

An aerial photograph of a suburban residential area, likely Brentwood, Tennessee. The map shows a grid of streets and numerous houses. A large, semi-transparent, multi-colored overlay (red, orange, yellow, and blue) is placed over the central part of the map, indicating the 'Brentwood Site'. The overlay has a complex, irregular shape with internal lines, suggesting a conceptual masterplan or development boundary. The text 'BRENTWOOD SITE' and 'CONCEPTUAL MASTERPLAN' is printed in bold black letters over the right side of the map. Below the title, a small black box contains the date '2012 JUNE 11'.

BRENTWOOD SITE CONCEPTUAL MASTERPLAN

2012 JUNE 11

BRENTWOOD SITE CONCEPTUAL MASTER PLAN

The City of the future needs to be thought of differently from how we considered cities in the past. A city that encourages people to work with their imaginations goes well beyond the urban engineering paradigm in city-making.

Charles Landry

BRENTWOOD TOWN CENTRE
MASTER PLAN REZONING APPLICATION — REVISED JUNE 2013

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Burnaby, B.C. V5C 3Z6

OWNERS



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+ THE VISION

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ACKNOWLEDGEMENTS





THE VISION

The Brentwood Site presents a unique opportunity to realize the vision established by the Brentwood Town Centre Development Plan. Inspired by the Creative City Initiative, the site's redevelopment will transform the existing suburban-style shopping mall into a world class, mixed-use, transit oriented community, reasserting itself as the nucleus of the Brentwood Town Centre area.

The site will expand its role as a shopping destination into an integrated, sustainable, urban community offering a rich variety of indoor and outdoor shopping experiences, a variety of residential types, cafes & restaurants, entertainment venues and offices, designed around new pedestrian-oriented public plazas, open spaces and tree-lined streetscapes.

In its new role, the Brentwood Site will enrich the social, economic and physical environment of Burnaby's western-most town centre through high quality urban design and architecture, integrated into the urban fabric of the surrounding neighbourhood. With its direct connection to the Brentwood Town Centre SkyTrain Station, it will offer a unique destination for all of Burnaby and the greater Vancouver area.







VANCOUVER DOWNTOWN

STANLEY PARK

BOUNDARY ROAD

GILMORE STATION

WILLINGDON AVENUE

DAWSON STREET



WEST VANCOUVER

NORTH VANCOUVER

BURRARD INLET

SINGLE-FAMILY RESIDENTIAL

LANE

ALPHA AVENUE

SKYTRAIN

BETA AVENUE

MULTI-FAMILY RESIDENTIAL

LOUGHEED HIGHWAY

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1.1 INTRODUCTION

The conceptual master plan for the Brentwood Site envisions a first of its kind signature destination where people can live, work, shop and play in one location, with the added advantage of direct access to a SkyTrain station. These are the key ingredients for a truly sustainable lifestyle, a complete community.

The site will feature a high quality urbane character with an exciting concentration of retail/commercial experiences paired with a range of residential unit types. The diverse mixture of uses will be planned around an exceptional public realm offering a variety of interesting gathering places, culminating at the new Town Centre Plaza.

The aesthetically rich environment of the new Brentwood Site will be a focal point for the town centre and a special asset for the neighbourhood and the City.



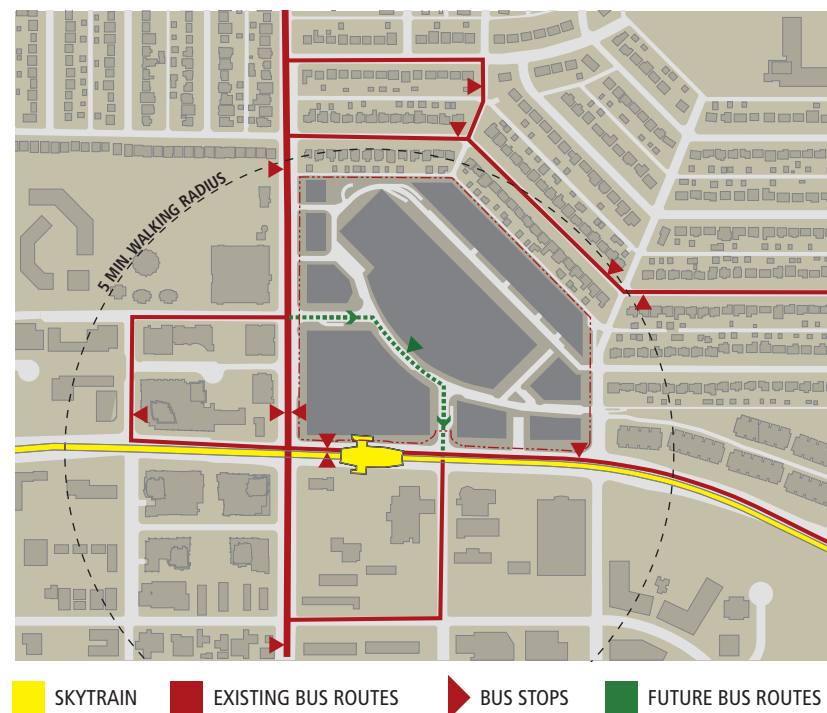
1.2 TRANSIT ORIENTED DEVELOPMENT

A major planning goal for the Brentwood Site is to achieve a transit oriented development that takes full advantage of the existing regional and city transit by optimizing the commercial and residential uses. The criteria for a successful transit oriented development are as follows:

- A regional node with mixed uses including office, residential, retail, and civic spaces in close proximity to a SkyTrain station and bus transit systems
- Multi-modal opportunities on and around the site integrating pedestrian, cycle, transit and High Occupancy Vehicles (HOV)
- Improving accessibility to transportation alternatives
- Walkable, pedestrian-oriented design within 10-minute walking radius surrounding the SkyTrain station
- Designed to include the easy use of bicycles
- Increasing transit ridership for those not owning cars
- Decreasing auto dependency and exhaust emissions
- Making better connections between jobs and housing

The Brentwood Conceptual Master Plan embodies these criteria.

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The existing off-street bus exchange will become an on-street layout, designed to address the passenger needs of the broader neighbourhood



1.3 COMMERCIAL STRATEGY

Strong, dynamic retail/commercial uses make an important contribution to the animation of the public realm in creative cities, encouraging public interaction and innovation. Great retail environments mixed with offices, interesting cafés, pubs and restaurants activate great public spaces and maintain a constant vibrancy. This is especially important for large public spaces where events are not occurring on a daily basis.

The Brentwood Site master plan will transform the existing exclusively internally-oriented shopping mall site into a mixed-use urban town centre environment with a focus on pedestrian oriented street retail and commercial uses. The site will have a full scale range and mix of retail and commercial spaces from small boutiques to major retailers and office uses. Larger retailers will be located discreetly in order to maintain an urban style street environment. Retail and commercial uses will front onto the new high street, all the street entrances to the site, the public street frontages, as well as the more intimate pedestrian mews. The intent is to create different urban retail experiences in a pedestrian oriented town centre within an exciting public realm.

(see Appendix B for the full description of the Commercial Strategy)



1.4 RESIDENTIAL STRATEGY

The Brentwood Site will accommodate just over four million square feet of Residential, benefiting from and mutually supporting the variety of retail/commercial services and public amenities on the site. The direct access to the Brentwood Town Centre SkyTrain Station is an important convenience for the residents on the site. This type of complete community development with immediate transit access and the full range of services to meet resident's daily needs will appeal to a broad demographic mix in terms of age, ethnicity, and income. The range of unit types will suit individuals, couples and families seeking an urban lifestyle. An inclusive demographic range will, in turn, enliven the social environment of the site and neighbourhood.

There are three principle residential types.

- High-rise residential is proposed along Willingdon Avenue and Lougheed Highway, between 30 and 70-storeys in height. Their principle entrances will be from the High Street and/or adjacent streets. The ground level will accommodate retail/commercial uses. There is the potential for semi-private active amenity green space for these towers on the adjacent commercial roof level. The Northwest high-rise also has a terraced element that transitions down in height towards the north.
- Mid-rise residential is proposed along the new Ridgelawn Drive, between 20-30 storeys in height. Their principle entrances would be from Ridgelawn Drive. The entrance level will accommodate retail/commercial uses. There is the potential for semi-private active amenity green space for these towers on the adjacent core commercial roof level.
- Low-rise residential is proposed to the north of the new Ridgelawn Drive, between 2 and 4 storeys in height. Their primary entrances will also be from Ridgelawn Drive. Active amenity space can be accommodated in the common open space bordering these low-rise units, as well as in the semi-private and private open space between the building forms.

(see Appendix C for the full description of the Residential Strategy)

1.5 PURPOSE OF THE CONCEPTUAL MASTER PLAN REZONING

The purpose of this master plan rezoning is to establish general development guidelines for the site that will inform future detailed rezoning applications for specific phases of development on the Brentwood Site. The master plan will determine development densities, general built form, building heights, land use and subdivision pattern.

1.6 CURRENT ZONING

The current Zoning is CD Comprehensive Development District (based on C3, C3a General Commercial District and P2 Administration and Assembly District)

1.7 REQUESTED ZONING

The Comprehensive Development rezoning for the Brentwood Conceptual Master Plan does not establish specific development rights for the site, but does establish a range of permissible land uses and densities in line with the Council adopted Brentwood Town Centre Development Plan.

The requested Zoning is Amended CD Comprehensive Development District (based on C3, C3a General Commercial Districts, P2 Administration and Assembly District, RM4s, RM5s Multiple Family Residential Districts and Brentwood Town Centre Plan guidelines)

1.8 REZONING RATIONALE

The Brentwood Site is currently highly under utilized and out of date with respect to the aspirations of the Brentwood Town Centre City policies. The principle reasons to redevelop this site are:

- Creating the heart of the Town Centre with a high density mixture of uses in close proximity to the Brentwood Town Centre SkyTrain Station
- Contributing to the 'Complete Community' concept for Brentwood by including residential, retail, office and civic uses on one site, thereby making better connections between housing, jobs, services and amenities
- Forming a high density, high-quality development within 10-minute, 400m walking radius surrounding Brentwood Town Centre SkyTrain Station
- Encouraging and enhancing transportation alternatives other than cars thereby increasing transit ridership
- Utilizing serviced land more efficiently and help create a more compact urban form
- Acting as a catalyst for private investment and development in the Town Centre area
- Creating more street activity and a safer environment around the Brentwood Town Centre Skytrain Station and the site by having residential 'eyes on the street'
- Creating a walkable neighborhood giving pedestrians the highest priority
- Providing housing in a variety of forms and sizes for a diverse demographic

1.9 CITY POLICIES

The planning and design of the Brentwood Town Centre has been guided by, amongst others, the following principle City policies:

- City of Burnaby's Official Community Plan (OCP)
- Brentwood Town Center Development Plan (BTCDP)
- Economic Development Strategy (EDS) 2020
- Social & Environmental Sustainability Strategies

1.10 PUBLIC BENEFITS

The major public benefits include, amongst others, the following:

- World-class, mixed-use retail centric development. A great social place and true selling point for the city
- **Town Centre Plaza:**
A 1 acre public plaza at the key intersection of Willingdon and Lougheed which connects with the Brentwood Town Centre SkyTrain Station, and the centre of the new development. This flexible space will accommodate a wide diversity of audiences ranging from small gatherings to up to 2,500 people. The year-round event program will primarily be focused between spring and fall. It has the potential of accommodating a variety of activities such as music, art shows, theatre presentations, and neighbourhood gatherings
- **Sustainability:**
The proposed Brentwood Site project is inherently a very sustainable development model, introducing high density, mixed-uses at a SkyTrain station. It will provide a complete community that supports and enhances regional sustainability aspirations as well as Burnaby's three pillar strategy for Social, Economic and Environmental sustainability. The preliminary assessment of the proposed master plan design indicates a strong LEED-ND (Neighbourhood Development) Gold rating
- **Community Uses:**
Many community activities currently take place daily at the existing Brentwood Town Centre Mall, such as charity fund-raising, neighbourhood walking & exercising groups, child activity centre, school group functions, social and arts groups exhibitions and performances. The proposed master plan will further enhance the community use of the site by introducing a wide range of publicly accessible outdoor spaces, upgraded public street design with widened tree-lined sidewalks and separated bicycle lanes and improved access to the SkyTrain station and transit, all supported by a wide range of commercial uses to better service the neighbourhood
- **Jobs:**
The substantial commercial uses proposed on the site, will provide extensive job opportunities in the neighbourhood. The commercial area will include a variety of jobs in the office, service, retail and restaurant uses, among others. These uses will assist in maintaining a good balance between jobs and number of residents in the town centre. The project will also create a very substantial number of job opportunities during the construction of the project

1.11 PROCESS TO DATE

There has been an extensive process to date, involving the public, the City, the property owners and consultants:

- Adoption of the Brentwood Town Center Development Plan in 1996
- Shape Properties purchase of the Brentwood Site in 2010
- 2010 Initiated discussions with Burnaby Planning Department
- 2011 April submitted an Amended Comprehensive Development Rezoning for the site
- Collaborative workshops with the City and a broad range of specialized consultants to develop specific tenets and principles to guide concept development (see Appendix A)
- Engaging in discussions with the Retail, Office and Residential market representatives
- A Public Open House was held on January 09, 2012 to solicit input on the character and intent of the redevelopment
- A second Public Open House was held on June 7, 2012 to obtain comments on the conceptual plan
- Meeting with special interest groups, neighbourhood residential strata groups, business owners and community groups
- The following document will be brought forward to a future Public Hearing to obtain input on the completion of the rezoning application

1.12 URBAN DESIGN CONCEPT

There are seven major urban design objectives integral within the overall concept. These include:

- Creating a high quality, high density residential and commercial development directly linked to the Brentwood Town Centre SkyTrain Station
- Creating a major Town Centre Plaza at the strategic southwest corner of the site which connects directly to the Brentwood Town Centre SkyTrain Station and to the centre of the new development
- Increasing multi-modal permeability through the site
- Creating a high quality and prominent built form that emphasizes the Brentwood Site as the centre of the northwest quadrant Town Centre
- Creating a pedestrian oriented public realm with a new High Street with strong vehicular connections to Halifax Street and Alpha Avenue
- Developing a strong, animated retail edge along the Lougheed Highway and Willingdon Avenue street frontages
- Providing a generous, landscaped transition zone to the northern single family residential neighbourhood

1.13 CREATIVE CITY INITIATIVE

The project team was tasked by the Mayor and Council of Burnaby to engage a Creative City approach to planning and redevelopment of the Brentwood Site.

To meet this challenge the design of the master plan strives to:

- Inspire creative energy through high quality and inspirational urban and architectural design by designing spaces where people want to go and connect with others
- Attract the “creative class” and promote greater creativity, entrepreneurship, diversity and innovation
- Enhance economic activity and improve people’s lives by making cities better places to live, work and play
- Create an active, high quality sense of place with a variety of internal and external meeting spaces, integrated within a vibrant, retail, restaurant and commercial environment
- Strive for a new architectural paradigm for the town centre with spaces that are flexible over time, offer a diversity of experiences and engage people for creative endeavors
- Provide a highly Socially, Economically and Environmentally sustainable development

1.14 CONCEPTUAL MASTERPLAN REZONING DOCUMENTATION

The Conceptual Master Plan Rezoning documentation for the Brentwood Site includes the Conceptual Master Plan illustrated in this booklet, chapters 1 through 10 with appendices, and a companion booklet outlining the design guidelines for the Master Plan.

2.0 SITE HISTORY

OPENING DAY / 16 AUGUST 1961





1920's



1960's



1966

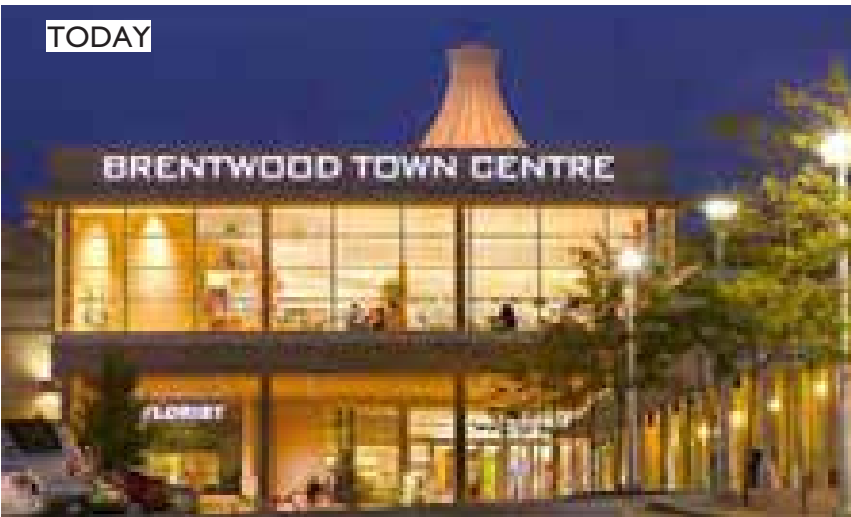


1966

Fifty years ago, Brentwood Town Centre (then known as Brentwood Shopping Centre) officially opened its doors on August 16, 1961 and has been a valued part of the community ever since. Initially built to serve the 526 new homes erected in the surrounding area in the early 1950's, Brentwood was originally a single-storey centre that was partial strip mall and partial enclosed mall with only 48 stores. When it first opened in 1961, Brentwood was the second mall in British Columbia (after Park Royal in 1950) and prided itself on being "Canada's most modern shopping centre". As the largest mall in the province it attracted shoppers from all over British Columbia. Many central BC and Okanagan residents fondly remember traveling to Vancouver and making Brentwood their first destination off the nearby TransCanada Highway.

In the early days, the Centre was anchored by prominent retailers Eaton's and Loblaws. The mall was also home to Fields, Zellers, Reitman's, Bank of Montreal, and the Doll House Restaurant. In the early 1970's, the Centre underwent its first major renovation. The lower level hallway between Eaton's and Loblaws was expanded, and a dome placed on the parking lot converting the outdoor fountain to an indoor one.

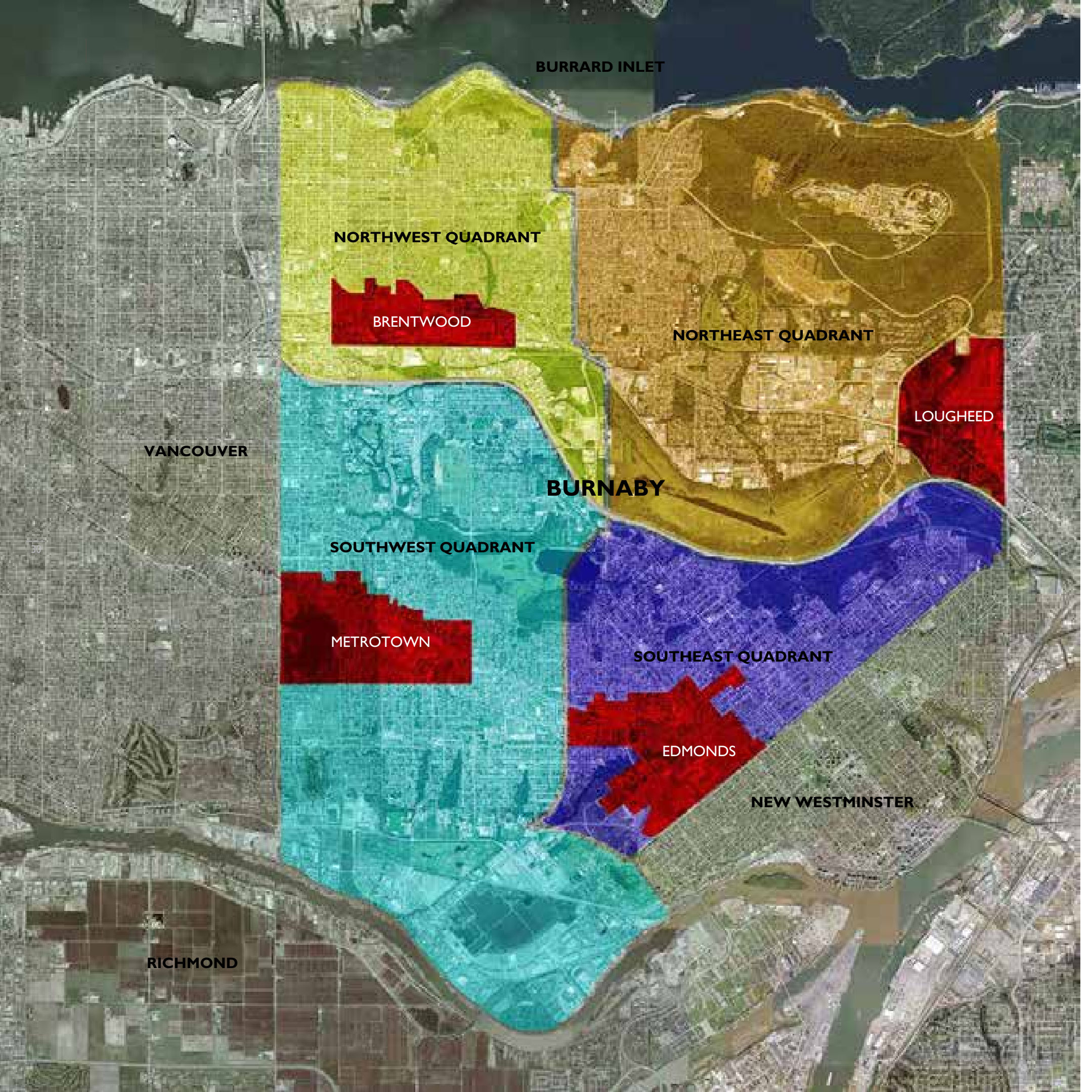
In 1989, Brentwood had its second major renovation which saw the addition of the iconic white Teflon roof and a new second level. In 2003, Translink opened the Millennium SkyTrain Line with a dedicated Brentwood Town Centre Station. Brentwood Mall became Brentwood Town Centre. The third renovation of the property happened in 2006. Improvements included a new food court, public washrooms and a children's play area.



TODAY

3.0 CITY POLICIES

- 3.1 Burnaby Official Community Plan (OCP)
- 3.2 Brentwood Town Centre Development Plan (BTCDP)
- 3.3 Social Sustainability Strategy & Economic
(EDS) 2020 Sustainability Strategy
- 3.4 Environmental Sustainability Strategy



BURRARD INLET

NORTHWEST QUADRANT

BRENTWOOD

NORTHEAST QUADRANT

LOUGHEED

VANCOUVER

BURNABY

SOUTHWEST QUADRANT

METROTOWN

SOUTHEAST QUADRANT

EDMONDS

NEW WESTMINSTER

RICHMOND

The OCP is about defining directions that will guide Burnaby's development. It presents a vision that speaks to pursuing more complete communities that bring people, jobs, services and amenities together in more accessible ways.

The OCP divides Burnaby into four Quadrants, each with their own Town Centre:

Northwest Quadrant - Brentwood (Municipal Town Centre)
Southeast Quadrant - Edmonds (Municipal Town Centre)
Northeast Quadrant - Lougheed (Municipal Town Centre)
Southwest Quadrant - Metrotown (Regional Town Centre)

Metrotown underwent major growth in the 1980's & 1990's. Brentwood and the other two Municipal Town Centres are now poised for redevelopment and a transition, over time, from suburban shopping centres into more mixed-use / high-density residential core areas. The OCP Town Centre policy proposes:

- Higher density Residential development connected to the LRT system
- Primary commercial focus for the City and Quadrants with significant role in future office, retail & service uses
- Designated locations for regional shopping use growth with a concentration of high profile retail uses

Each of the Town Centres contributes to Burnaby's overall diversity and to the vision of complete communities, creating self-sufficiency within their respective quadrants, to meet the daily needs of the area residents.

The Brentwood Town Centre (BTC) Development Plan was originally adopted by Council on June 10, 2006. Developed through a public consultation process, the BTC Plan builds upon its Burnaby Official Community Plan’s (OCP) designation as a Municipal Town Centre. As a Town Centre, Brentwood’s role is to accommodate higher density residential, commercial office and retail development, supporting, and supported by SkyTrain rapid transit, with the over arching goal of creating a “Complete Community” with a diversity of housing types, employment, services and recreation opportunities.

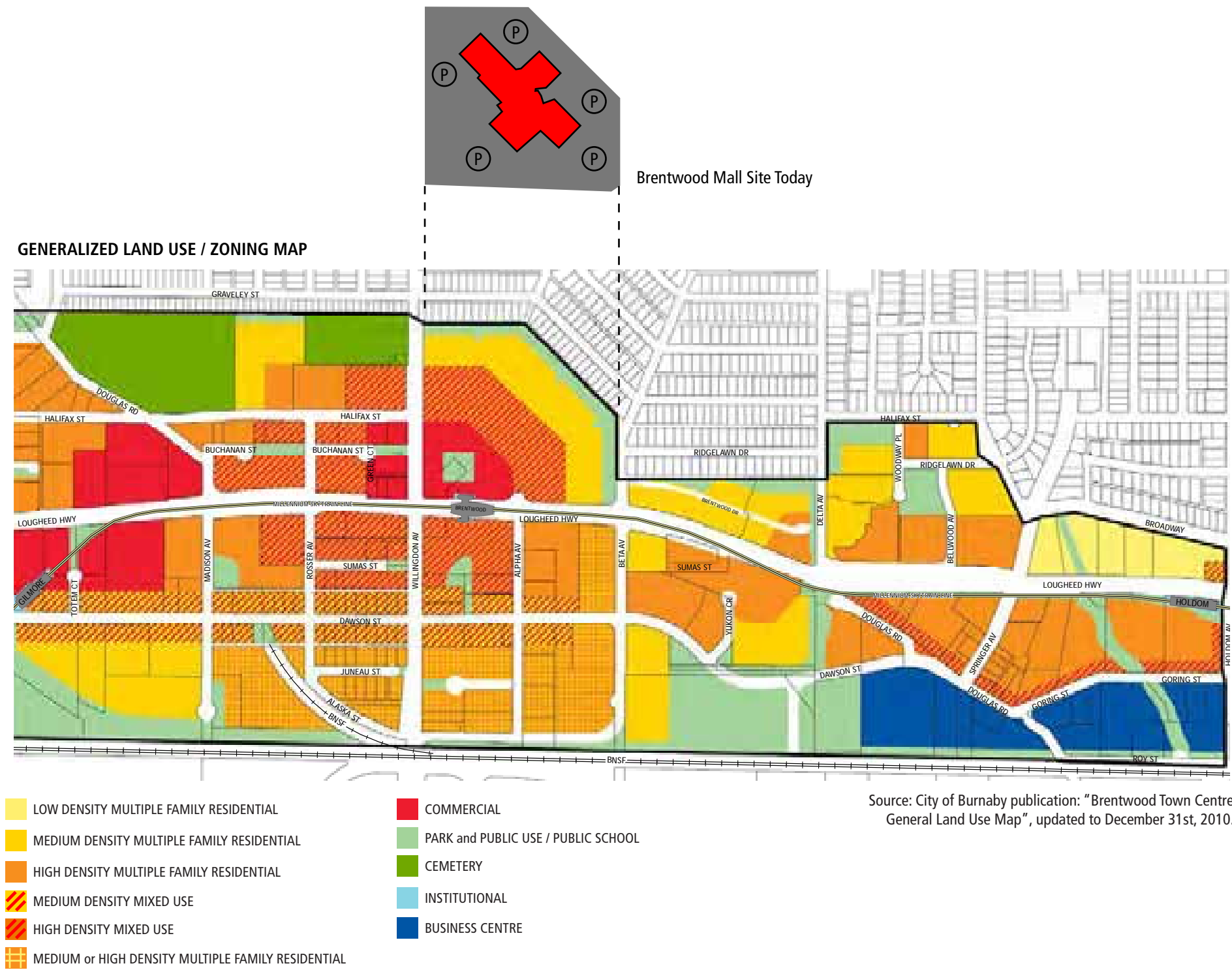
The Brentwood Town Centre concept is guided by the following principles:

- Organization of the Town Centre on the basis of a transit-oriented, high-density, mixed-use, high-vitality central core surrounding the Lougheed Highway and Willingdon Avenue intersection.
- Development of a complete community, enabling people to live, work and play within the area, with the goal of providing an inclusive and diverse community to benefit all.
- Promotion of an urbane but sustainable environment that emphasizes pedestrian orientation and transit-oriented development
- The desire to create distinct neighbourhood identities within the Town Centre providing a human scale to future development

The Brentwood Town Centre encompasses an area of approximately 161.9 hectares (400 acres), with the Brentwood shopping centre site occupying approximately 11.3 hectares (28 acres). The Brentwood site, makes up one of the four key corners of the Town Centre core and its mixed use redevelopment potential is acknowledged as a linchpin of the core. The Brentwood site’s redevelopment as envisioned contributes to the advancement of the Brentwood Town Centre Development Plan in the following ways:

- It is the proposed location for the BTC Town Square, with an urban character suitable for public celebrations and framed by vibrant commercial and entertainment uses
- Residential and commercial densities proposed meet the objectives of the plan and further the goal of creating a complete community
- Improvement to the bounding streets, including Willingdon Avenue and Lougheed Highway to enable improved pedestrian, cycling, transit and vehicular movement
- The relocation of proposed residential and commercial parking below ground to improve the ground level experience and human scale of the proposed development
- Furthering the goals of sustainable development through comprehensive stormwater management, green building design and broad diversity of housing types and forms

Further, the BTC Plan notes that it is to play a significant role in the City’s growth management strategy accommodating some of the overall future growth in the City. The Brentwood Site redevelopment aims to contribute to that goal.





SOCIAL SUSTAINABILITY

The City of Burnaby's June 2011 Social Sustainability Strategy Introduction states:

"Sustainability is about people – individuals and the community working together to meet their needs, realize their potential, and prosper in a healthy environment..."

From a social perspective, sustainable neighbourhood design involves creating inclusive communities where residents have a sense of belonging and lots of opportunity to access services, learn, work, engage in recreation, and feel inspired.

The Brentwood Site Conceptual Master Plan focuses on Social Sustainability through three thematic design areas: Housing, Mobility and Equity & Well-Being and outlines the goals and design strategies of these themes as follows:

Housing

- Provide a mix of housing types and tenures
- Opportunities for affordable housing options
- Incorporate adaptable housing units to meet the needs of all ages and abilities

Mobility

- Give priority to walking and cycling within and beyond the site
- Provide direct access to transit
- Provide pedestrian oriented commercial zones
- Provide universal accessibility

Equity & Well Being

- Create a vibrant public realm that promotes social interaction
- Create strong linkages to surrounding neighbourhoods
- Provide access to a broad range of services and amenities
- Ensure an enhanced sense of safety and security through CPTED (Crime Prevention through Environmental Design) principles



ECONOMIC SUSTAINABILITY (ECONOMIC DEVELOPMENT STRATEGY (EDS) 2020)

Supporting the growth and/or enhancement of a strong local and creative economy is a crucial component of sustainable neighbourhood design. Local creative economies provide a variety of opportunities to businesses, institutions, organizations and service providers, which in turn provide employment opportunities to residents.

The Brentwood Site Conceptual Master Plan focuses on economic sustainability through two thematic design areas: Economic Activity and Local Economic Development and outlines the goals and design strategies of these themes as follows:

Economic Activity

- Increase the number of jobs
- Create an attractive location for business
- Achieve a well-balanced mix of complementary commercial activities

Local Economic Development

- Maximize synergies between businesses and residents
- Foster the success of smaller-scale commercial activities



ENVIRONMENTAL SUSTAINABILITY

The City of Burnaby is currently undertaking an Environmental Sustainability Strategy. The Brentwood Site Conceptual Master Plan is envisioned to meet the goals of Environmental Sustainability and be consistent with the City's Environmental Sustainability Strategy.

The Brentwood Site Conceptual Master Plan embodies an environmentally sustainable approach by focusing on urban infill and redevelopment of a previously under-utilized site with a single use where a large percentage of the land is devoted to surface parking.

The Brentwood Site Conceptual Master Plan focuses on environmental sustainability through four basic thematic design areas: Energy & Air Quality, Greenspace and Food, Water and Wastewater and Solid Waste and outlines the goals and design strategies of these themes as follows:

Energy & Air Quality

- Reduce dependency on single-occupancy vehicles
- Reduce use of fossil fuels
- Increase use of renewable fuel sources

Greenspace and Food

- Create multi-functional greenspaces with ecological value
- Promote community-based food production

Water and Wastewater

- Reduce off-site impacts of stormwater
- Reduce the consumption of potable-quality water

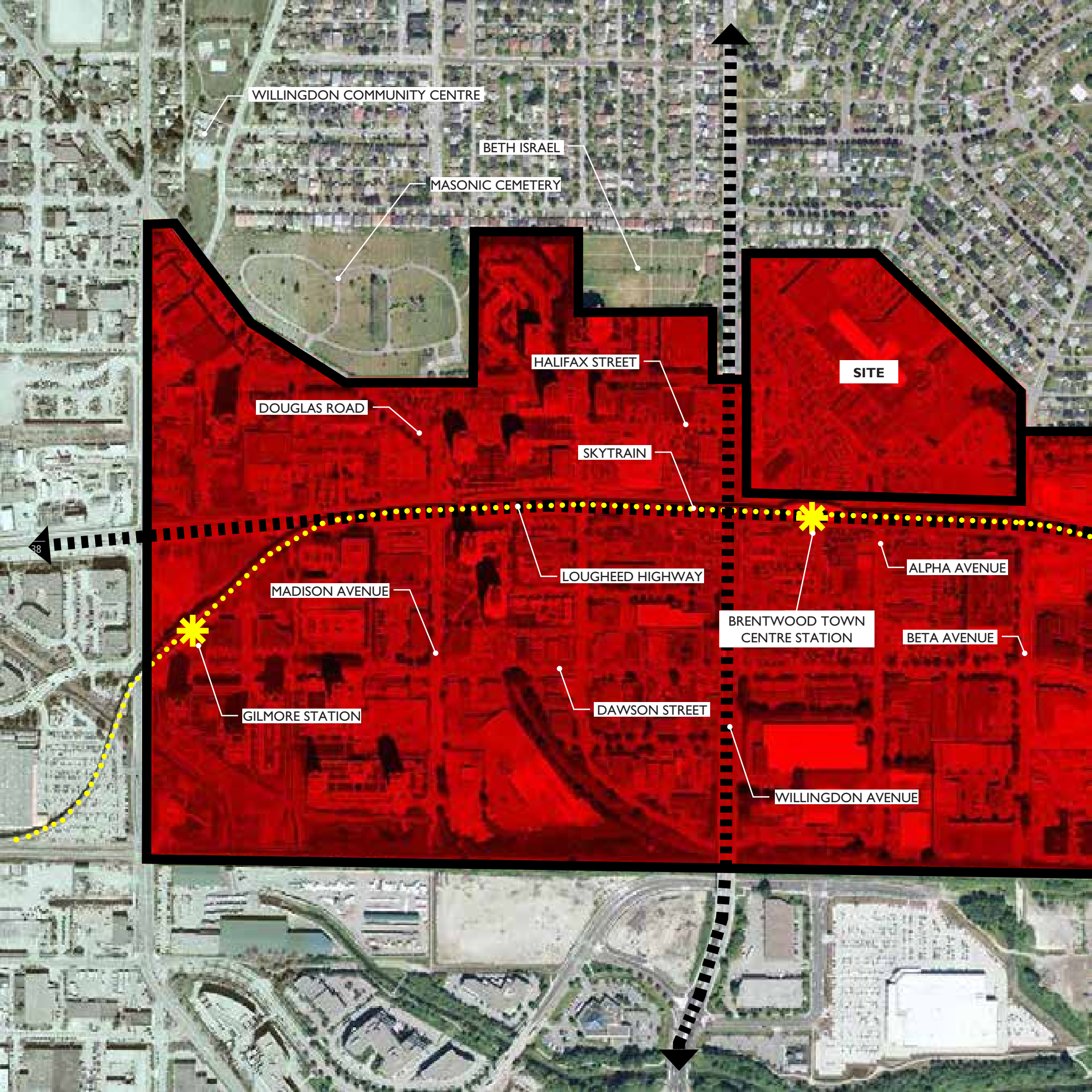
Solid Waste

- Reduce the amount of solid waste sent to landfill



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WILLINGDON COMMUNITY CENTRE

BETH ISRAEL

MASONIC CEMETERY

HALIFAX STREET

DOUGLAS ROAD

SKYTRAIN

LOUGHEED HIGHWAY

MADISON AVENUE

GILMORE STATION

DAWSON STREET

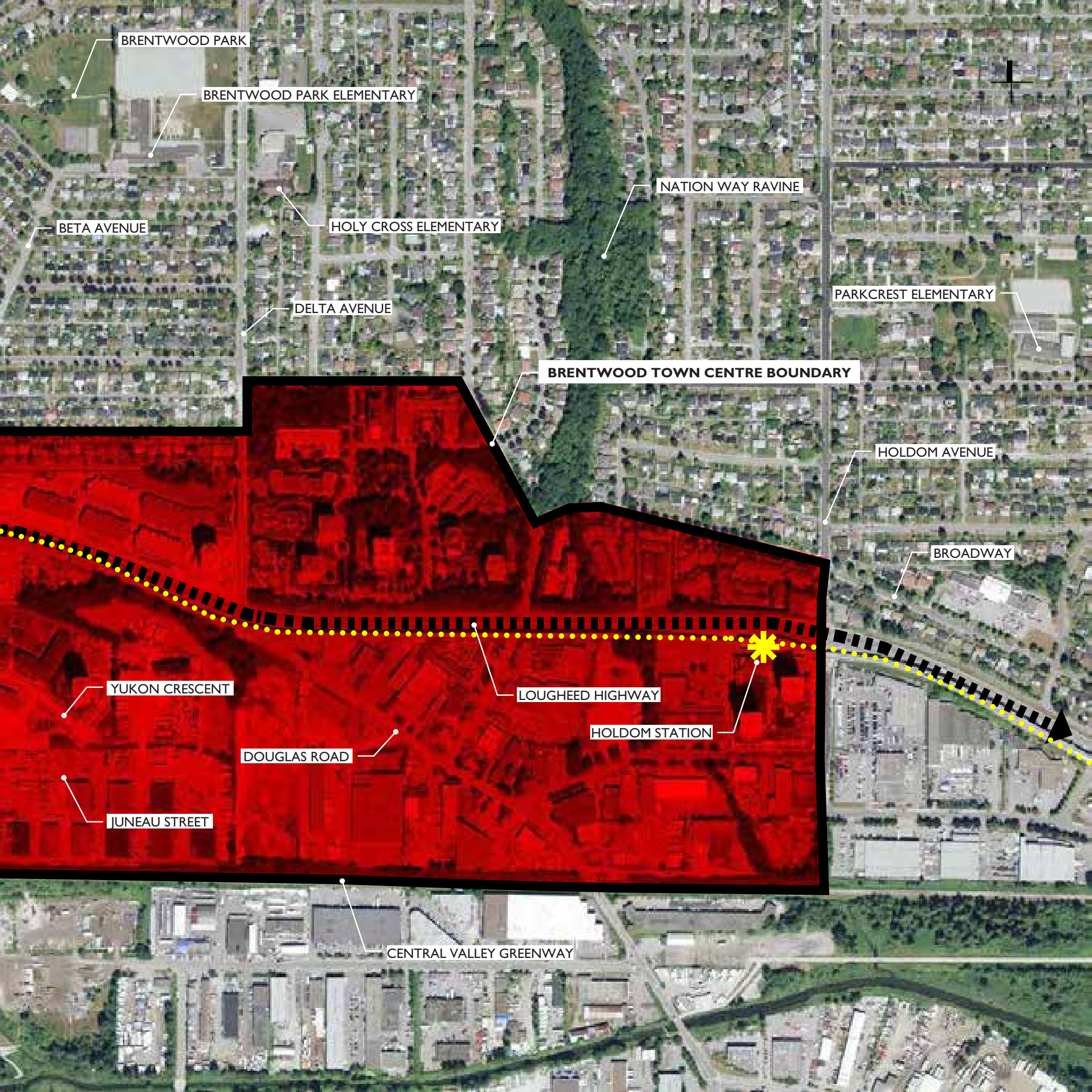
BRENTWOOD TOWN
CENTRE STATION

ALPHA AVENUE

BETA AVENUE

WILLINGDON AVENUE

SITE



BRENTWOOD PARK

BRENTWOOD PARK ELEMENTARY

BETA AVENUE

HOLY CROSS ELEMENTARY

DELTA AVENUE

NATION WAY RAVINE

PARKCREST ELEMENTARY

BRENTWOOD TOWN CENTRE BOUNDARY

HOLDOM AVENUE

BROADWAY

YUKON CRESCENT

LOUGHEED HIGHWAY

HOLDOM STATION

DOUGLAS ROAD

JUNEAU STREET

CENTRAL VALLEY GREENWAY



WILLINGDON COMMUNITY CENTRE

GRAVELEY STREET

DOUGLAS ROAD

MASONIC CEMETERY

HALIFAX STREET

GILMORE AVENUE

SKYTRAIN

MADISON AVENUE

DAWSON STREET

GILMORE STATION

LOUGHEED HIGHWAY

1st AVENUE

2nd AVENUE



BRENTWOOD PARK

BRENTWOOD PARK ELEMENTARY

BRENTLAWN DRIVE

FAIRLAWN DRIVE

WILLINGDON AVENUE

DELTA AVENUE

HIGHLAWN DRIVE

BRENTWOOD MALL

SITE

BRENTLAWN DRIVE

RIDGELAWN DRIVE

BRENTWOOD DRIVE

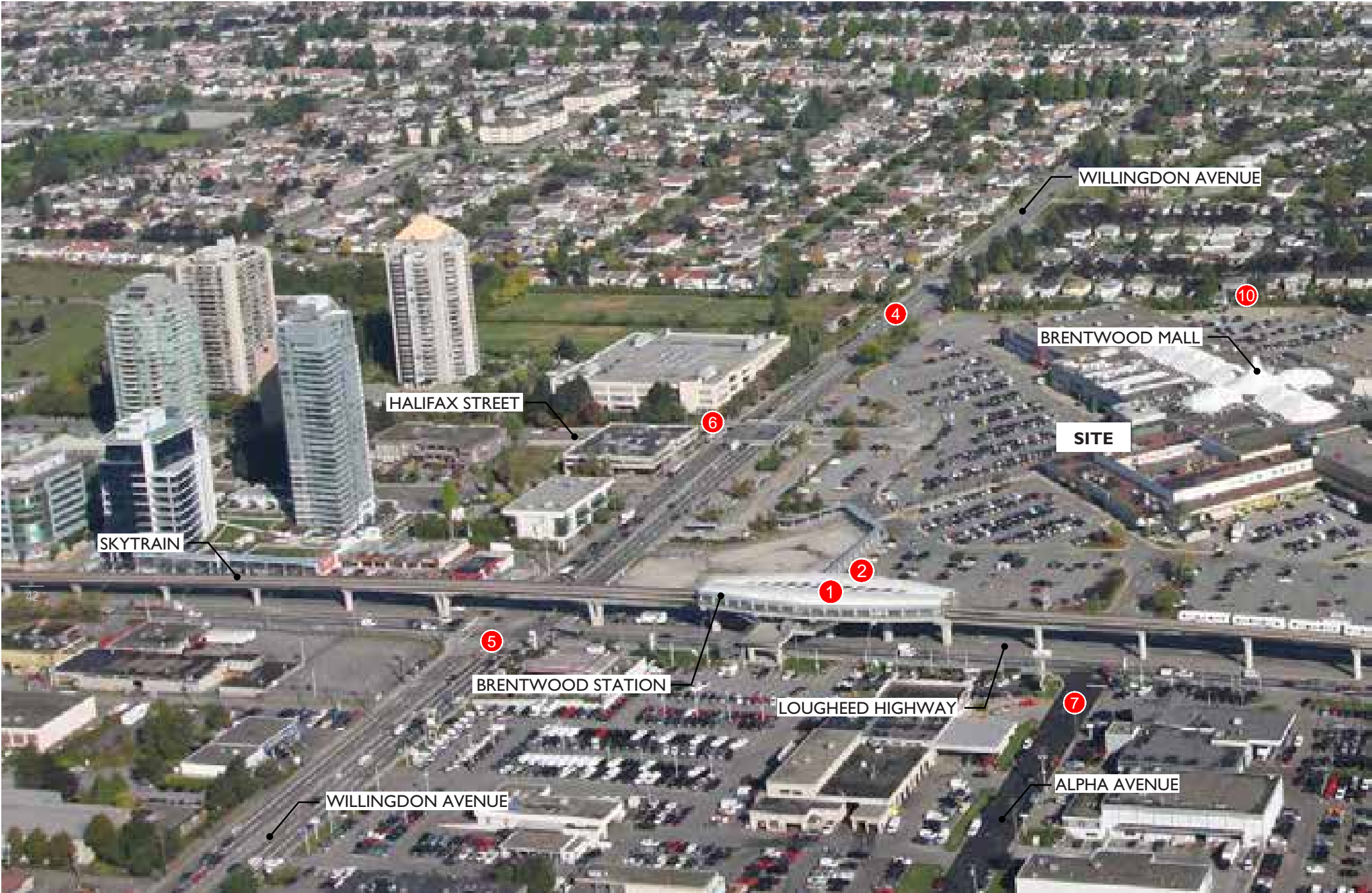
BETA AVENUE

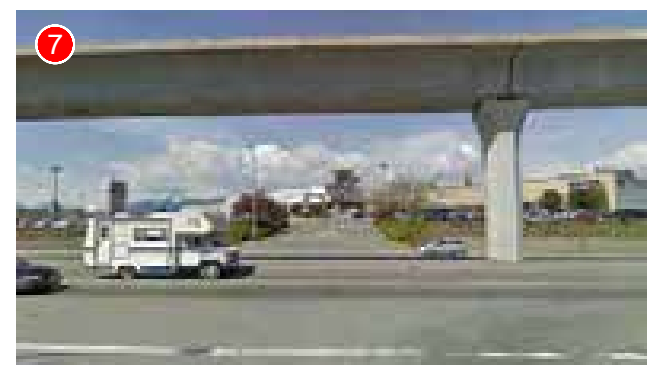
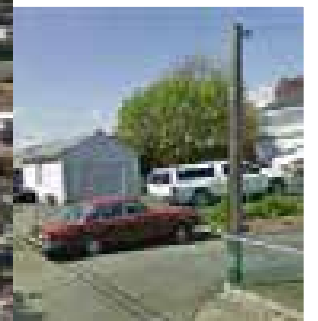
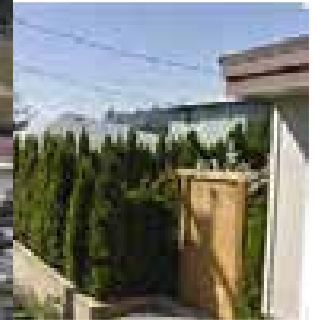
LOUGHEED HIGHWAY

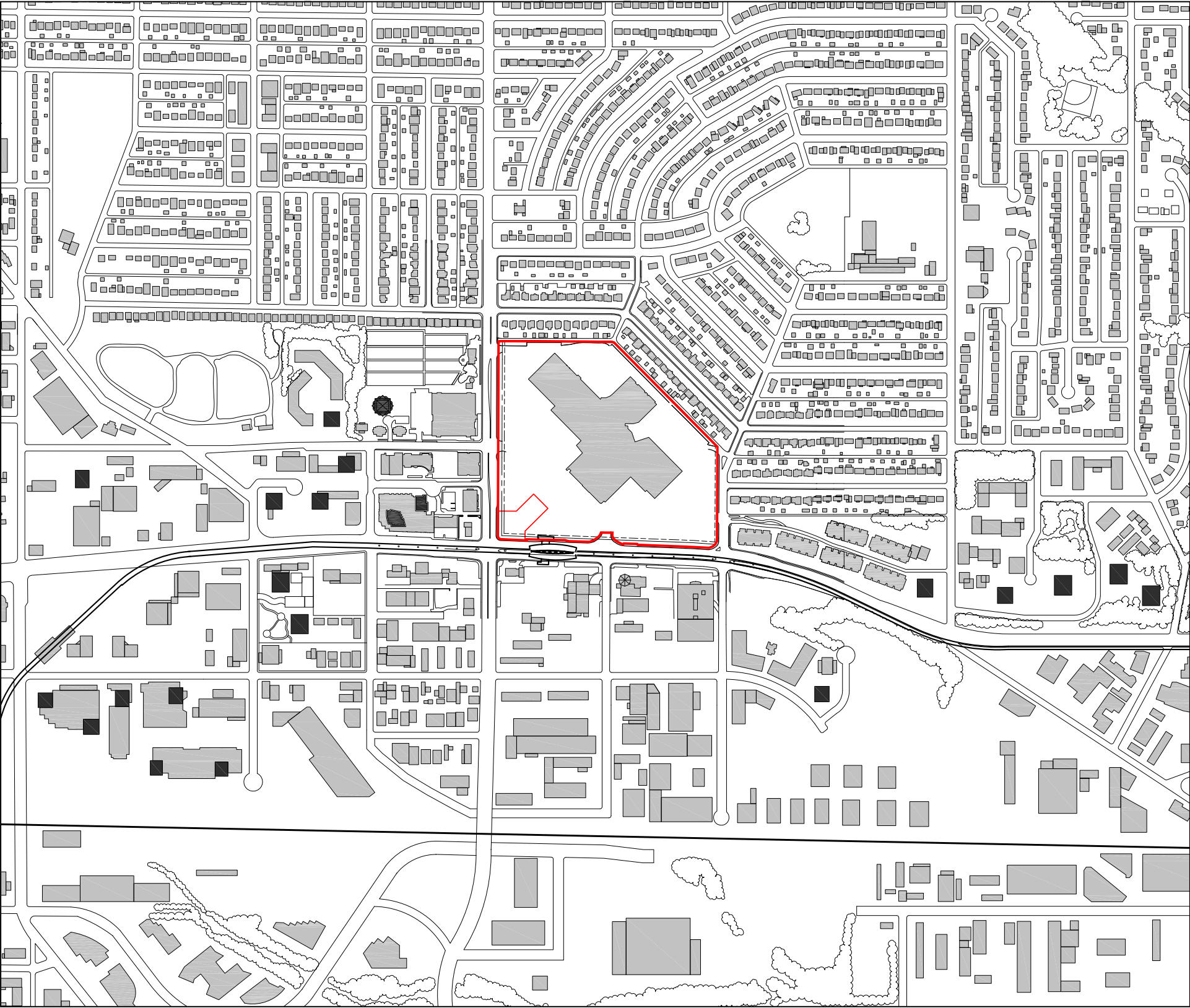
BRENTWOOD TOWN
CENTRE STATION

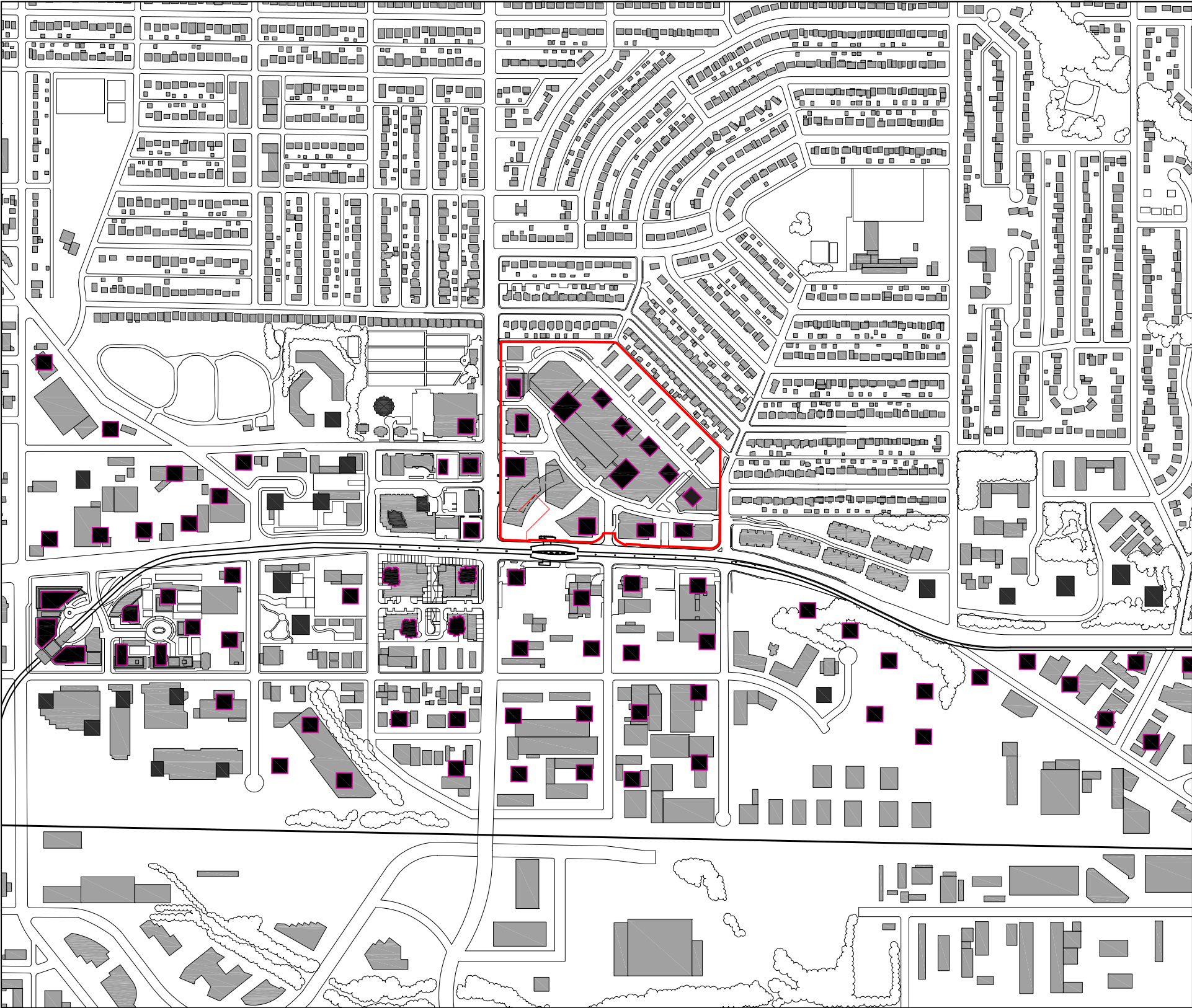
ALPHA AVENUE

SKYTRAIN









 POTENTIAL TOWERS

Shape: The site is polygonal in shape.

Site area: 28.4 ac (11.5 ha) - 1,237,540.6 SF (114,967.52 m2)

- Site dimensions (approx):
- | | |
|-----------------------------|------------------|
| Willingdon Street frontage | 1,125 ft (343 m) |
| • Lougheed Highway frontage | 1,240 ft (378 m) |
| • Beta Avenue frontage | 570 ft (174 m) |
| • Northeast lane frontage | 840 ft (256 m) |
| • North lane | 650 ft (198 m) |

Site edges: The site is bounded by a city lane to the north and north east, Lougheed Highway to the south, Beta Avenue to the east and Willingdon Avenue to the west

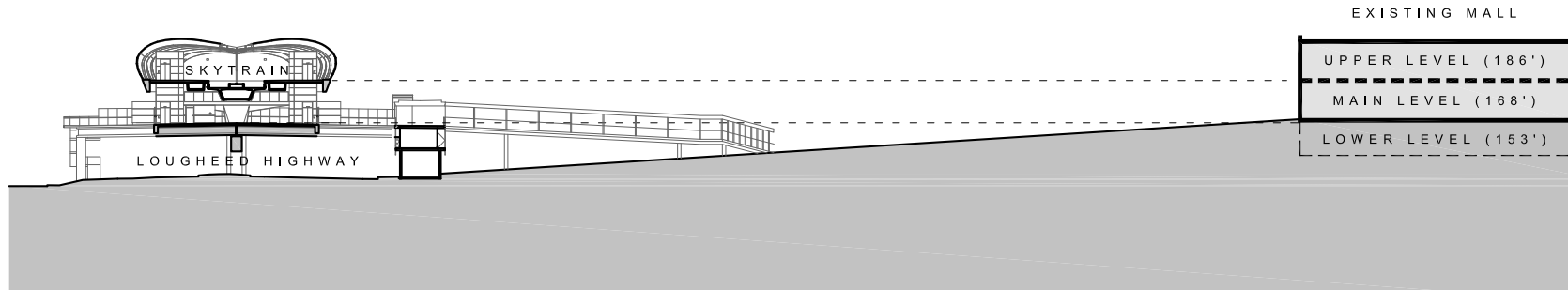
Site grades: Grade changes on the site transition from the lowest southeast corner on Lougheed Highway at Beta Avenue which has an elevation of approx. 124 ft. (37.8 m) to the highest elevation near the northeast corner of the site at an elevation of approx. 208 ft. (63.39 m). This represents a grade change of 83.5 ft. (25.4 m).

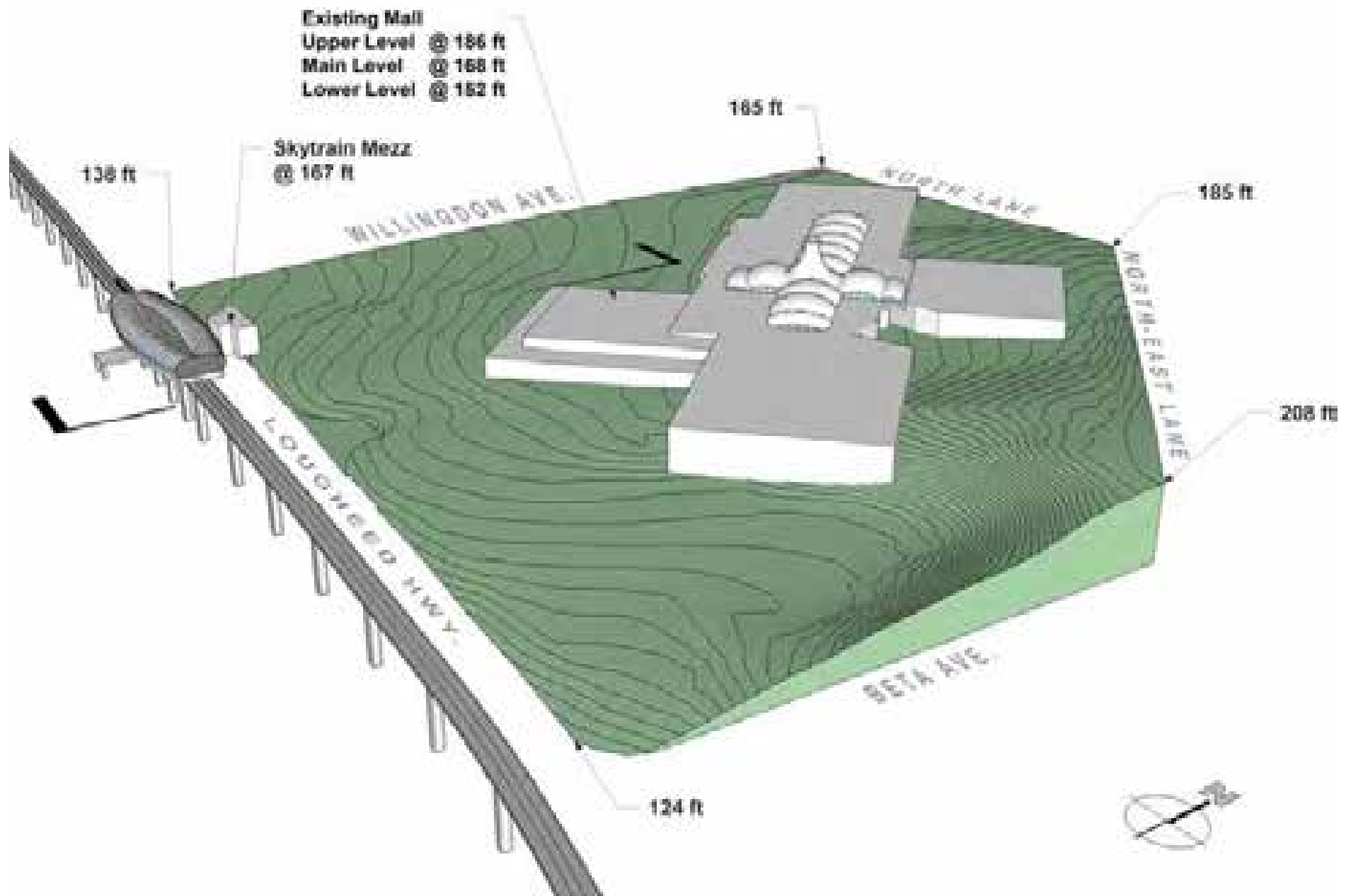
Specific Existing Site Grades:

- Main Mall Level: approx. 168 ft. (51.2 m). Skytrain ticketing level and grade separated crossing are 1 ft. (0.3 m) below.
- Upper Mall Level: approx. 186 ft. (56.69 m). Same level as the Skytrain Platform.
- Lower Mall Level (Sears): approx. 152 ft. (46.32 m).
- Corner of Willingdon Ave. and Lougheed Hwy: 138 ft. (42.06 m).
- Ridgelawn Drive meets Beta at: approx. 182 ft. (55.47 m). Approximately the elevation of the second retail level and the elevation that Fairlawn Drive (approx. 185 ft) meets the northwest corner of the property.
- Beta Avenue gradient averages 18 percent slope.
- The lane north of the mall property averages 10 ft. (3.04 m) higher in elevation than the north parking stalls adjacent to the property line

Existing buildings: The mall is predominantly a two-story commercial retail building with some service office uses and restaurants. The Sears department store at the east end of the mall is three levels with its lowest level (152 ft.) accessed at grade from the east. London Drugs is located north of the mall common area on the second level while Zellers to the west is two levels. The total gross floor area is approximately 60,942 m2 (656,000 sq. ft.).

Existing parking: there are 1,852 parking spaces on the site. 151 are located on the roof of the existing Sears structure and 87 are located above the existing loading area north of Zellers. The balance is all surface parking.





5.0 INFLUENCES + RESPONSE

- 5.1 Tenets & Principles
- 5.2 Existing Site & Influences
- 5.3 Planning Diagram
- 5.4 Linkages & Circulation
- 5.5 Urban Design Response



The Tenets and Principals were derived from collaborative workshops involving the City, the Brentwood Site owners and the consultant team. (refer to Appendix A for full descriptions)

Tenets

Tenets are the universal goals as follows:

- A. Strengthen the Surrounding Community
- B. Exceptional Urban Design and Architecture
- C. Create a Diverse and Inclusive Community
- D. Encourage Sustainable Development
- E. Contribute to Developing a Creative City
- F. Create a Livable Community

Principles

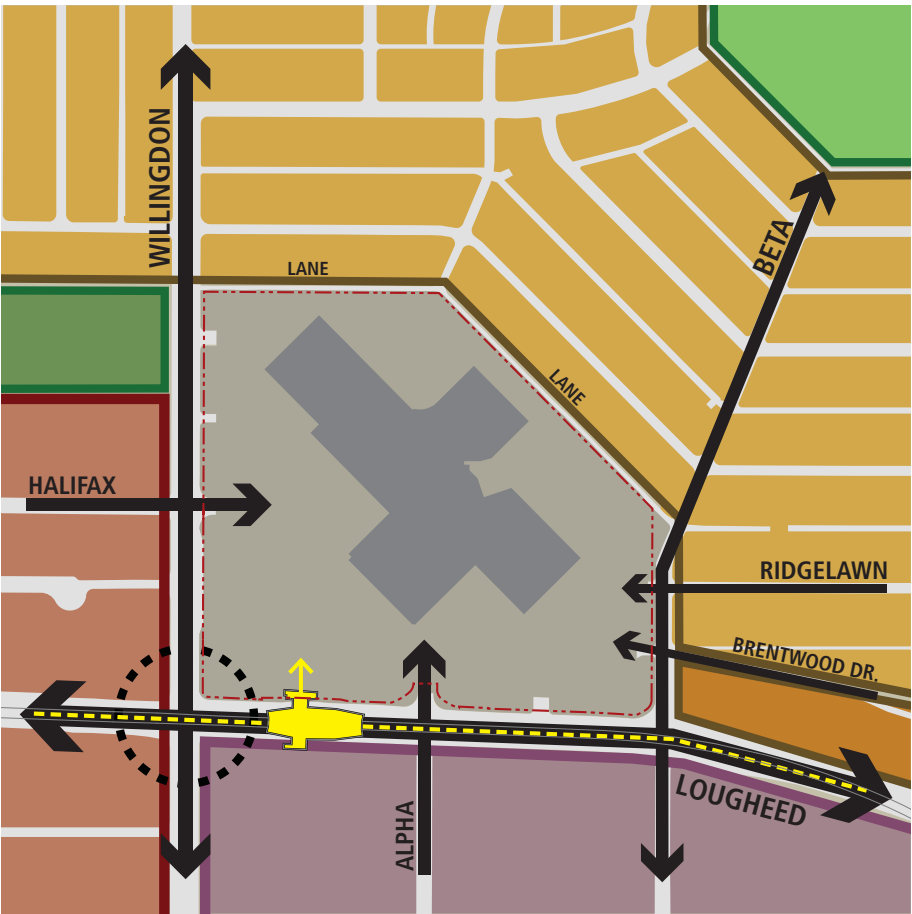
Principles are the guiding themes for future site planning and design, including: Edges and Connections, Site Circulation and Movement, Transit Oriented Development, The Heart and Public Realm, Diversity and Integration, Sophisticated Design, Design Evolution and Phasing

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Primary Design Objectives

- 1. Create a Creative City (Town) Centre
- 2. Develop a city experience (urban not village)
- 3. Activate and animate the Willingdon and Lougheed street edges
- 4. Respectful transition from high density to existing low density residential neighbourhood
- 5. Protect surrounding neighbourhood from traffic impacts
- 6. Make the site permeable and transparent
- 7. Make great connections (Roads/Pedestrians/Bicycles/Transit)
- 8. Extend the street network into the site
- 9. Capitalize on transit
- 10. Make it sustainable







The Tenets and Principles are a Litmus Test for evaluating the final Land Use and Design for the conceptual master plan design.

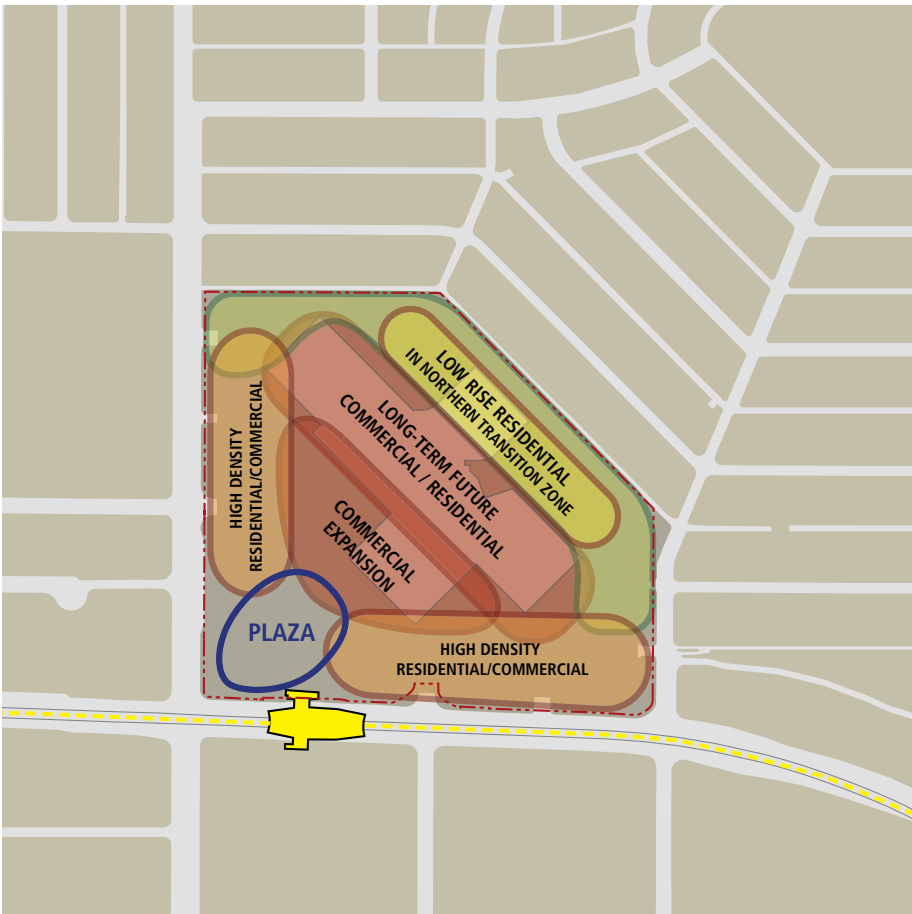


5.2 EXISTING SITE + INFLUENCES

Implementation of the Primary Design Principles takes into account the following existing site conditions and influences:

- Brentwood Site stands out as a super block within a finer grained street network
- Surrounding street network, currently terminating at the Brentwood site, requires integration
- Key bordering streets, Willingdon & Lougheed, require an edge definition and pedestrian animation
- Key intersection at the southwest corner identified as the civic heart of the town centre, linked to transit
- Two city grids border the site; diagonal grid of the northeast residential neighbourhood and the orthogonal grid of the remainder of the BTC
- The Brentwood Site is the transition zone between the north & northeastern single-family residential neighbourhoods and the mixed-use core of the Town Centre, and requires a buffer treatment

 SINGLE FAMILY RESIDENTIAL	 MULTI FAMILY RESIDENTIAL	 MIXED USE
 SERVICE / COMMERCIAL	 OPEN SPACE	 INSTITUTIONAL



5.3 PLANNING DIAGRAM

The planning diagram illustrates the location of the overall uses and densities to create the desired urban city experience with animated edges while maintaining a respectful transition zone to the neighbouring single family residential.

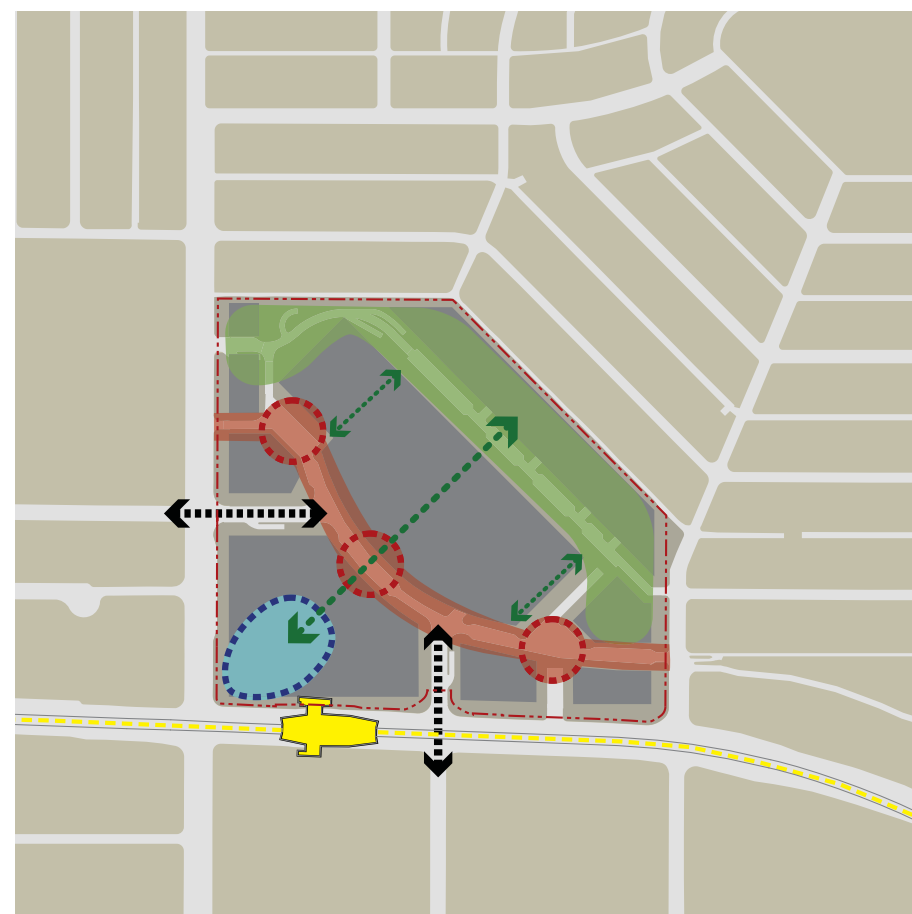
- Southwest corner anchored with major Town Centre Plaza, framed by vibrant commercial and entertainment uses
- High density, mixed Commercial/Residential uses defining the Willingdon and Lougheed street edges
- Commercial expansion zone connects the existing retail building to the street-edge commercial/residential
- Long term mixed-use core zone for the existing retail area
- Northern landscaped transition zone, with low-rise residential, buffers the established single-family neighbourhood from the denser mixed-use core



5.4 LINKAGES + CIRCULATION

The street network permeates the super block site providing desired connections tailored to the surrounding context. Primary access connects to the higher density areas, secondary access to the lower density area, with no additional connections from the northern lanes, to protect the single family neighbourhood. Pedestrian circulation is enhanced throughout the site with improved access to the Brentwood Town Centre SkyTrain Station and bus stops.

- Integration of Halifax and Alpha within the site, connecting these key city streets
- Introduction of a new High Street, Brentwood Boulevard, aligned diagonally through the site and linked to Willingdon, Lougheed and Beta
- New extension of Ridgelawn Drive, north of the existing retail building, links Beta to Willingdon
- Introduction of major central pedestrian circulation spine links the new Ridgelawn Drive to Brentwood Boulevard and extends to the key southwest corner
- Secondary pedestrian circulation spines penetrate the site, linking the mixed-use core to the new Ridgelawn Drive and the transition zone to the north



5.5 URBAN DESIGN RESPONSE

The resulting overall urban design response incorporates the Primary Design Principles

- Town Centre Plaza anchors the intersection of Willingdon and Lougheed and provides a public focus for the new urban development
- The edges are activated and animated with high density, mixed commercial and residential uses
- Key streets connections are established linked to the new High Street, Brentwood Boulevard, defined by arrival courts at each end
- Improved pedestrian access throughout the site connecting to the Town Centre plaza and transit service
- Landscaped transitional zone wraps the northern site edge, buffering the single family neighbourhood
- The urban design of the site will transform over time, initially integrating respectfully with the existing retail mall

6.0 OPEN SPACE AND PUBLIC REALM

- 6.1 Open Space Diagram
- 6.2 Landscape Plan
- 6.3 Precinct Diagram
- 6.4 Sightlines, Focal Points and Nodes
- 6.5 Pedestrian and Bicycle Paths
- 6.6 Open Space Components
 - Town Centre Plaza - Main Level
 - Town Centre Plaza - Street Level
 - Entrances
 - Edges
 - High Street (Brentwood Boulevard)
 - High Street Arrival Courts
 - Northern Transition Zone
- 6.7 Landscape Palette
- 6.8 Public Art



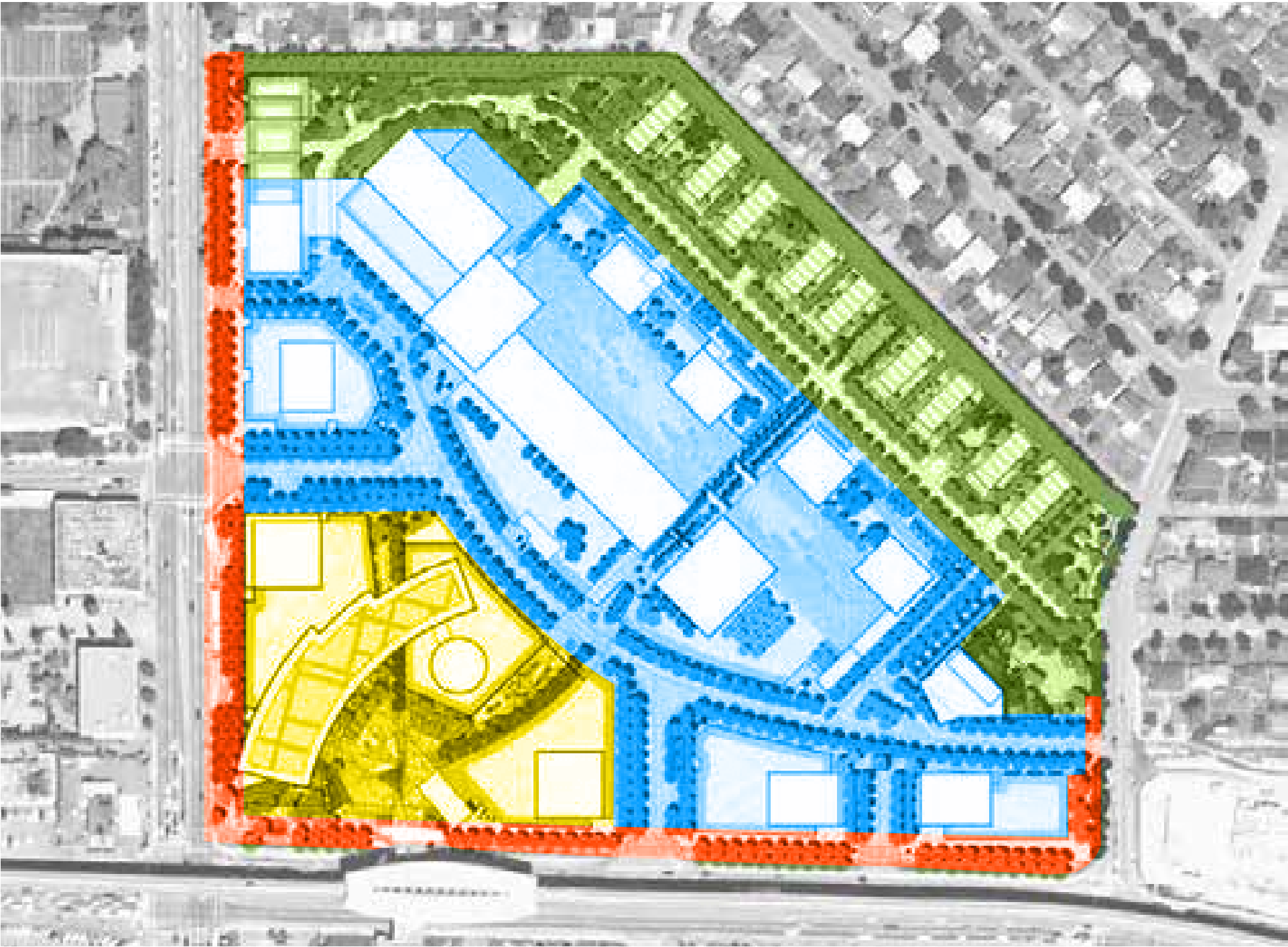
6.1 OPEN SPACE DIAGRAM

Open space and the public realm are the essential elements to create a vibrant, inviting sense of place. A rich variety of open spaces are planned within the site to offer a diversity of experiences and engage people for creative endeavors, while they live, work, shop or play at the Brentwood Site.

The surrounding street edges will be widened and enhanced with Lougheed and Willingdon achieving the character of Great Streets, a Town Centre/Commercial plaza will anchor the southwest corner adjacent the Brentwood Town Centre SkyTrain Station, new site entrances will provide a high quality sense of arrival, the new commercial High Street, Brentwood Boulevard, will feature wide sidewalks with space for outdoor seating and other gathering activities and will be defined at each end with arrival courts from Willingdon Avenue on the west and Beta Avenue on the east. A more quiet open space zone is provided along the northern boundary as a buffer to the adjacent single family neighbourhood. Pedestrian linkages are featured throughout the site, connecting all the public open spaces.

- 1 TOWN CENTRE/ COMMERCIAL PLAZA
- 2 GREAT STREETS
- 3 BRENTWOOD BOULEVARD
- 4 EAST ARRIVAL COURT
- 5 WEST ARRIVAL COURT
- 6 GREEN BUFFER
- 7 LANDSCAPED SEMI- PRIVATE SPACE
- 8 ACCESSIBLE LANDSCAPED ROOF
- 9 RIDGELAWN DRIVE
- 10 PEDESTRIAN MEWS
- 11 CENTRAL PEDESTRIAN CROSSING
- 12 NEIGHBOURHOOD STREET CHARACTER
- 13 PUBLIC ACCESSIBLE GREEN SPACE
- NORTHERN TRANSITION ZONE





6.3 PRECINCT DIAGRAM

The Brentwood Site is characterized by four distinct precincts described below.



Entertainment Precinct

Vibrant public heart of the Brentwood Site and Town Centre, active both daytime and nighttime, with direct access to the Brentwood Town Centre SkyTrain Station



Street Frontage Precinct

Highly urban and animated edges fronting onto widened tree-lined streets with generous space for pedestrian and cycling activities



Central Shopping Precinct

High quality, pedestrian oriented environment with a mix of retail, restaurants, cafes, pubs, offices and residential lobbies in an urban landscaped public realm designed to encourage social interaction



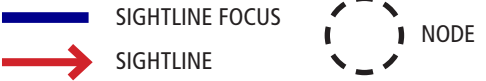
Northern Transition Precinct

A more quiet, landscaped buffer zone between the high density Town Centre activities and the surrounding residential neighbourhood



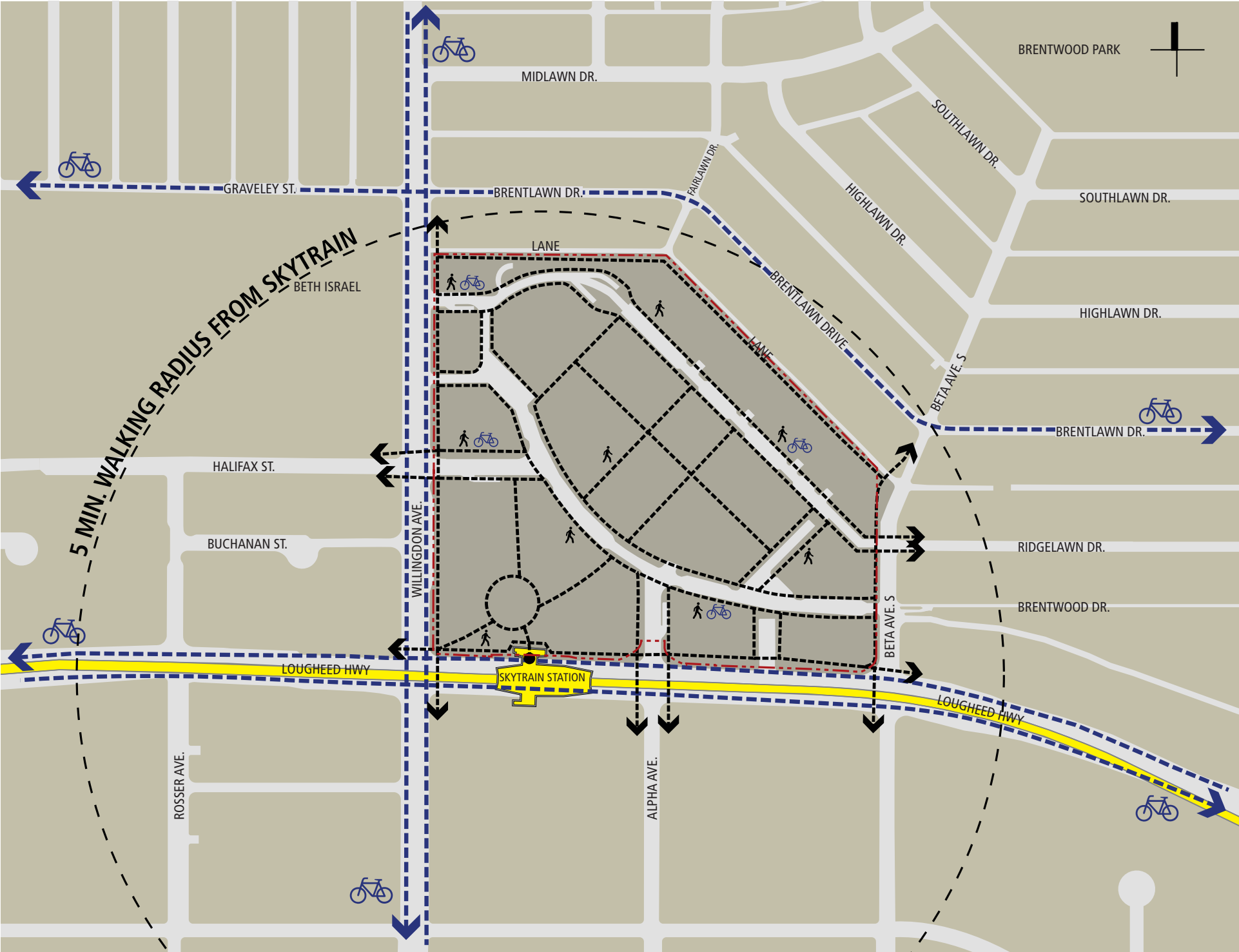
6.4 SIGHTLINES, FOCAL POINTS & NODES

"Art of relationships — Its purpose is to take all the elements that go to create the environment: buildings, trees, nature, water, traffic, advertisements and so on, and to weave them together in such a way that drama is released."
Gordon Cullen (The Concise Townscape)



- | | | |
|---|--|--|
| 1 Primary pedestrian sightlines to key nodes / focal points | 4 Primary node on Brentwood Blvd. announced with high level canopy / weather protection for drop-off / pick-up | 7 Northern sightlines from low-rise residential & neighbouring single family to landscaped open space |
| 2 Vehicular arrival experience with sight lines to Brentwood Blvd., focal points and arrival court nodes | 5 Arrival node framed by key retail | 8 Landscaped open space outlook for surrounding towers, low-rise residential & surrounding residential neighbourhood |
| 3 Town Centre/Commercial Plaza outdoor entertainment room & prominent focus for primary pedestrian sightlines | 6 Intimate scale outdoor rooms at prominent corners | |





6.5 PEDESTRIAN AND BICYCLE PATHS

--- PEDESTRIAN ROUTES
--- BIKE ROUTES

The total site is interconnected with landscaped pedestrian routes that link to all the site's open spaces and to the surrounding street network. Separated urban trail routes with dedicated bicycle facilities are introduced along Lougheed Highway and Willingdon Avenue.

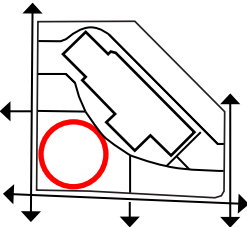
- Bicycles and cars are integrated on the new low-speed internal street environment, consistent with best-practice in other Cities (Local example – Granville Island)
- Provision of bicycle storage lockers in the vicinity of the SkyTrain station
- Bicycle racks located throughout the site
- Bicycle storage rooms for residential buildings.
- End of Trip Bicycle storage and change rooms will be provided for retail and commercial staff

◀ Omote Sando Hills, Tokyo, Japan — Tree-lined shopping street with generous sidewalks and special street lighting.

TOWN CENTRE PLAZA - MAIN LEVEL
(Level 168')

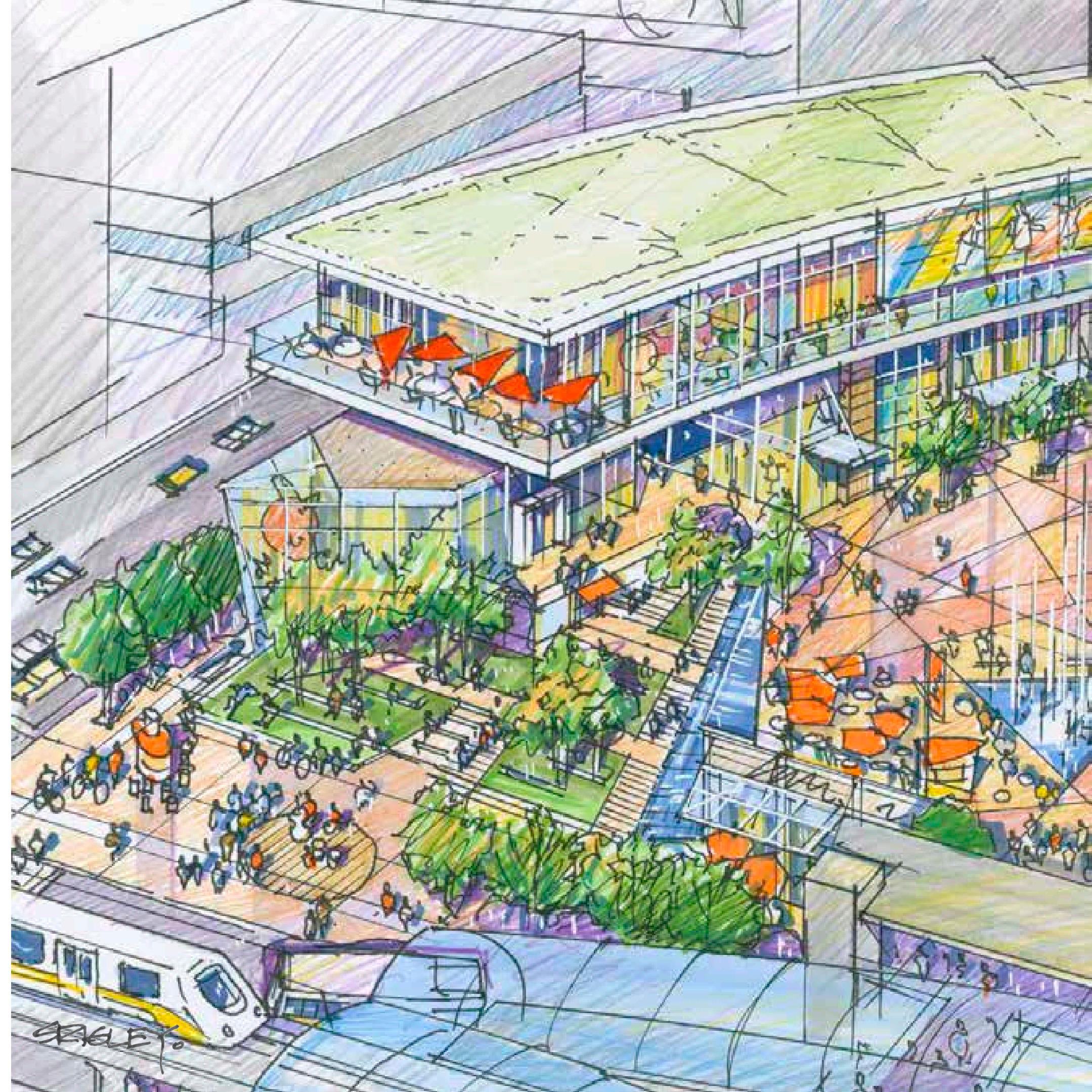
The Town Centre Plaza is the public heart of the Brentwood Site and the overall Brentwood Town Centre. The main upper level of the plaza has a direct, level connection to the SkyTrain station and a landscaped, terraced connection to the street level, at the key BTC intersection of Willingdon and Lougheed. This large public space is framed by the surrounding commercial podium.

This flexible space will accommodate a wide diversity of audiences ranging from small gatherings to large scale events. It has the potential of accommodating a variety of activities such as music, art shows, theatre presentations, markets, festivals and neighbourhood gatherings. The plaza integrates seamlessly with and at the same level as the surrounding commercial, which will provide the high-vitality activity envisioned in the BTC Development Plan. The surrounding commercial activity, with interesting shops, cafes, restaurants and entertainment spaces will provide a constantly vibrant public environment to animate the space between and during featured daytime and nighttime events.



- 1 Main 'Living Room' and entertainment zone for the Town Centre
- 2 Central node framed by retail to animate and attract pedestrian activity
- 3 Multi-purpose plaza for city-wide public events; performances, exhibitions, art installations, seasonal activities; to neighbourhood small scale celebrations
- 4 Interactive water feature as primary focal point
- 5 Daytime & Nighttime programming
- 6 Retail related outdoor dining & entertainment activity zone for perimeter commercial uses
- 7 Additional flexible space for plaza level restaurants & cafes
- 8 European style seating flexibility with moveable furniture
- 9 Seamless connections to SkyTrain, Brentwood Boulevard and main interior retail level
- 10 Sunny exposure & open visibility to SW corner with enclosure from surrounding retail & landscape features
- 11 Universal accessibility between Upper & Lower Plazas
- 12 Feature area for public art including temporary or rotating art installations
- 13 Plaza design provides a strong visual outlook for surrounding tall structures
- 14 Visual attraction for SkyTrain passengers







Bird's-Eye View of Town Centre Plaza & Skytrain Connection



Digital Screen Display on Plaza - Sanlitun, Beijing



Plaza design provides visual outlook for surrounding towers - Burj Khalifa, UAE



Featured Landscaping, Lighting & Plaza Roof - Tokyo Midtown, Japan



Seasonal focal points - festive lighting



Interactive Water Feature - PPG Place, Pittsburgh
(ability to turn off for plaza flexibility)



Active Commercial Plaza Edges with flexible outdoor seating - Sony Centre, Berlin



Large Public Celebrations - Jazz Festival @ Les Places des Festivals, Montreal



European-style moveable seating in public plaza

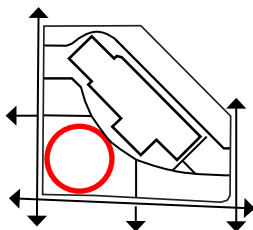


Integrated Paving Lights - Sony Centre, Berlin

TOWN CENTRE PLAZA - STREET LEVEL
(Level 143')

The principle street-level entrance to the Town Centre Plaza is from the corner of Loughheed Highway and Willingdon Avenue, where transit activity is focused. This corner is where pedestrians are making connections between SkyTrain and buses, being serviced by Grab-n-Go retailers, being dropped off for or picked up from their commute and where residents from the south and west developments will access the Brentwood Site.

The transition from the street level to the upper plaza level is characterized as an urban, architectural, terraced garden with a diverse palette of landscaping. This urban garden will offer a buffer to the vehicular activity at this busy intersection. The terraces will provide active outdoor spaces for more intimate public use and offer seating in a sunny southwesterly exposure along with the protection of shade trees. Open areas at street level will provide spaces for café seating and smaller scale gatherings and activities that may expand along enhanced public edges of Willingdon and Loughheed. Activities at the street level may also engage with activities on the main Town Centre Plaza level. The connection between the street-level plaza and the main upper plaza level is fully accessible. Pedestrians can choose the meandering steps through the landscaped terraces, escalators or elevators.



Area A

- 1 Urban green corner with landscaped terraces and featured trees
- 2 Multiple areas for informal seating on terraces with viewing areas for street buskers
- 3 Visual green buffer to vehicular intersection with inviting sense of entry to Upper Plaza
- 4 Stair connection to Upper Plaza
- 5 Active water feature for noise abatement and visual attraction for pedestrians
- 6 Waiting area for street level drop-off & pick-up
- 7 Grab-n-Go retail with generous weather protection & outdoor seating area
- 8 Bus transfers & Skytrain access at street level

Area B

- 9 Continuous active street retail east of SkyTrain
- 10 Open & covered plaza for convenience retail and informal outdoor seating
- 11 Universal access to Upper Plaza via escalators & elevators
- 12 Secondary access to major retail tenant at street level
- 13 Secondary drop-off & pick-up at commercial parking area

Area C

- 14 Continuous active retail along street
- 15 Access to major retail tenant at street level
- 16 Access to feature retail at south end of Willingdon
- 17 Potential bicycle parking & storage with bicycle service area
- 18 All weather connection to Skytrain and/or bus transfer
- 19 Anchor Retail Entrance

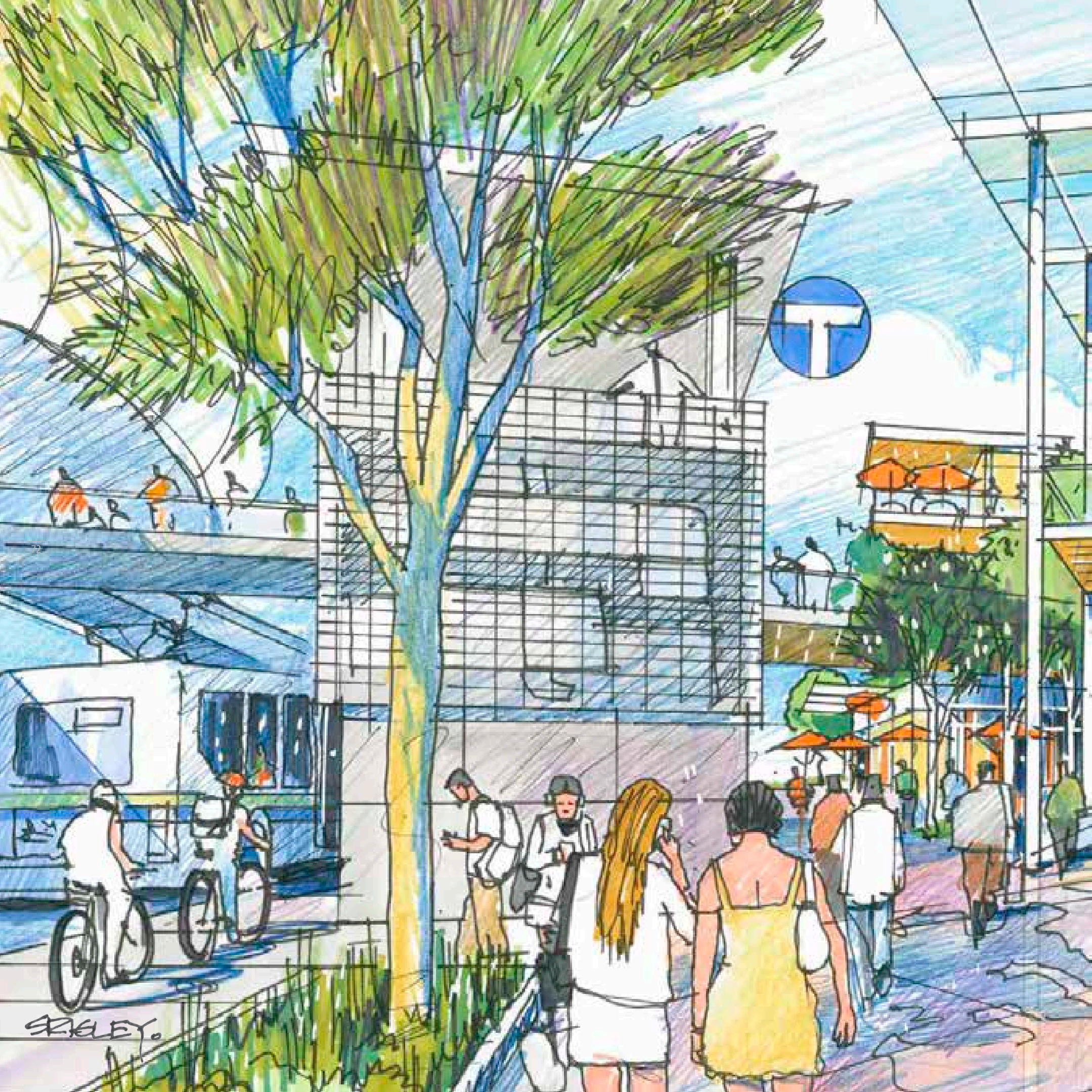


sketch





Street level view of Lower Plaza from Willingdon & Lougheed Intersection



SKLEY.



View along Lougheed looking west towards Escalators & Elevators to Skytrain & Upper Plaza



Seating related to interesting paving pattern - Saitama Plaza, Japan



Nighttime transformation - seating becomes lighting pattern - Saitama Plaza, Japan



Small Scale (Moveable) Retail Kiosk



Busker Performances



Glazed Weather Protection along Retail Frontage - Rotterdam, Netherlands



Open Escalator for Multi-level Spaces - Rotterdam, Netherlands



Water Feature as Noise Buffer and Visual Attraction



Patterns of Steps & Seating



Urban terraces & seating transition between levels - James Square, McGill University, Montreal



ENTRANCES

Site entrances are important for their convenient integration into the surrounding street network, for their ease of accessibility and clear way finding, both above and below grade, and for establishing the character and quality of the development for both driver and pedestrian. The entrances to the site should be inviting and compelling and provide a great arrival experience with openness, animation and a sense of announcement consistent with their respective role for the site, from a major entrance to a minor access.

A great arrival experience is influenced by the design of the physical elements of the entry; trees and soft landscaping, paving selection and treatment, lighting quality, signage and other design features. Entrances should also incorporate opportunities to provide seasonal variation through festive lighting, public art and colours changes in the landscape.



ENTRANCES — VEHICULAR MOVEMENT AND SURFACE PARKING

- **North Entry** New signaled entry connecting Ridgelawn Drive to Willingdon Avenue
 - **Northwest Entry** New entry to High Street (Brentwood Boulevard)
 - **Halifax Entry** Major signaled access/egress to Brentwood Boulevard with access, only, to underground parking
 - **Alpha Entry** Major new signaled access/egress to Brentwood Boulevard with access, only, to underground parking
- **Lougheed East Entry** Major underground parking/loading entry, designed for potential all-movement signal
 - **Beta Entry** Enhanced site access aligned with Brentwood Dr.
 - **Beta Entry** New site access aligned with Ridgelawn Drive
 - Surface parking provided along both sides of the Brentwood Boulevard
 - Surface parking provided along both sides of the new Ridgelawn Drive
 - All other parking is below grade
 - Parking on Lougheed Highway & Willingdon Avenue determined by the City

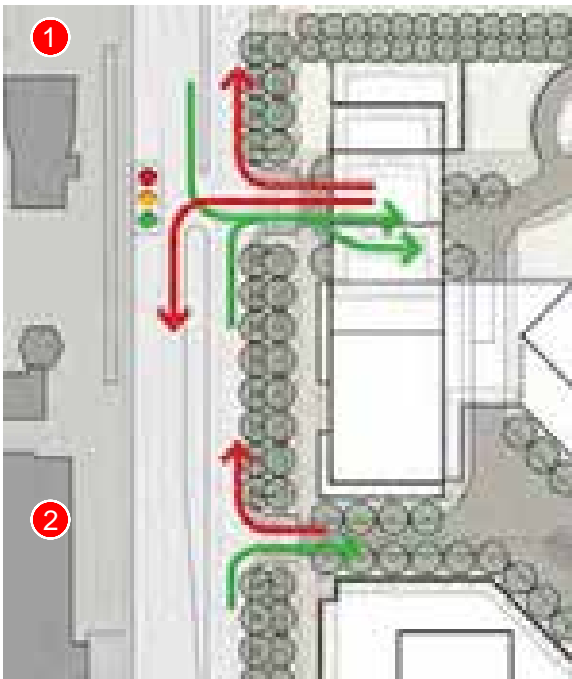
INTERNAL MOVEMENT

EXTERNAL MOVEMENT

SURFACE PARKING

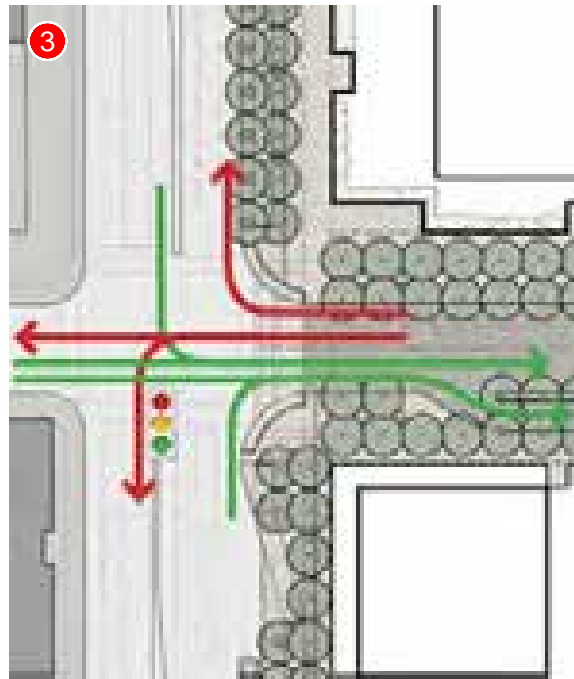
FULL MOVEMENT INTERSECTION

POTENTIAL FULL MOVEMENT INTERSECTION

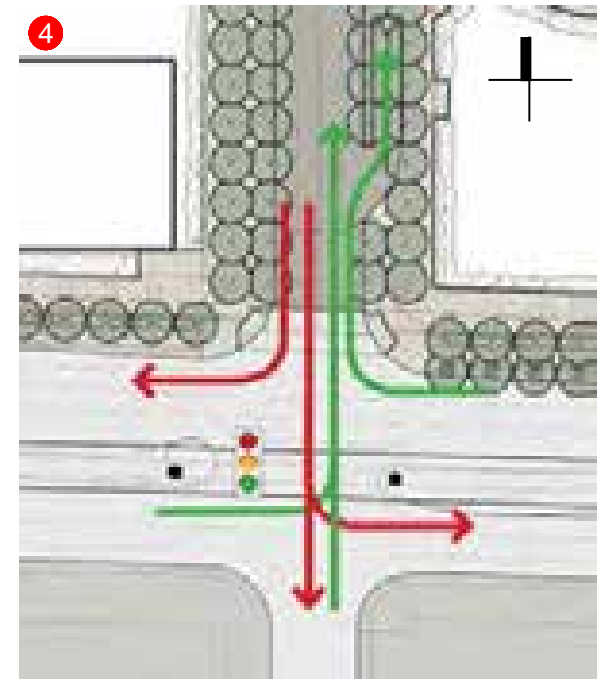


- 1. North Entry (Ridgelawn Drive):** Cars and Trucks
- All movement traffic signal
 - New Ridgelawn Drive access/egress
 - Access/egress to underground parking & loading

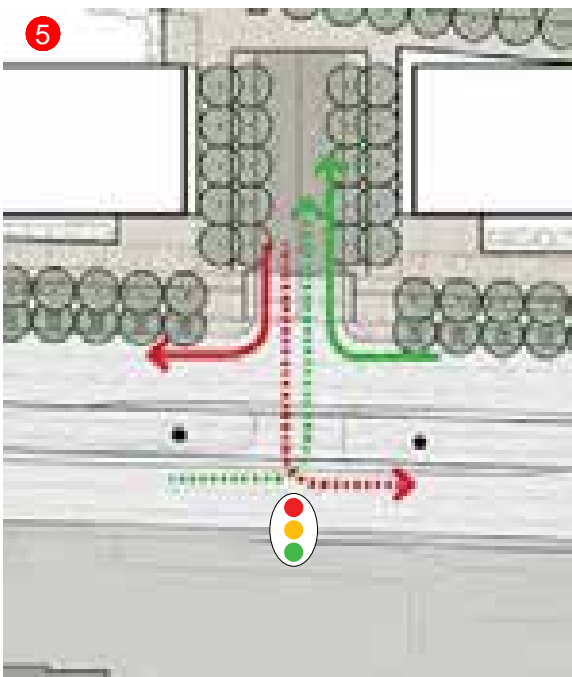
- 2. Northwest Entry:** Cars only
- Right in and right out only
 - Brentwood Boulevard access/egress



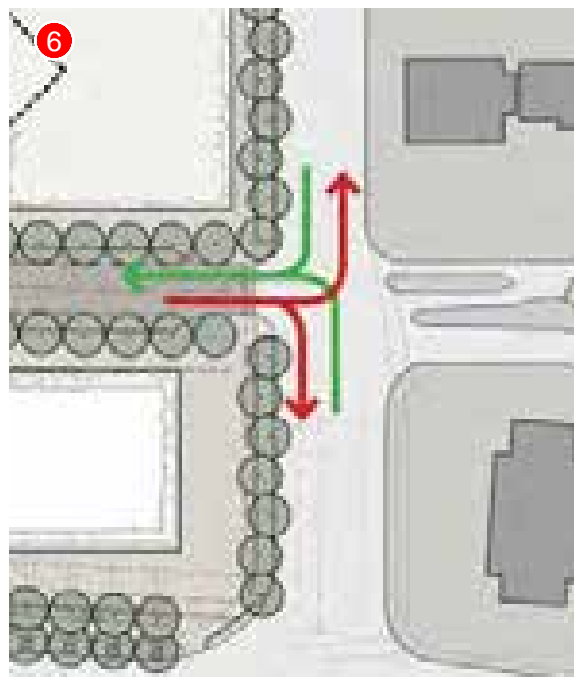
- 3. Halifax Entry:** Cars only
- All-movement traffic signal
 - Brentwood Boulevard access/egress
 - Underground Parking access, only



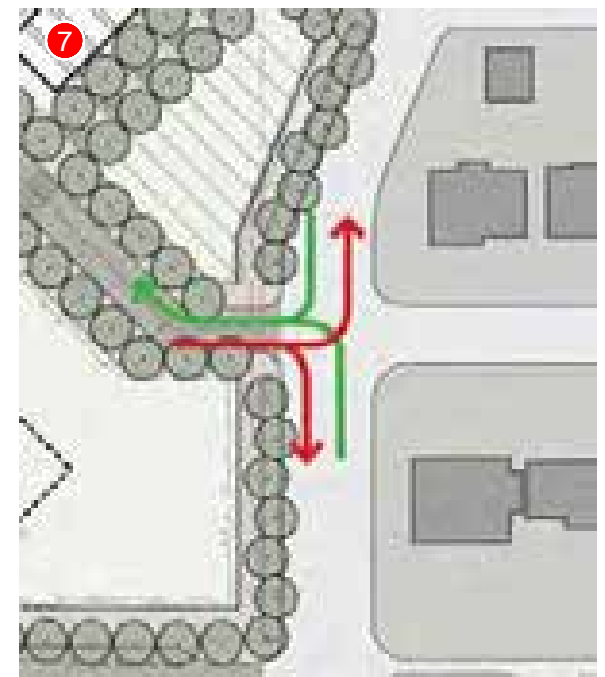
- 4. Alpha Entry:** Cars only
- All-movement traffic signal
 - Brentwood Boulevard access/egress
 - Underground Parking access, only



- 5. Lougheed East Entry:** Cars and trucks
- Underground access/egress only
 - Right in, right out
 - Designed for future full-movement signal



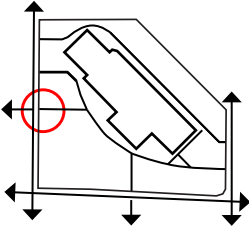
- 6. Beta Entry at Brentwood Drive:** Cars only
- Brentwood Boulevard access/egress
 - Right & Left in and right & left out
 - No signal



- 7. Beta Entry at Ridgelawn Drive:** Cars only
- Right & left in and right & left out
 - No signal

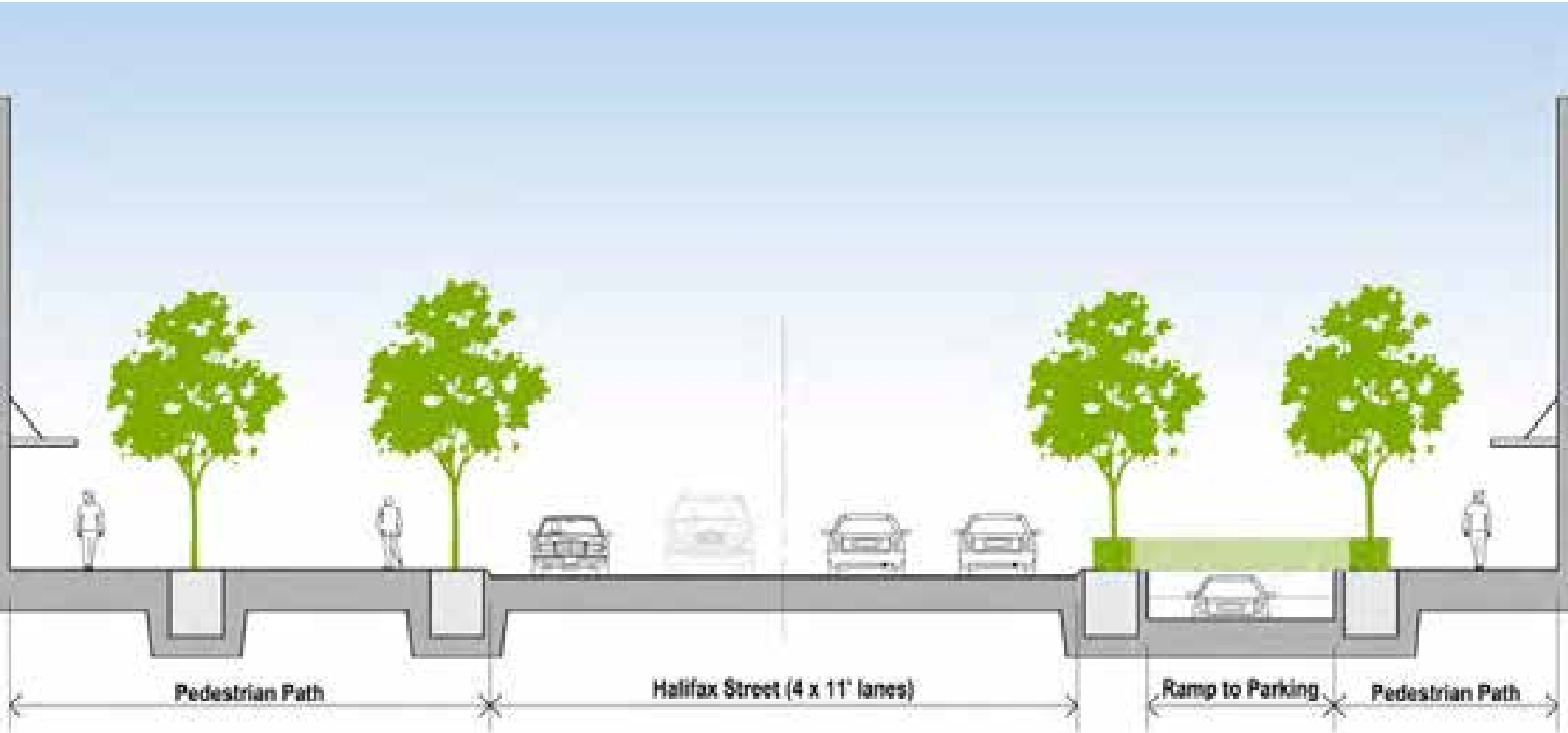


MAJOR ENTRANCE AT HALIFAX STREET





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Retail floor levels may vary along sloped street edge entrances

SECTION A-A THROUGH HALIFAX AVE. ENTRANCE

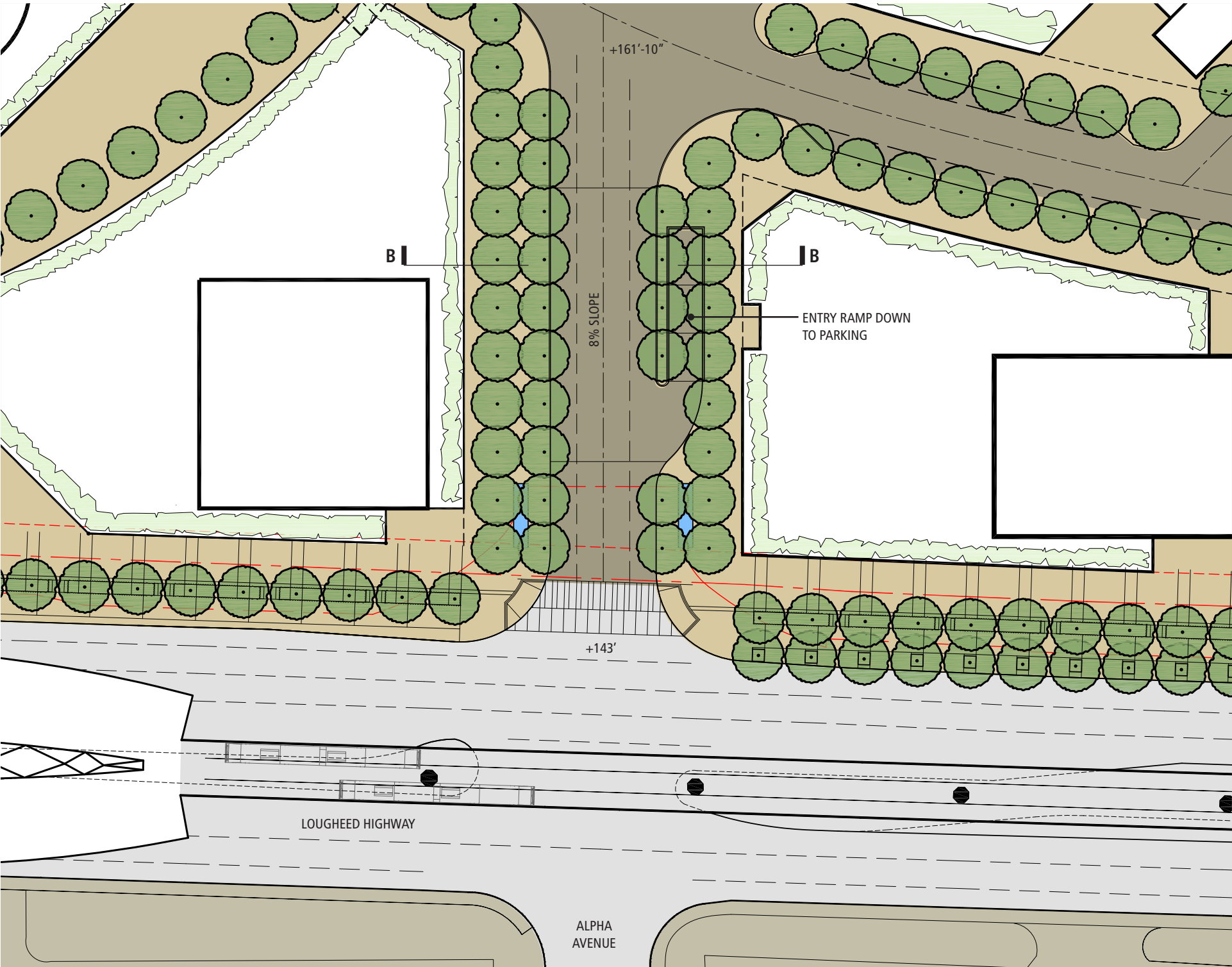


SKETCH

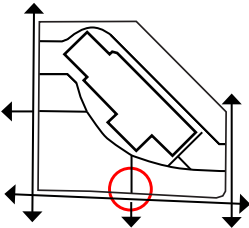


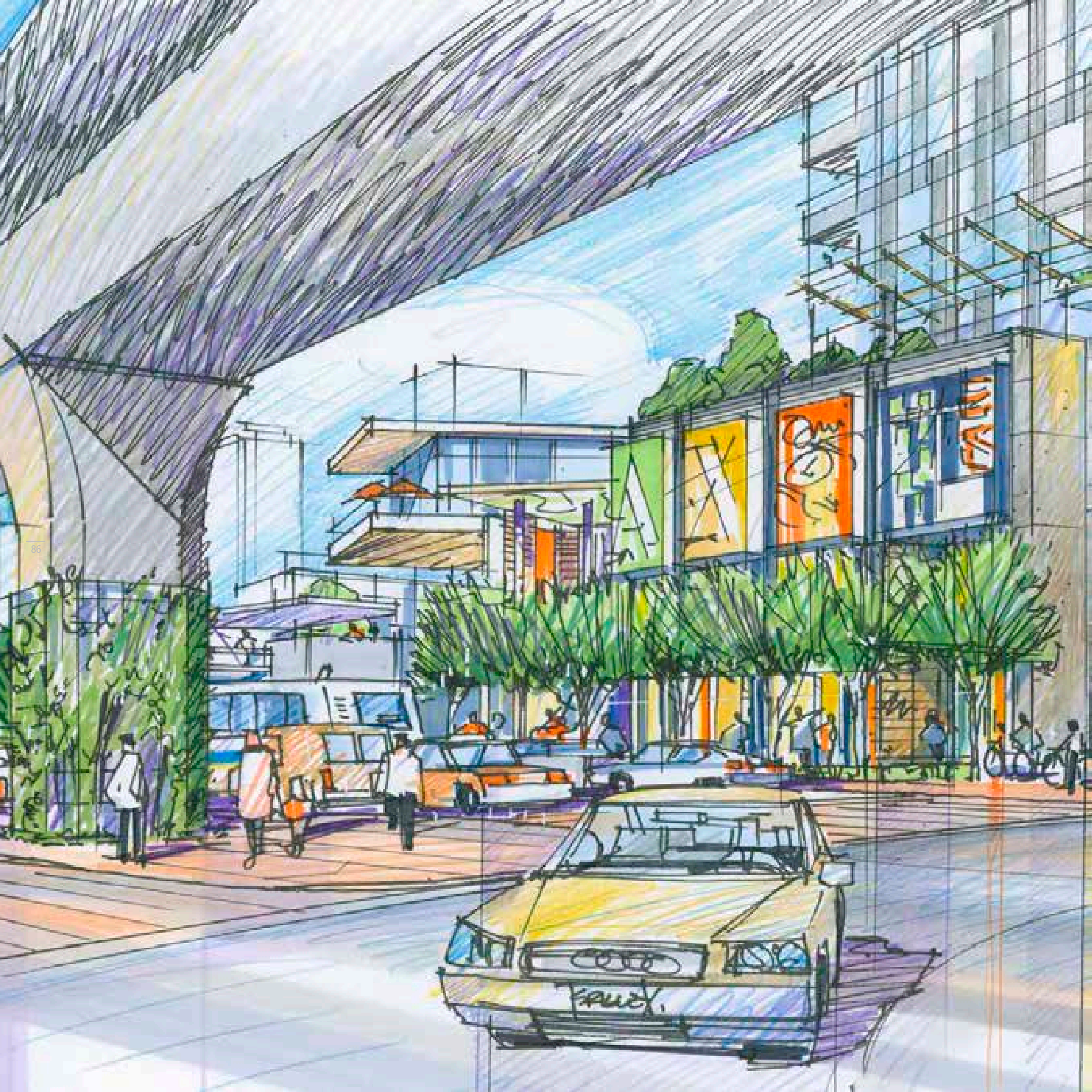
View of Halifax Entrance looking east to Brentwood Boulevard from Willingdon

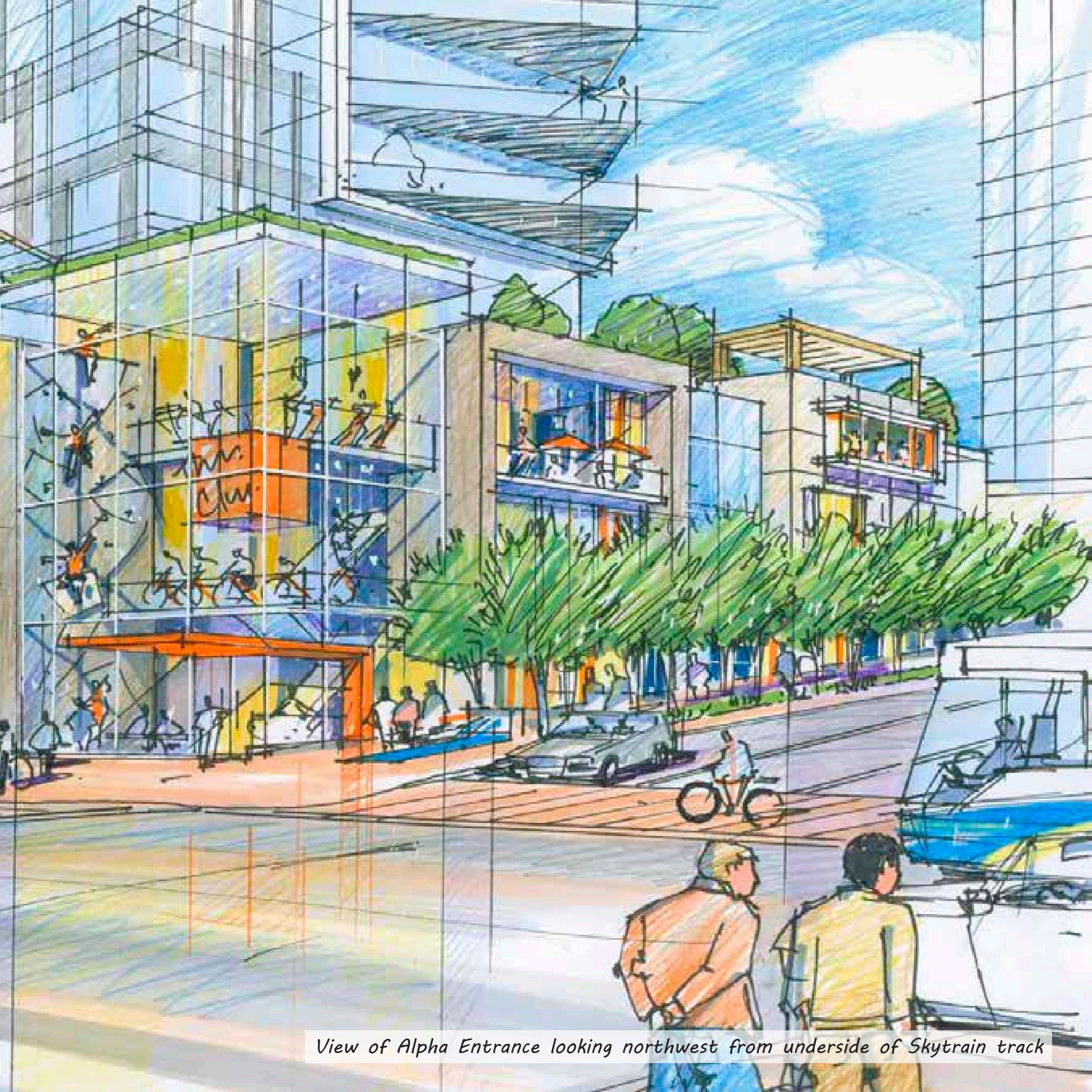
SPRUEY



MAJOR ENTRANCE AT ALPHA AVENUE







View of Alpha Entrance looking northwest from underside of Skytrain track



EDGES

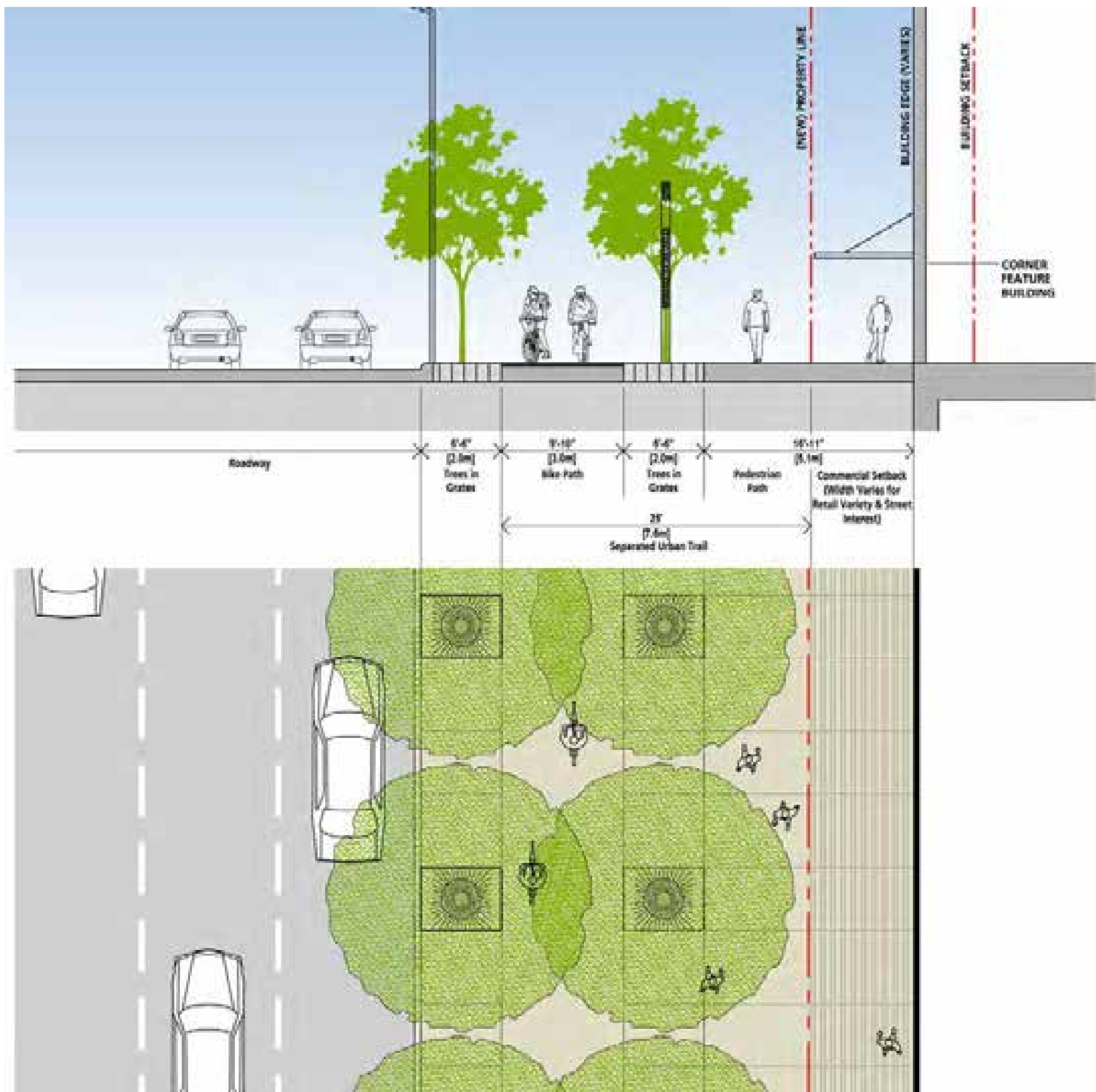
The site edges establish a unifying urban character for their neighbourhood and address a variety of modes of movement; cars, transit, bicycles and pedestrians.

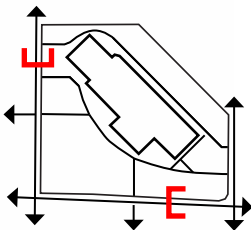
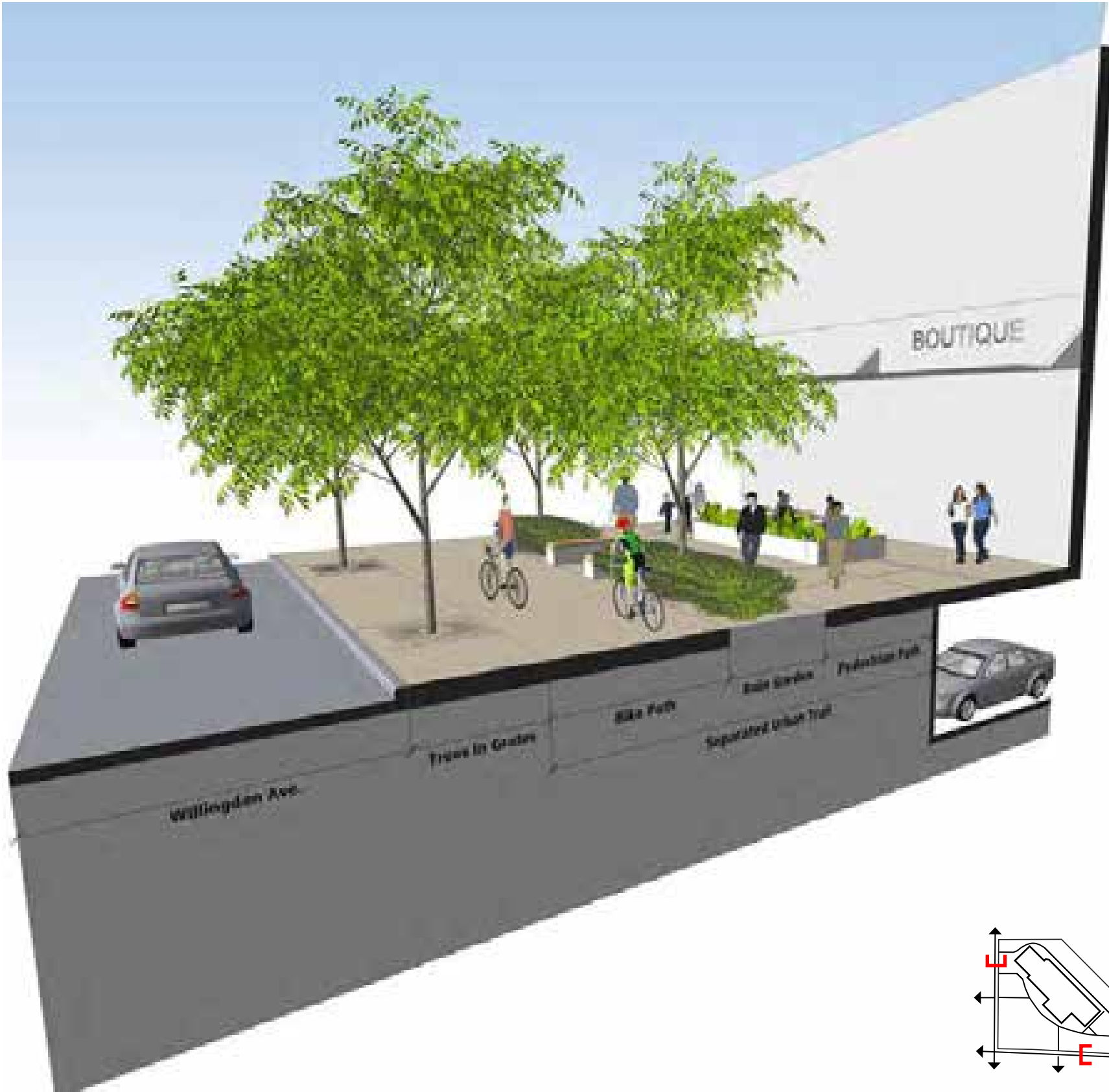
The Brentwood Site is bounded on the west and south by two primary streets, Willingdon Avenue and Lougheed Highway, respectively. Both are identified in the Brentwood Town Centre Development Plan for upgrading into more urban pedestrian streetscapes with separated urban trails bike paths. They will become 'Great Streets' with a sense of place, bounded and animated by the mixed-uses proposed on the Brentwood Site. These two streets require a design scale and treatment to create a comfortable setting to support the many activities they will accommodate. As such the existing property lines of the Brentwood site will be set back to provide additional space for the upgraded street design. The street design will include a double row of street trees defining the separated urban trail, a widened pedestrian path, and a commercial setback next to the new commercial and residential frontages, for a variety of outdoor activities.

The third site edge is Beta Avenue, which separates the Brentwood Site from the existing single and multi-family neighbourhood to the east. This street is distinguished by its steep 18% gradient. As such, it is not designated in the BTCDP as a bicycle route and provides more localized pedestrian movement. The Beta edge will also be upgraded with a more casual street tree treatment, a wider sidewalk and landscaped buffer to the adjacent building edge.

The northern edge of the site is bounded by a public lane, serving the single family neighbourhood to the north. An existing hedge, on the Brentwood Site, shields the adjacent residential lots from the site, along the south side of the existing lane. A new, continuous green buffer is proposed along this northern site edge to improve this northern boundary.

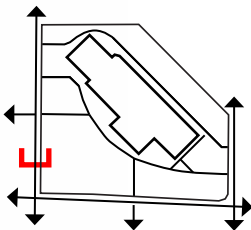
Typical Edge Condition on Willingdon Avenue (North of Halifax) and Lougheed Highway (East of Alpha)



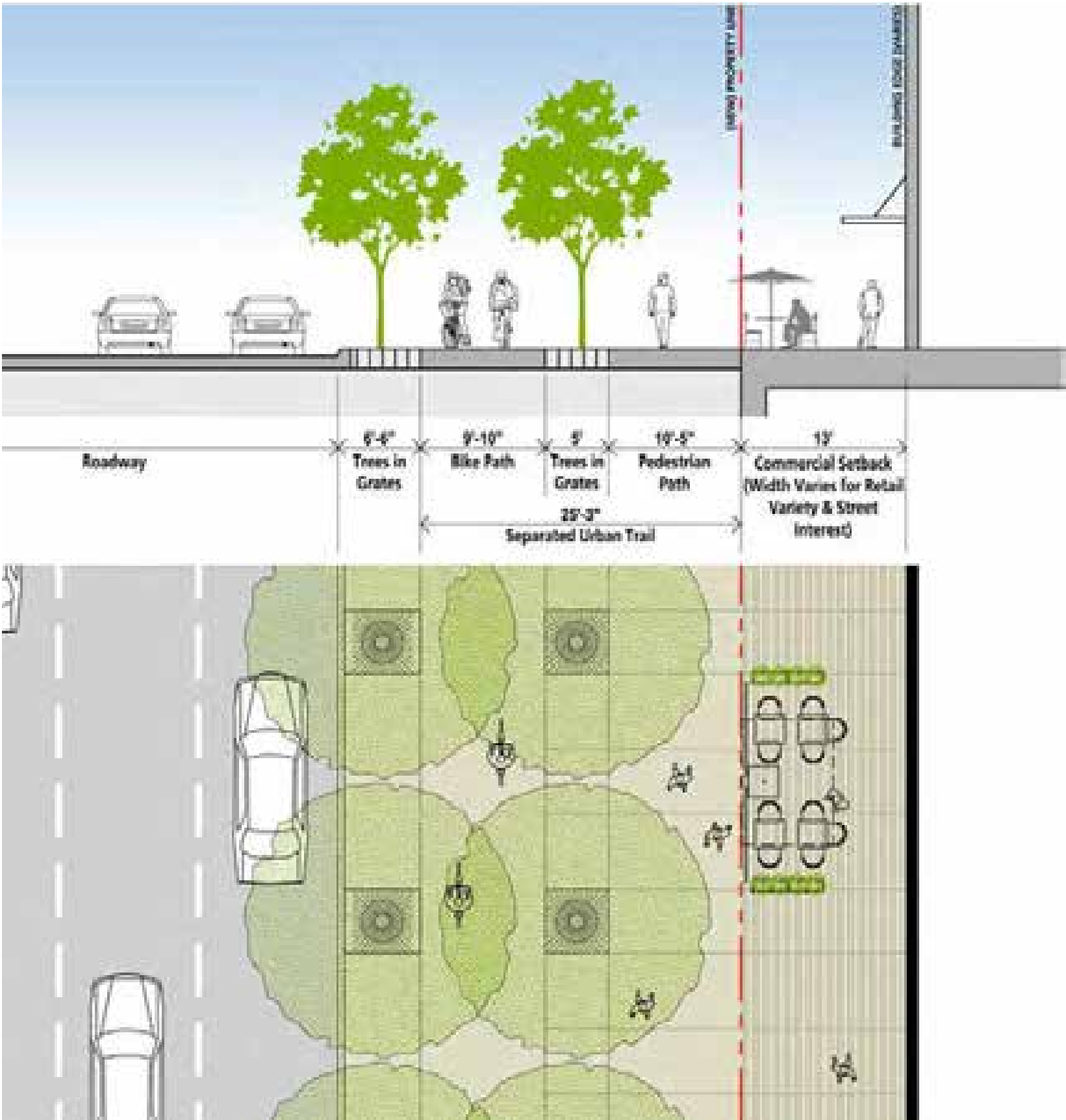


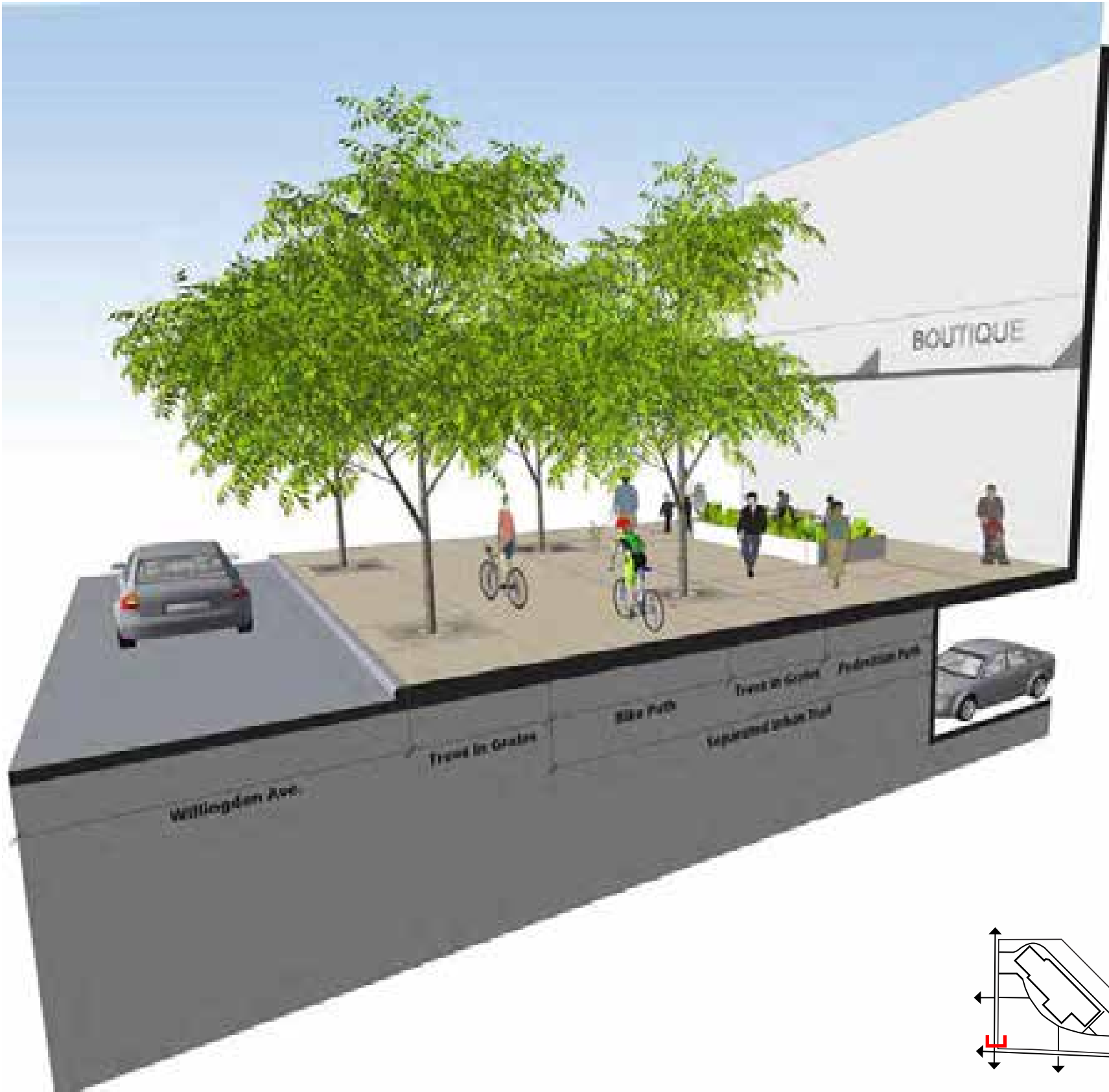
Typical Edge Condition on Willingdon Avenue at Bus Loading Area



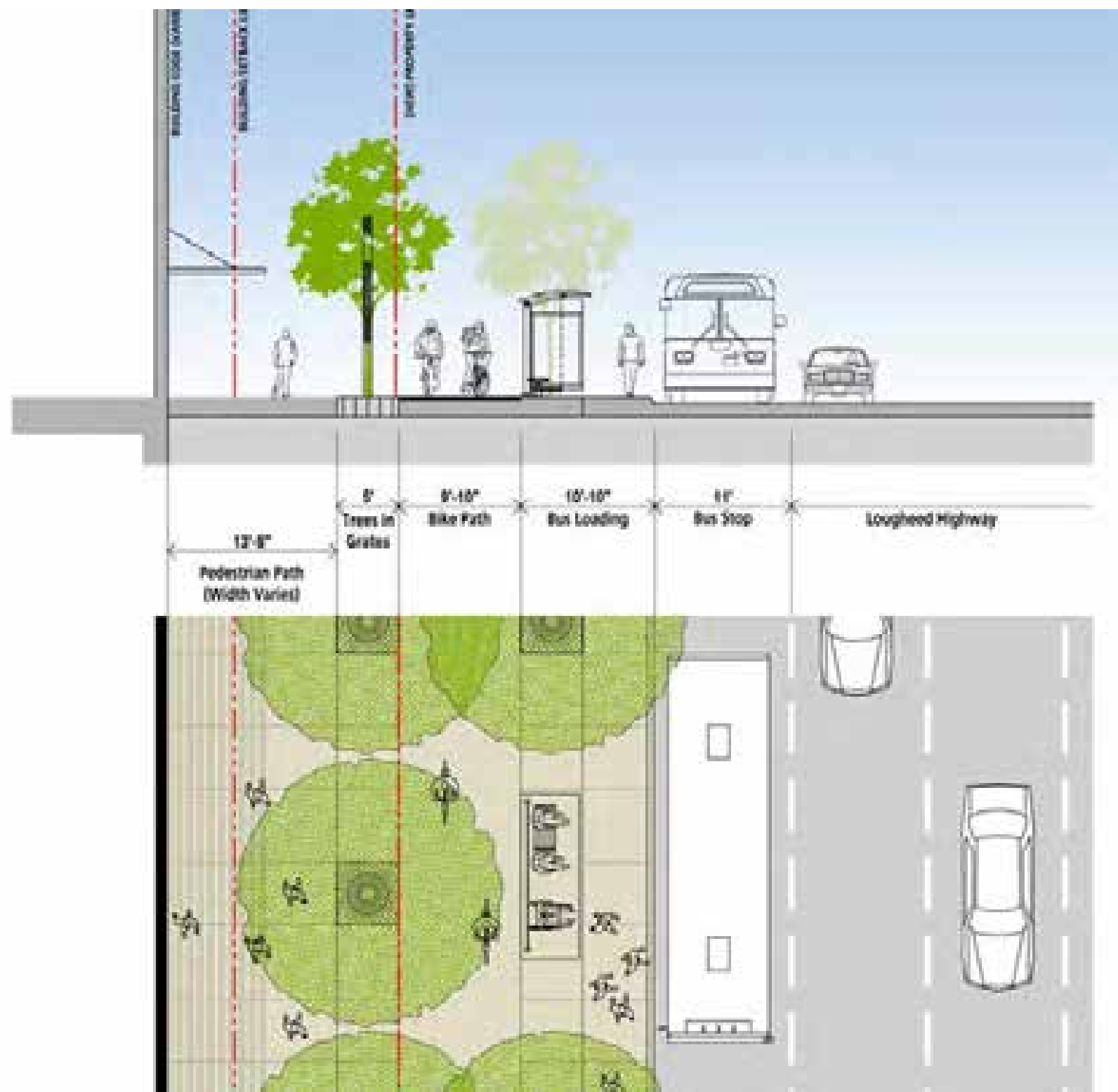


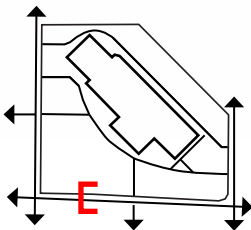
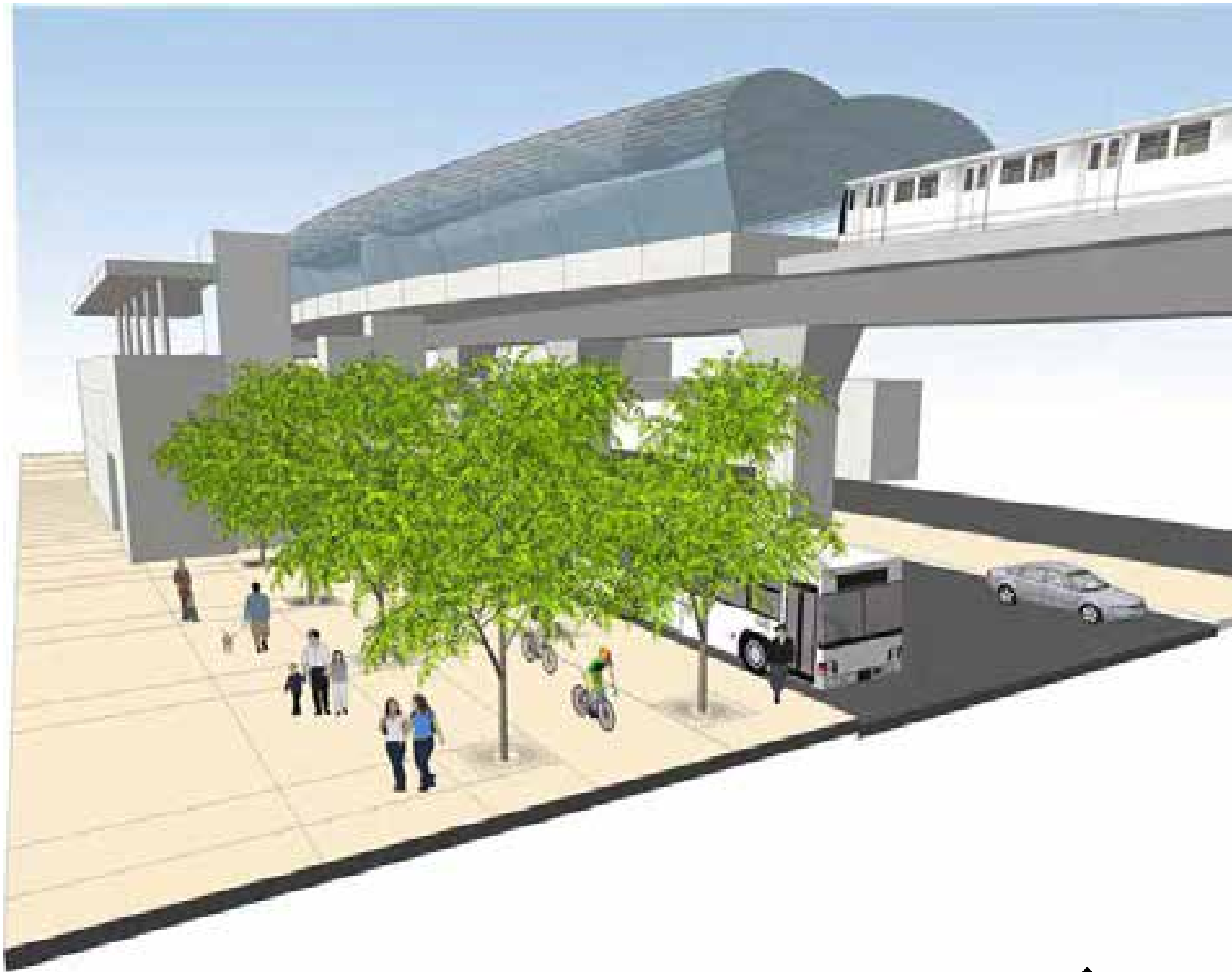
Typical Edge Condition on Willingdon Avenue at Lougheed Intersection



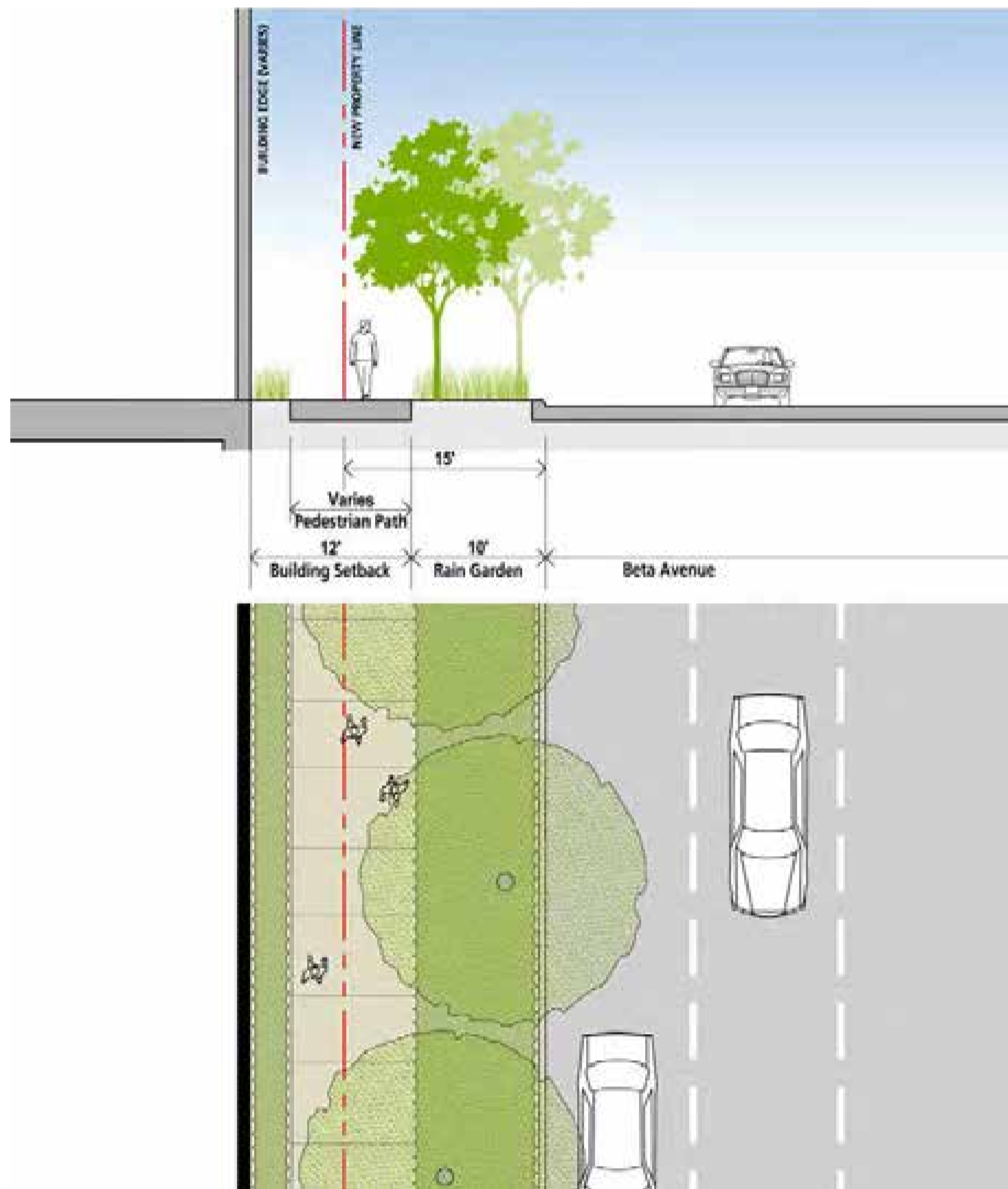


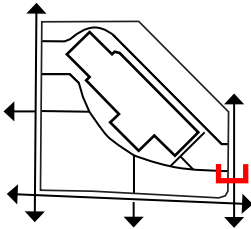
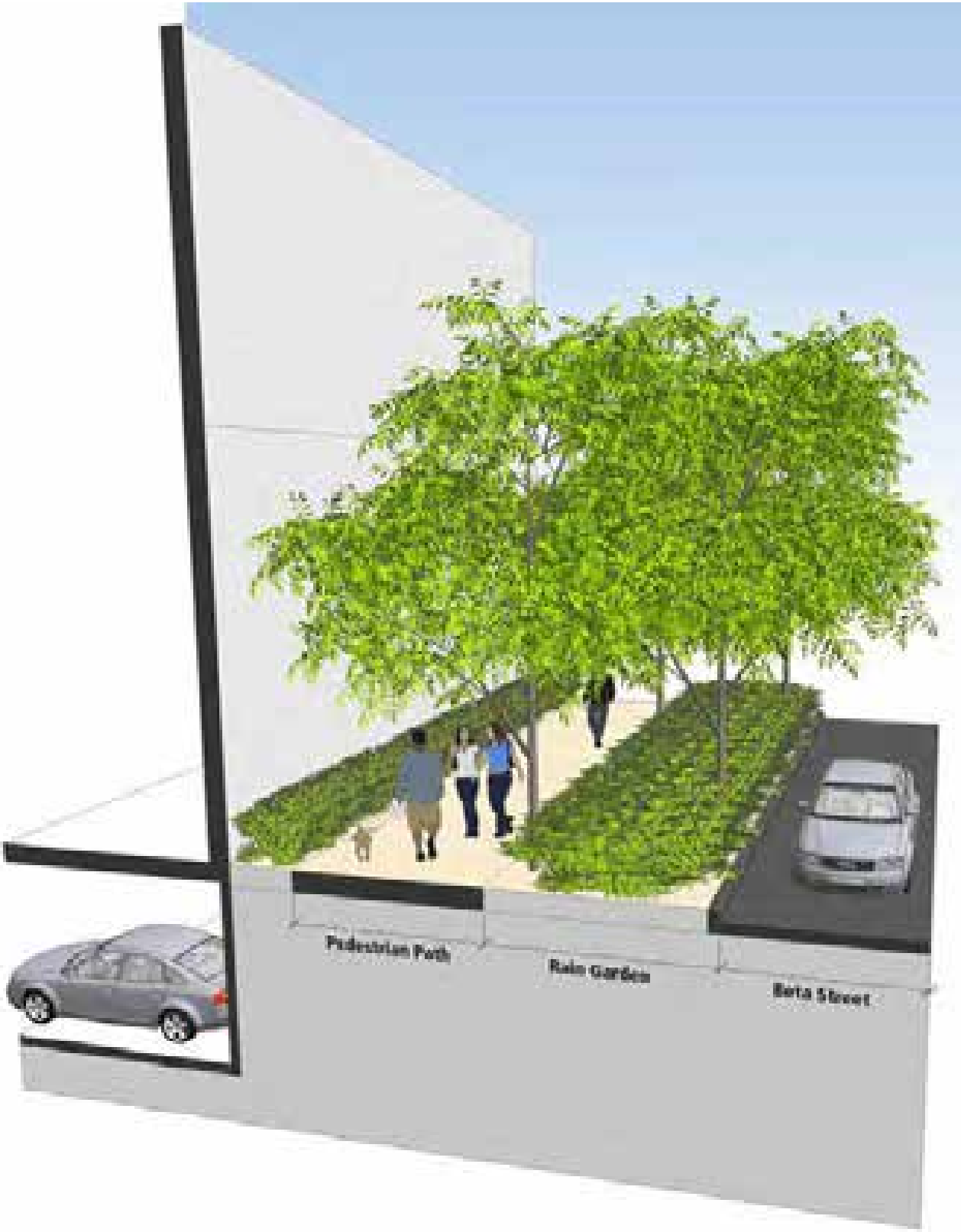
Typical Edge Condition on Lougheed Highway at Skytrain Station



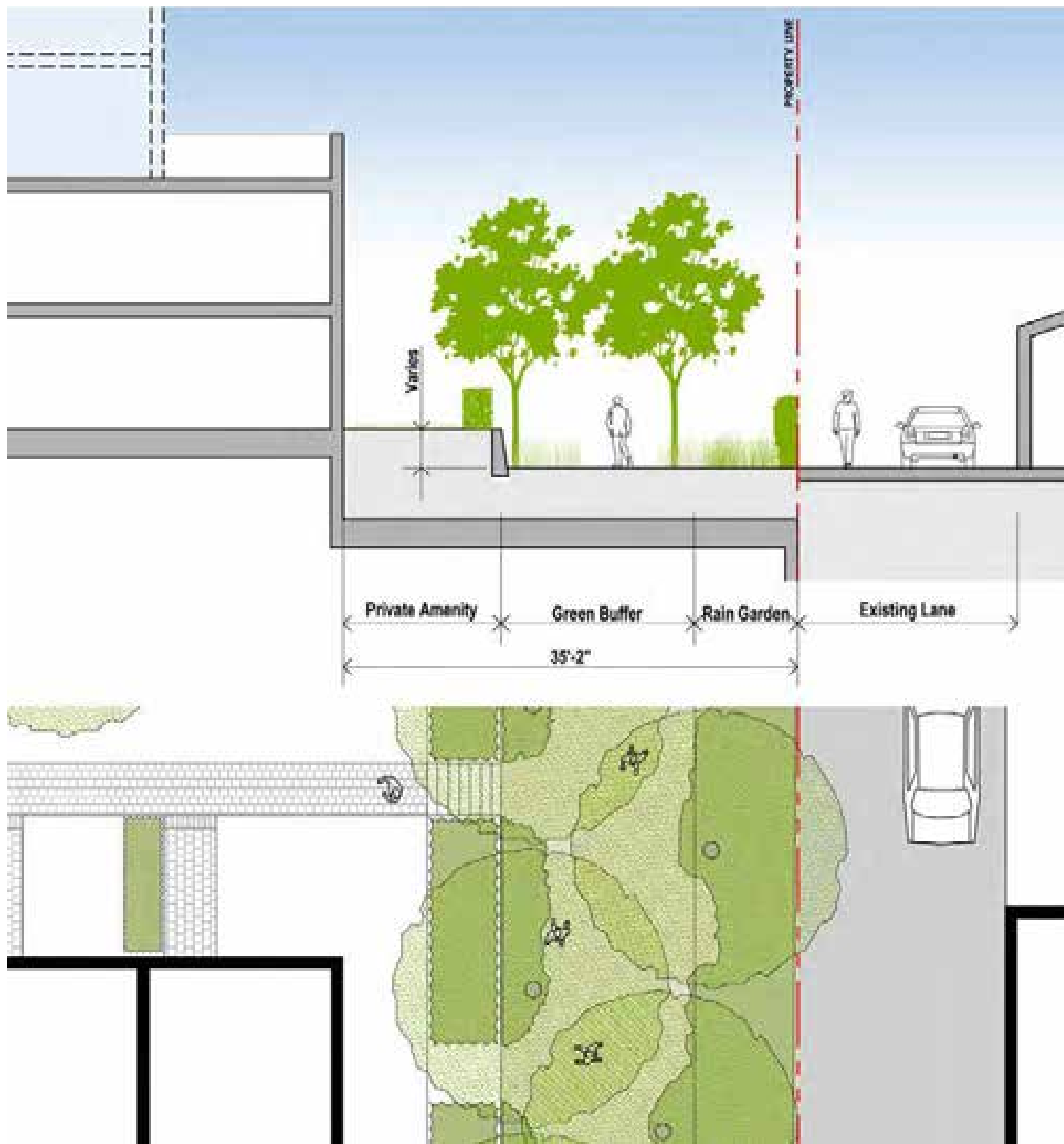


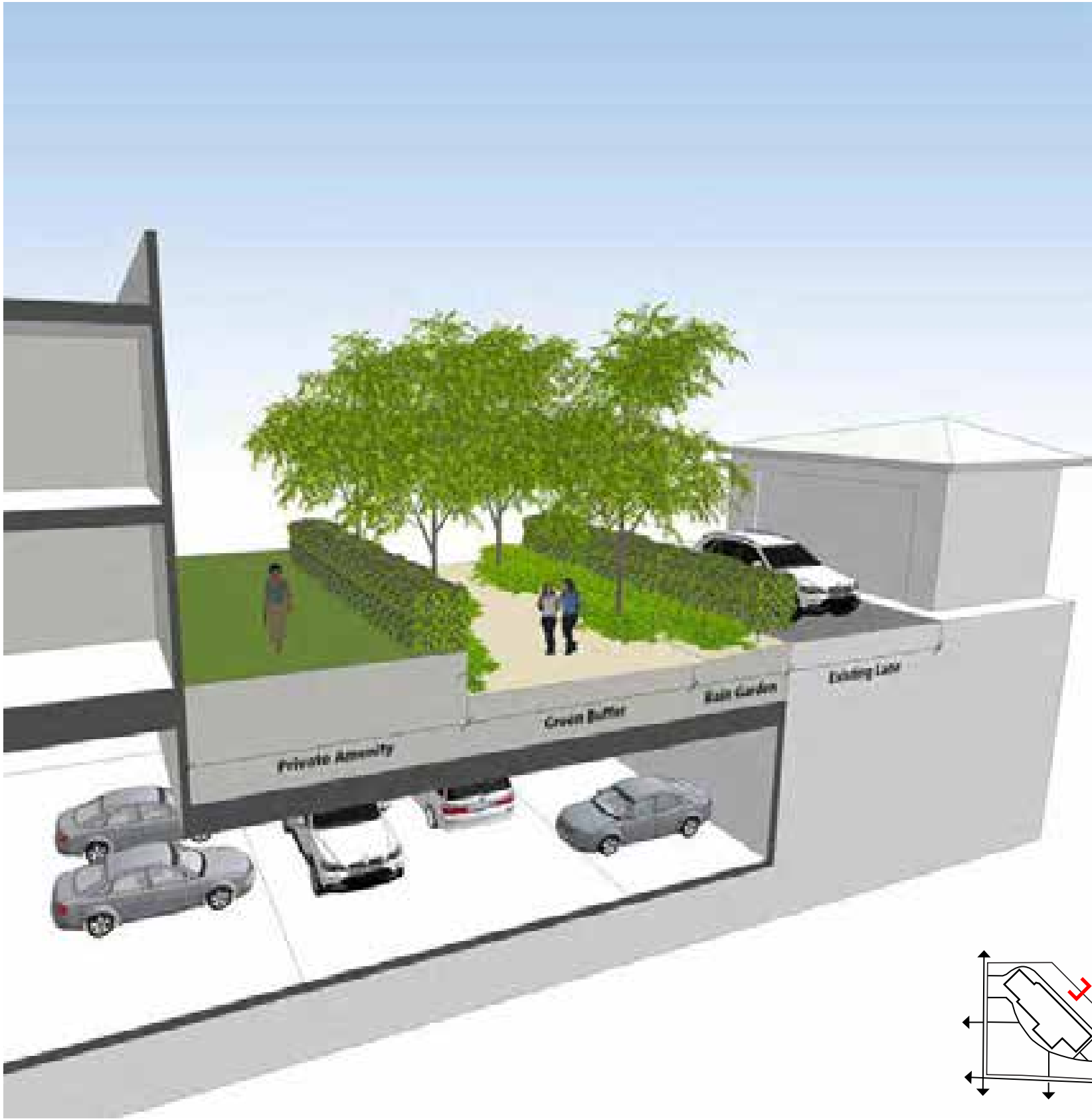
Typical Edge Condition on Beta Avenue





Typical Edge Condition on Northern Edge of Site





HIGH ST — BRENTWOOD BOULEVARD

Brentwood Boulevard is the 'high street' for the Brentwood Site, the 'backbone' of the master plan. It is the unifying element of the public realm that spans the full width of the site, featuring a vibrant range of prominent retail shops, restaurants, cafes and pubs. High quality storefront design flexibility will be encouraged to ensure this key boulevard feels authentic and unique, distinguishing itself through architecture, lighting and signage. Careful attention will also be given to the streetscape design to create an engaging human scale, which is inviting and stimulating. Generous tree-lined sidewalks, both sides of the street, allow space for outdoor restaurant/café seating, unique street furniture, public art, seasonal displays and other features. Festive lighting will add a nighttime magic to this important pedestrian spine.

The Brentwood Site 'high street' will be active throughout the day, offering lively four-season programming with flexibility for special pedestrian-only events. The street system is designed to accommodate temporary closures while maintaining underground parking access and traffic flow through the site.

CENTRAL DIAGONAL PEDESTRIAN AXIS

This diagonal pathway is the east pedestrian mews that connects the Town Centre Plaza to the new Ridgelawn Drive at the northerly edge of the site. It is a prominent pedestrian route, linked to Brentwood Boulevard and to a main entrance of the central retail area. This wide pathway could accommodate seating, public art and/or integrated water features that flow down from the higher levels of the site to the Town Centre Plaza.









View of Brentwood Boulevard Streetscape Animation & Activities



Inviting human scale, interesting outdoor seating enclosure



Vibrant street fronts & unique street lighting



Outdoor seating along tree-lined street - Santana Row, California



Street closure for special events



Multi-height retail with engaging signage & weather protection



Night illumination on multi-level tenant spaces



Visibility into unique upper level spaces - use of natural stone



Pedestrian mews off high street with European style flexible seating



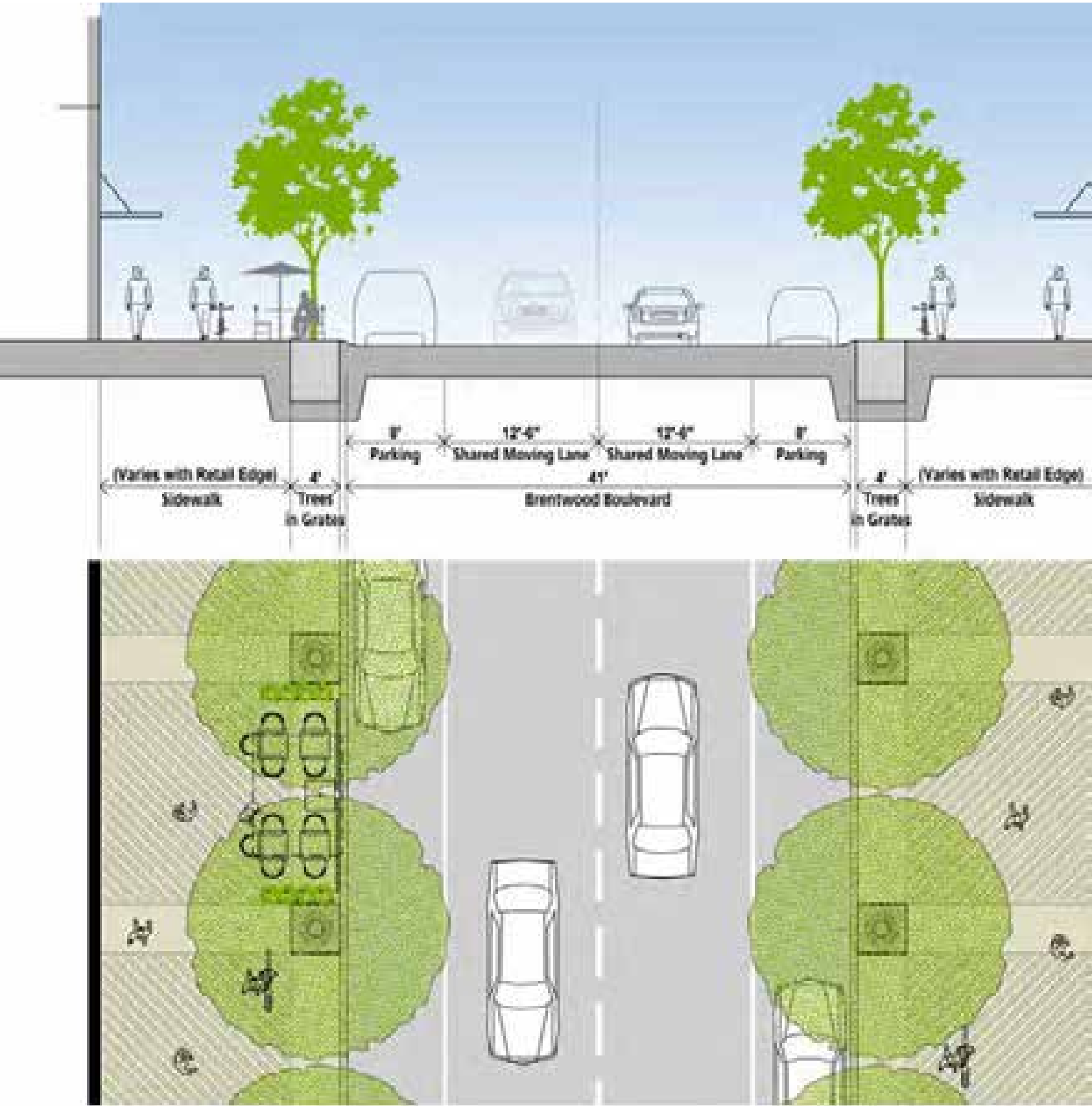
108

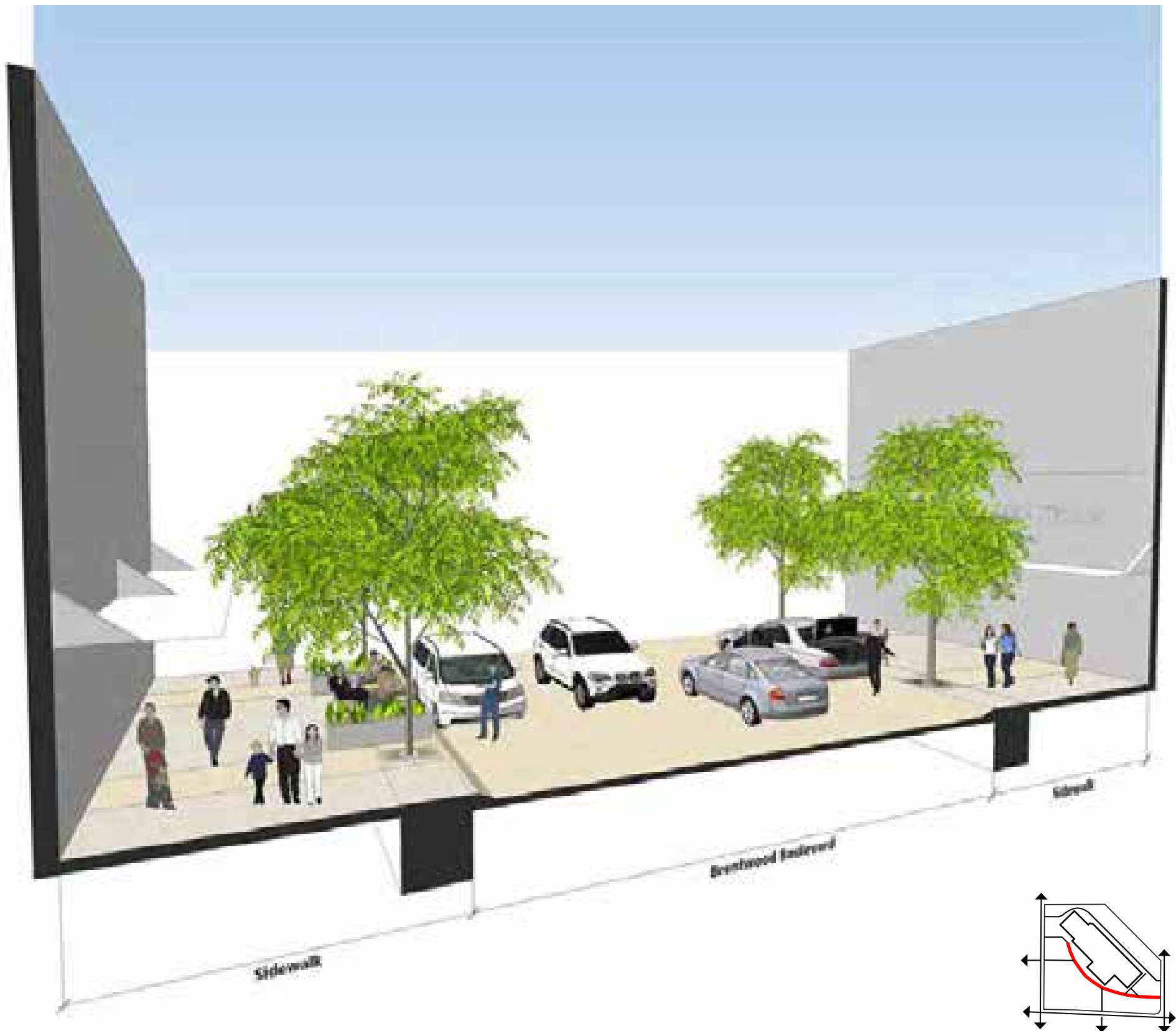
SKETCH BY
SUNNY



View along Brentwood Boulevard looking east towards Central Pedestrian Crossing

Typical Edge Condition on Brentwood Boulevard



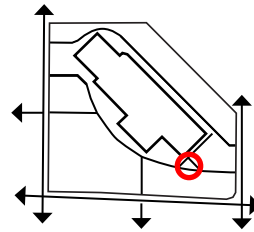




EAST ARRIVAL COURT

The East Arrival court provides a focus and defines the easterly termination of Brentwood Boulevard and announces the arrival from Beta Avenue. It is also visually aligned with the Loughheed East entrance, offering views of the focus for those arriving at the underground parking entrance and for pedestrians walking up alongside this entrance to the Brentwood Boulevard level.

The Arrival Court is part of both the principle pedestrian and vehicular networks. It includes a vehicle roundabout, around a central feature, drop-off and valet convenience for the retail anchor and access to the northern parking zone. This court could also become an outdoor event space with restricted vehicular access, in a European tradition, at certain times of the year.

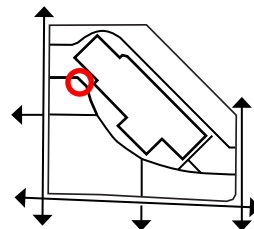


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WEST ARRIVAL COURT

The West Arrival Court provides a focus and defines the westerly termination of Brentwood Boulevard and announces the arrival from Willingdon at the northwest entry.

It provides drop-off and valet convenience for the large retail anchor and office tower and similar to the East Arrival Court, allows a vehicular turnaround for Brentwood Boulevard, around a central feature.



NORTHERN TRANSITION ZONE

The northern transition zone provides a landscaped buffer between the surrounding single family neighbourhood and the high density, mixed-use development of the Brentwood Site. A continuous green buffer is introduced along the north edge of this transition zone, following the City lane. This green buffer provides a visual screen for the existing single family neighbourhood. Low-rise residential (2-4 storey) is proposed between the new Ridgelawn Drive and the northeastern lane, from the northeast corner of the site to Fairlawn Drive. There are discreet areas of private and semi-private open space between the low-rise residential buildings which permit views to the south from the neighbouring residential properties.

The western end of the transition zone is a landscaped space surrounding Ridgelawn Drive. It terminates with a landscaped, terraced residential building at Willingdon, which provides a transition in building scale from the existing northern residential neighbourhood to the new high density development on the Brentwood Site. This terraced building spans over Ridgelawn Drive, where it connects to Willingdon, forming a portal over this north entrance. Commercial use is included at the street level of this stepped building, for continuity along the Willingdon street frontage.

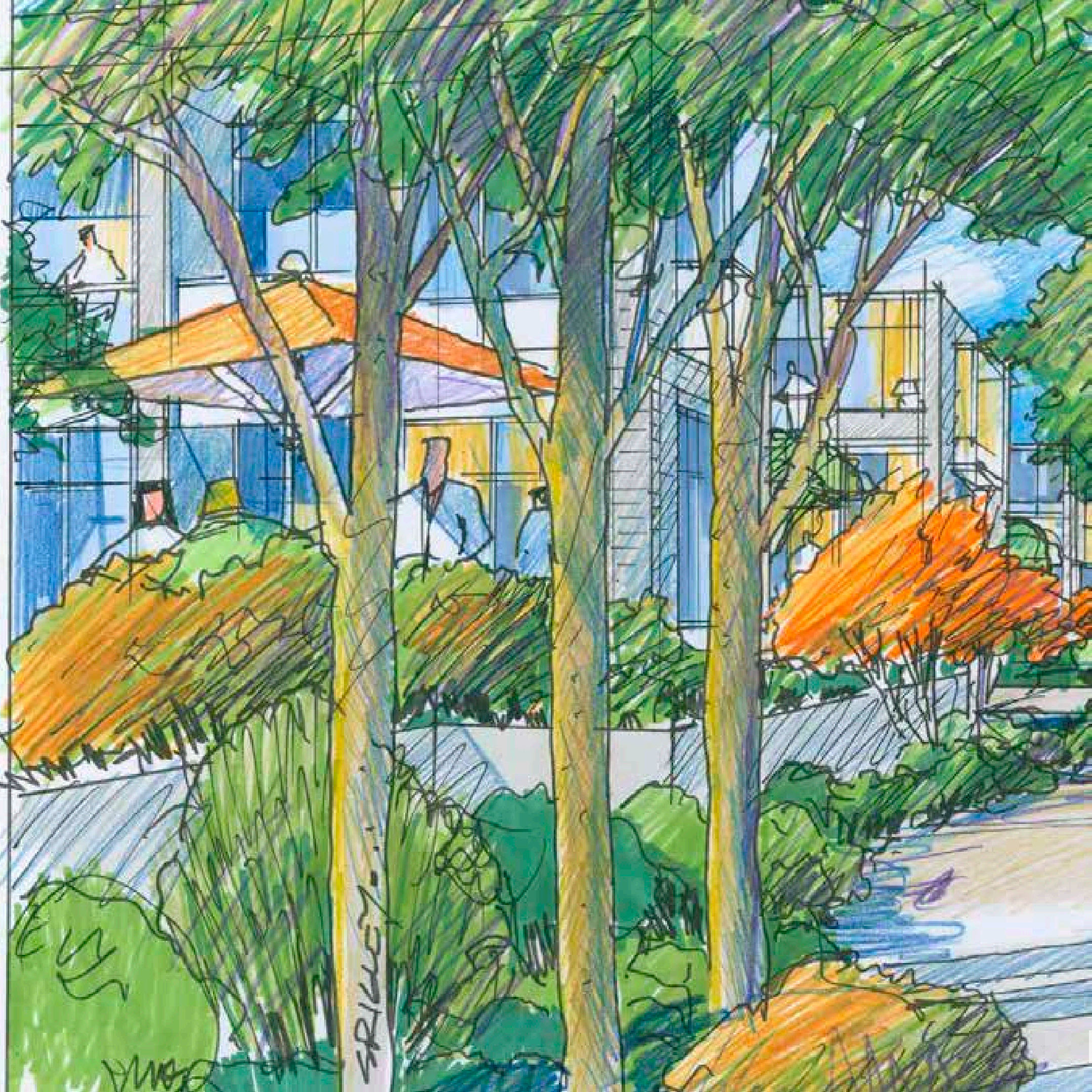
The eastern end of the transition zone wraps around the northeast corner of the site, along Beta Ave., terminating in the landscaped roof above the eastern Brentwood Boulevard anchor tenant.

New Ridgelawn Drive

The new Ridgelawn Drive is a secondary access through the site, connecting Beta Ave. to Willingdon Ave. and serves the mid-height and low-rise residential in the northern transition zone, as well as the upper retail level of the commercial core. Ridgelawn Drive is a tree-lined street with wide sidewalks and parallel parking on both sides and provides access to the north underground parking, where vertical vehicular circulation is provided to all lower parking levels and to Brentwood Boulevard.







SPRUEY

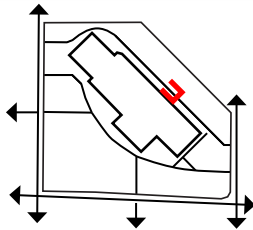
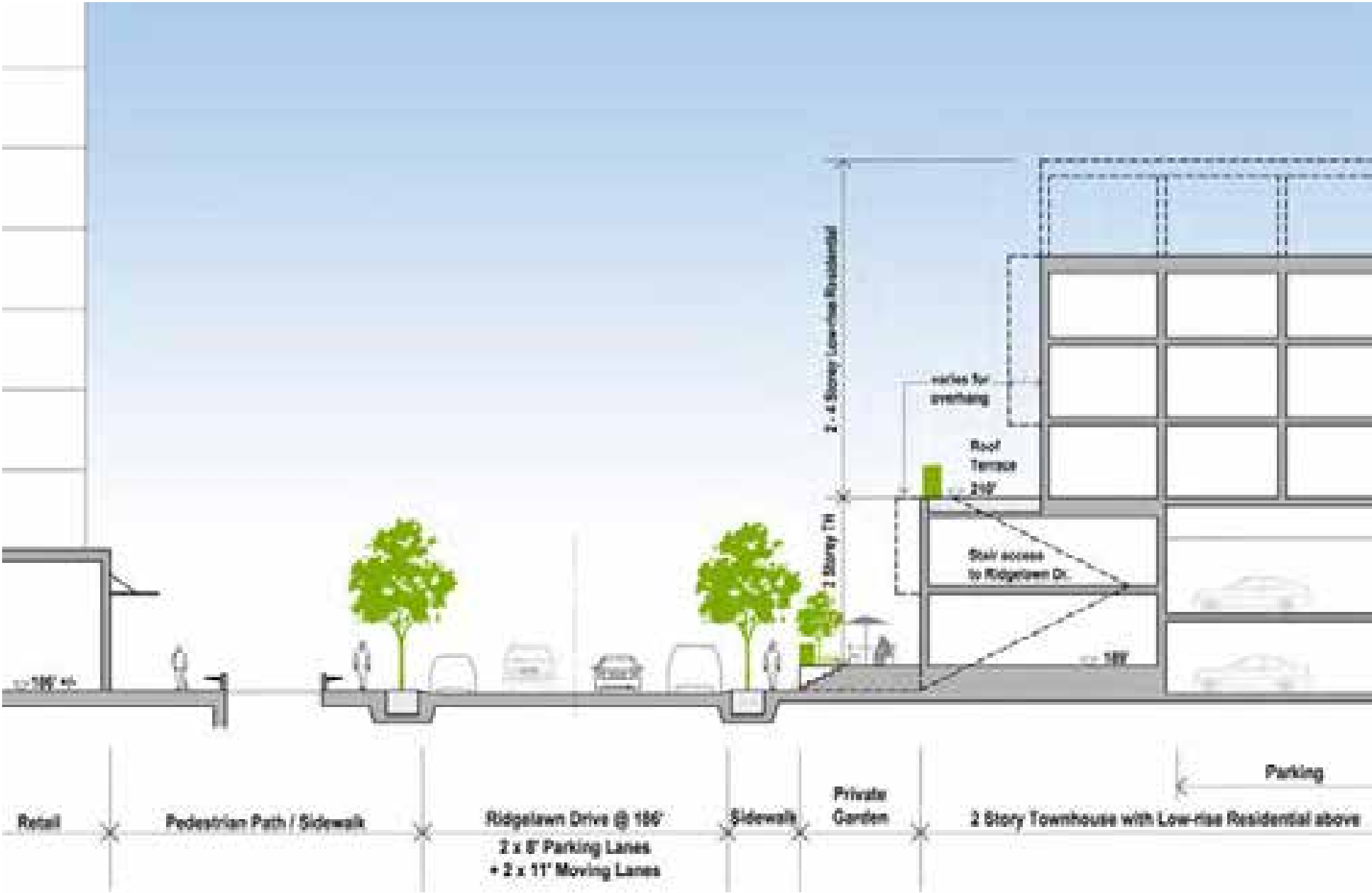
JOHN



Continuous Green Buffer separating Low Rise Residential from Single-Family Neighbourhood to the North

Typical Edge Condition on Ridgelawn Drive

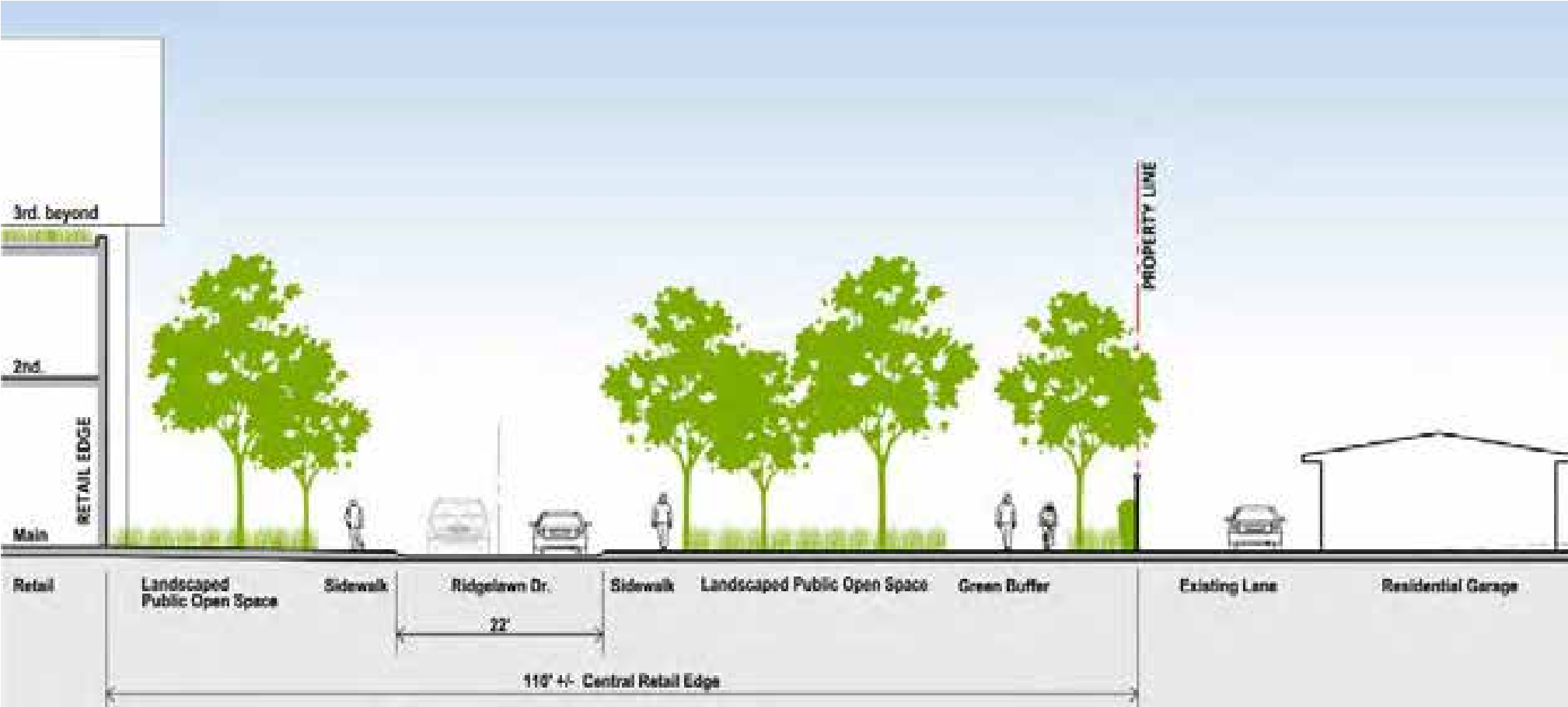


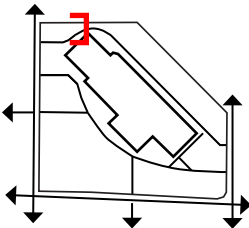
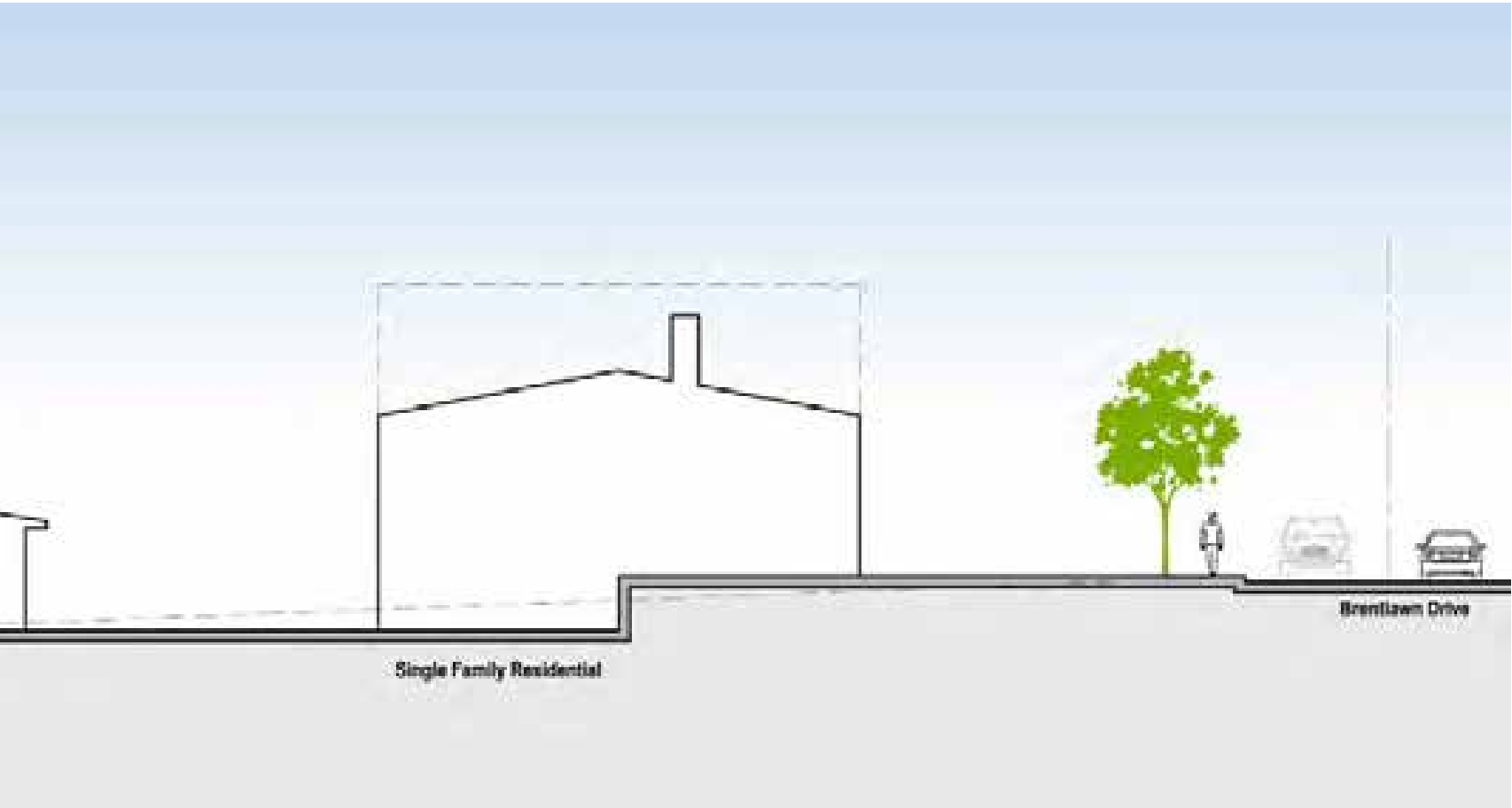


Edge Condition at Northern Pinch Point



120







LANDSCAPE PALETTE

Water, mountains and lush green landscapes are synonymous with British Columbia and essential elements of the west coast lifestyle.

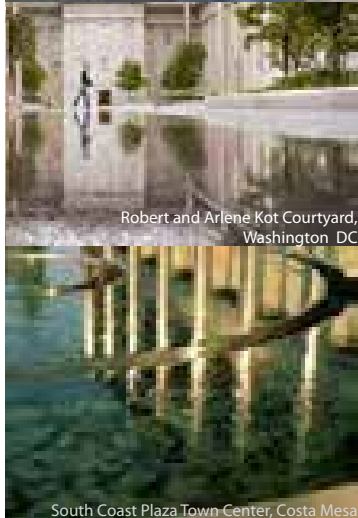
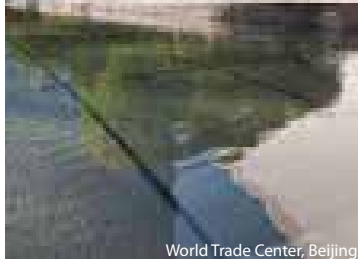
Water is a natural feature in public spaces, assuming any number of roles such as a visual focus, interactive feature, noise buffer, circulation guide, separation element or sustainability feature. Water is a landscape element that always engages people and encourages interaction and will be a feature on the Brentwood Site.

Trees and other green landscaping will define the edges, entrances, internal vehicular streets and pedestrian pathways and will provide seasonal colour and festive lighting opportunities.

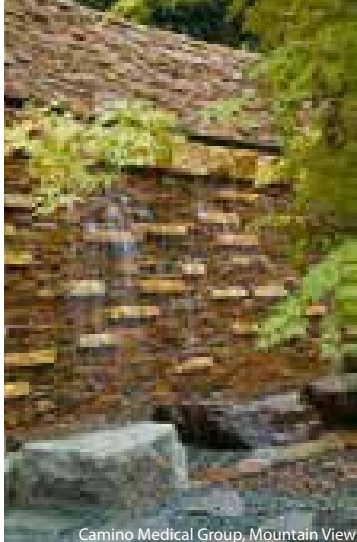
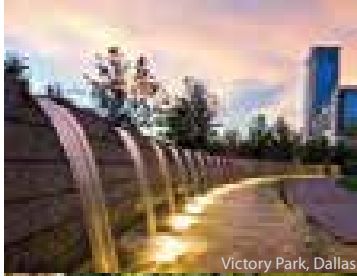
The landscape design for the Brentwood Site will offer a palette of hard and soft elements that unite aesthetics, functionality, and environmental quality to create a distinctive sense of place for each of the open space areas of the site.



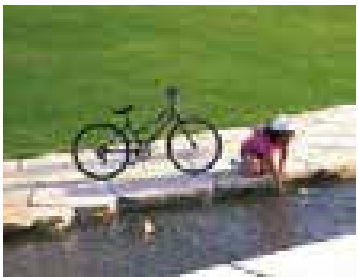
INTERACTIVE JET FOUNTAIN



REFLECTING POOL



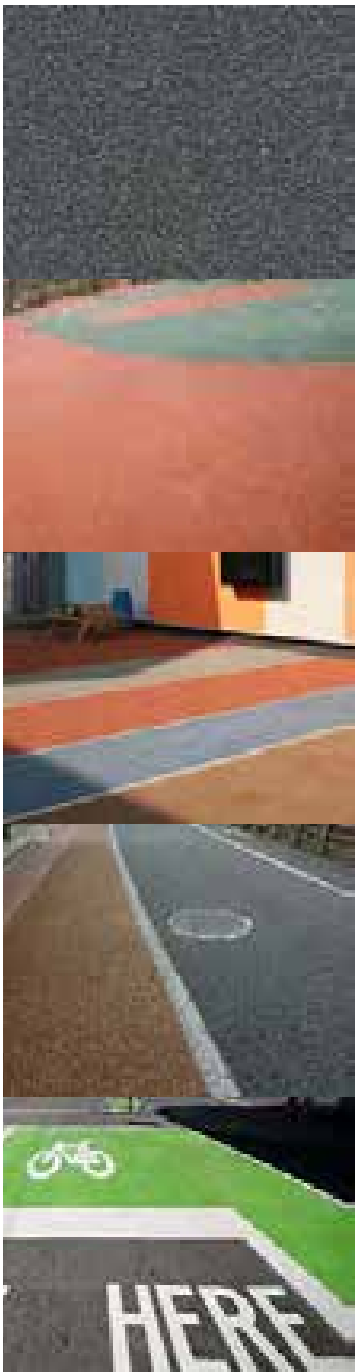
CASCADE WALL



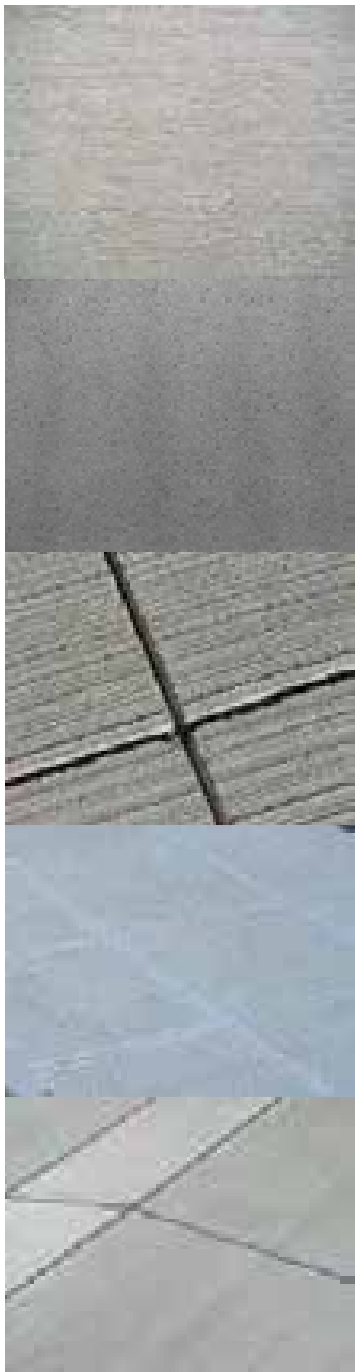
WATER CHANNEL



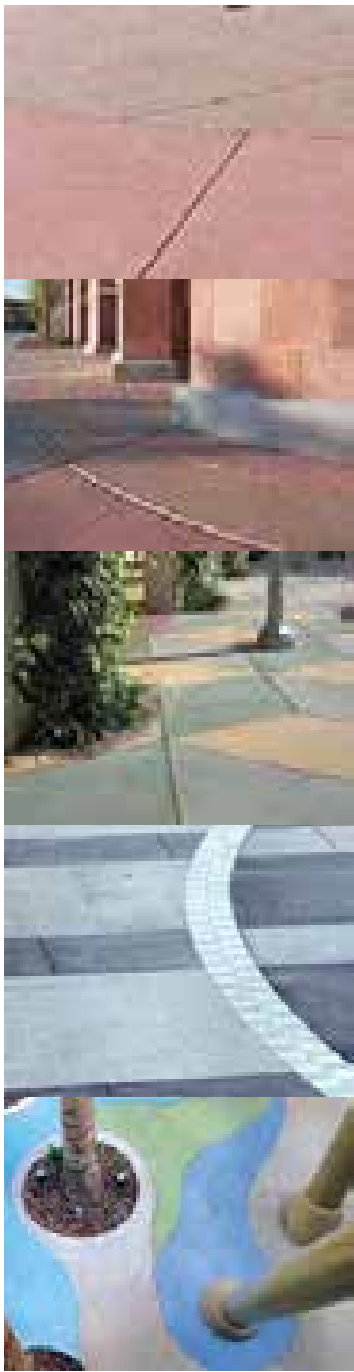
FOUNTAIN SCULPTURES



ASPHALT PAVING



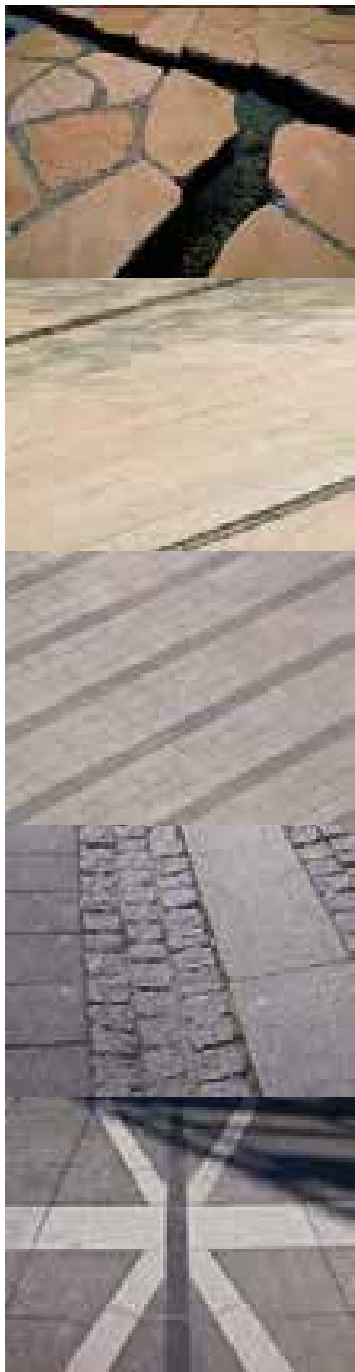
NATURAL COLOR CONCRETE



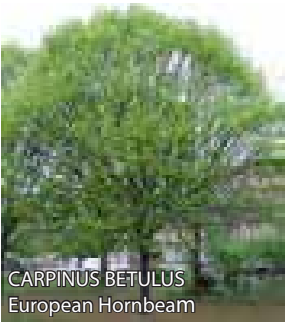
COLORED CONCRETE



CONCRETE PAVER



STONE PAVING



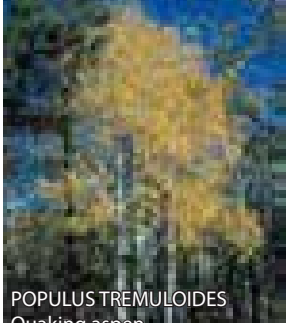
CARPINUS BETULUS
European Hornbeam



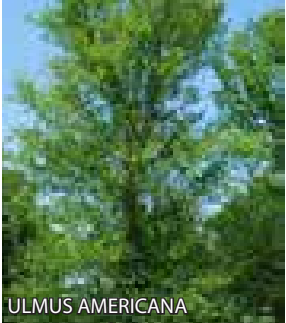
ZELKOVA SERRATA
Japanese zelkova



BETULA PAPERIFERA
Paper birch



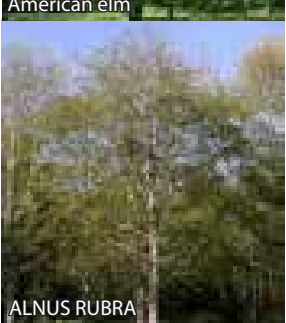
POPULUS TREMULOIDES
Quaking aspen



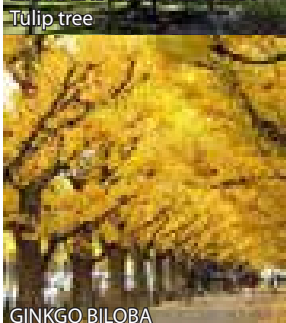
ULMUS AMERICANA
American elm



LIRIODENDRON TULIPIFERA
Tulip tree



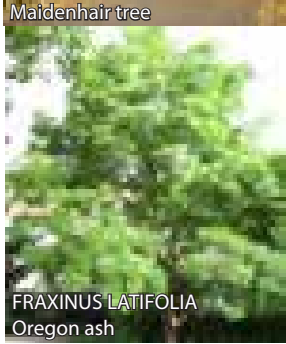
ALNUS RUBRA
Red alder



GINKGO BILOBA
Maidenhair tree



ACER PLATANOIDES
Norway maple



FRAXINUS LATIFOLIA
Oregon ash

LARGE TREES



BETULA NIGRA
River birch



ARBUTUS UNEDO
Strawberry tree



AMELANCHIER CANADENSIS
Canadian serviceberry



ACER PALMATUM
'Bloodgood' Japanese maple



ACER GRISEUM
Paper bark maple

SMALL TREES



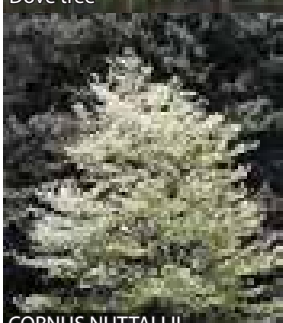
PRUNUS SP.
Cherry



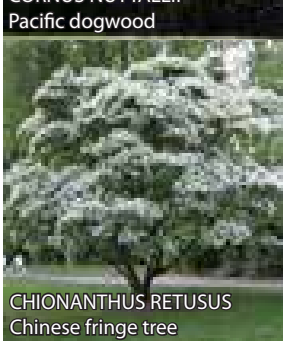
MAGNOLIA STELLATA
Royal star magnolia



DAVIDIA INVOLUCRATA
Dove tree



CORNUS NUTTALLII
Pacific dogwood



CHIONANTHUS RETUSUS
Chinese fringe tree



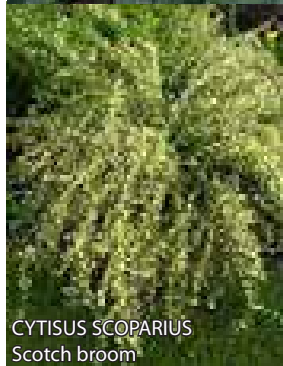
HYDRANGEA QUERCIFOLIA
Oak leaf hydrangea



FORSYTHIA INTERMEDIA
Border Forsythia



FATSIA JAPONICA
Japanese aralia

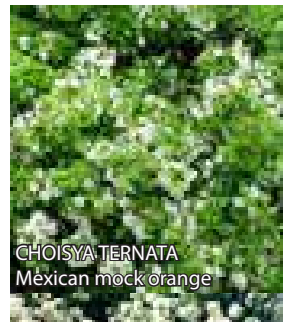


CYTISUS SCOPARIUS
Scotch broom

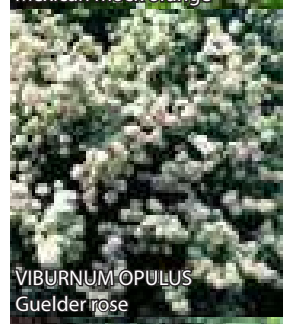


CAMELLIA SASANQUA
Sasanqua camellia

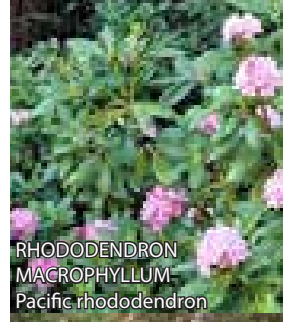
SHRUBS



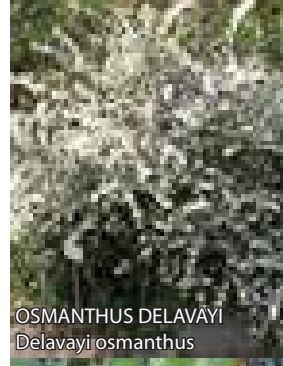
CHOISYA TERNATA
Mexican mock orange



VIBURNUM OPULUS
Guelder rose



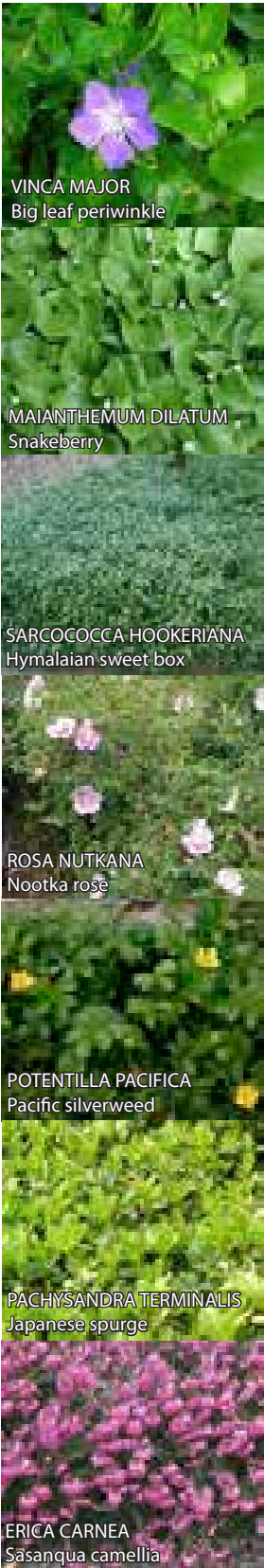
RHODODENDRON
MACROPHYLLUM
Pacific rhododendron



OSMANTHUS DELAVAYI
Delavayi osmanthus



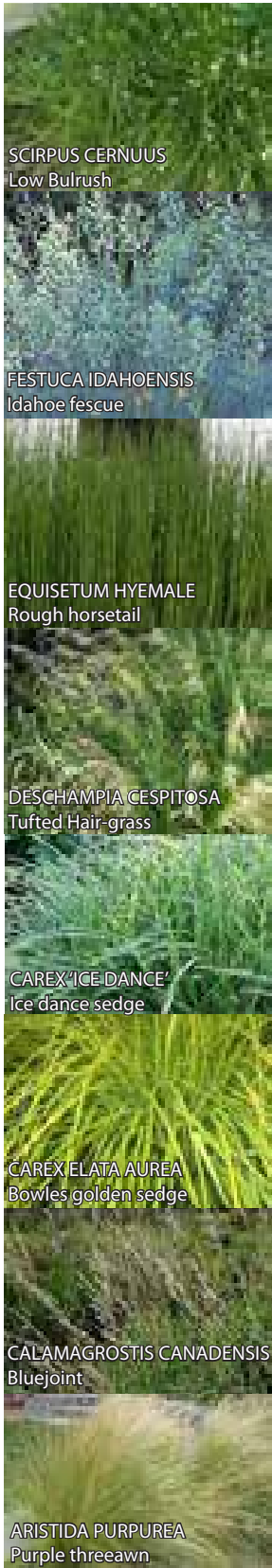
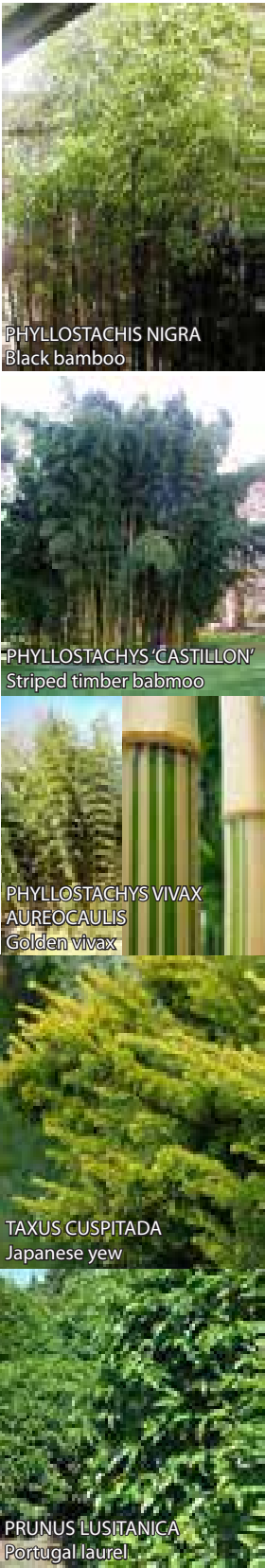
LONICERA CILIOSA
Orange honeysuckle



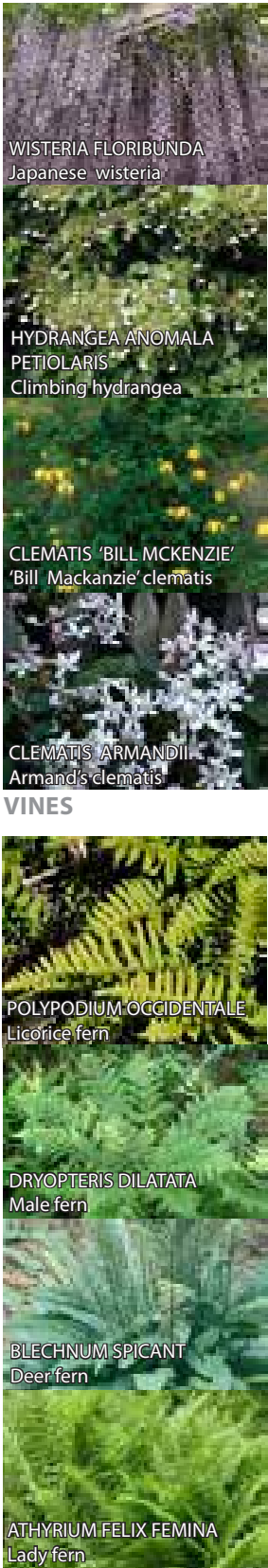
GROUNDCOVERS



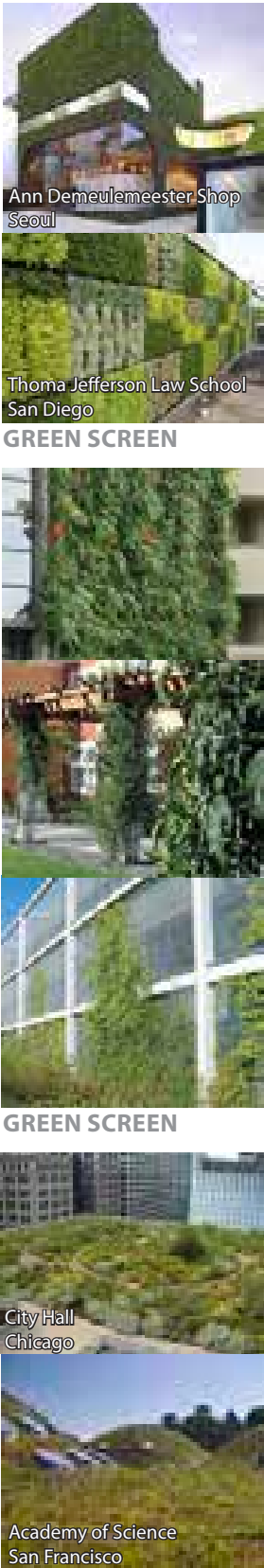
HEDGES



GRASSES



FERNS



GREEN ROOF



Catena Chair & Table



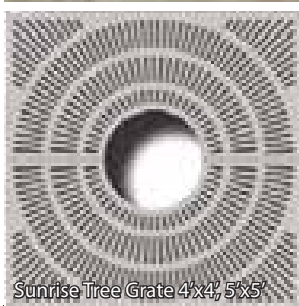
Balance Bench



Stay Bench



Tree Guard



Sunrise Tree Grate 4'x4', 5'x5'



Universal Planter



Scarborough Litter Bin



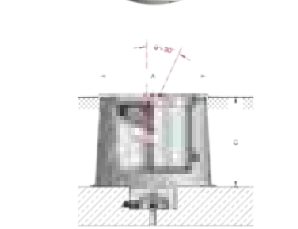
Equinox Umbrella



Indirect Pole Top Street Light



In-grade Adjustable Uplight



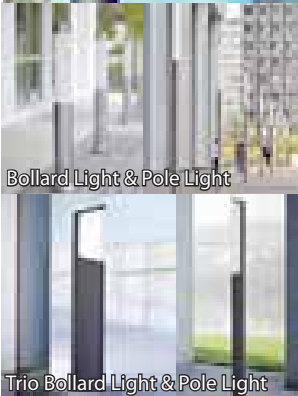
LP Knap Path Light,



SD100-B Bollard



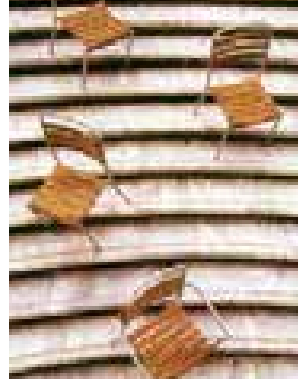
Bollard Light & Pole Light



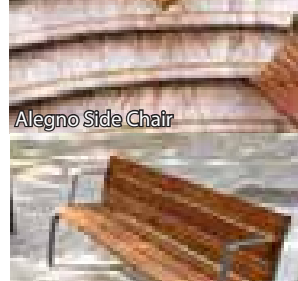
Trio Bollard Light & Pole Light



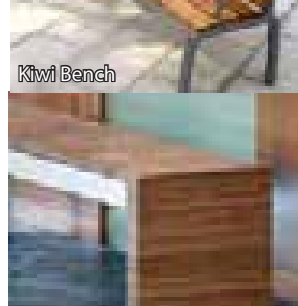
Marketplace Umbrella



Alegno Side Chair



Kiwi Bench



Duo Bench



Metro 40 Bench



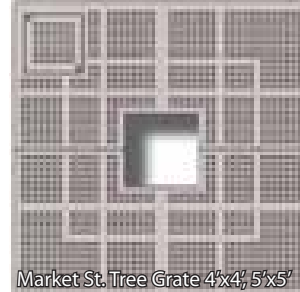
Parc Centre Table



Metal Tree Guard



Market St. Tree Grate 4'x4', 5'x5'



Venetian Planter



35 Pitch Litter Bin



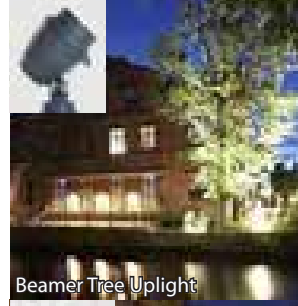
Sera SG Street Light



Metro40 Bollard



Lo-gio & Hi-gio light



Beamer Tree Uplight



LED Orientation Luminaires

FURNITURE
TYPE 1 - "METAL"

FURNITURE
TYPE 2 - "ORGANIC"



ES-335 Litter Receptacle



Umbrella



Luxembourg Chair



Luxembourg Table



60" Louisiana Bench



Luxembourg Bench

FURNITURE

TYPE 3 - "COLOUR"



Crush Gravel



Planted Tree Well



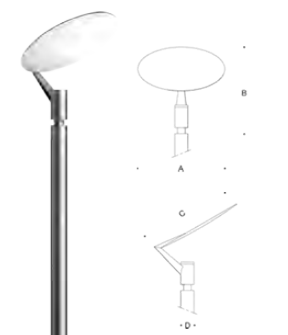
Tree Air Spot Lights



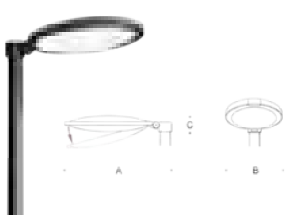
Cascade Round Planter



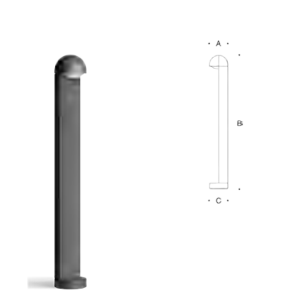
Bilbao Planter



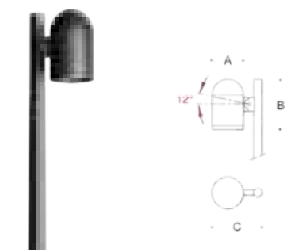
Indirect pole top street light,



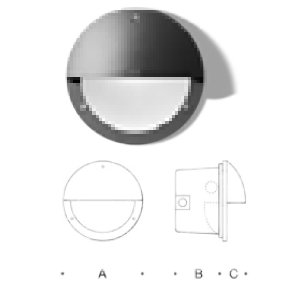
Street light with diffuse light



Small scale bollard with asymmetrical distribution



Pedestrian light with symmetrical distribution



Recessed Wall Light Shielded



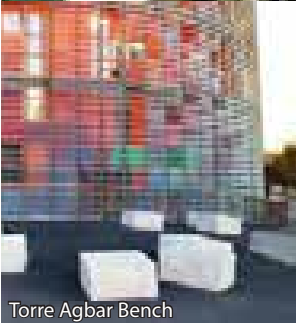
Prima Marina



Precast Concrete Seat Wall



Precast Concrete Seat Wall



Torre Agbar Bench



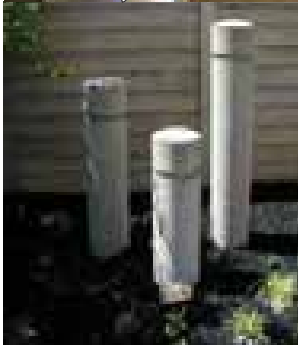
Cementum Bench

FURNITURE

TYPE 4 - "GEOMETRY"



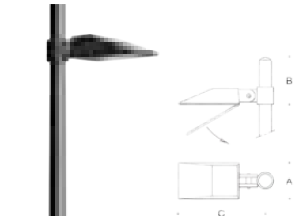
Laurel & Hardy Litter Bin



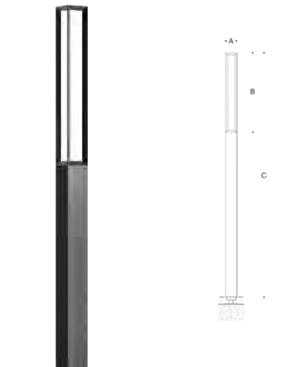
Herod Bollard



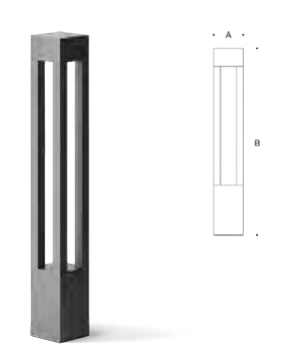
California Square Planter



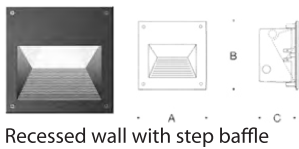
Pole light with asymmetrical distribution pole top



Square Street Light



Square Bollard



Recessed wall with step baffle



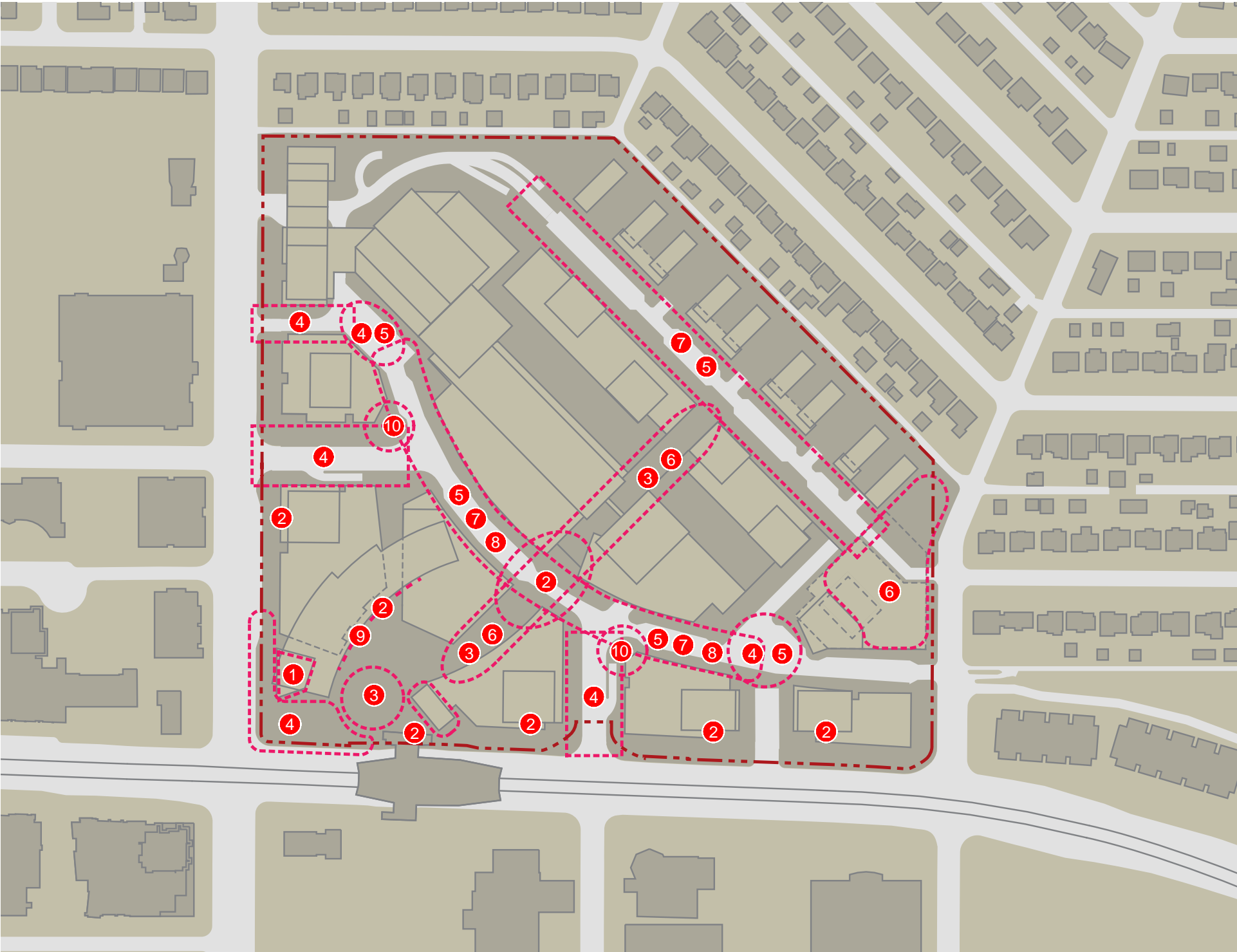
Pedreta Litter Bin



PUBLIC ART

Public art will be integrated throughout the site into both public open spaces and interior spaces. A variety of different forms of art will be pursued to create a rich, engaging visual environment.

An experienced public art consultant will be engaged to oversee the selection, execution and documentation of the public art elements on the Brentwood Site. Depending on the nature of the intended art, the consultant’s role may involve organizing a juried art competition or sourcing an artist in a specialized art discipline for a pre-determined concept, integrated into a building form. Landscape art or unique building art may also involve a collaboration between an artist and the project Landscape Architect and/or Architect.



PUBLIC ART KEY MAP

Possible locations for public art shown above.

Public art may be in the form of, amongst others:
Unique Building . Integrated into Buildings . Water Feature . Seasonal Displays . Rotating Exhibits
Permanent Sculpture Pieces . Landscape Art . Street Furniture . Light Displays . Large format
Digital Media Displays . Performance Art and Street Theatre

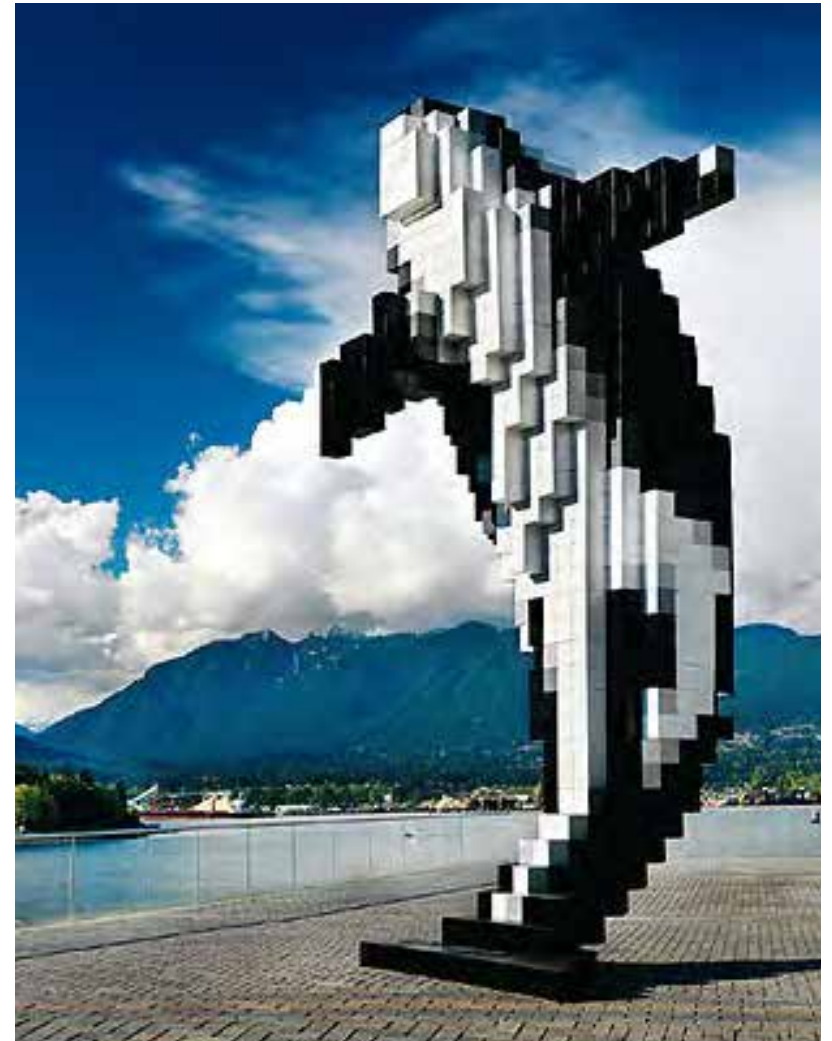
- | | |
|-----------------------------------|--------------------------------------|
| 1 UNIQUE BUILDING | 6 LANDSCAPE ART |
| 2 INTEGRATED INTO BUILDING | 7 STREET FURNITURE |
| 3 WATER FEATURE | 8 LIGHT DISPLAYS |
| 4 SEASONAL DISPLAYS | 9 LARGE FORMAT DIGITAL MEDIA DISPLAY |
| 5 POTENTIAL ART PIECES (ROTATING) | 10 PERMANENT SCULPTURE PIECES |



Temporary art installations for public interaction



Landscape art



Pixelated Orca - Vancouver Convention Centre



Illuminated water feature



Integrated into buildings - Fairmont Pacific Rim Vancouver



Interactive public screen - Millennium Park Chicago



Integrated into buildings - Shaw Tower Vancouver



Unique building - Apple Store Shanghai



Unique building - Millennium Park Chicago



Landscape fountain feature - Sanlitun, Beijing



Urban scale sculpture - Convention Centre Vancouver



Landscape art with faux boulder - Palisades, Vancouver



Art glass display - Residences on Georgia

7.0 SUSTAINABILITY

- 7.1 Introduction
- 7.2 Social Sustainability
- 7.3 Economic Sustainability
- 7.4 Environmental Sustainability
- 7.5 Leadership in Energy and Environmental Design (LEED-ND)



SUSTAINABILITY

Sustainable neighbourhood design embraces a synergistic approach in which the environmental, economic, and socio-cultural spheres of development are closely interrelated and integrated. It offers a systems-based approach where benefits are achieved in all three spheres simultaneously. Consistent with Creative City concepts, sustainable neighbourhood design results in vibrant, livable spaces that enrich the community and enhance the quality of life.

Preliminary sustainability review shows that the proposed design for the Brentwood Site will result in a strong LEED-ND Gold rating. A sustainability roadmap is outlined in this chapter to assist in achieving that goal. It provides a framework to track the development of the environmental, economic and social design strategies into detailed quantitative targets, as the project progresses through the various site-specific and detailed design stages of this comprehensive master plan.

7.1 INTRODUCTION

As stated in the vision for the project, the Brentwood Site’s very nature as a transit-oriented, mixed-use town centre lends itself to performing extremely well as a model “green” community. It represents a unique and exciting redevelopment of a brownfield site that will contribute significantly to Burnaby’s goal of “becoming a sustainable community through the implementation of a trilogy of economic, social and environmental sustainability strategies.” (Mayor Derek Corrigan in his 2011 State of the City address).

Through converting a site that is currently dominated by large expanses of asphalt, surface parking, and other automobile-oriented infrastructure into a lively high density, mixed-use, transit-oriented neighbourhood, the project will contribute in a very positive way to the Brentwood Town Centre and beyond. It will act as a catalyst for major economic, social and environmental enhancements to the area, all of which support and enhance municipal and regional policy related to sustainable neighbourhood and town centre design.

Turning sustainability intentions for urban design projects into on-the-ground reality relies on a roadmap, or framework, that communicates in a transparent way how high-level concepts are translated into comprehensive design strategies, and, as the project progresses, into detailed quantitative targets. The sustainability roadmap for the Brentwood Site translates the project vision into a series of goals that are selected to reflect city policy as well as sustainability best practice. These goals are then addressed through design decisions customized to fit the needs and context of this project. This chapter provides more detail about the goals and design strategies that are integrated into the Master Plan and future redevelopment. They have been classified according to nine thematic design areas that are sub-sets of social, economic and environmental sustainability.

Sustainability roadmaps also help to keep track of overall performance against goals. During site-specific rezoning and detailed design, specific targets will be set for the goals included in this Conceptual Master Plan. As well, the sustainability roadmap for the Brentwood Site has been prepared to dovetail with the LEED (Leadership in Energy and Environmental Design) Green Neighbourhood Design rating system in order to facilitate this kind of assessment. Preliminary review shows that the proposed design for the Brentwood Site will result in a strong LEED-ND Gold rating (between 60-79 points out of a possible 106). The LEED-ND Scorecard provided at the end of the chapter represents a synopsis of the integrated sustainability approach of the project, and provides a good summary of the detailed criteria that are incorporated from all three spheres of sustainability.

SPHERE OF SUSTAINABILITY	THEMATIC DESIGN AREA
Social Sustainability	Housing
	Mobility
	Equity and Well-Being
Economic Sustainability	Economic Activity
	Local Economic Development
Environmental Sustainability	Energy and Air Quality
	Greenspace and Food
	Water and Wastewater
	Solid Waste



Outdoor Community Exercise Groups

7.2 SOCIAL SUSTAINABILITY

From a social perspective, sustainable neighbourhood design involves creating inclusive communities where residents have a sense of belonging and lots of opportunity to access services, learn, work, engage in recreation, and feel inspired.

At the Brentwood Mall over 200 Community Groups actively use the common spaces in the mall. With the proposed masterplan many more venues and opportunities will become available to expand community group participation.

Physical expressions of social sustainability include infill and mixed-use spaces; transit-oriented developments; affordable housing; adaptable and flexible housing and commercial spaces; and developments that respond to demographic and socio-economic trends.

The Brentwood Site will play a very important role in enhancing social sustainability in Burnaby, particularly in terms of the strategic directions and goals laid out in the City's Social Sustainability Strategy. The proposed Master Plan does much to support the evolving needs of the local community, and includes many features that will create a vibrant and unique community for future residents and visitors.

The design of the Brentwood Site to support social sustainability has been considered according to three thematic design areas:

- Housing (which is about ensuring the fundamental basic need of safe, secure and attainable places to live)
- Mobility (which addresses the network of corridors that enable the movement of goods and people, including both active (e.g. biking, walking) and passive (e.g. automobile, Skytrain, bus) modes of transportation)
- Equity & well-being (which is about the quality of community facilities and spaces, the strong sense of place, culture, aesthetic quality, physical protection and security, and overall health, and where a sense of belonging and equal opportunity is created)

The specific goals and design strategies for each of these thematic areas are shown below.



Cultural Events



Community Theatre Performances

THEMATIC AREA	GOAL	BRENTWOOD SITE DESIGN STRATEGIES
HOUSING	Provide a mix of housing types and tenures	A broad continuum of housing tenures are being explored for the project, including private ownership, purpose-built rental, retirement, assisted living.
		The north edge of the site is designed with a multifamily residential character in a park-like setting in contrast to the metropolitan, urbane character of the towers closest to Willingdon & Lougheed
	Encourage the development of affordable housing options	A range of housing unit sizes and levels of finish will be incorporated in order to attract diverse income levels
	Incorporate adaptable housing units to meet the needs of all ages and abilities	Housing units will include types that are oriented to different ages and stages of life
		5% of housing units will be designed to be universally accessible
MOBILITY	Give priority to walking and cycling within and beyond the site	The site is characterized by a permeable network of routes for pedestrians and cyclists throughout and adjacent to the site
		Interior public spaces are designed to connect easily with the exterior public realm and mobility network, increasing the pedestrian permeability of the site
		Strategic placement of hard and soft landscape treatment at the north edge is designed to allow for pedestrian connections through the property
		A comprehensive cycling strategy informs the site design, with direct bicycle connections at Halifax Street and Alpha Avenue, dedicated bicycle lanes on Lougheed and Willingdon and “Granville-style” integrated cycling on Brentwood Blvd.
		The site is designed to invite pedestrians into and through the site by creating safe, attractive, and socially-active spaces and places
	Provide direct access to transit	The central plaza is designed to have direct level connection with the Skytrain station
		The redirection of an existing bus transit route into the site is being explored
		On-street transit services are being proposed that embrace the needs of the community and integrate with the urban fabric
	Provide pedestrian-oriented commercial zones	The new High Street, plaza and pedestrian only mews are designed to be a vibrant thoroughfare where pedestrian movements dominate
		Movement of cars at pedestrian levels of the site is tempered by traffic calming measures.
		Local improvements such as sidewalks, street crossings, plazas, squares, public art, interesting paving treatments, tree planting, and colourful shrub planting will create a safe, attractive and stimulating pedestrian environment
		Weather protection at various levels of pedestrian connections will provide heating and four season design necessary shelter to connect to transit, services and community facilities
		Public Realm access for all levels of mobility is being planned

THEMATIC AREA	GOAL	BRENTWOOD SITE DESIGN STRATEGIES
EQUITY & WELL-BEING	Create a vibrant public realm that promotes social interaction	Plazas with active programming and suitable for public celebrations are integrated in key locations as gathering spaces, including the new Town Centre Plaza
		Activities are focused at the street level to ensure a vibrant environment
		The existing indoor children’s play area will be maintained and enhanced to provide a year-round gathering place
		Informal social and meeting spaces (“social corners”) are incorporated throughout the site such as the terraces that create usable outdoor spaces for more intimate public use
		The design of commercial areas adjacent to public spaces focuses on uses that naturally spill into the external environment and streets
		A variety of forms of public art, including rotating exhibits, water features, landscape features, etc. are interspersed throughout the site to create a rich, engaging visual environment
		Four Season design elements are incorporated in order to ensure comfortable year-round use of spaces
		The Town Centre Plaza and other spaces will be designed to promote informal and formal cultural celebrations and festivals
		The Town Centre Plaza provides opportunity for permanent electronic displays that can be programmed for advertising, media events and movie screenings
		Interactive fountains and water features will be incorporated to provide fun public interaction and functional public art
	Create strong linkages with surrounding neighbourhoods	The street network is designed to better manage movements to/from the existing streets
		Dual access lobbies are designed in residential towers adjacent to prime streets to connect residents from existing urban realm to the new heart
		A respectful transition with safe, attractive and secure edges is created from higher density housing types to the existing single-family uses
		Highrises are located to minimize shadowing of abutting single family area north of the site
	Provide access to a broad range of services and amenities	A full range of commercial uses beyond existing fashion-oriented retail are targeted, including grocery, restaurants, leisure, offices and entertainment
		Cultural, civic and educational uses / activities are co-located within or within a walking distance of the site
		Smaller professional office and service uses will be dispersed through the development
		Spaces are incorporated in the commercial and outdoor realms to allow for existing and future community and charity group activities
	Ensure an enhanced sense of safety and security through CPTED (Crime Prevention through Environmental Design) principles	A diversity of uses are incorporated throughout the site to promote vibrancy and well-used spaces
		Natural surveillance is incorporated through orienting buildings to allow for “eyes on the street”
		Streets and pathways are designed to attract a high level of pedestrian activity

7.3 ECONOMIC SUSTAINABILITY

Supporting the growth and/or enhancement of a strong local and creative economy is a crucial component of sustainable neighbourhood design. Local creative economies provide a variety of opportunities to businesses, institutions, organizations and service providers, which in turn provide employment opportunities to residents. Civic and commercial entities provide a diverse mix of job opportunities, while also serving residents of a community with goods, services and amenities.

The type and composition of a local economy is closely linked with physical design, organizational support, size, and concentration. This includes not just the hard infrastructure of buildings, streets, and resource delivery, but also the soft infrastructure of placemaking, local services, and support that pays attention to how people can meet and exchange ideas in informal and formal ways, and that is so important to achieving a Creative City. These factors can have a huge influence on the financial viability, social well-being, and ecological footprint of a community.

Acting as a catalyst for private investment and development, the redevelopment of the Brentwood Site will play a significant role in helping achieve the City of Burnaby's Economic Development Strategy. The innovative nature of the development will help to attract leading-edge businesses to Burnaby, building on the City's existing track record.

At the broadest level, the Brentwood Site will offer employment opportunities, with the aim of accommodating two jobs for every 1000 square feet of gross leasable space. Construction and construction-related jobs will be created, as well as additional jobs to support site maintenance and operations. At the same time, spaces for a critical mass of residential and employment uses are designed into the site to complement the existing and future commercial uses.

The design of the Brentwood Site to support economic sustainability has been considered in terms of two thematic design areas:

- Economic activity (which refers to the specific business and employment generators);
- Local economic development (which is about the ability of a community to initiate and build long-term economic health and capacity, as well as the support mechanisms to enable a creative economy -- such as physical facilities to do business, and an economic development officer who helps businesses find an optimal location)

The specific goals and design strategies for each of these thematic areas are shown opposite.



Walkable Streets & Attractive Location for Business



Innovative Street Furniture - Outdoor "Personal Office"

ECONOMIC SUSTAINABILITY (CON'D)

THEMATIC AREA	GOAL	BRENTWOOD SITE DESIGN STRATEGIES
ECONOMIC ACTIVITY	Increase the number of jobs	The existing internally-oriented mall is transformed into a mixed-use urban town center to create and support new creative economic activity
		Commercial floor space is designed to increase from 50,000 sq.m to 120,000 sq.m, while 92,900 sq. m of office space is incorporated.
		An additional broad range of commercial uses is incorporated to attract an increased number of visitors to the site and to increase the number of hours of activity
		A substantial number of construction and construction-related jobs will be created through the redevelopment
		Additional jobs will be created to support site maintenance and operations as well as ongoing entertainment and other programmed activities
		The increased population for the area will result in additional needs for services and amenities
	Create an attractive location for business	A vibrant urban style street environment with retail and commercial uses fronting onto streets is created
		A seamless integration of commercial and office spaces with public transit options is designed
		A high quality public and pedestrian realm are designed throughout the site / beautification of high-volume streets
		Travel to work is made as easy as possible through a range of transit choices, cycling options, car-share programs, and proximity of housing to professional / retail commercial uses.
		A signature tower on High Street is designed to provide the prominence desirable for AAA office tower / major office uses
		A critical mass of retail offerings is incorporated in order to draw regional consumers
	Achieve a well-balanced mix of complementary commercial activities	Spaces are designed where people want to connect with others, inspiring creative energy
		Spaces are created for a good balance of professional, community, and local health services (child care, doctors, non-school teaching)
		Like tenants will be grouped to increase convenience for users and support business viability
		Retail uses are incorporated that support an innovative cycling scheme
		The new Town Centre will provide additional indoor and outdoor programming areas for non-profit, community and charitable events / activities
LOCAL ECONOMIC DEVELOPMENT	Maximize synergies between businesses and residents	Professional services such as dental and insurance are spread throughout site at ground and 2nd levels as would be typical in an urban setting
		Numerous community groups currently active in the Mall and not-for-profits contribute to social interaction
		The groundscape of residential towers is designated for commercial uses
	Foster the success of smaller-scale commercial activities	Live-work opportunities are incorporated into some residential units
		Flex office spaces are incorporated into professional spaces
		Retail spaces with a range of floor areas are incorporated to support large-format retail as well as smaller local enterprises
		Spaces are provided for informal programmed activities such as farmers' markets, craft fairs, other community-based sales
		Independent & unique local start-up businesses encouraged

7.4 ENVIRONMENTAL SUSTAINABILITY

Environmental sustainability involves reducing the ecological footprint of communities in order to provide the healthy natural environment on which our human social and economic systems rely. Properly functioning ecosystems play an intrinsic role in the health and quality of built and natural environments. Environmental preservation and regeneration ensures the protection of food, clean water, and air, supporting their ability to function together to sustain the health of a community.

Through providing and protecting a layered, blended, and green network, appropriate design at different physical scales can help create an interconnected system of naturalized spaces that protect watersheds, support a diversity of native species, and complement surrounding land uses. Through appropriate site planning and urban design strategies, significant energy savings and air quality improvements can be achieved without any changes to the building skin or technologies. At the same time, through paying careful attention to building and site design strategies, energy conservation in buildings can be achieved through a combination of passive and active measures, as well as through both design and technical solutions.

The Brentwood Site project embodies an environmentally sustainable approach to development by virtue of its focus on urban infill and redevelopment of a previously degraded site. Compact, mixed-use development, combined with frequent and accessible transit not only uses serviced land more efficiently, it also results in significant reductions in greenhouse gas emissions and a much lower carbon footprint than single-use patterns of development. The transformation of a site with almost no natural habitat into one with naturalized green spaces that start to mimic natural hydrological flows is another area in which environmental benefits are achieved through redevelopment. The project reflects many other objectives of the City of Burnaby's Environmental Policy Framework, including those related to resource conservation, waste management, and air quality.

The existing mall currently holds certification under the BOMA BEST program, indicating that it already addresses environmental sustainability criteria. This level of performance will be maintained and enhanced through third party certification under BOMA, LEED or equivalent. All retail / service commercial spaces will achieve a minimum LEED Certified equivalency. All residential buildings will achieve LEED Silver equivalency. All office buildings will achieve LEED Gold equivalency.

The design of the Brentwood Site in terms of environmental sustainability can be discussed through four basic thematic design areas:

- Energy & air quality (which includes transportation and building-associated energy and air emissions);
- Greenspace and food (which covers natural habitat, trees and other planting, and food production);
- Water and wastewater (which includes potable water, stormwater, and liquid waste / sewage); and
- Solid waste (which includes household and commercial waste, hazardous waste, and construction waste).

The specific goals and design strategies for each of these thematic areas are shown opposite.



Flowing Water Features to Support Natural Stormwater Management

ENVIRONMENTAL SUSTAINABILITY (CON'D)

THEMATIC AREA	GOAL	BRENTWOOD SITE DESIGN STRATEGIES
ENERGY & AIR QUALITY	Reduce dependency on single-occupancy vehicles	Innovative approaches to bicycle parking are being considered, including a local bike share scheme and / or bike station (integrated with bicycle repairs, sales, etc.)
		Opportunities for pay parking are being explored along with controls in residential areas
		The site is integrated with highly accessible transit options, including the SkyTrain Millennium line, and 5 local bus routes
		Transit subsidy through either car-share membership (includes a 15% discount) or TransLink's employee discount program (available to companies with 25 staff or more)
		Reduced parking ratios are designed, including 2.4 spaces per 100sqm commercial (including 10% allocation for office use on weekdays) and 1.1 per unit for residential
	Reduce use of fossil fuels	Buildings are to be designed to be energy efficient. All retail / service commercial spaces will achieve a minimum LEED Certified equivalency. All residential buildings will achieve LEED Silver equivalency. All office buildings will achieve LEED Gold equivalency.
		Lougheed and Willingdon are upgraded to be more urban pedestrian streetscapes with separated bike lanes
		Tenant Design Criteria are currently, and will continue to be, provided to communicate energy efficient approaches to store fixtures and equipment
	Increase use of renewable fuel sources	The feasibility of a district energy system is being explored for the site
		Buildings are designed and engineered to support future adaptation to renewable sources as they become feasible
GREENSPACE & FOOD	Create multi-functional greenspaces with ecological value	Green fencing options (including those that are fruit and vegetable-bearing) are being explored
		A landscaped / naturalized greenspace zone creates a transition from the north edge of the site to the adjacent single-family neighbourhoods
		A diverse palette of landscaped features is incorporated along the transition from Lougheed to the upper plaza
		Indigenous and hardy plant materials are specified for exterior landscaping
	Promote community-based food production	Access to locally-grown produce is provided through space for farmers' markets
		Opportunities to incorporate areas for community gardens are being considered
WATER & WASTEWATER	Reduce off-site impacts of stormwater	Water features that flow from higher levels of site to the Town Centre Plaza are designed to support natural stormwater management
		Rain gardens are designed at various locations around the site to capture and naturally treat stormwater
	Reduce the consumption of drinking-quality water	Building infrastructure is designed to reduce potable water consumption
SOLID WASTE	Reduce the amount of solid waste sent to landfill	Wide range of dedicated on-site locations for collection of recycling are provided in different locations around the site
		Construction waste best management practices will be incorporated through all demolition and construction activities
		Tenant Design Criteria are currently, and will continue to be, provided to communicate environmental approaches to materials selection and solid waste management, including hazardous waste management



7.5 LEED-ND

The Leadership in Energy and Environmental Design (LEED-ND Neighbourhood Development) rating system is an objective third-party certification program that offers an internationally accepted benchmark for assessing the performance of green buildings and neighbourhoods. It includes social, economic and environmental criteria, and therefore provides a succinct assessment of the sustainability of the Brentwood Site.

As the previous discussion shows, there are many sustainable design strategies incorporated into the Brentwood Site. Some of these are linked to the location of the project, some are related to the importance of the site as a Town Centre (municipally and regionally), and some are a product of strong design principles.

The net result is that the preliminary assessment of the Brentwood Site is that it will achieve a LEED-ND Gold rating (between 60-79 points out of a possible 106). The following Scoresheet identifies the credits that will be pursued, acknowledging that there are inevitable changes that occur as a project moves from conceptual design to detailed design strategies.

Credit	Title	Max. Potential Points	Anticipated Points
LEED P1	Smart Location		
LEED P2	Intervilled Spaces and Ecological Communities Conservation		
LEED P3	Wetland and Water Body Conservation		
LEED P4	Agricultural Land Conservation		
LEED P5	Floodplain Avoidance		
LEED C1	Preferred Locations	10	8
LEED C2	Brownfields Redevelopment	2	2
LEED C3	Locations with Reduced Automobile Dependence	7	7
LEED C4	Bicycle Network and Storage	1	1
LEED C5	Housing and Jobs Proximity	3	3
LEED C6	Group-Stop Protection	1	1
LEED C7	Site Design for Habitat/Wetland/Water Body Conservation	1	1
LEED C8	Restoration of Habitat/Wetland/Water Body Conservation	1	
LEED C9	Long-term Conservation Management of Habitat/Wetland/Water Body	1	
LEED P6	Walkable Streets		
LEED P7	Compact Development		
LEED P8	Connected and Open Community		
LEED C10	Walkable Streets	13	8
LEED C20	Compact Development	8	8
LEED C30	Mixed-Use Neighbourhood Centres	4	4
LEED C40	Mixed Income Diverse Communities	7	7
LEED C50	Reduced Parking Footprint	1	1
LEED C60	Street Network	3	1
LEED C70	Transit Facilities	1	1
LEED C80	Transportation Demand Management	2	1
LEED C90	Access to Civil and Public Space	1	1
LEED C100	Access to Recreation Facilities	1	1
LEED C110	Vitality and Universal Design	1	1
LEED C120	Community Outreach and Involvement	1	1
LEED C130	Local Food Production	1	1
LEED C140	Tree-lined and Shaded Streets	2	2
LEED C150	Neighbourhood Schools	1	1
LEED P9	Certified Green Building		
LEED P10	Minimum Building Energy Efficiency		
LEED P11	Minimum Building Water Efficiency		
LEED P12	Construction Activity Pollution Prevention		
LEED C160	Certified Green Buildings	5	3
LEED C170	Building Energy Efficiency	2	2
LEED C180	Building Water Efficiency	1	1
LEED C190	Water Efficient Landscaping	1	1
LEED C200	Existing Building Reuse	1	1
LEED C210	Historic Resource Preservation and Adaptive Use	1	
LEED C220	Minimized Site Disturbance in Design & Construction	1	1
LEED C230	Stormwater Management	4	2
LEED C240	Heat Island Reduction	1	1
LEED C250	Solar Orientation	1	
LEED C260	On-Site Renewable Energy Sources	3	1
LEED C270	Domest Heating & Cooling	2	
LEED C280	Infrastructure Energy Efficiency	1	1
LEED C290	Stormwater Management	2	
LEED C300	Recycled Content in Infrastructure	1	0
LEED C310	Solid Waste Management Infrastructure	1	0
LEED C320	Light Pollution Reduction	1	
LEED C330			
LEED C340	Innovation & Exemplary Performance	1	2
LEED C350	LEED AP	1	0
		106	74
RP C1	Regional Priority		4
	Certified	40-49	
	Silver	50-59	
	Gold	60-79	
	Platinum	80+	

8.0 SIGNAGE

- 8.1 Introduction
- 8.2 Entertainment Precinct
- 8.3 Street Frontages Precinct
- 8.4 Central Shopping Precinct
- 8.5 Northern Transition Precinct
- 8.6 Sign Type Definitions and Wayfinding



1. PURPOSE OF SIGNAGE SECTION

The purpose of this Signage section is to establish general guidelines for the Brentwood Site that will inform future detailed rezoning applications for specific phases of development. The Signage has been developed in close collaboration with the City of Burnaby and is intended to clarify the character and quality of signage that is proposed for each of the four precincts of the Conceptual Master Plan.

2. SIGNAGE VISION

To encourage a new creative and innovative approach to sign design which supports the spirit of the City’s vision for the Brentwood Site, and the unique nature of the project as a dynamic, creative and vibrant Town Centre core.

To enhance the value of the visitor experience and the community’s visual environment by encouraging signs that contribute to improving the overall visual image and interest of the proposed redevelopment, while communicating their intended message in a clear fashion.

To ensure aesthetics of the signage are an integral component of the urban design and architecture and are complimentary in materials, composition and scale.

To promote best practices in accessibility with a well thought out site-wide wayfinding program that helps visitors move through spaces in a clear, interesting, and logical manner. The program will be a combination of traditional signage complimented by wayfinding design elements such as media, lighting, parking management systems and other intuitive indicators. Wayfinding will have an overall unifying language, theme, or character that will identify the Brentwood Site as the Brentwood Town Centre.

To clearly identify areas of the Brentwood Site as Precincts within the Town Centre through variation in signage types and design. The intended distinction is to provide variety and interest—mystery and intrigue—for visitors experiencing the Town Centre. Careful consideration will be given to the Northern Transition Zone to ensure a respectful integration with the existing neighbourhood.

To provide businesses an opportunity to distinctly identify their brand message and tastefully promote their unique business offering in a way that strengthens the Town Centre as a place for community gathering and commerce.

3. SIGNAGE DEFINITIONS & GUIDING PRINCIPLES

The City of Burnaby has challenged the design team for the Brentwood Site to reflect the “Creative City” initiative in all aspects of the development. The signage should be a reflection of this challenge, encouraging future tenants and business owners to contribute to the creativity and innovation of place and counteract the challenge of “Vanilla Urban Character” described in the EDS 2020.

The following definitions describe some of the sign categories reflected in the precincts.

4. SIGN CATEGORIES

IDENTIFICATION: Site destination identification and individual tenant identification signs

DIRECTIONAL: Site directional signs and directories, including maps and touch screen kiosks.

INFORMATIONAL: Site visitor information, educational and interpretive panels

REGULATORY: Site regulatory information, instructions and safety warnings

5. SIGNAGE PRECINCTS

The Brentwood Site consists of four distinct precincts:

- 1. Entertainment Precinct
- 2. Street Frontages Precinct
- 3. Central Shopping Precinct
- 4. Northern Transition Precinct

All signage within these precincts will be categorized into; Town Centre (site identification and wayfinding), Commercial (office and retail tenant identification) and Residential (bldg. identification and wayfinding) and should make a positive contribution to the general character and appearance of the particular precinct in which they are located.

PRECINCTS:

The following pages outline examples of the signage vision for the four precincts, illustrating the various types of signs envisioned for each area.



Entertainment Precinct

The Entertainment Precinct for the Brentwood Site is proposed to be the new Public “Heart” for the Town Centre. The Entertainment Precinct will be the vibrant, exciting, dynamic public gathering place for the entire Brentwood area. Focused around a central Plaza, the Entertainment Precinct is linked to the SkyTrain and new Brentwood Blvd. “High Street” by pedestrian streets. Retail uses identified for this area include, but are not limited to, restaurants, pubs, bars, cafes, and public houses with patios spilling into the public realm. Fashion retailers with branding focused on animation of the public space.

Key signage design integration considerations will be:

1. High Intensity Urban Experience should be reflected in larger than life signage, digital screens, lighting, and programming;
2. Multimedia Graphic Displays and Signage will require flexibility for programming of events, special promotions, and information;
3. Retail framing the pedestrian streets and plaza will require unique solutions that allow for multilevel layering of storefronts, key messaging, signage, and branding;
4. Uses in this area will be programmed to animate the public realm day and night;
5. Pedestrian links to Brentwood Blvd. and public transit provide placemaking opportunities to create pockets of interesting experiences that lead visitors through the Town Centre. These opportunities should be enhanced through wayfinding and the expression and variation of the signage.

Building architecture and landscape design together with signage, environmental & entertainment graphics will provide a lively, modern, fresh atmosphere for both residents and visitors to the Town Centre.

Signage components anticipated for the Entertainment Precinct include the following
Sign Types:

- Freestanding site entry ID, building entrance ID, site directional and directories
- Building/wall mounted fascia signs, including building ID; entrance number ID; tenant ID
- Projected vertical double-sided illuminated blade signs for site and tenants
- Seasonal or shorter term environmental graphic banners and flags
- Horizontal blade signs for both site and tenants suspended from canopy
- Sky signs with a distinctive name or logo associated with the site name or primary tenant.
- This type of signage requires a subsequent rezoning application
- Digital LCD/LED display boards with event listings, advertising, sponsorship and news feed
- Large format electronic media: public information, advertising and public art displays
- Wireless wayfinding linked to visitors GPS enabled mobile devices, including smartphones





Large backlit graphics & signage



Large format digital HD LED screens



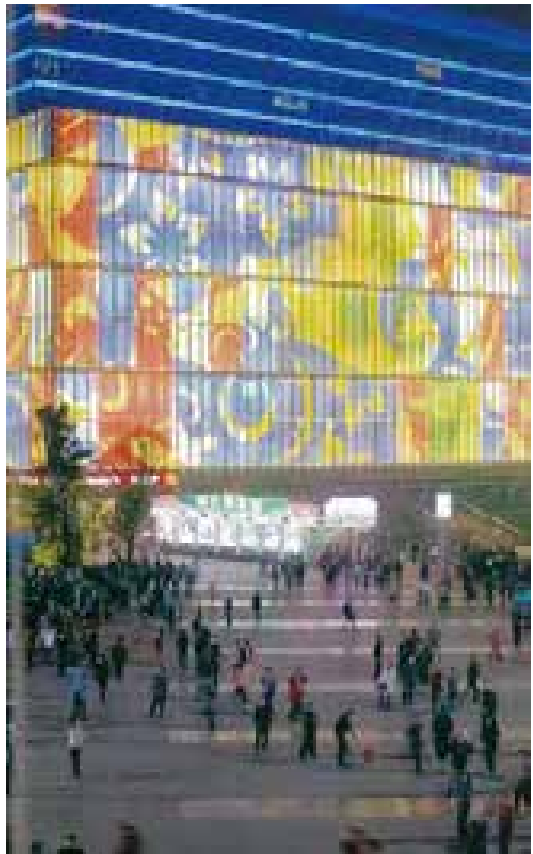
Public Wayfinding to transit



Enhanced public wayfinding to site



Colour RGB LED Lighting Program



Digital HD LED screens with animation

STREET FRONTAGES PRECINCT

Willingdon Avenue and Loughheed Highway Street Frontage

Loughheed and Willingdon are the two major traffic routes fronting the Brentwood Site, and the greatest opportunity to create an entirely new presence for the Brentwood Town Centre core with the least impact on surrounding residential neighbours. These Street Frontages are proposed as highly urban, animated edges that reflect the excitement and intensity of the new Town Centre. The urban environment starts at the street level with improved multi-use path, cycle lane, two rows of street trees, landscape furniture, and street lights. Building frontages, entrances, large format media screens, advertising and parking management displays are intended to complete the public realm animation creating a distinct character and presence for the new core of the Town Centre.

Key signage design integration considerations for Loughheed Highway and Willingdon Avenue will be:

1. The urbanity of the streets will transition from the highest intensity at the corner of Loughheed and Willingdon to a slightly more subdued expression at the North West corner of the property, and at the intersection of Loughheed Highway and Beta Avenue
2. Tenants will be encouraged along these edges to embrace the urban Town Centre philosophy and contribute to its vibrancy with “larger than life” displays, lighting, branding, and bold architectural expression—with signage that reflects this higher order of urbanity
3. Street edges will be animated in coordination with the public realm—both day and night—through landscape lighting, wayfinding, illuminated large format digital displays, programmed light displays, and distinctive signage lighting;
4. Significant vehicle entries will be designed as signature entries to the Town Centre. Alpha Avenue and Halifax Street are considered primary entrances and will contain prominent signage and illuminated displays. Secondary vehicle entries at Brentwood Blvd. and Beta Avenue, the eastern entry to parking from Loughheed Highway, and the two North East entries on Willingdon will be refined versions of the primary entries, and will contain significant retail signage presence.

Beta Avenue Street Frontage

Key signage design integration considerations for Beta Avenue will be:

1. Beta Avenue itself will contain a commercial expression that reflects the Town Centre, but with a respectful acknowledgement of the single and multifamily residents to the East. The Beta Avenue edge meets, and overlaps, the Northern Transition Zone further described in this document.

2. The new road proposed as an extension of Ridgelawn Drive will have a residential character with consideration of the Northern Transition Zone at its North Edge. Commercial Wayfinding and Signage on the Ridgelawn Drive extension, and at the entries from the public street edges, will be respectful of this residential character transition.

Signage components anticipated for the Street Frontages Precinct include the following **Sign Types**:

- Freestanding site entry, building entrance and site directional signs and directories
- Permanent dimensional sidewalk tenant signs
- Building/wall mounted fascia signs, including building ID; entrance number ID; tenant ID
- Drive-by retail storefront signage, vertical projected signs and street banners
- Dynamic retail signage and lighting that contributes to an exciting social space
- Seasonal or shorter term environmental graphic banners and flags
- Digital LCD/LED display boards with event listings, advertising, sponsorship and news feed
- Large format electronic media: public information, advertising and public art displays
- Note: Large digital commercial signage displays will not be permitted along the public Street Frontages
- Freestanding signage with programmable LED lighting as site markers
- Seasonal signage/lighting to create year round interest





Entrance signs signal on site entertainment



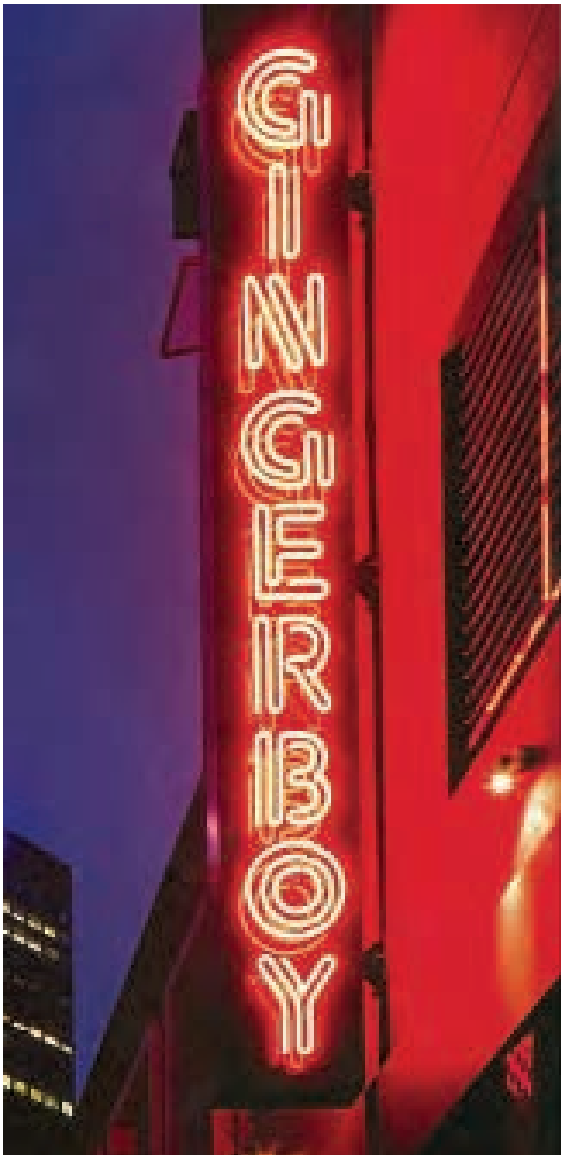
Dynamic retail signage contributes to an exciting streetscape



Drive-by retail storefront signage



Seasonal signage and illumination creates year round interest



Illuminated large scale projected tenant signs



Street edge banners



Signs as street sculpture

CENTRAL SHOPPING PRECINCT

Brentwood Boulevard is proposed as the signature “High Street” for the Brentwood Site. The new Brentwood Blvd. will be defined by the quality of its unique public realm, and differentiation from other streets in Brentwood and the City of Burnaby. The Public Realm will seamlessly integrate the visual elements of the 2nd and 3rd levels of commercial and residential uses with the ground plane—creating an interesting and distinct pedestrian, vehicle, and cyclist experience tying the Brentwood Site together and linking the Site to the surrounding community.

A primary focus area of this new High Street will be Fashion Retail with an emphasis between Alpha Avenue and Halifax Street. The ends of the High Street are contemplated for large format anchor tenants to draw shoppers from one end to the other—creating a complete shopping experience.

As the internal mall transitions over time, and other shopping streets are developed, a seamless integration of the public realm and residential and commercial expression will be coordinated with landscape, architecture and signage.

Key signage design integration considerations for Central Shopping Precinct will be:

1. Allow for key brand expression and creativity to integrate with storefront architecture in a layered and interesting multilevel format—storefronts and signage will be encouraged to vary in height, depth, and interaction with the ground plane
2. Creating interest and variation along the shopping streets will be critical to encourage the walkability of the central streets, and repeated visits to the Town Centre
3. Landscape and architecture will be developed to help lead visitors through the Brentwood Site. The design will consider the creation and integration of intriguing and unexpected places to pause. For instance pocket parks that contain unique landscape, street furniture or seating opportunities for cafes and restaurants. Signage will be encouraged to reflect the character of these unique places, and add to the intrigue of the space
4. Promote integration of all retail formats, ranging from small Commercial Retail Units (CRUs) to large format regional tenants in a thoughtful and cohesive manner that adds to the vibrancy and excitement of the Town Centre without dominating the Public Realm experience
5. Weather protection consideration and signage integration opportunities with four season design
6. The potential for a community food store at the East end of the street creates an opportunity for the unique signage character associated with boutique food and beverage uses—a community oriented retail mix

7. Larger format regional retailers at the North West corner create another opportunity for variation in signage character, placement, and experience; Opportunities for permanent and temporary large format digital displays and signage that is coordinated with the landscape furnishings, pedestrian and cyclist movements
8. Street flexibility on the ground plane is maintained for programming opportunities such as parades, festivals, street markets, etc.

Signage components anticipated for the Central Shopping District include the following **Sign Types**:

- Freestanding commercial building entrances, site directional signs and directories
- Building/wall mounted fascia signs, including building entrance number; retail tenant signs
- Creative retail tenant signage encouraged, including: vertical projected signs, canopy signs, street banners
- Permanent dimensional sidewalk tenant signs
- Changeable short term environmental graphic banners and flags
- Digital LCD/LED display boards with event listings, advertising, sponsorship and news feed
- Seasonal signage/lighting to create year round interest
- Dynamic 2/3 storey storefronts, signage, video, interactive screens and marketing Graphics





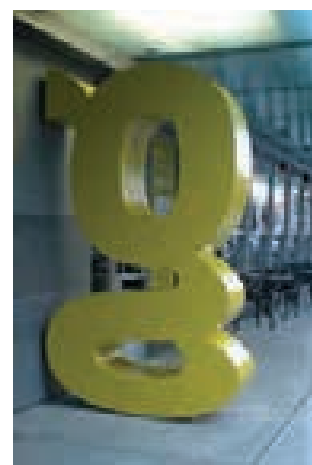
Two storey retail signage and window displays



Larger scale building fascia with illuminated tenant signs



A variety of retail tenant canopy and projecting signs is encouraged



Permanent dimensional sidewalk tenant signs



Creative retail tenant signage: large scale, individual letters & blade style on single retail tenant

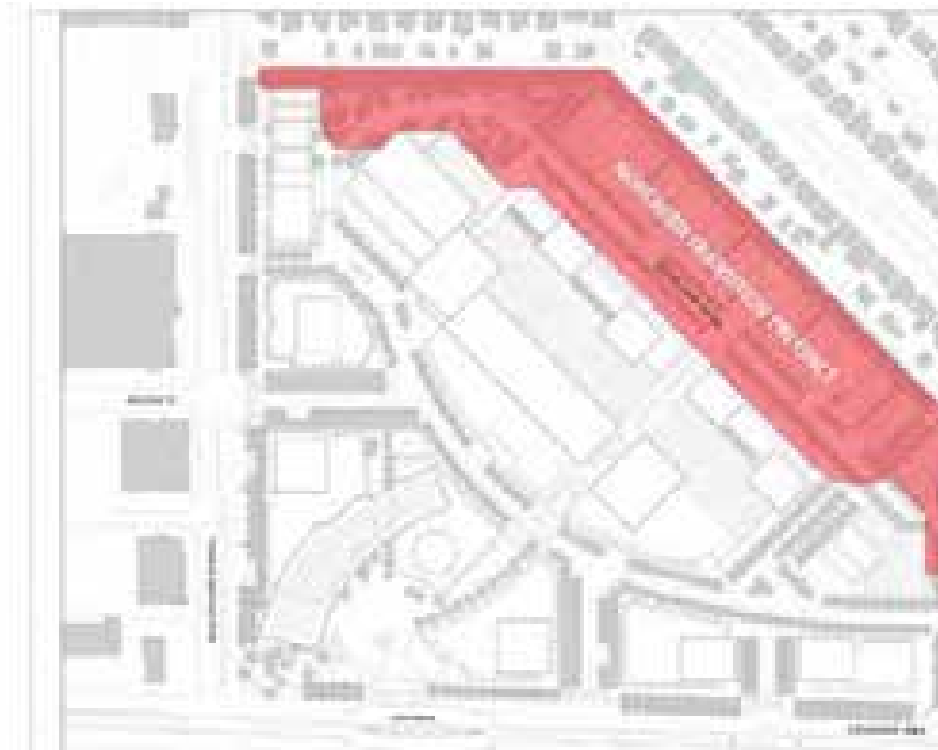
NORTHERN TRANSITION PRECINCT

RESIDENTIAL

The Northern Transition Precinct at Brentwood will be the area dedicated for low rise residential development. High quality and more discreet signage and lighting will denote the residential component of this precinct.

Signage components anticipated for the Northern Transition Precinct include the following
Sign Types:

- Freestanding /distinctive Identification sign for each residential building
- Wayfinding and street signs to be customized to the residential neighbourhood
- Wall mounted Identification sign or window graphic at lobby to each residential building





Freestanding/ dimensional building ID sign for each residential building



Residential address on glass



Wall mounted residential address and ID signs



Wayfinding & street signs to be customized to the residential neighbourhood



SIGN TYPES-DEFINITIONS

Several distinct types of signage will be required at Brentwood, including:

FREESTANDING: Individual low horizontal site monuments and vertical pylons; site entry ID; building and residential entrance ID; site directional and directories, including map kiosks. Also includes various and permanent dimensional sidewalk tenant signs.

FASCIA: Building/wall mounted signs, including building ID; entrance number ID; tenant ID, sometimes extending above the immediate fascia, viewed in outline.

PROJECTED: A range of generally vertical double-sided blade signs for both site and tenants. Usually illuminated, sometimes dimensional, shaped and rotating or otherwise animated. Also includes projecting marquee style signs illuminated with decorative and animated lighting.

BANNERS and FLAGS: Seasonal or shorter term environmental graphics employing visual imagery primarily with a limited area of text message, adding colour and animation to the visitor experience of the development.

SUSPENDED: Generally horizontal double-sided blade signs for both site and tenants suspended from building canopy. Usually illuminated, sometimes dimensional and shaped.

ROOFTOP: The entertainment component at Brentwood will demand the reinvention of roof top signs mounted on supporting frameworks that bring animation and character to the public spaces below.

SKY SIGNS: Large fascia signs with a distinctive name or logo associated with the site name or primary tenant. Generally mounted on a spandrel or non-occupied mechanical services level near the top of building.

DIGITAL SIGNS: A range of LCD monitors and large scale digital displays with content ranging from: event listings, advertising, sponsorship and televised news feed.

ELECTRONIC MEDIA: Large format public information, advertising and public art displays utilizing a rapidly evolving range of new media technologies from wall mounted HD LED screens to programmable RGB LED projection systems.

WIRELESS WAYFINDING: Brentwood will need to employ new forms of public wayfinding and information to accommodate the increasing use of GPS enabled mobile devices, including smartphones as visitors demand new integrated technologies to better find destinations.

SIGN ILLUMINATION: A variety of signage lighting types will be encouraged, including: low energy LED - push through, halo and edge lighting, neon/ simulated neon, fluorescent and CFL back lighting, marquee multiple- source and animated lighting and programmable RGB LED.

SITE WAYFINDING

Site Wayfinding will be a unifying thread that links the Town Centre together. The wayfinding strategy should consider the multiple modes of travel, site arrival and access, including parking.

9.0 FORM OF DEVELOPMENT

- 9.1 Built Form Concept
- 9.2 Site Plan
- 9.3 Built Form
- 9.4 Tower Locations and Heights
- 9.5 3D Diagram
- 9.6 Plan Summary
- 9.7 Level Diagrams
- 9.8 Sections and Elevations
- 9.9 Future Skyline
- 9.10 Shadow Study
- 9.11 Architectural Palette







LOUGHEED HIGHWAY

SKYTRAIN

MULTI FAMILY RESIDENTIAL

BRENTWOOD DRIVE

RIDGELAWN DRIVE

BRENTLAWN DRIVE

HIGHLAWN DRIVE

DELTA AVENUE

SINGLE FAMILY RESIDENTIAL

SINGLE FAMILY RESIDENTIAL

BRENTWOOD PARK



BETA AVENUE

ALPHA AVENUE

BRENTWOOD TOWN
CENTRE STATION

WILLINGDON AVENUE

LOUGHEED HIGHWAY

BUCHANAN STREET

HALIFAX STREET

WILLINGDON AVENUE

LANE

BETA AVENUE

BRENTLAWN DRIVE

LANE

FAIRLAWN DRIVE



- 1 TOWN CENTRE PLAZA
- 2 SKYTRAIN STATION
- 3 NORTH ENTRY
- 4 NORTH WEST ENTRY
- 5 HALIFAX ST. ENTRY
- 6 ALPHA AVE. ENTRY
- 7 LOUGHEED EAST ENTRY
- 8 BETA ST. ENTRY @ BRENTWOOD DR.
- 9 BETA ST. ENTRY @ RIDGELAWN DR.
- 10 RIDGELAWN DRIVE
- 11 BRENTWOOD BOULEVARD
- 12 WEST ARRIVAL COURT
- 13 EAST ARRIVAL COURT
- 14 NORTHERN TRANSITION ZONE
- 15 COMMERCIAL
- R RESIDENTIAL TOWER
- C COMMERCIAL TOWER
- T POSSIBLE RESIDENTIAL TOWER
- A AMENITY



FAIRLAWN DRIVE

BRENTLAWN DRIVE

WILLINGDON AVENUE

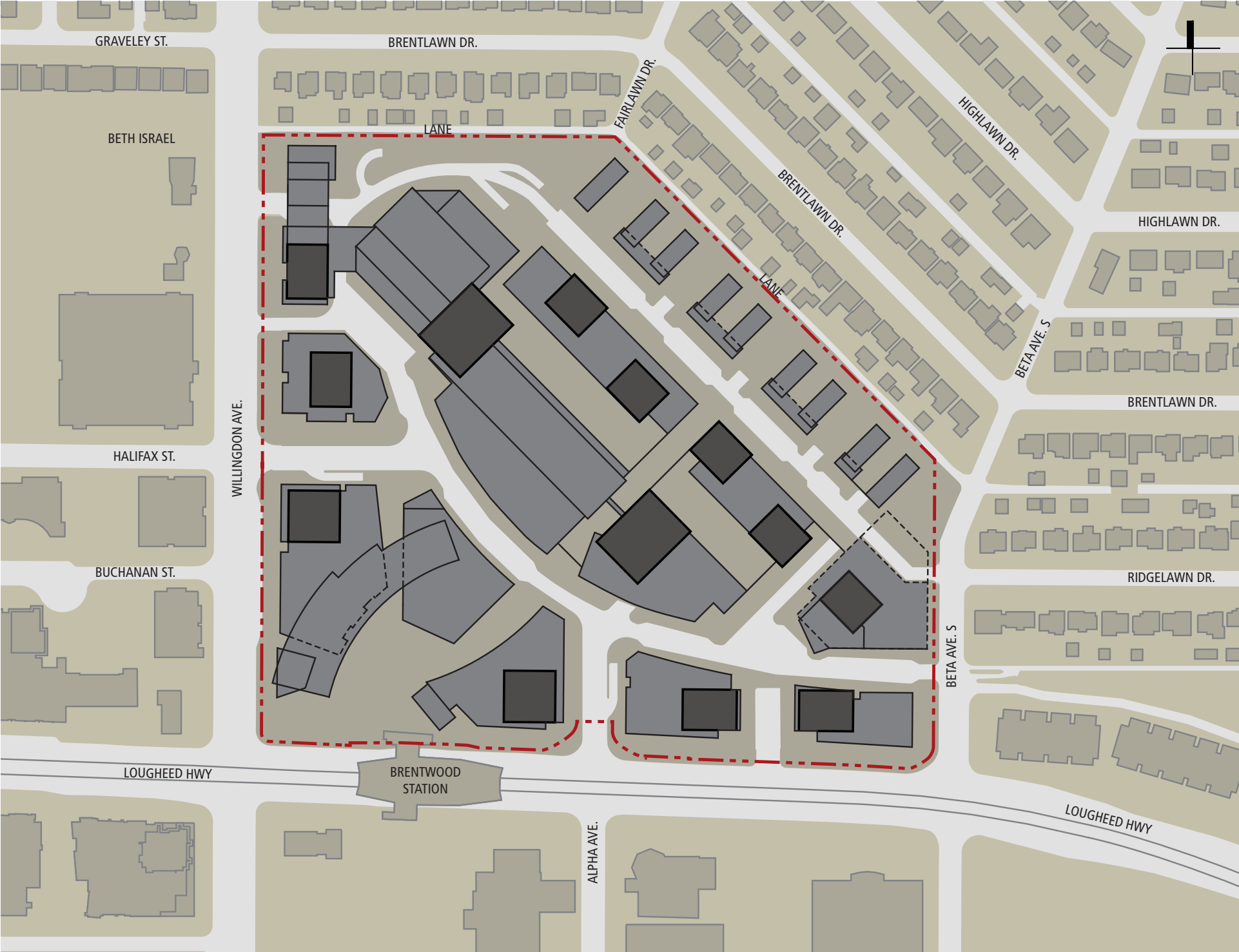
RIDGELAWN DRIVE

BRENTWOOD DRIVE

BETA AVENUE

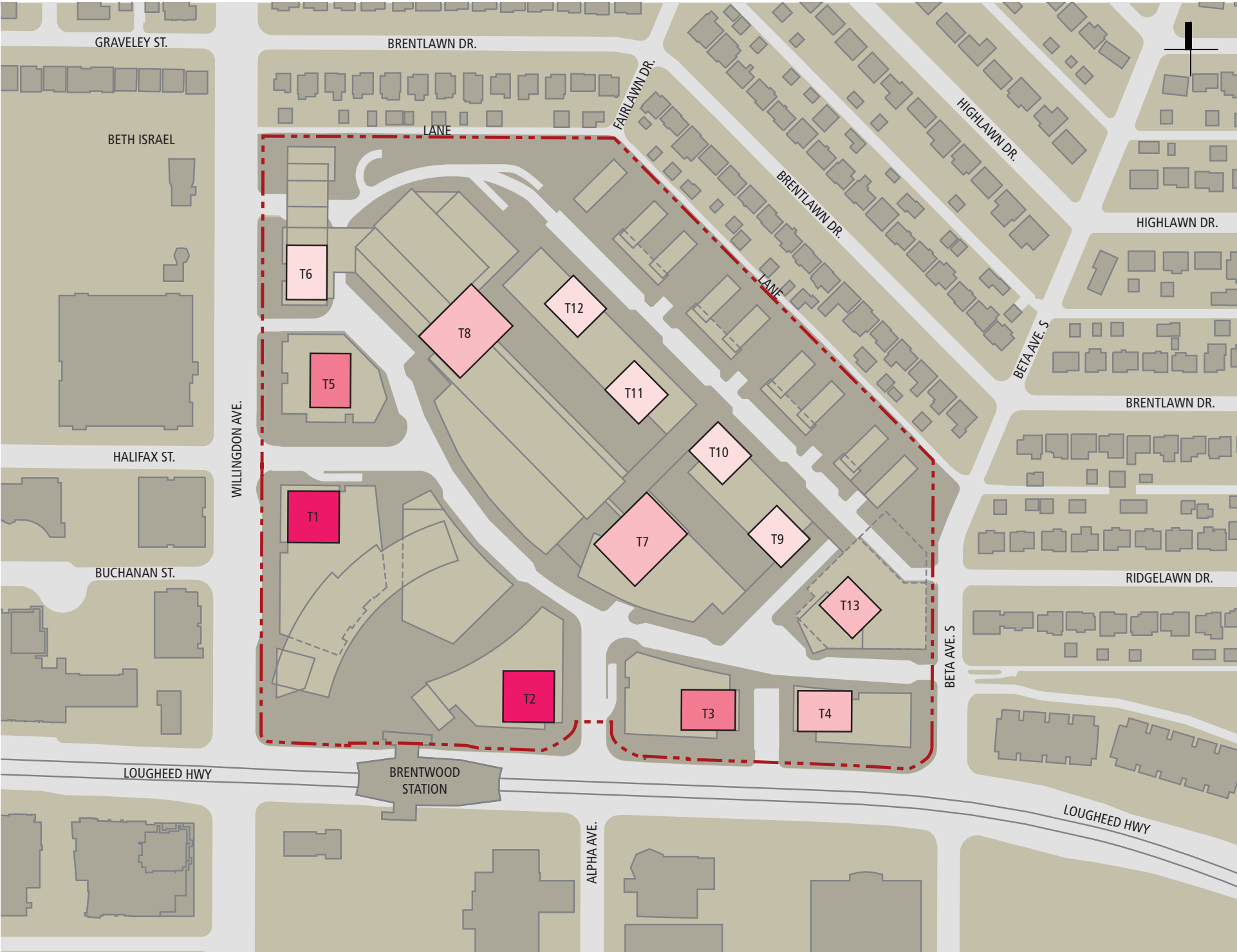
ALPHA AVENUE

LOUGHEED HIGHWAY



BUILT FORM

- Lower built form to define the Lougheed Highway and Willingdon Avenue 'Great Streets'
- High-rise residential towers along Lougheed Highway and Willingdon Avenue
- High-rise office towers in centre of site associated with the core retail area
- Mid-rise towers along the north edge of the core retail area, south of the new Ridgelawn Drive
- Possible additional mid-rise tower opportunity indicated above eastern Brentwood Boulevard retail anchor
- Low-rise residential in the northern transition zone
- All internal streets and pedestrian paths defined by double height, 2 and 3- storey built form



TOWER LOCATIONS AND HEIGHTS

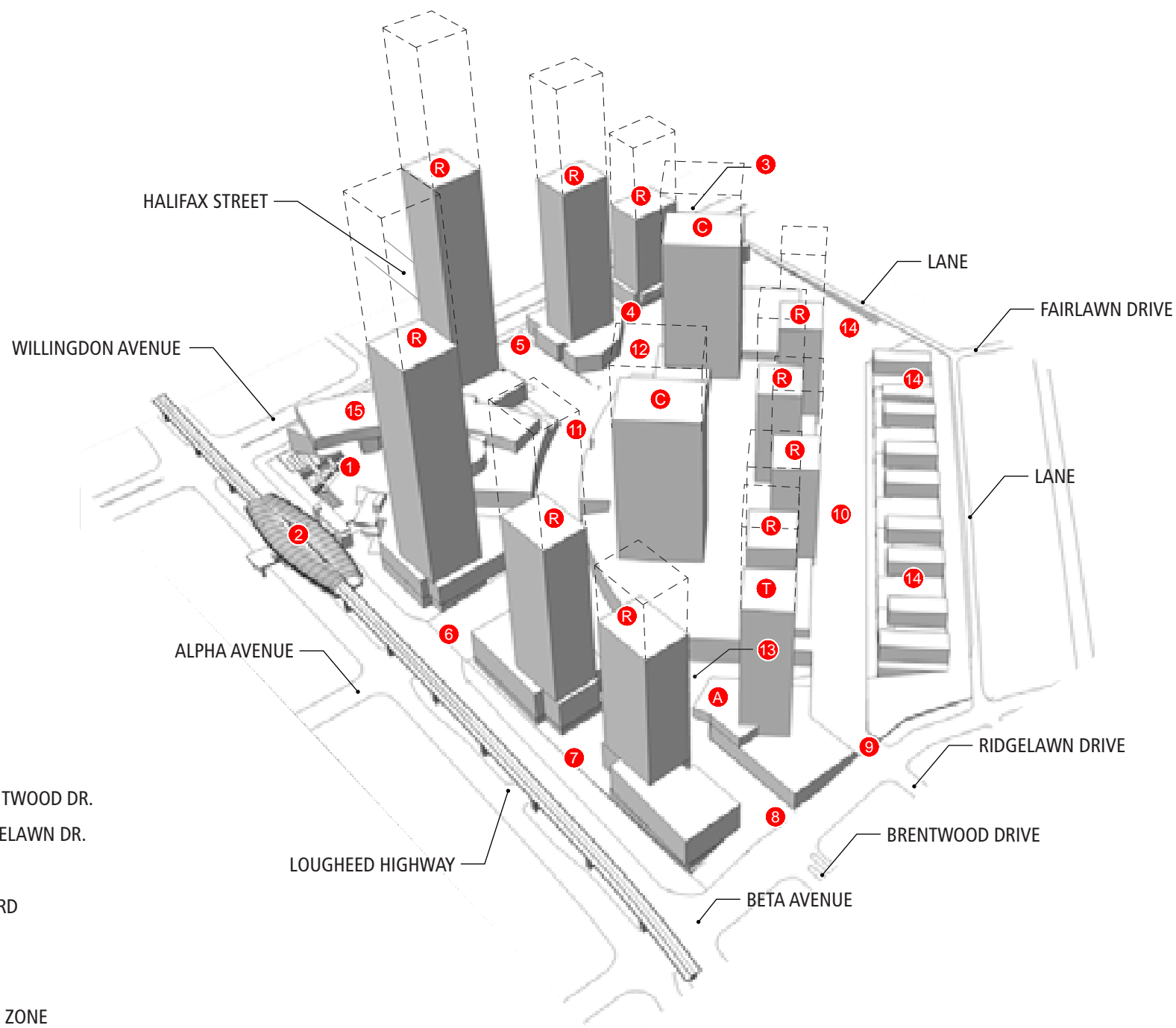
Tower height location principles:

- Highest towers focusing on the Lougheed Hwy. & Willingdon Ave. corner
- Towers step down in height along Lougheed Highway from west to east
- Towers step down in height along Willingdon Avenue from south to north
- Medium height towers in centre of the site
- Lower towers transition from the site centre to the north
- Towers are separated by (approx.) 100 ft. (30.48 m)

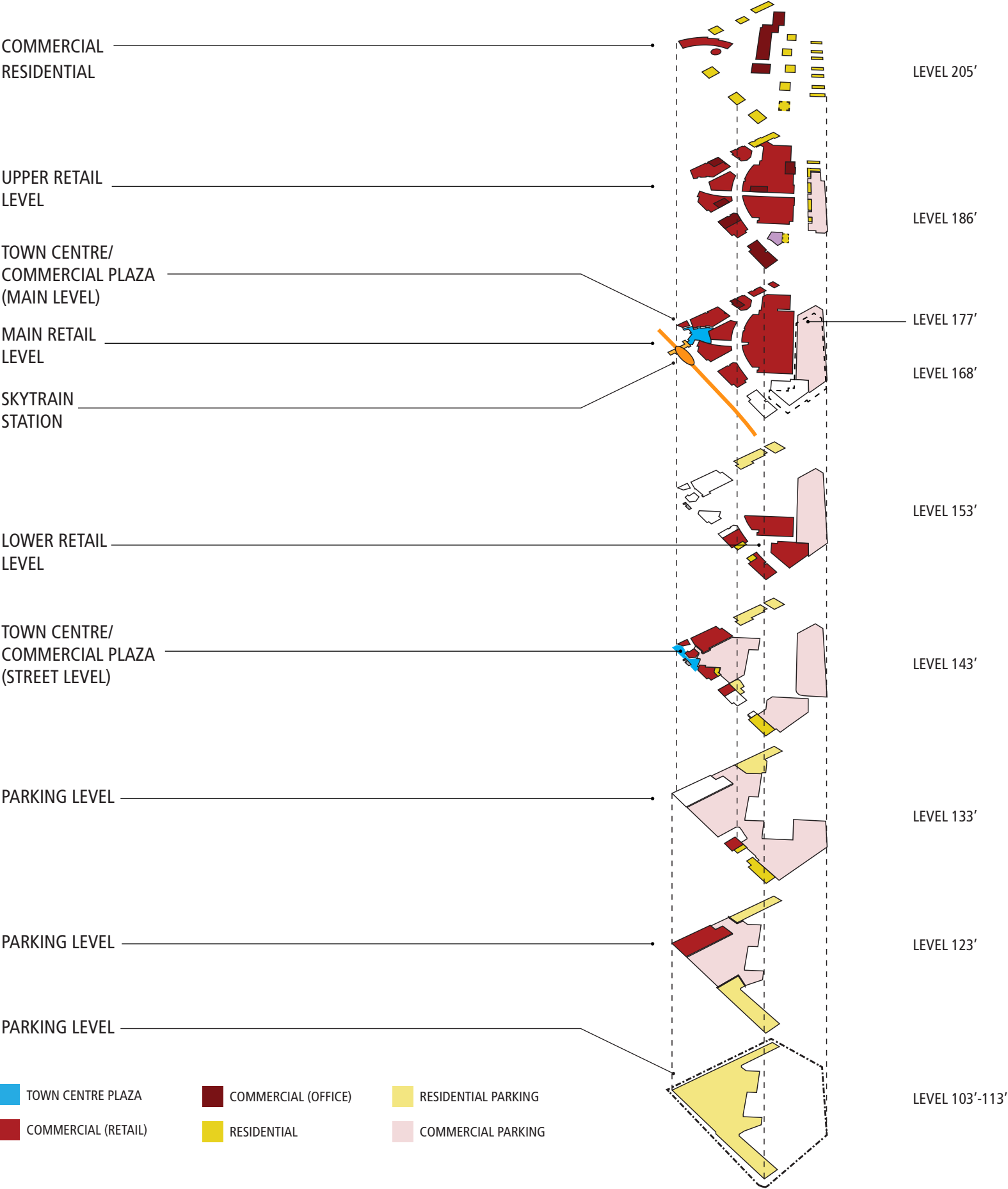
Proposed tower heights are as follows:

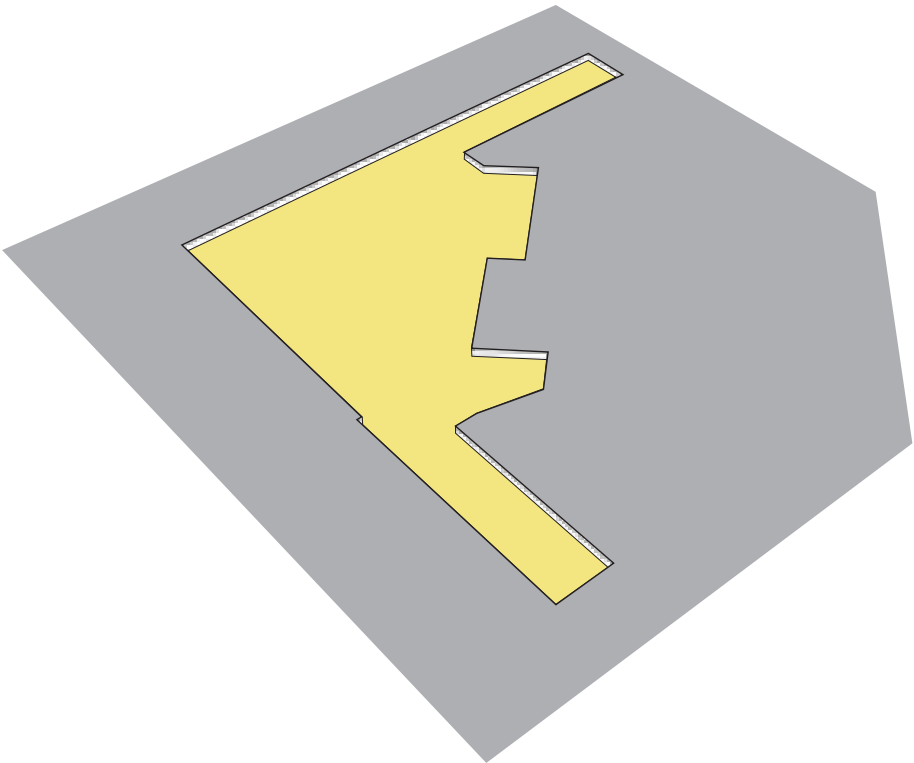
- T1 and T2: 45 to 70 storeys
- T3: 35 to 55 storeys
- T4: 30 to 40 storeys
- T5: 35 to 55 storeys
- T6: 20 to 35 storeys
- T7 and T8: 30 to 40 storeys
- T9, T10, T11, T12: 20 to 35 storeys
- T13: 25 to 40 storeys





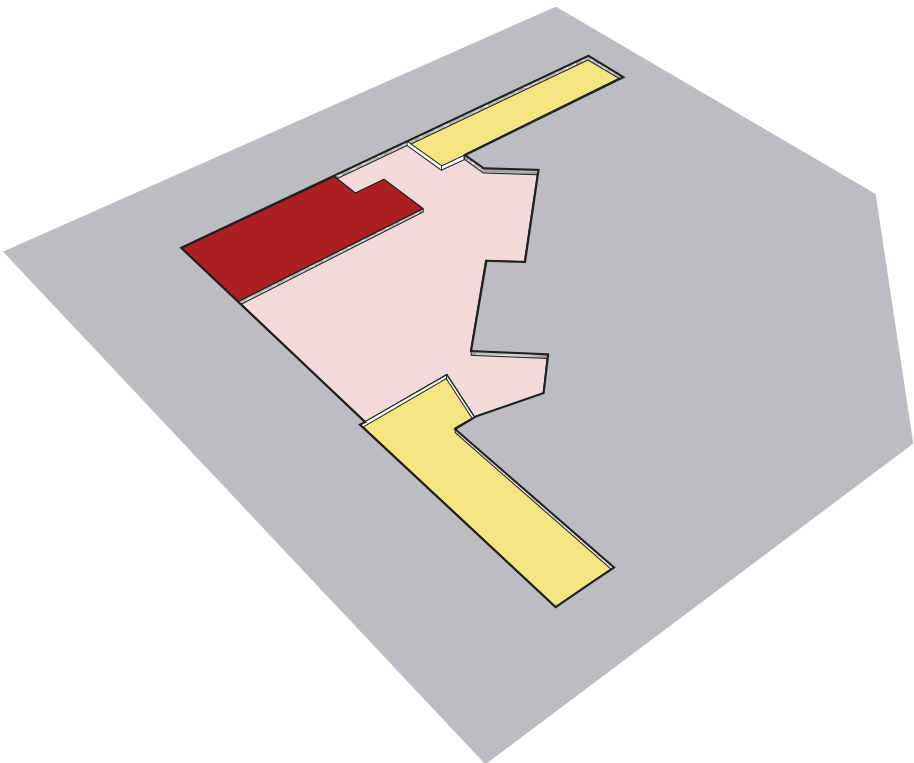
- 1 TOWN CENTRE PLAZA
- 2 SKYTRAIN STATION
- 3 NORTH ENTRY
- 4 NORTH WEST ENTRY
- 5 HALIFAX ST. ENTRY
- 6 ALPHA AVE. ENTRY
- 7 LOUGHEED EAST ENTRY
- 8 BETA ST. ENTRY @ BRENTWOOD DR.
- 9 BETA ST. ENTRY @ RIDGELAWN DR.
- 10 RIDGELAWN DRIVE
- 11 BRENTWOOD BOULEVARD
- 12 WEST ARRIVAL COURT
- 13 EAST ARRIVAL COURT
- 14 NORTHERN TRANSITION ZONE
- 15 COMMERCIAL
- R RESIDENTIAL TOWER
- C COMMERCIAL TOWER
- T POSSIBLE RESIDENTIAL TOWER
- A AMENITY
- POTENTIAL MAXIMUM HEIGHT





LEVEL 103' + 113'

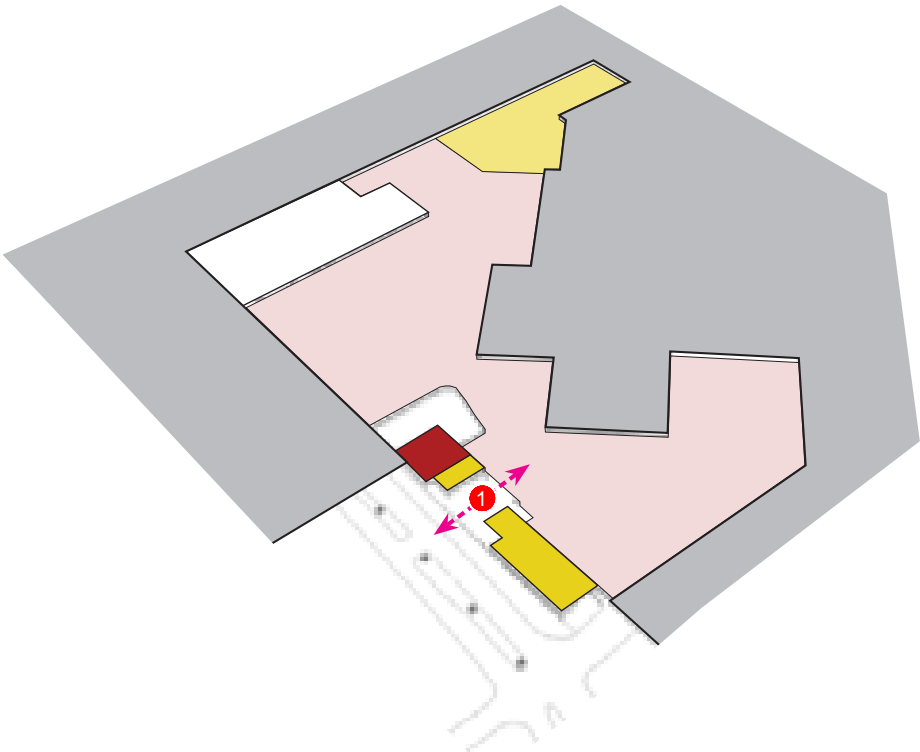
- Residential parking
- RESIDENTIAL PARKING



LEVEL 123'

- Residential parking along northern Willingdon Avenue
- Residential parking along eastern Lougheed Highway
- Commercial parking at Lougheed Highway and Willingdon Avenue near corner
- Lower retail (below grade) along southern Willingdon Avenue

- COMMERCIAL PARKING
- COMMERCIAL (RETAIL)
- RESIDENTIAL PARKING



LEVEL 133'

- Loughheed East Entry to underground parking and loading at Level 133
- Commercial parking in southwest corner, along Beta, extended into northern zone
- Residential parking along northern Willingdon Avenue
- Retail on Loughheed, adjacent Alpha entry
- Residential podium at Loughheed/Beta corner

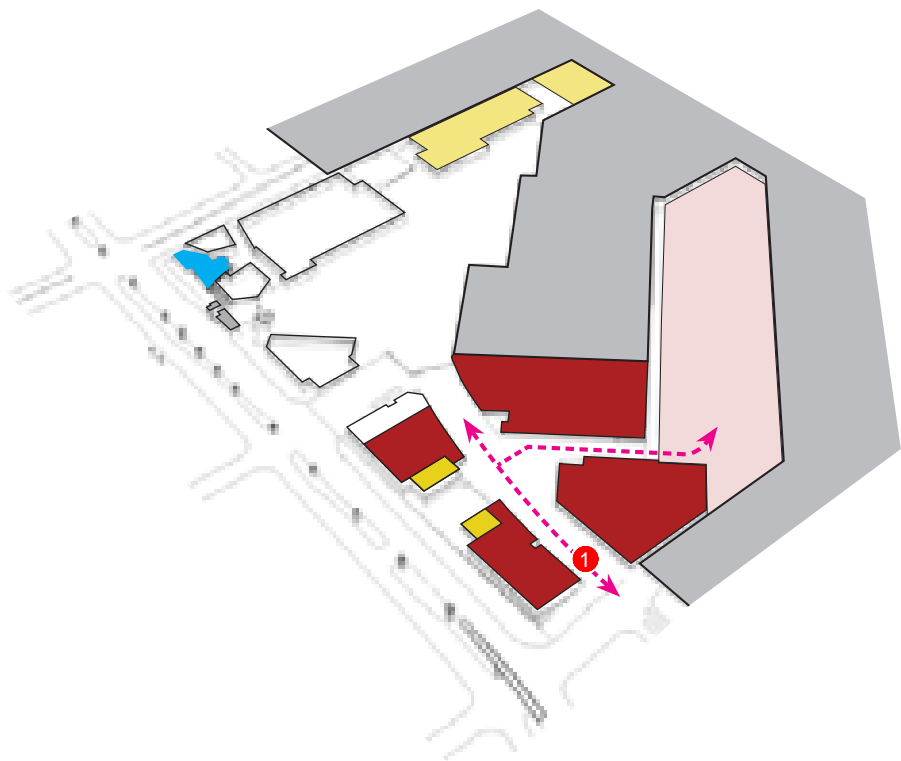
- COMMERCIAL PARKING
- COMMERCIAL (RETAIL)
- RESIDENTIAL (LOBBY/AMENITY/SERVICE)
- RESIDENTIAL PARKING
- 1 LOUGHEED EAST ENTRY (PARKING + LOADING ACCESS)



LEVEL 143'

- Town Centre Plaza –Street Level
- At-grade retail along Loughheed Highway
- Retail along southerly Willingdon Avenue at corner
- Commercial parking in southwest corner zone
- Residential parking along northern Willingdon Avenue
- Alpha underground parking access to Level 143

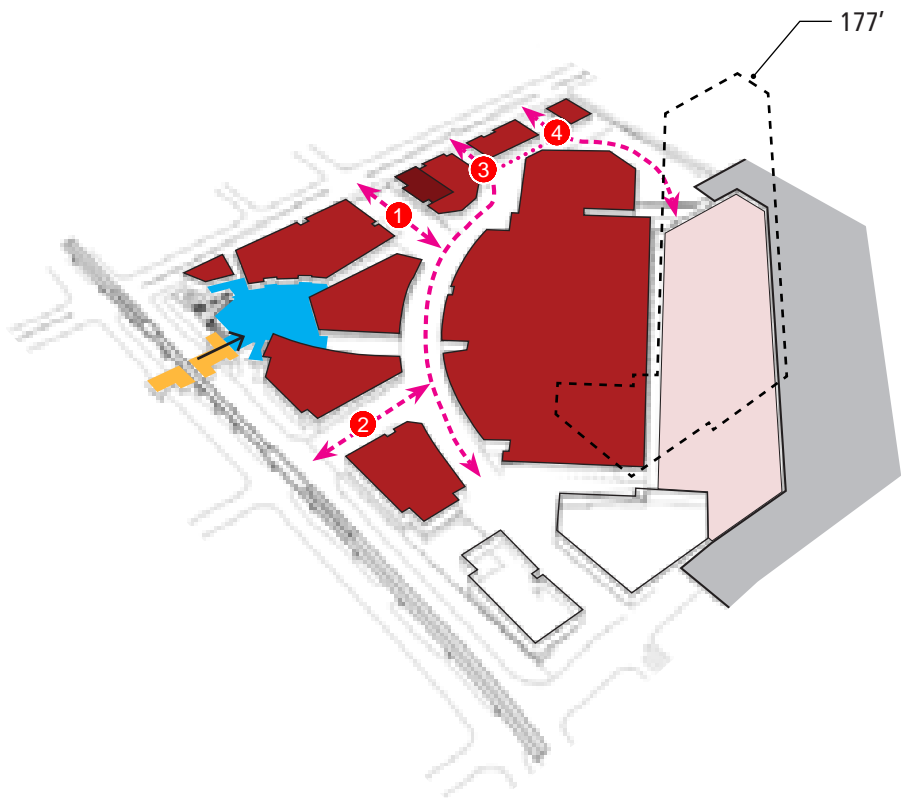
- TOWN CENTRE PLAZA
- COMMERCIAL (RETAIL)
- RESIDENTIAL (LOBBY/AMENITY/SERVICE)
- RESIDENTIAL PARKING
- COMMERCIAL PARKING
- 1 ALPHA ST. ENTRY (PARKING ACCESS)



LEVEL 153'

- Brentwood Boulevard access from Beta Avenue
- Retail at corner of High Street and Beta Avenue
- Vehicular access to northeast underground parking

- TOWN CENTRE PLAZA
- COMMERCIAL PARKING
- RESIDENTIAL (LOBBY/AMENITY)
- RESIDENTIAL PARKING
- COMMERCIAL (RETAIL)
- 1 BETA AVENUE ENTRY

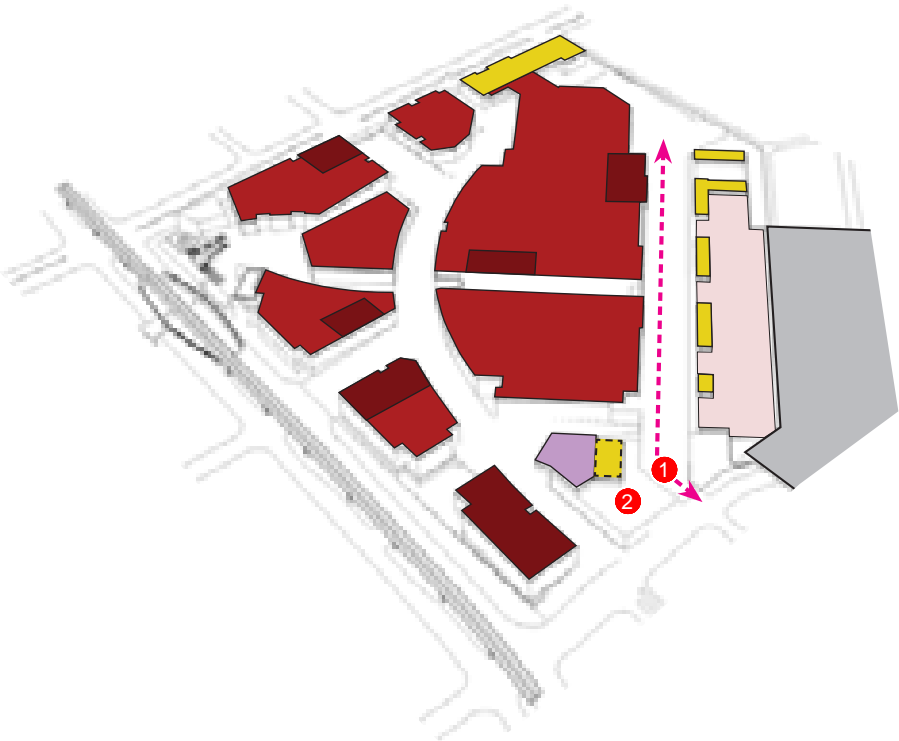


LEVEL 168'

- Brentwood Boulevard with connections to Willingdon and Lougheed
- Town Centre Plaza – Main Level
- Primary pedestrian access to retail/commercial
- Connection to Skytrain station
- Retail defining street edge with office space
- North Entry off Willingdon Avenue to Ridgelawn Drive

- TOWN CENTRE PLAZA
- SKYTRAIN STATION
- COMMERCIAL (RETAIL)
- COMMERCIAL (OFFICE)
- COMMERCIAL PARKING
- 1 HALIFAX STREET ENTRY
- 2 ALPHA AVENUE ENTRY
- 3 NORTHWEST ENTRY
- 4 NORTH ENTRY

LEVEL 177' — North parking zone level (no direct connection to retail floor)



LEVEL 186'

- Upper retail level with office space
- Entrances to residential along Ridgelawn extension
- Access to upper level of north parking zone with vertical vehicular access to Brentwood Boulevard
- Amenity and outdoor landscaped area access from Beta Avenue
- Vehicular access to Ridgelawn extension from Beta Avenue
- Low-rise residential fronting Ridgelawn Drive
- Lower level of terraced residential building at north end of Willingdon

- COMMERCIAL (RETAIL)
- COMMERCIAL (OFFICE)
- AMENITY
- ① RIDGELAWN DRIVE ENTRY
- ② OUTDOOR LANDSCAPED AREA



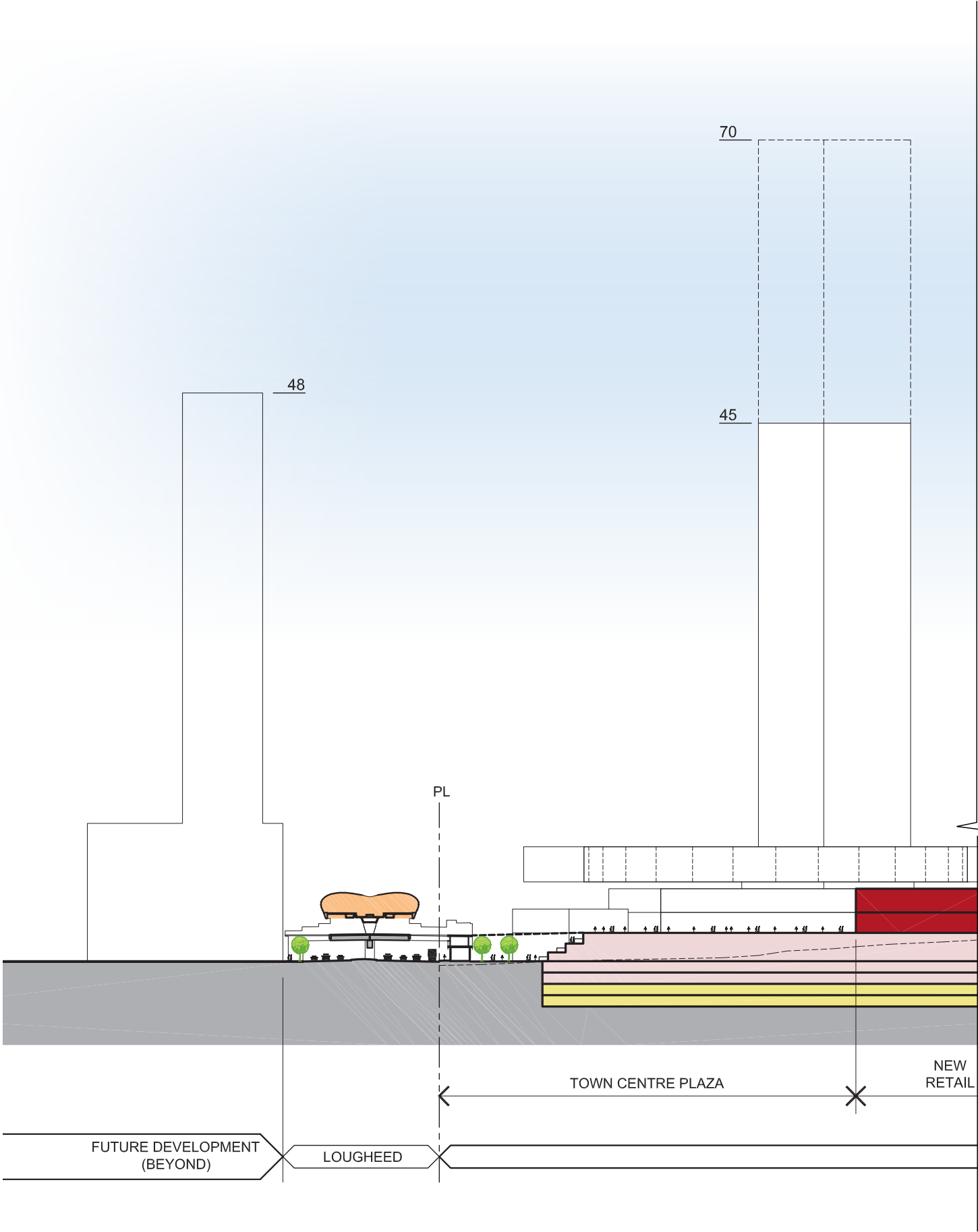
LEVEL 205'

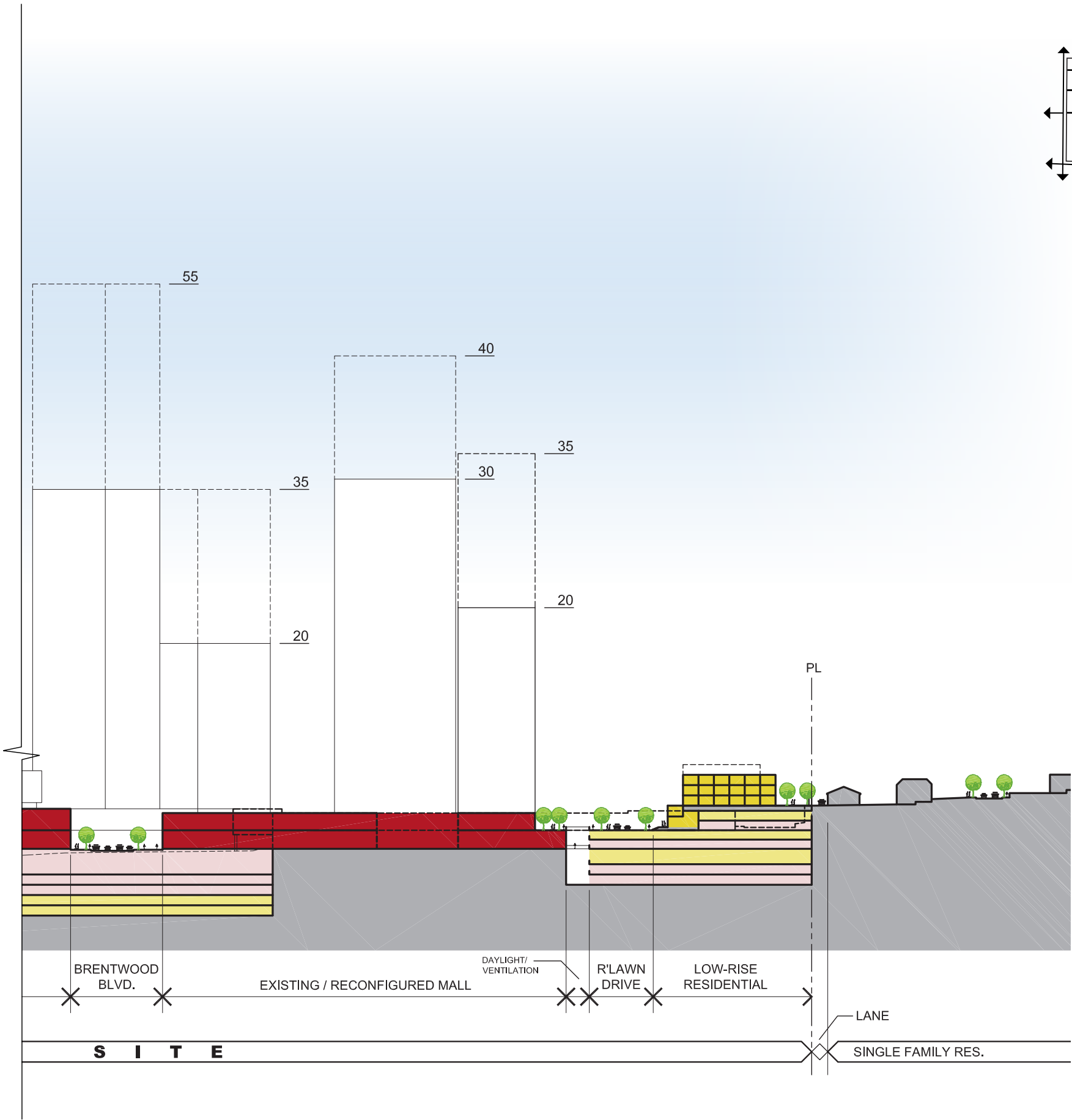
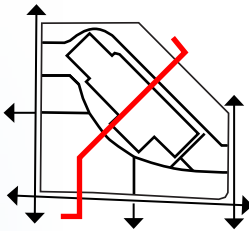
- Commercial/office
- Low-rise residential along northerly site boundary
- Accessible landscaped roof
- Residential and Office towers above commercial core
- Residential Towers along Willingdon and Lougheed

- COMMERCIAL (OFFICE)
- RESIDENTIAL
- COMMERCIAL (TBD)
- ① POSSIBLE RESIDENTIAL TOWER
- ② ACCESSIBLE LANDSCAPED ROOF

SITE SECTION

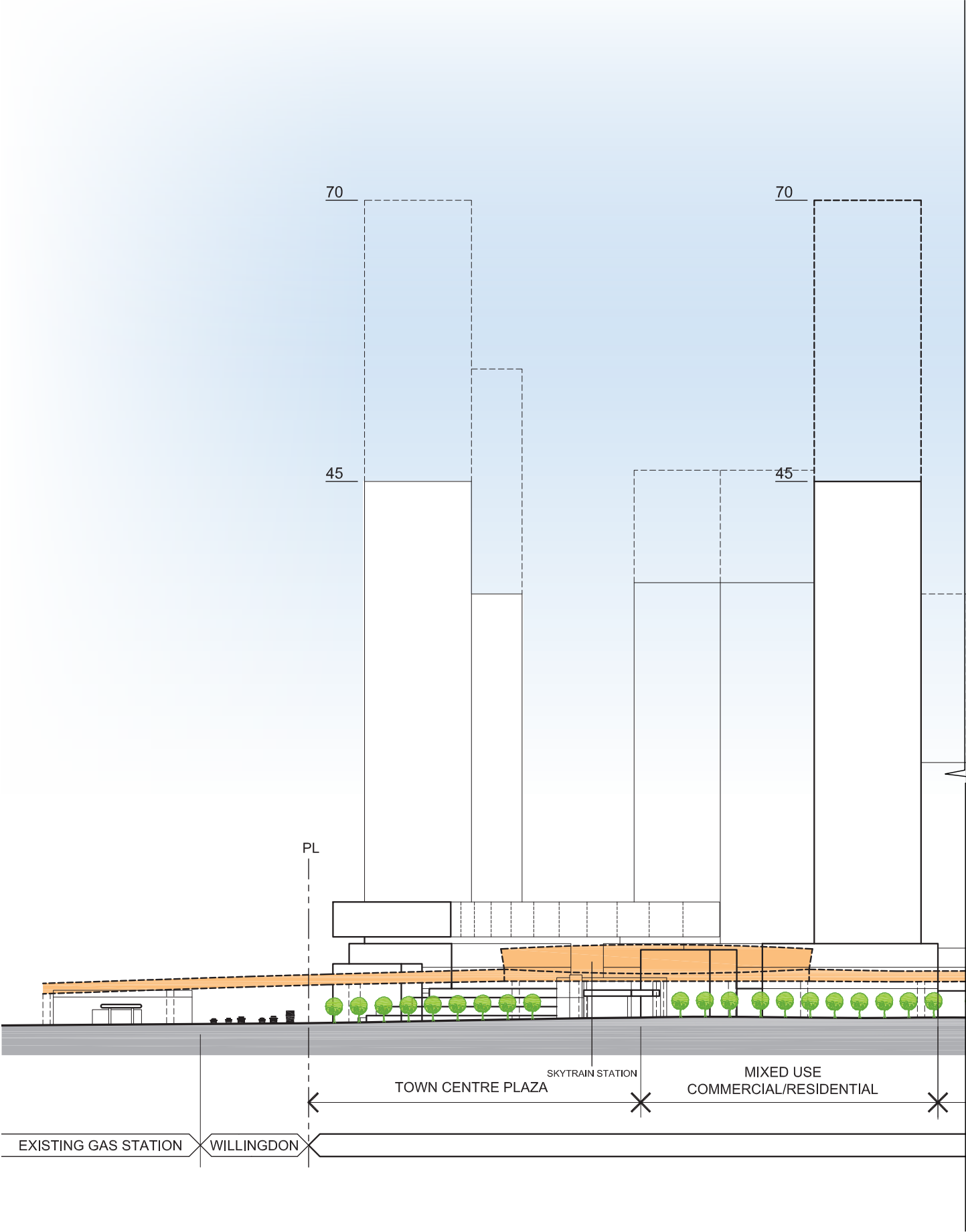
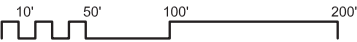
- COMMERCIAL
- RESIDENTIAL
- COMMERCIAL PARKING
- RESIDENTIAL PARKING
- BRENTWOOD TOWN CENTRE
SKYTRAIN STATION

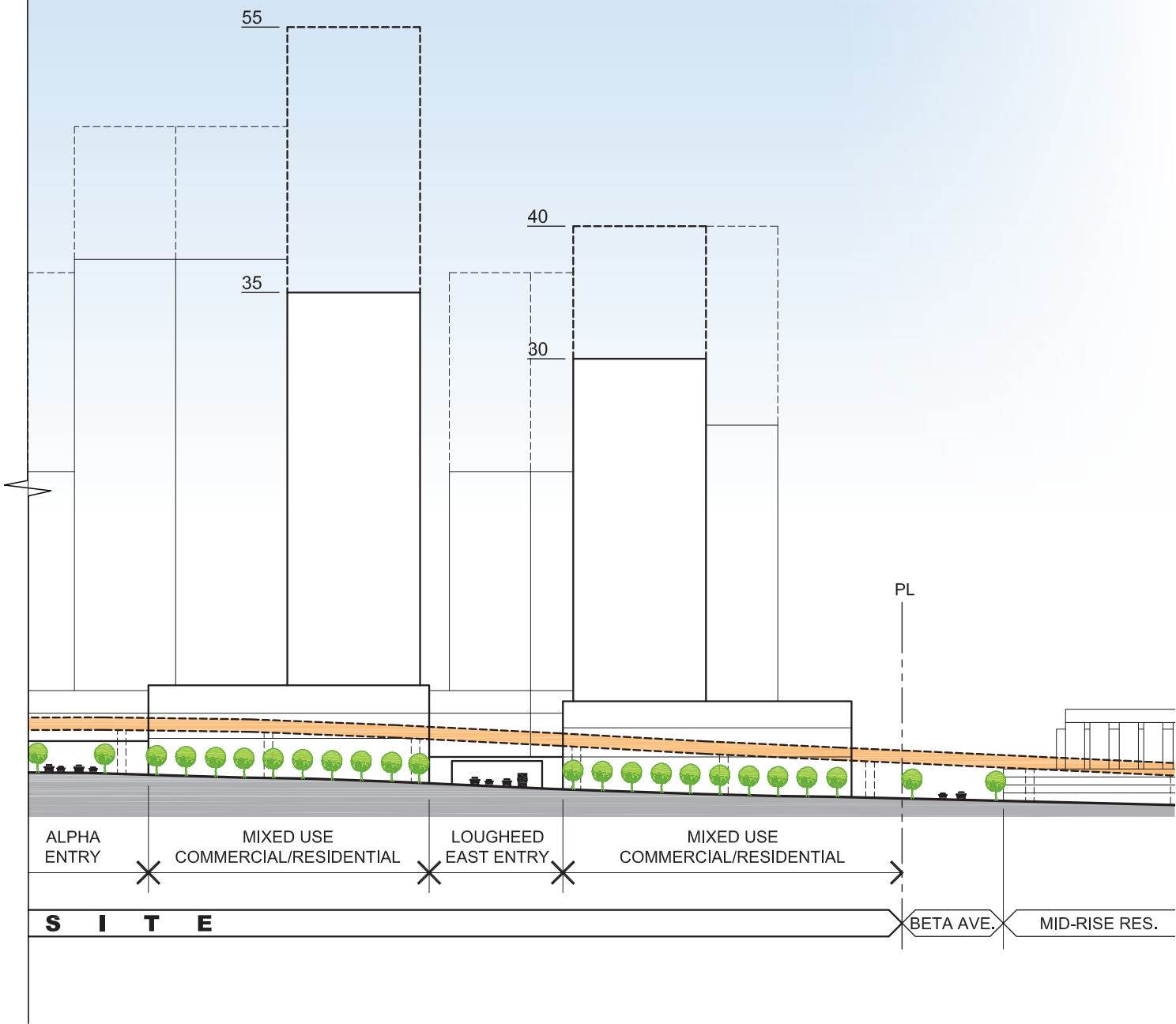
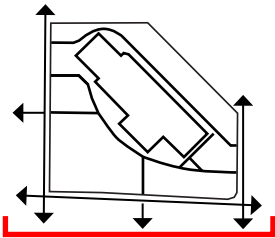




LOUGHEED HIGHWAY ELEVATION

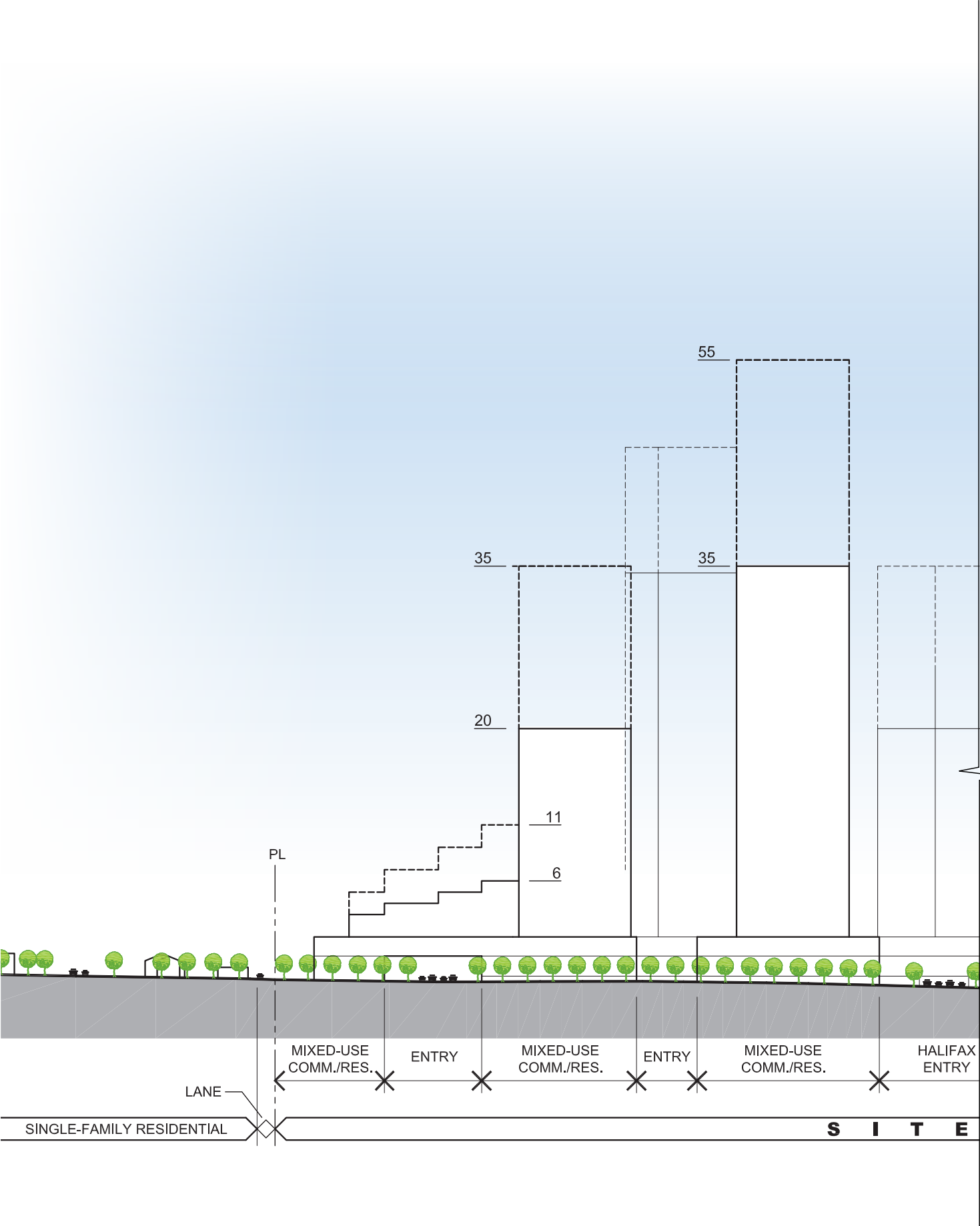
BRENTWOOD TOWN CENTRE
SKYTRAIN STATION

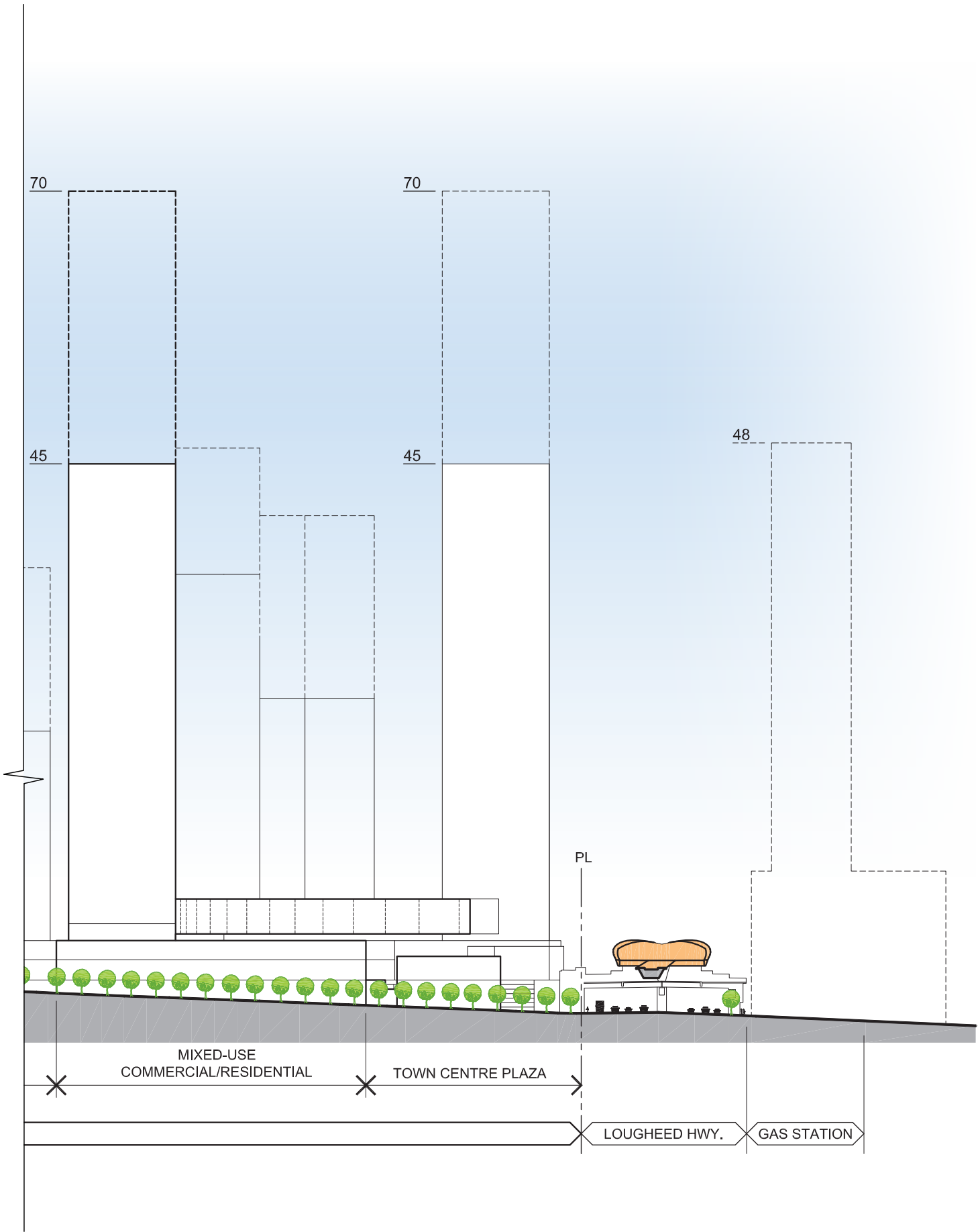
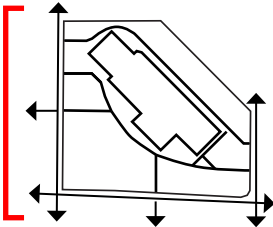




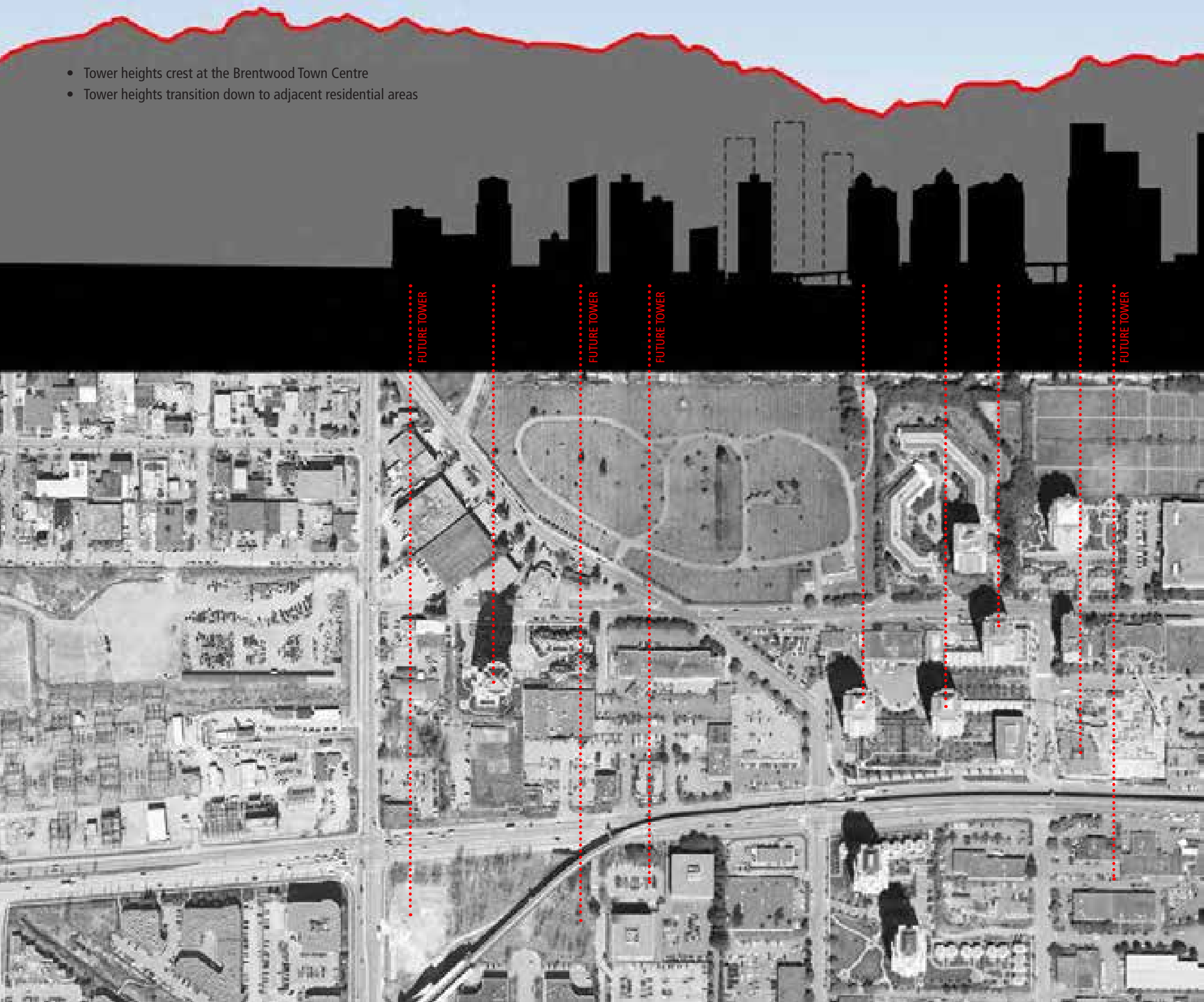
WILLINGDON AVENUE ELEVATION

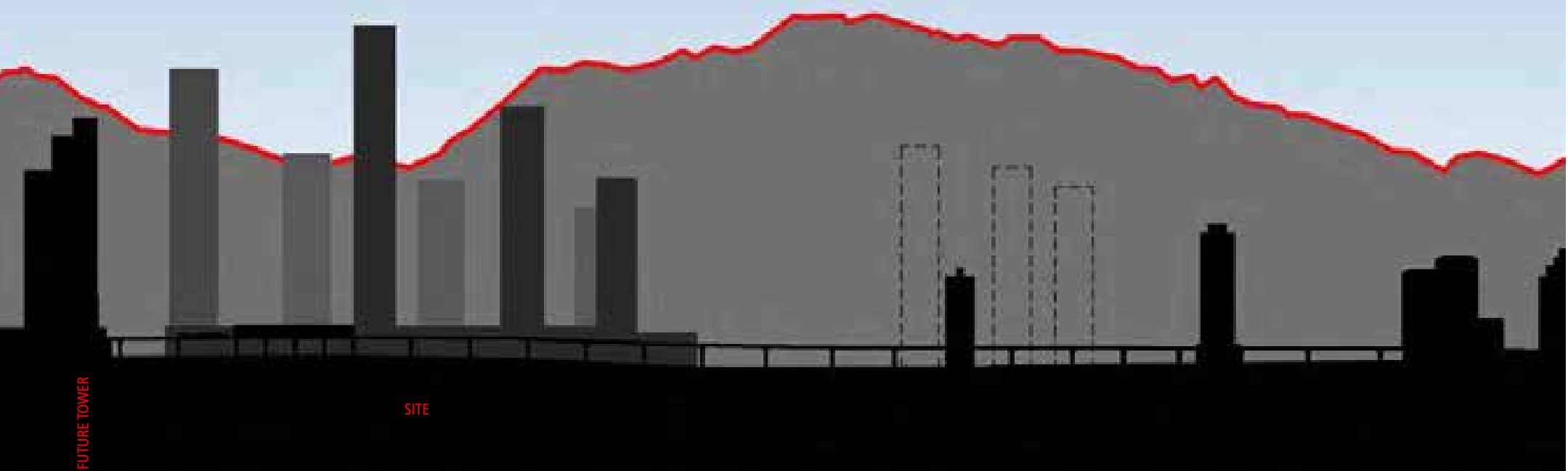
BRENTWOOD TOWN CENTRE
SKYTRAIN STATION



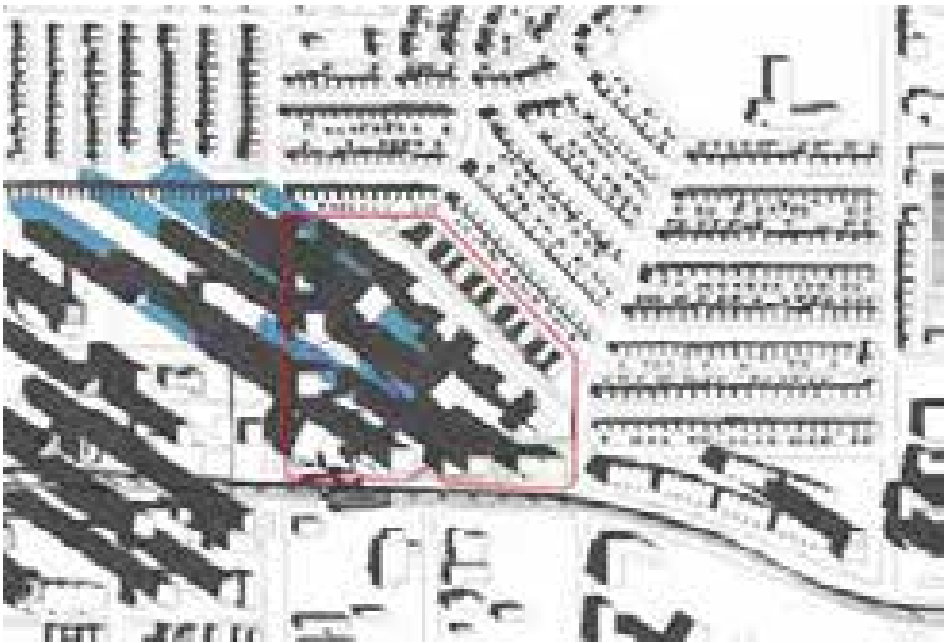


- Tower heights crest at the Brentwood Town Centre
- Tower heights transition down to adjacent residential areas





Equinox 10:00 am




Equinox 12:00 pm



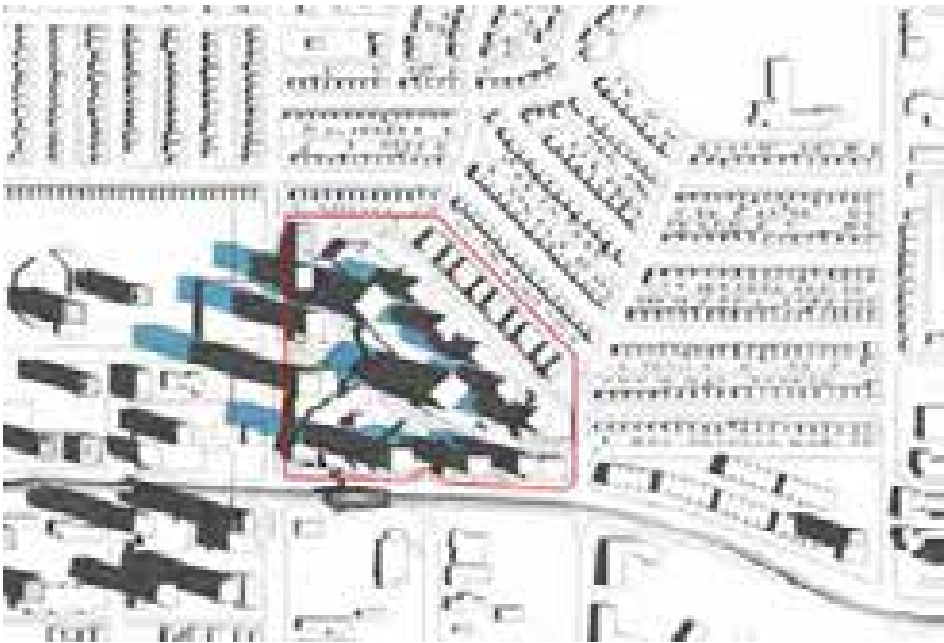
Equinox 02:00 pm



Equinox 04:00 pm

 Extent of Maximum Height Shadow

21 June 10:00 am




21 June 12:00 pm



21 June 02:00 pm

21 June 04:00 pm

 Extent of Maximum Height Shadow



ARCHITECTURAL PALETTE

The architectural character for the Brentwood Site will be modern and timeless with a palette of natural materials such as glass, stone, architectural concrete and a contemporary use of west coast wood features.

“Simplicity is the ultimate sophistication”
Steve Jobs



Multi-level retail with high entry



Pivoting glass doors - unique indoor/outdoor cafe space



Corner double-height structural glass retail facade with office space above



Double-height residential lobby with structural glass wall, indoor/outdoor wood feature wall



Townhouses fronting on semi-private garden



Varied residential balcony treatment above double-height commercial podium



Modern retail frontage variety - Tokyo, Japan



Unique textured glass screen wall - Roppongi Hills, Tokyo, Japan



Full height glass retail wall



Steel & glass covered outdoor space - Tokyo Midtown, Japan

APPENDICES

Appendix A: City / Owner Workshops
Tenets & Principles

Appendix B: Commercial Strategy

Appendix C: Residential Strategy

Appendix D: Creative Programming Strategy

Appendix E: Site Survey

Appendix F: Project Data Summary & Subdivision Pattern

Appendix G: Master Plan Transportation Assessment Study

The Tenets & Principles were derived from collaborative workshops with the City of Burnaby, the Brentwood Site Owners and consultant team, and intended to serve as a Litmus Test to evaluate the final Land Use and Design for the Brentwood Site Conceptual Master Plan.

TENETS

- A. Strengthen the Surrounding Community
- B. Exceptional Urban Design and Architecture
- C. Create a Diverse and Inclusive Community
- D. Encourage Sustainable Development
- E. Contribute to Developing a Creative City
- F. Create a Livable Community

PRINCIPLES

1. EDGES AND CONNECTIONS

- a. Lougheed Boulevard and Willingdon Avenue Edges
 - Clearly defined connections and entrances
 - Express the site to the both street edges
 - Transparency and permeability are important
 - Incorporate programmed uses
 - Lougheed "Blvd" should be pedestrian and cyclist friendly
 - High Density and Mix of Uses important on these edges—should feel like a urbane city center
- b. Seamless Community Interface
 - Improve existing access
 - Remove any barriers to free flow from adjacent areas where appropriate
 - Increase access points where appropriate to reflect nature of city center
 - Existing commuter routes should be considered (includes paths that are followed, but not developed i.e. pedestrian routes that are utilized, but not programmed currently)
 - Should be welcoming
- c. Inviting and Compelling Site Entrances
 - Enhance site openness and animation as well as provide extraordinary programming to announce the site.

d. Respectful Transition to Adjoining Single Family Uses

- Maintain and enhance existing residential interface
- Ensure the edge is safe, attractive, and secure
- Be a good neighbour

e. SkyTrain

- Site visibility from SkyTrain an opportunity
- Uses adjacent SkyTrain should be designed to allow for views
- Residential living areas should not be shadowed by SkyTrain or negatively impacted
- Skytrain should be easy to find from within site

2. SITE CIRCULATION AND MOVEMENT

a. Pedestrian Friendly and Safe

- Integrate people and vehicles in a safe environment that offers multiple movement choices
- Incorporates seating
- Weather protection (four season design)
- Pedestrian lighting
- Pedestrian pathway interconnections
- Accessible
- Some defined (i.e. sidewalks, paths, indicators, etc.) and undefined (i.e. open plazas, etc.) pedestrian options
- Choices
- Human scale
- Twenty four seven options

b. Simple and Clear Wayfinding

- Guide and inform visitors
- Provide attractive and well-placed signage
- Other site orientation features should be investigated in urban design
- Consistency where appropriate
- Site Identity and Placemaking should be considered as Wayfinding from other areas of town

c. Spatial Clarity and Orientation

- Orient visitors with built form and landscape features to define destinations, corridors, and highlight areas of interest
- Visual clues—features, architecture, and landscape
- Flow
- Not confusing
- Easy
- Comfortable
- Automatic
- Above and below ground (parking, etc.)
- Inside and outside

d. Pedestrian and Vehicular Integration

- Create a variety of positive experiences that intermingle cars and pedestrians (Example: Granville Island pedestrian and cars interact in a less formal fashion that adds to the experience, etc.)
- Activity
- Hustle and bustle
- Not always structured

e. Clear and Convenient Car Access and Parking

- Sense of arrival important
- Provide enhanced parking areas
- Multiple access and location options
- Type and variety (i.e. on-street and off-street parking, etc.)

3. TRANSIT ORIENTED DEVELOPMENT

a. Mixed Use Centre

- Provide high density and a variety of mixed uses
- Live, work, play, shop
- Connect
- Inclusive

b. Transit Orientation

- Contribute to ridership
- Clear transit interface
- Multiple uses should front transit, and/or be visible from transit
- Easy to access

c. Convenient Intermodal Connections

- Improve bus and other intermodal connections on site and offsite

d. Transit User Amenities

- Improve the experience
- Vibrant
- Welcoming
- Interesting
- Provide facilities and programming for transit users

e. Site should be a Destination

- Provide a compelling reason to visit the site/ get off

4. THE HEART AND PUBLIC REALM

a. Town Centre Core

- Create an urbane city experience
- Size, density, and feeling should be easily identified as a City experience
- Dramatic transition from Suburban neighbourhood
- Hustle and Bustle
- Vibrancy

b. Variety of Public Spaces

- Distinct and memorable
- Variety of sizes, shapes, forms, features and street furnishings
- Programmable
- Entertaining
- Fun
- Intriguing
- Comfortable
- Inclusive – something for everyone

c. Natural Setting

- West Coast Setting
- Dynamic site with vistas is an opportunity
- Consider sun (southern) exposure in architectural design
- Mountain views

d. Vibrancy and Serendipity

- Definition of Serendipity - an aptitude for making desirable discoveries by accident
- Promote a diversity of uses and activities to bring life and fun to the public spaces (in the spaces and around their edges)
- Programmed and non-programmed elements
- Inviting for everyone regardless of age, race, religion or culture

e. Inspirational Place**f. Entertainment**

- What enhances the space on a gloomy day? Colour?
- Programming
- Design should allow for easy set up and take down
- Music
- Staffing
- Media and advertising
- Branding

5. DIVERSITY AND INTEGRATION**a. Choices and Variety within all Land Uses**

- Uses should be appealing to a broad range of people and interests
- Allow for options
- Variety of commercial, residential uses and public realm
- Important to not limit any uses or tenants
- Multiple options of similar retailers (i.e. choice of restaurants, choice of grocery stores, choice of fashion options, etc.)

b. Livable and Connected Residential Community**c. Diverse Architectural and Landscape Expression**

- Authentic, high quality of finish with sophistication
- The ancient Roman architect Vitruvius famously wrote that a building should have “firmness, commodity, and delight.” In other words, it should stand up, it should do something, and it should look good.

d. Distinct Building Identities and Uses

- Encourage individual architectural expression with high quality and integrity where appropriate
- Lobby entrances –street level, identifiable, with great front door experiences
- Easily discernible uses, access points, and parking

e. Future Flexibility

- Allow for design integration of new technologies, new as yet undetermined uses, and alternate modes of transportation

6. SOPHISTICATED DESIGN**a. Visibility of Town Centre**

- Enhance identity, exposure and visual expression
- Transform neighbourhood

b. Aspire to incorporate Iconic Design**c. Great Front Door Experiences**

- Improve the welcoming and appealing
- Sense of arrival to the site
- Each use to have great front doors

d. Signature Design Elements

- Create unique and memorable character elements throughout the site
- Timeless

e. Authentic Architecture

- Seek integrity of architectural style.

7. DESIGN EVOLUTION

a. Respect Viability of Existing Mall

- Each phase of development should be accretive—each phase must be better than the last
- Economics have to work to ensure planned development improves upon existing situation over time
- Construction must work around functioning mall, and be a safe, considerate, and great public experience

b. Vital and Self Sustaining

- Ensure that each stage enhances economic viability and success.

c. Flexible and Responsive Phasing

- Ensure that each stage is adaptive to changing circumstances
- Could stand alone if there were a time lag between phases—and add to the continued success of the City Center

d. A Logical and Executable Phasing Plan

- Easy
- Simple
- Consumable
- Constructable

e. Clear Public Awareness and Communication of Evolution

COMMERCIAL STRATEGY

Introduction: The Brentwood Town Centre Development Plan designates the property as the commercial core of the town center. Accordingly the majority of the public realm, excluding the north and east edge quieter transition zone, will be framed at the ground plane with commercial uses. The master plan transforms the internally-oriented mall site into an urban town center environment with a focus on street orientation.

Burnaby's planning policies stipulate that the town center will have a full range and mix of commercial uses from small boutiques and offices, to major retailers and office users. Accordingly, commercial on the site will be wide ranging from small to large. Larger retailers will be located discreetly in order to maintain the urban style street feel.

Office Integration Strategy: Similar to a traditional urban town center smaller professional office and service uses will be dispersed throughout the development. Major office users will be located in two signature towers strategically situated at the heart of the development. Their location on the High Street will provide the prominence desirable for an AAA office tower while being within close walking distance of the Brentwood Town Centre Skytrain Station for commuters. Having the office lobbies front the High Street will add animation and fuel vibrancy on the street and site.

Retail Integration Strategy: The commercial goal is to create an urban, street-oriented town center environment. The commercial ground plane framing the public realm will primarily be two stories in height. Some commercial areas set back from the heart of the development will be one story, while some retail buildings that incorporate significant grade changes will contain three stories of commercial retail.

Commercial premises throughout will contain a wide range of retail tenants from local boutiques to international brands, as well as restaurants, services, entertainment and professional offices.

Key to the integration of commercial uses with the unifying public realm is the adaptation of the existing mall (through a combination of demolition, new construction and re-orientation of existing space) so that it fronts onto the external High Street and the extension of commercial development to the Willingdon and Lougheed street edges. This will serve to further animate and engage these prominent public streets.

Interior public spaces will be connected with the exterior public realm by joining them to the new on-site street network and beyond to the City's urban fabric through intersecting streets and pedestrian walkways. This connectivity will ensure seamless transition from the surrounding neighbourhood to on-site exterior and interior spaces, increasing the overall permeability of the site.

The length of the High Street is a powerful design element. The plan extends it fully through the site in order to achieve sufficient massing and for "co-tenancy". The High Street is distinguished by its curved design and contributes to the planned variety of interesting places and spaces. It will be enhanced at key points where access roads intersect; these intersections will become focal nodes through use of landscaping and lighting in order to accentuate the outdoor environment and create visual interest.

Restricting the number of cars is also seen as integral to the integration of the commercial uses into the public realm in a simple, circular, pedestrian-only commercial loop which connects the Town Centre/Commercial Plaza and Skytrain focal points with the interior commercial core.

Commercial Economic Success: The Master Plan will ensure the site is economically successful through the:

- Execution of the vibrancy strategy articulated in the public realm section. In short, a vibrant place ensures a commercially successful place
- Delivery of a high quality public realm. Executed well, the high quality public realm combined with integrated high-density residential and major office uses will set this development above and beyond almost every other major commercial development in Canada
- Provision of a full range of commercial uses. Not simply fashion-oriented retail common to most Canadian malls today, but inclusion of convenience offerings such as grocery as well as restaurants and entertainment. This full range of commercial uses will increase the number of visitors to the site and hours of activity, and will encourage visitors to stay longer
- Seamless integration with public transit options including Skytrain and buses

Merchandising: Generally speaking, in keeping with the feel of a Town Center, a mix of commercial uses will be spread throughout the development. However, the opportunity to comprehensively plan this large site enables the strategic location and grouping of certain businesses in order to optimize:

1. Vibrancy and animation of the public realm

- A strong merchandising strategy works to animate key public spaces by focusing on uses that naturally spill into the external environment and streets
- The Town Centre/Commercial Plaza will create a high level of activity with cafes, coffee shops and spill-out restaurants
- Site mapping situates anchors at the corners to help to pull traffic across the site, contributing to vitality, flow and activity on all streets

2. Convenience

- It is anticipated that Neighbourhood convenience uses will be grouped together for convenience in close proximity to a grocery or drug store anchor most likely located at either the southeast or northwest end of the High Street (or both).
- Transit oriented spaces including the street level of the Town Centre Plaza and street-side bus stops, will incorporate convenient 'Grab and Go' offerings such as coffee and news
- Professional services such as dental and insurance will be spread throughout the site at ground and second levels as would be typical in an urban environment
- Grouping of like tenants increases convenience for users and supports business viability

3. Creation of a variety of interesting places

- Creating a variety of experiences throughout the site provides diversity and interest—adding to the intrigue of the place and the desire to return and explore
- Provides an opportunity for retail uses to integrate with the public realm in a way that relates to the use of the retail offering—for example the community end of the property will have local offerings and grocery items specific to servicing the neighbourhood (see detail section ahead describing integration and co-tenancy)
- Provides more opportunity to offer “something for everyone” by varying the offerings, landscape and architecture throughout the town center
- Diversification decreases the risk of the town center being too uniform and generic with no unique offerings that differentiate the property from other commercial locations

4. “Co-tenancy” requirements of certain retailers

- A fundamental principle of retailing is that uses grouped together with complimentary or associated offerings promote cross shopping opportunities
- Providing areas of the property designated for groupings, such as fashion retailers on the High Street provides the consumer with choice and variety—and facilitates the comparison shopping desired by consumers
- While food and beverage will be distributed throughout the site, there will be two or three key restaurants groupings including the Town Centre/ Commercial Plaza. Part of the placement strategy will include second floor restaurant locations to extend animation vertically and take advantage of views. Groupings of restaurants improve their attraction to residents as it becomes much more of a “food and beverage” destination
- Reaching a critical mass of retail offerings is important to draw a regional consumer that will rely on the fact that they can find the item that they were seeking to purchase i.e. if one shop does not have the right size, etc., the neighbouring retailer will most likely have an alternate that is equally desirable

RESIDENTIAL STRATEGY

The residential strategy introduces ‘living’ within a mixed-use complete community serviced by rapid transit. Living within a complete community encourages a pedestrian-oriented lifestyle where residents have access to all the services required in their daily lives, within walking distance. Where work or other services are not located in the community, residents have direct access to a rapid transit system, decreasing their dependency on the car. This integrated lifestyle will appeal to a broad demographic range, adding to the inclusive nature of the Brentwood Town Centre. The high- density residential proposed for the Brentwood Site will enliven the public realm throughout the day and bring eyes on the street for a safer neighbourhood.

Accordingly, the residential towers and low-rise buildings are located adjacent to the public realm, with the higher towers positioned close to the heart of the development, next to the Town Centre Plaza at the Willingdon & Lougheed corner of the site. From that corner, the towers transition down in scale, towards the north and east, ending with the low-rise residential in the northern zone. This lower scale residential area acts as a buffer zone to the surrounding single family neighbourhood. The character of the public realm throughout the site will also transition from highly animated in the heart of the site to a more quiet nature in the buffer zone, respectful of the adjacent established neighbourhood.

The taller, high-density towers offer a truly cosmopolitan city experience, catering to the urban buyer seeking a mixed-use vibrancy and immediate access to SkyTrain. In keeping with the demands of that market, the ground scape of residential towers will feature commercial uses in addition to separated residential lobbies. Residential towers located along the Lougheed Highway and Willingdon Avenue frontages will be addressed on the new High Street, Brentwood Boulevard, with a second lobby entrance from the perimeter street frontage. Creating two lobbies to the towers increases permeability into the site from the existing urban fabric and activates both the surrounding streets and the internal shopping street.

The lower high-rise towers along the site edges, north of Halifax and east of Alpha, are located next to the two High Street Arrival Courts. These four towers also have the opportunity of dual lobbies, linking the site to the neighbourhood and integrating the residential entrances into the commercial fabric. These towers, while lower in height, remain urban in character, in keeping with the urban design direction for the site. All six perimeter towers have access to the upgraded public streetscapes and the pedestrian-oriented High Street, Brentwood Boulevard.

The residential proposed north of the existing mall, is accessed from a secondary street aligned with Ridgelawn Drive that connects, on the east, to Beta Avenue, and on the west to Willingdon Avenue. This street, referred to on the master plan as Ridgelawn Drive, will offer a quieter character with access to both the residential buildings and the upper retail level of the central commercial core. Pedestrian connections to Brentwood Boulevard, Town Centre Plaza and SkyTrain are provided from this secondary street. Low-rise (two-four storey) residential is proposed north of this street, between Beta Ave. and Fairlawn Drive. This residential is nestled within a new park-like setting designed as a buffer zone to separate the single family neighbourhood to the north from the high density development in the core of the site.

There are also four mid-rise residential towers proposed south of the new Ridgelawn Drive, located above the central commercial core. These residential towers offer a transition from the highly animated urban core to the lower scale of the northern residential low-rises, adding to the diversity of the range of residential unit types on the site.

All the residents living at the Brentwood Site will have the opportunity to take advantage of the many amenities accessible within the entire site, which include a wide range shopping experiences, office services, food and specialty stores, cafes, restaurants, pubs and other entertainment venues, all within walking distance. They will also have access to interior and exterior semi-private active amenity spaces provided for the use of the residents, only.

CREATIVE PROGRAMMING STRATEGY

Active, four-season event programming is vital to the ongoing vibrancy of the new town center. Numerous venues are available in the Master Plan including the Town Centre/Commercial Plaza, Brentwood Boulevard, pedestrian mews connected to the plaza, arrival courts at the ends of the new high street (Brentwood Boulevard), the landscaped open space along Beta Avenue, as well as the central indoor environment. The diverse range of venues can accommodate events of varying scales from large civic gatherings to intimate street entertainment.

Event programming envisioned for the site include:

- Large civic events
- Seasonal events
- Cultural celebrations & festivals
- Street theater
- Musical performances
- Performance art
- Rotating art installations
- Buskers
- Media events
- Movie screenings
- Community events
- Street festivals
- Markets
- Parades

Town Centre/Commercial Plaza

Programming would occur both daytime and nighttime in this Entertainment District

Central plaza space events can take place while activities related to the surrounding retail & restaurants are ongoing

Daily commercial programming will maintain a constant vibrancy in the plaza, drawing people for socializing, dining and shopping

Permanent electronic displays can provide creative advertising, media events and movie screenings

Permanent audio features or live musical performances can entertain the outdoor diners, shoppers and commuters passing thru the space to connect to transit and SkyTrain

Interactive water features can activate the plaza visually and engage children in play

Brentwood Boulevard

Programming would be a daily function along the new High Street, animated by the retail store fronts, outdoor seating, sidewalk displays, interactive signage,

promotional opportunities, street musicians among other festive activities. Sections of the street could be closed to traffic, on a temporary basis, for parades, festivals, block parties and other community and cultural events

Pedestrian Mews

Localized programming related to retail, restaurant and café tenants can add to the European-style character

Extension of events in the main plaza may extend into these streets to engage the site as a whole

Arrival Courts

Special events such as markets, seasonal activities, cultural heritage events and unique displays with traffic restricted on a temporary basis

Sidewalk events, engaging the surrounding retail tenants

Landscaped Open Space along Beta Avenue

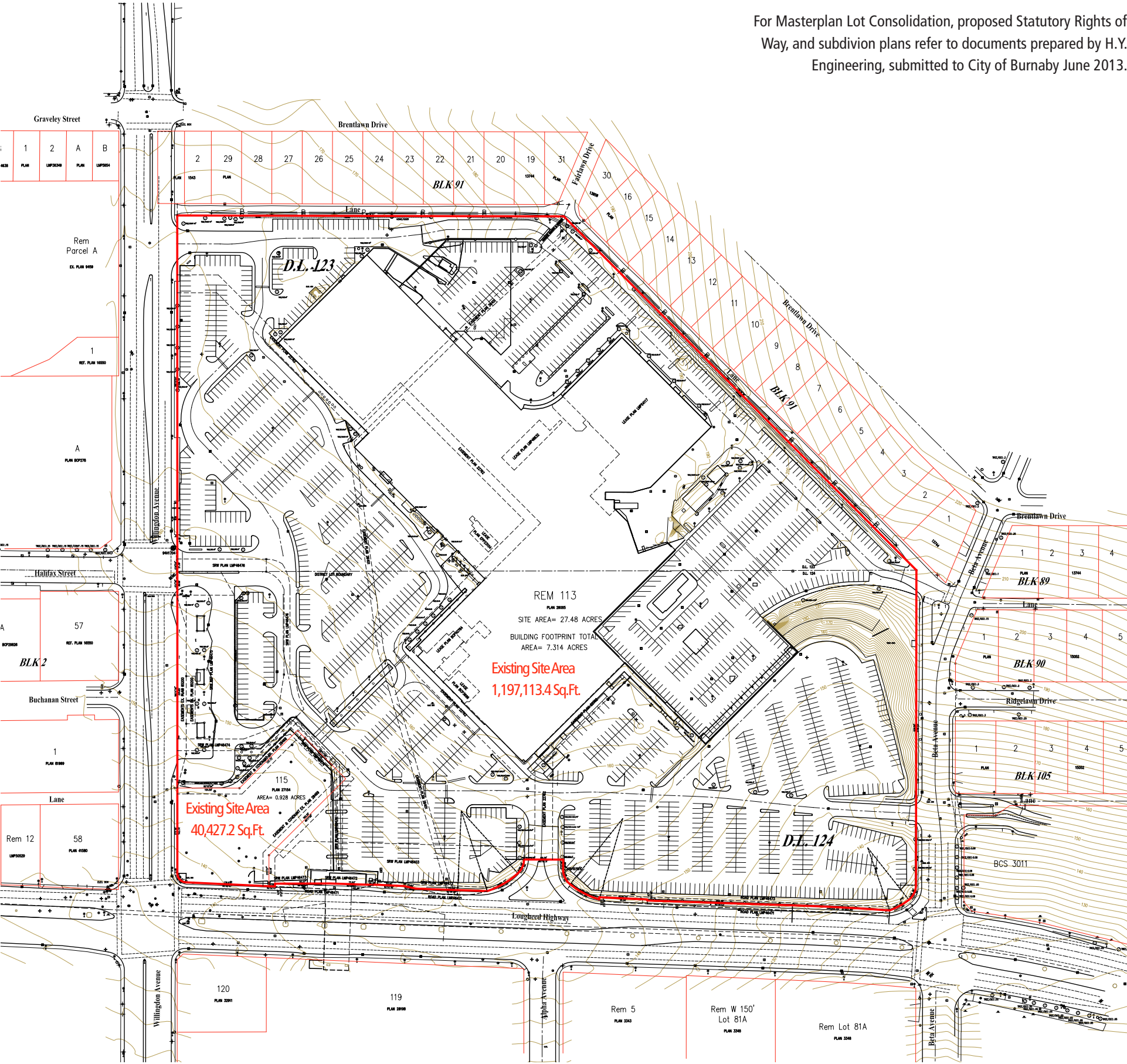
Recreational outdoor events, children's programming, art installations, community parties and music festivals can offer a green space in contrast to the urban Town Centre Plaza

Central Indoor Environment

Expand on the many on-going programs in the common spaces of the existing retail core with new opportunities to extend the programming to engage the outdoor public realm



For Masterplan Lot Consolidation, proposed Statutory Rights of Way, and subdivision plans refer to documents prepared by H.Y. Engineering, submitted to City of Burnaby June 2013.

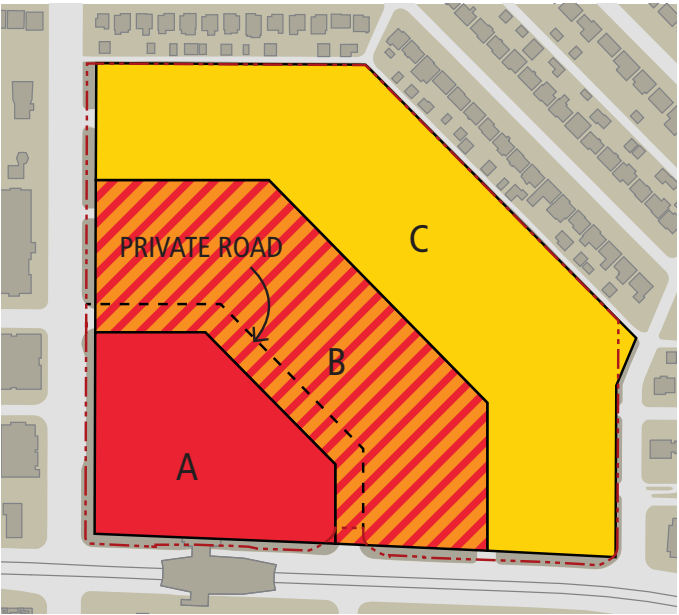


BAND	BAND NET AREA (SF)	BTC ZONING DISTRICT	BASE FAR	BONUS FAR	'S' CATEGORY BASE FAR	'S' CATEGORY BONUS FAR	TOTAL FAR
A	226,200	Commercial	6.0	0	0	0	6.0
B	418,889	Residential (RM5)	2.2	0.4	1.2	1.2	5.0
C	554,173	Residential (RM4)	1.7	0.3	0.8	0.8	3.6
Total Net Site Area	1,199,262						

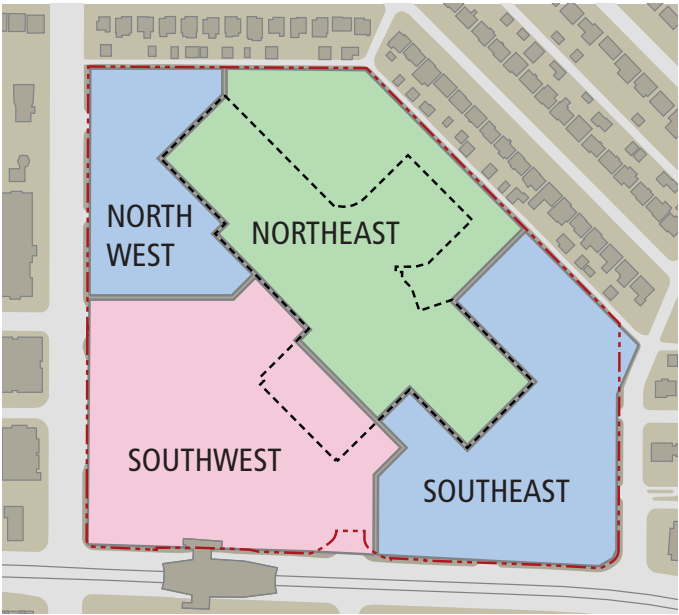
TOTAL PERMITTED AND PROPOSED DENSITY

USE	BAND	FAR		BAND NET AREA		TOTAL PERMITTED DENSITY GFA (SF)	TOTAL PROJECTED DENSITY GFA (SF)
RM4	C	3.6	x	554,173	=	1,995,023	
RM5	B	5.0	x	418,889	=	2,094,445	
RESIDENTIAL TOTAL						4,089,468	4,089,468*
C3	A + B	6.0	x	226,200+418,889	=	3,870,534	
COMMERCIAL TOTAL						3,870,534	2,600,000*
OVERALL TOTAL						7,960,002	6,689,468*

* Specific sq. ft. to be determined through site specific rezoning. Projected commercial figure includes existing Brentwood mall.



LAND USE & ZONING



MASTER PHASE BOUNDARIES

- Notes:
- 1. The Southwest sub-area will be the first phase of the development
 - 2. Subsequent phases will be determined by market conditions, with the Northeast sub-area likely the last phase
 - 3. Individual lot lines for each subdivision area identified will be determined at site specific rezoning

TRANSPORTATION ASSESSMENT - EXECUTIVE SUMMARY

Introduction

Shape Properties Corporation is developing a new master plan for the Brentwood Site consistent with the City's vision of a new mixed-use urban community with a permeable network of routes for pedestrians, cyclists, and vehicles.

The existing site was originally developed based on a single-use auto-focused model, with buildings setback from the street system separated by open surface parking. In 2002 the Brentwood SkyTrain Station opened, connecting the Town Centre with the strategic transit network, and has been a catalyst for facilitating compact mixed-use developments around the station.

The Brentwood Site's master plan would be an integral part of the rejuvenation of the local area with design principles of creating a compact community with a diversified range of uses built around the transit hub at Brentwood SkyTrain Station. It would complement and support the changing characteristics of the area, especially with meeting the growing needs of the community as a place to live, work, shop and relax.

Existing Conditions

The Brentwood Site is located adjacent to the SkyTrain Station on the Millennium Line and local bus services (#25, #123, #130, #134, #136), along with being directly connected to the arterial road network at Willingdon Avenue and Lougheed Highway.

Parking supply at the Brentwood site is currently at 3.6 spaces per 100sqm Gross Leasable Area, while peak demand (Saturday) is around 2.5 spaces per 100sqm GLA.

During the weekday peak-hour period (5pm to 6pm), Lougheed Highway accommodates around 3,200 vehicle movements, while Willingdon Avenue has around 2,500. In comparison, volumes for the Saturday peak-hour are typically lower by 15% and on the weekday morning lower by 25%. Weekday afternoon period is the critical period for operations.

Much of the site's vehicle activity is currently focused at the Halifax / Willingdon intersection (with around 45% of all movements), while vehicle access is limited on Lougheed Highway at Alpha Avenue (right-in / out) and Beta Avenue (with steep grade).

Some vehicle movements to / from the site (i.e. around 10%), currently use residential streets to the north and east of the site plan. Discouraging these non-local movements will be an integral part of the master plan strategy (covered later).

Generally pedestrian and cycling facilities immediately adjacent to the site are not well-developed and constrain opportunities for these modes. It will therefore be an important design consideration to enhance facilities to meet future demands.

Development Plan

Commercial floor space is planned to increase from around 50,000sqm (540,000sqft) to 120,000sqm (1,300,000sq.ft) Gross Leasable Area, and will be supported with around 93,000sqm (1,000,000 sq. ft.) Gross Floor Area of office space and 380,000sqm Gross Floor Area of Residential (4,089,468 sq. ft.).

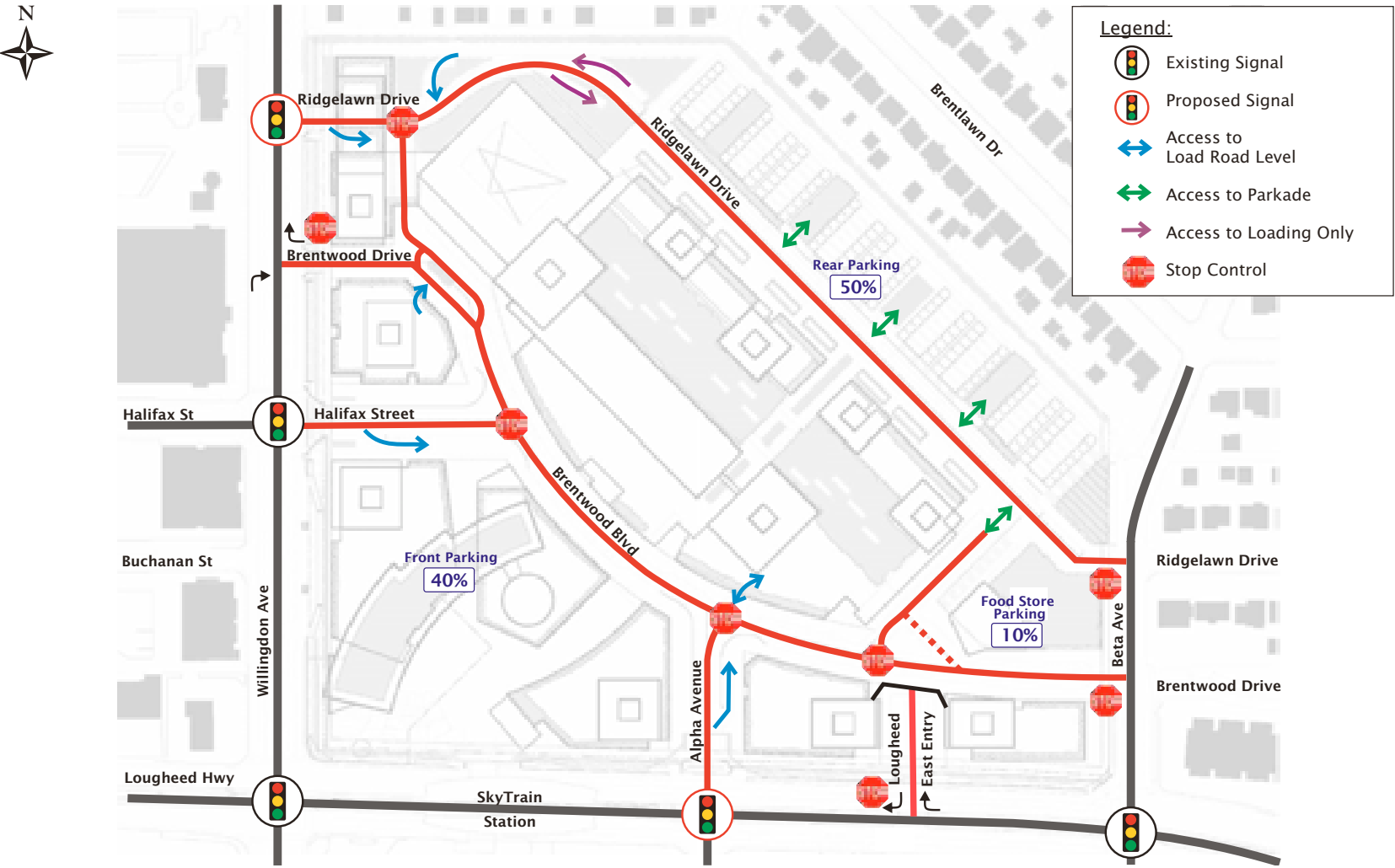
A prime focus for the design will be to develop an environment where street space is shared more equally through maximizing public realm and having pedestrian-focused street design. Complementing this approach will be a new 'sense of arrival' from Brentwood SkyTrain station along with through connections to Willingdon Avenue, Halifax Street, Alpha Avenue, Lougheed Highway, and Beta Avenue within the master plan.

Strong synergies are expected through the new residential and employment uses planned, complementing with the existing and future commercial activities (retail, local services, cafes / restaurants, leisure uses, etc.), and are expected to reduce overall travel demands. Brentwood SkyTrain Station and bus services are expected to have a significant positive influence on travel behaviour.

A new block street structure is proposed for the master plan, which can be seen at Exhibit 4.1a (from the Transportation Study). Brentwood Boulevard will form a new 'high street' running through the heart of the master plan area, with connections to the existing street system at Alpha Avenue, Halifax Street, Willingdon Avenue, and Beta Avenue.

Ridgelawn Drive (extension) will span from Willingdon Avenue (opposite the cemetery) to Beta Avenue (at Ridgelawn Drive), and will connect to Brentwood Boulevard at the north west corner. The laneway along the northern boundary of the site will not be used for access, and a greenway buffer would be developed along its southern edge.

A lower street is planned for the master plan with a direct at-grade connection on Lougheed Highway and which would feed the main parking and loading areas. It will have vertical circulation points to / from street level at Brentwood Boulevard, Halifax Street, Ridgelawn Drive, and Alpha Avenue, together with connections to the lower commercial and residential parking levels.



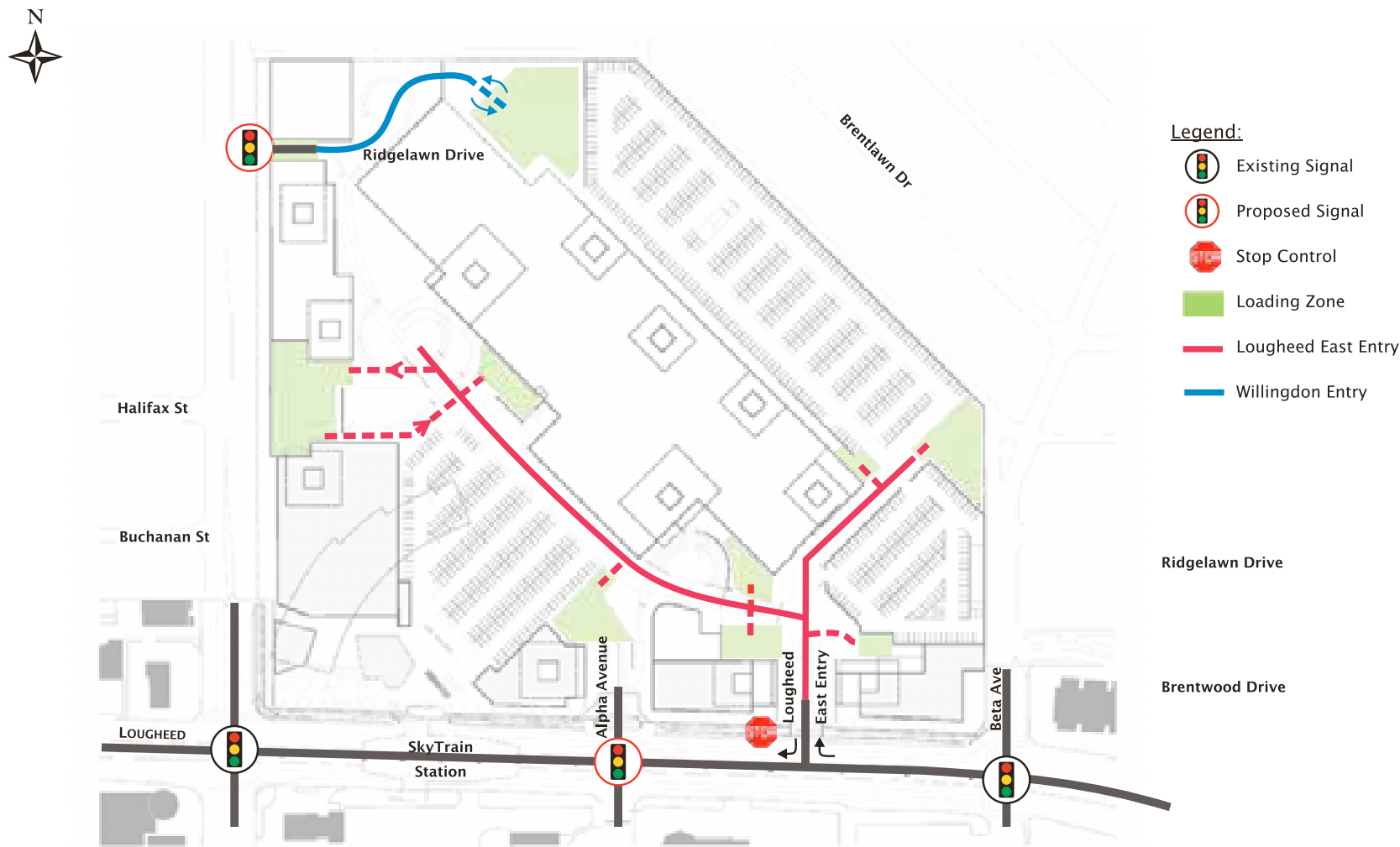
Vehicle Access

Seven vehicle connections to the new master plan are planned from the existing street network, and these are set out in the table below.

Improved accessibility from Loughheed Highway to the site would remove pressure on Willingdon Avenue, and more generally, spread vehicle demands through the local area and thus reducing pressure.

Note: Loughheed East Entry could be developed as a full-move-ment intersection depending on future traffic conditions

ACCESS	CONTROL	MOVEMENTS	LANES
1. Willingdon / Ridgelawn Drive	Signal	All	2 out / 1 in
2. Willingdon Avenue / Brentwood Blvd.	Stop/yield	right in / out	1 out / 1 in
3. Willingdon Avenue / Halifax Street	Signal	All	2# out / 2 in
4. Loughheed Highway / Alpha Avenue	Signal	All	2# out / 2 in
5. Loughheed Highway / Loughheed East Entry	Stop	Right in / out*	2 out / 2 in
6. Beta Avenue / Brentwood Boulevard	Stop	All	1 out / 1 in
7. Beta Avenue / Ridgelawn Drive	Stop	All	1 out / 1 in



Loading

The main truck servicing access is planned at the Loughheed East Entry intersection (Access 5), while the Willingdon Avenue / Ridgelawn Drive (Access 1) will provide access to buildings on the north side of the development plan, where a below grade loading podium is proposed. Commercial loading access is not planned from Beta Avenue (see Exhibit 5.1 from Transportation Study). Loading zones are identified throughout the lower street level for servicing the commercial and residential buildings. Details on the number and size of spaces would be assessed based on the City's requirements, operational needs, and shared-use opportunities. Recycling activities would be managed internally.

Parking

Commercial parking for the master plan is proposed at 2.4 parking spaces per 100sqm Gross Leasable Area (Gross Leasable Area being 60% of Gross Building Area), including 20% allocated for office space on weekdays. Residential is planned in the early phases at 1.1 spaces per unit, but the opportunity to lower this rate in the future through better understanding of market demands would provide flexibility in the design. Differing peak demands for retail, office and residential visitor uses would allow for shared parking opportunities to maxi-

mize utilisation.

Commercial and office parking rates are consistent with demands being observed at similar locations (high density / orientated around transit). The residential rate is consistent with what the City of Burnaby currently advises and the report shows it is comparable with observations at similar locations, including within Burnaby.

Parking rates planned would be supported with Transportation Demand Management measures, including bicycle initiatives and car-share vehicles. Consideration would be given to street management of parking controls in residential areas (should they be required). Opportunities would be explored for charging commercial parking in the future as part of the management of demands.

Accessibility

Pedestrians

A pedestrian-oriented focus is at the forefront of the design for the new internal street structure, and how it permeates out to meet the adjoining street network. Brentwood Boulevard is planned to be a vibrant thoroughfare, where pedestrian movements are expected to dominate and this would be reflected in the street design (width, materials, etc).

Connections through the master plan to the SkyTrain and Willingdon, Lougheed and Beta are planned to be prominent with strong visual corridors. Sidewalks on fronting streets would be upgraded to a comfortable width and form, in response to higher activity levels.

Cyclists

Cyclists would also benefit from the new internal network of streets, where the design would create a low-speed environment with a cycling strategy developed consistent with best-practice in other Cities.

Direct bicycle connections would be available at Ridgelawn Drive, Halifax Street and Alpha Avenue along with from residential streets to the north and east.

Bicycle lanes on Lougheed Highway and Willingdon Avenue would be developed along the frontage of the master plan as an integral part of the public realm design.

Bicycle parking facilities would be spread throughout the master plan for visitors, and would include specific parking for the SkyTrain Station hub. New innovative approaches to bicycle parking approaches would be considered, including a local bike share scheme and / or bike station (integrated with bicycle repairs, sales, etc.), and all supportive of lower vehicle parking rates.

Transit

A new 'sense of arrival' will be a prominent feature for the SkyTrain Station interface with the master plan, through new plazas and wide walkways at comfortable grades.

Reorganizing bus operations at the development site is a key design objective. Shape is working with TransLink and the City of Burnaby to develop new facilities that meet future requirements while being complementary to the integrity of the master plan's design (i.e. compact design, intimate street structure, activities focused at street level).

It has been agreed, in principle, one of the existing bus routes would circulate within the master plan and an optimal route is currently being developed. As well, new bus waiting facilities will be developed, including along Lougheed Highway and Willingdon Avenue.

Trip Generation

Compact mixed-use developments inherently have lower vehicle footprint from a transportation perspective, compared to single-use spatially diverse land use patterns. The Brentwood master plan site's new higher density will benefit from its proximity to the SkyTrain Station, while the expanded mix of uses will be supportive of the growing needs of the local community, and in particular providing access to a wide range of local amenities within walking distance.

Person trips generated by the master plan are expected to be upward of 11,000 to 12,000 movements in the peak-hour periods of operation (in 2033). Of these, 55% to 60% are projected to be auto-based, including passengers, while transit use would range between 25% and 35%, and walking between 10% and 15%. Vehicle movements are projected at 4,850 to 5,300 in the peak-hour periods for the completed master plan, an increase of around 100% over current levels at

the site. Projections made for the vehicle movements were corroborated with data collected at other similar locations and are consistent with the planned parking provision. At peak-hour times, around 35% of the commercial trips are expected to already be passing the site and / or within the immediate area. Vehicle movements will be spread across the 7 planned access points, with Alpha Avenue and Halifax Street expected to accommodate around one-half of all movements, while the Lougheed East Entry and Willingdon Avenue / Ridgelawn Drive would serve 25% of all movements. Beta Avenue is not expected to generate a material increase in movements to what is currently observed.

Street Network Changes

Lougheed Highway intersection with Willingdon Avenue currently operates at or close to capacity in the weekday PM peak-hour period while no operational issues were identified in the weekday morning and Saturday peak periods. Its operational performance is expected to benefit with the following measures:

- i. Lougheed Highway increasing to 6 through-lanes (currently 4/ 5 through-lanes in the local area);
- ii. New full movements intersections on Lougheed Highway at Alpha Avenue and Rosser Avenue, providing alternative north-south connections; and,
- iii. Dawson Street and Still Creek Drive developed as continuous routes between Douglas Street (in the east) through to Gilmore Avenue / Boundary Road (in the west).

Halifax Street and Alpha Avenue connections within the master plan could be expanded to 5 lanes depending on future demands, while future consideration would be given to introducing a full-movement traffic signal at the Lougheed East Entry.

Modifications are also proposed for the traffic signals at Dawson Street / Willingdon Avenue and Beta Avenue / Lougheed Highway to better manage movements within the existing street space, while other offsite changes will be developed through the planning process.

One of the main design objectives for the master plan development is to discourage 'non-local' movements through residential areas, with particular focus on the areas to the north and east of the site. The new master plan will have no direct north-south routes, while traffic calming measures such as street narrowing, speed humps, street signs, etc., will be considered, focusing particularly on Beta Avenue and Ridgelawn Drive.

Conclusion

The Brentwood Site the master plan is expected to be a major catalyst for new activity in the local area, and follows best-practice in urban design with respect to mix of uses, density, permeability, shared parking, planning for pedestrian and cyclists, Transportation Demand Management measures, and maximizing opportunities for transit use.

New vehicle demands can be catered through changes to the local street network and improved site access connections, while still preserving the integrity of the local street structure for the comfort of pedestrian, cycling, and transit users.

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Thurber Engineering Ltd.

Electrical Engineering
Nemetz (S/A) & Associates Ltd.

Mechanical Engineering
Sterling, Cooper & Associates

Quantity Surveyors
L.E.C. Quantity Surveying Inc.

Planning
Musson Cattell Mackey Partnership



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Pension Plan