

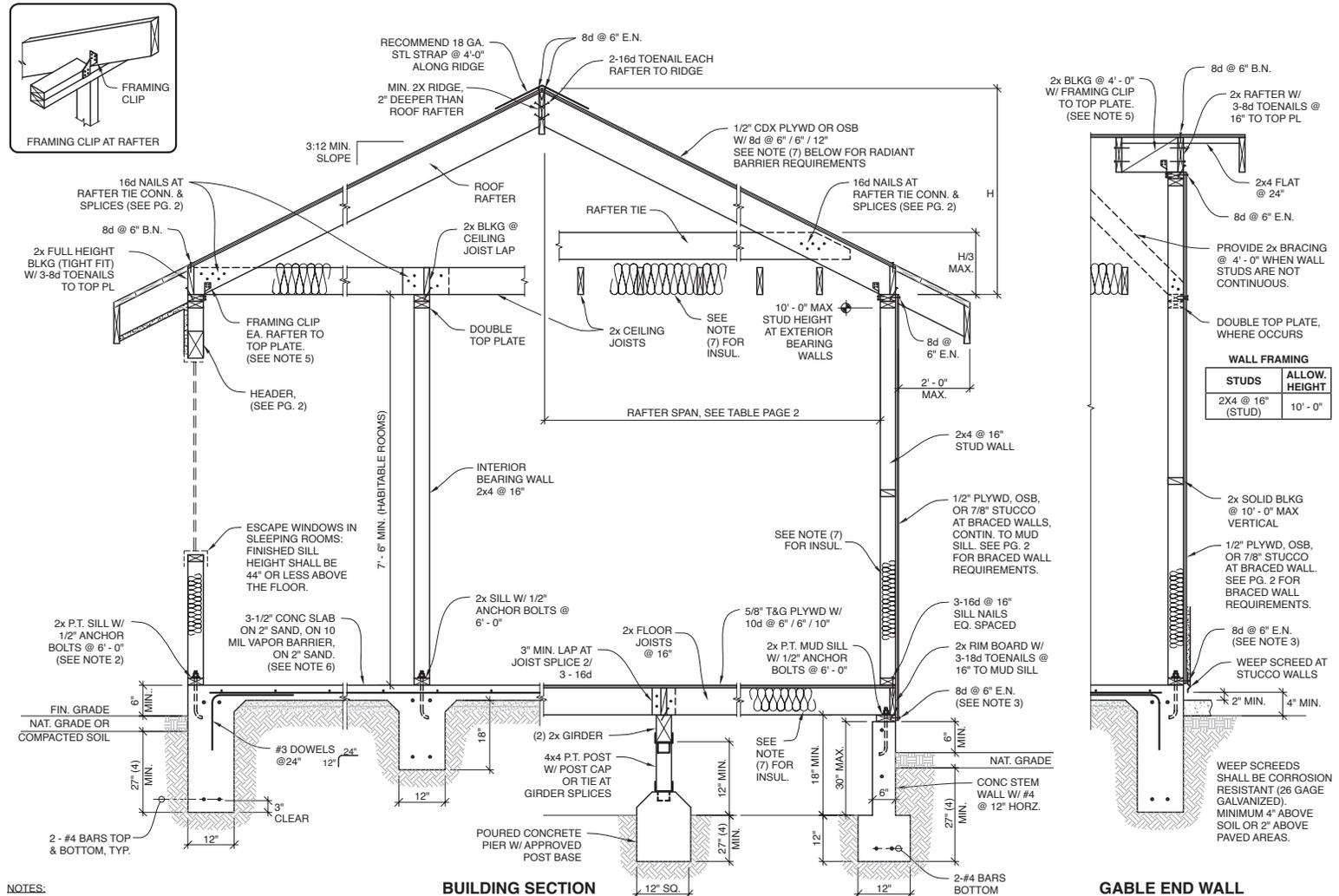
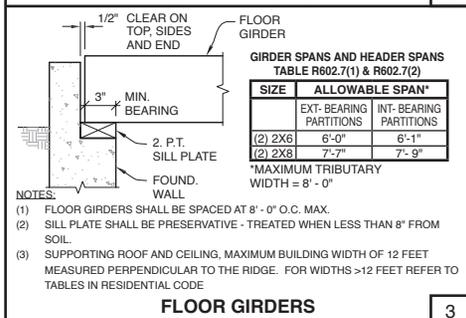
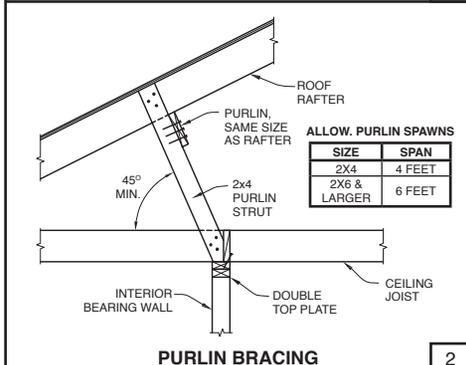
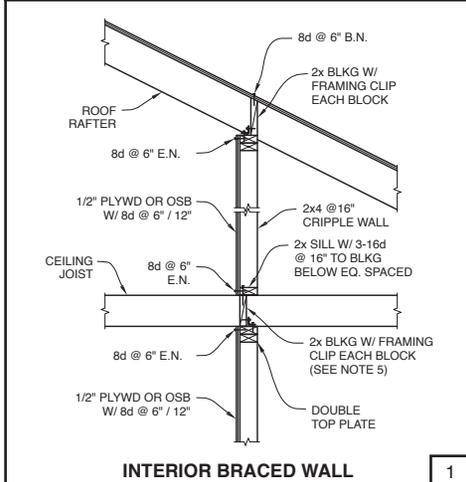


City of Moorpark

Community Development Building and Safety
 323 Science Drive
 Moorpark, CA 93021
 Ph: 805-517-6272

TYPE V SHEET / LIGHT FRAME CONSTRUCTION

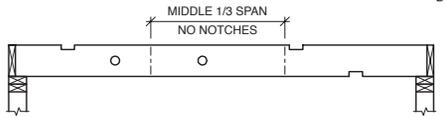
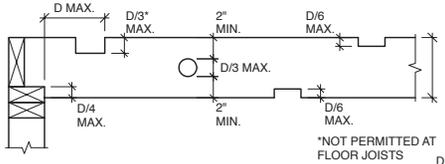
SINGLE STORY CONVENTIONAL WOOD-FRAME CONSTRUCTION SHEET



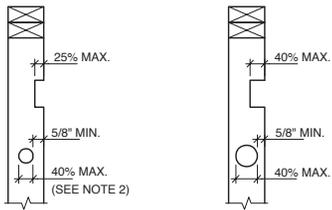
- NOTES:**
- (1) MINIMUM CONCRETE STRENGTH: 2500 psi.
 - (2) ANCHOR BOLTS SHALL BE EMBEDDED AT LEAST 7" INTO CONCRETE. FOR TWO-POUR FOUNDATIONS, THE REQUIRED EMBEDMENT SHALL BE PROVIDED IN THE FIRST POUR. ANCHOR BOLTS SHALL BE LOCATED NOT MORE THAN 12", OR LESS THAN 4 - 1/2" FROM SILL PLATE ENDS, CORNERS, AND SPLICES. ANCHOR BOLTS SHALL BE INSTALLED WITH 1/4" X 3" SQUARE PLATE WASHERS.
 - (3) FASTENERS FOR PRESERVATIVE TREATED WOOD SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER.
 - (4) FOUNDATIONS SHOWN ABOVE ASSUME EXPANSIVE SOILS ARE PRESENT AT THE SITE. FOUNDATION REQUIREMENTS MAY BE REDUCED WHEN JUSTIFIED BY A GEOTECHNICAL REPORT OR APPROVED BY THE BUILDING OFFICIAL.
 - (5) FRAMING CLIPS SHALL BE 18 GAGE STEEL WITH FOUR 8d NAILS PER LEG (EIGHT 8d NAILS PER CLIP). FRAMING CLIPS SHALL BE ICC APPROVED AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
 - (6) SLAB ON GRADE SHALL BE REINFORCED WITH #3 BARS @ 18" EACH WAY. REINFORCING SHALL BE LOCATED AT SLAB MID-HEIGHT.
 - (7) SEE PAGE 3 OF 3, TABLE 150.1A FOR RADIANT BARRIER AND INSULATION REQUIREMENTS BASED ON AHJ'S CLIMATE ZONE

THIS SHEET IS A SUMMARY OF THE PROVISIONS OF THE 2019 CRC FOR USE WITH SINGLE-STORY CONSTRUCTION ONLY. DEAD LOAD SHALL NOT EXCEED 15 PSF FOR AVERAGE ROOF AND CEILING, OR EXTERIOR WALLS OR FLOORS AND PARTITIONS. FLOOR LIVE LOAD SHALL NOT EXCEED 40 PSF. THIS SHEET IS FOR REFERENCE ONLY AND IS NOT SUBSTITUTE FOR ACCURATE DRAWINGS PREPARED FOR EACH PROPOSED CONSTRUCTION PROJECT.

SINGLE STORY CONVENTIONAL WOOD-FRAME CONSTRUCTION SHEET



RAFTERS, CEILING JOISTS AND FLOOR JOISTS
CRC FIG R602.3(1)



BEARING PARTITIONS &
ALL EXTERIOR WALLS

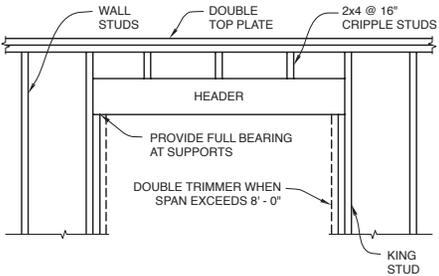
NON-BEARING
PARTITIONS

CRC FIG R602.6(1) & R602.6(2)

NOTES:

- BORED HOLES SHALL NOT BE LOCATED AT THE SAME SECTION AS A CUT OR NOTCH.
- BORED HOLES IN BEARING STUDS MAY BE INCREASED TO 60% IF STUDS ARE DOUBLED; NO MORE THAN TWO SUCCESSIVE DOUBLE STUDS MAY BE BORED.

2



DF#1 HEADER, ALLOWABLE SPANS*

SPAN	SIZE
UP TO 3' - 6"	4x4
3' - 7" TO 5' - 5"	4x6
5' - 6" TO 6' - 10"	4x8
6' - 10" TO 8' - 5"	4x10
8' - 6" TO 9' - 9"	4x12

HEADER/LINTEL

CRC TABLE R502.5(1)

3

GENERAL NOTES:

- SEE FASTENING SCHEDULE (TABLE R602.3(1)) FOR NAILING NOT SHOWN.
- BEARING WALLS AND BRACED WALLS REQUIRE CONTINUOUS FOOTINGS.
- "DF" ON THESE SHEETS REFERS TO DOUGLAS FIR-LARCH. SAWN LUMBER SHALL BE IDENTIFIED BY THE GRADE MARK OF AN APPROVED LUMBER GRADING OR INSPECTION AGENCY.
- "DL" AND "LL" ON THESE SHEETS INDICATES "DEAD LOAD" AND "LIVE LOAD," RESPECTIVELY
- WOOD MEMBERS SHALL BE OF SUFFICIENT SIZE TO PREVENT SPLITTING DUE TO NAILING. SPLIT MEMBERS SHALL BE REMOVED AND REPLACED.
- "P.T." ON THESE SHEETS INDICATES PRESERVATIVE-TREATED WOOD.
- WHEN FRAMED WITH ENGINEERED WOOD TRUSSES, ROOF DIAPHRAGMS SHALL BE CONNECTED TO INTERIOR BRACED WALLS BY MEANS OF DRAG TRUSSES OR TRUSS BLOCKING.

DF #2 RAFTERS, ALLOWABLE SPANS*

RAFTER SPACING	DL = 10 PSF, LL = 20 PSF				
	2x4	2x6	2x8	2x10	2x12
12"	10' - 10"	16' - 10"	21' - 4"	26' - 0"	--
16"	9' - 10"	14' - 7"	18' - 5"	22' - 6"	26' - 0"
24"	8' - 2"	11' - 11"	15' - 1"	18' - 5"	21' - 4"

* DATA TAKEN FROM TABLE R802.4.1(1)

DF #2 CEILING JOISTS, ALLOWABLE SPANS*

JOIST SPACING	ATTICS WITHOUT STORAGE, LL = 10 PSF					ATTICS WITH LIMITED STORAGE, LL = 20 PSF				
	2x4	2x6	2x8	2x10	2x12	2x4	2x6	2x8	2x10	2x12
12"	12' - 5"	19' - 6"	25' - 8"	--	--	9' - 10"	14' - 10"	18' - 9"	22' - 11"	--
16"	11' - 3"	17' - 8"	23' - 4"	--	--	8' - 11"	13' - 0"	16' - 6"	20' - 2"	--
24"	9' - 10"	15' - 0"	19' - 1"	23' - 3"	7' - 3"	10' - 8"	13' - 6"	16' - 5"	--	--

*DATA FROM CRC TABLE R802.5.1(1) & R802.5.1(2) ATTICS WITH STORAGE ARE THOSE WHERE THE CLEAR HEIGHT BETWEEN THE CEILING JOIST AND RAFTER IS 42" OR GREATER. ATTICS SHALL BE UNINHABITABLE. CEILING DEAD LOAD SHALL NOT EXCEED 5 PSF.

RAFTER TIE CONNECTIONS, # 16d COMMON NAILS, SEE NOTE (5)*

TIE SPACING	ROOF PITCH																									
	3:12				4:12				5:12				7:12				9:12				12:12					
	12'	20'	28'	36'	12'	20'	28'	36'	12'	20'	28'	36'	12'	20'	28'	36'	12'	20'	28'	36'	12'	20'	28'	36'		
12"	4	6	8	10	3	5	6	8	3	4	5	6	3	4	4	5	3	3	4	4	4	4	3	3	3	3
16"	5	8	10	13	4	6	8	10	3	5	6	8	3	4	5	6	3	4	4	5	3	3	4	4	4	4
24"	7	11	15	19	5	8	12	15	4	7	9	12	3	5	7	9	3	4	4	6	7	3	4	4	4	4

*CRC TABLE R802.5.2 VALUES ADJUSTED FOR DF#2 FRAMING. THE NUMBER OF NAILS SPECIFIED IN THE TABLE SHALL BE PROVIDED AT EACH CONNECTION. WHEN FULL-HEIGHT INTERIOR BEARING WALLS OR PURLIN BRACING ARE PROVIDED, RAFTER TIE NAILING MAY BE REDUCED PROPORTIONAL TO THE REDUCTION IN RAFTER SPACING; NO LESS THEN 3 NAILS SHALL BE PROVIDED AT EACH CONNECTION. NO SNOW LOAD

DF #2 FLOOR JOISTS, ALLOWABLE SPANS*

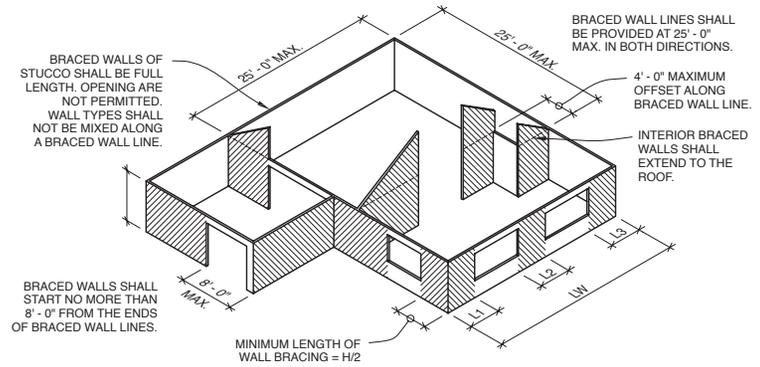
JOIST SPACING	DL = 10 PSF, LL = 40 PSF		
	2x6	2x8	2x10
12"	10' - 9"	14' - 2"	18' - 0"
16"	9' - 9"	12' - 9"	15' - 7"
24"	8' - 3"	10' - 5"	12' - 9"

* DATA FROM CRC TABLE R502.3.1(2)

PLYWOOD OR OSB FLOOR AND ROOF SHEATHING, ALLOWABLE SPANS*

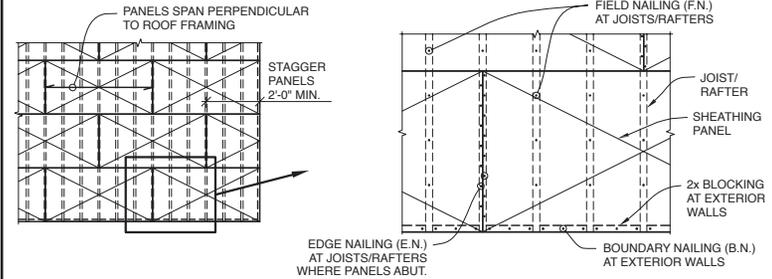
SHEATHING GRADES	ALLOWABLE LL (psf)	ROOF				FLOOR		
		MAX. SPAN (in.)		LOADS (psf.)		PANEL EDGES WITH T&G JOINTS OR BLOCKING		
		WITH EDGE SUPPORT	WITHOUT EDGE SUPPORT	TOTAL LOAD	LIVE LOAD	MAX. SPAN (in.)		
24/0	3/8	100	30	24	20	40	30	0
24/16	7/16	100	40	24	24	50	40	16
32/16	15/32, 1/2	180	70	32	28	40	30	16
40/20	19/32, 5/8	305	130	40	32	40	30	20
48/24	23/32, 3/4	-	175	48	36	45	35	24

* DATA FROM CRC TABLE R503.2.1.1(1) SHEATHING PANELS SHALL BE CONTINUOUS OVER TWO OR MORE SPANS AND PERPENDICULAR TO SUPPORTS. FOR 1/2" SHEATHING MAXIMUM SPAN SHALL BE 24". EDGE SUPPORT MAY BE PROVIDED BY TONGUE AND GROOVE EDGES, 2X BLOCKING OR PANEL EDGE CLIPS.



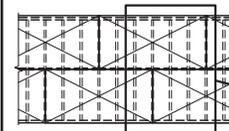
BASIC COMPONENTS OF THE LATERAL BRACING SYSTEM

1

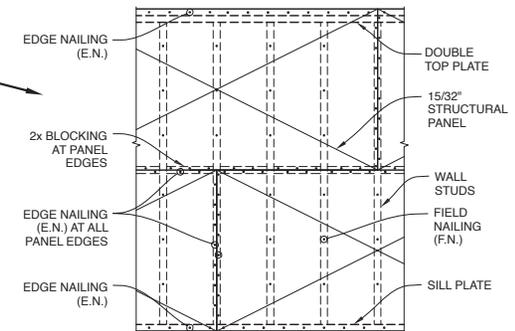


PARTIAL ROOF/FLOOR PLAN

ROOF/FLOOR SHEATHING



PARTIAL WALL ELEVATION



WALL SHEATHING

PANEL NAILING SCHEDULE

	B.N. / E.N. / F.N.
ROOFS:	8d @ 6" / 6" / 12"
FLOORS:	8d @ 6" / 6" / 10"
WALLS:	8d @ 6" / 12"

NOTES:

- NAILS SHALL BE PLACED 3/8" FROM PANEL EDGES.
- PROVIDE 1/8" GAP BETWEEN SHEATHING PANELS
- MINIMUM DIMENSION OF SHEATHING PANEL IN ANY DIRECTION SHALL BE 2'-0".
- WALL SHEATHING PANELS MAY BE INSTALLED WITH THE LONG DIRECTION ORIENTED VERTICALLY

City of Moorpark Climate Zone 9

2019 California Energy Code Low Rise Residential Buildings Table 150.1-A Component package - Single Family Standard Building Design

SINLE FAMILY			CLIMATE ZONE																	
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
Building Envelope Insulation																				
BUILDING ENVELOPE	Roofs/Ceilings	Option B (Meets §150.1(c)(9A))	Below Roof Deck Insulation ^{1,2} (With Air Space)	NR	NR	NR	R-19	NR	NR	NR	R-19									
			Ceiling Insulation	R-38	R-38	R-30	R-38	R-30	R-30	R-30	R-38									
			Radiant Barrier	NR	REQ	REQ	NR	REQ	REQ	REQ	NR	NR								
		Option C (Meets §150.1(c)(9A))	Ceiling Insulation	R-38	R-30	R-38	R-38	R-38	R-38	R-38										
			Radiant Barrier	NR	REQ	NR														
	Walls	Above Grade	Framed ³	U 0.048	U 0.065	U 0.065	U 0.048													
			Mass Wall Interior ^{4,5}	U 0.077 R-13	U 0.059 R-17															
			Mass Wall Exterior ⁶	U 0.125 R-8.0	U 0.077 R-13															
		Below Grade	Below Grade Interior	U 0.077 R-13	U 0.067 R-15															
			Below Grade Exterior	U 0.200 R-5.0	U 0.100 R-10	U 0.100 R-10	U 0.053 R-19													
	Floors	Slab Perimeter	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	U 0.58 R-7.0	
		Raised	U 0.037 R-19	U 0.037 R-19	U 0.037 R-19	U 0.037 R-19	U 0.037 R-19	U 0.037 R-19	U 0.037 R-19	U 0.037 R-19	U 0.037 R-19	U 0.037 R-19	U 0.037 R-19	U 0.037 R-19	U 0.037 R-19	U 0.037 R-19	U 0.037 R-19	U 0.037 R-19	U 0.037 R-19	
		Concrete Raised	U 0.092 R-8.0	U 0.092 R-8.0	U 0.037 R-19															
	Quality Insulation Installation (QII)			Yes																
	Roofing Products	Low-Sloped	Aged Solar Reflectance	NR	0.63	NR	0.63	NR												
			Thermal Resistance	NR	0.75	NR	0.75	NR												
		Steep-sloped	Aged Solar Reflectance	NR	0.20	0.20	0.20	0.20	0.20	0.20	NR									
			Thermal Resistance	NR	0.75	0.75	0.75	0.75	0.75	0.75	NR									
Penetration	Maximum U-factor		0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30		
	Maximum SHGC		NR	0.23	NR	0.23	NR	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	NR	
	Maximum Total Area		20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	
	Maximum West Facing Area		NR	5%	NR	5%	NR	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	NR	
Door	Maximum U-factor		0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20		

1 Install the specified R-value with an airspace present between the roof and the roof deck, such as standard installation of concrete or clay tile.
 2 R-values shown for below roof deck insulation are for wood-frame construction with insulation installed between the framing members. Alternatives including insulation above rafters or above roof deck shall comply with the performance standards.
 3 Assembly U-factors for exterior framed walls can be met with cavity insulation alone or with continuous insulation alone, or with both cavity and continuous insulation that results in an assembly U-factor equal to or less than the U-factor shown. Use Reference Joint Appendices JA4 Table 4.3.1, 4.3.1(a), or Table 4.3.4 to determine alternative insulation products to be less than or equal to the required maximum U-factor.
 4 Mass wall has a heat capacity greater than or equal to 7.0 Btu/h-ft².
 5 "Interior" denotes insulation installed on the inside surface of the wall. "Exterior" denotes insulation installed on the exterior surface of the wall.
 6 Below grade "interior" denotes insulation installed on the inside surface of the wall; and Below grade "exterior" denotes insulation installed on the outside surface of the wall.