

[illegible]

SECTION SHEET

DETAIL MARK

TITLE SCALE

TITLE MARK

INTERIOR BEARING WALL

EARTH

INSULATION

STANDARD WALL

DESIGN LOADS

ROOF LOADS: 20 PSF LIVE, 20 PSF DEAD

ATTIC LOADS: 20 PSF LIVE, WHERE INDICATED (SEE TRUSS DWGS)

FIRST FLOOR: 40 PSF LIVE, 10 PSF DEAD

UPPER FLOORS: 30 PSF LIVE, 15 PSF DEAD

WIND LOAD: FOR ASCE 7-10, RISK CATEGORY II, EXPOSURE 'B', 120 mph

ALL GARAGE PORTAL WALLS TO BE FRAMED WITH 2x6 STUDS

ENERGY COMPLIANCE (CHAPTER ELEVEN)

CLIMATE ZONE: 4A HARNETT COUNTY

CHAPTER 11 ENERGY EFFICIENCY COMPLIANCE (CHECK ONE)

☒ PRESCRIPTIVE CODE

☐ PERFORMANCE

CEILING INSULATION: R39


WALL INSULATION: R15 FOR ZONE 3 / R19 FOR ZONE 4

FLOOR INSULATION: R19 FOR CRAWL SPACE / R10 FOR SLAB

FRONT ELEVATION "C"

1/2" = 1'-0"


CONSTRUCTION SET 5-7-2025




**Caviness
& Cates
Communities**

© 2020 Caviness & Cates

639 Executive Place
Suite 400
Fayetteville, NC 28305
Office: 910-481-0503
Sales: 910-240-4210
Fax: 910-481-0585



AMERICAN INSTITUTE OF BUILDING
TRADITIONS



NATIONAL COUNCIL OF
FORTIFIED-WISE™
PROFESSIONAL

TODD TUCKER 34 - 156
FORTIFIED-WISE™
PROFESSIONAL
910-824-1474

PLAN NAME/NUMBER:

CC 1850

PLAN NO:
CC 1850

DATE:
MAY 2020

REVISIONS:	

SHEET NO.:

1

LOT DL26

SHEET TITLE:

ELEVATION / SUMMARY

CONSTRUCTION SET 5-7-2025

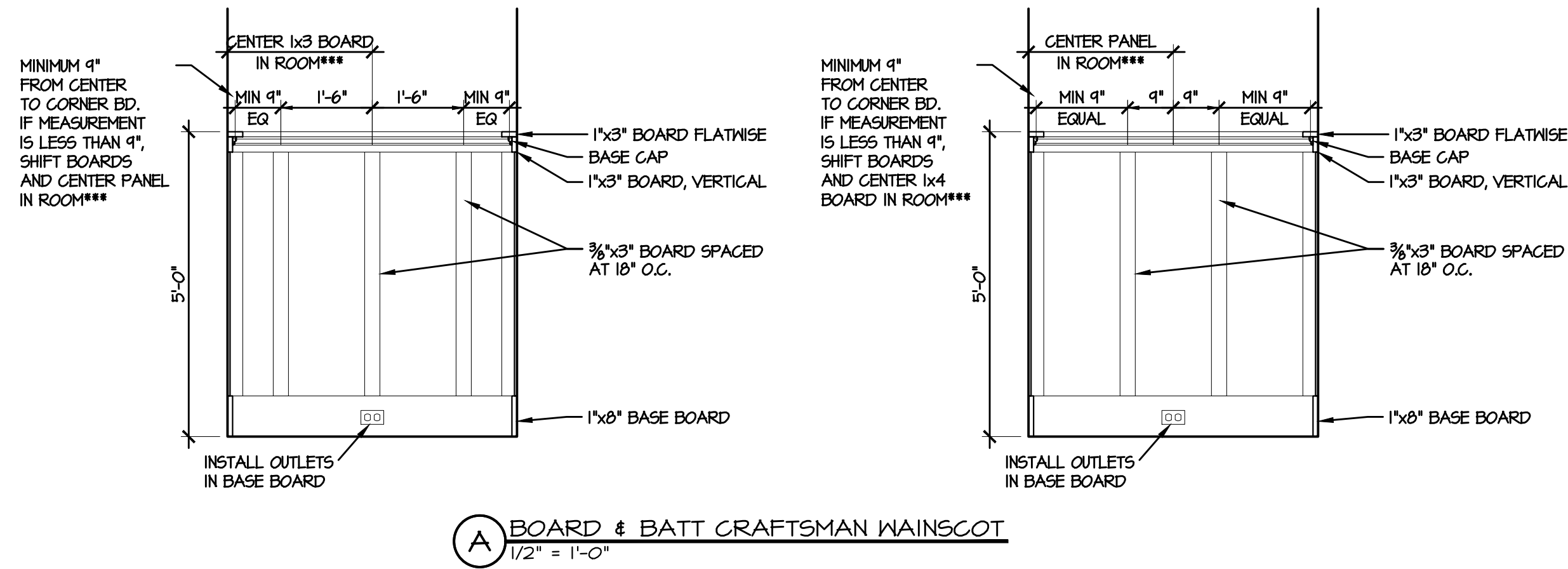
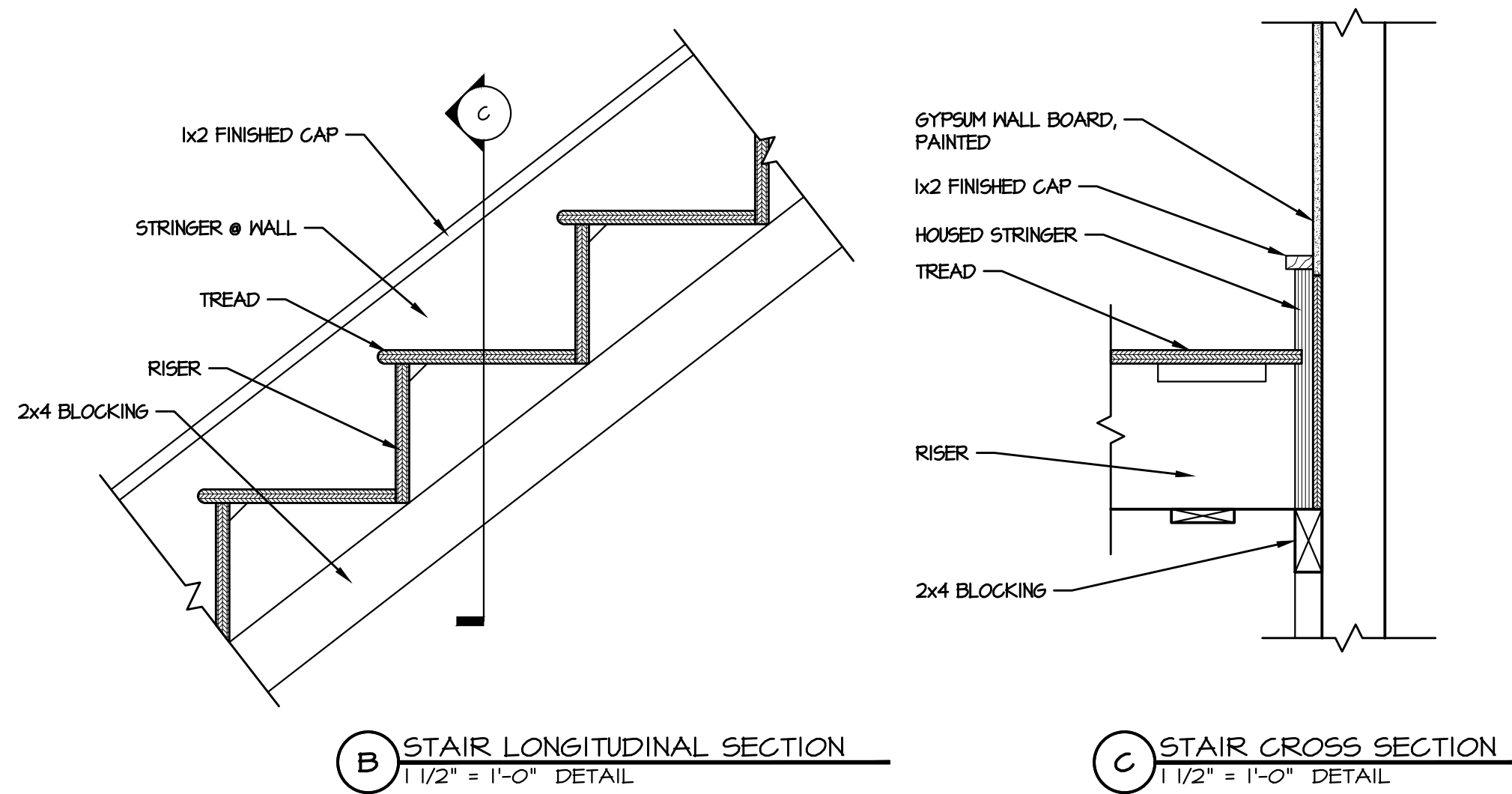
[illegible]

CC 1850
CAVINESS & CATES

DATE: JANUARY 20, 2022
SCALE: 1/4" = 1'-0"
DRAWN BY: TT
ENGINEERED BY: JAG

*NOTE: ALL EXTERIOR WALLS AND ATTIC WALLS ARE TO BE 2 x 4 @ 16" O.C. MIN. (UNO). 2 x 6 @ 24" O.C. EXTERIOR WALLS MAY BE CONSTRUCTED IN LIEU OF 2 x 4 WALLS (UNO). ALL INTERIOR LOAD BEARING WALLS ARE TO BE 2 x 4 @ 16" O.C. (UNO) AND NON-LOAD BEARING INTERIOR WALLS ARE TO BE 2 x 4 @ 24" O.C. (UNO).

D:\CAVINESS AND CATES\Caviness and Cates\CC 1850 254\LOT SPECIFIC PLANS\CC 1850\DUCKS LANDING 2x6\DL26 C GL\DL26 CC1850C 2x6 GL CONSTRUCTION SET 5-7-25.dwg, 5/9/2025 8:11:06 AM, 1:1

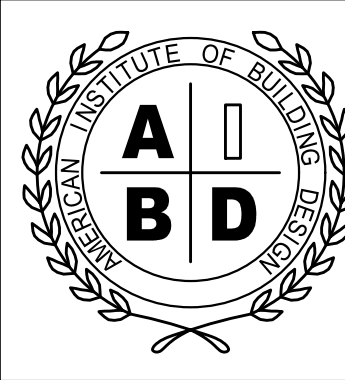


FIELD NOTES

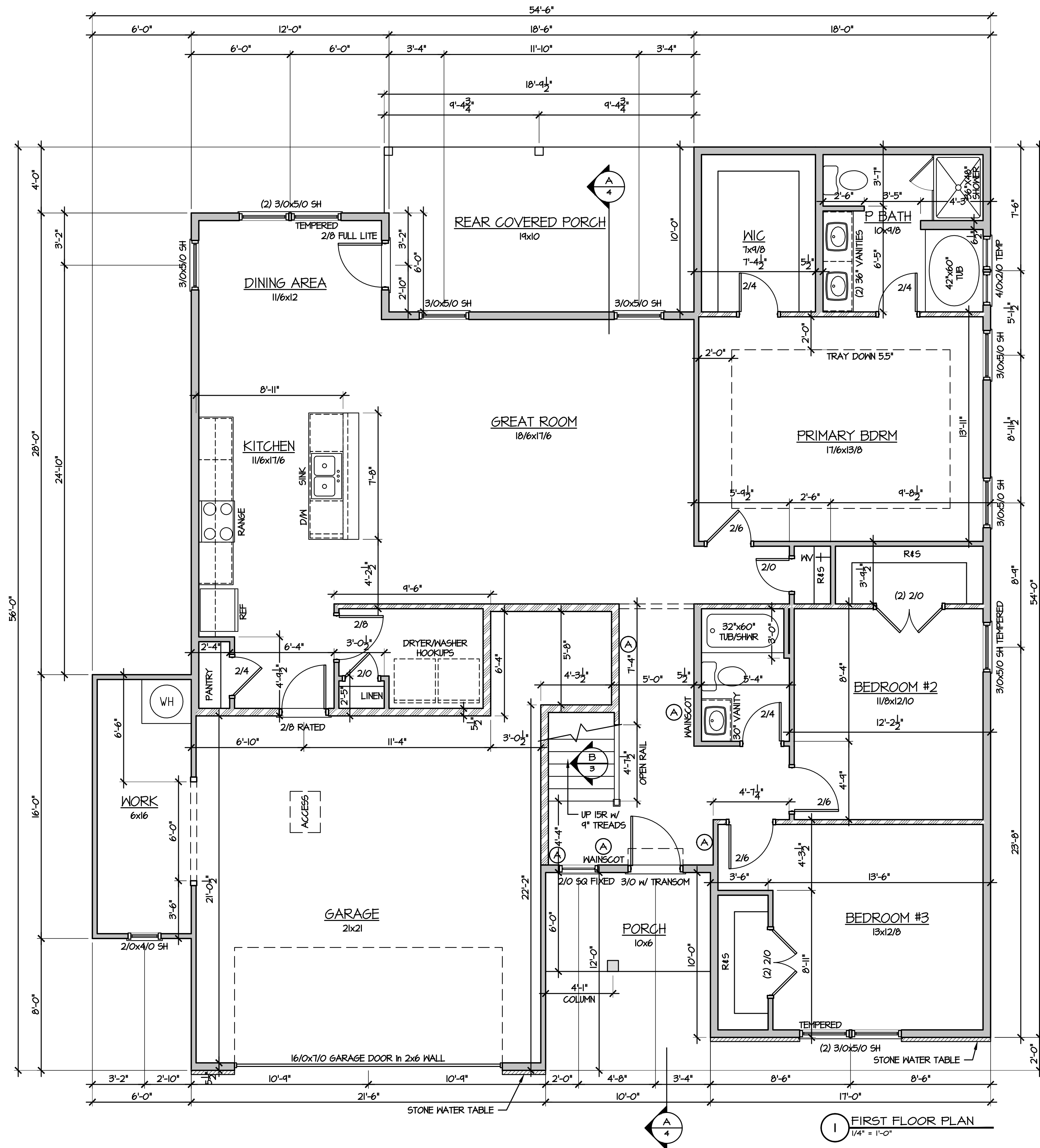
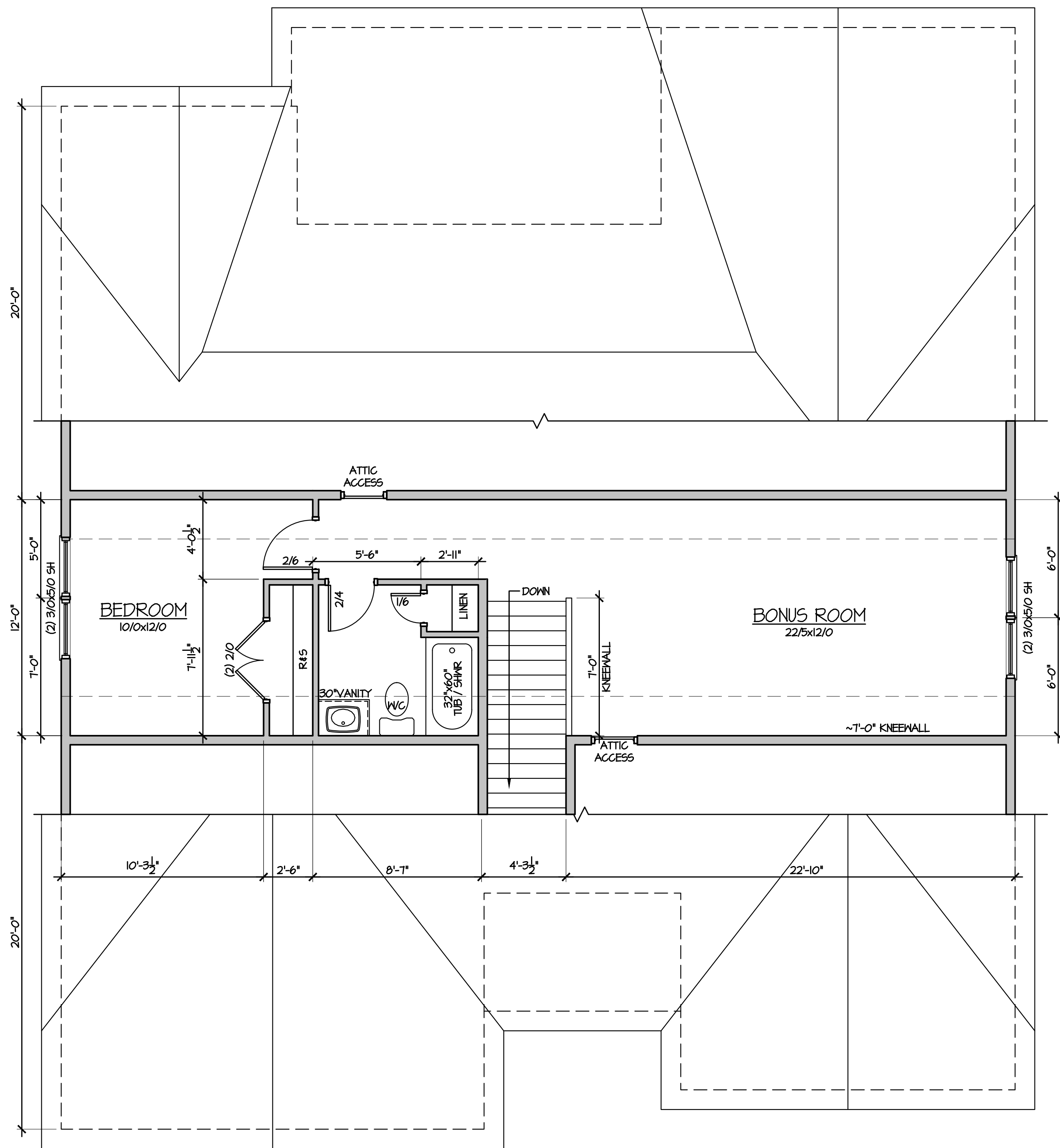


© 2020 Caviness & Cates

639 Executive Place
Suite 400
Fayetteville, NC 28305
Office: 910-481-0503
Sales: 910-240-4210
Fax: 910-481-0585



NATIONAL COUNCIL OF
EXAMINERS
TODD TUCKER 34 - 156
FORTIFIED-WISE™
PROFESSIONAL
910-824-1474



CC 1850
FLOOR PLANS

PLAN NAME/NUMBER:
SHEET TITLE:

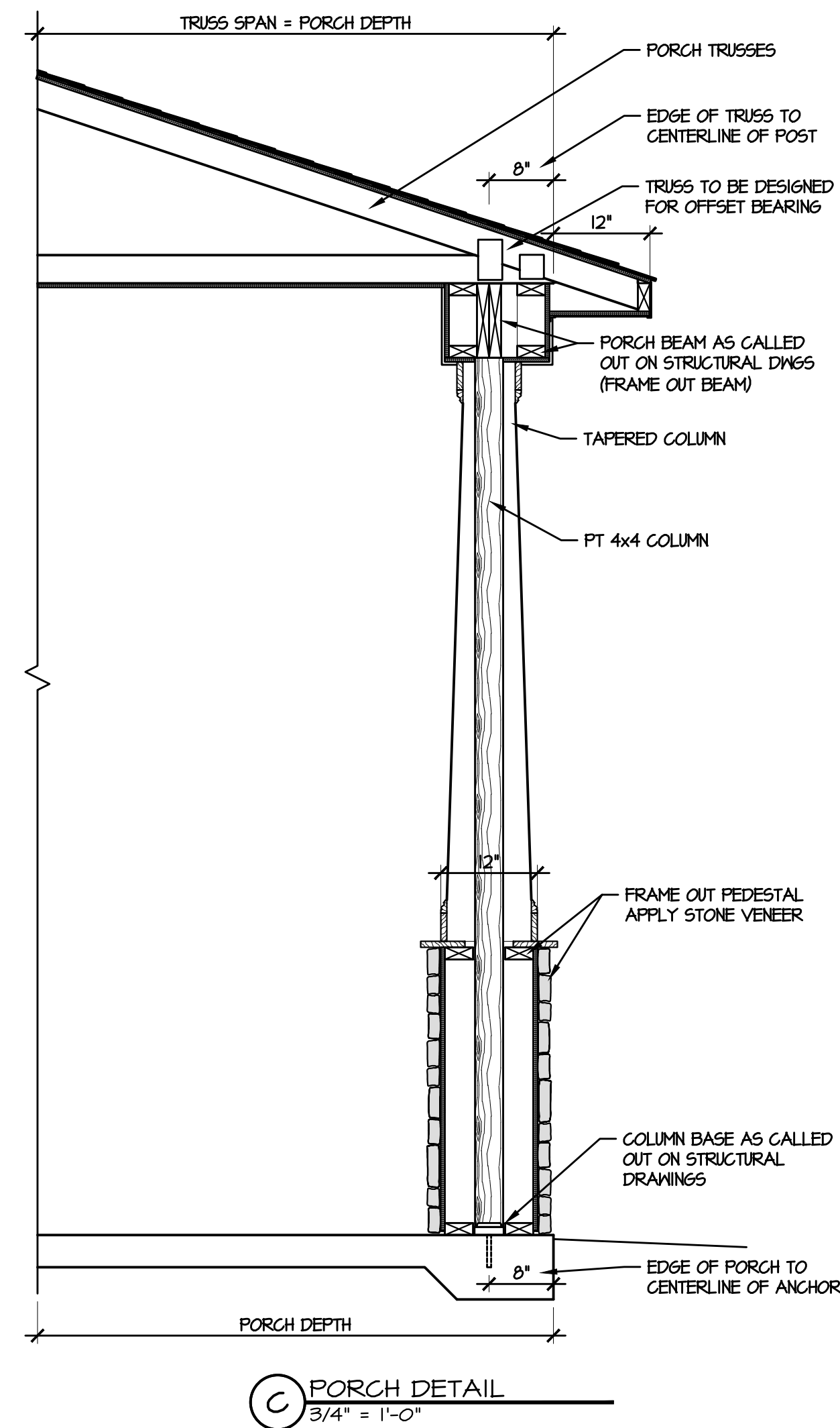
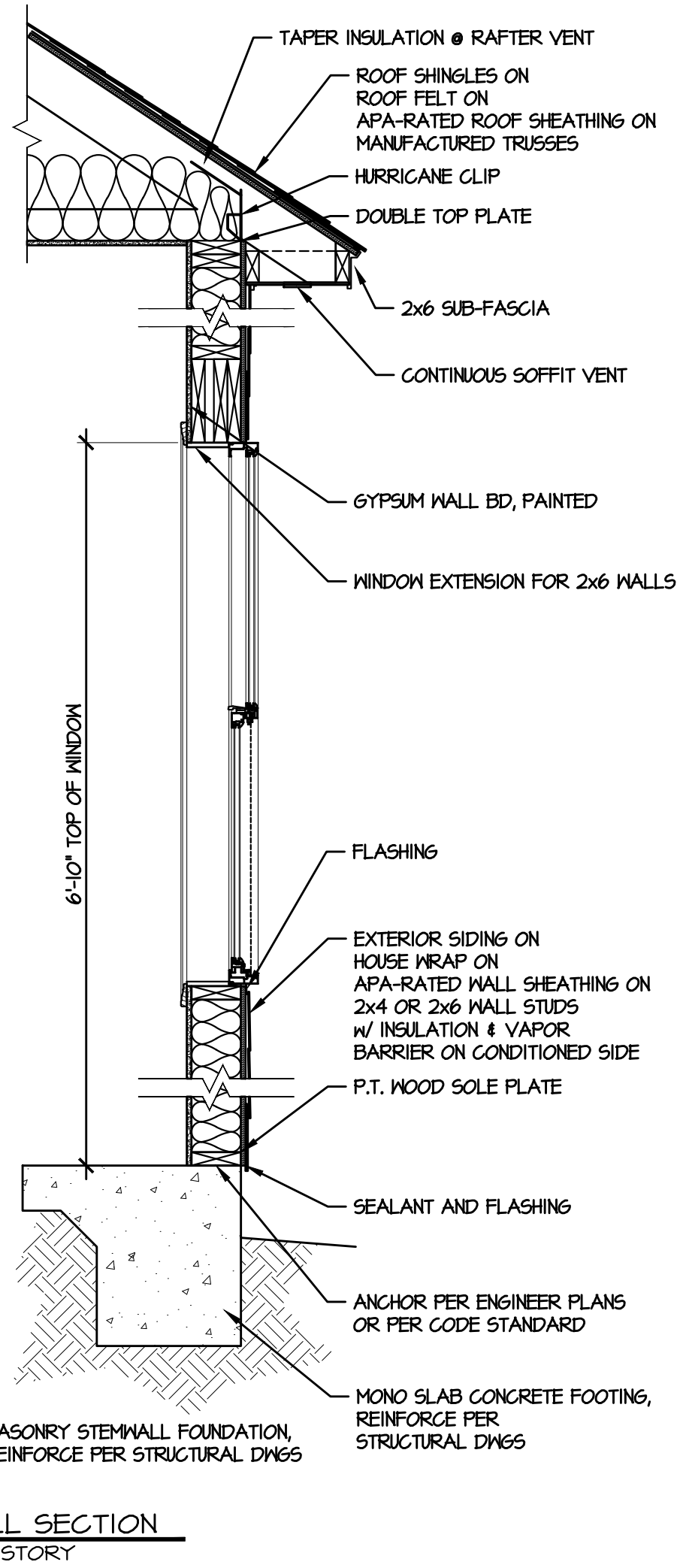
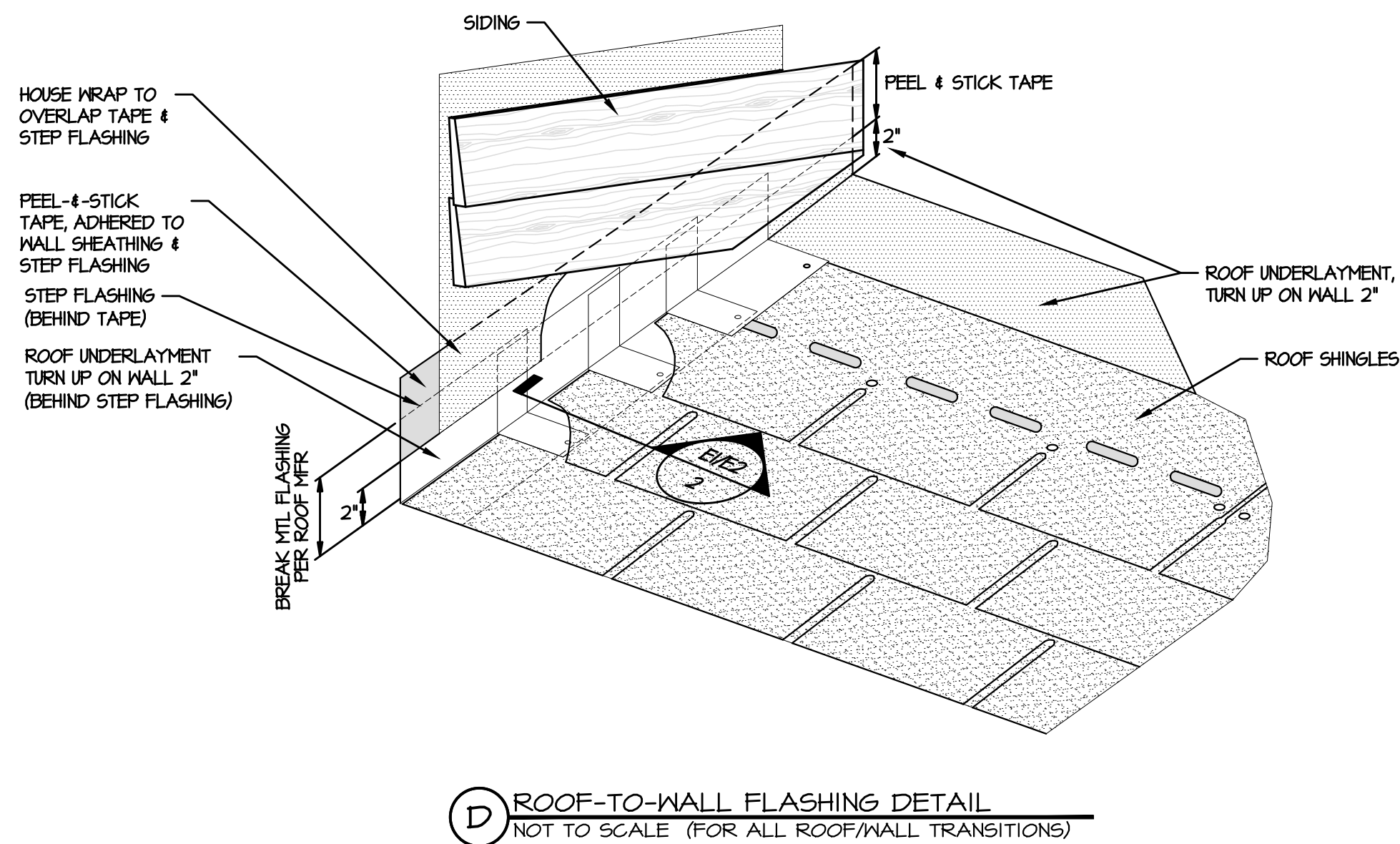
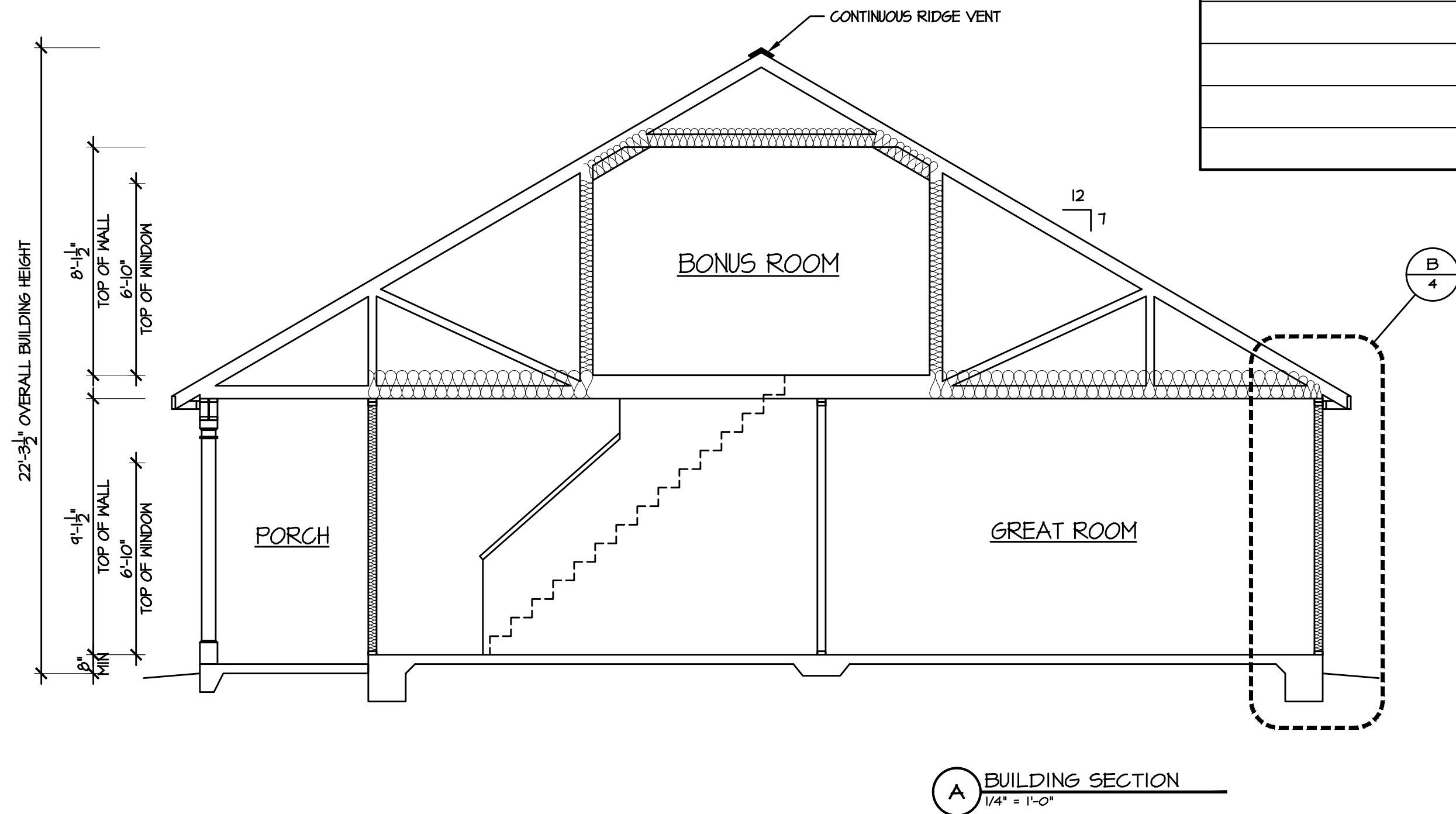
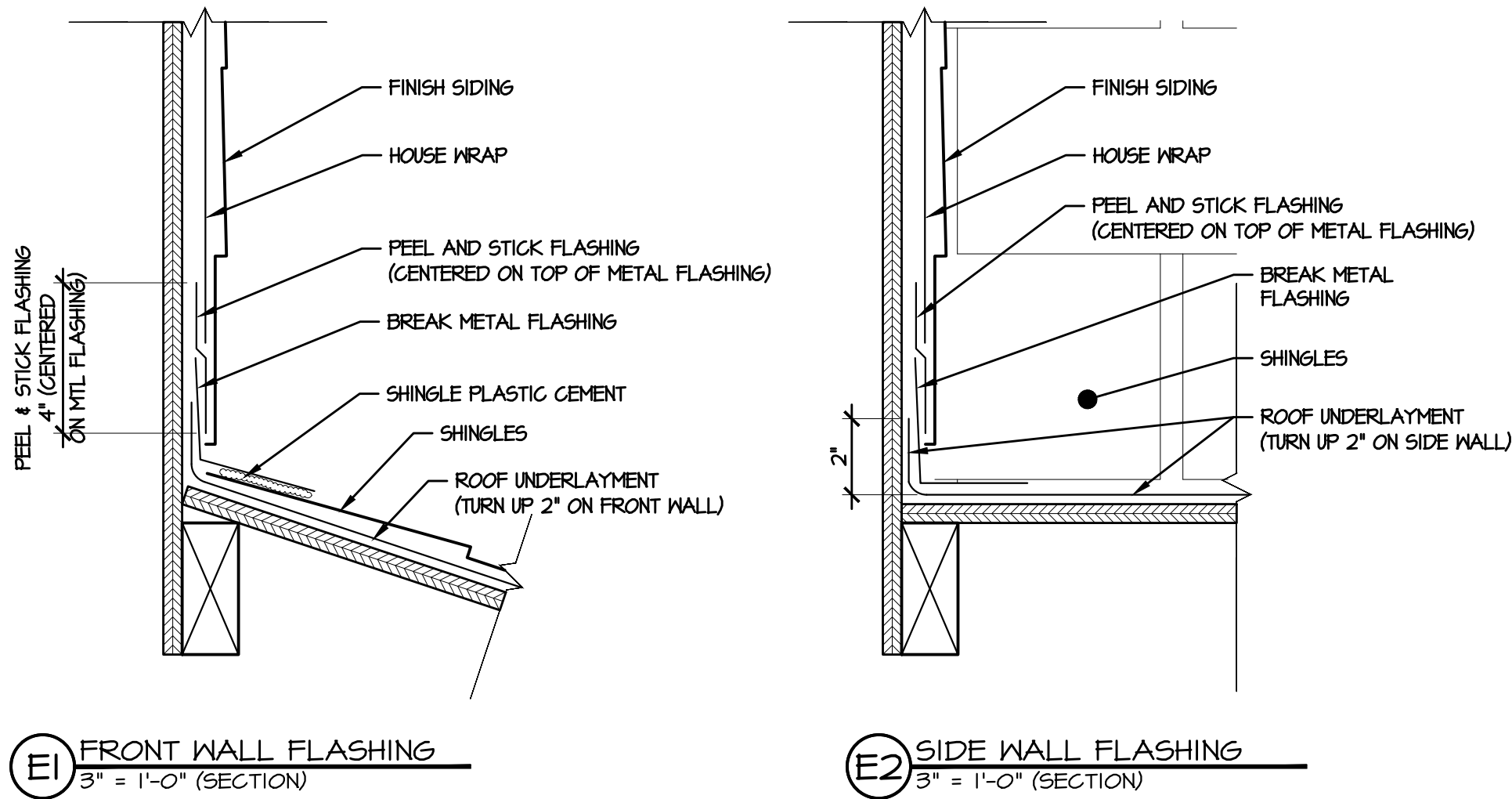
PLAN NO.:
CC 1850

DATE:
MAY 2020

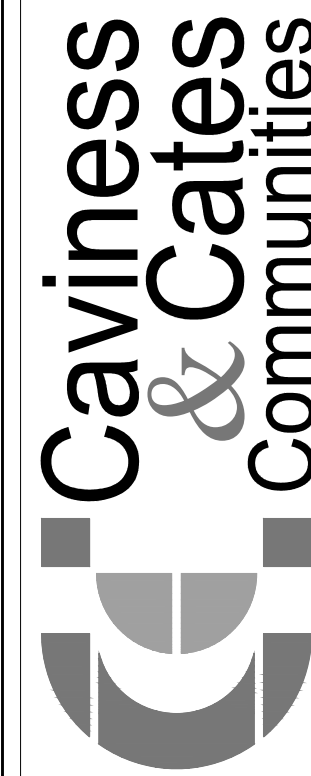
REVISIONS:

SHEET NO.:
3
LOT DL26

D:\CAVINNESS AND CATES\Caviness and Cates\CC 1850 254\LOT SPECIFIC PLANS\CC 1850\DUCKS LANDING 2x6\DL26 C GL\DL26 CC 1850C 2x6 GL CONSTRUCTION SET 5-7-25.dwg, 5/8/2025 8:11:07 AM, 1:1

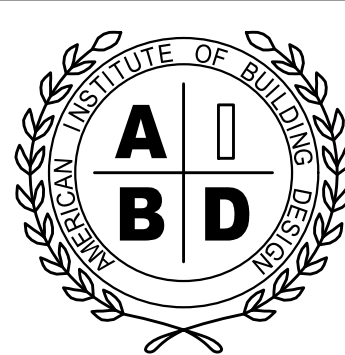


FIELD NOTES



© 2020 Caviness & Cates

639 Executive Place
Suite 400
Fayetteville, NC 28305
Office: 910-481-0503
Sales: 910-240-4210
Fax: 910-481-0585



TODD TUCKER 34 - 156
FORTIFIED-WISE™
PROFESSIONAL
910-824-1474

CC 1850

SECTIONS

PLAN NAME/NUMBER:

PLAN NO:
CC 1850

DATE:
MAY 2020

REVISIONS:

SHEET NO:

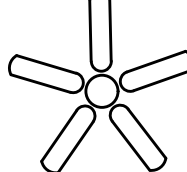
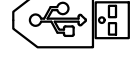

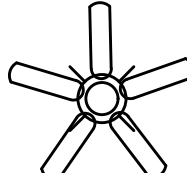


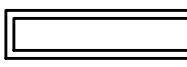







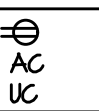

















4

LOT DL26

D:\CAVINESS AND CATES\Caviness and Cates\CC 1850 254\LOT SPECIFIC PLANS\CC 1850\DUCKS LANDING 2x6\DL26 C GL\DL26 CC1850C 2x6 GL CONSTRUCTION SET 5-7-25.dwg, 5/9/2025 8:11:07 AM, 1:1

FIELD NOTES

ELECTRICAL LEGEND

	CEILING FAN		USB PORT		SINGLE POLE SWITCH
	CEILING FAN w/ LIGHT		COMMUNICATIONS		DIMMER SWITCH
	FLUORESCENT LIGHT		UL APPROVED SMOKE / CO DETECTOR		3 WAY SWITCH
	WALL MOUNT LIGHT		SURROUND SOUND CEILING SPEAKER		4 WAY SWITCH
	SURFACE LIGHT		DOOR CONTACT		DUPLEX OUTLET ABOVE COUNTER UNDER COUNTER
	PENDANT LIGHT		DIRECTIONAL MOTION SENSOR		EXTERIOR DUPLEX OUTLET
	LED LIGHT		SECURITY KEYPAD		1/2 HOT DUPLEX OUTLET ON SWITCH
	UNDER-HALL-CABINET LIGHT		20" ON-G ENCLASURE HOUSING PHONE, CABLE, ALARM & REQUIRES 110V OUTLET		GROUND FAULT CIRCUIT INTERRUPT DUPLEX OUTLET
	FLOOD LIGHTS		SURROUND SOUND TERMINATION POINT-PHONE, CABLE, SS & FUTURE PIPE WILL TERMINATE IN ONE PHONE/CABLE JACK & SPOUT PLATE		QUAD OUTLET
	RECESS LIGHT				FLOOR OUTLET
	LIGHT / EXHAUST FAN COMBO				220 V OUTLET
	EXHAUST FAN				

ELECTRICAL NOTES:

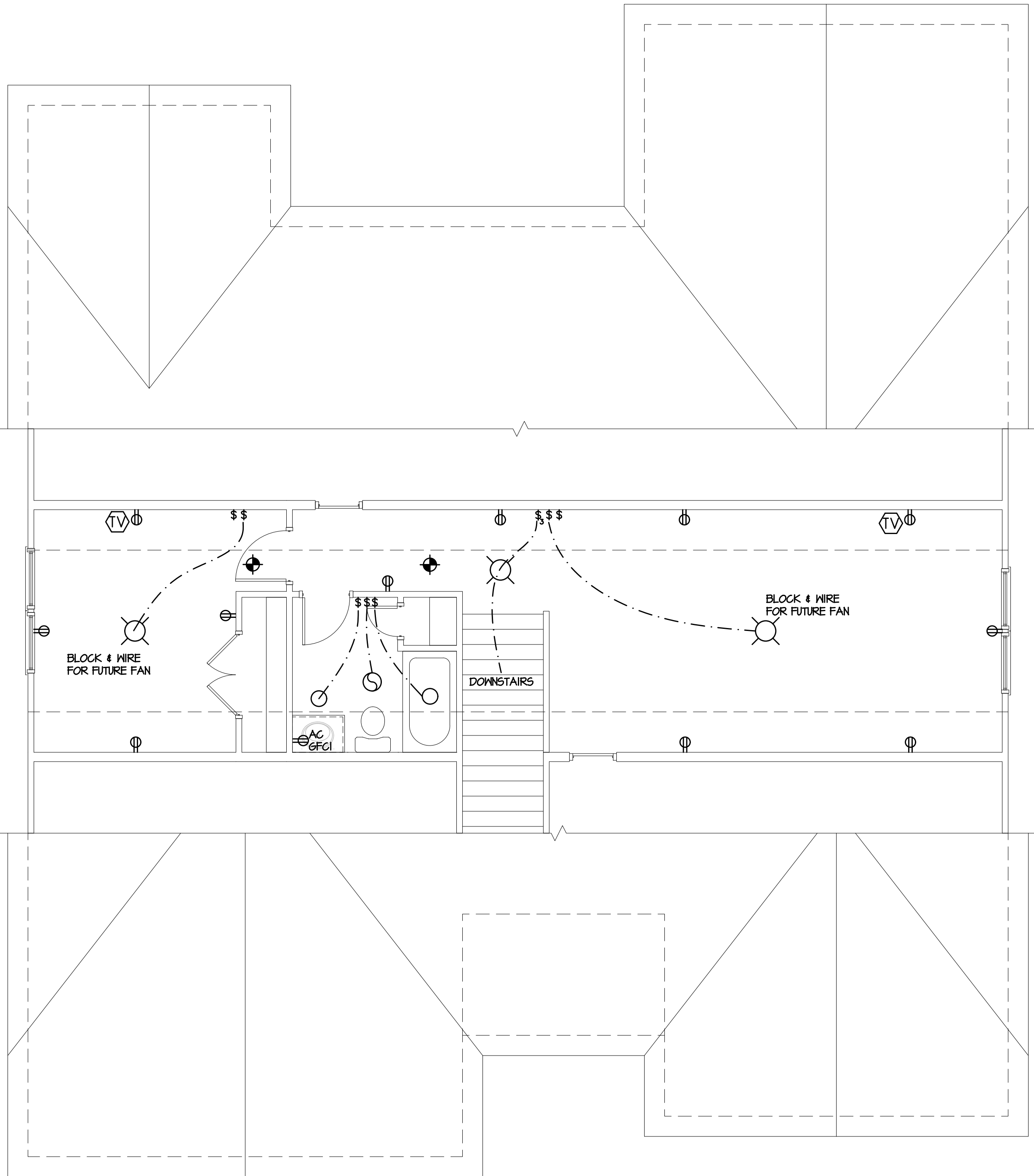
1. INSTALL LOW-WATTAGE LED LIGHTING IN SMALL CLOSETS PER 2023 NCEC ARTICLE 410.2.4 ARTICLE 410.16
2. INSTALL SMART KEYPAD DEADBOLT-FRONT DOOR

BATHROOM LIGHT SWITCH NOTES:

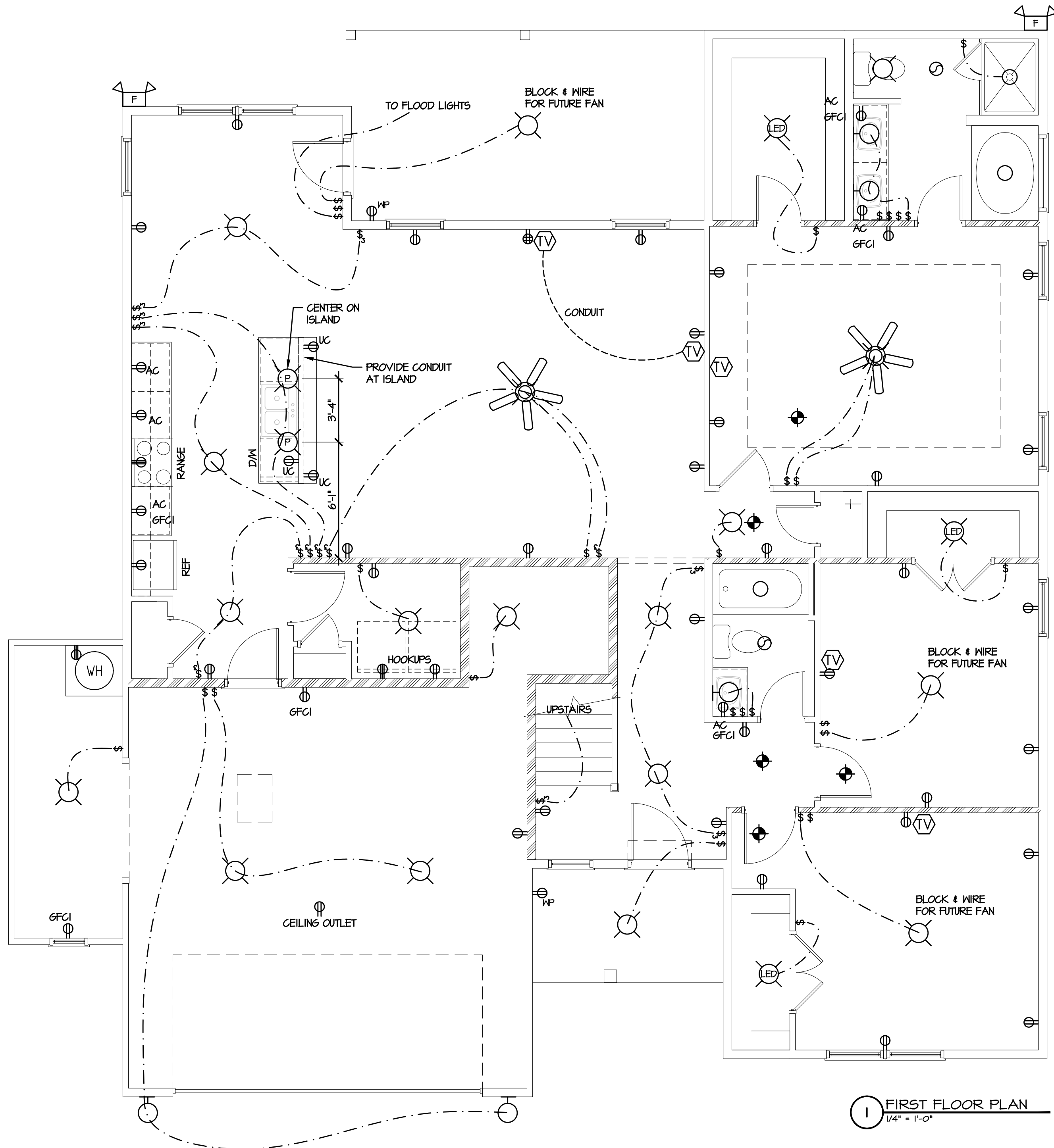
1. FIRST LIGHT SWITCH TO VANITY LIGHT (CLOSEST TO DOOR)
2. SECONDARY SWITCHES TO RECESSED TUB/SHOWER/PANTRY LIGHTS, ETC.
3. FINAL SWITCH TO FAN (FURTHEST FROM DOOR)

SMOKE DETECTOR NOTES:

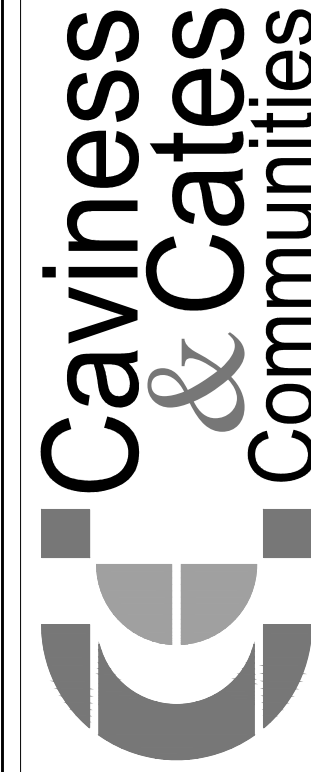
1. INSTALL SMOKE DETECTORS ON EVERY LEVEL, IN ALL SLEEPING AND GUEST ROOMS, AND OUTSIDE OF EACH SLEEPING ROOM, NO GREATER THAN 21' FROM ANY DOOR TO A SLEEPING ROOM [2022 NFPA T2, 24.1.3.1]
2. WHERE AN INTERIOR FLOOR LEVEL EXCEEDS 1000 SQUARE FEET, SMOKE ALARMS SHALL BE INSTALLED WHERE ALL POINTS FALL WITHIN 30' OF TRAVEL DISTANCE OR ONE SMOKE ALARM PER 500 SQUARE FEET. FOR VAULTED CEILINGS OVER MULTIPLE LEVELS, SMOKE ALARMS IN THE UPPER LEVEL NEAR THE CATHEDRAL SHALL BE CONSIDERED AS PART OF THE LOWER FLOOR PROTECTION [2022 NFPA T2, 24.1.3.1, 24.1.3.1.1 and 24.1.3.2]
3. MAINTAIN 120" MIN FROM KITCHEN COOKING APPLIANCES [2022 NFPA T2, 24.1.3.4(5)]
4. MAINTAIN 36" MIN FROM A BATHROOM DOOR CONTAINING A TUB OR SHOWER [2022 NFPA T2, 24.1.3.4(6)]
5. MAINTAIN 36" MIN FROM A SUPPLY REGISTER OF A FORCED HEATING/COOLING SYSTEM AND OUTSIDE OF THE DIRECT AIRFLOW [2022 NFPA T2, 24.1.3.4(1)]
6. MAINTAIN 36" MIN FROM TIP OF CEILING FAN BLADE [2014 NFPA T2, 24.1.3.4(8)]
7. WHERE STAIRS LEAD TO AN ABOVE-OCCUPIABLE LEVEL, A SMOKE DETECTOR SHALL BE LOCATED SO THAT RISING SMOKE IN THE STAIRWAY CANNOT BE BLOCKED BY AN INTERVENING DOOR [2014 NFPA T2, 24.1.3.4(9)]
8. PLACE SMOKE DETECTORS AT HIGHEST POINT OF TRAY CEILING [2014 NFPA T2, 24.1.3.4(11)]



2 SECOND FLOOR PLAN
1/4" = 1'-0"

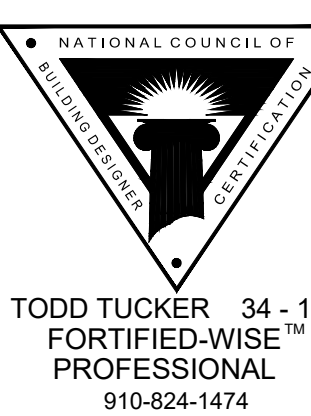


1 FIRST FLOOR PLAN
1/4" = 1'-0"



© 2020 Caviness & Cates

639 Executive Place
Suite 400
Fayetteville, NC 28305
Office: 910-481-0503
Sales: 910-240-4210
Fax: 910-481-0585



TODD TUCKER 34 - 156
FORTIFIED-WISE™
PROFESSIONAL
910-824-1474

PLAN NAME/NUMBER:
CC 1850
SHEET TITLE:
ELECTRICAL PLANS

PLAN NO:
CC 1850

DATE:
MAY 2020

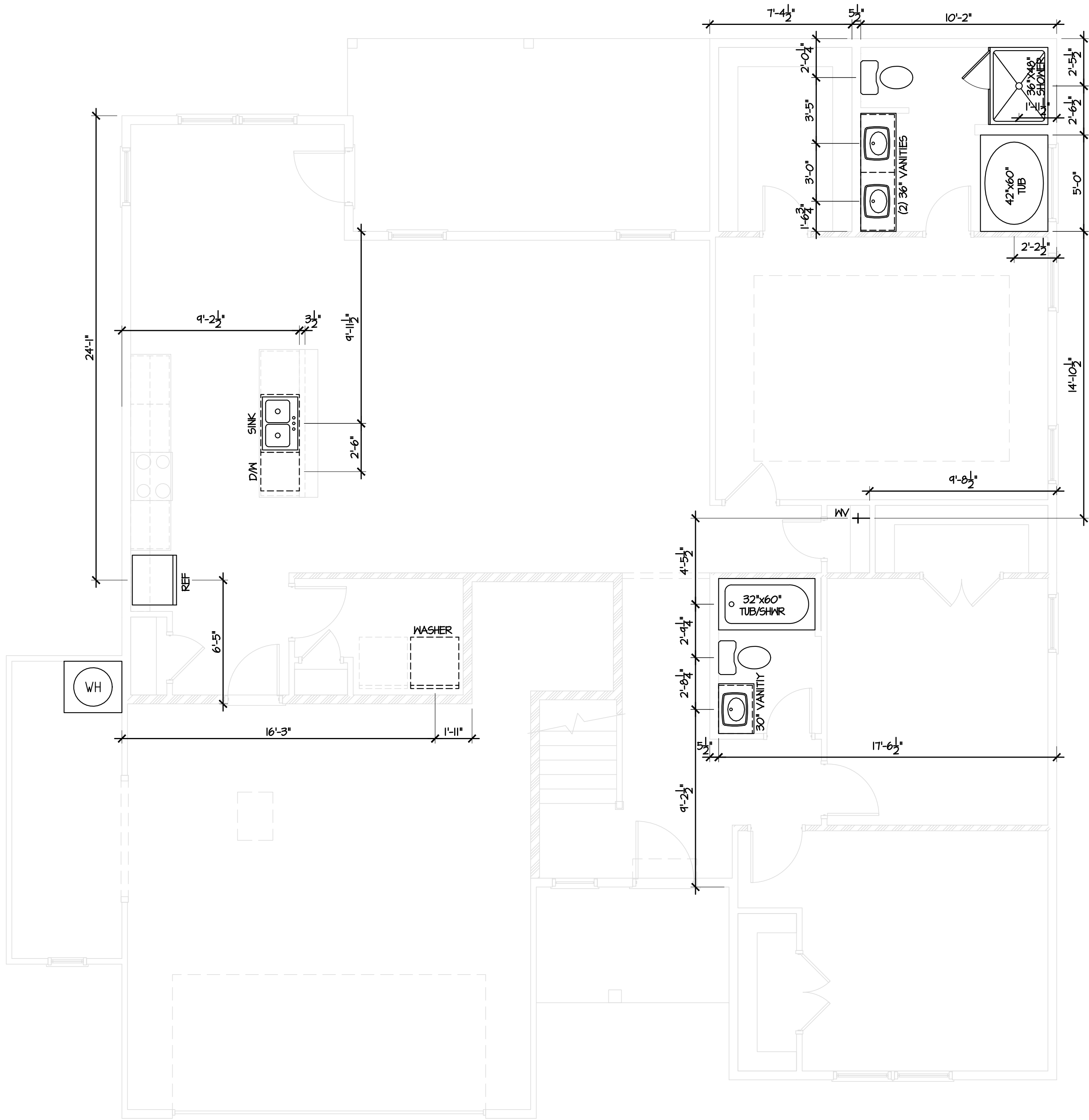
REVISIONS:	

SHEET NO:

5
LOT DL26

D:\CAVINESS AND CATES\Caviness and Cates\CC 1850 254A\LOT SPECIFIC PLANS\CC 1850\DUCKS LANDING 2x6\DL26 C GL\DL26 CC1850C 2x6 GL\CONSTRUCTION SET 5-7-25.dwg, 5/8/2025 8:11:07 AM, 1:1

FIELD NOTES

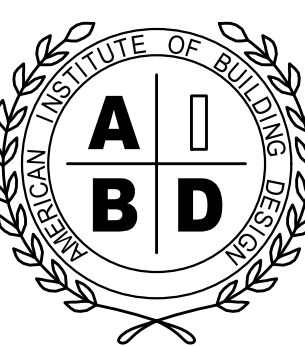


1 PLUMBING FIXTURE PLAN
1/4" = 1'-0"



© 2020 Caviness & Cates

639 Executive Place
Suite 400
Fayetteville, NC 28305
Office: 910-481-0503
Sales: 910-240-4210
Fax: 910-481-0585



TODD TUCKER 34 - 156
FORTIFIED-WISE™
PROFESSIONAL
910-824-1474

PLAN NAME/NUMBER:

CC 1850

PLAN NO:

CC 1850

DATE:

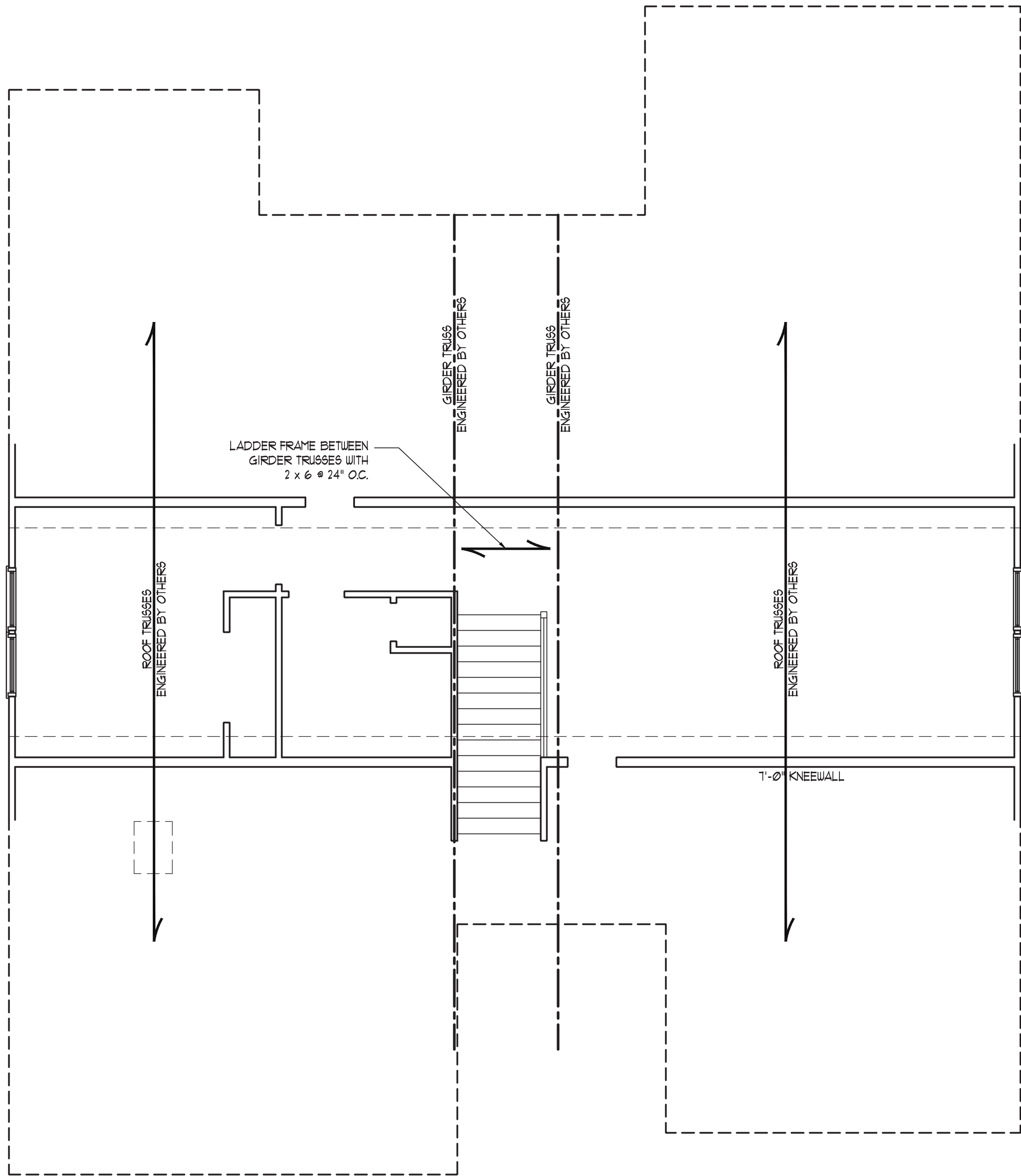
MAY 2020

REVISIONS:

SHEET NO:

P

SHEET TITLE:
PLUMBING FIXTURE PLAN



*NOTE: ALL EXTERIOR WALLS AND ATTIC WALLS ARE TO BE 2 x 4 @ 16" O.C. MIN. (UNO). 2 x 6 @ 24" O.C. EXTERIOR WALLS MAY BE CONSTRUCTED IN LIEU OF 2 x 4 WALLS (UNO). ALL INTERIOR LOAD BEARING WALLS ARE TO BE 2 x 4 @ 16" O.C. (UNO) AND NON-LOAD BEARING INTERIOR WALLS ARE TO BE 2 x 4 @ 24" O.C. (UNO).

BRACED WALL DESIGN NOTES:

1. BRACED WALL DESIGN PER SECTION R602.10 OF THE NRC 2018 EDITION.
2. CS-USP REFERS TO "CONTINUOUS SHEATHING - WOOD STRUCTURAL PANELS" CONTRACTOR IS TO INSTALL 1/16" OSB ON ALL EXTERIOR WALLS ATTACHED w/ 8d NAILS SPACED 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD.
3. GB REFERS TO "GYPSUM BOARD" CONTRACTOR IS TO INSTALL 1/2" (MIN) GYPSUM WALL BOARD WHERE NOTED ON THE PLANS. FASTEN GB WITH 1 1/4" SCREWS OR 1 5/8" NAILS SPACED 1" O.C. ALONG PANEL EDGES AND IN THE FIELD INCLUDING TOP AND BOTTOM PLATES.
4. BRACED WALL DESIGN APPLIED IN WIND ZONES UP TO 130 MPH. FOR HIGH WIND ZONES, BRACE WALLS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 45 OF THE NRC 2018 EDITION.
5. SEE NOTES AND DETAIL SHEETS FOR ADDITIONAL BRACED WALL INFORMATION.

NOTE:

1. PER TABLE R602.10.3 OF THE 2018 NRC, THE 2ND FLOOR IS CONTAINED WHOLLY WITHIN THE ROOF SYSTEM AND WALL BRACING ANALYSIS IS NOT REQUIRED ON THE SECOND FLOOR. IN ADDITION, THE SECOND FLOOR NEED NOT BE CONSIDERED A STORY IN THE FIRST FLOOR WALL BRACING ANALYSIS.
2. SHEATH ALL EXTERIOR WALLS WITH 1/16" OSB SHEATHING ATTACHED WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD.

TABLE R602.15
MINIMUM NUMBER OF FULL HEIGHT STUDS
AT EACH END OF HEADERS IN EXTERIOR WALLS

HEADER SPAN (FEET)	MAXIMUM STUD SPACING (INCHES) (PER TABLE R602.3/5)	
	16	24
UP TO 3'	1	1
4'	2	1
8'	3	2
12'	5	3
16'	6	4

STRUCTURAL NOTES:

1. ALL FRAMING LUMBER TO BE #2 SPF (UNO).
2. ALL LOAD BEARING HEADERS TO BE (2) 2 x 6 (UNO).
3. WINDOW AND DOOR HEADERS TO BE SUPPORTED w/ (1) JACK STUD AND (1) KING STUD EA. END (UNO). SEE TABLE R602.15 FOR ADDITIONAL KING STUD REQUIREMENTS.
4. SQUARES DENOTE POINT LOADS WHICH REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION. SQUARES TO BE (2) STUDS (UNO).
5. FOR HIGH WIND ZONES, ALL EXTERIOR WALLS TO BE SHEATHED WITH 1/16" OSB SHEATHING WITH JOINTS BLOCKED AND SECURED WITH 8d NAILS AT 3" O.C. ALONG EDGES AND 6" O.C. IN THE FIELD.
6. FOR HIGH WIND ZONES, SECURE ALL EXTERIOR WALL SHEATHING PANELS TO DOUBLE TOP PLATES, BANDS, JOISTS, AND GIRDERS WITH (2) ROWS OF 8d NAILS STAGGERED AT 3" O.C. PANELS SHALL EXTEND 12" BEYOND CONSTRUCTION JOINTS AND SHALL OVERLAP GIRDERS AND DOUBLE GILL PLATES THEIR FULL DEPTH.
7. SPECIFIED SIMPSON STRONG-TIE PRODUCTS MAY BE SUBSTITUTED WITH THOSE MANUFACTURED BY USP STRUCTURAL CONNECTORS PROVIDED THAT THE LOAD CAPACITY AND FUNCTION IS EQUIVALENT.
8. REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.



2/3/2022

J.S. THOMPSON
ENGINEERING, INC
606 WADE AVE., SUITE 104 RALEIGH, NC 27605
PHONE: (919) 7899919 FAX: (919) 7899921
N.C. LICENSE NO.: C-1733

CC 1850
CAVINNESS & CATES

DATE: JANUARY 20, 2022

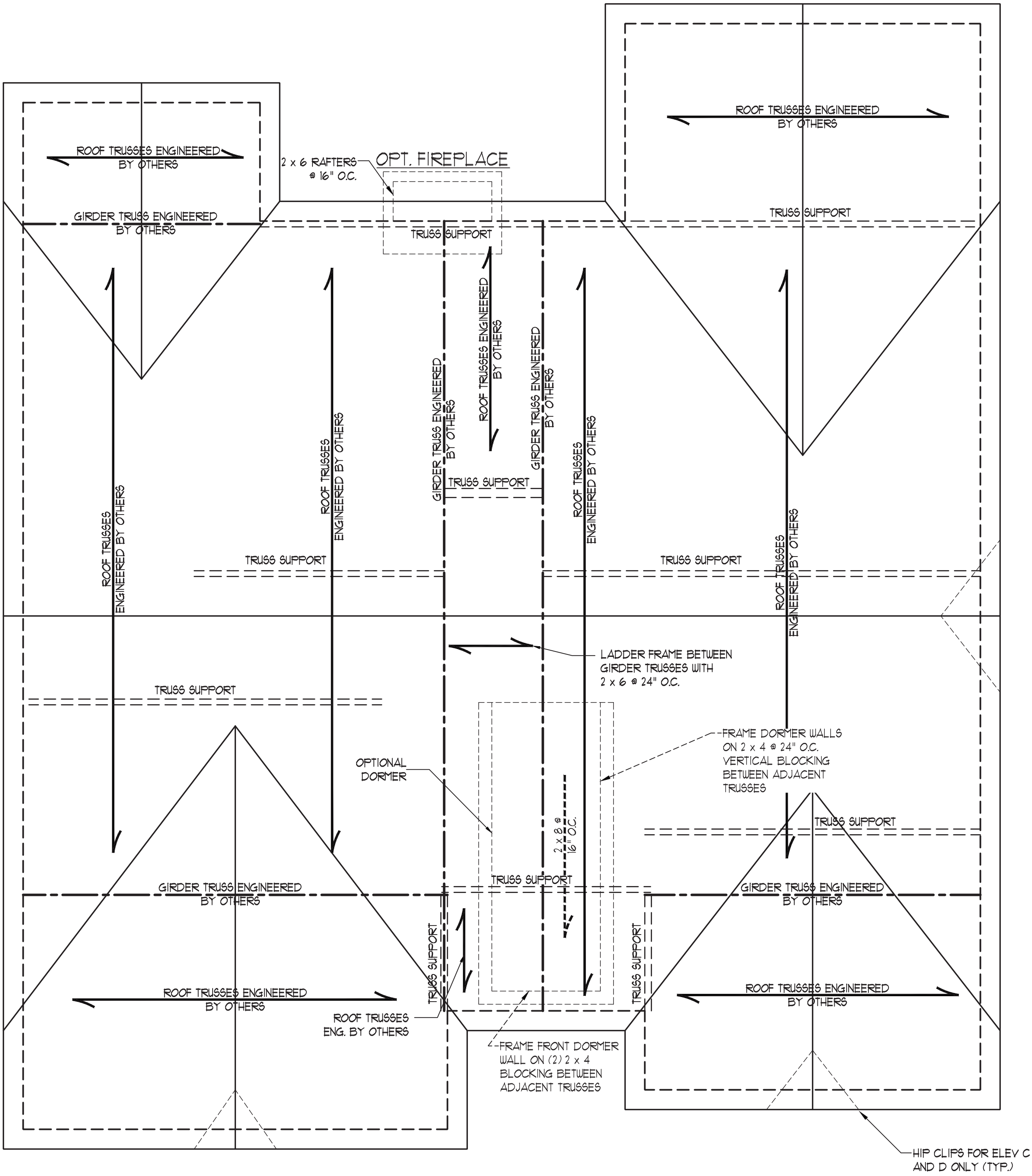
SCALE: 1/4" = 1'-0"

DRAWN BY: TT

ENGINEERED BY: JAG

SHEET: 5 OF: 11

S-3
ATTIC FLOOR
FRAMING PLAN



STRUCTURAL NOTES:

1. ALL FRAMING LUMBER TO BE #2 SPF (UNO).
2. CIRCLES DENOTE (3) 2 x 4 POSTS FOR ROOF SUPPORT.
3. FRAME DORMER WALLS ON TOP OF DOUBLE OR TRIPLE RAFTERS.
4. HIP SPLICES ARE TO BE SPACED A MIN. OF 8'-0". FASTEN MEMBERS WITH THREE ROWS OF 12d NAILS @ 16" O.C. (TYP.)
5. STICK FRAME OVER-FRAMED ROOF SECTIONS W/ 2 x 8 RIDGES, 2 x 6 RAFTERS @ 16" O.C. AND FLAT 2 x 10 VALLEYS OR USE VALLEY TRUSSES.
6. FASTEN FLAT VALLEYS TO RAFTERS OR TRUSSES WITH SIMPSON H2.5A HURRICANE TIES @ 32" O.C. MAX. PASS HURRICANE TIES THROUGH NOTCH IN ROOF SHEATHING. EACH RAFTER IS TO BE FASTENED TO THE FLAT VALLEY WITH A MIN. OF (6) 12d TOE NAILS.
7. REFER TO SECTION R802.11 OF THE 2018 NRC FOR REQUIRED UPLIFT RESISTANCE AT RAFTERS AND TRUSSES.
8. REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

J.S. THOMPSON
ENGINEERING, INC.
606 WADE AVE., SUITE 104 RALEIGH, NC 27605
PHONE: (919) 7899919 FAX: (919) 7899921
N.C. LICENSE NO.: C-1733

CC 1850
CAVINNESS & CATES

DATE: JANUARY 20, 2022

SCALE: 1/4" = 1'-0"

DRAWN BY: TT

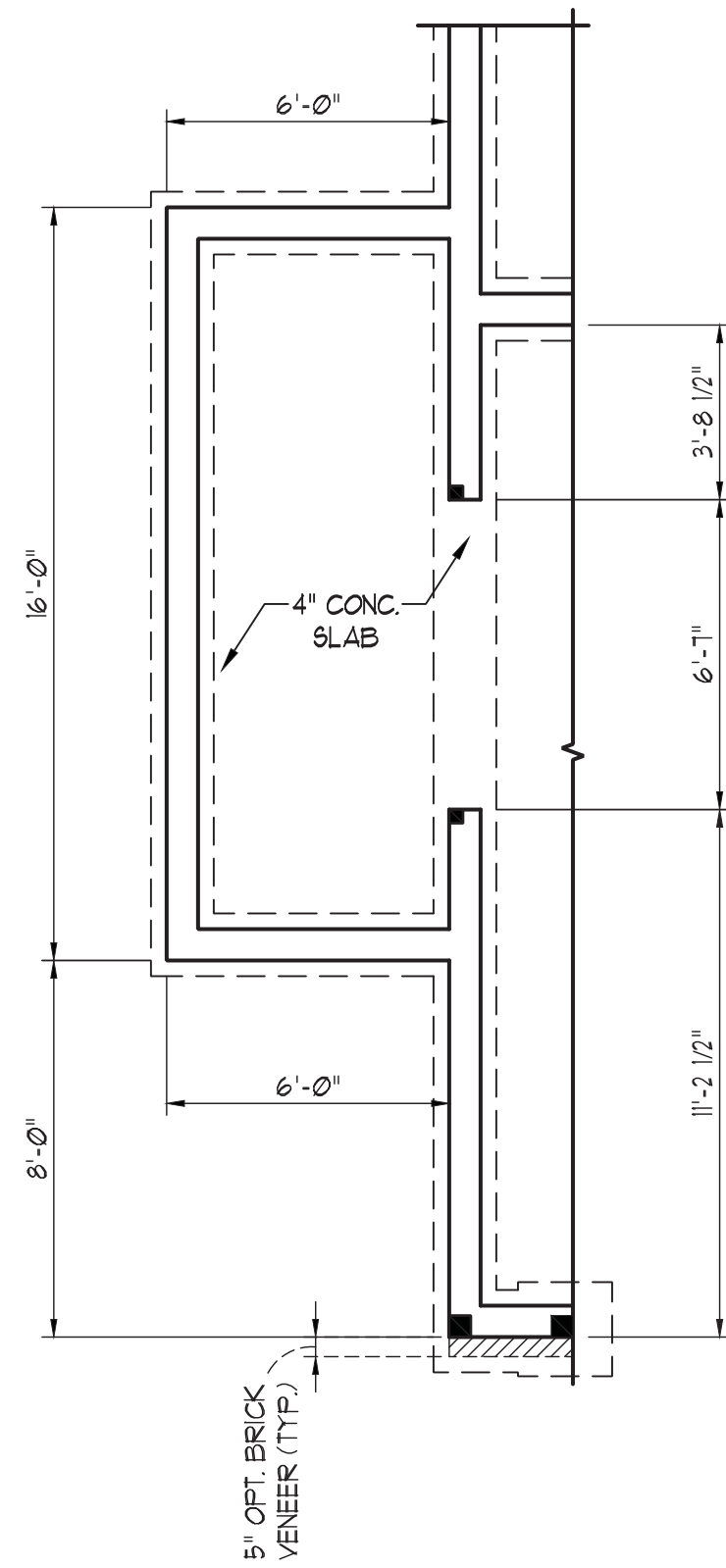
ENGINEERED BY: JAG



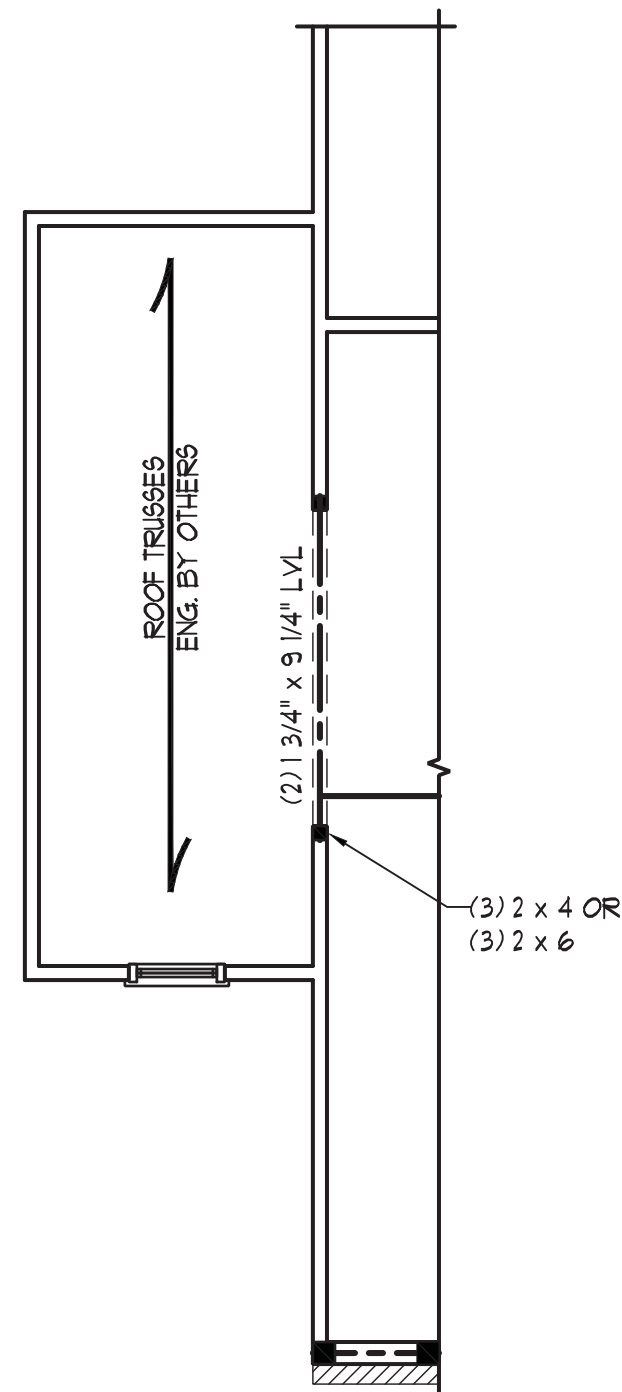
SHEET: 6 OF: 11

S4a
ROOF FRAMING
PLAN

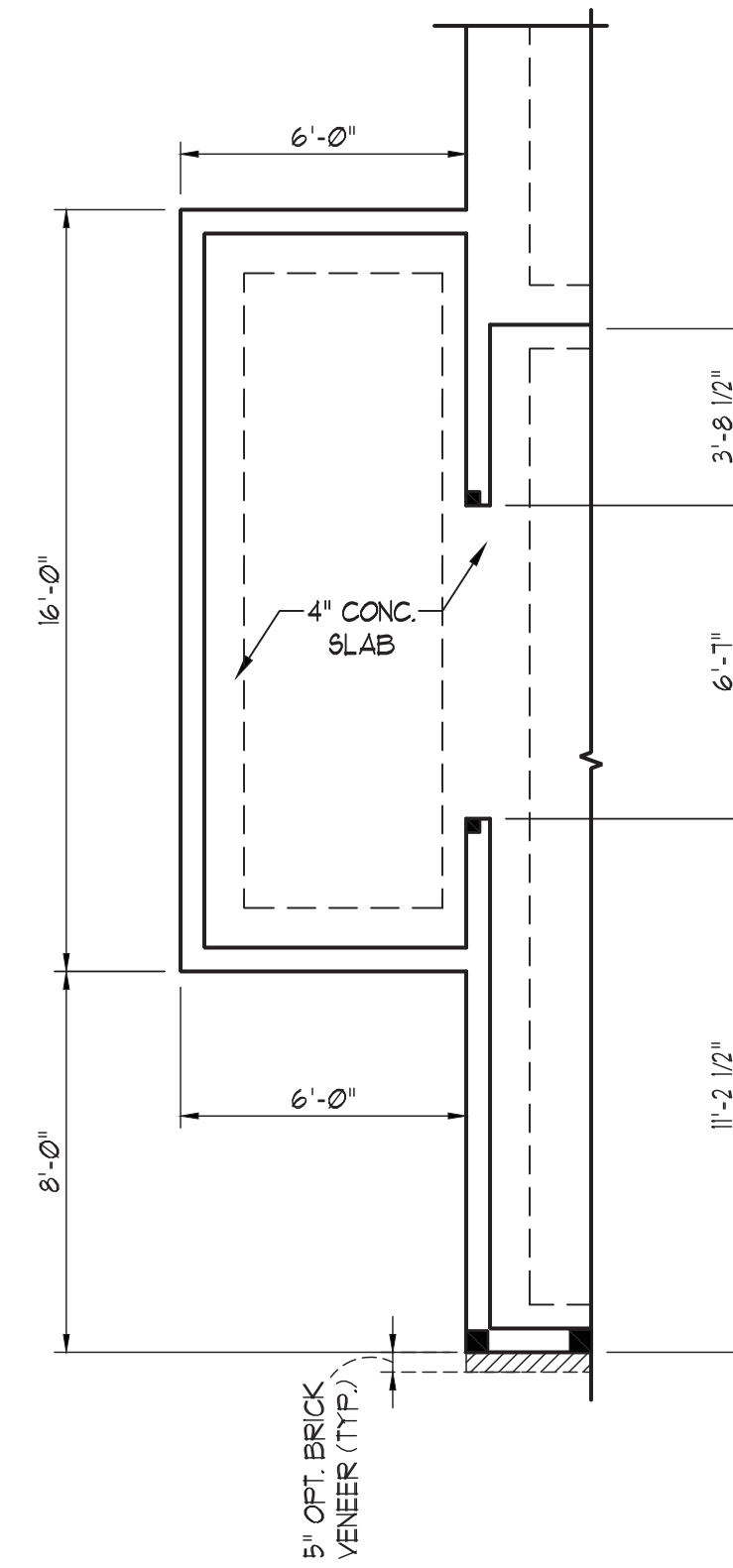
2/3/2022



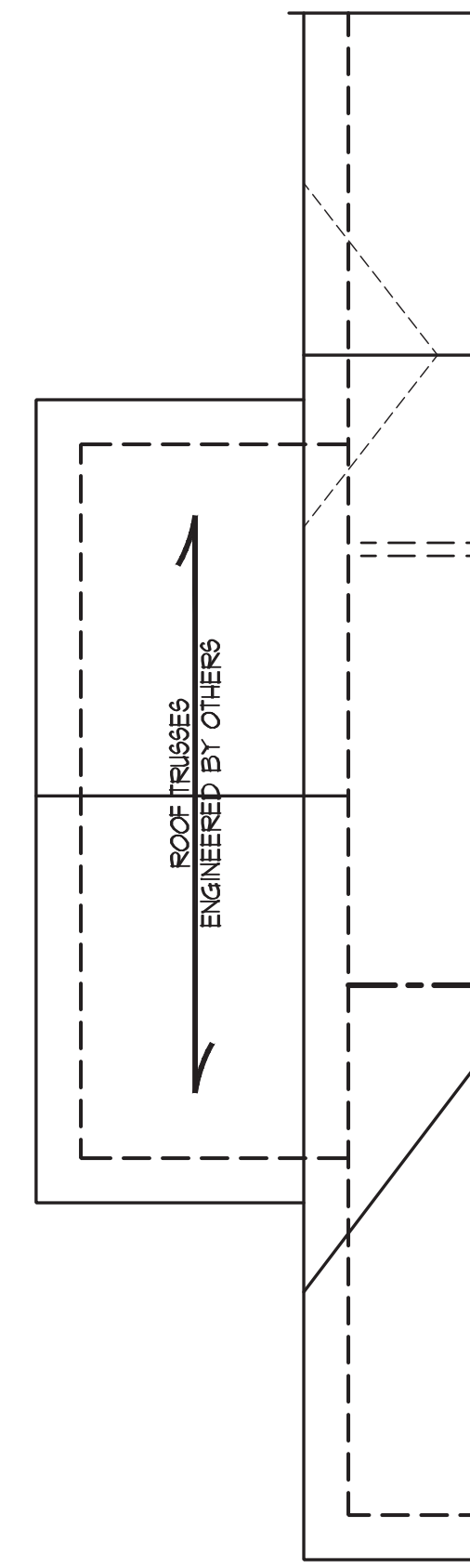
CRAWL SPACE AND STEM WALL



FRAMING PLAN



MONO SLAB



ROOF FRAMING PLAN



**J.S. THOMPSON
ENGINEERING, INC**
606 WADE AVE., SUITE 104 RALEIGH, NC 27605
PHONE: (919) 789-9919 FAX: (919) 789-9921
N.C. LICENSE NO.: C-1733

CC 1850
CAVINNESS & CATES

DATE: JANUARY 20, 2022

SCALE: 1/4" = 1'-0"

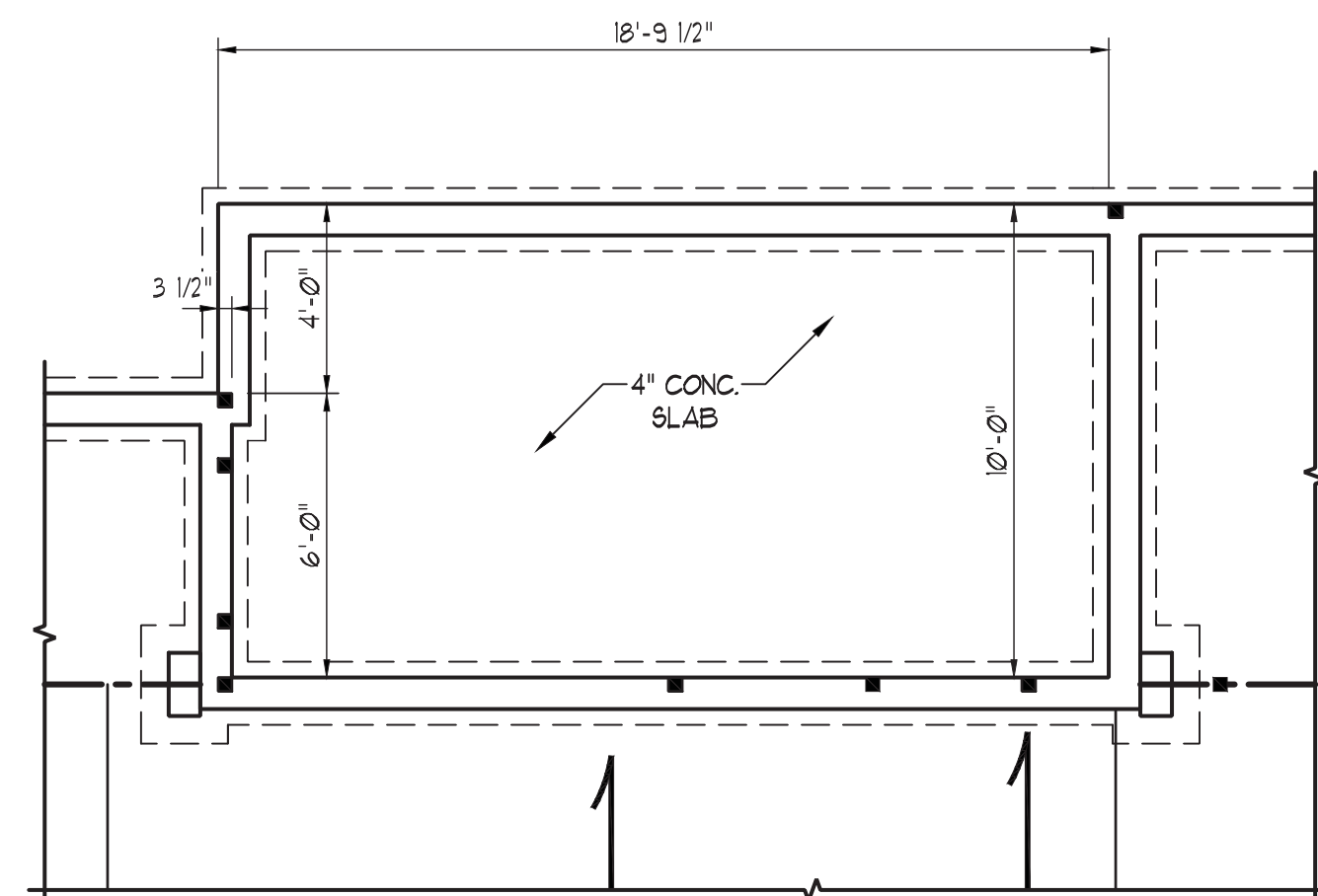
DRAWN BY: TT

ENGINEERED BY: JAG

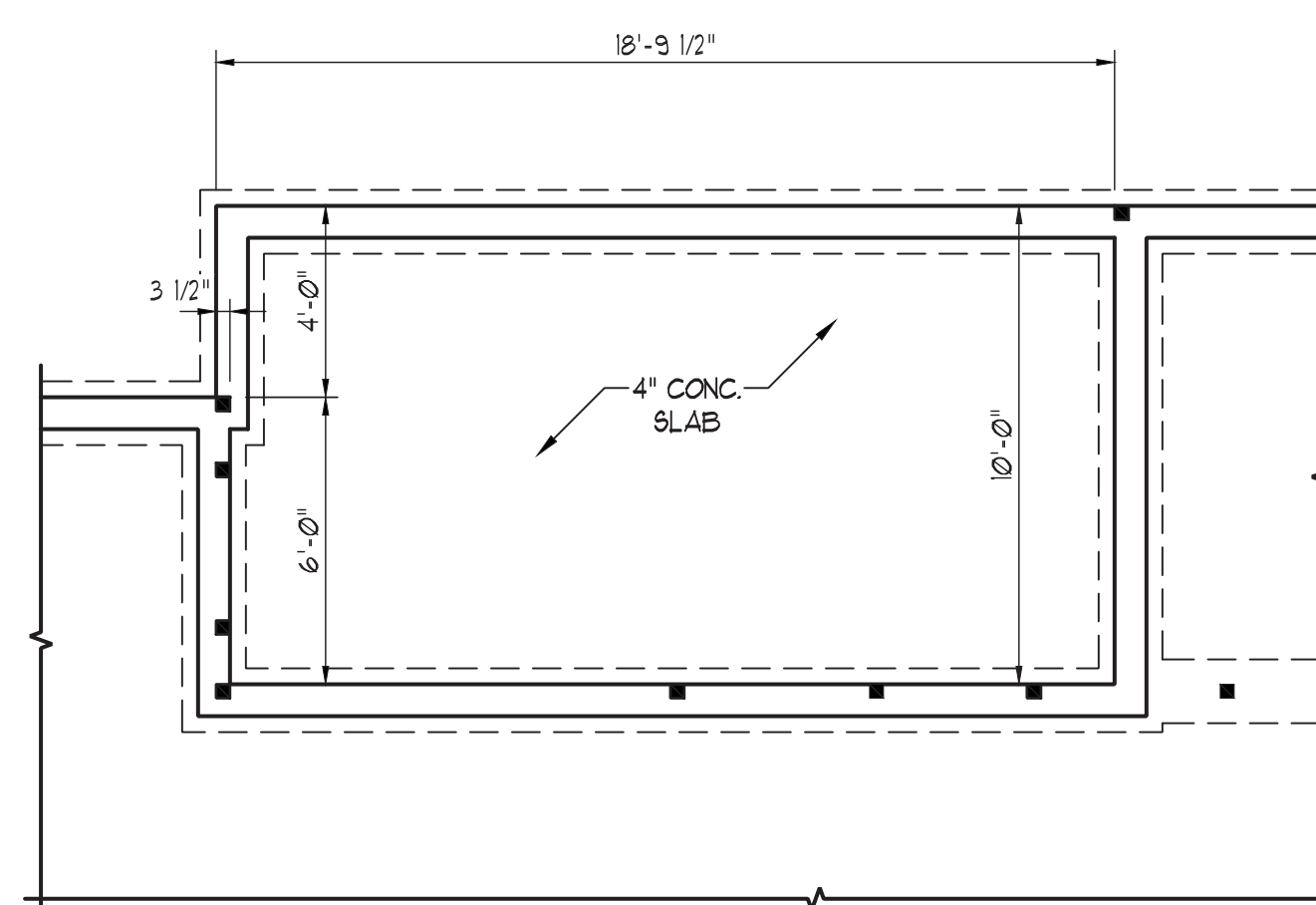
SHEET: 10 OF: 11

S-8
WORK GARAGE

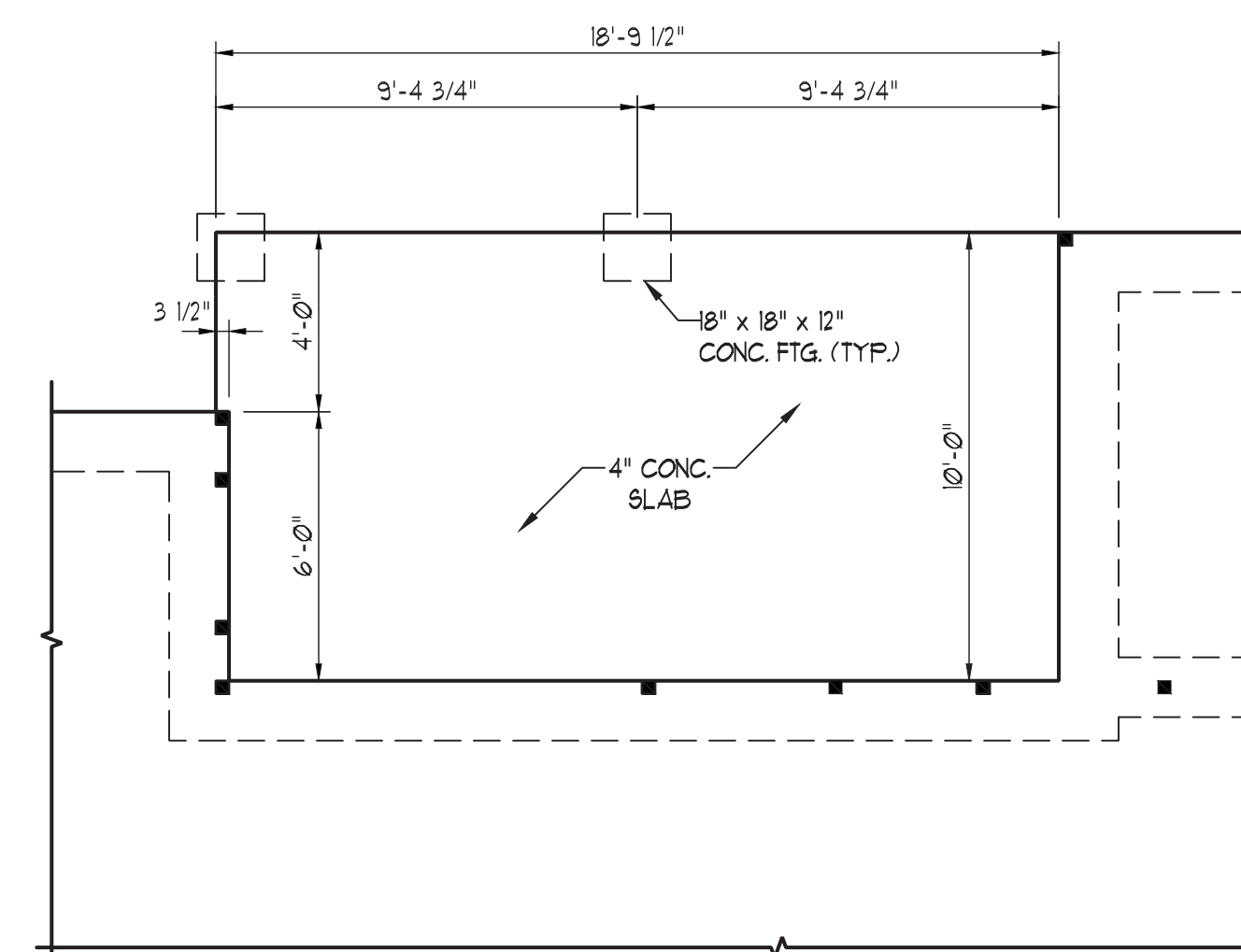
2/3/2022



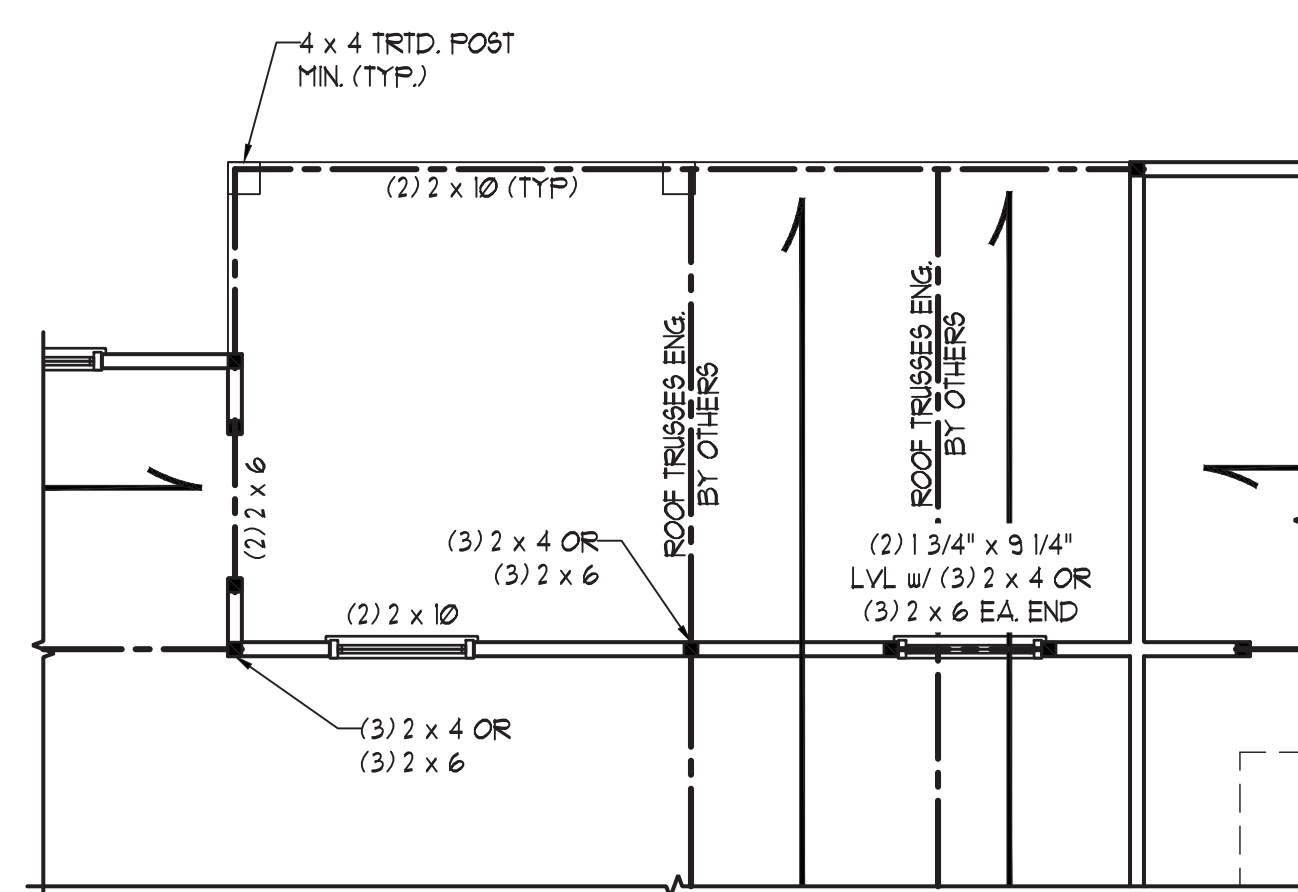
CRAWL SPACE



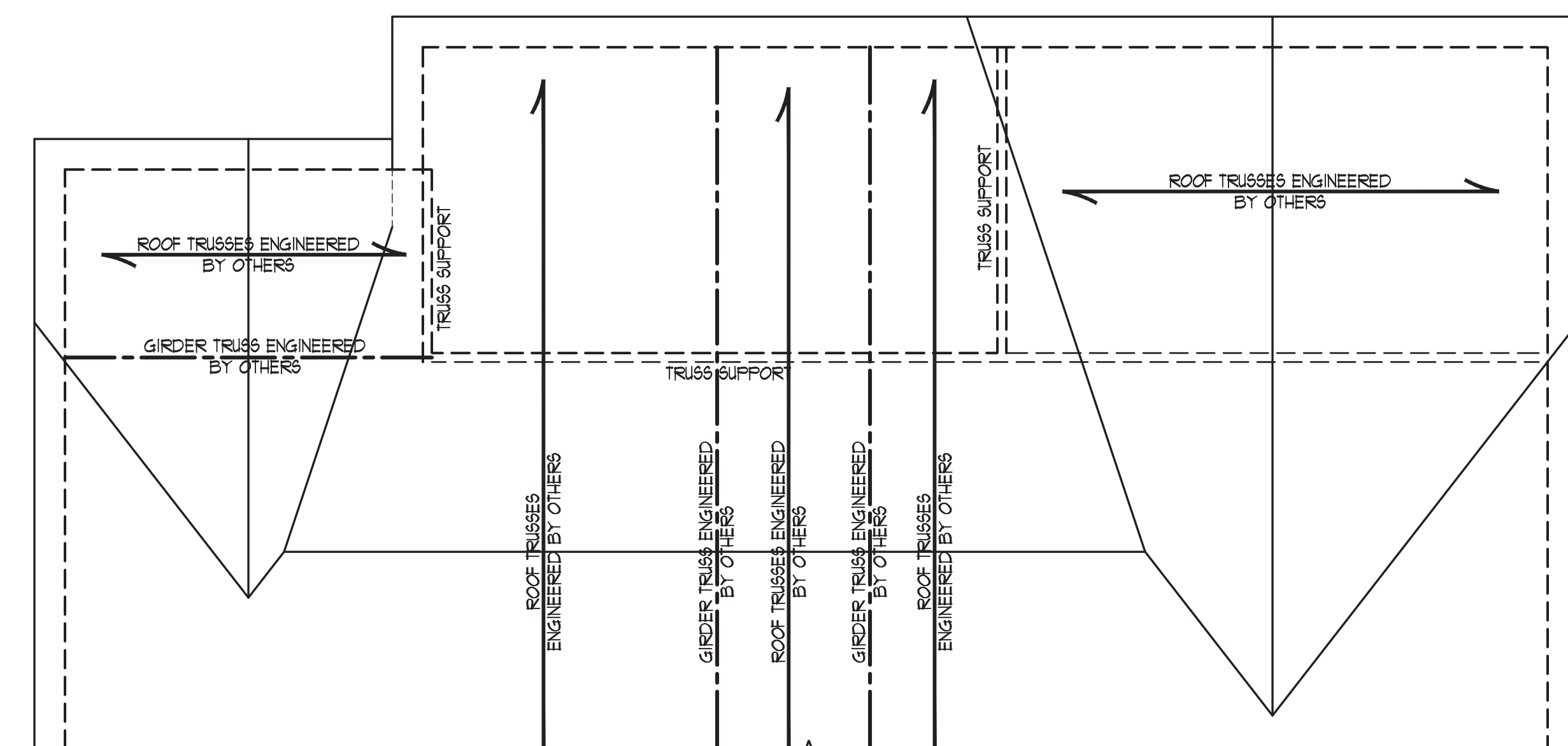
STEM WALL



MONO SLAB



FRAMING PLAN



ROOF FRAMING PLAN



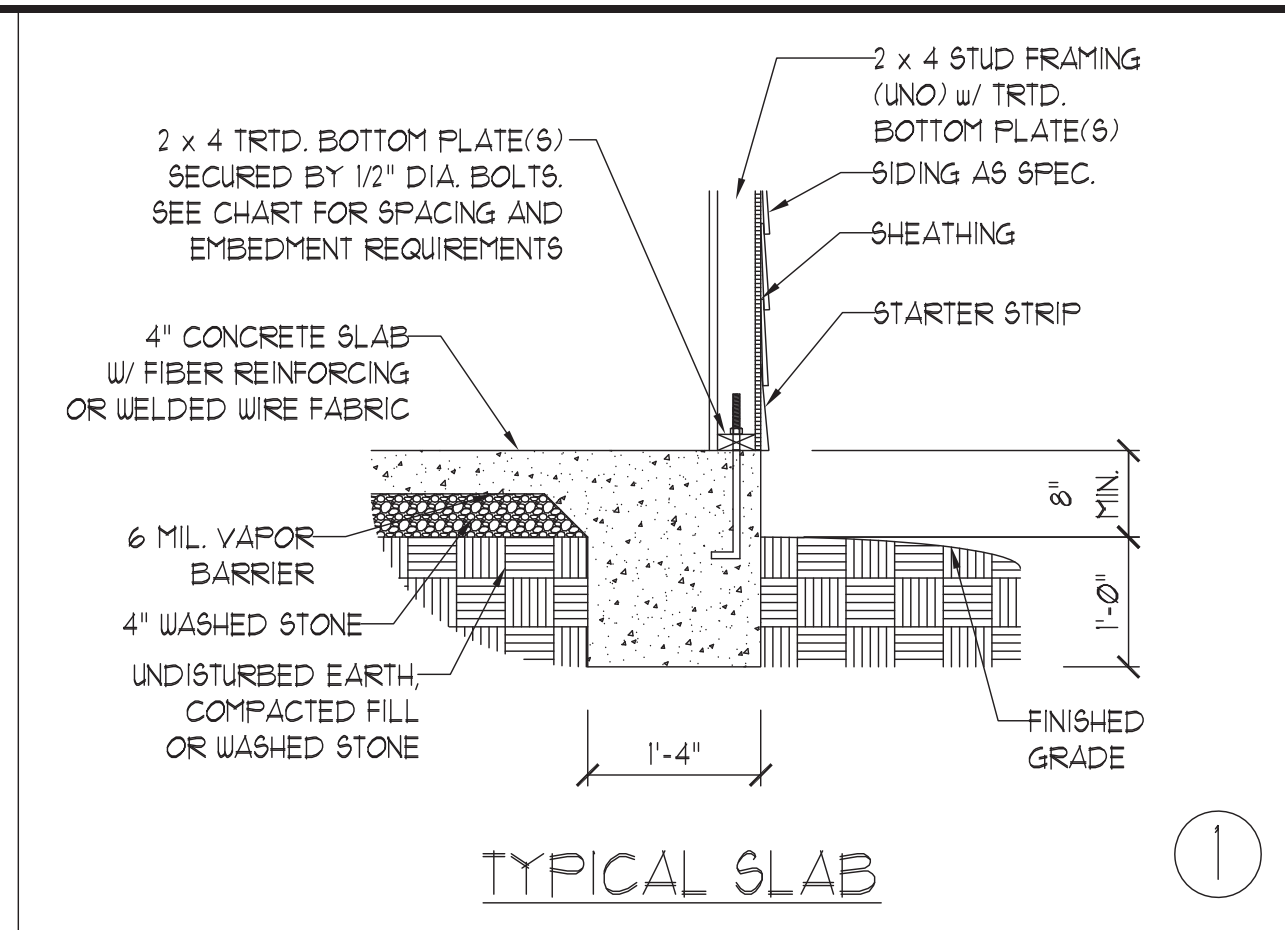
J.S. THOMPSON
ENGINEERING, INC
606 WADE AVE., SUITE 104 RALEIGH, NC 27605
PHONE: (919) 7899919 FAX: (919) 7899921
N.C. LICENSE NO.: C-1733

CC 1850
CAVINNESS & CATES

DATE: JANUARY 20, 2022
SCALE: 1/4" = 1'-0"
DRAWN BY: TT
ENGINEERED BY: JAG

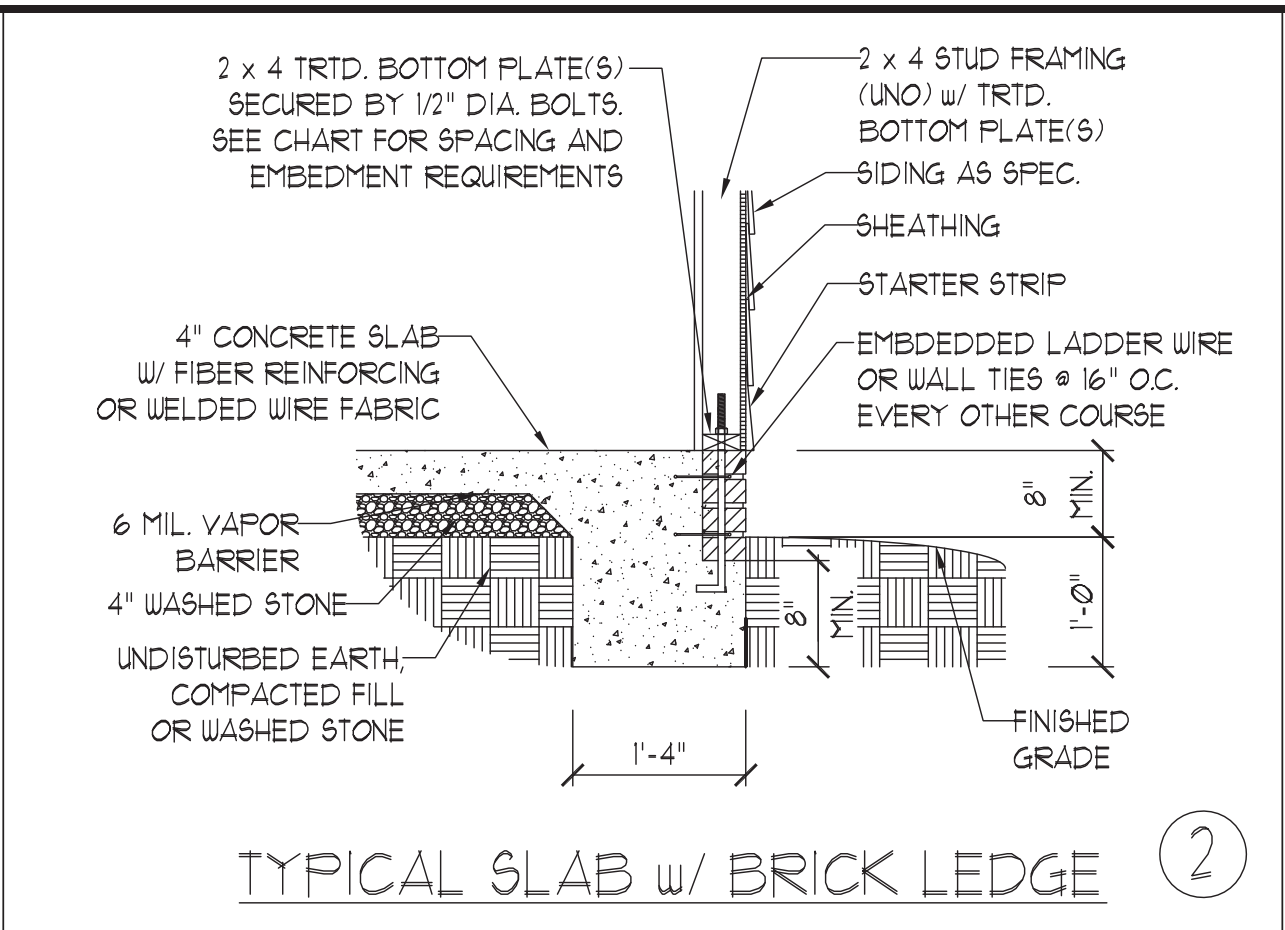
SHEET: 11 OF 11

S-9
10' PORCH



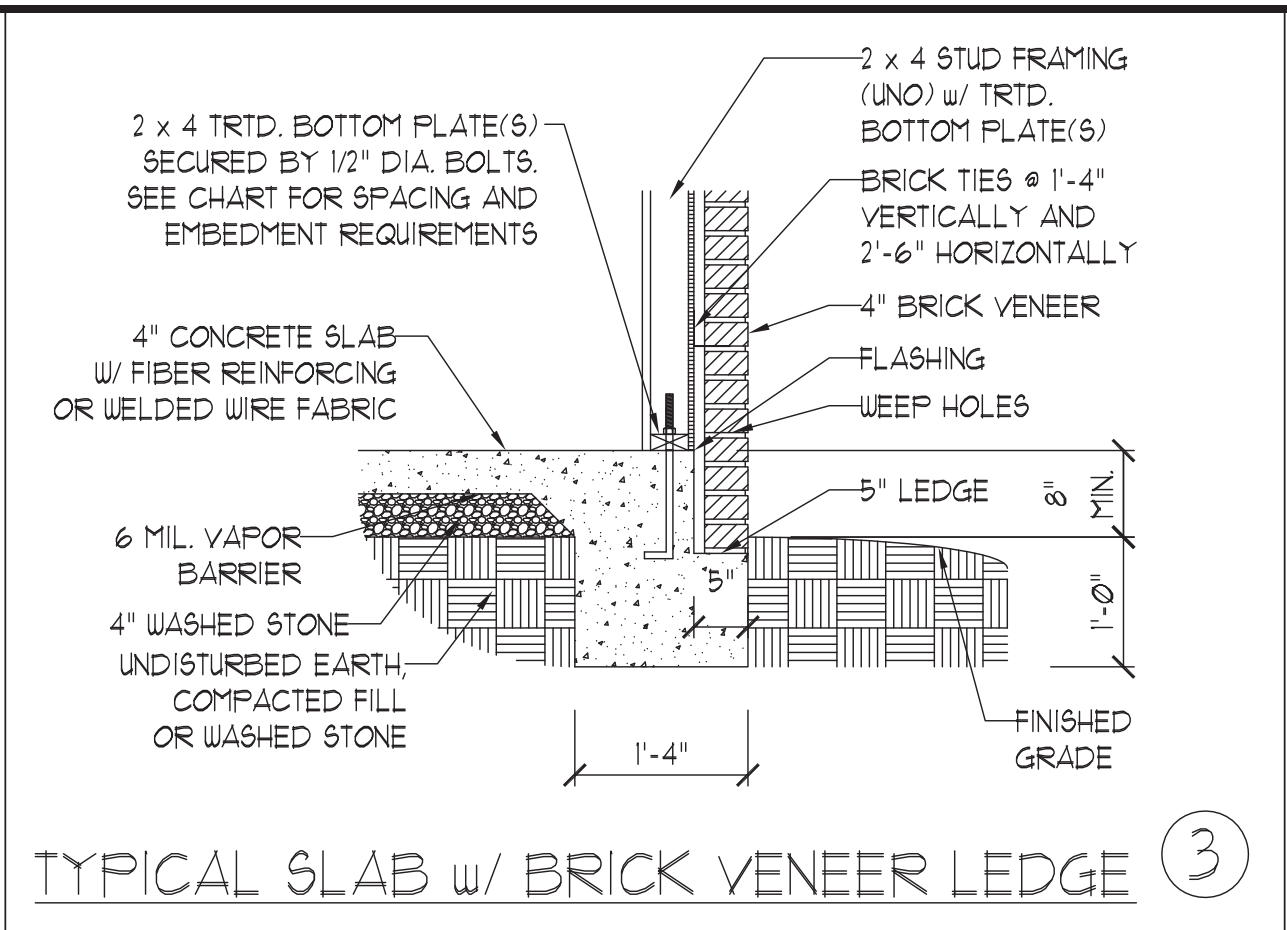
TYPICAL SLAB

①



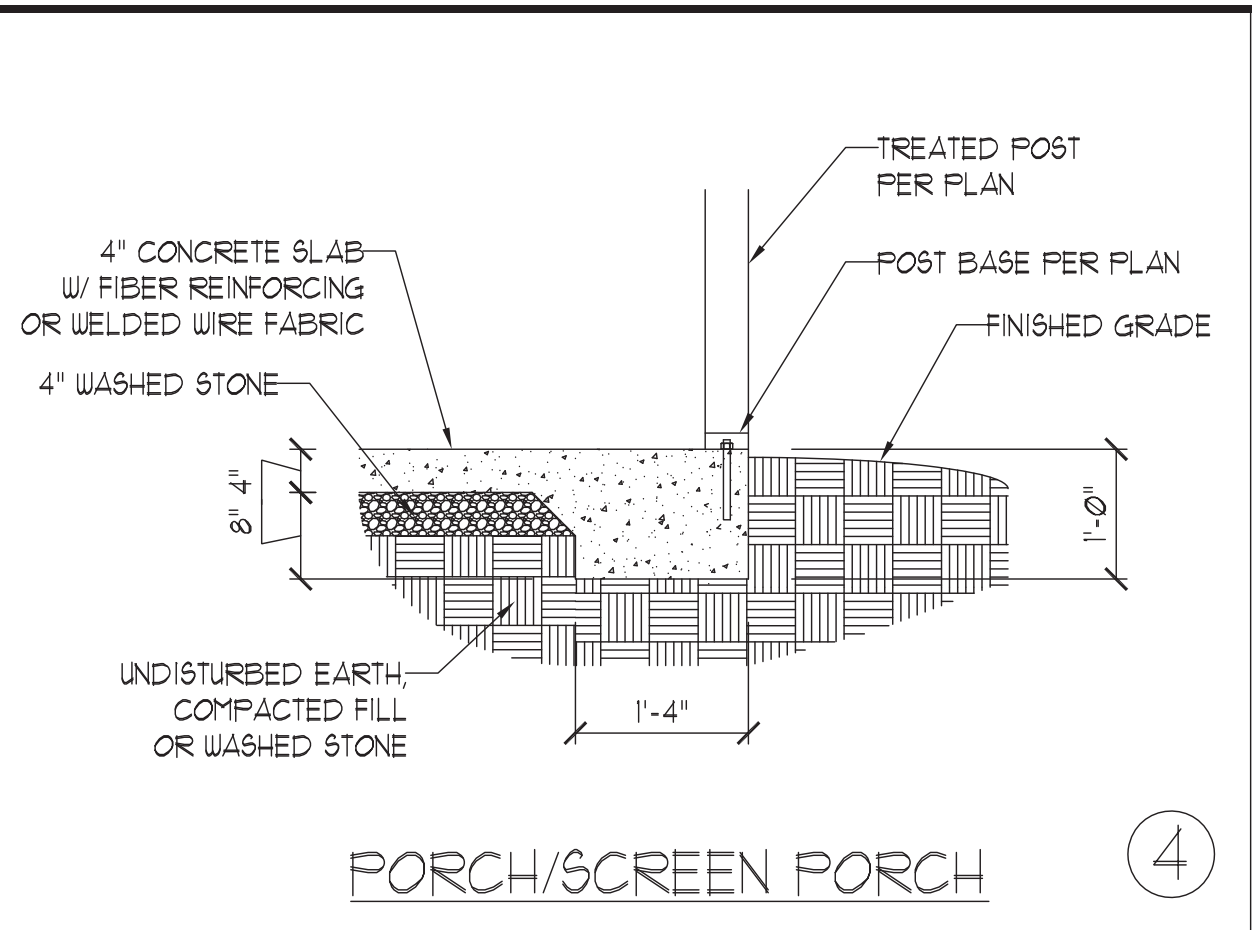
TYPICAL SLAB w/ BRICK LEDGE

②



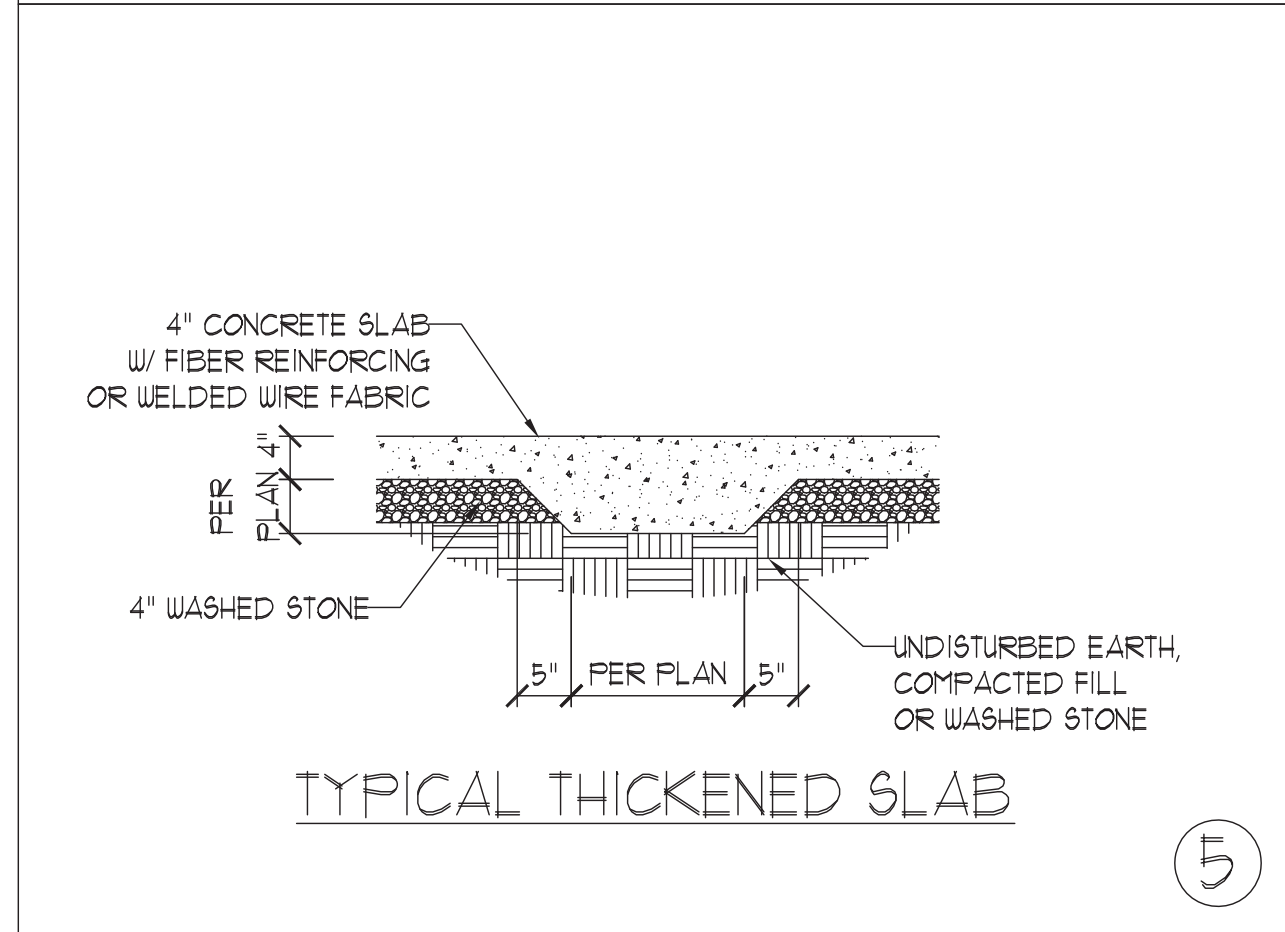
TYPICAL SLAB w/ BRICK VENEER LEDGE

③



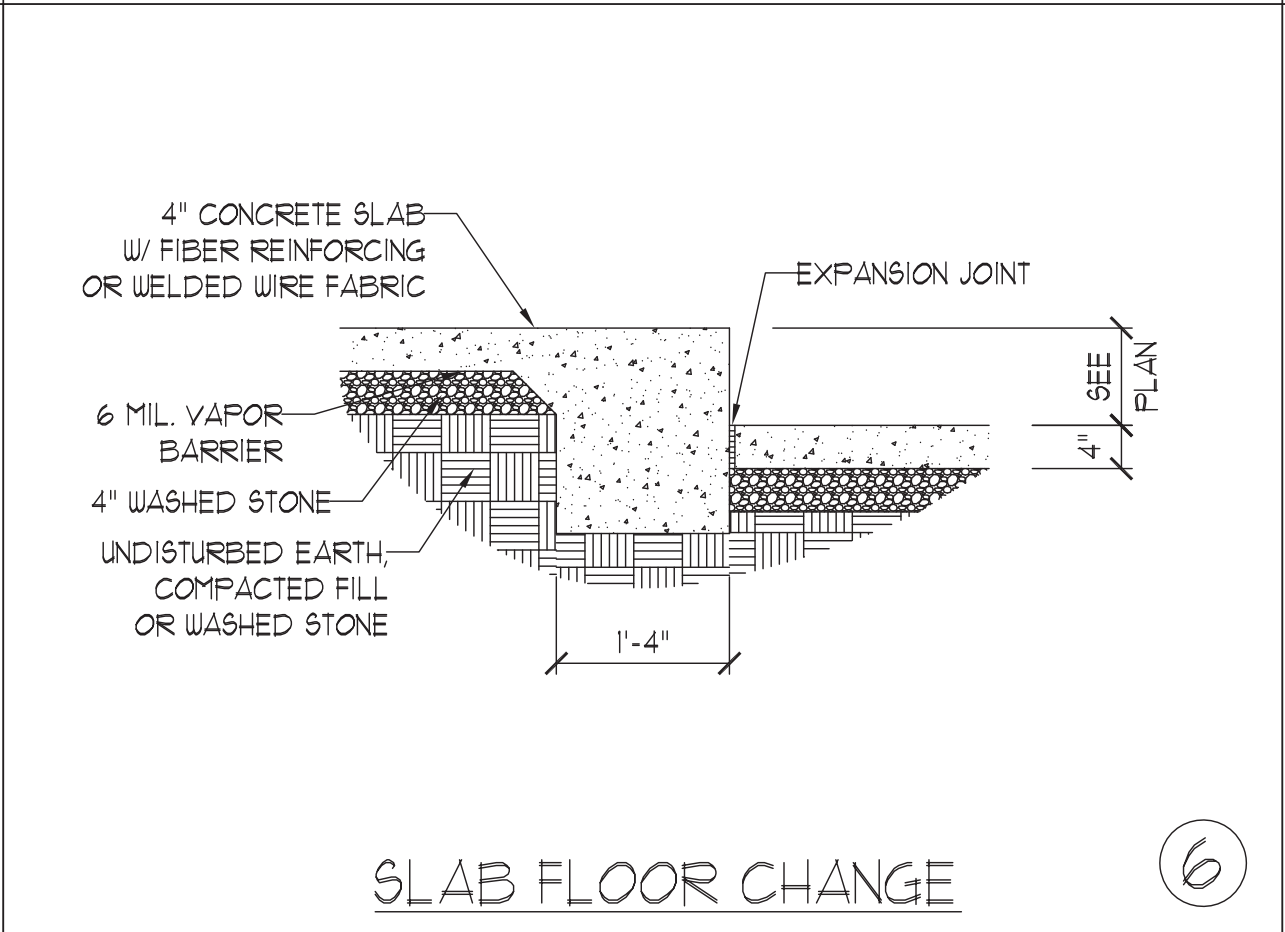
PORCH/SCREEN PORCH

④



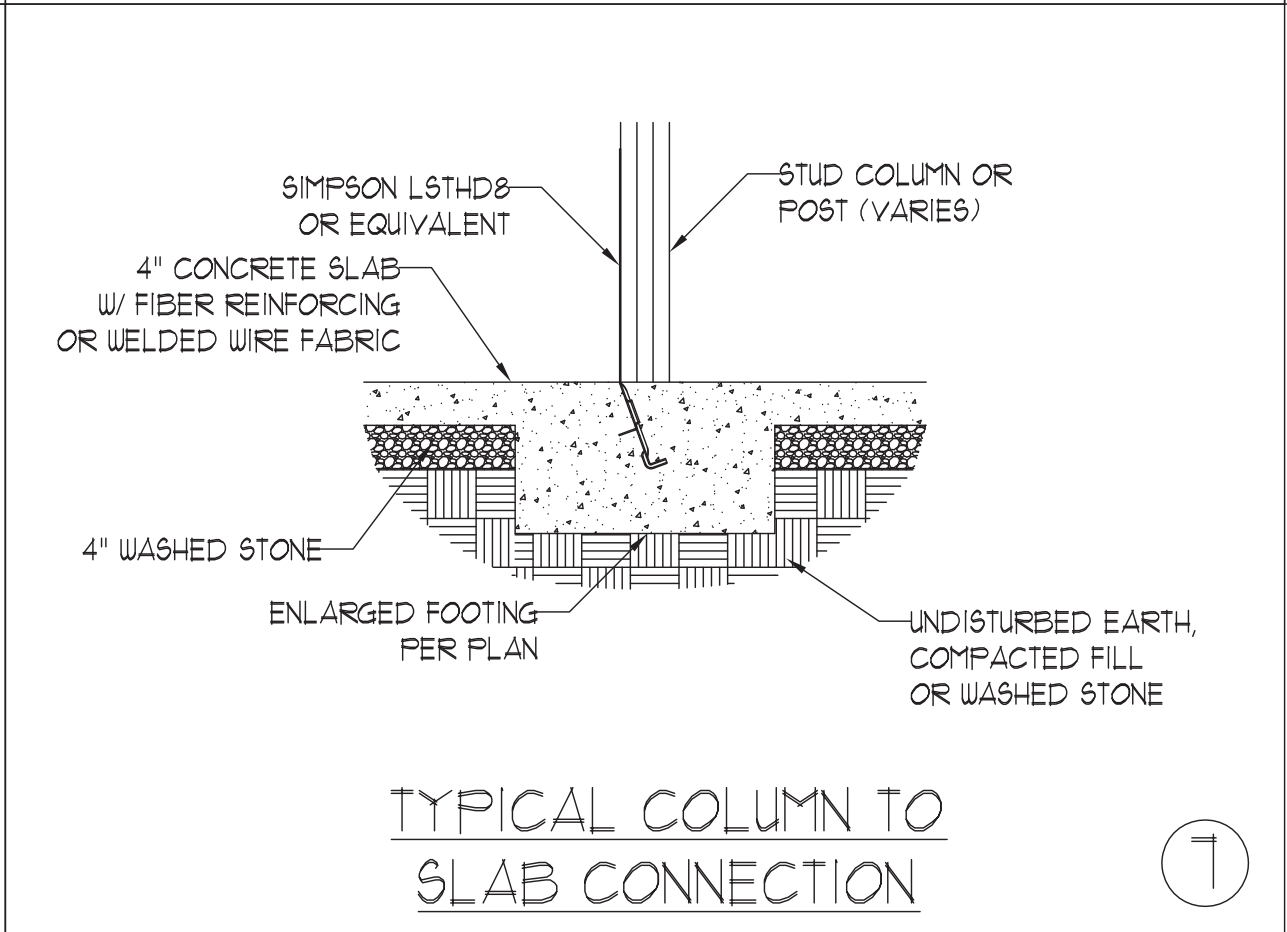
TYPICAL THICKENED SLAB

⑤



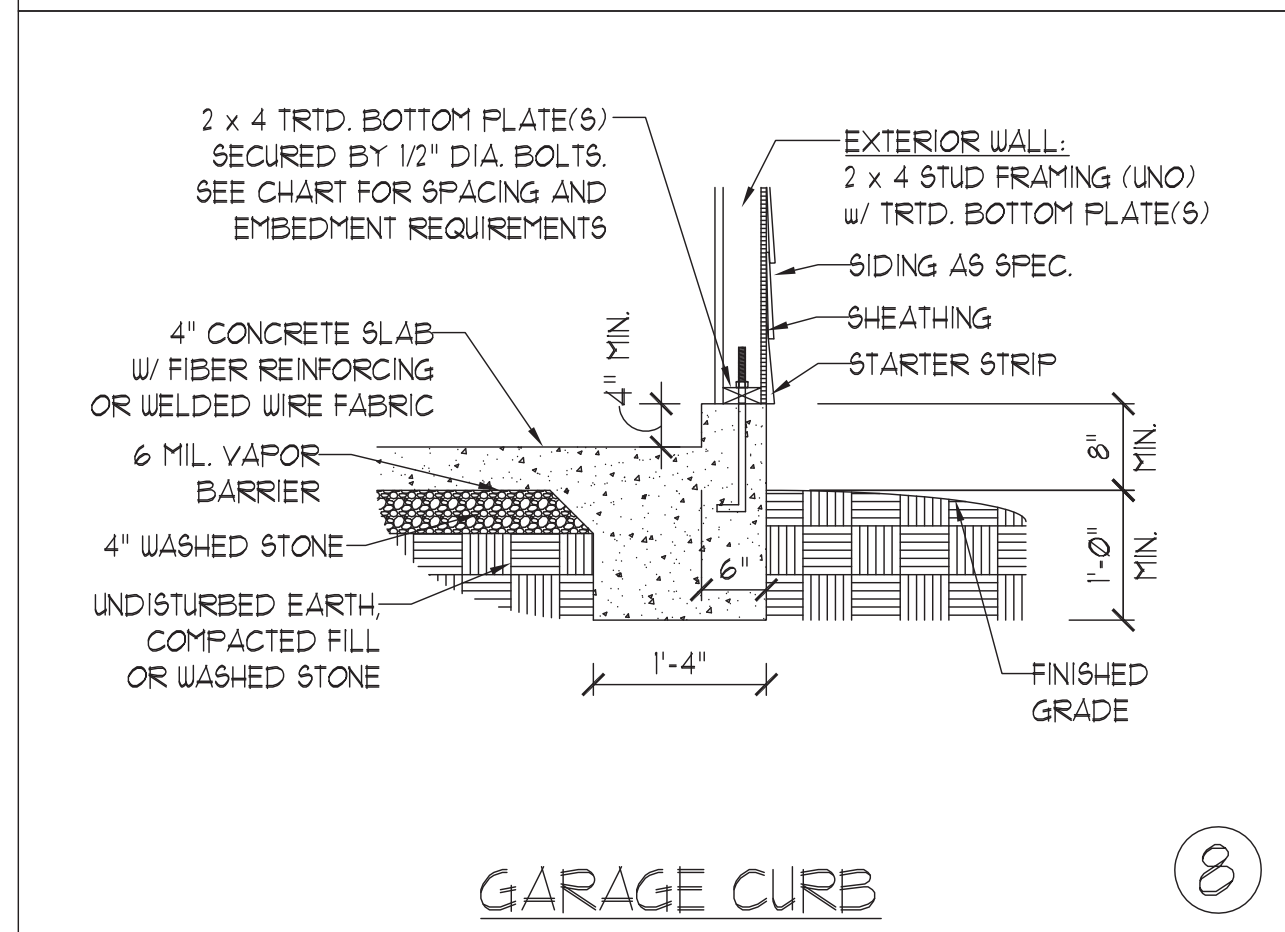
SLAB FLOOR CHANGE

⑥



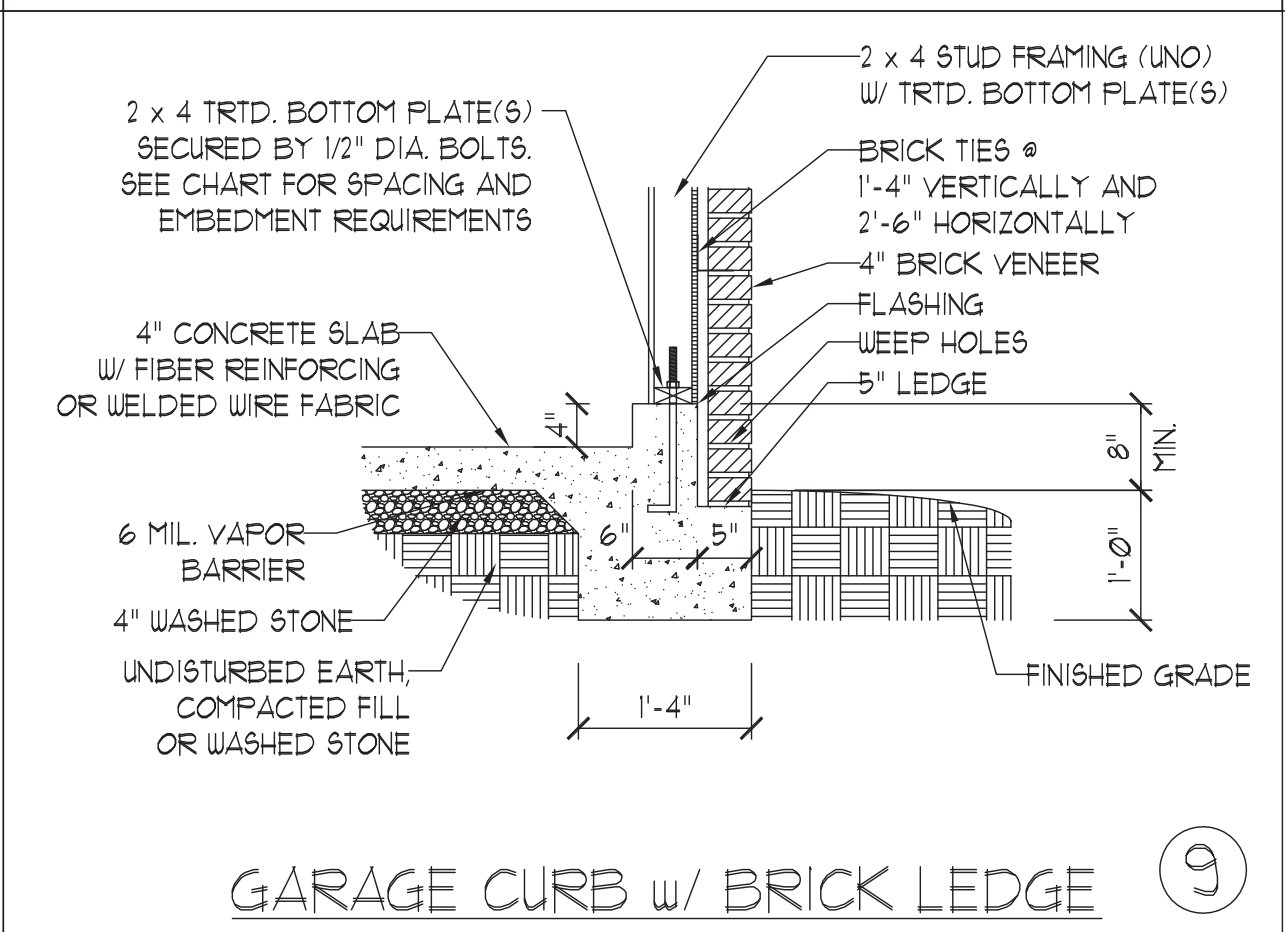
TYPICAL COLUMN TO
SLAB CONNECTION

⑦



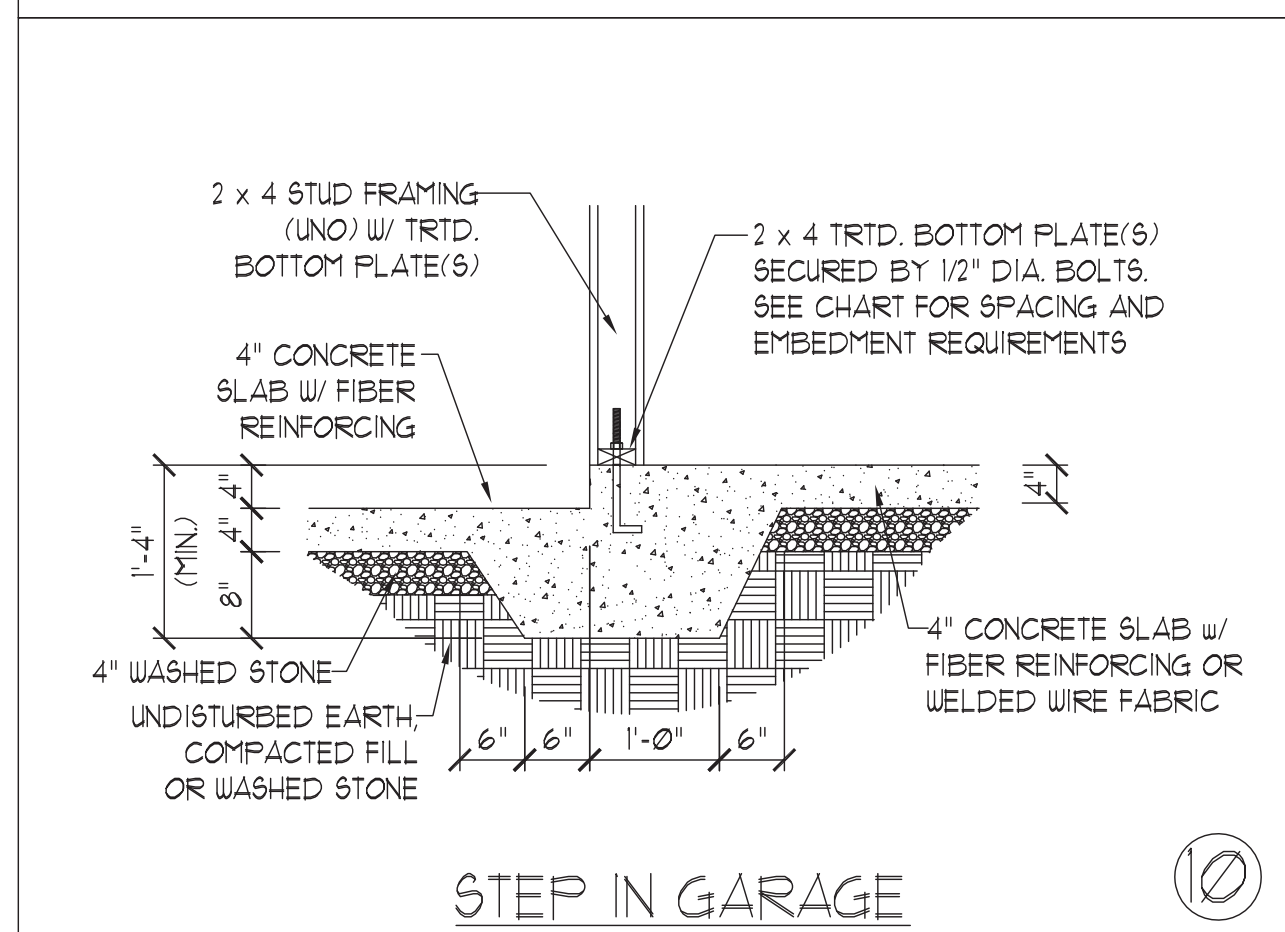
GARAGE CURB

⑧



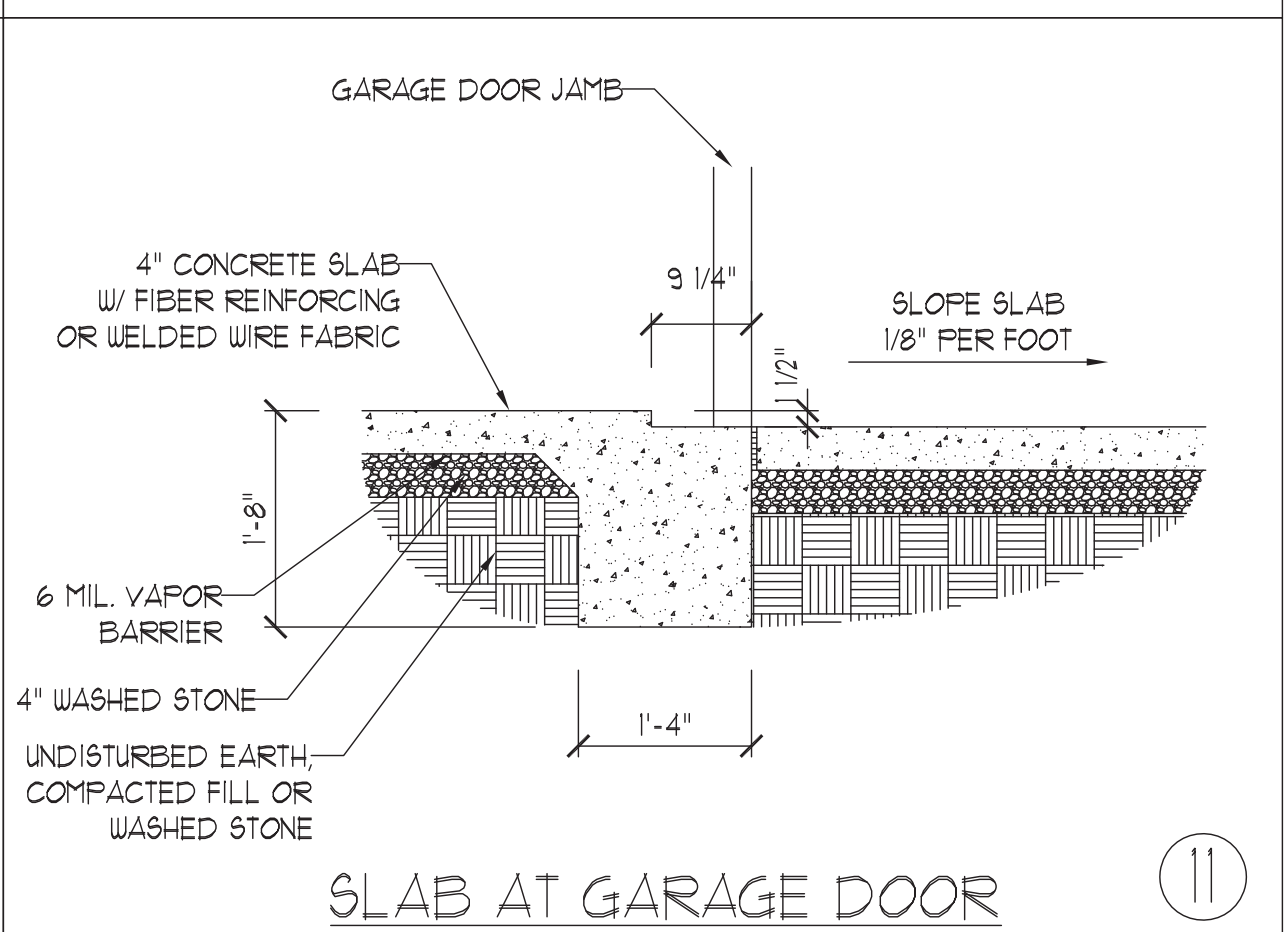
GARAGE CURB w/ BRICK LEDGE

⑨



STEP IN GARAGE

⑩

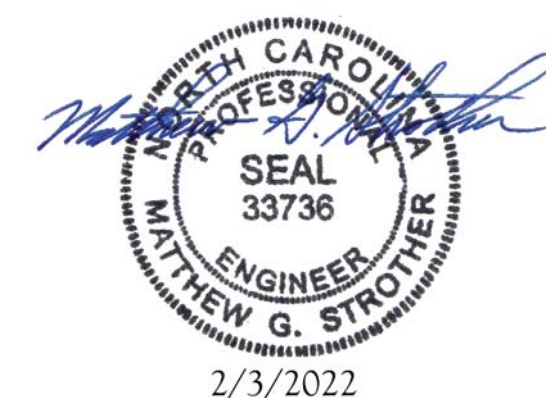


SLAB AT GARAGE DOOR

⑪

ANCHOR SPACING AND EMBEDMENT			NOTE: THREADED ROD WITH EPOXY, SIMPSON TITEN HD, OR APPROVED ANCHORS SPACED AS REQUIRED TO PROVIDE EQUIVALENT ANCHORAGE TO 1/2" DIAMETER ANCHOR BOLTS MAY BE USED IN LIEU OF 1/2" ANCHOR BOLTS.
WIND ZONE	120 MPH	130 MPH	
SPACING	6'-0" O.C. INSTALL MIN. (2) ANCHORS PER PLATE SECTION AND (1) ANCHOR WITHIN 12" OF CORNERS	4'-0" O.C. INSTALL MIN. (2) ANCHORS PER PLATE SECTION AND (1) ANCHOR WITHIN 12" OF CORNERS	
EMBEDMENT	7"	15" INTO MASONRY. 7" INTO CONCRETE	

This sealed page is to be used in conjunction with a full plan set engineered by J.S. Thompson Engineering, Inc. only. Use of this individual sealed page within architectural pages or shop drawings by others is a punishable offense under N.C. Statute § 89C-23



**J.S. THOMPSON
ENGINEERING, INC.**
606 WADE AVE., SUITE 104 RALEIGH, NC 27605
PHONE: (919) 789-9919 FAX: (919) 789-9921
N.C. LICENSE NO.: C-1733

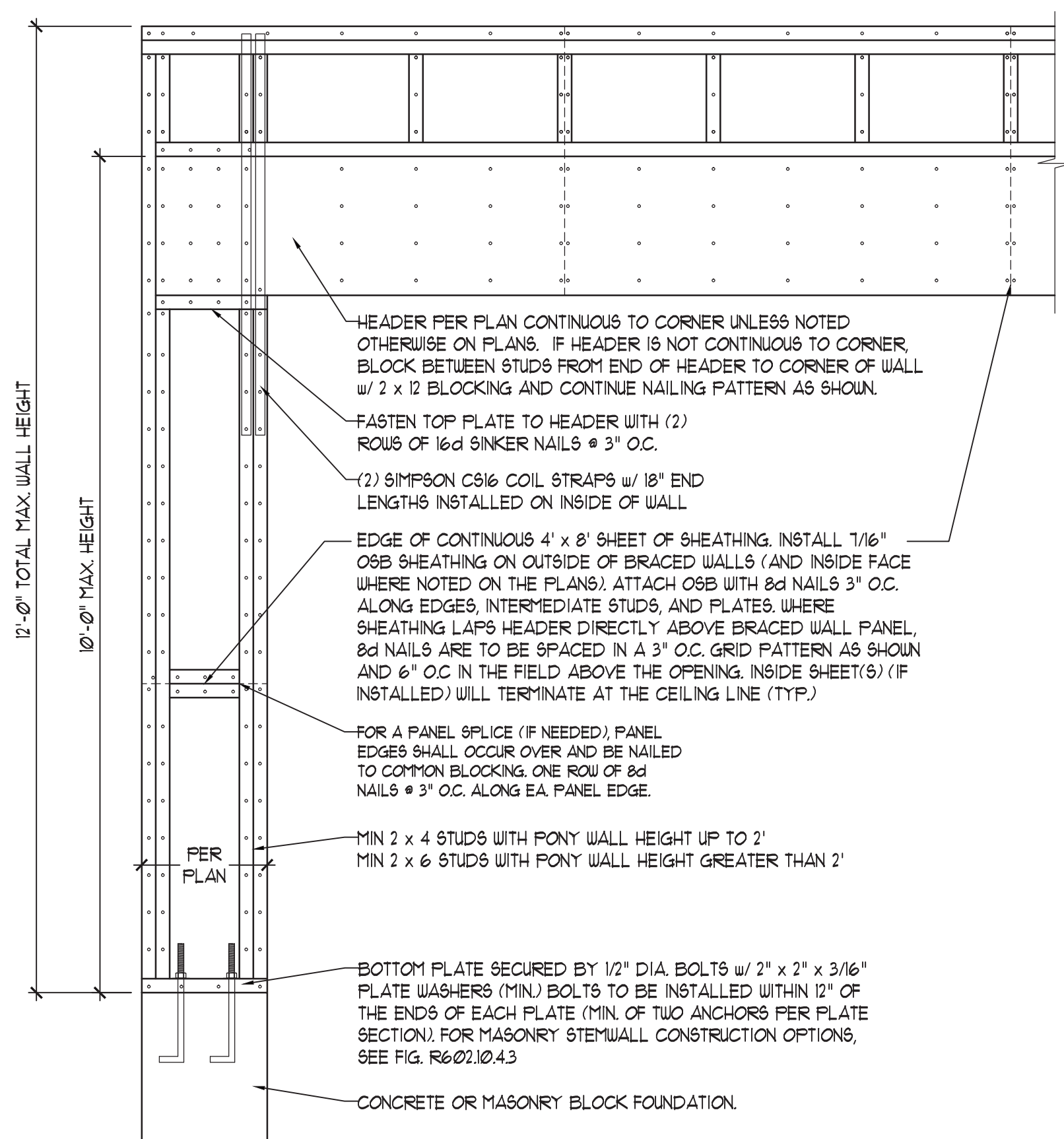
MONOLITHIC SLAB
FOUNDATION DETAILS

DATE: NOVEMBER 1, 2018
SCALE: NTS
DRAWN BY: JST
ENGINEERED BY: JST

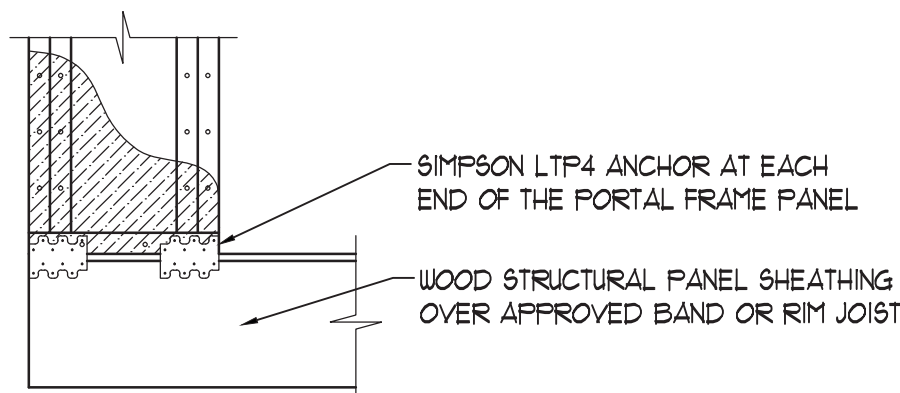
FOUNDATION
DETAILS

GENERAL WALL BRACING NOTES:

1. WALL BRACING DESIGNED IN ACCORDANCE WITH CHAPTER 6 OF THE 2018 NC RESIDENTIAL BUILDING CODE (NCR). TABLES AND FIGURES REFERENCED ARE FROM THE 2018 NCR.
2. SEE THIS SHEET FOR GENERAL DETAILS. REFER TO THE 2018 NCR FOR ADDITIONAL INFORMATION AS NEEDED.
3. SEE STRUCTURAL SHEETS FOR BRACED WALL LOCATIONS, DIMENSIONS, HOLD DOWN TYPE AND LOCATIONS, BRACED WALL LINE KEY WITH WALL DESIGN SUMMARY OF REQUIRED/PROVIDED TOTALS FOR EACH WALL LINE AND ANY SPECIAL NOTES OR REQUIREMENTS.
4. ALL EXTERIOR WALLS ARE TO BE SHEATHED WITH CS-UWP IN ACCORDANCE WITH SECTION R602.10.3 UNLESS NOTED OTHERWISE.
5. ALL EXTERIOR AND INTERIOR WALLS TO HAVE 1/2" GYPSUM INSTALLED, WHEN NOT USING METHOD "GB", GYPSUM TO BE FASTENED PER TABLE R602.3.5, METHOD GB TO BE FASTENED PER TABLE R602.10.1.
6. CS-UWP REFERS TO THE "CONTINUOUS SHEATHING - WOOD STRUCTURAL PANELS" WALL BRACING METHOD. 1/16" OSB SHEATHING IS TO BE INSTALLED ON ALL EXTERIOR WALLS ATTACHED w/ 6d COMMON NAILS OR 8d (2 1/2" LONG x 0.13" DIAMETER) NAILS SPACED 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD (UNO.).
7. GB REFERS TO THE "GYPSUM BOARD" WALL BRACING METHOD. 1/2" (MIN) GYPSUM WALL BOARD IS TO BE INSTALLED ON BOTH SIDES OF THE BRACED WALL FASTENED WITH 1 1/4" SCREWS OR 1 5/8" NAILS SPACED 1" O.C. ALONG PANEL EDGES INCLUDING TOP AND BOTTOM PLATES AND INTERMEDIATE SUPPORTS (UNO.). VERIFY ALL FASTENER OPTIONS FOR 1/2" AND 5/8" GYPSUM PRIOR TO CONSTRUCTION. FOR INTERIOR FASTENER OPTIONS SEE TABLE R602.3.5. FOR EXTERIOR FASTENER OPTIONS SEE TABLE R602.3(1). EXTERIOR GB TO BE INSTALLED VERTICALLY.
8. REQUIRED BRACED WALL LENGTH FOR EACH SIDE OF THE CIRCUMSCRIBED RECTANGLE ARE INTERPOLATED PER TABLE R602.10.3. METHOD CS-UWP CONTRIBUTES ITS ACTUAL LENGTH, METHOD GB CONTRIBUTES 5 ITS ACTUAL LENGTH, AND METHOD PF CONTRIBUTES 15 TIMES ITS ACTUAL LENGTH.



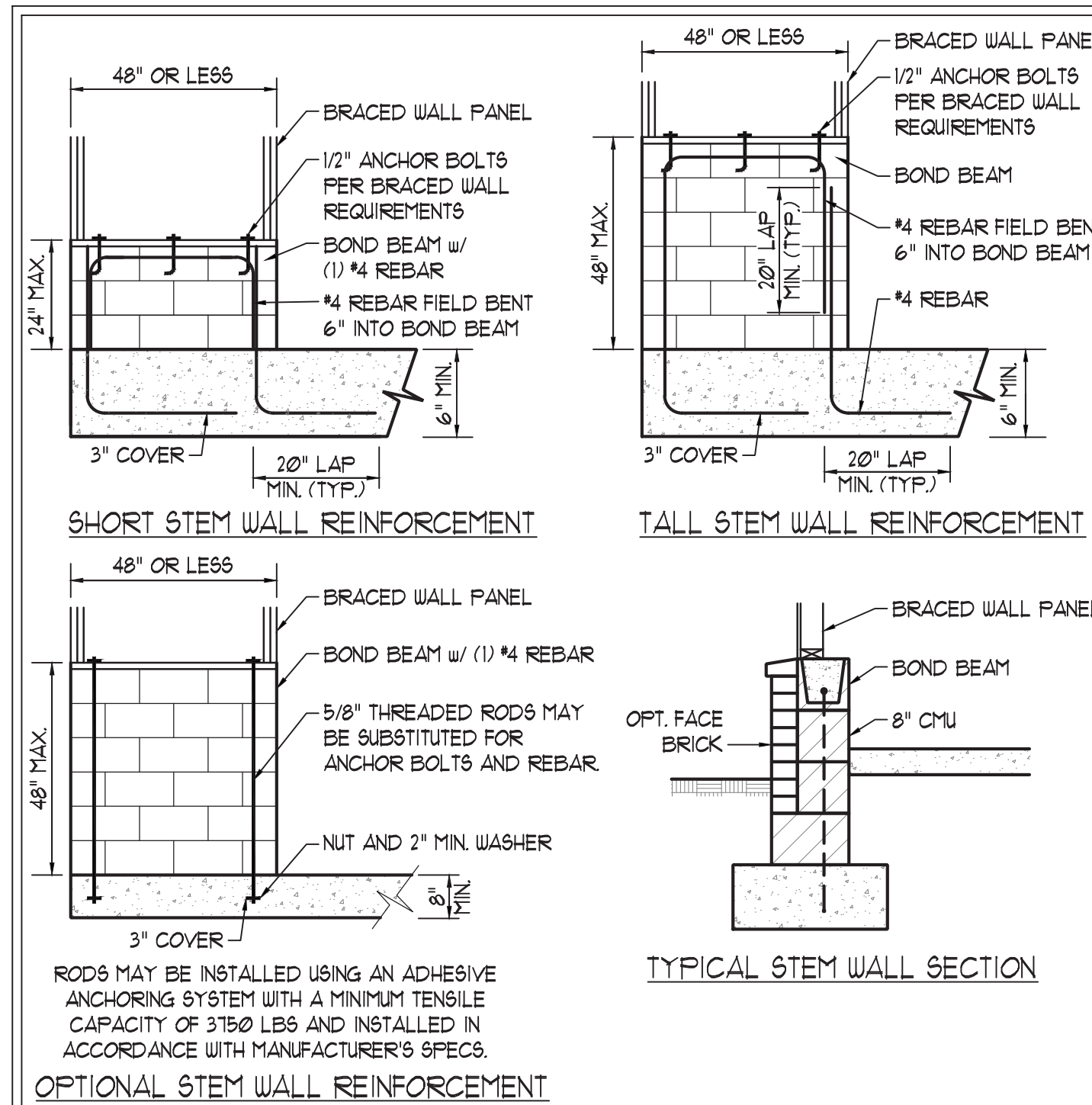
OVER CONCRETE OR MASONRY BLOCK FOUNDATION



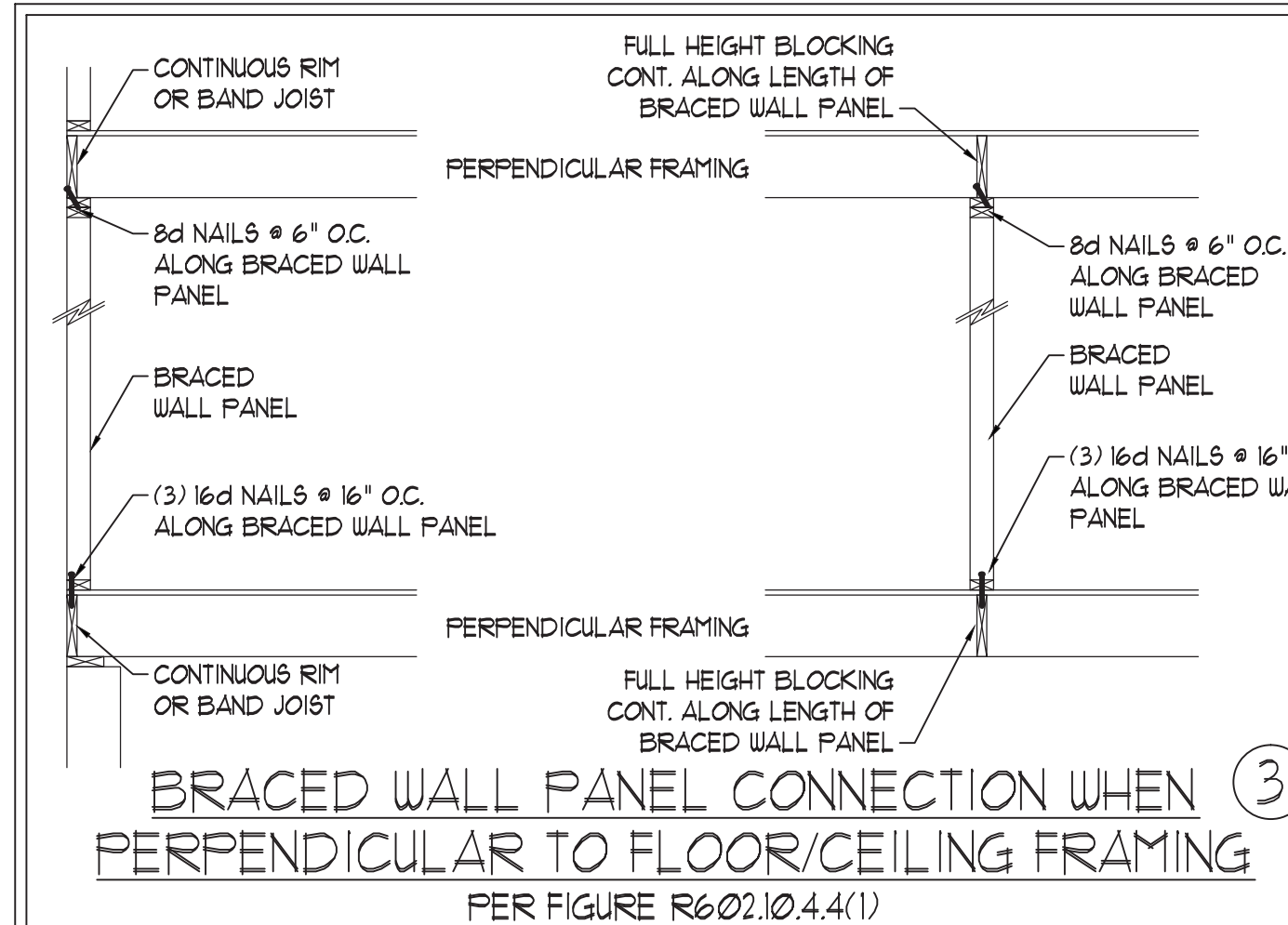
OVER RAISED WOOD FLOOR - FRAMING ANCHOR OPTION

* APPLICABLE w/ GREATER THAN 12" KNEE WALL HEIGHTS IN CRAWL SPACE AND ABOVE FINISHED BASEMENT WALLS *

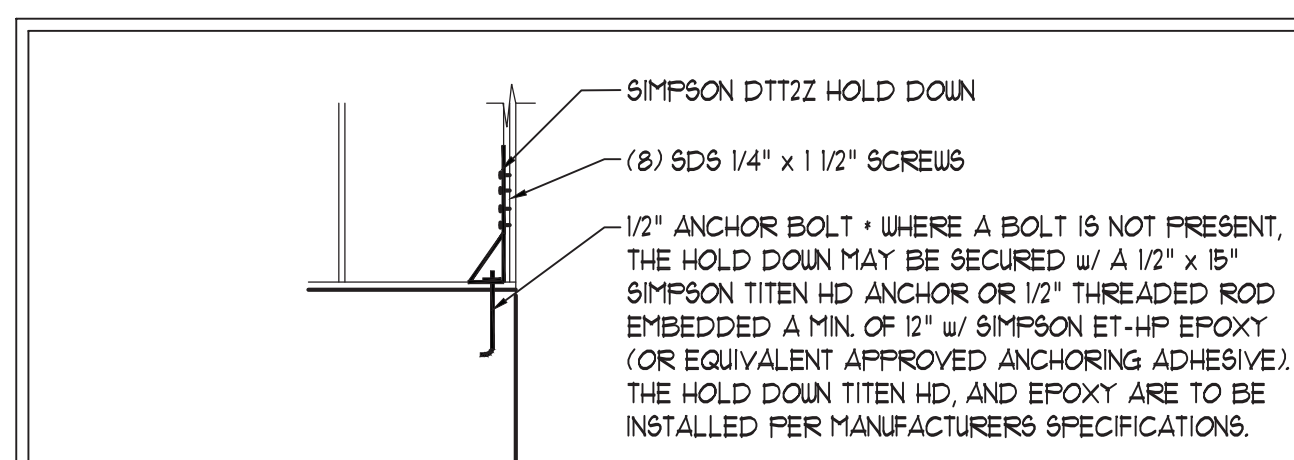
METHOD PF-PORTAL FRAME DETAIL ①



NOTE: GROUT BOND BEAMS AND ALL CELLS WHICH CONTAIN REBAR, THREADED RODS AND ANCHOR BOLTS
MASONRY STEM WALLS SUPPORTING
BRACED WALL PANELS ②
PER FIGURE R602.10.4.3

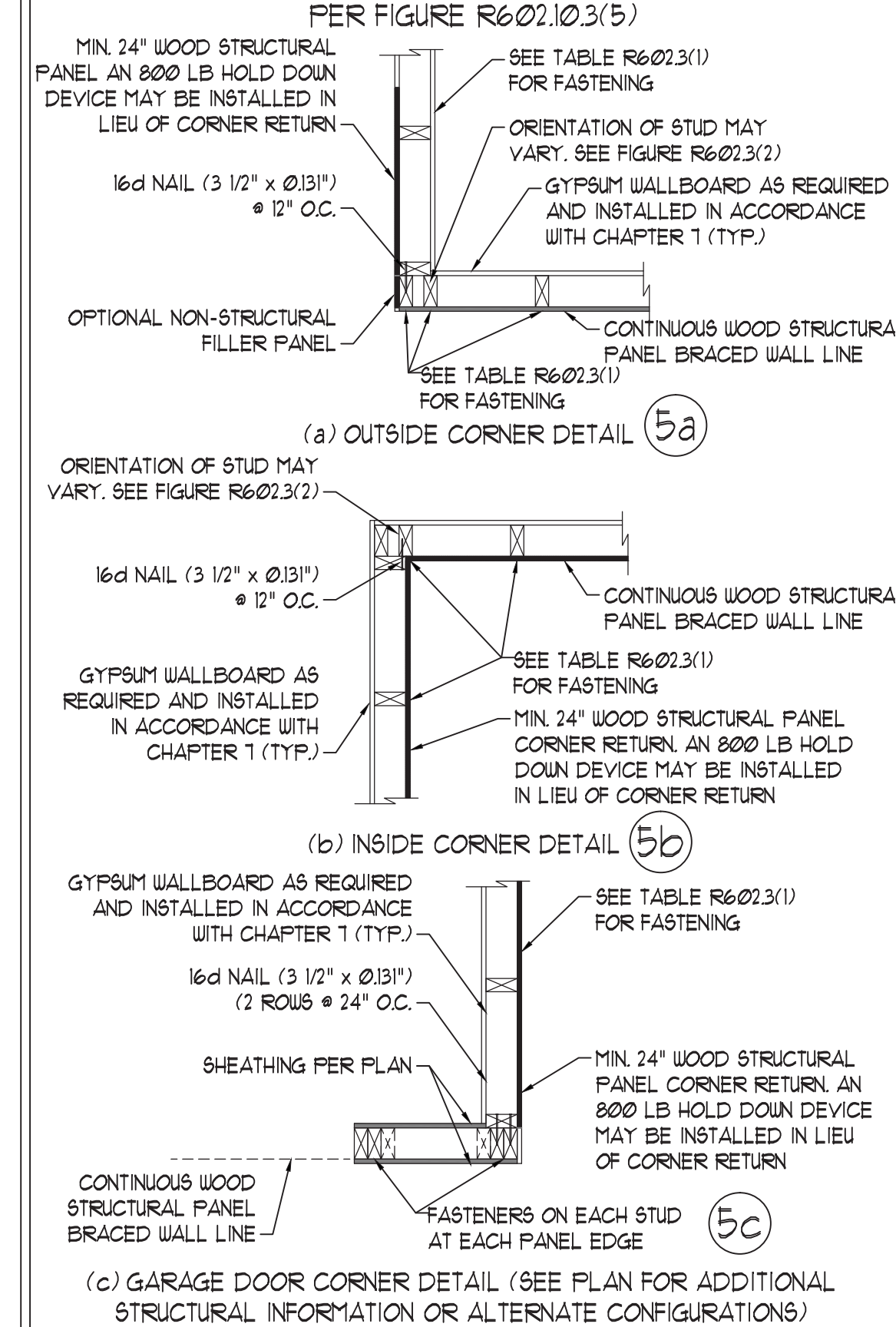


BRACED WALL PANEL CONNECTION WHEN ③
PERPENDICULAR TO FLOOR/CEILING FRAMING
PER FIGURE R602.10.4.4(1)

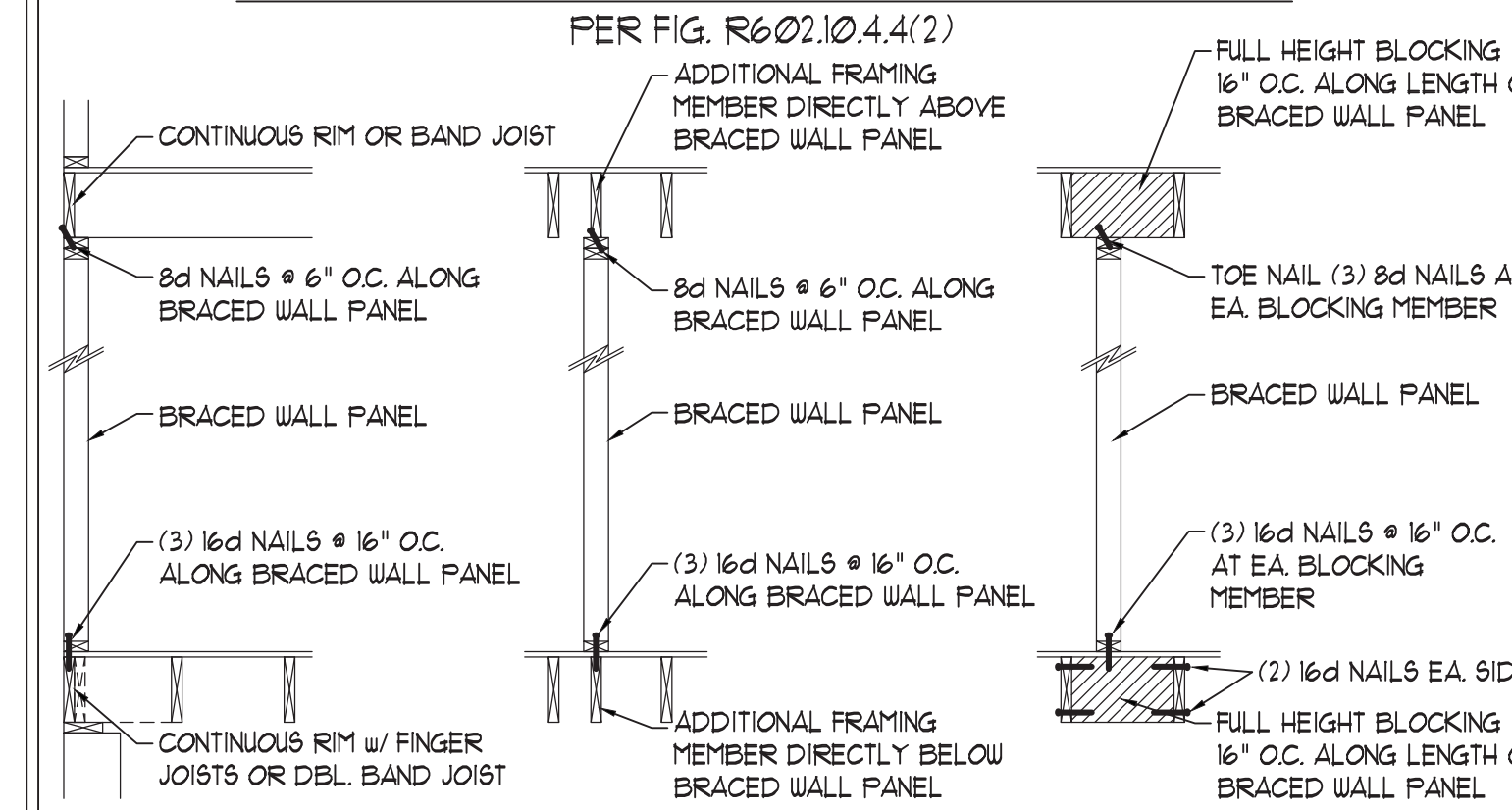


HOLD DOWN DETAIL FOR MASONRY FOUNDATION OR MONOLITHIC SLAB ④
* APPLICABLE ONLY WHERE SPECIFIED ON PLAN *

TYPICAL EXTERIOR CORNER FRAMING FOR CONTINUOUS SHEATHING ⑤

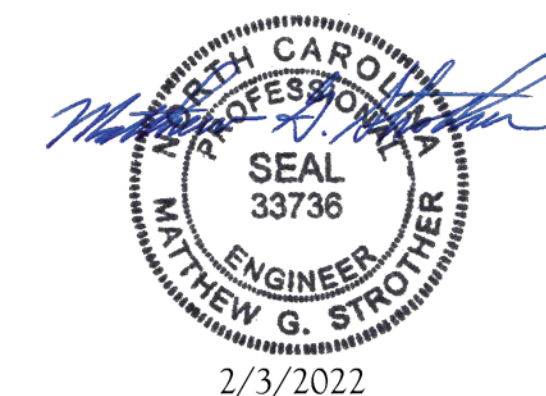
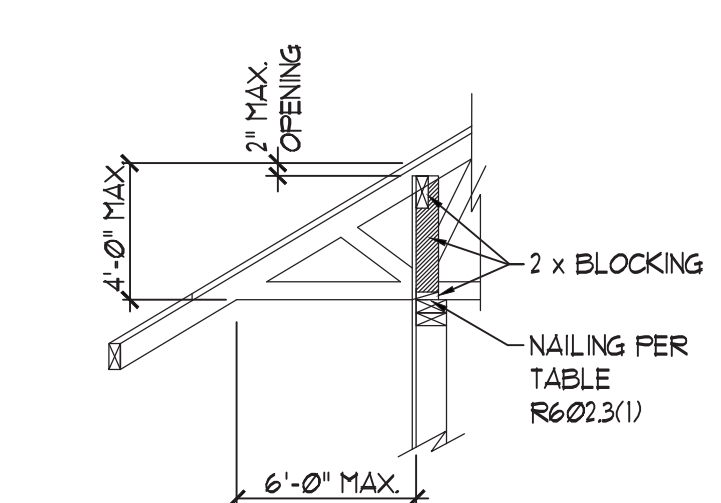


BRACED WALL PANEL CONNECTION WHEN ⑥ PARALLEL TO FLOOR/CEILING FRAMING



BRACED WALL PANEL CONNECTION TO PERPENDICULAR ROOF TRUSSES ⑨

PER FIGURE R602.10.4.5(3)
(OR ALTERNATIVE: FIGURE R602.10.4.5(2))



J.S. THOMPSON ENGINEERING, INC.
606 WADE AVE., SUITE 104 RALEIGH, NC 27605
PHONE: (919) 789-9919 FAX: (919) 789-9921
N.C. LICENSE NO.: C-1733

WALL BRACING NOTES AND DETAILS

DATE: OCTOBER 30, 2018
SCALE: 1/4" = 1'-0"
DRAWN BY: JST
ENGINEERED BY: JST

BRACED WALL NOTES AND DETAILS AND PF DETAIL

This sealed page is to be used in conjunction with a full plan set engineered by J.S. Thompson Engineering, Inc. only. Use of this individual sealed page within architectural pages or shop drawings by others is a punishable offense under N.C. Statute § 89C-23

GENERAL NOTES

1. ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS INCLUDING ROOF RAFTERS, HIPs, VALLEYS, RIDGES, FLOORS, WALLS, BEAMS, HEADERS, COLUMNS, CANTILEVERS, OFFSET LOAD BEARING WALLS, PIERS, GIRDER SYSTEM AND FOOTING. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OF ARCHITECTURAL LAYOUT INCLUDING ROOF. ENGINEER'S SEAL DOES NOT APPLY TO I-JOIST OR FLOOR/ROOF TRUSS LAYOUT DESIGN AND ACCURACY.
2. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NORTH CAROLINA RESIDENTIAL CODE (NRC) 2018 EDITION, PLUS ALL LOCAL CODES AND REGULATIONS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR, AND WILL NOT HAVE CONTROL OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK. NOR WILL THE ENGINEER BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
3. STRUCTURAL DESIGN BASED ON THE PROVISIONS OF THE NRC, 2018 EDITION (R301.4 - R301.7)
- | DESIGN CRITERIA: | LIVE LOAD (PSF) | DEAD LOAD (PSF) | DEFLECTION (IN) |
|--------------------------------|--|-----------------|-----------------------------------|
| ATTIC WITH LIMITED STORAGE | 20 | 10 | L/240 (L/360 w/ BRITTLE FINISHES) |
| ATTIC WITHOUT STORAGE | 10 | 10 | L/360 |
| DECKS | 40 | 10 | L/360 |
| EXTERIOR BALCONIES | 40 | 10 | L/360 |
| FIRE ESCAPES | 40 | 10 | L/360 |
| HANDRAILS/GUARDRAILS | 200 LB OR 50 (PLF) | 10 | L/360 |
| PASSENGER VEHICLE GARAGE | 50 | 10 | L/360 |
| ROOMS OTHER THAN SLEEPING ROOM | 40 | 10 | L/360 |
| SLEEPING ROOMS | 30 | 10 | L/360 |
| STAIRS | 40 | 10 | L/360 |
| WIND LOAD | (BASED ON TABLE R3012(4) WIND ZONE AND EXPOSURE) | | |
| GROUND SNOW LOAD: Pg | 20 (PSF) | | |
- I-JOIST SYSTEMS DESIGNED WITH 12 PSF DEAD LOAD AND DEFLECTION (IN) OF L/480
- FLOOR TRUSS SYSTEMS DESIGNED WITH 15 PSF DEAD LOAD
4. FOR 115 AND 120 MPH WIND ZONES, FOUNDATION ANCHORAGE IS TO COMPLY WITH SECTION R403.1.6 OF THE NRC, 2018 EDITION. FOR 130 MPH, 140 MPH, AND 150 MPH WIND ZONES, FOUNDATION ANCHORAGE IS TO COMPLY WITH SECTION 450.4 OF THE NRC, 2018 EDITION.
5. ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER 11 OF THE NRC, 2018 EDITION.

FOOTING AND FOUNDATION NOTES

1. FOUNDATION DESIGN BASED ON A MINIMUM ALLOWABLE BEARING CAPACITY OF 2000 PSF. CONTACT GEOTECHNICAL ENGINEER IF BEARING CAPACITY IS NOT ACHIEVED.
2. FOR ALL CONCRETE SLABS AND FOOTINGS, THE AREA WITHIN THE PERIMETER OF THE BUILDING ENVELOPE SHALL HAVE ALL VEGETATION, TOP SOIL AND FOREIGN MATERIAL REMOVED. FILL MATERIAL SHALL BE FREE OF VEGETATION AND FOREIGN MATERIAL. THE FILL SHALL BE COMPACTED TO ASSURE UNIFORM SUPPORT OF THE SLAB, AND EXCEPT WHERE APPROVED, THE FILL DEPTHS SHALL NOT EXCEED 24" FOR CLEAN SAND OR GRAVEL. A 4" THICK BASED COURSE CONSISTING OF CLEAN GRADED SAND OR GRAVEL SHALL BE PLACED. A BASE COURSE IS NOT REQUIRED WHERE A CONCRETE SLAB IS INSTALLED ON WELL-DRAINED OR SAND-GRAVEL MIXTURE SOILS CLASSIFIED AS GROUP 1, ACCORDING TO THE UNITED SOIL CLASSIFICATION SYSTEM IN ACCORDANCE WITH TABLE R405.1 OF THE NRC, 2018 EDITION.
3. PROPERLY DEWATER EXCAVATION PRIOR TO POURING CONCRETE WHEN BOTTOM OF CONCRETE SLAB IS AT OR BELOW WATER TABLE. IF APPLICABLE, 3/4" - 1" DEEP CONTROL JOINTS ARE TO BE SAUED WITHIN 4 TO 12 HOURS OF CONCRETE FINISHING AND WALL LOCATIONS HAVE BEEN MARKED. ADJUST WHERE NECESSARY.
4. CONCRETE SHALL CONFORM TO SECTION R402.2 OF THE NRC, 2018 EDITION. CONCRETE REINFORCING STEEL TO BE ASTM A615 GRADE 60. WELDED WIRE FABRIC TO BE ASTM A185. MAINTAIN A MINIMUM CONCRETE COVER AROUND REINFORCING STEEL OF 3" IN FOOTINGS AND 1 1/2" IN SLABS. FOR POURED CONCRETE WALLS, CONCRETE COVER FOR REINFORCING STEEL MEASURED FROM THE INSIDE FACE OF THE WALL SHALL NOT BE LESS THAN 3/4". CONCRETE COVER FOR REINFORCING STEEL MEASURED FROM THE OUTSIDE FACE OF THE WALL SHALL NOT BE LESS THAN 1 1/2" FOR #5 BARS OR SMALLER, AND NOT LESS THAN 2" FOR #6 BARS OR LARGER.
5. MASONRY UNITS TO CONFORM TO ACE 530/ASCE 5/TMS 402. MORTAR SHALL CONFORM TO ASTM C270.
6. THE UNSUPPORTED HEIGHT OF MASONRY PIERS SHALL NOT EXCEED FOUR TIMES THEIR LEAST DIMENSION FOR UNFILLED HOLLOW CONCRETE MASONRY UNITS AND TEN TIMES THEIR LEAST DIMENSION FOR SOLID OR SOLID FILLED PIERS. PIERS MAY BE FILLED SOLID WITH CONCRETE OR TYPE M OR S MORTAR. PIERS AND WALLS SHALL BE CAPPED WITH 8" OF SOLID MASONRY.
7. THE CENTER OF EACH OF THE PIERS SHALL BEAR IN THE MIDDLE THIRD OF ITS RESPECTIVE FOOTING. EACH GIRDER SHALL BEAR IN THE MIDDLE THIRD OF THE PIERS.
8. ALL CONCRETE AND MASONRY FOUNDATION WALLS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF SECTION R404 OF THE NRC, 2018 EDITION OR IN ACCORDANCE WITH ACI 318, ACI 332, NCHA TR68-A OR ACE 530/ASCE 5/TMS 402. MASONRY FOUNDATION WALLS ARE TO BE REINFORCED PER TABLE R404.11(1), R404.11(2), R404.11(3), OR R404.11(4) OF THE NRC, 2018 EDITION. CONCRETE FOUNDATION WALLS ARE TO BE REINFORCED PER TABLE R404.11(5) OF THE NRC, 2018 EDITION. STEP CONCRETE FOUNDATION WALLS TO 2 x 6 FRAMED WALLS AT 16" O.C. WHERE GRADE PERMITS (UNO).

This sealed page is to be used in conjunction with a full plan set engineered by J.S. Thompson Engineering, Inc. only. Use of this individual sealed page within architectural pages or shop drawings by others is a punishable offense under N.C. Statute § 89C-23

FRAMING NOTES

1. ALL FRAMING LUMBER SHALL BE #2 SFF MINIMUM (Fb = 875 PSI, Fv = 375 PSI, E = 1600000 PSI) UNLESS NOTED OTHERWISE (UNO). ALL TREATED LUMBER SHALL BE #2 SYP MINIMUM (Fb = 975 PSI, Fv = 175 PSI, E = 1600000 PSI) UNLESS NOTED OTHERWISE (UNO).
2. LAMINATED VENEER LUMBER (LVL) SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fb = 2600 PSI, Fv = 285 PSI, E = 1900000 PSI. LAMINATED STRAND LUMBER (LSL) SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fb = 2375 PSI, Fv = 310 PSI, E = 1500000 PSI. PARALLEL STRAND LUMBER (PSL) UP TO 1" DEPTH SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fc = 2500 PSI, E = 1800000 PSI. PARALLEL STRAND LUMBER (PSL) MORE THAN 1" DEPTH SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fc = 2900 PSI, E = 2000000 PSI. INSTALL ALL CONNECTIONS PER MANUFACTURER'S SPECIFICATIONS.
3. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS
- | | |
|--------------------------------|--------------------------------|
| A. W AND WT SHAPES: | ASTM A992 |
| B. CHANNELS AND ANGLES: | ASTM A36 |
| C. PLATES AND BARS: | ASTM A36 |
| D. HOLLOW STRUCTURAL SECTIONS: | ASTM A500 GRADE B |
| E. STEEL PIPE: | ASTM A53, GRADE B, TYPE E OR S |
4. STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" AND FULL FLANGE WIDTH (UNO). PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED AT THE BOTTOM FLANGE TO EACH SUPPORT AS FOLLOWS (UNO):
- | | |
|----------------------------|--|
| A. WOOD FRAMING | (2) 1/2" DIA. x 4" LONG LAG SCREWS |
| B. CONCRETE | (2) 1/2" DIA. x 4" WEDGE ANCHORS |
| C. MASONRY (FULLY GROUTED) | (2) 1/2" DIA. x 4" LONG SIMPSON TITEN HD ANCHORS |
- LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOISTS ARE TOE NAILED TO THE 2x NAILER ON TOP OF THE STEEL BEAM, AND THE 2x NAILER IS SECURED TO THE TOP OF THE STEEL BEAM w/ (2) ROWS OF SELF TAPPING SCREWS @ 16" O.C. OR (2) ROWS OF 1/2" DIAMETER BOLTS @ 16" O.C. IF 1/2" BOLTS ARE USED TO FASTEN THE NAILER, THE STEEL BEAM SHALL BE FABRICATED w/ (2) ROWS OF 3/16" DIAMETER HOLES @ 16" O.C.
5. SQUARES DENOTE POINT LOADS WHICH REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION. SHADED SQUARES DENOTE POINT LOADS FROM ABOVE WHICH REQUIRE SOLID BLOCKING TO SUPPORTING MEMBER BELOW.
6. ALL LOAD BEARING HEADERS TO CONFORM TO TABLE R602.7(1) AND R602.7(2) OF THE NRC, 2018 EDITION OR BE (2) 2 x 6 WITH (1) JACK AND (1) KING STUD EACH END (UNO). WHICHEVER IS GREATER ALL HEADERS TO BE SECURED TO EACH JACK STUD WITH (4) 8d NAILS. ALL BEAMS TO BE SUPPORTED WITH (2) STUDS AT EACH BEARING POINT (UNO). INSTALL KING STUDS PER SECTION R602.15 OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
7. ALL BEAMS, HEADERS, OR GIRDER TRUSSES PARALLEL TO WALL ARE TO BEAR FULLY ON (1) JACK OR (2) STUDS MINIMUM OR THE NUMBER OF JACKS OR STUDS NOTED. ALL BEAMS OR GIRDER TRUSSES PERPENDICULAR TO WALL AND SUPPORTED BY (3) STUDS OR LESS ARE TO HAVE 1 1/2" MINIMUM BEARING (UNO). ALL BEAMS OR GIRDER TRUSSES PERPENDICULAR TO WALL AND SUPPORTED BY MORE THAN (3) STUDS OR OTHER NOTED COLUMN ARE TO BEAR FULLY ON SUPPORT COLUMN FOR ENTIRE WALL DEPTH (UNO). BEAM ENDS THAT BUTT INTO ONE ANOTHER ARE TO EACH BEAR EQUAL LENGTHS (UNO).
8. FLITCH BEAMS SHALL BE BOLTED TOGETHER USING 1/2" DIAMETER BOLTS (ASTM A307) WITH WASHERS PLACED AT THREADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" CENTERS (MAXIMUM), AND STAGGERED AT TOP AND BOTTOM OF BEAM (2" EDGE DISTANCE), WITH (2) BOLTS LOCATED AT 6" FROM EACH END (UNO).
9. ALL I-JOIST OR TRUSS LAYOUTS ARE TO BE IN COMPLIANCE WITH THE OVERALL DESIGN SPECIFIED ON THE PLANS. ALL DEVIATIONS ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD PRIOR TO INSTALLATION.
10. BRACED WALL PANELS SHALL BE CONSTRUCTED ACCORDING TO THE NORTH CAROLINA RESIDENTIAL CODE 2018 EDITION WALL BRACING CRITERIA. THE AMOUNT, LENGTH, AND LOCATION OF BRACING SHALL COMPLY WITH ALL APPLICABLE TABLES IN SECTION R602.10.
11. PROVIDE DOUBLE JOIST UNDER ALL WALLS PARALLEL TO FLOOR JOISTS. PROVIDE SUPPORT UNDER ALL WALLS PARALLEL TO FLOOR TRUSSES OR I-JOISTS PER MANUFACTURER'S SPECIFICATIONS. INSTALL BLOCKING BETWEEN JOISTS OR TRUSSES FOR POINT LOAD SUPPORT FOR ALL POINT LOADS ALONG OFFSET LOAD LINES.
12. FOR ALL HEADERS SUPPORTING BRICK VENEER THAT ARE LESS THAN 8'-0" IN LENGTH, REST A 6" x 4" x 5/16" STEEL ANGLE WITH 6" MINIMUM EMBEDMENT AT SIDES FOR BRICK SUPPORT (UNO). FOR ALL HEADERS 8'-0" AND GREATER IN LENGTH, BOLT A 6" x 4" x 5/16" STEEL ANGLE TO HEADER WITH 1/2" LAG SCREWS AT 12" O.C. STAGGERED FOR BRICK SUPPORT. FOR ALL BRICK SUPPORT AT ROOF LINES, BOLT A 6" x 4" x 5/16" STEEL ANGLE TO (2) 2 x 10 BLOCKING INSTALLED w/ (4) 12d NAILS EA. FLY BETWEEN WALL STUDS WITH (2) ROWS OF 1/2" LAG SCREWS AT 12" O.C. STAGGERED AND IN ACCORDANCE WITH SECTION R103.8.2.1 OF THE NRC, 2018 EDITION.
13. FOR STICK FRAMED ROOFS, CIRCLES DENOTE (3) 2 x 4 POSTS FOR ROOF MEMBER SUPPORT. HIP SPLICES ARE TO BE SPACED A MINIMUM OF 8'-0". FASTEN MEMBERS WITH THREE ROWS OF 12d NAILS AT 16" O.C. FRAME DORMER WALLS ON TOP OF DOUBLE OR TRIPLE RAFTERS AS SHOWN (UNO).
14. FOR TRUSSED ROOFS, FRAME DORMER WALLS ON TOP OF 2 x 4 LADDER FRAMING AT 24" O.C. BETWEEN ADJACENT ROOF TRUSSES. STICK FRAME OVER-FRAMED ROOF SECTIONS WITH 2 x 8 RIDGES, 2 x 6 RAFTERS AT 16" O.C. AND FLAT 2 x 10 VALLEYS (UNO).
15. ALL 4 x 4 AND 6 x 6 POSTS TO BE INSTALLED WITH 100 LB CAPACITY UPLIFT CONNECTORS TOP AND BOTTOM (UNO). POSTS MAY BE SECURED USING ONE SIMPSON 146 OR L792 UPLIFT CONNECTOR FASTENED TO THE BAND AT THE BOTTOM AND THE BEAM AT THE TOP OF EACH POST. ONE 16" SECTION OF SIMPSON C916 COIL STRAPPING WITH (8) 8d HDG NAILS AT EACH END MAY BE USED IN LIEU OF EACH TWIN STRAP IF DESIRED. FOR MASONRY OR CONCRETE FOUNDATION USE SIMPSON POST BASE.

J.S. THOMPSON
ENGINEERING, INC.
606 WADE AVE., SUITE 104 RALEIGH, NC 27605
PHONE: (919) 789-9919 FAX: (919) 789-9921
N.C. LICENSE NO.: C-1733

STANDARD STRUCTURAL NOTES

DATE: OCTOBER 29, 2018

SCALE: 1/4" = 1'-0"

DRAWN BY: JES

ENGINEERED BY: JST

SHEET:

STRUCTURAL
NOTES



2/3/2022