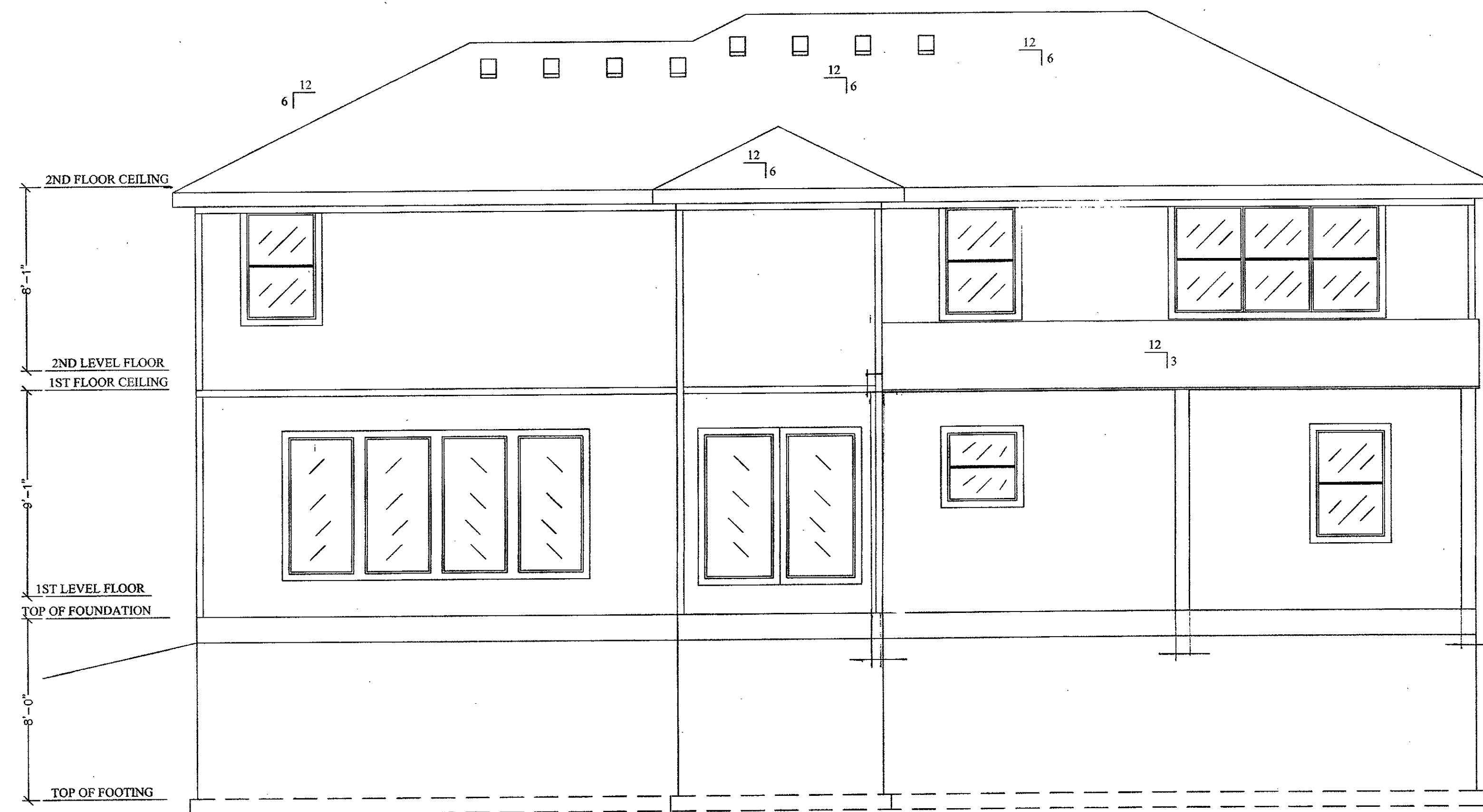


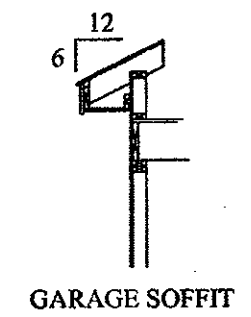
RESIDENTIAL AREA:		1284
RESIDENTIAL, LIVING AREA		0
RESIDENTIAL, FINISHED BASEMENT		1284
RESIDENTIAL, UN-FINISHED BASEMENT		686
RESIDENTIAL, GARAGE		1597
RESIDENTIAL, LIVING AREA 2		
DECK	338	
ROOFING MATERIAL	COMP	
NUMBER OF BEDROOMS	5	
NUMBER OF LIVING UNITS	2	
SEWER CONNECTION FEE		
		NUMBER OF BATHROOMS 3.5
		NUMBER OF STORIES 2
		TOTAL LIVING AREA 2881



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



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



DESCRIPTION:  
FRONT/REAR ELEVATIONS

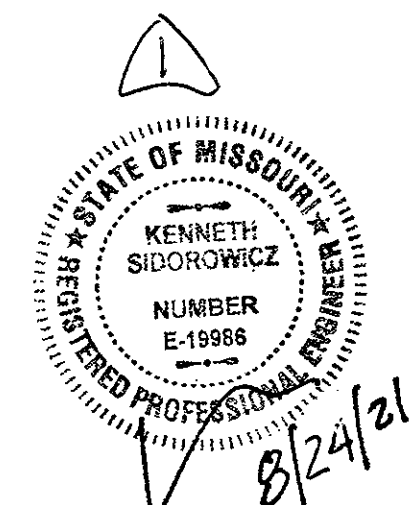
MODEL:  
FOX HILL  
DATE:  
1/24/21

ARCHITECT IS NOT RESPONSIBLE FOR THE STRUCTURAL ELEMENTS OF THESE PLANS. A STRUCTURAL ENGINEER MAY NEED TO VERIFY ALL STRUCTURAL ASPECTS OF THESE PRINTS BEFORE CONSTRUCTION BEGINS. FIELD CONDITIONS MAY BE DIFFERENT FROM PLAN. ALL STATE AND LOCAL CODES TAKE PRECEDENCE OVER THESE PLANS. CONTRACTOR WILL BE RESPONSIBLE FOR PLAN INTEGRITY AND CODE COMPLIANCE.

COMP ROOF  
ROOF & SOFFIT VENTS PER CODE

LSMO  
SVF 65  
3106 SW BLUE RIBBON ST.

RELEASE FOR CONSTRUCTION  
AS NOTED FOR PLAN REVIEW  
DEVELOPMENT SERVICES  
LEE'S SUMMIT, MISSOURI  
08/25/2021

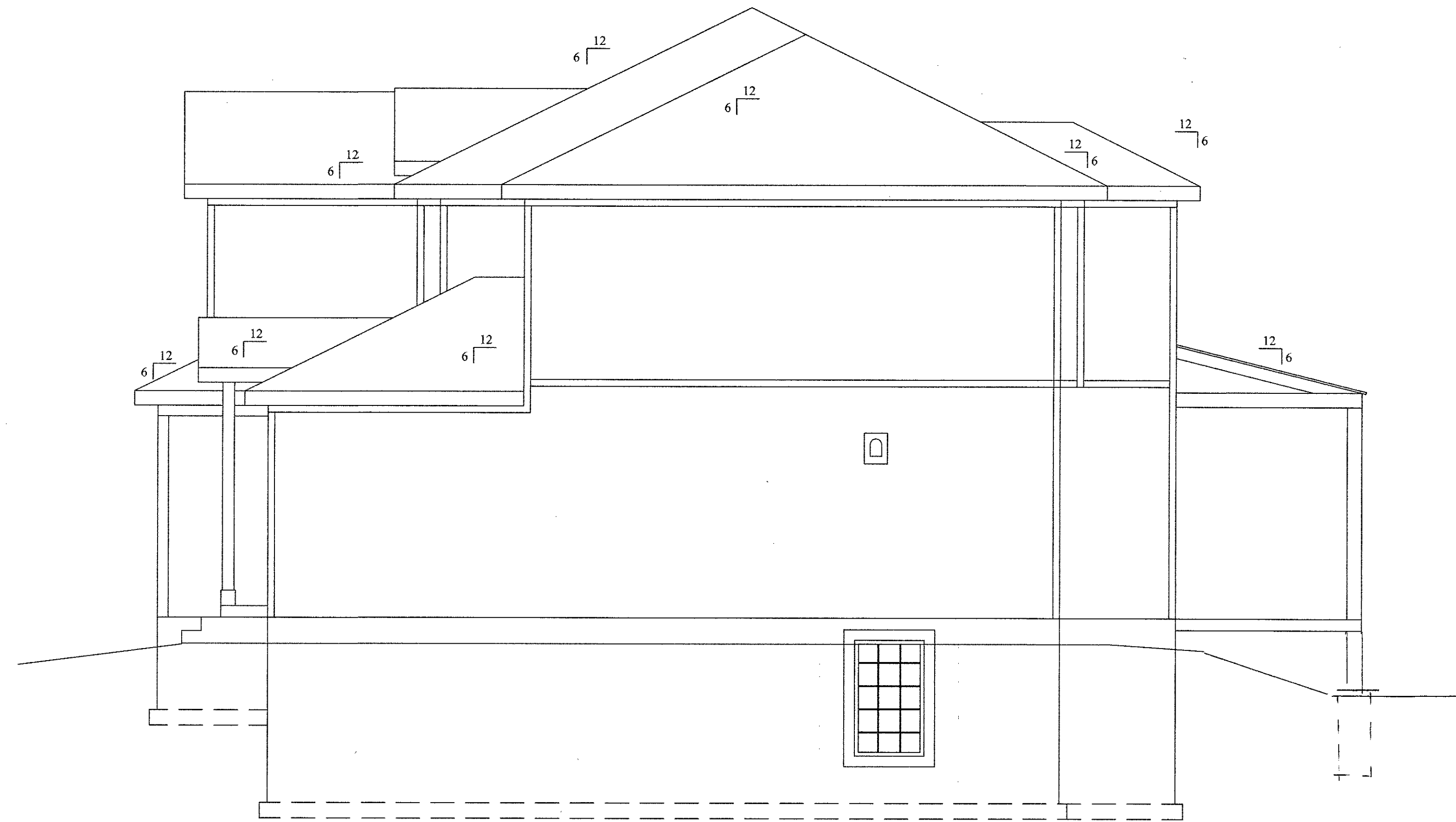


BUILD SET

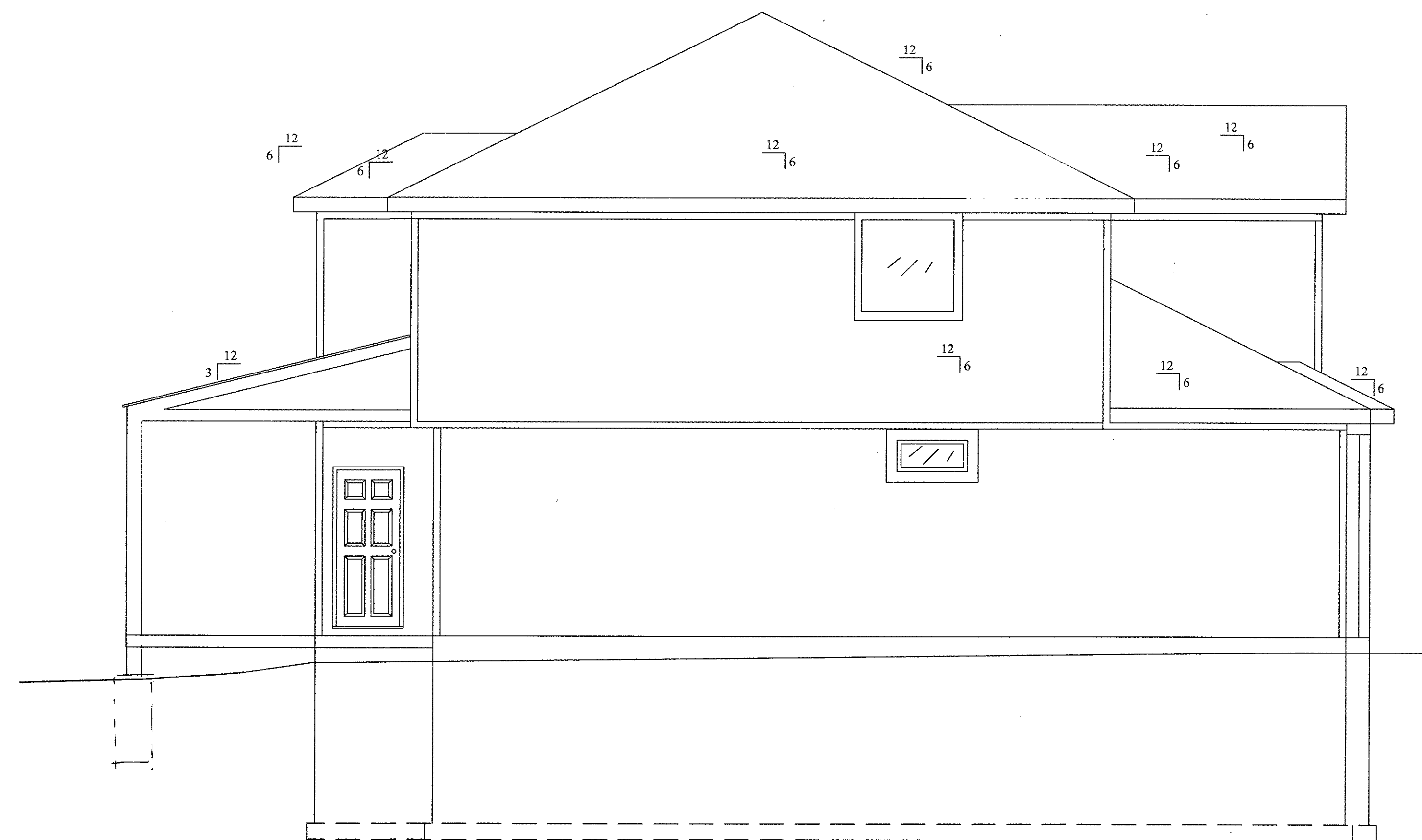
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1 of 6

SHEET NO:

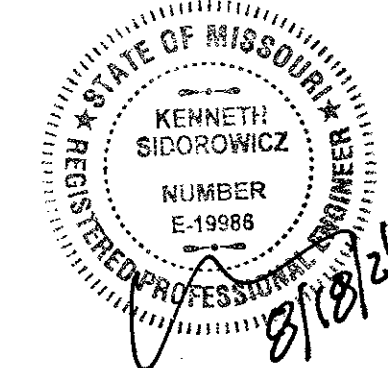


RIGHT ELEVATION  
SCALE: 1/4" = 1'-0"



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

LSMD  
SVF 65  
3106 SW BLUE RIBBON ST.



DESCRIPTION:

LEFT / RIGHT ELEVATIONS

MODEL:

FOX HILL

DATE:

1/24/21

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BUILD  
SET

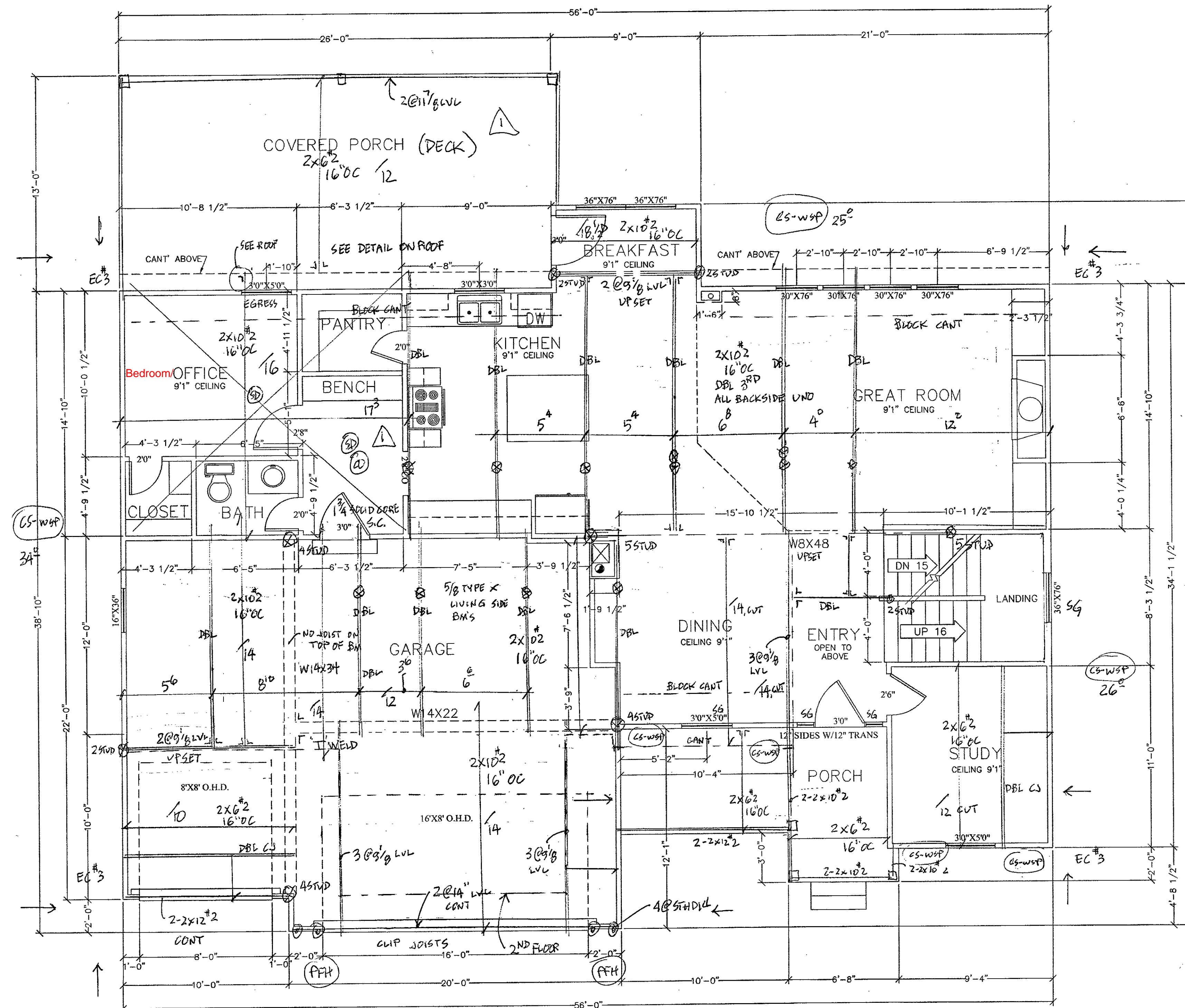
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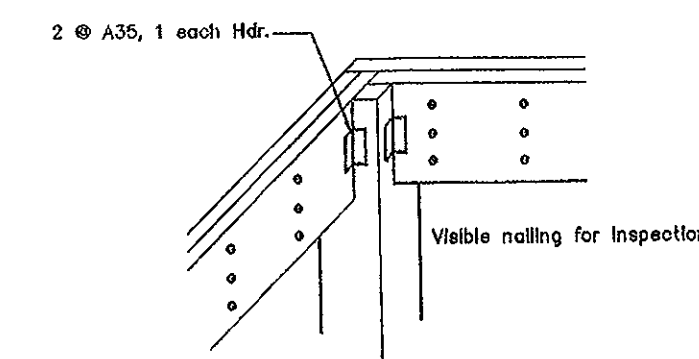
PLEASE FOR CONSTRUCTION  
AS NOTED FOR PLAN REVIEW  
DEVELOPMENT SERVICES  
LEE'S SUMMIT, MISSOURI  
08/25/2021





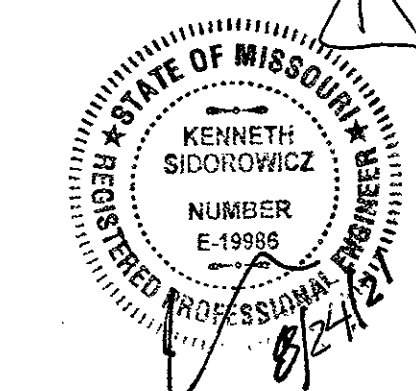
FIRST FLOOR PLAN  
SCALE: 1/4" = 1'-0"

9° PLATE UND  
(9 1/8" STUDS 104 3/8")



- DE/L MIN
- (CS-WSP) HOUSE IS SHEATHED W/ 3/4" OSB APA PANELS, SMART PANEL OR EQUAL. INSTALLED PER MANU. SPECS. SHIP LAPPED PANELS REQUIRE NAILING OF OVER AND UNDER PANELS SEPARATELY.
  - (LIB) INT SHALL BE SIMPSON STRAP (CS16)
  - (CS-PP) HEADER LENGTHS ARE SHOWN FOR CS-PP
  - SIDING LAPS R/M
  - 2x4, 9' PLATE, FULL HT. STUDS
  - S.C. = SELF CLOSING
  - D2 GN #25 FOR WINDOWS
  - CS = CONTINUOUSLY SHEATHED
  - EC = END CONDITION
  - SEE D2 FOR INSULATION VALUES
  - EC#5, 16" LONG CS16 STRAP, CENTERED ON SUBFLOOR, FILL ALL NAIL HOLES.

LSMO  
SVF 65  
3106 SW RIBBON ST.



DESCRIPTION:

FIRST FLOOR FRAMING

MODEL:  
FOX HILL  
DATE:  
1/24/21

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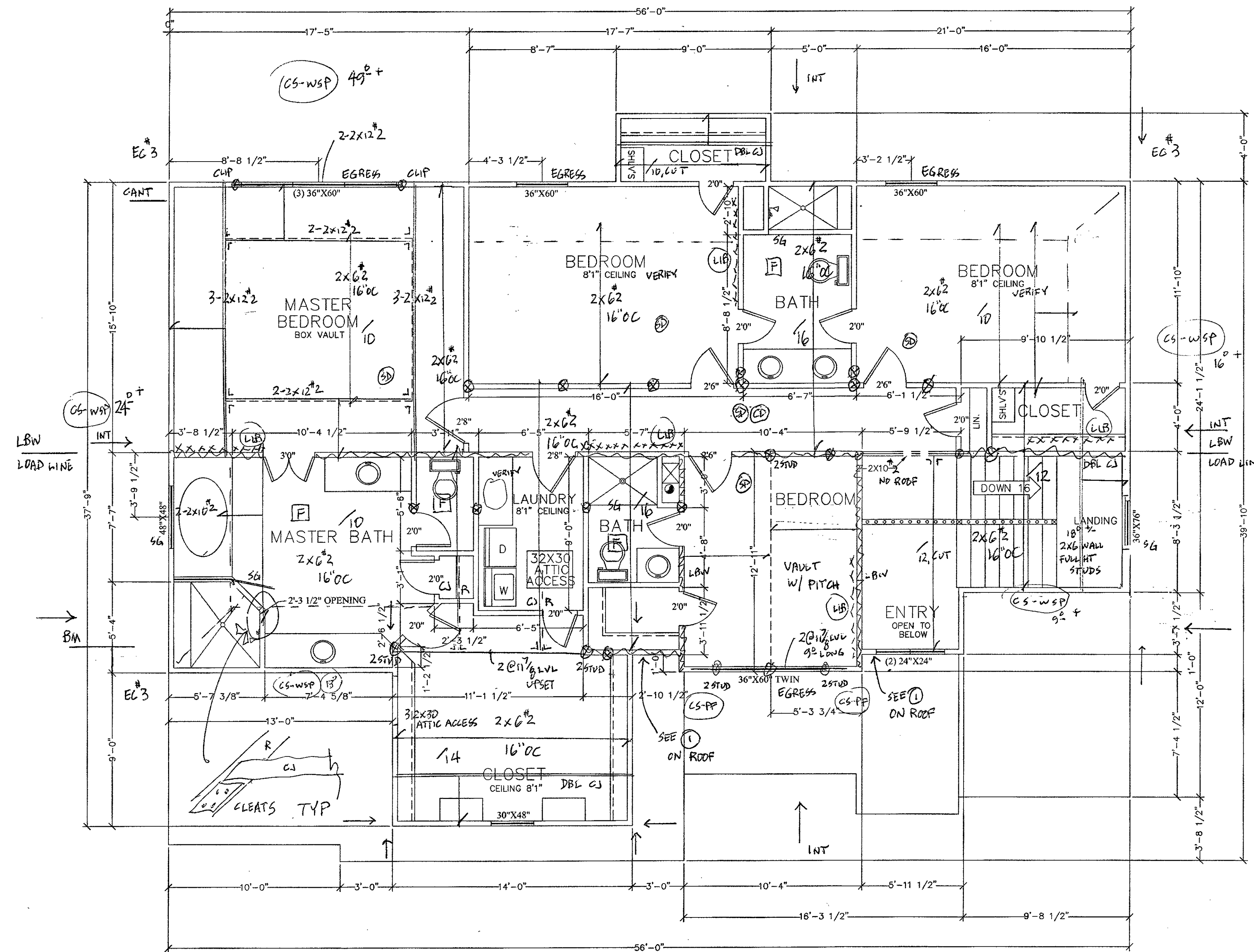
BUILD  
SET

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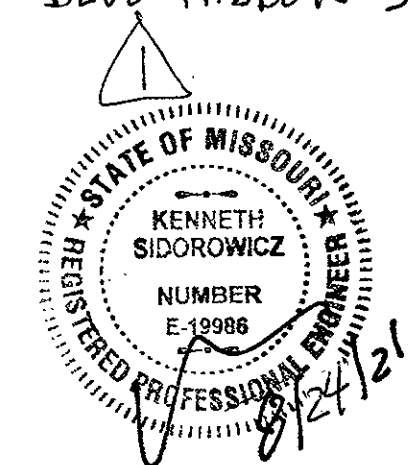




SECOND FLOOR PLAN  
SCALE: 1/4" = 1'-0"

8" PLATE (8" x 8") AND  
2x4 STUDS FULL HT  
(92" x 8")

LSMD  
SVF 05  
3106 SW BLUE RIBBON ST.



DESCRIPTION:

SECOND FLOOR FRAMING  
ROOF FRAMING PLAN

MODEL:

FOX HILL

DATE:

1/24/21

ARCHITECT IS NOT RESPONSIBLE FOR THE STRUCTURAL ELEMENTS OF THESE PLANS. A STRUCTURAL ENGINEER MAY NEED TO VERIFY ALL STRUCTURAL ASPECTS OF THESE PRINTS BEFORE CONSTRUCTION BEGINS. FIELD CONDITIONS MAY BE DIFFERENT FROM PLAN. ALL STATE AND LOCAL CODES TAKE PRECEDENCE OVER THESE PLANS. CONTRACTOR WILL BE RESPONSIBLE FOR PLAN INTEGRITY AND CODE COMPLIANCE.

VERIFY ALL VAULTS  
W/ BLDR

ATTIC SHALL BE POSTED,  
'NOT FOR STORAGE'

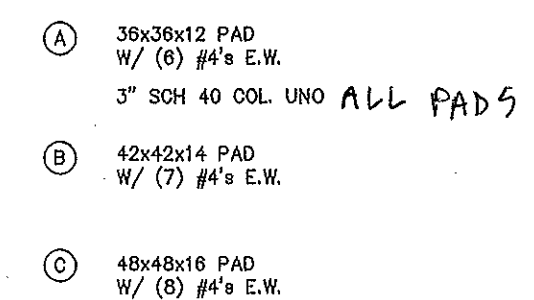
BUILD  
SET

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4 of 6

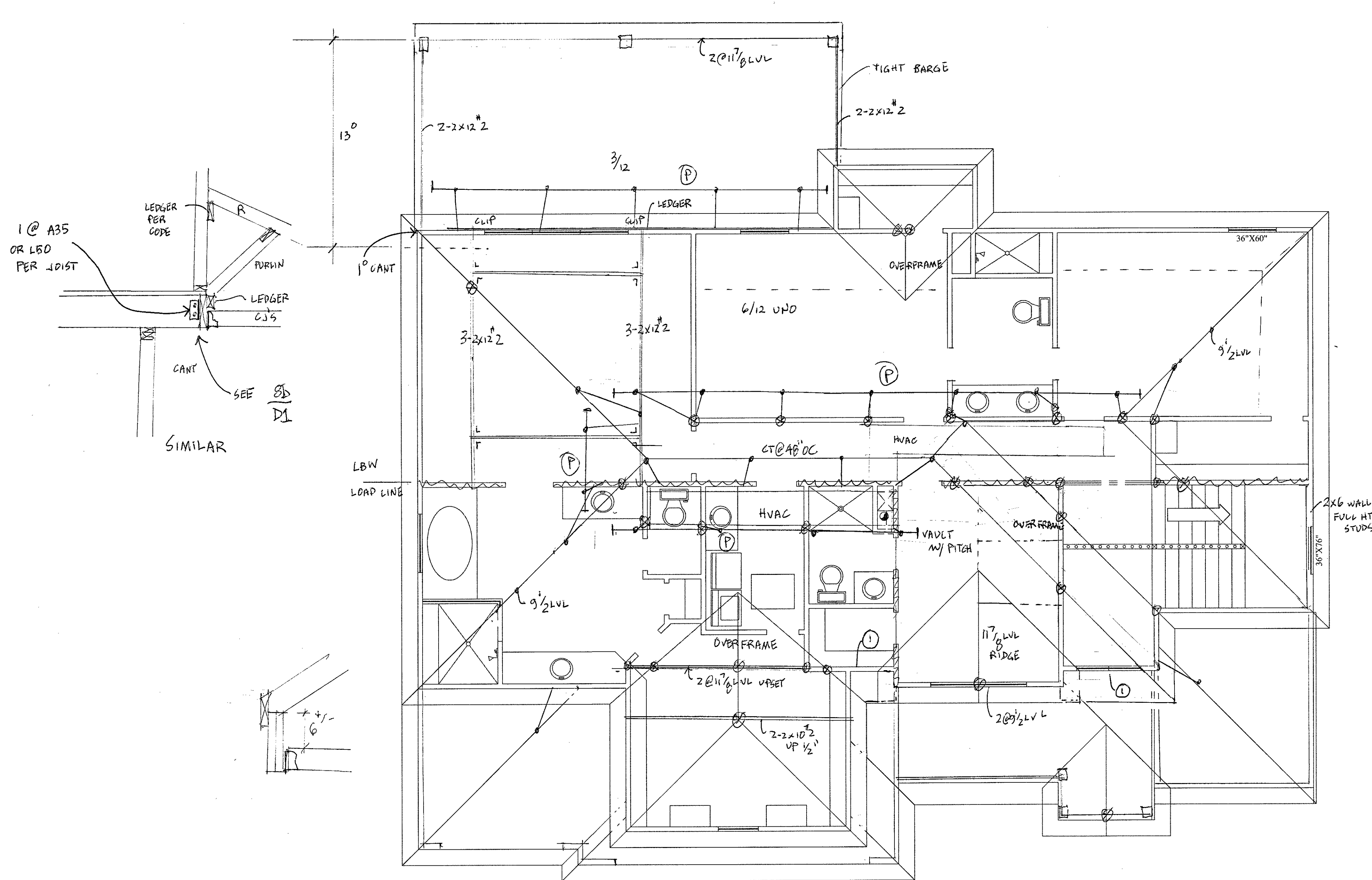
SHEET NO:





SHEET NO:





ROOF: ASPHALT SHINGLES - 2 1/2 MIN.  
WOOD SHINGLES/SHAKES - 3/8 MIN.  
CONCRETE TILE - 5/8 MIN.  
FLASH & COUNTERFLASH ALL ROOF PENETRATIONS AND INTERSECTIONS

RAFTERS & CEILING JOISTS: COLLAR TIES AT UPPER THIRD POINT 45° CO. 2 x 4 MIN. CEILING JOISTS ARE TURNED AS REQUIRED FOR RAFTER TIES

ROOF/RAFTER HANGERS AND STRAPS AS REQ'D. OUTGASERS REQ'D @ GABLE END SOFFITS FOR COMB. ROOF W/ SOFFITS @ 12". OUTGASERS REQ'D @ GABLE END SOFFITS FOR TILE ROOF

ATTIC VENTILATION: VENT EACH ENCLOSED ATTIC SPACE. NET AREA OPENING = 1/60TH OF VENTED AREA

UNLESS NOTED: RAFTERS ARE 2 X 6 @ 16" O.C. @ 90° CO. MAX SPAN 11'-4"

PROVIDE VERTICAL LOAD SUPPORT AT THE NOTED LOAD POINTS FOR THE VALLEYS, PURCHES & RIDGES. LET-IN SUPPORT LGS TO PURCHES. ALL THE VALLEYS & RIDGES ARE SIZED FOR THE RAFTER DEPTH, PITCH AND LOAD. ALL 2X6 UND

PURCH	COMP. LEB. OC	TILE LEB. OC
2 X 6	4'-0"	8'-0"
2 X 8	6'-0"	10'-0"
2 X 10	8'-0"	12'-0"

SUPPORT LEB.	COMP. MAX. LENGTH	TILE MAX. LENGTH
2 X 6 @ 8' x 4'-0" BRG	7'-0"	7'-0"
2 X 8 @ 8' x 4'-0" BRG	8'-0"	8'-0"
2 X 10 @ 8' x 4'-0" BRG	9'-0"	9'-0"
2 X 12 @ 8' x 4'-0" BRG	10'-0"	10'-0"

HEEL JOINT CONNECTION FACTOR

120° MIN.	15°	15°
1/3	1/3	1/3
1/4	1/4	1/4
1/5	1/5	1/5
1/6	1/6	1/6
1/7	1/7	1/7
1/8	1/8	1/8
1/9	1/9	1/9
1/10	1/10	1/10

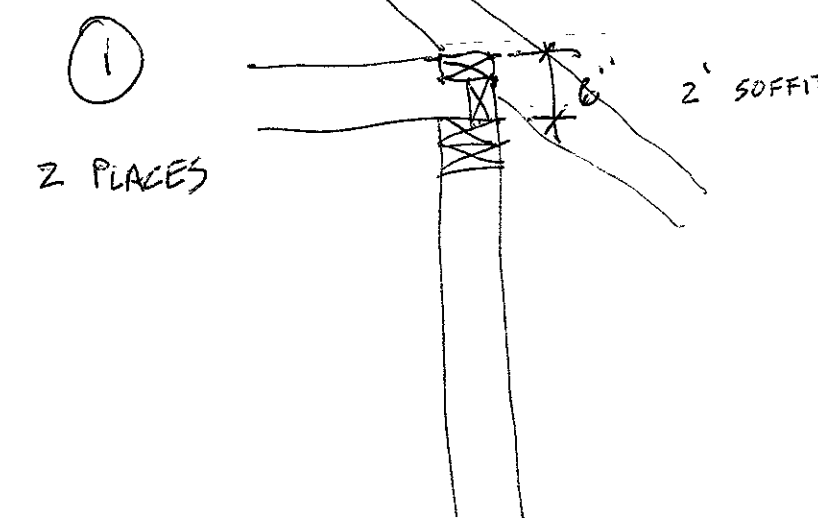
\*ALL ROOF FRAMING MEMBERS ARE SIZED AS BEAMS AND BRACED TO DOWN, HEADERS OR OTHER STRUCTURE

H<sub>0</sub> = HEIGHT OF CEILING JOISTS OR RAFTER TIES MEASURED VERTICALLY ABOVE TOP OF RAFTER SUPPORT WALL

H<sub>1</sub> = HEIGHT OF ROOF HEAD MEASURED VERTICALLY ABOVE THE TOP OF THE RAFTER SUPPORT WALL

RAFTER TIES SHALL BE PROVIDED PER 802.3.1 WHEN THE C/S ARE NOT CONNECTED TO THE RAFTERS AT THE TOP PLATE

C/S TURN FOR RAFTER TIES



ROOF FRAMING PLAN  
SCALE: 1/4" = 1'-0"

LSMD  
SVF 65  
3100 SW BLUE RIBBON ST.



DESCRIPTION:  
FIRST FLOOR FRAMING

MODEL:  
FOX HILL  
DATE:  
1/24/21

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BUILD SET

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6 of 6

SHEET NO.

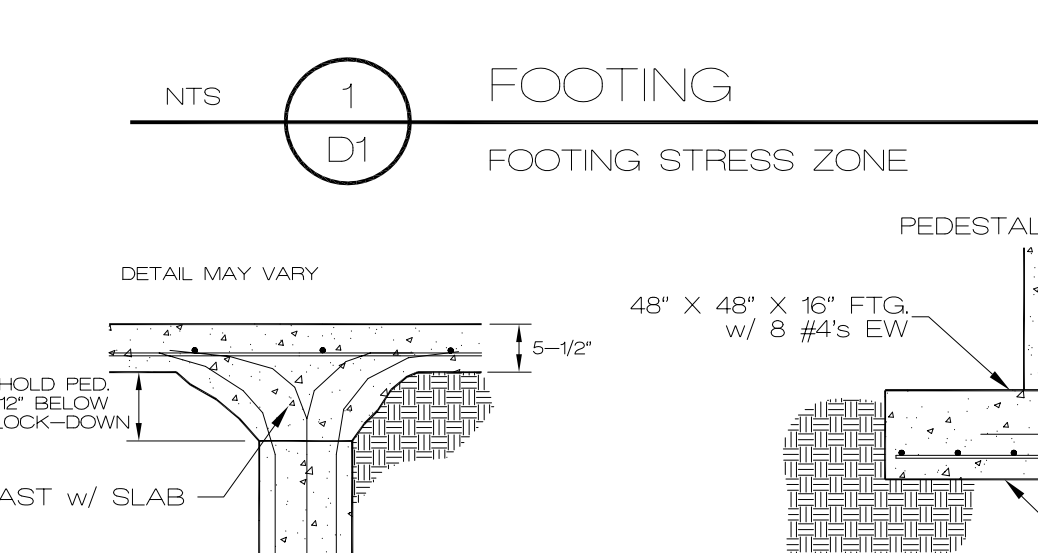
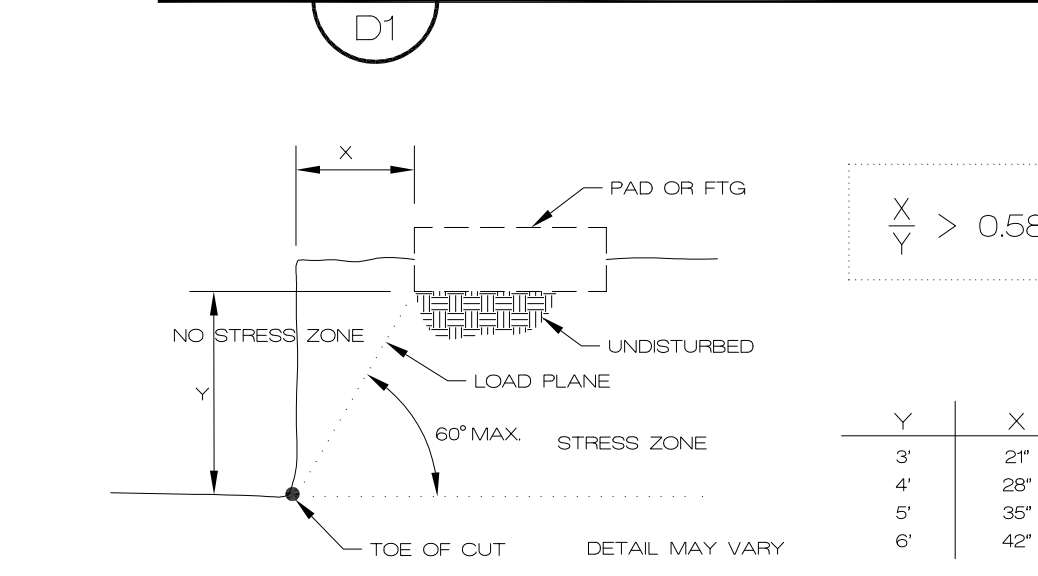
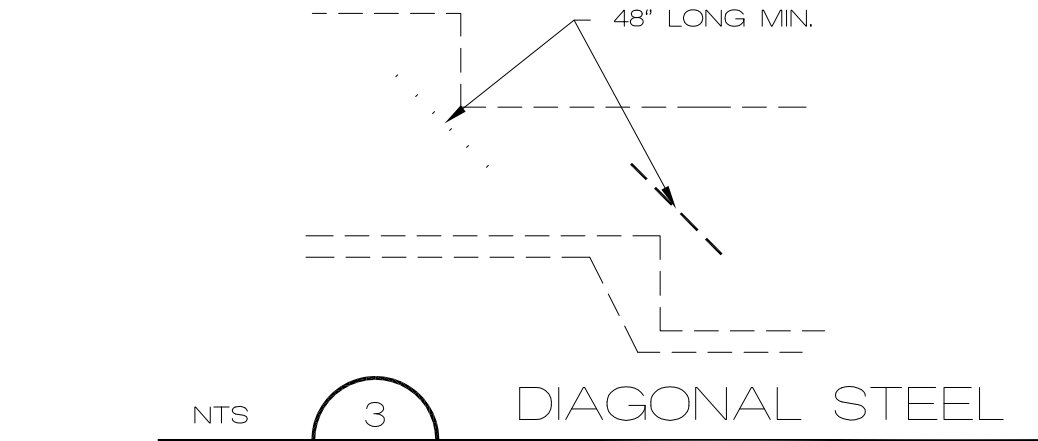


DIVISION 1 – GENERAL REQUIREMENTS

- DESIGN AND CONSTRUCTION WORK FOR THIS PROJECT SHALL CONFORM TO THE REQUIREMENTS OF THE 2018 IRC.
- FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK AS SHOWN OR INFERRED BY THE DRAWINGS.
- DESIGN FACTORS:
  - GROUND SNOW LOAD (INCLUDING DRIFTING SNOW) 20 PSF
  - WIND SPEED EXPOSURE B
  - SEISMIC CATEGORY (A), GROUND ACCELERATION = NA
- DESIGN LOADS (PSF, UNLESS NOTED OTHERWISE):
  - ROOF (LL/DL) SEE TABLE
  - FLOOR (LL/DL) SEE TABLE
  - CEILING (LL/DL) SEE TABLE. (0/10 TRUSSES)
- DO NOT SCALE DRAWINGS. IF DIMENSIONS ARE IN QUESTION, OBTAIN CLARIFICATION FROM A / E BEFORE CONTINUING CONSTRUCTION.
- THE CONTRACTOR SHALL EXAMINE ACTUAL JOB CONDITIONS AND BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE PLANS. IF ERRORS, OMISSIONS, OR DISCREPANCIES ARE FOUND THEY SHALL BE REPORTED TO THE DESIGN PROFESSIONAL BEFORE PROCEEDING WITH THE WORK.
- DIMENSIONS FOR NEW CONSTRUCTION ARE TO FACE OF FINISH OR COLUMNS AND FACE OF CONCRETE, WOOD, OR MASONRY WALLS UNLESS OTHERWISE INDICATED. DIMENSIONS INDICATE NOMINAL DIMENSIONS RATHER THAN ACTUAL DIMENSIONS.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL TRADES EVEN IF THE TRADE IS UNDER A SEPARATE CONTRACT.
- PROVIDE SUFFICIENT STUDS AND BLOCKING WHERE REQUIRED TO SUPPORT EQUIPMENT AND/OR MISCELLANEOUS ITEMS, IE, LOAD POINTS, TYPICAL CASEWORK, CABINETS, GRAB BARS ETC.
- PRETREAT FOUNDATION FOR TERMITES AS REQUIRED.
- GARAGE DOORS AND FRAMES SHALL BE DESIGNED AND INSTALLED TO MEET THE 115 MPH WIND LOAD RESISTANCE REQUIREMENTS OF DASHMA 108 AND ASTM E 330.
- ALL EXTERIOR DOORS, INCLUDING THE DOOR LEADING FROM THE GARAGE TO THE DWELLING UNIT, SHALL INCORPORATE THE PHYSICAL SECURITY PROVISIONS OF THE JURISDICTION IN WHICH THE CONSTRUCTION TAKES PLACE.

DIVISION 2 – EARTHWORK

- ALL PROPERTY MARKERS SHALL BE EXPOSED.
- ALL FOOTINGS ARE DESIGNED TO BEAR ON NATURAL UNDISTURBED SOIL CAPABLE OF ADEQUATELY SUSTAINING A MINIMUM BEARING PRESSURE OF 1500 PSF. IF SUITABLE UNDISTURBED BEARING CAPACITY IS NOT ENCOUNTERED AT THE ELEVATION INDICATED ON THE DRAWINGS, CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY.
- ALL TOPSOIL, ORGANIC MATERIAL, AND EXISTING STRUCTURES SHALL BE REMOVED FROM BUILDING AREA AND FROM AREAS TO BE PAVED. STOCKPILE ALL TOPSOIL FOR REUSE.
- REFERENCE THE SOILS REPORT FOR ALL FILL CONDITIONS.
- OVEREXCAVATE BUILDING AREA BELOW SLAB SUBGRADE ELEVATION AND REPLACE WITH MATERIAL PER SOILS REPORT, VERIFY.
- SITE EROSION CONTROL SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES.
- IN-SITU SOIL CONDITIONS, SEE SOILS REPORT OR 1500 PSF BEARING & 60 PCF EQUIVALENT FLUID WEIGHT.
- SOIL CONDITIONS AT THE DEPTH OF EXCAVATION FOR THE FOOTING SHALL BE UNIFORM AND CONSISTENT. NOTIFY THE ENGINEER OF RECORD OF ANY INCONSISTENCIES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING OF ANY EXCESS EXCAVATION MATERIALS AND FOR OBTAINING AND SUPPLYING ADDITIONAL FILL MATERIAL AS REQUIRED.



DIVISION 3 – CONCRETE

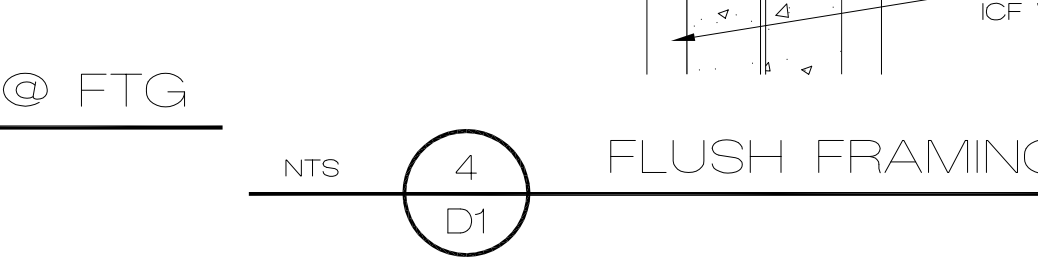
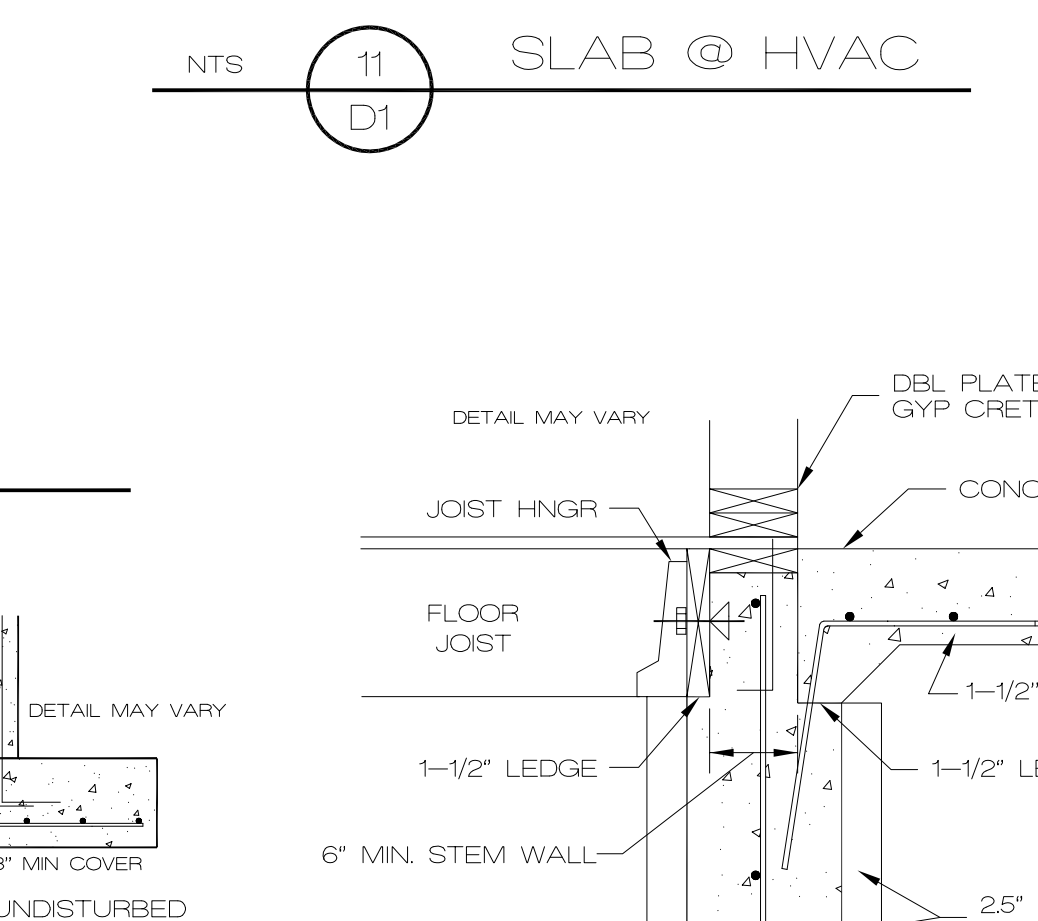
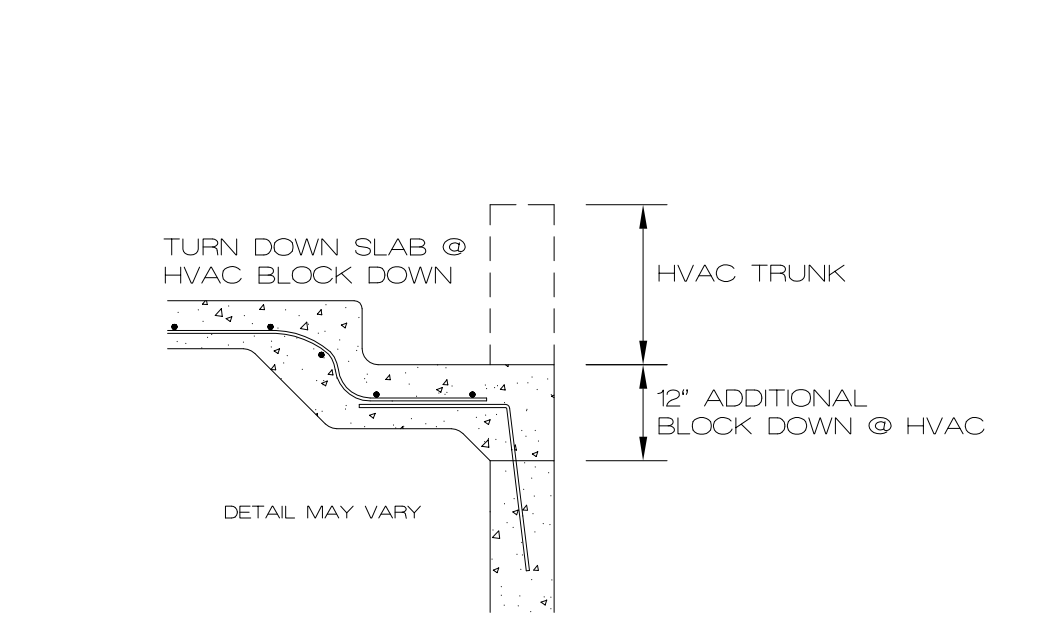
- ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 308 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AND ACI 332 REQUIREMENTS FOR RESIDENTIAL CONCRETE CONSTRUCTION.
- CONCRETE MATERIALS SHALL COMPLY WITH:
  - CEMENT – ASTM C 150 TYPE 1
  - AGGREGATE – ASTM C 33, MAXIMUM AGGREGATE SIZE 3/4"
  - WATER – POTABLE, WATER/CEMENT RATIO 5 (MAX)
  - AIR-ENTRAINING ADMIXTURE – ASTM C 260
  - WATER-REDUCING ADMIXTURE – ASTM C 494, INCLUDING SUPERPLASTICIZERS
  - FLY ASH – ASTM C 618, CLASS C
- CONCRETE SHALL DEVELOP THE FOLLOWING MINIMUM 28 DAY DESIGN COMPRESSIVE STRENGTH (f'c):
  - FOOTINGS, WALLS, AND SLABS SEE TABLE
  - EXTERIOR SLABS AND CURBS (AIR-ENTRAINED CONCRETE) SEE TABLE

TYPE OF CONSTRUCTION	COMP. STRENGTH (f'c)
FOOTINGS, WALLS, AND SLABS	SEE TABLE
EXTERIOR SLABS AND CURBS (AIR-ENTRAINED CONCRETE)	SEE TABLE

CONCRETE PROPORTIONS SHALL BE ESTABLISHED ON THE BASIS OF FIELD EXPERIENCE AND/OR TRIAL MIXTURES IN ACCORDANCE WITH ACI 318-89 SECTIONS 5.2 AND 5.3. WHEN FLY ASH IS UTILIZED IN THE MIX, MIX SHALL CONTAIN A WATER-REDUCER. FLY ASH SHALL BE ADDED AT THE RATE OF NOT MORE THAN 100 POUNDS PER CUBIC YARD AND CEMENT SHALL BE REDUCED BY NOT MORE THAN 15 PERCENT BY WEIGHT.

- PROPORTION AND DESIGN MIXES TO RESULT IN CONCRETE SLUMP AT A POINT OF PLACEMENT OF NOT MORE THAN 4" TO 5".
- USE AIR-ENTRAINING ADMIXTURES IN EXTERIOR EXPOSED CONCRETE TO RESULT IN CONCRETE AT POINT OF PLACEMENT HAVING AIR CONTENT OF 5 TO 7 PERCENT ENTRAINED AIR.
- ALL PLUMBING AND ELECTRICAL ROUGH-INS MUST BE COMPLETE, INSPECTED AND APPROVED BEFORE REQUESTING THE SLAB INSPECTION.
- CONCRETE WORK EXECUTION:
  - MINIMUM CONCRETE COVER FOR REINFORCING SHALL BE, UNLESS NOTED OTHERWISE ON DRAWINGS:
    - CAST AGAINST AND EXPOSED TO EARTH 3"
    - EXPOSED TO EARTH OR WEATHER 2"
    - NOT EXPOSED TO EARTH OR WEATHER 1 1/2"
  - IN CORNERS OF GRADE BEAMS PROVIDE CORNER REINFORCEMENT, LAP TWO FEET EACH DIRECTION IN OUTSIDE FACE, MATCHING SIZE AND SPACING OF HORIZONTAL REINFORCEMENT.
  - PROVIDE CONTROL JOINTS IN SLABS-ON-GRADE AT NOT GREATER THAN 20 FEET ON CENTER IN EACH DIRECTION. SAW CUT CONTROL JOINTS MINIMUM 1/2 OF THE SLAB DEPTH AS SOON AFTER SLAB FINISHING AS POSSIBLE WITHOUT DISLODGING AGGREGATE. (DO NOT SAW CUT STRUCTURAL SLABS w/o APPROVAL).
- BATCH TICKETS SHALL BE SUBMITTED TO A CONTRACTORS REPRESENTATIVE PRIOR TO OFF LOADING. ANY CONCRETE MORE THAN 45 MINUTES OUT PRIOR TO STARTING PLACEMENT SHALL BE REJECTED.
- THE MAXIMUM ADDITION OF WATER SHALL BE LIMITED TO 1 GALLON PER YARD, NOTE THAT THIS ADDITION SHALL BE USED TO CONTROL HEAT ONLY (NOT SLUMP).
- PUMPS SHALL NOT BE PRIMED IN FORMS.

- REINFORCEMENT:
  - ALL REINFORCING BARS SHALL BE A615, GR40 MIN. LAP SPLICES 18" MIN FOR #4 BAR SEE TABLE
  - WELDED WIRE FABRIC SHALL BE ASTM A185, LAP AT LEAST ONE FULL MESH AND LACE SPLICES WITH WIRE
  - REBAR SHALL BE CLEAN, AND FREE FROM RUST AND OIL PRIOR TO THE PLACEMENT OF CONCRETE. REBAR SHALL BE TIED AND SECURED AS REQUIRED TO PREVENT DISPLACEMENT IN THE FORMS.
  - TIE STEEL TO PREVENT DISPLACEMENT. HOOK AND TIE STEEL AS POSSIBLE. TIES, CHAIRS, OR OTHER PRODUCTS SHALL BE PROTECTED WHEN LOCATED NEAR EXPOSED SURFACES.
  - STEEL SHALL BE STORED ON SITE ABOVE GRADE, AND COVERED AS REQUIRED FOR PROTECTION FROM RAIN AND OTHER POSSIBLE DAMAGE.
- ADJUST FOUNDATION FOR SITE AND SOIL CONDITIONS AND VERIFY WITH EOR.



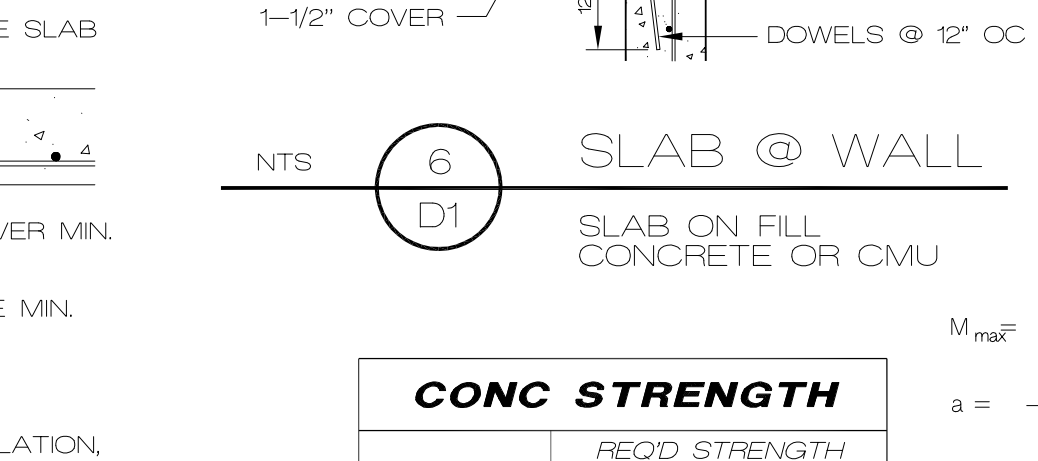
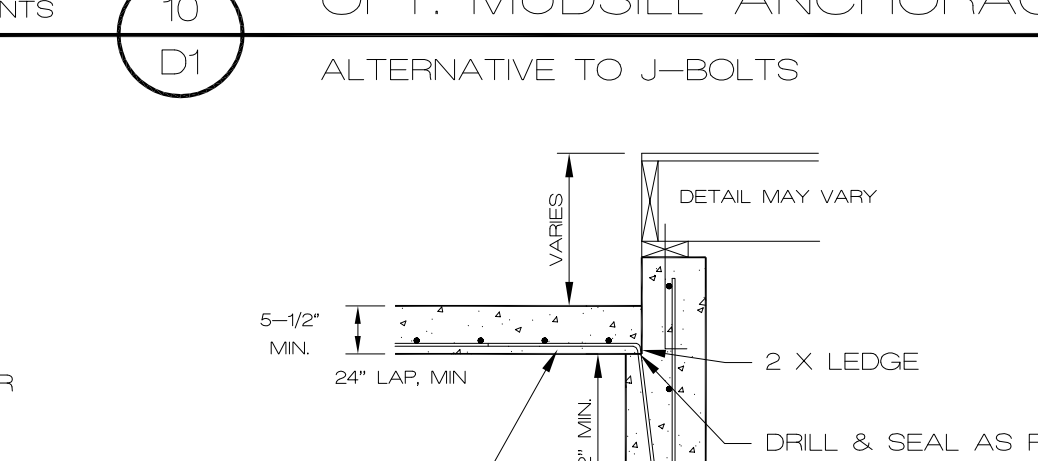
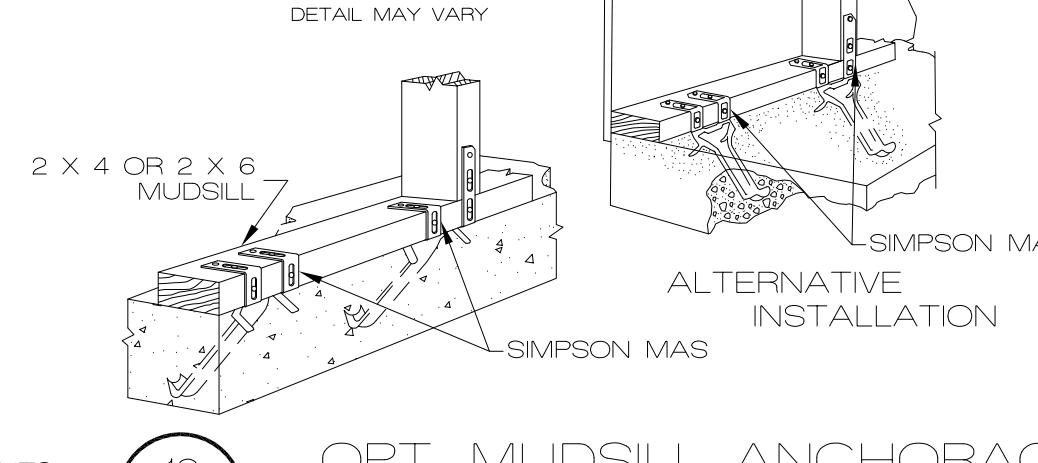
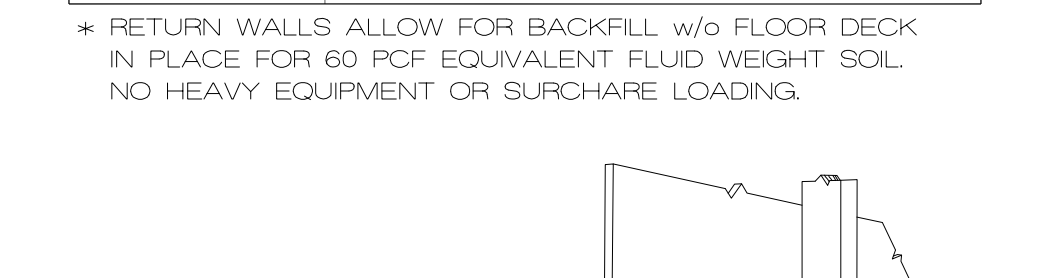
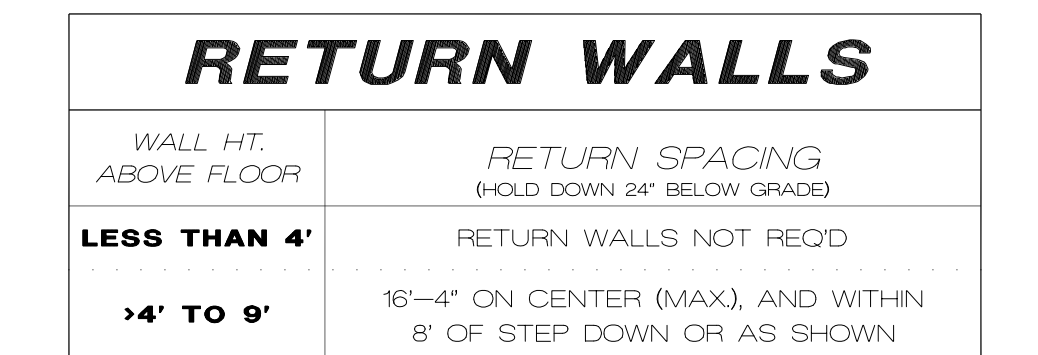
DIVISION 4 – MASONRY

- COMPRESSIVE STRENGTH OF CONCRETE MASONRY CONSTRUCTION (CMU) SHALL BE AS FOLLOWS (PSI). MASONRY STRENGTH NOT SPECIFICALLY NOTED ON PLAN SHALL BE (f'm) 1500 PSI.

MASONRY STRENGTH (f'm DESIGN)	1500
BLOCK STRENGTH	1900
MORTAR STRENGTH	800
GROUT STRENGTH	2000
- CONCRETE BLOCK SHALL BE HOLLOW LOAD-BEARING CONCRETE CONFORMING TO ASTM C 90, TYPE N-III. ALL BLOCKS SHALL BE PLACED IN RUNNING BOND CONSTRUCTION (UNLESS OTHERWISE NOTED) WITH ALL VERTICAL CELLS IN ALIGNMENT.
- MORTAR MIX SHALL CONFORM TO THE REQUIREMENTS OF ASTM C 270, TYPE M OR S. TYPE M MORTAR SHALL BE USED WHERE MASONRY IS IN CONTACT WITH SOIL.
- GROUT SHALL CONFORM TO THE REQUIREMENTS OF ASTM C 476, USE SUFFICIENT WATER FOR GROUT TO FLOW INTO ALL JOINTS OF THE MASONRY WITHOUT SEGREGATION. ALL CELLS IN CONCRETE BLOCKS CONTAINING REINFORCING SHALL BE FILLED SOLID WITH GROUT. ALL MASONRY BELOW FINISHED FLOOR OR GRADE SHALL BE GROUTED SOLID. HOLD GROUT DOWN 1-1/2" BELOW TOP OF BLOCK AT GROUT LIFT JOINTS AND AT CONCRETE PLACED OVER MASONRY.
- MINIMUM INTEL, WHERE NOT ON PLANS, SHALL HAVE A MINIMUM OF 2 – #5s CONTINUOUS HORIZONTAL BARS IN BOTTOM OF BOND BEAM OR INTEL BLOCK AND SHALL BE GROUTED SOLID TO A MIN. DEPTH OF 24". ALL INTEL REINFORCING AND GROUT SHALL EXTEND 2' MINIMUM PAST JAMBS UNLESS NOTED OTHERWISE ON PLANS OR DETAILS.
- LAP REINFORCING 48 BAR DIAMETERS. STAGGER LAP SPLICES A MINIMUM OF ONE LAP LENGTH.
- MASONRY VENEER SHALL BE ATTACHED TO SUPPORT WALL FRAMING WITH 3/8" DIAMETER WALL TIES OR DOVETAIL-TYPE METAL TIES OF EQUIVALENT STIFFNESS EMBEDDED INTO HORIZONTAL MORTAR JOINTS. MAXIMUM VERTICAL SPACING OF TIES SHALL BE 16". MAXIMUM HORIZONTAL SPACING SHALL BE 24". TIES IN ALTERNATE COURSES SHALL BE STAGGERED. PROVIDE #9 WIRE REINFORCING IN HORIZONTAL MORTAR JOINTS AT 16" OC. ENGAGE #9 WIRE WITH WALL ANCHOR TIES. CONSTRUCTION JOINTS IN MASONRY VENEER WALLS SHALL BE LOCATED PER THE DRAWINGS.
- WATERPROOFING, DRAINAGE PLANE, AND INSTALLATION PER ADOPTED BUILDING CODE.

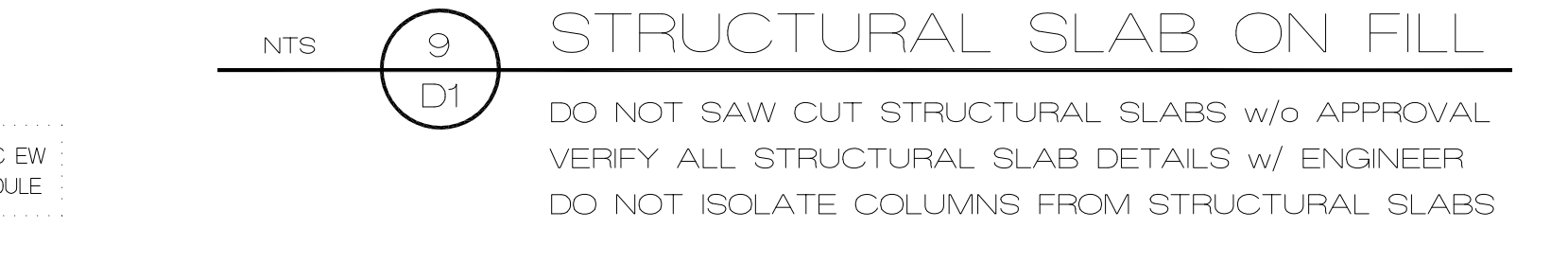
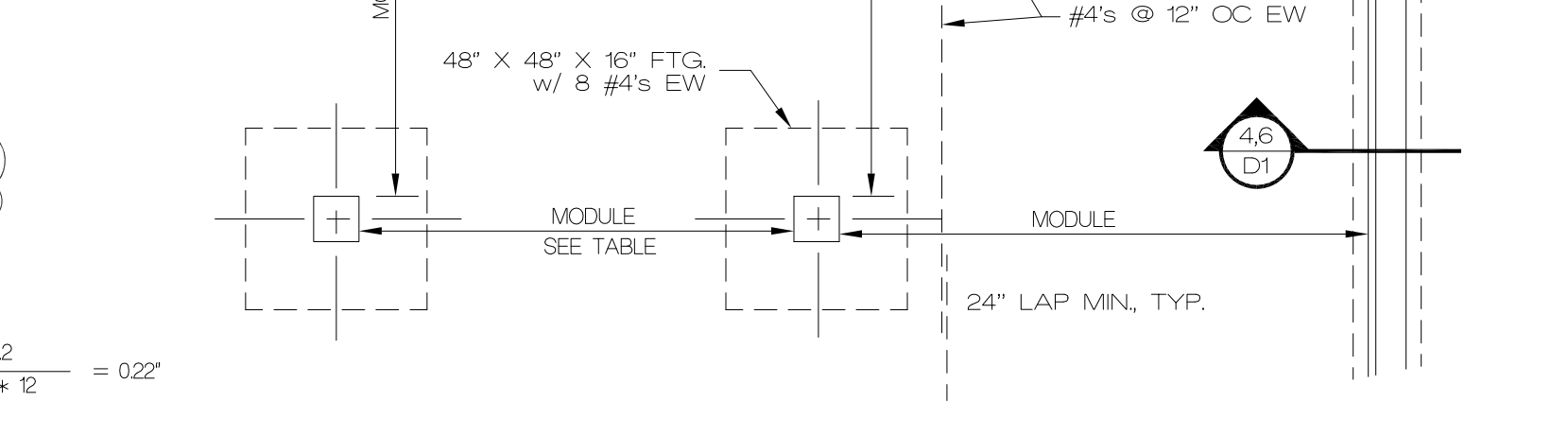
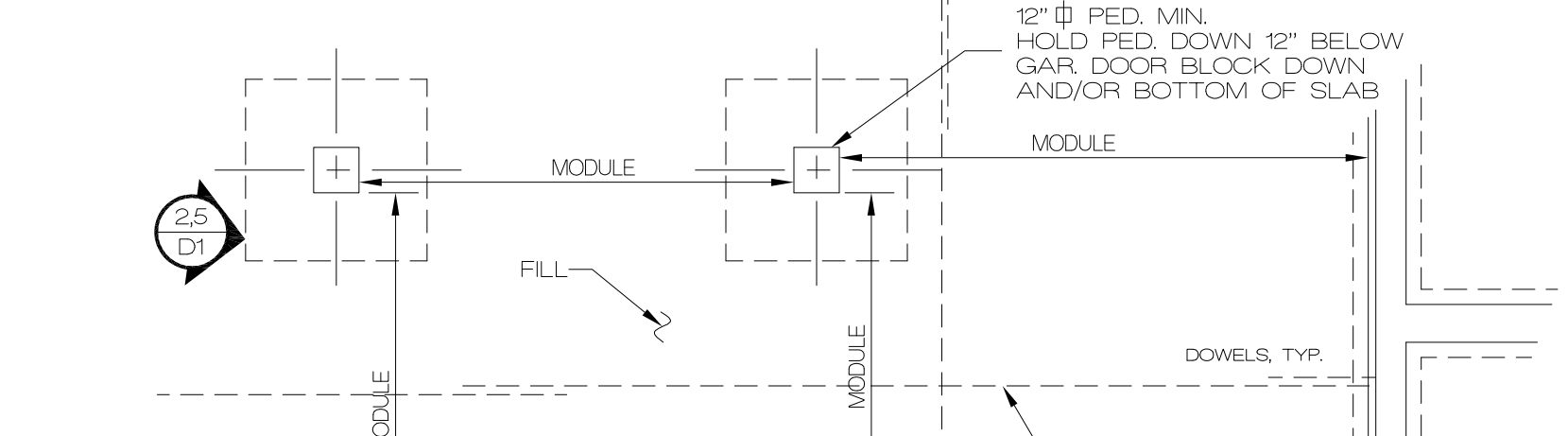
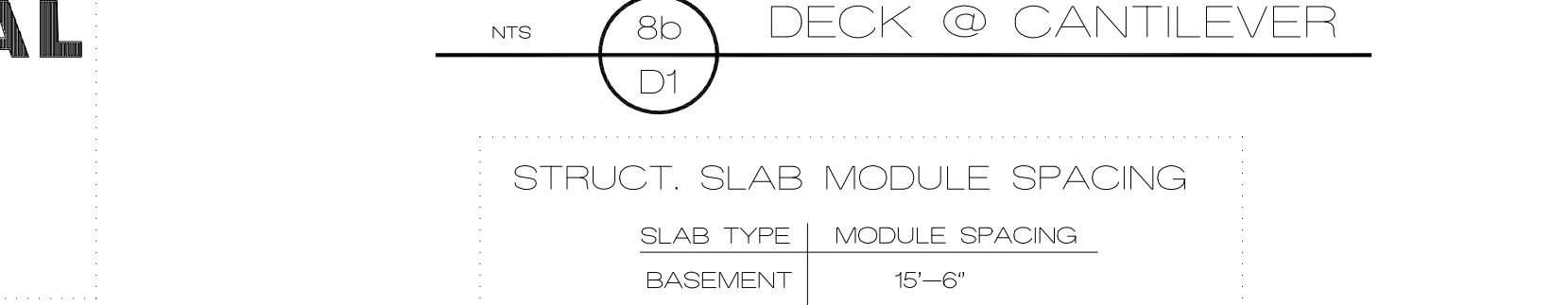
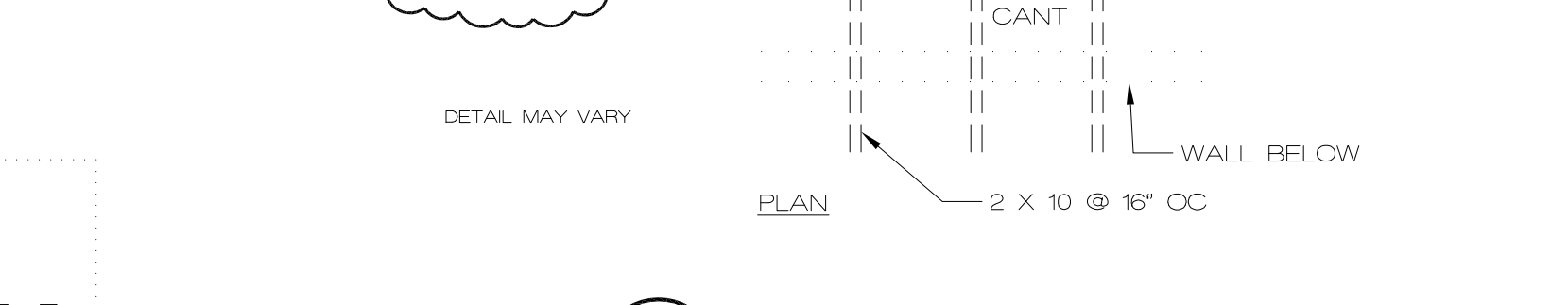
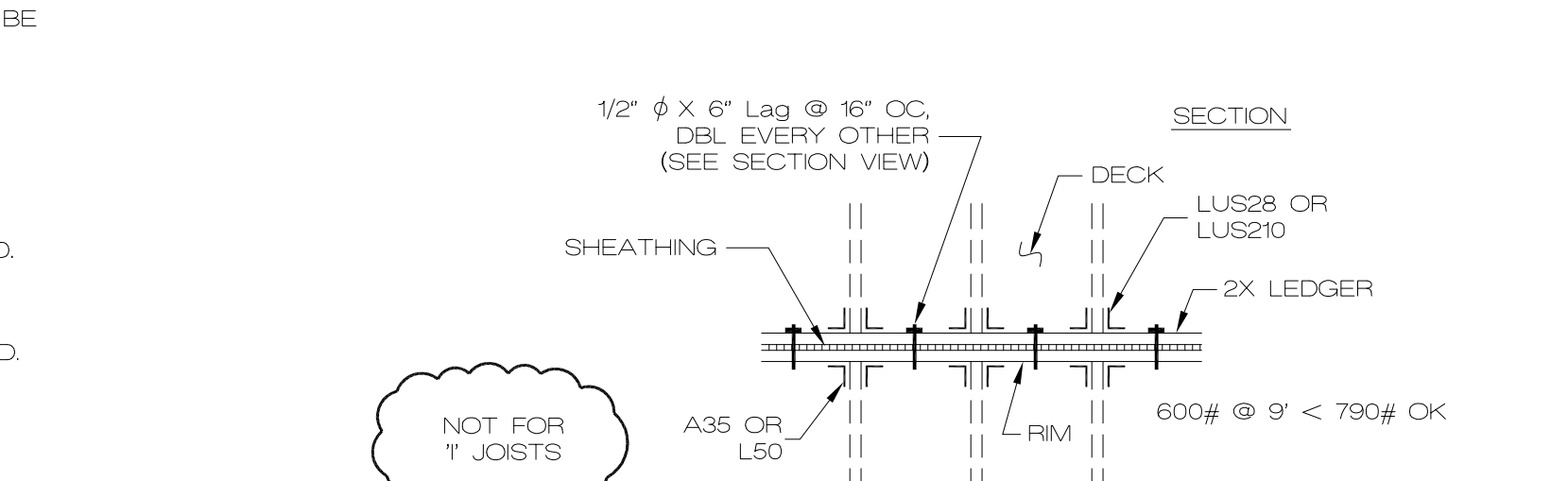
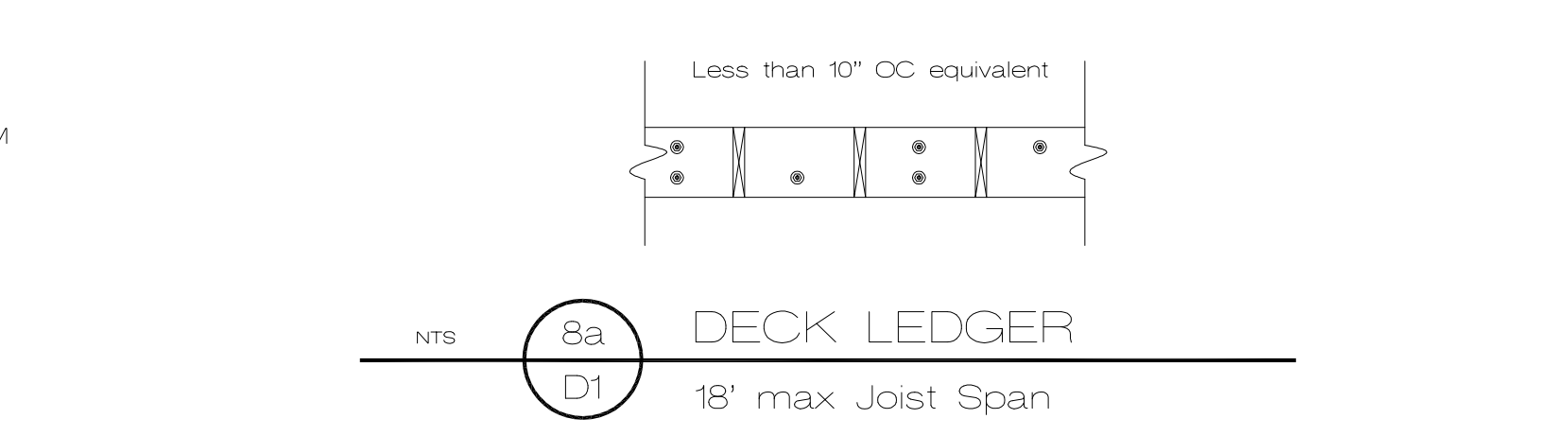
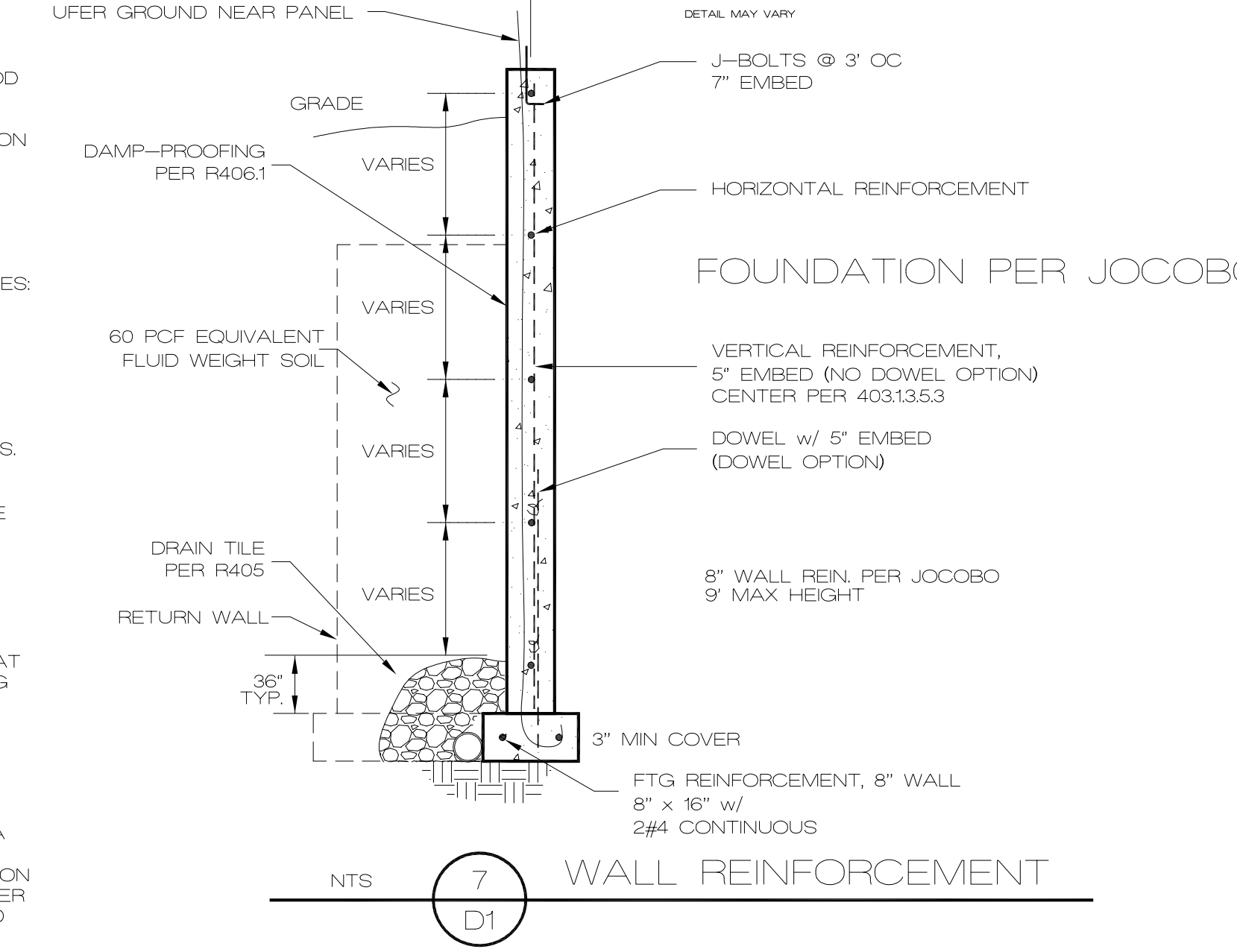
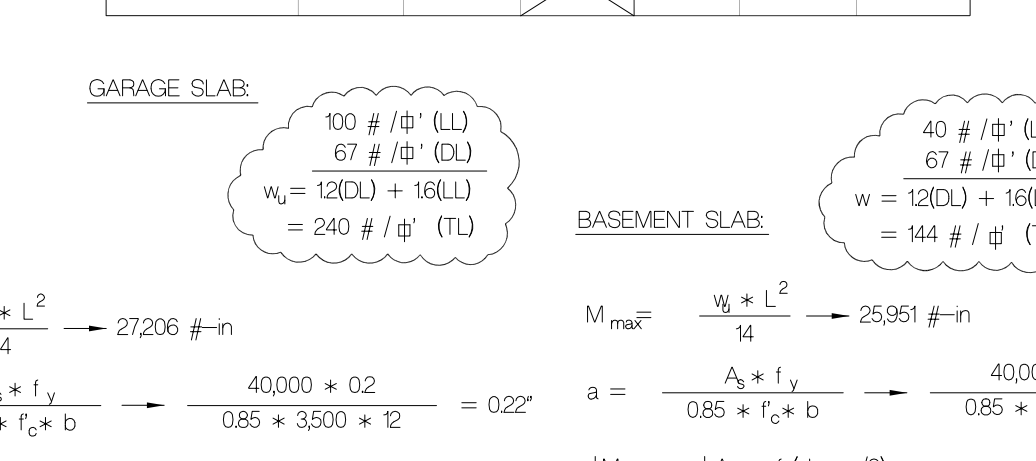
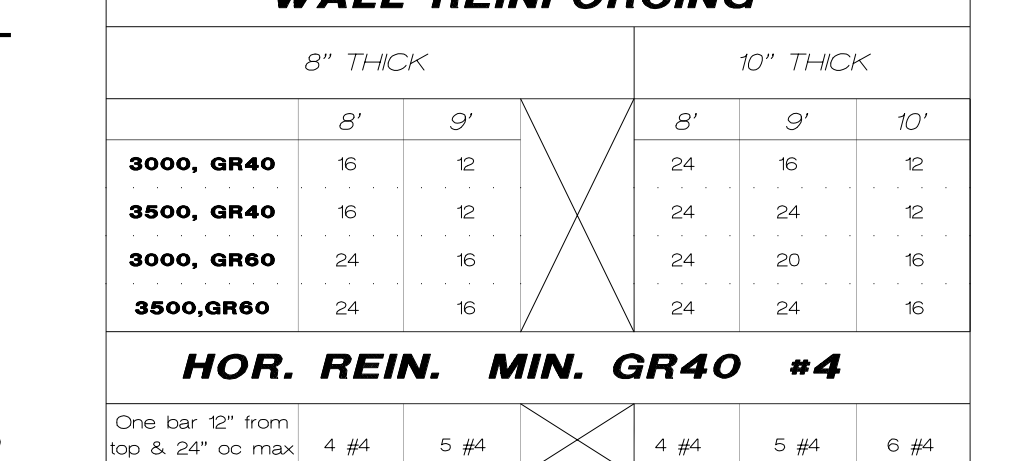
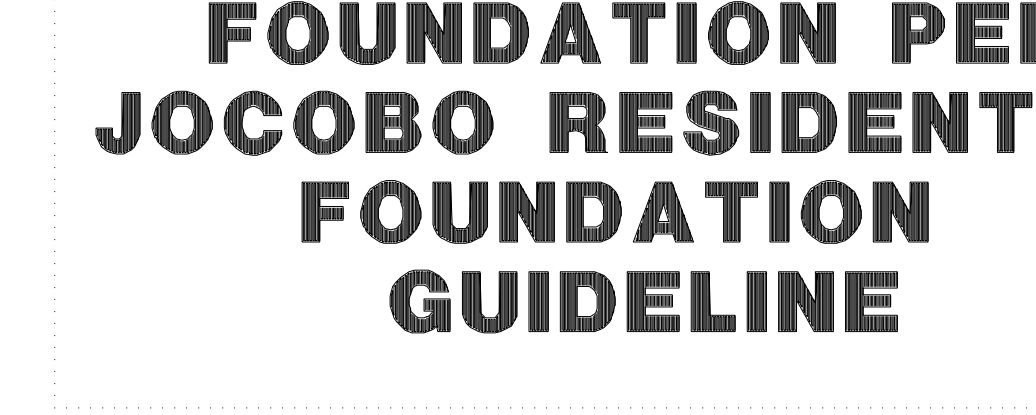
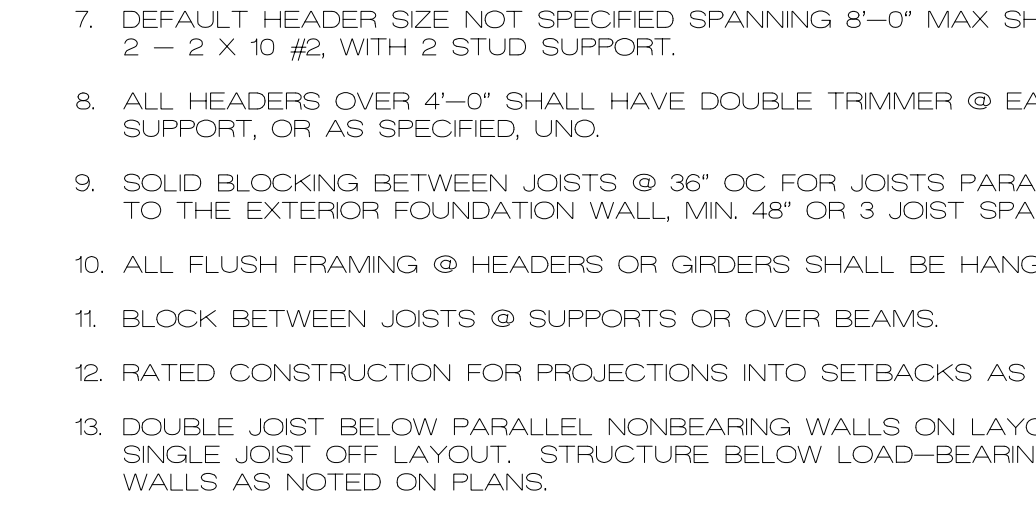
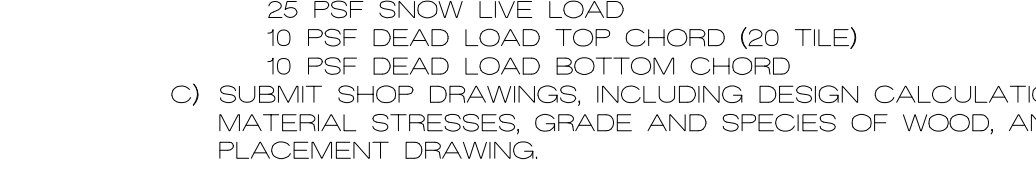
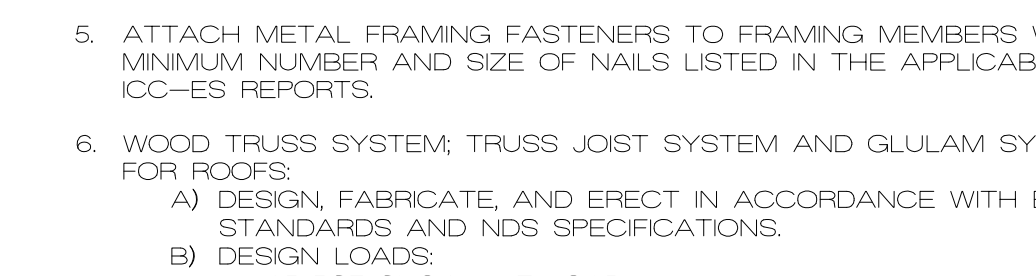
DIVISION 5.5 – MISC. STRUCTURAL STEEL

- ALL MISCELLANEOUS STRUCTURAL STEEL WORK SHALL CONFORM TO THE REQUIREMENTS OF AISC SPECIFICATIONS FOR DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
  - DESIGN LOADS:
    - 25 PSF SNOW LIVE LOAD
    - 10 PSF DEAD LOAD TOP CHORD (20 TILE)
    - 10 PSF DEAD LOAD BOTTOM CHORD
  - SUBMIT SHOP DRAWINGS, INCLUDING DESIGN CALCULATIONS, MATERIAL STRESSES, GRADE AND SPECIES OF WOOD, AND PLACEMENT DRAWING.
- DEFAULT HEADER SIZE NOT SPECIFIED SPANNING 8'-0" MAX SHALL BE 2 – 2 X 10 #2, WITH 2 STUD SUPPORT.
- ALL HEADERS OVER 4'-0" SHALL HAVE DOUBLE TRIMMER @ EACH SUPPORT, OR AS SPECIFIED, UNO.
- SOLID BLOCKING BETWEEN JOISTS @ 36" OC FOR JOISTS PARALLEL TO THE EXTERIOR FOUNDATION WALL, MIN. 48" OR 3 JOIST SPACES.
- ALL FLUSH FRAMING @ HEADERS OR GIRDERS SHALL BE HANGERED.
- BLOCK BETWEEN JOISTS @ SUPPORTS OR OVER BEAMS.
- RATED CONSTRUCTION FOR PROJECTIONS INTO SETBACKS AS REQ'D.
- DOUBLE JOIST BELOW PARALLEL NONBEARING WALLS ON LAYOUT, SINGLE JOIST OR GY JOIST. STRUCTURE BELOW LOAD-BEARING WALLS AS NOTED ON PLANS.



DIVISION 6 – ROUGH CARPENTRY

- ALL ROUGH CARPENTRY WORK SHALL CONFORM TO THE REQUIREMENTS OF NIPPA NATIONAL DESIGN SPECIFICATIONS OF WOOD CONSTRUCTION, TP1 DESIGN SPECIFICATIONS FOR LIGHT METAL PLATE CONNECTED WOOD TRUSSES, APA PLYWOOD DESIGN SPECIFICATIONS, DOC PS 1 PRODUCT STANDARD FOR CONSTRUCTION AND INDUSTRIAL PLYWOOD, DOC PS 55 STRUCTURAL GLUED LAMINATED TIMBER, AND APPLICABLE SECTIONS OF THE INTERNATIONAL BUILDING CODE.
- ROUGH CARPENTRY MATERIALS SHALL COMPLY WITH:
  - LUMBER – S4S, S-DRY, KD, OR S-GRN GRADE MARKED, COMPLYING WITH PS 20, GRADED UNDER WWPA OR SPIB RULES:
    - STUDS: STUD GRADE
    - HEADER: #2 DOUGLAS FIR MIN TYPICAL
    - RAFTER: #2 DOUGLAS FIR
    - PLATES: #2 DOUGLAS FIR
    - BLOCKING: #2 DOUGLAS FIR
  - METAL FRAMING FASTENERS – ASTM A 153, HOT-DIP GALVANIZED FASTENERS, EQUAL TO SIMPSON STRONG-TIE CONNECTORS COMPLYING WITH APPLICABLE ICC-ES REPORTS.
  - PLYWOOD – APA RATED SHEATHING, COMPLYING TO PS 1.
  - LVL – LAMINATED VENEER LUMBER SHALL BE GRADE 2800 F-20E AND SHALL MEET THE REQUIREMENTS OF APPLICABLE ICC-ES REPORTS.
  - GLULAM BEAMS – COMBINATION 24F-V3 IN ACCORDANCE WITH AITC A1901.
- EXTERIOR WALL AND ROOF SHEATHING SHALL BE 5/8" APA RATED SHEATHING 24/0 EXTERIOR GLUED (MIN FOR 16" OC STUD SPACING, NAIL SHEATHING TO SUPPORT MEMBERS WITH 8D COMMON NAILS AT 6" ON CENTER ALONG EDGE SUPPORTS AND 12" ON CENTER ALONG FIELD SUPPORTS UNLESS NOTED OTHERWISE. PROVIDE SOLID BLOCKING AT ALL UNSUPPORTED PANEL EDGES, 4/8 GUN NAILS.
- NOTE: ROOF SHEATHING SHALL BE 5/8" APA RATED SHEATHING FOR TILE ROOF, OR AS REQUIRED BY MANUFACTURER.
- INTERIOR SHEAR WALL SHEATHING WHERE NOTED SHALL BE 5/8" APA RATED SHEATHING 24/0 EXTERIOR GLUED (MIN FOR 16" OC STUD SPACING, NAIL SHEATHING TO SUPPORT MEMBERS WITH 8D COMMON NAILS AT 4" ON CENTER ALONG EDGE SUPPORTS AND 6" ON CENTER ALONG FIELD SUPPORTS UNLESS NOTED OTHERWISE. PROVIDE SOLID BLOCKING AT ALL UNSUPPORTED PANEL EDGES.
- ATTACH METAL FRAMING FASTENERS TO FRAMING MEMBERS WITH MINIMUM NUMBER AND SIZE OF NAILS LISTED IN THE APPLICABLE ICC-ES REPORTS.
- WOOD TRUSS SYSTEM, TRUSS JOIST SYSTEM AND GLULAM SYSTEM FOR ROOFS:
  - DESIGN, FABRICATE, AND ERECT IN ACCORDANCE WITH BCSI STANDARDS AND NDS SPECIFICATIONS.
  - DESIGN LOADS:
    - 25 PSF SNOW LIVE LOAD
    - 10 PSF DEAD LOAD TOP CHORD (20 TILE)
    - 10 PSF DEAD LOAD BOTTOM CHORD
  - SUBMIT SHOP DRAWINGS, INCLUDING DESIGN CALCULATIONS, MATERIAL STRESSES, GRADE AND SPECIES OF WOOD, AND PLACEMENT DRAWING.
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- BLOCK BETWEEN JOISTS @ SUPPORTS OR OVER BEAMS.
- RATED CONSTRUCTION FOR PROJECTIONS INTO SETBACKS AS REQ'D.
- DOUBLE JOIST BELOW PARALLEL NONBEARING WALLS ON LAYOUT, SINGLE JOIST OR GY JOIST. STRUCTURE BELOW LOAD-BEARING WALLS AS NOTED ON PLANS.



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ISSUE DATE	11/2/15
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2018 DETAIL SHEET

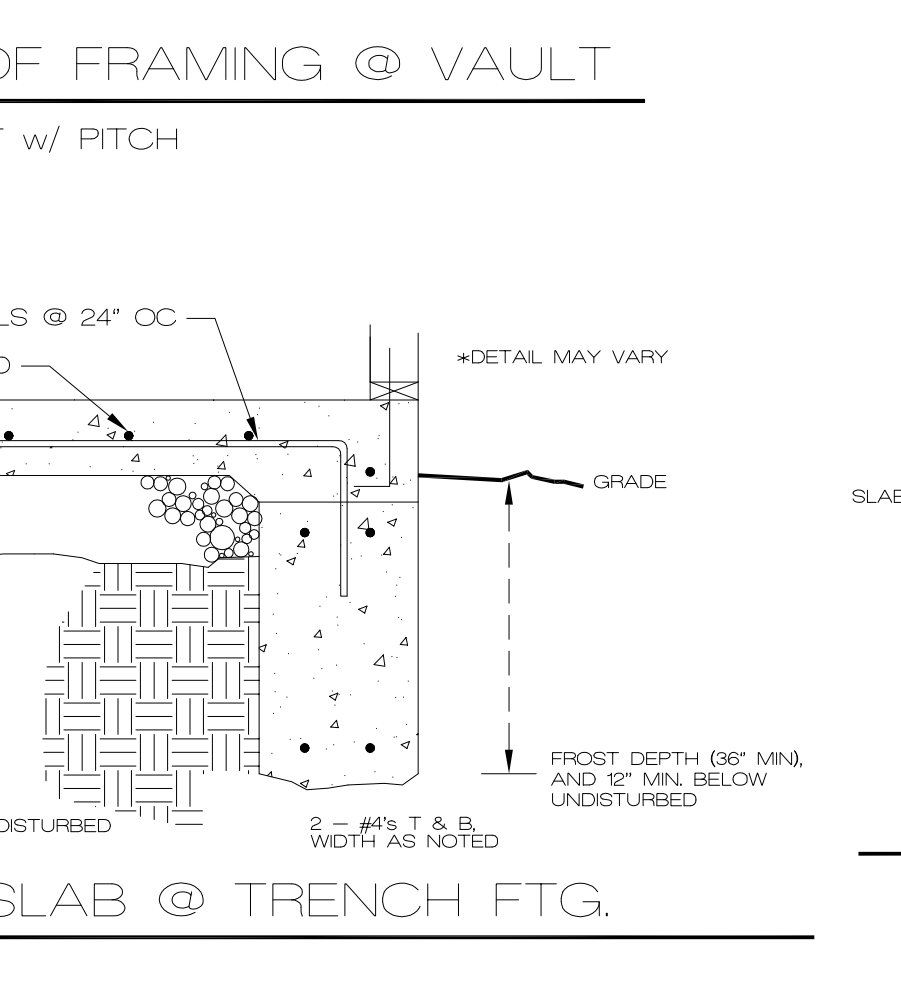
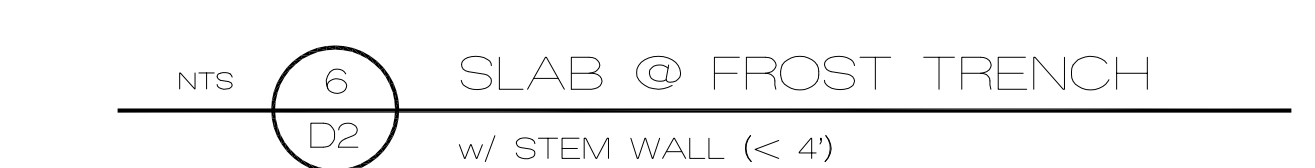
STATE OF MISSOURI  
KENNETH SIDOROWICZ  
NUMBER E-19986  
PROFESSIONAL ENGINEER

8/18/21

D1

RELEASE FOR CONSTRUCTION  
DEVELOPMENT SERVICES  
LEE'S SUMMIT, MISSOURI  
08/25/2021





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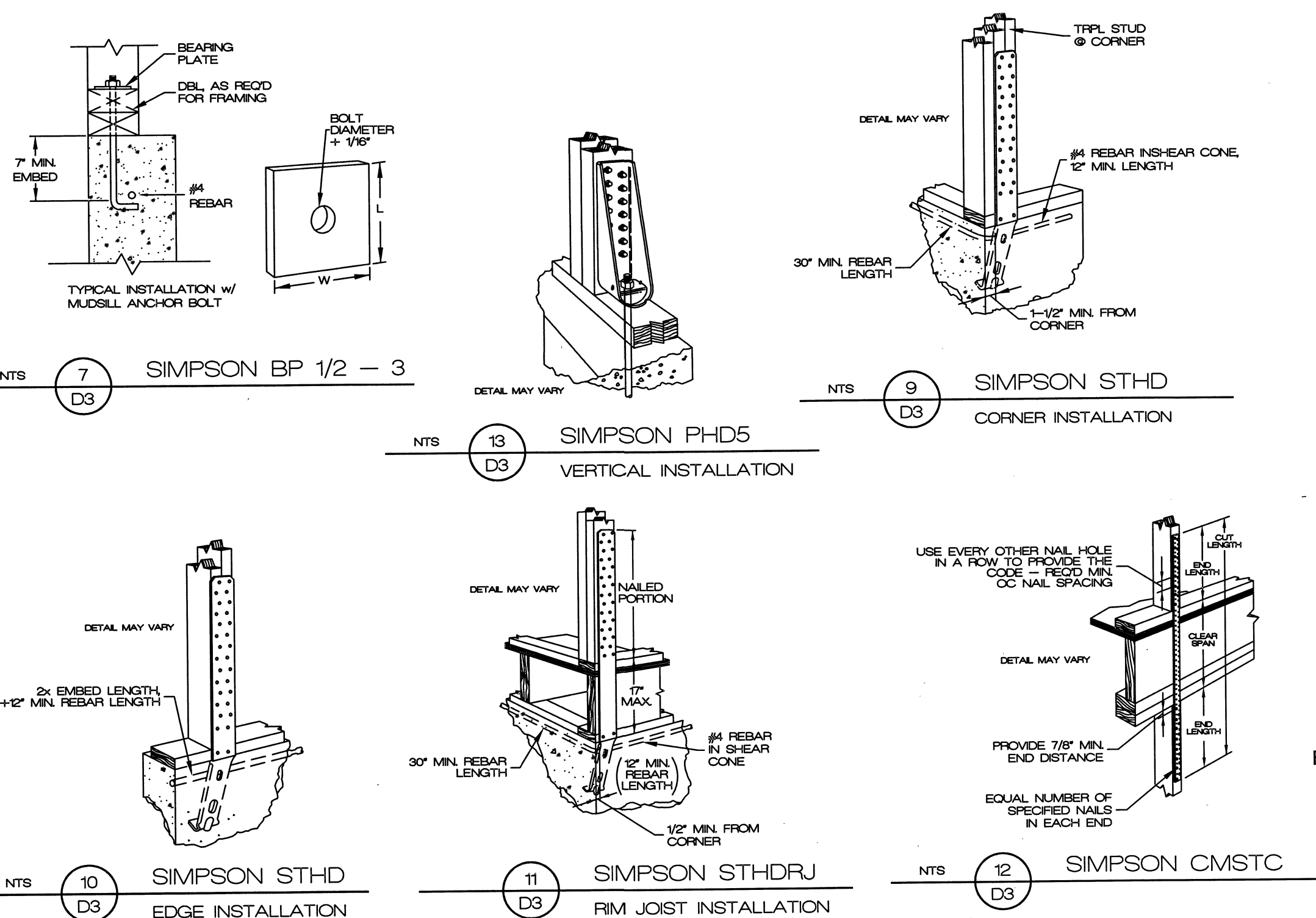
# STAPLES NOT PERMITTED IN KCMO

## FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

Item	Description of building elements	Number & type of fastener (notes: a, b, c)	Spacing of fasteners
<b>Roof</b>			
1	Blocking between joists or rafters to top plate, toe nail	3-8d (2-1/2" x 0.135)	
2	Ceiling joists to plate, toe nail	3-8d (2-1/2" x 0.135)	
3	Ceiling joists not attached to parallel rafter, laps over partitions, face nail	3-10d	
4	Collar tie rafter, face nail or 1-1/4" x 20 ga. ridge strap	3-10d (3" x 0.287)	
5	Rafter to plate, toe nail, note: trusses use STC clips at NLB walls and speed holdowns	3-10d or 3-10d (3-1/2" x 0.357, 0.145)	2 toe nails side 1, 1 toe nail side 2 (note j)
6	Roof rafters to ridge, valley or hip rafters	4-16d (3-1/2" x 0.357)	
7	Top nail	3-16d (3-1/2" x 0.357)	
<b>Wall</b>			
7	Built-up studs-face nail	10d (3" x 0.287)	24" o.c.
8	Assembling studs at intersecting wall corners, face nail	16d (3-1/2" x 0.357)	12" o.c.
9	Built-up header, two pieces w/ 1/2" spacer	16d (3-1/2" x 0.357)	16" o.c. along each edge
10	Continued header, two pieces	16d (3-1/2" x 0.357)	16" o.c. along each edge
11	Continuous header to stud, toe nail	4-8d (3-1/2" x 0.135)	
12	Double studs, face nail	10d (3" x 0.287)	24" o.c.
13	Double top plates, face nail	10d (3" x 0.287)	24" o.c.
14	Double top plates, min. 48" offset of end joints, face nail in lapped area	8-16d (3-1/2" x 0.357)	
15	Sole plate to joist or blocking, face nail	8d (2-1/2" x 0.135)	16" o.c.
16	Sole plate to joist or blocking at braced wall panels	3-16d (3-1/2" x 0.357)	16" o.c.
17	Stud to sole plate, toe nail	3-8d (2-1/2" x 0.135) or 2-16d (3-1/2" x 0.357)	
18	Top or sole plate to stud, end nail	2-8d (2-1/2" x 0.135)	
19	Top plates, face at corners and intersections, face nail	2-16d (3-1/2" x 0.357)	
20	1" brace to each stud and plate, face nail	2-8d (2-1/2" x 0.135)	
21	1" x 6" sheathing to each bearing, face nail	2 staples 1-3/4"	
22	1" x 6" sheathing to each bearing, face nail	2-8d (2-1/2" x 0.135)	
23	Wider than 1" x 6" sheathing to each bearing, face nail	3 staples 1-3/4"	
<b>Floor</b>			
24	Joist to sill or girder, toe nail	3-8d (2-1/2" x 0.135)	
25	Firm joist to top plate, toe nail (roof applications also)	8d (2-1/2" x 0.135)	6" o.c.
26	Firm joist or blocking to sill plate, toe nail	8d (2-1/2" x 0.135)	6" o.c.
27	1" x 6" subfloor or less to each joist, face nail	2-8d (2-1/2" x 0.135)	
28	2" subfloor to joist of girder, blind and face nail	2 staples 1-3/4"	
29	2" planks (plank & beam - floor and roof)	2-16d (3-1/2" x 0.357)	
30	Built-up girders and beams, 2" lumber layers	10d (3" x 0.287)	
31	Ledger strip supporting joists or rafters	3-16d (3-1/2" x 0.357)	
<b>Spacing of Fasteners</b>			
Description of building materials		Description of fastener (notes: b, c, e)	Intermediate supports (inches) (notes: c, e)
Wood structural panels, subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing		6d common (2" x 0.135) nail (subfloor, wall) (note j)	12 (note: g)
32	3/8" to 1/2"	8d common (2-1/2" x 0.135) nail (roof)	12 (note: g)
33	1/2" to 3/4"	10d common (3" x 0.148) nail or 8d deformed (2-1/2" x 0.135) nail	12
34	1-1/8" to 1-1/4"		
<b>Other wall sheathing (note h)</b>			
35	1/2" structural cellulose fiberboard	1-1/2" galv. roofing nail, 7/16" crown or 1" crown staple 16 ga., 1-1/4" long	6
36	25/32" structural cellulose fiberboard sheathing (note d)	1-3/4" galv. roofing nail, 7/16" crown or 1" crown staple 16 ga., 1-1/2" long	6
37	1/2" gypsum sheathing (note d)	1-1/2" galvanized roofing nail, staple galv., 1-1/2" long, 1-1/4" screws, Type W or S	7
38	5/8" gypsum sheathing (note d)	1-3/4" galvanized roofing nail, staple galv., 1-5/8" long, 1-5/8" screws, Type W or S	7
<b>Wood structural panels, combination subfloor underlayment to framing</b>			
39	3/4" and less	6d deformed (2" x 0.135) nail or 8d common (2-1/2" x 0.135) nail	12
40	7/8" to 1"	8d common (2-1/2" x 0.135) nail or 8d deformed (2-1/2" x 0.135) nail	12
41	1-1/8" to 1-1/4"	10d common (3" x 0.148) nail or 8d deformed (2-1/2" x 0.135) nail	12

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s, 1 psi = 6.895 kPa

- a. All nails are smooth-common, box or deformed shank except where otherwise stated. Nails used for framing and sheathing connections shall have minimum average bending yield strengths as shown: 80 ksi (551 MPa) for shank diameter of 0.052 inch (20d common nail, 90 ksi (620 MPa) for shank diameters larger than 0.042 inch but not larger than 0.077 inch, and 100 ksi (689 MPa) for shank diameters of 0.042 inch or less.
- b. Staples are 16 gauge wire and have a minimum 7/16-inch crown width.
- c. Nails shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater.
- d. Four-foot-by-8-foot or 4-foot-by-9-foot panels shall be applied vertically.
- e. Spacing of fasteners not included in the table shall be verified w/ ECR.
- f. For regions having basic wind speed of 100 mph or greater, 8d deformed nails shall be used for attaching plywood and wood structural panel roof sheathing to framing within minimum 48-inch distance from gable end walls, if mean roof height is more than 25 feet, up to 35 feet maximum.
- g. For regions having basic wind speed of 100 mph or less, nails for attaching wood structural panel roof sheathing to gable end wall framing shall be spaced 6 inches on center. When basic wind speed is greater than 100 mph, nails for attaching panel roof sheathing to intermediate supports shall be spaced 6 inches on center for minimum 48-inch distance from ridges, eaves and gable end walls and 6 inches on center to gable end wall framing.
- h. Gypsum sheathing shall conform to ASTM C 368 and shall be installed in accordance with GA 263. Fiberboard sheathing shall conform to ASTM C 208.
- i. Spacing of fasteners on floor sheathing panel edges applies to panel edges supported by framing members and at all floor perimeter joints. Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing members and at all roof perimeter joints. Blocking of roof or floor sheathing panel edges perpendicular to the framing members shall not be required except at intersection of adjacent roof planes. Floor and roof perimeter shall be supported by framing members or solid blocking.
- j. Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule, provide two toe nails on one side of the rafter and toe nails from the ceiling joist to top plate in accordance with this schedule. The toe nail on the opposite side of the rafter shall not be required.



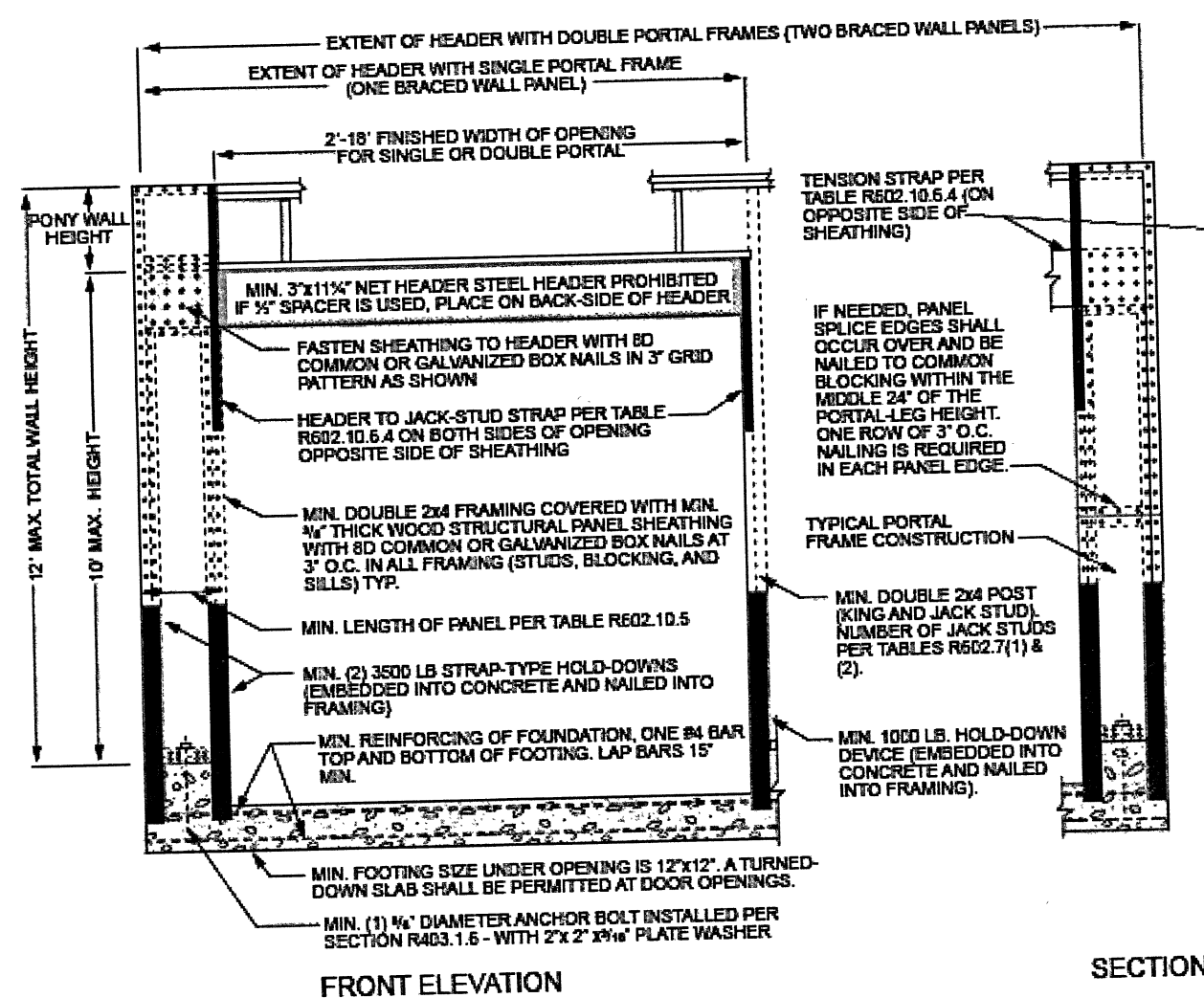
ALL METHODS	DESCRIPTION	CONSTRUCTION
1 LIB	METAL STRAP METHOD	SIMPSON CS16 STRAP NAILED TO STUDS SPACED AT 16" OC MAXIMUM. STRAPS SHALL BE INSTALLED IN 'V' OR 'X' PATTERN AT THE BRACE LOCATION AND FOR THE SPECIFIED LENGTH, ALTERNATIVE TO LET IN 1 X 4.
2 WSP/CS-WSP	SHEATHING METHOD	7/16" STRUCTURAL SHEATHING OVER STUDS SPACED 16" OC w/ 8d COMMON NAILS AT 6" OC EDGE AND 12" FIELD. HORIZONTAL JOINTS SHALL BE BLOCKED FOR ANCHORAGE.
3 PFH	GARAGE DOOR PORTAL	6 TO 1 ASPECT RATIO, HEADER LENGTH AS SPECIFIED WITH FULL PANEL SHEATHING AT UPPER CORNERS CUTOUT FOR THE OPENING. BLOCKING AT HORIZONTAL JOINTS. NOTE FULL 4" WIDTH CUTOUT PANELS REQ'D AT CORNERS. STD10 & LSTA STRAPS
4 CS-PF	PORTALS	HEADER LENGTH AS SPECIFIED EXTENDED TO NEXT LAYOUT STUD, 18" MINIMUM WIDTH. FULL PANEL SHEATHING REQ'D WITH CUTOUTS FOR OPENINGS. HORIZONTAL BLOCKING AT EDGES.

J' BOLT SPACING FOR SHEAR WALLS IS 3' OC WITH STRAPS AS NOTED.

## SHEAR WALL SCHEDULE

NTS 8 D3

## CHAPTER 6 WALL CONSTRUCTION

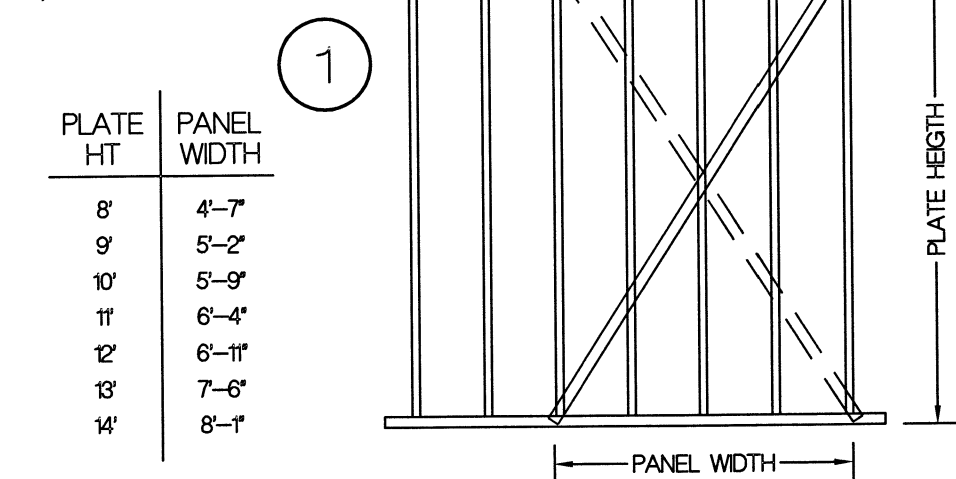


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FIGURE R602.10.6.2 METHOD PFH-PORTAL FRAME WITH HOLD-DOWNS

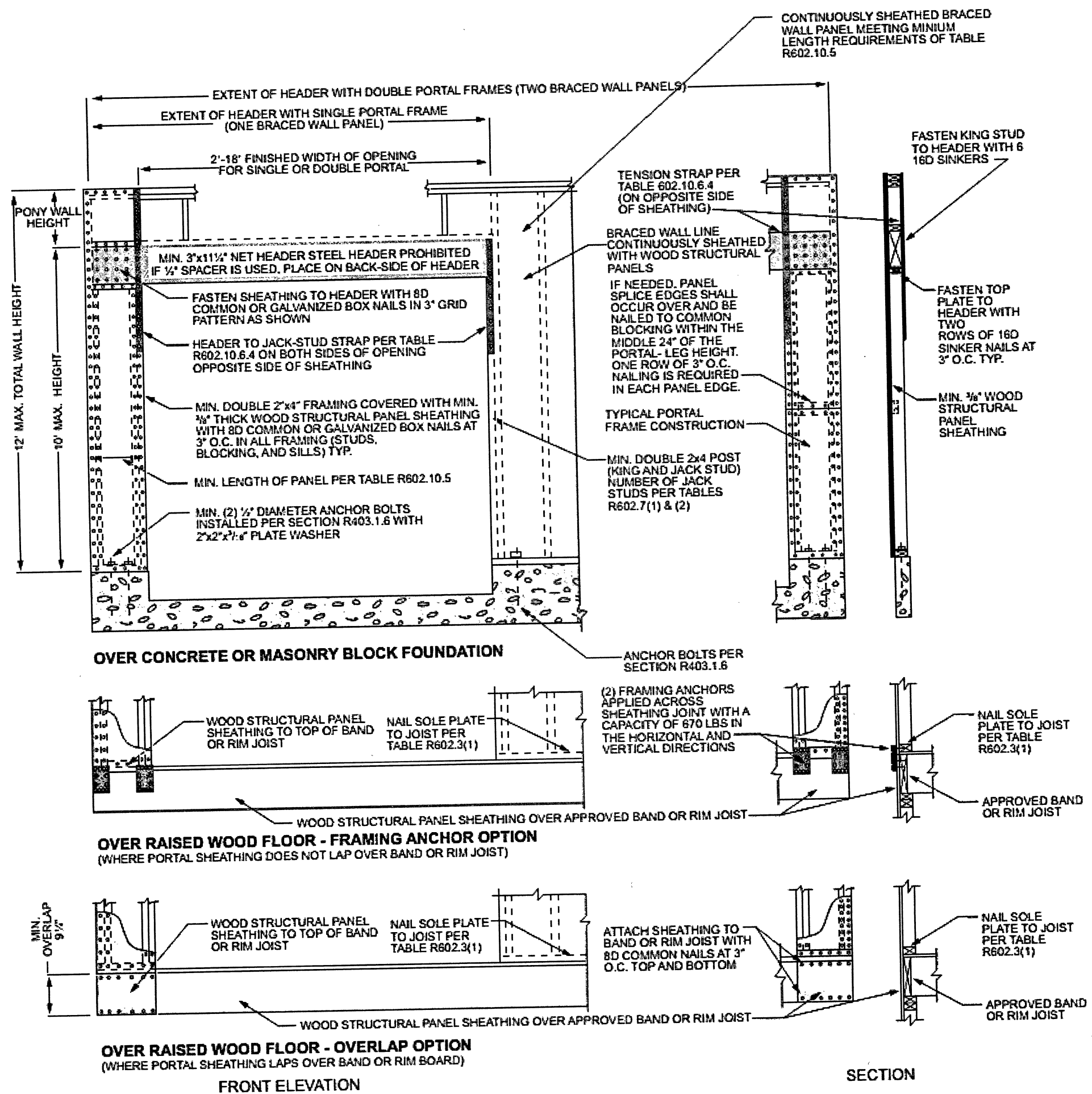
LOAD TABLE		
LOCATION	MIN. DL (PSF)	MIN. LL (PSF)
EXTERIOR BALCONIES	10	60
DECKS	10	40
CEILING w/o STORAGE	5	10
CEILING w/ STORAGE	10	20
NON-SLEEPING ROOMS	10	40
SLEEPING ROOMS	10	30
ROOF-LIGHT COVERING	10	25
ROOF-HEAVY COVERING	20	25

INTERIOR BRACED PANELS w/ SIMPSON WBC STRAP



NTS 1 D3 INT. BRACED WALL PANEL LIB, METAL STRAP ALT. TO LET IN 1 X 4

## CHAPTER 6 WALL CONSTRUCTION



For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

FIGURE R602.10.6.4 METHOD CS-PF-CONTINUOUSLY SHEATHED PORTAL FRAME PANEL CONSTRUCTION

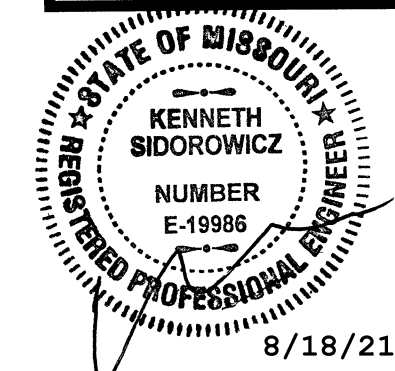
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ISSUE DATE  
REVISIONS

2018 International Residential Code  
Third Printing: Sep 2019

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