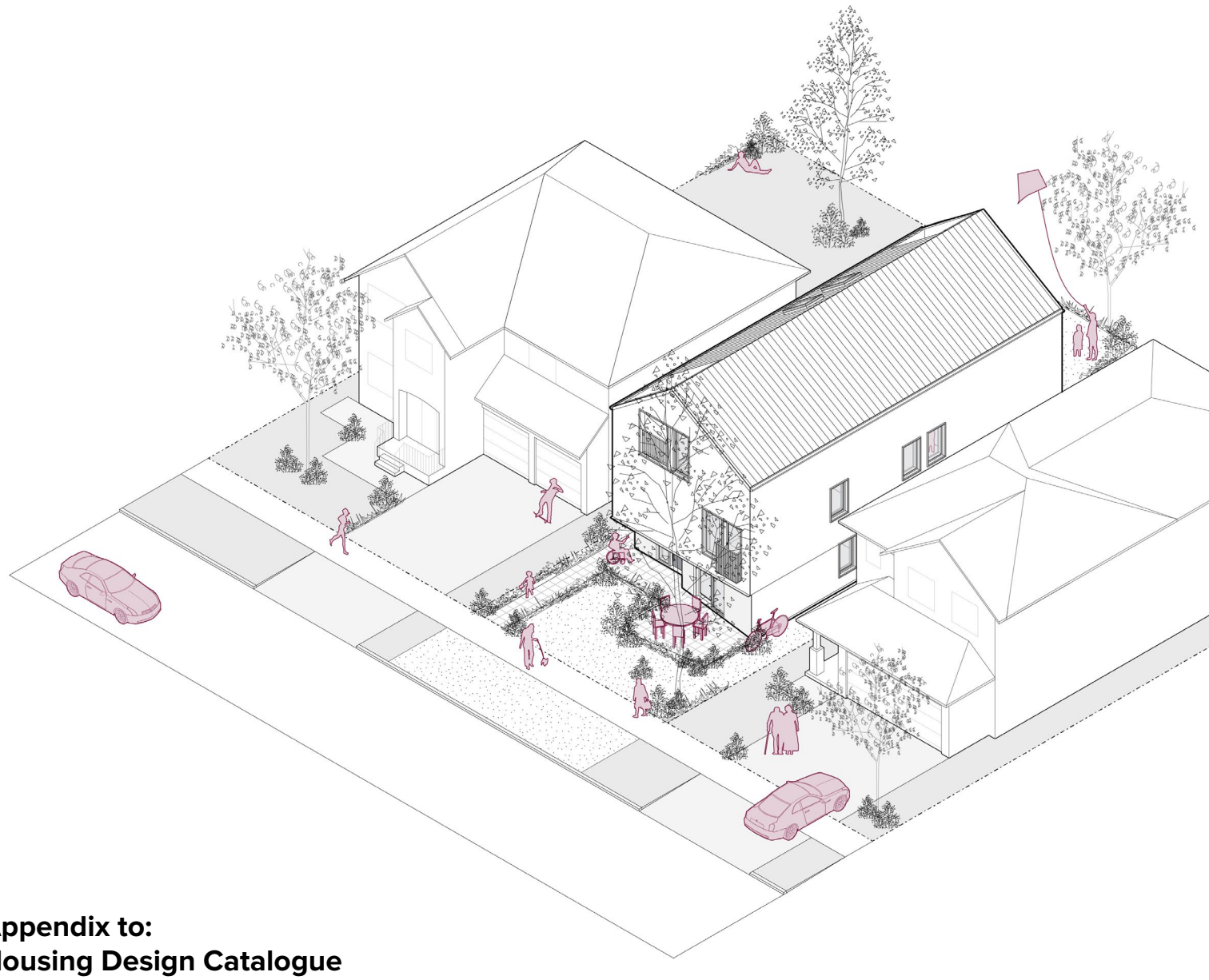
SITE DESIGN EXAMPLES

Ontario



Appendix to:
Housing Design Catalogue

Housing, Infrastructure and Communities Canada
Logement, Infrastructures et Collectivités Canada
Canada
CMHC SCHL

About this Document

This resource provides illustrative samples of site plans to help Housing Design Catalogue users evaluate potential sites and conceptualize how a selected design may fit on a prototypical property.

Site planning is informed by numerous considerations: site characteristics and context, local zoning and development regulations, building code requirements, land development costs, as well as user preferences and livability. There can be competing priorities that require careful thought and compromise. Financial viability will determine if a site plan example is suitable for a specific locations and property.

Users must work with a Qualified Professional when assessing site planning in compliance with Applicable Law, as indicated in the Housing Design Catalogue Terms and Conditions.[1]

[1] 'Qualified Professional', 'Applicable Law' and 'Design' are defined in the Terms and Conditions, as appended to the User Guide for the Housing Design Catalogue.

Disclaimer

The examples included in this resource are provided for illustrative purposes only and may not align with zoning requirements for a specific municipality or location. Users must consult Applicable Law prior to selecting a Design and proceeding with the development of a site plan with the support of a Qualified Professional. Additional guidance related to Catalogue Designs may be provided by authorities having jurisdiction.

All of the following drawings use this Legend:

Legend	
Property Line	Accessible Hardscape
Entrance	Landscape
Accessible Entrance	Permeable Path
Secondary Entrance	Setback Varies
Building	1 Garbage
Hardscape	2 Bike Storage

Contents

Site Design Considerations

The Site Design Examples consider functional elements of site planning, typical zoning requirements and common lot dimensions in each region.

The examples are based on a single residential lot in the case of accessory dwelling units and multiplexes. For designs that can be repeated side-by-side, such as rowhomes and stacked townhomes, examples are provided for a variety of narrow and wide lots. As the Housing Design Catalogue is a flexible tool, land or lot assembly could allow users to consider additional siting options.

The examples assume a single owner and are optimized for a rental scenario; however, the Housing Design Catalogue can be used for a variety of ownership models. The location of vehicle parking, waste storage, and other elements may vary depending on the ownership model and on whether the property is severed or arranged into separate parcels.

While the Site Design Examples provide a head start for site planning, they do not account for site- and location-specific conditions and requirements that a Qualified Professional will need to manage and balance when developing a detailed site plan. Common considerations include:

Site Characteristics

Site conditions will inform options for developing a property. Existing natural features (such as trees or rock outcrops), slope, lot orientation and the size of a property will influence where a home can be located on a site. Irregular lots[2], hydro clearances, easements, and restrictive covenants, can create additional complexity. The prototypical examples provided in the Site Design Examples focus on common issues and recommended approaches for lots with standard dimensions.

[2] See BC region site design examples for Accessory Dwelling Unit 01 and Accessory Dwelling Unit 02 for examples of siting on a cul-de-sac.

Zoning, Building Code and Life Safety

Zoning, land use regulations and building code requirements are key drivers of site design. Users of the Housing Design Catalogue must confirm all applicable zoning, development and building regulations that will impact site plan design. The role of the Qualified Professional is to support this process.

Site plans may be required as part of a building permit application and reviewed for life safety considerations.

Access Pathways

Each unit must have a clear access pathway, ensuring that firefighting access and life safety requirements are met. Pathways should also be provided from each unit entrance to parking and/or bike storage, where provided, as well as amenity areas and waste storage. The Site Design Examples include illustrative examples of primary pathways and secondary permeable pathways. Pathways dimensions may be determined by the local authorities having jurisdiction (AHJ) and building codes for compliance with accessibility and setbacks.

Solid Waste Management

Site designs for multi-unit rowhouse, townhouse and multiplex designs should pay particular attention to waste storage and pickup locations (street or laneway). The Site Design Examples include illustrative examples for various contexts.

Soft Landscaping and Stormwater Management

Zoning bylaws may include a minimum percentage of the overall site to be reserved for soft landscaping or softscape. This includes natural and permeable areas like grass, trees and shrubs that allow water infiltration and absorption into the ground to reduce stormwater runoff, while also providing amenity space for residents.

Softscape also provides important opportunities for snow storage. Local bylaws may include specific provisions related to snow management to ensure snow collected from hardscape areas (driveways and pathways) can be retained on the site and not pushed into the public right-of-way.

Local authorities may require a drainage plan or have specific requirements for on-site management of stormwater (see BC region for examples with rainwater detention tanks).

The Site Design Examples prioritize a sufficient amount of softscape to provide users with flexibility to account for site specific conditions such as preservation of existing trees, utility easements or clearance requirements, as discussed further below.

Tree Management

Existing mature trees provide significant livability and climate resilience benefits, making tree preservation an important consideration for site design for infill developments in existing older neighbourhoods. Local tree preservation, protection or retention bylaws may specify minimum planting and soil volumes and root clearance zones for existing and new trees.

Tree preservation interacts closely with parking, access, lot coverage and hard/ softscape requirements. The Site Design Examples provide illustrative examples that account for the preservation of existing mature trees within the front setback facing the street. Some AHJs require specific protection zones for existing trees on sites.

On-Site Vehicle Parking

The Site Design Examples include multiple options for a variety of vehicle parking scenarios and configurations. Municipal regulations take a variety of approaches to parking requirements. Resident demand varies based on location and access to transit. Street accessed on-site parking requires additional lot width than scenarios (a) and (c). Financial viability will determine if an illustrative site design example is suitable for a specific location and property.

The Site Design Examples provides illustrative options for:

a. no on-site vehicle parking intended for small infill lots in close proximity to transit and where off-site street parking is available;
b. street accessed on-site parking[3]; and,
c. laneway accessed on-site parking.

For (b) and (c) the Site Design Examples prioritize on-site parking for family sized units (e.g. 3+ bedrooms).

[3] The Site Design Examples for street accessed on-site parking provide parking stalls at the rear of the lot via a driveway. Users can consult their local zoning bylaw to determine if alternative approaches, such as on-site parking in the front setback or tandem parking, are permitted in some contexts.

See Appendix: Template Parking Layouts in the back of the document.

Bike Parking

Site planning should consider resident demand for bike parking, and municipal bylaws and regulations related to active transportation. The Site Design Examples provide an illustrative location for bike parking for all scenarios with 3 or more units.

Utilities and Servicing

Servicing and utility requirements and availability will affect site planning and must be considered by users of the Housing Design Catalogue and their Qualified Professional at the outset of planning a project.

This includes connecting the building to neighbourhood infrastructure, and the location of connection points, shut-offs and meter points. Some services, such as water, electricity and gas, may require separate meters for each dwelling unit. The Qualified Professional will need to follow through on some or all of the following:

- **Water** – AHJ servicing connection details and requirements.
- **Wastewater** – AHJ servicing connection details and requirements.
- **Stormwater** – AHJ servicing connection details and requirements, including whether drainage should be managed on-site, piped to a utility connection, or a combination thereof. A stormwater management plan may be required. Integrating on-site management with trees and landscaping is often recommended.
- **Electrical** – Building setback distances from overhead electrical poles, transformers and lines must be considered at the outset of site planning. Pad-mounted electrical transformers may be required for some multiplex developments. This equipment requires space and should be considered early in the site design process (see BC region for examples).
- **Gas** – AHJ servicing connection details and requirements, where applicable.
- **Communications** – Connection details and requirements for local internet, telecom and cable providers.

Climate Resilience

Users should consider site-specific risks, such as flooding or wildfires, when preparing a detailed site plan. Preserving and creating space for greenery, gardens and trees help support biodiversity, shading and water management and improved livability. Aiming to minimize hardscape and maximize permeable surfaces also supports integrated stormwater management principles.

Refer to the Climate Resilience Guide for additional guidance.

Enhanced Accessibility

In addition to each region's applicable building code barrier-free requirements, the Site Design Examples include a minimum of two illustrative layouts for Enhanced Accessibility: one accessory dwelling unit and one fourplex. These examples were developed with reference to CSA/ASC B652:23 Accessible Dwellings and CSA/ASC B651:23 Accessible design for the built environment.

These site plan concepts feature wider pathways and larger parking stalls as per CSA standards. These concepts can be applied to other designs with Enhanced Accessible layouts as provided in the Housing Design Catalogue.

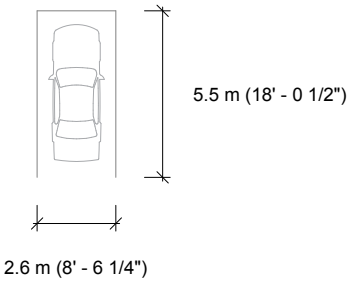
Standard Design Parameters

The key considerations used to develop the site plans are vehicle and bicycle parking, access pathways, driveways, and waste storage. The Site Design Examples are based on typical lot dimensions in each region. Local zoning regulations and municipal waste management strategies will determine the minimum dimensions required for parking, access and waste storage for a specific site and location.

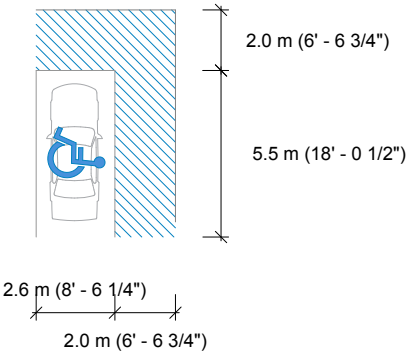
Parking

See Appendix: Template Parking Layouts in the back of the document

Standard Parking Stall

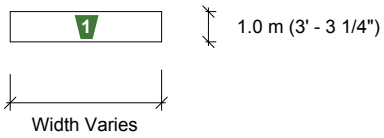


Accessible Parking Stall

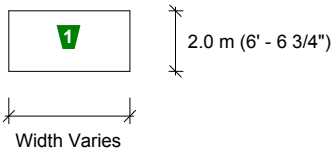


Garbage Stalls

Singular Garbage Stall



Garbage Stall



Pathways

Standard Pathway

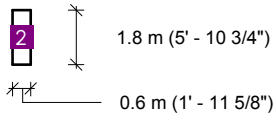
Accessible Pathway

Semi-Permeable Pathway

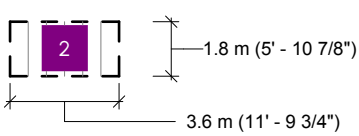
Typical Driveway

Bicycle Parking

Singular Stall Bike Parking



Six Stall Bike Parking

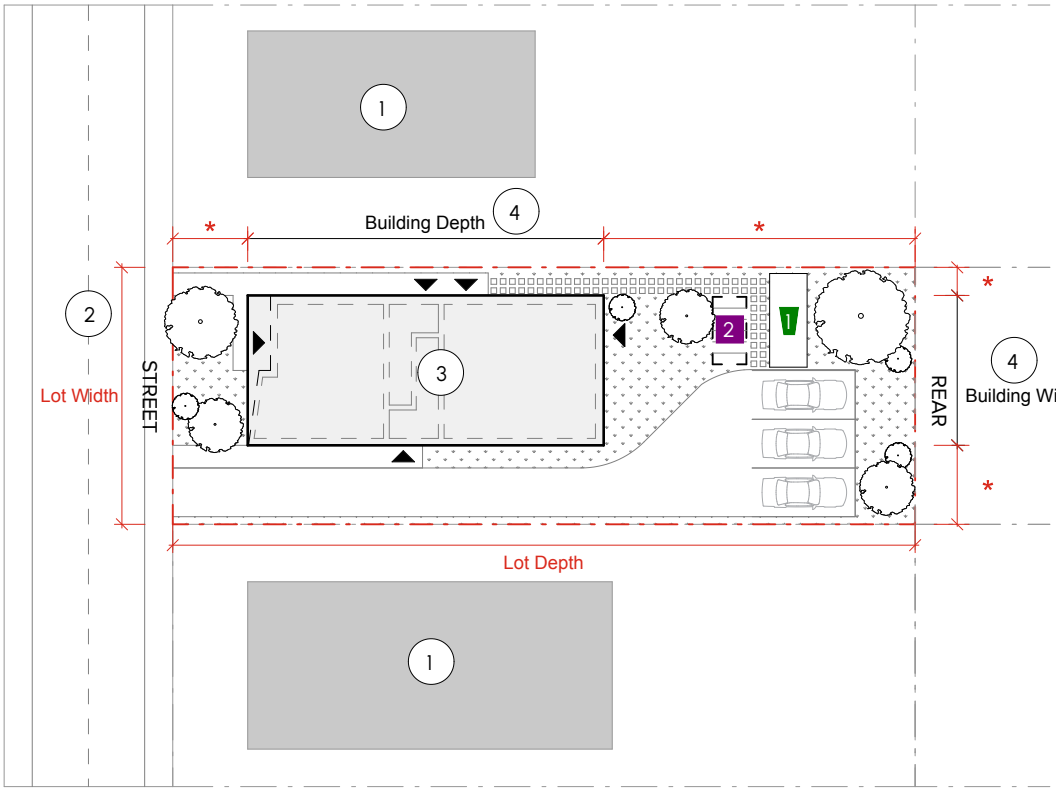


Typical Scenarios

Street Access Scenario

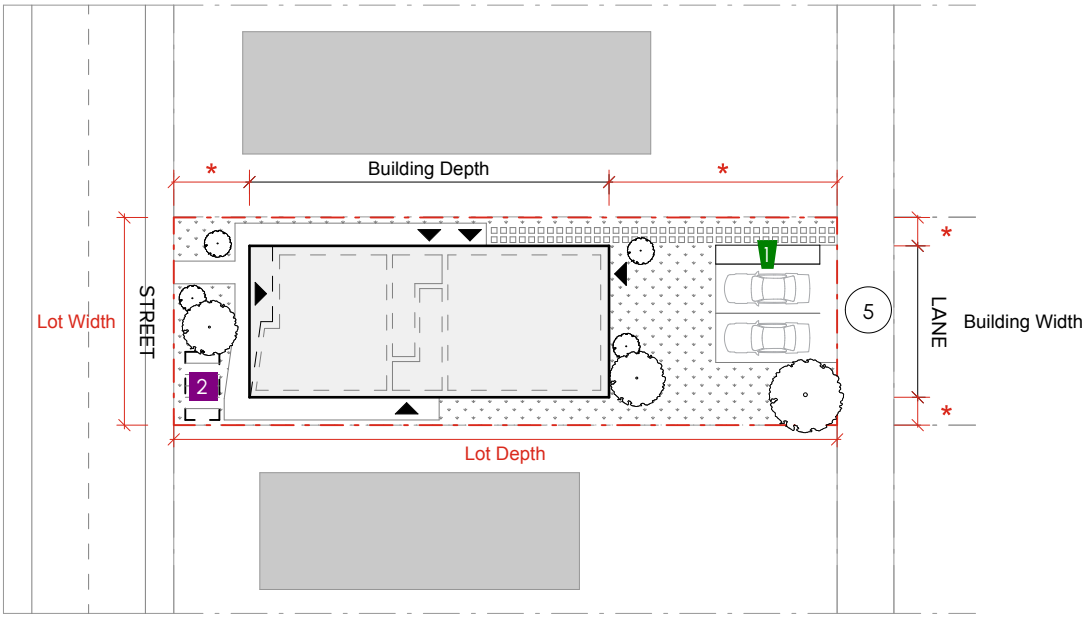
* Setbacks Vary based on location and local regulations.

1. Adjacent properties not shown in examples to follow, shown here for reference purposes.
2. Roads and sidewalks not shown in examples to follow, shown here for reference purposes.
3. Dashed lines show the extent of different units.
4. Building dimensions reference the 'Housing Design Catalogue'.



Lane Access Scenario

5. Parking and building access is from the lane.



Accessory Dwelling Unit 01

Legend

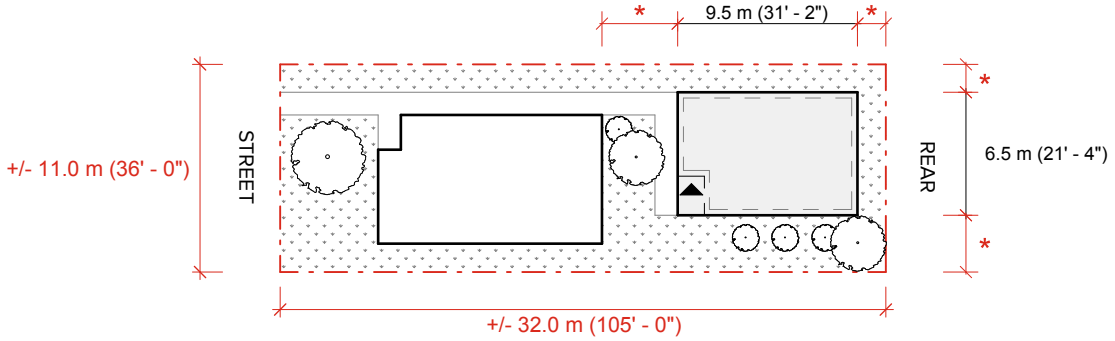
- Property Line
- Entrance
- Accessible Entrance
- Secondary Entrance
- Building
- Hardscape
- Accessible Hardscape
- Landscape
- Permeable Path
- * Setback Varies
- 1 Garbage
- 2 Bike Storage

Disclaimer

These examples are illustrative concepts only and may not align with zoning requirements for a specific community or location. Users must consult their local zoning bylaw prior to selecting a design and proceeding with the development of a site plan with the support of a Qualified Professional. Additional guidance related to Catalogue designs may be provided by the Authority having Jurisdiction (AHJ).

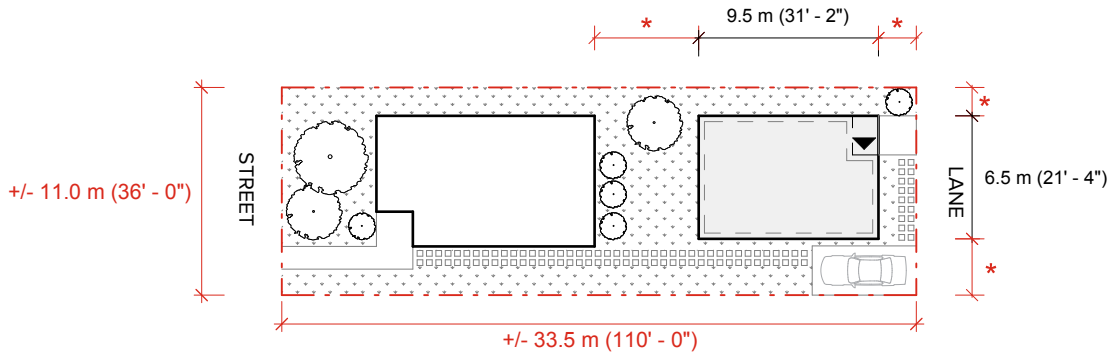
Option 1

Street Access



Option 2

Lane Access



Accessory Dwelling Unit 01 Enhanced Accessibility

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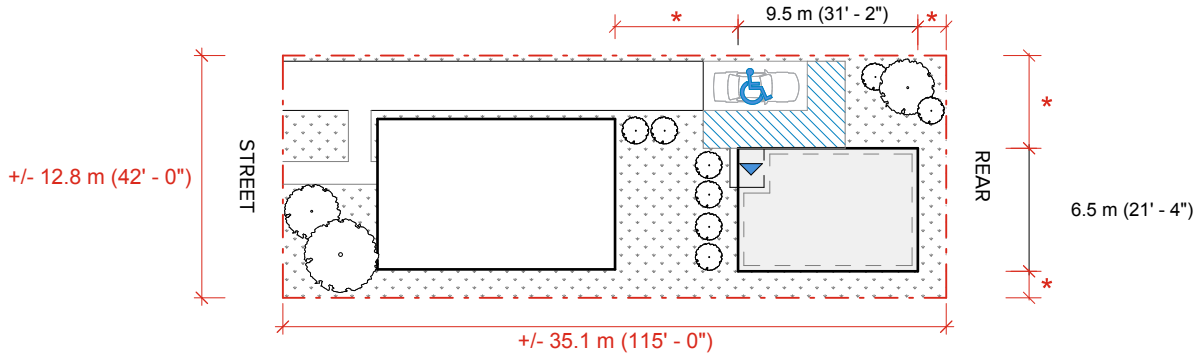
Legend

- Property Line
- Entrance
- Accessible Entrance
- Secondary Entrance
- Building
- Hardscape
- Accessible Hardscape
- Landscape
- Permeable Path
- * Setback Varies
- 1 Garbage
- 2 Bike Storage

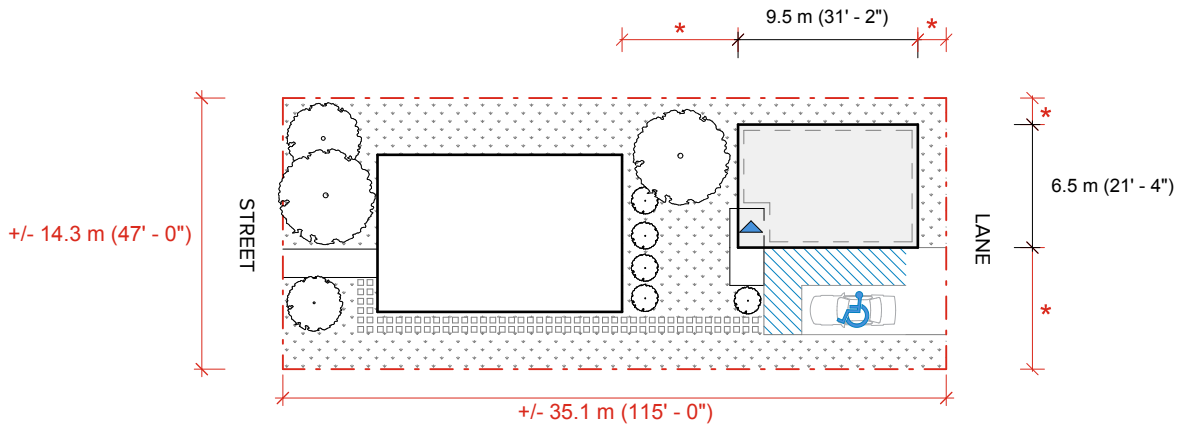
Option 1

Street Access



Option 2

Lane Access



Ontario

Accessory Dwelling Unit 02

Legend

- Property Line
- Entrance
- Accessible Entrance
- Secondary Entrance
- Building
- Hardscape
- Accessible Hardscape
- Landscape
- Permeable Path
- * Setback Varies
- 1 Garbage
- 2 Bike Storage

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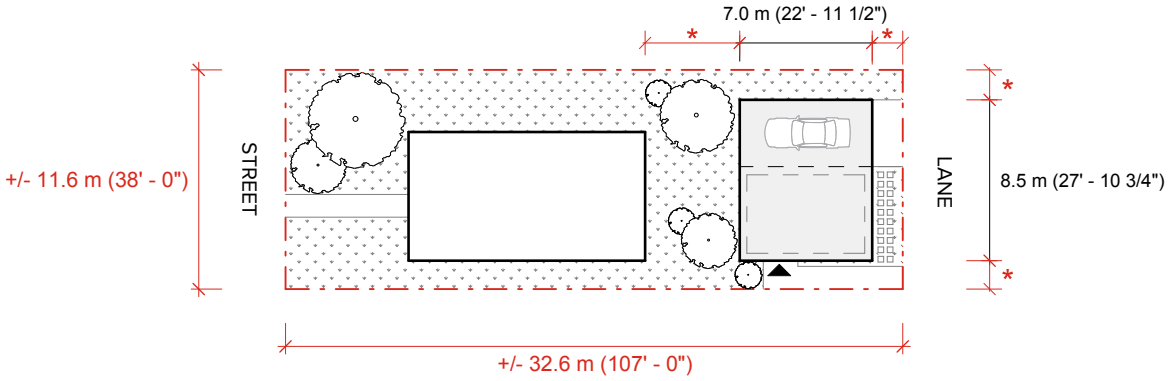
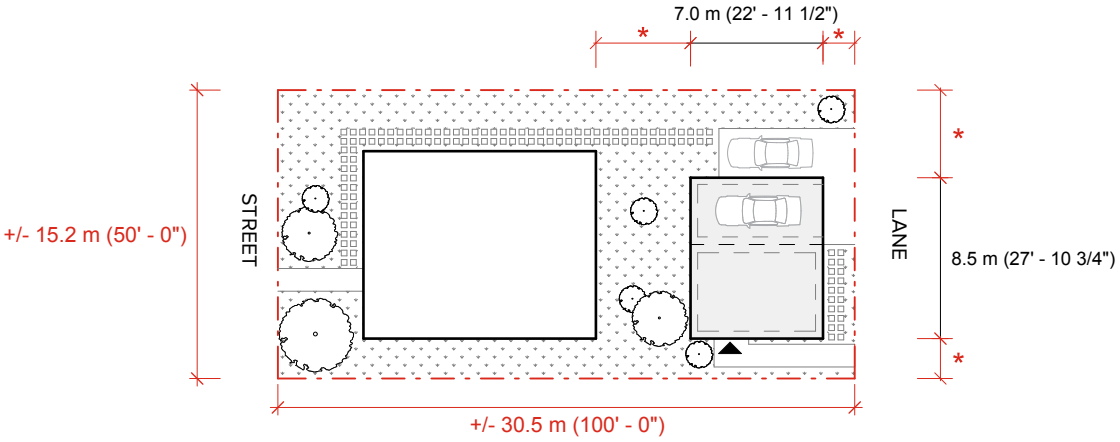
Option 1

Lane Access



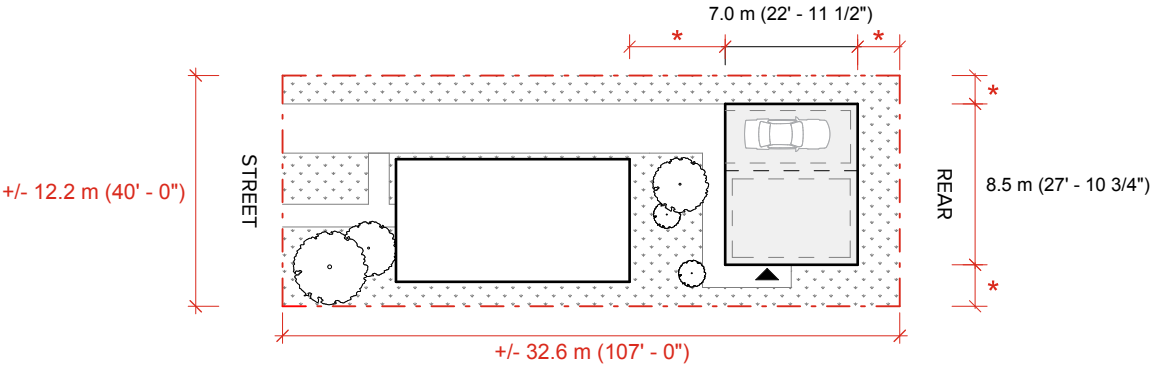
Option 2

Lane Access



Option 3

Street Access



Stacked Townhouse 01 Grouped

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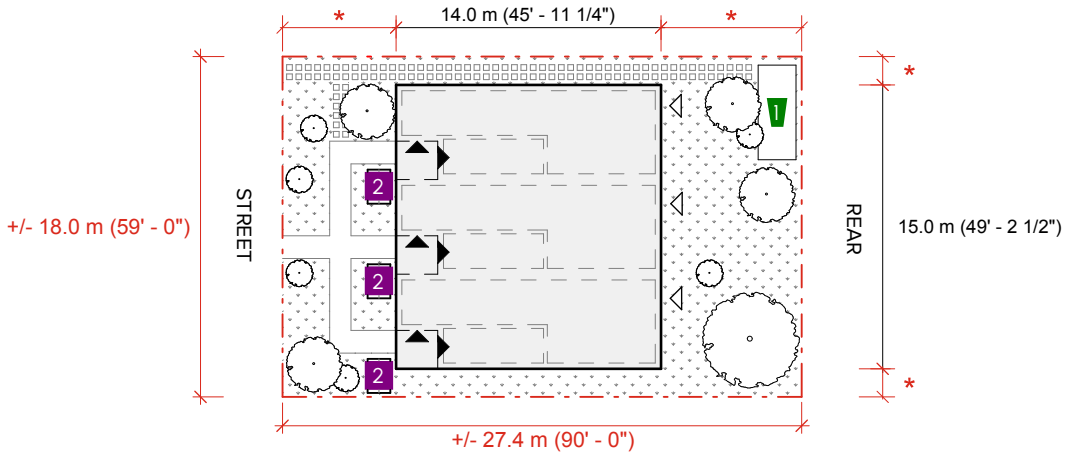
Legend

- Property Line
- Entrance
- Accessible Entrance
- Secondary Entrance
- Building
- Hardscape
- Accessible Hardscape
- Landscape
- Permeable Path
- * Setback Varies
- 1 Garbage
- 2 Bike Storage

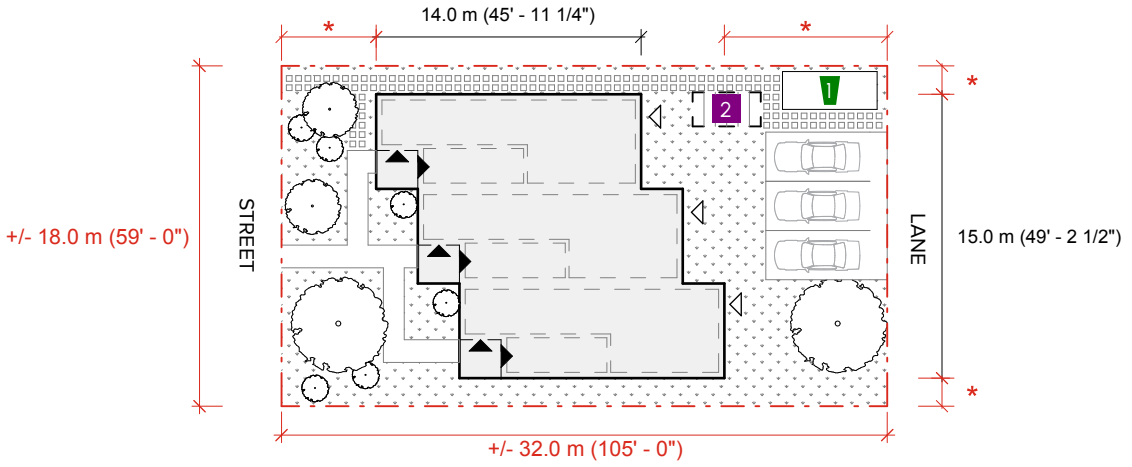
Option 1
Street Access

Lot Coverage
Total = 5310 sq ft
Building(s) = 2260 sq ft
Coverage – 43%



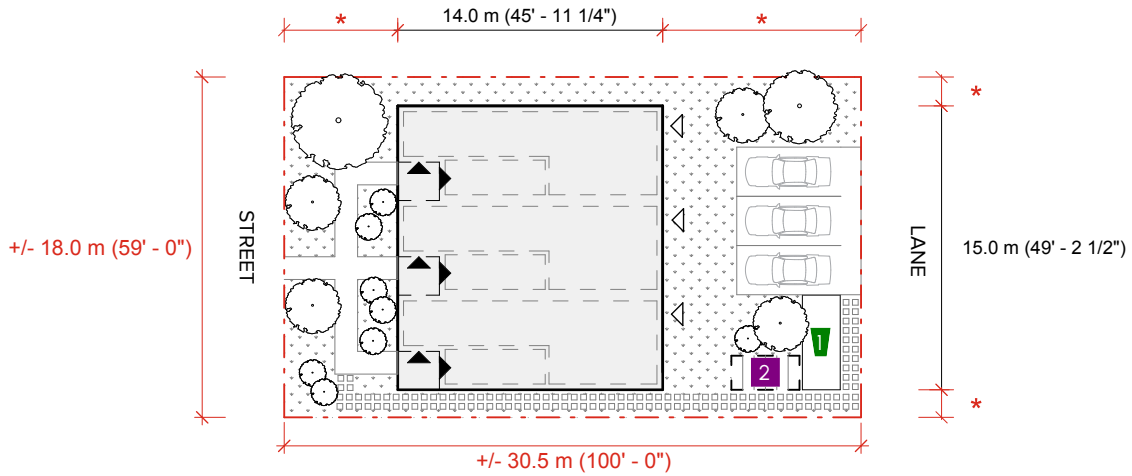
Option 2
Lane Access

Lot Coverage
Total = 6195 sq ft
Building(s) = 2260 sq ft
Coverage – 36%



Option 3
Lane Access

Lot Coverage
Total = 5905 sq ft
Building(s) = 2260 sq ft
Coverage – 38%



Stacked Townhouse 01 Grouped

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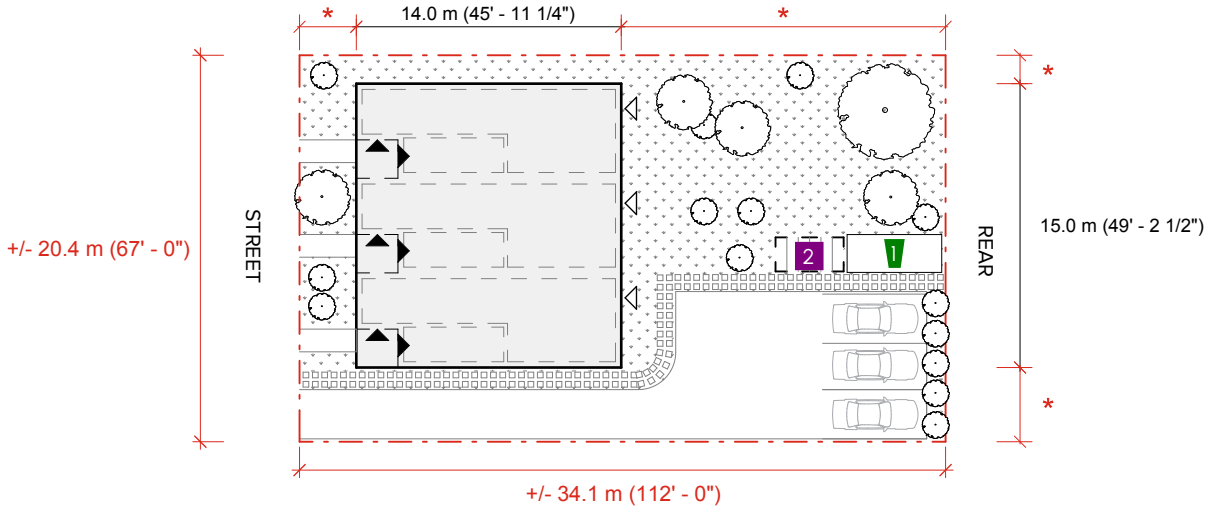
Legend

- Property Line
- Entrance
- Accessible Entrance
- Secondary Entrance
- Building
- Hardscape
- Accessible Hardscape
- Landscape
- Permeable Path
- * Setback Varies
- 1 Garbage
- 2 Bike Storage

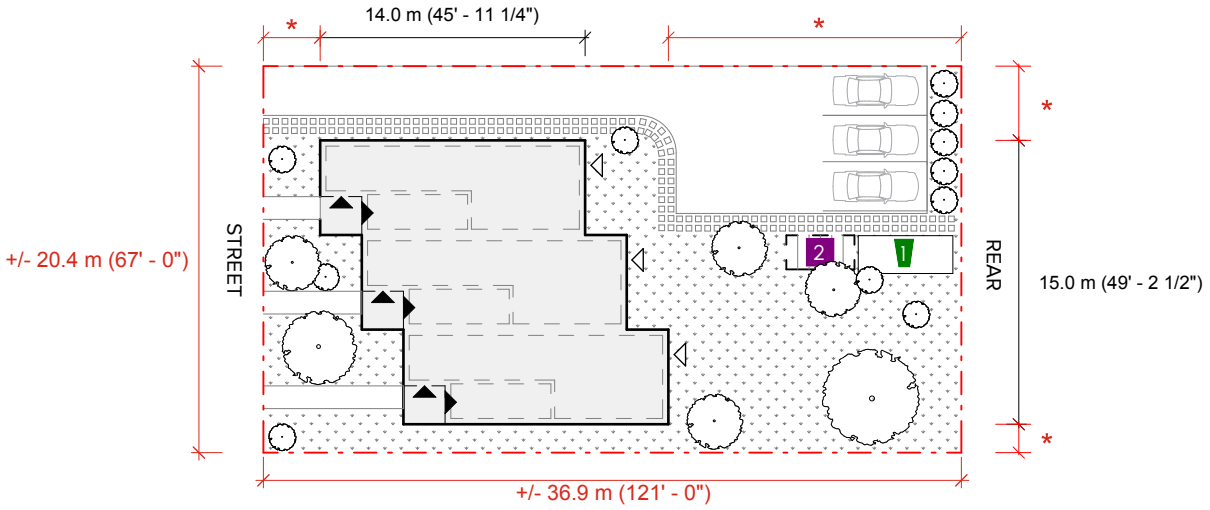
Option 4
Street Access

Lot Coverage
Total = 7504 sq ft
Building(s) = 2260 sq ft
Coverage – 30%



Option 5
Street Access

Lot Coverage
Total = 8107 sq ft
Building(s) = 2260 sq ft
Coverage – 28%



Ontario

Stacked Townhouse 01

Legend

- Property Line
- Entrance
- Accessible Entrance
- Secondary Entrance
- Building
- Hardscape
- Accessible Hardscape
- Landscape
- Permeable Path
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- 1 Garbage
- 2 Bike Storage

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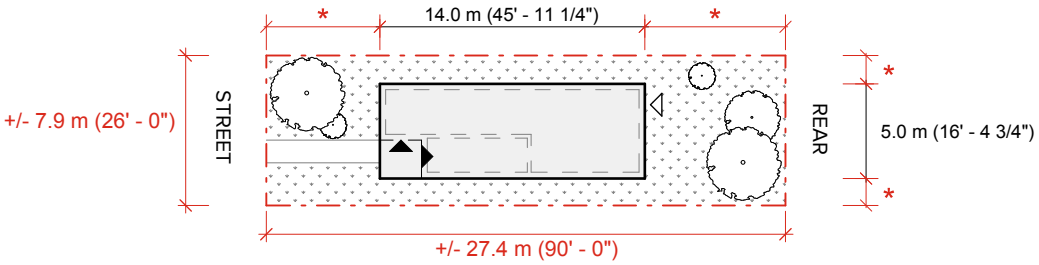
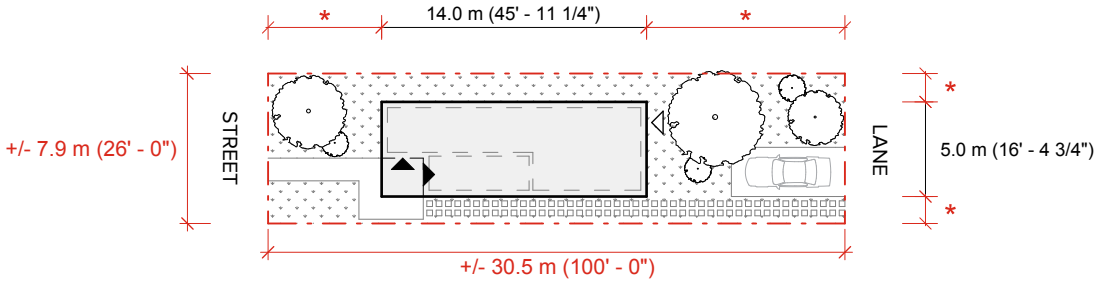
Option 1
Street Access

Lot Coverage
Total = 2340 sq ft
Building(s) = 753 sq ft
Coverage – 32%



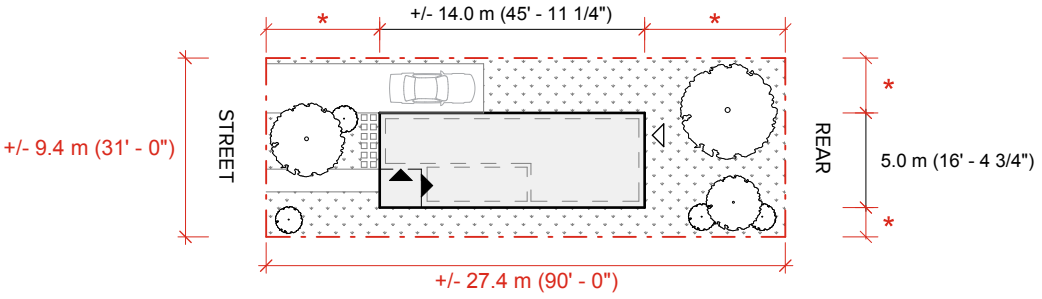
Option 2
Lane Access

Lot Coverage
Total = 2600 sq ft
Building(s) = 753 sq ft
Coverage – 29%



Option 3
Street Access

Lot Coverage
Total = 2790 sq ft
Building(s) = 753 sq ft
Coverage – 27%



Stacked Townhouse 02 Grouped

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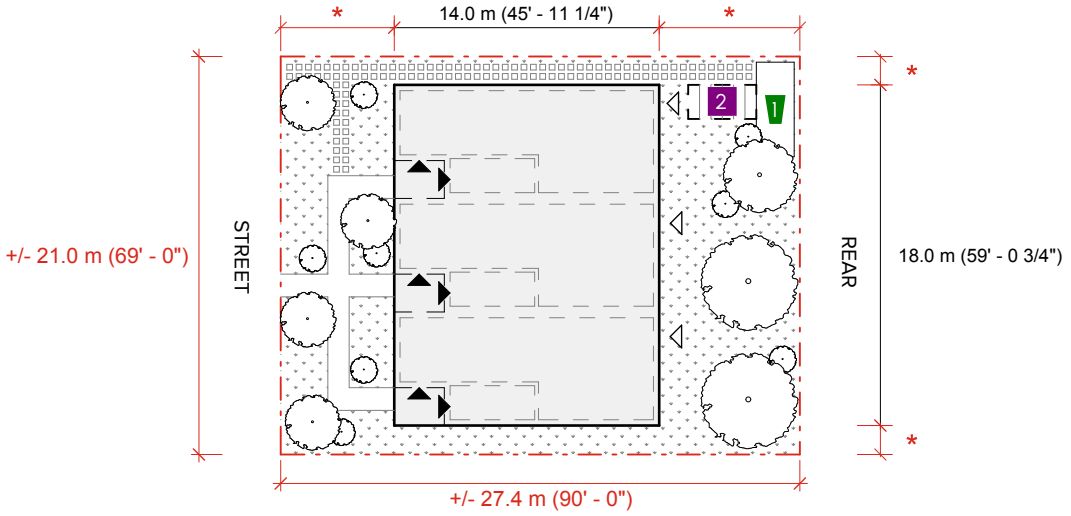
Legend

- Property Line
- Entrance
- Accessible Entrance
- Secondary Entrance
- Building
- Hardscape
- Accessible Hardscape
- Landscape
- Permeable Path
- * Setback Varies
- 1 Garbage
- 2 Bike Storage

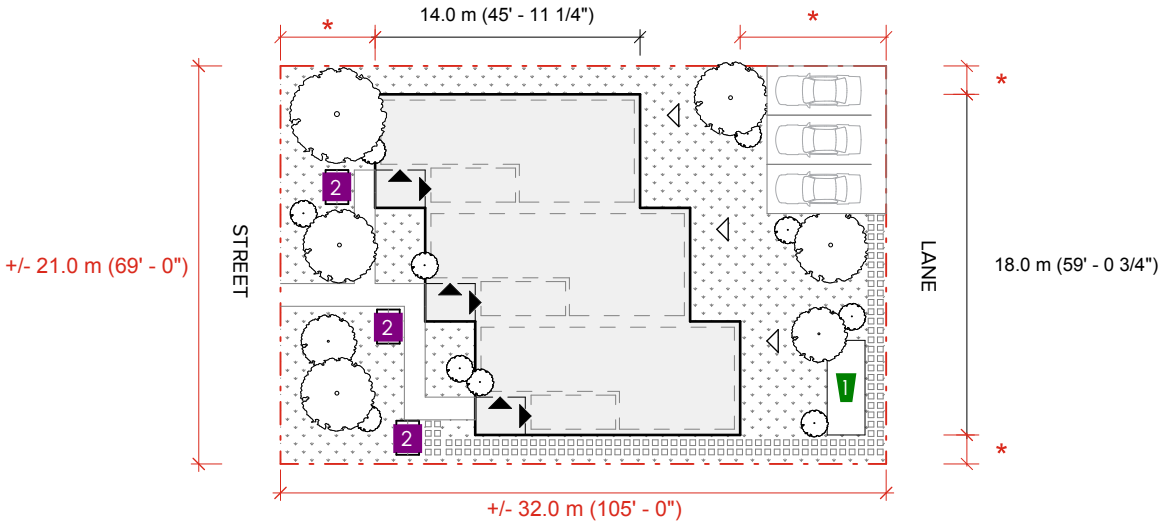
Option 1
Street Access

Lot Coverage
Total = 6210 sq ft
Building(s) = 2712 sq ft
Coverage – 44%



Option 2
Lane Access

Lot Coverage
Total = 8107 sq ft
Building(s) = 2260 sq ft
Coverage – 28%



Stacked Townhouse 02 Grouped

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Legend

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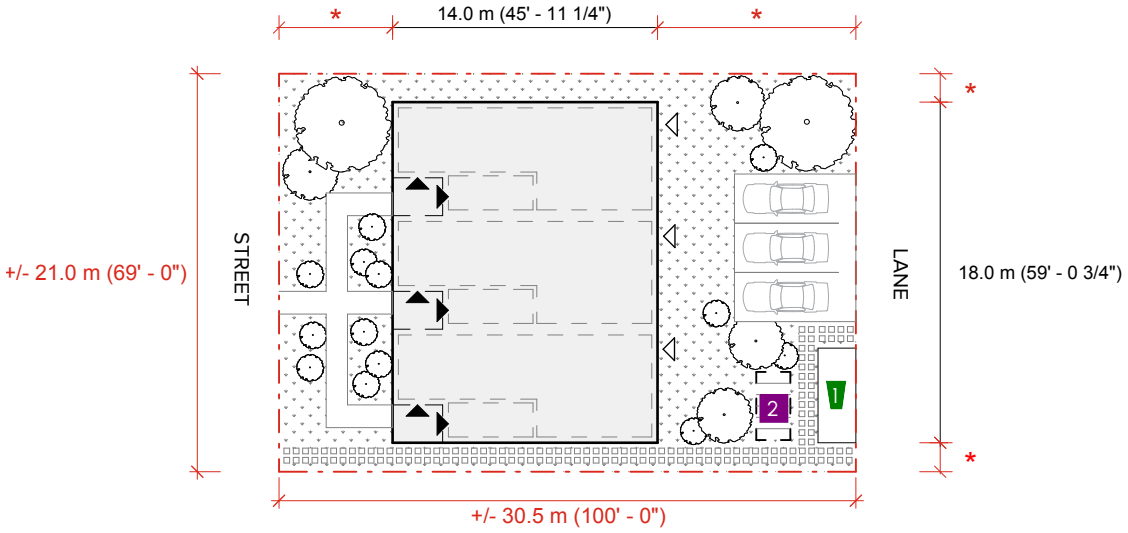
- Hardscape
- Accessible Hardscape
- Landscape
- Permeable Path
- * Setback Varies
- 1 Garbage
- 2 Bike Storage

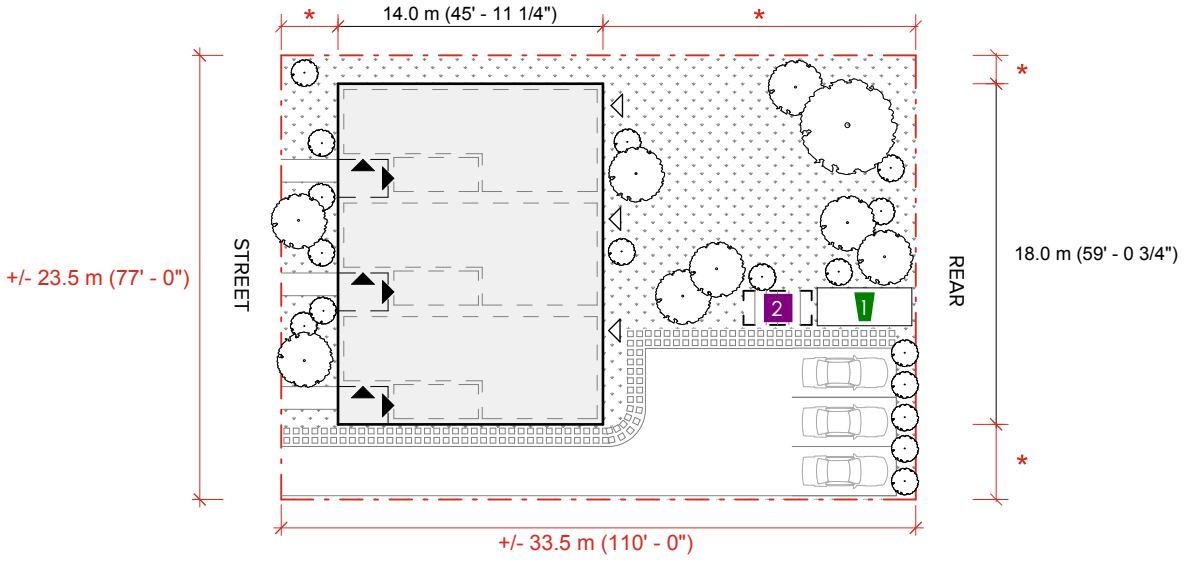
Option 3
Lane Access

Lot Coverage
Total = 6900 sq ft
Building(s) = 2712 sq ft
Coverage – 39%



Option 4
Street Access

Lot Coverage
Total = 8107 sq ft
Building(s) = 2260 sq ft
Coverage – 28%



Stacked Townhouse 02 Grouped

Disclaimer
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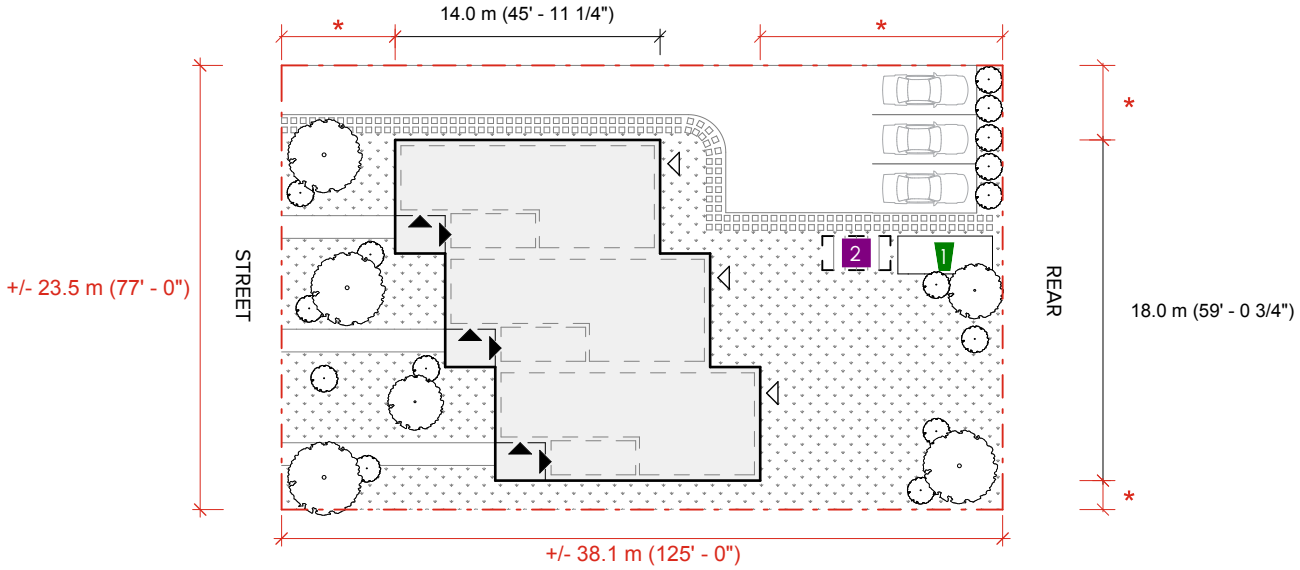
Legend

- Property Line
- Entrance
- Accessible Entrance
- Secondary Entrance
- Building
- Hardscape
- Accessible Hardscape
- Landscape
- Permeable Path
- * Setback Varies
- 1 Garbage
- 2 Bike Storage

Option 5
Street Access

Lot Coverage
Total = 9625 sq ft
Building(s) = 2712 sq ft
Coverage – 28%



Stacked Townhouse 02

Legend

- Property Line
- Entrance
- Accessible Entrance
- Secondary Entrance
- Building
- Hardscape
- Accessible Hardscape
- Landscape
- Permeable Path
- * Setback Varies
- 1 Garbage
- 2 Bike Storage

Disclaimer
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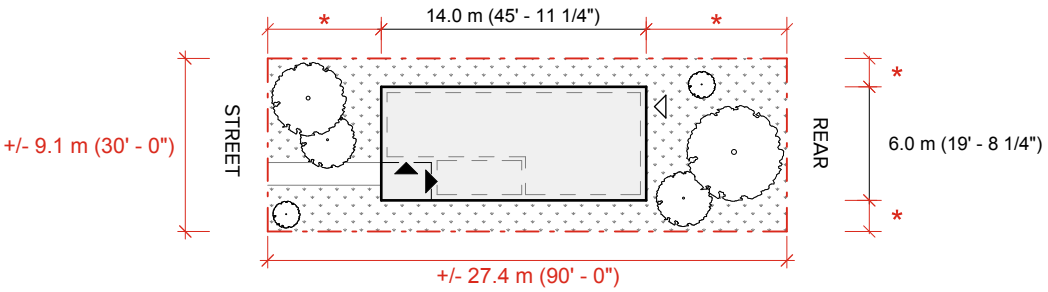
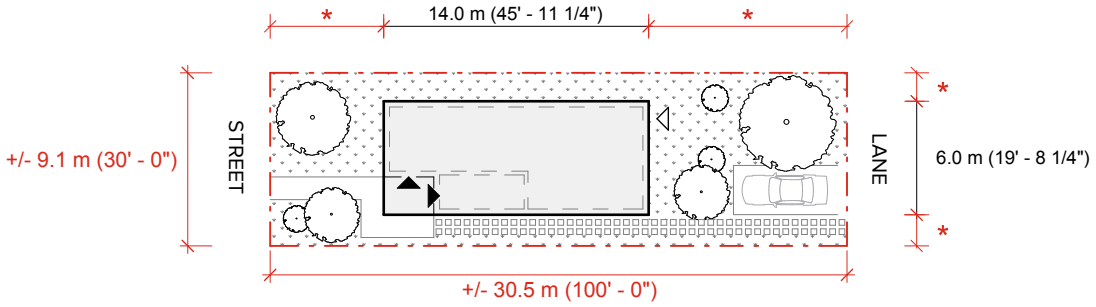
Option 1
Street Access

Lot Coverage
Total = 2700 sq ft
Building(s) = 904 sq ft
Coverage – 33%



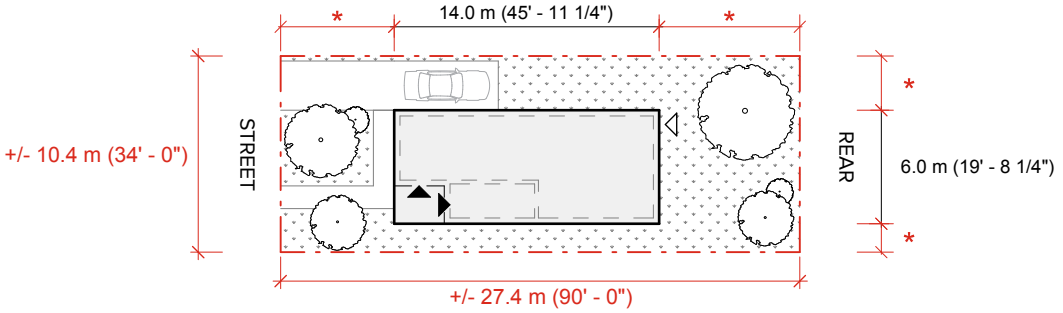
Option 2
Lane Access

Lot Coverage
Total = 3000 sq ft
Building(s) = 904 sq ft
Coverage – 30%



Option 3
Street Access

Lot Coverage
Total = 3060 sq ft
Building(s) = 904 sq ft
Coverage – 30%



Ontario

Fourplex 01

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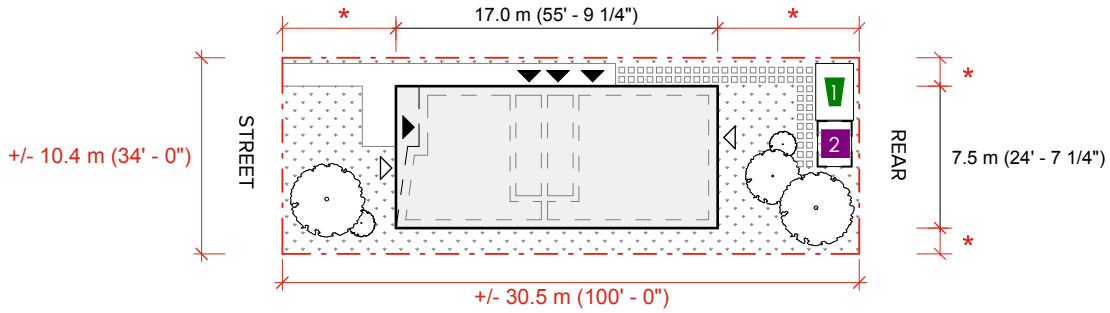
Legend

- Property Line
- Entrance
- Accessible Entrance
- Secondary Entrance
- Building
- Hardscape
- Accessible Hardscape
- Landscape
- Permeable Path
- * Setback Varies
- 1 Garbage
- 2 Bike Storage

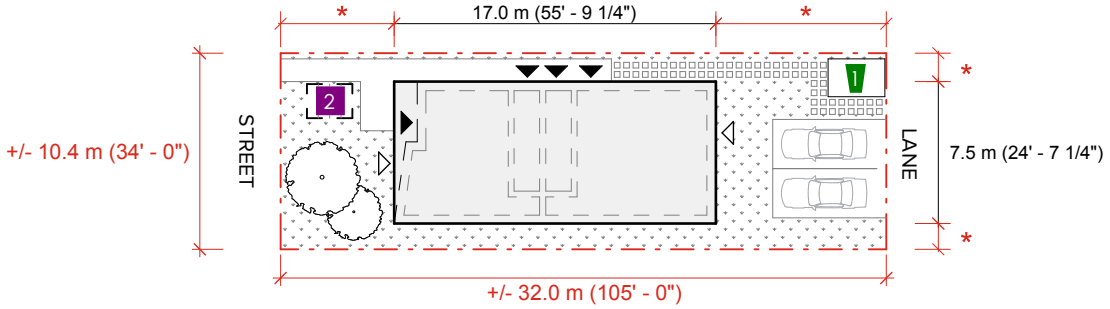
Option 1
Street Access

Lot Coverage
Total = 3400 sq ft
Building(s) = 1372 sq ft
Coverage – 40%



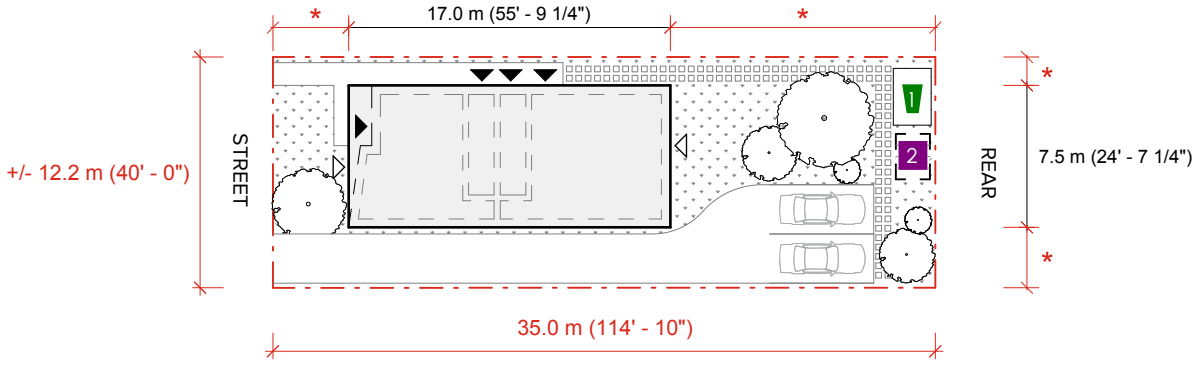
Option 2
Lane Access

Lot Coverage
Total = 3570 sq ft
Building(s) = 1372 sq ft
Coverage – 38%



Option 3
Street Access

Lot Coverage
Total = 4596 sq ft
Building(s) = 1372 sq ft
Coverage – 30%



Fourplex 02

Legend

- Property Line
- Entrance
- Accessible Entrance
- Secondary Entrance
- Building
- Hardscape
- Accessible Hardscape
- Landscape
- Permeable Path
- Setback Varies
- Garbage
- Bike Storage

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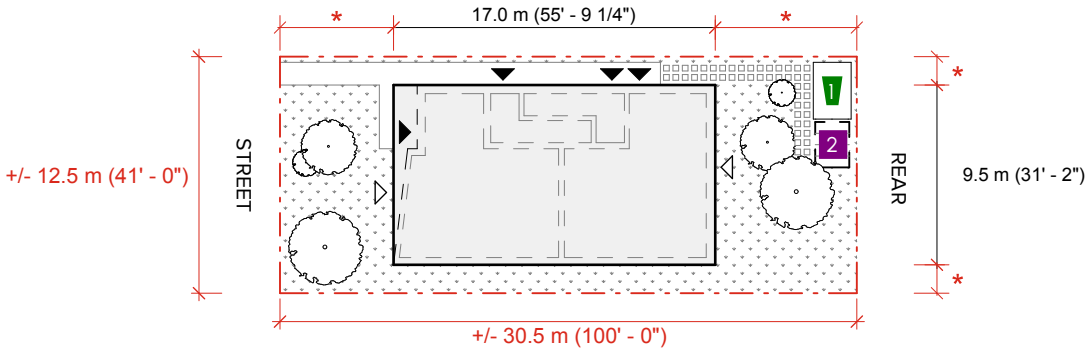
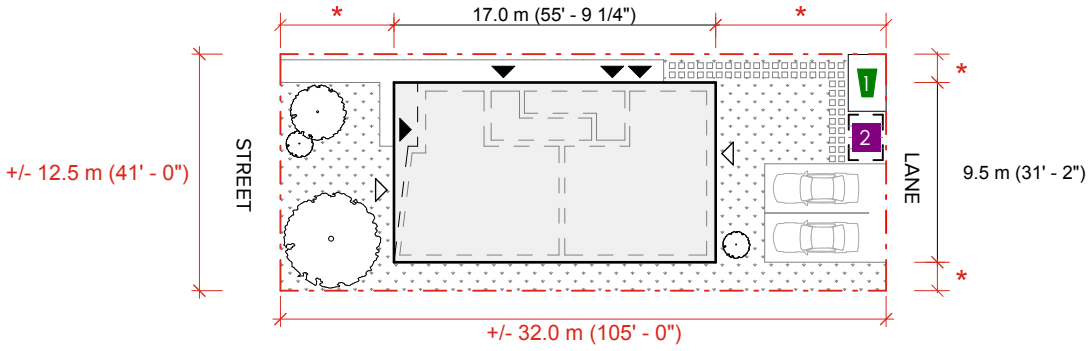
Option 1
Street Access

Lot Coverage
Total = 4101 sq ft
Building(s) = 1738 sq ft
Coverage – 42%



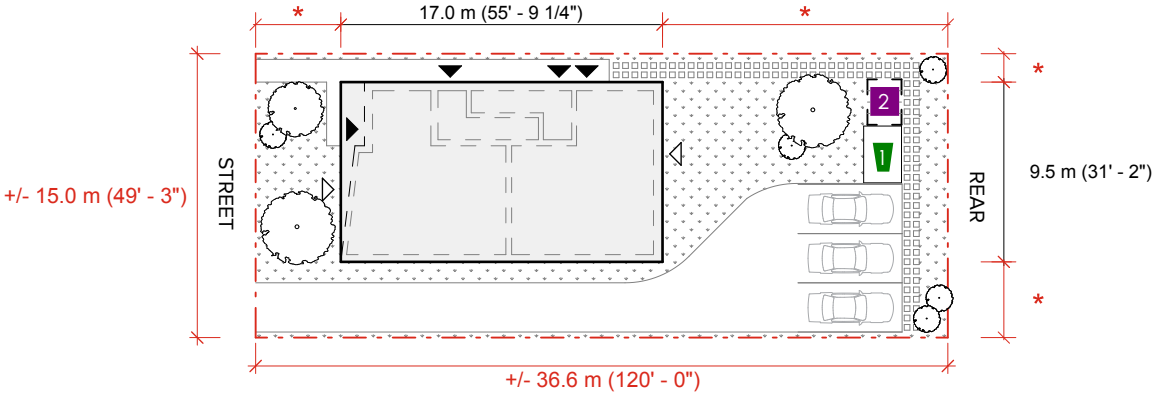
Option 2
Lane Access

Lot Coverage
Total = 4306 sq ft
Building(s) = 1738 sq ft
Coverage – 40%



Option 3
Street Access

Lot Coverage
Total = 5905 sq ft
Building(s) = 1738 sq ft
Coverage – 29%



Fourplex 02
Enhanced Accessibility

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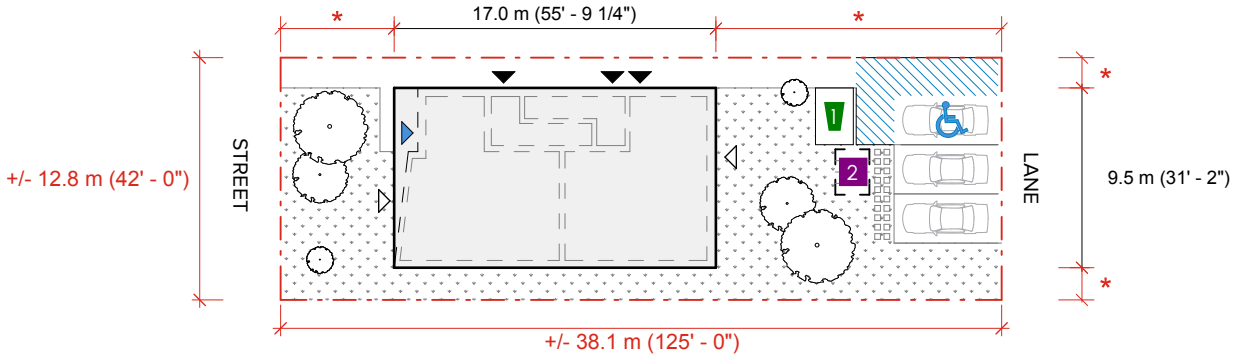
Legend

- Property Line
- Entrance
- Accessible Entrance
- Secondary Entrance
- Building
- Hardscape
- Accessible Hardscape
- Landscape
- Permeable Path
- * Setback Varies
- 1 Garbage
- 2 Bike Storage

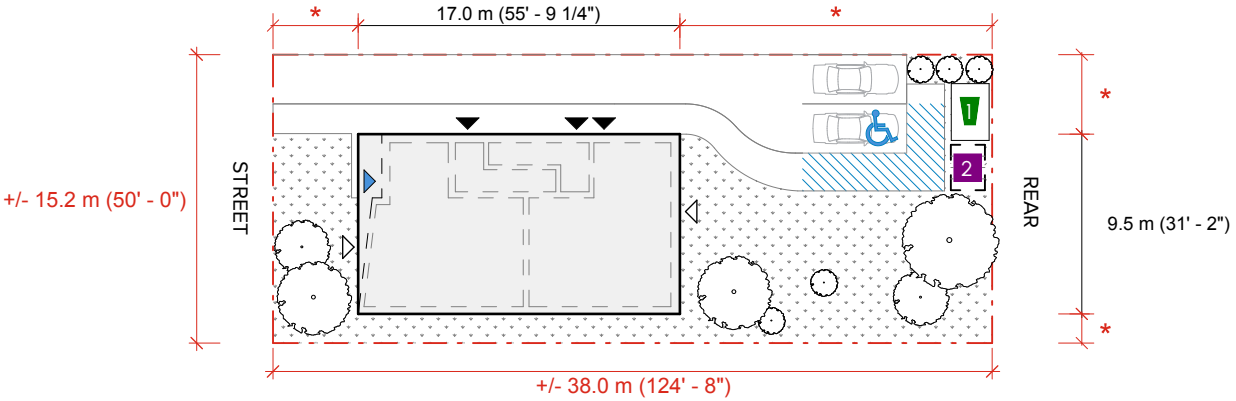
Option 1
Lane Access

Lot Coverage
Total = 5250 sq ft
Building(s) = 1738 sq ft
Coverage – 33%



Option 2
Street Access

Lot Coverage
Total = 6233 sq ft
Building(s) = 1738 sq ft
Coverage – 28%



Ontario

Sixplex

Legend

- Property Line
- Entrance
- Accessible Entrance
- Secondary Entrance
- Building
- Hardscape
- Accessible Hardscape
- Landscape
- Permeable Path
- * Setback Varies
- 1 Garbage
- 2 Bike Storage

Disclaimer

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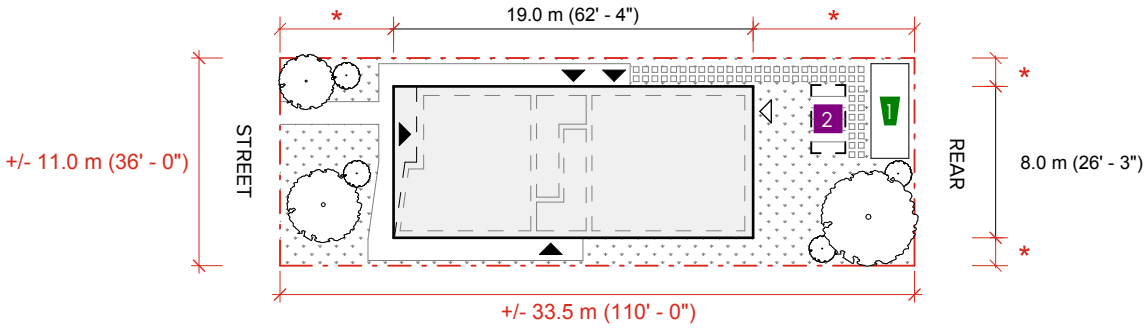
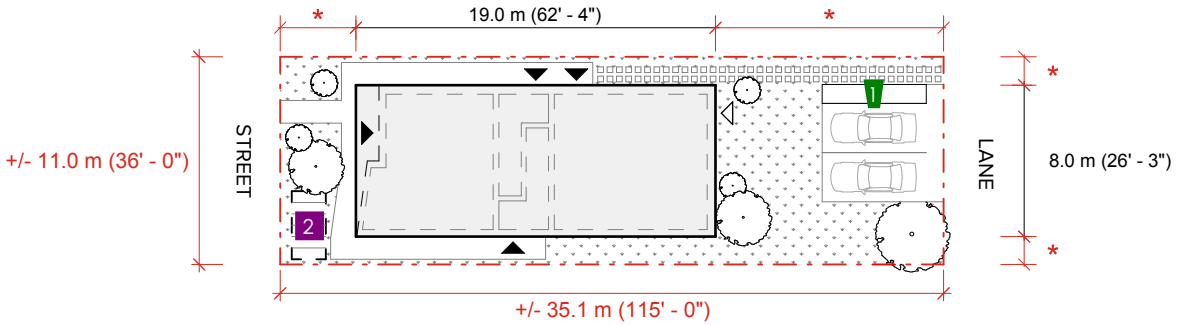
Option 1
Street Access

Lot Coverage
Total = 3960 sq ft
Building(s) = 1636 sq ft
Coverage – 41%



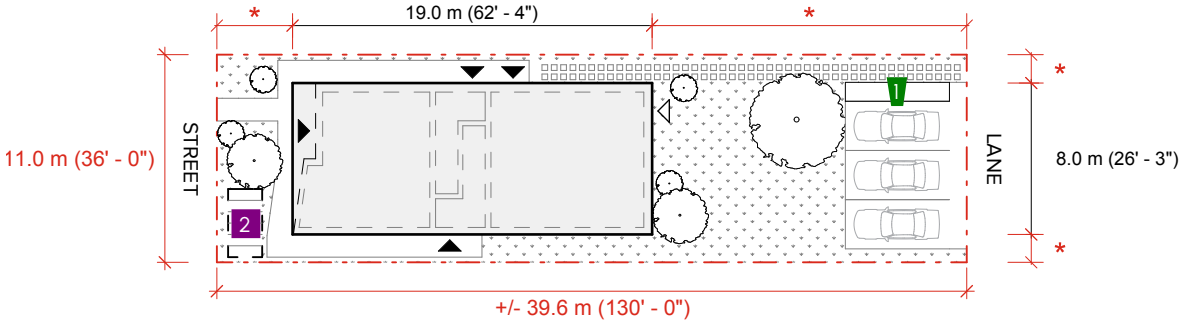
Option 2
Lane Access

Lot Coverage
Total = 4140 sq ft
Building(s) = 1636 sq ft
Coverage – 40%



Option 3
Lane Access

Lot Coverage
Total = 4680 sq ft
Building(s) = 1636 sq ft
Coverage – 35%



Ontario

Sixplex

Disclaimer
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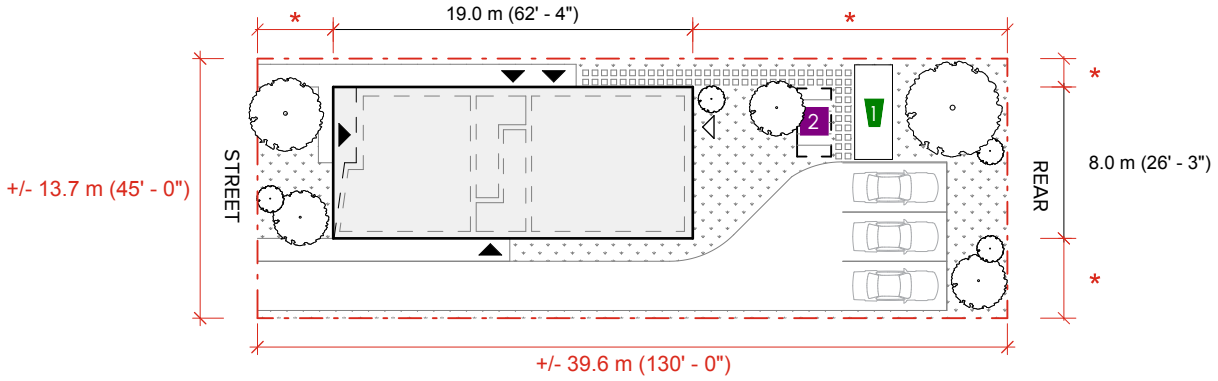
Legend

- Property Line
- Entrance
- Accessible Entrance
- Secondary Entrance
- Building
- Hardscape
- Accessible Hardscape
- Landscape
- Permeable Path
- * Setback Varies
- 1 Garbage
- 2 Bike Storage

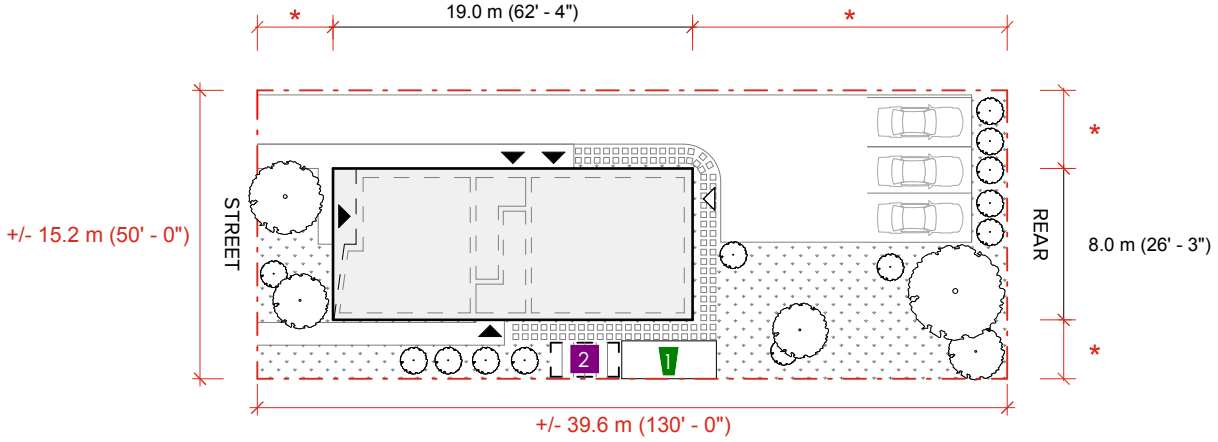
Option 4
Street Access

Lot Coverage
Total = 5850 sq ft
Building(s) = 1636 sq ft
Coverage – 28%



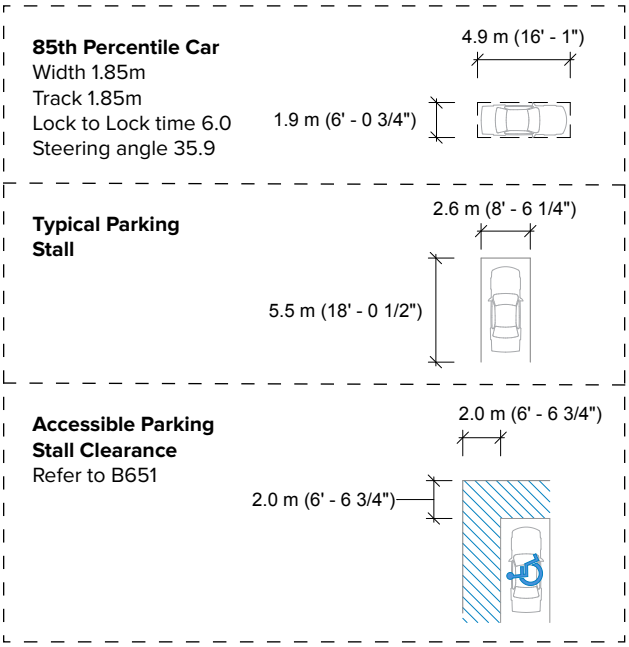
Option 5
Street Acess

Lot Coverage
Total = 6398 sq ft
Building(s) = 1636 sq ft
Coverage – 26%



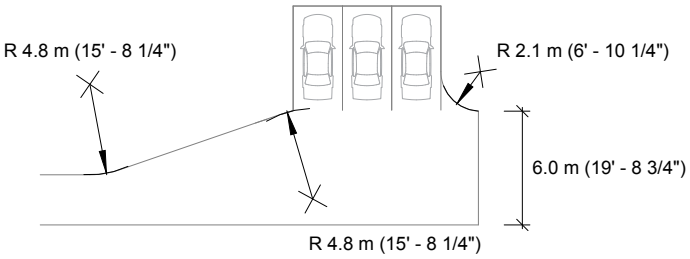
Appendix:
Template Parking Layouts

The Parking layouts were developed by Paradigm, Transportation consultant, using the '85th' percentile car size. The 85th percentile car size is a design standard used to determine the dimensions of parking spaces, driveways, and other vehicle-related infrastructure. It is defined as the vehicle that is larger than or equal to 85% of all passenger cars and light commercial vehicles operating on the road. This statistical measure ensures that most vehicles can comfortably use the facilities, without designing for the largest few that are rarely encountered.



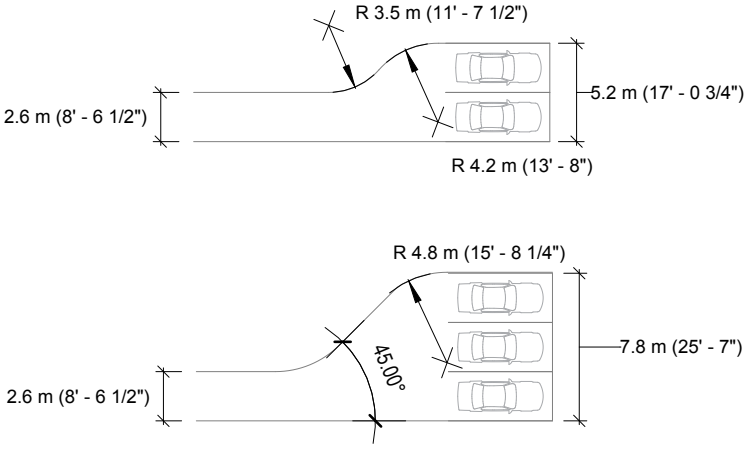
Perpendicular Parking with Turn-Around Space to Drive Forwards Out

Use depends on lot dimensions, dimensions of rear yard, site conditions and zoning requirements including hard/softscape and on-site stormwater management.



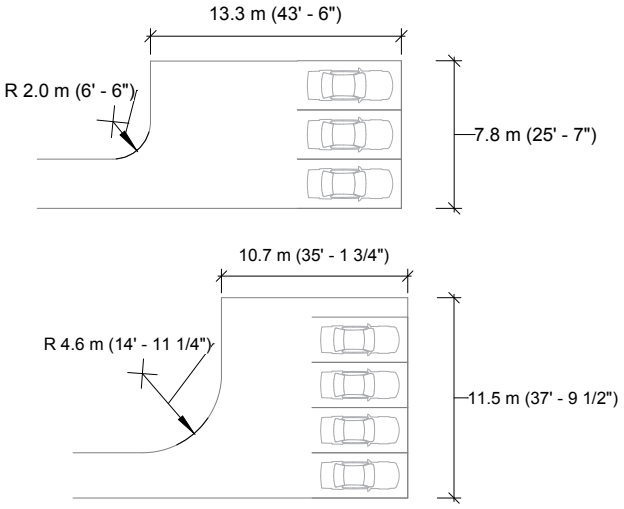
Parallel Parking Space with no Turn-Around Space – Back Out Only

Use depends on the road classification which may restrict backing on to street from driveways.



Parallel Parking Space with Turn-Around Space

Use depends on building depth, lot depth, site conditions, and zoning requirements including hard / softscape and on-site stormwater management.



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