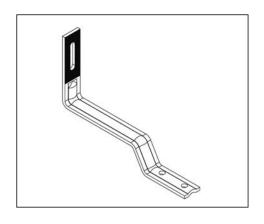
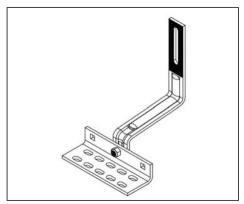
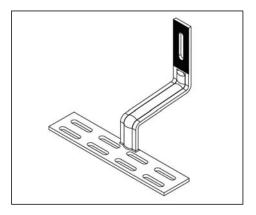
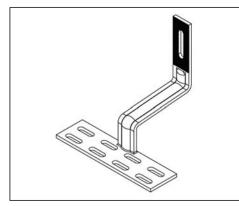


INSTALLATION GUIDE









SOLARHOOK FLAT TILE 004AT1H

SOLARHOOK UNIVERSAL W/ ADJUSTABLE BASE 004CT5H

SOLARHOOK SPANISH 7" FIXED BASE 004CT1H

SOLARHOOK SPANISH 9" FIXED BASE 004CT2H

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Pressure Tables	9-14



HOOK CAPACITIES AND ENGINEERING

Refer to engineering report tables for tested allowable loads. Refer to local AHJ to determine the correct code (ASCE 7-05, 7-10 or 7-16) and environmental loads. It is the responsibility of the installer to ensure these mounting attachments are appropriate for the application. Please contact your 3rd party engineer for more information.

ENGINEERING GUIDE LIMITATIONS

- Flush roof installations only
- Roof slope must be 0-45 degrees (0/12 12/12 pitch)
- Surrounding ground area must not slope more than 10 degrees
- Location must fall into Exposure Category B or C

Please refer to the Solarmount Installation Manual for proper installation of the Solarmount system. SOLARHOOKS are intended to replace L-feet in the system and connected to SOLARMOUNT or NXT Horizon rail according to the SOLARMOUNT Installation GUIDE or NXT Horizon Installation Guide respectively.

Please refer to www.unirac.com in the Technical Support section for the applicable D&E guide which should be used in installations that do not comply with the limitations above.

Follow all local and OSHA safety guidelines when installing.

RECOMMENDED TOOLS FOR HOOK INSTALL

- Drill, Impact Driver
- 3/16" drill bit
- Sealant
- Marking crayon/ chalk
- Rafter locator

RECOMMENDED TOOLS FOR OPTIONAL 3-COURSE FLASHING

- Roof cement
- Roof repair fabric
- Margin trowel
- Scrub brush
- Scissors

FIGURE 1: Lag pull-out (withdrawal) capacities (lbs) in typical roof lumber (ASD)							
	Specific Gravity	Lag Screw Specifications 5/16* shaft,* per inch thread depth					
Douglas Fir, Larch	0.50	266					
Douglas Fir, South	0.46	235					
Engelmann Spruce, Lodgepole Pine (MSR 1650f & higher)	0.46	235					
Hem. Fir, Redwood (Close Grain)	0.43	212					
Southern Pine	0.55	307					
Spruce, Pine, Fir	0.42	205					
Spruce, Pine, Fir (E of 2million PSI & higher grades of MSR & MEL)	0.50	266					

NOTES:

- (1) Thread must be embedded in the side grain of a rafter or other structural member integral with the building structure.
- (2) Lag bolts must be located in the middle third of the structural member.

SOURCES: AMERICAN WOOD COUNCIL, NDS 2005, TABLE 1

- (3) This table does not include shear capacities. If necessary, contact a local engineer to specify lag bolt size with regard to shear forces.
- (4) Install lag bolts with head and washer flush to surface (no gap). Do not over torque.
- (5) Withdrawal design values for lag screw connections shall be multiplied by applicable adjustment factors if necessary. See table 10.3 in the American Wood Council NDS for Wood Construction

FIGURE 1 AND ASSOCIATED NOTES (for reference only)

Refer to latest AWC, NDS data to select a lag bolt embedment depth to satisfy your Uplift Point Load Force (lbs), requirements. It is the installer's responsibility to verify that the substructure and attachment method is strong enough to support the maximum point loads calculated.





1. Remove tiles around installation area.



2. Locate and mark rafters.



3. Position hook, adjusting arm-base bolt position as needed. Use 3/16" bit to drill 2 pilot holes.





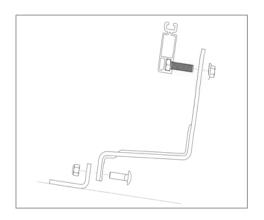
4. Remove hook, clean debris and fill pilot holes with roofing sealant.



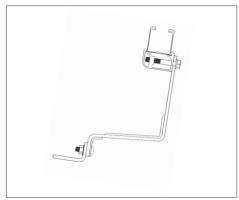
5. Reposition hook, secure with included lag screws.



6. Replace tiles, if necessary notch with grinder to ensure proper fit.



Install components as shown above.



Install components as shown above.

NOTE: SOLARHOOKS UNIVERSAL CT5 is compatible with all tile profiles. Installation process is the same for all tile profiles. NOTE: Refer to the SOLARMOUNT or NXT HORIZON Installation Guide for the remaining system installation.





1. Remove tiles around installation area.



2. Locate and mark rafters.



3. Position hook. Use 3/16" bit to drill 2 pilot holes.



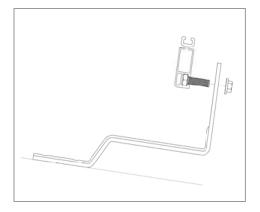
4. Remove hook, clean debris, then fill pilot holes and rib on back of hook with roofing sealant.



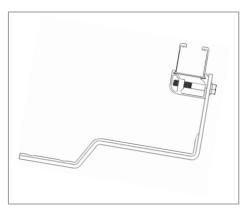
5. Reposition hook, secure with included lag screws.



6. Replace tiles, if necessary notch with grinder to ensure proper fit.



Install components as shown above.



Install components as shown above.

NOTE: SOLARHOOKS FLAT AT1 is compatible with flat tile profiles.

NOTE: Refer to the SOLARMOUNT or NXT HORIZON Installation Guide for the remaining system installation.





1. Remove tiles around installation area.



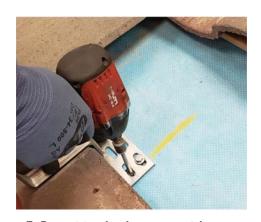
2. Locate and mark rafters.



3. Position hook. Use 3/16" bit to drill 2 pilot holes.



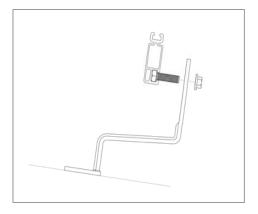
4. Remove hook, clean debris and fill pilot holes with roofing sealant.



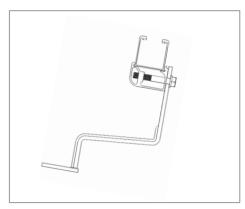
5. Reposition hook, secure with included lag screws.



6. Replace tiles, if necessary notch with grinder to ensure proper fit.



Install components as shown above.



Install components as shown above.





1. Clean underlay.



2. Using Margin Trowel, apply base coat of roofing cement.



3. Cut roof repair fabric size, lay into roofing cement.



4. Apply top coat of roof cement.

NOTE: 3-Course flashing is not required, but may be applied when required by AHJ or when additional protection is desired.

These images show the 3-Course method applied to a replacement tile mount. The process is the same for Solarhooks, with the roof cement being applied over the base.



ASSUMPTIONS AND USE DETAILS

- Pressure limits refer to Up, Down, Downslope, and Lateral PSF.
- See Design Pressure table appendix for representative geographic pressures or refer to Pressure Tables for Flush Mounted Systems at unirac.com.
- For each load direction, index the Allowable span for which the Allowable Pressure does not exceed the Design Pressure.
- The Allowable Span shall be the minimum of that for each load direction
- Pressure limits apply to all roof zones.
- Solarhooks are not recommended for use in hurricane zones.
- Tabulated allowable pressures assume continuous rail spans and may need to be divided by 1.25 for some rail span configurations.
- Pressure limits were calculated from the allowable Solarhooks loads, which are provided below for reference.

PRESSURE LIMIT MODIFICATION GUIDELINES

 Portrait Module Height 	65	inches
 Landscape Module Width 	39.4	inches

- Tabulated Pressure limits were calculated using a module size of 39.4in x 65in
- These pressure limits may be increased or decreased linearly.
- To modify pressure limits provided, follow these simple steps:
 - 1. For portrait modules, multiply the given pressure limit by (65" / New Module Length)
 - 2. For landscape modules, multiply the given pressure limit by (39.5" / New Module Width)
- · Allowable Loads (LBS):

UP/DOWN	DOWNSLOPE	LATERAL
218	120	210
270	93	39
270	120	210
228	120	210
	218 270 270	218 120 270 93 270 120

	AT1 Allowable Pressure (psf)								
	Up/	Down	Dowr	Slope	Lateral				
Allowable Spans (in.)	Portrait Modules	Landscape Modules	Portrait Modules	Landscape Modules	Portrait Modules	Landscape Modules			
72	13.4	22.1	12.2	12.2	12.9	21.3			
60	16.1	26.6	8.9	14.6	15.5	25.6			
48	20.1	33.2	11.1	18.3	19.4	32.0			
36	26.8	44.3	14.8	24.4	25.8	42.6			
24	40.2 66.4		22.2 36.5		38.8	64.0			
12	80.5	132.8	44.3	73.1	77.5	127.9			

	CT1 Allowable Pressure (psf)							
	Up/	Down	Down	Slope	Lateral			
Allowable Spans (in.)	Portrait Modules	Landscape Modules	Portrait Modules	Landscape Modules	Portrait Modules	Landscape Modules		
72	16.6	27.4	7.4	12.2	12.9	21.3		
60	19.9	32.9	8.9	14.6	15.5	25.6		
48	24.9	41.1	11.1	18.3	19.4	32.0		
36	33.2	54.8	14.8	24.4	25.8	42.6		
24	49.8	82.2	22.2	36.5	38.8	64.0		
12	99.7	164.5	44.3	73.1	77.5	127.9		

		CT2 Allowable Pressure (psf)								
	Up / I	Down	Down	Slope	Late	eral				
Allowable Spans (in.)	Portrait Modules	Landscape Modules	Portrait Modules	Landscape Modules	Portrait Modules	Landscape Modules				
72	14.0	23.1	7.4	12.2	12.9	21.3				
60	16.8	27.8	8.9	14.6	15.5	25.6				
48	21.0	34.7	11.1	18.3	19.4	32.0				
36	28.1	46.3	14.8	24.4	25.8	42.6				
24	42.1	69.4	22.2	36.5	38.8	64.0				
12	84.2	138.9	44.3	73.1	77.5	127.9				

	CT5 Allowable Pressure (psf)							
	Up / I	Down	Down	Slope	Lateral			
Allowable Spans (in.)	Portrait Modules	Landscape Modules	Portrait Modules	Landscape Modules	Portrait Modules	Landscape Modules		
72	16.6	27.4	5.7	9.4	2.4	4.0		
60	19.9	32.9	6.9	11.3	2.9	4.8		
48	24.9	41.1	8.6	14.2	3.6	5.9		
36	33.2	54.8	11.4	18.9	4.8	7.9		
24	49.8	82.2	17.2	28.3	7.2	11.9		
12	99.7	164.5	34.3	56.6	14.4	23.8		



NXT DESIGN RULES 8 INSTALLATION GUIDE PAGE

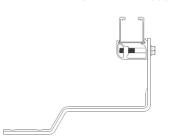
ASSUMPTIONS AND USE DETAILS

- Pressure limits refer to Up, Down, Downslope, and Lateral PSF.
- See design pressure table index for representative geographic pressures or refer to Pressure tables for Flush Mounted Systems at Unirac.com.
- For each load direction, index the Allowable span for which the Allowable Pressure does not exceed the Design Pressure.
- The Allowable Span shall be the minimum of that for each load direction. Pressure
- limits apply to all roof zones.
- Solar hooks not recommended for use in hurricane zones.
- Tabulated allowable pressures assume continuous rail spans and may need to be divided by 1.25 for some rail span configurations.
- Pressure limits were calculated from the allowable Solar hooks loads, which are provided below for reference.

PRESSURE LIMIT MODIFICATION GUIDELINES

- Portrait Module Height 65 in
 Landscape Module Width 39.4 in
- Tabulated Pressure were calculated using a module size of 39.4 in ×65 in
- These pressure limits may be increased or decreased linearly
- To modify pressure limits provided, follow these simple steps:
 - For portrait modules, multiply the given pressure limit by (65"/New module length)
 For Landscape modules, multiply the given pressure limit by (39.4"/New module width)
- Allowable loads (lbs)

HOOK TYPE	UP	DOWNLOAD	DOWNSLOPE	LATERAL
AT1	341	317	196	242
CT5	658	317	177	75
CT1	412	317	239	113
CT2	368	317	244	98







AT1 Flat Tile solar Hook with NH CT1/CT2 Spanish Fixed Hook Plate with NH

CT5 Universal Solar Hook W/Adjustable base with NH

	AT1 Allowable Pressure (psf)												
Allowable	Ų	JP	Down		DownSlope		Lateral						
Spans (in.)	Portrait	Landscape	Portrait	Landscape	Portrait	Landscape	Portrait	Landscape					
	Modules	Modules	Modules	Modules	Modules	Modules	Modules	Modules					
72	21.0	34.6	19.5	32.2	19.9	19.9	14.9	24.6					
60	25.2	41.5	23.4	38.6	14.5	23.9	17.9	29.5					
48	31.5	51.9	29.3	48.3	18.1	29.8	22.3	36.9					
36	42.0	69.2	39.0	64.4	24.1	39.8	29.8	49.1					
24	63.0	103.9	58.5	96.5	36.2	59.7	44.7	73.7					
12	125.9	207.7	117.0	193.1	72.4	119.4	89.4	147.4					

	CT1 Allowable Pressure (psf)										
Allowable	Ų	JP	Do	Down		DownSlope		Lateral			
Spans (in.)	Portrait	Landscape	Portrait	Landscape	Portrait	Landscape	Portrait	Landscape			
	Modules	Modules	Modules	Modules	Modules	Modules	Modules	Modules			
72	25.4	41.8	19.5	32.2	14.7	24.3	7.0	11.5			
60	30.4	50.2	23.4	38.6	17.6	29.1	8.3	13.8			
48	38.0	62.7	29.3	48.3	22.1	36.4	10.4	17.2			
36	50.7	83.7	39.0	64.4	29.4	48.5	13.9	22.9			
24	76.1	125.5	58.5	96.5	44.1	72.8	20.9	34.4			
12	152.1	251.0	117.0	193.1	88.2	145.6	41.7	68.8			

		CT2 Allowable Pressure (psf)										
Allowable	Ų	JP	Do	Down		DownSlope		Lateral				
Spans (in.)	Portrait	Landscape	Portrait	Landscape	Portrait	Landscape	Portrait	Landscape				
	Modules	Modules	Modules	Modules	Modules	Modules	Modules	Modules				
72	22.6	37.4	19.5	32.2	15.0	24.8	6.0	9.9				
60	27.2	44.8	23.4	38.6	18.0	29.7	7.2	11.9				
48	34.0	56.0	29.3	48.3	22.5	37.2	9.0	14.9				
36	45.3	74.7	39.0	64.4	30.0	49.5	12.1	19.9				
24	67.9	112.1	58.5	96.5	45.0	74.3	18.1	29.8				
12	135.9	224.2	117.0	193.1	90.1	148.6	36.2	59.7				

			CT:	5 Allowable	Pressure (psf)		
Allowable	Ų	JP	Do	wn	Dowr	Slope	Lat	eral
Spans (in.)	Portrait	Landscape	Portrait	Landscape	Portrait	Landscape	Portrait	Landscape
	Modules	Modules	Modules	Modules	Modules	Modules	Modules	Modules
72	40.5	66.8	19.5	32.2	10.9	18.0	4.6	7.6
60	48.6	80.2	23.4	38.6	13.1	21.6	5.5	9.1
48	60.7	100.2	29.3	48.3	16.3	27.0	6.9	11.4
36	81.0	133.6	39.0	64.4	21.8	35.9	9.2	15.2
24	121.5	200.4	58.5	96.5	32.7	53.9	13.8	22.8
12	243.0	400.8	117.0	193.1	65.4	107.8	27.7	45.7



PRESSURE TABLES | 9 INSTALLATION GUIDE | PAGE

		<u>B</u>	Bldg. Height =	= 15	ft.	2 5	Bldg. Height = 30 ft.	DC = 30	Down forth	2 =	In Dearenteer fresh	3	Pound ford
Roof	Roof Pitch	Zone 1	Zone 2 Z	Zone 3	DOWIN (psi)	Zone 1	Zone 2 Z	Zone 3	Down (psr)	Zone 1	L Zone 2 Z	Zone3	DOWN (DS
1	1:12	-9.7	-18.5	-29.5	15.1	-9.7	-18.5	-29.5	15.1	-12.1	-22.8	-36.1	15.1
2:	2:12	-8.7	-17.4	-27.3	14.7	-8.7	-17.4		14.7	-10.8	-21.5	-33.5	14.7
	3:12	89.	-17.5	-27.4	14.3	8.8	-17.5	-27.4	14.3	-10.8	-21.5	-33.5	14.3
	4:12	8.8	-17.5	-27.4	13.6	-8.8	-17.5	-27.4	13.6	-10.8	-21.5	-33.5	13.6
sur	5:12	8.8	-17.5	-27.4	13.6	-8.8	-17.5	-27.4	13.6	-10.8	-21.5	-33.6	13.6
	6:12	6.8-	-17.6	-27.5	13.4	6.8-	-17.6	-27.5	13.4	-10.9	-21.6	-33.6	13.4
	7:12	6.6-	-12.1	-12.1	13.3	6.6-	-12.1	-12.1	13.3	-12.3	-14.9	-14.9	15.4
	8:12	-9.9	-12.1	-12.1	13.2	6.6-	-12.1	-12.1		-12.3	-15.0	-15.0	15.2
	9:12	-10.0	-12.2	-12.2	13.1	-10.0	-12.2	-12.2	13.1	-12.3	-15.0	-15.0	15.1
	10:12	-10.0	-12.2	-12.2	13.0	-10.0	-12.2	-12.2	13.0	-12.4	-15.0	-15.0	15.0
11	11:12	-10.1	-12.3	-12.3	12.8	-10.1	-12.3	-12.3	12.8	-12.4	-15.1	-15.1	14.9
12	12:12	-10.1	-12.3	-12.3	12.7	-10.1			12.7	-12.5	-15.1	-15.1	14.7
Į.	1	,					5		;	,	1		
ä	1:12	-12.1	877-	-36.1	15.1	-14.1	-26.5	-41.9	15.1	-16.5	-30.7	48.5	15.1
	2:12	-10.8	-21.5	-33.5	14.7	-12.6	-24.9	-38.8	14.7	-14.7	-28.9	-44.9	14.7
Ex	3:12	-10.8	-21.5	-33.5	14.3	-12.6	-24.9	-38.8	14.3	-14.7	-29.0	44.9	14.3
	4:12	-10.8	-21.5	-33.5	13.6	-12.6	-25.0	-38.8	13.6	-14.8	-29.0	-45.0	13.6
	5:12	-10.8	-21.5	-33.6	13.6	-12.7	-25.0	-38.9	13.6	-14.8	-29.0	-45.0	13.6
	6:12	-10.9	-21.6	-33.6	13.4	-12.7	-25.0	-38.9	13.4	-14.8	-29.1	-45.0	13.4
	7:12	-12.3	-14.9	-14.9	15.4	-14.3	-17.4	-17.4	17.2	-16.7	-20.2	-20.2	19.3
	8:12	-12.3	-15.0	-15.0	15.2	-14.3	-17.4	-17.4	17.1	-16.7	-20.2	-20.2	19.2
	9:12	-12.3	-15.0	-15.0	15.1	-14.4	-17.5	-17.5	16.9	-16.7	-20.3	-20.3	19.1
	10:12	-12.4	-15.0	-15.0	15.0	-14.4	-17.5	-17.5	16.8	-16.8	-20.3	-20.3	18.9
11	11:12	-12.4	-15.1	-15.1	14.9	-14.5	-17.5	-17.5	16.7	-16.8	-20.4	-20.4	18.8
12	12:12	-12.5	-15.1	-15.1	14.7	-14.5	-17.6	-17.6	16.6	-16.9	-20.4	-20.4	18.7
Ä	1:12	-14.9	-27.9	-44.1	15.1	-17.0	-31.5	-49.8	15.1	-19.3	-35.8	-56.4	15.1
2:	2:12	-13.3	-26.3	-40.8	14.7	-12.1	-29.7	-46.1	14.7	-17.3	-33.7	-52.3	14.9
	3:12	-13.3	-26.3	-40.9	14.3	-15.2	-29.8	-46.2	14.3	-17.3	-33.8	-52.3	14.5
	4:12	-13.4	-26.3	-40.9	13.6	-15.2	-29.8	-46.2	13.6	-17.3	-33.8	-52.3	13.9
	5:12	-13.4	-26.3	-40.9	13.6	-15.2	-29.8	-46.2	13.6	-17.4	-33.8	-52.4	13.8
	6:12	-13.4	-26.4	-41.0	13.4	-15.3	-29.9	-46.3	13.4	-17.4	-33.9	-52.4	13.7
ate	7:12	-15.1	-18.3	-18.3	17.9	-17.1	-20.8	-20.8	19.7	-19.5	-23.6	-23.6	21.9
	8:12	-15.1	-18.4	-18.4	17.8	-17.2	-20.8	-20.8	19.6	-19.5	-23.6	-23.6	21.7
	9:12	-15.2	-18.4	-18.4	17.7	-17.2	-20.9	-20.9	19.5	-19.6	-23.7	-23.7	21.6
10	10:12	-15.2	-18.4	-18.4	17.5	-17.3	-20.9	-20.9	19.4	-19.6	-23.7	-23.7	21.5
11	11:12	-15.2	-18.5	-18.5	17.4	-17.3	-20.9	-20.9	19.2	-19.6	-23.8	-23.8	21.4
12	12:12	-15.3	-18.5	-18.5	17.3	-17.3	-21.0	-21.0	19.1	-19.7	-23.8	-23.8	21.3
Roof	Roof Pitch	Ss = 0.0	Ss = 0.1	Ss = 0.2	Ss = 0.3	Ss = 0.4	Ss = 0.5	Ss = 1.0	Ss = 1.25	Ss = 1.5	Ss = 2.0	Ss = 2.5	Ss = 3.1
H	1:12	0.7	0.8	1.0	1.1	1.3	1.4	1.9		2.5		4.0	
2:	2:12		1.4	1.6			2.0	2.4		2.9		4.3	
'n	3:12	1.9	1.9	5.0	2.2	2.4	2.5	2.9		3.4		4.6	5.5
	4:12	2.0	2.0		2.4	2.5	2.6	3.1		3.5		4.9	80.0
	5:12	2.4	2.4	2.5	2.7	2.8	2.9	3.4	3.5	x x	4.4	5.1	0.0
Slo	7.12				5.3	1.0	2.0	0.0	0.0	5.5	0.4	0.0	2.0
	8.12		2 6	5 6		2 6	מ	0.0	5 4	4.4	0.4	2 4	ט ע
6	9:12	3.2	3.2	3.3	3.4	3.6	3.7	4.1	4.2	4.5	5.0	5.7	6.5
10	10:12			3.4	3.5	3.7	3.8	4.2		4.6		5.8	9.9
11	11:12		3.3	3.5	3.6	3.7	3.8	4.2	4.4	4.6		5.9	9.9
12	12:12	3.4	3.4	3.5	3.7	3.8	3.9	4.3	4.4	4.7	5.3	5.9	6.7
		Ss = 0.0	Ss = 0.1	Ss = 0.2	Ss = 0.3	Ss = 0.4	Ss = 0.5	Ss = 1.0	Ss = 1.25	Ss = 1.5	Ss = 2.0	Ss = 2.5	Ss = 3.1
		0.0	0.2	0.5	0.7	6.0	1.0	1.6	1.8	2.2	2.9	3.6	4.5

California*

ASCE

85 mph

Basic Wind Speed

5 psf Ground Snow Load

* This table is not inclusive of all areas within the state or region. The local wind speeds and snow loads should be independantly verifed for the specific install location.



PRESSURE TABLES: 10 INSTALLATION GUIDE: PAGE

Marie Secret Se		5 -	to December (net)	in the second	Post of profit		Den courses for	Down Or other Dear	Dearing land		Denney Linner		
111 209 333 111 209 333 111 209 334 111 209 334 111 209 130 308 141 209 130 308 141 120 308 143 209 139 309 144 120 308 130 309 130 309 130 309 130 309 144 120 240 309 130 130 130 130 130 130 130 130 130 130 130 130 130 130 130 140 130 140 130 140 130 140 130 140 130 140 130 140 130 140 130 140 130 140 130 140 130 140 130	itch		Zone 2	Zone 3		Zone	Zone 2	Zone 3	Treat House	Zone	Zone 2	Zone 3	lucid luncon
9.8 19.7 30.8 19.7 30.8 19.7 30.8 19.7 30.8 19.7 30.8 19.7 30.8 19.7 30.8 19.9	1:12	-11.1	-20.9	-33.3	15.1	-11.1	-20.9	-33.3	15.1	-13.7	-25.7	40.7	15.1
99 197 308 193 399 197 308 197 308 197 308 197 308 197 308 198 309 197 308 138 309 138 309 138 309 138 309 138 309 138 309 138 138 309 138 138 318 138 138 138 138 139 140 110 139 139 140 110 139 139 140 110 140 110 139 139 140 110 140 110 140 110 140 110 140 110 140 110 140 140 110 140 140 140 140 140 141	2	8.6-	-19.7	-30.8	14.7	8.6-	-19.7	-30.8			-24.2	-37.7	14.7
99 198 309 136 99 198 309 136 49 136 409 198 309 136 409 136 409 136 136 137 343 343 340 400 136 136 137 344 110 137 344 110 137 134 112 343 132 344 113 137 134 123 349 160 150 160	2	6.6-	-19.7	-30.8	14.3	6'6-	-19.7	-30.8	14.3	-12.2	-24.2	-37.7	14.3
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114 138 138 141 114 138 138 141 114 138 138 141 114 139 139 139 1140 139 139 139 114 139 139 114 139 139 114 139 139 114 139 139 141 140 170 170 170 113. 23.9 40.7 15.1 160 29.8 47.1 15.1 166 326 3	2	-11.3	-13.8	-13.8	14.2	-11.3	-13.8	-13.8	14.2	-14.0	-17.0	-17.0	16.6
114 139 139 139 114 139 130 <td>17</td> <td>-11.4</td> <td>-13.8</td> <td>-13.8</td> <td>14.1</td> <td>-11.4</td> <td>-13.8</td> <td>-13.8</td> <td>14.1</td> <td>-14.0</td> <td>-17.0</td> <td>-17.0</td> <td>16.4</td>	17	-11.4	-13.8	-13.8	14.1	-11.4	-13.8	-13.8	14.1	-14.0	-17.0	-17.0	16.4
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13.7 25.7 40.7 15.1 16.0 29.8 47.1 15.1 18.6 34.6 54.5 50.5 13.7 14.7 14.3 14.3 28.1 44.6 14.7 16.7 32.6 32.6 50.5 11.2 24.2 37.7 14.3 14.3 28.1 43.7 14.3 16.7 13.6 14.4 28.1 43.7 14.3 14.3 28.1 43.7 14.7 16.7 32.6 50.5 12.2 22.2 20.6 11.2 32.6 32.7 50.6 13.6 14.7 14.7 15.0 14.7 15.0 14.7 15.0 14.7 15.0 14.7 14.7 14.7 14.4 28.2 43.7 14.8 14.8 12.2 22.0 14.0 14.7 14.4 28.2 14.8 14.8 14.8 12.9 18.8 18.8 12.2 12.2 12.0 14.0 14.0 14.0 14.0 18.0 18.0 18.0 18.0 <t< td=""><td>17</td><td>-11.4</td><td>-13.9</td><td>-13.9</td><td>13.8</td><td>-11.4</td><td>-13.9</td><td>-13.9</td><td>13.8</td><td>-14.1</td><td>-17.1</td><td>-17.1</td><td>16.2</td></t<>	17	-11.4	-13.9	-13.9	13.8	-11.4	-13.9	-13.9	13.8	-14.1	-17.1	-17.1	16.2
122	2	-13.7	-25.7	-40.7	15.1	-16.0	-29.8		15.1	-18.6	-34.6	-54.5	15.1
12.2 24.2 34.7 14.3 -14.3 -28.1 -43.7 14.3 -16.2 -28.1 -43.7 14.3 -16.2 -28.2 -43.7 13.6 -14.3 -28.1 -43.7 13.6 -14.4 -28.2 -43.7 13.6 -14.4 -28.2 -43.7 13.6 -14.4 -28.2 -43.7 13.6 -16.2 -19.0 13.6 -16.7 -19.7 -19.7 -18.8 -22.8	2	-12.2	-24.2	-37.7	14.7	-14.3	-28.1	-43.6	14.7	-16.7	-32.6	-50.5	14.7
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139 169 169 168 162 196 196 189 188 229 314 110 162 163 <td>2</td> <td>-12.3</td> <td>-24.3</td> <td>-37.8</td> <td>13.4</td> <td>-14.4</td> <td>-28.2</td> <td>-43.8</td> <td>13.4</td> <td>-16.8</td> <td>-32.7</td> <td>-50.6</td> <td>13.4</td>	2	-12.3	-24.3	-37.8	13.4	-14.4	-28.2	-43.8	13.4	-16.8	-32.7	-50.6	13.4
139 -169 -169 167 -162 -162 -169 -169 -169 -169 -169 -169 -169 -160 -162 -162 -197 -187 -188 -228 -229 -229 -229 -240 -170 -170 -170 -170 -170 -166 -162 -197 -197 -188 -188 -229 -	2	-13.9	-16.9	-16.9	16.8	-16.2	-19.6	-19.6	18.9	-18.8	-22.8	-22.8	21.2
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140 170 170 164 163 197 197 185 185 189 229 229 229 1440 170 170 163 -163 -198 184 190 -230 <	2	-14.0	-17.0	-17.0	16.6	-16.2	-19.7	-19.7	18.6	-18.9	-22.9	-22.9	21.0
140 -170 -170 16.3 -16.3 -19.8 -19.8 18.4 -19.0 -23.0 -23.0 -144.1 -17.1 -17.1 16.2 -16.4 -19.8 -19.8 18.3 -19.0 -23.0 -23.0 -16.9 -31.4 -49.6 15.1 -19.2 -35.5 -56.0 15.1 -19.2 -38.0 -58.8 1 -15.1 -29.6 -45.0 14.7 -17.1 -33.5 -51.9 14.4 -19.5 -38.0 -58.8 1 -15.1 -29.6 -46.0 13.6 -17.2 -33.5 -51.9 14.4 -19.5 -38.0 -58.8 1 -38.0 -58.8 1 -19.5 -38.0 -58.8 1 -38.0 -58.8 1 -38.0 -58.8 1 -38.0 -58.8 1 -38.0 -58.8 1 -38.0 -58.8 1 -38.0 -58.8 1 -38.0 -58.8 1 -38.0 -58.8 </td <td>12</td> <td>-14.0</td> <td>-17.0</td> <td>-17.0</td> <td>16.4</td> <td>-16.3</td> <td>-19.7</td> <td>-19.7</td> <td>18.5</td> <td>-18.9</td> <td>-22.9</td> <td>-22.9</td> <td>20.9</td>	12	-14.0	-17.0	-17.0	16.4	-16.3	-19.7	-19.7	18.5	-18.9	-22.9	-22.9	20.9
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$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	2	-16.9	-31.4	-49.6	15.1	-19.2	-35.5	-56.0	15.1	-21.8	-40.3	-63.4	15.1
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15.1 29.6 46.0 13.6 -17.2 -33.5 -51.9 13.9 -19.6 -38.0 -58.8 1 -15.2 -29.7 -46.0 13.6 -17.2 -33.6 -52.0 13.8 -19.6 -38.1 -58.8 1 -15.2 -29.7 -46.0 13.6 -17.2 -33.6 -52.0 13.7 -19.6 -38.1 -58.8 1 -17.0 -20.7 -46.1 13.4 -17.3 -33.6 -52.0 13.7 -19.6 -36.6 -26.6	2	-15.1	-29.6	-46.0	14.3	-17.2	-33.5	-51.9	14.4	-19.5	-38.0	-58.8	15.4
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15.2 -29.7 46.1 13.4 -17.3 -33.6 -52.0 13.7 -19.6 -38.1 -58.9 1 -17.0 -20.7 -20.7 19.7 -19.3 -23.4 -23.4 21.7 -20.0 -26.6 -26.7	2	-15.2	-29.7	-46.0	13.6	-17.2	-33.6	-52.0	13.8	-19.6	-38.1	-58.8	15.1
-17.0 -20.7 -20.7 19.7 -19.3 -23.4 -23.4 -23.6 -26.7 -26.7	6:12	-15.2	-29.7	-46.1	13.4	-17.3	-33.6	-52.0	13.7	-19.6	-38.1	-58.9	15.0
-17.1 -20.7 -20.7 -19.4 -23.5 -23.5 21.6 -22.0 -26.6 26.6 26.6 26.6 26.6 26.7 -27.1 -20.8 -19.4 -23.5 -23.5 21.5 -22.1 -26.7 -26.8 -26.8 -26.8 -26.8 -26.8 -26.8 -26.8 -26.8 -26.8 -26.8 -26.8 -26.8 -26.8 -26.8 -26.8 -26.8 -26.8 -26.8 -26.8<	2	-17.0	-20.7	-20.7	19.7	-19.3	-23.4	-23.4	21.7	-22.0	-26.6	-26.6	24.1
17.1 -20.8 -20.8 19.4 -19.4 -23.5 -23.5 21.5 -22.1 -26.7 -26.8 -26.8 -26.8 -26.8 -26.8 -26.8 -26.8 -26.8 -26.8 -26.8 -26.7 -26.7 -26.8 -26.7 -2	2	-17.1	-20.7	-20.7	19.5	-19.4	-23.5	-23.5	21.6	-22.0	-26.6	-26.6	24.0
-17.2 -20.8 -20.8 19.3 -19.5 -23.5 -23.5 21.4 -22.1 -26.7 -26.7 -26.7 -26.7 -26.7 -26.7 -26.7 -26.7 -26.7 -26.7 -26.7 -26.7 -26.7 -26.7 -26.7 -26.7 -26.7 -26.8 -27.2 -	7 5	-17.1	-20.8	-20.8	19.4	-19.4	-23.5	-23.5	21.5	-22.1	-26.7	-26.7	23.9
-17.2 -20.8 -20.8 19.2 -19.5 -23.6 -23.6 21.2 -22.1 -26.8 -27.2 -	7	-17.2	-20.8	-20.8	19.3	-19.5	-23.5	-23.5	21.4	-22.1	-26.7	-26.7	23.7
-17.2 -20.9 -20.9 19.1 -19.5 -23.6 -21.1 -22.2 -26.8 -26.9 -27.1 -27.2 -27.4 -27.5 -27.6 -27.1 -27.2 -27.4 -27.5 -27.9 -27.1 -27.2 -27.9 -27.1 -27.2 -27.9 -27.1 -27.2 -27.9 -27.1 -27.2 -27.2 -27.2 -27.2 -27.2 -27.2	7	-17.2	-20.8	-20.8	19.5	-19.5	-23.6	-23.6	21.2	-22.1	-26.8	-26.8	23.6
Ss = 0.1 Ss = 0.2 Ss = 0.3 Ss = 0.4 Ss = 0.5 Ss = 1.0 Ss = 1.0 Ss = 2.0	12	-17.2	-20.9	-20.9	19.1	-19.5	-23.6	-23.6	21.1	-22.2	-26.8	-26.8	23.5
0.7 0.8 1.0 1.1 1.3 1.4 1.9 2.1 2.5 3.2 4.0 1.4 1.4 1.6 1.7 1.9 2.0 2.4 2.6 2.9 3.1 3.6 4.3 1.9 1.9 2.0 2.2 2.4 2.5 2.9 3.1 3.4 3.9 4.6 2.0 2.0 2.2 2.4 2.5 2.6 3.1 3.2 3.5 3.5 4.0 4.6 4.9 2.0 2.0 2.2 2.4 2.5 2.6 3.1 3.2 3.8 4.0 4.6 5.3 2.4 2.5 2.7 2.8 2.9 3.4 3.5 3.8 4.0 4.6 5.1 2.7 2.7 2.8 2.9 3.1 3.3 3.4 3.8 4.0 4.6 5.3 3.0 3.1 3.3 3.4 3.5 4.0 4.1 4.9 5.6	itch	Ss = 0.0	Ss = 0.1	Ss = 0.2	Ss = 0.3	Ss = 0.4	Ss = 0.5	Ss = 1.0	= 1.	Ss = 1.5	Ss = 2.0	Ss = 2.5	Ss = 3.1
1.4 1.6 1.7 1.9 2.0 2.4 2.6 2.9 3.1 3.6 4.3 1.9 1.0 2.0 2.2 2.4 2.5 2.9 3.1 3.4 3.9 4.6 2.0 2.0 2.2 2.4 2.5 2.6 3.1 3.2 3.5 3.9 4.6 4.9 2.4 2.5 2.7 2.8 2.9 3.4 3.5 3.8 4.0 4.6 5.1 2.7 2.7 2.8 2.9 3.1 3.2 3.6 3.8 4.0 4.6 5.3 2.9 3.0 3.1 3.3 3.4 3.8 4.0 4.6 5.3 3.0 3.1 3.3 3.4 3.5 4.0 4.1 4.4 4.9 5.6 3.2 3.2 3.4 3.5 4.0 4.1 4.4 4.9 5.6 3.2 3.2 3.2 3.7 4.1 4.	7			1.0	1.1	1.3	1.4				3.2		4.8
1.9 1.9 2.0 2.2 2.4 2.5 2.9 3.1 3.4 3.9 4.6 2.0 2.0 2.2 2.4 2.5 2.6 3.1 3.2 3.5 4.2 4.9 2.4 2.0 2.2 2.4 2.5 2.6 3.1 3.2 3.8 4.0 4.4 5.1 2.7 2.7 2.8 2.9 3.1 3.2 3.6 3.8 4.0 4.6 5.3 3.0 3.0 3.1 3.3 3.4 3.8 4.0 4.6 5.3 3.0 3.0 3.1 3.3 3.4 3.8 4.0 4.2 4.8 5.5 3.0 3.1 3.3 3.4 3.5 4.0 4.1 4.4 4.9 5.6 3.2 3.2 3.4 3.5 4.0 4.1 4.4 4.9 5.6 3.3 3.4 3.5 3.7 4.1 4.2 4.	2	1.4	1.4		1.7		2.0	2.4			3.6	4.3	5.2
2.0 2.0 2.2 2.4 2.5 2.6 3.1 3.2 3.5 3.5 4.2 4.9 2.4 2.4 2.5 2.7 2.8 2.9 3.4 3.5 3.8 4.0 4.4 5.1 2.7 2.7 2.8 2.9 3.1 3.2 3.6 3.8 4.0 4.6 5.3 3.0 3.0 3.1 3.3 3.4 3.8 4.0 4.2 4.8 5.5 3.0 3.0 3.1 3.3 3.4 3.5 4.0 4.1 4.4 4.9 5.6 3.2 3.2 3.3 3.4 3.5 4.0 4.1 4.9 5.6 5.7 3.2 3.3 3.4 3.5 3.7 4.1 4.2 4.5 5.0 5.7 3.3 3.4 3.5 3.7 3.8 4.2 4.4 4.6 5.1 5.8 3.4 3.4 3.5 3.	2	1.9		5.0	2.2	2.4	2.5	5.9		3.4	3.9		
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2.7 2.8 2.9 3.1 3.2 3.6 3.8 4.0 4.6 5.3 2.9 2.9 3.0 3.1 3.3 3.4 3.8 4.0 4.1 4.4 4.9 5.5 3.0 3.0 3.1 3.3 3.4 3.5 4.0 4.1 4.4 4.9 5.6 3.2 3.2 3.3 3.4 3.6 3.7 4.1 4.2 4.5 5.0 5.7 3.3 3.4 3.5 3.7 3.8 4.2 4.3 4.6 5.1 5.8 3.3 3.4 3.5 3.7 3.8 4.2 4.3 4.6 5.1 5.8 3.4 3.5 3.7 3.8 4.2 4.4 4.6 5.2 5.9 3.4 3.4 3.5 3.7 3.8 3.9 4.3 4.4 4.7 5.3 5.9 3.4 3.4 3.5 3.5 3.5 3.	2	2.4			2.7		2.9	3.4		3.8	4.4		6.0
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3.0 3.0 3.1 3.3 3.4 3.5 4.0 4.1 4.4 4.9 5.6 3.2 3.2 3.3 3.4 3.6 3.7 4.1 4.2 4.5 5.0 5.7 3.3 3.3 3.4 3.5 3.7 3.8 4.2 4.3 4.6 5.1 5.8 3.3 3.3 3.5 3.6 3.7 3.8 4.2 4.4 4.6 5.2 5.9 3.4 3.4 3.5 3.7 3.8 3.9 4.3 4.4 4.7 5.3 5.9 55=0.0 55=0.1 55=0.1 55=0.3 55=0.5 55=1.0 55=1.5 55=1.5 55=2.5 55=2.5	7	5.9	2.9	3.0	3.1	3.3	3.4	3.8	4.0	4.2	4.8		6.3
3.2 3.2 3.3 3.4 3.6 3.7 4.1 4.2 4.5 5.0 5.7 3.3 3.3 3.4 3.5 3.7 3.8 4.2 4.3 4.6 5.1 5.8 3.3 3.3 3.5 3.6 3.7 3.8 4.2 4.4 4.6 5.2 5.9 5.4 3.4 3.5 3.7 3.8 3.9 4.3 4.4 4.7 5.3 5.9 5.5 = 0.0 5.5 = 0.1 5.5 = 0.3 5.5 = 0.3 5.5 = 0.5 5.5	2	3.0	3.0	3.1	3.3	3.4	3.5	4.0	4.1	4.4	4.9	5.6	6.5
3.3 3.3 3.4 3.5 3.7 3.8 4.2 4.3 4.6 5.1 5.8 3.3 3.3 3.5 3.6 3.7 3.8 4.2 4.4 4.6 5.2 5.9 3.4 3.4 3.5 3.7 3.8 3.9 4.3 4.4 4.7 5.3 5.9 5s=0.0 5s=0.1 5s=0.2 5s=0.3 5s=0.4 5s=0.5 5s=1.2 5s=1.5 5s=2.0 5s=2.5	2	3.2	3.2	3.3	3.4	3.6	3.7	4.1	4.2	4.5	2.0	5.7	6.5
3.3 3.5 3.6 3.7 3.8 4.2 4.4 4.6 5.2 5.9 3.4 3.4 3.5 3.7 3.8 3.9 4.3 4.4 4.7 5.3 5.9 Ss = 0.0 Ss = 0.1 Ss = 0.2 Ss = 0.3 Ss = 0.4 Ss = 0.5 Ss = 1.25 Ss = 2.0 Ss = 2.5	12			3.4	3.5	3.7	3.8	4.2	4.3	4.6	5.1		9.9
3.4 3.5 3.7 3.8 3.9 4.3 4.4 4.7 5.3 5.9 \$s = 0.0 \$s = 0.1 \$s = 0.2 \$s = 0.3 \$s = 0.4 \$s = 0.5 \$s = 1.25 \$s = 1.25 \$s = 2.0 \$s = 2.5	12	3.3			3.6	3.7	3.8	4.2	4.4	4.6	5.2		9.9
Ss = 0.1 Ss = 0.2 Ss = 0.3 Ss = 0.4 Ss = 0.5 Ss = 1.0 Ss = 1.25 Ss = 1.5 Ss = 2.0 Ss = 2.5	7	3.4			3.7	3.8	3.9	4.3		4.7	5.3		6.7
		Se = 0.0	Cc - 0 1	0									

Exposure Category D

Southwest*

ASCE

90 mph

Basic Wind Speed

5 psf Ground Snow Load

* This table is not inclusive of all areas within the state or region. The local wind speeds and snow loads should be independantly verifed for the specific install location.

Exposure Category C

Exposure Category B

Down Slope



PRESSURE TABLES | 11 | PAGE

Snov	v)*
ASCE	7-05
110 1	mph
Basic Win	d Speed
10	psf
Ground Sr	ow Load
* This tah	le is not

East Coast (Low

inclusive of all areas within the state or region. The local wind speeds and snow loads should be independantly verifed for the specific install location.

			B :	dg. Heig	Bldg. Height = 15 ft	نب	8	Bldg. Height = 30 ft.	ht = 30	ft.	18	Bldg. Height = 60	= 60	ft.
172 319 503 188 17.2 319 503 188 17.2 319 467 113 310 467 113 301 467 113 301 467 113 301 467 113 301 467 113 301 467 113 301 467 1143 1154 301 467 1143 1154 301 467 1143 1154 301 467 1143 1154 301 467 1143 1154 301 467 1143 1154 301 467 1143 1154 301 467 1143 1154 301 467 1143 1154 1	_	Roof Pitch		Zone 2	Zone 3	Down (psr)		Zone 2	Zone 3	Down (psr)		Up Pressures (psr)	Zone 3	nown (psr
153 301 467 181 15.3 30.1 467 181 467 183 30.1 467 183 30.1 467 173 15.3 30.1 46.7 173 15.3 30.1 46.7 149 186 15.4 30.1 46.7 14.3 15.4 30.1 46.7 149 18.2 15.4 30.2 46.8 13.7 -15.4 30.1 46.7 149 -18.2 17.4 21.0 21.0 12.0 12.0 19.9 21.2 19.9 21.2 17.4 21.1 21.1 21.1 19.7 17.4 21.1 19.9 21.2 17.5 21.1 </td <td></td> <td>1:12</td> <td>-17.2</td> <td>-31.9</td> <td>-50.3</td> <td>18.8</td> <td>-17.2</td> <td>-31.9</td> <td>-50.3</td> <td>18.8</td> <td>-21.1</td> <td>-39.0</td> <td>-61.4</td> <td>18.8</td>		1:12	-17.2	-31.9	-50.3	18.8	-17.2	-31.9	-50.3	18.8	-21.1	-39.0	-61.4	18.8
153 301 467 173 153 301 467 173 185		2:12	-15.3	-30.1	-46.7	18.1	-15.3	-30.1	-46.7	18.1	-18.9	-36.8	-56.9	19.0
15A 30.1 46.7 14.9 -15.4 30.1 46.7 14.9 -18.4 -15A 30.1 46.7 14.3 -15.4 30.1 -46.7 14.3 -15.4 30.1 -46.7 14.3 -15.4 30.1 -46.7 14.3 -15.4 30.1 -46.8 14.3 -15.4 -10.2 -10.3	_	3:12	-15.3	-30.1	-46.7	17.3	-15.3	-30.1	-46.7	17.3	-18.9	-36.8	-56.9	18.2
15A 301 467 143 -15A 30.1 -46.7 143 -196 115A 302 -46.8 13.7 -15.4 30.1 -46.8 13.7 -19.6 -17.3 -10.0 19.9 -17.3 -10.0 19.9 -17.3 -10.0 19.9 -17.4 -21.0 19.9 -21.0 -21.0 19.9 -17.4 -21.1 -21.0 19.9 -17.4 -21.1 -21.0 19.9 -21.4 -21.0 -21.0 19.9 -21.4 -21.1 19.7 -21.2 <td></td> <td>4:12</td> <td>-15.4</td> <td>-30.1</td> <td>-46.7</td> <td>14.9</td> <td>-15.4</td> <td>-30.1</td> <td>-46.7</td> <td>14.9</td> <td>-18.9</td> <td>-36.8</td> <td>-57.0</td> <td>15.8</td>		4:12	-15.4	-30.1	-46.7	14.9	-15.4	-30.1	-46.7	14.9	-18.9	-36.8	-57.0	15.8
154 302 468 137 -154 302 468 137 -154 302 -468 137 -154 302 -468 137 -173 -174 -110 -210 -109 -173 -210 -109 -210 -109 -210 -109 -210 -109 -210 -100		5:12	-15.4	-30.1	-46.7	14.3	-15.4	-30.1	-46.7	14.3	-19.0	-36.9	-57.0	15.2
173 210 -210 199 -173 210 -210 -199 -173 210 -199 -174 -210 -210 199 -212 -210 -174 -211 -210 -210 -210 -210 -210 -210 -210 -210 -210 -210 -210 -210 -211 -212 -211<		6:12	-15.4	-30.2	-46.8	13.7	-15.4	-30.2	-46.8	13.7	-19.0	-36.9	-57.0	14.6
174 210 -210 198 -174 210 -210 198 -174 211 -194 -114 -211 197 -174 -211 197 -174 -211 197 -174 -211 197 -174 -211 197 -214 -175 -212 -194 -175 -211 197 -214 -175 -211 -211 197 -214 -175 -212 -175 -175 -211 199 -211 -211 199 -212 -175 -212 -190 -212 -212 -190 -212 -212 -190 -212	_	7:12	-17.3	-21.0	-21.0	19.9	-17.3	-21.0	-21.0	19.9	-21.3	-25.7	-25.7	23.5
174 211 211 19.7 17.4 21.1 19.7 17.4 21.1 19.7 17.4 21.1 19.7 17.4 21.1 19.7 17.4 21.1 21.1 19.5 21.2 19.5 21.2 11		8:12	-17.4	-21.0	-21.0	19.8	-17.4	-21.0	-21.0	19.8	-21.3	-25.8	-25.8	23.3
17.4 21.1 21.1 19.5 -17.4 21.1 19.5 -17.4 21.1 19.5 -17.4 21.1 19.5 -17.5 -11.2 -21.2 19.4 -21.2 19.5 -21.2 -21.2 19.5 -21.2		9:12	-17.4	-21.1	-21.1	19.7	-17.4	-21.1	-21.1	19.7	-21.4	-25.8	-25.8	23.2
17.5 -21.2 -21.2 17.5 -21.2 -21.2 19.4 -17.5 -21.2 -21.2 19.4 -21.2 -17.5 -21.2 </td <td></td> <td>10:12</td> <td>-17.4</td> <td>-21.1</td> <td>-21.1</td> <td>19.5</td> <td>-17.4</td> <td>-21.1</td> <td>-21.1</td> <td>19.5</td> <td>-21.4</td> <td>-25.9</td> <td>-25.9</td> <td>23.1</td>		10:12	-17.4	-21.1	-21.1	19.5	-17.4	-21.1	-21.1	19.5	-21.4	-25.9	-25.9	23.1
-17.5 -21.2 -21.5 -17.5 -21.2 <th< td=""><td></td><td>11:12</td><td>-17.5</td><td>-21.2</td><td>-21.2</td><td>19.4</td><td>-17.5</td><td>-21.2</td><td>-21.2</td><td>19.4</td><td>-21.4</td><td>-25.9</td><td>-25.9</td><td>23.0</td></th<>		11:12	-17.5	-21.2	-21.2	19.4	-17.5	-21.2	-21.2	19.4	-21.4	-25.9	-25.9	23.0
21.1 -39.0 -61.4 18.8 -24.5 -45.0 -17.0 18.8 -25.2 -42.6 -65.8 20.3 -25.2 -18.9 -36.8 -56.9 19.0 -22.0 -42.6 -65.8 19.5 -25.2 -18.9 -36.8 -56.9 18.2 -22.0 -42.6 -65.8 19.5 -25.2 -19.0 -36.9 -57.0 15.2 -22.0 -42.6 -65.9 17.1 -25.2 -19.0 -36.9 -57.0 14.6 -22.1 -42.7 -65.9 16.3 -25.2 -19.0 -36.9 -57.0 14.6 -22.1 -42.7 -65.9 16.3 -25.2 -21.3 -25.7 -25.9 -25.9 -29.9 -29.9 -26.9 -28.7 -21.4 -25.9 -25.9 -23.2 -24.7 -29.9 -29.9 -28.9 -28.2 -21.4 -25.9 -25.9 -29.9 -29.9 -29.9 -28.2 <th< td=""><td></td><td>12:12</td><td>-17.5</td><td>-21.2</td><td>-21.2</td><td>19.3</td><td>-17.5</td><td>-21.2</td><td>-21.2</td><td>19.3</td><td>-21.5</td><td>-25.9</td><td>-25.9</td><td>22.9</td></th<>		12:12	-17.5	-21.2	-21.2	19.3	-17.5	-21.2	-21.2	19.3	-21.5	-25.9	-25.9	22.9
-18.9 -36.8 -56.9 19.0 -22.0 -42.6 -65.8 20.3 -25.6 -18.9 -36.8 -56.9 18.2 -22.0 -42.6 -65.8 19.5 -25.6 -18.9 -36.8 -56.9 18.2 -22.0 -42.6 -65.9 17.1 -25.6 -19.0 -36.9 -57.0 15.8 -22.0 -42.9 -65.9 17.1 -25.6 -19.0 -36.9 -57.0 14.6 -22.1 -65.9 16.5 -25.9 -25.9 -26.9 16.5 -25.9 -25.9 -26.9 16.5 -25.9 -25.9 -25.9 -26.		1:12	-21.1	-39.0	-61.4	18.8	-24.5	-45.2	-71.0	18.8	-28.5	-52.3	-82.0	18.8
-18.9 -36.8 -56.9 18.2 -22.0 -42.6 -65.8 19.5 -25.6 -18.9 -36.8 -57.0 15.8 -22.0 -42.7 -65.9 17.1 -25.6 -19.0 -36.9 -57.0 15.2 -22.0 -42.7 -65.9 17.1 -25.6 -19.0 -36.9 -57.0 14.6 -22.1 -42.7 -65.9 16.3 -25.6 -19.0 -36.9 -57.0 14.6 -22.1 -42.7 -65.9 16.3 -25.6 -21.3 -25.8 -25.8 -25.9 -26.9<		2:12	-18.9	-36.8	-56.9	19.0	-22.0	-42.6	-65.8	20.3	-25.5	-49.3	-76.1	21.7
-18.9 -36.8 -57.0 15.8 -22.0 42.6 -65.9 17.1 -25.6 -19.0 -36.9 -57.0 14.6 -22.1 -42.7 -65.9 16.5 -55.6 -19.0 -36.9 -57.0 14.6 -22.1 -42.7 -65.9 16.5 -55.6 -19.0 -36.9 -57.0 14.6 -22.1 -42.7 -65.9 16.5 -55.6 -21.3 -25.8 -25.8 -23.3 -24.7 -29.9 -29.9 26.9 -28.7 -21.4 -25.9 -25.9 -25.9 -26.9 -26.9 -26.2 -28.7 -21.4 -25.9 -25.9 -25.9 -26.9 -26.9 -26.2 -28.2 -21.4 -25.9 -25.9 -26.9 -26.1 -28.1 -28.2 -28.2 -28.2 -28.2 -28.2 -28.2 -28.2 -28.2 -28.2 -28.2 -28.2 -28.2 -28.2 -28.2 -28.2 -28.2		3:12	-18.9	-36.8	-56.9	18.2	-22.0	-42.6	-65.8	19.5	-25.5	-49.3	-76.1	21.0
19.0 36.9 57.0 15.2 22.0 42.7 -65.9 16.5 25.6 19.0 36.9 57.0 14.6 -22.1 42.7 -65.9 16.3 25.6 -19.0 36.9 -57.0 14.6 -22.1 42.7 -65.9 16.3 -25.6 -21.3 -25.8 -25.7 25.7 25.7 25.9 29.9 26.9 26.2 28.7 -21.4 -25.8 -25.8 -25.9 -29.9 -29.9 26.9 28.7 -21.4 -25.9 -25.9 -25.9 -26.9 26.2 -28.7 -21.4 -25.9 -25.9 -26.9 26.0 26.2 -28.2 -21.4 -25.9 -25.9 -26.9 -26.9 26.2 -28.2 -21.4 -25.9 -25.9 -26.9 -26.9 -26.9 -26.2 -28.2 -21.4 -25.9 -25.9 -26.9 -26.9 -26.9 -26.2 -28.2		4:12	-18.9	-36.8	-57.0	15.8	-22.0	-42.6	-65.9	17.1	-25.6	-49.4	-76.1	18.6
19.0 -36.9 -57.0 14.6 -22.1 42.7 -65.9 16.3 -25.7 -21.3 -25.7 -25.7 -25.7 -25.7 -25.9 -29.9 -29.9 26.5 -28.6 -21.3 -25.8 -25.8 -23.2 -24.7 -29.9 -29.9 26.9 -28.6 -28.7 -21.4 -25.8 -25.9 -25.9 -29.9 -29.9 26.9 -28.7 -21.4 -25.9 -25.9 -27.9 -29.9 26.9 -28.2 -21.4 -25.9 -25.9 -27.9 -29.9 26.2 -28.2 -21.4 -25.9 -25.9 -27.9 -20.0 -20.9 26.2 -28.2 -21.5 -25.9 -27.9 -30.0 -30.0 26.1 -28.2 -23.1 -44.9 -69.3 17.1 -26.3 -50.7 -78.2 18.8 -33.4 -23.2 -44.9 -69.3 17.1 -26.3 -50.7 -78	_	5:12	-19.0	-36.9	-57.0	15.2	-22.0	-42.7	-65.9	16.5	-25.6	49.4	-76.2	18.4
21.3 25.7 25.7 23.5 24.7 29.9 29.9 26.5 28.6 21.3 25.8 25.8 23.3 24.7 29.9 29.9 26.4 28.7 21.4 25.8 25.8 23.2 24.7 29.9 29.9 26.4 28.2 21.4 25.9 25.9 23.1 24.8 20.9 20.9 26.3 28.3 21.4 25.9 25.9 25.9 23.1 24.9 26.0 26.2 28.2 21.4 25.9 25.9 25.9 23.0 20.0 26.2 28.3		6:12	-19.0	-36.9	-57.0	14.6	-22.1	42.7	-65.9	16.3	-25.6	49.4	-76.2	18.3
-21.3 -25.8 -25.8 -25.8 -25.9 -29.9 -29.9 -29.9 -28.7 -21.4 -25.8 -25.8 -25.8 -25.9 -29.9 -29.9 -28.3 -21.4 -25.9 -25.9 -25.9 -25.9 -25.9 -25.9 -25.9 -25.9 -25.9 -25.9 -25.9 -26.2 -28.2 </td <td></td> <td>7:12</td> <td>-21.3</td> <td>-25.7</td> <td>-25.7</td> <td>23.5</td> <td>-24.7</td> <td>-29.9</td> <td>-29.9</td> <td>26.5</td> <td>-28.6</td> <td>-34.6</td> <td>-34.6</td> <td>30.1</td>		7:12	-21.3	-25.7	-25.7	23.5	-24.7	-29.9	-29.9	26.5	-28.6	-34.6	-34.6	30.1
-21.4 -25.8 -25.8 -23.2 -24.8 -29.9 -29.9 -28.3 -28.3 -21.4 -25.9 -25.9 -23.1 -24.8 -30.0 -30.0 26.2 -28.2 -21.4 -25.9 -25.9 -23.0 -24.9 -30.0 -30.0 26.2 -28.2 -21.5 -25.9 -25.9 23.0 -24.9 -30.0 -30.0 26.1 -28.2 -25.8 -47.5 -74.7 18.8 -29.3 -30.1 -30.1 25.9 -28.2 -23.1 -44.8 -69.2 20.8 -26.2 -50.7 -78.2 18.8 -33.2 -23.2 -44.9 -69.3 17.1 -26.3 -50.7 -78.2 18.8 -39.2 -23.2 -44.9 -69.3 17.1 -26.3 -50.7 -78.2 18.8 -39.2 -23.2 -44.9 -69.3 17.1 -26.3 -50.7 -78.2 18.2 -29.2 -25		8:12	-21.3	-25.8	-25.8	23.3	-24.7	-29.9	-29.9	26.4	-28.7	-34.6	-34.6	30.0
-21.4 -25.9 -25.9 -25.9 -27.9 -30.0 -30.0 -30.0 -26.2 -28.2 -21.4 -25.9 -25.9 -25.9 -24.9 -30.0 -30.0 26.1 -28.2 -21.5 -25.9 -25.9 -24.9 -30.1 -30.0 26.1 -28.2 -25.8 -47.5 -74.7 18.8 -29.3 -53.7 -84.2 18.8 -33.2 -23.1 -44.8 -69.2 20.8 -26.2 -50.7 -78.1 18.8 -33.2 -23.2 -44.9 -69.3 17.1 -26.2 -50.7 -78.2 18.8 -29.3 -20.2 -22.2 -20.2 -20.3 -20.2 -20.3 -20.2 -20.3 -20.2 -20.3 -20.3 -20.2 -20.3 -20.3 -20.2 -20.3 -20.3 -20.3 -20.3 -20.3 -20.3 -20.3 -20.3 -20.3 -20.3 -20.3 -20.3 -20.3 -20.3 -20.3 -20.		9:12	-21.4	-25.8	-25.8	23.2	-24.8	-29.9	-29.9	26.3	-28.7	-34.7	-34.7	29.9
-21.4 -25.9 -25.9 -23.9 -24.9 -30.0 -30.0 26.1 -28.8 -21.5 -25.9 -25.9 -23.9 -24.9 -30.1 -30.1 25.9 -28.8 -21.5 -25.9 -25.9 -24.9 -30.1 -30.1 25.9 -28.8 -25.8 -44.8 -69.2 20.8 -26.2 -50.7 -78.2 18.8 -33.2 -23.2 -44.9 -69.3 17.1 -26.3 -50.7 -78.2 18.8 -29.8 -23.2 -44.9 -69.3 17.1 -26.3 -50.7 -78.2 18.8 -29.8 -23.2 -44.9 -69.3 17.1 -26.3 -50.7 -78.2 18.8 -29.8 -25.0 -31.2 -29.4 -25.0 -78.2 18.8 -29.8 -26.0 -31.4 -31.4 27.7 -29.4 -35.5 -35.5 -30.3 -30.4 -35.5 -35.6 -36.7 -37.3 <t< td=""><td></td><td>10:12</td><td>-21.4</td><td>-25.9</td><td>-25.9</td><td>23.1</td><td>-24.8</td><td>-30.0</td><td>-30.0</td><td>26.2</td><td>-28.8</td><td>-34.7</td><td>-34.7</td><td>29.7</td></t<>		10:12	-21.4	-25.9	-25.9	23.1	-24.8	-30.0	-30.0	26.2	-28.8	-34.7	-34.7	29.7
-25.9 -25.9 -25.9 -24.9 -30.1 -30.1 25.9 -28.8 -25.8 -47.5 -74.7 18.8 -29.3 -53.7 -84.2 18.8 -33.2 -25.8 -47.5 -74.7 18.8 -29.3 -53.7 -84.2 18.8 -33.2 -23.1 -44.8 -69.2 20.8 -26.2 -50.7 -78.1 18.8 -33.2 -23.2 -44.9 -69.3 17.1 -26.3 -50.7 -78.2 18.8 -29.8 -23.2 -44.9 -69.3 17.1 -26.3 -50.7 -78.2 18.8 -29.8 -23.2 -44.9 -69.4 17.0 -26.3 -50.7 -78.2 18.8 -29.8 -25.3 -45.0 -69.4 17.0 -26.3 -50.7 -78.2 18.8 -29.8 -26.1 -31.5 -31.5 -31.5 -32.5 -32.5 -32.5 -32.8 -33.2 -26.1 -31.		11:12	-21.4	-25.9	-25.9	23.0	-24.9	-30.0	-30.0	26.1	-28.8	-34.8	-34.8	29.6
-25.8 47.5 -74.7 18.8 -29.3 -53.7 -84.2 18.8 -32.3 -23.1 44.8 69.2 20.8 -26.2 -50.7 -78.1 22.0 -29.8 -23.2 44.9 69.3 20.0 -26.2 -50.7 -78.2 13.3 -29.8 -23.2 44.9 69.3 17.2 -26.3 -50.7 -78.2 18.9 -29.8 -23.3 44.9 -69.3 17.1 -26.3 -50.7 -78.2 18.9 -29.8 -23.3 45.0 -69.4 17.0 -26.3 -50.7 -78.2 18.9 -29.8 -23.3 45.0 -69.4 17.0 -26.3 -50.7 -78.2 18.9 -29.8 -26.0 -31.6 17.0 -26.3 -35.6 -35.5 30.8 -33.8 33.8 -33.8 -33.8 -26.1 -31.5 27.2 -29.5 -35.7 -35.7 30.3 33.8 -31.8		12:12	-21.5	-25.9	-25.9	22.9	-24.9	-30.1	-30.1	25.9	-28.8	-34.8	-34.8	29.5
-23.1 -44.8 69.2 20.8 -26.2 -50.7 -78.1 22.0 -29.8 -23.2 -44.9 69.3 20.0 -26.2 -50.7 -78.2 21.3 -29.8 -23.2 -44.9 69.3 17.2 -26.3 -50.7 -78.2 18.8 -29.8 -23.2 -44.9 69.3 17.1 -26.3 -50.7 -78.2 18.8 -29.8 -25.0 -23.3 45.0 69.4 17.0 -26.3 -50.7 -78.2 18.8 -29.9 -26.0 -31.4 -31.4 27.7 -29.4 -35.5 -35.5 30.8 -33.8 -33.6		1:12	-25.8	-47.5	-74.7	18.8	-29.3	-53.7	-84.2	18.8	-33.2	-60.8	-95.3	19.0
-23.2 -44.9 -69.3 20.0 -26.2 -50.7 -78.2 21.3 -29.8 -23.2 -44.9 -69.3 17.2 -26.3 -50.7 -78.2 18.9 -29.8 -23.2 -44.9 -69.3 17.1 -26.3 -50.7 -78.2 18.9 -29.8 -23.3 -65.0 17.0 -26.3 -50.7 -78.2 18.9 -29.8 -25.0 -31.6 17.0 -26.3 -50.7 -78.2 18.9 -29.8 -26.0 -31.4 -31.4 27.7 -29.4 -35.5 -35.6 -35.6 -35.6 -35.6 -35.6 -37.2 -29.5 -35.6 -35.6 -35.8 -33.8 </td <td></td> <td>2:12</td> <td>-23.1</td> <td>44.8</td> <td>-69.2</td> <td>20.8</td> <td>-26.2</td> <td>-50.7</td> <td>-78.1</td> <td>22.0</td> <td>-29.8</td> <td>-57.4</td> <td>-88.4</td> <td>23.5</td>		2:12	-23.1	44.8	-69.2	20.8	-26.2	-50.7	-78.1	22.0	-29.8	-57.4	-88.4	23.5
-23.2 -44.9 -69.3 17.2 -26.3 -50.7 -78.2 18.9 -29.6 -23.2 -44.9 -69.3 17.1 -26.3 -50.7 -78.2 18.8 -29.5 -23.3 -45.0 -69.4 17.0 -26.3 -50.8 -78.3 18.7 -29.5 -26.0 -31.4 -31.4 27.7 -29.4 -35.5 -35.5 30.8 -33.6 -26.1 -31.5 -31.5 27.6 -29.5 -35.6 -35.6 -36.6 -33.8 -33.8 -26.1 -31.5 -31.6 27.7 -29.6 -35.7 -35.7 30.8 -33.8 -26.2 -31.6 -31.6 27.1 -29.6 -35.7 -35.7 30.6 -33.6 -26.2 -31.6 -31.6 27.1 -29.6 -35.7 -35.7 30.3 31.3 33.2 -26.2 -31.6 -37.1 -29.6 -35.7 -35.7 30.6 41. <tr< td=""><td></td><td>3:12</td><td>-23.2</td><td>-44.9</td><td>-69.3</td><td>20.0</td><td>-26.2</td><td>-50.7</td><td>-78.2</td><td>21.3</td><td>-29.8</td><td>-57.4</td><td>-88.4</td><td>22.7</td></tr<>		3:12	-23.2	-44.9	-69.3	20.0	-26.2	-50.7	-78.2	21.3	-29.8	-57.4	-88.4	22.7
-23.2 -44.9 -69.3 17.1 -26.3 -50.7 -78.2 18.8 -29.6 -23.3 -45.0 -694 17.0 -26.3 -50.8 -78.3 18.7 -29.6 -26.0 -31.4 -31.4 27.7 -29.4 -35.5 -35.5 30.8 -33.4 -26.1 -31.5 -31.5 27.6 -29.5 -35.6 -35.6 -35.6 -35.6 -33.6 -33.4 -26.1 -31.5 -31.6 -27.6 -29.5 -35.7 -35.7 -35.7 -33.4 -26.1 -31.6 -31.6 27.7 -29.6 -35.7 -35.7 30.2 -33.6 -26.2 -31.6 -31.6 27.1 -29.6 -35.7 -35.7 30.2 33.6 -31.6 -26.2 -31.6 -37.1 -29.6 -35.7 -35.7 30.2 33.6 41.9 -33.6 -3.2 -3.1 27.1 -29.6 -35.7 -35.7 30.2		4:12	-23.2	-44.9	-69.3	17.2	-26.3	-50.7	-78.2	18.9	-29.8	-57.4	-88.5	20.9
-23.3 45.0 -69.4 17.0 -26.3 -50.8 -78.3 18.7 -29.6 -26.0 -31.4 -31.4 27.7 -29.4 -35.5 -35.5 30.8 -33.4 -26.1 -31.5 -31.5 27.6 -29.5 -35.6 -35.6 30.7 -33.4 -26.1 -31.5 -31.5 27.5 -29.5 -35.6 -35.6 30.7 -33.4 -26.1 -31.6 -31.6 -27.5 -29.5 -35.7 -35.7 30.6 -33.5 -26.2 -31.6 -31.6 27.1 -29.6 -35.7 -35.7 30.2 -33.5 -26.2 -31.6 -31.6 27.1 -29.6 -35.7 -35.7 30.2 33.5 -31.5 -32.5 -35.7 30.2 33.5 -31.5 -32.6 -35.7 -35.7 30.2 33.5 -31.6 -32.6 -35.7 -35.7 30.2 32.6 -40.6 -40.7 -40.1 -32.6 <t< td=""><td></td><td>5:12</td><td>-23.2</td><td>-44.9</td><td>-69.3</td><td>17.1</td><td>-26.3</td><td>-50.7</td><td>-78.2</td><td>18.8</td><td>-29.9</td><td>-57.5</td><td>-88.5</td><td>20.8</td></t<>		5:12	-23.2	-44.9	-69.3	17.1	-26.3	-50.7	-78.2	18.8	-29.9	-57.5	-88.5	20.8
-26.0 -31.4 -31.4 27.7 -29.4 -35.5 -35.5 30.8 -33.4 -26.1 -31.5 -31.5 -31.5 -31.5 27.6 -29.5 -35.6 -35.6 30.7 -33.6 -26.1 -31.5 -31.5 27.5 -29.5 -35.6 -35.6 30.7 -33.6 -26.1 -31.6 -31.6 27.2 -29.6 -35.7 -35.7 30.8 -33.5 -26.2 -31.6 -31.6 27.1 -29.6 -35.7 -35.7 30.4 -33.5 -26.2 -31.6 -31.6 27.1 -29.6 -35.7 -35.7 30.3 -33.5 -26.2 -31.6 -31.6 27.1 -29.6 -35.7 -35.7 30.3 -33.5 -26.2 -31.6 -31.6 27.1 -29.6 -35.7 -35.7 30.3 -36.2 32.6 30.2 30.2 30.2 30.2 30.2 30.2 30.2 30.2 30.2 </td <td></td> <td>6:12</td> <td>-23.3</td> <td>-45.0</td> <td>-69.4</td> <td>17.0</td> <td>-26.3</td> <td>-50.8</td> <td>-78.3</td> <td>18.7</td> <td>-29.9</td> <td>-57.5</td> <td>-88.5</td> <td>20.7</td>		6:12	-23.3	-45.0	-69.4	17.0	-26.3	-50.8	-78.3	18.7	-29.9	-57.5	-88.5	20.7
-26.1 -31.5 -31.5 -31.5 -27.6 -29.5 -35.6 -35.6 -36.6 -37.6 -37.6 -37.6 -37.6 -37.6 -37.6 -37.6 -37.6 -37.6 -37.6 -37.7 <th< td=""><td>_</td><td>7:12</td><td>-26.0</td><td>-31.4</td><td>-31.4</td><td>27.7</td><td>-29.4</td><td>-35.5</td><td>-35.5</td><td>30.8</td><td>-33.4</td><td>-40.3</td><td>-40.3</td><td>34.4</td></th<>	_	7:12	-26.0	-31.4	-31.4	27.7	-29.4	-35.5	-35.5	30.8	-33.4	-40.3	-40.3	34.4
-26.1 -31.5 -31.5 -27.5 -29.5 -35.6 -35.6 30.6 -33.5 -26.1 -31.6 -31.6 -27.4 -29.6 -35.7 -35.7 30.4 -33.6 -26.2 -31.6 -31.6 27.2 -29.6 -35.7 -35.7 30.3 -33.6 -26.2 -31.6 -31.6 27.1 -29.6 -35.7 -35.7 30.3 -33.6 -26.2 -31.6 -31.6 27.1 -29.6 -35.7 -35.7 30.3 -33.6 -26.2 -31.6 -37.1 -29.6 -35.7 -35.7 30.3 -33.6 -26.2 -31.6 -37.1 -29.6 -35.7 -35.7 30.2 -33.8 -3.1 -3.1 -3.2 -3.2 -3.2 -3.2 30.2 -31.8 3.4 4.1 -3.2 3.2 4.1 4.1 4.1 4.1 4.2 3.2 3.2 3.2 3.2 3.2 3.2 3.2<	_	8:12	-26.1	-31.5	-31.5	27.6	-29.5	-35.6	-35.6	30.7	-33.4	-40.3	-40.3	34.2
-26.1 -31.6 -32.7 -32.8 -41.1 -42.7 -42.7 -42.7 -42.7 -42.7 -42.7 -42.7 -42.7 -42.7 -42.7 -42.7 -42.7 -42.7 -42.7 <th< td=""><td></td><td>9:12</td><td>-26.1</td><td>-31.5</td><td>-31.5</td><td>27.5</td><td>-29.5</td><td>-35.6</td><td>-35.6</td><td>30.6</td><td>-33.5</td><td>40.4</td><td>40.4</td><td>34.1</td></th<>		9:12	-26.1	-31.5	-31.5	27.5	-29.5	-35.6	-35.6	30.6	-33.5	40.4	40.4	34.1
-26.2 -31.6 -31.6 -27.2 -29.6 -35.7 -35.7 30.3 -33.5 -26.2 -31.6 -31.6 27.1 -29.6 -35.7 -35.7 30.3 -33.6 -26.2 -31.6 -31.6 27.1 -29.6 -35.7 -35.7 30.2 -33.6 1.1 1.3 1.5 1.6 1.7 2.1 2.3 2.6 1.1 1.1 1.3 1.5 1.6 1.7 2.1 2.3 2.6 2.1 2.1 2.1 2.3 2.4 2.5 3.0 3.1 3.4 3.6 3.7 3.4 3.6 4.1 4.1 4.1 4.1 4.1 4.1 4.2 3.2 3.2 3.2 4.2 3.2 4.2 3.2 3.2 4.2 3.2 3.2 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.2 4.2		10:12	-26.1	-31.6	-31.6	27.4	-29.6	-35.7	-35.7	30.4	-33.5	40.4	40.4	34.0
-26.2 -31.6 -31.6 27.1 -29.6 -35.7 -35.7 30.2 -33.6 5s = 0.0 5s = 0.1 5s = 0.2 5s = 0.3 5s = 0.4 5s = 0.5 5s = 1.2 5s =		11:12	-26.2	-31.6	-31.6	27.2	-29.6	-35.7	-35.7	30.3	-33.5	40.4	40.4	33.9
Ss = 0.0 Ss = 0.1 Ss = 0.2 Ss = 0.6 Ss = 0.6 Ss = 1.0 Ss = 1.2		12:12	-26.2	-31.6	-31.6	27.1	-29.6	-35.7	-35.7	30.2	-33.6	-40.5	-40.5	33.8
1.1 1.1 1.3 1.5 1.6 1.7 2.1 2.3 2.6 2.1 2.1 2.1 2.3 2.4 2.5 3.0 3.1 3.4 3.4 3.4 3.4 3.4 3.4 3.4 3.2 3.7 3.8 4.1 3.4 4.1 4.1 4.1 4.1 4.1 4.1 4.2 4.1 3.2 3.7 3.8 4.1 3.4 3.4 3.2 3.7 3.8 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.2		Roof Pitch	Ss = 0.0	Ss = 0.1	Ss = 0.2	Ss = 0.3	Ss = 0.4	Ss = 0.5	Ss = 1.0	Ss = 1.25	Ss = 1.5	Ss = 2.0	Ss = 2.5	Ss = 3.1
2.1 2.1 2.3 2.4 2.5 3.0 3.1 3.4 3.0 3.0 3.0 3.0 3.1 3.2 3.7 3.8 4.1 2.9 2.9 2.9 3.0 3.1 3.2 3.7 3.9 4.1 3.3 3.3 3.3 3.4 3.5 3.6 4.0 4.2 4.2 3.6 3.6 3.6 3.6 3.8 3.9 4.2 4.5 4.7 3.8 3.8 3.8 4.0 4.1 4.5 4.7 4.9 5.1 4.0 4.0 4.0 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9	_	1:12	1.1	1.1	1.3			1.7	2.1			3.2	4.0	4.8
3.0 3.0 3.0 3.1 3.2 3.7 3.8 4.1 2.9 2.9 2.9 3.0 3.1 3.2 3.7 3.9 4.1 3.3 3.3 3.3 3.4 3.5 3.6 4.0 4.2 4.5 3.6 3.6 3.6 3.8 3.9 4.3 4.5 4.7 4.9 3.8 3.8 3.8 4.0 4.1 4.5 4.7 4.9 4.7 4.9 4.7 4.9 5.1 4.0 4.0 4.0 4.1 4.1 4.1 4.1 4.2 4.3 4.7 4.9 5.1 4.1 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2		2:12	2.1	2.1					3.0			4.0	4.5	5.2
2.9 2.9 3.0 3.1 3.2 3.7 3.9 4.1 3.3 3.3 3.4 3.5 3.6 4.0 4.2 4.5 3.6 3.6 3.6 3.6 4.0 4.2 4.5 4.7 4.9 3.8 3.8 3.8 4.0 4.1 4.5 4.7 4.9 4.9 4.0 4.0 4.0 4.1 4.2 4.3 4.7 4.9 5.1 4.1 4.1 4.1 4.1 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2		3:12	3.0	3.0	3.0	3.0	3.1	3.2	3.7	3.8	4.1	4.7		5.9
3.3 3.3 3.4 3.5 3.6 4.0 4.2 4.5 3.6 3.6 3.6 3.8 3.9 4.3 4.5 4.7 4.9 3.8 3.8 3.8 4.0 4.1 4.5 4.7 4.9 4.0 4.0 4.0 4.1 4.2 4.3 4.7 4.9 5.1 4.1 4.1 4.1 4.1 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2		4:12	5.9	5.9	5.9	3.0	3.1	3.2	3.7	3.9	4.1	4.7		5.9
3.6 3.6 3.6 3.8 3.9 4.3 4.5 4.7 4.9 3.8 3.8 3.8 4.0 4.1 4.5 4.7 4.9 4.9 4.9 4.0 4.0 4.0 4.1 4.2 4.3 4.7 4.9 5.1 4.1 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2	- 1	5:12	3.3	3.3	3.3	3.4	3.5	3.6	4.0	4.2	4.5	2.0		6.2
3.8 3.8 3.8 4.0 4.1 4.5 4.7 4.9 3.9 3.9 3.9 4.0 4.1 4.2 4.6 4.8 5.1 4.0 4.0 4.0 4.1 4.1 4.1 4.1 4.2 4.3 4.7 4.9 5.1 4.1 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2		6:12	3.6	3.6	3.6	3.6	က ထ	3.9	4.3	4.5	4.7	5.3	2.8	6.5
3.9 3.9 4.0 4.1 4.2 4.6 4.8 5.1 4.0 4.0 4.1 4.1 4.1 4.1 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2		7:12	 8.	3.8	 8.	300	4.0	4.1	4.5	4.7	4.9	5.5		9.9
4.0 4.0 4.1 4.2 4.3 4.7 4.9 5.1 4.1 4.1 4.1 4.1 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2		8:12	3.9	3.9	3.9	4.0	4.1	4.2	4.6	4.8	5.1	9.9		6.7
4.1 4.1 4.1 4.1 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2	_	9:12	4.0	4.0	4.0	4.1	4.2	4.3	4.7	4.9	5.1	5.6	6.2	6.8
4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2 4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2		10:12	4.1	4.1	4.1	4.1	4.3	4.4	8.4	4.9	5.2	5.7		6.8
4.1 4.1 4.1 4.2 4.3 4.4 4.8 4.9 5.2		11:12	4.1	4.1	4.1	4.2	£. 4	4.4	8. 6	6.4	5.2	5.7	6.1	6.7
	_	12:12	4.1	4.1	4.1	4.2	4.3	4.4	8.4		5.2	5.6	6.1	6.7
Ss = 0.0 Ss = 0.1 Ss = 0.2 Ss = 0.3 Ss = 0.4 Ss = 0.5 Ss = 1.0 Ss = 1.25 Ss = 1.5			Ss = 0.0	Ss = 0.1	Ss = 0.2	Ss = 0.3	Ss = 0.4	Ss = 0.5	Ss = 1.0	-	Ss = 1.5	Ss = 2.0	Ss = 2.5	Ss = 3.1
			0.0	0.7	0.5	'n	6.0	T.0	T.D	r.x	7.7	6.7	3.0	4.5



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	<u> </u>	Bldg. Height = 15 ft.	tht = 15 t	ft.	∞ <u>≤</u>	Bldg. Height = 30 ft.	tht = 30	ft.		Bldg. Height = 60 ft.	tht = 60	ft.
Roof Pitch	Zone	Zone 2 Z	Zone 3	(isd)	Zone 1	Zone 2 Z	Zone 3	(Isd) III	Zone 1	Zone 2 Z	Zone 3	isola management
1:12	-9.8	-18.6	-29.7	14.8	8.6-	-18.6	-29.7	14.8	-12.1	-22.9	-36.3	14.8
2:12	-8.7	-17.5	-27.5	14.4	-8.7	-17.5	-27.5	14.4	-10.8	-21.6	-33.6	14.4
3:12	-8.7	-17.6	-27.5	14.0	-8.7	-17.6	-27.5	14.0	-10.8	-21.6	-33.7	14.0
4:12	-8.7	-17.6	-27.5	13.2	-8.7	-17.6	-27.5	13.2	-10.9	-21.6	-33.7	13.2
5:12	8.8	-17.6	-27.6	13.2	8.8	-17.6	-27.6	13.2	-10.9	-21.6	-33.7	13.2
6:12	8.8	-17.7	-27.6	13.0	-8.8	-17.7	-27.6	13.0	-10.9	-21.7	-33.8	13.0
7:12	6.6-	-12.2	-12.2	13.3	6.6-	-12.2	-12.2	13.3	-12.3	-15.0	-15.0	15.4
8:12	-10.0	-12.2	-12.2	13.2	-10.0	-12.2	-12.2	13.2	-12.4	-15.0	-15.0	15.3
9:12	-10.0	-12.2	-12.2	13.0	-10.0	-12.2	-12.2	13.0	-12.4	-15.1	-15.1	15.2
10:12	-10.1	-12.3	-12.3	12.9	-10.1	-12.3	-12.3	12.9	-12.4	-15.1	-15.1	15.0
11:12	-10.1	-12.3	-12.3	12.8	-10.1	-12.3	-12.3	12.8	-12.5	-15.2	-15.2	14.9
12:12	-10.2	-12.4	-12.4	12.7	-10.2	-12.4	-12.4	12.7	-12.5	-15.2	-15.2	14.8
1.12	-121	-220	-36.3	14.8	-14.2	-26.6	-42 1	14.8	-166	30.0	48.7	24.0
2	1 0	2 2	200		1 0	200	1 0	2 4 4	0.01	200		2 4 4
21.2	-10.0	-21.0	0.00	14.4	12.7	1.62-	0.65	14.4	-14.0	1.62-1	1.04	14.4
3:12	-10.8	-21.6	-33./	14.0	-17./	-25.1	0.65-	14.0	-14.8	-29.1	45.2	14.0
4:12	-10.9	-21.6	-33.7	13.2	-12.7	-25.1	-39.0	13.2	-14.8	-29.1	-45.2	13.2
5:12	-10.9	-21.6	-33.7	13.2	-12.7	-25.1	-39.1	13.2	-14.9	-29.5	-45.2	13.2
6:12	-10.9	-21.7	-33.8	13.0	-12.8	-25.2	-39.1	13.0	-14.9	-29.2	-45.3	13.0
7:12	-12.3	-15.0	-15.0	15.4	-14.4	-17.5	-17.5	17.3	-16.7	-20.3	-20.3	19.4
8:12	-12.4	-15.0	-15.0	15.3	-14.4	-17.5	-17.5	17.1	-16.8	-20.4	-20.4	19.3
9:12	-12.4	-15.1	-15.1	15.2	-14.5	-17.6	-17.6	17.0	-16.8	-20.4	-20.4	19.1
10:12	-12.4	-15.1	-15.1	15.0	-14.5	-17.6	-17.6	16.9	-16.9	-20.4	-20.4	19.0
11:12	-12.5	-15.2	-15.2	14.9	-14.5	-17.6	-17.6	16.8	-16.9	-20.5	-20.5	18.9
12:12	-12.5	-15.2	-15.2	14.8	-14.6	-17.7	-17.7	16.7	-16.9	-20.5	-20.5	18.8
1.12	-15.0	-28.0	-44.3	14.8	-17.0	-31 7	0 05	14.8	-194	-36.0	-567	14.8
2:12	-13.4	-26.4	410	14.4	-15.2	-29.9	-46.4	144	-17.4	-33.0	-52.5	15.0
3.12	13.4	-26.4	41.1	14.0		-20 0	-46.4	140	-174	22.0	52.5	145
4.12	12.4	76.4	41.1	12.0	1 2 2	20 0	AS A	12.0	17.4	200	20.20	140
4:12	t.C1-	4.02-	1.14	13.61	C.C.T.	6.62-	4.04-	7.01	477-	0.4.0	0.20-	7 7
5:12	-13.5	5.02-	-41.1	13.2	-15.3	-30.0	-40.5 C.04	13.2	-11.4	-34.0	-52.0	13.9
5:12	-13.5	-79.5	41.7	13.0	-15.3	-30.0	-46.5	13.0	-17.5	-34.0	7.75-	13.8
0.43	15.2	-18.4	-18.4	18.0	17.7	50.5	502-	19.8	-19.6	23.7	23.7	21.9
0.12	15.2	-16.5	10.5	17.7	17.3	51.0	5.02-	10.6	10.7	22.0	22.8	21.0
10:12	-15.2	-18.5	18.5	17.6	-173	-21.0	-21.0	19.0	-19.7	-23.8	-23.8	21.6
11:12	-15.3	-18.6	-18.6	17.5	-17.4	-21.0	-21.0	19.3	-19.7	-23.9	-23.9	21.5
12:12	-15.4	-18.6	-18.6	17.4	-17.4	-21.1	-21.1	19.2	-19.8	-23.9	-23.9	21.3
Roof Pitch	Ss = 0.0	Ss = 0.1	Ss = 0.2	Ss = 0.3	Ss = 0.4	Ss = 0.5	Ss = 1.0	Ss = 1.25	Ss = 1.5	Ss = 2.0	Ss = 2.5	Ss = 3.1
1:12	0.7	0.8	1.0	1.1	1.3	1.4	1.9	2.1	2.5	3.2	4.0	4.8
2:12	1.4	1.4	1.6	1.7	1.9	2.0	2.4	2.6	2.9	3.6	4.3	5.2
3:12	1.9	1.9	2.0	2.2	2.4	2.5	2.9	3.1	3.4	3.9	4.6	5.5
4:12	2.0	2.0	2.2	2.4	2.5	5.6	3.1	3.2	3.5	4.2	4.9	5.8
5:12	2.4	2.4	2.5	2.7	2.8	2.9	3.4	3.5	3.8	4.4	5.1	6.0
6:12	2.7	2.7	2.8	2.9	3.1	3.2	3.6	3.8	4.0	4.6	5.3	6.2
7:12	5.9	2.9	3.0	3.1	3.3	3.4	3.8	4.0	4.2	4.8	5.5	6.3
8:12	3.0	3.0	3.1	3.3	3.4	3.5	4.0	4.1	4.4	4.9	9.6	6.5
9:12	3.2	3.2	3.3	3.4	3.6	3.7	4.1	4.2	4.5	2.0	5.7	6.5
10:12	3.3	3.3	3.4	3.5	3.7	3.8	4.2	4.3	4.6	5.1	5.8	9.9
11:12	3.3	3.3		3.6	3.7	3.8	4.2	4.4	4.6		5.9	9.9
12:12	3.4	3.4	3.5	3.7	3.8	3.9	4.3	4.4	4.7	5.3	5.9	6.7
	Ss = 0.0	Ss = 0.1	Ss = 0.2	Ss = 0.3	Ss = 0.4	Ss = 0.5	Ss = 1.0	Ss = 1.25	Ss = 1.5	Ss = 2.0	Ss = 2.5	Ss = 3.1
	0.0	0.2	0.5	0.7	6.0	1.0	1.6	1.8	2.2	2.9	3.6	4.5

California*

ASCE

110 mph

Basic Wind Speed

5 psf Ground Snow Load

* This table is not inclusive of all areas within the state or region. The local wind speeds and snow loads should be independantly verifed for the specific install location.



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		8	Bldg. Height =	= 15	ft.	8	Bldg. Height = 30 ft	ht = 30	ft.	8	Bldg. Height =	ght = 60 ft.	f.
╫	Roof Pitch	Up Zone 1	Up Pressures (psf)	psf) Zone 3	Down (pst)	Up Zone 1	Up Pressures (psf)	ost) Zone 3	Down (pst)	Up Zone 1	Up Pressures (psf)	pst) Zone 3	Down (pst)
	1:12	-10.8	-20.5	-32.6	14.8	-10.8	-20.5	-32.6	14.8	-13.4	-25.1	-39.8	14.8
	2:12	9.6-	-19.3	-30.2	14.4	9.6-	-19.3	-30.2	14.4	-11.9	-23.7	-36.9	14.4
	3:12	9.6-	-19.3	-30.2	14.0	9.6-	-19.3	-30.2	14.0	-12.0	-23.7	-36.9	14.0
pos	4:12	-9.7	-19.3	-30.2	13.2	-9.7	-19.3	-30.2	13.2	-12.0	-23.7	-36.9	13.2
	5:12	-9.7	-19.4	-30.2	13.2	-9.7	-19.4	-30.2	13.2	-12.0	-23.8	-37.0	13.2
	6:12	-9.7	-19.4	-30.3	13.0	-9.7	-19.4	-30.3	13.0	-12.1	-23.8	-37.0	13.0
_	7:12	-11.0	-13.4	-13.4	14.2	-11.0	-13.4	-13.4	14.2	-13.6	-16.5	-16.5	16.5
	8:12	-11.0	-13.4	-13.4	14.1	-11.0	-13.4	-13.4	14.1	-13.6	-16.5	-16.5	16.4
	9:12	-11.1	-13.5	-13.5	14.0	-11.1	-13.5	-13.5	14.0	-13.6	-16.6	-16.6	16.3
_	10:12	-11.1	-13.5	-13.5	13.8	-11.1	-13.5	-13.5	13.8	-13.7	-16.6	-16.6	16.2
_	11:12	-11.1	-13.6	-13.6	13.7	-11.1	-13.6	-13.6	13.7	-13.7	-16.7	-16.7	16.0
	12:12	-11.2	-13.6	-13.6	13.6	-11.2	-13.6	-13.6	13.6	-13.8	-16.7	-16.7	15.9
	1:12	-13.4	-25.1	-39.8	14.8	-15.6	-29.2	-46.1	14.8	-18.2	-33.8	-53.4	14.8
	2:12	-11.9	-23.7	-36.9	14.4	-14.0	-27.5	-42.7	14.4	-16.3	-31.9	-49.5	14.5
_	3:12	-12.0	-23.7	-36.9	14.0	-14.0	-27.5	-42.7	14.0	-16.3	-31.9	-49.5	14.1
	4:12	-12.0	-23.7	-36.9	13.2	-14.0	-27.5	-42.8	13.2	-16.3	-32.0	-49.5	13.4
	5:12	-12.0	-23.8	-37.0	13.2	-14.0	-27.6	-42.8	13.2	-16.4	-32.0	-49.5	13.3
re (6:12	-12.1	-23.8	-37.0	13.0	-14.1	-27.6	-42.8	13.0	-16.4	-32.0	-49.6	13.2
_	7:12	-13.6	-16.5	-16.5	16.5	-15.8	-19.2	-19.2	18.6	-18.4	-22.3	-22.3	20.9
	8:12	-13.6	-16.5	-16.5	16.4	-15.9	-19.2	-19.2	18.4	-18.4	-22.3	-22.3	20.8
	9:12	-13.6	-16.6	-16.6	16.3	-15.9	-19.3	-19.3	18.3	-18.5	-22.4	-22.4	20.6
	10:12	-13.7	-16.6	-16.6	16.2	-15.9	-19.3	-19.3	18.2	-18.5	-22.4	-22.4	20.5
	11:12	-13.7	-16.7	-16.7	16.0	-16.0	-19.4	-19.4	18.1	-18.6	-22.5	-22.5	20.4
	12:12	-13.8	-16.7	-16.7	15.9	-16.0	-19.4	-19.4	17.9	-18.6	-22.5	-22.5	20.3
_	1:12	-16.5	-30.7	-48.5	14.8	-18.7	-34.8	-54.8	14.8	-21.3	-39.4	-62.1	14.8
	2:12	-14.7	-29.0	-45.0	14.4	-16.8	-32.8	-50.8	14.7	-19.1	-37.2	-57.5	15.7
_	3:12	-14.8	-29.0	-45.0	14.0	-16.8	-32.8	-50.8	14.3	-19.1	-37.2	-57.6	15.3
	4:12	-14.8	-29.0	-45.0	13.2	-16.8	-32.8	-50.9	13.7	-19.1	-37.2	-57.6	15.0
	5:12	-14.8	-29.0	-45.1	13.2	-16.8	-32.9	-50.9	13.6	-19.2	-37.3	-57.6	14.9
	6:12	-14.9	-29.1	-45.1	13.0	-16.9	-32.9	-50.9	13.5	-19.2	-37.3	-57.7	14.8
ate	7:12	-16.7	-20.2	-20.2	19.3	-18.9	-22.9	-22.9	21.3	-21.5	-26.0	-26.0	23.7
	8:12	-16.7	-20.3	-20.3	19.2	-19.0	-23.0	-23.0	21.2	-21.6	-26.1	-26.1	23.6
-	9:12	-16.8	-20.3	-20.3	19.1	-19.0	-23.0	-23.0	21.1	-21.6	-26.1	-26.1	23.4
	10:12	-16.8	-20.4	-20.4	19.0	-19.0	-23.0	-23.0	21.0	-21.6	-26.2	-26.2	23.3
_	11:12	-16.8	-20.4	-20.4	18.8	-19.1	-23.1	-23.1	20.9	-21.7	-26.2	-26.2	23.2
	12:12	-16.9	-20.4	-20.4	18.7	-19.1	-23.1	-23.1	20.7	-21.7	-26.2	-26.2	23.1
\vdash	Roof Pitch	Ss = 0.0	Ss = 0.1	Ss = 0.2	Ss = 0.3	Ss = 0.4	Ss = 0.5	Ss = 1.0	Ss = 1.25	Ss = 1.5	Ss = 2.0	Ss = 2.5	Ss = 3.1
	1:12	0.7	0.8	1.0	1.1	1.3	1.4	1.9	2.1	2.5	3.2	4.0	4.8
	2:12	1.4	1.4	1.6	1.7	1.9	2.0	2.4	2.6	2.9	3.6	4.3	5.2
_	3:12	1.9	1.9	2.0	2.2	2.4	2.5	5.9	3.1	3.4	3.9	4.6	5.5
	4:12	2.0	2.0			2.5	5.6	3.1	3.2	3.5	4.2	4.9	5.8
	5:12	2.4	2.4	2.5	2.7	2.8	2.9	3.4	3.5	3.8	4.4	5.1	6.0
	6:12	2.7	2.7	2.8	2.9	3.1	3.2	3.6	3.8	4.0	4.6	5.3	6.2
ope	7:12	2.9		3.0		3.3		3,8	4.0	4.2			6.3
	8:12	3.0		3.1		3.4	3.5	4.0	4.1	4.4		5.6	6.5
	9:12	3.2		3.3	3.4	3.6	3.7	4.1	4.2	4.5	2.0	5.7	6.5
	10:12	3.3	3.3	3.4	3.5	3.7	3.8	4.2	4.3	4.6	5.1		9.9
	11:12		3.3		3.6	3.7	œ (4.2		4.6			9.9
\dashv	12:12	3.4	3.4	3.5	3.7	3.8	3.9	4.3	4.4	4.7	5.3	5.9	6.7
		Ss = 0.0	Ss = 0.1	Ss = 0.2	Ss = 0.3	Ss = 0.4	Ss = 0.5	Ss = 1.0	Ss = 1.25	Ss = 1.5	Ss = 2.0	Ss = 2.5	Ss = 3.1
		0	0	0	0	0	,	1 6	0	,	000	2 6	7

Southwest*

ASCE

115 mph

Basic Wind Speed

5 psf Ground Snow Load

* This table is not inclusive of all areas within the state or region. The local wind speeds and snow loads should be independantly verifed for the specific install location.

o.

0.2

0.0



PRESSURE TABLES 14

INST

ALLATION	CHIDE	i	PAGE
ALLATIUN	GUIDE	ı	IAUL

		B	dg. Heig	= 15 f	ft.	8	Bldg. Height	tht = 30 ft.	ft.	8	Bldg. Height	9 =	ft.
Root	Roof Pitch	Zone 1	Up Pressures (psr)	cone 3	Down (psr)	Zone 1	Up Pressures (psr)	Zone 3	Down (psr)	Zone 1	1 Zone 2 Z	Zone 3	Down(psr)
1:	1:12	-14.2	-26.5	-42.0	18.5	-14.2	-26.5	-42.0	18.5	-17.5	-32.5	-51.2	18.5
2	2:12	-12.6	-25.0	-38.9	17.8	-12.6	-25.0	-38.9	17.8	-15.6	-30.6	-47.5	17.8
Ex	3:12	-12.7	-25.0	-38.9	17.0	-12.7	-25.0	-38.9	17.0	-15.6	-30.6	-47.5	17.0
	4:12	-12.7	-25.0	-38.9	14.6	-12.7	-25.0	-38.9	14.6	-15.7	-30.7	-47.5	14.6
	5:12	-12.7	-25.1	-39.0	14.0	-12.7	-25.1	-39.0	14.0	-15.7	-30.7	-47.6	14.0
	6:12	-12.8	-25.1	-39.0	13.4	-12.8	-25.1	-39.0	13.4	-15.7	-30.7	-47.6	13.4
	7:12	-14.3	-17.4	-17.4	17.2	-14.3	-17.4	-17.4	17.2	-17.6	-21.4	-21.4	20.2
	8:12	-14.4	-17.5	-17.5	17.1	-14.4	-17.5	-17.5	17.1	-17.7	-21.4	-21.4	20.1
	9:12	-14.4	-17.5	-17.5	17.0	-14.4	-17.5	-17.5	17.0	-17.7	-21.5	-21.5	20.0
	10:12	-14.5	-17.5	-17.5	16.9	-14.5	-17.5	-17.5	16.9	-17.8	-21.5	-21.5	19.8
11	11:12	-14.5	-17.6	-17.6	16.7	-14.5	-17.6	-17.6	16.7	-17.8	-21.6	-21.6	19.7
12	12:12	-14.5	-17.6	-17.6	16.6	-14.5	-17.6	-17.6	16.6	-17.8	-21.6	-21.6	19.6
1	1:12	-17.5	-32.5	-51.2	18.5	-20.3	-37.6	-59.3	18.5	-23.7	-43.6	-68.5	18.5
2	2:12	-15.6	-30.6	47.5	17.8	-18.2	-35.5	-55.0	18.7	-21.2	41.1	-63.6	19.9
L	3:12	-15.6	-30.6	-47.5	17.0	-18.2		-55.0	17.9	-21.2	-41.1	-63.6	19.2
xb(4:12	-15.7	-30.7	-47.5	14.6	-18.2	-35.5	-55.0	15.5	-21.2	-41.2	-63.6	16.7
5	5:12	-15.7	-30.7	-47.6	14.0	-18.3	-35.6	-55.0	14.9	-21.3	-41.2	-63.6	16.2
9	6:12	-15.7	-30.7	-47.6	13.4	-18.3	-35.6	-55.1	14.4	-21.3	-41.2	-63.7	15.9
7	7:12	-17.6	-21.4	-21.4	20.2	-20.5	-24.8	-24.8	22.8	-23.8	-28.8	-28.8	25.8
80	8:12	-17.7	-21.4	-21.4	20.1	-20.6	-24.9	-24.9	22.7	-23.9	-28.9	-28.9	25.6
6	9:12	-17.7	-21.5	-21.5	20.0	-20.6	-24.9	-24.9	22.5	-23.9	-28.9	-28.9	25.5
10	10:12	-17.8	-21.5	-21.5	19.8	-20.6	-25.0	-25.0	22.4	-23.9	-28.9	-28.9	25.4
11	11:12	-17.8	-21.6	-21.6	19.7	-20.7	-25.0	-25.0	22.3	-24.0	-29.0	-29.0	25.3
12	12:12	-17.8	-21.6	-21.6	19.6	-20.7	-25.0	-25.0	22.2	-24.0	-29.0	-29.0	25.2
1	1:12	-21.4	-39.6	-62.4	18.5	-24.3	-44.8	-70.4	18.5	-27.6	-50.7	-79.7	18.5
2	2:12	-19.2	-37.4	-57.8	19.1	-21.8	-42.2	-65.3	20.2	-24.7	47.9	-73.9	21.4
'n	3:12	-19.2	-37.4	-57.8	18.3	-21.8	-42.3	-65.3	19.4	-24.8	47.9	-73.9	20.6
4	4:12	-19.2	-37.4	-57.9	15.5	-21.8	-42.3	-65.3	16.6	-24.8	47.9	-73.9	18.1
ŝ	5:12	-19.3	-37.4	-57.9	15.0	-21.9	-42.3	-65.4	16.3	-24.8	-48.0	-74.0	18.0
9	6:12	-19.3	-37.5	-57.9	14.8	-21.9	-42.4	-65.4	16.2	-24.9	-48.0	-74.0	17.9
7	7:12	-21.6	-26.2	-26.2	23.8	-24.5	-29.6	-29.6	26.4	-27.8	-33.6	-33.6	29.3
œ	8:12	-21.7	-26.2	-26.2	23.7	-24.5	-29.6	-29.6	26.2	-27.8	-33.6	-33.6	29.5
6	9:12	-21.7	-26.2	-26.2	23.5	-24.6	-29.7	-29.7	26.1	-27.9	-33.7	-33.7	29.1
1 1	10:12	-21./	-26.3	-26.3	23.4	-24.6		1.62-	26.0	6.72-	-33./	-33./	29.0
17	12.12	21.0	26.4	26.4	23.3	24.0	20.62-	0.62	25.5	28.0	23.8	23.8	20.5
Bood	Doof Ditch	0.12-	202-	20.2	2.07	2-07	0.62-	0.62-	20.02	2,007	0.00	0.00	20.7
-	1.12	23 - 5	1.1.1	2.0 - 2.0	, L	10 1	17	33 - E.O	33 - 1.23	3.6	2.2	1 0	α ν
2	2:12		2.1				2.5	3.0			4.0		
m	3:12					3.1	3.2	3.7		4.1	4.7		5.9
4	4:12		2.9	2.9	3.0	3.1	3.2	3.7		4.1	4.7		5.9
	5:12	3.3	3.3	3.3	3.4	3.5	3.6	4.0	4.2	4.5	5.0		6.2
	6:12	3.6	3.6	3.6	3.6	3.8	3.9	4.3	4.5	4.7	5.3	5.8	6.5
lop	7:12	3.8	3.8	3.8	8	4.0	4.1	4.5	4.7	4.9	5.5	6.0	9.9
	8:12	3.9	3.9	3.9	4.0	4.1	4.2	4.6	4.8	5.1	5.6	6.1	6.7
6	9:12	4.0	4.0	4.0	4.1	4.2	4.3	4.7		5.1	5.6		6.8
10	10:12	4.1	4.1	4.1	4.1	4.3	4.4	4.8		5.2	5.7		6.8
11	11:12	4.1	4.1	4.1	4.2	4.3		4.8	4.9	5.2	2.7	6.1	6.7
12	12:12	4.1	4.1	4.1	4.2	4.3	4.4	4.8	4.9	5.2	5.6	6.1	6.7
		Ss = 0.0	Ss = 0.1	Ss = 0.2	Ss = 0.3	Ss = 0.4	Ss = 0.5	Ss = 1.0	Ss = 1.25	Ss = 1.5	Ss = 2.0	Ss = 2.5	Ss = 3.1
	_	0.0	0.2	0.5	0.7	6.0	1.0	1.6	1.8	2.2	2.9	3.6	4.5

East Coast (Low Snow)*

ASCE

130 mph

Basic Wind Speed

10 psf

Ground Snow Load

* This table is not inclusive of all areas within the state or region. The local wind speeds and snow loads should be independantly verifed for the specific install location.