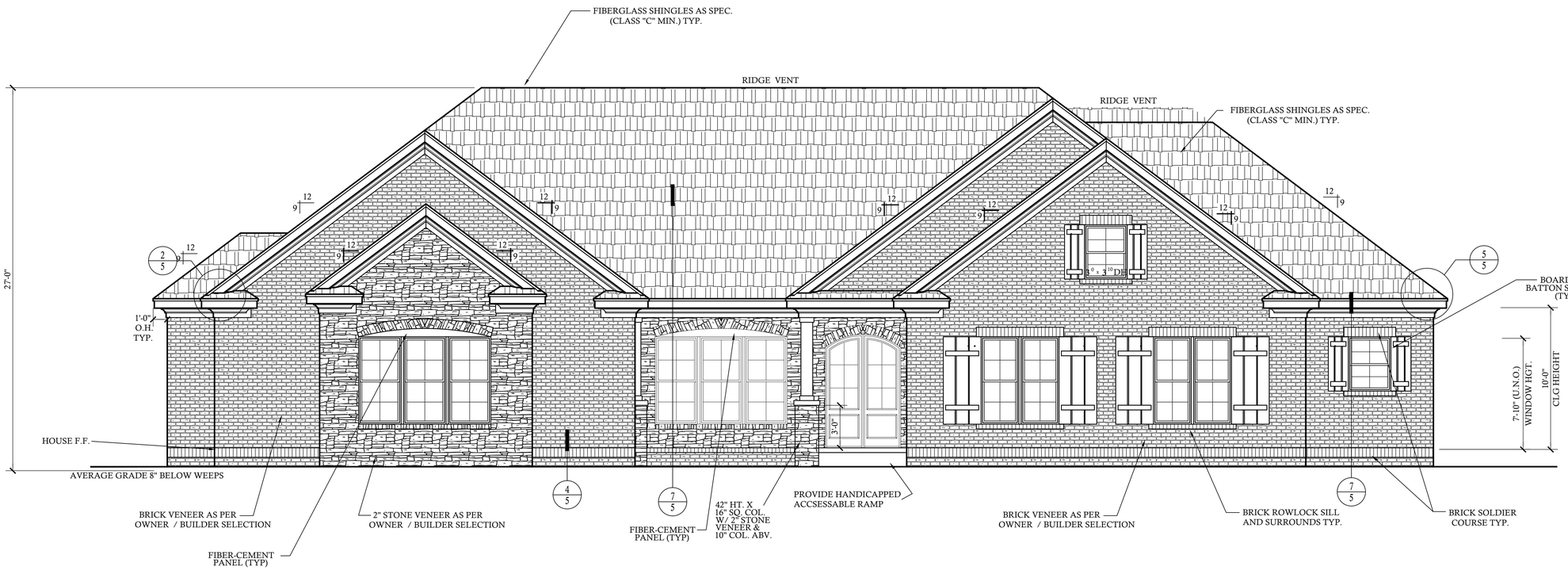
NOTE: PLANS DESIGNED UNDER 2018 NORTH CAROLINA RESIDENTIAL CODE.



FRONT ELEVATION

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

LIST OF ABBREVIATIONS

CLG. : CEILING
HGT. : HEIGHT
D.O. : DOUBLE OVEN
WD. : WOOD
CONT. :CONTINUOUS
CONC. : CONCRETE
COL. : COLUMN
ELLIP. : ELLIPSE
W/ : WITH
TRANS. : TRANSOM
CANT. : CANTILEVER
M.O. : MASONRY OPENING
5S= 5 SHELVES
1R/1S = 1 ROD AND 1 SHELF
2R/2S =2 RODS AND 2 SHELVES
SD= SMOKE DETECTOR
CMD= CARBON MONOXIDE DETECTOR
ABV. : ABOVE
C.O. : CASED OPENING
REFG. : REFRIGERATOR
D.W. : DISHWASHER
T.B.D.: TO BE DETERMINED
W.I.C. : WALK IN CLOSET
W : WASHER
D : DRYER
SHWR. : SHOWER
DN. : DOWN
K.S. : KNEE SPACE
TYP. : TYPICAL

GENERAL PLAN NOTES

1.) SEE CHAPTER 6 OF 2018 NCRC FOR WALL CONSTRUCTION.

2.) TEMPERED GLASS TO BE USED AT ALL SAFETY REQUIRED LOCATIONS ACCORDING TO 2018 NCRC SECTION R308.4.

3.) DWELLING/GARAGE FIRE SEPARATION SHALL PER TABLE 302.6 OF 2018 NCRC.

4.) ALL HABITABLE ROOMS SHALL MEET LIGHT/VENTILATION & EGRESS AS REQUIRED IN 2018 NCRC SECTIONS R303.1 AND R310

5.) ALL ANGLED WALLS ARE 45° UNLESS NOTED OTHERWISE.

6.) VERIFY ALL WINDOW SIZES, RADIUS, AND DETAILS WITH CHOSEN MANUFACTURE.

7.) LOCATE DORMER FACE TO ALLOW 4" MIN. BELOW WINDOW FRAME.

8.) FLOOR PLAN NOTATIONS GOVERN OVER ELEVATION SCALE.

9.) ALL CABINET DESIGNS/LAYOUTS TO BE VERIFIED WITH OWNER VIA SHOP DRAWINGS FROM CABINET MANUF.

10.) ALL FLOOR COVERINGS AND FINISHES BY OWNER/ BLDR. COORDINATE HEIGHTS DUE TO THICKNESS CHANGES.

11.) ALL WINDOW GLAZING TO HAVE 0.32 U-FACTOR MIN. SEE TABLE E-4A, E-4B

12.) FINISHES OF SCREEN PORCH COLUMNS,RAILS, FLOORS , CEILINGS ;SCREEN DOOR SYSTEM,AND DOOR TO PORCH BY BLDR. & OWNER, PER CONTRACT SPECIFICATIONS

13.) FINISHES FOR CLOSET SHELVING AND ROD BY BLDR. & OWNER, PER CONTRACT SPECIFICATIONS

14.) FINISHES OF ALL INTERIOR BASE BOARD , CLG. DETAIL / MOLDING ,OPENING DETAILS ,PASS-THRUS ,WAINSCOTTING DETAILS BY BLDR. & OWNER, PER CONTRACT SPECIFICATIONS

ACCESSORIES LEGEND

PROVIDE BLOCKING FOR:

TB = TOWEL BAR
TP = TOILET PAPER
TR = TOWEL RING
MR = MAGAZINE RACK
MC = MEDICINE CABINET

NOTE:
SELECTION BY OWNER PER BUILDER CONTRACT SPECIFICATIONS

NOTE:
-SEE ROOF PLAN FOR KNEEWALL HEIGHTS AND LOCATIONS.

-GRADE LINES ARE ASSUMED. VERIFY WITH FINAL GRADING PLAN.

AREA CALCULATIONS

HEATED (SQ. FT.)		UNHEATED (SQ. FT.)	
BASEMENT:	N/A	GARAGE:	1159
1ST FLOOR:	2688	COV. PORCH:	132
REC ROOM:	N/A	REAR PORCH:	805
		STOOP:	33
ATTIC:	N/A	BRICK:	N/A
TOTAL: (HEATED)	2688	TOTAL: (UNHEATED)	2096

OVERALL DIMENSION		UNFINISHED (SQ. FT.)	
WIDTH:	89'-4"	BASEMENT:	N/A
DEPTH:	79'-1"	REC ROOM:	N/A
		ATTIC:	N/A
		STORAGE:	73

CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. ANY ERROR OR OMISSIONS SHALL BE REPORTED TO DESIGNER FOR CLARIFICATION BEFORE ANY JUSTIFICATION. CONTRACTOR MUST COMPLY WITH ALL CODES AND ORDINANCES THAT APPLY TO HOME IS TO BE BUILT. IF NO ENGINEERING DRAWINGS ARE PROVIDED, CONTRACTOR MUST CONSULT WITH LOCAL OFFICIALS TO DETERMINE IF STRUCTURAL DESIGN ONCE CONSTRUCTION HAS BEGUN. CONTRACTOR WILL ASSUME ALL RESPONSIBILITY. PLAN HAS BEEN DESIGNED TO COMPLY WITH 2018 IRC.

REVISIONS:

DATE: NAME:

DRAWN BY: RKR

CHECKED BY:

DATE: 8/23/2021

PLAN NO.

DESIGNTECH INC.
130 WIND CHIME CT.
UNIT A
RALEIGH, NC 27603
919-233-0972
WWW.DESIGNTECH.COM

VUNCANNON RESIDENCE

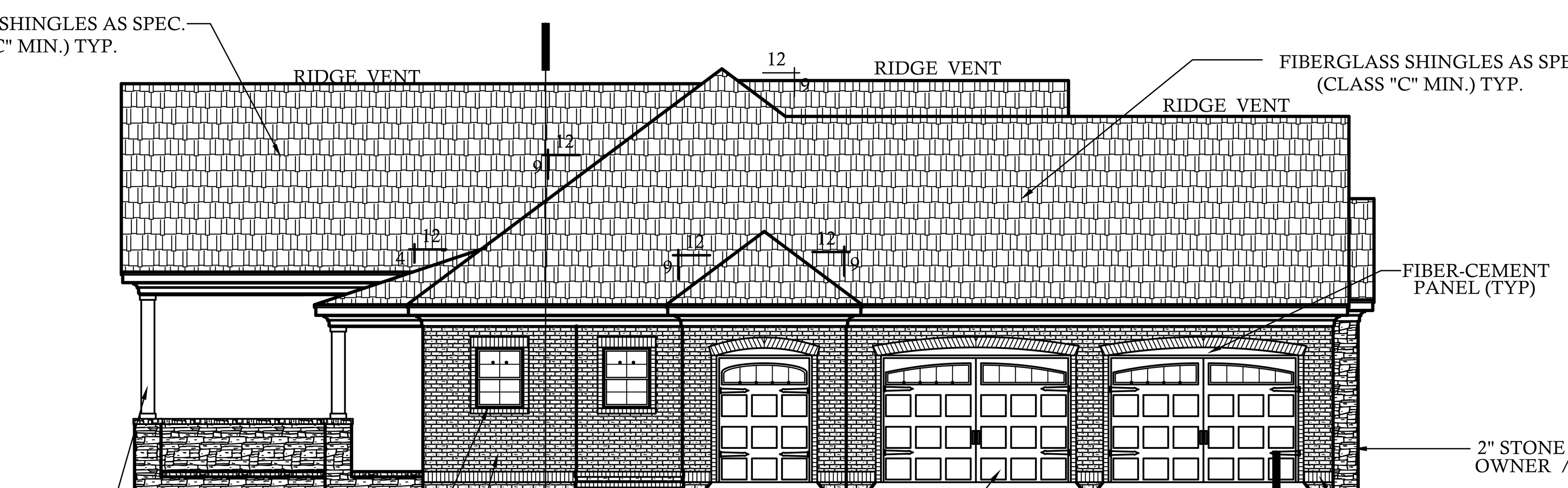
SHEET NO. 1 OF 5

NOTE:
SEE ROOF PLAN FOR KNEEWALL HEIGHTS AND LOCATIONS.

NOTE:
GRADE LINES ARE ASSUMED. VERIFY WITH FINAL GRADING PLAN.

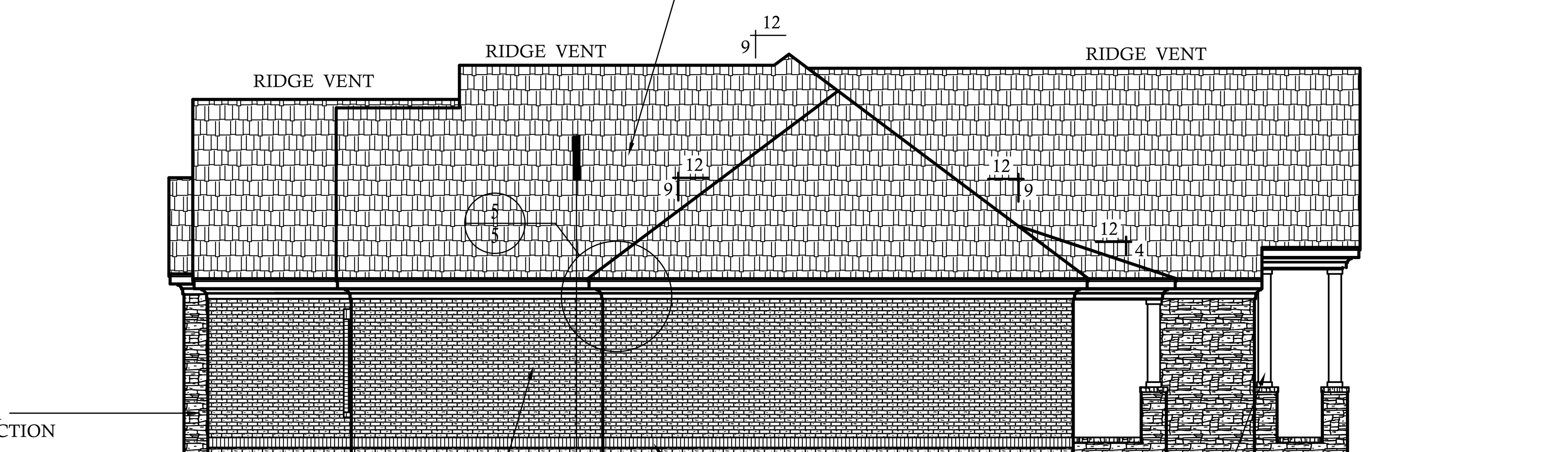
REAR ELEVATION

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



LEFT SIDE ELEVATION

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



RIGHT SIDE ELEVATION

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

CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. ANY ERROR OR OMISSIONS SHALL BE REPORTED TO DESIGN TECH, INC. FOR CORRECTIONS OR JUSTIFICATION. CONTRACTOR MUST COMPLY WITH ALL LOCAL BUILDING CODES WHERE HOME IS TO BE BUILT. IF NO ENGINEERING DRAWINGS ARE PROVIDED, CONTRACTOR MUST CONSULT WITH LOCAL ENGINEER FOR STRUCTURAL DESIGN. ONCE CONSTRUCTION HAS BEGUN, CONTRACTOR WILL ASSUME ALL RESPONSIBILITY.
PLAN HAS BEEN DESIGNED TO COMPLY WITH 2018 NCRC.

REVISIONS:

DATE:	NAME:

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130 WIND CHIME CT.
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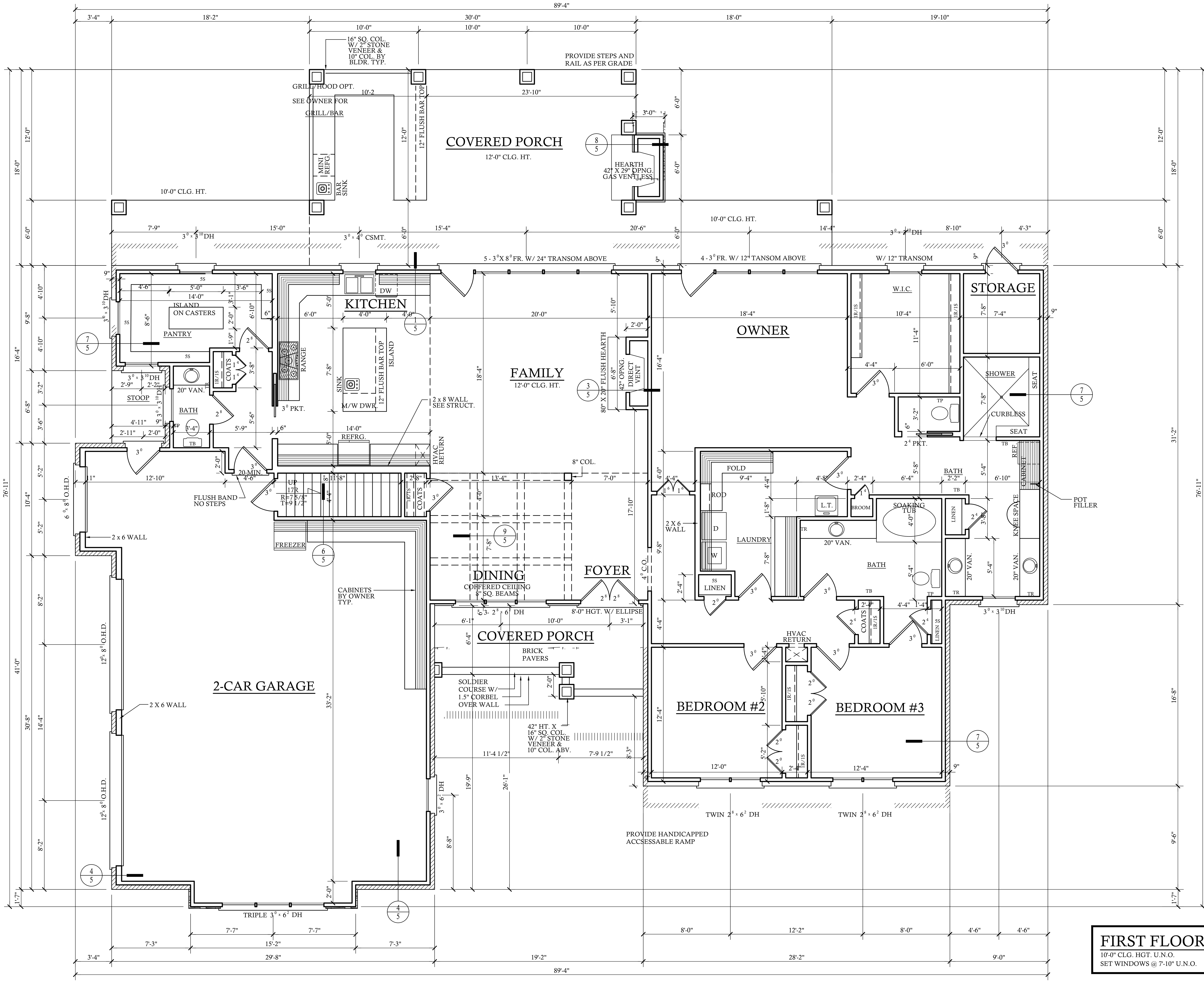
919-239-4972
WWW.DESIGN-TECH.COM

VUNCANNON RESIDENCE

SHEET NO.
2 OF 5



FIRST FLOOR PLAN

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

10'-0" CLG. HGT. U.N.O.
SET WINDOWS @ 7'-10" U.N.O.

CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. ANY ERROR OR OMISSIONS SHALL BE REPORTED TO DESIGN TECH, INC. FOR CORRECTIONS OR JUSTIFICATION. CONTRACTOR MUST COMPLY WITH ALL LOCAL BUILDING CODES WHERE HOME IS TO BE BUILT. IF NO ENGINEERING DRAWINGS ARE PROVIDED, CONTRACTOR MUST CONSULT WITH LOCAL ENGINEER FOR STRUCTURAL DESIGN. ONCE CONSTRUCTION HAS BEGUN, CONTRACTOR WILL ASSUME ALL RESPONSIBILITY.
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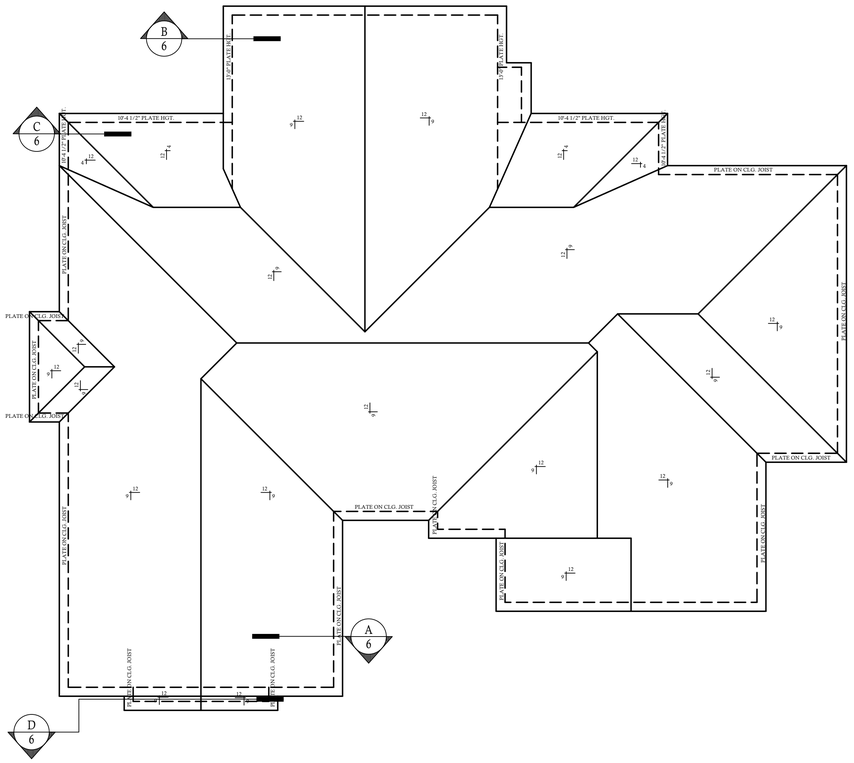
VUNCANNON RESIDENCE

SHEET NO.
3
OF 5



ROOF VENTILATING REQUIREMENTS

SQ.FT. OF AREA VENTILATED $\frac{4954}{150}$ (144) = 4756 TOTAL SQ. IN. OF ATTIC VENTILATION REQ'D

NOTE: FIGURE BASED ON SECTION R-806.2 OF THE 2018 NCRC .

MINIMUM NET FREE VENTILATING AREA IS PERMITTED
TO BE REDUCED TO 1 TO 300
WHEN CONDITIONS ARE MET AS PER SECTION R806.2 OF THE 2018 NCRC

INLET:

4756 (.5) = 2378 SQ. IN. OF INLET VENTING REQ'D

OUTLET:

4756 (.5) = 2378 SQ. IN. OF OUTLET VENTING REQ'D

A ONE STORY WALL W/ BRICK

B PORCH SECTION

C ONE STORY WALL W/ BRICK

D ONE STORY WALL W/ BRICK

CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. ANY ERROR OR OMISSIONS SHALL BE REPORTED TO DESIGN TECH, INC. FOR CORRECTIONS OR JUSTIFICATION. CONTRACTOR MUST COMPLY WITH ALL LOCAL BUILDING CODES WHERE HOME IS TO BE BUILT. IF NO ENGINEERING DRAWINGS ARE PROVIDED, CONTRACTOR MUST CONSULT WITH LOCAL ENGINEER FOR STRUCTURAL DESIGN. ONCE CONSTRUCTION HAS BEGUN, CONTRACTOR WILL ASSUME ALL RESPONSIBILITY.
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130 WIND CHIME CT.
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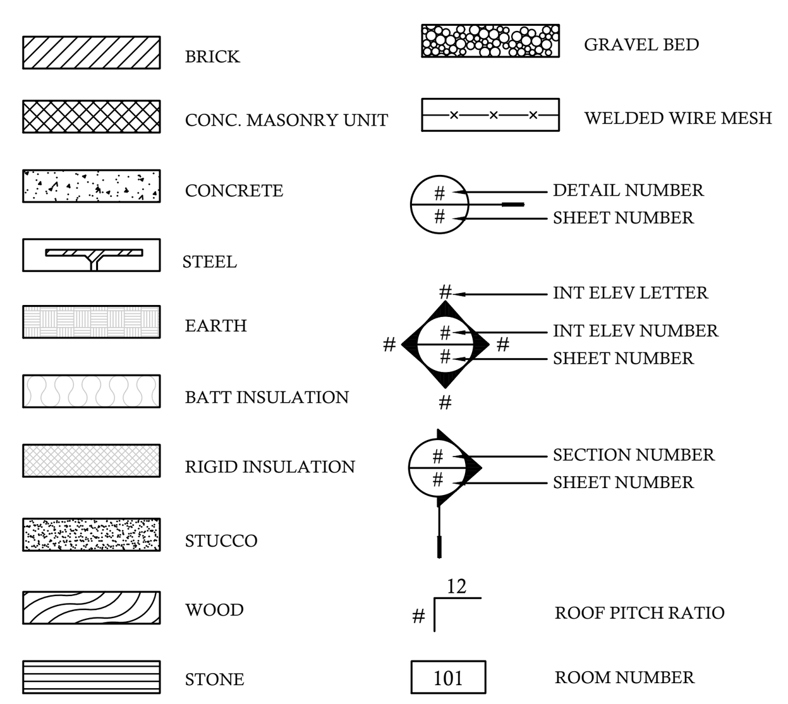
RALEIGH NC 27603
919-239-4972
WWW.DESIGN-TECH.COM

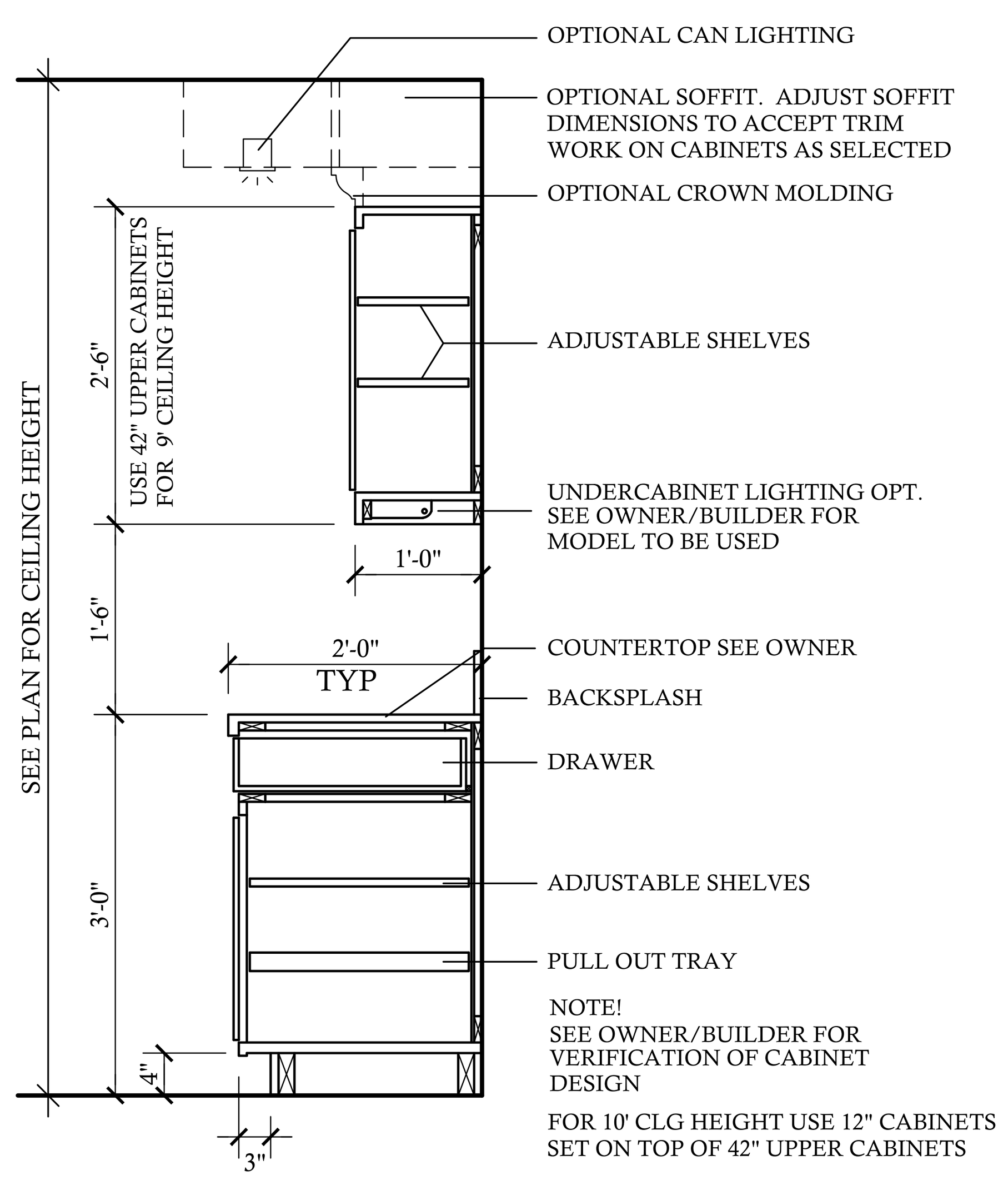
VUNCANNON RESIDENCE

A B D ®

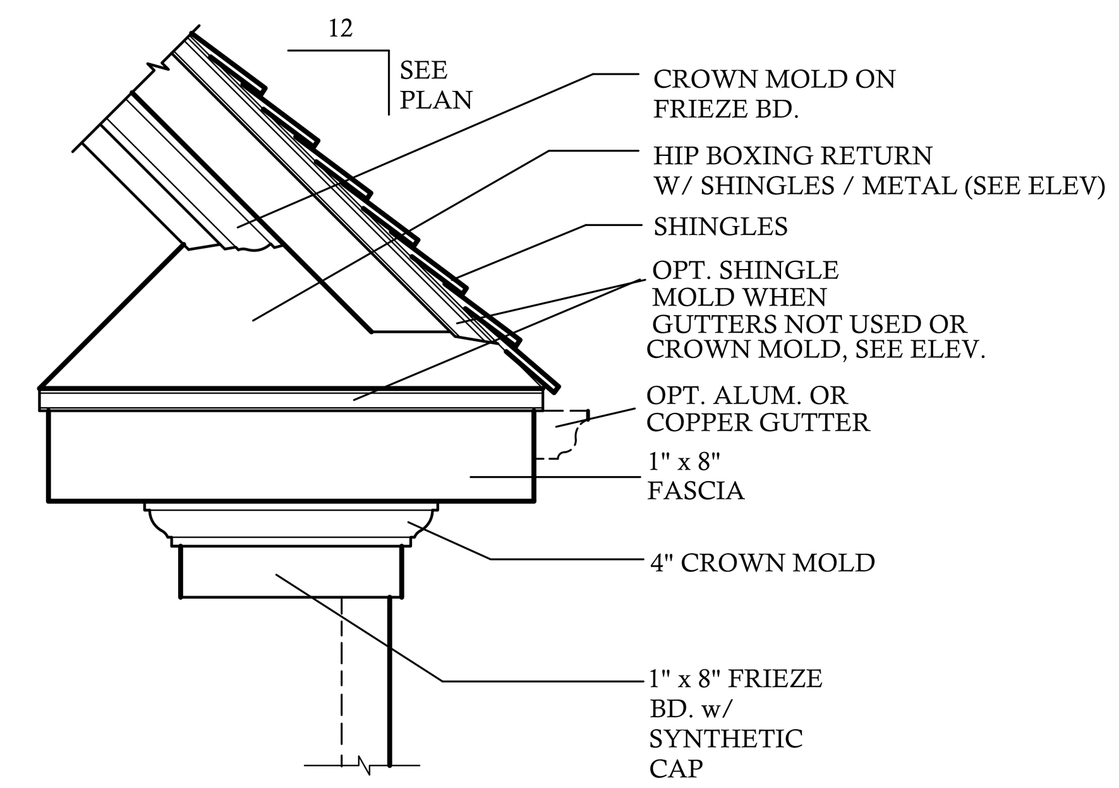
SHEET NO.
4
OF 5

1. CONT. POURED CONC. FOOTING
2. 4 X 8 X 16 C.M.U.
3. 6 X 8 X 16 C.M.U.
4. 8 X 8 X 16 C.M.U.
5. 12 X 8 X 16 C.M.U.
6. BRICK
7. SOLID MASONRY CAP
8. 4" CONCRETE SLAB
9. 6 MIL VAPOR BARRIER
10. 4" STONE BASE
11. 6" X 6" 10-10 W.W.M.
12. 2 X 4 TREATED SILL PLATE
13. 2 X 6 TREATED SILL PLATE
14. 2 X 6 JOIST
15. 2 X 6 BAND
16. 2 X 8 JOIST
17. 2 X 8 BAND
18. 2 X 10 JOIST
19. 2 X 10 BAND
20. A.P.A. RATED SUB-FLOOR
21. A.P.A. RATED UNDERLAYMENT
22. 2 X 4 SOLE PLATE
23. 2 X 4 STUD WALL
24. DBL 2 X 4 TOP PLATE
25. 2 X 6 SOLE PLATE
26. 2 X 6 STUD WALL
27. DBL 2 X 6 TOP PLATE
28. EXTERIOR SHEATHING
29. SHEATHING PAPER
30. 1/2" DRY WALL
31. R-15 BATT INSULATION MIN.
32. BRICK VENEER
33. WALL TIE
34. WEEP HOLES @ 16" O.C. HORZ.
35. FLASHING AS REQ. PER CODE
36. SELF FURRING GALV METAL LATH
37. METAL BEAD
38. STUCCO PLASTER
39. SIDING AS SPECIFIED
40. TPL 2 X BLOCKING
41. WOOD FILLER
42. 1 X FRIEZE BOARD
43. NAILER
44. LOOKOUT
45. 3/8" EXT PLYWOOD SOFFIT
46. SOFFIT VENT
47 SUB FASCIA
48. 1 X FASCIA
49. METAL DRIP STRIP
50. SHINGLES AS SPECIFIED
51. 15 LB. FELT PAPER
52. A.P.A. RATED SHEATHING
53. 2 X 8 RAFTER
54. 2 X 6 RAFTER
55. R-38 BATT INSULATION MIN.
56. C.M.U. PIER
57. TREATED 2 X 6 SHIM PLATE
58. GIRDER SIZE PER PLAN
59. 2 X 2 LEDGER BOARD
60. 1/2" EXPANSION JOINT
61. 1 1/2" RIGID INSULATION (R 5.0 MIN)
62. WATERPROOFING
63. 4" PERFORATED DRAIN TILE (SLOPE TO DRAIN)
64. CRUSHED STONE W/ INFILTRATION BARRIER ABOVE
65. CONC. WASH
66. 2 X 4 RAFTER TIE BACKS PER ENG SPECS. AT MIN EVERY THIRD RAFTER
67. SEE STRUCTURAL SHEETS FOR FOR JOIST DIRECTION & SIZES
68. R-19 BATT INSULATION (MIN.)
69. POURED CONC. FND. WALL
70. OPT. TRIM SEE BLDR.
71. STONE VENEER
72. TRUSSES PER MANUFACTURER
73. STUCCO DRIP CAP
74. STUCCO ON CMU OR CONCRETE WALL
75. BAND W/ DRIP CAP
76. SOFFIT BED MOLD TRIM
77. 2 X 8 TREATED SILL PLATE
78. 2 X 12 JOIST
79. 2 X 12 BAND
80. 66 MIL. OF THRU WALL FLASHING

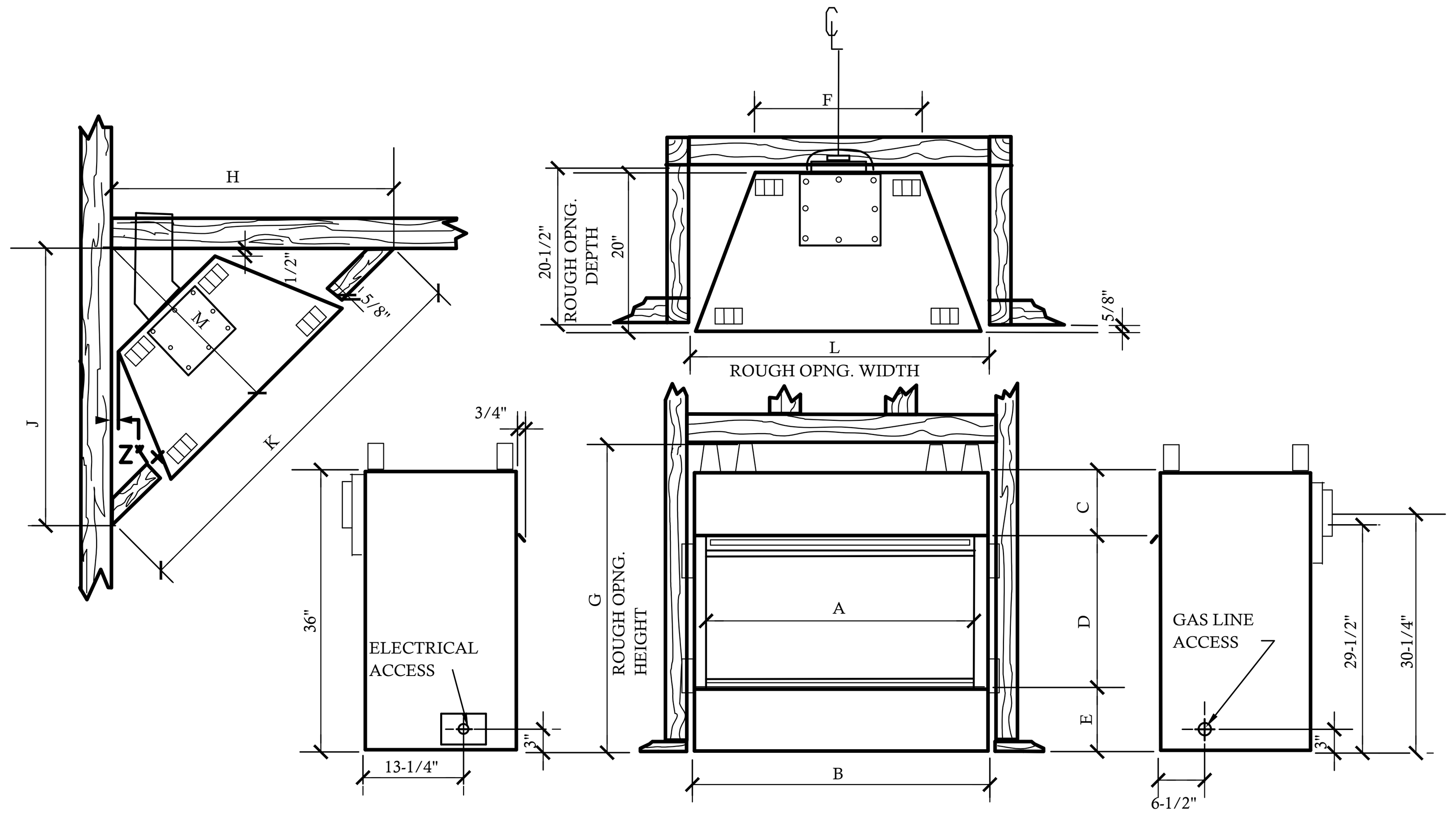




1 TYP. KITCHEN CABINET SECTION @ 3/4"=1'-0"
PROPERTY OF DESIGN TECH INC.



2 HIP BOXING RETURN DETAIL @ 3/4"=1'-0"
PROPERTY OF DESIGN TECH INC.

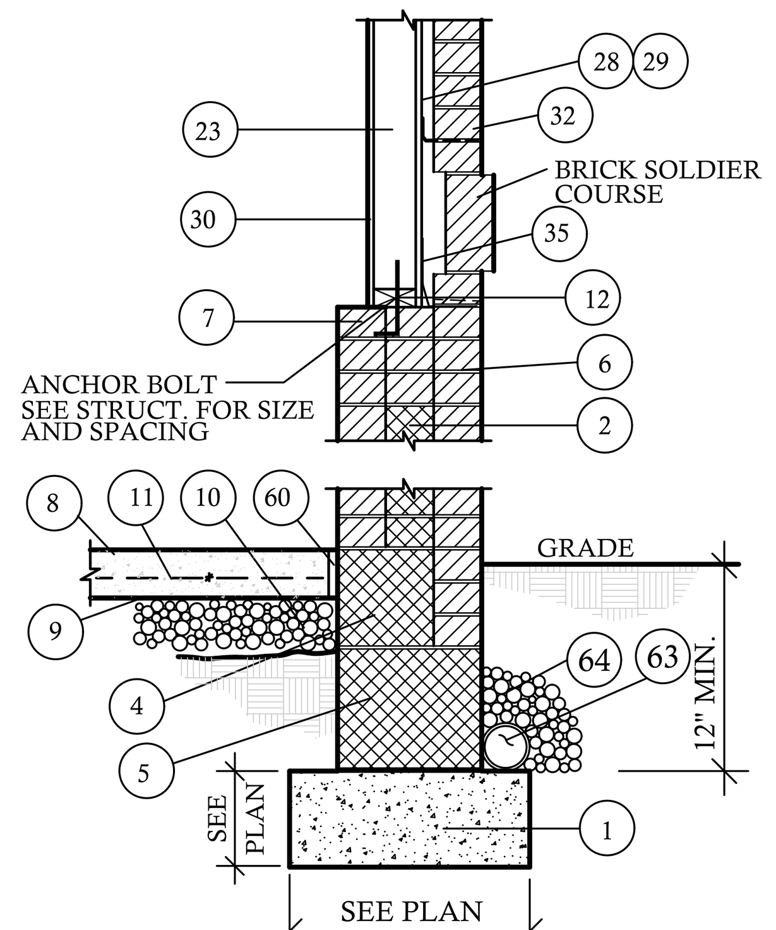


HISTYLE REAR VENT
DVBR36

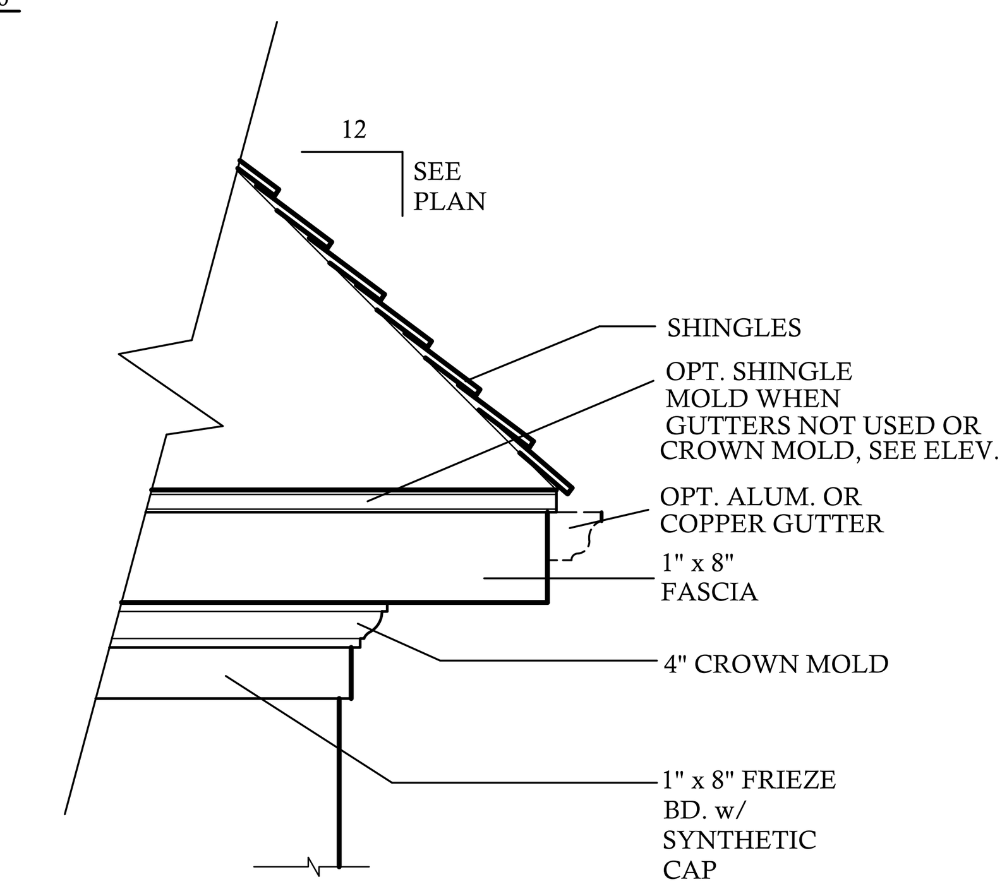
3 DIRECT VENT FIREPLACE NTS
PROPERTY OF DESIGN TECH INC.

FIREPLACE DIMENSIONS												
	A	B	C	D	E	F	G	H	J	K	L	M
DVBR36	36"	40"	6-3/8"	23-1/4"	6-3/8"	22"	40-1/2"	45-3/4"	45-3/4"	64-3/4"	41"	32-3/8"
DVBR42	42"	46"	6-3/8"	23-1/4"	5-3/8"	28"	40-1/2"	49"	49"	69-1/2"	47"	35-1/4"

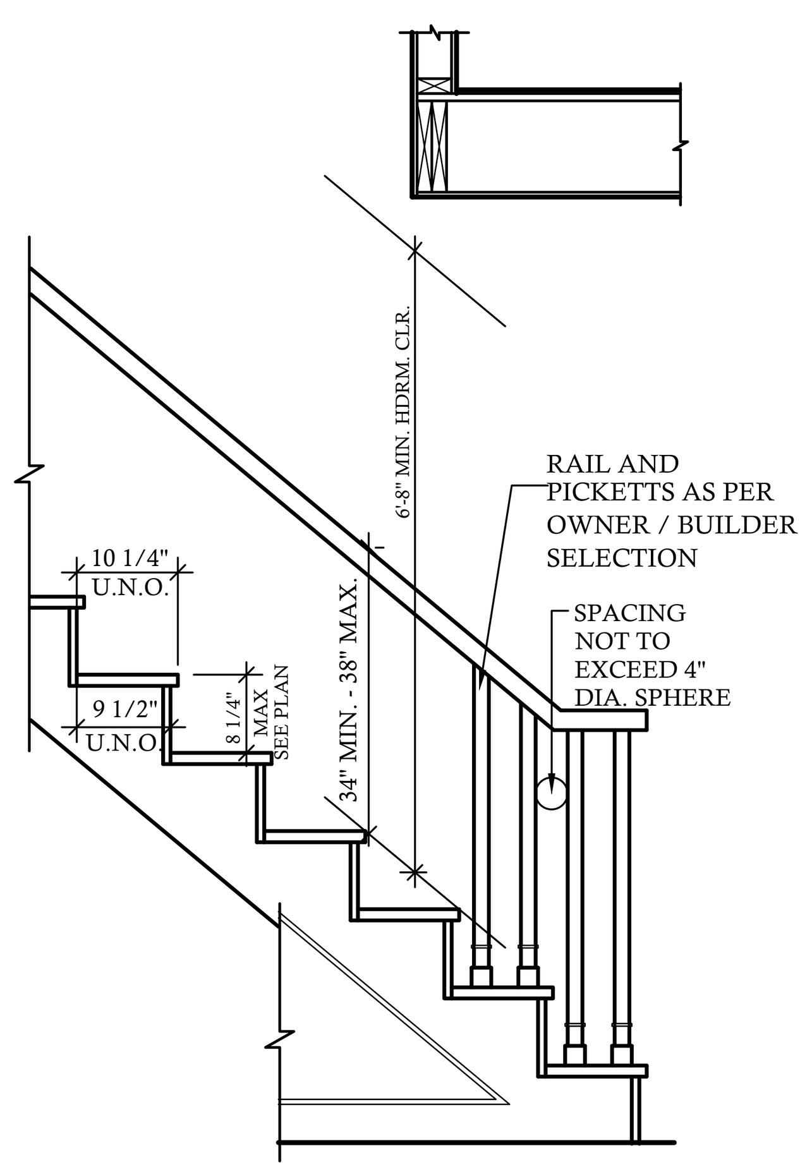
NOTE - VERIFY W/ MANUF. UNIT MODEL NO. & DIMENSIONS REQUIRED FOR FRAMING AROUND FIREPLACE UNIT PRIOR TO CONSTRUCTION



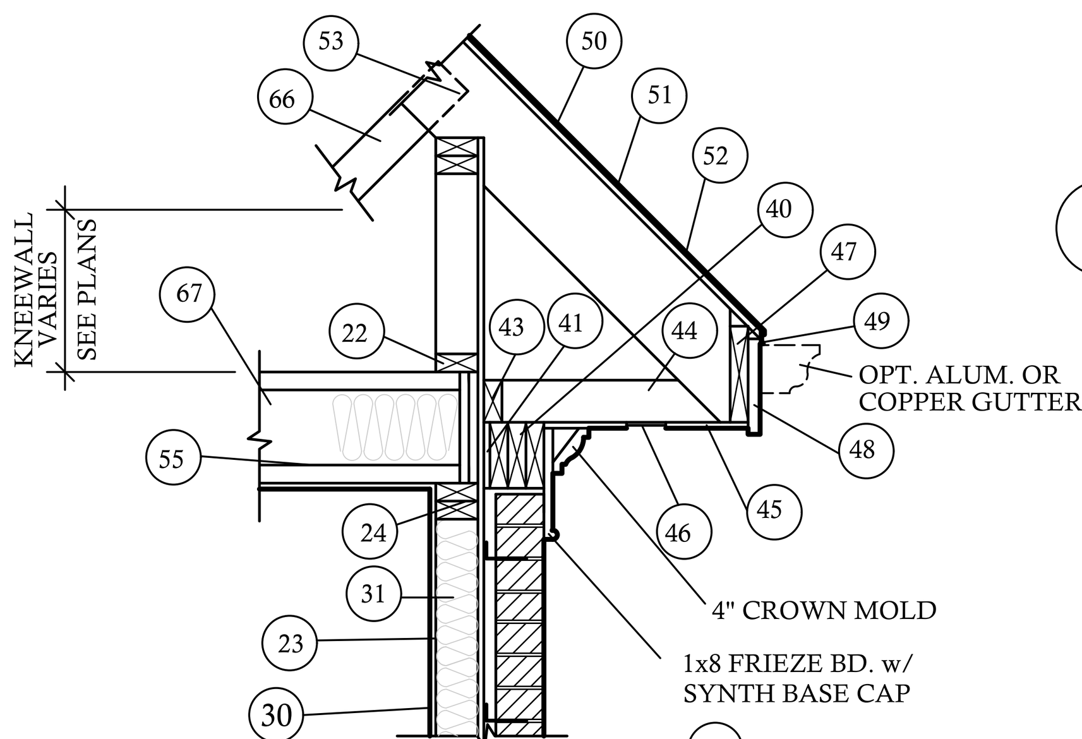
4 GARAGE WALL W/ BRICK @ 3/4"=1'-0"

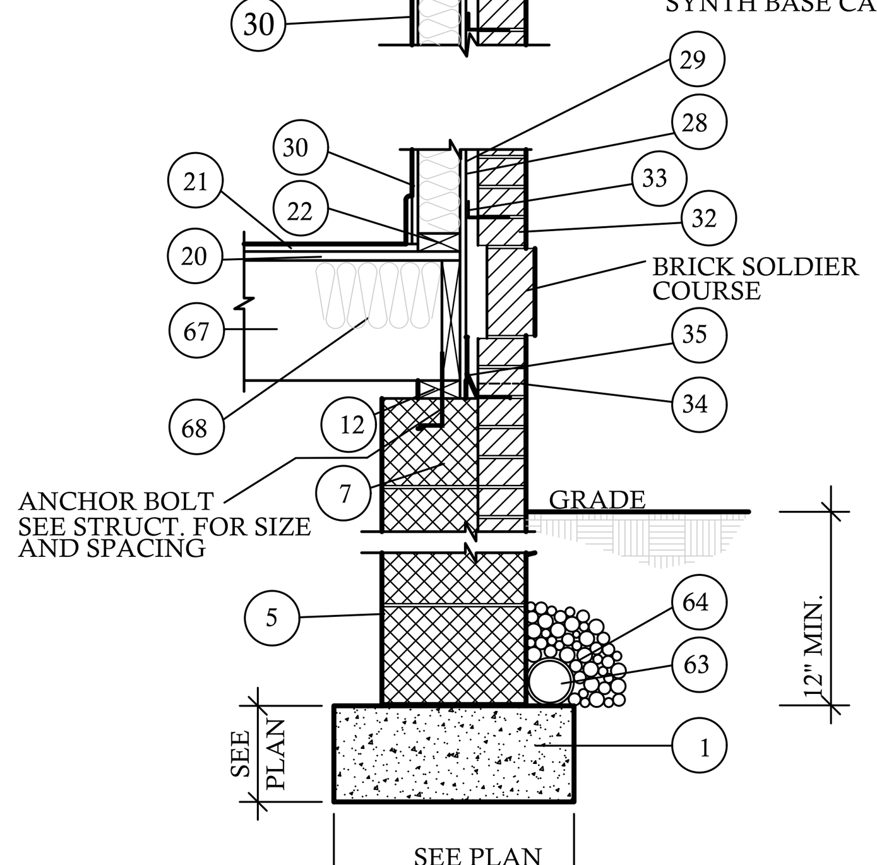


5 BOXING DETAIL @ 3/4"=1'-0"

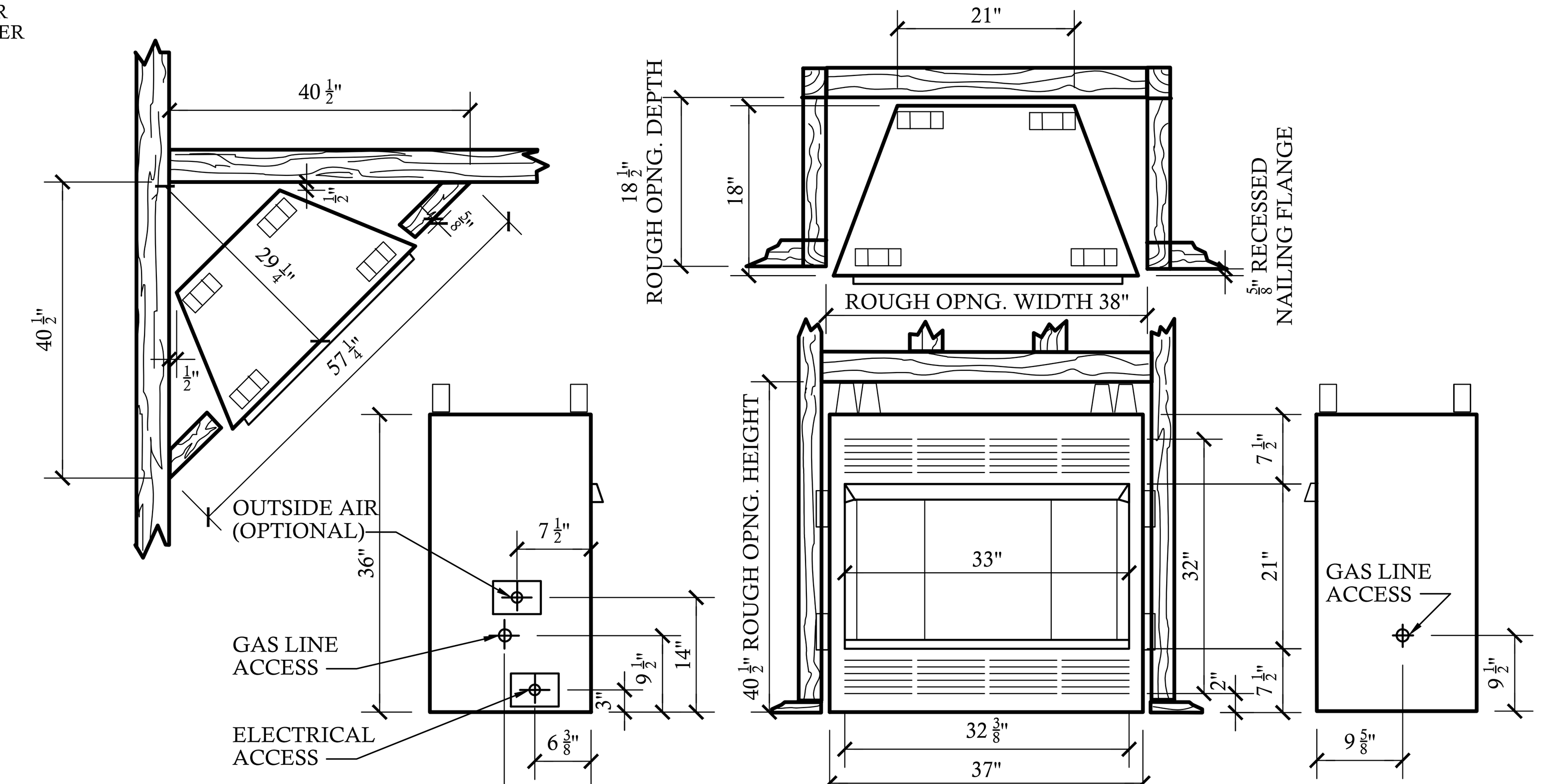


6 TYP. STAIR DETAIL @ 3/4"=1'-0"
PROPERTY OF DESIGN TECH INC.





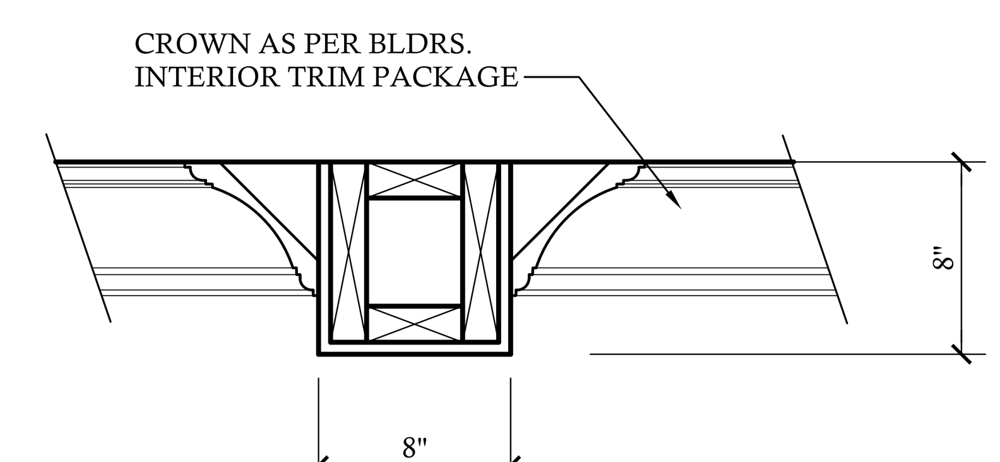
7 ONE STORY WALL W/ BRICK @ 3/4"=1'-0"



NOTE - VERIFY W/ MANUF. UNIT MODEL NO. & DIMENSIONS REQUIRED FOR FRAMING AROUND FIREPLACE UNIT PRIOR TO CONSTRUCTION

FIRESTAGE SERIES
UV33 VENT-FREE

8 VENTLESS FIREPLACE NTS



9 COFFERED CLG DETAIL @ 3/4"=1'-0"
PROPERTY OF DESIGN TECH INC.

REVISIONS:

DATE:	NAME:

DRAWN BY:
RKR
CHECKED BY:

DATE:
8/23/2021
PLAN NO.

DESIGNTECH INC.
130 WIND CHIME CT.
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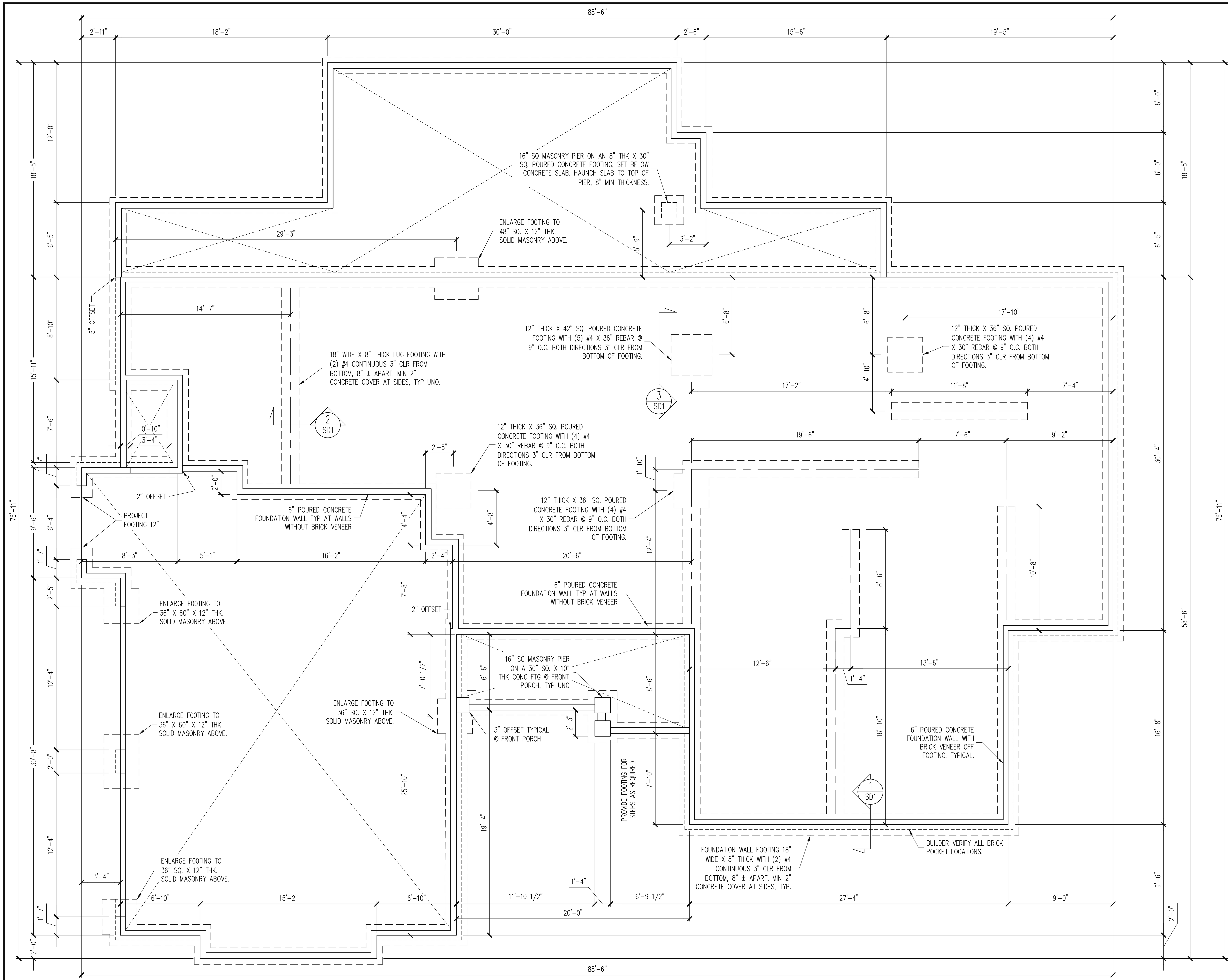
RALEIGH NC 27603
919-239-4972
WWW.DESIGN-TECH.COM

VUNCANNON RESIDENCE

SHEET NO.
5
OF 5



PLAN DESIGNED UNDER
2018 NORTH CAROLINA
RESIDENTIAL CODE

NOTES:
- HEIGHT AND BACKFILL LIMITATIONS FOR FOUNDATION WALLS ARE TO BE GOVERNED BY THE NCSBC, LATEST EDITION.
- FIBER MESH REINFORCED CONCRETE MAY BE USED IN LIEU OF WELDED WIRE FABRIC. SEE PART 5: CONCRETE AND SLABS ON GRADE OF THE CONSTRUCTION SPECIFICATIONS FOR ALLOWABLE SUBSTITUTION DETAILS.
- ALL FND DIMENSIONS TO OUTSIDE OF FRAMING. PROJECT FOOTING FOR BRICK VENEER

FOUNDATION PLAN

1/4" = 1'-0"

NORTH CAROLINA SEAL 035020 ENGINEER RALPH J. SIGLER

Engineering Tech ASSOCIATES, P.A.
STRUCTURAL ENGINEERS
License No. C-3870
183 Wind Chime Ct, Ste 100
Raleigh, North Carolina 27615
Phone (919) 844-1661

DANNY AND KIM VUNCANNON

SCOPE: STRUCTURAL ADDENDUM

LOC: 16D BENTON FARM WAY

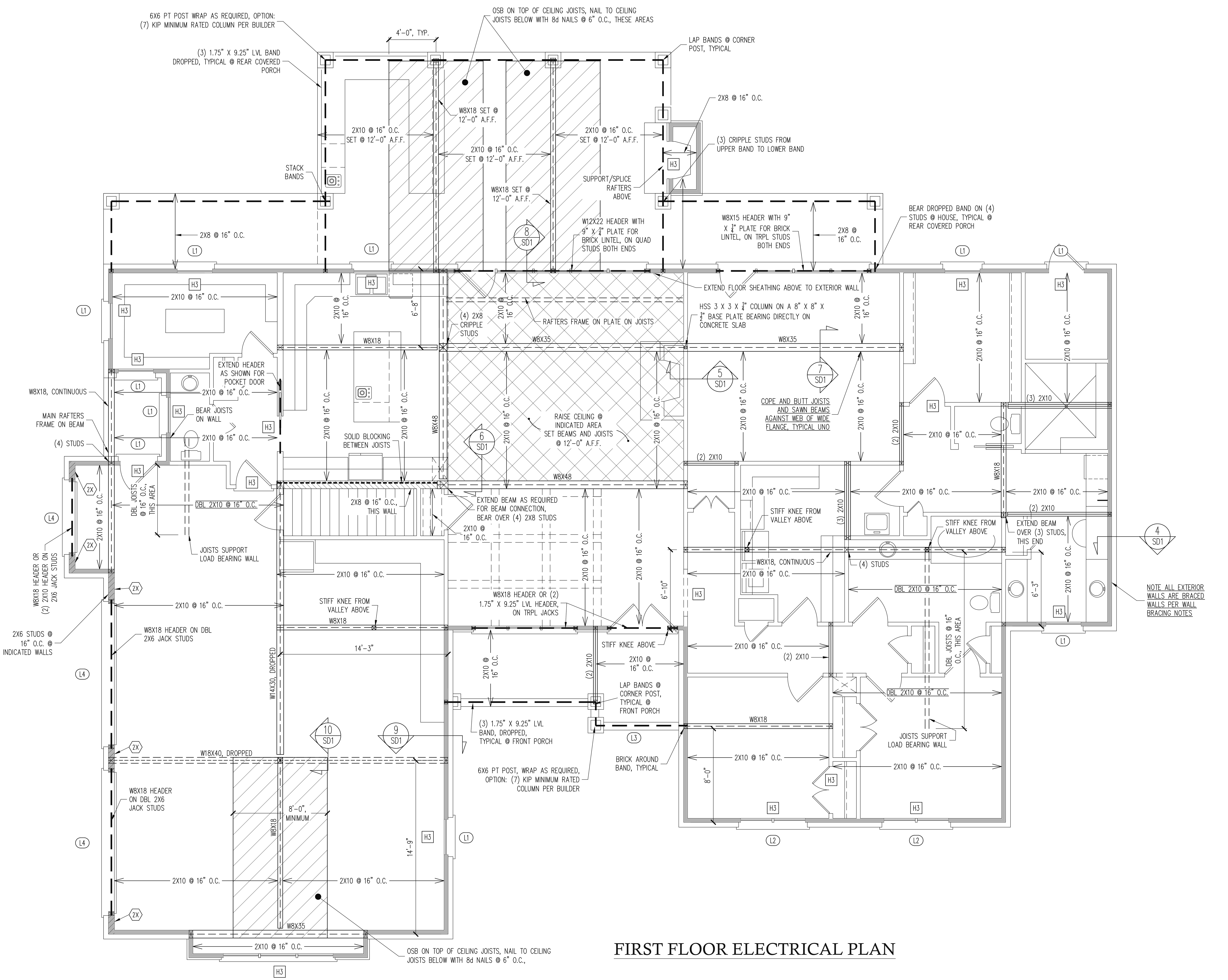
ENG: RJS

DATE: 8-20-2021

PROJECT NO. 21-15-044

SHEET NO. S1

1 of 5



FIRST FLOOR ELECTRICAL PLAN

LINTEL SCHEDULE

L1	L 3 1/2 X 3 1/2 X 1/4 TYP UNO
L2	L 5 X 3 1/2 X 5/16
L3	L 6 X 4 X 5/16 ATTACHED TO HEADER (2)– 1/2" DIA. X 3" LONG LAG SCREWS AT 16" O.C. (ONE LAG SCREW @ 16" O.C. PERMITTED FOR 5' OR LESS BRICK ABOVE)
L4	16 GAUGE FLEX LINTEL PER BUILDER

WALL BRACING

ALL EXTERIOR STUD WALLS ARE TO BE CONTINUOUSLY SHEATHED WITH 7/16 APA RATED OSB NAILED TO STUDS WITH 8d NAILS @ 6" O.C. AT PANEL EDGES, 12" O.C. IN PANEL FIELD.

SINGLE JOIST, CONTINUOUS RIM JOIST, OR BLOCKING OF EQUAL DEPTH IS REQUIRED ABOVE AND BELOW ALL BRACED WALLS. NAIL BLOCKING ABOVE WALL TO TOP PLATE WITH 8d TOE NAILS @ 6" O.C. NAIL SOLE PLATE OF BRACED WALL TO BLOCKING BELOW WITH (3) 16d NAILS @ 16" O.C. BLOCKING AT HORIZONTAL JOINTS IN BRACED WALL LINES ONLY REQUIRED AT SHADED WALLS, UNO.

SHADED WALLS:

GB – INTERIOR BRACED WALL WITH GYPSUM BOARD. 1/2" GB BOTH SIDES OF WALL ATTACHED TO PANEL EDGES, INCLUDING TOP AND BOTTOM PLATES, AT 7" O.C. (BUILDER PERMITTED TO SUBSTITUTE "WSP" FOR ANY "GB" WALL)

WSP – INTERIOR BRACED WALL WITH 3/8" MIN. THICKNESS WOOD STRUCTURAL PANELING, (1) SIDE. ATTACH WSP TO STUD WALL WITH 8d NAILS @ 6" O.C. AT PANEL EDGES, 12" O.C. IN PANEL FIELD. BLOCK AT ALL PANEL EDGES.

2X – SHEATH BOTH SIDES OF STUD WALL WITH 7/16 APA RATED OSB, NAILED TO STUDS WITH 8d NAILS @ 6" O.C. AT PANEL EDGES, 12" O.C. IN PANEL FIELD.

PROVIDED CONTINUOUS SHEATHING = 316' MIN.
–WALL BRACING IS BY ENGINEERED DESIGN AND NOT PRESCRIPTIVE PER SECTION 602.10 OF THE 2018 NCRC. CONTINUOUS SHEATHING HAS BEEN PROVIDED, ALONG WITH ALTERNATIVE METHODS TO INSURE THE MINIMUM INTENT OF SECTION 602.10 OF THE 2018 NCRC HAS BEEN MET AND EXCEEDED.

–BRACED WALL PANELS SHALL BE FASTENED IN ACCORDANCE WITH TABLE 602.3(1) TO PROVIDE CONTINUOUS PANEL UPLIFT RESISTANCE AND COMPLIANCE WITH NCRBC R602.3.5 AND R802.11 UNLESS NOTED OTHERWISE ON STRUCTURAL PLANS.

REQUIRED STUDS FOR BEAM SUPPORT

REFER TO PART 14: STUD SUPPORTS FOR BEAMS OF THE CONSTRUCTION SPECIFICATIONS FOR REQUIRED NUMBER OF STUDS FOR BEAM SUPPORT, TYP UNO.

HEADER SCHEDULE

H1	SINGLE 2X4 TURNED FLAT (A)
H2	(2) 2X4'S ON SINGLE JACKS (B)
H3	(2) 2X10'S ON SINGLE JACKS (C)
H4	(2) 1.75" X 9.25" LVL'S ON DBL JACKS

(A) TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPENING 38" MAX.

(B) TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPNG 38" TO 74" MAX.

(C) TYPICAL FOR ALL CONDITIONS NOT LISTED IN (A) OR (B) UNO.

NOTES:
–HEADERS IN NON LOAD BEARING INTERIOR WALLS ARE NOT LABELED.

HEADER KING STUDS

SEE PART 17: KING STUDS OF THE CONSTRUCTION SPECIFICATIONS FOR REQUIRED NUMBER OF KING STUDS FOR EXTERIOR WALL HEADERS

1ST FLOOR FRAMING PLAN

WALLS AND CEILING
1/4" = 1'-0"

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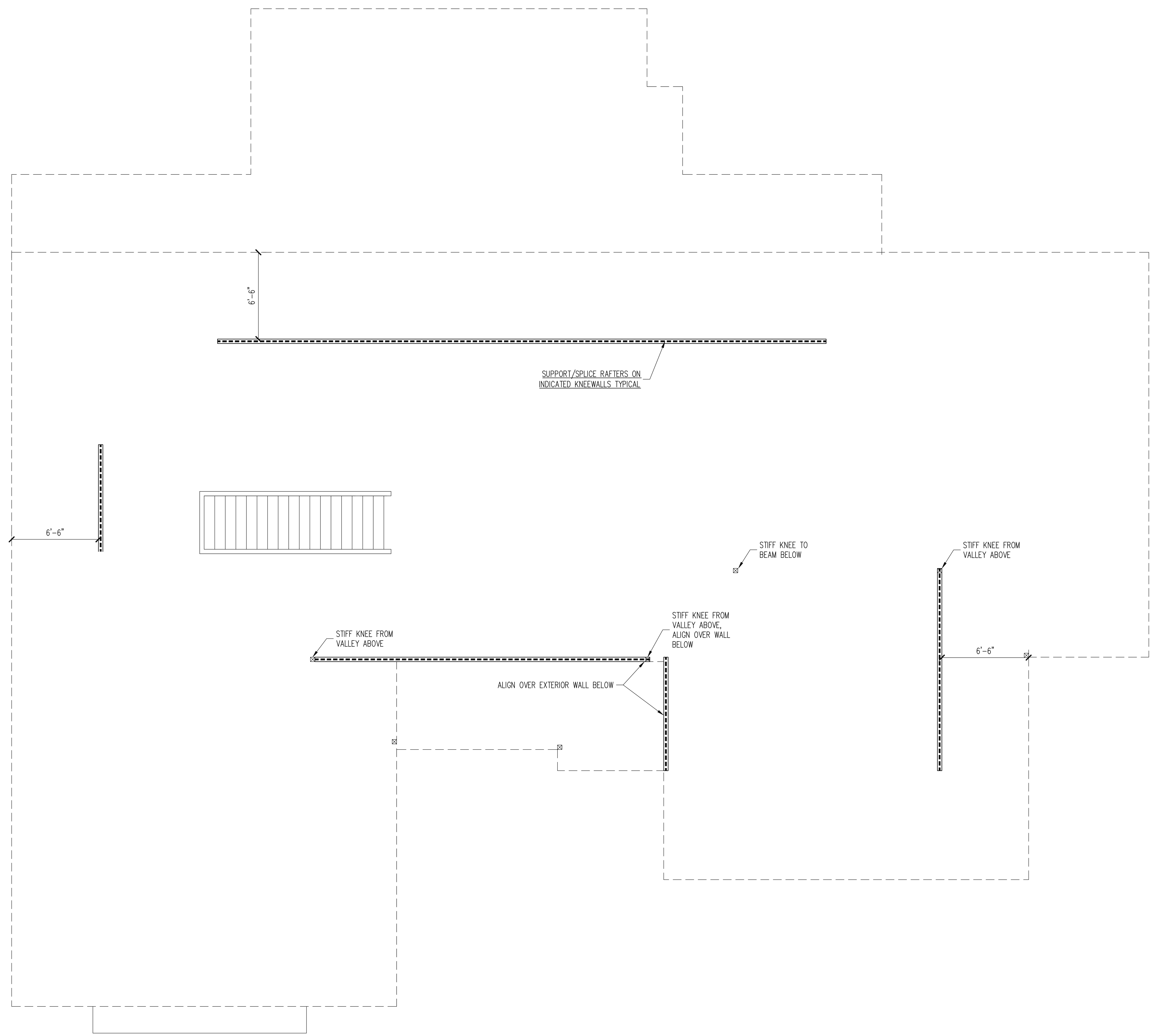
Raleigh, North Carolina 27615
Phone (919) 844-1661

DANNY AND KIM VUNCANNON
SCOPE: STRUCTURAL ADDENDUM
LOC: 16D BENTON FARM WAY

ENG: RJS
DATE: 8-20-2021

PROJECT NO. 21-15-044

SHEET NO. S2



2ND FLOOR FRAMING PLAN

WALLS AND CEILING

1/4" = 1'-0"

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035020 RALPH J. SIGLER III 8-20-2021

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DANNY AND KIM VUNCANNON

SCOPE: STRUCTURAL ADDENDUM

LOC: 16D BENTON FARM WAY

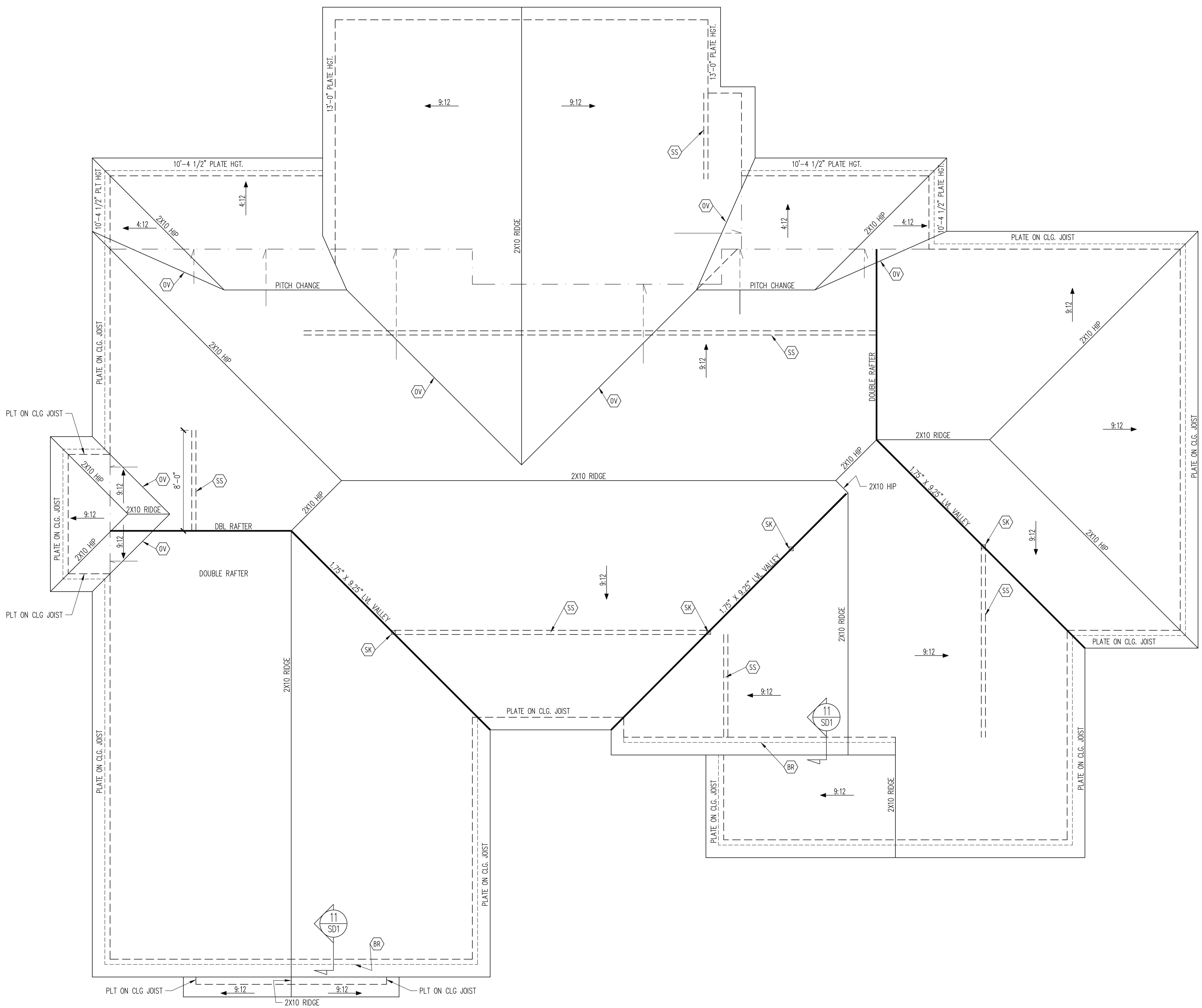
ENG: RJS

DATE: 8-20-2021

PROJECT NO. 21-15-044

SHEET NO. S3

3 of 5



ROOF FRAMING PLAN

1/4" = 1'-0"

FRAMING NOTES

ROOF ONLY

- COMMON RAFTERS 2X8 @ 16" O.C. TYP U.N.O.
- COLLAR TIES 2X4 EVERY 3RD SET OF RAFTERS TYP U.N.O.
- ROOF PITCHES 12:12 TYP U.N.O.

- VERIFY ROOF PITCHES, OVERHANG LENGTHS, AND KNEEWALL FRAMING HGTS WITH ARCHITECTURAL DRAWINGS, TYPICAL.

FRAMING SCHEDULE

ROOF ONLY

BR	SUPPORT BRICK VENEER PER SECT.703.7 OF THE NCRC, LATEST EDITION.
OV	OVERFRAME VALLEY (2X10 SLEEPER)
SK	TRPL 2X4 STIFF KNEE
SS	SUPPORT/SPLICE RAFTERS ON KNEEWALL BELOW

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035020 RALPH J. SIGLER III 8-20-2021

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DANNY AND KIM VUNCANNON

SCOPE: STRUCTURAL ADDENDUM

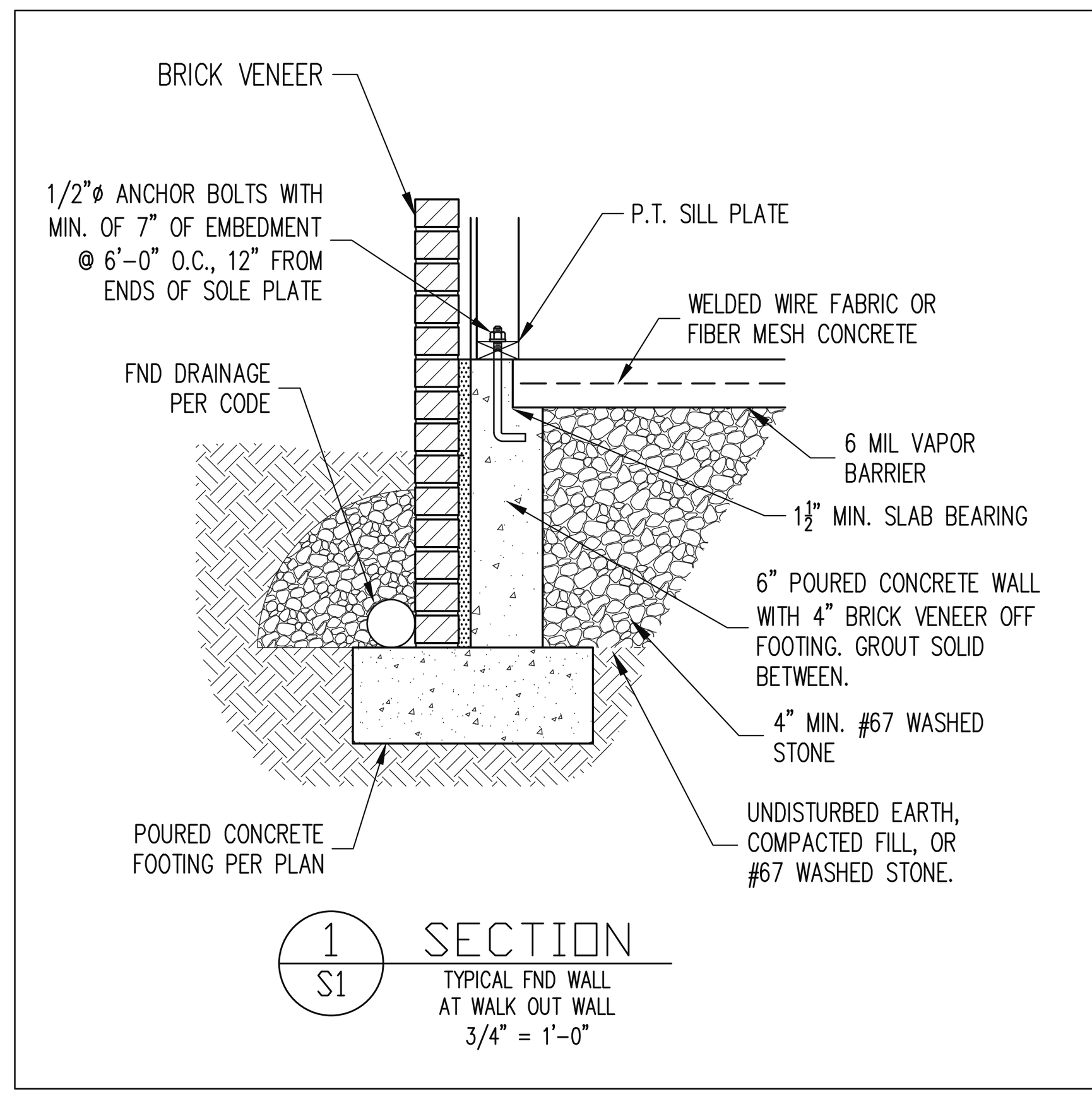
LOC: 16D BENTON FARM WAY

ENG: RJS

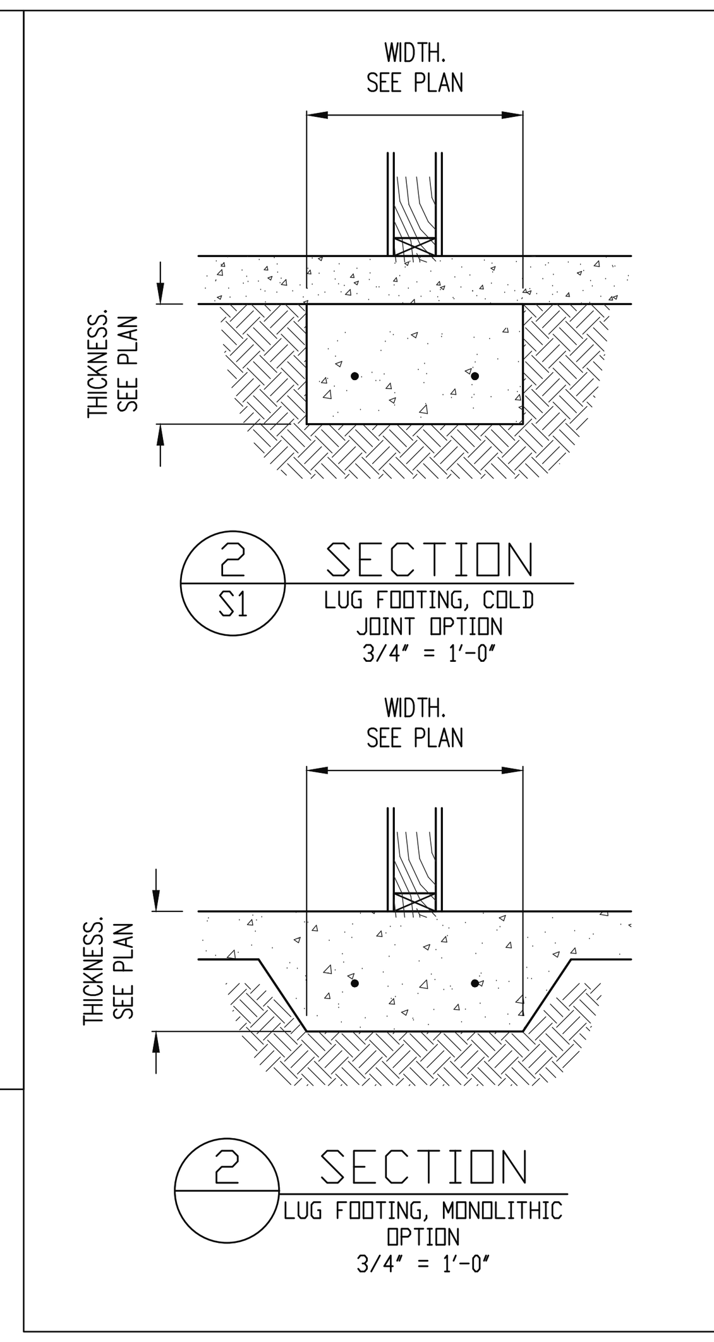
DATE: 8-20-2021

PROJECT NO. 21-15-044

SHEET NO. S4

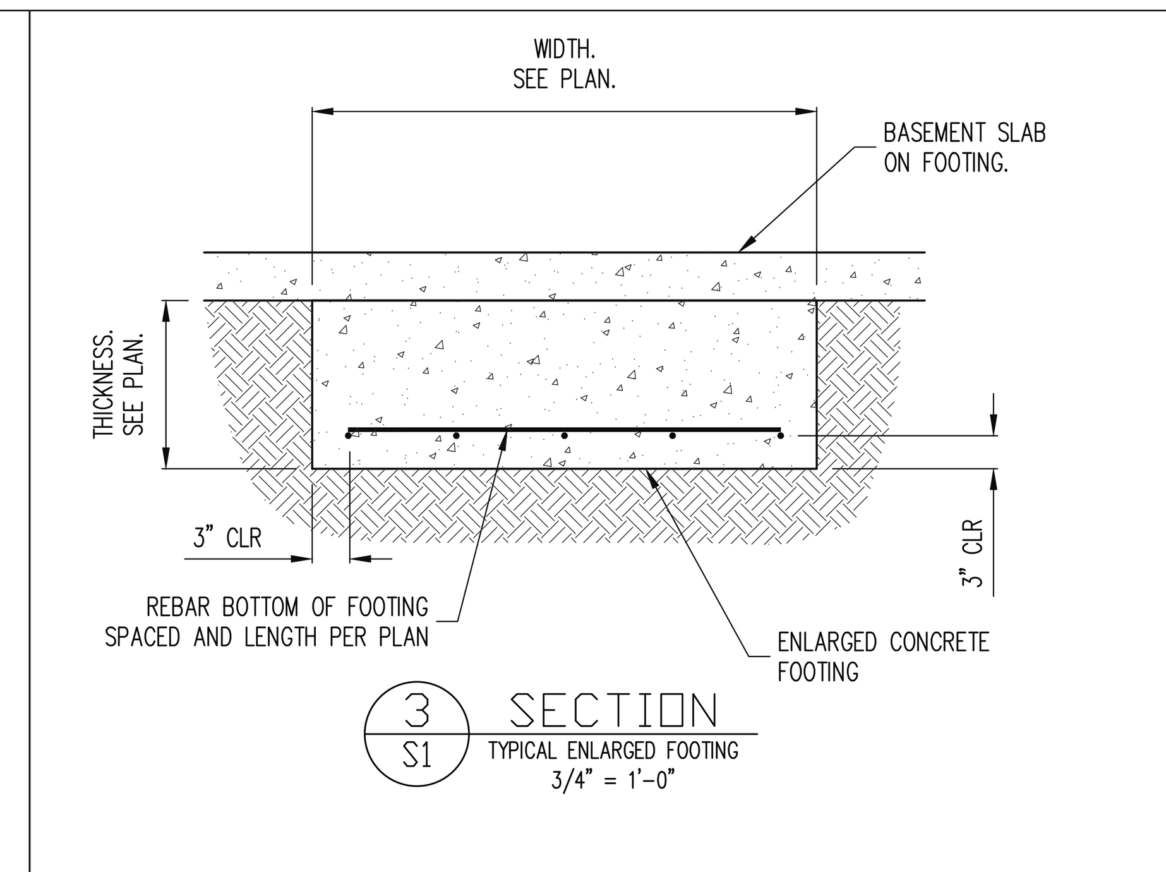


1 S1 SECTION
TYPICAL FND WALL AT WALK OUT WALL
3/4" = 1'-0"

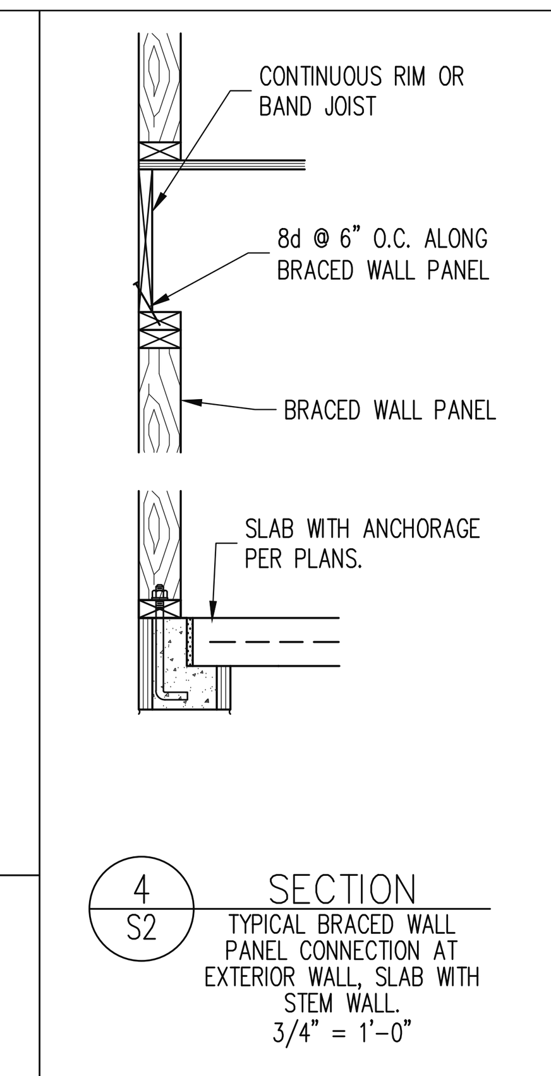


2 S1 SECTION
LUG FOOTING, COLD JOINT OPTION
3/4" = 1'-0"

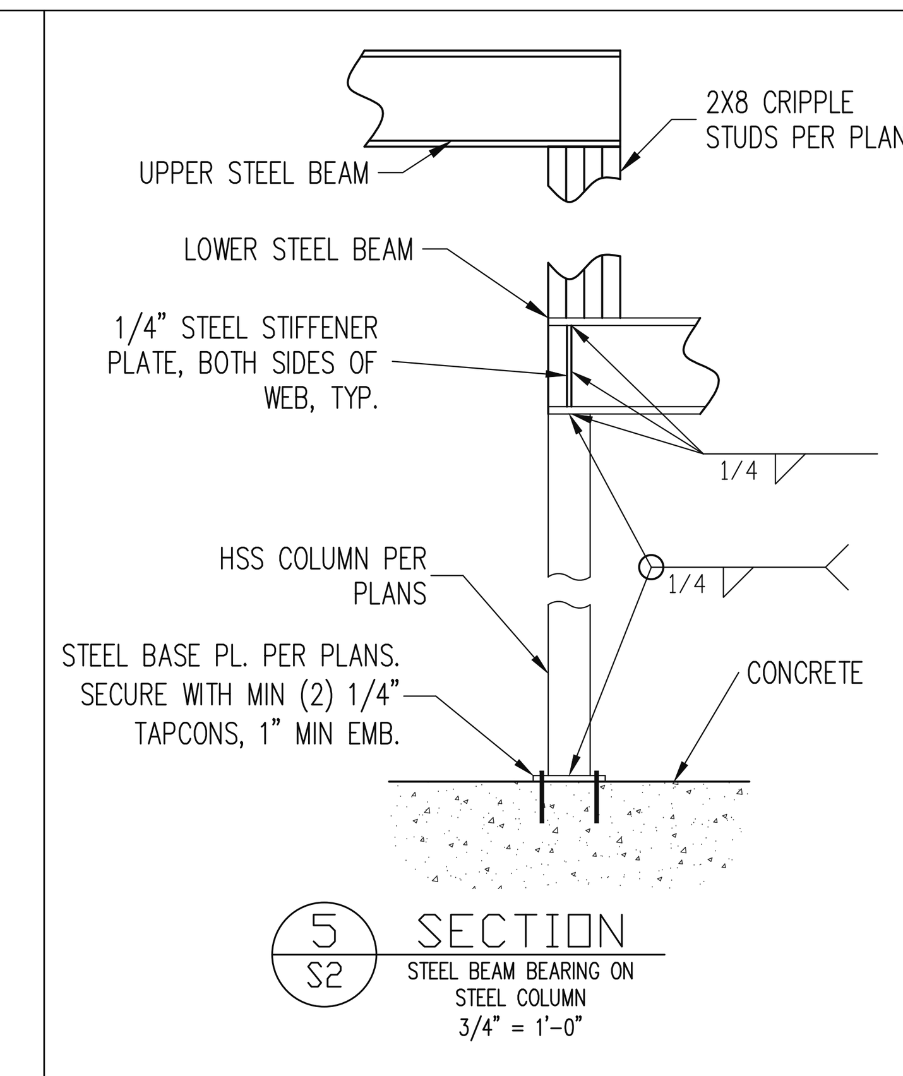
2 SECTION
LUG FOOTING, MONOLITHIC OPTION
3/4" = 1'-0"



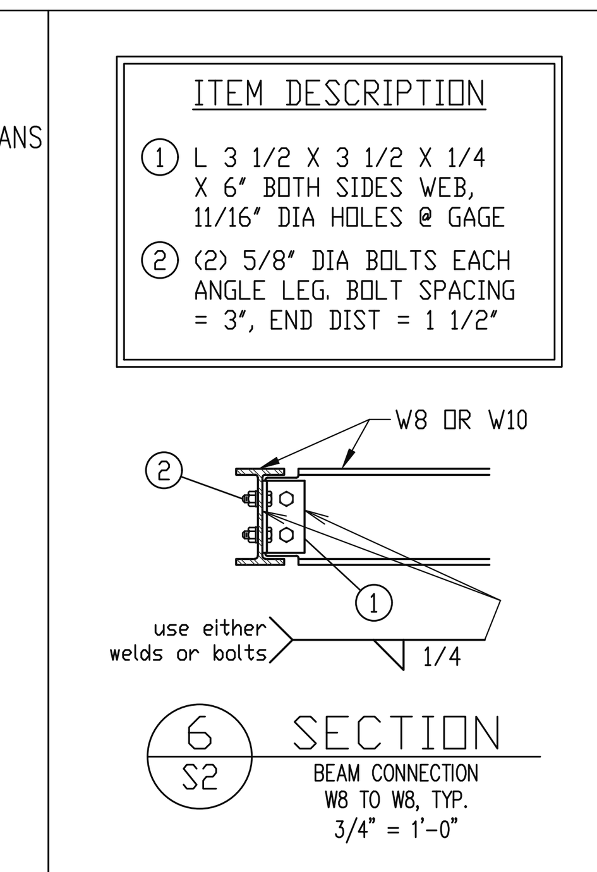
3 S1 SECTION
TYPICAL ENLARGED FOOTING
3/4" = 1'-0"



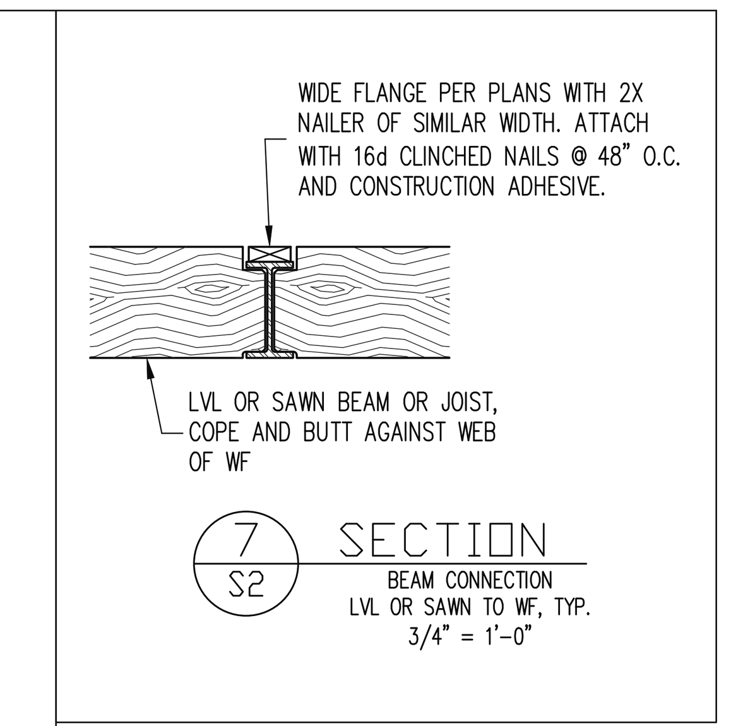
4 S2 SECTION
TYPICAL BRACED WALL PANEL CONNECTION AT EXTERIOR WALL, SLAB WITH STEM WALL.
3/4" = 1'-0"



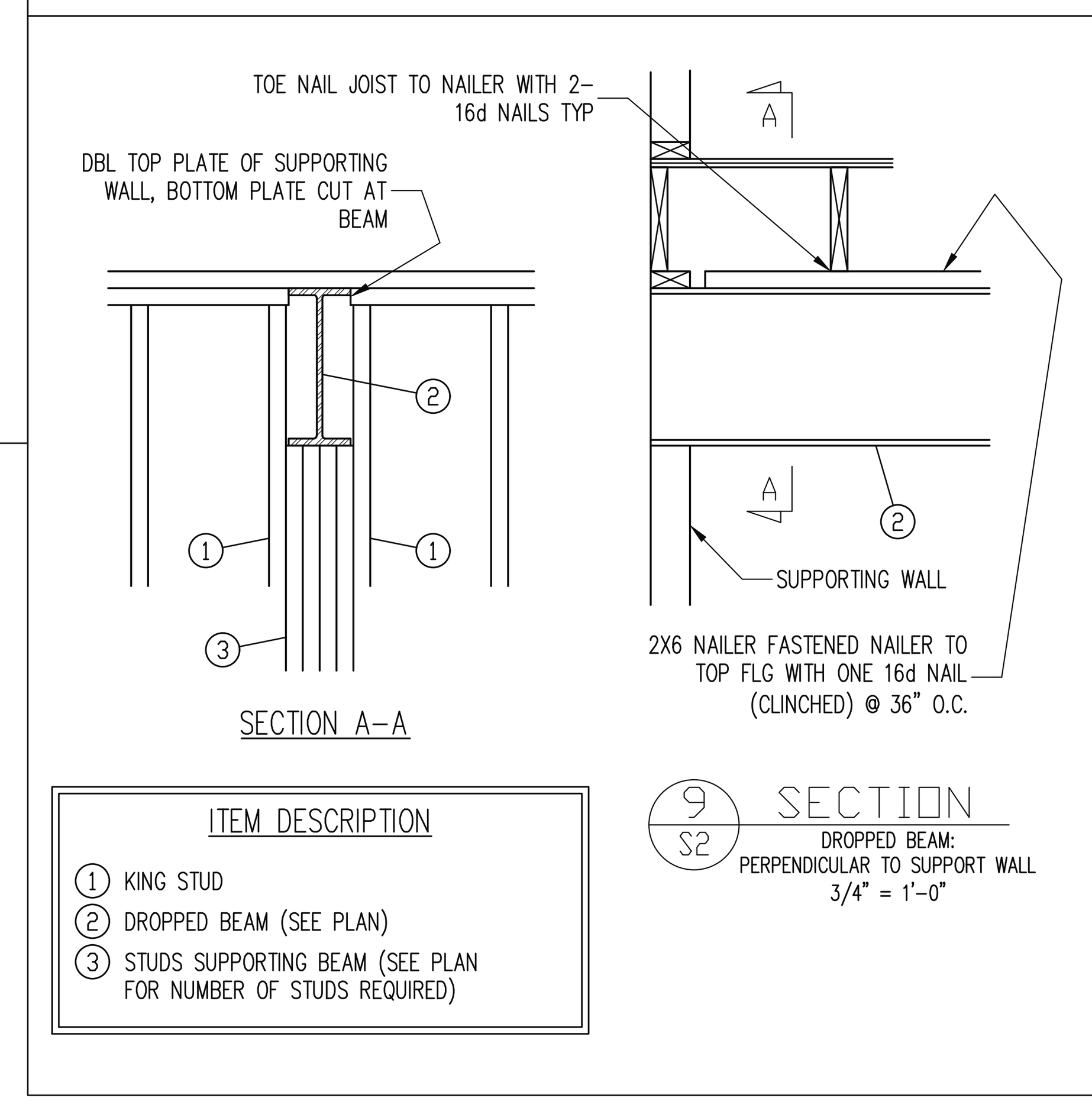
5 S2 SECTION
STEEL BEAM BEARING ON STEEL COLUMN
3/4" = 1'-0"



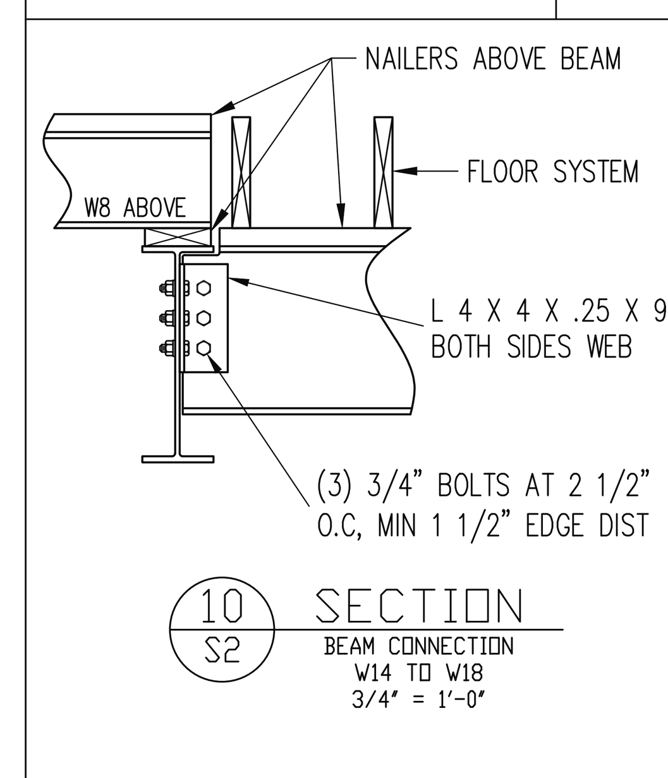
6 S2 SECTION
BEAM CONNECTION W8 TO W8, TYP.
3/4" = 1'-0"



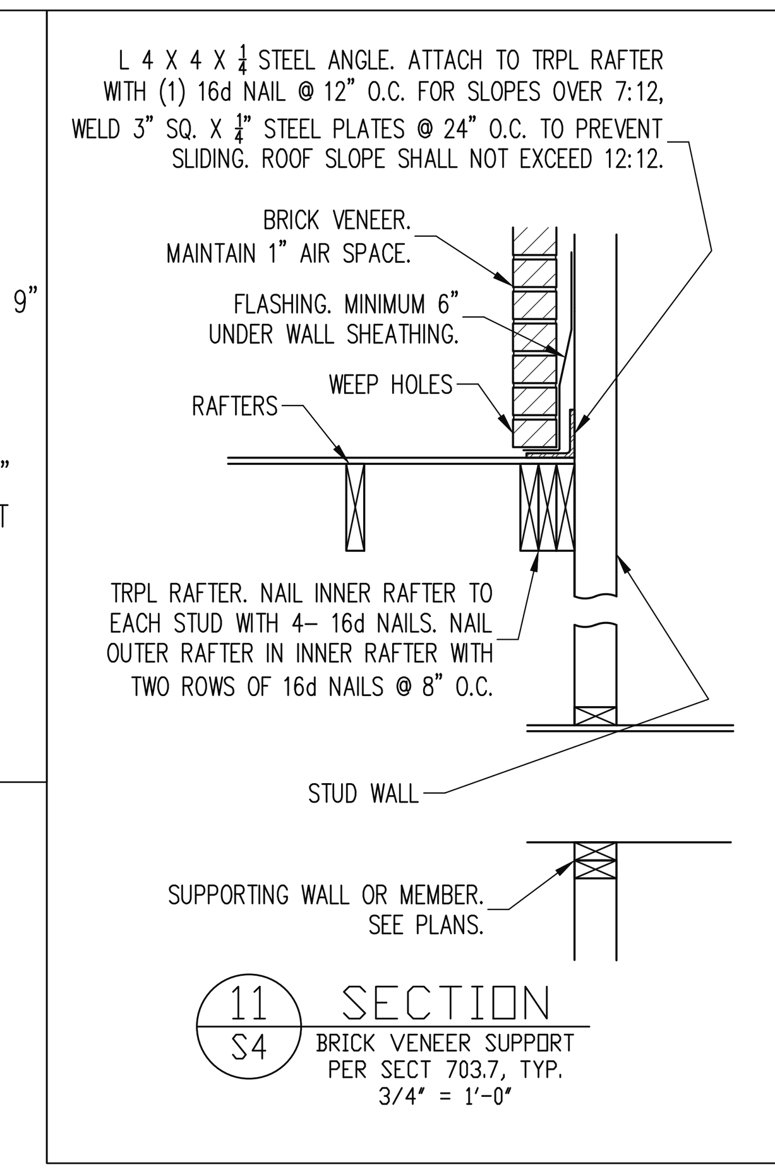
7 S2 SECTION
BEAM CONNECTION LVL OR SAWN TO WF, TYP.
3/4" = 1'-0"



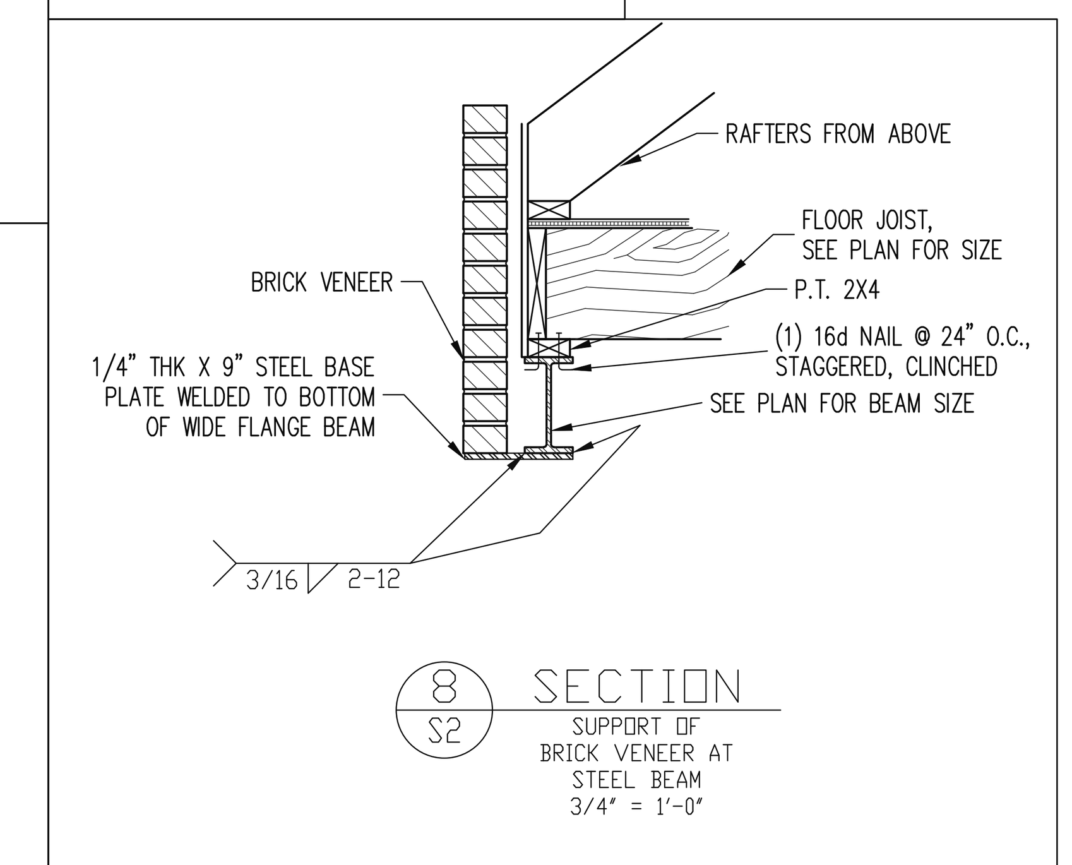
9 S2 SECTION
DROPPED BEAM: PERPENDICULAR TO SUPPORT WALL
3/4" = 1'-0"



10 S2 SECTION
BEAM CONNECTION W14 TO W18
3/4" = 1'-0"



11 S4 SECTION
BRICK VENEER SUPPORT PER SECT 703.7, TYP.
3/4" = 1'-0"



8 S2 SECTION
SUPPORT OF BRICK VENEER AT STEEL BEAM
3/4" = 1'-0"

CONSTRUCTION SPECIFICATIONS

PART 1: GENERAL

1.01 CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.

1.02 DIMENSIONS SHOWN SHALL GOVERN OVER SCALE ON THESE DRAWINGS.

1.05 METHODS, PROCEDURES AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR, WHO SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.

PART 2: DESIGN LOADS

2.01 DESIGN LOADS SHALL CONFORM WITH THE TABLE BELOW:

USE	LIVE LOAD (PSF)	DEAD LOAD (PSF)
BALCONIES, DECKS, ATTICS WITH FIXED STAIR ACCESS, DWELLING UNITS INCLUDING ATTICS WITH FIXED STAIR ACCESS, STAIRS, FIRE ESCAPES	40	10
GARAGES (PASSENGER CARS ONLY)	50	--
ATTICS (NO STORAGE, LESS THAN 5' HEADROOM)	10	10
ATTICS (WITH STORAGE)	20	10
ROOF	20	10 (15 FOR VAULTS)

NOTES:
- INDIVIDUAL STAIR TREADS ARE TO BE DESIGNED FOR THE UNIFORMLY DISTRIBUTED LIVE LOAD OF 40 PSF OR A 300 LB. CONCENTRATED LOAD ACTING OVER AN AREA OF 4 SQ. WHICHEVER PRODUCES THE GREATER STRESS.
- BUILDER TO VERIFY DEAD LOAD DOES NOT EXCEED 10 PSF WHEN HEAVY FLOOR OR ROOF FINISHES SUCH AS TILE OR SLATE ARE UTILIZED. NOTIFY ENGINEERING UNDER THESE CONDITIONS

2.02 INTERIOR WALLS: 5 PSF LATERAL.

2.03 BASIC WIND DESIGN VELOCITY OF 120 MPH.

2.04 SOIL BEARING CAPACITY 2000 PSF (PRESUMPTIVE).

PART 3: STRUCTURAL STEEL

3.01 WIDE FLANGE BEAMS AND TEE SECTIONS SHALL CONFORM TO ASTM A992 MINIMUM GRADE

3.02 SQUARE AND RECTANGULAR TUBING SHALL CONFORM TO ASTM A500 GRADE B MINIMUM GRADE.

3.03 STEEL PIPE SHALL CONFORM TO ASTM A53 GRADE B, TYPE S, MINIMUM GRADE

3.04 ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO ASTM A36 MINIMUM GRADE

3.05 STRUCTURAL STEEL CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.

PART 4: WELDING

4.01 WELDING ELECTRODES SHALL BE E70XX AND ALL WELDING SHALL BE PERFORMED BY AN AWS CERTIFIED WELDER

PART 5: CONCRETE AND SLABS ON GRADE

5.01 CAST IN PLACE CONCRETE SHALL BE OF NORMAL WEIGHT, 6% AIR ENTRAINMENT, AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS TYP UNO. ALL CONCRETE, INCLUDING CONCRETE FOR FOOTINGS, IS TO BE CAST IN PLACE, TYP UNO.

5.02 REINFORCED CAST IN PLACE CONCRETE SHALL BE PROPORTIONED, MIXED AND PLACED IN ACCORDANCE WITH THE SPECIFICATIONS OF ACI 318, LATEST EDITION.

5.03 SLABS ON GRADE, IF ANY, SHALL CONTAIN SYNTHETIC POLYPROPYLENE FIBRILLATED MICRO FIBERS, FIBER LENGTH 1 1/2", DOSAGE RATE 1 1/2 LBS/CU YD. SLAB TO BE PLACED ON A 6 MIL VAPOR BARRIER ON 2" MIN GRANULAR FILL ON SOIL WITH 90% MIN STANDARD PROCTOR DENSITY. VAPOR BARRIER MAY BE OMITTED FOR SLABS NOT IN ENCLOSED AREAS

PART 6: REBAR AND WIRE REINFORCEMENT

6.01 REBAR SHALL BE DEFORMED STEEL CONFORMING TO ASTM A615 GRADE 60 TYP UNO

6.02 LAP SPLICES SHALL BE CLASS B AS DEFINED BY ACI 318, TYP UNO

6.03 WIRE REINFORCEMENT SHALL BE 9 GA AND SHALL CONFORM TO ASTM A1064.

PART 7: MASONRY

7.01 CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90 AND C55, NORMAL WEIGHT, f'M = 1,500 PSI MIN

7.02 CLAY MASONRY UNITS SHALL CONFORM TO ASTM C62-17 GRADE SW

7.03 MORTAR SHALL BE TYPE S. MORTAR AND GROUT SHALL CONFORM TO ASTM C476, MIN COMPRESSIVE STRENGTH OF 2000 PSI.

7.04 MASONRY CONSTRUCTION SHALL CONFORM TO THE SPECIFICATIONS OF ACI 530

7.05 LADDER WIRE REINFORCEMENT SHALL CONFORM TO ASTM A951. 6" MIN LAPS FOR CONTINUOUS WALL APPLICATIONS

PART 8: BOLTS AND LAG SCREWS

8.01 BOLTS SHALL CONFORM TO ASTM A307 MINIMUM GRADE TYP UNO. INSTALL STANDARD STEEL WASHERS (ASTM F844-07a) FOR THE NUT / BOLT HEAD WHEN BOLTING WOOD MEMBERS

8.02 LAG SCREWS SHALL CONFORM TO ANSI/ASME STANDARD B18.2.1-1981. PILOT HOLES SHALL BE USED FOR LAG SCREW INSTALLATION AND SHALL BE BORED ACCORDING TO NDS SPECIFICATIONS. INSTALL STANDARD STEEL WASHERS (ASTM F844-07a) FOR SCREW HEAD

PART 9: DRIVEN FASTENERS

9.01 NAILS, SPIKES AND STAPLES SHALL CONFORM TO ASTM F 1667- 05. NAILS ARE TO BE COMMON WIRE OR BOX

PART 10: DIMENSIONAL LUMBER

10.01 SOLID SAWN WOOD FRAMING DESIGN IS BASED ON NO. 2 SPRUCE PINE FIR OR SYP #2 FOR JOISTS, RAFTERS, GIRDERS, BEAMS, STUDS, ETC.

PART 11: ENGINEERED LUMBER

11.01 LVL OR PSL MINIMUM ALLOWABLE DESIGN STRESSES ARE AS FOLLOWS:
E= 1.9 X 10E6 PSI, Fb = 2600 PSI, Fv = 285 PSI, Fc = 750 PSI
LSL MINIMUM ALLOWABLE DESIGN STRESSES ARE AS FOLLOWS:
E= 1.3 X 10E6 PSI, Fb = 1700 PSI, Fv = 400 PSI, Fc = 680 PSI

PART 12: PRESSURE TREATED LUMBER

12.01 LUMBER IN CONTACT WITH THE GROUND, CONCRETE OR MASONRY SHALL BE PRESSURE TREATED IN ACCORDANCE WITH AWPA STANDARD C-15. ALL OTHER EXPOSED LUMBER SHALL BE TREATED IN ACCORDANCE WITH AWPA STANDARD C-2 OR BY ANY METHOD GIVING EQUAL PROTECTION. THE BUILDING CODE OFFICE MAY ALSO APPROVE A NATURAL DECAY RESISTANT WOOD PER SECTION 19-6(A)

PART 13: STEEL FLITCH PLATE BEAMS

13.01 FLITCH PLATE BEAMS SHALL CONSIST OF A CONTINUOUS STEEL PLATE BOLTED BETWEEN TWO PIECES OF CONTINUOUS LUMBER AS SIZED ON THE PLANS. BOLT PIECES TOGETHER USING 1/2" ⌀ BOLTS SPACED AT 24" O.C. STAGGERED TOP TO BOTTOM OF THE BEAM. MAINTAIN A 2" EDGE DISTANCE. PLACE TWO BOLTS, ONE ABOVE THE OTHER, 6" ± 2" FROM EACH END OF THE BEAM.

PART 14: STUD SUPPORTS FOR BEAMS

14.01 STEEL, ENGINEERED LUMBER, AND FLITCH PLATE BEAMS BEARING ON A STUD WALL SHALL BEAR AS FOLLOWS:

1-WHEN THE BEAM IS PERPENDICULAR TO, OR SKEWED RELATIVE TO THE WALL, THE BEAM SHALL BEAR FULL WIDTH ON THE SUPPORTING WALL INDICATED AND SHALL BE SUPPORTED BY A MINIMUM OF THREE GANGED STUDS, OR A GANGED STUD COLUMN WITH A NUMBER OF STUDS SUCH THAT THE STUD COLUMN IS AT LEAST AS WIDE AS THE TRUE WIDTH OF THE BEAM BEING SUPPORTED, WHICHEVER IS GREATER, TYP UNO. FOR THE SKEWED CONDITION PARTICULAR CARE SHALL BE TAKEN TO ENSURE STUD COLUMN IS CENTERED ON THE BEAM
2-BEAMS BEARING ONTO THE END OF A STUD WALL PARALLEL TO THE BEAM SHALL BEAR A MINIMUM OF 4 1/2" ONTO THE WALL AND BE SUPPORTED BY A TRPL STUD GANGED COLUMN TYP UNO.

14.02 DIMENSIONAL LUMBER BEAMS BEARING ON A STUD WALL SHALL BEAR AS FOLLOWS:

1-WHEN THE BEAM IS PERPENDICULAR TO, OR SKEWED RELATIVE TO THE WALL, THE BEAM SHALL BEAR FULL WIDTH ON THE SUPPORTING WALL INDICATED (LESS 1 1/2" TO ALLOW FOR A CONTINUOUS RIM JOIST WHERE APPLICABLE) AND SHALL BE SUPPORTED BY A GANGED STUD COLUMN THE SAME WIDTH AS THE BEAM TYP UNO. (E.G. A TRIPLE 2X10 IS TO BE SUPPORTED BY (3) STUDS). FOR THE SKEWED CONDITION PARTICULAR CARE SHALL BE TAKEN TO ENSURE STUD COLUMN IS CENTERED ON THE BEAM
2-BEAMS BEARING ONTO THE END OF A STUD WALL PARALLEL TO THE BEAM SHALL BEAR A MINIMUM OF 3" ONTO THE WALL AND BE SUPPORTED BY A DBL STUD GANGED COLUMN TYP UNO.

14.03 EXTRA JOISTS BEARING ON A STUD WALL PERPENDICULAR TO OR SKEWED RELATIVE TO THE BEAM SHALL BE SUPPORTED BY ONE ADDITIONAL STUD.

14.04 STUDS THAT ARE GANGED TO FORM A COLUMN SHALL HAVE ADJACENT STUDS WITHIN THE COLUMN NAILED TOGETHER WITH ONE ROW OF 10d NAILS AT 8" O.C. (TWO ROWS OF 10d NAILS @ 8" O.C., 3" APART, FOR 2X8 OR 2X10 STUDS) ALL COLUMNS SHALL BE CONTINUOUS DOWN TO THE FOUNDATION OR OTHER PROPERLY DESIGNED STRUCTURAL ELEMENT SUCH AS A BEAM. COLUMNS TRANSFERRING LOADS THROUGH FLOOR LEVELS SHALL BE SOLIDLY BLOCKED FOR THE FULL WIDTH OF THE STUD COLUMN WITHIN THE CAVITY FORMED BY THE FLOOR JOISTS.

PART 15: NAILING OF MULTI PLY WOOD BEAMS

15.01 SOLID SAWN LUMBER JOISTS THAT ARE GANGED TO FORM A BEAM SHALL HAVE ADJACENT MEMBERS IN THE BEAM NAILED TOGETHER WITH THREE ROWS OF 10d NAILS @ 16" O.C. FOR 2X10 OR LARGER, TWO ROWS OF 10d NAILS @ 16" O.C. FOR 2X8, ONE ROW OF 10d NAILS @ 16" O.C. FOR 2X6 OR SMALLER. STAGGER ROWS 5" MIN.

15.02 LVL MEMBERS THAT ARE GANGED TO FORM A BEAM SHALL HAVE ADJACENT MEMBERS IN THE BEAM FASTENED TOGETHER PER MANUFACTURERS RECOMMENDATIONS, TYP UNO

PART 16: WALL FRAMING

16.01 STUD WALLS SHALL CONSIST OF 2X4 STUDS SPACED AT 16" O.C. UNO. STUDS SHALL BE CONTINUOUS FROM SOLE PLATE AT FLOOR TO DOUBLE TOP PLATE AT THE CEILING OR ROOF. NO INTERMEDIATE BANDS OR PLATES SHALL CAUSE DISCONTINUITIES IN A STUD WALL EXCEPT AS REQUIRED FOR DOOR OR WINDOW OPENINGS. THE KING STUDS FOR SUCH OPENINGS SHALL BE CONTINUOUS, TYP UNO

PART 17: KING STUDS

17.01 KING STUDS FOR OPENINGS IN EXTERIOR WALLS SHALL BE AS FOLLOWS:

		NUMBER OF KING STUDS				
MAX OPENING WIDTH		5'-0"	9'-0"	13'-0"	17'-0"	21'-0"
STUD SIZE	2X4	1	2	3	4	5
	2X6	1	1	2	2	2
	2X8	1	1	1	1	2

PART 18: SUBSTITUTIONS

18.01 MATERIAL OR MEMBER SIZE SUBSTITUTIONS OR PLAN DEVIATIONS REQUIRE THE WRITTEN AUTHORIZATION OF THE DESIGNERS. UNAUTHORIZED DEVIATIONS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

PART 19: OWNERSHIP OF STRUCTURAL DESIGN

19.01 THE STRUCTURAL DESIGN OF THIS PLAN IS THE PROPERTY OF ENGINEERING TECH ASSOCIATES (ETA). THESE PLANS ARE FOR THE ONE TIME USE AT THE LOCATION INDICATED AND FOR THE CLIENT LISTED. ETA ASSUMES NO LIABILITY FOR THESE PLANS IF THEY ARE REPRODUCED, IN WHOLE OR IN PART, FOR CONSTRUCTION AT ANY OTHER LOCATION WITHOUT WRITTEN PERMISSION FROM ETA

ABBREVIATIONS

ABV	ABOVE	FND	FOUNDATION	TJ	TRIPLE JOIST
B.	BOTH	FTG	FOOTING	TYP	TYPICAL
B.E.	BOTH ENDS	HDG	HOT DIPPED GALVANIZED	TRPL	TRIPLE
BTWN	BETWEEN	HGR	HANGER	TSP	TRIPLE STUD POCKET
CIP	CAST IN PLACE	LVL	LAMINATED VENEER LUMBER	UNO	UNLESS NOTED OTHERWISE
CONC	CONCRETE	NTS	NOT TO SCALE	XJ	EXTRA JOIST
CS	CONTINUOUS SHEATHING	O.C.	ON CENTER		
DIA	DIAMETER	PSL	PARALLEL STRAND LUMBER		
DBL	DOUBLE	PT	PRESSURE TREATED		
DJ	DOUBLE JOIST	QJ	QUAD JOIST		
DSP	DBL STUD POCKET	SP	STUD POCKET		
EQ	EQUAL	SQ	SQUARE		
EA	EACH				
FLG	FLANGE				
FL PL	FLITCH PLATE				
FLR	FLOOR				

NOTES

THE BUILDER IS RESPONSIBLE FOR REVIEWING PLANS PRIOR TO CONSTRUCTION. THE BUILDER SHALL IMMEDIATELY CONTACT THE ENGINEER OF RECORD (EOR) BEFORE PROCEEDING IF THE FOLLOWING CONDITIONS ARE NOTED BEFORE OR DURING CONSTRUCTION:
1) THE WORKING PLANS DO NOT BEAR THE SEAL OF THE EOR
2) THE PLANS CONTAIN DISCREPANT OR INCOMPLETE INFORMATION

ANY ERRORS DUE TO A FAILURE TO FOLLOW THE ABOVE PROCEDURES SHALL NOT BE THE RESPONSIBILITY OF THE EOR. FURTHERMORE, IT IS THE RESPONSIBILITY OF THE BUILDER TO ENSURE THAN ANY REVISIONS ISSUED BY THE EOR ARE PROMPLY DISTRIBUTED TO THE SUBCONTRACTORS

THE EOR DOES NOT PERFORM FENESTRATION OR VENTING CALCULATIONS OR ANY OTHER CALCULATIONS THAT ARE NOT DIRECTLY RELATED TO STRUCTURAL ENGINEERING.

ROOF AND FLOOR TRUSSES TO BE DESIGNED BY AN ENGINEER REGISTERED BY THE STATE. FINAL TRUSS DRAWING SHOULD BE SUBMITTED TO THE EOR FOR REVIEW

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