APPENDIX F DESIGN WORKSHEET

Owner's Name:			
Address:	 	 	
Builder's Name:	 		
Site Location:	 	 	

PART 1: SITE CONDITIONS (Accompanies Chapter 2) 1. Has the Manufacturer's Worksheet been provided? yes no **Existing Grade Elevation (201-1)** 2. Does the site require a survey? yes no (Answer yes if: 1) elev. to be altered by grade or fill; 2) site near flood zone; 3) subdivision. Answer no if individually-sited with no alteration of building site.) 3. If yes to above, what is the surveyed existing grade elevation? ft. **Flood Protection Elevation (201-2)** 4. Is the building site in a flood zone? yes no (If yes to 4, then answer 5, 6, 7 & 8. If no, skip to 9.) 5. What is the Base Flood Elevation or the Flood Protection Elevation (use highest value)? ft. 6. Is the site to be graded, filled, or bermed? yes no (If no, skip to 9.) 7. If yes to 6, have all permits been provided? yes no 8. If no to 6, then are the buildings to be built on elevated foundations? yes no (If yes, this handbook cannot be used. Refer to FEMA Manual.)

Frost Penetration Depth (201-3)

9.	What is the maximum frost penetration depth? (see Appendix H, page H-4)		in.
10a.	Does foundation plan show base of footing extending below frost penetration depth? (If yes proceed; if no, applicant should revise plans.)	yes	no
10b.	Does foundation plan show base of footing extending below top- soil layer (min. 12") to undisturbed soil?		no
Grou	nd Water Table Elevation (201-4)		
11.	For subdivisions, does a Geotechnical Engineer recommend drainage of subsurface water? (If no, skip to 13.)	yes	no
12.	Has groundwater drainage plan been provided?	yes	no
Soil (Conditions (202, 203)		
13.	If any of the following adverse site conditions are discovered, specific Geotechnical Engineer will be required (applies to subdivisions and in homes.)	recommend dividually-s	ations by a ited
	Organic soil (8" topsoil layer)	yes	no
	Expansive (shrink-swell) soil	yes	no
	Sloping site	yes	no
	Subsidence	yes	no
	(Applicant may be referred to Geotechnical Engineer if any of the abo of above, move to next step.)	ve are yes.]	lf no, to all
14.	Is area in a known termite infestation area?	yes	no
	Region classification? (See Appendix H, Termite Infestation Map, page H-10) (If no, skip to 16.)		
15.	Has applicant complied with CABO R-308 or local ordinance for construction procedures and treatment? (If yes, continue; if no, refer applicant to CABO requirements.)	yes	no

PART 2: SITE PREPARATION

(Accompanies Chapter 3)

16.	Acceptable surface drainage plan provided? (301) (If no, one must be provided for subdivision)	yes	no	
17.	Grading plan provided? (302)	yes	no	
18.	Fill specifications conforming to those cited in HUD Land Plan- ning Data Sheet (79g)? (303) (If fill is used, below the home's foundation, a report by Geotech. Eng. should be submitted to provide fill specifications.)	yes	no	
19.	Finish grade elevation? (304) (Check answers to Part 1: #4 & #5. The finish grade elevation must be higher than #5 if in flood zone.)			*
	PART 3: DESIGN LOADS (Accompanies Chapter 4)			
Infor	mation from Manufacturer's Worksheet			
20.	Has all the information been provided on the Manufacturer's Worksheet? (Appendix E)	yes	no	
21.	What is the building self weight (W)? (Mfg. Wksht. #8)			_lbs.
22.	What is the building length (L)? (Mfg. Wksht. #3)			_ ft.
23.	What is the distributed weight per foot of unit length? (w=W/L) (402-1.B, C)			_ lbs./ft.
24.	What is the building type? (Mfg. WkSht. #2)	Single- Multi-S	Sectio Sectio	on n
		С, Е,	or I	
	Foundation design concept? (C1, C2, C3, C4, E1, E3, E4, E5, E6, E7, E8, I)			*

Dead Load (402-1)

25.	What is the light dead load value from Table 4-1?			*
	(402-1.A.1)	(lbs./	ft.)	
26.	What is the heavy dead load value from Table 4-1?			*
	(402-1.A.2)	(lbs./	ft.)	
27.	Does the answer from Question #23 fall within the values in #25 and #26? (402-1.D) (If the answer is yes, continue. If no, the foundation is not within the limits of this document and must be redesigned by a structural engineer.)	yes	no	
Snow	Load (402-2) / Minimum Roof Live Load (402-2.C)			
28a.	What is average annual ground snowfall (Pg)? (See Ground Snow Load map, pages H-11, H-12 and H-13.)	(lbs./sc	q.ft.)	*
28b.	What is 0.7 multiplied by Pg?			psf.
29a.	What is the roof slope? (Mfg. Wksht. #7)			
29b.	What is the minimum roof live load for the roof slope? (D-200.2.B)			psf.
30.	Record the larger magnitude of item 28b or item 29b. Use this magnitude for roof load where required.			psf.
Wind	Load (402-3)			
31a.	What is the basic wind speed (V)? (See Wind Speed map, page H-14.)			mph.
31b.	If V is less than 80 mph, record <i>MPS</i> min. 80 mph for wind design. (402-3.A)			mph.
32.	Is the site inland or coastal? (402-3.B) (If inland, skip to question #38.)	Inlanc Coast	l al	
33.	If a coastal area, has the manufacturer provided connection de- tails? (402-3.D) (Mfg. Wksht. #12)	yes	no	

34.	If yes to #33, what design wind speed has the manufacturer used in designing connection details? (Mfg. Wksht. #14)				_ mph. *
35.	Are the connection locations shown? (Mfg. Wksht. #16a)		yes	no	
36.	Are connection details provided for foundation shear walls? (For an answer of yes, all questions under Mfg. Wksht #16 must be answered satisfactorily.)		yes	no	
37.	Is the value for Question 34 equal to or greater than the number given in Question 31? (If yes, proceed. If no, return design to manufacturer for clarification.)		yes	no	
Seisn	nic Load				
38a.	What are the seismic acceleration values?	Aa			*
	(See Seismic maps, pages H-15 and H-16)	Av			*
38b.	Is $\underline{Av} < 0.15$? (if no, proceed. If yes, seismic need not be considered, skip questions 39 to 41.)		yes	no	
39.	Seismic performance category. (See H-300 for Special Requirements of Foundation Design.)	-			
40.	What is the applicant's proposed design concept? (Design Wksht. #24)	-			*
41.	Do the Foundation Design Concept Tables approve the founda- tion system for use in seismic areas of Question #38 above? (See Appendix A) (If yes, proceed. If no, return to applicant for foundation design choice more suited to high seismic areas.)		yes	no	
	PART 4-FINAL DESIGN PROCEDURE (Accompanies Chapter 6)				
42.	What is the actual building width? (Mfg. Wksht. #4)	-			ft.

43.	The nominal building width to be used in the Foundation Design Tables, (Aftg, Av & Ah) is Wt: (600-2.A and Figure 6-1)			ft.
44.	Where are the foundation supports located? Check drawings submitted by the owner and Foundation Design Concepts in Appendix A. Circle the support locations shown on the Manufacturer's foundation concept plan.		Chassis Exterior Marriage	Beams Walls e Wall
45.	Do these locations match the Foundation Concept shown in Ap- pendix A? Do the locations match Question #24 on the Design Worksheet? (If yes, proceed. If no, return to Owner for clarification.)		yes	no
46.	Is Vertical Anchorage present? (601-2.B, 601-3.B & 601-4.B (Figures 6-7 & 6-8); Mfg. Wksht. #12 & #16)		yes	no
	APPENDIX A			
47.	What is the basic system type? (From Part 3: #24; Mfg. Wksht. #2)			*
48.	What is the spacing between piers?H(Mfg. Wksht. #11)(602-2)	Exterior: Interior:	4' 5' 6' 4' 5' 6'	7' 8' 7' 8'
	Continuous Marria	ge Wall:	4' 5' 6'	7'8'
	Largest or Average Marriage Wall C	Opening:		ft.
	Tie Do	wn (C1)		ft.
	APPENDIX B			
Requ	ired Footing Size			
49.	The required Exterior Wall Footing, for the foundation type, is found in the Required Effective Footing Area table in App. B, Part 1. (Use maximum value from item #30.)			*
	The Required Exterior Square Footing size is:	Type C		sq.ft.
	Туј	pe E or I	(widt	ft. h)

50.	The Required Interior Footing area is: (Also exterior piers for foundation type E)			sq.ft.
51a.	The Required Continuous Marriage Wall Footing area is:			sq.ft.
51b.	The Required Footing area under posts at the ends of marriage wall opening(s) is:	2		sq.ft.
Verti	cal Anchorage Requirements in the Transverse Direction (6	602-4)		
52a.	Using the Foundation Design Load Tables (Appendix B, Part 2), determine the Required Vertical Anchorage.	Exterior Av	(lbs./pier space) lbs./ft for E ty lbs./tie-down	* cing; ype; spacing)
52b.	Number of vertical tie-down locations for multi-section units:		2 or 4 or 6	
52c.	For units with additional vertical anchorage at the interior pier determine the Required Vertical Anchorage.	rs, Interior Av	(lbs./int pier s	* spacing)
53.	What is the manufacturer-supplied value? (#16b, Mfg. WkSht.)	Exterior Interior		*
54.	Is this value (#53) greater than the value given in #52a?		yes no	

(If yes, continue. If no, return to owner for clarification.)

Horizontal Anchorage Requirements In The Transverse Direction (602-5)

What number of transverse foundation walls was selected? (602-5.E) (If vertical X-bracing planes are used, complete items #55a, #56 and #57 for 2 transverse walls, and then skip to item #59.)
item #59.)

55b. Are diagonal ties used to complete the top of the transverse short wall for horizontal anchorage? (602-5.G.1)

Estimate height (h) for appropriate illustration in Figure 6-10.

trial 1	trial 2	trial 3	1
ulai i	ulai 2	ulai 5	
2	4	6	
yes	yes	yes	
no	no	no	
			ft.

			trial 1	trial 2	trial 3	
56.	Using the tables, find the Required Horizontal Anchorage (Ah). (Appendix B; Part 3)	End Wall Ah				lbs./ft.
		Int Wall Ah				lbs./ft.
57a.	What is the manufacturer's-supplied rated ca- pacity for sliding? (#16c, Mfg. WkSht.)					lbs./ft.
57b.	If answer to item #55b is yes, record manufac- turer or product supplier rated strap tension ca- pacity					lbs./strap
58a.	Is value #57a greater than item #56? If yes, continue. If no, return to section 602-4.C and to question #55a and select a lar- ger number of transverse foundation walls. If the maximum number selected (6) does not work, return to owner (who may wish to con- tact the manufacturer for clarification).		yes no	yes no	yes no	
58b.	If answer to #55b is yes, required tension in diagonal (T_t). (Complete procedure in Section 602.5.G.1.)					lbs.
58c.	Is value #57b greater than #58b? If yes, continue to item #62. If no, return to owner for product with greater capacity.		yes no	yes no	yes no	

- 59. If using vertical X-bracing planes in lieu of transverse short walls (and the formulas in section 602-5.G.2), determine anchorage values and sizes for diagonal members. (If shear walls are selected in item #55, skip to item #62.)
 - a. Vertical X-bracing spacing proposed.
 - b. Number of vertical X-bracing locations proposed. (Item #13, Mfg. WkSht. for trial 1.)



- c. Required horizontal anchorage (C) value, based on formula. (602-5.G.2.c)
- d. Estimated height (h) in Figure 6-10.
- e. Tension (T_t) required. (602-5.G.2.d)
- 60. What is the manufacturer-supplied rated strap tension capacity? (#16, Mfg. WkSht.) (or capacity defined by literature supplied by product supplier)
- 61a. Is value #57 greater than value #59c?If yes, continue. If no, return to Section 602-5.G and to question #59 and select a greater number of X-brace locations as a next trial. Repeat until answer is yes, then continue.
- 61b. Is value #60 greater than value #59e?If yes, continue. If no, return to section 602-5.G and to question #59 and select a greater number of X-bracing locations. If the maximum number selected does not work, return to owner (who may wish to contact the manufacturer for clarification or product supplier for clarification).

Horizontal Anchorage Requirements In The Longitudinal Direction (602-6)

F - 9

- 62a. Using the tables, find the required horizontal anchorage (Ah) in the longitudinal direction. (Appendix B, Part 4) (602.6.E)
- 62b. If using vertical X-bracing planes (and the formulas in section 602-6.F) determine anchorage value for X-bracing planes. (If using exterior long walls, skip to item #63.)
 - 1. Number of chassis beam lines used for vertical Xbracing planes.

trial 1	trial 2	trial 3
2 or 4	2 or 4	2 or 4

Exterior Wall Ah

lbs./ft.

trial 1	trial 2	trial 3	
			lbs./
			x-brace
			set
			ft.
			lbs./diag.
			11
			10S. *
yes	yes	yes	
no	no	no	
yes	yes	yes	
no	no	no	
	-	-	

Number of X-bracing planes proposed under each chassis beam along the length of the unit.

- 2. Horizontal anchorage (B) required force, based on formula.
- 3. Assumed height (h-b) based on Figure 6-11.
- 4. Tension (T_L) based on formula. (602-6.F.(3)).
- 63. What is the manufacturer-supplied value for horizontal anchorage? (#16d, Mfg. WkSht.)
- 64a. For shear walls: is value #63 greater than #62a? If yes, skip to item #67. If no, contact owner for clarification.
- 64b. For X-bracing: is value #63 greater than value #62b.2? If yes, return to item #62b.3. If no, increase number of vertical X-bracing planes and repeat items 62b.1 and 62b.2 until answer is yes. For multi-section units consider 4 lines of vertical X-bracing under all chassis beams.
- 65. What is the manufacturer-supplied rated strap tension? (#16e, Mfg. WkSht. or product supplier)
- 66. Is value #65 greater than #62b.4? If yes, continue. If no, contact owner to obtain straps with greater capacity, or return to item #62b.1 and increase the number of vertical X-bracing planes until answer is yes.

APPENDIX C

Withdrawal Resistance Verification (603-2.B)

67. Using Appendix C, Table C-1 or C-2, verify that the foundation system will resist withdrawal. Answer question #67a for type E. Answer question #67b for types C, I, or type E with interior pier anchorage.





a.	<i>Wi</i> Cii	<i>thdrawal Resistance for long foundation wall.</i> ([*] rcle the type of material that is to be used.	Type E)	Reinfo Mason Mason All-Wo	rced Co ry-Fully ry-Grou eather W	oncrete / Grou ited @ Vood /	e ited 48" o.c. Footing
	1)	Using Table C-1, which capacity is greater than Av? (603-2.B.(1)) (#52a)	required				lbs./ft.
	2)	Using Table C-1, what is the height of the wall - for required withdrawal resistance? (hw $+ 6$ ")	+ footing				in.
	3)	What is the height of the wall + footing for frost tion? (frost depth $(#9) + 12$ ")	protec-				in.
	4)	What is the greatest height #67a.2 or #67a.3?					in.
		Circle the height which controls.			Withdr Frost D	awal Depth	
	5)	Record the bottom of footing depth from grade. (Item #67a.4 - 12")					<u>in.</u>
	6)	Using Table C-1, what is the required width of t footing for withdrawal?	he wall				in.
	7)	Is item #67a.6 greater than or equal to item #495 If yes, continue. If no, change footing width to b	? item #49.		yes	no	
	8)	Record design exterior wall footing width.					in.
b.	Wi (cc and	<i>thdrawal Resistance for Piers.</i> (Types C, C1 oncrete dead-man), I or type E with interior pier chorage - multi-section units.)	Exterior Grade = (Item #9)	Frost Depth	Wf =	hp =	able C-2)
	Ci	rcle pier type:	Reinfo	orced Co	oncrete		

Reinforced Concrete Reinforced Masonry - fully grouted Reinforced Concrete Dead-man

			Exterior	Interior (when used)	
	1)	Using Table C-2, which capacity is greater than required Av? (#52a and #52c) (603-2.B.(2))			lbs./pier *
	2)	Using Table C-2, what is the height of the pier + footing for required withdrawal resistance? (hp + 8")			in. *
	3)	What is the required height of pier + footing for frost protection? (frost depth $(#9) + 12$ ")			in.
	4)	What is the greatest height #67b.2 or #67b.3?			in.
		Circle the height which controls.	Withdrawal Frost Depth	Withdrawal Frost Depth	
	5)	Record the bottom of footing depth from grade. (Item #67b.4 - 12")			in.
	6)	Using Table C-2, what is the required width of the square footing if withdrawal resistance controls or if frost depth controls?			in. *
c.	Fr foc (no	<i>ost depth for marriage walls.</i> What is the required of pting below grade for frost protection? (frost depth (# p withdrawal resistance)	lepth of #9))		in.
Vertical (603-2.D	An)	chorage and Reinforcement for Longitudinal Fou	ndation Walls	and Piers	

- 68. Using Appendix C, Table C-3, C-4A or C-4B, verify that the foundation anchors will resist uplift. Answer question #68a for type E. Answer question #68b for types C, I, or type E with interior pier anchorage.
 - a. *Vertical Anchor Capacity for longitudinal foundation wall* (type E). (603-2.D.2)
 - Using Table C-4A (concrete & masonry), which capacity is greater than the required Av? (#52a, Design Wksht.) If treated wood wall, skip to item #68a.3.

lbs./lineal ft. of wall

	Circle correct washer choice for the capacity selected	Standard Was Oversized Wa	her 1sher
4	2) Using Table C-4A (masonry and concrete):		
	a) Required anchor bolt diameter		in.
	b) Required anchor bolt spacing		in.
	c) Using Table C-3A:		
	(1) Rebar size		*
	(2) Lap splice		in.
	(3) Rebar hook length		in.
	 Using Table C-4B (wood), which capacity is greater than the required Av? (#52a, Design Wksht.) If using concrete or masonry wall, skip to item #68b. 	./lineal ft. of w	vall
2	•) Using Table C-4B (wood):		
	a) Required nailing		*
	b) Minimum plywood thickness		in.
	c) Required anchor bolt diameter		in.
	d) Required anchor bolt spacing		in.
b.	Vertical Anchor Capacity for Piers Types C, I, or type E with interior pier anchorage) 603-2.D.1)		
	Exterior	Interior (when used for anchorage in multi-section	or units)
-) Using Table C-3, which capacity in the table is greater than the required Av? (From #52a, Design Wksht.)		lbs./pier

				Exterior	Interior	
	2)) Us	ing Table C-3:			
		a)	Number of anchor bolts	1 or 2	1 or 2	
		b)	Anchor diameter	1/2" or 5/8"	1/2" or 5/8"	
	3)) Us	ing Table C-3A:			
		a)	Rebar size	#4 or #5	#4 or #5	
		b)	Lap splice			in.
		c)	Rebar hook length			in.
Horiz	zontal	Anc	horage and Reinforcement for Transverse Fou	ndation Walls	s (603-3)	
69.	Using tion a walls	g App ancho . Use	pendix C, Table C-5A or C-5B, verify that the four prage will resist sliding at the transverse end found e for types C, E, or I.	ında- dation		
	a. F	'or co	ontinuous foundations.	End Wall	Interior Wall	
	U (v (/	sing wood Ah) (Table C-5A (concrete & masonry) or C-5B), which capacity is greater than the required 603-3) (item #56)?			lbs./ft.
	1)) Us	ing Table C-5A, find:			
		a)	Required anchor bolt diameter			in.
		b)	Required anchor bolt spacing			in.
		c)	Using Table C-3A:			
			(1) Rebar size			*
			(2) Lap splice			in.
			(3) Rebar hook length			in.
	2)) Us	ing Table C-5B, find:			
		a)	Required nailing			*

			End Wall	Interior Wall						
		b) Minimum plywood thickness			in.					
		c) Required anchor bolt diameter			in.					
		d) Required anchor bolt spacing			in.					
b.	For transverse short foundation walls completed with diagonal braces. (603-5)									
	Us and	sing Appendix C, Table C-5A, verify the diagonal chorage capacity to the short foundation wall.								
			End	Interior						
	1)	Record the required horizontal force (Ah \times Wt) from 602-5.G.1.a and item #56.			lbs.					
	2)	Table C-5A capacity for one 1/2" diameter bolt at 12" o.c.	1800	1800	lbs.					
	3)	Number of bolts (Ah \times Wt \div 1800; one mini- mum) at concrete or masonry top of short wall.		<u> </u>	*					
	4)	Size of anchor bolts			in.					
	5)	Using Table C-3A:								
		a) Rebar size			*					
		b) Lap splice			in.					
		c) Rebar hook length			in.					
c.	For vertical X-bracing planes in the transverse direction. (603-6)									
	Using Appendix C, Table C-5A, verify the diagonal anchor- age to the pier footings and the tension capacity of the diago- nals.									
	1)	Record the required horizontal force (C) from iten	. <u>.</u>	lbs.						
	2)	Table C-5A capacity for one $1/2$ " diameter bolt at	12" o.c.	1800	lbs.					

	3)	Number of bolts (C \div 1800; one minimum) at top of a footing.	 *
	4)	Record the required tension force (T_t) from item #59e.	 lbs./diag.
	5)	Select tension strap capacity greater than or equal to T_t from owner's product supplier or manufacturer's supplied capacity (item #60).	 lbs./diag.
	6)	Record diagonal strap data	
Horiz	zontal A	Anchorage for Longitudinal Foundation Walls (603-4)	
70.	Using tion he walls.	Appendix C, Table C-5A or C-5B, verify that the founda- orizontal anchorage will resist sliding at the long foundation Use for types C, E and I.	
	a. F a	or continuous exterior foundation walls.	
	Us (w Ał	sing Table C-5A (concrete and masonry) or Table C-5B rood), which capacity is greater than the required exterior n? (602-6.E) (item #62a)	 lbs./ft.
	1)	Using Table C-5A, find:	
		a) Required anchor bolt diameter	 in.
		b) Required anchor bolt spacing	 in.
		c) Using Table C-3A:	
		(1) Rebar size	 *
		(2) Lap splice	 in.
		(3) Rebar hook length	 in.
	2)	Using Table C-5B, find:	
		a) Required nailing	 *
		b) Minimum plywood thickness	 in.
		c) Required anchor bolt diameter	 in.
		d) Required anchor bolt spacing	 in.

b. For vertical X-bracing planes.

(603-6.A.(2))

Using Appendix C, Table C-5A, verify the diagonal anchorage to the pier footings and the tension capacity of the diagonals.

1) Record the required horizontal force (B) from item #62b.2.

2)	Table C-5A capacity for one 1/2" diameter bolt at 12" o.c.	1800	lbs.
3)	Number of bolts (B \div 1800; one minimum)		*
4)	Record the required tension force (T_L) from item #62b.4.		lbs./diag.
5)	Select tension strap capacity greater than or equal to T_L from owner's product supplier or manufacturer's supplied capacity (item #60)		lbs/diag

6) Record diagonal strap data

SUMMARY SHEET

(Accompanies Chapter 7)

71. Compare values from preceding questions. Select the largest value.

a. Bearing area and vertical anchorage

1. Pier footings: types C, E & I.

		Pi	ers		_
	Marriage Wall				
	Exterior	Interior	Cont.	At Post	_
Required Effective Footing Area					
from questions #49, #50, & #51.					sq.ft.
Required footing area to resist withdrawal due to uplift from Question #67. (for single-section or 2 tie-down system, only the ex- terior piers resist uplift, for 4 tie- down only the interior piers and			G		
exterior walls resist uplift)			sq.ft.		

lbs.

			Piers			
	Marriage	Wall		a i		
Pier Footing Sizes (largest of	Exterior	<u>Int</u>	erior_	<u>Cont.</u>	<u>At Post</u>	
above)						sq.f
"Dead-man" footing size.		sq.f	t.			
<u>Reinforcing for pier footings:</u> Bring forward answers from previou (Types C, I, or E with interior pier	us questions anchorage.)	8. (#6	8b)			
			Exte	rior	Interior	-
Number of anchor bolts						-
Anchor bolt diameter						in.
Rebar size						-
Lap splice						in.
Rebar hook length						in.
Footing depth: grade to bottom of	Exterio	<u>r </u>	Inte	l rior	Marriage Wall	-
footing				<u> </u>		in.
Pier footing and "dead-man" footing	g reinforcin	g bar	s:	<u>1</u>	#4 at 10" o.c.	<u>.</u>
"Dead-man" footing depth: grade to	bottom of	footi	ng	-		in.
Long Foundation wall footing: type	E or I:					
Required Effective Footing Width						
Required Footing Width for soil bea	aring (#49)			-		ft.
Required Footing Width to resist up (#67a.6)	olift withdra	wal		-		ft.
Wall Footing Size (largest of above)			-		ft.
Footing Depth: Grade to bottom of	footing (#67	7a.5)		_		in.

		Footing reinforcing bars.		2	#4 ba	rs
		<u>Reinforcing for longitudinal foundation walls:</u> Reco answers from item #68a and record sizes and spacin	ord gs.			
		From 68a.2: masonry and concrete:				
		Required anchor bolt diameter				in.
		Required washer size	Standard	0	versize	ed
		Required anchor bolt spacing				in
		Rebar size				
		Lap splice				in.
		Rebar hook length				in.
		From 68a.4: wood: Record answers from item #68a record sizes and spacings.	.4 and			
		Required nailing				
		Minimum plywood thickness.				in.
		Required anchor bolt diameter				
		Required anchor bolt spacing				in
b.	Ho tio	orizontal anchorage in the transverse direction - fo on walls	unda-			
	1.	Continuous foundation walls (#69a)				
		Number of transverse foundation walls (#55a)		2	4	6
		Required Footing Width (minimum)			12	in.
		From #69a.1: concrete / masonry:				
			End Wall	Inte	rior W	<u>/all</u>
		Anchor bolt diameter				in.

		End Wall	Interior Wall	
	Anchor bolt spacing			in.
	Rebar size			
	Lap splice			in.
	Rebar hook length			in.
	<u>From #69a.2: wood:</u>			
	Required nailing			
	Minimum plywood nailer			
	Anchor bolt diameter			
	Anchor bolt spacing			in.
2.	For transverse short foundation walls completed we agonal braces (#69b)	ith di-		
	Number of pairs of diagonals (1 for single- section units, 2 for multi-section units) times number of short walls (end or interior) (#55a)	End	Interior	
	Number of pairs of diagonals (1 for single- section units, 2 for multi-section units) times number of short walls (end or interior) (#55a) Diagonal spacing (same as number of short walls)	End	Interior	
	Number of pairs of diagonals (1 for single- section units, 2 for multi-section units) times number of short walls (end or interior) (#55a) Diagonal spacing (same as number of short walls) <u>From #69b: concrete / masonry:</u>	End	Interior	
	Number of pairs of diagonals (1 for single- section units, 2 for multi-section units) times number of short walls (end or interior) (#55a) Diagonal spacing (same as number of short walls) <u>From #69b: concrete / masonry:</u> Anchor bolt diameter		Interior	in.
	Number of pairs of diagonals (1 for single- section units, 2 for multi-section units) times number of short walls (end or interior) (#55a) Diagonal spacing (same as number of short walls) <u>From #69b: concrete / masonry:</u> Anchor bolt diameter Number of bolts	End	Interior	in.
	Number of pairs of diagonals (1 for single- section units, 2 for multi-section units) times number of short walls (end or interior) (#55a) Diagonal spacing (same as number of short walls) <u>From #69b: concrete / masonry:</u> Anchor bolt diameter Number of bolts Rebar size	End		in.
	 Number of pairs of diagonals (1 for single-section units, 2 for multi-section units) times number of short walls (end or interior) (#55a) Diagonal spacing (same as number of short walls) From #69b: concrete / masonry: Anchor bolt diameter Number of bolts Rebar size Lap splice 			in.
	 Number of pairs of diagonals (1 for single-section units, 2 for multi-section units) times number of short walls (end or interior) (#55a) Diagonal spacing (same as number of short walls) From #69b: concrete / masonry: Anchor bolt diameter Number of bolts Rebar size Lap splice Rebar hook length 			in. in.

Number of X-brace locations (#59)

	Spacing of vertical X-brace planes (#59)	ft.
	Items from #69c.3 and #69c.5	
	Required anchor bolt diameter	in.
	Number of bolts at top of footing to connect diagonal	
	Diagonal strap size	
	Connection to top flange of chassis beam (describe)	
Ho rio	orizontal anchorage in the longitudinal direction - exte- or foundation walls	
1.	Continuous foundation walls	
	<u>Reinforcing for longitudinal foundation walls:</u> record only if larger sizes or closer spacing than recorded for vertical anchorage (#71a.2).	
	From #70a.1: concrete / masonry:	
	Anchor bolt diameter	in.
	Anchor bolt spacing	in.
	Rebar size	
	Lap splice	in.
	Rebar hook length	in.
	<u>From #70a.2: wood:</u> record only if larger sizes or closer spacings than recorded for vertical anchorage (#71a.2)	
	Required nailing	
	Minimum plywood nailer	
	Anchor bolt diameter	
	Anchor bolt spacing	in.

c.

2.	Vertical X-bracing planes under chassis beam lines
	(#70b.)

	Number of X-brace locations along one chassis beam line.	
	Spacing of X-brace locations along one chassis beam line.	ft.
	Required anchor bolt diameter.	in.
	Number of bolts at top of footing at connection to the diagonal.	
	Diagonal strap size.	
	Connection to bottom flange of chassis beam (describe).	
72.	Do foundation dimensions and details comply with Foundation Capacities Table, based on Foundation Design Table Values?	yes no
73.	If #72 yes, approve. If no, return to applicant.	APPROVE
		DISAPPROVE