

HARRY JEROME NEIGHBOURHOOD LANDS

REZONING APPLICATION

February 1st, 2018

DARWIN

PERKINS+WILL

PFS STUDIO

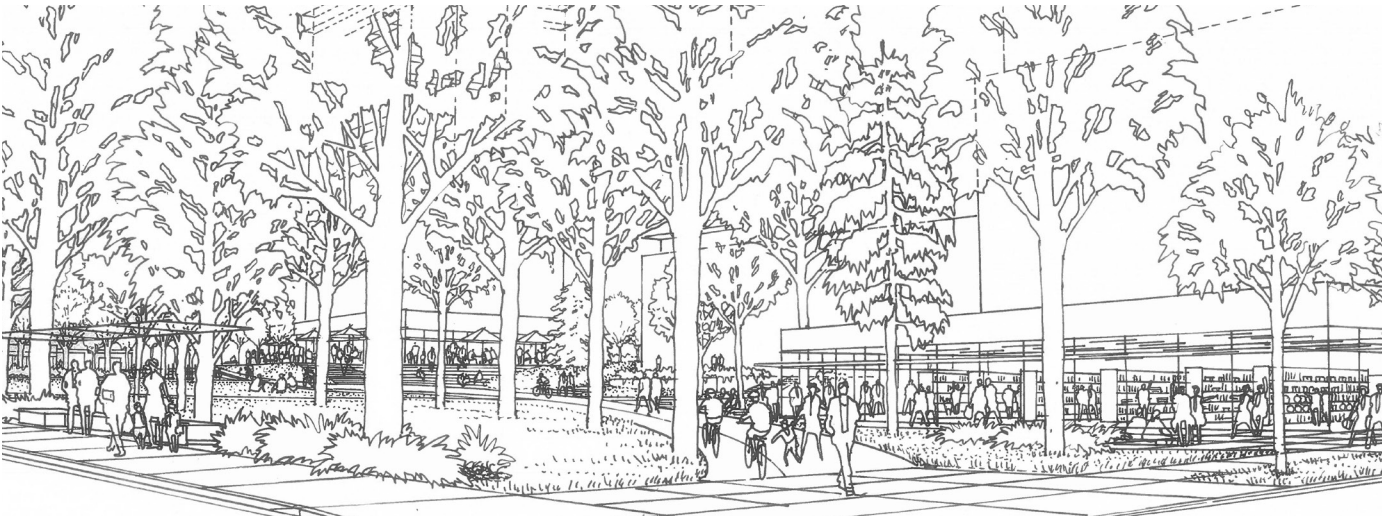


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“Our vision establishes a Legacy Redevelopment Plan for the Harry Jerome Lands. This Plan not only acknowledges the history and current use of the development lands - it recognizes that future generations will live, work and play here as well.”

PROJECT INFORMATION

PROJECT BRIEF



INITIATIVE

The Harry Jerome Community Recreation Centre is nearing the end of its useful life. In July 2017 – following a number of years of careful study and evaluation, and significant public input in the spring of 2017 – Council provided direction regarding the site and program for a new Harry Jerome Community Recreation Centre.

SELECTION OF DARWIN

The City of North Vancouver conducted a search among the development industry and after a review of submissions, identified Darwin Properties as the preferred proponent to lead the rezoning application process for the acquisition and redevelopment Harry Jerome Neighbourhood Lands south of 23rd Street E.

The City of North Vancouver plans to deliver these lands on a 99-year lease to Darwin Properties, who will apply to develop the lands with a mix of multi-family residential and other uses, including a significant new public park.

The City will use the proceeds from the lease of the Harry Jerome Neighbourhood Lands to fund construction of the new Harry Jerome Community Recreation Centre on City-owned land north of 23rd Street E.

PREFERRED SCHEME

The Darwin Properties team, including expert consultants, explored a variety of development scenarios. Ultimately, we developed one strong scheme which captures our vision. The plan herein features approximately 1.0 ha of public park land dedication, a significant community amenity, as a complement to the New Harry Jerome Community Recreation Complex.

This expansive new public park retains and builds on Crickmay Park, and maintains green space and open areas where the existing Lawn Bowling greens are today. This park encourages active participation by all age groups, and creates an important node in the Green Necklace.

Significantly, the proposed building forms and open spaces generally maintain to the existing parks, recreation and open space boundaries. The density proposed is within the range defined in the OCP maximum of 2.5 FSR. In line with the aspirations of the City, our Plan provides a mix of housing type and tenure, and commercial space, along with additional amenities.

DATA

Site Address and Legal Description

The site consists of five legal lots and is identified as follows:

- 123 23rd Street E (northwest portion)
Parcel Identifier: 009-029-311
Legal Description: Lot A of Lot 1 Block 207 District Lot 545 Plan 11876
- 123 23rd Street E (northeast portion)
Parcel Identifier: 018-929-648
Legal Description: Lot 1 Block 207 District Lot 545 Plan Lmp 17639
- 144 East 22nd Street E
Parcel Identifier: 007-711-280
Legal Description: Lot C Block 207 District Lot 545 Plan 15014
- North of Eastern Avenue
Parcel Identifier: 011-145-501
Legal Description: The Closed Part of Eastern Avenue in Reference Plan 8308 of Lot 2 Block 207 District Lot 545 Plan 5481
- 2160 Lonsdale Avenue
Parcel Identifier: 009-029-338
Legal Description: Lot B of Lot 1 Block 207 District Lot 545 Plan 11876

Site Information

- Existing Lot Area: 314,915 sq ft (95,986 sq m)
Includes Crickmay Park
- OCP Designation: MIXED-USE LEVEL 2 (Medium Density)
- Purpose: To allow mid-rise multi-family and commercial uses and activities contributing to a pedestrian-scale village-feel. Sites can be fully commercial, mixed use and must emphasize street fronting activity including shops, cafés or services.
- Form: A mix of building forms and sizes.
- Max Density: 2.0 FSR
- Max Bonus: 0.5 FSR
- A maximum increase of 0.5 FSR may be considered when public benefits are provided.

PUBLIC CONSULTATION SUMMARY



A. December 2017 Public Open House

PURPOSE

The purpose of the initial Harry Jerome Neighbourhood Lands consultation program was to provide opportunities for North Vancouver residents to give input, and help shape and define the proposed development options being considered prior to submitting a rezoning application to the City of North Vancouver

TIMELINE

On November 27, 2017 the Pre-Application Consultation Program was launched with a comprehensive project website and online survey. The program closed on December 17, 2017.

EVENTS

A Public Open House was held on Wednesday, December 6, 2017 at the North Vancouver School District 44 Administration Building on Lonsdale Avenue at West 21st Street.

Three pop-up consultation events were held on Saturday, December 9th from 1:30pm to 4:30pm in the lower level Lobby of the Harry Jerome Community Recreation Centre and on Tuesday, December 12, 2017 and Thursday, December 14th, 2017 from 4:30pm – 6:30pm in the Upper Lobby of the Harry Jerome Community Recreation Centre.

Open House		
Participants	#	%
Attendance	97	
Comment Forms Received	54	57%
Online Survey		
Participants	#	%
Survey Completed	287	
Comments Submitted	215	75%

B. Participation

PROPOSED DEVELOPMENT CONCEPT (DECEMBER 2017)

- Overall density not to exceed current Official Community Plan designation
- New expanded public park fronting Lonsdale Avenue
- Affordable housing (rental and/or for purchase) priced below typical market rates.
- Family-oriented housing
- Childcare facilities
- Retail opportunities
- Medical Office Space
- Extension and integration of the City's Green Necklace, including bicycle and pedestrian infrastructure



A. Development Option One

PROPOSED DEVELOPMENT OPTIONS

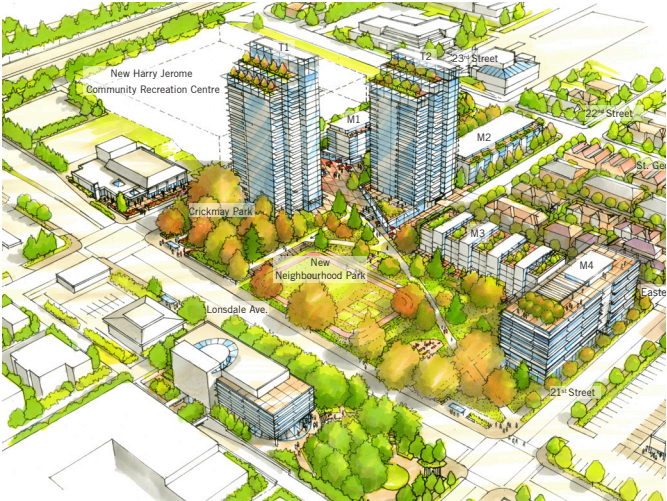
Two development concepts were presented for consideration:

Option 1

- Three buildings (T) at 16, 18 and 20 storeys are distributed across the site, with three mid-rise buildings (M), between 4 and 6 storeys, fronting the new park, Eastern Avenue, and along 22nd and 23rd Street E.
- Does not require Official Community Plan Amendment for increasing maximum building heights

Option 2

- Two buildings (T) at 24 and 26 storeys are distributed across the site, with four mid-rise buildings (M), between 4 and 6 storeys, fronting the new park, Eastern Avenue, and along 22nd and 23rd Street E.
- Requires Official Community Plan Amendment to allow for building heights above 56 metres but below 74 metres.



A. Development Option Two

FEEDBACK

- The greatest number of supportive comments were generated in relation to funding generated from the development ensuring the redevelopment of the Harry Jerome Community Recreation Centre, and in particular a 50 metre pool;
- Given the early stage of the development proposal the public provided generally positive suggestions reflecting community values including: green space; affordable housing; and livable communities that include a diverse mix of housing for families;
- The Eastern Avenue neighbours had concerns about density and adjacencies of towers and midrise buildings.
- Comments about traffic, parking and transportation infrastructure reflected the concern across the North Shore.
- The results for both options were similar, with a slight preference for Option One. This may be due to the perception that a three-tower option would result in a higher financial contribution to the City.



PROJECT INFORMATION

CONSULTANT TEAM

Darwin Properties – North Shore Developer & Builder

Darwin is a leading builder with a reputation for honesty and quality, collaboration and innovation. Since 1987, Darwin has satisfied the needs and tastes of our customers, maintaining our position as the North Shore’s most trusted development company.

Developer

DARWIN PROPERTIES

#404 - 197 Forester Street
North Vancouver, BC V7H 0A6
Canada
darwinconstruction.ca

Darwin Properties Consulting Team

Land and Development Approvals Advisor
– Richard White PAS

Urban Design Advisor
– Frank Ducote, Urban Design

Approvals and Public Engagement Strategies
– Chuck Brook, Real Estate Advisor

Public Engagement Facilitator
– Rockandel & Associates

Design Consultants

Darwin has selected a high caliber team best suited to develop the Harry Jerome Lands that will be enjoyed by the North Shore community for generations to come.

Each team member is selected for their unique experience, expertise, and ability to deliver an exceptional mixed-use development that will be a delight for the neighbourhood and the City of North Vancouver.

Architect & Planner

PERKINS + WILL

1220 Homer St,
Vancouver, BC V6B 2Y5
Canada
perkinswill.com

Landscape Architect

PFS STUDIO

1777 West 3rd Avenue,
Vancouver, BC V6J 1K7
Canada
604.736.5168
pfsstudio.com

Transportation

BUNT & ASSOCIATES

#1550 - 1050 W Pender St
Vancouver, BC V6E 3S7
Canada
604.685.6427
bunteng.com

Civil Engineering

BINNIE & ASSOCIATES

4946 Canada Way
Burnaby, BC V5G 4H7
Canada
604.420.1721
binnie.com

Environmental

KEYSTONE ENVIRONMENTAL

#1550 - 1050 W Pender St
Burnaby, BC V5G 4G3
Canada
604.430.0671
keystoneenvironmental.ca

Building Code

THORSON McAULEY

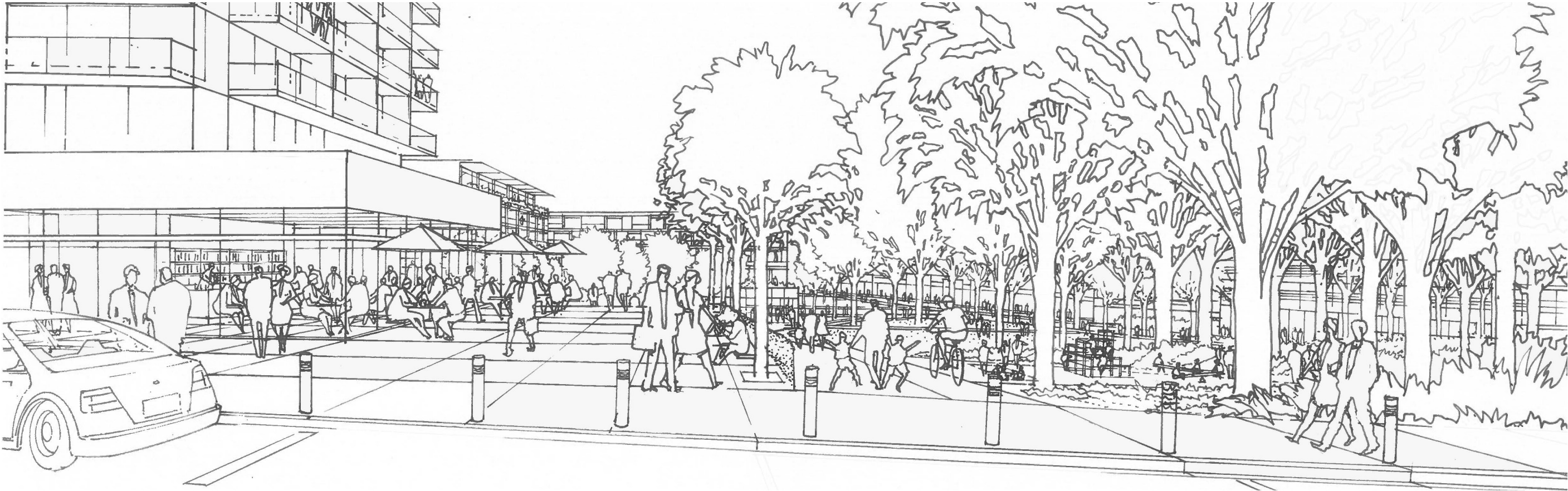
769 Roslyn Blvd.
North Vancouver, BC V7G 1P4
604.929.8520
brthorson.ca

Public Art

BALLARD FINE ART

(no municipal address on website)
604.922.6843
ballardfineart.com

DESIGN RATIONALE



A. Concept Drawing from 23rd Street E

The Harry Jerome Neighbourhood Lands project will be a key development in North Vancouver. It will create an active and vibrant destination at the northern end of Lonsdale Avenue, with a unique opportunity for a dynamic mixed-use development and public park in this location.

The Harry Jerome Neighbourhood Lands project is also a key contributor to the development of the Harry Jerome Community Recreation Centre project, where revenue generated from the HJNL project will help fund the HJCRC.

Collaborative Approach

- Darwin Properties and their consultants have worked collaboratively with the City of North Vancouver to develop this rezoning plan
- Plan also included public consultation for input into shaping the form of development

Expanding Park & Open Space

- Include and extend Crickmay Park
- Locate and provide park space that is contiguous along Lonsdale Avenue frontage

Activating the Public Realm

- Public plaza and buildings facing the public open space will have active uses (e.g. retail, commercial) as well as promoting the connection between the Harry Jerome Neighbourhood Lands and the future Harry Jerome Community Recreation Complex

Enhancing Public Site Access & Permeability

- North-south and east-west connections from adjoining communities through the site to the Green Necklace, and Lonsdale Avenue
- Enhanced sidewalks, separated bike lane and formal street trees promote daily pedestrian interaction along the boulevards

Delivering Significant Architectural Buildings

- Incorporating world-class urban design, architecture and sustainable development practices into the delivery of a community of buildings
- Derive maximum value from the site while providing a range of affordable housing options

Promoting Sustainability

- Sustainability targets for the development will meet the City of North Vancouver’s Community Vision Guiding Principles by providing an integrated approach to sustainable development for a low carbon community that is vibrant, diverse, and livable

PROJECT INFORMATION

VISION

We have a bold vision for the development that includes:

WORLD-CLASS BUILDING

- Incorporating world-class urban design, architecture and sustainable development practices into the delivery of a community of buildings.



WIDE RANGE OF CHOICE

- Providing a wide range of affordable housing choices which are appropriate to and provide options for the needs of this growing community.



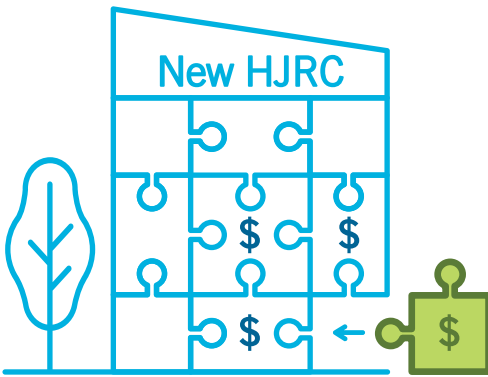
ENRICHING COMMUNITY

- Creating a rich, diverse, and complete community that promotes neighbourliness and enjoyment.



FUNDING A WORLD-CLASS COMMUNITY RECREATION COMPLEX

- Funding the construction of a new City-owned world-class Harry Jerome Community Recreation Complex (HJCRC).



DEDICATED NEIGHBOURHOOD PARK

- Building and dedicating a large and important new public park for all residents of the City of North Vancouver that will incorporate active play, exercise and recreation as an extension of the world-class facilities being planned for the new HJCRC.



ENHANCING THE GREEN NECKLACE

- Enhancing the City's Green Necklace with multi-modal pathways that derive maximum benefit from the development's amenities and new public park.



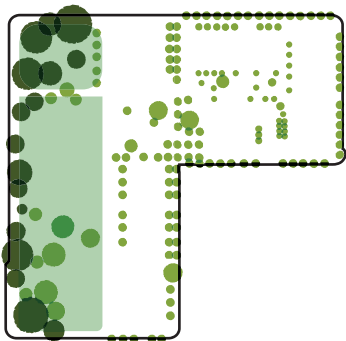
GUIDING PRINCIPLES



The following design principles, based on a thorough analysis of the site, are key to meeting our goal to achieve world-class urban design, architecture and exemplary sustainable development practices.

GREEN NETWORK / OPEN SPACE

- Maintain green gateway at significant entry points to the site
- Increase the area of existing green space on the site
- Retain trees on Lonsdale Avenue
- Ensure coherence and legibility of public open space



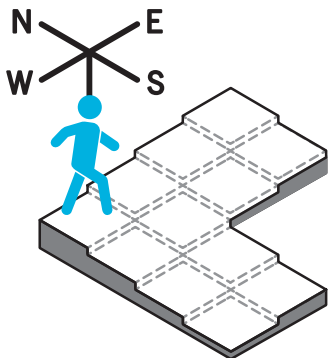
COMMUNITY

- Create a significant public gathering place
- Ensure no downtime for replacement facilities
- Build a sense of partnership with the community
- Ensure integration with the new Harry Jerome Community Recreation Complex



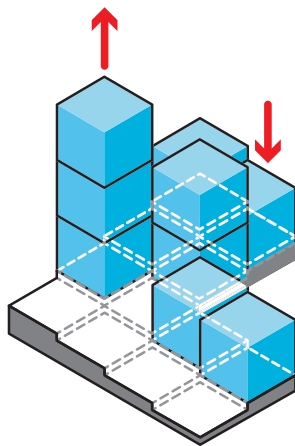
CONNECTIVITY

- Create new north-south pedestrian connections to the evolving new civic precinct (theatre, new HJCRC)
- Provide strong east-west connections to the community as well as at key entry points to the site (Lonsdale Avenue and 21st Street E, and Lonsdale Avenue and 23rd Street E).
- Provide a multi-use Green Necklace link through the site
- Maintain and improve mid-block connectivity through the site



SITE STRATEGIES

- Transition/decrease height towards the east
- Take advantage of the site slope and grade change



ECONOMICS

- Ensure strategic location of commercial uses (café, restaurant)
- Derive maximum value from the site while providing a range of affordable housing options
- Provide a diversity of housing type and unit mix



PROJECT INFORMATION

PROJECT STATISTICS

	Building Height		Area Summary					Unit Summary						
	Stories	Height	GFA Residential	GFA Retail	GFA Total	FSR Exclusions	FSR Area	Studio	1BR	1BR+D	2BR	2BD+D	3 BD	Total
T1	26	243 ft (74 m)	193,330	5,600	198,930	5,172	193,758	-	81	41	60	26	12	220
T2	26	243 ft (74 m)	195,860	-	195,860	7,516	188,344	-	80	40	60	26	12	218
M1	6	65 ft (19.8 m)	91,080	-	91,080	2,365	88,715	20	24		48	6	6	104
M2	6	67 ft (20.5 m)	104,440	-	104,440	2,848	101,592	-	-	43	30	23	5	101
M3	6	69 ft (21.1 m)	80,200	-	80,200	2,449	77,751	-	-	38	8	25	4	75
M4*	5	65 ft (19.8 m)	56,090	15,800	71,890	2,726	69,164	10	24		20	8	4	66
Parcel 2 Subtotal			136,290	15,800	152,090	5,175	146,915	10	24	38	28	33	8	141
Parcel 3 Subtotal			584,710	5,600	590,310	17,901	572,409	20	185	124	198	81	35	643
Site Total			721,000	21,400	742,400	23,076	719,324	30	209	162	226	114	43	784
Site Area							314,915							
FSR							2.28							

		Required Parking and Loading					Required Bicycle Parking						
		Units	GFA (sf)	GFA (sm)	Bylaw Requirements		Supply Required		Loading	Bicycle Bylaw Requirements		Supply Required	
					Total	Visitor	Total	Visitor		Short Term	Secure	Short Term	Secure
Parcel 2 Residential	M3	75			1.05 per unit		79	8		6 spaces per every 60 units or part there of	1.5 per unit	12	113
Parcel 2 Residential	M4*	66			.6 per unit	.1 per unit	40	7			1 per 250 sm	12	99
Parcel 2 Retail	M4		15,800	1,468	1 per 50 sm		29	-	1	6 per 1000 sm		-	6
Parcel 2 Subtotal		141					148	15				24	218
Parcel 3 Residential	M2	101			1.05 per unit	.1 per unit	106	10				12	152
	T2	218			1.05 per unit	.1 per unit	229	22				24	327
	M1	104			1.05 per unit	.1 per unit	109	10		6 spaces per every 60 units or part there of	1.5 per unit	12	156
	T1	220			1.05 per unit	.1 per unit	231	22				24	330
Parcel 3 Retail	T1		5,140	478	1 per 75 sm		6		1	6 per 1000 sm	1 per 250 sm	-	2
Parcel 3 Subtotal							681	64				72	967
Site Total							829	79				96	1,185

*M4 will conform to The City of North Vancouver's 10-10-10 policy for mid-market rental units

AFFORDABILITY & ADAPTABILITY



UNIT MIX

The Harry Jerome Neighbourhood Lands is planned to be a mixed-use community and inclusive for all.

The residential development occupies two high-rise towers and four mid-rise buildings. Both towers and mid-rises will be designed with a variety of unit types - studio, 1 bedroom, 1 bedroom + den, 2 bedroom, 2 bedroom + den, and 3 bedroom units.

The residential component consists of a variety of ownership/ rental types:

- Leasehold Strata Units
- Market Rental Units
- Mid-Market Rental

10% of all of the market rental housing within the project will be provided at 10% below CHMC rates (The City of North Vancouver’s 10-10-10 policy for mid-market rental units).

ADAPTABLE UNITS

Adaptable design refers to housing or housing features that are intended for use by people with disabilities or those who are limited in mobility. In accordance with the City of North Vancouver’s Adaptable Design Policy, 25% of homes will be designed to adaptable Level Two adaptable guidelines.

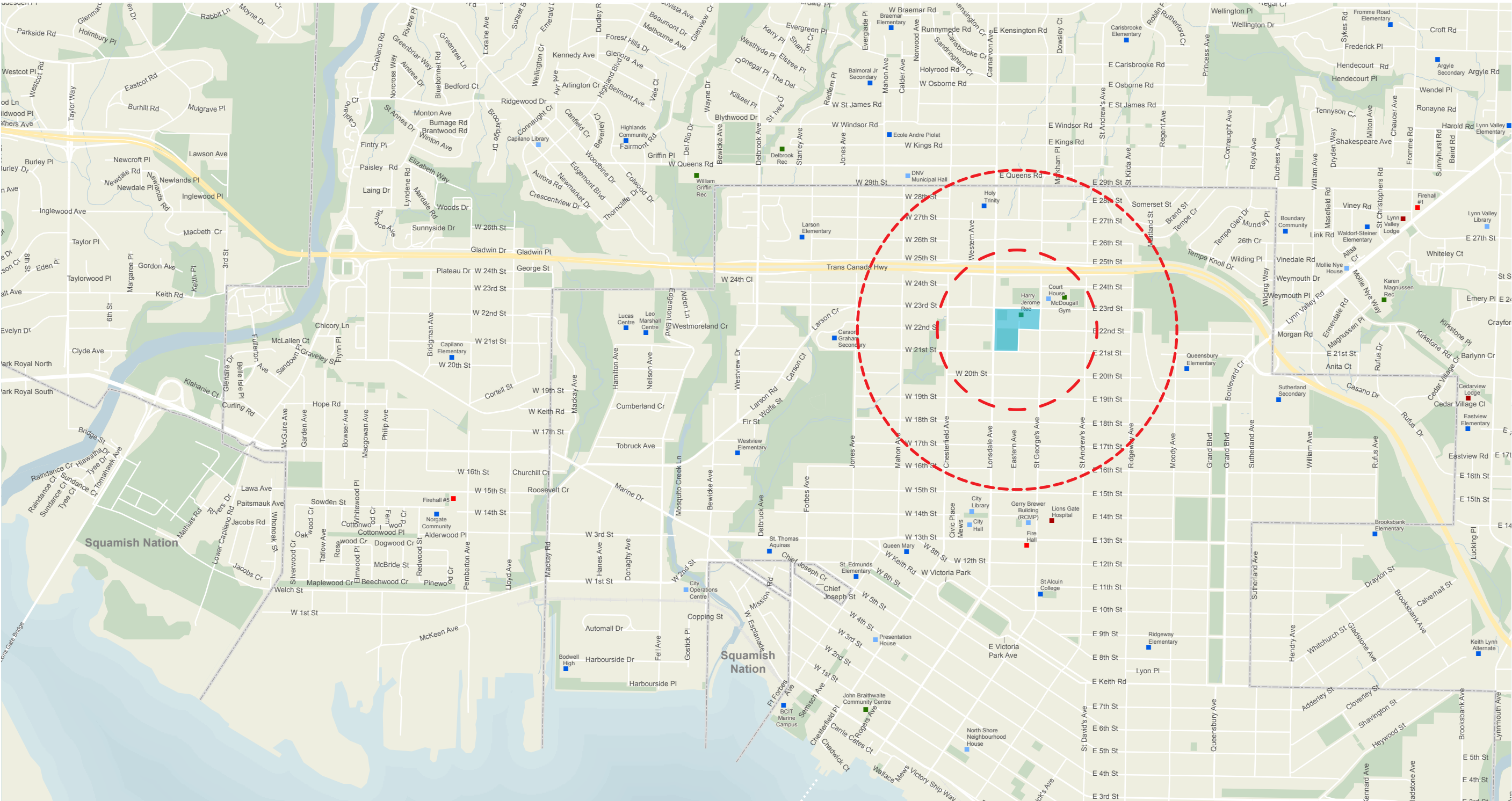
The above combined, will result in a desirable housing mix with market leasehold strata units, market rental units, and Mid-Market Rental.



SITE CONTEXT

REGIONAL CONTEXT

B

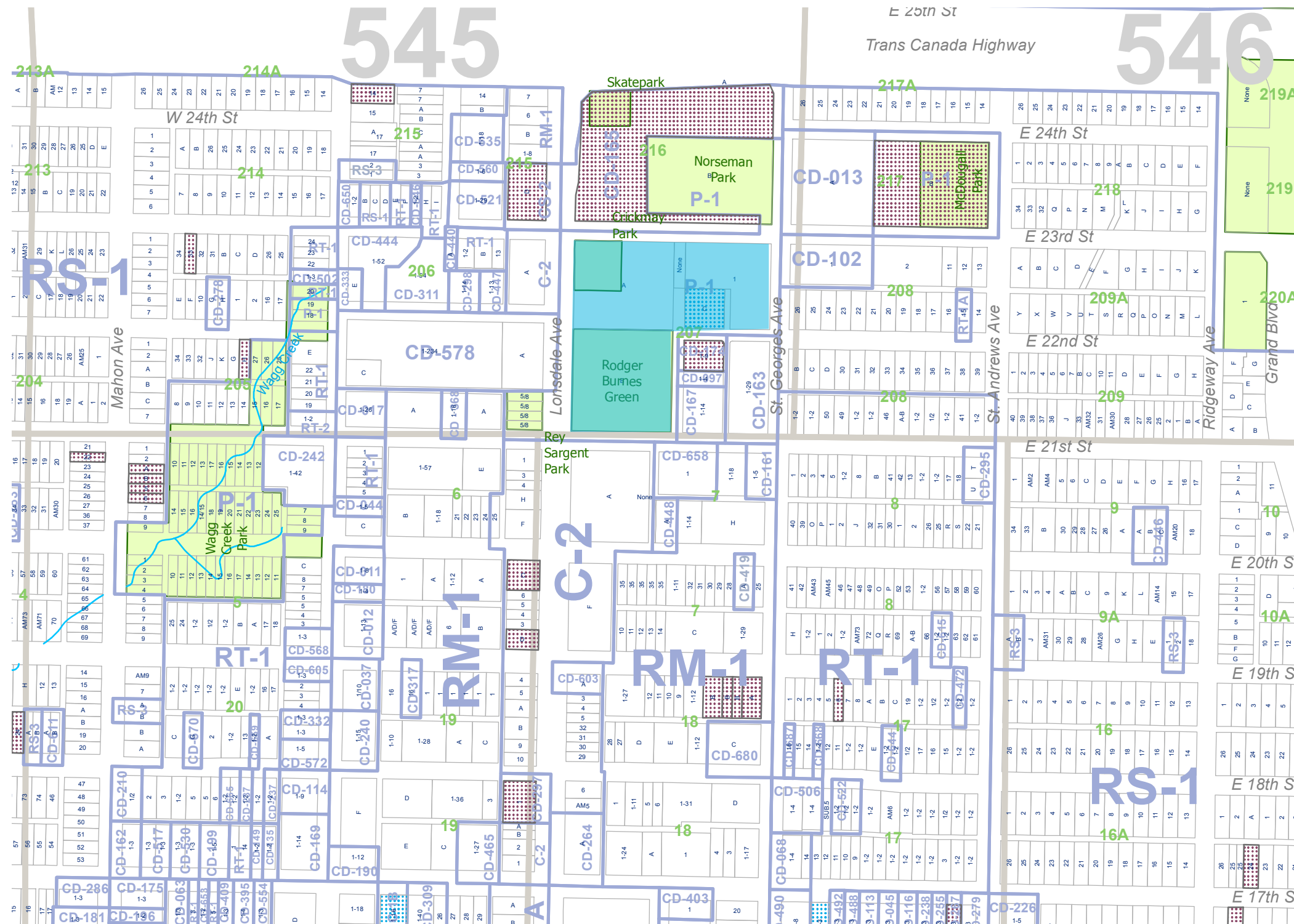


City & District of North Vancouver



ZONING DISTRICTS

■ Harry Jerome Neighbourhood Lands



City & District of North Vancouver - Generalized Zoning Map

SITE CONTEXT

CITY OF NORTH VANCOUVER OCP

OCP – KEY GOALS

Our project is designed to support the following vision for the community, which is well defined in the OCP’s Guiding Principles.

Complete & Compact

There is ample area to support the densification within a compact, sustainable and highly livable urban community that provides a wide variety of housing choices with access to transit.

Accessible & Active

The new public park is programmed to encourage activity for people of all ages and abilities, and creates a pedestrian link from Lonsdale Avenue and 21 Street E to the new Harry Jerome Community Recreation Centre.

Opportunity-Filled

Where sustainable, space for commercial uses has been provided to ensure employment opportunities are enhanced within the community. Commercial/retail space is provided at the northern urban plaza, across from the new HJCRC, to maximize visibility and use.

Resilient & Adaptable

Building spaces will be designed to remain functional through major storms, stormwater flows will be treated on site in retention ponds, and the development will contribute to greenhouse gas emission reductions by targeting LEED Gold certification.

Healthy & Inclusive

The new public park and the surrounding development will create an inclusive, supportive community that enhances the qualities of the existing neighbourhood. The legacy of athletics and sport will be strengthened to promote active lifestyles for individuals of all abilities and foster a greater sense of community.

Diverse & Affordable

This new community will include a mixture of housing types to address the City’s need for housing diversity and affordability. Rental and family friendly homes are all key components to the housing mix for the site.

Community Supporting Community

The City will continue to be a compassionate community recognizing that all individuals and/or their families will require support at some point in their lives. The City will assist organizations and individuals that provide community support through the responsible allocation of its resources.

Age Friendly

By integrating a range of housing options, accessible open space, and a variety of active and passive outdoor recreational areas, the new development and the new public park will create an inclusive community for all age groups. Furthermore, the new public park creates a barrier-free pedestrian connection to the new community centre that will provide programs for seniors and children alike.

CITY OF NORTH VANCOUVER OCP



City & District of North Vancouver - Schedule A Land Use

SITE CONTEXT

HISTORY OF THE NORTH SHORE

B



A. 189- Plan of the Townsite of North Vancouver- (North Vancouver Museum and Archives)



B. Squamish Nation paddlers in Nahanee dugout canoes in North Vancouver - (Squamish History Archives, Squamish Public Library)



C. 1910 Loggers at mouth of Capilano River with flume in the background- (North Vancouver Museum and Archives)



D. 1920s Ferry Landing, Lonsdale Ave., North Vancouver (City of Vancouver Archives)

For millennia the ancestors of the Skwxwú7mesh (Squamish), Tsleil-Waututh and X'muzk'i'um (Musqueam) peoples have lived on the North Shore. (NVMA)

1863 - Moodyville, The first sawmill opens on the North Shore. Purchased by Sewell Prescott Moody and becomes Moodyville, with a hotel and the inlet's first school. (NVMA)

1891 - The District of North Vancouver Incorporates, Stretching from Horseshoe Bay to Indian Arm, excluding Moodyville. (NVMA)

1900 - Ferry Across the Inlet - Ferry No. 1 Base of Lonsdale Avenue to Downtown Vancouver (NVMA)

1906 - Wallace Shipyards opens in North Vancouver. Later becomes Burrard Dry Dock (1925) and Versatile Pacific (1985)(NVMA)

1907 - The City of North Vancouver is created as a separate municipality "the Ambitious City" (NVMA)

1908 - Chief Joe Capilano undertakes talks with Prime Minister Wilfred Laurier on Land claims, fishing, hunting rights and education (NVMA)

1912 - West Vancouver Secedes (NVMA)

1923 - Squamish First Nation. Sixteen Coast Salish Chiefs amalgamate to create the Squamish First Nation and a council of chiefs to conduct Squamish affairs (NVMA)

1925 - The Second Narrows Bridge opens to Road traffic making North Vancouver accessible to motorists (NVMA)

1925 - Moodville joins The City of North Vancouver (NVMA)

SITE CONTEXT

HISTORY OF THE NORTH SHORE

The story of North Vancouver is imbued with the relationship between people and the natural realm.

The ancestors of Skwxwú7mesh (Squamish), Tsleil-Waututh and X'muzk'i'um (Musqueam) peoples have lived on the North Shore for Millennia (NVMA).

The densely forested slopes attracted early industry and sparked the settlements of logging operations on the North Shore. Close proximity to the industrial infrastructure and labour force of Vancouver and the abundant timber resources lead to a flourishing of logging activities on the North Shore.

As connectivity to Vancouver increased with regular ferry crossings and the installment of a streetcar line on Lonsdale Avenue, more industries including a considerable shipbuilding yard moved to the northern shores of the Burrard Inlet. People began to settle the slopes of the North Shore on mass. The construction of both the first (Lions Gate) and second narrows (Iron Worker's Memorial) bridges created connections to Vancouver which would create a huge residential demand for the development of the North Shore. Employment at the Burrard Dry Docks during World War II would reach a peak of 14,000 employees. The post-war housing boom in North Vancouver was substantial and solidified much of the urban fabric of North Vancouver.

Crickmay Park has been home to the North Vancouver Horticultural Hall, Japanese Tea House, Scout Hall and at one time was the terminus of the Lonsdale Streetcar. Today, Crickmay Park has a playground surrounded by lush gardens and mature trees (Parks of North Vancouver). The North Vancouver Lawn Bowling Club at Roger Burnes Green was established in 1923. The Harry Jerome Recreation and Community Centre and the Centennial Theatre were completed in 1966.

North Vancouver has been able to hold on to much of its' cultural, natural and industrial heritage and has remained a space characterized by the ability to live, work and play in close connection to the outdoors.



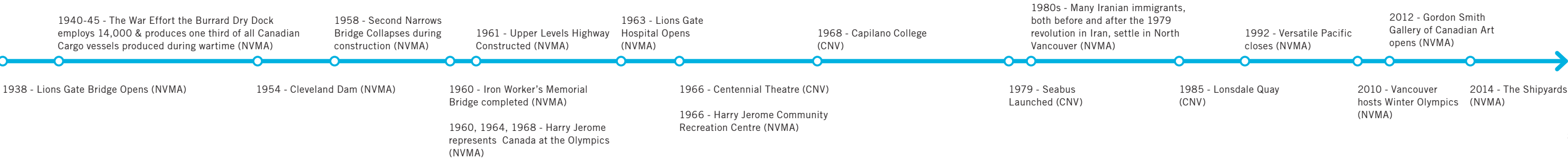
E. 1942 Burrard Dry Dock (North Vancouver Museum and Archives)



F. 1963 Lions Gate Hospital (North Vancouver Museum and Archives)



G. 1940-1982 Harry Jerome (Ralph Bower)



B

SITE CONTEXT

NEIGHBOURHOODS

North Vancouver is composed of a unique collection of neighbourhoods, each contributing to the richness of the community. The North Shore can be characterized as life between the mountains and the sea, rushing creeks and forested parks break up the communities into pocketed neighbourhoods which are connected through their commonality of life on the edge. Living on the north is something sublime - a common day can often include a walk in the rain underneath a canopy of giant cedars and douglas firs.

The neighbourhoods of North Vancouver have developed with this sense of serenity gained through a connectivity to the natural world, paired with the integrity of belonging to a tightly knit community. North Vancouver benefits immensely from the multicultural diversity of its neighbourhoods.

Lonsdale Avenue is a thriving commercial corridor, home to abundant social and cultural activities and varying scales of housing. Lonsdale Avenue hosts a remarkable range in the scales of industry and employment – on Lonsdale you can find an active ship-building yard, a flourishing residential and mixed-use neighbourhood and a variety of independent shops. The experience of Lonsdale Avenue is remarkable for its diversity of experiences and its’ tension between the mountains, and the sea.

Lonsdale Avenue has three distinct nodes: Lower, Central and Upper Lonsdale. Lower Lonsdale is anchored by Lonsdale Quay and the Sea Bus and serves dense residential development with imaginative cultural spaces such as the Lonsdale Night Market.

Central Lonsdale hosts a diverse commercial and employment economy spearheaded by the health district of Lions Gate Hospital.

North Lonsdale has a the cultural and recreational facilities such as Centennial Theatre, the Gordon Smith Gallery of Canadian Art and the Harry Jerome Community Recreation Centre.



A. Lonsdale Night Market - (North Vancouver Chamber of Commerce)



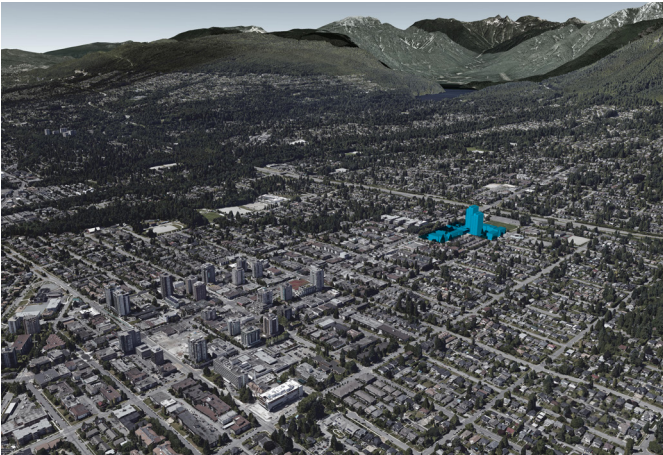
B. City of North Vancouver Library Plaza - (PCL Construction)



C. Looking North on Lonsdale Avenue & 18th Ave. - (Local on Lonsdale Avenue)



D. Views Down Lonsdale Avenue; Source: Google Earth



E. Views To Lions Gate Bridge; Source: Google Earth



F. Views Down Lonsdale Avenue; Source: Google Earth

SITE CONTEXT
NEIGHBOURHOODS

B



- New Public Park
- Surrounding Public Park
- Neighbourhood Node
- Trans-Canada Highway
- Arterial
- Collector/Local
- 5 Minute Walking Radius
- 10 Minute Walking Radius

City & District of North Vancouver - Neighbourhood Map
Not to scale

SITE CONTEXT

SITE PHOTOS

B



A. Lonsdale Avenue Streetscape



Streetscape Key Map



B. Eastern Avenue Streetscape

SITE CONTEXT

SITE PHOTOS

B



LONSDALE AVENUE



21ST STREET E

LONSDALE AVENUE



EASTERN AVENUE



EASTERN AVENUE

22ND STREET E



ST. GEORGES AVENUE

22ND STREET E

C. 22nd Street E Streetscape

SITE CONTEXT

SITE PHOTOS

B



23RD STREET E

ST. GEORGES AVENUE



23RD STREET E

D. 23rd Street E Streetscape



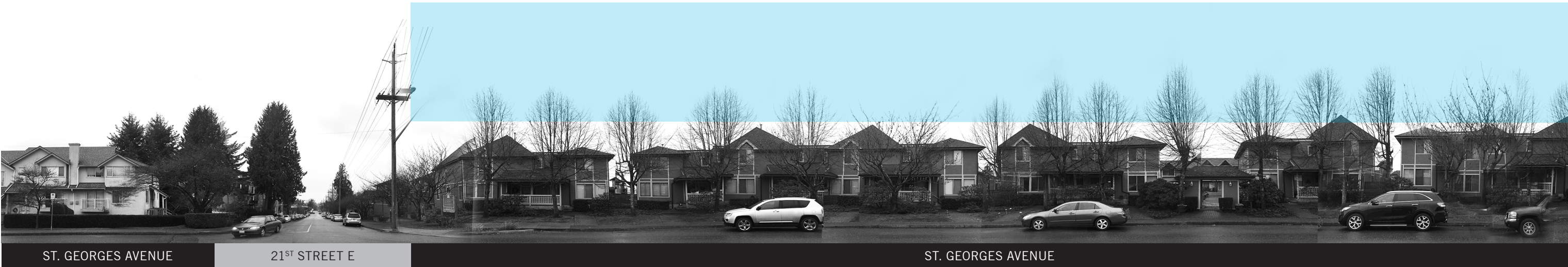
21ST STREET E

LONSDALE AVENUE



21ST STREET E

E. 21st Street E Streetscape



ST. GEORGES AVENUE

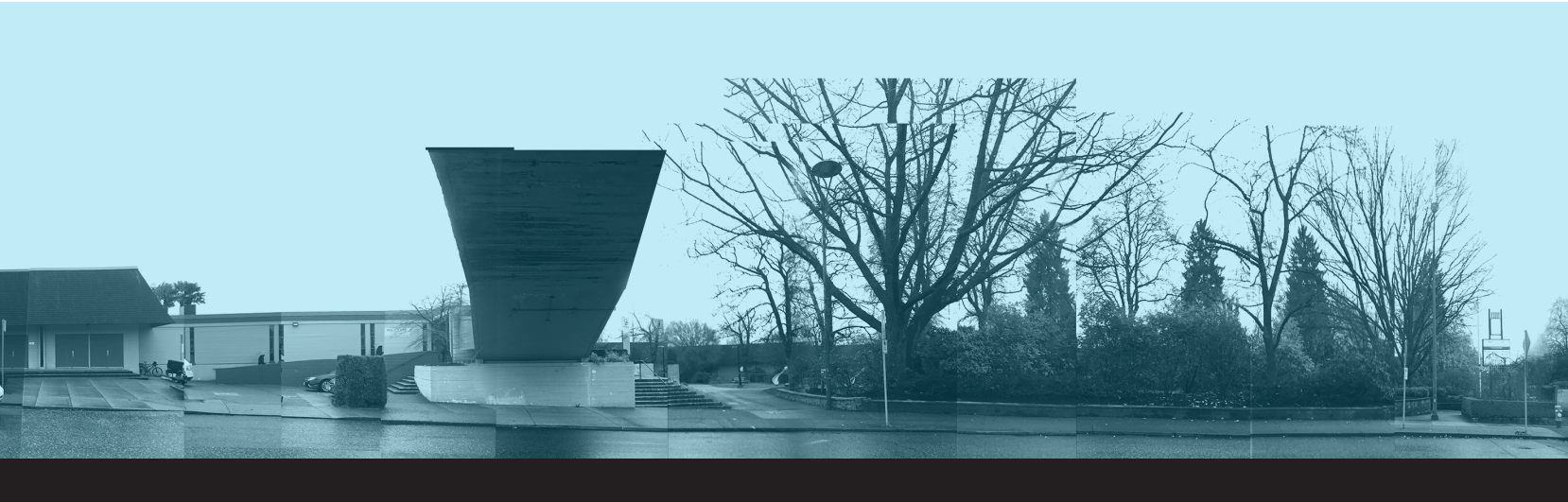
21ST STREET E

ST. GEORGES AVENUE

F. St. Georges Avenue

SITE PHOTOS

B



LONSDALE AVENUE

23RD STREET E



EASTERN AVENUE

21ST STREET E

ST. GEORGES AVENUE

21ST STREET E



23RD STREET E

ST. GEORGES AVENUE

23RD STREET E

ST. GEORGES AVENUE

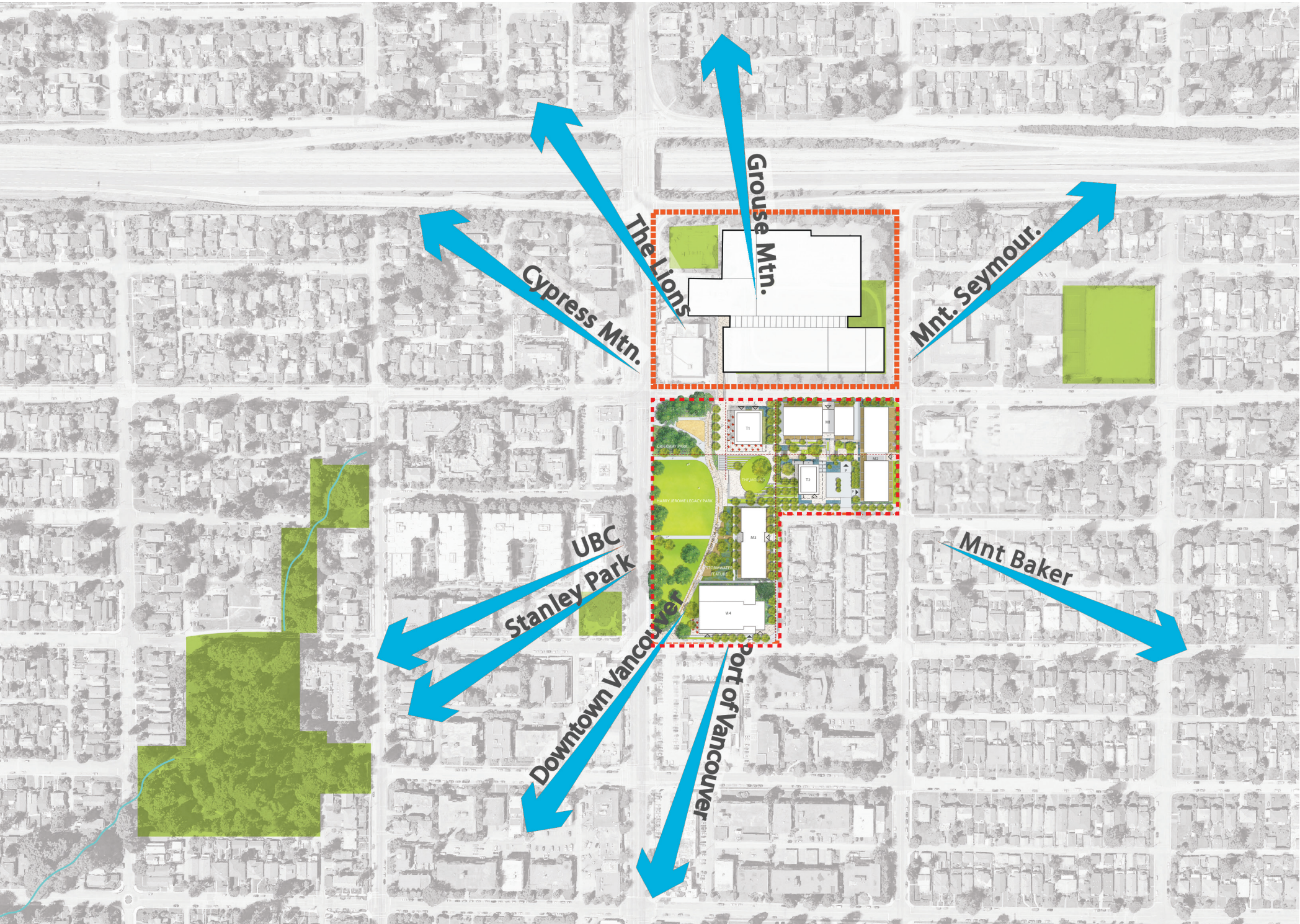
SITE CONTEXT

VIEWS & ORIENTATION

B

Views in all directions from the site are spectacular as pointed out in (A) Views & Orientation.

Drone photos from the site show actual views. See opposite page.



A. Views & Orientation

SITE CONTEXT
VIEWS FROM SITE

B



B. Panorama Above Site, looking North - 20 storeys above grade



D. Panorama Above Site, looking East - 20 storeys above grade



C. Panorama Above Site, looking South - 20 storeys above grade



E. Panorama Above Site, looking West - 20 storeys above grade

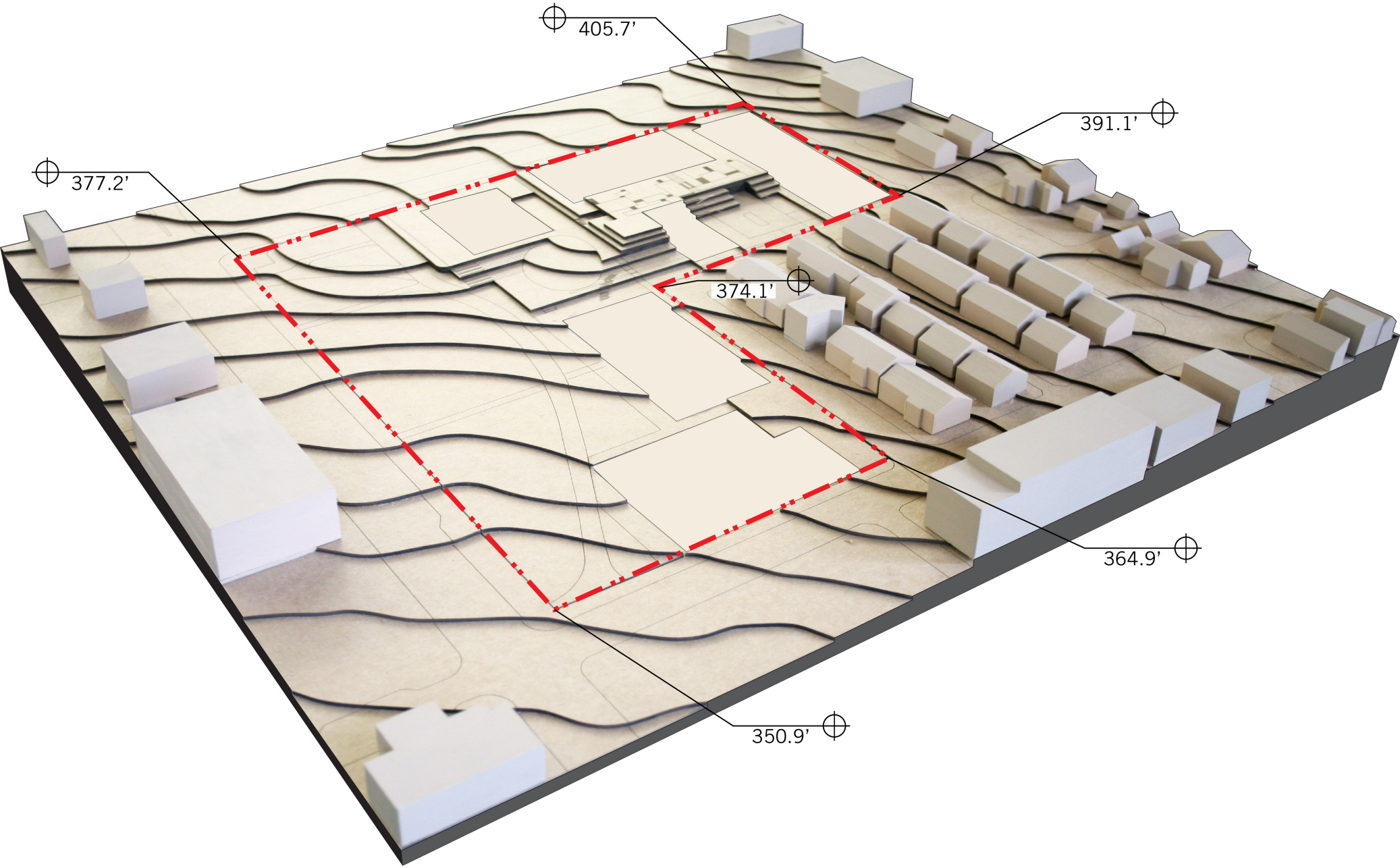
SITE CONTEXT

TOPOGRAPHY

B

Typical of a site on the North Shore, topography is a defining characteristic of the site. Sloping diagonally from the intersection of 23rd Street E and St. Georges Avenue to the intersection of 21st Street E and Lonsdale Avenue. There is a fall of 55 ft or 16.8 metres.

The slope of the site is fairly consistent, with the northeastern part of the site slightly steeper than along Lonsdale Avenue and 21st Street E.



Topographic Model of Harry Jerome Neighbourhood Lands; 1 contour = 3'-0" (1m)

URBAN DESIGN PRINCIPLES

MASTERPLAN STRUCTURE

The Masterplan of The Harry Jerome Neighbourhood Lands is structured through the following key organizing strategies:

C



THE NEW PUBLIC PARK

The site is located East of Lonsdale Avenue between 23rd Street E and 21st Street E. Its Western Boundary is St George Avenue between 22nd Street E and 23rd Street E and Eastern Avenue between 21st Street E and 22nd Street E.

The proposal includes the dedication of the existing Crickmay Park and a new public park South of Crickmay Park on Lonsdale Avenue.

KEY CONNECTIONS & NODES

The Green Necklace is the primary circulation path through the new public park. Beginning near the intersection of 21st Street E and Lonsdale Avenue – just east of existing tree canopies, this multi-modal recreational path crosses diagonally through the park dedication and just east of the proposed boundary of Crickmay Park.

East-West Pedestrian connections through the site will provide linkages from courtyards, 22nd Street E and Eastern Avenue to the Green necklace.

URBAN DESIGN PRINCIPLES

MASTERPLAN STRUCTURE



TRANSPARENCY & POROSITY

The development of this large site will create residential urban edges lined with ground floor entry patios along neighbouring streets. Key physical and visual connections through the site are provided between buildings. Visual connections through buildings with long frontages will be provided at building lobbies—providing visual transparency between the sidewalk and the interior parks and courtyards where possible.

OPEN SPACE - ZONES

The site has three distinct zones: Park, Edge and Private- shared. These zones are organized with the most public zone - the new public park located at the edge of Lonsdale Avenue. The Edge zone activates the park with active edges and uses or layers of semit public spaces between residents and public open space. Private coutryards for the residents of the new development are located further east.

PUBLIC & PRIVATE

Ground floor homes in all of the midrise buildings have private patios facing onto public sidewalks, private, yet shared, courtyards, and public park spaces. Providing transitions between public and private spaces creates a layered and terrace approach to privacy.

URBAN DESIGN PRINCIPLES

OPEN SPACE - TREES & STORMWATER

Along the western edge of the site are several significant mature trees, the vast majority of which will be retained, framing the future new public park. This canopy will be expanded through the planting of formal allies along street edges and on important connections through the site along with informal clusters of trees within the public realm.

Water will be an important feature throughout the site. Features will collect stormwater from public areas and carrying it West with the grades of the site. A large stormwater feature with a series of cascading retention pools will have both a practical function of slowing and allowing stormwater to infiltrate as well as provide peaceful seating areas among the pools.

F



A. Existing Trees + Stormwater Management

Urban Design Principle: Preservation of heritage trees will continue to be a vital asset to residents and will be expanded upon through new plantings.



B. Proposed Trees + Stormwater Management

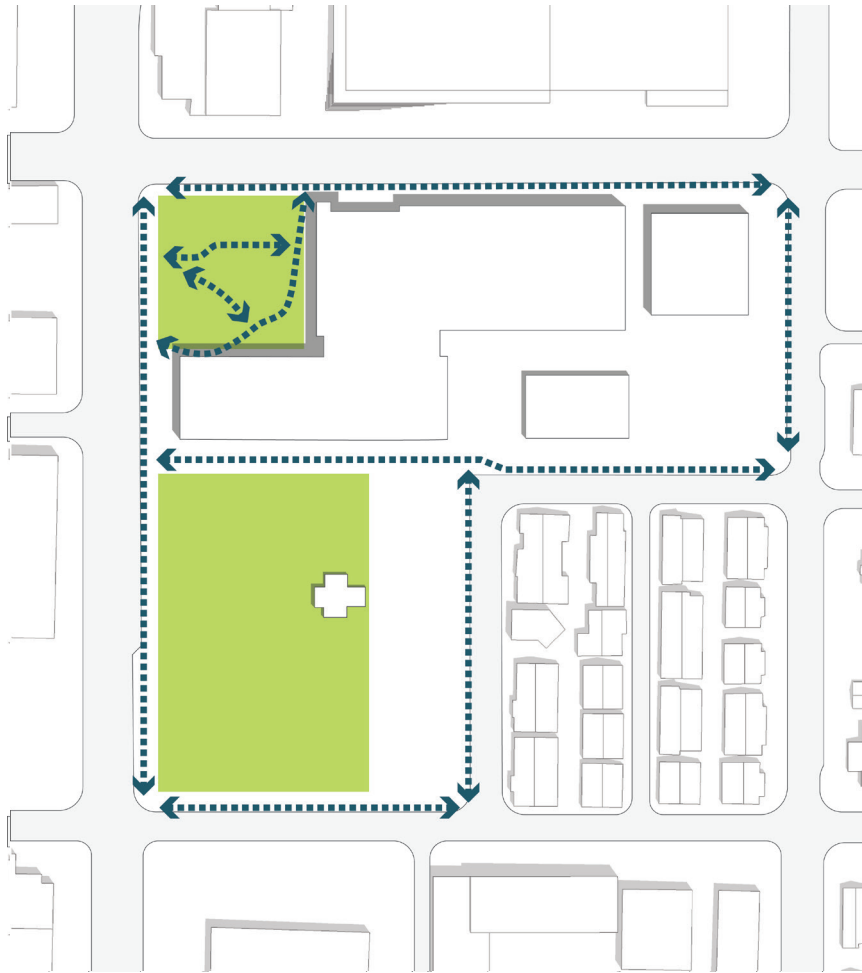
Urban Design Principle: Build on existing stormwater infrastructure to create a robust network of bioswales and on-site water management strategies.

PUBLIC REALM - PLAZA, STREETS & AXIS, GREEN NECKLACE

Presently, circulation through the site is largely limited to its outer edges with both building massing and slopes posing significant challenges to pedestrian movement.

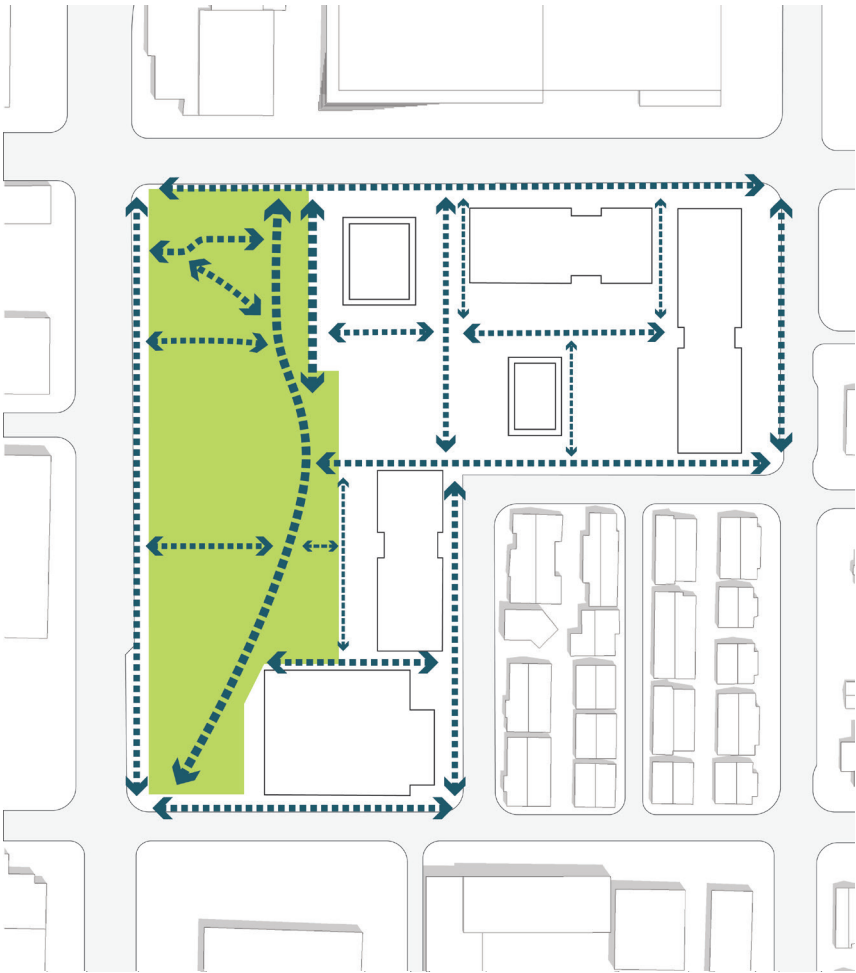
The proposed design will address the challenge of accessibility across the site through the Green Necklace, a central organizing element kept to an accessible grade of less than five percent, that will meet east west connections across the site.

The porosity of the development improves existing connectivity and is considerate of surrounding neighbours and connections and views to the future Harry Jerome Community Recreation Centre to the North.



C. Existing Circulation + Public Art

Urban Design Principle: Neighbourhood porosity will increase the ability of park users and surrounding residents to move through the development.



D. Proposed Circulation + Public Art

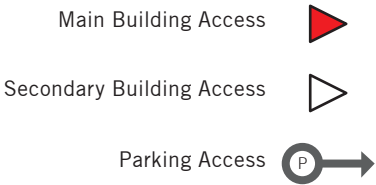
Urban Design Principle: Public art and interpretive features should work to create a sense of identity for the new public park.

URBAN DESIGN PRINCIPLES

ILLUSTRATIVE SITE PLAN

KEY CALLOUTS

- 1. Crickmay Park
- 2. New Public Park
- 3. Green Necklace
- 4. The Mound



Illustrative Site Plan

Scale 1:1000

URBAN DESIGN PRINCIPLES

MASSING

A 5-storey building with a retail podium fronts 21st Street E at the southern edge of the site. The west edge of the proposed new public park is lined with a 6-storey residential building along Eastern Avenue – the top storey of this building is setback to create a 5-storey massing and reduce the impact of height on the adjacent townhouse and single-family neighbours.

Two 26-storey towers with a maximum height of 74 metres, are proposed the northern edge of the site Just east of Crickmay Park and the second further east of the new public park accessed from 22nd Street E. Six-storey midrise buildings complete the urban edges of 23rd Street E and St. Georges Avenue.



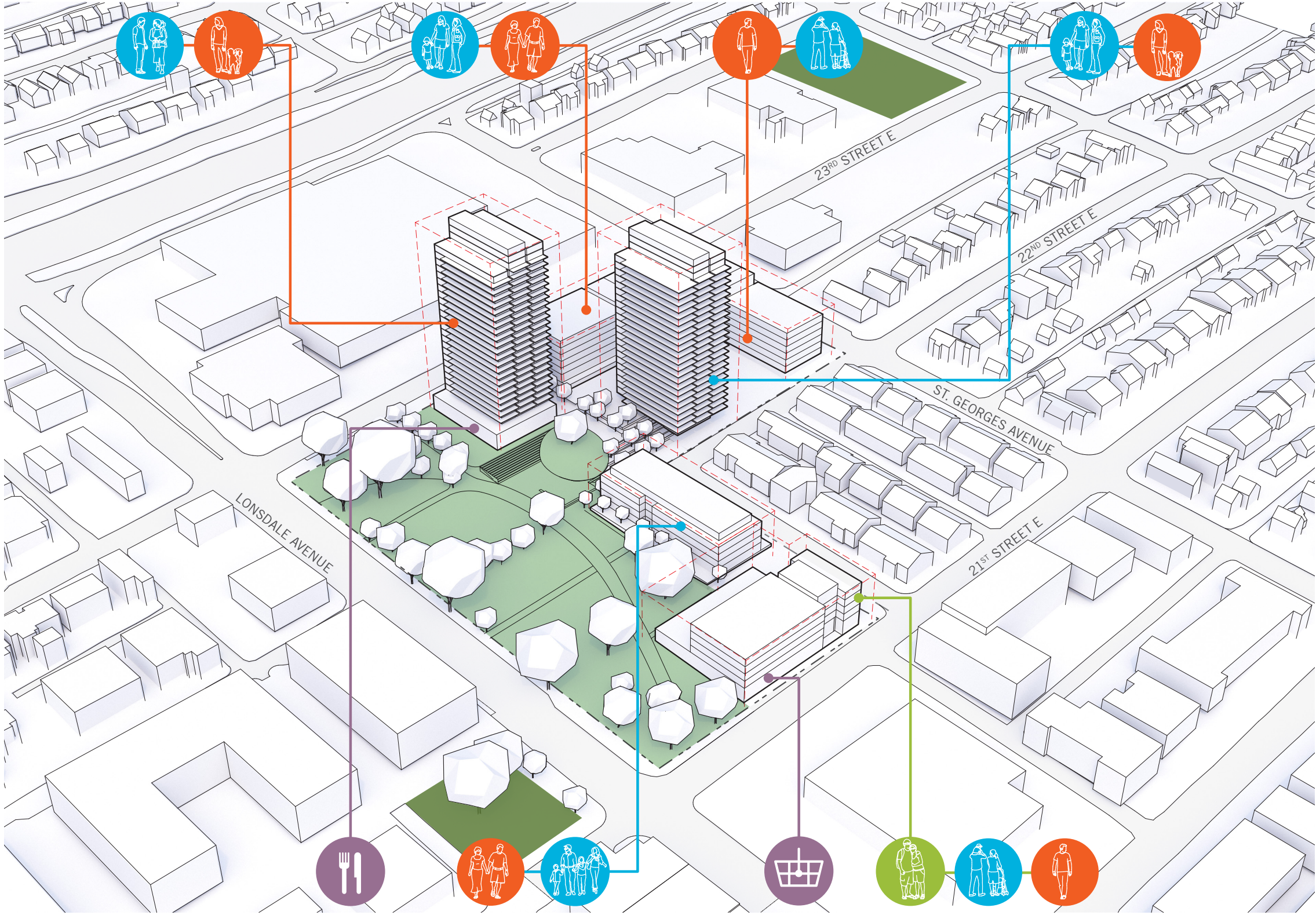
- On-site Park
- Surrounding Public Park

Massing 3D Diagram

URBAN DESIGN PRINCIPLES

PRIMARY USES

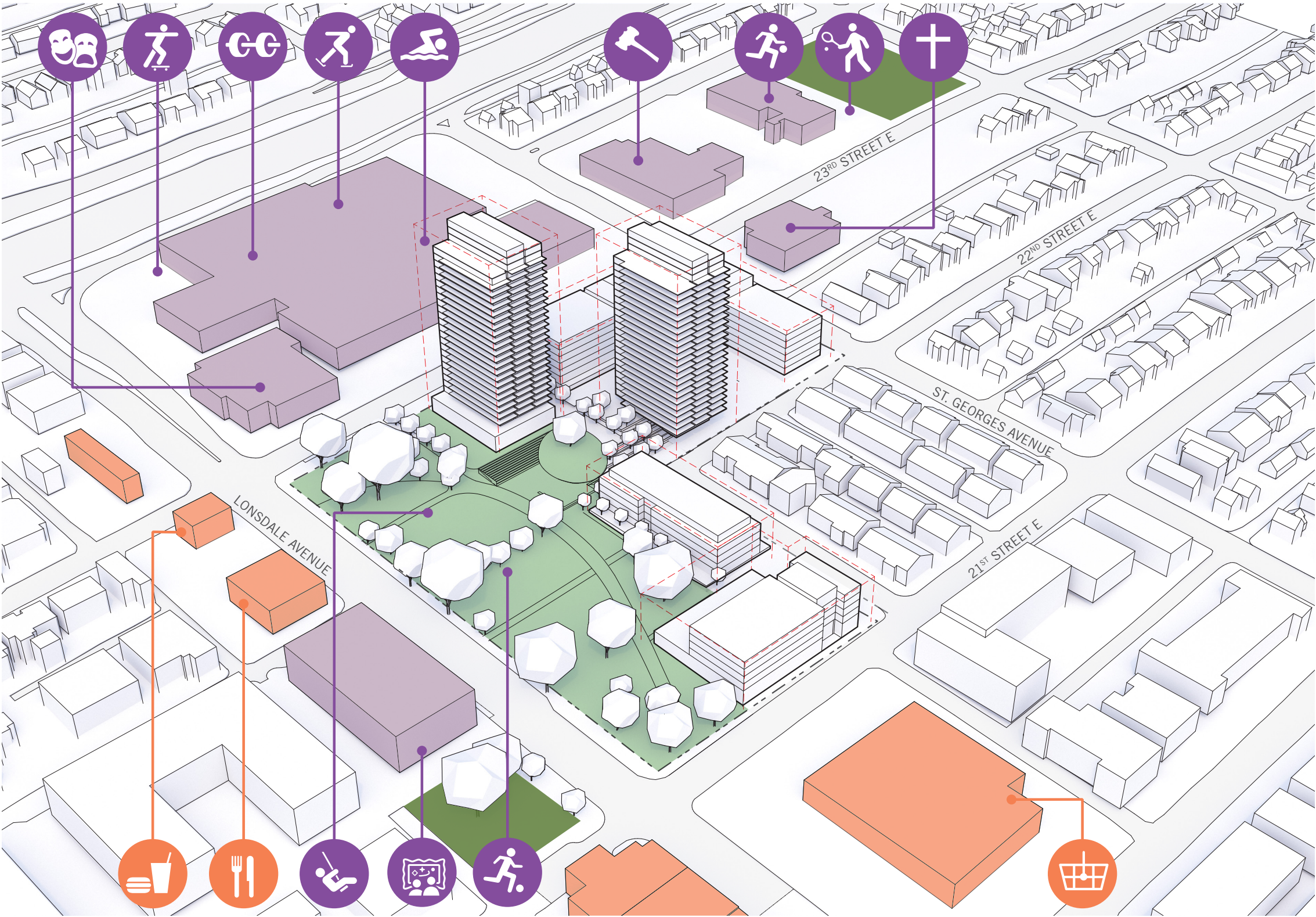
- Rental Residential
- Family Residential
- Studio/1 Bed Residential
- Commercial Retail



Primary Site Uses

URBAN DESIGN PRINCIPLES

PUBLIC AMENITIES



Public Amenities

THE NEW PUBLIC PARK

At approximately 1.0 hectares the proposed new public park will provide the City of North Vancouver with a spectacular amenity that will provide a number of significant benefits. Its location, which stretches along Lonsdale Avenue from 21st to 23rd Street E, will ensure ease of accessibility by foot, bus, bicycle or car, while also allowing for the retention of the numerous heritage trees that border the east side of Lonsdale Avenue, and comprise Crickmay Park.

GREEN NECKLACE CONNECTION

The Green Necklace is an important network within the City of North Vancouver that will be integrated within the site, providing pedestrian and bicycle pathways, connecting the site to a larger network of greenways and open spaces.

PUBLIC ART

The Gordon Smith Gallery of Canadian Art, located across Lonsdale Avenue from the Harry Jerome Lands, terminates the commercial frontage that stretches the length of Lonsdale Avenue with an intimate park that serves as an extension to the public gallery. The highly engaging art displayed in Rey Sargent park demonstrates how public art can enrich even a modest public space.

In similar fashion, the new public park presents a prime opportunity to celebrate art. A proposal for a public art approach is included.

PUBLIC REVENUE

Adding approximately 720,000 sq ft new homes to the community will generate substantial new revenue for the City of North Vancouver, more than doubling the current NVRCC Subsidy.

- Civic Uses
- Commercial Uses

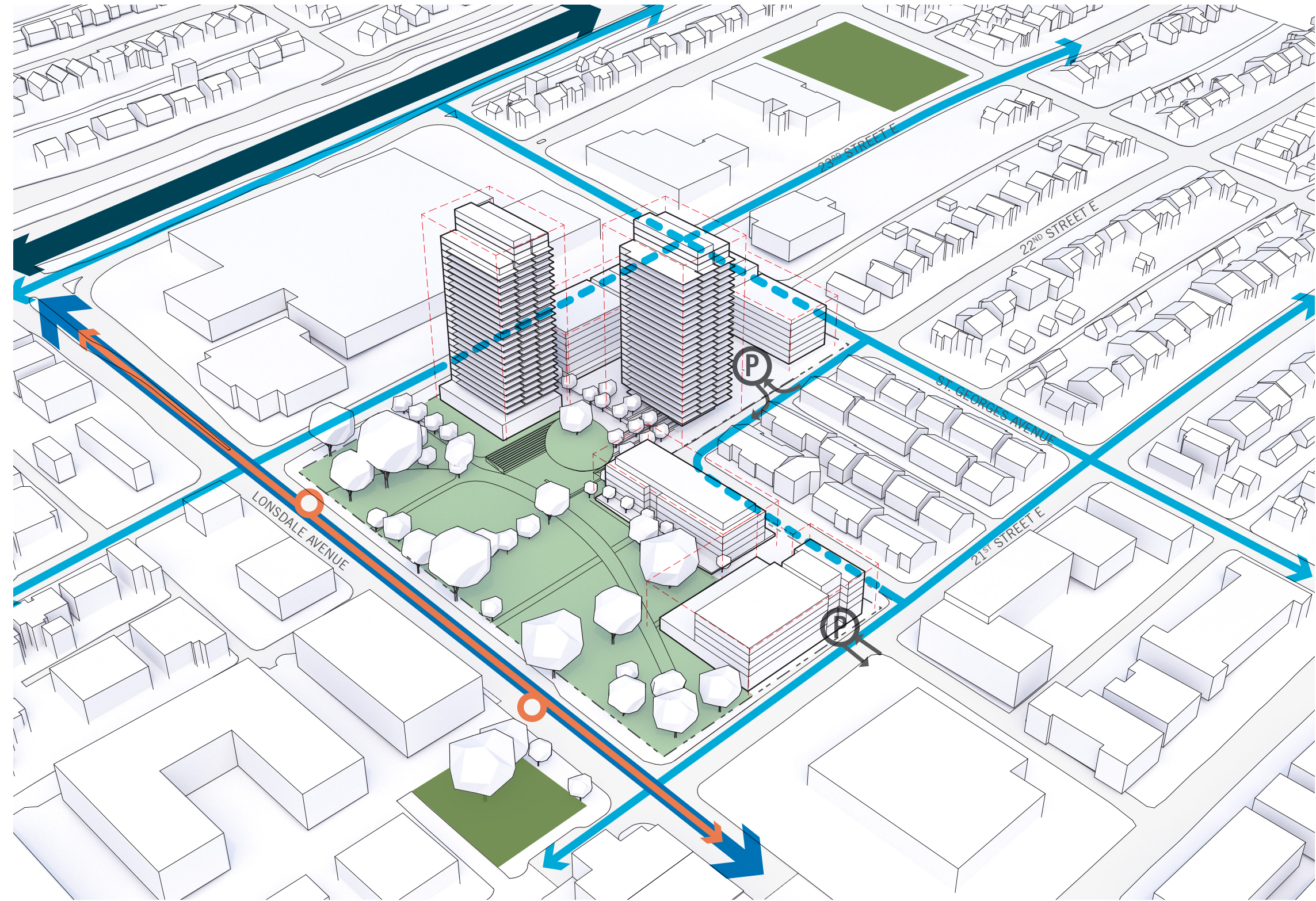
URBAN DESIGN PRINCIPLES

CIRCULATION - VEHICULAR & TRANSIT

A preliminary traffic analysis of the development site indicates it is accessible. Lonsdale Avenue, both an arterial and truck route, has a direct connection to Highway 1 to the north. St. Georges Avenue and 23rd Street E are minor arterials, and there is an alternate connection to eastbound Highway 1 at the end of St. Georges Avenue. Bus service along Lonsdale Avenue will increase with the addition of a new limited stop B-Line service, connecting Lynn Valley to downtown Vancouver via Lonsdale Avenue and the Lions Gate Bridge.

Currently, 23rd Street E, is a car-oriented roadway that bisects the Centennial Theatre/outdoor track and the existing Harry Jerome Community Centre. With the new development, the character of 23rd Street E will change dramatically as it becomes the interface between the Centennial Theatre, the new HJCRC, the new HJNL development and the new public park.

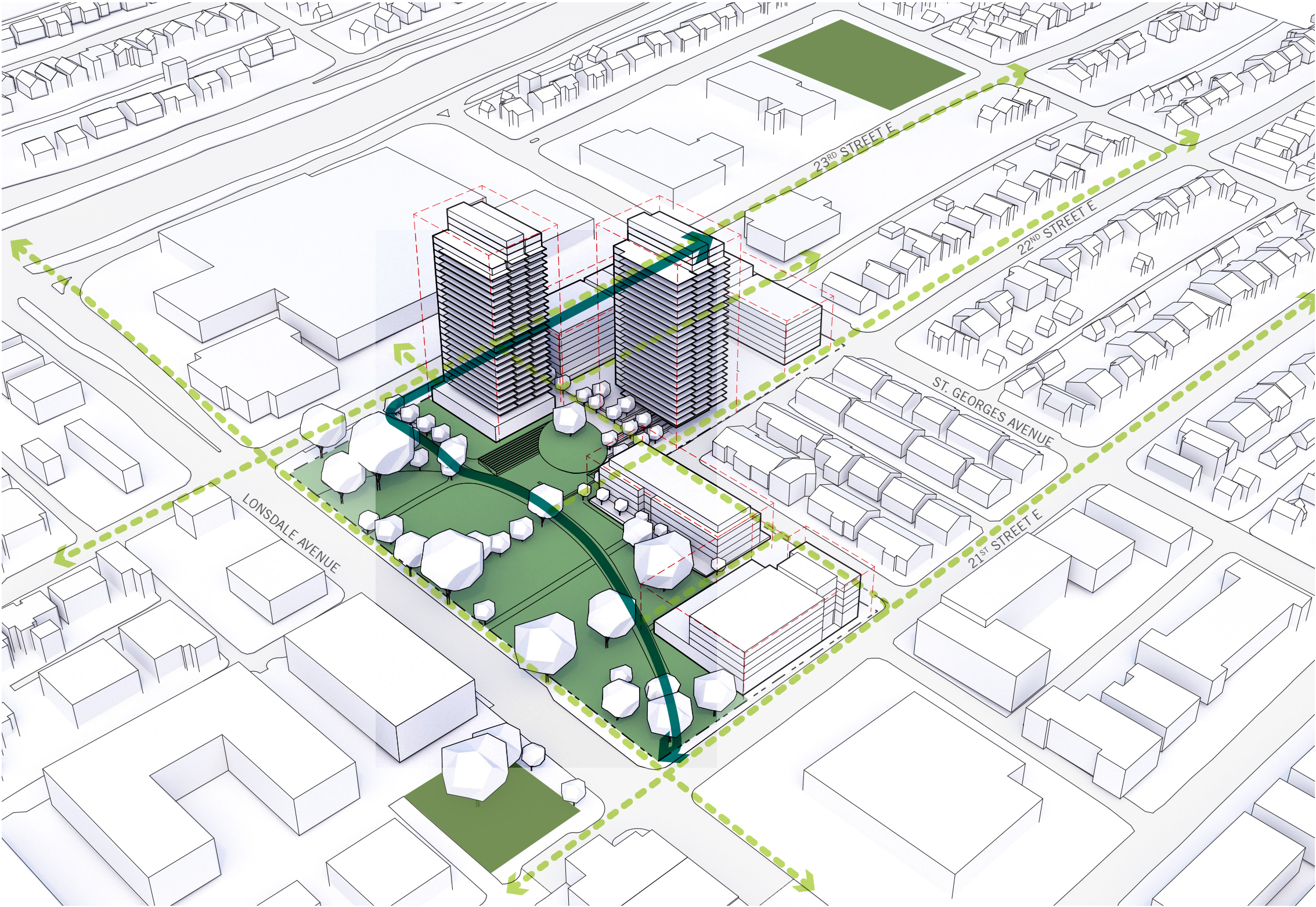
Planned improvements and traffic calming measures, such as pedestrian crossing signals or a roundabout at the intersection of 23rd Street E and St. Georges Avenue, will be considered to ensure the safety of pedestrians and cyclists.



Circulation - Vehicular & Transit

CIRCULATION - PEDESTRIAN & BICYCLES

The proximity of the New Harry Jerome Community Recreation Complex and proposed development is highly synergistic. With new residential units located across the street, the new community centre will become a centre of activity, attracting numerous pedestrians. As a key interface, it is essential that 23rd Street E become a safe, pedestrian friendly connector, linking the developments and ensuring ease of access across the street.



Circulation - Pedestrian and Bicycles



URBAN DESIGN PRINCIPLES

DESIGN ATTRIBUTES

Building Form

Tower forms address a primary south and west orientation to long commanding views across the park to the Burrard inlet, as well as significant views north of the site to the North Shore mountains:

- Capitalizing on their proximity to open space
- Framing and emphasizing the diagonal Green Necklace route across the site
- Articulating the massing of the top of each towers
- Minimizing shadow impact on adjacent neighbourhood streets and parks
- Marking the northern edge of Lonsdale Avenue with iconic yet differentiated buildings

Midrise residential massing aim to moderate the massing of the residential towers with the neighboring communities:

- Transitioning in height towards the east
- Taking advantage of the site slope and grade change, with stepped and articulated horizontal forms having visual interest
- Breaking down the scale on long building forms by articulating entrances and amenity spaces
- Raising ground floors above the adjacent sidewalk grade wherever possible to establish clear public-private space separation

Park & Open Space

The site's contiguity to park space will be reinforced by strong connections:

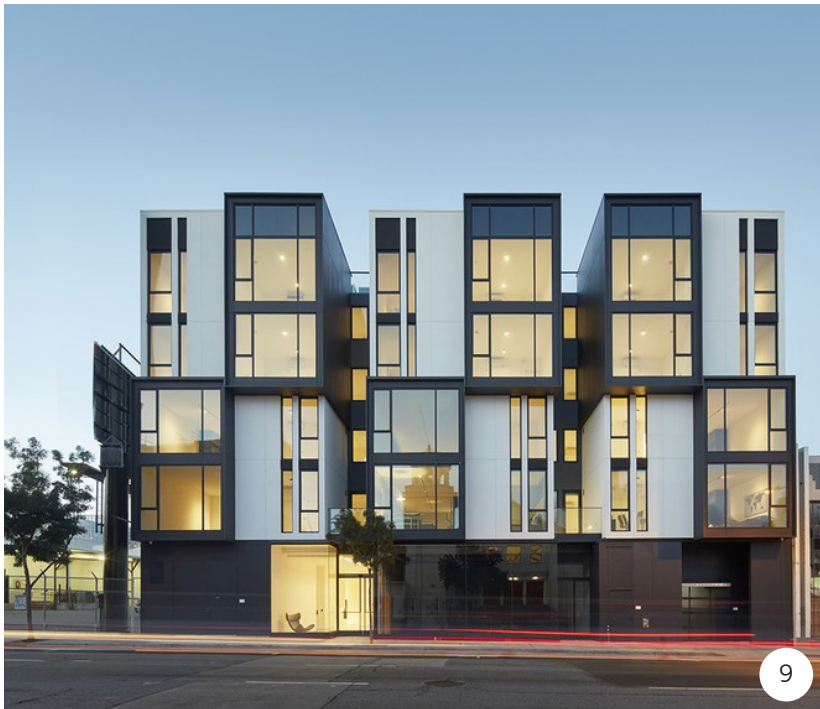
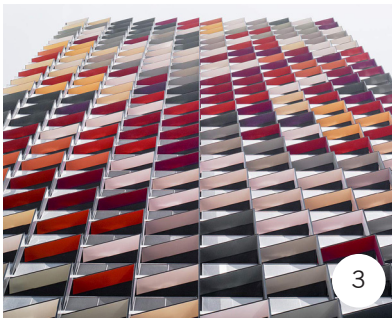
- Preserving Crickmay Park
- Providing additional public park space that is contiguous along Lonsdale Avenue frontage



Bird's Eye View of Proposed Development

URBAN DESIGN PRINCIPLES

DESIGN ARTICULATION



1. Onyx Building - Diez And Muller Arquitectos; Source: Sebastian Crespo
2. Onyx Building - Diez And Muller Arquitectos; Source: Sebastian Crespo
3. Abeckett Tower - Elenberg Fraser Architecture; Source: ArchHELLO
4. VIA Cordillera - JSA + DMG Architects; Source: ArchDailyValenton Housing - Galin Lafon; Source: ArchDaily
5. Aspire Apartments - Marchese Partners

6. Marchese Partners
7. Passivhäuser Erdmanstrabe - Huke-Schubert-Berg-Architekten
8. La Maison - TC Studio
9. Wardian - Glen Howells Architect

Public Realm

- Creating opportunities for commercial space (e.g. restaurants and/or cafés) as an amenities for new residents, park users, and the broader community
- Restaurant will include a large south-facing terrace with outdoor seating, combining strong visual and physical connections to the public park and open space, animating the park edge and drawing pedestrian traffic
- Public plaza at grade and buildings facing the public open space promoting the connection between the Harry Jerome Neighbourhood Lands and Harry Jerome Community Recreation Centre.
- The plaza and surrounding spaces provide opportunity for impromptu or temporary 'pop-up' activation at street level
- Public art will be featured at key locations in the park and/or distributed throughout the park.

Site Access & Permeability

The site benefits from a number of connections to and from the surrounding communities:

- Connecting north across 23 Street E the new Harry Jerome Community Recreation Centre
- Maintaining north/south public pedestrian route and visual axis from 23rd Street E to 21st Street E along Eastern Avenue
- Maintaining east/west public pedestrian route and visual axis from St. George's Avenue to Lonsdale Avenue along 22nd Street E
- Enhanced sidewalks, separated bike lane and formal street trees promote daily pedestrian interaction along the boulevard
- An expansive entry to the north/south central plaza space is provided mid-block

URBAN DESIGN PRINCIPLES

3D VIEWS



View Across 23rd Street E from the Future Harry Jerome Community and Recreational Centre

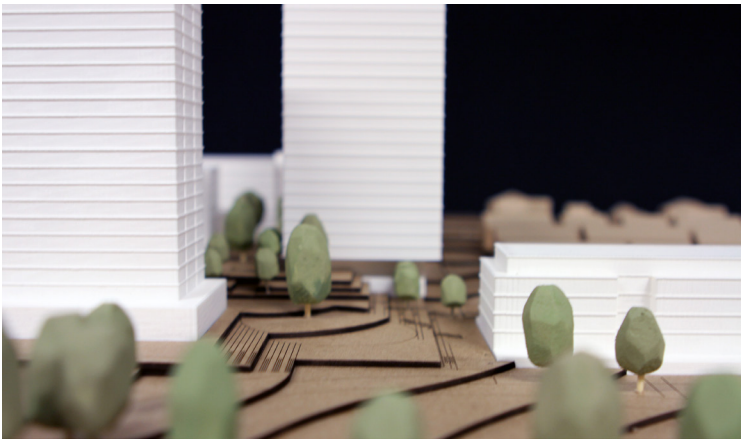
3D VIEWS

*View from 21st Street East and Lonsdale Avenue*

URBAN DESIGN PRINCIPLES

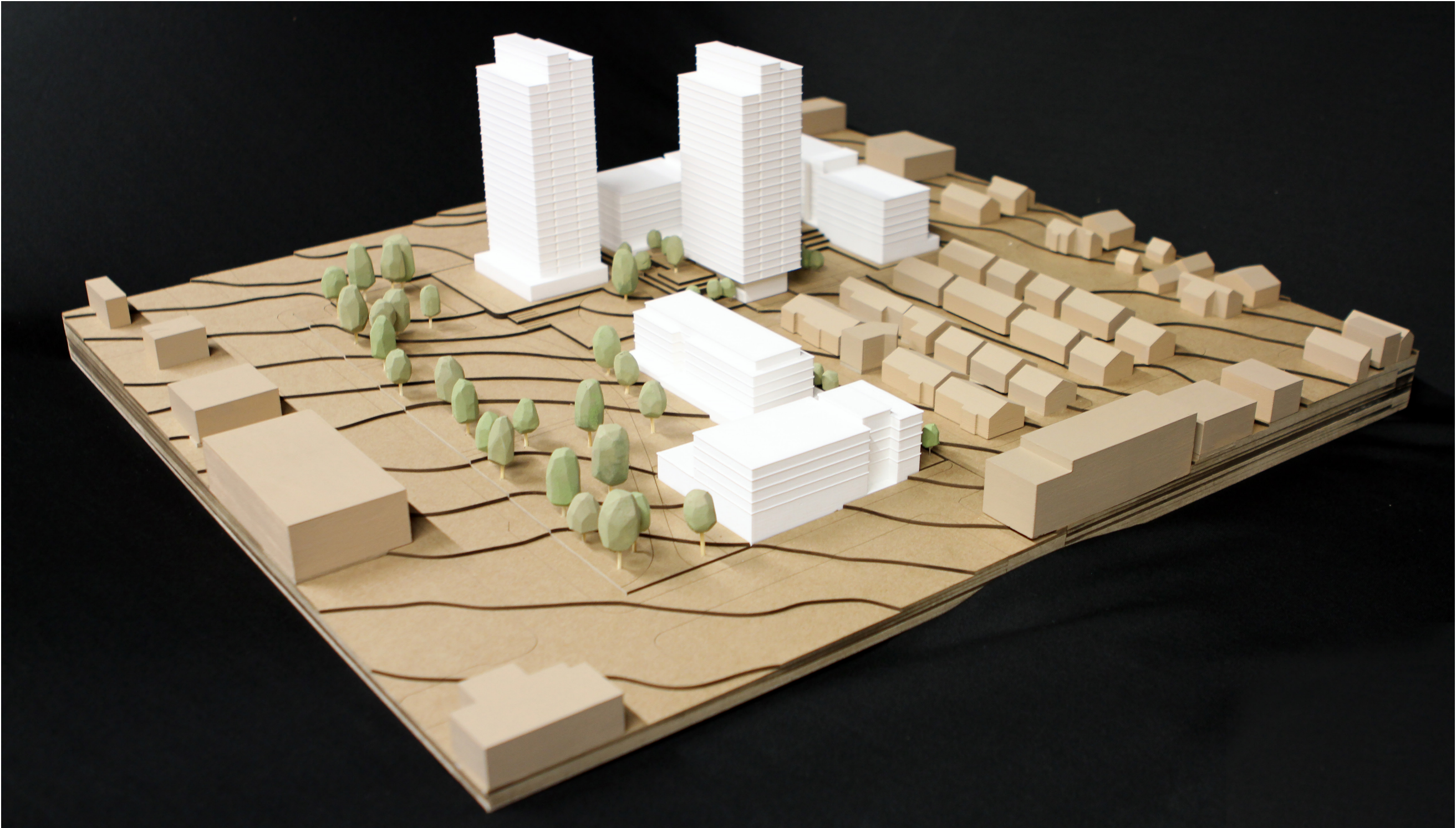
MODEL PHOTOS

C



Site Model

MODEL PHOTOS



URBAN DESIGN PRINCIPLES

MODEL PHOTOS

*Site Model*

SUSTAINABLE
DEVELOPMENT



SUSTAINABLE DEVELOPMENT

SUSTAINABLE GOALS AND STRATEGIES

Since our commitment to the environment and future generations is paramount, it is essential that this development show leadership by demonstrating how a holistic approach to sustainable community design can improve the way we live, work and play. The sustainability targets for this development will meet the City of North Vancouver’s Community Vision Guiding Principles by providing an integrated approach to sustainable development for a low carbon community that is vibrant, diverse and livable.

In December 2017, the City of North Vancouver’s zoning bylaw will be revised to require or incentivize compliance with one or more steps in the BC Energy Step Code.

Additionally, in accordance with current zoning bylaws, the development will be connected to the Lonsdale Energy Corporation (LEC) district energy system.

While we recognized the importance of energy reduction as a key sustainability driver, there are many other facets to delivering a truly holistic project. The following are the key principals and goals that illustrate our comprehensive approach.

DEVELOPMENT



- The project will produce a reasonable return on investment

- Optimize the site’s value for the City of North Vancouver’s new Harry Jerome Community Recreation Centre
- Design for lowest building operation cost for residents

COMMUNITY



- The project will encourage neighbourliness and promote a strong, connected, and engaged community

- Provide outdoor and indoor amenities for seniors, children, and youth that promote social interaction
- Provide a park with spaces that promote interaction, well-being, and health and fitness
- Provide rooftop community gardens on-site for residents

EQUITY



- The project will support equity in community development on the North Shore

- Provide a range of market and rental unit types and sizes with a range of affordability
- Promote culture and social interaction through the provision of an enhanced public realm with features such as street furniture, public art, gardens and benches
- Support universal access and the City of North Vancouver Adaptable Design Guidelines

ART + CULTURE



- The project will contribute positively to the culture of North Vancouver

- The new public park will celebrate and bring attention to a significant local hero
- Commission a new public artwork celebrating Harry Jerome

HEALTH



- The project will positively contribute to the health and welfare of inhabitants
- The project will consider the upstream and downstream impacts of materials

- Eliminate the use of harmful materials as per the Perkins+Will Precautionary List and LBC Red List
- Minimize the use of materials that produce toxic emissions during production of the material or at the end of its useful life
- Support active design approaches

MOBILITY



- The project will offer a range of mobility options

- Provide a range of emission-free mobility options including bike sharing dedicated spots for car-sharing and electric vehicles
- Provide access and connectivity to the Green Necklace

SUSTAINABLE GOALS AND STRATEGIES

BIODIVERSITY



- The project will support biodiversity in the area
 - The project will support global biodiversity ecosystems
- Provide habitat for local, small animals and insects
 - Ensure that extraction of materials for products in the project do not negatively affect global ecosystems
 - Provide more green space than existing site and an increase in the existing biodiversity

BIOPHILIA



- The project will include elements that celebrate and encourage the love of nature and natural systems, and leverage the inherent health and well-being benefits this brings to the occupants
- Provide all residents with access to public and private open space including natural elements
 - Provide views to nature from all interior spaces

RESILIENCY



- The project will be resilient to major climate events due to global warming
- Design all spaces to stay operational through major storm events
 - Accommodate the impacts of climate change over the next 100 years

WATER



- The project will minimize the use of grid-supplied potable water
 - The project will minimize stormwater flows leaving the site
- Use water efficient fixtures and fitting
 - Plant climate appropriate landscaping and use water sensitive irrigation techniques
 - Reduce stormwater flows to meet or exceed City of North Vancouver requirements with on-site infiltration and rainwater retention

ENERGY + CARBON



- The project will not contribute to climate change by increasing atmospheric carbon concentration
- Meet BC Energy Step Code in conformance with prevailing City of North Vancouver Policy, which governs building envelope, air tightness and energy usage and promote high performance envelopes
 - Connect to a hydronic energy service (LEC)

WASTE



- The project will enable inhabitants and residents to reduce the generation of solid waste
- Establish and implement an appropriate recycling and composting framework to ensure minimum waste production from the community

SUSTAINABLE DEVELOPMENT

SUSTAINABLE DEVELOPMENT GUIDELINES



COMMUNITY DEVELOPMENT DEPARTMENT
CITY OF NORTH VANCOUVER
141 WEST 14TH STREET
NORTH VANCOUVER
BC / CANADA / V7M 1H9

T 604 990 4220
F 604 985 0576
DEVEL@CNV.ORG
CNV.ORG

SUSTAINABLE DEVELOPMENT GUIDELINES

FOR REZONING & DEVELOPMENT PERMIT APPLICATIONS

Staff Use
Case Number _____

CIVIC ADDRESS Multiple Addresses, see attached.

APPLICANT NAME Andrew McMillian, Darwin Properties, Ltd.

I. INTRODUCTION

These Guidelines have been developed to help applicants prepare a successful Development Application submission. All Development Applications must include a response to the Sustainable Development Guidelines, which will be reviewed by Advisory Bodies, staff and, ultimately, City Council who will give serious consideration to the sustainability achievements of a project.

Applicants must demonstrate how their development will contribute to the current and future needs of the community by highlighting sustainability achievements of an application.

The Guidelines challenge applicants to advance the sustainability objectives of the City, as outlined in the 2014 Official Community Plan (OCP), which guides community development in our city with the following Vision:

In 2031, the City of North Vancouver will be a vibrant, diverse, and highly livable community that is resilient to climate or other changes, and sustainable in its ability to prosper without sacrifice to future generations.

One of the key ways that the community vision will be realized is through property development. Buildings house us, provide employment centres and frame our streets. They remain with us for many decades with significant ongoing impacts, including generating approximately 50% of our community greenhouse gas emissions. Buildings now need to adapt to the impacts of climate change to help the City become resilient to that new reality. Building forms and densities also have significant effects on housing cost and diversity, transportation choices, and the liveability of our community.



Sustainability in the City means balancing the natural, physical (human-made), human, social, cultural and local economic implications of our activities in order to meet the needs of people today without compromising the ability of future generations to meet their own needs.

April 2017 Version

Document: 1229132-v8

1


II. PREPARING THE SUSTAINABLE DEVELOPMENT GUIDELINES

Applicants are required to submit a response to the Guidelines as a key part of their development application package. Projects are not expected to incorporate all measures in the Guidelines.

For information on underlying City goals and objectives, it is recommended that applicants refer to other relevant City policies such as the OCP, Social Plan, Economic Development Strategy, Transportation Plan, Community Energy and Emissions Plan, Food Strategy and Food Action Plan, as well as others.

The Guidelines address the six capacities that comprise the OCP's Sustainable City Framework, including Natural Systems, Physical Structures / Infrastructure, Local Economy, Human Potential, Social Connections, and Cultural Diversity.

1. Natural Systems: The ability of natural systems, both global and local, to support life. Parks and green spaces help regulate the climate, clean and filter water and air, and provide recreational and aesthetic benefits. Maintaining healthy natural systems will reduce strain on municipal infrastructure, support local wildlife and enhance quality of life for community members.



	Y	N	N/A	Please Provide Comments:
LANDSCAPE				
Private Trees Retained or Added (indicate number)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3:1
Green Roof / Wall	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concrete only (Grocery)
Majority Native Species Landscaping	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Habitat Restoration (butterfly, bird-friendly, naturalized areas)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Community Gardens*	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
50% or More Edible Landscaping for Common Space	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Water Efficient Irrigation System (drip hose, low-flow nozzles)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Rainwater Collection (rain barrel)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Reuse of Wastewater	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
HARDSCAPE				
Permeable Paving for Hardscape	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
40%+ Open Site Space (see Zoning Bylaw definition)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other Sustainability Achievements:				

*See City of North Vancouver Active Design Guidelines for recommended compliance paths.

April 2017 Version

Document: 1229132-v8

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SUSTAINABLE DEVELOPMENT GUIDELINES

2. Physical Structures/Infrastructure: The ability to effectively deliver basic services, shelter and physical amenities required to sustain the health and well-being of the community. This includes water supply, sanitary sewer, stormwater drainage, solid waste management, roads, telecommunications, and energy efficiency and conservation including district energy. As well, this category includes attractive streetscapes, durable buildings, provision of a range of housing types and adequate community amenities.



	Y	N	N/A	Please Provide Comments:
HIGH PERFORMANCE CONSTRUCTION				
Durable Building (modular / deconstructable)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TBD
Building Reuse / Recycled Content / Use of Repurposed materials	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Majority Use of Environmentally Friendly Materials (non-toxic, wood)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Certified by a Third Party Green Building Rating System	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A with BC Step Code
ENERGY EFFICIENCY AND HEALTHY BUILDINGS				
Energy Performance (% better than Building Code or energy use / m ²)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TBD
Superior Insulation (thick wall exclusion in Zoning Bylaw sought for insulation above BC Building Code)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TBD
Airtightness (1.5+ blower door test and appropriate ventilation strategy)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TBD
High-performance Windows e.g. Energy-Star, Passive House Certified (whole project)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TBD
Heat Recovery Ventilator (75% or better recovery)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
LED Lighting (whole building)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Energy-Star Appliances (whole building)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Renewable Energy Fixtures Installed	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Water Efficient Fixtures (whole building)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Greywater Reuse	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
TRANSPORTATION				
End of Trip Bicycle Infrastructure (beyond Zoning Bylaw requirements)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Car-Share Program	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Electric Vehicle Supply Equipment:

20% of all residential parking spaces include an electrical outlet, a receptacle or electric vehicle supply equipment, and are supplied by a branch circuit rated not less than 40A at the nominal voltage of 208 V or 240V as applicable.

☒ ☐ ☐

Electric Vehicle Supply Equipment:

Adequate space in the electrical room or electrical vault to support future electric vehicle charging for the remaining 80% of parking spaces.

☐ ☐ ☐ TBD

Other Sustainability Achievements:

3. Local Economy: The ability to maintain and grow a healthy local economy. A strong economy brings employment and a solid tax base to support services without compromising other areas of capacity. A stronger economy has been shown to support healthier lifestyles for community members and greater opportunities for personal fulfillment and overall quality of life.



	Y	N	N/A	Please Provide Comments:
Net New Jobs Generated (long term, full time)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	# TBD
Commercial floor space (net increase, indicate area)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	+21,400 sf Commercial Area
Neighbourhood-Scale Commercial (unit frontages ≤6m (20ft))	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Non-Market / Lower-End of Market Commercial	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Commercial Relocation Strategy	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Other Sustainability Achievements:

4. Human Potential: The ability of our local community to support our residents in their pursuit of individual livelihood objectives including access to education, healthy food, active transportation and affordable housing. Meeting these basic needs is essential for the maintenance and growth of human capacity.



	Y	N	N/A	Please provide comments:
Market Rental Housing (net increase, indicate number of units)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	estimated 66-78 units
Non-Market / Lower-End of Market Rental Housing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TBD

SUSTAINABLE DEVELOPMENT

SUSTAINABLE GOALS AND STRATEGIES

10%+ Three+ Bedroom Units (in multi-unit residential buildings)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Micro-units ~37.16m ² (~400 ft ²)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Childcare Facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TBD
Community Space for Food Preparation, Storage and Processing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Amenity Room
Green Building Educational / Interpretive Features	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TBD
Primary and Secondary Stair Design*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TBD
Outdoor Circulation*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Storage space for residents in units and storage rooms (multi-unit residential buildings)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Other Sustainability Achievements:

*See City of North Vancouver Active Design Guidelines for recommended compliance paths.

5. Social Connections: The ability of our community to foster communication, interaction and networks to respond effectively to community issues. These may include supporting community members with low incomes, lone-parent families, and matters specific to children, youth, seniors and people with disabilities.



	Y	N	N/A	Please provide comments:
Design Features for People with Disabilities (beyond Zoning Bylaw requirement)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TBD
Communal Cooking Amenities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Indoor Amenity*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Outdoor Recreation*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Amenities for Senior Users	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TBD
Crime Prevention Through Environmental Design	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	TBD

Other Sustainability Achievements:

*See City of North Vancouver Active Design Guidelines for recommended compliance paths.

6. Cultural Diversity: The ability of our community to support and celebrate a diversity of cultural backgrounds. This includes recognition of the traditions of the Squamish Nation and the many cultures of residents who make the City their home. With both tangible and intangible elements, cultural capacity has economic implications and is strongly connected to social traditions. Manifestations of cultural practices can range from spiritual practices to heritage buildings.



	Y	N	N/A	Please provide comments:
Formal and Informal Gathering Spaces	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Retention of Heritage Building	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Public Art Reflecting Local Culture	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Public Art Plan
Streetscape Improvements (benches, planters, lighting)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Other Sustainability Achievements:

III. SUMMARY

The Sustainable Development Guidelines are important in both shaping and processing development applications. Applicants are advised to consider these issues at the outset of a project and to contact planning staff for more information on sustainable design strategies.



Endorsed by Council October 5, 2015

ARCHITECTURE

E



23RD STREET EAST

21ST STREET EAST

LONSDALE AVE



21ST STREET EAST

22ND STREET EAST

23RD STREET EAST

ST GEORGES AVE



LONSDALE AVENUE

EASTERN AVENUE

ST GEORGES AVENUE

21ST STREET EAST



ST GEORGES AVENUE

EASTERN AVENUE

LONSDALE AVENUE

22ND STREET EAST



ST GEORGES AVENUE

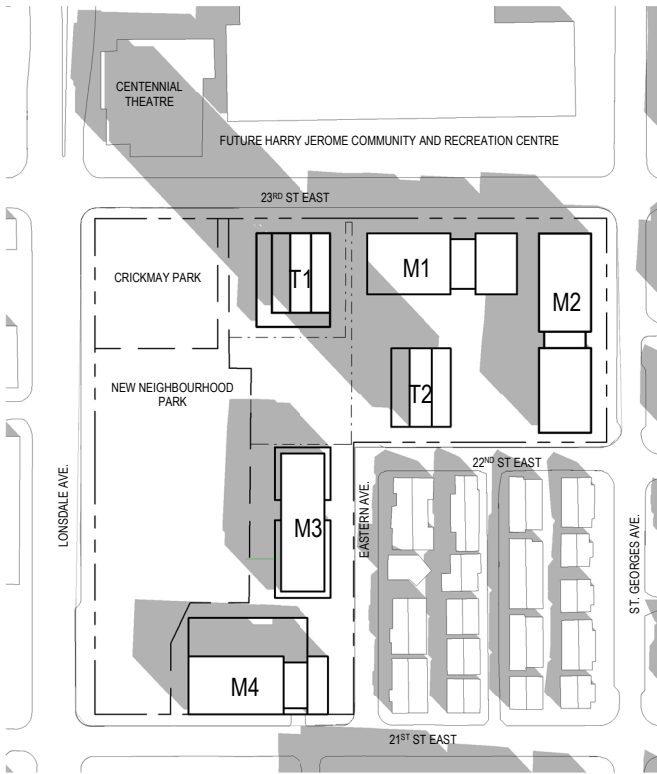
LONSDALE AVENUE

23RD STREET EAST

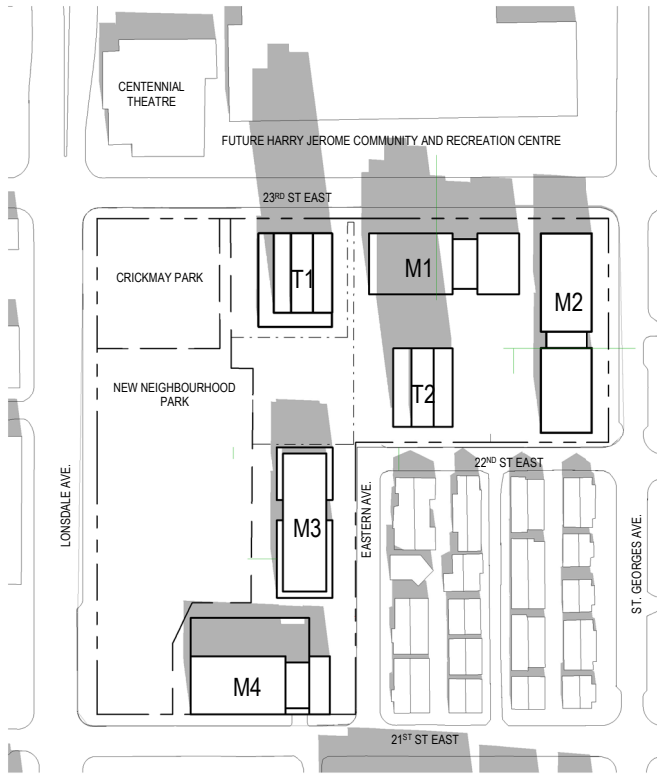
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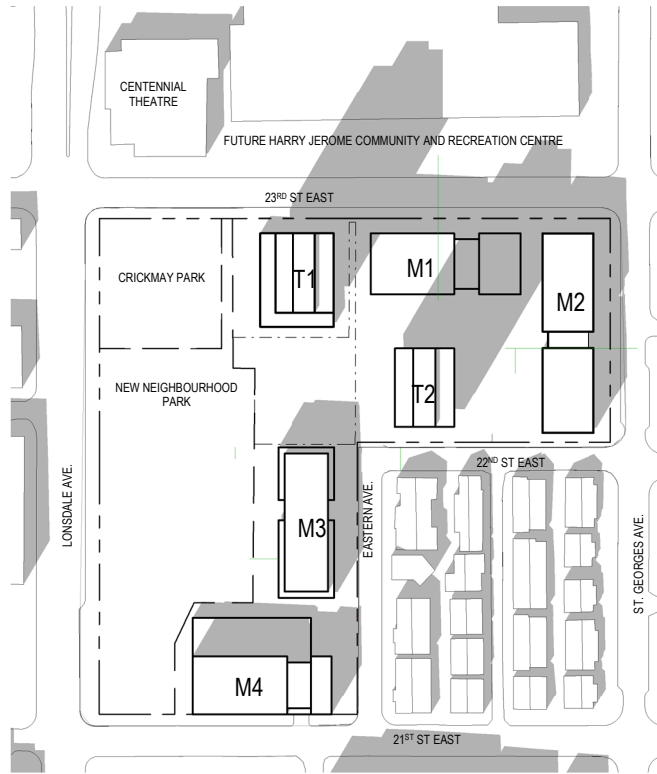




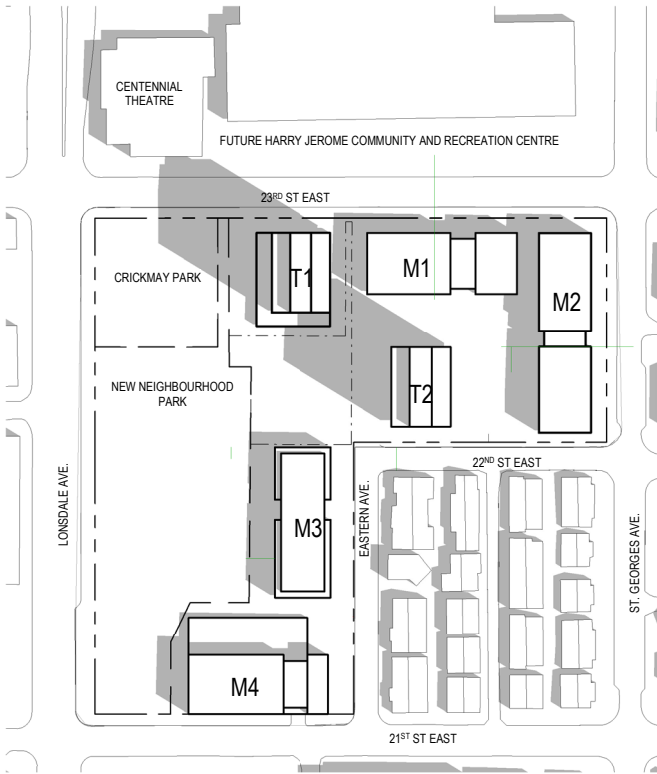
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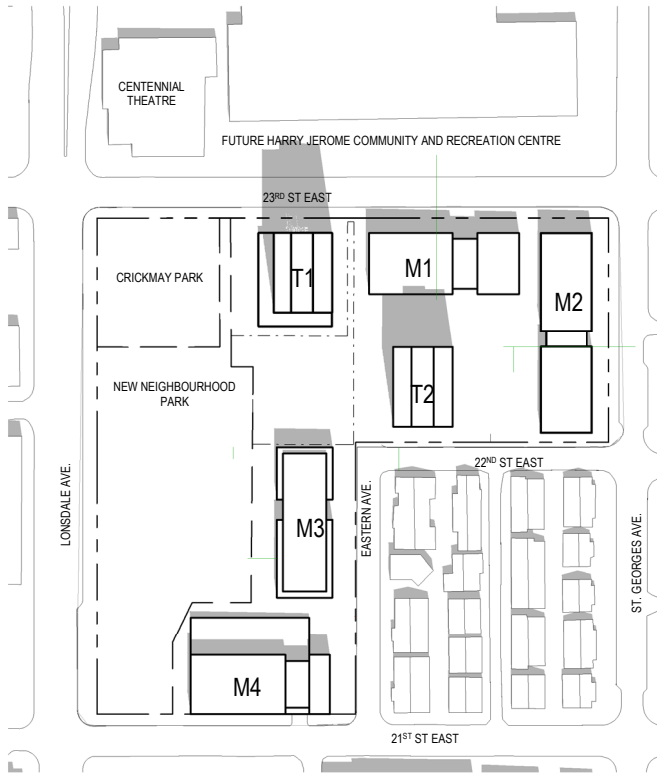
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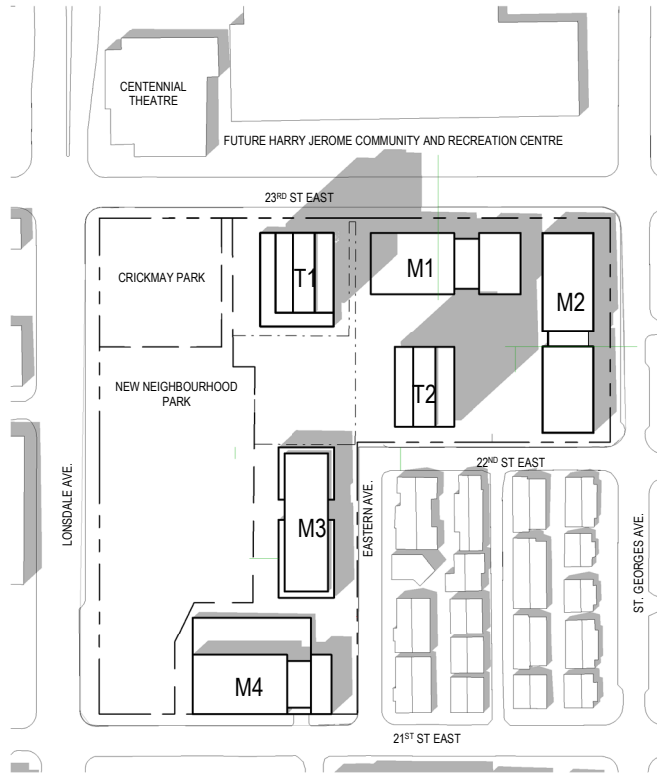
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4 JUNE 21 - 10 AM
NOT TO SCALE



5 JUNE 21 - NOON
NOT TO SCALE

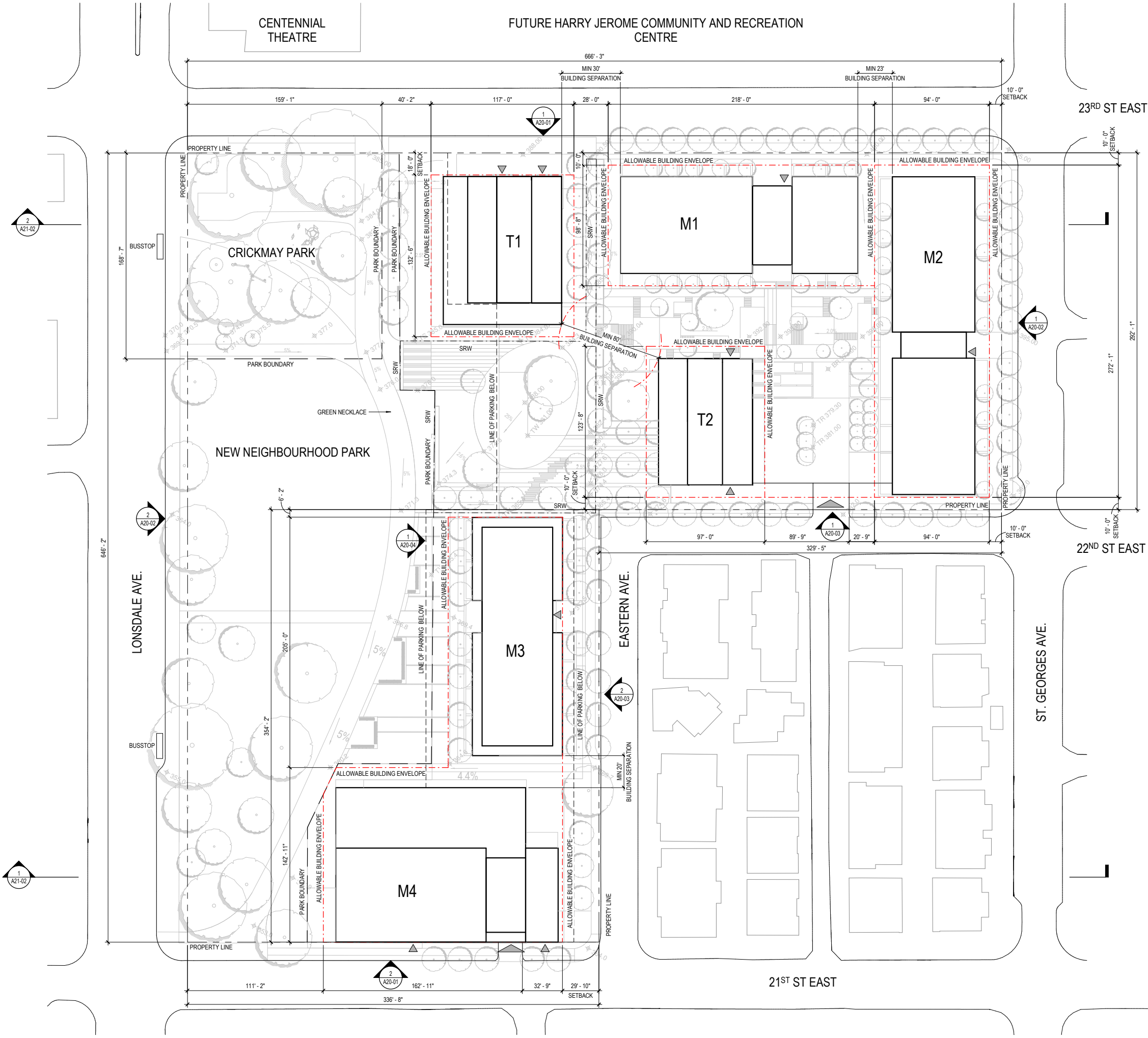


6 JUNE 21 - 2 PM
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NOTES:

1. PATIOS ARE ALLOWED WITHIN SETBACKS
2. OVERALL SITE DIMENSIONS TO NEAREST INCH. SEE SITE SURVEY FOR EXACT DIMENSIONS.

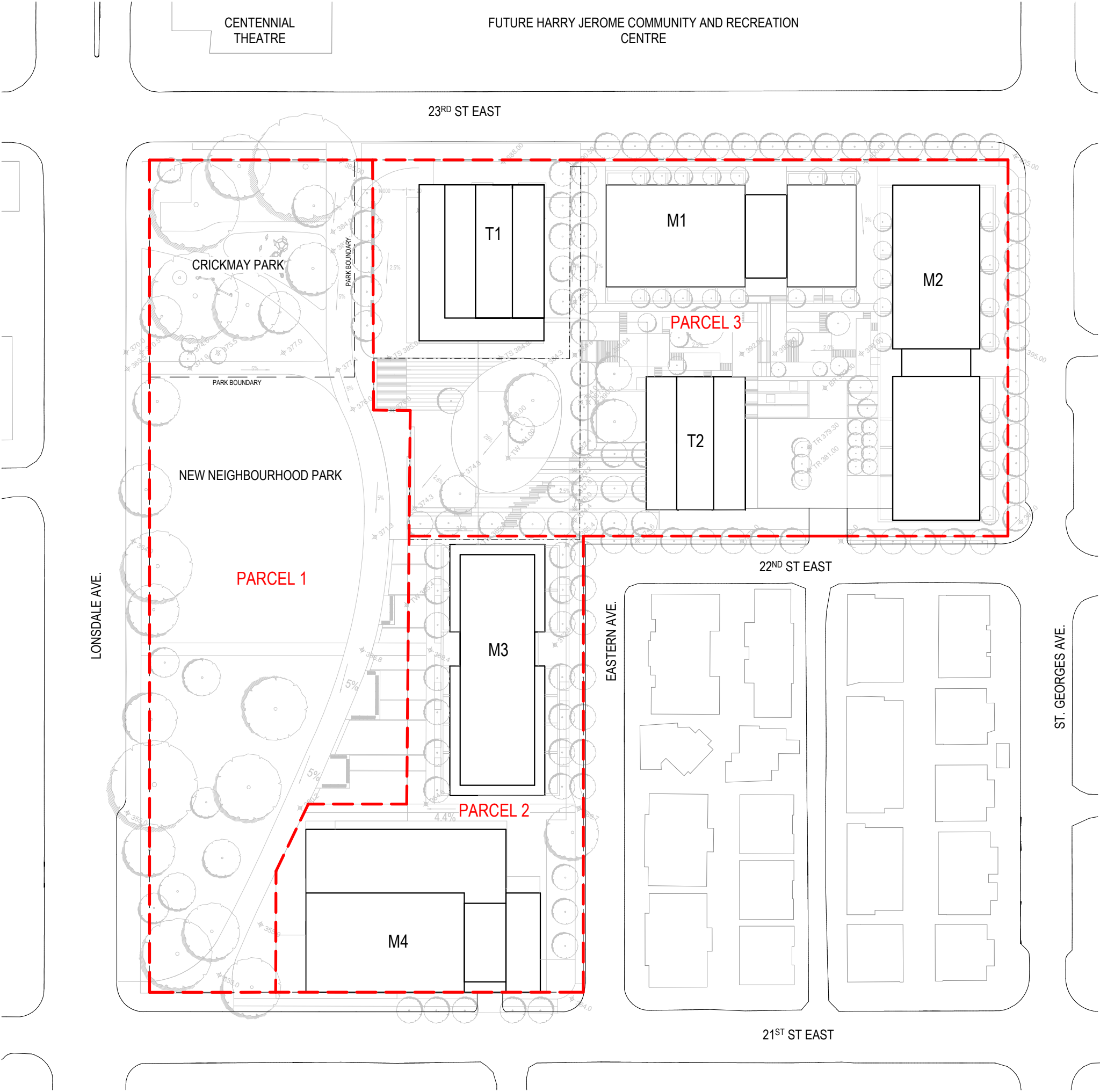
LEGEND

- PROPERTY LINE
- SRW
- PARK BOUNDARY
- - - - - ALLOWABLE BUILDING ENVELOPE

- ▲ BUILDING ENTRY
- ▲ PARKING ENTRY

SCALE 10' 50' 100'





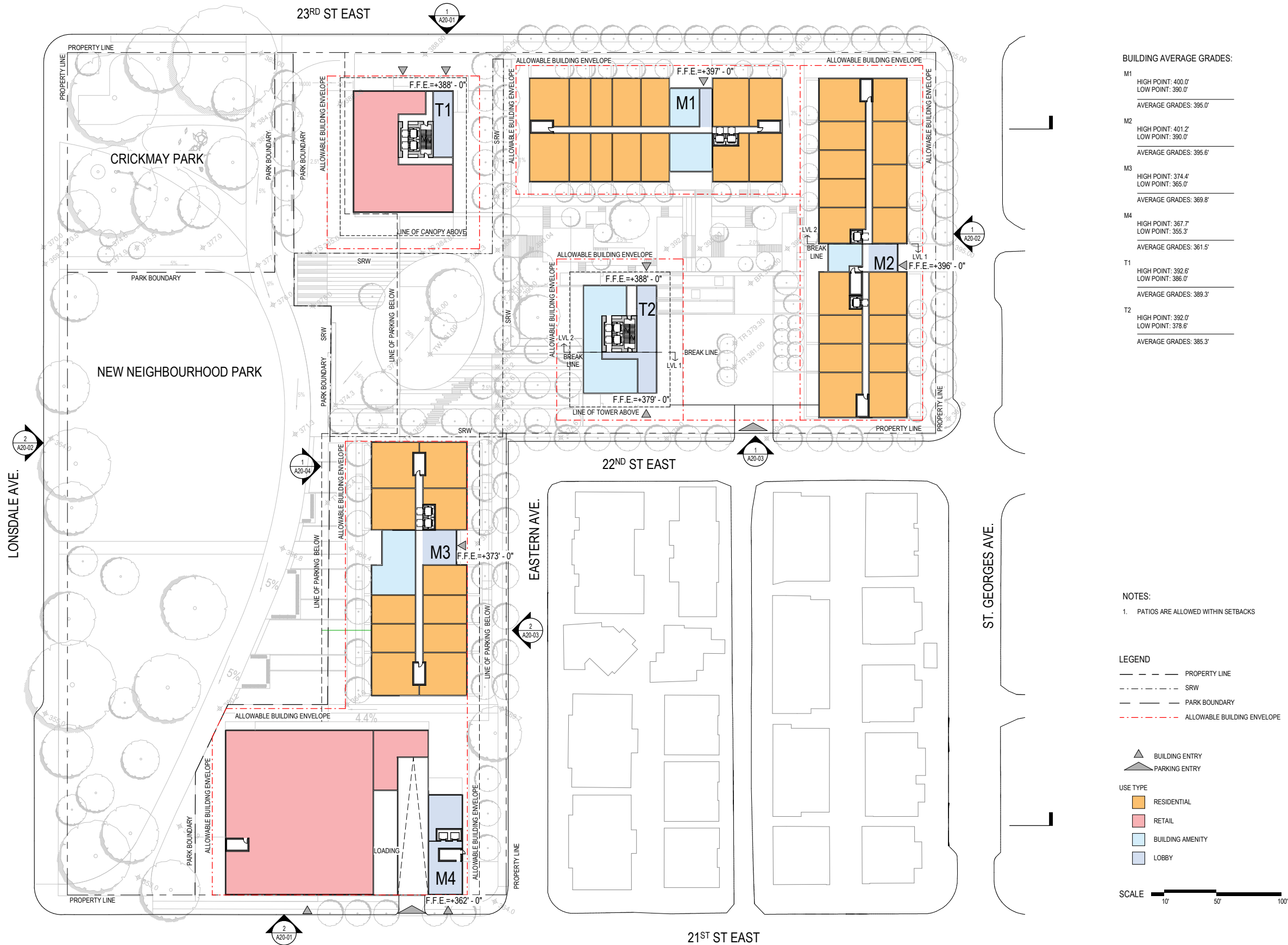
LEGEND

- PROPERTY LINE
- SRW
- PARK BOUNDARY
- PARCEL BOUNDARY



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BUILDING AVERAGE GRADES:

M1	HIGH POINT: 400.0' LOW POINT: 390.0' AVERAGE GRADES: 395.0'
M2	HIGH POINT: 401.2' LOW POINT: 390.0' AVERAGE GRADES: 395.6'
M3	HIGH POINT: 374.4' LOW POINT: 365.0' AVERAGE GRADES: 369.8'
M4	HIGH POINT: 367.7' LOW POINT: 355.3' AVERAGE GRADES: 361.5'
T1	HIGH POINT: 392.6' LOW POINT: 386.0' AVERAGE GRADES: 389.3'
T2	HIGH POINT: 392.0' LOW POINT: 378.6' AVERAGE GRADES: 385.3'

NOTES:

- PATIOS ARE ALLOWED WITHIN SETBACKS

LEGEND

- PROPERTY LINE
- SRW
- PARK BOUNDARY
- ALLOWABLE BUILDING ENVELOPE

- BUILDING ENTRY
- PARKING ENTRY

USE TYPE

- RESIDENTIAL
- RETAIL
- BUILDING AMENITY
- LOBBY

SCALE 10' 50' 100'

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NOTES:

1. PATIOS ARE ALLOWED WITHIN SETBACKS

LEGEND

- PROPERTY LINE
- SRW
- PARK BOUNDARY
- ALLOWABLE BUILDING ENVELOPE

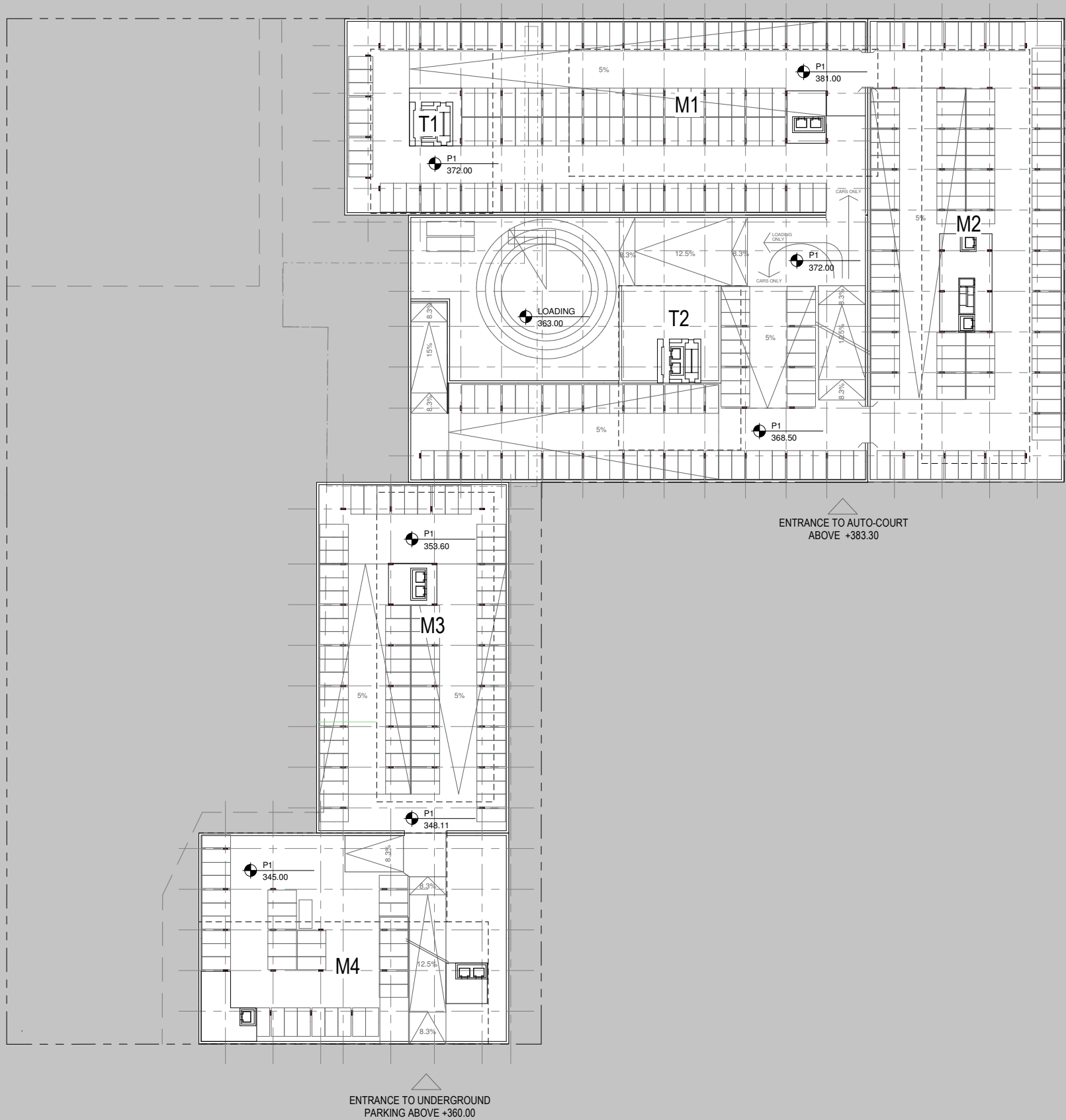
- BUILDING ENTRY
- PARKING ENTRY

- USE TYPE
- RESIDENTIAL

SCALE 10' 50' 100'

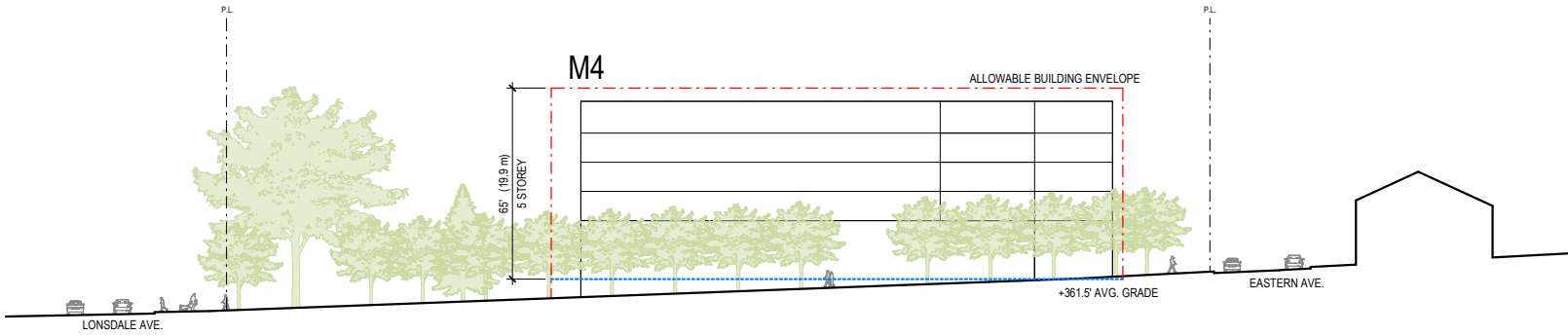
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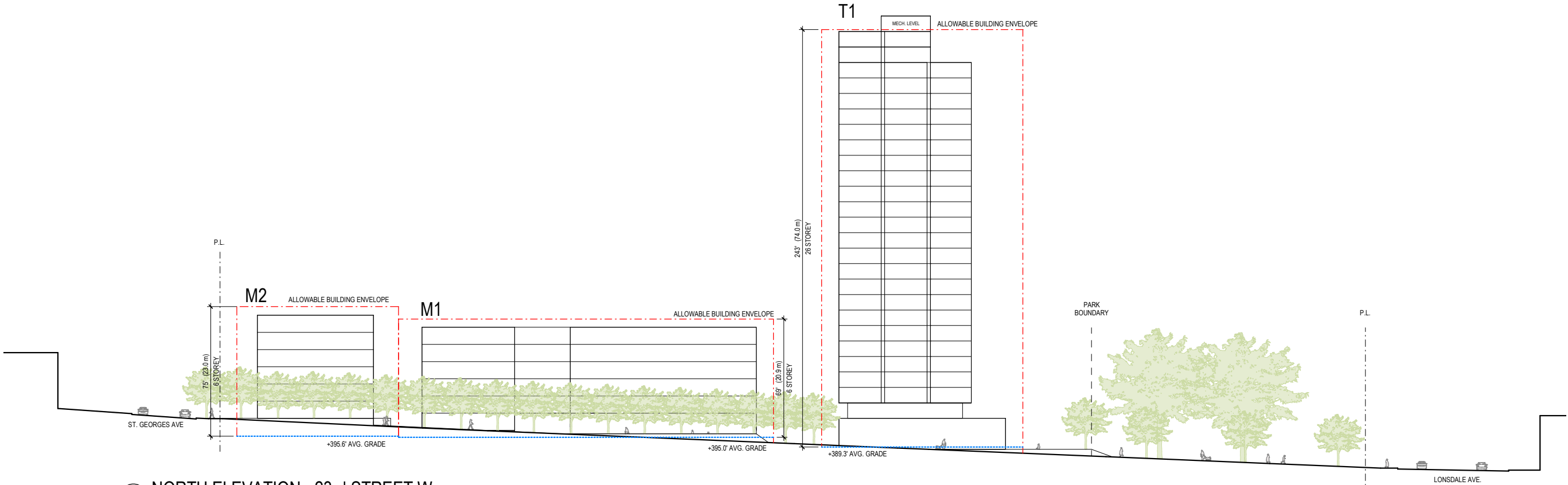


SCALE 10' 50' 100'





② SOUTH ELEVATION - 21st STREET E
1/32" = 1'-0"



① NORTH ELEVATION - 23rd STREET W
1/32" = 1'-0"

SCALE 10' 50' 100'



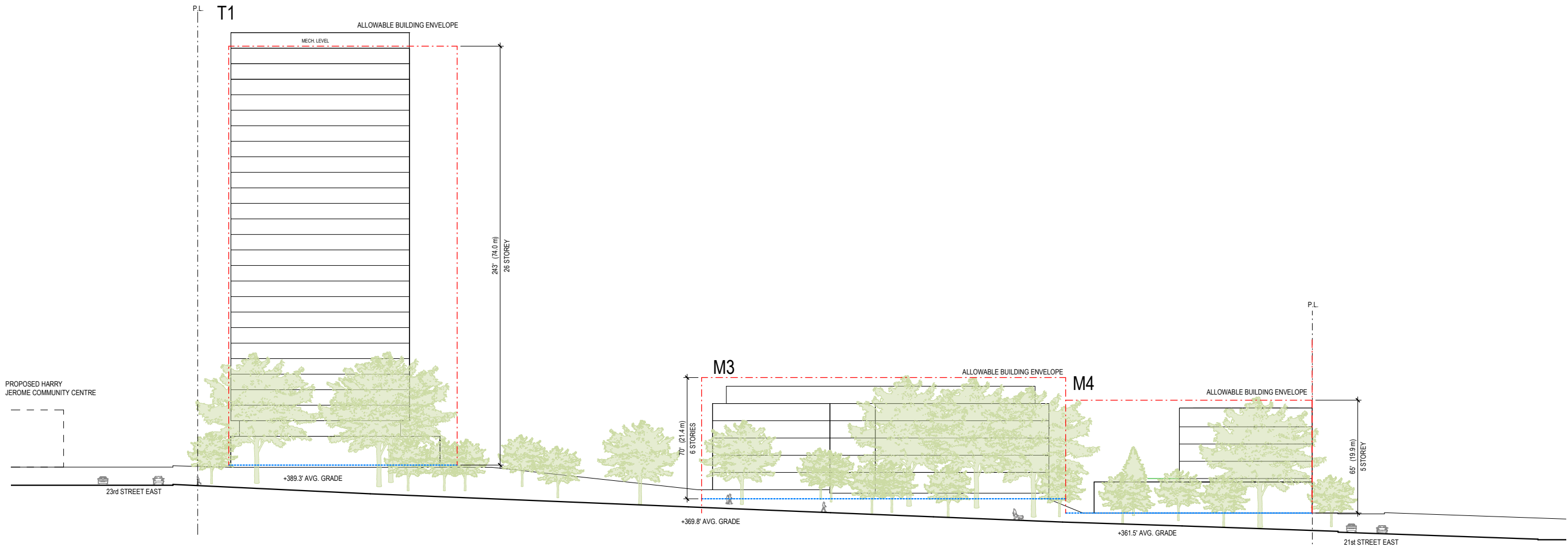
STREET ELEVATION

A20-01

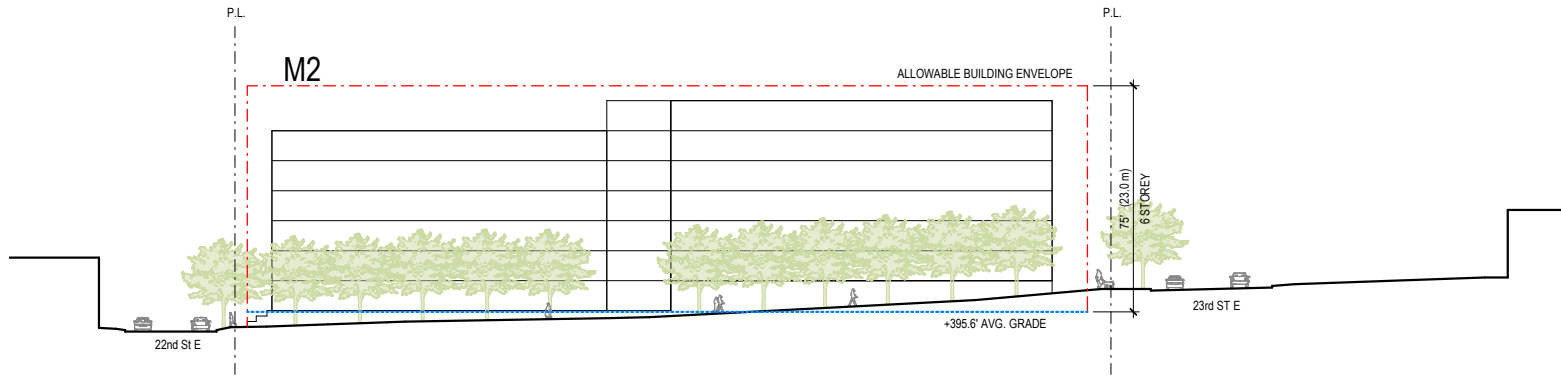
COPYRIGHT © 2016 PERKINS+WILL

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2018-01-31 10:09:31 AM



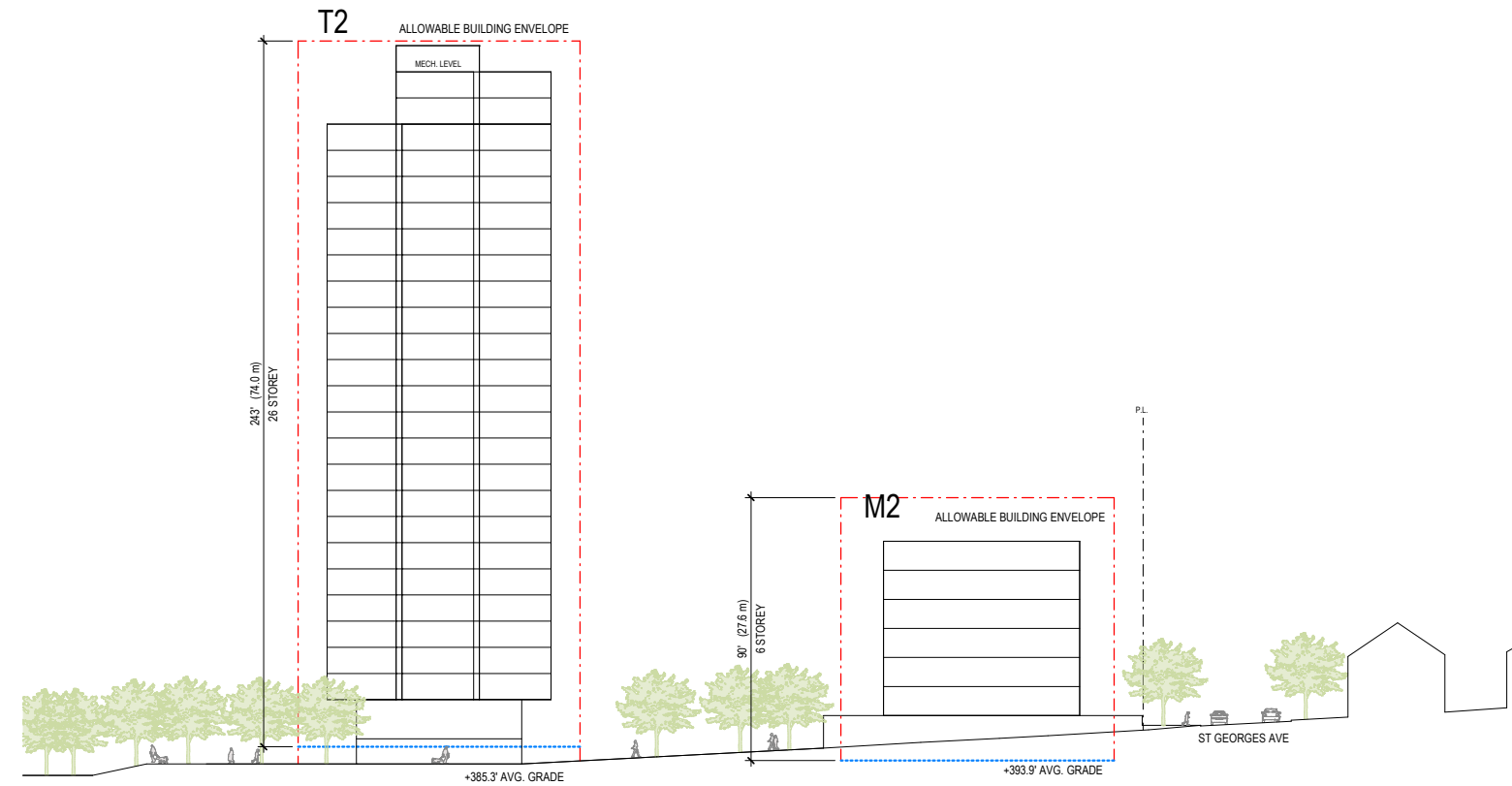
2 WEST ELEVATION - LONSDALE AVE
1/32" = 1'-0"



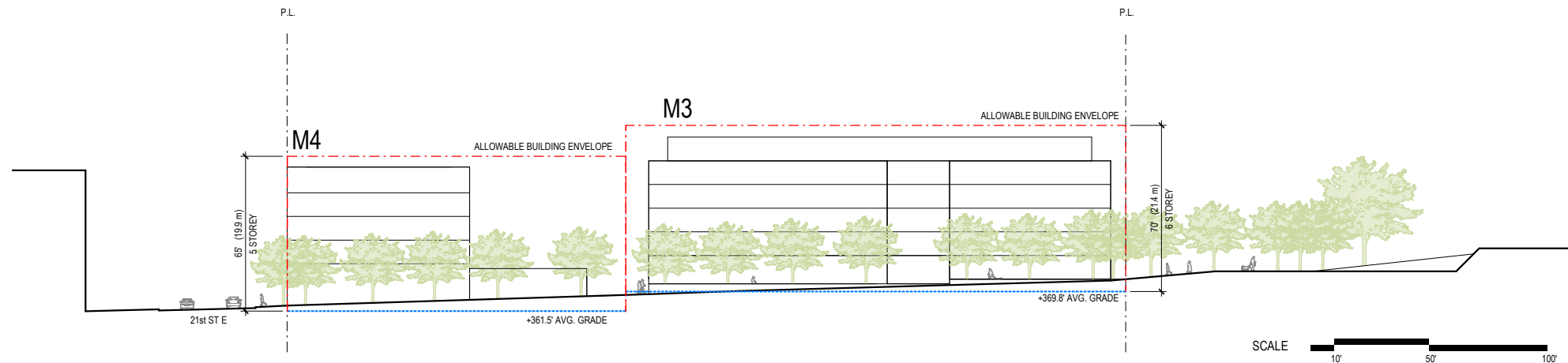
1 EAST ELEVATION- ST GEORGES AVE
1/32" = 1'-0"

SCALE 10' 50' 100'





1 SOUTH ELEVATION 22nd ST E
1/32" = 1'-0"

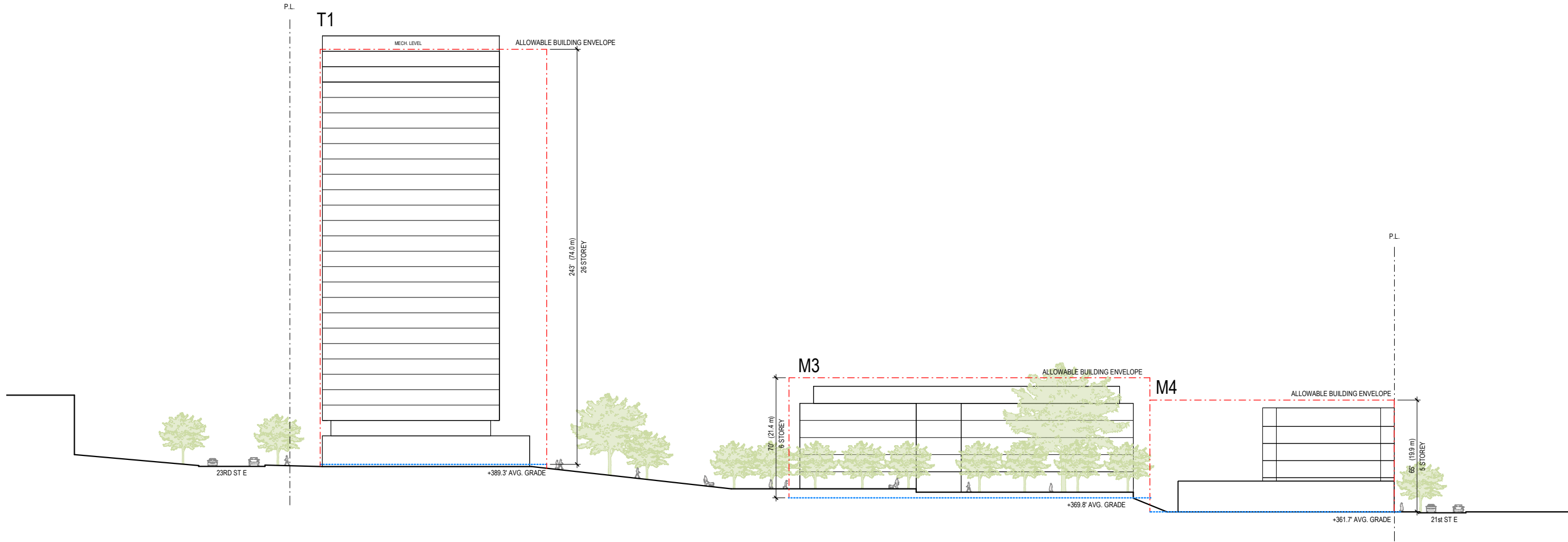


2 EAST ELEVATION - EASTERN AVE
1/32" = 1'-0"



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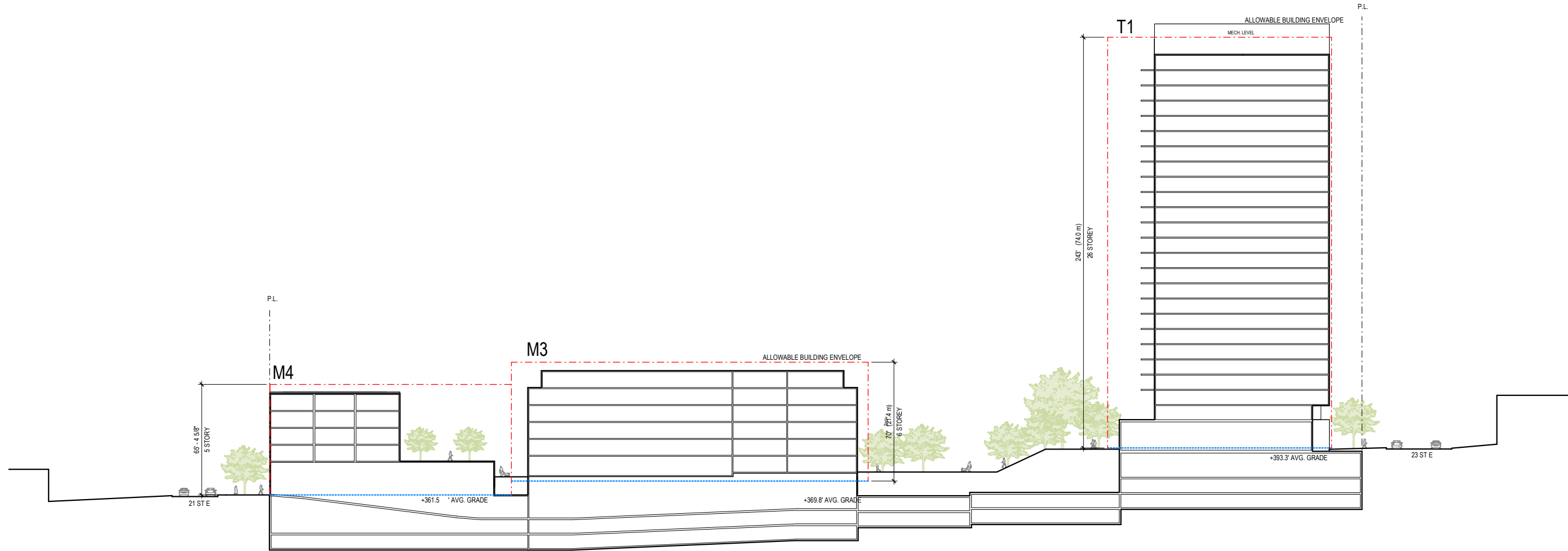
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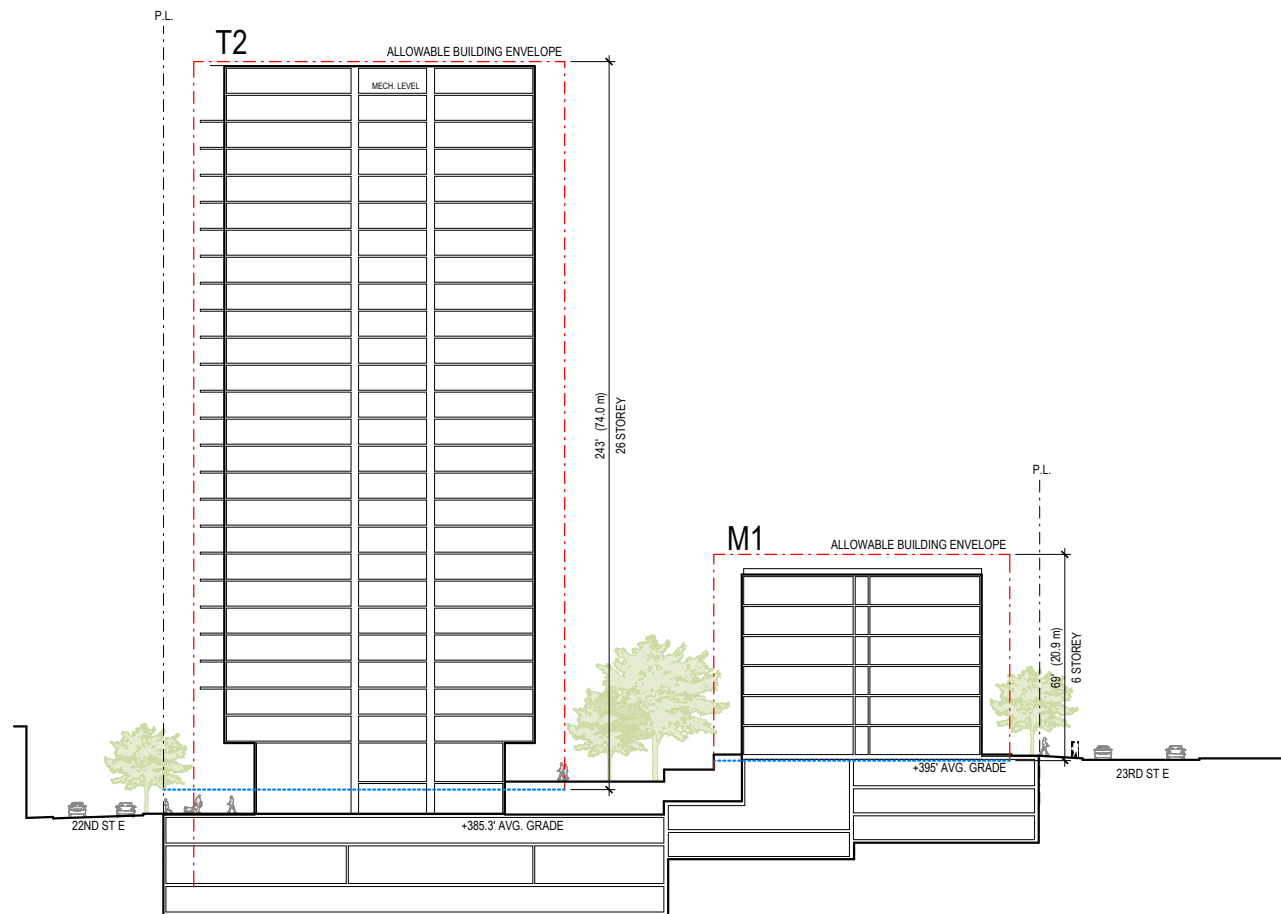
1 SECTION - LONSDALE PARK
1/32" = 1'-0"



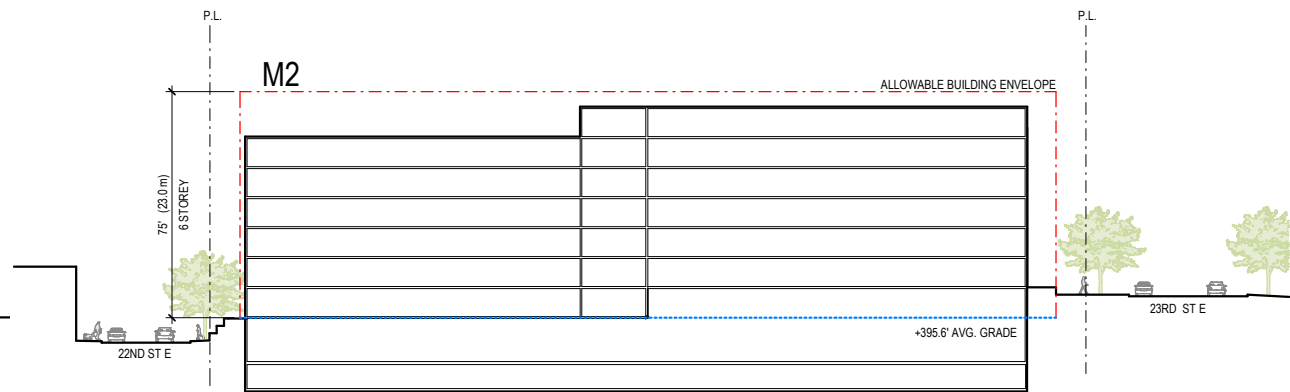
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3 M4 M3 + T1 SECTION LOOKING WEST
1/32" = 1'-0"

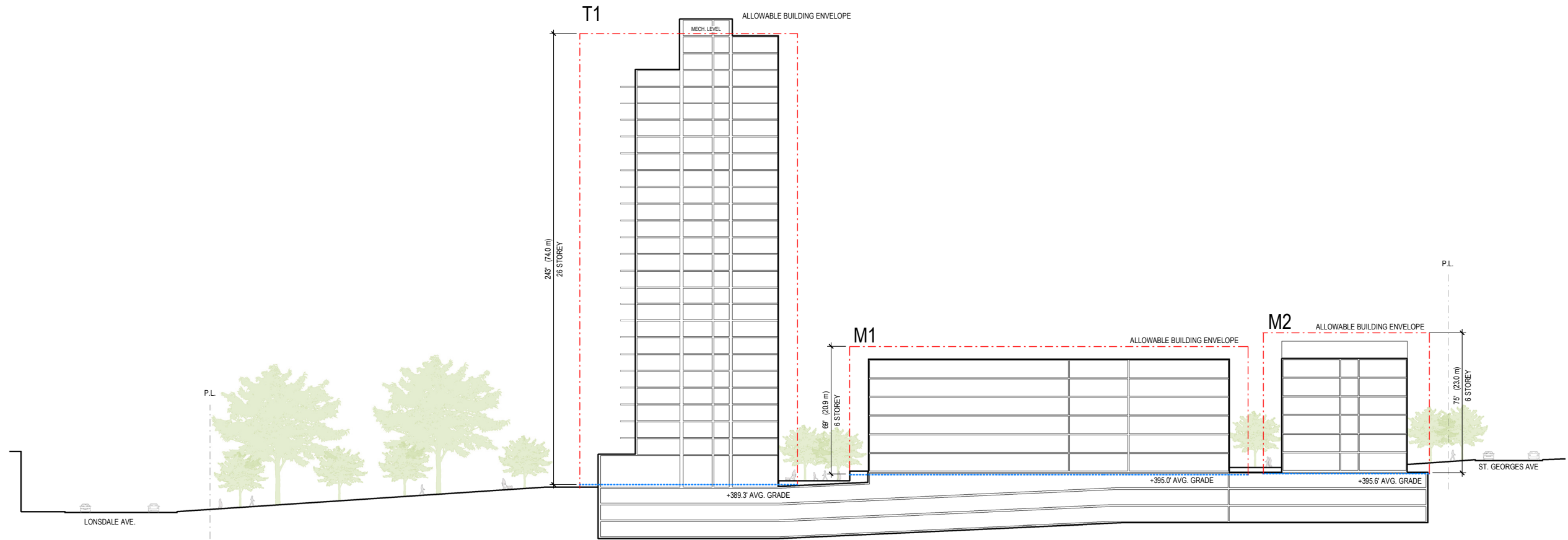


2 T2 + M1 SECTION LOOKING WEST
1/32" = 1'-0"

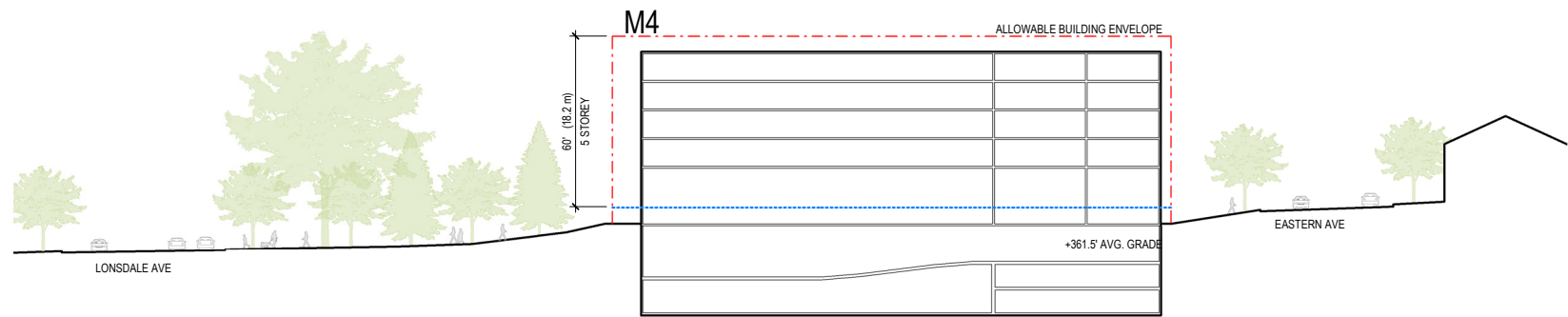


1 M2 SECTION LOOKING WEST
1/32" = 1'-0"





2 T1, M1, + M2 SECTION LOOKING NORTH
1/32" = 1'-0"



1 M4 SECTION LOOKING NORTH
1/32" = 1'-0"

LANDSCAPE

F

LANDSCAPE DRAWINGS

LANDSCAPE PLAN

F



Landscape Site Plan

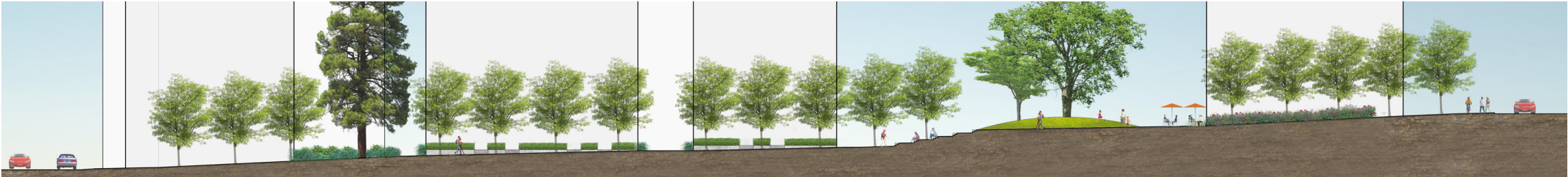
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LANDSCAPE DRAWINGS

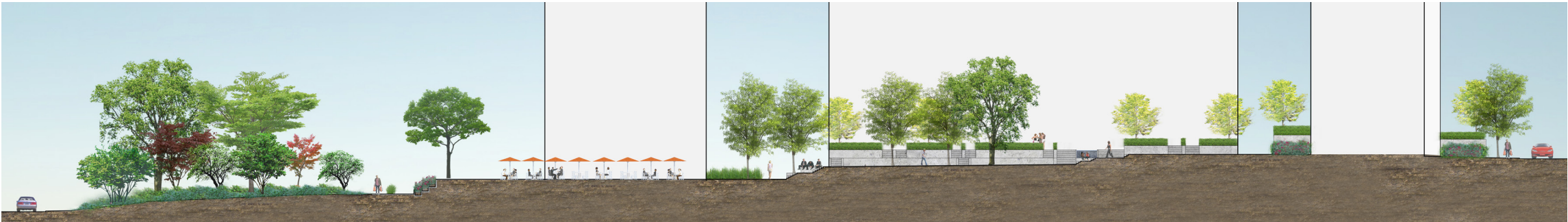
LANDSCAPE SECTIONS



AA 1:750



BB 1:750



CC 1:750



PUBLIC ART

PUBLIC ART CONCEPT

Public art has the power to punctuate everyday environments, energize public space, inspire and foster community participation and connectivity in the creation of our urban landscape. The proposed redevelopment of The Harry Jerome Neighbourhood Lands offers a dynamic public realm with an exceptional opportunity to introduce compelling and engaging public artwork that responds to the site, architecture and landscape, as well as the rich historic, cultural, and community contexts in a meaningful way.

Public art opportunities will be thoughtfully considered in keeping with the vision and spirit of the development as well as the City’s Public Art Program, in its commitment in offering public access to artistic expression and enhancing public awareness and appreciation of the visual arts.

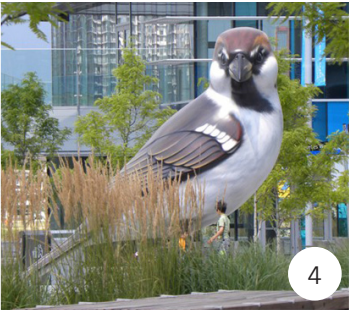
Several key sites have been identified as potential locations for art work which will activate the public realm while supporting and promoting site interconnectivity, access and permeability. The locations for public art will encourage connection with the future Harry Jerome Community Recreation Centre, as well as north-south and east-west connections from the adjoining neighbourhood through the site to the Green Necklace. Public art sited at the key gateway locations will possess distinctive wayfinding and place making qualities with high visibility. The Green Necklace with interconnected pedestrian and bike paths, the expansive park space, Crickmay Park along with the myriad of open public spaces and courtyards offer diverse opportunities to consider public art that will foster interest, dialogue, and provide for lively social interaction as well as moments of quietude and reflection.

The public art will adhere to best practices in contemporary art and offer a wide range of form, material, media, scope and approach, including artwork integrated with the landscape design and hard scape features. Establishing curatorial cohesion with the project site, the public art opportunities will create a dynamic interplay across public spaces and enliven the creative quality of The Harry Jerome Neighbourhood Lands. Artworks will be individually compelling, maintaining their own artistic rigor while conversing with one another in innovative, and unexpected ways. Contributing to the distinctive energy and function of respective site locations, the public art will support the flow and integration between the public spaces enriching the overall experience of visitors and residents.

Darwin proposes to host a collection of enduring public art works that will speak to diverse audiences offering maximum public benefit, accessibility and engagement. The public art at The Harry Jerome Neighbourhood Lands will significantly contribute to the artistic and cultural vibrancy of this lively community, building legacy, civic pride and community identity.



1



4



7



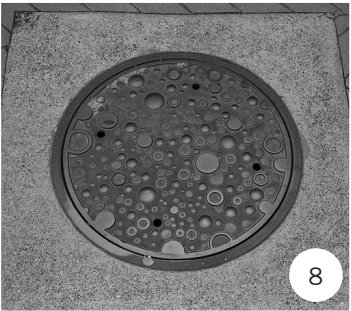
10



2



5



8



11



3



6



9

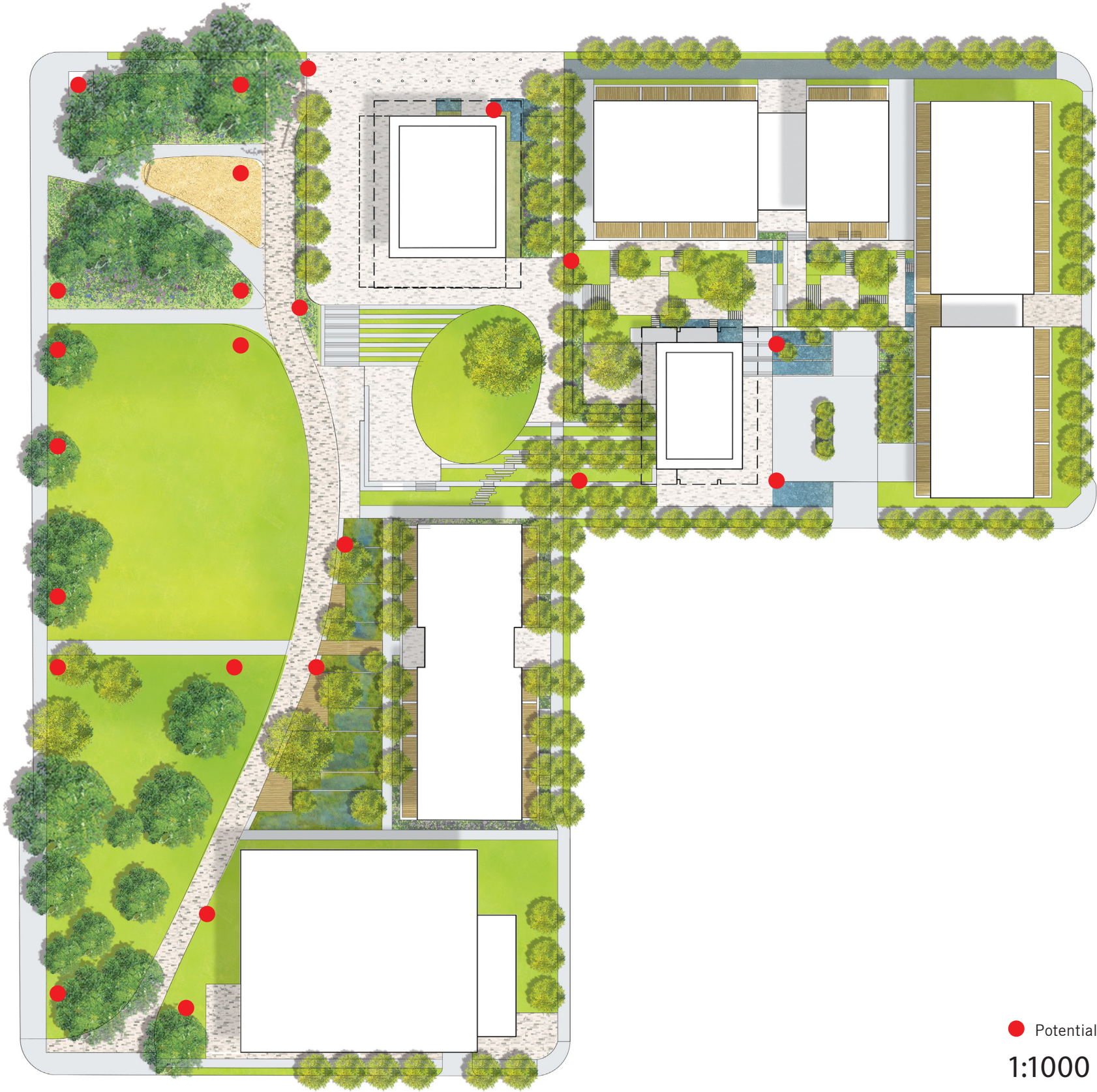


12

1. Jeppe Hein, *Follow Me*
2. Dan Corson, *Sonic Boom*
3. Aaron Curry, *Frieze*
4. Myfanwy MacLeod, *The Birds*
5. Parametric Bench, designed by Ten students from Columbia University
The group consisted of Charlie Able, Alexis Burson, Ivy Chan, Jennifer Chang, Aaron Harris, Trevor Hollyn Taub, Brian Lee, Eliza Montgomery, Vernon Roether, and David Zhai.

6. Marianne Nicolson, *The Land is a Person*
7. Franz West, *The Ego and the Id*
8. Jen Weih, *Art Under Foot - CofV*
9. Myfanwy MacLeod and Shannon Oksanen, *Playtime*
10. Jeppe Hein, *Appearing Rooms*
11. Douglas Coupland, *Beaver Dam*
12. Katharina Grosse, *Just Two of Us*

PUBLIC ART CONCEPT



Public Art Map

CIVIL

PRELIMINARY BUILDING GRADES

As required by the City of North Vancouver, Building Grades for the site are determined by the civil engineering consultant. Pictured at right are the preliminary Building Grades for this site. The Building Grades will be refined as part of the fronting road design and will be provided at key locations throughout the site as the site plan is developed.

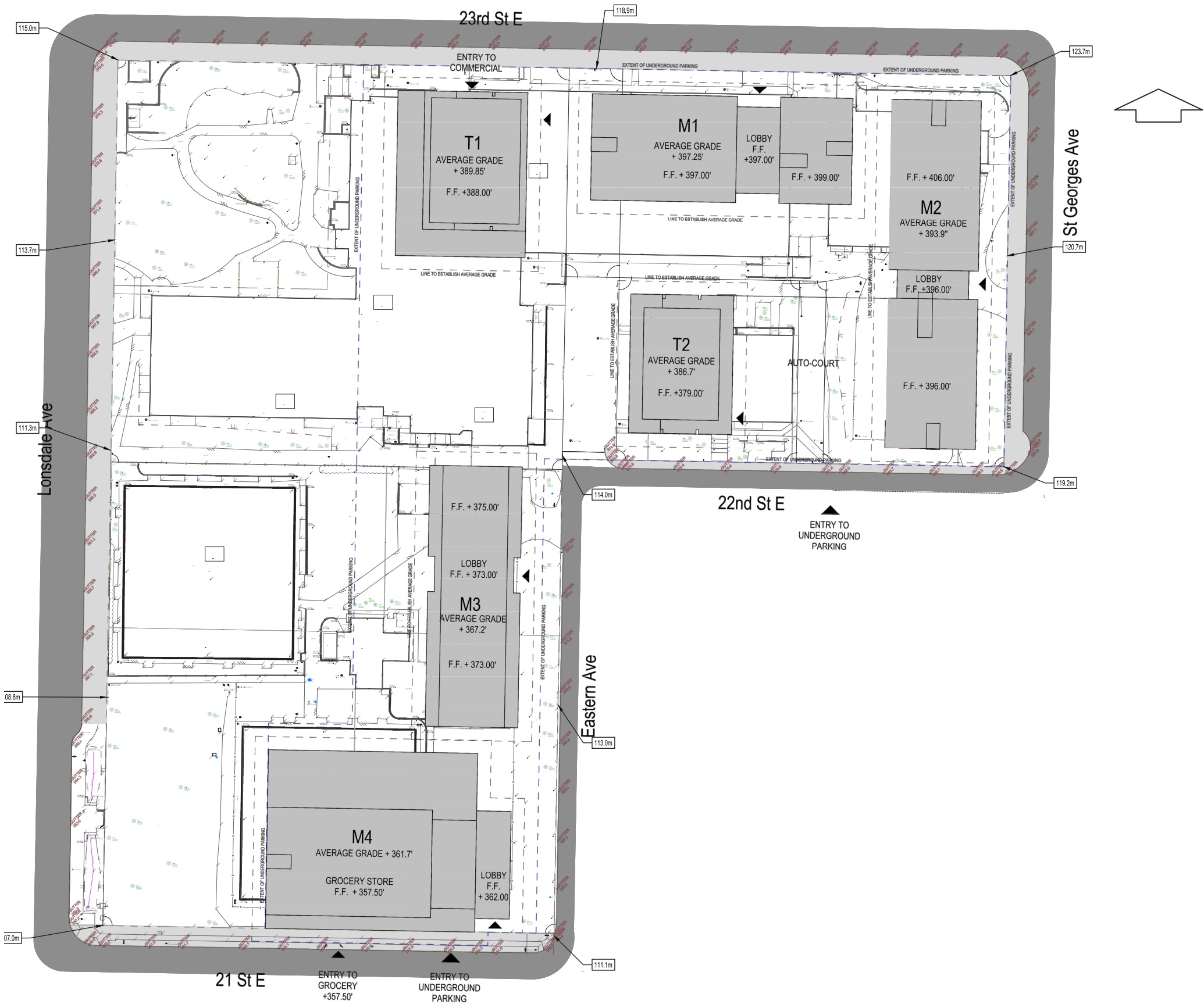
PRELIMINARY KEY PLAN AND BUILDING GRADES PLAN

Frontage improvements around the site are expected in accordance with the City of North Vancouver's Subdivision & Development Control Bylaw and are generally expected to include:

- Road improvements along site frontages per the Lonsdale Streetscape Standards and applicable City Bylaws. Improvements generally include:
 - New sidewalk, curb, and gutter
 - Street trees to CNV standards including Soil Cells as required
 - Overhead and pedestrian level lighting
 - Signal upgrades depending on the results of a Transportation Study
 - Street furnishings including bicycle racks, trash receptacles, and benches
 - New asphalt road surface to the existing road centerline
 - Associated signage and linepainting
 - Road dedications as required
- Green Necklace improvements per the Green Necklace Standards
- Underground utility upgrades required to service the proposed development
- Service connections for each parcel of land of the proposed development
- Coordination with LEC for service to the proposed development
- Stormwater Management Plan

The extent of the utility upgrades will be determined in conjunction with City staff and will depend on the proposed density and distribution of density in the proposed development.

As required by the City of North Vancouver, Building Grades for the site are determined by the civil engineering consultant. Pictured at right are the preliminary Building Grades for this site. The Building Grades will be refined as part of the fronting road design and will be provided at key locations throughout the site as the site plan is developed.



Preliminary Building Grades
See Full Size Drawings for detail.

Scale 1:1000

PRELIMINARY STORMWATER MANAGEMENT PLAN



All developments in the City of North Vancouver are required to provide site stormwater source controls to meet City Bylaws and regional requirements from Metro Vancouver and the Ministry of Environment. Stormwater source controls are “green infrastructure” designed to reduce the effect of development on natural water systems, including our streams and ocean. The stormwater management plan is to include:

- characterization and quantification of pervious and impervious areas on the building site,
- design of stormwater source controls for both volumetric reduction and water quality treatment for both on-site and neighbouring street areas,
- provision of a source control-based stormwater management plans.

Pictured to the right is a site plan and preliminary stormwater management plan. Given the size and extent of the project, we expect the development of the stormwater management plan will be a collaborative effort with City staff. Typical stormwater source controls include:

- deeper infiltration facilities (e.g. rock pits, dry wells, underground chambers);
- street side infiltration and treatment facilities (e.g. silva cells or equivalent);
- shallower infiltration facilities (e.g. raingardens, bioswales);
- absorbent landscaped areas;
- intensive and extensive green roofs; and
- rainwater harvesting (also subject to Building Code and Vancouver Coastal Health guidelines).

City of North Vancouver Stormwater Management Source Control Design Criteria

1. Stormwater source controls shall consume (i.e. not release to the receiving water) 56 mm of rain over a 24 hour period from all impervious building surfaces (e.g. roofs, decks, etc.).
2. All surrounding impervious areas (e.g. concrete) shall be directed to pervious vegetated areas or a source control for treatment and attenuation.
3. All roadways reporting to catchbasins at the property edge shall be treated and attenuated or consumed with source controls potentially located in the City road right-of-way.
4. All source controls should provide the means to monitor performance (e.g. inspection chamber for water levels, flow monitoring manhole for large discharges, green roofs, etc).
5. All residential development at FSR 1.0 or greater and any other Land Use Designations (e.g. Commercial, Industrial, Institutional, etc.) shall include a performance monitoring component where source controls are monitored for a period of two years by the proponent. This would generally include:
 - continuous water level measurement in the primary source control;
 - continuous discharge measurement for large roof areas with either green roof or rainwater harvesting approaches; and
 - water quality monitoring two times annually at the downstream end of any water quality source controls.

Preliminary Stormwater Management Plan Scale 1:1000
See Full Size Drawings for detail.

TRAFFIC



TRAFFIC



MEMO

DATE: January 31, 2018
PROJECT NO: 04-17-0070
PROJECT: Harry Jerome Neighbourhood Lands
SUBJECT: DRAFT High Level Transportation Review for Rezoning Submission

TO: Brent Welty, Architect AIBC, AAA
Senior Project Manager
Perkins + Will

PREPARED BY: Daniel Bragagnini, EIT
Nicolas Moss

REVIEWED BY: Daniel Fung, P.Eng

1. INTRODUCTION

Bunt & Associates has been retained as a consultant to Darwin Properties Ltd. in order to assist in the transportation planning and traffic engineering for the residential and commercial land uses of the project. Specifically, the purpose of this memo is to provide a high level transportation overview of the current site plan for the rezoning submission of the Harry Jerome Neighbourhood Lands in North Vancouver to help inform the site design. This memo focuses on the City of North Vancouver's Zoning Bylaw requirements for residential and commercial parking, loading, and bicycle parking, as well as a high level review of the proposed loading and site access points. In addition, a high level trip generation estimate for the proposed development in its entirety is presented. Of note, the City will be conducting a separate traffic study for the Harry Jerome Neighbourhood Lands including the future community centre.

The development proposal is expected to be progressed in four sequential phases as follows:

- **Phase 1:** Buildings M3 (mid-rise market residential apartments) and M4 (mid-rise rental residential apartments) with ground level commercial/retail space in building M4 (likely a neighbourhood grocery store);
- **Phase 2:** Building M2 (mid-rise market residential apartments);
- **Phase 3:** Tower T2 (high-rise market residential apartments); and,

- **Phase 4:** Tower T1 (high-rise market residential apartments) with ground level commercial/retail space (potentially a restaurant) and building M1 (mid-rise market residential apartments).

Table 1 below highlights the latest land use breakdown information for the site in its entirety.

Table 1: Development Statistics

PHASE	USE	BUILDING	SIZE
1	Residential Market Mid-rise	M3	75 units
	Residential Rental Mid-rise	M4	66 units
	Commercial (CRU or Grocery)	M4	15,573 sq ft*
2	Residential Market Mid-rise	M2	101 units
3	Residential Market Tower	T2	218 units
4	Residential Market Mid-rise	M1	104 units
	Residential Market Tower	T1	220 units
	Commercial (CRU or Restaurant)	T1	5,140 sq ft**

*Gross Floor Area
**Saleable Area

Access to the underground parking for Phase 1 is currently designed off of East 21st Street near the east side of building M4. Access to the underground parking and loading court for Phases 2, 3, and 4 is currently designed to be located off of East 22nd Street as shown in latest site plans. The access locations are also shown in **Appendix A**.



2. PARKING REQUIREMENTS

The City of North Vancouver’s Zoning Bylaw specifies parking requirements for various land use types. Mid-rise building M4 is anticipated to contain residential apartments for rental use, while mid-rise buildings M1, M2, and M3, as well as towers 1 and 2 are expected to consist of market apartments. There is a specific rate for rental use in the Bylaw, though rates for market apartments are not specified in the Bylaw. As such, a rate of 1.05 spaces per dwelling unit (for all “other residential uses” as specified in the Bylaw) was used for the two towers and mid-rise buildings (with the exception of M4).

The following tables indicate preliminary estimates of the Bylaw required parking stalls for all phases of the planned development, without any discounts for Transportation Demand Management measures, shared parking or provision of disabled stalls.

Table 2a below summarizes the Bylaw stall requirement for all phases of the development project, assuming that the commercial space in building M4 becomes a neighbourhood grocery store and the commercial space in tower T1 becomes a restaurant. **Table 2b** summarizes the Bylaw stall requirements for all phases in the event the commercial spaces in building M4 and tower T1 become a variety of retail shops instead. It should be noted that designated visitor stalls are required as part of the Bylaw requirements, at a rate of 0.1 stalls per unit for residential uses.

As can be seen from Table 2a, a Bylaw total of 829 stalls are required for the residential and commercial land uses for all phases of the development, if a grocery store and restaurant were to be constructed. Of the 829 stalls, 79 are required to be designated as visitor stalls. As can be seen from Table 2b, a Bylaw total of 833 stalls are required for the residential and commercial land uses for all phases of the development, if the commercial space becomes a variety of retail shops. Of the 833 stalls, 79 are required to be designated as visitor stalls. Any parking provision reductions may be possible with a robust TDM strategy or other parking reduction measures.

Table 2a: Preliminary Parking Bylaw Supply Requirement Estimate: no TDM reductions, Sharing, HC (with Grocery and Restaurant)

PHASE	USE	BLDG	SIZE	BYLAW REQUIREMENTS		SUPPLY REQUIREMENTS	
				Required Residential / Commercial Spaces	Required Visitor Spaces	Residential/ Commercial	Visitor
1	Residential	M3	75 units	Other Uses (Market): 1.05 spaces per unit	0.1 spaces per unit	79	8
		M4	66 units	Rental Use: 0.6 spaces per unit		40	7
	Commercial (Grocery)	M4	15,573 sq ft	1 space per 50m² GFA		29	
Sub-Total						148	15
2	Residential	M2	101 units	Other Uses (Market): 1.05 spaces per unit	0.1 spaces per unit	106	10
Sub-Total						106	10
3	Residential	T2	218 units	Other Uses (Market): 1.05 spaces per unit	0.1 spaces per unit	229	22
Sub-Total						229	22
4	Residential	M1	104 units	Other Uses (Market): 1.05 spaces per unit	0.1 spaces per unit	109	10
		T1	220 units	Other Uses (Market): 1.05 spaces per unit	0.1 spaces per unit	231	22
	Commercial (Restaurant)	T1	5,140 sq ft*	1 space per 75m² GFA		6	
Sub-Total						346	32
TOTAL						829	79**

*Note 1: Saleable area assumed for the calculation of supply requirements for the restaurant component.

**Note 2: 79 visitor stalls included in the total of 829 stalls

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Table 2b: Preliminary Parking Bylaw Supply Requirement Estimate: no TDM reductions, Sharing, HC (with Retail Shops)

PHASE	USE	BLDG	SIZE	BYLAW REQUIREMENTS		SUPPLY REQUIREMENTS	
				Required Residential / Commercial Spaces	Required Visitor Spaces	Residential/ Commercial	Visitor
1	Residential	M3	75 units	Other Uses (Market): 1.05 spaces per unit	0.1 spaces per unit	79	8
		M4	66 units	Rental Use: 0.6 spaces per unit		40	7
	Commercial (CRU)	M4	15,573 sq ft	1 space per 50m² GFA		29	
Sub-Total						148	15
2	Residential	M2	101 units	Other Uses (Market): 1.05 spaces per unit	0.1 spaces per unit	106	10
Sub-Total						106	10
3	Residential	T2	218 units	Other Uses (Market): 1.05 spaces per unit	0.1 spaces per unit	229	22
Sub-Total						229	22
4	Residential	M1	104 units	Other Uses (Market): 1.05 spaces per unit	0.1 spaces per unit	109	10
		T1	220 units	Other Uses (Market): 1.05 spaces per unit	0.1 spaces per unit	231	22
	Commercial (CRU)	T1	5,140 sq ft*	1 space per 50m² GFA		10	
Sub-Total						350	32
TOTAL						833	79**

*Note 1: Saleable area assumed for the calculation of supply requirements for the restaurant component.

**Note 2: 79 visitor stalls included in the total of 833 stalls



3. LOADING

3.1 Loading Bylaw Requirement

The City of North Vancouver’s bylaw requirements for loading are summarized in **Table 3** below for the entire development. It can be seen that only one loading space is required for each of the commercial land uses, with minimum dimensions of 9 feet in width, 30 feet in length, and 13.75 feet in height. It is our view that the loading requirements to meet the needs of the neighbourhood grocery store land use will be one of the more challenging issues to resolve in the site design.

Table 3: Loading Bylaw Supply Requirement

PHASE	BLDG	USE	GFA (SQ FT)	LOADING SPACE
				Min. 9 x 30 ft
1	M4	Commercial (CRU or Grocery)	15,573	1
		Sub-Total		1
4	T1	Commercial (CRU or Restaurant)	5,140	1
		Sub-Total		1
TOTAL				2

We note that while many grocers would prefer to have at least one loading position sized for larger WB15 tractor trailers, Bunt is aware of exceptions, such as Nester’s Market at SFU, which is 24,000 sq.ft. GFA and has only loading sized for SU9 vehicles. Having smaller loading positions may require special arrangements with some suppliers, which may result in reduced attractiveness for this site for some grocers and could potentially be a limitation to the site for future uses as well.

3.2 Truck Turning Movement Review

As per discussions with the Project Architect, Phase 1 of the proposed development is currently planned to have a loading area located at-grade.

Phases 2, 3 and 4, have a shared underground loading court accessed off of East 22nd Street. The exhibits in **Appendix B** summarize our swept path tests for the loading area for these phases. WB12 trucks were tested and it is expected they would be able to enter the loading court, reverse into a stall, and exit the loading court. In addition, while a passenger car and WB12 are expected to be able to turn simultaneously at the ninety degree turn on the ramp, the maneuver would be very tight. If WB12 sized loading vehicles are expected to use this loading court, the ramp may need to be widened. Of note, greater clearances can be achieved with SU9 sized vehicles and they can be better accommodated on the ramp.

It is our view that this is one of the key outstanding transportation design items that must be resolved for the site. The number and type of loading positions, and the choice of loading treatment could have significant impacts on the surface level and first/second levels of parking in the development due the substantial vertical clearances required for underground loading activity.

Additional Design Issues

Key design criteria for underground loading zones are noted below:

- Ramp grades should ideally be 10% or less for trucks, but should not exceed 15% at the steepest part of the ramp (note, the Woodward’s development which services the 18,000 sq.ft. Nester’s Market has a ramp which is 15% at its steepest point, with an overall 12% grade. In our experience there are some grocers that will not accept anything more than 8% due to concerns over goods spoilage);
- The 15% maximum grade applies to the inside curve, if the ramp is curved;
- Vertical clearance must be at least 4.42m (14.5 feet);
- Vertical grade breaks will be required to transition from relatively flat grades at the ground place to the parkade level, with a maximum of 7.5% between grade breaks. With large trucks on a steep ramp, it is recommended crest and sag vertical curves be designed rather than abrupt grade transitions; and,
- The grade of the loading zone/court should not exceed 3% where trucks are manoeuvring/loading.

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4. BICYCLE PARKING REQUIREMENTS

The City of North Vancouver’s Zoning Bylaw requirements for bicycle spaces are summarized in **Table 4** below for Phases 1 through 4 of the planned development:

Table 4: Bicycle Bylaw Supply Requirement

PHASE	USE	BLDG	SIZE	BYLAW REQUIREMENTS		SUPPLY REQUIREMENTS	
				Short-Term	Secure	Short-Term	Secure
1	Residential	M3	75 units	60 or more units: 6 spaces per every 60 units or part thereof	1.5 spaces per unit	8	113
		M4	66 units			7	99
	Commercial (CRU or Grocery)	M4	15,573 sq ft	6 spaces per 1,000m² GFA	1 space per 250m² GFA	9	6
Sub-Total						24	218
2	Residential	M2	101 units	60 or more units: 6 spaces per every 60 units or part thereof	1.5 spaces per unit	10	152
Sub-Total						10	152
3	Residential	T2	218 units	60 or more units: 6 spaces per every 60 units or part thereof	1.5 spaces per unit	22	327
Sub-Total						22	327
4	Residential	M1	104 units	60 or more units: 6 spaces per every 60 units or part thereof	1.5 spaces per unit	10	156
		T1	220 units			22	330
	Commercial (CRU or Restaurant)	T1	5,140 sq ft	6 spaces per 1,000m² GFA	1 space per 250m² GFA	3	2
Sub-Total						35	488
TOTAL						91	1,185

According to the City’s bylaw, the combined phases will require the provision of a total minimum of 91 short-term and 1,185 secure bicycle storage spaces overall.

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5. VEHICLE ACCESS

Access to the underground parking for Phase 1 is anticipated to be located off of East 21st Street near the east side of Building M4, as per the latest site plans shown in Appendix A. Chapter 8 of the Transportation Association of Canada (TAC) *Geometric Design Guidelines* (2017) recommends a minimum clearance of at least 15m between the Phase 1 access and the north-south laneway located immediately to the south (along the east side of London Drugs), if there is to be an offset. However, Bunt recommends that the access for Phase 1 be aligned with the north-south laneway, as shown in **Figure 1**, to follow good design practise and increase safety. This would be in order to avoid overlapping left turns as is shown in **Figure 2**.

Generally, a single entry lane and a single exit lane are sufficient to handle traffic demands associated with up to 300 commercial parking stalls (which are higher turnover) or 500 residential stalls (which are lower turnover), without undue inconvenience and delays to entering and exiting traffic as long as no operational issues are present at the surface interface with the adjacent street. Based on the number of stalls required in Table 1 above (and assuming their provision in entirety), this rough rule of thumb would indicate a need for just one entry and exit lane for Phase 1. However, assuming Phase 2, 3, and 4 are built sequentially, a second access would likely be needed after completion of Phase 3.

Figure 1: Aligned Access Arrangement (TAC *Geometric Design Guidelines* - Figure 8.9.3)

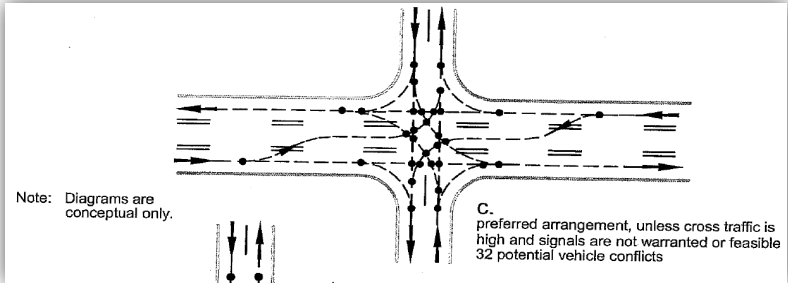
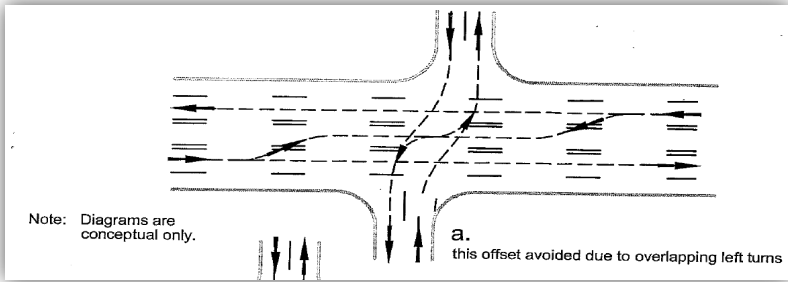


Figure 2: Overlapping Left Turns (TAC *Geometric Design Guidelines* - Figure 8.9.3)



Access to the underground parking and loading court for Phases 2, 3, and 4 is anticipated to be located off of East 22nd Street as shown in latest site plans. Once again, it is recommended that this access be offset at least 15m from the other laneway located to the south (between Eastern Avenue and St. Georges Avenue) or otherwise aligned which would help prevent left turn conflicts as suggested in the TAC *Geometric Design Guidelines*.

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6. TRIP GENERATION

Table 5 below summarizes the anticipated vehicle trip rates for the land uses of the site. Estimates of site-generated traffic during the weekday AM and PM peak hours for the commercial (grocery and restaurant) and market residential uses (with the exception of building M4, which is a rental building) were based on trip rates for similar land uses listed in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual (10th Edition)*. Of side note, due to the nature of this analysis being high level and to aid design of the site only, we have kept the estimate to be conservative. The general modal breakdown per the ITE trip generation manual is assumed while the effects of potential future rapid transit have not been anticipated. These estimates are high level and based on project statistics as provided by the Project Architects dated January 31, 2018.

Trip rates for the mid-rise residential rental building (M4) were estimated based on a Bunt survey at a rental apartment complex in the City of North Vancouver (ie. 0.17 total vehicle trips per dwelling unit in the AM peak hour and 0.29 total vehicle trips per dwelling unit in the PM peak hour). As these rates are lower than ITE mid-rise residential rental rates, they were marked-up by an additional 20% for conservative purposes. Of note, the District of North Vancouver's *Lower Capilano Marine Village Centre Transport Plan (2013)* uses multi-family trip generation rates measured from the Woodcroft complex in North Vancouver. The Woodcroft PM peak hour rate was 0.22, further corroborating that Bunt's rates presented in Table 5 below, though lower than ITE, are likely conservative. Trip rates for the mid-rise market buildings (M1, M2, and M3) were estimated based on land use code ITE 221.

While the ground level commercial/retail space in building M4 will likely be a neighbourhood grocery store, the rates for CRU units are also presented in the event this space would contain a variety of retail shops instead. The same is done for the commercial/retail space in tower T1. As ITE 826 (Specialty Retail) rates are not available in the 10th edition manual, the 9th edition rates were used for this land use.

Table 5: Estimated Vehicle Trip Rates

LAND USE	RATE	AM PEAK HOUR RATE			PM PEAK HOUR RATE			SOURCE
		IN %	OUT %	TOTAL	IN %	OUT %	TOTAL	
Residential Rental Mid-rise	Per d.u.	26%	74%	0.20	61%	39%	0.35	Bunt local survey (+ 20% markup) using ITE (221) distributions
Residential Market Mid-rise	Per d.u.	26%	74%	0.36	61%	39%	0.44	ITE (221)
Residential Market High-rise	Per d.u.	24%	76%	0.31	61%	39%	0.36	ITE (222)
Commercial (Grocery)	Per 1,000 sq ft	60%	40%	3.82	51%	49%	9.24	ITE (850)
Commercial (Restaurant)	Per 1,000 sq ft	55%	45%	9.94	62%	38%	9.77	ITE (932)
Commercial (CRU)*	Per 1,000 sq ft	62%	38%	0.70	44%	56%	2.71	ITE (820) & (826) – 9 th edition**

*Note 1: Listed in the event the commercial spaces become retail shops instead of a grocery and/or restaurant.
**Note 2: ITE (826) rates were used for the commercial (CRU) use PM peak hour. However, as the AM peak hour of adjacent street traffic rate is not available for ITE (826), the ratio of the PM Average Rate for ITE (826) to the PM Average Rate for ITE (820) was applied to the ITE (820) AM rate to determine an approximate ITE (826) AM rate.

Table 6a below summarizes the anticipated vehicle trip generation for all phases of the development project, assuming that the commercial space in building M4 becomes a neighbourhood grocery store and the commercial space in tower T1 becomes a restaurant. **Table 6b** summarizes the anticipated vehicle trip generation for all phases in the event the commercial spaces in building M4 and tower T1 become a variety of retail shops instead.

Given the mixed-use nature of the proposed development, it is anticipated that the number of external site vehicle trips will be reduced given some of the customers of the commercial uses will already be located on-site (i.e. someone living in one of the residential units can visit the grocery or restaurant as a pedestrian rather than making a vehicle trip). To account for internal trip making between the commercial uses and other uses proposed on-site, an internal trip reduction analysis was carried out based on the methodology outlined in the ITE Trip Generation Handbook (2nd Edition).



Overall, if the commercial space in building M4 becomes a grocery store and the space in tower T1 a restaurant, the development is estimated to have internal capture rates of about 21% during the PM peak hour. If the commercial spaces become variety of retail shops, then internal capture rates of about 6% can be estimated during the PM peak hour.

Table 6a: Estimated Peak Hour Vehicle Trip Generation (with Grocery and Restaurant)

PHASE	USE	BLDG	AM PEAK HOUR TRIPS			PM PEAK HOUR TRIPS		
			IN	OUT	TOTAL	IN	OUT	TOTAL
1	Residential	M3	7	20	27	20	13	33
		M4	3	10	13	14	9	23
	Commercial (Grocery)	M4	36	24	59	73	71	144
Sub-Total			46	54	100	108	92	200
2	Residential	M2	9	27	36	27	17	44
Sub-Total			9	27	36	27	17	44
3	Residential	T2	16	51	68	48	31	78
Sub-Total			16	51	68	48	31	78
4	Residential	M1	10	28	37	28	18	46
		T1	16	52	68	48	31	79
	Commercial (Restaurant)	T1	28	23	51	31	19	50
Sub-Total			54	103	157	107	68	175
TOTAL TRIPS			126	234	360	290	208	498
TOTAL TRIPS (AFTER INTERNAL CAPTURE DISCOUNT)			-	-	-	236	156	392

As shown in Table 6a, if the site were to develop with a neighbourhood grocery in building M4 (Phase 1 of the project), the development is expected to generate 360 (126 in, 234 out) and 392 (236 in, 156 out) vehicle trips during the weekday AM and PM peak hours, respectively.

Table 6b: Estimated Peak Hour Vehicle Trip Generation (with Retail Shops)

PHASE	USE	BLDG	AM PEAK HOUR TRIPS			PM PEAK HOUR TRIPS		
			IN	OUT	TOTAL	IN	OUT	TOTAL
1	Residential	M3	7	20	27	20	13	33
		M4	3	10	13	14	9	23
	Commercial (CRU)	M4	7	4	11	19	24	42
Sub-Total			17	34	51	53	46	98
2	Residential	M2	9	27	36	27	17	44
Sub-Total			9	27	36	27	17	44
3	Residential	T2	16	51	68	48	31	78
Sub-Total			16	51	68	48	31	78
4	Residential	M1	10	28	37	28	18	46
		T1	16	52	68	48	31	79
	Commercial (CRU)	T1	2	1	4	6	8	14
Sub-Total			28	81	109	82	57	139
TOTAL TRIPS			71	193	264	210	150	360
TOTAL TRIPS (AFTER INTERNAL CAPTURE DISCOUNT)			-	-	-	198	139	337

As shown in Table 6b, if the site were to develop with a variety of retail shops in building M4 and tower T1, the development is expected to generate 264 (71 in, 193 out) and 337 (198 in, 139 out) vehicle trips during the weekday AM and PM peak hours, respectively.

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APPENDIX A
Site Plan and Access Locations

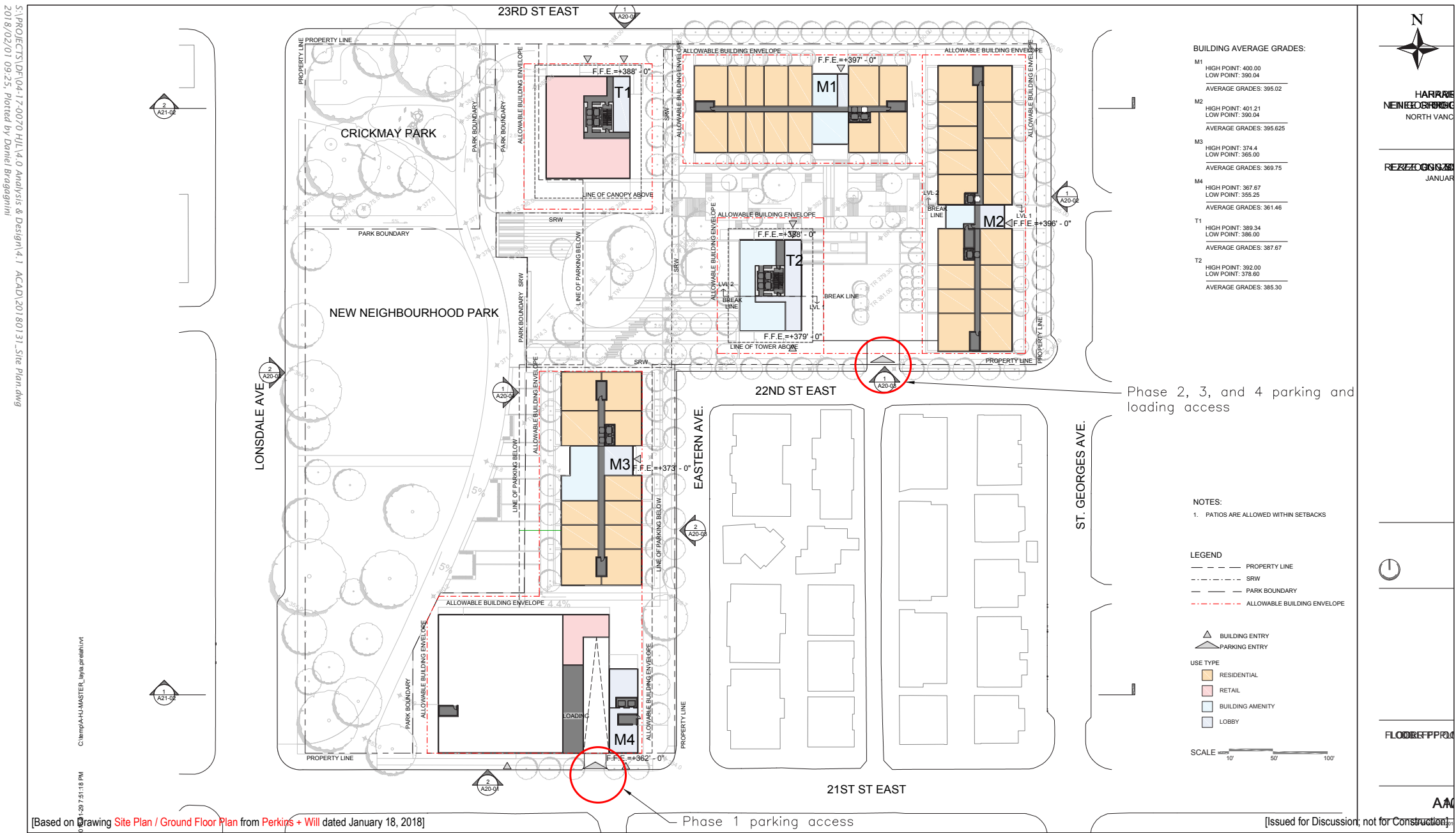
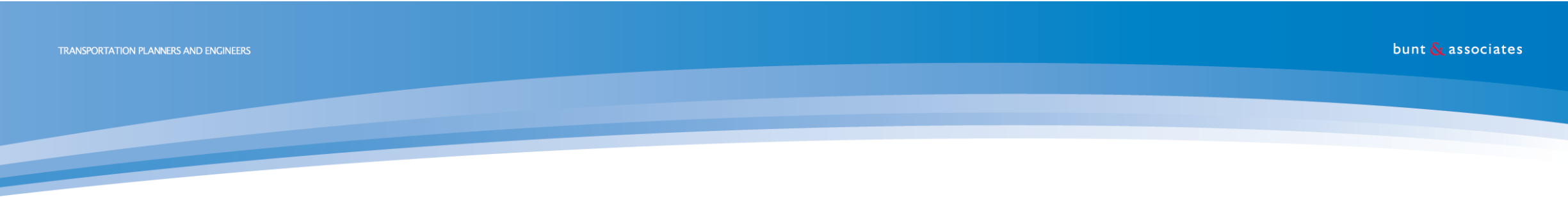


Exhibit A.1
Parking and Loading Accesses



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APPENDIX B
Loading Swept Path Analysis

ENVIRONMENTAL

“The following is the executive summary from the Keystone Environmental Ltd. “Report of Findings – Phase 1 Environmental Site Assessment” report prepared for the City of North Vancouver in August 2017. The complete report is available separately from this document.

Keystone has also prepared a “Schedule 1 Site Profile” dated January 12, 2018. The complete Schedule is also available separately from this document.”





**Keystone
Environmental**
Knowledge-Driven Results



**Report of Findings –
Phase I Environmental Site Assessment**

2160 Lonsdale Avenue, 144 East 22nd Street and 123 East 23rd Street
North Vancouver, BC

Prepared for: City of North Vancouver

Project No. 13622
August 2017

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**Keystone
Environmental**
Knowledge-Driven Results

Report of Findings – Phase I Environmental Site Assessment
2160 Lonsdale Avenue, 144 East 22nd Street and 123 East 23rd Street
North Vancouver, BC

EXECUTIVE SUMMARY

This KEYSTONE ENVIRONMENTAL™ Phase I Environmental Site Assessment (ESA) report, prepared at the request of the City of North Vancouver was conducted the properties referenced as 2160 Lonsdale Avenue, 144 East 22nd Street and 123 East 23rd Street, North Vancouver, BC (the Site). The Site is currently occupied by two community centre buildings, a multi-family residence and a lawn bowling club. The four buildings on the Site are identified as follows:

- Harry Jerome Recreation Centre – community centre building located on the northwest portion of the Site
- Memorial Gym – community centre building on the northeast portion of the Site
- Silver Harbour Centre – Multi-family residence on the central portion of the Site
- Lawn bowling pavilion (North Vancouver Lawn Bowling Club) – located on the south portion

ON-SITE SUMMARY

Historical records indicate that from the 1920s, or earlier until the mid-1930s, the Site was used primarily for residential purposes. In the mid-1930s, a hall was constructed on the north portion of the Site and the existing lawn bowling pavilion was constructed on the southwest portion of the Site. In the late 1940s, the existing Memorial Gym had been constructed and by the late 1960s, the former hall had been removed and the existing Harry Jerome community centre building was constructed. In the mid-1970s the former residences were removed and the existing Silver Harbour Centre residence was constructed.

Heating Oil

Memorial Gym

The Site building is currently connected to natural gas. The building was formerly heated via a heating oil underground storage tank (UST) located adjacent and west of the building. The UST and associated contaminated soil was removed from the Site in 1999. Confirmatory samples were taken by PHH Environmental Ltd. (PHH) and were analyzed for light/heavy extractable petroleum hydrocarbons (LEPH/HEPH) and polycyclic aromatic hydrocarbons (PAH). The concentrations of LEPH/HEPH and PAH were less than the current BC Contaminated Sites Regulation (CSR) park land use (PL) and residential land use (RL) standards. Potential contaminants of concern (PCOCs) associated with heating oil are LEPH/HEPH, PAH, benzene, toluene, ethylbenzene, xylenes, styrene (BTEX) and volatile petroleum hydrocarbons (VPH). Although BTEX and VPH parameters were not analyzed during the tank removal, based on the time since the tank was removed (over 15 years), there is considered to be a low potential for residual contamination to be present in the vicinity of the former heating oil UST.



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Lawn Bowling Pavilions (former and current)

The existing pavilion building is currently connected to natural gas. It is unknown if the building has been connected to natural gas since its construction in the late-1960s or how the former lawn bowling pavilion (located on the central west portion of the Site) was heated. It is possible that electricity, or heating oil were used. If heating oil was used, it would have been stored in an aboveground or underground storage tank (AST) or UST. Therefore based on the unknown heating methods of the former pavilion and the age of the existing pavilion, there remains a potential for heating oil USTs and associated hydrocarbons, if any, to be present in the vicinity of the existing and former lawn bowling pavilions.

Former Residences

Up to four former single-family residences were located on the Site. It is unknown how the former residences were heated. It is possible that wood, coal, electricity, or heating oil were used. If heating oil was used, it would have been stored in an AST or UST. Two of the former residences were located within the footprint of the existing Silver Harbour Centre. It is therefore anticipated that potential heating oil tanks associated with these former buildings, if any, would have been removed from the Site when the existing multi-family residence was constructed. However there remains a potential for heating oil USTs and associated hydrocarbons, if any, to be present in the vicinity of the remaining two former single-family residences located to the north of the Silver Harbour Centre and on the west portion of the Site.

Existing Community Centre

During the Site reconnaissance the following was observed in the Harry Jerome community centre building:

- Five 22.7 kg bags of calcium chloride
- Eleven 22.7 kg bags of sodium bicarbonate
- Seven approximately 20 L pails of hypochlorite
- Thirteen 22.7 kg bags of soda ash
- Eleven approximately 50 kg bags of diatomaceous earth
- Two approximately 20 L pails of hydrochloric acid
- One approximately 25 L container of sodium thiosulphate
- One approximately 200 L drum of compressor oil
- One approximately 150 L drum of waste compressor oil

Based on the products being stored over concrete floors, the concrete floors throughout the building being in good condition (major cracks and/or staining were not observed) and staining not being observed near the floor drains in the building, there is considered to be a low potential for constituents of concern associated with the storage of these products to be present in the Site soil, groundwater, and/or vapour at concentrations greater than the applicable CSR land and water use standards.



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Mr. Gary Hough, the maintenance and engineering services manager for the Site reported that the drainage pipe which runs underground from the pool to the filtration room was recently (exact dates could not be confirmed) replaced as the former pipe had been leaking and eventually burst, releasing a large quantity (exact volume unknown) of chlorinated water into the subsurface under the Harry Jerome building. Chlorinated water is a common source for chloroform production, as the chlorinated water reacts with organic compounds to produce chloroform¹. Although an unknown quantity of chlorinated water was released into the subsurface, given that the pipe was located underground, it is anticipated that the water was released below the organic rich topsoil. Based on the likely organic poor soil in which the chlorinated water was released, it is anticipated that significant amounts of chloroform were not released into the Site soil, vapour and/or groundwater, therefore there is considered to be a low potential for constituents of concern associated with the release of chlorinated water to be present in the Site soil, groundwater, and/or vapour at concentrations greater than the applicable CSR land and water use standards.

North Vancouver Lawn Bowling Club

During the Site visit, an interview was conducted with a representative of the lawn bowling club. He reported that herbicide/pesticides were occasionally used on the lawn bowling fields but that the herbicide/pesticide products were not stored on the Site in quantities of concern. Herbicides and/or pesticides typically have relatively short half-lives and quickly degrade in soil, as such, when used correctly, the application of herbicides and/or pesticides generally do not pose long-term contamination problems. Therefore, based on the relatively small scale of the lawn bowling fields (the lawn bowling fields have a combined area of approximately 3,200 m²) and the anticipated short half-lives of the herbicides/pesticides used, there is considered to be a low potential for constituents of concern associated with the orchard to be present in the Site soil, groundwater, and/or vapour at concentrations greater than the applicable CSR land and water use standards.

OFF-SITE SUMMARY

The properties located within the vicinity of the Site were primarily residential from the 1940s to the 1960s when increased commercial development began in the area.

Three off-Site properties located in the vicinity of the Site were identified to having been occupied by historical operations of potential environmental concern. However based on the distance, short duration and/or cross or down-gradient orientation to the Site, there is considered to be a low potential for the three off-Site properties to have contributed constituents of concern to the Site soil, groundwater, and/or vapour at concentrations exceeding the CSR land and water use standards.

¹ https://repository.asu.edu/attachments/143439/content/Rose_asu_0010N_14553.pdf



ENVIRONMENTAL

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CONCLUSION

With the exception of hydrocarbon contamination to be present in the vicinity of potential heating oil USTs, if any, or potential residual hydrocarbon contamination to be present in the vicinity of the former heating oil tank located west of the Memorial Gym, there is considered to be a low potential for constituents of concern to be present in the Site soil, groundwater, and/or vapour at concentrations greater than the applicable CSR land and water use standards.

In our experience, in a majority of cases, hydrocarbon contamination related to former heating oil storage tanks, if any, has been minor and localized to the vicinity of the tank. Potential heating oil USTs (if any) can be dealt with at the time of redevelopment and further investigation is not warranted at this time.

This Executive Summary is subject to the same general limitations as contained in the report and must be read in conjunction with the entire report.



APPENDIX

ALTERNATE SCHEME

Subsequent to Darwin’s community engagement with an Open House in December 2017, the City of North Vancouver asked Darwin Properties to consider some additional community priorities, and how these priorities may be accommodated in the development proposed.

AFFORDABLE (NON-MARKET) HOUSING

The City of North Vancouver’s “Definition of “Affordability” defines Affordable Housing as “housing which is affordable to households of low and moderate incomes, targeted to those whose incomes and family sizes meet the income thresholds set from time to time by BC Housing (formerly BCHMC) / CMHC for the Lower Mainland”.

Approximately 45,000 sq ft has been suggested for affordable (non-market) housing.

CHILDCARE

The City of North Vancouver adopted a Child Care Policy and Plan to provide an overall framework and specific actions to be implemented to help support child care facilities in the City of North Vancouver.

Although there is planning for childcare facilities in the future Harry Jerome Community Recreation Centre, the additional residents who will be living in the new Harry Jerome Neighbourhood Lands will increase that requirement. Approximately 5,000 sq ft of indoor area has been suggested for childcare on the HJNL.

The City of North Vancouver has proposed that approximately 50,000 (45,000 + 5,000) sq ft of additional floor area could be added to the allowable GFA for Harry Jerome Neighbourhood Lands site in consideration of accommodating the above community priorities.

This alternative scheme illustrated provides a high-level indication of how additional density may be accommodated. The addition of 50,000 sq ft of floor area in the lower levels of the buildings would displace existing residential area, which could then be added to Tower 1, making it approximately 32 storeys.

This Alternate Scheme may be discussed further at a later date. At present time this Alternate Scheme has not been presented to the public for input.



Alternate Scheme - Massing

Additional Density ■

ALTERNATE SCHEME

Building Height			Area Summary					Unit Summary						
	Stories	Height	GFA Residential	GFA Retail	GFA Total	FSR Exclusions	FSR Area	Studio	1BR	1BR+D	2BR	2BD+D	3 BD	Total
T1	32	298 ft (91 m)	246,150	5,600	251,750	6,372	245,378	-	105	53	78	32	12	280
T2	26	243 ft (74 m)	195,860	-	195,860	7,516	188,344	-	80	40	60	26	12	218
M1	6	65 ft (19.8 m)	91,080	-	91,080	2,365	88,715	20	24		48	6	6	104
M2	6	67 ft (20.5 m)	104,440	-	104,440	2,848	101,592	-	-	43	30	23	5	101
M3	6	69 ft (21.1 m)	80,200	-	80,200	2,449	77,751	-	-	38	8	25	4	75
M4*	5	65 ft (19.8 m)	56,090	15,800	71,890	2,726	69,164	10	24		20	8	4	66
Parcel 2 Subtotal			136,290	15,800	152,090	5,175	146,915	10	24	38	28	33	8	141
Parcel 3 Subtotal			637,530	5,600	643,130	19,101	624,029	20	209	136	216	87	35	703
Site Total			773,820	21,400	795,220	24,276	770,944	30	233	174	244	120	43	844
Site Area							314,915							
FSR							2.45							

		Required Parking and Loading						Required Bicycle Parking					
		Units	GFA (sf)	GFA (sm)	Bylaw Requirements		Supply Required		Loading	Bicycle Bylaw Requirements		Supply Required	
					Total	Visitor	Total	Visitor		Short Term	Secure	Short Term	Secure
Parcel 2 Residential	M3	75			1.05 per unit		79	8		6 spaces per every 60 units or part there of	1.5 per unit	12	113
Parcel 2 Residential	M4*	66			.6 per unit	.1 per unit	40	7			1 per 250 sm	12	99
Parcel 2 Retail	M4		15,800	1,468	1 per 50 sm		29	-	1	6 per 1000 sm		-	6
Parcel 2 Subtotal		141					148	15				24	218
Parcel 3 Residential	M2	101			1.05 per unit	.1 per unit	106	10				12	152
	T2	218			1.05 per unit	.1 per unit	229	22				24	327
	M1	104			1.05 per unit	.1 per unit	109	10		6 spaces per every 60 units or part there of	1.5 per unit	12	156
	T1	280			1.05 per unit	.1 per unit	294	28				24	420
Parcel 3 Retail	T1		5,140	478	1 per 75 sm		6		1	6 per 1000 sm	1 per 250 sm	-	2
Parcel 3 Subtotal							744	70				72	1,057
Site Total							892	85				96	1,275

*M4 will conform to The City of North Vancouver's 10-10-10 policy for mid-market rental units

** The location of 45,000 sf of Affordable Housing will be located in one of the mid-rise buildings. The location of which is to be determined.



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