Calgary

Centre City
URBAN DESIGN GUIDELINES

great
STREETS

quality
BUILDINGS

memorable
PLACES

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PHONE: FAX:	311 or outside of Calgary 403-268-2489 403-268-4615
WEB: SEARCH:	calgary.ca Calgary Centre City Urban Design Guidelines

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1.0 THE GUIDELINES FOR CALGARY'S CENTRE CITY

Memorable Places, Great Streets and Quality Buildings

These guidelines reinforce the fundamental principals of the City of Calgary's Municipal Development Plan

Prosperous economy | **Compact city** | **Great communities** | **Good urban design** | **Connecting the city** | **Greening the city** | **Managing growth and change**

"Make Calgary a more beautiful, memorable city with a commitment to excellence in urban design."

2.4.1 Creating a beautiful city, Municipal Development Plan

1.0 INTRODUCTION

IN THIS SECTION:

1.0 THE GUIDELINES FOR CALGARY'S CENTRE CITY

Memorable Places, Great Streets and Quality Buildings

WHAT

A consolidation of City of Calgary urban design policies and best practices

The Centre City Urban Design Guidelines (CCUDG) serve as a guide and inspiration for future development decisions for the Centre City area. Along with the existing Area Redevelopment Plans (ARPs) and corporate-wide policies (6.1 Relevant Policies), the guidelines build on the intentions of the Municipal Development Plan (MDP) and the Centre City Plan through policy consolidation and best-practice urban design solutions.

CCUDG engage stakeholders (6.2 Planning Process Summary), clarify expectations, and work toward achieving greater clarity, consistency and certainty in both policy-making and development review processes.

CCUDG align with the implementation of the new planning system in terms of contributing to the outcome-based decisions that help achieve the urban design goals for the Centre City - creating memorable places, great streets and quality buildings.

WHERE

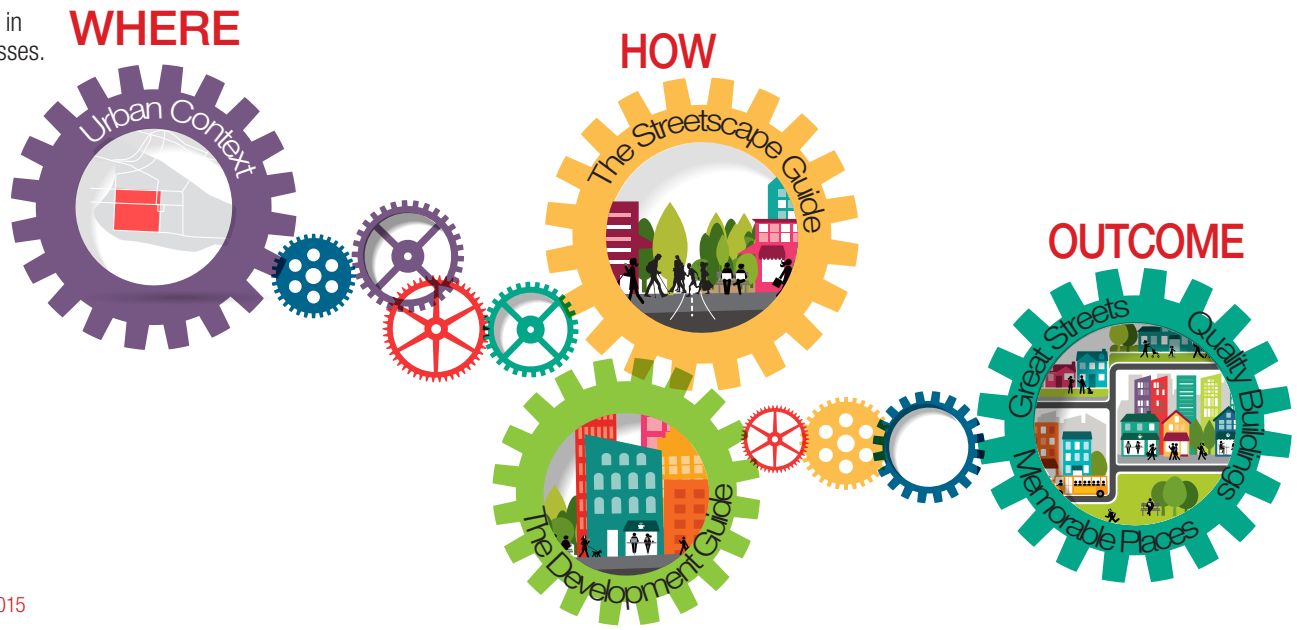
The guidelines apply to the Centre City

CCUDG are applicable to the Centre City including the communities of Downtown Commercial Core, Beltline, Downtown West, Eau Claire, Chinatown, and East Village. They are intended to support, respect, and augment Centre City's most celebrated features and characters. The 12 overlays of urban context (2.0) will be used along with context-specific guidelines to determine how the project fits into the big picture for the area.

HOW

Comprehensive, flexible and considered urban design guidance

CCUDG provide comprehensive, flexible and considered guidance on enhancing pedestrian experience through sensible and context-specific urban design solutions. Organized into two sections, The Streetscape Guide (3.0) and The Development Guide (4.0), the guidelines establish urban design objectives, rationales, and specific implementation directions for the physical components of private and public realm as they relate to the common good of the city.



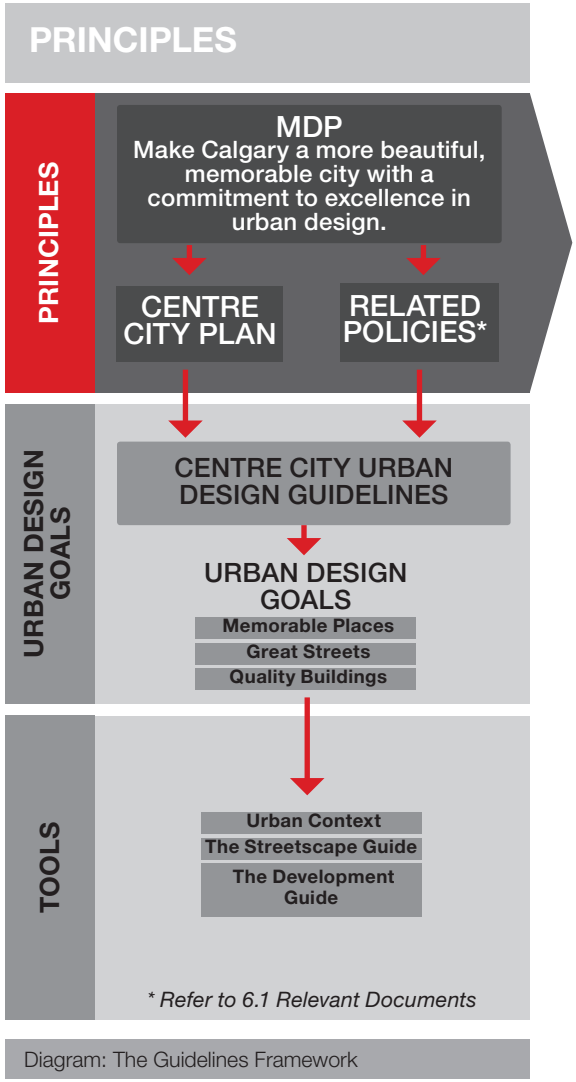


Diagram: The Guidelines Framework

MUNICIPAL DEVELOPMENT PLAN (MDP) URBAN DESIGN ELEMENTS

01. Creativity and Innovation
02. Context and Appropriateness
03. Connectivity and Continuity
04. Functional and Aesthetic Integration
05. Legibility and Accessibility
06. Enclosure and Human Scale
07. Comfort and Safety
08. Quality and Durability
09. Vitality and Animation
10. Flexibility and Adaptability
11. Diversity and Variety
12. Sustainability and Accountability
13. Wayfinding and Orientation

Source: Section 2.4, Municipal Development Plan

The guidelines build on and expand the intentions and aspirations of the Municipal Development Plan and the Centre City Plan through policy consolidation and the provision of best-practice urban design solutions.

1.2 THE GUIDELINES FRAMEWORK

Memorable Places, Great Streets and Quality Buildings

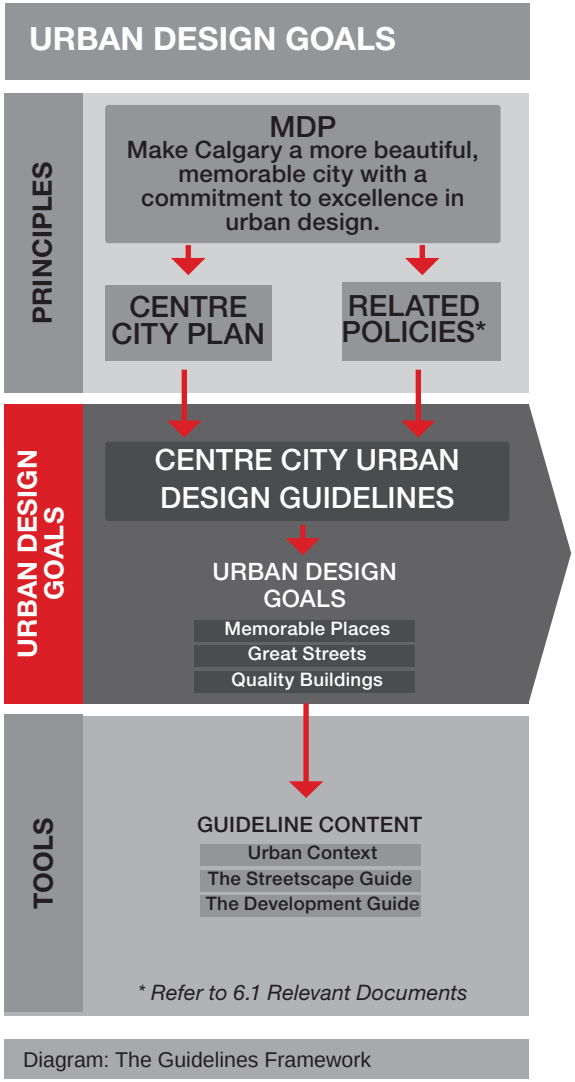


Diagram: The Guidelines Framework

Memorable Places

1 Respect the unique characteristics of the Centre City's urban fabric and climate

2 Enhance the image and legibility of the Centre City

3 Encourage a well-defined, active, and publicly accessible open space network

4 Protect access to sunlight in the Centre City's public and private realm

Great Streets

5 Facilitate safe, accessible, vibrant and comfortable movement of people and goods throughout the Centre City

6 Establish a system of streetscape characters and pedestrian, bicycle, transit and vehicular travel modes priorities

7 Strengthen the public realm interface to reinforce walkability throughout the Centre City

8 Provide sustainable, low impact development opportunities

Quality Buildings

9 Create an active and continuous street frontage and a public realm that is lively, safe, and successful

10 Support innovative opportunities for place-making through contextual design of high quality, sustainable buildings that are diverse in building form, type and use

11 Provide a sense of enclosure on the street through human-scaled building massing

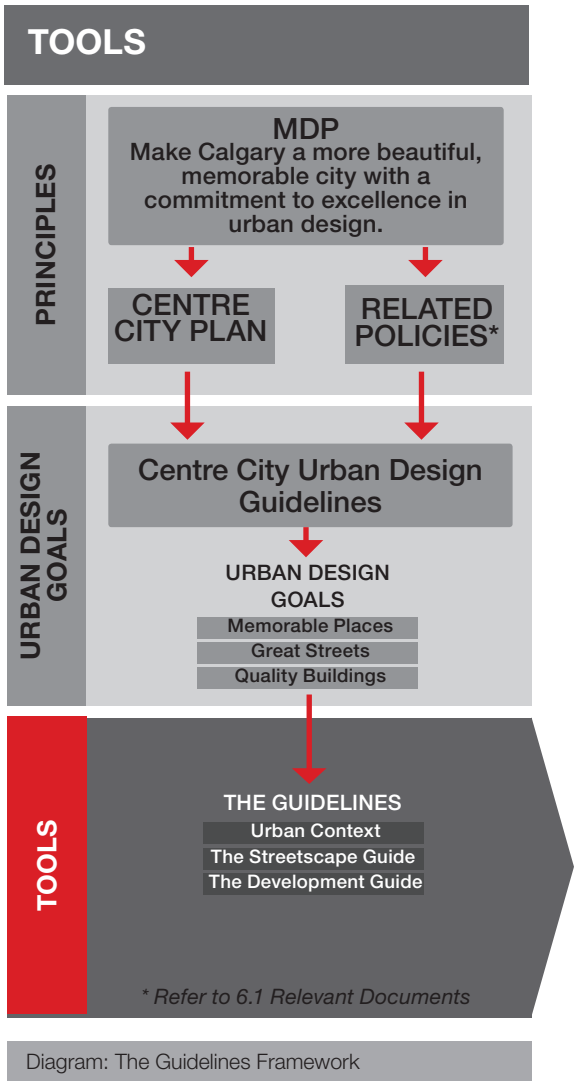


Diagram: The Guidelines Framework

The guidelines are comprehensive, flexible and context-specific. They establish the urban design objectives, rationales, and specific implementation directions for the physical components of private and public realm as they relate to the common good of the city.

Urban Context

Urban Context 12 Overlays (The intent is to determine how the project fits in the big picture for the area)

The Streetscape Guide

Streetscape Zones
Streetscape Elements
Lane Character Typologies

The Development Guide

Contextual Design Elements
Built Form
Green Infrastructure

IMPLEMENTATION

Outcome-based Decisions

INTENT OF THE GUIDELINES

The guidelines are intended to provide clear direction for designers, developers, and property owners, and will be used as an assessment tool during the design review process for new development and retrofitting projects in the Centre City. Although these guidelines are not regulatory, they are intended to be used by City staff and other decision makers in the review of new development proposals.

The guidelines provide recommendations that, if followed, should result in better public realm design in the Centre City. The building interface relationships with the public realm should aspire to the highest level of urban design excellence by contributing to a pedestrian-friendly, vibrant and livable Centre City.

As the definition of a memorable place, or a great street, or a quality building may vary with individual opinion, the guidelines will be used to ensure that proposed projects achieve the intentions of the urban design goals.

DESIGN PROPOSAL EQUIVALENCIES

The guidelines are not a formula or checklist. They are intended to maximize creativity and promote architectural and urban design excellence. There may be solutions that achieve the urban design principles that are not included in this document. Many quality solutions can be appropriate given the opportunities and constraints of a development site and the nature of ongoing advances in innovative and sustainable building and site practices. As such, it is important to view the guidelines as one set of possible solutions among a range of possibilities.

The guidelines will be used as a benchmark for design performance. If a project does not fully adhere to the guidelines, but meets the spirit and intent of the design goals while demonstrating an alternative approach toward achieving the urban design principles, it could be recognized as a valid approach.

The guidelines will also be used as a benchmark for reviewing equivalencies. For example, smaller parcels may have limiting conditions and/or other developmental constraints. In such cases, the applicant must demonstrate how the solution achieves the intent of the guidelines.

FUTURE AMENDMENTS

CCUDG is a living document and will be periodically amended as necessary to maintain consistency with statutory policies and to evolve with international best practice aspirations. See 5.0 for design guidelines within the context of regulatory framework and proposed policy and process changes.

Designers, landowners, developers, citizens and staff at the City of Calgary are seen as the collective authors of the city. These guidelines serve as an inspiration for creativity, innovation and cutting edge architectural expressions, and are intended to further enhance Calgary's progressive image on the national and international scene.

STEP 1: DEVELOPMENT CONTEXT

- Determine surrounding context and areas of particular attention based on the 12 overlays of urban context
- Define streetscape characters
- Determine travel modes priorities

Urban Context

2.1 Streetscape Characters
2.2 Urban Structure
2.3 Retail Nodes and Corridors
2.4 The Riverfronts
2.5 Parks and Open Space
2.6 Skyline, Gateways, Landmarks and View Corridors
2.7 Historic Resources
2.8 Character Areas
2.9 +15 Skywalk System
2.10 CPR Special Area
2.11 Bike and Transit Integration
2.12 Seasonal and Night Design

STEP 2: STREET INTERFACE

- Determine appropriate streetscape elements for defined streetscape character
- Determine curb line locations and building setbacks
- Determine the location, type, scale, design and character of each streetscape element
- Determine site access

The Streetscape Guide

3.1 Streetscape Zones
Roadway Zone
Pedestrian Zone
Frontage Zone

3.2 Streetscape Elements
Public Sidewalks
Transit Facilities
Bike Facilities
Furniture
Street Trees
Signage
Lighting
Public Art
Utilities

3.3 Lane Character Typologies

STEP 3: BUILDING INTERFACE

- Determine site interface conditions
- Determine on-site open spaces
- Determine building frontage characteristics and design treatments
- Determine building massing and study building impacts
- Integrate green infrastructure

The Development Guide

4.1 Contextual Design Elements
Public Open Space Interface
On-site Open Space
Heritage Interface
+15 Skywalk System
Seasonal Design and Sun Access
Pedestrian and Vehicular Access

4.2 Built Form
Frontage
Street wall
Building Massing
Facade Articulation
Street Corners
Upper Building Levels

4.3 Green Infrastructure

STEP 4: IMPLEMENTATION

- Evaluate proposed development against the principles, the urban design goals and pertinent urban design objectives
- Make outcome-based decisions based on proposed implementation strategies

IMPLEMENTATION

1.2 The Guidelines Framework
(Principles/Urban Design Goals)

2.0/3.0/4.0
Urban Design Objectives
(included at the beginning of each section)

5.0 Implementation
Guidelines and Regulatory Framework
Areas of Particular Concern

> Make Calgary a livable, attractive, memorable and functional city by recognizing its unique setting and dynamic urban character and creating a legacy of quality public and private developments for future generations."
>
> 2.4 Urban design, Municipal Development Plan

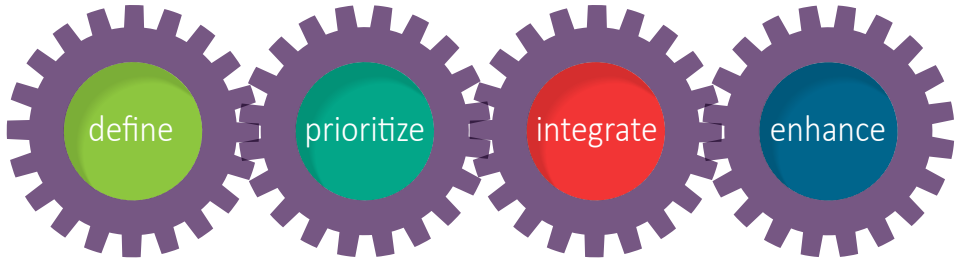
2.0 URBAN CONTEXT

IN THIS SECTION:

New projects should go beyond the consideration of individual buildings and fit into the Calgary-specific urban context. In this section, the following 12 overlays of urban context provide an analytical framework for a comprehensive and highly contextual analysis of any development project in the Centre City.

Applicants should submit a design rationale based on the analytical framework to answer the series of questions for each overlay (as shown on the next two pages), if applicable, and explain how their projects add to the complex patterns and characters of urban life in Calgary's Centre City.

ANALYTICAL FRAMEWORK



"Nothing is experienced by itself, but always in relation to its surroundings, the sequences of events leading up to it, the memory of past experiences."

The Image of the City, by Kevin Lynch

2.1 Streetscape Characters

1) Which streetscape character types are adjacent to the project? 2) How does the project prioritize different travel modes to strategically balance different user needs? 3) How does the project integrate different streetscape elements to enhance the pedestrian experience?

2.2 Urban Structure

1) How does the project integrate with and complement the key elements of the urban structure - a complete and dynamic Downtown surrounded by liveable, mixed-use neighbourhoods? 2) How does the project address the aspects of use, density, height, built form, sunlight protection, +15 connectivity and parking within the existing regulatory framework to minimize development impact on surrounding streets, places and residential neighbourhoods?

2.3 Retail Nodes and Corridors

1) How does the project help to activate its adjacent streets and places for an enhanced pedestrian experience, particularly along the identified retail corridors and nodes? 2) How does the project balance the provision of at-grade and +15 retail uses to ensure both are vibrant side-by-side? 3) If there is an opportunity for incorporating large scale retail use, how does the project provide sensitively designed building frontage to integrate with a mixed-use urban setting?

2.4 The Riverfront

Is the project close to the river(s)? If yes, 1) What needs to be preserved and/or enhanced to formulate the unique sense of place that belongs to Calgary's Centre City? 2) What needs to be done to integrate the river(s) with a high-density, urban environment? 3) If located in flood impacted zones, what efforts should be made to ensure the resilience of buildings for future floods while maintaining high quality urban design? 4) How does the project address grade-separated building frontages in terms of visual connectivity, facade articulation, inviting access and neighbourhood character?

2.5 Parks and Open Spaces

Is the project in close proximity to Centre City parks and open spaces? If yes, 1) What development impacts could it have on its surroundings? 2) How does it maximize green and active open space opportunities? 3) How does it preserve sunlight access to its surrounding parks and open spaces?

2.6 Skyline, Gateways, Landmarks and View Corridors

How does the project respect, support or strengthen the identified gateways, landmarks and view corridors through innovative building and site design?

2.7 Historic Resources

1) If applicable, how does the project conserve historic resources or respect a heritage context within the emerging urban fabric? 2) How does it sensitively integrate the new development through compatible building and site design, adaptive reuse, or display exceptional architectural, and/or historically authentic, high-quality, and long-lasting materials?

2.8 Character Areas

Is the project within the context of an identified character district, corridor or node? If yes, what needs to be done to preserve and strengthen the unique qualities of the character area and to contribute to a distinctive “sense of place”?

2.9 +15 Skywalk System

Is a +15 bridge necessary? If so, 1) How does the project contribute to the overall legibility of the +15 Skywalk System? 2) How does the project contribute to the design objectives of at-grade public realm integration, vertical and horizontal connectivity, system animation and design quality consistency?

2.10 Canadian Pacific Railway (CPR) Special Area

Is the project located in the CPR Special Area? If yes, 1) How does the project deal with the development constraints and provide innovative design solutions to contribute to a safe, vibrant and sustainable system with a variety of land uses, exciting horizontal and vertical linkages, special places and iconic built form? 2) What measures are incorporated into the development to mitigate noise, vibration and safety hazards, while ensuring the highest possible urban design standards?

2.11 Bike and Transit Integration

Is the project located along one of the identified bike corridors? If yes, 1) how does the project help to complete the planned Centre City Cycle Track Network? 2) How does the project prioritize different streetscape elements to ensure pedestrian and bike-friendly streetscape design?

Is the project located in close proximity to one of the identified transit corridors or nodes? If yes, how does the project integrate with a selection of new multi-modal streets and provide transit passenger amenities and adjacent active land uses to support the use, functionality and enjoyment of the public transit system?

2.12 Seasonal and Night Design

1) How does the project demonstrate innovative and/or practical ways of seasonal and night design to enhance the pedestrian experience and celebrate Calgary’s unique weather conditions and night life?
2) How does the project take advantage of Calgary’s ample sunlight in all four seasons by using different site design and building massing techniques to maximize sunlight access to the project site and minimize shadow impact on surrounding streets, buildings and places?

Map 1 Streetscape Typology – High Streets

High Streets represent a traditional main street model characterized by medium and high-density developments, mixed-use, streetfront retail areas and historic character within a comfortable, animated, green and safe pedestrian environment. They give priority emphasis to pedestrians and alternative transportation modes. For vehicle accessible high streets, it is typical to see two-way vehicle traffic with a minimum of one wide lane per direction (for public transit vehicles, emergency vehicles and bicycles) and on-street parking.

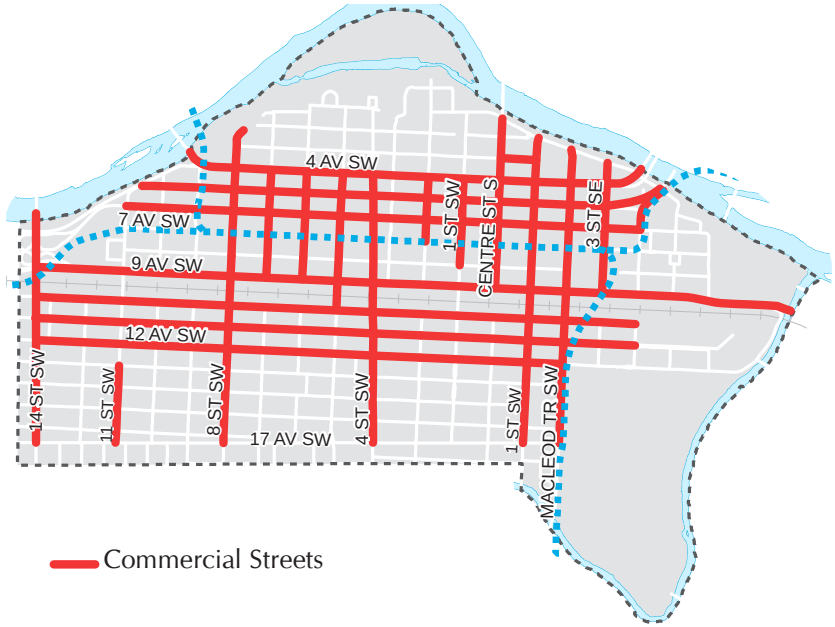
Policy Reference

- Centre City Plan
- Centre City Mobility Plan
- Centre City Cycle Track 5-year Plan
- Proposed Centre City Curb Lines Plan

Guideline Sections

- 3.0 The Streetscape Guide
- 2.8 Character Areas
- 2.11 Bike and Transit Integration
- 5.2 Areas of Particular Concern

Map 2 Streetscape Typology – Commercial Streets



Commercial Streets integrate a range of land uses with an eclectic range of transportation options for medium to high pedestrian, bicycle, public transit and vehicle volumes. These one or two-way streets function as major traffic connectors with selected on-street or off-street bike facilities and off-peak on-street parking. Outer lanes should be wider to accommodate public transit, bicycles and emergency vehicles. Commercial streets should provide a comfortable, green, animated and safe pedestrian environment.

Map 3 Streetscape Typology – Residential Streets

Residential Streets primarily accommodate low to medium traffic volumes with neighbourhood-oriented, mixed-use activities. Residential streets provide flexible transportation alternatives on one or two-way streets with shared travel lanes and a comfortable, green and safe pedestrian environment. Building setback areas should accommodate grade separation, building projections, landscaping and private amenity spaces.

Map 4 Streetscape Typology – Special Streets

Transit Streets incorporate priority for pedestrians with high-density mixed land uses, and the highest volumes of public transit and pedestrian traffic. Transit streets and malls permit LRT, bus, and emergency-authorized vehicle traffic only. They must provide comfortable, animated and visually attractive streetscape environment.

Green Streets connect multiple open spaces/places to the riverfronts. They provide a strong green environment for pedestrians and users of alternative transportation modes, with an emphasis on pedestrian safety, quality of landscaping, recreational opportunities and the natural qualities of the street.

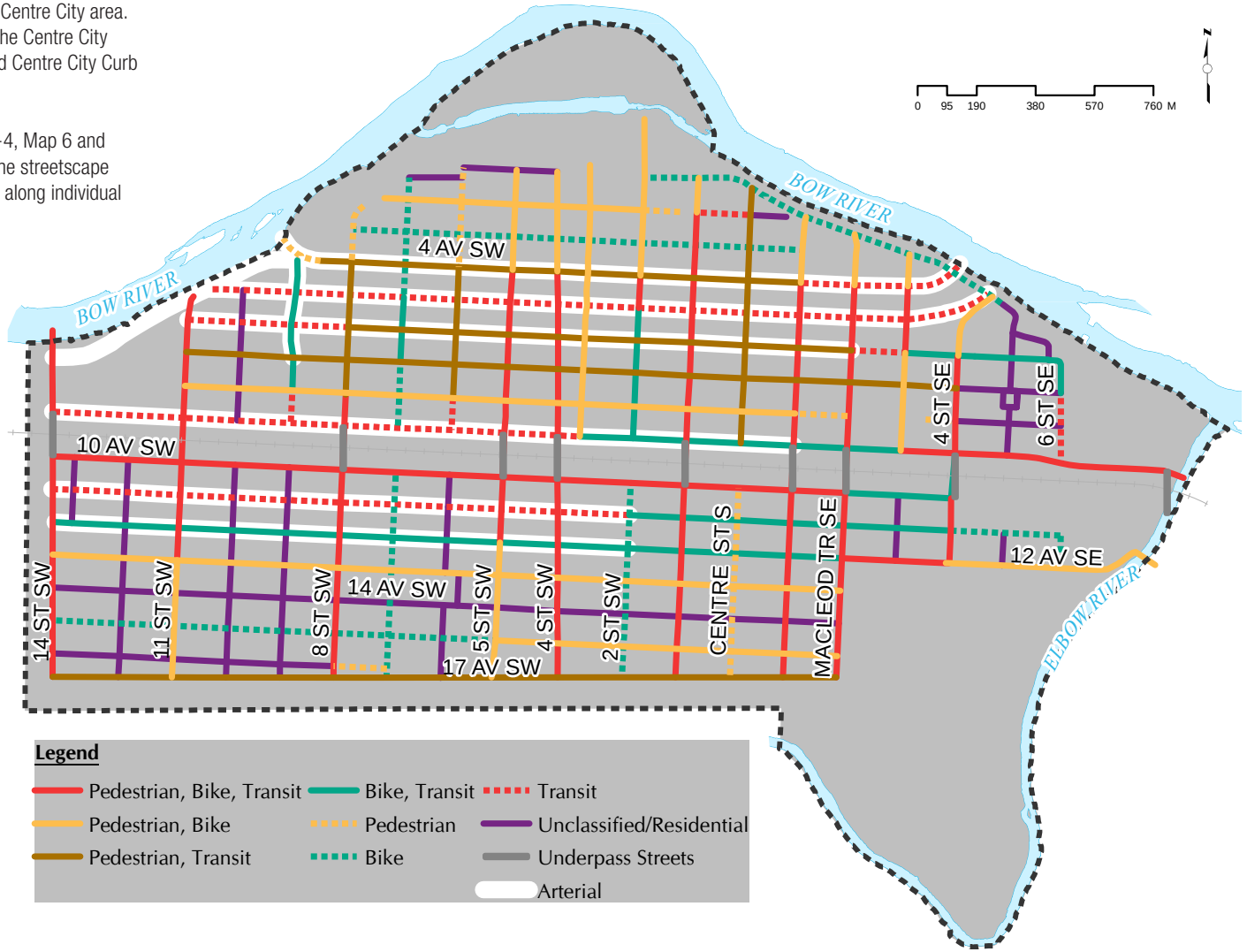
KEY CONSIDERATIONS

This map is a synthesis of pedestrian, bike, transit and vehicle priorities for each individual street sector in the Centre City area. It is based on the policy directions provided by the Centre City Plan, the Centre City Mobility Plan and proposed Centre City Curb Lines Plan.

This map should be used together with Maps 1-4, Map 6 and the cross sections defined in 3.1 to determine the streetscape elements (3.2) which should be accommodated along individual streets.

Refer to 3.3 for Lane Character Typologies related to streetscape characters.

Map 5 Travel Mode Priorities



KEY CONSIDERATIONS

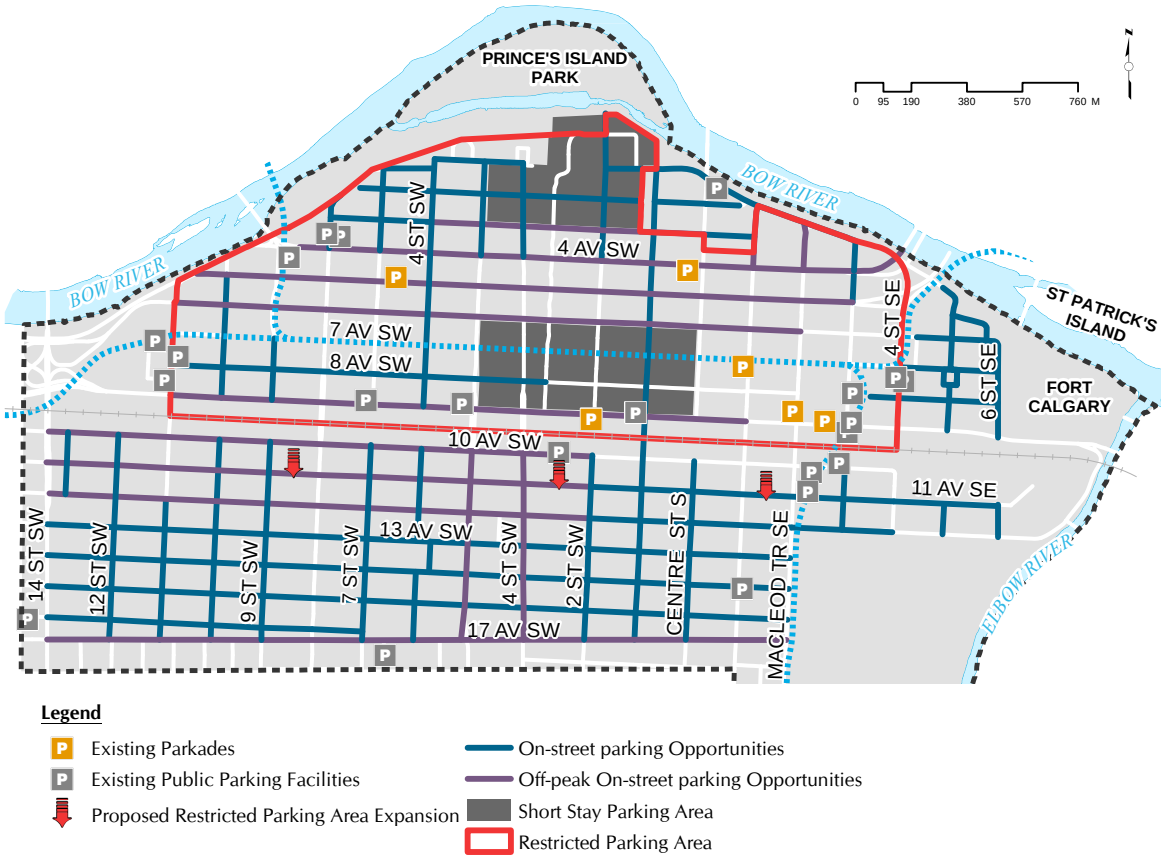
This map summarizes parking related regulations, policies and analysis in the Centre City area. It can be used to determine the streetscape characters and parking options and opportunities adjacent to a development site.

Regarding restricted parking area expansion (to the north edge of 12 Avenue S), the proposal only applies to large office development with a floor area ratio (FAR) exceeding 8.0 as per the Centre City Plan.

Refer to the Land Use Bylaw regarding restricted parking area and short stay parking.

Refer to 3.1 Streetscape Zones and 4.1.6 Pedestrian and Vehicular Access for relevant guidelines.

Map 6 Parking Facilities



STREETSCAPE CHARACTERS

URBAN DESIGN OBJECTIVES

- **Define** streetscape typologies
- **Prioritize** different travel modes
- **Integrate** streetscape elements
- **Enhance** pedestrian experience

Policy Reference

- Centre City Plan
- Centre City Mobility Plan
- Centre City Cycle Track 5-year Plan
- Proposed Centre City Curb Lines Plan

Guideline Sections

- 3.0 The Streetscape Guide
- 2.8 Character Areas
- 2.11 Bike and Transit Integration
- 5.2 Areas of Particular Concern

Integration of bike facilities in the Centre City streetscape design is an exciting new initiative. Individual development should refer to Map 19 for planned bike corridors.

The street corner building frontage treatments (4.2) create a comfortable sense of enclosure.

Integration of different streetscape elements (3.2) to accommodate pedestrian needs and different travel modes.

13th Avenue Heritage Greenway, a multi-use pathway which helps to complete the Green Loop in the Centre City (2.5).

URBAN STRUCTURE

URBAN DESIGN OBJECTIVES

Land Use Districts

- Integrate land use and mobility to create a **complete** and **dynamic** Downtown and livable and **mixed-use** neighbourhoods

Open Space System

- Complete the Centre City Green Loop (2.5) and protect **sunlight** access to the shadow sensitive areas

Movement and Access System

- **Prioritize** different travel modes based on the defined urban structure and streetscape characters to strategically balance different user needs
- Contribute to the use, functionality and enjoyment of the **movement** and **access** system in the Centre City

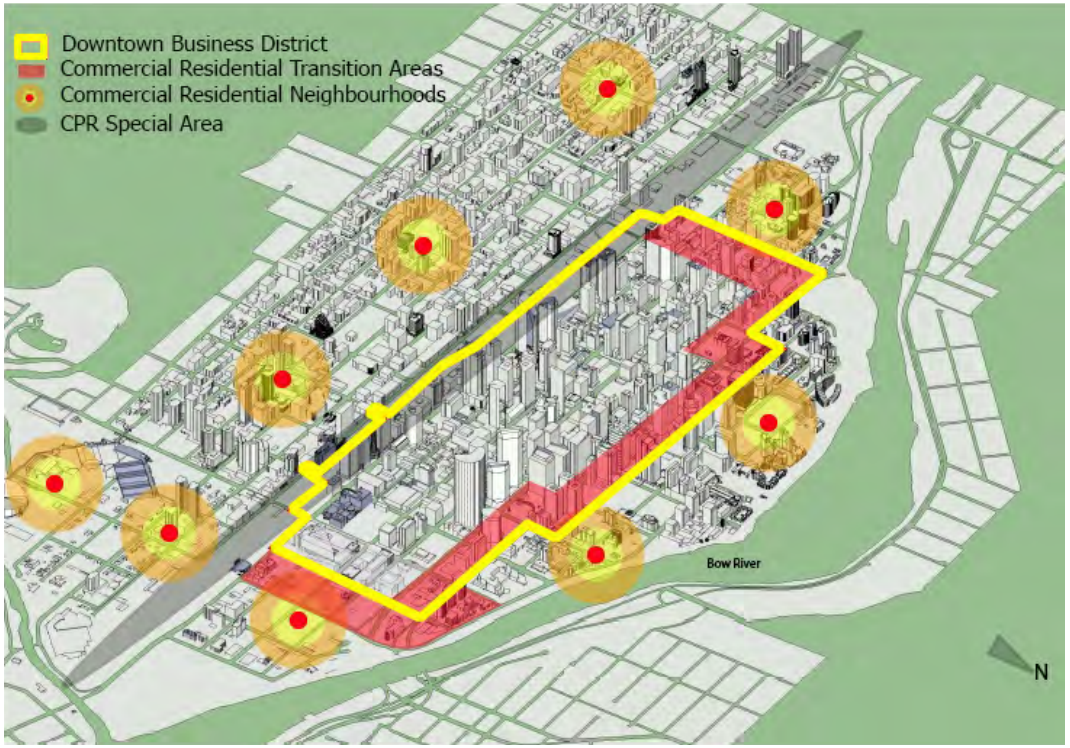
Policy Reference

- Centre City Plan
- Bylaw33P2013

Guideline Sections

- 2.0 Urban Context

Map 7 Urban Structure



KEY CONSIDERATIONS

Land Use Districts

1. Downtown Business District and Transition Area (Bylaw 33P2013)
2. Commercial Residential (CR) Neighbourhoods (Municipal Development Plan: Volume 2, Part 2; Land Use Bylaw Part 13)
   - CR Activity Area
   - CR Transition Area
   - CR Residential Area
3. Canadian Pacific Railway (CPR) Special Area (2.10)

Open Space System

- Green Loop (2.5) and The Riverfront (2.4, 2.5)
- Shadow Sensitive Areas (2.12, Map 21)

Movement and Access System

- Streetscape characters (2.1)
- Pedestrian Priority Corridors (Map 5)
- +15 Skywalk System (2.9)
- Bike corridors (2.11)
- Transit corridors (2.11)
- Parking facilities (Map 6)

2.3 RETAIL NODES AND CORRIDORS

Memorable Places, Great Streets and Quality Buildings

KEY CONSIDERATIONS

The intent of this map is to show those specific corridors and nodes where at-grade retail uses are highly recommended. Particular attention should be paid to quality streetscape and building frontage design in and around these pedestrian priority areas.

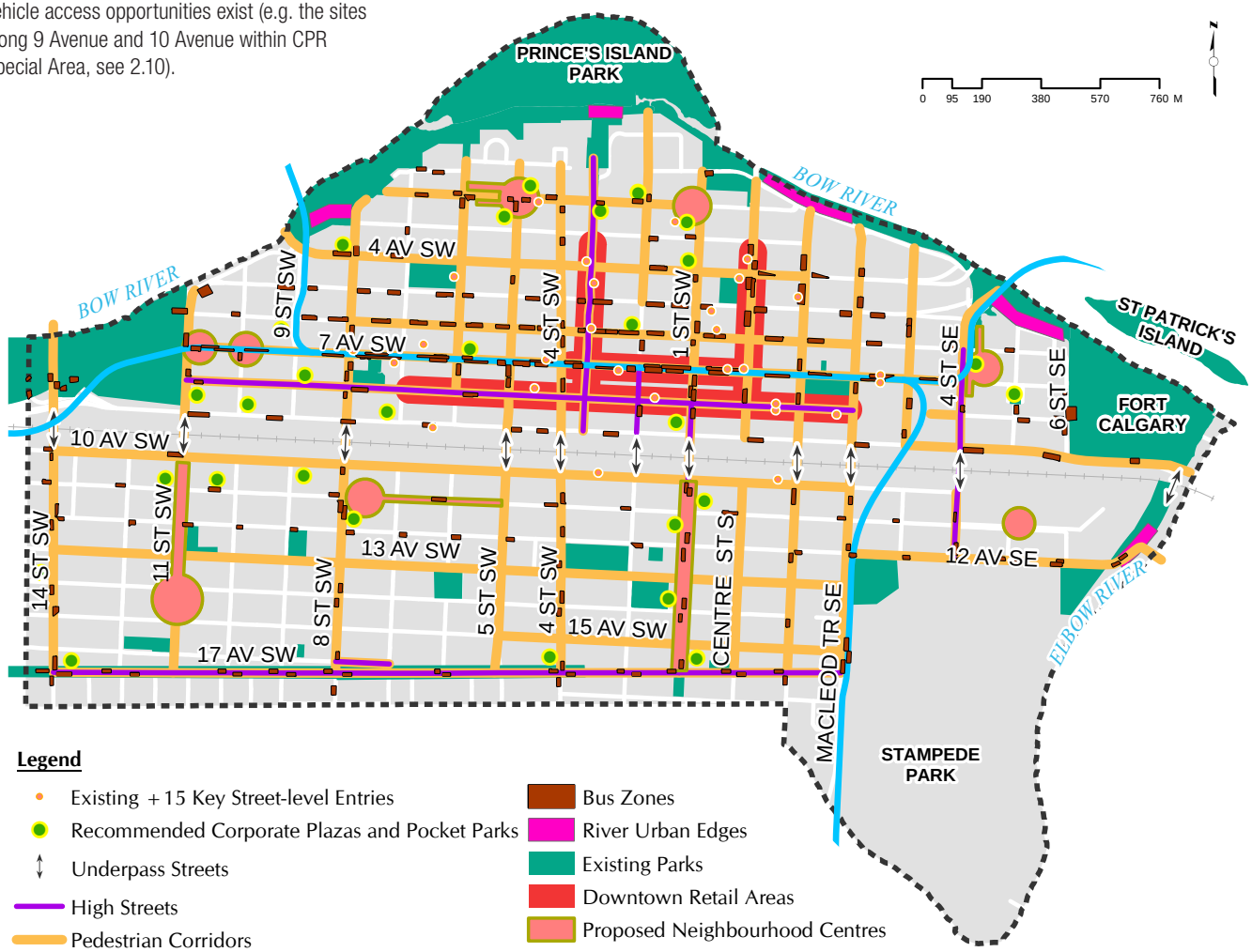
PEDESTRIAN PRIORITY RETAIL CORRIDORS AND NODES

- Downtown Retail Areas (inc. Stephen Avenue Mall Retail Area)
- High Streets
- 7 Avenue Transit Corridor
- Street corners along pedestrian priority streets
- Street corners along underpass streets
- LRT stations
- Bus zones
- Parks and open spaces
- Private and publicly accessible, on-site open spaces
- +15 key street-level entries
- Neighbourhood centres
- Riverfront urban edges
- Enhanced lanes
- Mid-block pedestrian connectors

LARGE FORMAT URBAN RETAIL

In addition to the noted retail nodes and corridors, redevelopment opportunities for innovative urban retail exist where large underdeveloped sites are available and pedestrian and vehicle access opportunities exist (e.g. the sites along 9 Avenue and 10 Avenue within CPR Special Area, see 2.10).

Map 8 Retail Nodes and Corridors



RETAIL NODES AND CORRIDORS

URBAN DESIGN OBJECTIVES

- Encourage the provision of **street level retail** wherever possible
- Require street level retail uses at the identified **pedestrian priority** retail corridors and nodes (Map 8), where sufficient retail demand exists and is supported by land use policy
- Strongly encourage the provision of street level retail along all **pedestrian corridors** as identified (Map 8)
- Strengthen both the street level and the **+15 system** retail environment and the link between them (2.9, 4.1.4)
- Incorporate multi-level, large format **urban retail** at strategic locations
- Use a variety of design treatments (4.2) to **activate** the building frontages at retail locations

Refer to Bylaw 33P2013 for regulations related to office gross floor area and lobbies at grade along Downtown Retail Areas including Stephen Avenue Mall Retail Area.

Policy Reference

- Centre City Plan
- Calgary Downtown Retail District Strategy
- Bylaw33P2013

Guideline Sections

- 2.0 Urban Context
- 3.1.3 Frontage Zone
- 4.2.1 Frontage

Transparency and active uses (such as dining and seating areas or fitness centres) help to mitigate the negative impacts of this long at-grade lobby on the pedestrian environment of the streetscape.

A multi-level, flagship store provides a strong street corner and a beacon for pedestrians.

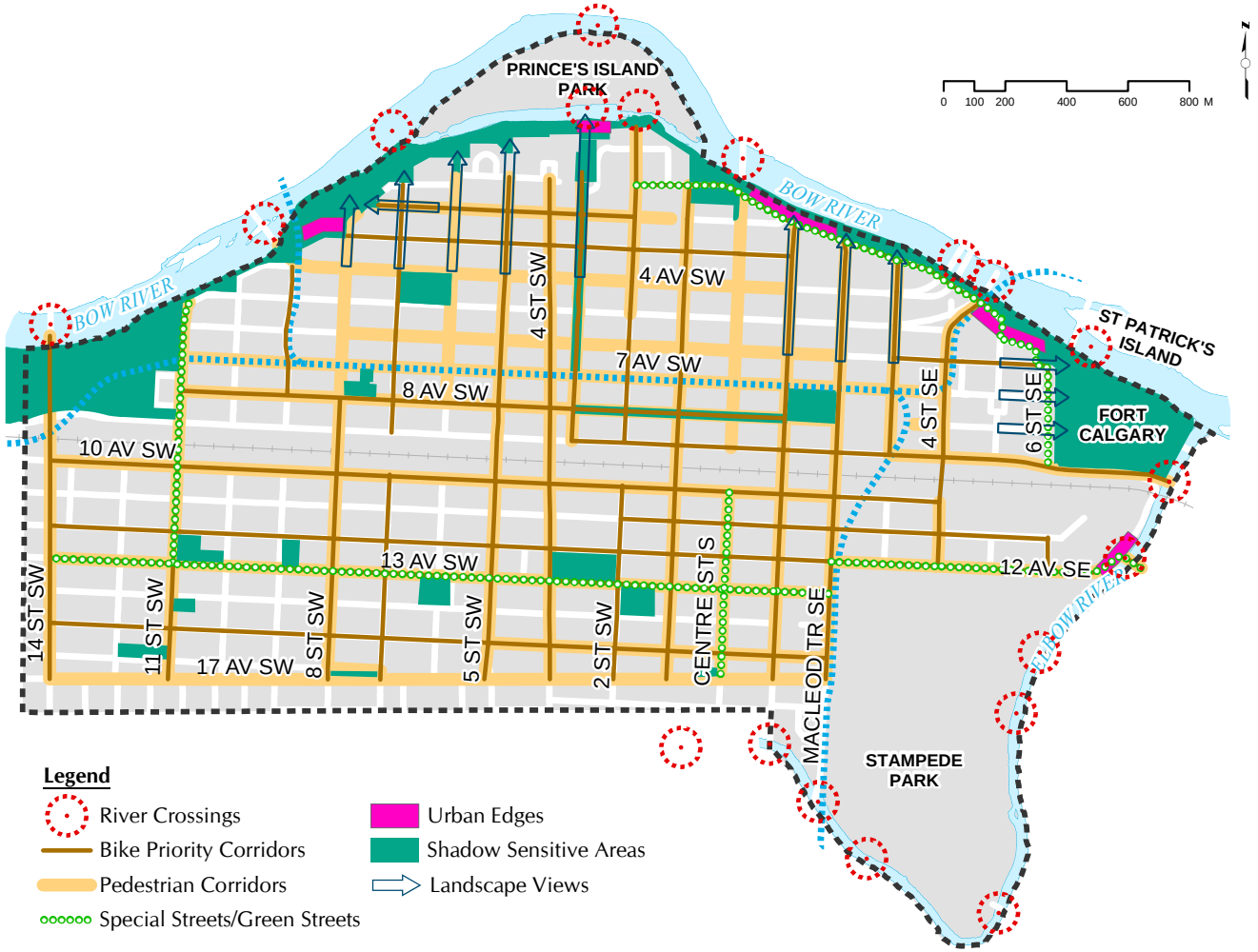
Patio seating extends out from the building, but allows for pedestrian flow.

The strong entrance on the corner of the two-storey retail pulls pedestrian traffic along both streets.

KEY CONSIDERATIONS

- Shadow sensitive areas (Map 21)
- Green Streets (Map 4)
- Landscape view corridors
- Pedestrian/bike priority corridors
- River crossings to surrounding communities
- River urban edges - strategic locations
  - Eau Claire/Chinatown
  - East Village
  - Peace Bridge
  - Louise Crossing Site
- Flood Impacted Zones - refer to Land Use Bylaw 1P2007 and Alberta Environment for regulations and the most updated map of flood impacted zones, which outlines Floodway, Flood Fringe, Overland Flow and Floodplain.
- Areas of Particular Concern to address bird-window collision issue (refer to the Bird-friendly Urban Design Guidelines)

Map 9 The Riverfront



THE RIVERFRONTS

URBAN DESIGN OBJECTIVES

- Generally preserve and reinforce a **naturalistic** and **riparian** character
- Encourage **activity nodes** at strategic locations
- Preserve **sunlight** access and landscape **views** to the riverfronts
- Reinforce **green** and **active** pedestrian and bike connections to the riverfronts
- Enhance pedestrian and cycling access to **river crossings**
- Design for **flood resilience** and pedestrian comfort
- Mitigate **bird-window collisions**

Policy Reference

- Centre City Plan
- Centre City Parks and Public Realm Enhancements Plan
- Bird-friendly Urban Design Guidelines

Guideline Sections

- 2.0 Urban Context
- 4.1 Contextual Design Elements (4.1.1, 4.1.5)
- 4.2.1 Frontage

The Peace Bridge is identified as one of the activity nodes along the Bow River.

Building frontage design solution to maintain pedestrian access and comfort in flood impacted areas.

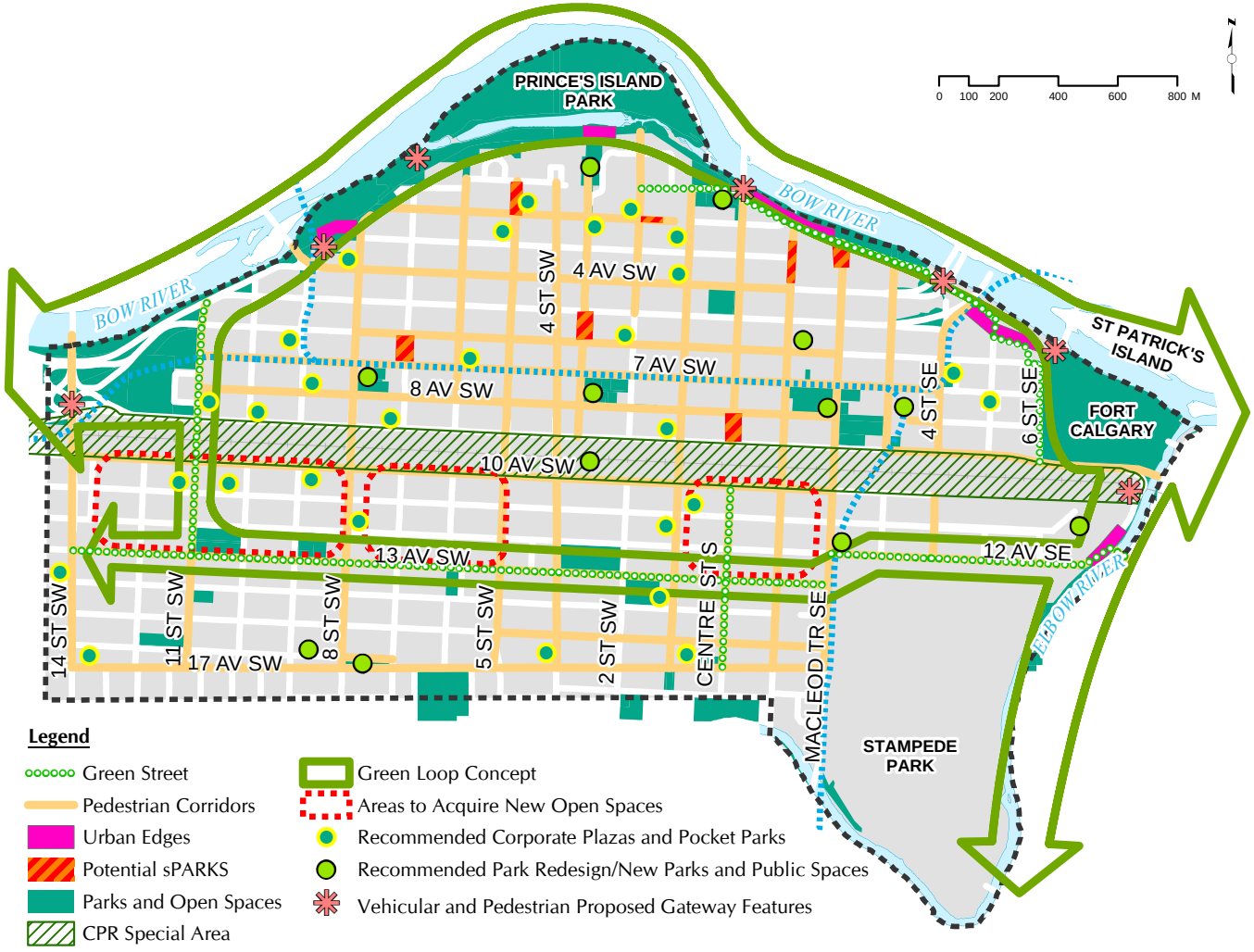
The Bow River and its riverfront define the unique sense of place in Calgary's Centre City.

It is crucial in a high-density urban setting to preserve sunlight access to the riverfront to maintain a green, active and healthy atmosphere.

KEY CONSIDERATIONS

- The Green Loop concept (Based on the Centre City Plan, the Green Loop refers to an open space/linkage loop through and around the Centre City via the riverfronts and 13 Avenue Heritage Greenway.)
- CPR Special Area (2.10, Centre City Parks and Public Realm Enhancements Plan)
- Shadow sensitive areas (2.12, 4.1.5)
- Potential new parks and park redesign (Centre City Parks and Public Realm Enhancements Plan)
- Private and publicly accessible, on-site open space opportunities (4.1.2)
- "sPARKS" potential locations (Centre City Plan)
- Green streets and opportunities for stormwater management features, double row of trees, etc. (2.1, 3.2.5, 4.3)
- Amenity roof opportunities, such as podium rooftop gardens, +15 level open air walkways and gardens (2.9, 4.1.4), etc.
- Active uses in and around (2.3):
  - Parks and Open Spaces
  - River urban edges
  - Private and publicly accessible, on-site open spaces

Map 10 – Parks and Open Spaces



Parks and Open Spaces

URBAN DESIGN OBJECTIVES

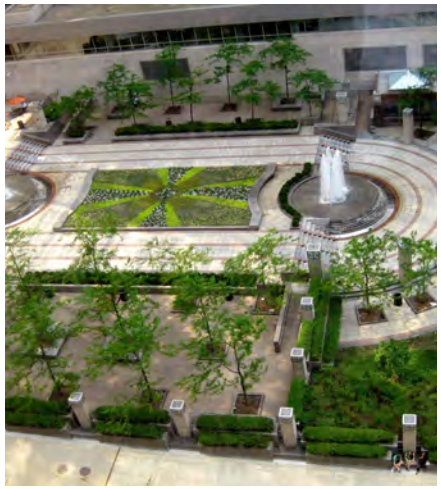
- **Integrate** all parks and open spaces to form the Centre City **Green Loop**
- **Preserve** and **enhance** existing parks and open spaces
- Increase **usable** public and private open spaces and tree planting
- Preserve **sunlight** access to parks and open spaces
- **Activate** parks and open spaces and their edges
- Create **built form** that gives a strong sense of enclosure for parks and open spaces
- Incorporate **innovative** stormwater management practices wherever possible

Policy Reference

- Centre City Plan
- Centre City Parks and Public Realm Enhancements Plan
- Other Parks policies (6.1)

Guideline Sections

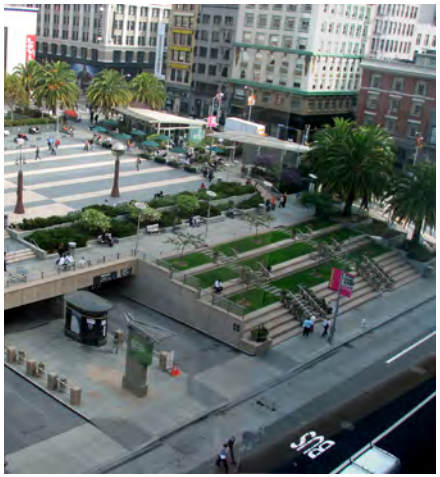
- 2.0 Urban Context
- 3.2.5 Street Trees
- 4.1 Contextual Design Elements (4.1.1, 4.1.2)
- 4.3 Green Infrastructure



Quality design of an urban plaza.

Double row of trees provide beautiful seasonal changes in the street.

Active use in the park.



A green and active urban plaza designed over a parking garage.

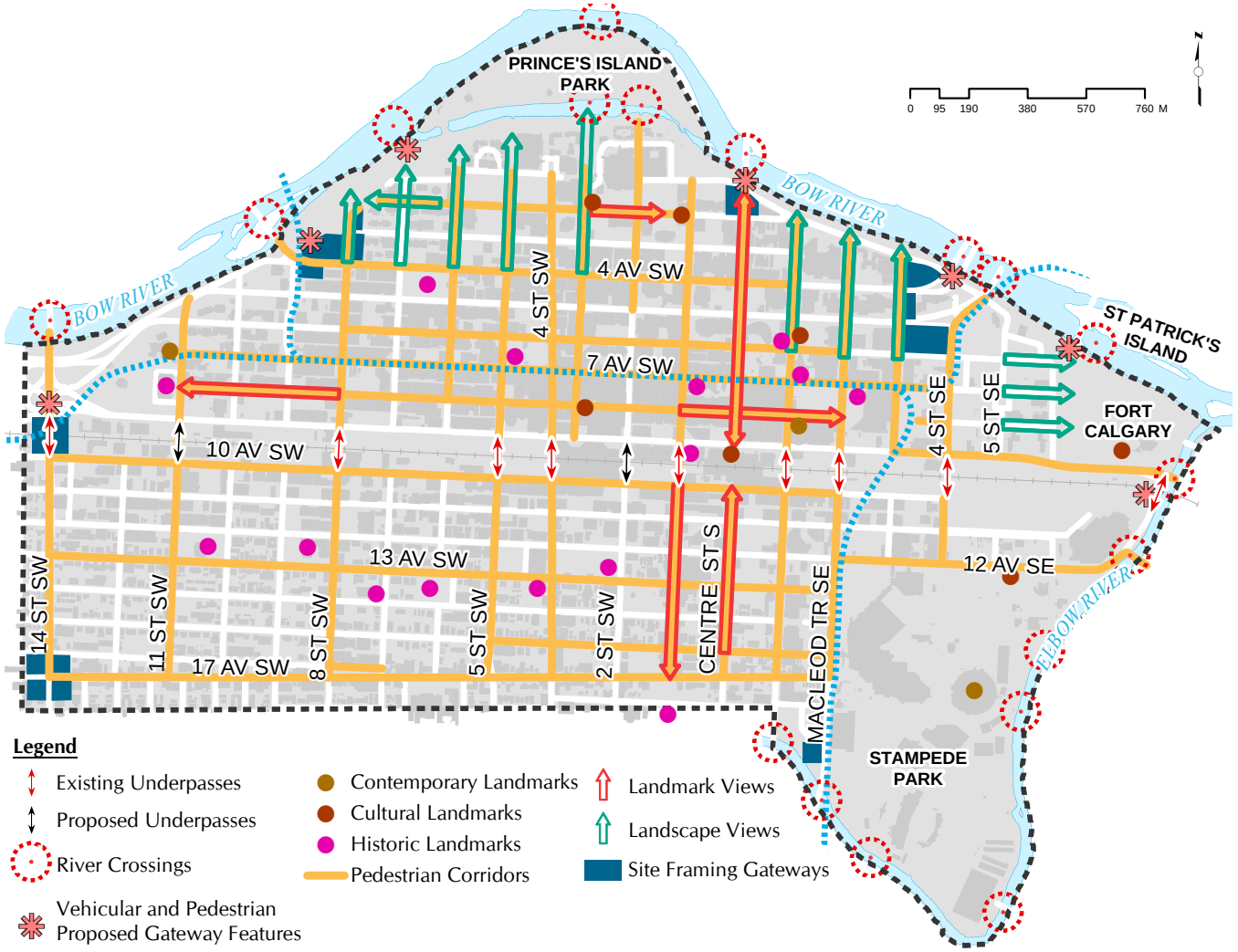
2.6 SKYLINE, GATEWAYS, LANDMARKS AND VIEW CORRIDORS

Memorable Places, Great Streets and Quality Buildings

KEY CONSIDERATIONS

- Skyline
  - The appropriateness of the siting, location and clustering
  - The visual impact including the proportion, massing and shape of the body and top of the building, as well as textures, materials, colours and reflectivity of surfaces
- Gateways
  - Streetscape and site design elements (e.g. landscaping, upgraded sidewalk treatments, special lighting, seating, signage, public art, etc.)
  - Built form (e.g. landmark buildings, special building massing and materials)
  - Areas of particular attention include underpasses, river crossings, identified landmarks and sites framing gateways
- Landmarks
  - Development impact on the identified historic, cultural and contemporary landmarks
- View Corridors
  - Preservation and enhancement of the identified landmark and landscape views (e.g. +15 impact)

Map 11 – Skyline, Gateways, Landmarks and View Corridors



SKYLINE, GATEWAYS, LANDMARKS AND VIEW CORRIDORS

URBAN DESIGN OBJECTIVES

- Encourage **visually distinctive** buildings to positively contribute to the unique character of the Centre City skyline
- **Mark** the gateways with distinctive structures, architecture and site design elements
- **Preserve** and **enhance** landmarks and view corridors
- Design the sites framing the landmarks, gateways and view corridors with **special considerations**

Policy Reference

- Centre City Plan

Guideline Sections

- 2.0 Urban Context
- 3.2 Streetscape Elements
- 4.2 Built Form

Office and tall residential buildings are designed with distinctive building tops.

The Bow building adds interest to the skyline of the Centre City.

The view corridors to the Chinese Cultural Centre and Calgary Tower are well preserved with enhanced streetscapes to define the urban character of these places.

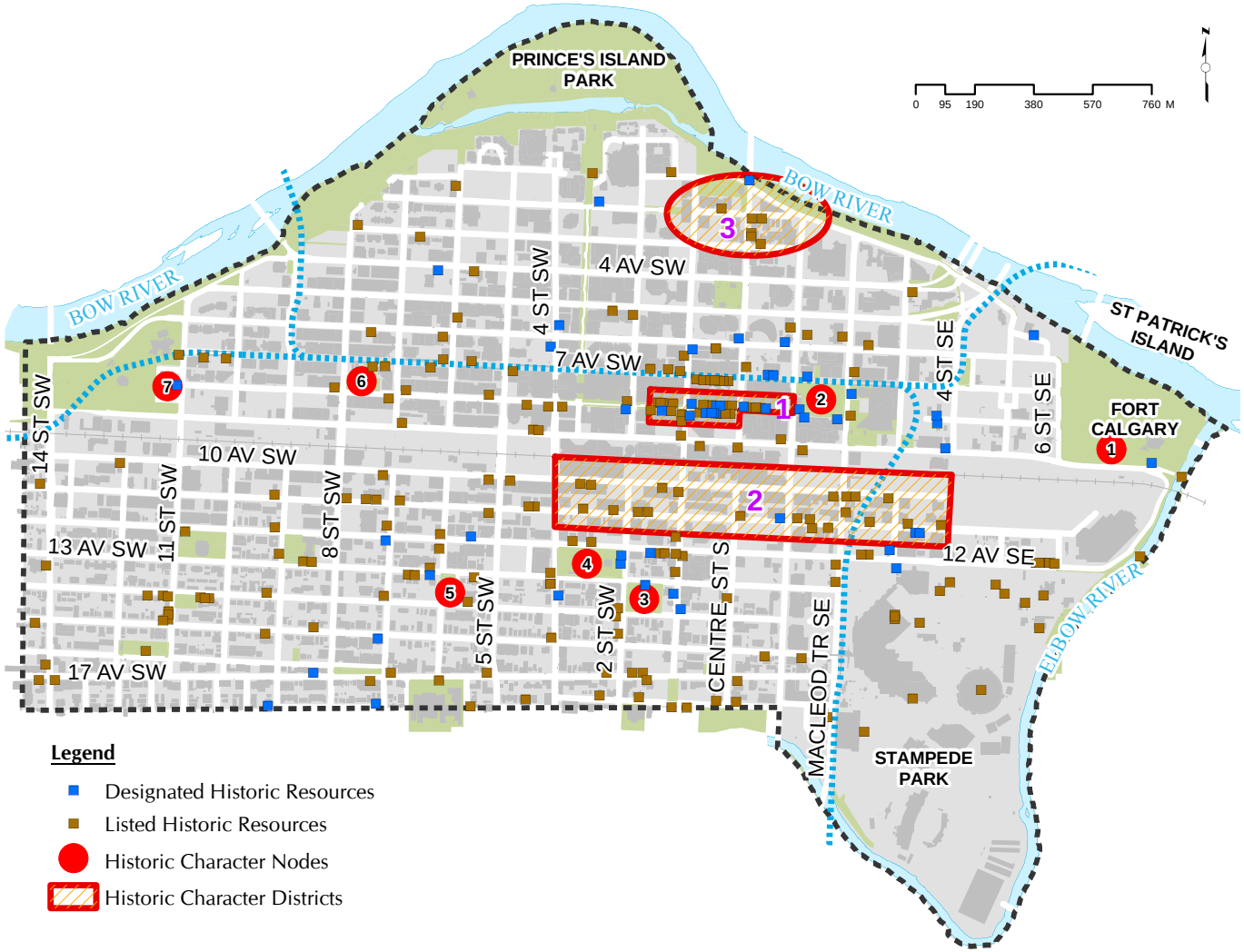
2.7 HISTORIC RESOURCES

Memorable Places, Great Streets and Quality Buildings

KEY CONSIDERATIONS

- Historic character district: an area of distinctive character with a cluster of listed and/or designated historic resources, such as:
  - 1 Stephen Avenue National Historic Site of Canada
  - 2 Warehouse District
  - 3 Chinatown
- Historic character corridor: a character street sector lined with listed and designated historic resources (e.g. 8 Avenue S, 1 Street SW, 11 Avenue S, 7 Avenue S, etc.)
- Historic character node: a place centred around, or surrounded by historic resource(s), such as:
  - ① Fort Calgary
  - ② Olympic Plaza
  - ③ Haultain Park
  - ④ Central Memorial Park
  - ⑤ Beaulieu Gardens
  - ⑥ Century Gardens
  - ⑦ Shaw Millenium Park
  - Designated and Listed Historic Resources
- Check out calgary.ca for updated Inventory of Evaluated Historic Resources by Calgary Heritage Authority (CHA).

Map 12 - Historic Resources



HISTORIC RESOURCES

URBAN DESIGN OBJECTIVES

- **Conserve** historic resources and cultural landscapes, and sensitively **integrate** new development
- **Respect** the context of areas with heritage character and resources
- Support the retention and **adaptive reuse** of historic resources
- Build new developments that have **exceptional** architectural merit or great **sensitivity** in a heritage context
- Apply **contemporary** interpretations of traditional designs and details in new development
- Use historically **authentic** materials that are robust and of high-quality

Policy Reference

- Centre City Plan
- Calgary Heritage Strategy
- The Standards & Guidelines for the Conservation of Historic Places in Canada
- CHA Inventory of Evaluated Historic Resources

Guideline Sections

- 2.0 Urban Context (2.6, 2.8, 2.12)
- 4.1.3 Heritage Interface

The new building on the right is a contemporary interpretation of adjacent heritage buildings and is respectful of its heritage context.

40 Bond St., New York – a contemporary building in a heritage context that displays exceptional architectural merit and that someday may become a historic resource in its own right.

This new urban-form Walmart sensitively integrates new development into a context of adjacent heritage buildings.

Interventions such as this carefully designed rooftop addition helps to support the retention and adaptive re-use of historic places.

This new building exemplifies a contemporary interpretation of traditional design and detailing.

KEY CONSIDERATIONS

CHARACTER DISTRICTS

- Chinatown
- CPR Special Area (2.10)
- Civic District (see Civic District Public Realm Strategy)
- Entertainment Districts
- Warehouse District
- Design District

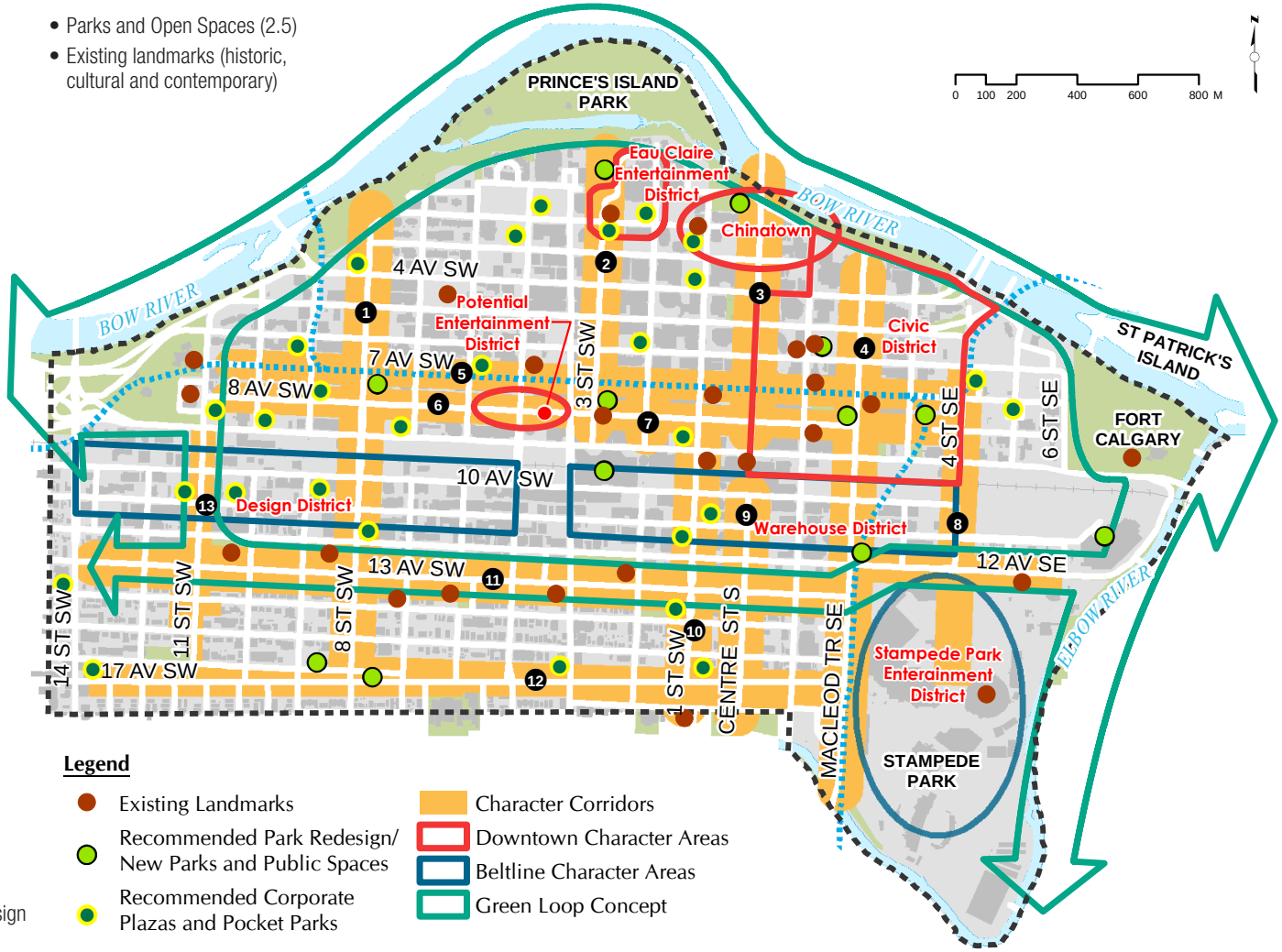
CHARACTER CORRIDORS

1. 8 Street SW Corridor (see 8 Street SW Corridor Public Realm Plan)
2. High Street/Barclay Mall
3. Centre Street Corridor
4. Macleod Trail Ceremonial/Civic Corridor
5. 7 Avenue Transit Corridor
6. Stephen Avenue Pedestrian Mall
7. High Street/2 Street W Sector
8. North Stampede Entrance Way
9. Centre Street/Volunteer Way (see Volunteer Way Master Plan)
10. High Street/1 Street SW
11. 13 Avenue Heritage Greenway
12. 17 Avenue Pedestrian Commercial Corridor (17 Avenue SW Urban Design Strategy)
13. 11 Street SW Pedestrian Commercial Corridor

CHARACTER NODES

- Parks and Open Spaces (2.5)
- Existing landmarks (historic, cultural and contemporary)

Map 13 – Character Areas



CHARACTER AREAS

URBAN DESIGN OBJECTIVES

- **Identify** districts, corridors and nodes with unique qualities
- **Complement** the network of unique districts, corridors and nodes through streetscape enhancement
- **Preserve** and **strengthen** the unique qualities through contextual building and site design
- Provide opportunities for future character areas to **develop**

Policy Reference

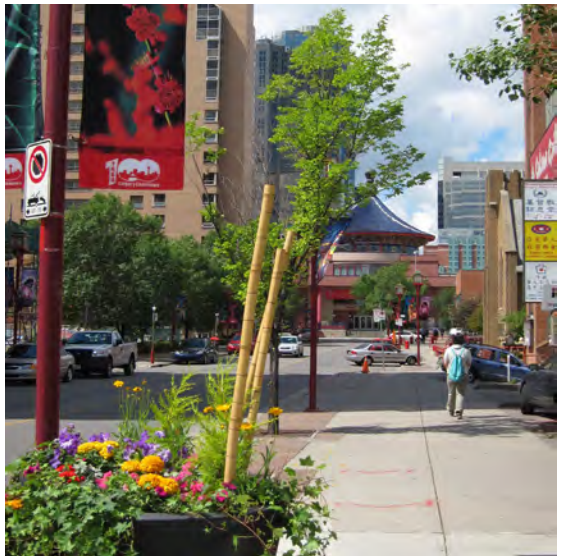
- Centre City Plan
- Beltline ARP
- Centre City Parks and Public Realm Enhancements Plan

Guideline Sections

- 2.0 Urban Context
- 3.0 The Streetscape Guide
- 4.0 The Development Guide
- 5.2 Areas of Particular Concern

Urban character may also be created by things such as this interesting sculpture located at a street corner in the Beltline.

One of the identified Entertainment Districts, which has a cluster of movie theatres, generates night time activity in the Downtown Core. Better lighting and digital signage (including animated public art) may help to better define the character of the area.



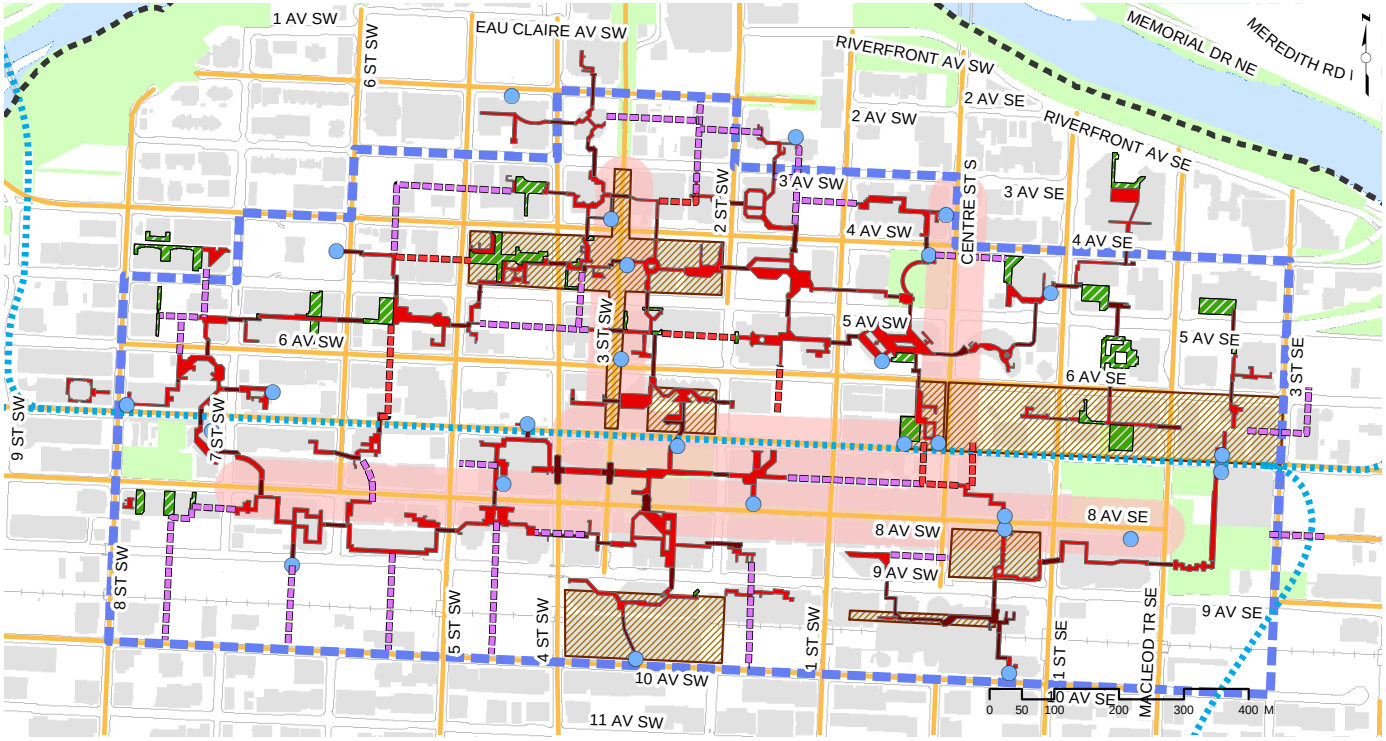
The pedestrian experience leading to the Chinese Cultural Centre, a landmark building in Chinatown, is enhanced through contextual design considerations.

To make vibrant places, character areas can implement multiple design solutions. The key is to build on the unique qualities of the place.

Map 14 – +15 Skywalk System

KEY CONSIDERATIONS

- +15 boundaries
- Downtown retail areas/stronger +15 link
- Existing key street level entries
- Future links (critical and potential)
- Areas for comprehensive improvement
- Pedestrian priority streets (2.1)
- Amenity roof opportunities - +15 level 'open to sky' spaces
- At-grade parks and open spaces
- Major transit corridors/stations (2.11)
- Major public parking facilities (Map 6)
- View corridors (2.6)
- "Bonusable" public amenity items (bridge, feature access and active walkway as per Bylaw33P2013)



Legend

- Existing Key Street Level Entries
- Potential Future Links - Critical
- Potential Future Links - Proposed (Centre City Plan, 2007)
- Pedestrian Priority Corridors
- Downtown Retail Areas
- Comprehensive Improvement Areas
- +15 Boundary
- Parks and Open Spaces

+15 Type

- Bridge Enclosed
- Bridge Open to Sky
- Passageway Enclosed
- Open to Sky

+15 SKYWALK SYSTEM

URBAN DESIGN OBJECTIVES

PUBLIC REALM INTEGRATION AND CONNECTIVITY

- Provide better **integration** of the +15 system with the surrounding uses, adjacent streets and public spaces
- Ensure **sensitive** and **creative** design of +15 bridges
- Respect and maintain key view corridors (2.6)
- Ensure overall **pedestrian connectivity** within the +15 boundaries with emphasis on retail areas (2.3)
- Discourage +15 links to areas outside of the +15 boundaries
- Create seamless and enjoyable pedestrian movement throughout the +15 system
- Optimize **visual connectivity** in the design of the +15 system

Animation and Quality Consistency

- **Animate** the design of +15 bridges using lighting, colours and dynamic structure and form (2.12)
- Locate retail and other **active uses** at strategic locations to animate the +15 system (2.3)
- Manage quality event **programming** to activate the +15 system
- **Maintain** the existing +15 system well, with sensitive **retrofitting** where needed
- Create quality space through The City's provision of "bonusable" public amenities (Bylaw 33P2013)
- Incorporate "open to sky" walkways in the +15 system designed as amenity roofs

Policy Reference

- +15 Policy
- Centre City Plan
- Downtown Retail District Strategy
- Centre City Illumination Guidelines
- Access Design Standards
- Bylaw33P2013

Guideline Sections

- 4.1.4 +15 Skywalk System
- 2.0 Urban Context (2.3, 2.6, 2.12)
- 5.2 Areas of Particular Concern

+15 and street-level connectivity at a LRT station.

Animated +15 bridge using colours and transparency.

Quality design outcome achieved through density bonus system.

+15 "open to sky" walkway designed as an amenity roof.

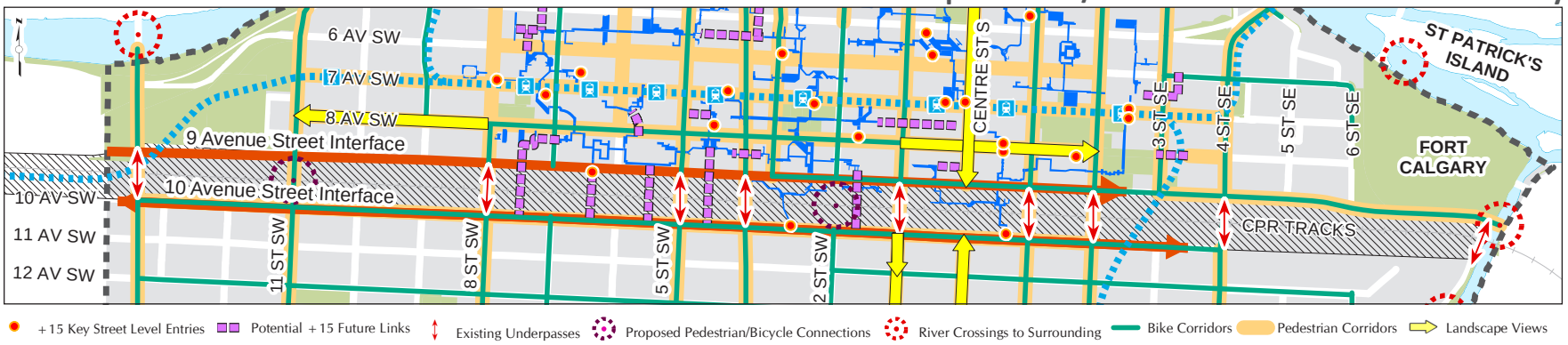
CPR SPECIAL AREA

URBAN DESIGN OBJECTIVES

- Contribute to the vision of a **safe, vibrant** and **sustainable system** with a variety of land uses, exciting horizontal and vertical linkages, special places and iconic built form (Centre City Plan)
- Work within the development **constraints** and provide **innovative** design solutions (5.2)
- Consider **sensitive uses** such as child care facilities, schools, hospitals, residential care and assisted living are not suitable in proximity to the railway corridor
- Evaluate opportunities for incorporating design considerations into the building to mitigate noise and vibration due to railway proximity (for tools and resources, please refer to the Guidelines for New Development in Proximity to Railway Operations, prepared for The Federation of Canadian Municipalities and The Railway Association of Canada, sections on **Noise** Mitigation and **Vibration** Mitigation: http://www.proximityissues.ca/asset/image/reference/guidelines/2013_05_29_Guidelines_NewDevelopment_E.pdf)
- Incorporate **mitigation measures** into the development while ensuring the highest possible urban design standards
- Link Downtown and Beltline through multi-modal streets, underpasses, +15 and +30 bridges, and **integrated developments**
- Promote **architecture excellence** (4.0)
- Integrate with future **transit** infrastructure (2.11, 3.2.2)
- Minimize **development impact** (2.12, 4.2)
- Improve **at-grade** pedestrian environment (3.2.1, 4.2)
- Incorporate **urban retail** opportunities (2.3)
- Preserve and enhance the **unique characters** (character areas, historical resources, landmarks, view corridors and gateways - 2.8, 2.7, 2.6)
- Manage parking and vehicular **access** (Map 6, 4.1.6)

Map 15 – CPR/Areas of Particular Attention

Map 16 – CPR/Horizontal and Vertical Connectivity



KEY CONSIDERATIONS

Safety

- Any development in proximity to a railway property must conform to all requirements of the City at the time of application due to the proximity of rail operations. These requirements are related to safety, noise, vibration, fencing, stormwater management, etc.
- Implementation Strategies (5.2.16 - Develop the CPR Special Area while ensuring safety)

Areas of Particular Attention

- Character Districts (2.8)
- Shadow Sensitive Areas (2.12)
- Restricted Parking Areas (Bylaw33P2013)

Horizontal and Vertical Connectivity

- +15/+30 Links (2.9, 4.1.4)
- Underpasses (Downtown Underpass Urban Design Guidelines)
- Pedestrian/Bike Connections (2.1, 3.2.1, 2.1, 3.2.3)
- River Crossings (2.4) and View Corridors (2.6)

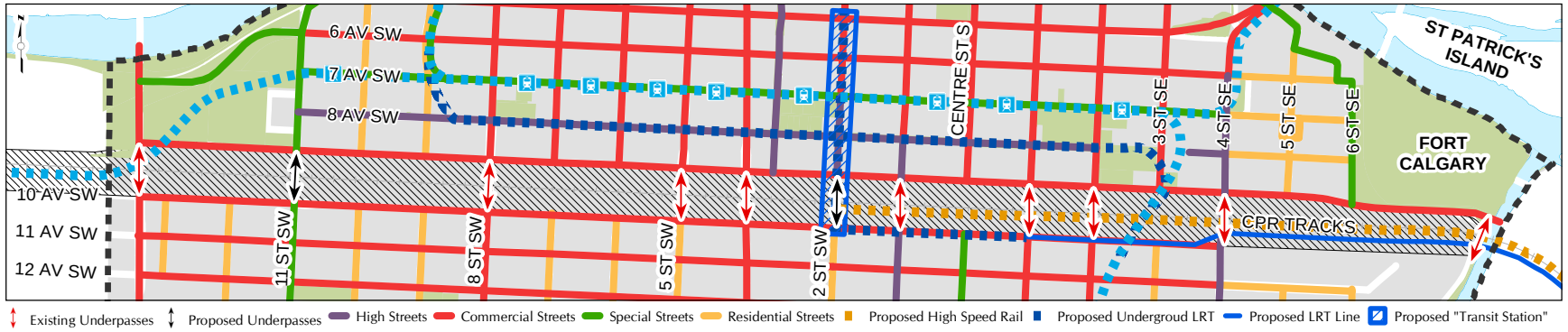
Streetscape Characters

- Streetscape Typologies/Travel Mode Priorities (2.1)
- Future Transit Alignments (2.11, 3.2.2)

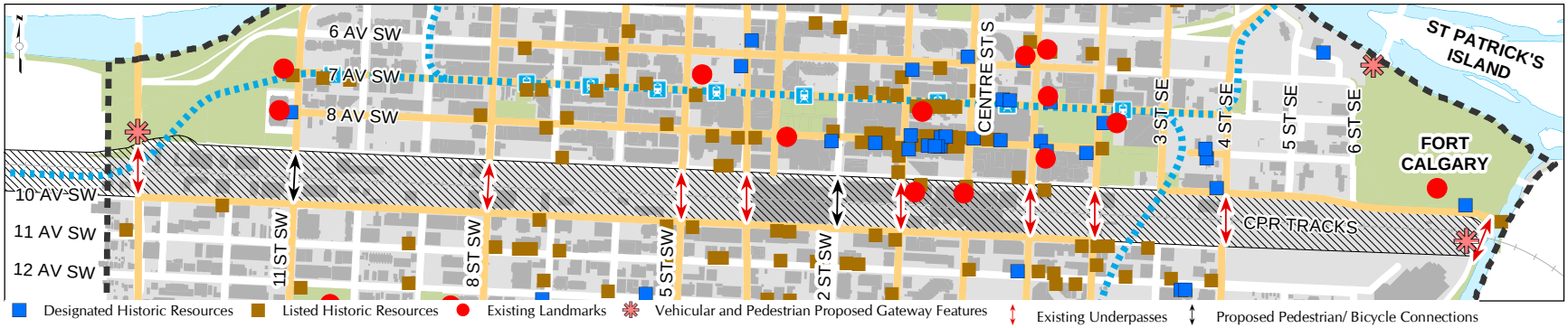
Special Places

- Historic Resources (2.7, 4.1.3)
- Landmarks and Gateways (2.6)
- Underpasses (Downtown Underpass Urban Design Guidelines)

Map 17 - CPR/Streetscape Characters



Map 18 – CPR/Special Places



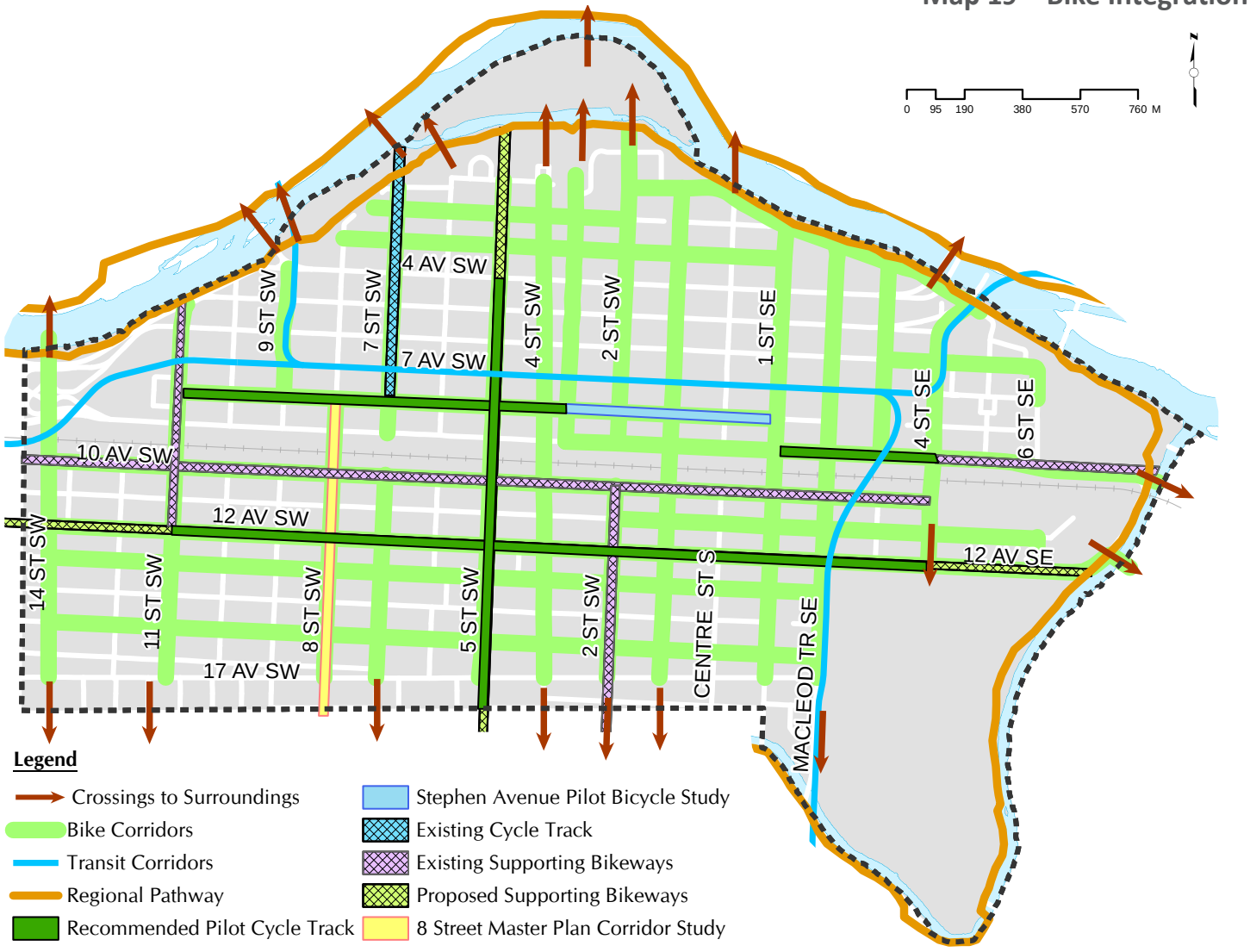
2.11 BIKE AND TRANSIT INTEGRATION

Memorable Places, Great Streets and Quality Buildings

KEY CONSIDERATIONS

- Bike infrastructure improvement has been identified as one of the key action items in the Cycling Strategy to increase mobility choices throughout the Centre City area. The target is to continue to complete at least 70 per cent of the network identified in the Centre City Mobility Plan by 2020.
- This map overlays the Centre City Bicycle Network (based on Centre City Mobility Plan and Centre City Plan) and the Centre City Cycle Track 5-year Plan (recommended by the Centre City Bike Committee based on stakeholder input).

Map 19 – Bike Integration



Bike Integration

URBAN DESIGN OBJECTIVES

Safety

- Increase pedestrian and cyclist **safety** and **convenience** throughout the Centre City
- Provide pedestrian scaled **lighting**

Connectivity

- **Complete** the defined Centre City Bicycle Network and implement Centre City Cycle Track 5-year Plan
- Improve **bike connectivity** between Downtown and Beltline
- Connect Centre City bicycle network to the regional pathway system

Streetscape Integration

- Balance the competing needs of space for all streetscape elements based on travel mode priorities (2.1)
- Integrate **bike-friendly street** design solutions
- **Integrate** bike facilities with surrounding uses and other travel modes
- Integrate **bike parking** in all street improvement projects and new developments

Best Practice Metrics

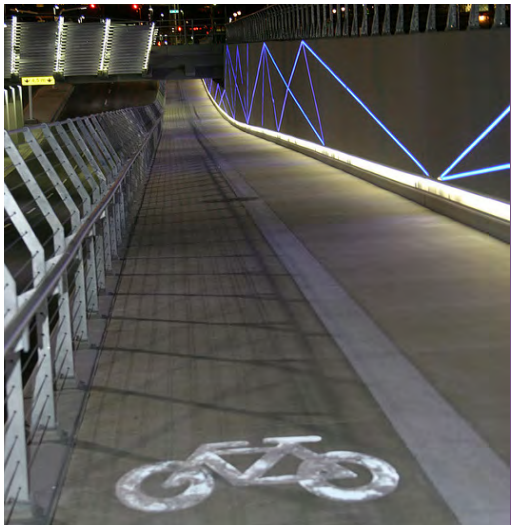
- Implement recommended best practice **metrics**, and if not possible, explore mitigating solutions

Policy Reference

- Centre City Plan
- Centre City Mobility Plan
- Centre City Cycle Track 5-year Plan

Guideline Sections

- 3.2.3 Bike Facilities



Multi-use pathway at 4 Street Underpass, Calgary.

A two-way cycle track, Vancouver.

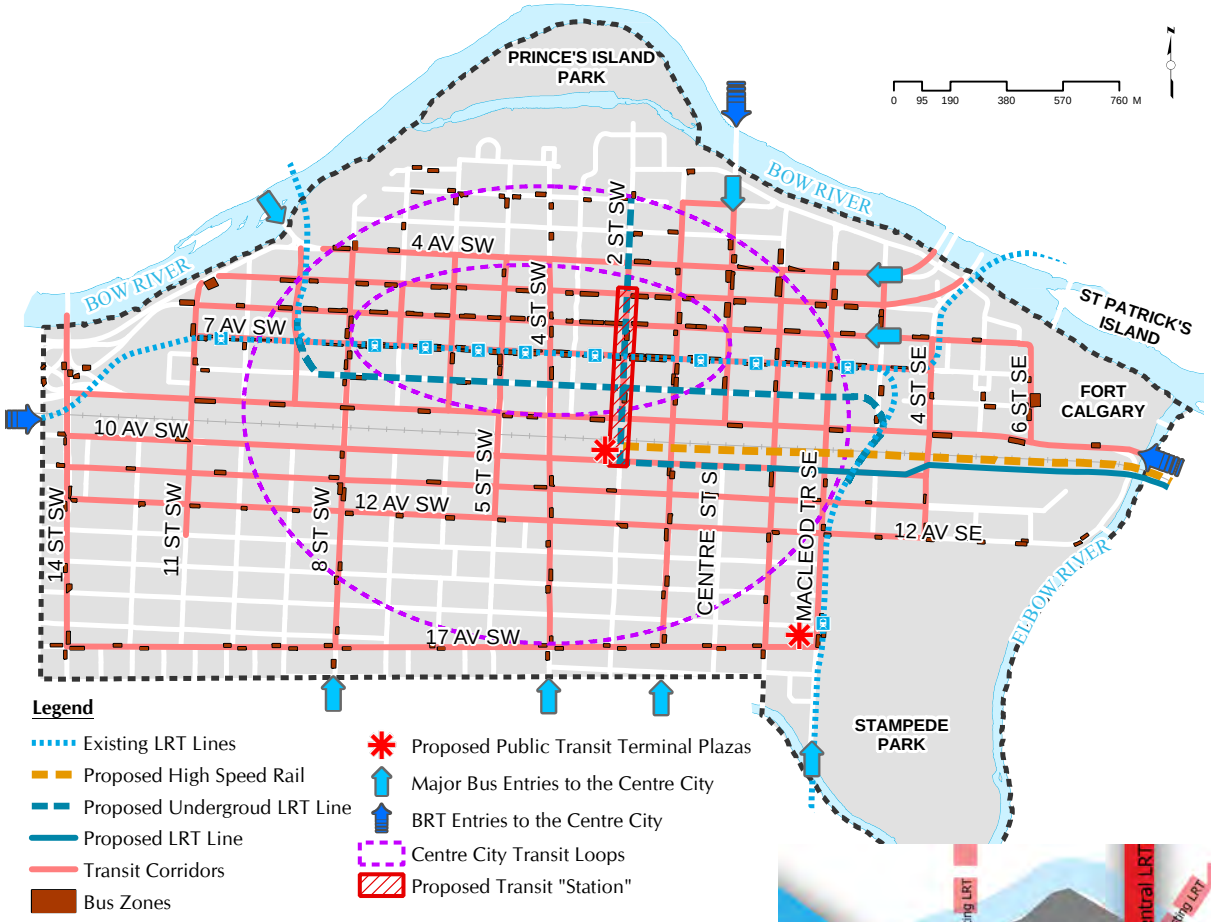
Covered bike parking, Portland.

Bike share program, Montreal.

KEY CONSIDERATIONS

- Transit Priority Corridors (2.1)
- 7 Avenue Transit Corridor and LRT Stations
- Planned Transit Alignments (Route Ahead)
- Bus Zones
- Proposed 2 Street SW Transit "Station" (Centre City Plan)
- Proposed Public Transit Terminal Plazas in Beltline (Beltline ARP)

Map 20 – Transit Integration



Planned Transit Alignments, adapted from Route Ahead; detailed alignments to be determined.

Transit Integration

URBAN DESIGN OBJECTIVES

- **Integrate** transit facilities in the selection of new multi-modal streets that emphasize walking, cycling and transit
- Identify areas, corridors and nodes of particular attention and provide **transit-supportive** urban design
- Provide passenger amenities to support the **use**, **functionality** and **enjoyment** of the public transit system
- Provide **active uses** and **public spaces** along transit corridors and around transit nodes
- Ensure that transit priority corridors are capable of accommodating public transit needs
- Integrate multiple **travel modes**
- Support the implementation of planned transit **alignments**

Policy Reference

- Centre City Plan
- Beltline ARP
- Transit-friendly Design Guide
- Route Ahead

Guideline Sections

- 3.2.2 Transit Facilities
- 5.2 Areas of Particular Concern

An example of a multi-modal street in Downtown Calgary that emphasize walking, cycling and transit.

An LRT station that is well integrated with the +15 Skywalk System and at-grade parks and open space.

A transit stop with transparent canopy, digital screen for passenger information, and active uses nearby.

An example of seasonal installations and Downtown branding at a transit station.

Seasonal Design

URBAN DESIGN OBJECTIVES

- Preserve and optimize **sunlight** access to the public and private realm (4.1.5)
- **Orient** and **design** buildings to minimize shadow impact on streets, open spaces, parks and neigbourhoods (4.1.5)
- Mitigate negative **wind** impacts
- Design for **snow** storage and removal
- Encourage **seasonal**, decorative and experiential lighting installations (4.1.5)
- **Program** a variety of events throughout the year
- Design for safe pedestrian **movement** and **comfort** in the winter season

Policy Reference

- Centre City Plan
- Beltline ARP
- +15 Policy

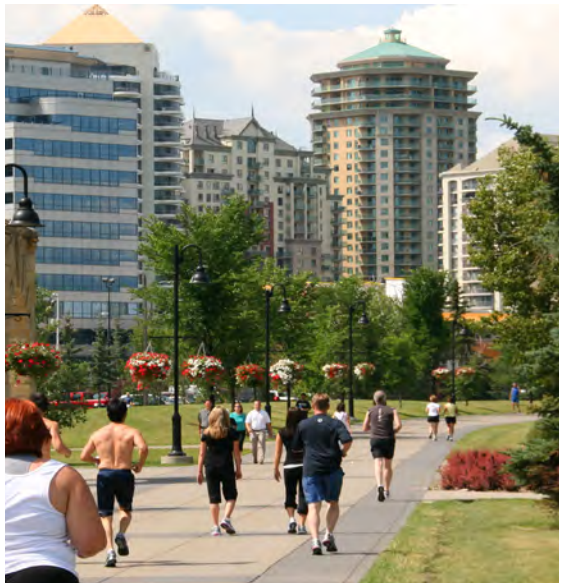
Guideline Sections

- 3.0 The Streetscape Guide
- 4.0 The Development Guide
- 4.1.5 Seasonal Design and Sunlight Access

The use of colours contribute to a dynamic streetscape, especially during winter time.

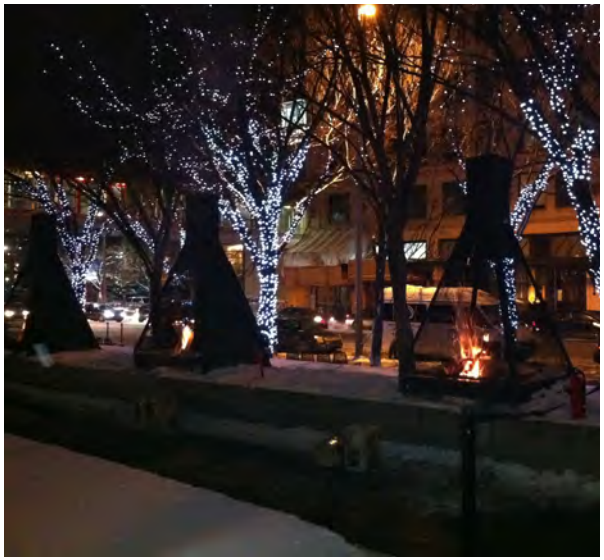
This building frontage is designed with seasonal installations such as canopy.

Creative use of reflected sunlight from the building across the street to brighten the building facade and the pedestrian area in a dense downtown environment.



The density and built form along the riverfronts must be carefully considered to protect sunlight access to this important public open space system.

Olympic Plaza in winter and summer, during the day and the night. Sunlight preservation, seasonal installations and programming of events encourage year-round, day to night activity.



Fire pit in public space.

+15 Skywalk System linked to an at-grade sunny plaza.

Shadow Sensitive Areas

Sunlight Protection Areas - protected by bylaw
(Bylaw 33P2013)

Shadow Sensitive Areas
- (4 classes adapted based on Centre City Plan)

On-site Open Spaces (4.1.2)
- Internal courtyards
- Corner plazas
- Mid-block plazas
- Above-grade landscape roofs

Building Frontages (4.2)
- South-facing street walls
- Colonnades
- Residential building windows

Public Sidewalks (3.2.1)
- Public sidewalks along north side of an avenue

Historical Landscapes or Architecture (2.7)
- Important natural features or vegetation
- Key historic buildings
- Stained glass windows

Map 21 – Shadow Sensitive Areas

KEY CONSIDERATIONS

- Site design (building and on-site open space locations)
- Building massing and orientation
- Street wall heights
- Upper building level design treatments
- Tower separation distances
- Floorplate sizes
- Building setbacks and stepping backs
- Light reflection
- Colonnade location and scale
- Street furniture location

(See 4.2 and 4.1.5 for architectural and site design solutions)

Policy Reference

- Centre City Plan
- Beltline ARP

Guideline Sections

- Bylaw33P2013
- 4.1.5 Seasonal Design and Sunlight Access
- 4.2 Built Form

The afternoon shadow in Downtown Calgary. This demonstrates the need to protect sunlight access to the public realm in a high density urban environment.

KEY CONSIDERATIONS

ILLUMINATION DISTRICTS

- Character areas (2.8)

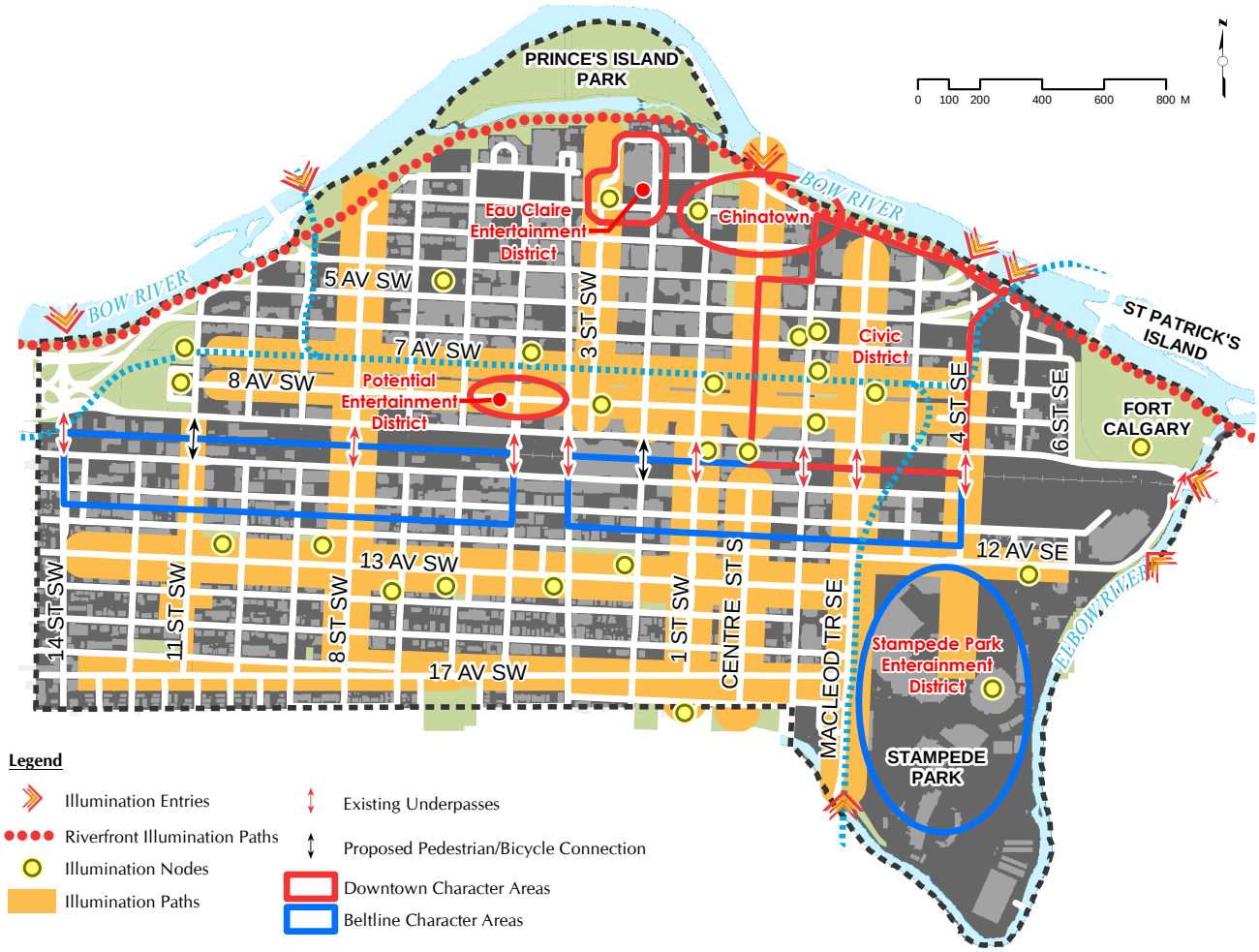
ILLUMINATION PATHS

- Character corridors (2.8)
- Regional pathways and cycle tracks (2.11)
- +15 Skywalk System (2.9)
- Enhanced lanes (3.3)

ILLUMINATION NODES

- Illumination entries (2.6)
- Landmark buildings and tall buildings (2.6)
- Historic resources (2.7)
- Parks and open spaces (2.5)
- Neighbourhood centres (2.2)
- Transit stations (2.11)
- Underpasses (2.10)
- Under-utilized spaces
- Comprehensive site/building lighting (3.2.7) as per Centre City Illumination Guidelines

Map 22 – Centre City Nightscape



Night Design

URBAN DESIGN OBJECTIVES

Animation

- Create an **animated** environment during the night and winter season

Legibility

- Increase **legibility**

Character

- Enhance the urban **characters** and express **identity** of a neighbourhood

Safety

- Contribute to the real and perceived **safety** and the legibility and of urban places

Sustainability

- Maximize **natural sunlight**
- Reduce energy consumption and support the use of new **technologies**
- Minimize glare, spill light and light trespass to reduce **light impact** on residential **neighbourhoods** and migratory **birds**

Policy Reference

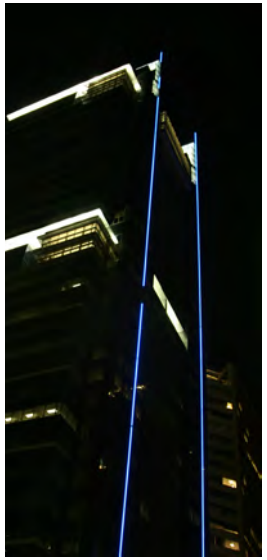
- Centre City Illumination Guidelines
- Design Guidelines for Street Lighting (under review)
- Downtown Underpasses Urban Design Guidelines

Guideline Sections

- 2.0 Urban Context
- 3.2.7 Lighting
- 5.2 Areas of Particular Concern

Pedestrian scaled street lighting along 13 Ave. Heritage Greenway.

Lighting and building setback zone to animate the streetscape.



Building lighting to highlight key architectural elements.

Landmark building lighting contributes to the beautiful night sky in Hong Kong.

Public Improvements - Areas of Particular Attention

- Riverfront promenade (2.4)
- High Streets (2.1)
- 7 Avenue transit corridor (2.8)
- 13 Avenue Heritage Greenway (2.8)
- Chinatown streets (2.8)
- Entertainment Districts(2.8)
- Civic Districts (2.8)
- Neighbourhood Centres (2.2)
- Parks and open spaces (2.5)
- Regional pathways/cycle tracks (2.11)
- Underpasses (2.10)
- Transit stations (2.11)
- Enhanced lanes (3.3)
- Unused dark spaces under the transportation flyovers
- Remnant undeveloped spaces in public ownership
- Sidewalk areas with Urban Braille treatments

Private Developments - Areas of Particular Attention

- Developments along all High Streets, 7 Avenue and 13 Avenue Heritage Greenway
- Developments interfacing with Neighbourhood Centres, Entertainment Districts, cultural and civic districts, and around transit stations, parks and open spaces, on-site open spaces
- Historic resources (designated and listed, 2.7)
- Gateways and landmarks (2.6)
- Tall building night skyline (2.6)

Site/Building Lighting - Areas of Particular Attention

- Building entrances
- Architectural features
- Building corners
- Building tops
- Canopies, colonnades and awnings
- +15 Skywalk System and at-grade entrances
- Mid-block pedestrian crossings
- On-site open spaces including amenity roofs
- On-site public art
- Animated Public Art
- Stairs and ramps
- Grade separated areas
- Parking lots
- Vehicle access areas and back lanes
- Underutilized spaces adjacent to the CPR Special Area

Transit stop lighting.

Lighting in building frontage zone to animate the streetscape.

3

> Enhance the public realm and promote pedestrian use through the coherent and collaborative design of streets, building interfaces and public spaces."
>
> 2.4.3 Enhancing the public realm, Municipal Development Plan

3.0 THE STREETSCAPE GUIDE

IN THIS SECTION:

URBAN DESIGN OBJECTIVES

DEFINE STREETSCAPE TYPOLOGIES

PRIORITIZE DIFFERENT TRAVEL MODES

INTEGRATE STREETSCAPE ELEMENTS

ENHANCE PEDESTRIAN EXPERIENCE

Defined Zones

There are three general zones (with sub-zones under each) that accommodate various streetscape elements of a complete street:

- Roadway Zone (from curb to curb)
- Pedestrian Zone (from property line to curb)
- Frontage Zone (from building face to property line)

Policy Reference

- Centre City Plan
- Centre City Mobility Plan
- Complete Streets Guide
- Cycling Strategy
- Pedestrian Policy
- Bicycle Policy
- Bylaw 33P2013

Guideline Sections

- 2.1 Streetscape Characters
- 3.2 Streetscape Elements
- 4.0 The Development Guide

3.1 Streetscape Zones

Approach to Centre City Streetscape

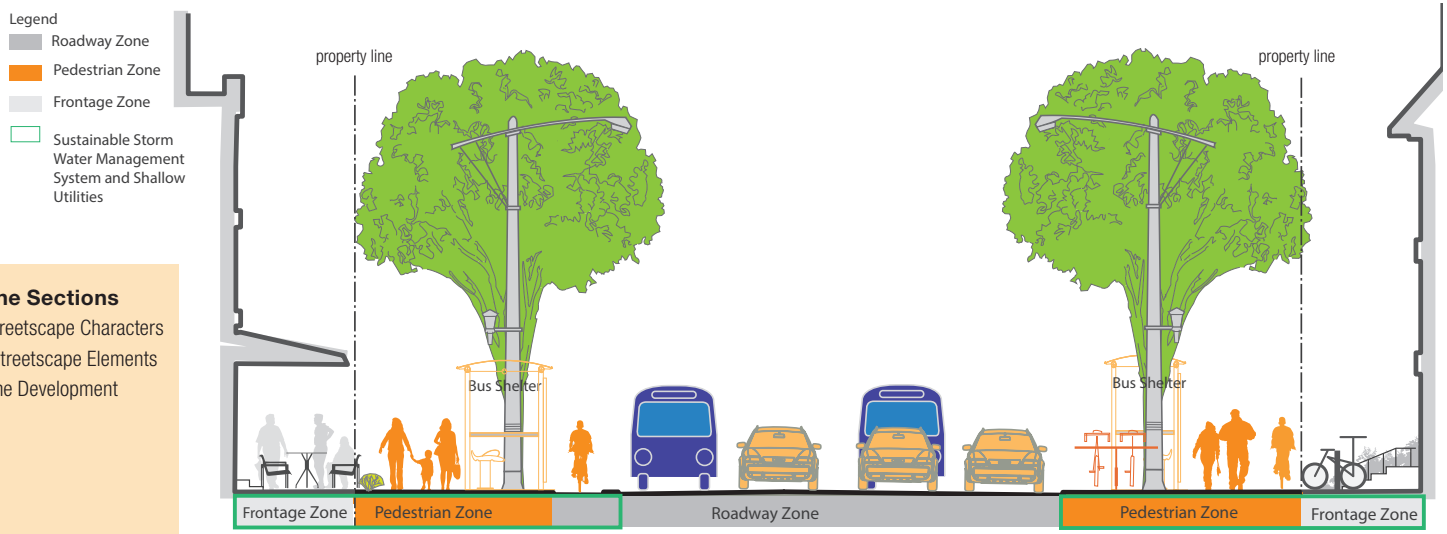
Good streetscape design begins with an approach that emphasizes cohesiveness and considers how various elements interact to create an overall streetscape composition that enhances pedestrian experience.

This section provides guidance regarding what street elements should be accommodated in each of the defined zones in relation to the streetscape typologies and travel mode priorities (as identified in 2.1 Streetscape Characters, which is a synthesis of the Centre City Plan street typologies and the Centre Mobility Plan street classifications).

Given the street right-of-way (ROW) widths, all Centre City street typologies should be able to achieve the defined streetscape characters based on different composition of streetscape elements. In some cases, the location of the curb may need to be moved to accommodate pedestrian/bike/transit needs. In other cases, private development may need to setback the building frontage or provide colonnades to give more pedestrian space (in this case the space is considered bonusable as per Bylaw 33P2013). Creating an overall streetscape composition based on travel mode priorities helps to achieve desirable streetscape characters and a coordinated implementation process.

Bike infrastructure improvement in the Centre City (both on-street and off-street as shown in 2.11 and 3.2.3) have some impact on the function of the Roadway Zone and the Pedestrian Zone. The integration of off-street, multi-use pathways, considering their impact on public sidewalks and building frontages, should also be carefully considered.

Defined Zones for a Pedestrian, Bike, and Transit Priority Corridor (Map 5)



3.1.1 Roadway Zone

The street elements that must be accommodated in the Roadway Zone are determined by defined streetscape typologies, travel mode priorities (see 2.1 Streetscape Characters), space availability and specific site conditions. The following street cross section is for illustration purposes only. It illustrates the highlighted Roadway Zone of a Pedestrian, Bike, Transit Priority Corridor (PBT Street, Map 5) in the context of the entire street cross section, and what streetscape elements should be included in order to achieve the defined streetscape characters.

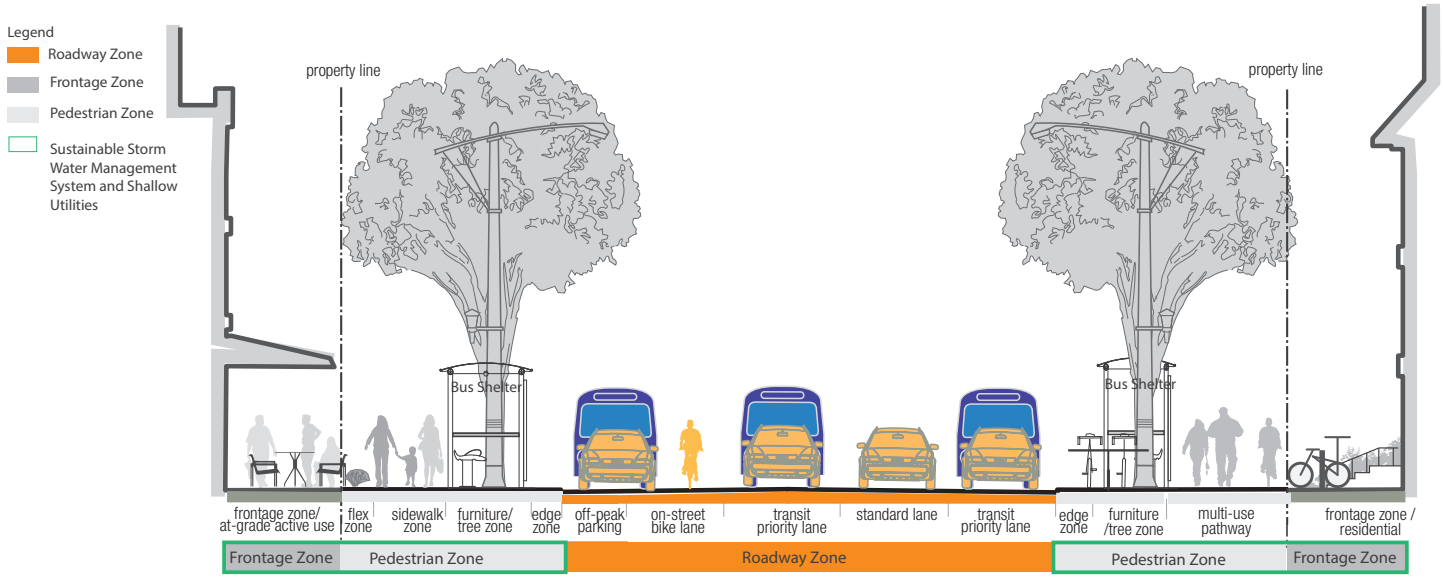
The Roadway Zone may include streetscape elements such as standard travel lanes, transit priority lanes, on-street shared vehicle/bike lanes, on-street cycle tracks, on-street parking, hard or soft landscaped medians and a sustainable stormwater management system where possible.

The Roadway Zone should incorporate the recommended streetscape elements based on travel mode priorities (see the table on the next page). When space is limited, expand the zone to accommodate transit priority lanes, on-street bike facilities, on-street parking or medians while balancing the need for other pedestrian amenities. In some cases, the Roadway Zone may be narrowed to add pedestrian amenities to the Pedestrian Zone, such as sidewalk space, off-street bike facilities, street trees, a stormwater management system, etc. Sidewalk curb extensions can also be considered at busy street corners.

Public improvement projects within the Roadway Zone should take a coordinated approach to address the overall streetscape. For example:

- Traffic calming projects in the Roadway Zone that add medians, curb extensions, etc. should add features such as trees, landscaping, stormwater facilities or site furnishings where feasible.
- Intersection safety improvement projects should incorporate other pedestrian amenities such as landscaping, lighting, furnishing, raised intersections or curb extensions where feasible.

Roadway Zone Design for a Pedestrian, Bike, and Transit Priority Corridor (PBT Street, Map 5)



Roadway Zone Streetscape Elements

	Streetscape Elements	Recommended Streetscape Elements Based on Travel Mode Priorities (Map 5) Pedestrians (P) Bikes (B) Transit (T) Unclassified/residential (U)								Areas of Particular Attention	Min. Space Required	Reference
		P	T	B	PT	PB	BT	PBT	U			
Roadway Zone	Standard Travel Lanes	X	X	X	X	X	X	X	X		3.35m	
	Transit Priority Lanes		X		X		X	X		Transit priority corridors and transit stations, Map 20	3.5m	2.11; 3.2.2
	On-street Shared Vehicle/Bike Lanes			X*		X*	X*	X*		Bike Corridors and Cycle Tracks (5-year plan), Map 19	4.0-4.5m	2.11; 3.2.3
	On-street Cycle Tracks			X*		X*	X*	X*		Bike Corridors and Cycle Tracks (5-year plan), Map 19	1.2-2.5m	2.11; 3.2.3
	On-street Parking									Streets with on-street parking opportunities including off-peak parking opportunities, Map 6 Note: Balance on-street parking needs with the space requirements for other streetscape elements (pop-up patios, sidewalk widening, bike facilities, curb extensions, landscaping, stormwater management system, etc.)	2.25m; or 2.0m on Residential Streets (Map 3)	2.1; 3.2; 4.1.6
	Hard or Soft Landscaped Medians									Streets with wider right-of-way widths (i.e., 30.5m) where space allows Note: Maximize street tree opportunities; when trees are not possible, incorporate streetscape elements such as planters, lower shrubs, public art, lighting, banners, etc.	Min. 2.0m	2.1; 3.2; 3.2.5; 4.3
	Stormwater Management System									All green highlighted zones shown in the cross sections included in 3.1, wherever space allows	Refer to relevant sections	2.1; 3.1; 3.2.5; 4.3

X* Apply only one of the bike facility types based on Bike Committee recommendations (Map 19 Bike Integration)

3.1.2 Pedestrian Zone

Pedestrian Zone often consists of competing streetscape elements which all demand sufficient space. The sub-zones and street elements in this zone may include:

- sidewalk zone;
- furniture/tree zone (furniture, street trees, transit passenger amenities, bike racks, above ground utilities, etc.);
- edge zone (signs, utility posts, snow storage, space for parked car doors, etc);
- off-street bike facilities;
- flex zone (as described on the right, to accommodate pedestrian amenities such as landscaping, furniture, transit passenger waiting areas, public art, pedestrian lighting, wider sidewalks, stormwater management system, etc.); and
- stormwater management system where possible (e.g. space under sidewalks for tree trenches, etc.).

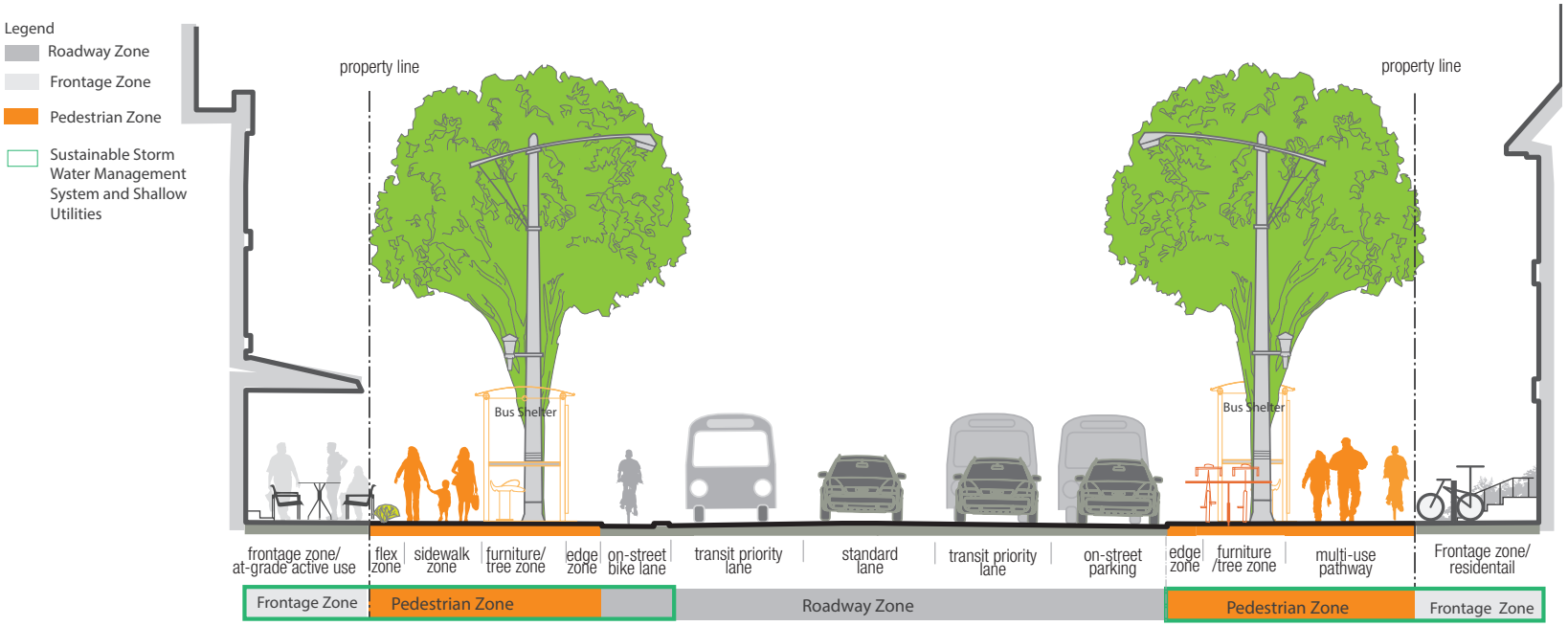
The following street cross section is for illustration purposes only. It illustrates the highlighted Pedestrian Zone of a Pedestrian, Bike, Transit Priority Corridor (PBT Street, Map 5) in the context of the entire street cross section, and what streetscape elements should be included in order to achieve the defined streetscape characters.

What is a Flex Zone?

Where additional space beyond the minimums is available in any given right-of-way (ROW), the 'flex zone' describes suggested uses.

Flex zones allow the intention of the street character to be fully realized in relationship to the contextual elements and specific constraints of any given street. For example, a pedestrian priority corridor in the downtown core has a flex zone between the sidewalk zone and the building frontage. Where extra space is available in the ROW, the higher volumes of pedestrian traffic will be accommodated.

Pedestrian Zone Design for a Pedestrian, Bike, and Transit Priority Corridor (PBT Street, Map 5)



Pedestrian Zone Recommended Streetscape Elements by Urban Context

	Streetscape Elements	Recommended Streetscape Elements Based on Travel Mode Priorities (Map 5) Peds (P) Bikes (B) Transit (T) Unclassified/ residential (U)								Areas of Particular Attention	Min. Space Required	Reference
		P	T	B	PT	PB	BT	PBT	U			
Pedestrian Zone	Sidewalk Zone	X	X	X	X	X	X	X	X		Refer to 3.2.1	3.2.1
	Furniture/Tree Zone	X	X	X	X	X	X	X	X		1.5m	3.2.4; 3.2.5
	Transit Passenger Amenities		X		X		X	X		Transit Priority Corridors and Transit Stations, Map 20	Refer to Transit-friendly Design Guide	2.11; 3.2.2; Transit-friendly Design Guide
	Bike Racks			X*		X*	X*	X*		Bike Corridors and Cycle Tracks (5-year plan), Map 19	Refer to Bicycle Parking Handbooks	2.11; 3.2.3; Bicycle Parking Handbooks
	Street Trees	X	X	X	X	X	X	X	X	Green Streets, Map 4	Refer to 3.2.5	Map 4; 3.2.5
	Edge Zone	X	X	X	X	X	X	X	X		Min. 0.46m	
	Off-street Cycle Track			X*		X*	X*	X*		Bike Corridors and Cycle Tracks (5-year plan), Map 19	1.5-2.0m	Map 19; 3.2.3
	Multi-use Pathway			X*		X*	X*	X*			3.0-5.0m	Map 19; 3.2.3
	Flex Zone: to accommodate pedestrian amenities such as landscaping, furniture, transit passenger waiting areas, public art, pedestrian lighting, wider sidewalks, stormwater management system, etc.	X	X	X	X	X	X	X	X	Whenever additional right-of-way space beyond the minimums is available	For patios, min. 1.0m	3.1.2
	Stormwater Management System									All green highlighted zones shown in the cross sections included in 3.1, wherever space allows.	Refer to relevant sections	2.1; 3.1; 3.2.5; 4.3

X* Apply only one of the bike facility types based on Bike Committee recommendations (Map 19 Bike Integration)

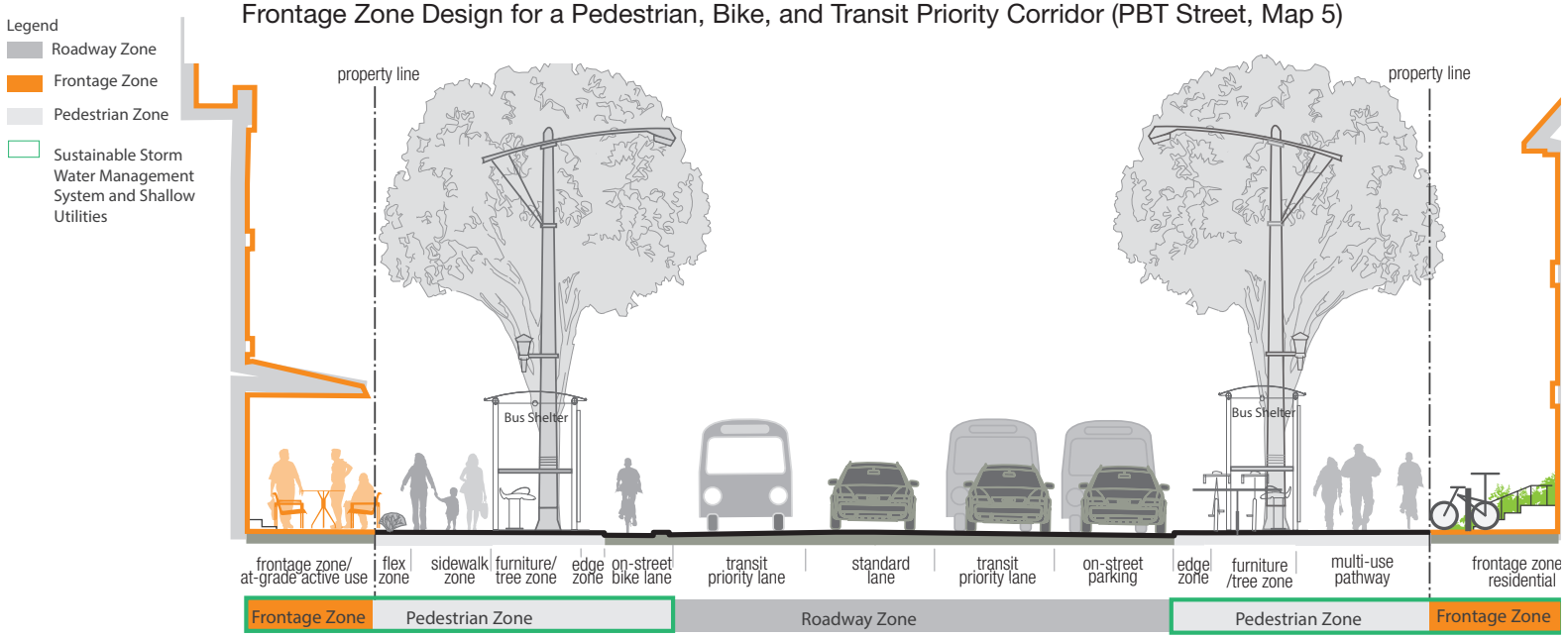
3.1.3 Frontage Zone

Private development plays an important role in shaping the overall streetscape design and character. According to Bylaw33P2013, many featured frontage design elements in the Downtown land use district, which contribute to enhanced pedestrian experience, are eligible for density bonusing. When the right-of-way space is limited to achieve the defined streetscape character, private development should consider providing additional space within the Frontage Zone for on-site pedestrian amenities and public open spaces to accommodate the required streetscape elements that cannot be realized within the Pedestrian Zone.

In the Frontage Zone, the key design elements may include:

- continuous street walls;
- at-grade active uses;
- featured facade articulations, including building signage and lighting;
- on-site pedestrian amenities (e.g. an extension of the public sidewalk, green strip/street trees, urban grove, bike racks, bike station, pedestrian scaled lighting, public art, colonnades, arcades, corner recesses, min. 1.0m patios, sheltered public transit waiting areas, +15 Skywalk System featured access, etc.);
- on-site public open spaces;
- private bike racks and bike stations (they should not conflict with storefronts); and
- stormwater management system where possible (e.g. space under sidewalk for tree trenches, setback area for soft landscaping and permeable paving).

Frontage Zone Design for a Pedestrian, Bike, and Transit Priority Corridor (PBT Street, Map 5)



Frontage Zone Recommended Streetscape Elements by Urban Context

	Streetscape Elements	Recommended Streetscape Elements Based on Travel Mode Priorities (Map 5) Peds (P) Bikes (B) Transit (T) Unclassified/residential (U)								Areas of Particular Attention	Reference
		P	T	B	PT	PB	BT	PBT	U		
Frontage Zone	Continuous Street Walls	X	X	X	X	X	X	X	X		4.2.2
	At-grade Active Uses (e.g. restaurant use with outdoor patios)	X			X	X		X		Retail Nodes and Corridors, Map 8	2.3; 4.2.1
	Featured Facade Articulations (including building signage and lighting)	X			X	X		X		Retail Nodes and Corridors, Map 8 Character Areas, Map 13 Centre City Nightscape, Map 22	2.3; 2.8; 2.12; 3.2.6; 3.2.7; 4.2.4
	On-site Pedestrian Amenities (e.g. an extension of the public sidewalk, green strip/street trees, urban grove, bike racks, bike station, pedestrian scaled lighting, public art, colonnades, arcades, corner recesses, min. 1.0m patios, sheltered public transit waiting areas, +15 Skywalk System featured access, etc.)	X	X	X	X	X	X	X	X	Wherever there is limited right-of-way width, the recommended streetscape elements within the Pedestrian Zone cannot be realized (The on-site pedestrian amenities may be eligible for density bonus, check out Bylaw33P2013)	Various sections: 2.0; 3.2; 4.1; 4.2; Bylaw33P2013 for bonusable on-site pedestrian amenities
	On-site Open Spaces	X			X	X		X		Recommended Corporate Plazas and Pocket Parks, Map 13	2.5; 4.1.2; Bylaw33P2013
	Bike Racks and Bike Stations			X		X	X	X		Bike Corridors and Cycle Tracks (5-year plan), Map 19	2.11; 3.2.3; Bicycle Parking Handbooks
	Stormwater Management System									All green highlighted zones shown in the cross sections included in 3.1, wherever space allows	2.1; 3.1; 3.2.5; 4.3

STREETSCAPE ELEMENTS

URBAN DESIGN OBJECTIVES

- Achieve design **consistency** and coordination
- Provide sufficient sidewalk **widths** related to streetscape characters
- Ensure **safe** and **accessible** pedestrian traffic for pedestrians of all abilities
- Formulate continuous **variety** and **active** building frontages
- Facilitate **placemaking** and provide pedestrian amenities

Policy Reference
- Pedestrian Policy 2008
- Centre City Mobility Plan
- Centre City Plan
- Complete Street Guide

Guideline Sections
- 2.1 Streetscape Characters
- 3.1.2 Pedestrian Zone
- 5.2 Areas of Particular Concern

Sufficient sidewalk space and building frontage design contributes to better pedestrian experience.

3.2 Streetscape Elements

3.2.1 Public Sidewalks

It is critical to coordinate all parties responsible for public sidewalks (regulation, design, improvement, construction, maintenance) and balance the competing uses within the right-of-way and frontage zone to ensure that:

- Sufficient sidewalk widths are provided based on streetscape typologies and travel modes priorities.
- Pedestrian amenities are incorporated.
- Building frontage design contributes to a safe, continuous and comfortable pedestrian experience.

DESIGN GUIDELINES

1. Design Consistency and Coordination

   a. To enhance the pedestrian experience and achieve design consistency and coordination, all streetscape improvement projects should adhere to the following guidelines:

      i. Wherever possible, streetscape improvements should be constructed for an entire corridor, or at minimum the length of one block, on both sides of the block for design consistency.

      ii. Overall streetscape concepts or precinct studies should identify paving material palettes, lighting palettes, furniture palettes, sidewalk widening, building setbacks and street wall heights, so that the individual project complies with the overall streetscape concept design.

      iii. Street improvement projects should widen sidewalks that don't meet the recommended sidewalk widths (in this section), where feasible.

iv. Street improvement projects should consider incorporating transit and bike facilities based on recommendations included in 2.11.

v. Sidewalk repair, utility trenching, and other sidewalk excavations should add street trees, landscaping, stormwater facilities and site furnishings where feasible.

vi. Curb ramp construction and intersection improvement projects should include curb extensions where feasible.

2. Sufficient Width

a. Determine (1) the streetscape elements that should be incorporated in the limited right-of-way space, and (2) if these elements demand any sidewalk expansion onto public right-of-way or private lands. Refer to the minimum sidewalk widths (clear path of travel) by streetscape character recommended in this section. Also see 2.1 Streetscape Characters and 3.1.2 Pedestrian Zone.

b. If the minimum sidewalk width cannot be met due to limited right-of-way space, or more than minimum sidewalk width is expected in a specific context (i.e., the project is adjacent to the nodes and corridors of high pedestrian volume, including busy street corners, transit stops, high streets, transit corridors, etc.):

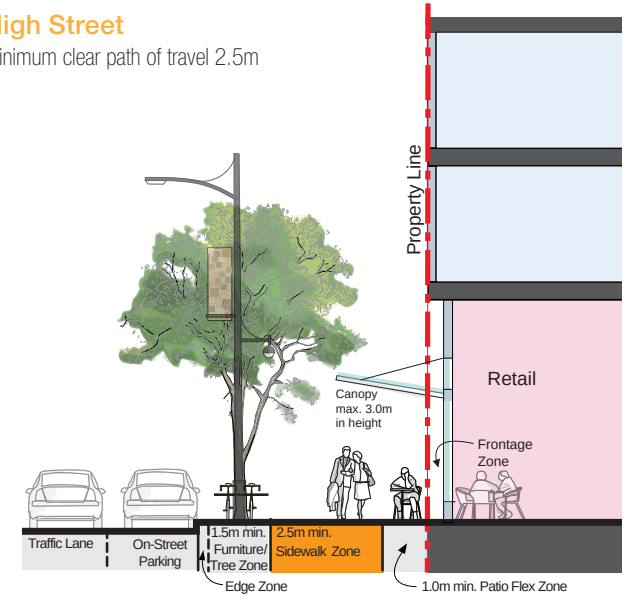
i. Private developments should consider sidewalk widening through building setbacks and provision of high quality on-site pedestrian amenities including colonnades, arcades, recessed corner plazas, etc. Some of these features may be eligible for density bonus at the discretion of the Approval Authority (refer to Bylaw33P2013 for density bonus details).

ii. Public improvement projects should consider applying sidewalk curb extensions at busy street corners or create sidewalks within the existing right-of-way by using bylaw-enforced setback areas, removing or narrowing excess travel lanes, where appropriate.

c. Trees, seating, café patios, kiosks and other street furniture and utilities (e.g. signal poles, lighting bases, garbage cans, fire hydrants, parking metres) should be coordinated and should not impede normal pedestrian traffic on the public sidewalk.

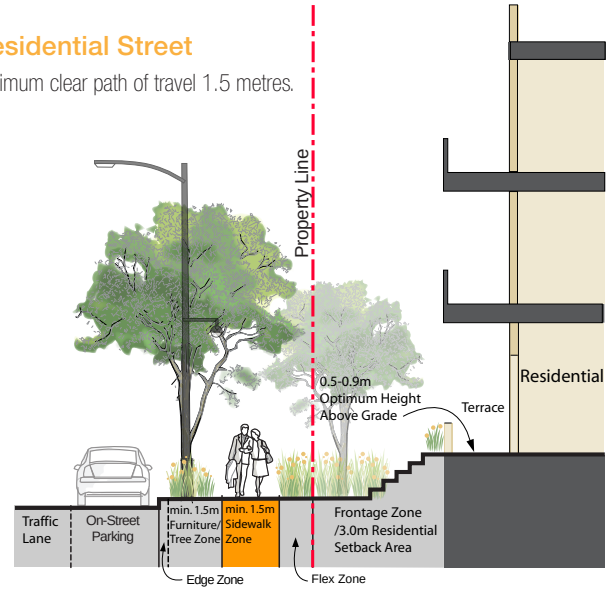
High Street

Minimum clear path of travel 2.5m



Residential Street

Minimum clear path of travel 1.5 metres.



d. Where Bylaw setbacks exist, the following regulations as included in the Beltline Area Redevelopment Plan (ARP) may be relaxed with the discretion of the Development Authority, depending on the purpose and possibility of the future right-of-way expansion:

   i. setting buildings back from the sidewalk where the sidewalk may in fact never be widened;

   ii. preventing arcades, cantilevers or other structures from encroaching the setback area; and

   iii. limiting or prohibiting the placement of street amenities such as trees, planters and lighting.

3. Pedestrian Experience

   a. Sidewalk design and enhancement (width, placement, connectivity, and paving material) must be comprehensively considered together with street, site and building design elements and pedestrian amenities.

The comprehensive design strategies include (detailed guidelines can be found in the relevant Streetscape Guide and Development Guide sections):

   i. Formulate an active, transparent, pedestrian scaled, well-articulated and continuous street wall with frequent entries directly accessible from the sidewalk.

   ii. Increase architectural detailing and variation at grade level when building to property lines.

   iii. Setback building or ground floor only to provide on-site pedestrian amenities (such as an extension of the public sidewalk, green strip/ street trees, urban grove, bike racks, bike station, pedestrian scaled lighting, public art, colonnades, arcades, corner recesses, patios, sheltered public transit waiting areas, +15 Skywalk System featured access, etc.). Most of these amenity items are bonusable (see Bylaw 33P2013 for details).

   iv. A minimum 1.5m Furniture/Tree Zone should be provided between traffic lane and sidewalk.

   v. Facilitate placemaking along the streets by providing sidewalk connections to pedestrian nodes including transit stops, wayfinding stations, bike parking, public art, seating and landscaping/stormwater management areas.

4. Pedestrian Access and Safety

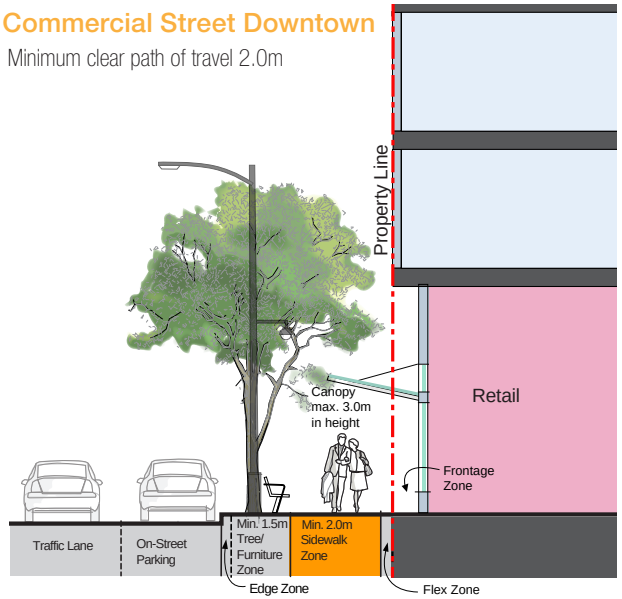
   a. Depending on the surrounding context and pedestrian traffic volumes, establish pedestrian priority by incorporating special design features (such as highly visible crosswalks, raised intersections, curb extensions, etc.).

   b. Avoid multiple driveways and minimize the number of curb cuts. Where there are conflicts with pedestrian flows on street frontages:

      i. Define the area with ample lighting, special paving patterns and unrestricted pedestrian access between the sidewalk and parking area.

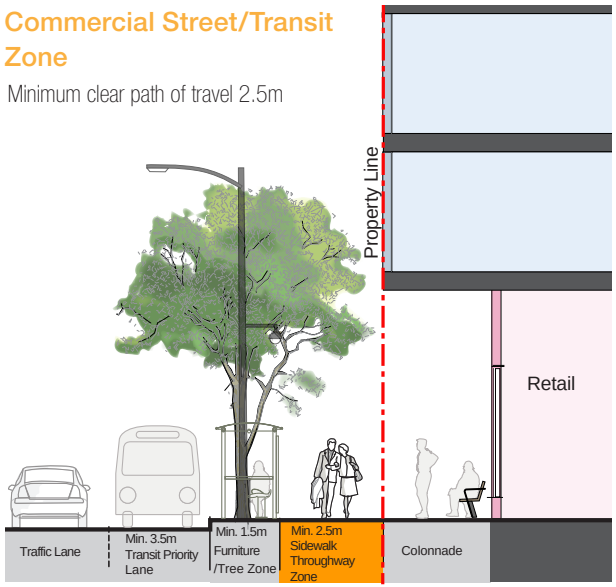
Commercial Street Downtown

Minimum clear path of travel 2.0m



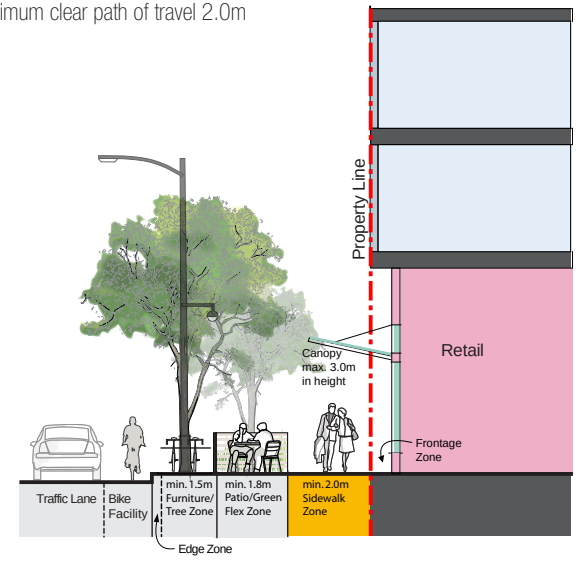
Commercial Street/Transit Zone

Minimum clear path of travel 2.5m



Commercial Street/Beltline

Minimum clear path of travel 2.0m



ii. Ensure that driveways and access to parking are no wider than 24 feet (7.3m).

iii. Consider the option of a one-way back lane to reduce the number of locations where vehicles exit from the lane and across the pedestrian realm.

c. Provide smooth and moderate grades and cross slopes to ensure comfortable walking and seamless transition between different grades (e.g. street corners, CTrain platforms, sidewalks/multi-use pathways, building entrances) according to relevant codes and standards.

d. To provide a seamless transition between the sidewalk and building frontage in grade-separated areas, the entire sidewalk or a portion of the sidewalk adjacent to the building may be ramped, and/or internal stairs and ramps may be provided. Refer to 4.2.4 Frontage for additional guidelines.

e. Balance the different needs of pedestrians including seniors, persons using wheel chairs and other mobility devices, and visually impaired pedestrians.

f. Give clear indication of the transition between the sidewalk and road to reduce confusion presented to blind and visually impaired pedestrians.

g. The grade of the sidewalk corridor should not exceed 5 per cent; the slope of the curb ramp should not exceed 8 per cent and should use textured concrete.

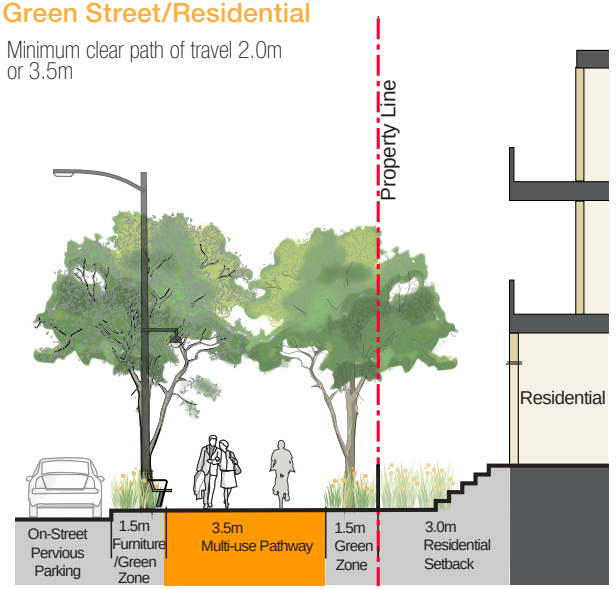
h. When the slope of a curb ramp is less than 6.7 per cent, use colour and brightness contrast detectable warning surfaces (i.e. tactile paving) for the ramp to give clear indication of the transition from the sidewalk to the road intersection.

i. Audible signals can be combined with detectable warning surfaces at busy intersections, or raised intersections, to help further reduce the confusion presented to blind and visually impaired pedestrians.

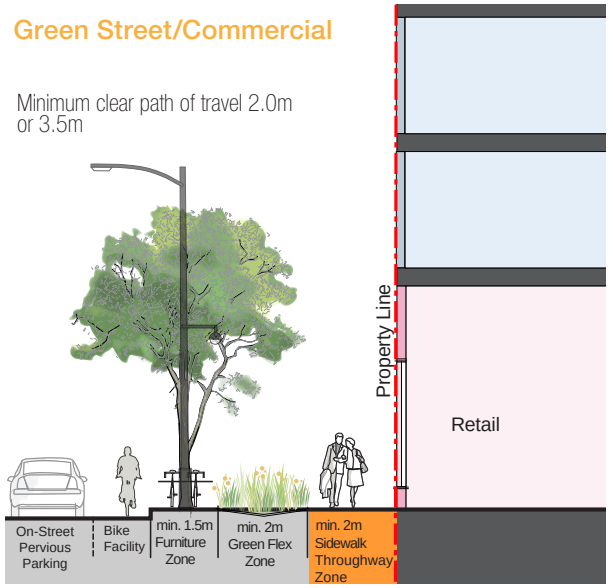
j. For raised parking lanes, give clear indication of the transition between the sidewalk and parking lane to avoid a potential tripping hazard and the confusion presented to blind and visually impaired pedestrians.

k. When pavers are used, they should be large and smooth enough to avoid uncomfortable vibration for cyclists and people using wheeled conveyances.

Green Street/Residential



Green Street/Commercial



Consistent paving materials are used at the building entrance plaza and its adjacent public sidewalk.

The two-coloured concrete paving material is used to accent the residential building entrance while coordinating with the textures of both the building facade material and adjacent sidewalk surface material.

Continuous and consistent paving materials define the streetscape character and the pedestrian zone.

Permeable paving can be used to provide increased stormwater infiltration and minimize runoff.

5. Sidewalk Surface Materials
   a. Consistency
      i. Private development and public improvement projects should contribute to defined streetscape characters by using consistent or complementary surface materials, patterns, colours and textures.
   b. Location
      i. Paving materials should define the pedestrian zone, indicate pedestrian priority and assist with wayfinding.
      ii. Paving materials should be varied to accent special areas (such as building entrances, plaza edges and transit zones).
   c. Design
      i. Paving materials should be high quality, hard surfaced, even, stable, durable, slip-resistant and easy to maintain considering the winter conditions in Calgary.
      ii. Paving materials should ensure Calgary's sidewalks are accessible to people of all ages and abilities.
      iii. Paving materials should consider multiple freeze-thaw cycles in Calgary.
      iv. Permeable materials (especially along the Furniture/ Tree Zone, Edge Zone and Frontage Zone of the Green Streets) should be considered to encourage natural water infiltration.
      v. Refer to 3.2.3 Bike Facilities for multi-use pathway design details.
      vi. Catch basins, ventilation grills, vault lids and tree grates located in the sidewalk zone should be avoided, and if not, mitigate their impact on pedestrians through the use of durable, even, slip resistant materials.

d. Character

i. Paving materials in the Character Areas (2.8) should be suited to their context, embody local character and follow coordinated local area plans.

ii. Use brushed concrete as the standard paving material for the Sidewalk Zone; for high pedestrian volume streets, explore the use of coloured asphalt, coloured and stamped concrete, and other decorative materials (tile, stone and brick) along Furniture/Tree Zone, Edge Zone, Frontage Zone, or the trim zone of a multi-use pathway.

iii. Preserve original sidewalk stamps or reuse them as part of the historical preservation practice.

iv. Wayfinding, lighting, public art or historical interpretive features can be embedded in the paving surfaces (especially for high pedestrian volume streets) to enhance the streetscape character.

Varied paving materials at this multi-use pathway help to define pedestrian and cyclist zones and highlight potential conflict zones (i.e. pedestrian crossing).

Colours and patterns should be selected based on their material appropriateness and contribution to the Centre City's identity.

Materials can address context and contribute to local characters.

A historical interpretive feature is embedded in the paving surface to enhance the streetscape character.

TRANSIT FACILITIES

URBAN DESIGN OBJECTIVES

- **Integrate** transit facilities in the selection of new multi-modal streets that emphasize walking, cycling and transit
- Identify areas, corridors and nodes of particular attention and provide **transit-supportive** urban design
- Provide transit passenger amenities to support the **use, functionality** and **enjoyment** of the public transit system
- Provide **active uses** and **public spaces** along transit corridors and around transit nodes
- Ensure that transit priority corridors are capable of accommodating public transit needs
- Integrate multiple **travel modes** (walking, cycling, public transit and driving)
- Support the implementation of planned transit **alignments**

Policy Reference

- Transit Friendly Design Guide
- Centre City Plan
- Beltline ARP
- Centre City Mobility Plan
- Complete Street Guide

Guideline Sections

- 2.11 Transit Integration
- 5.2 Areas of Particular Concern

3.2.2 Transit Facilities

Centre City is a major focus of Calgary's transit network. 50 per cent of Centre City workers travel to work on transit. According to ImagineCALGARY, the transit/vehicle modal split target for the Centre City is 60 per cent. To achieve this target, the overall system needs to be planned and designed around the provision of a high-quality pedestrian and bicycle realm to support the use, functionality and enjoyment of the public transit system.

DESIGN GUIDELINES

1. Pedestrian Access

   a. Design transit stations, and vertical and horizontal connections to transit stations, that provide seamless, efficient and barrier-free access for pedestrians with all levels of physical abilities.

   b. Whenever possible, avoid walls, berms, steep slopes or steps that isolate the buildings from transit access. If unavoidable, provide short and direct pedestrian access to transit facilities.

   c. Carefully design landscaped setbacks to avoid long walking distances on the part of transit riders and to avoid isolating those waiting for transit services.

2. Streetscape Design

   a. Provide adequate street space and sidewalk width (min. 2.5m sidewalk width adjacent to building face is recommended at transit stops) to allow for pedestrian circulation and transit loading and off-loading.

   b. If space allows, carefully locate street trees in transit stations away from the curb to avoid obstruction and ensure proper spacing of trees (approximately every 4.0m within the transit stop).

   c. Orient building entrances to priority transit corridors and provide short and direct access to transit stops and stations.

Transit facilities are an integral part of Centre City's multi-modal streets that emphasize walking, cycling and transit.

Transit stops should be integrated with other streetscape elements (street trees, furniture and public sidewalks) and building frontages.

3. Transit Passenger Amenities

   a. Design transit stations as vibrant, mixed-use areas or focal points incorporating transit-supportive passenger amenities (such as active uses, urban plazas/public gathering areas, public art, etc.) to provide for natural surveillance and an active street.

   b. Provide transit passenger amenities (such as adequate lighting, furniture, wayfinding systems, accurate passenger information and communication systems, electronic surveillance, etc.) that do not impede access to and from transit vehicles or transit stations and stops.

   c. Integrate transit passenger amenities with local streetscape design and building facade articulations (i.e. provision of active uses, urban plazas, public washrooms and weather protection features, such as enclosed space, colonnades, canopies, communal ground-level heaters, or heat lamps).

   d. Where possible, incorporate deeper setbacks at bus zones to provide additional space for bus waiting and tree planting (this may be eligible for density bonus).

   e. Where possible, set back transit passenger amenities from the curb to allow for circulation when space is available.

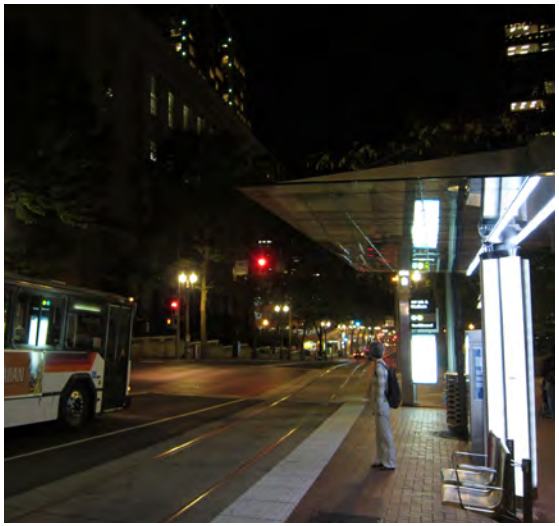
   f. Use transparent materials for transit shelters and any enclosed waiting areas. At maximum, one side of a transit shelter may be used for advertisements.

   g. Integrate transit passenger amenities with other modes of transportation, including the +15 Skywalk System.

   h. For bus zone detailed design and common transit design dimensions (bus vehicle dimensions, standard bus turning template, standard bus, BRT zone dimensions, typical bus station, bus turnarounds, bus passenger shelter, light rail vehicle dimensions), refer to the Transit Friendly Design Guide.

Front setbacks and canopies along busy transit corridors provide additional space and weather protection for pedestrians and transit passengers.

Transit stations should be integrated with the +15 Skywalk System where applicable.



Lighting at transit stops as part of transit passenger amenities provide pedestrian safety and comfort.

Transit stops are set back from the curb to allow for pedestrian circulation and the provision of additional streetscape elements (street trees, seating, etc.).

4. Area-specific Guidelines

a. Centre City Transit Priority Corridors

Proposed Location: See Map 23 for identified transit priority corridors.

Specific Guidelines

i. Along identified transit priority corridors, require a minimum of one wide lane (3.5m) per direction that is not encroached on by leaning poles, trees, signs, etc. to accommodate public transit needs.

b. 7 Avenue Primary Transit Corridor

Specific Guidelines

In addition to the general guidelines included in this section, the following specific guidelines should apply:

Roadway Zone

i. Minimum clearance over LRT corridors shall be 6.0m at the intersection, although a lower clearance may be permitted in mid-block locations where transit standards can be maintained.

Pedestrian Zone

i. Integrate wayfinding, street furniture, street lighting and public art features into the furniture zone of the LRT stations or platforms.

ii. Incorporate downtown branding with any public improvement initiatives to facilitate a seamless downtown branding program.

Frontage Zone

i. Strengthen 7th Avenue as a transit-oriented development zone with at-grade active uses:

- Support convenience-type retail such as food, specialty food, health and personal services and banking as well as flagship retailers.
- Focus retail on the main intersections in relation to the north/south streets, with a particular emphasis between Barclay Mall and Centre Street.

ii. Use building frontages with a variety of at-grade facade articulations to create a sense of human scale.

iii. Incorporate transit waiting areas and weather protection such as canopies, shelters, and/or waiting areas integrated into adjacent buildings.

iv. Consider large, animated, electronic displays for civic information and commercial advertising, and digital public art to add interest, comfort and visual attractiveness to the 7 Avenue streetscape.

v. Use reflective facade materials along south-facing facades to brighten the north side of the avenue.

c. Proposed 2 Street SW Transit Station

Proposed Location: A transit station at 2 Street SW between 5 and 10 Avenue SW (Map 20).

Specific Guidance (as per the Centre City Plan)

i. Plan for a transit station that integrates underground and at-grade LRT lines, the BRT routes, high speed rail to Edmonton, regional commuter rail/bus lines, parking facilities for automobile and bicycle and the appropriate supportive land uses. A station may include purpose-built structures and connections (above, below or at street level) through other private and public facilities and structures. Taken together, these structures and connections will form an integrated station complex.

d. Public Transit Terminal Plazas

Proposed Locations (as per the Beltline ARP)

Two locations have been identified as preferred locations for a Transit Mall or Public Transit Terminal Plazas (Map 20), which are:

- the north block at the intersection of MacLeod Trail and 17 Avenue SE; and
- the intersection of 10 Avenue and 2 Street SW along the proposed new SE LRT line.

Specific Guidelines

In addition to the general guidelines included in this section, the following specific guidelines should apply:

i. The plazas should be designed for either a shorter stay or as a gathering place.

ii. The plazas should provide commercial/retail and hospitality uses at-grade.

iii. Public transit terminal plazas should be enclosed (temperature controlled) with opened waiting areas.

iv. The public transit terminal plazas should be integrated with the +15 connection.

v. Public restrooms, sitting areas, canopies, colonnades and public clocks should be provided in these plazas.

7 Avenue Primary Transit Corridor.

BIKE FACILITIES

URBAN DESIGN OBJECTIVES

Safety

- Increase **pedestrian** and cyclist **safety** and convenience throughout the Centre City
- Provide pedestrian scaled lighting

Connectivity

- **Complete** the defined Centre City Bicycle Network and implement Centre City Cycle Track 5-year Plan
- Improve **bike connectivity** between Downtown and Beltline
- Connect Centre City **bicycle network** to the regional pathway system

Streetscape Integration

- **Balance** the competing needs of space for all streetscape elements based on travel mode priorities (2.1)
- Integrate **bike-friendly street design** solutions
- **Integrate** bike facilities with surrounding uses and other travel modes
- Integrate **bike parking** in all street **improvement projects** and new developments

Best Practice Metrics

- Implement recommended best practice **metrics**, and if not possible, explore mitigating solutions

Policy Reference

- Centre City Mobility Plan
- Centre City Plan
- Cycling Strategy
- Complete Street Guide
- Downtown Underpass Urban Design Guidelines
- Bicycle Parking Handbook

Guideline Sections:

- 2.11 Bike Integration
- 5.2 Areas of Particular Concern

3.2.3 Bike Facilities

DESIGN GUIDELINES

1. Location and Type

a. Determine the location and type of bike facilities, such as on-street wide-curb lanes, on-street bike lanes, off-street cycle tracks, off-street multi-use pathways, etc. (see Map 19 Bike Integration for Centre City bike network and 5-year cycle track plan recommended by Centre City Bike Committee).

b. Determine the location and type of bike amenities (such as bike racks, bike stations, public bike share stations, etc.) based on pedestrian traffic, cyclist needs, overall streetscape design, surrounding uses and site plan of the private development. For example, a bicycle station in the vicinity of Eau Claire Plaza is encouraged based on comprehensive analysis of the above criteria.

c. Provide bicycle routes to, and bicycle parking at, transit stations, hubs and corridors.

d. Improve bike connectivity between Downtown and Beltline by implementing Recommended Bike Infrastructure Types at underpasses and investigating the feasibility of the following bicycle improvements:

i. A pedestrian and bicycle-only crossing of CPR tracks at 2 Street SW;

ii. A pedestrian and bicycle-only crossing over 14 Street SW at 10 Avenue S; and

iii. A pedestrian and bicycle-only overpass to connect the 13 Avenue Greenway over Macleod Trail and the LRT tracks into Stampede Park and 12 Avenue SE.

2. Design

a. Bike-friendly Street Design

i. Provide a smooth surface on roads clear of obstacles (potholes, debris, sewer grates, uneven asphalt, gravel, snow, etc.) to avoid uncomfortable vibration for cyclists and people using wheeled conveyances.

	Recommended Bike Facility Types at Underpasses (based on the recommendations from Downtown Underpass Urban Design Guidelines)
7 Street SE	Off-street, multi-use pathways
4 Street SE	Off-street, multi-use pathways
Macleod Trail	Off-street, multi-use pathway along east side of the street
1 Street SE	Off-street, multi-use pathway along west side of the street
1 Street SW	On-street, shared travel lanes
2 Street SW (future)	Off-street, multi-use pathway or on-street bike lanes
4 Street SW	On-street, shared travel lane along east side of the street
5 Street SW	On-street, shared travel lane along west side of the street
8 Street SW	On-street bike lanes (see 8 Street SW Corridor Public Realm Plan)
11 Street SW	On-street bike lanes

Off-street, multi-use pathway at 4 Street SE underpass.


Bike parking at building frontage.


Bike parking at curb extension area.


Cycle track with planter buffer, painted pedestrian/cyclist conflict zones and convenient bike parking.

ii. In the case of a multi-use pathway design, use the combination of concrete/asphalt and decorative materials (e.g. concrete sidewalk with asphalt cycle track and brick/stone trim). Provide a visible transition edge between the sidewalk and the cycle track. Level changes should be avoided. Small lighting elements embedded in the trim zone can be considered to ensure visibility during evenings for cyclists and pedestrians, including the visually challenged.

iii. Encourage the installation of bike-friendly street design solutions (such as bike boxes, speed humps, bicycle-actuated signals, reversed stop signs, etc., depending on surrounding context) to increase cyclists' safety.

iv. Curb extensions should maintain an adequate width for a cyclist and motor vehicle to pass side-by-side.

v. Enhance consistency on planning, design approval and inspections in regards to a safety buffer (minimum 0.5m, or 1.0m when adjacent to a parking lane or travelling uphill). If not possible, mitigation measures must be applied.

b. Bike Parking Streetscape Integration (public and private)

i. Bicycle racks should be of high quality design and in a well lit location.

ii. Encourage creative bike rack design and the installation of public art functioning as bike racks in Character Areas (Map 13).

iii. Bike rack shelter should be visually light with a transparent cover.

iv. Bike racks should not conflict with retail/restaurant visibility.

c. On-Site Bicycle Racks (private)

i. Racks must be located within 15.0m of the public entrance and have passive surveillance to maximize convenience and security, but should not interfere with pedestrian movement.

ii. On-site bicycle racks should be integrated with the building envelope to minimize the inset size and reduce the appearance of gaps in the facade.

d. Public Bicycle Racks (public)

i. Public bike racks should be located in the public ROW (preferably the furniture zone) in areas that will support adjacent land uses, particularly areas of high pedestrian intensity. Where not possible, public bike facilities may require encroachment agreements with adjacent landowners.

ii. Bike racks in the furniture zone should be parallel to street/property lines.

3. Climate

a. Appropriate priority must be established for maintenance, snow clearing and repairs to ensure bike facilities remain available and usable.

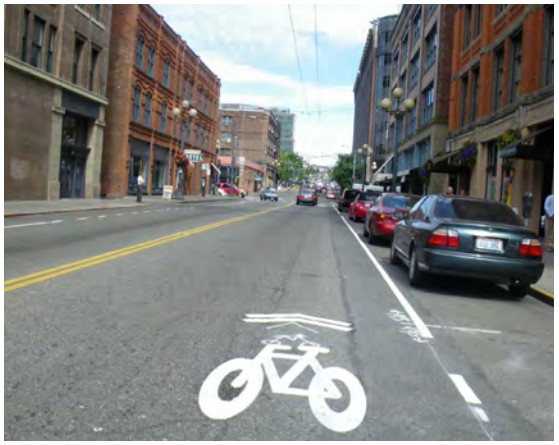
b. Bike racks should be protected from weather (sheltered bike racks) whenever possible.

c. Bike rack shelters should be designed to prevent rain from dripping and the creation of icicles.

4. Recommended Bike Facilities Types and Design Metrics for Streetscape Integration

On-street, shared travel lane

Minimum dimensions:	4.0m
Recommended dimensions:	4.5m
Description:	On-street, shared travel lane with frequent bike symbol marks and "share the road" signs. A 1.0m wide bicycle stencil is painted on the roadway.



On-street bike lane

Minimum dimensions:	1.5m; 1.2m permitted in retrofit projects where there are constraints.
Recommended dimensions:	2.0m, including 0.5m buffer; or 2.5m, including 1.0m buffer when adjacent to a parking lane or travelling uphill.
Description:	On-street, marked bike lane with frequent bike symbol marks and painted or textured buffer.

Off-street cycle track

Minimum dimensions:	1.5m
Recommended dimensions:	2.0m, including 0.5m physical buffer
Description:	Off-street, separated bike lane with physical buffer.

Off-street, multi-use pathway

Minimum dimensions:	3.5m
Recommended dimensions:	3.5m-5.0m, combining 1.5m-3.0m sidewalk, 1.5-2.0m cycle track and buffer.
Descriptions:	Off-street, separated pathway with physical buffer shared by pedestrian and cyclist. A visible transition edge (using material and colour difference) between sidewalk and cycle track with no level changes is preferred.

Regional pathway

Recommended dimensions:	3.0m uplands and 4.0m for river and creek valleys

STREET TREES

URBAN DESIGN OBJECTIVES

- Maximize **safety, comfort,** and **function**
- Reduce clutter and maintain **pedestrian flow**
- Define special **characters**
- **Activate** streets, buildings and places
- Enhance pedestrian comfort in all **seasons**

Policy Reference

- Transit Friendly Design Guide
- Bicycle Parking Handbooks
- Universal Design Handbook
- Access Design Standards

Guideline Sections:

- 2.1 Streetscape Characters
- 2.8 Character Areas
- 3.1 Streetscape Zones
- 3.2.1 Public Sidewalks

3.2.4 Furniture

Street furniture consists of all elements and amenities installed in the public right-of-way and frontage zone for the use and convenience of the pedestrians, such as transit shelters, garbage/recycling bins, public seating, wayfinding signage, lighting, shelters, bike racks, utility poles, etc. Well-designed and carefully located street furniture can make the streetscape more comfortable and life on the sidewalk more convenient.

DESIGN GUIDELINES

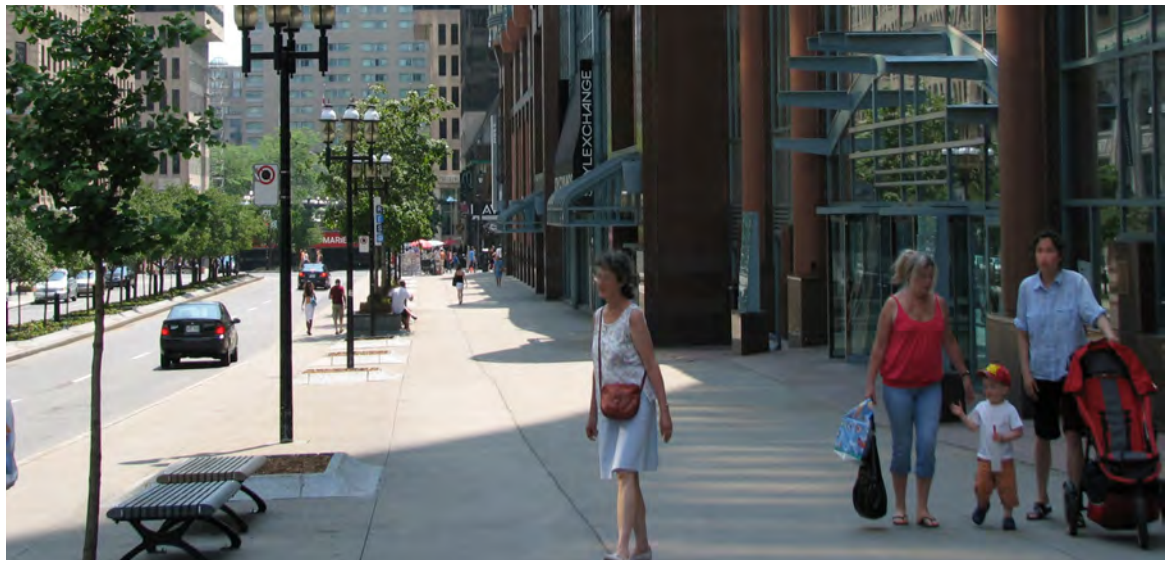
1. Location

(See 3.1 and 3.2.1 for streetscape zones and cross sections to accommodate the streetscape elements within pedestrian and frontage zones.)

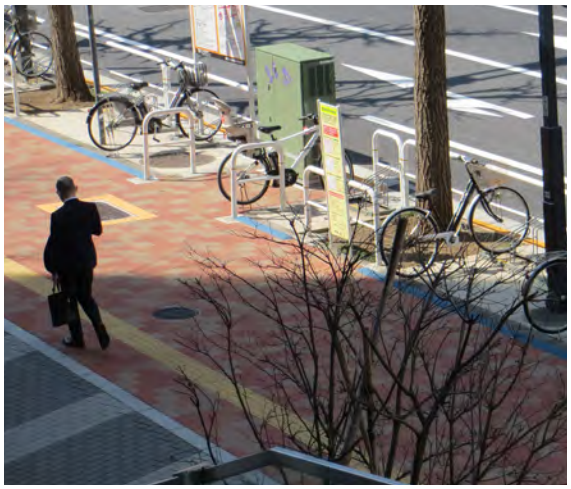
a. Public furniture should be integrated within the furniture zone (or flex zone if there is additional space available), and private furniture within the frontage zone so as to avoid obstructions and clutter.

b. The width of the sidewalk clear path of travel should be determined prior to the width of the furniture zone (see 3.2.1); the minimal space for furnishing should be no less than 1.0m.

c. As pedestrian amenities, furniture should be located in areas that will support adjacent land uses, particularly areas of greater pedestrian activity, including parks and open spaces, the riverfront promenades, pedestrian corridors, transit corridors, commercial areas, +15 Skywalk System, corner plazas, pocket plazas and squares.



Public furniture (e.g. seating, lighting, signage, etc.) should be located in areas that will support adjacent land uses and pedestrian activities, and be integrated within the furniture zone so as to avoid obstructions and clutter.



Bike racks, street trees, street lights and utility boxes are all located in a distinctive zone to reduce clutter and maximize pedestrian comfort.

The magazine stand helps to activate the street without hindering pedestrian flow.

d. Furniture should not interfere with building entrances, busy street corners, heavily used loading zones, parked vehicles, transit stops, or access to fire hydrants and underground services.

e. Furniture zone must allow signage throughout and be designed to allow access to/from parked vehicles.

f. Furniture should maintain sight lines at intersections and allow the visibility of signage.

g. Wayfinding signage should identify destinations, gateways, neighbourhoods, the +15 Skywalk System, entrances and transit stops.

2. Character

(See 2.1 for defined streetscape characters and 2.8 for character areas.)

a. For identified Character Areas (Map 13), create a unique street character that responds to the architectural theme and quality of an area through the use of cohesive and coordinated street furniture elements (e.g. banners, entrance signs, signage, lighting and other street furniture). Existing palettes (such as those in East Village, Stephen Avenue, Chinatown, 17 Avenue, etc.) should be considered and the number of choices should be limited to facilitate the ongoing coordinated street furniture program.

b. Street Furniture should be allowed to be customised in special character areas by using different colour, graphics, materials and finish details. Depending on defined streetscape characters and character areas, furniture/tree zone may be characterized by decorative paving features using different materials, design elements and graphic treatments.

c. Signage should enable heritage interpretation and promote local character.

3. Design

a. Furniture should be of high quality in design and materials, durable, easy to maintain and replace (e.g. replaceable modular parts), and compatible with the existing environment.

b. Furniture should engage pedestrians, reduce clutter and maximize pedestrian visibility, safety and comfort.

c. The number of furniture elements should reflect and respond to use patterns, placement opportunities, accessibility and pedestrian flow.

d. Seating areas should be designed as pedestrian nodes grouping key furniture pieces and amenities together (such as lighting, wayfinding signage, bollards, seating, tables, newspaper dispensers, trash receptacles, bicycle racks, drinking fountains, tree grates, tree guards, etc.).

e. Furniture can be artful, simple, creative in design, or combined with other uses (such as seating surface on planter ledges, or bike racks designed as public art)

f. Distinctive, movable and multipurpose street furniture is encouraged to allow users the flexibility of creating their own desired configurations for social interaction.

g. Street furniture elements should be designed to accommodate pedestrians of all abilities.

h. The use of sustainable materials and energy saving/ efficient design is encouraged (e.g. solar energy through the use of solar panels, recycled materials, energy efficient lighting, etc.)

4. Climate

a. Furniture should enhance pedestrian comfort in all seasons.

b. Covered bike racks may be provided to increase usability in winter.

c. Seating location and configuration should consider maximum sunlight access and minimum wind impact.

5. Ownership

a. Public furniture should be located in the public right-of-way where possible. Where not possible, public furniture may require encroachment agreements with adjacent landowners (this is particularly relevant for bike racks).

b. Calgary Transit is responsible for the maintenance of 7th Avenue, including placement of furniture and other items.

This pop-up seating area located at a street corner adjacent to a small retail use helps to activate the street and provide pedestrian comfort.

Furniture with wooden surface enhances pedestrian comfort in all seasons.

Movable and multipurpose street furniture is encouraged to allow users flexibility.

Furniture can be artful, simple, creative in design, or combined with other uses.

STREET TREES

URBAN DESIGN OBJECTIVES

- **Link** all green spaces to form an interconnected green system at the Centre City (2.5)
- **Protect** and **enhance** existing trees and forest ecosystems at all parks and green spaces within the Centre City
- **Increase** tree planting and green spaces in all new development on both public and private lands
- Provide quality, **sustainable** landscapes and trees at sidewalks and boulevards of commercial, residential and special streets
- Integrate **low impact development** with street tree planting to improve a street's ecological performance

Policy Reference

- Design Guidelines for Street Lighting
- Parks' Development Guidelines and Standard Specifications, Landscape Construction
- Sustainable development Guidelines for Trees, Shrubs & Groundcovers 2009
- Parks Water Management Strategic Plan

Guidelines Sections

- 2.1 Streetscape Characters/ Green Streets
- 2.4 The Riverfonts
- 2.5 Parks and Open Space
- 3.1.2 Pedestrian Zone
- 3.2.1 Public Sidewalks
- 3.2.9 Utilities

3.2.5 Street Trees

Street trees and other landscaping can make streets and neighbourhoods delightful, memorable and comfortable places. Used together with other streetscape elements, they can define the character of streets and enhance the visual enjoyment of our urban fabric. In addition, street trees provide us with many environmental and social benefits.

DESIGN GUIDELINES

1. Street Tree Planting

   a. Tree location and Spacing

      i. Prioritize total tree canopy size over the quantity of trees.

      ii. Integrate street tree planting with the planning of proposed utility alignments, including existing utility alignment and connections. Identify tree planting opportunities and locations in early design stages, and coordinate these with the placement and alignment of underground and/or overhead utilities.

      iii. Use planting design and construction practices that accommodate a minimum 50-year tree lifespan target. Refer to Parks' Development Guidelines and Standard Specifications, Landscape Construction for technical details of these practices.

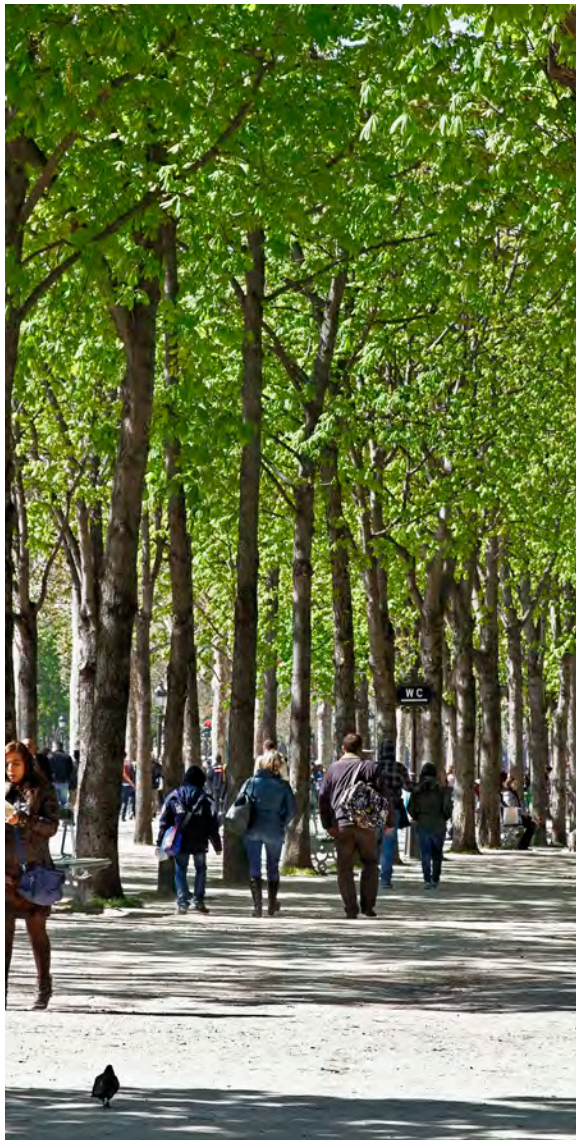
      iv. Create a continuous tree canopy and buffering effect between the roadway and the sidewalk.

      v. Use closer street tree spacing for heavily travelled streets to visually and physically strengthen the separation between roadways and sidewalks.

      vi. Adjust street tree spacing to suit local street conditions and minimize conflicts with setbacks at street corners, utilities, driveways, building access and entries, street lighting, transit stops and crosswalks.

      vii. Position a street tree slightly off the desired rhythm or spacing instead of having a gap in a planting pattern, should site limitations prevent the exact tree spacing.

      viii. Align tree trenches and/or planters to run in a straight line along the city block and parallel to sidewalks.



Double rows of trees create tree tunnels at sidewalks providing pedestrian comfort from bustling street traffic, noise and heat.

ix. Space the trees out regularly, 6.0m to 10.0m apart, and with a minimum set back of 1.5m from the road curb. Consider tree spacing with the expected mature tree sizes in mind.

x. Plant trees as much as possible in trenches, and in interconnected groups or clusters. Target a minimum lifespan of 50 years for planting design.

xi. Use permeable surface treatment of sidewalks to increase water and oxygen for intake by tree roots where possible, when optimal tree basins or trenches cannot be used.

xii. Space street trees to spread out between street lights. See current Design Guidelines for Street Lighting for separation and clearance distances.

xiii. Adapt new tree planting strips, pits, trenches or planters to the location of existing lighting, if necessary.

xiv. Do not plant street trees adjacent to accessible parking and passenger zones where sidewalks are less than 3.5m wide.

xv. Maintain a minimum clearance of 2.4m between curb face and edge of tree pit or trench along the length of accessible parking and passenger zones where street trees are planted.

xvi. Space trees about every 6.0m within the transit stop zone to permit transit passengers to board and alight without obstruction.

xvii. Reflect Crime Prevention Through Environmental Design (CPTED) principles in tree beds and planting design. Ensure there is no interference with sightlines, access, parking/loading, or access to fire hydrants, utilities and services.

xviii. Integrate street trees with street furniture at the furnishing zone. Street furniture includes traffic signage, street benches, bike racks, lighting, waste bins and way-finding signage.

xix. Place awnings, canopies, signs and temporary structures to avoid conflicts with street trees.

xx. Use hard landscaping within areas adjacent to roadways that are subjected to intensive ice and snow management activities. These include intersections, hills, school zones, bus routes, expressways, arterials and medians.

b. Character and Street Legibility

i. Protect and retain street trees wherever possible to maintain and/or enhance the character of a street or place, be this historical, commercial, residential and/or green space.

ii. Use street trees to reinforce street hierarchy, way-finding and views by:

- breaking continuous tree lines at places of interest;
- using flowering trees to accentuate and enhance entrances at neighbourhoods as well as buildings;

Large tree openings allow more water, oxygen and unobstructed growing medium for trees to develop. Open planter systems also allow fairly free access to maintain utilities within the root zones of trees. Repairs of curbs or retaining walls around the planting zones become conveniently accessible.

Please note the following bonusing provisions of 1P2007:

Land Use Bylaw 33P2013 Part 13: Commercial Residential Districts

- Bylaw 1294: General Landscaped Area Rules
- Bylaw 1298: Low Water Irrigation System
- Bylaw 1332: Incentive Density Calculation Method, Schedule A, Table 8: Public Amenity Items, item 8.2 Public Open Space; item 8.4 Urban Grove

Less trees and greater tree spacing allow more soil for each tree. The trees and canopy can grow larger, significantly enhancing the streetscape quality.

(Note: These are adaptations of figures taken from Tree Planting Solutions for Hard Boulevards - Best Practices Manual (City of Toronto)


Mature street trees add distinctive value to the streetscape.


Large trees defining the character of a place.


Street trees buffer amenity space like this park from traffic on roadways. Here, pedestrians can take momentary refuge from busy urban streets.

Keep street trees clear of pedestrian and passenger movement at transit stops and zones.

- setting back street trees at transit stops and zones to facilitate passenger movement (including universal access) between transit vehicles and the sidewalk, as well as pedestrian movement around these stops;
- planting a double row of trees to create a formal, consistent planting design distinctive for ceremonial streets, commercial streets, special streets and major thoroughfares, or to create tree tunnels at sidewalks and roadways;
- lining street trees to frame vistas; or
- varying tree planting pattern or design, as well as tree species, to create a relaxed mixed landscape at residential streets for neighborhood character.

iii. Select tree species to reflect the urban design goals of a streetscape character. Consider the form, mature size, colour and texture of tree species for the local climate. In addition, consider root growth and mature tree canopy impacts on sidewalks, curbs, utilities, street or pedestrian lighting, views of signage and building fronts.

c. Scale

i. Line streets with street trees to give the streets a sense of enclosure and a human-scale.

ii. Provide tree planters/planting beds with raised seat walls, where sidewalk widths allow, to support soil volume as well as to have shaded street seating.

iii. Plant trees at medians of very large streets to visually narrow the roadways and calm traffic.

d. Climate Impact

i. Plant only salt tolerant species of street trees in medians, where possible.

ii. Plant high-headed canopy deciduous trees at locations where cooling summer shade and warming winter solar heating is desired.

iii. Do not use coniferous trees as street trees, as these interfere with sightlines.

iv. Avoid planting street trees where they would shade and cause icing of paved surfaces in winter.

v. Locate street trees to mitigate known wind impact and heat island effect.

2. Biodiversity

a. Tree Species and Native Vegetation

i. Balance tree species to maintain biodiversity by following The City of Calgary's urban forestry provisions.

ii. Preserve or establish native vegetation along roadway greens wherever possible.

3. Low Impact Development

a. Incorporate low impact development in any major street improvement project. Where possible, use existing infrastructure like raising sewer manholes to form overflow drain inlets at either existing or new landscaped beds and/or planters, to create new storm water facilities.

4. Tree Clearances from Utilities

a. See the Design Guidelines for Subdivision Servicing for minimum tree clearance distances from shallow and deep utilities. Obtain confirmation of no conflict from the relevant utility owner for any clearance less than the specified minimum distances.

b. Setback trees from all streetlight poles to a minimum of 4.0m.

c. Coordinate with and obtain approvals from all relevant utility owners on the design of tree trenches that incorporate any existing utility infrastructure, prior to any construction.

SIGNAGE

URBAN DESIGN OBJECTIVES

- Reinforce **legibility** and **wayfinding** for users of different travel modes
- Identify Centre City **public realm system** (2.0 Urban Context)
- Contribute to the defined streetscape **characters** (2.1)
- Avoid clutter and **visual pollution**
- Promote local character
- Accommodate **new technology** trends

Policy Reference
- Land Use Bylaw1P2007
- Bylaw33P2013

Guideline Sections:
- 2.0 Urban Context
- 3.1 Streetscape Zones

Wayfinding signage located in the furniture zone is integrated with other streetscape elements.

Signage should be used as branding for the city and can bring human-scale to the street environment.

3.2.6 Signage

There are generally four types of signage - traffic signs, pedestrian wayfinding signs, advertising signs, and building signage. The guidelines focus on pedestrian wayfinding signs and building signage.

DESIGN GUIDELINES

1. Location

a. Signage should identify gateways, character areas, parks and open spaces, the +15 Skywalk System, entrances and transit stops (see 2.0 maps for locations).

b. Signage should contribute to the defined streetscape character (2.1); As part of the coordinated street furniture program, signage should be incorporated within the furniture zone and edge zone, or in some cases, frontage zone, depending on the local area plan (if any), the type of signage and the space availability (3.1).

c. Signage should help to improve areas of blank walls, surface parking, grade separation, utilities, or construction sites.

d. Signage should not hinder movement or sightlines.

e. Signage should not block view corridors (Map 14).

f. Signage in the furniture zone should be located a minimum of 0.75m from the curb line.

g. Signage may be accommodated on streetlight poles (with a minimum of 1.0m^2 of signage).

h. Third-party advertising at bus shelters (one side only) should be allowed, and arts and cultural organizations based in Centre City should receive first consideration.

i. Allow digital building signage (including “animated public art”) at the Retail Nodes and Corridors (2.3) and the Entertainment Districts (2.8), only if it has minimal impact on residential areas and adequately meets the guidelines included in this section.

2. Design
   a. General
      i. Refer to Land Use Bylaw regarding signage approval procedure, location, type, size, lettering, colour, illumination, etc.
      ii. Signage should be distinct in design so as not to be confused with traffic or hazard signage.
      iii. Signage should accommodate new technology trends and changing environmental graphic design concepts.
   b. Building Signage
      i. Building signage should be appropriately designed based on its function and location, as well as for its ability to add interest and animation to both the street and the skyline.
      ii. Building signage should promote both wayfinding and building identity.
      iii. Building signage should clearly express the main entrance, name and location of building use.
      iv. Building signage should be well-integrated into the facade, be appropriate for the setting and complement architectural materials and colours.
      v. See 3.2.6.1 for digital building signage locations.
3. Legibility
   a. Signage should be considered as an integral part of the built environment and public realm system.
   b. Signage should be informative, and reinforce legibility and wayfinding.
   c. Signage should promote the efficient use of parking resources in the Centre City.
   d. Signage should help to integrate the +15 system into the overall public realm system in the Centre City, especially at identified key street level entries (Map 14).
   e. Transit signage should be highly visible so that it may be seen from afar and night.
4. Scale
   a. Signage should reflect a human scale and be integrated with the surrounding streetscape context so as not to create clutter and visual pollution.
   b. Blade signage is encouraged at retail facades, but should have a minimum of 2.5m overhead clearance.
5. Identity
   a. Signage should be used as branding for The City and help to promote and market Centre City as a place to live, work, play and visit (e.g. branding signs on the balustrades of an underpass gateway).
   b. Signage should respect historical context, enable heritage interpretation and promote local character.
   c. Historical signs should be preserved, repaired and reused to provide a vivid image of the local history.
   d. Land Use Bylaw provides rules governing all signs in the Stephen Avenue Mall Heritage area (Map 8) to preserve its unique historic character.

The brand at the entrance of RÉSO, Montreal's Underground City.

Blade signs along a high street add to the pedestrian scale.

Digital signs may be allowed at certain locations.

LIGHTING

URBAN DESIGN OBJECTIVES

- Facilitate a coordinated process for The City to develop a comprehensive **lighting palette** and a separate **pedestrian lighting system** for the Centre City
- Identify priority districts, edges, corridors and nodes for the implementation of both **functional** and **experiential** lighting
- Contribute to the real and perceived **safety** and the **legibility** of urban places
- Create an **animated** environment during the night and winter season
- Enhance the urban characters and express **identity** of a neighbourhood
- Reduce **lighting impact** on surroundings, residential neighbourhoods and migratory birds
- Maximize natural **sunlight,** reduce **energy** consumption and support the use of new **technologies**

Policy Reference

- Centre City Illumination Guidelines
- Traffic Policy
- Design Guidelines for Street Lighting
- Downtown Underpasses Urban Design Guidelines
- Bird-friendly Urban Design Guidelines

Guideline Sections:

- 2.12 Seasonal and Night Design
- 5.2 Areas of Particular Concern

3.2.7 Lighting

Calgary has a long winter; therefore, lighting is important to create a nighttime environment in which people can see comfortably and safely navigate between destinations. Lighting can lend character to a street and contribute to the unique identity of a place.

In this section, lighting refers to both functional lighting (street lighting and pedestrian lighting to address safety) and experiential lighting (pedestrian lighting and site/building/structure lighting designed primarily to enhance the environment).

The City is currently planning to develop a comprehensive lighting palette and a separate pedestrian lighting system for the Centre City. The current Design Guidelines for Street Lighting should be followed before a separate pedestrian scale lighting system is developed by The City.

The future lighting palette should be developed based on a coordinated process. The identified Areas of Particular Attention (2.12), should be considered when determining where to put emphasis on lighting and what lighting types to use (i.e., decorative vs. standard) in relation to the Centre City public realm system and special character areas. The Design Guidelines for Street Lighting will then be modified to reflect the changes to current standards. Increased maintenance and power requirements, as well as life cycle replacement costs, will be considered when developing the new pedestrian scaled lighting system.

DESIGN GUIDELINES

1. Location and Legibility

a. Pedestrian lighting should be placed in the furniture zone, flex zone if space allows, or frontage zone if provided by private development.

b. Lighting should put more emphasis on the identified Areas of Particular Attention (2.12).

c. Lighting should facilitate wayfinding at night.

d. Particular attention should be given to the lighting of public and private areas at grade to provide effective and attractive at-grade light.

Pedestrian-scaled lighting elements at the building frontage and the tree/furniture zone contribute to pedestrian comfort during dark winter days.

e. Considerations should also be given to the impacts of any lighting strategy on residential uses based on Bylaw requirements.

f. Lighting on private property should not replace roadway lighting, but be used to contribute to a sense of character/place.

2. Safety

a. Lighting should facilitate the safe movement of all street users and consider CPTED principles.

b. In areas of vehicular and pedestrian/cyclist conflicts, an appropriate level of pedestrian-oriented lighting should be provided to increase a sense of personal safety.

c. Underutilized spaces, such as unused dark spaces under the transportation flyovers, remnant undeveloped spaces, parking lots or unused spaces adjacent to the CPR corridor, should be improved and reclaimed by their property owners through appropriate lighting combined with other CPTED design techniques (e.g. transparency, openness and space flow, active uses, enlivened blank walls, graffiti resistant paint).

d. Colonnades should be designed to have sufficient light levels and lighting features that provide a sense of safety and pedestrian comfort (4.2.4).

e. Special lighting features and colours should be provided at the underpasses.

f. Illumination levels should be increased to emphasize stairs, entrances, obstacles, information signs and hazardous areas.

g. Illumination levels for pedestrian and experiential lighting should not outcompete with traffic control devices.

h. Trees need to maintain minimum distances from streetlight wires as per Design Guidelines for Street Lighting.

3. Scale

a. A pedestrian scaled lighting system should be developed by The City to lighten the pedestrian zone of the streetscape, especially in the identified Areas of Particular Attention (2.12).

b. A denser rhythm of pedestrian scaled street lighting, among other streetscape elements, may help to enhance the sense of human scale.

c. Pedestrian lighting should not be obtrusive or dominant in the overall streetscape design.

The featured lighting on the building facade and the entrance structure for the subway station creates a colourful, animated environment during the night.

Lighting at the LRT station creates a sense of character and facilitates wayfinding and safe movement.

d. Combined pedestrian/road way lighting poles should be considered as one of the future street lighting palettes when appropriate lighting levels and uniformity ratios are achieved.

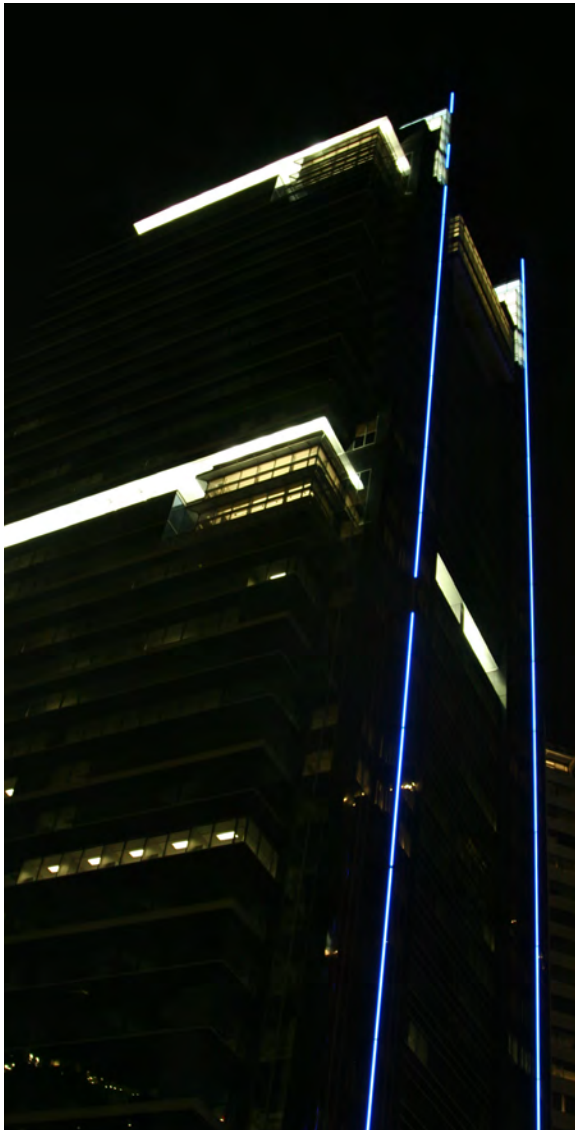
4. Character

a. Decorative street lighting should be considered as part of the overall street lighting palette, especially within the identified Areas of Particular Attention (2.12), to create a sense of character/place within the streetscape.

b. Street lighting should develop mood and ambiance.

c. Experiential lighting should be used to highlight heritage and contemporary architectural landmarks, structures, riverfront promenades, +15 Skywalk System, transit corridors and stations, parks and open spaces, gateways, character areas and the overall skyline (see 2.0 for relevant maps).

Featured pedestrian lighting in the furniture zone can add vibrancy and animation to the streetscape.



Tall buildings should use distinctive lighting design for the top floors, combined with building massing techniques.

The lighting elements help to define the characters of the historic building and the streetscape.

The building facade design should avoid creating dark areas (e.g. the space under the colonnades).

5. Design
   a. General
      i. New development should provide a comprehensive site and building lighting strategy and pay attention to the Areas of Particular Attention (2.12).
      ii. Glare, spill light and light trespass should be minimized to reduce light impact on surroundings and migratory birds.
      iii. Lighting should be designed to reduce energy consumption and support the use of new technologies.
      iv. Building design should maximize sunlight access and avoid creating dark areas; if not possible, use lighting fixtures to compensate for the lack of natural light.
      v. Tall buildings should use distinctive lighting design for the top floors, combined with building massing techniques, such as reducing floor plate sizes, stepping the building mass, etc.
      vi. Trees need to maintain minimum distances from streetlights as indicated in the Design Guidelines for Street Lighting.
      vii. In the vicinity of residential buildings, placement of light fixtures should be done so as to avoid lighting up bedrooms. The poles should be strategically placed to achieve minimum lighting levels and uniformity ratios.
   b. Building Facades
      i. Enhance and complement adjacent lighting in the public realm.
      ii. Use different lighting levels for the different building uses.
      iii. Allow digital building signage (including “animated public art”) at the Retail Nodes and Corridors (2.3) and the Entertainment Districts (2.8), only if it adequately meets the guidelines included in this section.

iv. Install pedestrian-scaled featured lighting on columns or walls to reduce the mass of the building and to brighten the arcade space.

v. Direct light both upward and downward to brighten the dark areas, such as the ceiling of the overhang, under colonnades and under awnings.

vi. Add light shelves to reflect sunlight onto arcade ceilings.

vii. Explore lighting for entrance stairs to enhance the grandeur of the entrance.

viii. Provide lighting fixtures to enhance safety and openness in grade separated areas.

c. Ground Floor Parking

i. Provide lighting fixtures to enhance safety and openness in parking areas and grade separated areas.

ii. Add light shelves to reflect sunlight onto parking areas.

d. +15 Skywalk System

i. Lighting of all +15 bridges, lane links, walkways and stairs should maintain the minimum standard of 43 lux (4 foot candles).

ii. Ensure that +15 entryways are well lit to enhance safety and wayfinding.

iii. Install ceiling lighting design across the bottom of the triple-deck +15 bridge, creating a unified portico space.

iv. Use up-lighting to create a bright and iconic space beneath the bridge.

v. Ensure that +15 walkways are well lit to enhance safety and wayfinding.

vi. Where possible, use windows and skylights to maximize natural lighting.

vii. Consider adding bold colours or lighting features on bridges to create vibrant environments.

e. Underpasses

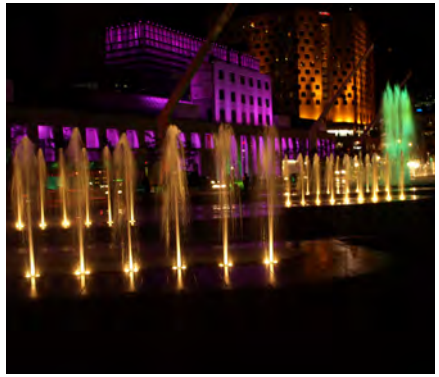
i. Install lighting beneath underpass bridges and against the walls of underpasses to enhance safety and signify a gateway.

ii. Project lights up towards the ceilings of bridges for more aesthetic and gateway character.

iii. Consider the use of coloured lights or light displays.

Lighting on the building facade adds colour and a sense of character to this residential building.

The well-lit +15 bridge contributes to safety and wayfinding.



Lighting at the public open space and its surrounding building facades creates a vibrant environment.

Featured lighting on the bridge and the retaining wall of this underpass helps to enhance safety and signify a gateway.

PUBLIC ART

URBAN DESIGN OBJECTIVES

- Contribute to a **visually rich** environment and art opportunities that are freely accessible to all
- **Celebrate** Centre City's unique **characteristics**, mixed-use neighbourhoods, history, and urban and natural environment
- Strategically place public art to create a unique sense of place and **identity**
- Improve and enhance **streetscapes, public open spaces** and **site/building design**

Policy Reference
- Corporate Public Art Policy
- Bylaw 33P2013
- Public Sculpture Opportunities for Downtown and Central Calgary

Guideline Sections:
- 2.0 Urban Context
- 3.1 Streetscape Zones

3.2.8 Public Art

"Art in public space must speak profoundly to a larger portion of the population - people who will use the public space in which it is located. The selected work is interpreted by the public as a gesture of the space's owners towards the population, so that it should generously benefit the public and create a sense of well-being." (1987 - Suzanne Crowhurst Lennard)

Public art is an integral part of our urban environment. Creating opportunities for public art must be part of the agenda in planning and building public spaces. This section is prepared to assist in creating those opportunities by providing locational criteria and general guidelines for public art.

There are two definitions that must be clarified to ensure we all understand the terms referred to in this document, and the roles of both public and private parties:

Public Art

Public art is works of visual art, in any media, that have been planned and executed with the specific intention of being sited or staged in the public domain, often incorporating elements of site specificity, community engagement and collaboration (Definition from Corporate Public Art Policy).

Public Art - On Site

Public art is publicly accessible art of any kind that is permanently suspended, attached to a wall or other surface, or otherwise integrated into a development. It is privately owned and must be an original piece of art in any style, expression, genre or media, created by a recognized artist (Definition from Bylaw33P2013 related to Downtown District density bonus).

DESIGN GUIDELINES

1. Location

Locational criteria may include:

a. Who is the expected audience and how will they see and interact with the public art? Consider the following:
   i. urban context (see the maps in 2.0);
   ii. pedestrian use;
   iii. vehicle use;
   iv. aerial views (e.g. can it be seen from an office tower?); and

Public art should be used to activate the streets, engage pedestrians and animate wayfinding.

Public art should be used to enliven urban places.

v. directional views (e.g. one-way traffic system)

b. Where are the priority districts/corridors/nodes for public art?

i. The following listed areas should be considered priority districts, corridors and nodes for public art:

- Centre City parks and open spaces (2.5);
- pedestrian priority corridors (2.1);
- recommended corporate plazas and pocket parks (2.5);
- key intersections/road terminus (e.g. the confluence of 8th Street SW and 17 Ave SW);
- river promenade connection points with the streets/ street connections to Fort Calgary;
- underpass connections/bridge crossings;
- +15 Skywalk System and amenity roofs
- gateways (2.6); and
- sites with historic or cultural value (2.7).

c. What should be considered to integrate public art in streetscape design?

i. Public art should be considered as one of the streetscape elements and be located in the furniture zone, flex zone if space allows, or frontage zone if provided by private development (3.1).

ii. Private development should consider integrated architectural and public art treatments, especially at block corner locations.

iii. Public art should be located so as not to hinder pedestrian, cyclist or vehicular movement.

2. Character

a. Public art should create an authentic sense of place.

b. Public art should define local character and respond to the local context (see 2.8).

c. Public art should incorporate seasonal and night design considerations (see 2.12).

d. Public art should be used to reinforce key views (see 2.6).

e. Public art should stimulate curiosity and interest in a community's heritage and foster community spirit.

The public art located in an urban plaza integrates with the streetscape elements and other pedestrian amenities.

The public art located at a street corner of a raised public park helps to mitigate the effect of grade separation.

f. Public realm improvement projects should incorporate local history interpretive elements. (see 2.7) through public art in the form of plaques, concrete etchings or other textural and photographic inserts.

3. Design

a. General

i. Public art should beautify the public realm, engage pedestrians and activate the street with interactive elements.

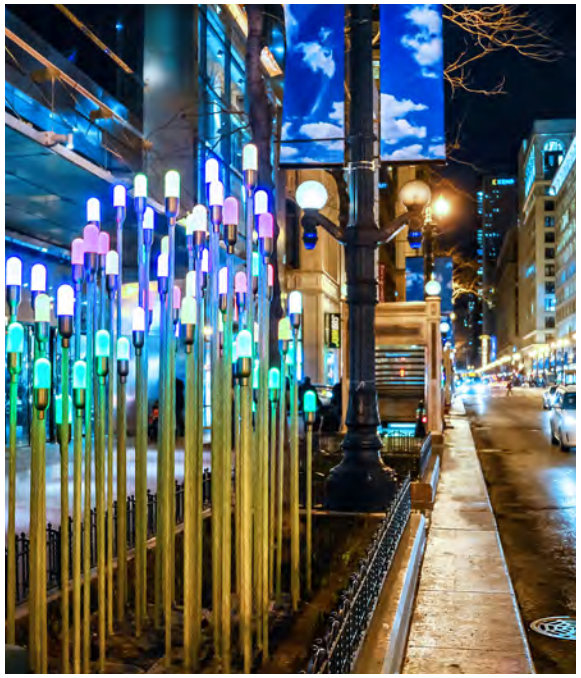
ii. Public art should be integrated with overall streetscape design.

iii. Public art should improve orientation and animate wayfinding through visual cues.

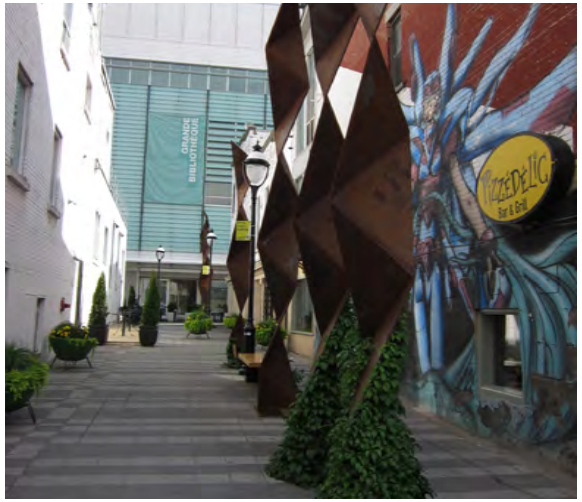
iv. Both permanent or temporary public art should be permitted.

v. Public art should be easy to maintain with seasonal considerations.

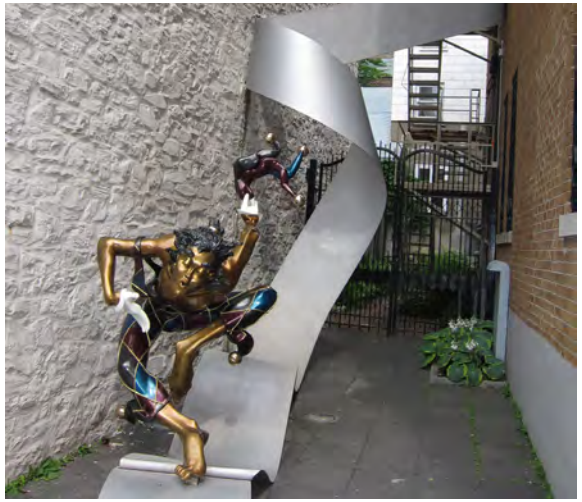
vi. Public art should provide educational opportunities.



Seasonal lights installed in the tree/furniture zone function as a public art piece for pedestrians to enjoy.



This back lane is transformed into an urban oasis through the provision of a public art piece, decorative paving, wall murals, planters, pedestrian lighting and seating.



This public art piece located in the leftover space between two buildings stimulates pedestrian curiosity and interest.

b. Public Art Opportunity Areas

i. In Downtown Land Use District, public art on-site is a bonusable public amenity item (See Bylaw33P2013 for Public Art – On Site).

ii. At block corners, architectural and public art treatments should be integrated because they are the confluence of streets and sidewalks—points ideal for pedestrian interaction, building entries, public spaces, expanded sidewalks, public art and landscaping.

iii. For corner pocket plazas, unique public art pieces can be installed to activate the streets and engage pedestrians, such as kinetic art pieces that move with the wind, or interactive art that reacts to users.

iv. For large, blank wall space in pedestrian views, murals or other public art installations can be considered.

v. In an underpass, public art can be installed at retaining walls, underpass bridges, or below-grade stories of buildings abutting underpasses in the form of murals, 3-D sculptural elements or any new electronic media that would enliven the environment throughout the year.

vi. At building frontages, especially where at-grade retail use is not possible, public art can be installed in the form of:

- art in display windows;
- art on lobby curtain walls and large windows on the ground floor;
- overhead public art and lighting pieces; and
- public art displays on upper floors.

vii. Public art should be used to enliven building facades and create human scale under the following circumstances:

- Where the ceiling of the colonnade is high, install hanging public art pieces to add light and colour to the colonnade
- Soften harsh overhang angles with public art, draping canopies or lighting design. These strategies can also appear to reduce the overhang's dramatic height.
- Utilize tall columns as a venue for bold and iconic public art features. Consider using kinetic art combined with LED lighting and landscape design.

viii. Where possible, sections of alleys should be developed to include public art and active uses.

ix. The +15 Skywalk System should be enhanced with public art, colours and high quality lighting; sky bridges can be featured with large scale art installations while allowing for transparency.

UTILITIES

URBAN DESIGN OBJECTIVES

Plan and locate surface and underground utilities to:

- Minimize the impact of surface utilities on the **visual environment**
- Minimize **clutter** and interference with potential locations for streetscape elements
- Maximize space for **planting**
- Improve **efficiency** and integrate **alignment** with stormwater facilities
- Maintain **safety** and **access** to utilities
- **Consolidate** utilities, parking meters, and street signs and poles where feasible

Policy Reference
- Complete Street

Guideline Sections
- 3.1.2 Pedestrian Zone
- 3.2.5 Street Trees
- 3.2 Lane Character Typologies

3.2.9 Utilities

DESIGN GUIDELINES

1. Consult with The City's Utility Line of Assignment office (ULA) and individual utilities for existing and future required utility information.
2. Give due consideration to the underground infrastructure of the road right-of-way at the start of any development project by submitting utility plans with initial development proposals.
3. Utilities should be consolidated for efficiencies and to minimize disruption to the streetscape.
4. Any abandoned utilities should be either reused or removed when possible.
5. Integrate utility alignment with stormwater facilities by using state-of-the-art technologies.
6. Minimize the impact of surface utilities on the pedestrian path of travel by consolidating and placing surface utilities away from crosswalks, sidewalks and building access points.
7. New development should incorporate alleys for vehicle, utility, and service access to maintain a more consistent streetscape.
8. Integrate tree boulevards with buried and surface utilities to avoid any potential conflicts.
9. For safety and access, maintain minimum separation distances between trees and utilities as required by ULA and individual utility owners.
10. Buffer above-ground equipment with landscaping while maintaining the minimum required separation distances.
11. Ensure the minimum required space within the City-owned right-of-way to permit the utility infrastructure to be installed, repaired and accessed safely with little or no impediments.

This modular structure for tree boulevards should prevent damage of adjacent pavement and underground utilities by spreading roots and will provide predictability for future nearby work under the pavement.

LANE CHARACTER TYPOLOGIES

URBAN DESIGN OBJECTIVES

- **Retain, enhance** and **celebrate** rear lanes
- Provide a variety of lane **character typologies** and uses to enrich urban fabric
- Support and contribute to the character and **function** of the street
- Create attractive and multi-functional **built form interfaces** with lanes
- Create fine-grain and **active** urban spaces at strategic locations
- Reduce **pedestrian/vehicle conflicts**
- Incorporate **pedestrian amenities** appropriate for the lane character typology

Policy Reference
- Centre City Plan
- Centre City Mobility Plan

Guideline Sections
- 2.0 Urban Context
- 4.1.6 Pedestrian and Vehicle Access

3.3 Lane Character Typologies

3.3.1 Lane Interface Design

DESIGN GUIDELINES

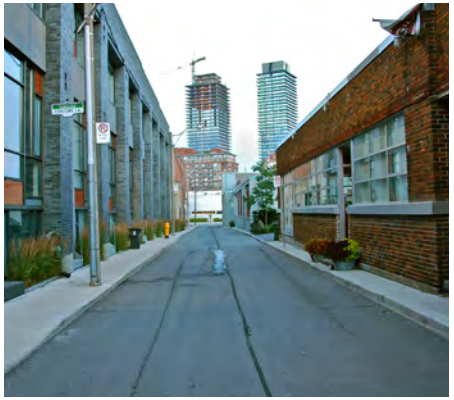
a. Access, safety and connectivity
   i. Accommodate the safe and efficient movement of private and service vehicles.
   ii. Orient loading docks and ramps to prevent obstructions and/or interference with public realm.
   iii. Consider for more one-way lanes to reduce pedestrian/vehicle conflicts at high pedestrian volume street interfaces.
   iv. Strongly discourage lane closures, other than for enhanced lanes.
   v. Connect to on-site open space and/or the +15 Skywalk System, where possible.
   vi. Refer to 4.1.6 for guidelines related to pedestrian and vehicle access at lanes

b. Interface/Edge Condition
   i. Support and contribute to the character and function of the street through appropriate selection of the lane character typology. Refer to 3.3.2 and the Lane and Streetscape Characters map on the following page to determine appropriate lane character typology (Service, Enhanced or Residential).
   ii. Create safe, attractive and multi-functional built form interfaces with lanes by providing the key design elements appropriate for the lane character typology (see 3.3.2 tables).
   iii. Carefully design the areas where lanes transition into the public realm at the edge of street, and pay special attention to the lanes with the following interfaces:
      - Pedestrian Priority Corridors (2.1)
      - High Streets
      - Green Streets
      - Public and on-site open spaces
      - Neighbourhood Centres
   iv. Activate the entrances to lanes at the above-locations by wrapping active, at-grade uses at the corner and situating servicing at mid-block locations.
   v. Incorporate green edges that contain sustainable stormwater amenity, where possible. Pay particular attention to the lanes which interface with Green Streets.

3.3.2 Lane Character Typologies

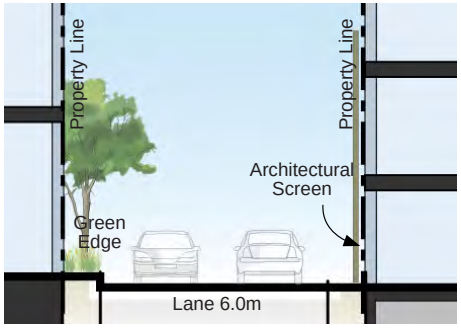
a. Service Lane Character Typology

	Service Lane Character
Vehicle Access (4.1.6)	• Primarily for vehicle and service access
Location Criteria (Refer to 2.1 for streetscape typologies and travel modes priorities)	The Lanes that intersect with, or within one block vicinity of (see Lane and Streetscape Characters map): • A Commercial Street
Key Design Elements (Refer to 3.0 and 4.0 for relevant design guidelines)	• Active frontages at the entrances to the lanes • Landscaping/sustainable stormwater amenities • Building Lighting • Architectural/landscaping screens for parking accesses and service areas

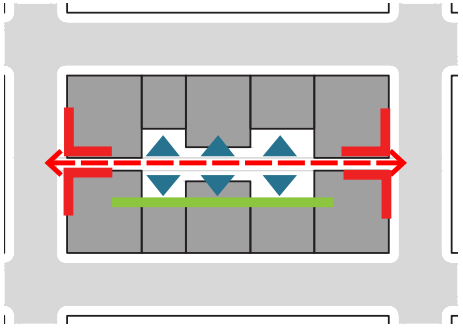


Service lanes with green edges and on-site bio-filtration planters contribute to sustainable stormwater management.

Active wrap-around uses to activate and allow natural surveillance to service lanes.



Service Lane Typology Illustrative Section

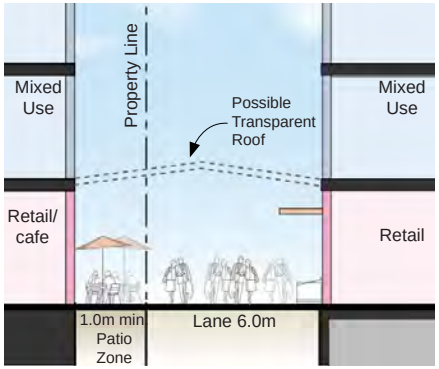


Service Lane Typology Diagram

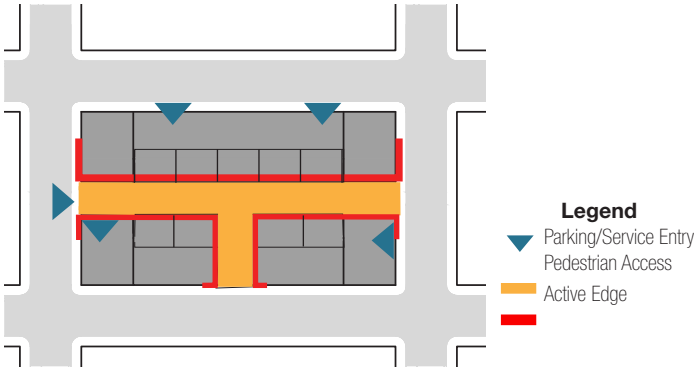
b. Enhanced Lane Character Typology

	Enhanced Lane Character
Vehicle Access (Refer to 4.1.6)	• Pedestrian priority/limited or no vehicle access • Consolidated street access points where possible
Location Criteria (Refer to 2.1 for streetscape typologies and travel modes priorities)	The lanes that intersect with, or within one block vicinity of (see Lane and Streetscape Characters map): • A High Street • A Downtown Retail Area • 7 Avenue transit corridor
Key Design Elements (Refer to 3.0 and 4.0 for relevant design guidelines)	• Active frontages along lanes • Landscaping/sustainable stormwater amenities • Sunlight access • Public art • Featured paving, building lighting and signage • Weather protection (i.e. transparent roofs, canopies)

Enhanced laneway with active edges at ground level.



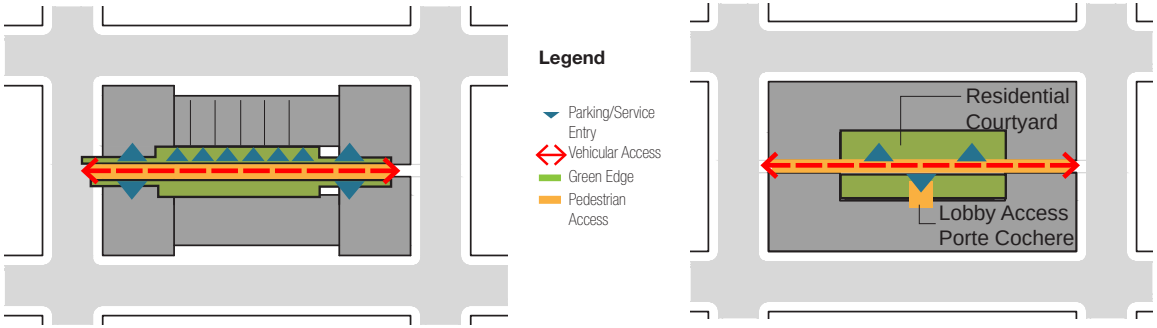
Enhanced lane with active edges at ground level



Enhanced lane with active edges at ground level

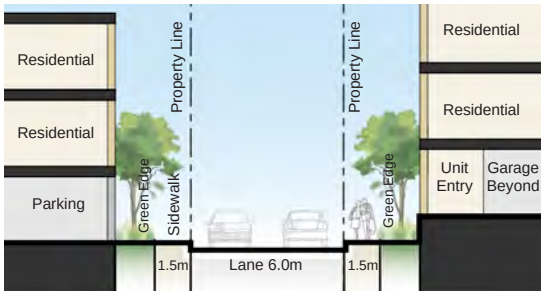
c. Residential Lane Typology

	Residential Lane Character	
Vehicle Access (Refer to 4.1.6)	• Pedestrian and vehicle and service access	
Location Criteria (Refer to 2.1 for streetscape typologies and travel modes priorities)	The lanes that intersect with, or within one block vicinity of (see Map 23): • A Residential Street	
Key Design Elements (Refer to 3.0 and 4.0 for relevant design guidelines)	• Elevated townhouse frontages, where applicable • Landscaping and sidewalk interfaces • Sustainable stormwater amenities • Sunlight access	• Building lighting • Architectural/landscaping screens for parking accesses and service areas • Other pedestrian amenities

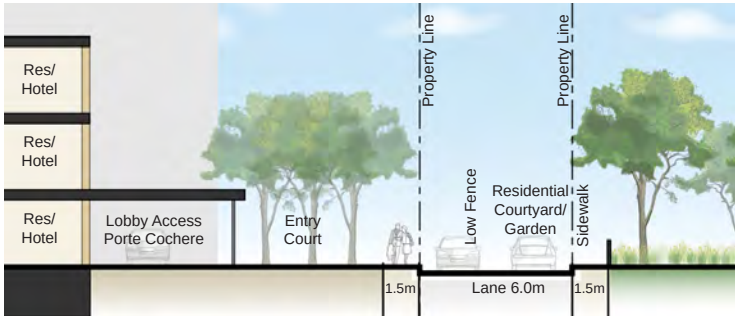


Residential lane with courtyard interface to entrance of a multi-residential building.

Residential lane with townhouse interface. A pedestrian – friendly service lane with townhouses, green edges, good lighting, neat and well-maintained.



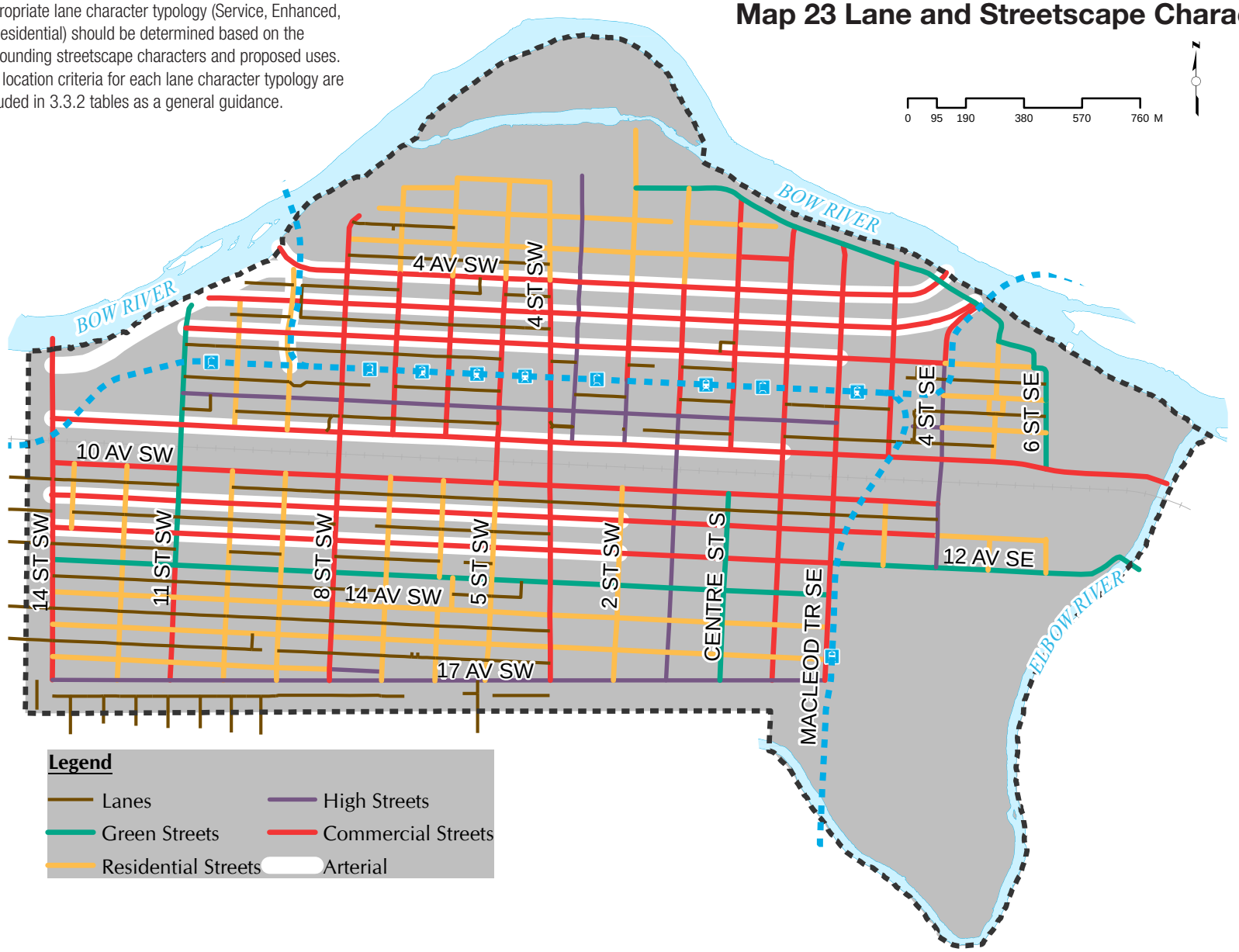
Residential Lane Typology with Townhouse Interface



Residential Lane Typology with Courtyard Interface

Appropriate lane character typology (Service, Enhanced, or Residential) should be determined based on the surrounding streetscape characters and proposed uses. The location criteria for each lane character typology are included in 3.3.2 tables as a general guidance.

Map 23 Lane and Streetscape Characters



> Promote site and building design that contributes to high quality living environments and attractive, walkable, diverse neighbourhoods and communities."

2.4.3 Enhancing the public realm, Municipal Development Plan

4.0 THE DEVELOPMENT GUIDE

IN THIS SECTION:

PUBLIC OPEN SPACE INTERFACE

Urban Design Objectives

- **Integrate** all parks and open spaces to form the Centre City **Green Loop** (see 2.5)
- **Preserve** and **enhance** existing parks and open spaces
- Increase **usable** public and private open spaces and tree planting
- Preserve **sunlight** access to all parks and open spaces
- **Activate** parks and open spaces and their edges
- Create **built form** that gives a strong sense of enclosure for parks and open spaces
- Incorporate **innovative** stormwater management practices wherever possible

Policy References

- Centre City Parks & Public Realm Enhancement Plan
- Sustainable Development Guidelines for Trees, Shrubs and Groundcovers
- The City of Calgary's Environmental Policy
- Centre City Plan
- Land Use Bylaw

Guideline Sections

- 2.4 The Riverfronts
- 2.5 Parks and Open Spaces
- 3.1.3 Frontage Zone
- 3.2 Streetscape Elements
- 4.1.2 Private and Public Accessible On-site Open Space
- 4.3 Green Infrastructure

4.1 Contextual Design Elements

4.1.1 Public Open Space Interface

DESIGN GUIDELINES

1. For buildings adjacent to public open space:
   a. Develop continuous street wall definition at public open spaces and Riverfront interfaces to generate a strong sense of enclosure for such open spaces and green areas.
   b. Site and shape these buildings to optimize sun exposure at the public open spaces adjacent to them.
   c. Provide a high degree of transparency at the building interfaces to maximize views for occupants to enjoy and passive surveillance of the adjacent public open space.
   d. Do not locate main building and/or lobby entries at public open space interfaces. Orient such entries towards the street.
   e. Provide secondary entrances along open public spaces to increase permeability and active edges while improving natural surveillance. Do not have fire exits and/or fire escape stairways, or service access and entrances as secondary entrances.

The building interface surrounding public open space should ensure optimum sun exposure.

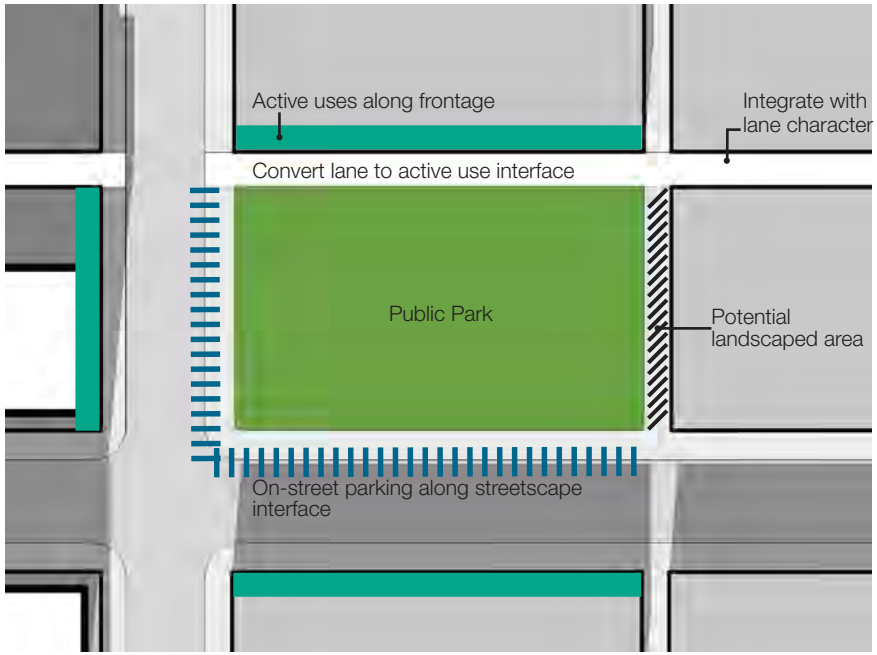
f. Keep the ground level of commercial building interfaces at the same level as the public open space.

g. Separate the ground level of residential building interfaces from the public open space to maximize resident privacy.

h. Activate the south-facing, non-residential building interfaces with preferable uses like cafés and restaurants at grade.

i. Provide semi-private landscaped areas like patios and courtyards at residential building interfaces at grade, with greater setbacks if necessary, for the transitioning of public open space to private residential space.

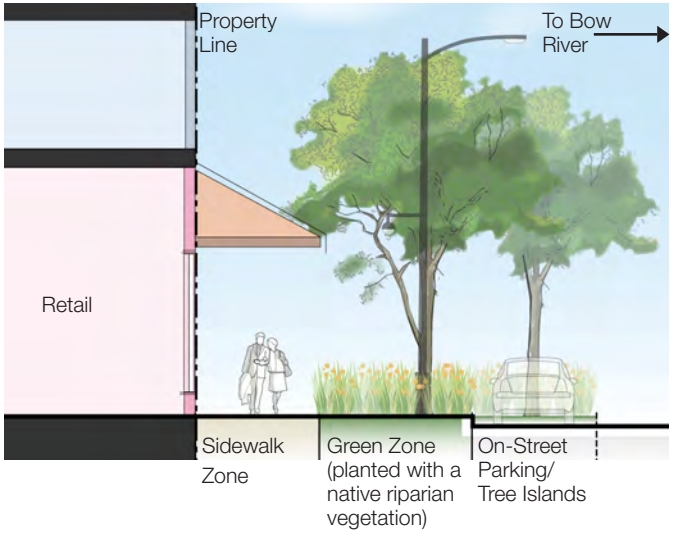
j. Activate building frontages along lanes that are between the buildings and the public open space, relating the uses here to the context of the lane character.

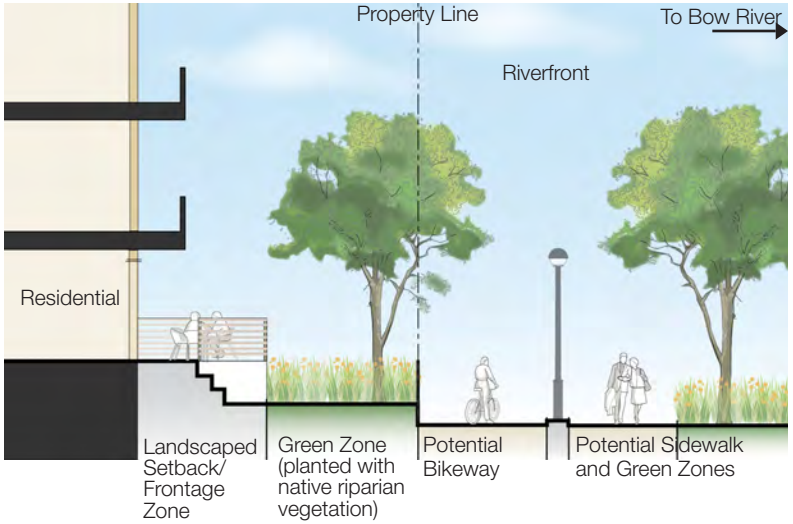


A partial block public park interface treatment

Provide active edges to buildings that face onto a public park or plaza. Set buildings back to provide good sunlight access to the public open space.

2. Buildings adjacent to the Riverfront:
    a. Locate active uses at the ground floor level of building frontages at strategic nodes along the Riverfront. Such nodes include Eau Claire, East Village, Peace Bridge and the Louise Crossing.
    b. Create 'green zones' for both commercial and residential building interfaces with the Riverfront, where desired. Use such 'green zones' to reinforce the natural riparian character while providing an additional green buffer between the buildings and the open space of the Riverfront.
    c. Use low maintenance, native plant/landscaping materials to reinforce the riparian character of the Riverfront.
    d. Preserve sunlight access and landscape views to the riverfronts.
    e. Reinforce green and active pedestrian and bike connections to the riverfronts.
    f. Design for flood resilience without compromising on pedestrian comfort.
    g. Apply design measures to mitigate bird-window collisions.





The top diagram shows an active use Riverfront interface section. The lower diagram shows a green Riverfront interface section.

ON-SITE OPEN SPACE

Urban Design Objectives

- **Integrate** all parks and open spaces to form the Centre City **Green Loop** (see 2.5)
- **Preserve** and **enhance** existing parks and open spaces
- Increase **usable** public and private open spaces and tree planting
- Preserve **sunlight** access to all parks and open spaces
- **Activate** parks and open spaces and their edges
- Create **built form** that gives a strong sense of enclosure for parks and open spaces
- Incorporate **innovative** stormwater management practices wherever possible

Policy Reference

- Centre City Parks & Public Realm Enhancement Plan
- Sustainable Development Guidelines for Trees, Shrubs and Groundcovers
- Access Design Guidelines
- Public Art Policy

Guidelines Sections

- 2.4 The Riverfronts
- 2.5 Parks and Open Spaces
- 3.2.5 Street Trees
- 4.1.4 +15 Skywalk System to 4.1.6 Pedestrian and Vehicular Access
- 4.2.1 Frontage to 4.2.5 Street Corner Building Design Treatments
- 4.3 Green Infrastructure

4.1.2 Private and Publicly Accessible On-site Open Space

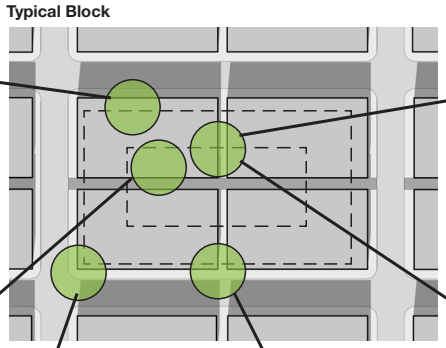
DESIGN GUIDELINES

1. General
   a. Design attractive, engaging and functional on-site open spaces with high quality, durable and contemporary materials, colours, lighting, furniture and signage at the Centre City.
   b. Integrate all publicly accessible private space with public open space to create a seamless contiguous public realm in the design of both their layout and function.
   c. Carefully locate, scale and maintain all on-site open space so that it allows for direct and/or convenient public access and accommodates active uses at grade.
   d. Frame on-site open space with retail frontages and have this space and the ground floor uses at the same level.
   e. For all residential units adjacent to on-site open space, elevate these units above grade so as to maximize privacy to occupants. This also allows for passive surveillance of the open space.

Locate open space for gathering people at sunny locations that offer optimum sun exposure.

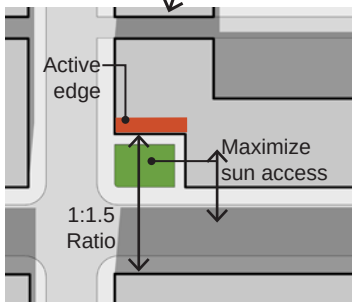
On-Site Open Space Typologies

Landscaped setbacks with grade separation from sidewalks to enhance the privacy of residents.

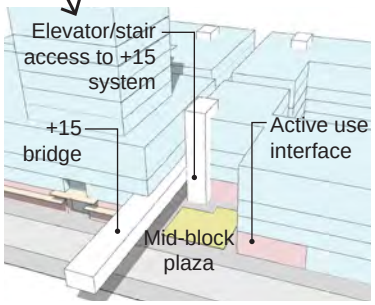


Mid-block pedestrian connection with residential interface.

Courtyard/landscaped amenity roof.

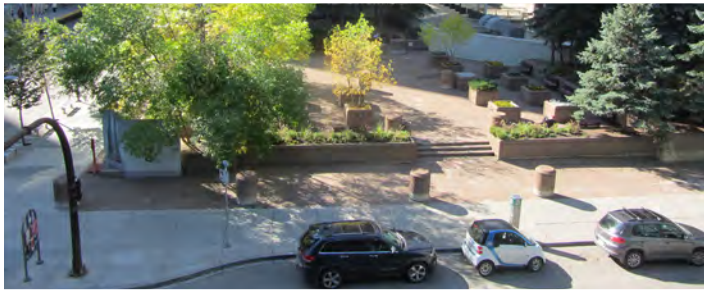


Sunny corner plaza.

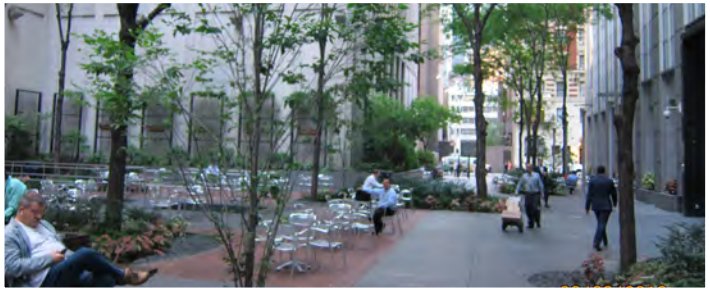


Mid-block plaza.

Mid-block pedestrian connection with commercial interface.



Sunny corner plaza.



Mid-block plaza.

f. Locate open spaces and gathering spaces at sunny locations that can offer optimum sun exposure.

g. Use landscape elements (e.g. adding trees) and transparent facade treatments (e.g. screens) to mitigate negative wind impacts at on-site open space when necessary.

2. Corner Plazas

a. Provide strong architectural corner design treatment at all street intersections. Treat corner plazas using various design interventions such as:

i. Locating corner plazas at the north-east corner of intersections;

ii. Animating corner plazas with active uses at the ground level; and

iii. Ensuring a comfortable, pedestrian-scale environment at corner plazas that is proportionate to the adjacent street right-of-way. A ratio of 1:1.5 between the east-west avenue right-of-way width and the plaza is recommended. (See lower left illustration of On-Site Open Space Typologies diagram)

3. Mid-Block Plazas and Pedestrian Connections

a. Locate mid-block plazas at sunny locations along the north sides of east-west avenues, where possible.

b. Integrate mid-block plazas with access points to the +15 system at the Downtown Core, where possible. (See 4.1.4 +15 Skywalk System)

c. Provide mid-block pedestrian connections with a comfortable, pedestrian-scale environment that responds to the surrounding built form height at the recommended enclosure ratio range of 1:1 to 1:2. (See 4.2.2 Street Wall).

Animate corner plazas with active uses to provide a comfortable and safe pedestrian environment.

d. Edge all mid-block pedestrian connections at commercial and/or mixed-use areas with active uses such as cafés, restaurants, shops and live/work units.

e. Activate mid-block pedestrian connections in residential areas by orienting residential units here directly onto the pedestrian connections.

4. Landscaped Setbacks

   a. Landscape all required building setbacks on residential streets. If desired, locate private patios and/or gardens within these landscaped setback areas.

   b. Provide private patio areas adjacent to residential units with usable, functional and attractive outdoor living space. Locate such private patios at the same level of the residential units, at the street level, or at a level in between these two levels depending on the patio location and the building setback width.

5. Courtyards and Landscaped Roofs

   a. Optimize sun exposure at all residential courtyards and above-grade landscaped roofs used as both private and/or communal open space for residents.

   b. Provide at-grade courtyards over underground parking where possible, with readily accessible connections from these to streets and lanes.

   c. Provide residents with green space through landscaped roofs where above-grade parking is unavoidable. Design access points to such landscaped roofs from the street and lane with careful consideration of all user needs.

6. Urban Community Gardens

   a. Create community gardens at grade, in sunny, non-windy locations, or on podiums or roofs, particularly in residential development to support social and economic activities. Include pedestrian lighting and sitting areas to enhance such community gardens as additional amenity space.

   b. Use urban community gardens as gateway features for different neighbourhoods where possible.

The overlooking of private and community green amenity allows for natural surveillance and increases the sense of safety and security of its users.

HERITAGE INTERFACE

Urban Design Objectives

- **Conserve** historical resources and cultural landscapes, and sensitively **integrate** any new development
- **Respect** the context of areas that have heritage character and resources
- Support the retention and **adaptive reuse** of historical resources
- Build new developments that have **exceptional** architectural merit or great **sensitivity** in a heritage context
- Apply **contemporary** interpretations of traditional designs and details in new developments
- Use historically **authentic** materials that are robust and of high-quality

Policy Reference

- Standards and Guidelines for the Conservation of Historic Places in Canada (2010)
- Calgary Heritage Strategy and Policy
- The City of Calgary's Environmental Policy
- Land Use Bylaw

Guideline Sections:

- 2.7 Historic Resources
- 2.8 Character Areas
- 4.1.4 +15 Skywalk System
- 4.2.1 Frontage to 4.2.5 Street Corner Building Treatments
- 4.3 Green Infrastructure

4.1.3 Heritage Interface

In areas of the Centre City where new development will be integrated into the context of, or be adjacent to, historic resources, the following guidelines will apply.

DESIGN GUIDELINES

1. Integration of New Development in a Heritage Context

   a. Ensure that the new development is 'contextual' with adjacent heritage buildings and/or the existing heritage character of the block as per setback, scale, massing, street-wall height and landscaping character. The land use bylaw specifies the rules for such contextual features. However, the historical contextual character will be respected to the maximum degree while aligning with the land use bylaw.

   b. Divide the massing of large developments to reflect the generally smaller, human scale of existing heritage buildings in the area. This can be achieved by dividing the mass of a large new development into smaller modules to reduce the new building's sense of scale. The massing should feature facades with height and width proportionate to contextual heritage buildings. The taller portion of the new building will be placed away from the street.

Whilst the building in the middle of the above photo is clearly a contemporary building, it exists side-by-side harmoniously with historical buildings, using high-quality and compatible finishes.

c. Design new developments to be physically and visually compatible with, subordinate to and distinguishable from the existing heritage character of the immediate context.

d. Align the redevelopment of heritage buildings, including the incorporation of heritage buildings within new developments, with the Standards and Guidelines for the Conservation of Historic Places in Canada (2010).

e. When it is not possible to retain a heritage building in its entirety, pursue the partial retention of the building and its facades, to have these incorporated in the new development. If such a development approach must be taken, the development, in general, should showcase and emphasize the remaining heritage building. This may be accomplished in numerous ways, including setting back the new development and keeping as many structural bays behind the heritage building's facade as possible.

Exceptional Architectural Merit

Recognize new development of 'exceptional' architectural merit that may not closely align with some of the guidelines in this section. Valued heritage-character areas throughout the world - present and in the past - have evolved and are enriched by exceptional developments that have deviated from the existing character of an area. Permit such exceptions in the Calgary's Centre City areas with heritage character. Exceptional architectural merit constitutes highly original and innovative design, and high-quality materials.

This new development reduces its perceived scale through differentiated vertical and horizontal articulation in its massing and facade treatment. Its design, including the use of high-quality, traditional materials, is respectful of the historical context.

This contemporary development is respectful of the adjacent heritage building to its left, using compatible fenestration (or window treatment), cornice lines, awnings and cladding materials.

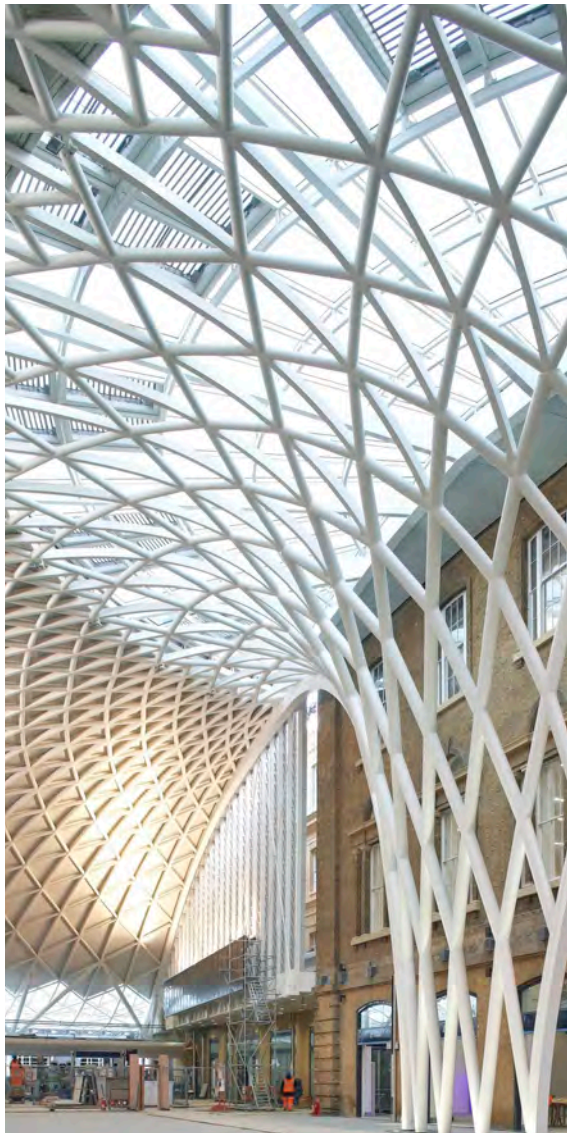
2. Materials and Facade Elements of New Developments

   a. Echo the historical stylistic and design features of the area in any new development to respect the context. Such features include window patterns and placements, roof slopes, floor levels, building finishes and materials. Specifically for commercial contexts, incorporate features such as cornice lines, roof lines, storefront alignment, entrance placements and other adjacent historic architectural features in the new development.

   b. Use high-quality materials of a long-lasting/ permanent nature - and employ high-quality design of our own time - so that one day new development may become heritage itself. Materials which are historically authentic and are proven to be of a long-lasting/permanent nature include brick, stone, terra-cotta, wood siding (solid), wood shingles and cement stucco (residential use); such materials may be used in creative and contemporary ways.

   c. Avoid copying or mimicking the design of heritage buildings in the area to create a false sense of heritage character; contemporary interpretations of traditional design and detail are encouraged.

The finishing of this new building shows how historically authentic high-quality and long-lasting materials can be used in contemporary design.



This new development shows exceptional architectural merit whilst promoting the retention and reuse of a historic resource.

+15 SKYWALK SYSTEM

Urban Design Objectives

Public Realm Integration and Connectivity

- Provide better **integration** of the +15 system with the surrounding uses, adjacent streets and public spaces
- Ensure **sensitive** and **creative** design of +15 bridges
- Respect and maintain key view corridors (see 2.6)
- Ensure overall **pedestrian connectivity** within the +15 boundaries with emphasis on retail areas (see 2.3)
- Discourage +15 links to areas outside of the +15 boundaries
- Create seamless and enjoyable pedestrian movement throughout the +15 system
- Optimize **visual connectivity** in the design of the +15 system

Animation and Quality Consistency

- **Animate** the design of +15 bridges using lighting, colours and dynamic structure and form (see 2.12)
- Locate retail and other **active uses** at strategic locations to animate the +15 system (see 2.3)
- Manage quality event **programming** to activate the +15 system
- **Maintain** the existing +15 system well, with sensitive retrofitting where needed
- Create quality space through The City's provision of "**bonusable**" public amenities (see Bylaw 33P2013)
- Incorporate "open to sky" walkways in the +15 system designed as **amenity roofs**

Policy Reference

- +15 Policy
- Downtown Retail District Strategy
- Centre City Illumination Guidelines
- Access Design Standards
- Bylaw33P2013

Guideline Sections:

- 2.9 +15 Skywalk System
- 4.1.2 Private and Publicly Accessible On-site Open Space
- 4.1.5 Seasonal Design and Sunlight Access
- 4.2.1 Frontage

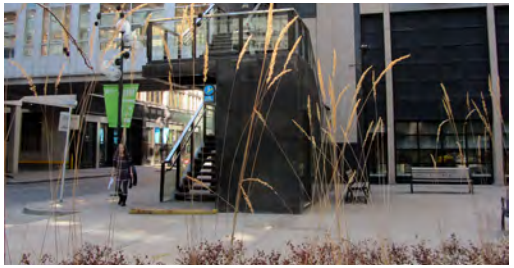
4.1.4 +15 Skywalk System

DESIGN GUIDELINES

The +15 Skywalk System provides weather-protected links between buildings, but may lessen street activity at grade. This section provides various design strategies to positively create and strengthen relationships between the public realm and the +15 system at the building frontages.

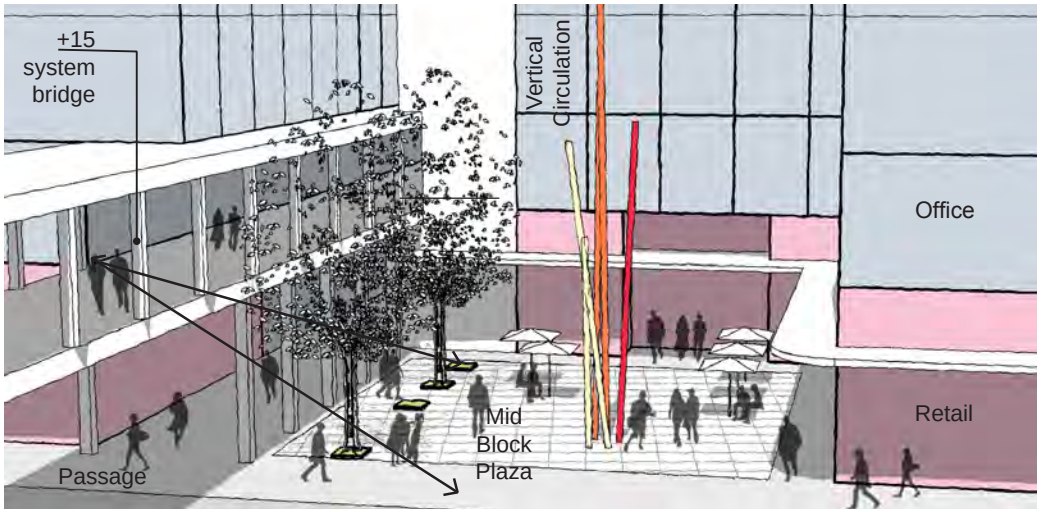
Also see:

- 2.9 for +15 system urban context map and key considerations
- Bylaw 33P2013 for "bonusable" public amenities including +15 bridge, feature access and active walkway



The +15 system connects to the streetscape through a corner plaza.

Active uses and weather protection animate connections between the +15 and the public realm.



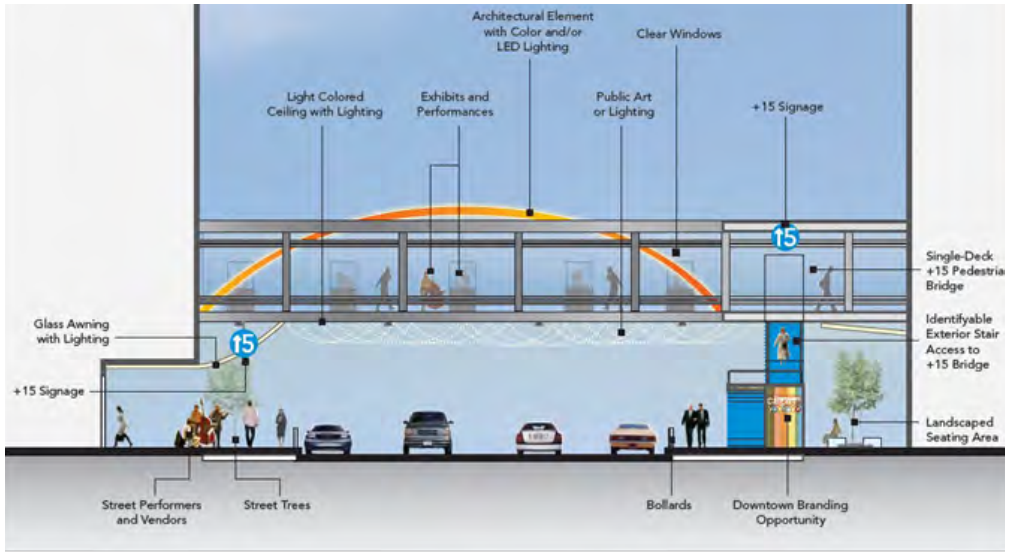
A +15 street-level access point that is well integrated with the streetscape through at-grade mid-block plaza.

1. Street Access to +15 System
   a. Increase street-level entrances to the +15 Skywalk System through publicly accessible spaces that are transparent and sheltered or enclosed (see also 4.2).
   b. Ensure all connections between the +15 system and its street-level access points are direct and well-animated.
   c. Incorporate animated, at-grade plazas that are lined with active uses and have good sun exposure, where possible, in the design of active street-level entrances to the +15 system.

See Map 17 +15 Skywalk System for opportunities to establish such active and direct connections with streets. These include:

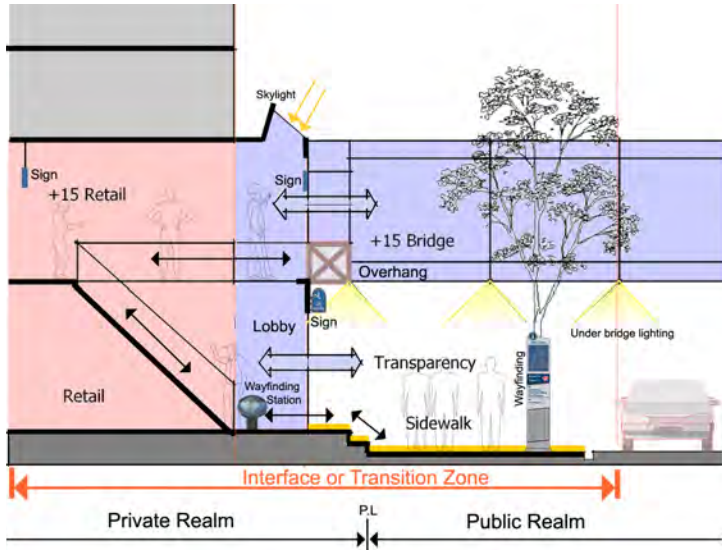
- Major transit corridors/LRT Stations
- High-density mixed-use office complexes (15.0 to 20.0 FAR)
- Parks and open spaces
- High Streets
- Major public parking structures
- Streets along the +15 boundaries

2. +15 System Design Treatment
   a. Scale the design of +15 bridges so that they are highly transparent and visually lightweight, with minimum dimensions as follows:
      i. minimum clearances of 4.75m over roads and lanes for both +15 bridges and lane links;
      ii. minimum clearances of 6.0m over LRT corridors at intersections;
      iii. minimum clearances over CPR right-of-ways, determined on a site-specific basis;
      iv. minimum unobstructed widths of 4.5m for +15 bridges, walkways and lane links; and
      v. minimum unobstructed widths of 2.0m for +15 stairs.
   b. Maintain visual access between the +15 system and both the streets and adjacent open space.



The design treatment of a +15 bridge and its access point at the street-level entry.

c. Design the +15 system with elements that brighten, animate and enhance the appearance of the system from the street level, through the following ways:
   i. special lighting treatment;
   ii. temporary and/or permanent public art installations; and
   iii. contemporary, high-quality materials with unobtrusive colours and textures and other streetscape elements to complement the design of the +15 system.



A +15 Skywalk System complete with both vertical and horizontal connectivity.

SEASONAL DESIGN AND SUNLIGHT ACCESS

Urban Design Objectives

- Preserve and optimize **sunlight** access to all public and private realm
- **Orient** and **design** buildings to minimize shadow impact on streets, open spaces, parks and neighbourhoods.
- Mitigate negative **wind** impacts
- Design for **snow** storage and removal
- Encourage **seasonal**, decorative and experiential lighting installations
- **Program** a variety of events to activate the public and private realm throughout the year
- Design for safe pedestrian **movement** and **comfort** in the winter season

Policy Reference

- Centre City Parks & Public Realm Enhancement Plan
- Public Art Policy
- Beltline ARP
- Land Use Bylaw

Guideline Sections

- 2.12 Seasonal and Night Design
- 3.2.5 Street Trees
- 4.1.2 Private and Publicly Accessible On-site Open Space
- 4.2.1 Frontages to 4.2.6 Upper Building Level Impacts
- 4.3 Green Infrastructure

4.1.5 Seasonal Design and Sunlight Access

People enjoy streets, buildings and places that are well designed and responsive to the weather and seasonal variations. For a winter city like Calgary, the success of any public realm lies in the careful consideration of winter conditions in its design. The following design guidelines aim at designing great public spaces for all day use through the different seasons, with optimized sun access to these places.

DESIGN GUIDELINES

1. Weather Protection
   a. Apply weather protection treatments to help mitigate wind impacts in all developments. Minimize adverse wind impacts to the public realm using sensitive site design, building form, massing and enclosure, landscaping, continuous street wall heights, various forms of sheltering and recesses.
   b. Provide canopies along building frontages whenever possible to shelter pedestrians from the weather. Incorporate various at-grade, transparent and sheltered or enclosed publicly accessible spaces, such as covered pedestrian walkways/gallerias, indoor parks, winter gardens or colonnades.

Use continuous canopies on key retail streets for weather protection as well as to enhance human scale.

Calgary Sunlight Access Parameters

Design new development to minimize shadowing of streets and open spaces. In all development applications, demonstrate how the tower and building massing are designed to minimize shadowing impacts. Consider the following in the sun access/ shadow impact analysis:

i. **Shadow casting and sun access at the spring/fall equinox at 10 a.m., noon, 2 p.m. and 4 p.m.**

ii. **All pertinent information for sites where adverse shadow impact is a major concern**

iii. **Calgary's time zone of Mountain Daylight Time (-7), latitude of 51˚6' and longitude of 114˚1'**

Use decoration and lights to enhance pedestrian experience of seasonal changes at parks and open space.

Remove snow for safe pedestrian movement during winter.

See guidelines in 4.2.4 Facade Articulation on design considerations for canopies and colonnades.

c. Consider pedestrian winter needs in the design of all pedestrian amenities such as sidewalks, crosswalks, bikeways and the +15 system. Enhance pedestrian comfort through the following features and conditions:
   i. communal heaters and heat lamps at ground level within transit station waiting areas; sheltered fire pits; heated steps and ramps; canopies/extended glass awning over patios, colonnades, gallerias, operable/retractable transparent windows;
   ii. street furniture suitable for all seasons, such as wooden seats instead of concrete;
   iii. sensitive location of street seating amenities, responsive to the local climate conditions;
   iv. generous pedestrian lighting;
   v. covered bike parking to increase usability in winter;
   vi. durable paving materials that tolerate freeze-thaw cycles;
   vii. transit amenities with generous shelter and space to accommodate drifting snow and wintry conditions;
   viii. snow-melt systems at key, high-use areas;
   ix. careful street tree planting to avoid shadowing and icing over of paved surfaces in winter, as well as to mitigate negative wind impacts;
   x. strategic placement of high canopy deciduous trees for summer shade and winter heat; and
   xi. frequently spaced planting islands and boulevards for snow storage and melting or removal, in addition to stormwater management.

d. See street-level sheltered or enclosed connections guidelines in 4.1.4 +15 Skywalk System.

e. Use encroachment agreements to enable the provision of weather protection where infringement on The City ROW by weather protection installations is unavoidable.

2. Sunlight Access
    a. See Map 21 Shadow Sensitive Areas (under 2.12).
    b. Optimize sun access in general, to adjacent public realm, such as the opposite street frontage, public open space and on-site open space. Consider:
        i. stepping back the higher levels of building podiums and/or the upper parts of street walls to optimize sunlight access to the podium level of the building facade especially on the north side of east-west avenues;
        ii. sculpting the form of upper building levels to optimize sun access to the public realm on larger sites;
        iii. using creative solutions, such as directing reflected light, to allow sunlight access to the public realm especially on smaller sites and neighbouring, north-facing buildings; and
        iv. placing and spacing towers, and orienting mid-rise buildings to minimize adverse shadowing of opposite internal courtyards and building frontages, while ensuring natural light access, views and privacy, especially for residential units.
3. Experiential and Decorative Features
    a. Incorporate light, texture, colours and the application of contemporary technology and materials creatively in the design of people-gathering spaces to animate these places. Such places include high streets, parks, open spaces, urban plazas, +15 Skywalk System, the Stampede Parade route, potential locations for sPARKs and Neighbourhood Centres and the identified Gateways to the Centre City.
    b. Use audio-visual, kinetic and other interactive features to reflect seasonal changes and/or events to enhance pedestrian experience and use of the public realm.
    c. Provide event programming to activate public gathering spaces and streets such as pop-up parks, street vending, temporary or seasonal farmer markets, food trucks, artisan exhibitions and street performances.

PEDESTRIAN AND VEHICULAR ACCESS

Urban Design Objectives

- Minimize pedestrian and vehicular **access** conflicts
- Design for **safe** and convenient pedestrian movement for all ages and abilities, in all seasons
- Design for **pedestrian comfort** especially in the winter season
- Promote **natural surveillance** of streets and lanes
- Create **visual cues** to facilitate pedestrian and vehicular navigation

Policy Reference

- Access Design Guidelines
- Public Art Policy
- Land Use Bylaw

Guideline Sections

- 2.1 Streetscape Characters
- 3.1 Streetscape Zones
- 3.2.1 Public Sidewalks
- 3.2.5 Street Trees
- 3.3 Lane Character Typologies
- 4.1.2 Private and Publicly Accessible On-site Open Space
- 4.1.4 +15 Skywalk System
- 4.2.1 Frontage to 4.2.4 Facade Articulation
- 4.3 Green Infrastructure

4.1.6 Pedestrian and Vehicular Access

DESIGN GUIDELINES

1. Accessibility and Wayfinding
   a. See guidelines in 3.2.1 Public Sidewalks.
   b. Integrate wayfinding features with clear directional signage into the design of all new development wherever possible and needed. Ensure signage design is legible and accommodates the needs of the aging population.
   c. Place services frequently used by the public at visible, prominent and convenient locations, such as at entries or along the street front.
   d. Provide direct pedestrian access to parking from streets. Ensure stairs for such access are highly visible at all levels, from the street.
2. Safety And Security
   a. See guidelines in 3.2.1 Public Sidewalks.
   b. Use appropriate materials in paving treatment for safe pedestrian and vehicular movement. Consult with The Advisory Committee on Accessibility for advice on alternative paving treatments that would allow persons with mobility challenges to reasonably manage their travels.
   c. Provide multi-sensory features to minimize vehicle-pedestrian conflict, such as textured paving, warning lights and sounds and similar safety devices. Areas of potential vehicle-pedestrian conflict include vehicle access points to parking facilities and service access points.
   d. Provide lighting for safety on buildings and at the private and public realm to illuminate sidewalks, entrances, pedestrian pathways and amenities.
   e. Place doors, windows, balconies and street-level uses to provide lines of sight for natural surveillance of the street, private and public realm.


Use attractive vehicular entry doors at a street frontage.

   f. Ensure a high degree of transparency at street-level where appropriate, to provide views into spaces behind walls or plantings, at corners and along lanes or narrow passageways.
   g. Provide temporary and/or alternative uninterrupted safe pedestrian movement when construction is underway in all new developments.
   h. To manage access and security needs, indicate clearly the extent of and boundaries between publicly accessible private open space and private open space.
3. Vehicle Access
   a. Avoid locating vehicle access on the short sides of city blocks along north-south streets, especially on key retail streets.
   b. Provide all service and parking access through service lanes in all new developments, appropriate to the character and function of the lane typology. Ensure safe, efficient movement of private and service vehicles through all lanes, except enhanced lanes. This would help ensure contiguous public realm and sidewalks for

unimpeded pedestrian movement and connectivity. It also allows for better street wall continuity and definition.

c. Do not close lanes except for enhanced lanes with limited or no vehicular access.

d. Where there is no lane and/or reduced lane access:

i. limit vehicle access to 2 per the standard city block length on east-west avenues;

ii. locate vehicle access at a minimum of 30.0m away from corners or intersections, and from other vehicle access points; and

iii. share the use of vehicle access in multiple ownership circumstances.

e. Locate all loading docks and ramps to prevent physical obstructions and/or interference to the public realm.

f. Keep the size of vehicular entrances to the minimum width and height feasible for access.

g. Screen all vehicle access points with attractive garage doors and/or gates that contribute positively to the street and/or lane character and the public realm.

4. Parking

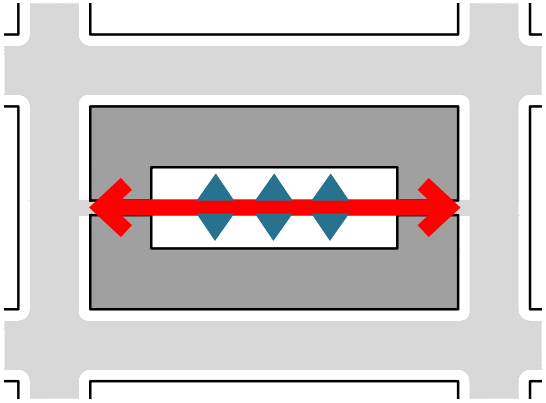
a. Provide below-grade parking for all required on-site parking.

b. Where above-grade and/or structured parking is unavoidable, line the parking facility with active and/or retail ground floor uses throughout the entire length of its street frontage. Screen all building levels above ground of such parking facilities with quality architectural and/or landscaped facade treatments. This is to conceal the parking use at grade or at the street level.

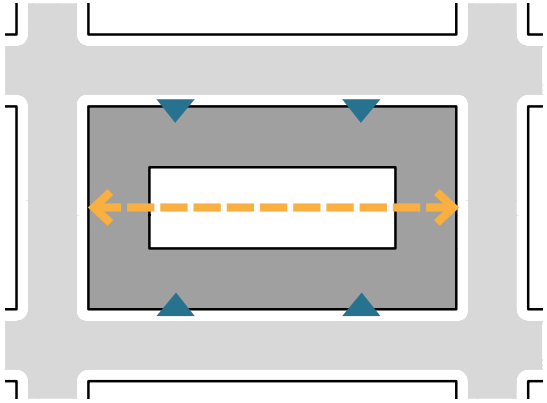
c. Reduce the visual impacts of parking facilities, their entrances and related signs and equipment as much as possible.

d. Break large parking areas into smaller areas, and screen them using trees, other landscaping and/or fencing.

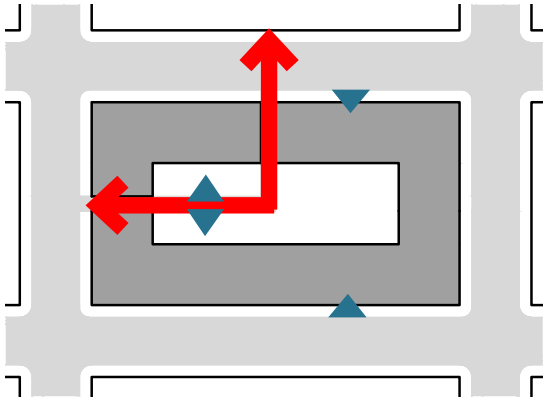
Limit the number and width of vehicle entries along a street frontage to maximize continuity of street wall and the public realm.



Full Vehicle Lane Access



No Vehicle Access at Lane with Pedestrian Access Only

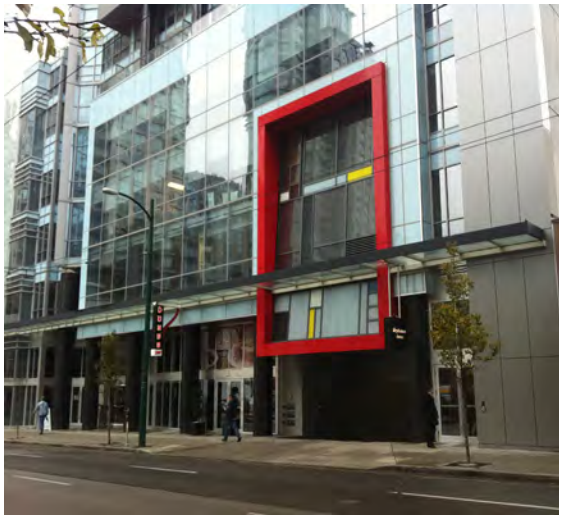


Reduced Vehicle Access at a Partial Lane

Legend ▼ Parking/Service Entry ↔ Parking/Service Access ↔ Pedestrian-Only Access

The above figures show different parking and service lane access options at a city block.

Line above-grade parking facilities with active uses at the street level.



Use bold colours and signage to clearly indicate parking entries.

e. Design at-grade and above-grade parking structures to integrate architecturally with the rest of the building and streetscape.

f. Design parking areas to allow for multiple uses in multi-residential development, such as children's play spaces, outdoor gathering areas, sports courts or recreational space for residents.

5. Services and Utilities

a. See guidelines in 3.2.9 Utilities.

b. Place and design service entries, loading docks, recycling and waste facilities away from pedestrian areas or in a less visible location of the development site to reduce impacts on pedestrian circulation and building aesthetics.

c. Maintain attractive and safe edges through screening, planting, or other design treatments where service facilities abut pedestrian areas or the perimeter of the property.

d. Locate building utilities such as meters, mechanical boxes and ventilation shafts within the development site, in a building alcove, or a landscaped area that is fully screened from view of the public realm.

FRONTAGE

Urban Design Objectives

- Create **attractive**, **fine-grain** and **animated pedestrian-friendly** street frontages that encourage and support active, safe, engaging and healthy street life and events for all ages
- Create attractive and **multi-functional** building frontages with lanes through active retail and/or residential uses at street level
- Design building frontages that promote the safe use of **streets** and **lanes** for both **pedestrians** and **vehicles**

Policy Reference

- Centre City Parks & Public Realm Enhancement Plan
- Sustainable Development Guidelines for Trees, Shrubs and Groundcovers
- Slope Adaptive Development Guidelines Policy
- Land Use Bylaw

Guideline Sections:

- 2.3 Retail Nodes and Corridors
- 2.8 Character Areas
- 3.1.3 Frontage Zone
- 3.2 Streetscape Elements
- 4.1.1 Public Open Space Interface
- 4.1.2 Private and Public Accessible On-site Open Space
- 4.3 Green Infrastructure

4.2 Built Form

4.2.1 Frontage

Design buildings to create and support high quality pedestrian environments in the Centre City:

- at a scale that relates well to the neighbourhood context;
- with street walls that have articulation and frontages to generate active and attractive streets and open spaces; and
- that provide sunlight and privacy for their occupants.

DESIGN GUIDELINES

1. Commercial and Residential Street-Level Interface
   a. General
      i. Use a minimum floor-to-floor height of 4.5m for ground floor heights, to accommodate the possibility of future retail uses.
      ii. Minimize building setbacks to achieve street wall consistency where possible and/or desired, and reinforce the intentions of existing Area Redevelopment Plans (ARPs) in all building setbacks. Accommodate underground parking at building setbacks where and when allowed.

A sensitive treatment using gently sloped ramp and clear step placement at a street corner to accommodate grade change.

Gently sloping surfaces provide zero level change at the building entrance and accommodate grade-separation requirements of a site at the floodplain. This development shows a seamless interface treatment between private development and the public ROW.

iii. Orient all primary lobby entrances and active ground floor uses towards the street.

iv. Provide frequent building entrances to suit the surrounding use intensity, at-grade building uses and streetscape type, as follows:

- On streets requiring a fine-grain rhythm of shop-fronts and/or residential access, space the building entries to no more than 20.0m apart.
- On streets where a coarser grain of residential and/or office entries is acceptable, space building entries to no more than 40.0m apart.

v. Buildings located at the floodplain are required to be elevated in accordance with the Land Use Bylaw and the Alberta Environment Regulations. This is to ensure protection from the 1 in 100 year floods. Where grade changes are unavoidable, such as in areas with these floodplain restrictions:

- locate ramps and steps clear of the main path of pedestrian movement, away from building corners, minimizing their sizes and appearance;
- incorporate sloped and/or ramped floors using the zero level change principles in their design; and
- preferably, use interior steps and ramps to accommodate the grade changes.

vi. Incorporate at-grade active uses (such as retail use, commercial display space, urban plazas, interactive public art, lighting, blade signage, etc) to activate the building frontage.

vii. Provide building and site lighting to ensure all grade separated areas are well lit.

viii. Use multiple smaller levels to avoid having single retaining walls that are large and blank.

ix. Scale grade separations to act as seating walls wherever possible, for pedestrians to rest.

x. Use transparent glazing to provide visual access or views to internal uses.

xi. With large format retail development, when located at grade, line this with smaller shops to reduce its building bulk, increase fine grain in its street frontage and prevent blank wall frontages.

xii. Do not set back buildings along all key retail streets where possible, especially at the Downtown Core.

xiii. See 4.1.1 (2) for interface treatment of buildings adjacent to the Riverfront.

Provide outdoor dining at key retail streets to enhance street level activation.


In areas requiring floodplain considerations, accommodate shop access through the careful design of stairs and/or ramps within the building or tenancy.

b. Ground Level Retail Interface
   i. Provide street level retail uses relevant to the identified retail nodes and corridors.
   ii. Provide a seamless grade transition between shops and the sidewalk.
   iii. Locate outdoor dining and retail uses on retail-oriented streets to animate and activate the streetscape, where possible.
   iv. Create a fine-grain rhythm of multiple shop fronts, frequent entrances, shop display windows, architectural design articulation, canopies and signage along retail streets.

c. Ground Level Office Interface
   i. Do not extend building entries/access points to towers beyond 30 per cent of the length of their facades at grade, along street frontages.
   ii. Avoid having sheer towers extend directly onto adjacent sidewalks so as to minimize impacts on pedestrian-scale and amenity quality of the streetscape. This would also mitigate wind impacts at the street level.
   iii. Maintain active uses like retail frontages where possible, at all office and live/work streets.
   iv. Where continuous retail use is not immediately viable in key commercial areas such as the Downtown Core, locate interim uses and amenities like public art, cultural space and exhibition areas at grade.
   v. Should continuous retail use be not immediately viable at transition areas like the Beltline, activate the ground level through internal uses. Examples include having continuous transparent windows at street level and/or locating internal active uses such as office and cafés along the street interface.

Keep entrances and entrance lobbies to towers within 30 per cent of the facade at grade along street frontages.

Line large format retail uses with smaller shops at grade to reduce building bulk, with fine grain street frontages to prevent having blank walls along street frontages.

d. Ground Level Residential Interface

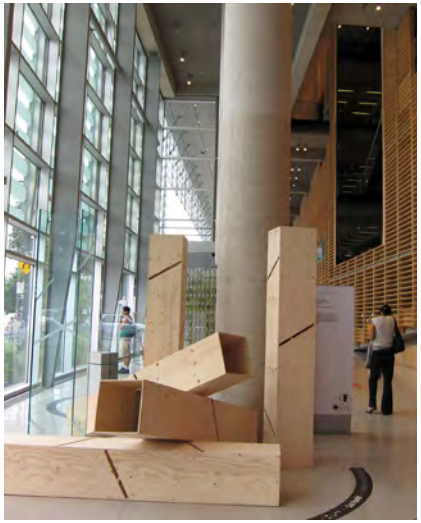
i. Provide a grade separation between the ground floor level of residential units and public sidewalks, to offer privacy for residents. The optimal range of grade separation is 0.5m to 0.9m. Where grade separation greater than 0.9m is unavoidable, increase the setback distance to allow for a soft landscaped buffer treatment with a pedestrian-friendly interface at the adjacent sidewalk. Similarly, where grade separation less than 0.5m is unavoidable, provide greater setbacks with soft landscaped buffer to ensure privacy for residents.

ii. To accommodate such grade separations, use appropriately scaled stair access (or ramp in the case of accessible units) and landscaped terraces consisting of small vertical walls, low and visually permeable fences, and CPTED-aligned (Crime Prevention Through Environmental Design) horizontal and vertical landscaping. Avoid using high walls and fences.

iii. Accommodate building projections such as balconies and/or insets at building setback areas where possible. Determine sensitively factors like location, intensity of use and safety in the design of these building components.

iv. Provide private open space for dwelling units like patios, terraces and gardens within building setback areas where possible.

v. Provide separated or individual primary access to the street from each dwelling unit, whenever possible.



Consider interim uses at grade such as public art, cultural and/or exhibition space at areas with less intensity of use.

Provide grade separation and greater landscape setbacks between the sidewalk and ground floor of residential units to increase privacy for residents.

A retail street frontage with a fine-grain rhythmic repetition of active uses, multiple shop and lobby entrances, all oriented towards the street.

STREET WALL

Urban Design Objectives

- Establish appropriate **street wall heights** to maximize street definition and a sense of **enclosure** for streets and open spaces
- Allow for optimal access of **sunlight** to and sky **view** from sidewalks and open spaces
- Provide for great **pedestrian** comfort and **human scale** street experience

Policy Reference

- Sustainable Development Guidelines for Trees, Shrubs and Groundcovers
- Slope Adaptive Development Guidelines Policy
- Land Use Bylaw

Guideline Sections:

- 3.1.3 Frontage Zone
- 3.2 Streetscape Elements
- 4.1.2 Private and Public Accessible On-site Open Space
- 4.3 Green Infrastructure

4.2.2 Street Wall

DESIGN GUIDELINES

1. Street Wall Height to Street Right-of-Way Width Ratios

   a. Design buildings to form a consistent and strong edge to streets, especially at the first 9.0m from grade. This generally consistent minimum building height helps to establish a street wall, creating a sense of enclosure for streets and the public realm.

   b. The proportion of the height of street walls to the width of a street's right-of-way determines the character of the street and the quality of the pedestrian experience. Best practices show good street definition and enclosure are achieved using the optimal ratios of street wall height to street right-of-way width of between 1:1 and 1:2.

   c. Refer to the street right-of-way widths for the Centre City as identified by The Transportation Department at The City of Calgary. Use these identified street right-of-way widths and the optimal street proportions/enclosure ratios ranging between 1:1 and 1:2 to determine the appropriate street wall heights needed to maximize street definition and enclosure for a pedestrian-scale public realm.

   d. Vary building heights along a block length to increase street wall height diversity, as well as allow access to sky view, where appropriate. Heights varying between 1 and 2 storeys are preferred. Opportunities for such variations of street wall heights include:

      i. residential neighbourhood streets and high streets – where the optimal ratio could be reduced to emphasize pedestrian scale;

      ii. an open space – where the optimal ratio could be reduced to provide a better sense of enclosure, enhance human-scale and allow more sunlight access; and

      iii. where street wall height diversity is preferred to avoid uniformity and monotony in the street frontage treatment, or to integrate with historical street frontages and buildings.

   e. Step back street walls by a minimum of 2.5m at the upper levels of buildings to allow sunlight access to sidewalks, open space and building podium amenity spaces to the north of east–west avenues. The sunlight access would also enhance the growth and health of street trees.

   f. Use varying design details, different wall surface treatments and modulations as well as different materials to create street wall facades that contribute positively to pedestrian experience of the streetscape.

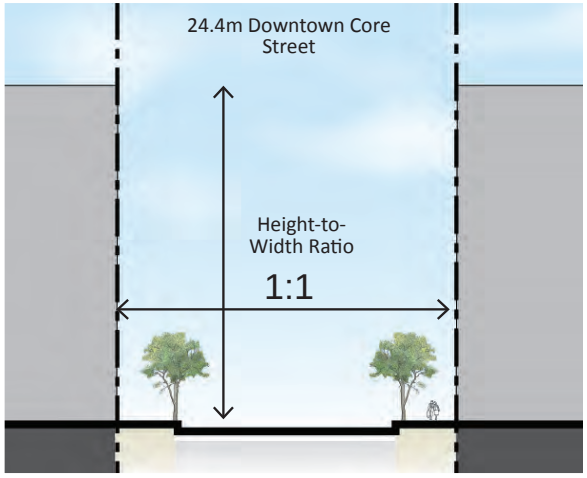
   g. Reinforce the intended street wall character by extending the street wall facade treatment to wrap around corners on sites fronting onto street and lane intersections.

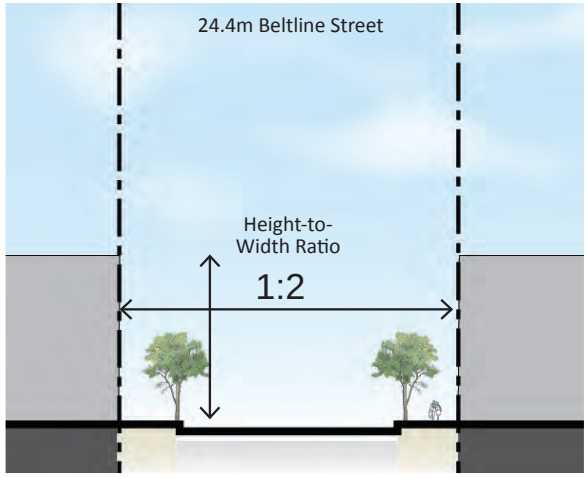
   h. Seamlessly incorporate the building's access elements (such as stairs, stoops, ramps and lifts) within the building envelope to preserve street wall alignment. If this is not possible, mitigate level changes in the street frontage by setting the building back by several metres from the street and increase the visual interest of the building frontage using slopes, landscaping, public art and other amenities or site design solutions.

   i. For all new developments along an underpass street, refer to the Downtown Underpasses Urban Design Guidelines for further details.

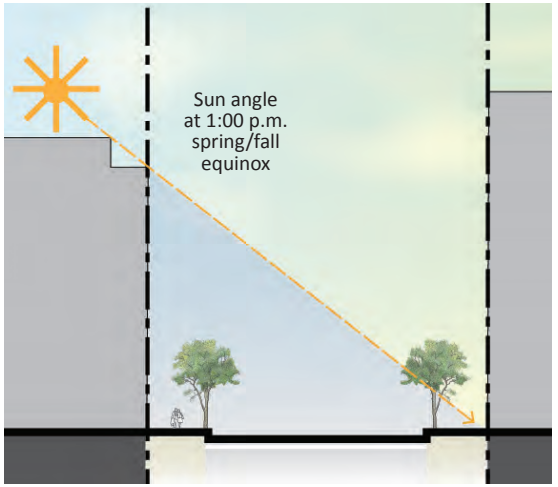
Use a street wall ratio of 1:1 for a location that has a high intensity of use such as this multi-residential development.

Provide maximum sun access to opposite street facade at spring/fall equinox.





The above figures show the optimal street wall height to street right-of-way width proportions (or enclosure ratios) of 1:1 to 1:2.



This figure shows the recommended street wall height, on east-west avenues, that offers maximum sun access.

Street proportion is the ratio of the height of buildings along the edges of the street and the width of the space between the buildings. Street proportion gives a measure to certain qualities of the street including its access to sunlight and sky view.

Toronto Official Plan 2010

This illustration shows the street wall to street width ratio and its impact on (i) the quality of street definition, (ii) sense of street enclosure and (iii) pedestrian environment at the street level.

BUILDING MASSING

Urban Design Objectives

- Create **building forms** that reinforce the street wall and contribute positively to the streetscape and the public realm as well as the skyline
- Design the **upper floors** of buildings to mitigate impacts on surrounding context, adjacent streets and open spaces
- Shape building forms and envelopes to create positive complementary impacts on the **streetscape** and **public realm**
- Use diverse **design articulation** treatment of building forms to reduce building bulk and generate attractive permeable edges that enhance pedestrian street experience

Policy References

- Centre City Parks & Public Realm Enhancement Plan
- Sustainable Development Guidelines for Trees, Shrubs and Groundcovers
- Land Use Bylaw

Guideline Sections:

- 2.1 Streetscape Characters
- 2.6 Skyline, Gateways, Landmarks and View Corridors
- 2.7 Historic Resources
- 2.8 Character Areas
- 3.1.3 Frontage Zone
- 3.2 Streetscape Elements
- 4.1.2 Private and Public Accessible On-site Open Space
- 4.3 Green Infrastructure

4.2.3 Building Massing

DESIGN GUIDELINES

1. Massing and Scale
   a. Design buildings to the following massing categories in terms of storeys:
      i. podium (or base building) – generally of 1 to 6 storeys;
      ii. mid-rise – generally of 7 to 10 storeys; and
      iii. tower – generally of more than 10 storeys. For buildings above 10 storeys, articulate their towers in accordance to the tower articulation guidelines in 4.2.4 c. Mid-Rise and Tower Articulation.
   b. For full block building development:
      i. design multiple building volumes that are in proportion to and distinctive from one another; and
      ii. create transitions in the bulk and scale of the buildings.
   c. Distinguish building volumes using a variety of architectural expressions or forms to avoid monotonous building forms.
   d. Design building forms with:
      i. lower floors that reinforce the street wall and create a strong sense of enclosure at the street level; and
      ii. tall, slender, well-proportioned upper floors, with step backs, to offer a human-scale public realm at the street level.

A retail podium that has residential tower and a fine grain appearance at grade.

Commercial tower.

Residential podium (or base building).

Residential mid-rise building.

Residential tower.

2. Podium Articulation

   Consider the following:

   a. Express podiums (or base buildings) clearly, where desired, as distinct from upper building massing. This can help reinforce the desirable street wall heights.

   b. Vary the physical form of building facades at the podium level along streets to (a) minimize the overall building bulk; and (b) create a fine-grain human scale street frontage. Consider using a variety of vertical articulation in the building facades, including projecting bays and insets, to distinguish and reinforce the building design.

   c. Emphasize building entries at podiums using building elements such as canopies and vertical architectural features.

   d. Locate active uses at the ground level and other levels of podiums where possible, to animate the streetscape.

3. Mid-Rise and Tower Articulation

   Consider the following:

   a. Articulate the building form of mid-rise buildings that exceed 60.0m in length, to reduce the perception of building bulk at the street level.

   b. Differentiate the mass of a building tower from the podium (or base building) by stepping back the tower a minimum of 3.0m from the street edge of the podium. Generally, the taller the building is, relative to its podium, the greater is the stepping back. This is to reduce the negative impacts of the taller building on the surrounding context and adjacent streets.

   c. Use materials, colours, or architectural expressions of the building facade to distinguish the upper building levels from the podium (or base building).

Articulate buildings using bays and insets to minimize building bulk and create fine grain street frontages that are human-scale and pedestrian friendly.

d. Accentuate the design of building entries using architectural articulation such as continuous recesses or projections running vertically up the building facade of the upper building levels.

e. Incorporate roof caps, terraces and/or other architectural expressions or forms at the upper building levels of towers to provide the Centre City with an interesting skyline. Avoid flat-topped roof profiles that could make a building look top heavy.

f. Design the tower massing to clearly express a middle building shaft and building top that are complementary to the scale and materiality of the building podium.

4. Roofs

   a. Integrate vents, mechanical equipment, and elevator penthouses into the roof design or its architectural treatment. Alternatively, consider using materials compatible with the buildings to screen these building elements.

   b. Design the roofs of podiums and mid-rise buildings preferably, as sustainable and active amenity space enhanced with quality landscape treatment.

   c. Design the roofs of podiums and mid-rise buildings that are not actively used, with materials and colours to make them visually attractive when viewed from above.

A mid-rise building with interesting building articulation massing, using spatial volumes to mitigate building bulk and scale.

Stepping back the tower to define the building podium and the street walls. This also reduces the negative impacts of taller building parts on the adjacent streets and surrounding context.

A commercial podium with colonnade at the ratio of 2:1 and a street wall height to street width ratio of 1:2. The step-backs at the upper building parts help to mitigate adverse shadow impact on adjacent public realm, sidewalks and surrounding building facades.

Design buildings with careful setbacks and tower placement to ensure sunlight access to on-site open spaces.

Design landscaped roofs to look attractive from above.

Use landscaped roofs to provide private on-site open space for building occupants to enjoy on smaller sites.

FACADE ARTICULATION

Urban Design Objectives

- Design visually and physically attractive building facades to enhance the **public realm** and the **streetscape**
- Enhance facade design treatment with diverse building **materials**, surface **textures**, **colours** and complementary **building elements** such as canopies, building lighting, building signage and bike racks, as well as street furniture and public art

Policy Reference

- Centre City Parks & Public Realm Enhancement Plan
- Sustainable Development Guidelines for Trees, Shrubs and Groundcovers
- Land Use Bylaw

Guideline Sections:

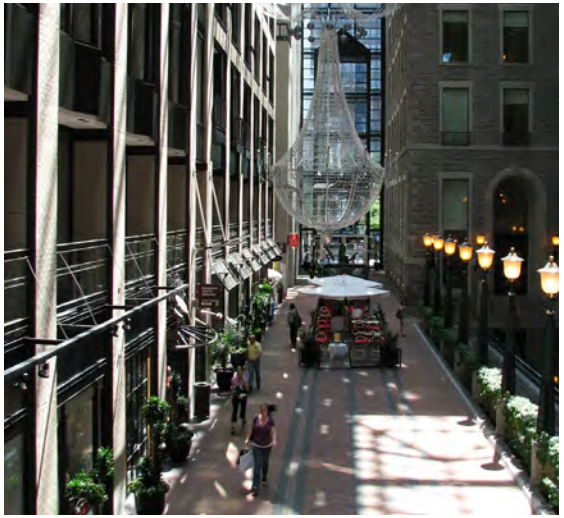
- 2.1 Streetscape Characters
- 2.7 Historic Resources
- 2.8 Character Areas
- 3.1.3 Frontage Zone
- 3.2 Streetscape Elements
- 3.3 Lane Character Typologies
- 4.1.1 Public Open Space Interface
- 4..1.2 Private and Public Accessible On-site Open Space
- 4.3 Green Infrastructure

4.2.4 Facade Articulation

DESIGN GUIDELINES

1. General
   a. Introduce vertical breaks and step-backs to break up the facades of building frontages that exceed 60.0m in length. This also helps develop the fine grain quality desired, especially at key retail street frontages.
2. Texture and Building Materials
   a. Maximize transparency in building facades at the ground level to support visual interaction between the active uses in the buildings and the surrounding street context.
   b. Avoid blank walls at ground level. Use public art, architectural features or details and landscape to mitigate the negative visual impact of blank walls, should such walls be unavoidable.
   c. Generate fine-grain facade articulation using different architectural configurations of vertical and horizontal planes and breaks, insets and projections in the facade treatment.
   d. Create rhythms, variations and diversity in the facade design through window and curtain walling configuration and placement.
   e. Design facades using high quality materials that are durable and contemporary. Use locally sourced materials to help contribute towards a “Calgary character”, as well as sustainability initiatives.
   f. Add visual interest to facades as well as building massing using contrasting and saturated colours. This will also provide visual vibrancy in winter.
   g. Consider designing building facades to sensitively provide desired reflected light into streets, open space and onto north-facing neighbouring buildings, especially in winter.

Use windows, walls, materiality and colours to articulate building facades so as to create fine-grain street frontages. Articulate the building form with set-backs or insets to help reduce the impact of building bulk on adjacent sidewalks.



Use reflected light and allow daylight through skylights and clerestory windows to increase sunlight access to plazas and sidewalks in between buildings.

Integrate on-site bicycle racks with the design of the building envelope at ground level.

Mixing local sandstone materials with contemporary materials like steel and glass makes for a very interesting contemporary design of this building facade.

Use a wrap-around wall treatment with interplay of materials and accent colours to reduce bulk and add fun to a building facade.

3. Integrating Facade Elements

   a. On-site bicycle racks:

      i. See guidelines in 3.2.3 Bike facilities.

   b. On-site public art:

      i. See guidelines in 3.2.8 Public Art.

   c. Canopies and Colonnades:

      Consider the following in the design of canopies and colonnades:

      i. Angle canopies back towards the building with heating devices to melt snow accumulation at the building face.

      ii. Ensure canopies are designed to withstand snow loads, as well as to prevent the formation of icicles.

      iii. Locate canopies at primary building entries to both protect users and define entries.

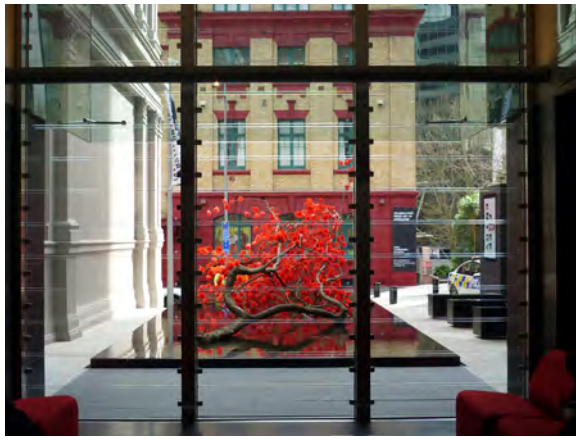
      iv. Keep canopy heights to a maximum of 3.0m to protect pedestrians effectively from weather elements. This would also offer a good pedestrian scale at the street level.

      v. Orient and angle canopies to shed snow into the furniture zone without posing any hazard to pedestrians at streets and open spaces.

      vi. Use transparent and visually light canopies to allow for passive surveillance of the street from upper building levels.

A mixed-use development of housing above and supermarket at grade, with building facade treatment that reflects the different retail and residential uses.

Use on-site public art to complement facade articulation and enhance pedestrian experience at the street level.



Carefully placed on-site courtyards with attractive vibrant public art provide for both views from the building interiors and visual interest at the street level.

Integrate on-site public art into the building facade treatment.

vii. Use colonnades only at sunny locations along key retail streets. Design colonnades using the height-to-width ratio of 2:1 to allow sun access to the internal facade of the colonnaded area.

viii. Provide transparency at the internal facade of the colonnade through the use of large windows. This will allow indirect sun light into the building interiors as well as passive surveillance of colonnaded area.

d. Use encroachment agreements to enable the provision of weather protection where infringement on The City ROW by weather protection installations is unavoidable.

4. Building Lighting

a. Install building lighting to enhance the safety of building users and pedestrians.

b. Design building facades to allow for easy identification of pedestrian and vehicular entrances at night.

c. Use building lighting to complement and enhance lighting in any adjacent public realm.

d. Use a hierarchy of lighting levels suitable for different uses in a building.

e. See also guidelines in Section 3.2.7 Lighting.

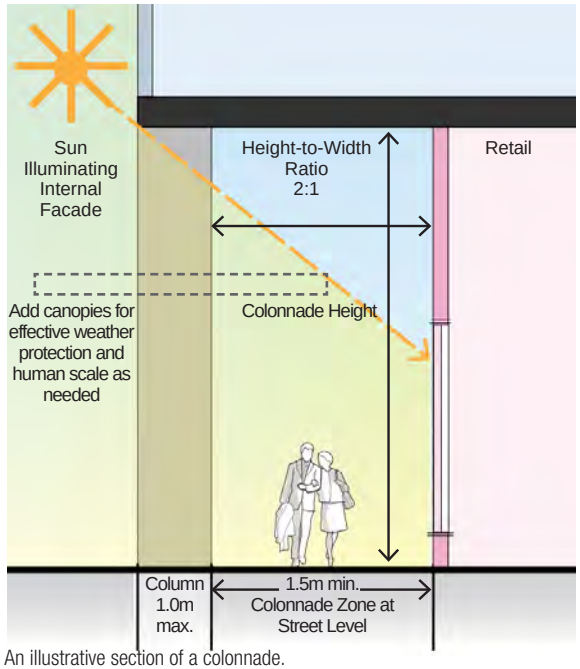
5. Building Signage

a. Design the building signage to enhance a building's identity and its wayfinding system.

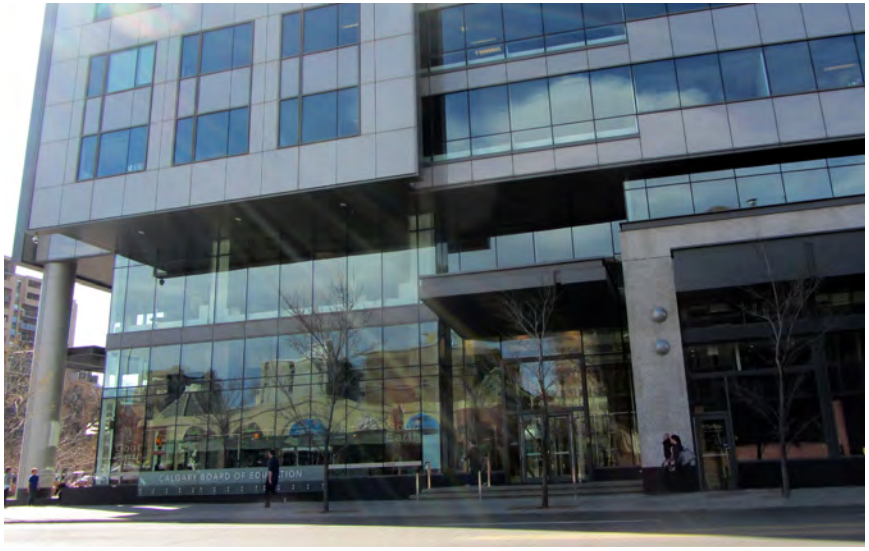
b. Integrate the design of the building signage with the design of the building facade, with consideration of the building's architectural details, materials and colours.

c. Consider using digital building signage whenever it is appropriate, to add visual vibrancy at key retail streets. Minimize any impact of digital building signage on residential development.

d. See also guidelines in Section 3.2.6 Signage.



An illustrative section of a colonnade.



Articulate facades using different planes to heighten the 3-dimensional visual interest of a building, with a canopy to accentuate the building entrance as shown here.

Locate colonnades on key retail streets, preferably at areas with good sun exposure.

Use weather protection canopies to define primary building entries in addition to enhancing the human-scale effect at the pedestrian level.

Colonnades providing sun access to the internal facade by having a 2:1 height-to-width ratio like 3.0m:1.5m. For high colonnades, provide canopies no higher than 3.0m in height, to protect pedestrians from weather elements effectively.

Easily distinguishable building entrances.

Building lighting that enhances adjacent public realm.

An example of building signage that is well integrated into the facade.

Using digital signage on a building facade at a retail street.

STREET CORNER BUILDING DESIGN TREATMENT

Urban Design Objectives

- Optimize the use of street corners as nodes of **social interaction**, offering opportunities to pedestrians to pause and congregate
- Design **built forms** that strongly define the spatial and visual quality of street corners and support the **gathering functions** here

Policy Reference

- Centre City Parks & Public Realm Enhancement Plan
- Sustainable Development Guidelines for Trees, Shrubs and Groundcovers
- Slope Adaptive Development Guidelines Policy
- Complete Streets
- Land Use Bylaw

Guideline Sections:

- 2.1 Streetscape Characters
- 2.3 Nodes and Corridors
- 3.1.3 Frontage Zone
- 4.1.1 Public Open Space Interface and 4.1.2 Private and Public Accessible On-site Open Space
- 4.2.3 Building Massing
- 4.2.4 Facade Articulation
- 4.3 Green Infrastructure

4.2.5 Street Corner Building Design Treatment

DESIGN GUIDELINES

1. General
   a. Design buildings to strongly define the space at corners by:
      i. positioning retail entrances well-accentuated with facade articulation here; and
      ii. treating the building facades here with a cohesive vertical form or plane, expressed throughout the podium, mid and upper levels.
   b. Locate active uses, such as cafés and shop/retail entrances at street corners, to animate the intersection/node. Wrap such active uses around the building at grade to activate both street frontages that street corners enjoy.
   c. Use public art and special lighting to further enhance building corners.
   d. Locate residential and office entrances away from street corners.

A good corner building design treatment showing emphasis of building corner, through the use of colours and transparency in the facade treatment. Such design treatment activates and promotes building corners as sites for people to gather and socialize.

Street corners should be designed to enhance gathering space and maximize social interaction.

The vertical architectural treatment accentuates this building corner, promoting a strong visual sense of the building's presence at the street level.

UPPER BUILDING LEVEL IMPACTS

Urban Design Objectives

- Position upper building levels to maximize **privacy**, **views** and **sun access** to the public realm, while contributing to an attractive **skyline**

Policy Reference

- Centre City Parks & Public Realm Enhancement Plan
- Sustainable Development Guidelines for Trees, Shrubs and Groundcovers
- Complete Streets
- Land Use Bylaw

Guideline Sections:

- 2.6 Skyline, Gateways, Landmarks and View Corridors
- 2.8 Character Areas
- 2.12 Seasonal and Night Design
- 3.1.3 Frontage Zone
- 4.1.1 Public Open Space Interface
- 4.1.2 Private and Public Accessible On-site Open Space
- 4.2.3 Building Massing
- 4.2.4 Facade Articulation
- 4.3 Green Infrastructure

4.2.6 Upper Building Level Impacts

DESIGN GUIDELINES

1. General

   a. Ensure tower separation distances, floor plate sizes, all building setbacks and step backs are in accordance with the current Land Use Bylaw provisions.

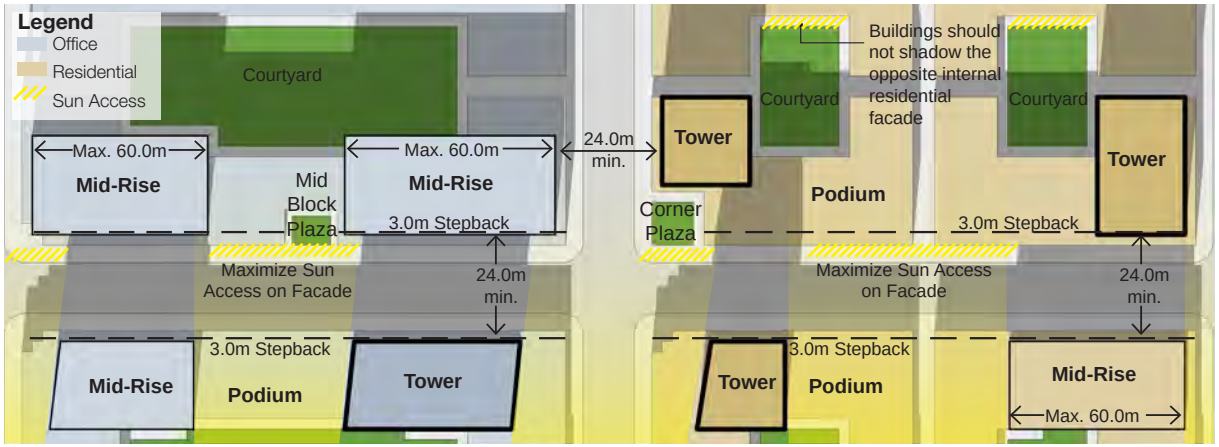
   b. Design towers and mid-rise buildings to minimize adverse shadowing and wind impacts on the public realm. See 4.1.5 (1) Sun Access for design considerations for maximizing sun access.

   c. Offset upper building levels of towers and mid-rise buildings to maximize privacy, especially between office and residential uses. 24.0m is the typical minimum tower separation required for ensuring privacy.

   d. The diagram below shows how the spacing and orientation of the upper levels of tower and mid-rise buildings could help mitigate impacts on adjacent buildings and surrounding areas, including the public realm.

   e. See 4.2.4 (3) on design considerations for mid-rise and tower building articulation.

Keep towers separated at a minimum of 24.0m to maximize privacy and sun access.



These impacts diagrams Illustrate possible tower and mid-rise configurations and their shadows depicted at 1 p.m. on the spring/fall equinox.

SUSTAINABLE URBAN DRAINAGE

Urban Design Objectives

- Enhance **storm-water management** by employing a **sustainable** form of **urban drainage system** for all development within the Centre City

Policy Reference

- Calgary – A City of Trees: Parks Urban Forest Strategic Plan
- The City of Calgary's Environmental Policy
- Stormwater Management and design Manual
- LID Technical Guidance Manual
- Citywide Stormwater Targets
- Land Use Bylaw

Guideline Sections

- 2.4 The Riverfront
- 2.5 Parks and Open Spaces
- 3.1.3 Frontage Zone
- 3.2.5 Street Trees
- 4.1.1 Public Open Space Interface
- 4.1.2 Private and Public Accessible On-site Open Space
- 5.2 Areas of Particular Concern

4.3 Green Infrastructure

4.3.1 Sustainable Urban Drainage

DESIGN GUIDELINES

1. Topography and Site Layout
   a. Begin a development by fitting its design to the site features and the natural drainage so as to minimize site disturbance and/or accommodate the existing drainage flow paths. This helps to preserve the pre-development drainage conditions of the site, while reducing the amount and cost of required underground drainage infrastructure.

Integrated Design Approach

Engage an integrated design approach to resolve and accommodate multiple building and/or development objectives through green infrastructure and sustainable measures in all development. For example, installing a landscaped or green roofing system as a solution to:

- **manage storm-water;**
- **reduce energy consumption; and**
- **increase the attraction and comfort of amenity areas and public realm, and add green open space at the Centre City.**

This figure illustrates an integrated sustainable design approach that addresses multiple building and development objectives.

2. Low Impact Development (LID)
    a. Incorporate all-season and on-site low impact development (LID) solutions into the design of streets, open spaces and buildings to:
        i. reduce overall surface run-off volumes leaving the site;
        ii. control the rate of drainage flow; and
        iii. improve water quality before it enters any water course or storm sewer system.

    See examples of LID solutions or measures as shown here.
3. Surface Treatment
    a. Reduce paved surfaces by (a) concentrating density in compact forms of development, especially on larger sites; and (b) co-locating services into shared spaces, such as shared driveways and utility or servicing areas. This will minimize storm-water run-offs from paved surfaces.
    b. Maximize permeable paving to increase on-site natural infiltration of storm-water run-off by using permeable inter-locking concrete pavers, plastic or concrete grid paving systems, or pervious concrete or porous asphalt, where possible. Suitable applications of permeable surface treatments include low traffic roads, driveways, parking lots, pedestrian plazas and walkways.

Permeable pavers at a lane with well-vegetated edges and gardens, all part of a sustainable drainage system.

Landscaped curb extension.

Grass permeable paving.

Flowthrough planters.

Structured swales.

Bio-retention swales.

4. River Flooding

   a. Consult with The Water Resources Business Unit at The City of Calgary at the onset of all development projects at the Centre City planning area to:

      i. confirm the applicability of all River Flooding policies and related regulations that could potentially impact development plans and schedules;

      ii. minimize accrual of incremental safety, property and environmental risk under flood conditions; and

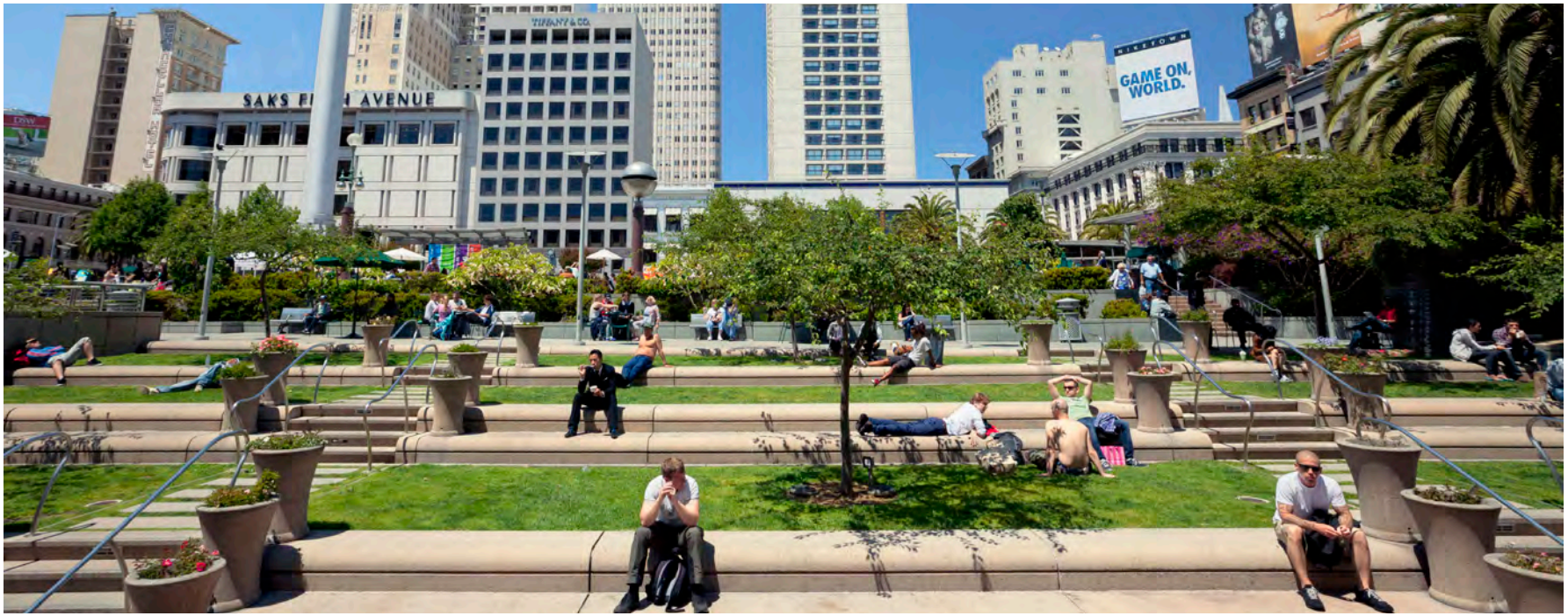
      iii. protect riparian functions, water quality and aesthetics of the shoreline interface of the Bow and Elbow Rivers.

   b. Consider ice effects of the Bow and Elbow Rivers on the design and location of watercourse crossings, utilities and their related infrastructure in the vicinity of these rivers. Use appropriate building forms, structural and foundation drainage design, bank protections and geotechnical measures to mitigate such impacts.

   c. Generally, ensure no structural and/or topographical modification of the floodways. Comply with all flood proofing and setback requirements specified in the Land Use Bylaw for all development at the flood fringe areas.

   d. Address all regulatory requirements in The Water Act, Fisheries Act, and Navigable Waters Act for the design of paths, promenades, landscaping, plantings, and/or other features in the floodway areas, from the earliest conceptual design stage of any development project.

   e. Use vegetative treatments of a softer (or biological) engineering approach, where possible, to ensure bank stability when bank rehabilitation works are required at or near shorelines of rivers.



Union Square, San Francisco - example of an underground parking structure with its roof designed as a green open space and urban plaza at-grade for amenity purposes. This also aids sustainable storm-water drainage and heat island mitigation.

Application of Sustainable Urban Drainage Features by Location at Right-of-Way

Where to apply	Paving	Bioretention			Conveyance		Other	
	Permeable Paving	Rain Gardens	Flow-through and Infiltration Planters	Infiltration Bioswales	Swales	Channels and Runnels (including Vegetated Gutters)	Infiltration and Soakage Trenches	Vegetated Buffer Strip
Private Driveways and Frontage Zone	✓	✓	✓	✓	✓	✓	✓	
Boulevard Areas	✓	✓	✓	✓	✓	✓	✓	
Curb Extensions	✓	✓	✓	✓	✓	✓	✓	
Laneways	✓		✓		✓	✓	✓	
Bike Lanes								
Through Lanes								
Medians*	✓	✓	✓			✓	✓	✓
Traffic Circles*	✓	✓	✓	✓	✓	✓	✓	

*Limited potential for rain gardens/water collection areas at these locations.
Vegetated gutters are best used where there are few driveways or curb cuts.

Application of Sustainable Urban Drainage Features by Location at a Development Site

Sustainable Urban Drainage Features	Where to Apply							
	Roofs	Walls/ Vertical Cladding Systems	Open Spaces/ Pedestrian Plazas and Walkways (at-grade and elevated)	Private Access Roads/Curb Extensions	Surface Parking Lots/Driveways/ Drive Aisles/ Gutters	Channels and Runnels (including Vegetated Gutters)	Landscaped Areas	Building Frontage Zone
Sustainable Urban Drainage System (including recycled water system)	✓		✓	✓	✓	✓	✓	✓
Efficient Mechanical Heating and Ventilation System	✓		✓			✓	✓	
Water-efficient Mechanical Heating and Ventilation System	✓	✓	✓					
Recycled/Easily Renewable Material Use	✓	✓	✓	✓	✓	✓	✓	✓
Passive Heating, Cooling, and Ventilation System (like operable windows and doors for summer cooling, atria with solar access, shading elements)	✓	✓	✓					
Green Roofs, Community Gardens, Native Vegetation and Tree Canopy)	✓		✓	✓	✓	✓		
Orientation for Optimum Solar Access and Natural/Daylight Capture	✓	✓	✓			✓		

EFFICIENT RESOURCE USE

Urban Design Objectives

- Use **energy** and **resources** efficiently, by protecting and conserving water, reusing and recycling water, reducing energy consumption, minimizing waste output, waste and all forms of resources, using renewal energy and **building materials**, and incorporating **mixed-uses** in new development
- Incorporate **sustainable** and/or **green building** design practices and technologies to reduce development footprint, minimize adverse impacts on the environment and increase **green open space**

Policy Reference

- Calgary – A City of Trees: Parks Urban Forest Strategic Plan
- The City of Calgary's Environmental Policy
- Citywide Stormwater Targets
- Land Use Bylaw

Guideline Sections

- 3.2.5 Street Trees
- 4.1.2 Private and Public Accessible On-site Open Space
- 4.2.3 Building Massing
- 4.2.4 Facade Articulation
- 4.3.1 Sustainable Stormwater Drainage
- 4.3.3 Biodiversity

4.3.2 Efficient Resource Use

DESIGN GUIDELINES

1. Water Use
   a. Harvest rainwater and reuse storm-water in buildings, open space, parks and other landscaped areas for non-potable water consumption and irrigation purposes. See applicable licensing requirements and policies of Alberta Environmental and Sustainable Resources Development (AESRD) for accepted practices of rainwater and storm water re-use.
   b. Install efficient water fittings like dual flush toilets and low flow household appliances in buildings.
   c. Use drought-resistant plant species, that are regionally appropriate, in the design of water-efficient parks, landscaped (or green) roofs and all other landscaped areas.
2. Energy Use
   a. Orientate and design buildings and open space on sites to optimize sun access and natural ventilation for efficient lighting as well as mechanical heating and ventilation.
   b. Manage solar gain from southern and western sun exposure during summer through the appropriate use of colonnades, trellises, horizontal or vertical wall projections or recesses, operable windows and other shading devices. Also consider using deciduous trees and shrubs at grade, or on roofs or podiums.
   c. Use building design elements like light shelves, clerestory lighting, skylights and translucent wall materials to reduce the use of artificial daytime lighting and energy consumption.

Landscaped roofs and roof gardens save energy while adding landscaped amenity space for building occupants.

Use a controllable glass louver shading system to reduce solar heat gain and cut down cooling costs in summer, while maximizing the use of natural daylight.

Operable windows and doors allow for natural ventilation to cool buildings in summer.

d. Use landscaped roofs, courtyard designs, colonnades, canopies and other passive space-cooling techniques to allow for natural ventilation and passive temperature regulation through buildings during summer.

e. Integrate active solar technology such as photovoltaic panels on roofs and/or into the external wall cladding systems, as well as geo-thermal heating technology for renewable energy use.

f. Install fixtures and operating systems with high energy-efficiency ratings when improving or rehabilitating existing buildings, as well as in all new buildings, to lower energy consumption.

3. Building Materials

a. Use materials and assemblies that are durable and can be rapidly renewed, from renewal sources and/or made of largely recycled contents, and are compatible with reusing and recycling.

b. Reuse and recycle construction and demolition materials appropriate for new construction.

c. Use building products and materials from local regions to conserve energy and transportation resources.

d. Use lightly tinted glazing and other bird-friendly materials and facade treatment techniques to mitigate built form impact on bird migratory paths.

4. Waste Management

a. Provide collection facilities for recyclable materials within buildings in all new developments

b. Maximize tree canopy in all new developments using street trees, tree groves or clusters at open space areas, amenity space and along streets to reduce urban heat island effects and CO2 emissions.

c. Minimize glare and light trespass into the night sky from exterior lighting of buildings.

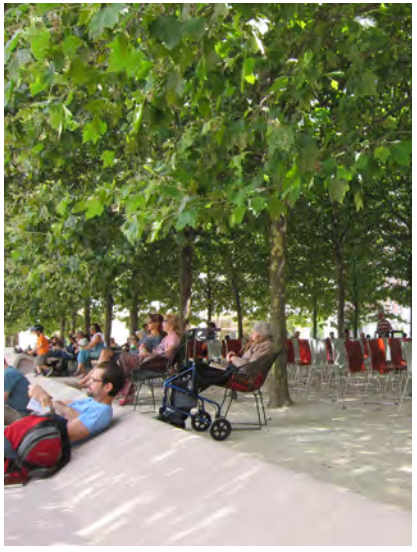
5. Flexible Reuse of Buildings and Sites

a. Design block layouts, buildings and open space with generous space standards and carefully planned spatial arrangement that can allow for adaptation with relative ease to suit the needs of different users over the years.

b. Convert existing, redundant or under-used buildings and open space, including derelict sites, to high density development or intensified productive uses.

Use clerestory windows and operable windows to allow natural light into buildings.

Natural ventilators at courtyards and operable windows aid in efficient resource use.



Street trees at public open space, along streets and around buildings, make great people-gathering places while reducing carbon dioxide emissions and urban heat gain.

Project building lighting downwards to minimize light pollution.

BIODIVERSITY

Urban Design Objectives

- Protect and enhance **urban forestry** and the **natural** habitat by **conserving** and **enhancing** riparian areas, retaining natural vegetation and features, habitats and wildlife, as well as **connecting** green space and corridors to form a green urban network in the Centre City

Policy Reference

- Calgary – A City of Trees: Parks Urban Forest Strategic Plan
- The City of Calgary's Environmental Policy
- Stormwater Management and Design Manual
- Watershed Management Plans
- Land Use Bylaw

Guideline Sections

- 2.4 The Riverfront
- 2.5 Parks and Open Spaces
- 3.2.5 Street Trees
- 4.1.1 Public Open Face Interface
- 4.1.2 Private and Public Accessible On-site Open Space
- 4.3.1 Sustainable Stormwater Drainage
- 4.3.2 Efficient Resource Use

4.3.3 Biodiversity

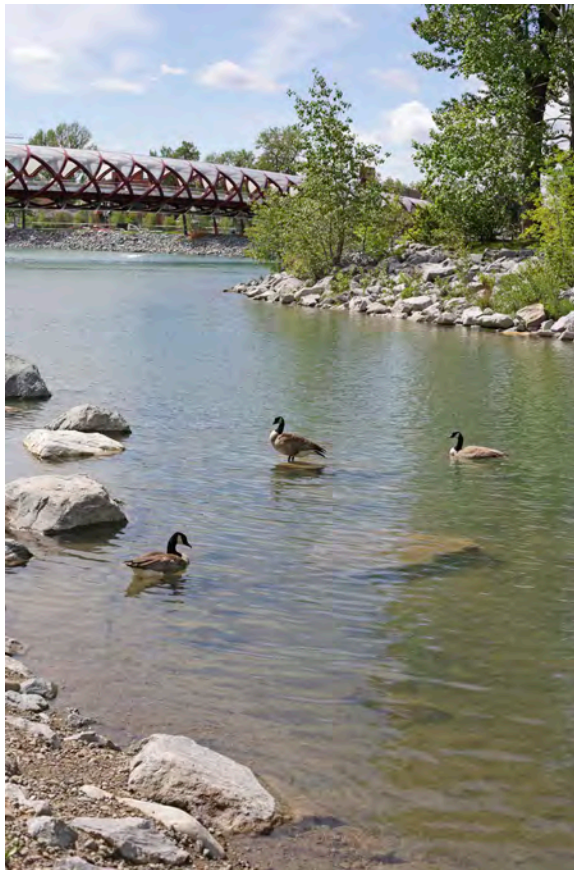
DESIGN GUIDELINES

1. Native Vegetation and Habitat
   a. Mix native and ornamental plants to enhance diversity. Use native and drought-resistant plant species that are tolerant of urban pollution and conditions in new developments.
   b. Design project landscaping to increase the interconnected corridors of urban forest and natural habitat as well as all riparian areas and open space at the Centre City.
   c. Use lightly tinted glazing and other bird-friendly materials and facade treatment techniques to mitigate built form impact on bird migratory paths.
2. Urban Community Gardens
   a. Create community gardens at grade in sunny, non-windy locations, or on podiums or roofs, particularly in residential development, for economic and social benefits. Include pedestrian lighting and sitting areas to enhance such community gardens as additional amenity space. Consider using these community gardens as gateway features for different neighbourhoods.

Native vegetation on landscaped (or green) roofs reduces water use, solar gain and adds amenity space for residents.

Urban community gardens provide amenity space as well as offer social, economic and environmental benefits to local communities.

3. Riparian Corridors
    a. Protect, restore and enhance all riparian areas in any development project at and/or in the vicinity of riparian corridors within the Centre City.
    b. Collaborate with Water Resources and Parks at The City of Calgary at the onset of all development projects to:
        i. develop an integrated and adaptive water management approach to protect and manage riparian areas; and
        ii. confirm on requirements and targets of The City of Calgary Riparian Strategy that may impact development projects.
    c. See 4.1.1 (2) for interface treatment of buildings adjacent to the Riverfront.



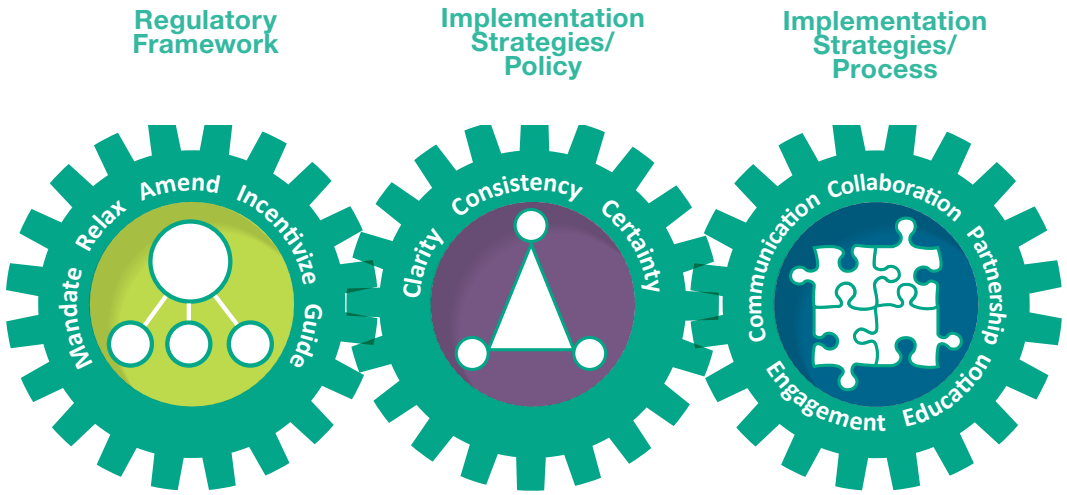
Prince's Island Park, a part of Calgary's riparian corridors, is a great natural asset to preserve and enhance.

The riparian corridors along the Bow River offer a unique, invaluable stretch of urban forestry and natural habitats right next to downtown Calgary.

> The urban design policies and guidelines are intended to inform a level of decision-making including Local Area Planning, outline plans, land use amendments and development permits. They are also relevant to city initiated design projects for public realm improvements, street corridors, open space plans, and transit station area planning"
>
> 1.4 Implementing the MDP, Municipal Development Plan

5.0 IMPLEMENTATION

IN THIS SECTION:



5.1 Guidelines and Regulatory Framework

5.1.1 Introduction

It is important to understand the following interrelated overlays of policy and process in the current regulatory framework for the Centre City.

1. Mandate
Statutory policies and municipal Bylaws include:

a. Municipal Development plan (MDP)
b. Area Redevelopment Plans (ARPs)
c. Bylaws

Policy development often supports design guidelines through embedding essential design requirements in the MDP, ARPs or Bylaws to make them more implementable.

2. Relax/Amend
On a case-by-case basis, certain impedimental rules can be relaxed in the development review process, or amended through Bylaw or policy amendment process.

3. Incentivize
To achieve significant public benefit through private development, the density bonus system has also been established as part of the Centre City's regulatory framework, through which a number of public amenity items are considered "bonusable" when certain performance criteria are met.

4. Guide
Design guidelines speak to the non-statutory aspect of the regulatory framework. Design guidelines can be inspirational, descriptive and flexible. They supplement other policies and provide guidance as to "how" to achieve the desirable outcomes as defined in existing policies.

Design guidelines focus on the aspects of project fit and how to achieve the desirable outcomes - great streets, quality buildings and memorable places. Design guidelines as part of the regulatory framework must work together with other statutory policies and Bylaws while maintaining a fine balance between under-regulation and over-regulation.

This section includes proposed implementation strategies for the guidelines, as well as potential changes to policy, process and regulations.

5.1.2 Implementation Strategies

Guideline Contents	Regulatory Framework	Implementation Strategies/Policy	Implementation Strategies/Process
	Mandate Relax Amend Incentivize Guide	Clarity Consistency Collaboration	Communication Collaboration Partnership Engagement Education
Urban Context Maps	Guide/ Mandate	1. Update Urban Context maps periodically to reflect new changes. 2. Refine the urban context maps for area-specific considerations in each ARP.	13. Use Urban Context maps to determine project fit at early design concept generation stage. 14. Provide a written summary regarding how the project addresses the 12 urban context overlays, if applicable.
Design Objectives	Mandate	3. Reiterate the Design Objectives in the MDP and ARPs using consistent languages. 4. Use design guidelines as a tool to condense ARPs.	15. Develop a Centre City-wide incentive/density bonus system to incorporate higher design standards with measurable performance criteria.
General Design Guidelines	Guide	5. Maintain the guidelines as a living document. 6. Develop a cross reference system to link between the guidelines and MDP, ARPs and other policy documents.	16. Use the guidelines as a resource book for better urban design. 17. Provide training to the File Managers. 18. Design a user-friendly web site for the approved guidelines with links to relevant policies.
New Standards	Mandate/ Relax/Amend	7. Coordinate desires of the guidelines with the requirements and regulations of the Bylaws, MDP and ARPs. 8. Set baseline requirements. 9. Maintain a fine balance between under-regulation and over-regulation. 10. Provide context-specific design options. 11. Allow for flexibility for innovation.	19. Increase certainty in decisions and streamline the development review process by implementing the new standards. 20. Relax certain impedimental rules to better achieve the design objectives. 21. Monitor the effectiveness of the new standards and amend them if needed.
Higher Design Standards	Incentivize	12. Develop a Centre City-wide incentive/density bonus system to incorporate higher design standards with measurable performance criteria.	22. Ensure exceptional urban design and significant public benefits are achieved in the development review process.

5.2 Areas of Particular Concern

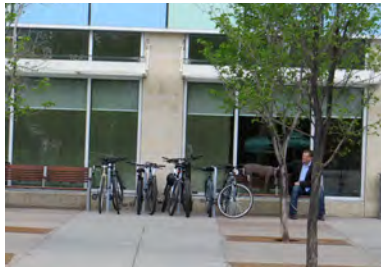
Areas of Particular Concern	Implementation Strategies (Regulation, Policy and Process)	Guideline Reference
Pedestrian Priority Corridors	**5.2.1 Create pedestrian priority**	
	1. Coordinate all parties responsible for public sidewalks (regulation, policy, design, improvement, construction, maintenance) and balance the competing uses within the right-of-way and frontage zone to ensure that, along all identified Pedestrian Priority Corridors: a. sufficient sidewalk widths are provided based on streetscape typologies and travel modes priorities; b. pedestrian amenities are incorporated; and c. building frontage design contributes to safe, continuous and comfortable pedestrian experience.	• Pedestrian Priority Corridors (PBT, PB, PT, P) - 2.1 • Streetscape Zones - 3.1 • Public Sidewalks - 3.2.1 • Pedestrian Amenities - 3.2 • Frontages - 4.2.1
Character Districts/ Corridors	**5.2.2 Formulate character districts and corridors**	
	1. Wherever possible, improve the streetscape for the entire corridor, or at minimum the length of one block. Treat both sides of the block for design consistency. 2. For overall streetscape concepts or precinct studies, identify paving material palettes, lighting palettes, furniture palettes, street tree species, sidewalk widening, building setbacks and street wall heights. The individual project should comply with overall streetscape concept and design. 3. Coordinate infrastructure/utility placement with public realm requirements. 4. Incorporate transit, bike and stormwater facilities. 5. Determine street wall heights by the best practice ratio of street right-of-way width, right-of-way location, intensity of surrounding uses and sun access considerations. 6. Provide public open spaces, on-site open spaces and urban plazas.	• Character Districts/Corridors - 2.8 • Bike/Transit Integration - 2.11 • Parks and Open Spaces - 2.5 • Streetscape Zones - 3.1 • Streetscape Elements - 3.2 • On-site Open Spaces - 4.1.2 • Green Infrastructure - 4.3 • Street wall Heights - 4.2.2
Road Construction Projects	**5.2.3 Facilitate a coordinated process for road construction projects**	
	1. Use road construction projects (such as sidewalk repair, utility trenching, sidewalk excavations, curb ramp construction and intersection improvements) as opportunities to add street trees, landscaping, stormwater facilities, site furnishings and curb extensions as feasible. 2. Reference the identified Pedestrian Priority Corridors when prioritizing road construction projects.	• Pedestrian Priority Corridors (PBT, PB, PT, P) - 2.1 • Streetscape Elements - 3.2 • Green Infrastructure - 4.3

Areas of Particular Concern	Implementation Strategies (Regulation, Policy and Process)	Guideline Reference
Sidewalk Widening 	**5.2.4 Widen the public sidewalks where needed** 1. Where the minimum sidewalk width cannot be met due to limited right-of-way space, or more than minimum sidewalk/landscape zone widths is expected in a specific context (e.g. Retail Nodes and Corridors, Pedestrian Priority Corridors, Transit Stops): a. Private developments should consider sidewalk widening through building setbacks and provision of high quality on-site pedestrian amenities including colonnades, arcades, canopies, recessed corner plazas, double row of trees, etc. b. The City should consider applying sidewalk curb extensions at busy street corners or create sidewalks within the existing right-of-way by using bylaw-enforced setback areas and/or removing or narrowing excess travel lanes where appropriate.	• Pedestrian Priority Corridors (PBT, PB, PT, P) - 2.1 • Retail Nodes and Corridors - 2.3 • Transit Integration - 2.11 • Streetscape Zones - 3.1 • Public Sidewalks 3.2.1 • Frontages - 4.2.1
Relaxation/Amendments 	**5.2.5 Relax/amend the impedimental rules** 1. Where bylaw-enforced setbacks exist, the following regulations may be relaxed with the discretion of the Development Authority, depending on the purpose and possibility of the future right-of-way expansion: a. setting buildings back from the sidewalk where the sidewalk may in fact never be widened; b. preventing arcades, cantilevers or other structures from encroaching the setback area; and c. limiting or prohibiting the placement of street amenities such as trees, planters and lighting.	• Streetscape Zones - 3.1 • Streetscape Elements - 3.2 • Frontages - 4.2.1

Areas of Particular Concern	Implementation Strategies (Regulation, Policy and Process)	Guideline Reference
Transit Integration 	**5.2.6 Integrate transit** 1. Support the implementation of planned transit alignments and ensure Urban Design is involved in any detailed transit integration study. 2. Ensure the following key metrics are implemented in both design and approval processes: a. minimum 3.5m transit priority lanes along all Transit Priority Corridors; and b. minimum 2.5m sidewalk width adjacent to building face is provided at transit stops. 3. Allow private developments to provide passenger amenities, such as deeper setbacks at the bus zones and weather protected bus waiting areas along building frontages. 4. Consider transit stops as activity nodes integrated with adjacent streetscapes and private developments.	• Transit Priority Corridors (PBT, PT, BT, T) - 2.1 • Transit Integration, planned transit alignments, transit stations/bus zones - 2.11 • Public Sidewalks 3.2.1 • Transit Facilities 3.2.2
Bike Integration 	**5.2.7 Integrate bike** 1. Support the implementation of Centre City Cycle Track Network (5-year plan) and Bike Priority Corridors, and ensure Urban Design is involved in any detailed bike integration study. 2. Balance bike integration with pedestrian needs and the competing needs of space for all streetscape elements. 3. Use the recommended bike facilities design metrics by bike facility type included in this guideline document. 4. Ensure consistency on planning, design approval and inspections in regards to bike safety buffer or mitigation measures when space is limited.	

Areas of Particular Concern	Implementation Strategies (Regulation, Policy and Process)	Guideline Reference

Ownership/Maintenance



5.2.8 Clarify ownership and maintenance issues

1. Ownership and maintenance issues arise due to, but not limited to, the following reasons:
   a. provision of pedestrian amenities (street furniture, shrubs, planters, patios, etc.);
   b. bike facility streetscape integration;
   c. provision of transit waiting areas along building frontages (e.g. canopies);
   d. integration of stormwater facilities;
   e. consistent paving materials;
   f. consolidated vehicle access;
   g. encroachment to bylaw-enforced setback zone; and
   h. public or publicly-accessible amenity roofs over underground parking.

2. When one of the above issues arises:
   a. Prioritize and determine the type, number, character and quality of streetscape elements based on Streetscape Characters and Travel Modes Priorities, as well as space availability.
   b. Facilitate public/private partnerships and partnerships between property owners to achieve the best outcomes (great streets, quality buildings, memorable places).
   c. Reference initial capital cost for construction, operational and life cycle maintenance of enhanced infrastructure.
   d. Accept that negotiation will always be a part of the process, but be consistent in the development review process by clarifying and reiterating the Design Objectives as outlined in each guideline section.
   e. Use perpetual encroachment agreements as a tool to clarify maintenance issues.

- Streetscape characters - 2.1
- Streetscape Zones - 3.1
- Streetscape Elements - 3.2
- Green Infrastructure - 4.3

Areas of Particular Concern	Implementation Strategies (Regulation, Policy and Process)	Guideline Reference
Paving 	**5.2.9 Create a new enhanced paving standard** 1. Work with Roads to create a new, enhanced standard of right-of-way surfacing/paving within city-owned land adjacent to streets (including both standard and decorative paving materials, trims, permeable pavings, etc.). 2. Encourage consistent paving for the identified Character Districts and Corridors, and for both public and private portions of the streetscape zones. 3. Embody the local characters (of those defined Character Districts and Corridors) using the new, enhanced standard with variations in patterns, colours and textures. 4. Consider maintenance requirements and incorporate them in the operational budget. 5. Conduct further best practice research regarding the feasibility of permeable paving applicable to Calgary-specific weather conditions (multiple freeze-thaw cycles), and include it as part of the new standard for applicable locations. 6. Promote the benefits of natural water infiltration through pilot projects at strategic locations.	• Pedestrian Priority Corridors (PBT, PB, PT, P) - 2.1 • Character Areas - 2.8 • Streetscape Zones - 3.1 • Public Sidewalks 3.2.1 • Green Infrastructure - 4.3
Lighting 	**5.2.10 Light it up for pedestrians** 1. Require new developments to provide a comprehensive site and building lighting strategy as part of the development application package. 2. Develop a comprehensive lighting palette based on a coordinated process and the Centre City Nightscape Plan map regarding lighting priority districts, edges, corridors and nodes. 3. Develop a separate pedestrian lighting system for the Centre City. 4. Consider both functional and experiential lighting along areas of particular attention. 5. Consider increased maintenance and power requirements as well as life cycle replacement costs. 6. Reduce energy consumption and support the use of new technologies. 7. Clarify maintenance issue.	• Centre City Nightscape Plan - 2.12 • Lighting - 3.2.7

Areas of Particular Concern	Implementation Strategies (Regulation, Policy and Process)	Guideline Reference
Sunlight Access	**5.2.11 Safeguard sunlight access to places, streets, and neighbourhoods**	
	1. Through the development review process, safeguard/maximize sunlight access to the identified Shadow Sensitive Areas, including public open spaces, on-site open spaces, building frontages, public sidewalks and historical landscapes or architecture.	• Shadow Sensitive Areas - 2.12 • Seasonal Design and Sunlight Access - 4.1.5
Active Uses	**5.2.12 Activate building frontages**	
	1. Reference Retail Nodes and Corridors (2.3) for the Urban Design Hierarchy of recommended active frontage locations. 2. Permit special or unique activities in spaces to create memorable pedestrian experiences. 3. When at-grade retail uses are not possible, or grade separation is unavoidable, use built form guidelines (4.0) or other innovative mitigation strategies to activate the building frontage.	• Retail Nodes and Corridors - 2.3 • Built Form - 4.2
Street Trees	**5.2.13 Increase street tree opportunities**	
	1. Integrate street tree planting with the planning of utility alignments by identifying tree planting opportunities and locations in early design stages. 2. Maximize street tree opportunities along Green Streets. 3. Consider consistent tree species in a Character District or along a Character Corridor. 4. Incorporate the use of soil cell system. 5. Establish maintenance responsibilities and program clearly to ensure sustainable street tree planting.	• Streetscape Characters/Green Streets - 2.1 • Character Areas - 2.8 • Street Trees - 3.2.5

Areas of Particular Concern	Implementation Strategies (Regulation, Policy and Process)	Guideline Reference
Green Infrastructure  	**5.2.14 Integrate green design considerations into the approval process** 1. Require, for all developments, a description/accounting of design measures included to reduce the development footprint. 2. Engage an integrated design approach to resolve and accommodate multiple building and/or development objectives through green infrastructure and sustainable measures in all development. 3. Enhance storm-water management by employing a sustainable form of drainage system in all development within the Centre City. 4. Use the Sustainable Design Declaration Form and Sustainable Technologies Permitting Matrix when green building projects are at the conceptual stage. 5. (Private developments) Take advantages of the development incentives by providing the Green Building Features as described in Bylaw 33P2013 (environmental roof, green wall, bioretention structure, district energy connection ability, district energy connection, on-site cogeneration facility, electric vehicle charging stations and additional bicycle parking stalls). 6. Use the Bird-friendly Urban Design Guidelines to reduce the impact of built form on migratory birds.	• Green Infrastructure - 4.3 • Development Incentives - Bylaw33P2013 • Sustainable Design Declaration Form and Sustainable Technologies Permitting Matrix - calgary.ca • Bird-friendly Urban Design Guidelines - calgary.ca
+15 Skywalk System 	**5.2.15 Integrate +15 Skywalk System with at-grade public realm** 1. Evaluate +15 development and project fit to achieve the following objectives: a. complement the Centre City public realm; b. enhance pedestrian movement; c. animate the system; d. improve quality consistency throughout the system; e. incorporate sustainable design and operational practices; and f. strategize the implementation. 2. Complete +15 Urban Design Strategy policy to provide guidance related to how to achieve the above objectives and support the prioritization of the +15 Fund. 3. Develop a consistent approach and sustained funding mechanism (in terms of what, where and when the system upgrades should take place) to prioritize the +15 Fund along with accumulated interest and private funding opportunities.	• +15 Policy - calgary.ca • Development Incentives - Bylaw33P2013 • +15 Skywalk System - 4.1.4

Areas of Particular Concern	Implementation Strategies (Regulation, Policy and Process)	Guideline Reference

CPR Special Area

5.2.16 Develop the CPR Special Area while ensuring safety

1. Work with the following development constraints and provide innovative design solutions:
   a. identify railway related risks and provide sufficient mitigation acceptable to the approving authority.
   b. identify noise and vibration impacts and provide sufficient mitigation acceptable to the approving authority.
   c. Consult with the railway operator to determine requirements for development in proximity to the railway corridor.
   d. Conduct the following additional studies which may be requested by The City:
      i. environmental considerations related to potential contamination from past activities;
      ii. shadow cast impact (including City policy specifying requirements for the preservation of direct access to sunlight to areas in proximity to the CPR corridor); and
      iii. lot depths (areas where lot depth would not support conventional residential and/or commercial building projects).
   e. Implement the CPR corridor vision over time with the following five main components:
      i. +30 public spaces that bridge the CPR tracks;
      ii. east-west connections along 9 and 10 Avenues and between the +30 public bridges to create a continuous east/west system;
      iii. at-grade plazas that serve as entrances to the +30 system;
      iv. opportunities within new developments for active uses at the +30 level; and
      v. physical enhancements of existing and potentially new vehicular underpasses.
   f. Create a bonus system for how the CPR Special Area can be built over time, with short and long-term considerations to achieve the vision of a safe, vibrant and sustainable system with a variety of land uses, exciting horizontal and vertical linkages, special places and iconic built form.

- Guidelines for New Development in Proximity to Railway Operations (May 2013)
- Downtown Underpasses Urban Design Guidelines - calgary.ca
- Shadow Sensitive Areas - 2.12
- 9 and 10 Avenue streetscape characters - 2.1
- +15 Skywalk System - 4.1.4
- Private and Publicly Accessible On-site Open Space - 4.1.2
- Centre City Plan
- Centre City Parks and Public Realm Enhancements Plan

> Urban design brings together the many elements and areas of expertise involved in great place-making, including land use planning, transportation planning, architecture, landscape design, engineering and development economics. The effective coordination of all of these city-making pursuits, through the instrument of urban design concepts and principles, will result in the creation of distinctive and cherished places."
>
> 1.4 Implementing the MDP, Municipal Development Plan

6.0 SUPPORTING INFORMATION

IN THIS SECTION:

6.1 RELEVANT DOCUMENTS

Please use the guidelines in conjunction with the relevant statutory and/or Council documents listed below. These relevant documents apply to all potential new development. All project proponents are to confirm the status of these relevant documents prior to submitting applications for development. Apply the most recent editions of these relevant documents. Please note that these relevant documents are mostly available online through keyword search at The City's website at calgary.ca.

Bylaws and Planning Policy

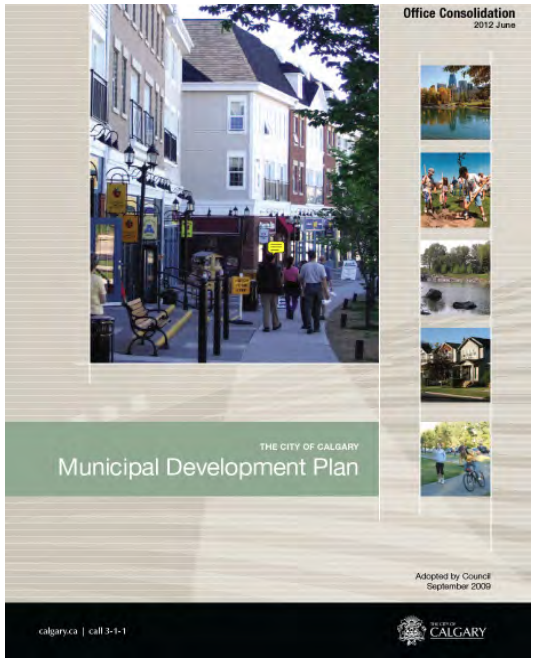
- Municipal Development Plan (MDP)
- Land Use Bylaw 1P2007
- Downtown Land Use District
- Various Direct Control Bylaws
- Centre City Plan
- Beltline Area Redevelopment Plan
- East Village Area Redevelopment Plan
- Eau Claire Area Redevelopment Plan
- Chinatown Area Redevelopment Plan
- Downtown West Area Redevelopment Plan
- +15 Policy
- Centre City Illumination Guidelines
- Bird Friendly Urban Design Guidelines
- Downtown Underpass Urban Design Guidelines
- Calgary Downtown Retail District Strategy
- 17 Avenue SW Urban Design Strategy
- Midtown: An Urban Design Strategy for Midtown Calgary

Transportation Policies

- Calgary Transportation Plan
- Centre City Mobility Plan
- Complete Streets Guide
- Cycling Strategy
- Bicycle Parking Handbook: A Developer's Guide
- Design Guidelines for Street Lighting

Parks Policies

- Centre City Parks: Open Space Management Plan
- Centre City Parks and Public Realm Enhancements Plan
- Sustainable Development Guidelines for Trees, Shrubs, and Groundcovers
- Calgary – A City of Trees: Parks Urban Forest Strategic Plan
- Natural Area Management Plan
- Calgary River Valleys Plan
- Parks Water Management Strategic Plan
- Cultural Landscape Strategic Plan



Calgary Transit Policies

- Transit Friendly Design Guide

Public Art Policy

- Corporate Public Art Policy

Universal Design

- Universal Design Handbook: Building Accessible and Inclusive Environments
- Access Design Standards

Water Resources

- Stormwater Management and Design Manual
- Watershed Management Plans
- City-Wide Stormwater Targets
- LID Technical Guidance Manual
- Riparian Strategy
- Standard Specifications for Waterworks Construction
- Standard Specifications for Sewer Construction
- Design Guidelines for Subdivisions

6.2 PLANNING PROCESS SUMMARY

	Key Activities	Participants	Key Event Dates	Facilitation	Deliverable
Project Charter	**4 Project Charter Sessions**	• Project Team, Centre City Team • Corporate Project Management Centre (CPMC) • Engagement Resource Unit (ERU) • Internal Stakeholders	Dec. 2011 - Mar. 2012 • Dec. 14, 2011 • Dec. 21, 2011 • Jan.16, 2012 • Mar. 19, 2012	• CPMC • Project Team	• Project Overview • Scope Statement • 3D Schedule • Risk Register • Governance
Early Stakeholder Engagement	**4 Stakeholder Workshops**	• Project Team, Centre City Team • Consultant Team • Internal Stakeholders • Community Attendees • Development Attendees	April - June 2012 • April 5, 2012 • April 26, 2012 • May 3, 2012 • June 1, 2012	• MVH Urban Planning and Design Inc. (MVH) • Project Team	• Stakeholder Workshops Phase 1 Summary Report available at calgary.ca
	2 Public Open Houses	• Project Team, Centre City Team • Consultant Team (MVH) • General Public	May - June 2012 • May 31, 2012 • June 2, 2012	• MVH Urban Planning and Design Inc. (MVH) • Project Team	
Guideline 1st Draft and Stakeholder Review	**RFP Process**	• Project Team, Procurement	June - Nov. 2012	• Project Team	• RFP/Consultant team hired
	Policy Consolidation	• Project Team	June - Nov. 2012	• Project Team, Centre City Team	• Consolidated policies
	6 Pre-consultation Telephone Interviews	• Project Team, Centre City Team • Consultant Team • Internal Stakeholders	Nov. - Dec. 2012	• Civitas Urban Design and Planning Inc., AECOM, Beasley + Associates • Project Team	1st Draft: • Centre City Urban Design Guidelines • Companion Document - Public Realm Interface Consolidation and Recommendations available at calgary.ca
	Guideline 1st Draft	• Consultant Team	Jan. - May 2013		
	8 Guideline Draft Discussion and Review Sessions	• Project Team, Centre City Team • Consultant Team • Leadership Team • General Manager • Internal Stakeholders • Community Attendees • Development Attendees	Dec. 2012 - June 2013 • Dec. 12, 2012 • Jan. 11, 2013 • March 7, 2013 • March 14, 2013 • April 11, 2013 • April 22, 2013 • June 6, 2013		
	1st Draft Circulation and UDRP Review	• Internal and external stakeholders • Urban Design Review Panel (UDRP)	May - June 2013	• Project Team	• Stakeholder comments on 1st Draft • UDRP comments on 1st Draft
Guideline and Stakeholder Review/ Training	**Internal Stakeholder Meetings and Guideline 2nd Draft**	• Project Team, Centre City Team • Internal Stakeholders	Q3 2013 - Q1 2015	• Project Team	Centre City Urban Design Guidelines (2nd Draft) including: • Urban Context • The Streetscape Guide • The Development Guide • Implementation
	Guideline 2nd Draft Stakeholder Review/ Training Sessions and Public Open House	• Internal and external stakeholders • General Public	Q2 - Q3 2015	• Project Team	
Approval Process	**Calgary Planning Commission (CPC)**	• Project Team • CPC members	Q4 2015	• Project Team	Centre City Urban Design Guidelines (October 2015)

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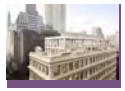	35	Hayes Davidson and Shigeru Ban Architects
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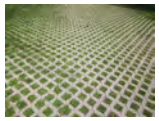	135	Richard Drdul www.flickr.com/photos/drdul/180848197
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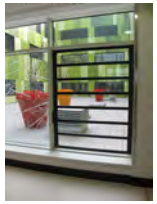	140	Colt Group www.flickr.com/photos/coltgroup/9687795512
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6.4 GLOSSARY

+15 entry squares (including +30): Special gathering places that connect the ground floor and the +15 realm. +15 Entry squares provide an opportunity for active retail uses and passive recreation on the street, as well as much safer +15 access.

Beltline ARP

+15 skywalk system, +15 system, +15 network: A network of weather-protected, publicly accessible and grade-separated (fifteen-feet above the road grid) pedestrian walkway system, which operates through and between buildings in the Centre City. It is composed of walkways, bridges, at-grade entries and vertical connections, associated public spaces at +15 level (both open and enclosed) and wayfinding signage.

+30 network: A network of weather-protected, publicly accessible and grade-separated (thirty-feet above the road grid) pedestrian walkway system, which connects developments on the north and south of the Canadian Pacific Railway, and +15 skywalk system.

Above-grade: The building floors above the ground floor.

Accessibility: Ease of access / egress to any location by walking, cycling, transit and private vehicles, or for commercial vehicles. (See universal design.)

Calgary Transportation Plan

Activation / active uses: Types of commercial uses on the main / ground floor adjacent to the sidewalk or street, which generate frequent activity or people moving in and out of the building or business entrance.

Adpatable use: Building uses that contribute to flexibility of use over time. An example is ground floor heights that accommodate future retail uses.

Adaptive reuse: Process of renovating old structures for new uses.

Amenity or amenity space: Common or private, indoor or outdoor space provided on-site and designed for active or passive recreational use.

Municipal Development Plan

Animation: A quality of the built environment which results from designs that support sustained activity and the visual and physical connection of the interior activities from the exterior. (See also Activation / active uses.)

Approving authority: The Subdivision Authority, Development Authority or Subdivision and Development Appeal Board of The City of Calgary, as the context implies.

Municipal Development Plan

Arcade: This is a continuous covered space fronting on and open to a street, residential plaza or urban plaza for its entire length, except for building columns. (See Colonnade.)

Beltline ARP

Area redevelopment plan (ARP): A statutory plan as defined by the Municipal Government Act, that directs the redevelopment, preservation or rehabilitation of existing lands and buildings, generally within existing areas of the city.

Municipal Development Plan

Area structure plan (ASP): A statutory plan as defined by the Municipal Government Act, that directs the future land use patterns, transportation and utility networks and sequence of development in new communities.

Municipal Development Plan

Architectural screen: A visually appealing and interesting screen to shield the view of service areas or to protect the privacy of ground-floor residential units.

Articulation: The manner in which the exterior of a building form is designend to include window patterns, materials, colours, textures, significant changes in planes that, together, create visual interest.

At-grade: Located at the ground level.

Atrium: A sky-lit interior space.

Biodiversity: The variability among living organisms - animals, plants, their habitats and their genes - from all sources including terrestrial, marine and other aquatic ecosystems, and the ecological complexes of which they are part. This includes diversity within species, between species, and of ecosystems (International Union for Conservation of Nature).

Our BiodiverCity - Calgary's 10 - year Biodiversity Strategic Plan

Block structure: The physical arrangement, size, and shape of city blocks.

Bonus: A system that allows an increase in development density in return for providing permanent public benefits beyond typical requirements.

Brownfield site: This is an abandoned, vacant, derelict or under utilized property where past actions have resulted in contamination and where there is an active potential for redevelopment.

Building or built form / built environment: The engineered surroundings that provide the setting for human activity and includes buildings, streets and structures (including infrastructure).

Municipal Development Plan; Calgary Transportation Plan

Building envelope: Often used to refer to the general space occupied by the building, also known as its massing. It can also refer the building exterior skin that comprises the structure and materials used to provide weather-protection and temperature control.

Building massing: The arrangement of the bulk of a building on a site, with consideration of its physical and visual impacts on adjacent buildings and space. Refer to section 4.2.3 Building Massing design guidelines.

Build-to-line: A required distance for the placement of the building face from the property line, that defines where the building must be constructed.

Building use: The activity that occupies a building.

Canopy: An architectural element that is attached to a building facade.

Character: The distinctive qualities of a place, building or street.

Colonnade: A series of regularly spaced columns providing load bearing support of an overhead structure such as an arcade. (See Arcade.)

Centre City Plan

Complete street: A street designed and operated to enable safe, attractive and comfortable access and travel for all users, including pedestrians, cyclists and public transit and private vehicle users. A complete street incorporates green infrastructure and optimizes public space and aesthetics wherever possible.

Municipal Development Plan

Concept plan: A plan that may be required, at the discretion of the Approving Authority, to be submitted at the time of Outline Plan / Land Use Amendment application, showing the relationship of the design of the subject site with adjoining parcels, the possible development of adjoining parcels, and/or the next phases of development.

Land Use Bylaw (Bylaw 46P2013)

Connectivity: The links between spaces and built form, including sidewalks, plus 15 links, and parks and plazas, which facilitate ease of pedestrian navigation and contribute to walkability. (See Walkability.)

Cornice: A decorative moulding that caps a building's wall, forming a strong horizontal line.

Crime Prevention Through Environmental Design (CPTED): Analysis of the form of existing and proposed development for the purpose of addressing safety related issues through design.

East Village ARP

Crime Prevention Through Environmental Design (CPTED 2): CPTED 2 is a community-based process building on CPTED principles that seeks through social interaction to build community capacity to address safety and safety perception issues. Such an analysis may be undertaken within the context of a community and social development plan, or on a project basis.

East Village ARP

Cultural landscape: Any geographical area that has been modified, influenced or given special cultural meaning by people, and that has been formally recognized for its heritage values.

Parks Canada - Guiding Principles and Operational Policies

Deep utilities: Stormwater, sanitary and water pipes.

Calgary Transportation Plan

Density: A measure of the number of dwelling units on a parcel of land, expressed in units per hectare or in units per parcel.

Municipal Development Plan

Development parcel or site: A privately owned development site.

Development permit: A development permit indicates permission from the Approving Authority for construction or changes of use in accordance with The City of Calgary Land Use Bylaw.

Land Use Bylaw (Bylaw 46P2013)

District: An area identified by a distinguishing feature such as land use, heritage, cultural and/or any other significant characteristic.

Center City Plan

Diversity: An environment that offers a variety of experiences to patrons. Mix of land uses, architecture, street design and landscaping can all contribute to providing variety.

Municipal Development Plan

Ecosystem: A dynamic system of plants, animals and other organisms, together with the non-living components of the environment, that functions as an interdependent unit.

Municipal Development Plan

Edges: See Interfaces.

Enclosure: The presence of buildings and street trees on either side of the street in a way that helps to define the pedestrian realm and provide a sense of human scale. The nature of the enclosure is defined by the enclosure ratio.

Enclosure ratio: A proportion expressing the relationship of the width of the street right-of-way (ROW) to the height of the building, in order to determine the amount of street enclosure.

Encroachment: An element located in the public right-of-way (ROW) that is associated with a private use, such as awnings /canopies, roof level or upper level cornices, roof overhangs, exterior cladding, window sills and copings, bay windows, and in some cases, bicycle racks. (Note: An encroachment may also involved an element located at an adjacent property under a different private ownership. Encroachment agreements are usually needed to address encroachment issues.)

Enhance/ enhancement: To augment (or augmentation of) an area, street or open space in quality, value, beauty or effectiveness.

Center City Plan (revised)

Entranceways or gateways: Important transportation connections either to enter the city or to signify entrance into a specific part of the city. Well-designed entrances welcome people and provide a sense of arrival to an important place.

Municipal Development Plan

Equinox: The day of the year when the daytime is roughly the same length of time as the night, usually around March 20 and September 22. Shadow studies are conducted between these dates to determine building massing based on optimal sunlight access.

Escarpment: A steep slope formed by the erosive action of water, and normally adjacent to a watercourse.

Municipal Development Plan

Experiential light: While lighting can serve more than one purpose, experiential lighting is designed primarily to enhance the environment, not to provide security. This can include lighting of buildings, monuments, public art, pathways etc.

Centre City Illumination Guidelines

"Eyes on the street": Passive resident and worker (or user) surveillance of adjacent streets and open space. Refer to CPTED.

Facade: The front of a building that faces onto a street or an open space.

Fine-grain: The expression of the building facade along a street frontage that contributes to a sense (or distinction) of individual buildings and human-scale.

- **Fine-grain retail:** The dimension and/or number of linear shops and entrances along the street.
- **Fine-grain residential:** The dimension of linear width of a single residential unit.

Flood fringe: The lands that abut the floodway, the boundaries of which are indicated on the Floodway / Flood Fringe Maps (of the Calgary Land use Bylaw) that are inundated by floodwaters of a magnitude likely to occur once in a hundred years.

Land Use Bylaw

Floodway: The river channel and adjoining lands indicated in the Floodway / Flood Fringe Maps (of the Calgary Land use Bylaw) that would provide the pathway for flood waters in the event of a flood of the magnitude likely to occur once in a hundred years.

Land Use Bylaw

Floor area ratio (FAR): The quotient of the gross floor area of a building divided by the gross site area.

Center City Plan

Forecourts / mid-block street plazas: A mid-block location where the forecourt extends right through the block which will generate substantial pedestrian-through traffic and may become an oasis space or quiet sitting area, depending on its size.

Beltline ARP

Frontage: The linear edge of a property adjacent to the property line abutting a street, or public right-of way. This edge usually comprises an area between the property line and the front facade of a building.

Glazing: The use of glass windows in building walls. At the street level transparent glazing allows visual permeability between public and private spaces.

Greenhouse gas emissions (GHG): Gases in the atmosphere that absorb and emit radiation within the thermal infrared range.

Calgary Transportation Plan

Green Infrastructure: An interconnected network of natural green and engineered green elements applicable at multiple scales in the land use and mobility framework. Natural green elements include the conservation and integration of traditional green elements like trees, wetlands, riparian areas and parks. Engineered green elements include systems and technologies designed to mimic ecological functions or to reduce impacts on ecological systems. Examples include green alleys, green buildings, and green roadways and bridges.

Municipal Development Plan

Grey field: An outdated, vacant or failing commercial or institutional site. The term "grey" refers to the large area of concrete and asphalt that typically accompanies retail sites.

Municipal Development Plan

Ground floor: The building floor level that is situated at, and accessed from, the grade level of the street or public realm.

Heat island effect: When an urban area tends to have a higher temperature than the surrounding rural area due to building materials trapping heat. Retaining and introducing natural features and vegetation can help to mitigate the heat island effect.

Height-to-width ratio: See Enclosure ratio and Street wall.

Heritage building: A building that has an aesthetic, historic, scientific, cultural, social or spiritual importance or significance of past, present or future generations. The heritage value is embodied in its character-defining materials, forms, location, spatial configurations, uses and cultural associations or meanings. (See Historic resource.)

Historic resource: This refers to any work of nature or of humans that is primarily of value for its palaeontological, archaeological, prehistoric, historic, cultural, natural, scientific or aesthetic interest including, but not limited to, a palaeontological, archaeological, prehistoric, historic or natural site, structure or object. (See Heritage Building.)

Historical Resources Act, Province of Alberta

Human scale: See Pedestrian scale.

Impervious surfaces: Mainly artificial structures, such as building roofs, road pavements, sidewalks and parking lots that cannot be easily penetrated by water, thereby resulting in runoff.

Municipal Development Plan

Infrastructure: The technical structures that support a society, including roads, transit, water, sewers, power grid, telecommunications, etc.

Municipal Development Plan

Intensification: The development of a property, site or area at a higher density than currently exists. Intensification can be achieved through redevelopment, development of vacant / under utilized lots, the conversion of existing buildings, or through infill development in previously developed areas.

Municipal Development Plan

Intensity: A measure of the concentration of people and jobs within a given area calculated by totalling the number of people either living or working in a given area.

Municipal Development Plan

Interfaces: These are the spaces between the building facade and the public sidewalk or boulevard. This space is a very important part of the image and character of the public street. (Note: This term is used inter-changeably with edges.)

Beltline ARP (revised)

Landmark: A building, structure such as bridges, memorials, public art, and/or landscapes that have a special historical, architectural or cultural significance.

Center City Plan

Landscaped (or amenity) roof: A roof with green space, vegetation, and other features that provides amenity to building residents and improves attractiveness when viewed from above.

Landscape zone: The area within a building setback that contains gardens, communal open space and/or private patios. This zone may contain soft landscaping such as trees, shrubs, hedges, grass and ground cover, or hard landscaping such as brick, stone, concrete, tile or wood.

Landscaping (soft and hard): The enhancement of a site through the use of (a) soft landscaping; (b) hard landscaping; and (c) architectural elements.

Lane: A roadway that is primarily intended to give access to the rear of buildings and parcels.

Land Use Bylaw

Large format urban retail One or more large stores (commonly called "big box stores") that may take up most or all of the ground level of a building. Such development would comprise a retail component of 9,300 square metres and above. (See Municipal Development Plan Section 4.1.)

Municipal Development Plan

Legibility: The degree to which users of a space are able to perceive and understand its layout and function readily.

Municipal Development Plan

Light pollution: The unnaturally increased illumination and temporary fluctuations in lighting produced from man-made sources such as building lights, street lamps and vehicles. (See Light trespass.)

Bird-friendly Urban Design Guidelines

Light rail transit (LRT): Electrically-powered rail cars, operating in sets of three to five cares per train on protected rights-of-way, adjacent to or in the medians of roadways or rail rights-of-way.

Municipal Development Plan (revised)

Light trespass: A form of light pollution, where potentially unwanted light crosses a property line. (See Light pollution.)

Bird-friendly Urban Design Guidelines

Line / lined: A building use that fronts the street and screens undesirable views of internal uses, such as parking, from the street. Lined buildings may contain residential, retail, commercial or community uses.

Linear parks: These are long park areas or landscaped portions of roads' right-of-way. They can be at grade level or elevated. They can provide significant opportunities to create new nodes of active and passive recreation. These parks also serve as connections to other public open spaces (north of the Beltline and CPR tracks), and can also be natural parks with a variety of ecological communities and trails in the heart of the city. They can be achieved by reclaiming portions of former industrial areas and railway lands.

Beltline ARP

Linkages: Linear systems that connect places and built form. Linkages allow for the movement of people and goods within the urban fabric.

Municipal Development Plan

Livability: Factors that contribute to a healthy, vibrant and well-designed community that values its unique identity and manages growth and change to maintain and enhance its community character.

Live / Work: A land use and development strategy that accommodates both a commercial use and residential use within the same property.

Low impact development: An approach to land development that uses various land planning and design practices and technologies to simultaneously conserve and protect natural resource systems and reduce infrastructure costs.

Municipal Development Plan

Massing: The arrangement of the bulk of a building on a site and its visual impact in relation to adjacent buildings. (See also Building massing.)

Centre City Plan

Mixed-use development: The development of land, a building or structure with two or more different uses, such as residential, office and retail. Mixed-use can occur vertically within a building, or horizontally on a site.

Municipal Development Plan

Modal split: The proportion of total person trips using each of the various modes of transportation. The proportion using any one mode is its modal share.

Municipal Development Plan

Native biodiversity: Species of flora and fauna that are indigenous to a specific area. (See Biodiversity.)

Municipal Development Plan

Neighbourhood: A distinct part of a larger community, containing up to 5,000 people. A neighbourhood is typically considered to be a primarily residential area within walking distance of a local commercial area, school, park, transit station, etc. As "compact, pedestrian friendly and mixed use" areas, the neighbourhood becomes the building block from which enduring settlements are formed.

Municipal Development Plan

Neighbourhood centre: A place within a neighbourhood at which an activity or complex of activities takes place to meet local needs and foster a sense of unique identity for the neighbourhood. Components of the neighbourhood centre may include the basic needs of open spaces, grocery, health, community association facilities, childcare and seniors amenities and transit. And such needs provided within walking distance.

Centre City Plan

On-site: The area within the development parcel and its property boundaries, including buildings, open space, and other features and amenities.

Open space: Green landscape and / or water area with its surface open to the sky, which provides active or passive recreational opportunities and structures urban development and form.

- **On-site open space:** Private realm gathering and / or landscaped amenity areas within a development parcel including corner plazas, mid-block plazas, pedestrian connections, courtyards, landscape zones and landscape roofs.
- **Public open space:** Open space that is situated in the public realm under public ownership and management, such as parks, plazas, and courts.

Parking area – short stay: This is an area designed for the parking of motor vehicles within a building where:

(a) the vehicle remains parked for no more than 4 hours at a time; and

(b) there is convenient pedestrian access to the street level and publicly accessible uses within the development.

Land Use Bylaw

Parking facilities: Any surface used to provide parking for vehicles, whether inside part of or all of a building, or outside either off-street or within the roadway right-of-way.

Calgary Transportation Plan

Patio: An uncovered horizontal structure with a surface height, at any point, no greater than 0.60 metres above grade, intended for use as an outdoor amenity space.

Land Use Bylaw

Pedestrian realm: The publicly accessible space between street curb and building line.

Downtown Underpass Urban Design Guidelines

Pedestrian scale: The scale (height/proportions) and comfort level that the street level and lower stories of a building provide for pedestrians as they walk alongside a building or buildings. (See Human scale.)

Municipal Development Plan; Centre City Plan

Pedestrian-oriented, pedestrian-friendly, or pedestrian-first: An environment designed to make travel on foot convenient, attractive and comfortable for various ages and abilities. Considerations include directness of the route, interest along the route, safety, amount of street activity, separation of pedestrians and traffic, street furniture, surface material, sidewalk width, prevailing wind direction, intersection treatment, curb cuts, ramps and landscaping.

Municipal Development Plan; Centre City Plan

Permeability: The ability of pedestrians, vehicles, and cyclists to move easily and without impediment within and between public spaces.

Pervious parking: When parking space incorporates porous concrete to allow for water infiltration into the ground. This helps to reduce runoff from impermeable surfaces.

Placemaking, place: Placemaking is a people-centered approach to the planning, design and management of public spaces. “Spaces” and “places” have very different meanings. A space is a physical description of a piece of land, whereas a “place” is defined by surrounding linkages and built form and connotes an emotional attachment to the piece of land.

http://www.placemakingchicago.com/about/index.asp

Plaza / urban plaza: An open area fronting onto a street or sidewalk which is accessible to the public at all times for the use and enjoyment of larger numbers of people.

Beltline ARP

Podium: Base of a bulding. (See Building massing.)

Porte cochere: A roofed structure extending from the entrance of a building over an adjacent driveway and sheltering those getting in or out of vehicles.

Private amenity space: Amenity space provided for the use of the occupants of only one unit.

Land Use Bylaw

Promendade: A formally designed pedestrian priority walkway along the riverfront that includes a walkway, urban features such a benches, garbage disposal and pedestrian-scale lighting, etc.

Centre City Plan

Property line: The legal boundary of a parcel.

Land Use Bylaw

Public realm / public space: The spaces around, between and within buildings that are publicly accessible, including streets, squares, plazas, +15 system, parks and open spaces. These areas and settings support or facilitate public life and social interaction.

Redevelopment: The creation of new units, uses or lots on previously developed land in existing communities.

Municipal Development Plan

Residential plaza: A neighbourhood public space with higher design and amenity standards. Such plazas are “living rooms” of residential neighbourhoods - open spaces that are accessible, inviting, sunlit, safe and beautifully landscaped.

Beltline ARP

Retaining wall: A structure constructed to withstand lateral pressure in order to hold back earth, loose rock, or similar materials.

Land Use Bylaw

Right-of-way (ROW): Publicly owned land containing roads and streets and/or utilities.

Calgary Transportation Plan; Municipal Development Plan

Riparian areas: Areas where the plants and soils are strongly influenced by the presence of water. They are transitional lands between aquatic ecosystems (wetlands, rivers, streams or lakes) and terrestrial ecosystems.

Municipal Development Plan

Screen, “screened” and “screening”: These terms are used to refer to the total or partial concealment of a building, equipment, structure or activity by a berm, fence, vegetation or wall.

Land Use Bylaw

Seasonal design: The cold climate design considerations to minimize discomfort outdoors. The design objectives include pedestrian protection, optimized accessibility, improved microclimate and conceptions of public spaces in relation to seasonal use.

Sense of place: A strong identity and character that is felt by local inhabitants and visitors. Factors that help to create a “strong sense of place” include natural and cultural features, built form and architecture,

mobility to and within the place and the people who frequent that place.

Municipal Development Plan

Servicing / service access: The space and facilities used for the delivery and / or removal of material to a residential, retail, or commercial property.

Setback area: The area of a parcel between the property lines and lines parallel to the property lines at a distance equivalent to the minimum depth from each respective property line as required by a land use district.

Land Use Bylaw

Shadowing: When a building, or portion of a building, casts shadows on adjacent streets, open space, and / or building facades.

Sheer tower: A tall building with little articulation along walls, lacking glazing or other elements to add visual interest and human scale.

Sidewalk: The area principally used by pedestrians and located to the side of a roadway within a right-of-way (ROW).

Sidewalk widenings: Sidewalk widenings are minor public spaces that serve the purpose of improving pedestrian circulation and/or add opportunities for commercial or hospitality activities. They form a continuous publicly accessible private pedestrian area adjacent to public sidewalks.

Beltline ARP

sPARKS: A street park or portion of a street right-of-way that doubles as park space.

Centre City Plan

Square: This is a centrally located, animated gathering space which is predominantly hard surfaced with complementary landscaping.

Beltline ARP

Stepback: Upper building levels that are set back from the podium-level frontage to reduce the perception of building mass from street level and allow more light to reach street level.

Storey: A habitable level or enclosed floor in a building.

Streets: Roadways that are designed to accommodate all modes of transportation (to varying degrees depending on the specific type of street). They include (a) any public road, including the boulevards, sidewalks and improvements, but excluding a lane, bridge or walkway; or (b) a private condominium roadway.

Calgary Transportation Plan; Land Use Bylaw

Street definition: The way in which the height, articulation, and massing of buildings define the quality of a street edge.

Street level: The elevation of the street where it meets the building or open space interface.

Street wall: The overall presence of a building facade that defines the vertical edge wall of a street. When both street walls on a street are considered in combination, they define the street edges and containment of the street space.

Street-oriented: Design that supports orienting building frontages and primary entranceways towards the street rather than the internal space of a site.

Municipal Development Plan

Streetscape: All the elements that make up the physical environment of a street and define its character. This includes paving, trees, lighting, building type, style setback, pedestrian, cycle and transit amenities, street furniture, etc.

Municipal Development Plan; Centre City Plan

Sun access: The siting of buildings, including podium and upper building levels, to maximize sun exposure to adjacent streets, open space, and building facades.

Sustainability: Meeting the needs of the present without compromising the ability of future generations to meet their own needs. It includes environmental, economic and social sustainability.

Municipal Development Plan

Terracing: The stepping back of upper floors of buildings to allow for greater sun access, amenity space, facade articulation, architectural detail, and human scale at the ground level.

Top of bank: The natural transition line or upper natural topographical break at the top of a valley, or at the top of a channel that contains a watercourse, between a slope where the grade exceeds 15.0 per cent and the adjacent upper level area where the grade is less than 15.0 per cent, and where area that is less than 15.0 per cent in slope is at least 15.0 metres wide.

Land Use Bylaw

Transit: All components involved in providing public transportation to residents, workers and tourists. Includes types of public transportation, routes, and schedules. Public transit provides passengers with low-cost mobility (ability to move around) and accessibility (ability to reach services and destinations) to people, places, goods and services.

Transit enhancement: Transit enhancement is the construction of structures either as part of a building or as a separate structure that provide shelter from the elements to transit service users and that provide an amenity and design standard exceeding standard transit facilities.

Land Use Bylaw

Transit integration: The inclusion of public transit amenities such as transit passenger waiting areas, weather protection within private buildings and on private property.

Transit-oriented, transit-friendly or transit-supportive: The elements of urban form and design that make transit more accessible and efficient. These range from land use elements, (e.g. locating higher intensity housing and commercial uses along transit routes) to design (e.g. street layout that allows efficient bus routing). It also encompasses pedestrian-friendly features, as most transit riders begin and end their rides as pedestrians.

Municipal Development Plan; Centre City Plan

Transit plaza: An area developed to serve as a public transportation centre, including onsite driveways, walkways, benches, bus shelters and landscape areas.

Municipal Development Plan / Bylaw 46P2013

Transit stop: A designated place within a public road right-of-way where buses or light rail cars stop for passengers to board or leave the vehicle. Transit stops typically have widened sidewalk space, shelters, seating, signs and electronic passenger information systems.

Calgary Large Commercial Urban Design Guidelines

Transition zone / area: Sensitively planned and designed area between Downtown and surrounding Centre City neighbourhoods. Local Area Plans identify transition areas of an appropriate size to facilitate a change in scale and intensity. Refer to Downtown Land Use District (Bylaw33P2014) and East Village ARP for specific rules within transition areas (such as residential window separation, floor plate restriction, use area, mixed use, street orientation, etc.).

Tree canopy: The area within the boundaries of Calgary covered by tree and forest foliage.

Municipal Development Plan

Typology: The classification of an urban component such as geographic areas, streets, buildings, lanes or open spaces by type, that share common characteristics. Typologies establish the strategic framework within which more detailed policies and urban design guidelines can be established.

Underpass, underpass streets: Passageway for vehicles or pedestrians that runs under a railway. The passageway includes the complete street body below grade between 9 Avenue and 10 Avenue SE / SW.

Downtown Underpass Urban Design Guidelines

Universal design: Universal design is the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.(See Accessibility.)

Municipal Development Plan

Urban design: The practice of giving form, shape and character to the arrangement of buildings, of whole neighbourhoods, or the city. At the more detailed level, it involves the shaping of the external spaces between buildings, and the design of their details and finishes to respond to use, context, climate, and building form.

Urban fabric: The structure of a city and how its parts relate to each other. The generic term for the physical aspect of urbanism.

Urban forest: All the trees and associated vegetative understory in the city, including trees and shrubs intentionally planted, naturally occurring or accidentally seeded within the city limits.

Municipal Development Plan

Urban grove: This is a cohesive planting area accommodating at least 10 trees, for an average 25-year life span for each tree. The purpose of the urban grove is to contribute to greening the city by providing cohesive groups of trees in the streetscape.

Land Use Bylaw

Urban structure: The arrangement of land use in urban areas which is defined by various linkages between elements within its urban activity.

Use: See Building Use.

Utilities: Facilities for gas, electricity, telephone, cable television, water, storm or sanitary sewer. Shallow utilities: Gas, electrical, telephone and television cable services. Deep utilities are stormwater, sanitary and water pipes.

Centre City Plan; Calgary Transportation Plan

Walkable: See Pedestrian-oriented.

Calgary Large Commercial Urban Design Guidelines

Wayfinding: A term used to describe how people respond to the built environment to orient themselves. Elements that contribute to wayfinding include reference points such as signage, natural areas or parks, landmark buildings, bridges, distinctive lighting, public art, etc.

Municipal Development Plan

Weather protection: The requirement to provide protection of public pedestrian areas at the ground floor, Elements of weather protection include canopies, trees and other barriers to wind, sun and precipitation.

Winter gardens (indoor): Winter gardens are climate-controlled, fully enclosed spaces adjacent to sidewalks or the +15 system.

Beltline ARP

Woonerf ("street for living"): A Dutch term for a common space created to be shared by pedestrians, bicyclists and low-speed motor vehicles.

Centre City Plan