

# BUFFINGTON

CANE MILL ESTATES  
LOT 21

PLAN ID: 060120.1201



110 VILLAGE TRAIL SUITE 215  
WOODSTOCK, GA. 30188



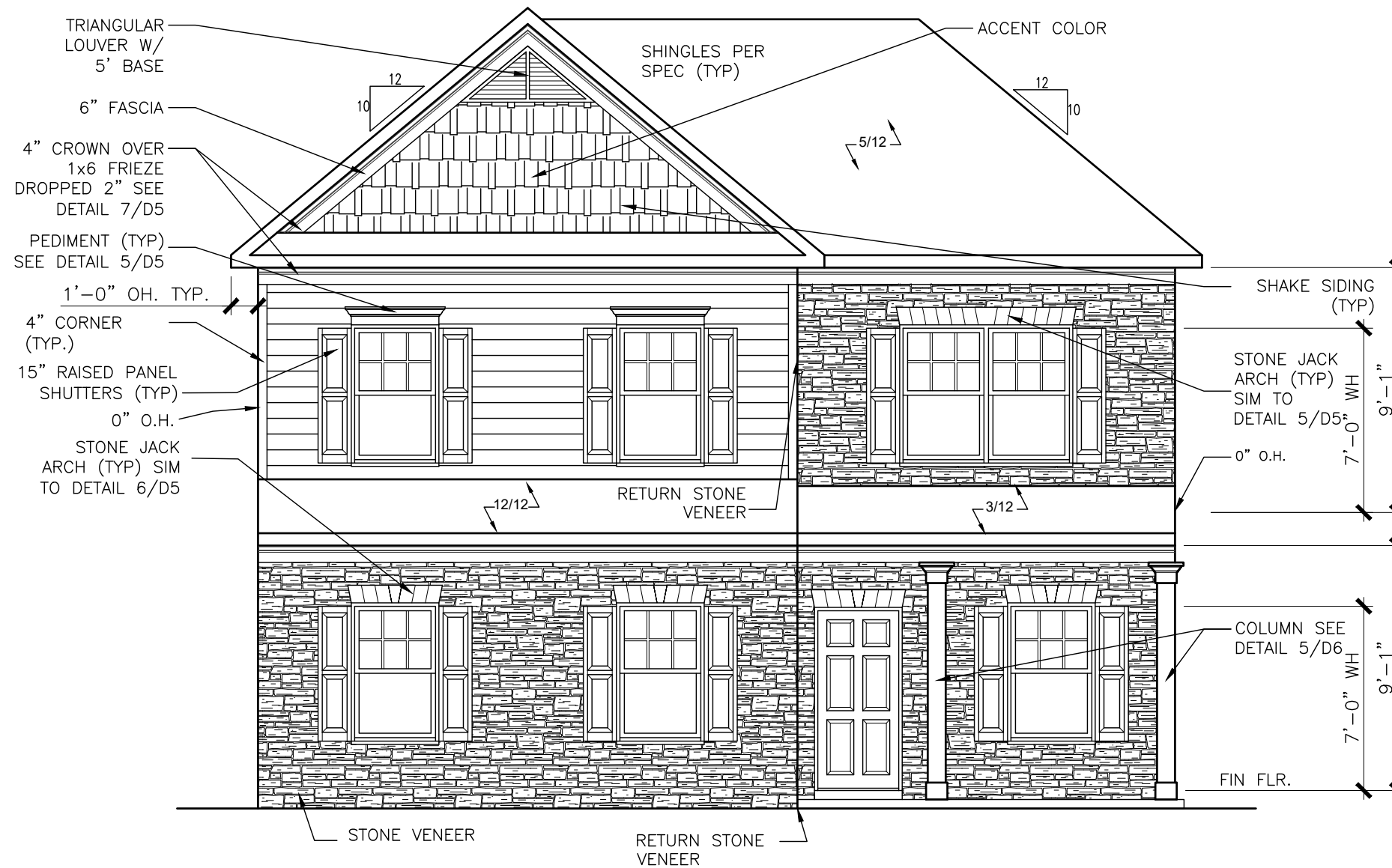
DRAWING INDEX	
A0.0	COVER SHEET
A1.1	FRONT ELEVATIONS
A2.1	SIDE & REAR ELEVATIONS
A3.1	SLAB FOUNDATIONS
A5.1	FIRST FLOOR PLANS & DETAILS
A5.2	SECOND FLOOR PLANS & DETAILS
A6.1	ROOF PLANS
A7.2-A7.3	ELECTRICAL PLANS

AREA TABULATION	
FIRST FLOOR	1100
SECOND FLOOR	1448
TOTAL	2548
GARAGE	400
FRONT PORCH (COVERED)	86
REAR PATIO (COVERED)	120

PLAN REVISIONS			
DATE	BY	REVISION	PAGE #
10/2/2019	AW	PCR #3254 Reduced island framing depth 1" to accommodate 48" countertop.	A1.5
10/2/2019	AW	PCR #3256 showed Obath switches on door adjacent to W.I.C.	A7.3
10/2/2019	AW	PCR #3247 Added 3-way switches to Owner's Suite light when optional Laundry door is chosen	A7.3
10/8/2019	AW	PCR #3292 moved kitchen light switches over to clear backsplash bullnose on wall adjacent to stairs	A7.2
10/16/2019	AW	Revised location for tankless hot water heater	A3.1, A5.1, A7.2
11/1/2019	AW	PCR #3314 Relocated switch to attic light for the B&C roof massings	A7.2
2/26/2020	AW	PCR #3638 Added 1x10 on front elevations M & T	A1.16, A1.19
6/1/2020	MM	PCR #3765 Added note to return veneer ILO siding on second floor returns above front door.	A1.6, A1.11, A1.15, A1.17
8/11/2020	AW	Updated elevs M & T to remove cedar columns	A1.16, A1.19
10/1/2020	AW	PCR #4084 Removed opt. fireplace in corner location (for 10/1/20 release)	A3.1, A5.1, A7.2, A8.1
11/6/2020	MM	Removed overhang at front porch	A1.1-A1.19, A6.1-A6.1.2
12/1/2020	MM	Shifted upper run of stairs 2" from landing towards outside of house	A5.1, A5.2
12/1/2020	MM	PCR #4239 Changed 2x6 walls at Owner's Bath vanity & WC exterior wall to 2x4 walls	A5.2, A5.2.1

GOVERNMENTAL CODES & STANDARDS
HOME TO BE BUILT TO CONFORM TO ALL APPLICABLE LOCAL CODES, PRACTICES AND STANDARDS
BUILDING CODE ANALYSIS / DESIGN CRITERIA
HOME TO BE BUILT TO MEET OR EXCEED ALL LOCAL CODES AND DESIGN CRITERIA

# CANE MILL ESTATES LOT 21



FRONT ELEVATION "F"

SIDE ENTRY GARAGE

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

ALL NON-MASONRY RETURNS TO BE HORIZONTAL SIDING

SEE SHEET D3 OF SDH TYPICAL DETAILS FOR SOFFIT DETAILS PER SOFFIT MATERIAL

DATE	REVISION	BY	#	#	#	#	#



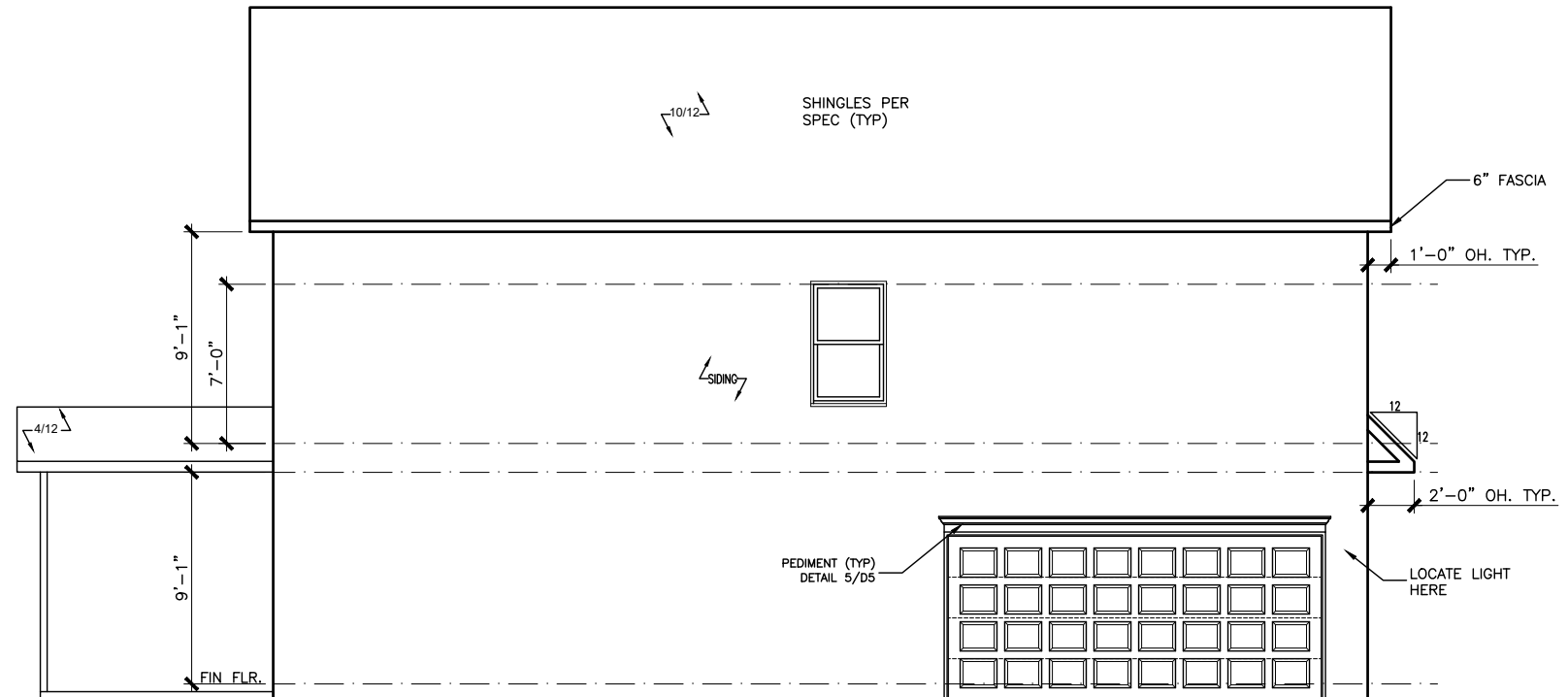
ELEVATIONS  
FRONT ELEVATION  
BUFFINGTON

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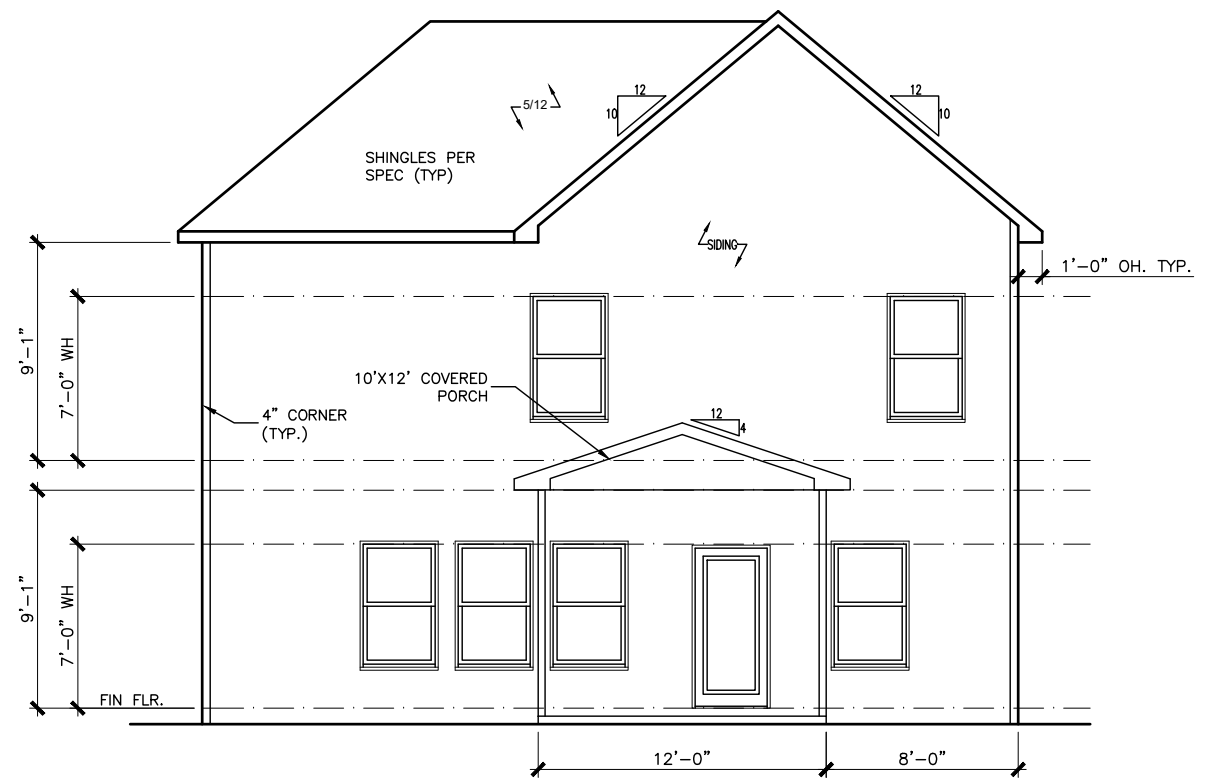
# CANE MILL ESTATES LOT 21



LEFT ELEVATION "F"

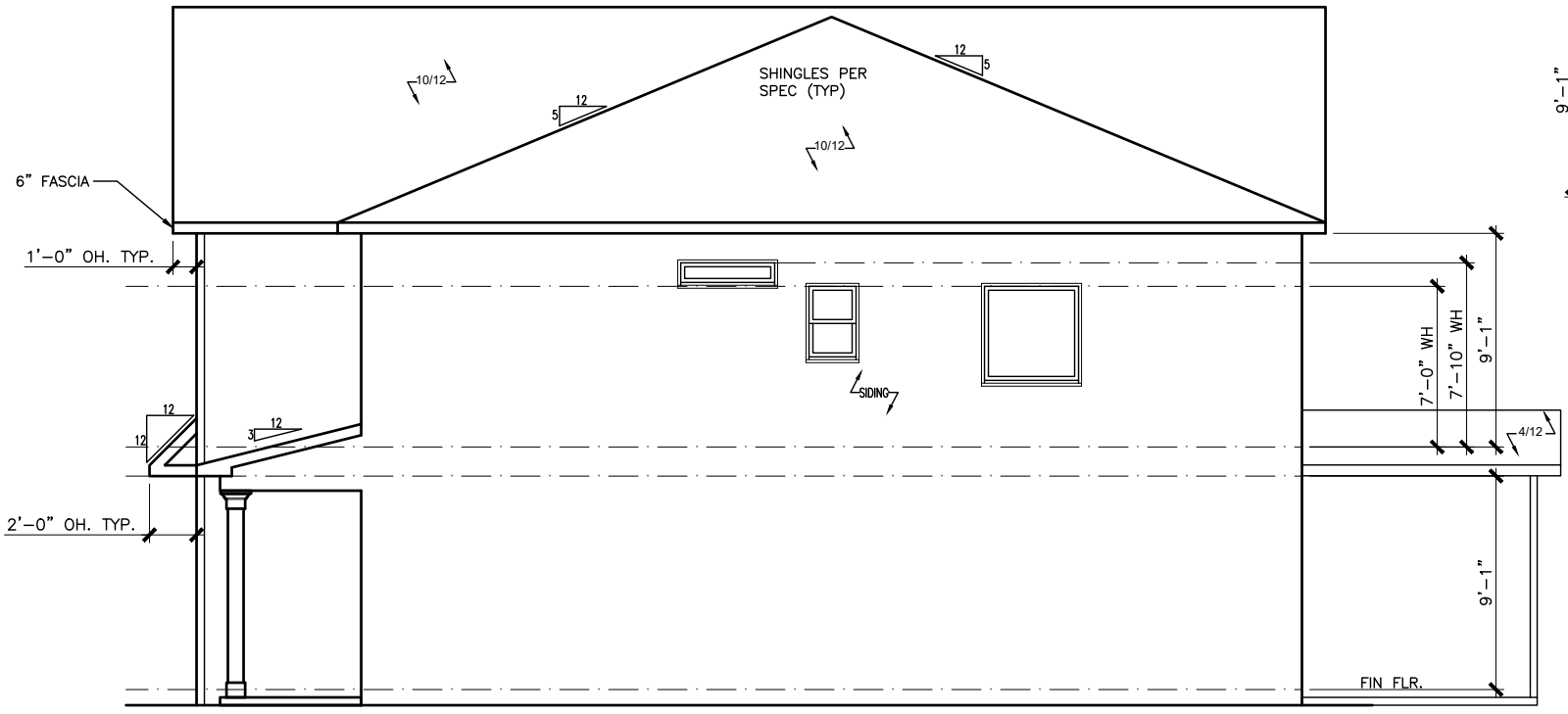
SCALE: 1/8" = 1'-0"

SIDE ENTRY GARAGE



REAR ELEVATION "F"

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



RIGHT ELEVATION "F"

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

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**SMITH DOUGLAS HOMES**  
QUALITY | INTEGRITY | VALUE

ELEVATIONS  
SIDES AND REAR  
BUFFINGTON

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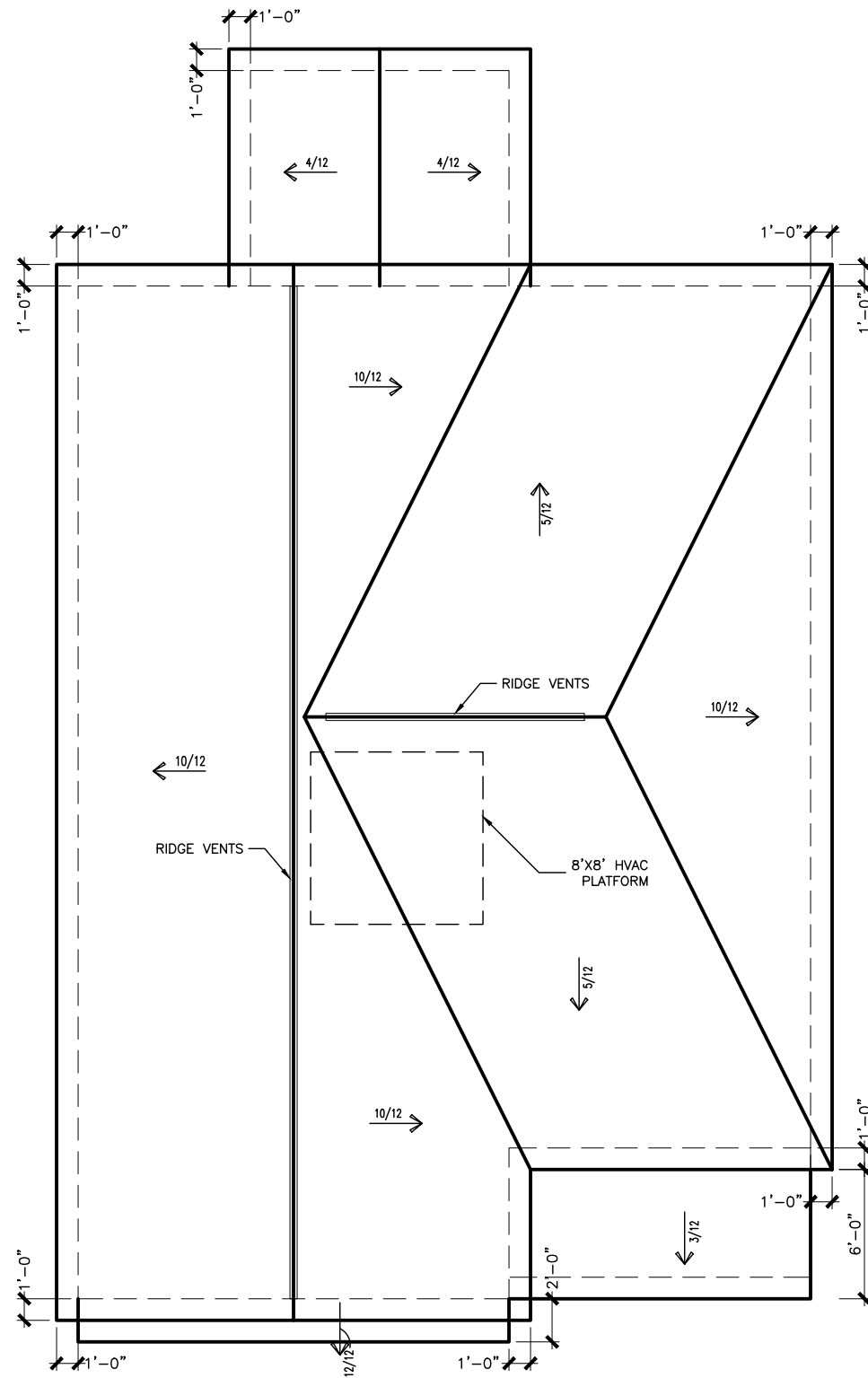








# CANE MILL ESTATES LOT 21



ROOF LAYOUT "F"

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

DATE	REVISION	BY



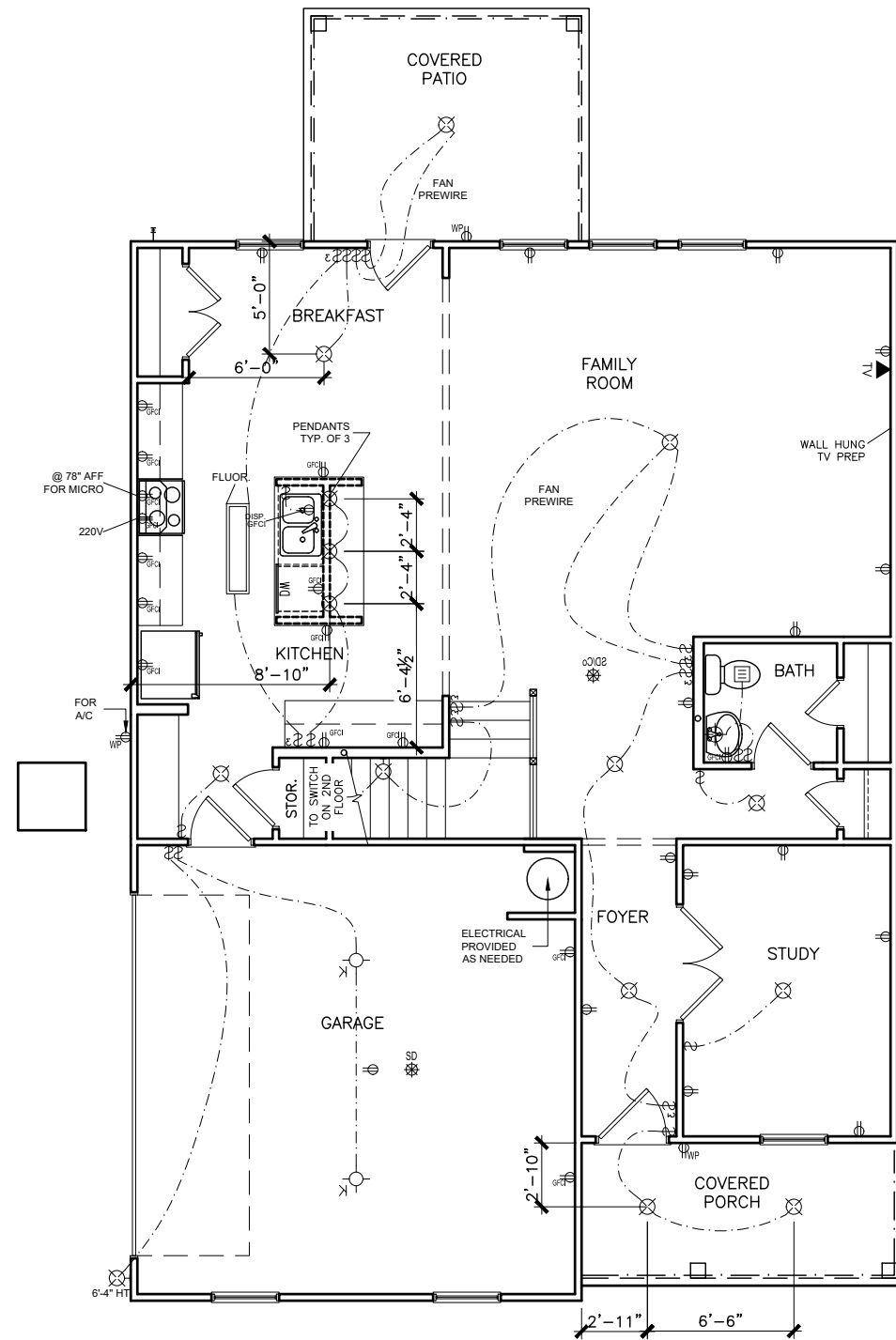
ROOF PLAN  
ROOF PLAN  
BUFFINGTON

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PAGE NO: A6.1	

# CANE MILL ESTATES LOT 21



## ELECTRICAL LEGEND

\$	SWITCH	TV	TV
\$3	3 WAY SWITCH	⊕	120V RECEPTACLE
\$4	4 WAY SWITCH	⊕	120V SWITCHED RECEPTACLE
⊗	CEILING FIXTURE	⊕	220V RECEPTACLE
⊕ <sub>K</sub>	KEYLESS	⊕ <sub>GFCI</sub>	GFCI OUTLET
⊗	WALL MOUNT FIXTURE	⊕ <sub>AFCI</sub>	ARCH FAULT CIRCUIT INTERRUPTER
○	CEILING FIXTURE	† <sub>GL</sub>	GAS LINE
●	FLEX CONDUIT	† <sub>WL</sub>	WATER LINE
CH	CHIMES	⊥	HOSE BIBB
PH	TELEPHONE	⊕	FLOOD LIGHT
SD/Cd	SMOKE DETECTOR & CARBON MONOXIDE	⊕	1x4 LUMINOUS FIXTURE
SO	SECURITY OUTLET	⊕	CEILING FAN
□	GARAGE DOOR OPENER	—	ELECTRICAL WIRING
⊕	EXHAUST FAN	⊕	CEILING FIXTURE
⊕	FAN/LIGHT		

ELECTRICAL PLANS TO FOLLOW ALL LOCAL CODES

APPROX. FIXTURE HGTS (MEASURED FROM BOTTOM OF FIXTURE)

BREAKFAST/DINING ROOM	63" ABOVE FINISHED FLOOR
KITCHEN PENDANT LIGHTS	33" ABOVE COUNTER TOP
TWO STORY FOYER FIXTURE	96" ABOVE FINISHED FLOOR
CEILING FAN	96" ABOVE FINISHED FLOOR

NOTE: FINAL PLACEMENT OF PHONE/CABLE T.B.D. ON SITE BY THE BUILDER

FIRST FLOOR ELECTRICAL PLAN

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

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REVISION					
DATE					



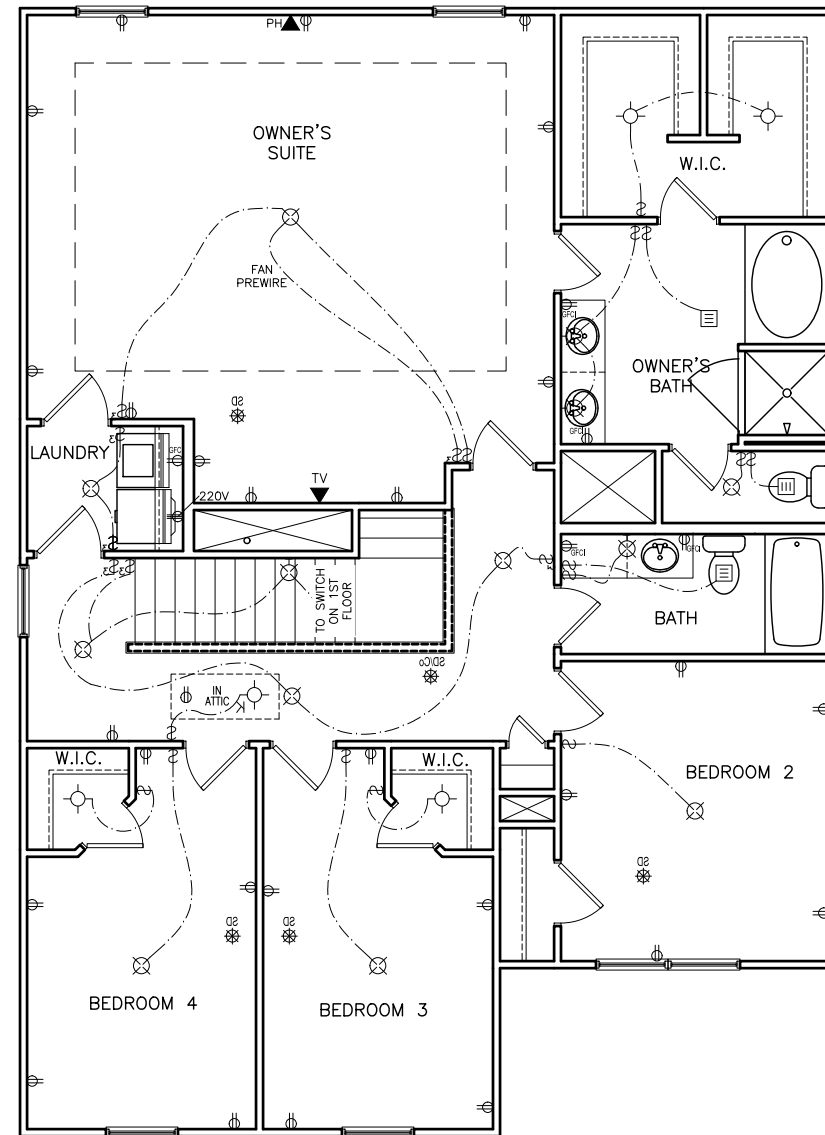
ELECTRICAL PLAN  
FIRST FLOOR  
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PAGE NO:	A7.2		

# CANE MILL ESTATES LOT 21



ELECTRICAL LEGEND			
\$	SWITCH	TV	TV
\$3	3 WAY SWITCH	⊕	120V RECEPTACLE
\$4	4 WAY SWITCH	⊕	120V SWITCHED RECEPTACLE
⊗	CEILING FIXTURE	⊕	220V RECEPTACLE
⊕ <sub>K</sub>	KEYLESS	⊕ <sub>GFCI</sub>	GFCI OUTLET
⊗	WALL MOUNT FIXTURE	⊕ <sub>AFCI</sub>	ARCH FAULT CIRCUIT INTERRUPTER
○	CEILING FIXTURE	† <sub>GL</sub>	GAS LINE
●	FLEX CONDUIT	† <sub>WL</sub>	WATER LINE
CH	CHIMES	⊥	HOSE BIBB
PH	TELEPHONE	⊕	FLOOD LIGHT
SD/CO	SMOKE DETECTOR & CARBON MONOXIDE	▭	1x4 LUMINOUS FIXTURE
SO	SECURITY OUTLET	⊗	CEILING FAN
□	GARAGE DOOR OPENER	—	ELECTRICAL WIRING
⊕	EXHAUST FAN	⊕	CEILING FIXTURE
⊕	FAN/LIGHT		

ELECTRICAL PLANS TO FOLLOW ALL LOCAL CODES

APPROX. FIXTURE HGTS (MEASURED FROM BOTTOM OF FIXTURE)

BREAKFAST/DINING ROOM	63" ABOVE FINISHED FLOOR
KITCHEN PENDANT LIGHTS	33" ABOVE COUNTER TOP
TWO STORY FOYER FIXTURE	96" ABOVE FINISHED FLOOR
CEILING FAN	96" ABOVE FINISHED FLOOR

NOTE: FINAL PLACEMENT OF PHONE/CABLE T.B.D. ON SITE BY THE BUILDER

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ELECTRICAL PLAN  
SECOND FLOOR  
BUFFINGTON

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SECOND FLOOR ELECTRICAL PLAN  
SCALE: 1/8" = 1'-0"

# CANE MILL ESTATES

## LOT 21

Lot Definition		
<b>Project:</b> Cane Mill Estates <b>Building:</b> 000 <b>Unit:</b> 0021	<b>Community:</b> Cane Mill Estates <b>Builder:</b> Thomas Kenneth Barlow <b>Status:</b> Sold	
<b>Plan:</b> Buffington F Side Entry <b>Orientation:</b> Garage Left <b>Bedrooms:</b> 4 <b>Address:</b> 95 Trolley Lane Coats NC 27521	<b>RTeam:</b> Raleigh West <b>Sq. Ft.:</b> 2,548 <b>Bathrooms:</b> 2.5 <b>Permit:</b> <b>Notes:</b>	
<b>Sales Data</b>	<b>Dates</b>	
<b>Contract:</b> 89159 <b>Buyer:</b> Courtney S. Jones <b>Sales Agent:</b> Nicole Stinard	<b>Ratified:</b> 03/30/2021 <b>Original Start:</b> 04/09/2021 <b>Start:</b> 04/09/2021 <b>Scheduled Complete:</b> 08/19/2021	
<b>Option</b>	<b>Description</b>	<b>Quantity</b>
36" Cabinet 1st Upgr	Note: Bath cabinets to match	1
Automatic Garage Door Opener	Garage Door Opener - Per Door	1
Blind per Optional 2040 Window	One 2040 blind. For use when you've added a 2040 optional window. See Optional Windows Sales Guide on the Process Model for assistance.	1
Blinds for Base House	Includes blinds for all standard windows on front, sides, and rear that are operational and accessible. Does not include blinds for any optional windows, including windows for optional second floors.	1
Cabinet Bump above Microwave	Cabinet Bump above Microwave	1
Cabinet Pulls	Cabinet Pulls-Element 1002 series-pulls on all doors and drawers. Note: Bath cabinets to match	1
Comfort Height Toilets-All Bathrooms	Comfort Height Toilet- All Bathrooms. Floor to bowl=17" high	1
Decorative 4040 Picture Window	Replace clear 4040 Window over Master Garden Tub with Decorative 4040 Picture Window. NOTE: This option cannot be used with the large fig shower option, the large tile shower option, or on any plan/job that otherwise does not have a 4040 clear window over Master Garden Tub.	1
FIPkg 5AA-Floorte Pro, StdCpt (IPkg1)	Flooring Package 5AA - Floorte Pro, Standard Carpet (from Package 1). SPC (solid polymer core) 0.5 mm vinyl top layer plank	1
Garage Door Window Insert for 16W Door	Garage Door Window Insert for 16W Door	1
Granite-Kitchen Countertops - Lvl 1 (I)	Kitchen Granite Countertops - Level 1-where Laminite is Std.	1
User Name: Victoria Wicker 1 of 3 04/07/2021 Database: SmithDouglasCommunities 01:02:39 PM		

Lot Definition		
G-Tub & T1 Shwr KW FD OBATHC	(Separate Garden tub and tile shower ILO Prefab large shower. Shower walls w/ 1 tile with prefab base. Shower includes kneewall (capped with tile) and framed clear glassdoor with glass panel on kneewall. Includes tile w/ 1 tub surround. (obathc))	1
Laundry Door to Owner Bedroom	Additional Door to Access the Laundry Room, Door Size Per Plan	1
Level 3 - Package Electric (from E1)	Frigidaire SS 24" Dishwasher Frigidaire SS 1.6 Cu Ft Micro Frigidaire SS 30" Elec Range-Self Clean	1
Lighting Package Farmhouse		1
Mud Room Trim with Bench Seat	Bead board with crown and hooks with bench seat	1
Nickel Interior Finish Color Package	NOTE: If Laminate Kitchen top, Upgrade KII Faucet or it remains Chrome. Includes SS kitchen faucet, brushed nickel bath faucets & fixtures & door hardware (handles, knobs, knobs/levers, deadbolts), Pkg1(bn) light fixtures, pewter oval mirror. Separate options also affected: shower door, bath hardware (towel bearing, tp holder), shower grab bar, cabinet hardware	1
Open Rail 1st Floor - Iron		1
Optional Covered Patio-Regular-Fiber (3)	Optional Covered Patio-Regular-Fiber Cement Siding. Actual dimensions can vary per plan. Site Condition Exclusions may apply. ***Starting from 3x3 concrete pad	1
Owner Bath Marble 1 Double lo LamSgl	***Includes Vanity Double Bowl Option Do Not Select Both***	1
Owner Bath Water Closet Window	2030 Single Window for Owner Bath Water Closet. NOTE: Blind not included.	1
Pendant Lights per Plan	Pendant Lights above Island/Bar Top per plan electrical diagram. To match lighting package selected. NOTE: Choose this option only once.	1
PreWire for Ceiling Fan	Pre-wire a light location for a future ceiling fan.	1
Raise Single SecondaryVanity 32.5"to 35"	Raise a Single Secondary Bath Vanity from 32.5" to 35" NOTE: Per Vanity Cabinet. Note which bath(s) on plan exhibit. NOTE: If you have selected any Double Bowl upgrade for Hall Bath, DO NOT USE this option for that location.	1
Screen Per Optional 2040 Window		1
Screens Base House Single Family	Add window screens to all operable standard windows on single family home. NOTE: Does not include screens for windows for optional 2nd-floors, side entry garage, or windows added or changed from structural options, optional windows, or basement windows. See additional options to complete screens.	1
Stone 19 B ExtCoIPkg(I)		1
Study ILO Living Room		1
Tile - KR Backsplash LVL 3 Brick Lay		1
Tray Ceiling - Owner's Bedroom		1
Vent Microwave/Hood Combo to Outside	Vent the Microwave/Hood Combo to Outside. NOTE: Must be used with option Cabinet Bump above Microwave. If Cabinet Bump above Microwave is not standard, the option MUST be chosen.	1
User Name: Victoria Wicker 2 of 3 04/07/2021 Database: SmithDouglasCommunities 01:02:39 PM		

Lot Definition		
Wall Hung TV Prep	Flat panel TV prep with satellite connections. Conduit from outlet height to TV Mount Height at locations noted. NOTE: Does not include additional Cable connection.	1
Window Above Hall Bath TubShower		1
Window in Hallway	Optional Window in Hallway. Does not include Blind.	1
<b>Activity</b>	<b>Description</b>	<b>Selection Description</b>
Ceramic Tile Set - Bath	TILEBathShwrWalls-1stUpgr ALL	Milan Surf 500 (13x13) Silver00030
Ceramic Tile Set-Kitchen	TILEKIBacksplash-3rdUpgr ALL	Geoscape 3x6 Bone 150NavajoWhite00012
Del&Install AppliancePkg	Appliance Package Select - All	Appliance Package Selected
Deliver & Install Blinds	Blind Color	White
Deliver Windows-FirstOut	4040 Decorative Privacy Window	Prairie DF4747PRAI
Install Cabinets Complet	Secondary Bath Vanity Tops-All	5001K-07 Pearl Sequoia
Install Carpet	Carpet - Standard ALL	Smith Grove II Glimmer 00501
Install Floorte Pro (LP)	Floorte Pro 1stUpgr ALL	Presto Plus - 400 Weathered Barnboard
Install Garage Door	Garage Door WindowInserts LW1	Kenningson Ranch Glass Inserts
Install Granite Tops	RDU Granite CounterKitchenLW1	Datille-Ashen White
Install Marble Tops	RDU Marble Vanity Top Lvl 1	Matte-#153 White w/ice Grey w/oval bowl
Paint Interior Complete	Interior Paint (Trim)	SW 7006 Extra White
Paint Interior Complete	Interior Paint (Walls) - Base	SW 8917 Shell White
PM Install Vinyl Floor	VinylPkg-Option Baths	Highlands II Legacy 170
PM Install Vinyl Floor	VinylPkg-Owner Bath	Highlands II Legacy 170
PM Install Vinyl Floor	VinylPkg-Std 2nd Baths/Laundry	Highlands II Legacy 170
Stain Handrails	Hand Rail Stain - All	MW-Alluvium [LVP-400 Weathered Barnbd]
User Name: Victoria Wicker 3 of 3 04/07/2021 Database: SmithDouglasCommunities 01:02:39 PM		

BY	#	DATE	REVISION



DETAILS  
LOT DEFINITION  
BUFFINGTON

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#### 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, P.C. (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.
- 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 the 2018 North Carolina Residential Code (NCR) and any local codes or restrictions

#### FOUNDATIONS:

- Foundations shall be constructed in accordance with chapter 4 of the 2018 NC Residential Building Code (Special consideration shall be given to Chapter 45 in wind zones above 130mph)
- Footings sizes based on a presumptive soil bearing capacity of 2000 PSF. Contractor is solely responsible for verifying the suitability of the site soil conditions at the time of construction
- Maximum depth of unbalanced fill against masonry walls to be as specified in section R404.1 of the 2018 NCR
- 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.
- No concrete shall be placed against any subgrade containing water, ice, frost, or loose material.
- Each crawl space pier shall bear in the middle third of its respective footing and each girder shall bearing in the middle third of the piers. Plasters to be bonded to perimeter foundation wall
- Crawl spaced to be graded level and clear of all debris
- Provide foundation waterproofing and drain with positive slope to outlet as required by site conditions
- Energy efficiency compliance and insulation of the structure to be in accordance with chapter 11 of the 2018 NCR

#### 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:
  - Footings: 5%
  - Exterior Slabs: 5%
- 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 302.1R-96: "Guide for Concrete Slab and Slab Construction".
- 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.
- 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.
- 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.
- All welded wire fabric (W.W.F.) for concrete slabs-on-grade shall be placed at mid-depth of slab. The W.W.F. shall be securely supported during the concrete pour. Fibermesh may be used in lieu of W.W.F.

#### 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 C1116, any local building code requirements, and shall meet or exceed the current industry standard.
- Steel Reinforcing bars shall be new billet steel conforming to ASTM A615, grade 60.
- 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.
- 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 Spruce-Pine-Fir (SPF) #2.
- LVL or PSL engineered wood shall have the following minimum design values:
  - E = 1,900,000 psi
  - Fb = 2600 psi
  - Fv = 285 psi
  - 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
- Nails shall be common wire nails unless otherwise noted.
- Lag screws shall conform to ANSI/ASME standard B18.2.1-1981. 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.
- Exterior and load bearing stud walls are to be 2x4 SPF#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 10d nail @6" O.C. staggered. The stud column shall be continuous to the foundation or beam. The column shall be fully blocked at all floor levels to ensure proper load transfer.
- Multi-ply beams shall have each ply attached with (3)10d nails @ 24" O.C.
- Fitth beams and four and five ply beams shall be bolted together with (2) rows of 1/2" dia. through bolts staggered @24" O.C. w/ 2" edge distance and (2) bolts located at 6" from each end, unless noted otherwise.

#### WOOD TRUSSES:

- 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.
- 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." 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.

#### 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.
- 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.
- Wood floor sheathing shall be APA rated sheathing exposure 1 or 2. Attach sheathing to its supporting framing with (1)-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" 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.
- 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 as recommended in accordance with the AFA.

#### EXTERIOR WOOD FRAMED DECKS:

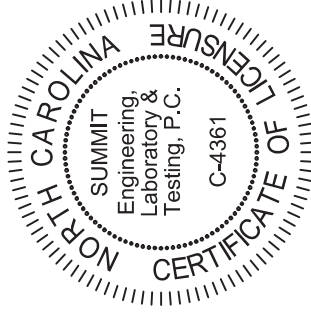
- Decks are to be framed in accordance with local building codes and as referenced on the structural plans, either through code references or construction details.

#### 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 of the manual of Steel Construction "Load Resistance Factor Design" latest editions.
- All steel shall have a minimum yield stress (Fy) of 36 ksi unless otherwise noted.
- Welding shall conform to the latest edition of the American Welding Society's Structural Welding Code AWS D1.1. Electrodes for shop and field welding shall be class E70XX. All welding shall be performed by a certified welder per the above standards.



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PROJECT  
Buttington - LH  
Coversheet  
CLIENT  
Smith Douglas Homes  
2520 Reliance Ave.  
Apex, NC 27539

#### CURRENT DRAWING

DATE: 2/13/19

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

PROJECT #: 3832.202R

DRAWN BY: ZTS

CHECKED BY: WAJ

#### ORIGINAL DRAWING

DATE  
12/11/15

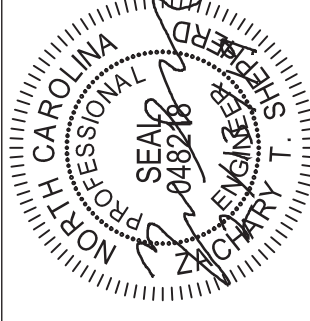
PROJECT#  
3832.09

REFER TO COVER SHEET FOR A  
COMPLETE LIST OF REVISIONS

SHEET

CS2

Cane Mill  
Lot 21



STRUCTURAL MEMBERS ONLY

- FOUNDATION NOTES:**
- FOUNDATIONS TO BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 4 OF THE 2008 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL AMENDMENTS.
  - STRUCTURAL CONCRETE TO BE F<sub>c</sub> = 3000 PSI, PREPARED AND PLACED IN ACCORDANCE WITH SECTION 907 OF THE 2008 NORTH CAROLINA RESIDENTIAL BUILDING CODE.
  - FOOTINGS TO BE PLACED ON UNDISTURBED EARTH, BEARING A MINIMUM OF 10' BELOW ADJACENT FINISHED GRADE, OR AS OTHERWISE DIRECTED BY THE ENGINEER.
  - FOOTINGS SHALL BE CONSTRUCTED WITH A MINIMUM OF 3" CLEARANCE FROM THE ADJACENT FINISHED GRADE. THE BOTTOM OF THE FOOTING SHALL BE PLACED ON A MINIMUM OF 4" OF COMPACTED FILL OR AS OTHERWISE DIRECTED BY THE ENGINEER.
  - FOOTINGS AND PIERS SHALL BE CENTERED UNDER THEIR RESPECTIVE ELEMENTS. PROVIDE 7" MINIMUM FOOTING PROJECTION FROM THE FACE OF MASONRY.
  - MINIMUM DEPTH OF UNSALVAGED FILL AGAINST MASONRY WALLS TO BE AS SPECIFIED IN SECTION 9406.1 OF THE 2008 NORTH CAROLINA RESIDENTIAL BUILDING CODE.
  - PIERS SHALL BE BONDICED TO PERIMETER FOUNDATION WALL.
  - FOUNDATION ANCHORAGE SHALL BE CONSTRUCTED PER THE 2008 NORTH CAROLINA RESIDENTIAL CODE SECTION 9403.16, MINIMUM 1/2" DIA. BOLTS SPACED AT 6'-0" ON CENTER WITH A 7" MINIMUM EMBEDMENT INTO MASONRY.
  - FOUNDATION ANCHORAGE BOLTS PER FLATE SECTION 9403.16 AND FLATE SECTION 9403.17 SHALL BE LOCATED IN THE CENTER THIRD OF THE FLATE.
  - ABBREVIATIONS:
    - D1 = DOUBLE MOST
    - G1 = GROSS TRUSS
    - GT = GROSS TRUSS
    - DR = DOUBLE RAFTER
    - SC = STUD COLUMN
    - EE = EACH END
    - TJ = TRIPLE JOIST
    - OC = ON CENTER
    - CL = CENTER LINE
    - FL = POINT LOAD

- ALL PIERS TO BE 16"x16" MASONRY AND ALL PILLASTERS TO BE 8"x6" MASONRY, TYPICAL (UNO).
- WALL FOOTINGS TO BE CONTINUOUS CONCRETE SIZES PER STRUCTURAL PLAN UNLESS OTHERWISE NOTED.
- FOUNDATION ANCHORAGE SHALL BE CONSTRUCTED BY A PROFESSIONAL GEOTECHNICAL ENGINEER OR HIS QUALIFIED REPRESENTATIVE. IF ISOLATED AREAS OF YIELDING MATERIALS AND/OR POTENTIALLY EXPANSIVE SOILS ARE OBSERVED IN THE FOOTING EXCAVATIONS AT THE TIME OF CONSTRUCTION, NOTIFY ENGINEERING. ENGINEERING SHALL BE NOTIFIED IMMEDIATELY BY THE CONTRACTOR. REVIEW THE FOOTING DESIGN PRIOR TO CONCRETE PLACEMENT.
- ALL FOOTINGS & SLABS ARE TO BEAR ON UNDISTURBED SOIL OR 95% COMPACTED FILL, VERIFIED BY ENGINEER OR CODE OFFICIAL.

SEEKS TO BE PLACED WALL PLAN FOR PANEL LOCATIONS AND ANY REQUIRED HOLDINGS. ADDITIONAL INFO PER SECTION R602.12.4 AND FIGURE R602.12.3.4) OF THE 2008 NRCRC.

NOTE: ALL EXTERIOR FOUNDATION DIMENSIONS ARE TO FRAMING AND NOT BRICK VENEER UNO

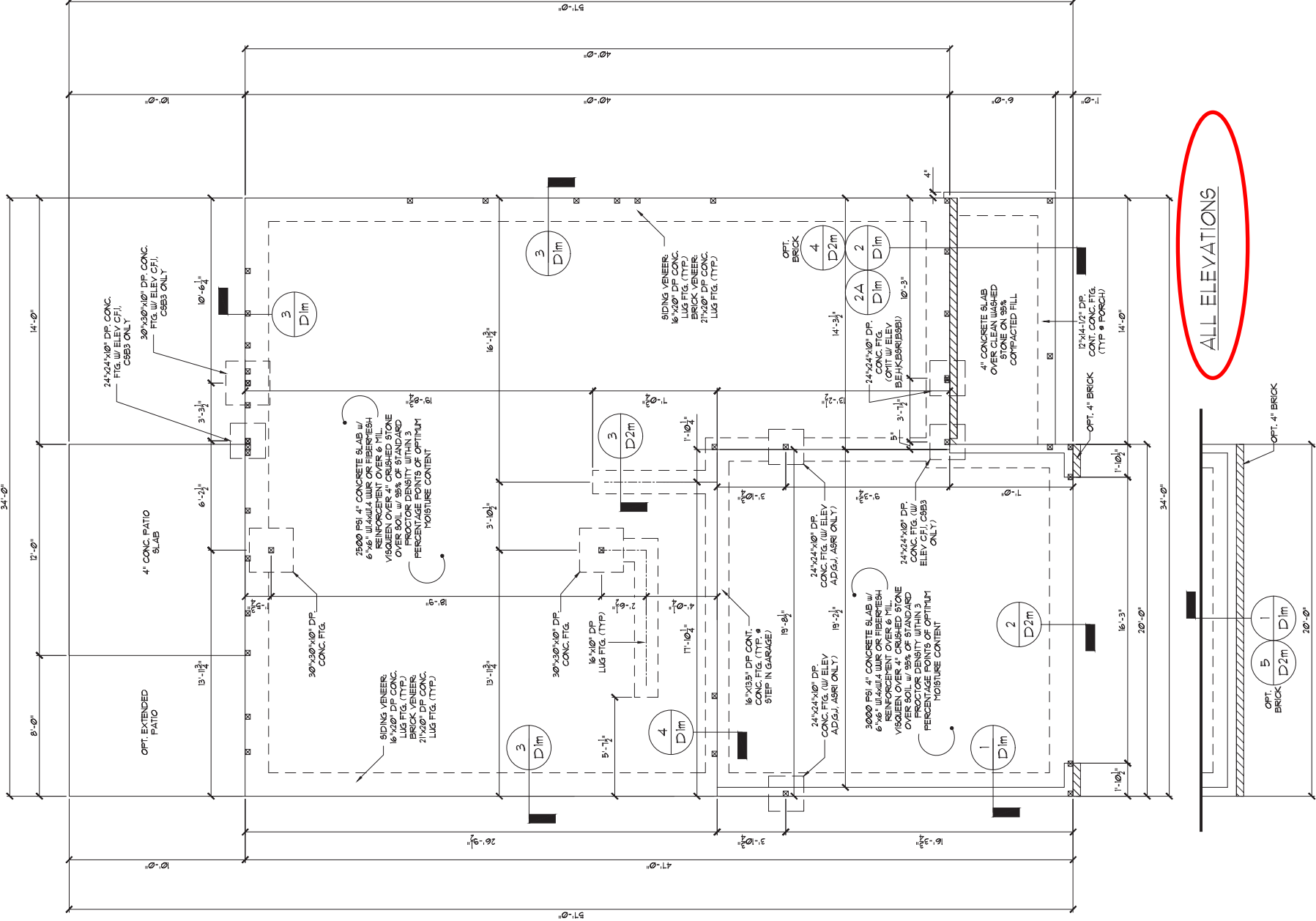
THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY SMITH DOUGLAS HOMES. HORES COMPLETED/REVISED ON 5/11/19. IT IS THE RESPONSIBILITY OF THE CLIENT TO NOTIFY SUMMIT ENGINEERING LABORATORY & TESTING, P.C. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS. THE CLIENT'S RESPONSIBILITY TO GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

NOTE: A 4" CRUSHED STONE BASE COURSE IS NOT REQUIRED WHEN SLAB IS INSTALLED ON WELL-DRAINED OR SAND-GRAVEL MIXTURE SOILS CLASSIFIED AS GROUP 1 PER TABLE R405.1

**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, P.C. FAILURE TO DO SO WILL VOID SUMMIT LIABILITY.

STRUCTURAL ANALYSIS BASED ON 2016 NRCRC.

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



ALL ELEVATIONS

OPT. SIDE LOAD GARAGE



STRUCTURAL MEMBERS ONLY

Cane Mill Lot 21

S1.0m  
 SHEET

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

ORIGINAL DRAWING  
 DATE 12/11/15  
 PROJECT# 3832.09

CHECKED BY: WAJ  
 DRAWN BY: ZTS

PROJECT #: 3832.202R  
 SCALE: 1/8" = 1'-0"

DATE: 2/13/19  
 CURRENT DRAWING

PROJECT  
 Buffington - LH  
 Monolithic Slab Fnd.  
 CLIENT  
 Smith Douglas Homes - Raleigh  
 2520 Reliance Ave.  
 Apex, NC 27539



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**GENERAL STRUCTURAL NOTES:**

- CONSTRUCTION SHALL CONFORM TO 2008 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL AMENDMENTS.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS. CONTRACTOR SHALL COMPLY WITH THE CONTENTS OF THE DRAWING FOR THIS SPECIFIC PROJECT. ENGINEER IS NOT RESPONSIBLE FOR ANY DEVIATIONS FROM THIS PLAN.
- TO RESIST ALL EXPOSURE OCCURRING DURING CONSTRUCTION.
- PROPERTIES USED IN THE DESIGN ARE AS FOLLOWS:  
MICROALUM (LVL), F<sub>b</sub> = 16,600 PSI, F<sub>v</sub> = 288 PSI, E = 1,940P<sup>2</sup> PSI  
PARALLAX (FRLL), F<sub>b</sub> = 25,000 PSI, F<sub>v</sub> = 250 PSI, E = 1,940P<sup>2</sup> PSI
- ALL DIMENSIONS UNLESS NOTED OTHERWISE.
- ALL BEAMS SHALL BE SUPPORTED WITH A (1) 2" x 4" x 8" STP STUD COLUMN AT EACH END UNLESS NOTED OTHERWISE.
- ALL REINFORCING STEEL SHALL BE GRADE 60 BARS CONFORMING TO ASTM A603.
- FOUNDATION AND GARAGE SHALL BE CONSTRUCTED PER THE 2008 NORTH CAROLINA RESIDENTIAL CODE SECTION R402.16. MINIMUM 1/2" DIA. BOLTS SPACED AT 6'-0" ON CENTER WITH A 1" MINIMUM EMBEDMENT INTO MASONRY OR CONCRETE. ANCHOR BOLTS SHALL BE 7" FROM THE END OF EACH PLATE SECTION. ANCHOR BOLTS SHALL BE 12" FROM THE END OF EACH PLATE SECTION. ANCHOR BOLTS SHALL BE 12" FROM THE END OF EACH PLATE SECTION.
- CONTRACTOR TO PROVIDE LOOKOUTS WHEN CEILING JOIST'S SPAN PERPENDICULAR TO RAFTERS.
- FITCH BEAMS, 4 FT LVL'S AND 3 FT LVL'S SIZE LOADED LVL'S SHALL BE BOLTED TO STUD COLUMNS PER DETAIL 1D6f. MINIMUM 1/2" DIA. BOLTS SHALL BE AT EQUIVALENT CONNECTIONS PER DETAIL 1D6f. MINIMUM 1/2" DIA. BOLTS SHALL BE AT EACH END OF THE BEAM.
- ALL NON-LOAD BEARING HEADERS SHALL BE (1) FLAT 2x4 STP 2, DROPPED, FOR NON-LOAD BEARING HEADERS EXCEEDING 8'-0" IN WIDTH AND/OR WITH MORE THAN ONE JOIST ABOVE SHALL BE (2) FLAT 2x4 STP 2, DROPPED, (UNLESS NOTED OTHERWISE).
- ABBREVIATIONS:  
S1 = SINGLE JOIST  
S2 = DOUBLE JOIST  
SC = STUD COLUMN  
DR = DOUBLE RAFTER  
TR = TRIPLE RAFTER  
OC = ON CENTER  
CL = CENTER LINE

**NOTE:** DESIGNATED JOIST SUPPORTED LOAD BEARING WALL ABOVE. PROVIDE BLOCKING UNDER JOIST SUPPORTED LOAD BEARING WALL.

**NOTE:** SHADDED WALLS INDICATE LOAD BEARING WALLS.

**JOIST & BEAM SIZES SHOWN ARE MINIMUMS. BUILDER MUST INCREASE DEPTH FOR EASE OF CONSTRUCTION.**

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

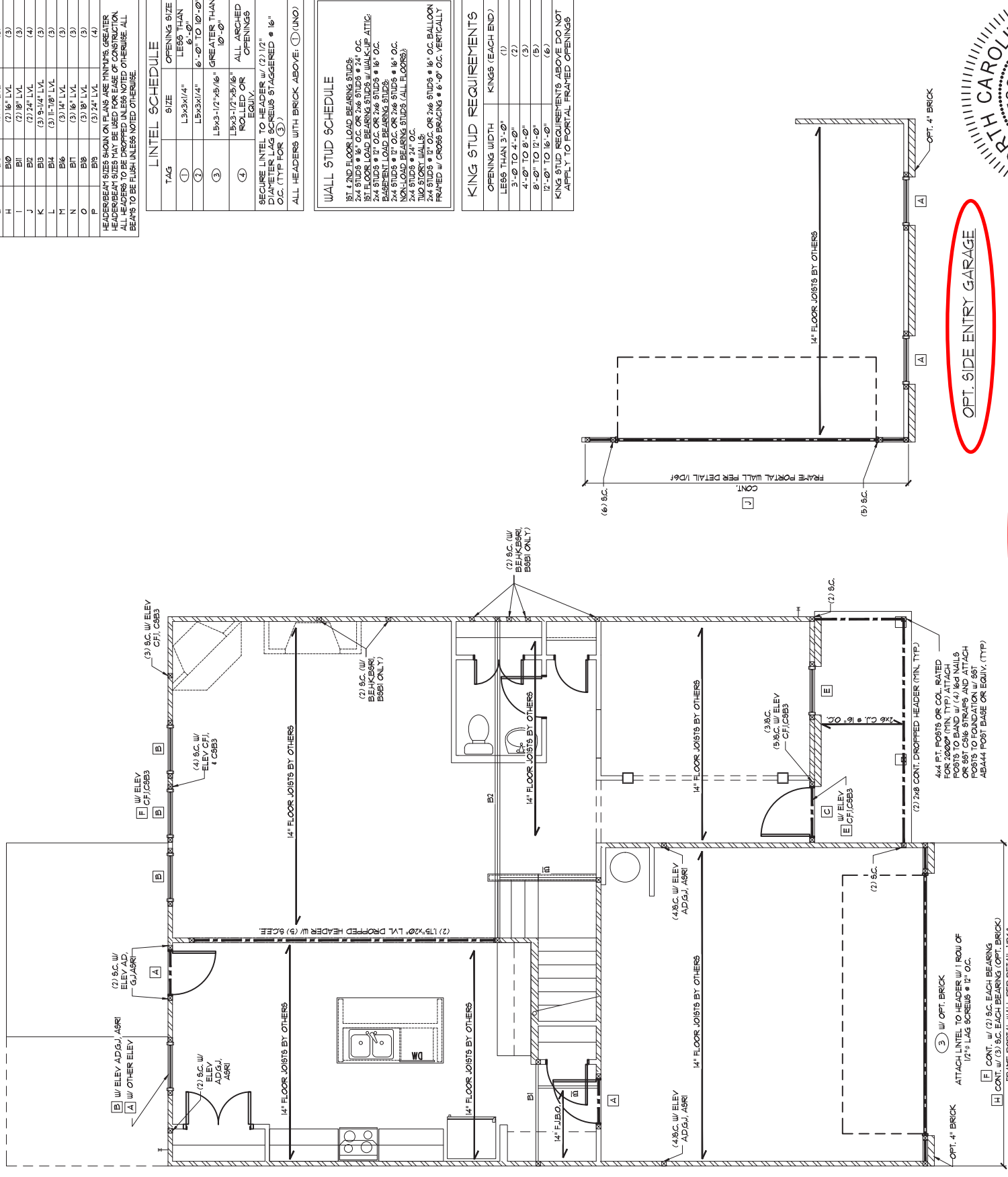
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**STRUCTURAL MEMBERS ONLY**  
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STRUCTURAL ANALYSIS BASED ON 2016 NCR.

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

STUD COLUMN (S.C.) CALLOUTS ON PLAN OVERSIDE JACK STUD COUNT SHOWN IN BEAM/HEADER SCHEDULE. KING STUDS TO BE INSTALLED PER APPLICABLE BUILDING CODE.











METHOD	MATERIAL	MIN. THICKNESS	REQUIRED CONNECTION	
			• INTERMEDIATE SUPPORTS	• PANEL EDGES
CS-UWP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.
GB	GYPSPUM BOARD	1/2"	5d COOLER NAILS @ 1" O.C.	5d COOLER NAILS @ 1" O.C.
USP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.
FF	WOOD PANEL	1/16"	PER FIGURE R602.10.1	PER FIGURE R602.10.1

**BRACED WALL NOTES:**

- WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10 FROM THE 2018 NORTH CAROLINA RESIDENTIAL CODE.
- WALLS ARE DESIGNED FOR SEISMIC ZONES A-C AND ULTIMATE WIND SPEEDS UP TO 130 MPH.
- 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 R602.10.1.
- THE INTERIOR SIDE OF EXTERIOR WALLS AND BOTH SIDES OF INTERIOR WALLS SHALL BE SHEATHED CONTINUOUSLY WITH MINIMUM 1/2" GYPSUM BOARD.
- FOR CONTINUOUS SHEATHING METHOD, EXTERIOR WALLS SHALL BE SHEATHED ON ALL SHEATHABLE SURFACES INCLUDING NELL AREAS AND ON GABLE END WALLS.
- ALL BRACED WALLS SHALL BE DESIGNED MORE THAN 24" BEYOND THE FOUNDATION OR BEARING WALL BELOW WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
- A BRACED WALL PANEL SHALL BE LOCATED WITHIN 12 FEET OF EACH END OF A BRACED WALL LINE.
- MASONRY OR CONCRETE STEM WALLS WITH A LENGTH OF 48" OR LESS SUPPORTING A BRACED WALL PANEL SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.4.3 OF THE 2018 NCRS.
- BRACED WALL PANEL CONNECTIONS TO ROOF SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.4.
- CEFRILE WALLS AND WALK OUT BASEMENT WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.4.5.
- PORTAL WALLS SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.1 (NO).
- ON SCHEMATIC, SHADED WALLS INDICATE BRACED WALL PANELS.
- ABBREVIATIONS:  
GB = GYPSUM BOARD  
CS-UWP = WOOD STRUCTURAL PANEL  
CS-XXX = CONT. SHEATHED  
FF = PORTAL FRAME  
FF-ENG = ENG. PORTAL FRAME

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY SMITH DOUGLAS HOMES COMPLETED/REVISED ON 5/11/21. IT IS THE RESPONSIBILITY OF THE CLIENT TO NOTIFY SUMMIT ENGINEERING LABORATORY TESTING P.C. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS. SMITH DOUGLAS HOMES, SMITH ENGINEERING LABORATORY & TESTING, P.C. CANNOT GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

INSTALL HOLD-DOWNS PER SECTION R602.10.4 AND FIGURE R602.10.4.1 OF THE 2018 NCRS.

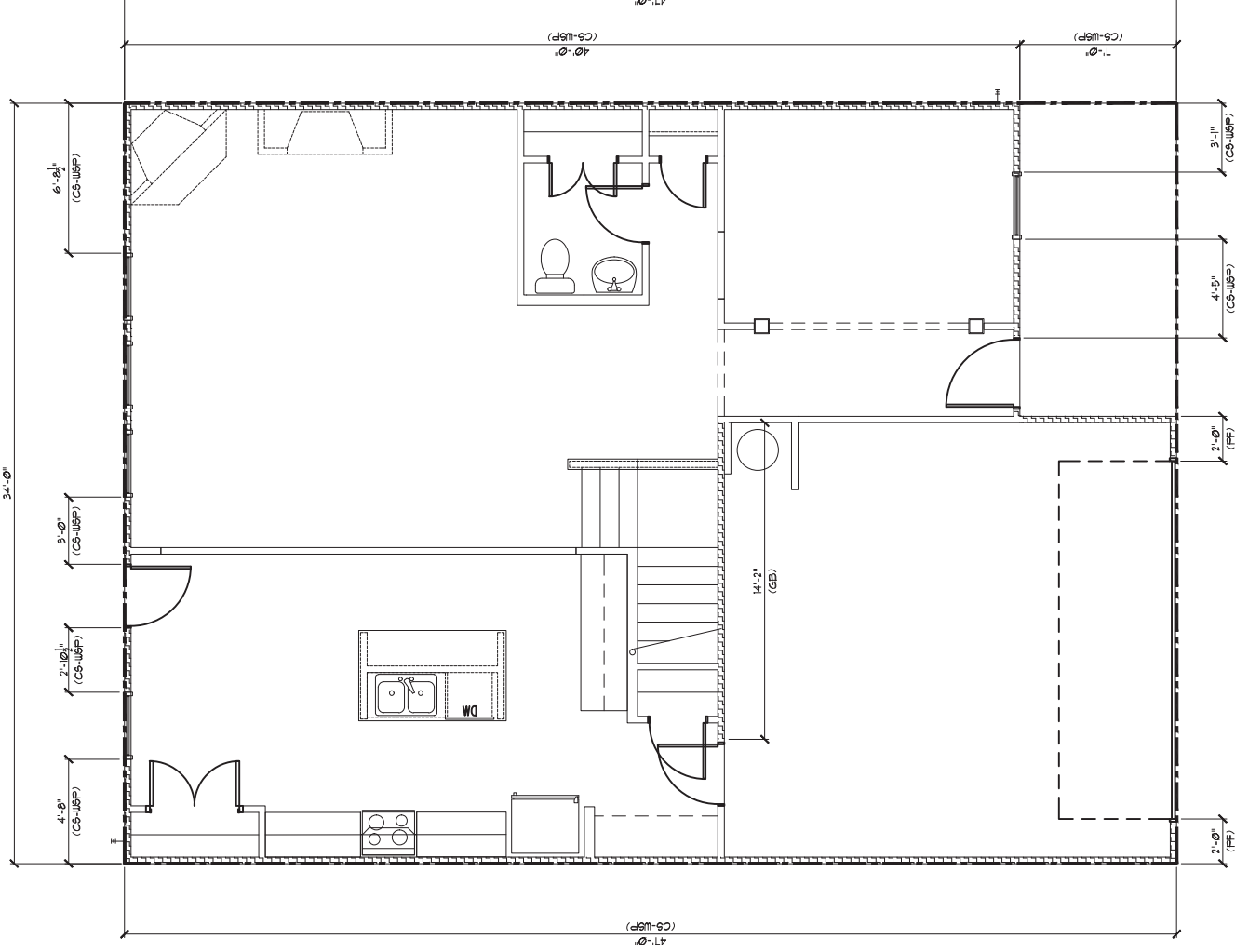
FIRST FLOOR BRACING (FT)		
CONTINUOUS SHEATHING METHOD		
REQUIRED	PROVIDED	
FRONT SIDE	148	206
RIGHT SIDE	11	410
REAR SIDE	148	112
LEFT SIDE	11	410

FIRST FLOOR BRACING - SIDE LOAD GARAGE (FT)		
CONTINUOUS SHEATHING METHOD		
REQUIRED	PROVIDED	
FRONT SIDE	148	215
RIGHT SIDE	11	410
REAR SIDE	148	112
LEFT SIDE	11	330

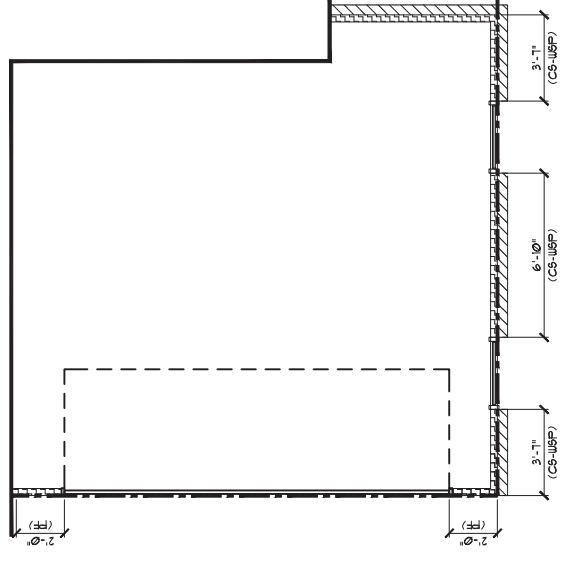
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STRUCTURAL ANALYSIS BASED ON 2018 NCRS.

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



ALL ELEVATIONS



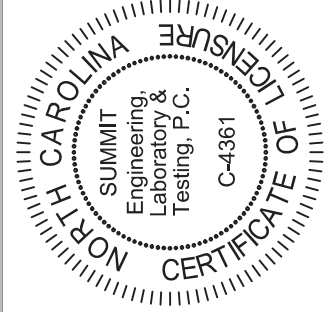
OPT. SIDE LOAD GARAGE



Cane Mill  
Lot 21

STRUCTURAL MEMBERS ONLY

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PROJECT  
Buttington - LH  
CLIENT  
Smith Douglas Homes - Raleigh  
2520 Reliance Ave.  
Apex, NC 27539

CURRENT DRAWING  
DATE: 2/13/19  
SCALE: 1/8"=1'-0"  
PROJECT #: 3832.202R  
DRAWN BY: ZTS  
CHECKED BY: WAJ

ORIGINAL DRAWING  
DATE: 12/11/15  
PROJECT#: 3832.09

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET  
**S7.0**





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PROJECT  
Burlington - LH  
CLIENT  
Smith Douglas Homes - Raleigh  
2520 Reliance Ave.  
Apex, NC 27539

CURRENT DRAWING  
DATE: 2/13/19  
SCALE: 1/8" = 1'-0"  
PROJECT #: 3632.202R  
DRAWN BY: ZTS  
CHECKED BY: WAJ

ORIGINAL DRAWING  
DATE: 12/11/15  
PROJECT#: 3832.09

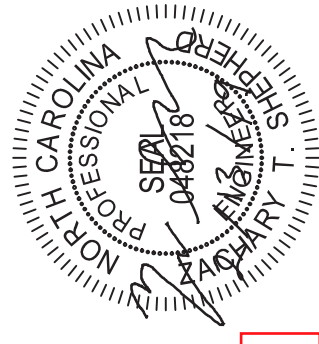
REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET

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STRUCTURAL MEMBERS ONLY

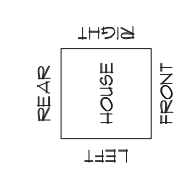
Cane Mill  
Lot 21



**REQUIRED BRACED WALL PANEL CONNECTIONS**

METHOD	MATERIAL	MIN. THICKNESS	REQUIRED CONNECTION
CS-WBP	WOOD STRUCTURAL PANEL	3/8"	• INTERMEDIATE SUPPORTS • 6d COMMON NAILS @ 12" O.C.
GB	GYP/UM BOARD	1/2"	• 5d COOLER NAILS @ 1" O.C.
WBP	WOOD STRUCTURAL PANEL	3/8"	• 6d COMMON NAILS @ 12" O.C.
FF	5" WOOD NAAL PANEL	1/16"	PER FIGURE R602.10.1

\*\*OR EQUIVALENT PER TABLE R702.3.5



- BRACED WALL NOTES:**
- WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10 FROM THE 2018 NORTH CAROLINA RESIDENTIAL CODE.
  - WALLS ARE DESIGNED FOR SEISMIC ZONES A-C AND ULTIMATE WIND SPEEDS UP TO 130 MPH.
  - ALL BRACED WALL PANELS SHALL BE AN APPROVED OPENING SIZE.
  - BRACED WALL PANELS, METHODS, MEANS, AND FASTENERS SHALL BE IN ACCORDANCE WITH TABLE R602.10.1.
  - 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 R602.10.1.
  - THE INTERIOR SIDE OF EXTERIOR WALLS AND BOTH SIDES OF INTERIOR WALLS SHALL BE SHEATHED CONTINUOUSLY WITH MINIMUM 1/2" GYPSUM BOARD.
  - FOR CONTINUOUS SHEATHING METHOD, EXTERIOR WALLS SHALL BE SHEATHED ON ALL SHEATHABLE SURFACES INCLUDING NELL AREAS BETWEEN BRACED WALL PANELS, ABOVE AND BELOW WALL OPENINGS, AND ON GABLE END WALLS.
  - ALL WALLS SHALL BE BUILT TO BE MORE THAN 24" BEYOND THE FOUNDATION OR BRACING WILL BELO WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
  - A BRACED WALL PANEL SHALL BE LOCATED WITHIN 12 FEET OF EACH END OF A BRACED WALL LINE.
  - THE DISTANCE BETWEEN BRACED WALL PANELS SHALL NOT EXCEED 21 FEET.
  - MASONRY OR CONCRETE STEM WALLS WITH A LENGTH OF 48" OR LESS SUPPORTING A BRACED WALL PANEL SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.4.3 OF THE 2018 NCRS.
  - CONCRETE OR MASONRY WALLS SUPPORTING A BRACED WALL SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.4.
  - BRACED WALL PANEL CONNECTIONS TO ROOF SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.4.5.
  - CEILING WALLS AND WALK OUT BASEMENT WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.4.5.
  - PORTAL WALLS SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.1 (IND).
  - ON SCHEMATIC, SHADED WALLS INDICATE BRACED WALL PANELS.
- ABBREVIATIONS:**  
 GB = GYPSUM BOARD    WBP = WOOD STRUCTURAL PANEL  
 CS-XXX = CONT. SHEATHED ENG = ENGINEERED SOLUTION  
 FF = PORTAL FRAME    FF-ENG = ENG PORTAL FRAME

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY SMITH DOUGLAS HOMES. NOTES COMPLETED/REVISED ON 5/10/19. IT IS THE RESPONSIBILITY OF THE CLIENT TO NOTIFY SUMMIT ENGINEERING LABORATORY TESTING, P.C. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS. SMITH DOUGLAS HOMES, SMITH ENGINEERING LABORATORY & TESTING, P.C. CANNOT GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

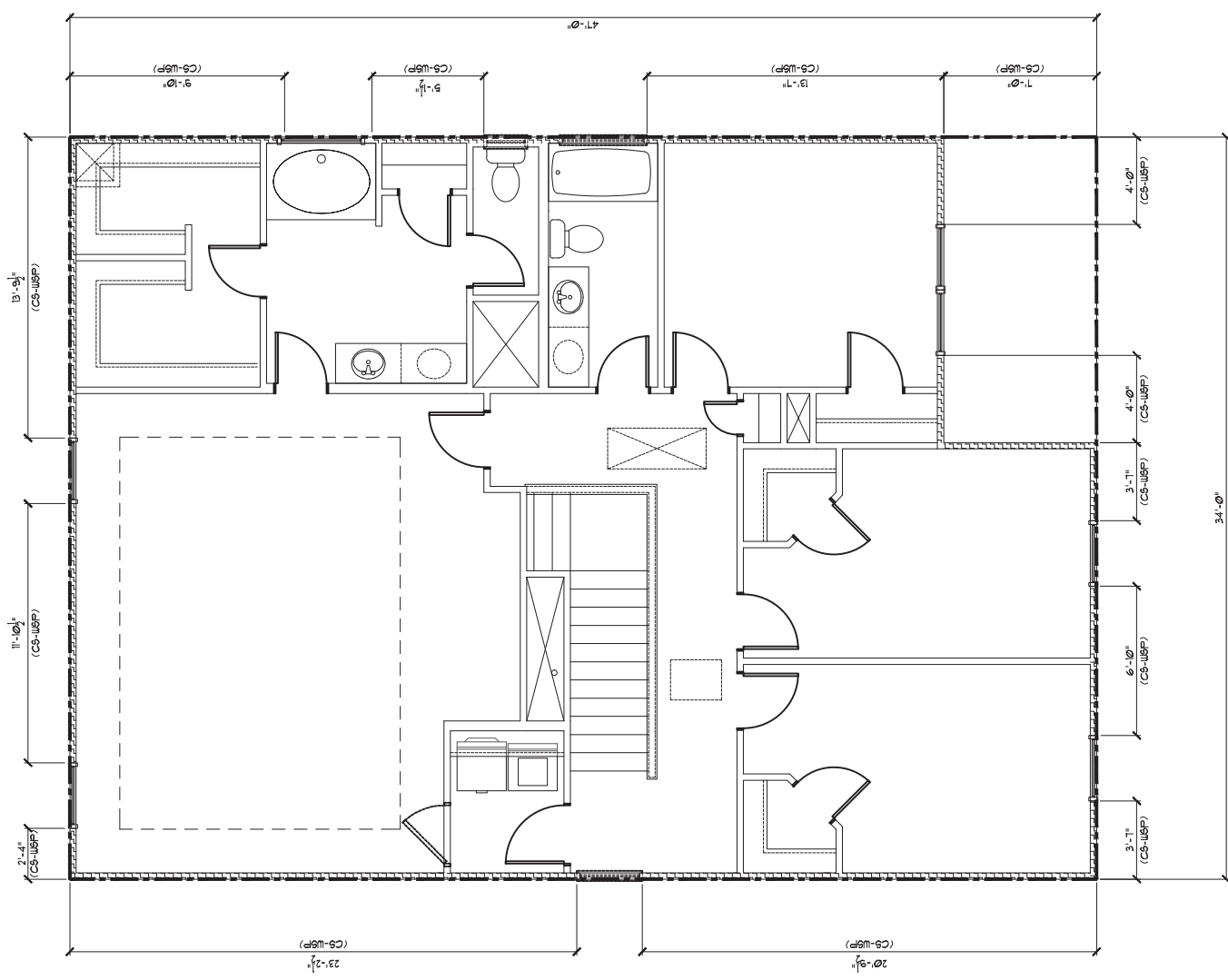
**SECOND FLOOR BRACING (FT)**

CONTINUOUS SHEATHING METHOD	
REQUIRED	PROVIDED
FRONT SIDE	21.0
RIGHT SIDE	38.5
REAR SIDE	78.0
LEFT SIDE	44.0

INSTALL HOLD-DOWNS PER SECTION R602.10.4 AND FIGURE R602.10.4.1 OF THE 2018 NCRS.

**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, P.C. FAILURE TO DO SO WILL VOID SUMMIT LIABILITY.  
 STRUCTURAL ANALYSIS BASED ON 2018 NCRS.

**SECOND FLOOR BRACING PLAN**  
 SCALE: 1/8" = 1'



ALL ELEVATIONS

**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, P.C. (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.
- 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 the 2018 North Carolina Residential Code (NCRC) and any local codes or restrictions

**FOUNDATIONS:**

- Foundations shall be constructed in accordance with chapter 4 of the 2018 NC Residential Building Code (Special consideration shall be given to Chapter 45 in wind zones above 130mph)
- Footing sizes based on a presumptive soil bearing capacity of 2000 PSF. Contractor is solely responsible for verifying the suitability of the site soil conditions at the time of construction
- Maximum depth of unbalanced fill against masonry walls to be as specified in section R404.1 of the 2018 NCRC
- 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.
- No concrete shall be placed against any subgrade containing water, ice, frost, or loose material.
- Each crawl space pier shall bear in the middle third of its respective footing and each girder shall bearing in the middle third of the piers. Pilasters to be bonded to perimeter foundation wall
- Crawl spaced to be graded level and clear of all debris
- Provide foundation waterproofing and drain with positive slope to outlet as required by site conditions
- Energy efficiency compliance and insulation of the structure to be in accordance with chapter 11 of the 2018 NCRC

**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:
  - Footings: 5%
  - Exterior Slabs: 5%
- 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 302.1R-96: "Guide for Concrete Slab and Slab Construction".
- 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.
- 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.
- 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.
- All welded wire fabric (W.W.F.) for concrete slabs-on-grade shall be placed at mid-depth of slab. The W.W.F. shall be securely supported during the concrete pour. Fibermesh may be used in lieu of W.W.F.

**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 C1116, any local building code requirements, and shall meet or exceed the current industry standard.
- Steel Reinforcing bars shall be new billet steel conforming to ASTM A615, grade 60.
- 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.
- 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 Spruce-Pine-Fir (SPF) #2.
- LVL or PSL engineered wood shall have the following minimum design values:
  - E = 1,900,000 psi
  - Fb = 2600 psi
  - Fv = 285 psi
  - 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
- Nails shall be common wire nails unless otherwise noted.
- Lag screws shall conform to ANSI/ASME standard B18.2.1-1981. 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.
- Exterior and load bearing stud walls are to be 2x4 SPF#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 10d nail @6" O.C. staggered. The stud column shall be continuous to the foundation or beam. The column shall be fully blocked at all floor levels to ensure proper load transfer.
- Multi-ply beams shall have each ply attached with (3)10d nails @ 24" O.C.
- Fitch beams and four and five ply beams shall be bolted together with (2) rows of 1/2" dia. through bolts staggered @24" O.C. w/ 2" edge distance and (2) bolts located at 6" from each end, unless noted otherwise.

**WOOD TRUSSES:**

- 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.
- 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."
- 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.

**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.
- 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.
- Wood floor sheathing shall be APA rated sheathing exposure 1 or 2. Attach sheathing to its supporting framing with (1)-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" gap at panel ends and edges as recommended in accordance with the APA.

**STRUCTURAL FIBERBOARD PANELS:**

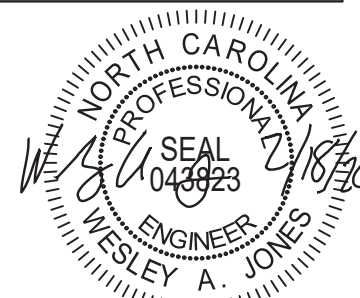
- Fabrication and placement of structural fiberboard sheathing shall be in accordance with the applicable AFA standards.
- Fiberboard wall sheathing shall comply with the requirements of local building codes for the appropriate state as indicated on these drawings. Refer to wall bracing notes in plan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

**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.

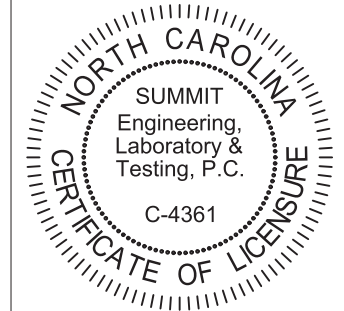
**STRUCTURAL STEEL:**

- 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 of the manual of Steel Construction "Load Resistance Factor Design" latest editions.
- All steel shall have a minimum yield stress (Fy) of 36 ksi unless otherwise noted.
- Welding shall conform to the latest edition of the American Welding Society's Structural Welding Code AWS D1.1. Electrodes for shop and field welding shall be class E70XX. All welding shall be performed by a certified welder per the above standards.



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PROJECT  
**Standard Details**  
**Notes and Specifications**  
CLIENT  
**Smith Douglas Homes**  
**110 Village Trail, Suite 215**  
**Woodstock, GA 30188**

**CURRENT DRAWING**

DATE: 2/18/20  
SCALE: NTS  
PROJECT #: 3832  
DRAWN BY: LBV  
CHECKED BY: WAJ

**ORIGINAL DRAWING**

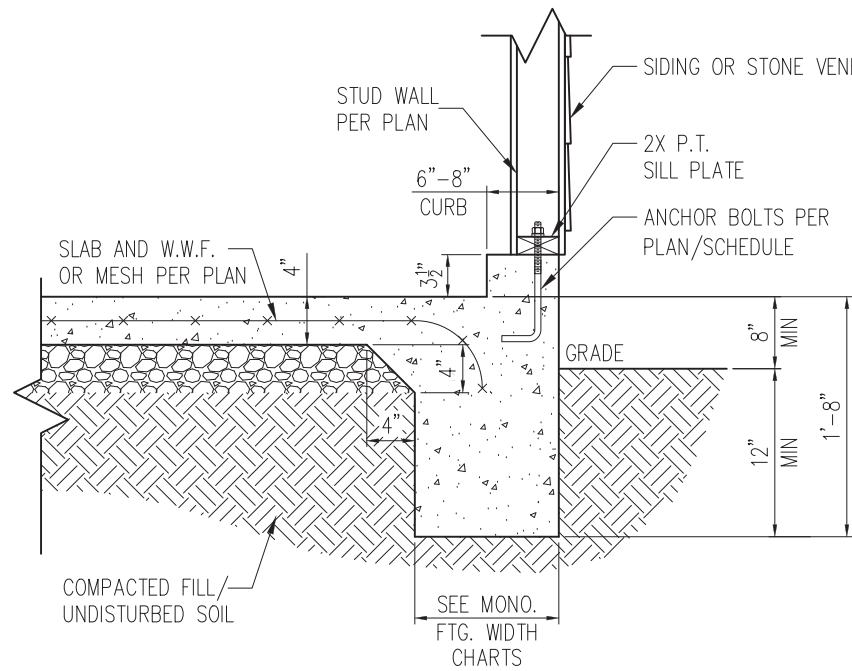
NO.	DATE	PROJECT #
0	1/7/16	3832

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET

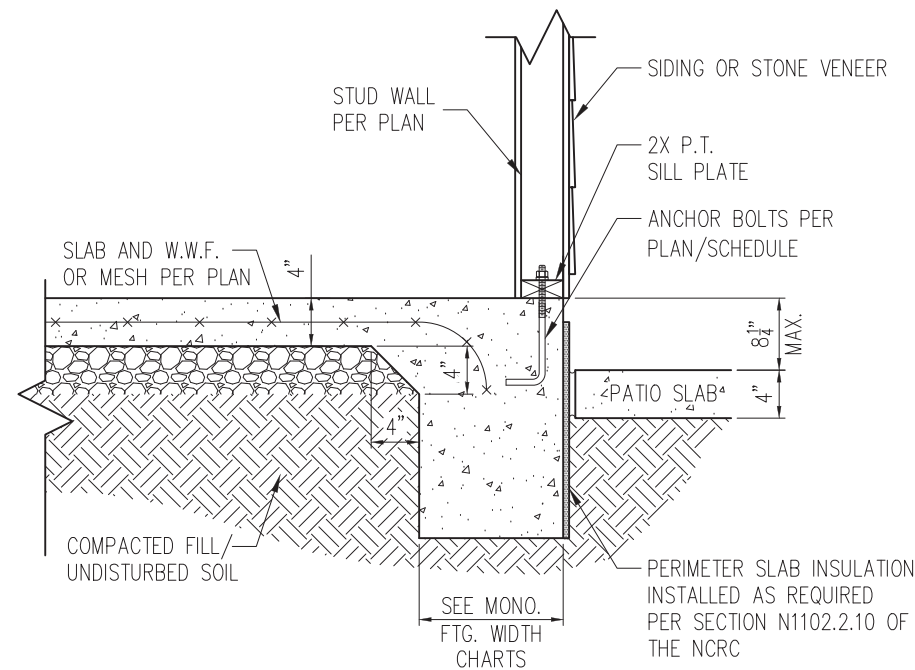
**CS2**





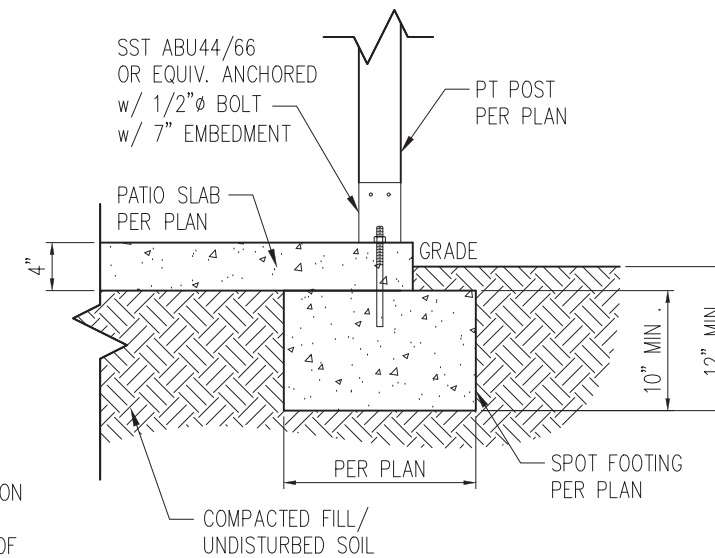
STANDARD - SIDING/STONE

1 TYP. GARAGE CURB DETAIL  
D1m 3/4" = 1'-0"

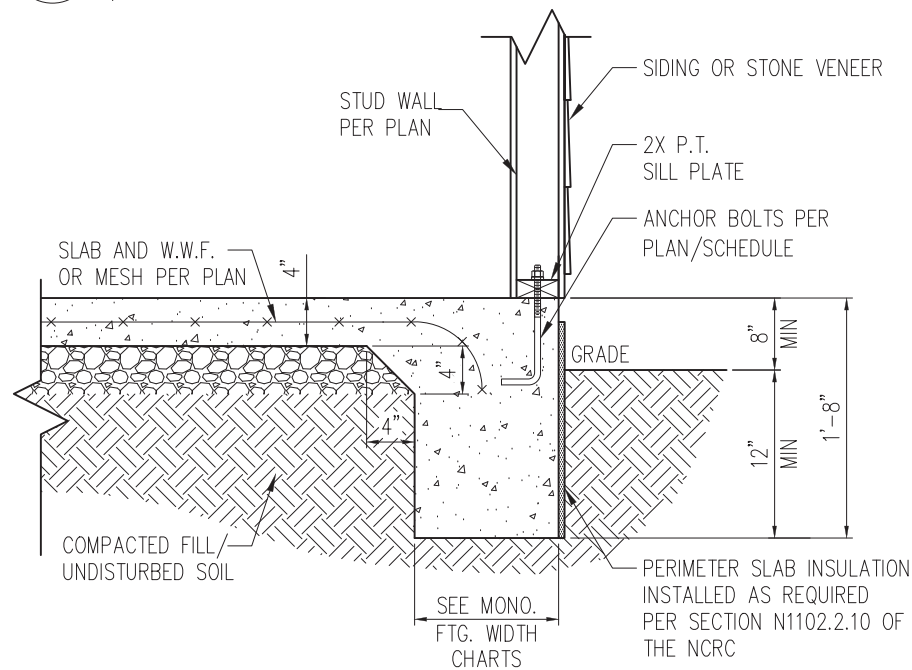


STANDARD - SIDING/STONE

2 PATIO SLAB DETAIL  
D1m 3/4" = 1'-0"

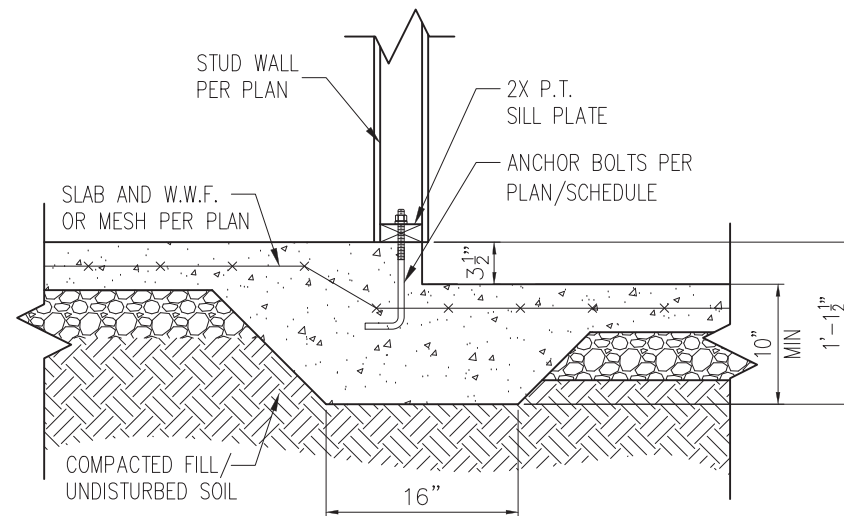


2A COVERED PATIO DETAIL  
D1m 3/4" = 1'-0"



STANDARD - SIDING/STONE

3 TYP. SLAB DETAIL  
D1m 3/4" = 1'-0"



4 STEP IN GARAGE  
D1m 3/4" = 1'-0"

WALL ANCHOR SCHEDULE

TYPE OF ANCHOR	MIN. CONC. EMBEDMENT	SPACING EMBEDMENT	INTERIOR WALL	EXTERIOR WALL
1/2" Ø A307 BOLTS w/ STD. 90° BEND	7"	6'-0"	YES	YES
SST - MAS	4"	5'-0"	NO	YES
HILTI KWIK BOLT KBI 1/2-2-3/4	2-1/4"	6'-0"	YES	NO
1/2" Ø HILTI THREADED ROD w/ HIT HY150 ADHESIVE	7"	6'-0"	YES	YES

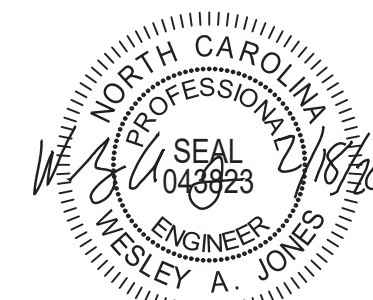
NOTE: INSTALL ALL ANCHORS 12" MAX. FROM ALL BOTTOM PLATE ENDS AND JOINTS.

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.	20"	16"	16"
2 STORY - BRICK VENEER	25"	21"	21"

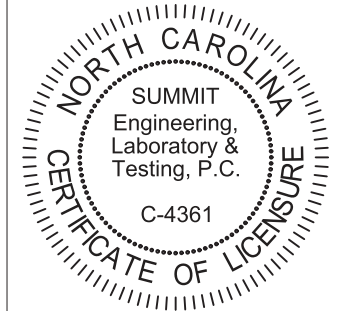
\*5" BRICK LEDGE HAS BEEN ADDED TO THE MONOLITHIC FOOTING WIDTH FOR BRICK SUPPORT

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



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PROJECT  
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Monolithic Slab Details  
CLIENT  
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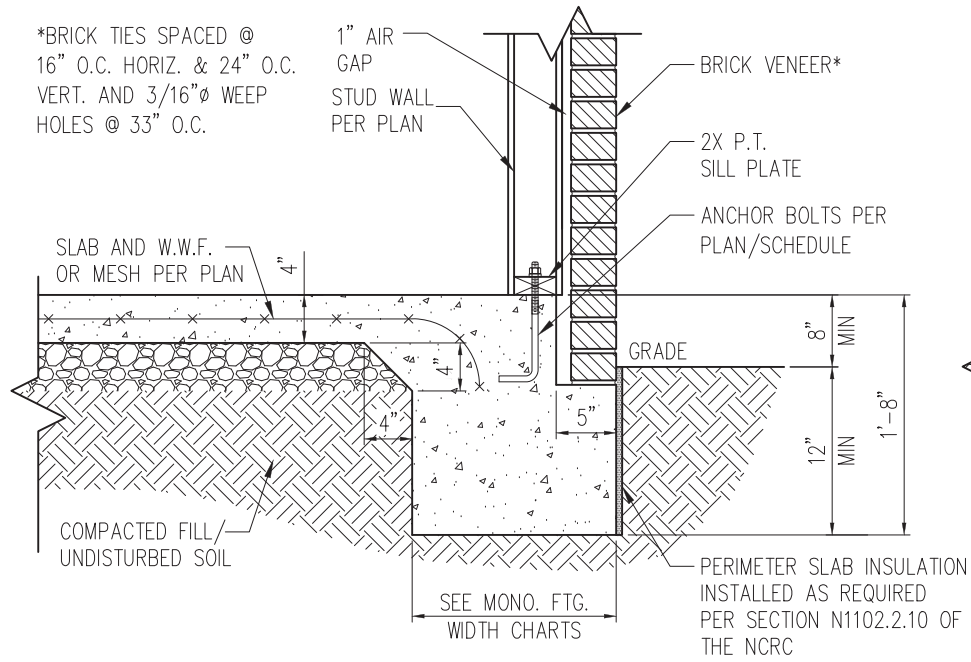
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NO. DATE PROJECT #  
0 1/7/16 3832

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET

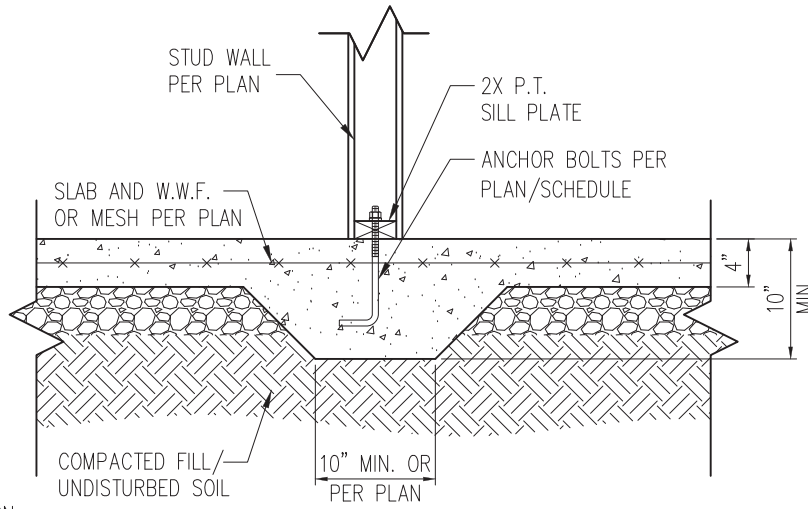
D1m

\*BRICK TIES SPACED @ 16" O.C. HORIZ. & 24" O.C. VERT. AND 3/16" Ø WEEP HOLES @ 33" O.C.



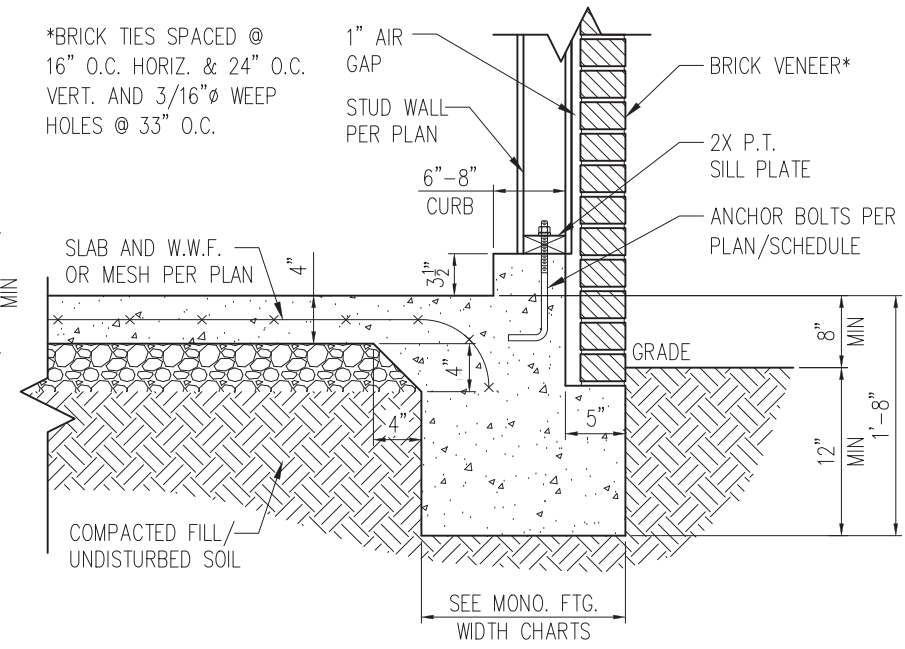
STANDARD - BRICK

1 TYP. SLAB DETAIL W/ BRICK VENEER  
D2m 3/4" = 1'-0"



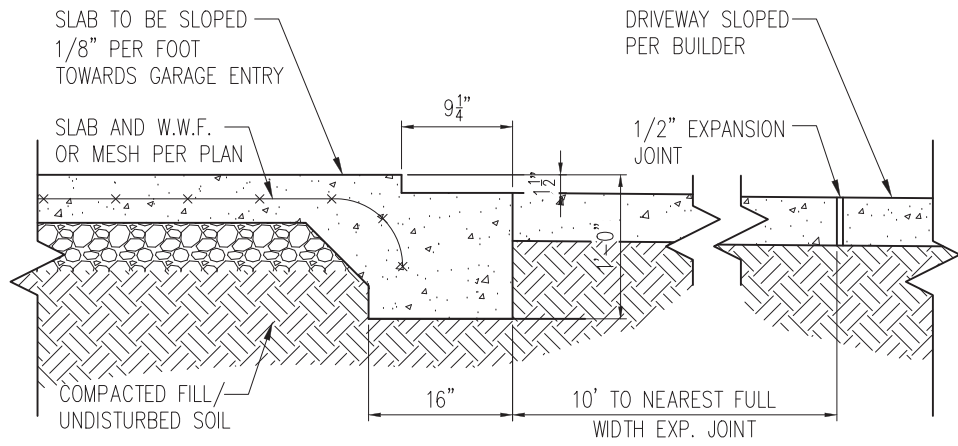
3 TYP. THICKENED SLAB DETAIL  
D2m 3/4" = 1'-0"

\*BRICK TIES SPACED @ 16" O.C. HORIZ. & 24" O.C. VERT. AND 3/16" Ø WEEP HOLES @ 33" O.C.

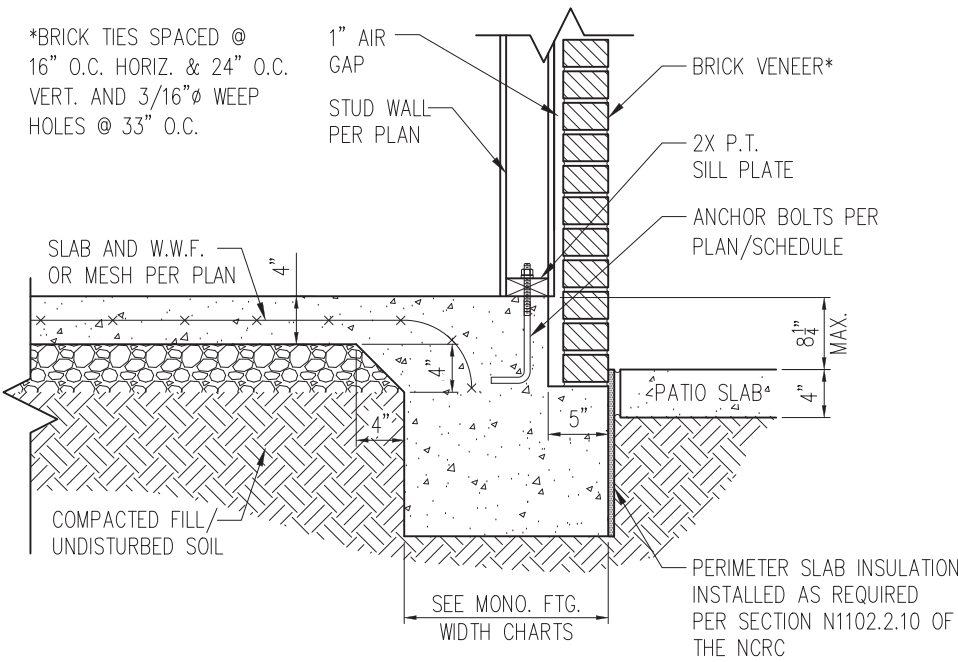


STANDARD - BRICK

5 TYP. GARAGE CURB DETAIL W/ BRICK VENEER  
D2m 3/4" = 1'-0"



2 SLAB AT GARAGE DOOR  
D2m 3/4" = 1'-0"



STANDARD - BRICK

4 PATIO SLAB DETAIL W/ BRICK VENEER  
D2m 3/4" = 1'-0"

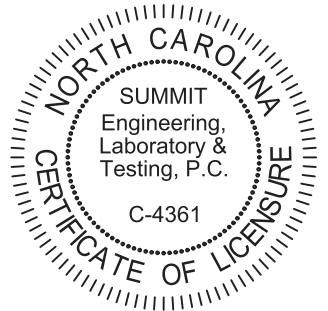
NOTES:

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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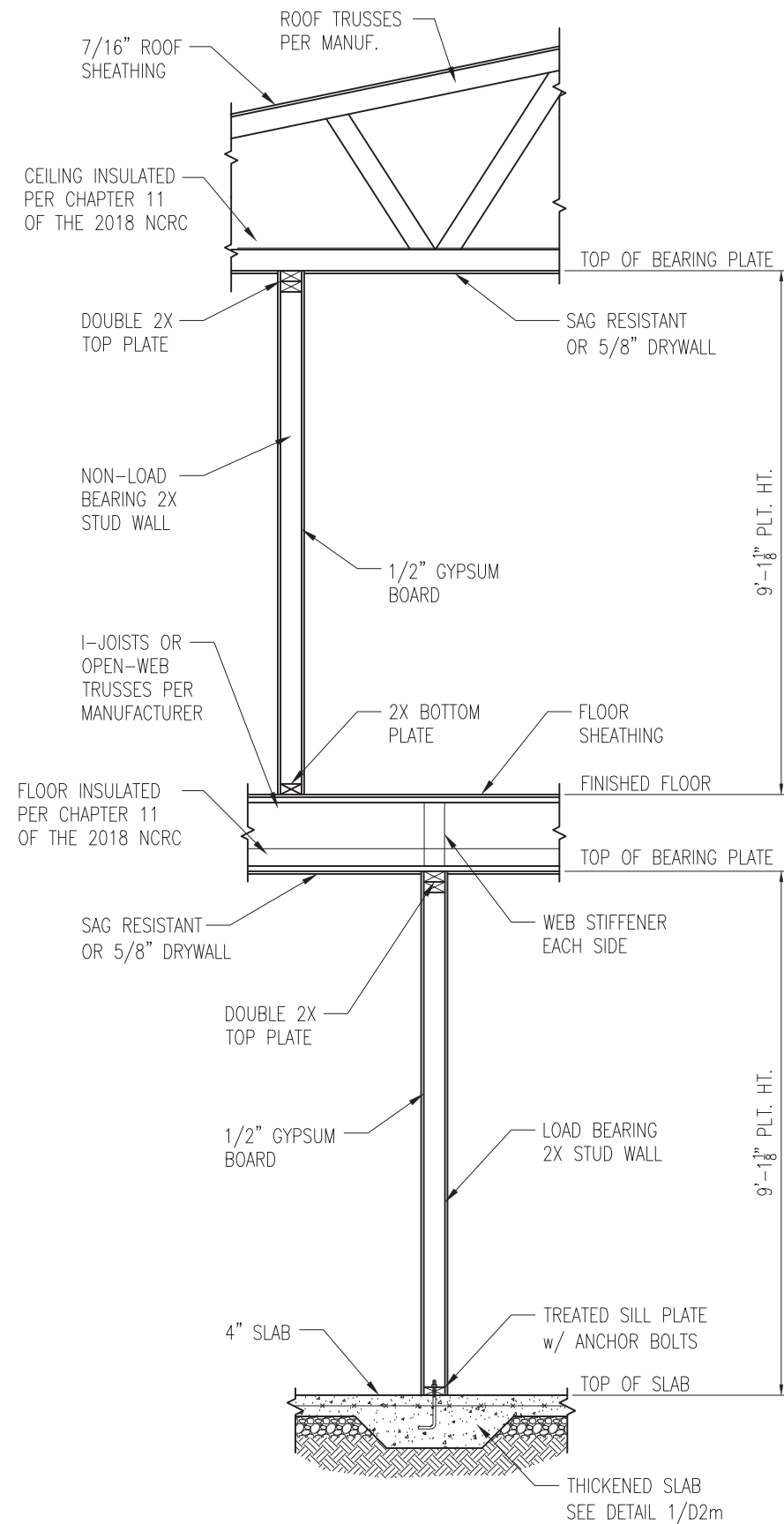
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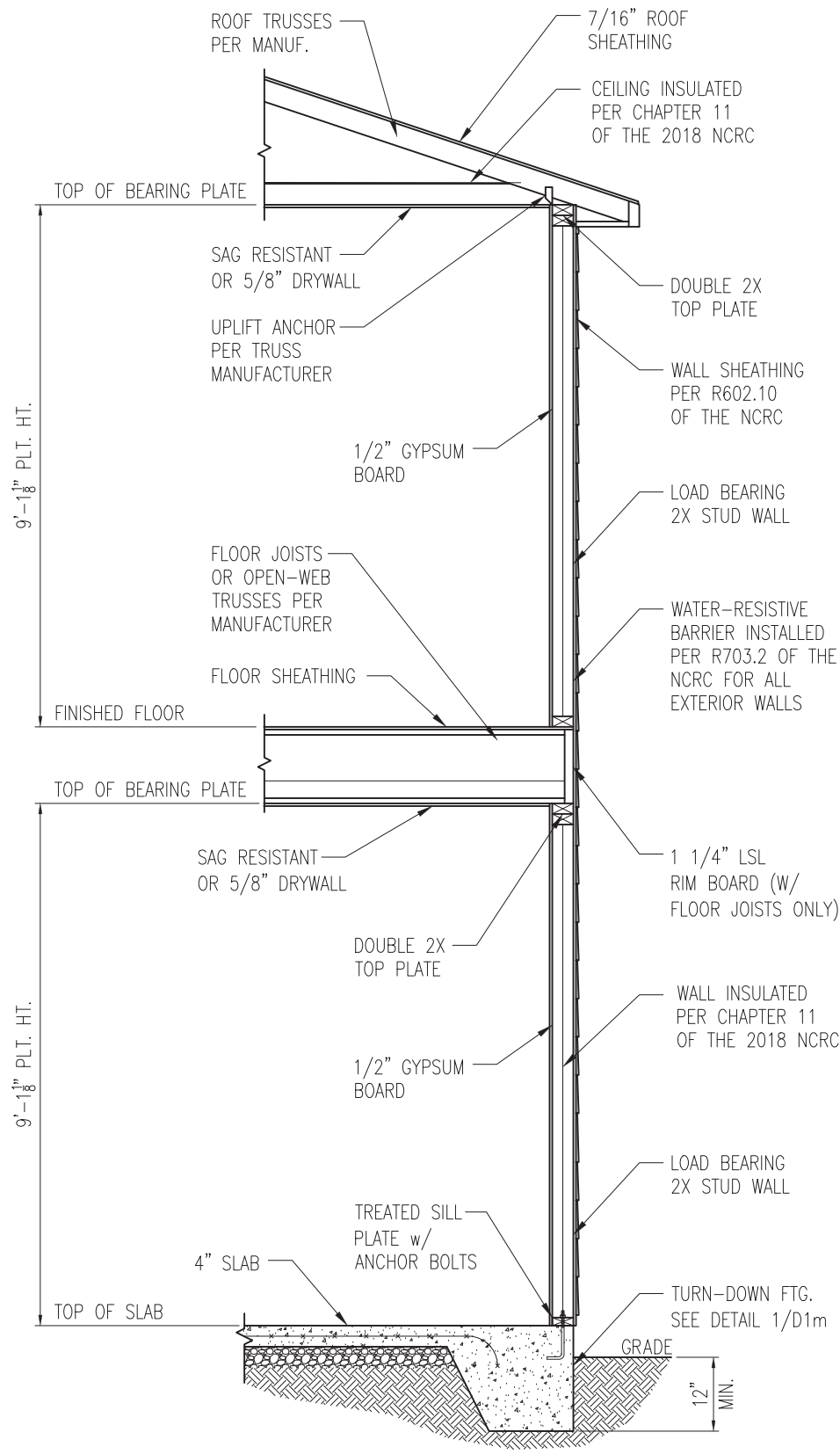
ORIGINAL DRAWING  
NO. DATE PROJECT #  
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REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET  
**D2m**



1 TYP. INTERIOR LOAD BEARING WALL SECTION  
 D3m 3/4" = 1'-0"



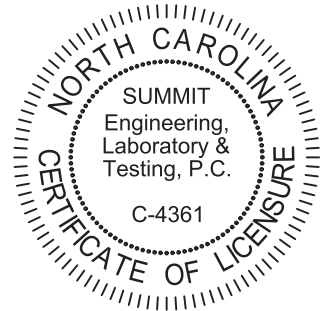
2 TYP. EXTERIOR LOAD BEARING WALL SECTION  
 D3m 3/4" = 1'-0"  
 -SIMILAR w/ BRICK AND STONE  
 -BRICK TIES SPACED @ 16" O.C. HORIZ. & 24" O.C. VERT.  
 -MIN. 3/16" Ø WEEP HOLES @ 33" O.C.

- NOTES:
1. REFER TO GENERAL NOTES & SPECIFICATIONS ON SHEET CS2 FOR ADDITIONAL INFORMATION.
  2. PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
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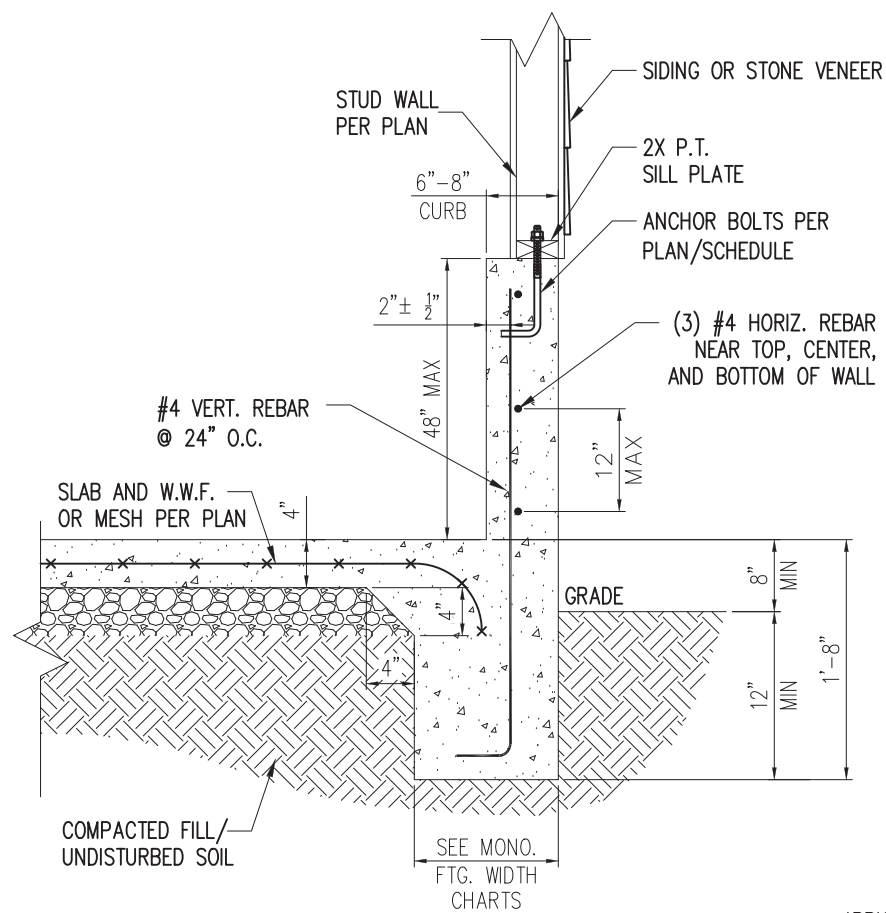
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ORIGINAL DRAWING  
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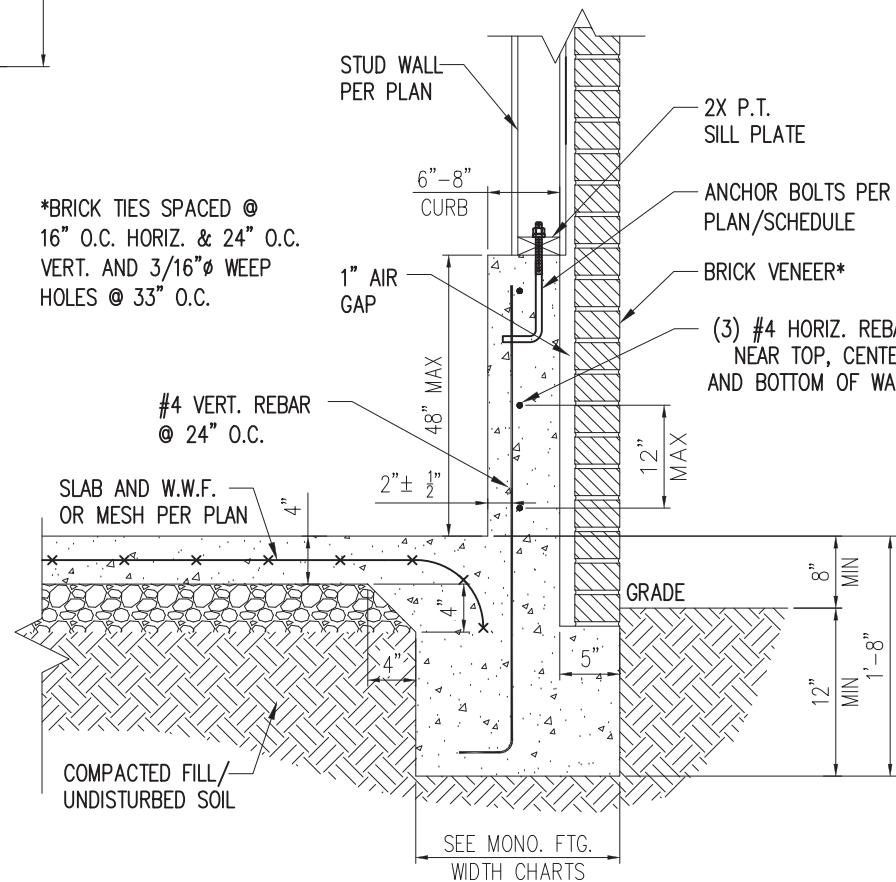
SHEET  
**D3m**



STANDARD - SIDING/STONE

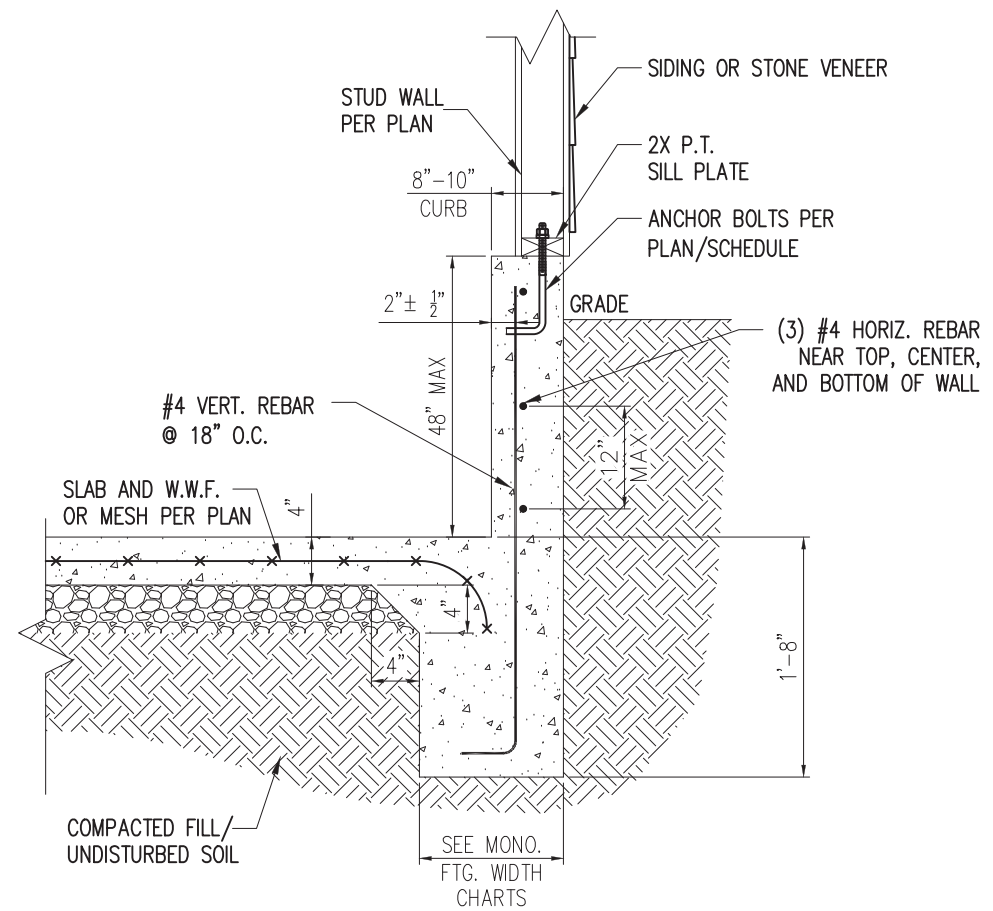
1 EXTENDED GARAGE CURB DETAIL  
D4m NTS

\*BRICK TIES SPACED @  
16" O.C. HORIZ. & 24" O.C.  
VERT. AND 3/16" Ø WEEP  
HOLES @ 33" O.C.



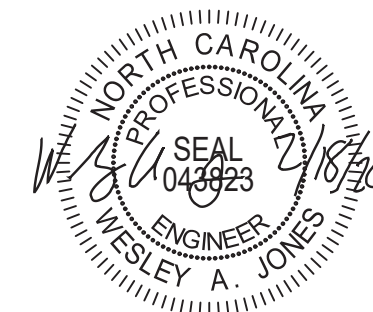
STANDARD - BRICK

3 EXTENDED GARAGE CURB DETAIL  
W/ BRICK VENEER  
D4m NTS



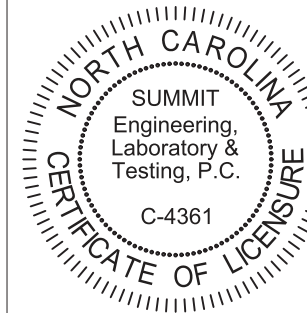
STANDARD - SIDING/STONE

2 EXTENDED GARAGE CURB DETAIL  
W/ UNBALANCED FILL  
D4m NTS



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PROJECT  
Standard Details  
Monolithic Slab Details  
CLIENT  
Smith Douglas Homes  
110 Village Trail, Suite 215  
Woodstock, GA 30188

CURRENT DRAWING  
DATE: 2/18/20  
SCALE: NTS  
PROJECT #: 3832  
DRAWN BY: LBV  
CHECKED BY: WAJ

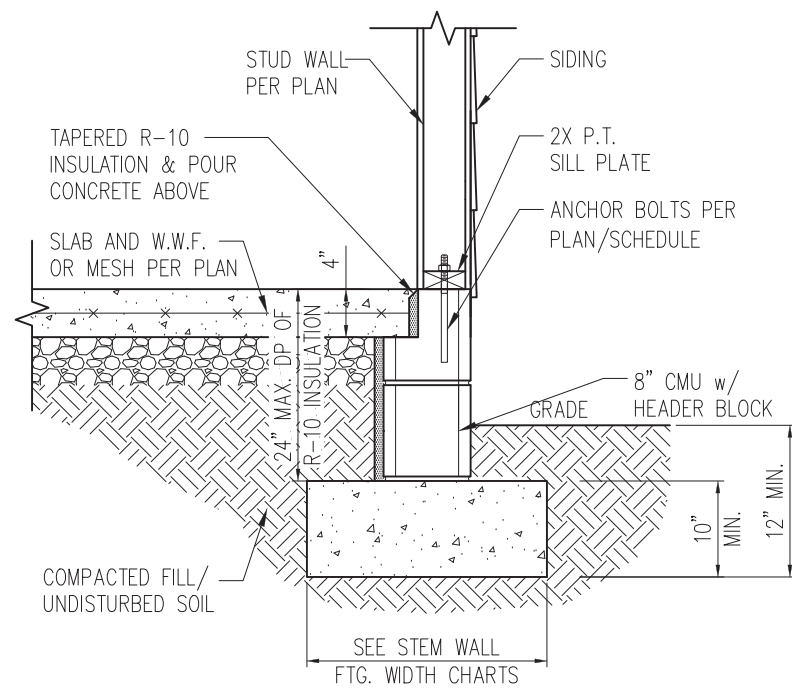
ORIGINAL DRAWING  
NO. DATE PROJECT #  
0 1/7/16 3832

REFER TO COVER SHEET FOR A  
COMPLETE LIST OF REVISIONS

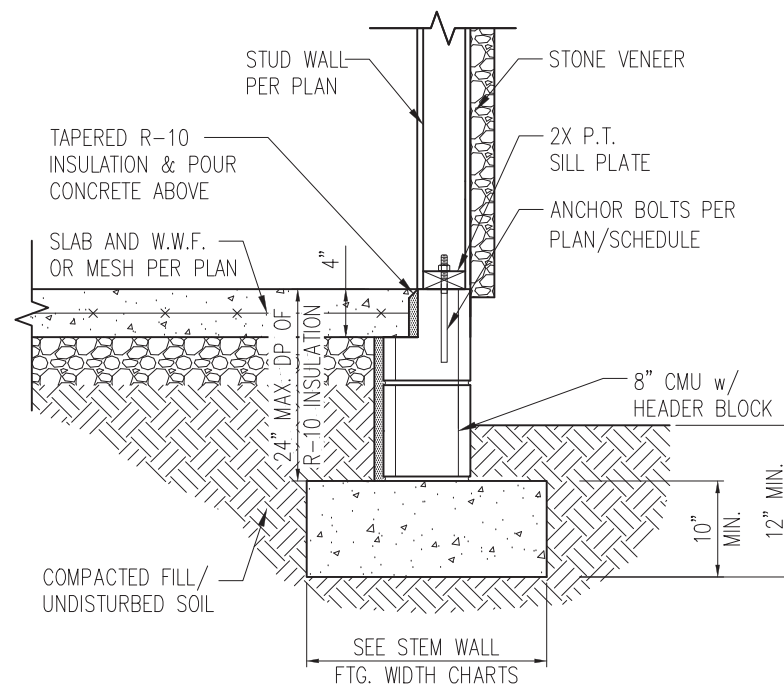
SHEET

D4m

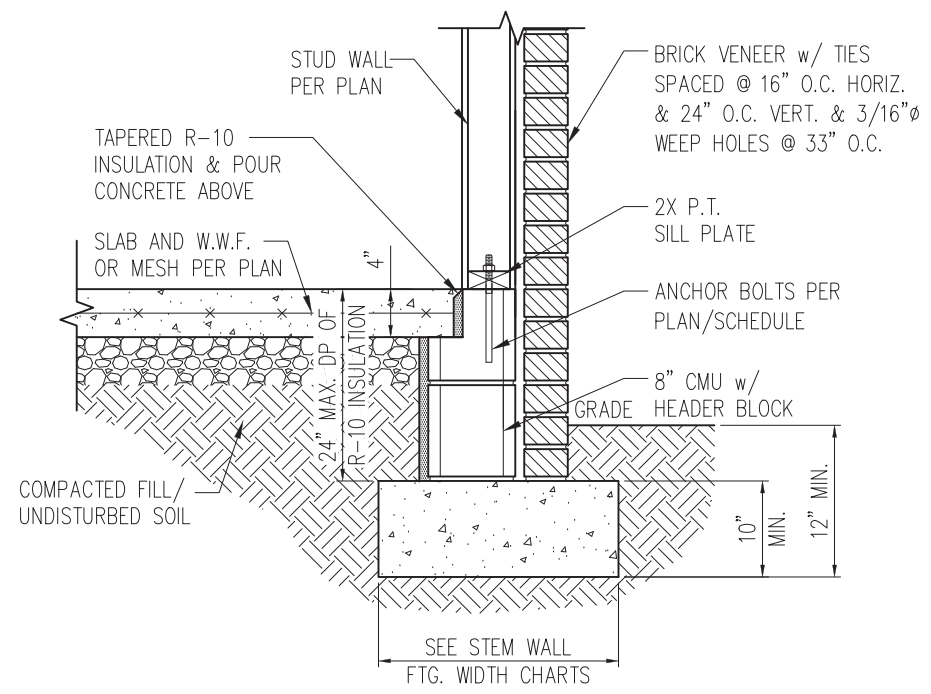




STANDARD - SIDING

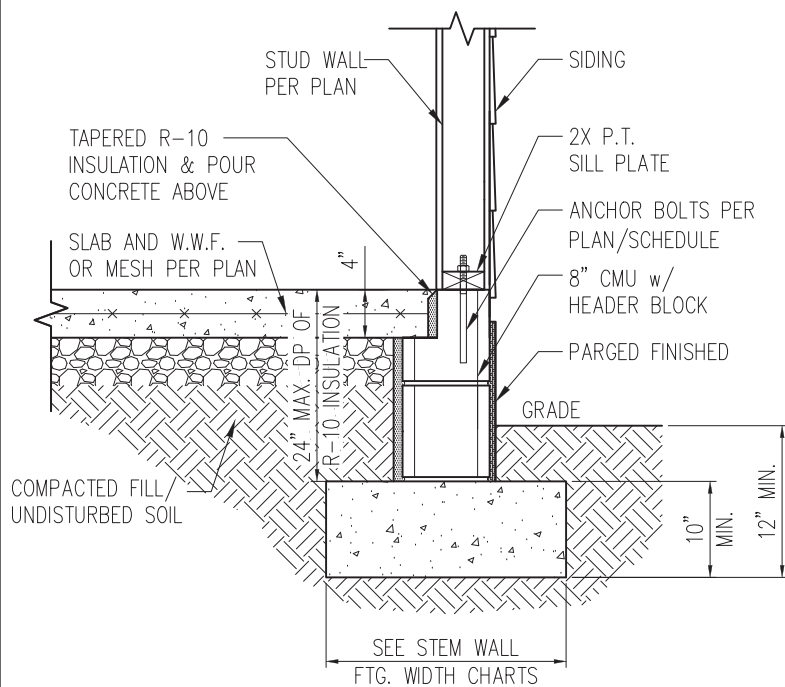


STANDARD - STONE

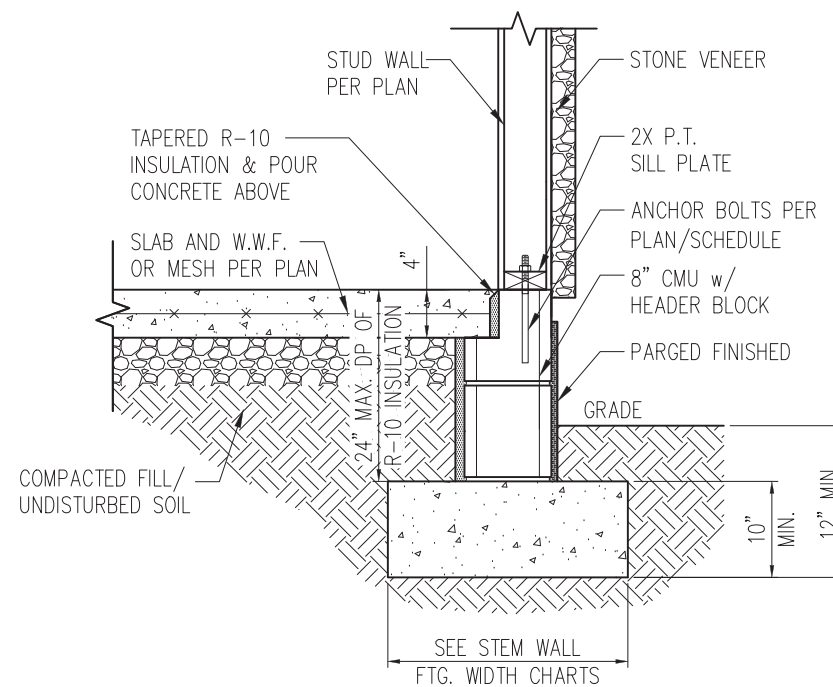


STANDARD - BRICK

1 TYP. STEM WALL DETAIL  
D1s 3/4" = 1'-0"



STANDARD - SIDING



STANDARD - STONE

1a STEM WALL DETAIL w/ PARGED FINISH  
D1s 3/4" = 1'-0"

STEM WALL 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.	20"	16"	16"
2 STORY - BRICK VENEER	25"*	21"*	21"*

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

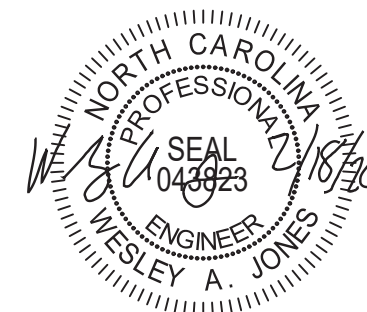
WALL ANCHOR SCHEDULE

TYPE OF ANCHOR	MIN. CONC. EMBEDMENT	SPACING EMBEDMENT	INTERIOR WALL	EXTERIOR WALL
1/2" A307 BOLTS w/ STD. 90° BEND	7"	6'-0"	YES	YES
SST - MAS	4"	5'-0"	NO	YES
HILTI KWIK BOLT KBI 1/2-2-3/4	2-1/4"	6'-0"	YES	NO
1/2" HILTI THREADED ROD w/ HIT HY150 ADHESIVE	7"	6'-0"	YES	YES

NOTE: INSTALL ALL ANCHORS 12" MAX. FROM ALL BOTTOM PLATE ENDS AND JOINTS.

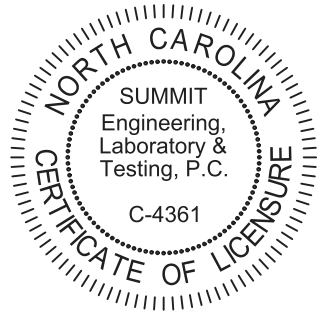
NOTES:

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



STRUCTURAL MEMBERS ONLY

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ENGINEERING LABORATORY TESTING  
3070 HAMMOND BUSINESS PLACE,  
SUITE 171, RALEIGH, NC 27603  
OFFICE: 919.380.9991  
FAX: 919.380.9993  
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PROJECT  
**Standard Details**  
**Stemwall Details**  
CLIENT  
**Smith Douglas Homes**  
110 Village Trail, Suite 215  
Woodstock, GA 30188

CURRENT DRAWING  
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CHECKED BY: WAJ

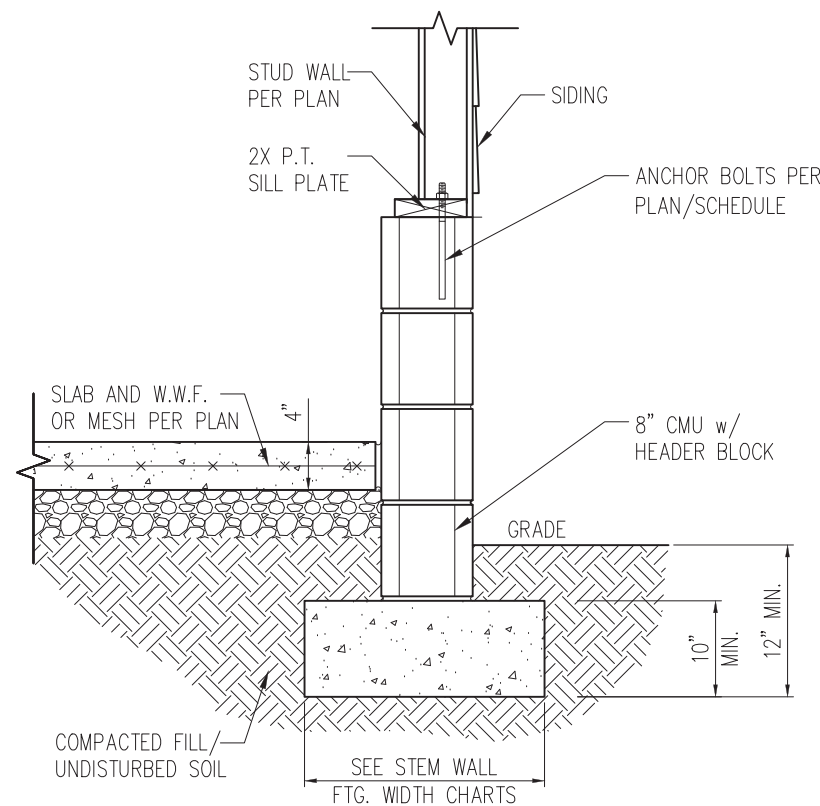
ORIGINAL DRAWING  
NO. DATE PROJECT #  
0 1/7/16 3832

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

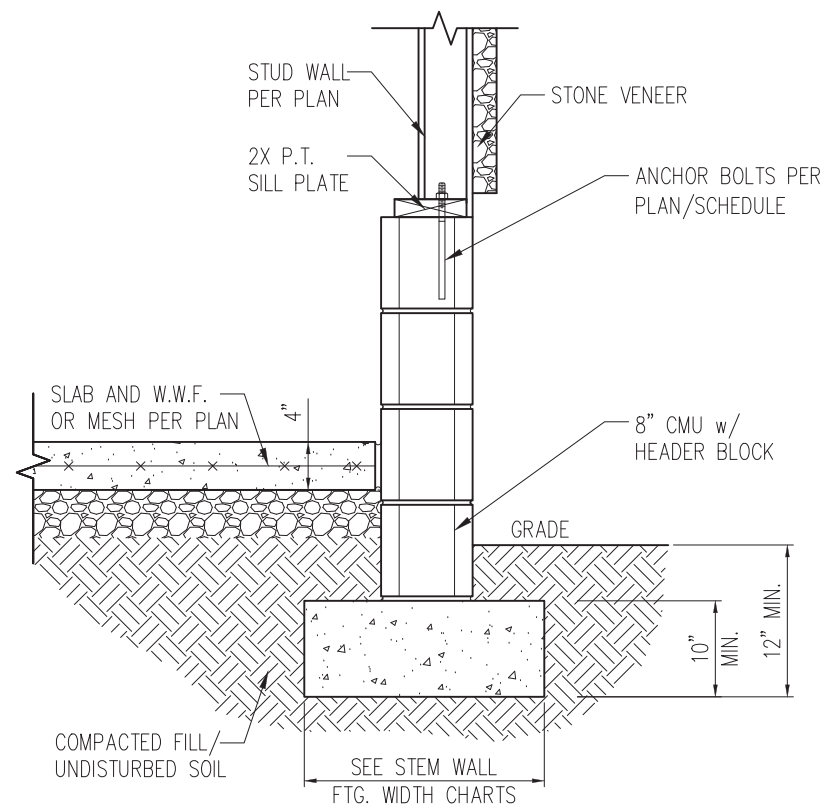
SHEET

**D1s**

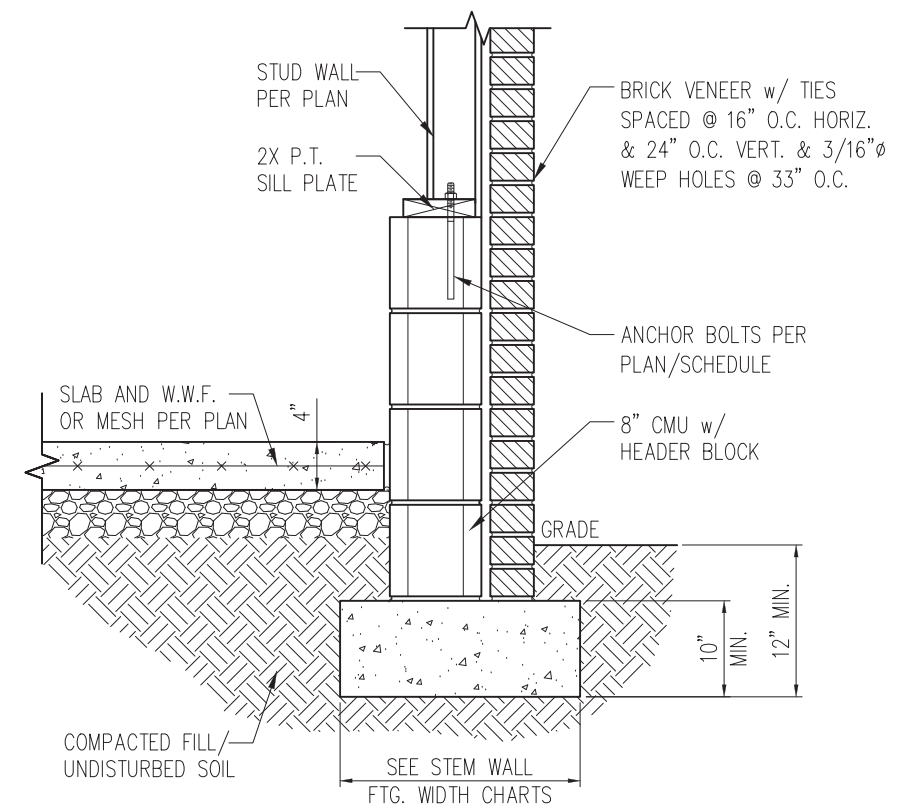




STANDARD - SIDING

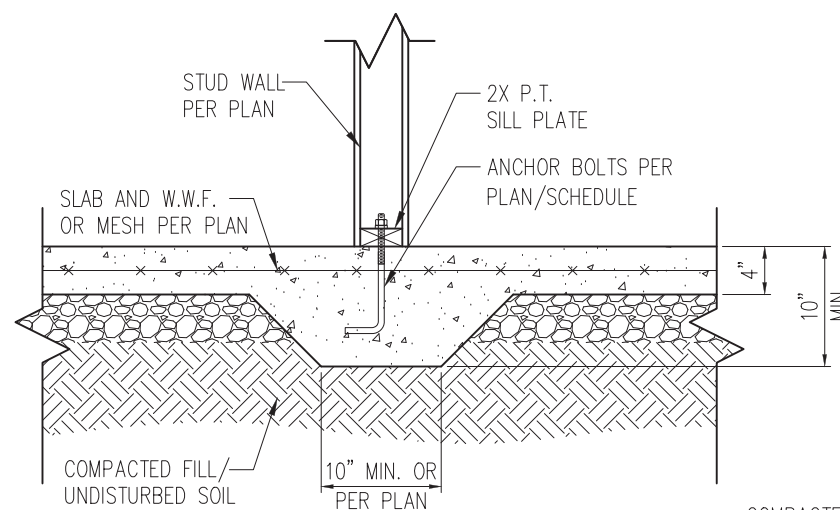


STANDARD - STONE

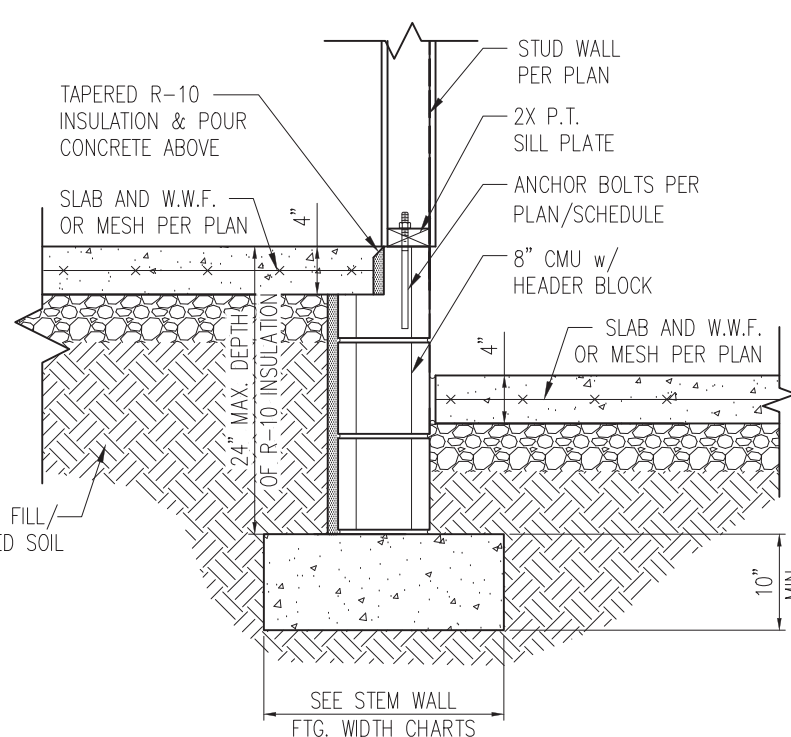


STANDARD - BRICK

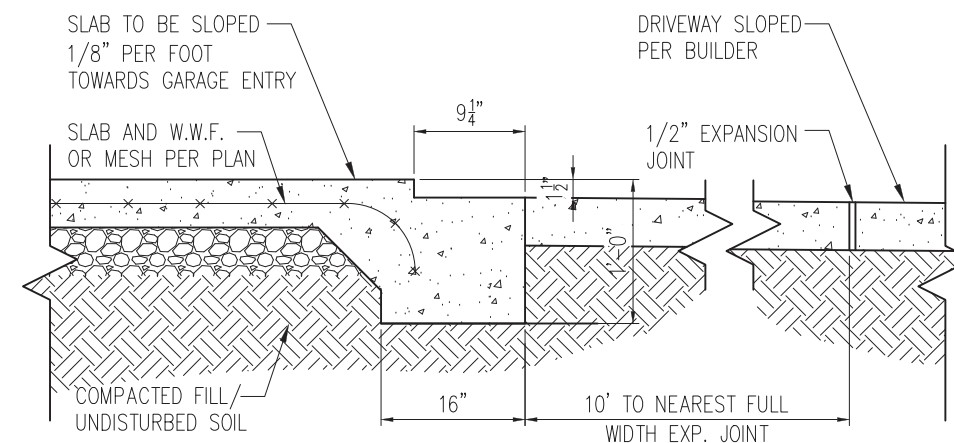
1 TYP. GARAGE CURB DETAIL  
D2s 3/4" = 1'-0"



2 TYP. THICKENED SLAB DETAIL  
D2s 3/4" = 1'-0"

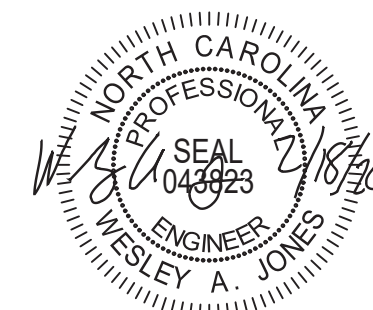


3 HOUSE/GARAGE WALL DETAIL  
D2s 3/4" = 1'-0"



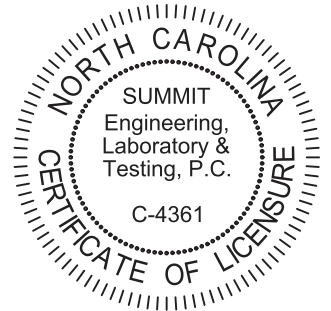
4 SLAB AT GARAGE DOOR  
D2s 3/4" = 1'-0"

- NOTES:
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  - SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.



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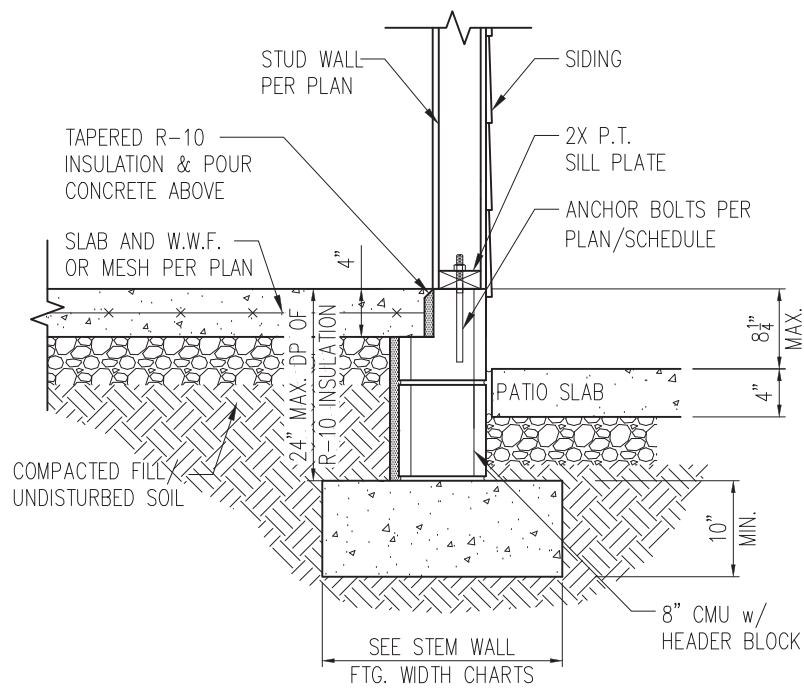


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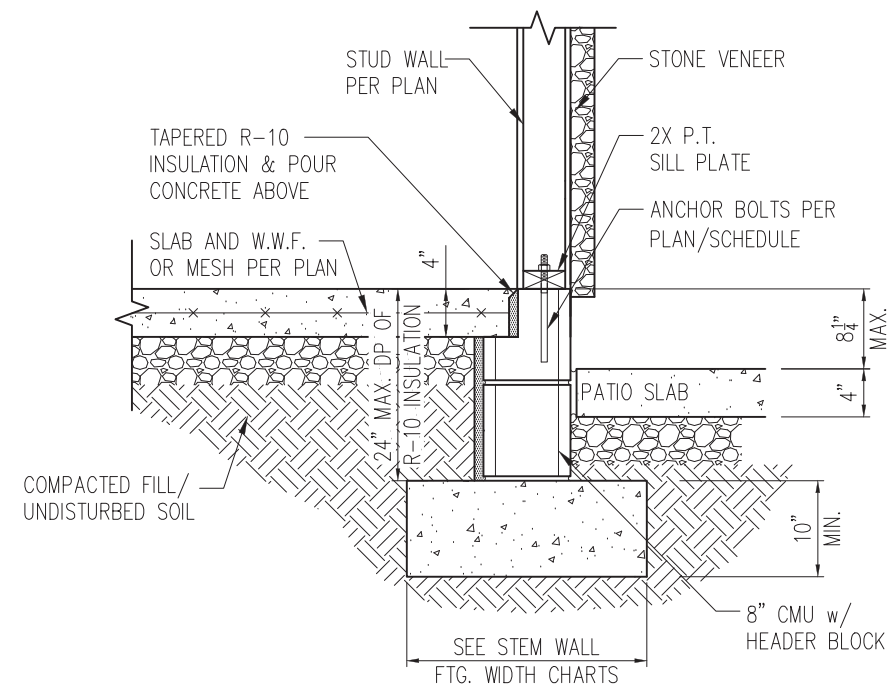
CURRENT DRAWING		
DATE: 2/18/20		
SCALE: NTS		
PROJECT #: 3832		
DRAWN BY: LBV		
CHECKED BY: WAJ		
ORIGINAL DRAWING		
NO.	DATE	PROJECT #
0	1/7/16	3832

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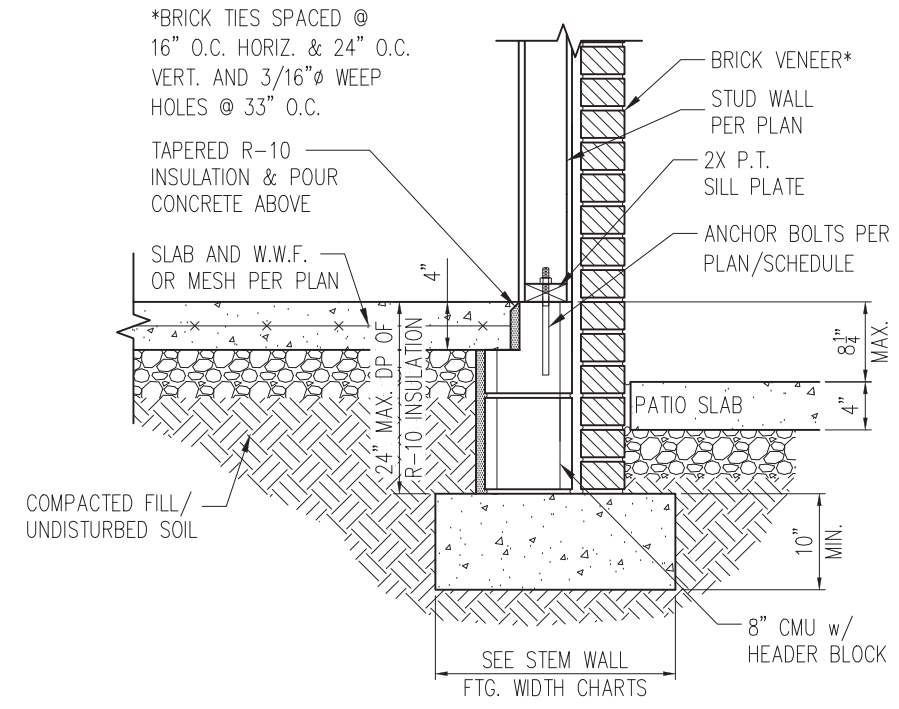
SHEET  
**D2s**



STANDARD - SIDING

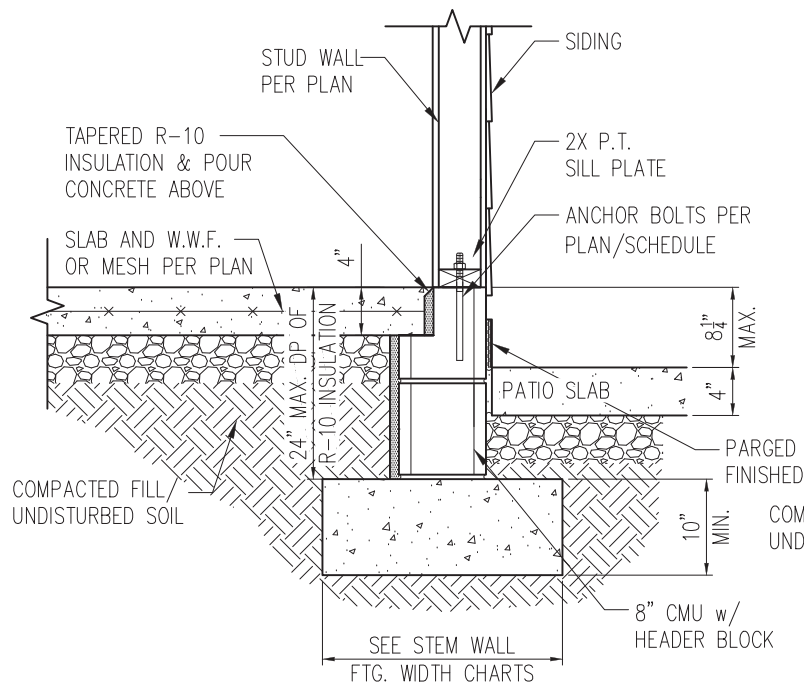


STANDARD - STONE

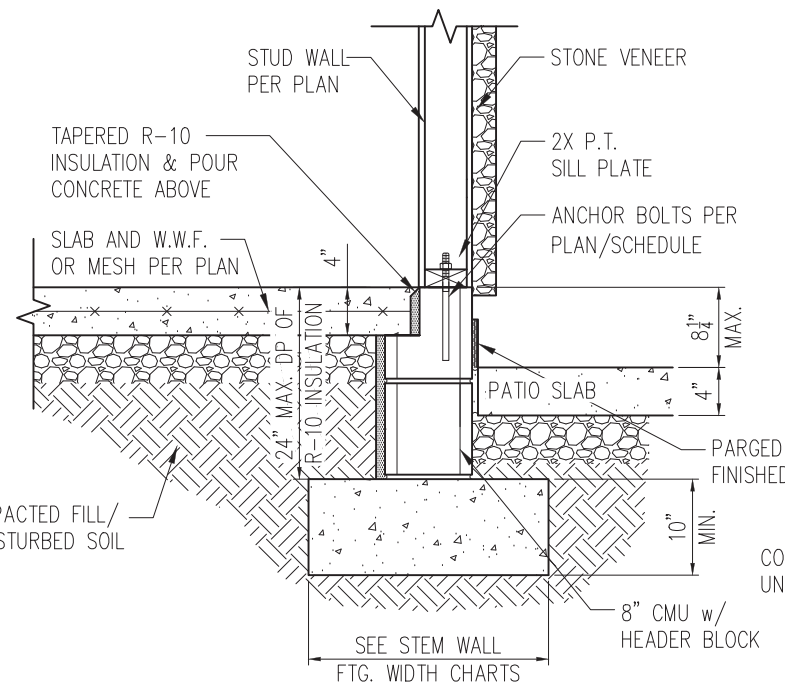


STANDARD - BRICK

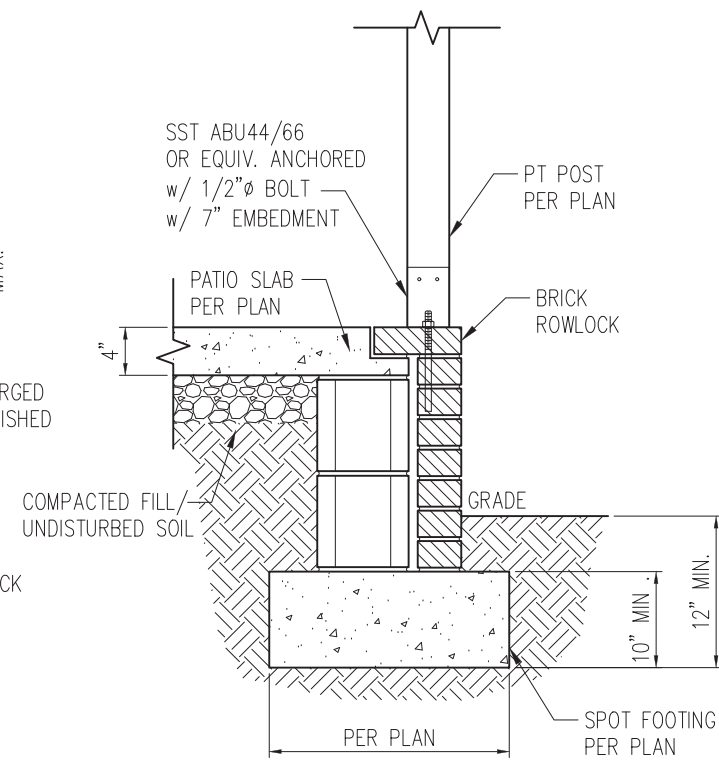
1 PORCH SLAB DETAIL  
D3s 3/4" = 1'-0"



STANDARD - SIDING

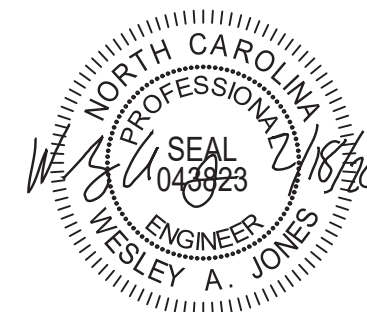


STANDARD - STONE



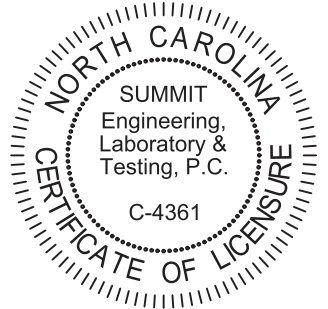
2 COVERED PORCH DETAIL  
D3s 3/4" = 1'-0"

- 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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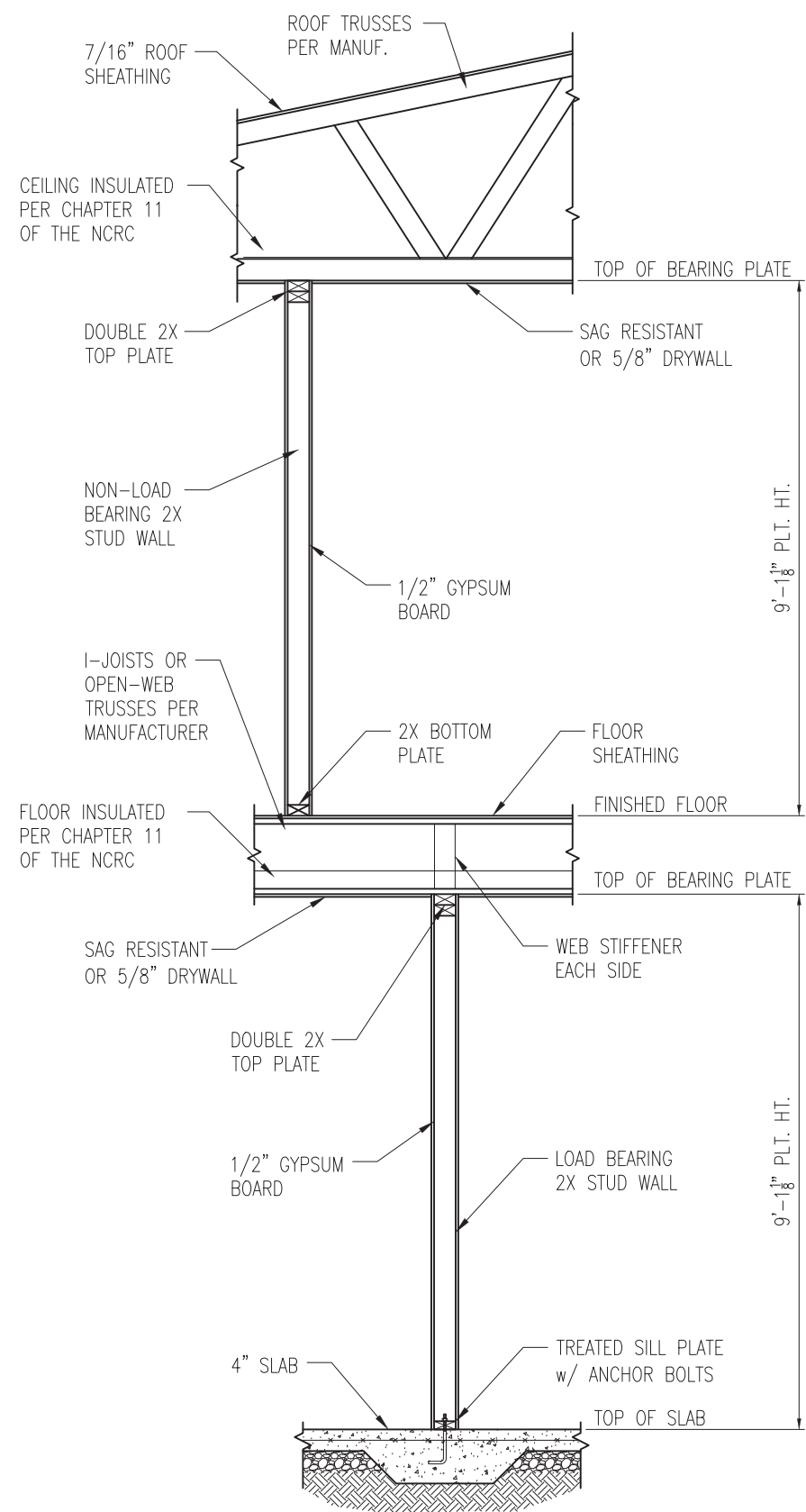
PROJECT  
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**Stemwall Details**  
CLIENT  
**Smith Douglas Homes**  
110 Village Trail, Suite 215  
Woodstock, GA 30188

CURRENT DRAWING  
DATE: 2/18/20  
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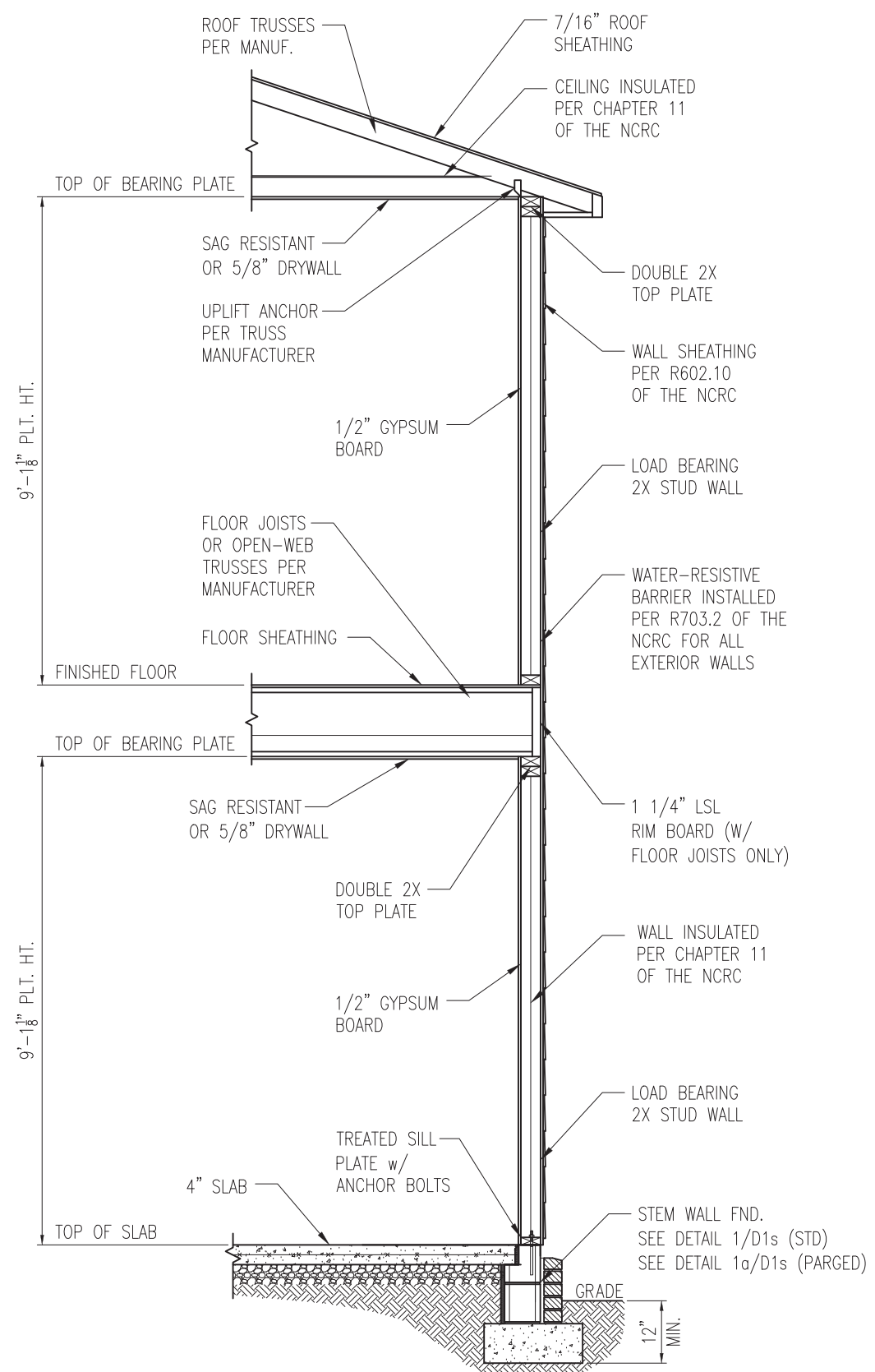
ORIGINAL DRAWING  
NO. DATE PROJECT #  
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REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET  
**D3s**



1 TYP. INTERIOR LOAD BEARING WALL SECTION  
 D4s 3/4" = 1'-0"



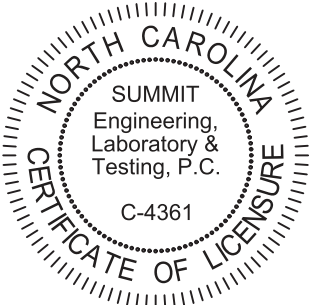
2 TYP. EXTERIOR LOAD BEARING WALL SECTION  
 D4s 3/4" = 1'-0" -SIMILAR w/ BRICK AND STONE  
 -BRICK TIES SPACED @ 16" O.C. HORIZ. & 24" O.C. VERT.  
 -MIN. 3/16" Ø WEEP HOLES @ 33" O.C.

- 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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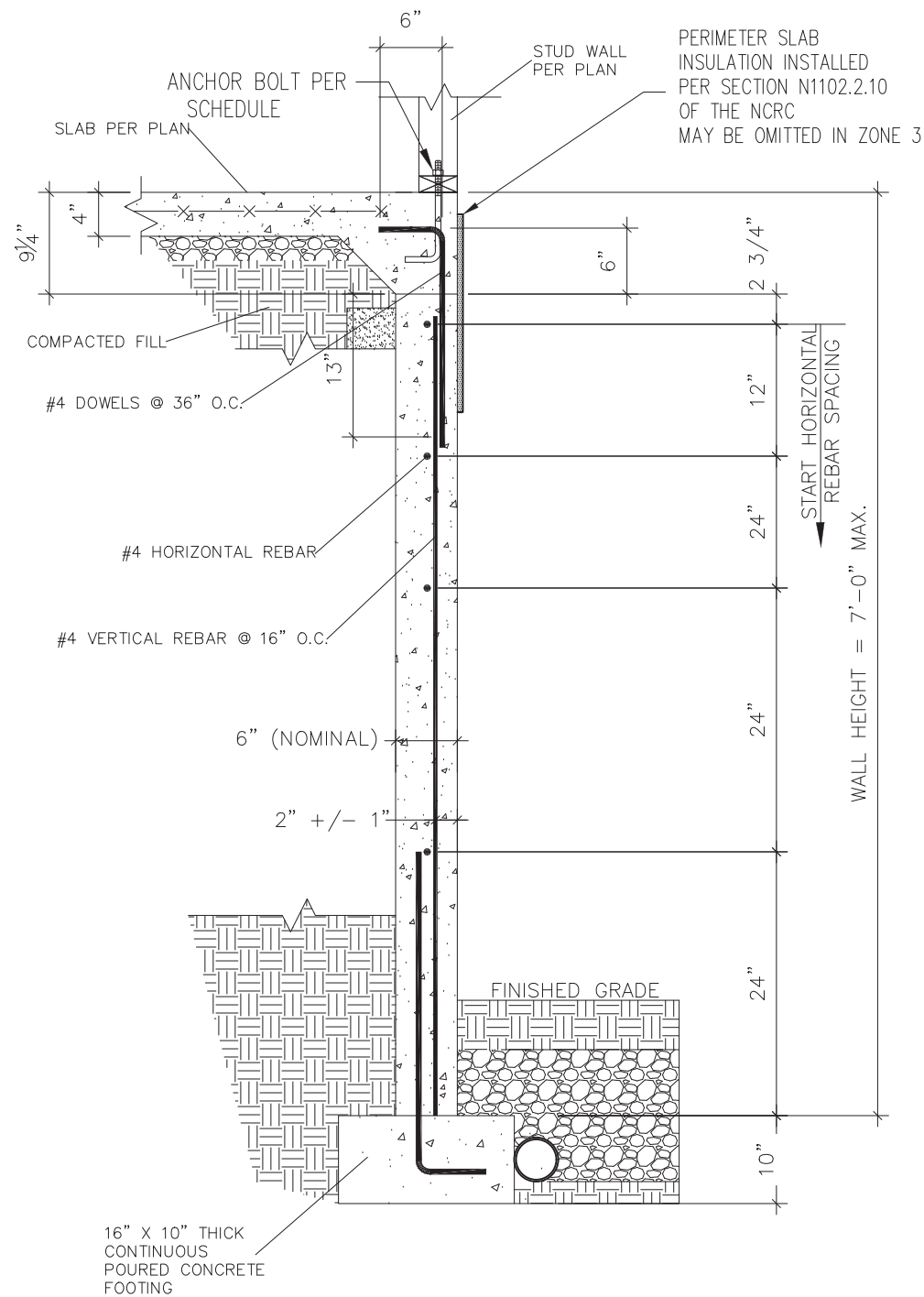
PROJECT  
**Standard Details**  
**Stemwall Details**  
 CLIENT  
**Smith Douglas Homes**  
 110 Village Trail, Suite 215  
 Woodstock, GA 30188

CURRENT DRAWING  
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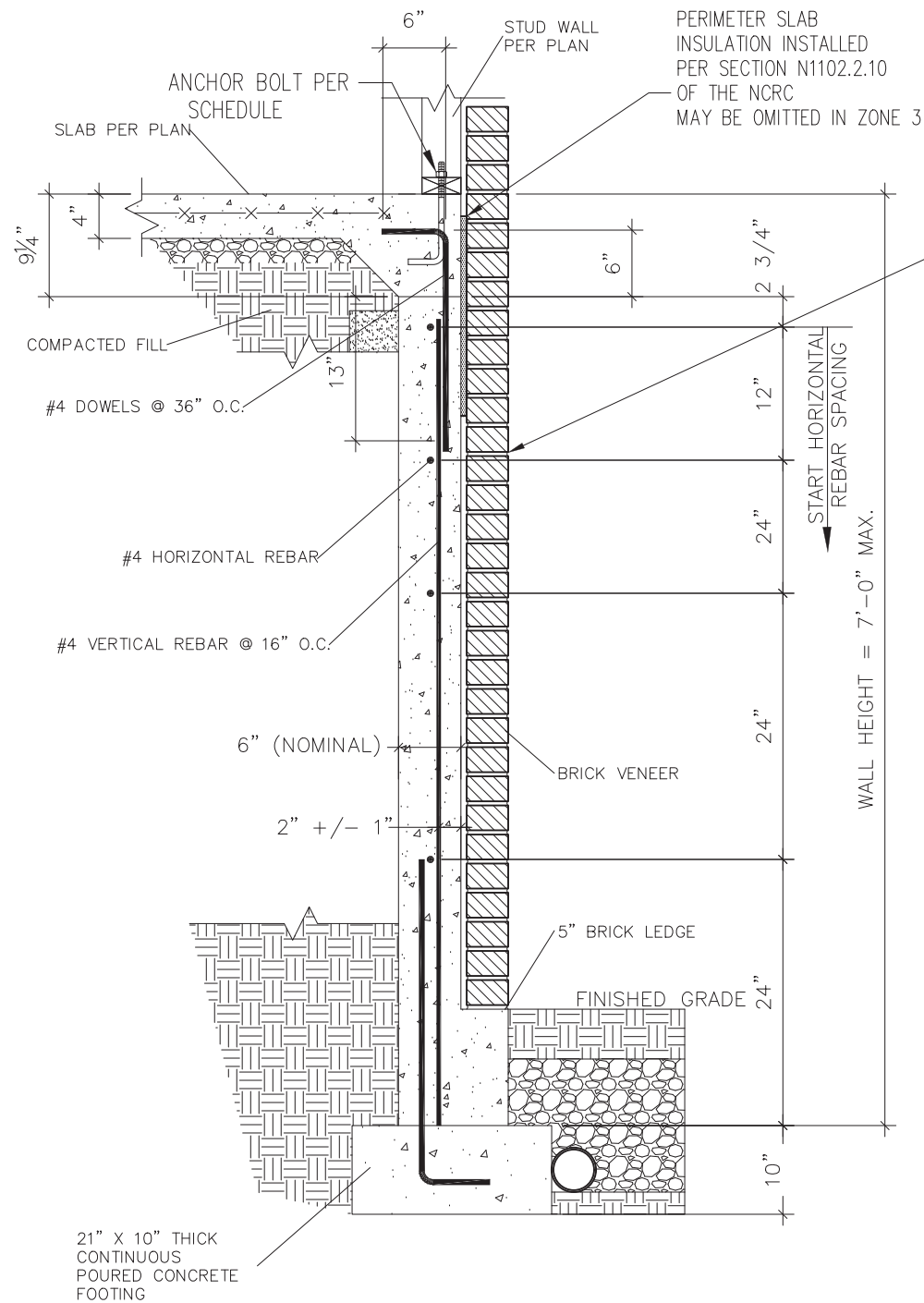
ORIGINAL DRAWING  
 NO. DATE PROJECT #  
 0 1/7/16 3832

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET  
**D4s**



1 SUBWALL FOUNDATION  
 D5s 3/4" = 1'-0"



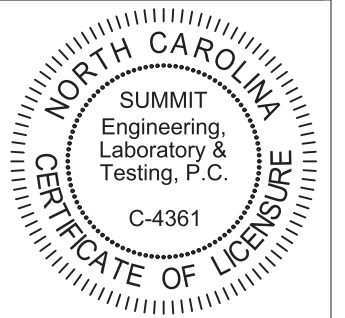
2 SUBWALL FOUNDATION W/ BRICK VENEER  
 D5s 3/4" = 1'-0"

PROVIDE LADDER WIRE OR METAL TIES, INSTALLED PER R608.1.2 OF THE 2012 NCRC, AND FULLY GROUT BETWEEN BRICK AND CONCRETE.



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PROJECT  
**Standard Details**  
**Stemwall Details**  
 CLIENT  
 Smith Douglas Homes  
 110 Village Trail, Suite 215  
 Woodstock, GA 30188

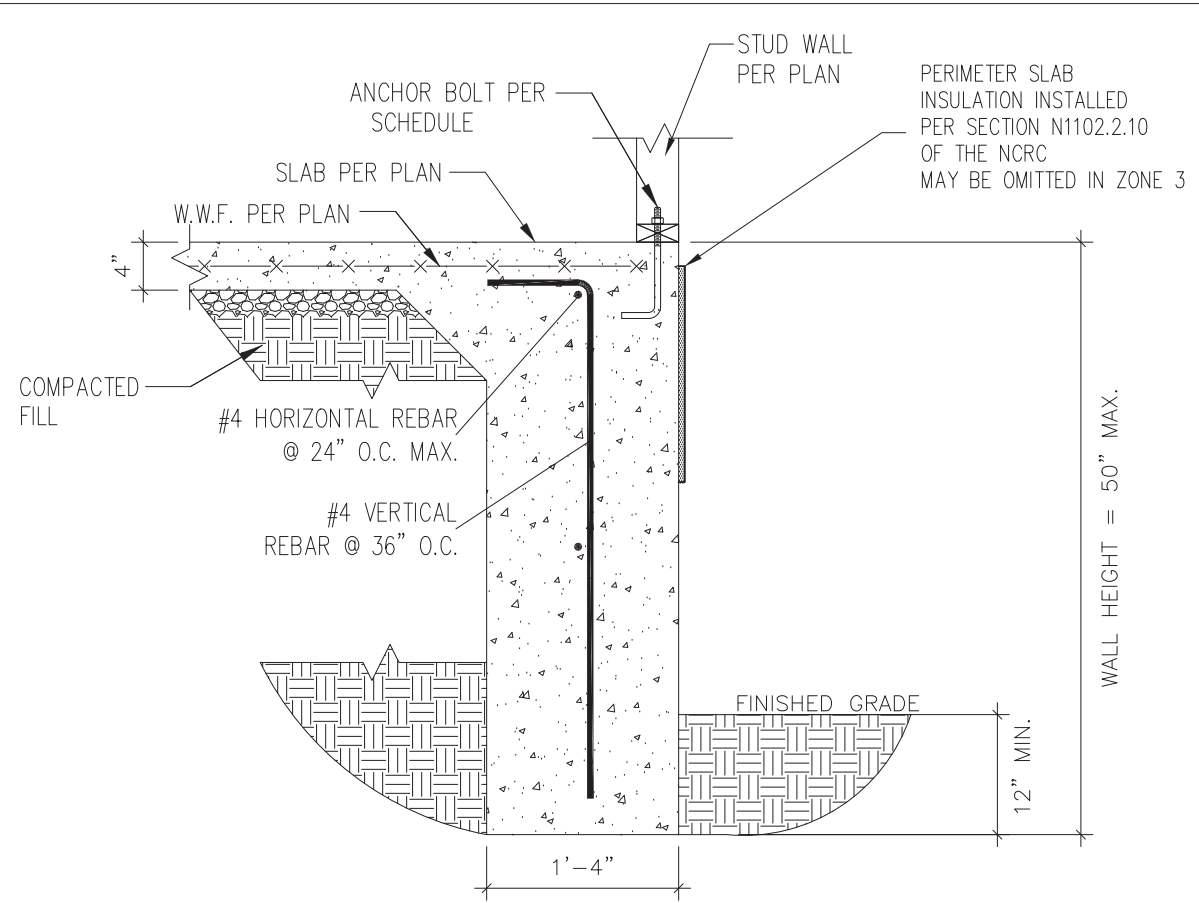
CURRENT DRAWING  
 DATE: 2/18/20  
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NO.	DATE	PROJECT #
0	1/7/16	3832

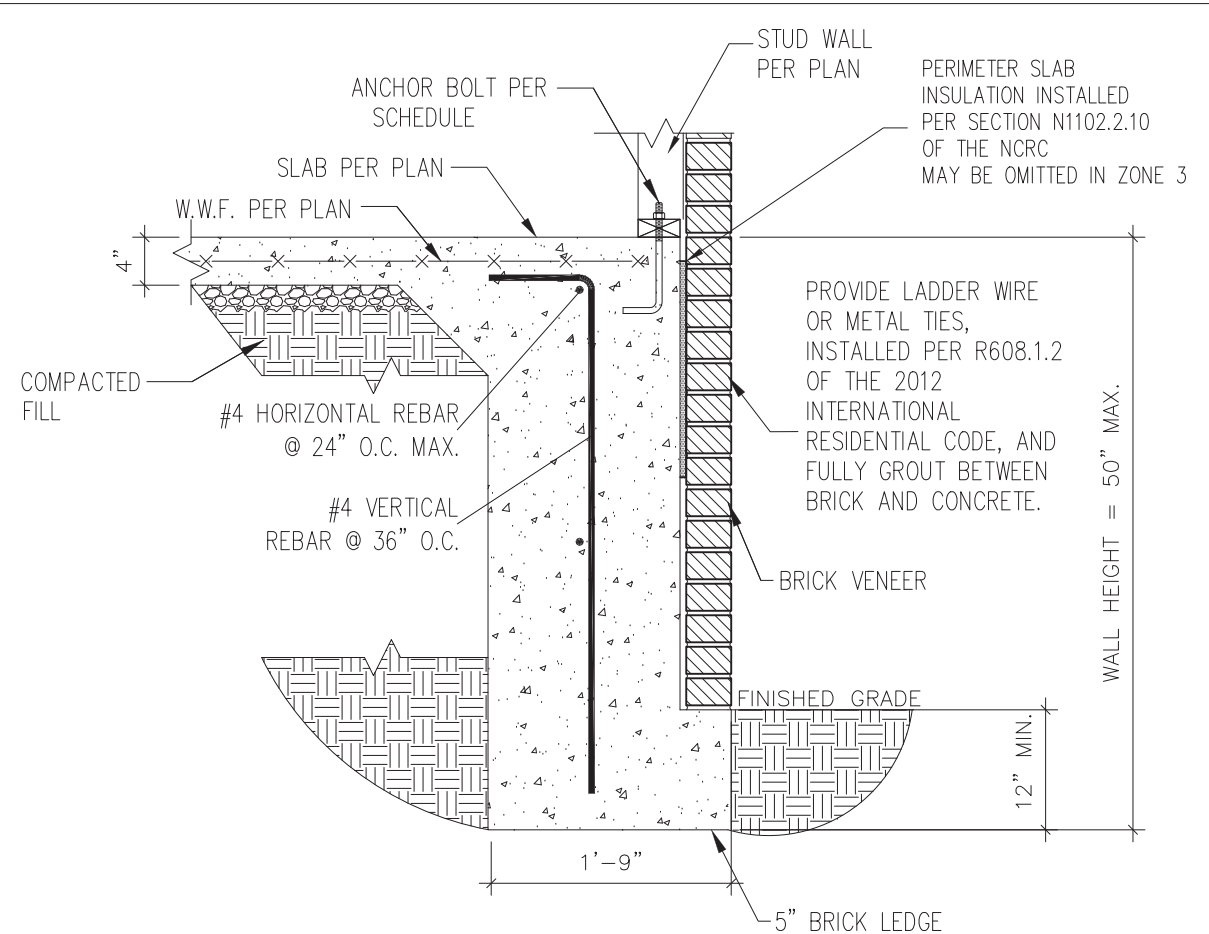
REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET  
**D5s**

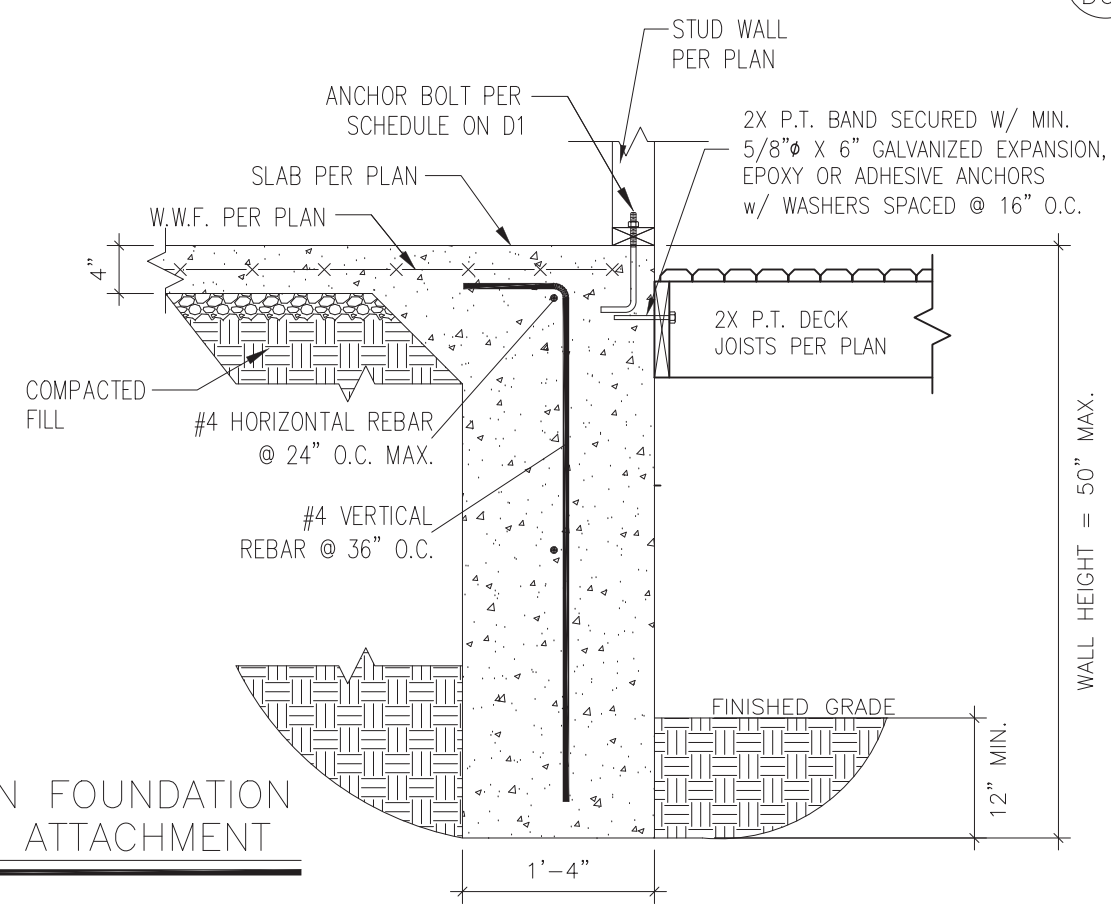




1 TURNDOWN FOUNDATION  
 D6s 3/4" = 1'-0"



2 TURNDOWN FOUNDATION W/ BRICK VENEER  
 D6s 3/4" = 1'-0"

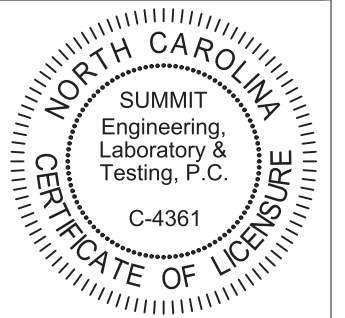


3 TURNDOWN FOUNDATION W/ DECK ATTACHMENT  
 D6s 3/4" = 1'-0"



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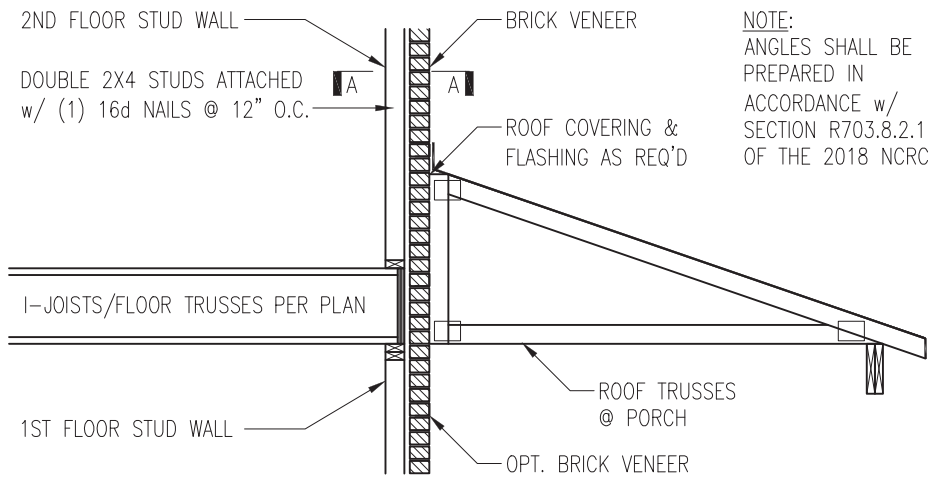
PROJECT  
**Standard Details**  
**Stemwall Details**  
 CLIENT  
**Smith Douglas Homes**  
 110 Village Trail, Suite 215  
 Woodstock, GA 30188

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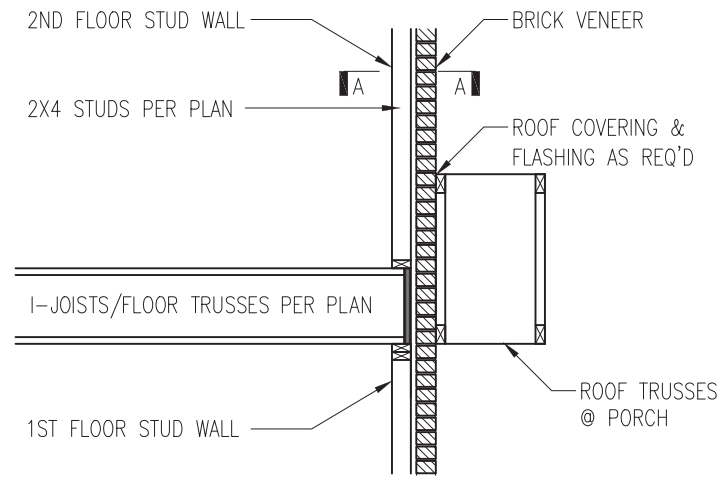
NO.	DATE	PROJECT #
0	1/7/16	3832

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SHEET  
**D6s**



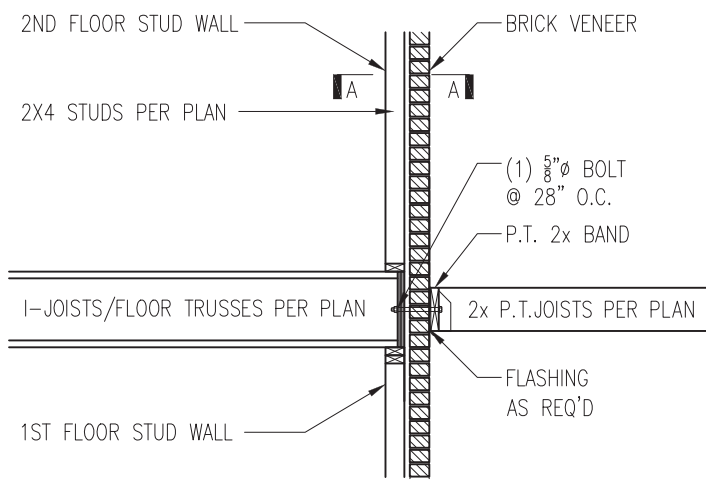
NOTE:  
ANGLES SHALL BE  
PREPARED IN  
ACCORDANCE W/  
SECTION R703.8.2.1  
OF THE 2018 NCR



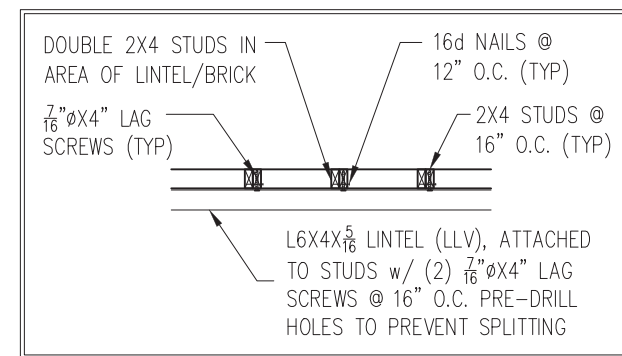
TRUSSES PERPENDICULAR TO STUD WALL

TRUSSES PARALLEL TO STUD WALL  
w/ CONTINUOUS BRICK VENEER

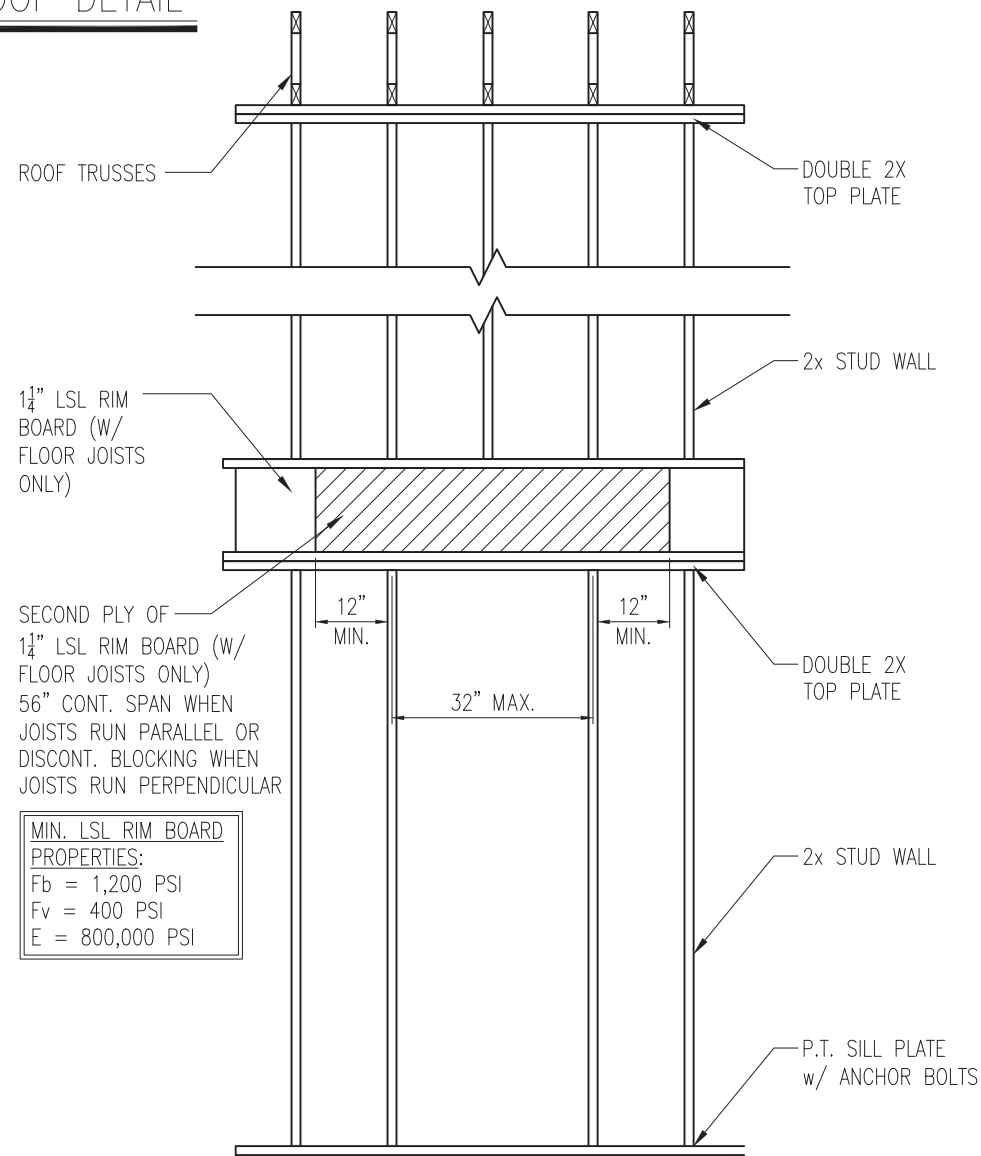
1 BRICK SUPPORT ABOVE STORAGE/PORCH ROOF DETAIL  
D5f NTS



3 BALCONY JOIST ATTACHMENT  
D5f NTS



SECTION A-A  
NTS



SECOND PLY OF  
1 1/4\"/>

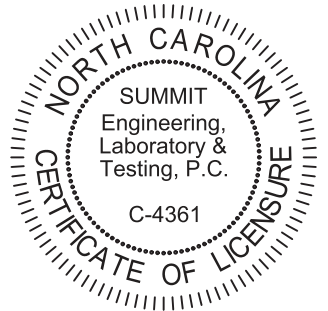
MIN. LSL RIM BOARD  
PROPERTIES:  
Fb = 1,200 PSI  
Fv = 400 PSI  
E = 800,000 PSI

4 TYP. RANGE VENT FRAMING  
D5f VENTED TO EXTERIOR WALL



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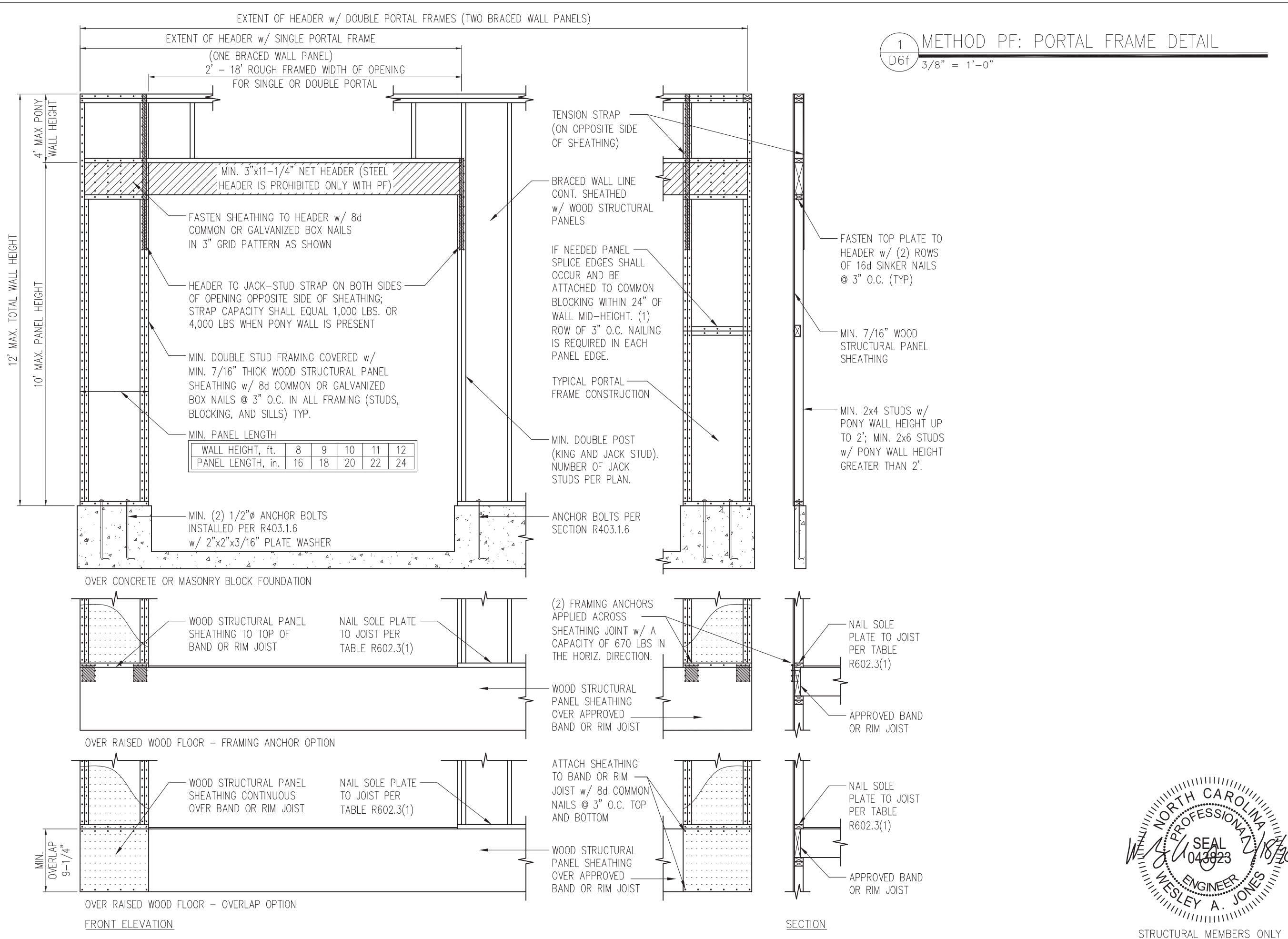
PROJECT  
Standard Details  
Framing Details  
CLIENT  
Smith Douglas Homes  
110 Village Trail, Suite 215  
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ORIGINAL DRAWING  
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SHEET  
**D5f**



1 METHOD PF: PORTAL FRAME DETAIL  
D6f 3/8" = 1'-0"

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NORTH CAROLINA  
SUMMIT  
Engineering,  
Laboratory &  
Testing, P.C.  
C-4361  
CERTIFICATE OF LICENSURE

PROJECT  
**Standard Details**  
**Framing Details - Bracing**

CLIENT  
**Smith Douglas Homes**  
**110 Village Trail, Suite 215**  
**Woodstock, GA 30188**

CURRENT DRAWING  
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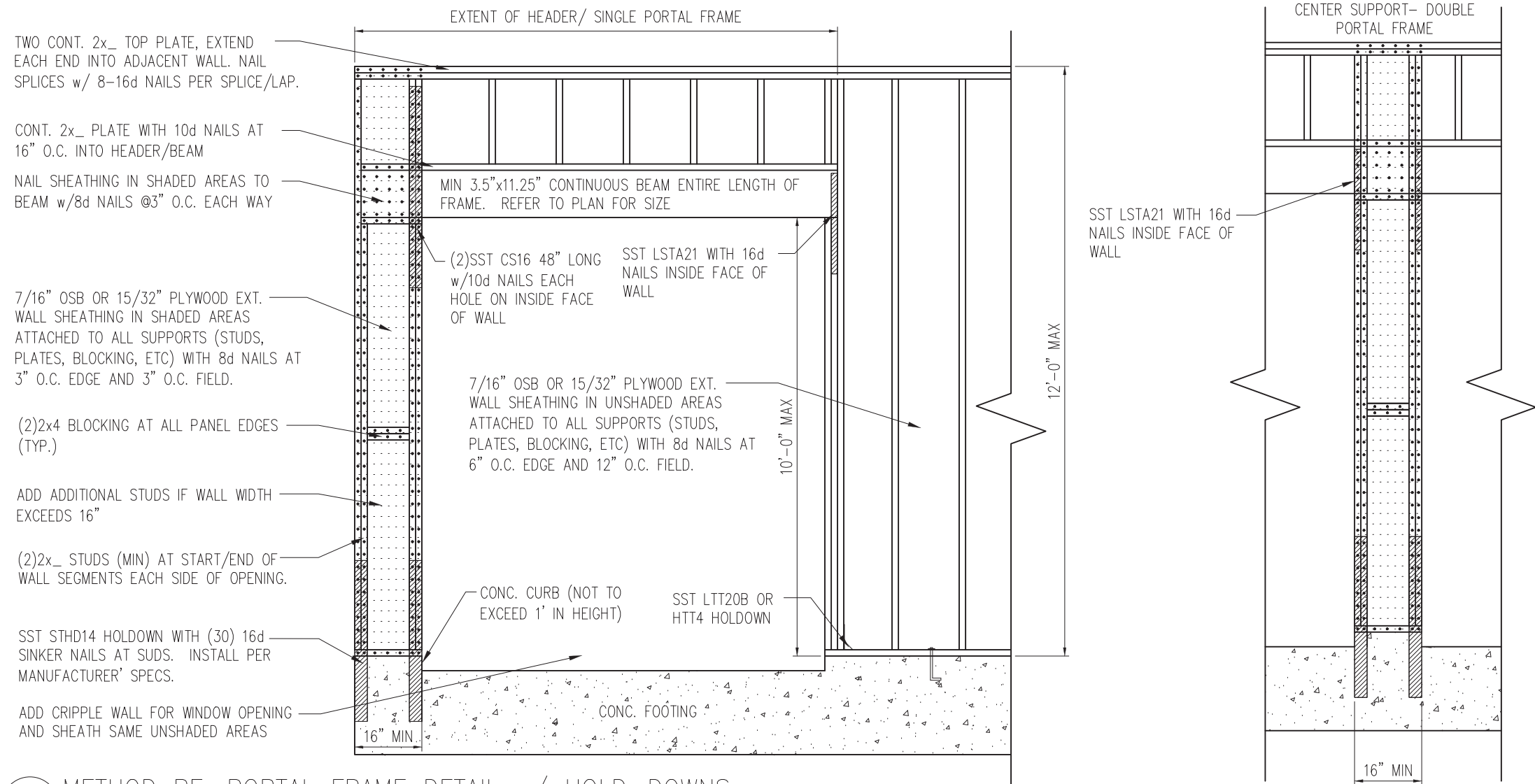
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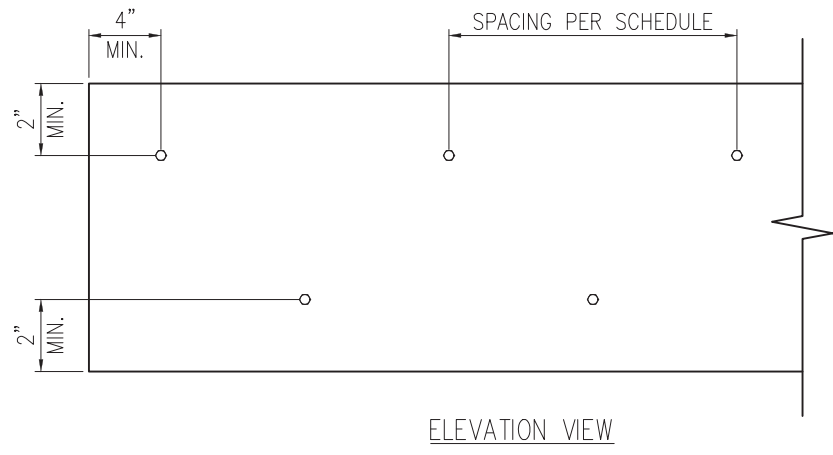
NORTH CAROLINA  
PROFESSIONAL  
ENGINEER  
WESLEY A. JONES  
SEAL  
043823  
2/18/20

SHEET  
**D6f**  
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1 METHOD PF: PORTAL FRAME DETAIL w/ HOLD-DOWNS  
 D7f 3/4" = 1'-0"



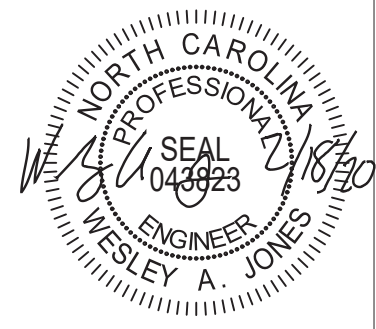
2 MULTI-PLY BEAM CONNECTION DETAIL  
 D7f N.T.S

**MINIMUM FASTENING REQUIREMENTS FOR TOP- AND SIDE-LOADED MEMBERS**

FASTENER TYPE	LVL DEPTH	3/4" WIDE		5/4" WIDE		7" WIDE	
		2-Ply 1 3/4"	3-Ply 1 3/4"	1 3/4" + 3 1/2"	4-Ply 1 3/4"	2-Ply 1 3/4" + 3 1/2"	2-Ply 3 1/2"
10d (0.128" x 3") Nails	7 1/4" ≤ d < 14"	3 rows @ 12" o.c.	3 rows @ 12" o.c. (ES)	3 rows @ 12" o.c.	-	3 rows @ 12" o.c. (ES)	-
	d ≥ 14"	4 rows @ 12" o.c.	4 rows @ 12" o.c. (ES)	4 rows @ 12" o.c.	-	4 rows @ 12" o.c. (ES)	-
16d (0.162" x 3 1/2") Nails	7 1/4" ≤ d < 14"	2 rows @ 12" o.c.	2 rows @ 12" o.c. (ES)	2 rows @ 12" o.c.	-	2 rows @ 12" o.c. (ES)	-
	d ≥ 14"	3 rows @ 12" o.c.	3 rows @ 12" o.c. (ES)	3 rows @ 12" o.c.	-	3 rows @ 12" o.c. (ES)	-
1/2" Through Bolts	d ≥ 7 1/4"	2 rows @ 24" o.c.	2 rows @ 24" o.c.		2 rows @ 24" o.c.		
SDS 1/4" x 3 1/2", WS35, 3 3/8" TrussLok		2 rows @ 24" o.c.	2 rows @ 24" o.c. (ES)	2 rows @ 24" o.c.	-	2 rows @ 24" o.c. (ES)	-
SDS 1/4" x 6", WS6		-	-	-	2 rows @ 24" o.c. (ES)		
5" TrussLok		-	2 rows @ 24" o.c.		-		
6 3/4" TrussLok		-	-	-	2 rows @ 24" o.c.		

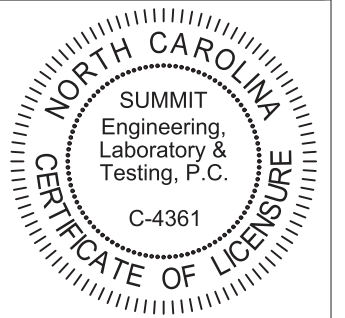
**NOTES:**

- All fasteners must meet the minimum requirements in the table above. Side-loaded multiple-ply members must meet the minimum fastening and side-loading capacity requirements given on page 48.
- Minimum fastening requirements for depths less than 7 1/4" require special consideration. Please contact your technical representative.
- Three general rules for staggering or offsetting for a certain fastener schedule:
  - If staggering or offsetting is not referenced, then none is required;
  - 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
  - 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).



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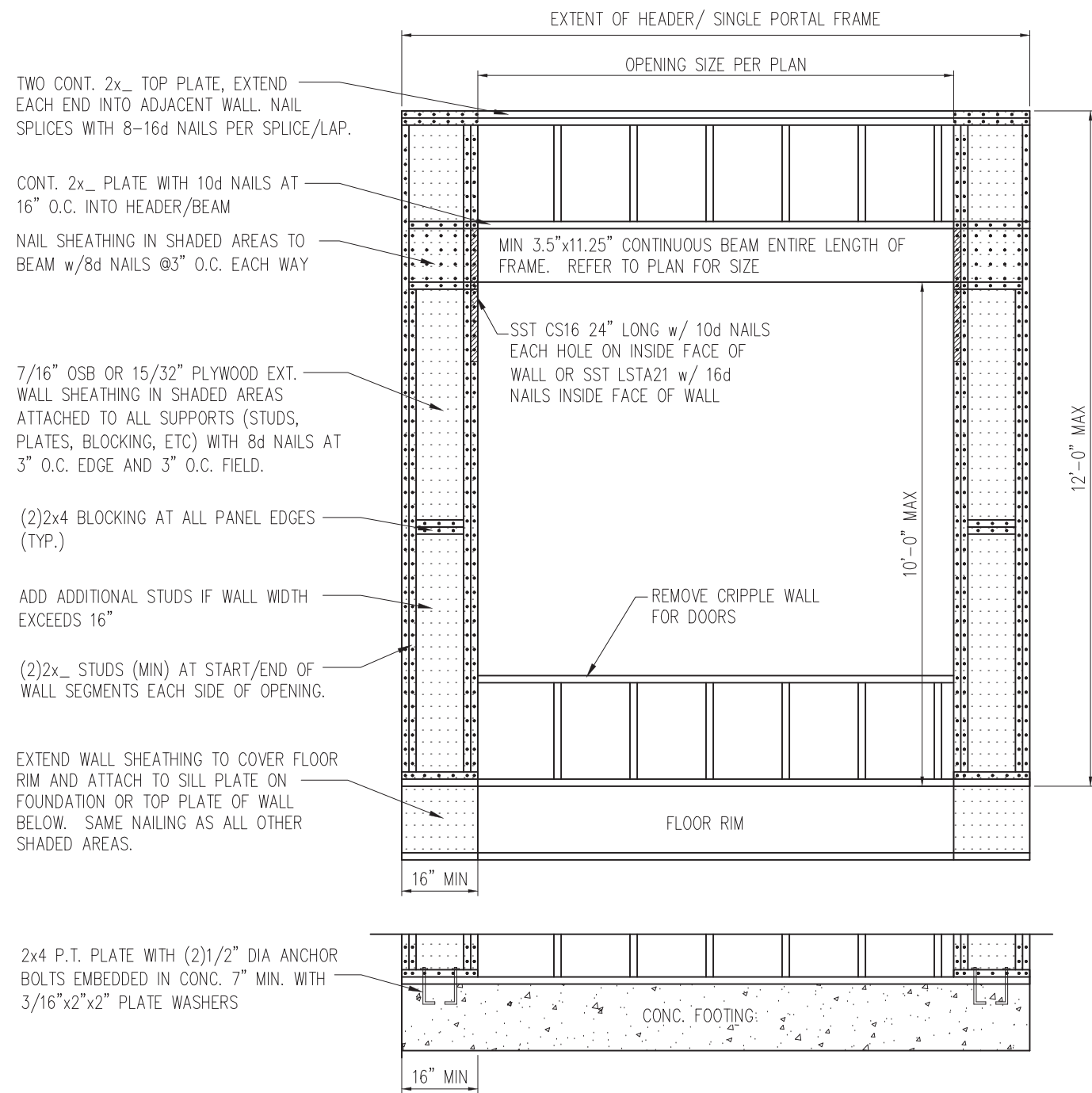


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 Smith Douglas Homes  
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SHEET  
**D7f**



TWO CONT. 2x\_ TOP PLATE, EXTEND EACH END INTO ADJACENT WALL. NAIL SPLICES WITH 8-16d NAILS PER SPLICE/LAP.

CONT. 2x\_ PLATE WITH 10d NAILS AT 16\" O.C. INTO HEADER/BEAM

NAIL SHEATHING IN SHADED AREAS TO BEAM w/8d NAILS @3\" O.C. EACH WAY

7/16\" OSB OR 15/32\" PLYWOOD EXT. WALL SHEATHING IN SHADED AREAS ATTACHED TO ALL SUPPORTS (STUDS, PLATES, BLOCKING, ETC) WITH 8d NAILS AT 3\" O.C. EDGE AND 3\" O.C. FIELD.

(2)2x4 BLOCKING AT ALL PANEL EDGES (TYP.)

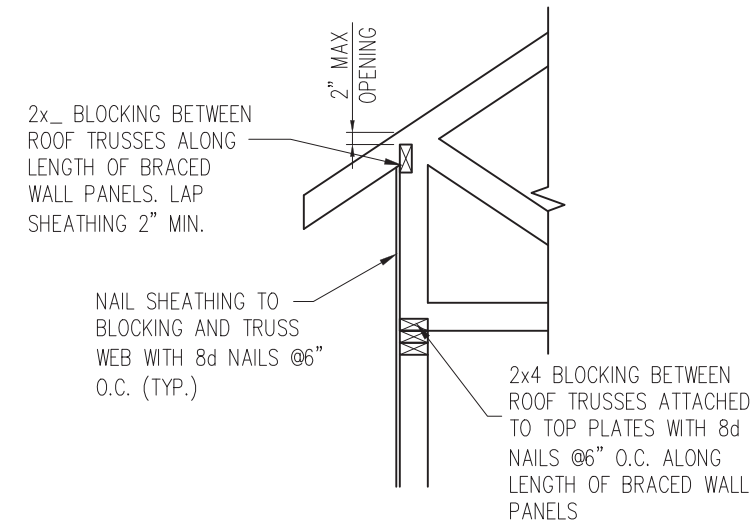
ADD ADDITIONAL STUDS IF WALL WIDTH EXCEEDS 16\"

(2)2x\_ STUDS (MIN) AT START/END OF WALL SEGMENTS EACH SIDE OF OPENING.

EXTEND WALL SHEATHING TO COVER FLOOR RIM AND ATTACH TO SILL PLATE ON FOUNDATION OR TOP PLATE OF WALL BELOW. SAME NAILING AS ALL OTHER SHADED AREAS.

2x4 P.T. PLATE WITH (2)1/2\" DIA ANCHOR BOLTS EMBEDDED IN CONC. 7\" MIN. WITH 3/16\"x2\"x2\" PLATE WASHERS

1 METHOD PF: PORTAL FRAME DETAIL  
D8f 3/4\" = 1'-0\" OPENINGS UNDER 8'-0\"

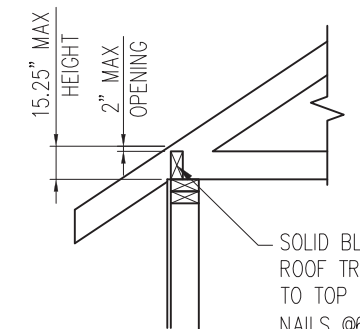


2x\_ BLOCKING BETWEEN ROOF TRUSSES ALONG LENGTH OF BRACED WALL PANELS. LAP SHEATHING 2\" MIN.

NAIL SHEATHING TO BLOCKING AND TRUSS WEB WITH 8d NAILS @6\" O.C. (TYP.)

2x4 BLOCKING BETWEEN ROOF TRUSSES ATTACHED TO TOP PLATES WITH 8d NAILS @6\" O.C. ALONG LENGTH OF BRACED WALL PANELS

HEEL HEIGHT GREATER THAN 15.25\"



\*BLOCKING IS NOT REQUIRED WITH HEEL HEIGHTS LESS THAN 9.25\"

SOLID BLOCKING BETWEEN ROOF TRUSSES ATTACHED TO TOP PLATES WITH 8d NAILS @6\" O.C. ALONG LENGTH OF BRACED WALL PANELS

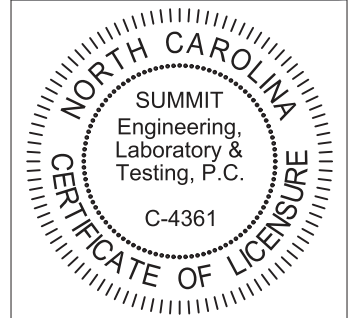
HEEL HEIGHT LESS THAN 15.25\" \*

2 TYP. WALL PANEL TO ROOF TRUSS CONNECTION  
D8f 1\" = 1'-0\"



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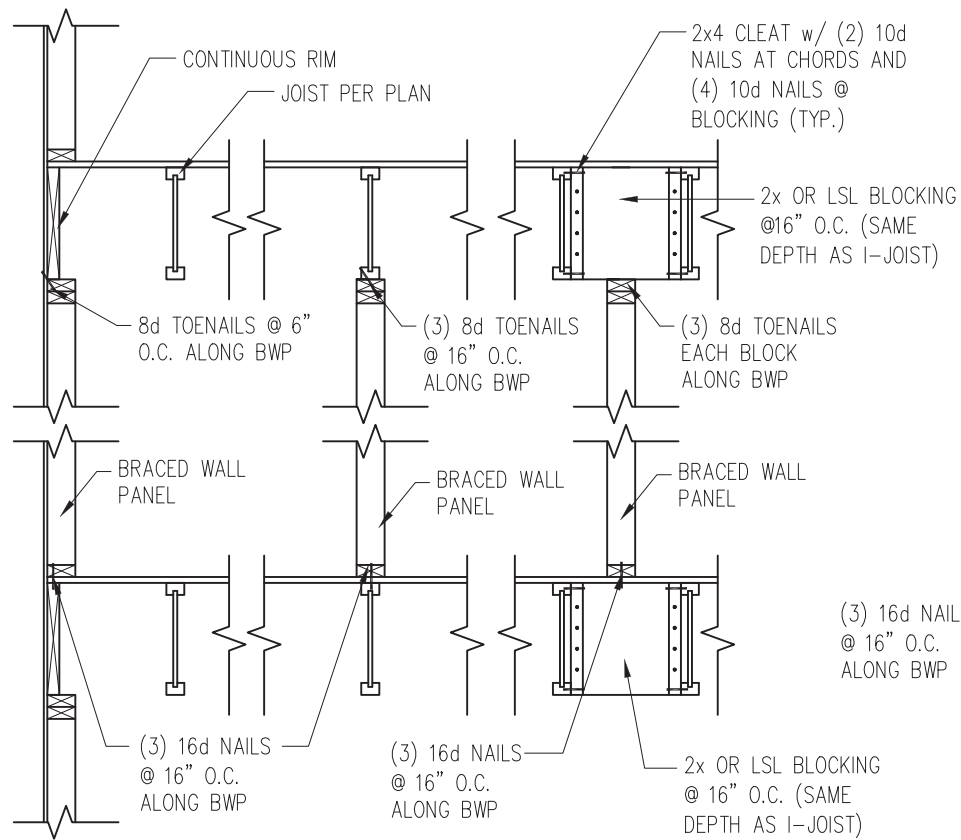
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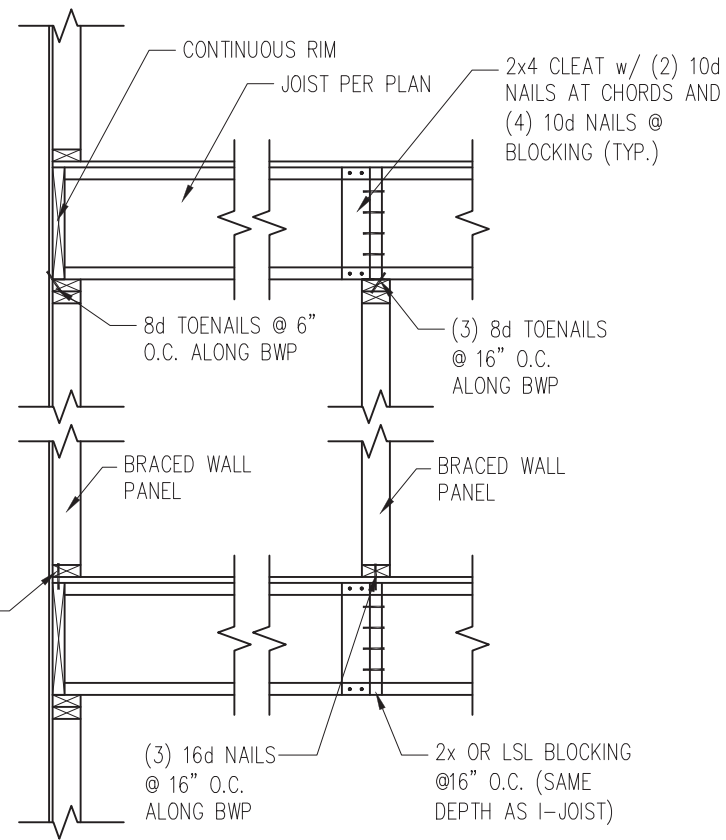
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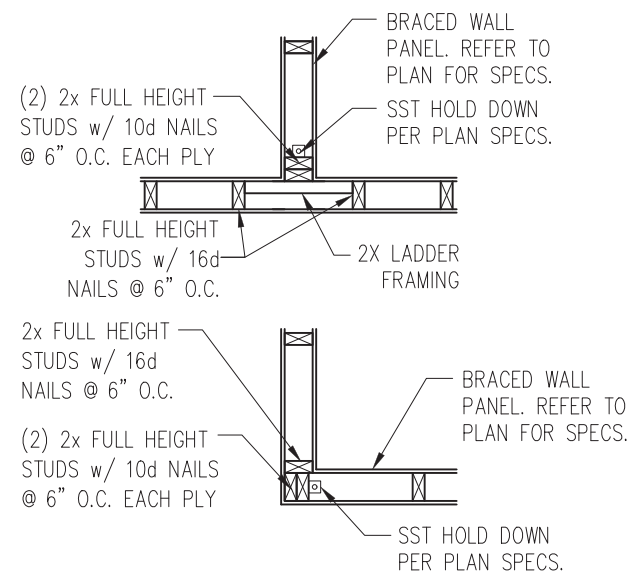
SHEET  
**D8f**



JOISTS PARALLEL TO BRACED WALLS

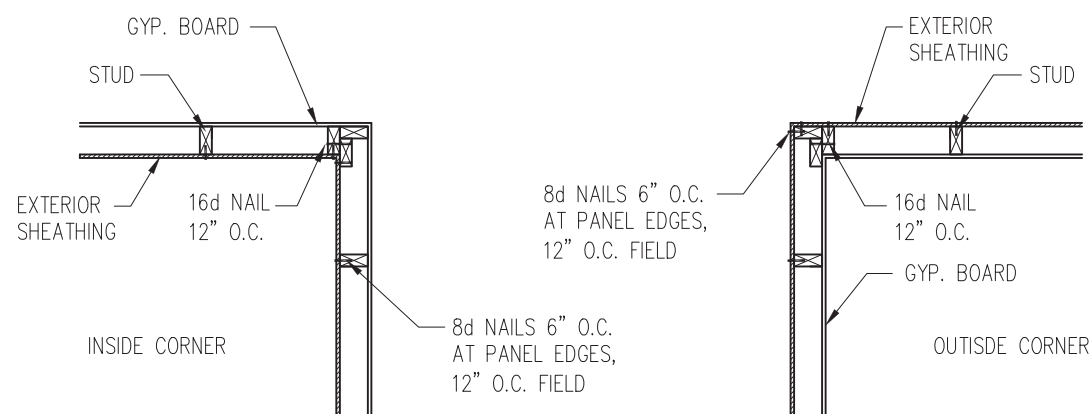


JOISTS PERPENDICULAR TO BRACED WALLS

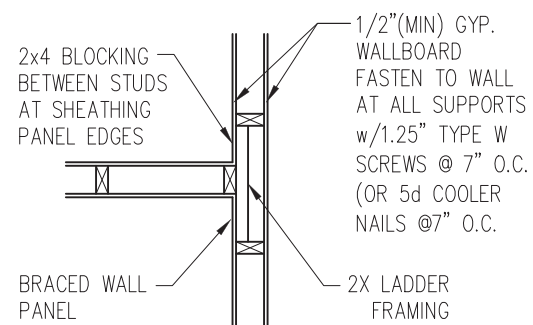


4 TYP. HOLD DOWN DETAIL  
D9f 1" = 1'-0"

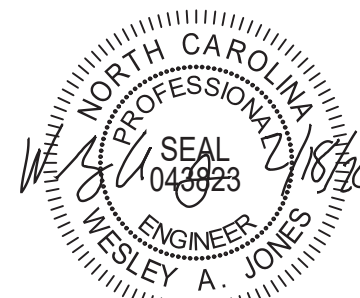
1 TYP. WALL PANEL TO FLOOR/CEILING CONNECTION  
D9f 1" = 1'-0"



2 TYP. EXTERIOR CORNER FRAMING  
D9f 1" = 1'-0"

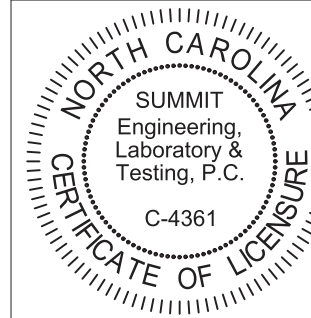


3 INTERIOR 3-STUD WALL INTERSECTION  
D9f 1" = 1'-0"



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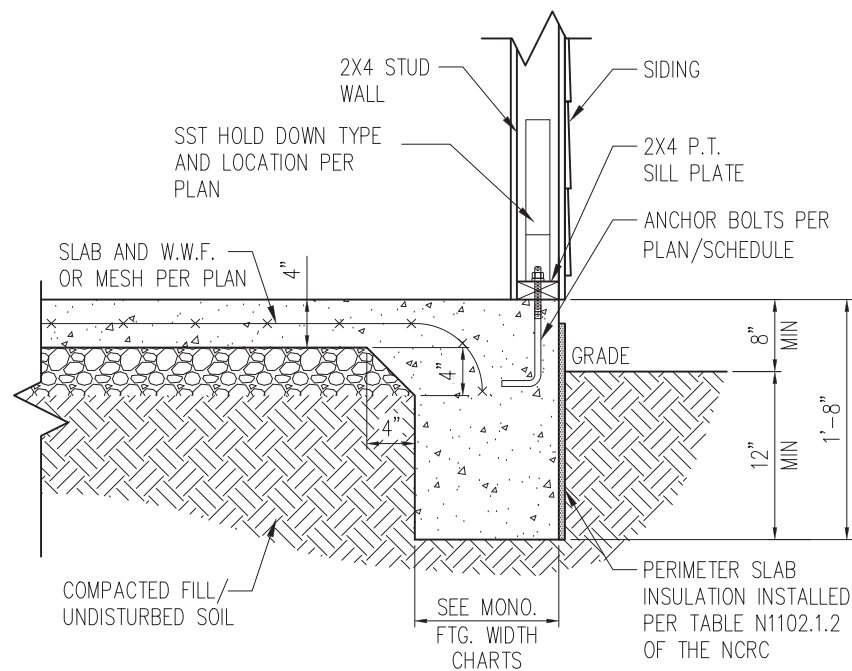
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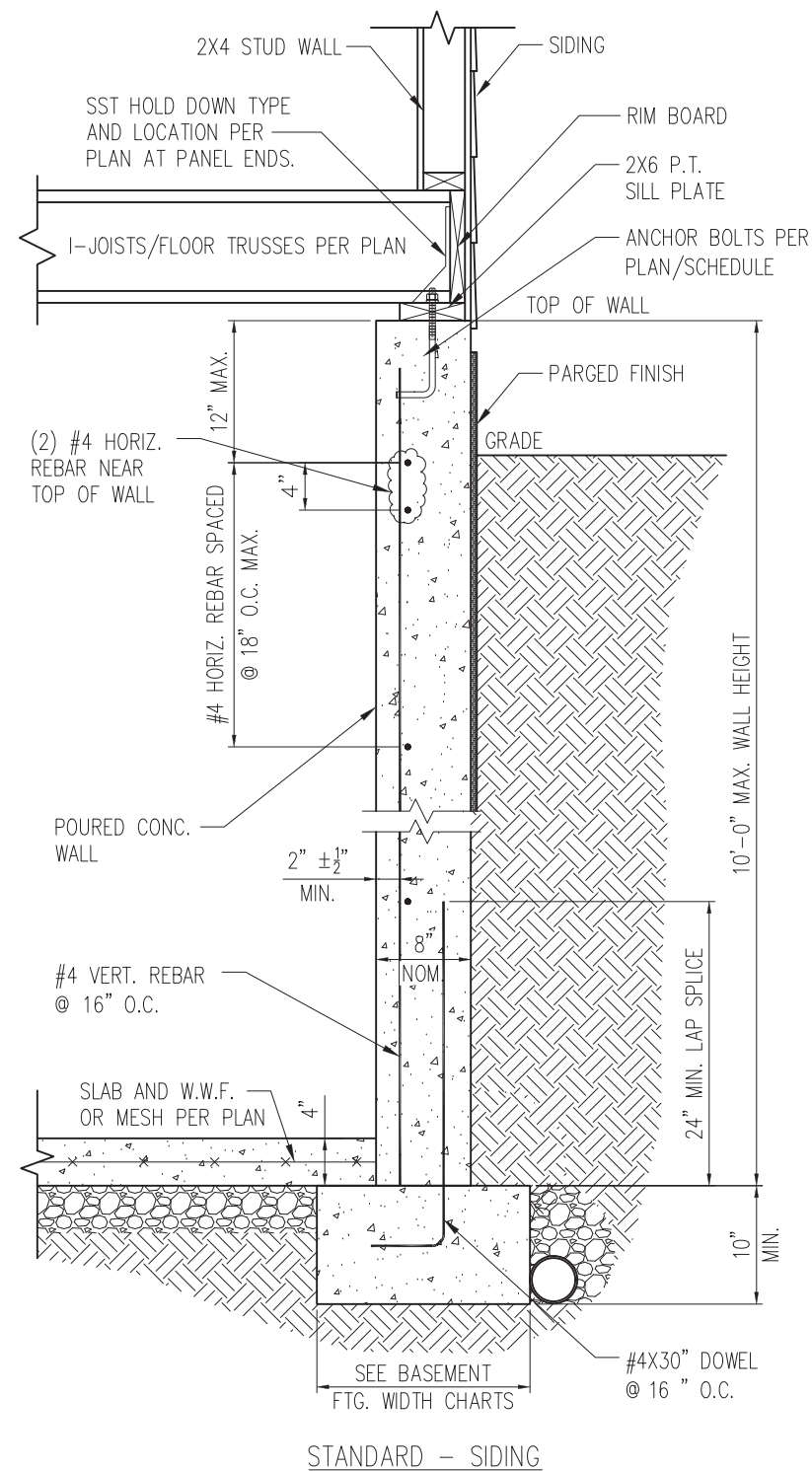
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**D9f**



1 SLAB DETAIL w/ HOLD-DOWN  
 D10f 3/4" = 1'-0"

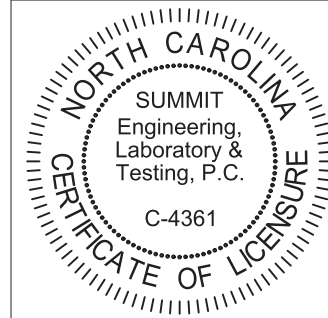


2 BASEMENT FOUNDATION WALL DETAIL W/ HOLD-DOWN  
 D10f 3/4" = 1'-0"



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