



City of
Kelowna

CDZ # 21 - COUNCIL WORKSHOP

(March 29th, 2010)



KELOWNA'S DOWNTOWN

Rethinking...

Remaking...

Reinventing...



TODAY'S AGENDA

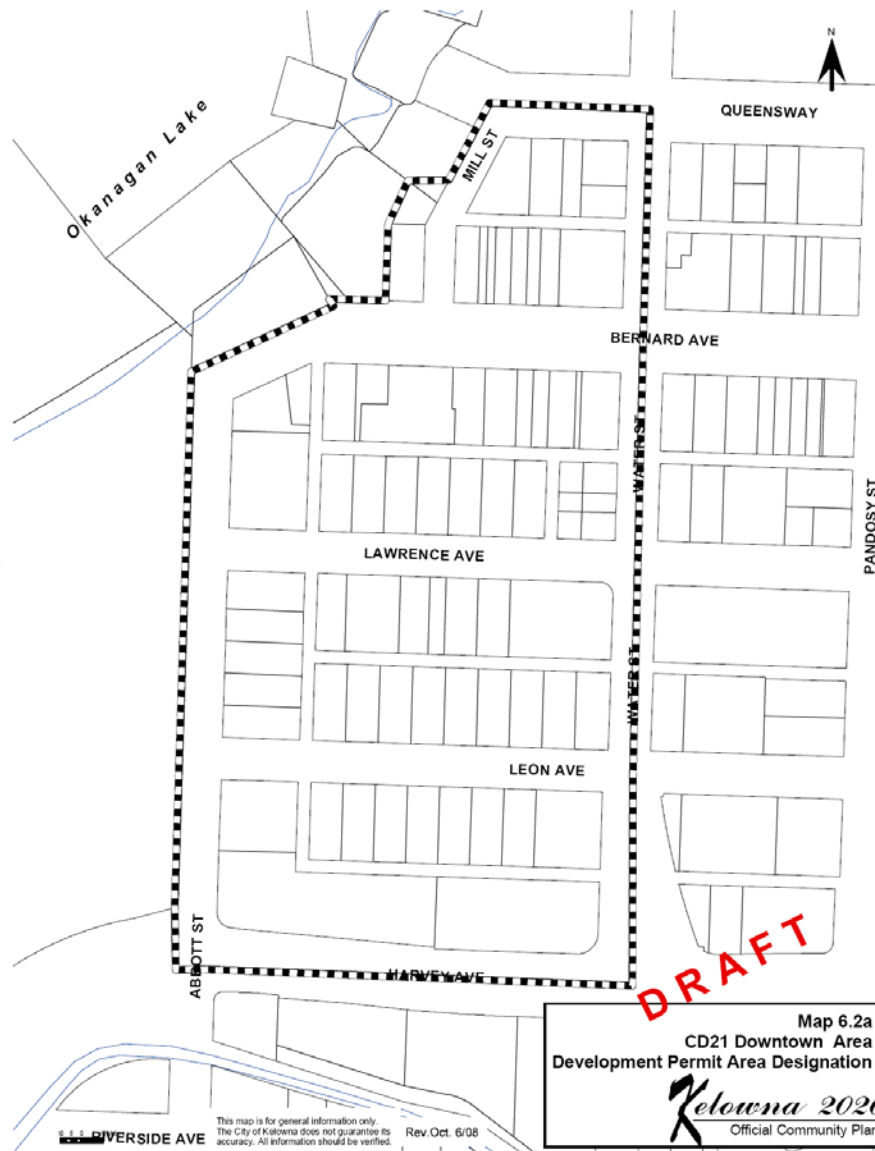
- ▶ Historical Context
- ▶ The Concept
- ▶ Public Consultation & Process
- ▶ The Detail / Mechanics
- ▶ Previous Areas of Interest
- ▶ Q & A

AGENDA - APRIL 26TH 2010

New Areas of Interest (Council):

- Heritage value of Additional Buildings
- Closure and Consolidation of Mill St.
- 2030 OCP Growth Projections in D/T (with mapping)
- Amenity Cost Sharing (across D/T)
- Direct Land Owner/Council Discussion Options
- Greater Economic Impact of Hotel

CDZ #21 AREA



A BRIEF HISTORY



PREVIOUS INITIATIVES

- ▶ Parking Relief Incentive
- ▶ Tax Relief Incentive
- ▶ D/T Streetscape Initiative
- ▶ Gospel Mission Relocation
- ▶ Downtown Plan
- ▶ Way Finding Sign Program
- ▶ Dumpster Removal Program
- ▶ Downtown Task Force
- ▶ Entertainment Task Force
- ▶ City Land Assembly



ZONING COMPREHENSIVELY

- ▶ What are the benefits?
- ▶ What does it mean?



THE TOOL (CD ZONE)

1. Ensure Complementary Uses
2. Foster Amenity Creation (\$22 million)
3. Infrastructure Cost Sharing
4. Parking Efficiency & Active Streets
5. Determine Appropriate Massing



THE TOOL (CD ZONE)

6. Preserve View Corridors & Solar Access
7. Create Certainty
8. Quality of Design Controls
9. Supports sustainable design -
Social, Economic & Environmental



GUIDING OUR PATH

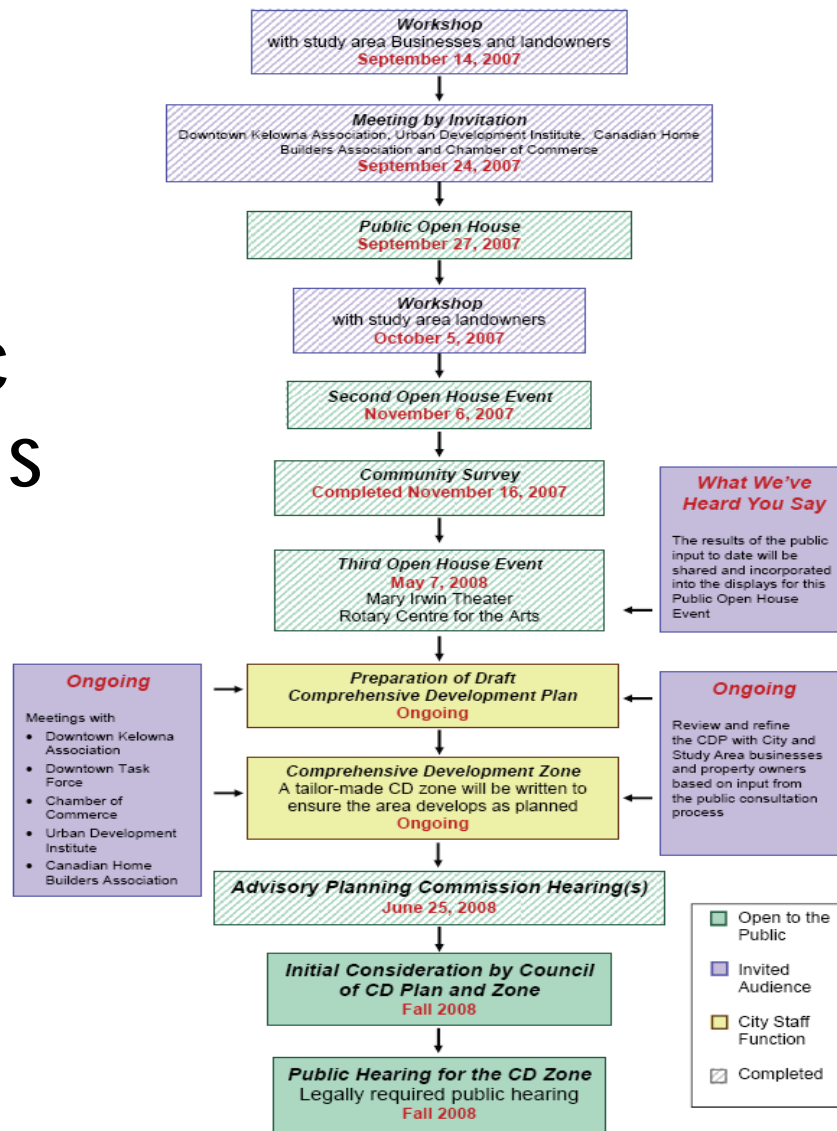
The Principles:

1. Enhance Kelowna's identity nationally and internationally
2. Improve Downtown's presence as Kelowna's principle urban centre
3. Develop a viable mixed use community of live, work and play for residents and visitors.
4. Develop a safe environment by providing more eyes and ears on the streets.
5. Incorporate sustainable design principles
6. Expand community amenities

The Principles Continued:

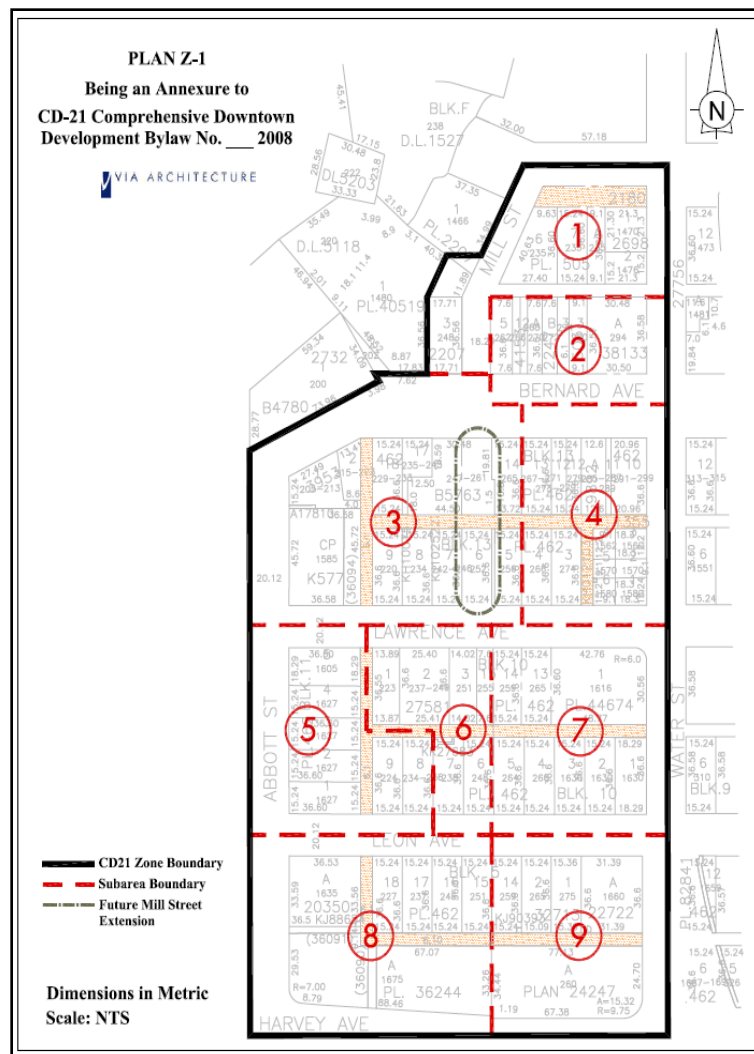
7. Create a community feel integrated with adjoining parks and Culture District.
8. Engender housing diversity downtown with housing types and tenures that include affordable and special needs housing.
9. Respect the area's Heritage assets.
10. Contribute to a share of downtown amenities as a condition of development
11. Honour the City's agreement with the Province for vehicle movement to and from the new Bill Bennett Bridge.
12. Catalyst redevelopment through the remainder of downtown.

THE PUBLIC PROCESS



THE HIGHLIGHTS

- ▶ Some assembly required
- ▶ Density Bonusing
- ▶ Amenities **
- ▶ Heritage
- ▶ Existing C7



A COMMUNITY VISION



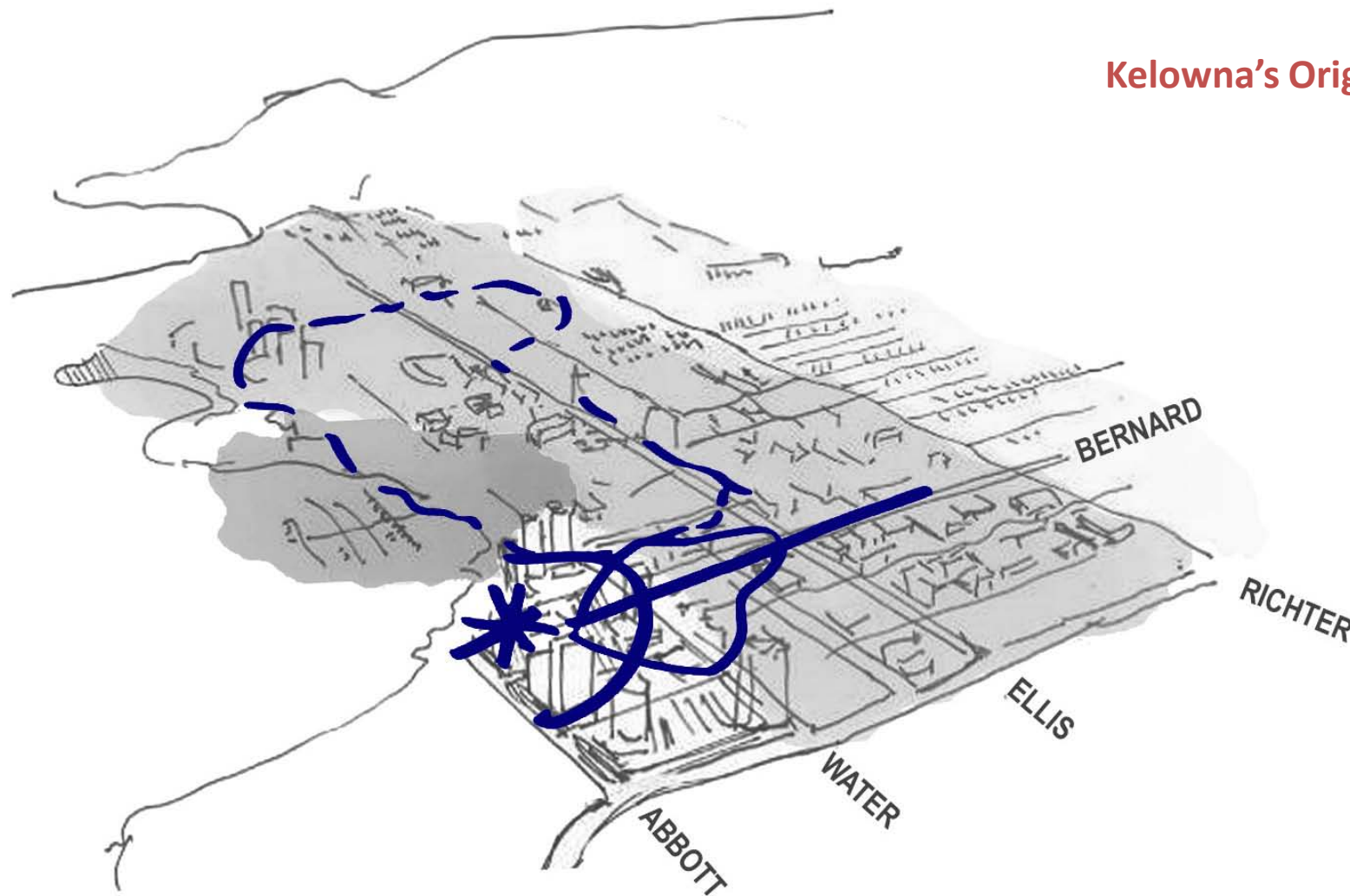
ENVISIONING FUTURE PERSPECTIVES FOR KELOWNA



1. Enhance Kelowna's **identity**
2. Downtown as Kelowna's **principal urban centre**
3. **Viable mixed use** community residents and visitors.
4. **Safe environment** eyes and ears on the streets.
5. Incorporate **sustainable** design principles
6. Expand **community amenities**
7. **Community integrated** Parks and Culture District.
8. Engender **housing diversity** downtown
9. Respect the area's **Heritage** assets.
10. **Contribute** to downtown amenities
11. City/Provincial agreement for **vehicle movement**
12. **Catalyst redevelopment** through downtown

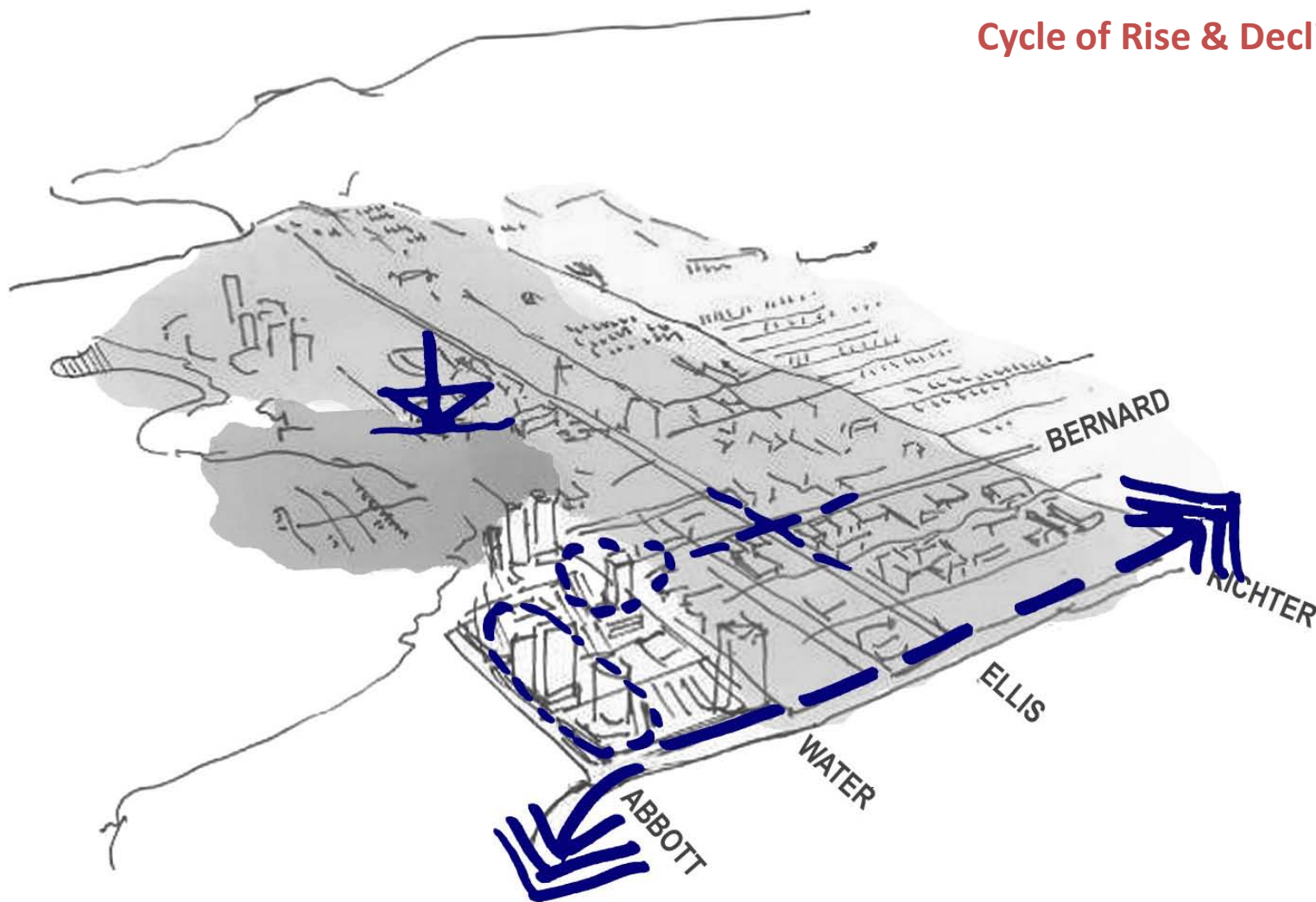
PLANNING CONTEXT

Kelowna's Origins



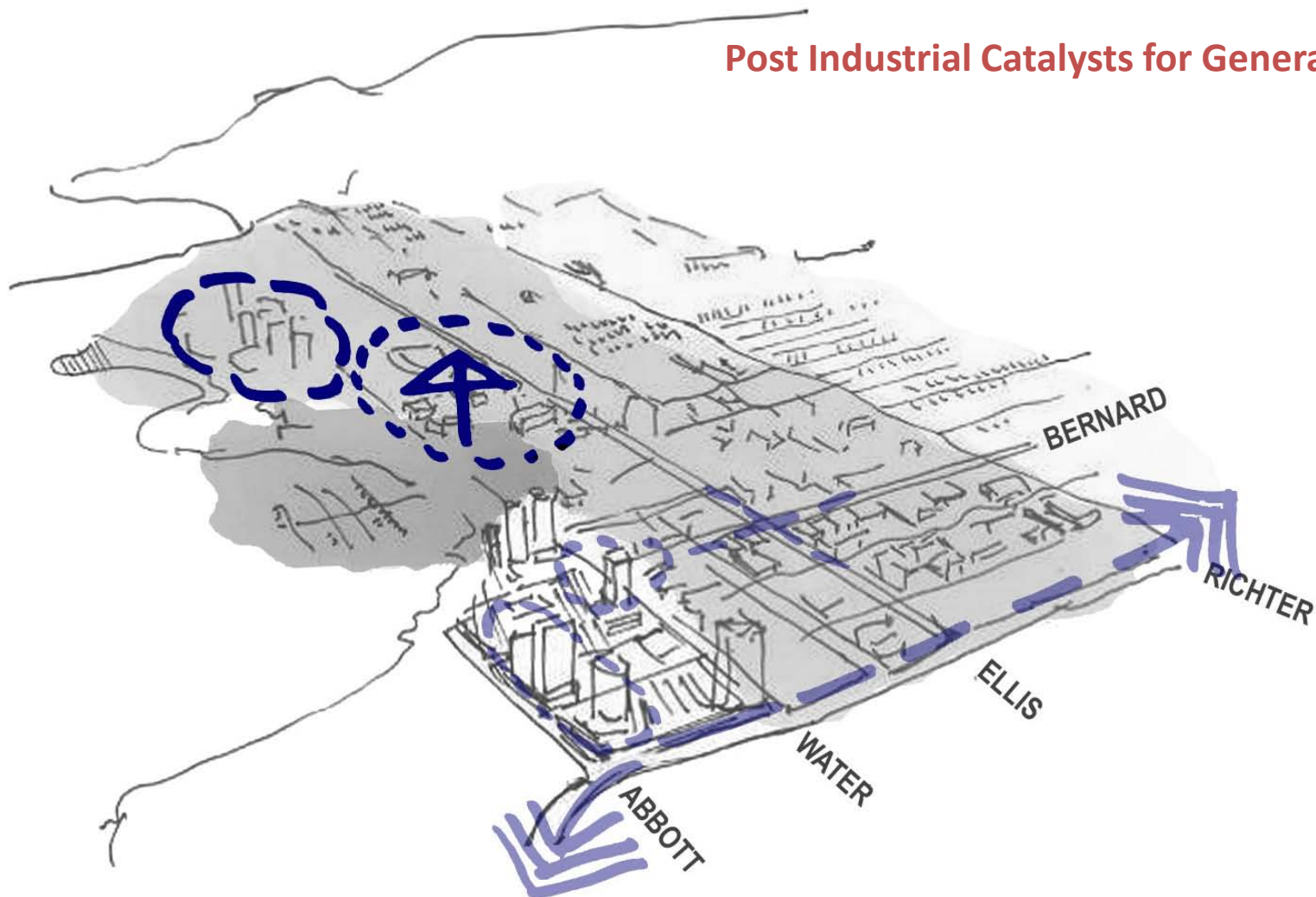
PLANNING CONTEXT

Cycle of Rise & Decline



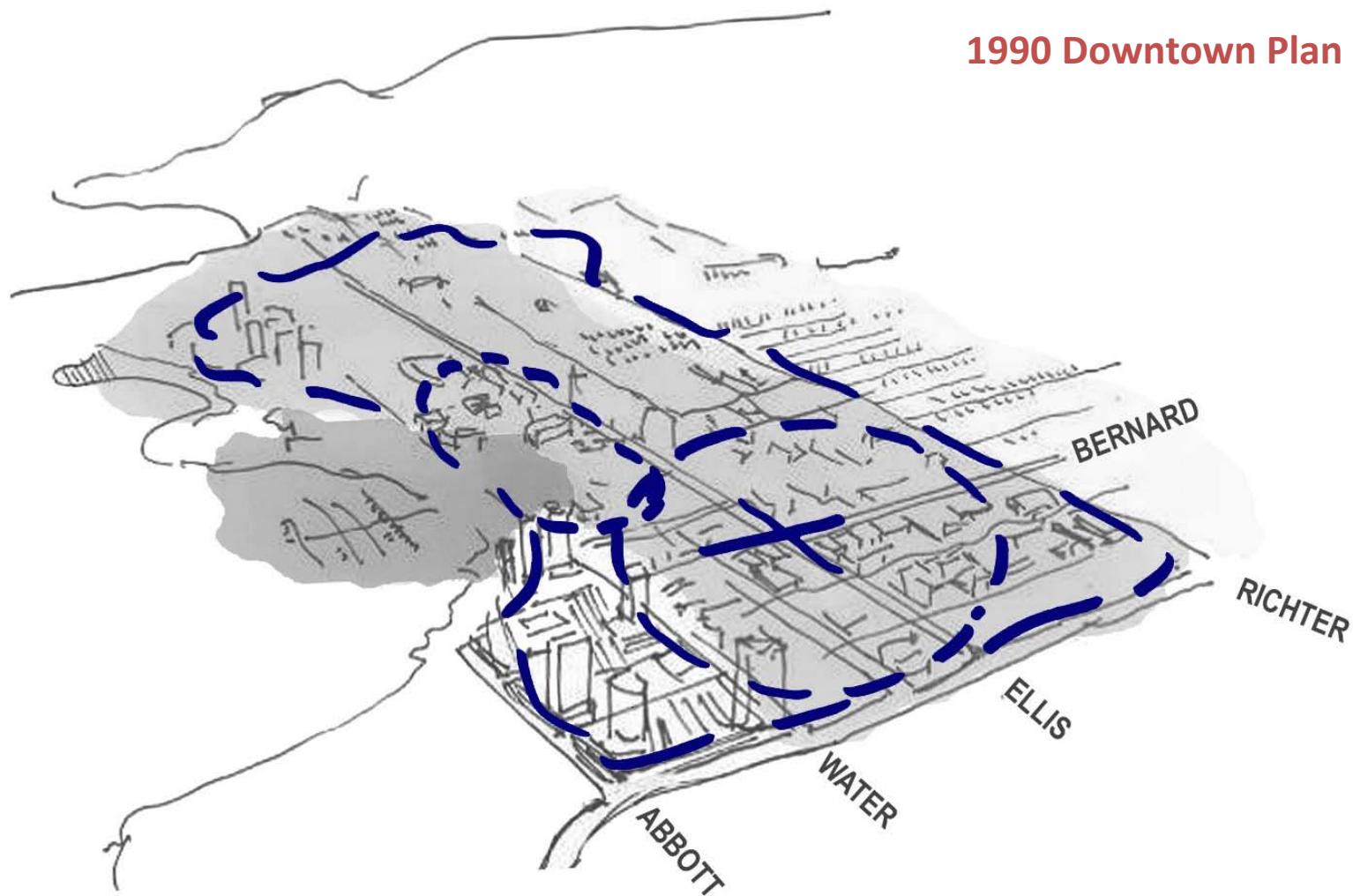
PLANNING CONTEXT

Post Industrial Catalysts for Generation



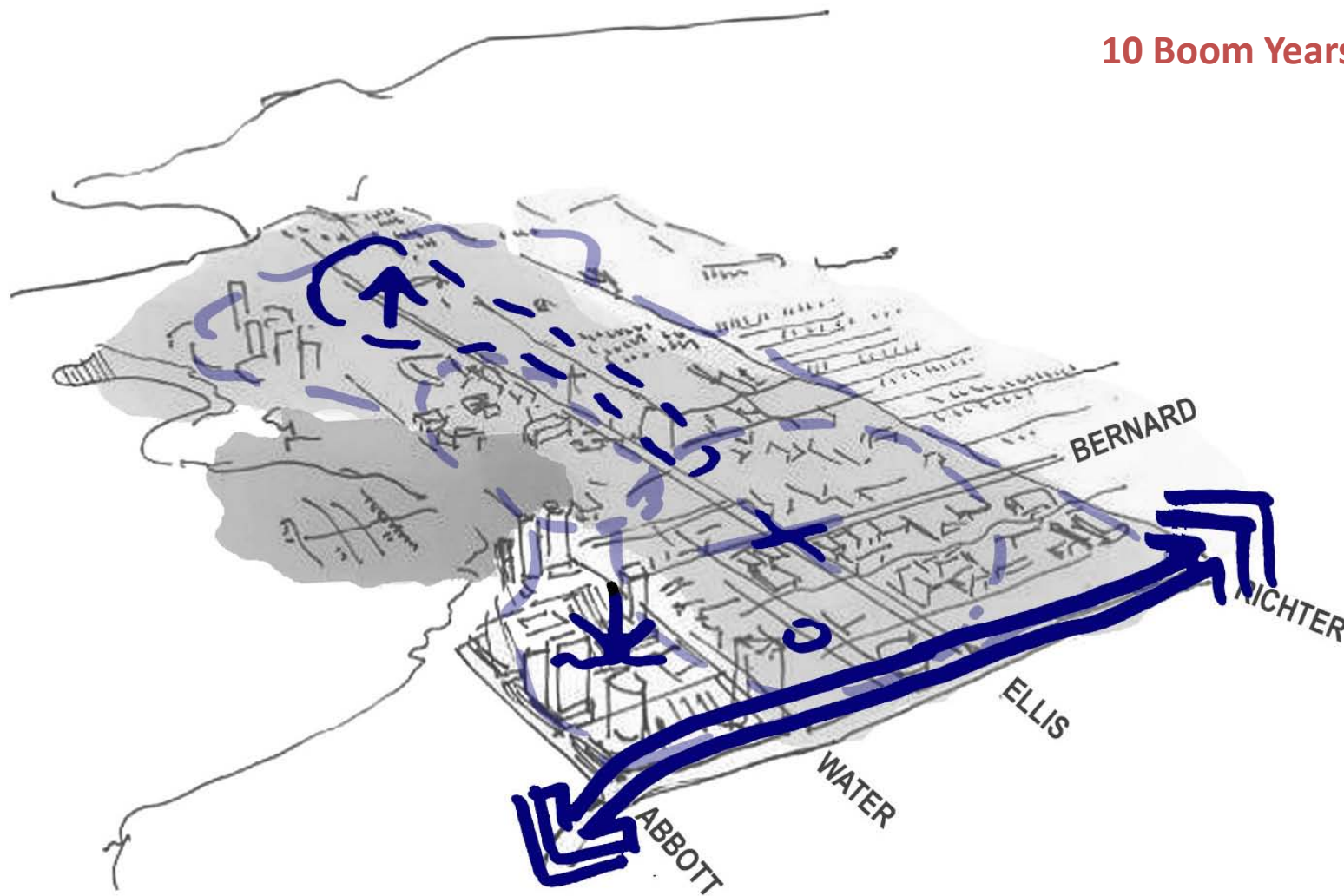
PLANNING CONTEXT

1990 Downtown Plan



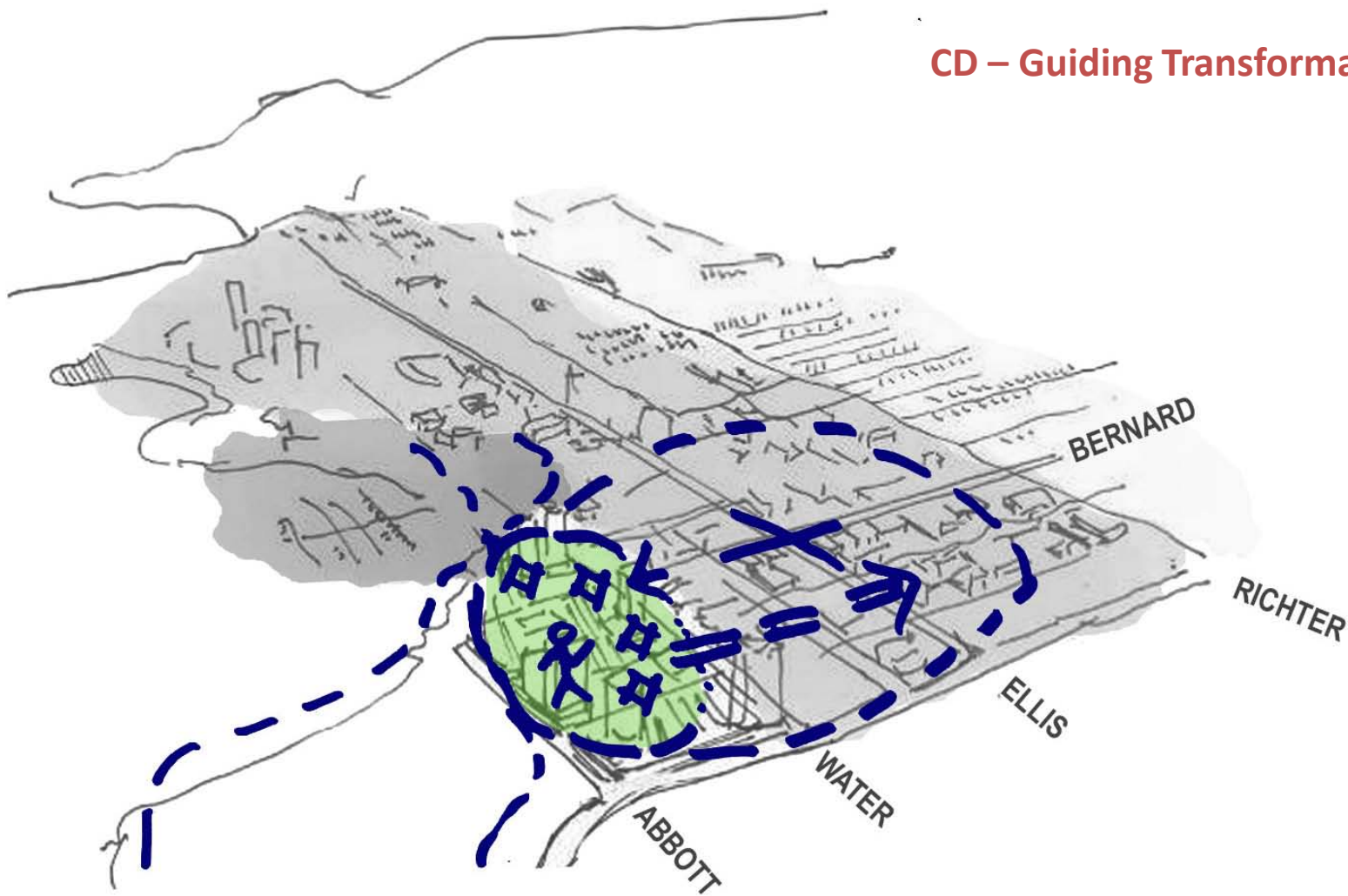
PLANNING CONTEXT

10 Boom Years



PLANNING CONTEXT

CD – Guiding Transformation

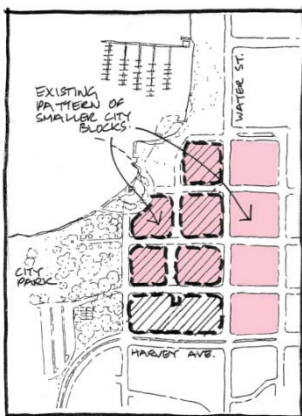


GUIDING DESIGN PRINCIPLES

block structure

Principle 1:

Downtown is about **walking**



Principle 2:

Enhance Harvey Ave. as a **green gateway** boulevard



Principle 3:

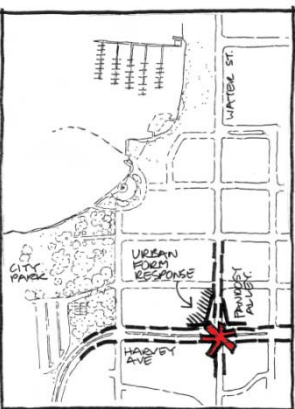
Connect Mill to Lawrence to **redirect** traffic from **waterfront edge**



boundary influences

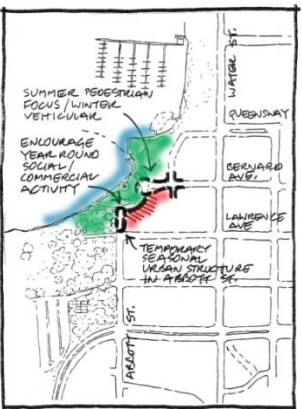
Principle 4:

Plan Pandosy Harvey as a long term **urban crossing**



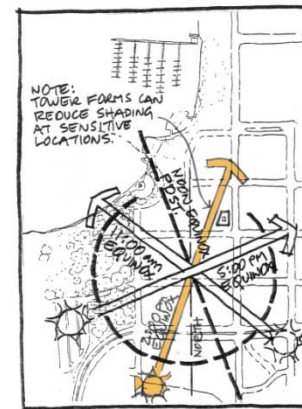
Principle 5:

Use Abbott & Bernard as **year-round amenity**, not through traffic



Principle 6:

Optimise Kelowna **sunshine**

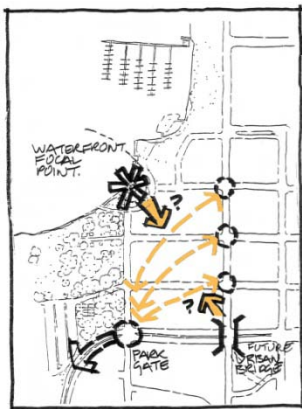


GUIDING DESIGN PRINCIPLES

urban place making

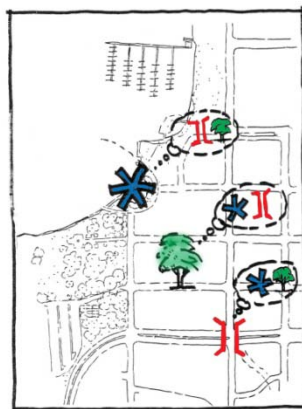
Principle 7:

Enhance diagonal pedestrian and vehicular patterns



Principle 8:

Create a series of linked, memorable urban places



Principle 9:

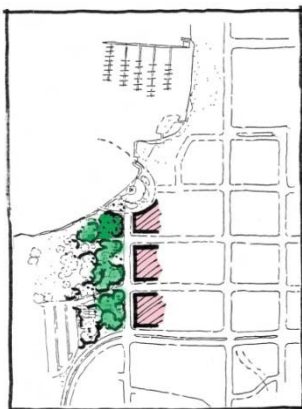
Knit public realm with a procession of focal points



integrated continuity

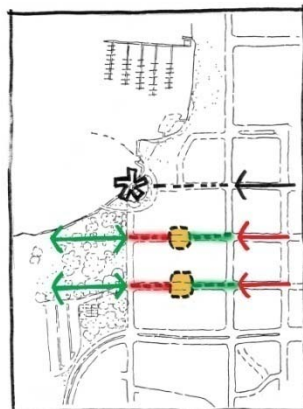
Principle 10:

Highlight park/city interface



Principle 11:

Bring City park and Downtown together

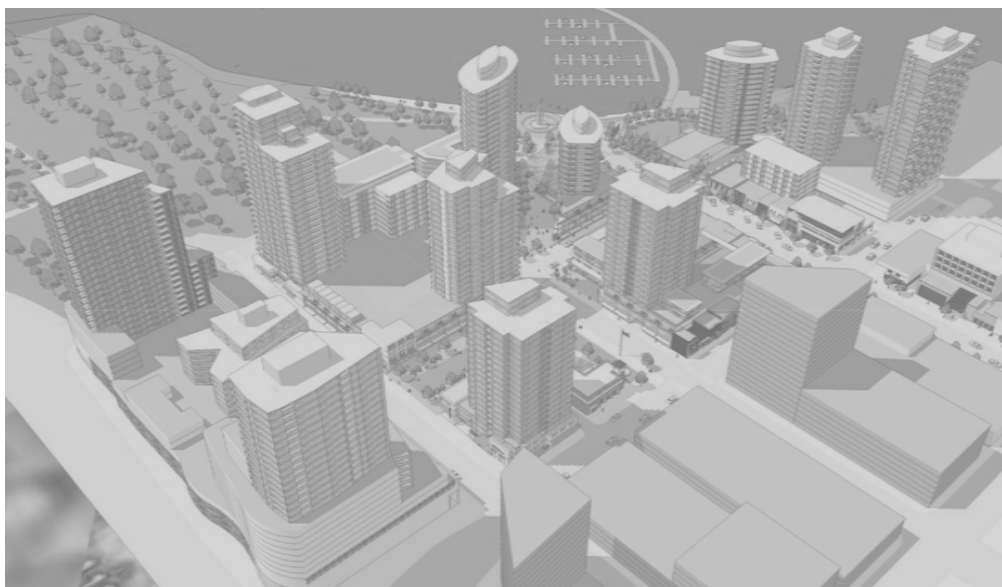
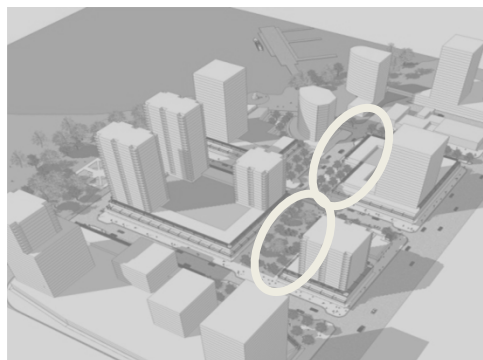
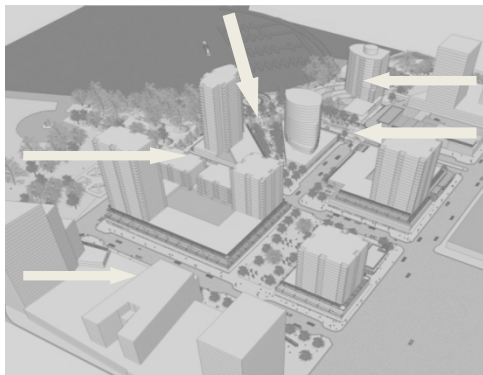


Principle 12:

Reinforce heritage to serve the future

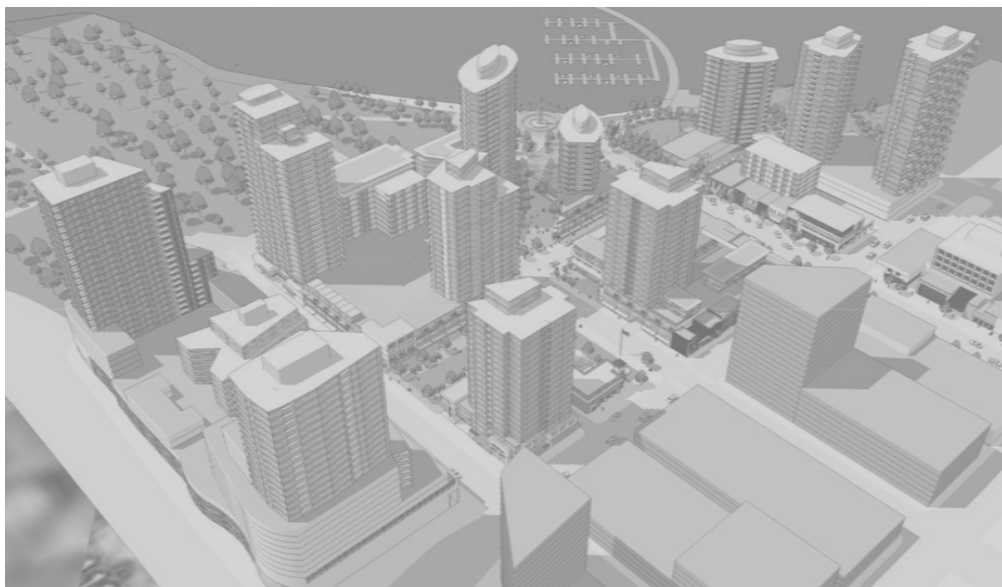
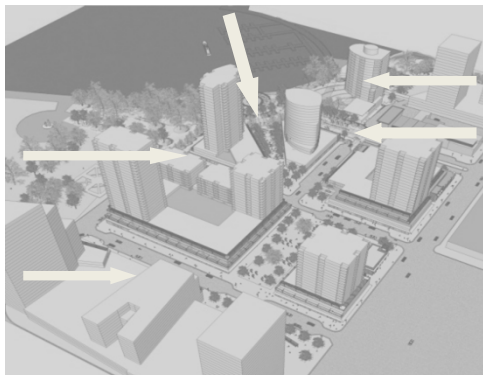


ITERATIVE PUBLIC CONSULTATION



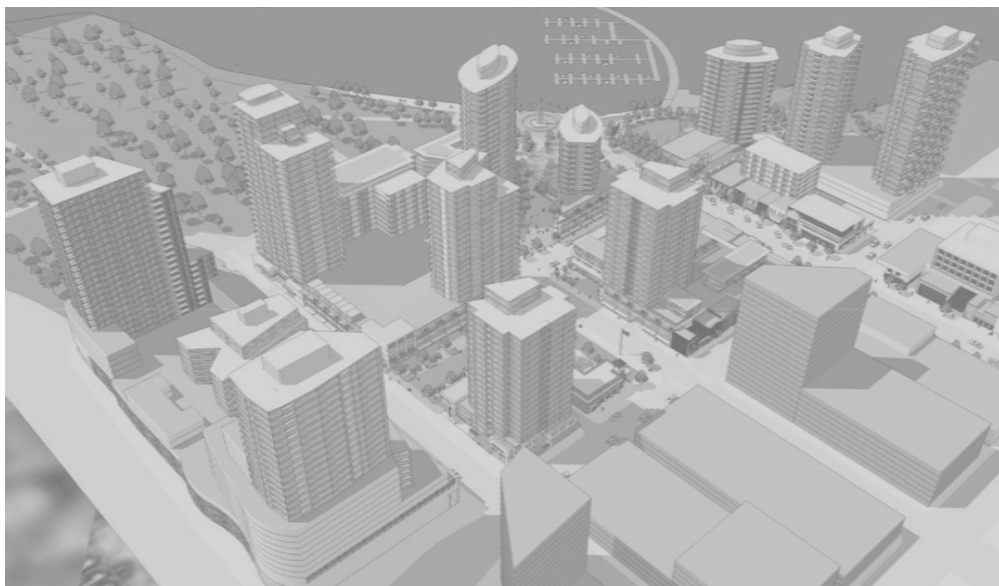
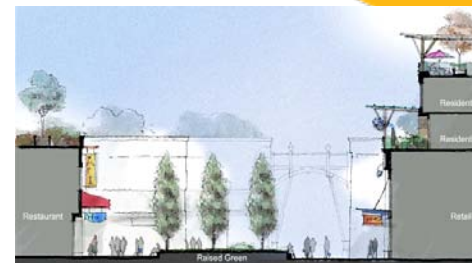
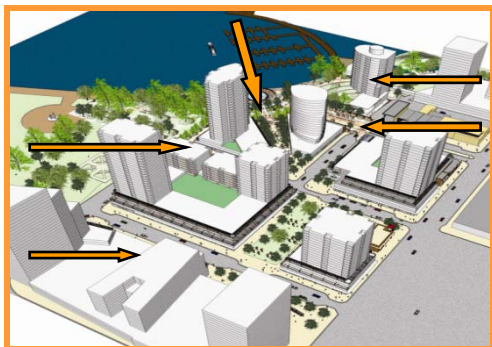
- **Open House**
Sept 2007
- **Open House**
Nov 6th 2007
- **Property Owners' Workshop**
Dec 2007
- Council Presentation
Feb 11th 2008
- Council & Community Workshops
March 17th & 31st 2008
- Open House
May 7th 2008
- Advisory Planning Commission
June 25th 2008

ITERATIVE PUBLIC CONSULTATION



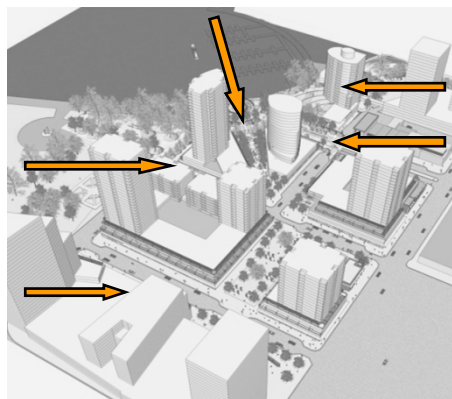
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ITERATIVE PUBLIC CONSULTATION PRODUCT



SUSTAINABILITY - THE DRIVER



**“something happens because
something happens because
something happens” Jan Gehl**

WHAT SUSTAINS THE HERE, HERE?



C7

Automobile Priority

“get me out of here”

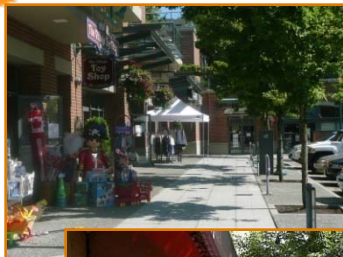


CDZ

Pedestrian Priority

“meet me here”

VIEW UP CLOSE- urban amenity for all



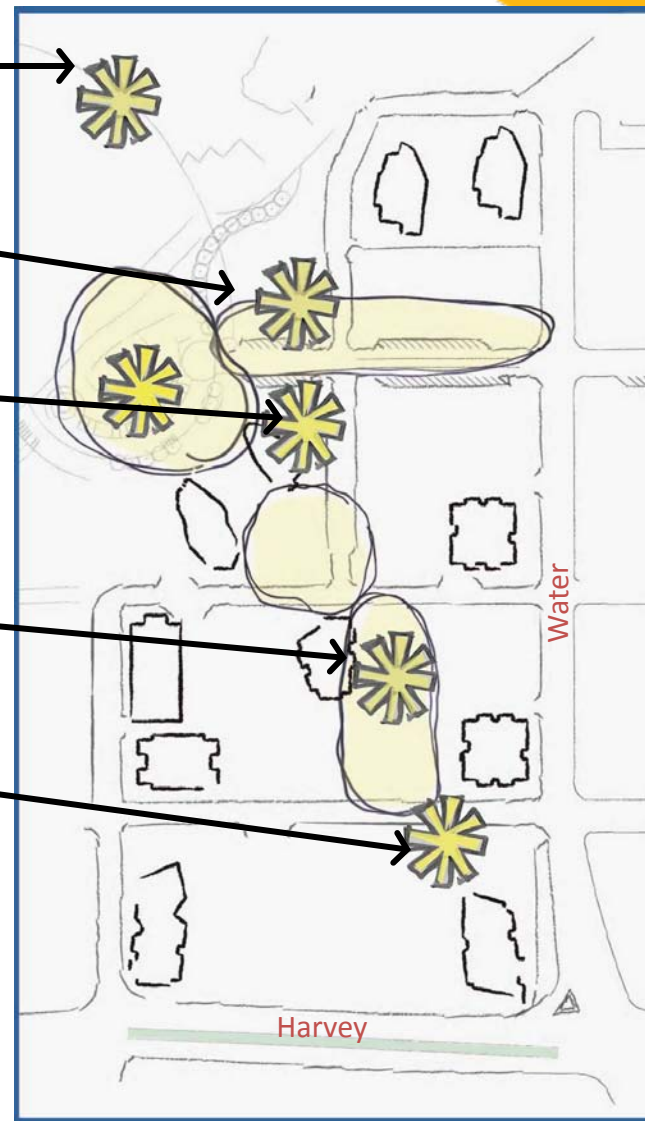
Public Pier

Community + Hotel
Anchor Park "Portal"

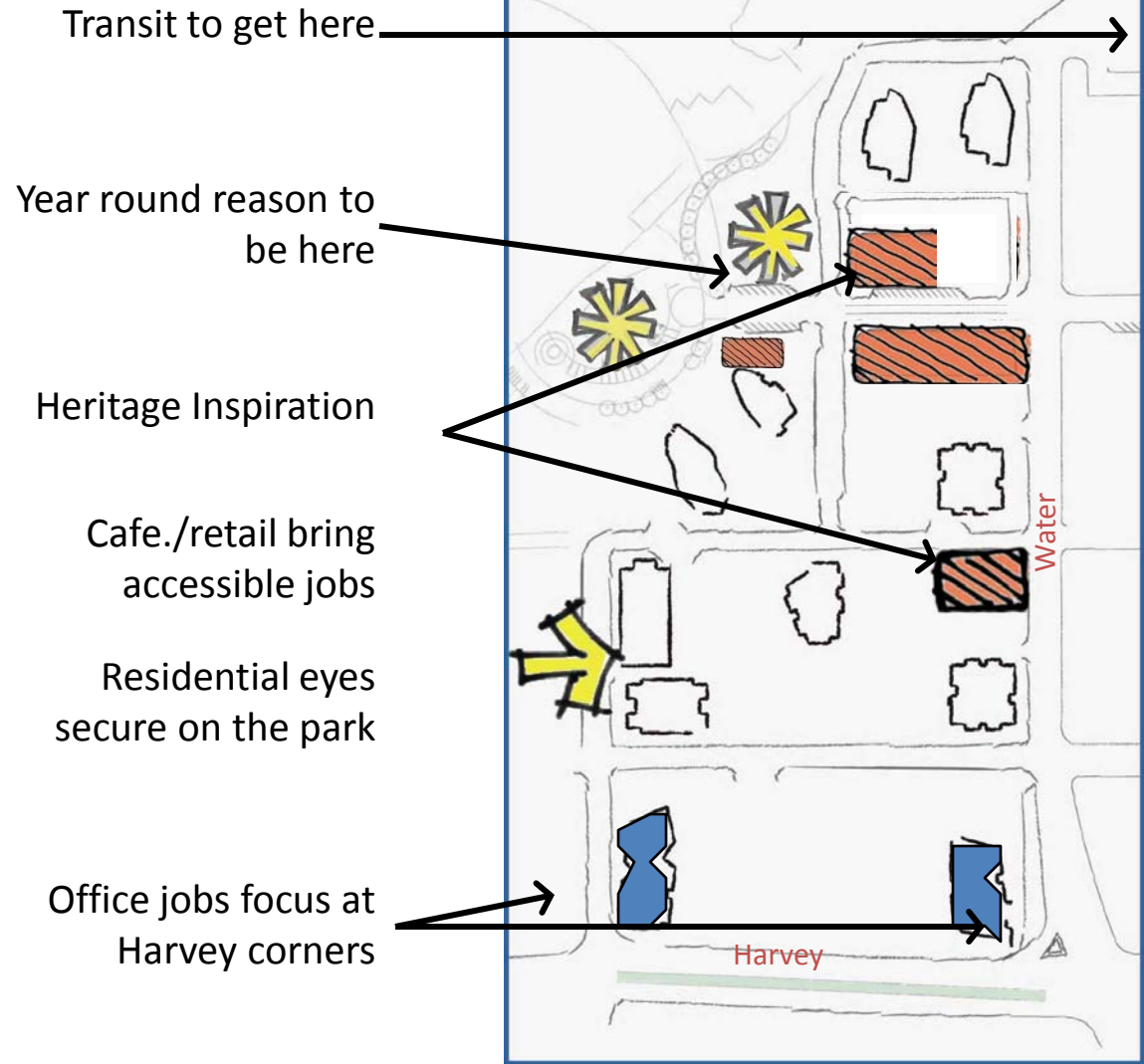
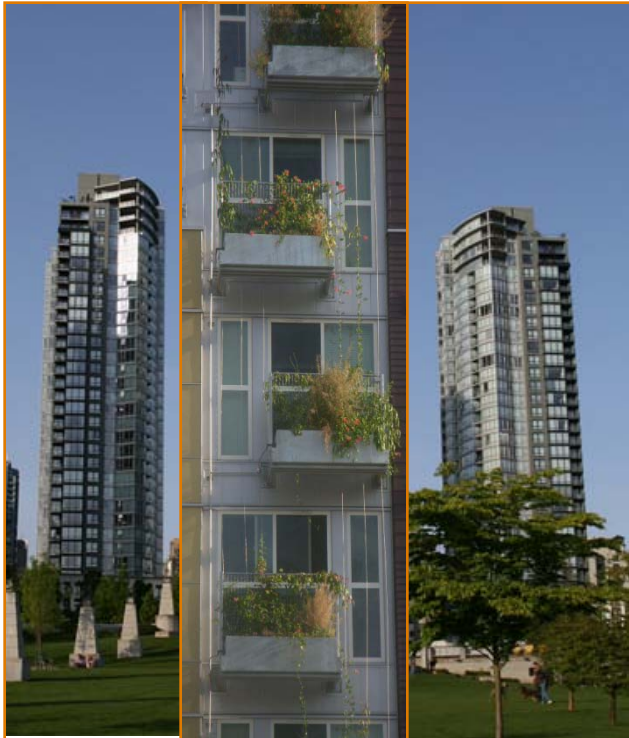
Feet on the Street
Live, Work, Play

Active Market Green

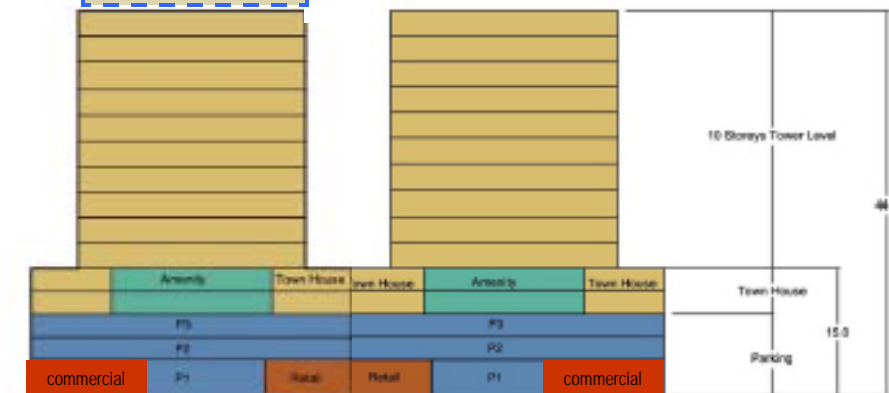
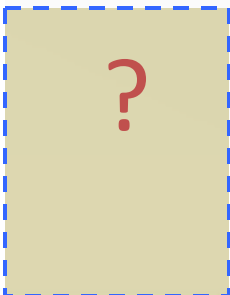
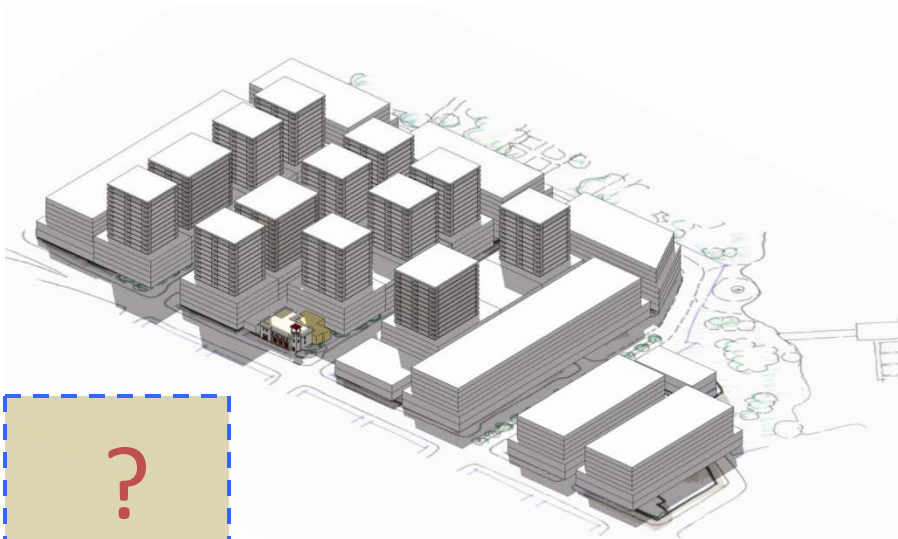
Grocery Store + Community Room



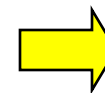
VIEW FROM AFAR – sustaining public health



HOW TO GET THERE

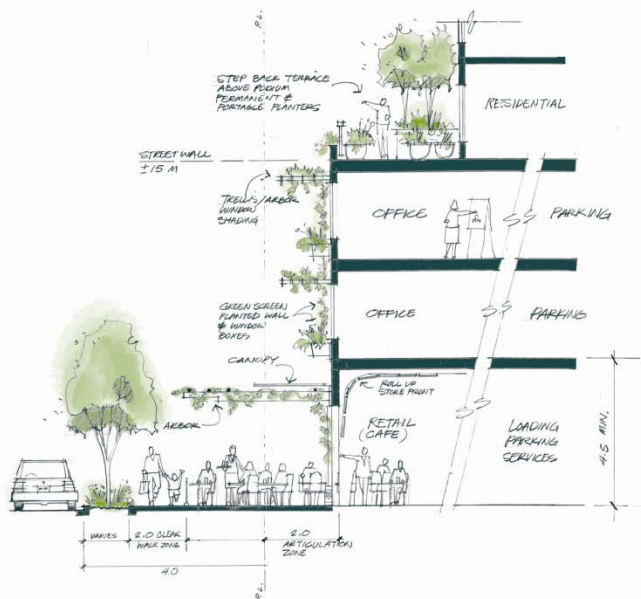
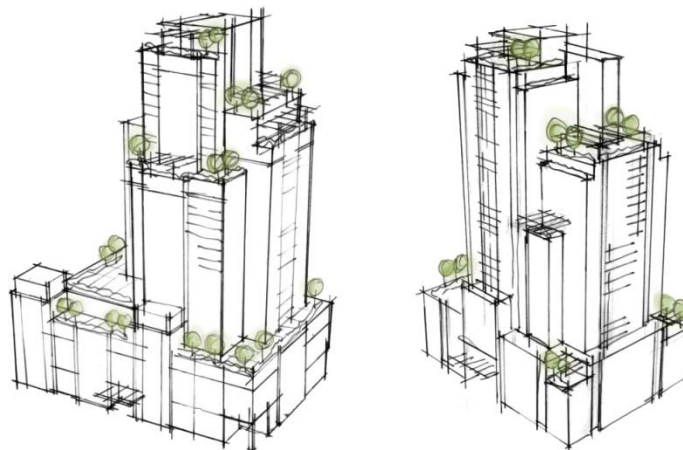


~~Existing Downtown Plan~~
~~P27 Zoning~~

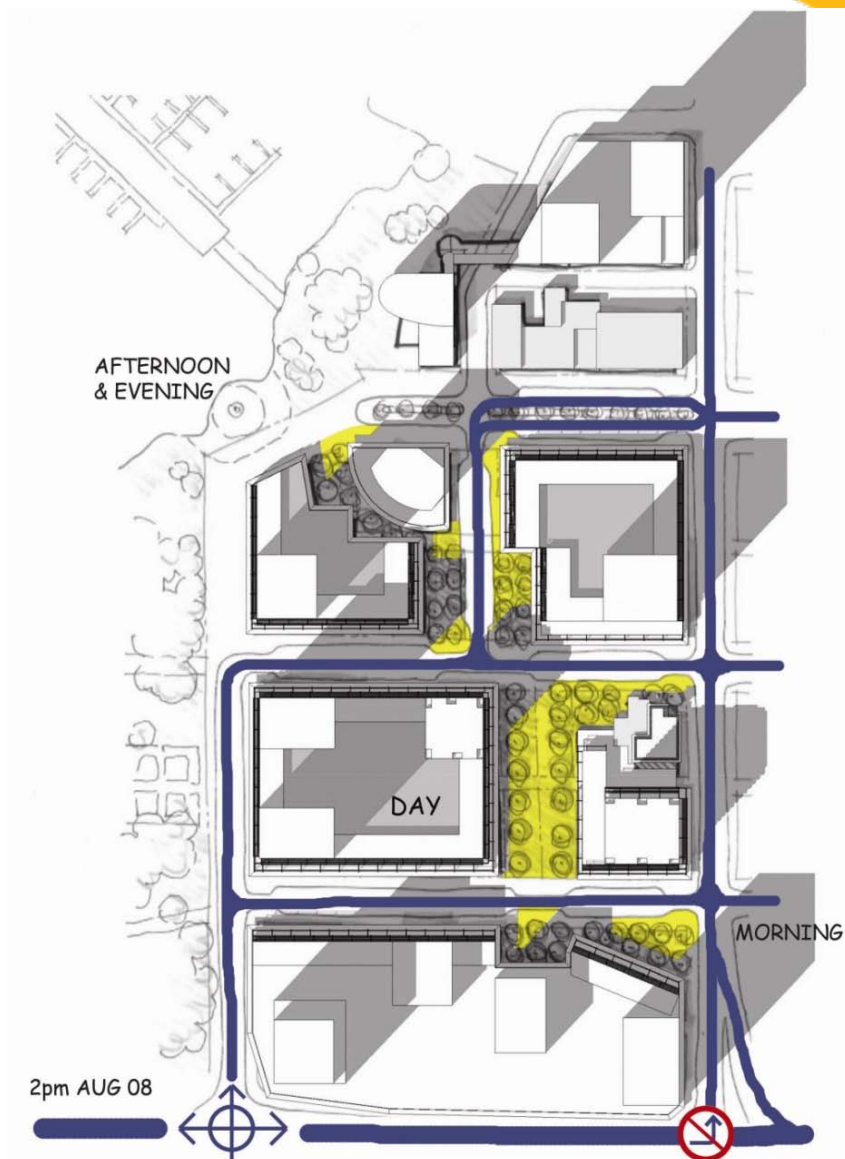


Comprehensive
Development Zone

CD = CALIBRATING DETAIL



TRAFFIC AND SUNSHINE



HEIGHT, VOLUME + SUNLIGHT

10:30 AM

12:00 PM

1:30 PM

3:00 PM

September 20



Harvey

morning
welcome



afternoon
filter



COMMUNITY AMENITY MATRIX

- ▶ Streetscape & public plaza construction
 - ▶ Increase of acreage of urban park
 - ▶ High quality functional public space
- ▶ Indoor public space
 - ▶ Daycare
 - ▶ Multi-use facility (senior/youth/meeting)
- ▶ Public pier with day/commercial moorage
- ▶ Children's playground
- ▶ Public washroom facility



ECONOMIC AMENITIES

(OR HOW TO PAY FOR THE PUBLIC GOOD)

Feedback loop

City, public, and development community

+

Identify development **incentive**
as catalyst for positive change

=

Enable economic feasibility &
return **benefit** to the public

Proposed Net Floor Area

FAR calculation as per Kelowna Zoning Bylaw standards

Sub Area Floor Area Calculator		CD 21 Base Density	CD 21 Base Density + Amenity Density
11-Sep-08 OPTION 18A		Floor Area, Net sq ft	Floor Area, Net sq ft
SUB AREA 1	Total Net Floor Area	166,339	332,677
SUB AREA 2	Total Net Floor Area	39,697	79,394
SUB AREA 3	Total Net Floor Area	163,197	326,394
SUB AREA 4	Total Net Floor Area	108,871	217,741
SUB AREA 5	Total Net Floor Area	132,850	265,699
SUB AREA 6	Total Net Floor Area	99,056	198,112
SUB AREA 7	Total Net Floor Area	89,321	178,641
SUB AREA 8	Total Net Floor Area	181,962	363,925
SUB AREA 9	Total Net Floor Area	190,519	381,037
Total Net Floor Area - CD 21		1,132,114	2,343,622

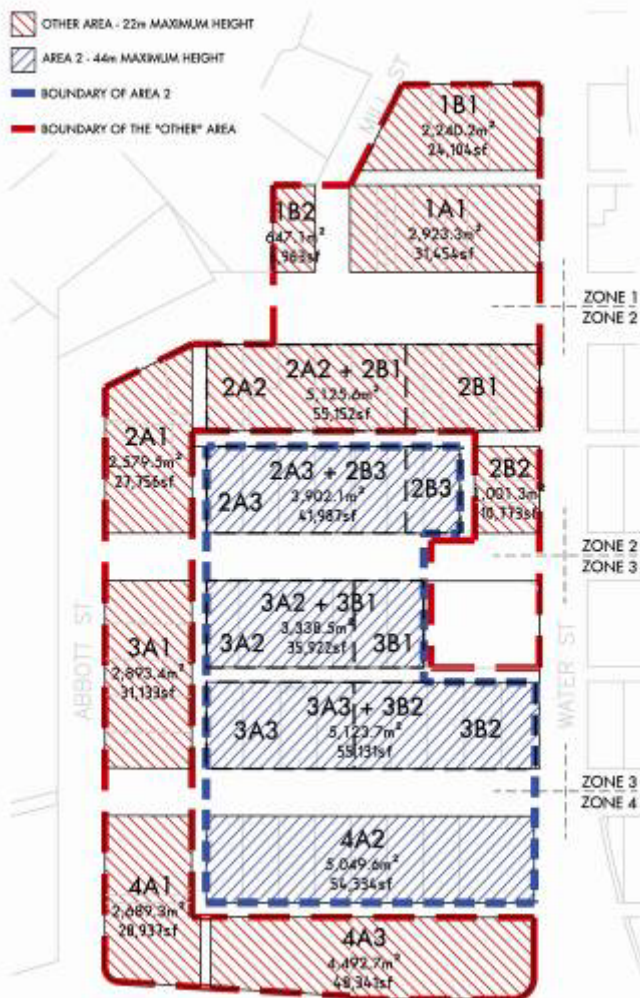


Underground Level

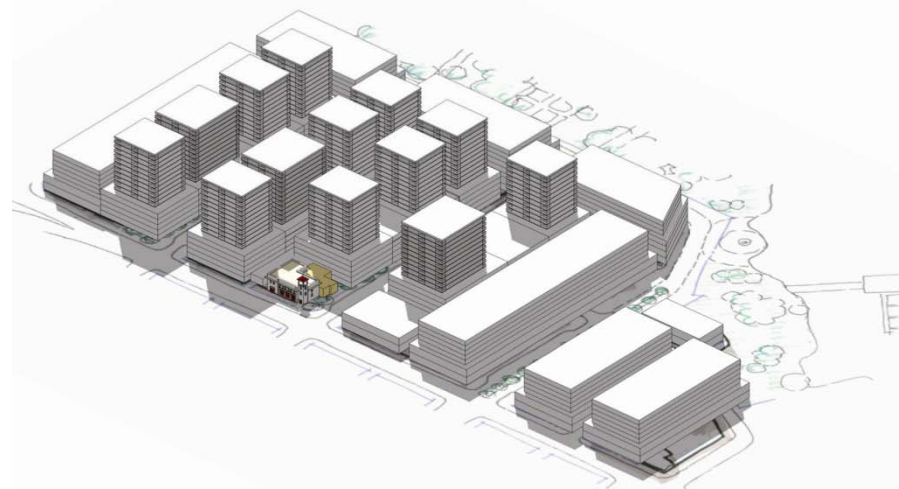
Grade Level

3rd Level

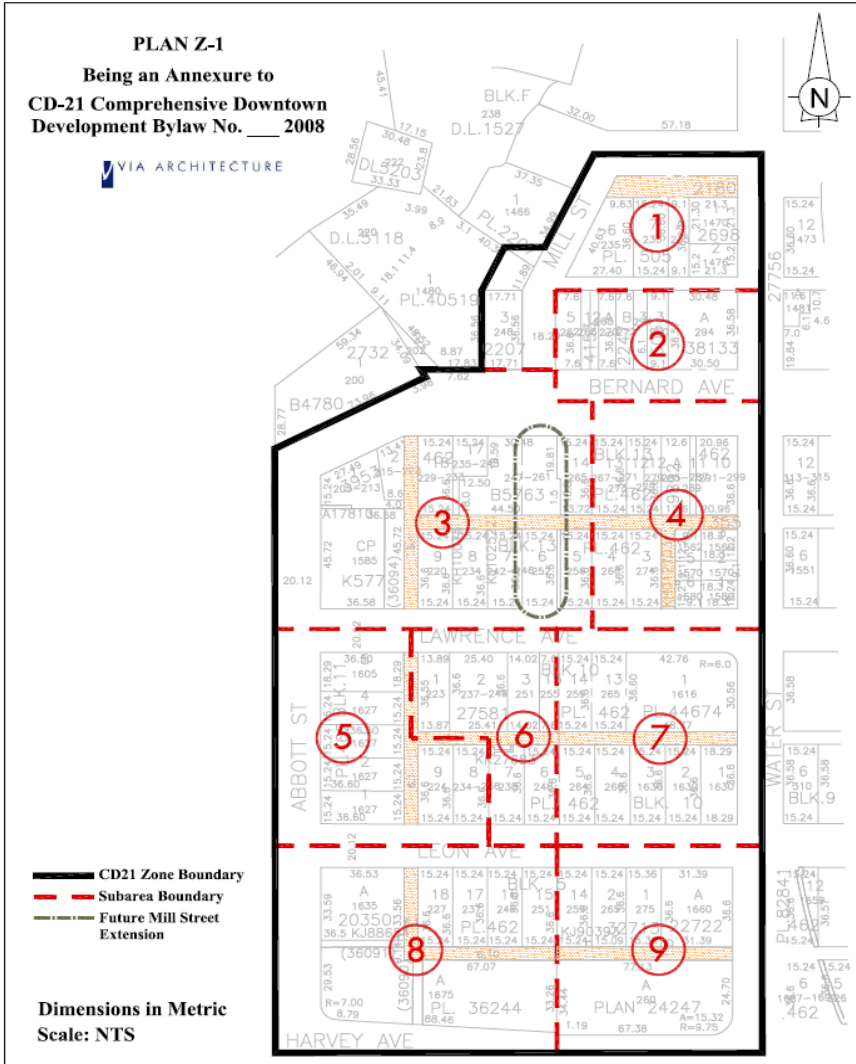
C7 Existing Zoning (potential build out)



C7 YIELD	Site Area	Area 2 44m max ht	"Other Area" 22m Max ht	Fully assembled		Not assembled		
				GFA	FAR	GFA	FAR	
Sub Area 1A	1A1	31,454	-	YES	94,363	3.0	94,363	3.0
Remains as C7		31,454			94,363	3.0	94,363	3.0
Sub Area 1B	1B1	24,104	-	YES	72,313	3.0	72,313	3.0
	1B2	6,963	-	YES	13,925	2.0	13,925	2.0
Total		31,067			86,238	2.8	86,238	2.8
Sub Areas 2A + 2B	2A1	27,756	-	YES	83,267	3.0	77,263	2.8
	2A2 + 2B1	55,152	-	YES	165,456	3.0	153,448	2.8
	2A3 + 2B3	41,987	YES	-	209,935	5.0	173,911	4.1
	2B2	10,773	-	YES	21,547	2.0	15,543	1.4
Total		135,668			480,205	3.5	420,165	3.1
Sub Areas 3A + 3B	3A2 + 3B1	35,919	YES	-	179,595	5.0	143,571	4.0
	3B3	-	-	YES	-	-	-	-
	3A3 + 3B2	55,134	YES	-	275,670	5.0	239,646	4.3
	3A1	31,133	-	YES	93,399	3.0	87,395	2.8
Total		122,186			548,664	4.5	470,612	3.9
Sub Area 4	4A1	28,937	-	YES	86,810	3.0	80,806	2.8
	4A2	54,334	YES	-	271,669	5.0	253,657	4.7
	4A3	48,341	-	YES	145,023	3.0	139,019	2.9
Total		131,611			503,502	3.8	473,482	3.6
Total		420,532			1,618,609	3.8	1,450,497	3.4



C7 to CDZ (equitable enhancement)



DEVELOPMENT PLANNING SUMMARY		C7 YIELD				CD YIELD				VIA ARCHITECTURE				
05-Feb-08	Site Area sf	C7 Site Area	Area 2 44m ht	other 22m ht	Fully Assembled GFA	Not Assembled GFA	Fully Assembled FAR	Not Assembled FAR	CD Site Area	Fully Assembled GFA	Not Assembled GFA	Fully Assembled FAR	Not Assembled FAR	
Sub Area 1A	1A	31,454	-	YES	94,363	3.0	94,363	3.0						
Remains as C7		31,454			94,363	3.0	94,363	3.0		94,363	3.0			
Sub Area 1B	1B1	24,104	24,104	-	72,313	3.0	72,313	3.0	24,104	397,277	7.2	72,313	3.0	
(City) 1B2		6,963	6,963	-	13,925	2.0	13,925	2.0	6,963	76,503	4.6	13,925	2.0	
Sub Total Sub Area 1B		31,067	31,067		86,238	2.8	86,238	2.8	71,321	473,781	6.6	86,238	2.8	
r.o.w transfer	2A4	6,335							6,335	0.0	0.0	30,090	4.7	
r.o.w transfer	2A7	6,004							6,004	0.0	0.0	28,518	4.7	
r.o.w transfer	2A3	8,338							8,338	0.0	0.0	39,604	4.7	
r.o.w transfer	3B1	6,004							6,004	0.0	0.0	34,665	5.8	
r.o.w transfer	3B3	6,004							6,004	0.0	0.0	34,665	5.8	
r.o.w transfer	1C1	7,569							7,569	0.0	0.0	220,002	29.1	
Sub Total Transfer		40,254							transferred to above				387,543	9.6
Total		71,321							71,321	473,781	6.6	473,781	6.6	
Sub Area 2A	2A1	27,756	27,756	-	83,267	3.0	77,263	2.8	27,756	111,352	4.0	83,267	3.0	
2A2		9,558	32,977	-	98,931	3.0	92,927	2.8	9,558	38,345	4.0	28,674	3.0	
2A5		8,746	inc in 2A2	-					8,746	35,088	4.0	26,238	3.0	
2A6		18,012	32,957	YES	-	164,785	5.0	146,773	4.5	18,012	108,266	6.0	90,060	5.0
2A8		8,941	inc in 2A6	YES	-				8,941	53,742	6.0	44,705	5.0	
Sub Total Sub Area 2A		73,013	93,690		346,983	3.7	316,963	3.4	73,013	346,794	4.7	272,944	3.7	
r.o.w transfer	2A3	8,338	inc in 2A2	-								sale & transfer to 1B	-	r.o.w.
r.o.w transfer	2A4	6,335	inc in 2A2	-								sale & transfer to 1B	-	r.o.w.
r.o.w transfer	2A7	6,004	inc in 2A6	YES	-							sale & transfer to 1B	-	r.o.w.
r.o.w transfer	2C1	11,060							11,060	0.0	0.0			
Sub Total Transfer 2A		31,737							transferred to above					
Total		104,750												
Sub Area 2B	2B1	22,175	22,175	-	66,525	3.0	60,521	2.7	22,175	121,903	5.5	66,525	3.0	
2B2		10,773	10,773	-	21,547	2.0	15,543	1.4	10,773	40,020	3.7	21,547	2.0	
2B3		9,030	9,030	YES	-	45,150	5.0	27,138	3.0	9,030	75,557	8.4	45,150	5.0
Sub Total Sub Area 2B		41,978	41,978		133,222	3.2	103,202	2.5	41,978	237,480	6.7	133,222	3.2	
r.o.w transfer	2C2	6,313		-					6,313	0.0	0.0			
Sub Total Transfer 2B		6,313							transferred to above					
Total		48,291												
Sub Area 3A	3A1	31,133	31,133	-	93,399	3.0	87,395	2.8	31,133	153,506	4.9	93,399	3.0	
3A2		24,078	24,078	YES	-	120,390	5.0	102,378	4.3	24,078	197,868	8.2	120,390	5.0
3A3		24,435	24,435	YES	-	122,175	5.0	104,163	4.3	24,435	200,802	8.2	122,175	5.0
Total Sub Area 3A		79,646	79,646		335,964	4.2	293,936	3.7	79,646	552,176	6.9	335,964	4.2	
r.o.w transfer	3C1	9,183		-					9,183	0.0	0.0			
Sub Total Transfer 3A		9,183							transferred to above					
Total		88,828												
Sub Area 3B	3B1	6,004	11,941	YES	-	59,205	5.0	41,193	3.5			sale & transfer to 1B		
3B2		5,837	inc in 3B1	YES	-				5,837		0.0		29,185	5.0
3B3		6,004	30,699	YES	-	153,495	5.0	135,483	4.4			sale & transfer to 1B		
3B4		24,695	inc in 3B3	YES	-				24,695	176,280	7.1	123,475	5.0	
Total Sub Area 3B		42,540	42,540		212,700	5.0	176,676	4.2	30,532	176,280	5.8	152,660	5.0	
r.o.w transfer	3C2	5,156		-					5,156	0.0	0.0	23,620		
r.o.w transfer	3C3	19,175		-					19,175	existing heritage building retained				
Sub Total Transfer 3B		24,331							transferred to above					
Total		66,871												
Sub Area 4A	4A1	28,937	28,937	-	86,810	3.0	80,806	2.8	28,937	133,394	4.6	86,810	3.0	
4A2		54,334	54,334	YES	-	271,669	5.0	253,657	4.7	54,334	417,453	7.7	271,669	5.0
4A3		48,341	48,341	-	145,023	3.0	139,019	2.9	48,341	222,846	4.6	145,023	3.0	
Total Sub Area 4A		131,611	131,611		503,502	3.8	473,482	3.6	131,611	773,693	5.9	503,502	3.8	
r.o.w transfer	4C1	13,272		-					13,272	0.0	0.0			
Sub Total Transfer 4		13,272							transferred to above					
Total		144,883												
Total		524,945	420,532		1,618,609	3.8	1,450,497	3.4	426,101	2,560,203	6.0	1,872,072	4.4	

An architectural rendering of a modern urban building complex. The scene features several multi-story buildings with large glass windows and balconies. In the foreground, a pedestrian walkway is lined with young trees in red planters. People are shown walking, a person is riding a bicycle, and a car is parked on the street. A central white text box with an orange border contains the text "PREVIOUS AREAS OF INTERESTS".

PREVIOUS AREAS OF INTERESTS

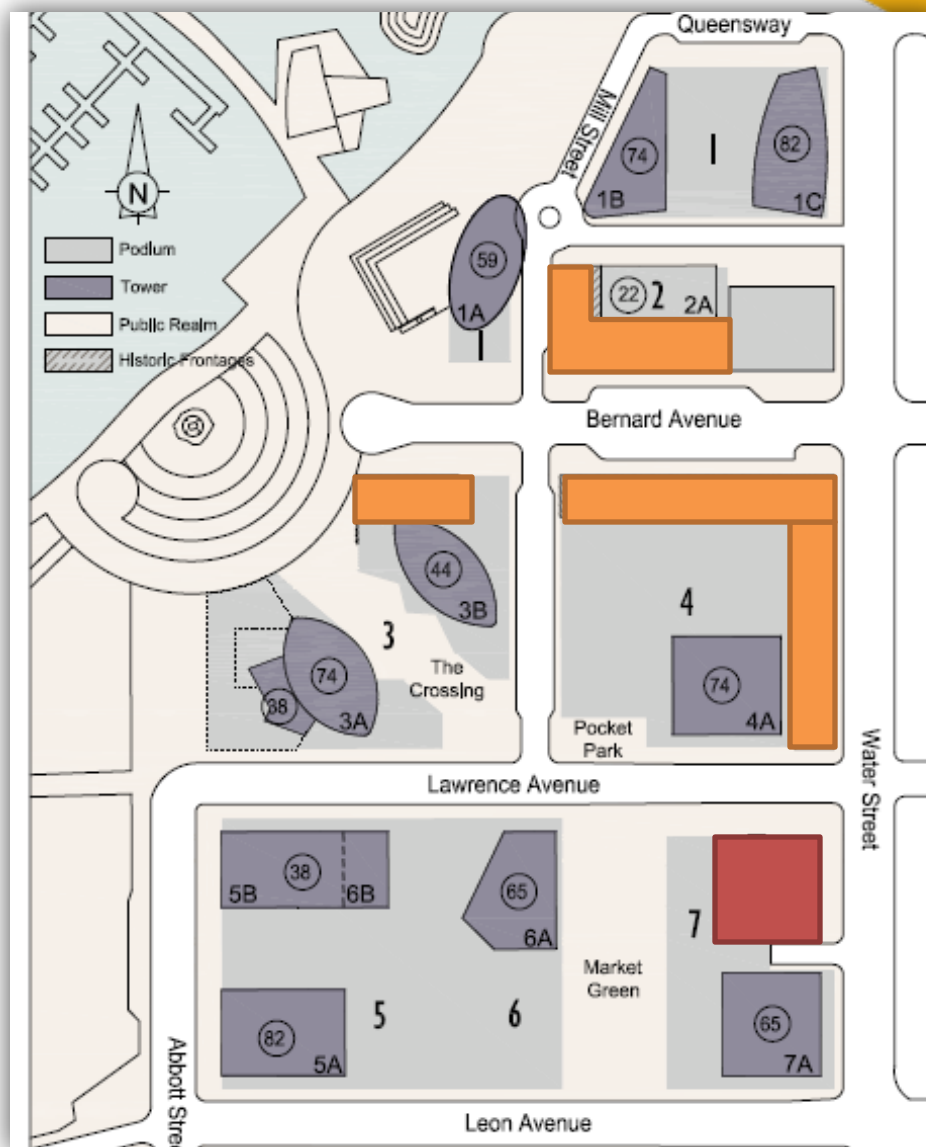


HERITAGE

HERITAGE INTERESTS



PROTECTED HERITAGE UNDER PROPOSED ZONE

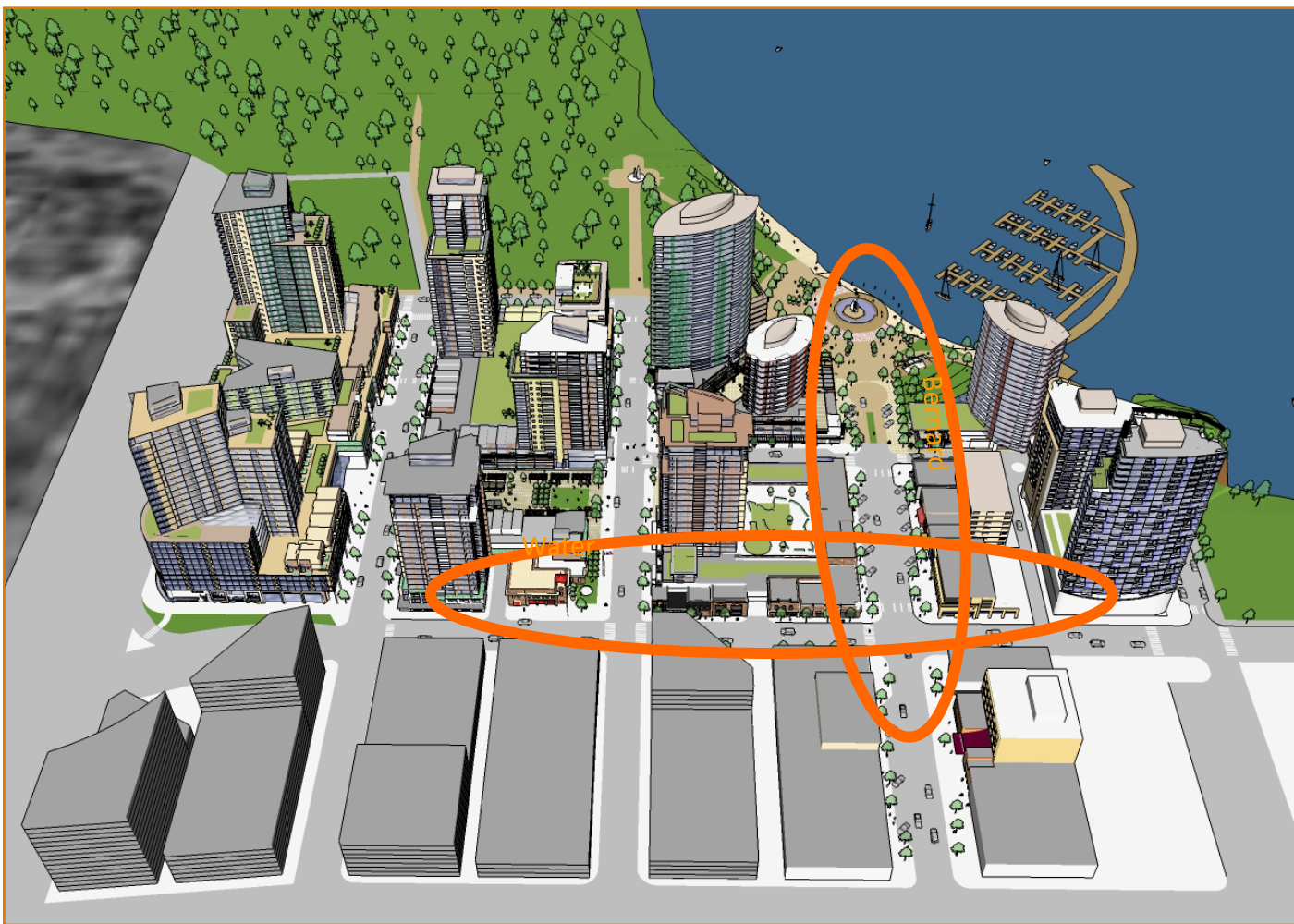


HERITAGE



PROTECTION

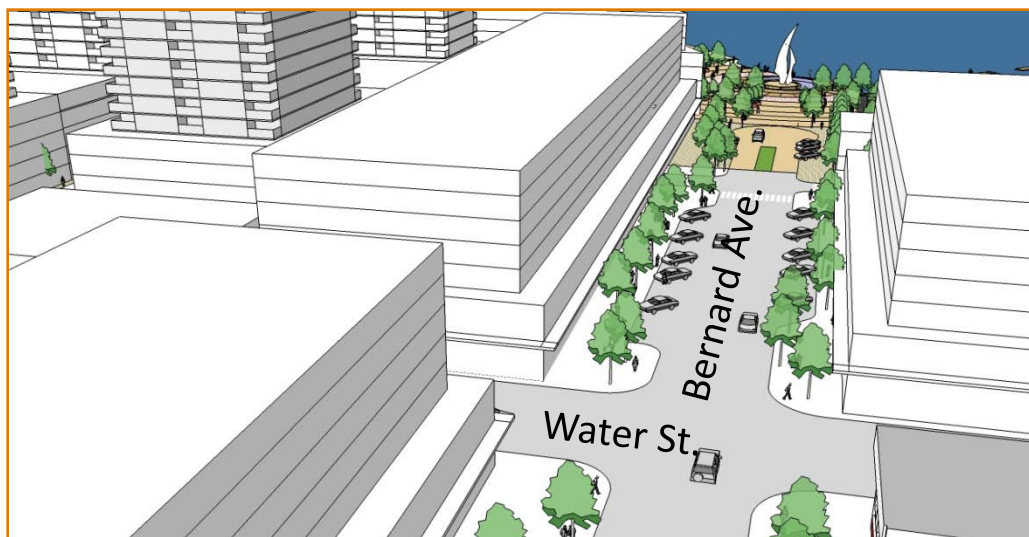
GROUNDING THE PLAN - HERITAGE



Heritage Context



Proposed CD zoning



Existing C7 zoning

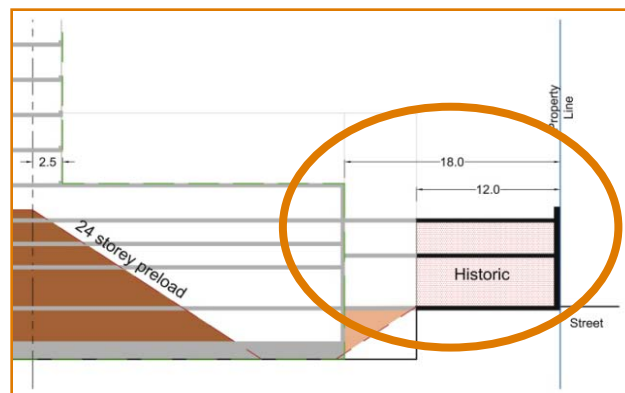
Legacy Tools



- ▶ Preserve historic scale of street enclosure
- ▶ Improve C7 sunlight to north side of street
- ▶ Pool increased density to south of block
- ▶ Waive commercial ground level parking



Heritage Context

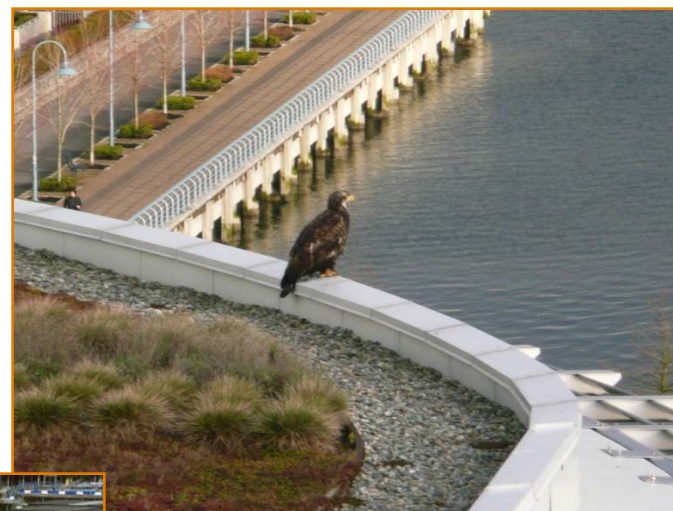




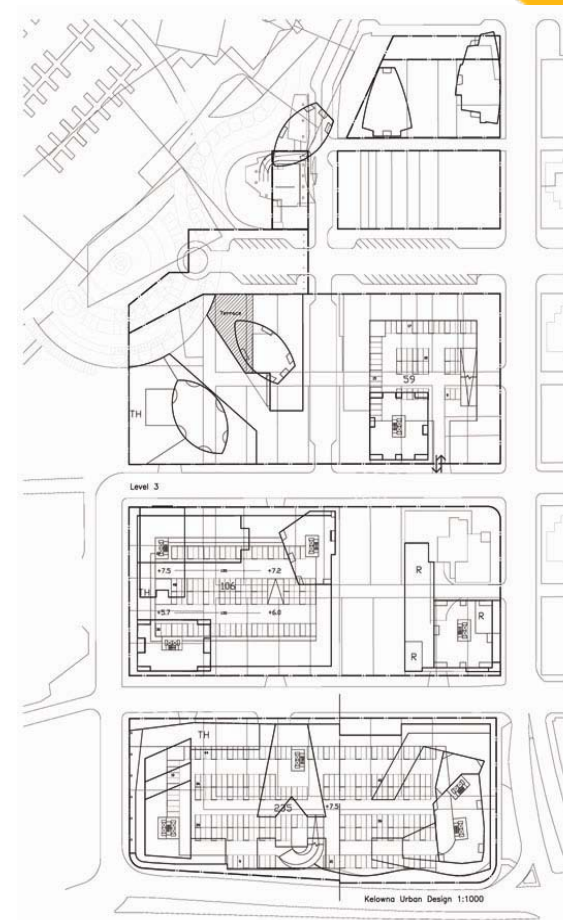
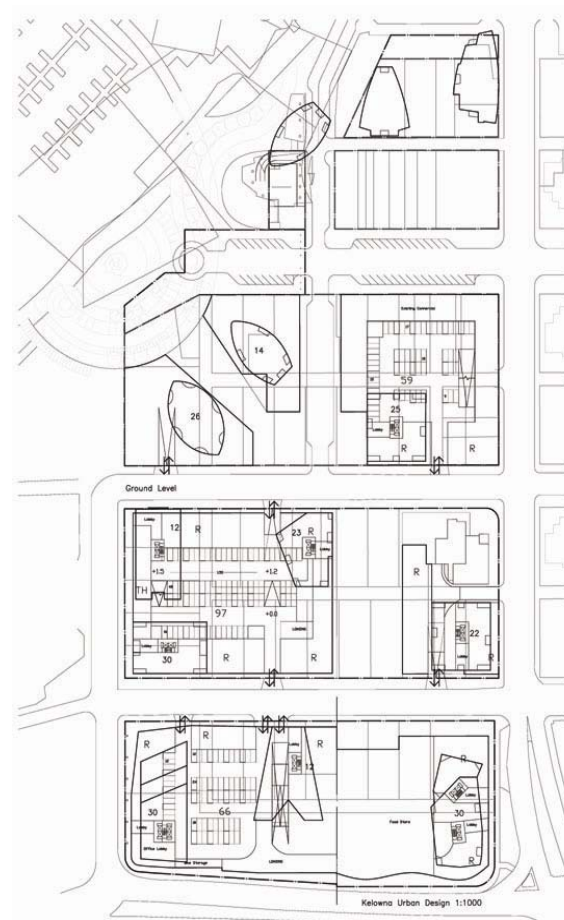
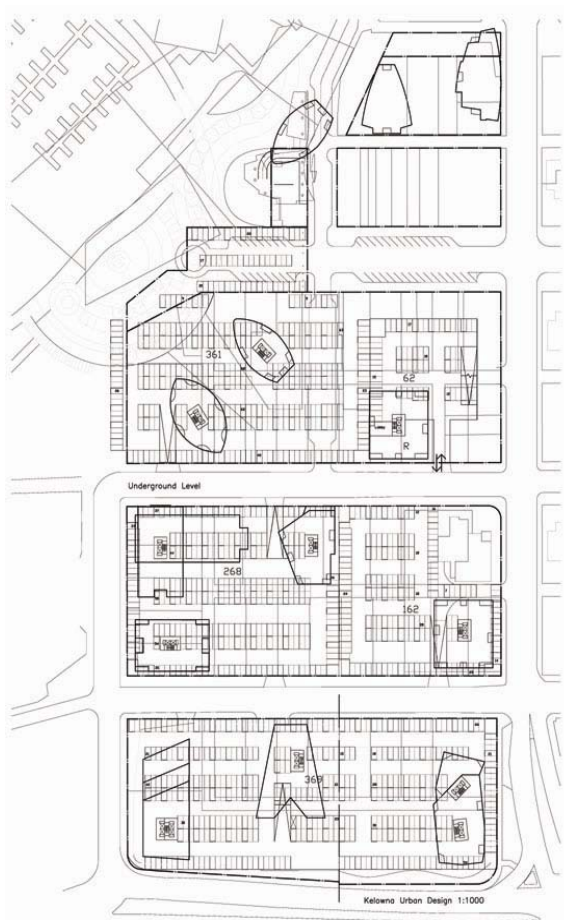
SITE PREPARATION

SITE PREPARATION

- ▶ Soil settlement plan
- ▶ Property impact/mitigation plan
- ▶ Floodplain management plan



Site Preparation - Land Use Configuration

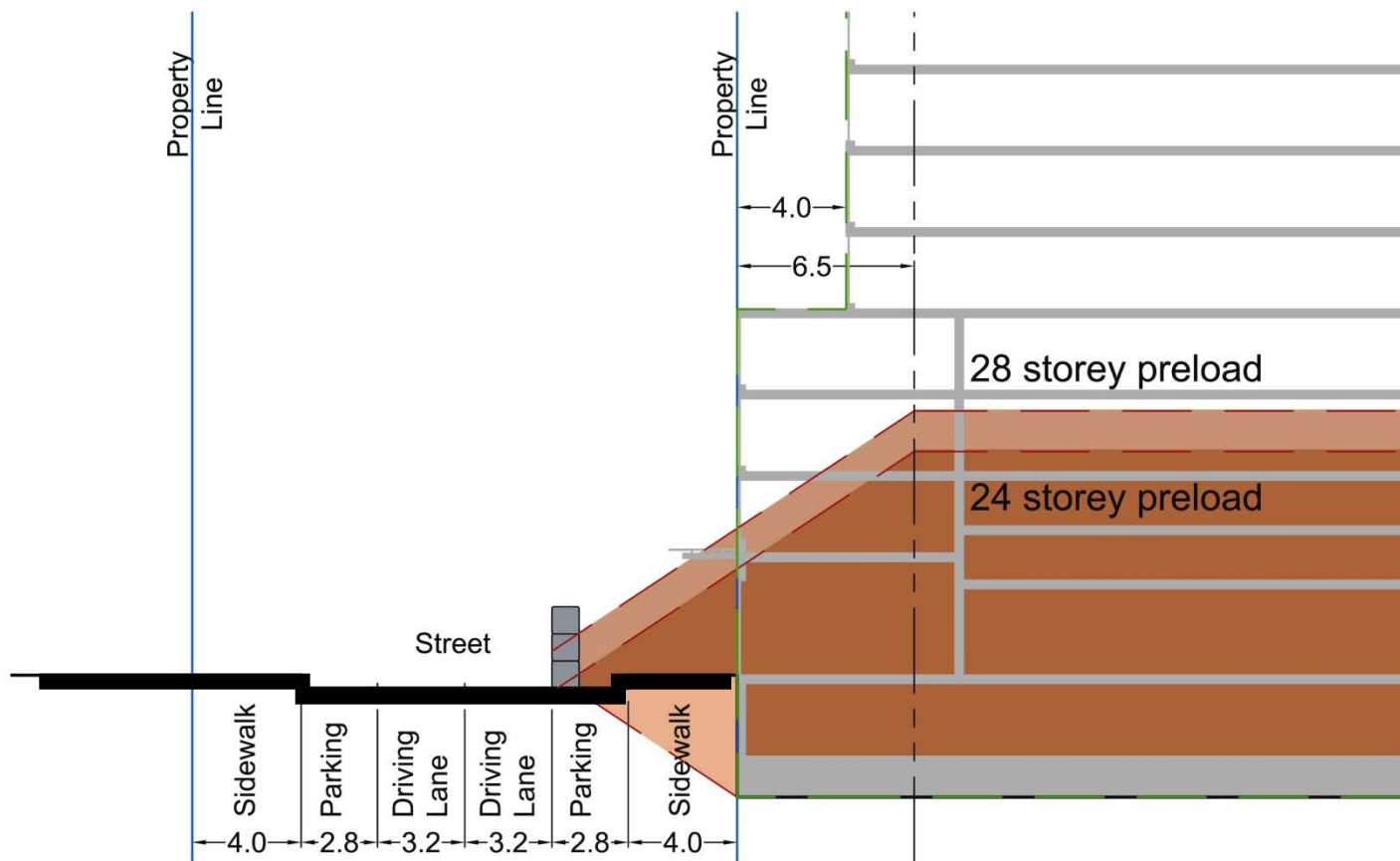


Underground Level

Grade Level

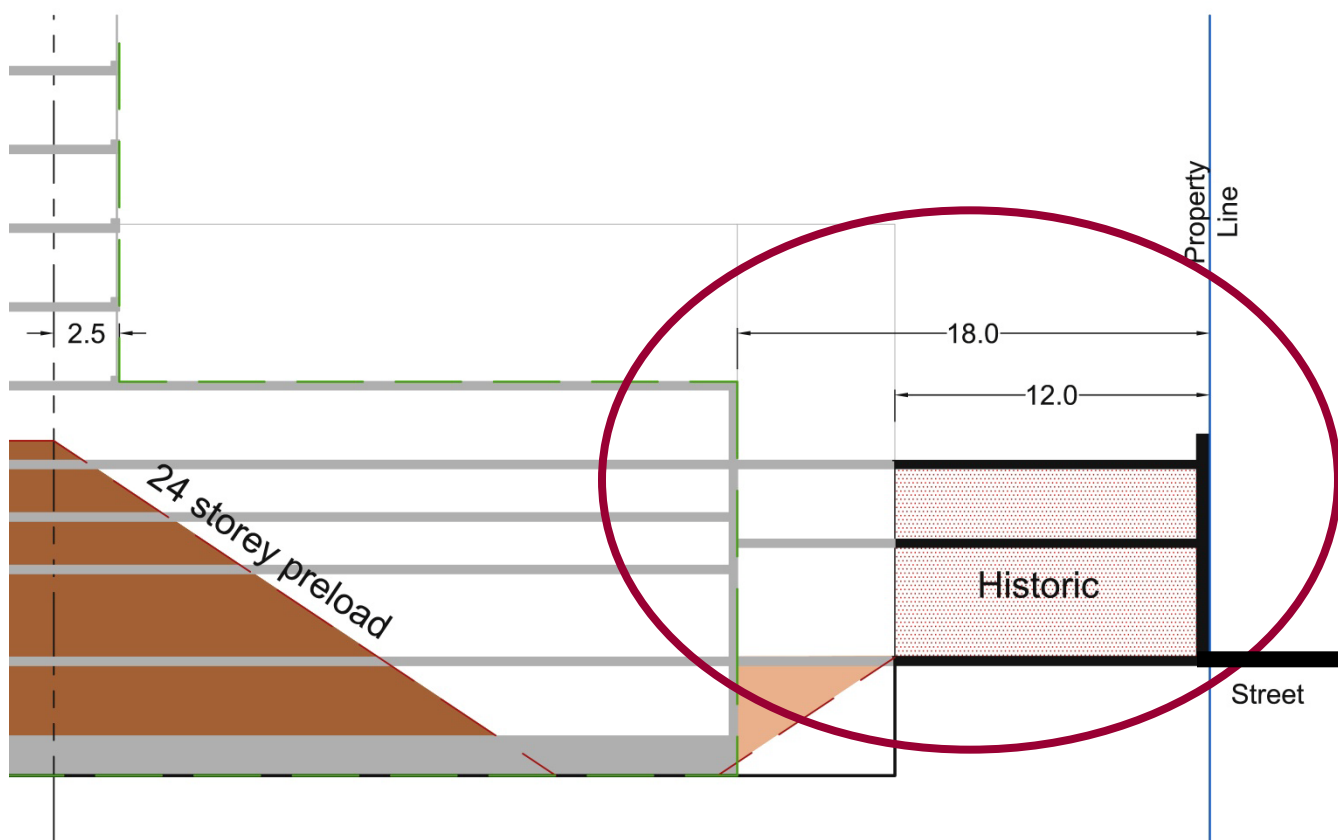
Level 3

Site Preparation - Geotechnical Configuration



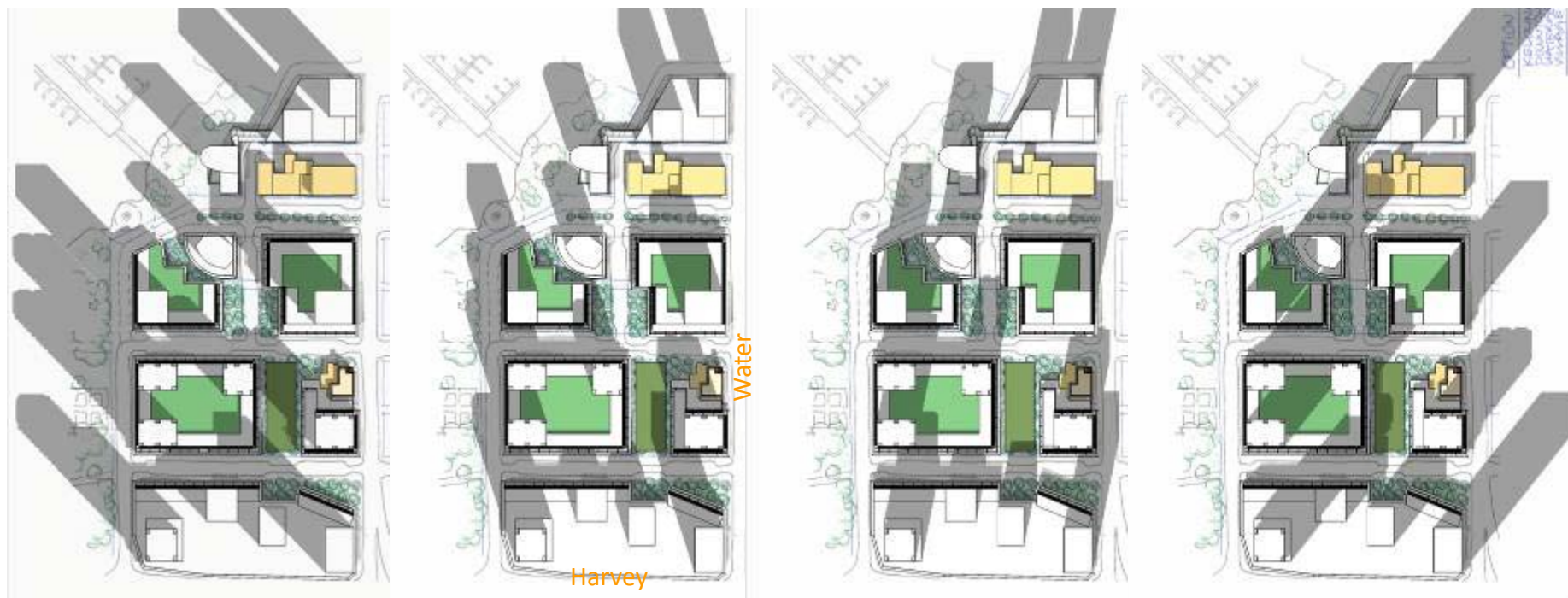
building cross section

Site Preparation - Heritage Configuration

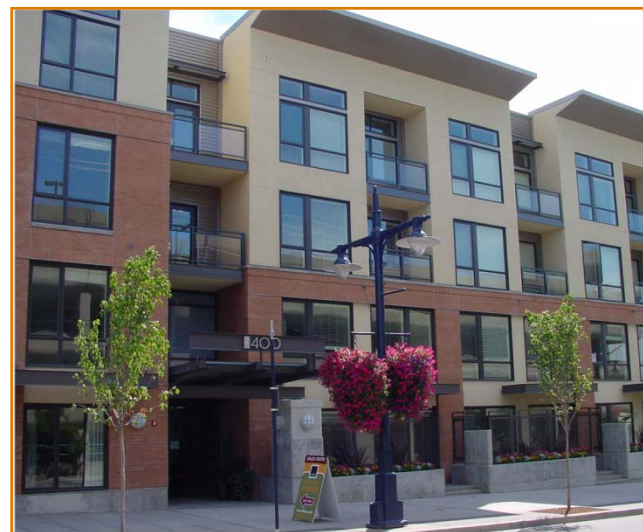


Site Preparation - Solar Access Configuration

September 20



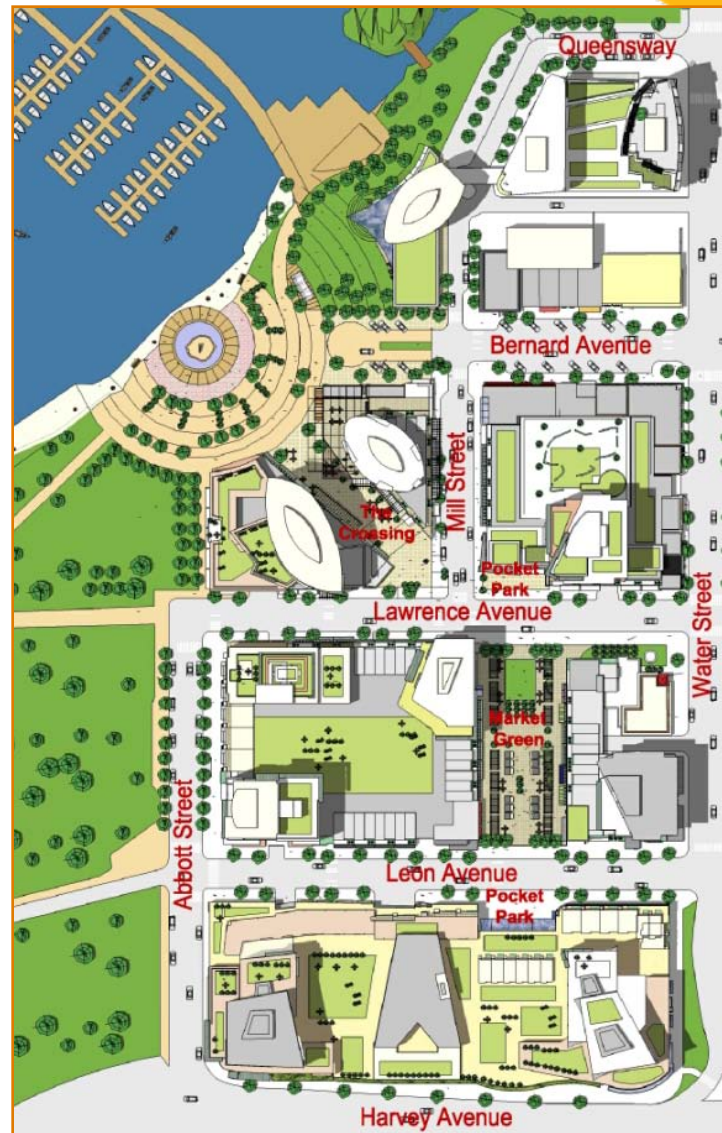
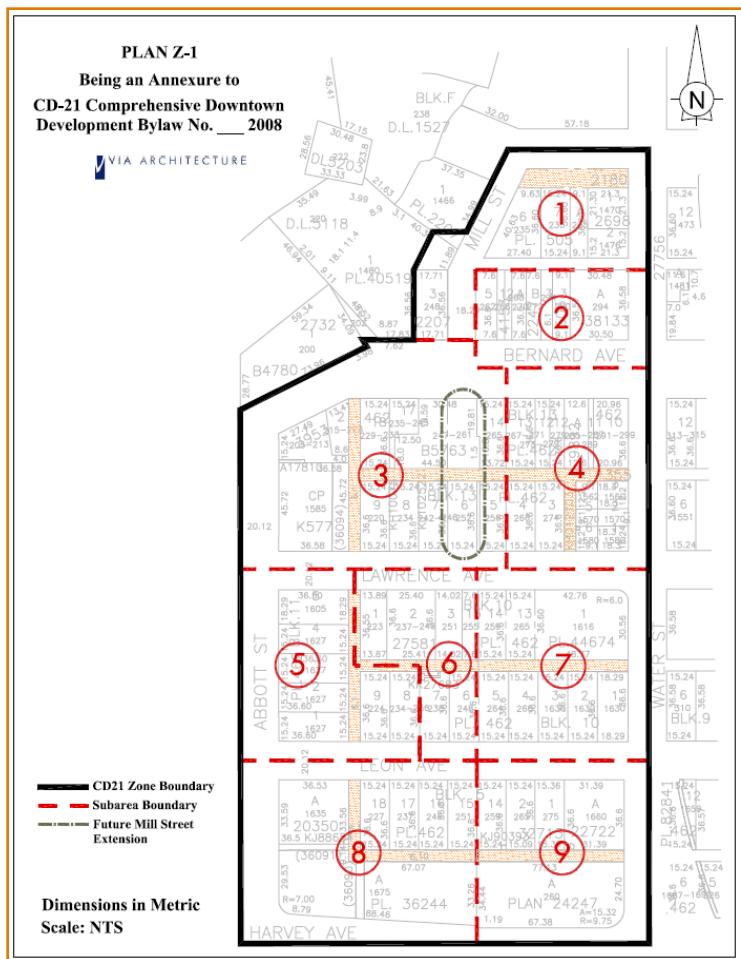
RESIDENTIAL AT STREET LEVEL



An aerial architectural rendering of a city skyline, rendered in a monochromatic orange color. The scene shows a dense urban environment with various building types, including several tall skyscrapers and numerous smaller commercial or residential structures. The buildings are interconnected by a network of streets and walkways. In the foreground, there are circular public spaces or plazas, some with trees and benches. The overall style is clean and modern, typical of urban planning or architectural visualization. The text 'LAND EXCHANGES' is superimposed in the center of the image.

LAND EXCHANGES

LAND EXCHANGES





**PARK ENHANCEMENT
&
ROYAL TRUST SITE**

PARK ENHANCEMENT



PARK



ENHANCEMENT

PARK ENHANCEMENT (ROYAL TRUST SITE)



PARK ENHANCEMENT- balancing 'centre' and 'edge'



PARK ENHANCEMENT-

balancing 'centre' and 'edge'

land use synergy
for community benefit.

- year round jobs
- livability
- comfort & safety
- public amenity



PARK ENHANCEMENT-

balancing 'centre' and 'edge'

land use synergy
for community benefit.

- year round jobs
- livability
- comfort & safety
- public amenity



PARK ENHANCEMENT-

balancing 'centre' and 'edge'

land use synergy
for community benefit.

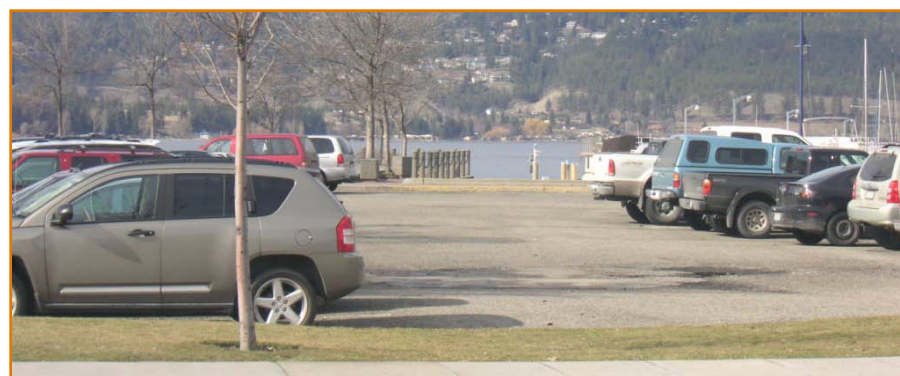
- year round jobs
- livability
- comfort & safety
- public amenity



PARK ENHANCEMENT- balancing 'centre' and 'edge'



PARK ENHANCEMENT- balancing 'centre' and 'edge'



PARK ENHANCEMENT- balancing 'centre' and 'edge'



*Opportunity for public
benefit without
commitment or
obligation*



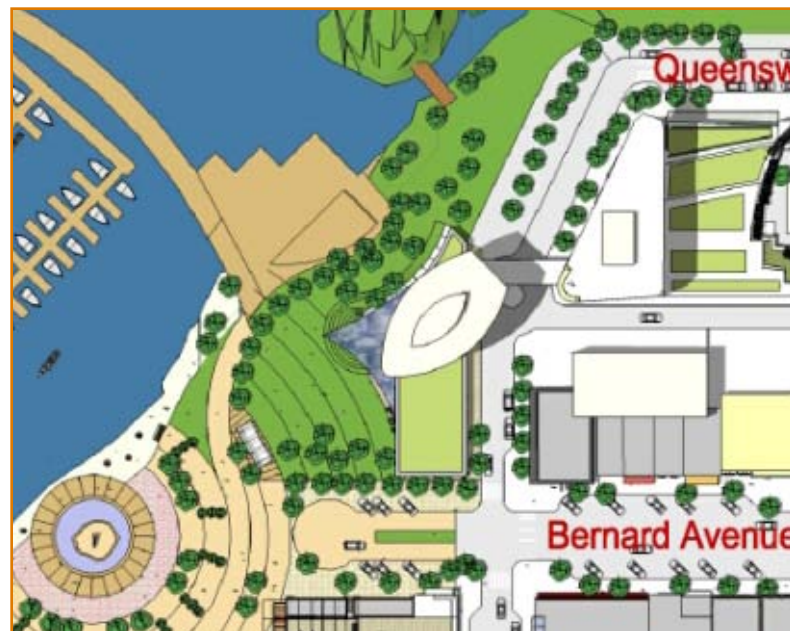
PARK ENHANCEMENT- balancing 'centre' and 'edge'



THE ECONOMICS



Kerry Park & Royal Trust site
(existing)



Kerry Park & Royal Trust site
(proposed)

THE ECONOMICS



Downtown CD-21 Zone



Kerry Park & Sails Plaza

HOTEL ECONOMICS

EMPLOYMENT

During Construction

- 485 jobs (364 full-time)

Permanent Ongoing

- 229 jobs (172 full-time)



HOTEL ECONOMICS

THE NUMBERS

- Construction - \$31.6 million
(w/ multiplier = \$53 million)
- Const. tax revenue - \$4.9 million
(Prov., Fed. & Municipal)
- Operating tax revenue - \$1.5 million
(Annual ongoing Prov., Fed. & Municipal)
- Hotel tax revenue - \$440k
(Annual ongoing & payable to CoK)



HOTEL ECONOMICS

OTHER BENEFITS

- ~165 Additional Rooms Downtown
- 12,000 - 15,000 Sq Ft. of conference space
- Additional food & beverage venues
- Anchor & traffic generator for downtown redevelopment





**THE
GREATER
DOWNTOWN - C7**

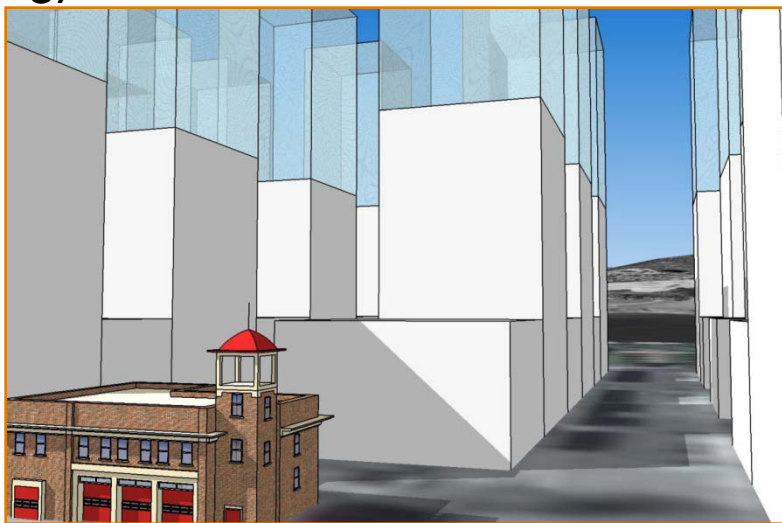
THE GREATER DOWNTOWN



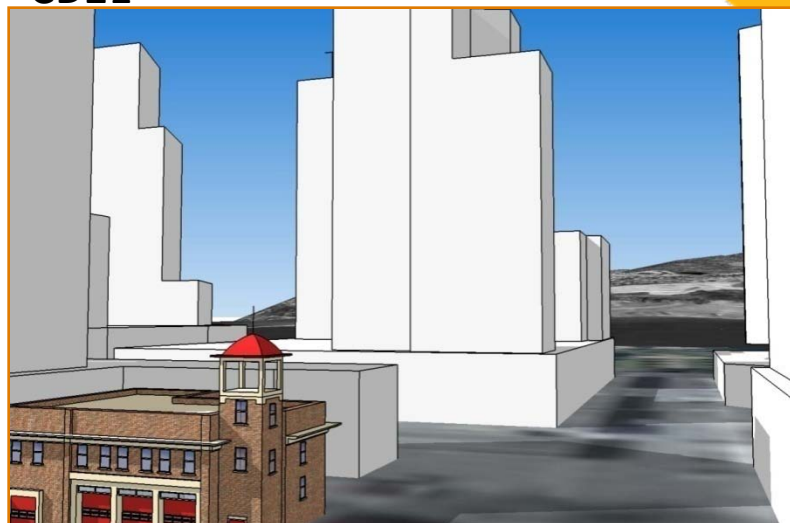
BUILDING FORM:

UNDERSTANDING HEIGHT & VOLUME

C7



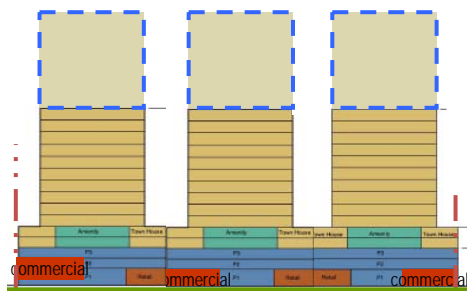
CD21



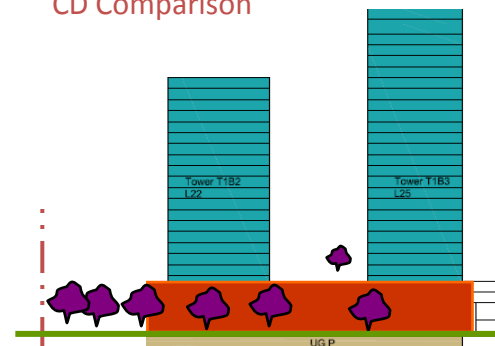
Test: Lawrence from east of Water



C7 Potential Build-out



CD Comparison



BUILDING FORM:

UNDERSTANDING HEIGHT & VOLUME

C7



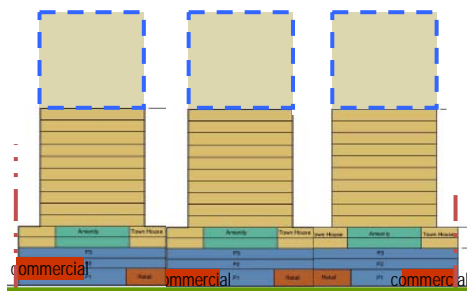
CD21



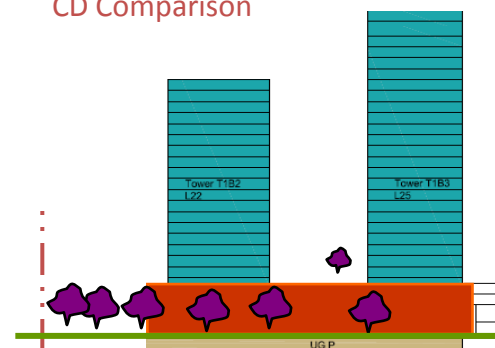
Test: Bernard from east of Pandosy



C7 Potential Build-out



CD Comparison



An aerial architectural rendering of a city district, showing various buildings, streets, and green spaces. The rendering is in a monochromatic orange-brown color scheme. The text "DISTRICT ENERGY" is overlaid in the center in a bold, black, sans-serif font. The buildings are depicted with detailed line work, showing windows and structural elements. The streets are marked with small car icons, and there are numerous trees scattered throughout the district. The overall style is clean and modern, typical of urban planning or architectural visualization.

DISTRICT ENERGY

DISTRICT ENERGY

PERCEPTION

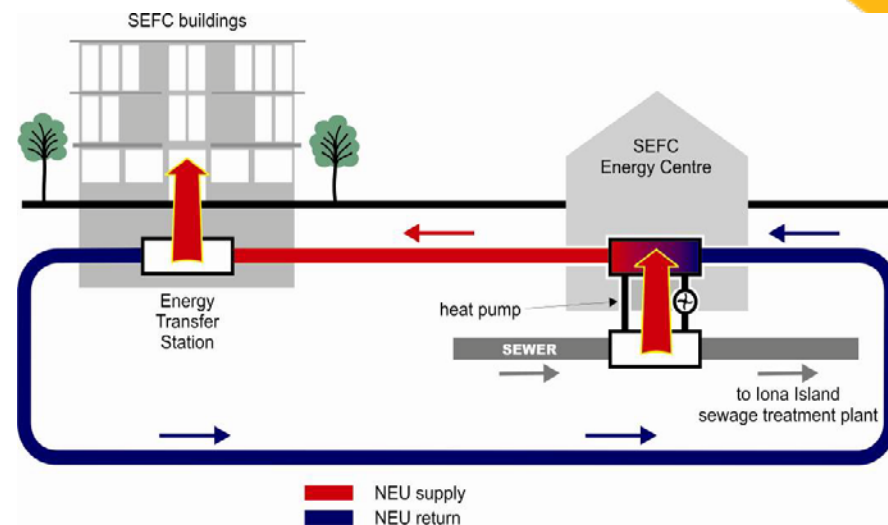
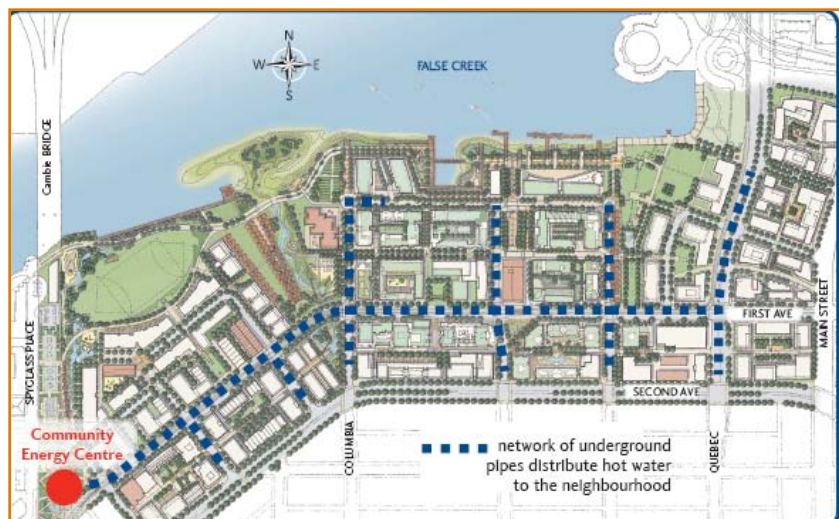
1. Out of sight
2. Minimal land required
3. Simple operation
4. Cost neutral
5. Automated



REALITY

1. City infrastructure
2. Conflicting land use
3. Central site
4. Complex
5. High capital costs

South East False Creek - District Energy



- The NEU is a community energy system to supply space heating and domestic hot water to all buildings within SEFC.
- Three components:
 - Energy Centre
 - Distribution Pipe
 - ETS

CHALLENGES

- Timeline
- Start-up Capital
- Working with developers unfamiliar with district energy
- Gaining public acceptance for Community Energy Centre development

North Vancouver - District Energy

North Vancouver LEC Lessons learned

Hybrid utility service models a viable option for delivery of distributed energy

Open/expandable model allows for innovation, mitigates development and operational risk, and optimizes expertise, ingenuity, and rigour in the delivery of community service.

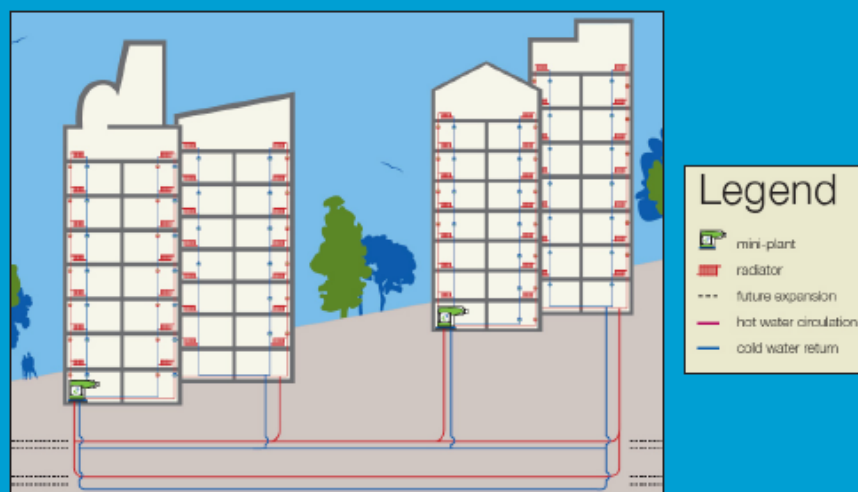
Municipalities can encourage uptake of district energy through planning practices.

Process identified sites with high demand for heating/cooling and need for contractual obligations with builders purchasing City-owned land to connect to district energy. Rezoning for development on City-owned lands requires connection to the LEC as other municipal infrastructure, such as sidewalks, roads, sewer and stormwater management.

High-performing district energy demands a new approach to building design. Accurately model efficiency of a district with detailed guidelines for developers' design teams to implement infrastructure, design & controls for connection to district energy system.



How the Lonsdale system works:



Basic Information

Building type served: residential and commercial

Building area served: 600,000 ft²

Location: City of North Vancouver, British Columbia

Service begins: 2004

Utility Company: Lonsdale Energy Corporation

Technology: Seven Viessmann condensing high efficiency boilers

Production capacity: 6 MW

Fuel type: Natural gas

Distribution system: Hot water uses thin-walled steel pipe insulated with PUR insulation





COMMUNITY COSTS

COMMUNITY COST (ZERO)

Development Cost Charges (DCCs)

- ▶ No impact

Utilities & Other Infrastructure

- ▶ No impact



An aerial architectural rendering of a city skyline, rendered in a monochromatic orange color. The scene shows a dense urban environment with various building heights and styles, including several prominent skyscrapers. The buildings are interspersed with streets, parking lots, and clusters of trees. The overall style is clean and modern, typical of urban planning or architectural visualization. The word "SUSTAINABILITY" is overlaid in the center in a bold, black, sans-serif font.

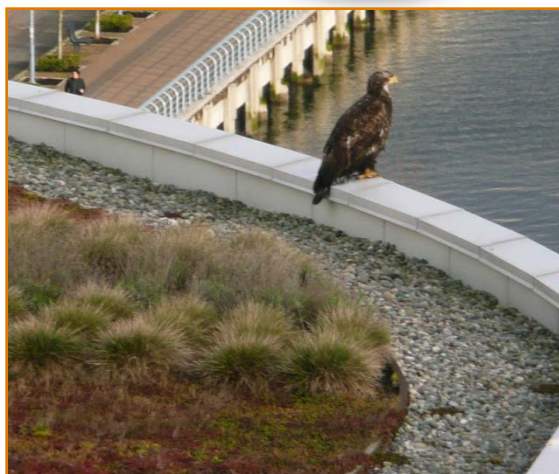
SUSTAINABILITY

SUSTAINABILITY - THE OVERARCHING PRINCIPLE



Sustainability Menu

- LEED ND for Neighbourhoods
- Pedestrian focus
walking/biking/connections
- Transit relationship (BRT)
- Parking
convertible/reduction/creativity
- Active rooftops



SUSTAINABILITY - THE MEASURABLE

LEED for Neighbourhood Development

Project Number: 55907 | Project Name: Kelowna CD-1 Urban Plan | Date: March 24, 2008

Prerequisite or Credit	OPTION PATH	Potential Points	Achievable?	Likely Points	Comments to Achieve Level	
Smart Location & Linkage						
Prereq 1	Smart Location	1	Y	NA	Infill site - close to centre of Region's transit system	
Prereq 2	Proximity to Water and Wastewater Infrastructure	1	Y	NA	Existing core civil infrastructure adequate for buildout.	
Prereq 3	Impaired Species and Ecological Communities	1	Y	NA	No impaired species expected	
Prereq 4	Wetland and Water Body Conservation	1 or 2	Y	NA	If at flood plain level then demonstrate urban mapping	
Prereq 5	Agricultural Land Conservation	2	Y	NA	Urban Infill	
Prereq 6	Floodplain Avoidance	2	Y	NA	Urban Infill	
Credit 1	Brownfield Redevelopment	2	N	0	Not a brownfield	
Credit 2	High Priority Brownfields Redevelopment	1	N	0	Not a brownfield	
Credit 3	Preferred Locations	2-10	Y	9	guesstimate of at least 30 miles of centreline miles/ sq mile within 1 mile radius	
Credit 4	Reduced Automobile Dependence	1-8	Y	4	guesstimated of 100 transit rides per week day within 1/4 mile of 50% of building entrances	
Credit 5	Bicycle Network	1	Y	1	Diverse use mix adjacent + bike for 15% of car capacity	
Credit 6	Housing and Jobs Proximity	1	3	Y	3	within 1/2 mile of pre-project jobs >50% dwelling units
Credit 7	School Proximity	1	N	0	distance to school to be confirmed	
Credit 8	Steep Slope Protection	1	N	0	N/A	
Credit 9	Site Design for Habitat or Wetlands Conservation	2	1	Y	1	native plants for 90% of vegetation
Credit 10	Restoration of Habitat or Wetlands	1	N	0	May be covered in Park design	
Credit 11	Conservation Management of Habitat or Wetlands	1	N	0	May be covered in Park design	
Smart Location & Linkage		30		18		

Prerequisite or Credit	OPTION PATH	Potential Points	Achievable?	Likely Points	Comments to Achieve Level
Neighborhood Pattern & Design					
Prereq 1	Open Community		Y	NA	No gated areas
Prereq 2	Compact Development		Y	NA	Develop above minimum densities: 7u/ac, 0.5 FAR commercial
Credit 1	Compact Development	1-7	Y	6	5.6 Res + 0.4 Comm on area table
Credit 2	Diversity of Uses	1-4	Y	4	Ten qualifying uses within 1/2 mile
Credit 3	Diversity of Housing Types	1-3	Y	2	Estimated Simpson diversity index of 0.6
Credit 4	Affordable Rental Housing	1-2	N	0	City demographic calculation required
Credit 5	Affordable For-Sale Housing	1-2	N	0	City demographic calculation required
Credit 6	Reduced Parking Footprint	2	Y	2	No visible surface lots, and 10% bike & carpool
Credit 7	Walkable Streets	4-8	Y	8	Extensive urban design criteria to be met
Credit 8	Street Network	1-2	Y	2	Street grid density above 30 centreline mi. per sq. mi.
Credit 9	Transit Facilities	1	Y	1	Safe, illuminated transit stops with information
Credit 10	Transportation Demand Management	2	?	0	Achievable but subject to transit policy
Credit 11	Access to Surrounding Vicinity	1	Y	1	Through-street every 800 feet max
Credit 12	Access to Public Spaces	1	Y	1	1/6ac park within 1/2 mi. of 90% of dwellings
Credit 13	Access to Active Public Spaces	1	Y	1	1ac park within 1/2 mi. or bikeway within 1/4 mi or gym/rec. centre within 1/4 of 90% of dwellings
Credit 14	Universal Accessibility	1	Y	1	20% accessible housing of all types
Credit 15	Community Outreach and Involvement	1	Y	1	Active public participation required in all phases
Credit 16	Local Food Production	1	?	0	Possible to provide growing space/ community gardens
Neighborhood Pattern & Design		39		30	

LEED ND (Neighbourhood Development)

Prerequisite or Credit	OPTION PATH	Points	Achievable?	Likely Points	Comments to Achieve Level	
Green Construction & Technology						
Prereq 1	Construction Activity Pollution Prevention		Y	NA	Prevent erosion, sedimentation, air and water pollution during construction	
Credit 1	LEED Certified Green Buildings	1-3	?	0	LEED certification for 20-40% of buildings	
Credit 2	Energy Efficiency in Buildings	1-3	?	0	90% of buildings energy efficient over ASHRAE or ENERGY STAR. Conduct whole building energy simulations - various compliance paths	
Credit 3	Reduced Water Use	2	1-3	Y	1	Point for nonpotable or eliminating irrigation
Credit 4	Building Reuse and Adaptive Reuse	1-2	Y	2	Re-use 50% of 1 build (measured on surface area) + equiv of 2nd	
Credit 5	Reuse of Historic Buildings	1	Y	1	Incorporate 1 Historic Building	
Credit 6	Minimize Site Disturbance through Site Design	1	Y	1	development footprint is 100% previously developed	
Credit 7	Minimum Site Disturbance during Construction	1	Y	1	development footprint is 100% previously developed	
Credit 8	Contaminant Reduction in Brownfields Remediation	1	N	0	Not a brownfield site	
Credit 9	Stormwater Management	1-5	?	0	Safest to assume infiltration rates not achievable with	
Credit 10	Heat Island Reduction	1	1	Y	1	50% parking spaces under cover
Credit 11	Solar Orientation	1	N	0	Unrealistic criteria based on east-west orientation	
Credit 12	On-Site Energy Generation	1	N	0	5% of project's electrical requirements generated on site with low CO2	
Credit 13	On-Site Renewable Energy Sources	1	N	0	5% of project's electrical requirements generated on site through renewable sources	
Credit 14	District Heating and Cooling	1	N	0	80% connected to district heating and cooling achieving 80% of need	
Credit 15	Infrastructure Energy Efficiency	1	?	1	all district lights, pumps, and treatment systems perform 15% better than baseline	
Credit 16	Wastewater Management	1	N	0	Divert 50% of wastewater, provide onsite treatment	
Credit 17	Recycled Content in Infrastructure	1	?	1	90% recycled aggregate in concrete, 25% fly ash, or equivalent for roads, parking lots, sidewalks and curbs	
Credit 18	Construction Waste Management	1	Y	1	Reduce or salvage 50% of construction debris not land-clearing or excavation	
Credit 19	Comprehensive Waste Management	1	?	0	2 of 3: Hazardous materials dropoff, recycling and reuse station, compost station	
Credit 20	Light Pollution Reduction	1	?	1	Light to minimums of safety and comfort. Light infiltration maximums per project IESNA zoning	
Green Construction & Technology		31		11		

Prerequisite or Credit	OPTION PATH	Points	Achievable?	Likely Points	Comments to Achieve Level
Innovation & Design Process					
Credit 1	Innovation in Design	1-5	Y	1	Requires exceptional performance under any credit or innovation
Credit 2	LEED Accredited Professional	1	Y	1	LEED Professionals on team
Innovation & Design Process		6		2	

Project Number: 55907 | Project Name: Kelowna CD-1 Urban Plan | Date: March 24, 2008

LEED ND Grand Total: 106 **61**

Certified: 40-49 points; Silver: 50-59 points; Gold: 60-79 points; Platinum: 80-106 points

SUSTAINABILITY - THE MEASURABLE?

LEED for Neighbourhood Development

Project Number: 55907 | Project Name: Kelowna CD-1 Urban Plan | Date: March 24, 2008

Prerequisite or Credit		OPTION PATH		Potential Points	Achievable?	Likely Points
Smart Location & Linkage						
Prereq 1	Smart Location	1		Y	NA	Infin
Prereq 2	Proximity to Water and Wastewater Infrastructure	1		Y	NA	Ext
Prereq 3	Imperviled Species and Ecological Communities	1		Y	NA	No
Prereq 4	Wetland and Water Body Conservation	1 or 2		Y	NA	If at
Prereq 5	Agricultural Land Conservation	2		Y	NA	Urb
Prereq 6	Floodplain Avoidance	2		Y	NA	Urb
Credit 1	Brownfield Redevelopment		2	N	0	Not
Credit 2	High Priority Brownfields Redevelopment		1	N	0	Not
Credit 3	Preferred Locations		2-10	Y	9	gu
Credit 4	Reduced Automobile Dependence		1-8	Y	4	gu
Credit 5	Bicycle Network		1	Y	1	Div
Credit 6	Housing and Jobs Proximity	1	3	Y	3	wit
Credit 7	School Proximity		1	N	0	dist
Credit 8	Steep Slope Protection		1	N	0	N/A
Credit 9	Site Design for Habitat or Wetlands Conservation	2	1	Y	1	nat
Credit 10	Restoration of Habitat or Wetlands		1	N	0	Ma
Credit 11	Conservation Management of Habitat or Wetlands		1	N	0	Ma
Smart Location & Linkage		30			18	

Prerequisite or Credit		OPTION PATH		Potential Points	Achievable?	Likely Points
Neighborhood Pattern & Design						
Prereq 1	Open Community			Y	NA	No
Prereq 2	Compact Development			Y	NA	Del
Credit 1	Compact Development		1-7	Y	6	5,6
Credit 2	Diversity of Uses		1-4	Y	4	Ter
Credit 3	Diversity of Housing Types		1-3	Y	2	Est
Credit 4	Affordable Rental Housing		1-2	N	0	Cit
Credit 5	Affordable For-Sale Housing		1-2	N	0	Cit
Credit 6	Reduced Parking Footprint		2	Y	2	No
Credit 7	Walkable Streets		4-8	Y	8	Ext
Credit 8	Street Network		1-2	Y	2	Stre
Credit 9	Transit Facilities		1	Y	1	Saf
Credit 10	Transportation Demand Management		2	?	0	Ac
Credit 11	Access to Surrounding Vicinity		1	Y	1	Thr
Credit 12	Access to Public Spaces		1	Y	1	1/6
Credit 13	Access to Active Public Spaces		1	Y	1	fac
Credit 14	Universal Accessibility		1	Y	1	20%
Credit 15	Community Outreach and Involvement		1	Y	1	Act
Credit 16	Local Food Production		1	?	0	Poss
Neighborhood Pattern & Design		39			30	



Neighborhood Development

Points	Achievable?	Likely Points	Comments to Achieve Level
	Y	NA	Prevent erosion, sedimentation, air and water pollution during construction
3	?	0	LEED certification for 20-40% of buildings
3	?	0	90% of buildings energy efficient over ASHRAE or ENERGY STAR. Conduct whole building energy simulations - various compliance paths
3	Y	1	Point for nonpotable or eliminating irrigation
2	Y	2	Re-use 50% of 1 build (measured on surface area) + equiv of 2nd
	Y	1	Incorporate 1 Historic Building
	Y	1	development footprint is 100% previously developed
	Y	1	development footprint is 100% previously developed
	N	0	Not a brownfield site
5	?	0	Safest to assume infiltration rates not achievable with
	Y	1	50% parking spaces under cover
	N	0	Unrealistic criteria based on east-west orientation
	N	0	5% of project's electrical requirements generated on site with low CO2
	N	0	5% of project's electrical requirements generated on site through renewable sources
	N	0	80% connected to district heating and cooling achieving 80% of need
	?	1	all district lights, pumps, and treatment systems perform 15% better than baseline
	N	0	Divert 50% of wastewater, provide onsite treatment
	?	1	90% recycled aggregate in concrete, 25% fly ash, or equivalent for roads, parking lots, sidewalks and curbs
	Y	1	Reduce or salvage 50% of construction debris not land-clearing or excavation
	?	0	2 of 3: Hazardous materials dropoff, recycling and reuse station, compost station
	?	1	Light to minimums of safety and comfort. Light infiltration maximums per project IESNA zoning
		11	

Points	Achievable?	Likely Points	Comments to Achieve Level
5	Y	1	Requires exceptional performance under any credit or innovation
	Y	1	LEED Professionals on team
		2	

CD-1 Urban Plan | Date: March 24, 2008

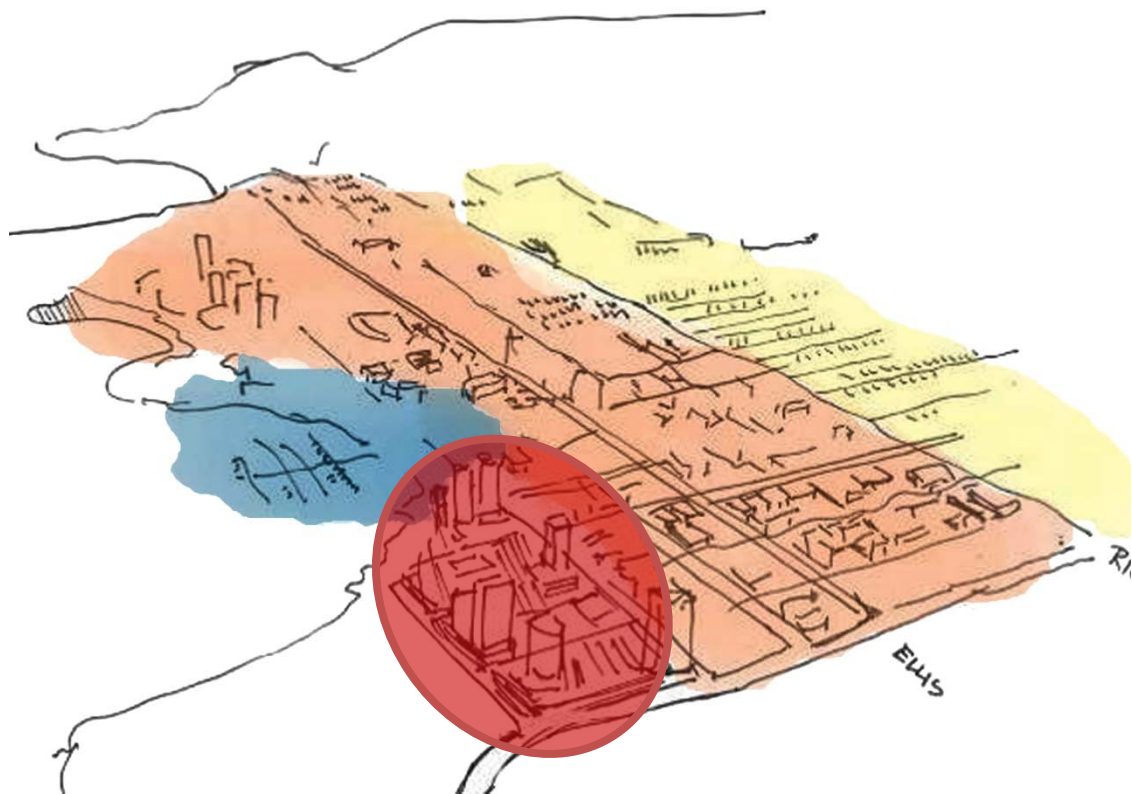
LEED ND Grand Total: 106 **61**

Certified: 40-49 points; Silver: 50-59 points; Gold: 60-79 points; Platinum: 80-106 points

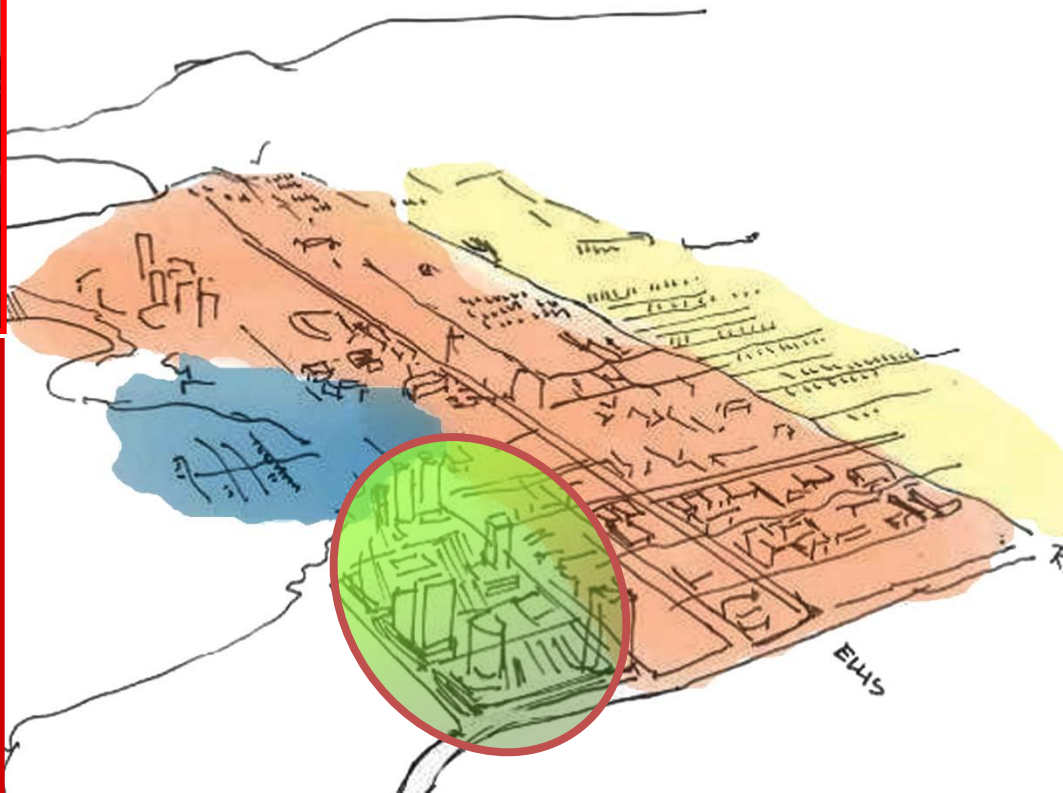
GETTING THERE



GETTING THERE

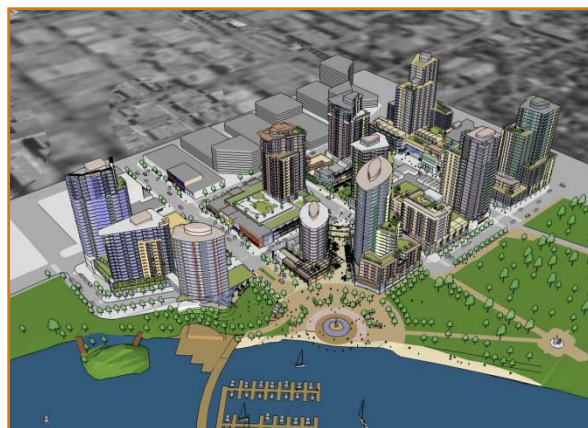
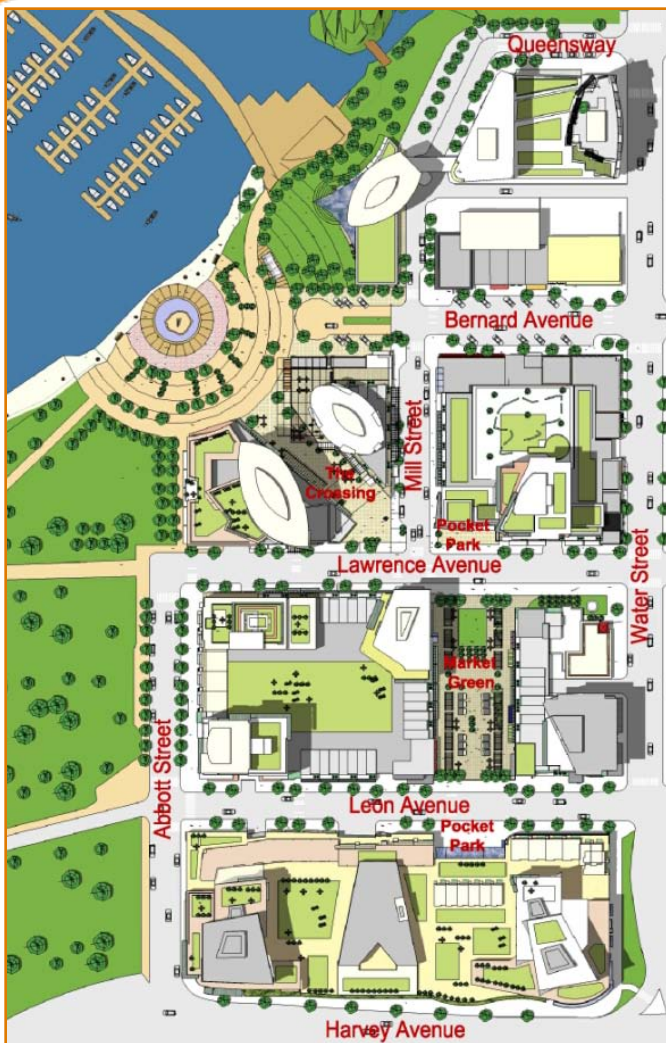


GETTING THERE



KEYS TO SUCCESS

- ▶ Planning Expertise ✓
- +
- ▶ The Right Tools ✓
- +
- ▶ Supportive Council ✓
- +
- ▶ Committed Development Community ✓
- +
- ▶ Engaged Citizens ✓



Kelowna Downtown Rethinking, Remaking, Reinventing

RESOLUTION

- ▶ ... receive report for information

