedule must be repeated on each side, with the fasteners on the back side offset up to one-half the o.c. spacing of the front side (whether or not it is staggered).

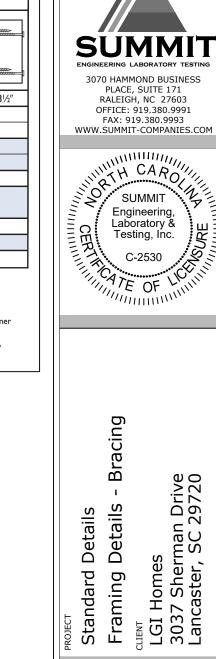


MULTI-PLY STUD

N.T.S

CONNECTION DETAIL

4+ PLIES



# Details Details Standard Framing

CURRENT DRAWING

DATE: 09.30.22

SCALE: NTS

PRO1ECT #: 3554 T0040

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ORIGINAL DRAWING DATE

10/01/19

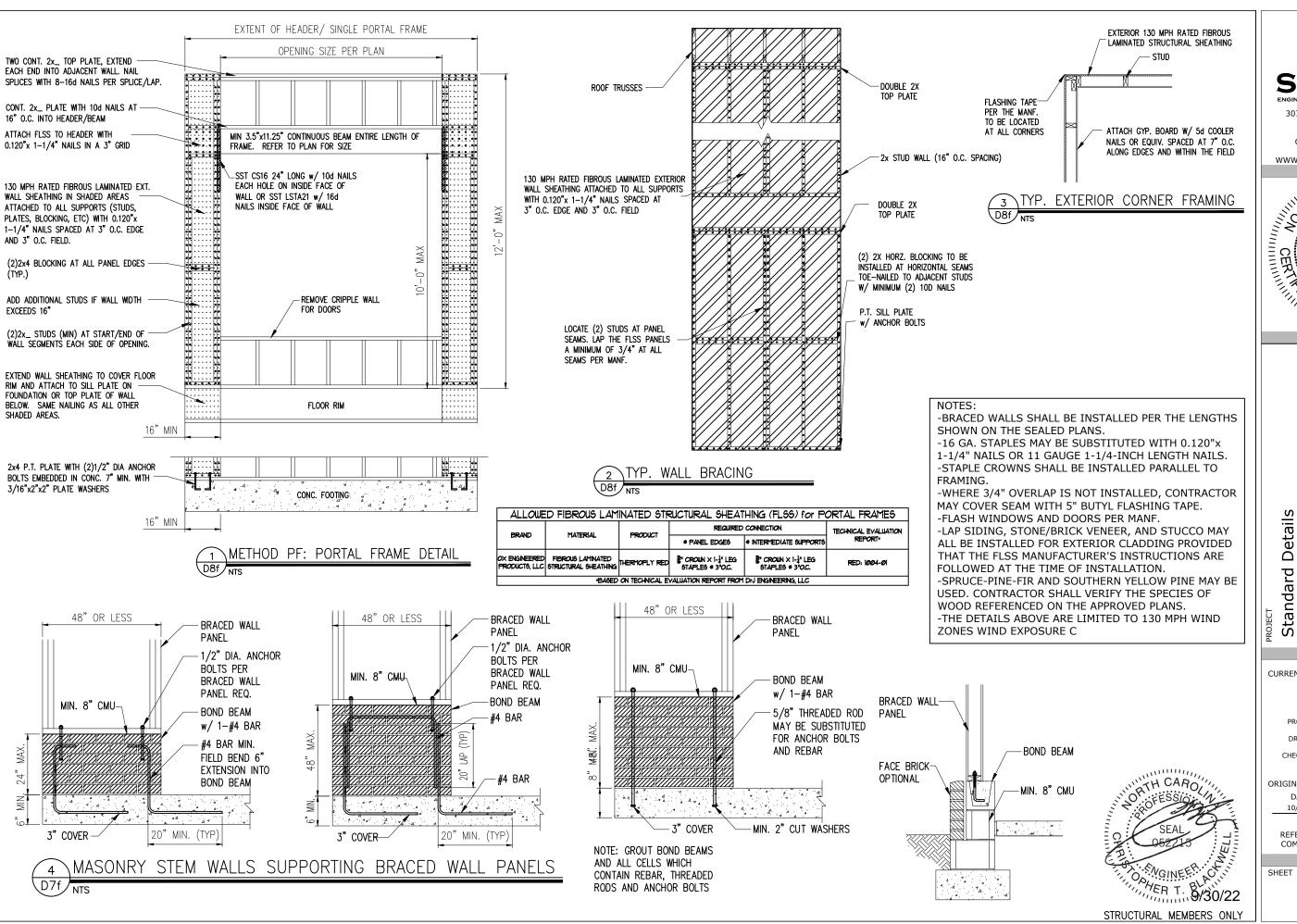
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# Bracing Details CLENT LGI Homes 3037 Sherma Lancaster, SC Framing

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CURRENT DRAWING

DATE: 09.30.22

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PRO1ECT #: 3554 T0040

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