

BUFFINGTON

CANE MILL ESTATES
LOT 13



PLAN ID: 060120.1201

110 VILLAGE TRAIL SUITE 215
WOODSTOCK, GA. 30188

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

AREA TABULATION	
FIRST FLOOR	1100
SECOND FLOOR	1448
TOTAL	2548
GARAGE	400
FRONT PORCH (COVERED)	86
REAR PATIO	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 13



FRONT ELEVATION "D"

SIDE ENTRY GARAGE

SCALE: 3/16" = 1'-0"

ALL NON-MASONRY RETURNS TO BE HORIZONTAL SIDING

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

REV	BY	DATE	REVISION



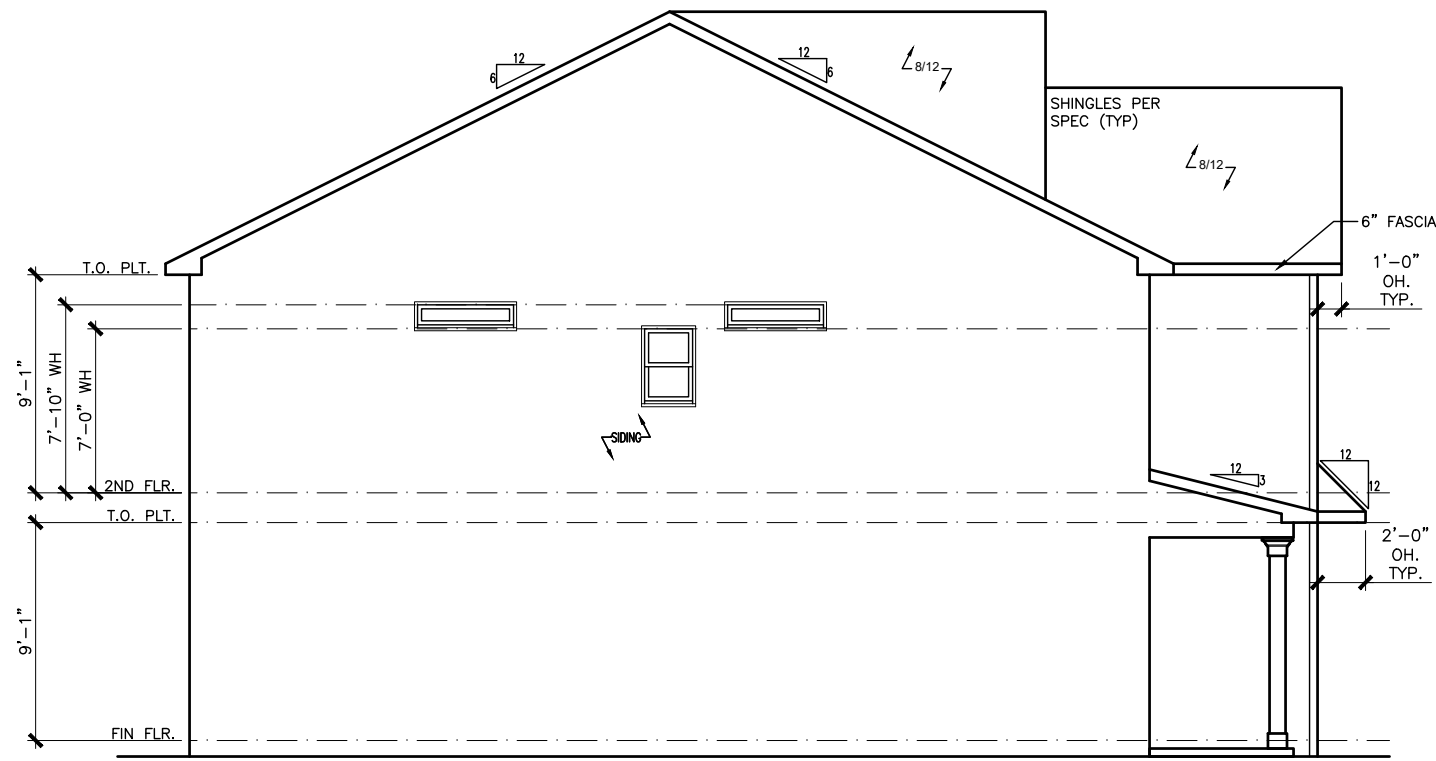
ELEVATIONS
FRONT ELEVATION
BUFFINGTON

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110 VILLAGE TRAIL
SUITE 115
WOODSTOCK, GA 30188
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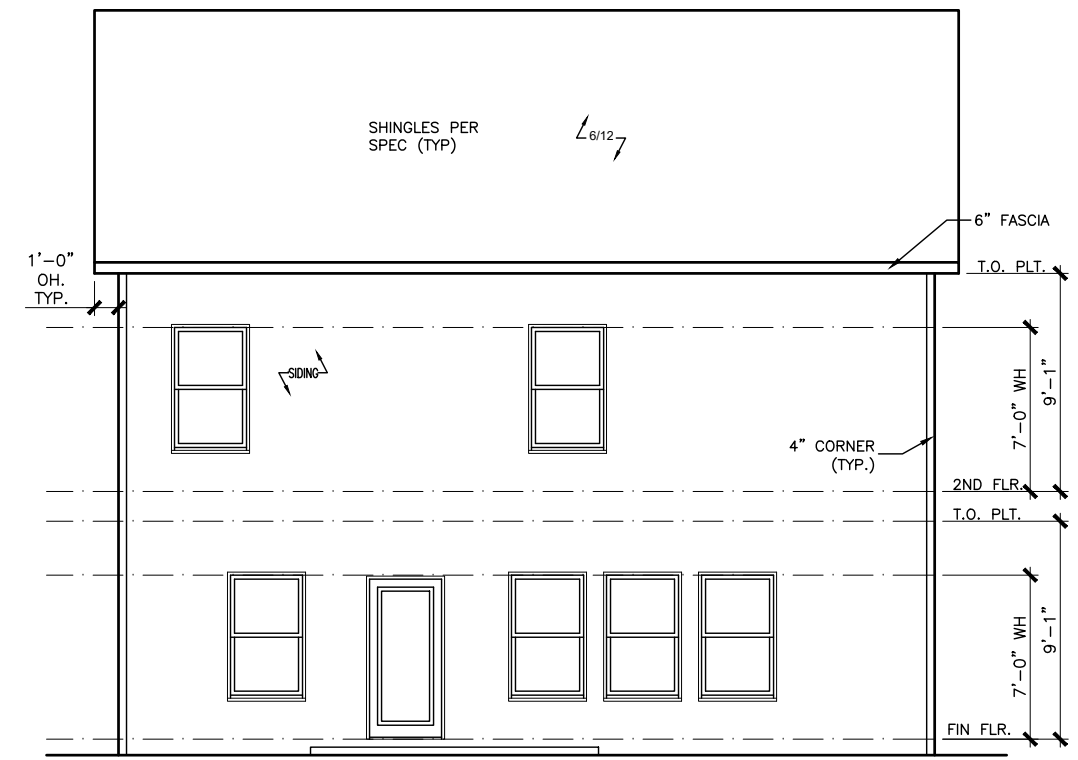
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PLAN ID:	
FND: ALL	ELEV: D
PAGE NO: A1.1	

CANE MILL ESTATES LOT 13



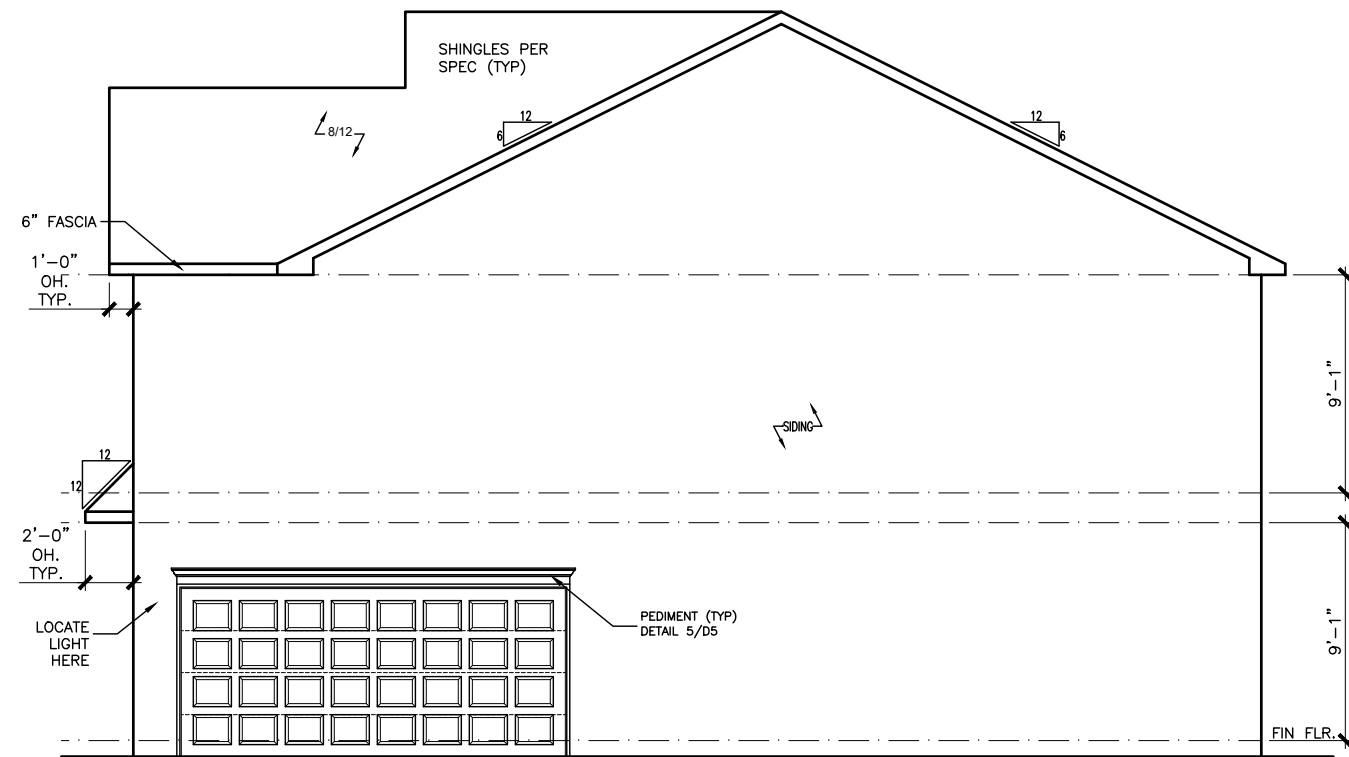
LEFT ELEVATION "D"

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



REAR ELEVATION "D"

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



RIGHT ELEVATION "D"

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

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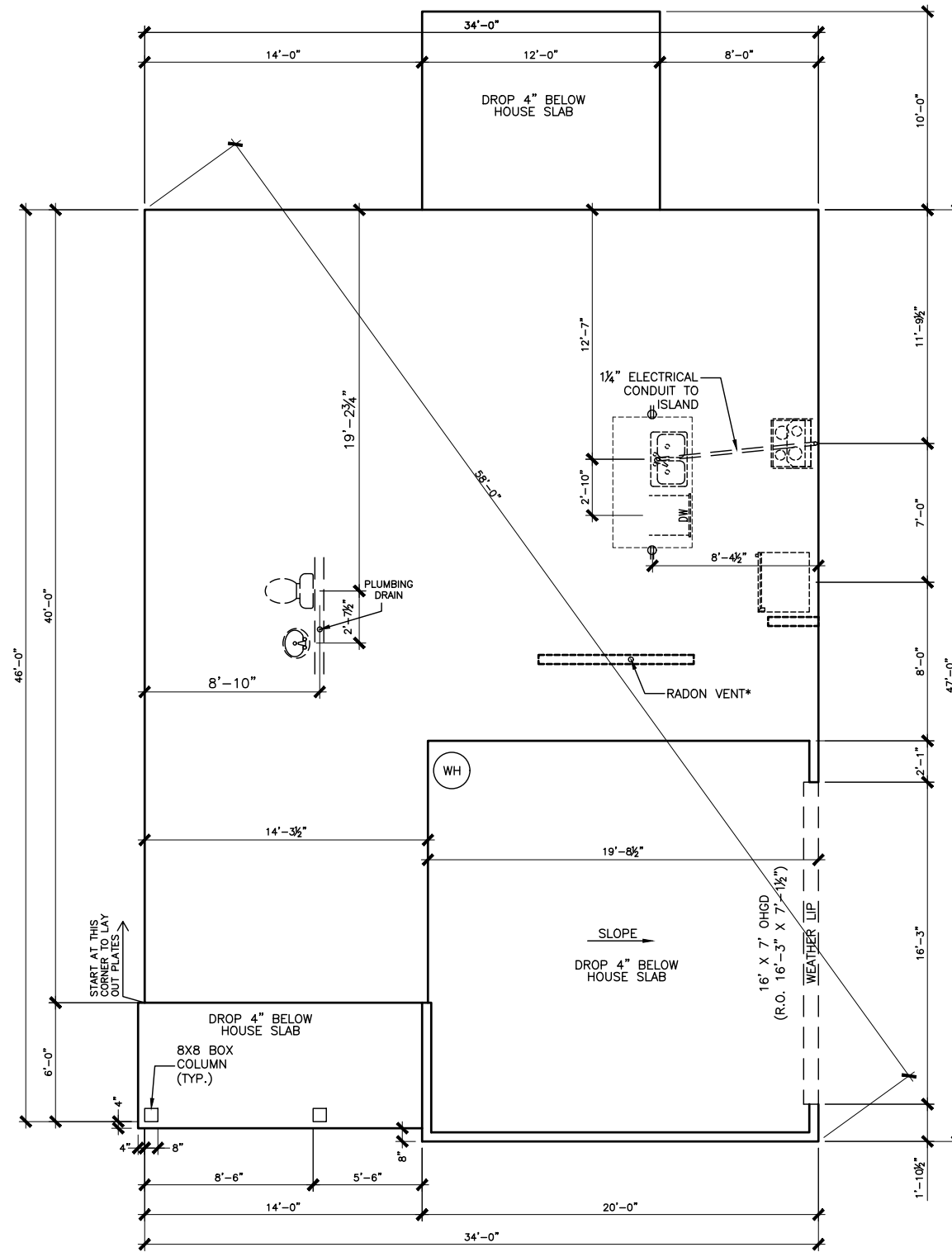
ELEVATIONS
SIDES AND REAR
BUFFINGTON

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CANE MILL ESTATES LOT 13



*RADON VENT PROVIDED
PER LOCAL CODE

REFER TO DETAIL 3/D1
FOR BRICK LEDGE
DETAIL WHEN BRICK
VENEER IS CHOSEN

SLAB PLAN

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

DATE	REVISION	BY	#



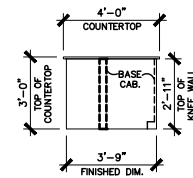
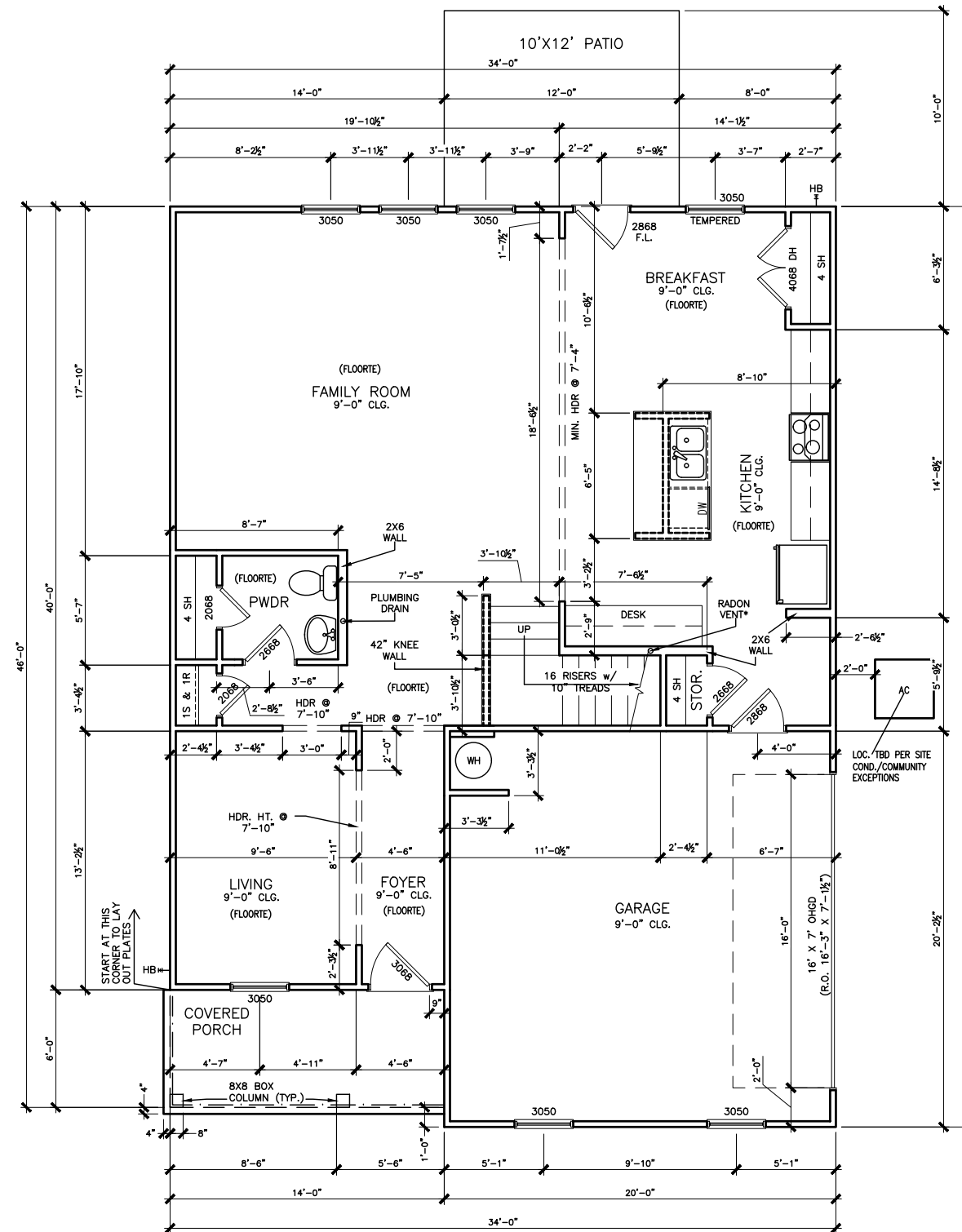
FOUNDATION PLAN
SLAB PLAN
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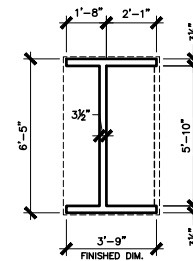
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PAGE NO: A3.1	

CANE MILL ESTATES LOT 13



KITCHEN ISLAND SUPPORT
FRAMING (SIDE VIEW)



KITCHEN ISLAND SUPPORT
FRAMING (PLAN VIEW)

FIRST FLOOR PLAN

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

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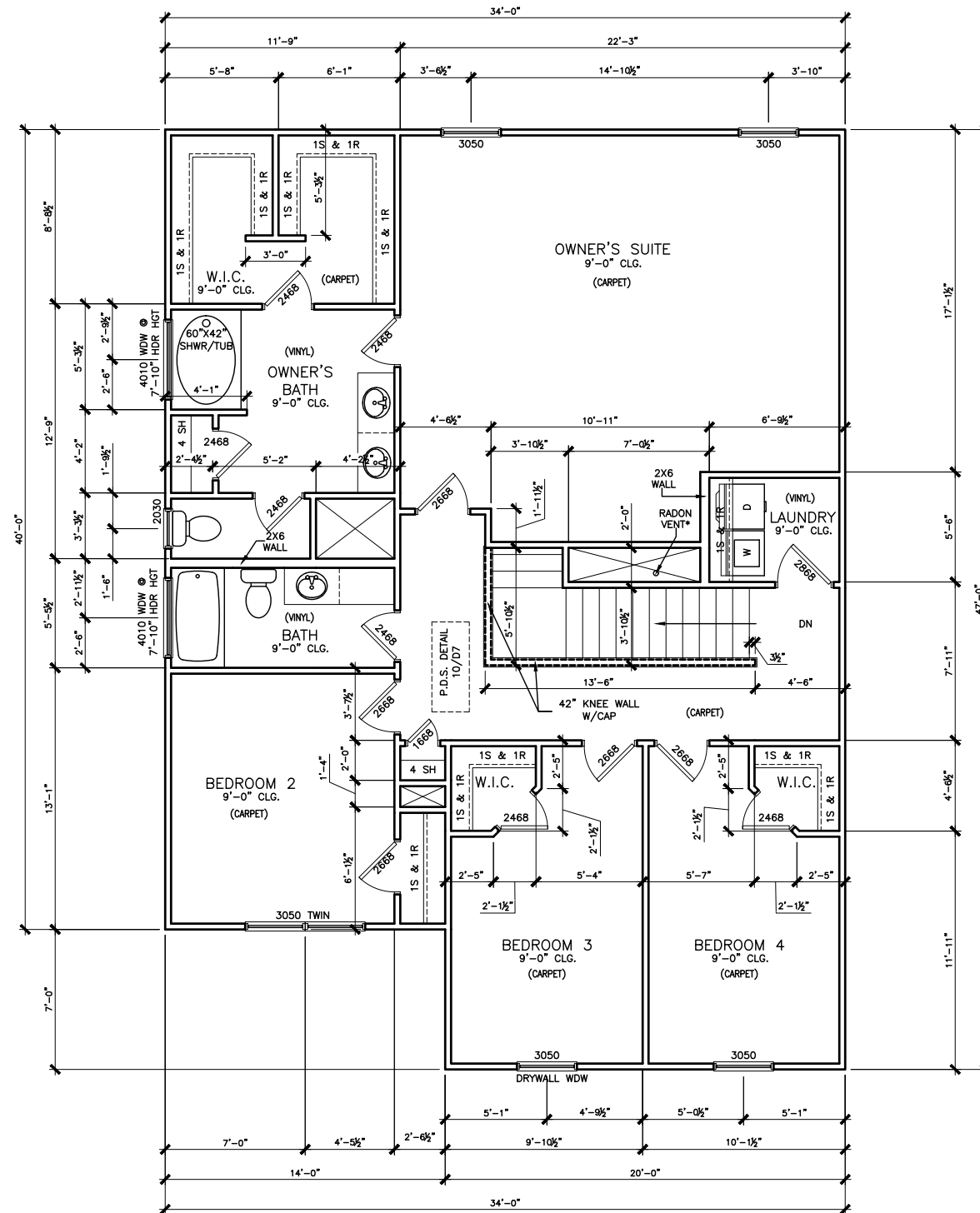
FLOOR PLAN
FIRST FLOOR
BUFFINGTON

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PAGE NO:	A5.1		

CANE MILL ESTATES LOT 13



*RADON VENT PROVIDED
PER LOCAL CODE

REFER TO MANUFACTURER'S SPECS.
FOR DRAIN LOCATIONS ON DETAIL
SHEETS D12, D12.1, D12.2 & D12.3

SECOND FLOOR PLAN

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

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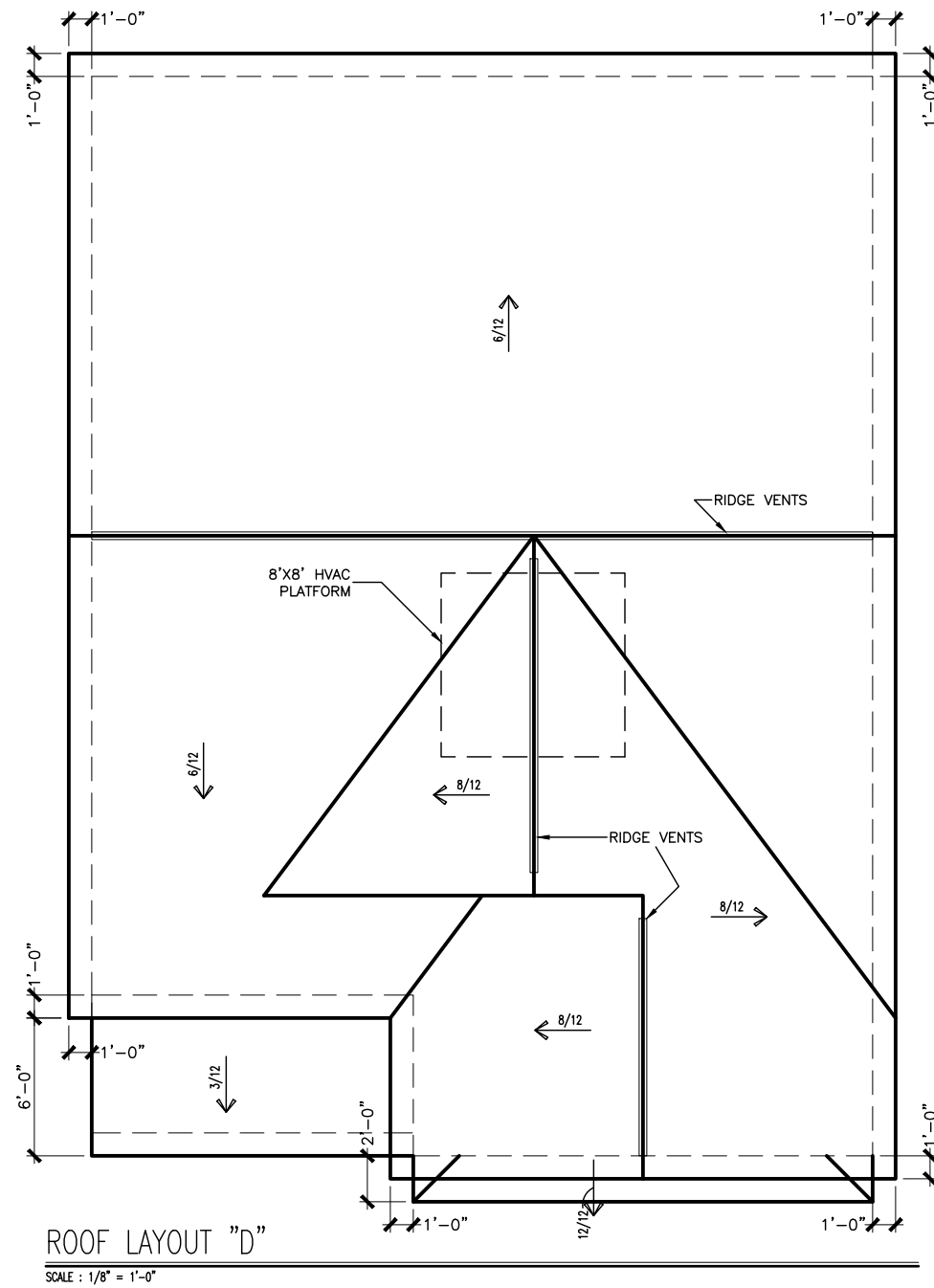
FLOOR PLANS
SECOND FLOOR
BUFFINGTON

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CANE MILL ESTATES LOT 13



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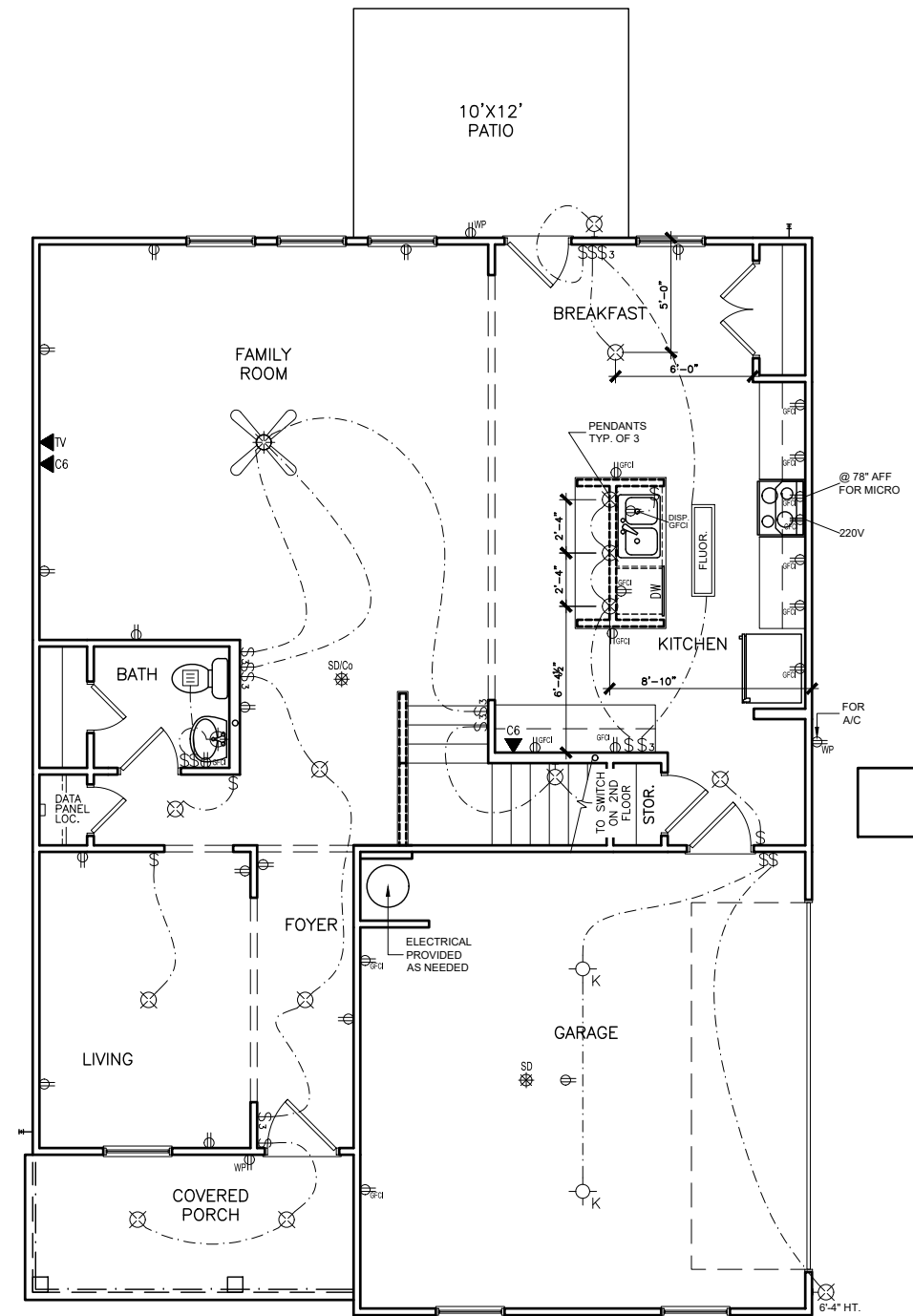
ROOF PLAN
ROOF PLAN
BUFFINGTON

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CANE MILL ESTATES LOT 13



FIRST FLOOR ELECTRICAL PLAN

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

ELECTRICAL LEGEND			
\$	SWITCH	TV	TV
\$3	3 WAY SWITCH	⊕	120V RECEPTACLE
\$4	4 WAY SWITCH	⊕	120V SWITCHED RECEPTACLE
⊗	CEILING FIXTURE	⊕	220V RECEPTACLE
⊕ _K	KEYLESS	⊕ _{GFCI}	GFCI OUTLET
⊗	WALL MOUNT FIXTURE	⊕ _{AFCI}	ARCH FAULT CIRCUIT INTERRUPTER
○	CEILING FIXTURE	† _{GL}	GAS LINE
●	FLEX CONDUIT	† _{WL}	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		

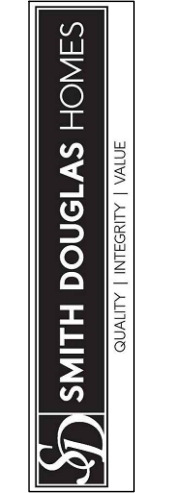
ELECTRICAL PLANS TO FOLLOW ALL LOCAL CODES

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

BY	REVISION	DATE
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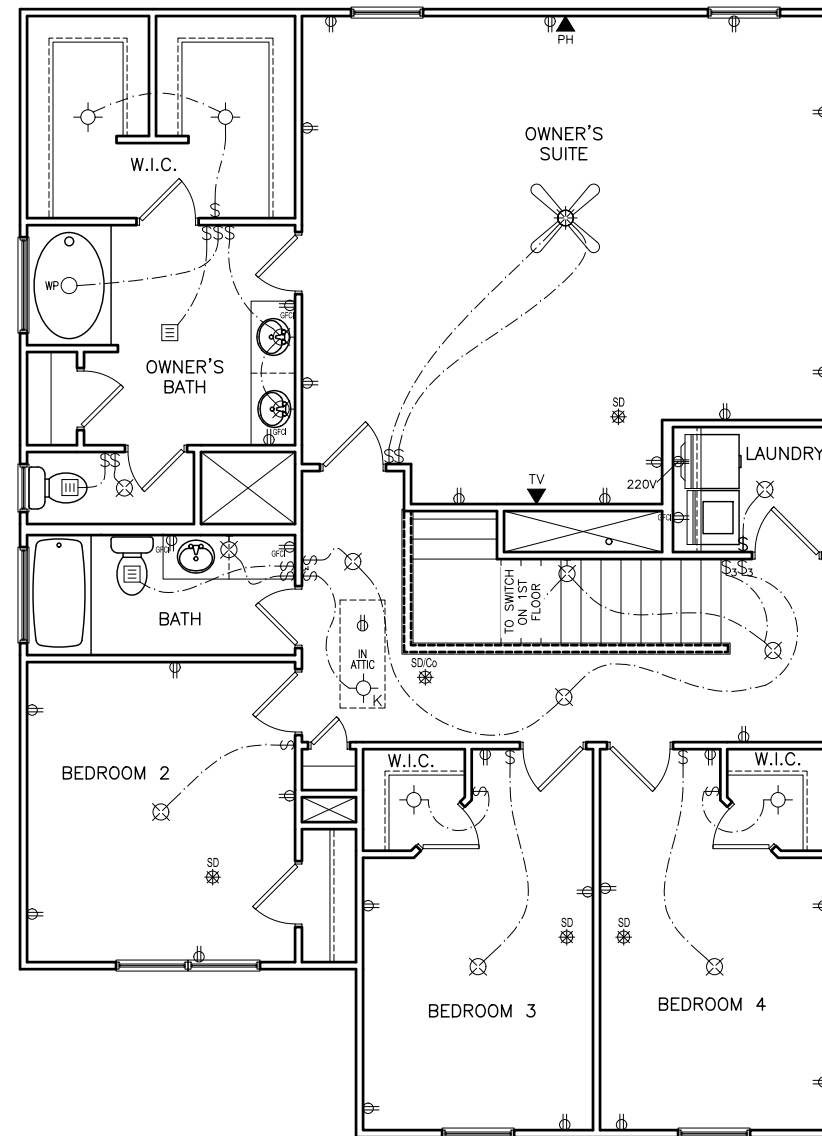
ELECTRICAL PLAN
FIRST FLOOR
BUFFINGTON

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CANE MILL ESTATES LOT 13



SECOND FLOOR ELECTRICAL PLAN

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

ELECTRICAL LEGEND			
\$	SWITCH	TV	TV
\$3	3 WAY SWITCH	⊙	120V RECEPTACLE
\$4	4 WAY SWITCH	⊙	120V SWITCHED RECEPTACLE
⊗	CEILING FIXTURE	⊙	220V RECEPTACLE
⊙ _K	KEYLESS	⊙ _{GFCI}	GFCI OUTLET
⊗	WALL MOUNT FIXTURE	⊙ _{AFCI}	ARCH FAULT CIRCUIT INTERRUPTER
⊙	CEILING FIXTURE	† _{GL}	GAS LINE
●	FLEX CONDUIT	† _{WL}	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
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CEILING FAN	96" ABOVE FINISHED FLOOR

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

BY	REVISION	DATE
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#	#	#
#	#	#
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ELECTRICAL PLAN
SECOND FLOOR
BUFFINGTON

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PAGE NO: A7.3	

CANE MILL ESTATES LOT 13

Lot Definition

Project: Cane Mill Estates Building: 000 Unit: 0013 Plan: Buffington D Side Entry Orientation: Garage Right Sq. Ft: 2,548 Bedrooms: 4 Bathrooms: 2.5 Address: 320 Planters Lane Coats: NC 27521	Community: Cane Mill Estates Builder: Thomas Kenneth Barlow Status: Sold RTeam: Raleigh West Slot: 5480 Permit: Notes:
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Sales Data	Dates
Contract: 89380	Ratified: 04/03/2021
Buyer: Patrick Holley	Original Start: 04/30/2021
Sales Agent: Nicole Stinard	Start: 04/30/2021
	Scheduled Complete: 09/09/2021

Option	Description	Quantity
1	Ceiling Fixture Light Wet or Dry Add One Low Profile Flush Mount LED Light on One Single Switch. This Option can be used in a Wet or Dry Location. Locations to be noted on exhibit for Electrician. NOTE: Option cannot be used to replace light fixtures at a specific location.	1
	36" Cabinet (0) Standard Note: Bath cabinets to match	1
	Automatic Garage Door Opener Garage Door Opener - Per Door	1
	Ceiling Fan w/Light Family Room Ceiling fan, including Light Kit. Does not include Prewire. This option is for use in Family Rooms that are pre-wired standard but have no fan.	1
	Ceiling Fan w/Light Owner Bedroom Ceiling fan, including Light Kit. Does not include Prewire. This option is for use in Owner Bedrooms that are pre-wired standard but have no fan.	1
	Chrome Interior Finish Color Package Includes chrome kitchen faucet, bath faucets, & fixtures, brushed nickel door hardware (hinges, bumps, knobs/levers, deadbolts), Plug1 (br) lighting fixtures, & pewter oval mirror. Separate options also affected: shower door, bath hardware (towel barring, tp holder), shower grab bar, cabinet hardware	1
	Comfort Height Toilet in Owner Bathroom	1
	FlPkg SAA-Floorte Pro, StdCpt (FlPkg1) Flooring Package SAA - Floorte Pro, Standard Carpet (from Package 1). SPC (solid polymer core) 0.5 mm vinyl top layer plank	1
	FlPkg Opt-Powder Floorte Pro Flooring Package - Option Powder Room LVP SPC (solid polymer core) 0.5 mm vinyl top layer plank	1
	Insulate Garage Carriage Door/Walls (s) Upgrade from uninsulated steel panel door to insulated carriage panel door and insulate exterior garage walls. Not for use with Third Car Garage.	1
	Owner Bath Marble 1 Double Ilo LamSgl ***Includes Vanity Double Bowl Option Do Not Select Both***	1

User Name: Victoria Wicker 1 of 2 05/03/2021 12:40:55 PM
Database: SmithDouglasCommunities

Lot Definition

Patio Rgnr Ilo 3x3 Rear Stoop	Expand 3x3 rear stoop to 10x12 concrete patio (size may vary, dimensions are per plan drawing). ***If selecting a covered patio, do not select this option***	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
Prefab G-TubShwr Combo 60x42 OBATHC	Prefab Garden TubShower Combo in Lieu of PF Large Shower (obathc)	1
Screen Per Optional 2030 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 21 A ExtCol(Pkg1)		1
Structure Wiring Package	Two rooms with Cat 5e data wiring connected includes a hub (aka data panel)	1
Window Above Hall Bath TubShower		1
Window in Owner Bath Water Closet	2030 Single Window for Owner Bath Water Closet. NOTE: Blind not included.	1

Activity	Description	Selection Description
Del&Install AppliancePkg	Appliance Package Select - All	Appliance Package Selected
Install Cabinets Complet	Cabinet Finish - Standard Arts	Standard-Sinclair Birch- Saddle
Install Cabinets Complet	Kitchen Counter Tops - All	4952K-22 Typhoon Ice
Install Cabinets Complet	Secondary Bath Vanity Tops-All	4952K-22 Typhoon Ice
Install Carpet	Carpet - Standard ALL	Smith Grove II Glimmer 00501
Install Floorte Pro (LP)	Floorte Pro 1stUpgr ALL	Preslo Plus - 717 Tattered Barnboard
Install Marble Tops	RDU Marble Vanity Top Lvl 1	Matte-#190 White w/Parchment 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-Owner Bath	Highlands II Citadel 560
PM Install Vinyl Floor	VinylPkg-Std 2nd Baths/Laundry	Highlands II Citadel 560

User Name: Victoria Wicker 2 of 2 05/03/2021 12:40:55 PM
Database: SmithDouglasCommunities

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REVISION	#	#	#	#	#	#
DATE	#	#	#	#	#	#



DETAILS
 LOT DEFINITION
 BUFFINGTON

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 SUITE 115
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PLAN ID:	
FND: ALL	ELEV: D
PAGE NO: A9.1	

DESIGN SPECIFICATIONS:

Construction Type: Commercial Residential
 Applicable Building Codes:
 • 2018 North Carolina Residential Building Code
 • ASCE 7-10: Minimum Design Loads for Buildings and Other Structures

- Design Loads:
- Roof
 - 1.1 Live..... 20 PSF
 - 1.2 Dead..... 10 PSF
 - 1.3 Snow..... 15 PSF
 - 1.3.1 Importance Factor..... 1.0
 - Floor Live Loads
 - 2.1 Typ. Dwelling..... 40 PSF
 - 2.2 Sleeping Areas..... 30 PSF
 - 2.3 Balconies (exterior) and Decks..... 40 PSF
 - 2.4 Garage Parking..... 50 PSF
 - Floor Dead Loads
 - 3.1 Conventional 2x..... 10 PSF
 - 3.2 I-Joist..... 15 PSF
 - 3.3 Floor Truss..... 15 PSF
 - Ultimate Wind Speed (3 sec. gust)..... 130 MPH
 - 4.1 Exposure..... B
 - 4.2 Importance Factor..... 1.0
 - 4.3 Wind Base Shear
 - 4.3.1 Vx =
 - 4.3.2 Vy =
 - Component and Cladding (in PSF)

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

- Seismic
 - 6.1 Site Class..... D
 - 6.2 Design Category..... C
 - 6.3 Importance Factor..... 1.0
 - 6.4 Seismic Use Group..... 1
 - 6.5 Spectral Response Acceleration
 - 6.5.1 Sms = %g
 - 6.5.2 Sm1 = %g
 - 6.6 Seismic Base Shear
 - 6.6.1 Vx =
 - 6.6.2 Vy =
 - 6.7 Basic Structural System (check one)
 - Bearing Wall
 - Building Frame
 - Moment Frame
 - Dual w/ Special Moment Frame
 - Dual w/ Intermediate R/C or Special Steel
 - Inverted Pendulum
 - 6.8 Arch/Mech Components Anchored?..... No
 - 6.9 Lateral Design Control: Seismic Wind
- Assumed Soil Bearing Capacity..... 2000psf



STRUCTURAL PLANS PREPARED FOR:

BUFFINGTON

PROJECT ADDRESS:
 TBD
 OWNER:
 Smith Douglas Homes - Raleigh
 2520 Reliance Ave.
 Apex, NC 27539

ARCHITECT/DESIGNER:
 Smith Douglas Homes
 110 Village Trail, Suite 215
 Woodstock, GA 30188

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

PLAN ABBREVIATIONS:

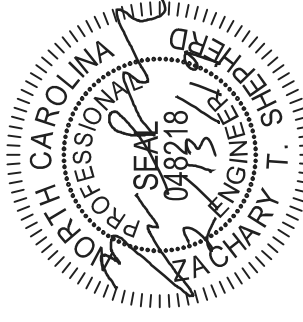
AB	Anchor Bolt	OC	On Center
ACI	American Concrete Institute	PCF	Pounds per Cubic Foot
ASCE	American Society of Civil Engineers	PCI	Pounds per Cubic Inch
AFA	American Fiberboard Association	PSF	Pounds per Square Foot
AFF	Above Finished Floor	PSI	Pounds per Square Inch
AISC	American Institute for Steel Construction	PT	Pressure Treated
APA	American Plywood Association	SC	Stud Column
AWS	American Welding Society	SER	Structural Engineer of Record
CJ	Ceiling Joist	SJ	Single Joist
CLR	Clear	SPF	Spruce Pine Fir
DBL	Double	SST	Simpson Strong Tie
DJ	Double Joist	ST	Single Truss
DSP	Double Stud Pocket	STD	Standard
EA	Each	TJ	Triple Joist
EE	Each End	TOF	Top of Footing
EOS	Edge of Slab	TSP	Triple Stud Pocket
EW	Each Way	TYP	Typical
HDG	Hot Dipped Galvanized	UNO	Unless Noted Otherwise
NDS	Nation Design Spec. for Wood	WWF	Welded Wire Fabric
NTS	Not to Scale		

SHEET LIST:

Sheet No.	Description
CS1	Cover Sheet, Specifications, Revisions
CS2	Specifications Continued
S1.0m	Monolithic Slab Foundation
S1.0s	Stem Wall Foundation
S1.0c	Crawl Space Foundation
S1.0b	Basement Foundation
S2.0	Basement Framing Plan
S3.0	First Floor Framing Plan
S4.0	Second Floor Framing Plan
S5.0	Roof Framing Plan
S6.0	Basement Bracing Plan
S7.0	First Floor Bracing Plan
S8.0	Second Floor Bracing Plan

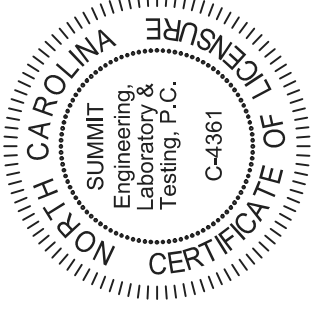
REVISION LIST:

Revision No.	Date	Project No.	Description
1	1/29/19	3832.202	Revised per 2018 NCRC
2	2/13/19	3832.202R	Revised kitchen/family beam



Cane Mill
 Lot 13

STRUCTURAL MEMBERS ONLY



PROJECT
 Buffington
 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

CS1

GENERAL STRUCTURAL NOTES:

- The design professional whose seal appears on these drawings is the structural engineer of record (SER) for this project. The SER bears the responsibility of the primary structural elements and the performance of this structure. No other party may revise, alter, or delete any structural aspects of these construction documents without written permission of SUMMIT Engineering, Laboratory & Testing, 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 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:

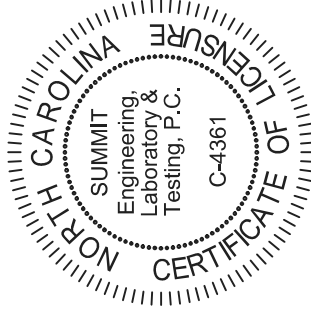
- Fabrication and placement of structural fiberboard sheathing shall be in accordance with the applicable AFA standards.
- Fiberboard wall sheathing shall comply with the requirements of local building codes for the appropriate state as indicated on these drawings. Refer to wall bracing notes in plan 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.



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

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

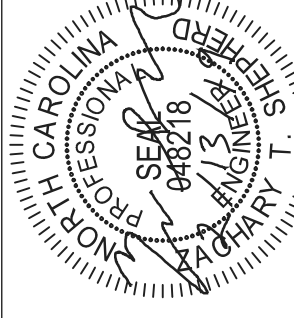
PROJECT# 3832.09

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET

CS2

Cane Mill
Lot 13



STRUCTURAL MEMBERS ONLY

- FOUNDATION NOTES:**
- FOUNDATIONS TO BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 4 OF THE 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL AMENDMENTS.
 - STRUCTURAL CONCRETE TO BE $F_c = 5000$ PSI, PREPARED AND PLACED IN ACCORDANCE WITH SECTION 1908.1.1.3.1.
 - FOOTINGS TO BE PLACED ON UNDISTURBED EARTH, BEARING A MINIMUM OF 12" 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, UNLESS OTHERWISE SPECIFIED. THE STABILITY OF THE SITE SOIL CONDITIONS AT THE TIME OF CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 - FOOTINGS AND PIERS SHALL BE CENTERED UNDER THEIR RESPECTIVE ELEMENTS, PROVIDE 7" MINIMUM FOOTING PROJECTION FROM THE FACE OF MASONRY WALLS.
 - MINIMUM DEPTH OF UNSBALANCED FILL AGAINST MASONRY WALLS TO BE AS SPECIFIED IN SECTION 1906.1.1 OF THE 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE.
 - FILASTERS TO BE BONDED TO PERIMETER FOUNDATION WALL.
 - FOUNDATION ANCHORAGE SHALL BE CONSTRUCTED PER THE 2018 NORTH CAROLINA RESIDENTIAL CODE SECTION 1903.16, MINIMUM 1/2" DIA. BOLTS SPACED AT 6'-0" ON CENTER WITH A 7" MINIMUM EMBEDMENT INTO MASONRY WALLS.
 - FOUNDATION ANCHORAGE BOLTS PER FLAT SLATE ANCHOR BOLTS SECTION 1903.16.1 SHALL BE LOCATED IN THE CENTER THIRD OF THE FLATE.
 - ABBREVIATIONS:

- | | |
|----|----------------|
| D1 | • DOUBLE JOIST |
| G1 | • GROSS TRUSS |
| SC | • STUD COLUMN |
| EE | • EACH END |
| TJ | • TRIPLE JOIST |
| OC | • ON CENTER |
| CL | • CENTER LINE |

- ALL PIERS TO BE 16"x16" MASONRY AND ALL PILASTERS TO BE 8"x6" MASONRY, TYPICAL (UNO).
- WALL FOOTINGS TO BE CONTINUOUS CONCRETE SIZES PER STRUCTURAL PLAN.
- REINFORCEMENT SHALL BE AS SHOWN OR AS SPECIFIED BY A REGISTERED PROFESSIONAL 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, SUMMIT ENGINEERING SHALL BE NOTIFIED IMMEDIATELY. THE CONTRACTOR SHALL 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 R403.

REFER TO BRACED WALL PLAN FOR PANEL LOCATIONS AND ANY REQUIRED HOLDINGS. ADDITIONAL INFO PER SECTION R602.02.4 AND FIGURE R602.02.3.4) OF THE 2018 NRC.

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

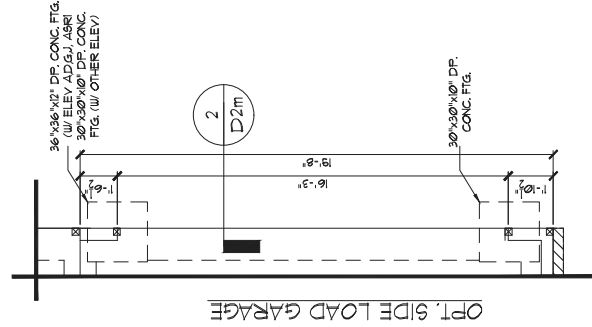
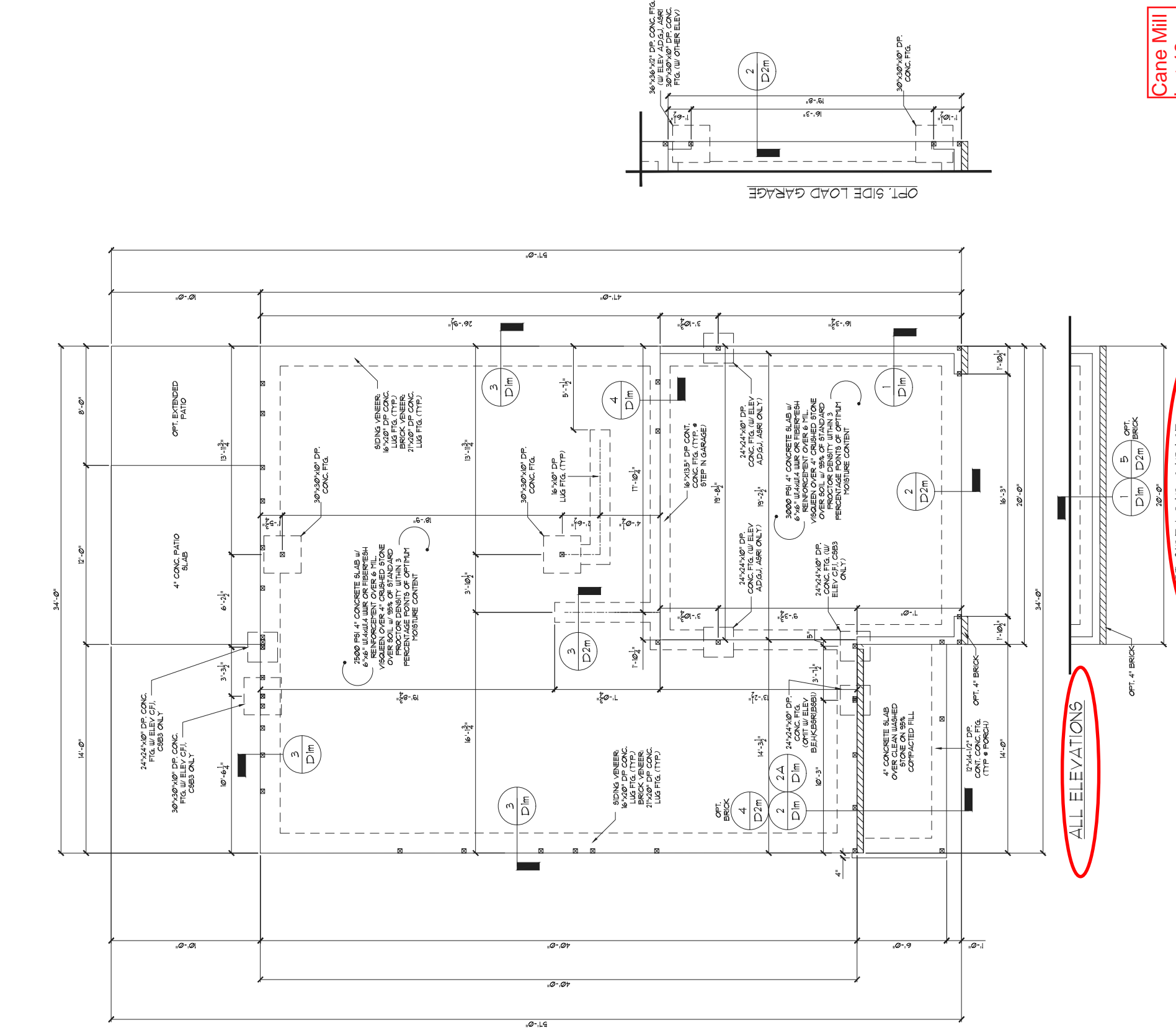
THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY SMITH DOUGLAS HOMES. HORES COMPLETED/REVISED ON 5/11/19. IT IS THE RESPONSIBILITY OF THE CLIENT TO NOTIFY SUMMIT ENGINEERING LABORATORY & TESTING, P.C. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS. THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION WITHOUT THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

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

STRUCTURAL ANALYSIS BASED ON 2018 NRC.

MONOLITHIC SLAB FOUNDATION

SCALE: 1/8"=1'



SUMMIT
 ENGINEERING LABORATORY TESTING
 3070 HAMMOND BUSINESS
 PLACE, SUITE 171
 RALEIGH, NC 27603
 OFFICE: 919.380.9991
 FAX: 919.380.9993
 WWW.SUMMIT-COMPANIES.COM

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

PROJECT
 Buftington
 Monolithic Slab Fnd.
 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
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ORIGINAL DRAWING
 DATE: 12/11/15
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REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
 S1.0m

PROFESSIONAL SEAL
 SHEPHERD
 048218
 CAROLINA
 T. SHEPHERD
 ENGINEER

STRUCTURAL MEMBERS ONLY

Cane Mill
 Lot 13

HEADER/BEAM SCHEDULE

HEADER TAG	BEAM TAG	SIZE	JACKS (EACH END)
-	BI	(7) 14" FLOOR JOIST	(7)
-	B2	(2) 14" FLOOR JOIST	(2)
-	A	B3	(1)
-	B	B4	(2)
-	C	B5	(2)
-	D	B6	(2)
-	E	B7	(3)
-	F	B8	(3)
-	G	B9	(3)
-	H	B10	(3)
-	I	B11	(3)
-	J	B12	(4)
-	K	B13	(3)
-	L	B14	(3)
-	M	B15	(3)
-	N	B16	(3)
-	O	B17	(3)
-	P	B18	(4)

WALL STUD SCHEDULE

TAG	SIZE	OPENING SIZE
①	L3x3x1/4"	LESS THAN 6'-0" TO 10'-0"
②	L3x3x1/4"	6'-0" TO 10'-0"
③	L3x3-1/2"x3/8"	GREATER THAN 10'-0"
④	L3x3-1/2"x3/8"	ALL ARCHED OPENINGS EQUIV.

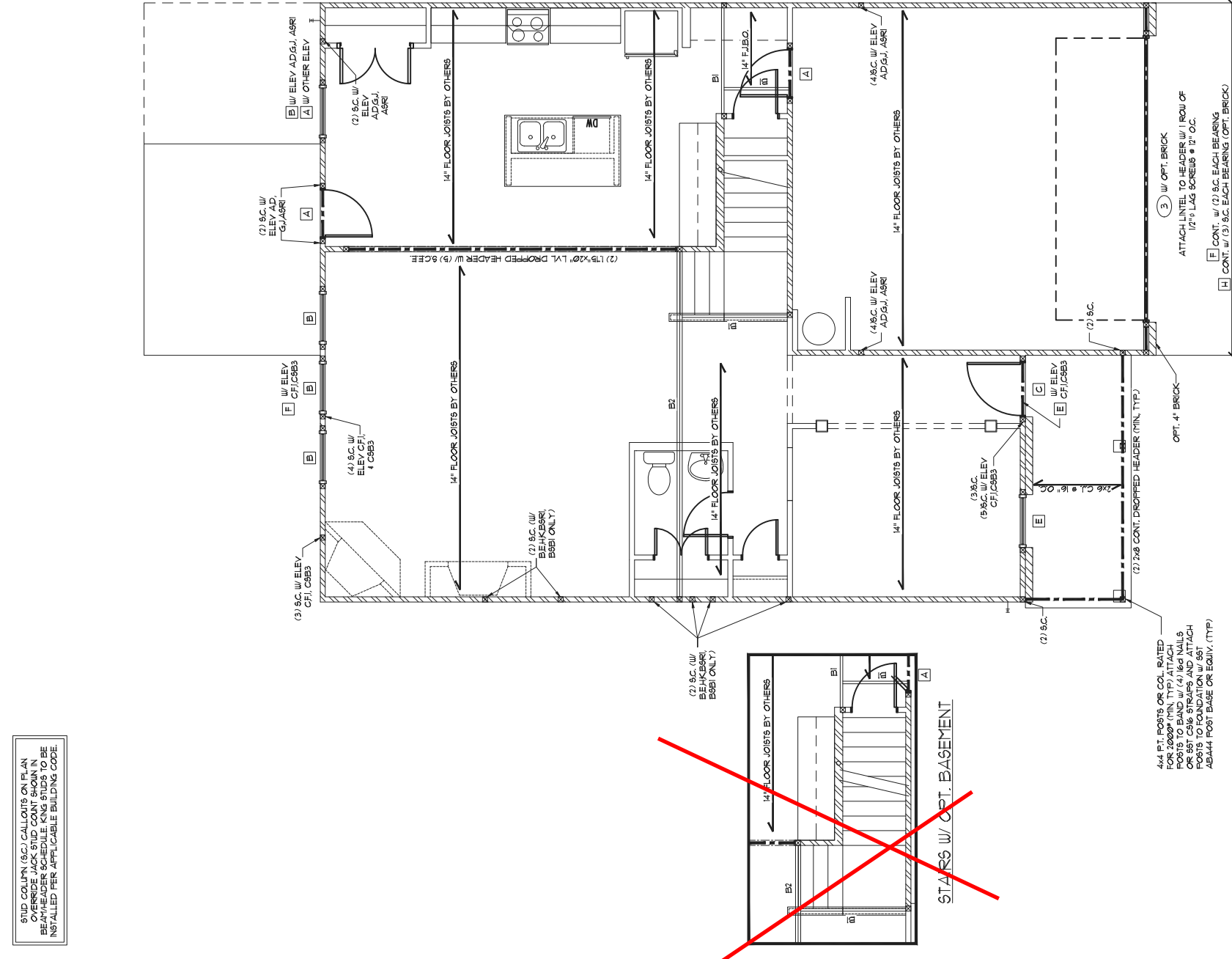
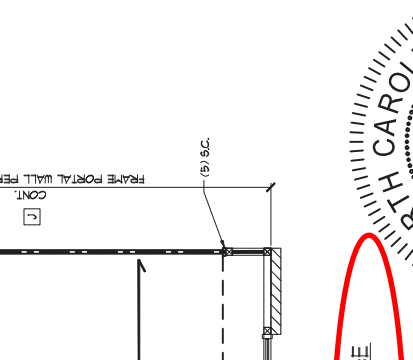
KING STUD REQUIREMENTS

OPENING WIDTH	KINGS (EACH END)
LESS THAN 3'-0"	(1)
3'-0" TO 4'-0"	(2)
4'-0" TO 8'-0"	(3)
8'-0" TO 12'-0"	(5)
12'-0" TO 16'-0"	(6)

WALL STUD SCHEDULE
814 AND FLOOR LOAD BEARING STUDS:
2x4 STUDS @ 16" OC OR 2x6 STUDS @ 24" OC
817 FLOOR LOAD BEARING STUDS W/ WALKUP ATTIC:
2x4 STUDS @ 12" OC OR 2x6 STUDS @ 16" OC.
BASEMENT LOAD BEARING STUDS:
2x4 STUDS @ 16" OC OR 2x6 STUDS @ 24" OC.
NON-LOAD BEARING STUDS: 1x4 @ 16" OC.
2x4 STUDS @ 24" OC.
TWO STORY WALLS:
2x4 STUDS @ 12" OC OR 2x6 STUDS @ 16" OC BALLOON
FRAMED W/ CROSS BRACING @ 6'-0" OC. VERTICALLY

LINTEL SCHEDULE
TAGS: L3x3x1/4", L3x3-1/2"x3/8"
SECURE LINTEL TO HEADER W/ (2) 1/2" DIAMETER LAG SCREWS STAGGERED @ 16" OC. (TYP FOR ③)
ALL HEADERS WITH BRICK ABOVE: (1) (UNO)

WALL STUD REQUIREMENTS
OPENING WIDTH: LESS THAN 3'-0", 3'-0" TO 4'-0", 4'-0" TO 8'-0", 8'-0" TO 12'-0", 12'-0" TO 16'-0"
KING STUD REQUIREMENTS ABOVE DO NOT APPLY TO PORTAL FRAMED OPENINGS



GENERAL STRUCTURAL NOTES:
1. CONSTRUCTION SHALL CONFORM TO 2008 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL AMENDMENTS.
2. 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.
3. TO RESIST ALL EXCESS UNDESIGNED DURING CONSTRUCTION.
4. PROPERTIES USED IN THE DESIGN ARE AS FOLLOWS:
MICROLAM (LVL): F_b = 1600 PSI, F_v = 285 PSI, E = 1.9x10⁶ PSI
PARALLAM (FRLL): F_b = 2500 PSI, F_v = 250 PSI, E = 1.5x10⁶ PSI
5. ALL DIMENSIONS UNLESS NOTED OTHERWISE.
6. ALL BEAMS SHALL BE SUPPORTED WITH A (2) 2x4 @ 91P STUD COLUMN AT EACH END UNLESS NOTED OTHERWISE.
7. ALL REINFORCING STEEL SHALL BE GRADE 60 BARS CONFORMING TO ASTM A603.
8. FOUNDATION ANCHORAGE 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 FLATE SECTION LOCATED AT THE CENTER THIRD OF THE FLATE.
9. CONTRACTOR TO PROVIDE LOOKOUTS WHEN CEILING JOIST SPAN PERPENDICULAR TO RAFTERS.
10. FLITCH BEAMS, 4x12 LVLs AND 3-PL. SIZE LOADED LVLs SHALL BE BOLTED TO RAFTERS PER DETAIL 106.3. IF THE FLITCH BEAM IS USED AS AN EQUIVALENT CONNECTION PER DETAIL 103.1 MIN. EDGE DISTANCE SHALL BE 4" AND (2) BOLTS SHALL BE LOCATED MINIMUM 6" FROM EACH END OF THE BEAM.
11. ALL NON-LOAD BEARING HEADERS EXCEEDING 8'-0" IN WIDTH AND/OR WITH MORE THAN ONE JOIST ABOVE SHALL BE (2) FLAT 2x4 91P @ DROPPED.
12. 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:
SHADED WALLS INDICATE LOAD BEARING WALLS.

NOTE:
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.

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY SMITH DOUGLAS HOMES. HOMES COMPLETED/REVISED PLANS PROVIDED BY THE ARCHITECTURAL ENGINEER. THE ARCHITECTURAL ENGINEER IS NOT RESPONSIBLE FOR ANY DEVIATIONS FROM THIS PLAN. 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 EXCESS UNDESIGNED DURING CONSTRUCTION. PROPERTIES USED IN THE DESIGN ARE AS FOLLOWS: MICROLAM (LVL): F_b = 1600 PSI, F_v = 285 PSI, E = 1.9x10⁶ PSI; PARALLAM (FRLL): F_b = 2500 PSI, F_v = 250 PSI, E = 1.5x10⁶ PSI. ALL DIMENSIONS UNLESS NOTED OTHERWISE. ALL BEAMS SHALL BE SUPPORTED WITH A (2) 2x4 @ 91P STUD COLUMN AT EACH END UNLESS NOTED OTHERWISE. ALL REINFORCING STEEL SHALL BE GRADE 60 BARS CONFORMING TO ASTM A603. FOUNDATION ANCHORAGE 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 FLATE SECTION LOCATED AT THE CENTER THIRD OF THE FLATE. CONTRACTOR TO PROVIDE LOOKOUTS WHEN CEILING JOIST SPAN PERPENDICULAR TO RAFTERS. FLITCH BEAMS, 4x12 LVLs AND 3-PL. SIZE LOADED LVLs SHALL BE BOLTED TO RAFTERS PER DETAIL 106.3. IF THE FLITCH BEAM IS USED AS AN EQUIVALENT CONNECTION PER DETAIL 103.1 MIN. EDGE DISTANCE SHALL BE 4" AND (2) BOLTS SHALL BE LOCATED MINIMUM 6" FROM EACH END OF THE BEAM. ALL NON-LOAD BEARING HEADERS EXCEEDING 8'-0" IN WIDTH AND/OR WITH MORE THAN ONE JOIST ABOVE SHALL BE (2) FLAT 2x4 91P @ DROPPED. ABBREVIATIONS: S1 = SINGLE JOIST, S2 = DOUBLE JOIST, SC = STUD COLUMN, DR = DOUBLE RAFTER, TR = TRIPLE RAFTER, OC = ON CENTER, CL = CENTER LINE.

STARS W/ OPT. BASEMENT

4x4 FT. POSTS OR COL. RATED FOR 2000P (MIN. TYP.) ATTACH TO FOUNDATION W/ 80T OR 95T L516 STRAPS AND ATTACH POSTS TO FOUNDATION W/ 80T AB444 POST BASE OR EQUIV. (TYP.)

ALL ELEVATIONS

STRUCTURAL ANALYSIS BASED ON 2016 NCRC.

STRUCTURAL MEMBERS ONLY
FIRST FLOOR FRAMING PLAN
SCALE: 1/8" = 1'



Cane Mill Lot 13

STRUCTURAL MEMBERS ONLY

HEADER TAG	BEAM TAG	SIZE	JACKS (EACH END)
-	B1	(1) 14" FLOOR JOIST	(2)
-	B2	(2) 14" FLOOR JOIST	(2)
-	A	(2) 2x6	(1)
-	B4	(2) 2x6	(1)
-	C	(2) 2x6	(1)
-	B7	(1) 8x14 LVL	(1)
-	E	(2) 1x7x8 LVL	(1)
-	G	(2) 1x4 LVL	(1)
-	B8	(2) 1x4 LVL	(1)
-	H	(2) 1x4 LVL	(1)
-	I	(2) 1x4 LVL	(1)
-	J	(2) 2x4 LVL	(4)
-	K	(3) 2x4 LVL	(3)
-	B4	(3) 2x4 LVL	(3)
-	M	(3) 1x4 LVL	(3)
-	N	(3) 1x4 LVL	(3)
-	O	(3) 1x4 LVL	(3)
-	B8	(3) 2x4 LVL	(4)

HEADER BEAM SIZES SHOWN ON PLANS ARE MINIMUMS. GREATER HEADERS BEAM SIZES MAY BE USED FOR EASE OF CONSTRUCTION. ALL HEADERS TO BE INSTALLED PER APPLICABLE BUILDING CODE UNLESS NOTED OTHERWISE. ALL BEAMS TO BE FLASH IN LESS NOTED OTHERWISE.

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.

TAGS	SIZE	OPENING SIZE
①	L3x3x1/4"	LESS THAN 10"
②	L3x3x1/4"	6'-0" TO 10'-0"
③	L3x3-1/2"x5/8"	GREATER THAN 10'-0"
④	L3x3-1/2"x5/8"	ALL ARCHED OPENINGS

SECURE LINTEL TO HEADER w/ (3) 1/2" DIAMETER LAG SCREWS STAGGERED @ 16" O.C. (1) FOR ①

ALL HEADERS WITH BRICK ABOVE: (U)NO

WALL STUD SCHEDULE
1x4 AND 2x6 OSB LOAD BEARING STUDS
2x4 STUDS @ 16" O.C. OR 2x6 STUDS @ 24" O.C.
2x4 STUDS @ 16" O.C. OR 2x6 STUDS @ 24" O.C. WITH WALKUP ATTIC
2x4 STUDS @ 17" O.C. OR 2x6 STUDS @ 16" O.C. EMERGENCY LOAD BEARING STUDS
2x4 STUDS @ 16" O.C. OR 2x6 STUDS @ 24" O.C. NON-LOAD BEARING STUDS (WALL HEADERS)
2x4 STUDS @ 24" O.C.
2x4 STUDS @ 17" O.C. OR 2x6 STUDS @ 16" O.C. BALLOON FRAMED w/ CROSS BRACING @ 6'-0" O.C. VERTICALLY

KING STUD REQUIREMENTS	
OPENING WIDTH	KINGS (EACH END)
LESS THAN 3'-0"	(1)
3'-0" TO 4'-0"	(2)
4'-0" TO 8'-0"	(3)
8'-0" TO 12'-0"	(5)
12'-0" TO 16'-0"	(6)

KING STUD REQUIREMENTS ABOVE DO NOT APPLY TO PORTAL FRAMED OPENINGS

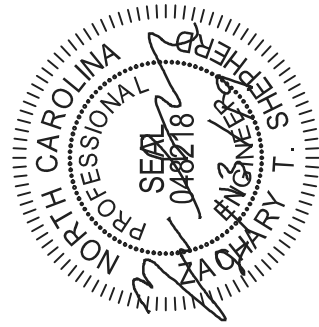
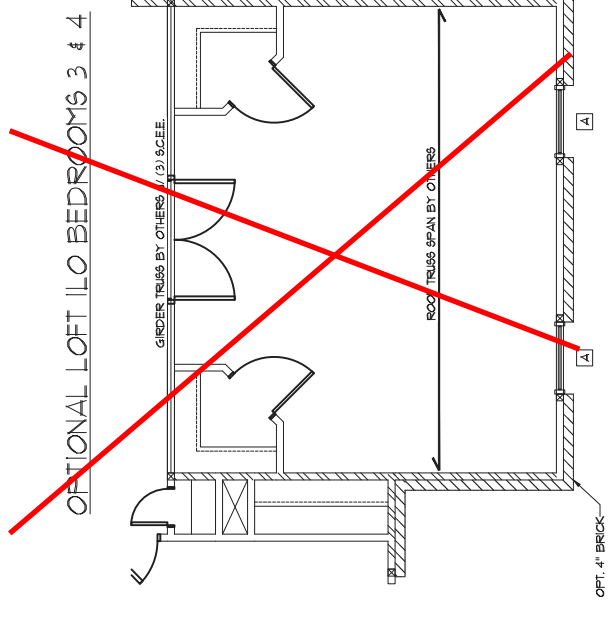
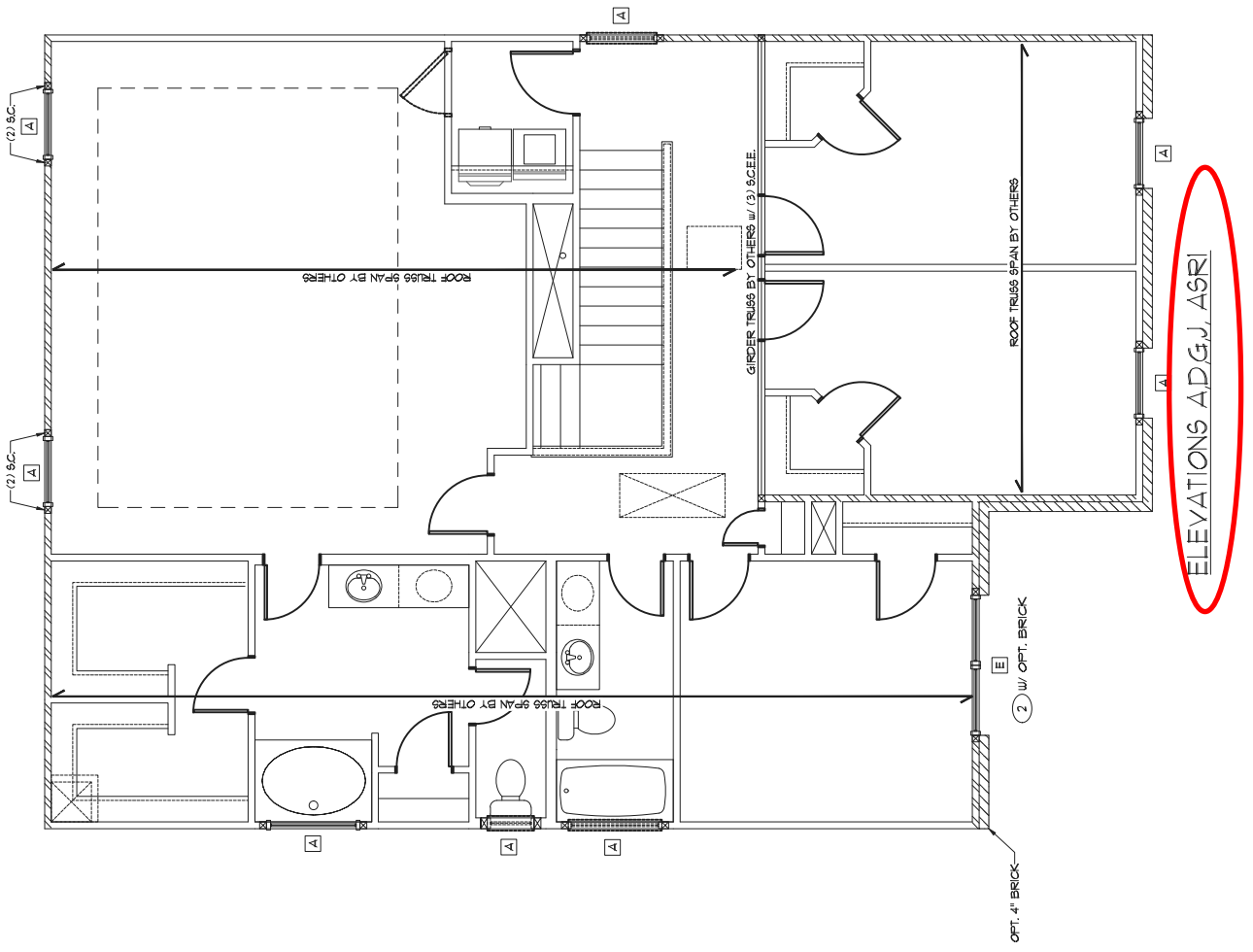
THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY SMITH DOUGLAS HOMES. SMITH DOUGLAS HOMES IS NOT RESPONSIBLE FOR THE ACCURACY OF THE PLANS. THE ENGINEER HAS REVIEWED THE PLANS AND HAS FOUND THEM TO BE IN ACCORDANCE WITH THE APPLICABLE BUILDING CODES. THE ENGINEER HAS NOT CONDUCTED A VISUAL INSPECTION OF THE PROJECT. THE ENGINEER HAS NOT CONDUCTED A VISUAL INSPECTION OF THE PROJECT. THE ENGINEER HAS NOT CONDUCTED A VISUAL INSPECTION OF THE PROJECT.

STRUCTURAL MEMBERS ONLY

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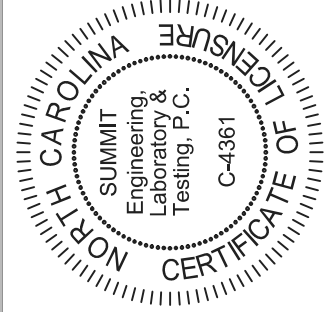
STRUCTURAL ANALYSIS BASED ON 2016 NCRC.

SECOND FLOOR FRAMING PLAN
SCALE: 1/8"=1'



Cane Mill Lot 13

STRUCTURAL MEMBERS ONLY



PROJECT
Burrington
Second Floor Framing
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
S4.0

TRUSS UPLIFT CONNECTOR

MODEL *	MAX. UPLIFT (LBS)
H1	595
H2A	575
H2SA	600
H6	950
H10A*	1340
H14*	1465

MODEL *	MAX. UPLIFT (LBS)	PLY *
LG1*	2050	2
LG13-SD513*	3605	3
LG14-SD593*	4060	4
HGT-2*	10990	2
HGT-3*	10530	3
HGT-4*	9250	4

USE BELOW ONLY FOR 2-PLY OR GREATER GIRDER TRUSSES THAT EXCEED THE UPLIFT REQUIREMENTS ABOVE.

1. ALL PRODUCTS LISTED ARE SIMPSON STRONG-TIE. EQUIV. PRODUCTS MAY BE USED PER MANUF. FOR SINGLE ANCHOR. DOUBLE ANCHORS MAY BE USED TO DOUBLE THE UPLIFT CAPACITIES SHOWN ABOVE. PROVIDED A MINIMUM 2-1/2" MEMBER THICKNESS. ITEMS DENOTED WITH "*" MAY NOT BE DOUBLED TO INCREASE UPLIFT CAPACITY. UPLIFT CAPACITIES SHOWN ABOVE ARE FOR SYP #2 GRADE OR BETTER MEMBERS. PLEASE CONTACT EOR OR TRUSS MANUF. IF SPECIES OR GRADE VARIES. 2. THIS CONNECTION IS TO BE USED FOR TRUSS MANUF. AND SUPPORTS. TRUSS MANUF. FILE EOR IS NOT RESPONSIBLE FOR THESE CONNECTIONS.

NOTE: PLY OF ALL SHOWN GIRDER TRUSSES TO ALIGN WITH INSIDE FACE OF WALL (TYP. UNO)

NOTE: ROOF TRUSSES SHALL BE SPACED TO SUPPORT FALSE FRAMED CORNER WALLS (TYP. UNO)

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS. THE CLIENT IS RESPONSIBLE FOR NOTIFYING SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. CANNOT BE HELD RESPONSIBLE FOR ANY CHANGES OR OMISSIONS MADE WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

REFER TO TRUSS LAYOUT PER MANUFACTURER FOR UPLIFT CONNECTIONS FROM TRUSS TO TOP PLATE (TYP. UNO)

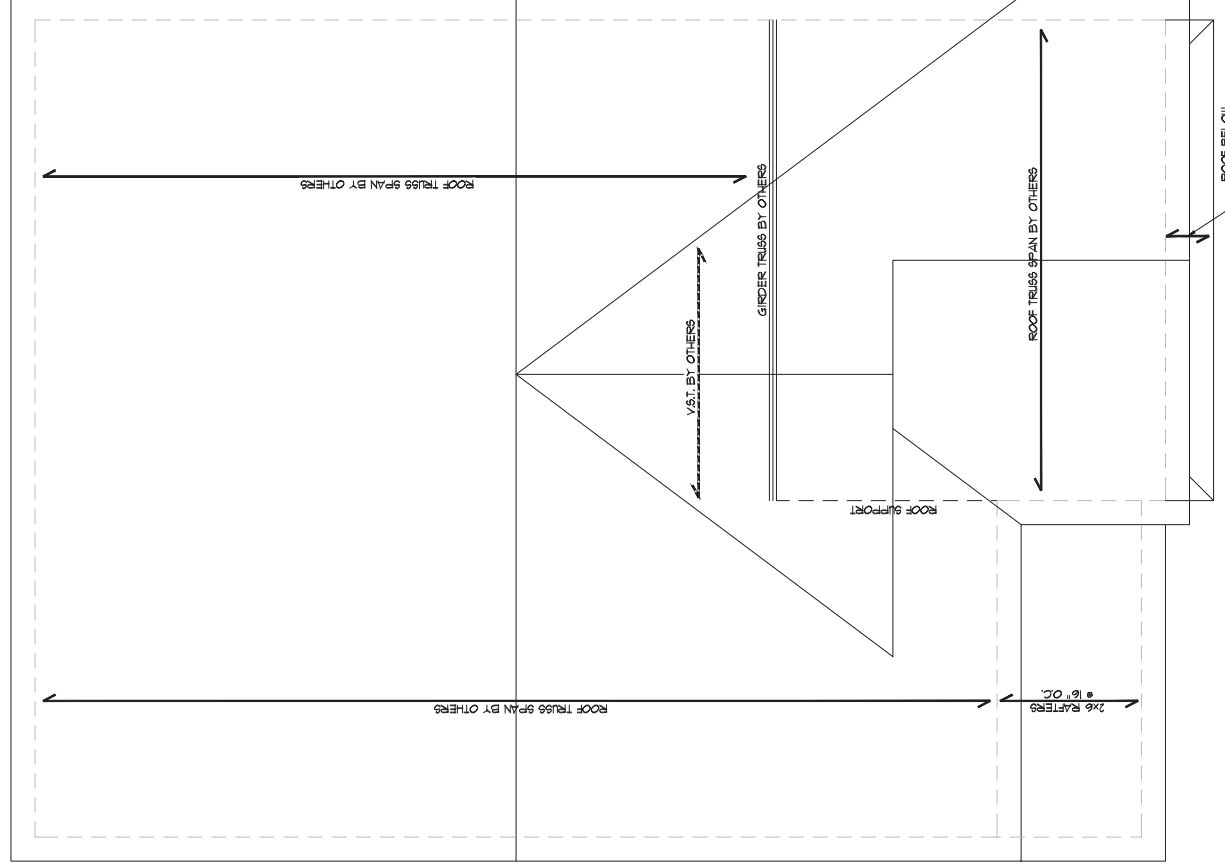
NOTE: TRUSS UPLIFT LOADS SHALL BE DETERMINED PER TRUSS MANUFACTURER IN ACCORDANCE WITH SECTION R602.11.1 WALL SHEATHING AND FASTENERS HAVE BEEN DESIGNED TO RESIST THE UPLIFT LOAD PATH IN ACCORDANCE WITH METHOD 3 OF SECTION R602.11.1.1. SEE ARCHITECTURAL DRAWINGS FOR UPLIFT PLANS FOR SHEATHING AND FASTENER REQUIREMENTS.

STRUCTURAL MEMBERS ONLY

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STRUCTURAL ANALYSIS BASED ON 2016 NCRC.

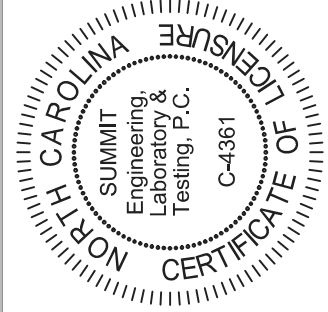
ROOF FRAMING PLAN
SCALE: 1/8"=1'



ELEVATIONS ADG, J, & ASRI

Cane Mill
Lot 13

STRUCTURAL MEMBERS ONLY



PROJECT
Buttington

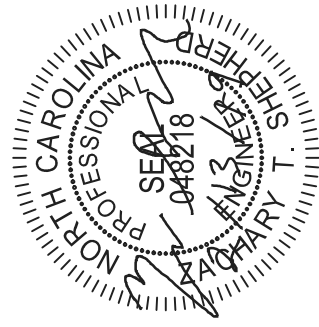
CLIENT
Smith Douglas Homes - Raleigh
2520 Reliance Ave.
Apex, NC 27539

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
S5.0



REQUIRED BRACED WALL PANEL CONNECTIONS		
METHOD	MATERIAL	MIN. THICKNESS
CS-U8FP	WOOD STRUCTURAL PANEL	3/8"
GB	GYPSUM BOARD	1/2"
USP	STRUCTURAL WOOD PANEL	3/8"
FF	STRUCTURAL WOOD PANEL	1/16"

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 NEEL AREAS BETWEEN BRACED WALL PANELS, ABOVE AND BELOW WALL OPENINGS, AND ON GABLE END WALLS.
- ALL SHEATHING SHALL BE FULL HEIGHT AND SHALL EXTEND BEYOND THE FOUNDATION OR BASEMENT 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 NRC.
- CONCRETE OR MASONRY WALLS SUPPORTING A BRACED WALL PANEL SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.4.4.
- 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
 - USP = WOOD STRUCTURAL PANEL
 - CS-XXX = CONT. SHEATHED ENG. ENGINEERED SOLUTION
 - FF = 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 NRC.

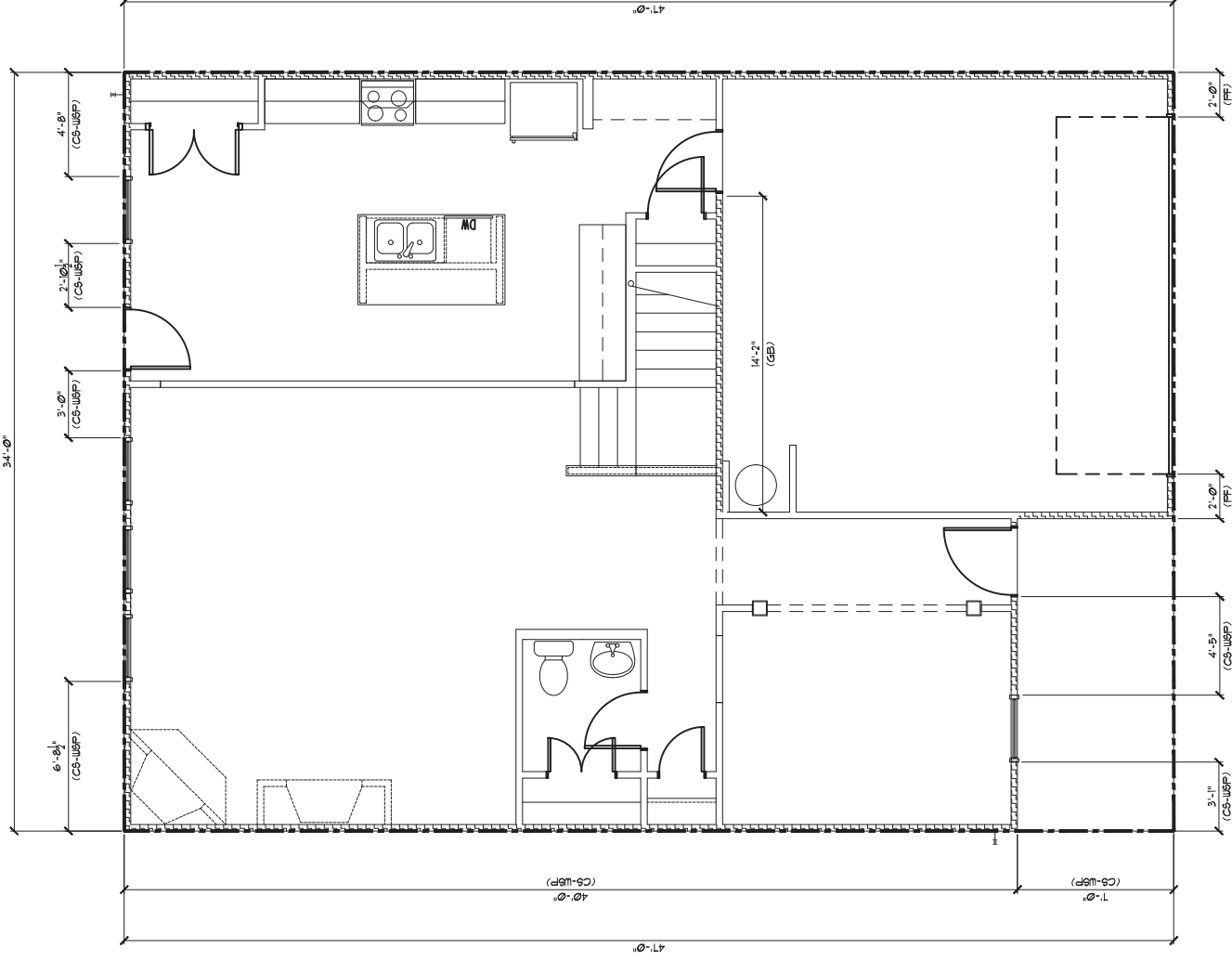
FIRST FLOOR BRACING (FT)		
CONTINUOUS SHEATHING METHOD		
REQUIRED	PROVIDED	
FRONT SIDE	148	206
LEFT SIDE	11	41.0
REAR SIDE	148	172
RIGHT SIDE	11	41.0

FIRST FLOOR BRACING - SIDE LOAD GARAGE (FT)		
CONTINUOUS SHEATHING METHOD		
REQUIRED	PROVIDED	
FRONT SIDE	148	215
LEFT SIDE	11	41.0
REAR SIDE	148	172
RIGHT SIDE	11	33.0

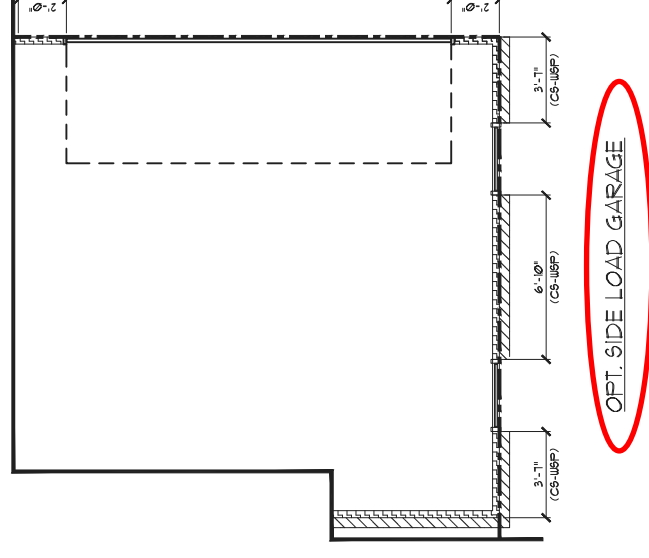
STRUCTURAL MEMBERS ONLY
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STRUCTURAL ANALYSIS BASED ON 2018 NRC.

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



ALL ELEVATIONS



OPT. SIDE LOAD GARAGE

SUMMIT
 ENGINEERING LABORATORY TESTING
 3070 HAMMOND BUSINESS PLACE, SUITE 171
 RALEIGH, NC 27603
 OFFICE: 919.380.9991
 FAX: 919.380.9993
 WWW.SUMMIT-COMPANIES.COM

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

PROJECT
 Buftington
 First Floor Bracing - Raleigh
 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

Cane Mill
 Lot 13

PROFESSIONAL ENGINEER
 GREGORY T. SHEPHERD
 SEAL
 048218
 NORTH CAROLINA

STRUCTURAL MEMBERS ONLY



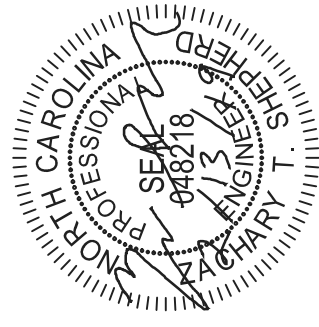
PROJECT
Buftington
CLIENT
Smith Douglas Homes - Raleigh
2520 Reliance Ave.
Apex, NC 27539

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

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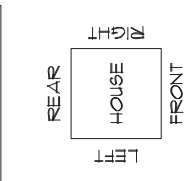
STRUCTURAL MEMBERS ONLY

Cane Mill
Lot 13

REQUIRED BRACED WALL PANEL CONNECTIONS

METHOD	MATERIAL	MIN. THICKNESS	REQUIRED CONNECTION
CS-WSP	WOOD STRUCTURAL PANEL	3/8"	INTERMEDIATE SUPPORTS 6d COMMON NAILS @ 12" O.C.
GB	GYPSPUM BOARD	1/2"	5d COOLER NAILS @ 1" O.C.
WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 12" O.C.
FF	WOOD 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 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 BRACED WALLS SHALL BE BUILT TO EXCEED MORE THAN 24" BEYOND THE FOUNDATION OR BENCHMARK BELOW 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 NRC.
 - CONCRETE OR MASONRY WALLS SUPPORTING A BRACED WALL PANEL 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 WSP = WOOD STRUCTURAL PANEL
CS-XXX = CONT. SHEATHED ENG. ENGINEERED SOLUTION
FF = PORTAL FRAME

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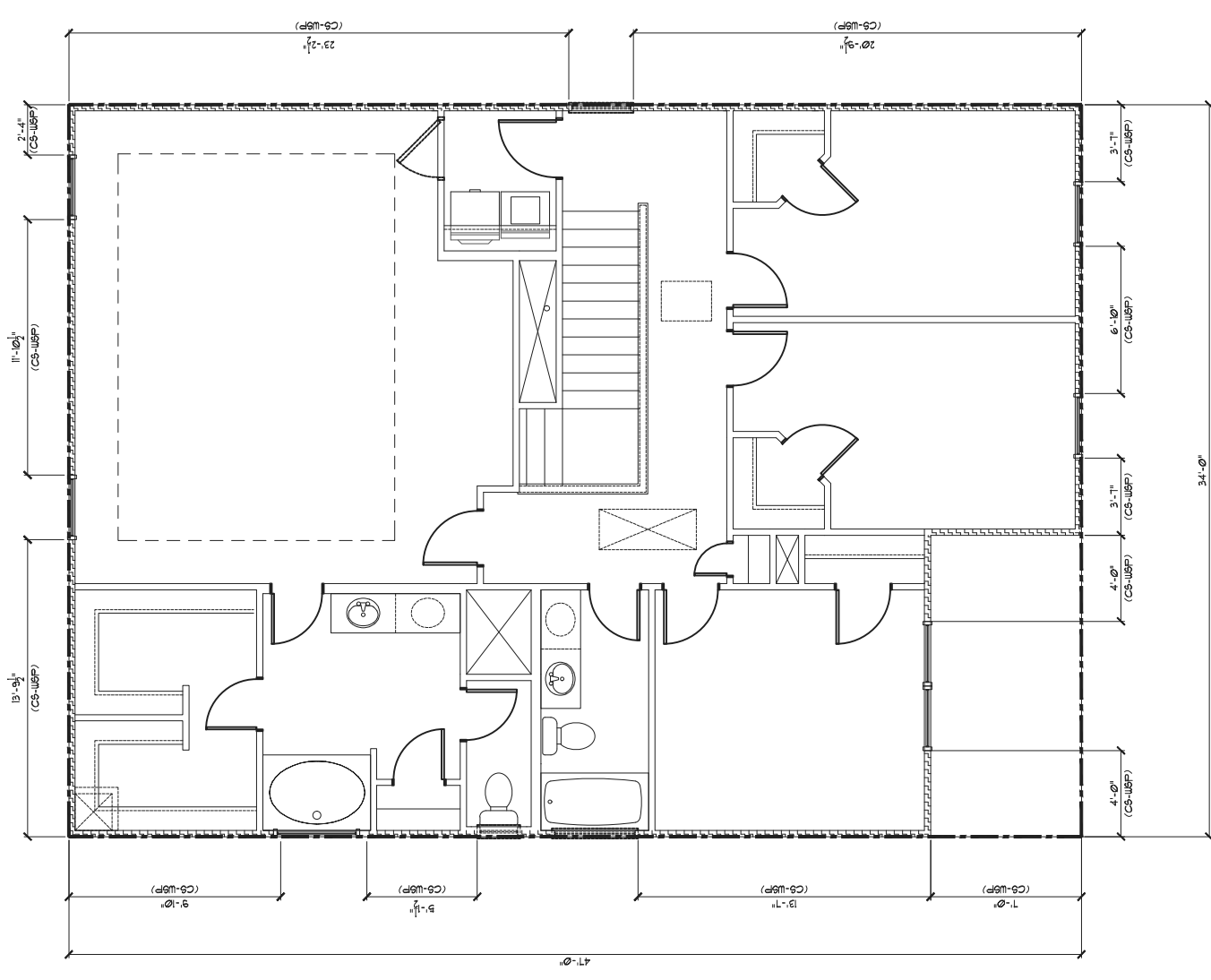
SECOND FLOOR BRACING (FT)

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

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

STRUCTURAL MEMBERS ONLY
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STRUCTURAL ANALYSIS BASED ON 2018 NRC.

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:

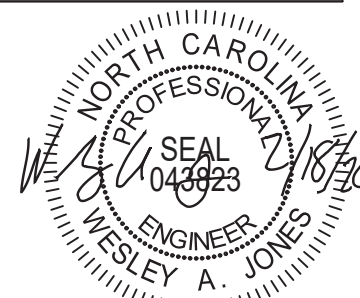
- Fabrication and placement of structural fiberboard sheathing shall be in accordance with the applicable AFA standards.
- Fiberboard wall sheathing shall comply with the requirements of local building codes for the appropriate state as indicated on these drawings. Refer to wall bracing notes in plan 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.

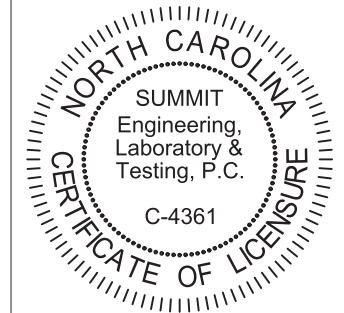
STRUCTURAL STEEL:

- 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

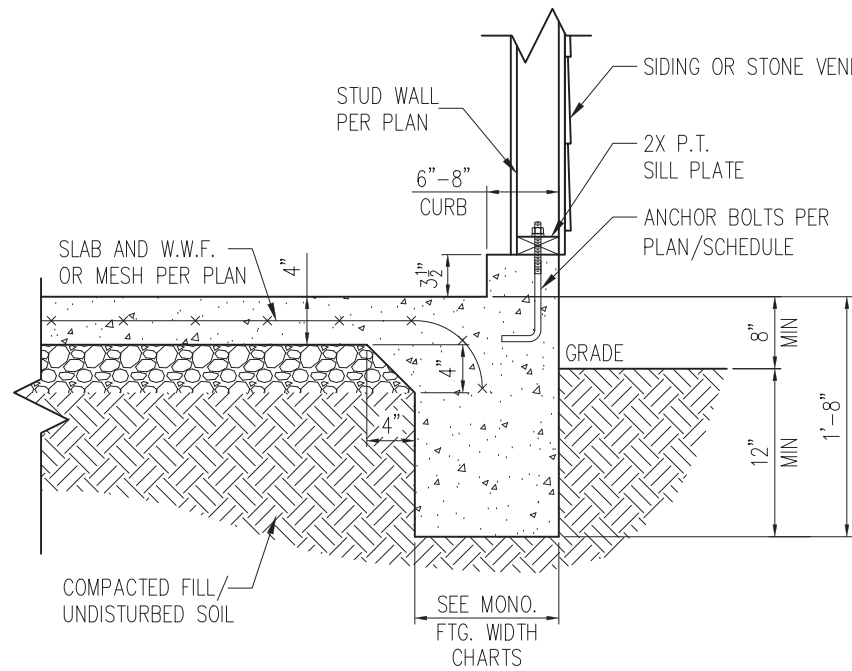
ORIGINAL DRAWING

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

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

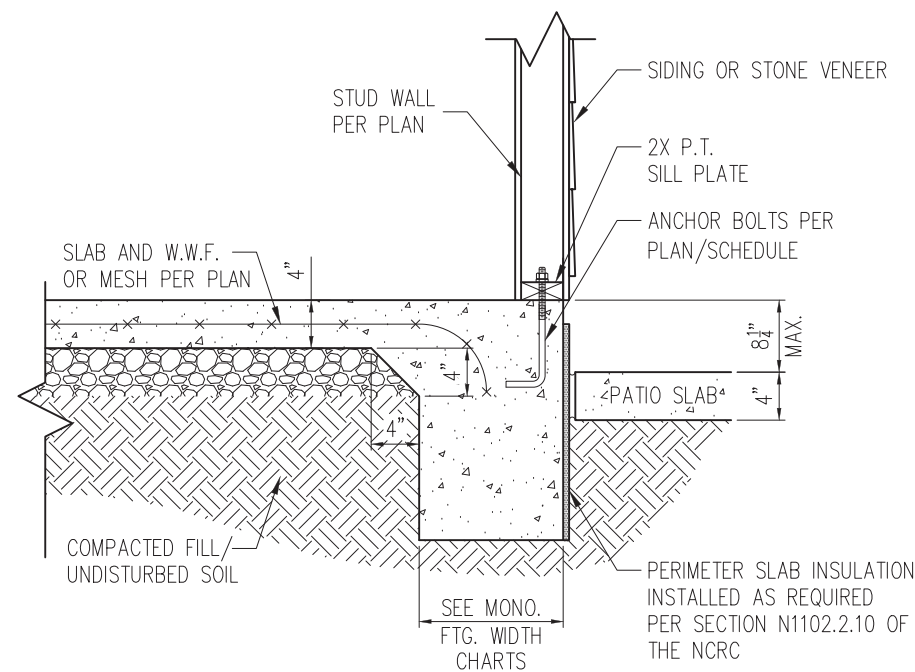
SHEET

CS2



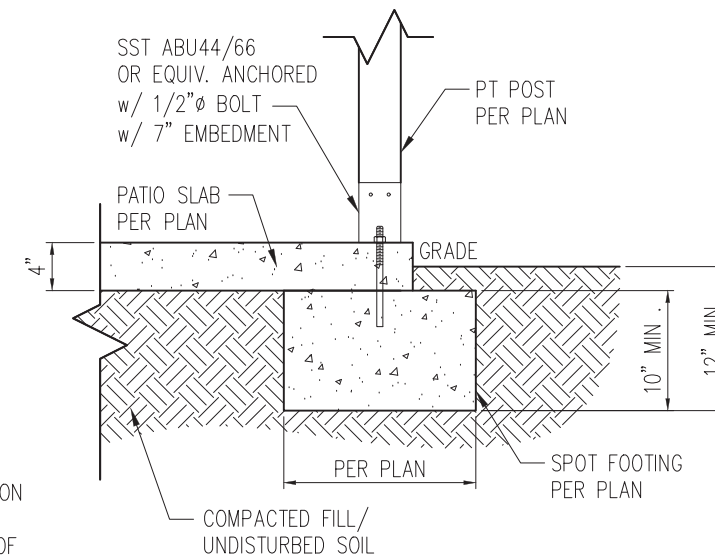
STANDARD - SIDING/STONE

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

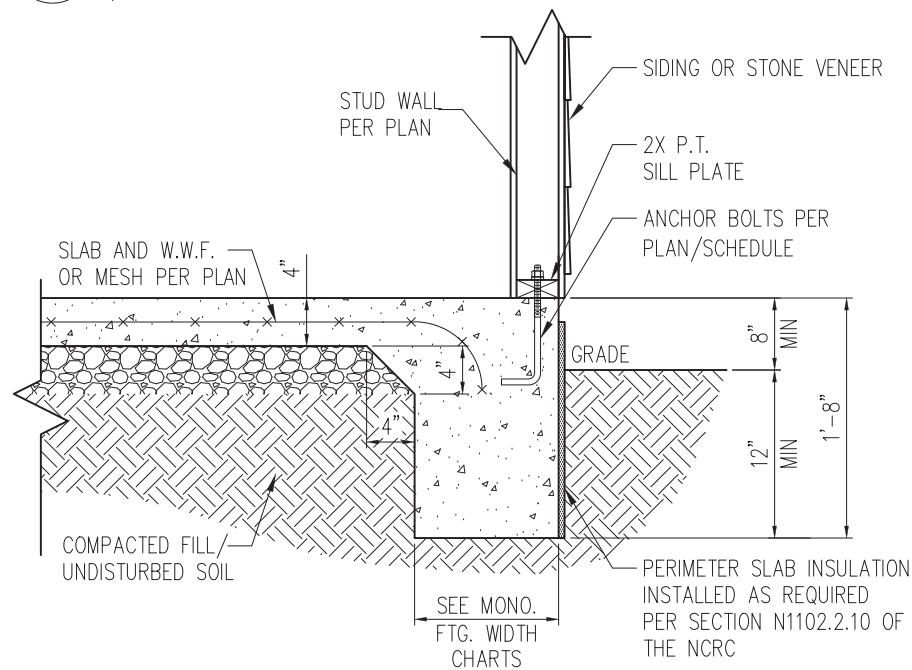


STANDARD - SIDING/STONE

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

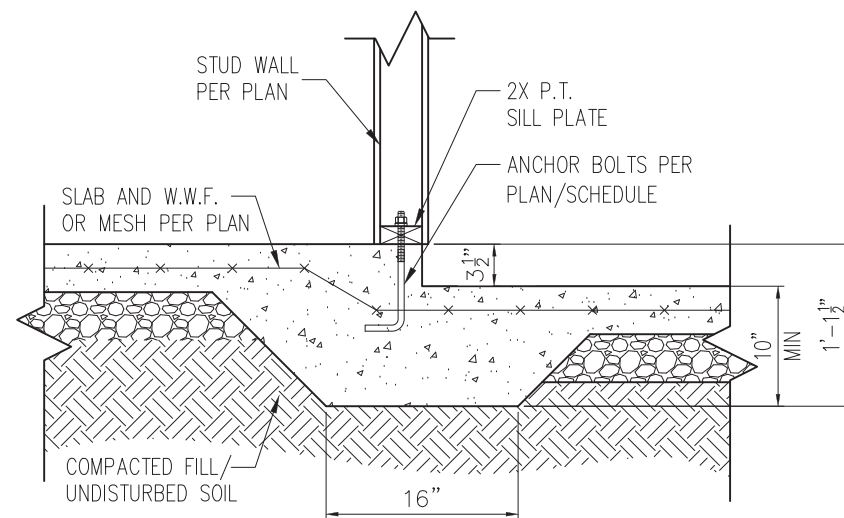


2A COVERED PATIO DETAIL
D1m 3/4" = 1'-0"



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"

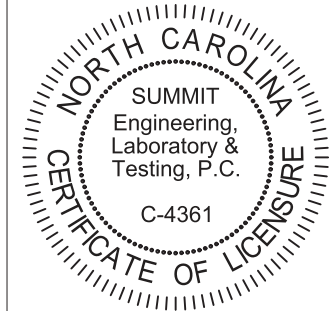
*5" BRICK LEDGE HAS BEEN ADDED TO THE MONOLITHIC FOOTING WIDTH FOR BRICK SUPPORT

- 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
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

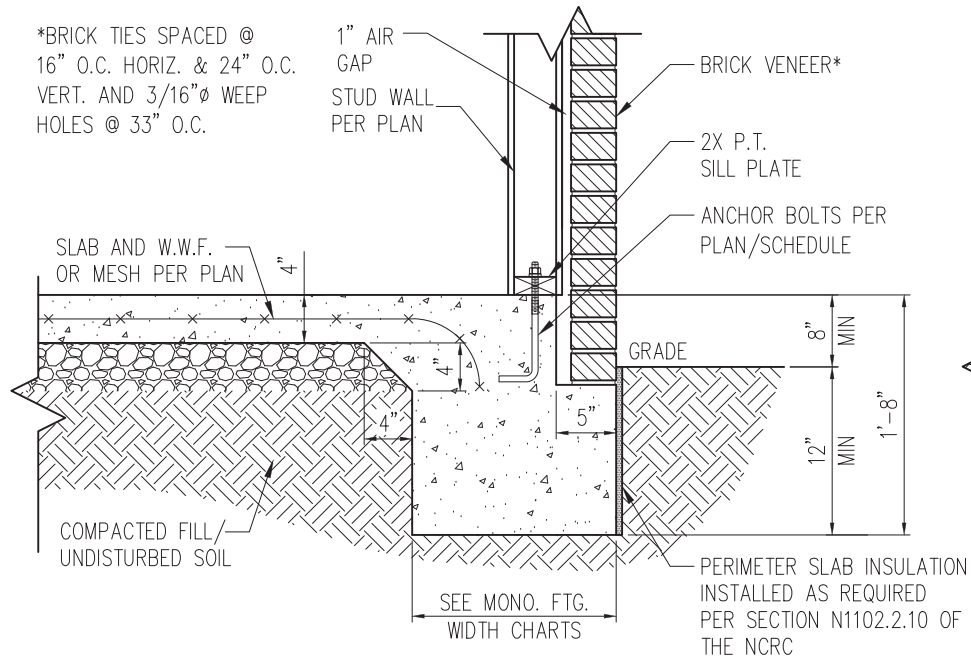
ORIGINAL DRAWING
NO. DATE PROJECT #
0 1/7/16 3832

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET

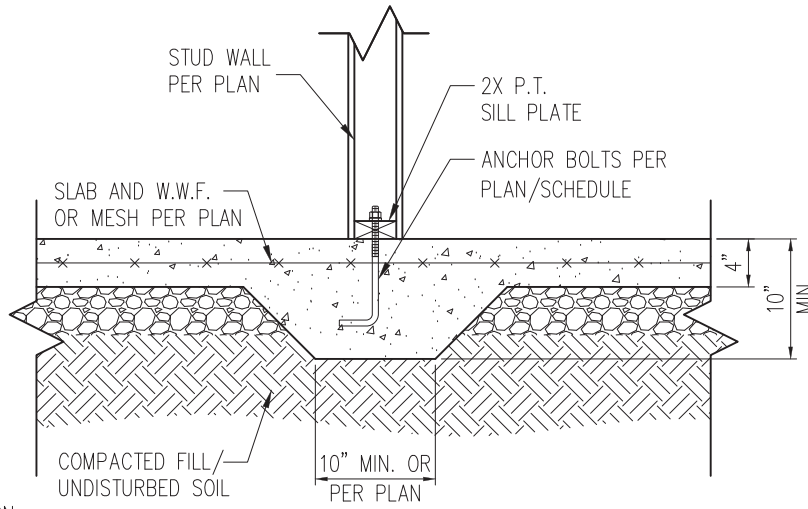
D1m

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



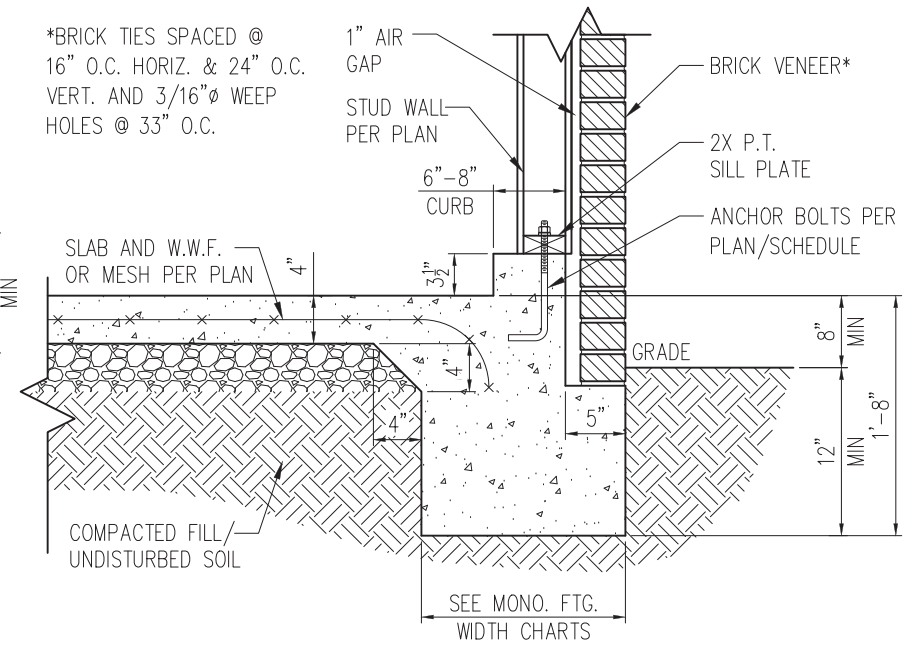
STANDARD - BRICK

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



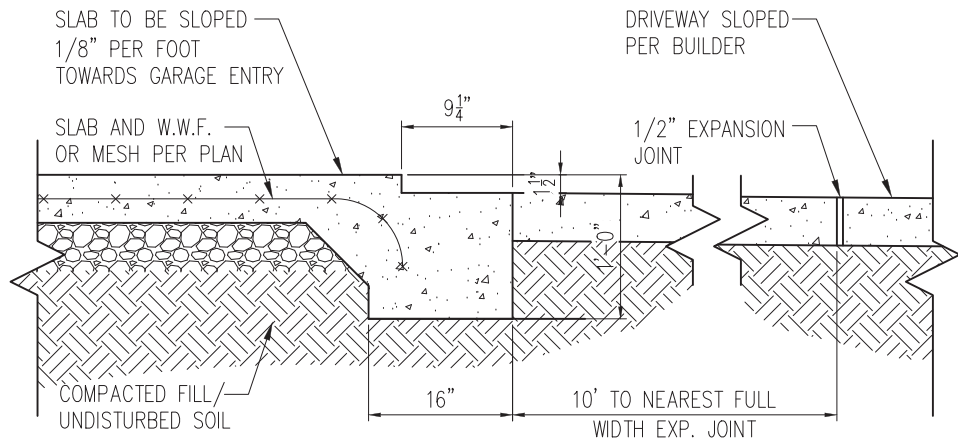
3 TYP. THICKENED SLAB DETAIL
D2m 3/4" = 1'-0"

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

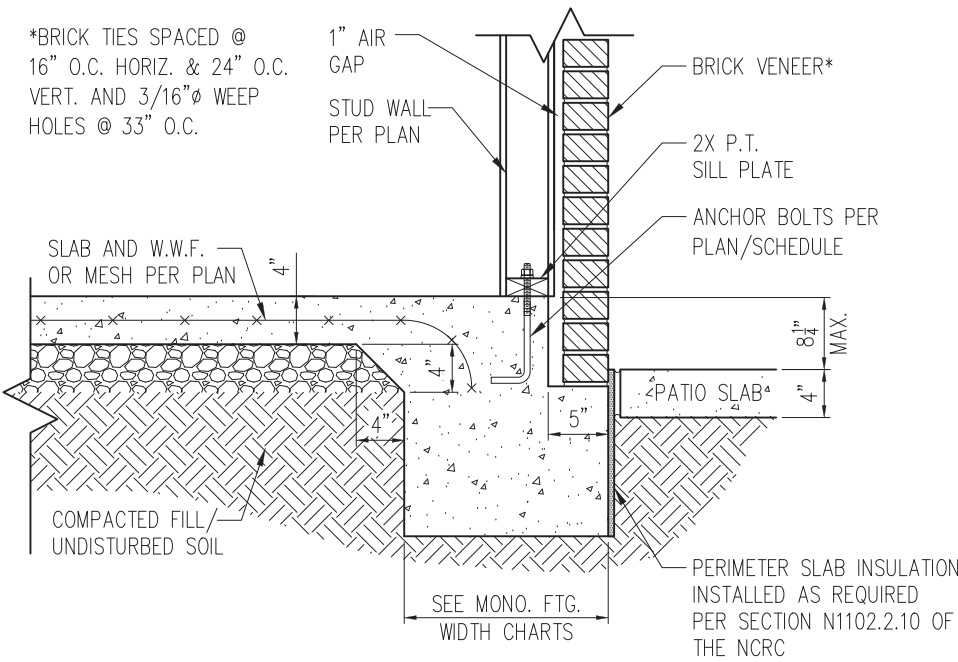


STANDARD - BRICK

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"

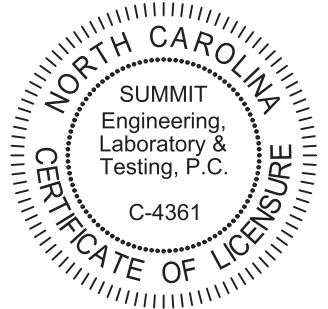
NOTES:

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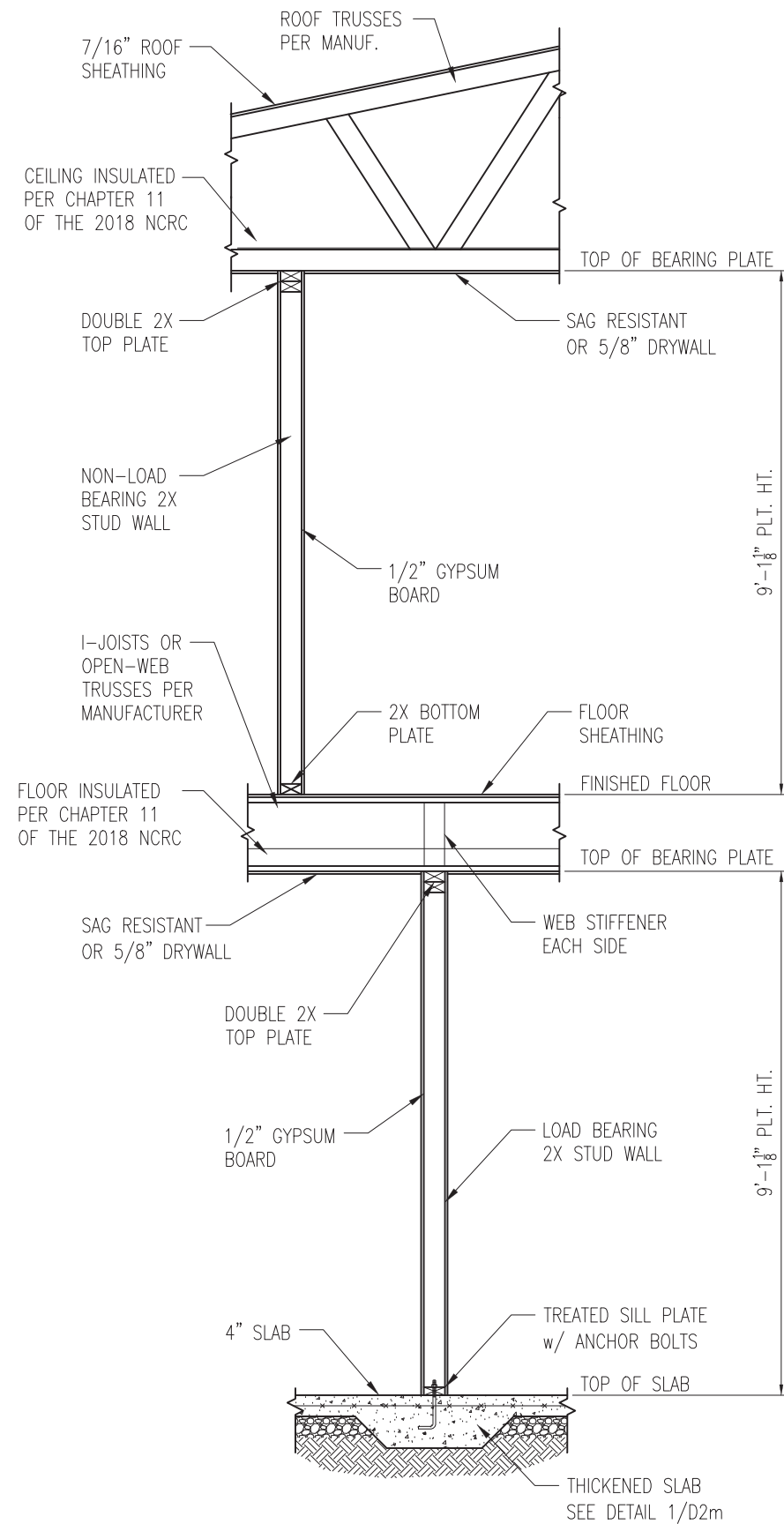
PROJECT
Standard Details
Monolithic Slab Details
CLIENT
Smith Douglas Homes
110 Village Trail, Suite 215
Woodstock, GA 30188

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

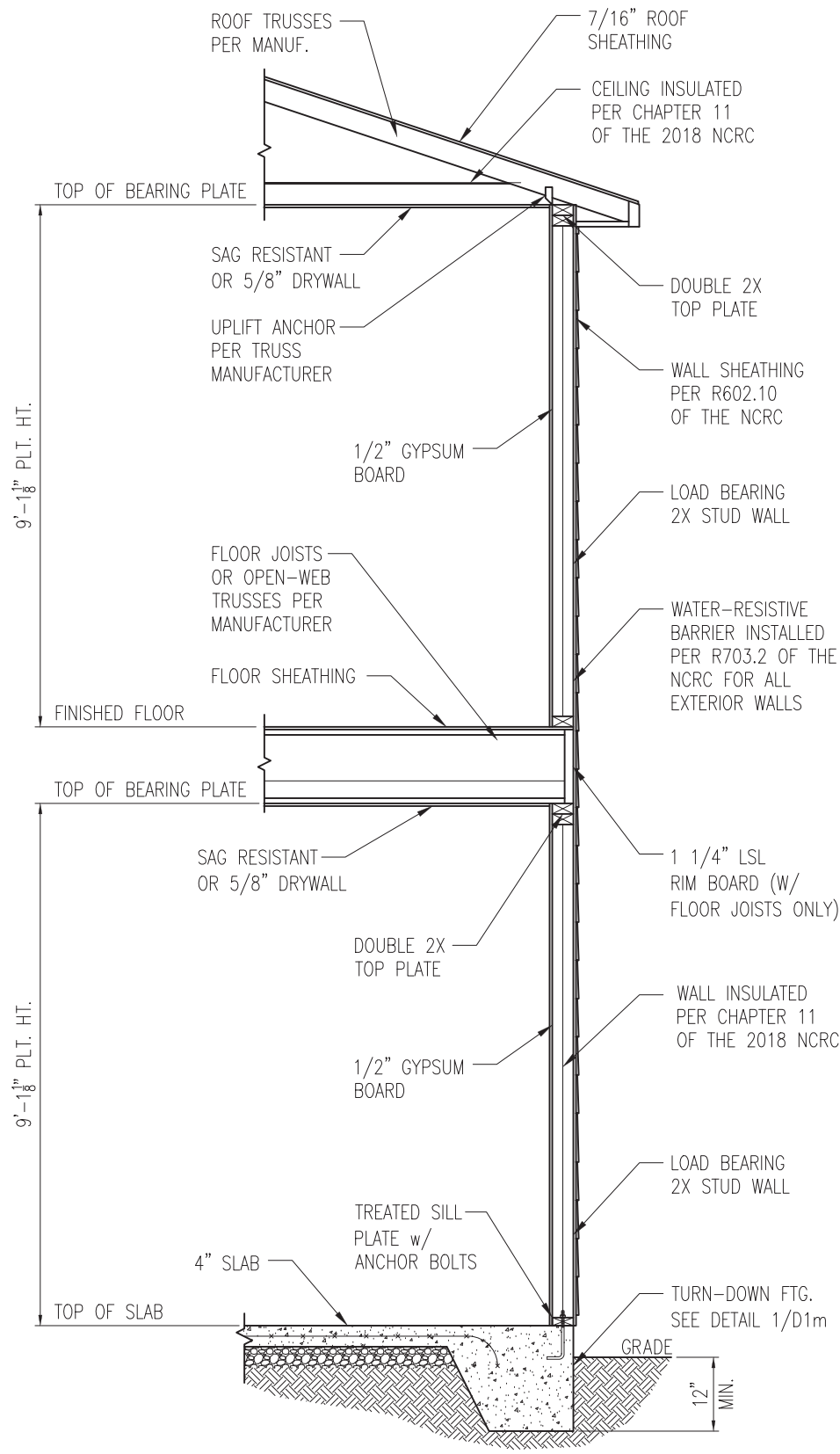
ORIGINAL DRAWING
NO. DATE PROJECT #
0 1/7/16 3832

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
D2m



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

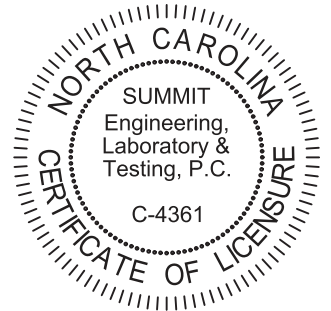


2 TYP. EXTERIOR LOAD BEARING WALL SECTION
 D3m 3/4" = 1'-0"
 -SIMILAR w/ BRICK AND STONE
 -BRICK TIES SPACED @ 16" O.C. HORIZ. & 24" O.C. VERT.
 -MIN. 3/16" Ø WEEP HOLES @ 33" O.C.

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



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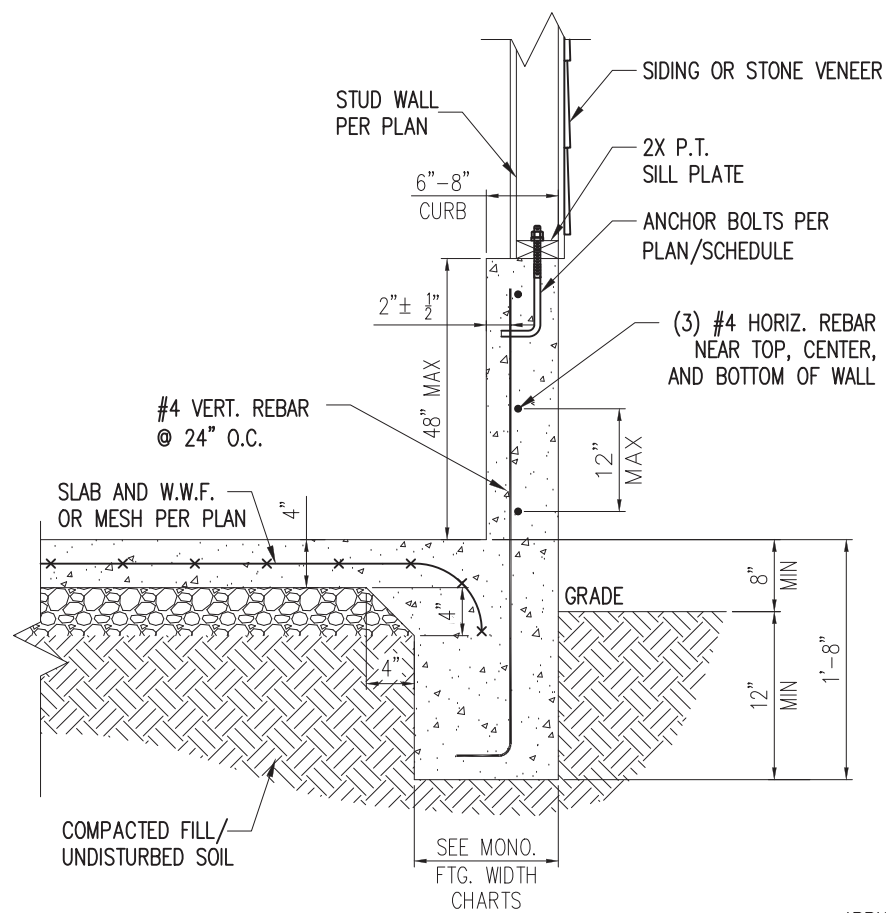
PROJECT
Standard Details
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Smith Douglas Homes
 110 Village Trail, Suite 215
 Woodstock, GA 30188

CURRENT DRAWING
 DATE: 2/18/20
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 CHECKED BY: WAJ

ORIGINAL DRAWING
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REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

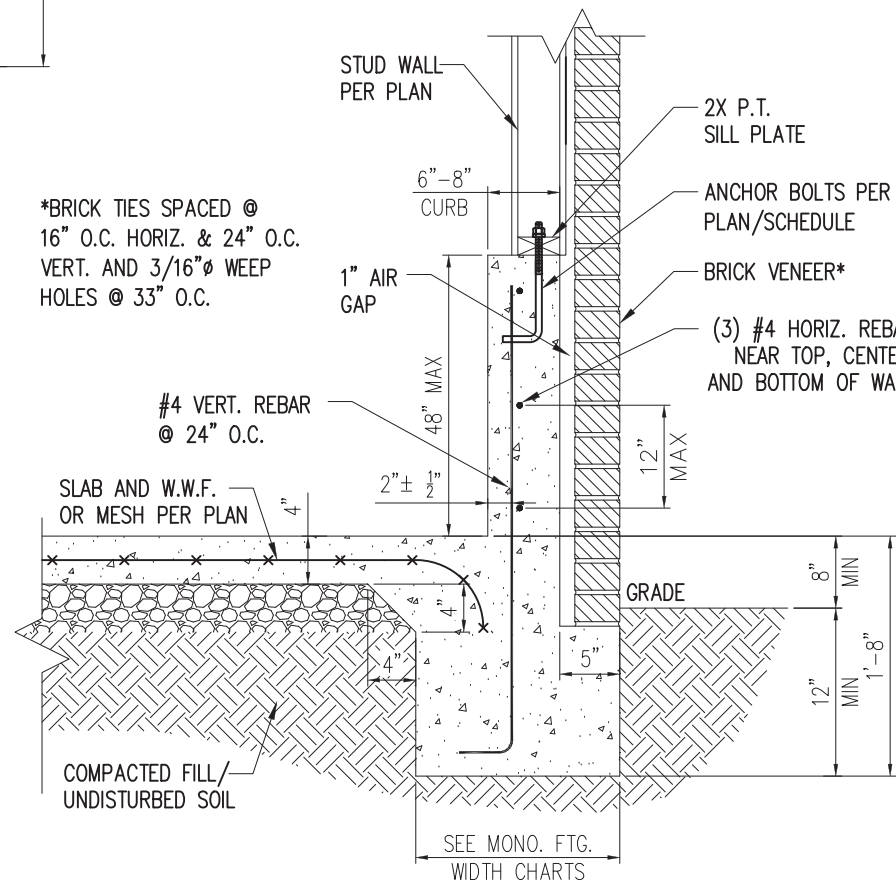
SHEET
D3m



STANDARD - SIDING/STONE

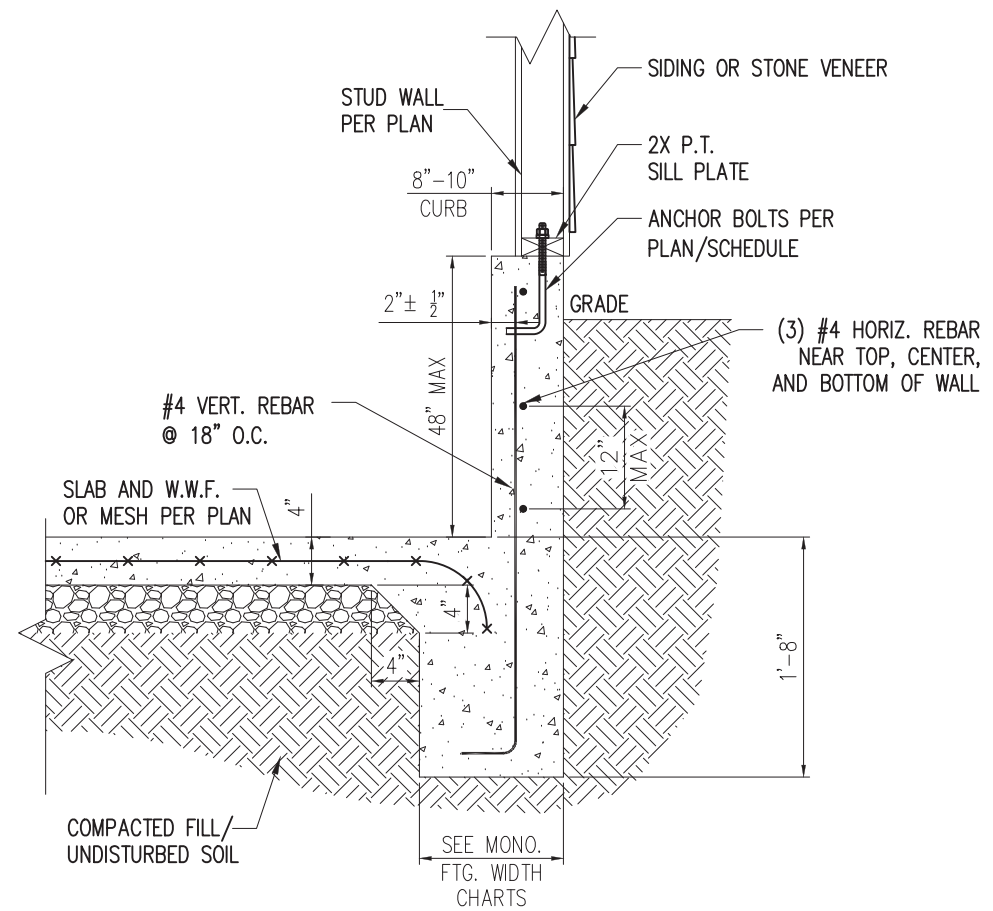
1 EXTENDED GARAGE CURB DETAIL
D4m NTS

*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



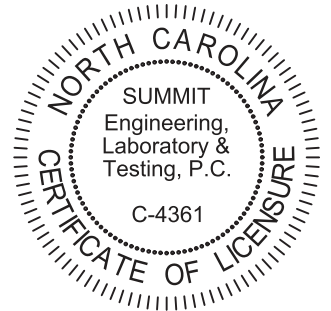
STANDARD - SIDING/STONE

2 EXTENDED GARAGE CURB DETAIL
W/ UNBALANCED FILL
D4m NTS



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

CURRENT DRAWING

DATE: 2/18/20

SCALE: NTS

PROJECT #: 3832

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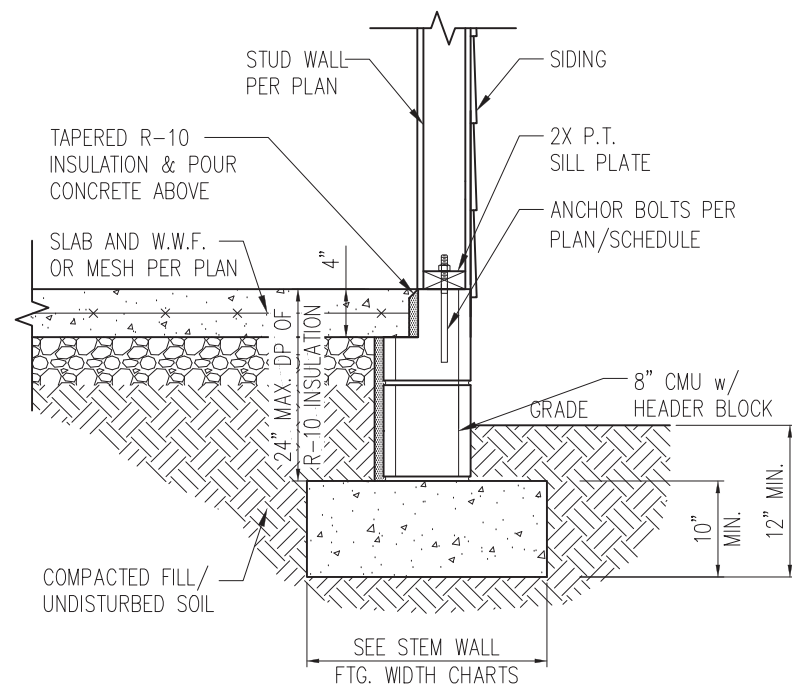
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NO.	DATE	PROJECT #
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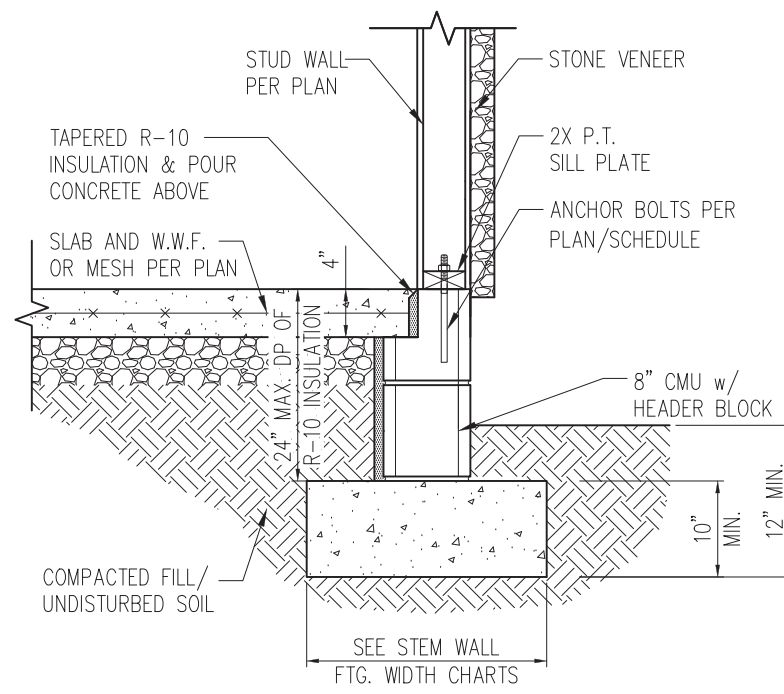
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COMPLETE LIST OF REVISIONS

SHEET

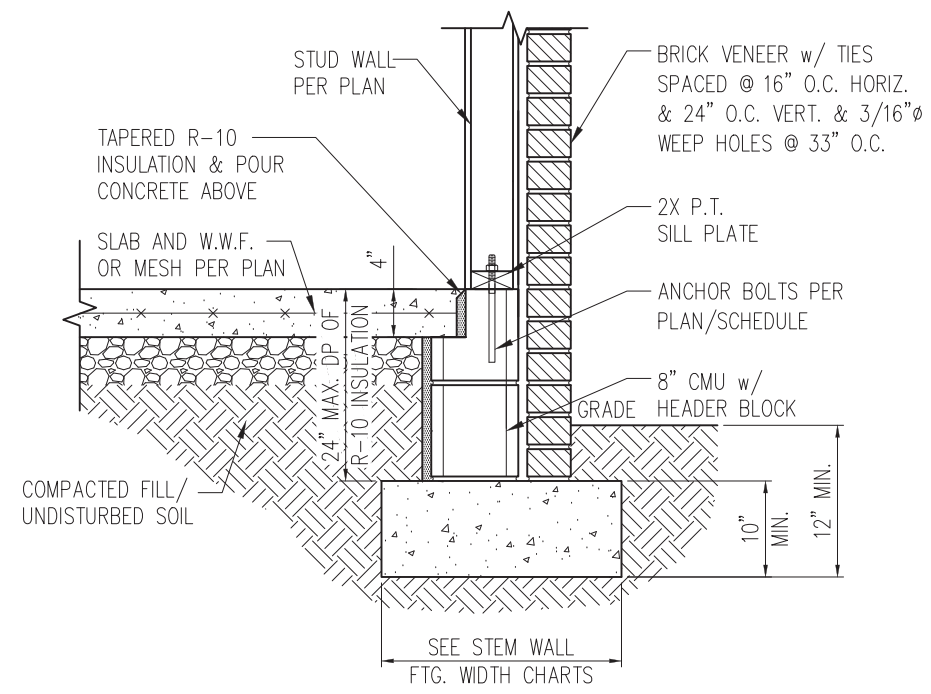
D4m



STANDARD - SIDING

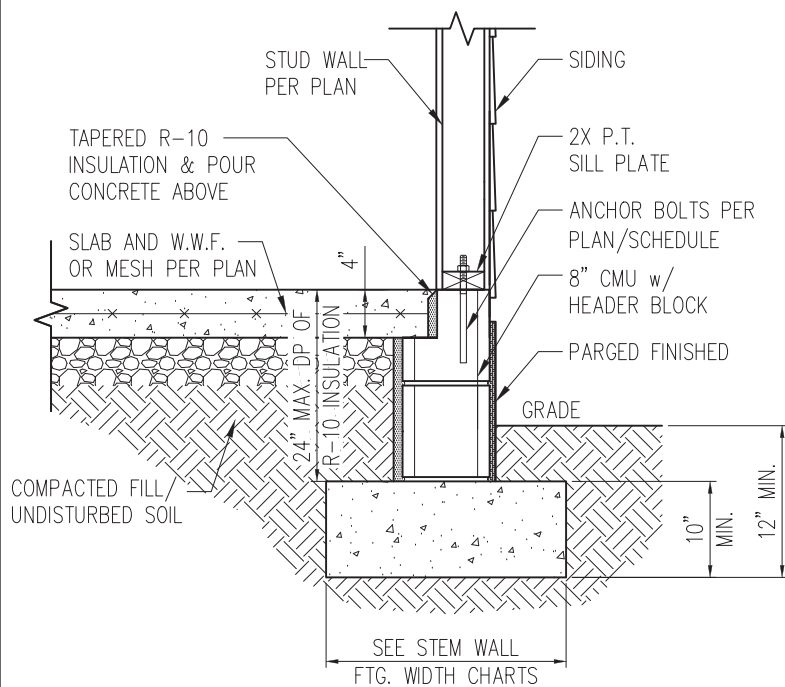


STANDARD - STONE

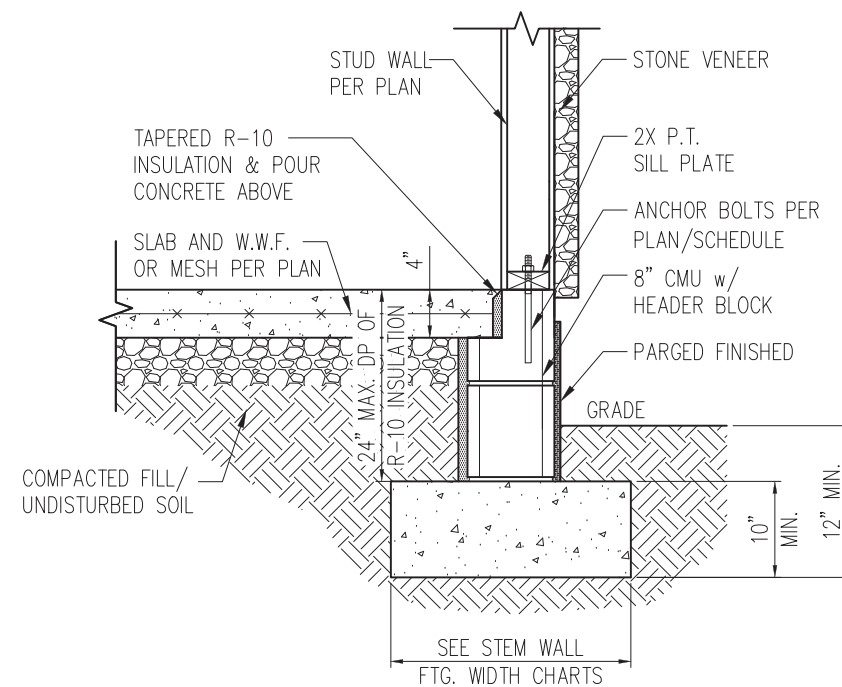


STANDARD - BRICK

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

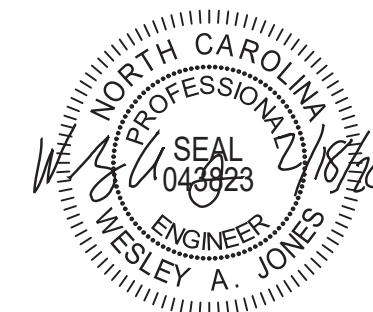
WALL ANCHOR SCHEDULE

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.

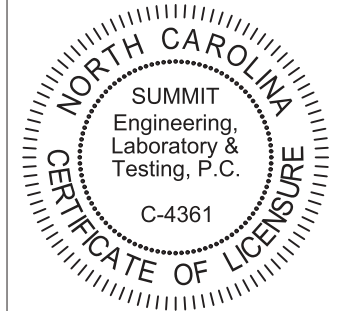
NOTES:

- 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.



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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
SCALE: NTS
PROJECT #: 3832
DRAWN BY: LBV
CHECKED BY: WAJ

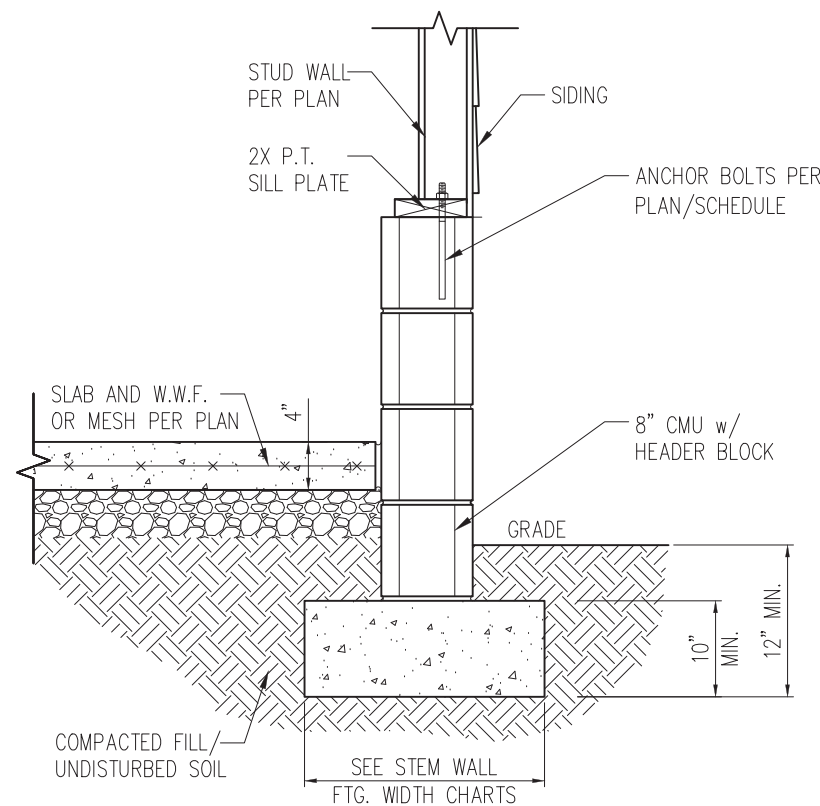
ORIGINAL DRAWING

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

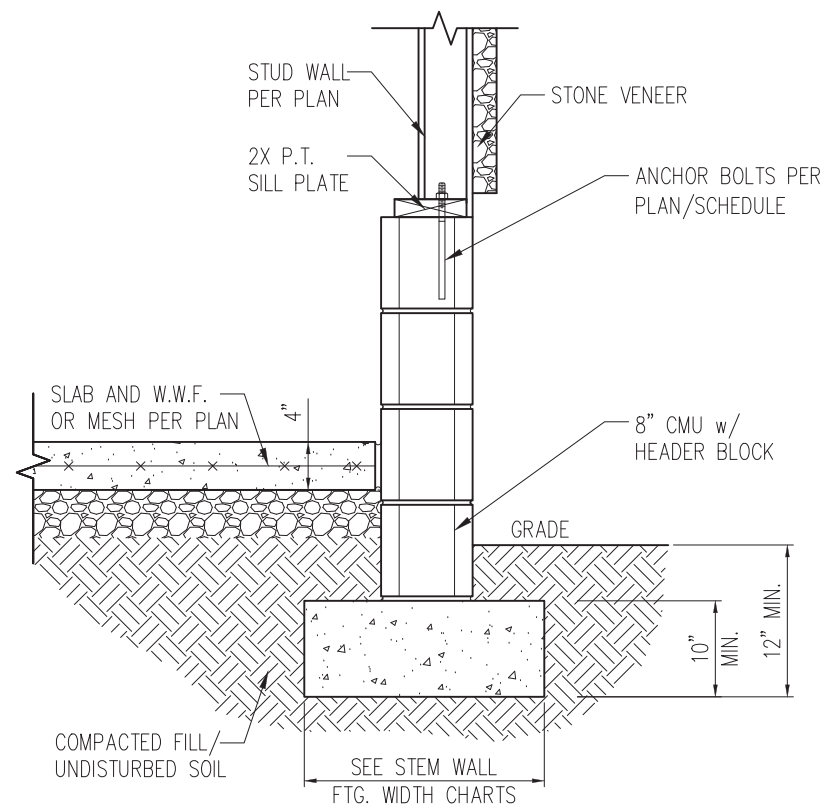
REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET

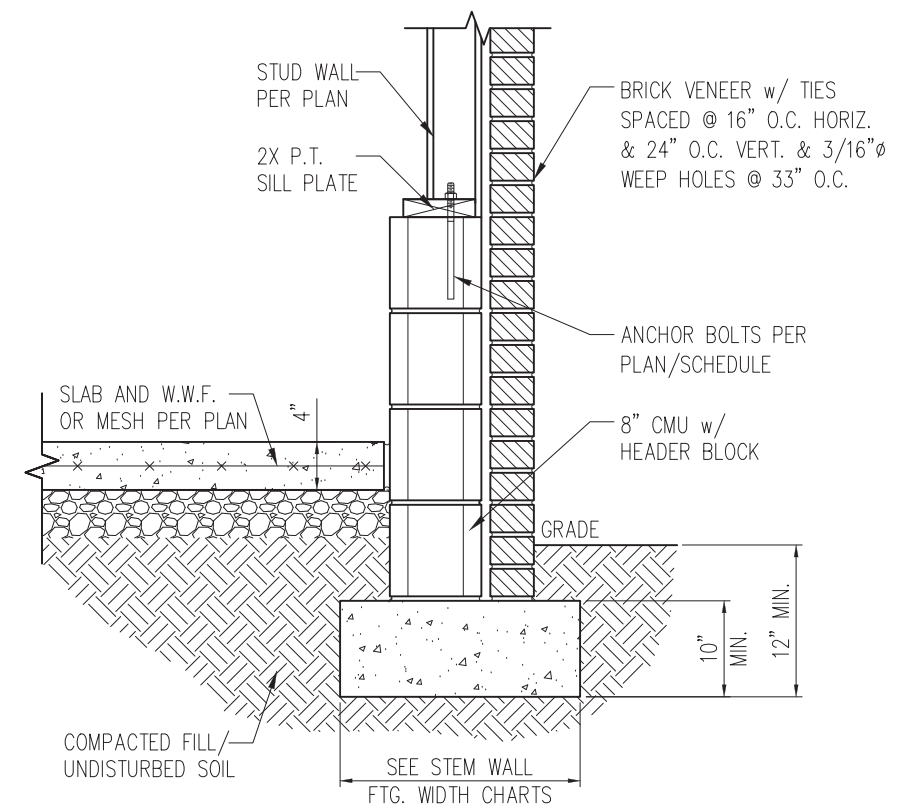
D1s



STANDARD - SIDING

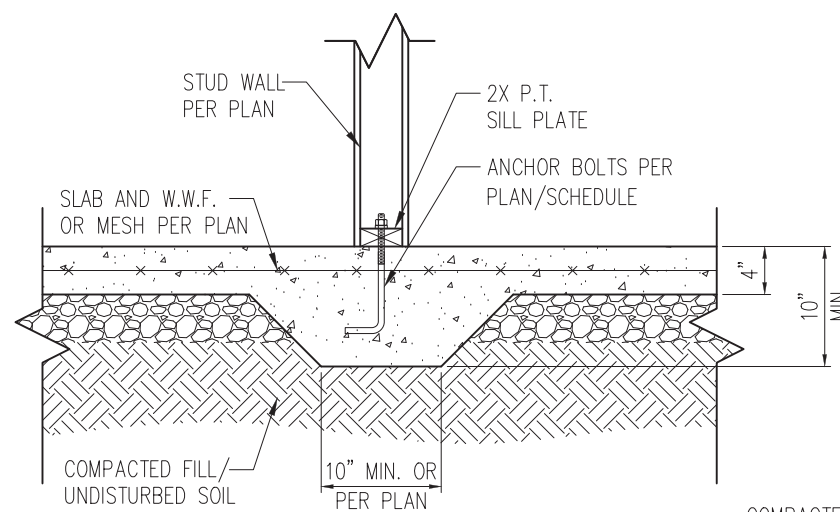


STANDARD - STONE

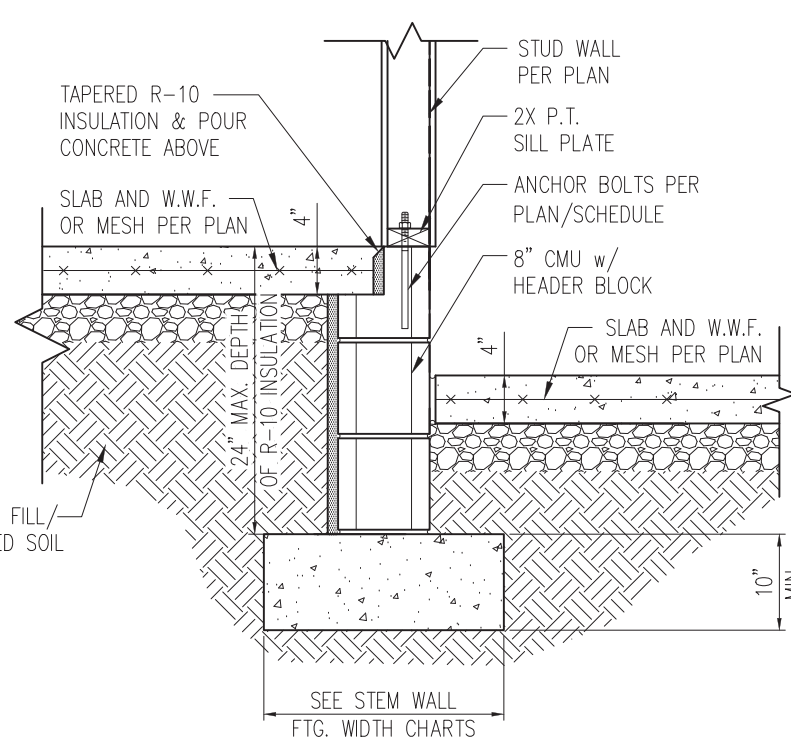


STANDARD - BRICK

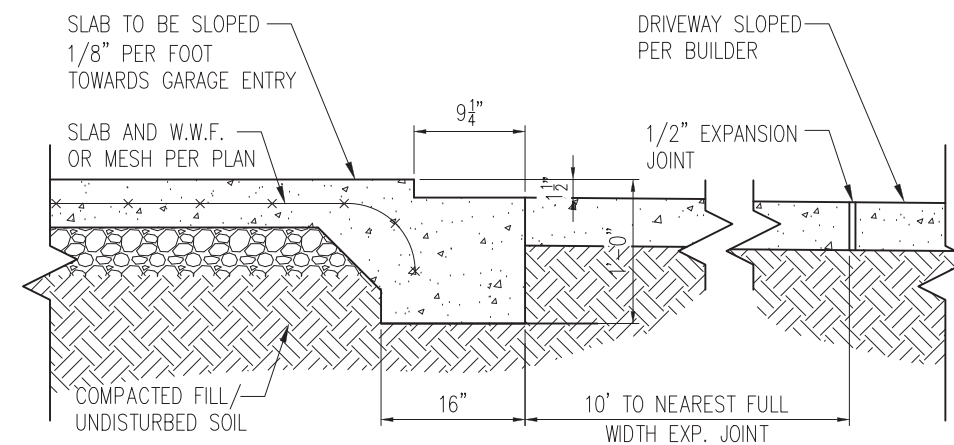
1 TYP. GARAGE CURB DETAIL
D2s 3/4" = 1'-0"



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

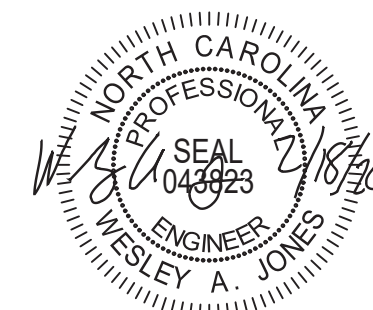


3 HOUSE/GARAGE WALL DETAIL
D2s 3/4" = 1'-0"



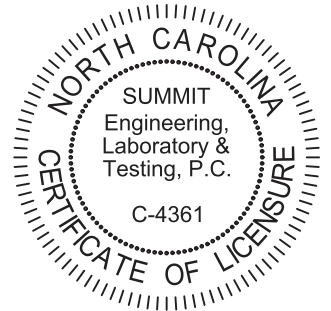
4 SLAB AT GARAGE DOOR
D2s 3/4" = 1'-0"

- NOTES:
- 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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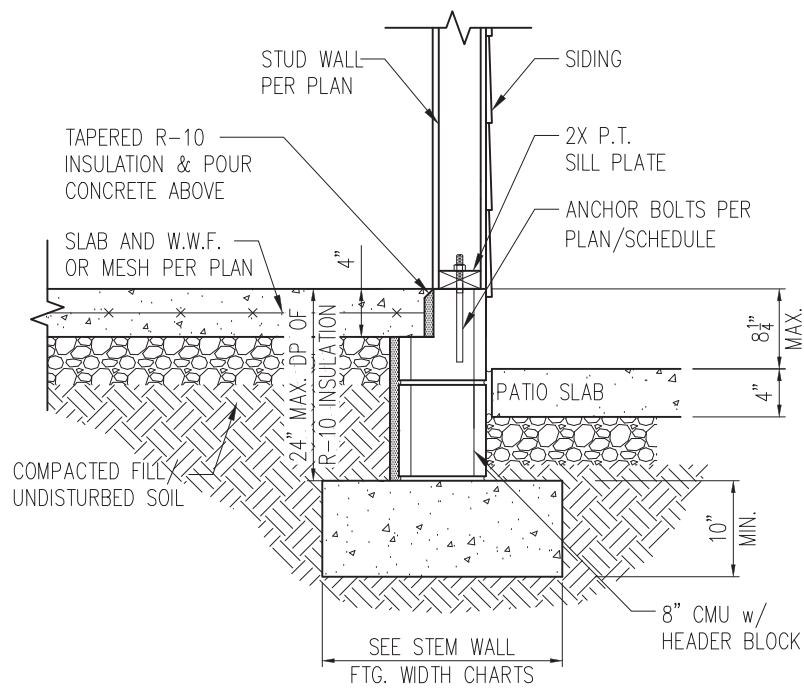


PROJECT
Standard Details
Stemwall Details
CLIENT
Smith Douglas Homes
110 Village Trail, Suite 215
Woodstock, GA 30188

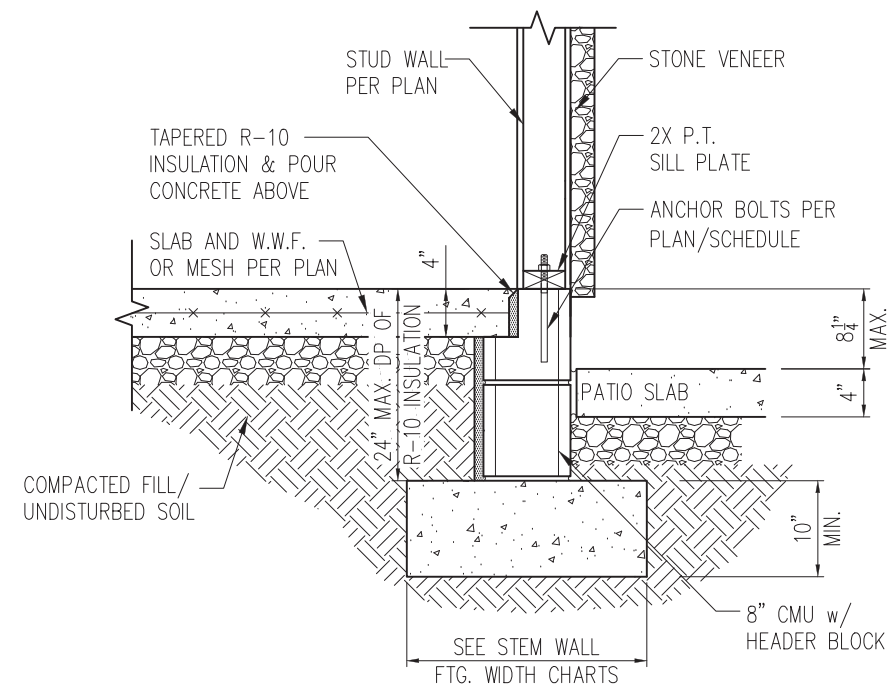
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DATE: 2/18/20		
SCALE: NTS		
PROJECT #: 3832		
DRAWN BY: LBV		
CHECKED BY: WAJ		
ORIGINAL DRAWING		
NO.	DATE	PROJECT #
0	1/7/16	3832

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

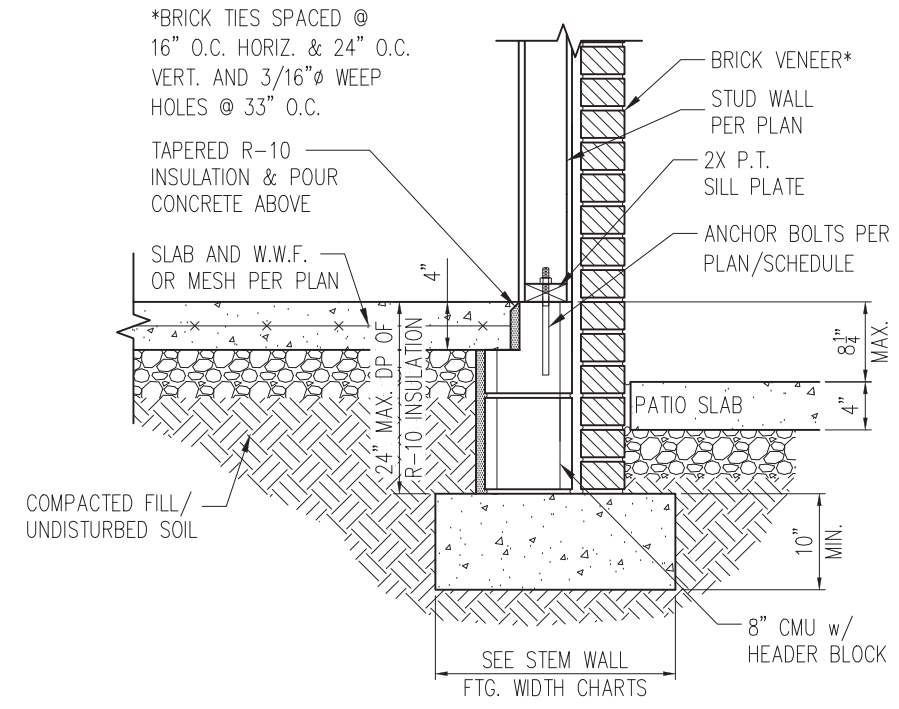
SHEET
D2s



STANDARD - SIDING

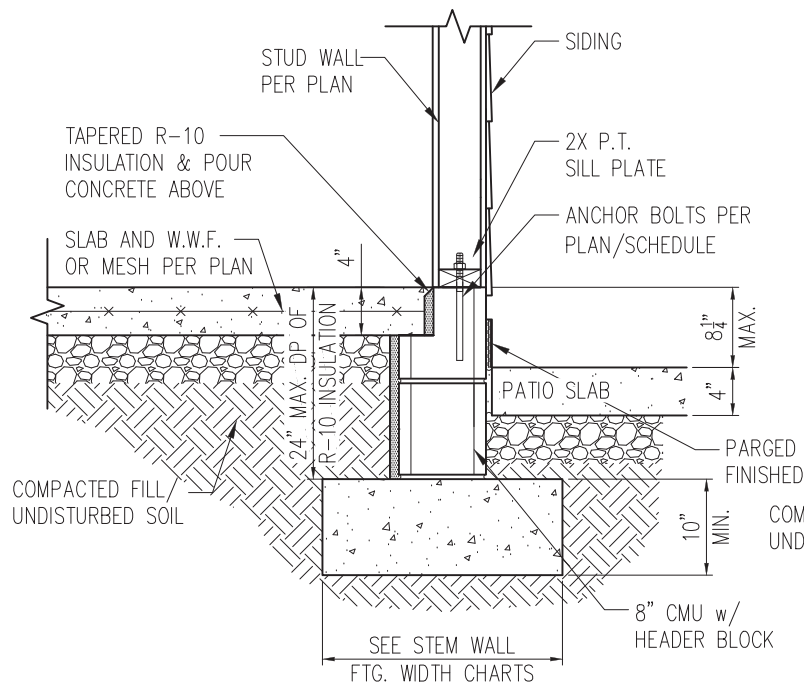


STANDARD - STONE

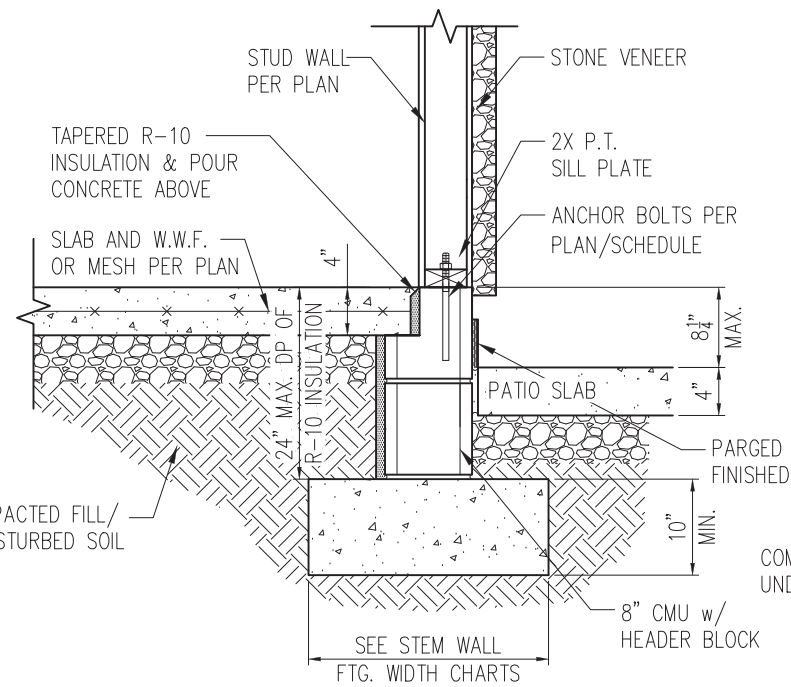


STANDARD - BRICK

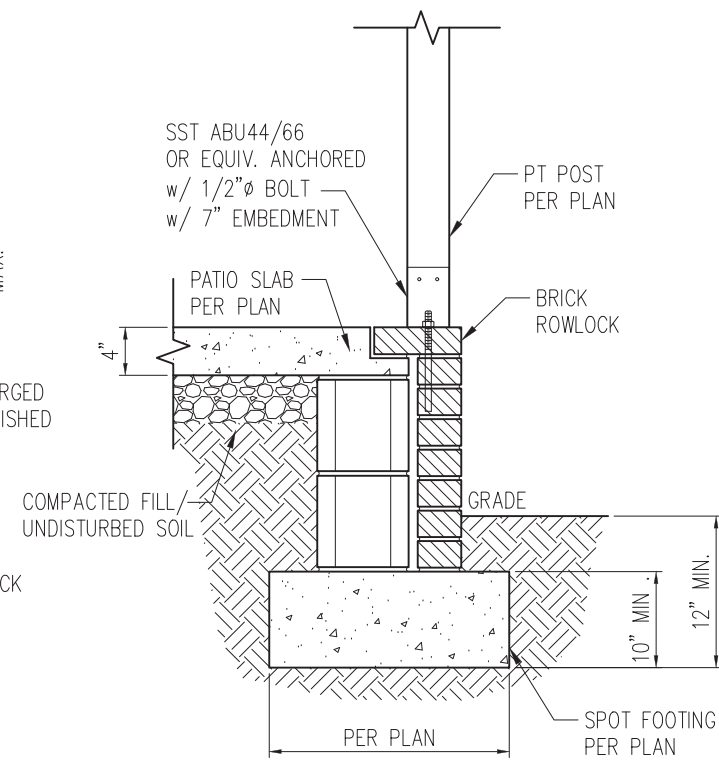
1 PORCH SLAB DETAIL
D3s 3/4" = 1'-0"



STANDARD - SIDING

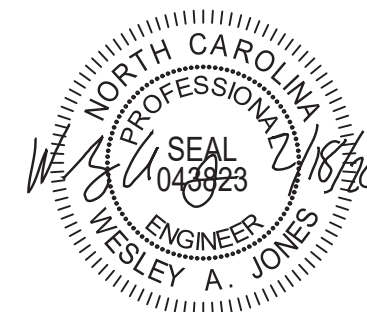


STANDARD - STONE



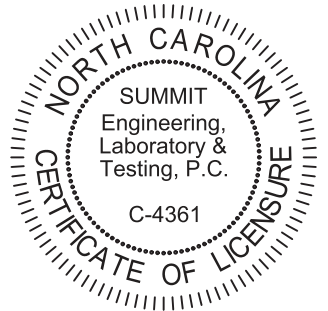
2 COVERED PORCH DETAIL
D3s 3/4" = 1'-0"

- NOTES:
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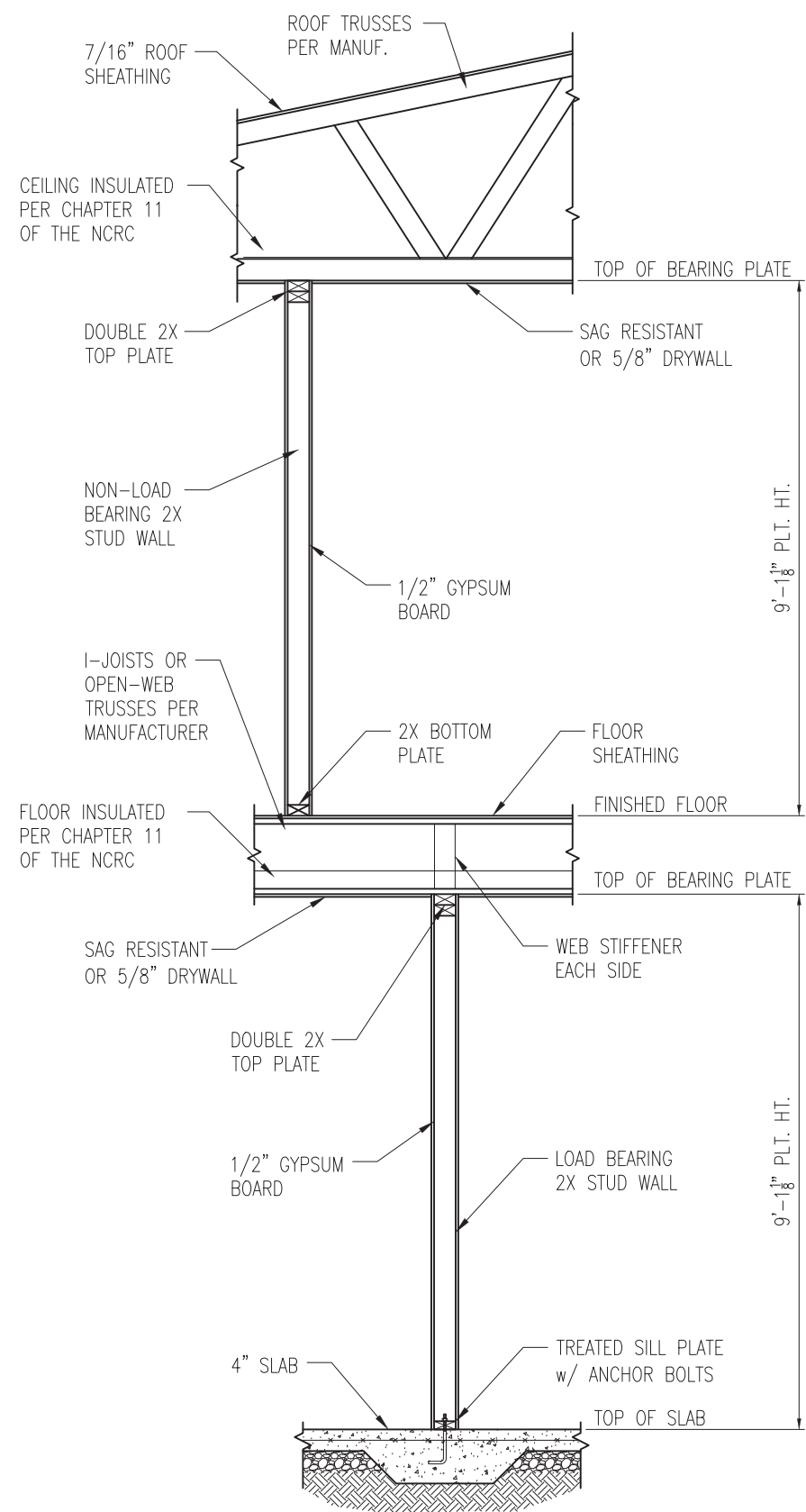
PROJECT
Standard Details
Stemwall Details
CLIENT
Smith Douglas Homes
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CURRENT DRAWING
DATE: 2/18/20
SCALE: NTS
PROJECT #: 3832
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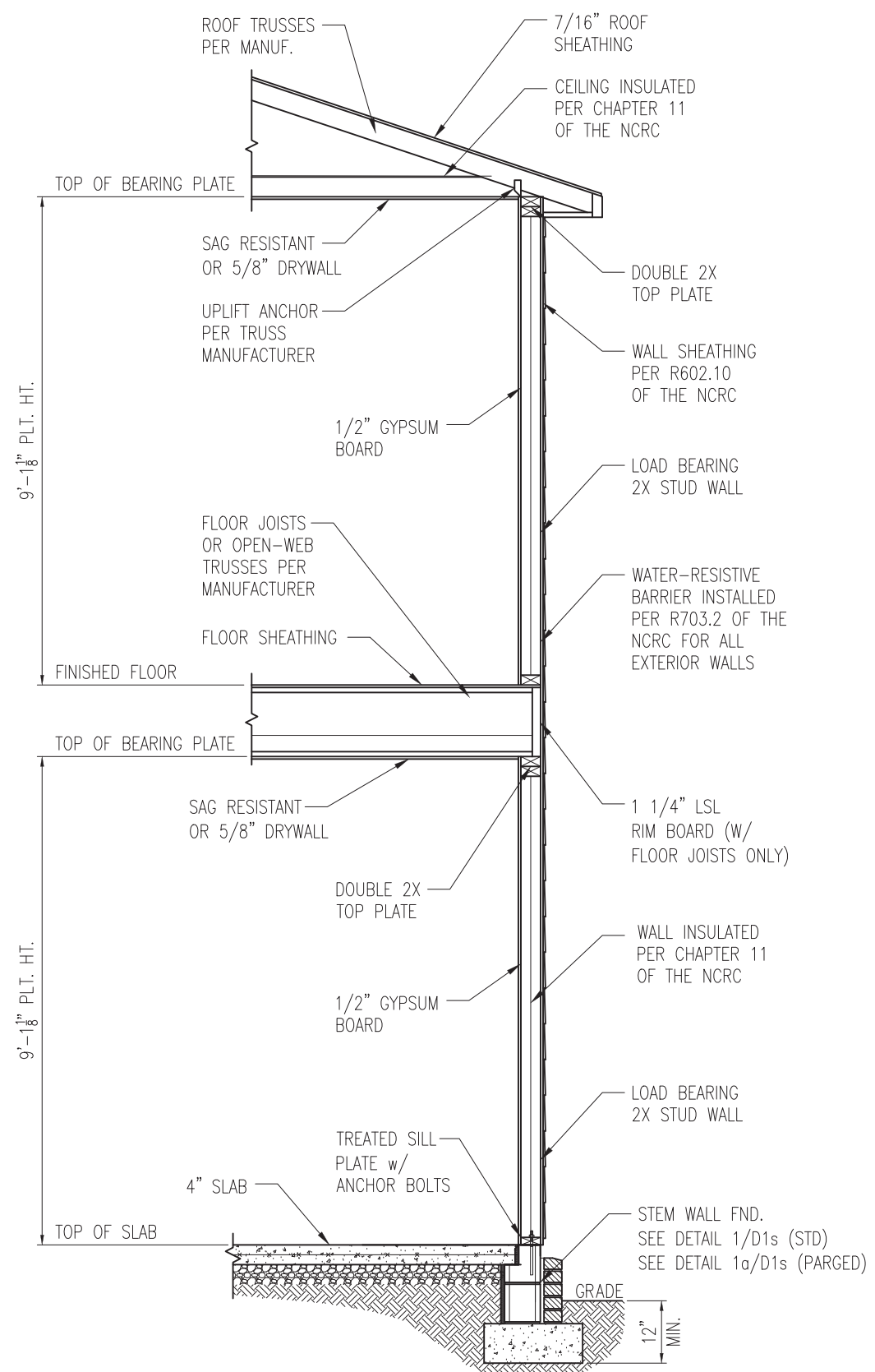
ORIGINAL DRAWING
NO. DATE PROJECT #
0 1/7/16 3832

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
D3s



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



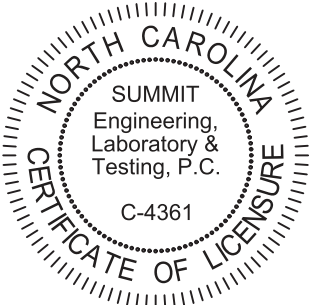
2 TYP. EXTERIOR LOAD BEARING WALL SECTION
 D4s 3/4" = 1'-0"
 -SIMILAR w/ BRICK AND STONE
 -BRICK TIES SPACED @ 16" O.C. HORIZ. & 24" O.C. VERT.
 -MIN. 3/16" WEEP HOLES @ 33" O.C.

- NOTES:
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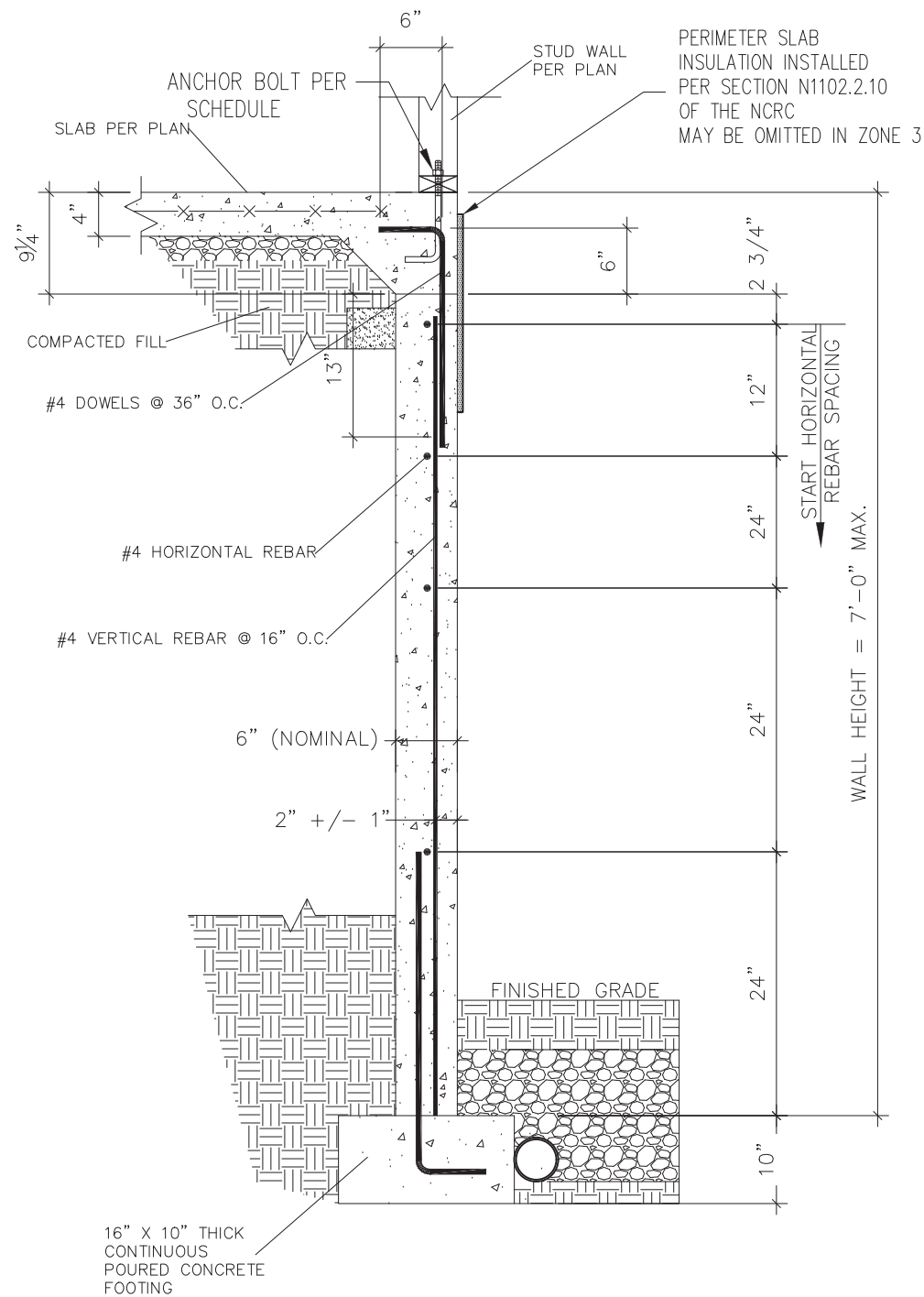
PROJECT
Standard Details
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Smith Douglas Homes
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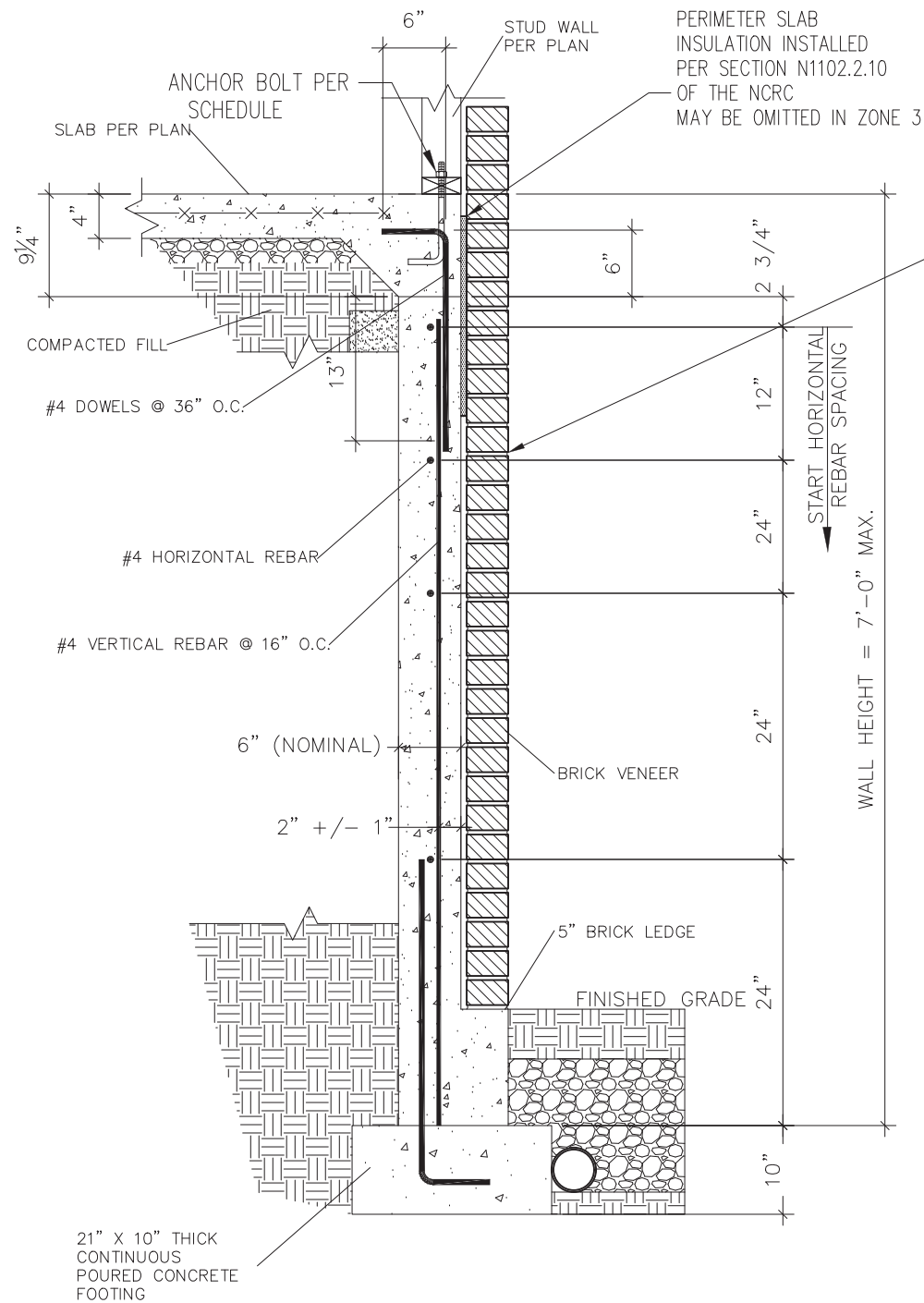
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REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
D4s



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



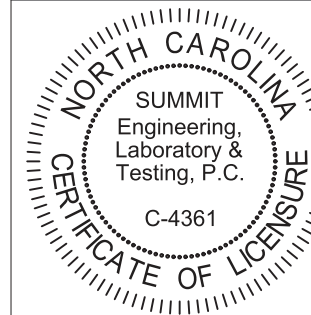
2 SUBWALL FOUNDATION W/ BRICK VENEER
 D5s 3/4" = 1'-0"

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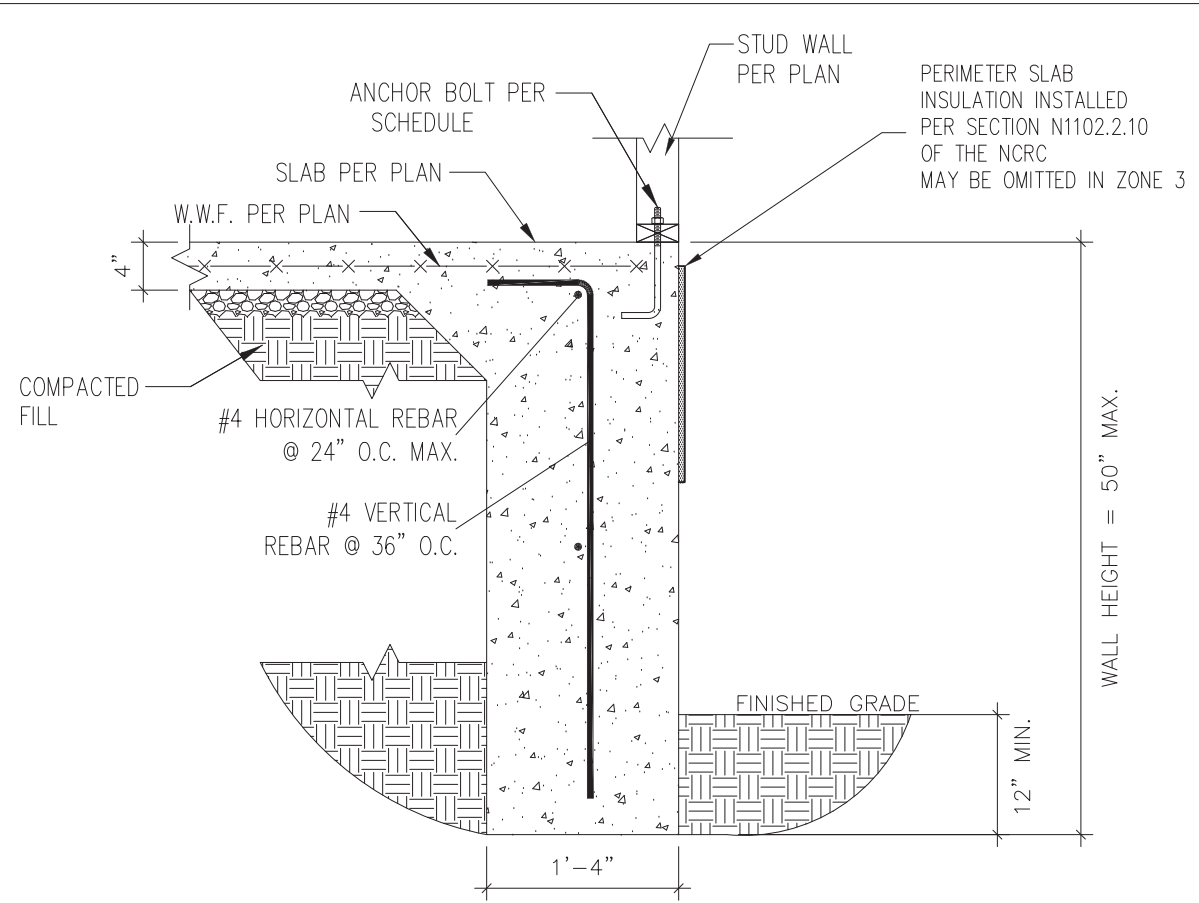
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ORIGINAL DRAWING
 NO. DATE PROJECT #
 0 1/7/16 3832

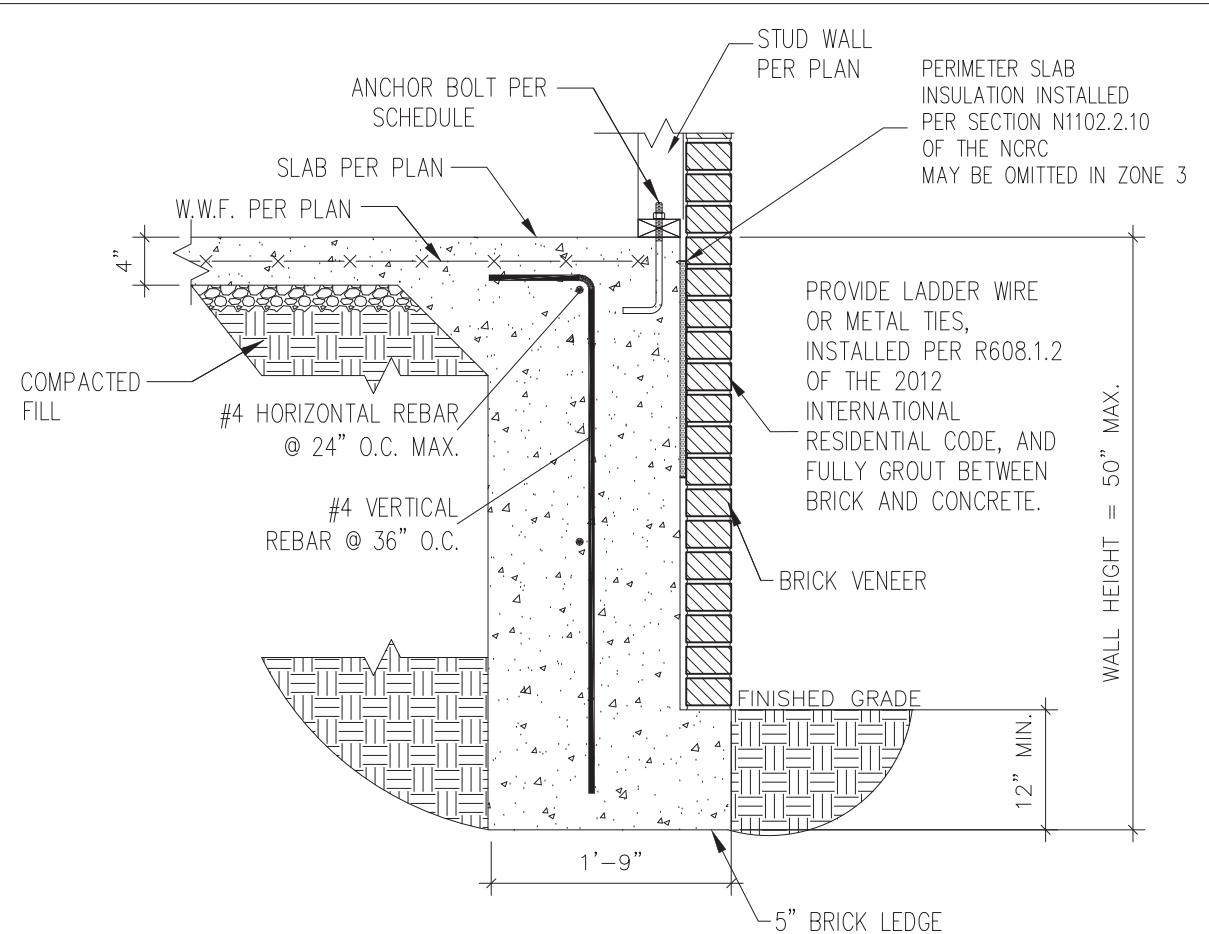
REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET

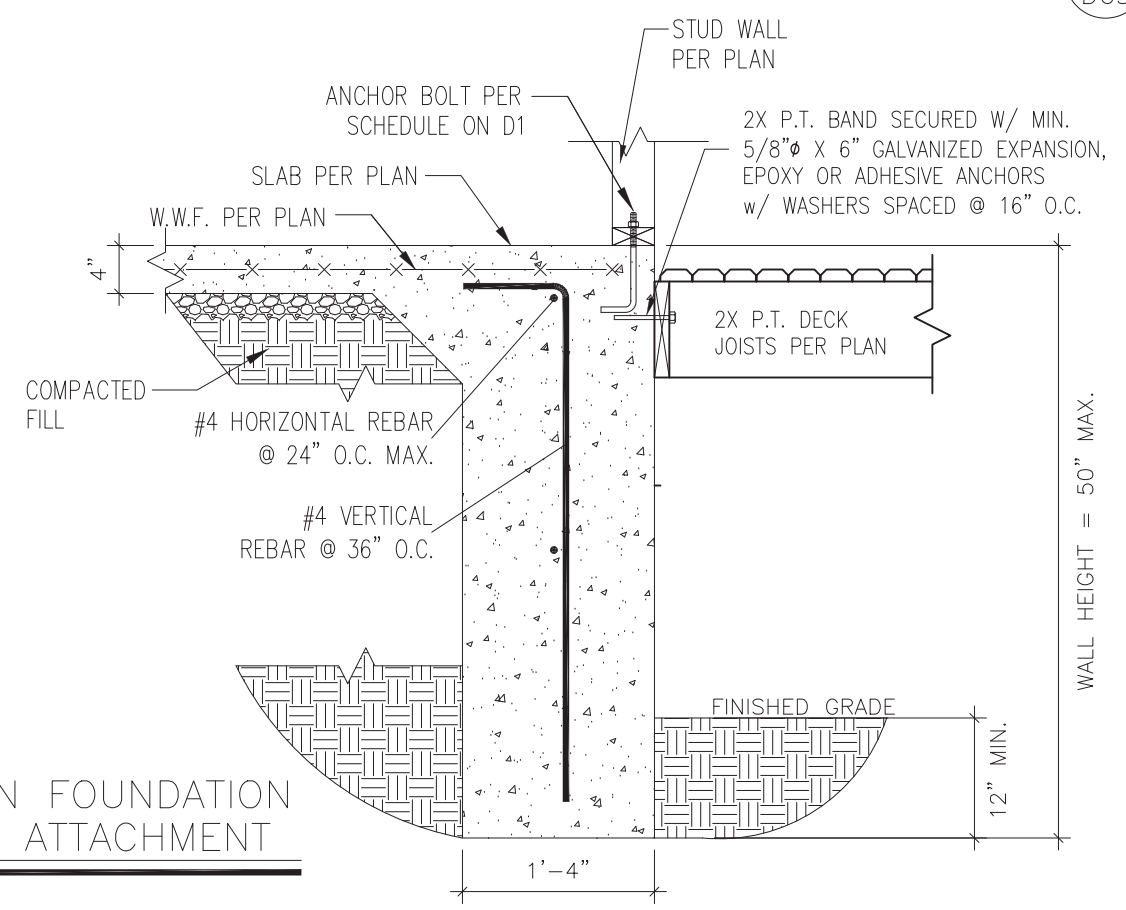
D5s



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



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

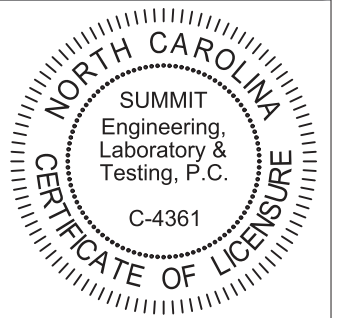


3 TURNDOWN FOUNDATION W/ DECK ATTACHMENT
 D6s 3/4" = 1'-0"



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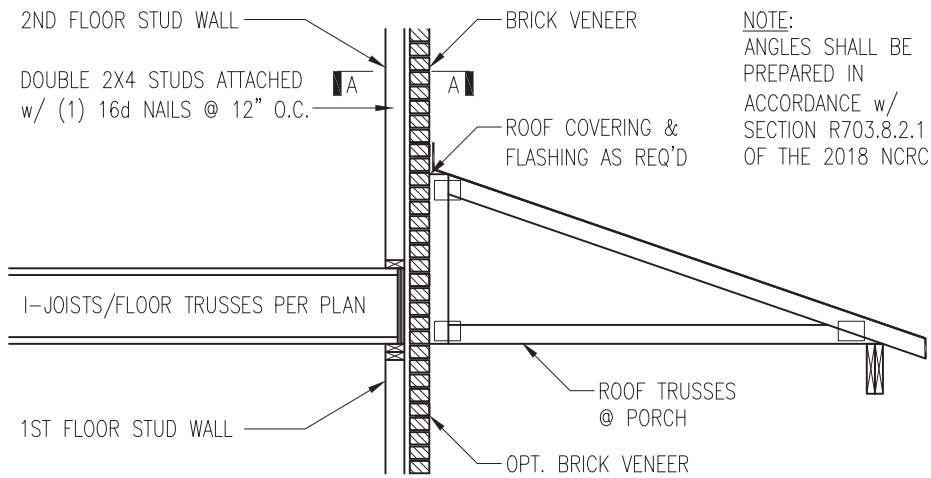
PROJECT
Standard Details
Stemwall Details
 CLIENT
Smith Douglas Homes
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 Woodstock, GA 30188

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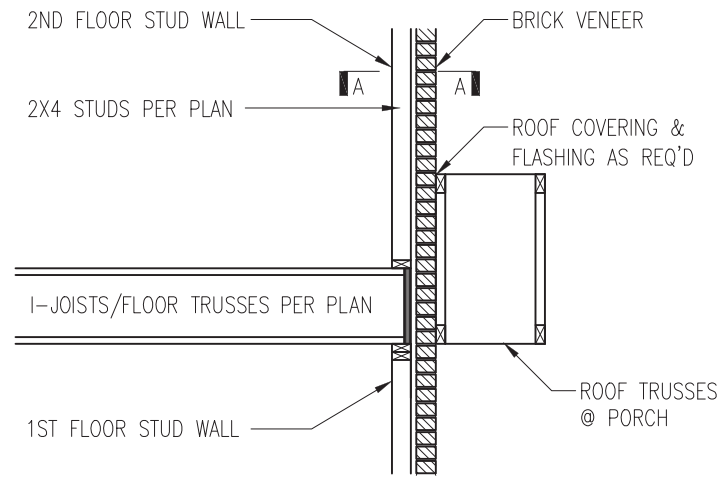
NO.	DATE	PROJECT #
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REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
D6s



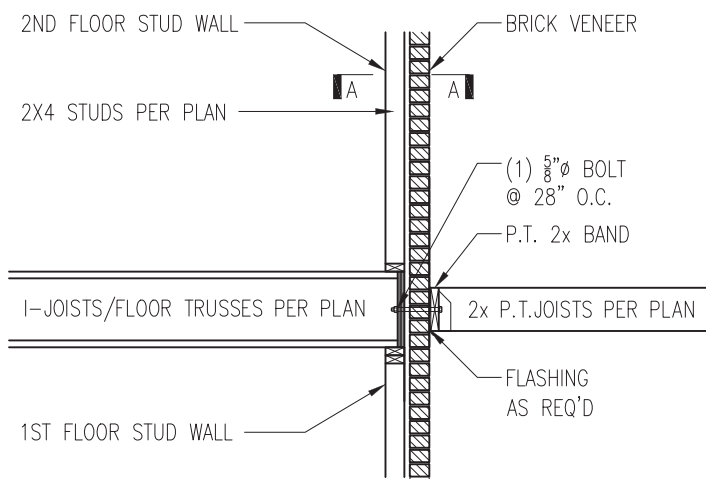
NOTE:
ANGLES SHALL BE PREPARED IN ACCORDANCE w/ SECTION R703.8.2.1 OF THE 2018 NCR



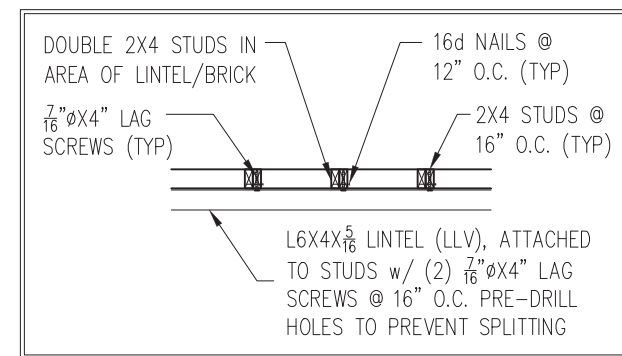
TRUSSES PERPENDICULAR TO STUD WALL

TRUSSES PARALLEL TO STUD WALL w/ CONTINUOUS BRICK VENEER

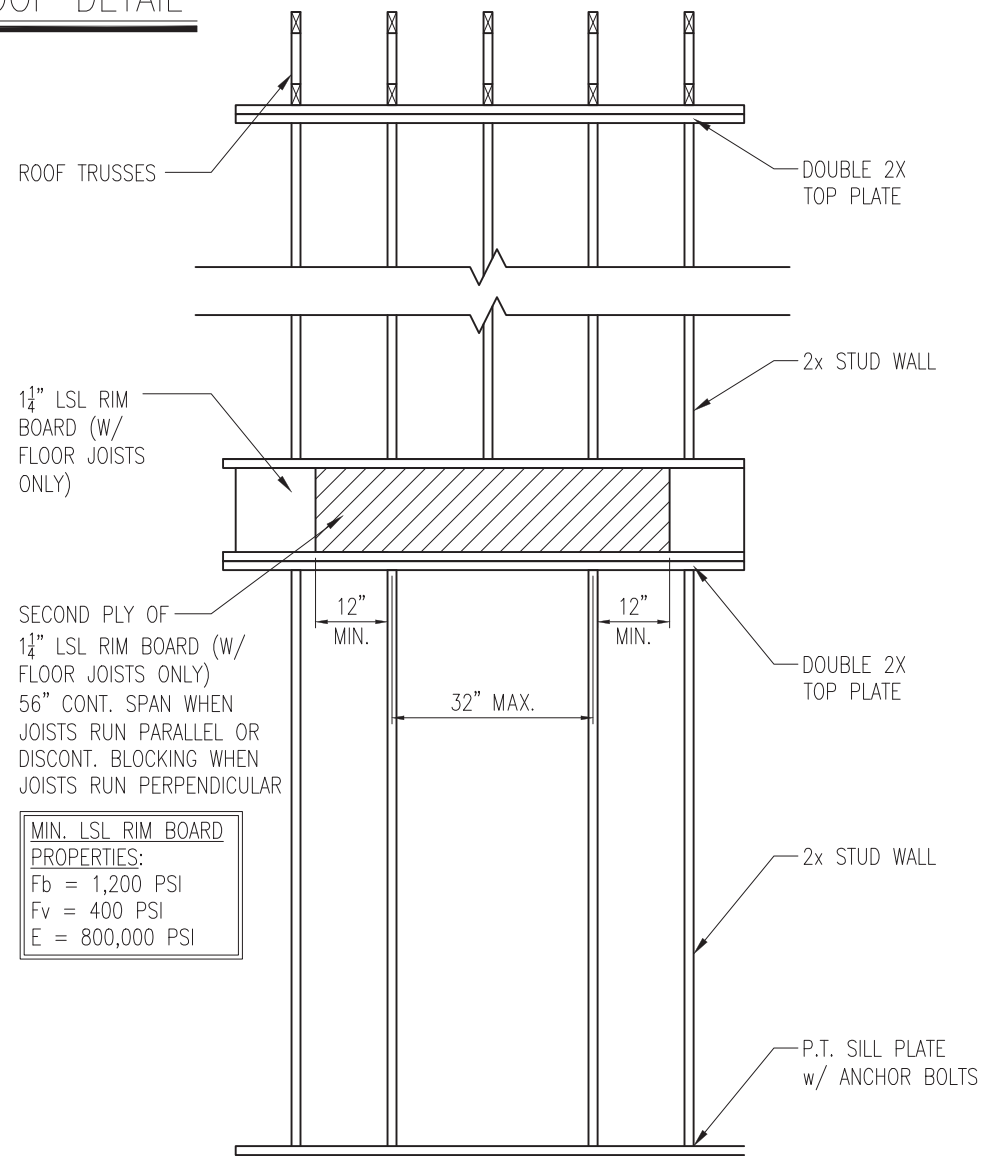
1 BRICK SUPPORT ABOVE STORAGE/PORCH ROOF DETAIL
D5f NTS



3 BALCONY JOIST ATTACHMENT
D5f NTS



SECTION A-A
NTS

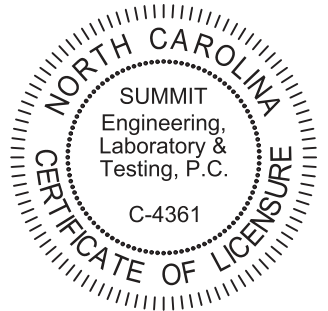


SECOND PLY OF 1 1/4\"/>

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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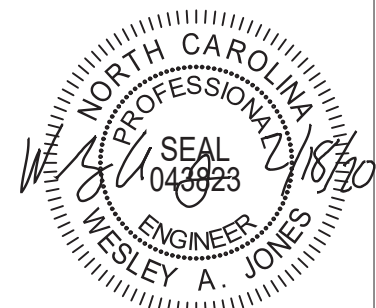


PROJECT
Standard Details
Framing Details
CLIENT
Smith Douglas Homes
110 Village Trail, Suite 215
Woodstock, GA 30188

CURRENT DRAWING
DATE: 2/18/20
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CHECKED BY: WAJ

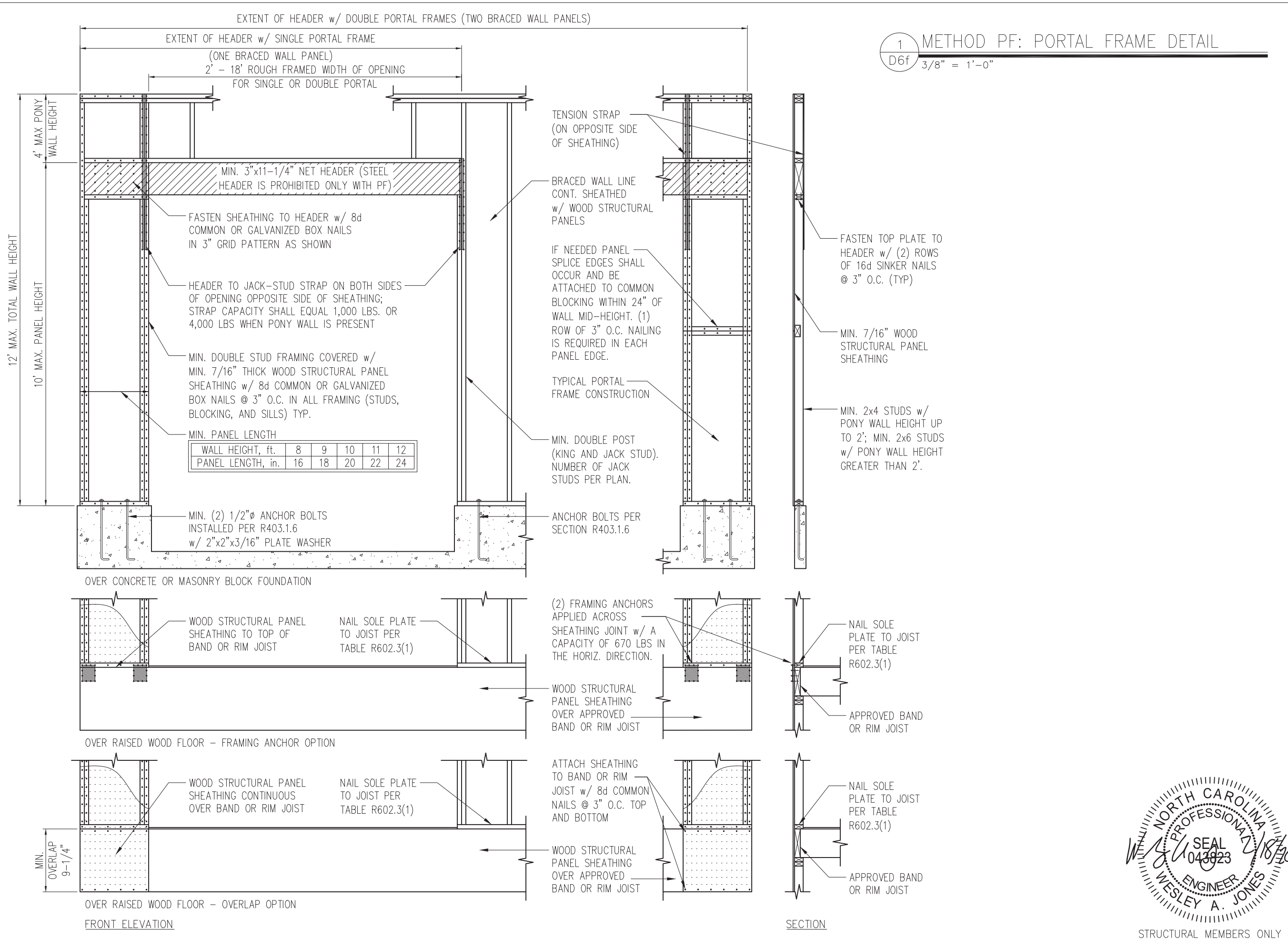
ORIGINAL DRAWING
NO. DATE PROJECT #
0 1/7/16 3832

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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

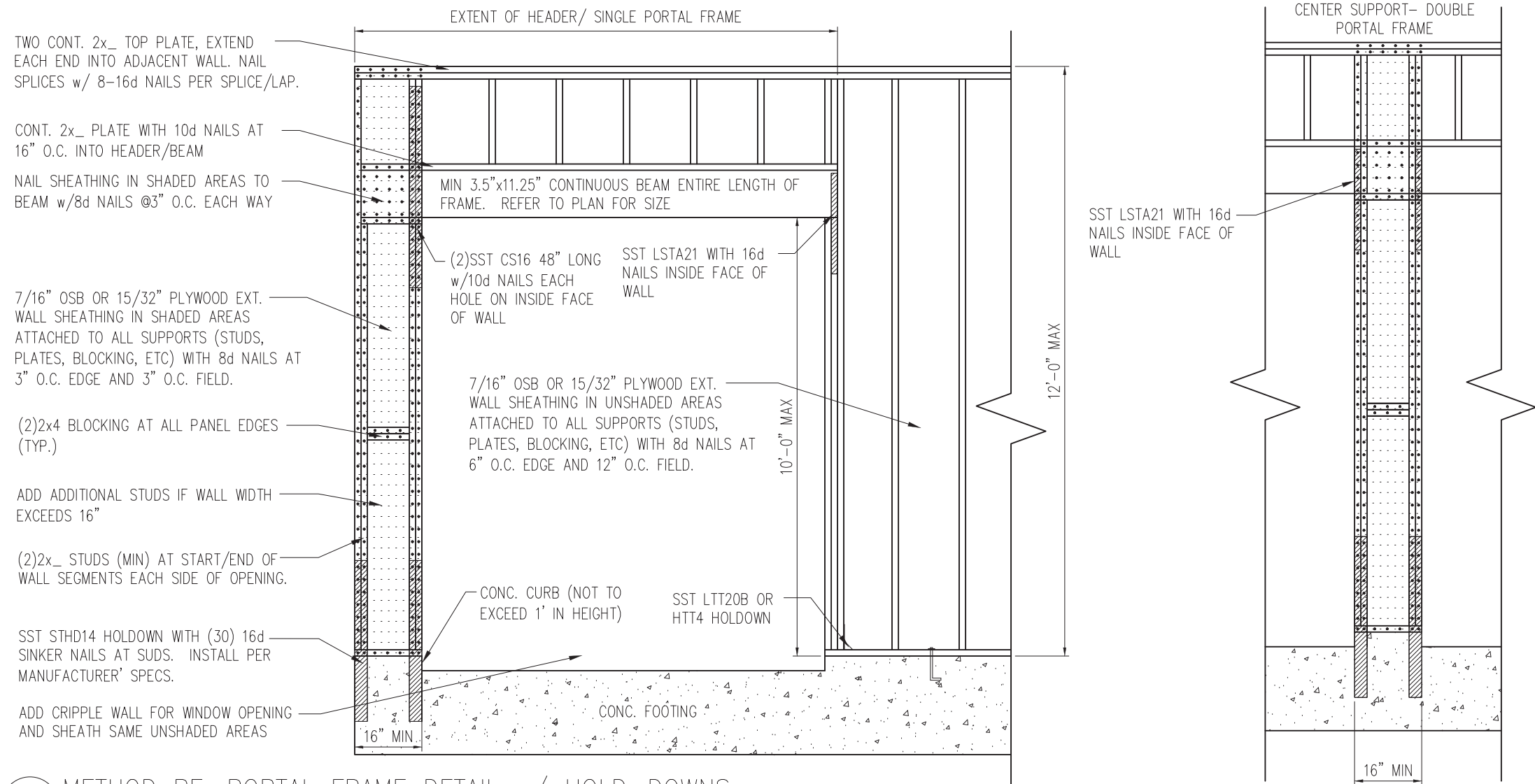
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ORIGINAL DRAWING
NO. DATE PROJECT #
0 1/7/16 3832

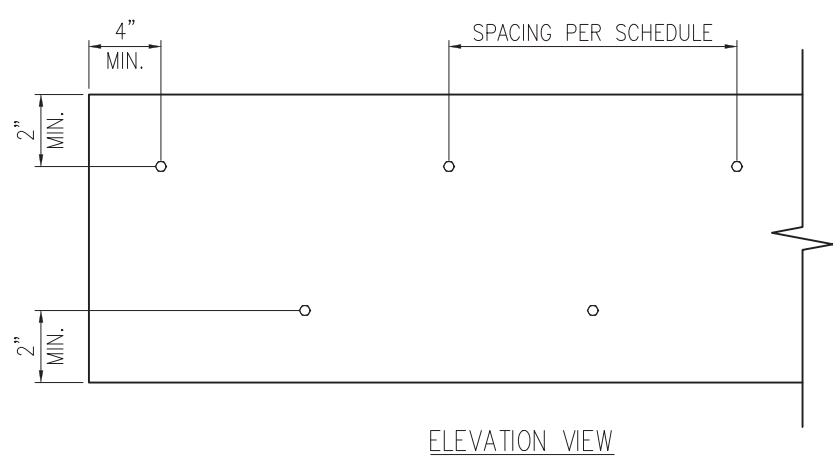
REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

NORTH CAROLINA
PROFESSIONAL
SEAL
043823
ENGINEER
WESLEY A. JONES

SHEET
D6f
STRUCTURAL MEMBERS ONLY



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



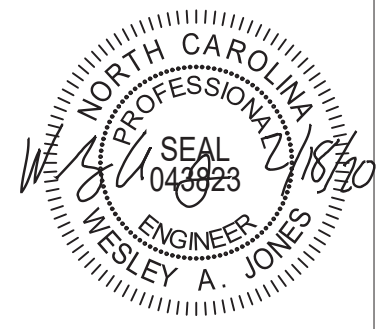
2 MULTI-PLY BEAM CONNECTION DETAIL
 D7f N.T.S

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.		-

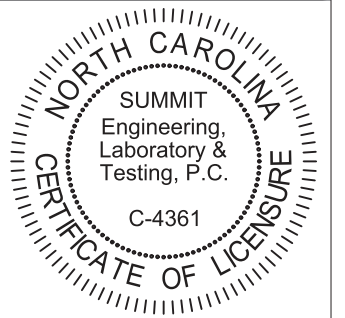
NOTES:

- 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:
 - (1) if staggering or offsetting is not referenced, then none is required;
 - (2) if staggering is referenced, then fasteners installed in adjacent rows on the front side are to be staggered up to one-half the o.c. spacing, but maintaining the fastener clearances above; and
 - (3) if "ES" is referenced, then the fastener schedule must be repeated on each side, with the fasteners on the back side offset up to one-half the o.c. spacing of the front side (whether or not it is staggered).



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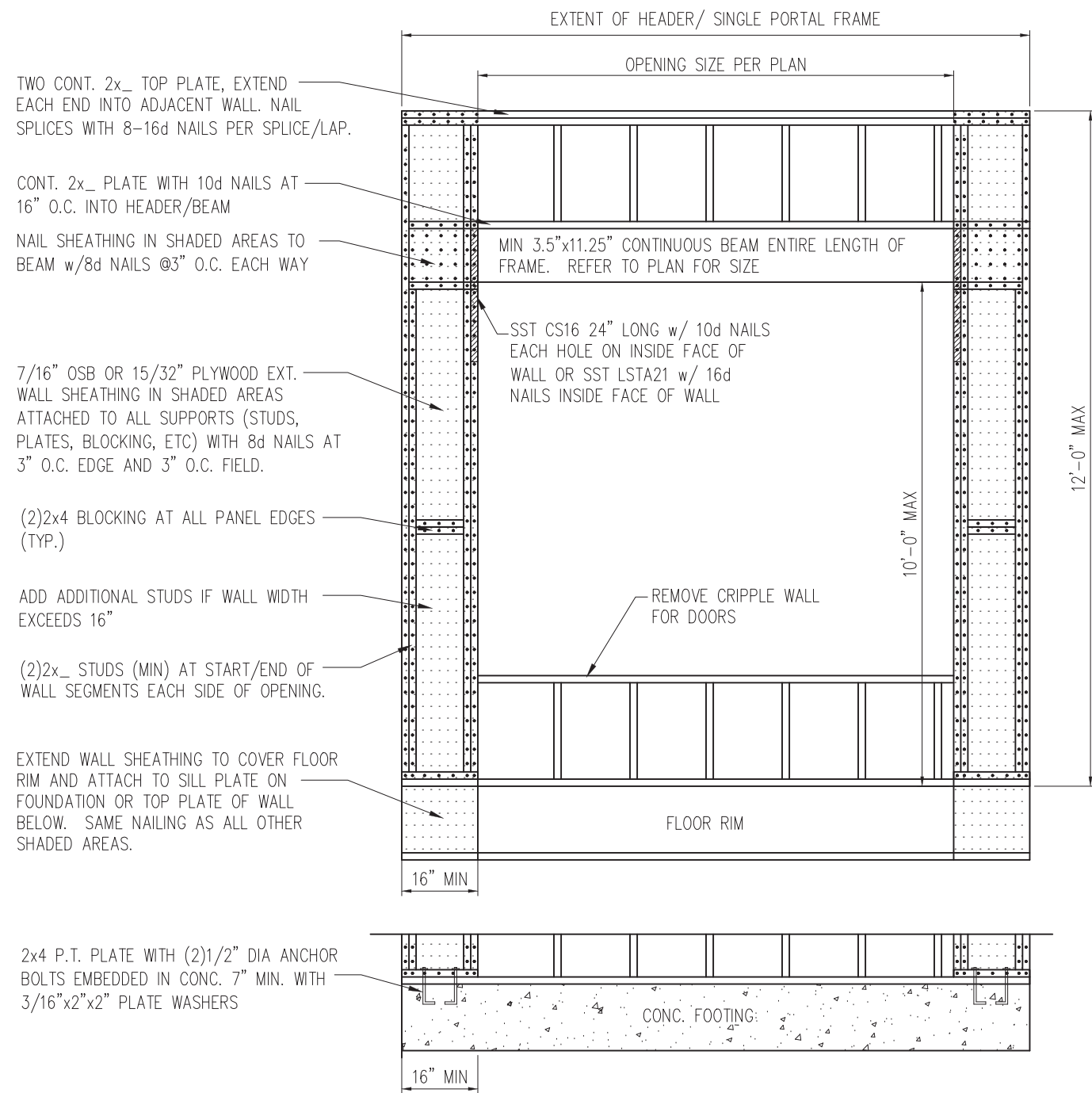


PROJECT
 Standard Details
 Framing Details - Bracing
 CLIENT
 Smith Douglas Homes
 110 Village Trail, Suite 215
 Woodstock, GA 30188

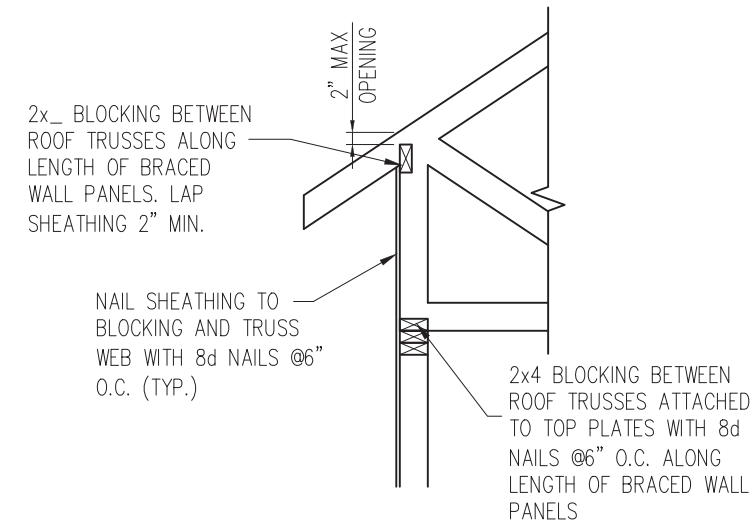
CURRENT DRAWING
 DATE: 2/18/20
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 NO. DATE PROJECT #
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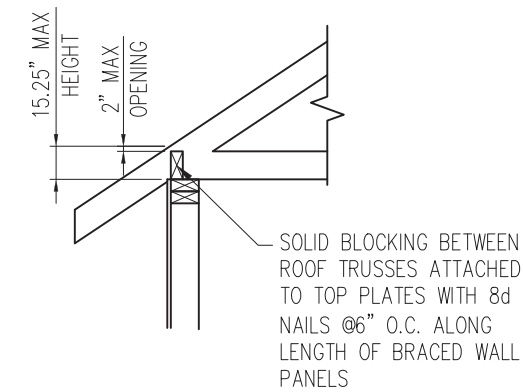
SHEET
D7f



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



HEEL HEIGHT GREATER THAN 15.25"



HEEL HEIGHT LESS THAN 15.25" *

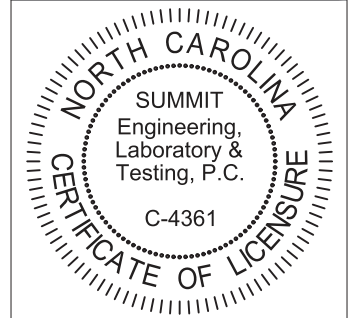
*BLOCKING IS NOT REQUIRED WITH HEEL HEIGHTS LESS THAN 9.25"

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



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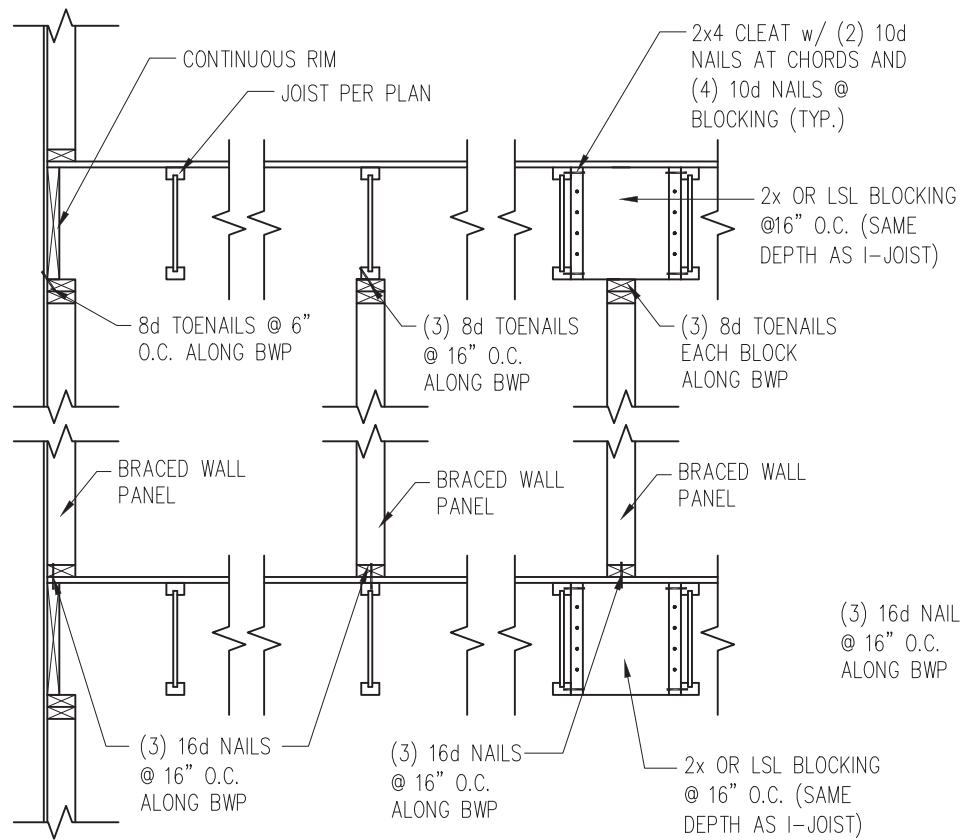
PROJECT
Standard Details - Bracing
Framing Details - Bracing
 CLIENT
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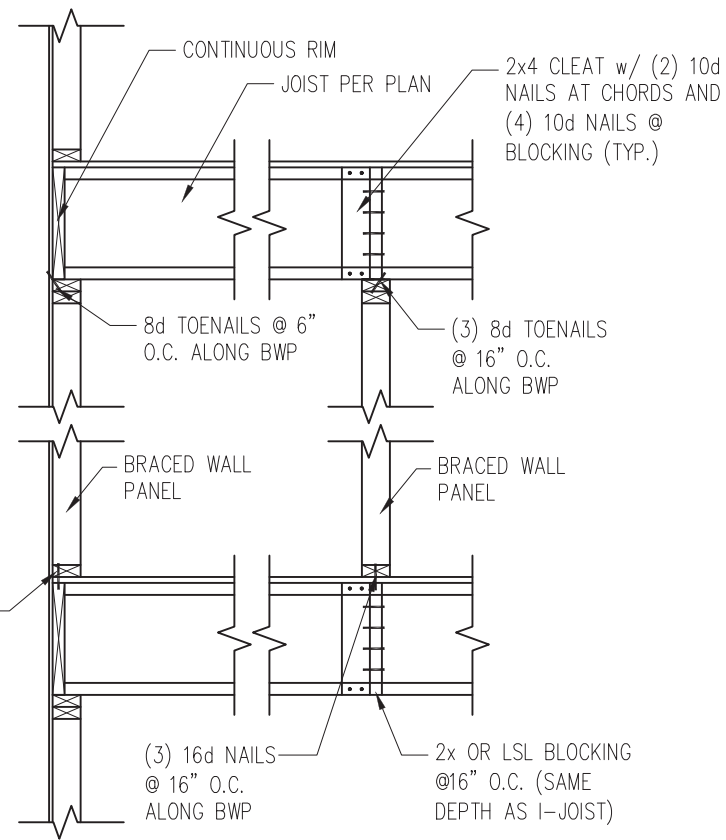
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SHEET
D8f

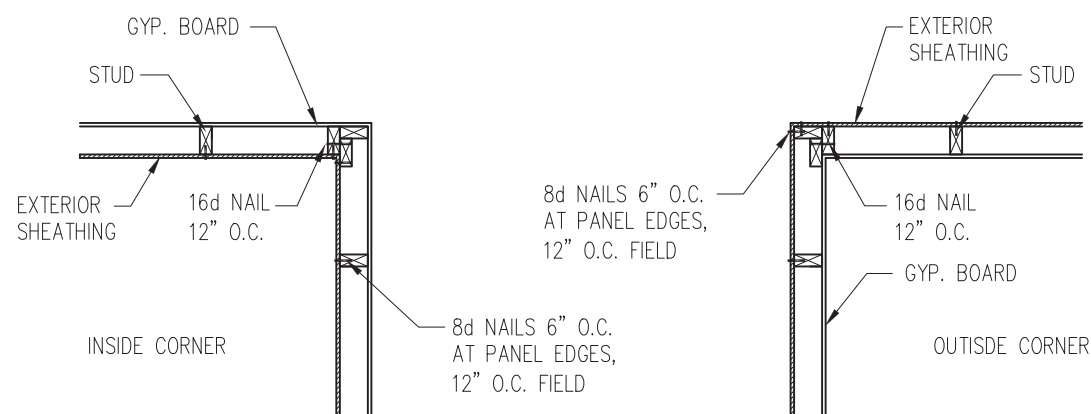


JOISTS PARALLEL TO BRACED WALLS

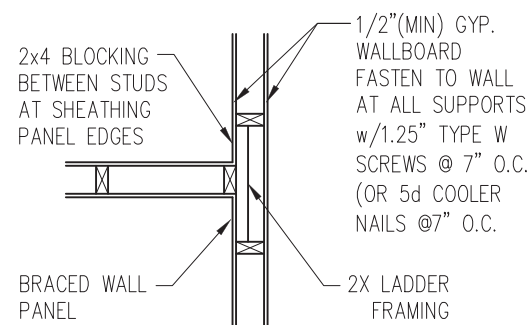


JOISTS PERPENDICULAR TO BRACED WALLS

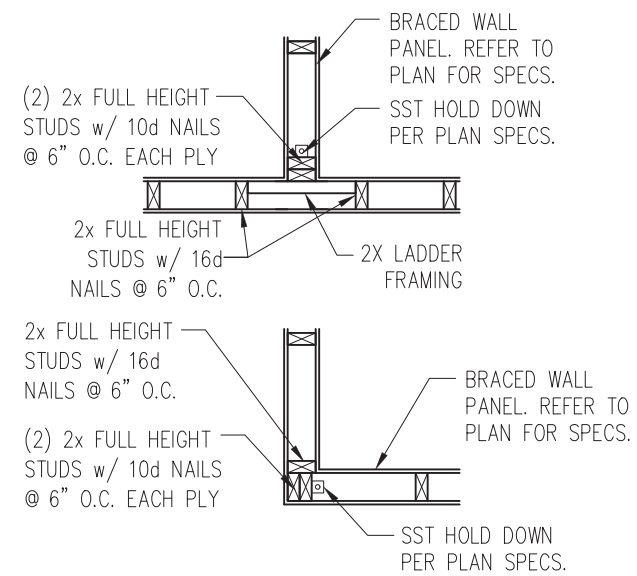
1 TYP. WALL PANEL TO FLOOR/CEILING CONNECTION
D9f 1" = 1'-0"



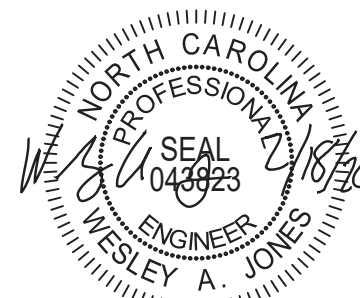
2 TYP. EXTERIOR CORNER FRAMING
D9f 1" = 1'-0"



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

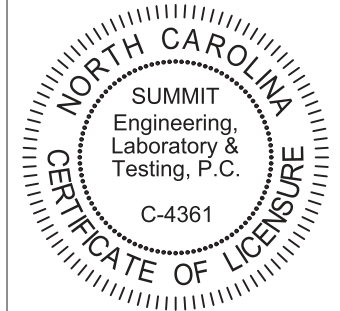


4 TYP. HOLD DOWN DETAIL
D9f 1" = 1'-0"



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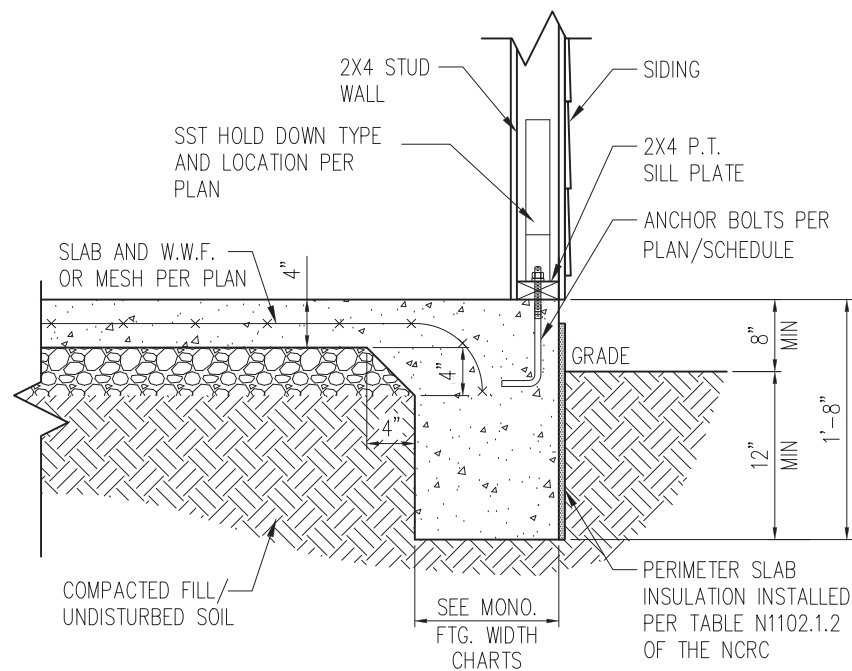
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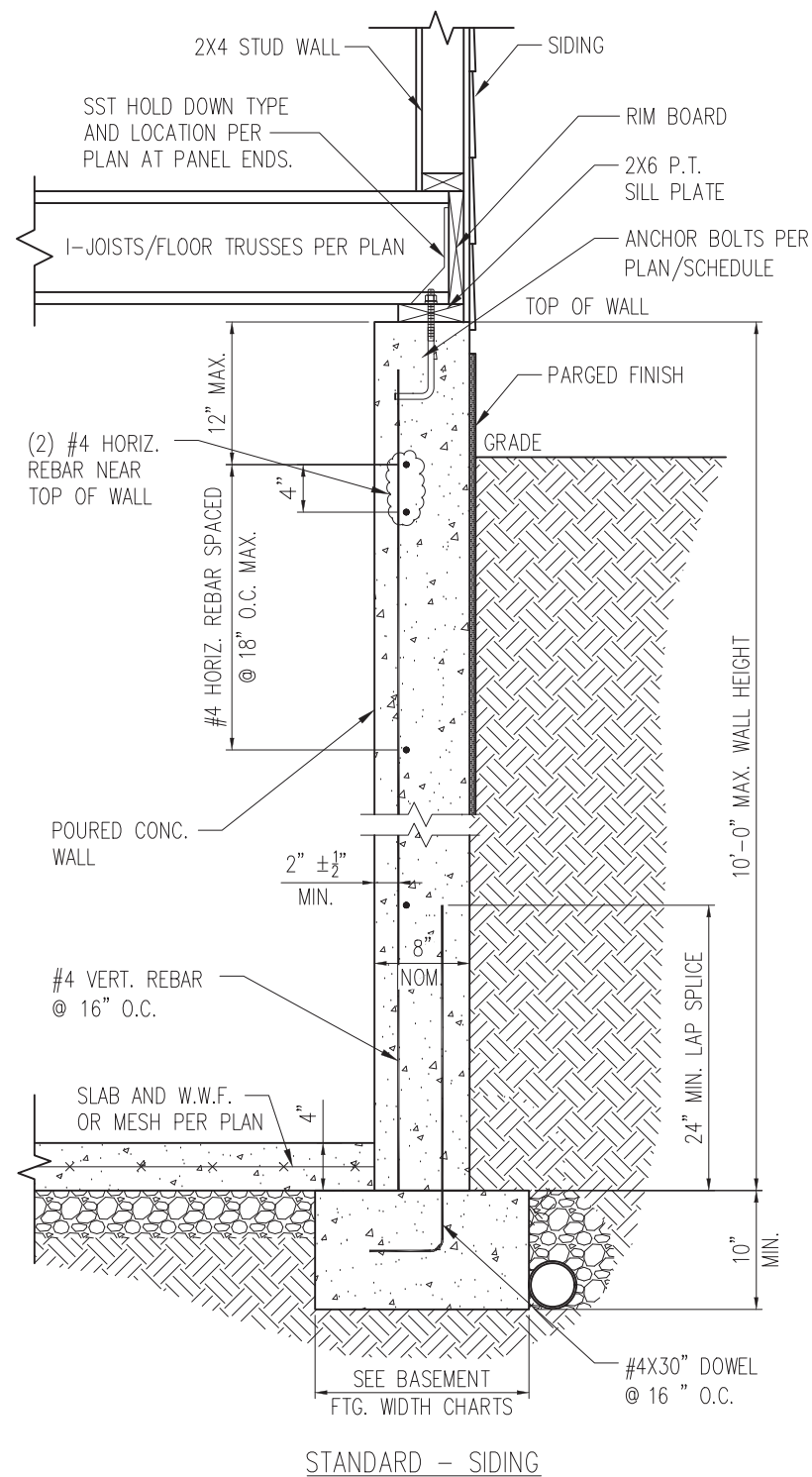
REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET

D9f



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

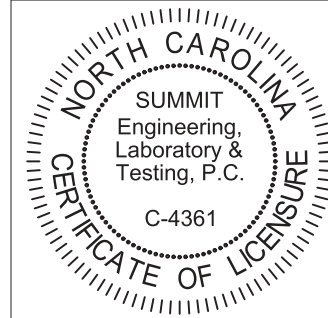


2 BASEMENT FOUNDATION WALL DETAIL W/ HOLD-DOWN
 D10f 3/4" = 1'-0"



STRUCTURAL MEMBERS ONLY

SUMMIT
 ENGINEERING LABORATORY TESTING
 3070 HAMMOND BUSINESS PLACE,
 SUITE 171, RALEIGH, NC 27603
 OFFICE: 919.380.9991
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PROJECT
Standard Details
Framing Details - Bracing
 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

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

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
D10f