

City of Kelowna

Regular Council Meeting

AGENDA



Monday, May 16, 2016
1:30 pm
Council Chamber
City Hall, 1435 Water Street

Pages

1. Call to Order

This meeting is open to the public and all representations to Council form part of the public record. A live audio and video feed is being broadcast and recorded by CastaNet and a delayed broadcast is shown on Shaw Cable.

2. Confirmation of Minutes

4 - 7

PM Meeting - May 9, 2016

3. Public in Attendance

3.1 Alternator Centre for Contemporary Art

8 - 34

Annual presentation to Council by Lorna McParland, Artistic and Administrative Director.

4. Development Application Reports & Related Bylaws

4.1 894 Stremel Road, Z16-0006, Supplemental Report - McBeetle Holdings

35 - 37

To consider revisions to an OCP amendment and Rezoning Bylaw to facilitate the construction of an automotive dealership on Stremel Road.

4.2 894 Stremel Road, BL11244 (OCP16-0001) - McBeetle Holdings Ltd.

38 - 39

Requires a majority of all members of Council (5).

To give Bylaw No. 11244 first reading in order to change the future land use designation of portions of the subject property to facilitate the construction of an automotive dealership.

4.3 894 Stremel Road, BL11245 (Z16-0006) - McBeetle Holdings

40 - 41

To give Bylaw No. 11245 first reading in order to rezone portions of the subject property to facilitate the construction of an automotive dealership.

- 4.4 247-261 Bernard Avenue, DP16-0065 - Paramount Court Inc. 42 - 73**

To review a form and character Development Permit for the re-use of the former Paramount Theatre.

- 4.5 1775 Chapman Place. DP16-0060 - 1017482 BC Ltd. 74 - 103**

To consider the form and character of an 83 unit residential building at Central Green.

- 4.6 3075 Vint Road, DP16-0099 - Highline Buildings Ltd. 104 - 140**

To review a form and character Development Permit for a 19 unit (3 bedroom) townhouse development.

5. Bylaws for Adoption (Development Related)

- 5.1 (S of) Academy Way, BL11143 (Z15-00006) - Watermark Developments Ltd. & City of Kelowna 141 - 143**

To adopt Bylaw No. 11143 in order to rezone portions of the subject property to accommodate the development of a single family subdivision.

6. Non-Development Reports & Related Bylaws

- 6.1 British Columbia Recreation and Parks Association PERC Award 144 - 145**

To provide Council with background information about the British Columbia Recreation and Parks Association PERC Award and to present Council with the award.

- 6.2 Water Controller Rebate Program 146 - 148**

To present a rebate program for City of Kelowna water utility customers to assist in water conservation and the transition to water use restrictions using the assigned day of week watering program.

- 6.3 Community for All Ages Update 149 - 165**

To inform Council on the status of the Community for All Ages project prior to the commencement of community engagement.

- 6.4 Eco-Pass Program Updates - Reconsideration 166 - 183**

To reconsider a recent update to the Eco-Pass program made to encourage the purchase and use of plug-in electric vehicles.

- 6.5 Energy Specialist Program - Contract Extension 184 - 191**

To approve a one-year contract extension of the FortisBC Energy Specialist Program to extend the Energy Specialist position.

6.6 Pedestrian and Bicycle Master Plan

192 - 347

To receive Council endorsement on the Pedestrian and Bicycle Master Plan and receive direction for staff to move forward with required implementation items as described in the Plan.

7. Bylaws for Adoption (Non-Development Related)

7.1 BL11215 - Amendment No. 7 to Kelowna Memorial Park Cemetery Bylaw No. 8807

348 - 360

To adopt Bylaw No. 11215 in order to amend the City of Kelowna's Kelowna Memorial Park Cemetery Bylaw.

8. Mayor and Councillor Items

9. Termination



City of Kelowna Regular Council Meeting Minutes

Date: Monday, May 9, 2016
 Location: Council Chamber
 City Hall, 1435 Water Street

Members Present Mayor Colin Basran, Councillors Maxine DeHart, Ryan Donn, Gail Given, Tracy Gray, Charlie Hodge, Brad Sieben and Luke Stack*

Members Absent Councillor Mohini Singh

Staff Present City Manager, Ron Mattiussi; City Clerk, Stephen Fleming; Community Planner, Laura Bentley*; Cemetery Manager, David Gatzke*; Parks Services Manager, Ian Wilson*; Council Recording Secretary, Arlene McClelland

(* Denotes partial attendance)

1. Call to Order

Mayor Basran called the meeting to order at 1:32 p.m.

Mayor Basran advised that the meeting is open to the public and all representations to Council form part of the public record. A live audio and video feed is being broadcast and recorded by CastaNet and a delayed broadcast is shown on Shaw Cable.

2. Confirmation of Minutes

Moved By Councillor Hodge/Seconded By Councillor Gray

R393/16/05/09 THAT the Minutes of the Regular Meetings of May 2, 2016 be confirmed as circulated.

Carried

3. Development Application Reports & Related Bylaws

3.1 Regional Context Statement Update, OCP16-0002 - City of Kelowna

Staff:

- Provided a summary of the Regional Context Statement.

Moved By Councillor Donn/Seconded By Councillor DeHart

R394/16/05/09 THAT Council receives, for information, the Report from the Planner II dated May 9, 2016 with respect to a new Regional Context Statement;

AND FURTHER THAT Official Community Plan Text Amending Bylaw No. 11205 be forwarded to a Public Hearing for further consideration.

Carried

4. Bylaws for Adoption (Development Related)

4.1 889 McCurdy Place, BL11217 (Z16-0003) - P J S Holdings Ltd.

Moved By Councillor Stack/Seconded By Councillor DeHart

R395/16/05/09 THAT Bylaw No. 11217 be adopted.

Carried

4.2 190 Homer Road, BL11218 (Z15-0044) - Cascade Developments Group Ltd.

Moved By Councillor DeHart/Seconded By Councillor Stack

R396/16/05/09 THAT Bylaw No. 11218 be adopted.

Carried

5. Non-Development Reports & Related Bylaws

5.1 Quarterly Report Update - Q1 2016

City Manager:

- Displayed a PowerPoint Presentation summarizing the 2016 Quarterly Report update.

Moved By Councillor Donn/Seconded By Councillor Given

R397/16/05/09 THAT Council receives, for information, the Quarterly Report from the City Manager, dated April 27, 2016.

Carried

5.2 Kelowna Memorial Park Cemetery Bylaw Update

Staff:

- Summarized the proposed amendments to the Kelowna Memorial Park Cemetery Bylaw and responded to questions from Council.

Moved By Councillor Sieben/Seconded By Councillor Stack

R398/16/05/09 THAT Council receives for information the report from the Cemetery Manager, dated May 9, 2016 recommending changes to the Kelowna Memorial Park Cemetery Bylaw 8807;

AND THAT Council gives reading consideration to Bylaw No. 11215 being amendment No. 7 to Kelowna Memorial Park Cemetery Bylaw No. 8807.

Carried

5.3 BL11215 - Amendment No. 7 to Kelowna Memorial Park Cemetery Bylaw No. 8807

Moved By Councillor Sieben/Seconded By Councillor DeHart

R399/16/05/09 THAT Bylaw No. 11215 be read a first, second and third time.

Carried

5.4 Highway 97 North (Adjacent to) - Proposed Road Closure

Moved By Councillor Donn/Seconded By Councillor Hodge

R400/16/05/09 THAT Council receive for information, the Report from the Manager; Real Estate Services dated May 9, 2016, recommending that Council adopt the proposed road closure to close an unused portion of roadway adjacent to Highway 97 North;

AND FURTHER THAT Bylaw No. 11232, being the proposed road closure of a portion on unused roadway adjacent to Highway 97 North, be given reading consideration.

Carried

5.5 Highway 97 North (Adjacent to), BL11232 - Proposed Road Closure

Moved By Councillor Sieben/Seconded By Councillor DeHart

R401/16/05/09 THAT Bylaw No. 11232 be read a first, second and third time.

Carried

6. Bylaws for Adoption (Non-Development Related)

Councillor Stack declared a conflict of interest on Items 6.1 to 6.6 as his employer is a rental housing agreement recipient and departed the meeting at 2:05 p.m.

6.1 125 Dundas Road, BL11234, Housing Agreement Authorization Bylaw - Unico One Developments Ltd.

Moved By Councillor Hodge/Seconded By Councillor Donn

R402/16/05/09 THAT Bylaw No. 11234 be adopted.

Carried

6.2 2065 Benvoulin Court, BL11235, Housing Agreement Authorization Bylaw - National Society of Hope

Moved By Councillor Gray/Seconded By Councillor Hodge

R403/16/05/09 THAT Bylaw No. 11235 be adopted.

Carried

6.3 1745 Chapman Place, BL11236, Housing Agreement Authorization Bylaw - Ki-Low-Na Friendship Society

Moved By Councillor Gray/Seconded By Councillor Hodge

R404/16/05/09 THAT Bylaw No. 11236 be adopted.

Carried

6.4 1170 Highway 33 W, BL11237, Housing Agreement Authorization Bylaw - Okanagan Metis & Aboriginal Housing Society

Moved By Councillor Given/Seconded By Councillor Hodge

R405/16/05/09 THAT Bylaw No. 11237 be adopted.

Carried

6.5 805 Academy Way, BL11238, Housing Agreement Authorization Bylaw - U Three-Mission Group Rentals Ltd.

Moved By Councillor Gray/Seconded By Councillor Given

R406/16/05/09 THAT Bylaw No. 11238 be adopted.

Carried

6.6 305 Homer Road, BL11239, Housing Agreement Authorization Bylaw - Davara Holdings Ltd.

Moved By Councillor Given/Seconded By Councillor Donn

R407/16/05/09 THAT Bylaw No. 11239 be adopted.

Carried

Councillor Stack returned to the meeting at 2:07 p.m.

7. Mayor and Councillor Items

Councillor Donn

- Encouraged the public to attend the Rutland Centennial Community Hall Open House on May 12th.

Councillor Gray

- Encouraged the public to attend the Cameron House Open House to offer different ways the property may be utilized from 3:30 to 6:30 p.m. on May 12th.

Councillor DeHart

- Spoke to her attendance, on behalf of Mayor and Council, at the Friends of Parkinson's Society event.

Mayor Basran

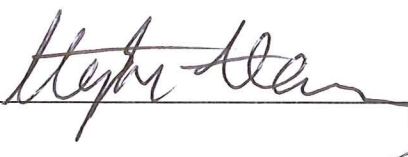
- Encouraged the public to provide input regarding parking around the hospital on the city's website.

8. Termination

This meeting was declared terminated at 2:10 p.m.

Mayor

/acm



City Clerk

ALTERNATOR

centre for contemporary art

centre for contemporary art

• ORGANIZATIONAL SUMMARY •

- ARTIST RUN CENTRE FOUNDED IN 1989
- LOCATED IN THE ROTARY CENTRE FOR THE ARTS
- LARGEST ARTIST RUN CENTRE BETWEEN VANCOUVER & CALGARY

{mandate}

- 1. to support emerging and alternative artists through mentorship, studio space, workshops, exhibition opportunities and professional development*
- 2. to present exhibitions and projects that are engaged in social issues; are experimental and collaborative in nature; challenge dominant structures of identity and value*
- 3. to inspire our members and the community*

ALTERNATOR
centre for contemporary art
centre for contemporary art

• ARTIST RUN CENTRES IN CANADA •

WHAT ARE THEY?

- Artist initiated and managed organizations
- Follow the not-for-profit model
- Do not charge admission fees
- De-emphasize the selling of work

WHAT IS THEIR ROLE?

- To act as arts incubators
- Work towards the benefit of the practicing artist within a context of self-determination

Production,
effective progressive politics,
neutral,
borders,
heat,
perfect,
practice

Rearrange,
be a tourist,
mark the word,
making place,
origin,
pure.

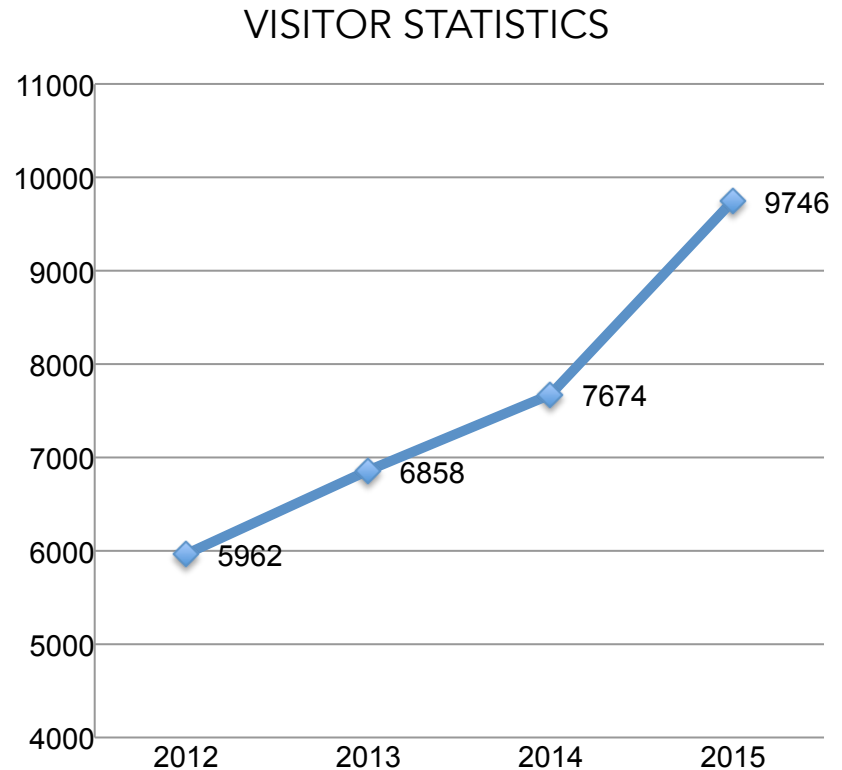
Magic,
power,
disassemble.

Peripheral vision,
counter,
judgement

Concrete vision,
flinch,
the future will always have

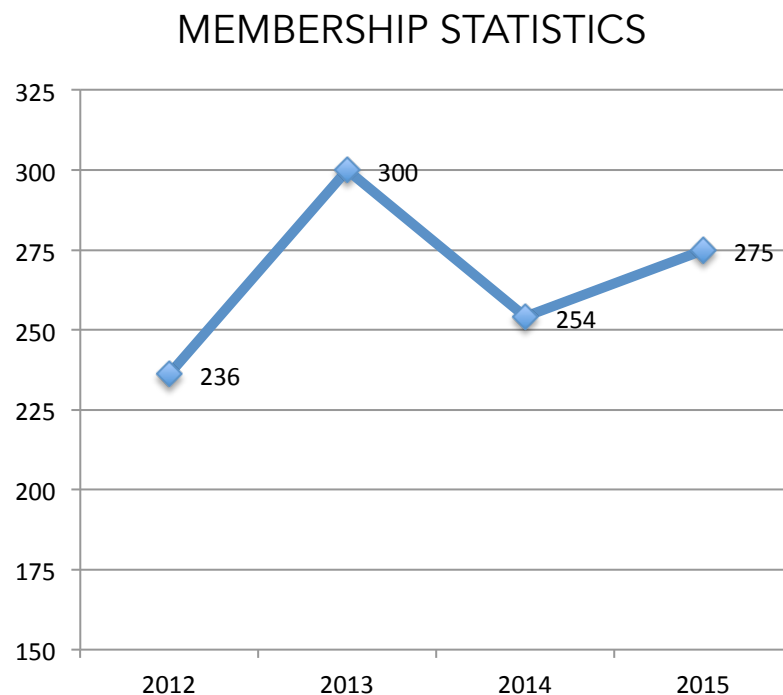
• VISITOR STATISTICS •

- 48% ages 19-34
- 20% ages 35-49
- 29% ages 50+
- 70% from Kelowna
- 87% from the Okanagan
- Since 2012, visitor numbers have increased over 60%



• MEMBERSHIP STATISTICS •

- Strong majority of members are young artists ages 19-35
- Includes membership agreement with UBC Okanagan Visual Arts Course Union
- Annual revenue from memberships in 2015: \$2800.00
- Volunteer memberships are also available





Exhibition Opening Reception 2015

• HUMAN RESOURCES •

STAFF

- 4 part-time staff
- 1 full-time summer student
- 2 part-time practicum students
- Annual Payroll: \$73,785

VOLUNTEERS

- 159 active volunteers
- 1607 hours annually
- Value: \$35,840

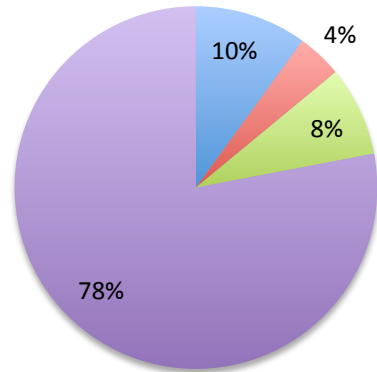


Exhibition Installation Sydney Lancaster & Marion Switzer YORK 2016

• FINANCIALS •

- 2015 Operating Budget: \$130,327
- 19% of total revenues from City of Kelowna

REVENUE SUMMARY



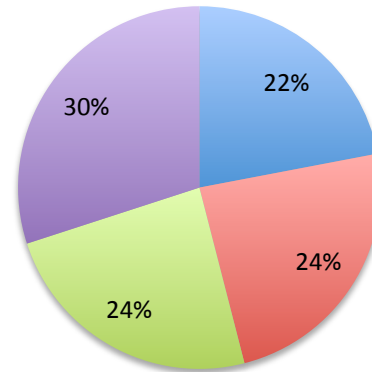
■ EARNED REVENUE

■ FUNDRAISING ACTIVITIES

■ FOUNDATIONS

■ GOVERNMENT FUNDING

GOVERNMENT FUNDING



■ CANADA COUNCIL

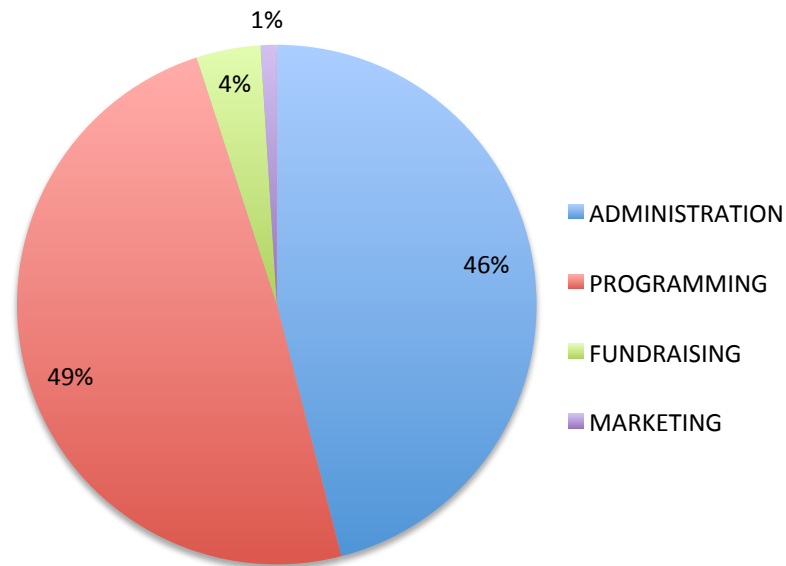
■ BC ARTS COUNCIL

■ CITY OF KELOWNA

■ BC GAMING COMMISSION

EXPENSES

EXPENSES SUMMARY



• IN COMPARISON •

COMPARATIVE FINANCIAL DATA 2014 *

	OAAA	CANADIAN ARC MEDIAN
MEMBERSHIP REVENUE	\$2,080	\$1,300
TOTAL EARNED REVENUE	\$7,609	\$10,286
FEDERAL OPERATING GRANTS	\$28,750	\$49,750
PROVINCIAL OPERATING GRANTS	\$25,000	\$47,325
MUNICIPAL OPERATING GRANTS	\$25,000	\$28,000
TOTAL OPERATING BUDGET	\$136,893	\$206,639

* DATA FROM CADAC (CANADIAN ARTS DATA). CANADIAN (EXCLUDING QUEBEC) ARC SAMPLE OF 90 ORGANIZATIONS.

• IN COMPARISON •

COMPARATIVE STATISTICAL DATA 2014 *

	OAAA	CANADIAN ARC MEDIAN
EXHIBITIONS PRESENTED	14	10
COMMUNITY ARTS ACTIVITIES	30	3
ATTENDANCE AT EXHIBITIONS	7674	4500
PARTICIPANTS IN COMMUNITY ARTS ACTIVITIES	244	102
NUMBER OF MEMBERS	254	147
HOURS WORKED BY VOLUNTEERS	1465	925

* DATA FROM CADAC (CANADIAN ARTS DATA). CANADIAN (EXCLUDING QUEBEC) ARC SAMPLE OF 90 ORGANIZATIONS.

• 2015 ACHIEVEMENTS •

- Increased frequency, stability and financial return of **fundraising activities**
- **Diversified skills** on expanded board of directors
- Successfully managed challenging year in **human resources** with minimal impact to organization and programming
- **Transitioned** Members' Gallery from being volunteer-run to staff-run
- **Improved connections** between ancillary programming and professional exhibitions



Alterknowledge Discussion Series 2015

• COMMUNITY IMPACT •

We act as an **arts incubator** in Kelowna, helping the promotion of amateur artists to **professional status**.







Kevin Day & Landon Mackenzie: A Scanner Ubiquitous, 2015

Members' Gallery Exhibition Critique with Landon Mackenzie 2015



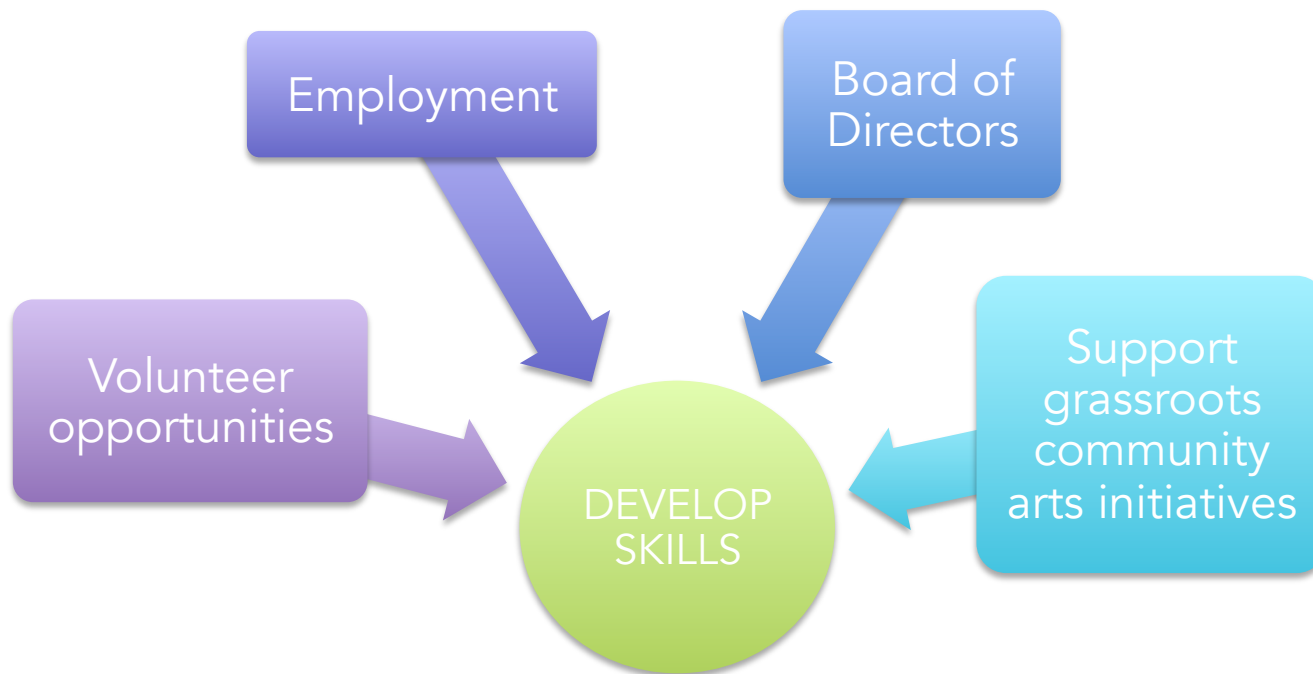
Emily Geen *A View To Call One's Own* 2015



David Kadish *Subtle Emergences* 2015

- COMMUNITY IMPACT •

We integrate young artists in the Kelowna community, and help retain professionals in the region.





Exhibition opening and screening Rishma Johal *Phulkari* 2015

• COMMUNITY IMPACT •

A unique pillar of Kelowna's arts community, the Alternator shows types of **socially engaged** work absent at other institutions.

"With the freedom afforded us through the unique structure of artist run centres, we're able to exhibit work that may not be commonplace, but still relevant to our community. By our very nature, we aim to support projects that may be viewed as 'risky' by more established arts and culture organizations."

-Hanss Lujan
President, OAAA

ANN NICHOLSON
THE CHILCOTIN WAR
A COLONIAL LEGACY



Ann Nicholson *The Chilcotin War* 2015



Ann Nicholson *The Chilcotin War* 2015

• LOOKING FORWARD •

- **Strategic planning** to guide activities for the next three years
- Focusing on **increasing earned revenue** through diversified fundraising, sponsorship and donations
- Expanding the professional exhibitions program utilizing the networks of our expanded board of directors to encourage proposals from **very early career artists**
- Explore new ways of engaging our membership through **volunteerism and social activities**

• THANK YOU •



BRITISH COLUMBIA
ARTS COUNCIL
An agency of the Province of British Columbia



Canada Council
for the Arts

Conseil des arts
du Canada

ALTERNATOR
centre for contemporary art
centre for contemporary art

REPORT TO COUNCIL



Date: May 16, 2016

RIM No. 1250-30

To: City Manager

From: Community Planning Department (RR)

Application: Z16-0006 **Owner:** McBeetle Holdings

Address: 894 Stremel Road **Applicant:** McBeetle Holdings

Subject: Rezoning Application

Existing OCP Designation: IND - Industrial

Proposed OCP Designation: COMM - Commercial / PARK - Major Park / Open Space

Existing Zone: RU1 - Large Lot Housing

Proposed Zone: C10 - Service Commercial / P3 - Parks and Open Space

1.0 Recommendation

THAT Council receives, for information, the Report from the Community Planning Department dated May 16, 2016 with respect to a rezoning and OCP amendment for 894 Stremel Road;

AND THAT the Official Community Plan Map Amending Bylaw and Rezoning Bylaw be forwarded for reading consideration.

2.0 Purpose

To consider revisions to an OCP amendment and Rezoning Bylaw to facilitate the construction of an automotive dealership on Stremel Road.

3.0 Community Planning

On April 25th, Council considered an OCP and Zoning Bylaw application to amend a highway fronting property to allow the construction of an automotive dealership. At the time, an out-of-date map was attached to the bylaw that did not reflect the negotiations between city staff and the applicant.

The proposed bylaws, which rezone the entire property to C10 - Service Commercial or P3 - Park and Open Space, represent the configuration staff and the applicant wish to have considered at public hearing. No RU1 - Large Lot Housing zoning would remain on site.

4.0 Proposal

4.1 Project Description

The applicant would like to construct an automobile dealership on the subject property. The first stages of the approvals process will require that the property be re-zoned and the OCP amended.

The OCP would be amended from Industrial to Service Commercial and Major Park/Open Space. The intent of the Major Park/Open Space component will be to protect Francis Brook and its riparian area in public ownership.



5.0 Application Chronology

Date of Application Received:	January 15, 2016
Date referrals completed:	April 8, 2016
Date of Initial Consideration:	April 25, 2016

Report prepared by:

Ryan Roycroft, Planner

Reviewed by: ☐ Terry Barton, Urban Planning Manager

Approved for Inclusion: ☐ Ryan Smith, Community Planning Department Manager

CITY OF KELOWNA

BYLAW NO. 11244

Official Community Plan Amendment No. OCP16-0001 McBeetle Holdings 894 Stremel Road

A bylaw to amend the "*Kelowna 2030* - Official Community Plan Bylaw No. 10500".

The Municipal Council of the City of Kelowna, in open meeting assembled, enacts as follows:

1. THAT Map 4.1 - **GENERALIZED FUTURE LAND USE** of "*Kelowna 2030* - Official Community Plan Bylaw No. 10500" be amended by changing the Generalized Future Land Use designation of portions of Lot A, Section 34, Township 26, ODYD, Plan EPP53299, located on Stremel Road, Kelowna, B.C., from the IND - Industrial designation to the SC - Service Commercial designation and the PARK - Major Park / Open Space designation as per Map "A" attached to and forming part of this bylaw;
2. This bylaw shall come into full force and effect and is binding on all persons as and from the date of adoption.

Read a first time by the Municipal Council this

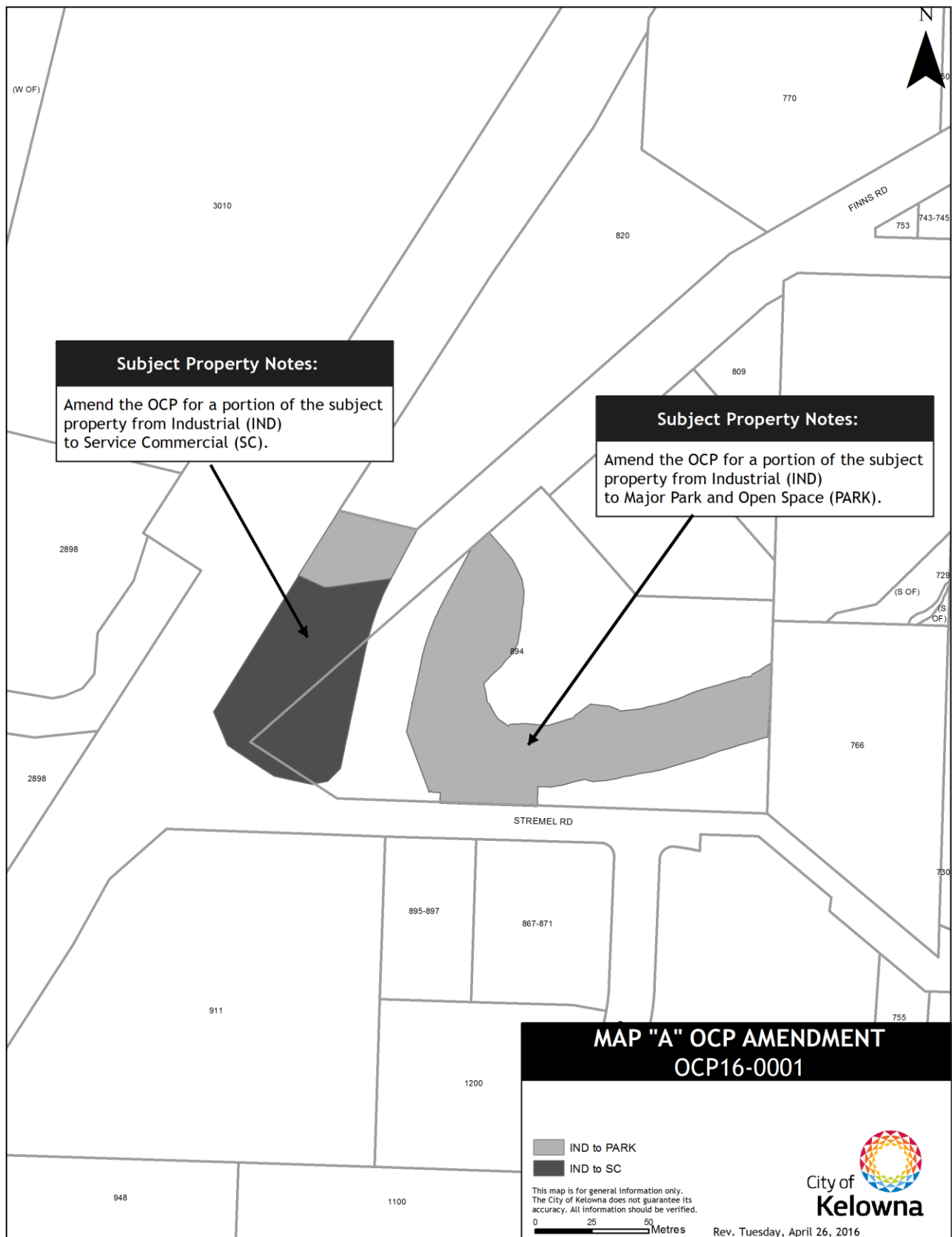
Considered at a Public Hearing on the

Read a second and third time by the Municipal Council this

Adopted by the Municipal Council of the City of Kelowna this

Mayor

City Clerk



CITY OF KELOWNA
BYLAW NO. 11245
Z16-0006 - McBeetle Holdings
894 Stremel Road

A bylaw to amend the "City of Kelowna Zoning Bylaw No. 8000".

The Municipal Council of the City of Kelowna, in open meeting assembled, enacts as follows:

1. THAT City of Kelowna Zoning Bylaw No. 8000 be amended by changing the zoning classification of portions of Lot A, Section 34, Township 26, ODYD, Plan EPP53299 located on Stremel Road, Kelowna, B.C., from the RU1 - Large Lot Housing zone to the C10 - Service Commercial zone and the P3 - Parks and Open Space zone as per Map "B" attached to and forming part of this bylaw.
2. This bylaw shall come into full force and effect and is binding on all persons as and from the date of adoption.

Read a first time by the Municipal Council this

Considered at a Public Hearing on the

Read a second and third time by the Municipal Council this

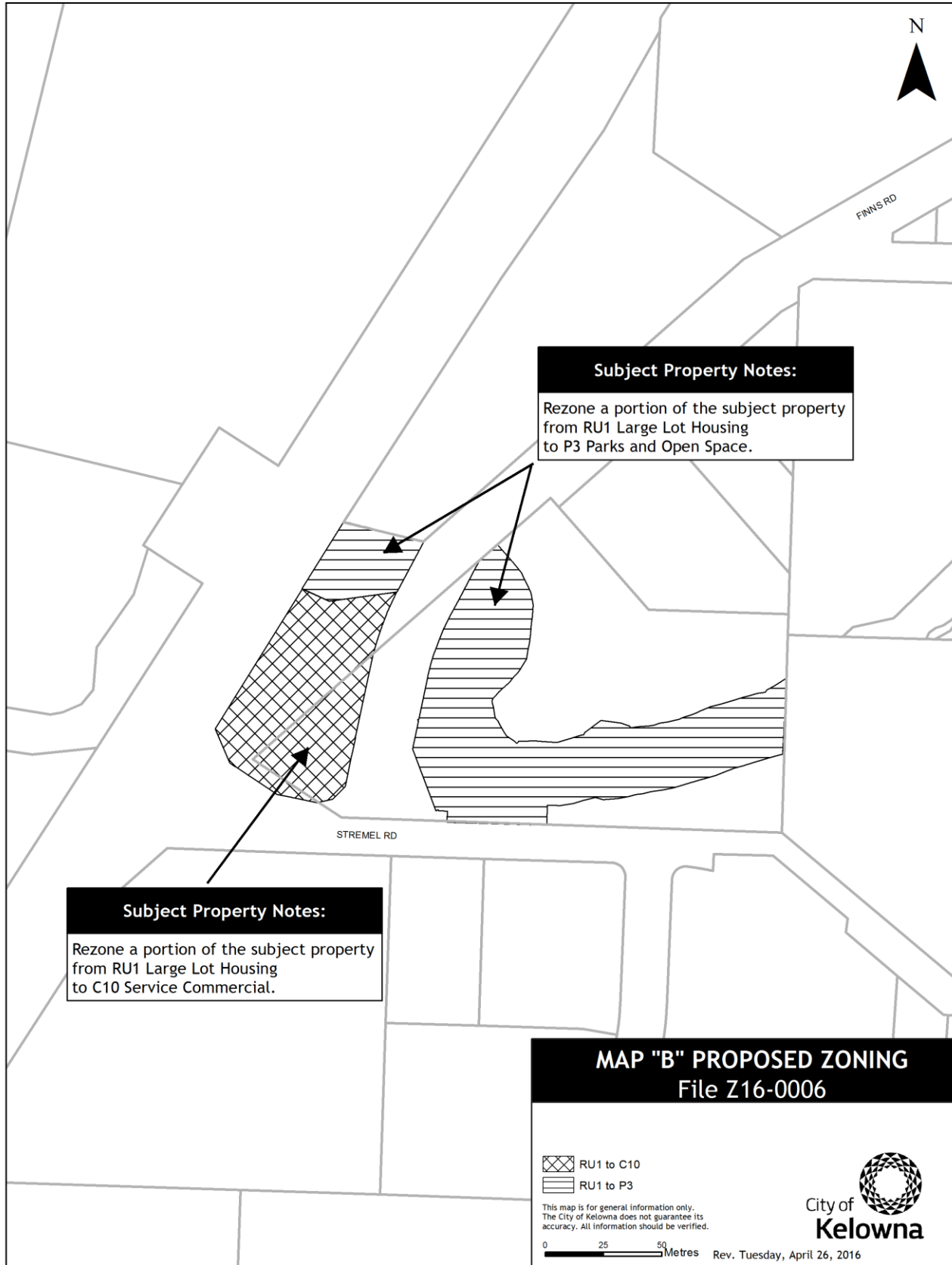
Approved under the Transportation Act

(Approving Officer-Ministry of Transportation)

Adopted by the Municipal Council of the City of Kelowna this

Mayor

City Clerk



REPORT TO COUNCIL



Date: 5/16/2016

RIM No. 0940-40

To: City Manager

From: Community Planning Department (AC)

Application: DP16-0065 **Owner:** Paramount Court Inc., Inc.
No. A0086803

Address: 247-261 Bernard Ave **Applicant:** McKinley Burkart - Tyson
Bolduc

Subject: Development Permit Application

Existing OCP Designation: MXR - Mixed Use (residential / Commercial)

Existing Zone: C7 - Central Business Commercial

1.0 Recommendation

THAT Council authorize the issuance of Development Permit DP16-0065 for Parcel Z (Plan B5763), Block 13, District Lot 139, ODYD, Plan 462, located on 261 Bernard Ave, Kelowna, BC, subject to the following:

1. The dimensions and siting of the building to be constructed on the land be in general accordance with Schedule "A";
2. The exterior design and finish of the building to be constructed on the land be in general accordance with Schedule "B";
3. Landscaping to be provided on the land to be in general accordance with Schedule "C";
4. That the applicant be required to post with the City, a Landscape Performance Security deposit in the form of a "Letter of Credit" in the amount of 125% of the estimated value of the landscaping, as determined by a professional landscaper;

AND THAT the applicant be required to complete the above noted conditions of Council's approval of the Development Permit Application in order for the permit to be issued;

AND FURTHER THAT this Development Permit be valid for two (2) years from the date of Council approval, with no opportunity to extend.

2.0 Purpose

To review a form and character Development Permit for the re-use of the former Paramount Theatre.

3.0 Community Planning

Staff supports the proposed Development Permit as the proposed development is consistent with the Official Community Plan (OCP) urban design guidelines and considers the unique character of the iconic Paramount Theatre.

The Paramount Theater, opened on June 16th, 1949 and has operated in downtown Kelowna until March 2016. The building has significant community character. Certain elements like the "Paramount" sign and the existing marquee, hold intrinsic value to the streetscape and reference the historic nature of the surrounding community. As such, the proposed redevelopment maintains the existing sign and part of the marquee sign but revives the remaining building elevation. Although the east commercial retail unit will keep the structure of the existing marquee, the final layout and font of the text may change as required by the selected tenant. The property is not included on Kelowna's Heritage Register.

The design includes a flat roof with a parapet that varies in height as well as balcony roofs to modulate the massing, break up long continuous surfaces and provide visual complexity without rendering the elevation too cluttered. The proposed brick material (charcoal brick) is complimentary to the existing materials of adjacent buildings. The flat roof design is different from the neighbouring buildings which incorporate sloping roofs. This provides a diversity of design styles along Bernard Ave.

3.1 Notification Policy

Council Policy No. 367 respecting public consultation does not apply to Development Permits.

4.0 Proposal

4.1 Project Description

The former Paramount Theatre is proposed to be divided into two commercial units. The larger unit (west CRU) is approximately 75% of the existing building area and is proposed to be a food primary restaurant with 'Craft Beer Market' as the tenant. The applicant has stated they value the history of the building and as such their intentions are to re-use the rest of the existing marquee theatre sign within the space as an interior element. There will also be consideration to the interior to mimic some of the qualities of the former theatre, such as projecting movies within the space for Craft patrons and possibly having movie-theatre-inspired menu items. The proposed seat count within the west CRU:

Main Floor: 230
Mezzanine: 48
Second Floor Patio: 204
Total: 482

The other, smaller tenant (east CRU) is proposed to be a retailer; the proposed retailer is not known at this time.

4.2 Site Context

The subject parcel is located downtown and is designated as MXR -Mixed Use (Residential / Commercial) in the OCP and is zoned C7 - Central Business Commercial. The lot is within the Permanent Growth Boundary and the adjacent land uses are C7 - Central Business Commercial.

Subject Property Map: 261 Bernard Ave



4.3 Zoning Analysis

The change of use does not trigger any new zoning requirements including parking. The Zoning Bylaw states parking is exempt for buildings under 3 stories that are located within the first few blocks along Bernard Ave.

5.0 **Current Development Policies**

5.1 Kelowna Official Community Plan (OCP)

Chapter 5: Development Process

Compact Urban Form.¹ Develop a compact urban form that maximizes the use of existing infrastructure and contributes to energy efficient settlement patterns. This will be done by increasing densities (approximately 75 - 100 people and/or jobs located within a 400 metre walking distance of transit stops is required to support the level of transit service) through development, conversion, and re-development within Urban Centres (see Map 5.3) in particular and existing areas as per the provisions of the Generalized Future Land Use Map 4.1.

Sensitive Infill.² Encourage new development or redevelopment in existing residential areas to be sensitive to or reflect the character of the neighbourhood with respect to building design, height, and siting.

¹ City of Kelowna Official Community Plan, Policy 5.3.2 (Development Process Chapter).

² City of Kelowna Official Community Plan, Policy 5.22.6 (Development Process Chapter).

³ City of Kelowna Official Community Plan, Housing, Chapter 2.1 (Regional Context).

⁴ City of Kelowna Official Community Plan, Policy 5.23.1 (Development Process Chapter).

6.0 Technical Comments

6.1 Building & Permitting Department

- a) Development Cost Charges (DCC's) are required to be paid prior to issuance of any Building Permit(s).
- b) Placement permits are required for any sales or construction trailers that will be on site. The location(s) of these are to be shown at time of development permit application.
- c) A Hoarding permit is required and protection of the public from the staging area and the new building area during construction. Location of the staging area and location of any cranes should be established at time of DP.
- d) A Building Code analysis is required for the structure at time of building permit applications, but the following items may affect the form and character of the building(s):
 - Any security system that limits access to exiting needs to be addressed in the code analysis by the architect.
- e) A Geotechnical report is required to address the sub soil conditions and site drainage at time of building permit application. Structural Engineer is required to review the entire structure for the additional load of the roof top deck and a report provided at time of permit application.
- f) Fire resistance ratings are required for storage, janitor and/or garbage enclosure room(s). The drawings submitted for building permit is to clearly identify how this rating will be achieved and where these area(s) are located.
- g) An exit analysis is required as part of the code analysis at time of building permit application. The exit analysis is to address travel distances within the units, number of required exits per area.
- h) Full Plan check for Building Code related issues will be done at time of Building Permit applications.

6.2 Development Engineering

- See attached Memo dated March 21st 2016

6.3 Fire Department

- a) Construction fire safety plan to be submitted and reviewed prior to construction.
- b) Engineered Fire Flow calculations are required to determine Fire Hydrant requirements as per Bylaw #7900.
- c) A visible address must be posted (COK subdivision manager).
- d) Sprinkler drawings are to be submitted to the Fire Dept. for review when available (if sprinklered).
- e) sprinkler zone valves shall be accessible as per fire prevention bylaw.
- f) sprinkler isolation valve to have 1.0 meter unobstructed access.
- g) A fire safety plan as per section 2.8 BCFC is required at occupancy. The fire safety plan and floor plans are to be submitted for approval in AutoCAD Drawing format on a CD or DVD to facilitate Fire Department pre-planning for this structure. The fire safety plan should clearly detail the unique requirements for this structure.
- h) Include a copy of the sprinkler system owner's certificate with fire safety plan.
- i) Copy of referenced NFPA 25 document to be on site.

- j) Fire Stairwells to be marked clearly (including roof access) as per Fire Department requirements. This would be standardized and approved by the KFD.
- k) Fire Department steel lock box acceptable to the fire dept. is required by the entrance. Kurt's Lock & Safe at 100A - 1021 Ellis Street, Kelowna is the approved supplier for flush mount lock boxes.
- l) If installed, standpipes connections are to be installed on the transitional landings of the stairwells as per NFPA 14.
- m) All requirements of the City of Kelowna Fire and Life Safety Bylaw 10760 shall be met
- n) Fire alarm system is to be monitored by an agency meeting the CAN/ULC S562 Standard.
- o) Contact Fire Prevention Branch for fire extinguisher requirements and placement.
- p) Fire department connection is to be within 45M, unobstructed, of a fire hydrant - ensure this is possible and that the FD connection is clearly marked and visible from the street.
- q) Do not issue BP unless life safety requirements complete.

7.0 Application Chronology

Date of Application Received: March 8th 2015
 Date of Public Consultation¹: n/a

¹There are no public consultation/notification requirements for a Development Permit.

Report prepared by:

Adam Cseke, Planner

Reviewed by: ☐ Terry Barton, Urban Planning Manager

Approved by: ☐ Ryan Smith, Community Planning Manager

Attachments:

Development Engineering Comments dated March 21st 2016

Applicant's rationale

Draft Development Permit

- Schedule 'A'
 - Site Plan
 - Floor Plan
- Schedule 'B'
 - Elevations
 - Colour Board
- Schedule 'C'
 - Landscaping

CITY OF KELOWNA
MEMORANDUM

Date: March 21, 2016
File No.: DP16-0065
To: Community Planning (AC)
From: Development Engineering Manager (SM)
Subject: 247-261 Bernard Avenue Renovation

Development Engineering has the following comments and requirements associated with this application. The utility upgrading requirements outlined in this report will be a requirement of this development.

1. Domestic Water and Fire Protection

This property is currently serviced with a 100mm-diameter PVC water service. The service should be adequate for this application.

2. Sanitary Sewer

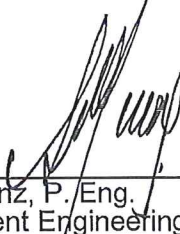
Our records indicate that this property is currently serviced with multiple 100mm diameter sanitary sewer services. The developer's consulting mechanical engineer will determine the development requirements of this proposed development and establish the service needs.

3. Development Permit and Site Related Issues

Access to this site is permitted from the lane only. No driveway access to Bernard Ave will be permitted.

4. Electric Power and Telecommunication Services

It is the applicant's responsibility to make a servicing application with the respective electric power, telephone and cable transmission companies to arrange for service upgrades to these services which would be at the applicant's cost.



Steve Muenz, P. Eng.
Development Engineering Manager

SS

mckinley burkart

Design Rationale

project:	Paramount Land Use	date:	2016-02-16
project no:	15013	file reference:	2.7.2.2

This document is for the intended recipient only and may contain information which is legally privileged. If an addressing or transmission error has misdirected this document please notify the author by replying. If you are not the intended recipient you must not use, disclose, distribute, copy, print or rely on the information contained within.

City of Kelowna
Community Planning
1435 Water Street
Kelowna, BC V1Y 1J4
250.469.8626

Below is the design rationale for Parcel Z, Plan B5763, Block 13 D.L. 139 ODYD Plan 462, otherwise described as the 'Paramount Theatre'. The proposed project's statistics are:

- Existing building area (foot print) to remain unchanged at +/- 14,053 sqft (1305 sm)
- Existing building to be subdivided to create two leasable commercial retail units (CRUs)- fire separated as required by BC Building Code
- Main Floor (both spaces) useable area to remain the same; existing floor (which is sloped/tiered) to be infilled to a single level (approximately 22.5" above grade at the front entrance)
- No changes to be made to existing parking and loading condition
- East CRU space:
 - o New glazed doors and storefront provided
 - o Exterior surfacing material to be redone with heritage detailing
 - o Infill existing floors as required – otherwise minor Leveling of existing floors
 - o Existing marquee to be remain and be refurbished (main portion to be used on exterior of east CRU & longer piece to be reused by west CRU in the interior)
 - o Mezzanine level to be demolished
 - o Usable area to be +/- 3806 sqft (354 sm) on Main Floor only
- West CRU space:
 - o New exterior surface material with operable, vertical-lift glazing, as well as, new doors, glazing and trims
 - o New signage proposed
 - o Barrier Free access provided – new lift access from grade to Main Floor and new elevator access from Main to Second Floor Patio
 - o Second Floor Patio to be constructed
 - o Infill existing raked seating to be level with adjacent floor
 - o Existing Mezzanine to be demolished & new Mezzanine level and separate stair to be constructed
 - o Usable area to be +/- 8806 sqft (818 sm) on Main Floor
 - o Usable area to be +/- 509 sqft (47 sm) on Mezzanine Floor
 - o Usable area to be +/- 3860 sqft (359 sm) on Second Floor
 - o Two (2) new exit stairs to Second Floor to be constructed
 - o Reuse part of the existing marquee in the interior space as a signage element

The design proposes revising the building's Bernard Avenue elevation with new materials, windows and doors. The Paramount Theatre, opened on June 16, 1949, has operated within the heritage district of downtown Kelowna. Although it is within this zone, it is not included on Kelowna's Heritage Register. Regardless of this, certain elements, like the "Paramount" sign and the existing marquee, hold intrinsic value to the street scape and reference the historic nature of the surrounding community. **As such, the proposed redevelopment maintains the existing sign and part of the marquee but revives the remaining elevation. Although the east CRU will keep the structure of the existing marquee, the final layout and font of the text may change as required by the selected tenant.** While the building face will be constructed of new materials, it will, however, follow the heritage guidelines set by the City of Kelowna Zoning.

The overall goal of the proposed redevelopment is to maintain the established architectural character of the area while bringing more activity to the street. This is achieved by maintaining a similar form – it's traditional in nature with recessed and mullioned windows, simple detailing and heritage materials. The context of the street has been considered as it maintains the existing building height and character; the proposed brick material compliments the existing materials of adjacent buildings. The objective of the project is to revitalize the existing building to attract long term tenants that will have a positive impact on the community and city.

The larger tenant (west CRU), approximately 75% of the existing building area, is proposed as Craft Beer Market (licensed and operating as 'Restaurant Primary'.) The mission of Craft is to connect local, small businesses and brewers with their own community. The establishment focuses on fresh, local food and beverages within a space that is unique to the neighborhood. Craft values the history of the building; as such, there is intention **to re-use the rest of the existing marquee within the space as an interior element. There will also be consideration to the interior to mimic some of the qualities of the former theatre, such as projecting movies within the space for Craft patrons and possibly having movie-theatre-inspired menu items.** The other, smaller tenant (east CRU) is proposed to be a retailer; the proposed retailer is not known at this time.

The proposed seat count within the west CRU:

Main Floor: 230
Mezzanine: 48
Second Floor Patio: 204
Total: 482

The Project conforms relevant guidelines, including:

- City of Kelowna Planning & Corporate Service Department, C7 Zone Design Guidelines, January 2006
- CPTED (Crime Prevention Through Environment Design)
- Guidelines of Accessibility in Outdoor paces (when applicable)

As per the C7 Design Guidelines, 8.0 Downtown Heritage Area, the following notes the project's compliance.

Check List		
	Guideline	Comments
	8.1 Material and Colours	
<input checked="" type="checkbox"/>	Building uses traditional building materials	
<input checked="" type="checkbox"/>	Building uses colours found on heritage buildings within Downtown Heritage Area	
	8.2 Windows	
<input checked="" type="checkbox"/>	Proposed new glazing is set back from building face and included headers and sills	
<input type="checkbox"/>	Window sill to be low	existing grade of the building limits the minimum sill height

<input checked="" type="checkbox"/>	Proposed new windows use traditional mullion patterns	
<input checked="" type="checkbox"/>	Windows height is at minimum 1.5 times the width	
<input type="checkbox"/>	Double-hung windows on upper floors	there are no upper floors or windows
<input checked="" type="checkbox"/>	Glazing is highly transparent	
	8.3 Cornice Lines	
<input checked="" type="checkbox"/>	The building has emphatic cornice lines using traditional detailing	
	8.4 Detailing Ornament	
<input checked="" type="checkbox"/>	Building conveys a sense of craftsmanship	
	8.5 Entrances	
<input checked="" type="checkbox"/>	Entrance to both tenants spaces are recessed	
	8.6 Canopies	
<input type="checkbox"/>	Fabric canopies are made from natural or natural looking materials	Proposed canopies are made from combination of natural wood and steel
	8.7 Signs	
<input checked="" type="checkbox"/>	Signs are in keeping with the character of the area and are front-lit	
<input checked="" type="checkbox"/>	Signs have visual interest and are not utilitarian in character	

In conclusion, the proposed project is designed to enhance the community within the guidelines set forth by the City of Kelowna.

Thank you,

McKinley Burkart Architecture

DEVELOPMENT PERMIT



APPROVED ISSUANCE OF DEVELOPMENT PERMIT

File Number DP16-0065
Issued To: Paramount Court Inc., Inc. No. A0086803
Site Address: 247-261 Bernard Ave
Legal Description: Parcel Z (Plan B5763), Block 13, District Lot 139, ODYD, Plan 462
Zoning Classification: C7 - Central Business Commercial
Development Permit Area: Comprehensive Development Permit Area

SCOPE OF APPROVAL

This Permit applies to and only to those lands within the Municipality as described above, and any and all buildings, structures and other development thereon.

This Permit is issued subject to compliance with all of the Bylaws of the Municipality applicable thereto, except as specifically varied or supplemented by this Permit, noted in the Terms and Conditions below.

The issuance of a Permit limits the Permit Holder to be in strict compliance with regulations of the Zoning Bylaw and all other Bylaws unless specific Variances have been authorized by the Permit. No implied Variances from bylaw provisions shall be granted by virtue of drawing notations that are inconsistent with bylaw provisions and that may not have been identified as required Variances by the applicant or Municipal staff.

1. TERMS AND CONDITIONS

THAT Development Permit No. DP16-0065 for Parcel Z (Plan B5763), Block 13, District Lot 139, ODYD, Plan 462, located at 247-261 Bernard Ave, Kelowna, BC to be approved subject to the following:

- a) The dimensions and siting of the building to be constructed on the land be in accordance with Schedule "A";
- b) The exterior design and finish of the building to be constructed on the land be in accordance with Schedule "B";
- c) Landscaping to be provided on the land be in accordance with Schedule "C";
- d) The applicant be required to post with the City a Landscape Performance Security deposit in the form of a "Letter of Credit" in the amount of 125% of the estimated value of the landscaping, as determined by a Registered Landscape Architect;

AND FURTHER THAT this Development Permit is valid for two (2) years from the date of Council approval, with no opportunity to extend.

2. PERFORMANCE SECURITY

As a condition of the issuance of this Permit, Council is holding the security set out below to ensure that development is carried out in accordance with the terms and conditions of this Permit. Should any interest be earned upon the security, it shall accrue to the Permit Holder and be paid to the Permit Holder if the security is returned. The condition of the posting of the security is that should the Permit Holder fail to carry out the development hereby authorized, according to the terms and conditions of this Permit within the time provided, the Municipality may use the security to carry out the work by its servants, agents or contractors, and any surplus shall be paid over to the Permit Holder, or should the Permit Holder carry out the development permitted by this Permit within the time set out above, the security shall be returned to the Permit Holder. There is filed accordingly:

- a) Cash in the amount of \$_____ n/a _____ OR
- b) A Certified Cheque in the amount of \$_____ n/a _____ OR
- c) An Irrevocable Letter of Credit in the amount of \$_____ n/a _____ .

Before any bond or security required under this Permit is reduced or released, the Developer will provide the City with a statutory declaration certifying that all labour, material, workers' compensation and other taxes and costs have been paid.

3. DEVELOPMENT

The land described herein shall be developed strictly in accordance with the terms and conditions and provisions of this Permit and any plans and specifications attached to this Permit that shall form a part hereof.

If the Permit Holder does not commence the development permitted by this Permit within two years of the date of this Permit, this Permit shall lapse.

This Permit IS NOT a Building Permit.

4. APPLICANT'S AGREEMENT

I hereby declare that all of the above statements and the information contained in the material submitted in support of this Permit are to the best of my belief, true and correct in all respects. Upon issuance of the Permit for me by the Municipality, then in such case, I covenant and agree to save harmless and effectually indemnify the Municipality against:

- a) All actions and proceedings, costs, damages, expenses, claims, and demands whatsoever and by whomsoever brought, by reason of the Municipality granting to me the said Permit.
- b) All costs, expenses, claims that may be incurred by the Municipality if the construction by me of engineering or other types of works as called for by the Permit results in damages to any property owned in whole or in part by the Municipality or which the Municipality by duty or custom is obliged, directly or indirectly in any way or to any degree, to construct, repair, or maintain.

I further covenant and agree that should I be granted a Development Permit and/or Development Variance Permit, the Municipality may withhold the granting of any Occupancy Permit for the occupancy and / or use of any building or part thereof constructed upon the hereinbefore referred to land until all of the engineering works or other works called for by the Permit have been completed to the satisfaction of the Municipal Engineer and Divisional Director of Community Planning & Real Estate.

Should there be any change in ownership or legal description of the property, I undertake to notify the Community Planning Department immediately to avoid any unnecessary delay in processing the application.

I HEREBY UNDERSTAND AND AGREE TO ALL THE TERMS AND CONDITIONS SPECIFIED IN THIS PERMIT.

Signature of Owner / Authorized Agent

Date

Print Name in Bold Letters

Telephone No.

5. APPROVALS

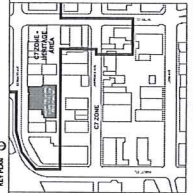
Issued and approved by Council on the _____ day of _____, 2016.

Ryan Smith, Community Planning Department Manager
Community Planning & Real Estate

Date

**The PERMIT HOLDER is the CURRENT LAND OWNER.
Security shall be returned to the PERMIT HOLDER.**

NOTES
 1. THIS PLAN IS A PRELIMINARY DESIGN AND IS NOT TO BE USED FOR CONSTRUCTION.
 2. THE DESIGNER HAS CONDUCTED VISUAL ANALYSIS OF THE PROPOSED DEVELOPMENT AND HAS DETERMINED THAT THE PROPOSED DEVELOPMENT IS COMPATIBLE WITH THE SURROUNDING ENVIRONMENT.
 3. THE DESIGNER HAS CONDUCTED VISUAL ANALYSIS OF THE PROPOSED DEVELOPMENT AND HAS DETERMINED THAT THE PROPOSED DEVELOPMENT IS COMPATIBLE WITH THE SURROUNDING ENVIRONMENT.
 4. THE DESIGNER HAS CONDUCTED VISUAL ANALYSIS OF THE PROPOSED DEVELOPMENT AND HAS DETERMINED THAT THE PROPOSED DEVELOPMENT IS COMPATIBLE WITH THE SURROUNDING ENVIRONMENT.
 5. THE DESIGNER HAS CONDUCTED VISUAL ANALYSIS OF THE PROPOSED DEVELOPMENT AND HAS DETERMINED THAT THE PROPOSED DEVELOPMENT IS COMPATIBLE WITH THE SURROUNDING ENVIRONMENT.



paramount redevelopment

issued for review 2016-02-05

SCHEDULE A/B/C
 This forms part of development
 Permit # DP 16-0065

DRAFT
 2016-02-16

CLIENT
 RONMOR

PROJECT
 PARAMOUNT LAND USE
 2001 10th Street, Suite 100
 St. Louis, MO 63102
 (314) 433-1000
 www.mckinleyburkart.com

TITLE SHEET

PROJECT
 NAME
 ADDRESS
 CITY
 STATE
 ZIP
 COUNTY

SCALE
 1" = 100'

NOTES
 1. THE EXISTING BUILDING IS A 1920S-STYLE BRICK BUILDING WITH A STEEP GABLE ROOF. THE BUILDING IS IN GOOD CONDITION AND IS A HISTORIC LANDMARK. THE BUILDING IS TO BE REHABILITATED TO MEET THE REQUIREMENTS OF THE NATIONAL HISTORIC PRESERVATION ACT AND THE DENVER HISTORIC DISTRICT REGULATIONS. THE REHABILITATION WILL INCLUDE THE FOLLOWING:
 - EXTERIOR WALLS: REPAIR AND REPOINT MORTAR JOINTS. REPLACE DAMAGED BRICKS WITH MATCHING BRICKS.
 - ROOF: REPLACE DAMAGED SHINGLES WITH 30-YEAR WARRANTY SHINGLES. REPAIR DAMAGED FLASHING AND GUTTERS.
 - INTERIOR: REPAIR AND REFINISH FLOORS. REPAIR DAMAGED CEILING AND WALLS. REPAIR DAMAGED DOORS AND WINDOWS.
 - MECHANICAL/ELECTRICAL: REPLACE EXISTING MECHANICAL AND ELECTRICAL SYSTEMS WITH NEW, ENERGY-EFFICIENT SYSTEMS.
 - PLUMBING: REPLACE EXISTING PLUMBING SYSTEMS WITH NEW, ENERGY-EFFICIENT SYSTEMS.
 - PAINT: REPAIR AND REFINISH EXISTING PAINT. APPLY NEW PAINT TO DAMAGED AREAS.



REVISION	DATE
1	2016-02-16

DRAFT
 2016-02-16

CLIENT
 RONMOR

PROJECT
 PARAMOUNT LAND USE

EXISTING
 SITE IMAGES

REVISION
 A000



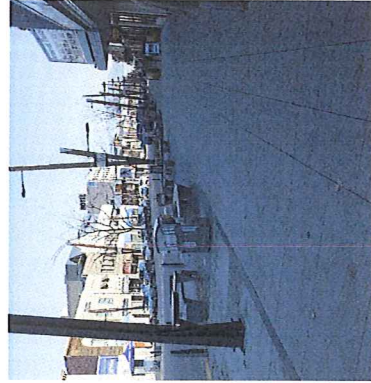
01 A000 WEST FRONT VIEW



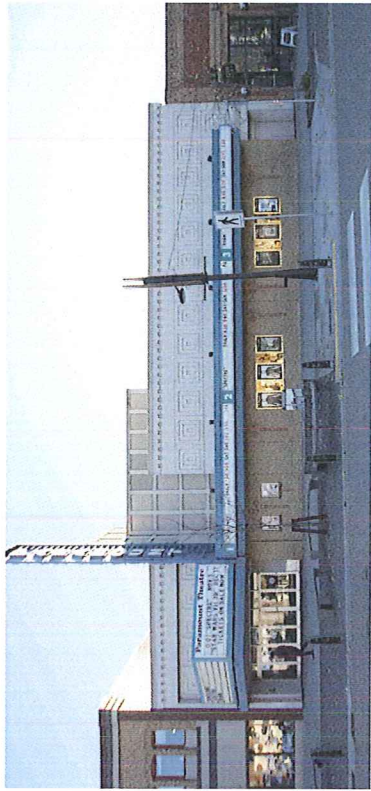
01 A000 NORTH WEST FRONT VIEW



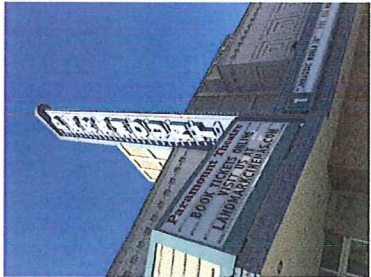
01 A000 EAST FRONT VIEW



01 A000 EAST STREET VIEW



01 A000 NORTH FRONT ELEVATION



01 A000 MARQUEE AND SIGN



01 A000 SOUTH EAST BACK VIEW



01 A000 SOUTH WEST BACK VIEW

SCHEDULE B
 This forms part of development
 Permit # DP16-0065

NOTES

DO NOT SCALE DIMENSIONS. REQUEST VERIFICATION OF DIMENSIONS AS REQUIRED.

THE ORIGINAL CONSTRUCTION SHALL BE OF STEEL AND WOOD JOISTS. DOUBLES AND TRIPLES ARE REQUIRED TO BE USED TO SUPPORT ANY AND ALL JOISTS. DOUBLES CONTRIBUTED TO THE PROBLE (CONSULT THE NATIONAL T&E).

THIS DIMENSION IS TO BE USED IN CONNECTION WITH THE STRUCTURAL, MECHANICAL, ELECTRICAL, DRAINAGE AND ANY OTHER CONSULTANTS' DIMENSIONS THAT ARE APPLICABLE.

COURT REPORT REVEALS ALL PARTS OF THE DIMENSION ARE THE FOLLOWING PROPERTY OF MOBLEY PARTNERS ARCHITECTS INC. AND SHALL NOT BE USED OR REPRODUCED WITHOUT THEIR PERMISSION.

THIS DIMENSION BLIND IS TO BE USED FOR CONSTRUCTION ONLY. SEE APPROVALS.



ISSUED	DATE
NO	DATE
ISSUE	

DRAFT
2016-02-16

CURRENT
RONMOR

PROJECT	MUNICIPAL ADDRESSES	LEGAL ADDRESSES
PARAMOUNT LAND USE	SACRAMENTO REGIONAL AIRFIELD	PINELL 2 (PULAN BLDG)

PROPOSED MATERIALS & RENDERINGS

PROJECT	10013
PROJECT NO	10013
STATUS	AS NOTED
SCALE	1/8"
DATE	10/10/13
DESIGN	10/10/13

REVISION  SHEET **A000a**

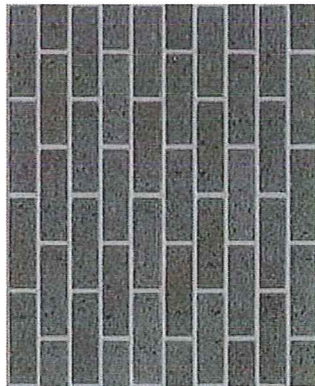


01 A000a NORTH WEST FRONT VIEW



02 A000a EAST FRONT VIEW

SCHEDULE B
This forms part of development
Permit # DP16-0065

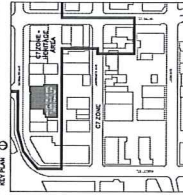


MATERIAL KEYNOTES

01	PROPOSED CONCRETE BASE & REINFORCED CONCRETE
02	PROPOSED MASONRY (COLOR, FINISH, BRICK)
03	PROPOSED WOOD DOOR & HWY TRAILER/POLO/COLORED METAL TRAILER
04	PROPOSED TRAIL, FENCE & DRIVEWAY (STREET/POLE, SIGN, FENCE, CLIMB, WALL, METAL, BRICK, METAL)
05	GRADING (DOD, REPAIR, EROSION, FENCE, TRAIL)
06	REINFORCED METAL, METAL, CLIMB, METAL, METAL



NOTES
 1. THIS DRAWING IS THE PROPERTY OF MCKINLEY/BURKART AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF MCKINLEY/BURKART.
 2. THE CLIENT HAS REVIEWED AND APPROVED THE CONCEPT AND PRELIMINARY DESIGN OF THIS PROJECT.
 3. THE CLIENT HAS REVIEWED AND APPROVED THE PRELIMINARY DESIGN OF THIS PROJECT.
 4. THE CLIENT HAS REVIEWED AND APPROVED THE PRELIMINARY DESIGN OF THIS PROJECT.
 5. THE CLIENT HAS REVIEWED AND APPROVED THE PRELIMINARY DESIGN OF THIS PROJECT.
 6. THE CLIENT HAS REVIEWED AND APPROVED THE PRELIMINARY DESIGN OF THIS PROJECT.
 7. THE CLIENT HAS REVIEWED AND APPROVED THE PRELIMINARY DESIGN OF THIS PROJECT.
 8. THE CLIENT HAS REVIEWED AND APPROVED THE PRELIMINARY DESIGN OF THIS PROJECT.
 9. THE CLIENT HAS REVIEWED AND APPROVED THE PRELIMINARY DESIGN OF THIS PROJECT.
 10. THE CLIENT HAS REVIEWED AND APPROVED THE PRELIMINARY DESIGN OF THIS PROJECT.



REVISION NO. DATE
 1. 02/16/16
 2. 02/16/16
 3. 02/16/16
 4. 02/16/16
 5. 02/16/16
 6. 02/16/16
 7. 02/16/16
 8. 02/16/16
 9. 02/16/16
 10. 02/16/16

DRAFT
 2016-02-16

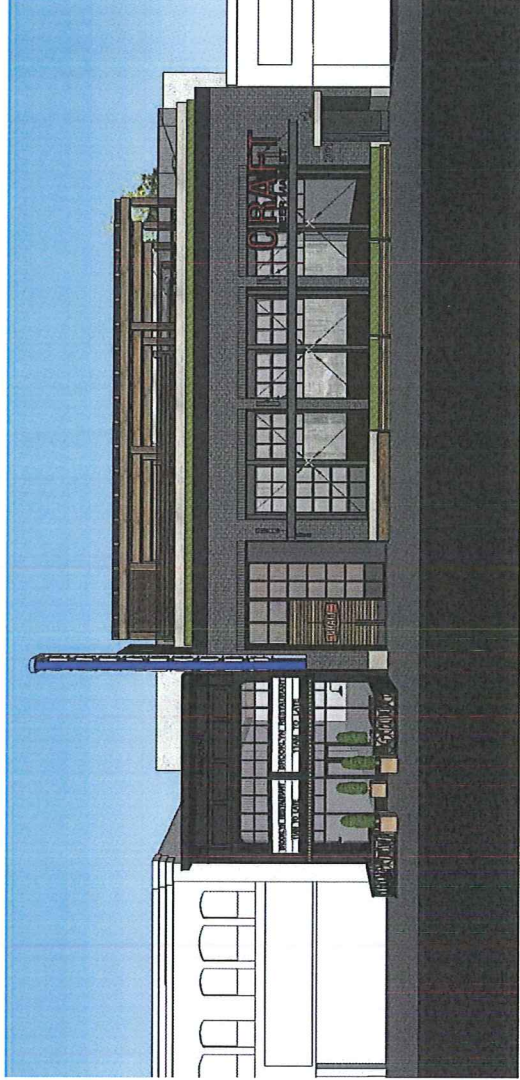
CLIENT
 RONMOR

PROJECT
 PARAMOUNT LAND USE
 1000 14th Street, Suite 1000
 Denver, CO 80202
 303.733.1100
 www.mckinleyburkart.com

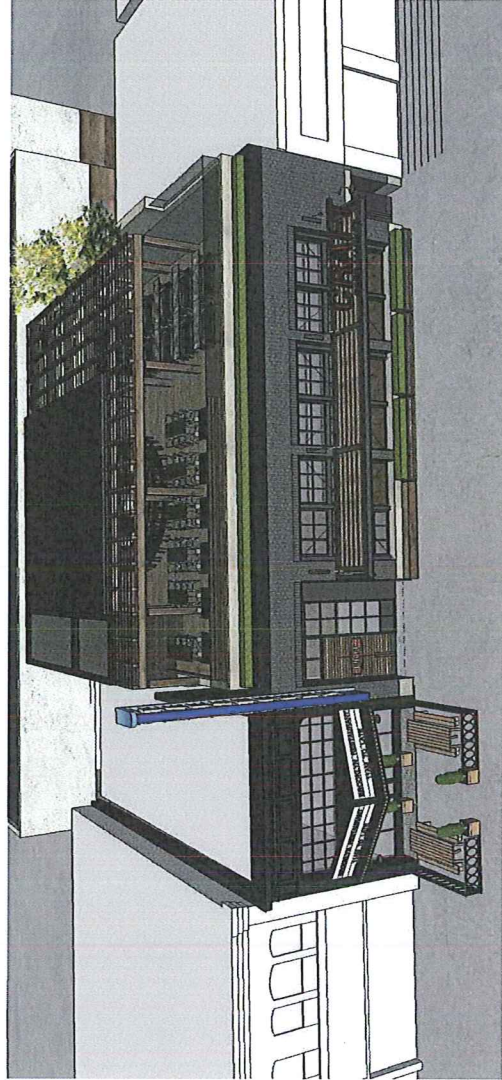
PROPOSED MATERIALS
 & RENDERINGS

PROJECT NO.
 SHEET NO.
 DATE
 DRAWN BY
 CHECKED BY

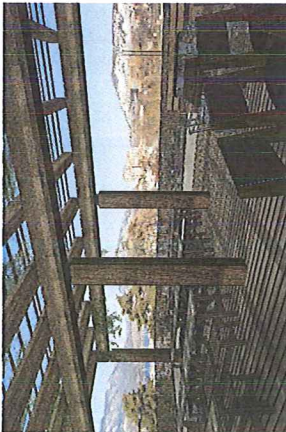
REVISION NO. DATE
 1. 02/16/16
 2. 02/16/16
 3. 02/16/16
 4. 02/16/16
 5. 02/16/16
 6. 02/16/16
 7. 02/16/16
 8. 02/16/16
 9. 02/16/16
 10. 02/16/16



04 A000b NORTH FRONT ELEVATION

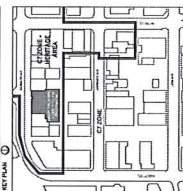


05 A000b ROOFTOP LANDSCAPING



06 A000b NORTH VIEW FROM PATIO

SCHEDULE B
 This forms part of development
 Permit # DP16-0065



ISSUED	NO	ISSUE	DATE
--------	----	-------	------

REVISED	NO	REVISION	DATE
	1		

REAL

DRAFT
2016-02-16

CLIENT
IRONMOR

PROJECT
PARAMOUNT LAND USE

DRAWING TITLE
SITE PLAN

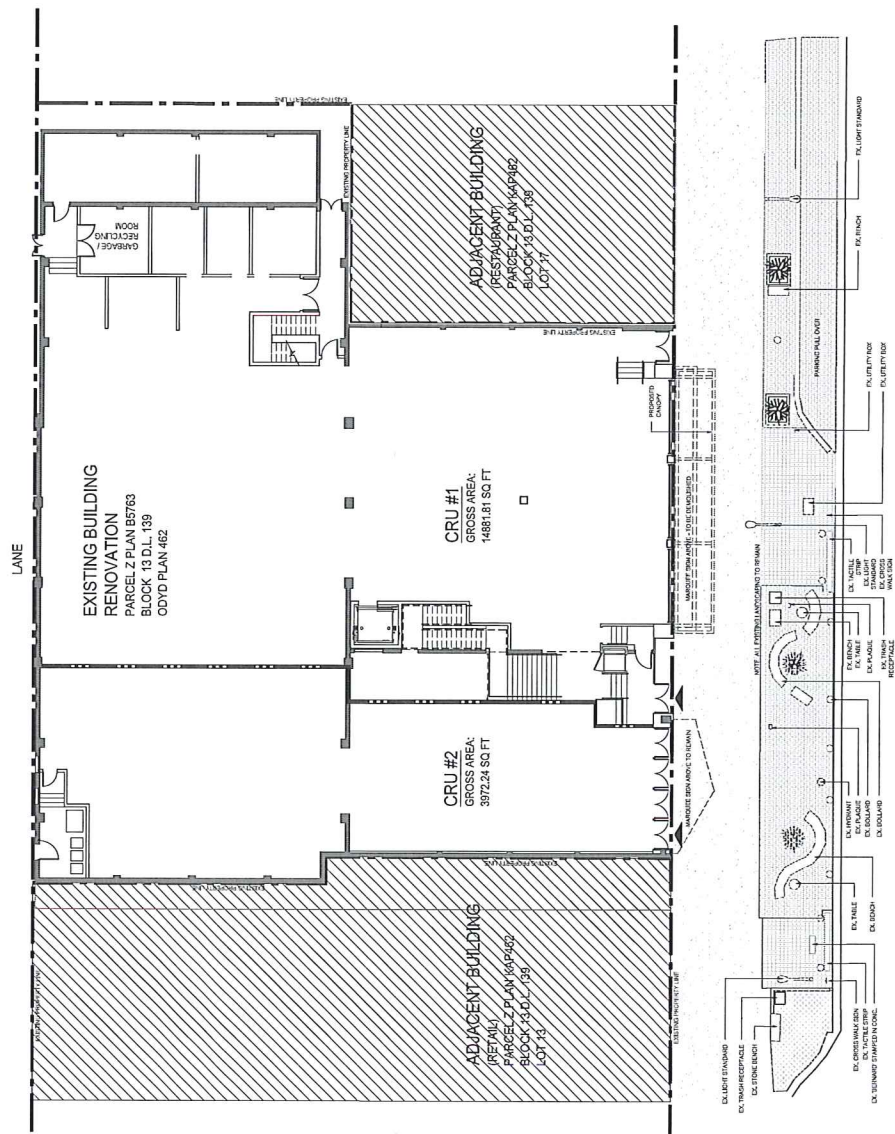
[illegible]

North arrow pointing upwards.

A100



01 A100 SITE PLAN
2/16/17



BERNARD AVE

SCHEDULE A
This forms part of development
Permit # DP16-0065

NOTES

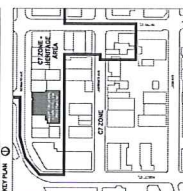
PROPOSAL SCALE: UNLIMITED. REGISTRATION: VARIOUS. TYPE OF BIDDING: OPEN. AWARD: LUMP SUM.

THE BIDDING CONTRACTOR SHALL CHECK AND VERIFY ALL LEVELS, DATUMS, ELEVATIONS, AND DIMENSIONS OF THE EXISTING STRUCTURES AND BE RESPONSIBLE FOR ANY DISCREPANCIES TO THE PLANS (CONTRACT NO. 100-10-000-100).

THE BIDDING CONTRACTOR SHALL BE REQUIRED TO CONDUCT VISUAL INSPECTIONS, SURVEYING, ELECTRICAL, CHEMICAL, AND ALL OTHER CONSULTANTS' SERVICES THAT ARE APPLICABLE.

CONTRACTOR MUST REPAIR ALL PARTS OF THE EXISTING AND THE EXISTING PROPERTY OF MOHAWK RAILROAD AND ELECTRIC CO. AND SHALL NOT BE RESPONSIBLE FOR REMEDIATION WITHOUT THE PERMISSION.

THE BIDDING CONTRACTOR SHALL BE REQUIRED TO CONDUCT VISUAL INSPECTIONS, SURVEYING, ELECTRICAL, CHEMICAL, AND ALL OTHER CONSULTANTS' SERVICES THAT ARE APPLICABLE.



ISSUED	NO	ISSUE	DATE

REVISION	REVISION	DATE
1		

DRAFT
2016-02-16

CLIENT
RONIMOR

PROJECT

PARAMOUNT LAND USE




ENGINEERING ADDRESS:
PARCEL 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 8

DRAWING TITLE
MAIN FLOOR
CONSTRUCTION PLAN

PROJECT	PROJECT NO	STATUS	DATE	NAME	CODE
1011	1011	1011	1011	1011	1011
1012	1012	1012	1012	1012	1012
1013	1013	1013	1013	1013	1013
1014	1014	1014	1014	1014	1014
1015	1015	1015	1015	1015	1015
1016	1016	1016	1016	1016	1016
1017	1017	1017	1017	1017	1017
1018	1018	1018	1018	1018	1018
1019	1019	1019	1019	1019	1019
1020	1020	1020	1020	1020	1020


 A211
 SHEET

CONSTRUCTION PLAN - LEGEND

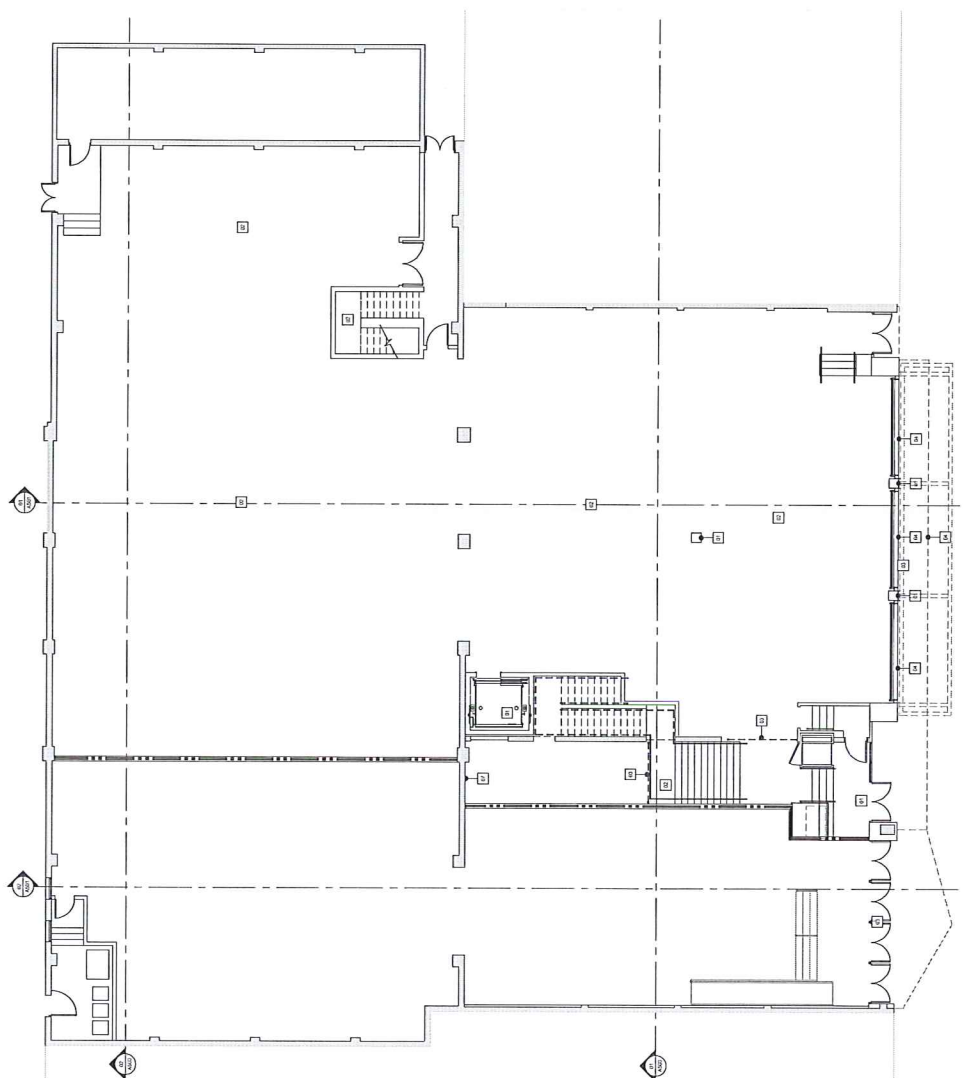
-  AREA NOT IN CONTRACT (NIC)
 EXISTING PARTITION TO REMAIN
 1 HOUR FIRE RATING
 2 HOUR FIRE RATING

CONSTRUCTION PLAN NOTES

RESERVED

KEY NOTES

- | | |
|---|--|
| 2 | NEW STRUCTURAL COLLARS - REFER TO STRUCTURAL DRAWINGS FOR DETAILS. |
| 3 | LOCATION OF NEW DIRT STAIR. |
| 4 | LOCATION OF FINE SHUTTER ABOVE. REFER TO HCP FOR DETAILS. |
| 5 | NEW GARAGE DOOR. |
| 6 | NEW GARAGE DOOR. |
| 7 | CONVERTED TO NEW POLYURETHANE PARTITION WALLS AND NEW DOOR. |



SCHEDULE A
This forms part of development
Permit # DP/6-0065

01 A211 MAIN FLOOR - CONSTRUCTION PLAN



65



NO	REVISION	DATE
1		

NO	REVISION	DATE
1		

CLIENT
RON MOR

PROJECT
PARAMOUNT LAND USE

MEZZANINE
CONSTRUCTION PLAN

PROJECT	PROJECT NO	DATE	BY	RECORD
13111				
3074120				
AD 16210				
66				
37				

REVISION SHEET
A221

CONSTRUCTION PLAN - LEGEND

	AREA NOT IN CONTRACT (NIC)
	EXISTING PARTITION TO REMAIN

RESERVED

CONSTRUCTION PLAN NOTES

KEY NOTES

NEW STRUCTURAL COLLARS • REFER TO STRUCTURAL DRAWINGS FOR DETAILS.

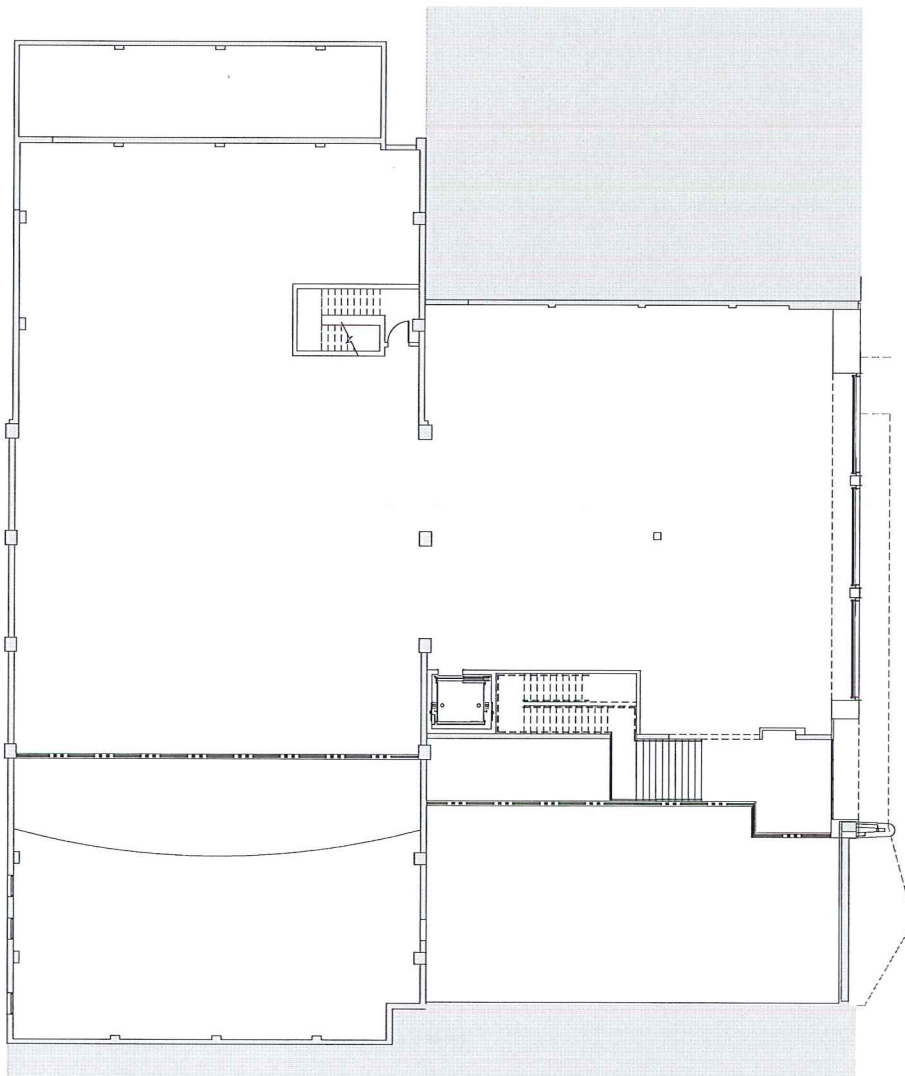
107 LOCATION OF NEW EXIST STAIR.

103 LOCATION OF FIRE SHUTTER ABOVE. REFER TO RCP FOR DETAILS.

04 NEW GARAGE DOOR.

25 NEW GARAGE DOOR.

CONTRACTOR TO VERIFY ON SITE EXISTING PARTITION



SCHEDULE A
This forms part of development
Permit # DP16-0065

NOTES

1. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

2. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

3. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

4. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

5. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

6. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

7. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

8. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

9. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

10. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.



REVISIONS

NO.	DATE	DESCRIPTION
1	2016-02-16	DRAFT

DRAFT
 2016-02-16

CLIENT
 RIMMOR

PROJECT
 PARAMOUNT LAND USE
 MEZZANINE PARTITION PLAN

MEZZANINE
 PARTITION PLAN

PROJECT
 10000 10th Avenue
 Suite 100
 Denver, CO 80202
 (303) 733-1000
 www.mckinleyburkart.com

A222

PARTITION PLAN - LEGEND

1. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

2. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

3. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

4. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

5. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

6. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

7. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

8. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

9. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

10. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

PARTITION PLAN NOTES

1. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

2. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

3. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

4. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

5. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

6. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

7. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

8. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

9. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

10. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

KEY NOTES

1. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

2. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

3. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

4. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

5. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

6. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

7. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

8. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

9. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

10. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

REVISIONS

NO.	DATE	DESCRIPTION
1	2016-02-16	DRAFT

NOTES

1. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

2. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

3. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

4. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

5. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

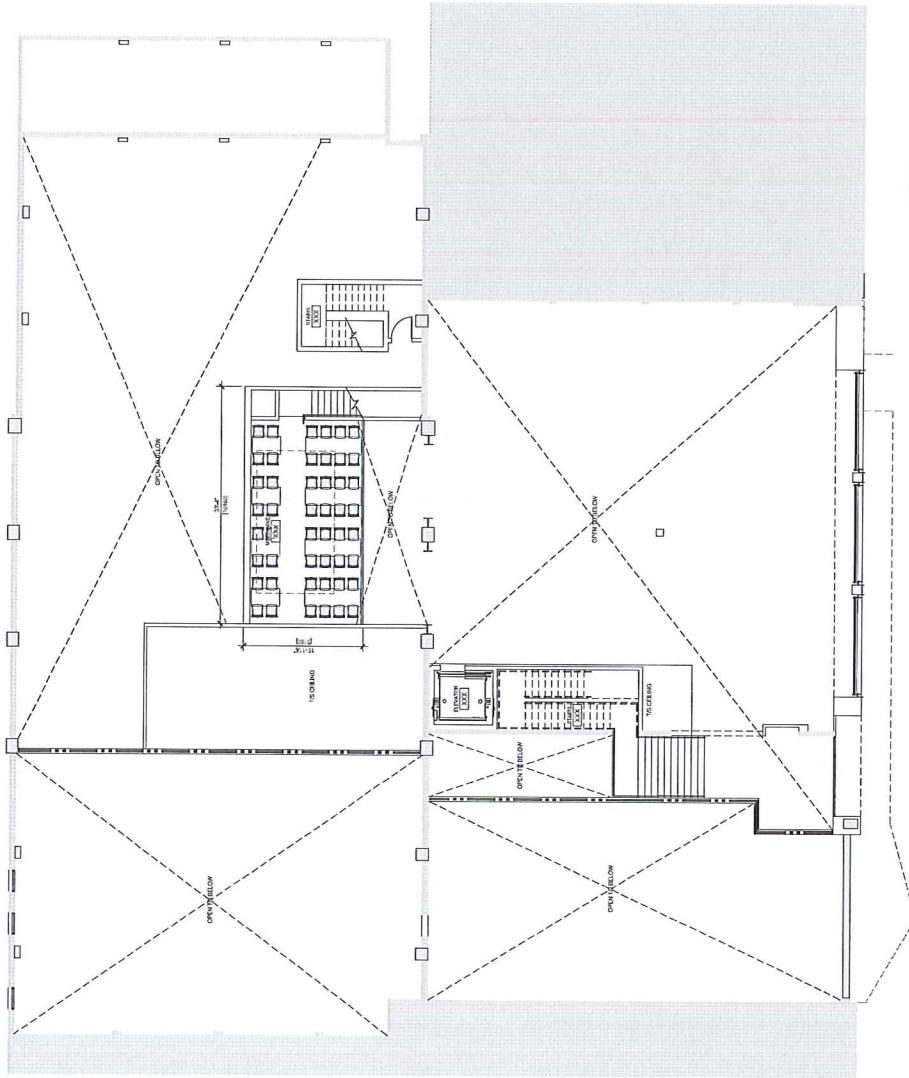
6. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

7. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

8. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

9. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.

10. ALL NEW PARTITIONS TO BE TYPE P-1 UNLESS NOTED TO THE CONTRARY.



SCHEDULE A
 This forms part of development
 Permit # **OP16-0065**

01 A222 | MEZZANINE - PARTITION PLAN
 10' x 10'



NOTES

1. DEMOLITION OF EXISTING STRUCTURE SHALL BE IN ACCORDANCE WITH THE DISTRICT DEPARTMENT OF PUBLIC WORKS (DDPW) DEMOLITION MANUAL, LATEST EDITION, AND THE DISTRICT OF COLUMBIA DEPARTMENT OF THE ENVIRONMENT (DOE) DEMOLITION MANUAL, LATEST EDITION. THE DEMOLITION MANUALS SHALL BE AVAILABLE AT THE FOLLOWING WEBSITE: www.ddpw.dc.gov/Portals/0/DEMOLITION%20MANUAL.pdf

2. THE DEMOLITION OF EXISTING STRUCTURE SHALL BE IN ACCORDANCE WITH THE DISTRICT OF COLUMBIA DEPARTMENT OF THE ENVIRONMENT (DOE) DEMOLITION MANUAL, LATEST EDITION, AND THE DISTRICT DEPARTMENT OF PUBLIC WORKS (DDPW) DEMOLITION MANUAL, LATEST EDITION. THE DEMOLITION MANUALS SHALL BE AVAILABLE AT THE FOLLOWING WEBSITE: www.ddpw.dc.gov/Portals/0/DEMOLITION%20MANUAL.pdf

3. THE DEMOLITION OF EXISTING STRUCTURE SHALL BE IN ACCORDANCE WITH THE DISTRICT OF COLUMBIA DEPARTMENT OF THE ENVIRONMENT (DOE) DEMOLITION MANUAL, LATEST EDITION, AND THE DISTRICT DEPARTMENT OF PUBLIC WORKS (DDPW) DEMOLITION MANUAL, LATEST EDITION. THE DEMOLITION MANUALS SHALL BE AVAILABLE AT THE FOLLOWING WEBSITE: www.ddpw.dc.gov/Portals/0/DEMOLITION%20MANUAL.pdf



REVISIONS

NO.	DESCRIPTION	DATE
1	ISSUED	
2	REVISED	

SCALE

DRAFT
 2016-02-16

CLIENT
 RONNOR

PROJECT
 PARAMOUNT LAND USE
 1000 14th St NW
 Washington, DC 20004

PROJECT
 SECOND FLOOR
 DEMOLITION PLAN

REVISIONS

NO.	DESCRIPTION	DATE
1	ISSUED	
2	REVISED	

SHEET
 A230

DEMOLITION PLAN - LEGEND

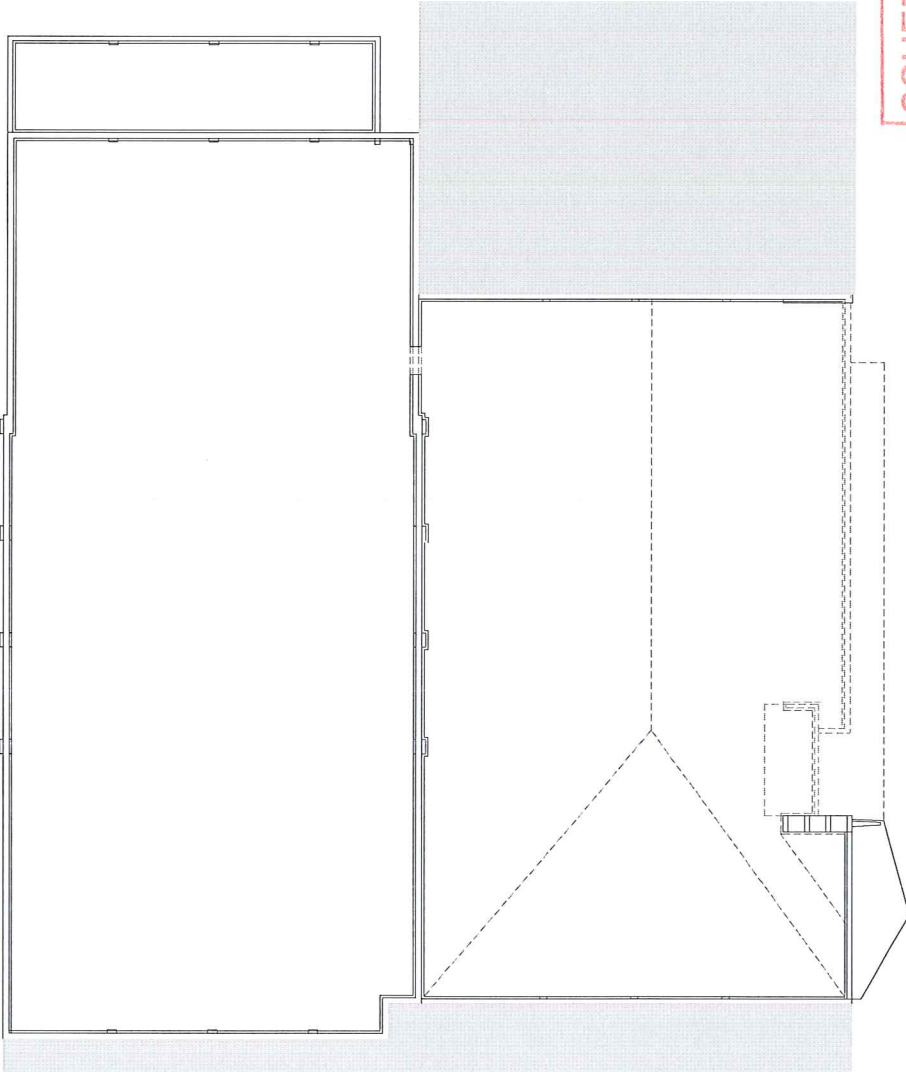
- EXISTING STRUCTURE
- EXISTING MATERIAL, CONCRETE SLAB, FOR REUSE
- EXISTING MATERIAL, CONCRETE SLAB, FOR REUSE

KEY NOTES

1. DEMOLITION OF EXISTING STRUCTURE SHALL BE IN ACCORDANCE WITH THE DISTRICT DEPARTMENT OF PUBLIC WORKS (DDPW) DEMOLITION MANUAL, LATEST EDITION, AND THE DISTRICT OF COLUMBIA DEPARTMENT OF THE ENVIRONMENT (DOE) DEMOLITION MANUAL, LATEST EDITION. THE DEMOLITION MANUALS SHALL BE AVAILABLE AT THE FOLLOWING WEBSITE: www.ddpw.dc.gov/Portals/0/DEMOLITION%20MANUAL.pdf
2. THE DEMOLITION OF EXISTING STRUCTURE SHALL BE IN ACCORDANCE WITH THE DISTRICT OF COLUMBIA DEPARTMENT OF THE ENVIRONMENT (DOE) DEMOLITION MANUAL, LATEST EDITION, AND THE DISTRICT DEPARTMENT OF PUBLIC WORKS (DDPW) DEMOLITION MANUAL, LATEST EDITION. THE DEMOLITION MANUALS SHALL BE AVAILABLE AT THE FOLLOWING WEBSITE: www.ddpw.dc.gov/Portals/0/DEMOLITION%20MANUAL.pdf
3. THE DEMOLITION OF EXISTING STRUCTURE SHALL BE IN ACCORDANCE WITH THE DISTRICT OF COLUMBIA DEPARTMENT OF THE ENVIRONMENT (DOE) DEMOLITION MANUAL, LATEST EDITION, AND THE DISTRICT DEPARTMENT OF PUBLIC WORKS (DDPW) DEMOLITION MANUAL, LATEST EDITION. THE DEMOLITION MANUALS SHALL BE AVAILABLE AT THE FOLLOWING WEBSITE: www.ddpw.dc.gov/Portals/0/DEMOLITION%20MANUAL.pdf

DEMOLITION PLAN NOTES

1. DEMOLITION OF EXISTING STRUCTURE SHALL BE IN ACCORDANCE WITH THE DISTRICT DEPARTMENT OF PUBLIC WORKS (DDPW) DEMOLITION MANUAL, LATEST EDITION, AND THE DISTRICT OF COLUMBIA DEPARTMENT OF THE ENVIRONMENT (DOE) DEMOLITION MANUAL, LATEST EDITION. THE DEMOLITION MANUALS SHALL BE AVAILABLE AT THE FOLLOWING WEBSITE: www.ddpw.dc.gov/Portals/0/DEMOLITION%20MANUAL.pdf
2. THE DEMOLITION OF EXISTING STRUCTURE SHALL BE IN ACCORDANCE WITH THE DISTRICT OF COLUMBIA DEPARTMENT OF THE ENVIRONMENT (DOE) DEMOLITION MANUAL, LATEST EDITION, AND THE DISTRICT DEPARTMENT OF PUBLIC WORKS (DDPW) DEMOLITION MANUAL, LATEST EDITION. THE DEMOLITION MANUALS SHALL BE AVAILABLE AT THE FOLLOWING WEBSITE: www.ddpw.dc.gov/Portals/0/DEMOLITION%20MANUAL.pdf
3. THE DEMOLITION OF EXISTING STRUCTURE SHALL BE IN ACCORDANCE WITH THE DISTRICT OF COLUMBIA DEPARTMENT OF THE ENVIRONMENT (DOE) DEMOLITION MANUAL, LATEST EDITION, AND THE DISTRICT DEPARTMENT OF PUBLIC WORKS (DDPW) DEMOLITION MANUAL, LATEST EDITION. THE DEMOLITION MANUALS SHALL BE AVAILABLE AT THE FOLLOWING WEBSITE: www.ddpw.dc.gov/Portals/0/DEMOLITION%20MANUAL.pdf

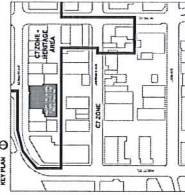


SCHEDULE A
 This forms part of development
 Permit # 0P/6-0065

A230 SECOND FLOOR - DEMOLITION PLAN
 1/8" = 1'-0"



NOTES
1. THESE NOTES ARE INTENDED TO BE USED IN CONJUNCTION WITH THE CONSTRUCTION PLAN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.



REVISIONS
NO. DESCRIPTION DATE
1. INITIAL DESIGN DATE

SCALE

DRAFT
2016-02-16

CLIENT
RONIMOR

PROJECT
PARAMOUNT LAND USE
LOCAL ORDINANCE
SECTION 15.04.010
SUBSECTION 15.04.010.010

PROJECT
SECOND FLOOR
CONSTRUCTION PLAN

PROJECT
NO. 1
DATE
2016-02-16
BY
MCKINLEYBURKART

PROJECT
NO. 1
DATE
2016-02-16
BY
MCKINLEYBURKART

CONSTRUCTION PLAN - LEGEND

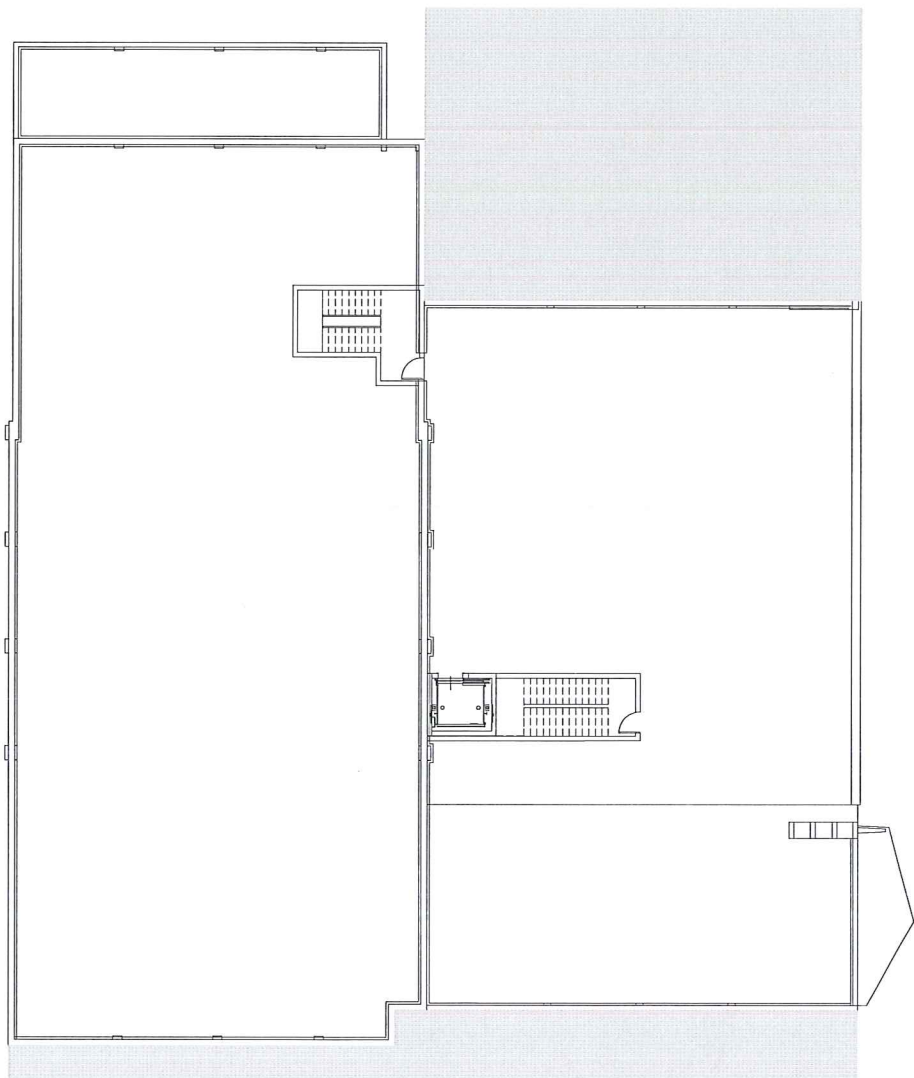
- 1. AREA NOT IN CONTRACT (N/C)
- 2. EXISTING PARTITION TO REMAIN
- 3. 1 FOOT HIGH RAILING
- 4. 2 FOOT HIGH RAILING

CONSTRUCTION PLAN NOTES

1. RESERVED

KEY NOTES

- 1. NEW STRUCTURAL WALLS - REFER TO STRUCTURAL DRAWINGS FOR DETAILS
- 2. LOCATION OF NEW EXIST STAIR
- 3. LOCATION OF NEW EXIST STAIR
- 4. NEW GARAGE DOOR
- 5. NEW GARAGE DOOR
- 6. CONSTRUCTION TO COMPLY WITH LOCAL ORDINANCE



SCHEDULE A
This forms part of development
Permit # DP16-0065

A231 SECOND FLOOR - CONSTRUCTION PLAN
1/8" = 1'-0"



NOTES

1. ALL DIMENSIONS ARE TO FACE UNLESS NOTED OTHERWISE.

2. THE EXISTING BUILDING IS A 1950S CONCRETE FRAME BUILDING WITH A FLAT ROOF. THE EXISTING BUILDING IS TO BE DEMOLISHED AND A NEW BUILDING IS TO BE CONSTRUCTED ON THE SAME SITE.

3. THE NEW BUILDING IS TO BE A 4-STORY BUILDING WITH A GABLE ROOF. THE NEW BUILDING IS TO BE CONSTRUCTED WITH CONCRETE FRAME AND CLAY TILE ROOFING.

4. THE NEW BUILDING IS TO BE CONSTRUCTED WITH CONCRETE FRAME AND CLAY TILE ROOFING.

5. THE NEW BUILDING IS TO BE CONSTRUCTED WITH CONCRETE FRAME AND CLAY TILE ROOFING.

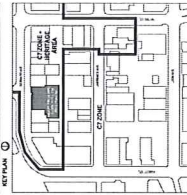
6. THE NEW BUILDING IS TO BE CONSTRUCTED WITH CONCRETE FRAME AND CLAY TILE ROOFING.

7. THE NEW BUILDING IS TO BE CONSTRUCTED WITH CONCRETE FRAME AND CLAY TILE ROOFING.

8. THE NEW BUILDING IS TO BE CONSTRUCTED WITH CONCRETE FRAME AND CLAY TILE ROOFING.

9. THE NEW BUILDING IS TO BE CONSTRUCTED WITH CONCRETE FRAME AND CLAY TILE ROOFING.

10. THE NEW BUILDING IS TO BE CONSTRUCTED WITH CONCRETE FRAME AND CLAY TILE ROOFING.



DATE
 2016-02-16

REVISIONS
 NO. REVISION DATE

SCALE
 1/8" = 1'-0"

DRAFT
 2016-02-16

CLIENT
 RONMOR

PROJECT
 PARAMOUNT LAND USE
 10000 10th Avenue, Suite 100
 Denver, CO 80202

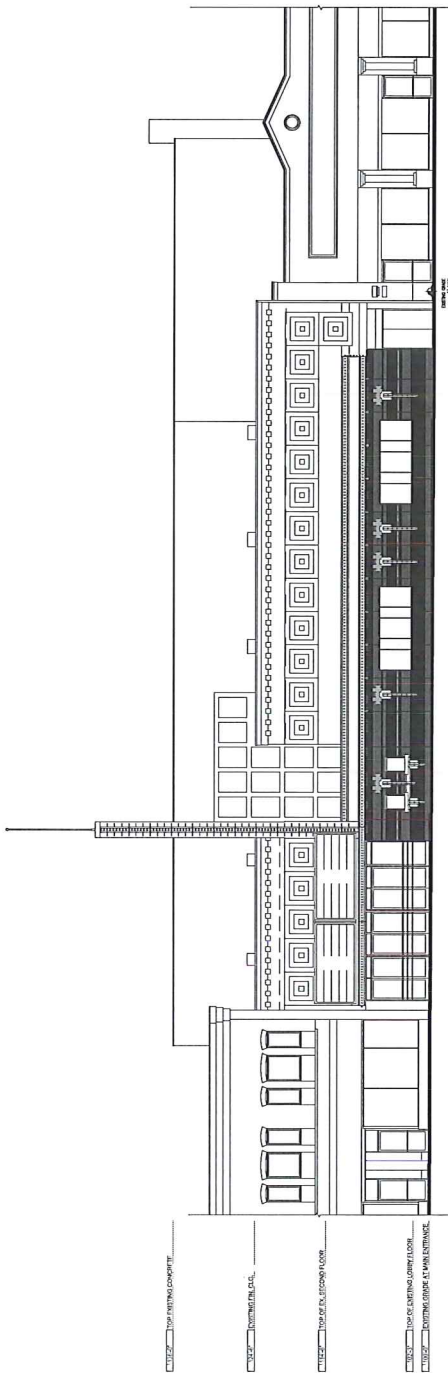
DATE
 2016-02-16

PROJECT
 PARAMOUNT LAND USE
 10000 10th Avenue, Suite 100
 Denver, CO 80202

PROJECT
 PARAMOUNT LAND USE
 10000 10th Avenue, Suite 100
 Denver, CO 80202

DATE
 2016-02-16

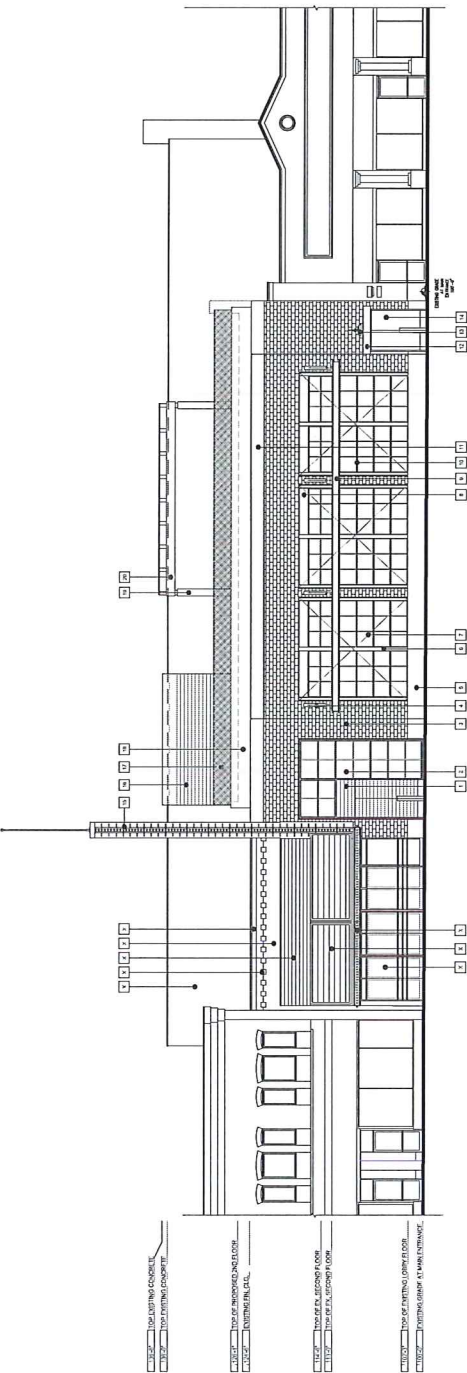
PROJECT
 PARAMOUNT LAND USE
 10000 10th Avenue, Suite 100
 Denver, CO 80202



01 A400 EXISTING ELEVATION
 1/8" = 1'-0"

MATERIAL KEYNOTES

1. CONCRETE FRAME
 2. CLAY TILE ROOFING
 3. CONCRETE FRAME
 4. CLAY TILE ROOFING
 5. CONCRETE FRAME
 6. CLAY TILE ROOFING
 7. CONCRETE FRAME
 8. CLAY TILE ROOFING
 9. CONCRETE FRAME
 10. CLAY TILE ROOFING



02 A400 PROPOSED ELEVATION
 1/8" = 1'-0"

SCHEDULE B
 This forms part of development
 Permit # DP16-0065

NOTES

1. THE ARCHITECT HAS REVIEWED THE PERMIT APPLICATION AND HAS FOUND IT TO BE IN COMPLIANCE WITH THE CITY OF WASHINGTON'S ZONING AND SUBDIVISION ACTS AND THE DISTRICT OF COLUMBIA'S ZONING AND SUBDIVISION ACTS.
2. THE ARCHITECT HAS REVIEWED THE PERMIT APPLICATION AND HAS FOUND IT TO BE IN COMPLIANCE WITH THE CITY OF WASHINGTON'S ZONING AND SUBDIVISION ACTS AND THE DISTRICT OF COLUMBIA'S ZONING AND SUBDIVISION ACTS.
3. THE ARCHITECT HAS REVIEWED THE PERMIT APPLICATION AND HAS FOUND IT TO BE IN COMPLIANCE WITH THE CITY OF WASHINGTON'S ZONING AND SUBDIVISION ACTS AND THE DISTRICT OF COLUMBIA'S ZONING AND SUBDIVISION ACTS.
4. THE ARCHITECT HAS REVIEWED THE PERMIT APPLICATION AND HAS FOUND IT TO BE IN COMPLIANCE WITH THE CITY OF WASHINGTON'S ZONING AND SUBDIVISION ACTS AND THE DISTRICT OF COLUMBIA'S ZONING AND SUBDIVISION ACTS.
5. THE ARCHITECT HAS REVIEWED THE PERMIT APPLICATION AND HAS FOUND IT TO BE IN COMPLIANCE WITH THE CITY OF WASHINGTON'S ZONING AND SUBDIVISION ACTS AND THE DISTRICT OF COLUMBIA'S ZONING AND SUBDIVISION ACTS.



REVISIONS

NO.	DATE	DESCRIPTION
1	2016-02-16	ISSUED FOR PERMIT

DRAFT
 2016-02-16

CLIENT
 RONNOR

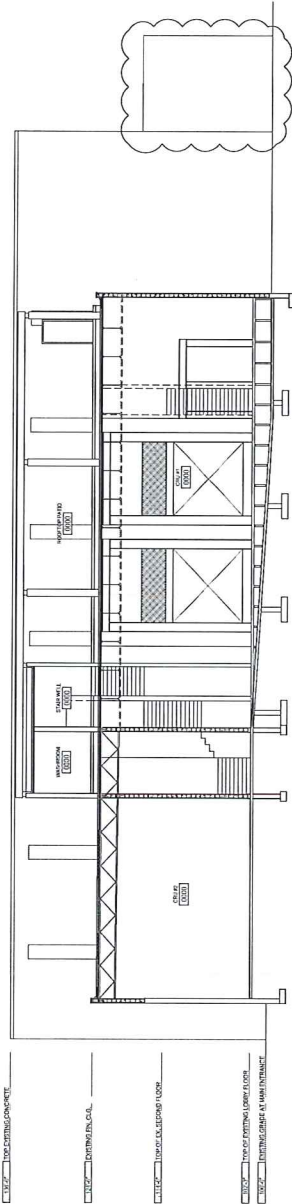
PROJECT
 PARAMOUNT LAND USE
 1000 15th St NW
 Suite 1000
 Washington, DC 20004

BUILDING SECTION

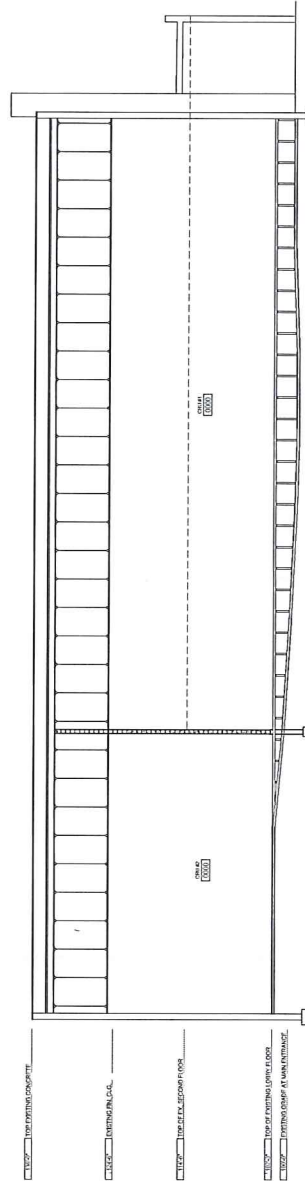
PROJECT

NO.	DATE	DESCRIPTION
1	2016-02-16	ISSUED FOR PERMIT

SCALE
 1/8" = 1'-0"



01 A500 SECTION
 1/8" = 1'-0"



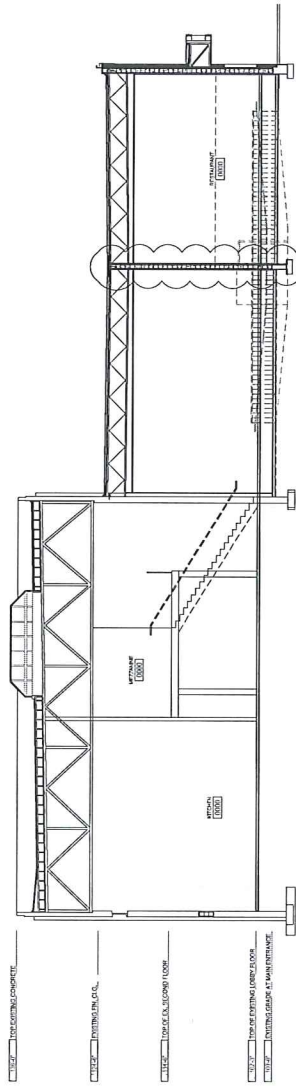
02 A500 SECTION
 1/8" = 1'-0"

SCHEDULE A/B
 This forms part of development
 Permit # DP16-0065

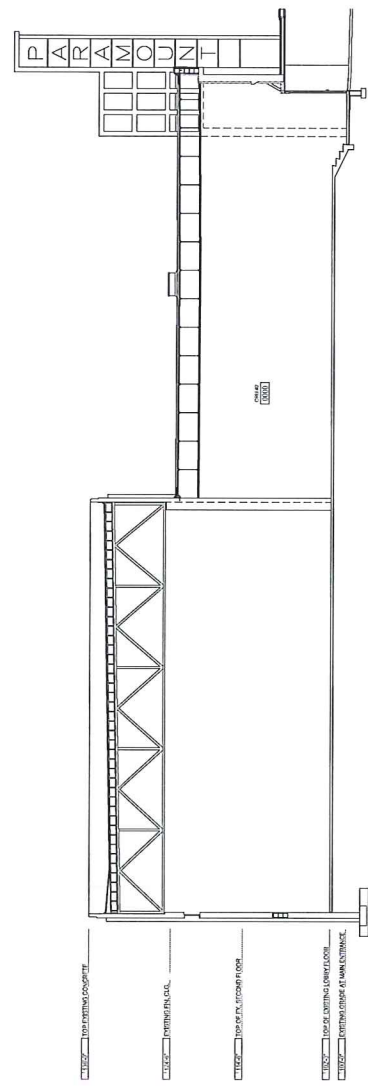
NOTES
 1. REFER TO EXISTING PERMIT FOR EXISTING BUILDING INFORMATION.
 2. THE EXISTING BUILDING IS A 100,000 SQ. FT. INDUSTRIAL BUILDING.
 3. THE EXISTING BUILDING IS A 100,000 SQ. FT. INDUSTRIAL BUILDING.
 4. THE EXISTING BUILDING IS A 100,000 SQ. FT. INDUSTRIAL BUILDING.
 5. THE EXISTING BUILDING IS A 100,000 SQ. FT. INDUSTRIAL BUILDING.
 6. THE EXISTING BUILDING IS A 100,000 SQ. FT. INDUSTRIAL BUILDING.
 7. THE EXISTING BUILDING IS A 100,000 SQ. FT. INDUSTRIAL BUILDING.
 8. THE EXISTING BUILDING IS A 100,000 SQ. FT. INDUSTRIAL BUILDING.
 9. THE EXISTING BUILDING IS A 100,000 SQ. FT. INDUSTRIAL BUILDING.
 10. THE EXISTING BUILDING IS A 100,000 SQ. FT. INDUSTRIAL BUILDING.



DESIGNED BY: [Signature]
 DATE: [Date]
 CHECKED BY: [Signature]
 DATE: [Date]
 REVISIONS: [List]
 DATE: [Date]



01 A501 SECTION THROUGH CRU #1
 1/8" = 1'-0"



02 A501 SECTION THROUGH CRU #2
 1/8" = 1'-0"

DRAFT
 2016-02-16

CLIENT
 RUMOR

PROJECT
 PARAMOUNT LAND USE
 1000 10th Avenue
 Suite 1000
 Boulder, CO 80502
 (303) 440-1000
 www.mckinleyburkart.com

REVISIONS: [List]
 DATE: [Date]

PROJECT
 PARAMOUNT LAND USE
 1000 10th Avenue
 Suite 1000
 Boulder, CO 80502
 (303) 440-1000
 www.mckinleyburkart.com

REVISIONS: [List]
 DATE: [Date]

PROJECT
 PARAMOUNT LAND USE
 1000 10th Avenue
 Suite 1000
 Boulder, CO 80502
 (303) 440-1000
 www.mckinleyburkart.com

REVISIONS: [List]
 DATE: [Date]

SCHEDULE A/B
 This forms part of development
 Permit # DP16-0065

REPORT TO COUNCIL



Date: May 16, 2016

RIM No. 0940-00

To: City Manager

From: Community Planning Department (RR)

Application: DP16-0060 **Owner:** 1017482 BC Ltd Inc. No BC1017482

Address: 1775 Chapman Place **Applicant:** Mission Group

Subject: Development Permit

Existing OCP Designation: MRM - Multiple Unit Residential (Medium Density)

Existing Zone: CD22 - Central Green Comprehensive Development

1.0 Recommendation

THAT Council authorizes the issuance of Development Permit No. DP16-0060 for Lot 3, DL 139, ODYD Plan KAP92715 located at 1775 Chapman Place, Kelowna, BC subject to the following:

1. The dimensions and siting of the building to be constructed on the land be in accordance with Schedule "A";
2. The exterior design and finish of the building to be constructed on the land, be in accordance with Schedule "B";
3. Landscaping to be provided on the land be in accordance with Schedule "C";
4. The applicant be required to post with the City a Landscape Performance Security deposit in the form of a "Letter of Credit" in the amount of 125% of the estimated value of the landscaping, as determined by a Registered Landscape Architect;

AND THAT this Development Permit is valid for two (2) years from the date of Council approval, with no opportunity to extend.

2.0 Purpose

To consider the Form and Character of an 83 unit residential building at Central Green.

3.0 Community Planning

Community Planning supports the Development Permit application. The proposal mirrors the first Mission Group building at Central Green, which was the intent of the original design.

The four storey design will act as a transition between the public Rowcliffe Park and the taller buildings at the core of Central Green. The design is in keeping with the established vision. The proposed development complies with all Zoning Bylaw requirements, and does not require any variances.

4.0 Proposal

4.1 Background

In December of 2015, Council approved the first Building on the market portion of the Central Green site. The developer has begun construction on the site, and has now made application for a second building.

4.2 Project Description



1 View from Chapman

The proposed development is a 4 storey 83 unit residential building. The main entry lobby will be off of Chapman, with a secondary lobby facing into the Central Green site. All parking will be under the building, with no required parking above ground.

The building will be the second building of seven in the market portion of the Central Green development, and the fifth on the site.

The project will be a near mirror image of Building C, clad in red brick with mixed hardi plank accents. The red brick is intended to provide a visual tie in to the Central School across Richter and act as a common thematic element. The red brick are historic references to the former

school on site and brick buildings across the road. The Hardi Plank will be white, brown and grey, providing a mix of colours and textures to break up the long building facade along Rowcliffe Park.



2 View from Rowcliffe

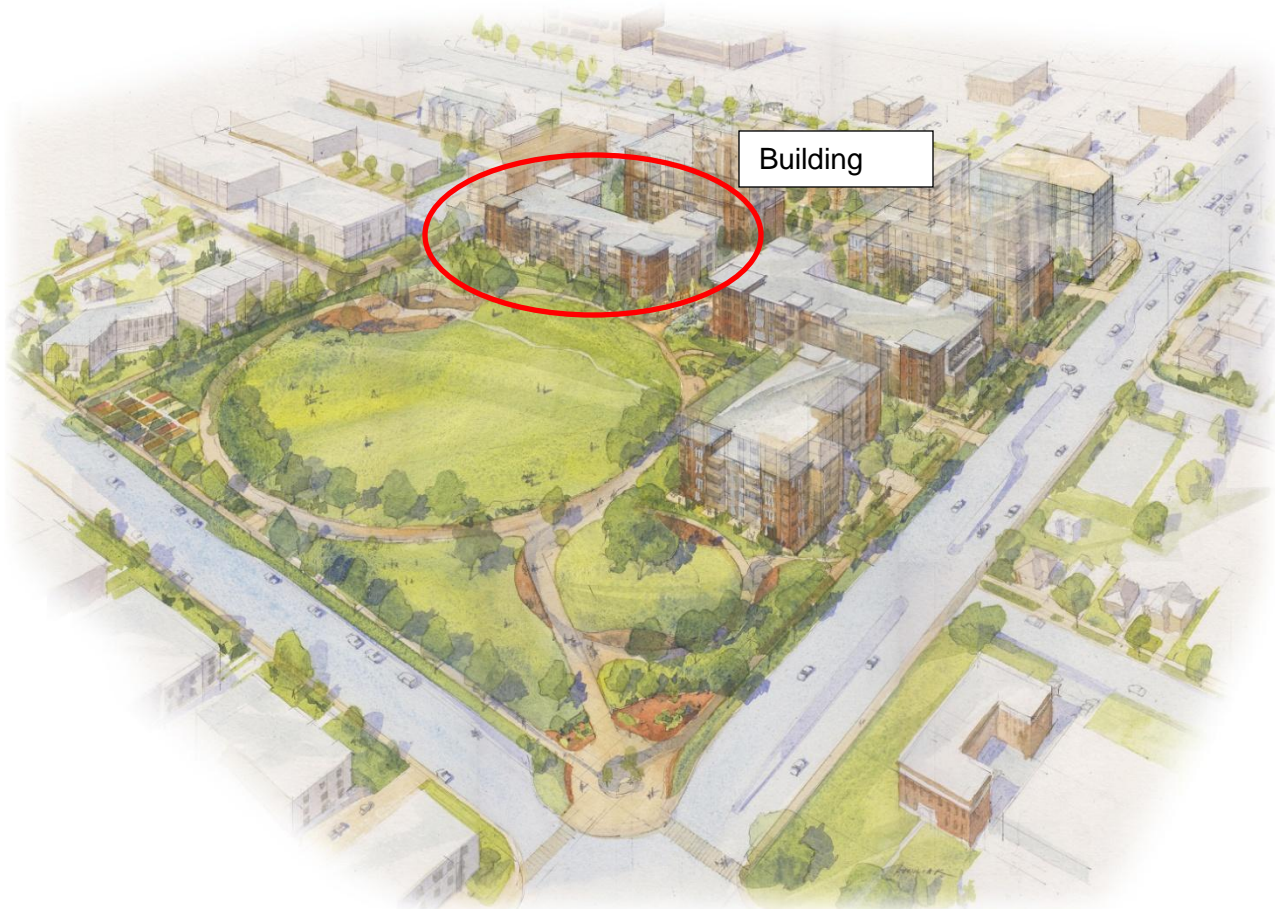
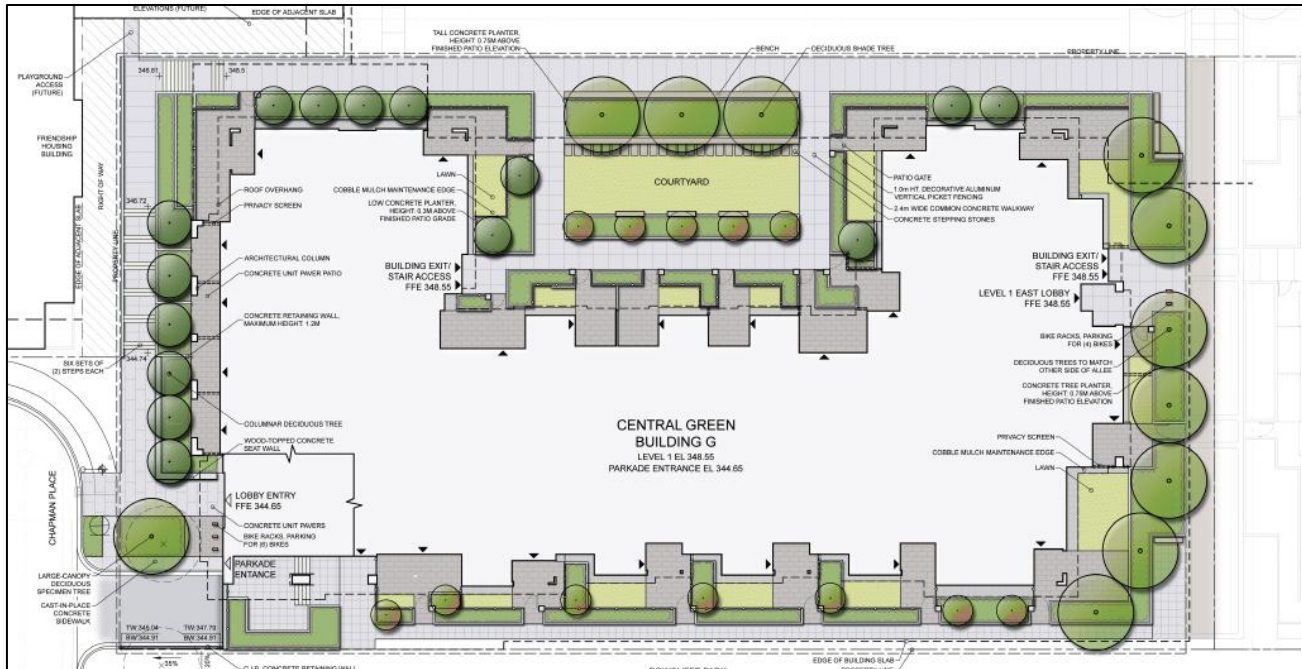


3 View from within Central Green

Site Landscaping

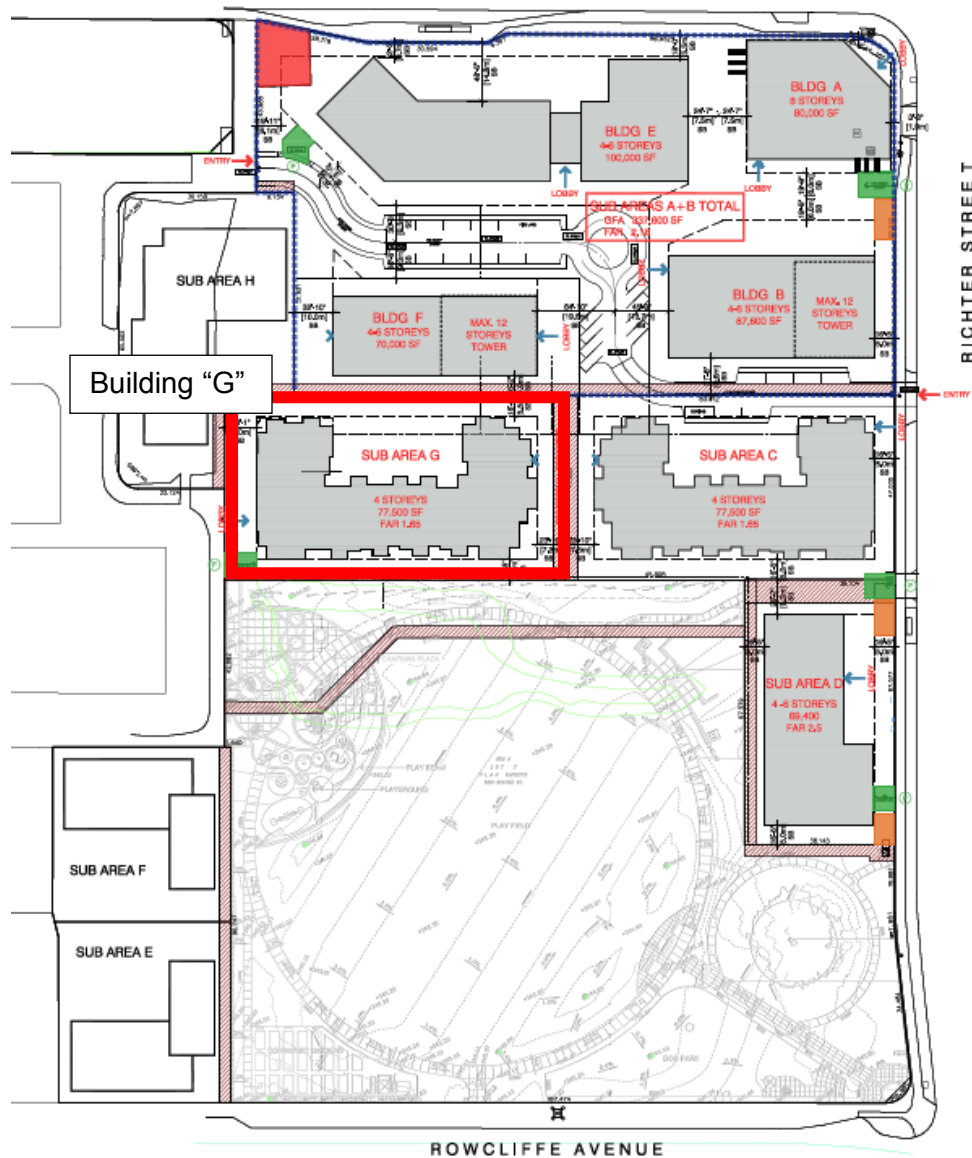
The majority of landscaping of Central Green has been addressed through the Master Development Permit, authorized by Council in December of 2015. The landscaping associated with Building "G" is limited to landscaping around the building itself.

The applicant has proposed a similar suite of vegetation and amenity space to that of Building "C".



4.3 Site Context

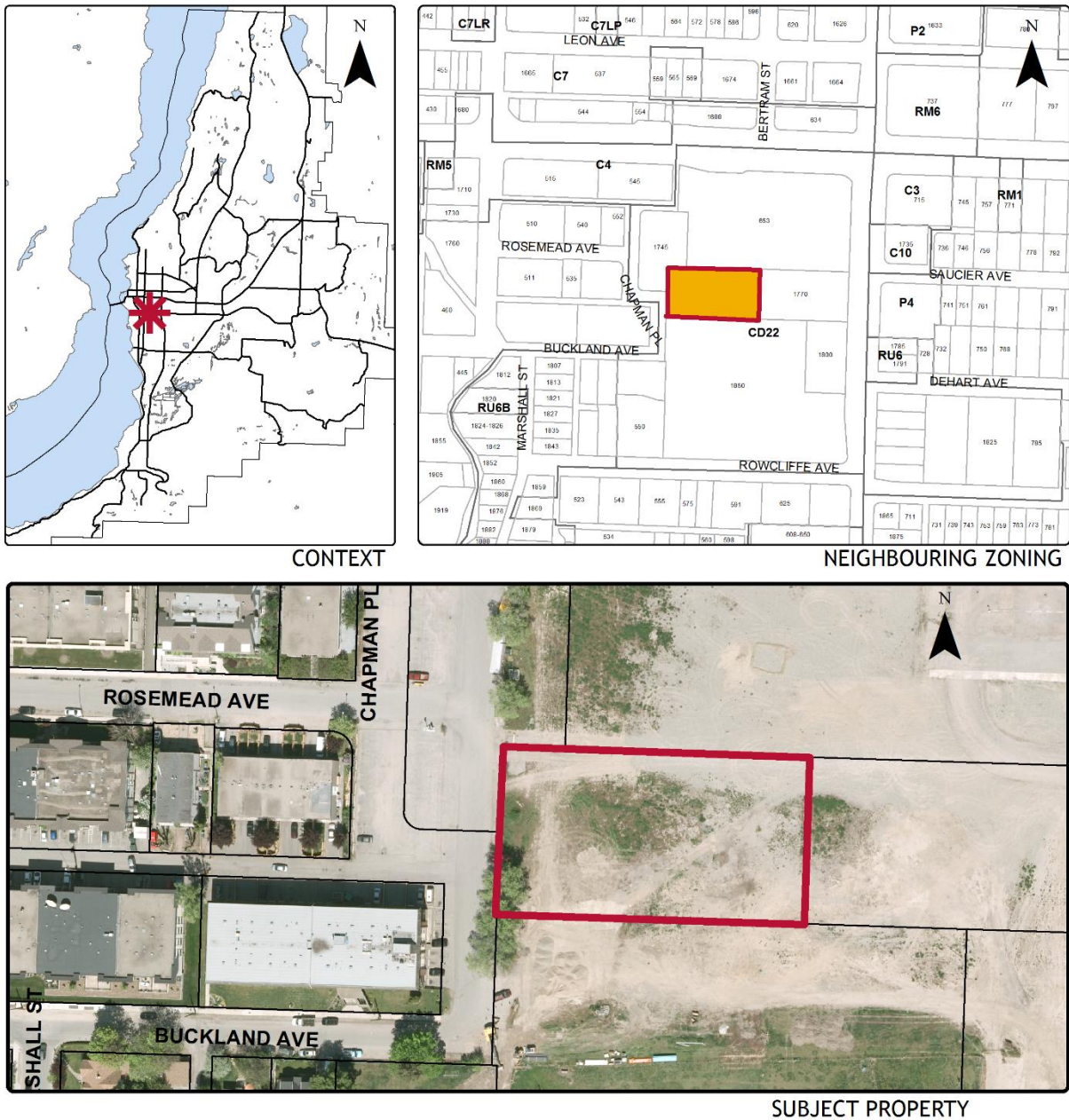
The building will be the second building of the market phase of Central Green. Building C will be constructed directly to the east, and will mirror the proposed building. Building D to the south will be of a similar style. Buildings A, B, E and F will be constructed to the north of the site.



Adjacent land uses are as follows:

Orientation	Zoning	Land Use
North	CD22 - Central Green	Ki Lo Na Friendship Society
East	CD22 - Central Green	Central Green Building "C"
South	CD22 - Central Green	Rowcliffe Park
West	RM5 - Medium Density Multiple Family	Residential

Subject Property Map:



4.4 Zoning Analysis Table

5.0 Zoning Analysis Table		
CRITERIA	CD22 ZONE REQUIREMENTS	PROPOSAL
Development Regulations		
Maximum Floor Area Ratio	2.0	1.78
Maximum Site Coverage	50%	44%
Maximum Height	4 storeys	4 storeys
Minimum Front Yard (Chapman)	3.0 m	8.0 m
Minimum Side Yard (south)	3.0 m	5.0 m

Minimum Side Yard (north)	3.0 m	5.5 m
Minimum Rear Yard (east)	7.0 m	7.3 m
Other Regulations		
Minimum Parking Requirements	95	99
Minimum Bicycle Parking	51	95

6.0 Current Development Policies

6.1 Central Green Design Guidelines

Urban Design

The design of the neighbourhood should focus on creating a pedestrian-oriented neighbourhood with a strong sense of place that fosters social interaction and a cohesive community. Building and open space design should convey human scale, address physical comfort and safety, and complement the surrounding community and existing building stock.

6.2 Master Development Permit

The project fits into the Master Development Permit (DP15-0287). The Master DP established the form and character of elements of Central Green outside of the building footprints.

7.0 Technical Comments

7.1 Building & Permitting Department

- 1 Development Cost Charges (DCC's) are required to be paid prior to issuance of any Building Permit(s)
- 2 Placement permits are required for any sales or construction trailers that will be on site. The location(s) of these are to be shown at time of development permit application.
- 3 A Hoarding permit is required and protection of the public from the staging area and the new building area during construction. Location of the staging area and location of any cranes should be established at time of DP.
- 4 A Building Code analysis is required for the structure at time of building permit applications, but the following items may affect the form and character of the building(s):
 - 4.1 Any security system that limits access to exiting needs to be addressed in the code analysis by the architect.
 - 4.2 Access to the roof is required per NFPA and guard rails may be required and should be reflected in the plans if required.
- 5 A Geotechnical report is required to address the sub soil conditions and site drainage at time of building permit application. This property falls within the Mill Creek flood plain bylaw area and compliance is required. Minimum building elevations are required to be established prior to the release of the Development Permit. This minimum Geodetic elevation is required for all habitable spaces including parking garages. This building may be designed to low, which may affect the form and character of the building.
- 6 We strongly recommend that the developer have his professional consultants review and prepare solutions for potential impact of this development on adjacent properties. Any damage to adjacent properties is a civil action which does not involve the city directly. The items of potential damage claims by adjacent properties are items like settlement of

foundations (preload), damage to the structure during construction, additional snow drift on neighbour roofs, excessive noise from mechanical units, vibration damage during foundation preparation work etc.

- 7 Fire resistance ratings are required for storage, janitor and/or garbage enclosure room(s). The drawings submitted for building permit is to clearly identify how this rating will be achieved and where these area(s) are located.
- 8 An exit analysis is required as part of the code analysis at time of building permit application. The exit analysis is to address travel distances within the units, number of required exits per area, door swing direction, handrails on each side of exit stairs, width of exits etc.
- 9 Size and location of all signage to be clearly defined as part of the development permit. This should include the signage required for the building addressing to be defined on the drawings per the bylaws on the permit application drawings.
- 10 Mechanical Ventilation inlet and exhausts vents are not clearly defined in these drawings for the enclosed parking storeys. The location and noise from these units should be addressed at time of Development Permit.
- 11 Full Plan check for Building Code related issues will be done at time of Building Permit applications. Please indicate how the requirements of Radon mitigation and NAFS are being applied to this structure at time of permit application

7.2 Development Engineering Department

See attached Memorandum dated March 18, 2016.

7.3 Fire Department

- 1 Construction fire safety plan is required to be submitted and reviewed prior to construction and updated as required.
- 2 Engineered Fire Flow calculations are required to determine Fire Hydrant requirements as per the City of Kelowna Subdivision Bylaw #7900. Should a hydrant be required on this property it shall be operational prior to the start of construction.
- 3 A visible address must be posted as per City of Kelowna By-Laws .
- 4 Sprinkler drawings are to be submitted to the Fire Dept. for review when available.
- 5 A fire safety plan as per section 2.8 BCFC is required at occupancy. The fire safety plan and floor plans are to be submitted for approval in AutoCAD Drawing format on a CD
- 6 Fire Department access is to be met as per BCBC 3.2.5. -
- 7 Approved Fire Department steel lock box or key tube acceptable to the fire dept. is required by the fire dept. entrance.
- 8 All requirements of the City of Kelowna Fire and Life Safety Bylaw 10760 shall be met
- 9 Fire alarm system is to be monitored by an agency meeting the CAN/ULC S561 Standard.
- 10 Contact Fire Prevention Branch for fire extinguisher requirements and placement.
- 11 Fire department connection is to be within 45M of a fire hydrant - unobstructed
- 12 Ensure FD connection is clearly marked and visible from the street

- 13 Standpipes to be located on intermediate landings.
- 14 Sprinkler zone valves shall be accessible as per fire prevention bylaw
- 15 Dumpster/refuse container must be 3 meters from structures or overhangs
- 16 Do not issue BP unless all life safety issues are confirmed Interior Health Authority

Report prepared by:

Ryan Roycroft, Planner

Reviewed by:

☐

Terry Barton, Urban Planning Manager

Approved for Inclusion:

☐

Ryan Smith, Community Planning Department Manager

Attachments:

Development Engineering Memorandum
Draft Permit DP16-0060

DEVELOPMENT PERMIT



APPROVED ISSUANCE OF DEVELOPMENT PERMIT NO. DP16-0060

Issued To: 1017482 BC Ltd Inc. No BC1017482
Site Address: 1775 Chapman Place
Legal Description: Lot 3 DL 139 ODYD Plan KAP92715
Zoning Classification: CD22 - Central Green Comprehensive
Development Permit Area: Central Green Comprehensive

SCOPE OF APPROVAL

This Permit applies to and only to those lands within the Municipality as described above, and any and all buildings, structures and other development thereon.

This Permit is issued subject to compliance with all of the Bylaws of the Municipality applicable thereto, except as specifically varied or supplemented by this Permit, noted in the Terms and Conditions below.

The issuance of a Permit limits the Permit Holder to be in strict compliance with regulations of the Zoning Bylaw and all other Bylaws unless specific Variances have been authorized by the Permit. No implied Variances from bylaw provisions shall be granted by virtue of drawing notations that are inconsistent with bylaw provisions and that may not have been identified as required Variances by the applicant or Municipal staff.

1. TERMS AND CONDITIONS

THAT Development Permit No. DP16-0060 for Lot 3 DL 139 ODYD Plan KAP92715, located at 1775 Chapman Place, Kelowna, BC to allow the construction of a residential building be approved subject to the following:

- a) The dimensions and siting of the building to be constructed on the land be in accordance with Schedule "A";
- b) The exterior design and finish of the building to be constructed on the land be in accordance with Schedule "B";
- c) Landscaping to be provided on the land be in accordance with Schedule "C";
- d) The applicant be required to post with the City a Landscape Performance Security deposit in the form of a "Letter of Credit" in the amount of 125% of the estimated value of the landscaping, as determined by a Registered Landscape Architect;

AND FURTHER THAT this Development Permit is valid for two (2) years from the date of Council approval, with no opportunity to extend.

2. PERFORMANCE SECURITY

As a condition of the issuance of this Permit, Council is holding the security set out below to ensure that development is carried out in accordance with the terms and conditions of this Permit. Should any interest be earned upon the security, it shall accrue to the Permit Holder and be paid to the Permit Holder if the security is returned. The condition of the posting of the security is that should the Permit Holder fail to carry out the development hereby authorized, according to the terms and conditions of this Permit within the time provided, the Municipality may use the security to carry out the work by its servants, agents or contractors, and any surplus shall be paid over to the Permit Holder, or should the Permit Holder carry out the development permitted by this Permit within the time set out above, the security shall be returned to the Permit Holder. There is filed accordingly:

- a) Cash in the amount of \$_____ OR
- b) A Certified Cheque in the amount of \$_____ OR
- c) An Irrevocable Letter of Credit in the amount of \$ 98,431.25 .

Before any bond or security required under this Permit is reduced or released, the Developer will provide the City with a statutory declaration certifying that all labour, material, workers' compensation and other taxes and costs have been paid.

3. DEVELOPMENT

The land described herein shall be developed strictly in accordance with the terms and conditions and provisions of this Permit and any plans and specifications attached to this Permit that shall form a part hereof.

If the Permit Holder does not commence the development permitted by this Permit within two years of the date of this Permit, this Permit shall lapse.

This Permit IS NOT a Building Permit.

4. APPLICANT'S AGREEMENT

I hereby declare that all of the above statements and the information contained in the material submitted in support of this Permit are to the best of my belief, true and correct in all respects. Upon issuance of the Permit for me by the Municipality, then in such case, I covenant and agree to save harmless and effectually indemnify the Municipality against:

- a) All actions and proceedings, costs, damages, expenses, claims, and demands whatsoever and by whomsoever brought, by reason of the Municipality granting to me the said Permit.
- b) All costs, expenses, claims that may be incurred by the Municipality if the construction by me of engineering or other types of works as called for by the Permit results in damages to any property owned in whole or in part by the Municipality or which the Municipality by duty or custom is obliged, directly or indirectly in any way or to any degree, to construct, repair, or maintain.

I further covenant and agree that should I be granted a Development Permit and/or Development Variance Permit, the Municipality may withhold the granting of any Occupancy Permit for the occupancy and / or use of any building or part thereof constructed upon the hereinbefore referred to land until all of the engineering works or other works called for by the Permit have been completed to the satisfaction of the Municipal Engineer and Divisional Director of Community Planning & Real Estate.

Should there be any change in ownership or legal description of the property, I undertake to notify the Community Planning Department immediately to avoid any unnecessary delay in processing the application.

I HEREBY UNDERSTAND AND AGREE TO ALL THE TERMS AND CONDITIONS SPECIFIED IN THIS PERMIT.

Signature of Owner / Authorized Agent

Date

Print Name in Bold Letters

Telephone No.

5. APPROVALS

Issued and approved by Council on the _____ day of _____, 2016.

Ryan Smith, Community Planning Department Manager
Community Planning & Real Estate

Date

**The PERMIT HOLDER is the CURRENT LAND OWNER.
Security shall be returned to the PERMIT HOLDER.**

CITY OF KELOWNA

MEMORANDUM

Date: March 18, 2016
File No.: DP16-0060
To: Community Planning (RR)
From: Development Engineering Manager
Subject: 1775 Chapman Place

CD-22

Development Engineering Department have the following comments and requirements associated with this application. The road and utility upgrading requirements outlined in this report will be a requirement of this development.

The Development Engineering Technologist for this project is Sergio Sartori

1. Domestic Water and Fire Protection

- (a) The developer's consulting mechanical engineer will determine the domestic and fire protection requirements of this proposed development and establish hydrant requirements and service needs.
- (b) The proposed development site is currently serviced with a 200mm service. Only one service will be permitted for this development.

2. Sanitary Sewer

- (a) Our records indicate that this proposed development site is connected with a 150mm diameter sewer service. The developer's consulting mechanical engineer will determine the development requirements of this proposed development and establish the service needs. Only one service will be permitted for this development. The applicant, at his cost, will arrange for the removal and disconnection of the existing service and the installation of one new larger service if necessary.

3. Storm Drainage

- (a) The developer must engage a consulting civil engineer to provide a storm water management plan for these sites which meets the requirements of the City Subdivision, Development and Servicing Bylaw 7900. The storm water management plan must also include provision of lot grading plans, minimum basement elevations (MBE), if applicable, and provision of a storm drainage service and recommendations for onsite drainage containment and disposal systems.
- (b) Only one service will be permitted for this development. The applicant, at his cost, will arrange for the installation of one new overflow service.

4. Road Improvements

- (a) Chapman Place fronting this development must be upgraded to a full urban standard including a sidewalk, curb and gutter, storm drainage system road works, landscaped boulevard street lights and re-location or adjustment of existing utility appurtenances if required to accommodate the upgrading construction.

5. Transportation

- a) These Development Engineering comments/requirements are subject to the review and requirements from the Ministry of Transportation (MOT) Infrastructure Branch.
- b) The existing access to this site is a shared access and is limited to a right turn only in and out onto Richter Street at this time. The consultant must demonstrate how other movements can be accomplished safely and to the satisfaction of the City Transportation & Mobility Manager.

6. Subdivision

- (a) Grant Statutory Rights of Way if required for utility services.
- (b) If any road dedication or closure affects lands encumbered by a Utility right-of-way (such as Hydro, Telus, Gas, etc.) please obtain the approval of the utility. Any works required by the utility as a consequence of the road dedication or closure must be incorporated in the construction drawings submitted to the City's Development Manager.

7. Electric Power and Telecommunication Services

- a) All proposed distribution and service connections are to be installed underground.
- b) Make servicing applications to the respective Power and Telecommunication utility companies. The utility companies are required to obtain the City's approval before commencing construction.

8. Engineering

Road and utility construction design, construction supervision, and quality control supervision of all off-site and site services including on-site ground recharge drainage collection and disposal systems, must be performed by an approved consulting civil engineer. Designs must be submitted to the city engineering department for review and marked "issued for construction" by the city engineer before construction may begin.

9. Design and Construction

- (a) Design, construction supervision and inspection of all off-site civil works and site servicing must be performed by a Consulting Civil Engineer and all such work is subject to the approval of the City Engineer. Drawings must conform to City standards and requirements.
- (b) Engineering drawing submissions are to be in accordance with the City's "Engineering Drawing Submission Requirements" Policy. Please note the number of sets and drawings required for submissions.

- (c) Quality Control and Assurance Plans must be provided in accordance with the Subdivision, Development & Servicing Bylaw No. 7900 (refer to Part 5 and Schedule 3).
- (d) A "Consulting Engineering Confirmation Letter" (City document 'C') must be completed prior to submission of any designs.
- (e) Before any construction related to the requirements of this subdivision application commences, design drawings prepared by a professional engineer must be submitted to the City's Works & Utilities Department. The design drawings must first be "Issued for Construction" by the City Engineer. On examination of design drawings, it may be determined that rights-of-way are required for current or future needs.

10. Servicing Agreements for Works and Services

- (a) A Servicing Agreement is required for all works and services on City lands in accordance with the Subdivision, Development & Servicing Bylaw No. 7900. The applicant's Engineer, prior to preparation of Servicing Agreements, must provide adequate drawings and estimates for the required works. The Servicing Agreement must be in the form as described in Schedule 2 of the bylaw.
- (b) Part 3, "Security for Works and Services", of the Bylaw, describes the Bonding and Insurance requirements of the Owner. The liability limit is not to be less than \$5,000,000 and the City is to be named on the insurance policy as an additional insured.

11. Geotechnical Report

As a requirement of this application the owner must provide a geotechnical report prepared by a Professional Engineer qualified in the field of hydro-geotechnical survey to address the following:

- (a) Area ground water characteristics.
- (b) Site suitability for development, unstable soils, etc.
- (c) Drill and / or excavate test holes on the site and install piezometers if necessary. Log test hole data to identify soil characteristics, identify areas of fill if any. Identify unacceptable fill material, analyse soil sulphate content, identify unsuitable underlying soils such as peat, etc. and make recommendations for remediation if necessary.
- (d) List extraordinary requirements that may be required to accommodate construction of roads and underground utilities as well as building foundation designs.
- (e) Additional geotechnical survey may be necessary for building foundations, etc.

12. Development Permit and Site Related Issues

Access and Manoeuvrability

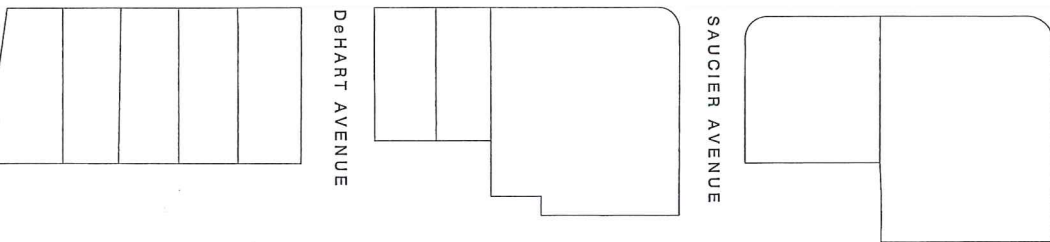
- (i) An MSU standard size vehicle must be able to manoeuvre onto and off the site without requiring a reverse movement onto public roadways.
- (ii) Indicate on the site, the locations of loading bays as well as the garbage and recycle bins.

Steve Muenz, P. Eng.
Development Engineering Manager

SS

SCHEDULE A

This forms part of development
Permit # **DP16-0060**



RAYMOND LEREMAN
REGISTERED PROFESSIONAL ENGINEER
200-212 Street 16, Vancouver, B.C. V6K 3K7
Tel: 604-271-1881 Fax: 604-271-1881
Copyright © 2016 Raymond Lereman. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of Raymond Lereman.

February 19, 2016 - Issued for PP Submission

Central Green
Kelowna, BC
By
Mission Group
Building G

Overall
Site Plan
February 19, 2016
1"=50'

This forms part of development

Permit # DP16-0060



**WEST ELEVATION FROM
NORTH WEST**

 **RAYMOND LETKEMAN
& CO. INC.**
800-877-1100 ext. 211, YONGE/QUEEN ST. W. 2ND FLOOR
TEL: 416-597-2359 FAX: 416-597-5651

PAPER 2011-01

Feb 19, 2016 - Issued for DP Submission

**Central
Green**
Kelowna, BC
By
Mission Group
Building G

3D Renderings

February 19, 2016
1/4" = 1'-0"

SCHEDULE 3

This forms part of development
Permit # DP16-0060



**NORTH ELEVATION FROM
NORTH WEST**

RAYMOND LEREMAN
030316014 INC.
100-102 Avenue 16, Vancouver, B.C. V6P 4B7
Tel: 604-275-1500 Fax: 604-275-1501
www.raymondlereman.com

Feb 19, 2016 - Issued for DP Submission

**Central
Green**
Kelowna, BC
By
Mission Group
Building 6

3D Renderings
February 19, 2016
1/4" = 1'-0"

SCHEDULE 13

This forms part of development
Permit # DP16-0060



**NORTH ELEVATION FROM
NORTH EAST**

RAYMOND LETSISMAN
ARCHITECT
200-212 Street 10, Vancouver, B.C. V6C 2K7
Tel: 604.481.1819 Fax: 604.481.1821
Copyright © Raymond Letsisman. Reproduction or other use
without the written permission of the architect is prohibited.
This drawing is the property of the architect.

February 19, 2016 - Issued for DP Submission

**Central
Green**
Kelowna, BC
By
Mission Group
Building 6

3D Renderings
February 19, 2016
1/4" = 1'-0"

This forms part of development Permit # DP16-0060



Feb 19, 2016 - Issued for DP Submission

3D Renderings
February 19, 2016
1/4" = 1'-0"

SCHEDULE 3

This forms part of development
Permit # **DP16-0060**



**EAST ELEVATION FROM
SOUTH EAST**

RAYMOND LEKEMAN
ARCHITECT
220-220 Street 16, Vancouver, B.C. V6C 2B7
Tel: 604.681.1111 Fax: 604.681.1112
Copyright © 2016 Raymond Lekeleman Architect Inc.
This drawing is the property of Raymond Lekeleman Architect Inc. and is not to be reproduced or used in any form without the written consent of Raymond Lekeleman Architect Inc.

Revised
Feb. 19, 2016 - Issued for DP Submission

**Central
Green**
Kelowna, BC
By
Mission Group
Building 6

3D Renderings
February 19, 2016
1/2" = 1'-0"

**SOUTH ELEVATION FROM
 SOUTH EAST**



RAYMOND LETSHEMAN
 ARCHITECTS INC.
 200-1010 Street 10, Vancouver, B.C. V6E 1A1
 Tel: 604-681-1888 Fax: 604-681-1889
 Copyright 2016 Raymond Letschman Architects Inc.
 All rights reserved. Reproduction or copying in
 any form without the written permission of the
 architect is prohibited. The architect and owner accept no
 liability for the accuracy of the information provided.

Revised
 Feb 19, 2016 - Issued for DP Submission

**Central
 Green**
 Kelowna, BC
 By
 Mission Group
 Building 6

3D Renderings
 February 19, 2016
 1/8" = 1'-0"

SCHEDULE D
 This forms part of development
 Permit # DPL6-0060



**SOUTH ELEVATION FROM
 SOUTH WEST**

RAYMOND LITKEMAN
 CONSULTING INC.
 220-222 Street 16, Vancouver, B.C. V6P 4P7
 Tel: 604-681-1234 Fax: 604-681-1235
 Email: ray@raylitke.com
 Copyright © 2016 Raymond Litkeman Consulting Inc. All rights reserved.
 This drawing is the property of Raymond Litkeman Consulting Inc. and is not to be
 reproduced or transmitted in any form or by any means electronic or mechanical,
 including photocopying, recording, or by any information storage and retrieval
 system, without prior written permission from Raymond Litkeman Consulting Inc.

Revised
 Feb 19, 2016 - Issued for DP Submission

**Central
 Green**
 Kelowna, BC
 By
 Mission Group
Building 6

3D Renderings
 February 19, 2016
 1/8" = 1'-0"

SCHEDULE B

This forms part of development

Permit # DP16-0060



WEST ELEVATION FROM
SOUTH WEST



RAYMOND LETKEMAN
ARCHITECTS INC.
2100-24th Avenue, Suite 200, Vancouver, B.C. V6K 3A9
Tel: 604.681.1111 Fax: 604.681.1112
www.raymondletkeman.com

Copyright © 2016 Raymond Letkeman Architects Inc. All rights reserved. Reproduction or distribution of this document without the written consent of Raymond Letkeman Architects Inc. is prohibited.

Revised:

Feb 19, 2016 - Issued for DP Submission

**Central
Green**
Kelowna, BC

By
Mission Group
Building 6

3D Renderings

February 19, 2016
1/4" = 1'-0"

This forms part of development Permit # DP16-0060



South Elevation ~ Condo Building G

- Central
Green**
Kelowna, BC
By
Mission Group
Building &



Feb 19, 2016 - Issued for DP Submission

**Central
Green**
Kelowna, BC
By
Mission Group
Building G

- Mission Group**
- Building G**

SK-4.1

SCHEDULE B

This forms part of development
Permit # **DP16-0060**

Trims, Window Trims, Arbours & Struts
Benjamin Moore, Timid White OC-39

Fascia, & Window Trims
Benjamin Moore, Iron Mountain 2134-30

HardiePanel c/w Aluminum Reveals
Cobblestone JH 90-30

HardiePanel c/w Aluminum Reveals
Timber Bark JH 30-40

HardiePanel and HardieSliding
Iron Gray JH 90-30

HardiePanel
Benjamin Moore, Timid White OC-39

Metal Gaudrais
Railcraft, Black Velvet 68-80012

Brick, 1/3 Running Bond
StouxCity, Sonoma City

Metal Flashing, Gutters
Geniek Iron Ore

Flat Roof, High Albedo
Pabco - White Weathered

Metal Works
Benjamin Moore, Iron Mountain 2134-30

Standing Seam Metal Roof
Weathered Zinc



Low Slope Roof, SBS
High Albedo

Aluminum Gutter & RWL
Geniek Iron Ore

Hardie Softie,
BM OC-39, Timid White

Wood Struts & Arbours, painted
BM OC-39, Timid White

Wood Trims, painted,
BM OC-39, Timid White

Brick Cladding,
StouxCity Brick, Sonoma Valley

Metal Balcony Guardrail, Fence
Railcraft, Black Velvet 68,80012

Precast Lintels & Copings,
Architectural Sandblasted Finish

Windows in Vinyl Frames,
In Hardie - White

HardiePanel c/w Metal Reveal,
Hardie Cobblestone JH-40-10

HardiePanel c/w Metal Reveal,
Hardie Cobblestone JH-40-10

Metal Cap Flashing
Geniek Iron Ore

HardiePanel c/w Metal Reveal,
Hardie Timber Bark JH 40-30

HardieSliding 6" Exposure
Hardie Iron Gray JH 90-30

Architectural Concrete
Sandblasted Finish

Metal & Frosted Glass Canopy
BM 2134-30 Iron Mountain

Storefront Windows
Aluminum Frame, Black

RAYMOND LERKEMAN
Architect
200-200 South St. Vancouver, BC V6C 2K7
Tel: 604-487-1887 Fax: 604-487-1887
Cell: 604-487-1887
Copyright © 2016 Raymond Lerkeman Architect Inc.
All rights reserved. No part of this publication may be reproduced without prior written permission of the publisher.

Revised
Feb 15, 2016 - Issued for DP Submission

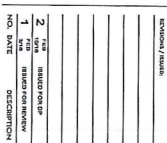
Central Green
By
Mission Group
Building 6

Materials & Components
February 15, 2016
3032



LEGEND:	
	LIMIT OF WORK
	EDGE OF SLAB
	PROPERTY LINE
	BUILDING ENTRANCE LEVEL
	BUILDING ENTRANCE CURB LEVEL
	BUILDING ENTRANCE PARKING LEVEL
	COBLE MAINTENANCE STRIP WIDTH: WALKS INSIDE OVERLAP
	SPRING POTENTIAL & SOAK PLANTING
	SMALL TREELAND SHAIR
	RECOGNITIVE METAL FENCE
	RECOGNITIVE METAL GATE
	ADDRESS MARKER
	PROPOSED TREE CROWN
	PROPOSED TREE CROWN
	EXISTING TREE TO REMAIN

NOT FOR CONSTRUCTION



BENCH
SITE DESIGN

1030-7289 ext 0799, Lakewood, CO 80401
1-800-860-6778

CONSULTANTS
RAYMOND LETKEMAN
ARCHITECTS INC.

MISSION GROUP HOMES
KELOWNA, B.C.

PROJECT:
**CENTRAL GREEN
BUILDING G
KELOWNA, B.C.**

HYDROZONE PLAN

DESIGN BY	XB
DRAWN BY	SD
CHECKED BY	XB
PROJECT NO.	15-018
SCALE	1:150

SUBJECT NO. _____

REPORT TO COUNCIL



Date: 5/16/2016

RIM No. 0940-40

To: City Manager

From: Community Planning Department (AC)

Application: DP16-0099 **Owner:** Highline Buildings Ltd.,
Inc.No. BC0287583

Address: 3075 Vint Rd **Applicant:** Centre Construction Ltd. -
Mario Emond

Subject: Development Permit Application

Existing OCP Designation: MRL - Multiple Residential (Low Density)

Existing Zone: RM3 - Low Density Multiple Housing

1.0 Recommendation

THAT Council authorize the issuance of Development Permit DP16-0099 for Lot 9, Section 3, Township 23, ODYD, Plan EPP53793, located on 3075 Vint Rd, Kelowna, BC, subject to the following:

1. The dimensions and siting of the building to be constructed on the land be in general accordance with Schedule "A";
2. The exterior design and finish of the building to be constructed on the land be in general accordance with Schedule "B";
3. Landscaping to be provided on the land to be in general accordance with Schedule "C";
4. That the applicant be required to post with the City, a Landscape Performance Security deposit in the form of a "Letter of Credit" in the amount of 125% of the estimated value of the landscaping, as determined by a professional landscaper;

AND THAT the applicant be required to complete the above noted conditions of Council's approval of the Development Permit Application in order for the permit to be issued;

AND FURTHER THAT this Development Permit be valid for two (2) years from the date of Council approval, with no opportunity to extend.

2.0 Purpose

To review a form and character Development Permit for a 19 unit (3 bedroom) townhouse development.

3.0 Community Planning

Staff supports the proposed Development Permit as it is consistent with the Official Community Plan (OCP) urban design guidelines. The project is providing ground-oriented 3 bedroom townhouses which are in great demand within the City of Kelowna. The applicant has provided a product that meets many of the urban design guidelines including:

- Ground-oriented units facing Vint Rd;
- Vehicular access from a private lane in the rear;
- Additional parking in the lane for visitor or guests;
- Adequate lane turnarounds; and
- Form & character of the buildings appropriate for the context within the University South Village Neighbourhood.

In addition to the engineering requirements the applicant will be providing a temporary turnaround on Vint Road until the subdivision to the west is completed.

3.1 Notification Policy

Council Policy No. 367 respecting public consultation does not apply to Development Permits.

4.0 Proposal

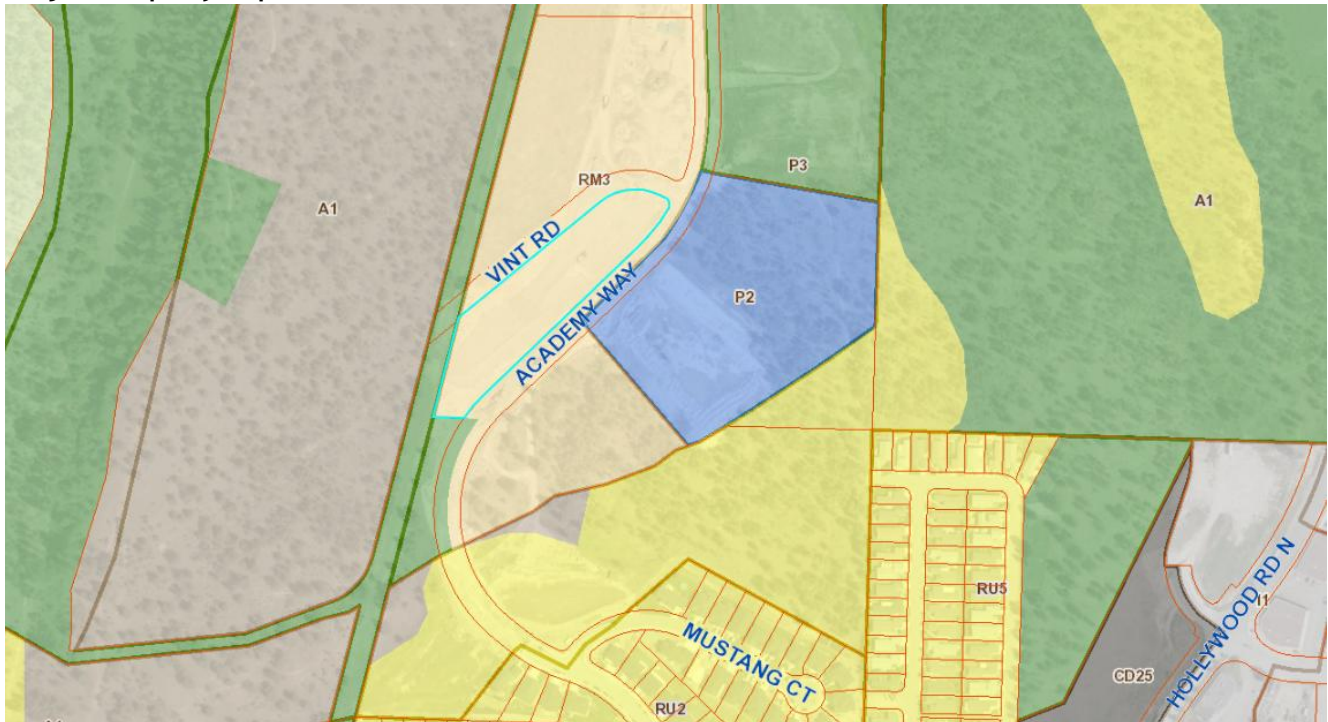
4.1 Project Description

The 19 unit townhouse project is divided into five buildings. Each unit has 3 bedrooms and ground-oriented pedestrian access onto Vint Road with vehicular access to the rear facing Academy Way. The predominant building materials is hardi-panel with a complimentary stucco, laminate shingle roof, and a brick base. The proposal does not require any variances.

4.2 Site Context

The subject parcel is located on Academy Way in the University South area. The subject property is designated as MRL - Multiple Residential (Low Density) in the OCP and is zoned RM3 - Low Density Multiple Housing. The lot is within the Permanent Growth Boundary and the adjacent land uses include single family, multi-family (low density, park, and institutional areas.

Subject Property Map: 3075 Vint Rd



4.3 Zoning Analysis

Zoning Analysis Table		
CRITERIA	PROPOSAL	REQUIREMENTS
		RM3
Development Regulations		
Height	10 m / 3 stories	Max 10 m / 3 stories
Building Setbacks		
Front Yard (north)	4.5 m	Min 1.5 m
Side Yard (west)	5.1 m	Min 4.0 m
Side Yard (east)	4.5 m	Min 4.5 m
Rear Yard (south)	7.5 m	Min 7.5 m
Site Coverage	14.1 %	Max 40 %
Site coverage of buildings, parking, & driveways	34.7 %	Max 60 % or 65% when permeable drive surfaces and parking are provided
FAR	0.24	Max 0.75
Other Regulations		
Minimum Parking Requirements	48 stalls	Min 38 stalls
Private Open Space	25.2 m ² per unit	25m ² per unit

5.0 Current Development Policies

5.1 Kelowna Official Community Plan (OCP)

Development Process

Compact Urban Form.¹ Develop a compact urban form that maximizes the use of existing infrastructure and contributes to energy efficient settlement patterns. This will be done by increasing densities (approximately 75 - 100 people and/or jobs located within a 400 metre walking distance of transit stops is required to support the level of transit service) through development, conversion, and re-development within Urban Centres (see Map 5.3) in particular and existing areas as per the provisions of the Generalized Future Land Use Map 4.1.

Sensitive Infill.² Encourage new development or redevelopment in existing residential areas to be sensitive to or reflect the character of the neighbourhood with respect to building design, height, and siting.

Design (Parking Structures)³ - All multiple family residential and mixed use buildings will contain understructure (beneath habitable or commercial space) in keeping with zoning requirements. Parking structures should be screened from views/wrapped by other uses, and entrances must be located to avoid pedestrian-vehicle conflicts.

Parks, Open Space and Trails - A key principle of the Master Plan is to feature a relatively compact and densely populated neighbourhood that has easy and immediate access to parks, trails, and open space/natural areas. These areas and facilities will encourage outdoor recreation and exercise, hiking, cycling, nature walk, and socialization. A trail system will be integrated through the site, with connections to major open space systems and the neighbourhood park. A wildlife corridor will run through the site, with connections to major open space systems and the neighbourhood park.

Design (Parking Structures)⁴ - All multiple family residential and mixed use buildings will contain understructure (beneath habitable or commercial space) in keeping with zoning requirements. Parking structures should be screened from views/wrapped by other uses, and entrances must be located to avoid pedestrian-vehicle conflicts.

6.0 Technical Comments

6.1 Building & Permitting Department

- a) Development Cost Charges (DCC's) are required to be paid prior to issuance of any Building Permit(s)
- b) Placement permits are required for any sales or construction trailers that will be on site. The location(s) of these are to be shown at time of development permit application.
- c) A Building Code analysis is required for the structure at time of building permit applications. Details of Fire Separations to be supplied.
- d) A Geotechnical report is required to address the sub soil conditions and site drainage at time of building permit application

¹ City of Kelowna Official Community Plan, Policy 5.3.2 (Development Process Chapter).

² City of Kelowna Official Community Plan, Policy 5.22.6 (Development Process Chapter).

³ City of Kelowna Official Community Plan, Housing, Chapter 2.1 (Regional Context).

⁴ City of Kelowna Official Community Plan, Policy 5.23.1 (Development Process Chapter).

³ Part 2 University Master Plan (October 2009) - Watermark

⁴ Part 2 University Master Plan (October 2009) - Watermark

- e) Full Plan check for Building Code related issues will be done at time of Building Permit applications. Please indicate how the requirements of Radon mitigation and NAFS are being applied to this structure

6.2 Development Engineering

- See attached Memo dated April 28th 2016

6.3 Fire Department

- a) Construction fire safety plan is required to be submitted and reviewed prior to construction and updated as required. Template available online at Kelowna.ca
- b) Is the wildfire interface area plan up to date?
- c) Engineered Fire Flow calculations of 90 l/sec are required. Should a fire hydrant be required to be installed on this property, it shall be deemed a private hydrant and be operational prior to the start of construction *****
- d) A visible address must be posted as per City of Kelowna By-Laws. Deerhurst Estates shall have one main address with unit numbers.
- e) Should the townhomes have a sprinkler system, Sprinkler drawings are to be submitted to the Fire Dept. for review when available.
- f) Should the townhomes have a sprinkler system, a Fire alarm system is to be monitored by an agency meeting the CAN/ULC S561 Standard.
- g) Approved Fire Department steel lock box or key tube acceptable to the fire dept. is required by the fire dept. entrance.
- h) Fire department access shall be met as per BC Building Code - roadways shall be minimum 6 metres width unobstructed, turning radius of 12 metres as well as turnarounds.
- i) Requirements of section 9.10.19 Smoke Alarms and Carbon Monoxide alarms of the BCBC 2012 are to be met.
- j) All requirements of the City of Kelowna Fire and Life Safety Bylaw 10760 shall be met.
- k) Dumpster/refuse container must be 3 meters from structures and overhangs.
- l) Do not issue BP unless all life safety issues are confirmed.

7.0 Application Chronology

Date of Application Received: March 8th 2015
 Date of Public Consultation¹: n/a

¹There are no public consultation / notification requirements for a Development Permit.

Report prepared by:

Adam Cseke, Planner

Reviewed by: ☐ Terry Barton, Urban Planning Manager

Approved by: ☐ Ryan Smith, Community Planning Manager

Attachments:

Development Engineering Comments dated April 28th 2016

Applicant's rationale

Draft Development Permit

- Schedule 'A'
 - Site Plan
 - Floor Plan
- Schedule 'B'
 - Elevations
 - Colour Board
- Schedule 'C'
 - Landscaping

CITY OF KELOWNA

MEMORANDUM

Date: April 28, 2016
File No.: DP16-0099
To: Community Planning (AC)
From: Development Engineering Manager (SM)
Subject: 3075 Vint Rd Lot 9 Plan EPP53793

The Development Engineering Department has the following comments and requirements associated with this Development Permit Application proposing 19 residential units in a 5 building complex:

The Development Engineering Technologist for this project is Jason Ough

1. General

- a) Subdivision requirements have been addressed in the Development Engineering report under file S15-0075.
- b) Provide Right of Way and Easement as may be required.
- c) This proposed subdivision may require the installation of centralized mail delivery equipment. Please contact Rick Ould, Delivery Planning Officer, Canada Post Corporation, 530 Gaston Avenue, Kelowna, BC V1Y 2K0 to obtain further information and to determine suitable location(s) within the development.

2. Geotechnical Study

A comprehensive Geotechnical Study is required to be prepared by a Professional Engineer competent in the field of geotechnical engineering. The study is to address the following:

- a) Overall site suitability for development.
- b) Presence of ground water and/or springs.
- c) Presence of fill areas.
- d) Presence of swelling clays.
- e) Presence of sulfates.
- f) Potential site erosion.
- g) Provide recommendations for on-site storm water disposal.
- h) Provide specific requirements for footings and foundation construction.

3. Domestic Water and Fire Protection

- a) The developer's consulting mechanical engineer will determine the domestic and fire protection requirements of the proposed development and establish hydrant requirements and service needs. Provide confirmation of available capacity.
- b) This development is within the service area of the Glenmore Ellison Improvement District (GEID). The developer is required to make satisfactory arrangements with GEID for these items. All charges for service connection and upgrading costs are to be paid directly to GEID.

4. Sanitary Sewer

The developer's consulting mechanical engineer will determine the requirements of the proposed development and establish the service needs. Only one service per lot will be permitted for this development. The applicant will arrange for the installation of a sanitary sewer service at the applicant's cost.

5. Storm Drainage

The developer must engage a consulting civil engineer to provide a storm water management plan for the site, which meets the requirements of the Subdivision, Development and Servicing Bylaw No. 7900. The storm water management plan must also include provision of lot grading plan, minimum basement elevation (MBE), if applicable, and provision of a storm drainage service for the development and / or recommendations for onsite drainage containment and disposal systems. All the storm drainage must be dealt with on site.

6. Road Improvements

- a) Road improvements will be constructed along the full frontage of this proposed development, including separate sidewalk, landscaped boulevard complete with street trees and irrigation. Relocate or adjust utility appurtenances if required to accommodate construction. All improvements will be at the developer's expense.
- b) Boulevard landscape irrigation system, must be integrated with the on-site irrigation system.
- c) The temporary hammer head turn around design submitted by CTQ appears acceptable.

7. Other Engineering Comments

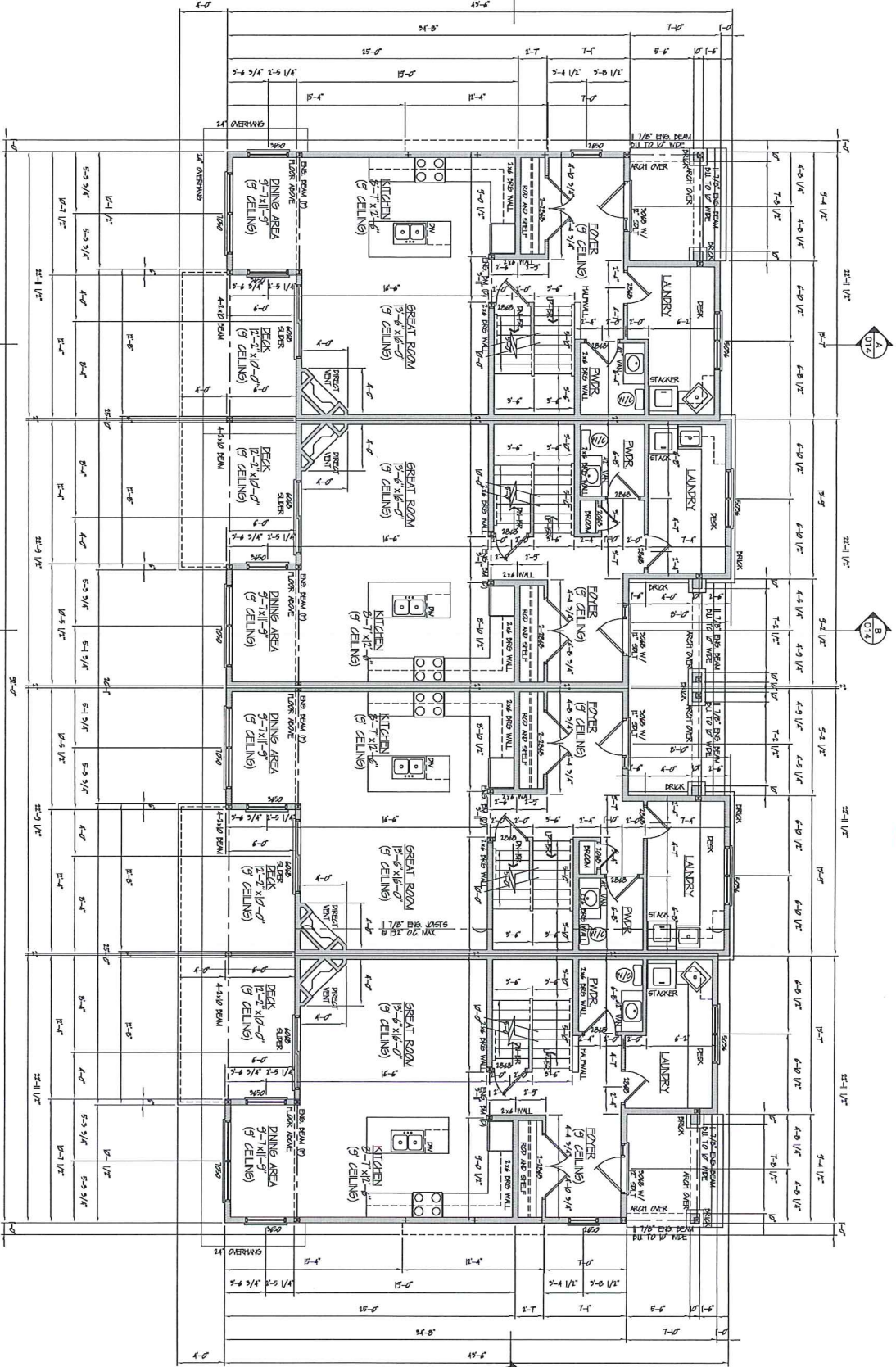
- a) Provide all necessary Statutory Rights-of-Way for any utility corridors required, including those on proposed or existing City Lands.
- b) If any road dedication affects lands encumbered by a Utility right-of-way (such as Terasen, etc.) please obtain the approval of the utility prior to application for final subdivision approval. Any works required by the utility as a consequence of the road dedication must be incorporated in the construction drawings submitted to the City's Development Manager.

8. Development Permit and Site Related Issues

- a) Access and Manoeuvrability
 - (i) An SU-9 standard size vehicle must be able to manoeuvre onto and off the site without requiring a reverse movement onto public roadways. If the development plan intends to accommodate larger vehicles movements should also be illustrated on the site plan.

Steve Muenz, P. Eng.
Development Engineering Manager
jo

SCHEDULE A
 This forms part of development
 Permit # DP16-0094



MAIN FLOOR PLAN
 - 1/4" = 1'-0"
 - 1/4" = 1'-0"

MAIN FLOOR PLAN
 - 1/4" = 1'-0"
 - 1/4" = 1'-0"

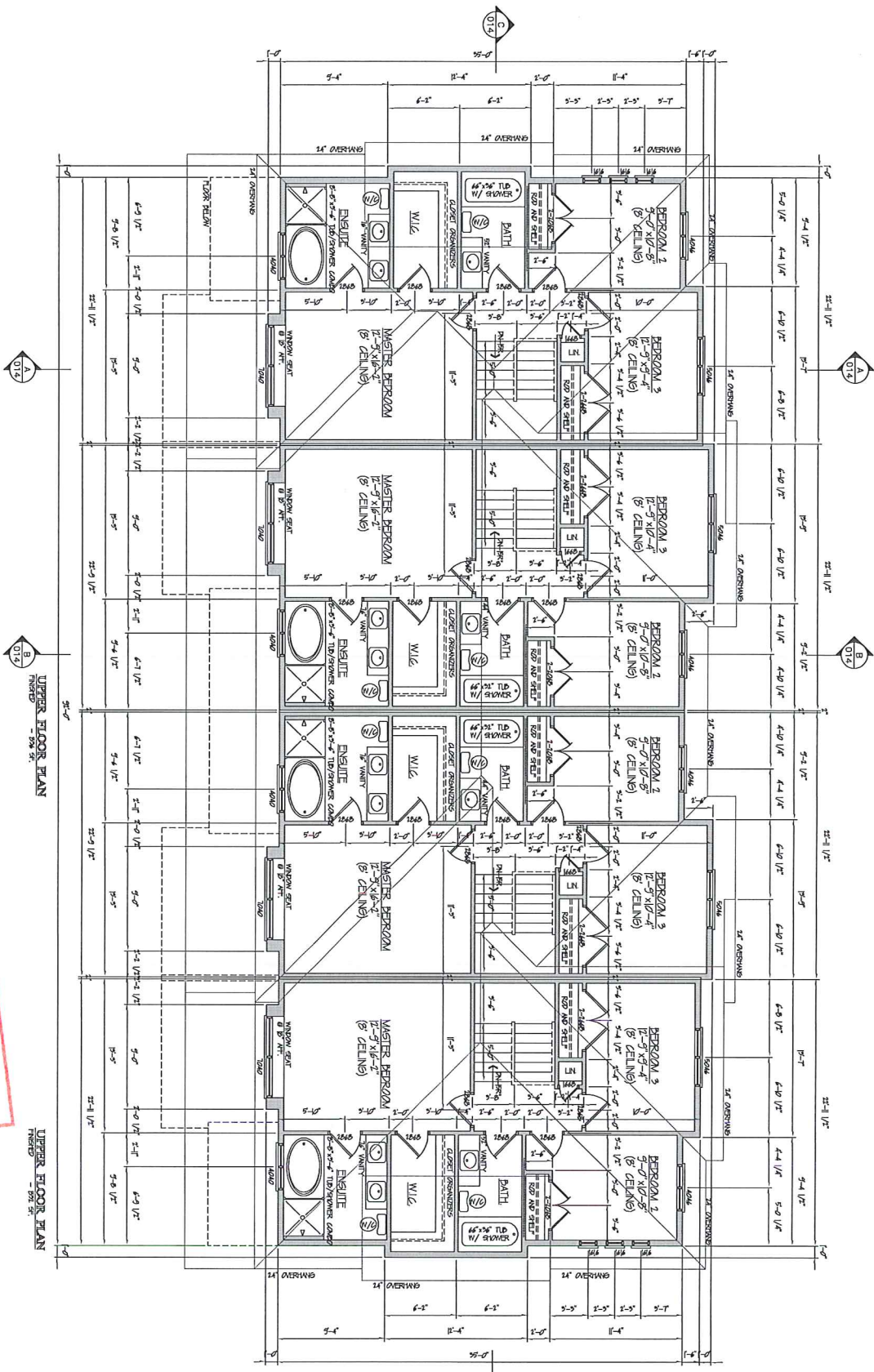
FOR PERMIT - FEBRUARY 28, 2016

DEERHURST TOWNHOMES

OASIS DESIGN
 868-2275
 DESIGNED BY: JAMES W. HAASDYK
 DATE: FEBRUARY 28, 2016

**MAIN FLOOR PLAN
 FOUR PLEX BUILDINGS
 LOT 18 - ACADEMY WAY**

SCALE: 1/4" = 1'-0" | DRAWING NUMBER: 15-975-002 | REVISION:



SCHEDULE A
This forms part of development
Permit # **DP16-0099**

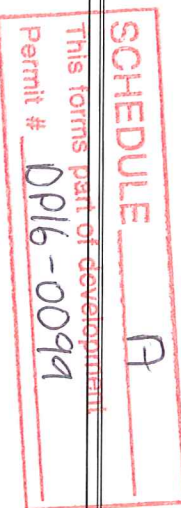
FOR PERMIT - FEBRUARY 28, 2016

DEERHURST TOWNHOMES

OASIS DESIGN
868-2275 KILPATRICK, NORTH GALESDALE, MS 39204
DESIGNED BY: JAMES W. HASSEYK
DATE: FEBRUARY 28, 2016

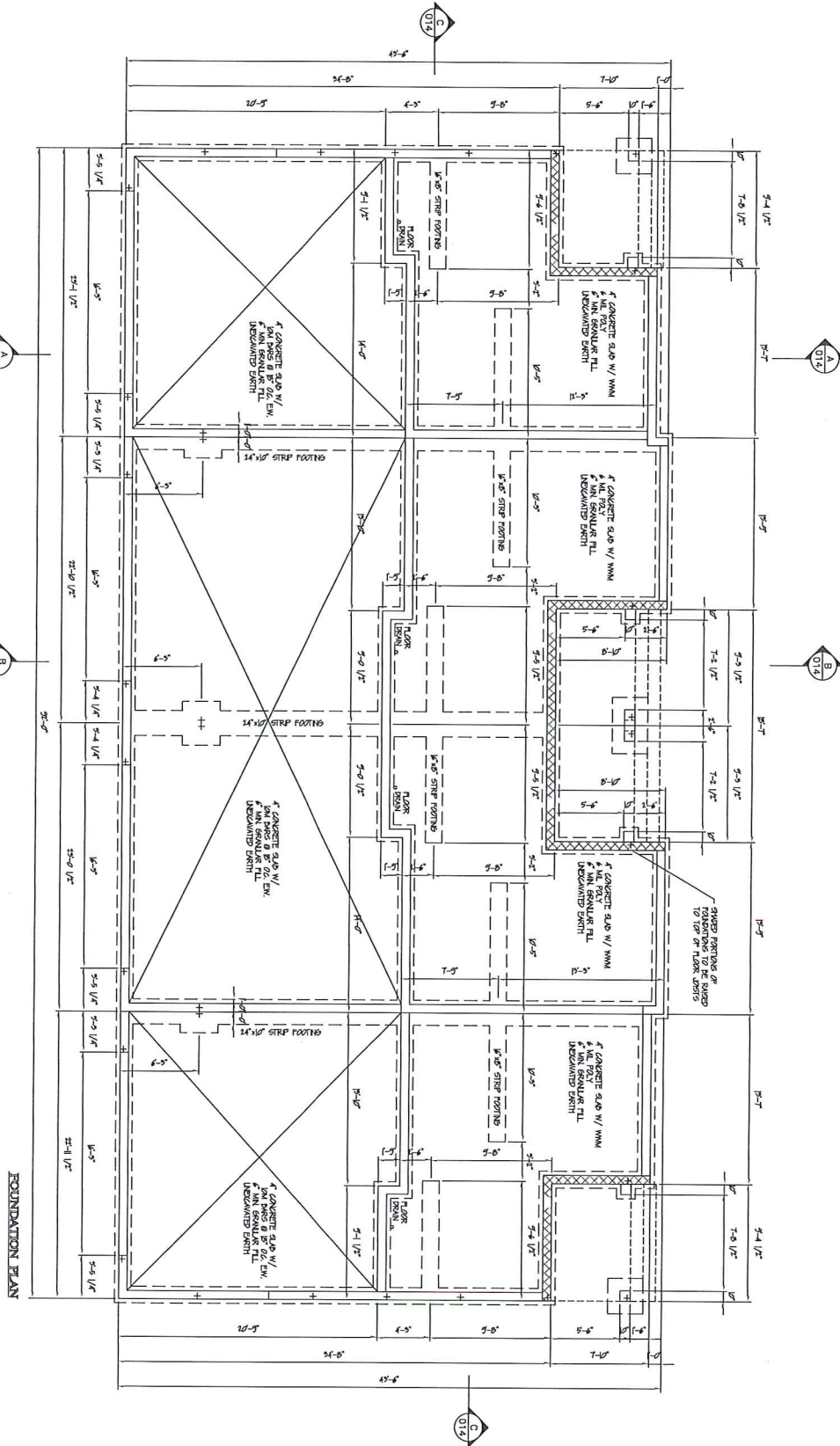
**UPPER FLOOR PLAN
FOUR PLEX BUILDINGS
LOT 18 - ACADEMY WAY**

SCALE: 1/4" = 1'-0" | DRAWING NUMBER: 15-975-003 | REVISION: A



SCHEDULE *F*
 This forms part of development
 Permit # *DP16-0099*

FOR PERMIT - FEBRUARY 28, 2016

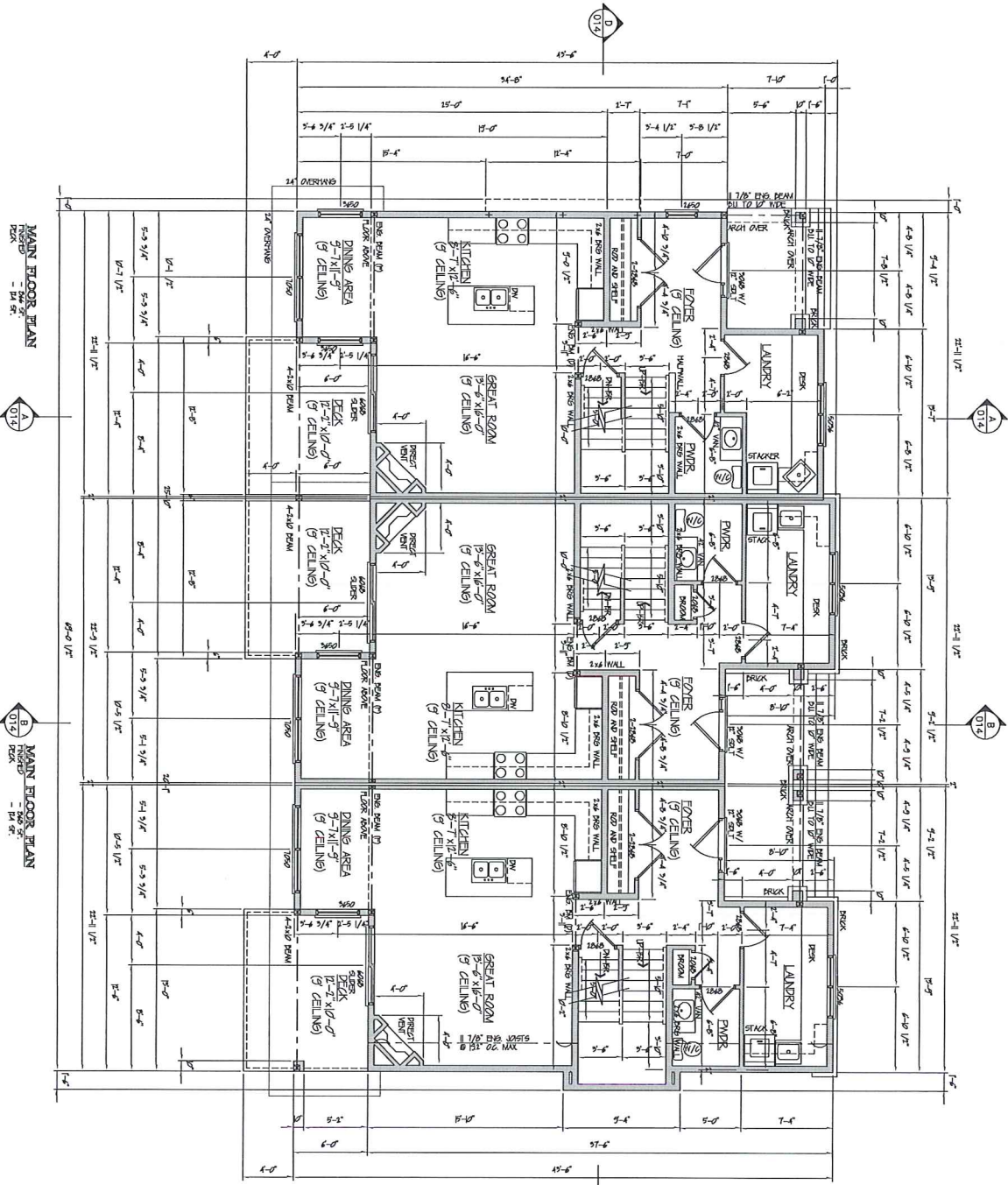


DEERHURST TOWNHOMES

OASIS DESIGN
 868-2275
 DESIGNED BY: JAMES W. HAASDYK
 DATE: FEBRUARY 28, 2016

**FOUNDATION PLAN
 FOUR FLEX BUILDINGS
 LOT 18 - ACADEMY WAY**

SCALE: 1/4" = 1'-0" | DRAWING NUMBER: 15-975-005 | REVISION:



MAIN FLOOR PLAN
UNIT A
- 14 SF.

MAIN FLOOR PLAN
UNIT B
- 14 SF.

FOR PERMIT - FEBRUARY 28, 2016

SCHEDULE A
This forms part of development
Permit # DPI6-0099

DEERHURST TOWNHOMES

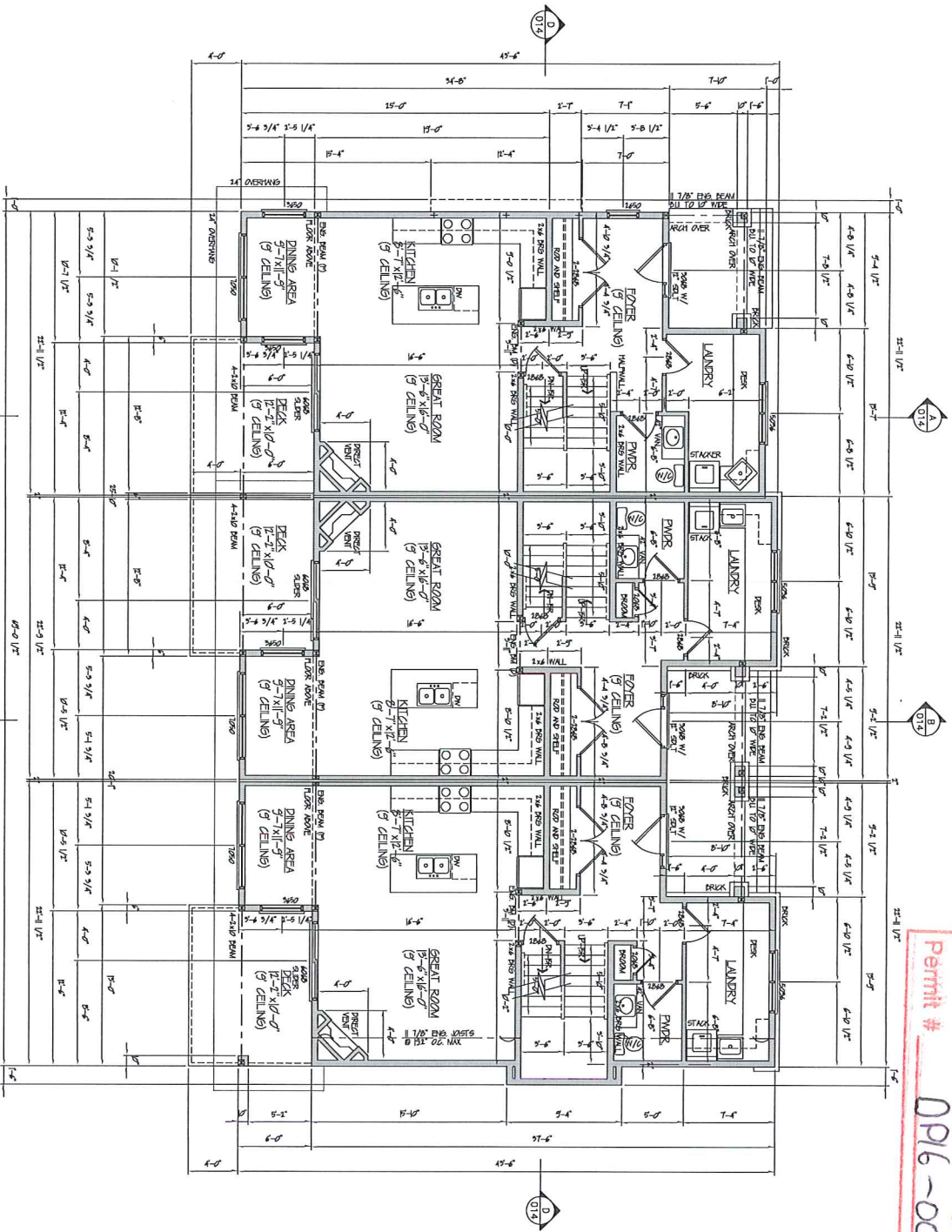
OASIS DESIGN
868-2275 KILGORE, NORTH CAROLINA, 28759
DESIGNED BY: JAMES W. HASDYK
DATE: FEBRUARY 28, 2016

**MAIN FLOOR PLAN
THREE FLEX BUILDING D
LOT 18 - ACADEMY WAY**

SCALE: 1/4" = 1'-0" | DRAWING NUMBER: 15-975-000 | REVISION:

MAIN FLOOR PLAN
 015
 1/4" = 1'-0"

MAIN FLOOR PLAN
 015
 1/4" = 1'-0"



SCHEDULE A
 This forms part of development
 Permit # **DP16-0099**

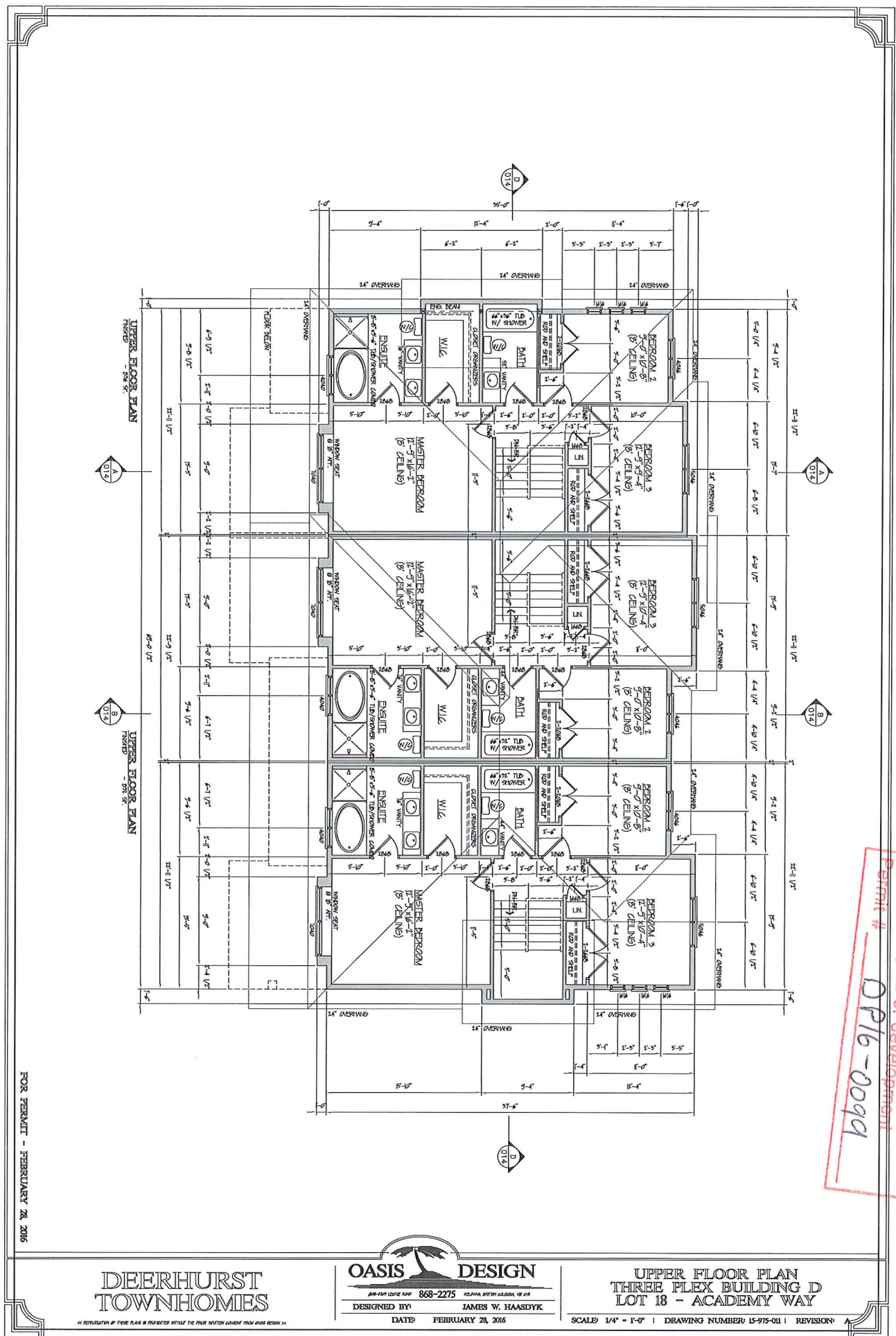
FOR PERMIT - FEBRUARY 28, 2016

DEERHURST TOWNHOMES

OASIS DESIGN
 868-2275
 DESIGNED BY: JAMES W. HASDYK
 DATE: FEBRUARY 28, 2016

MAIN FLOOR PLAN
 THREE FLEX BUILDING D
 LOT 18 - ACADEMY WAY

SCALE: 1/4" = 1'-0" | DRAWING NUMBER: 15-975-001 | REVISION:



SCHEDULE A
 This forms part of development
 Permit # DP16-00991

FOR PERMIT - FEBRUARY 28, 2016

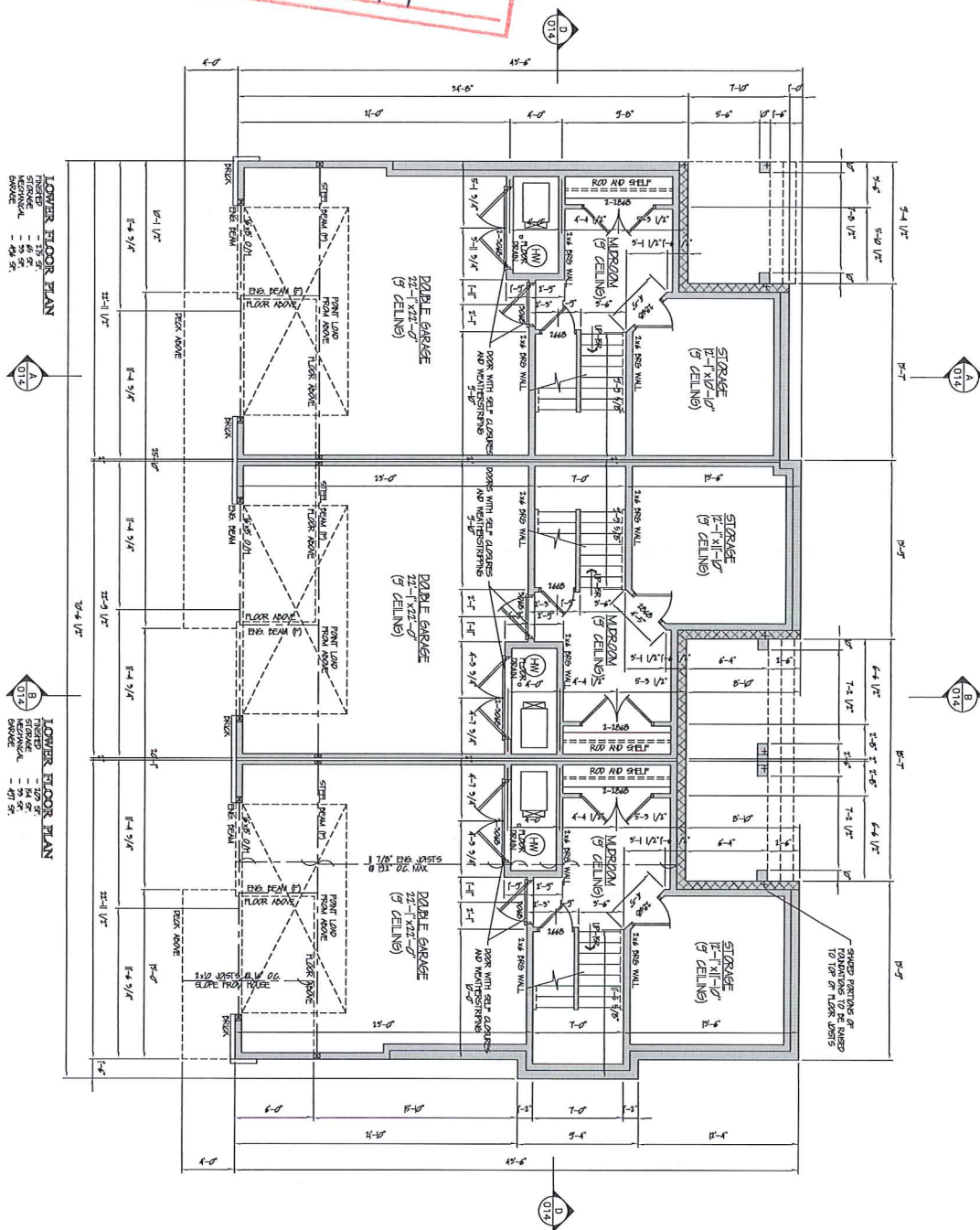
DEERHURST TOWNHOMES

OASIS DESIGN
 868-2275 KILGORE, NORTH CAROLINA, US 28129
 DESIGNED BY: JAMES W. HAASDYK
 DATE: FEBRUARY 28, 2016

**UPPER FLOOR PLAN
 THREE PLEX BUILDING D
 LOT 18 - ACADEMY WAY**

SCALE: 1/4" = 1'-0" | DRAWING NUMBER: 15-975-011 | REVISION:

SCHEDULE A
 This forms part of development
 Permit # **DP16-0099**



LOWER FLOOR PLAN
 FINISHED FLOOR - 48'-0"
 FINISHED CEILING - 10'-0"
 FINISHED BASE - 48'-0"
 FINISHED SIDE - 48'-0"

LOWER FLOOR PLAN
 FINISHED FLOOR - 48'-0"
 FINISHED CEILING - 10'-0"
 FINISHED BASE - 48'-0"
 FINISHED SIDE - 48'-0"

FOR PERMIT - FEBRUARY 28, 2016

DEERHURST TOWNHOMES



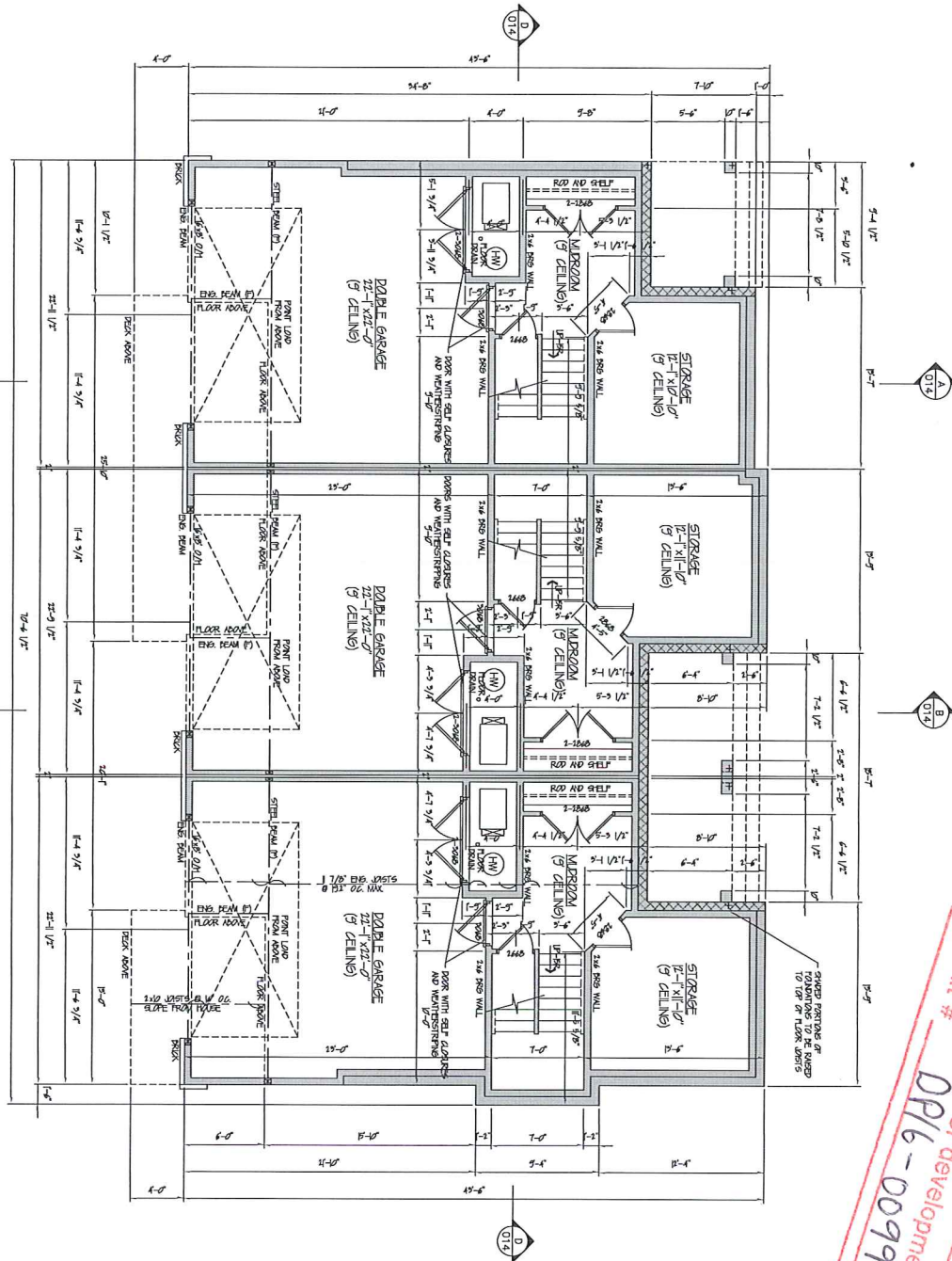
DESIGNED BY: **JAMES W. HAASDYK**
 DATE: **FEBRUARY 28, 2016**

**LOWER FLOOR PLAN
 THREE FLEX BUILDING D
 LOT 18 - ACADEMY WAY**

SCALE: 1/4" = 1'-0" | DRAWING NUMBER: 15-975-012 | REVISION: A

LOWER FLOOR PLAN
 1
 016

LOWER FLOOR PLAN
 2
 017



SCHEDULE
 This forms part of development
 Permit # **DP16-0099**
A

FOR PERMIT - FEBRUARY 28, 2016

DEERHURST TOWNHOMES

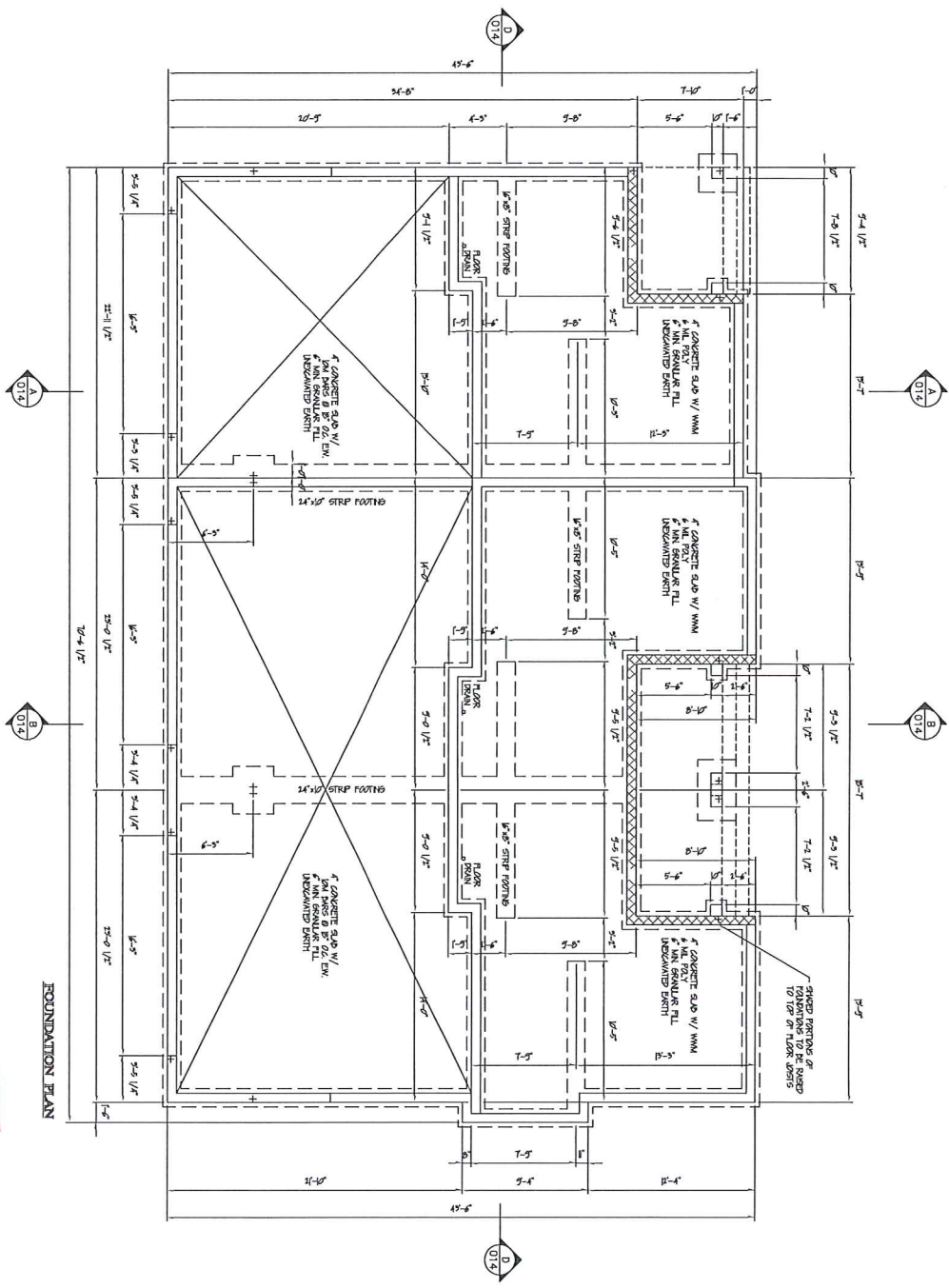
OASIS DESIGN

DESIGNED BY: **JAMES W. HASDYK**
 DATE: **FEBRUARY 28, 2016**

**LOWER FLOOR PLAN
 THREE PLEX BUILDING D
 LOT 18 - ACADEMY WAY**

SCALE: 1/4" = 1'-0" | DRAWING NUMBER: 15-975-012 | REVISION: 1

SCHEDULE A
 This forms part of development
 Permit # **DP16-0099**



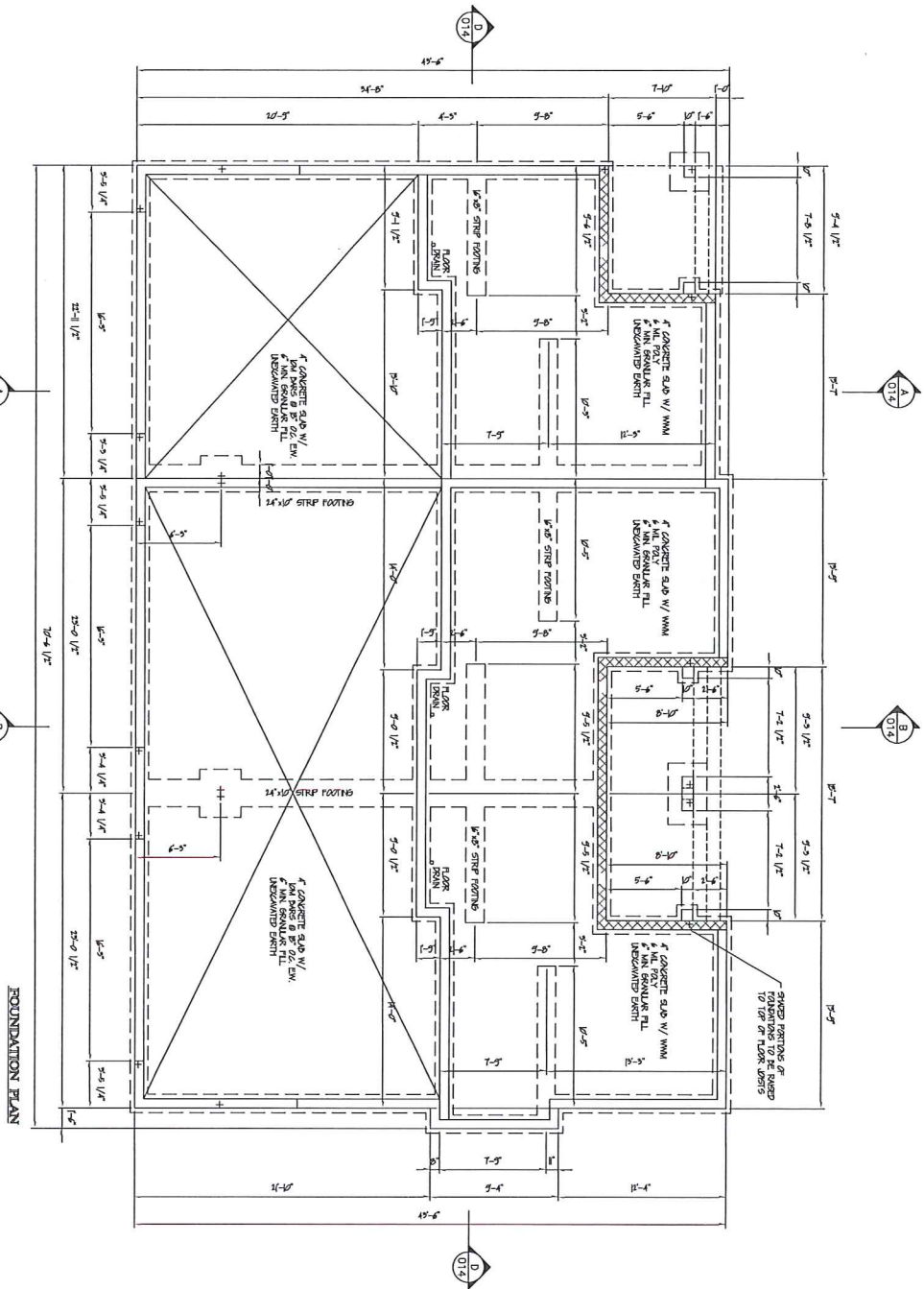
FOR PERMIT - FEBRUARY 28, 2016

DEERHURST TOWNHOMES

OASIS DESIGN
 868-2275 KALAMA, WYOMING 82401
 DESIGNED BY: JAMES W. HAASDYK
 DATE: FEBRUARY 28, 2016

**FOUNDATION PLAN
 THREE PLEX BUILDING D
 LOT 18 - ACADEMY WAY**
 SCALE: 1/4" = 1'-0" | DRAWING NUMBER 15-975-03 | REVISION:

SCHEDULE A
 This forms part of development
 Permit # **DP16-0099**



FOR PERMIT - FEBRUARY 28, 2016

DEERHURST TOWNHOMES

OASIS DESIGN
 868-2275 KALPA, BETTY GILSON, MS, PLS
 DESIGNED BY: JAMES W. HAASDYK
 DATE: FEBRUARY 28, 2016

**FOUNDATION PLAN
 THREE PLEX BUILDING D
 LOT 18 - ACADEMY WAY**

SCALE: 1/4" = 1'-0" | DRAWING NUMBER: 15-975-03 | REVISION: A

SCHEDULE B

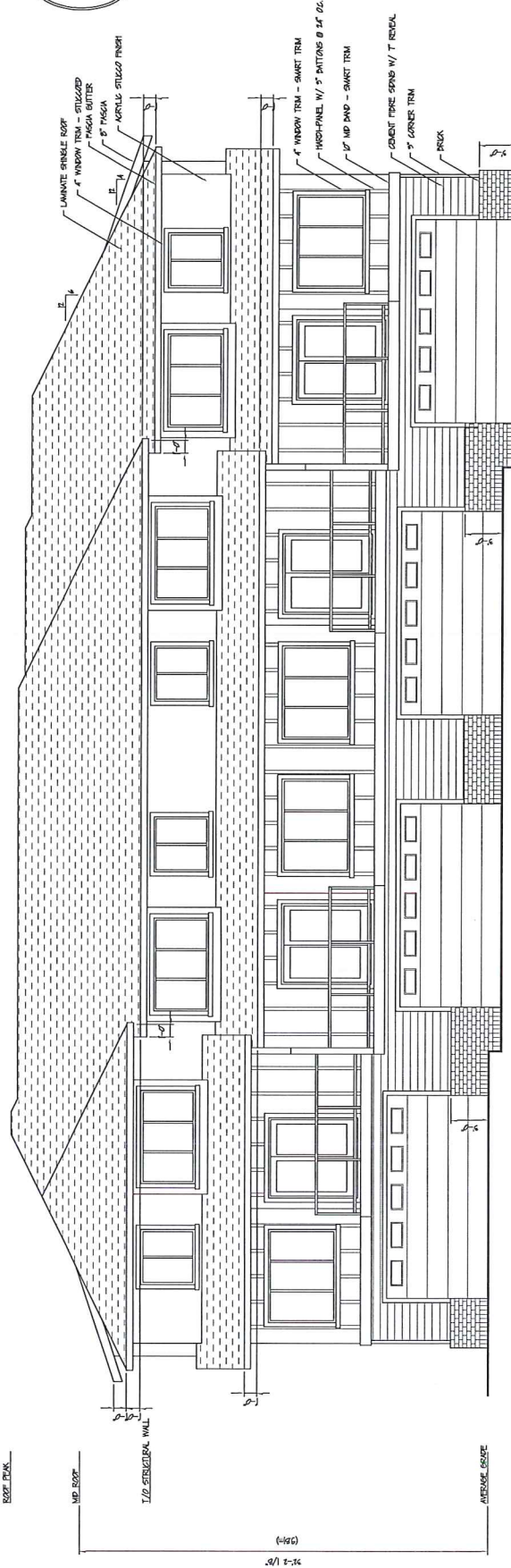
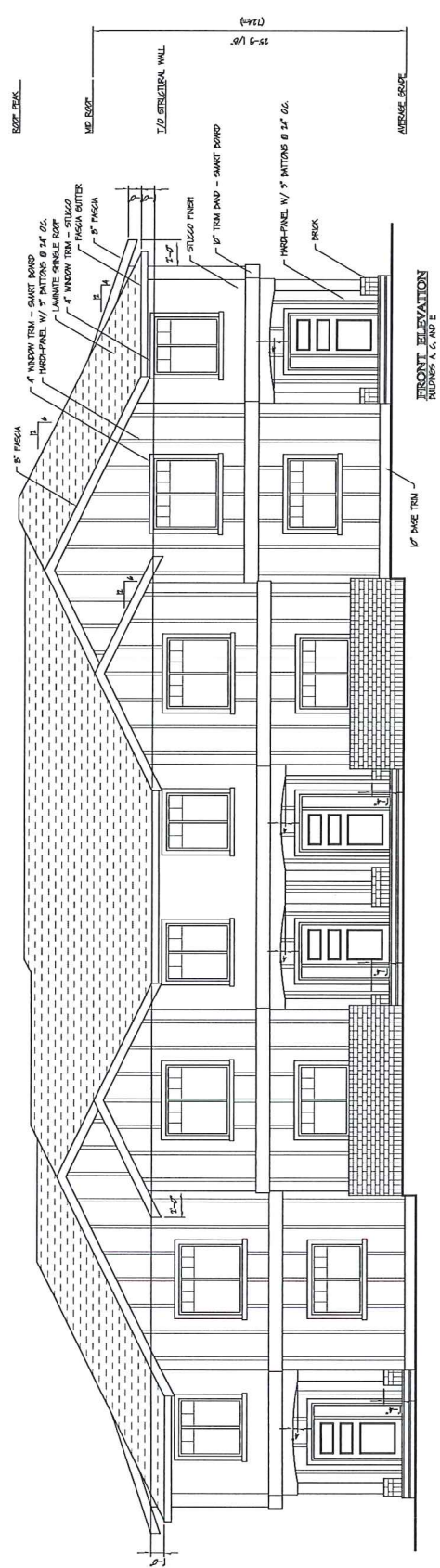
This forms part of development

Permit # DP16-0099

FRONT AND REAR ELEVATIONS
FOUR FLEX BUILDINGS A, C, AND E
3075 VINT ROAD

DESIGN OASIS
DESIGNED BY JAMES W. HAASDYK
868-2275
APRIL 15, 2016

DEERHURST
TOWNHOMES



REAR ELEVATION
BUILDINGS A, C, AND E

FOR PERMIT - APRIL 15, 2016

SCHEDULE B
 This forms part of development
 Permit # DP16-0044

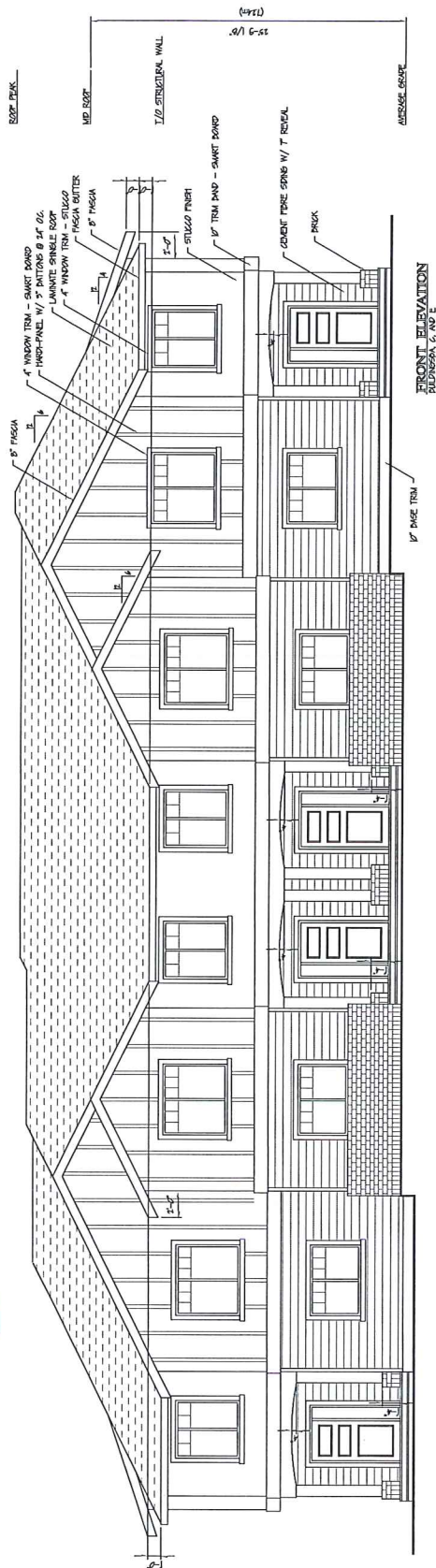
FRONT AND REAR ELEVATIONS
 FOUR FLEX BUILDING B
 3075 VINT ROAD

DESIGN OASIS

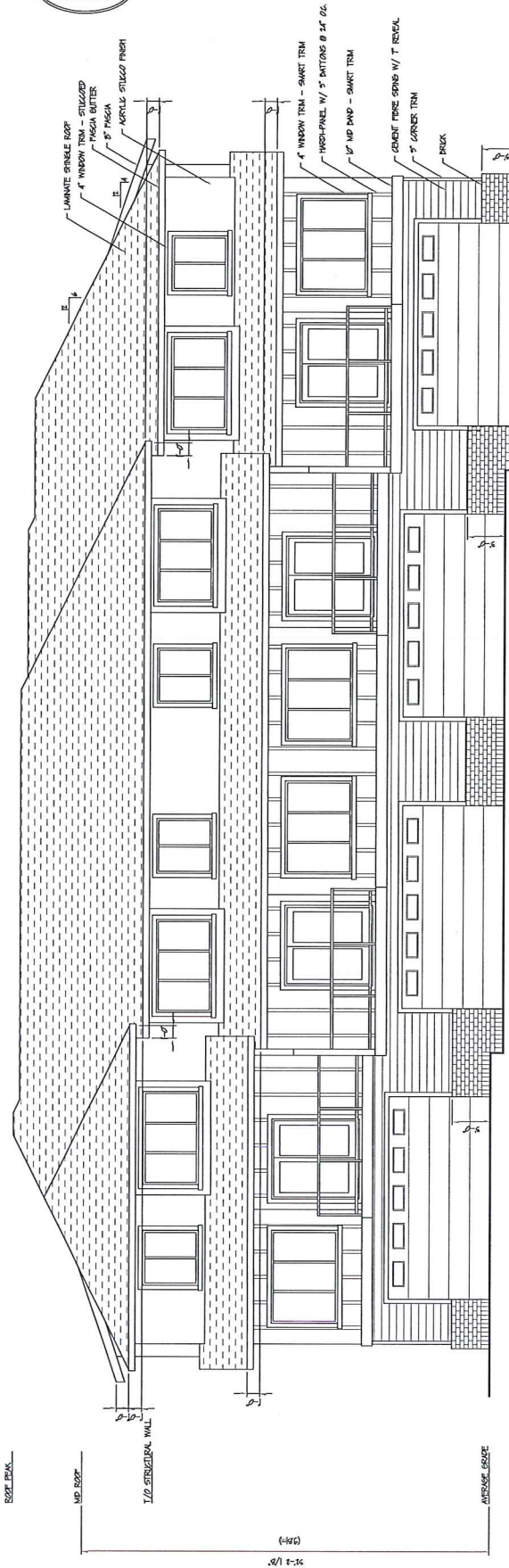
DESIGNED BY JAMES W. HAASDYK
 APRIL 15, 2016

DEERHURST TOWNHOMES

ALL DIMENSIONS ARE IN FEET AND INCHES (1" = 1/8") UNLESS OTHERWISE NOTED



FRONT ELEVATION
 BUILDING A, C, AND E



REAR ELEVATION
 BUILDING D

FOR PERMIT - APRIL 15, 2016

SCHEDULE B
 This forms part of development
 Permit # **DP16-0099**

DEERHURST TOWNHOMES

DESIGNED BY: JAMES W. HANDELYR
 868-2275
FOR EACH LOT AND FOR EACH UNIT, THE DESIGN SHALL BE SUBMITTED TO THE TOWN ENGINEER FOR REVIEW AND APPROVAL.

OASIS DESIGN

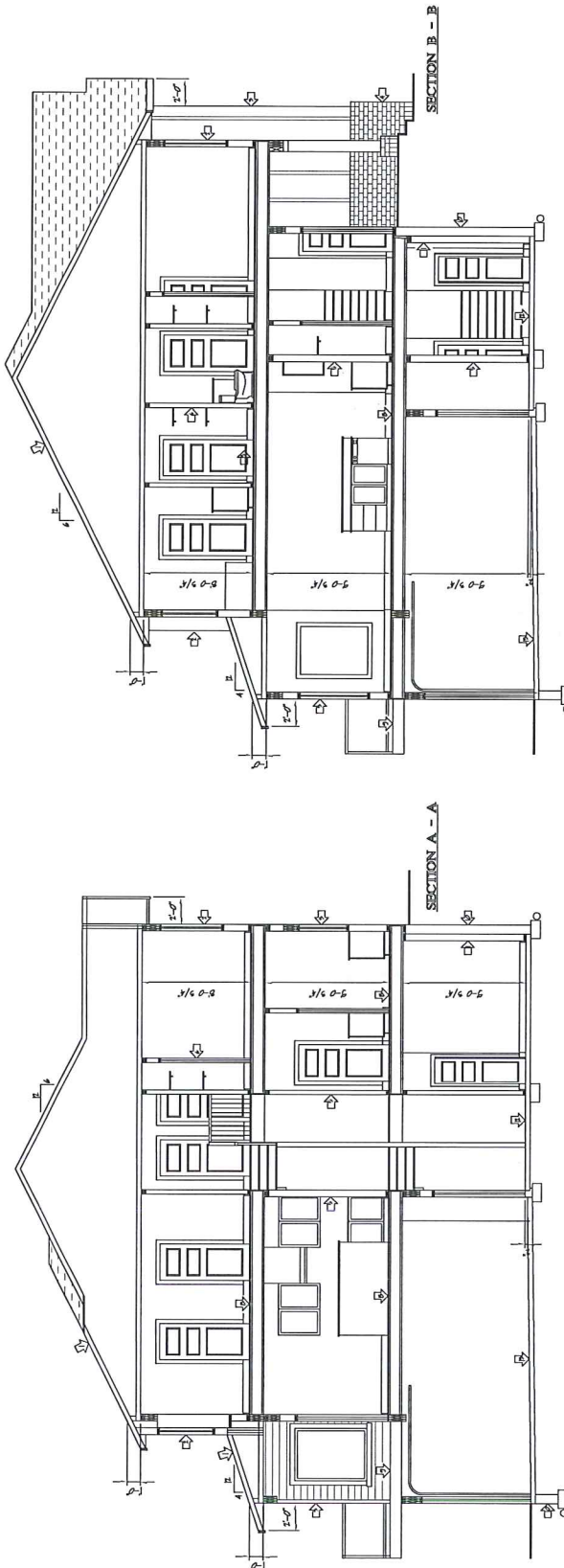
DATE: FEBRUARY 28, 2016
 SCALE: 1/4" = 1'-0" | DRAWING NUMBER: 15-975-009 | REVISION:

SIDE ELEVATIONS FOR ALL BUILDINGS LOT 18 - ACADEMY WAY

FOR PERMIT - FEBRUARY 28, 2016

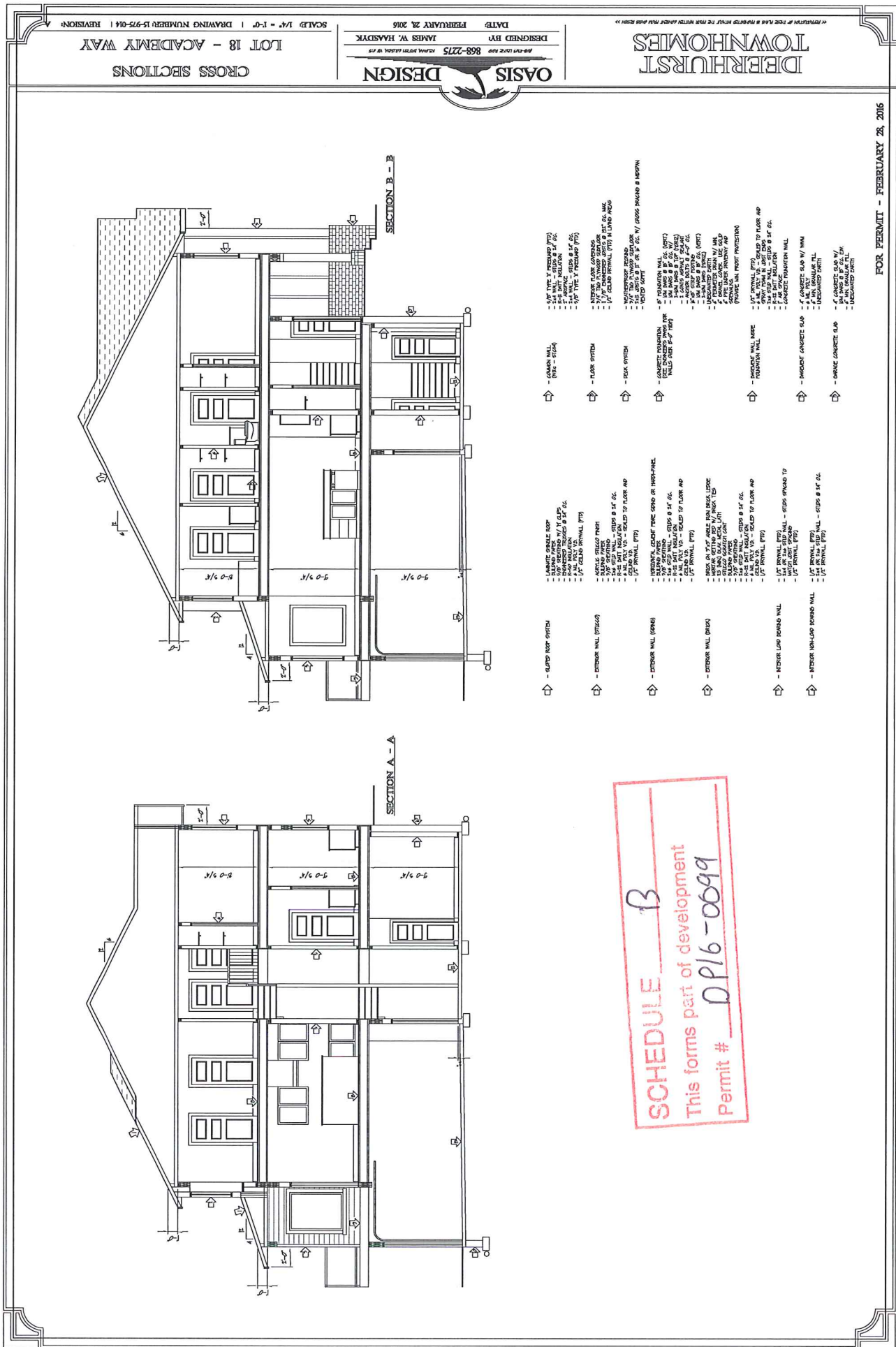
SIDE ELEVATION BUILDINGS A, B, AND C

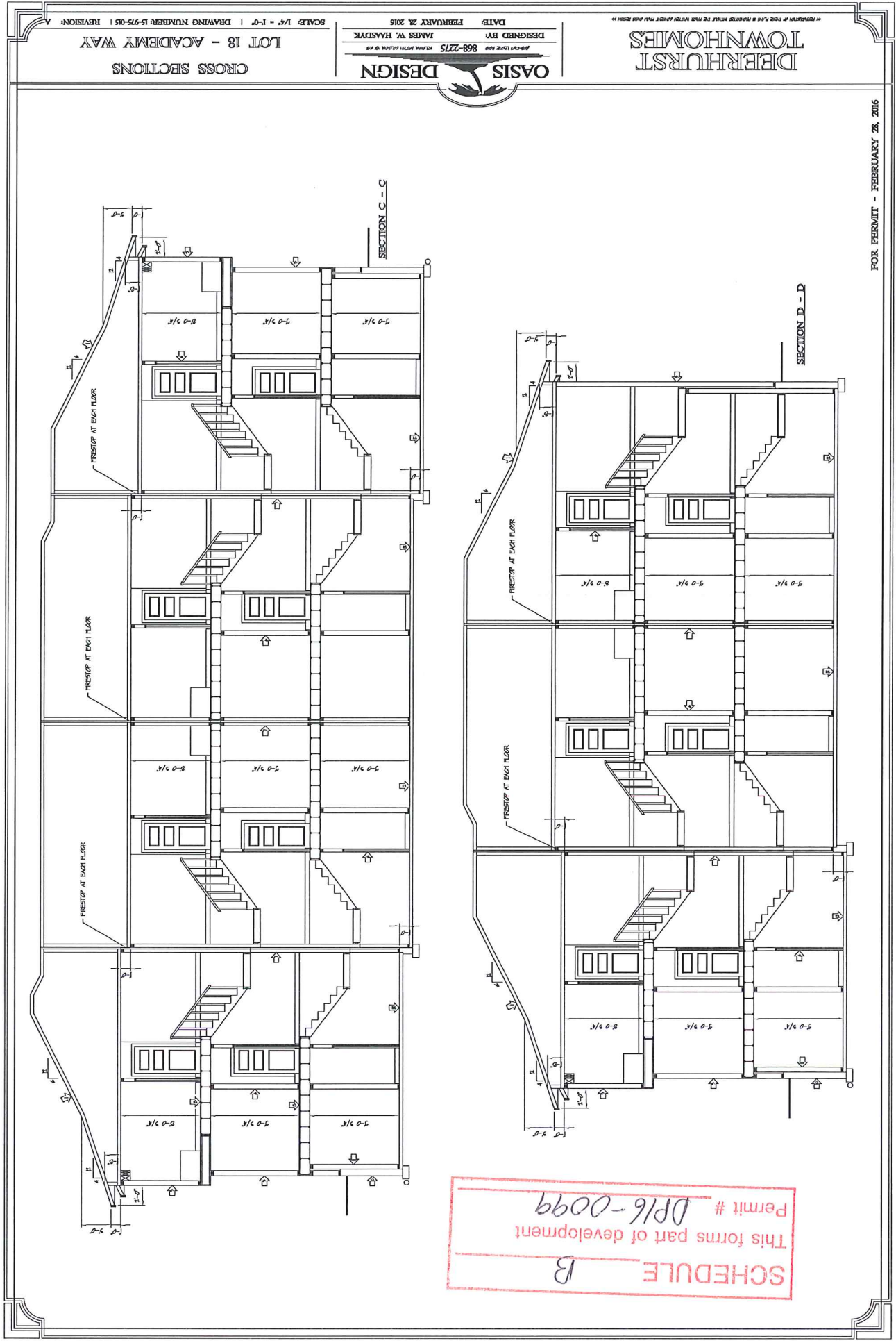
SIDE ELEVATION BUILDING D

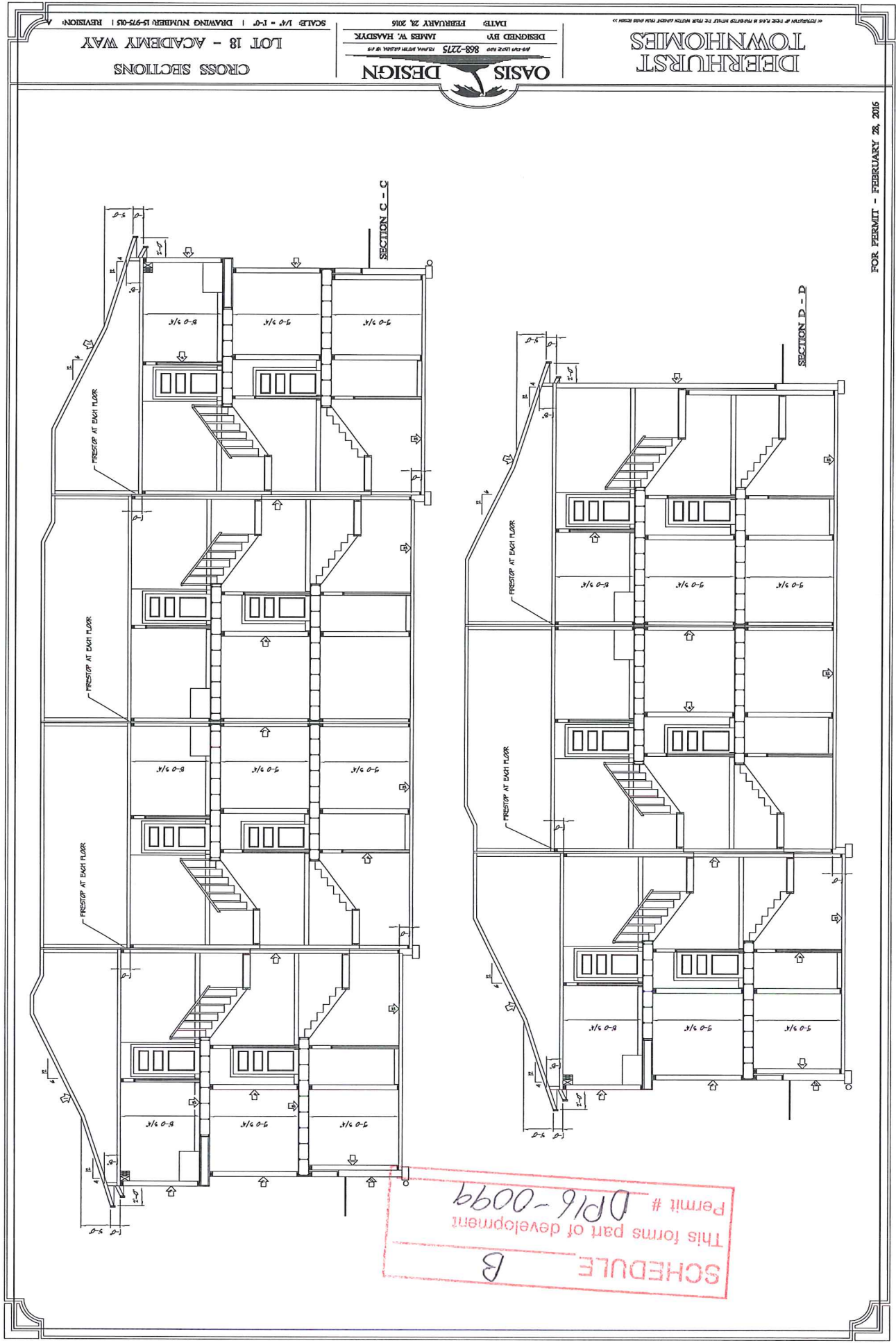


- [illegible]

SCHEDULE B
This forms part of development
permit # DP16-0099







FOR PERMIT - FEBRUARY 28, 2016

SCHEDULE A1B
This forms part of development
Permit # **DP16-0099**

2321.6 THERMAL CHARACTERISTICS OF ABOVE GROUND SPACE ASSEMBLIES

EFFECTIVE RSI-VALUES (WITH HRY)

ASSEMBLY	CLIMATE ZONE (RENTING DESIGNS DATA)	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)	(U)	(V)	(W)	(X)	(Y)	(Z)
CEILING		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WALLS		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FLOORS OVER UNCONDITIONED SPACE		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

CEILING ASSEMBLY BELOW AN ATTIC SPACE

COMPONENTS

1. INSULATED TRUSSES @ 24" O.C.
2. 1/2" R-22 BATT INSULATION
3. 1/2" R-22 BATT INSULATION
4. AIR FILM

TO MEET THE MINIMUM EFFECTIVE RSI VALUE OF 4.0
OR R VALUE OF 2.0 FOR THIS CEILING ASSEMBLY IN HRY
UNITS MUST BE INCORPORATED INTO THE FRAME

RSI/R VALUE OF ASSEMBLY 0.54 / 4.758

WALL ASSEMBLY 2 1/2" EXTERIOR GARAGE TO HOUSE

COMPONENTS

1. AIR FILM
2. 1/2" R-22 BATT INSULATION
3. 1/2" R-22 BATT INSULATION
4. 1/2" R-22 BATT INSULATION
5. 1/2" R-22 BATT INSULATION
6. AIR FILM

TO MEET THE MINIMUM EFFECTIVE RSI VALUE OF 4.0
OR R VALUE OF 2.0 FOR THIS WALL ASSEMBLY IN HRY
UNITS MUST BE INCORPORATED INTO THE FRAME

RSI/R VALUE OF ASSEMBLY 3.07 / 17.42

WALL ASSEMBLY 2 1/2" EXTERIOR (SHALL BE CLADDING)

COMPONENTS

1. AIR FILM
2. 1/2" R-22 BATT INSULATION
3. 1/2" R-22 BATT INSULATION
4. 1/2" R-22 BATT INSULATION
5. 1/2" R-22 BATT INSULATION
6. AIR FILM

TO MEET THE MINIMUM EFFECTIVE RSI VALUE OF 4.0
OR R VALUE OF 2.0 FOR THIS WALL ASSEMBLY IN HRY
UNITS MUST BE INCORPORATED INTO THE FRAME

RSI/R VALUE OF ASSEMBLY 3.0735 / 17.16

CEILING ASSEMBLY BELOW AN ATTIC SPACE

COMPONENTS

1. INSULATED TRUSSES @ 24" O.C.
2. 1/2" R-22 BATT INSULATION
3. 1/2" R-22 BATT INSULATION
4. AIR FILM

TO MEET THE MINIMUM EFFECTIVE RSI VALUE OF 4.0
OR R VALUE OF 2.0 FOR THIS CEILING ASSEMBLY IN HRY
UNITS MUST BE INCORPORATED INTO THE FRAME

RSI/R VALUE OF ASSEMBLY 0.54 / 4.758

FLOOR ASSEMBLY ABOVE UNCONDITIONED SPACE

COMPONENTS

1. INTERIOR FLOOR COVERINGS
2. AIR FILM
3. 1/2" R-22 BATT INSULATION
4. 1/2" R-22 BATT INSULATION
5. 1/2" R-22 BATT INSULATION
6. AIR FILM

TO MEET THE MINIMUM EFFECTIVE RSI VALUE OF 4.0
OR R VALUE OF 2.0 FOR THIS FLOOR ASSEMBLY IN HRY
UNITS MUST BE INCORPORATED INTO THE FRAME

RSI/R VALUE OF ASSEMBLY 4.99 / 25.27

WALL ASSEMBLY BELOW GRADE

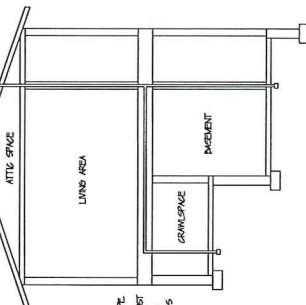
COMPONENTS

1. 1/2" R-22 BATT INSULATION
2. 1/2" R-22 BATT INSULATION
3. 1/2" R-22 BATT INSULATION
4. 1/2" R-22 BATT INSULATION
5. 1/2" R-22 BATT INSULATION
6. AIR FILM

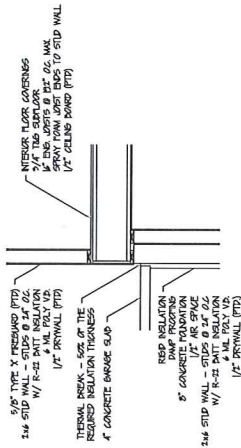
TO MEET THE MINIMUM EFFECTIVE RSI VALUE OF 4.0
OR R VALUE OF 2.0 FOR THIS WALL ASSEMBLY IN HRY
UNITS MUST BE INCORPORATED INTO THE FRAME

RSI/R VALUE OF ASSEMBLY 4.97 / 27.16

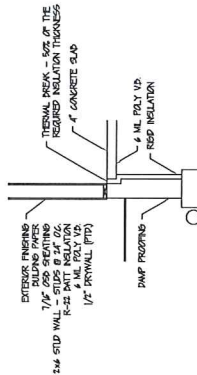
RADIANT GAS VENTING



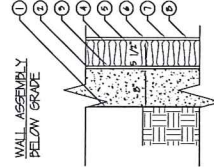
NOTES:
- RADIANT GAS VENTING SYSTEMS ARE REQUIRED FOR THE PROTECTION OF THE LIVING AREA FROM THE RADIANT GAS VENTING SYSTEMS TO AVOID FIRE.
- EACH SPACE UNDER GAS VENTING MUST BE VENTED AT A POINT WHERE IT MEETS THE MINIMUM EFFECTIVE RSI VALUE OF 4.0 AND BE SEPARATED FROM THE LIVING AREA.



GARAGE SLAB AT HOUSE 1/2" - 1/2"



FOUNDATION FROST WALL 1/2" - 1/2"



COMPONENTS

1. DAMP PROOFING
2. 1/2" R-22 BATT INSULATION
3. 1/2" R-22 BATT INSULATION
4. 1/2" R-22 BATT INSULATION
5. 1/2" R-22 BATT INSULATION
6. AIR FILM

TO MEET THE MINIMUM EFFECTIVE RSI VALUE OF 4.0
OR R VALUE OF 2.0 FOR THIS WALL ASSEMBLY IN HRY
UNITS MUST BE INCORPORATED INTO THE FRAME

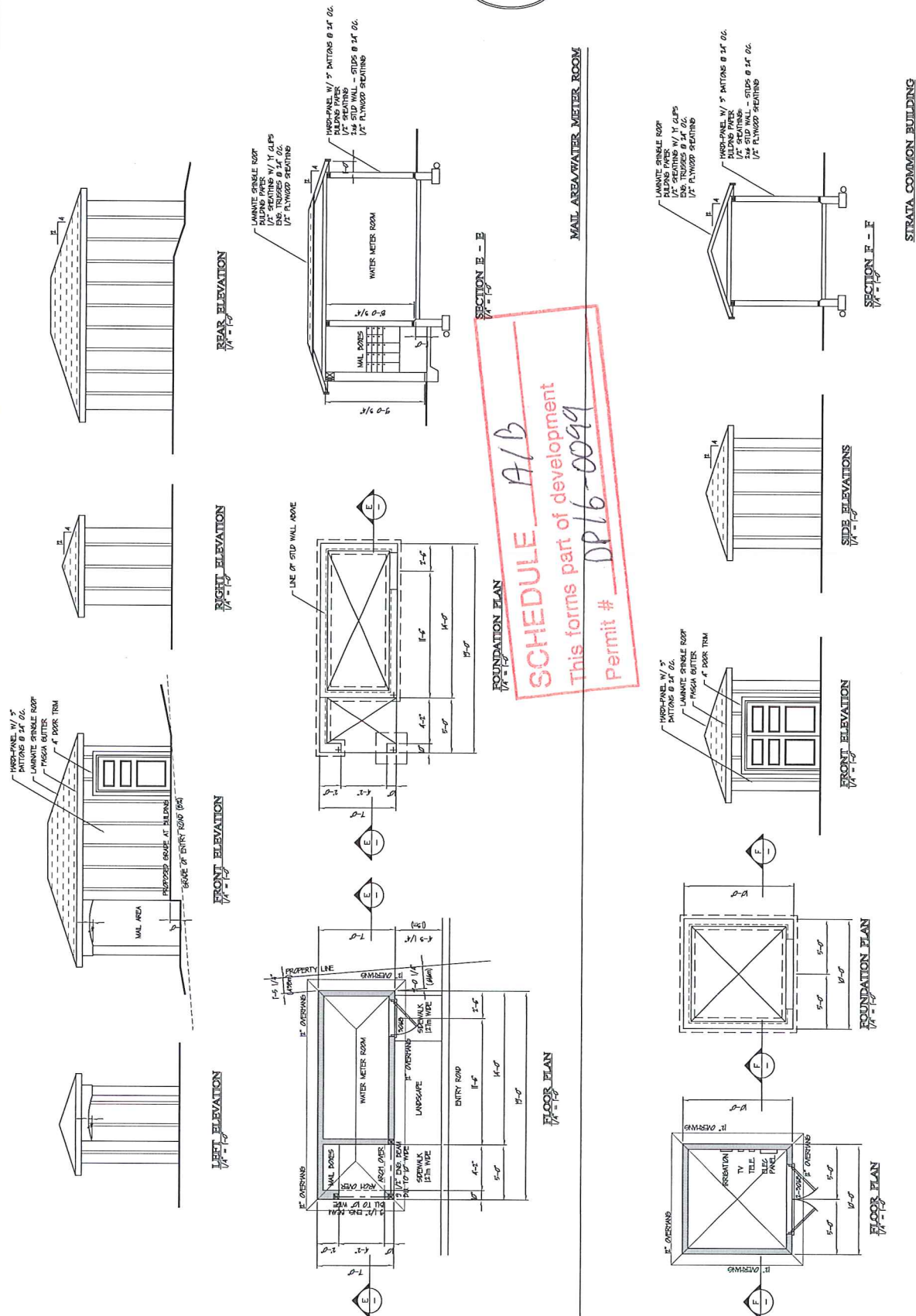
RSI/R VALUE OF ASSEMBLY 3.14 / 17.92

ENERGY EFFICIENCY DETAILS
LOT 18 - ACADEMY WAY
SCALE: 1/4" = 1'-0"
DRAWING NUMBER 15-975-065
REVISIONS:

DESIGNED BY: JAMES W. HAASDYK
DATE: FEBRUARY 28, 2016
OASIS DESIGN

DEERHURST TOWNHOMES

FOR PERMIT - FEBRUARY 28, 2016



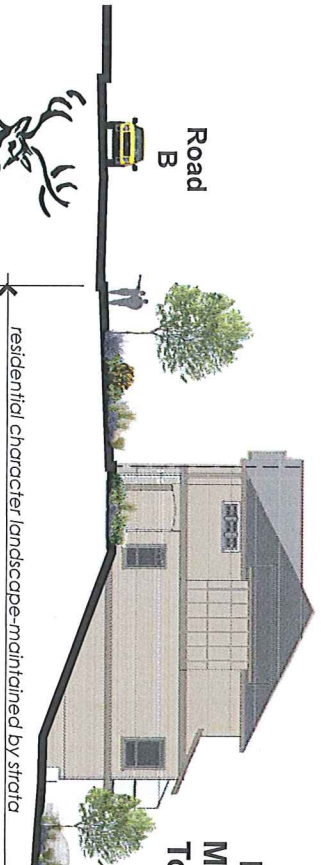


CONTEXT



Existing Fill Slope

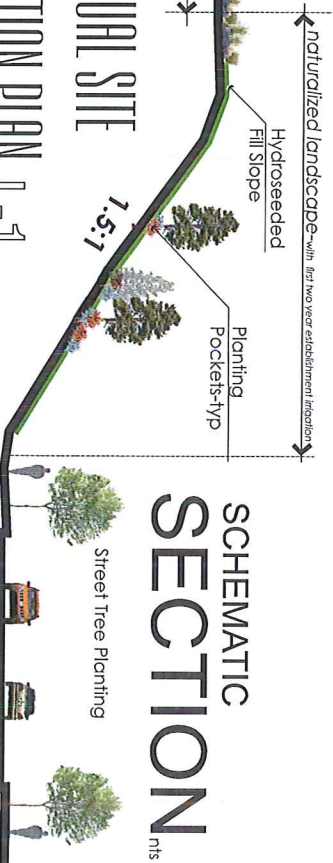
Proposed Multi-Family Townhomes



residential character landscape-maintained by strata

DEERHURST ESTATES

CONCEPTUAL SITE RESTORATION PLAN 1:1



SCHEMATIC SECTION



ENGINEERING PLANNING DESIGN

SCHEDULE C

This forms part of development Permit # **DE16-0099**

Notes

- All plants, material and planting practices to conform to the BCNA 8C Landscape Standard - Current Edition
- Contractor to provide a warranty and maintenance period of 1 year on all plants and materials. Plants and materials that fail before end of the warranty period shall be replaced by the contractor.
- The illustrated landscape plan is conceptual only, not for construction.
- Massed planting areas to receive 450mm of topsoil, pocket plantings 10mm of topsoil, hydroseeded slope 100mm of topsoil.
- Prior to delivery to site, a representative sample and test results of topsoil should be made available to the consultant for approval.
- No plant species substitution will be accepted without the written consent of the consultant.
- All planting beds to receive 50 mm depth of Ogo-Growth.
- Plant material selections are conceptual only. Final planting selections may vary depending on availability.
- Reconstruct and grade planting/hydroseeding time of late September to November in the fall.



DEERHURST ESTATES CONCEPTUAL SITE RESTORATION PLAN 1-2



Massed planting of native drought tolerant shrubs, grasses and perennials at top of slope as transition from residential character landscape to naturalized slope



Recommended Plants

- Trees- min #5 pot size**
 - Ponderosa pine
- Shrubs (ht / width) - min #1 pot size - Plant 1.0m O.C.**
 - Snowberry-1.5/1.5
 - Prickly rose-1.5/1.5
 - Oregon grape-1.5/1.5
 - Bitch leaved spirea-5/1.5
 - Rabbit brush-75/1
 - MT Sage-1/1
 - Antelope brush-1.5/1
 - Woxy Currant-1/1
 - Snowbush (ceonothus v.)- 75/20
 - Sumac
 - Mockorange
 - Saskatoon
- Grasses- plug size - Plant 0.3m O.C.**
 - Blue bunch wheategrass-5/25
 - Rough fescue-3/3
 - Idaho fescue-3/3
 - Giant wild rye-1/75
- Perennials - min 4 inch pot size - Plant 0.3m O.C.**
 - Brown eyed susan-4/4
 - Red columbine-5/3
 - Orange Amica-25/1.0 - spreads by rhizomes
 - Nodding onion-25/1.0-spreads by rhizomes
 - Showy Aster

Proposed Restoration Prescription

The proposed landscape prescription is based on a temporary mitigation for the hydroseeded and native planting areas for the first two years.

Hydroseeded areas to receive an annual broadcast fertilizer treatment for the first 3 years.

Year one-400kg/ha (18-18-18)

Years two and three 300kg/ha (20-10-10)

Weeding as required to ensure weed control within the hydroseeded areas.

Hydroseeding Treatment

All seeded areas will be hydroseeded with the following seed mix (Approved by City of Kelowna)

Dryland Grass Mix (Seed Blend 1% by weight)

Application Rate 1500g/ha	Seed Type	Rate
20	Perennial Ryegrass	15
15	Annual Ryegrass	10
10	Hard Fescue	10
10	Creeping Red Fescue	10
10	Annual Ryegrass	10
15	Fall Type	15

Seed mix to be certified at Grade.

SCHEDULE C

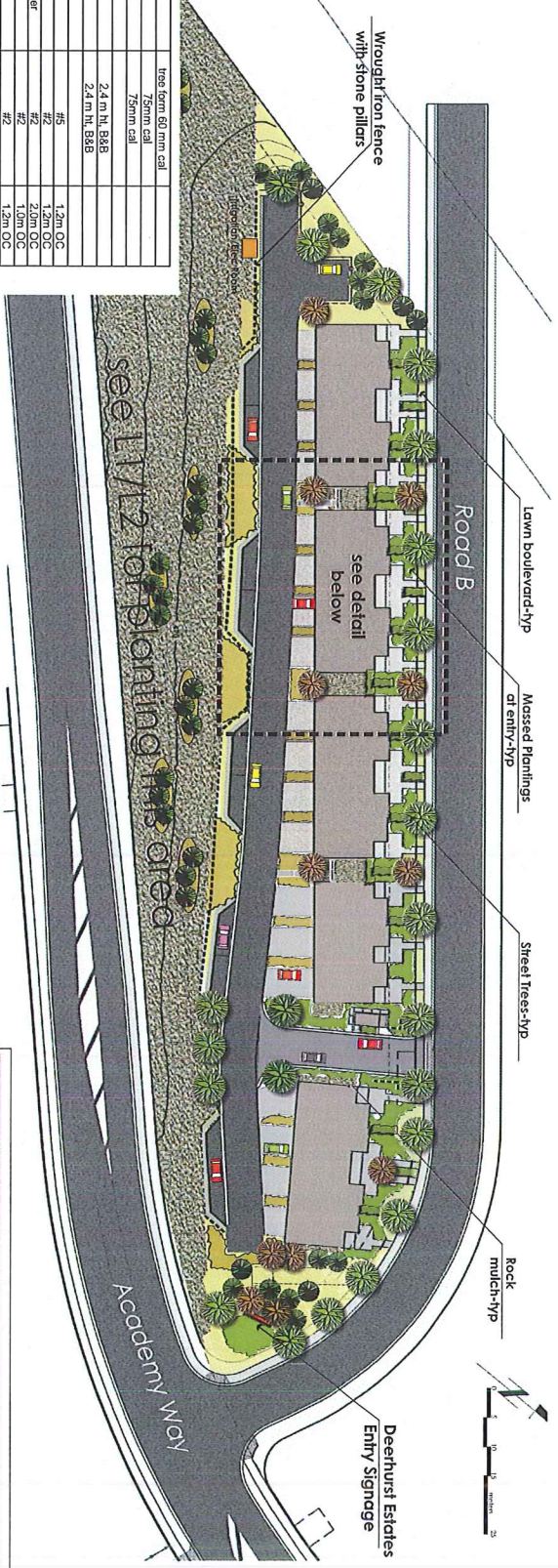
This forms part of development Permit # DP16-0099

Legend

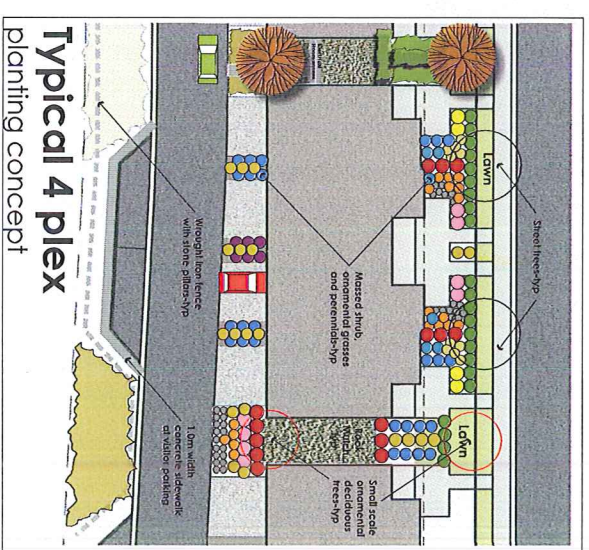
- Coniferous Trees
- Large Scale Deciduous Trees
- Massed Shrub/groundcover/ornamental plantings
- Dryland Grass mix
- Rock mulch between units

Recommended Plant Material

10	Metrosideros	Star Margalo	tree form 60 mm cal
22	Pinus aristata	Little Blue Tree	25mm cal
6	Pyrus calleryana 'Chantrelle'	Chantrelle Pear	75mm cal
12	Pinus ponderosa	Ponderosa Pine	2.4 m H. B&B
13	Pseudotsuga menziesii	Douglas Fir	2.4 m H. B&B
30	Eucalyptus alba compacta	Dwarf Burning Bush	#5
30	Forsetia x courroisi (Gold Tiger Yellow)	Gold Tiger Forsythia	#2
30	Juniperus sibirica 'Meyera'	Clumpy Juniper	#2
20	Ribes cereum	Yucca Yucca	#2
30	Rhus typhina	Goat Willow	#2
30	Rhus typhina	Shantung Sumac	#8
30	Calamagrostis 'Karl Foerster'	Karl Foerster Reed grass	#3
30	Festuca ovina 'Elijah Blue'	Elijah Blue Fescue	#1
30	Helictotrichon sempervirens	Blue Oat Grass	#2
30	Miscanthus sinensis purpurascens	Orange Flame grass	#2
30	Pennisetum alopecuroides	Fountain Grass	#2
30	Pennisetum orientale 'Tall Tails'	Oriental fountain grass	#2
30	Arenaria ludoviciana 'Valerie Finnis'	White Sage	#1
60	Hermocallis 'Autumn Red' (red)	Autumn Red Daisy	#1
60	Hermocallis 'Gentle Sheperd' (white)	Gentle Sheperd Daisy	#1
60	Hermocallis 'Fuchsia Vines' (purple)	Fuchsia Vines Daisy	#1
60	Hermocallis 'Shila O'Go' (yellow)	Shila O'Go Daisy	#1
60	Leucanthemum 'M. J. (purple)	Leucanthemum	#1
60	Perovskia arborescens	Russian Sage	#1
60	Ruscacantha hirta 'Goldstern' (yellow)	Goldstern Clematis Daisy	#1
60	Leucanthemum x superbum 'Snow Lady' (white)	Snow Lady Shasta Daisy	#1
60	Arctostaphylos uva ursi 'Vancouver Jade'	Vancouver Jade Kermelack	#1



Wrought iron fence with stone pillars



Deerhurst
ESTATES
NOVEMBER 2015
CTO

DEERHURST ESTATES

CONCEPTUAL RESIDENTIAL LANDSCAPE PLAN L-3

SCHEDULE

This forms part of development Permit # **OP16-0099**

DEVELOPMENT PERMIT



APPROVED ISSUANCE OF DEVELOPMENT PERMIT

File Number	DP16-0099
Issued To:	Highline Buildings Ltd., Inc.No. BC0287583
Site Address:	3075 Vint Rd
Legal Description:	Lot 9, Section 3, Township 23, ODYD, Plan EPP53793
Zoning Classification:	RM3 - Multi-family Residential (Low Density)
Development Permit Area:	Comprehensive Development Permit Area

SCOPE OF APPROVAL

This Permit applies to and only to those lands within the Municipality as described above, and any and all buildings, structures and other development thereon.

This Permit is issued subject to compliance with all of the Bylaws of the Municipality applicable thereto, except as specifically varied or supplemented by this Permit, noted in the Terms and Conditions below.

The issuance of a Permit limits the Permit Holder to be in strict compliance with regulations of the Zoning Bylaw and all other Bylaws unless specific Variances have been authorized by the Permit. No implied Variances from bylaw provisions shall be granted by virtue of drawing notations that are inconsistent with bylaw provisions and that may not have been identified as required Variances by the applicant or Municipal staff.

1. TERMS AND CONDITIONS

THAT Development Permit No. DP16-0099 for Lot 9, Section 3, Township 23, ODYD, Plan EPP53793, located at 3075 Vint Rd, Kelowna, BC to be approved subject to the following:

- a) The dimensions and siting of the building to be constructed on the land be in accordance with Schedule "A";
- b) The exterior design and finish of the building to be constructed on the land be in accordance with Schedule "B";
- c) Landscaping to be provided on the land be in accordance with Schedule "C";
- d) The applicant be required to post with the City a Landscape Performance Security deposit in the form of a "Letter of Credit" in the amount of 125% of the estimated value of the landscaping, as determined by a Registered Landscape Architect;

AND FURTHER THAT this Development Permit is valid for two (2) years from the date of Council approval, with no opportunity to extend.

2. PERFORMANCE SECURITY

As a condition of the issuance of this Permit, Council is holding the security set out below to ensure that development is carried out in accordance with the terms and conditions of this Permit. Should any interest be earned upon the security, it shall accrue to the Permit Holder and be paid to the Permit Holder if the security is returned. The condition of the posting of the security is that should the Permit Holder fail to carry out the development hereby authorized, according to the terms and conditions of this Permit within the time provided, the Municipality may use the security to carry out the work by its servants, agents or contractors, and any surplus shall be paid over to the Permit Holder, or should the Permit Holder carry out the development permitted by this Permit within the time set out above, the security shall be returned to the Permit Holder. There is filed accordingly:

- a) Cash in the amount of \$ _____ tbd _____ OR
- b) A Certified Cheque in the amount of \$ _____ tbd _____ OR
- c) An Irrevocable Letter of Credit in the amount of \$ _____ tbd _____ .

Before any bond or security required under this Permit is reduced or released, the Developer will provide the City with a statutory declaration certifying that all labour, material, workers' compensation and other taxes and costs have been paid.

3. DEVELOPMENT

The land described herein shall be developed strictly in accordance with the terms and conditions and provisions of this Permit and any plans and specifications attached to this Permit that shall form a part hereof.

If the Permit Holder does not commence the development permitted by this Permit within two years of the date of this Permit, this Permit shall lapse.

This Permit IS NOT a Building Permit.

4. APPLICANT'S AGREEMENT

I hereby declare that all of the above statements and the information contained in the material submitted in support of this Permit are to the best of my belief, true and correct in all respects. Upon issuance of the Permit for me by the Municipality, then in such case, I covenant and agree to save harmless and effectually indemnify the Municipality against:

- a) All actions and proceedings, costs, damages, expenses, claims, and demands whatsoever and by whomsoever brought, by reason of the Municipality granting to me the said Permit.
- b) All costs, expenses, claims that may be incurred by the Municipality if the construction by me of engineering or other types of works as called for by the Permit results in damages to any property owned in whole or in part by the Municipality or which the Municipality by duty or custom is obliged, directly or indirectly in any way or to any degree, to construct, repair, or maintain.

I further covenant and agree that should I be granted a Development Permit and/or Development Variance Permit, the Municipality may withhold the granting of any Occupancy Permit for the occupancy and / or use of any building or part thereof constructed upon the hereinbefore referred to land until all of the engineering works or other works called for by the Permit have been completed to the satisfaction of the Municipal Engineer and Divisional Director of Community Planning & Real Estate.

Should there be any change in ownership or legal description of the property, I undertake to notify the Community Planning Department immediately to avoid any unnecessary delay in processing the application.

I HEREBY UNDERSTAND AND AGREE TO ALL THE TERMS AND CONDITIONS SPECIFIED IN THIS PERMIT.

Signature of Owner / Authorized Agent

Date

Print Name in Bold Letters

Telephone No.

5. APPROVALS

Issued and approved by Council on the _____ day of _____, 2016.

Ryan Smith, Community Planning Department Manager
Community Planning & Real Estate

Date

**The PERMIT HOLDER is the CURRENT LAND OWNER.
Security shall be returned to the PERMIT HOLDER.**

CITY OF KELOWNA
BYLAW NO. 11143
Z15-0006 - Watermark Development Ltd. Inc. No. BC0642787
and City of Kelowna
(S OF) Academy Way

A bylaw to amend the "City of Kelowna Zoning Bylaw No. 8000".

The Municipal Council of the City of Kelowna, in open meeting assembled, enacts as follows:

1. THAT City of Kelowna Zoning Bylaw No. 8000 be amended by changing the zoning classification of portions of Lot C, Section 3, Township 23, ODYD, Plan EPP33993 "see plan as to limited access", located on Academy Way, Kelowna, B.C., from the A1 - Agriculture 1 zone to the RU1h - Large Lot Housing (Hillside Area) zone, from the A1 - Agriculture 1 zone to the P3 - Parks and Open Space zone, from the A1 - Agriculture 1 zone to the P4 - Utilities zone, from the RM5 - Medium Density Multiple Housing zone to the RU1h - Large Lot Housing (Hillside Area) zone and from the P3 - Parks and Open Space zone to the RU1h - Large Lot Housing (Hillside Area) zone as per Map "A" attached to and forming part of this bylaw.
2. AND THAT City of Kelowna Zoning Bylaw No. 8000 be amended by changing the zoning classification of portions of Lot 1, Sections 3 and 10, Township 23, ODYD, Plan EPP45918, located on Academy Way, Kelowna, B.C., from the P3 - Parks and Open Space zone to the RM5 - Medium Density Multiple Housing zone and from the A1 - Agriculture 1 zone to the RM5 - Medium Density Multiple Housing zone as per Map "A" attached to and forming part of this bylaw.
3. AND THAT City of Kelowna Zoning Bylaw No. 8000 be amended by changing the zoning classification of portions of Lot A, Section 3, Township 23, ODYD, Plan EPP33993 "see plan as to limited access", located on Academy Way, Kelowna, B.C., from the RM5 - Medium Density Multiple Housing zone to the P3 - Parks and Open Space zone and from the A1 - Agriculture 1 zone to the P3 - Parks and Open Space zone as per Map "A" attached to and forming part of this bylaw.
4. This bylaw shall come into full force and effect and is binding on all persons as and from the date of adoption.

Read a first time by the Municipal Council this 14th day of September, 2015.

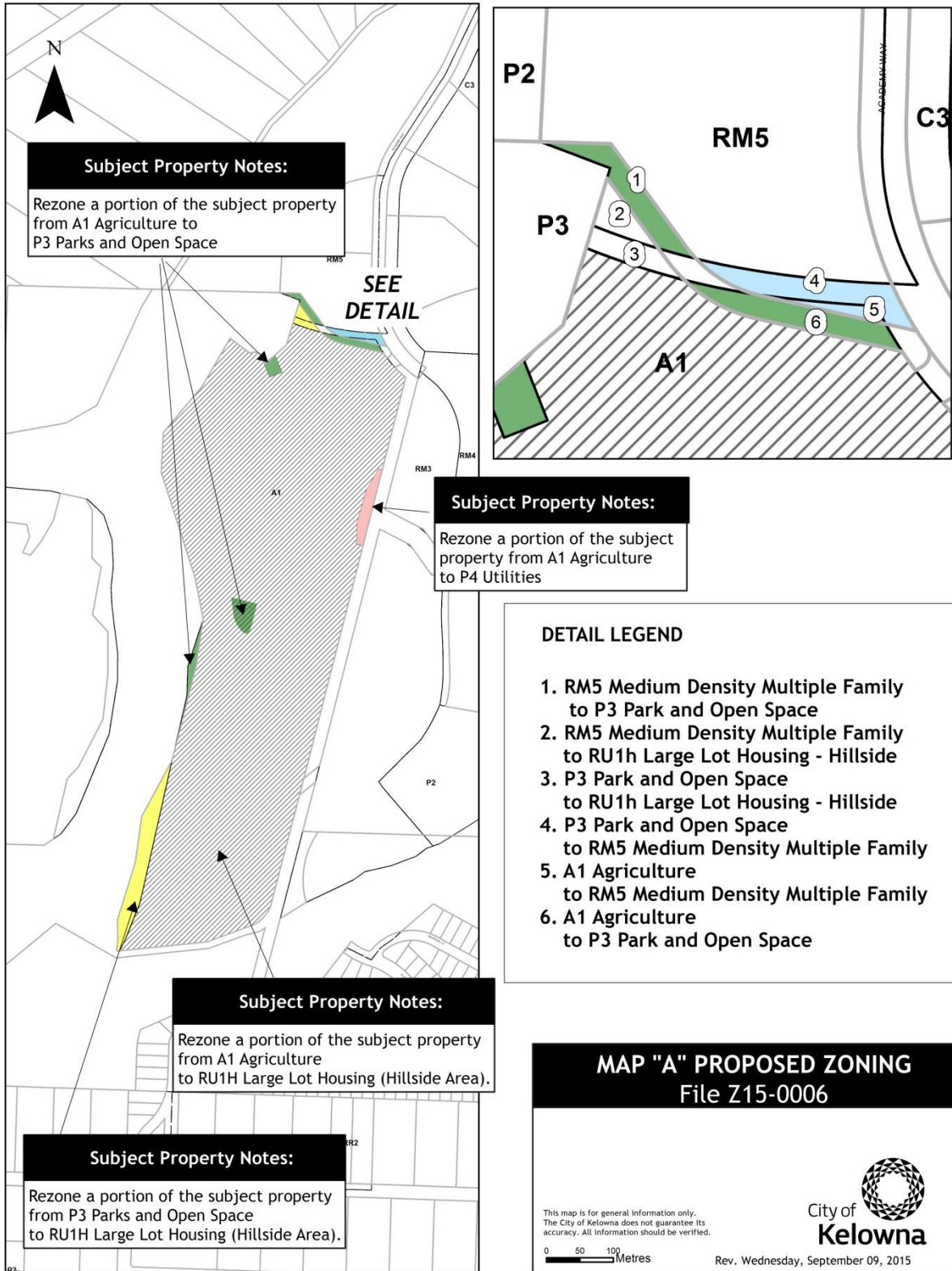
Considered at a Public Hearing on the 6th day of October, 2015.

Read a second and third time by the Municipal Council this 6th day of October, 2015.

Adopted by the Municipal Council of the City of Kelowna this

Mayor

City Clerk



Report to Council



Date: May 16, 2016
Rim No. 0610-53
To: City Manager
From: Louise Roberts, Community & Neighbourhood Services Manager
Subject: British Columbia Recreation and Parks Association PERC Award

Recommendation:

THAT Council receives, for information, the report from the Community & Neighbourhood Services Manager dated May 16, 2016, with respect to the City of Kelowna receiving the British Columbia Recreation and Parks Association PERC Award.

Purpose: To provide Council with background information about the British Columbia Recreation and Parks Association PERC Award and to present Council with the award.

Background:

On April 29, 2016, at the British Columbia Recreation and Parks Association (BCRPA) Symposium, the City of Kelowna was awarded the PERC Award for management, innovation and ingenuity for its Strong Neighbourhoods Program.

Annually, the BCRPA recognizes excellence in its sector through its awards program. One of the awards it bestows is the PERC Award. The focus of PERC Award is creativity and the development of something that provides value to the community and its citizens by delivering additional benefits. It must demonstrate benefits that are new to the community being served and it should also create opportunities for other organizations to adapt it for implementation in other settings.

The Strong Neighbourhoods Program aims to inspire, involve and empower resident participation in building Kelowna neighbourhoods as great places to live, work and play. The goal of the program is to foster an engaged community and spark neighbourhood projects and initiatives that enhance the quality of life in Kelowna.

Internal Circulation: Divisional Director, Active Living & Culture; Communications Advisor, Communications & Information Services

Considerations not applicable to this report:

Legal/Statutory Authority

Legal/Statutory Procedural Requirements

Existing Policy

Financial/Budgetary Considerations

Personnel Implications

External Agency/Public Comments

Communications Comments

Alternate Recommendation

Submitted by:

L. Roberts, Community & Neighbourhood Services Manager

Approved for inclusion: J. Gabriel, Divisional Director, Active Living & Culture

cc: Divisional Director, Communication & Information Services
 Divisional Director, Active Living & Cultural Services

Report to Council



Date: May 12, 2016
File: 1890-01
To: City Manager
From: Kevin Van Vliet, Utility Services Manager
Subject: Water Controller Rebate Program

Recommendation:

THAT Council receives for information the report from the Utility Services Manager dated May 12, 2016, pertaining to an irrigation controller rebate program for City of Kelowna Water Utility customers;

AND THAT Council approves a \$40 rebate program for the purchase of replacement irrigation controllers for properties serviced by the City of Kelowna water utility as outlined in the report.

Purpose:

To present a rebate program for City of Kelowna water utility customers to assist in water conservation and the transition to water use restrictions using the assigned day of week watering program.

Background:

Irrigation controllers have improved significantly in recent years. They are easier to program and have more control options which improves their ability to optimize irrigation performance and minimize water consumption.

On April 18, 2016, Council amended the Water Regulation Bylaw and implemented water use restrictions for City of Kelowna water utility customers. For basic residential and commercial properties during "normal" non-drought years, properties with odd numbered addresses can irrigate their landscaping on Tuesdays, Thursdays and Saturdays. Properties with even numbered addresses can irrigate on Wednesdays, Fridays and Sundays. There should be no residential or commercial irrigation on Mondays. Using a watering can or spring loaded nozzle is allowed on any day.

The implementation of permanent water use restrictions using assigned days of the week is a significant change for City of Kelowna water utility customers. The City has not historically had irrigation restrictions. In response to the 2015 drought Council implemented stage 1 of the City's Drought Response Plan which implemented restrictions based on odd / even calendar days.

While staff do not have an estimate of the number of homes with existing irrigation controllers, the proposed program has funding for up to 500 units. Generally, new homes will already include irrigation controllers that will allow bylaw compliance and efficient operation, so they have not been included in this program. New controllers easily allow for rain delay and easily allow for seasonal reduction in performance to account for the fact that less water is needed in May than in August. Some older controllers are more complicated to program and do not allow programming based on days of the week. This makes it difficult to ensure optimal water use. Owners of these controllers will need to either reset their controller every week, or purchase, install and program a new controller in order to maximize their irrigation efficiency as well as to comply with the bylaw.

In order to help City of Kelowna water utility customers reduce water consumption by better optimizing their irrigation routine as well as adapt to the new water irrigation regulations, staff propose providing a \$40 rebate to all Kelowna water utility customers that purchase a controller that is compliant with the Water Regulation Bylaw. The proposed program specifics are as follows:

1. Only one \$40 rebate per property served by the Kelowna Water Utility. Applicants will need to provide a copy of their water utility bill.
2. Only existing water utility customers may apply. New home construction is exempt.
3. Proof of purchase will be required, including make and model of the unit. The compatibility with our bylaw will be verified.
4. Compliant controllers must be purchased between April 19 and July 31, 2016 to be eligible for the rebate.
5. Required information must be submitted to the City of Kelowna by August 31, 2016.

Waterkind, the City's water smart contractor can provide the expertise to verify that the controller complies with our bylaw. Residents are encouraged to call them in advance of purchase. In addition, they can help answer other technical questions that our customers may have and provide general water conservation information and strategies. With the appropriate documentation, Waterkind will issue a rebate cheque. Staff will create the option for users to submit the necessary documentation electronically (via the website or via email). In person application will be able to be arranged directly with Waterkind. Waterkind can be reached at waterkindinfo@gmail.com or by telephone at 778-478-9840.

Waterkind will invoice Utility Services monthly along with the appropriate documentation.

This program will be advertised in the City utility bills, along with some mention on radio and print ads that are intended to increase overall awareness of the new water irrigation rules.

Internal Circulation:

Jodie Foster - Communications Supervisor
Andrew Reeder - Utility Planning Manager
Lynn Walter - Revenue Manager

Existing Policy:

The City has an existing program allowing for rebates for water irrigation controllers. In order to qualify the applicant must complete the irrigation permit and reporting requirements. The program does not apply to simple controller replacement. Over the last few years very few rebates have been issued under this existing program.

Financial/Budgetary Considerations:

Funding for up to \$20,000 for this program is available within the existing Water Utility budget in the Public Relations / Water Conservation program. Should the program appear destined to exceed this amount (500 controllers) staff will return to Council for further direction.

Communications Comments:

Information about the rebate program will be included in ongoing communications to City of Kelowna water utility customers regarding the April 2016 update of residential water regulations. In addition, the consultant hired to deliver the Water Smart program in 2016 will continue to work directly with residents, as well as irrigation specialists to develop awareness of watering restrictions and the rebate program.

Considerations not applicable to this report:

Legal/Statutory Authority:

Legal/Statutory Procedural Requirements:

Personnel Implications:

External Agency/Public Comments:

Alternate Recommendation:

Submitted by:

K. Van Vliet, Utility Services Manager

Approved for inclusion:



Joe Creron, Divisional Director, Civic Operations

cc:

Jodie Foster - Communications Supervisor

Andrew Reeder - Utility Planning Manager

Lynn Walter - Revenue Manager

Report to Council



Date: May 16, 2016
File: 1200-40
To: City Manager
From: Michelle Kam, Sustainability Coordinator
Subject: Community for All Ages Update

Recommendation:

That Council receives, for information, the report from the Sustainability Coordinator dated May 16, 2016, with respect to the Community for All Ages Update.

Purpose:

To inform Council on the status of the Community for All Ages project prior to the commencement of community engagement.

Background:

Like many other cities, Kelowna is grappling with how to build a vibrant, healthy and sustainable city in the face of challenges including climate change, a growing prevalence of chronic health conditions, and an aging population.

How communities are planned and built, and the services and resources provided within them, directly impacts people's physical and social health.

The Community for All Ages Plan is the first project under the Healthy City Strategy, a long-term, integrative plan that the City is building in partnership with Interior Health. The Healthy City Strategy focuses on healthy places and spaces, community health and quality of life for all Kelowna residents. Under this umbrella, the Community for All Ages Plan will aim to deliver on a vision "to create a city that is healthy, safe, active and inclusive for seniors, children and those with diverse abilities."

The Community for All Ages Plan will identify areas to adapt policies, plans and programs to respond to the evolving needs of our community as actions for healthier seniors will provide co-benefits to children and residents with diverse abilities, enabling them to be active and engaged within our community.

In order to assist in the preparation of the Community for All Ages Action Plan, the City received a grant from The Union of British Columbia Municipalities (UBCM). The UBCM grant requires that direct engagement occur as part of the development of the Plan and that all work be completed in 2016. A variety of direct in-person and key stakeholder engagement will be combined with online techniques for the community engagement. Public input will be used to inform potential areas for physical design, policy, programming and service provision and create a Community for All Ages Action Plan.

The Community for All Ages Action Plan will address both physical environments and services for all ages. This Plan is being developed by working with several teams including:

1. **Healthy City Strategy Steering Committee** - this committee consists of senior leaders and staff from both the City and Interior Health. This committee is overseeing the entire Healthy City Strategy and have signed a Collaboration Agreement to work together for a minimum of three years. This committee guides the development of each of the theme areas as well as the indicators and targets for the Healthy City Strategy.
2. **City and Interior Health Staff Technical Team** - this team consists of technical staff from both organizations that are working directly on the Community for All Ages project. These experts aid in the development of implementable policies and actions for the Community for All Ages Plan.
3. **Stakeholder Advisory Committee** - this committee consists of key stakeholders from the community, including: Interior Health, UBC, School District #23, Community Action Towards Children's Health (CATCH), Central Okanagan Division of Family Practice, Seniors Outreach Services Society, Pathways Abilities Society and People in Motion. This committee provides input on the Community Inventory (successes, gaps and priorities for Kelowna), makes recommendations for community engagement, and acts as a champion for the project in the community.
4. **Barefoot Planning** - this is the consultant hired to work with Policy & Planning staff and the above teams to develop the Community Inventory, to conduct community engagement, and to provide draft policy and action recommendations.

The timelines for the project consist of the following:

Task	Details	Date
Community Inventory	Developed in collaboration with the above teams	May 3 & 4
Community Engagement	Four public in-person engagements and one key stakeholder workshop	May 29 - 31
	on-line engagement at getinvolved.kelowna.ca (see attached Fact Sheet for details)	May 24 - June 13
Draft Recommendations and Consultant Report	Including Community Inventory, Community Engagement and proposed recommendations	End of July
Draft Community for All Ages Action Plan	City and Interior Health to partner on draft	Early Fall

	Action Plan	
Community Consultation	Consultation on draft Community for All Ages Action Plan	Late Fall
Council	Council consideration on Community for All Ages Action Plan	December
UBCM final grant report	Finalizing granting requirements	December / January

The Community for All Ages Plan will help shape Kelowna over the coming years to meet the evolving needs of residents of all ages and abilities and will be the first step towards creating an overarching Healthy City Strategy for Kelowna.

Internal Circulation:

Community Planning & Real Estate Divisional Director
Active Living & Culture Divisional Director
Regional Planning Manager
Infrastructure Delivery Department Manager
Policy & Planning Department Manager
Communications Advisor

Financial/Budgetary Considerations:

The UBCM grant of \$20,000 is contingent on two components: direct engagement and work being complete in 2016.

Existing Policy:

Official Community Plan

- Objective 5.23 Address the needs of families with children through the provision of appropriate family oriented housing
- Policy 7.16.2 Park Accessibility. Design parks to meet the needs of a variety of user groups, including families, youth, and seniors. Where appropriate, parks will be designed to meet universal access standards for outdoor spaces.

External Agency/Public Comments:

Key stakeholder organizations will be invited to participate in a stakeholder workshop at the end of May. Other organizations and the public will be able to participate on-line or at the community conversations open to the public.

Communications Comments:

A dedicated website has been developed kelowna.ca/planningprojects
The project will be communicated through direct in-person and online social media (getinvolved.kelowna.ca)

Considerations not applicable to this report:

Legal/Statutory Authority:

Legal/Statutory Procedural Requirements:

Personnel Implications:

External Agency/Public Comments:
Communications Comments:
Alternate Recommendation:

Submitted by:

Michelle Kam, Sustainability Coordinator

Approved for inclusion: ☐ (DG)

cc:
Healthy City Strategy Steering Committee
Community for All Ages Staff Technical Team

Attachment: Community for All Ages Engagement Fact Sheet

Community for All Ages



Built environments are the places and spaces in which people live, work, play and learn. When strategically designed, these places including homes, neighbourhoods, schools, streets, workplaces and parks, can reduce obesity and chronic diseases, like heart disease and diabetes, as well as improve the well-being and social connection of residents.

As part of the Healthy City Strategy, City of Kelowna community planners and Interior Health public health practitioners are working together with a focus on the first of six themes areas: a community for all ages.

Community for All Ages

Demographic shifts across the globe are having a profound impact on community age relations and Kelowna is no different.

The Community for All Ages Plan will identify areas to adapt policies, plans and programs to respond to the evolving needs of our community as actions for healthier seniors will provide co-benefits to children and residents with diverse abilities enabling them to be active and engaged within our community.

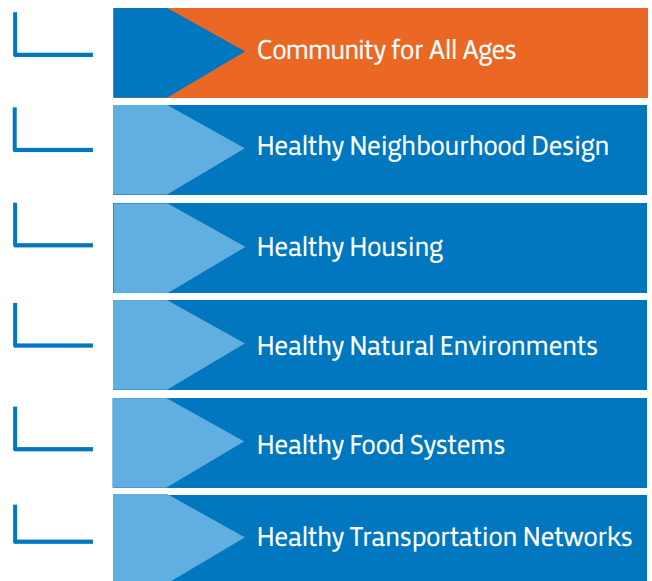
About the Healthy City Strategy

Like many other cities around the world, Kelowna is grappling with how to build a vibrant, healthy and sustainable city in the face of challenges including climate change, a growing prevalence of chronic health conditions, and an aging population.

The City of Kelowna and Interior Health Authority have partnered to develop the Healthy City Strategy, a long-term, integrative plan that focuses on healthy places and spaces, community health, and quality of life for all Kelowna residents.

This strategy will promote integrated decision-making and is proposed to be a companion document to the Official Community Plan with implementable actions in six theme areas.

Healthy City Strategy



Community for All Ages

Help create a city that is healthy, safe, active and inclusive for seniors, children and those with diverse abilities.

Join the conversation

How communities are planned and built, and the services and resources provided within them, directly impacts people's physical and social health.

Policies, infrastructure design and programs influence many aspects of our daily lives. For example: air quality, the ability of people to get around, where and what type of housing is available, what food can be easily accessed, and how safe, connected, and included residents feel in their neighbourhoods.

Your input is important and will be used to address physical design, policy, programming and service provision and create a Community for All Ages Action Plan to improve our community.

Fast Facts

- ▶ Kelowna's senior population is growing and will increase from the current rate of 20 per cent to 24 per cent by 2040 as predicted in City of Kelowna *Community Trends Report*.
- ▶ 1 in 3 people in B.C. are living with one or more diagnosed chronic diseases, which consumes approximately 80 per cent of the provincial health care budget as per the Province of B.C. *Promote, Protect, Prevent: Our health begins here*.
- ▶ 50 per cent of adults and 91 per cent of children and youth do not get the recommended levels of physical activity according to the Heart and Stroke Foundation, *Shaping Active, Healthy Communities*.
- ▶ At 26 per cent, Canada's childhood obesity rates are among the highest in the world - almost doubling in the last 25 years - according to Government of Canada *Healthy Weights for Healthy Kids*.

- > **Online engagement**
May 24 - June 13, 2016
getinvolved.kelowna.ca
- > **Parkinson Recreation Centre**
Family Fun Day
May 29, 2016
1:00 - 4:00 p.m.
- > **Parkinson Activities Centre**
May 30, 2016
9:30 - 11:30 a.m.
- > **Capri Mall Food Court**
May 30, 2016
2:00 - 4:00 p.m.
- > **Rutland Recreation Complex Parking Lot**
May 31, 2016
6:00 - 8:00 p.m.



COMMUNITY FOR ALL AGES

Provincial perspective



Chronic disease is pervasive

— One in three British Columbians is living with one or more chronic conditions, which consume approximately 80% of B.C. health care budgets.⁷



People are not active enough

— 50% of adults and 91% of children and youth do not get recommended levels of physical activity.⁸



Obesity is on the rise

— 26% of children in Canada are overweight or obese.⁹ Canada's childhood obesity rates are among the highest in the developed world — rates have almost tripled since 1978.¹⁰



Our population is aging — By 2031, seniors in B.C. will account for 25% of the total population.¹¹



Our communities are designed to have us use our cars instead of our feet

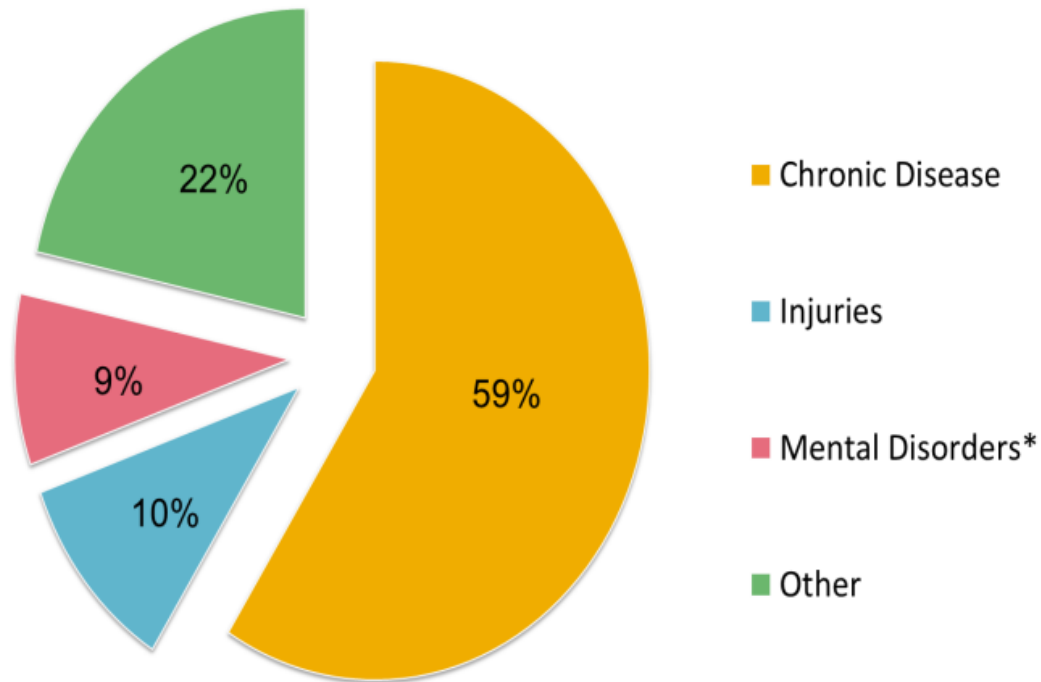
— Research shows that suburban developments tend to be built with low-density, single-land use neighbourhoods and street networks that are poorly suited to walking.¹²



Many of us struggle to buy healthy local food — Research shows some populations in B.C., particularly low-income, single-parent, aboriginal, and rural populations, have difficulty accessing healthy, fresh, locally produced food.¹³

A Resource Guide for Local Governments, PlanH, 2014

Burden of disease in BC

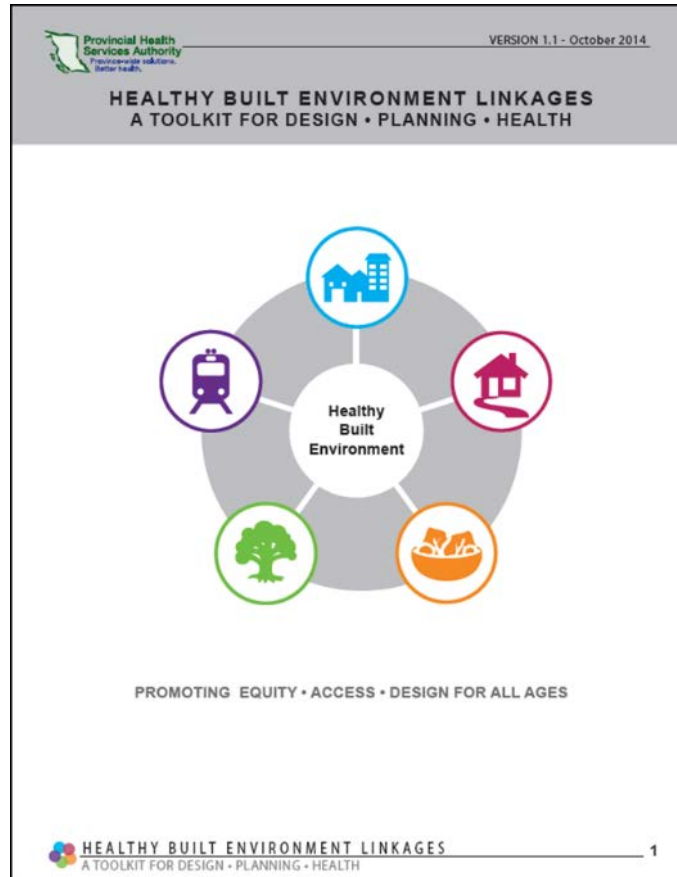


2012 Disability-Adjusted Life Years, BC
* Excludes Dementia.

How cities shape us

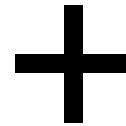


Healthy City Strategy



Provincial Health Services Authority. (2014). *Healthy Built Environment Linkages A Toolkit for Design, Planning, Health.*

Community for All Ages



Community for All Ages

- ▶ \$20,000 grant from UBCM for 2016
- ▶ Percentage of seniors will increase from 20% in 2014 to 24% in 2040
- ▶ Project will focus on seniors, children and those with diverse abilities



Community for All Ages vision

- ▶ A city that is healthy, safe, active & inclusive for seniors, children and those with diverse abilities



Project deliverables

- ▶ Background research;
- ▶ Community Inventory;
- ▶ Create a Community for All Ages Steering Committee;
- ▶ Direct engagement;
- ▶ Policy recommendations; and
- ▶ Community for All Ages Action Plan



Community for All Ages teams

- ▶ Healthy City Strategy Steering Committee
- ▶ Staff Technical Team
- ▶ Consultant – Barefoot Planning
- ▶ Stakeholder Advisory Committee



Key project milestones



Next steps

- ▶ Community Engagement
 - ▶ Online engagement at getinvolved.kelowna.ca (May 24 to June 13)
 - ▶ 1 stakeholder workshop (May 31)
 - ▶ 4 public engagement events (May 29-31)



Report to Council



Date: May 16, 2016
File: [RIM Classification Number]
To: City Manager
From: D. Duncan, Manager, Parking Services
Subject: Eco-Pass Program Updates - Reconsideration

Recommendation:

THAT Council receives, for information, the report from the Manager, Parking Services, dated May 16, 2016, for reconsideration of the eligibility criteria to obtain an Eco-Pass permit.

Purpose:

To reconsider a recent update to the Eco-Pass program made to encourage the purchase and use of plug-in electric vehicles.

Background:

The Eco-Pass program was introduced in 2005 to reward owners of fuel efficient, environmentally friendly vehicles by offering no-charge parking at on-street pay parking locations throughout 2005 and 2006. This program was extended in 2007 and 2008 and again reviewed as part of larger council reports in 2010 and 2011. All other parking restrictions, including maximum time limits remain applicable (i.e. two-hour parking) to ensure adequate turnover is maintained to prevent Eco-Passes from being used for long-term parking.

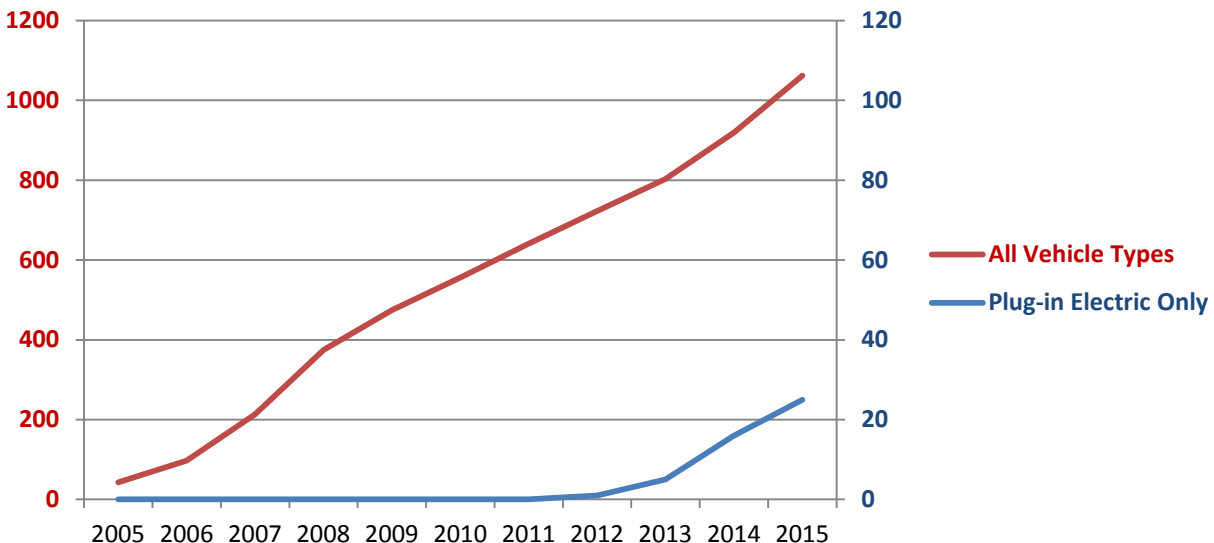
When the program began in 2005, there were seven hybrid models available in North America that would qualify; today there are more than 35 hybrid models and 39 plug-in electric models that qualify for an Eco-Pass. Current eligibility requirements for the Eco-Pass program state that all hybrid vehicles qualify, regardless of fuel economy (e.g. GMC Sierra Hybrid with published (city) fuel economy of 11.5 L/100km), which goes against the intent of the program. By comparison, non-hybrid vehicles must have a maximum fuel economy (consumption) less than 5.9 L/100km (city) to qualify. Participation in the Eco-Pass program has grown from 43 active permits in the first year to 1062 permits in 2015. If every active permit holder used their Eco-Pass once per week for two hours, lost parking revenue to the City could be more than \$138,000 annually.

A Report to Council in 2011 on Neighborhood Zero Emission Vehicles & Conventional Electric Cars suggested hybrid vehicles had successfully achieved market penetration and that their eligibility for the Eco-Pass program could be reconsidered.

Updates to the Eco-Pass Program

This is the first review of the Eco-Pass program since the 2011 report and hybrid vehicles are now commonplace. Staff believe the incentive to promote fuel efficient vehicles has been successful and that an incentive for plug-in electric vehicles should be the new qualification standard as we move forward. New Eco-Pass permits would be valid for up to two hours per day of no-charge on-street parking for a period of one year after which the vehicle would pay regular parking rates. Updates to the program would remove hybrid electric and fuel efficient gas/diesel powered vehicles from those eligible for an Eco-Pass in favour of plug-in electric type vehicles.

Active Eco-Passes (2005 to 2015)



If changes to the Eco-Pass program are approved, any older permits currently in circulation that do not show an expiry date would be deemed to expire on December 31, 2016. Newer permits with an expiry date indicated would remain valid until the date shown.

Internal Circulation:

Legislative Systems Coordinator
City Clerk

Legal/Statutory Authority:

B.C. Motor Vehicle Act; Section 124
City of Kelowna Traffic Bylaw No. 8120

Existing Policy:

- Kelowna's Official Community Plan identifies a goal of reducing the community greenhouse gas emissions by 33% from 2007 levels by 2020.
- Community Climate Action Plan.

Financial/Budgetary Considerations:

A small increase/decrease in on-street parking revenue is expected, depending on the eligibility criteria.

Communications Comments:

A news release will be issued if further changes are made to the Eco-Pass program. For approximately 1-2 years, staff have advised anyone receiving an Eco-Pass that the program is under review and that they may not be eligible in the future.

Alternate Recommendation:

THAT Council directs staff to amend Council Policy No. 375 to issue Eco-Pass Parking Permits for any hybrid electric vehicle (HEV) with maximum fuel consumption less than 6.0L/100km (city) as per the Natural Resources Canada 2016 Fuel Consumption Guide, until June 1, 2018. The permit will be valid for a one-year period and allow up to a maximum of two hours per day of no-charge on-street parking.

AND THAT Council directs staff to amend Council Policy No. 375 to provide Eco-Pass Parking Permits for any Battery Electric (BEV) or Plug-in Hybrid Electric Vehicle (PHEV), until further directed by Council. The permit will be valid for a one-year period and allow up to a maximum of two hours per day of no-charge on-street parking.

Considerations not applicable to this report:

Personnel Implications

External Agency/Public Comments

Submitted by: D. Duncan, Manager, Parking Services

Approved for inclusion: D. Edstrom, Director, Real Estate

Attachments: 1. Council Policy 375 - "Eco-Pass Permit" (Existing Policy)
2. PowerPoint Presentation



City of Kelowna
1435 Water Street
Kelowna, BC V1Y 1J4
250 469-8500
kelowna.ca

Council Policy

ECO-PASS Parking Permit

ESTABLISHED: MARCH 1, 2016

Contact Department: Real Estate (Parking Services)

Guiding Principle

A clean healthy environment through the reduction of greenhouse gas emissions.

Purpose

To reward new owners of qualifying vehicles with an Eco-Pass Parking Permit for use in the City of Kelowna.

Application

The policy applies only to vehicles:

- classified and defined as Battery Electric Vehicle (BEV) or Plug-in Hybrid Electric Vehicle (PHEV) by the Canadian Automobile Association (CAA)
<http://electricvehicles.caa.ca/electric-vehicles-available-in-canada/>; and
- registered to an address located within the Regional District of the Central Okanagan.

Note: Hybrid Electric Vehicle (HEV's) are not eligible for an Eco-Pass Parking Permit

Policy Statements

1. Effective March 01, 2016, the *Eco-Pass Permit* will offer up to two hours of no charge parking at on-street pay parking locations in the City of Kelowna for a period of one year.
2. *Eco-Pass Parking Permits* issued prior to March 01, 2016 will expire as of December 31, 2016 or on the date shown on the permit.
3. *Eco-Pass Parking Permits* are not eligible for renewal.
4. Lost or stolen *Eco-Pass Parking Permits* will be replaced at no charge, and will be valid only for the balance of the year remaining from the original permit.
5. A vehicle displaying an *Eco-Pass Parking Permit* is subject to all regulations contained in the City of Kelowna *Traffic Bylaw No. 8120* and is exempt only from making payment for the first two hours of on-street pay parking.
6. *Eco-Pass Parking Permits* are for the exclusive use of the registered owner, vehicle/plate number the permit is assigned to and are not transferrable.
7. Permits may not be altered or tampered with in any manner.
8. The *Eco-Pass Parking Permit* is a placard that must be displayed from the rear view mirror; incorrectly displayed permits are considered invalid.

9. Any misuse of an *Eco-Pass Parking Permit* will be treated as if no permit was in use and subject to immediate:
 - a. issuance of a parking ticket and/or towed based on parking regulations;
 - b. revocation of the permit; and
 - c. denied future issuance of an *Eco-Pass Parking Permit*.
10. Grounds for immediate revocation of the *Eco-Pass Parking Permits* include:
 - a. The sale, trade, rental, give away or disposal of a permit contrary to this policy, or
 - b. using/allowing use in any vehicle other than the vehicle authorized by the permit.

Amendments

Resolution: R121/16/02/15 – adopted new policy

ECO-PASS PERMIT PROGRAM



BACKGROUND

- ▶ Electric vehicles are an emerging sector in the auto industry
- ▶ OCP and Community Climate Action Plan aims to reduce greenhouse gas emissions by 33% from 2007 levels by 2020
- ▶ Opportunity to support EV adoption

ECO-PASS PERMIT PROGRAM

- ▶ Established in 2005 to reward owners of hybrid and fuel efficient vehicles
- ▶ Initially 7 specific models qualified
- ▶ Today, over 35 hybrid models and 39 plug in electric models qualify
- ▶ Over 1000 active Eco-Passes issued

ORIGINAL PERMIT ELIGIBILITY

- ▶ Any hybrid or electric vehicle and all gas/diesel powered vehicles with a city fuel consumption rating less than 5.9 l/100km qualified
- ▶ Permits could be renewed
- ▶ Eco-Pass allowed no-charge on-street parking up to the posted time limit

2016 PROGRAM CHANGES

- ▶ In support of reducing GHG emissions, new qualification standards:
 - ▶ Vehicles must be either:
 - ▶ Battery Electric
 - ▶ Plug-in Hybrid Electric
 - ▶ Pass is valid for one year and cannot be renewed
- ▶ Issued only for vehicles registered within the RDCO

COUNCIL POLICY 375

- ▶ Outlines how staff administer the program:
 - ▶ Vehicle types that qualify
 - ▶ Benefits available to permit holders
 - ▶ Lost or stolen placard procedure
 - ▶ Length of time permits are valid and expiry
 - ▶ Addresses misuse of permits

ELECTRIC VEHICLE INCENTIVES IN B.C.

- ▶ Clean Energy Vehicle Program
 - ▶ Up to \$5,000 for purchase
- ▶ Scrap-it Program
 - ▶ Up to \$3,250 for purchase when retiring vehicle
- ▶ Multi-unit Residential Building Charging program
 - ▶ Rebate on charging stations up to \$4,500
- ▶ Electric vehicles may now use HOV lanes

AVAILABILITY (AS OF MAY 2, 2016)

- ▶ Okanagan Dealers – New Electric Vehicles:
 - ▶ 3 Fully Electric & 1 Plug-in Hybrid in Kelowna
 - ▶ 4 Plug-in Hybrid in Penticton
 - ▶ \$33,000 to \$41,500 price range (New)
- ▶ 9 new and 71 used Fully Electric and Plug-in Hybrid's currently listed for sale in British Columbia*
- ▶ Vehicles priced between \$17,000 (2012 Nissan Leaf) and \$87,888 (2014 Tesla Model S)*

* Information courtesy of Autotrader.ca



- ▶ 2012 Nissan Leaf
 - ▶ \$17,000 (Used)

- ▶ 2014 Tesla Model S
 - ▶ \$87,888 (Used)



PERMIT ELIGIBILITY CRITERIA

Current (Feb 2016)

- ▶ Battery Electric Vehicles (BEV's)
- ▶ Plug-in Hybrid Vehicles (PHEV's)
- ▶ Permit valid for one-year
- ▶ Max 2 hours per day of on-street parking

Alternate Recommendation

- ▶ Battery Electric Vehicles (BEV's)
- ▶ Plug-in Hybrid's (PHEV's)
- ▶ Hybrids (HEV's) with maximum fuel consumption less than 6.0L/100km* *until June 1, 2018*
- ▶ Permit valid for one-year
- ▶ Max 2 hours per day of on-street parking

*Based on the Natural Resources Canada 2016 Fuel Consumption Guide

NEXT STEPS

- ▶ Communications
 - ▶ News release if any changes are made to Eco-Pass program
- ▶ Any further changes/adjustments to Eco-Passes would take effect on June 1, 2016

PLUG-IN HYBRID ELECTRIC VS. HYBRID

Make / Model	Year	L / 100 km	CO ₂ Emissions (g/km)	Make / Model	Year	L / 100 km	CO ₂ Emissions (g/km)
Chevrolet Volt	2016	2.2	32	Toyota Prius	2016	4.4	104
Ford C-Max Energi	2016	2.0	80	Ford C-Max	2016	5.6	140
Ford Fusion Energi	2016	2.0	80	Toyota Camry	2016	5.5	134
BMW i3 REX	2016	2.0	22	Ford Fusion	2016	5.4	130
Hyundai Sonata Plug-in	2016	2.4	63	Lexus CT200h	2016	5.5	132

BATTERY ELECTRIC VEHICLES

Make/ Model	Year	L _e / 100 km*	CO ₂ Emissions (g/km)
BMW i3	2016	1.7	0
Chevrolet Spark EV	2016	1.8	0
Ford Focus Electric	2016	2.1	0
Nissan Leaf	2016	1.9	0
Tesla Model S	2016	2.5	0

* L_e is gasoline litre equivalent. One litre of gasoline contains the energy equivalent to 8.9 kWh electricity

Report to Council



Date: May 16, 2016
File: 1825-03
To: City Manager
From: Martin Johansen, Manager Building Services
Subject: Energy Specialist Program - Contract Extension

Recommendation:

THAT Council receives, for information, the report from the Manager, Building Services dated May 16, 2016 with respect to a one-year contract extension to the FortisBC Energy Specialist Program;

AND THAT the 2016 Financial Plan be amended to include \$60,000 in funding from the FortisBC Energy Specialist Program;

AND FURTHER THAT the 2016 Financial Plan be amended to include up to \$95,000 funded from the Energy Carbon Reserve to extend the Energy Specialist position.

Purpose:

To approve a one-year contract extension of the FortisBC Energy Specialist Program to extend the Energy Specialist position.

Background:

FortisBC has been working with the City since June 2015 providing \$60,000 in funding to support an Energy Specialist staff position for the City of Kelowna. A review of the program deliverables has confirmed results which demonstrate the value of the position from a financial perspective (Attachment 1). FortisBC is excited about the results and has approved a one-year contract extension to the Energy Specialist Program complete with \$60,000 in additional funding. The City has worked in collaboration with FortisBC to establish the following performance metrics to justify the program extension:

- GJ/year reduction goal - 2,500 GJ
- kWh/year reduction goal - 450,000kWh

Energy efficiency opportunities exist throughout the City's operations, however this is a large task and approving a one-year contract extension to the Energy Specialist position, to support the FortisBC Energy Specialist Program, will provide a dedicated resource to identify and implement those opportunities.

Benefits for Kelowna:

The Energy Specialist will continue to identify energy efficiency solutions, manage the implementation of energy saving projects, and recommend operational changes needed to adopt a structured energy management program.

The Energy Specialist will support the City to implement a sustainable, on-going, energy management program that ensures optimization of energy dollars while incorporating a culture of energy conservation. This dedicated resource will be accountable for:

- Managing the City's energy use.
- Developing energy efficiency and conservation measures complete with a business case.
- Implement and updating the Corporate Energy & Emissions Plan.
- Providing support for cultural change within the organization.
- Working with utility providers to identify rebate opportunities.
- Project management of energy conservation projects.
- Selection of environmental sustainability initiatives for new capital projects.
- Management of project commissioning, including measurement and verification of results.
- Annual reporting to Council.

To date, there is an annual savings of \$26,000 as a result of the Rutland Arena Heat Recovery Project. There are three (3) projects in progress (Cedar Creek Pump Station - new pump; Airport Parking Lot Lighting LED conversion; City Yards) which we have calculated an annual savings of \$38,500. We are currently working with the operator of the Capital News Centre replacing the lights with LED and expect an annual savings of \$42,500 (See attached for further details).

Internal Circulation:

Divisional Director, Civic Operations
Divisional Director, Human Resources
Director, Financial Services
Financial Planning Manager

Financial/Budgetary Considerations:

Council approved an Energy Specialist 18-month term position at the 2015 Provisional budget on January 15, 2015 to be funded 100 per cent from the Energy Carbon Reserve. The extension of the Energy Specialist position to December 31 2017 is not part of the City's current Financial plan. The 2016 Financial plan will require an amendment of up to \$95,000 funded from the Energy Carbon Reserve and \$60,000 in additional funding from the FortisBC Energy Specialist Program. This brings the total funding from the FortisBC Energy Specialist program to \$120,000 which will offset the additional cost to extend this position.

Considerations not applicable to this report:

Existing Policy:

Legal/Statutory Authority:

Legal/Statutory Procedural Requirements:

Personnel Implications:

External Agency/Public Comments:

Communications Comments:

Alternate Recommendation

Submitted by:

Martin Johansen, Manager Building Services

Approved for inclusion:



J. Creron, Divisional Director, Civic Operations

cc: Divisional Director, Civic Operations
Director, Financial Services

ECM - Project Inventory

Complete	Annual Life Cycle	
	Savings [\$]	Grants/Rebates [\$]
Rutland Arena heat Recovery Project	\$26,000	\$99,800
In Progress		
Cedar Creek Pump Station - New Pump	\$18,000	\$0
Airport Parking Lot Lighting - LED Conversion	\$12,500	\$17,600
City Yards	\$8,000	\$27,000
Proposed		
Capital News Center	\$42,000	\$68,500
Other		
Fortis Energy Specialist Program		\$120,000
Fortis Energy Study Incentives		\$16,200
Total	\$106,500	\$349,100

Additional Involvement

Improved relationship and increased communication with FortisBC

CNG Feasibility Study

Project Management for Street Light Retrofit

Completion Date	
31-Mar-16	<p>Project driver was the replacement of a failed heat recovery storage tank. After approval of a Community Energy Leadership Program energy grant and FortisBC rebate, the project increased in scope to include boiler and controls upgrades which resulted in Natural Gas savings of 2660 GJ per year. After rebates and grants, the capital cost is \$75,000 (2.9 year payback).</p>
1-Jun-16	<p>Project driver was to improve reliability and avoid mechanical failure of the existing pump station. The Energy Specialist was engaged resulting in the installation of a smaller duty pump which resulted in a demand charge reduction of approx 200 kVA.</p>
1-Jun-16	<p>Project driver was end of service of the existing street lights. Other considerations in the design were improved energy efficiency and reduced operational cost. The design included replacement of 222 existing HPS street lights with LED lights which resulted in Electrical savings of 116,508 kWh/year. After rebates, the incremental capital cost to upgrade to LED fixtures is \$60,000 (4.8 year payback).</p>
30-Sep-16	<p>Project driver is end of service life of the existing boilers. The project design includes an upgrade to high efficiency condensing boilers from mid-efficiency boilers which will result in savings of 890 GJ per year. After rebates, the incremental capital cost to upgrade to the more efficient condensing boilers is \$27,000 (3.4 year payback).</p>
1-Dec-16	<p>The Energy Specialist, working in cooperation with the operator of the Capital News Centre (RG Properties), identified a project which will reduce operational cost. The design is for replacement of all metal halide fixtures with LED fixtures which will result in Electrical savings of 456,000 kWh/year. After rebates, the total capital cost is \$100,000 (2.4 year payback). This is a win/win project with the City and RG Properties working together to find the best solution to meet the needs of the facility and operator. Also the Electrical kWh savings contribute to the reduction targets identified under the FortisBC Energy Specialist Agreement.</p>
1-Jun-17	<p>\$60,000/year (x2), high potential for another year renewal.</p>
15-Mar-16	<p>Energy Study for Rutland Arena Heat Recovery project.</p>

Report to Council



Date: May 16, 2016
File: 1850-30
To: City Manager
From: Moudud Hasan, Transportation & Mobility Manager
Subject: Pedestrian and Bicycle Master Plan final report

Recommendation:

THAT Council receives, for information, the final Pedestrian and Bicycle Master Plan as attached to this report from the Transportation & Mobility Manager dated May 16, 2016;

AND THAT Council endorses the Pedestrian and Bicycle Master Plan, as presented in the report from the Transportation & Mobility Manager dated May 16, 2016;

AND THAT Council directs staff to bring forward the required Bylaw and Policy updates, as identified in Chapters 6, 7 and 8 of the Pedestrian and Bicycle Master Plan for Council consideration.

Purpose:

To receive Council endorsement on the Pedestrian and Bicycle Master Plan and receive direction for staff to move forward with required implementation items as described in the Plan.

Background:

The City of Kelowna's Pedestrian and Bicycle Master Plan development process started in August 2014. The primary objective was to identify project, program and policy measures to improve walking and cycling conditions in the City. After an in-depth planning process, branded as *Kelowna On the Move*, the final Plan is now ready for Council consideration and approval (Attachments A and B). A team of consultants led by ALTA Planning has assisted staff in developing this Plan. The process included data collection, analysis, mapping, best practice review, public, stakeholder and Council consultation, as well as program, policy and bylaw review. The draft report was presented to Council on January 18, 2016, which was followed by the final round of public consultation. The overall engagement process and its outcomes are summarized in the attached report (Attachment C).

The ultimate goal of this Plan is to create a balanced transportation network where walking and cycling are established as alternatives to driving to achieve a multitude of the 2030 Official Community Plan (OCP) objectives. It is an important infrastructure plan and one of the building blocks for large-scale community plans. Notably, this Plan will inform the next OCP regarding the community's active transportation needs and priorities. It will also inform

the upcoming Transportation Master Plan, a critical tool in examining the future growth of our City and prioritizing infrastructure investments to accomplish the long-term growth strategy.

Vision, Goals and Principles

The vision of this master plan with corresponding goals, principles, and objectives, aligns with that of the current 2030 OCP and is forward thinking to apply to the next OCP. The vision is:

To make walking and cycling safer, convenient, and practical modes of travel, to reduce motor vehicle use and resulting greenhouse gas emissions, and to increase opportunities for active living to improve community health and happiness.

Principles:

- To increase walking and cycling as practical modes of travel; and
- To improve safety and convenience for pedestrians and cyclists.

Goals:

- Increase year-round walking and cycling so that within 20 years, 25% of all trips are made by walking and cycling; and
- Improve pedestrian and cyclist safety so that the rate of collisions with motor vehicles is reduced by 50% within 20 years.

Objectives:

- Network Design:
 - Facilitate and enhance walking and cycling in all roadway design;
 - Apply higher design standards for high demand or “strategic” routes;
 - Develop a comprehensive network for phased implementation.
- Planning, Monitoring and Maintenance:
 - Establish proactive and ongoing planning for new and existing infrastructure;
 - Establish monitoring and evaluation mechanisms;
 - Ensure ongoing maintenance programs for walking and cycling facilities.
- End-of-Trip and Transit Integration:
 - Encourage transit-bicycle integration;
 - Incorporate end-of-trip facilities in new and existing developments.
- Education and Promotion:
 - Develop and implement an ongoing education and awareness program.
- Bylaws, Policies and Enforcement:
 - Establish bylaw, policy, and enforcement measures to improve safety.
- Funding:
 - Support walking and cycling with effective and equitable investment.

State of Walking and Cycling in Kelowna

The City’s existing walking and cycling network consists of 400 kilometres of sidewalks, 297 km of bike lanes and 40 km of shared-use pathways. These are remarkable compared to many other municipalities. However, opportunities for improvement exist in terms of completing gaps in the sidewalk network and providing better width and physical separation to enhance the safety of bike lanes. Such measures will attract users of all ages and abilities to walk or bike to their destinations. Enhanced walking and cycling will also promote transit use and reduce vehicle use, leading to a cleaner environment and a healthier community.

Mode Share

The percentage of walking and cycling trips is gradually increasing in Kelowna. The combined pedestrian and cycling mode share for all daily trips increased from 8% in 2007 to 11% in 2013. In the urban core area, the increase was more pronounced, as the mode share increased from 8.9% in 2007 to 13% in 2013. Due to density and shorter travel distances in the core area, infrastructure investments effectively increase the percentage of walk and bike trips.

Safety

Each year a total of 60 to 70 pedestrian collisions and 60 to 80 cyclist collisions are reported in Kelowna. Despite slight increases in the total number, the average collision rates per capita have remained relatively steady over the recent years.

Barriers

A survey, conducted as part of this planning process, cited a lack of safe infrastructure as the number one reason to be a barrier to cycling as a viable mode choice. For walking trips, time and distance, followed by a lack of sidewalks was the most-cited obstacle.

Public Input

An extensive community engagement process was followed throughout this planning process. The key areas of community concern and interest can be summarized as follows:

- Safety concerns due to the lack of physical separation between bike lanes and vehicles parked and moving;
- Demands for sidewalks to improve pedestrian safety throughout the City;
- Concerns related to wide intersection design and effect on pedestrian and cyclist safety;
- Suggestions to build more cost-effective bicycle facilities;
- Inquiries to expedite the time in implementing this Master Plan; and
- Improved maintenance e.g. sweeping and snow plowing of cycling facilities.

Other than comments that require additional resources, other comments and feedback received were incorporated into the Master Plan.

Status and Outcomes

The Master Plan development has been finalized with the completion of the final round of public engagement sessions. Public involvement at key milestones of this planning process resulted in a pedestrian and bicycle network that serves users of all ages, abilities and trip purposes. The network is carefully designed to improve the level of safety and convenience by optimizing the allocation of available resources. The Plan focuses on key destinations and activity generators, linking higher density Urban and Village Centres, transit exchanges, schools, parks, shopping centres, and other major institutions. The key outcomes are as follows.

Key Outcome 1

- The development of a Geographic Information System (GIS) based inventory of existing pedestrian and bicycle infrastructure;

Key Outcome 2

- The development of Pedestrian and Bicycle Network Maps and identification of priority pedestrian and bicycle projects. A set of prioritization criteria, developed with public and stakeholder input, was applied to rank the projects. This takes into account

geographic location, land use, network connectivity, access to transit, schools, project readiness, cost, and development opportunities. Table 1 summarizes the lengths of existing and proposed facilities, as shown in the maps.

Table 1: Summary of Existing and Future Priority Walking and Cycling Facilities in Kelowna

Infrastructure Type	Existing (km)	Proposed Priority (km)*	Description
Sidewalks	399.8	71.8	One or both sides of the road, excludes beautification, storm drainage, urbanization
Cycle Tracks	3.0	41.5	Cycling facilities physically separated from vehicles & pedestrians
Shared-Use Pathway	36.4	37.7	Roadside paved pathway for walking and cycling
Bike Lanes	298.6**	210	On-road marked bike lanes

*These are proposed new infrastructure in addition to existing facilities; ** Measured on both sides

Key Outcome 3

- A summary of supporting programs and activities to bolster infrastructure initiatives. These activities include:
 - o Awareness, encouragement programs;
 - o Evaluation and monitoring tools; and
 - o Recommended Bylaw and Policy updates.

Funding

The priority walking and cycling networks are shown the master plan and tabulated in the appendix. Based on preliminary cost estimates, the priority projects will cost approximately \$267 million. Table 2 shows the anticipated investments from 2016 to 2020 as outlined in the 2030 Infrastructure Plan. The City anticipates a total investment in new infrastructure of approximately \$90 million by 2030. As such, the plan implementation will need to be completed gradually with investment respecting the priorities and opportunities, along with frequent plan updates. Nevertheless, full implementation of the plan will extend beyond 2030.

Table 2: 2030 Infrastructure Plan Anticipated Investments (2016 to 2020)

Facility Types	2016	2017	2018	2019	2020
Sidewalks	\$417,620	\$500,000	\$500,000	\$500,000	\$500,000
Bike Lanes	\$340,000	\$300,000	\$300,000	\$300,000	\$300,000
Active Transportation Corridors	\$3,230,000	\$4,928,400	\$8,307,799	\$8,407,601	\$3,400,000
Total	\$3,987,620	\$5,728,400	\$9,107,799	\$9,207,601	\$4,200,000

This also applies to encouragement and promotional programs that will need to be gradually expanded to boost awareness and participation in the community. Potential additional funding sources have been identified to increase the level of investment in programs, projects and maintenance. These include:

- Development contributed cash-in-lieu of on-site parking;
- On-street parking revenues;
- Community contribution and Local Area Service taxes; and
- Private sector partnership/ Corporate sponsorship.

Next Steps and Implementation

Staff is seeking Council consideration and approval of the Pedestrian and Bicycle Master Plan. Subsequent to this, the priority pedestrian and bicycle networks will be implemented gradually as part of the annual sidewalk and active transportation capital programs, as well as in conjunction with future developments on adjacent lands and as per requirements in the Traffic Impact Studies. The official network maps will be incorporated into the City's GIS system. The next OCP, 20-Year Servicing Plan and the DCC roads/active transportation program updates will take into account the priority routes, as identified in the Master Plan. Staff will complete necessary policy and bylaw updates as outlined in Chapters 6, 7 and 8 of the master plan and bring forward for Council consideration. This includes incorporation of the new road cross-section design standards in the updated Subdivision, Development and Servicing Bylaw 7900.

Summary

This Master Plan describes a strategic approach for achieving a significant shift in transportation throughout our City, and sets out a vision that underscores the goal of the City to be a truly livable community. The Plan seeks to make walking and cycling safe, accessible, and practical for users of all ages and abilities. The implementation of this plan will establish active transportation as a suitable alternative to driving and thereby reduce environmental impacts of single occupancy vehicles, and address growing demand for new roads and road widening. A balanced transportation network is essential to enhance community health and to make Kelowna an attractive place to live, work and visit. This Plan will set in motion a vision to be realized for decades to come, and takes inspiration from other real-life City examples such as Vancouver, Seattle and Montreal that are actively investing in active transportation and realizing the benefits to health, safety, the environment, neighborhood livability, and sound fiscal spending. The unique character of our City can be enjoyed and enhanced through the creation of a connected set of pedestrian and cycling facilities.

Internal Circulation:

Divisional Director, Infrastructure
 Divisional Director, Community Planning & Real Estate
 Divisional Director, Civic Operations
 Divisional Director, Active Living & Culture
 Divisional Director, Communications & Information Services
 Divisional Director, Corporate & Protective Services
 Infrastructure Planning Department Manager
 Director, Financial Services
 Policy & Planning Department Manager

Existing Policy:

OCP Policy 7.6.1 - Transportation Infrastructure Priority. Transportation infrastructure will be funded, designed, constructed and maintained to meet the needs of users and according to the following priority:

- i. Active Transportation (Walking and Cycling)

- ii. Transit
- iii. Movement of Goods & Services
- iv. High Occupancy Vehicles (HOVs)
- v. Single Occupant Vehicles (SOVs)

Priority will be assigned to active transportation and transit infrastructure that serves and connects Urban Centres, major employers, health care and educational facilities.

OCP Policy 7.7.1 - Motorized Trips. Provide infrastructure to the Urban Centres based on the expectation that not more than 45% of total trips in the City Centre and other Town Centres will be by motor vehicle.

OCP Policy 7.7.2 Ease of Movement. Ensure that pedestrians, bicyclists and transit users can move about pleasantly and conveniently and that they are not unduly impeded in their movements by provisions for enhanced automobile mobility.

OCP Policy 7.8.2 Active Transportation. Ensure corridors identified on Map 7.1 - Active Transportation Corridors, are designed for bicyclists, pedestrians of all ages and abilities, and people getting on and off transit vehicles.

OCP Policy 7.8 .5 Walkability. Increase walkability within the City's Urban Centres.

Climate Action Plan - Reduce vehicle kilometers travelled by 20% per capita.

Council Policy No. 352 - Sustainable Municipal Infrastructure.

The City's municipal infrastructure provides the essential foundation for local economic prosperity and the quality of life for its residents, as well as making a fair and appropriate contribution to global sustainability.

Financial/Budgetary Considerations:

The Master Plan is developed to align with the anticipated investment in the 2030 Infrastructure Plan. Additional funding sources have been identified to increase the level of investment and thereby accelerate the implementation of this plan.

External Agency/Public Comments:

An extensive public engagement process was followed throughout the plan development process. The event dates and outcomes are summarized in the attached report (Attachment C).

Communications Comments:

Communications staff has worked on the Pedestrian and Bicycle Master Plan. A dedicated website, kelowna.ca/onthemove has been created for this project where the public can obtain information

Considerations not applicable to this report:

Legal/Statutory Authority:

Legal/Statutory Procedural Requirements:

Alternate Recommendation:

Personnel Implications:

Submitted by:

M. Hasan, Transportation and Mobility Manager

Approved for inclusion:



Alan Newcombe, Infrastructure Divisional Director

Attachment A: Executive Summary - Pedestrian and Bicycle Master Plan

Attachment B: Pedestrian and Bicycle Master Plan

Attachment C: Community Engagement Report

cc: Divisional Director, Infrastructure
Divisional Director, Community Planning & Real Estate
Divisional Director, Civic Operations
Divisional Director, Active Living & Culture
Divisional Director, Communications & Information Services
Divisional Director, Corporate & Protective Services
Infrastructure Planning Department Manager
Director, Financial Services
Policy & Planning Department Manager



Kelowna On the Move

Pedestrian and Bicycle Master Plan Executive Summary

April 2016



EXECUTIVE SUMMARY

Purpose of the Plan

The Pedestrian and Bicycle Master Plan identifies infrastructure, planning, and policy requirements to promote and facilitate walking and cycling throughout the community.

The plan identifies current gaps and opportunities to create an interconnected active transportation network in a cost-effective manner and is based on six key objectives to structure near and long-term priorities for walking and cycling improvements:

1. Network Design;
2. Planning, monitoring and maintenance;
3. End-of-Trip and Transit Integration;
4. Education and Promotion;
5. Policies and Enforcement; and
6. Funding.

Guiding Vision

To make walking and cycling safer, convenient, and practical modes of travel, to reduce motor vehicle use and resulting greenhouse gas emissions, and to increase opportunities for active living to improve community health and happiness.

Principles

- To increase walking and cycling as practical modes of travel;
- To improve safety and convenience for pedestrians and cyclists.

Plan Goals

- Increase year-round walking and cycling so that within 20 years, 25 per cent of all trips less than five kms in length are made by walking and cycling.
- Improve pedestrian and cyclist safety so that the rate of collisions with motor vehicles is reduced by 50 per cent within 20 years.

Public Engagement

To ensure the Pedestrian and Bicycle Master Plan was well-informed, shaped in part by public input, and that the plan would meet the needs of residents, the City offered a variety of opportunities throughout the project to engage the public and gather their feedback.

In accordance with the guiding principles defined in Council's Engage Policy, engagement outreach was done twice during the project. Initial consultation was done near the onset of the project to gather input for the Plan, and final engagement at the end of the project was done to ensure the draft Plan reflected the communities' desires.

Initial consultation from nearly 250 surveys, 12 stakeholders, 14 administrators, and over 200 open house attendees provided support for the Plan goals; helped develop project prioritization criteria; identified priority network routes and gaps; and identified issues the Plan should address including safety, connectivity and barriers to cycling. This information was used to help draft the active transportation network and Plan.

During the final engagement, the community could comment on the Plan they helped shape. Feedback from the more than 500 surveys and over 260 open house participants during the final consultation showed that the draft Plan would encourage nearly three quarters of respondents to walk more and 83 per cent to bike more. While the majority of respondents expressed support for the Pedestrian and Bicycle Master Plan, feedback on possible plan improvements was reviewed and considered for inclusion in the final version of the Plan.

State of Walking and Cycling in Kelowna

Network Inventory

The City's walking and cycling network currently includes approximately 400 km of sidewalks, 300 km of bike lanes and 40 km of shared-use pathways. Improving and adding more sidewalks and protected cycling facilities will enable users of all ages and abilities to walk or bike to their destinations.



EXECUTIVE SUMMARY

Mode Share

The percentage of walking and cycling trips is gradually increasing in Kelowna. The combined pedestrian and cycling mode share for all trips increased from 8 per cent in 2007 to 11 per cent in 2013. For the urban core area of Kelowna, the growth was more pronounced, as mode share moved from 8.9 per cent in 2007 to 13 per cent in 2013.

Given Kelowna's Official Community Plan target that not more than 45 per cent of total trips in city centre and other town centres will be by motor vehicle, there is room for significant improvement.

Safety

In Kelowna, 60 to 70 pedestrian collisions and 60 to 80 bicycle collisions are reported annually. While the total number of reported collisions for both modes is increasing gradually over time; collision rates per capita is remaining steady.

Barriers

Based on responses to an online survey a lack of infrastructure was noted as the number one reason more Kelowna residents choose not to cycle. For walk trips, time and distance are noted as more significant barriers,

“Ensure that pedestrians, cyclists and transit users can move about pleasantly and conveniently and that they are not unduly impeded in their movements by provisions for enhanced automobile mobility.”

KELOWNA OCP, CHAPTER 7

however lack of sidewalks was the second most-cited obstacle.

Multi-Modal Corridors

There are a number of corridors in Kelowna where the truck, transit, and bicycle routes overlap. These roads were examined and one of two complementary strategies were established for network development:

- Avoid, to the extent possible placing bike lanes along heavy vehicle and high speed routes; or
- For routes of high strategic importance with significant overlap, consider enhancing bike facilities to provide physical separation

Figure E1 highlights the value in limiting multi-modal transportation to specific corridors in order to enhance connectivity and safety for all road users.

Gap Analysis

A gap analysis of the existing pedestrian and bicycle networks was performed to help identify potential improvements. These improvements form the basis of the envisioned active transportation network maps.

Analysis at the block level in the urban core showed missing sidewalks on one or both sides of the street, which create challenges for pedestrians and discourage walking, particularly in Rutland and lower Mission.

A cycling gap analysis was conducted which identified many areas for new routes for connectivity as well as identified weak links in the existing network where improvements can be made e.g., where bike lanes are missing or where more protection from traffic is recommended.

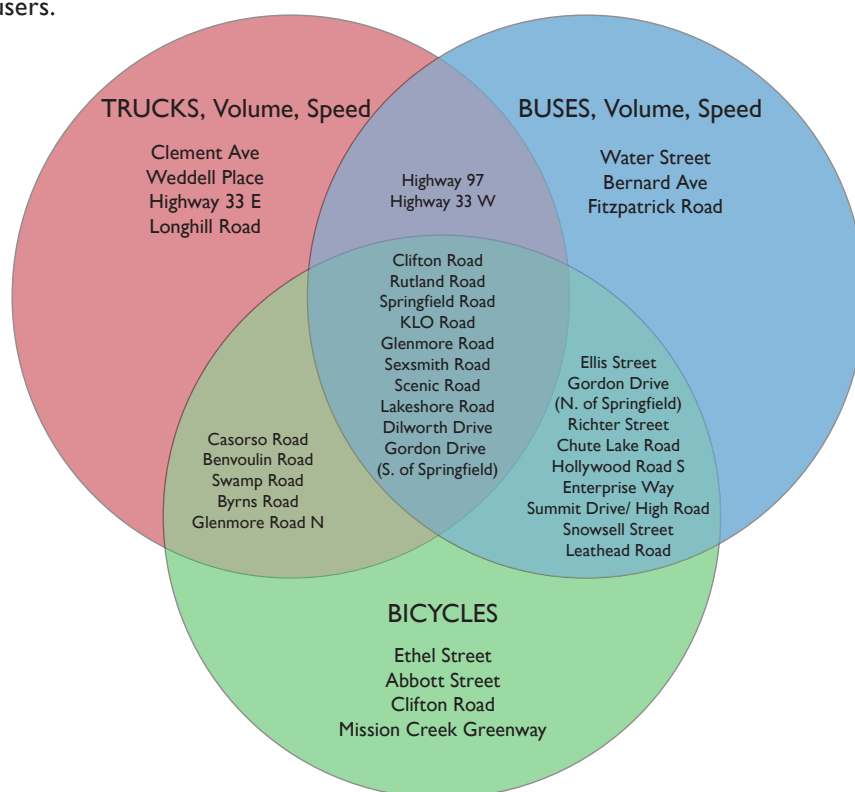


Figure E1: Multi-modal corridors

EXECUTIVE SUMMARY

Active Transportation Vision

A long-term vision was developed for pedestrian and bicycle networks based on technical analysis and stakeholder input. The network was divided into:

- the Primary Network - forms the backbone of Kelowna's active transportation system and is intended to serve users of all ages and abilities with physically separated walking and cycling facilities; and
- the Supporting Networks - provide additional walking and cycling facilities at a neighbourhood level.

The Primary Network includes routes with improved facilities consisting of paved shared-use pathways or a combination of sidewalks and cycle tracks.

The supporting Bicycle and Pedestrian network includes sidewalks, paved or unpaved shared-use pathways, bike lanes or low-volume, traffic-calmed streets.

The future primary and supporting active transportation network for pedestrians and cyclists is illustrated in Figures E2 and E3 respectively, and summarized in Table E1.

Table E1: Future priority active transportation network summary

Infrastructure Type	Existing (km)	Proposed (km)
Sidewalks	399.8	71.8
Cycle Tracks	3.0	41.5
Shared-Use Pathway, Paved	36.4	37.7
Bike Lanes	298.6	210.0

Investment Options

The pedestrian and bicycle networks presented will need to be completed in phases to minimize financial burden on residents.

Table E1 summarizes the total length of the proposed on-road active transportation network. Based on preliminary planning level cost estimates the delivery of the priority facilities alone will cost approximately \$267 million. Further, as the active transportation network grows, additional operation and maintenance investments will be necessary to support the new routes

The City of Kelowna currently invests approximately \$500,000 in its annual sidewalk program and \$300,000 in bike network programs each year. This current allocation results in less than \$90 million invested in the network by 2030, inadequate funding to complete the delivery of the facilities.

Potential funding sources are explored further as options to increase the investment in active transportation programs and projects, including;

- Community contribution fees and taxes;
- User fees and project related revenue sources;
- Other grants; and
- Private sector.

Prioritization and Implementation

Given the number of infrastructure projects identified and limited resources available within annual capital programs, it is important to prioritize individual active transportation projects required throughout the City.

Ranked project lists were created for each of the primary network, pedestrian network and cycling network, based on prioritization criteria endorsed through public consultation and best practices. This helped determine the most urgent projects and projects which may be implemented later.

The number of projects to be implemented over the next 20 years will be determined by the City's Financial Strategy and 2030 Infrastructure Plan.

The following prioritization criteria were used to rank individual projects:

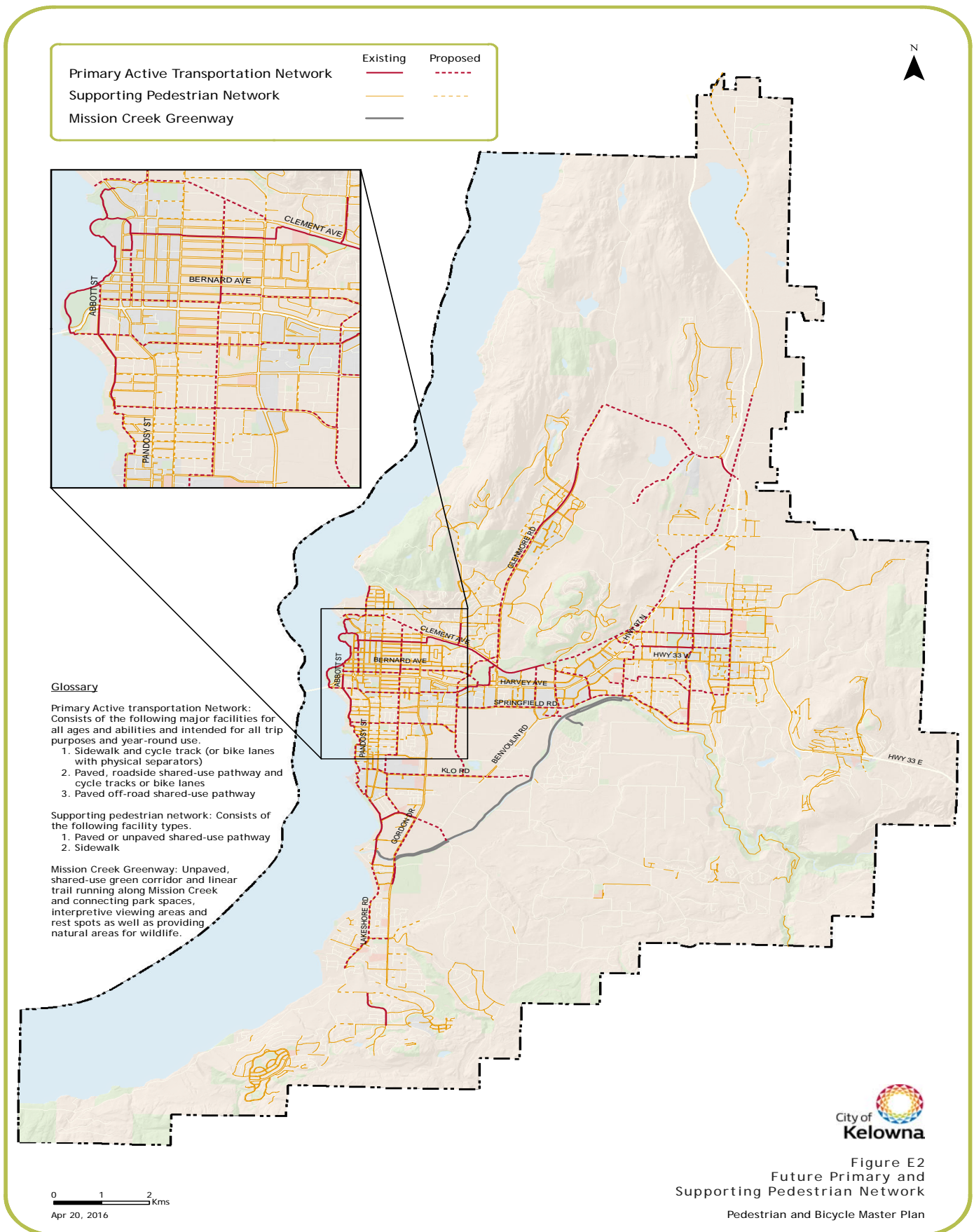
Utility Criteria

- Geographic area
- Gap Closure
- Connectivity to Transit
- Primary Network Route
- Connectivity to Schools

Implementation Criteria

- Project Readiness
- Project Cost & Site Constraint
- Development Opportunity

EXECUTIVE SUMMARY



EXECUTIVE SUMMARY

Primary Active Transportation Network
Supporting Cycling Network
Mission Creek Greenway

Existing Proposed
— - - -
— - - -
— - - -

Glossary

Primary Active transportation Network: Consists of the following major facilities for all ages and abilities and intended for all trip purposes and year-round use.

1. Sidewalk and cycle track (or bike lanes with physical separators)
2. Paved, roadside shared-use pathway and cycle tracks or bike lanes
3. Paved off-road shared-use pathway

Supporting Cycling Network: Consists of the following facility types.

1. Paved or unpaved shared-use pathway
2. Bike lanes

Mission Creek Greenway: Unpaved, shared-use green corridor and linear trail running along Mission Creek and connecting park spaces, interpretive viewing areas and rest spots as well as providing natural areas for wildlife.

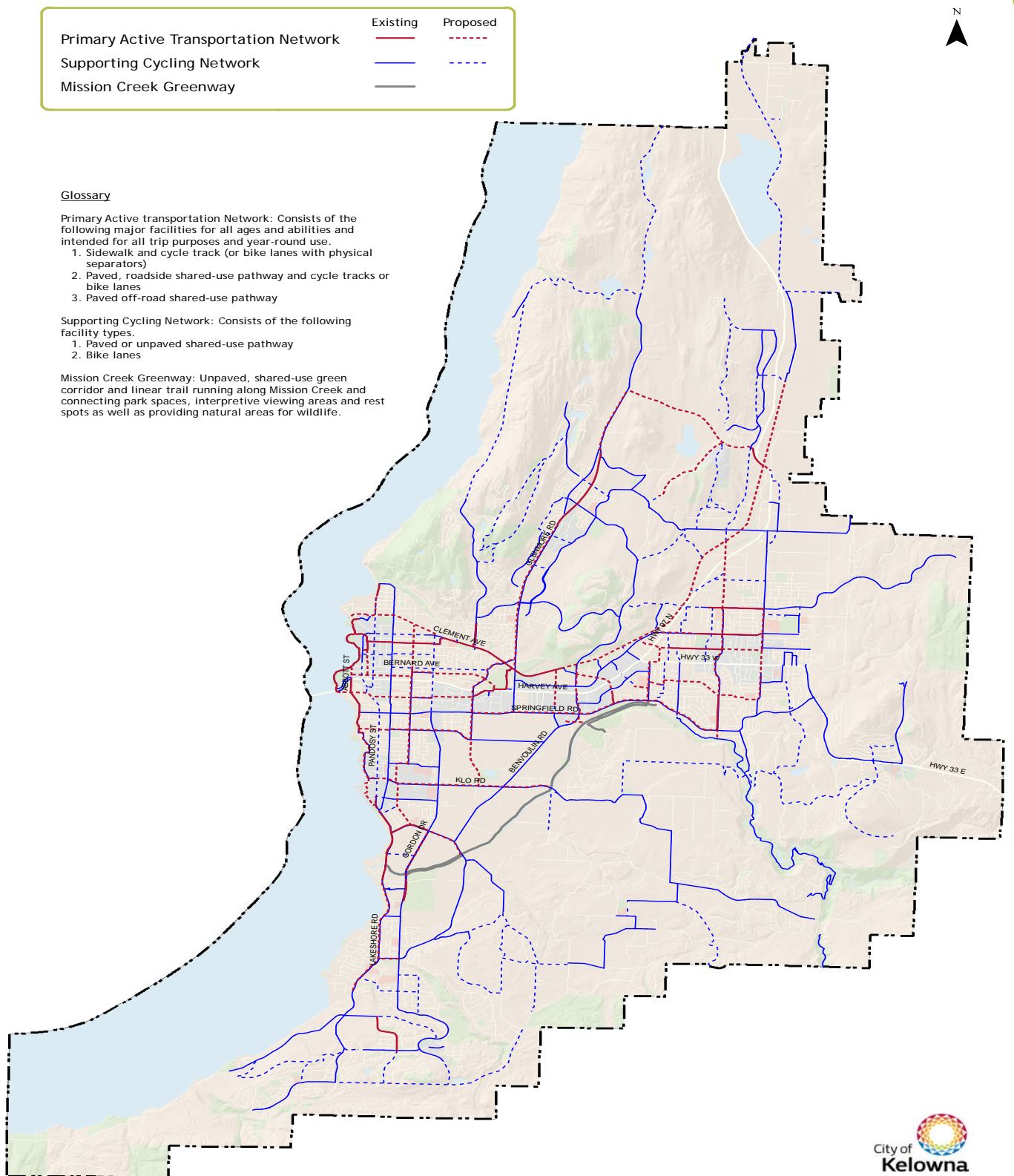


Figure E3
Future Primary and
Supporting Cycling Network
Pedestrian and Bicycle Master Plan

EXECUTIVE SUMMARY

Facility Design

To increase the walking and cycling mode share, a fresh approach to facility design is necessary that considers users of all ages and abilities.

Active transportation facilities must be designed based on environmental and functional requirements that take into account user needs, roadway and traffic conditions.

Recommendations to Kelowna's current standard road cross-section (Bylaw 7900: Subdivision Development and Servicing bylaw) are based on the Transportation Association of Canada and the National Association of City Transportation Officials publications.

These guidelines introduce new facility types and identify strategies to retrofit existing facilities to make active transportation suitable and attractive to children, less confident cyclists and seniors.

Bylaw and Policies

Updated bylaws and policies are necessary to improve conditions for walking and cycling. Recommended updates to Kelowna's Zoning, Traffic and Subdivision, Development and Servicing Bylaws will:

- encourage or require the provision of bicycle amenities;
- enable skate and skateboard access to sidewalks and shared-use pathways;
- adopt standard road cross-section designs that accommodate pedestrian and bicycle access;

- require end-of-trip facilities in new workplaces; and
- modify the Payment-in-lieu Parking Policy to support active transportation-related projects.

Programs

Education, encouragement, enforcement and evaluation programs encourage people to use active transportation, inform the public of its benefits, and provide resources to shift from motor vehicle trips to alternative active transportation modes.

Programs are essential and cost-effective complements to infrastructure investments.

Kelowna currently runs programs in conjunction with regional partners such as School Travel Planning, Bike to Work/School Week, and youth bicycle skills training. In addition, Kelowna has launched Active By Nature,

an interactive map and wayfinding program that highlights the extensive network of pathways and shared trails.

A detailed strategy should be developed based on research that clarifies barriers to active transportation, and targets specific audiences, measures success and explores funding sources.

Further, the strategy should be complemented by:

- A Program Assistant position and program budget to focus on various City safety and active transportation initiatives;
- Enforcement campaigns to encourage safe road user behaviour; and
- Ongoing surveys and automated counts to accurately track active transportation behavior change.



Shared-Use Pathways accommodate community needs



City Hall
1435 Water Street
Kelowna, BC V1Y 1J4
T. 250 469-8542
F. 250 862-3316
ask@kelowna.ca

kelowna.ca/onthemove



Kelowna On the Move

Pedestrian and Bicycle Master Plan

April 2016



TABLE OF CONTENTS

Executive Summary	E-I
Chapter 1: Background	
1.1 Plan Purpose	2
1.2 Principles, Goals, Objectives	3
1.3 Community Benefits	4
1.4 Policy Review	5
Chapter 2: Existing Walking and Cycling Conditions	
2.1 Existing Conditions	8
2.2 Existing Pedestrian Network	11
2.3 Existing Cycling Network	11
2.4 Who's Walking and Cycling, Why, and Where?	14
2.5 Barriers to Walking and Cycling in Kelowna	18
2.6 Pedestrian Network Gap Analysis	21
2.7 Cycling Gap Analysis	23
2.8 Multi-Modal Transportation Analysis	27
Chapter 3: Active Transportation Vision	
3.1 Bikeway Network Mesh Width Standard	29
3.2 Future Active Transportation Network	30
Chapter 4: Prioritization and Implementation	
4.1 Prioritization Criteria	38
4.2 Project Ranking	42
4.3 Network Implementation	42
4.5 Implementation Strategy	44
Chapter 5: Investment Options	
5.1 Current and Planned Investment	46
5.2 Best Practices	48
5.3 Potential Funding Sources	49
5.4 Funding Options for Further Consideration	54
5.5 Investment Considerations	56
Chapter 6: Facility Design and Maintenance	
6.1 Active Transportation Facility Design	58
6.2 Bicycle Facility Types	59
6.3 Linear Parks Master Plan	65
6.4 Bicycle Parking Guidelines	66
6.5 Bicycle Parking Facility Types	67
6.6 Facility Design Guidance	69
6.7 Active Transportation Facility Maintenance	73
6.8 Summary of Facility Maintenance Recommendations	80
Chapter 7: Bylaw and Policy Measures	
7.1 Zoning Bylaw No. 8000	82
7.2 Payment in Lieu of Parking Bylaw No. 8125	85
7.3 Building Bylaw No. 7245	86
7.4 Official Community Plan updates	86
7.5 Traffic Bylaw No. 8120	87
7.6 Subdivision, Development and Servicing Bylaw No. 7900 ..	89
7.7 Additional Bylaw and Policy Measures	93
7.8 Summary of Recommended Bylaw & Policy Measures	94
Chapter 8: Supporting Programs	
8.1 Awareness Programs	96
8.2 Encouragement Programs	98
8.3 Enforcement	100
8.4 Evaluation and Monitoring	101
8.5 Summary of Recommended Programs	102
Appendices	
Appendix A: Glossary	A-2
Appendix B: Engagement Process	
B.1 "On the Move" Online Survey, Mind Mixer Map and Online Survey	A-4
B.2 Stakeholder Event	A-5
B.3 School District Survey	A-6
B.4 Draft Plan Engagement	A-8
Appendix C: Pedestrian and Bicycle Project List	
C.1 Priority Cycle Track Projects	A-10
C.2 Priority Shared-use Pathway Projects	A-11
C.3 Priority Sidewalk Projects	A-12
C.4 Priority Bike Lane Projects	A-16
Appendix D: Facility Design	
D.1 Intersection Design Improvements	A-18
D.2 Potential Retrofit Ideas for Existing Streets	A-25



CHAPTER 1: BACKGROUND

BACKGROUND

Kelowna residents aspire to have a community that is compact and walkable, where the natural environment is protected, and where walking paths and cycling routes connect destinations throughout the community (Kelowna 2030 Official Community Plan, 2011).

The Pedestrian and Bicycle Master Plan is a long-term plan that identifies infrastructure, planning and policy requirements to promote and facilitate walking and cycling throughout the community. The Plan is one component of the Transportation Master Plan and together the plans will help achieve the OCP goal to “Feature A Balanced Transportation Network, increasing the attractiveness, convenience and safety of all modes of transportation ... focusing on pedestrians, cyclists and transit service.” Ultimately, the community can benefit economically, socially and environmentally from a well-established pedestrian and bicycle network.

Building on the guiding vision “to make walking and cycling safer, convenient, and practical modes of travel,” the Plan is based on six key objectives to structure priorities for walking and cycling: network design; planning, monitoring and maintenance; end-of-trip and transit integration; education and promotion; policies and enforcement; and funding.

1.1 Plan Purpose

This Plan identifies infrastructure, planning, and policy requirements to promote walking and cycling in the community. It identifies current gaps and opportunities, and prioritizes improvements to create an interconnected active transportation network in a cost-effective manner.

The plan complements and builds on Kelowna’s Official Community Plan (OCP) and the Community Climate Action Plan (CCAP). These plans have goals of providing non-vehicular transportation options and reduced greenhouse gas (GHG) emissions as

the transportation sector accounts for an estimated 65 per cent¹ of Kelowna’s GHG emissions. The overall target is to reduce GHG emissions 33 per cent below 2007 levels by 2020.

The Pedestrian and Bicycle Master Plan is based on a vision for the City that ensures that walking and cycling are safe, convenient, and practical modes of travel.

“Ensure that pedestrians, cyclists and transit users can move about pleasantly and conveniently and that they are not unduly impeded in their movements by provisions for enhanced automobile mobility.”

KELOWNA OCP, CHAPTER 7

¹ [Community Energy and Emissions Inventory \(CEEI\) Report \(2010\)](#).



1.2 Principles, Goals, Objectives

This Pedestrian and Bicycle Master Plan is based on the following vision, goals and objectives that are aligned with the City's OCP. The principles and goals describe general outcomes, and the objectives provide measurable targets in order to achieve each goal.

Guiding Vision

To make walking and cycling safer, convenient, and practical modes of travel; to reduce motor vehicle use and resulting greenhouse gas emissions; and to increase opportunities for active living to improve community health and happiness.

Principles

- To increase walking and cycling as practical modes of travel;
- To improve safety and convenience for pedestrians and cyclists.

Goals

- Increase year-round walking and cycling so that within the next 20 years 25 per cent of all trips less than five kilometres in length are made by walking or cycling.
- Improve pedestrian and cyclist safety so that the rate of collisions with motor vehicles is reduced by 50 per cent within the next 20 years.

Objectives

The Pedestrian and Bicycle Master Plan has six key objectives to structure the short- and long-term priorities in walking and cycling improvements. Each objective is addressed within the implementation strategy.

Network Design

- Facilitate and enhance walking and cycling in all roadway designs;
- Apply higher design standards for high demand or “strategic” active transportation routes;
- Develop a comprehensive pedestrian and bicycle network for phased implementation.

Planning, Monitoring and Maintenance

- Establish proactive and ongoing planning for both new and existing infrastructure;
- Establish monitoring and evaluation mechanisms;
- Ensure ongoing maintenance programs for walking and cycling facilities.

End-of-Trip and Transit Integration

- Encourage transit-bicycle integration;
- Incorporate end-of-trip facilities for pedestrians and cyclists in new and existing developments.

Education and Promotion

- Develop and implement an ongoing education and awareness program.

Policies and Enforcement

- Establish bylaw, policy, and enforcement measures to improve pedestrian and cyclist safety.

Funding

- Support walking and cycling programs and infrastructure with effective and equitable investment.



1.3 Community Benefits

Creating a community that is suitable for walking and cycling for all trip purposes and demographics will benefit everyone. The City of Kelowna recognizes that healthier, more livable communities include a balanced multi-modal transportation system that serves the public and is more efficient to build and maintain in the long-term. The direct benefits of a high-quality pedestrian and cycling network include:

Economic Benefits

- Walking and cycling are affordable transportation options;
- Investments in pedestrian and cycling infrastructure cost less to build per kilometer than roadways;

- Pedestrian and bicycle activity is good for the local economy, reducing expenditures on operating and maintaining a motor vehicle, and freeing up disposable income for investment in local goods and services.

Health and Social Benefits

- Regular physical activity contributes to a wide variety of health benefits, such as lower rates of obesity and reduced risk of cardiovascular disease and type 2 diabetes;
- More people out walking and cycling contributes to more vibrant streets and more social capital through human interaction. Further, more eyes on the street results in safer streets.

Environmental Benefits

- Walking and cycling are zero-emission activities that provide environmental benefits such as improved air quality and reduced noise, vibration and light pollution.

A sign of a City's attractiveness and livability is a superior walking and cycling environment. A recent trend has emerged among the younger generation of Millennials – they are choosing to live in compact urban centres, opting for walking, cycling and public transit over car ownership. Cities that respond to this emergent trend and shift towards active and sustainable transportation systems will attract and retain a younger population.

Mission Creek Greenway Trail



BACKGROUND

1.4 Policy Review

In developing the Pedestrian and Bicycle Master Plan all relevant official plans and policy documents were reviewed.

The [2030 Official Community Plan](#) provides the over arching policy direction for the well-being, growth and development of the community. The OCP's comprehensive transportation strategies include implementing complete streets, transportation demand management policies, and facilitating walking and cycling for daily travel and recreation. Chapter 7 of the OCP details infrastructure policy directions for general transportation, demand management, pedestrians, cycling, and transit, and provides high-level recommendations to support increased walking and cycling. The OCP commits the City to a 33 per cent reduction in greenhouse gas (GHG) emissions below 2007 levels by 2020.

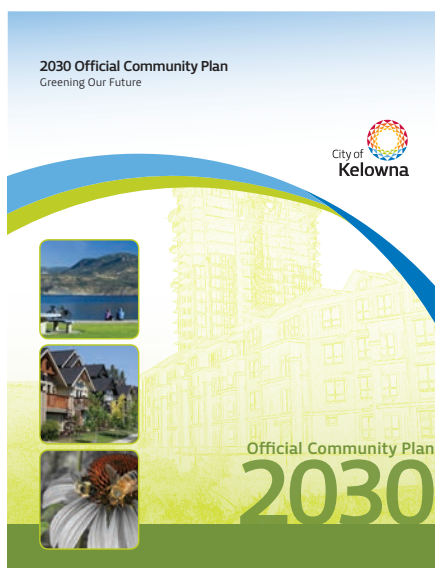
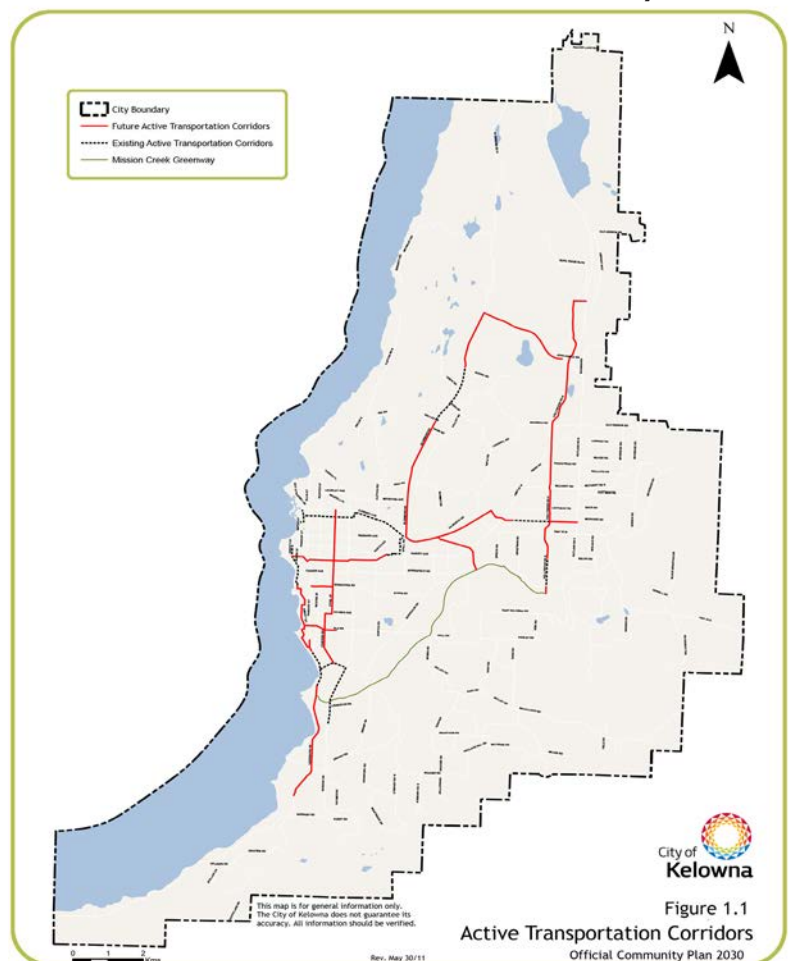
The [20-Year Servicing Plan](#) (2011) supports the infrastructure needs identified in the OCP. It summarizes Development Cost Charges-based (DCC) Roads and Active Transportation Programs that creates transportation network connectivity and capacity required to support development in the City. A number of active transportation corridors are identified for delivery by 2030.

Figure 1.1 shows existing Active Transportation corridors and Future Active Transportation corridors that are planned for construction by 2030.

The [Central Okanagan Regional Active Transportation Master Plan](#) (2012) incorporates the needs and priorities of each local municipality and identifies opportunities to improve and expand pedestrian and cycling infrastructure to enhance active transportation connections and linkages between municipalities in Central Okanagan.

All projects identified in OCP Map are considered regionally significant.

Figure 1.1: Existing and Future Active Transportation Corridors, as identified in the Official Community Plan



BACKGROUND

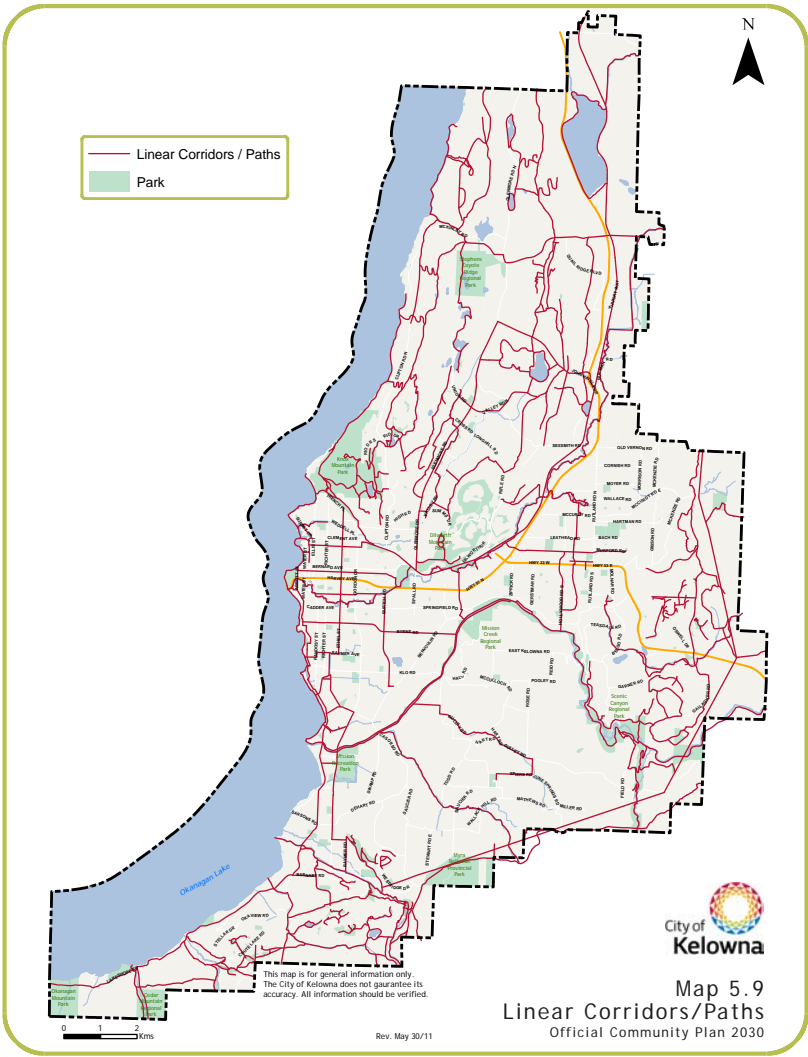
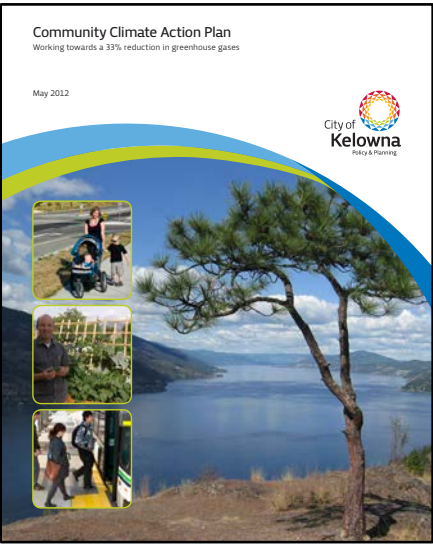
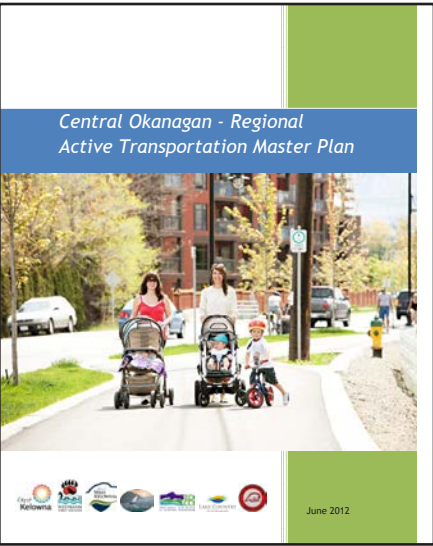
The [Community Climate Action Plan](#) (2012) outlines the steps required to achieve a 33 per cent reduction below 2007 levels in community GHG emissions by 2020. The CCAP reports that reducing overall driving levels and changing vehicle types are the most effective initiatives in reducing GHG emissions. To this end, the CCAP specifically identifies land-use planning and urban design as key in the creation of a compact, walkable community which, in turn, will facilitate reductions in GHGs.

The [Linear Parks Master Plan](#) (2009) envisions a network of linear parks serving primarily recreational travel purposes. The Master Plan presents a classification system for Kelowna’s linear parks that differentiates facilities on the basis of width, level of use, and cost. The Linear Parks Master Plan interprets urban bicycle and pedestrian facilities as park facilities, and focuses accordingly on aspects of tourism, ecology and trail head design.

Emphasis of the Linear Parks Master Plan is on an off-road trail network throughout the city, versus a commuter network.

Figure 1.2 shows existing and planned linear corridors and pedestrian paths as identified in the Linear Parks Master Plan.

Figure 1.2: Existing and Planned Linear Corridors and Pedestrian Paths, as identified in the Linear Parks Master Plan





CHAPTER 2: EXISTING WALKING AND CYCLING CONDITIONS

EXISTING WALKING AND CYCLING CONDITIONS

The City of Kelowna's existing transportation network consists of 400 km of sidewalks and walkways, 300 km of on-road bike lanes and over 40 km of shared-use pathways. Improving and adding a variety of facilities will enable users of all ages and abilities to walk or bike to their destinations.

The City has made great strides in improving the conditions for walking and cycling. The 2013 Household Travel Survey results show that there has been a 40 per cent increase in the number of daily trips taken by walking and cycling, going from 8 per cent of all trips originating in Kelowna in 2007 to more than 11 per cent in 2013.

These trends are consistent with Kelowna's Official Community Plan Objective 7.7: "reduce peak hour trips and the percentage of trips undertaken by single occupant vehicles, particularly in Urban Centres, in order to reduce the expansion of the network and capacity."

Feedback from stakeholders and residents was used in identifying barriers, such as safety and network gaps, to help design and prioritize a pedestrian and bicycle network that will meet our community's needs.

2.1 Existing Conditions

To meet walking and cycling demands, the City has been constructing sidewalks and shared-use pathways both as standalone projects and in concert with roadway upgrades and development frontage works. A variety of facility types have been used to meet this demand, outlined in the following definitions.

Cycling: Includes various types of bicycles, in-line skates, roller-skates and skateboards as defined/permitted by the City bylaws and Motor Vehicle Act.

Walkway: A short segment of walking facility used to connect neighbourhoods to sidewalks usually at the end of cul-de-sac bulbs.

Sidewalk: An asphalt or concrete walking facility adjacent to roads exclusively for pedestrians.



EXISTING WALKING AND CYCLING CONDITIONS

Shared-Use Pathway - Off-Road:

An off-road two-way facility that is shared by pedestrians, cyclists, and other users with or without directional separation and built using a range of surface material.



Shared-Use Pathway - Roadside:

A roadside two-way asphalt or concrete facility that is shared by pedestrians, cyclists, and other users.



Cycle Track: An exclusive one-way or two-way cycling facility that can be at road, sidewalk or an intermediate level and is physically separated from both vehicular and pedestrian traffic.



EXISTING WALKING AND CYCLING CONDITIONS

Bike Lanes: An exclusive one-way, street-level cycling space designated by means of pavement striping, markings and signage that is located adjacent to vehicular traffic.



Local Street Bikeway: A short segment of local road that is shared by cyclists and motor vehicles, designated through pavement markings and signage. Local Street Bikeways require traffic-calmed streets with 85 per cent vehicular operating speeds of 30 km/hr or less and Average Annual Daily Traffic volume (AADT) of less than 500.



EXISTING WALKING AND CYCLING CONDITIONS

2.2 Existing Pedestrian Network

Historically, land use in the Okanagan Valley has been predominantly rural with a dispersed population, resulting in dependence on motorized vehicles for transportation. As the City becomes more urbanized, with a mix of land uses and increased population density, walking and cycling become more viable options for a variety of trips. To meet walking and cycling demands, the City has been constructing sidewalks and shared-use pathways both as standalone projects and in concert with roadway upgrades and development frontage works.

The City has also been improving accessibility by adding improved

crosswalks, curb ramps, audible pedestrian signals, and countdown timers at intersections. In 2015, the City had approximately 400 km of sidewalks and walkways (Figure 2.1). New walking facilities are added each year as part of new developments. In addition, the annual sidewalk capital program, allows the network to expand by approximately 2.0 km each year. This program does not include urbanization or beautification of streets such as curb, gutter, boulevard, paved parking to replace gravel shoulders.

2.3 Existing Cycling Network

The City of Kelowna has approximately 300 km of bike lanes plus 35 km of paved shared-use pathways.

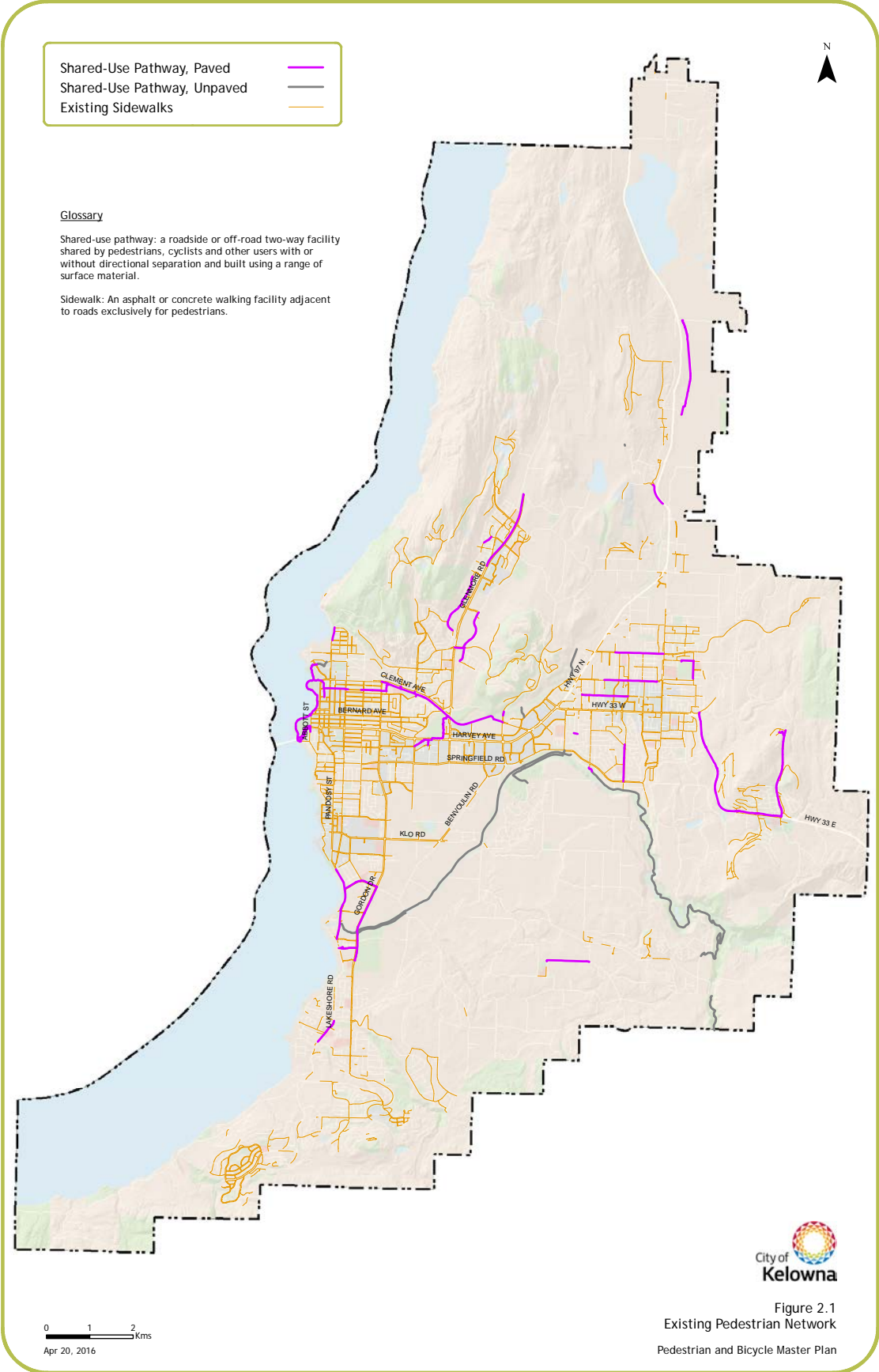
The cycling network is expanded and improved each year, albeit slowly due to limited resources. In addition to on-road bike lanes, there are pathways, shared between cyclists and pedestrians, and more recently introduced separated cycle tracks, green bike lanes equipped with signal push buttons, signal displays and count stations.

Figure 2.2 illustrates the current system, which is a combination of various types of facilities ranging from traffic-calmed neighbourhood streets to separated cycle tracks and shared-use pathways.

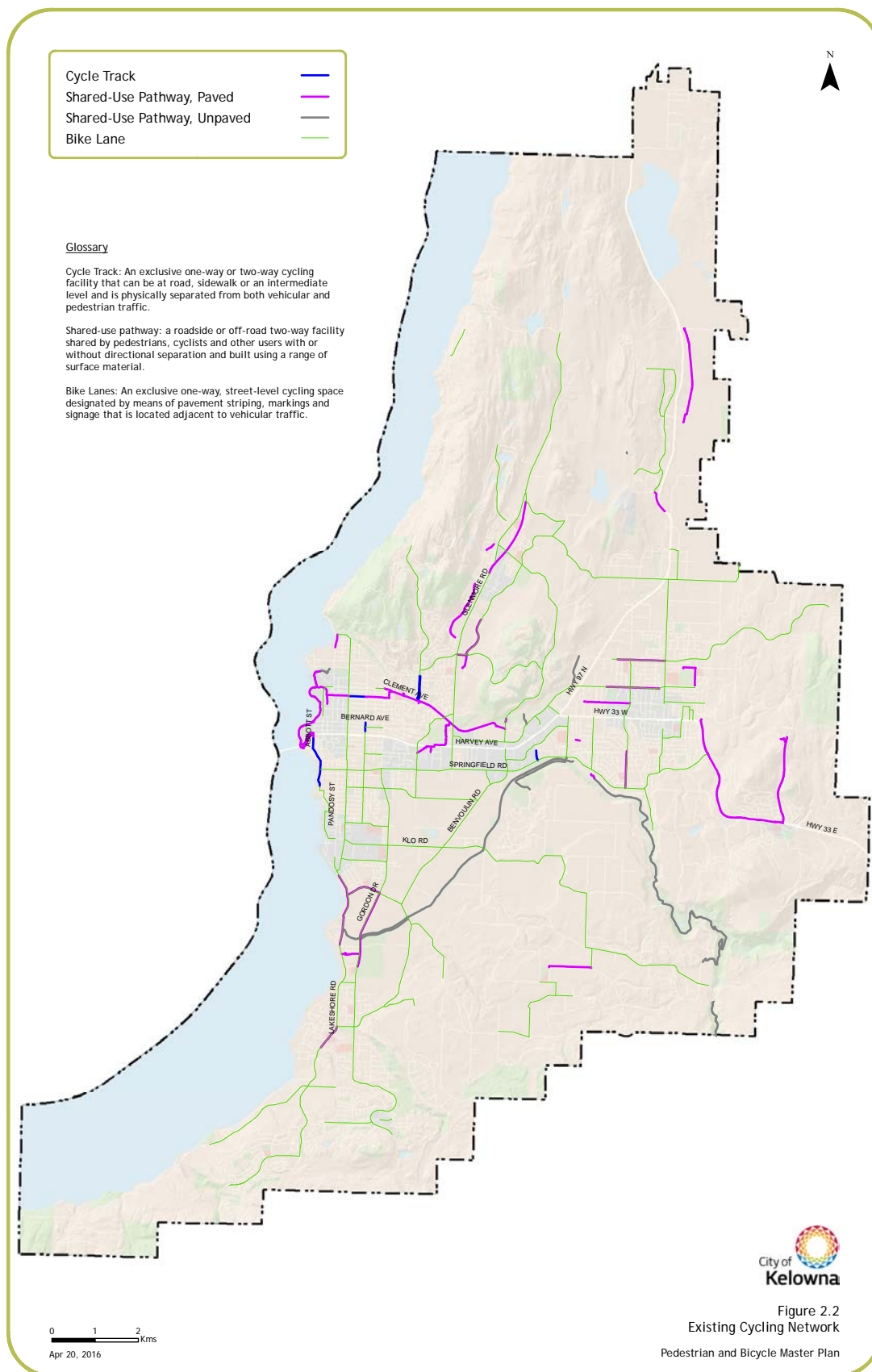
The City undertakes other projects and programs to encourage and support cycling, including regular roadway sweeping, provision of bicycle lockers, bike racks, and SmartTRIPS. These measures are important and there remains an opportunity to do even more to serve users of all ages and abilities.



EXISTING WALKING AND CYCLING CONDITIONS



EXISTING WALKING AND CYCLING CONDITIONS



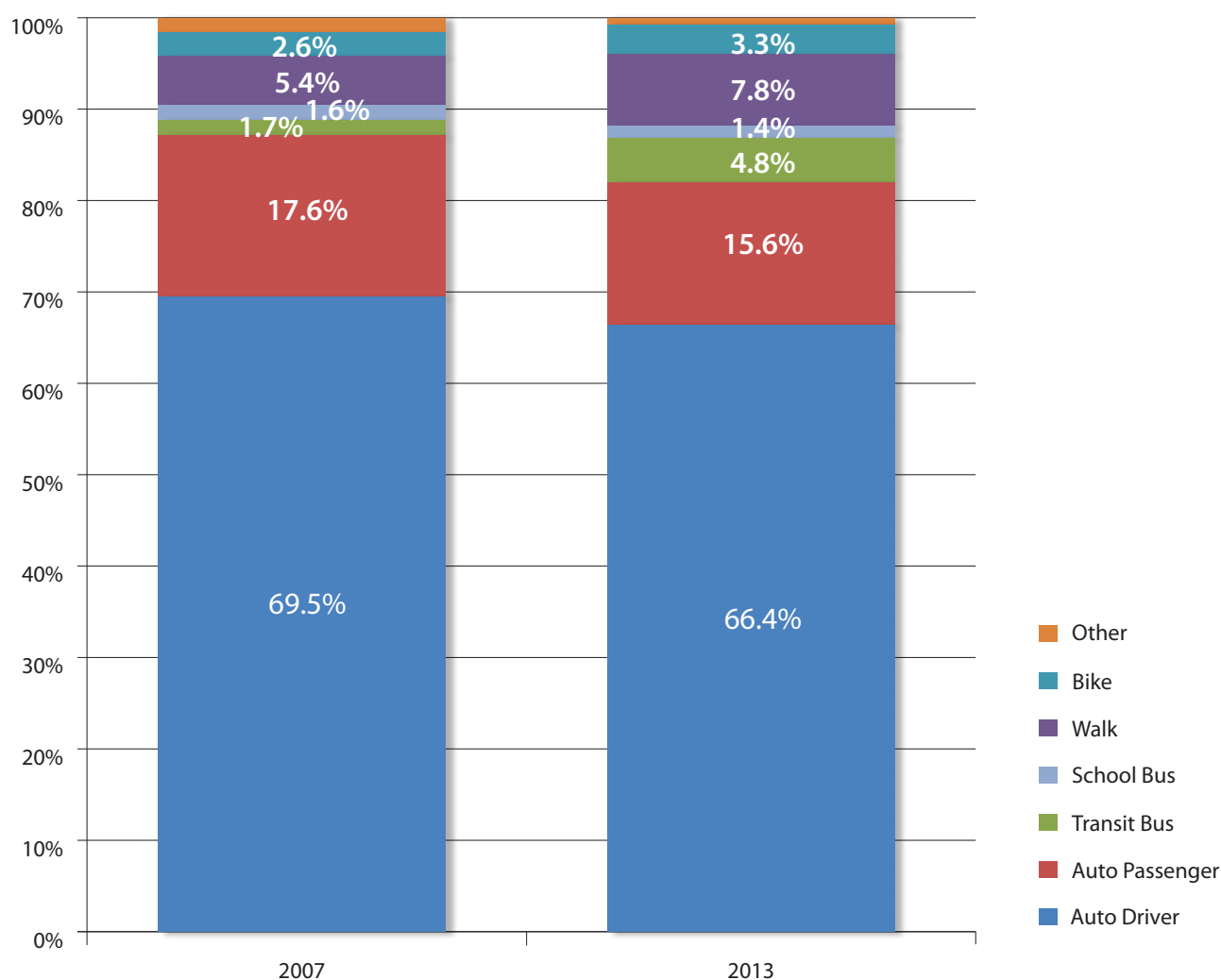
2.4 Who's Walking and Cycling, Why, and Where?

The Household Travel Surveys undertaken in the Central Okanagan Region in 2007 and 2013 indicate a gradual shift in travel behaviour away from single-occupancy motor vehicles and toward sustainable modes, such as walking, cycling and transit. Figure 2.3 shows trip mode trends for the City of

Kelowna daily (24-hour) travel patterns surveyed in 2007 and 2013. The figure suggests that auto mode share dropped from 69.5 per cent of all trips to 66.4 per cent of all trips, while bicycle mode share increased from 2.6 per cent to 3.3 per cent and walking increased from 5.4 per cent to 7.8 per

cent. The combined walking and cycling mode share for all trips is therefore 11.1 per cent, up from 8.0 per cent in 2007, a growth of almost 40 per cent. This growth is further described in Figure 2.5.

Figure 2.3: Trip mode trend (24 hr) City of Kelowna 2007 and 2013



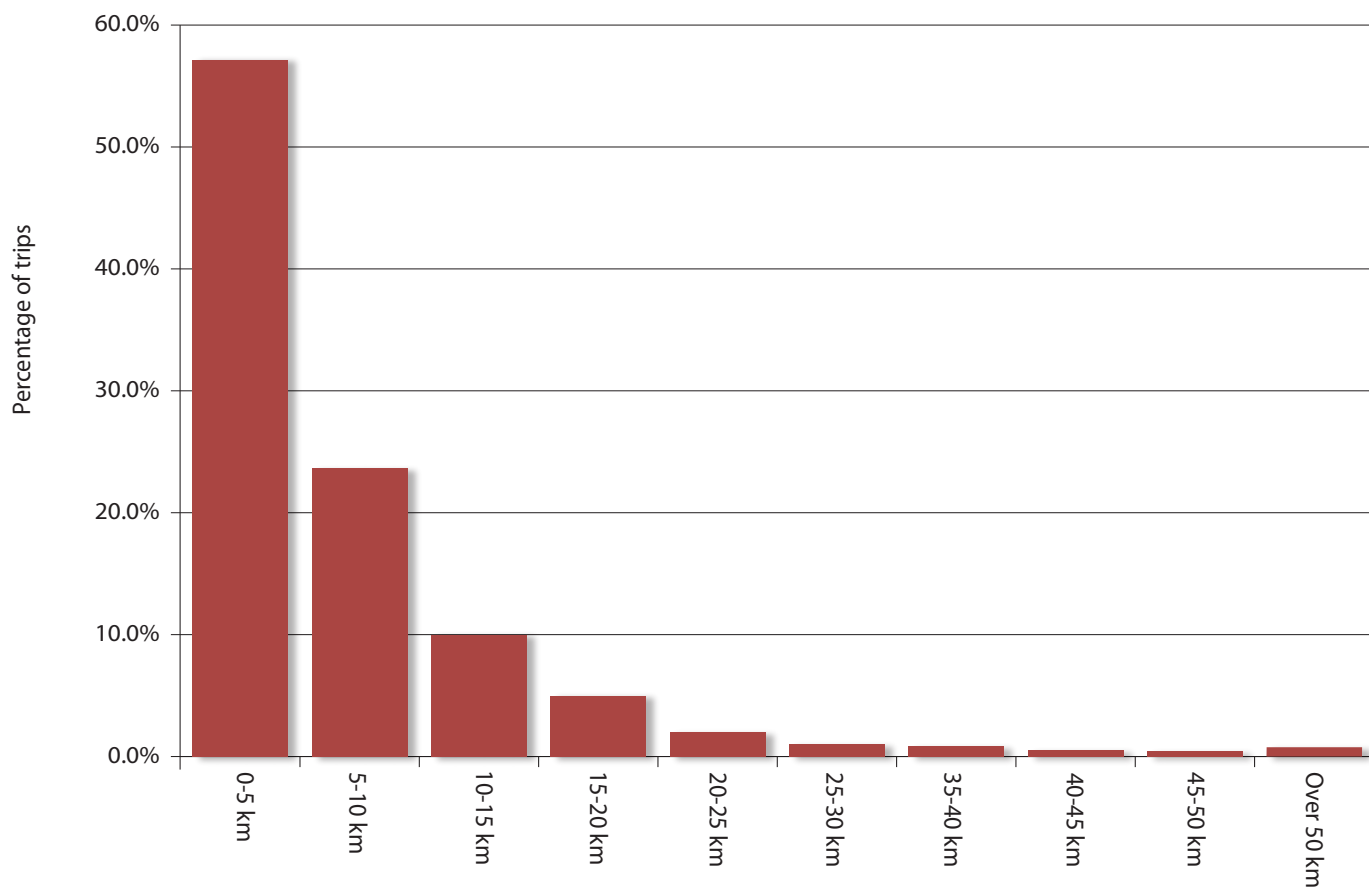
EXISTING WALKING AND CYCLING CONDITIONS

Figure 2.4, also from the 2013 Okanagan Household Travel Survey, indicates that 56 per cent of trips are under 5 km in length and approximately 23 per cent are between five and 10 km, for a total of approximately 79 per cent of all trips under 10 km.

Research undertaken by the National Household Travel Survey in the United States and by TransLink in Metro Vancouver shows that over 90 per cent of all bicycle trips are less than

10 km and 90 per cent of all walking trips are less than two km in length. This means that the significant number of trips in Kelowna that are under two and 10 km could potentially be shifted from driving to walking and cycling respectively. This Pedestrian and Bicycle Master Plan identifies infrastructure improvements and supporting programs to shift such short distance vehicular trips to alternative non-vehicular modes.

Figure 2.4: Trip length distribution Central Okanagan 2013



EXISTING WALKING AND CYCLING CONDITIONS

The Okanagan Household Travel Survey provides detailed statistics regarding the growth of pedestrian and cycling activity in Kelowna since 2007.

As described previously, the combined pedestrian and cycling mode share (for all trips) climbed from eight per cent in 2007 to 11.1 per cent in 2013. For the urban core area of Kelowna, the growth was more pronounced, as mode share moved from 8.9 per cent in 2007 to 13.0 per cent in 2013 (a 45 per cent increase). By contrast, outside the core grew from a 6.0 per cent combined mode share in 2007 to 8.0 per cent in 2013 (a 31 per cent increase).

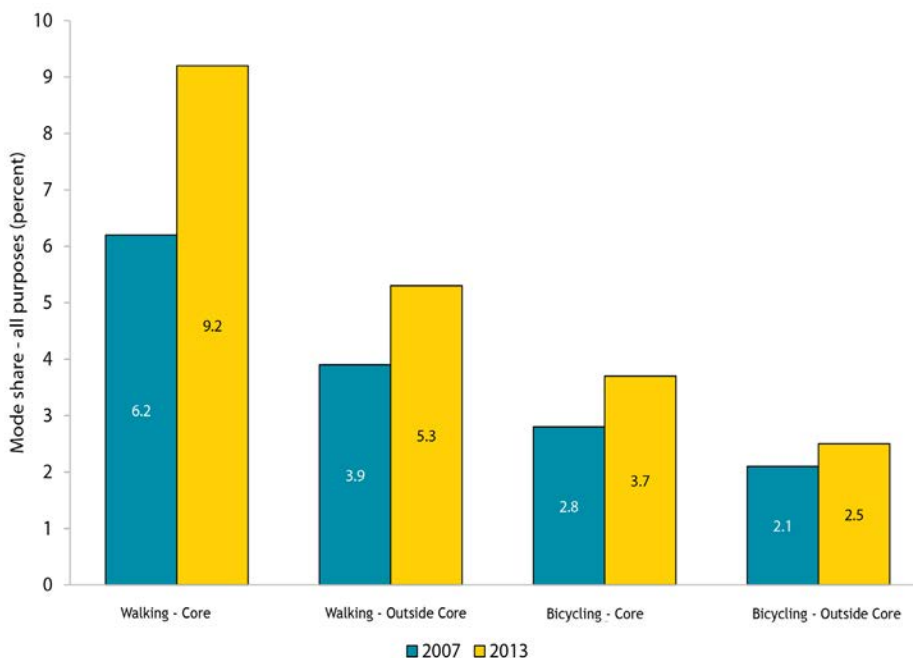
As Figure 2.5 illustrates, pedestrian trips in the core area grew from 6.2 per cent of all trips in 2007 to 9.2 per cent in 2013 - a full 50 per cent increase over six years.

Cycling also had a large growth in the core area, growing from 2.8 per cent to 3.7 per cent, a 32 per cent increase.

Figure 2.6, the Census Journey to Work data spatially shows that the Core Area of Kelowna is favoured for walking to work. In the core neighbourhoods, walking rates are typically 5 to 12 per cent, with several neighbourhoods approaching 20 per cent.

As seen in Figure 2.7, the core and northern areas of Kelowna are also favoured for cycling to work. In the core and northern neighbourhoods, cycling rates are typically two to five per cent, with several neighbourhoods around seven per cent.

Figure 2.5: Kelowna walking and bicycling trip shares in 2007 and 2013 (2013 Okanagan Household Travel Survey)



EXISTING WALKING AND CYCLING CONDITIONS

Figure 2.6: Kelowna walking mode share.
Census Journey to Work, 2011

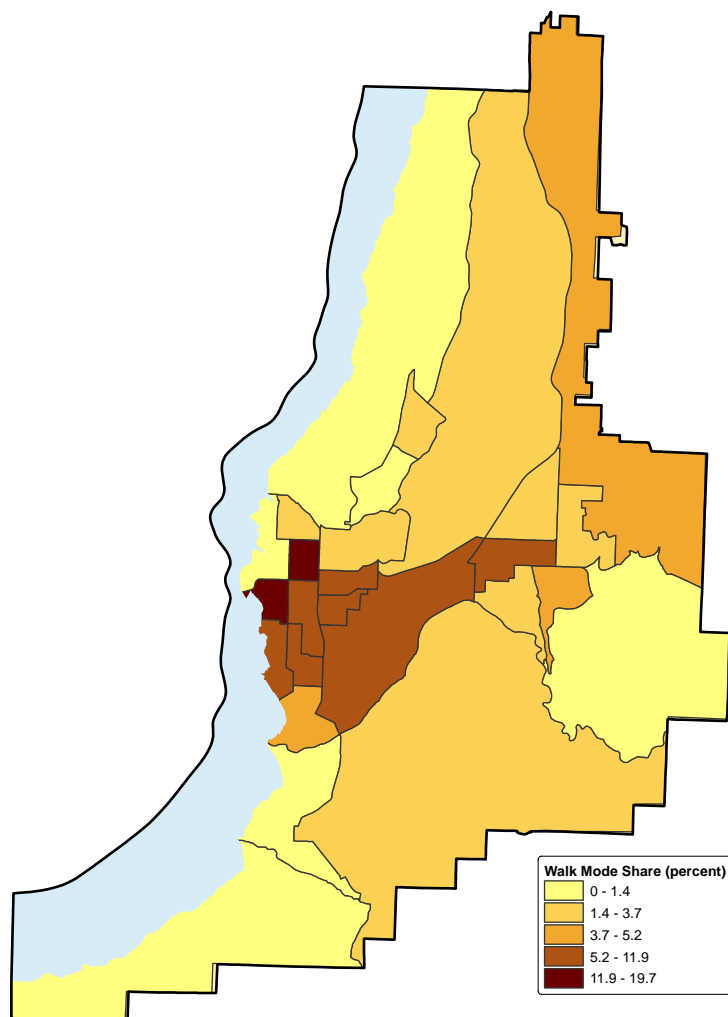
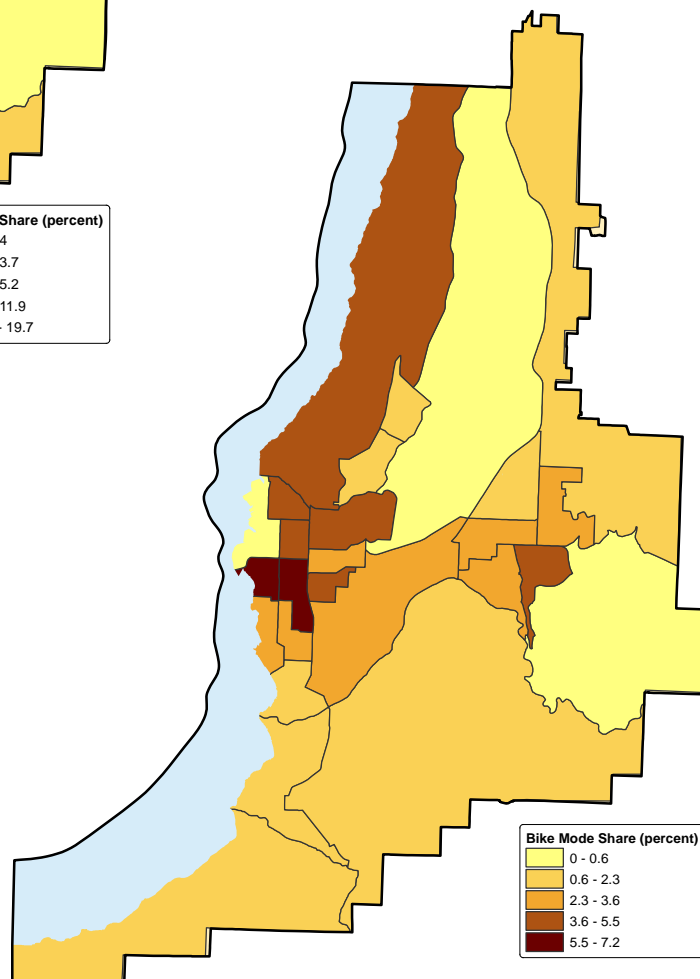


Figure 2.7: Kelowna cycling mode share.
Census Journey to Work, 2011



2.5 Barriers to Walking and Cycling

Based on responses to an online survey of Kelowna residents undertaken for this study, the most common perceived barriers to walking and cycling are inconvenience and lack of infrastructure (see Figure 2.8 and 2.9).

For pedestrians, the concern regarding a lack of infrastructure (the #2 response) is compounded by the perception that travel distances are too long to walk (#1) and other convenience factors such as “I have too much stuff to carry” (#3) and “I don’t have time” (#4). These convenience factors are more pronounced for pedestrians than for bicyclists, and together represent the most significant barrier for pedestrian travel, eclipsing the deterrent factor of missing sidewalks and/or paths.

For cyclists, lack of infrastructure comprised the top three responses, with lack of protected and/or off-street infrastructure representing two of these top three. To the extent that perceived lack of protected and/or separated bicycle infrastructure can be understood as an indicator of perceived lack of safety, the results suggest that safety is of particular concern to cyclists.

Figure 2.8: Reasons for not walking to a destination

What are the reasons you DO NOT choose to walk more often when heading to work/school/errands, etc? Check all that apply.

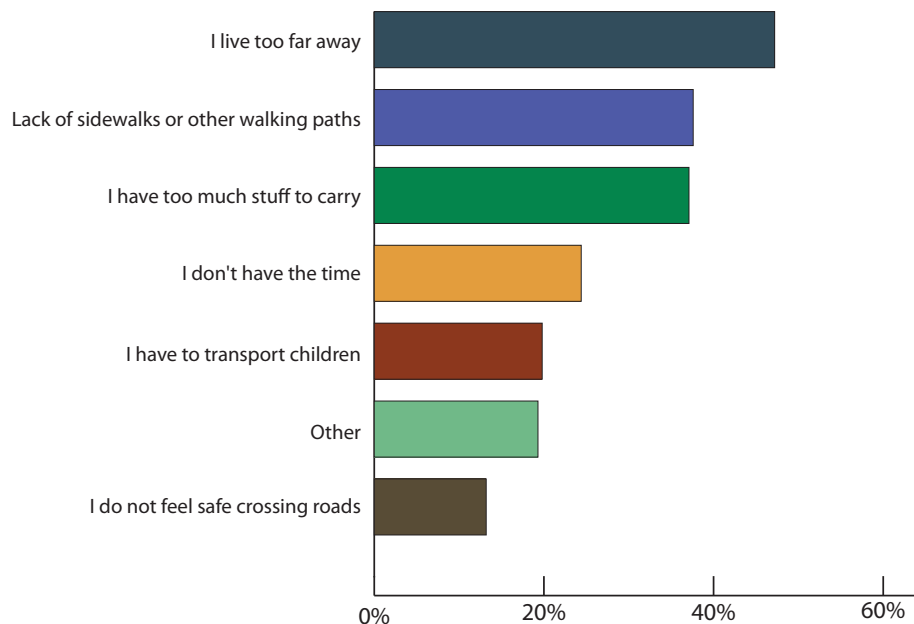
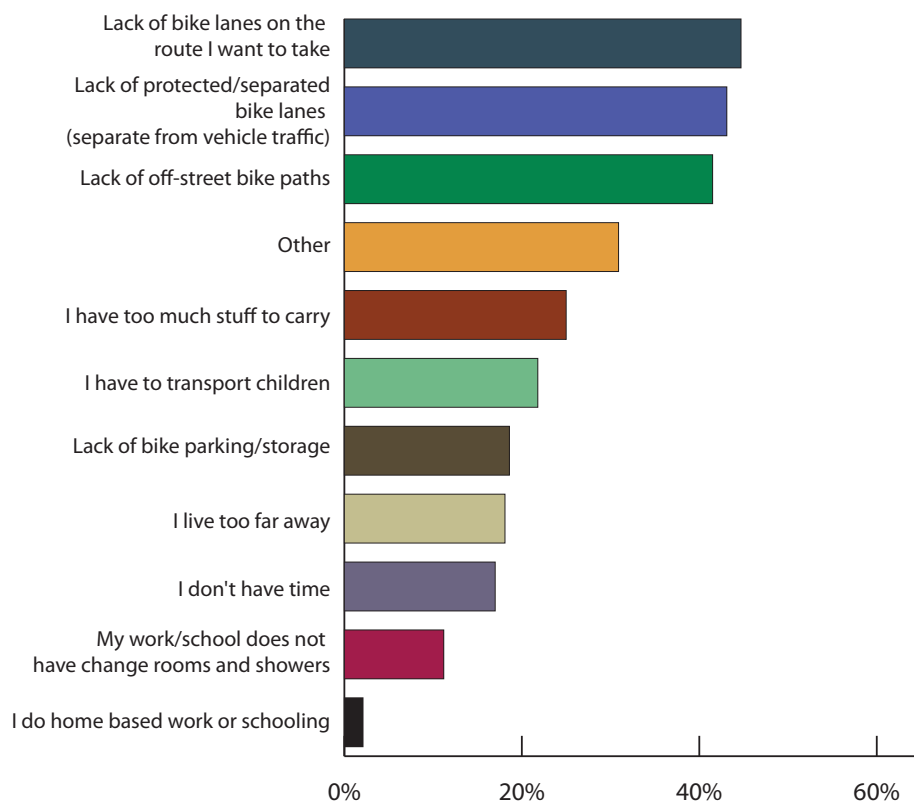


Figure 2.9: Reasons for not cycling to a destination

What are the reasons you DO NOT choose to cycle more often when heading to work/school/errands, etc? Check all that apply.



EXISTING WALKING AND CYCLING CONDITIONS

According to ICBC collision claims data, Kelowna averages 60 to 70 reported pedestrian collisions annually and 60 to 80 reported bicycle collisions annually. The absolute number of reported pedestrian collisions is increasing gradually over time; however, the number of collisions per capita is remaining steady. Figure 2.10 illustrates the trend line for pedestrian crashes from 2001 to 2013.

Total reported bicycle collisions are also gradually increasing, but population growth has meant that the number of per-capita bicycle crashes has maintained a relatively steady rate (about 60 collisions per 100,000 residents). These trends are shown in Figure 2.11.

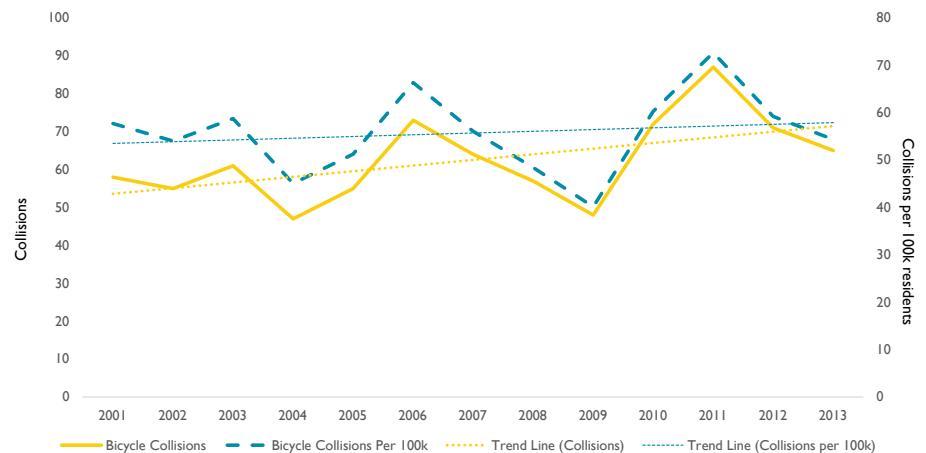
Between 2001 and 2013:

- Kelowna has averaged about two pedestrian fatalities per year and one bicycle fatality per year;
- Four pedestrian fatalities occurred in parking lots, one cyclist fatality also occurred in a parking lot; and
- Heavy vehicles were not involved in any pedestrian fatalities, but heavy vehicles were involved in two cyclist fatalities in 2012.

Figure 2.10: Pedestrian collisions, 2001-2013 (ICBC)



Figure 2.11: Bicycle collisions, 2001-2013 (ICBC)



EXISTING WALKING AND CYCLING CONDITIONS

Figure 2.12 shows location of frequent pedestrian collisions include:

- Major arterials (especially Highway 33 and Gordon Drive);
- Intersections;
- Downtown.

Figure 2.15 shows locations of frequent bicycle collisions include:

- Major arterials (especially Highway 33, Gordon Drive, Harvey Avenue and Springfield Road);
- Intersections;
- Downtown.

There are a number of challenges with the current active transportation network that affect the desire to move around the City safely and conveniently.

These challenges include:

- A curvilinear¹ street network that provides few direct routes through some neighbourhoods;

¹ Curvilinear networks feature winding roads and cul-de-sacs that link to surrounding neighbourhoods via collector and arterial streets. They can be a challenge to navigate by foot and bicycle because routes are indirect, distances are long and high-speed, high-volume streets cannot be readily avoided. Curvilinear street networks are contrasted against conventional grid networks, which provide a nearly unlimited number of alternative travel routes due to increased connectivity (i.e. the presence of numerous intersections and multiple parallel and perpendicular streets).

- Physical and geographic barriers, such as Highway 97 and Orchard Park Mall;
- Conflicts between truck, transit, and bicycle routes;
- Areas of the City that are inaccessible by bicycle; and
- On-street bike lanes that are not suitable for all ages and abilities.

Figure 2.12: Pedestrian collisions in Kelowna (ICBC, 2001-2013)

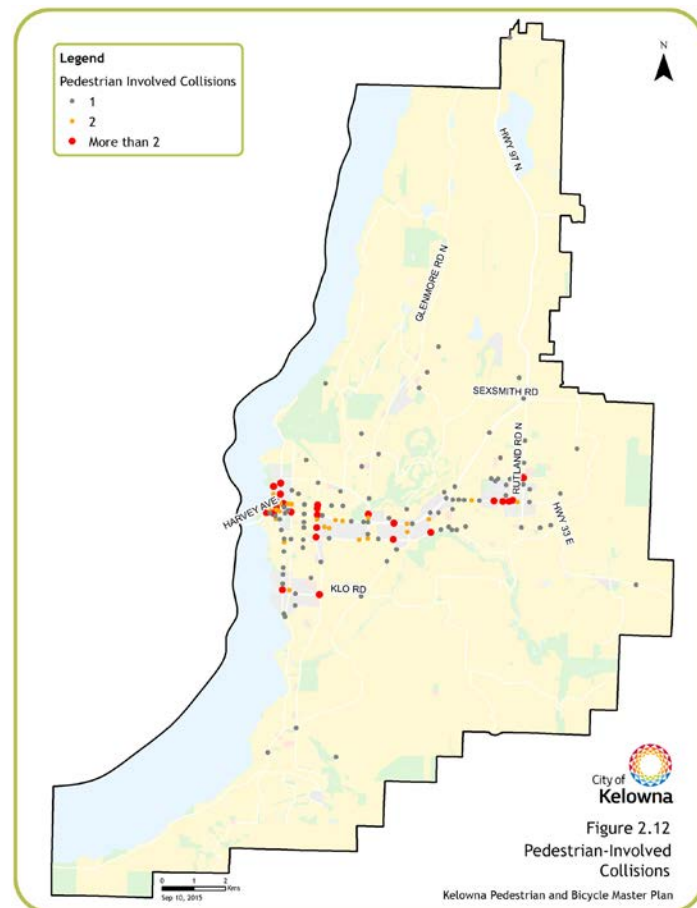
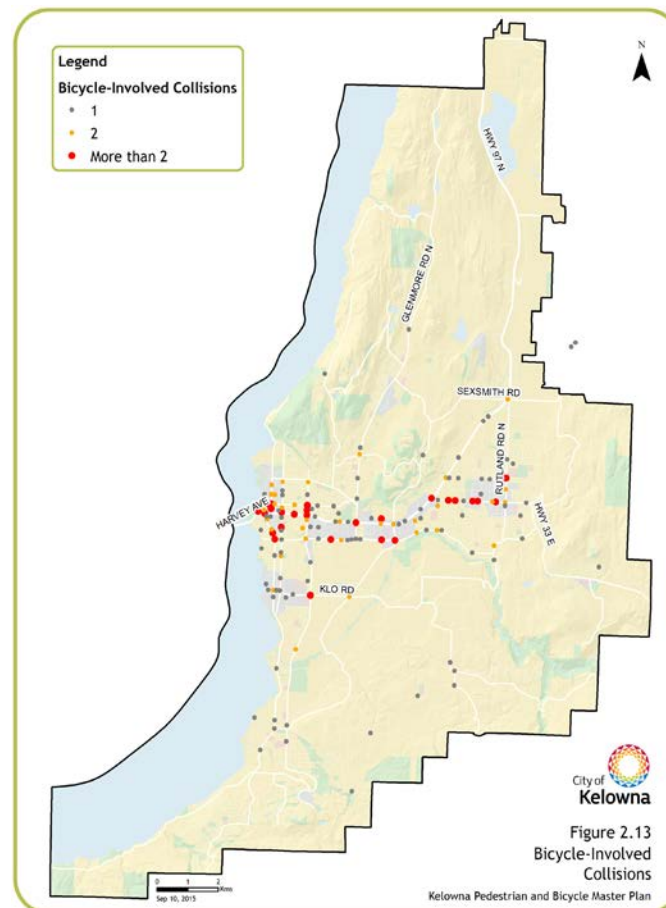


Figure 2.13: Bicycle collisions in Kelowna (ICBC, 2001-2013)



2.6 Pedestrian Network Gap Analysis

There are approximately 400 km of sidewalks in Kelowna, compared with 810 km of roadways. This means that, on average, the sidewalk network in Kelowna is one-quarter complete (assuming that 1600 km of sidewalk are required to service both sides of all streets). Gaps in the pedestrian

network exist at the block level, even within the Core Area, where missing sidewalks create unexpected challenges for pedestrians, wheelchair users and others, and discourage walking. These gaps at the block level were the focus of the pedestrian gap analysis and presented in Figure 2.14.

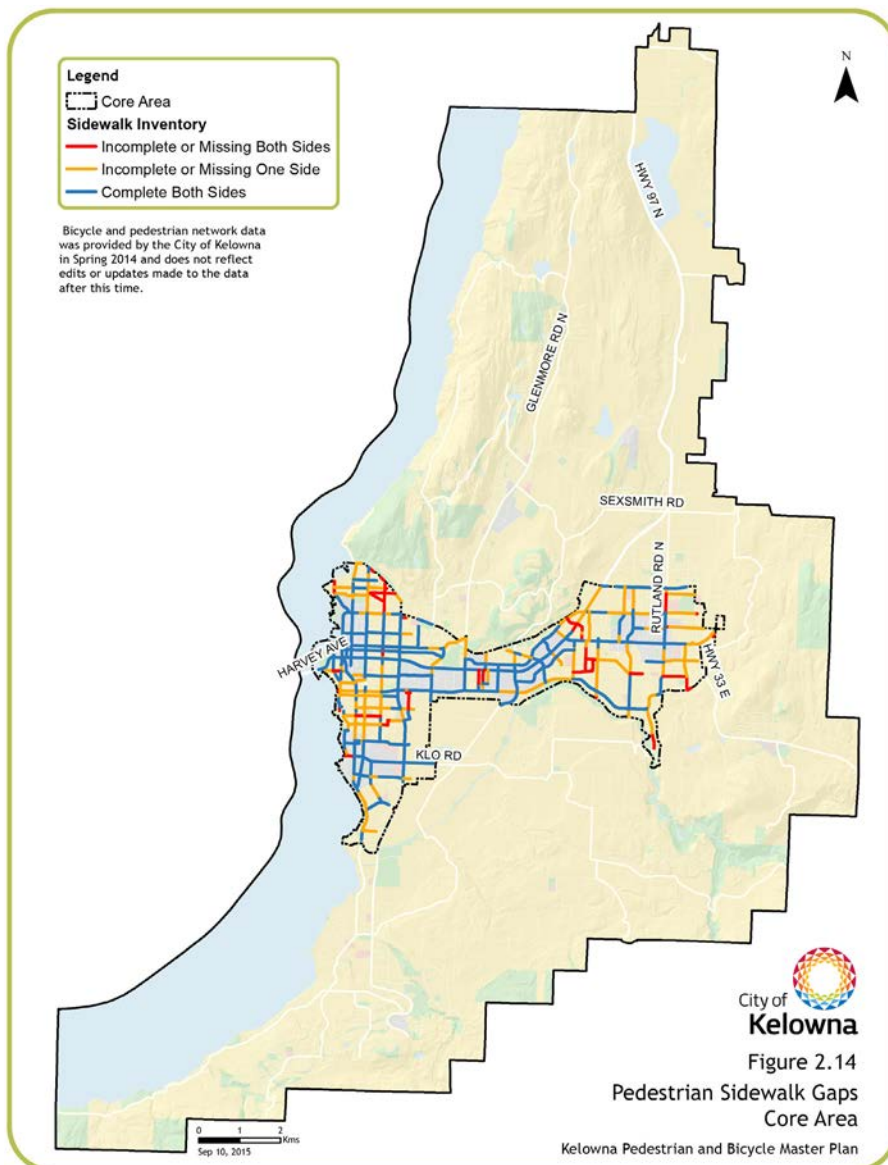
This gap analysis was limited to the City's Core Area that includes the most built-up neighbourhoods, amenities, transit stops and other high activity areas. This area covers the neighbourhoods of Downtown, North End, South Pandosy, Landmark, Orchard Park, Enterprise, Baron Road, and sections of Rutland. The rationale for limiting the scope of the analysis to this area is two-fold:

- Most destinations that are attractive to pedestrians are located within the Core Area of Kelowna; and
- Walking mode shares in outlying areas are significantly lower than in the Core Area.

The gap analysis was conducted based on the pedestrian network Geographic Information Systems assembled in Spring 2014.

This approach recognizes that gaps in the pedestrian network are more likely to be problematic in areas of the City with relatively high pedestrian activity. It also acknowledges that resources for sidewalk improvements are limited, so investing in sidewalks will be most effective in areas with “walkable” characteristics like high population densities, compact urban form, grid-like street networks and clusters of amenities/destinations. Finally, this approach assumes that pedestrian gaps tend not to be neighbourhood-wide, and are best addressed at the block level.

Figure 2.14: Pedestrian sidewalk gaps - core area



EXISTING WALKING AND CYCLING CONDITIONS

Sidewalk gaps are shown on Figure 2.14. Red lines indicate where sidewalks are missing on both sides of the street. Yellow lines show locations with a sidewalk missing on one side.

It is notable that the only continuous east-west streets offering largely complete two-sided pedestrian travel through the Core Area are Highways 97 and 33—two of the least appealing

streets for pedestrians due to vehicle traffic and intimidating intersections.

In addition to the detailed linear analysis shown in Figure 2.14, the sidewalk gap data was generalized to the Census Tract level to represent sidewalk connectivity at the neighbourhood scale in Figure 2.15. Sidewalk completion was calculated by computing the linear kilometres of sidewalk for each Census Tract,

which was converted to a roadway centreline-kilometre equivalent by dividing by two. Centreline sidewalk kilometres and roadway centreline kilometres were then compared to obtain the percentage of roadway with complete sidewalk on both sides.

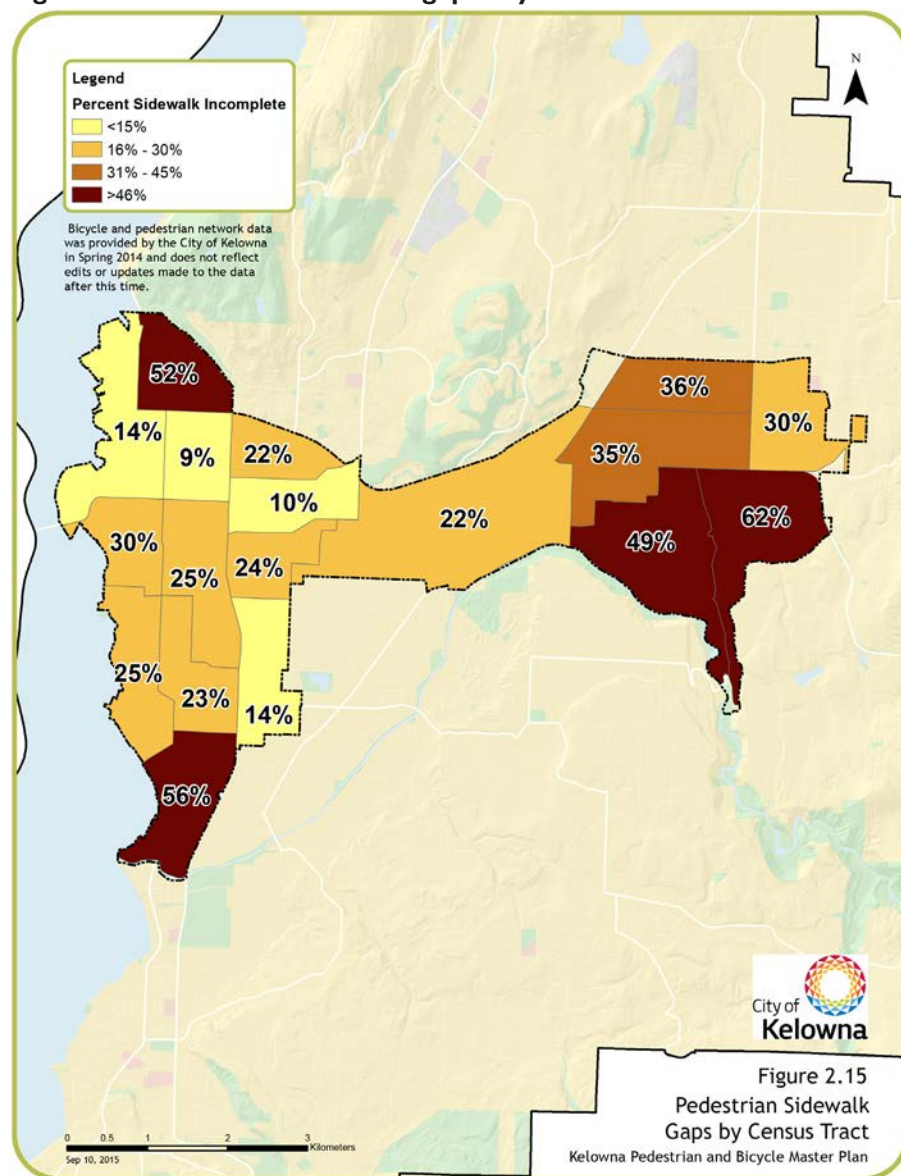
The neighbourhoods to the immediate east and south of Downtown have the most complete street networks in the Core Area, with two-sided sidewalks on nearly all non-local streets.¹

However, most other parts of the Core Area, including Downtown, are less complete.

The results highlight the need for targeted efforts in several sub-areas:

- The northern edge of the historic core, between Cawston Avenue and Knox Mountain;
- The Rutland neighbourhood;
- Downtown and South Central Kelowna;
- The area surrounding Kelowna General Hospital; and
- The southern area that is part of Lower Mission.

Figure 2.15: Pedestrian sidewalk gaps - by Census Tract



¹ Due to data availability, the sidewalk gap analysis was limited to non-local streets only (i.e. collectors and arterials).

2.7 Cycling Gap Analysis

Bicycle trips tend to be longer than pedestrian trips – with some up to 10 km. The bicycle gap analysis therefore considered the entire City as the study area. Gap types identified range from Spot (or Point) Gaps (e.g., a location where a bikeway is “dropped”), Area Gaps (communities where limited or substandard bicycle or pedestrian facilities exist), and Weak Links (where cycling facilities exist but are not suitable for use by a broad spectrum of potential users). These gap types are listed in Table 2.1.

Spot Gaps

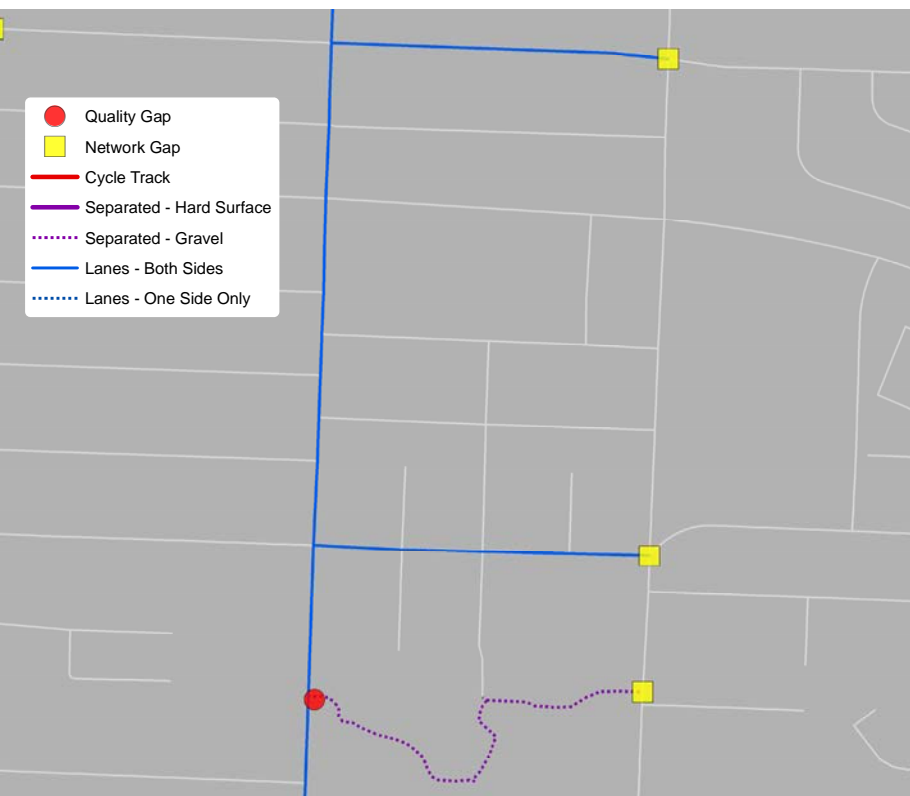
Figure 2.16 illustrates gaps in the bicycle network. Network gaps force cyclists onto a shared roadway—these locations are candidates for improvements. Quality Gaps occur where high-quality routes intersect with lesser routes. At these locations, a cyclist may be forced to transition to a gravel surface or from a pathway to bike lanes on a busy arterial. This is inappropriate for the majority of users due to experience level or bicycle type.

Figure 2.17 illustrates these gaps at a citywide scale, telling a story about where problems in the bicycle network are clustered.

Table 2.1: Cycling gap types

Gap Type	Gap Sub-Type	Description	Notes
Area Gap	n/a	Where no bicycle facility is present in a specified area, based on a coverage analysis of the existing network	This gap type is best identified through a GIS buffer analysis that applies a target mesh width to the existing network
Spot Gap	Network Gap	Where a bicycle or pedestrian facility is discontinuous (“dropped”)	Facilities that terminate unexpectedly are potentially hazardous and are difficult to access
	Quality Gap	Where a bikeway transitions to a lower-order surface (e.g., forced transition from concrete to gravel)	An unexpected reduction in facility quality is a disincentive to bicycle
Weak Link	n/a	Where a bicycle facility is present in a given area, but does not meet guidelines identified in the Design Guide chapter	Existing bicycle routes are deemed “weak links” if they score 3 or 4 on a Level of Travel Stress (LTS) analysis

Figure 2.16 Cycling point gaps example



EXISTING WALKING AND CYCLING CONDITIONS

Key clusters in need of attention exist in the following areas:

- In the downtown core - Leon Avenue, Lawrence Avenue, Bernard Avenue, Pandosy Street, Sutherland Avenue, UBC Okanagan and Rutland Centre;
- In the Core Area including Orchard Park Mall. Infrastructure such as designated facilities and pedestrian-bicycle grade separation are needed to connect routes and eliminate discontinuities;
- Over a dozen dropped routes can be found along the Glenmore Road corridor.

Area Gaps

Area gaps are identified using a GIS buffer analysis that relies on the target mesh widths as follows:

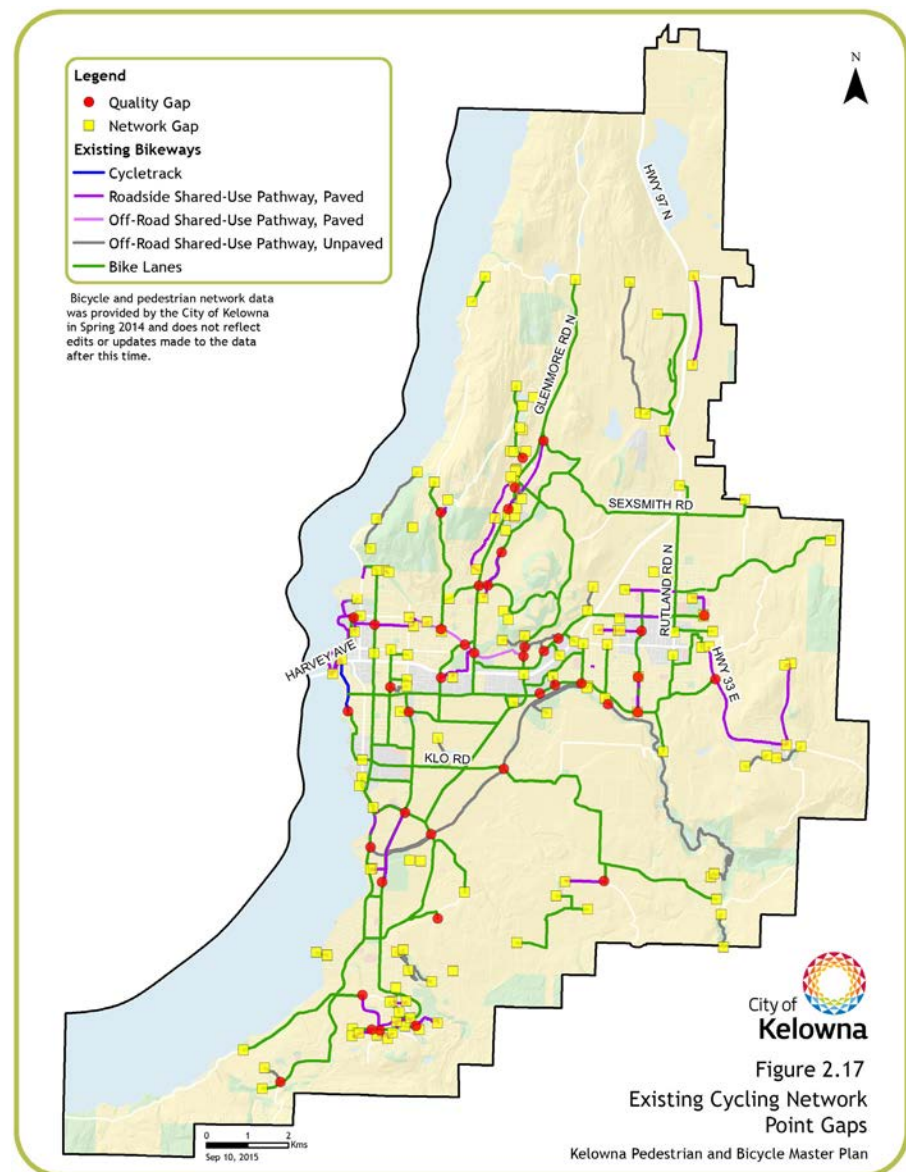
- Inside the Core Area, a dedicated bike facility within 200 metres; and
- Outside the Core Area, a bike facility within 400 metres.

Conceptually, the area gap analysis draws a buffer with a radius of 100 m inside the Core Area around all existing routes (i.e., edge-to-edge diameter is 200 m). Outside the Core Area, a buffer of radius 200 m was drawn (i.e. edge-to-edge diameter of 400 m).¹

¹ Although the mesh width standard for a bikeway is within 200 metres in the Core Area (ranging up to a maximum of 400 metres between bikeways), the gap analysis assumed a maximum of 200 metres between bikeways to conform to best practices and to provide a single GIS input, rather than a range of values. The same approach was taken outside the Core Area, with a maximum of 400 metres between bikeways assumed.

For a mature, built-out bike network, these buffers would overlap to cover the entire City, leaving no area out of reach by bicycle. In reality, drawing these buffers reveals gaps in network coverage by highlighting the negative space between bikeway routes.

Figure 2.17 Cycling spot gaps

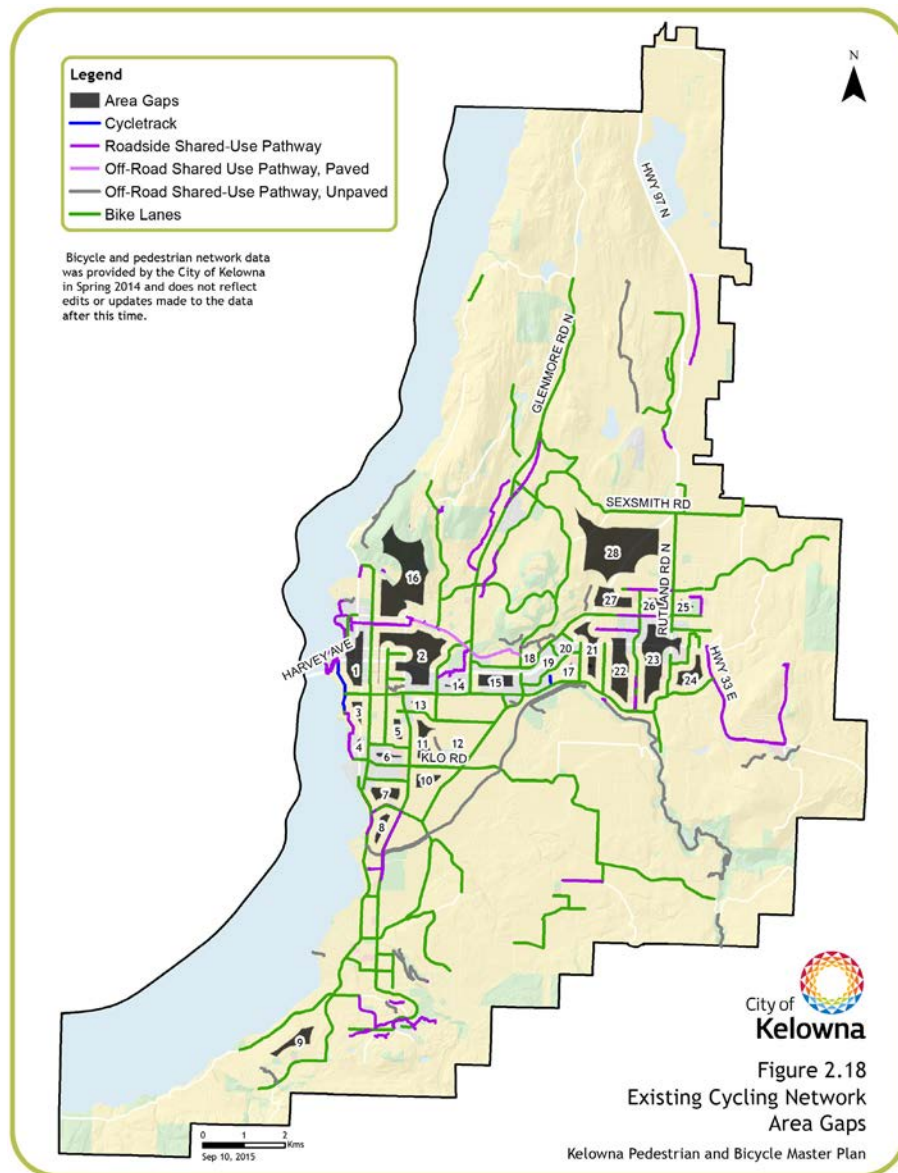


EXISTING WALKING AND CYCLING CONDITIONS

As Figure 2.18 shows, several gaps can be found throughout Kelowna, as shown in black. Strategies to close these gaps include:

- Between Harvey Avenue and Cawston Avenue, large areas of Downtown are not served by any bike facility (gaps 1 and 2). Investment is needed in both north-south and east-west routes to close gaps through these priority areas.
- South Pandosy neighbourhood (gaps 3 through 8) has a number of small gaps that can be closed by increasing the density of the bicycle grid in this part of the city. Targeted improvements here (e.g., extending existing routes) can improve network coverage substantially.
- Large vertical gaps through the Rutland neighbourhood (gaps 21 to 24) can be countered with the addition of several east-west bikeways through the community.
- Northwest Rutland (gap 27) could be improved with a facility along Pearson Road.
- Glenmore and UBC Okanagan area, where significant demand exists.

Figure 2.18: Cycling area gaps



EXISTING WALKING AND CYCLING CONDITIONS

Weak Links

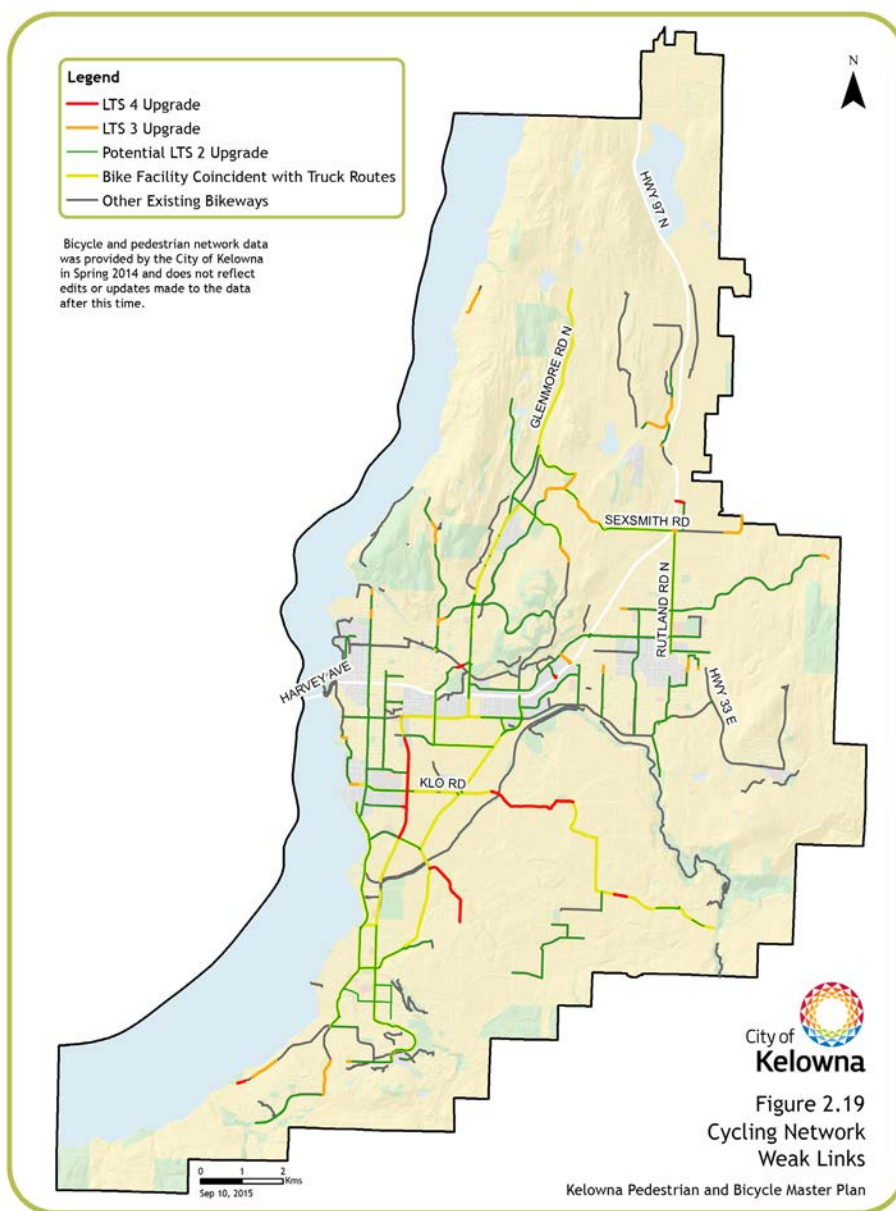
Cycling network gaps can exist even when there is a formal bicycle facility in place. In Kelowna, these situations occur when painted bike lanes are placed adjacent to high-speed, high-volume vehicle traffic, presenting safety concerns and discomfort.

In order to develop a bicycle network that is suitable for all travelers, several weak links require upgrading. These weak links are identified in Figure 2.19.

Weak links were identified through a Level of Traffic Stress (LTS) analysis that rated the existing Kelowna bicycle network on the basis of suitability for various road users. LTS 1 routes, such as Rails-with-Trails (Okanagan Rail Trail), are appropriate for all ages and abilities, while LTS 4 routes are suitable only for the most confident adult cyclist.

Weak links were also identified where bike lanes were installed on only one side of a street. For example, Crawford Road and Old Meadows Road need bike lanes on both sides.

Figure 2.19: Cycling network weak links



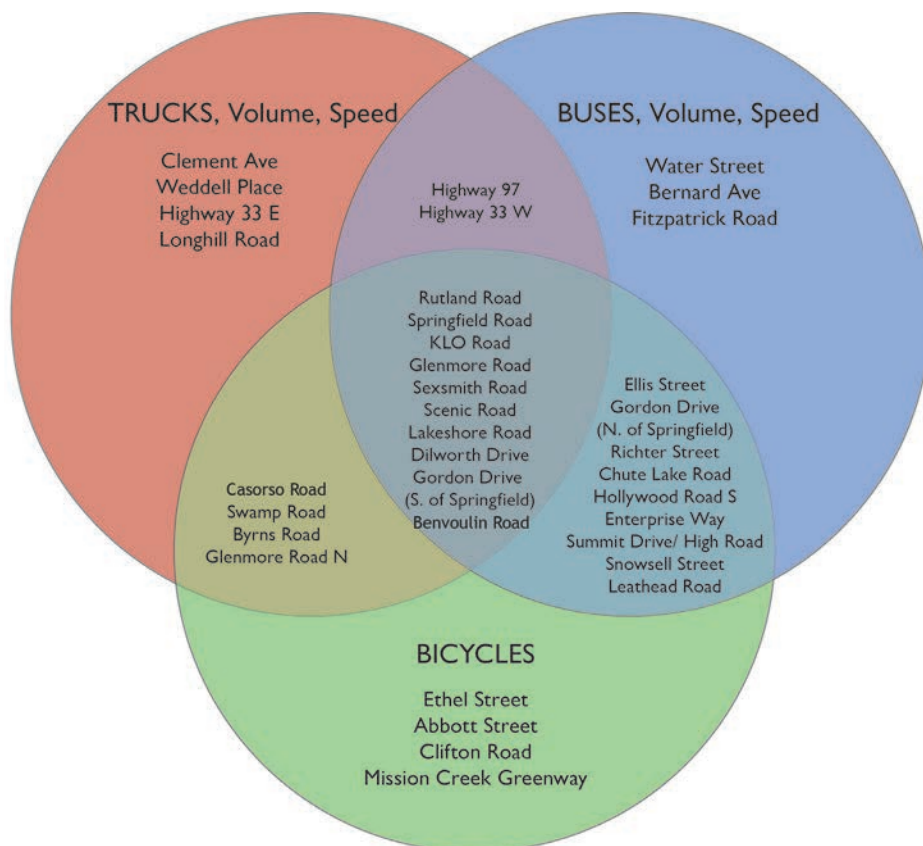
2.8 Multi-Modal Transportation Analysis

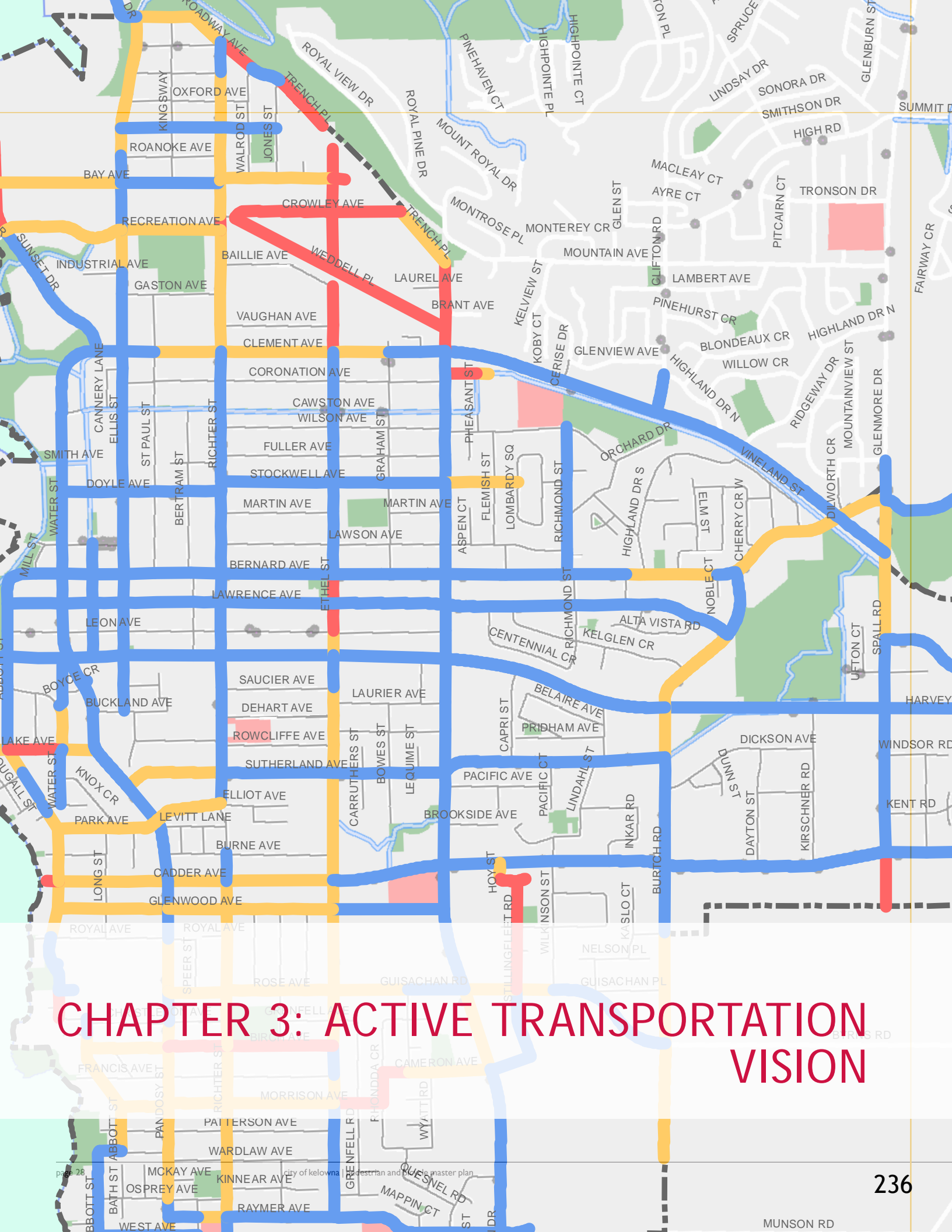
Figure 2.20 shows corridors in Kelowna where the truck, transit, and bicycle networks overlap. These roads were examined and one of two complementary strategies were established for network development:

- Avoid, to the extent possible, placing bike lanes along heavy vehicle and high speed routes; or
- For routes of high strategic importance with significant overlap, consider enhancing bike facilities to provide physical separation.

By overlaying the truck, transit, and bicycle networks, the analysis highlights the value in limiting multi-modal transportation to specific corridors in order to enhance connectivity and safety for all road users.

Figure 2.20: Bicycle and vehicular route overlap





CHAPTER 3: ACTIVE TRANSPORTATION VISION

ACTIVE TRANSPORTATION VISION

A safe and functional network of pedestrian and bicycle facilities is important in encouraging travel by active modes. Users generally want to access the same locations by walking and cycling as they do by driving.

To address existing network issues identified in Chapter 2, the Pedestrian and Bicycle Master Plan identifies pedestrian and bicycle networks that seek to improve safety, connectivity and accessibility by:

- Improving the quality and convenience to pedestrians and cyclists by establishing a hierarchy of walking and cycling infrastructure;
- Taking into account the overlap between high speed, high volume vehicular movement along major roads and applying physical measures to reduce conflicts;
- Enhancing walking and cycling facility connectivity and continuity with new routes through gap areas; and
- Adding connectivity through problematic areas with better connections and shortcuts, including grade-separated crossings where appropriate.

In order to attract a broad range of users so that users feel confident to walk and cycle, a network and design approach was followed that takes into account needs of users of all ages and abilities.

3.1 Bikeway Network Mesh Width Standard

A “mesh width” standard is an important first step in the design and layout of active transportation facilities. Mesh width refers to the desired density of bike facilities in a given area.¹ Typically, these standards allow for greater density of bike facilities in areas with higher density mixed-use developments, such as city centres, with correspondingly lower densities in residential neighbourhoods and outlying rural areas.

¹ Mesh width applies to bikeways, but not pedestrian facilities, because bike lanes are typically constructed on selected (not all) streets. Built-out pedestrian networks, on the other hand, consist of the entire street network (i.e., sidewalks on both sides), and thus have unique requirements for network improvements, as described under Pedestrian Network Gap Analysis.

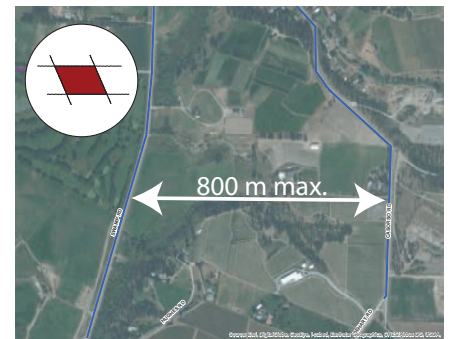
Best practices in leading cycling and walking cities in North America and Europe were reviewed and, in consultation with stakeholders, a standard was developed that targets one facility within 200 to 400 metres (Figure 3.1) in the Core Area (for both north-south and east-west directions) and within 400 to 800 metres outside of the Core Area (Figure 3.2). The Core Area is the central more urban part of the City and is described further under Gap Analysis.

This standard was used as a rule of thumb in determining the densities of proposed routes in different parts of Kelowna, and was a key input into network layout.

Figure 3.1: Mesh width standard - core area



Figure 3.2: Mesh width standard - outside core area



3.2 Future Active Transportation Network

Based on technical analysis, public and stakeholder input and current best practice examples, comprehensive future pedestrian and bicycle networks were developed for gradual implementation in the longer term.

The Active Transportation Vision seeks to improve safety, connectivity, and accessibility by:

- Improving the quality and attractiveness of pedestrian and cycling facilities by establishing a low-stress Primary Network for users of all ages and abilities;
- Reducing conflicts due to truck, transit, and bicycle network overlaps;
- Enhancing route connectivity and continuity with new routes through gap areas; and
- Adding connectivity through high speed, high vehicle traffic volume areas with new connections and direct routes, including grade-separated crossings where appropriate

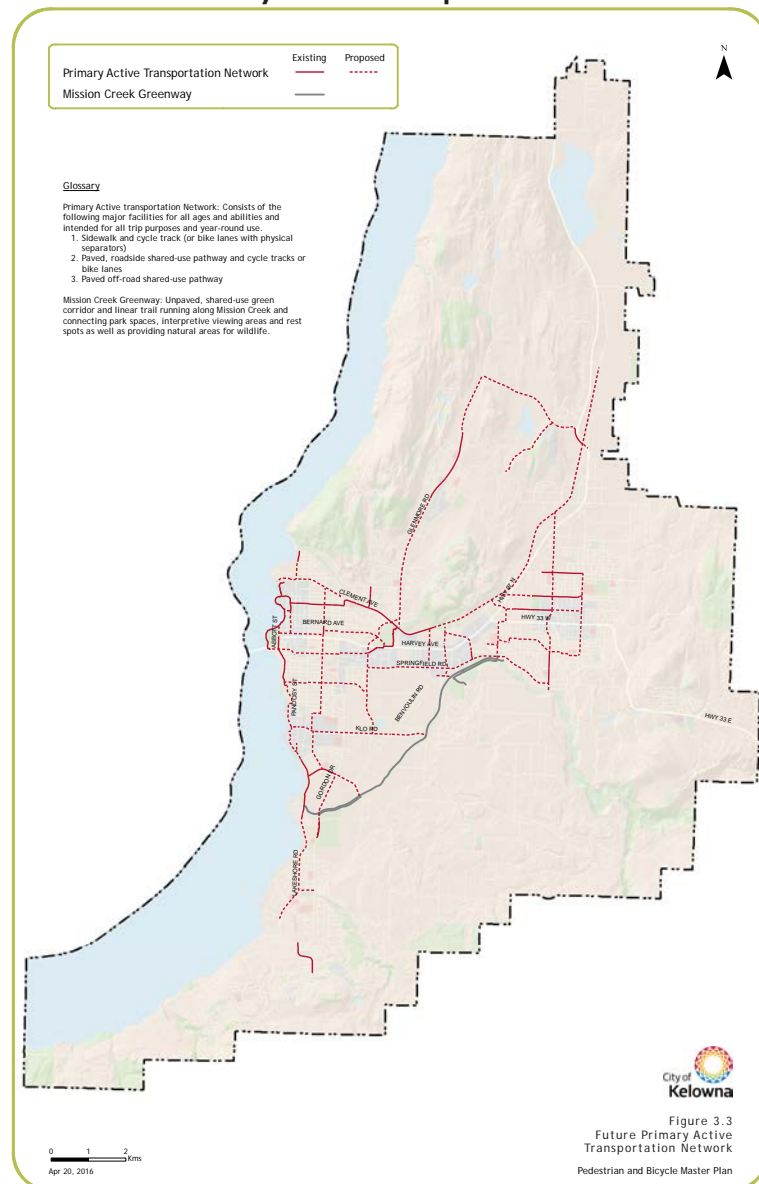
Future Primary Active Transportation Network

The Primary Network shown in Figure 3.3 forms the backbone of Kelowna's active transportation system and is intended to serve travelers of all ages and abilities with high quality walking and cycling facilities. This allows safe, convenient, and connected travel across the City.

The primary network connects neighbourhoods, Urban Centres, activity and recreational centres, health facilities, academic institutions, major commercial developments, and tourist attractions. These routes are located primarily within road

rights-of-way, but physically separated from vehicular traffic. Such facilities provide low-stress conditions due to separation of potential conflicts between cyclists, pedestrians, and motor vehicles.

Figure 3.3: Future Primary Active Transportation Network



ACTIVE TRANSPORTATION VISION

The primary network focuses on the major land uses in the City's Core area. It also takes into account two key land uses that are located beyond the core area but generate significant travel demands. These are the University of British Columbia Okanagan Campus and Kelowna International Airport, both located in the northern third of the City.

Future Pedestrian Network

A list of priority sidewalks and shared pathways both paved and unpaved was identified based on this master planning exercise. The primary focus was on major roads and the Core Area where the majority of walking demand exists. In 2015, the City had approximately 400 km of sidewalks and an additional 70 km of priority sidewalks have been identified. Additional sidewalks could be built in conjunction with developments on adjacent lands. The relatively small annual sidewalk capital program will need to focus on school zones, transit stops, major recreational and activity centres, as well as Urban and Village Centres.

Supporting the primary network is a series of pedestrian and cycling facilities at the neighbourhood level connecting subdivisions, schools, parks and other destinations.

The combination of the Primary Network together with supporting pedestrian facilities such as sidewalks creates the Future Active Transportation Network for Pedestrians as illustrated in Figure 3.4.

Future Cycling Network

A range of cycling facilities are envisioned for the City's transportation network. The Primary Network includes the highest form of infrastructure where physically separated cycling and walking facilities will be available; for example, a paved shared-use pathway and on-road bike lanes (e.g. Lakeshore Rd.) wide paved off-road pathway (Rails-With-Trails) or sidewalks with cycle tracks (e.g. Ethel Active Transportation Corridor). These are appropriate for the higher demand core area of the City. More cost-effective on-road bike lanes potentially with painted buffer strips are more appropriate for lower demand areas.

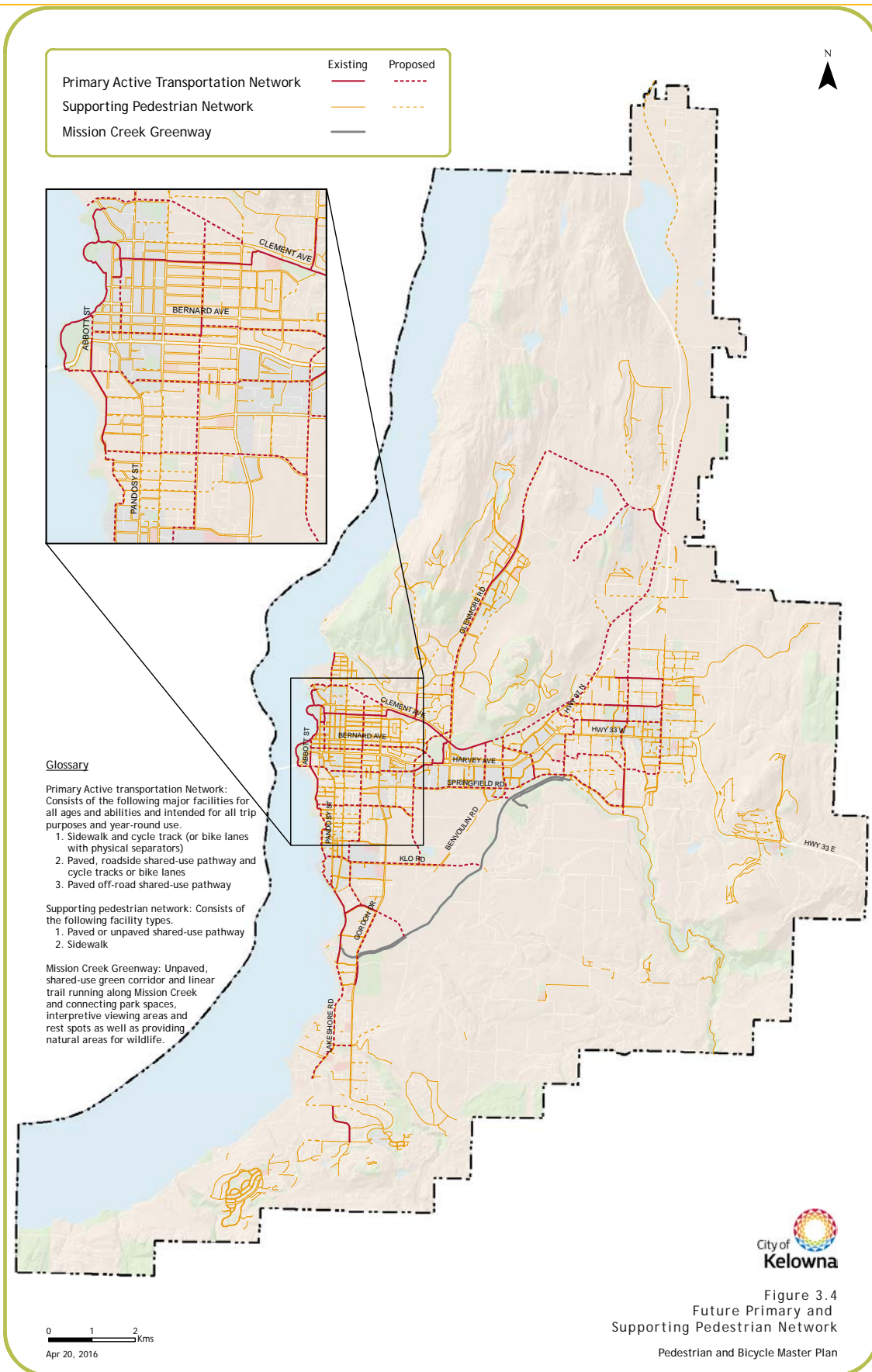
Further expansion of the network will be feasible by including low volume, low speed local roads as supporting cycling corridors. This will be identified as part of the overall Transportation Master Plan.

Similarly, the combination of the Primary Network with supporting cycling facilities creates the Future Active Transportation Network for Cyclists as illustrated in Figure 3.5.

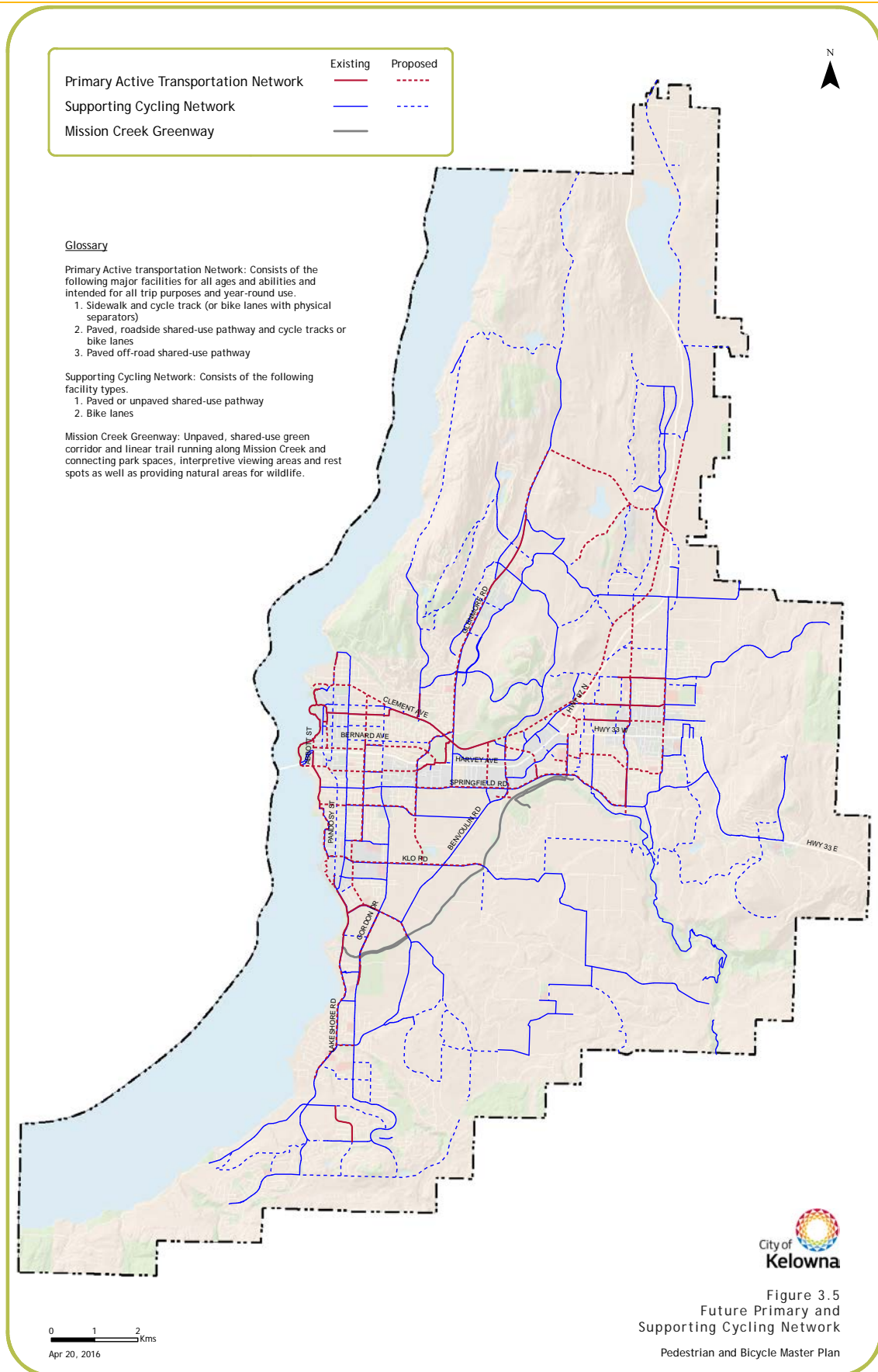
Inter-Municipal Connectivity

In developing the Active Transportation Corridors (ATC) vision for cyclists, consideration was given on regional connectivity to West Kelowna and Lake Country. The existing pathway on the south side of the W.R. Bennett Bridge was considered for this purpose interconnected to Abbott Street ATC and City Park Promenade. The proposed Okanagan Rail Trail and Glenmore Road bike lanes will ensure connectivity to the District of Lake Country. Highway 33 is another route that extends beyond the City limits to the east heading toward the Big White Ski Resort. With the existing pathway along the north side within Kelowna and paved shoulders outside city limits, this was deemed acceptable for rural conditions with low demand on Highway 33, which is under provincial jurisdiction.

ACTIVE TRANSPORTATION VISION



ACTIVE TRANSPORTATION VISION



ACTIVE TRANSPORTATION VISION

The Future Pedestrian and Cycling Transportation Network shown in figures 3.6 and 3.7 are comprised of a mixture of existing and proposed facilities. Facility types identified for each segment have been carefully selected based on the needs for all ages and abilities, trip purpose, and safety.

The Glossary of Terms used on the following network maps can be summarized as follows (for more details on these and other active transportation terms, see Chapter 2):

- **Cycle Track:** An exclusive one-way or two-way cycling facility at road, sidewalk or an intermediate level, which is physically segregated from vehicular and pedestrian traffic.
- **Shared-use Pathway:** A roadside or off-road two-way facility shared between pedestrians, cyclists, and other users with or without directional separation.

- **Bike Lanes:** An exclusive one-way, street-level cycling space designated through use of pavement striping, markings and signage, that is located adjacent to vehicular traffic.
- **Sidewalk:** An asphalt or concrete walking facility exclusively for pedestrians.

A combination of several facility types are used to create the Primary Network. These facilities are intended for all ages and abilities, used for all trip purposes and are anticipated to be used year-round.

They include:

- Sidewalk & Cycle Track (or bike lanes with physical separators)
- Paved Shared-Use Pathway and Cycle Tracks or Bike Lanes
- Paved Off-road Shared-Use Pathways

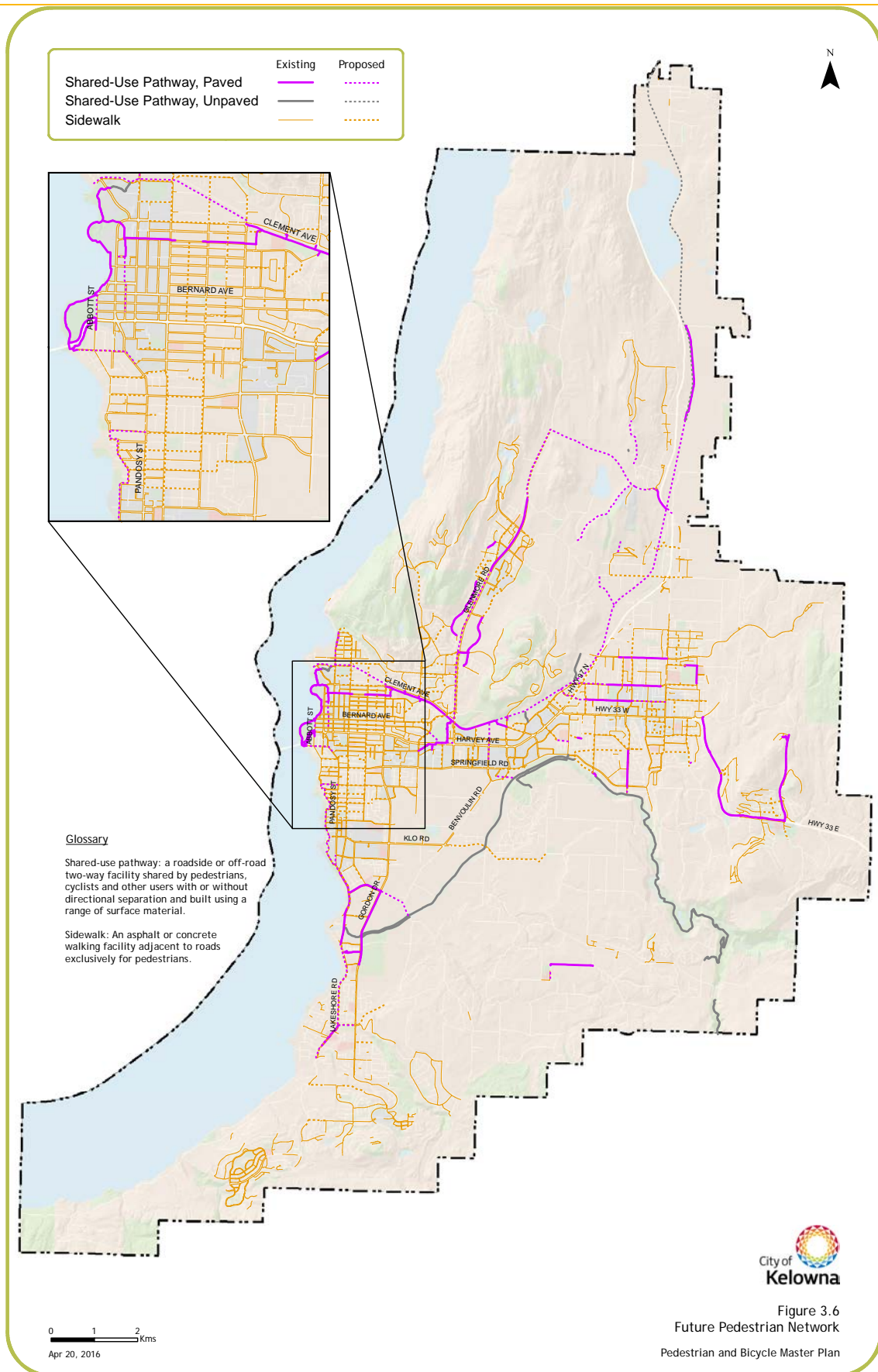
The Primary Network is supported by a variety of facilities. These routes are located on local or collector streets and may not require significant investments to create comfortable and safe conditions for pedestrians and cyclists. Facilities include:

- Sidewalk and Bike Lanes
- Paved or unpaved Shared-Use Pathway without Bike Lanes
- Sidewalks
- Bike Lanes

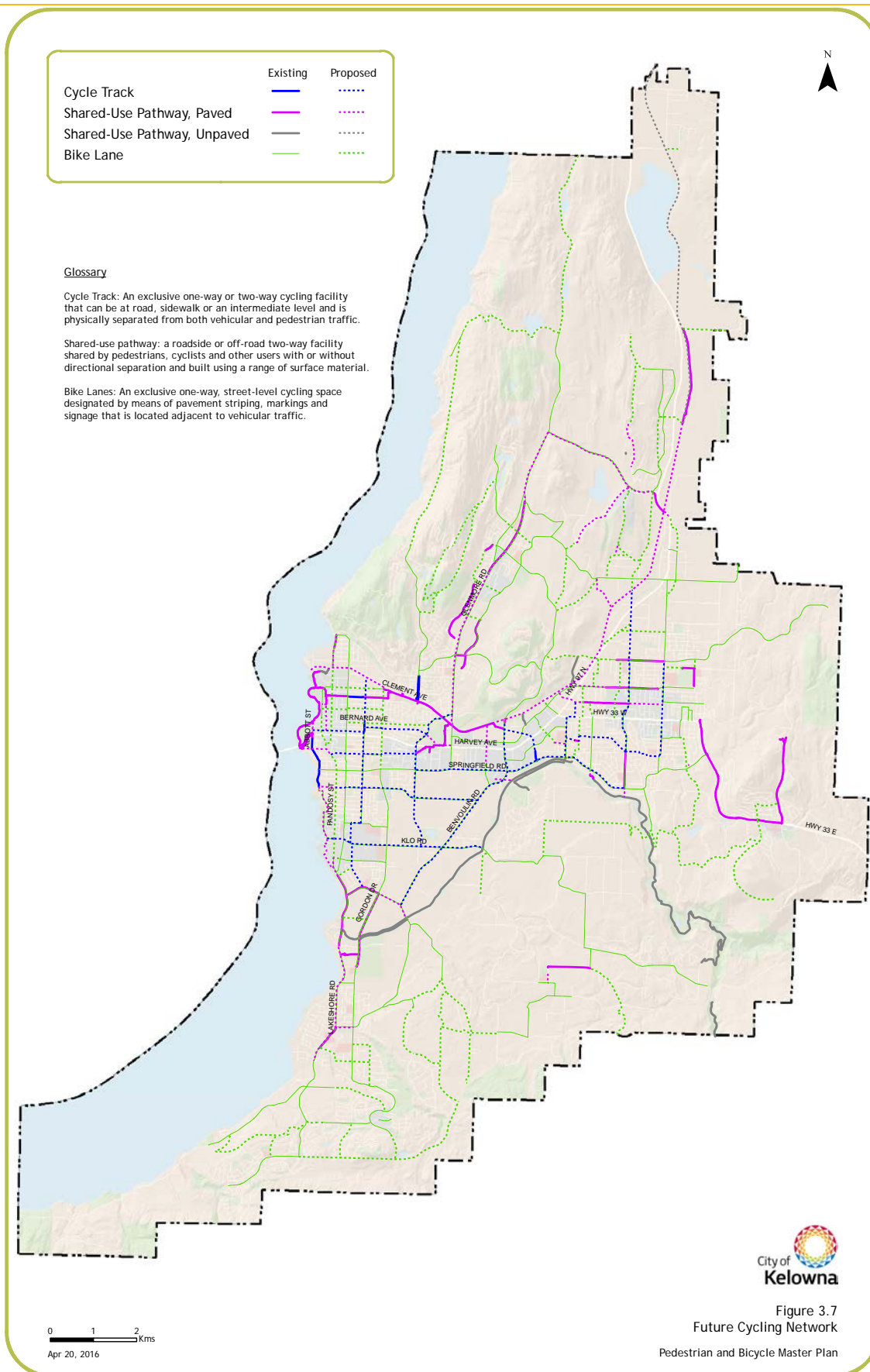
Given that hundreds of kilometres of facilities are envisioned for both pedestrian and cyclists, and the significant cost to build such facilities, it is important to prioritize the facilities, as described in Chapter 4.

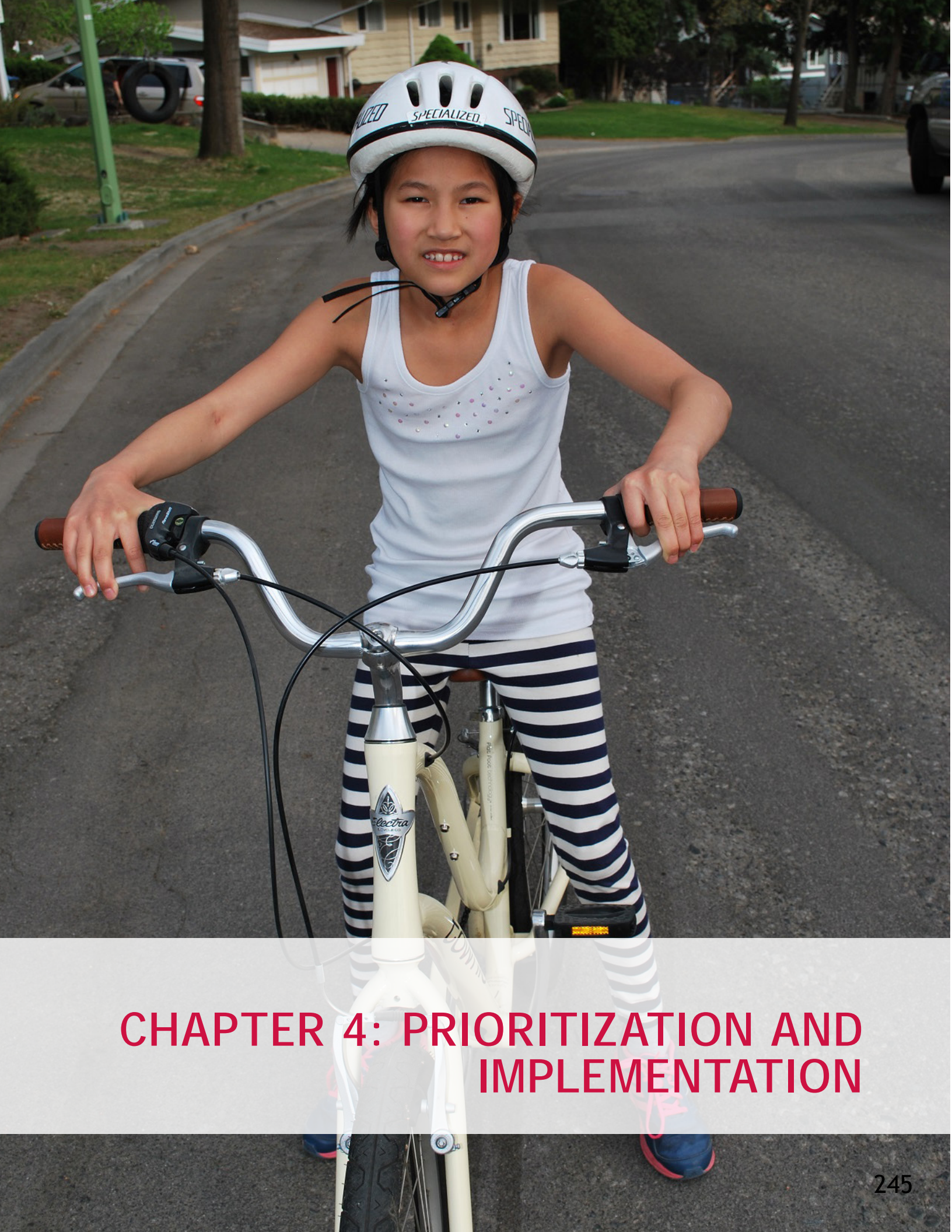


ACTIVE TRANSPORTATION VISION



ACTIVE TRANSPORTATION VISION





CHAPTER 4: PRIORITIZATION AND IMPLEMENTATION

PRIORITIZATION AND IMPLEMENTATION

Given the number of infrastructure projects identified in Chapter 3, and limited resources available within annual capital programs, it is important to prioritize individual active transportation projects required throughout the City.

The order in which projects are constructed will depend on many factors. Based on a set of prioritization criteria developed based on best practices and endorsed through stakeholder input, projects were assessed for facility importance and ranking order of priority.

4.1 Prioritization Criteria

This section provides a framework for facility prioritization—a scored Multiple Account Evaluation process that takes into account key constraints and maximizes cost effectiveness of projects implemented.

The criteria are designed to evaluate linear routes – such as pathways, sidewalks and bicycle lanes – and are not intended for other facilities like bicycle parking, signal enhancements, or sidewalk furnishings. The criteria are organized into “utility” and “implementation” prioritization factors.

Utility Prioritization Factors

Utility criteria include characteristics that enhance the pedestrian and bicycle network. The utility prioritization was developed based on best practice review and stakeholder input. Each criterion is discussed below.

Gap Closure

Filling gaps in the walking and cycling networks opens up new areas of Kelowna to pedestrian and bicycle access. Projects that fill gaps will score higher than projects that do not (i.e., projects that are redundant with existing routes).

Primary Network Route

A future network of Primary Active Transportation Corridors is recommended for implementation as part of this Master Plan. This network is intended to serve as the “spine” for active travel throughout Kelowna, linking all parts of the City on routes that are comfortable and attractive for people of all ages and abilities. Projects that form part of the future Primary Active Transportation Network will score highest on this criterion.



“Provide infrastructure to the urban centres based on the expectation that not more than 45 per cent of total trips in City Centre and other Town Centres will be by motor vehicle.”

KELOWNA OCP, CHAPTER 7

PRIORITIZATION AND IMPLEMENTATION

Connectivity to Schools

Schools generate short distance trips that could be served by walking and cycling. Constructing safe routes to schools relieves parents of the need to drive each morning, encourages physical activity among children, and instills healthy inter-generational habits. Proposed projects that connect directly to schools (K-12) score higher on this criterion.

Connectivity to Transit

Active Transportation facilities that link to public transit increase the geographical distance that pedestrians and cyclists are able to travel and

provide an alternative in case of problems during a trip. Proposed projects that connect directly to transit facilities will score higher on this criterion.

Geographic Area

Through the OCP process and reinforced through the community engagement process, priority areas for active transportation routes have been identified within Kelowna. These areas are largely highlighted in pink and yellow within Figure 4.1, the Transportation Context Zone Map and include:

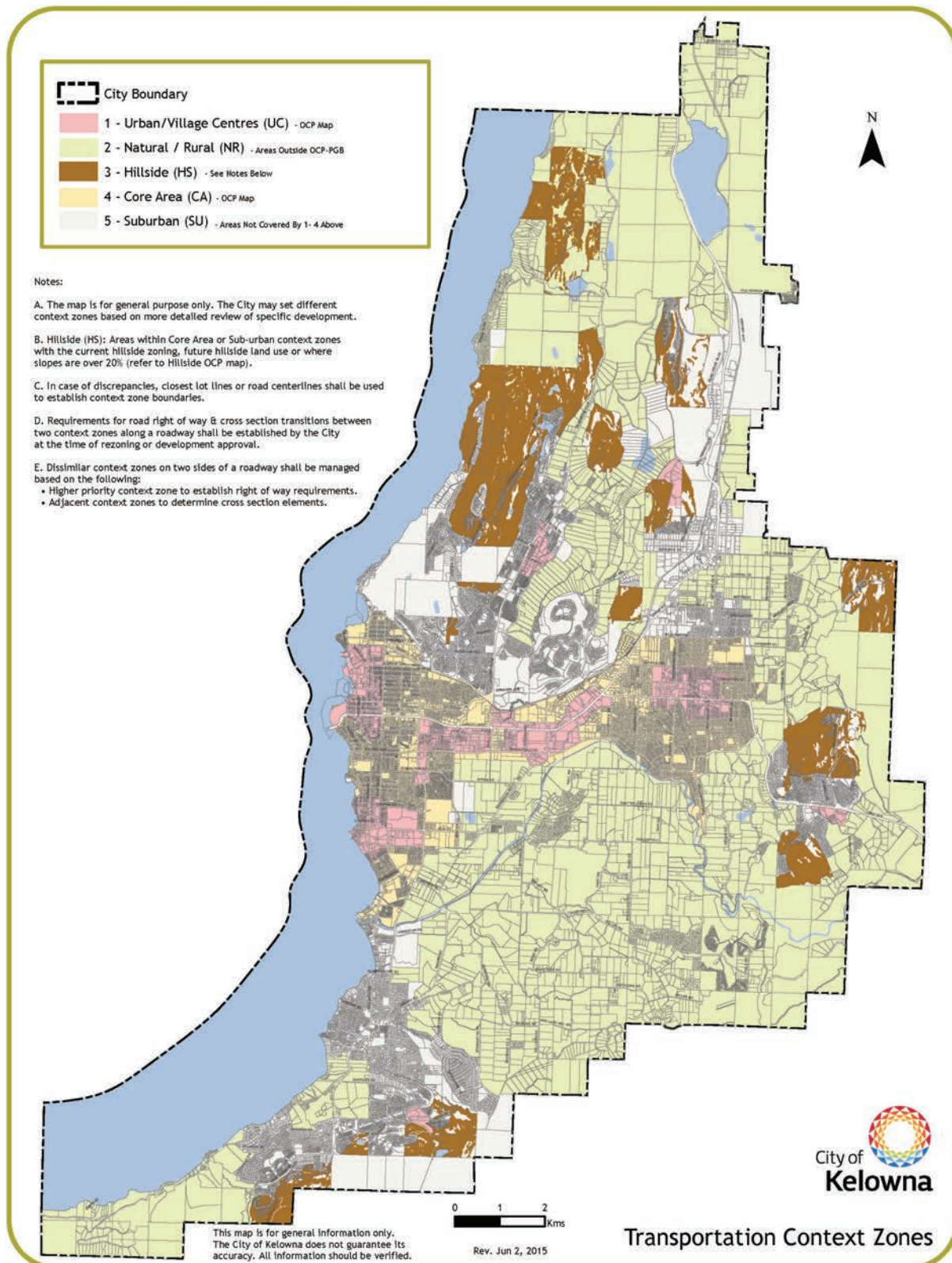
- Downtown, north of Harvey;
- Mid Town, in the vicinity of Orchard Park Mall;
- Downtown south of Harvey;
- South Pandosy;
- Rutland; and
- Glenmore/ North Glenmore.

Projects located in these central areas will be weighted more heavily according to this criterion.



PRIORITIZATION AND IMPLEMENTATION

Figure 4.1: Transportation Context Zone Map



PRIORITIZATION AND IMPLEMENTATION

Implementation Factors

Implementation criteria address the ease or challenge of implementing each active transportation project. Each criterion is discussed below. These criteria were also used to prioritize projects to achieve an implementable plan.

Project Readiness

Projects that can be implemented solely by the City of Kelowna are easier to construct than those requiring lands for rights-of-way and approvals from other agencies (i.e., Agriculture Land Commission, Province of B.C.). Those projects that are easier to build will score higher on this criterion.

Development Opportunity

Active Transportation facilities such as sidewalks are constructed by individual developments as part of their frontage upgrades or Traffic Impact Study (TIS) requirements, in which case facilities could extend beyond the site frontage.

Any project where development is expected in the near future will be deferred to meet site design, access needs and also to reduce burden on the small taxation based capital programs. Projects where no development opportunity exists will score higher.

Project Cost and Site Constraints

Cost estimates have been developed for various facility types, such as shared-use paths, cycle tracks, bike lanes, and sidewalks. These estimates are based on per-metre unit costs and take into account site-specific constraints or challenges such as retaining walls, trees, drainage terrain, driveways, etc.

Projects with lower costs or easier to implement will score higher on this criterion.



4.2 Project Ranking

Two sets of prioritization factors were developed and are shown in Tables 4.1 and 4.2, the Utility Prioritization Factors and Implementation Prioritization Factors. These were used to objectively sort projects within the recommended pedestrian and bicycle networks.

All pedestrian and bicycle facility projects were ranked and based on the Prioritization Factors, and each project segment was organized into a list for implementation.

Projects that received fewer points fell into the low priority and projects that scored a higher number of points fell into the high priority implementation phase.

The lists of pedestrian and bicycle projects are provided in Appendix C.

Table 4.1: Utility prioritization criteria

Criteria	Description
Utility Prioritization Factors	
Geographic Area	Areas score 0 - 5 based on descending order of geographic priority for sidewalks and bicycle facilities from Urban Centres (5) to Rural Areas (0)
Gap Closure	Resolves multiple existing network gaps (5)
Connectivity to Transit	Provides direct access (within 100 metres) to a major transit exchange or rapid ride bus (5)
	Provides direct access (within 100 metres) to a standard bus stop (2)
	Does not directly or indirectly access to a major transit exchange (1)
Primary Network Route	Facility is identified as part of the proposed Primary Network (5)
	Facility is not identified as part of the proposed Primary Network (1)
Connectivity to Schools	Is within 200 metres of a K – 12 school (5)
	Does not directly access to a K – 12 school (1)

Table 4.2: Implementation prioritization criteria

Criteria	Description
Implementation Prioritization Factors	
Project Readiness	Projects that require land acquisition, Agriculture Land Commission approval, etc. will be scored lower (1)
	Requires approval etc. (2)
	Does not have any major challenge will score higher (5)
Project Cost & Site Constraint	Will cost less than \$25,000 to implement (5)
	Will cost between \$25,001 and \$75,000 to implement (3)
	Will cost over \$75,000 to implement (1)
Development Opportunity	A development that may contribute to the project is imminent (i.e., current planning year) (1)
	A proposed development that is likely in the mid-term (2)
	No developments are expected that may contribute to the project (5)

4.3 Network Implementation

All individual projects in the bicycle and pedestrian networks have been ranked and higher priority projects will be implemented as funding becomes available. Additional facilities will need to be built in conjunction with adjacent or nearby future developments to enable new customers or residents to use active modes of transportation and minimize the site traffic impact.

PRIORITIZATION AND IMPLEMENTATION

Implementing the long-term vision for the pedestrian and bicycle networks will require significant financial investment, partnership between different levels of government and participation from the private sector. Such investments will in return provide benefits in terms of a balanced and efficient transportation system, reduced healthcare costs, increased tourism, improved air quality and recreation for all residents and visitors. This prioritization and investment will help Kelowna meet its goals of increasing walking and cycling trips under 5.0 km, and of reducing pedestrian and bicycle collisions.

To achieve the optimum use of funds both the pedestrian and bicycle networks have been ranked such that projects which offer greater benefits to the community will be implemented first.

Table 4.3 summarizes the total length of various active transportation facilities identified in the pedestrian and bicycle network maps in this master plan.

Based on preliminary planning level cost estimates the delivery of the priority facilities alone will cost approximately \$267 million.

Cost estimates include costs directly attributed or related to active transportation such as planning, engineering, construction, and contingency. Items such as repaving or reconstructing the existing road or related utility upgrades within the corridor are excluded, as are land acquisition costs. Project cost estimates do not include ongoing maintenance.

This is only one third of the amount allocated in the draft 2030 Infrastructure Plan. This means only one-third of the priority projects can be completed by 2030, which will be completed based on the ranking of the individual projects.

Appendix C provides a summary of the priority projects.

Table 4.3: Summary of existing and proposed pedestrian and bicycle networks

Infrastructure Type	Existing (km)	Proposed (km)
Sidewalks	399.8	71.8
Cycle Tracks	3.0	41.5
Shared-Use Pathway, Paved	36.4	37.7
Bike Lanes	298.6	210.0



PRIORITIZATION AND IMPLEMENTATION

It should be noted that land developments/redevelopments will still be required to complete their responsibility in terms of frontage improvements. This typically involves sidewalks with urbanization including curb, gutter and storm drainage. Such shared delivery of infrastructure will reduce pressure on taxation based small capital programs.

4.5 Implementation Strategy

The pedestrian and bicycle networks presented in this Master Plan will need to be completed in phases to minimize financial burden on residents.

The City of Kelowna currently invests approximately \$500,000 in its annual sidewalk program and \$300,000 in bike network programs each year. Approximately \$3.0 million dollars of gas tax and development cost charge (DCC) funding is allocated toward Primary Active Transportation Corridor programs each year.

The Draft 2030 Infrastructure Plan shows amounts per program type and time period, as reproduced in Table 4.4. The amounts are dependant on Council’s approval of the annual budgets and other civic priorities each year.

Further, as the active transportation network grows, additional operation and maintenance investments will be necessary to support the new routes.

This current allocation in bicycle and pedestrian infrastructure is inadequate

to complete the delivery of facilities for users of all ages and abilities, as summarized in Table 4.3.

Increased investment means new funding sources including higher taxation will need to be considered to promote walking and cycling as alternative modes of travel. It is equally important to explore new cost-effective infrastructure designs to ease funding challenges and to accelerate the Plan’s implementation.

The optimal allocation of funding is expected to be established based on the public consultation process currently in progress for the 2030 Infrastructure Plan.

Table 4.4: Anticipated active transportation capital investments 2016 to 2030 (pending annual Council approval)

Infrastructure Capital Program	2016-2020	2021-2025	2026-2030	Sub-Total
Sidewalk Network Expansion	2,417,620	3,400,000	3,750,000	9,567,620
Bicycle Network Expansion	1,540,000	2,150,000	2,800,000	6,490,000
Primary Active Transportation Corridor Expansion	28,273,800	14,076,515	29,320,000	71,670,315
Sub-total	\$32,231,420	\$19,626,515	\$35,870,000	\$87,727,935

Source: Draft 2030 Infrastructure Plan, City of Kelowna 2015



CHAPTER 5: INVESTMENT OPTIONS

INVESTMENT OPTIONS

Financial investments in active transportation infrastructure influence long term travel behaviour in any community. The Central Okanagan Household Travel Surveys undertaken in 2007 and 2013 indicate the percentage of daily walking and cycling trips has increased from 8 per cent to over 11 per cent of all daily trips, which equates to an increase of 38 per cent. Despite this increase, Kelowna's walking and cycling mode shares are still low compared to other cities in North America that are leaders in promoting walking and cycling.

This chapter explores potential options to increase the investment in active transportation to deliver projects and programs sooner than it would take based on the current funding level. Investment practices from other cities could be used as a benchmark for Kelowna. This will assist the City of Kelowna in its efforts to establish itself as the best mid-sized city in North America.

5.1 Current and Planned Investment

Table 5.1 and Figure 5.1 summarize the City of Kelowna's historical annual investment in walking and cycling infrastructure between 2010 and 2014.

The surge in 2010 reflects federal stimulus funds to improve the economy.

The 2020 Capital Plan outlines planned future investments in active transportation capital projects up to 2020. Based on the plan, the initial low annual investments would gradually increase in the final years of the capital plan. This 2020 plan is currently being updated to the 2030 horizon year and the anticipated investments are now shown in a draft document titled 2030 Infrastructure Plan. The draft plan shows an investment of \$500,000 in annual new sidewalk program and \$300,000 in new bicycle network program that gradually increase to

Figure 5.1: Recent investments in active transportation

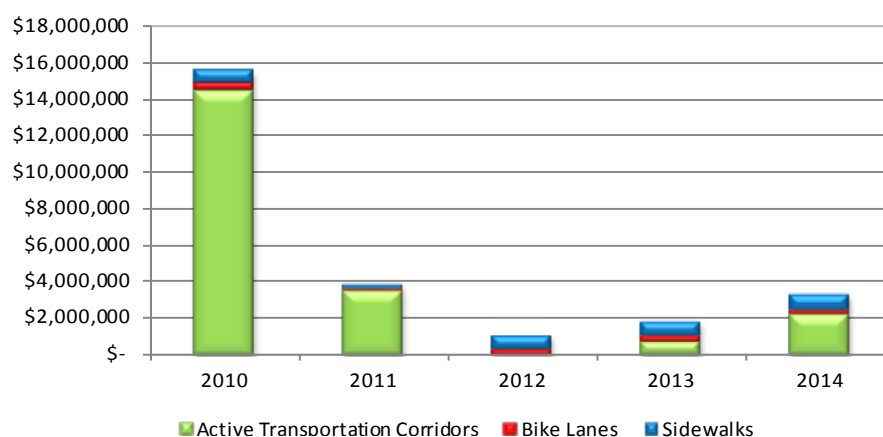
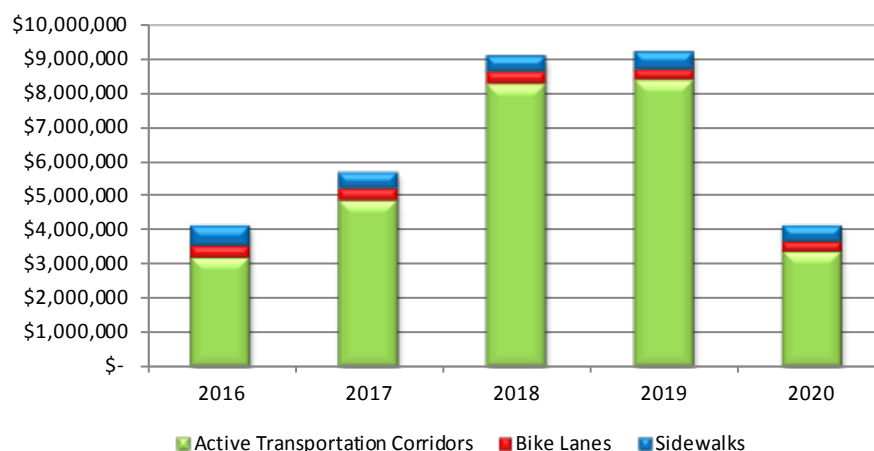


Figure 5.2: 2030 Infrastructure Plan (Draft) anticipated investments



INVESTMENT OPTIONS

\$750,000 and \$600,000 respectively by 2030. Table 5.2 and Figure 5.2 show an additional primary active transportation corridor program that anticipates \$4.78 million to be spent on average each year between 2016 and 2030 utilizing federal Gas Tax Funds and Development Cost Charges (DCC).

The City supports various educational and encouragement programs. Some programs are funded regionally. The direct investment in such programs is approximately \$50,000 per year. This is funded through general taxation and supported by volunteer contributions from residents, employers and nonprofit agencies.

Encouragement programs branded as 'SmartTRIPS' include, Bike to Work Week, Bike/Walk to School Week, and Carpool month.

The annual budget leverages additional amounts of varying magnitude in foundation grants, private contributions and volunteer support, for a total of approximately \$100,000.

This funding fluctuates annually depending on contributions available and are for the region and not exclusively for the City of Kelowna.

The City invests in active transportation in terms of ongoing repair and maintenance such as facility repairs, sign and marking replacements, outdoor lighting repairs, landscaping, replacement of signal hardware, sweeping and snow clearing, etc.

Table 5.1: Recent investments in active transportation

Facility Types	2010	2011	2012	2013	2014
Sidewalks	\$805,319	\$238,328	\$750,157	\$758,792	\$783,583
Bike Lanes	\$351,020	\$115,014	\$248,133	\$285,376	\$217,543
Active Transportation Corridors	\$14,508,792	\$3,564,537	\$96,364	\$836,735	\$2,339,291
Total	\$15,665,131	\$3,917,879	\$1,094,654	\$1,880,903	\$3,340,417

Table 5.2: 2030 Infrastructure Plan (Draft) anticipated investments

Facility Types	2016	2017	2018	2019	2020
New Sidewalks	\$417,620	\$500,000	\$500,000	\$500,000	\$500,000
New Bike Lanes	\$340,000	\$300,000	\$300,000	\$300,000	\$300,000
New Active Transportation Corridors	\$3,230,000	\$4,928,400	\$8,307,799	\$8,407,601	\$3,400,000
Total	\$3,987,620	\$5,728,400	\$9,107,799	\$9,207,601	\$4,200,000

5.2 Best Practices

In a review of active transportation investment on a per capita basis from jurisdictions throughout Europe and North America, research has found that existing and planned per capita annual investment amongst communities with a commitment to improving walking and cycling mode shares is as follows:

- Pedestrian and cycling infrastructure \$40-80 per capita;
- Education \$0.75-\$3.00 per capita;
- Encouragement \$1.00-\$3.00 per capita; and
- Evaluation \$0.25-\$1.75 per capita.

As an example, the District of Saanich has a population comparable to Kelowna (109,750 vs. 115,560, respectively, based on 2009 data) and mix of urban and rural conditions.

The most up-to-date active transportation statistics for Kelowna and Saanich are shown in Table 5.3

Table 5.3: Active transportation commute mode shares for Kelowna and Saanich

Mode	Kelowna	Saanich
Cycling	3.5%	5.4%
Walking	5.6%	5.8%
Total	9.1%	11.2%

Source: Statistics Canada National Household Survey, 2011

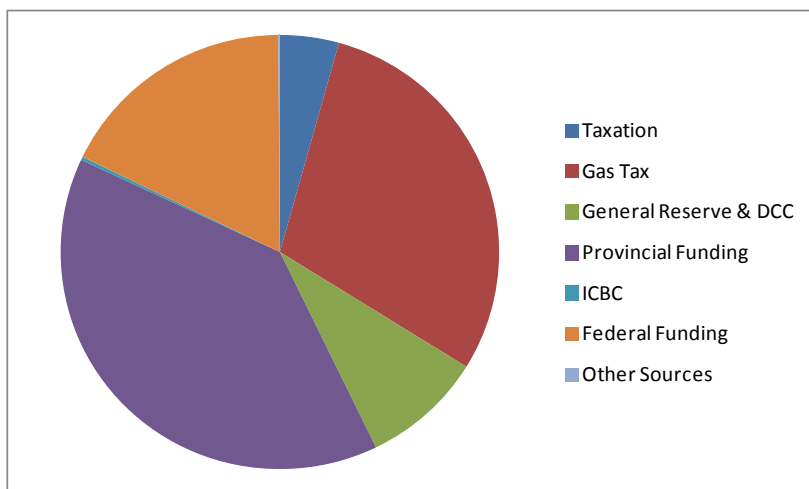
Although the climate in Saanich is slightly more conducive year round, the mode share measurements listed tend to occur in late spring and fall, thus allowing a more direct comparison. In 2009, Saanich was investing approximately \$1.9 million/year and leveraged an additional \$2.6 in funding for active transportation projects for a total of \$4.5 million.

In 2009 their annual investment in walking and cycling infrastructure was approximately \$41 per capita.

Based on the best practices review, Kelowna would have to invest the following amounts annually:

- Pedestrian and cycling infrastructure \$5.2 - \$10.5 million;
- Education \$100,000 - \$400,000;
- Encouragement \$130,000 - \$400,000; and
- Evaluation and Monitoring \$30,000 - \$230,000.

Figure 5.3: Revenue sources for active transportation improvements (2010-2014)



5.3 Potential Funding Sources

This plan explored potential funding sources that could be used to fund active transportation improvements in Kelowna. This section also examines their potential to contribute to active transportation improvement programs.

1. Community Contribution Fees and Taxes:
 - a. General Funds/Taxation
 - b. Local Area Services
2. User Fees and Project Related Revenue Sources:
 - a. Cash-in-lieu Parking
 - b. Latecomer Agreements
3. Other Grants:
 - a. Climate Action Revenue Incentive Program
 - b. Gas Tax Fund
 - c. Infrastructure Canada
 - d. Green Municipal Funds
 - e. ICBC
4. Private Sector:
 - a. Deeds, donations and dedications
 - b. Service Clubs
 - c. Advertising

The following criteria were used to assess each of the potential funding sources:

1. Reliability – Does the funding source provide a reliable and steady flow of income?
2. Administrative Ease – Has the collection method been established; is it easy to collect?
3. Travel Demand Management (TDM) – Will a funding method influence people's propensity to use active modes?
4. Revenue Potential – Can this stream provide a significant stream of additional revenue?
5. Equity – Is this revenue source equitable in terms of the geographic distribution of those who pay, relative to the area that will benefit and in terms of income, by avoiding drawing overly upon those that can least afford to pay?
6. Political Support – Is there public support for a particular funding source?
7. Feasibility – Is Kelowna able to implement without approval or support from other agencies? Is the method likely to face legal or technical challenges?

The following criteria were considered for inclusion but were omitted for the reasons listed below:

- User pay – Does the method support user pay? This is generally an accepted measure of success for transportation related revenue sources, but in this case those that do not pay also benefit by decreased congestions, reduced healthcare costs, and reduced pollution and noise. User pay is thus not an important consideration for active transportation related sources.
- Transparency – Is the link between a cost and benefit clear? Is the taxpayer aware of how much they are paying and what they are paying for? This is an important consideration but is more of a concern in the implementation phase, rather than in the exploration phase. Moreover, one can mitigate such concerns through communication.

INVESTMENT OPTIONS

Community Contribution Fees and Taxes

A number of broad community based funding sources and strategies can be used to implement pedestrian and bicycle facilities, as follows:

General Funds/Taxation

General funds are provided by property tax or other regular jurisdictional revenue streams. In Kelowna, General Funds are used for active transportation projects and programs, providing only about 5-20 per cent of total annual funding.

To accelerate the delivery of the priority projects, it will be important to consider an increased contribution from General Taxation to match funding from Federal and Provincial Grants to achieve consistency with current best practices.

Local Area Services

A form of taxation that is levied against residents and property owners who vote in favour of a particular improvement. In order to be successful the petition must be signed by the owners of at least 50 per cent of the parcels subject to the local service tax and represent at least 50 per cent of the assessed value of land and improvements that would be subject to the Local Service Tax (Division 5 of Part 7 of the BC Community Charter, Section 212(3)a and b). This mechanism could be used to allow residents to accelerate sidewalk projects identified in the Plan by funding a portion of the costs as described in Table 5.4. The remaining percentage of costs would be paid through general tax revenues or other municipal sources.

User Fees and Project Related Revenue Sources

Cash-in-lieu Parking

Recent changes to the Local Government Act allow municipalities to use funding from cash-in-lieu parking reserves to fund alternative transportation such as active transportation network upgrades. The City of Kelowna allows cash-in-lieu of parking within the Urban Town Centre (Schedule “A” of City of Kelowna Bylaw No 8125).

This source of funding could be used to fund a range of programs and measures designed to reduce reliance on the private auto for trips to and from a development that takes advantage of Cash-in-lieu Parking, including but not limited to, trip reduction programs, active transportation improvements, and access to bike and car sharing vehicles.

Latecomer Agreements

In B.C. local governments may require an owner of land that is under development to provide “excess” or “extended” services including roads, water, sewage and/or drainage works with enough capacity to service properties that are situated nearby.

A roadway that must be widened and upgraded with designated cycling

facilities to serve future traffic increases surrounding a proposed subdivision is an example of an extended service. A local government can require the subdivision owner or developer to pay the up-front costs of extended services or can pay those costs themselves. These parties are then able to recover a portion of the costs from the owners of properties that will benefit from the works in the future. These “latecomers” are subject to a latecomer tax or fee that is collected by local government and remitted to the entity that paid for the extended or excess service.

Latecomer schemes are normally initiated through an agreement with the owner or developer that identifies the costs that will be recovered by a latecomer charge. The term of the agreement cannot exceed 15 years and no latecomer charges are payable after the term of the agreement. Because some or all of the properties that will benefit from the extended service may not connect or use the service before the term of the agreement ends, those who finance excess or extended services are obliged to accept the risk that not all of their costs will be recovered (http://www.cscd.gov.bc.ca/lgd/finance/latecomer_connection.htm).

Table 5.4: Proportion of local area service costs proposed to be funded by residents

Location	percentage funded by residents
Projects identified in the Plan and located in Core Urban Area	25 per cent
Projects identified in the Plan but located outside of Core Urban Area	50 per cent
All other projects	100 per cent

INVESTMENT OPTIONS

Other Grants

As funding opportunities change regularly, the information in this section is subject to change. Kelowna should regularly check with all levels of government to keep up to date on funding opportunities.

Climate Action Revenue Incentive Program

The Climate Action Revenue Incentive Program is a conditional grant program that provides funding to BC Climate Action Charter (Charter) signatories equivalent to one hundred per cent of the carbon taxes they pay directly. This funding supports local governments in their efforts to reduce greenhouse gas emissions and move forward on achieving their Charter goals. Governments must take action towards carbon neutrality and measuring GHG emissions to be eligible. These funds have been applied toward various planning efforts that are related to active transportation, including sustainability planning, local area planning, age friendly plans, and air quality studies, to name a few. In Kelowna this fund is allocated to corporate energy reduction measures.

Gas Tax Fund

Gas tax is collected annually by the federal government. Jurisdictions receive a proportion of the federal dollars based on their populations through the Gas Tax Fund.

The Gas Tax Fund supports environmentally sustainable municipal infrastructure, including active transportation infrastructure.

Kelowna's Surplus/Reserves fund sourced from the Gas Tax Fund should be invested in for active transportation infrastructure improvements as per the original intent of reducing vehicle use.

Infrastructure Canada

The programs of Infrastructure Canada are the New Building Canada Fund (NBCF) and the Gas Tax Fund named above. Typically, the federal government contributes one-third of the cost of municipal infrastructure projects. Provincial and municipal governments contribute the remaining funds and, in some instances, there may be private sector investment as well. The NBCF support projects of national, regional and local significance that promote economic growth, job creation and productivity.

Green Municipal Funds

The Federation of Canadian Municipalities (FCM) manages the Green Municipal Fund (GMF). Eligible capital projects include transportation that must demonstrate the potential to reduce vehicle kilometres travelled in a single occupancy vehicle by encouraging active transportation. Matched funds are a requirement to apply for the Green Municipal Fund.

ICBC

An increased ICBC contribution would be allocated to improve the safety for vulnerable road users such as pedestrians and cyclists.

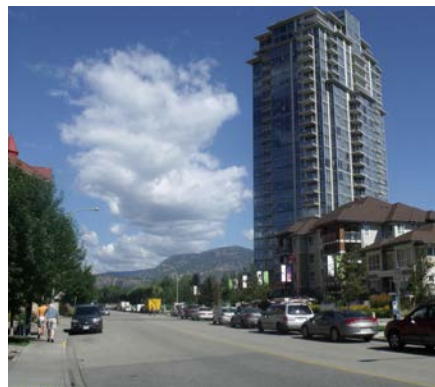
About 1.0 per cent of the City's active transportation funding has come from ICBC in the last 10 years.

Private Sector

Many private sector businesses may wish to be socially and environmentally responsible neighbours. Active transportation facilities are well-suited to corporate sponsorship. Examples in B.C. include Construction Aggregates in Sechelt, which constructed an overpass over a gravel conveyor to provide a link for pedestrians and cyclists, and 7-Eleven and Molson Breweries which sponsored multi-use pathways in Vancouver, Burnaby and New Westminster.

Deeds, Donations and Dedications

In many communities, multi-use pathways have been funded in part by local residents who purchased "deeds" to sections of the pathway. The Trans Canada Trail, for example, is funded partially by sales of one metre sections for \$40. Kelowna partially funded development of a greenway along Mission Creek through community donations. A dedication program can be set up for residents and corporations to donate bicycle facilities, such as bicycle racks or lockers. In many cases, these deeds, donations and dedications are tax-deductible where administered by a not-for-profit agency.



INVESTMENT OPTIONS

Service clubs

Efforts to provide new bicycle facilities can be coordinated with service clubs, such as the Lions Club, the Rotary Clubs and Kiwanis. In Kelowna and Port Coquitlam, for example, one of the Rotary Clubs provided funding for the construction of bicycle facilities.

Advertising

There may be several options for obtaining funding for bicycle projects from advertising revenues. The costs of producing and distributing a bicycle route map could be partially or fully offset by selling advertising space on the map. Advertising on bicycle racks could reduce the costs of providing bicycle parking and in some cases infrastructure projects have been

funded directly through revenues from advertising. For example, McBride pedestrian/bicycle overpass in New Westminster, B.C. was paid for by Mediacom in return for a 20-year advertising deal involving seven billboards throughout the community.

A Sponsorship Program and Policy is being developed in 2016 for the City of Kelowna to guide these types of revenue opportunities.

Table 5.5: Summary of potential funding sources

Funding Option Name	Pros	Cons	Best Practice Example	Previous use in Kelowna	Recommended
General Funds/ Taxation	Tends to be equitable as lower valued properties will pay less tax.	Not geographically equitable depending on how improvements distributed. Political support low as residents do not generally support increased taxes.	Most, if not all, jurisdictions in North America use general revenues to support transportation improvements.	Yes	Yes
Local Area Services	Collected through property taxes; easy to administer. By providing pedestrian environments in proximity to affected residents, this mechanism will influence people's propensity to use active modes. Geographic equity is strong. Likely to enjoy strong public support and can be implemented without support from other agencies or levels of government.	Income equity may be an issue as some who vote no (due to financial constraints) may be forced to contribute by the majority. Feasibility of this measure is challenging since residents must go through considerable effort to solicit support from their neighbours and must secure support from over 50% through a binding petition.	Local area service taxes are available to all municipalities in B.C. and are utilized by many communities including Vancouver, Kelowna, Surrey and Saanich.	Yes	Yes

INVESTMENT OPTIONS

Table 5.5: Summary of potential funding sources, continued

Funding Option Name	Pros	Cons	Best Practice Example	Previous use in Kelowna	Recommended
Cash-in-lieu-Parking	<p>Typically nets between \$5,000 and \$40,000 per foregone parking stall, depending on whether parking is at grade or within a structure.</p> <p>Potentially significant funds, yet limited to specific developments.</p> <p>Relatively easy to administer as fees are collected as part of a development approval. Geographic and income equity would be strong, assuming the proceeds are used to benefit those who contribute. Political support would likely be strong, given that Kelowna already makes use of this measure.</p>	<p>Does not provide a reliable or steady flow of income.</p> <p>To meet parking demands, a well thought-out multi-modal transportation plan will be required.</p> <p>This fund is directed to build new parkades and parking infrastructure.</p>	The City of New Westminster updated the parking in-lieu provision of their Zoning Bylaw and added a complementary bylaw called the Parking Cash in-Lieu Reserve Fund Bylaw to create an Alternative Transportation Reserve Fund for the revenue generated from the updated cash in-lieu policy.	Yes	Yes
Latecomer Agreement	<p>Agreements are expected to have an immediate and ongoing impact on travel behaviour. Arrangements are considered equitable both from a geographic and income perspective.</p> <p>Political support could be high for such initiatives and they can be implemented without approval from the Provincial government.</p>	<p>Administratively such agreements are challenging to negotiate; however, once established, these agreements are relatively easy to administer.</p> <p>Risk to developer if term exceeds 15 years.</p>	Vernon, Summerland, Hope and Surrey all use latecomer agreements.	No	Yes
Other Grants	Helps supplement project costs.	Not always available. Specific requirements sometimes have to be met.		Yes	Yes

5.4 Funding Options for Further Consideration

Some best practice funding options that are outside existing provincial legislation require further investigation to determine the legalities and/or feasibility for implementing in Kelowna.

Benefiting Area Tax

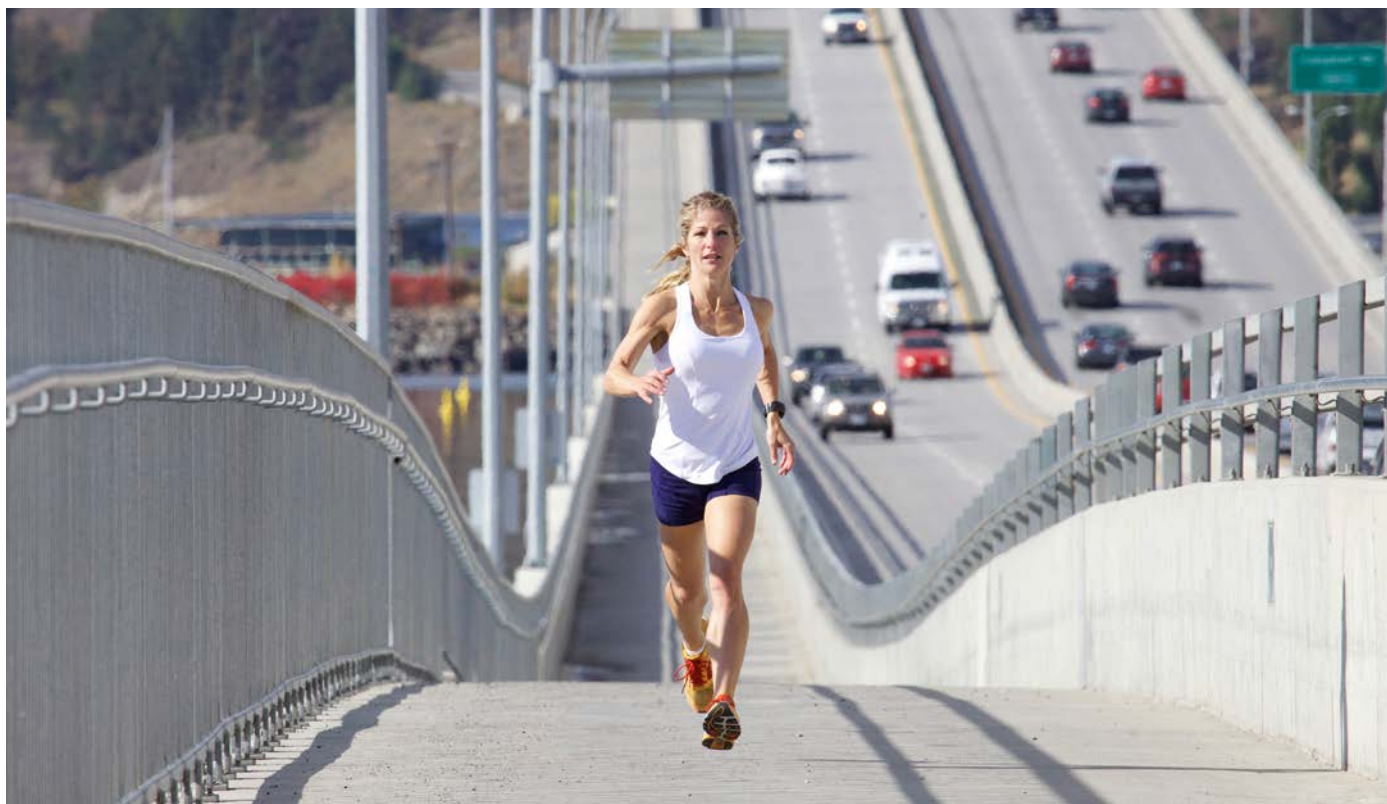
This is a type of value capture tax that imposes a charge on property owners based on their geographic proximity to a major transportation facility. This form of tax is most commonly used in proximity to light rail, bus rapid transit stations, or transit exchanges i.e. properties that are within 400-800 metres and which thus benefit directly through improved access.

Car Rental Tax

Municipal and regional authorities may choose to use revenue from locally imposed taxes on vehicle rentals to fund transportation improvements. Such a tax would require visitors to pay a portion of the cost associated with their use of the transportation system. Vehicle rental companies are responsible for reporting and remitting these taxes (Lambert, 2012).

Parking Levy

A tax on off-street, commercial parking stalls would be assessed regardless of whether or not users are charged directly for the use of that parking space. For example, this tax would apply to shopping malls that offer free parking to their patrons. The levy would be set as a flat fee on each parking stall or calculated based on the land area dedicated to parking. (TransLink, 2013).



INVESTMENT OPTIONS

Table 5.6: Funding sources for further consideration

Funding Option Name	Pros	Cons	Best Practice Example	Previous use in Kelowna	Recommended
Benefiting Area Tax	Offers a reliable flow of income. Can be implemented and collected with ease. Likely to influence transportation behaviour since those in proximity to a transportation improvement are more likely to use it. Offers strong revenue potential if facility cost is dispersed amongst property owners within 400-800 metres of the entire route length. Offers strong geographic equity. Can be implemented without support from other levels of government.	Likely to face strong opposition from those opposed to increased property taxes.	This mechanism is common in the U.S. and is being discussed for use in Metro Vancouver.	No	Further study needed
Car Rental Tax	Funding could provide a reliable and steady flow of income. Relatively easy to establish and collect. Public support for such an initiative is likely to be strong since fund would largely target visitors, allowing them to pay a portion of the costs for local roadways.	Revenue potential is limited to the size of the rental car market and would likely be vigorously resisted by car rental agencies.	Seattle has levied a rental car tax to support public transit since 1996. In 2015, a 0.8 per cent tax yields approximately \$2.5 million per year.	No	Further study needed
Parking Levy	Potential to provide a reliable and steady flow of income. The influence on travel behaviour is potentially strong, depending on how the cost is passed to the user. Revenue potential could be significant; for example, an annual cost of \$65 per stall in Metro Vancouver would generate approximately \$50 million (TransLink, 2013).	A mechanism to implement and administer would be required. Could potentially be costly for those who are relatively poor but who rely on a motor vehicle. Could be strongly resisted by those subject to tax, and this group could be large and diverse. Feasibility is unknown given that provincial legislative changes would be required.	In Metro Vancouver, a region-wide parking levy was implemented in 2006 to fund transportation improvements, but was subsequently repealed by legislative changes by the B.C. Government in 2008 due to opposition.	No	Further study needed

5.5 Investment Considerations

The previous analysis provides a high level overview of potential sources to fund active transportation improvements in Kelowna. Further investigation is required to understand the feasibility of drawing more funding from existing sources and to clarify the feasibility of sources not currently in use. Consequently it is recommended that Kelowna undertake further investigation to assess existing and potential funding sources and their applicability as a new or increased source of funding toward active transportation improvements.





CHAPTER 6: FACILITY DESIGN AND MAINTENANCE

Active transportation facilities must be designed based on environmental and functional requirements that take into account roadway and traffic conditions (e.g. vehicle speed and volume, topography), land-use context, and intended user types (e.g. all ages and abilities versus commuters versus recreational only).

This Master Plan presents pedestrian and bicycle networks designed to meet the goals of increasing walking and cycling trips and improving their safety. To increase the walking and cycling mode share, a fresh approach to facility design is necessary that considers users of all ages and abilities.

Developing an active transportation network with new facility types and retrofitting existing facilities will make cycling more suitable and attractive to children, less confident cyclists, and seniors.

This section provides guidance on the selection of the type of facilities and their design, as well as maintenance considerations.

6.1 Active Transportation Facility Design

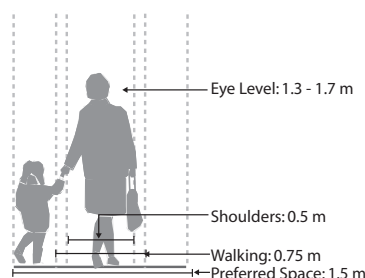
Careful consideration is important in selecting the type of facility to meet the needs of anticipated users on the corridor. The design of a facility requires measures to minimize unpleasant traffic conditions. The design should consider user types and required dimensions. Figure 6.1 illustrates the spatial needs of various active transportation users.

The following section describes each active transportation facility type with guidelines for design elements.

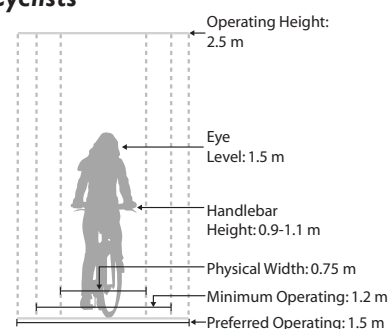
The City is currently working to update its roadway design standards. The process is anticipated to address safety and accessibility needs of vulnerable road users, including seniors, wheelchairs, walkers and visually impaired pedestrians. Additional information is provided in Chapter 7.

Figure 6.1: Spatial needs of active transportation users

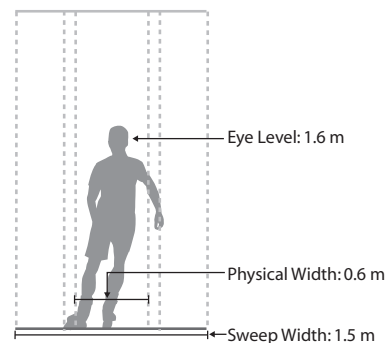
Spatial Needs of Pedestrians



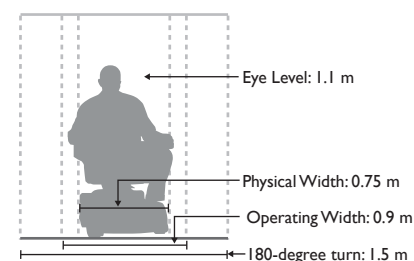
Spatial Needs of Cyclists



Spatial Needs of Roller bladers



Spatial Needs of Wheelchair Users



6.2 Bicycle Facility Types

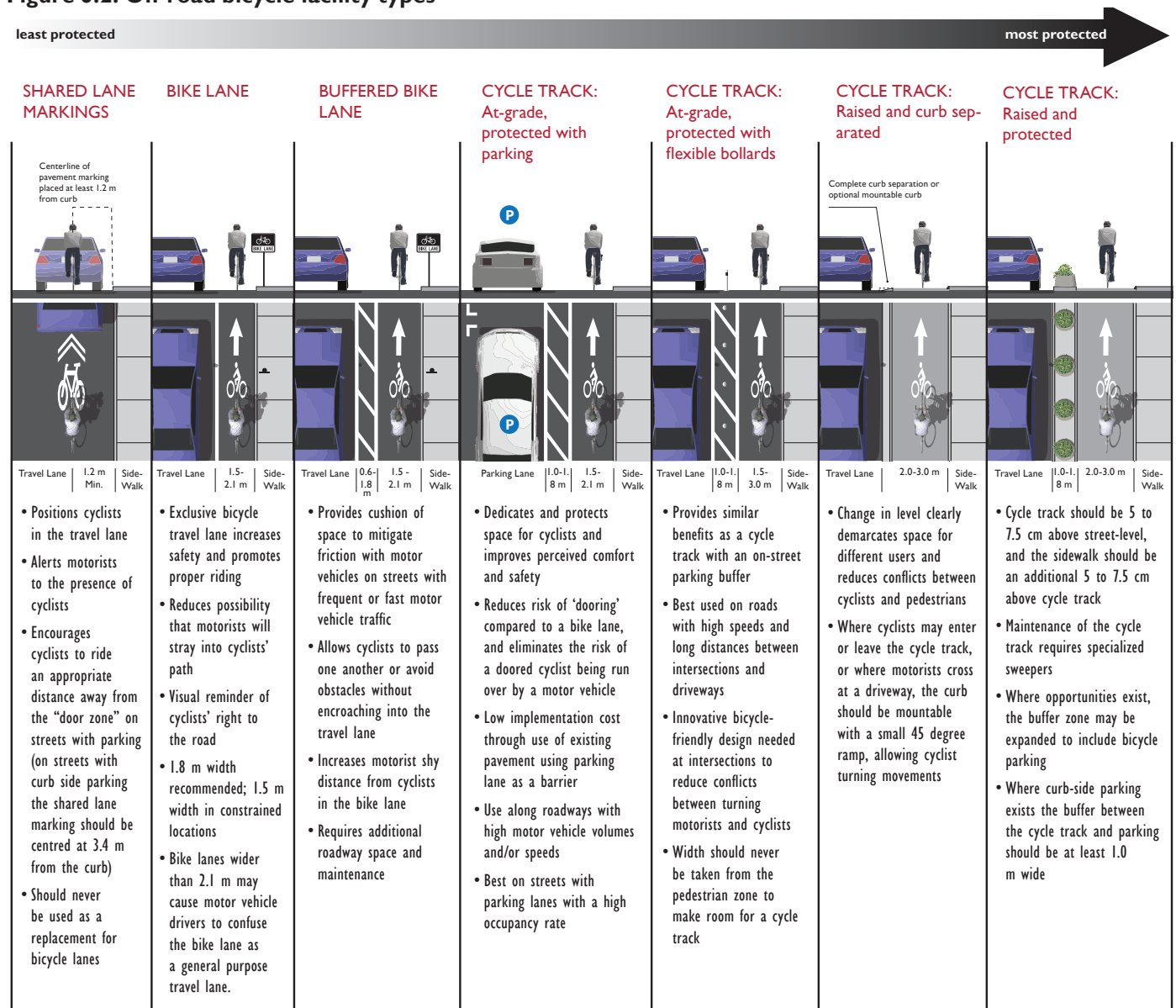
When developing facility recommendations for a specific corridor, criteria should be based on engineering standards, traffic analysis, corridor plans, land use context and stakeholder input.

Figure 6.2 shows the spectrum of facility treatments, from the most exposed to the most protected facility for cyclists. Beneath each facility type is a description of the benefits and

things to consider in selecting that type of facility for the roadway.

Additional design guidance is provided in Appendix D.

Figure 6.2: On-road bicycle facility types



Shared-Use Pathways

Pathways (Figure 6.3) are designed for shared use of a facility between pedestrians, runners, pedestrians with strollers or walkers, wheelchairs, roller bladers and cyclists of various ages and skills.

A minimum width of 3.0 m is needed to allow a cyclist to pass another user approaching from the opposite direction. Paths narrower than this should only be considered in constrained conditions for short distances or one-direction movement.

Wide paths are advisable in the following circumstances:

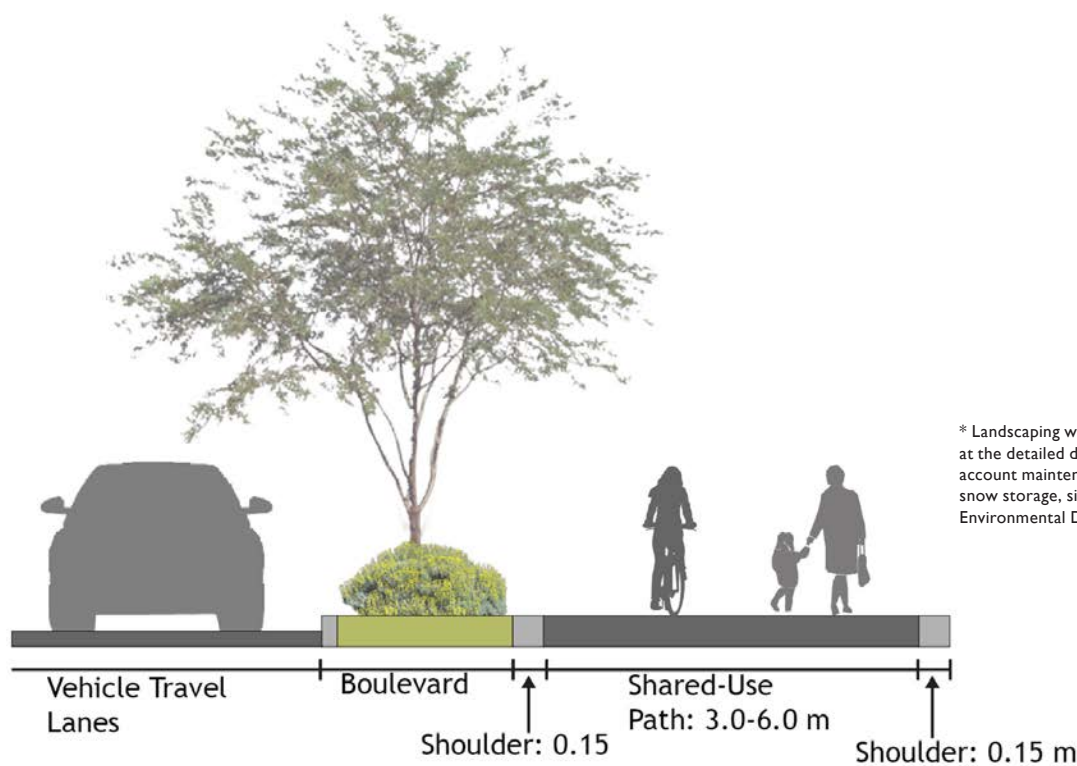
- Where cyclists may be expected to travel faster than 12 km/h;
- On steep grades (>7%) to provide additional passing area; and
- Through curves or around obstructions for operating space and better sightlines.

Centre line marking is not recommended to allow users to organize themselves according to circumstance and to avoid confusion.

Edge lines, flush curbing or banding in urban environments should be included as they are a helpful means to highlight path edges in low light conditions.

Just as the speed differential and volume of traffic between cyclists and vehicles often warrants physical separation, the speed differential and volume of cyclists and pedestrians may warrant separation between them. In instances where cyclists can be expected to travel at over 20 km/h, it is advisable to separate cyclists from other active travel users. This is particularly important if two-way cyclist travel is permitted ie., Abbott Street Corridor.

Figure 6.3: Shared-use pathways adjacent to roadways



* Landscaping will be addressed for each identified project at the detailed design stage. Landscaping will take into account maintenance requirements, water conservation, snow storage, site lines and Crime Prevention through Environmental Design Guidelines.

Landscaping shown is for illustrative purposes only. *

Conventional Bicycle Lanes

On minor streets with appropriate volumes and speeds, conventional painted bicycle lanes are adequate as supporting infrastructure to the Primary Network.

Standard minimum dimensions for bicycle lanes are cited in the Bikeway Traffic Control Guidelines for Canada as 1.5 m, although for increased comfort, 1.8 m should be the standard minimum dimension (Figures 6.4 & 6.5). Narrower lanes are acceptable only in constrained conditions or for short (less than 100 m) distances.

Widening of existing bike lanes by reducing vehicular lane width will be explored at the time of annual road resurfacing or with replacement projects.

Conventional bicycle lanes (and intersections) should be improved by adding buffer space from parked cars and moving traffic. Physical buffers such as flexible bollards, concrete curbs or medians will be appropriate for this purpose.

Figure 6.4: Conventional bicycle lane configurations

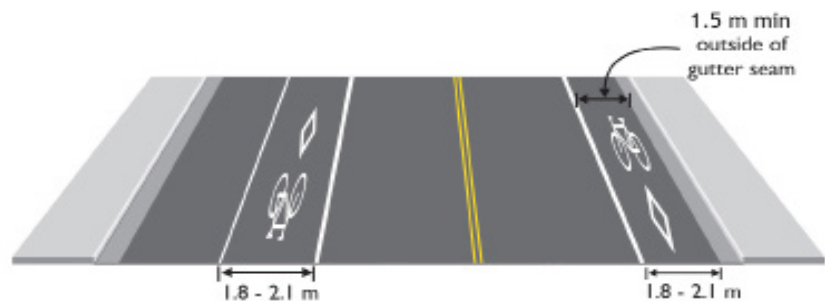
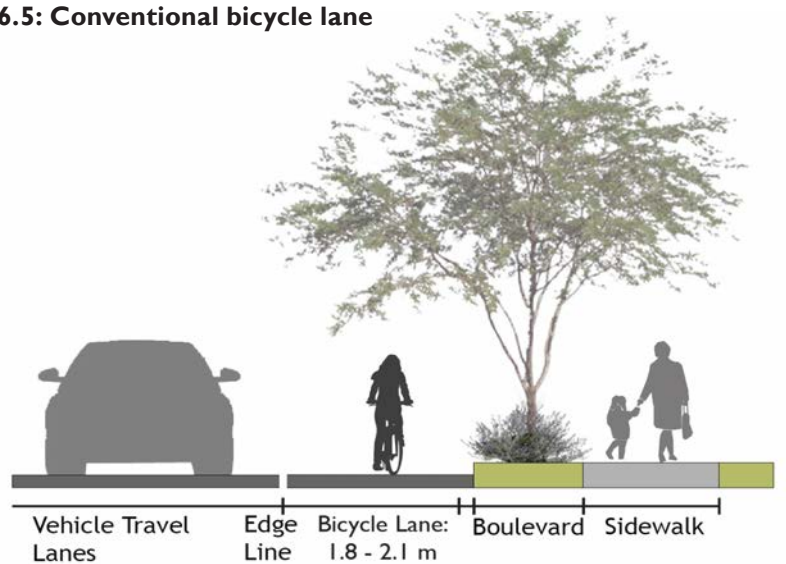


Figure 6.5: Conventional bicycle lane



Landscaping shown is for illustrative purposes only. *

Buffered Bicycle Lanes

Buffered bicycle lanes (Figures 6.6 and 6.7) add a buffer zone to a conventional bicycle lane to increase the separation between cyclists and motor vehicles. The width of the buffer zone should ideally be 0.6 m as a minimum (Figure 6.8).

The buffer zone should be used on both the parking and travel side of the bicycle lane. This protects cyclists from the door zone of an adjacent parking lane.

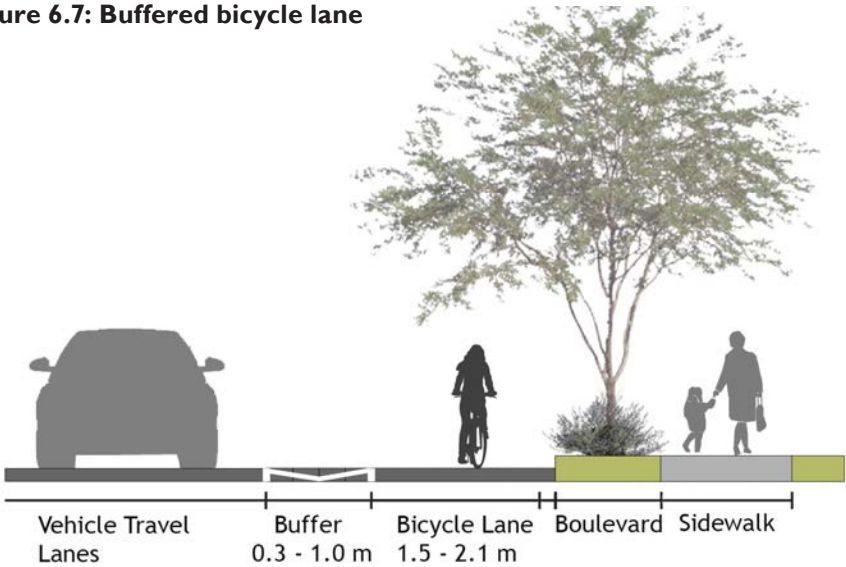
On corridors on the primary network prior to the implementation of cycle tracks, wide buffered bicycle lanes could offer an opportunity for future upgrades to cycle tracks.

Buffered bicycle lanes should be enhanced with physical separations such as flexible bollards, curbs or medians.

Figure 6.6: Buffered bicycle lane configurations

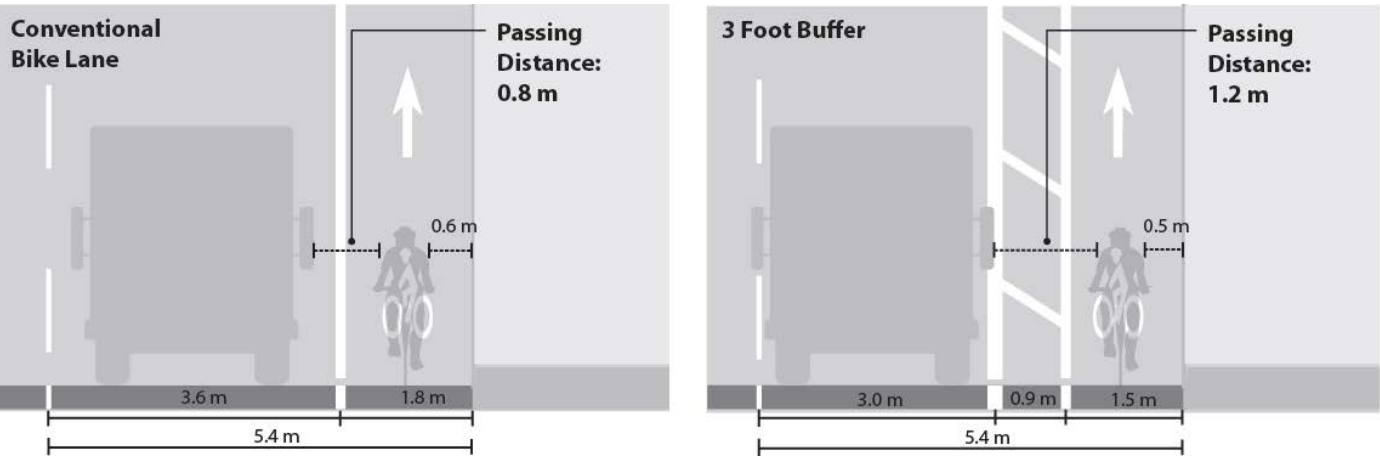


Figure 6.7: Buffered bicycle lane



Landscaping shown is for illustrative purposes only. *

Figure 6.8: Buffer effect on passing distance



Cycle Tracks

Cycle tracks use physical barriers from vehicles and pedestrians to offer increased safety and comfort for cyclists as shown in Figure 6.9 and 6.10. Narrow cycle tracks of 1.5 m prevent cyclists from passing slower riders and avoiding obstacles. Thus, minimum dimensions should only be used in constrained conditions and for short distances.

Further, street-level cycle tracks are recommended over raised ones to better accommodate all types of cyclists and improve comfort and safety.

Figure 6.9: Cycle track

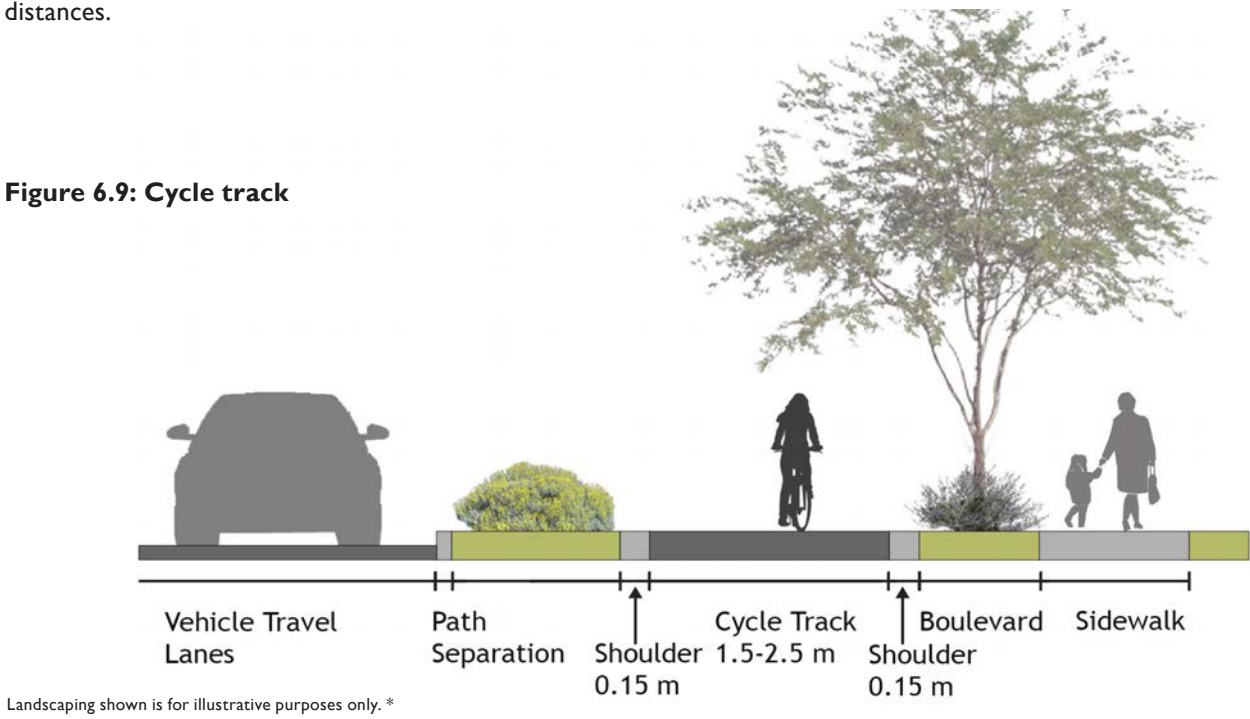
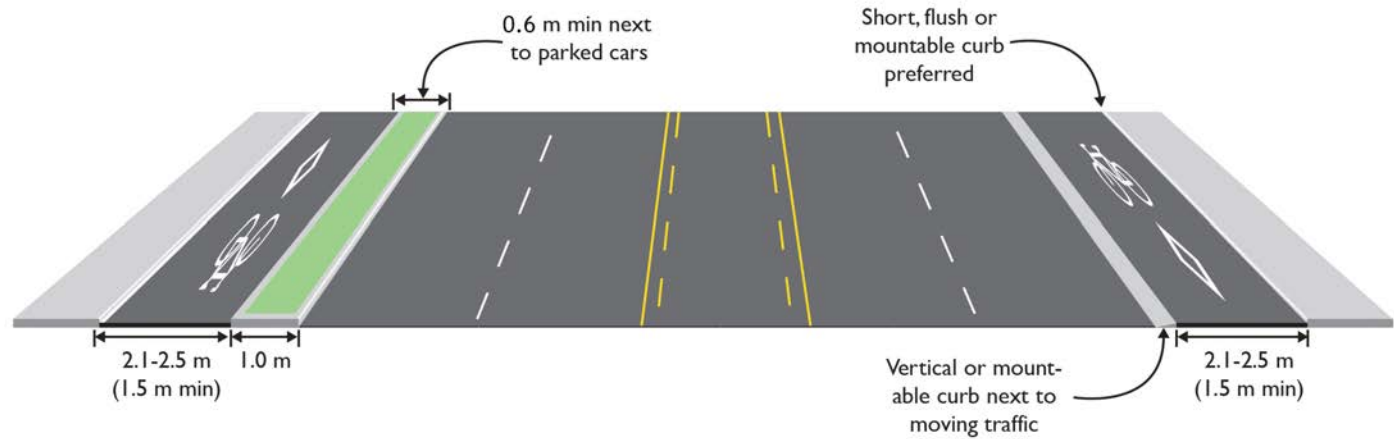


Figure 6.10: Cycle track configurations



Retrofit Cycle Tracks

Retrofit cycle track designs attempt to preserve existing sidewalks, curbs, roadside utilities, and stormwater drainage. Retrofit designs often use less durable materials (e.g. delineator posts) to reduce costs. Figures 6.11 to 6.13 illustrate various retrofit design features.

Plastic bollards can delineate while planters or curbs create a more aesthetically pleasing and more robust form of protection.

Shared Traffic Lane

Shared vehicle-bike lanes, or sharrows, are used to highlight the presence of cyclists on roadways in special circumstances. When used, they should be in the middle of the travel lane to indicate single-file movement. Side-by-side sharrows are not recommended.

Sharrows should be used in special cases only and are less preferred than a dedicated bike facility. They can be used only in retrofit situations if no suitable alternative can be found and should be combined with traffic calming measures. Inadequate road right of way due to expanding vehicular capacity cannot be excused for limiting bike facilities to sharrows.

Roads with a posted speed limit of 30 km/hr or less are suitable for sharrows as cyclists and vehicles can share the road comfortably. Roads with a posted speed limit of more than 30 km/hour should include a dedicated bike facility, as speed differentials become hazardous. Roads will not be marked with sharrows if there is already a dedicated on or off road bike facility along the road.

Figure 6.11: Cycle track barrier design

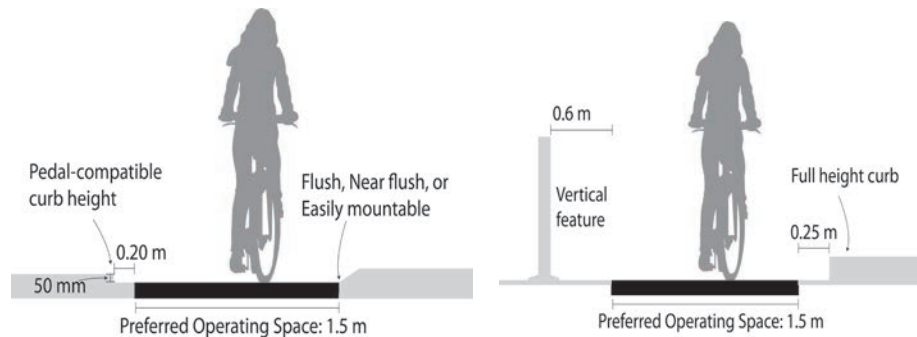
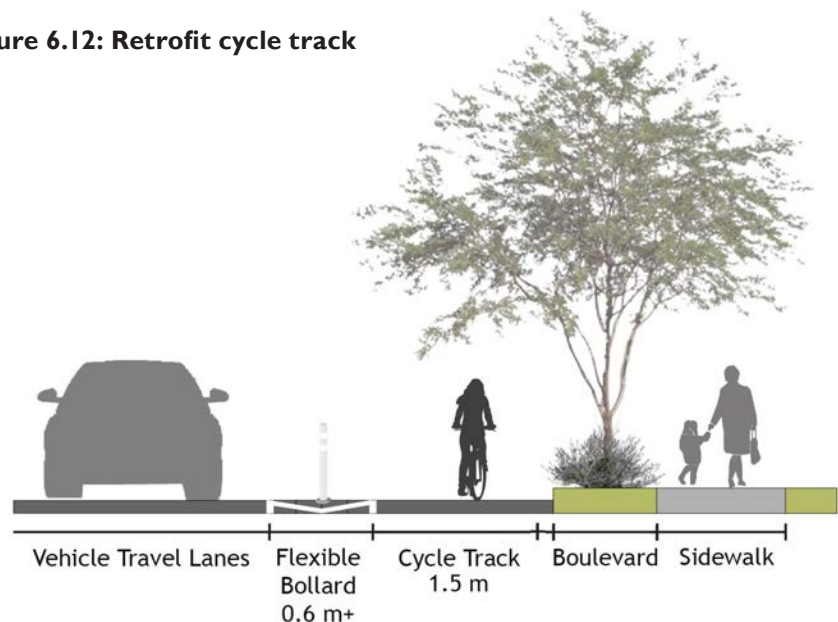
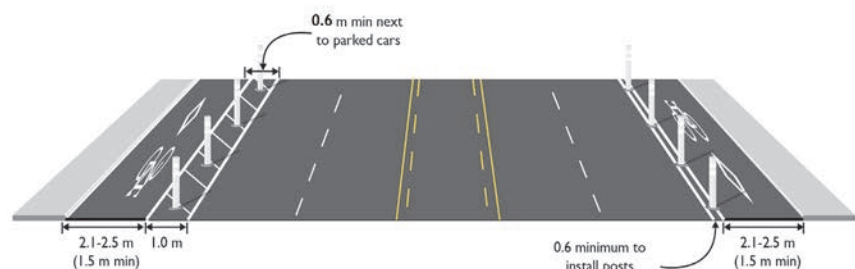


Figure 6.12: Retrofit cycle track



Landscaping shown is for illustrative purposes only. *

Figure 6.13: Retrofit cycle track configurations



6.3 Linear Parks Master Plan

The Linear Parks Master Plan was approved by Council in 2009 as an overall guide for linear parks development within the City and it helped inform the Kelowna 2030 OCP.

While this Pedestrian and Bicycle Master Plan identifies active transportation routes within road right of ways, the Linear Parks Master Plan individually describes: a detailed network of 142 predominantly off-road recreation trails for all forms of non-motorized users including equestrians and mountain bikers; prioritizes them; and, further breaks them down into a hierarchy of six trail classifications based on location, anticipated type and number of users, width, surfacing and topography.

Trails identified in the Linear Parks Master Plan connect parks and points of interest by providing access to cultural and heritage sites, and natural features e.g., creek corridors, viewpoints, rock outcroppings, lakes and ponds etc.

The Linear Parks Master Plan is a valuable resource that helps identify land for park acquisition and provides justification for dedication of public parkland and registering of statutory right-of-ways during the development application process.

The two master plan documents are complementary and contain some overlap. Of the six trail classes identified in the Linear Parks Master Plan (referred to as facility types in the Pedestrian and Cycling Master Plan), there is a potential duplication of two classes:

- The Major Urban Promenade is an off-road shared-use pathway (referred to as multi-use trail in the Linear Parks Master Plan) typically located in waterfront parks in the downtown core.
- The Roadside Corridor is a shared-use pathway (referred to as multi-use trail in the Linear Parks Master Plan) separated from vehicle traffic and designed for use within the road right of way. The design guidelines for the Roadside Corridor include the option of separate bicycle and pedestrian pathways, i.e. the Abbott Street Corridor



6.4 Bicycle Parking Guidelines

Adequate supply of visible, well-lit, secured and accessible parking removes a major barrier toward the ownership and use of bicycles. Bicycle parking is therefore an important supporting infrastructure for public places such as road rights-of-way and private developments.

Off-Street Private Bicycle Parking

The City of Kelowna's Zoning Bylaw No. 8000 stipulates off-street parking requirements for new developments, as well as change-in use and development expansions. The requirements are outlined in terms of dimensions, type and number of parking spaces. These are separated into two categories based on their intended function and location. These categories are:

i. Bicycle parking, CLASS I means bicycle parking that is provided for residents, students, or employees of a development. It is intended for the long term secure parking of bicycles and includes bicycle lockers, compounds or rooms specifically provided and equipped for longer term bicycle storage.

ii. Bicycle parking, CLASS II means bicycle parking that is provided for patrons or visitors of a development.

It is intended for the short term parking of bicycles and includes racks, lockers, or other structurally sound devices designed to secure one or more bicycles in an orderly fashion (recommended updates to the Zoning Bylaw found in Section 7.1).

On-Street Public Bicycle Parking

Bicycle parking demands are typically higher in Urban Centres and major activity centres such as transit stations, commercial, retail, medical, institutional, recreational uses and parks. The City should invest directly or form partnerships to deliver parking infrastructure and thereby address demands generated by the majority of existing land use that has not recently gone through the development approval process.

In theory, to promote cycling, parking supply should be proactive, publicly funded and involve minimal regulations. However, certain criteria and prioritization are necessary due to limited budget and to meet safety and functional requirements in a consistent manner.

Table 6.1 summarizes recommended criteria towards the screening and selection of potential locations for on-street parking. Such parking can be short or long term and located on the roadside boulevard, extended curbs, and along vehicle parking bays with adequate lateral and longitudinal clearance. Bike lockers can be installed based on private-sector interests and to achieve a minimum ratio of one locker per every five bike rack spaces.

Table 6.1: On-street bicycle parking needs assessment criteria

New Candidate Location	Yes	No	Criteria
	X		Urban Centre or Transit Exchange within 200 m?
	X		Demand> Supply Evident within 200 m?
	X		Nearby Street Volume >1000 ADT?
	X		Nearby Surplus Parking > 100 m?
	X		Visible/ non-obstructing?
	X		Public Space Available> 3x.6x1.8 m2?
	X		Commercial or Transit Routes>1 within 200 m?
	X		Racks<5 or Lockers<3
	X		Qualifies for on-street bicycle parking installation



6.5 Bicycle Parking Facility Types

This section summarizes various types of bicycle parking grouped into short and long term parking categories and offers guidance for design and implementation of each facility.

Short-Term Parking

Short-term bicycle parking is generally intended to be used for few hours by residents, visitors or employees to an establishment.

Sidewalk Boulevard Parking

Typical sidewalk parking frequently includes ring and post, “U”, cluster, or decorative racks, allowing multiple bicycles to be locked to both sides of the rack.

Bike Corral

On-street or curb-mounted bicycle corrals minimize clutter, free up space for pedestrians and other uses and increase bicycle parking capacity at high-demand destinations. Where roadside boulevard is unavailable, on-street corrals are an efficient use of right-of-way space as 12 or more bicycles can park in two car parking spaces. Curb-mounted corrals can avoid potential conflicts with street sweeping, vehicle movement/manoeuvring, and offer better overall design.

Temporary (Event) Parking

Temporary parking typically consists of portable racks that meet demands for an event. Racks are clustered together, providing a higher level of security and more bikes can be parked in less space. Bicycle valet parking often includes event staff to monitor the area.

Bike corral



Temporary (event) parking



FACILITY DESIGN AND MAINTENANCE

Long-Term Parking

Long-term bicycle parking areas are intended to be used all day and/or night. Primary users are employees, residents, students, or travellers leaving their bicycle at inter-modal stations, bus stops, or airports.

Bicycle Lockers

Bicycle lockers are the most secure, weather-protected, single-user-access parking type, usually by subscription, rental, or on demand. Bike locker

rental is available through the City for a monthly fee at numerous locations.

Shelters

Short- and long-term bicycle parking can be accommodated with shelters for weather protection. Sheltered bicycle parking can be on public or private property.

Transit and Bicycle Parking

Kelowna recognizes that trips are increasingly multi-modal and users expect flexibility to park their bike and ride on transit buses. The City of Kelowna and BC Transit are also working to improve bicycle access and integration with transit by means of front loading bike racks on buses and incorporating short- and long-term parking at transit stations and exchanges.

Bicycle secured parking area



Transit and bicycle parking



Bicycle lockers



Transit and bicycle parking



6.6 Facility Design Guidance

This section provides guidance on the site design, layout and planning for short- and long-term bicycle parking.

Bicycle Racks

Description

Short-term bicycle parking should use approved standard racks and be placed in consistent locations.

The Association for Pedestrian and Bicycle Professionals (APBP) recommends selecting a bicycle rack that:

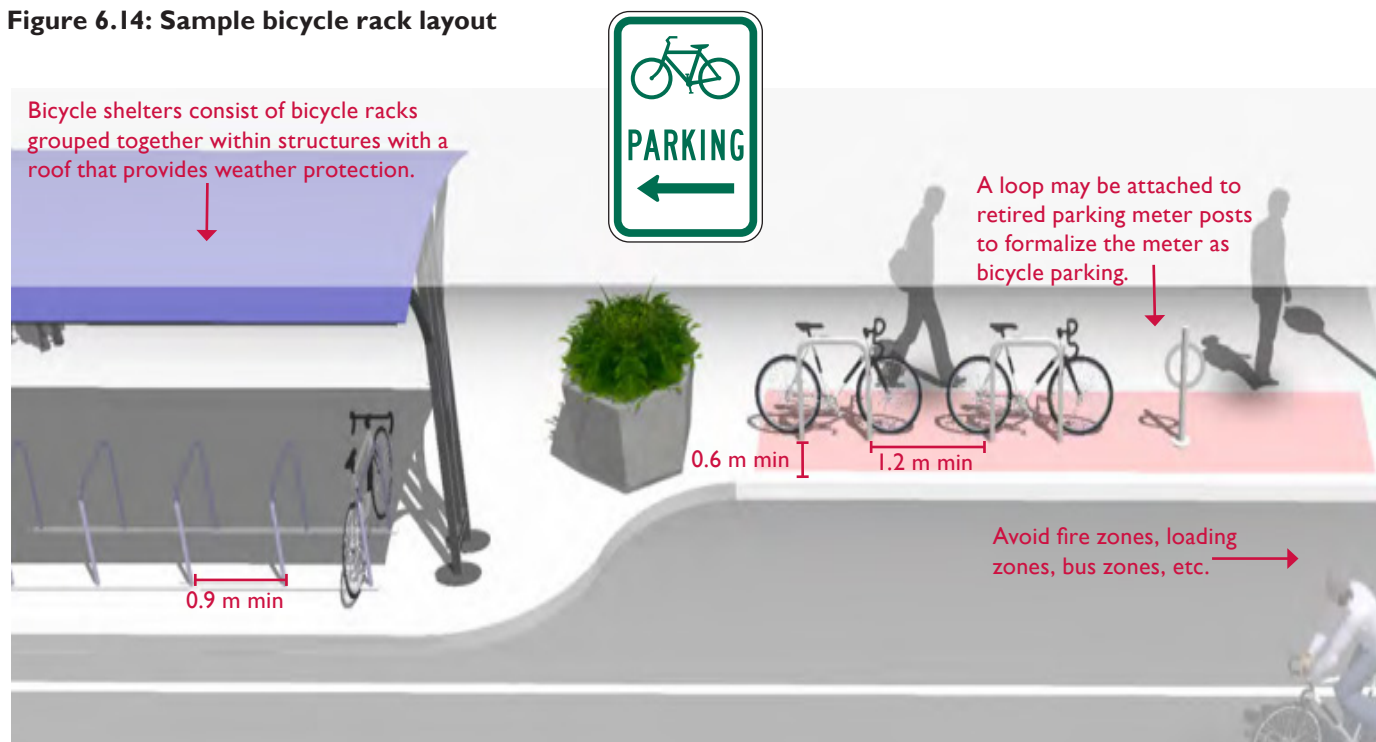
- Supports the bicycle in at least two places, preventing it from falling over;
 - Allows locking of the frame and one or both wheels with a U-lock;
 - Is securely anchored to ground; and
 - Resists cutting, rusting and bending or deformation.
- Close to destinations – 15.2 m maximum distance from main building entrance; minimum clear distance of 1.8 m between the bicycle rack and the property line;
 - In a location that is highly visible from adjacent bicycle routes and by pedestrian traffic; and
 - Using installation site assessment criteria in Figure 6.14.

Guidance

Bicycle racks for short-term parking should be placed:

- 0.6 m minimum from the curb face to avoid 'dooring';

Figure 6.14: Sample bicycle rack layout



Bicycle Corrals

Description

Bicycle corrals consist of bicycle racks grouped together in a common area within the street traditionally used for vehicle parking. Bicycle corrals provide a relatively inexpensive solution to providing high-capacity bicycle parking.

Bicycle corrals can be easily implemented by converting two on-street vehicle parking spaces into a series of racks. Each vehicle parking space can be replaced with approximately 6 bicycle parking spaces.

Bicycle corrals move bicycles off the sidewalks, leaving more space for pedestrians, sidewalk café tables, and amenities and furniture.

Bicycle parking does not block sight lines and can be located in 'no-parking' zones near intersections and crosswalks.

Guidance

Guidelines for sidewalk bicycle corral placement include.

- Cyclists should have an entrance width from the roadway of 1.5 m - 1.8 m;
- Parking stalls adjacent to curb extensions are good candidates for bicycle corrals since the concrete extension serves as delimitation on one side.

Discussion

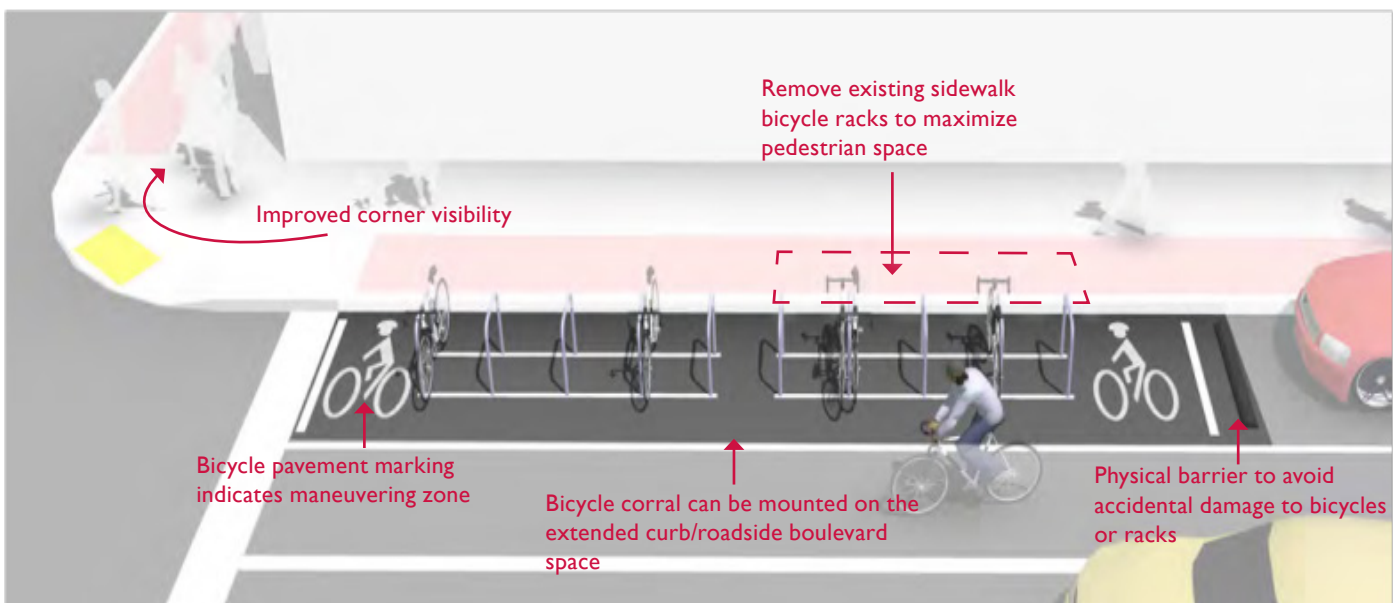
Bicycle corrals can be especially effective in areas with high bicycle parking demand or along street frontages with narrow sidewalks where parked bicycles would be detrimental to the pedestrian environment.

Kelowna has installed a bike corral on Water Street at Cawston Avenue.

Materials and Maintenance

Physical barriers may obstruct drainage and collect debris if installed on street. Establish a maintenance agreement with neighboring businesses.

Figure 6.15: Sample bicycle corral layout



FACILITY DESIGN AND MAINTENANCE

Bicycle Lockers

Description

Bicycle lockers provide space to store accessories or rain gear in addition to containing the bicycle. Some lockers allow access to two users—a partition separating the two bicycles can help users feel their bike is secure. Lockers can also be stacked, reducing the footprint of the area, although that makes them more difficult to use.

Guidance

Bicycle lockers should have the following minimum dimensions:

- Width (opening) 1.76 m; height 1.2 m; depth 1.8 m;
- 1.2 m side clearance and 1.8 m end clearance;
- 2.1 m minimum distance between facing lockers;
- Should allow visibility and inspection of contents for safety and security; and
- Control access by a key or access code.

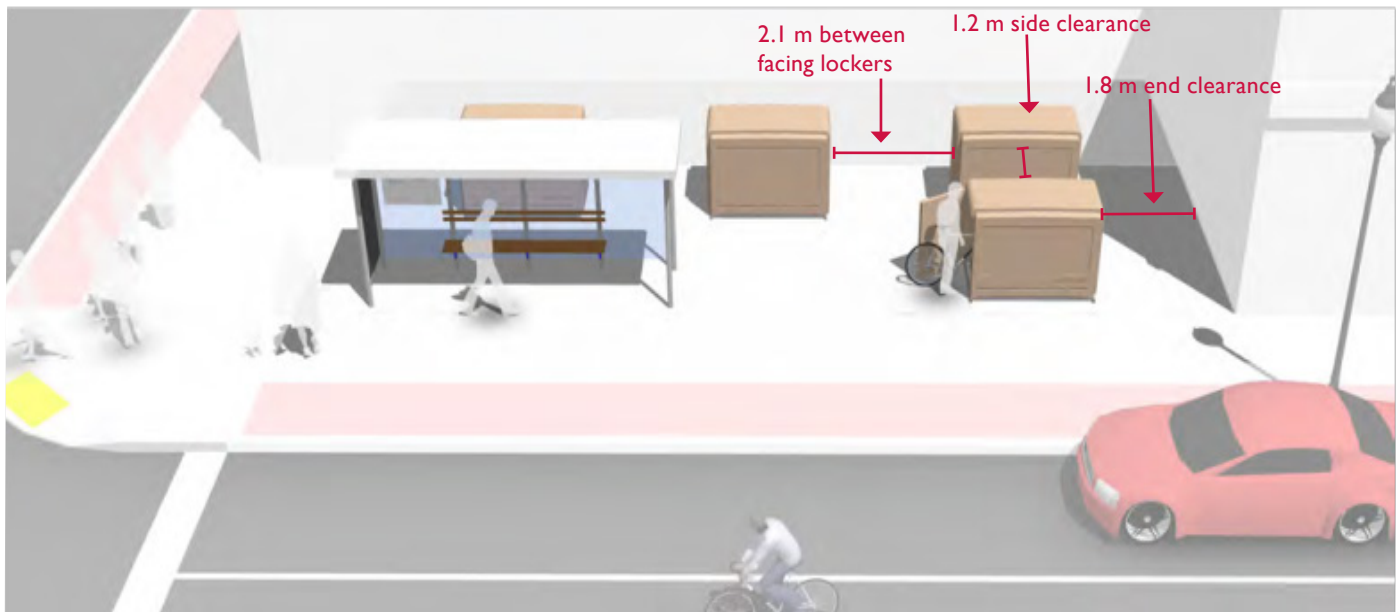
Discussion

Although many bicycle commuters would be willing to pay a nominal fee to guarantee better safety of their bicycle, long-term bicycle parking should be free wherever vehicle parking is free and to promote cycling.

Potential locations for long-term bicycle parking include transit stations, major institutions where people use their bikes for commuting, and on site facilities are not available.

Kelowna has installed a number of bike lockers that are available to rent monthly throughout Downtown.

Figure 6.16: Sample bicycle locker layout



FACILITY DESIGN AND MAINTENANCE

Secure Parking Areas

Description

A Secure Parking Area (SPA) for bicycles, also known as a Bike SPA or Bike & Ride (when located at transit stations), is a semi-enclosed space that offers a higher level of security than ordinary bike racks.

Accessible via key-card, combination locks, or keys, BikeSPAs provide high-capacity parking for 10 to 100 or more bicycles.

Increased security measures create an alternative transportation option for users whose biggest concern is theft and vulnerability.

Guidance

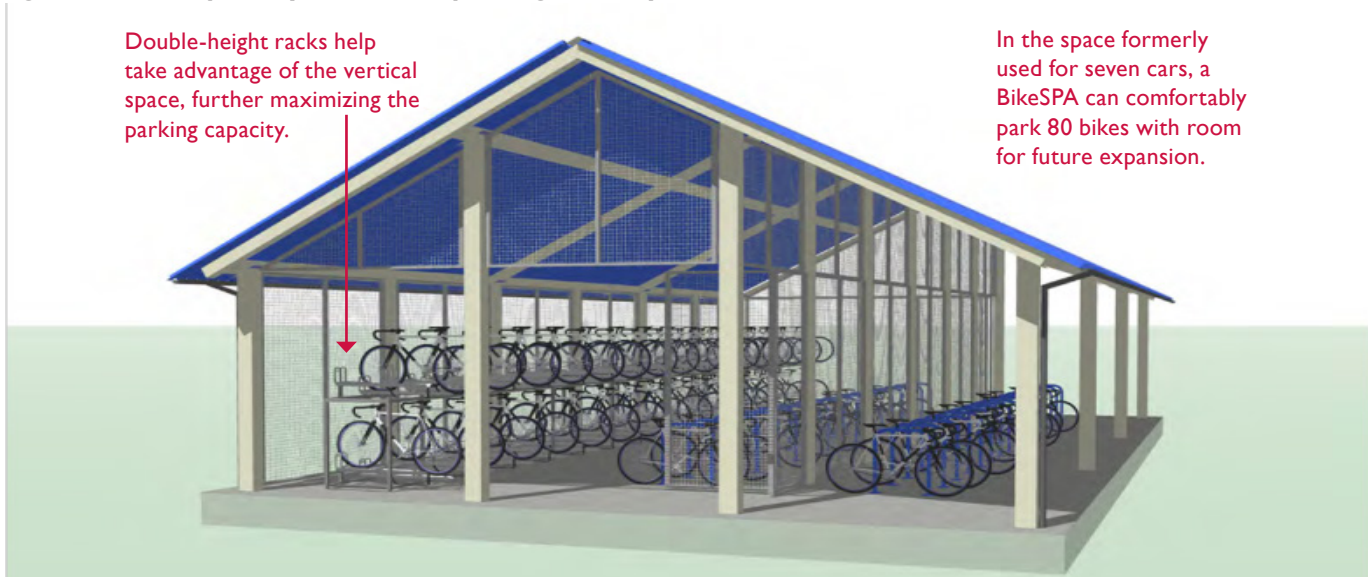
Key features of a SPA may include:

- Closed-circuit television monitoring;
- Double high racks and cargo bike spaces;
- Bike repair station with bench;
- Bike tube and maintenance item vending machine;
- Bike lock “hitching post” – allows people to leave bike locks; and
- Secure access for users.

Discussion

BikeSPAs are ideal for transit centres, parkades, airports, institutions, City Park, or wherever large numbers of people might arrive by bicycle and need a secure place to park while away.

Figure 6.17: Sample bicycle secured parking area layout



6.7 Active Transportation Facility Maintenance

A well maintained active transportation network can provide many benefits that include:

- Improved safety;
- A positive user experience to cause behaviour change;
- Protection of investment in infrastructure; and
- Ensured compliance to policies, standards, and regulations.

The City of Kelowna's current Road Maintenance Policy includes road cleaning and sweeping between March and May, weather permitting. Bike lanes are swept in conjunction with the road network, and sidewalk construction and maintenance is inspected in the spring and repaired, as needed.

Residents are also expected to complete their responsibilities. The current Maintenance of Boulevards by the Owners of Lands Abutting Thereon Bylaw 10425 outlines adjacent homeowners' responsibilities in maintaining sidewalks and boulevards.

To keep pace with the expansion of

the active transportation network additional maintenance funding will be necessary over time.

Design Considerations

Maintenance requirements need to be captured in pedestrian and bicycle facility design. The design affects ongoing maintenance procedures and costs. Key design considerations include:

- What equipment and crew capabilities are needed?
- How will maintenance or service vehicles access the facility?
- Are supportive features, such as lighting, signs, irrigation, information kiosks, water fountains, and garbage receptacles, located and designed to allow for maintenance and operation?

Maintenance Procedures

Maintenance of pedestrian and bicycle facilities require specific procedures, priorities, schedules, and budget. Maintenance activities are generally classified as either routine maintenance or remedial maintenance.

- Routine maintenance refers to day-to-day and scheduled tasks, including garbage and debris removal, sweeping, sign replacement, marking, landscaping, etc. Routine maintenance also includes minor repairs and replacement such as sealing cracks and potholes.
- Remedial maintenance involves tasks that are of a larger scale, and are required less frequently, such as resurfacing or minor replacement. Some items ("minor repairs") may occur on a five to ten year cycle such as repainting, seal coating asphalt. Anticipating and budgeting for these expenses can be critical to ensure facilities meet user needs and expectations and to avoid significant costs in deferred maintenance.
- Major reconstruction items occur at the end of service life and are part of long-term capital plans.
- Regular bicycle facility maintenance includes sweeping, maintaining a smooth roadway and ensuring that the gutter-to-pavement transition remains relatively flat. Pavement overlays are a good opportunity to improve bicycle facilities. The following recommendations provide options to consider to enhance a maintenance regimen.



FACILITY DESIGN AND MAINTENANCE

Sweeping

Description

The City has a fleet of sweeping equipment for sidewalks. Sidewalks, cycle tracks and shared-use pathways are swept once per year, whereas bike lanes are swept 10 times per year as part of regular road sweeping.

Cyclists often avoid shoulders and bike lanes filled with gravel, broken glass and other debris; they will ride in the vehicle lanes to avoid these hazards, potentially causing conflicts with motorists. Debris from the roadway should not be swept onto sidewalks, nor should debris be swept from the sidewalk onto a designated cycling facility. A regularly scheduled inspection and maintenance program helps ensure that roadway debris is regularly picked up or swept.

Guidance

- Work to establish priority cycling routes for street sweeping taking into account operational conditions.
- Sweep walkways and bikeways whenever there is an accumulation of debris on the facility.
- In curbed sections, sweepers should pick up debris; on open shoulders, debris can be swept onto gravel shoulders.
- Pave gravel driveway approaches to minimize loose gravel on paved roadway shoulders.
- Perform sweeping in the spring to remove debris from the winter. Consideration should be given for additional sweeping on priority routes to enhance user safety.
- Perform sweeping in the fall in areas where leaves accumulate.

Signage and Marking

Description

Bike lanes, shared shoulders, transportation corridors and paths all have different signage types for wayfinding and regulations. Such signage is vulnerable to damage, vandalism or wear, and requires periodic maintenance and replacement.

Guidance

- Bike lane markings can be renewed at the time of road resurfacing which will also create an opportunity to improve the design. Consideration should be given for additional repairing of lines on priority routes to enhance user safety.
- To discourage wrong way movement, and to guide cyclists in the intended direction, directional arrows should be considered as per Bikeway Traffic Control Guidelines for Canada (TAC).
- Create a Maintenance Management Plan.



FACILITY DESIGN AND MAINTENANCE

Roadway Surface

Description

Bicycles are much more sensitive to subtle changes in roadway surface than motor vehicles. Various materials are used to pave roadways, and some are smoother than others. Compaction is also an important issue after trenches and other construction holes are filled. Uneven settlement after trenching can affect the roadway surface nearest the curb where bicycles travel.

Sometimes compaction is not achieved to a satisfactory level, and an uneven pavement surface can result due to settling over the course of days or weeks. When resurfacing streets, use the smallest chip size and ensure that the surface is as smooth as possible to improve safety and comfort for cyclists.

Guidance

- Conduct inspections and maintain a smooth pothole-free surface.
- In order to improve safety, amend design standards in the Subdivision and Servicing Bylaw so there is a smooth transition and minimize the vertical drop.
- Maintain pavement so ridge buildup does not occur at the gutter-to-pavement transition or adjacent to railway crossings.
- Inspect the pavement 2 to 4 months after trenching construction activities are completed to check that excessive settlement has not occurred.
- If chip sealing is to be performed, use the smallest possible chip on bike lanes and shoulders. Sweep loose chips regularly following application.
- During chip seal maintenance projects, if the pavement condition of the bike lane is satisfactory, it may be appropriate to chip seal the travel lanes only. However, use caution when doing this so as not to create an unacceptable ridge between the bike lane and travel lane.



Pavement Overlays

Description

Pavement overlays present good opportunities to improve conditions for cyclists if done carefully. A ridge should not be left in the area where cyclists ride (this occurs where an overlay extends part-way into a shoulder bikeway or bike lane). Overlay projects also offer opportunities to widen a roadway, add bike lanes, or re-stripe a roadway to widen/improve bike lanes.

Guidance

- Extend the overlay over the entire roadway surface to avoid leaving an abrupt edge.
- If the shoulder or bike lane pavement is of good quality, it may be appropriate to end the overlay at the shoulder or bike lane stripe provided no abrupt ridge remains.
- Ensure that inlet grates, manhole and valve covers are flush with the finished pavement surface and are made or treated with slip resistant materials.

- Move valve or manhole covers where possible away from bike lanes, preferably in boulevards or sidewalks. Where this is not possible, covers and lids should be flush with the surface.

Drainage Grates

Description

Drainage grates are typically located on catch basins in the gutter area near the curb of a roadway. Drainage grates have slots through which water drains into the municipal storm sewer system. Many older grates were designed with linear parallel bars spread wide enough that the front tire of a bicycle could become caught in the slot and create a tripping hazard. This would cause the cyclist to tumble and sustain potentially serious injuries.

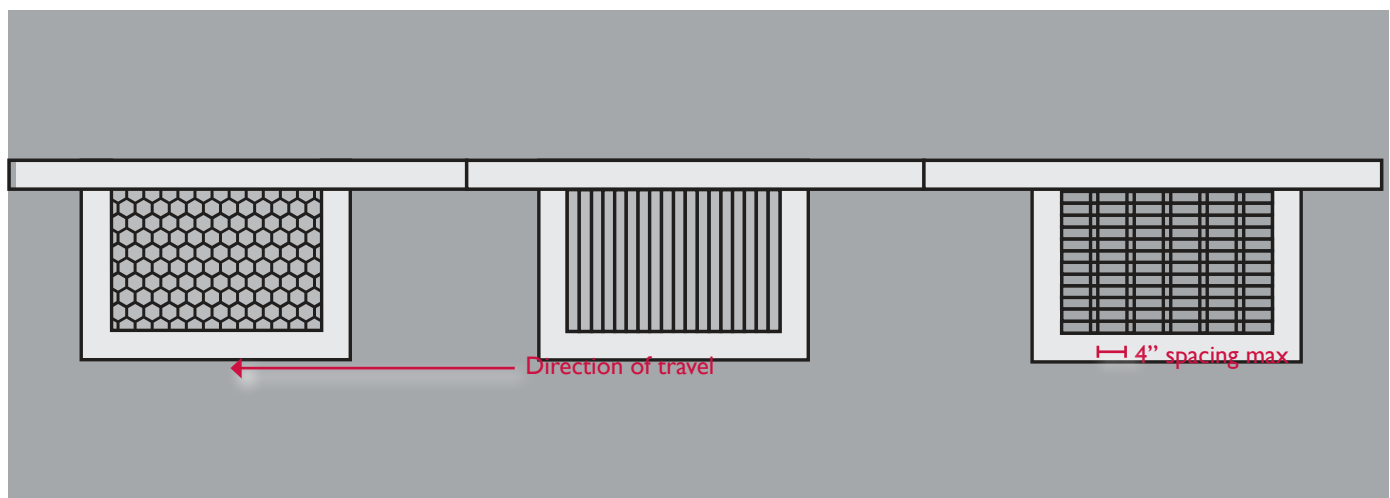
Guidance

- Install grates that have horizontal slats on them so that bicycle tires and assistive devices do not fall through the vertical slats, as illustrated in Figure 6.18.

- Replace hazardous grates – temporary modifications such as installing rebar horizontally across the grate is not an acceptable alternative to replacement.
- Review Bylaw 7900 Subdivision and Servicing to include more bicycle friendly catch basin grates.



Figure 6.18: Drainage grate examples



Gutter to Pavement Transition

Description

On streets with concrete curbs and gutters, 0.3 metre of the curbside area typically includes the gutter pan, where water collects and drains into catch basins. On many streets, the bike lane is situated near the transition between the gutter pan and the pavement edge. This transition can be susceptible to erosion, creating potholes and a rough surface for travel.

The pavement on many streets is not flush with the gutter, creating a vertical transition between these segments. This area can buckle over time, creating a hazardous condition for cyclists.

Guidance

- Ensure that gutter-to-pavement transitions have no more than a two cm vertical transition.
- Examine pavement transitions during every roadway project for new construction, maintenance activities, and construction project activities that occur in streets.
- Inspect the pavement 2 to 4 months after trenching construction activities are completed to ensure that excessive settlement has not occurred.
- Provide at least 0.9 m of pavement outside of the gutter seam.



Landscaping

Description

Bike lanes and sidewalks can become inaccessible due to overgrown vegetation. All landscaping needs to be designed and maintained to ensure compatibility with the use of the bikeways.

Guidance

- Ensure that shoulder plants do not hang into or impede passage along bikeways and sidewalks
- After major damage incidents, remove fallen trees or other debris as quickly as possible

FACILITY DESIGN AND MAINTENANCE

Traffic Management Plan

Description

Cyclists need accommodation during construction and maintenance activities when bike lanes may be closed or unavailable. Users must be warned of bike lane closures and given adequate detour information to bypass the closed section. Users should be warned through the use of standard signing approaching each affected section (e.g., “Bike Lane Closed,” “Trail Closed”), including information on alternate routes and dates of closure. Alternate routes should provide reasonable directness, equivalent traffic characteristics, and be signed.

Although much of the maintenance required for on-street bike lanes can be seamlessly incorporated into present roadway maintenance activities, there may be additional costs to ensure that facilities remain safe and accessible. Table 6.2 describes maintenance costs for bicycle and pedestrian facilities recommended in this Plan. These costs should be included in the annual budget and financial plan to achieve a balanced transportation system.

Guidance

- Enforce speed limits and other rules of the road
- Provide temporary advance construction signs to warn of work zones within bicycle or pedestrian facilities
- Plan detours to ensure safe passage by cyclists and pedestrians
- Follow temporary traffic control measures defined in the Manual of Uniform Traffic Control Devices (“MUTCD”)

Table 6.2: Maintenance cost estimates

Maintenance Activity	Unit Cost (2015)	Notes
Ongoing regular maintenance	\$2,000 to \$12,500 per km/year	Maintenance of landscaped boulevards including mowing, irrigation, fertilization and turf care, pruning and weeding of shrub beds, tree pruning, pest management, and litter removal. Costs vary according to the level of landscaping, e.g. hard surfacing and trees, versus more extensive lawn, trees and shrubs.
Line painting (non-intersection)	\$2,000 per km/year	Repainting lane stripes and stencils, sign replacement as needed
Line painting (intersections)	\$1,500 / year / intersection	
Street lighting maintenance	\$2,500 per km/year	This includes electricity costs and maintenance and repair costs.
Traffic signal maintenance	\$300 per location per year	Maintenance for signal head and pushbuttons
Snow and Ice Control	\$3,900 per km/year	Refers to primary network only
Sweeping and flushing	\$400 per km/year	Refers to primary network only
Additional equipment	\$200,000 / 12 km of network growth	
Eco-counters	\$300/location	Based on battery life

FACILITY DESIGN AND MAINTENANCE

Snow and Ice Removal

The City of Kelowna maintains approximately 815 centre line kilometres of roadway (centre line road length represents the length of the road corridor and does not include the combined length of various lanes). Plowing and sanding takes place on a priority basis with major routes receiving first priority. Bike lanes are either cleared as the same level of service as adjacent roadway or are used as snow storage. Additional resources will be required to prioritize maintenance on new cycle tracks or shared-use pathways so that these primary facilities receive higher priority than local roads.

Guidance

- Plan bike facilities with sufficient right-of-way to accommodate unimpeded travel, snow removal vehicles, and storage space for snow. Buffered bike lanes and cycle tracks have the advantage of allowing for additional vehicle access and storage space.
- Where roadways are plowed, sidewalks should be kept free and clear of snow debris to the extent possible. Curb ramps and landings, crosswalks and refuge islands must be kept clear so as not to impede safe pedestrian movements.
- During snow event, on-street parking may be used for snow storage to keep bike lanes clear.
- Investment in smaller, more specialized snow removal equipment will allow for better access to newer active transportation facilities. Due to smaller size, the equipment has better maneuverability, and may also be used for clearing sidewalks.
- A prioritization schedule for snow removal is necessary and should focus on primary corridors and destinations that serve the highest volume of cyclists. Council Policy 332: Snow and Ice Control should be updated to include primary active transportation corridors for snow and ice control. Where feasible, snow storage will be kept to the roadside boulevard.



6.8 Summary of Facility Maintenance Recommendations

Maintenance of the active transportation network is vital to ensure user safety, comfort and accessibility. To keep pace with the

expansion of the network, additional maintenance funding will be necessary over time as capital improvements are approved.

Table 6.3: Recommended pedestrian and bicycle facility maintenance activities

Maintenance Activity	Current Activity	Recommended Frequency
Inspections		Seasonal – at beginning and end of Summer
Curb/gutter sweeping/blowing	Twice per year	As needed, with higher frequency in the early Spring and Fall
Bike lane sweeping/blowing	10 times per year	Higher frequency in Spring and Fall, whenever there is accumulation
		Work to establish priority cycling routes for street sweeping taking into account operational conditions.
Sidewalk sweeping/blowing	Once per year (spring)	Higher frequency in Spring and Fall, whenever there is accumulation
Multi-use path sweeping/blowing	Once per year	Spring and Fall, whenever there is accumulation
Pavement sealing		5 - 15 years
Pothole repair	As needed	1 week – 1 month after report
Culvert inspection	After winter	Before Winter and after major storms
Drainage grate inspection	Annual	Before Winter and after major storms
Pavement markings replacement	As needed	As needed
Signage replacement	As needed	As needed
Shoulder plant trimming (weeds, trees, brambles)	2 - 3 times per year	Twice a year; middle of growing season and early Fall
Roadside mowing (weeds, rough grass, brambles)	Once per year	1 - 3 years
Tree trimming		Once every 2 - 9 years, depending on tree age and species
Shrub pruning		Once per year
Major damage response (washouts, fallen trees, flooding)	As needed	As soon as possible
Snow/Ice removal bicycle lanes/facilities	Used for snow storage	Update Council Policy 332, Snow and Ice Control, to include primary active transportation corridors for snow and ice control. Where feasible snow storage will be kept to the roadside boulevard.



CHAPTER 7: BYLAW AND POLICY MEASURES

BYLAW AND POLICY MEASURES

The City of Kelowna civic bylaws are intended to keep Kelowna safe, healthy and operational. Updated bylaws and policies are necessary to improve conditions for walking and cycling. Based on best practices, the recommended updates would ensure important new bicycle amenities such as bicycle parking and end-of-trip facilities are in place. The updates will allow other users, such as skaters and skateboarders, to utilize sidewalks and shared-use pathways. Finally, significant updates to road cross-section designs are recommended to better accommodate pedestrian and bicycle access. It is also important to ensure proper enforcement of these bylaws and regulations. The existing and proposed regulatory changes require enforcement for greater success.

7.1 Zoning Bylaw No. 8000

The City's Zoning Bylaw No. 8000 regulates land use and development. Implementing recommended updates will help support bicycle parking and end of trip facilities as summarized in Table 7.1.

Table 7.1: Zoning bylaw recommended updates

Section	Topic	Recommendation
8.4	Off-Street Bicycle Parking	Update section 8.4 to increase the number of Class I (long-term) and Class II (short-term) bicycle parking spaces required in educational institutions as outlined in Table 7.1(a). Review table 8.3 of Zoning Bylaw and update bicycle parking requirements for commercial and industrial zones based on best practices.
8.1.11	Parking space size requirements	Amend section 8.1.11 to include a provision enabling the conversion or substitution of bicycle parking for Full Size Vehicle Parking, at a ratio of five bicycle spaces per Full Size Vehicle Parking space.
13, 14, 15, 16, 17, 18	End of Trip Facilities	Create an end-of-trip facility regulation for commercial, industrial, institutional, or other developments, with a requirement for change rooms. Updates to the Development Permit guidelines (OCP) and the corresponding requirements in the Building Bylaw may also be required to be consistent with and align to the Zoning Bylaw updates.



Rails-with-Trails shared-use pathway

BYLAW AND POLICY MEASURES

Bicycle parking

Cyclists need a safe and accessible place to secure their bicycle after reaching their destination.

The Zoning Bylaw (sections 8.4.6 to 8.4.10) contains development standards that outline location, accessibility and dimension requirements for off-street bicycle parking to meet these needs. Bicycle parking spaces are regulated in Section 8.4 of the Bylaw. The Class I (long-term) and Class II (short-term) parking requirements are based on development type and land use.

Based on the current best practice examples the current requirements at educational institutions could be enhanced, as per best practices in Table 7.1(a) to account for school staff and to more accurately meet the current and anticipated demand.

Table 7.1(a): Recommended bicycle parking requirements for educational institutions

Type of Activity	Long-Term Bicycle Parking Requirement	Short-Term Bicycle Parking Requirement
Education		
a) Public, parochial, and private day-care centers for 15 or more children	1 space for each 10 employees, min. 2 spaces	1 space for each 10 students of planned capacity, minimum 2 spaces
b) Public, parochial and private nursery schools, kindergartens, and elementary schools (1-3)	1 space for each 10 employees, min. 2 spaces	1 space for each 10 students of planned capacity, minimum 2 spaces
c) Public, parochial and elementary (4-6) public and high schools	1 space for each 10 employees, plus 1 space for each 10 students or planned capacity, min. 2 spaces	1 space for each 10 students of planned capacity, minimum 2 spaces
d) Colleges and universities	1 space for each 10 employees, plus 1 space for each 10 students planned capacity; or 1 space for each 20,000 s.f. of floor area, whichever is greater	1 space for each 10 students of planned capacity, minimum 2 spaces

Adapted from Association of Pedestrian and Bicycle Professionals (2010)

Best Practice Example:

The City of Victoria Bicycle Parking Strategy outlines parking requirements that are slightly more stringent than Kelowna's. For example, at educational institutions, Kelowna requires 2.5 long-term spaces per classroom and 0.1 short-term spaces per classroom. The City of Victoria requires one space per five to ten students and one space per ten employees.



BYLAW AND POLICY MEASURES

End-of-trip Facilities

In addition to bicycle parking, other end-of-trip facilities, such as showers, lockers and change rooms are important supportive infrastructure for cyclists and pedestrians. The City of Kelowna has no such end-of-trip facility requirement. These should be included in the development and zoning regulations similar to parking requirements. Parking bylaw incentives can be offered in the form of reducing the required number of vehicle parking spaces in new developments when adequate end-of-trip facilities and bicycle parking are provided.

Best Practice Examples:

- UBC Okanagan promotes campus locations for shower or change rooms.
- The District of Saanich's OCP encourages change and shower facilities in commercial, institutional, public, recreational, and multi-family residential buildings.
- Vancouver's Building Bylaw specifies a certain number of shower and change rooms based on the number of long-term bicycle parking spaces and employment areas (see Table 7.1(b)).
- Toronto's Green Building Development Standard for mid-to-high-rise residence, commercial, industrial, and institutional developments require one facility per gender for every 30 bicycle parking spaces.
- The City of Coquitlam Transit-Oriented Development Strategy includes the provision of end-of-trip facilities in new office and retail developments.

Table 7.1(b): Vancouver shower/change rooms (Vancouver, 2003)

Required Long-Term Bike Spaces	Minimum Number for Each Sex		
	Water Closets	Wash Basins	Showers
0-3	0	0	0
4-29	1	1	1
30-64	2	1	2
65-94	3	2	3
95-129	4	2	4
130-159	5	3	5
160-194	6	3	6
Over 194	6 plus one for each additional 30 bike spaces or part thereof	3 plus one for each additional 30 bike spaces or part thereof	6 plus one for each additional 30 bike spaces or part thereof



7.2 Payment in Lieu of Parking Bylaw No. 8125

The Payment in Lieu of Parking Bylaw No. 8125 permits land owners within the Urban Centres to pay a lump sum amount in lieu of providing off-street parking spaces required under the Zoning Bylaw.

According to section 8.5.3 of the Zoning Bylaw, Council can direct the disposition of funds deposited into the reserve fund. Updates to the Payment in Lieu Bylaw in conjunction with Zoning Bylaw revisions could create additional reserve funds for active transportation infrastructure in Urban Centres.

Best Practice Example:

The City of New Westminster updated the parking in-lieu provision of their Zoning Bylaw and added a complementary bylaw called the Parking Cash in-Lieu Reserve Fund Bylaw to create an Alternative Transportation Reserve Fund for the revenue generated from the cash in-lieu policy. The revenue in the Reserve Fund is allocated for infrastructure projects that support public transit, walking and cycling. Further, the City increased the cash in-lieu amount to reflect the actual construction costs for parking.

Table 7.2: Payment in lieu parking bylaw recommended updates

Section	Topic	Recommendation
Schedule A	Cost per parking stall	Update schedule with increased cash amounts per parking space.



7.3 Building Bylaw No. 7245

The Building Bylaw sets out regulations regarding the construction, alteration, repair, or demolition of buildings and structures. Updates to the Building Bylaw can require end of trip facilities providing more amenities for people using active transportation.

Potential incentives to encourage end of trip facilities in existing buildings include:

- Grants – that use a specific fund to share the costs of end-of-trip facilities. Kelowna's Cost-Shared Bike Rack Program, for example, allows businesses to apply for a fifty per cent reduction in purchase and installation price for high-quality bike rack.
- Recognition/Awards – that recognize initiatives such as bike-friendly businesses.

7.4 Official Community Plan Updates

The Urban Design Development Permit Guidelines in Chapter 14 of Kelowna's Official Community Plan provide design guidelines with respect to site layout, building form and character and landscaping. These DPs apply to commercial, industrial, multi-family and mixed use developments and updates could provide an opportunity to incorporate end of trip facilities.

Table 7.3 Building bylaw recommended updates

Section	Topic	Recommendation
	End of Trip Facilities	Create an end-of-trip facility regulation for commercial, industrial, institutional, or other developments, with a requirement for change rooms. This is to be done in conjunction with Zoning Bylaw updates.



Table 7.4 Official Community Plan recommended updates

Section	Topic	Recommendation
Chapter 14	Urban Design DP Guidelines	Regulations can be a stronger mechanism to require the inclusion of indoor secure bike parking, lockers, or shower facilities. This is done in conjunction with Zoning and Building Bylaw updates. The City of Vancouver provides an example of best practice for shower/change room provisions as illustrated in Table 7.1(b)

7.5 Traffic Bylaw No. 8120

The Province of British Columbia's Motor Vehicle Act regulates the operation of all motor vehicles, cycles, and pedestrians on all roadways.

The City of Kelowna's Traffic Bylaw No. 8120 provides additional Bylaws to complement the provincial laws within the municipal jurisdiction to ensure the safety of all road users including pedestrians, bicycles, and other users (e.g. inline skates) on the City streets. Some updates to the Traffic Bylaw is required to better support walking, cycling, and other modes of active transportation.

Snow and Rubbish Removal

The Traffic Bylaw Part 2 General Regulations Section 2.5 Snow and Rubbish Removal outlines the regulations associated with property owners' responsibility to remove snow, ice, or rubbish from the adjacent sidewalks or walkways within 24 hours of accumulation and these standards are consistent with best practices. The bylaw also lists properties that are exempt from this provision. Maintenance of pedestrian and bicycle facilities is further discussed in Appendix D.

Cycling Regulations

Section 9.1.2 of the Traffic Bylaw states that no person shall cycle on the sidewalk unless directed by a traffic control device, the individual is under the age of 12 years, and is operating a "non-chain-driven 3- or 4-wheeled cycle which is designed for recreational use." Research indicates that cycling on the sidewalk is generally less safe than cycling on the roadway and could affect

Table 7.5 Traffic bylaw recommended updates

Section	Topic	Recommendation
9.1.2(a)	Cyclist Duties	Remove the specified non-chain-driven 3 or 4 wheeled bicycles.
9.1.7 (a), (b), (d)	In-line skates, roller skates	Add text to allow users of skates, skateboards and recreation scooters to use sidewalks, bicycle facilities, and shared-use paths, with minor or minimal restrictions. Recreation scooters include all low-powered motorized vehicles (50cc engine displacement or 1.5kw motor rating or less) such as limited-speed motorcycles, mopeds, small motor scooters, electric motor-assisted cycles, pocket bikes, motorized skateboards, self-balancing boards, motorized wheelchairs, etc. that have a maximum speed of 32km/h.

the safety of pedestrians. Many municipalities, however, allow children under a specified age to cycle on the sidewalk as roadways are intimidating and possibly unsafe for young, inexperienced cyclists.

As most bicycles for children above the age of 3 are either a) chain-driven and two-wheeled or b) non chain driven and two-wheeled, it is recommended the bylaw be amended to remove the "non-chain driven 3 or 4 wheeled bicycle." It is anticipated that allowing younger children to cycle on the sidewalk will be supported by parents and better serve children in Kelowna.

Best Practice Example:

The City of Calgary, Traffic Bylaw 42.2(d) Use of Sidewalks states that a person may ride a bicycle on a sidewalk if they propel a child's bicycle operated by a person under the age of 14 years.

The District of Saanich Street and Traffic Bylaw Section 8.16 indicates a person may ride on any sidewalk that has been designated and marked for the use of bicycles, notwithstanding the Motor Vehicle Act.



Inline Skates, Roller Blades

Traffic Bylaw section 9.1.7 does not allow skaters on the sidewalk unless directed by a traffic control device. Further, the bylaw states in-line skaters shall use a bike lane if one is present on the roadway.

Peer jurisdictions have customized approaches to skate and skateboard access as summarized in Table 7.6. Bylaw regulations typically state whether skate and skateboard users may use sidewalks, bike lanes and general purpose roadways and specify restrictions on the basis of topography.

While in-line skates or roller blades have a sweep width suitable for bike lanes, the speed at which skaters travel tends to be less than cycling speed, and is a consideration for allowing them in bicycle facilities over pedestrian facilities.

Restrictions on skaters will need to be carefully considered as town centres, urban centres, and villages are often key destinations and restricting use to in popular locations will run counter to the goals of encouraging sustainable modes of travel.

Considered as modes of active transportation, skateboards, in-line skates, roller skates, and scooters should be supported. Updates to the Traffic Bylaw should be made to allow for wheeled devices on sidewalks, paths and bicycle facilities. Education and enforcement efforts could support changes to the bylaw to reduce anticipated user conflicts.

Table 7.6: Inter-municipal policy comparison: skate and skateboard access

Location	Source	Sidewalk	Bike Lane	Road	Restrictions
West Kelowna	Traffic Bylaw B0092	No	Yes	Yes	<ul style="list-style-type: none"> • On sidewalks unless directed • Must ride on right if no bike lane
Kamloops	By-law No. 23-63	Yes	Yes	Yes	<ul style="list-style-type: none"> • On arterial, collector roads • On steep roads, steep sidewalks • In town centres
Victoria	Streets and Traffic Bylaw 09-079	No	No	Yes	<ul style="list-style-type: none"> • On sidewalks • On designated streets only
North Vancouver	Bylaw No. 8335	Yes	Yes	Yes	<ul style="list-style-type: none"> • On steep roads, steep sidewalks • On roads with speeds over 50 km
Calgary	Bylaw No. 26M96	Yes	Yes	Yes	<ul style="list-style-type: none"> • In town centres • To a max speed of 20 km
Chilliwack	Bylaw No. 3023	Yes	Yes	Yes	<ul style="list-style-type: none"> • On designated streets only
Winnipeg	Traffic Bylaw 1573/77	Yes	No	No	<ul style="list-style-type: none"> • Only for “Transportation”

7.6 Subdivision, Development and Servicing Bylaw No. 7900

The Subdivision, Development & Servicing Bylaw No. 7900 establishes standards and regulations for works and services, and sets out application procedures in connection with the subdivision and development of land within the City. Recommended updates are primarily for the standard road cross-sections outlined in the bylaw.

These cross-sections represent standardized approaches to various street classifications. The designs presented herein are intended to inform the design of new and existing roadways, both for City-funded projects and improvements funded through developer contributions. Appendix D reviews the cross sections in relation to recommended facility design and selection.

Minimum Widths

Minimum widths for standard street elements - sidewalk, boulevard, bike lane and median - are described in Table 7.8.

These minimums are applicable to all street classifications referenced in this chapter. Preferred dimensions are provided on a case-by-case basis. Generally speaking, the widths and level of separation required for active transportation facilities increase on street classifications associated with higher motor vehicle speeds and volumes (e.g. collectors and arterials).

Dimensions for bicycle and pedestrian facilities should only be reduced to minimum widths in constrained conditions and only after other cross-section elements have also been reduced to their constrained minimum widths.

Table 7.7 Subdivision, development and servicing Bylaw recommended updates

Section	Topic	Recommendation
Schedule 4 and 5	Design Standards Highway and Drawings Road Works	Incorporate the concepts of the cross-sections illustrated in this chapter into the standard street cross-sections. Review bylaw and update based on on best practices to include mroe bicycle friendly catch basin grates.
Schedule 4	Minimize driveway access that intersects with active transportation corridor	The number of private driveways and direct accesses must be minimized across all primary active transportation corridors. No additional driveways will be supported at the time of land-use change for these networks. All driveways in active transportation corridors will limit their let down within the boulevard area. If no boulevard exists, then parking may be removed to build bulb-outs for the purpose of driveway let down.

Table 7.8: Minimum widths/separations & constraints

Attribute	Minimum Clear Width	Notes
Sidewalk Width	1.5 m	Minimum width sidewalks should periodically widen to 1.8 m to allow users in mobility devices to pass.
Boulevard Width	1.2 m for tree boulevard, grass or planter	Minimum width for raised hard surface is 0.9m.
Bike Lane Width	1.5 m	When positioned adjacent to parked cars, 1.8 m should be provided.
Median Width	0.9 m (raised)	When used to separate cycle tracks from parking, minimum width of 1.0 m raised median. Use shallow bicycle-friendly curb designs (low height, chamfered profile) on medians adjacent to cycle tracks.

BYLAW AND POLICY MEASURES

Local non-through streets

On local non-through streets, no separated bicycle facility is specified and cyclists are expected to ride within the roadway (Figure 7.1). Assuming low motor vehicle speeds (<30 km/hr) and volumes (<2000 ADT), a designated local street bikeway may be appropriate.

If these operating conditions are not met, traffic calming should be used to lower volumes and speeds.

Local through streets

A 1.5 m bike lane plus curb and gutter is specified on local through streets (Figure 7.2). Including the curb and gutter into bike lane measurements, this specification meets the preferred bike lane dimensions of 1.8 m.

This facility is appropriate given the 40 km/h design speed and the potential for higher traffic volumes using the through street connection.

If calmer traffic or increased separation from cyclists and motor vehicles is desired, one option is to not mark the centreline of the street. The lack of the centreline may encourage passing motor vehicles to position closer to the center of the street and farther away from cyclists.

Figure 7.1: Proposed section for local non-through streets

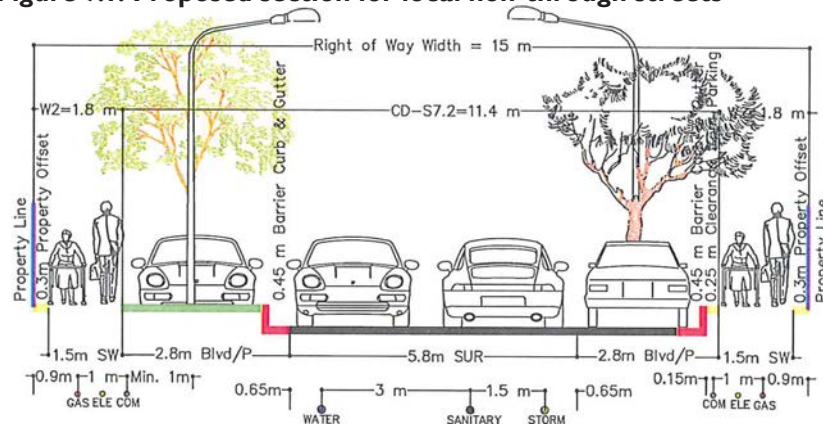
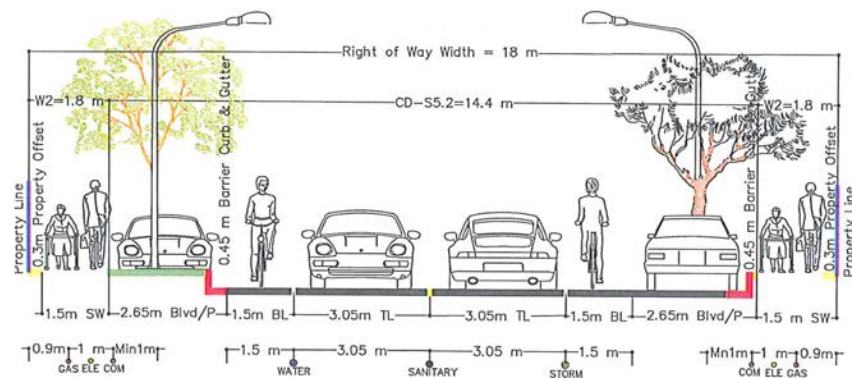


Figure 7.2: Proposed section for local through streets



BYLAW AND POLICY MEASURES

Minor collector streets

A 1.65 m bike lane plus curb and gutter is specified on minor collector streets (Figure 7.3). This meets the minimum for this facility selection. Given the likelihood of higher speeds and vehicle volumes, a more robust bike facility should be used on the primary network routes. Buffered bike lanes or cycle tracks can offer increased comfort and safety for users of all ages and abilities. Vehicle lane widths should be limited to a maximum of 3.2 metres. For designated active transportation corridors, this should be kept to 3.05 metres in conjunction with other physical traffic calming measures. Landscaping will be important on primary active transportation corridors to create a more walking and cycling friendly environment.

Major collector streets

Figure 7.4 shows a cross-section for major collector streets. The standard cross-section includes 1.65 m bike lanes, and the Major Collector with Cycle Tracks includes 1.8 m cycle tracks. Given the likelihood of higher speeds and vehicle volumes, and increased number of travel lanes, the Major Collector with Cycle Tracks cross-section is preferred for its increased comfort and safety for cyclists.

Figure 7.3: Proposed section for minor collector streets

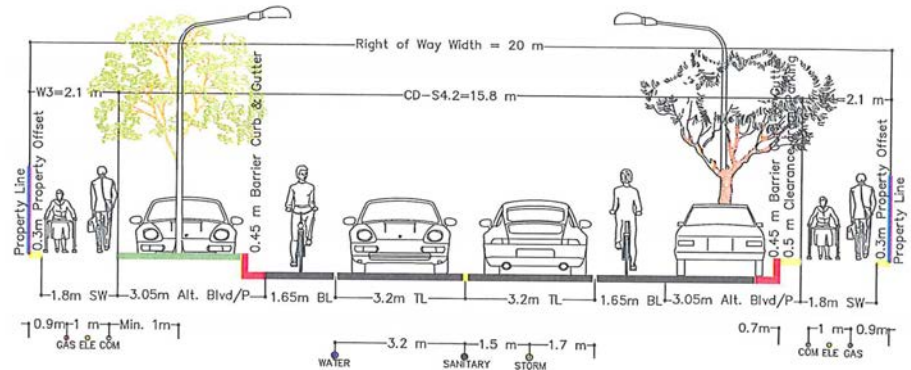
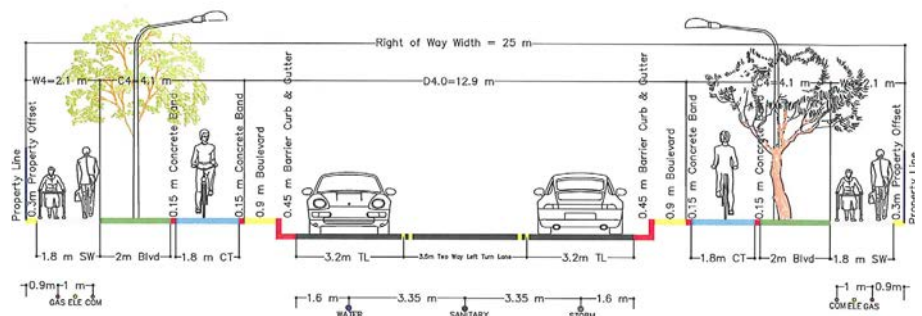


Figure 7.4: Proposed section for major collector streets with cycle track



BYLAW AND POLICY MEASURES

Minor arterial streets

Figure 7.5 is one of two alternative cross-sections available for minor arterial streets. The standard cross-section includes 1.65 m bike lanes plus curb and gutter, and the Minor Arterial with Cycle Tracks includes 1.8 m cycle tracks. Given the higher design speed (60 km/h), likelihood of high motor vehicle volumes, and increased number of travel lanes, the Minor Arterial with Cycle Tracks cross-section is preferred for its increased comfort and safety for cyclists.

Major arterial streets

Figure 7.6 is one of two alternative cross-sections available for major arterial streets. The standard cross-section includes 1.8 m bike lanes, and the Major Arterial with Cycle Tracks includes 2.1 m cycle tracks.

Given the high design speed (70 km/h) of the road, the preferred bicycle facility on this street is a cycle track. Conventional bike lanes are not adequate to provide the necessary degree of comfort and safety for users of all ages and abilities. For routes on the primary network, the Major Arterial with Cycle Tracks cross-section should be used.

Most cycle track designs shown in the proposed cross-sections are illustrated at the height of the adjacent sidewalk, with the exception of the Major Arterial with Cycle Track cross-section. This section is illustrated with a channelized cycle track,

located between the sidewalk curb and a median island. While the height of the cycle track curbs is not labeled, they appear to be the height of regular barrier curbs. These curbs are tall enough to interfere with a cyclist's pedals and reduce the effective operating space.

The cycle track should be raised to sidewalk level or to an intermediate level between the roadway and the sidewalk and mountable curbs added to improve safety and the effective operating space.

Figure 7.5: Proposed section for minor arterial streets

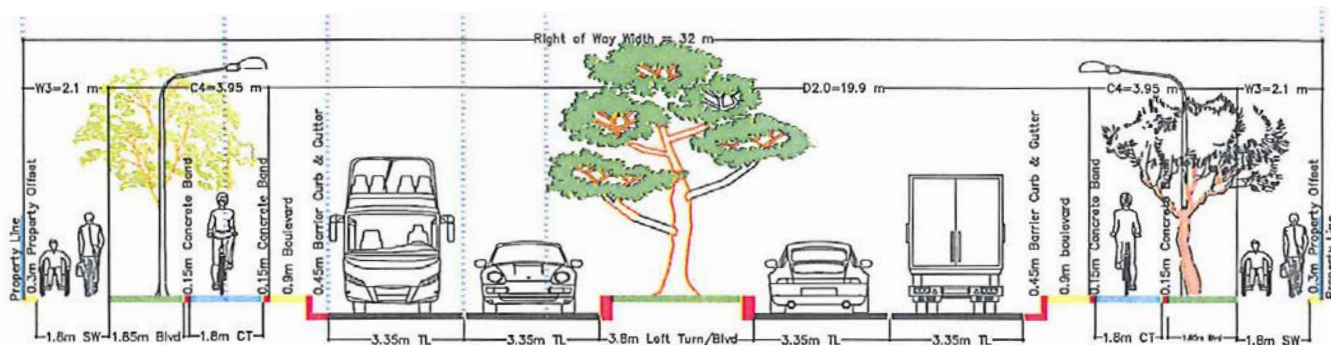
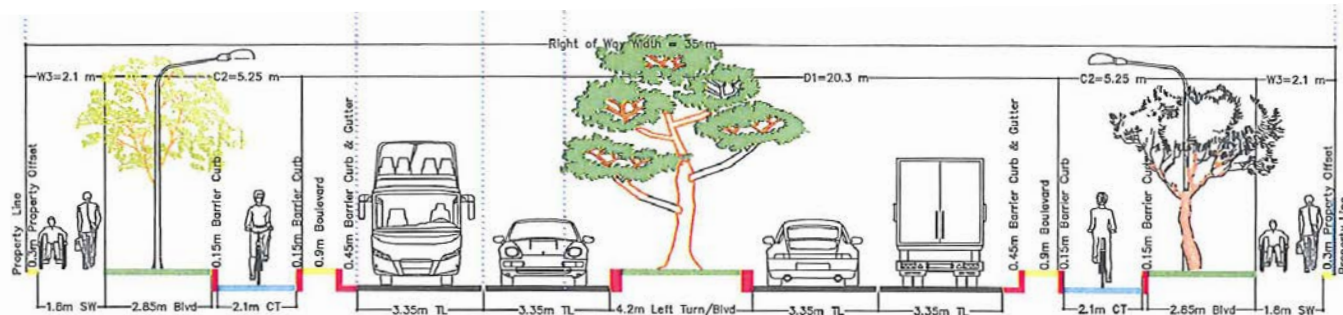


Figure 7.6: Proposed section for major arterial streets



7.7 Additional Bylaw and Policy Measures

Some recommended best practice bylaw updates that are outside of existing provincial legislation or require further investigation to determine the legalities and/or feasibility for implementing in Kelowna.

Bicycle Parking in Existing Buildings

The City should explore opportunities to apply bicycle parking regulations to existing developments. The addition of bylaws for the provision of bicycle parking in existing buildings could better serve older commercial or residential buildings.

Bicycle parking bylaws for existing buildings could include provisions that:

- encourage a building owner to convert vehicle parking spaces to long-term bicycle parking spaces; and
- require bicycle access in buildings with freight elevators.



Table 7.9: Bylaw updates for further consideration

Bylaw	Topic	Recommendation
Zoning Bylaw No. 8000	Incentives for end of trip facilities	Kelowna could benefit most from the establishment of either a financial incentive or parking requirement reduction to encourage new or retrofit developments to include end of trip facilities.
	Parking location	Investigate options to encourage developments to site parking at the rear of buildings.
Building Bylaw No. 7245	Bicycle storage access	Investigate a provision requiring bicycle access to buildings with freight elevators for the purpose of facilitating secure bicycle storage for employees.
Traffic Bylaw No. 8120	Rules of the road	Investigate the addition of policy to the Traffic Bylaw outlining user right of way for various infrastructure not covered by the motor vehicle act (e.g. elephant feet cross walks, cycle tracks, etc.).
Subdivision, Development and Servicing Bylaw No. 7900 (Section 9.3, subsection 2)	Road frontage requirements at development approval	Include a policy requiring developers of new buildings, as applicable, to construct adjacent roadway elements in accordance with the ultimate cross-section of the road, which may include parcels that front onto a planned active transportation network. This would require, for instance, a new development on a major collector with planned sidewalks and cycle tracks construct each of these elements as part of the development.

BYLAW AND POLICY MEASURES

7.8 Summary of Recommended Bylaw & Policy Measures

Table 7.10: Summary of recommended bylaw revisions

Bylaw	Section	Topic	Recommendation
Zoning Bylaw No. 8000	8.4	Off-Street Bicycle Parking	Update section 8.4 to increase the number of Class I (long-term) and Class II (short-term) bicycle parking spaces required in educational institutions as outlined in Table 7.1. Review table 8.3 of zoning bylaw and update bicycle parking requirements for commercial and industrial zones based on best practices.
	8.1.11	Parking space size requirements	Amend section 8.1.11 to include a provision enabling the conversion or substitution of bicycle parking for Full Size Vehicle Parking, at a ratio of five bicycle spaces per Full Size Vehicle Parking space.
	13, 14, 15, 16, 17, 18	End of Trip Facilities	Create an end-of-trip facility regulation for commercial, industrial, institutional, or other developments, with a requirement for change rooms. Updates to the Development Permit guidelines (OCP) and the corresponding requirements in the Building Bylaw may also be required to be consistent with and align to the Zoning Bylaw updates.
Payment in Lieu of Parking Bylaw No. 8125	Schedule A	Cost per parking stall	Update schedule with increased cash amounts per parking space. Use these funds to manage vehicle travel demands by investing in alternative active modes of transportation
Building Bylaw No. 7245	To be determined	End of Trip Facilities	Create an end-of-trip facility regulation for commercial, industrial, institutional, or other developments, with a requirement for change rooms. This is to be done in conjunction with Zoning Bylaw updates.
Official Community Plan	Chapter 14	Urban Design DP Guidelines	Regulations can be a stronger mechanism to require the inclusion of indoor secure bike parking, lockers, or shower facilities. This is done in conjunction with Zoning and Building Bylaw updates. The City of Vancouver provides an example of best practice for shower/change room provisions as illustrated in Table 7.1(b)
Traffic Bylaw No. 8120	9.1.2(a)	Cyclist Duties	Remove the specified non-chain-driven 3 or 4 wheeled bicycles.
	9.1.7 (a), (b), (d)	In-line skates, roller skates	Add text to allow users of skates, skateboards and non-motorized recreation scooters to use sidewalks, bicycle facilities, and shared-use paths, with minor or minimal restrictions.
Subdivision, Development and Servicing Bylaw No. 7900	Schedule 4 and 5	Design Standards Highway and Drawings Road Works	Incorporate the concepts of the cross-sections illustrated in this chapter into the standard street cross-sections. Review bylaw and update based on best practices to include more bicycle friendly catch basin grates.
	Schedule 4	Minimize driveway access that intersects with active transportation corridor	The number of private driveways and direct accesses must be minimized across all primary active transportation corridors. No additional driveways will be supported at the time of land-use change for these networks. All driveways on active transportation corridors will limit their let down within the boulevard area. If no boulevard exists, them parking may be removed to build bulb-outs for the purpose of driveway let down.
Additional bylaw and policy updates for future consideration	Zoning Bylaw No. 8000	Incentives for end of trip facilities	Kelowna could benefit most from the establishment of either a financial incentive or parking requirement reduction to encourage new or retrofit developments to include end of trip facilities.
		Parking location	Investigate options to encourage developments to site parking at the rear of buildings.
	Building Bylaw No. 7245	Bicycle access storage	Investigate a provision requiring bicycle access to buildings with freight elevators for the purpose of facilitating secure bicycle storage for employees.
	Traffic Bylaw No. 8120	Rules of the road	Investigate the addition of policy to the Traffic Bylaw outlining user right of way for various infrastructure not covered by the motor vehicle act (e.g. elephant feet cross walks, cycle tracks, etc.).
	Subdivision, Development and Servicing Bylaw No. 7900 (Section 9.3, subsection 2)	Road frontage requirements via development approvals	Include a policy requiring developers of new buildings, as applicable, to construct adjacent roadway elements in accordance with the ultimate cross-section of the road, which may include parcels that front onto a planned active transportation network. This would require, for instance, a new development on a major collector with planned sidewalks and cycle tracks construct each of these elements as part of the development.



CHAPTER 8: SUPPORTING PROGRAMS

SUPPORTING PROGRAMS

Education, encouragement, enforcement, and awareness programs enhance the walking and cycling experience and can be cost effective complements to infrastructure investments. These types of programs encourage people to try using active transportation, inform the public of the benefits of walking and cycling, and provide resources to shift motor vehicle trips to sustainable transportation.

The majority of the City of Kelowna's current cycling and pedestrian programs are offered through the regional smartTRIPS program. These initiatives aim to reduce single-occupancy vehicle trips to high occupancy vehicles (HOV), transit use, walking and cycling. The extent of current programs is not as intensive as the assessed need, popular demand and the pace of infrastructure delivery and introduction of new designs. A more intensive campaign and education in the City will require the support of additional staff and financial resources.

8.1 Awareness Programs

Awareness programs inform residents about the existing facilities, safety rules and how to use them. These educational programs improve safety, build awareness of alternative modes of travel and facilitate shift to active transportation modes.

Such programs also highlight walking and cycling routes and newly designed infrastructure.

Through the consultation process, safety education was identified as a community priority and specific programs can help eliminate cyclist and pedestrian related collisions.

Awareness programs also build broad community support for active transportation, even for those who do not regularly use these modes for commuting. This creates inclusivity and builds support for investment in active transportation projects that lead to a balanced transportation system.



Best Practice Example:

The City of Toronto has a Cycle Ambassadors program as a cost-effective way to engage the community with safety and encouragement programs and campaigns.

The City of Chicago also has a popular bicycle ambassador program which includes junior ambassadors to provide peer-to-peer bicycle safety education to Chicago children.

SUPPORTING PROGRAMS

Table 8.1 Recommended awareness programs

Topic	Measure
Communication and Marketing Strategy	<p>Develop a Communication and Marketing Strategy for the City to build support and awareness for the pedestrian and bicycle network. The strategy should include promotion of new infrastructure (where, what), annual communication plans, and information on proper use and benefits of new facilities (for example cycle tracks), as well as how to interact with these new elements as a motorist.</p> <p>Consistently utilize dialogue and tools to shift from defining people by their mode (e.g. cyclist, motorist, pedestrian) to speaking of people, community members and neighbours, and of taking care of one another while travelling on the roadways.</p> <p>http://www.modacitylife.com/</p> <p>http://www.citylab.com/commute/2015/02/dont-say-cyclists-say-people-on-bikes/385387/</p>
Online	Ongoing information sharing as detailed in the Communications and Marketing Strategy to educate users about facilities (e.g. elephant's feet crossings, signals, crosswalks, bike parking, routes) promoting the network and Active Transportation in general. Prepared messaging to share with stakeholders, including direct links to the online information.
Maps and Route Planners	Provide funding for printed bike route maps and on-line mobile-friendly maps showing designated cycling and walking routes in Kelowna. This will also benefit Active By Nature and way-finding initiatives. Promotional and advertising funding should be provided and complement the Communication and Marketing Strategy.
Program Assistant	Provide additional program budget and hire an additional Active Transportation program coordinator to focus on City infrastructure initiatives. A variety of funding sources could support the position such as ICBC safety improvement grants, capital project budgets, taxation, etc. (Budgetary requirements to be based upon outcome of further program research and development in Section 8.2).
Active Transportation Ambassadors	<p>Bicycle ambassador programs use outreach staff to provide assistance and information to public about safe walking and cycling rules, routes, new facilities, and resources at events or as roving staff (e.g. on a busy shared-use path).</p> <p>Explore opportunities to partner with Business Improvement Associations, Kelowna Area Cycling Coalition (KACC), schools, Interior Health and major employers to create a Bicycle Ambassadors program. An Ambassador program could help maintain momentum of Bike to Work and School events, support tourism, disseminate information, recognize local cyclists, or businesses.</p>
Street Closure Events	<p>A wide range of events with a variety of names encourage running, walking, cycling, or rolling (inline skate or scooter) by providing car-free streets. These events involve periodic street closures to create an open urban park space for walking, cycling, and celebrating. While these events are not focused ongoing behavior change, they are successful for building social interaction, and exposing the general public to alternate modes of travel generating broader awareness and acceptance of active transportation.</p> <p>Resource - http://issuu.com/switchhfx/docs/pdc_switch_toolkit-final.</p>

8.2 Encouragement Programs

Transportation Demand Management (TDM) measures are now relying more on Community-Based Social Marketing (CBSM) principles to encourage behaviour change for a lasting effect. Such behaviour change programs are specifically designed to identify and remove barriers to embracing walking, cycling and transit as regular modes of transportation. Barriers are identified through research and programs developed using CBSM principles. Such tools are more successful at changing behaviour than information alone.

The CBSM concept emphasizes direct contact among community members and identifies and removes barriers to behaviour change such as switching from driving to commuting by riding a

bike or walking. This technique uses “tools” that are known to be effective in fostering such change. While each of these tools on its own is also capable of promoting sustainable behaviour under right conditions, the tools are most effective when used together.

Community-based social marketing involves:

- Identifying barriers to behaviour change through research;
- Developing and piloting a program to overcome these barriers;
- Implementing the program across a community; and
- Evaluating the effectiveness of the program.

Customized travel encouragement programs can reduce single-occupancy vehicle trips and increase cycling, walking and transit use within a target area. These marketing programs focus on long-term behaviour change by revealing barriers and then shifting participants to the new travel behaviour through the use of commitments, prompts, norms, and incentives.

Best Practice Example:

Inspired by the “people’s planner” Jane Jacobs, the annual Jane’s Walk event held in early May is a series of free neighbourhood walking tours, developed and delivered by citizens, as a way to help put people in touch with their environment and each other by bridging social and geographic gaps. This event creates a space for cities to discover themselves and to reacquaint citizens with enjoyable walkable areas.

A similar type of initiative is the Glenmore Footprint Days, a citizen driven initiative.



SUPPORTING PROGRAMS

Table 8.2 Recommended Encouragement Programs

Topic	Measure
Annual encouragement programs	Residents who are likely to adopt active transportation should be researched to identify barriers. With this information, a strategy could be developed which prioritizes programs that would be most effective in achieving behavioral change. Programs could focus on the City as a whole or in select neighborhoods to grow the number of residents using active transportation.
Annual events	<p>Annual initiatives to build awareness and encourage people to try active transportation in a safe, fun way. It is likely that participants will continue to use active transportation after the program ends. Current events include Bike to Work Week, Bike and Walk to School Week and Walk and Wheel to School Week (a part of International Walk to School Month).</p> <p>Further ideas can be found at: http://dashbc.ca/what-we-do/programs-initiatives/walk-and-wheel/</p> <p>The City should continue to offer annual encouragement programs and make adjustments based on the results of completed strategy to achieve behavioral change.</p>
Cycling skills courses / Learn to Ride	<p>Cycling skills courses provide a diverse level of training for children and adults to improve cycling knowledge and skill level. Cycling courses cover topics on safe bicycle handling skills, rules of the road, and on-road advance training. The City of Kelowna's Active Living and Culture Department offers an annual course to introduce participants to a range of cycling skills and knowledge in a fun, supportive environment. Resources would allow continuation of Kelowna Area Cycling Coalition facilitated certified bicycle safety training courses, Basic Commuter and Advance Skills Courses. These fee-for-service courses would target adults.</p> <p>Broaden the reach of cycling skills courses to youth and adults which teach them to navigate safely, to combine the use of transit and cycling to reach destinations and to understand the cost savings and health benefits of walking, cycling and transit.</p>
School programs	<p>Based on success of programs elsewhere, the City (through UBCM) should lobby the Provincial Ministry of Education to incorporate cycling skills training into the school curriculum so that children can learn to cycle in a safe and confident manner at an early age (e.g. Bike Right/Guide to Ride initiatives).</p> <p>District, school administrations and Parents Advisory Council (PAC) play a crucial role in development of a culture of active travel. Programs at the school level should seek to empower these stakeholders and encourage them to make active travel a priority for students through school level grass roots initiatives (e.g. walking school bus, bike trains, regular communications, etc). These could include working with School District 23 and/or target schools to pilot the Physical and Health Education Canada (PHE) 'Guide to Ride' cycling lesson plans (http://www.phecanada.ca/resources/guide-to-ride), as well as continuing efforts underway to lobby for and develop more comprehensive Provincially endorsed youth cycling education programming through the 'Bike Right' campaign (led by HASTE BC in partnership with HUB, the lower mainland cycle coalition and BC Cycling Coalition (BCCC) (http://bikeright.nationbuilder.com/).</p>

8.3 Enforcement

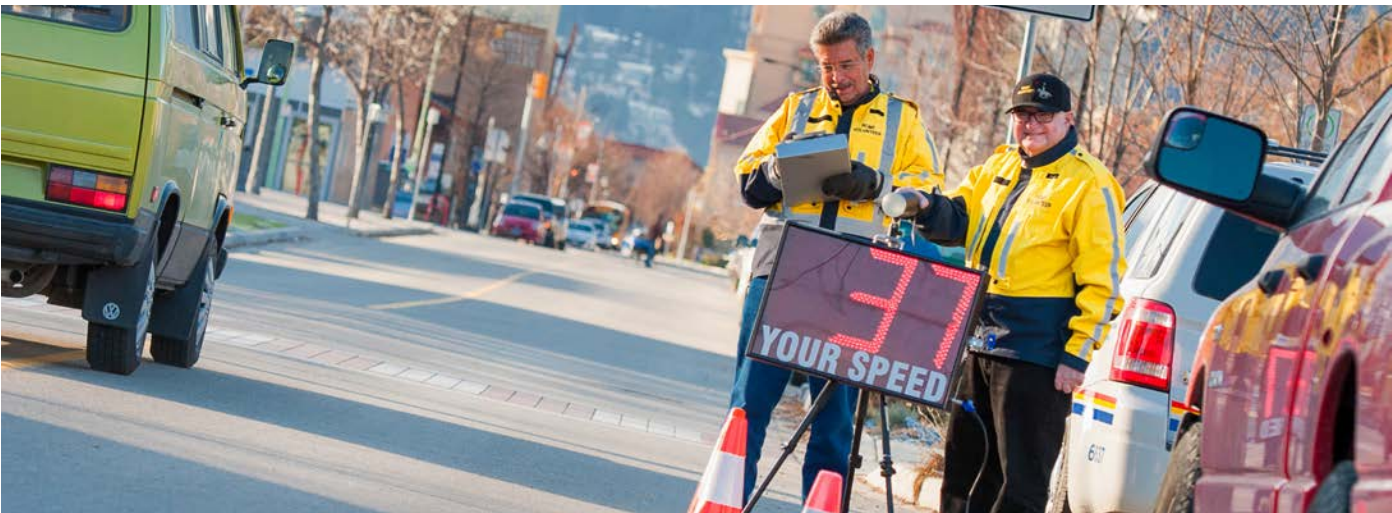
Enforcement initiatives improve the safety of road users and support legal and respectful use of the transportation network. Enforcement programs also provide a regulatory framework for addressing common or recurring issues experienced by the most vulnerable road users, i.e. cyclists and pedestrians.

Best Practice Examples:

Back-to-School Crosswalk Stings with accompanying publicity have been conducted in Surrey, British Columbia; Shoreline, Washington and Roseburg, Oregon.

Table 8.3 Enforcement measures

Topic	Measure
Motor Vehicle Act Enforcement	<p>The RCMP Traffic Services provide enforcement, public education, and work closely with partners to keep roads safe. The RCMP run a Speed Watch program that involves volunteers who monitor problem areas, collect data and respond to requests from the City, School District and general public. Based on requests the RCMP typically conduct enforcement at problem spots or in conjunction with an event.</p> <p>Targeted enforcement at specific locations can influence road user behavior and increase awareness about safety of pedestrians and cyclists. For example, targeted crosswalk enforcement can generate publicity which in turn reinforces the importance of obeying the provincial Motor Vehicle Act and the City’s Traffic Bylaws.</p>
School Safety Patrol	<p>The Regional Traffic Safety Officer works with schools, Bylaw Services and RCMP to manage transportation challenges in school zones. The officer provides on-site education to parents and students to operate safely within school zones.</p>
Bylaw Enforcement	<p>The City’s Bylaw Enforcement Branch enforces regulations in the Traffic Bylaw to ensure public safety and security within the municipal jurisdictions. Bylaw officers may wish to consider a theme-based or seasonal event-based enforcement campaign as a unique approach for encouraging safer road user behavior. For example: http://www.ibiketo.ca/blog/2008/06/16/safe-cycling-police-campaign-starts</p>



8.4 Evaluation and Monitoring

Monitoring and evaluation is important to assess and understand needs, travel characteristics, facility utilization, year-to-year ridership trends that can guide future planning and design decisions. The effect of various investments and

initiatives in terms of projects, policies and programs should be monitored over time.

Data collection by means of surveys, road safety data and count equipment evaluate not only the impacts of

specific projects, but also function as a method to measure the progress towards the targets in terms of active transportation mode share and road safety.

Table 8.4 Evaluation and monitoring measures

Topic	Measure
National Survey	<p>Bike to Work Week participants are surveyed before and after the week-long event, allowing first time cyclists to be identified so that follow up can occur to see if they are continuing to cycle.</p> <p>Statistics Canada surveys play a critical role in assessing the overall travel characteristics in the municipalities and by smaller geographic area. Changes over time in travel behavior and transportation mode can be made by comparing surveys. The City should continue to utilize Statistics Canada survey data to assess the impacts of initiatives.</p>
Automated and Manual Counters	<p>Count programs provide useful information related to travel behavior, priority routes, measuring project success, and monitoring trends over time. Counts are done manually or through the use of automated equipment and results are useful to communicate progress to everyone. Data and presentation tools can be utilized to complement behavior change programs by providing further encouragement to adopt, and maintain participation in active transportation.</p> <p>Kelowna has permanent and portable automated count technologies deployed at 10 locations around the downtown core and other major facilities (http://www.eco-public.com/ParcPublic/?id=4198). Automated counters work well for counting users that pass a specific point and can track longer-term counts, establishing daily, weekly, or monthly ridership and variations. Further, Kelowna performs intersection counts every year at the major intersections using manual count boards and various detection technology. These counts capture motor vehicles, pedestrians and cyclists. The current annual traffic data collection program should be expanded to include bicycle and pedestrian counts. This will allow more accurate tracking of active transportation trends in the City. The cost of vehicular data collection can be recovered at the time of distribution for private commercial use and thereby support the current taxation-based count program.</p>
Road Safety Data	Continue to use ICBC crash data and input from the health agency and emergency services.
Citizen Surveys	<p>The Citizen Survey is conducted to gauge public satisfaction with municipal programs and services and to gain an insight into citizens' service priorities. Results are benchmarked against other local governments. Insight gained by this research helps the City make decisions regarding planning, budgeting and issues management. Top issues for citizens in Kelowna consistently include transportation (traffic congestion and condition of streets). The continued inclusion and analysis of active transportation related questions will indicate citizen satisfaction with infrastructure changes and investments. The City should continue to obtain public feedback and utilize tools to assess public programming efforts.</p>
Transit Ridership	At strategic bus stop locations monitor annual boardings and alightings for ridership and mode split assessment.

8.5 Summary of Recommended Programs

Table 8.5 Summary of recommended programs

	Category	Recommendation
Encouragement and Awareness	Communication and Marketing Strategy	Develop a Communication Strategy for the City of Kelowna to build support and awareness for the pedestrian and bicycle network and roadway safety for all users.
	Program Assistant	Provide program budget and hire an Active Transportation Assistant to focus on various City safety and active transportation initiatives.
	Maps	Establish ongoing funding for a printed bike map and add an online and/or mobile bike map showing all of the designated cycling and pedestrian routes in Kelowna.
	Active Transportation Ambassador	Explore opportunities to partner with Business Improvement Associations, Kelowna Area Cycling Coalition, schools and major employers to create an ambassador program.
Behaviour Change	Program Development	Research and develop a strategy to demonstrate which programs would be most effective in achieving behavioral change to grow the share of residents selecting active modes of transportation.
	Cycling skills	Continue to offer cycling skills courses to adults in collaboration with Active Living and Culture Department.
	Annual encouragement programs	Continue to offer annual encouragement programs and make adjustments based on the results of completed strategy to achieve behavioral change.
	School travel planning	Based on success of other country's programs, lobby the provincial Ministry of Transportation and Ministry of Education to incorporate cycling skills training into the school curriculum. Eg. Bike Right, PHE Guide to Ride.
Enforcement	Law enforcement	Consider a theme-based or seasonal event-based enforcement campaign.
Evaluation and monitoring	Surveys	Continue to utilize Citizen surveys to assess the impacts of initiatives.
	Counts	Expand automated and manual counters to more accurately track active transportation behavior using data and public interfaces to incentivize and encourage public behavior change.



Pedestrian and Bicycle Master Plan Appendices

APPENDIX A: GLOSSARY

Bike Lanes: An exclusive one-way street-level cycling space designated through the use of pavement striping, markings and signage that is located adjacent to vehicular traffic

Cycling: Includes the riding of various types of cycles, in-line skates, roller-skates and skate boards as permitted by the City Bylaws or Motor Vehicle Act

Cycle Track: An exclusive one-way or two-way cycling facility that can be at road, sidewalk or an intermediate level and is physically segregated both from the vehicular and pedestrian traffic

Local Street Bikeway: A street with low motorized traffic volumes and speeds, designated and designed to give bicycle travel priority. Local Street Bikeways use signs, pavement markings, and speed and volume management measures to discourage through trips by motor vehicles and create safe, convenient bicycle crossings of busy arterial streets

Mission Creek Greenway: An unpaved, shared-use green corridor and linear trail running along Mission Creek and connecting park spaces, interpretive viewing areas and rest spots as well as providing natural areas for wildlife

Off-Road: Placed within an exclusive right-of-way without any vehicular traffic except service/emergency vehicles

Paved: A surface paved with asphalt, concrete or pavers but excludes loose materials such as gravel or crushed rock

Primary Corridor: A major active transportation route consisting of the following major facilities for all ages and abilities and intended for all trip purposes and year-round use:

- Sidewalk and cycle track (or bike lanes with physical separators)
- Paved shared-use pathway and cycle track or bike lanes
- Paved off-road shared-use pathway

Roadside: Placed within the same road right of way as vehicular traffic and separated by a regular boulevard, drainage ditch/swale or barriers

Shared-Use Pathway: A roadside or off-road two-way facility that shared by pedestrians, cyclists and other users with or without directional separation

Sidewalk: An asphalt or concrete walking facility adjacent to roads exclusively for pedestrians

Supporting Corridor: A minor active transportation route with a narrower range of service levels feeding to the Primary Network and comprised of the following facility combinations:

- Paved or unpaved shared-use pathway
- Bike lanes
- Sidewalks

APPENDIX B: ENGAGEMENT PROCESS

To ensure the Pedestrian and Bicycle Master Plan was well-informed, shaped in part by public input, and that the plan would meet the needs of residents, the City offered a variety of opportunities throughout the project to engage the public and gather their feedback.

In accordance with the guiding principles defined in Council's Engage Policy, engagement outreach was done twice during the project. Initial consultation was done near the onset of the project to gather input for the Plan, and final engagement at the end of the project was done to ensure the draft Plan reflected the communities' desires.

Initial consultation from nearly 250 surveys, 12 stakeholders, 14 administrators, and over 200 open house attendees provided support for the Plan goals; helped develop project prioritization criteria; identified priority network routes and gaps; and identified issues the Plan should address including safety, connectivity and barriers to cycling. This information was used to help draft the active transportation network and Plan.

During the final engagement, the community could comment on the Plan they helped shape. Feedback from the more than 500 surveys and over 260 open house participants during the final consultation showed that the draft Plan would encourage nearly three quarters of respondents to walk more and 83 per cent to bike more. While the majority of respondents expressed support for the Pedestrian and Bicycle Master Plan, feedback on possible plan improvements was reviewed and considered for inclusion in the final version of the Plan.



B.1 “On the Move” Online Survey, Mind Mixer Map and Online Survey

A designated project area was established and linked from the Active Transportation page of the City’s website (www.kelowna.ca). An Online Survey was available for the public to complete and included links to the interactive maps via Mind Mixer at www.getinvolved.kelowna.ca.

More than 1,500 individuals viewed the maps, 489 people had some interaction with the maps and/or left comments, and 243 people completed the survey. The majority of the respondents were individuals who choose to walk or cycle regularly. The results provide excellent input for the Pedestrian and Bicycle Master Plan (PBMP). However, the results are not a representative sample of Kelowna residents.

Common survey themes were:

- Safety;
- Lack of pedestrian and bicycle facilities in some locations; and
- Building a comprehensive active transportation network.

Project info cards the size of business cards were printed to drive the public to the project website, online survey, and interactive maps. These were distributed at project events and in the community. Many were left on parked bicycles throughout the City.

The following feedback provided the basis for determining the pedestrian and bicycle network. A summary from the Online Survey and MindMixer maps included:

1. Facility Design and Connectivity:

- Support for better facilities and transportation options to UBC is very strong, and the most frequently mentioned destination in the network.
- Connecting existing routes and pathways was also frequently mentioned.
- Respondents highlighted a desire to focus on comprehensive complete loops or routes, not just segments (i.e., the routes in the Mission being broken out into segments).

2. Bicycle Network:

- Connecting to UBC was the most common network gap.
- Improving the routes surrounding Orchard Park, along Dilworth Drive and Lakeshore Road were also highlighted. However, improved facilities from the Upper Mission through to Downtown is highly supported.
- Ethel Street was the third most mentioned route within the discussion around the primary route network for upgraded facilities.

3. Pedestrian Network Gaps:

- Expanding the sidewalk network and pedestrian infrastructure were the primary concerns for the public.
- Respondents noted filling in gaps in the network and ensuring connections to popular destinations.
- Maintenance of sidewalks and paths were identified as concerns, and adding wheel chair ramps at intersections and corners for total accessibility.

Other topics mentioned:

- More education and engagement is required around safety
- There is a strong sense in the community that Glenmore Road is unsafe for cycling
- Request for more “bike buttons” at crossings and throughout town
- Education for motorists about not parking in bike lanes, general awareness of pedestrian and cyclist needs
- Education for cyclists about laws prohibiting cycling on sidewalks (with the exception of young children)

APPENDIX B: ENGAGEMENT PROCESS

B.2 Stakeholder Event

Open House

A project Open House was hosted for a full day on Saturday October 18, 2014, at Kelowna's Orchard Park Mall. The event was publicized via the City's communications channels including e-Subscribe, social media, via the website, through Orchard Park communications, street signage, and through stakeholder networks.

Six display boards presented the vision and objectives, showed pathway networks, highlighted gaps in connectivity and displayed a proposed "all ages and abilities" (AAA) network. More than 200 individuals spoke with project representatives, learned more about the Pedestrian and Bicycle Master Plan, asked questions, and shared their insights and perspectives. Info cards were distributed and citizens were encouraged to visit the project website to complete the online survey and utilize the interactive maps. Some individuals completed hard copy surveys at the Open House and these were later entered into the online survey by the project team.

A diverse group of community stakeholders were invited to attend an interactive information session. The purpose of the meeting was to introduce and raise awareness of the project and its intended outcomes. Attendees were invited to share their insights and suggestions. They were also asked to share information about the Pedestrian and Bicycle Master Plan online survey with their members, employees, and customers.

Sixteen individuals attended the two-hour session on September 23, 2014. They included representatives from Kelowna Area Cycling Coalition (KACC), Okanagan College, Community Action Toward Children's Health (CATCH), School District 23, Interior Health, Kelowna Chamber of Commerce, Downtown Kelowna Association, Worman, Urban Development Institute, Canadian Home Builders' Association, Central Okanagan Regional District, and UBC Okanagan. The feedback gathered at the stakeholder event was addressed in the Master Plan.

Three top themes emerged at this event:

Schools

Virtually all participants at the meeting emphasized the importance of school connectivity. Access to schools provides independence for children, frees up parents in the mornings and instills healthy inter-generational habits. The Pedestrian and Bicycle Master Plan should provide strategies to break down barriers around school travel. Connectivity to UBCO and other post-secondary schools was also emphasized, but to a lesser extent than K to 12 schools.

Major Streets

There was broad support for pedestrian and bicycle facilities along the most direct available routes, which tend to be high volume arterials. In a number of instances, existing facilities along these arterials were identified as inadequate, including, for example, Springfield, Burtch, Dilworth, and Benvoulin.

"Bowtie" Bottleneck

A bottleneck in the Kelowna street grid occurs around the Orchard Park Mall due to natural topography and a limited number of through-routes. This area was identified as a priority for north-south connectivity (e.g., Harvey) and east-west connectivity (e.g., Springfield). Support for improvements in this area was generally as high, or higher, than for improvements Downtown, reflecting acute connectivity issues and a limited number of alternate routes.



Stakeholder Event

APPENDIX B: ENGAGEMENT PROCESS

B.3 School District Survey

A survey was created and distributed to 25 school Principals or Administrators within School District #23. The purpose of the survey was to gather preliminary knowledge of or implementation of Safe Routes to School strategies and explore any infrastructure concerns that impede students walking and cycling to school. In addition, the survey asked for information regarding students' mode of transportation to and from school, their desire for infrastructure enhancements, and education programming designed to increase the number of students who walk or cycle to school.

Fourteen responses from school administrators were received. Over half (56 per cent) of the schools in Kelowna responded to the survey. Garnering survey responses was initially hampered due to the BC teachers' strike. Once school resumed, the project team made three further requests for participation in the

survey. Overall, individual school administrators or Parent Advisory Councils initiate pedestrian and bicycle training and promotions, such as Walk and Bike to School Week or on-site skills training. Most schools are familiar with local road safety programs relevant to schools, such as bylaw enforcement or ICBC community road safety projects. However, the majority (58 per cent) are not familiar with Safe Routes to School initiatives. In addition, formal school travel surveys have not been conducted in schools.

Five common deterrents to walking and cycling to school identified are:

- More convenient for parents to drive students to school;
- Some live too far away/takes too long to walk or bike to school;
- Motorist behaviour (speeding, distracted driving) causing safety concerns;
- Parents don't want their child to walk or bike alone; and

- Intersections are challenging or dangerous to cross.

When asked if there are specific locations around the schools that impose barriers for students walking, riding a bike, scooting or skateboarding to school, respondents highlighted:

- Streets with lots of high speed and high volume traffic;
- Intersections without safe crosswalks;
- Streets without bike paths or bike lanes;
- Streets without sidewalks; and
- Hilly streets.

The feedback collected from the school district surveys was integrated into the Master Plan.



APPENDIX B: ENGAGEMENT PROCESS

People expressed a strong desire for coordinated pedestrian and bicycle programming in schools. Many schools have delivered one or more initiatives aimed at increasing safety, educating the school community about traffic issues or participated in a promotional event like Walk/Bike to School Week. The most common programs schools have participated in are:

- Bicycle safety training or assemblies focused on safe bicycling and walking;
- Bylaw/Police/Traffic Safety Officer enforcement;
- Parent driver education (e.g. drop-off/pick-up rules, driver behaviour tips);
- Walk and Bike to School events in spring or fall;
- On-site bicycle skills training (e.g., parking lot “bike rodeos”); and
- Contests or incentives for walking or cycling to school.

Based on the responses, roughly one-quarter of the surveyed schools have participated in one of the above-mentioned pedestrian or bicycle programs.

The feedback from the school administrators indicates more information about Safe Routes to School or School Travel Planning initiatives would be beneficial.

While schools in District 23 are individually addressing road safety issues such as education and encouragement, greater support is needed on issues of enforcement. For example, a survey response from one school noted there is significant traffic on the adjacent roadway and school-zone speed limits are not generally adhered to by motorists. This feedback suggests that an enforcement initiative would improve conditions around that school.

Furthermore, feedback from community members through the Stakeholder Event emphasized the

“There is a strong desire for coordinated pedestrian and bicycle programming in schools.”

need to prioritize improvements for active travel on the journey to and from school. The primary champions for school travel programs are often administrators, teachers, or parent groups, and there is a strong interest for additional support and resources to deliver school-based walking and cycling initiatives.



APPENDIX B: ENGAGEMENT PROCESS

B.4 Draft Plan Engagement

The goal of the final phase of the engagement process was to seek input from the community on the draft Master Plan. Public feedback on the draft was obtained during this phase and was considered for incorporation into the final Master Plan.

The engagement tactics utilized included:

- An online survey to collect input on the draft Master plan
- Two open houses to inform and consult with the community
- Outreach through City Communication Channels (email bulletins, social media, Public Service Announcements, stakeholder and resident association networks).

An online survey provided a platform for community members to share their feedback on the draft Master Plan and garnered more than 500 responses, 12 per cent of which were also involved in the initial consultation.

The City held two public open houses in 2016 to inform and gather feedback on the draft Pedestrian and Bicycle Master Plan network and recommendations.

The first, held at Parkinson Recreation Centre, welcomed 170 attendees. Ninety-two individuals attended the second open house at Okanagan College. More than 50 hardcopy surveys were completed at the open houses and participants were also encouraged to complete the same survey online. The hardcopy survey

answers were compiled with the online responses and analyzed together.

The majority of survey respondents expressed support for the Pedestrian and Bicycle Master Plan.

Nearly three quarters of respondents said the plan would encourage them to walk more, while 83 per cent would be encouraged to bike more. Furthermore, 83 per cent of respondents were satisfied with the plan's prioritization criteria for future sidewalk and cycling route construction.

Safety and education of all users, including motorists, was a recurring theme at the open houses and in the online survey responses.

Concerns over cost, including taxation



APPENDIX B: ENGAGEMENT PROCESS

impact, and length of implementation time were also noted. Several individuals called for greater attention to snow and ice removal. In fact, 65 per cent of respondents would like snow clearing that would provide winter cycling on some routes through budget reallocations or tax increases, whereas 35 per cent of respondents would like the City to maintain the current level of service. Many also stated that connectivity to schools, such as UBCO, and gap closures should be given high priority.

With respect to the proposed network, community members suggested building pathways and cycle tracks only instead of full road reconstruction projects,

providing paved shoulder bike lanes on Glenmore road and inquiries about specific local road sidewalks in neighbourhoods not shown on the plan due to lower priority.

When asked what people liked about the plan, many highlighted the ability to access more areas of the city on foot or by bike in a safer manner. Separated cycle paths and better connectivity with existing routes, particularly throughout the downtown core and towards the University of British Columbia Okanagan, were frequently mentioned in the responses.

Primary responses for those who said the plan would not encourage them to walk or cycle more were because they

do already and/or they are satisfied with the existing routes.

Eighty-seven per cent of respondents said the recommended complementary updates to bylaws and policies would increase walking and/or cycling convenience. Updates would include changes to road design standards, bicycle amenity requirements and to allow skates and skateboards on sidewalks and pathways.

Pathway signage, and driver and cyclist education were common responses to encourage more walkway and cycling through education and programs.



APPENDIX C: PEDESTRIAN AND BICYCLE PROJECT LIST

Priority Cycle Track Projects

S. No.	Project Name	From	To	Length, m	Ranking
1	Ethel St	Cawston Ave	Bernard Ave	592	High (1)
2	Ethel St	Harvey Ave	Sutherland Ave	520	High (2)
3	Sutherland Ave	Ethel St	Gordon Dr	417	High (3)
4	Sutherland Ave	Gordon Dr	Burtch Rd	823	High (4)
5	Dilworth Rd	Rails with Trails	Leckie Rd	159	High (5)
6	Sutherland Ave	Pandosy St	Ethel St	772	High (6)
7	Leon Ave	Abbott St	Ethel St	1,197	High (7)
8	Ethel St	Sutherland Ave	Raymer Ave	1,605	High (8)
9	Dilworth Dr	Enterprise Way	Harvey Ave	155	High (9)
10	Benvoulin Rd	Mayer Rd	Springfield Rd	214	High (10)
11	Dilworth Dr	Harvey Ave	Springfield Rd	525	High (11)
12	Dilworth Dr	Leckie Pl	Enterprise Way	301	High (12)
13	Raymer Ave	Lane	Ethel St	235	High (13)
14	Springfield Rd	Ziprick Rd	Hollywood Rd S	1,625	Medium (1)
15	Rutland Rd S/Rutland Rd N	McIntosh Rd	Robson Rd E	560	Medium (2)
16	Lawrence Ave	Ethel St	Gordon St	420	Medium (3)
17	Lawrence Ave	Gordon Dr	Burtch Rd	1,064	Medium (4)
18	Springfield Rd	Ziprick Rd	Benvoulin Rd	1,419	Medium (5)
19	Rutland Rd N	McCurdy Rd	McIntosh Rd	1,005	Medium (6)
20	Rutland Rd S	Robson Rd E	Venus Rd	649	Medium (7)
21	Hollywood Rd N/Hollywood Rd S	Houghton Rd	Hollydell Rd	1,158	Medium (8)
22	Hollywood Rd N	McCurdy Rd	Houghton Rd	1,028	Medium (9)
23	Hollydell Rd/Dougall Rd S/Venus Rd	Hollywood Rd S	Rutland Rd S	836	Medium (10)
24	Cedar Ave	Abbott St	Lakeshore Rd	164	Medium (11)
25	Rose Ave/Guisachan Rd	Pandosy St	Ethel St	617	Medium (12)
26	Lane	Raymer Ave	KLO Rd	482	Medium (13)
27	Ethel St	Baillie Ave	Cawston Ave	449	Medium (14)
28	Casorso Rd	KLO Rd	Barrera Rd	1,077	Medium (15)
29	Guisachan Rd	Ethel St	Gordon Dr	476	Medium (16)
30	Guisachan Rd	Burtch Rd	Gordon Dr	811	Medium (17)
31	Burtch Rd	Spall Rd	Sutherland Ave	1,437	Medium (18)
32	Findlay Rd/Loyd Rd	Rails with Trails	McCurdy Rd	1,621	Medium (19)
33	Burtch Rd	Sutherland Ave	Springfield Rd	399	Medium (20)
34	Benvoulin Rd	KLO Rd	Casorso Rd	1,664	Low
35	Benvoulin Rd	Mayer Rd	KLO Rd	2,166	Low
36	Burtch Rd	Guisachan Rd/Byrns Rd	KLO Rd	1,185	Low
37	Burtch Rd	Springfield Rd	Guisachan Rd/Byrns Rd	639	Low
38	Byrns Rd	Benvoulin Rd	Burtch Rd	1,463	Low
39	Elwyn Rd/Hollydell Rd	Taylor Rd	Hollywood Rd S	1,217	Low
40	KLO Rd	Benvoulin Rd	Mission Creek Greenway	955	Low
41	KLO Rd	Benvoulin Rd	Lakeshore Rd	2,524	Low
42	Leckie Rd	Dilworth Dr	Parkview Cr	970	Low
43	Renfrew Rd	Woods Rd	Ziprick Rd	204	Low
44	Springfield Rd	Benvoulin Rd	Burtch Rd	2,114	Low
45	Taylor Rd	Elwyn Rd	Renfrew Rd Walkway	170	Low
46	Ziprick Rd/Hwy 33 W/Mills Rd	Houghton Rd	Springfield Rd	1,458	Low
Total				41,539	

APPENDIX C: PEDESTRIAN AND BICYCLE PROJECT LIST

Priority Shared-use Pathway Projects

S. No.	Project Name	From	To	Length, m	Priority
Paved					
1	John Hindle Dr	Glenmore Rd N	Hollywood Rd N	2,922	High (1)
2	Hwy 97 N	E of Rails with Trails	Bulman Rd	172	High (2)
3	Curtis Rd Pathway	John Hindle Dr	Curtis Rd	1,933	High (3)
4	Cooper Rd Pathway	Rails with Trails	Enterprise Way	146	High (4)
5	Commerce Ave	Rails with Trails	Lester Rd	683	High (5)
6	Smith Ave	Water St	Artwalk	92	High (6)
7	Abbott St	Rose Ave	Christleton Ave	92	High (7)
8	Christleton Ave	Abbott St	Abbott St	99	High (8)
9	Pandosy St	Lake Ave	Sutherland Ave	184	High (9)
10	Lake Ave	Terminus of Lake Ave	Pandosy St	505	High (10)
11	Rails with Trails	Leckie Pl	Cambro / Loyd Rd	4,740	High (11)
12	Rails with Trails	Airport Way	Cambro Rd/Loyd Rd	4,132	High (12)
13	Houghton Rd/McIntosh Rd	Hollywood Rd N	Rutland Rd N	786	Medium (1)
14	Hollywood Rd S	Springfield Rd	Mission Creek Greenway	199	Medium (2)
15	Pandosy St	Artwalk	Leon Ave	599	Medium (3)
16	Abbott St	Christleton Ave	Cedar Ave	1,244	Medium (4)
17	Benvoulin Pathway	Mission Creek Greenway	Benvoulin Ct	430	Medium (5)
18	Lakeshore Rd	Lexington Dr	DeHart Rd	1,960	Medium (6)
19	Cooper Rd	Enterprise Way	Orchard Park Mall Entrance	471	Medium (7)
20	Lakeshore Rd	Lanfranco Rd	Swordy Rd	462	Medium (8)
21	Rails with Trails	Gordon Dr	Okanagan Lake	1,900	Medium (9)
22	Watt Rd	Cedar Ave	Lakeshore Rd	849	Medium (10)
23	Clydesdale Pathway	Clydesdale Rd	Arab Rd	260	Medium (11)
24	Abbott St	Bernard Ave	Harvey Ave	268	Medium (12)
25	Banks Rd Pathway	Ziprick Rd	Banks Rd	299	Low
26	Rails with Trails	Willits Rd	Belgo Rd	79	Low
27	Casorso Rd	Gordon Dr	Mission Creek Greenway	565	Low
28	Country Club Dr Pathway	Terminus of Country Club Dr	UBCO	1,102	Low
29	Dehart Rd	Gordon Dr	Lakeshore Rd	405	Low
30	Ellis St	Oxford Ave	Rails with Trails	459	Low
31	Glenmore Rd	Dallas Rd	Summit Dr	2,038	Low
32	Glenmore Rd N	John Hindle Dr	Scenic Rd	1,736	Low
33	KGH Pathway	Abbott St	Pandosy St	399	Low
34	Lakeshore Rd	McClure Rd	Vintage Terrace Rd	331	Low
35	Leathead Rd	McPhee St	Rails with Trails	866	Low
36	Parkinson Pathway	Burtch Rd	Harvey Ave Overpass	321	Low
37	Sexsmith Pathway	Sexsmith Rd	Rails with Trails	824	Low
38	Spiers Rd	Existing Spiers Rd Pathway	Wallace Hill Rd	212	Low
39	Spall Pathway	Spall Rd	Angel Way	166	Low
40	Spall Rd/Glenmore Rd	Summit Dr/High Rd	Clement Ave	1,605	Low
41	Taylor Pathway	Taylor Rd	Renfrew Rd	97	Low
42	Watson Rd	Glenmore Rd	Yates Rd	141	Low
Unpaved					
43	Rails with Trails	Old Vernon Rd	Airport Way	2,227	Low
44	Rails with Trails	City Limit	Old Vernon Rd	6,485	Low
Total				45,488	

APPENDIX C: PEDESTRIAN AND BICYCLE PROJECT LIST

Priority Sidewalk Projects

S. No.	Road	From	To	Project Length, m	Priority
1	Banks Rd	Hwy 97	Baron Rd	168	High
2	Bernard Ave	Burtch Rd	Spall Rd	1,267	High
3	Bernard Ave	Lakeview St	Noble Ct	671	High
4	Cadder Ave	Richter St	Ethel St	401	High
5	Casorso Rd	Swordy Rd	Bechard Rd	362	High
6	Dilworth Dr	Leckie Pl	Enterprise Way	600	High
7	Dilworth Dr	N of Leckie Pl	Rails With Trails	44	High
8	Gordon Dr	Trench Pl	Clement Ave	322	High
9	Graham Rd	Stirling Rd	Springfield Rd	1,152	High
10	Guisachan Rd	Ethel St	Charolais Rd	546	High
11	High Rd	Lowland St	Kennedy St	211	High
12	High Rd	Tronson Ct	Glengarry St	168	High
13	Hollywood Rd S	S of Hwy 33	Hollydell Rd	573	High
14	Leckie Rd	Hunter Rd	Enterprise Way	284	High
15	Pandosy St	Birch Ave	Lane N of McKay Ave	1,524	High
16	Richter St	Elliot Ave	Raymer Ave	1,634	High
17	Richter St	Recreation Ave	Clement Ave	441	High
18	Rose Ave	Pandosy St	Ethel St	1,222	High
19	Rowcliffe Ave	Richter St	Marshall St	289	High
20	Rutland Rd S	Gray Rd	Venus Rd	1,498	High
21	Snowsell St	Union Rd	Crosby Rd	629	High
22	Spall Rd	Bernard Ave	N of Enterprise Way	504	High
23	Springfield Rd	Benvoulin Rd	Benvoulin Ct	188	High
24	Venus Rd	Rutland Rd S	Dougall Rd S	570	High
25	Agassiz Rd	Ambrosi Rd	Barlee Rd	102	Medium
26	Ambrosi Rd	Harvey Ave	Ambrosi Rd	180	Medium
27	Bach Rd	Rutland Rd N	E of Hemlock Rd	849	Medium
28	Banks Rd	Baron Rd	Terminus of Banks Rd	477	Medium
29	Belgo Rd	Rutland Rd S	Springfield Rd	921	Medium
30	Benvoulin Ct	Springfield Rd	S of Springfield Rd	67	Medium
31	Benvoulin Rd	Springfield Rd	Mayer Rd	307	Medium
32	Birch Ave	Abbott St	Ethel St	1,813	Medium
33	Burtch Rd	Harvey Ave	Sutherland Ave	349	Medium
34	Burtch Rd	Harvey Ave	Lawrence Ave	739	Medium
35	Cadder Ave	Abbot ST	Pandosy St	392	Medium
36	Cameron Ave	Rhondda Cr	Gordon Dr	791	Medium
37	Cary Rd	Enterprise Way	Hwy 97 N	651	Medium
38	Cedar Ave	Abbott St	Pandosy St	180	Medium
39	Clifton Rd	Cara glen Way	Rio Dr	805	Medium
40	Clement Ave	St Paul St	Graham St	863	Medium
41	Commerce Ave	Enterprise Way	Hwy 97 N	299	Medium
42	Dehart Rd	Gordon Dr	Lakeshore Rd	756	Medium
43	Ellis St	Broadway Ave	Industrial Ave	1,321	Medium
44	Enterprise Ct	Spall Rd	Enterprise Way	193	Medium
45	Ethel St	Saucier Ave	Morrison Ave	1,898	Medium
46	Franklyn Rd	McCurdy Rd	Leathead Rd	643	Medium

APPENDIX C: PEDESTRIAN AND BICYCLE PROJECT LIST

Priority Sidewalk Projects

S. No.	Road	From	To	Project Length, m	Priority
47	Gerstmar Rd	Hwy 33 W	Springfield Rd	1,028	Medium
48	Glenmore Dr	Summit Dr	Bernard Ave	1,351	Medium
49	Gray Rd	Cambie Rd	Dougall Rd S	255	Medium
50	Gray Rd	Park Rd	Cambie Rd	154	Medium
51	Hardy St	Rails with Trails	Enterprise Way	289	Medium
52	Hartman Rd	Rutland Rd N	YMCA Entrance	442	Medium
53	High Rd	Gordon Dr	Terminus of High Rd	321	Medium
54	Hollydell Rd	Davie Rd	Hollywood Rd S	1,997	Medium
55	Hollydell Rd	Hollywood Rd S	Dell Rd	608	Medium
56	Hollywood Rd N	McCurdy Rd	Renshaw Rd	562	Medium
57	Hollywood Rd S	Springfield Rd	Terminus of Hollywood Rd S	398	Medium
58	Hunter Rd	W of Enterprise W	Leckie Rd	352	Medium
59	Jurome Rd/Robson Rd W/Robson Rd E	Prior Rd S	Dougall Rd S	780	Medium
60	KLO Rd	E of Benvoulin Rd	East Kelowna Rd	2,264	Medium
61	Lake Ave	Terminus of Lake Ave	Pandosy St	1,013	Medium
62	Lakeshore Rd	Lanfranco Rd	Lanfranco Rd	38	Medium
63	Lakeshore Rd	Swordy Rd	Cook Rd	878	Medium
64	McIntosh Rd	Froelich Rd	Rutland Rd N	412	Medium
65	Molnar Rd	Hwy 33 E	Belgo Rd	799	Medium
66	Mountain Ave	Van St	Clifton Rd	347	Medium
67	Orchard Dr	Wilson Ave	Richmond St	280	Medium
68	Pinecrest Lane	Gillard Dr	Highland Dr N	188	Medium
69	Powick Rd	Enterprise Way	Hwy 97	307	Medium
70	Raymer Rd	Raymer Rd	Gordon Dr	383	Medium
71	Renfrew Rd	Woods Rd	Ziprick Rd	204	Medium
72	Richards Rd	Hartman Rd	86m S of Hartman Rd	86	Medium
73	Richter St	Central Ave	Recreation Ave	518	Medium
74	Roxby Rd	Shepherd Rd	Hwy 33 W	210	Medium
75	Royal Ave	Pandosy St	Speer St	299	Medium
76	Rutland Rd N	Fitzpatrick Rd	Sumac Rd E	409	Medium
77	Springfield Rd	Durnin Rd	Dilworth Dr	352	Medium
78	Stockwell Ave	Richmond St	Lombardy Sq	74	Medium
79	Stockwell Ave	Gordon Dr	Lombardy Sq	267	Medium
80	Sutherland Ave	93m E of Pandosy St	Pandosy St	92	Medium
81	Tronson Dr	Kennedy St	Tronson Ct	199	Medium
82	Union Rd	Glenmore RD	Valley Rd N	460	Medium
83	Valley Rd	Kane Rd	Yates Rd	812	Medium
84	Wilkinson St	McBride Rd	Guisachan Rd	252	Medium
85	Willow Cr	Highland Dr N	Highland Dr N	376	Medium
86	Abbot St	Rose Ave	Cedar Ave	990	Low
87	Acland Rd	N of Penno Rd	Edwards Rd	180	Low
88	Asher Rd	McIntosh Rd	Shepherd Rd	250	Low
89	Asher Rd	Shepherd Rd	Hwy 33 W	250	Low
90	Barlee Rd	Harvey Ave	Springfield Rd	576	Low
91	Barnaby Rd	Paret Rd	South Rdge Dr	557	Low
92	Barnaby Rd	South Ridge Dr	Lakeshore Rd	358	Low

APPENDIX C: PEDESTRIAN AND BICYCLE PROJECT LIST

Priority Sidewalk Projects

S. No.	Road	From	To	Project Length, m	Priority
93	Benvoulin Rd	Byrns Rd	N of Byrns Rd	97	Low
94	Borden Ave	Gordon Dr	Bowes St	207	Low
95	Briarwood Rd	Terminus of Briarwood Rd	Rutland Rd N	98	Low
96	Central Ave	Kingsway	Ellis St	149	Low
97	Chute Lake Rd	Frost Rd	S of Frost Rd	145	Low
98	Cook Rd	Bird Pl	133m W of Bird Pl	133	Low
99	Creekside Rd	Gerstmar Rd	Graham Rd	516	Low
100	Crowley Ave	Richter St	Trench Pl	619	Low
101	Dehart Rd	Swamp Rd	Westpoint Dr	769	Low
102	Drysdale Blvd	Whitman Rd	Glen Park Dr	600	Low
103	Edwards Rd/Lougheed Rd	Acland Rd	Rails With Trails	680	Low
104	Elliot Ave	Pandosy St	Richter St	509	Low
105	Elwyn Rd	Taylor Rd	Davie Rd	1,047	Low
106	Ethel St	Crowley Ave	Clement Ave	1,032	Low
107	Feedham Ave	Oswell Dr	Loeth Dr	315	Low
108	Findlay Rd	N of Stremel Rd	McCurdy Rd	494	Low
109	Frost Rd	Killdeer Rd	Chute Lake Rd	450	Low
110	Gallagher Rd	Gallagher Ct	146m S of Gallagher Ct	246	Low
111	Gaston Ave	Richter ST	Ellis St	361	Low
112	Gerstmar Rd	Springfield Rd	Creekside Rd	93	Low
113	Glen Park Dr	Valley Rd	NW of Drysdale Blvd	262	Low
114	Glenmore Rd N	John Hindle Dr	Scenic Rd	1,739	Low
115	Glenview Ave	Clifton Rd	Hillcrest St	176	Low
116	Graham St	Clement Ave	Lane N of Lawson Ave	615	Low
117	Holbrook Rd E	Rutland Rd S	Brighton Rd	842	Low
118	Hwy 33 W	Enterprise Way	Clement Ave	380	Low
119	Hwy 97 N	McCurdy Rd	Keehn Rd	2,712	Low
120	Hwy 97	N Leckie Rd	N of Leckie Rd	62	Low
121	Kane Rd	Drysdale Blvd	Valley Rd	129	Low
122	Kent Rd	Ambrosi Rd	Spall Rd	351	Low
123	Keyes Rd/Irene Rd	Sumac Rd E	McCurdy Rd E	516	Low
124	Kirschner Rd	Harvey Ave	Springfield Rd	571	Low
125	Lakeshore Rd	Lequime Rd	Old Meadows Rd	750	Low
126	Lakeshore Rd	Bluebird Rd	Lequime Rd	780	Low
127	Lakeshore Rd	McClure Rd	Vintage Terrace Rd	320	Low
128	Lakeshore Rd	DeHart Rd	Old Meadows Rd	1,335	Low
129	Large Ave	W of St Clare Ct	Black Mountain Dr	362	Low
130	Leon Ave	Ethel St	241m E of Ethel St	156	Low
131	Manhattan Dr	Ellis St	Guy St	447	Low
132	Mills Rd	Hwy 97 N	North of Fir Ct	148	Low
133	Miscellaneous Walkways	Various Places		1,500	Low
134	Morrison Ave	Abbott St	Rhonda Cr	1,928	Low
135	Moubray Rd	Cosens Ct	Ballou Rd	466	Low
136	Mugford Rd	Rutland Rd	Poonian St	1,894	Low
137	Nickel Rd/Lester Rd	Houghton Rd	Hwy 33 W	540	Low
138	Old Vernon Rd	E of Acland Rd	Sexsmith Rd	612	Low

APPENDIX C: PEDESTRIAN AND BICYCLE PROJECT LIST

Priority Sidewalk Projects

S. No.	Road	From	To	Project Length, m	Priority
139	Oswell Dr/Duncan Ct	166m W of Henderson Dr	Duncan Ct	548	Low
140	Park Ave	Abbott St	Pandosy St	371	Low
141	Park Rd/Gray Rd	Rutland Rd S	Hwy 33 W	225	Low
142	Pemberton Rd	Gray Rd	Jurome Rd	262	Low
143	Prior Rd N	Mugford Rd	Danube Ct	291	Low
144	Recreation Ave	Ellis St	Richter St	363	Low
145	Rhondda Cr	Cameron Ave	Morrison Ave	224	Low
146	Robson Rd W	Jurome Rd	Holbrook Rd W	95	Low
147	Sexsmith Rd	Acland Rd	Adams Rd	217	Low
148	Sexsmith Rd	Adams Rd	Arab Rd	1,185	Low
149	Shepherd Rd	Rutland Rd N	Asher Rd	460	Low
150	Spruceview Pl S	Spruceglen Dr	Caldow St	485	Low
151	Sumac Rd E	Irene Rd	Keyes Rd	54	Low
152	Toovey Rd	W of Ackerman Ct	Hwy 33 E	451	Low
153	Vasile Rd	Harvey Ave	Agassiz Rd	79	Low
154	Wardlaw Ave	Ethel St	Pandosy St	597	Low
155	Watt Rd	Lakeshore Rd	Walnut St	260	Low
156	Willits Rd	Eastbourne Rd	Seaford Rd	72	Low
157	Yates Rd	McTavish Rd	Ballou Rd	553	Low
Total				88,027	

APPENDIX C: PEDESTRIAN AND BICYCLE PROJECT LIST

Priority Bike Lane Projects

S. No.	Project Name	From	To	Length, m	Ranking
1	Bernard Ave	Richmond St	Burtch Rd	592	High (1)
2	Glenmore Rd	Rails with Trails	High Rd/Summit Dr	1,631	High (2)
3	Ellis St	Broadway Ave	Buckland Ave	2,514	High (3)
4	Doyle Ave/Stockwell Ave	Water St	Gordon Dr	1,442	High (4)
5	Bernard Ave	Richter St	Richmond St	1,271	High (5)
6	Lanfranco Rd	Richter St	Lakeshore Rd	158	High (6)
7	Glenmore Rd	Scenic Rd	Dallas Rd	1,974	High (7)
8	Union Rd	Millard Pl	Valley Rd	813	High (8)
9	Clement Ave	Graham St	Ellis St	985	High (9)
10	Curtis Rd	Planned Pathway at Curtis Rd	Sexsmith Rd	253	High (10)
11	Academy Way	John Hindle Dr	Clydesdale Rd	1,244	Medium (1)
12	Banks Rd	Driveway NW of Hwy 97 N	Terminus of Banks Rd	503	Medium (2)
13	Cooper Rd	Orchard Park Mall Entrance	Springfield Rd	193	Medium (3)
14	Gerstmar Rd	Springfield Rd	Creekside Rd	103	Medium (4)
15	Pandosy St/Buckland Ave	Lake Ave	Ellis St	258	Medium (5)
16	Raymer Rd	Gordon Dr	Varney Ct	1,195	Medium (6)
17	Swordy Rd	Lakeshore Rd	Casorso Rd	358	Medium (7)
18	Glenmore Rd N	McKinley Rd	City Limit	4,328	Medium (8)
19	Pandosy St	Sutherland Ave	KLO Rd	1,982	Medium (9)
20	Pandosy St/Water St	Queensway	Buckland Ave	630	Medium (10)
21	Acland Rd/Hereron Rd/Bulman Rd	300 m north of Hereron Rd	Edwards Rd	919	Low
22	Airport Way	Hollywood Rd N	Rails with Trails	597	Low
23	Arab Rd	Clydesdale Rd	Sexsmith Rd	894	Low
24	Ballou Rd/Kane Rd	Yates Rd	Valley Rd	640	Low
25	Bedford Rd	Stewart Rd E	Saucier Rd	1,453	Low
26	Belgo Rd/Garner Rd/Kloppenburg Rd	Teasdale Rd	Loeth Rd	3,047	Low
27	Belgo Rd/Molnar Rd/Belgo Rd/Holbrook Rd E	Mallach Rd	Teasdale Rd	2,818	Low
28	Biggar Rd	Moubray Rd	Snowsell St	99	Low
29	Cambro Rd	Sexsmith Rd	Rails with Trails	265	Low
30	Clifton Rd N	McKinley Rd	Magic Dr	4,994	Low
31	Clydesdale Rd	Proposed Pathway	Hollywood Rd N	698	Low
32	Cook Rd	Gordon Dr	Lakeshore Rd	536	Low
33	Country Club Dr	Quail Ridge Blvd	Terminus of Country Club Dr	1,445	Low
34	Craig Rd	McCurdy Rd E	Hartman Rd	191	Low
35	Crawford Rd	Stewart Rd W	Parkridge Dr	239	Low
36	Crawford Rd	Parkridge Dr	South of DeHart Rd	1,597	Low
37	Dease Rd	McCurdy Rd	Leathhead Rd	739	Low
38	DeHart Rd	Crawford Rd	Casorso Rd	883	Low
39	E Kelowna Rd	KLO Rd	Dunster Rd	1,023	Low
40	E Kelowna Rd	Dunster Rd	Mission Creek Greenway	2,824	Low
41	E Kelowna Rd/Hollywood Rd S/Teasdale Rd	Mission Creek Greenway	Belgo Rd	1,287	Low
42	Fenwick Rd/Finns Rd	Rails with Trails	Findlay Rd	859	Low
43	Fitzpatrick Rd	Finns Rd	Rutland Rd N	1,043	Low
44	Franklyn Rd	McCurdy Rd	HWY 33 W	1,374	Low

Note - Bike lane projects are based on road centre line distance. Total project distance is double this amount.

APPENDIX C: PEDESTRIAN AND BICYCLE PROJECT LIST

Priority Bike Lane Projects

S. No.	Project Name	From	To	Length, m	Ranking
45	Frost Rd	Treadgold Ct	Killdeer Rd	126	Low
46	Frost Rd ROW	Chute Lake Rd	Treadgold Ct	291	Low
47	Gertsmar Rd/Kneller Rd	Houghton Rd	Hwy 33	360	Low
48	Gordon Dr	Lequime Rd	Casorso Rd	525	Low
49	Gordon Dr	Rails with Trails	Springfield Rd	1,902	Low
50	Gordon Dr	Southcrest Dr/Clarence Ave	South Perimeter Rd	589	Low
51	Hartman Rd	YMCA Entrance	Rutland Rd N	418	Low
52	Hollywood Rd N	Airport Way	University Way	1,228	Low
53	Hollywood Rd N	John Hindle Dr	Sexsmith Rd	2,098	Low
54	Hwy 33 W	Enterprise Way	Rails with Trails	146	Low
55	Jim Bailey Cr	Rails with Trails	Jim Bailey Cr	308	Low
56	John Hindle Dr	Hollywod Rd N	Glenmore Rd N	2,922	Low
57	June Springs Rd	Spiers Rd	City Limit	2,106	Low
58	Lark St	Okaveiw Rd	Chute Lake Rd	533	Low
59	Leckie Rd	Dilworth Dr	Parkview Cr	984	Low
60	Lester Rd/Nickel Rd	Leathead Rd	Hwy 33 W	709	Low
61	Longhill Rd	Rifle Rd	Sexsmith Rd	1,261	Low
62	Loseth Dr/Large Ave	Black Mountain Dr	Hwy 33 E	930	Low
63	Loseth Rd	Hwy 33 E	Autumn Rd	333	Low
64	Loseth Rd	Autumn Rd	Terminus of Gallagher Rd	2,430	Low
65	Mail Rd	Sexsmith Rd	Longhill Rd	1,220	Low
66	McClure Rd	Raymer Rd	Lakeshore Rd	1,342	Low
67	McCurdy Rd	Rails with Trails	Dalton Rd	1,187	Low
68	McCurdy Rd/Mount Baldy Dr	Dilworth Dr	Rails with Trails	385	Low
69	McKinley Rd	Glenmore Rd N	N of Arthur Rd	2,977	Low
70	Moubray Rd/Ballou Rd/Yates Rd	Crossridge Cr	Existing SUP at Yates Rd	924	Low
71	Old Vernon Rd	Spencer Rd	Airport Way	1,029	Low
72	Quail Ridge Blvd	E of Country Club Dr	Terminus of Quail Ridge Blvd	252	Low
73	Ridge Rd/Cara Glen Way	Upper Canyon Dr	Clifton Rd	3,193	Low
74	Rutland Rd N	Old Vernon Rd	Cornish Rd	433	Low
75	Saucier Rd	Stewart Rd W	Sallows Rd	1,393	Low
76	Saucier Rd	Bedford Rd	Stewart Rd W	912	Low
77	South Perimeter Rd	Stewart Rd W	Chute Lake Rd	4,450	Low
78	South Ridge Dr	Frost Rd	South Perimeter Rd	871	Low
79	Spiers Rd	KLO Rd	Gulley Rd	1,085	Low
80	Steele Rd	South Ridge Dr	Gordon Dr	1,401	Low
81	Stewart Rd E	Saucier Rd	Terminus of Stewart Rd E	1,197	Low
82	Stewart Rd W	Saucier Rd	Terminus of Stewart Rd W	1,112	Low
83	Taylor Rd/Collision Rd/Mark Rd/Graham Rd	Hwy 33 W	Springfield Rd	1,050	Low
84	Uplands Dr/Okaview Rd/Chute Lake Cr	Lakeshore Rd	Chute Lake Rd	2,998	Low
85	Upper Canyon Dr	Union Rd	Ridge Rd	3,822	Low
86	Yates Rd	Valley Rd	Glennmeadows Rd	435	Low
Total				106,759	

Note - Bike lane projects are based on road centre line distance. Total project distance is double this amount.

D.1 Intersection Design Improvements

The majority of more serious pedestrian and bicycle collisions occur at intersections and driveways. It is therefore important to incorporate necessary safety features at such locations.

This section describes recommended intersection design improvements for pedestrians and cyclists. To create a safe network of cycle tracks, shared paths, sidewalks, crosswalks and bike lanes, design care is critical at intersections, vehicle right turn lanes, driveways, and minor street crossings.

The City of Kelowna will adopt and apply the National Association of City Transportation Officials (NACTO) recommended design features in its publication titled Urban Bikeway Design Guide. This will supplement the Transportation Association of Canada (TAC) standards in the Bikeway Traffic Control Guidelines for Canada. The

City will also consider references such as the Massachusetts Department of Transportation's Separated Bike Lane Planning & Design Guide.

The City will continue to work to develop standards for bike signals which will significantly enhance safety and convenience for cyclists on cycle tracks and shared-use pathways. Furthermore, various left-turn specific treatments for cyclists will also be formally incorporated. In particular, future work will look at intersections in urban centres which need more attention to improve accessibility, safety and convenience for active transportation users.

Shared-Use Pathway Intersection Approach

When a Shared-use pathway meets an intersection, the corners of the

crossing should provide a large clear area to allow cyclists to stop and wait to cross without blocking the through zone of the sidewalk. Pushbuttons should be placed on each corner approach, close enough to the path to be reached by cyclists without the need to dismount.

Figure D.1 illustrates the preferred location of pushbuttons. If suitable pushbutton is not possible, loop detectors could be used. The specific actuation area should be well marked to inform cyclists of proper positioning.

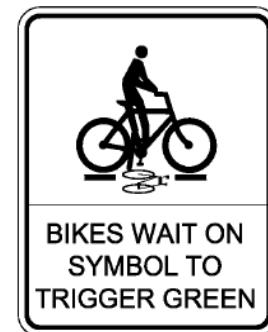
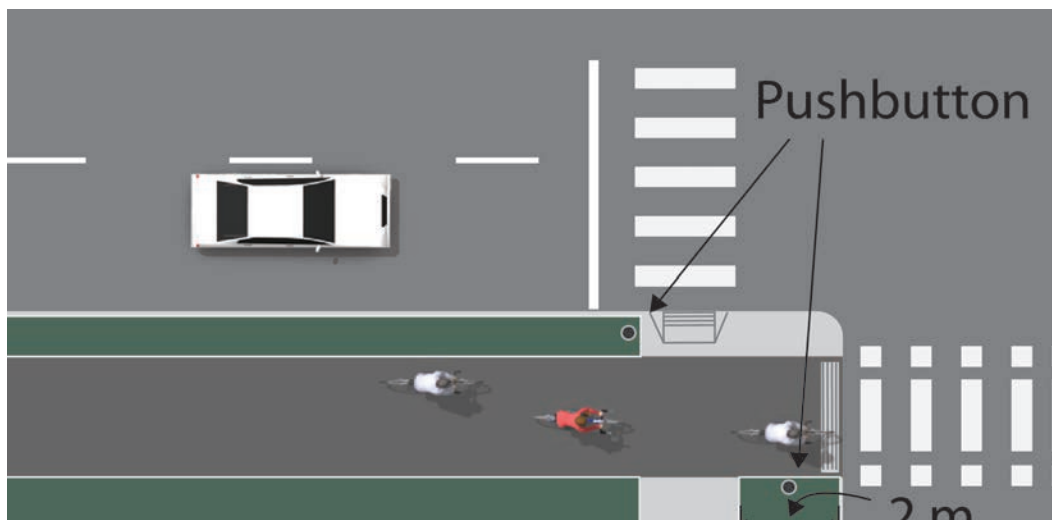


Figure D.1: Ramps and Waiting Areas for a Shared-Use Pathway at an Intersection



APPENDIX D: FACILITY DESIGN

Cycle Track Design

Intersection approach treatments should be based on available roadway width, right-turn volumes, corner geometry and other traffic operation considerations. This section highlights a few design features for cycle tracks at intersections.

Signal-Protected Turns

A cycle track can extend all the way to an intersection by including a traffic signal to separate the movements of cyclists and conflicting vehicles. The signal is triggered by a cyclist on the track at the intersection and on its approach. In this instance, right turn on red should be prohibited to preserve the protection of cyclists. Because there are no bicycle and motor vehicle conflicts, coloured pavement is not necessary.

Corner Refuge Islands

Corner refuge islands can be used to manage right turn motor vehicle bicycle conflicts further within the intersection (Figure D.2). This strategy is used in the Netherlands, and is particularly beneficial at locations where two cycle tracks cross and the cycle tracks are protected by a wide buffer strip. The geometry of the corner refuge island brings cyclists in a clear line of sight of the motorists to avoid conflict and also reduces vehicle turning speed.

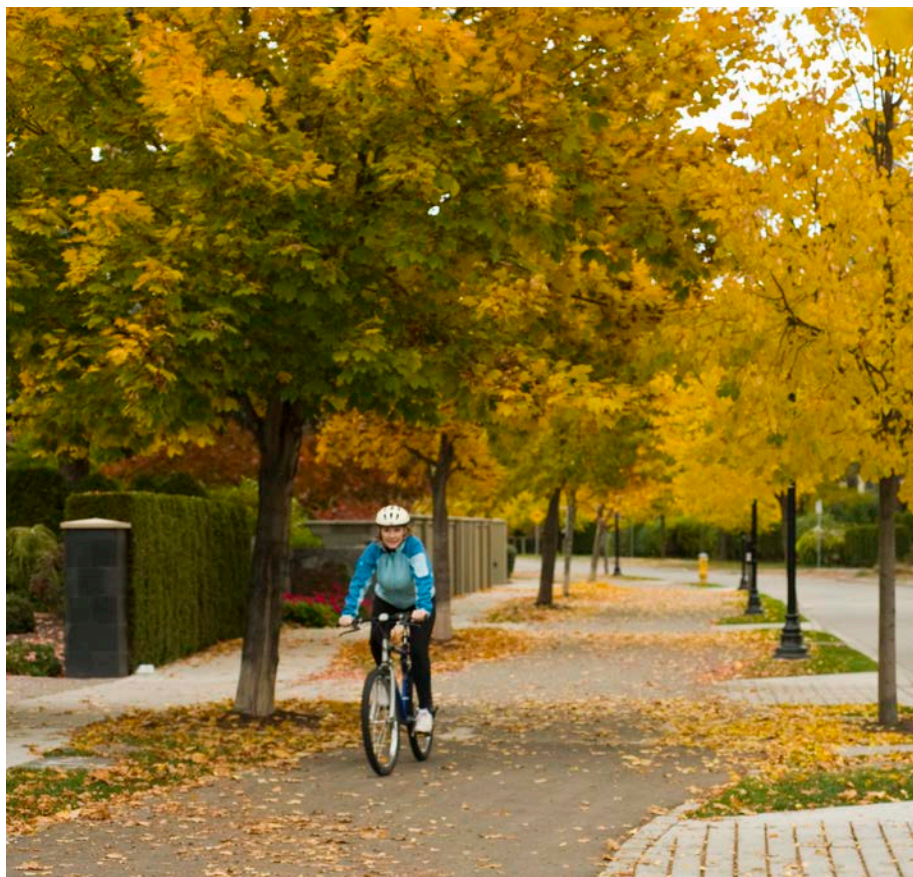
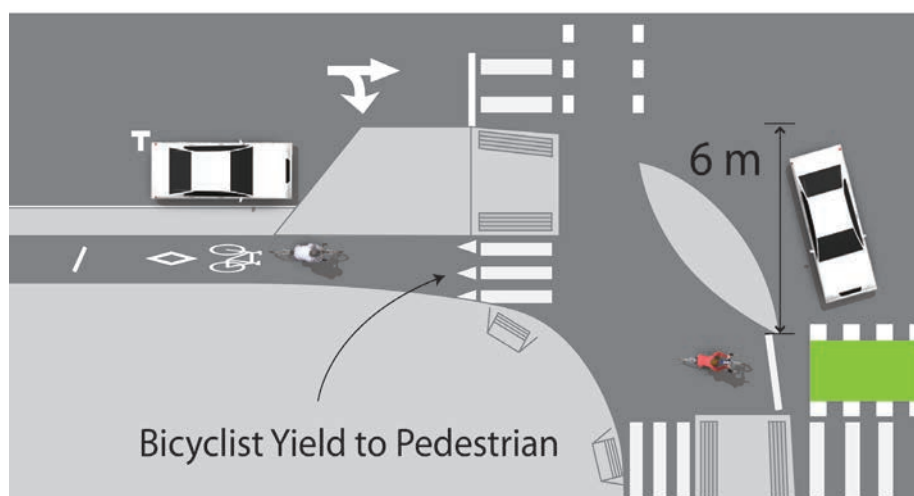


Figure D.2: Cycle Track at a Corner Refuge Island



APPENDIX D: FACILITY DESIGN

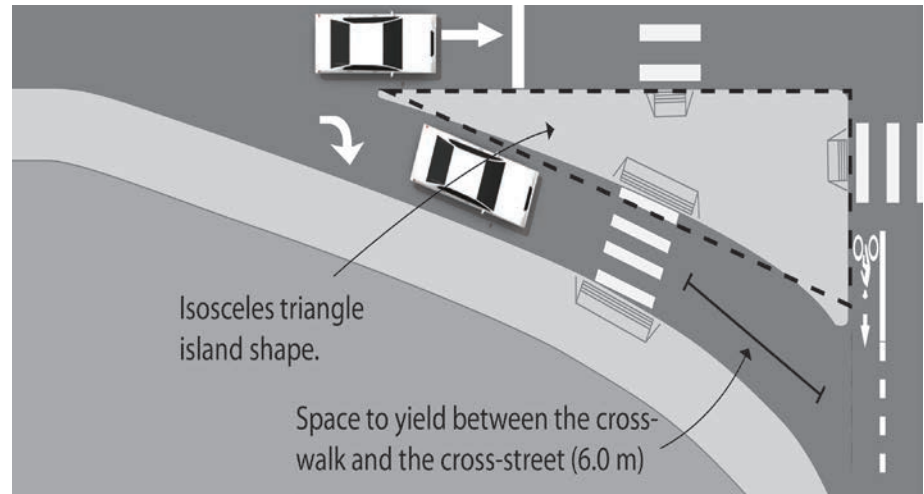
Crossing Channelized Turn Lanes and Roundabouts

Channelized turn lanes and roundabouts can be challenging for cyclists and pedestrians to navigate, particularly for users with vision disabilities. Efforts should be made to mitigate the negative effect on these users.

The geometry of a channelizing island should promote clear visibility of crossing pedestrians and provide sufficient space to accommodate pedestrians, bikes, and vehicles.

The alignment of the turn lane should be a nearly right-angle entry to the cross street (Figure D.3). There should be adequate length of the turn lane to store yielding vehicles both before and after the crosswalk.

Figure D.3: Channelized Island Geometry

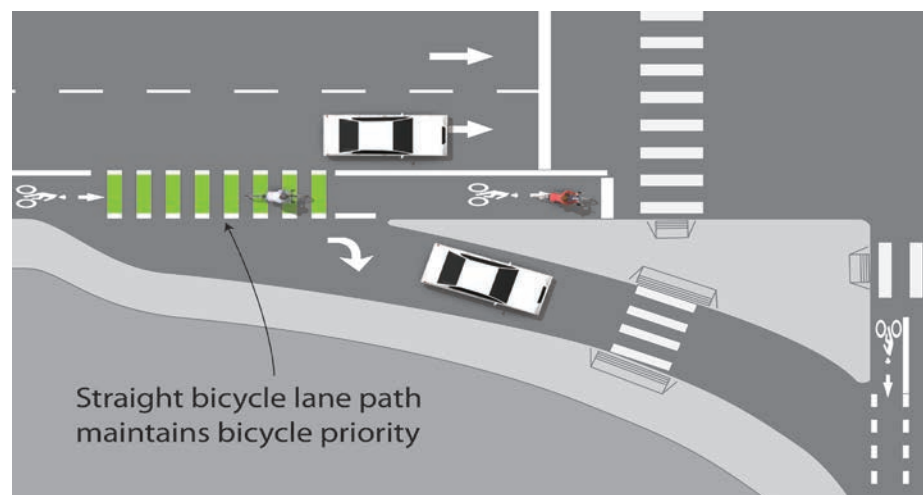


Bicycle Lane Priority

When a right-turn-only lane is added to the right of the bicycle lane, the cyclist path should remain straight and drivers are expected to yield before entering the turn lane (Figure D.4).

These configurations create a clear sense of yield priority for all users.

Figure D.4: Channelized Island Geometry

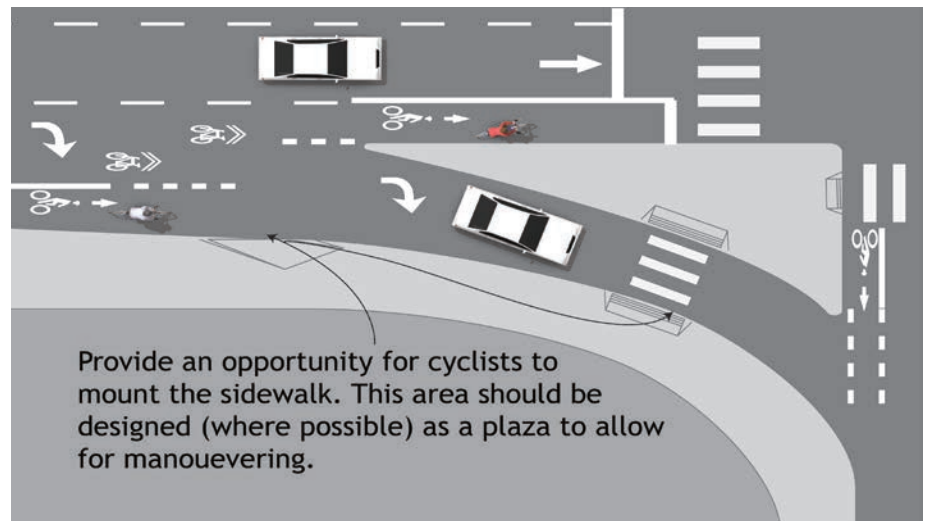


APPENDIX D: FACILITY DESIGN

Right Turn Lane Priority

When a fast-moving through lane transitions into a right-turn-only lane, there is no reasonable expectation for drivers to yield to cyclists (Figure D.5). In these cases, cyclists should yield for their own safety. Pavement markings should dash the bicycle lane well in advance to cue cyclists to merge across when safe. In these situations, it may be prudent to allow cyclists to move to the sidewalk and cross with pedestrians at the crosswalk. Less confident cyclists may mount the sidewalk and cross with pedestrians using Elephant's Feet Crossing.

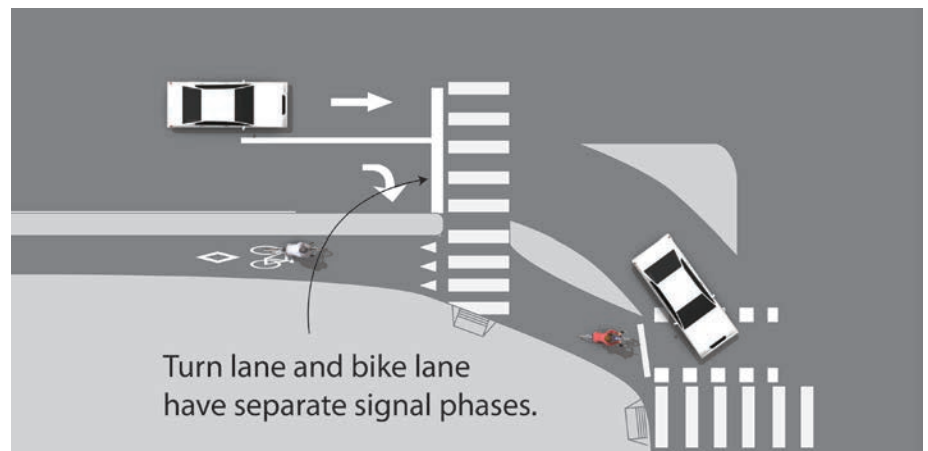
Figure D.5: Right Lane Transition



Signalized Corner Refuge Island

Using signal control to prevent conflict and providing corner refuge islands to create physical separation offers better protection at channelized turn lanes (Figure D.6). In this situation, vehicles cannot make a right turn on red. Separation of cyclists and pedestrians is maintained, and cyclists and pedestrians have a more direct path in crossing an intersection.

Figure D.6: Signalized Refuge Island

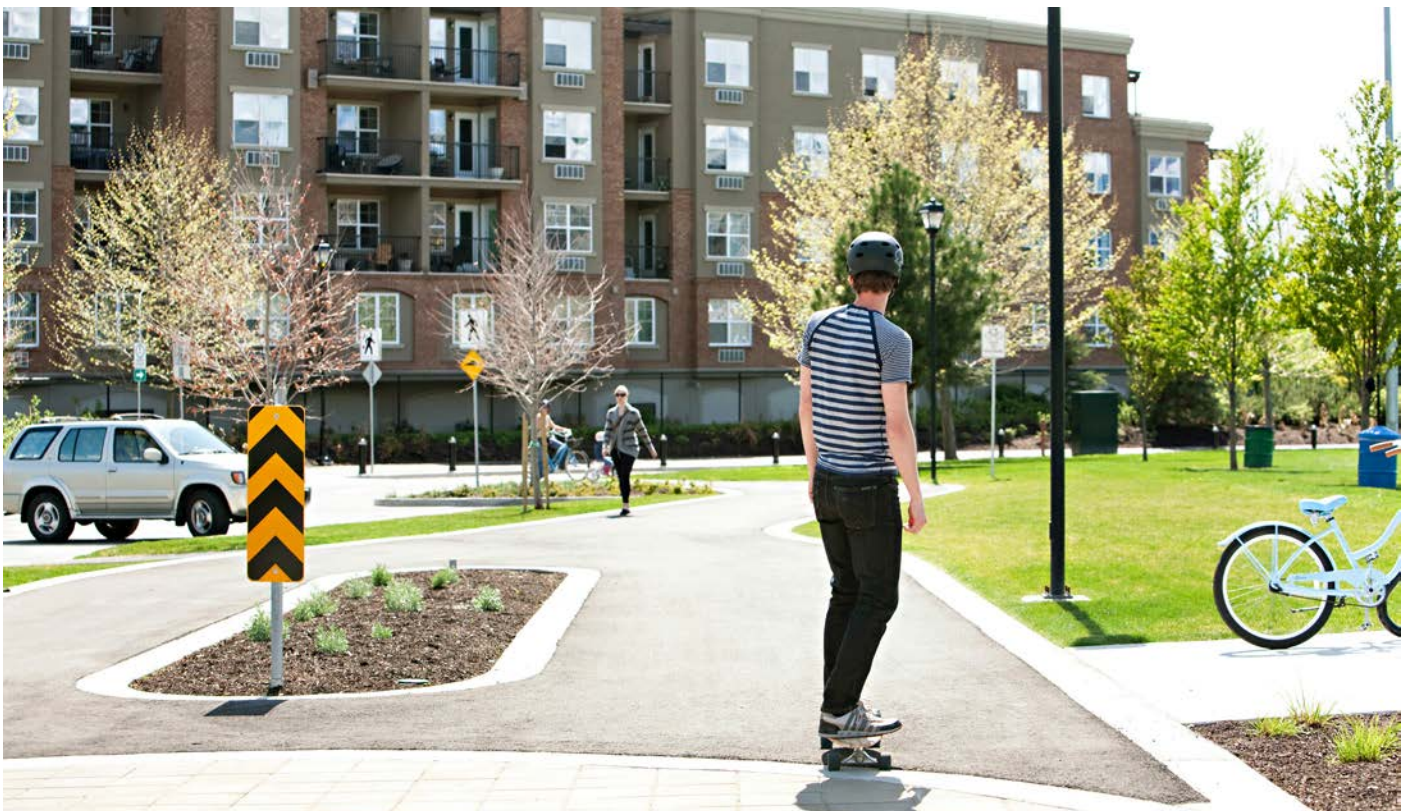
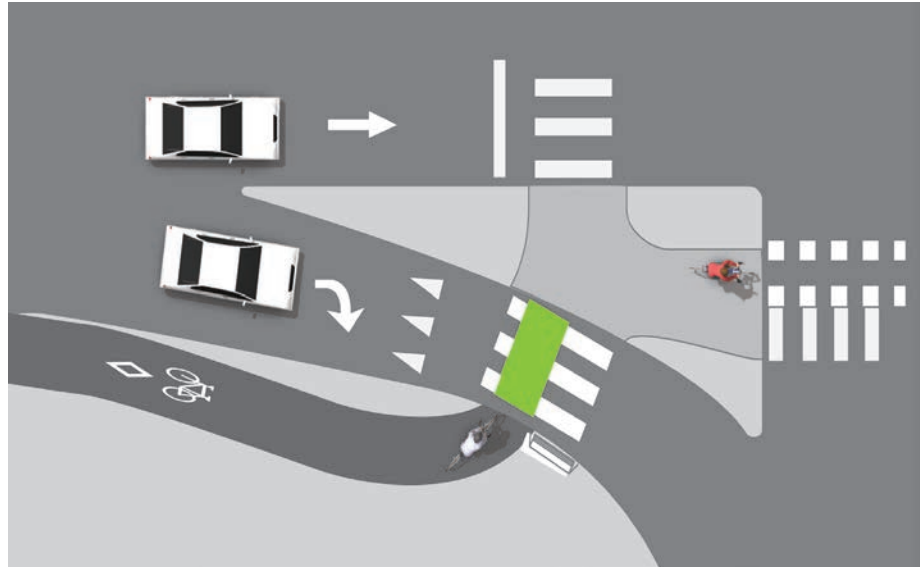


APPENDIX D: FACILITY DESIGN

Traffic Island Pass Through

When a cycle track crosses an intersection with a channelized turn lane, cyclists can be directed to cross at the pedestrian crosswalk to maintain physical protection of the bikeway, yet there will still be an uncontrolled crossing of the channelized turn lane. Design of the traffic island should promote slow turning speeds and a high level of visibility of crossing users (Figure D.7). This design is appropriate for use with a cycle track or shared-use path. Raised crosswalks and crosswalk flashers can increase motorist yielding compliance at the crossing. This design may lead to frustration amongst commuter cyclists who feel unnecessarily delayed. However, this provides better protection and is suitable for the majority of users.

Figure D.7: Traffic Island Pass Through



APPENDIX D: FACILITY DESIGN

Driveways

Drivers crossing driveways must yield to cyclists and pedestrians. Geometric design, markings and signs can all be used to identify the conflict and promote yielding.

Driveway Crossing Retrofit

Parking can be restricted to a minimum 9 m in advance of the driveway for improved bicycle visibility for vehicles exiting the driveway (Figure D.10). Colored pavement can also alert motor vehicles to cyclist crossing.

Driveway Crossing Reconstruction

Raised cycle tracks offer more opportunity to use geometric design of driveway aprons, grade and driveway aisle width to promote yielding (Figure D.11). The raised level of the cycle track can be maintained with driveway aprons. These aprons should be steep and abrupt to prompt slow turning speeds into and out of the driveway. Parking can be restricted 9 m in advance of the driveway for improved bicycle visibility, and landscaping can be used to define the driveway aisle.

Abbott Street driveways are similar to the design shown in Figure D.11.

Figure D.10: Driveway Crossing Retrofit

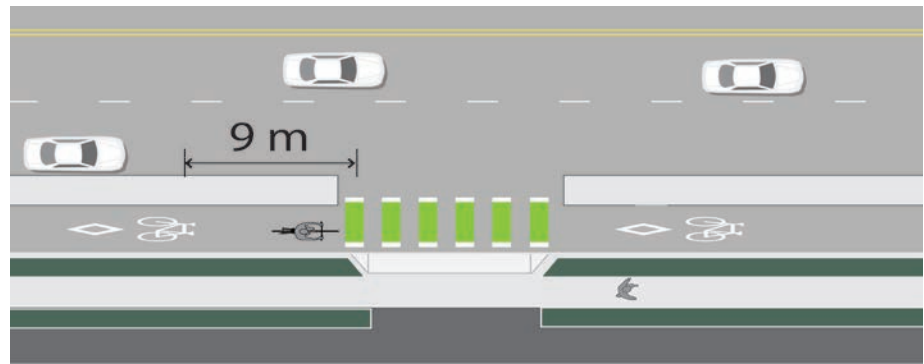
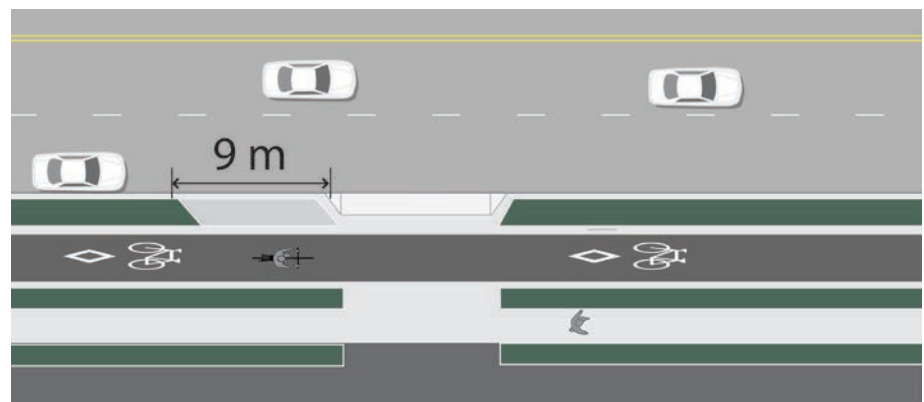


Figure D.11: Driveway Crossing Reconstruction



D.2 Potential Retrofit Ideas for Existing Streets

These strategies are focused on identifying opportunities for additional bikeway and walkway space. Available street space may be used to establish new bikeways, enhance existing bikeways or expand the pedestrian realm.

Travel Lane Reconfigurations

Streets with excess vehicle capacity provide opportunities for active transportation projects. The removal of a single wide travel lane can provide ample space for pedestrians and cyclists. Figure D.12 illustrates how vehicle lane space can be reallocated to bicycles and pedestrians without adding additional width to the right-of-way. Various lane reduction configurations may apply to a street, depending on a street's existing configuration, traffic operations, user needs and safety concerns. Prior to implementing any measure, a traffic analysis should identify potential impacts.

Travel Lane Narrowing

Lane narrowing utilizes roadway space that exceeds minimum standards to provide additional space for active transportation. Many roadways have existing travel lanes that are wider than those prescribed in local and national roadway design standards (Figure D.13). Most standards allow for the use of 3.2 m, sometimes 3 m wide travel lanes. Special consideration

should be given to the amount of heavy vehicle traffic and horizontal curvature before the decision is made to narrow travel lanes. In some situations, center turn lanes can also be narrowed.

Figure D.12: Potential Use of Space from Travel Lane Reconfigurations

Adding Pedestrian Space



Adding Bicycle Lanes



Adding Protected Bicycle Lanes



Figure D.13: Lane Narrowing to Create Bicycle Lanes

Before



After



APPENDIX D: FACILITY DESIGN

Parking Lane Removal

Like travel lane removal, the removal of one or both parking lanes on a roadway may provide necessary space to establish enhanced bicycle or pedestrian facilities (Figure D.14).

Typical parking lane widths of 2.5 m or more are directly compatible with one-way cycle tracks, and direct conversions from one to the other may be very cost effective.

Shoulder Widening

Bicycle and pedestrian accessible shoulders can be accommodated on streets with excess right-of-way through roadway widening.

Although roadway widening often incurs higher expenses compared with re-striping projects, pedestrian and bicycle accessible shoulders can be added to streets lacking curbs, gutters, and sidewalks without the high costs of major infrastructure reconstruction (Figure D.15).

Figure D.14: Parking Lane Removal to Create Bicycle Lanes

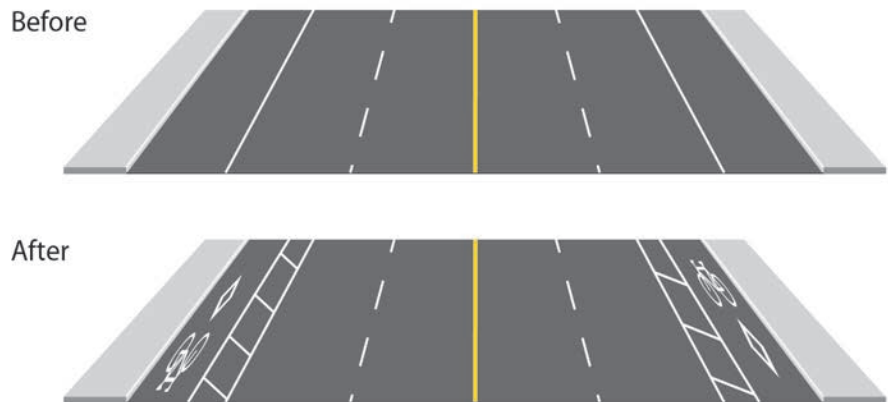
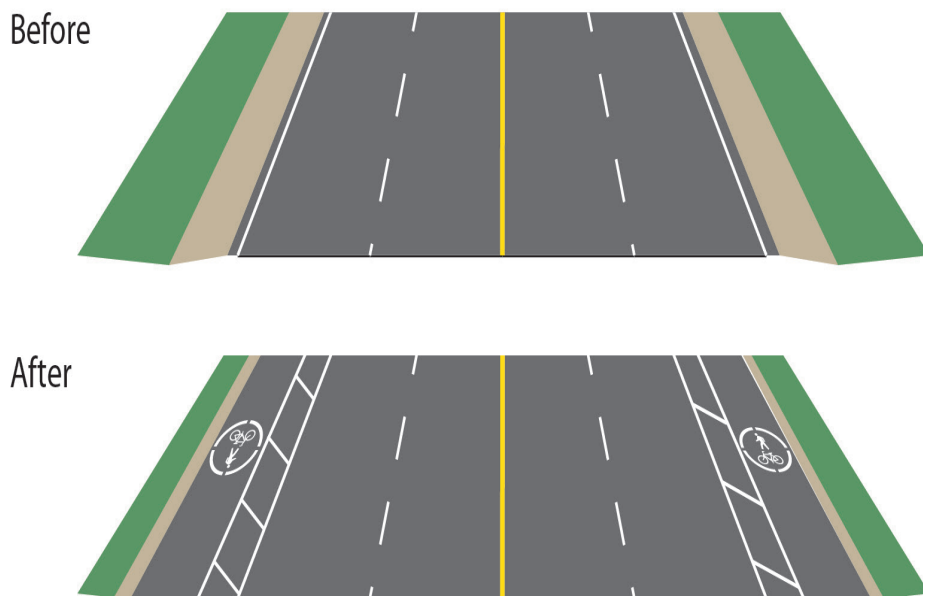
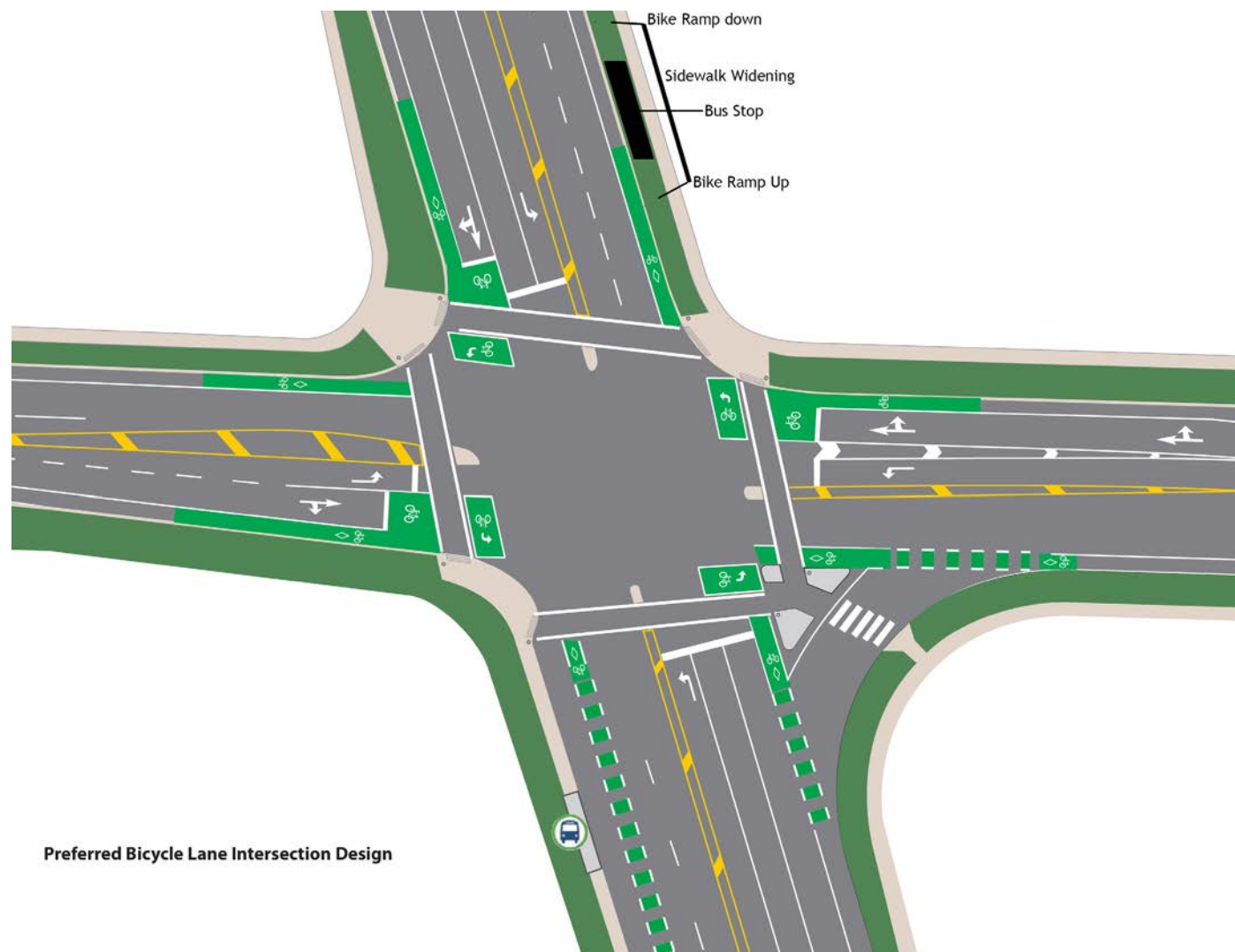


Figure D.15: Roadway Widening to Create Pedestrian and Bicycle Accessible Shoulders



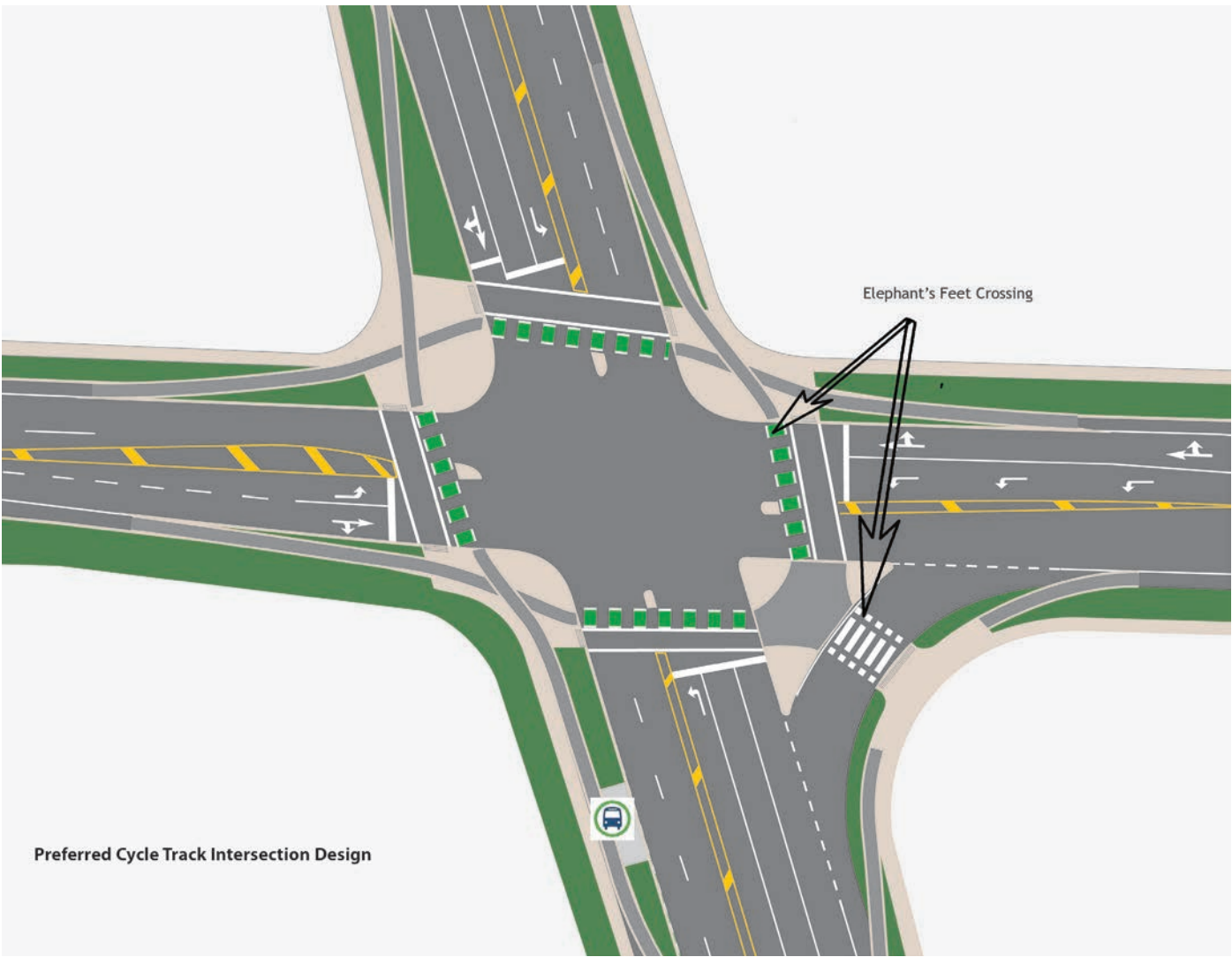
APPENDIX D: FACILITY DESIGN

Figure D:I6: Preferred Bicycle Lane Intersection Design



APPENDIX D: FACILITY DESIGN

Figure D.17: Preferred Cycle Track Intersection Design



Pedestrian and Bicycle Master Plan

Community Engagement Final Report

April 2016

1. Introduction.....	3
2. Executive Summary.....	3
3. Timeline & Milestones	4
4. Initial public engagement: Issues Identification & Gap Analysis	4
5. Final Public Engagement: Draft Master Plan Input.....	6
6. Outcomes.....	8

1. Introduction

The City of Kelowna's Pedestrian and Bicycle Master Plan identifies infrastructure, planning and policy requirements to promote and facilitate walking and cycling throughout the community.

There are currently 400 kilometres of sidewalks, 300 kilometres of bike lanes and 35 kilometres of shared-use pathways throughout the City.

Over the past decade, the City has seen a gradual increase in pedestrian and cycling mode share. This increase has been most pronounced in the urban core area, where the percentage of individuals who walk or cycle has moved up from 8.9 per cent in 2007 to 13 per cent in 2013.

The goals of the Master Plan are to increase year-round walking and cycling so that within 20 years 25 per cent of all trips less than five kilometers in length are made by walking or cycling as well as to improve pedestrian and cyclist safety so that collisions with motor vehicles is reduced by 50 per cent.

Through a comprehensive, two-phase engagement process, the City sought to inform, consult and involve the community in order to construct a Master Plan that best identifies current gaps and opportunities for creating an interconnected active transportation network.

2. Executive Summary

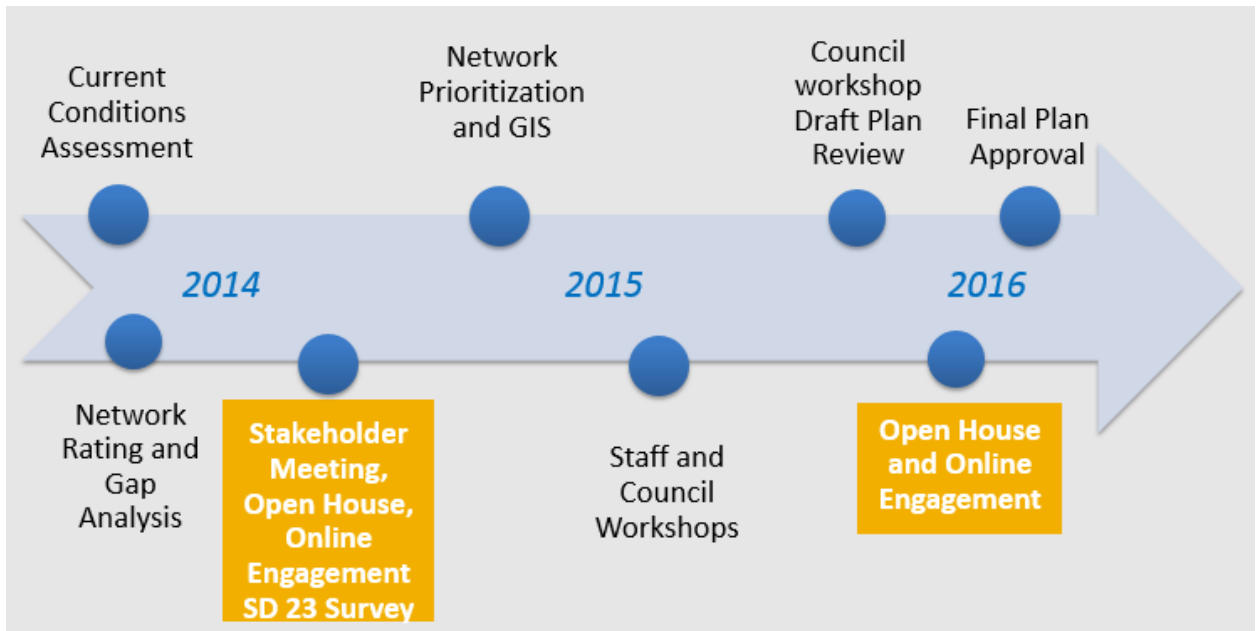
To ensure the Pedestrian and Bicycle Master Plan was well-informed, shaped in part by public input, and that the plan would meet the needs of residents, the City offered a variety of opportunities throughout the project to engage the public and gather their feedback.

In accordance with the guiding principles defined in Council's Engage Policy, engagement outreach was done twice during the project. Initial consultation was done near the onset of the project to gather input for the Plan, and final engagement at the end of the project was done to ensure the draft Plan reflected the communities' desires.

Initial consultation from nearly 250 surveys, 12 stakeholders, 14 administrators, and over 200 open house attendees provided support for the Plan goals; helped develop project prioritization criteria; identified priority network routes and gaps; and identified issues the Plan should address including safety, connectivity and barriers to cycling. This information was used to help draft the active transportation network and Plan.

During the final engagement, the community could comment on the Plan they helped shape. Feedback from the more than 500 surveys and over 260 open house participants during the final consultation showed that the draft Plan would encourage nearly three quarters of respondents to walk more and 83 per cent to bike more. While the majority of respondents expressed support for the Pedestrian and Bicycle Master Plan, feedback on possible plan improvements was reviewed and considered for inclusion in the final version of the Plan.

3. Timeline & Milestones



4. Initial public engagement: Issues Identification & Gap Analysis

The purpose of the initial Pedestrian and Bicycle Master Plan engagement process was to gather feedback from the community on barriers, issues and gaps for active transportation in Kelowna. The goals of the initial engagement were to inform, consult and involve the community in developing a draft Master Plan for the future of pedestrian and cycling networks in the City. A variety of tactics were utilized to gather community input including:

- Outreach through City communication channels (e-Subscribe, social media, PSA's, stakeholder networks)
- School District 23 survey (Summer/Fall 2014)
- Interactive stakeholder workshop (September 2014)
- Online engagement (getinvolved.kelowna.ca)
- Online public survey
- Open house at Orchard Park Mall (October 2014)

Outreach through City communication channels

A designated project website was established: kelowna.ca/onthemove to house information and links to the online survey and interactive maps via Mind Mixer at getinvolved.kelowna.ca.

The City promoted the open house, online survey and getinvolved.kelowna.ca through a variety of platforms including media releases, newspaper advertisements, e-bulletins and social media including facebook and twitter.

School District 23 survey

Increasing the number of students who actively commute to school can reduce motor vehicle trips, reduce emissions and develop life-long habits. Recognizing this, a survey was sent to 25 principals and administrators working for School District 23 during the summer/fall 2014. The purpose of the survey was to gather information on the existing knowledge of Safe Routes to School strategies, infrastructure concerns that impede students for walking and cycling to school, students' primary means of transportation, and educational programming designed to encourage walking or cycling to school.

Garnering survey responses was hampered due to the BC teachers' strike and in the end fourteen responses were received (56% of public schools). Highlights from these responses include:

- Majority of schools surveyed are not familiar with Safe Routes to School initiatives.
- Common deterrents for students walking/cycling to school include - more convenient for parents to drive; live too far away / takes too long; safety concerns; parents don't want child walking/cycling along; and intersections are dangerous to cross.
- Infrastructure barriers include - high speed/high volume streets; intersections without crosswalks; streets without bike paths/lanes; streets without sidewalks; and hilly streets.

Feedback from this survey was used to help develop the network.

Interactive stakeholder workshop

Sixteen individuals, representing 11 stakeholder organizations were invited to attend an interactive session on September 23, 2014 at the Bohemian Café in Kelowna. Stakeholders represented included: Kelowna Area Cycling Coalition (KACC), Okanagan College, Community Action Toward Children's Health (CATCH), School District 23, Interior Health, Kelowna Chamber of Commerce, Downtown Kelowna Association, Worman, Urban Development Institute & Canadian Home Builders' Association, Central Okanagan, and UBC Okanagan. The goal of the event was to introduce the project, raise awareness of its intended outcomes, and receive insight from the community through discussions and questions.

The main themes that emerged from the discussions were the importance of connectivity with schools, support for routes along major streets (Springfield, Ethel, Burtch, Dilworth, Benvoulin), and prioritizing the bottleneck section around Orchard Park Mall with improvements to infrastructure. Stakeholders were also encouraged to complete the online engagement and survey and distribute it throughout their networks.

Information gathered at this session was used to help build the network as well as develop prioritization criteria.

Online engagement (getinvolved.kelowna.ca)

The City's Mind Mixer online engagement web platform (getinvolved.kelowna.ca) utilized interactive maps to gather public input on network gaps and primary route priorities. In addition, getinvolved.kelowna.ca provided direct link to an online survey (see below for more information).

Overall, more than 1,500 individuals viewed the maps, and 489 people had some interactions with the maps or left comments. The feedback provided basis for determining the pedestrian and bicycle network.

Better facilities and options to UBC was the most frequently mentioned area on the first interactive map, routes that should make up Kelowna's active transportation primary network. Lakeshore was a very close second for most mentions and support, followed by Ethel Street. Improved facilities from

the upper Mission through to downtown is also highly supported. Connecting existing routes and pathways was also frequently mentioned.

Connections to UBC was also mentioned most frequently on the second interactive map, cycling route and network links that are missing. The next highest mention was a link somewhere in the shopping area near Orchard Park and along Dilworth.

Online public survey

An online survey was used to seek initial input from the community regarding the proposed Pedestrian and Bicycle Master Plan.

The survey asked respondents to identify their current walking and cycling activity and barriers to pursuing those activities in Kelowna. Respondents were also provided an opportunity to identify gaps in the network or recommend locations for new or enhanced routes. Further, participants could share their comments related to walking and cycling in the city.

Through promotion via the City's communication channels and engagement events, the survey generated 243 responses.

Overall, the common survey themes were:

- Safety;
- Lack of pedestrian and bicycle facilities; and
- Building a comprehensive active transportation network.
- Keeping sidewalks/bike paths clean and swept

Commonly mentioned routes or road that needed upgraded facilities and infrastructure for walking and cycling included:

- Travelling to UBC Okanagan (cycling)
- Lakeshore Rd corridor (both walking and cycling)
- Crossing Highway 97 and travelling around the shopping area around Orchard Park

Open house at Orchard Park Mall

A nine-hour public open house was held on Saturday, October 18, 2014 to inform the community and allow people to provide input. The event was promoted through the City's communications channels, as well as through stakeholder outreach.

Over 200 individuals attended the event at Orchard Park Mall. Community members were invited to speak with project representatives to ask questions and share insights. Information cards were distributed at this event to encourage citizens to visit the website, complete an online engagement survey and use the interactive maps. Several individuals completed hard copy surveys and these results were combined with the online survey results.

Feedback from the open house was compiled and considered for input into the report.

5. Final Public Engagement: Draft Master Plan Input

The goal of final engagement process was to seek input from the community on the draft Master Plan.

The City informed and consulted with the public about the draft Master plan. Feedback on analysis and alternative decisions were obtained during this phase and were considered for incorporation into the final Master Plan.

Engagement tactics utilized during this phase included:

- Outreach through City Communication Channels (e-Subscribe, social media, PSA's, stakeholder networks)
- Online survey (January 20 - February 7)
- Online engagement (getinvolved.kelowna.ca)
- Open houses (Parkinson Recreation Center, January 30 and Okanagan College, February 4)
- Stakeholder input

Outreach through City communication channels

The website, kelowna.ca/onthemove, was used to promote the draft Pedestrian and Bicycle Master Plan as well as a series of maps outlining the existing and future pedestrian and cycling networks. The website also provide a link to the online survey and information for those wanting to attend either of the 2 open houses.

A variety of platforms were also used to promote the online surveys, open house and getinvolved.kelowna.ca through a variety of platforms including media releases, which generated several news stories promoting the draft Plan and promoting the online survey and open houses, newspaper advertisements, e-bulletins and social media.

Facebook and Twitter were the primary social media platforms used to promote the 2016 engagement survey. These efforts resulted in 53 survey responses. However, more respondents likely reached the survey via social media due to the website link being shared on the City's e-bulletins which were then shared on social media channels as those results would be accounted for under the website responses.

Online survey

An online survey provided a platform for community members to share their feedback on the draft Master Plan. The survey was available from January 20 - February 7, 2016 and garnered over 500 responses, 12 per cent of which were from people who were involved in the initial consultation.

The majority of survey respondents expressed support for the Pedestrian and Bicycle Master Plan. Nearly three quarters of respondents said the plan would encourage them to walk more, while 83 per cent would be encouraged to bike more. Furthermore, 83 per cent of respondents were satisfied with the plan's prioritization criteria for implementing future sidewalk and cycling projects.

In order to encourage more walking and cycling, survey respondents were also asked to provide input on education and support. Pathway signage, driver and cyclist education, route maintenance and infrastructure improvements were common themes among the responses.

Areas for plan improvement were also identified through the survey. Respondents expressed a need for a stronger focus on safety, increased education for cyclists and drivers, a shorter implementation time frame and cost considerations. Many also stated that connectivity to schools, such as UBCO, and gap closures should be given high priority.

Online engagement (getinvolved.kelowna.ca)

Concurrently with the online survey, a topic was opened on the City's Mind Mixer site, getinvolved.kelowna.ca. The main purpose of this topic was to drive this online community to the survey and provide an opportunity for comments.

Overall, there were 212 views of this discussion topic and 12 interactions. 113 survey responses were acquired through the getinvolved.kelowna.ca channel.

Open houses (Parkinson Recreation Centre and Okanagan College)

During the final engagement phase of the Master Plan development, the City held two public open houses in 2016 to inform and involve the community in the process. The purpose of these events was to gather feedback from the community on the draft Pedestrian and Bicycle Master Plan network and recommendations, as well as to increase the public's awareness of the Plan.

The first open house was held at the Parkinson Recreation Centre on January 30 and welcomed 170 attendees. Ninety-two individuals attended the second open house on February 4 at Okanagan College.

Safety and education of all users, including motorists, was a recurring theme at both open houses. Concerns over cost, including taxation impact, and length of implementation time were also noted. Community members suggested building pathways and cycle tracks only instead of full road reconstruction projects; and providing paved shoulder bike lanes on Glenmore road. There were also many inquiries about specific local road sidewalks in neighbourhoods not shown on the plan due to lower priority.

From the completed exit surveys at the open houses, it was found that:

- 98 per cent of respondents found the information helped them understand the scope of the project
- 95 per cent of respondents reported the information was presented in an understandable format
- 89 per cent of respondents agreed the material presented enough information for them to provide an informed opinion on the nature of the project

6. Outcomes

The feedback from initial consultation was used to develop draft the Pedestrian and Bicycle Master Plan. Public input was used to inform project prioritization criteria, develop active transportation network and ensure that safety was addressed throughout the Plan.

During the final engagement, the majority of respondents expressed support for the Pedestrian and Bicycle Master Plan they helped shape. The comments for suggested improvements were reviewed and considered for inclusion to help refine the overall Plan and active transportation network.

During the final engagement, several suggestions for additions or changes to the network were received and added to the network including:

- Sidewalks added as a medium priority to Graham Street to address safety concerns around the Martin Community Centre.
- Bike lanes added to Mail Road in which addresses comments about connecting Dilworth to UBCO and to connect Valley Road North community with Orchard Park.

- Shared path added on Casorso Road between Gordon Drive and Mission Creek Greenway to address concerns with more connectivity to the Greenway.
- Buffered bike lanes on Leckie Road to address concerns of connecting Rutland to Rails with Trails and safety issues around Orchard Park at Dilworth.
- Active transportation corridors on Leon Avenue from Abbott Street to Ethel and Lawrence Avenue from Ethel to Parkinson Recreation Center (PRC) to provide connection from City Park to PRC.

Further, during final consultation, many Kelowna residents shared their feedback and recommendations on how safety could be increased through infrastructure enhancements. These concerns were addressed by:

- One suggestion cited Vancouver's use of secondary roads designated as priority bikeways where vehicular traffic flow is reduced and vehicle speed limits are posted at 30km. Based on this recommendation, the plan was amended to read that further expansion of the network will be feasible by including low volume, low-speed local roads as supporting cycling corridors and that this will be identified as part of the overall Transportation Master Plan. Further, a section on shared traffic lanes (sharrows) was added and guidelines on when these facilities should be used.
- A section on buffered bicycle lanes enhanced with physical separations such as flexible bollards, curbs or medians was added to the plan after a resident requested more white barrier poles, such as the ones near Gordon and Springfield.
- A cyclist highlighted the hazards associated with cycle tracks, including too many transitions on and off the tracks and over driveways. In this case, the plan was adjusted so that street level cycle tracks are recommended over raised ones to better accommodate all types of cyclists and improve comfort and safety.
- Intersections geared to pedestrians and cyclists were also emphasized in the comments. In particular, one commenter asked for left-turn infrastructure for bikes along the primary network in the form of bike boxes or a bike-only turn signals. The plan addressed this comment by adding that various left-turn specific treatments for cyclists will be formally incorporated and future work will look at intersections.
- One resident asked how accessible the walking paths would be for seniors, wheelchairs, walkers and the visually impaired. The document was revised to include that safety and accessibility needs of the vulnerable road users including seniors, wheelchairs, walkers and visually impaired pedestrians needs to be further addressed during the road design standards update.

Many comments were received in relation to maintenance of the active transportation network, in particular to snow and ice control and street sweeping. These concerns were addressed by making the recommendation in the Plan to update Council Policy 332: Snow and Ice Control, to prioritize active transportation routes for Snow and Ice control as well as a recommendation to work to establish priority cycling routes for street sweeping taking into account operational conditions.

Finally, many comments were received that wished "to speed up the implementation" of the Plan. Several revisions were made to the Plan to address this including "exploring new cost-effective infrastructure designs to ease funding challenges and accelerate the Plan's implementation" as well identifying "low-volume, low-speed local roads" for expansion of the network in the Transportation Master Plan.

CITY OF KELOWNA

BYLAW NO. 11215

Amendment No. 7 to Cemetery Bylaw No. 8807

The Municipal Council of the City of Kelowna, in open meeting assembled, enacts that the City of Kelowna Amendment No. 7 to Cemetery Bylaw No. 8807 be amended as follows:

1. THAT PART 1 - GENERAL, 1.3 Definitions, 1.3.1 be amended by:

a) Adding a new definition for "Family Niche" in its appropriate location that reads:

"Family Niche" means each individual compartment to be used for the interment of up to four (4) cremated remains in a columbarium.

b) Adding a new definition for "Family Vessels" in its appropriate location that reads:

"Family Vessels" means an urn shaped niche designed for multiple interments.

c) Deleting the definition for "Legacy Gardens" that reads:

"Legacy Gardens" means the columbarium and mausolea in **Section D** surrounding the **Bennett Memorial Columbarium** which consists of 10 double side columbarium of 70 niches each, 4 columbarium of 20 niches each, 2 columbarium of 40 niches each, and 2 mausolea of 6 crypts each.

And replacing it with:

"Legacy Gardens" means the columbarium and mausolea in **Section D** surrounding the **Bennett Memorial Columbarium** which consists of 10 double side columbarium of 69 niches each, 4 columbarium of 19 niches each, 2 columbarium of 38 niches each, 2 mausolea of 6 crypts each, and two family vessels.

d) Deleting the definition for "Section G7 Block 5" that reads:

"Section G7 Block 5" consists of double-depth in-ground lawn crypts memorialized by either a flat ground or upright marker according to design of the row, with the option of 2 **cremated remains** inurned within a liner(s) over the lawn crypts once both casket interments have taken place. All other regulations are the same as for **"Section G7"**.

And replacing it with:

"Section G7 Block 3 and Block 5" consists of double-depth in-ground lawn crypts memorialized by either a flat ground or upright marker according to design of the row, with the option of 2 **cremated remains** inurned within a liner(s) over the lawn crypts. All other regulations are the same as for **"Section G7"**.

2. AND THAT PART 5 - PERMISSION TO INTER, EXHUME OR DISINTER, 5.3 Application for Permit, be deleted that reads:

"5.3 Application for Permit All applications for an interment permit must be made at least 24 hours (1 working day), and during the winter months from November 1 to March 15 of each year 48 hours (2 working days); the **Pioneer Section** requires 48 hours (2 working days) before the scheduled interment, to the **Cemetery Manager** between the hours of 8:00 a.m. and 4:00 p.m. on all days of the week except Saturday and Sunday, Statutory Holiday, and in cases of emergency, as described in Sections 5.5, 5.6 and 5.7 of this bylaw."

And replacing it with:

"5.3 Application for Permit. All applications for an interment permit must be made at least 48 hours (2 working days) in advance to the **Cemetery Manager** between the hours of 8:00 a.m. and 4:00 p.m. on all days of the week except Saturday and Sunday, Statutory Holiday, and in cases of emergency, as described in Sections 5.5, 5.6 and 5.7 of this bylaw."

3. AND THAT PART 6 - INTERMENT IN THE CEMETERY, 6.6 Number of Interments, be deleted that reads:

"6.6 Number of Interments In Sections C, D, E1, E2, E3 and G4 and in the upright monument portion of Sections A, B and E4 where the grave top is not covered by hard surfacing, two (2) casket interments plus two (2) cremations will be permitted in each large plot. In Section G1 and "G7 Blocks 1 and 3" Lawn Crypts, only two (2) interments are allowed. Section G7 Block 5 permits two (2) casketed interments (within the lawn crypt). An additional two (2) cremated remains may be inurned above the lawn crypt once it is full. An additional use fee will be applied for the third and subsequent burial in a single plot for these areas. The Garden Estates in Section G7 are exempt from the additional use fee."

And replacing it with:

"6.6 Number of Interments In Sections C, D, E1, E2, E3 and G4 and in the upright monument portion of Sections A, B and E4 where the grave top is not covered by hard surfacing, two (2) casket interments plus two (2) cremated remains will be permitted in each large plot. In sections with designated Small Plots (child's plot), one interment is permitted in each small plot.

In Section G1 and G7 Block 1 Lawn Crypts, only two (2) casketed interments are allowed.

Section G7 Block 3 and Block 5 permits two (2) casketed interments (within the lawn crypt) and an additional two (2) cremated remains inurned (in liners) above the lawn crypt. An additional use fee will be applied for the third and subsequent burials in a single plot for these areas.

If cremated remains are interred first, and a casket interment follows at a later date, a disinterment fee will be charged for the removal of each cremated remains in order to inter the casketed remains in the crypt. A concurrent interment fee will then be charged for each cremated remains re-interred once the casketed remains have been interred.

The Garden Estates in Section G7 are exempt from the additional use fee."

4. AND THAT PART 6 - INTERMENT IN THE CEMETERY, 6.10 Scattering of Cremated Remains, be amended by deleting the sentence that reads:

"All cremated remains that are placed in the scattering garden or ossuary are considered non-recoverable and commingled."

And replacing it with:

"All cremated remains that are placed in the scattering garden, alongside the scattering trail, or within the ossuary are considered non-recoverable and commingled."

5. AND THAT PART 6 - INTERMENT IN THE CEMETERY, 6.17, Legacy Gardens interment Garden, be amended by adding the word "section" after the words "Notwithstanding the provisions of this"

6. AND THAT PART 6 - INTERMENT IN THE CEMETERY, 6.20 Cremated Remains Container, be deleted that reads:

"6.20 Cremated Remains Container. For every interment of cremated remains in a container, the grave will be dug to a depth sufficient to ensure that there are not less than 30 centimetres of earth between the top of the container and the level of the ground surrounding the grave. For every interment of cremated remains in a vault-type Memorial Marker, the grave will be dug to a depth sufficient to ensure that the Memorial Marker, once installed, is level with the surface of the ground. For every interment of cremated remains in a **niche**, the container(s) for cremated remains shall be made of metal, stone, or porcelain and must be manufactured for the express purpose of containing cremated remains. A single container or combination of (2) two containers shall not exceed 27 cm high x 27 cm wide x 27 cm deep and for the **Bennett Memorial Columbarium**, the container(s) for cremated remains shall not exceed 27 cm high x 27 cm wide x 36 cm deep."

And replacing it with:

"6.20 Cremated Remains Container For every interment of cremated remains in a container, the grave will be dug to a depth sufficient to ensure that there are not less than 30 centimetres of earth between the top of the container and the level of the ground surrounding the grave. For every interment of cremated remains in a vault-type Memorial Marker, the grave will be dug to a depth sufficient to ensure that the Memorial Marker, once installed, is level with the surface of the ground. For every interment of cremated remains in a **niche**, the container(s) for cremated remains shall be made of metal, stone, or porcelain and must be manufactured for the express purpose of containing cremated remains.

Promontory Green: A single container or combination of (2) two containers shall not exceed 27 cm high x 27 cm wide x 27 cm deep

Bennett Memorial Columbarium: A single container or combination of (2) two containers shall not exceed \, 27 cm high x 27 cm wide x 36 cm deep.

Legacy Gardens: for **single niche** - A single container or combination of (2) two containers shall not 29cm high x 29cm wide x 29cm deep and for a **family niche** a single container or combination of (2) two to (4) four containers shall not exceed 29 cm high x 58cm wide x 29cm deep."

7. AND THAT PART 10 - ADORNMENT, 10.8 Specifications, (b) be amended by deleting the words "Infant/Stillborn or Cremation";
8. AND THAT KELOWNA MEMORIAL PARK CEMETERY'S FEE SCHEDULE "A" be deleted in its entirety and replaced with a new KELOWNA MEMORIAL PARK CEMETERY'S FEE SCHEDULE "A" as attached to and forming part of this bylaw;
9. AND THAT Schedule "F", Memorials, 6. be deleted that reads:

(iix) Legacy Gardens Columbarium

(iix) Legacy Gardens Columbarium

Niche Nameplates.

All Niches will be engraved.

(A) Where a niche plate is engraved, inscriptions shall be carved into the surface to a depth of 0.3 cm (1/8") in Roman Classic letters and figures.

(B) Inscriptions for companion niches shall be composed of six (6) lines centred.

(1) First line - to include family surname(s) in lettering 1 & ¼ inch in height;

(2) Second line - to include the given names(s) of the first inurnment in lettering 7/8 inch in height;

(3) Third line - to include year of birth and the year of death in lettering 7/8 inch in height;

- (4) Fourth line - to include the given name(s) of the second interment in lettering 7/8 inch in height;
- (5) Fifth line - to include year of birth and the year of death in lettering 7/8 inch in height;
- (6) Sixth line - to include a sentiment or phrase, in lettering ½ inch in height, that is in keeping with the dignity of the Cemetery, adjacent niches and community standards; and
- (7) All names, initials, title, rank, sentiment, phrases, etc are carved on the particular line as space permit.

And replacing it with:

(ix) Legacy Gardens Columbarium

All Niches will be engraved.

Inscriptions shall be carved into the surface in Palantino lettering.

Where only one interment will take place, inscriptions shall be composed of four (4) lines.

Inscriptions for a niche with two interments in one niches shall be composed of either six (6) or eight (8) lines centred.

Inscriptions for family niches will be a doubling of the individual niche shutters on one shutter composed of either six (6) or eight (8) lines centered on equivalent of the dimensions of a single shutter.

Six line inscription:

- (1) First line – Starting 2.5 cm from the top of the shutter, to include full name in lettering 2cm in height;
- (2) Second line – to include year of birth and the year of death in lettering 1.5 cm in height;
- (3) Third and fourth line – centered in middle of the shutter, to include a sentiment or phrase, in lettering 1.5 cm in height, that is in keeping with the dignity of the Cemetery, adjacent niches and community standards;
- (4) Fifth line - to include full name in lettering 2cm in height;
- (5) Sixth line – to include year of birth and the year of death in lettering 1.5 cm in height;

Eight line inscription:

- (1) First line – starting 2.5 cm from the top of the shutter, to include full name in lettering 2cm in height;
- (2) Second line – to include year of birth and the year of death in lettering 1.5 cm in height;
- (3) Third and fourth line –to include a sentiment or phrase, in lettering 1.5 cm in height, that is in keeping with the dignity of the Cemetery, adjacent niches and community standards;
- (4) Fifth line - to include full name in lettering 2cm in height;
- (5) Sixth line – to include year of birth and the year of death in lettering 1.5 cm in height;
- (6) Seventh and Eight line – to include a sentiment or phrase, in lettering 1.5 cm in height, that is in keeping with the dignity of the Cemetery, adjacent niches and community standards;

Four line inscription:

- (1) First line – starting 2.5 cm from the top of the shutter, to include full name in lettering 2cm in height;
- (2) Second line – to include year of birth and the year of death in lettering 1.5 cm in height;
- (3) Third and fourth line -centered in the middle of the shutter, to include a sentiment or phrase, in lettering 1.5 cm in height, that is in keeping with the dignity of the Cemetery, adjacent niches and community standards.

10. AND THAT **Schedule “F”, Memorials, 6.** be amended by adding a new (x) Legacy Gardens Family Vessels in its appropriate location that reads:

“(x) Legacy Gardens Family Vessels

Vessel can be engraved with one family surname upon purchase

Each interment can memorialized with a 5.25x2.5 inch bronze plaque that will be installed on the base.

- (1) First line - to include family surname(s);
- (2) Second line - to include the given names of the interment
- (3) Third line - to include year of birth and the year of death
- (4) Fourth Line to include up to four word memorialization phrase”

11. This bylaw may be cited for all purposes as "Bylaw No. 11215 being Amendment No. 7 to Cemetery Bylaw No. 8807."
12. This bylaw shall come into full force and effect and is binding on all persons as and from the date of adoption.

Read a first, second and third time by the Municipal Council this 9th day of May, 2016.

Adopted by the Municipal Council of the City of Kelowna this

Mayor

City Clerk

KELOWNA MEMORIAL PARK CEMETERY'S FEE SCHEDULE "A"

PRODUCT/SERVICE <i>Non-residents add 25% to all fees</i>		5% Annual Increase Effective 01/01/16	5% Annual Increase Effective 01/01/17	5% Annual Increase Effective 01/01/18
	2015 Base Fee	2016 Base Fee	2017 Base Fee	2018 Base Fee

CASKET PLOTS

*Grave liner required

UPRIGHT MARKER SECTIONS

G1, G7 Lawn Crypt

Right of Interment	\$2,142	\$2,249	\$2,362	\$2,480
Cemetery Replacement Fund	\$1,071	\$1,125	\$1,181	\$1,240
Cemetery Maintenance Fund	\$1,071	\$1,125	\$1,181	\$1,240
Total	\$4,284	\$4,499	\$4,724	\$4,960

G4 Large Plot *

Right of Interment	\$1,038	\$1,090	\$1,144	\$1,202
Cemetery Replacement Fund	\$519	\$545	\$572	\$601
Cemetery Maintenance Fund	\$519	\$545	\$572	\$601
Total	\$2,076	\$2,180	\$2,288	\$2,404

FLAT MARKER SECTIONS

G7 Lawn Crypt

Right of Interment	\$1,544	\$1,621	\$1,702	\$1,787
Cemetery Replacement Fund	\$772	\$811	\$851	\$894
Cemetery Maintenance Fund	\$772	\$811	\$851	\$894
Total	\$3,088	\$3,243	\$3,404	\$3,575

C,D,E, G4 Large Plot *

Right of Interment	\$741	\$778	\$817	\$858
Cemetery Replacement Fund	\$370	\$389	\$408	\$428
Cemetery Maintenance Fund	\$370	\$389	\$408	\$428
Total	\$1,481	\$1,556	\$1,633	\$1,714

DRY LANDSCAPE SECTIONS

A,B* - Existing inventory as of Dec. 1, 2015

Right of Interment	\$260	\$272	\$285	\$300
Cemetery Replacement Fund	\$129	\$136	\$143	\$150
Cemetery Maintenance Fund	\$129	\$136	\$143	\$150
Total	\$518	\$544	\$571	\$600

A,B* - Inventory returned to KMPC after Dec. 1, 2015

Right of Interment	\$741	\$778	\$817	\$858
Cemetery Replacement Fund	\$370	\$389	\$408	\$428
Cemetery Maintenance Fund	\$370	\$389	\$408	\$428
Total	\$1,481	\$1,556	\$1,633	\$1,714

SMALL PLOTS (Child's Plot)

Section A,C, D (3'x5')*

Right of Interment	\$188	\$197	\$207	\$218
Cemetery Replacement Fund	\$94	\$99	\$104	\$109
Cemetery Maintenance Fund	\$94	\$99	\$104	\$109
Total	\$376	\$395	\$415	\$436

ESTATE PLOTS

All Estate Plots Include: 2 Double Depth Lawn Crypts (space for 4 caskets), 8 Companion Cremation Plots (Space for 16 Urns), Marker Foundations
Section G7

PRIVATE ESTATE

Also Includes: Granite Bench, Arched Gate Feature - c/w
Bronze Name Plate , Garden Beds

Right of Interment	\$29,850	\$31,343	\$32,910	\$34,555
Cemetery Replacement Fund	\$14,926	\$15,672	\$16,456	\$17,279
Cemetery Maintenance Fund	\$14,926	\$15,672	\$16,456	\$17,279
Total	\$59,702	\$62,687	\$65,822	\$69,113

SEMI PRIVATE ESTATE

Also includes: Shared Granite Bench, Flower Beds

Right of Interment	\$22,018	\$23,119	\$24,275	\$25,489
Cemetery Replacement Fund	\$11,008	\$11,558	\$12,136	\$12,743
Cemetery Maintenance Fund	\$11,008	\$11,558	\$12,136	\$12,743
Total	\$44,034	\$46,235	\$48,547	\$50,975

IN-GROUND CREMATED REMAINS PLOT

*Grave liner required

COMPANION PLOTS (Space for 2 Urns)

Section C (1.5' x 2') & SECTION D (2.5' x 1.5')*

PLOT PRICE	\$249	\$261	\$275	\$288
CEMETERY REPLACEMENT FUND	\$124.50	\$131	\$137	\$144
CEMETERY MAINTENANCE FUND	\$124.50	\$131	\$137	\$144
Total	\$498	\$523	\$549	\$576

Section G5 / G6 *

Right of Interment	\$309	\$324	\$341	\$358
Cemetery Replacement Fund	\$154	\$162	\$170	\$178
Cemetery Maintenance Fund	\$154	\$162	\$170	\$178
Total	\$617	\$648	\$681	\$714

Section G3

Promontory Green Interment Garden Plot *

Right of Interment	\$401	\$421	\$442	\$464
Cemetery Replacement Fund	\$201	\$211	\$222	\$233
Cemetery Maintenance Fund	\$201	\$211	\$222	\$233
Total	\$803	\$843	\$886	\$930

FAMILY PLOTS (Space for 6 Urns)

Section G5 & G6*

Right of Interment	\$617	\$648	\$680	\$714
Cemetery Replacement Fund	\$309	\$324	\$341	\$358
Cemetery Maintenance Fund	\$309	\$324	\$341	\$358
Total	\$1,235	\$1,296	\$1,362	\$1,430

Section G3**Promontory Green Interment Garden Plot***

Right of Interment	\$741	\$778	\$817	\$858
Cemetery Replacement Fund	\$370	\$389	\$408	\$428
Cemetery Maintenance Fund	\$370	\$389	\$408	\$428
Total	\$1,481	\$1,556	\$1,633	\$1,714

MAUSOLEA**LEGACY GARDENS - Section D****Single Crypt (*no increase from 2015-2016)****Level 1**

Right of Interment	\$8538	\$8538	\$8,965	\$9,413
Cemetery Replacement Fund	\$6,830	\$6,830	\$7,171	\$7,529
Cemetery Maintenance Fund	\$1,707	\$1,707	\$1,792	\$1,882
Total	\$17,075	\$17,075*	\$17,928	\$18,824

Level 2

Right of Interment	\$8,803	\$8,803	\$9,242	\$9,705
Cemetery Replacement Fund	\$7,042	\$7,042	\$7,394	\$7,764
Cemetery Maintenance Fund	\$1,760	\$1,760	\$1,848	\$1,940
Total	\$17,605	\$17,605*	\$18,484	\$19,409

Level 3

Right of Interment	\$8,902	\$8,902	\$9,346	\$9,813
Cemetery Replacement Fund	\$7,120	\$7,120	\$7,477	\$7,851
Cemetery Maintenance Fund	\$1,780	\$1,780	\$1,869	\$1,962
Total	\$17,802	\$17,802*	\$18,692	\$19,626

PROMONTORY GREEN - Section G2**Single Crypt - Includes Standard Crypt Plate, Vase, Open/Close****Fee and Second Year Date Plate****Level 1**

Right of Interment	\$6,300	\$6,615	\$6,946	\$7,293
Cemetery Replacement Fund	\$5,040	\$5,292	\$5,557	\$5,834
Cemetery Maintenance Fund	\$1,261	\$1,324	\$1,390	\$1,460
Total	\$12,601	\$13,231	\$13,893	\$14,587

Level 2

Right of Interment	\$7,560	\$7,938	\$8,335	\$8,752
Cemetery Replacement Fund	\$6,048	\$6,350	\$6,668	\$7,001
Cemetery Maintenance Fund	\$1,512	\$1,588	\$1,667	\$1,750
Total	\$15,119	\$15,876	\$16,670	\$17,503

Level 3

Right of Interment	\$7,121	\$7,477	\$7,851	\$8,243
--------------------	---------	---------	---------	---------

Cemetery Replacement Fund	\$5,696	\$5,981	\$6,280	\$6,594
Cemetery Maintenance Fund	\$1,423	\$1,494	\$1,569	\$1,647
Total	\$14,240	\$14,952	\$15,700	\$16,484

Couch Crypt - Includes Standard Crypt Plate, Vase,
Open/Close Fee and Second Year Date Plate

Level 1, 2, and 3

Right of Interment	\$10,495	\$11,020	\$11,571	\$12,149
Cemetery Replacement Fund	\$8,396	\$8,816	\$9,257	\$9,719
Cemetery Maintenance Fund	\$2,099	\$2,204	\$2,314	\$2,430
Total	\$20,990	\$22,040	\$23,142	\$24,298

NICHES

LEGACY GARDENS - Section D

Phase One (*no increase from 2015-2016)

Level 1

Right of Interment	\$1,623	\$1,623	\$1,704	\$1,788
Cemetery Replacement Fund	\$1,298	\$1,298	\$1,363	\$1,431
Cemetery Maintenance Fund	\$324	\$324	\$340	\$358
Total	\$3,245	\$3,245*	\$3,407	\$3,577

Level 2

Right of Interment	\$1,793	\$1,793	\$1,882	\$1,976
Cemetery Replacement Fund	\$1,434	\$1,434	\$1,506	\$1,581
Cemetery Maintenance Fund	\$358	\$358	\$376	\$395
Total	\$3,585	\$3,585 *	\$3,764	\$3,952

Level 3/4/5

Right of Interment	\$1,899	\$1,899	\$1,995	\$2,094
Cemetery Replacement Fund	\$1,520	\$1,520	\$1,595	\$1,675
Cemetery Maintenance Fund	\$379	\$379	\$3,98	\$4,18
Total	\$3,798	\$3,798 *	\$3,988	\$4,187

Family Niches

Level 3/4/5

Right of Interment		\$3,988	\$4,187	\$4,396
Cemetery Replacement Fund		\$3,190	\$3,349	\$3,517
Cemetery Maintenance Fund		\$797	\$837	\$879
Total		\$7,975	\$8,373	\$8,792

Family Vessels - Includes One Family name engraved on vessel

Right of Interment		\$6,225	\$6,536	\$6,863
Cemetery Replacement Fund		\$4,980	\$5,229	\$5,491
Cemetery Maintenance Fund		\$1,244	\$1,307	\$1,372
Total		\$12,449	\$13,072	\$13,726

BENNETT MEMORIAL

Concord - Includes Bronze Wreath and birth year date plate

Right of Interment	\$1,396	\$1,466	\$1,539	\$1,616
--------------------	---------	---------	---------	---------

Cemetery Replacement Fund	\$698	\$733	\$770	\$808
Cemetery Maintenance Fund	211	\$222	\$233	\$244
Total	\$2,365	\$2,483	\$2,607	\$2,738

Curved Wall -Includes Open/Close Fee

Level 1

Right of Interment	\$1,544	\$1,621	\$1,702	\$1,787
Cemetery Replacement Fund	\$1,236	\$1,298	\$1,363	\$1,431
Cemetery Maintenance Fund	\$309	\$324	\$341	\$358
Total	\$3,089	\$3,242	\$3,405	\$3,575

Level 2

Right of Interment	\$1,636	\$1,769	\$1,858	\$1,951
Cemetery Replacement Fund	\$1,310	\$1,415	\$1,486	\$1,560
Cemetery Maintenance Fund	\$317	\$353	\$370	\$389
Total	\$3,273	\$3,537	\$3,714	\$3,900

Level 3

Right of Interment	\$1,699	\$1,784	\$1,873	\$1,967
Cemetery Replacement Fund	\$1,359	\$1,427	\$1,498	\$1,573
Cemetery Maintenance Fund	\$306	\$321	\$337	\$354
Total	\$3,364	\$3,532	\$3,709	\$3,894

Round Unit - Includes Open/Close Fee

Level 1 & 6

Right of Interment	\$1,544	\$1,621	\$1,702	\$1,787
Cemetery Replacement Fund	\$1,236	\$1,298	\$1,363	\$1,431
Cemetery Maintenance Fund	\$309	\$324	\$341	\$358
Total	\$3,089	\$3,242	\$3,405	\$3,575

Level 2 &5

Right of Interment	\$1,636	\$1,718	\$1,804	\$1,894
Cemetery Replacement Fund	\$1,310	\$1,376	\$1,444	\$1,516
Cemetery Maintenance Fund	\$327	\$343	\$361	\$379
Total	\$3,273	\$3,437	\$3,608	\$3,789

Level 3&4

Right of Interment	\$1,699	\$1,784	\$1,873	\$1,967
Cemetery Replacement Fund	\$1,359	\$1,427	\$1,498	\$1,573
Cemetery Maintenance Fund	\$306	\$321	\$337	\$354
Total	\$3,364	\$3,532	\$3,709	\$3,894

PROMONTORY GREEN INTERMENT GARDEN

Section G2 - Includes Standard Niche Plate, Second Year Date Plate and Open/Close fee

LEVEL 1

Right of Interment	\$1,544	\$1,621	\$1,702	\$1,787
Cemetery Replacement Fund	\$1,236	\$1,298	\$1,363	\$1,431
Cemetery Maintenance Fund	\$309	\$324	\$341	\$358
Total	\$3,089	\$3,242	\$3,405	\$3,575

Level 2

Right of Interment	\$1,636	\$1,718	\$1,804	\$1,894
Cemetery Replacement Fund	\$1,310	\$1,376	\$1,444	\$1,516
Cemetery Maintenance Fund	\$327	\$343	\$361	\$379
Total	\$3,273	\$3,437	\$3,608	\$3,789

Level 3

Right of Interment	\$1,699	\$1,784	\$1,873	\$1,967
Cemetery Replacement Fund	\$1,359	\$1,427	\$1,498	\$1,573
Cemetery Maintenance Fund	\$306	\$321	\$337	\$354
Total	\$3,364	\$3,532	\$3,709	\$3,894

Level 4

Right of Interment	\$1,636	\$1,718	\$1,804	\$1,894
Cemetery Replacement Fund	\$1,310	\$1,376	\$1,444	\$1,516
Cemetery Maintenance Fund	\$327	\$343	\$361	\$379
Total	\$3,273	\$3,437	\$3,608	\$3,789

SCATTERING

PROMONTORY GREEN INTERMENT GARDEN SCATTERING GARDEN OSSUARY or SCATTERING TRAIL

Scattering Only

Right of Interment	\$75	\$79	\$83	\$87
Cemetery Replacement Fund	\$39	\$41	\$43	\$45
Cemetery Maintenance Fund	\$39	\$41	\$43	\$45
Total	\$153	\$161	\$169	\$177

Scattering with Name Plate

Right of Interment	\$279	\$293	\$308	\$323
Cemetery Replacement Fund	\$141	\$148	\$155	\$163
Cemetery Maintenance Fund	\$141	\$148	\$155	\$163
Total	\$561	\$589	\$619	\$649

Promontory Green Memorial Wall Space - Name Plate Only

Right of Interment	\$279	\$293	\$308	\$323
Cemetery Replacement Fund	\$141	\$148	\$155	\$163
Cemetery Maintenance Fund	\$141	\$148	\$155	\$163
Total	\$561	\$589	\$619	\$649

PRODUCT/SERVICES

Non-residents add 25% to all fees

		5% Annual Increase	5% Annual Increase	5% Annual Increase
	2015 Fee	2016 Fee	2017 Fee	2018 Fee

INTERMENT PERMIT

Open/Close Fees

Casket - Burial	\$816	\$857	\$900	\$945
Casket - Mausoleum	\$850	\$892	\$936	\$982
Cremated Remains - In-ground	\$357	\$375	\$394	\$413
Cremated Remains - Niche	\$357	\$375	\$394	\$413
Children Under 12 Years of Age - interred in a designated Child Plot (SMALL PLOTS - Section A,C, D (3'x5'))	\$ 0	\$ 0	\$ 0	\$ 0

Concurrent Interment Per

Casket	\$408	\$428	\$449	\$471
Cremated Remains - in-ground	\$179	\$187	\$196	\$205
Cremated Remains - niche	\$138	\$144	\$151	\$158

Additional Fees

Interments After 3PM	\$459	\$482	\$506	\$531
Weekend/Holiday Services	\$816	\$857	\$900	\$945
Deepening Large Plot	\$1,236	\$1,298	\$1,363	\$1,431
Deepening Cremation Plot	\$309	\$324	\$341	\$358
Additional Use Fee (3RD/+ INTERMENT for in-ground plots)	\$309	\$324	\$341	\$358

DISINTERMENT PERMIT

Casket	\$1,236	\$1,298	\$1,363	\$1,431
Cremated Remains	\$309	\$395	\$415	\$435

ADMINISTRATIVE FEES

Transferring a Plot/Surrendering a Plot/Add Name to Reservation	\$62	\$65	\$68	\$72
---	------	------	------	------

LINERS

Standard Size	\$494	\$519	\$545	\$572
Child's Liner	\$186	\$195	\$205	\$215
Cremation Liners (in ground)	\$154	\$162	\$170	\$178
Handling and Placing Liners (vaults) Supplied by Funeral Homes	\$309	\$324	\$341	\$358

MEMORIALS

Marker Permit - Installation of Markers by the City in Sections C, D, E1,E2,E3,G3,G4,G5 & G6

Cemetery Maintenance Fund	\$128	\$134	\$141	\$148
Installation	\$191	\$201	\$211	\$221
Total	\$319	\$335	\$352	\$369

Marker Permit - Installation of Markers by Others in Sections A, B and Upright Marker Sections of Section G

\$186	\$195	\$205	\$215
-------	-------	-------	-------

Marker Modification Permit - Resetting/Removal/Reinstallation of Marker

\$62	\$65	\$68	\$72
------	------	------	------

Disposal of Marker	\$84	\$88	\$93	\$97
Engraving of Shutter (niche - each occurrence)	\$235	\$247	\$259	\$272
Supply Second Year Date Plate for Niche/Mausolea	\$153	\$161	\$169	\$177
Replacement Shutter - Single Niche - Legacy Gardens		\$70	\$74	\$78
Replacement Shutter - Double Niche - Legacy Gardens		\$140	\$147	\$154
Family Vessel Plaques Per - Legacy Gardens		\$280	\$294	\$309

VASES

Bud Vase - Niches	\$201	\$211	\$222	\$233
Bud Vase - Mausolea		\$314	\$330	\$347
In-Ground Galvanized Flower Vase	\$64	\$67	\$71	\$74
In-Ground Galvanized Flower Vase - Supplied by Funeral Home	\$25	\$26	\$28	\$29

ADDITIONAL SERVICES

Canopy Service (Second Tent)	\$105	\$110	\$116	\$122
To Supply Pall Bearer Per (Two Employees)	\$91	\$96	\$100	\$105

Dedication Program

Memorial Tree (with plaque at cemetery only -) -includes scattering of ashes at KMPC Scattering Garden or Trail	\$1,122	\$1,178	\$1,237	\$1,299
Memorial Tree (no plaque - all sites besides KMPC)	\$1,122	\$1,178	\$1,237	\$1,299
Memorial Bench (with plaque)	\$2,550	\$2,678	\$2,811	\$2,952
Memorial Bench (existing bench, adding a plaque)	\$1850	\$1943	\$2040	\$2142
Adding Second Plaque to Existing Memorial Bench or Tree	\$620	\$651	\$684	\$718
Memorial Table (with plaque)	\$2,550	\$2,678	\$2,811	\$2,952