STRUCTURAL NOTES

1 GENERAL

A. THE BUILDING IS DESIGNED UNDER THE PROVISIONS OF THE 2018 VIRGINIA UNIFORM STATEWIDE BUILDING CODE (VUSBC).

B. THE FOLLOWING LIVE LOADS WERE UTILIZED IN THE DESIGN:

ROOF	30 PSF
LIVING AREAS	40 PSF
SLEEPING ROOMS	30 PSF
EXTERIOR DECK	40 PSF
GARAGE	50 PSF
ROOF SNOW LOAD	
GROUND SNOW LOAD (Pg)	30 PSF
WIND LOAD	
BASIC WIND SPEED (V3s)	115 MPH
IMPORTANCE FACTOR (Iw)	1.0
WIND EXPOSURE	B

DEAD LOAD ARE USED AS FOLLOWS UNLESS NOTED OTHERWISE:

ROOF	
TOP CHORD	10 PSF
BOTTOM CHORD	7 PSF
ATTIC FLOOR	10 PSF
2ND FLOOR	10 PSF
1ST FLOOR	10 PSF

C. THE BASIC STABILITY OF THE STRUCTURE IS DEPENDENT UPON THE DIAPHRAGM ACTION OF FLOORS, WALLS & ROOF ACTING TOGETHER. CONTRACTOR TO PROVIDE ALL GUYS, BRACES, STRUTS, ETC. AS REQUIRED TO ACCOMMODATE ALL LIVE, DEAD AND WIND LOADS UNTIL ALL FINAL CONNECTIONS BETWEEN THESE ELEMENTS ARE MADE.

D. BASEMENT AND FOUNDATION WALLS ARE DEPENDENT UPON THE COMPLETED INSTALLATION OF FLOORS FOR THEIR STABILITY. CONTRACTOR SHALL NOT PLACE BACKFILL UNTIL THESE ELEMENTS ARE COMPLETELY INSTALLED, OR CONTRACTOR HAS PROVIDE SHORING AND BRACING TO ADEQUATELY RESTRAIN WALL.

E. THE STRUCTURAL INTEGRITY OF THE BUILDING SHOWN ON THESE PLANS IS DEPENDENT UPON COMPLETION ACCORDING TO PLANS AND SPECIFICATIONS. STRUCTURAL MEMBERS ARE NOT SELF BRACING UNTIL PERMANENTLY AFFIXED TO THE STRUCTURE AS DIRECTED. THE STRUCTURAL ENGINEERS ASSUME NO LIABILITY FOR THE STRUCTURE DURING ARE INCLUDED IN THE PLANS AND SPECIFICATIONS OR ARE SUPERVISED BY THE STRUCTURAL ENGINEERS DURING CONSTRUCTION.

2 EARTHWORK

A. SOIL BEARING VALUE AT THE BOTTOM OF ALL FOOTINGS IS ASSUMED TO BE 1500 PSF. THIS VALUE IS TO BE VERIFIED IN THE FIELD PRIOR TO POURING FOOTINGS BY A REGISTERED ENGINEER EXPERIENCED IN SOILS ENGINEERING OR BY A QUALIFIED INSPECTOR.

B. BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 2'-0" BELOW FINISH EXTERIOR GRADE. WHERE REQUIRED, STEP FOOTINGS IN RATIO OF 2 HORIZONTAL TO 1 VERTICAL.

C. COMPACTED BACKFILL BELOW BUILDING SLABS – ALL SOIL FILL MATERIAL MUST BE APPROVED BY SOILS ENGINEER PRIOR TO PLACEMENT. MATERIALS TO BE FREE FROM ORGANIC MATERIAL, TRASH, MUCK, CONCRETE, ASPHALT OR OTHER DELETERIOUS SUBSTANCES. PRIOR TO PLACING FILL, THE EXISTING SURFACE SHALL BE CLEARED OF ALL REFUSE OR ORGANIC MATERIALS. FILL MATERIAL SHALL BE PLACED IN LAYERS NOT TO EXCEED 8" AND COMPACTED TO MIN. 95% OF THE DRY MAX. DENSITY AS DETERMINED BY ASTM D698.

D. FOUNDATION WALLS ARE DESIGNED FOR A LATERAL EARTH PRESSURE OF 60 PCF ASSUMING A FREE DRAINING MATERIAL OR DRAINING BOARD BEHIND WALL WITH A PERIMETER DRAINTILE SYSTEM. NOTIFY ENGINEER IF SOIL CONDITIONS DIFFER.

3 CONCRETE

A. ALL CONCRETE TO HAVE MINIMUM COMPRESSIVE STRENGTH (F'c) = 3000 PSI IN 28 DAYS. EXTERIOR SLABS SHALL HAVE A MINIMUM STRENGTH OF 3500 PSI. ALL CONCRETE TO BE POURED IN ACCORDANCE WITH ACI 301 SPECIFICATIONS. CONCRETE EXPOSED TO WEATHER TO BE AIR ENTRAINED.

B. ALL REINFORCING STEEL TO MEET ASTM-A-615 GRADE 60. PLACING PLANS AND SHOP FABRICATION DETAILS SHALL BE IN ACCORDANCE WITH "THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES". FURNISH SUPPORT BARS AND ALL REQUIRED ACCESSORIES IN ACCORDANCE WITH C.R.S.I. STANDARDS. ALL REINFORCING TO BE SPLICED A MINIMUM OF 30 BAR DIAMETERS.

C. PROVIDE CLEAR DISTANCE TO OUTERMOST REINFORCING AS FOLLOWS: PLANS AND SHOP FABRICATION DETAILS SHALL BE IN ACCORDANCE WITH

– BEAMS EXPOSED TO WEATHER	2"
– FOOTINGS (BOTTOM)	3"
– WALLS	1-1/2"

D. PROVIDE CORNER BARS TO MATCH HORIZONTAL REINFORCING IN WALLS AND FOOTINGS.

4 MASONRY

A. APPLICABLE BUILDING CODE AND THE "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES AND SPECIFICATIONS FOR MASONRY STRUCTURES" ACI-530/ACI-530.1, LATEST EDITIONS.

B. MASONRY TO CONFORM TO THE FOLLOWING SPECIFICATIONS:

HOLLOW LOAD-BEARING C.M.U	ASTM C90
MORTAR	ASTM C270, TYPE M OR S
GROUT	ASTM C476

C. MASONRY ASSEMBLIES SHALL HAVE COMPRESSIVE STRENGTH (F'M) GREATER THAN OR EQUAL TO 1350 PSI.

D. ALL VERTICAL REINFORCING SHALL BE GROUTED IN PLACE WITH TYPE S MORTAR OR PEA GRAVEL CONCRETE.

E. PROVIDE CONTINUOUS HORIZONTAL JOINT REINFORCING IN MASONRY WALLS AT 16" O.C. PROVIDE AT 8" O.C. AT PARAPETS.

F. CAVITY WALLS OF BRICK/STONE AND BLOCK SHALL BE CONSTRUCTED WITH JOINT REINFORCING IN MASONRY AND ADJUSTABLE METAL ANCHORS TO BRICK/STONE.

G. REINFORCING STEEL SHALL CONFORM TO ASTOM A615-GR60. LAP BARS A MINIMUM OF 48 BAR DIAMETERS. GROUT ALL REINFORCED CORES SOLID.

I. ALL EXPANSION BOLTS OR SLEEVE ANCHORS IN MASONRY WALLS SHALL BE PLACED IN GROUTED SOLID MASONRY.

J. PROVIDE DOWELS FROM ALL FOOTINGS TO MASONRY WALLS TO MATCH SIZE AND SPACING OF VERTICAL REINFORCING.

5 STEEL

A. ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A-36. WIDE FLANGES TO BE A572-GR50. PIPE TO BE A53. TUBE TO BE A500 ON A501. DETAILING TO BE IN ACCORDANCE WITH AISC STRUCTURAL STEEL DETAILING MANUAL. BOLTED FIELD CONNECTION SHALL BE 3/4" DIAMETER HIGH STRENGTH BOLTS MEETING ASTM SPEC. A-325.

B. SUBMIT COMPLETE SHOP AND ERECTION DRAWINGS FOR APPROVAL PRIOR TO FABRICATION OR ERECTION.

C. ALL WELDERS SHALL BE CERTIFIED IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY. ALL WELDING ELECTRODES, MACHINES, ETC. SHALL BE COMPATIBLE WITH STEEL BEING WELDED.

D. FLITCH BEAMS SHALL BE BOLTED WITH 1/2 INCH DIAMETER THROUGH BOLTS AT 16 INCHES ON CENTER TOP AND BOTTOM WITH THE FIRST SET OF BOLTS 6 INCHES FROM THE END.

6 WOOD

A. ALL FRAMING LUMBER SHALL BE HEM-FIR, GRADE #2, OR SPRUCE-PINE-FIR GRADE #2, OR BETTER, HAVING THE FOLLOWING MINIMUM BASE DESIGN VALUES:
- -BENDING STRESS "Fb" = 850 PSI FOR SINGLE MEMBER USE
- -HORIZONTAL SHEAR "Fv" = 135 PSI
- -COMPRESSION PERPENDICULAR TO GRAIN "Fc" = 405 PSI
- -COMPRESSION PARALLEL TO GRAIN "Fc11" = 1,150 PSI
- -MODULUS OF ELASTICITY "E" = 1,300,000 PSI

NOTE: SPRUCE-PINE-FIR (SOUTH) IS NOT ACCEPTABLE. SPRUCE-PINE-FIR MUST BE GRADED BY NLGA.

B. ALL EXTERIOR FRAMING SHALL BE PRESSURE-TREATED. FRAMING SHALL BE PRESSURE-TREATED WITH ALKALINE COPPER QUAT (ACQ) OR COPPER AZOLE (CBA-A AND CA-B), NOT SODIUM BORATE (SBX). LUMBER OR STRUCTURAL POSTS SHALL BE SOUTHERN YELLOW PINE, GRADE 2 OR BETTER, HAVING THE FOLLOWING MINIMUM PROPERTIES (BASED ON 2X12 LUMBER):
- -BENDING STRESS "Fb" = 750 PSI FOR SINGLE MEMBER USE
- -HORIZONTAL SHEAR "Fv" = 90 PSI
- -COMPRESSION PERPENDICULAR TO GRAIN "Fc" = 565 PSI
- -COMPRESSION PARALLEL TO GRAIN "Fc11" = 1,250 PSI
- -MODULUS OF ELASTICITY "E" = 1,400,000 PSI

C. PLYWOOD LAMINATED (MICROLAM OR LVL) BEAMS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:
- -BENDING STRESS "Fb" = 2600 PSI
- -HORIZONTAL SHEAR "Fv" = 250 PSI
- -MODULUS OF ELASTICITY "E" = 1,900,000 PSI

D. ALL WALL STUDS SHALL BE SPF STUD GRADE OR BETTER, HAVING THE FOLLOWING MINIMUM BASE DESIGN VALUES:
- -COMPRESSION PARALLEL TO GRAIN "Fc11" = 625 PSI
- -BENDING STRESS "F" = 725 PSI FOR SINGLE USE MEMBERS
- -MODULUS OF ELASTICITY "E" = 1,200,000 PSI

E. UNLESS NOTED OTHERWISE, FASTENING FOR STRUCTURAL MEMBERS SHALL FOLLOW INTERNATIONAL RESIDENTIAL CODE TABLE R602.3(1).

F. CUTTING AND NOTCHING OF CONVENTIONAL 2X FLOOR JOISTS SHALL CONFORM TO THE FOLLOWING:
- -NOTCH DEPTH IN THE TOP OR BOTTOM OF THE JOISTS AND BEAMS SHALL NOT EXCEED ONE-SIXTH THE DEPTH OF THE MEMBERS AND SHALL NOT BE LOCATED IN THE MIDDLE ONE THIRD OF THE SPAN (INCLUDING BIRDS MOUTH CUTS).
- -NOTCH DEPTH AT THE ENDS OF THE MEMBER SHALL NOT EXCEED ONE-FOURTH THE DEPTH OF THE MEMBER.
- -THE TENSION SIDE OF BEAMS, JOISTS AND RAFTERS SHALL NOT BE BOTCHED, EXCEPT AT ENDS OF MEMBERS.
- -HOLES BORED OR CUT INTO JOISTS SHALL NOT BE CLOSER THAN TWO INCHES TO THE TOP OR BOTTOM OF THE JOISTS. THE DIAMETER OF THE HOLE SHALL NOT EXCEED ONE-THIRD THE DEPTH OF THE JOISTS.

G. PROVIDE BLOCKING BETWEEN ALL JOISTS 2X12 OR GREATER IN DEPTH AT INTERVALS NOT TO EXCEED 8 FEET. TRUSS JOIST AND "I" JOIST SHALL HAVE BRIDGING BETWEEN JOISTS DESIGNED BY THE MANUFACTURER TO CONFORM BUILDING CODE REQUIREMENTS.

H. PROVIDE SOLID BLOCKING AT 4 FEET ON CENTER BETWEEN BAND JOIST AND FIRST INTERIOR PARALLEL JOIST, UNO.

I. PREFABRICATED JOIST HANGERS, BEAM HANGERS, POST CAPS AND POST BASES SHALL BE SIZED AND ATTACHED PER MANUFACTURERS RECOMMENDATION. FASTENERS AND CONNECTORS UTILIZED WITH PRESSURE-TREATED MEMBERS SHALL MEET G185 GALVANIZING.

J. ANCHOR BOLTS CONNECTING PRESSURE TREATED WOOD PLATES TO FOUNDATIONS, MASONRY WALLS, OR CONCRETE SLABS SHALL BE HOT-DIPPED GALVANIZED.

K. HOLES THROUGH WOOD I'S SHALL NOT EXCEED MANUFACTURERS RECOMMENDATIONS. NO CUTS OR HOLES ARE ALLOWED THROUGH TOP OR BOTTOM CHORD.

L. TRUSS FLOOR JOISTS & "I" FLOOR JOISTS SHALL BE PER DEPTH AS SHOWN ON DRAWINGS. SPACING OF THE FLOOR JOISTS AS SHOWN ON DRAWINGS ARE MAXIMUM ACCEPTABLE SPACING.

M. PROVIDE LSL BAND BOARD IN WOOD "I" FLOOR JOIST SYSTEMS AT ALL PERIMETER BEARING WALLS. PROVIDE SQUASH BLOCKS AND STIFFENERS AS REQUIRED TO DISTRIBUTE LOADINGS AND AS REQUIRED BY MANUFACTURER. PROVIDE SOLID BLOCKING AT INTERIOR JOIST SUPPORTS WITH BEARING WALLS ABOVE.

N. MULTIPLE STUDS SHALL BE NAILED WITH 10d NAILS AT 24" O.C. PROVIDE SOLID BLOCKING OR CRIPPLE STUDS IN FLOOR SYSTEM AT ALL POINT LOADS ABOVE.

O. ALL FREESTANDING POSTS SHALL HAVE PREFAB POSTCAP AND BASE. POSTS WITHIN WALL SHALL HAVE PREFAB CAP ATTACHED TO BEAM. POSTS BEARING ON MASONRY OR CONCRETE SHALL HAVE PREFAB BASE.

P. HOLES BORED IN BEARING WALL STUDS SHALL NOT EXCEED 1/3 OF STUD WIDTH.

Q. ALL STUD BEARING WALLS TO BE PROVIDED WITH 2 CONTINUOUS TOP PLATES AND 1 CONTINUOUS BOTTOM PLATE SPLICES OF TOP PLATE SHALL OCCUR OVER STUD. SPLICES SHALL BE STAGGERED A MINIMUM OF TWO FEET.

R. ALL ROOF RAFTERS AND TRUSSES SHALL BE CONNECTED AT EACH BEARING POINT WITH ONE PREFABRICATED GALVANIZED METAL CONNECTOR. EACH ANCHOR SHALL BE 18 GAGE MINIMUM THICK AND SHALL BE ATTACHED TO HAVE A CAPACITY TO RESIST A 450# UPLIFT LOADING UNLESS SHOWN OTHERWISE ON DRAWINGS.

S. ALL PREFABRICATED TRUSSES AND TRUSS JOISTS SHALL BE DESIGNED FOR THE LIVE AND DEAD LOADS INDICATED IN 1B. TRUSS AND TRUSS JOIST SPACING SHOWN ON DRAWINGS IS MAXIMUM ACCEPTABLE SPACING. SPACING OF TRUSSES SHALL BE ADJUSTED AS REQUIRED TO MEETING LOADING REQUIREMENTS.

T. THE DESIGN OF THE BRACING REQUIRED TO LATERALLY STABILIZE THE TRUSSES AND THE TRUSS MEMBERS SHALL BE THE RESPONSIBILITY OF THE SPECIALTY ENGINEER. TEMPORARY BRACING DURING ERECTION IS THE SPONSIBILITY OF CONTRACTOR.

U. ALL PREFABRICATED TRUSSES AND TRUSS JOISTS SHALL BE DESIGNED FOR THE FOLLOWING LOADS UNLESS NOTED OTHERWISE:

ROOF	LIVE LOAD – 30 PSF
	DEAD LOAD BOTTOM CHORD – 7 PSF

7 SHEATHING

A. FLOOR SHEATHING SHALL BE 23/32 (3/4) INCH APA RATED STURD-I-FLOOR, TONGUE AND GROOVE, PLYWOOD, OR EQUAL. PANELS SHALL HAVE LONG DIMENSION ORIENTED ACROSS THREE OR MORE JOISTS AND SHALL BE FASTENED WITH CONSTRUCTION ADHESIVE AND 8d NAILS AT 6 INCHES ON CENTER AT PANEL EDGES AND AT 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS. UNLESS NOTED OTHERWISE, PANEL EDGES NEED NOT BE BLOCKED.

B. ROOF SHEATHING SHALL BE 15/32 (1/2) INCH APA RATED WOOD PANELS WITHE SPAN RATING OF 24/0 OR BETTER. FASTEN PANELS TO FRAMING WITH 8d NAILS AT 6 INCHES ON CENTER AT PANEL EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS. ORIENT LONG DIMENSION OF PANELS ACROSS THREE OR MORE SUPPORTS. EDGES NEED NOT BE BLOCKED, UNLESS OTHERWISE NOTED.

C. ALL EXTERIOR WALL SHEATHING SHALL BE BRACED IN ACCORDANCE R602.10.4 IRC 2018 AS FOLLOWS:

1) UON, EXTERIOR SHEATHING SHALL BE AS FOLLOWS: 2X4 MIN. SPF (STUD GRADE) SPACED @ 16" O.C. MAX. EXTERIOR WALL SHEATHING – 7/16" OSB OR PLYWOOD FASTENERS – 8d X 2.5" LONG NAILS @ 6" O.C. @ PANEL EDGES & 12" O. C. @ INTERMEDIATE SUPPORTS

2) WOOD STRUCTURAL PANEL (WSP) SHALL BE CONSTRUCTED THE SAME AS ABOVE, AND ALL EDGES OF BRACED WALL PANELS (WSP OR CS-WSP) SHALL BE BLOCKED WITH 2X4 BLOCKING AND THE SAME EDGE NAILING AS ABOVE

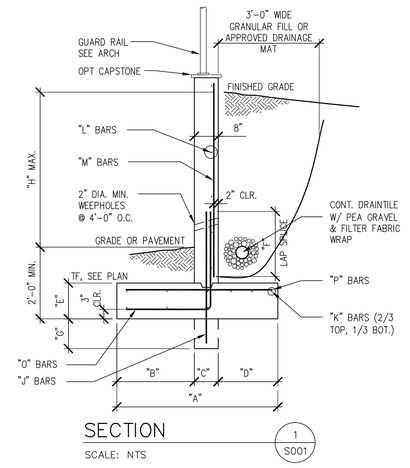
3) WHEN CONTINUOUS SHEATHING METHODS (CS-WSP OR CS-PF) ARE SPECIFIED ON THE PLANS, ALL EXTERIOR SHEATHABLE SURFACES ON THE SPECIFIED BRACED WALL LINE SHALL BE SHEATHED THE SAME AS NOTE 1) & SHALL BE BLOCKED WITH 2X4 BLOCKING.

4) GYPSUM BOARD (GB) BRACED WALL, WHEN INSTALLED VERTICALLY, SHALL BE BLOCKED WITH 2X4 BLOCKING & FINISHED AS FOLLOWS: INTERIOR WALL FINISH – 1/2" GYPSUM BOARD FASTENERS – 6d X 2" COMMON NAIL @ 7" O.C. @ EDGES & 7" IN FIELD OR NO. 6 1-1/4" SCREWS @ 4" O.C. @ EDGES & IN FIELD

5) MINIMUM BRACED WALL PANEL LENGTH IS IN ACCORDANCE WITH TABLE R602.10.5

6) ABBREVIATIONS & LEGEND:

CS-WSP	CONTINUOUS SHEATHING
WSP	WOOD STRUCTURAL PANEL
CS-PF	CONTINUOUSLY SHEATHED PORTAL FRAME
GB	GYPSUM BOARD
SW	SHEAR WALL



SECTION 1 S001

SCALE: NTS

8" CONCRETE LOW RETAINING WALL SCHEDULE

WALL HEIGHT	DIMENSIONS						
H	A	B	C	D	E	F	G (CONC KEY)
2'-0"	2'-3"	0'-8"	0'-8"	0'-11"	1'-0"	2'-0"	–
4'-0"	3'-3"	1'-3"	0'-8"	1'-4"	1'-0"	2'-0"	1'-0"
6'-0"	4'-6"	1'-10"	0'-8"	2'-0"	1'-0"	2'-0"	1'-0"

WALL HEIGHT	REINFORCING						
H	J (CONC KEY)	K	L	M	N	O	P
2'-0"	–	3-#4	#4 @ 12"	–	–	SAME AS "M"	#4 @ 8"
4'-0"	#4 @ 10"	6-#4	#4 @ 8"	#4 @ 8"	–	SAME AS "M"	#4 @ 8"
6'-0"	#4 @ 10"	9-#4	#4 @ 8"	#4 @ 8"	–	SAME AS "M"	#4 @ 8"

JZSC
JZ STRUCTURAL CONSULTING INC.

43130 Amberwood Plaza, #235
Chantilly, VA 20152

WWW. JZ Structure. Com
PH. (703) 327-9912
FAX (703) 327-8285

STRUCTURAL FRAMING

Job #

Date: 11/07/2023 Issue:

REVISION

COMMONWEALTH OF VIRGINIA
XIAOJIN ZHANG
Lic. No. 029548
11/13/2023
PROFESSIONAL ENGINEER

Drawn ZH Checked JZ

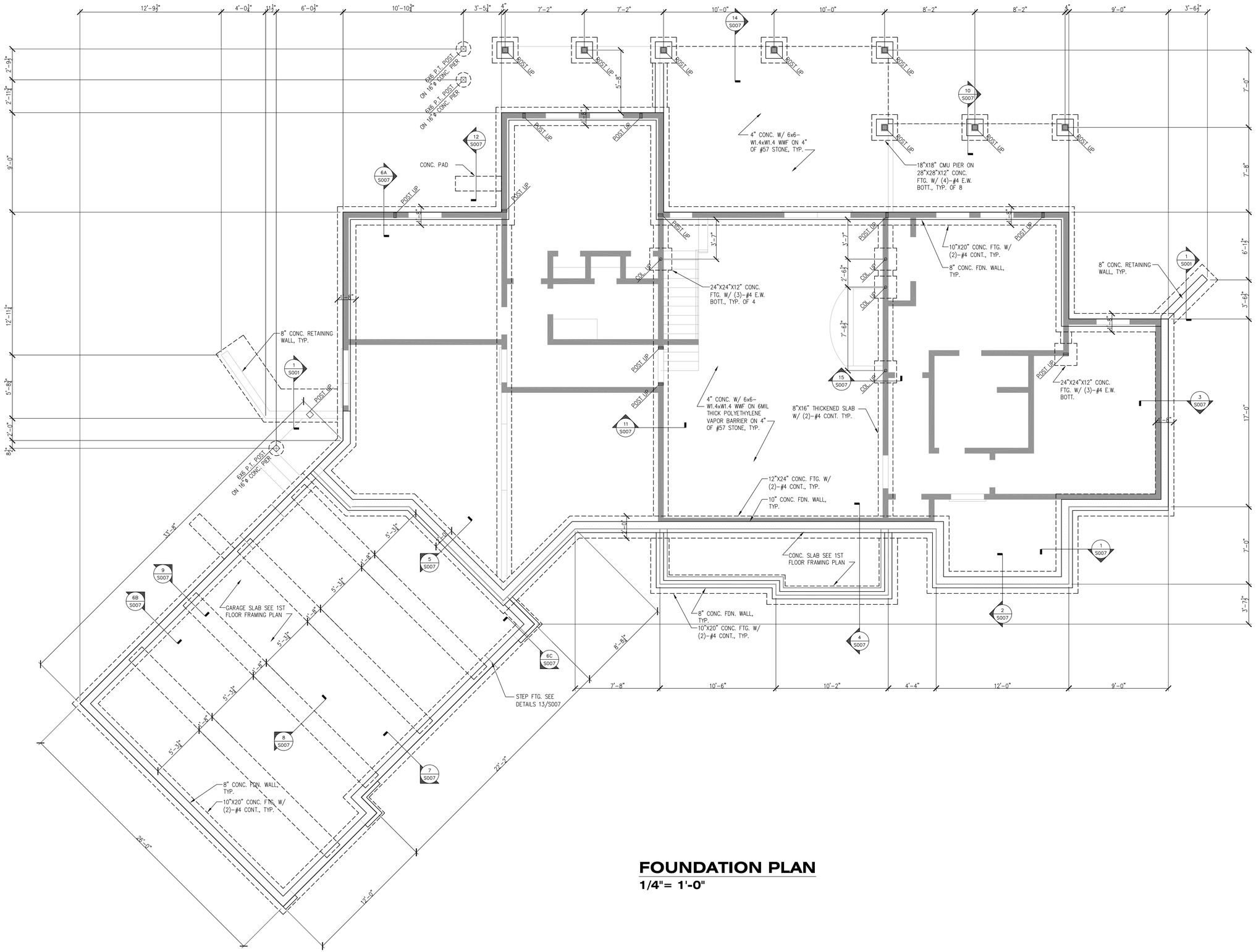
Scale AS NOTED

Sheet Title

STRUCTURAL NOTES & DETAILS

Sheet No.

S001



FOUNDATION PLAN

1/4"= 1'-0"

JZSC
JZ STRUCTURAL CONSULTING INC.

43130 Amberwood Plaza,
#235
Chantilly, VA 20152

WWW. JZ Structure. Com
PH. (703) 327-9912
FAX (703) 327-8285

STRUCTURAL FRAMING

Job #

Date: 11/07/2023 Issue:

REVISION

COMMONWEALTH OF VIRGINIA
XIAOJIN ZHANG
Lic. No. 029348
11/13/2023
PROFESSIONAL ENGINEER

Drawn ZH Checked JZ

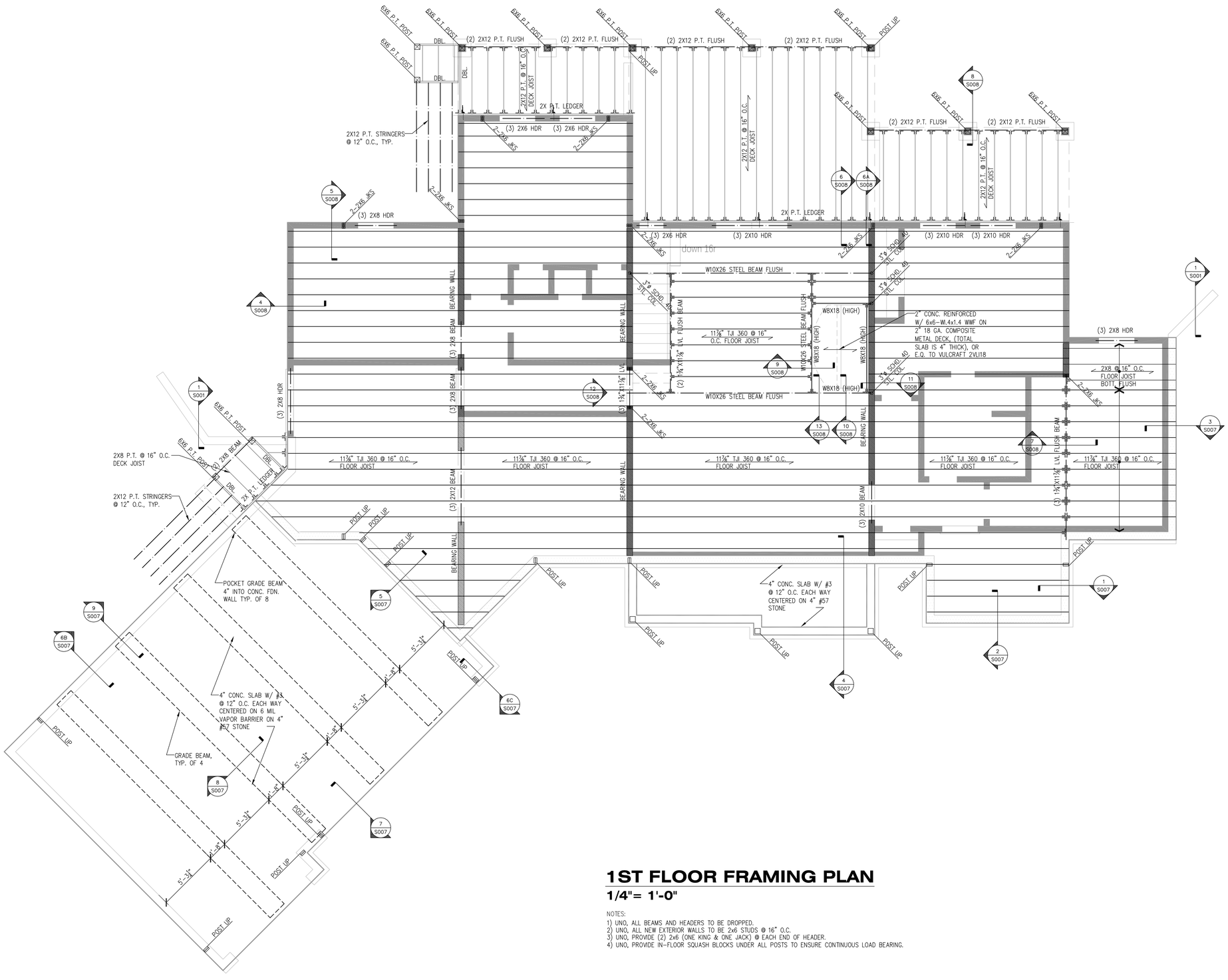
Scale AS NOTED

Sheet Title

FOUNDATION PLAN

Sheet No.

S002



1ST FLOOR FRAMING PLAN

1/4"= 1'-0"

NOTES:
1) UNO, ALL BEAMS AND HEADERS TO BE DROPPED.
2) UNO, ALL NEW EXTERIOR WALLS TO BE 2x6 STUDS @ 16" O.C.
3) UNO, PROVIDE (2) 2x6 (ONE KING & ONE JACK) @ EACH END OF HEADER.
4) UNO, PROVIDE IN-FLOOR SQUASH BLOCKS UNDER ALL POSTS TO ENSURE CONTINUOUS LOAD BEARING.

JZSC
JZ STRUCTURAL CONSULTING INC.
43130 Amberwood Plaza, #235
Chantilly, VA 20152
WWW. JZ Structure. Com
PH. (703) 327-9912
FAX (703) 327-8285

STRUCTURAL FRAMING

Job #

Date: 11/07/2023 Issue:

REVISION

COMMONWEALTH OF VIRGINIA
XIAOJIN ZHANG
Lic. No. 029548
11/13/2023
PROFESSIONAL ENGINEER

Drawn ZH Checked JZ

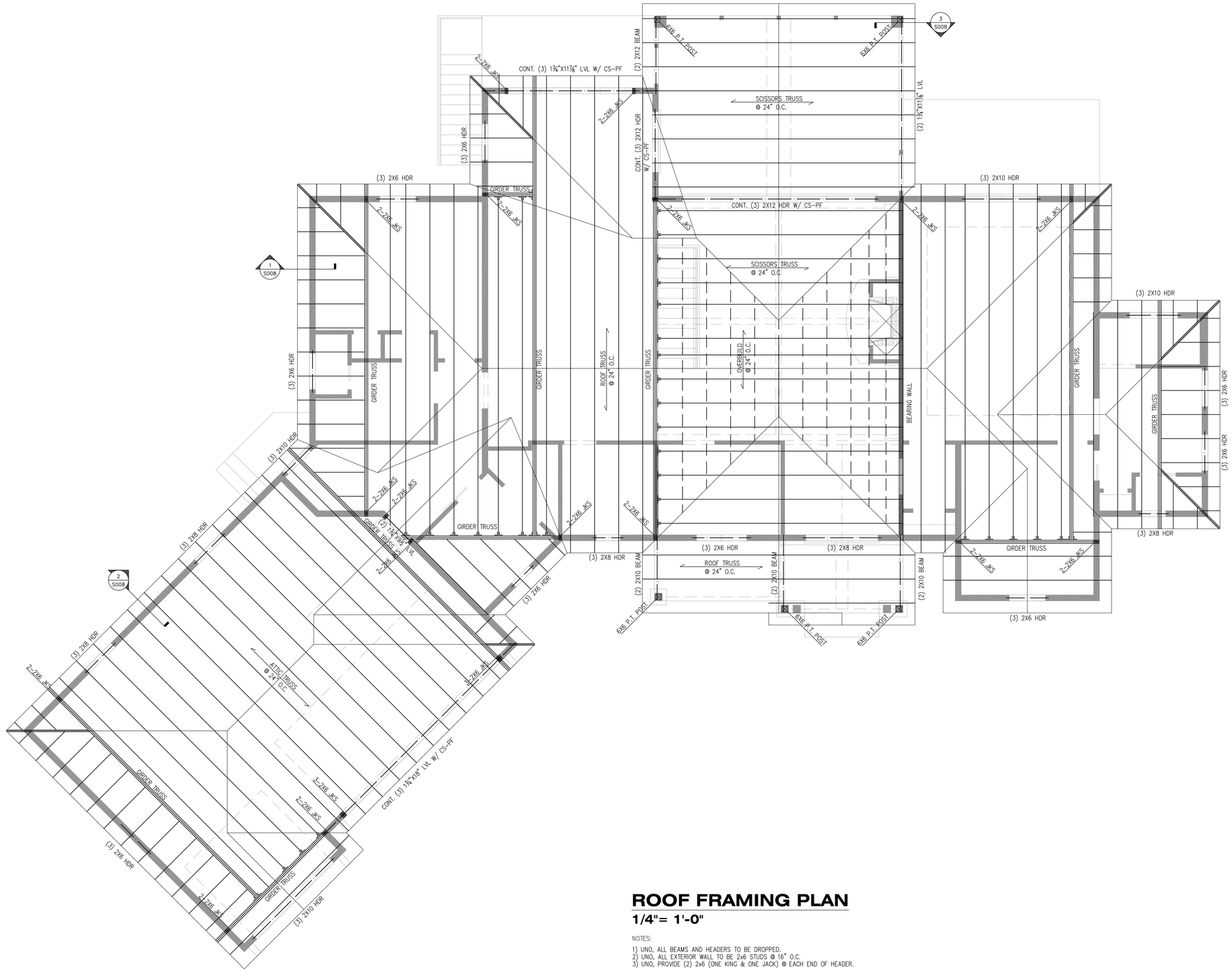
Scale AS NOTED

Sheet Title

1ST FLOOR FRAMING PLAN

Sheet No.

S003



ROOF FRAMING PLAN

1/4"= 1'-0"

NOTES:

1) UNO, ALL BEAMS AND HEADERS TO BE DROPPED.
2) UNO, ALL EXTERIOR WALL TO BE 2x6 STUDS @ 16" O.C.
3) UNO, PROVIDE (2) 2x6 (ONE KING & ONE JACK) @ EACH END OF HEADER.

JZSC
JZ STRUCTURAL CONSULTING INC.

43130 Amberwood Plaza, #235
Chantilly, VA 20152

WWW. JZ Structure. Com
PH. (703) 327-9912
FAX (703) 327-8285

STRUCTURAL FRAMING

Job #

Date: 11/07/2023 Issue:

REVISION

COMMONWEALTH OF VIRGINIA
XIAOJIN ZHANG
Lic. No. 029548
11/13/2023
PROFESSIONAL ENGINEER

Drawn ZH Checked JZ

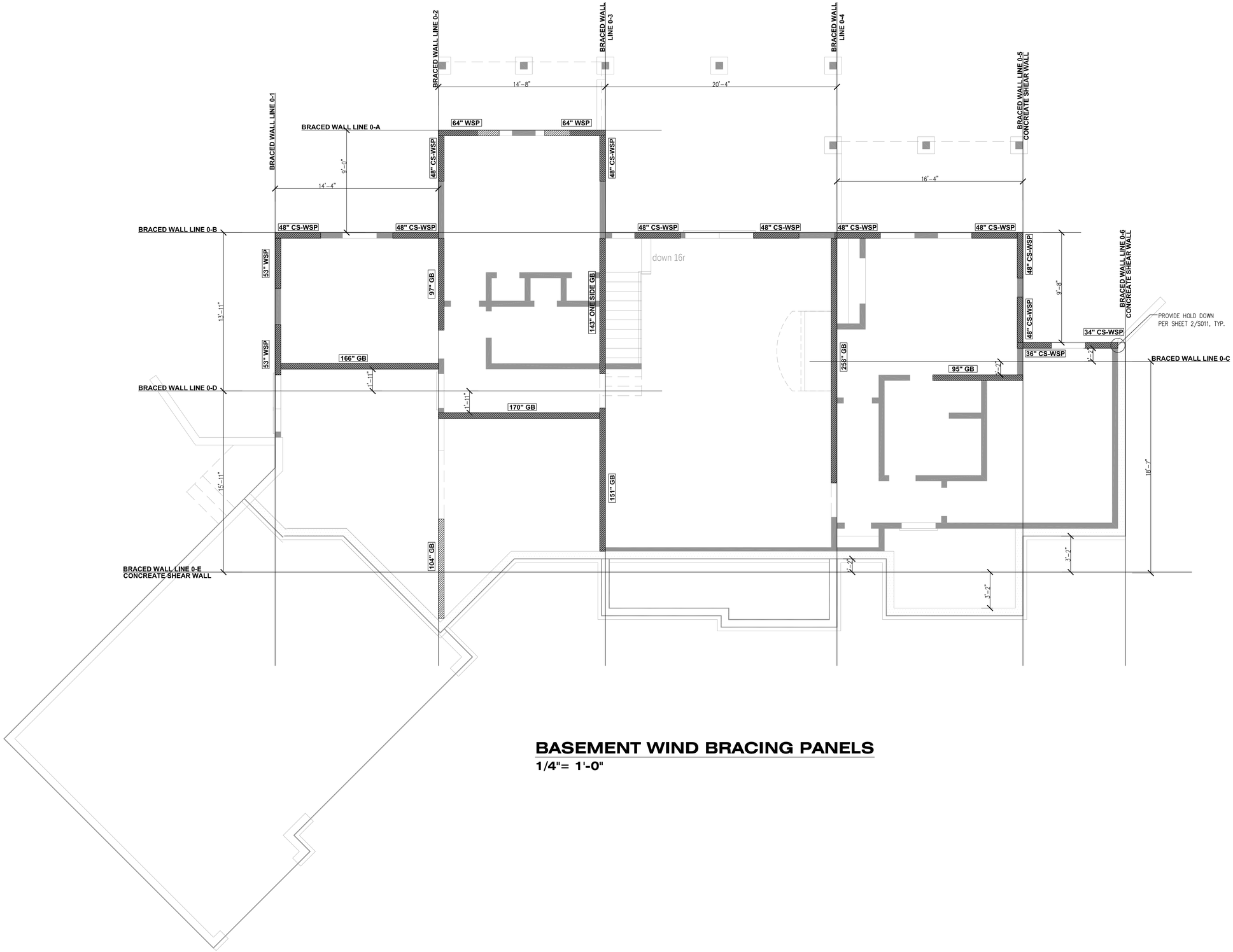
Scale AS NOTED

Sheet Title

ROOF FRAMING PLAN

Sheet No.

S004



BASEMENT WIND BRACING PANELS

1/4"= 1'-0"

JZSC
JZ STRUCTURAL CONSULTING INC.

43130 Amberwood Plaza,
#235
Chantilly, VA 20152

WWW. JZ Structure. Com
PH. (703) 327-9912
FAX (703) 327-8285

STRUCTURAL FRAMING

Job #

Date: 11/07/2023

Issue:

REVISION

COMMONWEALTH OF VIRGINIA
XIAOJIN ZHANG
Lic. No. 029548
11/13/2023
PROFESSIONAL ENGINEER

Drawn ZH

Checked JZ

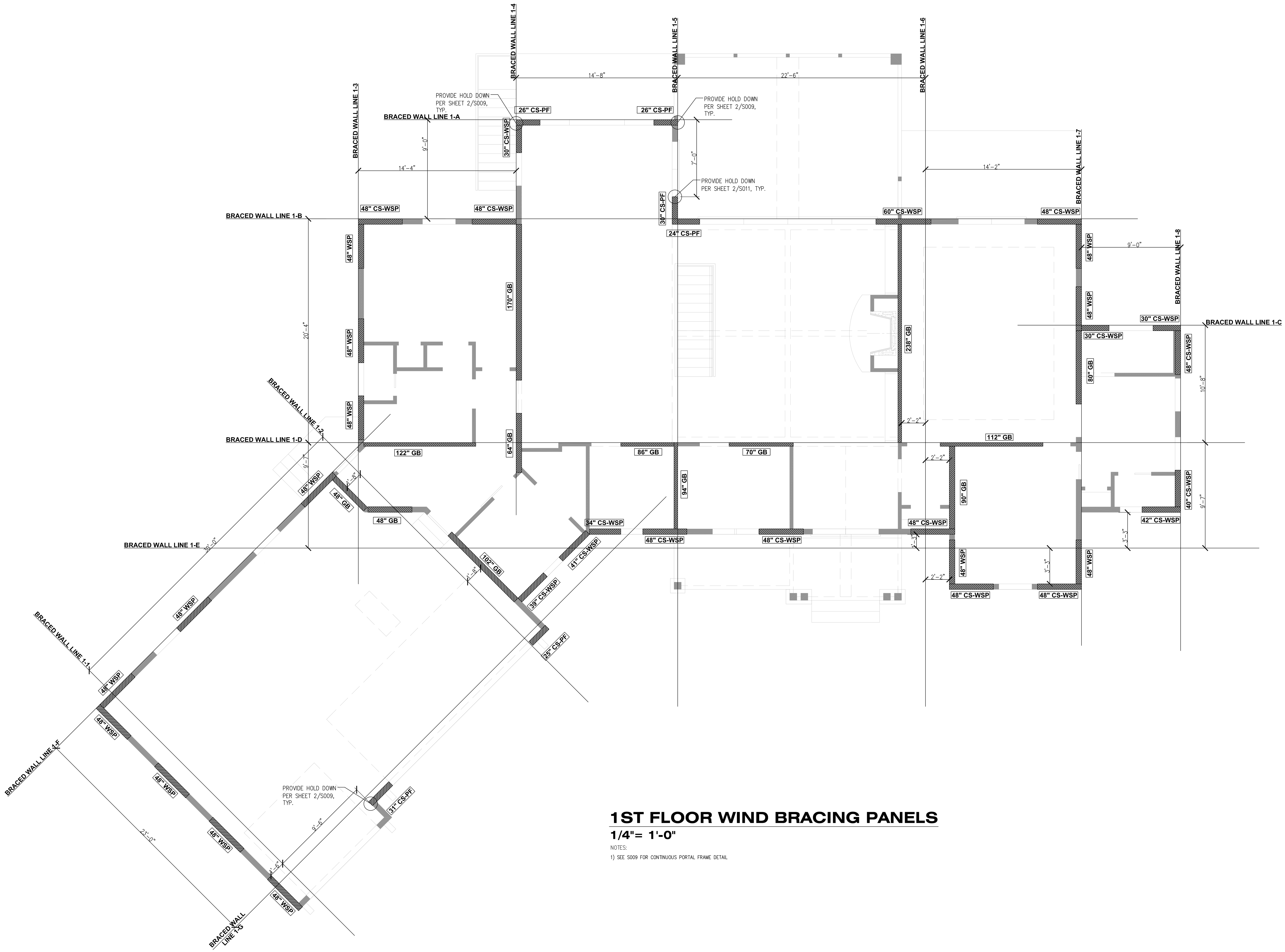
Scale AS NOTED

Sheet Title

BASEMENT BRACING WALL PLAN

Sheet No.

S005



1ST FLOOR WIND BRACING PANELS

1/4"= 1'-0"

NOTES:

1) SEE S009 FOR CONTINUOUS PORTAL FRAME DETAIL

JZSC
JZ STRUCTURAL CONSULTING INC.

**43130 Amberwood Plaza, #235
Chantilly, VA 20152**

WWW. JZ Structure. Com

PH. (703) 327-9912
FAX (703) 327-8285

STRUCTURAL FRAMING

Job #

Date: 11/07/2023

Issue:

REVISION

COMMONWEALTH OF VIRGINIA
XIAOJIN ZHANG
Lic. No. 029548
11/13/2023
PROFESSIONAL ENGINEER

Drawn ZH

Checked JZ

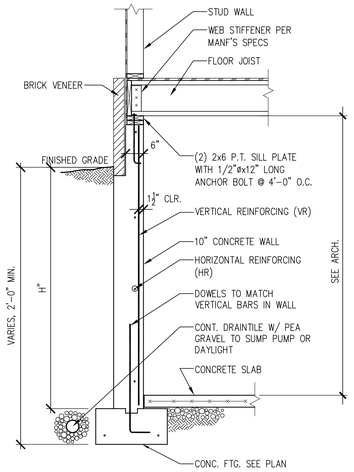
Scale AS NOTED

Sheet Title

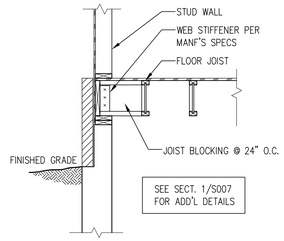
1ST FLOOR BRACING WALL PLAN

Sheet No.

S006

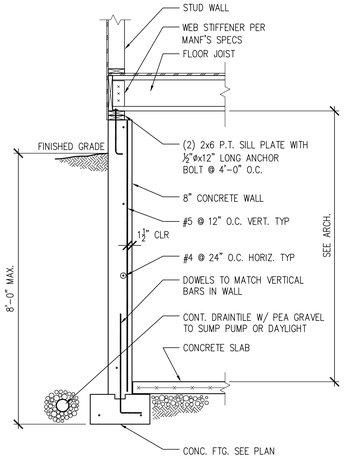


SECTION 1 S007
SCALE: NTS

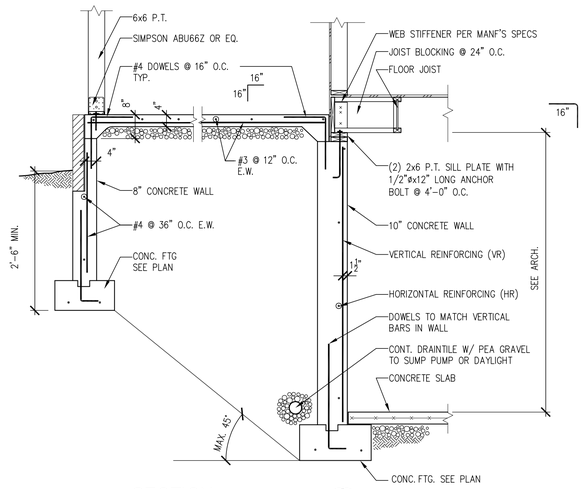


SECTION 2 S007
SCALE: NTS

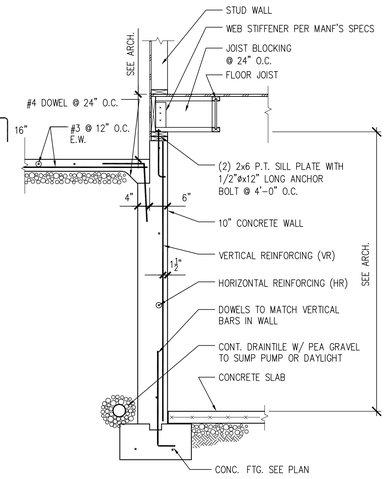
10" THICK CONCRETE WALL H = 9 FT EQUIVALENT EARTH PRESSURE 60 PCF		
BACKFILL HEIGHT h	VERTICAL REINFORCING (VB)	HORIZONTAL REINFORCING (HB)
≤ 7'-0"	#4 @ 16" O.C.	#4 @ 24" O.C.
≤ 8'-6"	#4 @ 12" O.C.	



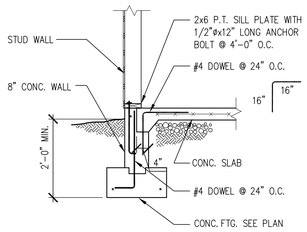
SECTION 3 S007
SCALE: NTS



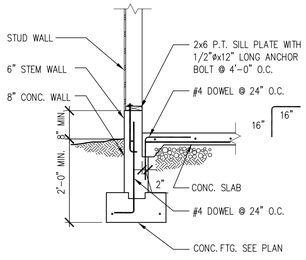
SECTION 4 S007
SCALE: NTS



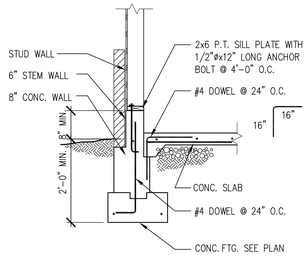
SECTION 5 S007
SCALE: NTS



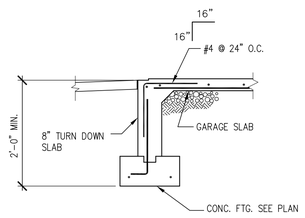
SECTION 6A S007
SCALE: NTS



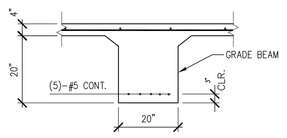
SECTION 6B S007
SCALE: NTS



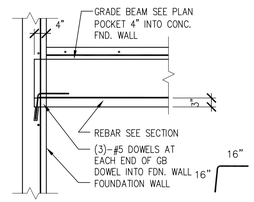
SECTION 6C S007
SCALE: NTS



SECTION 7 S007
SCALE: NTS

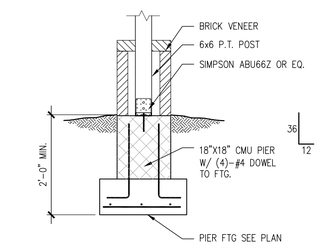


SECTION 8 S007
SCALE: NTS

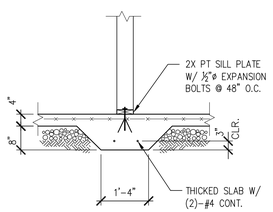


TYPICAL GRADE BEAM TO NEW FOUNDATION WALL POCKETING DETAIL

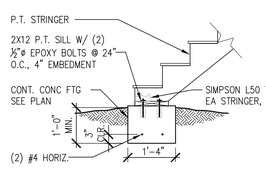
SECTION 9 S007
SCALE: NTS



SECTION 10 S007
SCALE: NTS

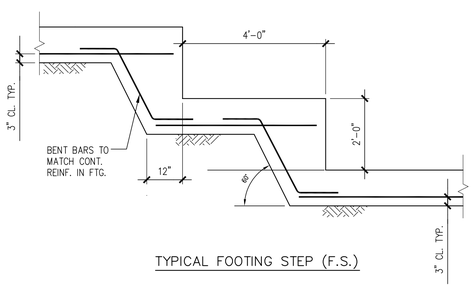


SECTION 11 S007
SCALE: NTS



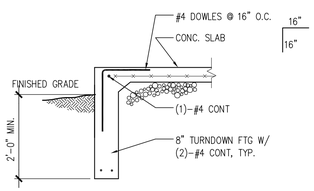
TYPICAL STRINGER TO FOOTING DETAIL

SECTION 12 S007
SCALE: NTS

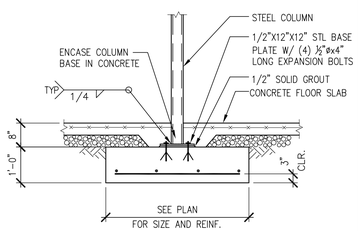


TYPICAL FOOTING STEP (F.S.)

SECTION 13 S007
SCALE: NTS



SECTION 14 S007
SCALE: NTS



TYPICAL COLUMN FOOTING

SECTION 15 S007
NOT TO SCALE

JZSC
JZ STRUCTURAL CONSULTING INC.
43130 Amberwood Plaza, #235
Chantilly, VA 20152
WWW. JZ Structure. Com
PH. (703) 327-9912
FAX (703) 327-8285

STRUCTURAL FRAMING

Job #

Date: 11/07/2023 Issue:

REVISION

COMMONWEALTH OF VIRGINIA
XIAOJIN ZHANG
Lic. No. 029548
11/13/2023
PROFESSIONAL ENGINEER

Drawn ZH Checked JZ

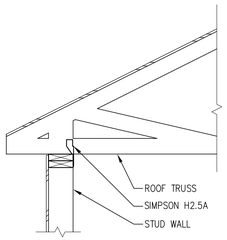
Scale AS NOTED

Sheet Title

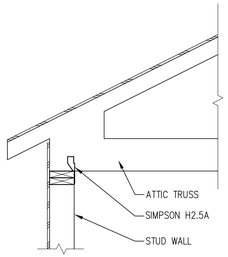
FOUNDATION DETAILS

Sheet No.

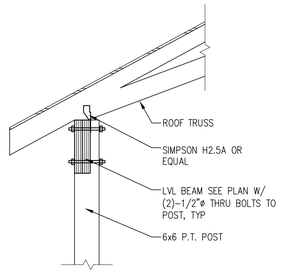
S007



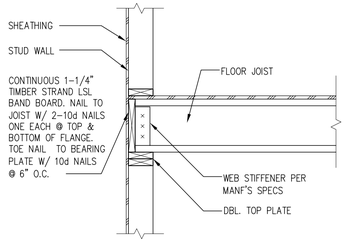
SECTION 1 S008
NOT TO SCALE



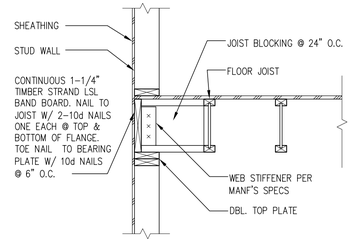
SECTION 2 S008
NOT TO SCALE



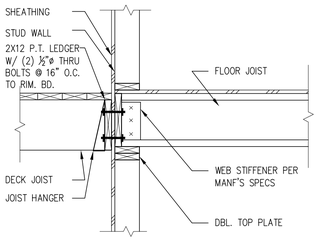
SECTION 3 S008
NOT TO SCALE



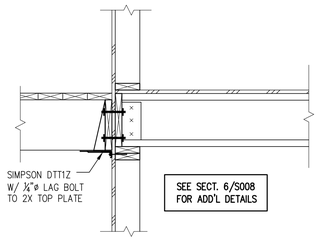
SECTION 4 S008
NOT TO SCALE



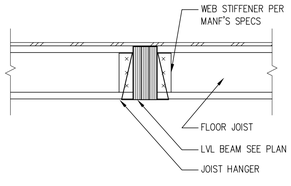
SECTION 5 S008
NOT TO SCALE



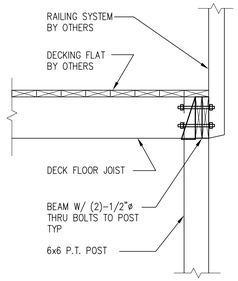
SECTION 6 S008
NOT TO SCALE



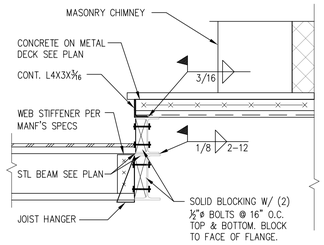
SECTION 6A S008
NOT TO SCALE



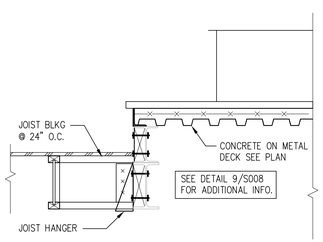
SECTION 7 S008
NOT TO SCALE



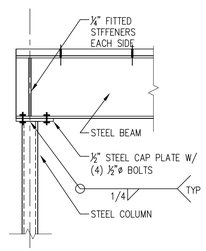
SECTION 8 S008
NOT TO SCALE



SECTION 9 S008
NOT TO SCALE

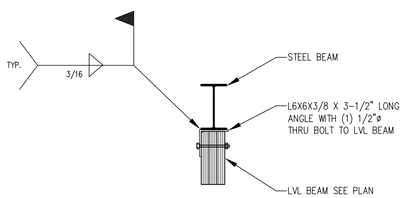


SECTION 10 S008
NOT TO SCALE

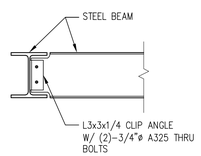


TYPICAL STEEL BEAM TO STEEL COLUMN DETAIL

SECTION 11 S008
NOT TO SCALE



SECTION 12 S008
NOT TO SCALE



TYPICAL STEEL BEAM TO BEAM CONNECTION

SECTION 13 S008
NOT TO SCALE

JZSC
JZ STRUCTURAL CONSULTING INC.

43130 Amberwood Plaza, #235
Chantilly, VA 20152

WWW. JZ Structure. Com
PH. (703) 327-9912
FAX (703) 327-8285

STRUCTURAL FRAMING

Job #

Date: 11/07/2023
Issue:

REVISION

COMMONWEALTH OF VIRGINIA
XIAOJIN ZHANG
Lic. No. 029548
11/13/2023
PROFESSIONAL ENGINEER

Drawn ZH
Checked JZ

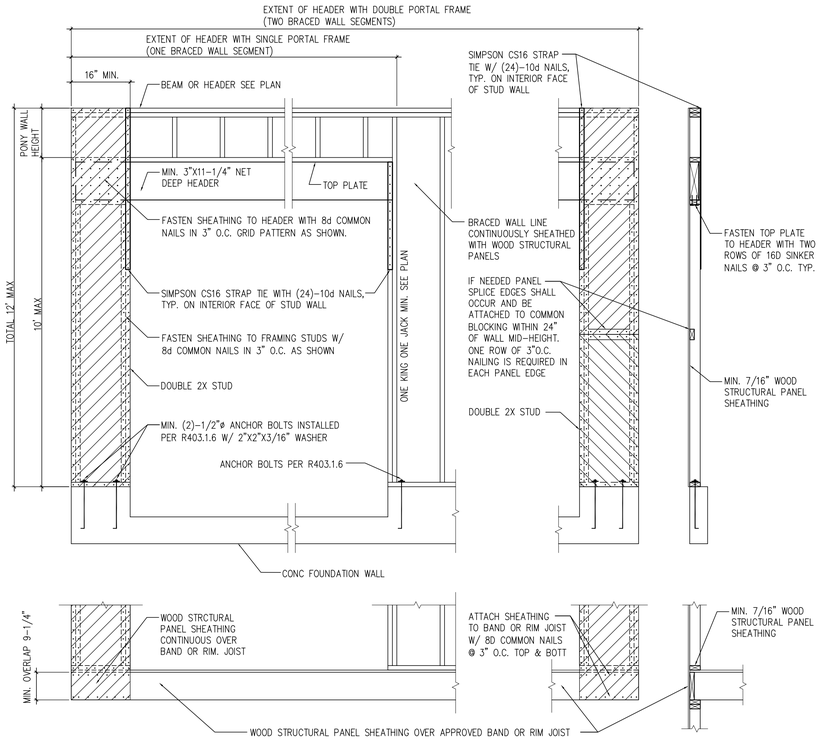
Scale AS NOTED

Sheet Title

FRAMING DETAILS

Sheet No.

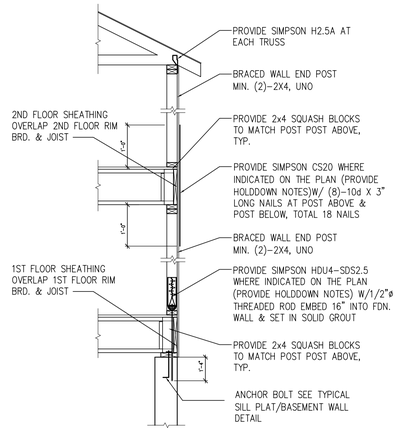
S008



TYPICAL PORTAL FRAME CS-PF BRACE DETAIL

SECTION 4 S009

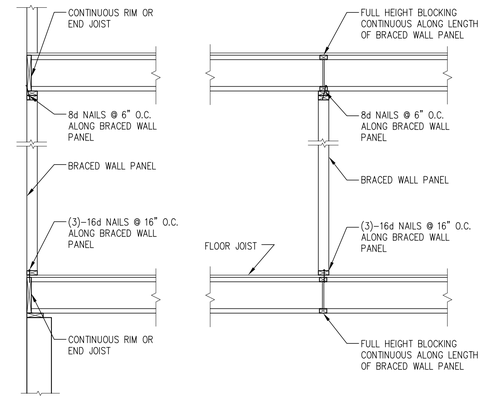
SCALE: NTS



TYPICAL BRACED WALL END PANEL HOLD-DOWN DETAIL

SECTION 1 S009

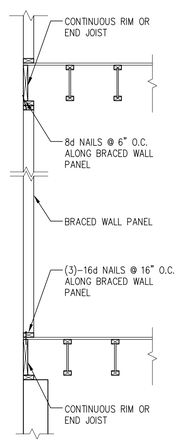
SCALE: NTS

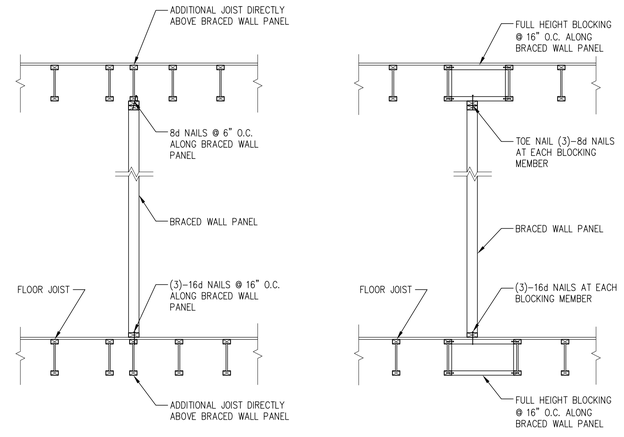


BRACED WALL PANEL PERPENDICULAR TO FLOOR/CEILING FRAMING

SECTION 2 S009

SCALE: NTS





BRACED WALL PANEL PARALLEL TO FLOOR/CEILING FRAMING

SECTION 3 S009

SCALE: NTS

JZSC
JZ STRUCTURAL CONSULTING INC.
43130 Amberwood Plaza, #235
Chantilly, VA 20152
WWW. JZ Structure. Com
PH. (703) 327-9912
FAX (703) 327-8285

STRUCTURAL FRAMING

Job #

Date: 11/07/2023 Issue:

REVISION

COMMONWEALTH OF VIRGINIA
XIAOJIN ZHANG
Lic. No. 029548
11/13/2023
PROFESSIONAL ENGINEER

Drawn ZH Checked JZ

Scale AS NOTED

Sheet Title

BRACED WALL DETAILS

Sheet No.

S009