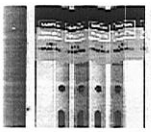

WALL-BRACING Length Calculator

SIMPSON Strong-Tie

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About WBLC

2015 IRC Required Braced-Wall-Line Length Calculations

PROJECT INFORMATION

NAME: PLAN #1656

ADDRESS: KITSAP, WA

WALL DIRECTION: Front to Back

SEISMIC DESIGN CATEGORY: D2

ULTIMATE DESIGN WIND SPEED: 110 mph

WIND EXPOSURE CATEGORY: B

STONE OR MASONRY VENEER: No

	Wall Line A-2	Wall Line B-2	Wall Line C-2
Inputs			
Braced-Wall-Line Location	2nd of 2-story	2nd of 2-story	2nd of 2-story
Eave to Ridge Height	7 ft	7 ft	7 ft
Braced-Wall-Line Spacing	22.00 ft	22.00 ft	20.00 ft
Braced-Wall-Line Length	26 ft	26 ft	26 ft
Wall Height	8 ft	8 ft	8 ft
Bracing Method	CS-WSP	CS-WSP	CS-WSP
GB Construction Type	N/A	N/A	N/A
Gypsum Wall Board on Inside	Yes	Yes	Yes
Horizontal Joints Blocked	Yes	Yes	Yes
Holdown Device Used	No	No	No
Wall Dead Load	> 8 psf & ≤ 15 psf	> 8 psf & ≤ 15 psf	> 8 psf & ≤ 15 psf
Roof/Ceiling Dead Load	≤ 15 psf	≤ 15 psf	≤ 15 psf
WIND			
Tabulated Wind Bracing Amount	3.3 ft	3.3 ft	3 ft
Exposure Height Factor	1	1	1
Eave-to-Ridge Height Factor	0.82	0.82	0.82
Wind Wall Height Factor	0.9	0.9	0.9
Number of BWL Factor	1.3	1.3	1.3
Holdown Factor	1	1	1
Blocked Joint Factor	1	1	1
Gypsum on Inside Factor	1	1	1
Wind GB Construction Factor	1	1	1
Required Wind Bracing Amount	3.17 ft	3.17 ft	2.88 ft
SEISMIC			
Tabulated Seismic Bracing Amount	5.56 ft	5.56 ft	5.56 ft
Seismic Wall Height Factor	1	1	1
BWL Spacing Factor	1	1	1
Blocked Joint Factor	1	1	1
Gypsum on Inside Factor	1	1	1
Seismic GB Construction Factor	1	1	1
Wall Dead Load Factor	1	1	1
Roof Dead Load Factor	1	1	1
Veneer Factor	1	1	1

Reviewed for code compliance with IRC 2015
Kitsap County Building Department
GShapiro@co.kitsap.wa.us
04/03/2020

Permit Number: 19-05696

	Wall Line A-2	Wall Line B-2	Wall Line C-2
Required Seismic Bracing Amount	5.56 ft	5.56 ft	5.56 ft
RESULTS			
Length of Wall Bracing Required	**5.56 ft**	**5.56 ft**	**5.56 ft**

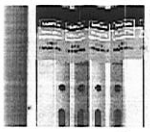
NOTES

This wall-bracing evaluation is based on the 2015 International Residential Code. The user is responsible for ensuring that the project fits within the scope of the IRC and complies with the wall-bracing requirements of Sections R602.10, R602.11 and R602.12 as applicable.

1. One- and two-family dwellings and townhouses in Seismic Design Category D0, D1, or D2 are subject to the wind and seismic requirements of the IRC. The length of wall bracing shall be the greater of that required by Table R602.10.3(1) based on wind speed, and Table R602.10.3(3) based on seismic design category, including all applicable adjustment factors.
2. Braced-wall lines using the continuous sheathing methods shall be constructed in accordance with the requirements of Sections R602.10.4.2, R602.10.6.4, and R602.10.7, as applicable.
3. Braced-wall panels shall be located at each end of braced-wall lines. Braced-wall panels constructed of Methods WSP, BV-WSP, or continuous sheathing methods may begin up to 10 feet from each end when the additional requirements of Section R602.10.2.2.1 are satisfied.
4. The distance between braced wall panels shall not exceed 20 feet in accordance with Section R602.10.2.2.
5. Interior braced-wall-line spacing is the greater of the distance between two adjacent braced-wall lines or the average of the distance as selected by the designer.
6. Refer to the *Strong-Wall® Bracing Selector* (http://www2.strongtie.com/webapps/strongwallbracingselector/) for pre-engineered solutions when the required bracing amounts cannot be satisfied with prescriptive braced-wall panels. Simpson Strong-Tie® Wood and Steel Strong-Wall® shearwalls may be considered equivalent to the code braced-wall panel construction method WSP with gypsum board applied on the inside.
7. Braced-wall-line spacing shall not exceed 25 feet on center in each story in both longitudinal and transverse directions in accordance with Table R602.10.1.3. However, the spacing between two adjacent braced wall lines shall not exceed 35 feet on center in order to accommodate one single room when the provisions in Table R602.10.1.3 are satisfied.
8. Horizontal panel joints in braced-wall panels shall be blocked in accordance with Section R602.10.10.
9. Braced-wall lines shall have a minimum of two braced wall panels unless the provisions of Section R602.10.2.3 are satisfied.

WARNINGS

1. For buildings in SDC D0, D1, and D2 the user must ensure braced wall line spacing greater than 25 feet satisfies the requirements of Table R602.10.1.3.
2. The wall bracing provisions of the IRC may not be used in areas where wind design is required in accordance with Figure R301.2(4)B or where the ultimate design wind speed shown on Figure R301.2(4)A equals or exceeds 140 miles per hour.
3. Different intermittent bracing methods are not permitted to be mixed within a braced wall line for Townhouses in Seismic Design Category C and all structures in Seismic Design Category D0, D1, or D2 in accordance with Section R602.10.4.1 item #3.



WALL-BRACING Length Calculator

SIMPSON Strong-Tie

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About WBLC

2015 IRC Required Braced-Wall-Line Length Calculations

PROJECT INFORMATION

NAME: PLAN #1656

ADDRESS: KITSAP, WA

WALL DIRECTION: Side To Side

SEISMIC DESIGN CATEGORY: D2

ULTIMATE DESIGN WIND SPEED: 110 mph

WIND EXPOSURE CATEGORY: B

STONE OR MASONRY VENEER: No

	Wall Line 1-1	Wall Line 2-1
Inputs		
Braced-Wall-Line Location	1st of 2-story	1st of 2-story
Eave to Ridge Height	7 ft	7 ft
Braced-Wall-Line Spacing	26.00 ft	26.00 ft
Braced-Wall-Line Length	42 ft	42 ft
Wall Height	8 ft	8 ft
Bracing Method	CS-WSP	CS-WSP
GB Construction Type	N/A	N/A
Gypsum Wall Board on Inside	Yes	Yes
Horizontal Joints Blocked	Yes	Yes
Holdown Device Used	No	No
Wall Dead Load	> 8 psf & ≤ 15 psf	> 8 psf & ≤ 15 psf
Roof/Ceiling Dead Load	≤ 15 psf	≤ 15 psf
WIND		
Tabulated Wind Bracing Amount	7 ft	7 ft
Exposure Height Factor	1	1
Eave-to-Ridge Height Factor	0.91	0.91
Wind Wall Height Factor	0.9	0.9
Number of BWL Factor	1	1
Holdown Factor	1	1
Blocked Joint Factor	1	1
Gypsum on Inside Factor	1	1
Wind GB Construction Factor	1	1
Required Wind Bracing Amount	5.73 ft	5.73 ft
SEISMIC		
Tabulated Seismic Bracing Amount	19.64 ft	19.64 ft
Seismic Wall Height Factor	1	1
BWL Spacing Factor	1.04	1.04
Blocked Joint Factor	1	1
Gypsum on Inside Factor	1	1
Seismic GB Construction Factor	1	1
Wall Dead Load Factor	1	1
Roof Dead Load Factor	1	1
Veneer Factor	1	1

Permit Number: 19-05696

	Wall Line 1-1	Wall Line 2-1
Required Seismic Bracing Amount	20.43 ft	20.43 ft
RESULTS		
Length of Wall Bracing Required	**20.43 ft**	**20.43 ft**

NOTES

This wall-bracing evaluation is based on the 2015 International Residential Code. The user is responsible for ensuring that the project fits within the scope of the IRC and complies with the wall-bracing requirements of Sections R602.10, R602.11 and R602.12 as applicable.

1. One- and two-family dwellings and townhouses in Seismic Design Category D0, D1, or D2 are subject to the wind and seismic requirements of the IRC. The length of wall bracing shall be the greater of that required by Table R602.10.3(1) based on wind speed, and Table R602.10.3(3) based on seismic design category, including all applicable adjustment factors.
2. Braced-wall lines using the continuous sheathing methods shall be constructed in accordance with the requirements of Sections R602.10.4.2, R602.10.6.4, and R602.10.7, as applicable.
3. Braced-wall panels shall be located at each end of braced-wall lines. Braced-wall panels constructed of Methods WSP, BV-WSP, or continuous sheathing methods may begin up to 10 feet from each end when the additional requirements of Section R602.10.2.2.1 are satisfied.
4. The distance between braced wall panels shall not exceed 20 feet in accordance with Section R602.10.2.2.
5. Interior braced-wall-line spacing is the greater of the distance between two adjacent braced-wall lines or the average of the distance as selected by the designer.
6. Refer to the *Strong-Wall® Bracing Selector* (http://www2.strongtie.com/webapps/strongwallbracingselector/) for pre-engineered solutions when the required bracing amounts cannot be satisfied with prescriptive braced-wall panels. Simpson Strong-Tie® Wood and Steel Strong-Wall® shearwalls may be considered equivalent to the code braced-wall panel construction method WSP with gypsum board applied on the inside.
7. Braced-wall-line spacing shall not exceed 25 feet on center in each story in both longitudinal and transverse directions in accordance with Table R602.10.1.3. However, the spacing between two adjacent braced wall lines shall not exceed 35 feet on center in order to accommodate one single room when the provisions in Table R602.10.1.3 are satisfied.
8. Horizontal panel joints in braced-wall panels shall be blocked in accordance with Section R602.10.10.
9. Braced-wall lines shall have a minimum of two braced wall panels unless the provisions of Section R602.10.2.3 are satisfied.

WARNINGS

1. For buildings in SDC D0, D1, and D2 the user must ensure braced wall line spacing greater than 25 feet satisfies the requirements of Table R602.10.1.3.
2. The wall bracing provisions of the IRC may not be used in areas where wind design is required in accordance with Figure R301.2(4)B or where the ultimate design wind speed shown on Figure R301.2(4)A equals or exceeds 140 miles per hour.
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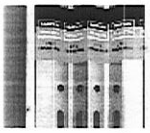

WALL-BRACING Length Calculator

SIMPSON StrongTie

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About WBLC

2015 IRC Required Braced-Wall-Line Length Calculations

PROJECT INFORMATION

NAME: PLAN #1656

ADDRESS: KITSAP, WA

WALL DIRECTION: Front to Back

SEISMIC DESIGN CATEGORY: D2

ULTIMATE DESIGN WIND SPEED: 110 mph

WIND EXPOSURE CATEGORY: B

STONE OR MASONRY VENEER: No

	Wall Line A-1	Wall Line B-1	Wall Line C-1
Inputs			
Braced-Wall-Line Location	1st of 2-story	1st of 2-story	1st of 2-story
Eave to Ridge Height	7 ft	7 ft	7 ft
Braced-Wall-Line Spacing	22.00 ft	22.00 ft	20.00 ft
Braced-Wall-Line Length	26 ft	26 ft	26 ft
Wall Height	8 ft	8 ft	8 ft
Bracing Method	CS-WSP	CS-WSP	CS-WSP
GB Construction Type	N/A	N/A	N/A
Gypsum Wall Board on Inside	Yes	Yes	Yes
Horizontal Joints Blocked	Yes	Yes	Yes
Holdown Device Used	No	No	No
Wall Dead Load	> 8 psf & ≤ 15 psf	> 8 psf & ≤ 15 psf	> 8 psf & ≤ 15 psf
Roof/Ceiling Dead Load	≤ 15 psf	≤ 15 psf	≤ 15 psf
WIND			
Tabulated Wind Bracing Amount	6 ft	6 ft	5.5 ft
Exposure Height Factor	1	1	1
Eave-to-Ridge Height Factor	0.91	0.91	0.91
Wind Wall Height Factor	0.9	0.9	0.9
Number of BWL Factor	1.3	1.3	1.3
Holdown Factor	1	1	1
Blocked Joint Factor	1	1	1
Gypsum on Inside Factor	1	1	1
Wind GB Construction Factor	1	1	1
Required Wind Bracing Amount	6.39 ft	6.39 ft	5.86 ft
SEISMIC			
Tabulated Seismic Bracing Amount	12.16 ft	12.16 ft	12.16 ft
Seismic Wall Height Factor	1	1	1
BWL Spacing Factor	1	1	1
Blocked Joint Factor	1	1	1
Gypsum on Inside Factor	1	1	1
Seismic GB Construction Factor	1	1	1
Wall Dead Load Factor	1	1	1
Roof Dead Load Factor	1	1	1
Veneer Factor	1	1	1

Permit Number: 19-05696

	Wall Line A-1	Wall Line B-1	Wall Line C-1
Required Seismic Bracing Amount	12.16 ft	12.16 ft	12.16 ft
RESULTS			
Length of Wall Bracing Required	**12.16 ft**	**12.16 ft**	**12.16 ft**

NOTES

This wall-bracing evaluation is based on the 2015 International Residential Code. The user is responsible for ensuring that the project fits within the scope of the IRC and complies with the wall-bracing requirements of Sections R602.10, R602.11 and R602.12 as applicable.

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WARNINGS

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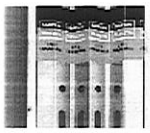

WALL-BRACING Length Calculator

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About WBLC

2015 IRC Required Braced-Wall-Line Length Calculations

PROJECT INFORMATION

NAME: PLAN #1656

ADDRESS: KITSAP, WA

WALL DIRECTION: Side To Side

SEISMIC DESIGN CATEGORY: D2

ULTIMATE DESIGN WIND SPEED: 110 mph

WIND EXPOSURE CATEGORY: B

STONE OR MASONRY VENEER: No

	Wall Line 1-2	Wall Line 2-2
Inputs		
Braced-Wall-Line Location	2nd of 2-story	2nd of 2-story
Eave to Ridge Height	7 ft	7 ft
Braced-Wall-Line Spacing	26.00 ft	26.00 ft
Braced-Wall-Line Length	42 ft	42 ft
Wall Height	8 ft	8 ft
Bracing Method	CS-WSP	CS-WSP
GB Construction Type	N/A	N/A
Gypsum Wall Board on Inside	Yes	Yes
Horizontal Joints Blocked	Yes	Yes
Holdown Device Used	No	No
Wall Dead Load	> 8 psf & ≤ 15 psf	> 8 psf & ≤ 15 psf
Roof/Ceiling Dead Load	≤ 15 psf	≤ 15 psf
WIND		
Tabulated Wind Bracing Amount	3.9 ft	3.9 ft
Exposure Height Factor	1	1
Eave-to-Ridge Height Factor	0.82	0.82
Wind Wall Height Factor	0.9	0.9
Number of BWL Factor	1	1
Holdown Factor	1	1
Blocked Joint Factor	1	1
Gypsum on Inside Factor	1	1
Wind GB Construction Factor	1	1
Required Wind Bracing Amount	2.88 ft	2.88 ft
SEISMIC		
Tabulated Seismic Bracing Amount	8.92 ft	8.92 ft
Seismic Wall Height Factor	1	1
BWL Spacing Factor	1.04	1.04
Blocked Joint Factor	1	1
Gypsum on Inside Factor	1	1
Seismic GB Construction Factor	1	1
Wall Dead Load Factor	1	1
Roof Dead Load Factor	1	1
Veneer Factor	1	1

	Wall Line 1-2	Wall Line 2-2
Required Seismic Bracing Amount	9.28 ft	9.28 ft
RESULTS		
Length of Wall Bracing Required	**9.28 ft**	**9.28 ft**

NOTES

This wall-bracing evaluation is based on the 2015 International Residential Code. The user is responsible for ensuring that the project fits within the scope of the IRC and complies with the wall-bracing requirements of Sections R602.10, R602.11 and R602.12 as applicable.

1. One- and two-family dwellings and townhouses in Seismic Design Category D0, D1, or D2 are subject to the wind and seismic requirements of the IRC. The length of wall bracing shall be the greater of that required by Table R602.10.3(1) based on wind speed, and Table R602.10.3(3) based on seismic design category, including all applicable adjustment factors.
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4. The distance between braced wall panels shall not exceed 20 feet in accordance with Section R602.10.2.2.
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WARNINGS

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3. Different intermittent bracing methods are not permitted to be mixed within a braced wall line for Townhouses in Seismic Design Category C and all structures in Seismic Design Category D0, D1, or D2 in accordance with Section R602.10.4.1 item #3.