

Attachment 1: Jurisdictional scan of policies and regulatory frameworks relating to below ground construction and iceberg homes

Municipality	Gross floor area / floor space index	Lot coverage	Setbacks	Depth	Length	Reference to landscaping or water	Number of levels below grade	Notes
Toronto, Ontario, Canada				.	.			- As part of the Ontario Municipal Board appeals of Zoning By-law 569-2013, proposed regulations pertaining to building setbacks below grade were removed in 2018 - Building length and depth regulations apply to all main walls of a building above and below grade, excluding footings
Mississauga, Ontario, Canada	.		.	.				- GFA of a basement is potentially included, based on whether the building is considered "infill" - Dwelling unit depth only does not apply to structures below the first storey in the front rear yards
Hamilton, Ontario, Canada	.		.					GFA includes a "basement", but not a "cellar"
Vaughan, Ontario, Canada			.					
Ottawa, Ontario, Canada	.							GFA exempts certain room uses in the basement
Kingston, Ontario, Canada	.							GFA excludes areas with limited headroom
Vancouver, British Columbia Canada	.	.	.					- FSI regulated based on number of dwelling units in the building; permitted FSI is increased if certain criteria is met; - Permitted FSI is sometimes related to the age of the building, ceiling heights of select spaces, and whether any portion of the basement or cellar projects horizontally beyond the perimeter of the first storey, including entries, porches, and verandahs
Edmonton, Alberta, Canada						.		- GFA is not regulated for small-scale residential buildings, only site coverage - Setbacks below grade do not apply, except where a "Development Officer may require that a Yard, or any portion of it, be unobstructed and undisturbed below grade in order to preserve existing vegetation, or to provide an adequate growing environment for any proposed or required Landscaping"
Calgary, Alberta, Canada			.					- GFA is not regulated for small-scale residential buildings, only site coverage - Portion of the building below the surface of the ground may extend without limits into a setback area, with the exception of the required front setback area

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San Francisco, California, United States of America	•							<ul style="list-style-type: none"> <li>- GFA exempts certain room uses in the basement</li> <li>- When constructing garages that are under decks or underground, confirmation with Sections 136(c)(24) or (c)(25) if their top surfaces are developed as usable open space, provided that no such garage shall occupy any area within the rear 15 feet of the depth of the lot. However, it is long-standing Planning Department practice to permit such obstruction into required yards for any type of underground building that meets these provisions, and not limit them to garages. Therefore, any building that meets the strict provisions of Section 136(c)(26) may be permitted within required yards, and such obstruction is not limited to only garages.</li> </ul>
Burbank, California, United States of America	•							Whether a basement space is included in the GFA takes into account the area of a space, the location of a space, and the elevation of the first floor relative to the expanse of the basement.
Seattle, Washington, United States of America	•		•	•		•		<ul style="list-style-type: none"> <li>- FSI below grade is based on the location of the ground around the house</li> <li>- Setbacks apply below grade, but "structures below grade...may be located below required yards"</li> <li>- "A structure may be permitted to extend into front and rear yards as necessary to protect exceptional trees and trees over 2 feet in diameter"</li> <li>- Retained or new trees must meet standards to ensure the long-term health of the tree</li> </ul>
Portland, Oregon, United States of America								GFA excludes areas with limited headroom and basements, but "only one basement level may be partly below grade; additional basement levels must be completely below grade"
Los Angeles, California, United States of America	•		•					<ul style="list-style-type: none"> <li>- GFA exempts certain room uses in the basement</li> <li>- Areas considered yards are unobstructed from the ground upwards</li> <li>- A definition for "permeable" is included in the zoning by-law</li> <li>- Due to the geographic variations of the land, Hillside Construction Regulation (HCR) Districts are subject to additional requirements, including limits on the amount of excavation, fill, and grading that can occur</li> <li>- Single-family home developments larger than 17,500 square feet are subject to a Site Plan Review prior to the issuance of related permits and entitlements</li> </ul>

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Long Beach, California, United States of America	•	•	•					<ul style="list-style-type: none"> <li>- GFA does not include the area of a basement</li> <li>- Lot coverage includes all levels of a building and accessory buildings</li> <li>- Setbacks for basements may not exceed the principal structure</li> </ul>
Palo Alto, California, United States of America	•		•			•		<ul style="list-style-type: none"> <li>- Basements may not extend beyond footprint of the building or structure</li> <li>- Basements not permitted in special flood hazard areas</li> <li>- Yard requirements are only measured horizontally, not vertically</li> <li>- GFA for basements excludes areas with limited headroom, takes into account whether a space is habitable or not, and whether the basement area is associated with a historic property</li> <li>- Requirements regulate functional projections associated with basement development, such as lightwells and stairwells <ul style="list-style-type: none"> <li>- Size and location</li> </ul> </li> <li>- May not be harmful to mature trees on the subject property or abutting properties <ul style="list-style-type: none"> <li>-To have an adequate drainage system, to the satisfaction of the public works department</li> </ul> </li> <li>- Requirements regulate select excavated areas, such as sunken gardens and below grade patios <ul style="list-style-type: none"> <li>- Size and location</li> </ul> </li> <li>- Roof overhangs or canopy are counted toward site coverage requirements <ul style="list-style-type: none"> <li>-To have an adequate drainage system, to the satisfaction of the public works department</li> </ul> </li> <li>- May not be harmful to mature trees on the subject property or abutting properties, to the satisfaction of the planning director <ul style="list-style-type: none"> <li>- Areas are required to be architecturally compatible with the residence</li> </ul> </li> <li>- Screened to off-site views to the satisfaction of the planning director</li> </ul>
Melbourne, Australia								<ul style="list-style-type: none"> <li>- Melbourne planning scheme utilizes a mixed regulatory framework, taking into account planning policy and zoning ordinance</li> <li>- Includes mention of policy and objectives relating to pervious surfaces, facilitating on-site stormwater infiltration and the reduction of increased stormwater run-off to drainage systems</li> <li>- The basement is not considered a storey</li> </ul>

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Boroughs of Kensington and Chelsea (London), England		•				•	•	<ul style="list-style-type: none"> <li>- Town planning in the UK is generally policy-based instead of zoning-based. Applications are reviewed on a discretionary basis for compliance with planning policy guidance.</li> <li>- Policy CL7 addresses basements, with further guidance provided in a Supplementary Planning Document (SPD) - akin to guidelines: <ul style="list-style-type: none"> <li>- Maximum 50% of yard area, which must be contiguous</li> <li>- Basements limited to one storey, with potential exceptions on large sites</li> <li>- Requires a drainage system be provided, including suitable pumping (sump pump)</li> <li>- Requires a minimum 1 metre soil depth above a portion of the basement beneath a garden, and construction may not cause damage or loss of trees</li> <li>- Regulates impacts such as noise, vibration, dust, urban design, affects on traffic, and flooding</li> </ul> </li> <li>- Safeguards structural stability of existing and surrounding buildings and structures</li> </ul>
Borough of Westminster (London), England		•				•	•	<ul style="list-style-type: none"> <li>- Town planning in the UK is generally policy-based instead of zoning-based. Applications are reviewed on a discretionary basis for compliance with planning policy guidance.</li> <li>- Policy CM28.7 addresses basement construction: <ul style="list-style-type: none"> <li>- Maximum of the greater of 50% or 4 metres of garden area, and not result in the loss of trees of townscape, ecological, or amenity value</li> <li>- Excavation limited to one storey below the lowest original floor level, with potential exceptions</li> <li>- Requires a minimum 1.2 metre soil depth and adequate soil volume above a portion of the basement, incorporating soft landscaping and permeable surfacing</li> <li>- Limits adverse visual impact on the subject building, garden setting, and surrounding area</li> <li>- Protects heritage and archaeological assets</li> <li>- Applicants must demonstrate that developments do not impact potential of flooding and structural instability</li> </ul> </li> <li>- Safeguards structural stability of existing and surrounding buildings and structures: structural methodology statement, self-certification, and a construction management plan to be provided by the applicant</li> </ul>