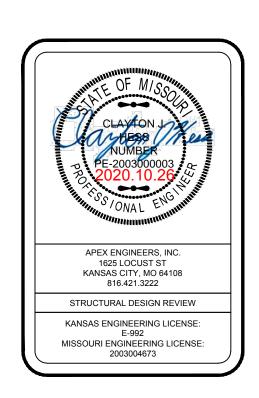


FRONT ELEVATION SCALE: 1/4" = 1'-0"

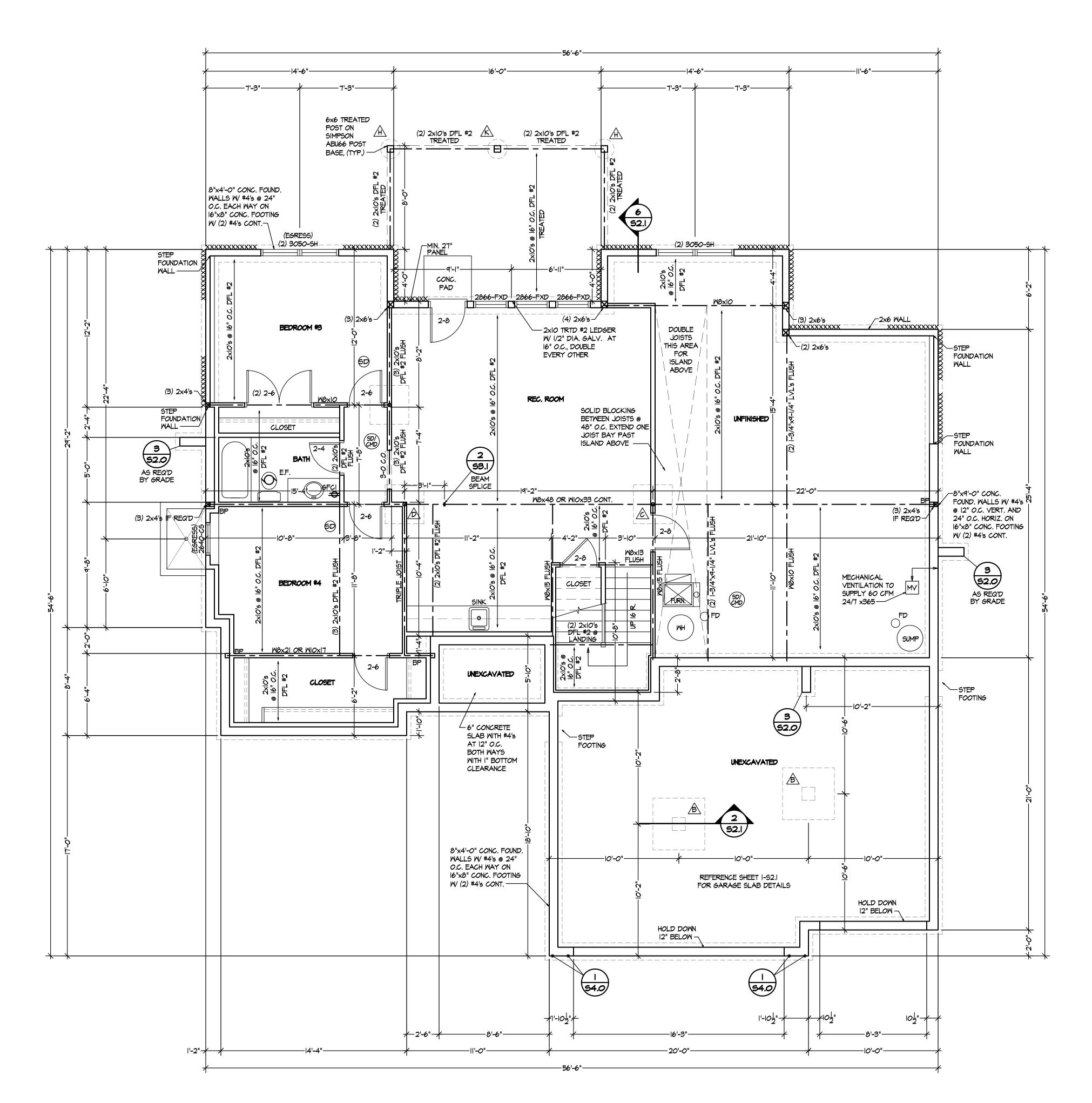


<u>DISCLAIMER</u> ACTUAL PLANS AND ELEVATIONS MAY VARY FROM ARCHITECTURAL DRAWINGS. DUE TO TERRAIN/BACKFILL PROCESS. FRONT ELEVATIONS ARE ARCHITECTURAL DRAWINGS AND MAY VARY DUE TO MATERIAL AVAILABILITY.

<u>NOTE:</u> PLANS DESIGNED PER IRC AS ADOPTED BY GOVERNING JURISDICTION

	New Mark Homes P.O. Box 12025 Parkville, Missouri 64152 Ph. (816) 969-9010
	Residential Builder Resource, LLC Custom Home Drafting & Design Service PO Box 613 Lee's Summit, MO 64063 Ph. (816) 472-5072
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Ζ	DRAWN BY: RBR CHECKED BY: CA DATE: 10-23-20 PROJ. #20-081





LOWER LEVEL PLAN SCALE: 1/4" = 1'-0"

BRACED WALL METHODOLOGY CONTINUOUS EXTERIOR SHEATHING PER WSP METHOD (BELOW) UNLESS OTHERWISE NOTED ON THE PLAN

XXXX EXTERIOR BRACED WALLS:

WSP METHOD:	WOOD STRUCTURAL PANEL SHEATHING WITH A THICKNESS NOT LESS THAN $\frac{3}{6}$ " WITH MINIMUM SPAN RATING OF 24/O FOR 16" OC STUD SPACING WITH 6d COMMON NAILS AT 6" OC EDGES AND 12" OC FIELD OR SHEATHING THICKNESS NOT LESS THAN $\frac{1}{6}$ " WITH MINIMUM SPAN RATING OF $\frac{24}{6}$ FOR 24" OC SPACING WITH 8d COMMON NAILS AT 6" OC EDGES AND 12" OC IN FIELD.
	(NOTE: FRAMING MEMBERS 16" OC MAXUNBLOCKED, AND WITH SHEATHING APPLIED DIRECTLY TO FRAMING MEMBERS)
//// <u>INT</u>	ERIOR BRACED WALLS (REF 2-54.0):
GB METHOD:	$\frac{1}{2}$ " MIN. GYPSUM BOARD OVER STUDS SPACED 24" MAX. FASTENED WITH No 6 - $\frac{1}{4}$ " TYPE 'W' OR 'S' DRYWALL SCREWS AT 7" OC EDGES AND FIELD (MIN. 4'-O" SECTION FOR BOTH SIDES.)
07	·

OR

LIB METHOD: IX4 WOOD FASTENED WITH (3) 8d COMMON NAILS OR SIMPSON / USP 16 GA. TYPE WB (OR EQUAL) STL. X-BRACE(S) AT 45° TO 60° ANGLES, MAXIMUM 16" O.C. STUD FASTENED PER MANUFACTURER'S SPECIFICATIONS.

///// = INTERIOR BRACED WALS (REF 2/54.0)

EC = END CONDTION (REF 2/54.1 FOR CONTINUOUS SHEATHED BRACED WALL END CONDTIONS

STRUCTURAL NOTES:

- ALL UNMARKED HEADERS MIN (2)#2-2×10

- ALL HEADERS AND BEAMS MIN #2 GRADE DF/L (OR EQ.)

- EXXXXXX = BEARING WALL

COLUMN & PIER PAD SCHEDULE (REE 5/S20)

COLUMN & FILK FAD SCHEDDEL (REF. 5/52.0)					
COLUMN MARK	PAD SIZE	REINFORCEMENT	COLUMN SIZE	COLUMN TYPE	
À	30" x 30" x 12"	(4) #4 BAR E.W.	3" NOMINAL		
B	36" × 36" × I2"	(4) #4 BAR E.W.	3" NOMINAL		
	42" × 42" × 12"	(5) #4 BAR E.W.	3" NOMINAL	NIF 40 PIPE 40 KSI MIN,	
\bigcirc	48" × 48" × 12"	(6) #4 BAR E.W.	3" NOMINAL	38 4	
Ē	54" × 54" × 16"	(8) #4 BAR E.W.	3½" NOMINAL	SCHED STATE DU III = B	
Ŕ	60" × 60" × 16"	(10) #4 BAR E.W.	3½" NOMINAL		

I. COLUMN & PAD SIZES SHOWN ARE FOR MAXIMUM COLUMN HEIGHT OF 10'-0", REQUIRES SEPARATE ENGR'D DESIGN IF GREATER THAN 10'-O" TALL.

2. COLUMN & PIER PAD SIZES SHOWN ARE BASED ON AN ASSUMED MINIMUM ALLOWABLE SOIL BEARING CAPACITY OF 2,000 PSF.

COLUMN & PIER SCHEDULE			
MARK	COLUMN SIZE	PIER DIA.	
à	6×6	12"	
	6×6	16"	
	6×6	18"	
Å	6×6	24"	
	6×6	28"	

I. ALL PIERS TO BEAR ON ORIGINAL, UNDISTURBED SOIL OF 2,000 PSF BEARING CAPACITY OR FILL COMPACTED AND TESTED TO CONFORM TO THE RECOMMENDATIONS OF A GEOTECHNICAL ENGINEER.

2. PIERS SHALL EXTEND BELOW THE FROST LINE: MIN. DEPTH OF 36" BELOW GRADE.

3. POST SHALL BE TREATED OR CEDAR WITH SIMPSON ABU66 POST BASE

DETAIL REFERENCES

(1) TYPICAL FOUNDATION WALL DETAIL

2 TYPICAL "UNRESTRAINED" 52.0 FOUNDATION WALL DETAIL

3 52.0 TYPICAL DEAD MAN DETAIL

4 52.0 FOUNDATION WALL JUMP DETAIL

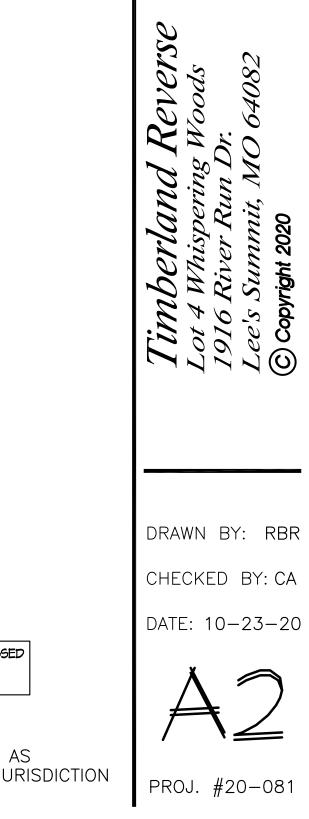
5 52.0 COLUMN PAD DETAIL

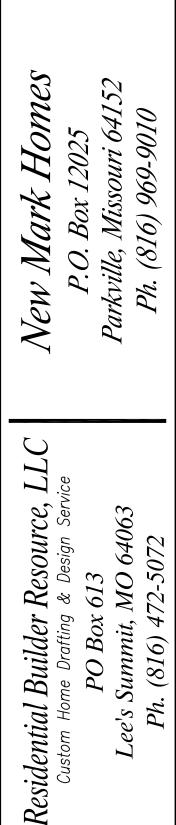
I TYPICAL STRUCTURAL GARAGE SLAB

 CLAYTON L CLAYTON L
APEX ENGINEERS, INC. 1625 LOCUST ST KANSAS CITY, MO 64108 816.421.3222
APEX ENGINEERS, INC. 1625 LOCUST ST KANSAS CITY, MO 64108

2 52.1 STRUCTURAL GARAGE SLAB PIER PAD DETAIL 3 STRUCTURAL GARAGE SLAB / S2.I WALL SECTION 6 52.1 TYPICAL OVERDIG DETAIL AT BASEMENT SLAB

- ALTERNATE BRACED WALL PANEL DETAIL
- APA NARROW WALL BRACING 54.0 METHOD WITHOUT HOLD-DOWNS
- COLUMN AND PIER PAD SCHEDULE (SHEET 52.0)



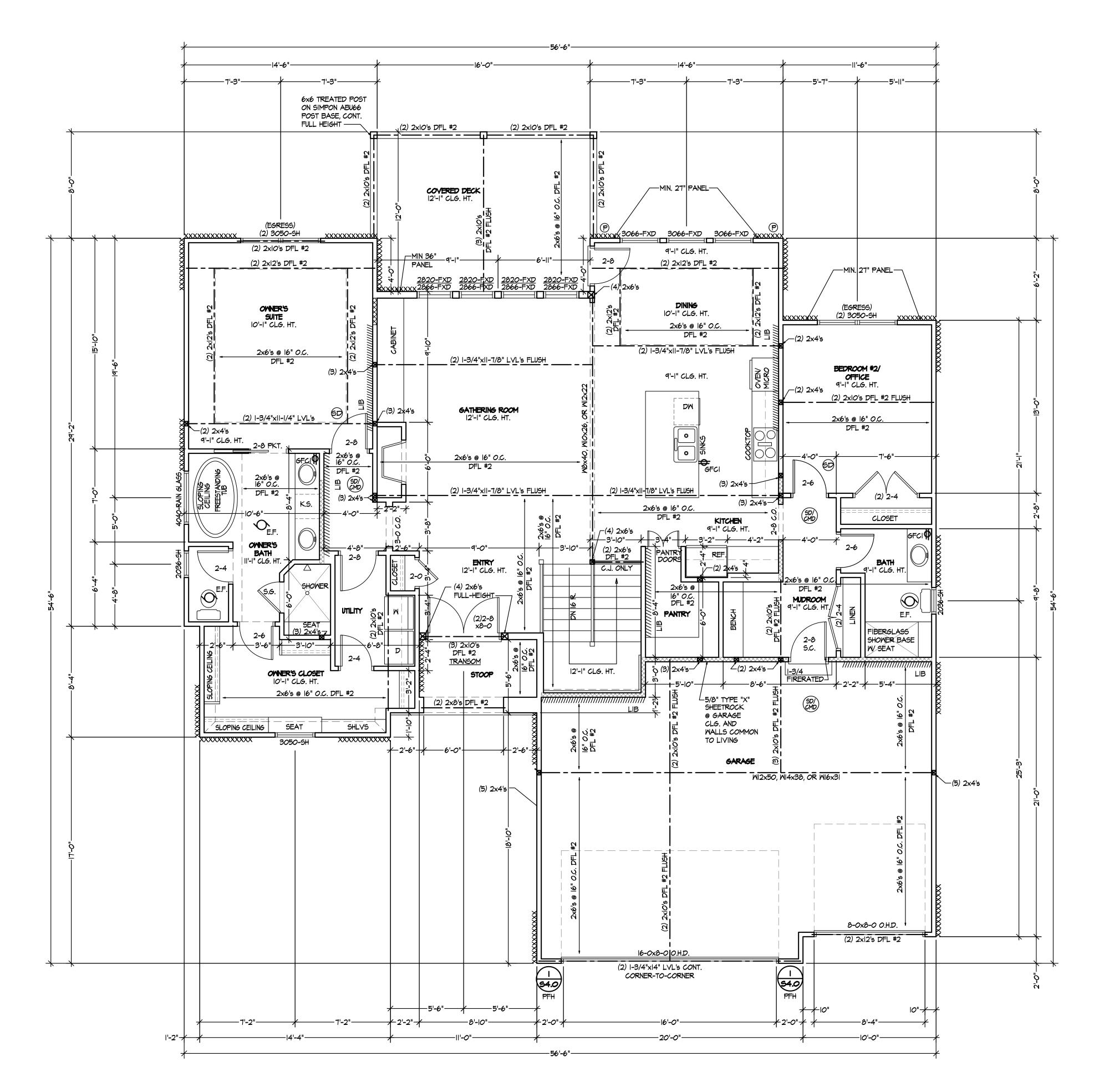


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ALL WINDOWS SIZES ARE EXPRESSED IN FEET AND INCHES TO THE UNIT SIZE.

XXXX = EXTERIOR BRACED WALLS





FIRST FLOOR PLAN

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

BRACED WALL METHODOLOGY CONTINUOUS EXTERIOR SHEATHING PER WSP METHOD (BELOW) UNLESS OTHERWISE NOTED ON THE PLAN

XXXX EXTERIOR BRACED WALLS:

MSP METHOL	WOOD STRUCTURAL PANEL SHEATHING WITH A THICKNESS NOT LESS THAN ³ / ₈ " WITH MINIMUM SPAN RATING OF 24/O FOR 16" OC STUD SPACING WITH 6d COMMON NAILS AT 6" OC EDGES AND 12" OC FIELD OR SHEATHING THICKNESS NOT LESS THAN ¹ / ₆ " WITH MINIMUM SPAN RATING OF ²⁴ / ₆ FOR 24" OC SPACING WITH 8d COMMON NAILS AT 6" OC EDGES AND 12" OC IN FIELD. (NOTE: FRAMING MEMBERS 16" OC MAXIMELOCKED, AND WITH SHEATHING APPLIED DIRECTLY TO FRAMING MEMBERS)
////	NTERIOR BRACED WALLS (REF 2-54.0):

//// INTERIOR DRACED MALLS (REF 2-34.0):

GB METHOD: 1/2" MIN. GYPSUM BOARD OVER STUDS SPACED 24" MAX. FASTENED WITH NO 6 - 1/4" TYPE 'W' OR 'S' DRYWALL SCREWS AT 7" OC EDGES AND FIELD (MIN. 4'-O" SECTION FOR BOTH SIDES.) OR

LIB METHOD: IX4 WOOD FASTENED WITH (3) 8d COMMON NAILS OR SIMPSON / USP 16 GA. TYPE WB (OR EQUAL) STL. X-BRACE(S) AT 45° TO 60° ANGLES, MAXIMUM 16" O.C. STUD FASTENED PER MANUFACTURER'S SPECIFICATIONS.

///// = INTERIOR BRACED WALS (REF 2/54.0)

EC = END CONDTION (REF 2/S4.1 FOR CONTINUOUS SHEATHED BRACED WALL END CONDTIONS

STRUCTURAL NOTES:

- ALL UNMARKED HEADERS MIN (2)#2-2×10

- ALL HEADERS AND BEAMS MIN #2 GRADE DF/L (OR EQ.)



FIRST FLOOR LOWER LEVEL TOTAL 1,757 SQ. FT. 1,003 SQ. FT. UNFINISHED BASEMENT COVERED DECK

GARAGE

2,760 SQ. FT. 711 SQ. FT. 200 SQ. FT.

638 SQ. FT.

*ALL WINDOWS TO HAVE U = 0.35 OR LESS.

ALL WINDOWS SIZES ARE EXPRESSED IN FEET AND INCHES TO THE UNIT SIZE.

NOTE: PLANS DESIGNED PER IRC AS ADOPTED BY GOVERNING JURISDICTION

Timberland ReverseResidential Builder Resource, LLCLot 4 Whispering WoodsCustom Home Drafting & Design ServiceLot 4 Whispering WoodsPO Box 6131916 River Run Dr.PO Box 613Lee's Summit, MO 64082Ph. (816) 472-5072Copyright 2020Ph. (816) 472-5072	CELC New Mark Homes	1	P.O. Box 12020	Parkville, Missouri 64152	Ph. (816) 969-9010
nd Reverse ring Woods un Dr. t, MO 64082	Residential Builder Resource	Custom Home Drafting & Design Se	PO Box 613	Lee's Summit. MO 64063	Ph. (816) 472-5072
nd Reverse ring Woods un Dr. t, MO 64082					
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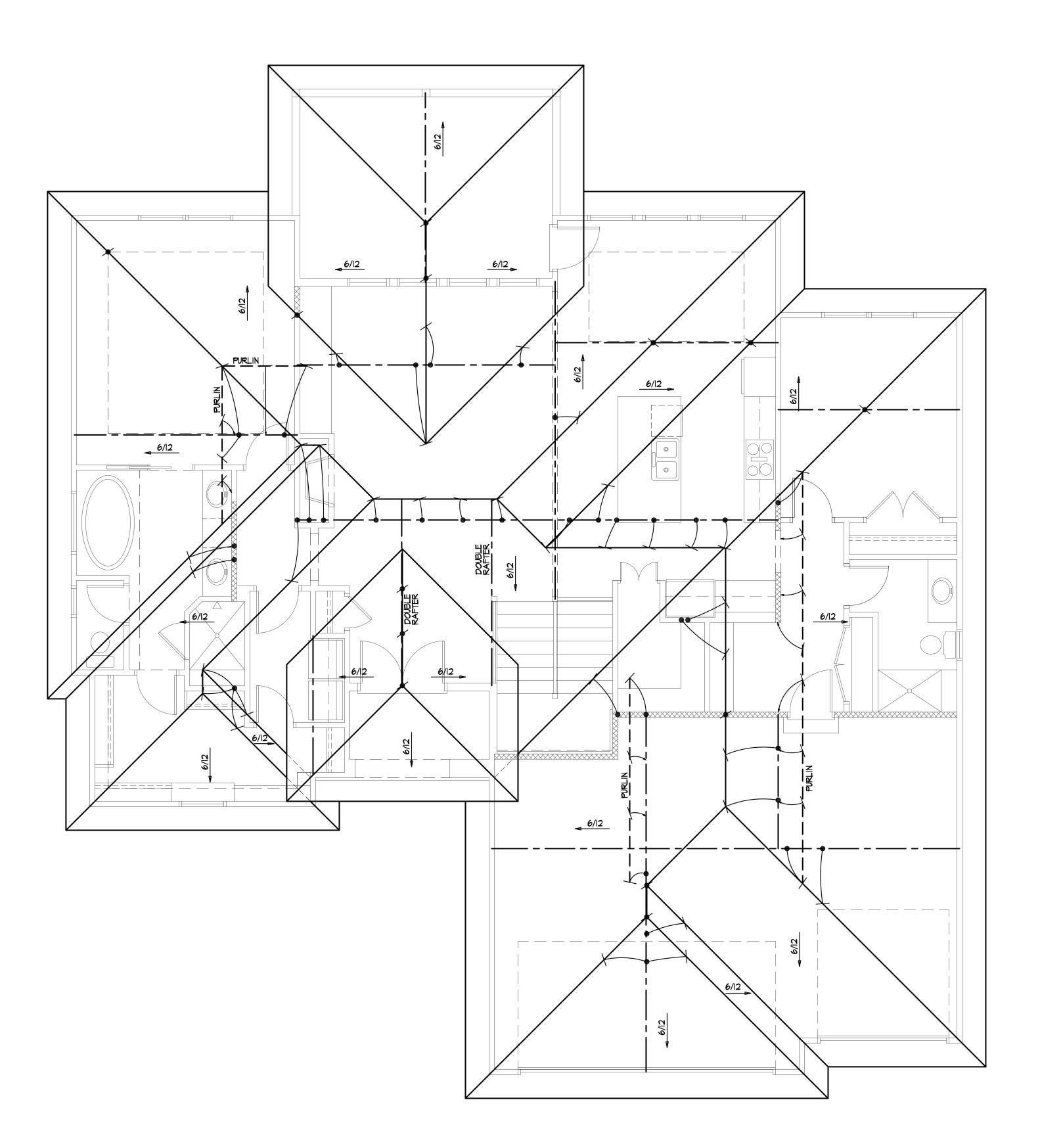
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PROJ. #20-081

XXXX = EXTERIOR BRACED WALLS

RELEASE FOR CONSTRUCTION AS NOTED ON PLANS REVIEW DEVELOPMENT SERVICES LEE'S SUMMIT, MISSOURI 10/26/2020



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

ROOF FRAMING NOTES

ROOF DESIGNED FOR LIGHT ROOF COVERING 30psf TOTAL LOAD [l0psf DL, 20psf LL (SL)]

ROOF SYSTEM IS DESIGNED TO MEET REQUIREMENTS OF

IRC 802

*RAFTERS (HEM-FIR, DOUG-FIR, OR EQUAL): SEE SPAN CHARTS BELOW

CODE MINIMUM

RAFTERS	SPACING	MAX HORIZONTAL CLEARSPAN
#2-2x6	AT 24" OC	'-7"
#2-2×6	AT 16" OC	4'-2"
#2-2x8	AT 24" OC	4'-8"
#2-2×8	AT 16" OC	7'- "
#2-2x10	AT 24" OC	17'-10"
#2-2x10	AT 16" OC	2 '- "

NOTE: CODE MINIMUM ALLOWS FOR A RAFTER DEFLECTION OF L/180 TOTAL LOAD

HIGHER PERFORMANCE

RAFTERS	SPACING	MAX HORIZONTAL CLEARSPAN
#2-2×6	AT 24" OC	8'-6"
#2-2×6	AT 16" OC	9'-9"
#2-2x8	AT 24" OC	'-3"
#2-2x8	AT 16" OC	12'-9"
#2-2×I0	AT 24" OC	14'-3"
#2-2×I0	AT 16" OC	16'-3"

APEX ENGINEERS, INC. RECOMMENDED DEFLECTION = L/360 LIVE LOAD, L/240 TOTAL LOAD

*RIDGE BOARDS ARE (UNLESS OTHERWISE NOTED)

#2-2x10 UP TO 9:12 PITCH

#2-2x12 OVER 9:12 PITCH

- *ALL HIPS AND VALLEYS ARE (UNLESS OTHERWISE NOTED) #2-2x10 UP TO 9:12 PITCH
- #2-2x12 OVER 9:12 PITCH
- *PURLINS ARE 2×6 MIN
- PURLIN STRUTS ARE AT 4'-O" OC - PURLIN STRUTS SHALL BE INSTALLED AT NOT LESS THAN A
- 45 DEGREE ANGLE WITH THE HORIZONTAL
- ALL PURLIN STRUTS SHALL HAVE A MAX UNBRACED LENGTH *O*F 8'-0"
- PURLIN STRUTS SHALL BE CONSTRUCTED IN A "T" CONFIGURATION AND PER THE FOLLOWING CHART:

CONFIGURATION AND FER THE FOLLOWING CHART:		
PURLIN STRUT	MAX PURLIN STRUT LENGTH	
(2)2×4	8'-0"	
(1)2x4 AND (1)2x6	12'-0"	
(1)2×6 AND (1)2×8	20'-0"	
(2)2x6 AND (1)2x8	30'-0"	
CONSULT ARCH ENGR	>30'-0"	

*EACH END OF STRUT SHALL BE FASTENED WITH MIN (3)8d OR (2)16d NAILS

- *RIDGE BRACERS ARE SAME AS PURLIN BRACES-SPACING, SIZE, CONFIGURATION, AND INSTALLATION (SEE PURLIN BRACE NOTES ABOVE)
- *HIP AND VALLEY BRACES ARE THE SAME AS PURLINS SIZE, CONFIGURATION, AND INSTALLATION (SEE PURLIN BRACE NOTES ABOVE)

> = ROOF BRACE/STRUT (PER CHART) -SLASH IS TOP END OF BRACE

-CIRCLE IS BOTTOM END OF BRACE

harphi = purlin struts at 48" oc (per chart) U.N.O. -SLASH IS TOP END OF BRACE -ARROW IS BEARING LOCATION

---- DENOTES PURLIN

DENOTES BEARING WALL ----- DENOTES BEARING STRUCTURE

STRUCTURAL NOTES: - ALL UNMARKED HEADERS MIN (2)#2-2x10 - ALL HEADERS AND BEAMS MIN #2 GRADE DF/L (OR EQ.) - XXXXXX = BEARING WALL

THIS IS AN ENGINEERED ROOF STRUCTURE DESIGNED FOR COMPLIANCE WITH IRC 802.3, BUILD AS SHOWN WITH NO DEVIATIONS. ALL HIPS ARE DESIGNED TO BE **||2**.

CONTROLLED BY BENDING. SHEAR AT BEARING WITH MIN $5\frac{1}{2}$ " **DEPTH DOES NOT CONTROL** DESIGN. FOR VALLEYS REF 4/S3.2



New. Parkvii Ph. LLC l Builder Resource, J 64063 072 ; 613 MO 6 :72-50; PO Box (Summit, 1 1. (816) 47 Residential e's Ph

P.O. Box 12025 ville, Missouri 64152 h. (816) 969-9010

Homes

Mark.

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PROJ. #20-081

SHEAT	HING AND FRAMING	B FASTENING SCHEDULE
BUILDING COMPONENT	MATERIAL	FASTENING
/	7/16" PLYWOOD	16 GA x 1-3/4" STAPLES AT 3" OC EDGES AND 6" OC IN FIELD
ROOF SHEATHING ¹	1x4 #3 FURRING	1/2" CROWN STAPLES
		8d COMMON NAILS AT 6" OC EDGES
	3/4" T&G YELLOW PINE PLYWOOD	AND 12" OC IN THE FIELD 14 GA x 2" STAPLES AT 4" OC
FLOOR SHEATHING ¹	APPLIED PERPENDICULAR TO	EDGES AND 8" OC IN THE FIELD
	JOISTS AND ENDS STAGGERED	12.5 GA x 1-1/2" RING OR SCREW SHANK NAILS AT 6" OC EDGES
		AND 8" OC IN THE FIELD
		7" OC NAILED / 12" OC SCREWED WITH 13 GA, 1-3/8" LONG, 19/64" HEAD; 0.098
CEILING COVERING ¹	1/2" GYPSUM SHEATHING	DIA, 1-1/4" LONG, ANGRINGED; 5d
		COOLER NAIL, 0.086 DIA, 1-5/8" LONG, 15/64" HEAD; OR GYP BD NAIL, 0.086 DIA,
		1-5/8" LONG, 9/32" HEAD
INTERIOR WALL		6d COMMON NAILS; 1-5/8" GALVANIZED STAPLES; 1-1/4"
COVERING ¹	1/2" GYPSUM SHEATHING	SCREWS, TYPE W OR S- AT 4" OC
EXTERIOR WALL		EDGES AND 8" OC IN THE FIELD 8d COMMON NAILS AT 6" OC EDGES
SHEATHING	MIN 3/8" APA RATED SHEATHING	AND 12" OC IN THE FIELD
		*TOE NAIL RIM JOIST TO SILL OR TOP 8d COMMON AT 6" OC; 3"x0.131" AT 6" OC; 3"x0.131"
	*SUPPORTING 2 FLOORS, ROOF, AND CEILING OR LESS.	PLATE: AT 6" OC *TOE NAIL STUD TO TOP AND SOLE PLATE: (4) 8d COMMON; (4) 3"x0.131"
	*HEIGHT: 10'-0" OR LESS	*END NAL TOP AND SOLE PLATE TO STUD: (2) 16d COMMON; (3) 3"A0.131" *FACE NAIL BUILT-UP CORNER STUDS: 16d AT 24" OC; 3"A0.131" AT 16"
	SIZE: NOM 2x4 (NOM 2x6 WHEN SUPPORTING 2 FLOORS, CEILING,	"FACE NAIL BUILT-UP CORNER STUDS (AT BRACED WALL PANELS): 16d COMMON NAILS AT 16" OC; 3"x0.131" AT 12" OC
	AND ROOF)	*FACE NAIL JACK STUDS/TRIMMERS SUPPORTING HEADERS WITH: 10d NAILS AT 6" OC
CONVENTIONAL WOOD FRAMED WALLS	*SPECIES: DOUG-FIR, HEM-FIR, SOUTH PINE, SPRUCE-PINE-FIR	*FACE NAIL DBL TOP PLATE: 16d COMMON AT 16" OC; 3"x0.131" AT 12" OC; 3"x0.128" AT 12" OC
	*MAXIMUM SPACING 16" OC	*DBL TOP PLATES WITH MIN 48" OFFSET OF EACH. FACE NAIL LAPPED AREA WITH: (8) 16d COMMON; (12) 3"x0.131"; (12) 3"x0.128"
	*STUDS 10' LENGTH OR LESS	*FACE NAIL DBL TOP PLATES AT LAPPED CORNERS AND INTERSECTIONS WITH: (2) 16d COMMON; (3) 3"x0.131"; (3) 3"x0.128"
	SHALL BE #3 STANDARD, OR STUD	*FACE NAIL SOLE PLATE TO FRAMING SYSTEM WITH: 16d COMMON AT 16" OC; 3"x0.131" AT 12" OC
	*STUDS OVER 10' LENGTH SHALL	*TOENAIL BRIDGING TO JOIST, EACH END: (2) 8d COMMON; (2) 3"x0.131"; (3) 3"x0.128" *FACE NAIL LEDGER STRIPS SUPPORTING (3) 16d COMMON; (4) 3"x0.131"; (4) 3"x0.128" (3) 16d COMMON; (4) 3"x0.131"; (4) 3"x0.128"
	BE MIN #2 GRADE	(3) TOU CONNIVION, (4) 3 XU. 131 , (4) 3 XU. 120
		*TOE NAIL HEADERS TO WALL STUDS WITH (4) 8d
CONVENTIONAL WOOD HEADER FRAMING	PER PLAN	NAILS AT EACH END. *FACE NAIL DOUBLE PIECE HEADERS WITH 16d
HEADERTHAMING		NAILS AT 16" CENTERS ALONG EACH EDGE.
RAFTER TIES ²	MIN 2x4 MEMBERS AT EACH RAFTER	REF TABLE R802.5.2
		FACENAIL TO RAFTERS IN UPPER 1/3 OF
COLLAR TIES	MIN 1x4 MEMBERS AT 48" OC	ATTIC SPACE WITH (3) 10d NAILS AT EACH
		AR TO JOISTS AND ENDS STAGGERED. DGE HAS BEEN PROVIDED AND ADEQUATELY
	ULTED ROOM). SUCH SHALL BE NOTED	
BUILDING COMPONENT	FASTEN TO	FASTEN WITH
	TO RIDGE/VALLEY/HIP RAFTERS	TOENAIL WITH (4) 16d
RAFTERS	TO PLATE	ENDNAIL WITH (3) 16d TOENAIL WITH (2) 16d
	TO TOP PLATE	TOENAIL WITH (3) 8d AT EACH END
CEILING JOISTS		DISTS RUN PARALLEL TO RAFTERS O RAFTERS WITH (3) 10d MIN
	TO SILL OR GIRDER	TOENAL WITH: (3) 8d COMMON; (3) 3"x0.131"; (4) 3"x0.128
FLOOR JOISTS	TO RIM JOIST	ENDNAIL WITH: (3) 16d COMMON; (4) 3"x0.131"; (4) 3"x0.12
BRACED WALL PANELS	TO FRAMING MEMBER	SOLE PL, 16" OC WITH: (3) 16d COMMON; (4) 3"x0.131" TOP PL, 6" OC WITH: 8d COMMON; 3"x0.131"
PERP TO FRAMING MEMBERS ABOVE/BELOW:	TO FRAMING AND	SOLE PL, 16" OC WITH: (3) 16d COMMON; (4) 3"x0.131"
PARALLEL TO FRAMING	BLOCKING AT 16" OC	AND AT EACH BLOCK: (3) 16d COMMON; (4) 3"x0.131" TOP PL, 6" OC WITH: 8d COMMON; 3"x0.131"
MEMBERS ABOVE/BELOW:		AND AT EACH BLOCK: (3) 8d COMMON; 3"x0.131"

RELEASE FOR CONSTRUCTION AS NOTED ON PLANS REVIEV DEVELOPMENT SERVICES

LEE'S SUMMIT, MISSOURI 10/26/2020

> NOTE: MEMBER THICKNESS AND FASTENING LISTED IN THIS SCHEDULE ARE MINIMUM IRC REQUIREMENTS. SPECIFIC PROJECT REQUIREMENTS NOTED WITHIN THE STRUCTURAL OR ARCHITECTURAL DRAWINGS, IF REQUIRED BY APEX ENGINEERS DESIGN NEEDING TO BE MORE STRINGENT, SHALL BE FOLLOWED.

ENERGY REQUIREMENTS

1. LIGHTING FIXTURES PENETRATING THE THERMAL ENVELOPE SHALL BE IC-RATED, LEAKAGE RATED, AND SEALED TO THE GYPSUM WALLBOARD AS REQUIRED PER N1102.4.5. 2. PROGRAMMABLE THERMOSTATS SHALL BE INSTALLED AS REQUIRED PER N1103 1 1 3. AIR HANDLERS SHALL BE RATED FOR MAXIMUM 2% AIR LEAKAGE RATE PER

N1103.3.2.1. 4. BUILDING FRAMING CAVITIES SHALL NOT BE USED AS DUCTS OR

PLENUMBS PER N1103.3.5 5. HOT WATER PIPES SHALL BE INSULATED AS REQUIRED PER N1103.4. 6. ALL EXHAUST FANS SHALL TERMINATE TO THE BUILDING EXTERIOR AS REQUIRED PER M1501.1. 7. MAKEUP AIR SYSTEMS SHALL BE INSTALLED FOR KITCHEN EXHAUST HOODS THAT EXCEED 400 CFM AS REQUIRED PER M1503.6.

8. AN AIR HANDLING SYSTEM SHALL NOT SERVE BOTH THE LIVING SPACE AND THE GARAGE PER M1601.6.

ENERGY CONSERVATION

THE ENERGY EFFICIENCY OF THE DWELLING SHALL COMPLY WITH ONE OF THE FOLLOWING TABLES (WHERE THERE ARE DISCREPANCIES BETWEEN THIS TABLE AND THE PLANS, THE MOST RESTRICTIVE SHALL APPLY). IF TABLE 1 IS NOT COMPLETED AND ACCOMPANIED BY RESCHECK CALCULATIONS, THEN TABLE 2 SHALL BE APPLIED.
TABLE 1 - ResCheck COMPLIANCE SOFTWARE (FILL IN APPLICABLE)
 ALUES FROM ResCheck CALCS)

VALUES FROM ResCheck CALCS.)	
BUILDING ELEMENT	MIN VALUE
WALLS - FRAMED	R-
WALLS - BASEMENT	R-
FLOORS - UNCONDITIONED SPACE	R-
FLOORS - OVER OUTSIDE AIR	R-
FLOORS - CRAWL SPACE	R-
SLAB - PERIMETER	R-
CEILING - FLAT	R-
CEILING - CATHEDRAL	R-
DOORS - GLASS	U-
DOORS - SOLID	U-
WINDOWS - OPERABLE	U-
WINDOWS - FIXED	U-
WINDOWS - OTHER	U-
FURNACE	AFUE-
AIR CONDITIONER	SEER-
NOTE: FOR USE OF TABLE 1 A ResCheck COMP	LIANCE FORM MUST BE
SUBMITTED WITH PLANS.	
TABLE 2 -PRESCRIPTIVE ENVELOPE (MIN PRES	SCRIPTIVE APPROACH
ACCEPTABLE FOR ANY DWELLING.)	
BUILDING ELEMENT	
CEILING - FLAT	R-49
CEILING - CATHEDRAL**	R-30
CEILING - CATHEDRAL	R-38
FLOORS - UNCONDITIONED SPACED	R-19
FLOORS - OVER OUTSIDE AIR	R-30
WALLS - BASEMENT	R-10 (CONT) OR R-13 (CAVITY)
CONCRETE SLAB ON GRADE	R-10 (FOR 2FT)
SKYLIGHTS	U=0.55
WALLS - EXTERIOR (2x4)	R-13 (CAVITY) + R-5 (CONT)
WALLS - EXTERIOR (2x6)	R-20
WALLS - CRAWL SPACE	R-19
GLAZING*	U<=0.32
GLAZING*	SHGF<=0.40
NOTE:	
TABLE 2 PER IRC TABLE N1102.1.2	

*DEFAULT U-FACTOR FOR DOUBLE PANE. ARGON FILLED LOW-E TREATMENT IS U=0.35

**LIMITED TO AREAS LESS THAN 500 SQ-FT OR 20% OF CEILING AREA

DEFERRED SUBMITTALS

1. THE ARCHITECT OR ENGINEER OF RECORD SHALL LIST THE DEFERRED SUBMITTALS ON THE PLANS FOR REVIEW BY THE BUILDING OFFICIAL. DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT OR ENGINEER OF RECORD WHO SHALL REVIEW THEM AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND FOUND TO BE IN THE GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL. DEFERRED SUBMITTALS ARE DEFINED AS THOSE PORTIONS OF THE DESIGN THAT ARE NOT SUBMITTED AT THE TIME OF THE APPLICATION AND THAT ARE TO BE SUBMITTED TO THE BUILDING OFFICIAL WITH A SPECIFIED PERIOD. DEFERRAL OF ANY SUBMITTAL ITEMS SHALL HAVE THE PRIOR APPROVAL OF THE BUILDING OFFICIAL.

2. DEFERRED SUBMITTAL ITEMS (WHEN APPLICABLE):

- A. TRUSSES B. I-JOISTS
- C. GUARDRAILS AND HANDRAILS
- D. STEEL FABRICATED STAIRS
- E. PRE-MANUFACTURED CANOPIES AND AWNINGS
- F. PRECAST HOLLOW CORE SLABS
- G. GROUND IMPROVEMENT AND/OR STRUCTURAL FOUNDATION SOLUTIONS (SUCH AS DRILLED PIERS)

CONCRETE

CONCRETE SHALL BE AIR ENTRAINED WITH A MINIMUM COMPRESSIVE STRENGTH OF 28 DAYS OF 2,500 PSI FOR BASEMENT AND INTERIOR FLOOR SLABS, 3,000 PSI FOR BASEMENT AND FOUNDATION WALLS. AND 3,500 FOR PORCHES, CARPORTS, AND GARAGE FLOOR SLABS.

GLAZING

GLAZING IN HAZARDOUS LOCATIONS AS IDENTIFIED IN IRC SECTION R308.4 SHALL BE OF APPROVED SAFETY GLAZING MATERIALS: GLASS IN STORM DOORS; INDIVIDUAL FIXED OR OPENABLE PANELS ADJACENT TO A DOOR WHERE THE NEAREST VERTICAL EDGE IS WITHIN A 24" ARCH OF THE DOOR IN A CLOSED POSITION AND WHOSE BOTTOM EDGE IS WITHIN 60" OF THE FLOOR: WALLS ENCLOSING STAIRWAYS AND LANDINGS WHERE THE GLAZING IS WITHIN 60" OF THE TOP OR BOTTOM OF THE STAIR; ENCLOSURES FOR SPAS, TUBS, SHOWERS, AND WHIRLPOOLS; GLAZING IN FIXED OR OPENABLE PANELS EXCEEDING 9 SQUARE FEET AND WHOSE BOTTOM EDGE IS LESS THAN 18" ABOVE THE FLOOR OR WALKING SURFACE WITHIN 36".

EMERGENCY EGRESS AND RESCUE

1. PROVIDE ONE WINDOW FROM EACH BEDROOM THAT HAS A MINIMUM OPENABLE AREA OF 5.7 SQUARE FEET WITH A MINIMUM OPENABLE HEIGHT OF 24 INCHES AND WIDTH OF 20 INCHES.

2. BASEMENT EGRESS TO MEET THE REQUIREMENTS OF IRC SECTION 310. 3. SMOKE ALARMS SHALL BE INSTALLED AS REQUIRED PER IRC 2018 SECTION R314. 4. PROVIDE SMOKE ALARMS IN EACH SLEEPING ROOM, OUTSIDE OF EACH SLEEPING AREA, ON EACH FLOOR INCLUDING BASEMENTS AND HABITABLE ATTICS, AND NOT LESS THAN 3'-0" HORIZONTALLY FROM DOOR OR OPENING OF A BATHROOM THAT CONTAINS A BATHTUB OR SHOWER. ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTUATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE DWELLING. 5. CARBON MONOXIDE ALARMS SHALL BE INSTALLED AS REQUIRED PER IRC 2018

SECTION R315. 6. CARBON MONOXIDE ALARMS SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA. WHERE A FUEL-BURNING APPLIANCE IS LOCATED WITHIN A BEDROOM OR ITS ATTACHED BATHROOM, A CARBON MONOXIDE ALARM SHALL BE INSTALLED WITHIN THE BEDROOM.

FRAMING GENERAL

1. ALL LUMBER SIZES ARE FOR DOUGLAS FIR-LARCH UNLESS NOTED OTHERWISE. 2. ALL HEADERS TO BE MIN (2) #2-2x10 UNLESS NOTED OTHERWISE. 3. BLOCK CANTILEVERS, DOORJAMBS, AND OVER BEAMS. 4. ALL HEADERS TO BEAR ON A MINIMUM OF (2) 2x4 STUD POSTS UNLESS NOTED OTHERWISE

5. INTERIOR NON-BEARING WALLS, OTHER THAN THOSE RESTING DIRECTLY ON THE FOOTING SHALL BE ISOLATED FROM THE FLOOR FRAMING ABOVE. 6. WHERE JOISTS RUN PARALLEL TO FOUNDATION WALLS, SOLID BLOCKING FOR A MINIMUM OF (2) JOIST SPACES BE PROVIDED TO A MAXIMUM OF 2'-0" CENTERS TO TRANSFER LATERAL LOADS ON THE WALL TO THE FLOOR DIAPHRAGM. THE BLOCKING SHALL BE SECURELY NAILED TO THE JOISTS AND FLOORING. NAIL JOISTS AND BLOCKING TO SILL PLATE WITH (3) 10d NAILS (IRC SECTION R602.3.(1 7. IF DUCTS ARE INSTALLED IN THE FIRST JOIST SPACE(S), NAIL 2x4s FLAT AT 2'-0" CENTERS WITHIN THE JOIST SPACE(S) AND THEN PROVIDE SOLID BLOCKING. INSTALLED UPRIGHT, IN THE NEXT TWO JOIST SPACES. SECURE THE 2x4s TO THE SILL PLATE WITH (4) 10d NAILS.

8. ALL SILLS AND SLEEPERS SUPPORTED ON CONCRETE OR MASONRY AND FURRING ATTACHED TO CONCRETE OR MASONRY SHALL BE OF DECAY RESISTANT MATERIALS 9. JOISTS UNDER BEARING PARTITIONS SHALL BE DOUBLED AND COMPLY WITH

IRC SECTION R502.4.

10. JOISTS FRAMING FROM OPPOSITE SIDES OVER BEARING SUPPORTS SHALL LAP A 1. THE FOUNDATION DESIGN SHALL BE BASED ON A MINIMUM SOIL BEARING MINIMUM 3" AND SHALL BE NAILED TOGETHER WITH A MINIMUM 10d FACE NAILS. CAPACITY OF 2000 PSF, UNLESS OTHERWISE INDICATED ON THE PLANS OR IF 11. JOISTS FRAMING INTO A WOOD GIRDER OR BEAM SHALL BE SUPPORTED BY MODIFIED BY AN ENGINEERING REPORT BASED ON ACTUAL SITE CONDITIONS. APPROVED FRAMING ANCHORS OR MINIMUM 2"x2" LEDGER STRIPS. 2. CONCRETE SHALL MEET THE FOLLOWING SPECIFIED DESIGN STRENGTH 12. FRAMING OF OPENINGS - HEADERS AND TRIMMERS SHALL BE OF SUFFICIENT CRITERIA CROSS SECTION TO SUPPORT THE FLOOR FRAMING. TRIMMER JOISTS SHALL BE - 2500 PSI FOR BASEMENT FLOOR SLABS ON UNDISTURBED SOIL DOUBLED WHEN THE HEADER IS SUPPORTED MORE THAN 3'-0" FROM THE - 3000 PSI FOR FOOTINGS AND FOUNDATION WALLS TRIMMER JOIST BEARING. WHEN THE HEADER SPAN EXCEEDS 4'-0", THE - 3500 PSI FOR GARAGE FLOOR SLABS HEADER AND TRIMMER SHALL BE DOUBLED.

13. JOISTS AT SUPPORTS SHALL BE SUPPORTED LATERALLY AT THE ENDS BY FULL-DEPTH SOLID BLOCKING NOT LESS THAN 2" NOMINAL THICKNESS OR BY ATTACHMENT TO A HEADER, BAND OR RIM JOIST OR TO AN ADJOINING STUD OR OTHERWISE PROVIDED WITH LATERAL SUPPORT TO PREVENT ROTATION. 14. WATER-RESISTIVE BARRIER SHALL BE PROVIDED OVER ALL EXTERIOR WALLS. ONE LAYER OF No 15 ASPHALT FELT OR ANY OTHER BARRIER THAT MEETS ASTM D226 TYPE 1 FELT. (R703.2)

15. WHERE CEILING JOISTS ARE NOT INSTALLED CONNECTED TO THE RAFTERS AT THE TOP PLATE AND/OR WHERE CEILING JOISTS ARE NOT INSTALLED PARALLEL TO THE RAFTERS, RAFTER TIES SHALL BE INSTALLED IN THE LOWER 1/3 OF THE ATTIC SPACE AND IN ACCORDANCE WITH TABLE 1-S1.0. 16. COLLAR TIES SHALL BE PROVIDED IN THE UPPER 1/3 OF THE ATTIC SPACE IN ACCORDANCE WITH TABLE 1-S1.0.

GARAGE

1. THE GARAGE FLOOR SHALL SLOPE TOWARDS THE GARAGE DOORWAYS. 2. DOORS BETWEEN THE GARAGE AND THE DWELLING - MINIMUM 1-3/8" SOLID CORE OR HONEY COMBED STEEL DOOR OR 20-MINUTE FIRE RATED. 3. THE GARAGE SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC AREA BY 5/8", TYPE X GYPSUM BOARD, OR EQUIVALENT MATERIALS APPROVED FOR ONE-HOUR FIRE-RESISTIVE CONSTRUCTION, APPLIED TO GARAGE SIDE. WHERE THE SEPARATION IS A FLOOR-CEILING ASSEMBLY, THE STRUCTURE SUPPORTING THE SEPARATION SHALL ALSO BE PROTECTED BY 5/8", TYPE X GYPSUM BOARD, OR MATERIALS APPROVED FOR ONE-HOUR FIRE-RESISTIVE CONSTRUCTION OR EQUIVALENT, APPLIED TO THE GARAGE SIDE. PULL DOWN STAIRS LOCATED WITHIN GARAGE SHALL BE RATED TO BE ADEQUATELY PROTECTED WITH MATERIALS APPROVED FOR ONE-HOUR FIRE-RESISTIVE CONSTRUCTION. ATTIC ACESS PANELS LOCATED WITHIN GARAGE SHALL BE OF 5/8", TYPE X GYPSUM BOARD, OR MATERIALS FOR ONE-HOUR FIRE-RESISTIVE

CONSTRUCTION. 4. GARAGE DOOR AND FRAME- THE H-FRAME FOR THE ATTACHMENT OF THE TRACK AND COUNTER BALANCE SHALL CONSIST OF THE FOLLOWING: 2x6 VERTICAL JAMBS RUNNING FROM THE FLOOR TO CEILING ATTACHED WITH 1-3/4" x 0.120" NAILS AT 7" OC STAGGERED WITH (7) 3-1/4" x 0.120" NAILS THRU THE JAMB INTO THE HEADER, MINIMUM 2x8 HEADER FOR ATTACHMENT OF COUNTER BALANCE SYSTEM.

STAIRWAYS

1. STAIRWAYS SHALL PROVIDE A MAXIMUM 7-3/4" RISE AND MINIMUM 10" RUN. 2. PROVIDE MINIMUM 36" GUARDRAILS ON THE OPEN SIDES OF RAISED FLOORS, PORCHES, AND BALCONIES: MINIMUM 34" GUARDRAILS ON THE OPEN SIDES OF STAIRWAYS LOCATED MORE THAN 30" ABOVE THE FLOOR OR GRADE BELOW. GUARDRAIL ENCLOSURES SHALL HAVE INTERMEDIATE RAILS OR ORNAMENTAL PATTERNS THAT DO NOT ALLOW PASSAGE OF A SPHERE 4" IN DIAMETER. 3. EACH STAIRWAY OF THREE OR MORE RISERS SHALL PROVIDE A CONTINUOUS HANDRAIL ON AT LEAST ONE SIDE BETWEEN 34" AND 38" ABOVE THE NOSING OF THE TREADS.

4. HANDRAILS SHALL HAVE A CIRCULAR CROSS SECTION OF 1-1/4" MINIMUM TO 2" MAXIMUM OR OTHER APPROVED GRASPABLE SHAPER PER IRC SECTION 311.7.8.5.

5. PROVIDE A MINIMUM 6'-8" OF HEADROOM CLEARANCE IN STAIRWAYS. 6. ENCLOSED ACCESSIBLE SPACE UNDER STAIRWAYS SHALL HAVE WALLS AND THE UNDERSIDE OF THE STAIR AND LANDING PROTECTED WITH 1/2" GYPSUM BOARD ON ENCLOSURE SIDE PER IRC SECTION 302.7. 7. SPIRAL STAIRS TO BE CONSTRUCTED PER IRC SECTION 311.7.10.1 8. SPACE STRINGERS AT 16" OC MAX.

GENERAL

1. PLANS SHALL COMPLY WITH THE 2018 INTERNATIONAL RESIDENTIAL CODE WITH AMENDMENTS AS ADOPTED BY THE GOVERNING JURISDICTION. IF ANY CHANGES OR DEVIATIONS FROM THE PLANS ARE MADE DURING CONSTRUCTION, CONTRACTOR SHALL NOTIFY THE APPROPRIATE AUTHORITY AND ENGINEER OF RECORD, EITHER (OR BOTH) OF WHOM MAY REQUIRE REVISED DRAWINGS OR CALCULATIONS AT ITS DISCRETION

2. REPRODUCTION, ALTERATION, OR RE-USE BY ANY METHOD OF ALL OR PORTIONS OF THESE STRUCTURAL PLANS OR VARIATIONS THEREOF WITHOUT WRITTEN PERMISSION FROM APEX ENGINEERS, INC IS STRICTLY PROHIBITED. THE DRAWINGS AND DETAILS OF THIS SHEET SET. BEING INSTRUMENTS OF SERVICE. ARE AND SHALL REMAIN THE PROPERTY OF APEX ENGINEERS, INC. AN UNSEALED VERSION, OR A VERSION VOID OF APEX ENGINEERS LOGO AND/OR TITLE BLOCK, SHALL BE CONSIDERED AN UNAUTHORIZED REPRODUCTION.

3. WHERE DISCREPENCIES EXIST BETWEEN THE STANDARD COMMENTS, NOTES FROM THE DESIGN PROFESSIONAL OR THE CODE. THE MOST RESTRICTIVE SHALL APPLY. THE DWELLING SHALL COMPLY WITH THE FOLLOWING LOAD CONDITIONS:

AREA	MIN DEAD LOAD	MIN LIVE LOAD		
EXTERIOR BALCONIES	10 PSF	60 PSF		
DECKS	10 PSF	40 PSF		
CEILING JOISTS/ATTICS NO STORAGE - SCUTTLE ACCESS ONLY ROOF SLOPE 3:12 OR LESS	5 PSF	10 PSF		
CEILING JOISTS/ATTICS WITHOUT STORAGE - SCUTTLE ACCESS ONLY ROOF SLOPE OVER 3:12 OR LESS	10 PSF	10 PSF		
CEILING JOISTS/ATTICS WITH STORAGE - DOOR/PULL DOWN LADDER ACCESS	10 PSF	20 PSF		
ROOMS - NON-SLEEPING	10 PSF	40 PSF		
ROOMS - SLEEPING	10 PSF	30 PSF		
ROOF - LIGHT ROOF COVERING	10 PSF	20 PSF		
ROOF - HEAVY ROOF COVERING	20 PSF	20 PSF		

NOTE: HEAVY ROOF COVERING WILL NOT BE INSTALLED OR USED IN THE DESIGN CALCULATIONS UNLESS IT IS SPECIFICALLY NOTED ON

THE PLANS THAT THE DESIGN IS FOR HEAVY ROOF COVERINGS.

FOUNDATIONS

3. FOOTINGS SHALL EXTEND BELOW THE FROST LINE; MINIMUM DEPTH 36 INCHES BELOW GRADE. 4. UNLESS OTHERWISE NOTED ON THE PLANS OR IF SITE CONDITIONS

REQUIRE OTHERWISE, FOOTINGS SHALL BE A MINIMUM OF 16" WIDE AND 8" DEEP WITH (2) #4 BARS CONTINUOUS.

5. COLUMN PADS SHALL BE A MINIMUM 30"x30"x12" WITH (4) #4 BARS EACH WAY UNLESS NOTED OTHERWISE.

6. UNLESS NOTED OTHERWISE ON THE PLANS, FOUNDATION WALLS SHALL BE MINIMUM 8" THICK x 8'-0" (OR 9'-0") TALL AND REINFORCED PER DETAIL 1-S2.0 (AND 2-S2.0 WHERE APPLICABLE). FOUNDATION WALLS GREATER THAN 10'-0" TALL REQUIRE A SEPERATE ENGINEERED DESIGN. PROVIDE A 2'-0" LONG INTERIOR OR EXTERIOR DEAD-MAN FOR ANY STRAIGHT WALL PANELS EXCEEDING 20'-0" IN LENGTH (REF 3-S2.0)

7. REINFORCEMENT SHALL BE MINIMUM GRADE 40 UNLESS NOTED OTHERWISE. REINFORCEMENT SHALL LAP A MINIMUM OF 24" AT ENDS, SPLICES, AND AROUND CORNERS

8. FOUNDATION WALLS SHALL BE BACKFILLED WITH A CLEAN LEAN CLAY (OR BETTER) LOW VOLUME CHANGE MATERIAL. ON-SITE MATERIAL MAY BE USED IF DEEMED ACCEPTABLE BY THE GEOTECHNICAL ENGINEER OF RECORD. 9. FOUNDATION WALLS WILL NOT ACHIEVE FULL STRENGTH UNTIL THE BASEMENT SLAB AND THE FIRST FLOOR DECK HAVE BEEN PROPERLY PLACED. IF BACKFILLING THE INTERIOR OF THE FOUNDATION WALL WITH GREATER THAN 8" OF EARTHEN FILL OR 24" OF GRANULAR FILL, A STRUCTURAL BASEMENT SLAB (TO BE DESIGNED OR DESIGN REVIEWED BY APEX ENGINEERS), OR ALTERNATE ENGINEERED SOLUTION (i.e. ENGINEERED FILL) WILL BE REQUIRED. 10. WHERE JUMPS OR STEPS IN ELEVATION OCCUR FOUNDATION WALLS AND FOOTINGS SHALL BE FORMED CONTINUOUS AND POURED PER DETAIL 4-S2.0. 11. CONCRETE FLOOR SLABS SHALL BE A MINIMUM 4" THICK OVER A MINIMUM 4" BASE OF 1/2" OR 3/4" CLEAN GRADED ROCK, UNLESS NOTED OTHERWISE OR IF

SITE CONDITIONS REQUIRE OTHERWISE. 12. PROVIDE A MIN 6 MIL THICK POLYETHYLENE MOISTURE BARRIER OVER POURUS GRAVEL BASE UNDER BASEMENT FLOOR SLAB PER R406.2. LAP JOINTS MINIMUM 6" (NOT REQUIRED FOR GARAGE SLABS OR DETACHED ACCESSORY

BUILDINGS). 13. FOR A STRUCTURAL REINFORCED CONCRETE FLOOR OVER A USABLE AREA. SUCH AS A GARGE FLOOR LOCATED OVER A STORAGE AREA. SUBMIT SEALED ENGINEERED DETAILS AND CALCULATIONS. 14. GARAGE SLABS AND BASEMENT OVERDIGS SUPPORTED BY FILL

CONSISTING OF MORE THAN 24" OF GRANULAR FILL OR 8" OF EARTH SHALL BE REINFORCED PER DETAILS 1-S2.1 AND 6-S2.1 RESPECTIVELY. WHERE THE LIMITATIONS OF DETAILS 1-S2.1 AND 6-S2.1 ARE NOTE MET, A SEPERATE ENGINEERED DESIGN SHALL BE REQUIRED.

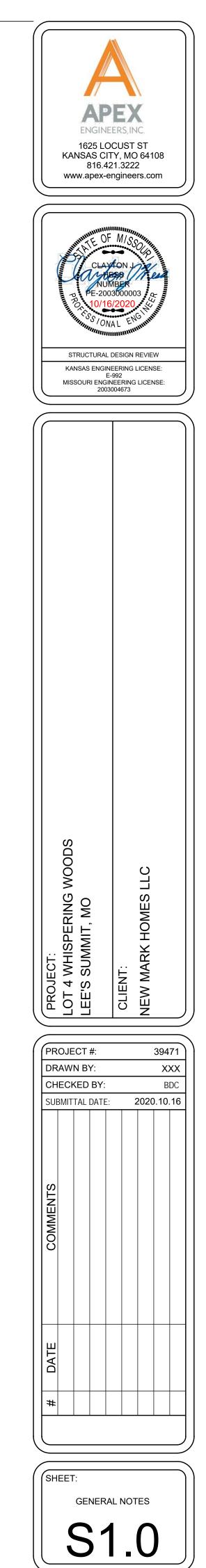
15. BASEMENT FOUNDATION SILL PLATES SHALL BE BOLTED TO THE FOUNDATION WITH A MINIMUM OF 1/2" ANCHOR BOLTS EMBEDDED AT LEAST 7" INTO THE CONCRETE AND SPACED NOT MORE THAN 3'-0" ON CENTER AND WITHIN 12" OF EACH END PIECE.

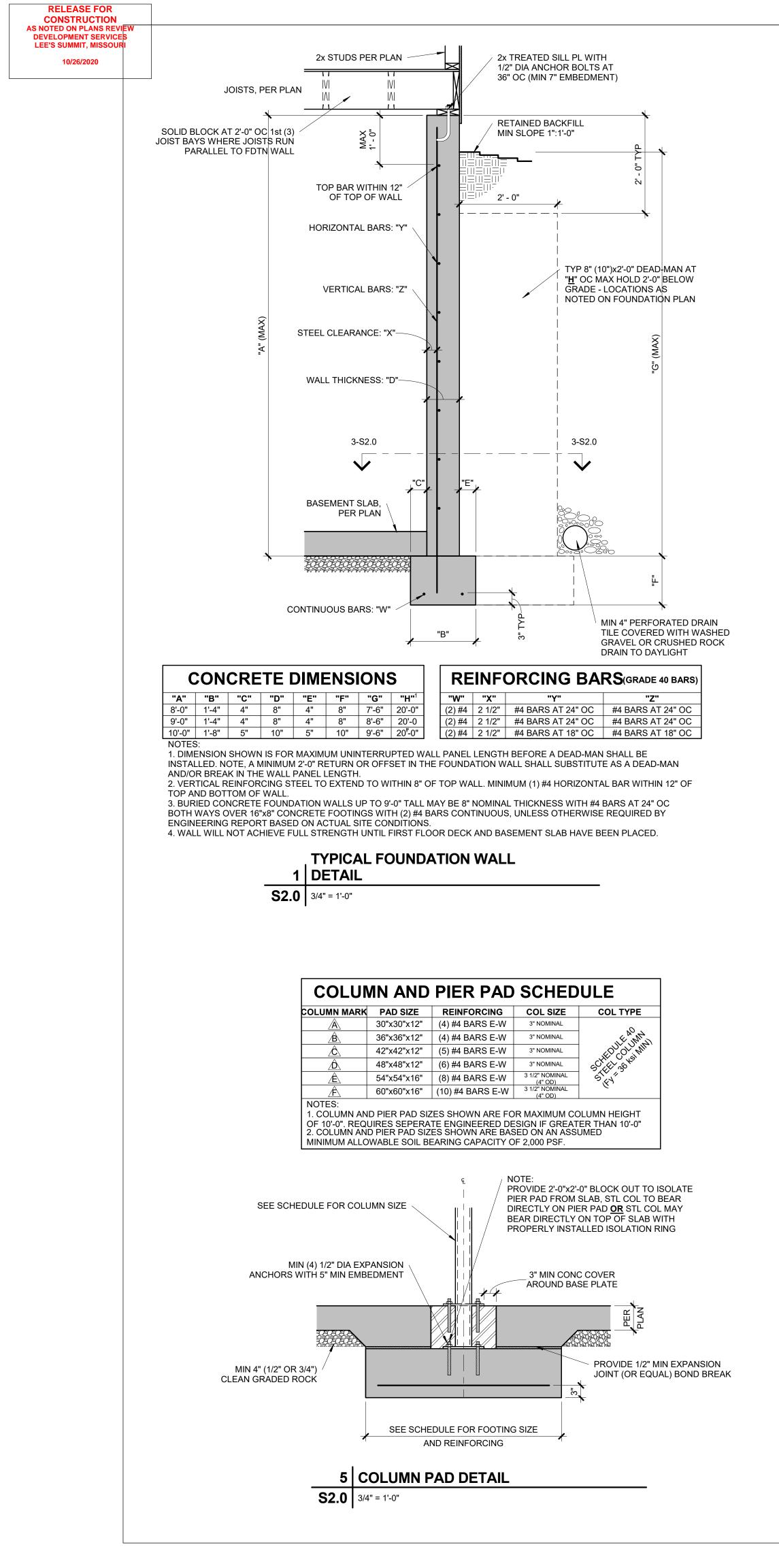
16. FOUNDATION WALLS SHALL BE DAMP-PROOFED PER IRC SECTION R406. 17. PROVIDE A MINIMUM 4" PERFORATED DRAIN AROUND USABLE SPACE BELOW GRADE OR OTHER EQUIVALENT MATERIALS PER IRC SECTION 405.1. THE PIPE SHALL BE PLACED ON A MINIMUM OF 2" OF WASHED GRAVEL OR CRUSHED ROCK AND COVERED WITH NOT LESS THAN 6". THE DRAIN SHALL DAYLIGHT TO THE EXTERIOR BELOW THE FLOOR LEVEL OR TERMINATE IN A MINIMUM 20 GALLON SUMP PIT.

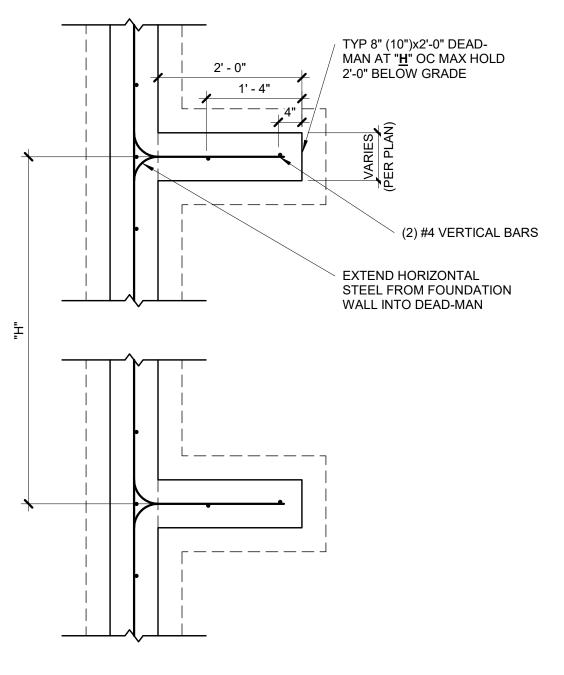
18. INTERIOR BEARING WALLS AND COLUMNS SHALL BE ISOLATED FROM THE BASEMENT FLOOR SLAB. 19. INTERIOR NON-BEARING WALLS, OTHER THAN THOSE RESTING DIRECTLY ON

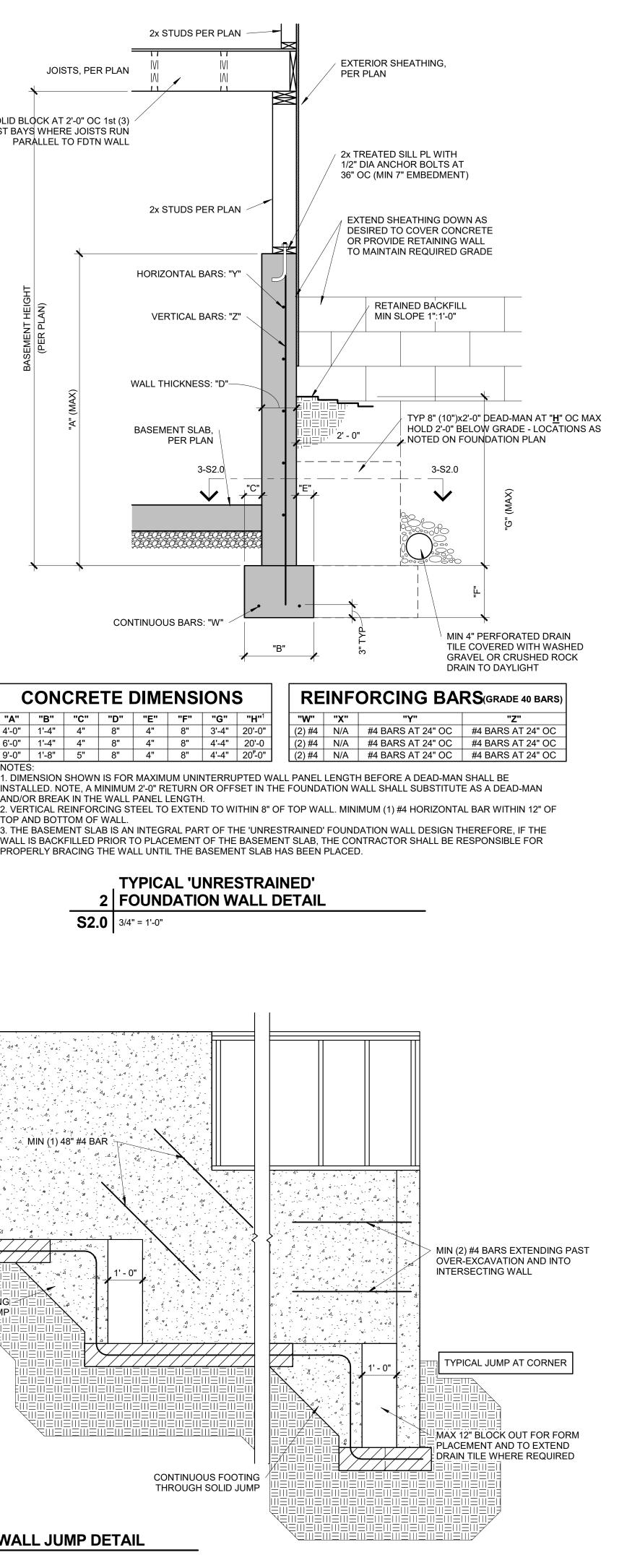
THE FOOTING, SHALL BE ISOLATED FROM THE FLOOR FRAMING ABOVE. 20. ALL EARTH RETAINING STRUCTURES ON SITE GREATER THAN 4'-0" TALL (EXCLUDING CONCRETE FOUNDATION WALLS RESTRAINED AT BOTH THEIR TOP AND BOTTOM) SHALL REQUIRE A SEPARATE ENGINEERED DESIGN AS REQUIRED BY THE CODE AUTHORITY. 21. ANY GEOTECHNICAL IMPROVEMENT METHODS AND/OR STRUCTURAL

SOLUTIONS (SUCH AS DRILLED PIERS) EMPLOYED TO ADDRESS UNACCEPTABLE SUBGRADE CONDITIONS SHALL BE SUBMITTED TO EOR AS ENGINEERED SHOP DRAWINGS FOR REVIEW AND APPROVAL.





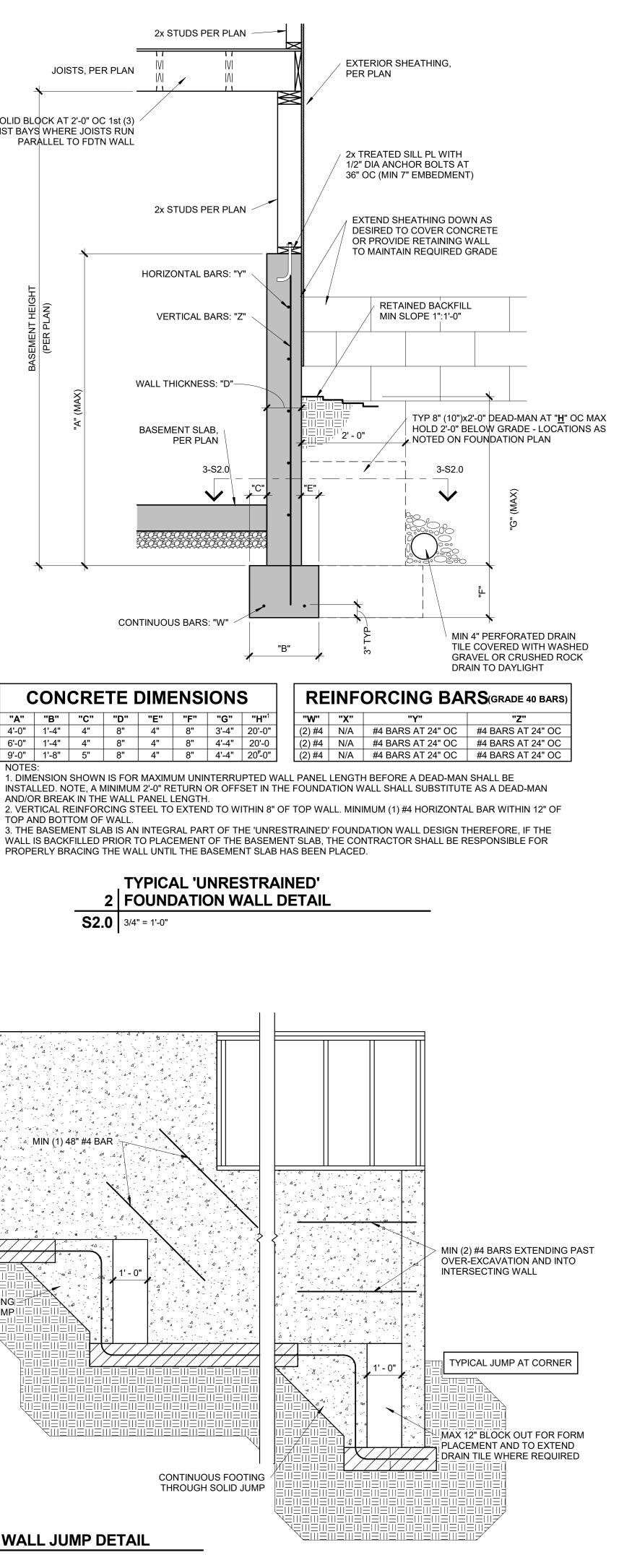


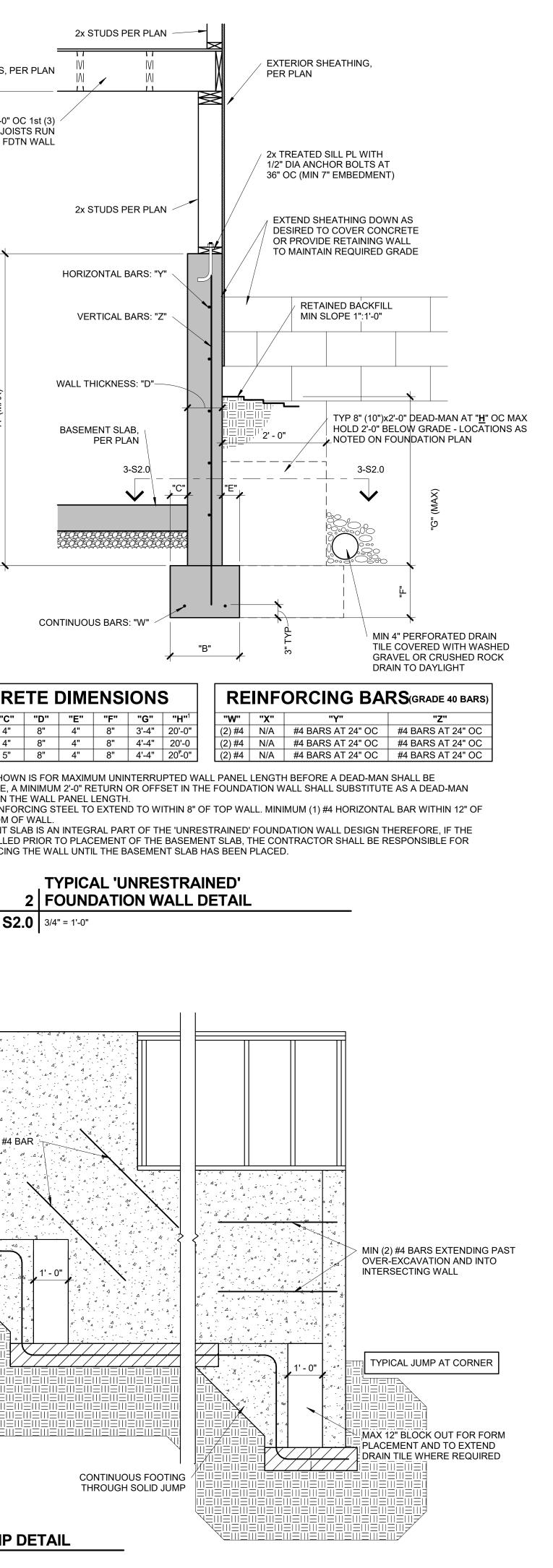


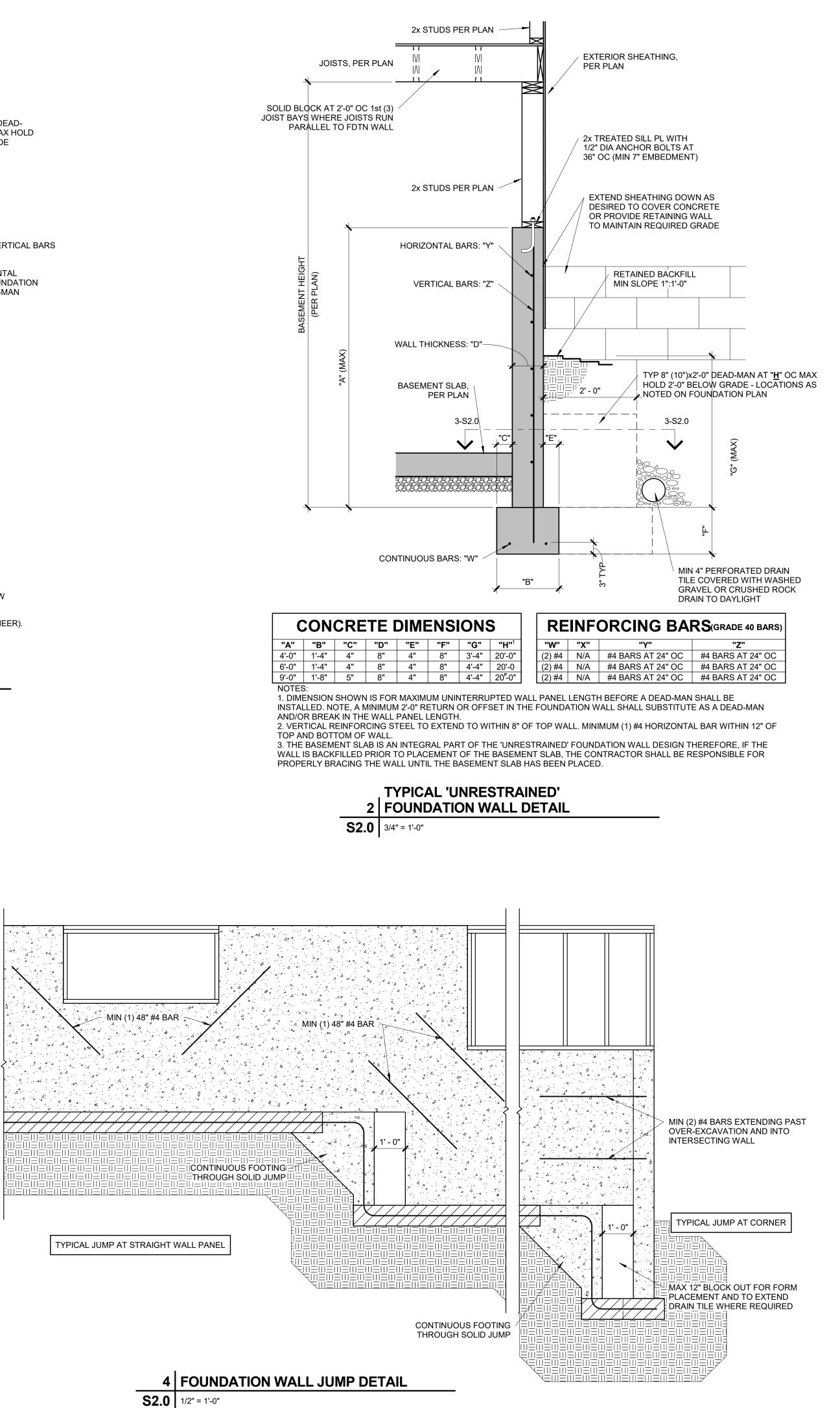
- NOTES: 1. MIN 3000 PSI FOOTING COMPRESSIVE CONCRETE STRENGTH.
- 2. MIN 3000 PSI WALL COMPRESSIVE CONCRETE STRENGTH. 3. AIR ENTRAINED BETWEEN 5% & 7% OF CONCRETE VOLUME.
- 4. GRADE 40 REINFORCING STEEL UNLESS OTHERWISE NOTED.
- 5. LAP SPLICES 24" MIN. 6. WALL SHALL BE BACK-FILLED WITH CLEAN, LEAN CLAY (OR BETTER) LOW
- VOLUME CHANGE MATERIAL. ON-SITE MATERIAL MAY BE USED IF DEEMED
- ACCEPTABLE BY THE GEOTECHNICAL ENGINEER. 7. ASSUMED 2,000 PSF BEARING (TO BE VERIFIED BY GEOTECHNICAL ENGINEER).

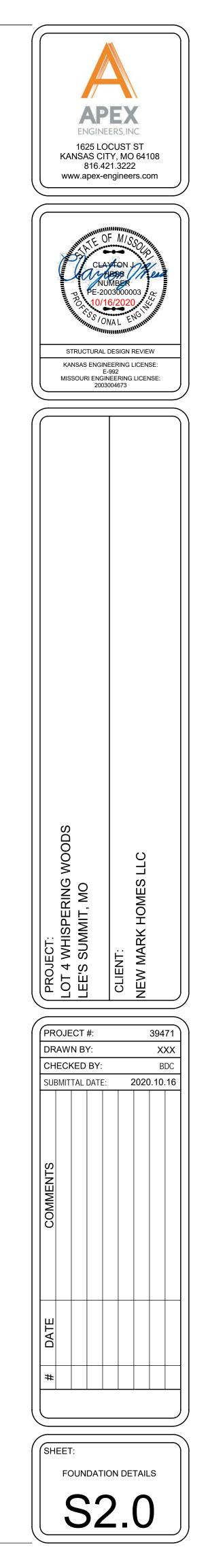
3	TYPICAL DEAD-MAN SECTION

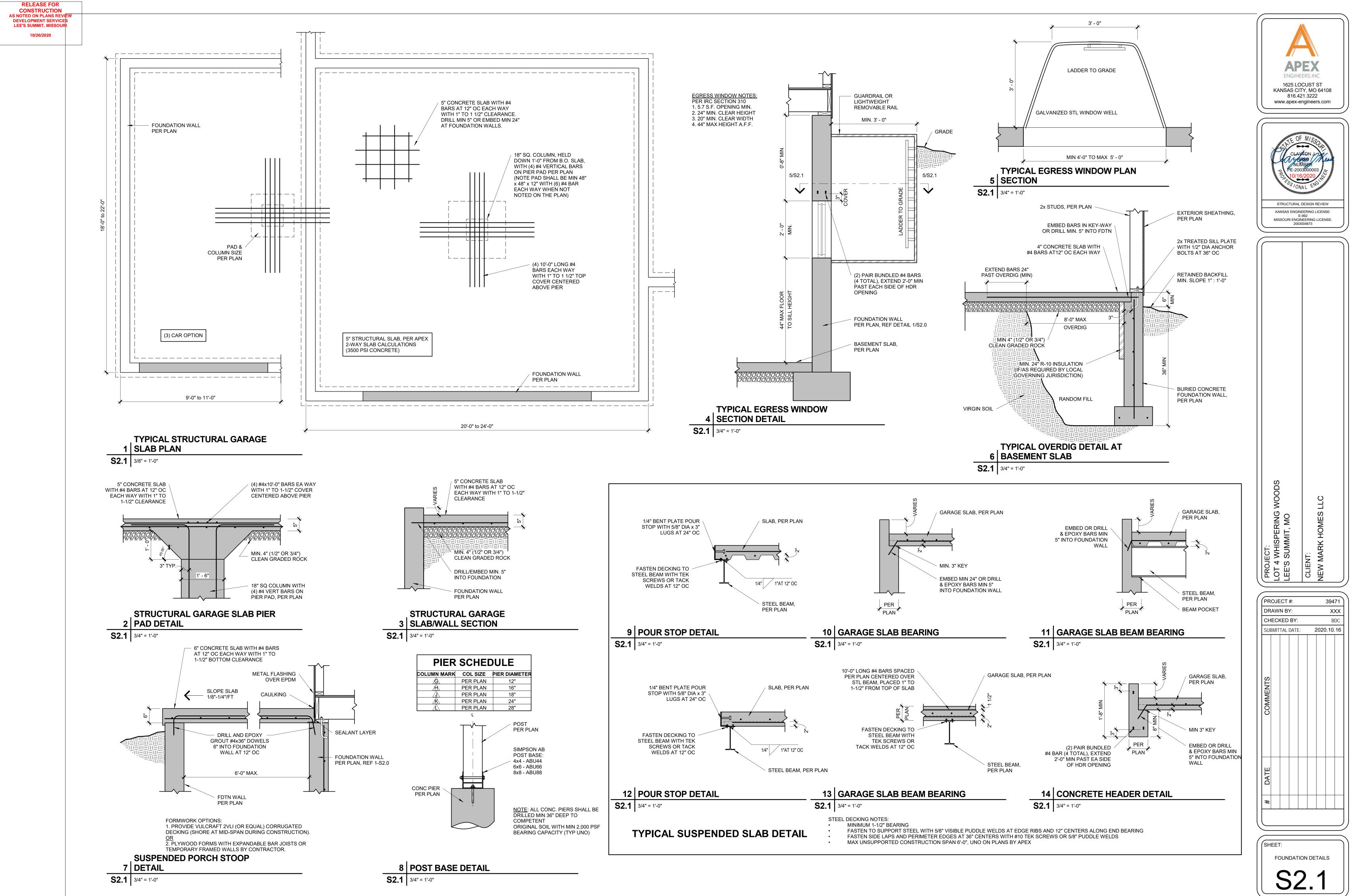
S2.0 3/4" = 1'-0"

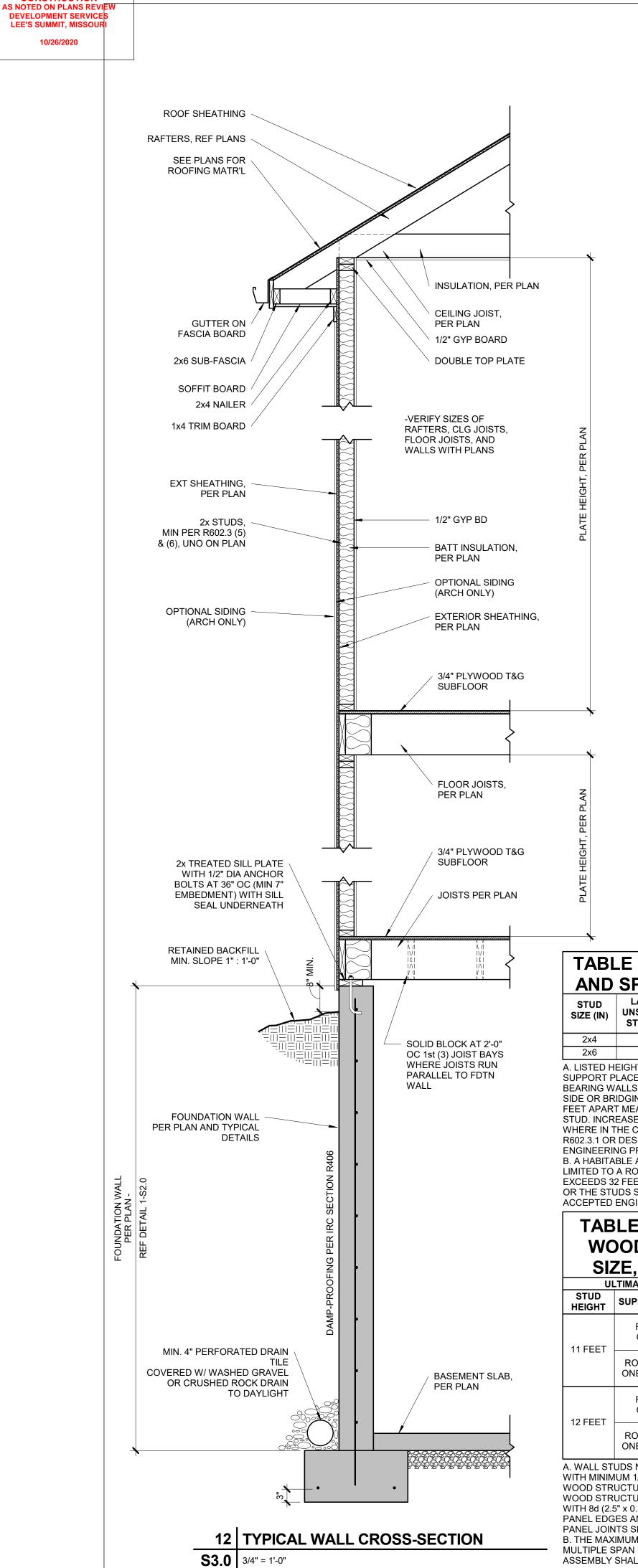












RELEASE FOR CONSTRUCTION

TABLE R602.3 (5) - SIZE, HEIGHT, AND SPACING OF WOOD STUDS

	SPACING		200.2	U
STUD	LATERALLY UNSUPPORTED STUD HEIGHT [^]	STRUCTURE SUPPORTE		
SIZE (IN)		ROOF ONLY	ROOF AND (1) FLOOR	RO((2) F
2x4	10 FEET	24" OC [®]	16" OC [₿]	
2x6	10 FEET	24" OC	24" OC	10
SUPPORT P BEARING W SIDE OR BR FEET APAR STUD. INCR WHERE IN T R602.3.1 OR ENGINEERIN	EIGHTS ARE DISTAI LACED PERPENDIC ALLS SHALL BE SHI IDGING SHALL BE II I MEASURED VERT EASES IN UNSUPPO HE COMPLIANCE W DESIGNED IN ACCI NG PRACTICE.	ULAR TO THI EATHED ON N NSTALLED NO ICALLY FROM ORRTED HEIG VITH EXCEPT ORDANCE WI	E PLANE OF T NOT LESS TH/ DT GREATER 1 EITHER END GHT ARE PER ION 2 OF SEC ITH ACCEPTE	THE V AN O THAI O OF MITT TION D
κ α μακιια				

B. A HABITABLE ATTIC ASSEMBLY SUPPORTED BY 2x4 STUDS IS LIMITED TO A ROOF SPAN OF 32 FEET. WHERE THE ROOF SPAN EXCEEDS 32 FEET, THE WALL STUDS SHALL BE INCREASED TO 2x6 OR THE STUDS SHALL BE DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE.

TABLE R602.3 (6) - ALTERNAT WOOD BEARING WALL STUD								
SIZE, HEIGHT AND SPACING								
UL	TIMATE DESIG	N WIND SPE	ED = 115 MPH					
STUD HEIGHT	SUPPORTING	STUD SPACING _A	MAX ROOF/F	LOOR S				
_	ROOF ONLY	12 IN	2x4	2x				
11 FEET		16 IN	2x4	2x				
		24 IN	2x6	2x				
	ROOF AND ONE FLOOR	12 IN	2x4	2x				
		16 IN	2x6	2x				
		24 IN	2x6	2x				
12 FEET	ROOF ONLY	12 IN	2x4	2x				
		16 IN	2x4	2x				
		24 IN	2x6	2x				
	ROOF AND ONE FLOOR	12 IN	2x4	2x				
		16 IN	2x6	2x				
		24 IN	2x6	2x				

A. WALL STUDS NOT EXCEEDING 16" OC SHALL BE SHEATHED WITH MINIMUM 1/2" GYPSUM BOARD ON THE INTERIOR AND 3/8" WOOD STRUCTURAL PANEL SHEATHING ON THE EXTERIOR. WOOD STRUCTURAL PANEL SHEATHING SHALL BE ATTACHED WITH 8d (2.5" x 0.131") NAILS NOT GREATER THAN 6" OC ALONG PANEL EDGES AND 12" OC AT INTERMEDIATE SUPPORTS, AND ALL PANEL JOINTS SHALL OCCUR OVER STUDS OR BLOCKING. B. THE MAXIMUM SPAN IS APPLICABLE TO BOTH SINGLE AND MULTIPLE SPAN ROOF AND FLOOR CONDITIONS. THE ROOF ASSEMBLY SHALL NOT CONTAIN A HABITABLE ATTIC.

