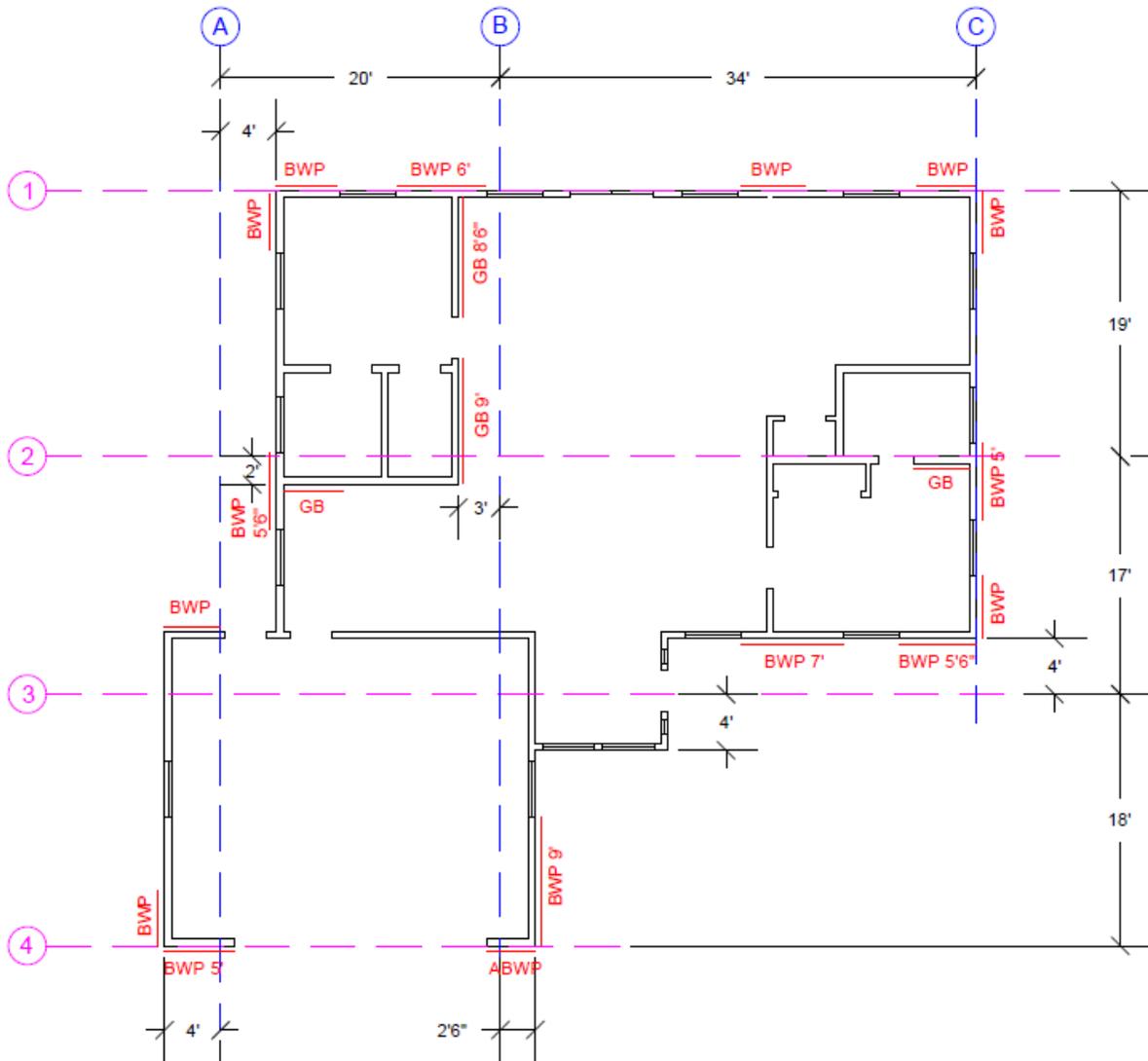


## Lateral Bracing Calculator Instructions

This calculator is *not* intended to teach the user how to do a lateral bracing calculation or teach code. It is intended to help the user present their work to their local jurisdiction in an easy to follow format and do the math for the user. The user needs to be familiar with the code requirements when using this calculator to be able to take advantage of its versatility.

1. Identify your braced wall lines and brace wall locations (length and type). The following is an example of what your plan should resemble. Color was used in the example for clarity, however it is not required. Plan needs to be to scale.



Lateral Bracing Plan

Scale: \_\_\_\_\_

2. Fill out the job site information section of the form.

Job Name: _____					Permit Number: _____				
Job Address: _____					Date: _____				
City: _____					Zip: _____				
Check which floor this applies to:		1st floor: <u>XX</u>		2nd floor: _____		Number of Stories: <u>1</u>		Seismic Zone: _____	
Eave to Ridge Height: <u>10'</u>		Wall Height: <u>9'</u>		Wind Speed: <u>105</u>		Wind Exposure: <u>C</u>			

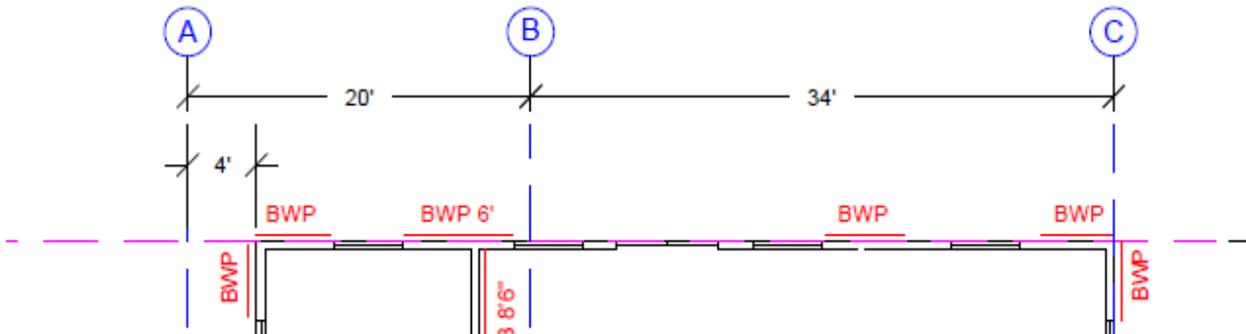
3. Fill in the adjustment factors for each wall line. If you find you do not have enough bracing at the end you can go back and change the factors as needed and the calculator will change the math and update the fields. Some of the adjustment factors may not apply. **If you are not going to take the adjustment factor or the factor does not apply then a value of 1 or 1.0 must be entered for the calculator to work.**

Wall line ID:	1	2	3	4	5	A	B	C	D	E
Wind Exposure Factor (footnote b):	1.2	1.2	1.2	1.2		1.2	1.2	1.2		
Eave to Ridge Height Factor (footnote c):	1	1	1	1		1	1	1		
Wall Height Factor (footnote d):	0.95	0.95	0.95	0.95		0.95	0.95	0.95		
Number of Braced Wall Lines Factor (footnote e):	1.45	1.45	1.45	1.45		1.3	1.3	1.3		
Gypsum Wall Board Factor (footnote f):	1	1	1	1		1	1	1		
Gypsum Wall Board Nailing Factor (footnote g):	1	1	1	1		1	1	1		
Hold-down Factor (footnote i):	1	1	1	1		1	1	1		
<b>Total Wind Adjustment Factor:</b>	<b>1.653</b>	<b>1.653</b>	<b>1.653</b>	<b>1.653</b>	<b>0.000</b>	<b>1.482</b>	<b>1.482</b>	<b>1.482</b>	<b>0.000</b>	<b>0.000</b>

**Note:** The Total Wind Adjustment Factor will automatically populate when all factors are entered.

4. Next fill in the bracing method or type.  
 5. Fill in the braced wall line spacing value. Use the furthest distance to an adjacent wall line on either side.

Example: Braced line spacing for  
 A = 20 (20' is the only adjacent line)  
 B = 34 (34' is the furthest adjacent line)  
 C = 34 (34' is the only adjacent line)



6. From the corresponding ORSC Table, enter the required bracing.
7. The final step is to enter the amount of bracing provided on the plan. If this amount is greater than the Total Required Bracing Length then in the next box “PASS” will appear. If the amount is less than the Total Required Bracing Length then in the next box “FAIL” will appear.

Braced Wall Line	Bracing Method	Braced Wall Line Spacing	Required Bracing	Total Wind ADJ Factor
1	WSP	19	5.23	1.653
2	GB	19	5.23	1.653
3	WSP	18	4.95	1.653
4	WSP	18	4.95	1.653
5				0.000
A	WSP	20	5.5	1.482
B		34	8.65	1.482
C	WSP	34	8.65	1.482
D				0.000
E				0.000

Total Required Bracing Length	Length Provided	PASS or FAIL
8.65	18	PASS
8.65	8	FAIL
8.18	16.5	PASS
8.18	9	PASS
0.00		
8.15	13.5	PASS
12.82	26.5	PASS
12.82	13	PASS
0.00		
0.00		

8. Repeat the above steps for the Seismic Chart.

If all of the PASS or FAIL boxes say PASS then the calculator part is complete and ready to be printed for submittal. If any of the boxes say FAIL then you will need to go back and adjust your factors or amount of bracing provided.