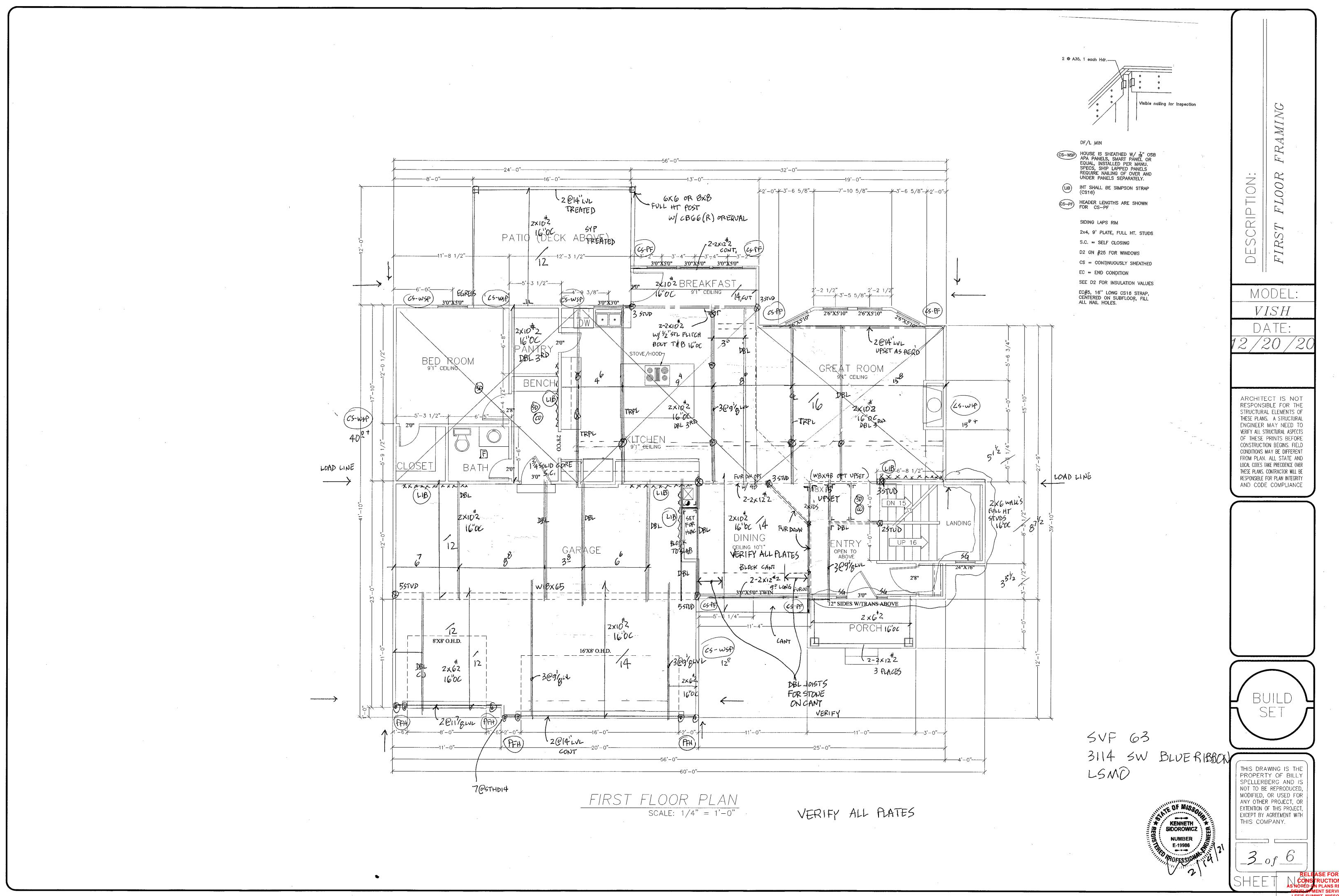
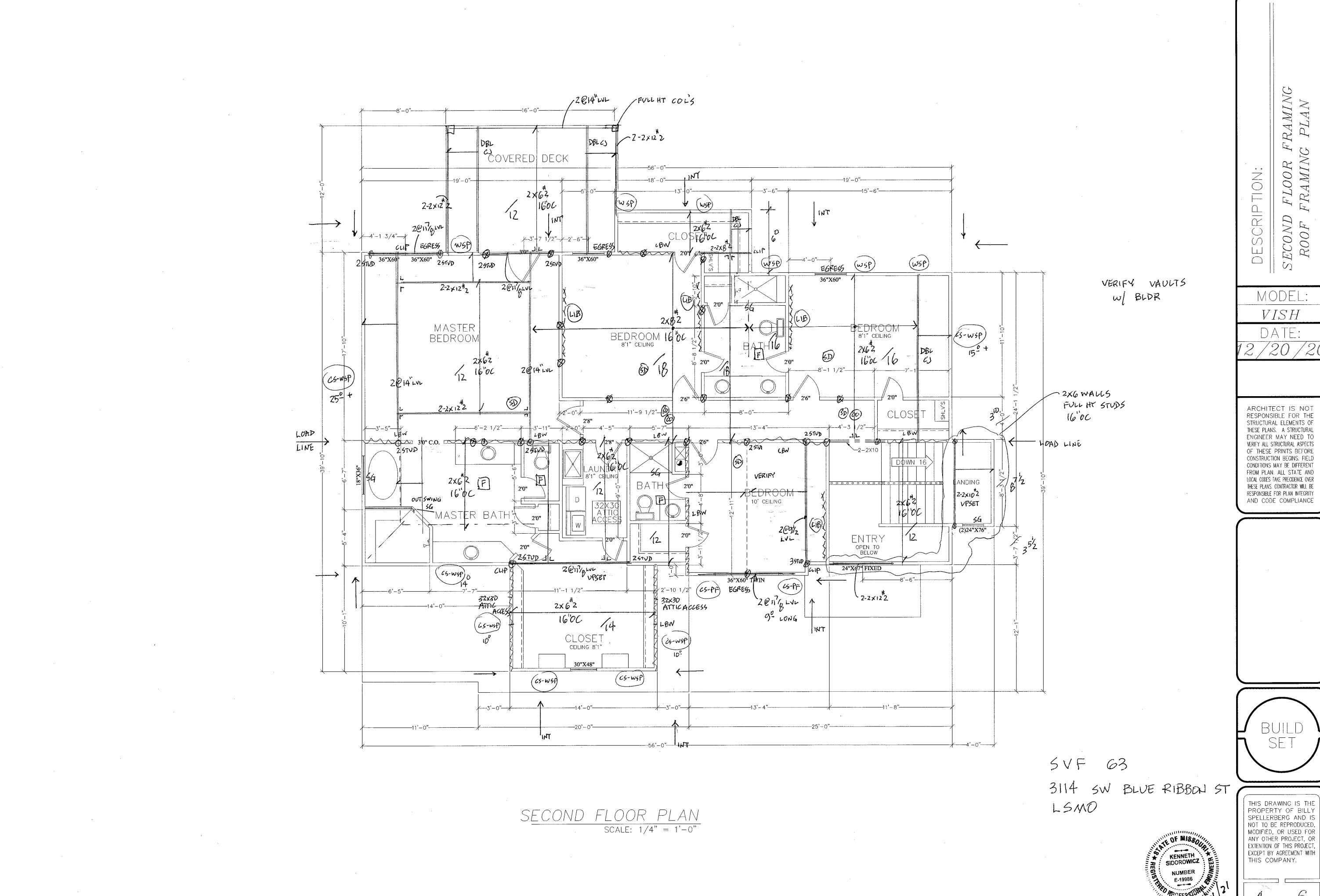


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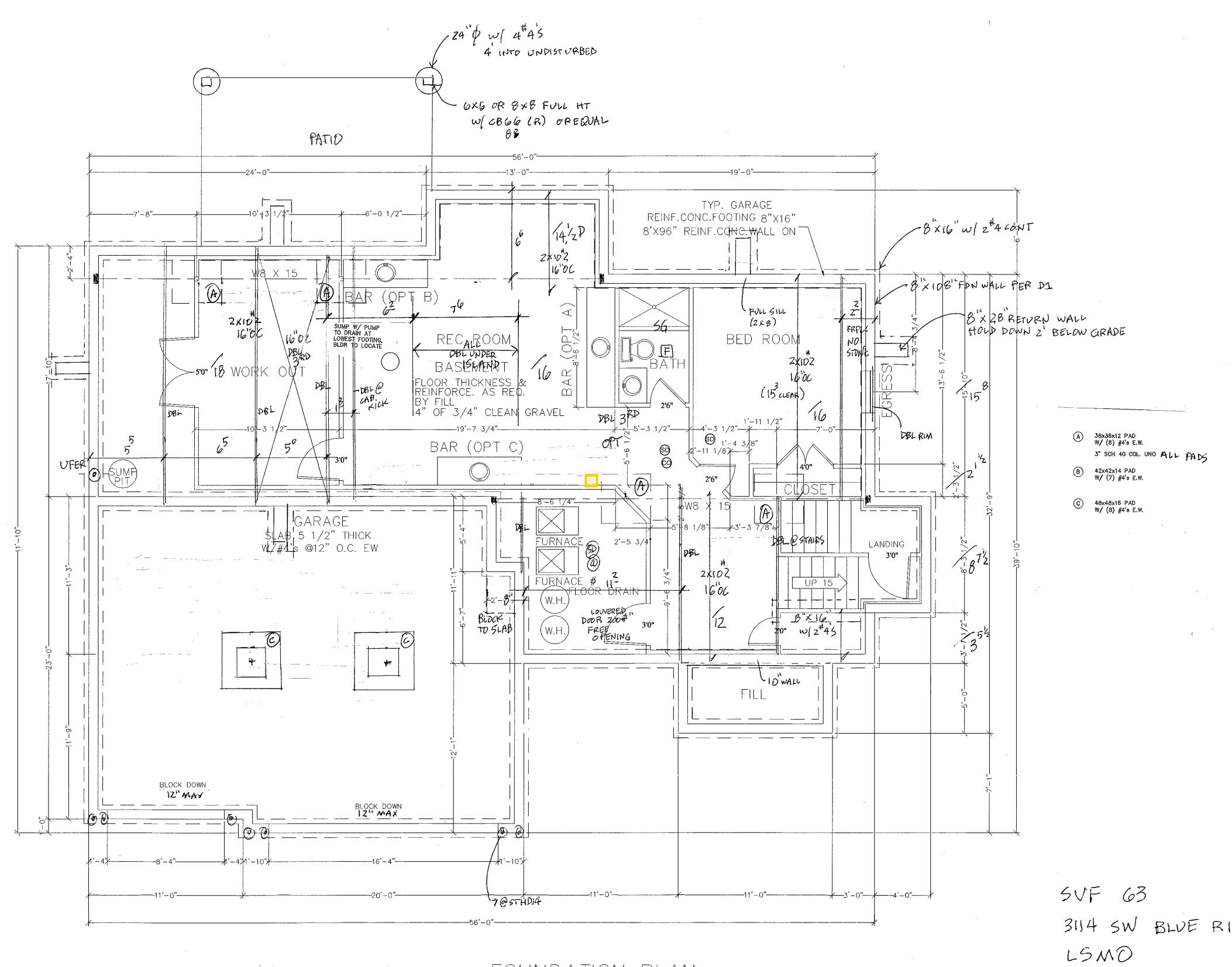
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AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

BEAMS FIELD VERIFY LENGTH LENGTH SIZE 24'11" W8 X 15 30'0" W18X45

2 POSTS ADJUSTIBLE



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

3114 SW BLUE RIBBON



THIS DRAWING IS THE PROPERTY OF BILLY SPELLERBERG AND IS NOT TO BE REPRODUCED, MODIFIED, OR USED FOR ANY OTHER PROJECT, OR EXTENTION OF THIS PROJECT, EXCEPT BY AGREEMENT WITH THIS COMPANY.

DESCRIPTION:

FOUNDATION

MODEL:

VISH

DATE:

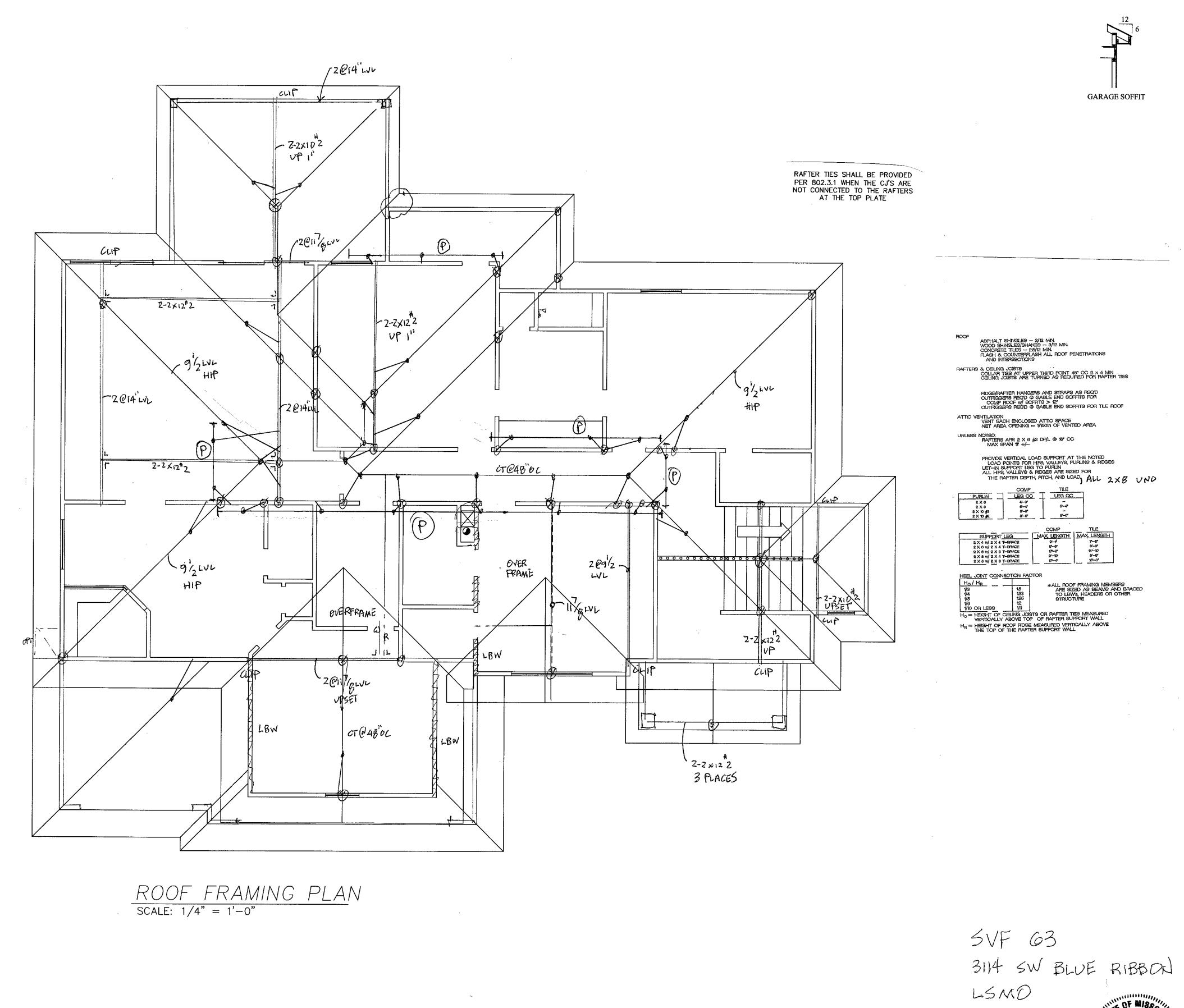
ARCHITECT IS NOT RESPONSIBLE FOR THE STRUCTURAL ELEMENTS OF THESE PLANS. A STRUCTURAL

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 PRECIDENCE OVER
THESE PLANS. CONTRACTOR WILL BE
RESPONSIBLE FOR PLAN INTEGRITY
AND CODE COMPLIANCE



T FLOOR FRAMING

DESCRIPTION FIRST FLOOF

MODEL:

VISH

DATE: 12/20/20

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

OF THESE PRINTS BEFORE CONSTRUCTION BEGINS. FIELD CONDITIONS MAY BE DIFFERENT FROM PLAN. ALL STATE AND LOCAL CODES TAKE PRECIDENCE OVER THESE PLANS. CONTRACTOR WILL BE RESPONSIBLE FOR PLAN INTEGRITY AND CODE COMPLIANCE

BUILD
SET

THIS DRAWING IS THE PROPERTY OF BILLY SPELLERBERG AND IS NOT TO BE REPRODUCED, MODIFIED, OR USED FOR ANY OTHER PROJECT, OR EXTENTION OF THIS PROJECT, EXCEPT BY AGREEMENT WITH THIS COMPANY.

KENNETH SIDOROWICZ

NUMBER E-19986 6 of 6

RELEASE FOR
CONSTRUCTION
ASNOTED ON PLANS REVIEW
DEVELOPMENT SERVICES

SUMMIT, MIS

DIVISION 1 — GENERAL REQUIREMENTS 1. DESIGN AND CONSTRUCTION WORK FOR THIS PROJECT SHALL CONFORM TO THE REQUIREMENTS OF THE 2018 IRC. 2. FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK AS SHOWN OR INFERRED BY THE DRAWINGS. 3. DESIGN FACTORS: A) GROUND SNOW LOAD (INCLUDING DRIFTING SNOW)_20 PSF B) WIND SPEED (EXPOSURE B)_ _115 MPH C) SEISMIC CATEGORY (A), GROUND ACCELERATION = NA 4. DESIGN LOADS (PSF, UNLESS NOTED OTHERWISE): A) ROOF (LL/DL)_ SEE TABLE B) FLOOR (LL/DL) _SEE TABLE C) CEILING (LL/DL)_ _SEE TABLE, (0/10 TRUSSES) 5. DO NOT SCALE DRAWINGS. IF DIMENSIONS ARE IN QUESTION, OBTAIN CLARIFICATION FROM A / E BEFORE CONTINUING 6. 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. 7. 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. 8. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL TRADES EVEN IF THE TRADE IS UNDER A SEPARATE CONTRACT 9. PROVIDE SUFFICIENT STUDS AND BLOCKING WHERE REQUIRED TO SUPPORT EQUIPMENT AND/OR MISCELLANEOUS ITEMS, I.E., LOAD POINTS, TYPICAL CASEWORK, CABINETS, GRAB BARS ETC. 10. PRETREAT FOUNDATION FOR TERMITES AS REQUIRED. 11. GARAGE DOORS AND FRAMES SHALL BE DESIGNED AND INSTALLED TO MEET THE 115 MPH WIND LOAD RESISTANCE REQUIREMENTS OF DASMA 108 AND ASTM E 330. 12. 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. <u>DIVISION 2</u> — EARTHWORK 1. ALL PROPERTY MARKERS SHALL BE EXPOSED. 2. ALL FOOTINGS ARE DESIGNED TO BEAR ON NATURAL UNDISTURBED SOIL CAPABLE OF ADEQUATELY SUSTAINING A MINIMUM BEARING PRESSURE OF 1,500 PSF. IF SUITABLE UNDISTURBED BEARING CAPACITY IS NOT ENCOUNTERED AT THE ELEVATION INDICATED ON THE DRAWINGS, CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY. 3. ALL TOPSOIL, ORGANIC MATERIAL, AND EXISTING STRUCTURES SHALL BE REMOVED FROM BUILDING AREA AND FROM AREAS TO BE PAVED. STOCKPILE ALL TOPSOIL FOR REUSE. 4. REFERENCE THE SOILS REPORT FOR ALL FILL CONDITIONS. 5. OVEREXCAVATE BUILDING AREA BELOW SLAB SUBGRADE ELEVATION AND REPLACE WITH MATERIAL PER SOILS REPORT, 6. SITE EROSION CONTROL SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES. 7. IN-SITU SOIL CONDITIONS, SEE SOILS REPORT OR 1,500 PSF BEARING & 60 PCF EQUIVALENT FLUID WEIGHT. 8. SOIL CONDITIONS AT THE DEPTH OF EXCAVATION FOR THE FOOTING SHALL BE UNIFORM AND CONSISTENT. NOTIFY THE ENGINEER OF RECORD OF ANY INCONSISTENCIES. 9. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING OF ANY EXCESS EXCAVATION MATERIALS AND FOR OBTAINING AND SUPPLYING ADDITIONAL FILL MATERIAL AS 48" LONG MIN. _____ ______ ----DIAGONAL STEEL > 0.58 NO ISTRESS ZONE - LOAD PLANE STRESS ZONE

WITH EOR. DETAIL MAY VARY FOOTING FOOTING STRESS ZONE **PEDESTAI** DETAIL MAY VARY 48" X 48" X 16" FTG. w/ 8 #4's EW DETAIL MAY VAR CAST w/ SLAE 3" MIN COVER UNDISTURBED 3" MIN. COVER **PEDESTAL** PED @ FTG SLAB @ PE

SLAB ON FILL

DIVISION 3 - CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" AND ACI 332 "REQUIREMENTS FOR RESIDENTIAL

CONCRETE CONSTRUCTION." 2. CONCRETE MATERIALS SHALL COMPLY WITH: A) CEMENT - ASTM C 150 TYPE 1

B) AGGREGATE - ASTM C 33, MAXIMUM AGGREGATE SIZE 3/4" C) WATER — POTABLE, WATER/CEMENT RATIO .5 (MAX.) D) AIR-ENTRAINING ADMIXTURE - ASTM C 260 E) WATER-REDUCING ADMIXTURE - ASTM C 494, INCLUDING SUPERPLASTICIZERS.

F) FLY ASH - ASTM C 618, CLASS C 3. CONCRETE SHALL DEVELOP THE FOLLOWING MINIMUM 28 DAY

DESIGN COMPRESSIVE STRENGTH (f'c): TYPE OF CONSTRUCTION COMP. STRENGTH (f'c) A) FOOTINGS, WALLS, AND SLABS SEE TABLE B) EXTERIOR SLABS AND CURBS SEE TABLE

(AIR-ENTRAINED CONCRETE) 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.

4. PROPORTION AND DESIGN MIXES TO RESULT IN CONCRETE SLUMP AT A POINT OF PLACEMENT OF NOT MORE THAN 4" TO 5".

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.

6. ALL PLUMBING AND ELECTRICAL ROUGH-INS MUST BE COMPLETE, INSPECTED AND APPROVED BEFORE REQUESTING THE SLAB INSPECTION.

7. CONCRETE WORK EXECUTION:

A) MINIMUM CONCRETE COVER FOR REINFORCING SHALL BE, UNLESS NOTED OTHERWISE ON DRAWINGS: CAST AGAINST AND EXPOSED TO EARTH_ EXPOSED TO EARTH OR WEATHER_

NOT EXPOSED TO EARTH OR WEATHER B) IN CORNERS OF GRADE BEAMS PROVIDE CORNER REINFORCEMENT LAP TWO FEET EACH DIRECTION IN OUTSIDE FACE, MATCHING SIZE AND SPACING OF HORIZONTAL REINFORCEMENT.

C) PROVIDE CONTROL JOINTS IN SLABS-ON-GRADE AT NOT GREATER THAN 20 FEET ON CENTER IN EACH DIRECTION. SAW CUT CONTROL JOINTS MINIMUM 1/4 OF THE SLAB DEPTH, AS SOON AFTER SLAB FINISHING AS POSSIBLE WITHOUT DISLODGING AGGREGATE. (DO NOT SAW CUT STRUCTURAL SLABS w/o

8. 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

9. 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).

10. PUMPS SHALL NOT BE PRIMED IN FORMS.

TURN DOWN SLAB @

DETAIL MAY VARY

HVAC BLOCK DOWN

11. REINFORCEMENT:

A) ALL REINFORCING BARS SHALL BE A615, GR40 MIN. LAP SPLICES 18" MIN FOR #4 BAR. SEE TABLE B) WELDED WIRE FABRIC SHALL BE ASTM A185, LAP AT LEAST ONE

FULL MESH AND LACE SPLICES WITH WIRE. C) 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 D) TIE STEEL TO PREVENT DISPLACEMENT. HOOK AND TIE STEEL AS POSSIBLE. TIES, CHAIRS, OR OTHER PRODUCTS SHALL BE

PROTECTED WHEN LOCATED NEAR EXPOSED SURFACES. E) STEEL SHALL BE STORED ON SITE ABOVE GRADE, AND COVERED AS REQUIRED FOR PROTECTION FROM RAIN AND OTHER POSSIBLE

12. ADJUST FOUNDATION FOR SITE AND SOIL CONDITIONS AND VERIFY

HVAC TRUNK

12" ADDITIONAL

SLAB @ HVAC

DETAIL MAY VARY

JOIST HNGR —

FLOOR

6" MIN. STEM WALL-

JOIST

1-1/2" LEDGE ·

BLOCK DOWN @ HVAC

DBL PLATE FOR

- CONCRETE SLAB

- 1-1/2" COVER MIN.

2.5" INSULATION,

- 1-1/2" LEDGE MIN.

ICF WALL

FLUSH FRAMING @ FDN

GYP CRETE

DIVISION 4 - MASONRY

1. 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) BLOCK STRENGTH_ 1900 MORTAR STRENGTH GROUT STRENGTH_

2. CONCRETE BLOCK SHALL BE HOLLOW LOAD-BEARING CONCRETE MASONRY UNITS CONFORMING TO ASTM C 90, TYPE N-II. ALL BLOCKS SHALL BE PLACED IN RUNNING BOND CONSTRUCTION (UNLESS OTHERWISE NOTED) WITH ALL VERTICAL CELLS IN

3. 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.

4. 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" BELOW TOP OF BLOCK AT GROUT LIFT JOINTS AND AT CONCRETE PLACED OVER

5. MINIMUM LINTEL, WHERE NOT ON PLANS, SHALL HAVE A MINIMUM OF 2 - #5's CONTINOUS HORIZONTAL BARS IN BOTTOM OF BOND BEAM OR LINTEL BLOCK AND SHALL BE GROUTED SOLID TO A MIN. DEPTH OF 24." ALL LINTEL REINFORCING AND GROUT SHALL EXTEND 2' MINIMUM PAST JAMBS UNLESS NOTED OTHERWISE ON PLANS OR DETAILS.

6. LAP REINFORCING 48 BAR DIAMETERS. STAGGER LAP SPLICES A MINIMUM OF ONE LAP LENGTH.

7. MASONRY VENEER SHALL BE ATTACHED TO SUPPORT WALL FRAMING WITH &" 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.

8. WATERPROOFING, DRAINAGE PLANE, AND INSTALLATION PER ADOPTED BUILDING CODE.

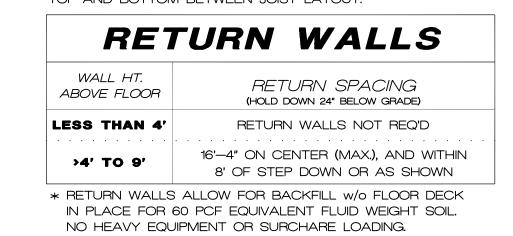
DIVISION 5.5 — MISC. STRUCTURAL STEEL

1. ALL MISCELLANEOUS STRUCTURAL STEEL WORK SHALL CONFORM TO THE REQUIREMENTS OF AISC "SPECIFICATIONS FOR DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR

2. MISCELLANEOUS STRUCTURAL STEEL MATERIAL SHALL COMPLY

A) STRUCTURAL STEEL - ASTM A992 B) STEEL PIPE COLUMNS - ASTM A53 GRADE B(Sch 40 TYP) C) ANCHOR BOLTS - ASTM A307 GRADE A, NON-HEADED TYPE UNLESS OTHERWISE NOTED.

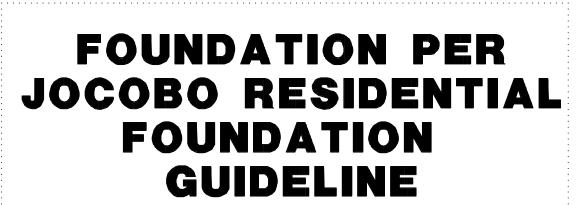
3. FLITCH PLATES SHALL HAVE 1" DIA. BOLTS @ 16" OC, STAGGERED TOP AND BOTTOM BETWEEN JOIST LAYOUT.



DETAIL MAY VARY

2 X 4 OR 2 X 6

MUDSILL



<u>DIVISION 6</u> — ROUGH CARPENTRY

INTERNATIONAL BUILDING CODE.

BLOCKING: #2 DOUGLAS FIR

ICC-ES REPORTS.

WITH AITC A190.1

RAFTER:

PLATES:

ICC-ES REPORTS.

B) DESIGN LOADS:

1. ALL ROUGH CARPENTRY WORK SHALL CONFORM TO THE

REQUIREMENTS OF NFPA "NATIONAL DESIGN SPECIFICATION OF WOOD

SPECIFICATIONS", DOC PS 1 "PRODUCT STANDARD FOR CONSTRUCTION

COMPLYING WITH PS 20, GRADED UNDER WWPA OR SPIB RULES:

CONSTRUCTION". TPI "DESIGN SPECIFICATIONS FOR LIGHT METAL

A) LUMBER - S4S, S-DRY, KD, OR S-GRN GRADE MARKED

#2 DOUGLAS FIR MIN TYPICAL

B) METAL FRAMING FASTENERS - ASTM A 153, HOT-DIP

GALVANIZED FASTENERS; EQUAL TO SIMPSON STRONG-TIE

C) PLYWOOD - APA RATED SHEATHING, COMPLYING TO PS 1.

D) LVL - LAMINATED VENEER LUMBER SHALL BE GRADE 2800

E) GLULAM BEAMS - COMBINATION 24F-V3 IN ACCORDANCE

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

3. EXTERIOR WALL AND ROOF SHEATHING SHALL BE 16" APA RATED

FIELD SUPPORTS UNLESS NOTED OTHERWIDE, PROVIDE SOLID

TILE ROOF, OR AS REQUIRED BY MANUFACTURER.

BLOCKING AT ALL UNSUPPORTED PANEL EDGES.

STANDARDS AND NDS SPECIFICATIONS.

25 PSF SNOW LIVE LOAD

PLACEMENT DRAWING.

 $2-2 \times 10$ #2, WITH 2 STUD SUPPORT.

SUPPORT, OR AS SPECIFIED, UNO.

WALLS AS NOTED ON PLANS.

BLOCKING AT ALL UNSUPPORTED PANEL EDGES; 4/8 GUN NAILS.

NOTE: ROOF SHEATHING SHALL BE \S " APA RATED SHEATHING FOR

4. INTERIOR SHEAR WALL SHEATHING WHERE NOTED SHALL BE 7 APA

RATED SHEATHING 24/0 EXTERIOR GLUED (MIN) FOR 16" OC STUD

5. ATTACH METAL FRAMING FASTENERS TO FRAMING MEMBERS WITH

MINIMUM NUMBER AND SIZE OF NAILS LISTED IN THE APPLICABLE

6. WOOD TRUSS SYSTEM; TRUSS JOIST SYSTEM AND GLULAM SYSTEM

10 PSF DEAD LOAD TOP CHORD (20 TILE)

10 PSF DEAD LOAD BOTTOM CHORD

A) DESIGN, FABRICATE, AND ERECT IN ACCORDANCE WITH BCSI

C) SUBMIT SHOP DRAWINGS, INCLUDING DESIGN CALCULATIONS,

7. DEFAULT HEADER SIZE NOT SPECIFIED SPANNING 8'-0" MAX SHALL BE

8. ALL HEADERS OVER 4'-0" SHALL HAVE DOUBLE TRIMMER @ EACH

9. SOLID BLOCKING BETWEEN JOISTS @ 36" OC FOR JOISTS PARALLEL

TO THE EXTERIOR FOUNDATION WALL, MIN. 48" OR 3 JOIST SPACES.

10. ALL FLUSH FRAMING @ HEADERS OR GIRDERS SHALL BE HANGERED

12. RATED CONSTRUCTION FOR PROJECTIONS INTO SETBACKS AS REQ'D.

SINGLE JOIST OFF LAYOUT. STRUCTURE BELOW LOAD-BEARING

13. DOUBLE JOIST BELOW PARALLEL NONBEARING WALLS ON LAYOUT

11. BLOCK BETWEEN JOISTS @ SUPPORTS OR OVER BEAMS.

MATERIAL STRESSES, GRADE AND SPECIES OF WOOD, AND

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

CONNECTORS COMPLYING WITH APPLICABLE ICC-ES REPORTS.

F-2.0E AND SHALL MEET THE REQUIREMENTS OF APPLICABLE

PLATE CONNECTED WOOD TRUSSES", APA "PLYWOOD DESIGN

AND INDUSTRIAL PLYWOOD", DOC PS 56 "STRUCTURAL GLUED

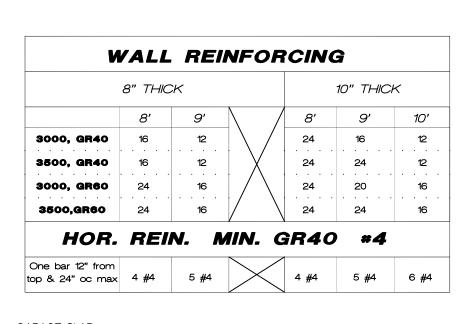
LAMINATED TIMBER", AND APPLICABLE SECTIONS OF THE

2. ROUGH CARPENTRY MATERIALS SHALL COMPLY WITH:

#2 DOUGLAS FIR

#2 DOUGLAS FIR

STUD GRADE



GARAGE SLAB: ~ 100 # /中' (LL) ` 67 # /中'(DL) $w_u = 1.2(DL) + 1.6(LL)$ = 240 # / φ' (TL)

 $M_{\text{max}} = \frac{W_1 * L^2}{14} - 27,206 \# \text{in}$ 40,000 * 0.2 $\phi M_N = *\phi A * f(d - a/2)$ = 0.9(0.2)(40000)(4-0.22/2)

= 28,008 # in > 27,206 (OKAY)

∴ Use #4 @ 12" OC EW

12'-6" (+/-) MODULE

-SIMPSON MAS

ALTERNATIVE

OPT. MUDSILL ANCHORAGE

-SIMPSON MAS

ALTERNATIVE TO J-BOLTS

4 4 4

FTG

SUS-SLAB

24" LAP, MIN

1-1/2" COVER

NTS

INSTALLATION

- 2 X LEDGE

SLAB @ WALL

CONCRETE OR CMU

SLAB ON FILL

REQ'D STRENGTH

3,000 psi

3,500 psi

3,500 psi

7 SACK MIX

CONC STRENGTH

· DRILL & SEAL AS REQ'D

- DOWELS @ 12" OC

 $\phi M = *\phi A * f(d - a/2)$ = 0.9(0.2)(40000)(4-0.22/2)= 28.008 # in > 25.951 (OKAY)

BASEMENT SLAB:

... Use #4 @ 12" OC EW 15'-6" (+/-) MODULE

40 # /中' (LL)

67 # /中' (DL)

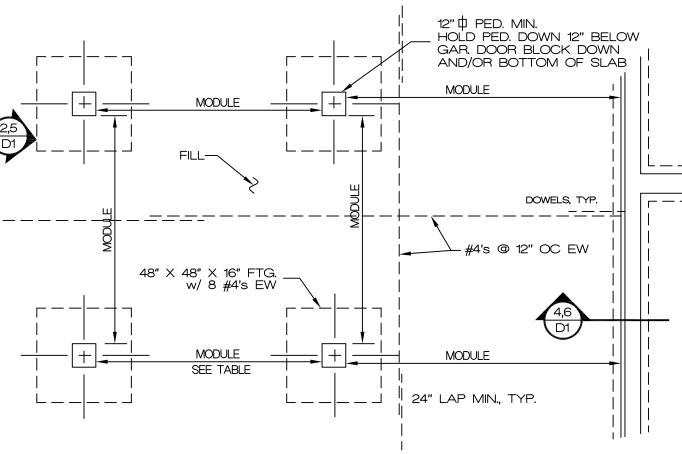
w = 1.2(DL) + 1.6(LL)

= 144 # / # (TL)

10 UFER GROUND NEAR PANEL DETAIL MAY VARY J-BOLTS @ 3' OC 7" EMBED GRADE DAMP-PROOFING VARIES PER R406.1 HORIZONTAL REINFORCEMENT FOUNDATION PER JOCOBO 60 PCF EQUIVALENT VERTICAL REINFORCEMENT, FLUID WEIGHT SOIL (5" EMBED (NO DOWEL OPTION) CENTER PER 403.1.3.5.3 **VARIES** (DOWEL OPTION) PER R405 8" WALL REIN. PER JOCOBO **VARIES** 9' MAX HEIGHT RETURN WALL-MIN COVER FTG REINFORCEMENT, 8" WALL $8" \times 16" \text{ w/}$ 2#4 CONTINUOUS WALL REINFORCEMENT Less than 10" OC equivalent

> 1/2" \$\psi X 6" Lag @ 16" OC,
> DBL EVERY OTHER ---(SEE SECTION VIEW) LUS28 OR LUS210 SHEATHING — -2X LEDGER 'I' JOISTS DETAIL MAY VARY -WALL BELOW <u>PLAN</u> -2 X 10 @ 16" OC

max Joist Span



STRUCTURAL SLAB ON FILI

DO NOT SAW CUT STRUCTURAL SLABS w/o APPROVAL VERIFY ALL STRUCTURAL SLAB DETAILS W/ ENGINEER DO NOT ISOLATE COLUMNS FROM STRUCTURAL SLABS

KENNETH SIDOROWICZ

ISSUE DATE

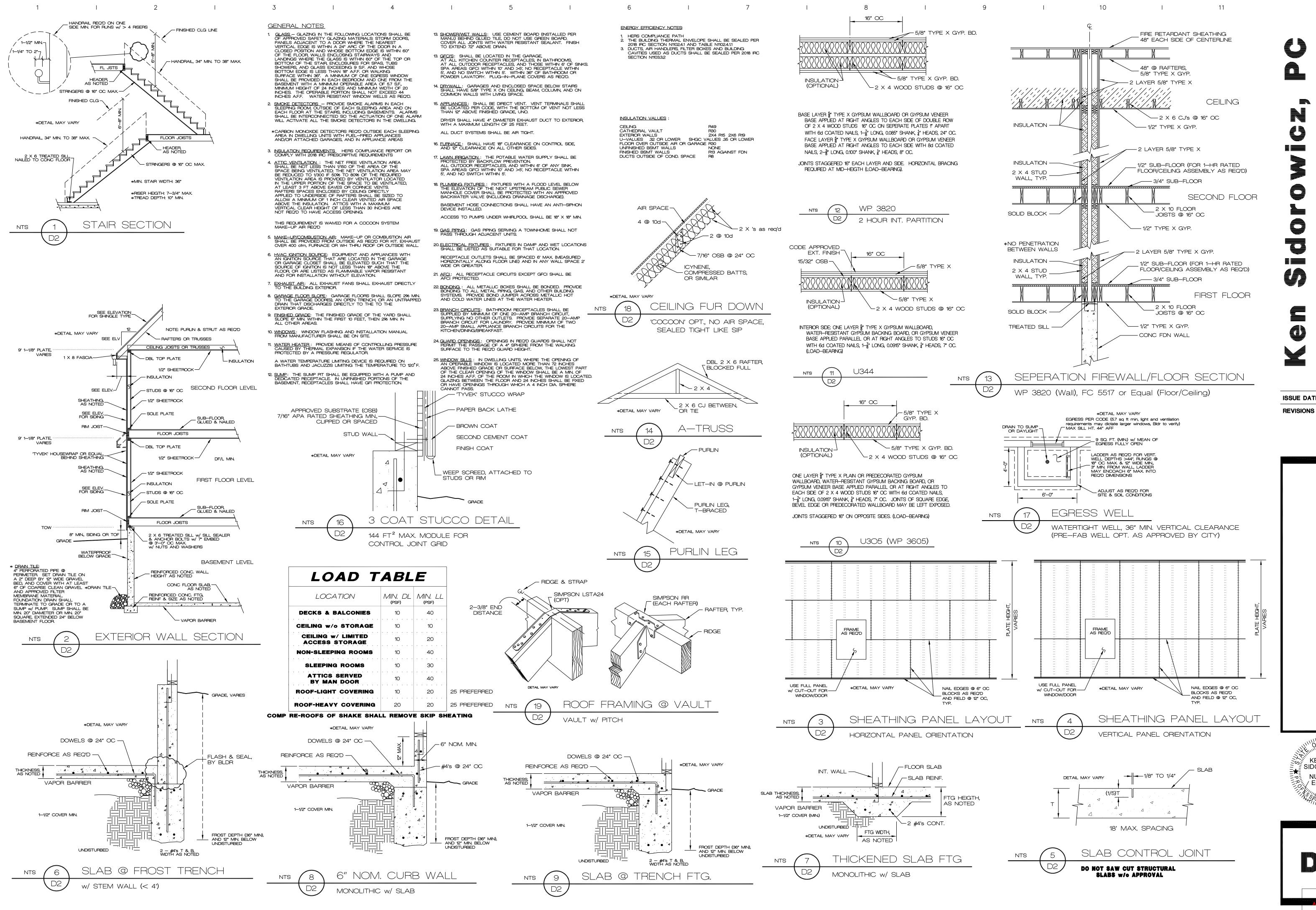
REVISIONS

11/2/15

RELEASE FO DEVELOPMENT SERVICES LEE'S SUMMIT, MISSOURI 03/08/2021

ECK @ CANTILEVER STRUCT. SLAB MODULE SPACING SLAB TYPE | MODULE SPACING BASEMENT GARAGE (MODULE ALSO APPLIES @ OVERDIG) L — — — -

NUMBER E-19986



ISSUE DATE

20

MINISTER MANAGE KENNETH 3 SIDOROWICZ NUMBER / E-19986 _--

RELEASE

DEVELOPMENT SERVICES LEE'S SUMMIT, MISSOURI 03/08/2021

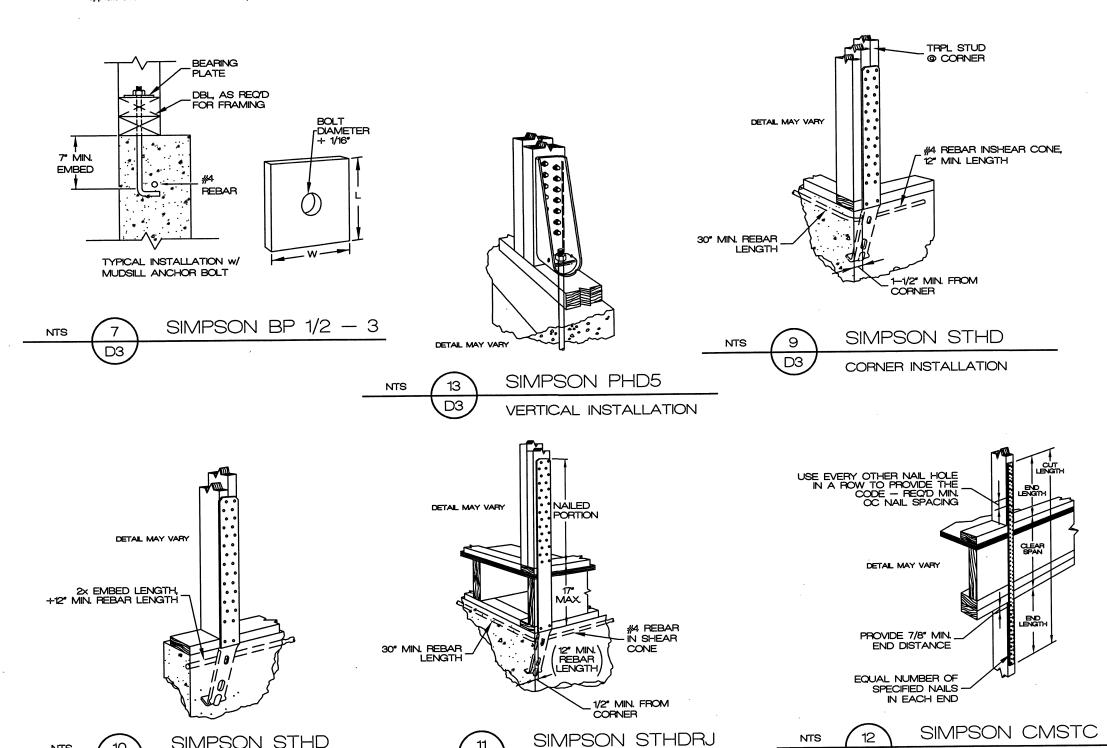
STAPLES NOT PERMITTED IN KCMO

Section December December Propose or Institute to Doc passe, to en rel. Section Sect		FAST	ENER SCHEDULE FO	OR STRUCTURAL	MEMBERS
1 Society Detivers page to referre to topy pages, see real 3-40 (3-47 x cuty) 2-40 (4-47 x cuty) 3 Celley place to page to real referre to topy and referr	Item [Description of building eler	ments		Spacing of fasteners
Control peats to challe for each Control peats to plants for peats in present inters, lace over peritions, face mail Control peats on a similar to peats inters, lace over peritions, face mail Control peats on the peats on a children or peats on the peats of the peats of the peats on the peats of the peats on the peats of the peats on the peats on the peats of the peats of the peats on the peats on the peats on the peats on the peats of the peats on the peats of the peats on the	of				
Foot retires to misse, valey or hip neffers: Top net	3	Ceiling joists to plate, toe nail Ceiling joists not attached to parallel ra Collar tie rafter, face nail or 1—1/4° × 2°	after, laps over partitions, face nail O ga. ridge strap	3-8d (2-1/2" × 0.113") 3-10d 3-10d (3" × 0.128")	2 toe nails side 1, 1 toe nail side 2 (note j)
	6 F	Roof rafters to ridge, valley or hip rafte	ars:		
Dutility to studin-floor net Dutility to study in the company and correct, face net Dutility to header, two pleases will 25 gapter Studin-Live header two pleases will be pleased two pleases will be pleased to please w		Face nail:		3-16d (3-1/2" x 0.135")	
Authority studenties fine properties and correct lose real 16d Co-1/2* x 0359 16° ca. song each dogs 10° continued headers, two pleases 16d Co-1/2* x 0359 16° ca. song each dogs 10° continued headers have pleases 16d Co-1/2* x 0359 16° ca. song each dogs 10° continued headers have pleases 16d Co-1/2* x 0359 16° ca. song each dogs 10° continued headers have to please, face neal 100 (3° x 0359) 26° ca. song each dogs 10° continued headers have to please, face neal 100 (3° x 0359) 26° ca. song each dogs 10° ca. song each each each each each each each each	all			10-1 (01 04001)	24" 00
10	8	Abutting studs at intersecting wall corr Built-up header, two pieces w/ 1/2° sp Continued header, two pieces	ners, face nail	16d (3-1/2" x 0.135") 16d (3-1/2" x 0.135") 16d (3-1/2" x 0.135") 4-8d (2-1/2" x 0.113")	12" o.c. 16" o.c. along each edge 16" o.c. along each edge —
Saud to soce plate, toe nat	13 [1 14 [1 15 [5]	Double top plates, face nail Double top plates, min. 48° offset of end joints, face nail in lapped area Sole plate to joist or blocking, face nail		10d (3" × 0.128") 8—16d (3—1/2" × 0.135") 16d (3—1/2" × 0.135")	24° o.c.
20 If brace to each study and plate, face nall 2 staples 1–344 280 (2-1/2*, 1157) 280 (2-	17 5	Stud to sole plate, toe nail Top or sole plate to stud, end nail Top plates, laps at corners and intersections, face nail		3-8d (2-1/2" × 0.113") or 2-16d (3-1/2" × 0.135") 2-16d (3-1/2" × 0.135") 2-10d (3" × 0.128")	
Satisfies 1-34* Satisfies		1" \times 6" sheathing to each bearing, fac	e nail	2 staples 1-3/4" 2-8d (2-1/2" x 0.113") 2 staples 1-3/4" 2-8d (2-1/2" x 0.113")	-
A				1	<u>-</u>
24 Jost to all or girder, toe nall 3-ed (2-1/2* × 0.157) 6* o.c. 25 Pim jost to top plates toe nall (roof applications also) 8d (2-1/2* × 0.157) 6* o.c. 26 Pim jost to top plates toe nall (roof applications also) 8d (2-1/2* × 0.157) 6* o.c. 27 T × 6* authfoor or less to each jost, face nall 2-ed (2-1/2* × 0.157) 7* o.c. 28 2* subfloor to jost of girder, blind and face nall 2-ed (0-1/2* × 0.155) 2 staples 1-3/4*		Wider than 1" x 8" sheathing to each	bearing, face nail	3 SOS SEPTIME 1 NO DATE (
Spacing of Fasteners Description of building panels, subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing 32 3/8" to 1/2" 8d common (2" × 0.113") nail (subfloor, wall) (note i) 8d common (2" × 0.113") nail (roof) 8d deformed (2" × 0.113") nail (roof) 8d deformed (2" × 0.113") nail or 9d deformed (2" × 0.113") na	24 25 26 27 28 29	Firm joist to top plate, toe nail (roof ap Firm joist or blocking to sill plate, toe r 1" x 6" subfloor or less to each joist, 1 2" subfloor to joist of girder, blind and 2" planks (plank & beam — floor and	face nail roof)	8d (2-1/2" x 0.113") 8d (2-1/2" x 0.113") 2-8d (2-1/2" x 0.113") 2 staples 1-3/4" 2-16d (3-1/2" x 0.135") 2-16d (3-1/2" x 0.135")	6° o.c.
Description of building materials Description of building materials Description of fastener (notes: b, c, e) Description of fastener (notes: b, c, e) (notes: c, e) (no	31	Ledger strip supporting joists or rafter		3-16d (3-1/2" × 0.135")	@ each joist or rafter
			• .	Edges (inches)	Intermediate supports (inches)
32 3/8" to 1/2" 6d common (2" x 0.113") nail (subfloor, wall) (note j) 8d common (2-1/2" x 0.131") nail (roof) 6 12 (note: g)	1.				1
32 3/8" to 1/2" Sch common (2—1/2" x 0.131") nail (roof) 33 19/32" to 1" Sch common nail (2—1/2" x 0.131") Sch common nail (2—1/2" x 0.131") Sch common nail (2—1/2" x 0.131") Sch common (3" x 0.148") nail or 34 1—1/8" to 1—1/4" 10d common (3" x 0.148") nail or 35 1/2" structural cellulosic fiberboard 1—1/2" galv. roofing nail, 7/16" crown or 36 25/32" structural cellulosic 1—3/4" galv. roofing nail, 7/16" crown or 37 1/2" gypsum sheathing (note d) 1—1/2" galv. roofing nail, 7/16" crown or 38 5/8" gypsum sheathing (note d) 1—1/2" galvanized roofing nail; staple galv, 39 1/4" and less Sch deformed (2" x 0.131") nail 39 3/4" and less Sch deformed (2" x 0.131") nail 30 1/2" gypsum sheathing (note d) 1—5/8" sorews, Type W or S 30 1/2" gypsum sheathing (note d) 1—3/4" galvanized roofing nait staple galv, 30 1/3" and less Sch deformed (2" x 0.120") nail or 30 1/4" and less Sch deformed (2" x 0.120") nail or 31 1/2" gypsum sheathing (note d) 1—1/2" galvanized roofing nait staple galv, 31 1/2" gypsum sheathing (note d) 1—3/4" galvanized roofing nait staple galv, 32 1/4" and less Sch deformed (2" x 0.120") nail or 33 1/4" and less Sch deformed (2" x 0.120") nail or 34 1/4" gypsum sheathing (note d) 1—3/4" galvanized roofing nait staple galv, 35 1/4" and less Sch deformed (2" x 0.120") nail or 36 1/2" sch deformed (2" x 0.131") nail 37 1/4" gypsum sheathing (note d) 1—3/4" galvanized roofing nait staple galv, 38 1/4" and less Sch deformed (2" x 0.120") nail or 39 1/4" and less Sch deformed (2" x 0.120") nail or 39 1/4" and less Sch deformed (2" x 0.120") nail or 39 1/4" and less Sch deformed (2" x 0.131") nail		and the same of th			12 (note: g)
35 1/2" structural cellulosic fiberboard 1—1/2" galv. roofing nail, 7/16" crown or sheathing 1" crown staple 16 ga, 1—1/4" long 3 6 25/32" structural cellulosic 1—3/4" galv. roofing nail, 7/16" crown or 3 6 6 7" crown staple 16 ga, 1—1/2" long 3 7 1/2" gypsum sheathing 1" crown staple 16 ga, 1—1/2" long 3 1/2" gypsum sheathing (note d) 1—1/2" galvanized roofing nail; staple galv. 7 7 7 1—1/2" long; 1—1/4" screws, Type W or S 5/8" gypsum sheathing (note d) 1—3/4" galvanized roofing nail; staple galv. 7 7 7 1—5/8" long; 1—5/8" screws, Type W or S 7 7 7 7 7 7 7 7 7	33	19/32° to 1°	8d common (2-1/2" x 0.131") naii (roof) 8d common naii (2-1/2" x 0.131") 10d common (3" x 0.148") naii or	6	12 (note: g)
1/2" structural cellulosic fiberboard 1-1/2" galv. roofing nail, 7/16" crown or sheathing 1" crown staple 16 ga, 1-1/4" long 3 6 25/32" structural cellulosic 1-3/4" galv. roofing nail, 7/16" crown or 3 6 6 7" crown staple 16 ga, 1-1/2" long 3 6 7" crown staple 16 ga, 1-1/2" long 3 7 1/2" gypsum sheathing (note d) 1-1/2" galvanized roofing nail; staple galv. 7 7 7 7 7 7 7 7 7	Other wall she	eathing (note h)			
1/2" gypsum sheathing (note d) 1-1/2" galvanized roofing nait; staple galv, 1-1/2" long; 1-1/4" screws, Type W or S 1-3/4" galvanized roofing nait; staple galv, 1-5/8" long; 1-5/8" screws, Type W or S /ood structural panels, combination subfloor underlayment to framing 39 3/4" and less 6d deformed (2" x 0.120") nail or 8d common (2-1/2" x 0.131") nail		sheathing 25/32" structural cellulosic	1" crown staple 16 ga., 1-1/4" long 1-3/4" galv. roofing nail, 7/16" crown or	3 	6
/ood structural panels, combination subfloor underlayment to framing 39 3/4* and less 6d deformed (2* x 0.120*) nail or 8d common (2-1/2* x 0.131*) nail		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 1-3/4" galvanized roofing nail; staple galv.,	7	7
39 3/4" and less 6d deformed (2" x 0.120") nail or 6 12 8d common (2-1/2" x 0.131") nail			4		
39 3/4* and less 6d deformed (2 x 0.120) hall or 8d common (2-1/2* x 0.131*) nail					19
40 7/8" to 1" 8d common (2-1/2" x 0.151) hall or 8d deformed (2-1/2" x 0.120") nail		3/4" and less 	8d common (2-1/2" x 0.131") nail 8d common (2-1/2" x 0.131") nail or	6	12

For St 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s; 1 ksi = 6.895 MPa

EDGE INSTALLATION

- a. All nails are smooth-common, box or deformed shanks 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 0.192 inch (20d common nail), 90 ksi (620 MPa) for shank diameters larger than 0.142 inch but not larger than 0.177 inch, and 100 ksi (689 MPa) for shank diameters of 0.142 inch or less.
- Staples are 16 gage wire and have a minimum 7/16-inch on diameter 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.
- Four-foot-by-8-foot or 4-foot-by-9-foot panels shall be applied vertically. e. Spacing of fasteners not included in this table shall be verified w/ EOR.
- f. For regions having basic wind speed of #10 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 endwall 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 4 inches on center to gable end wall framing. h. Gypsum sheathing shall conform to ASTMC 1396 and shall be installed in accordance with GA 253. Fiberboard sheathing shall conform to ASTM C 208.
- Spacing of fasteners on floor sheathing panel edges applies to panel edges supported by framing members and at all floor perimeters only. Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing members and at all roof plane perimeters. 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
- 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.



RIM JOIST INSTALLATION

NAIL TOP AND BOTTOM PLATES OF BP's TO JOISTS ABOVE AND BELOW W/ 3 @ 16d @ 16" OC ALL METHODS CONSTRUCTION DESCRIPTION SHEAR WALL SIMPSON CS16 STRAP NAILED TO STUDS SPACED METAL STRAP METHOD AT 16" OC MAXIMUM. STRAPS SHALL BE INSTALLED IN 'V' OR 'X' PATTERN AT THE BRACE LOCATION AND FOR THE SPECIFIED LENGTH, ALTERNATIVE TO *DBL JOIST MIN. BELOW BRACED WALL WHEN FRAMING BELOW IS PARALLEL TO WALL LINE, OR SOLID BLOCK @ 16" OC BELOW BRACED WALL WHEN FRAMING BELOW IS PERPENDICULAR TO WALL LINE. COLLECTOR OR DRAG STRUT OVER. 7/16" STRUCTURAL SHEATHING OVER STUDS SPACED 16" OC w/ 8d COMMON NAILS AT 6" OC EDGE AND 12" FIELD, HORIZONTAL JOINTS SHALL BE SHEATHING METHOD BLOCKED FOR ANCHORAGE. *DBL JOIST MIN. BELOW BRACED WALL WHEN FRAMING BELOW IS PARALLEL TO WALL LINE, OR SOLID BLOCK @ 16" OC BELOW BRACED WALL WHEN FRAMING BELOW IS PERPENDICULAR TO WALL LINE. 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. STHD10 & LSTA STRAPS GARAGE DOOR PORTAL PFH HEADER LENGTH AS SPECIFIED EXTENDED TO NEXT PORTALS CS-PF 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

CHAPTER 6 WALL CONSTRUCTION

FIGURE R602.10.6.2

METHOD PFH—PORTAL FRAME WITH HOLD-DOWNS

TYPICAL PORTAL FRAME CONSTRUCTION -

MIN. 1000 LB. HOLD-DOWN DEVICE (EMBEDDED INTO CONCRETE AND NAILED

SECTION

EXTENT OF HEADER WITH SINGLE PORTAL FRAME
(ONE BRACED WALL PANEL)

MIN. 3"x11%" NET HEADER STEEL HEADER PROHIBITED IF %" SPACER IS USED, PLACE ON BACK-SIDE OF HEADEL

- FASTEN SHEATHING TO HEADER WITH 8D COMMON OR GALVANIZED BOX NAILS IN 3" GRID PATTERN AS SHOWN

HEADER TO JACK-STUD STRAP PER TABLE —— R602, 10.6 A ON BOTH SIDES OF OPENING OPPOSITE SIDE OF SHEATHING

MIN. DOUBLE 214 FRAMING COVERED WITH MIN. No THICK WOOD STRUCTURAL PANEL SHEATHING WITH 8D COMMON OR GALVANIZED BOX NAILS AT 3' O.C. IN ALL FRAMING (STUDS, BLOCKING, AND DIELES TOTAL

IIN. LENGTH OF PANEL PER TABLE RE02.10.5

TOP AND BOTTOM OF FOOTING, LAP BARS 15"

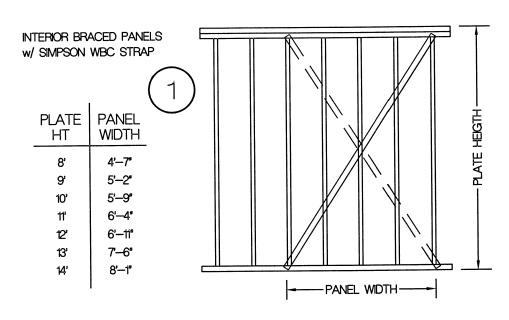
Mon har hope har har has has de the said of the sa MIN. FOOTING SIZE UNDER OPENING IS 12"x12". A TURNED DOWN SLAB SHALL BE PERMITTED AT DOOR OPENINGS.

FRONT ELEVATION

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

--- MIN. (1) % DIAMETER ANCHOR BOLT INSTALLED PER SECTION R403.1.6 - WITH 2"X 2" X716" PLATE WASHER

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



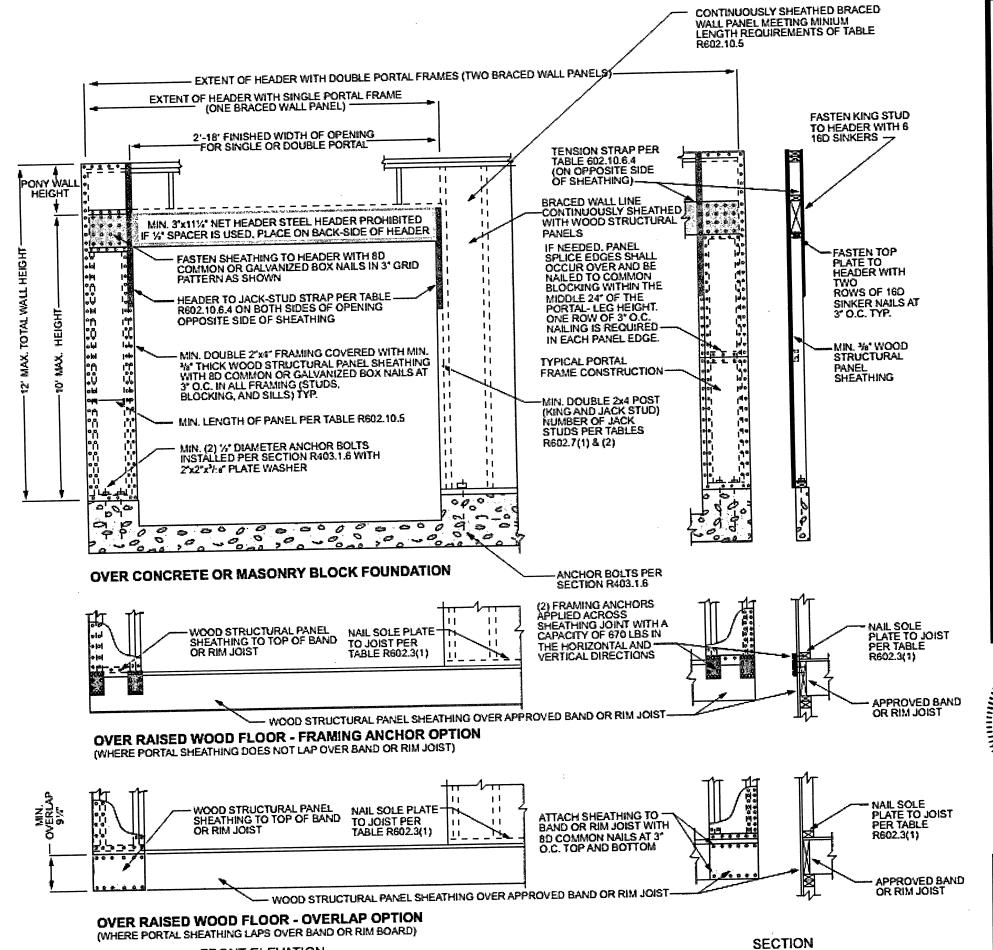
10

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

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CHAPTER 6 WALL CONSTRUCTION



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

FRONT ELEVATION

DIGITAL CODES

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

ISSUE DATE **REVISIONS** 0 TE OF MISS **~•**~ KENNETH SIDOROWICZ NUMBER E-19986

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2/14/21

DEVELOPMENT SERVICES LEE'S SUMMIT, MISSOURI 03/08/2021

RELEASE