

Design Codes and Criteria



The City of Vancouver Adopted Codes (effective March 15, 2024)

Washington State Amendments available at <https://sbcc.wa.gov>

2021 International Building Code & WAC 51-50	2021 Washington State Energy Code, Commercial WAC 51-11C
2021 International Residential Code & WAC 51-51	2021 Washington State Energy Code, Residential WAC 51-11R
2021 International Existing Building Code & WAC 51-50-480000	2021 Wildlife-Urban Interface Code & WAC 51-55 (Delayed)
2021 International Mechanical Code & WAC 51-52	2023 National Electrical Code (Eff. 4/1/2024)
2021 International Fuel Gas Code & WAC 51-52-21000	ICC/ANSI A117.1-2017 Accessibility & WAC 51-50-1101.2
2021 International Fire Code & WAC 51-54A	ASCE/SEI 7-16 Minimum Design Loads & Associated Design Criteria
2021 Uniform Plumbing Code & WAC 51-56	Washington State Water Conservation Code
2021 International Swimming Pool and Spa Code	Vancouver Municipal Code Title 17

Minimum Design Criteria & Structural Loads

SNOW (based on site ground elevation) <table border="0"> <tr> <td>Ground Snow load up to 150 ft</td> <td>20 psf</td> </tr> <tr> <td>Ground Snow load over 150 ft</td> <td>25 psf</td> </tr> <tr> <td>Roof Snow load (regardless of slope)</td> <td>25 psf Minimum</td> </tr> <tr> <td colspan="2">Drift calculations as required by ASCE 7-16 Chapter 7</td> </tr> </table>		Ground Snow load up to 150 ft	20 psf	Ground Snow load over 150 ft	25 psf	Roof Snow load (regardless of slope)	25 psf Minimum	Drift calculations as required by ASCE 7-16 Chapter 7		WIND <table border="0"> <tr> <td>Risk Occupancy Category (Table 1604.5)</td> <td>3-Second Gust Wind</td> </tr> <tr> <td>Residential (IRC) & Commercial (IBC) II</td> <td>V = 97 mph</td> </tr> <tr> <td>Commercial (IBC) III</td> <td>V = 103 mph</td> </tr> <tr> <td>Commercial (IBC) IV</td> <td>V = 107 mph</td> </tr> </table>		Risk Occupancy Category (Table 1604.5)	3-Second Gust Wind	Residential (IRC) & Commercial (IBC) II	V = 97 mph	Commercial (IBC) III	V = 103 mph	Commercial (IBC) IV	V = 107 mph
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SEISMIC DESIGN CATEGORY Residential: D1 Commercial: D Seismic upgrade may be required for existing buildings due to change of use/occupancy/risk category, addition or alteration		Exposure Category based on site specific conditions Exposure B minimum Exposure C All structures within 1500 feet of the Columbia River																	
SOIL BEARING PRESSURE 1500 psf or Site-specific Current Geotechnical Report		Cell Tower (TIA-222-H-2017) & Flag Poles (NAAMM FP 1001-18) V = 97 mph (V _{asd} = 75 mph) without ice V _c & radial ice thickness based on ASCE 7-16 Figure 10.4-5																	
FLOOD FEMA Maps																			
CLIMATE ZONE 4C-MARINE		DECKS & BALCONIES																	
DESIGN TEMP <table border="0"> <tr> <td>WINTER</td> <td>22 °F</td> </tr> <tr> <td>SUMMER</td> <td>88 °F</td> </tr> <tr> <td>MEAN ANNUAL</td> <td>50 °F</td> </tr> </table>		WINTER	22 °F	SUMMER	88 °F	MEAN ANNUAL	50 °F	Residential (IRC) WAC 51-51-R301.5 SBCC Interpretation No. 16-11 60 psf Minimum Commercial (IBC) IBC Table 1607.1 item 5 1.5 x live load of area served Not to exceed 100 psf											
WINTER	22 °F																		
SUMMER	88 °F																		
MEAN ANNUAL	50 °F																		
ICE SHIELD & AIR INDEX FREEZING N/A		RAINFALL 1.4 in/hr Maximum rate of rainfall storm drainage for 60 minute duration, 100 year hourly rate																	
SUBJECT TO DAMAGE: <table border="0"> <tr> <td>TERMITE</td> <td>Slight to Moderate</td> </tr> <tr> <td>FROST</td> <td>12" Min</td> </tr> <tr> <td>DECAY</td> <td>Slight to Moderate</td> </tr> <tr> <td>WEATHER</td> <td>Moderate</td> </tr> </table>		TERMITE	Slight to Moderate	FROST	12" Min	DECAY	Slight to Moderate	WEATHER	Moderate	RADON POTENTIAL High - Zone 1 Residential occupancies require radon protection and testing WAC 51-51-R332, IRC Appendix F (IRC) & WAC 50-50-1202.7 (IBC)									
TERMITE	Slight to Moderate																		
FROST	12" Min																		
DECAY	Slight to Moderate																		
WEATHER	Moderate																		

All other loading per 2021 IRC Chapter 3 or 2021 IBC Chapter 16 as applicable.