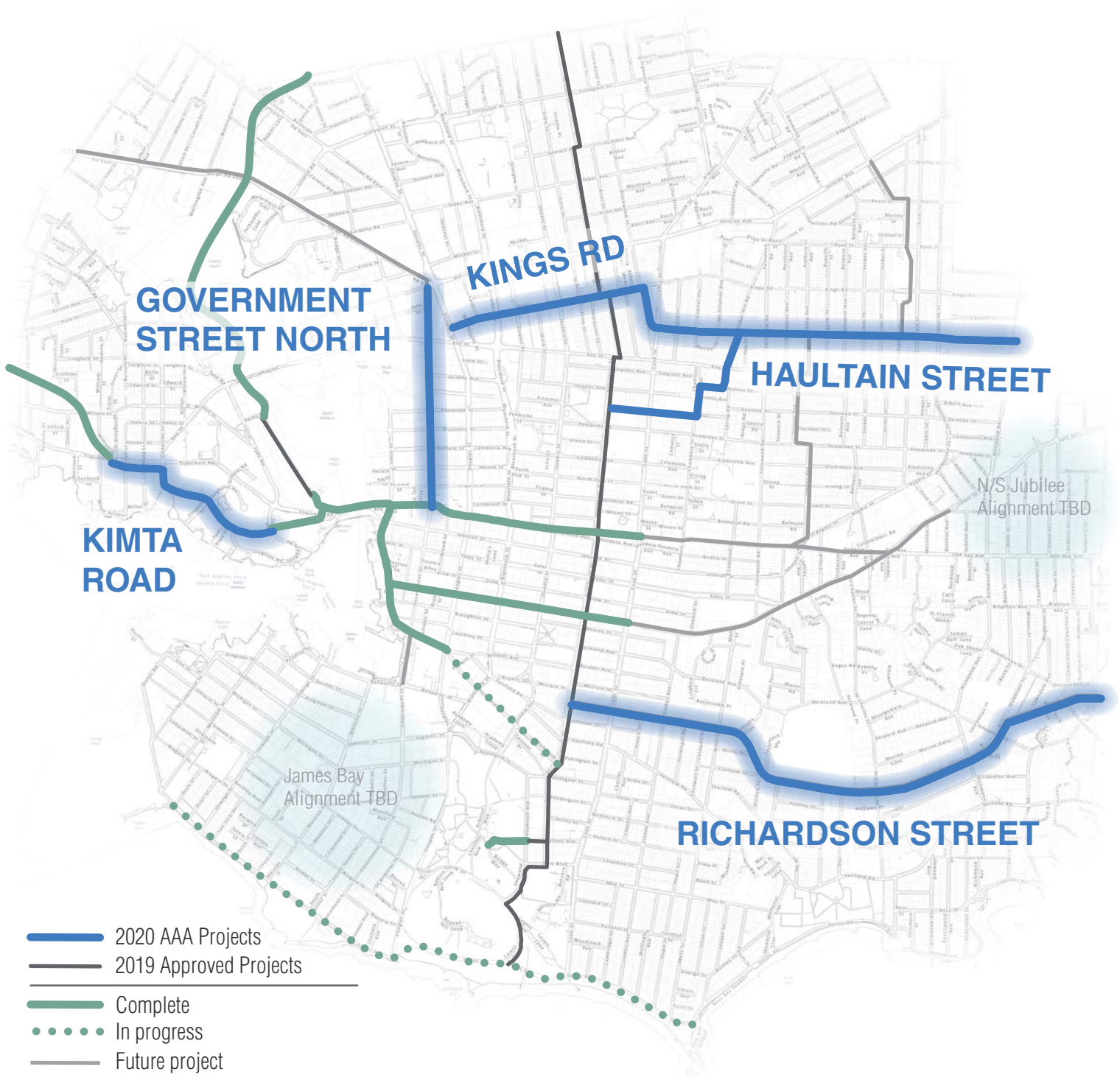


2020 Cycling Network Projects

Recommended Designs Appendixes A - F

Appendix A: Kings-Haultain
Appendix B: Kimta/E&N Connector
Appendix C: Government Street North

Appendix D: Richardson Street
Appendix E: Haultain/Vancouver Connection
Appendix F: Government/Kings Connection



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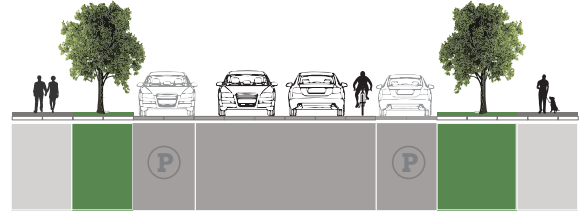
APPENDIX A

KINGS / HAULTAIN CORRIDOR

CORRIDOR LOCATION

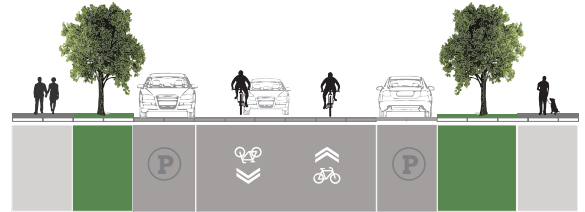


Existing Conditions

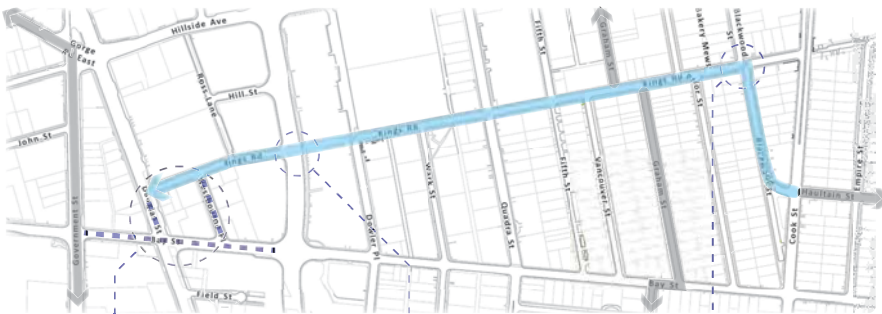


Proposed Conditions

(traffic calmed neighbourhood bikeway)



CORRIDOR HIGHLIGHTS



Explore interim cycling facilities on Bay Street to connect Douglas Street and Government Street

Add a signalized crossing for pedestrians and cyclists to cross Blanshard Street

Improve access for cyclists at this existing traffic diversion

Kings Road

Traffic diversion to reduce cut through traffic and vehicle volumes

New pedestrian crossings and opportunities for place-making

Haultain Street



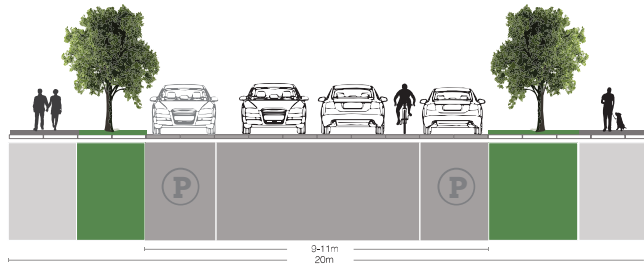
New cycling and pedestrian crossing to support additional AAA bikeway connection to Vancouver Street

Improve crossing for pedestrians and cyclists and reduce cut through traffic

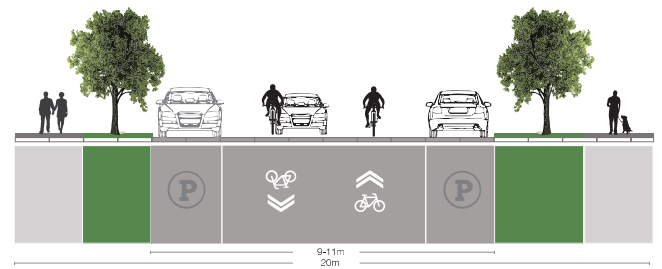
Appendix A.1 Kings / Haultain Corridor | SEGMENT A - Douglas Street to Quadra Street

Recommended Design Overview

Existing Cross Section



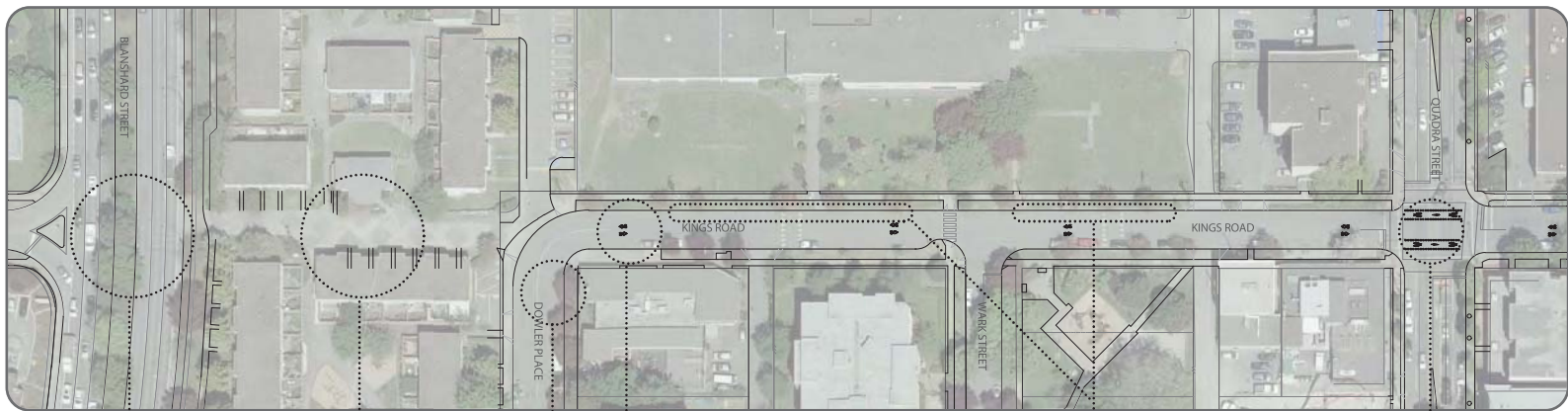
Proposed Cross Section



Connection to Government Street corridor to be provided by planned road safety improvements on Bay Street

Add sharrow paint markings and post speed limit at 30 km/hr in select locations

Provide a signalized crossing for pedestrians and cyclists at Blanshard Street - removal of select trees required



Provide a signalized crossing for pedestrians and cyclists at Blanshard Street

Formalize access between Dowler Place and Blanshard Street

Add stop sign

Add sharrow paint markings and post speed limit at 30 km/hr in select locations

Add on-street parking to north side of the street where feasible

Add push button and paint markings for bikes to cross at existing signal

Kings / Haultain Corridor | SEGMENT A - Douglas Street to Quadra Street

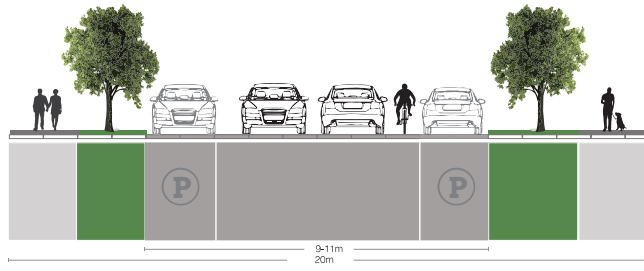
Recommended Design Changes & Rationale

Existing Conditions	Proposed Conditions	Rationale
Cycling Facilities		
No cycling facilities.	Shared use neighbourhood bikeway	To provide a comfortable cycling environment for people of all ages and abilities, traffic volumes between 500 and 1,000 vehicles per day and vehicle speeds of less than 30 km/hr are required. A shared use design retains on-street parking, reduces project costs, and traffic calms
Pedestrian Amenities		
Sidewalks buffered by boulevards and pedestrian crossings in select areas.	New pedestrian crossing at Blanshard Street. Reduced traffic volumes and vehicle speeds.	Provides a safer and more accessible pedestrian environment.
Public Realm / Landscaping		
Existing conditions illustrated in cross section.	No identified opportunities for additional landscaping. Potential impacts to boulevard trees at Blanshard Street.	To support the Urban Forest Master Plan, Parks and Open Space Master Plan, Greenways Plan and Official Community Plan.
Vehicle Speeds		
Speed limit is 50 km/hr.	Posted speed limit will be 30 km/hr.	To accommodate a safer cycling environment.
Vehicle Volumes & Circulation		
Existing traffic volumes range from 500 -1000 vehicles per day.	Traffic volumes are anticipated to remain the same (500 -1000) vehicles per day. No changes to vehicle circulation are proposed.	No change.
On-street Parking / Loading		
~ 40 parking stalls	~ 58 (+18) parking stalls	A net gain of ~18 parking stalls is possible with vehicle speed reductions and traffic calming features.
Road Classification		
Local Road.	Local Road.	No change.
Transit		
No transit service exists on Kings Road.	No transit service is planned on Kings Road.	No change.

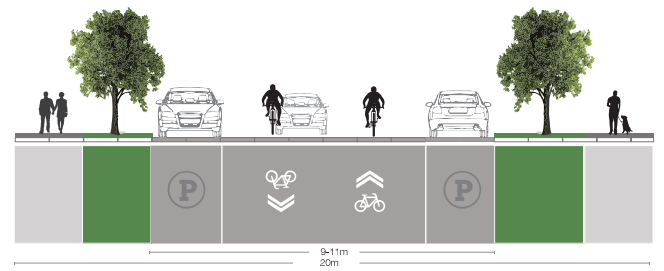
Appendix A.2 Kings / Haultain Corridor | SEGMENT B - Quadra Street to Cook Street

Recommended Design Overview

Existing Cross Section



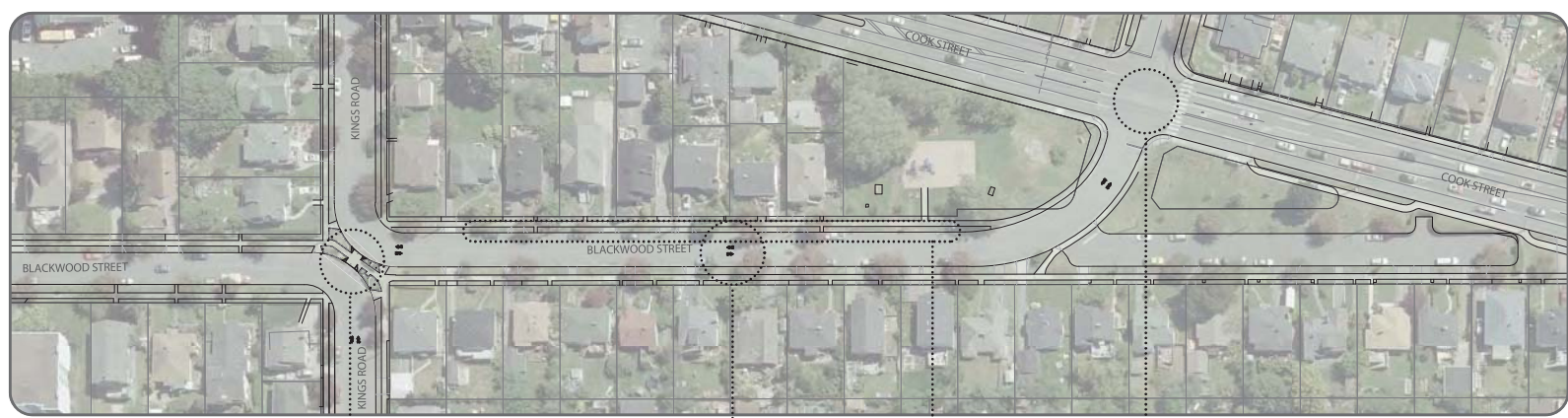
Proposed Cross Section



Existing traffic diversion

Add sharrow paint markings and post speed limit at 30 km/hr in select locations

Improve connection for bikes at existing directional closure



Improve connection for bikes at existing directional closure

Add sharrow paint markings and post speed limit at 30 km/hr in select locations

Add on-street parking to east side of street where feasible

Add paint markings to better facilitate road crossing for cyclists

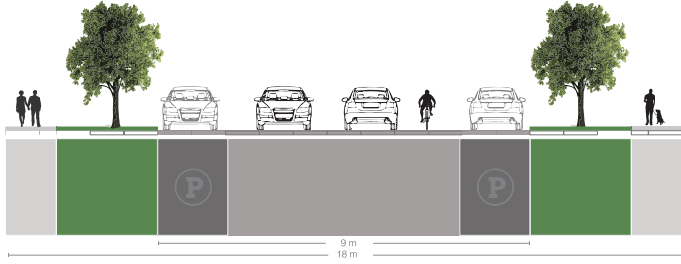
Recommended Design Changes & Rationale

Existing Conditions	Proposed Conditions	Rationale
Cycling Facilities		
No cycling facilities.	Shared use neighbourhood bikeway.	To provide a comfortable cycling environment for people of all ages and abilities, traffic volumes between 500 and 1,000 vehicles per day and vehicle speeds of less than 30 km/hr are required. A shared use design retains on-street parking, reduces project costs, and traffic calms
Pedestrian Amenities		
Sidewalks buffered by boulevards and pedestrian crossings in select areas.	New pedestrian crossing at Blanshard Street. Reduced vehicle speeds and traffic volumes.	Provides a safer and more accessible pedestrian environment.
Public Realm / Landscaping		
Existing conditions illustrated in cross section.	No identified opportunities for additional landscaping. Potential impacts to boulevard trees at Blanshard Street.	N/A
Vehicle Speeds		
Speed limit is 50 km/hr.	Posted speed limit will be 30 km/hr.	To accommodate a safer cycling environment.
Vehicle Volumes & Circulation		
Existing traffic volumes range from 500 -1000 vehicles per day.	Traffic volumes are anticipated to remain the same (500 -1000) vehicles per day. No changes to vehicle circulation are proposed.	No change.
On-street Parking / Loading		
~ 77 parking stalls	~ 83 (+6) parking stalls	A net gain of ~6 parking stalls is possible with vehicle speed reductions and traffic calming features.
Road Classification		
Local Road.	Local Road.	No change.
Transit		
No transit service exists on Kings Road.	No transit service is planned on Kings Road.	No change.

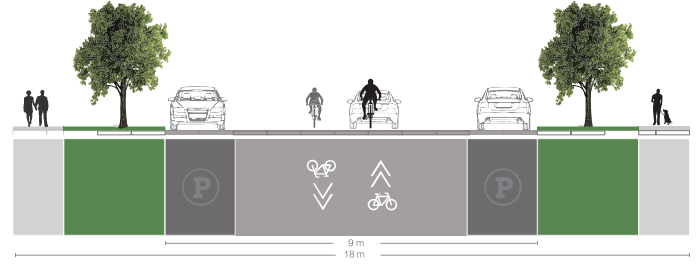
Appendix A.3 Kings / Haultain Corridor | SEGMENT C - Cook Street to Asquith Street

Recommended Design Overview

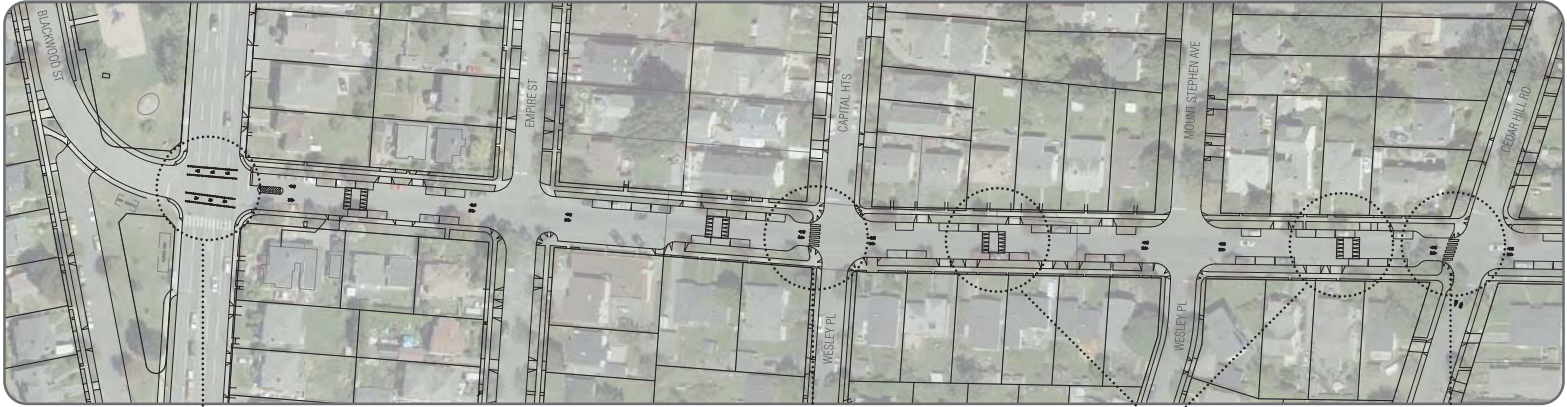
Existing Cross Section



Proposed Cross Section



* cross section is representative of wider street conditions (Cook to Fernwood Road)

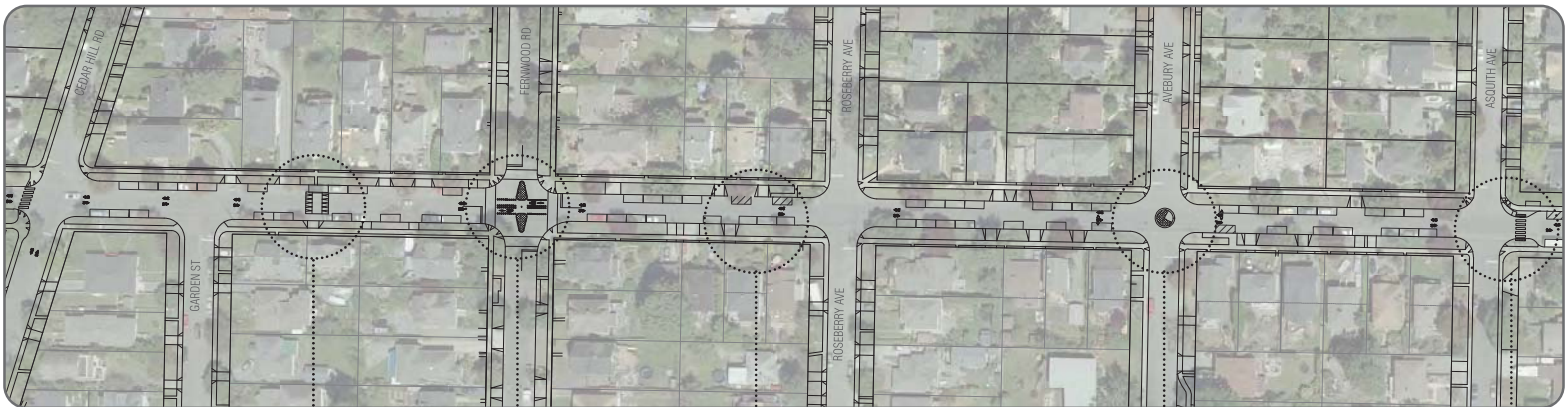


Improve crossing for cyclists and add centre median

Add marked pedestrian crossing

Add speed humps where the road is wider

Add marked crossing, and support cycling connection on Cedar Hill Greenway



Add speed humps where the road is wider

Restrict east-west through movements and left turns to reduce traffic volumes

Add new on-street parking where bus stops were located

Add traffic circles at cycling network junctions

Add bulb out and evaluate addition of marked crossing

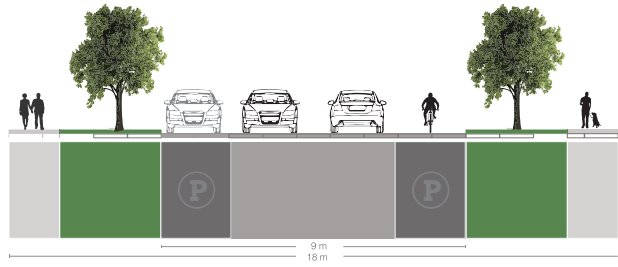
Recommended Design Changes & Rationale

Existing Conditions	Proposed Conditions	Rationale
Cycling Facilities		
Signed bike route.	Shared use neighbourhood bikeway.	To provide a comfortable cycling environment for people of all ages and abilities, traffic volumes between 500 and 1,000 vehicles per day and vehicle speeds of less than 30 km/hr are required. A shared use design retains on-street parking, reduces project costs, and traffic calms
Pedestrian Amenities		
Sidewalks buffered by boulevards.	3 pedestrian crossing upgrades to be evaluated at Capital Heights, Cedat Hill Road and Asquith Street. Reduced vehicle speeds and traffic volumes.	Provides a safer and more accessible pedestrian environment.
Public Realm / Landscaping		
Existing conditions illustrated in cross section.	Opportunities for landscaping in median islands and traffic circles at Cook Street, Fernwood Road, and Avebury Avenue.	To support the Urban Forest Master Plan, Parks and Open Space Master Plan, Greenways Plan and Official Community Plan.
Vehicle Speeds		
Speed limit is 50 km/hr.	Posted speed limit will be 30 km/hr.	To accommodate a safer cycling environment.
Vehicle Volumes & Circulation		
Existing traffic volumes range from 2000 - 3000 vehicles per day.	Anticipated traffic volumes are 500 -1000 vehicles per day.	Traffic volumes will be reduced as cut-through traffic is redirected to Bay Street in select areas.
On-street Parking / Loading		
~ 116 parking stalls	~ 116 parking stalls	No change.
Road Classification		
Secondary Collector	Local Road (500 - 1000 vpd) from Cook Street to Richmond Road.	New designs will result in local road conditions on Haultain Street.
Transit		
Transit service on Haultain Street is provided east of Fernwood Road.	Transit service on Haultain Street east of Fernwood Road is proposed to be relocated to Bay Street. There are two bus stops in this segment (SEGMENT C) which are proposed to be repurposed to on-street parking.	A relocation of Transit service onto Bay Street is proposed to improve Transit frequency on Bay Street and eliminate conflicts between buses and cyclists.

Appendix A.4 Kings / Haultain Corridor | SEGMENT D - Asquith Street to Richmond Road

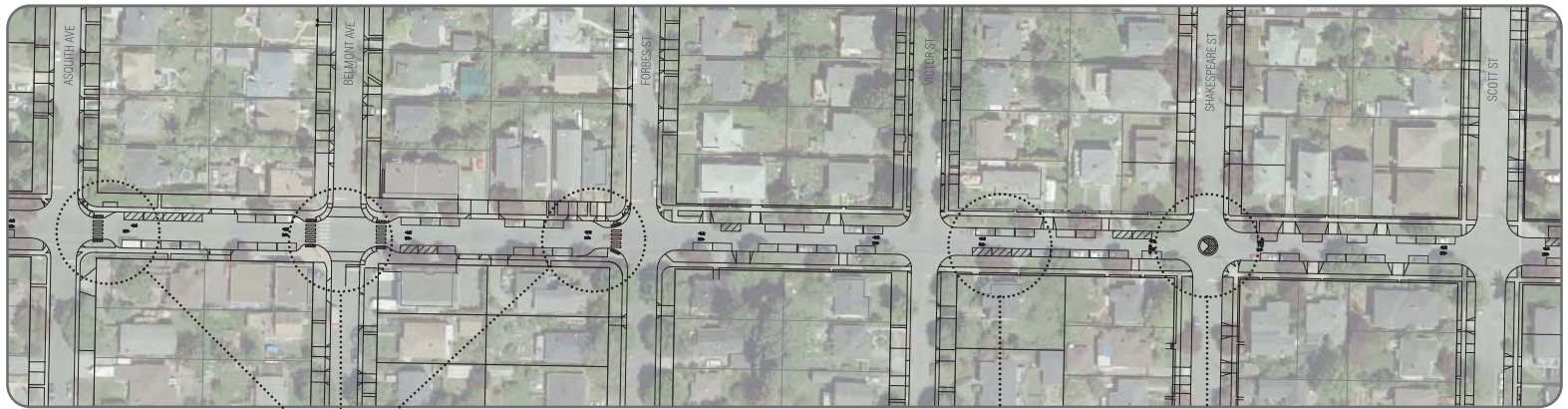
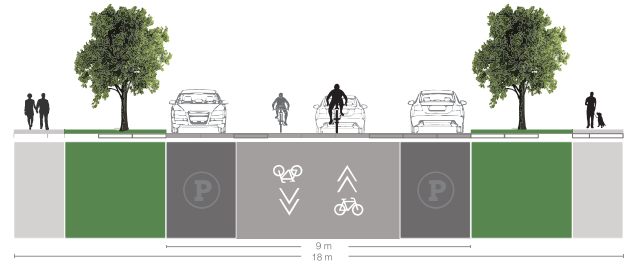
Recommended Design Overview

Existing Cross Section



* cross section is representative of narrower street conditions (Forbes Street to Richmond Road)

Proposed Cross Section



Improve pedestrian crossings and add additional on-street parking at Haultain Corners

Add additional on-street parking at bus stops

Add traffic circles at cycling network junctions



Reduce traffic volumes on Haultain by restricting northbound left turn from Shelburne Street

Explore speed humps on this long block of the Haultain corridor

Improve pedestrian and cyclist crossing at Richmond Road

Recommended Design Changes & Rationale

Existing Conditions	Proposed Conditions	Rationale
Cycling Facilities		
Signed bike route.	Shared use neighbourhood bikeway.	To provide a comfortable cycling environment for people of all ages and abilities, traffic volumes between 500 and 1,000 vehicles per day and vehicle speeds of less than 30 km/hr are required. A shared use design retains on-street parking, reduces project costs, and traffic calms
Pedestrian Amenities		
Sidewalks buffered by boulevards.	5 pedestrian crossing upgrades to be evaluated at Asquith Street, Belmont Avenue, Forbes Street, Shelbourne Street, and Richmond Road. Reduced vehicle speeds and traffic volumes.	Provides a safer and more accessible pedestrian environment.
Public Realm / Landscaping		
Existing conditions illustrated in cross section.	Opportunities for landscaping in median islands and traffic circles at Shakespeare Street, Shelbourne Street and Richmond Road.	To support the Urban Forest Master Plan, Parks and Open Space Master Plan, Greenways Plan and Official Community Plan.
Vehicle Speeds		
Speed limit is 50 km/hr.	Posted speed limit will be 30 km/hr.	To accommodate a safer cycling environment.
Vehicle Volumes & Circulation		
Existing traffic volumes range from 2000 - 3000 vehicles per day.	Anticipated traffic volumes are 500 -1000 vpd. Vehicle circulation changes at Shelbourne Street include restricting the northbound left turn. Vehicle circulation changes at Richmond Road include restricting the westbound left turn.	Traffic volumes will be reduced as cut-through traffic is redirected to Bay Street in select areas.
On-street Parking / Loading		
~ 118 parking stalls	~ 142 (+24) parking stalls	A net gain of ~24 parking stalls is possible as curbside space currently used as a bus stop is repurposed.
Road Classification		
Secondary Collector	Local Road (500 - 1000 vpd) from Cook Street to Richmond Road.	New designs will result in local road conditions on Haultain Street.
Transit		
Transit service on Haultain Street is provided east of Fernwood Road.	Transit service on Haultain Street east of Fernwood Road is proposed to be relocated to Bay Street. There are 7 bus stops in this segment (SEGMENT D) which are proposed to be repurposed to on-street parking.	A relocation of Transit service onto Bay Street is proposed to improve Transit frequency on Bay Street and eliminate conflicts between buses and cyclists.

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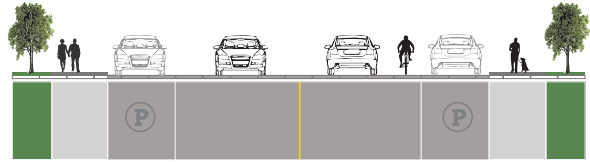
APPENDIX B

KIMTA / E&N CONNECTOR

CORRIDOR LOCATION

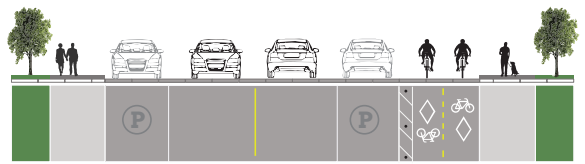


Existing Conditions



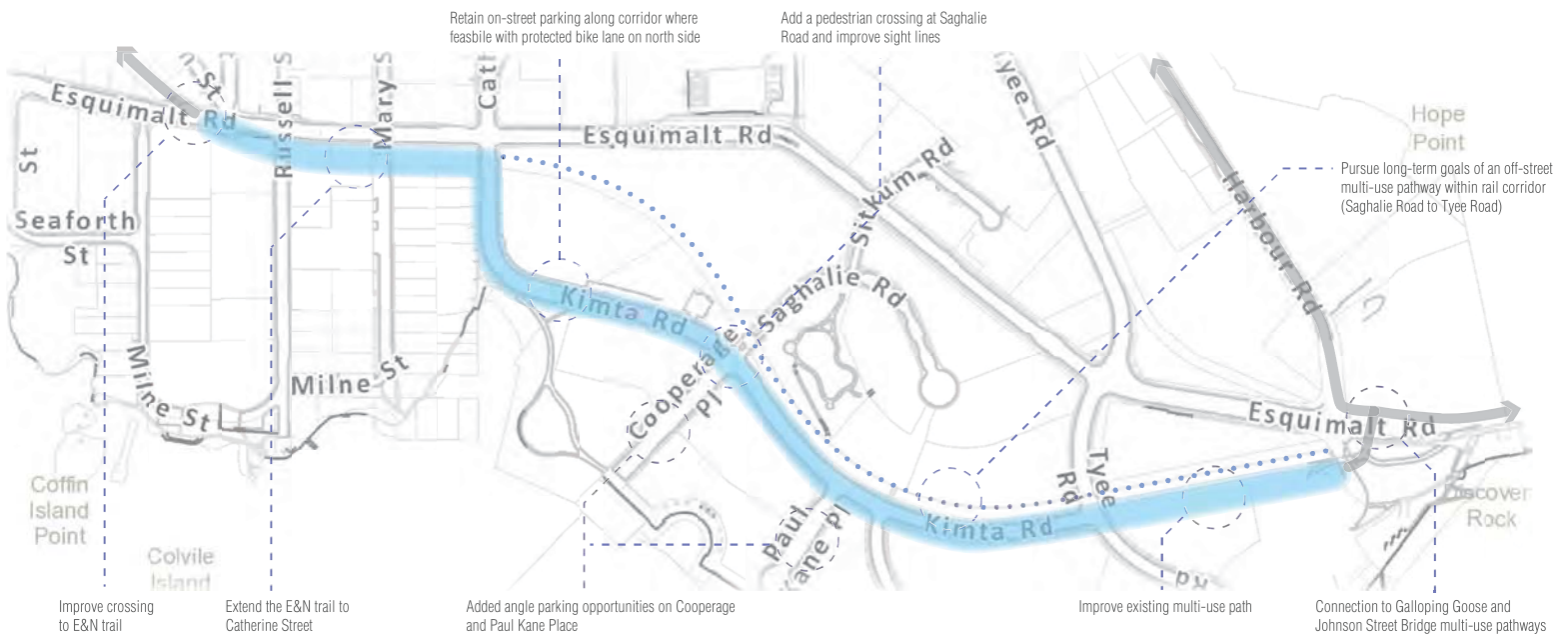
Proposed Conditions

(two-way protected bike lane - northside)



* off street cycling facility south of Esquimalt Road is proposed from Robert Street to Catherine Street

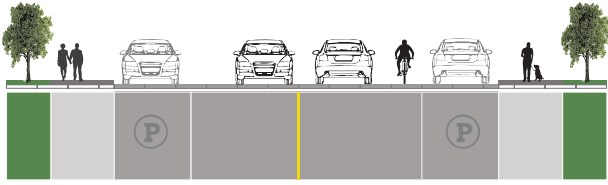
CORRIDOR HIGHLIGHTS



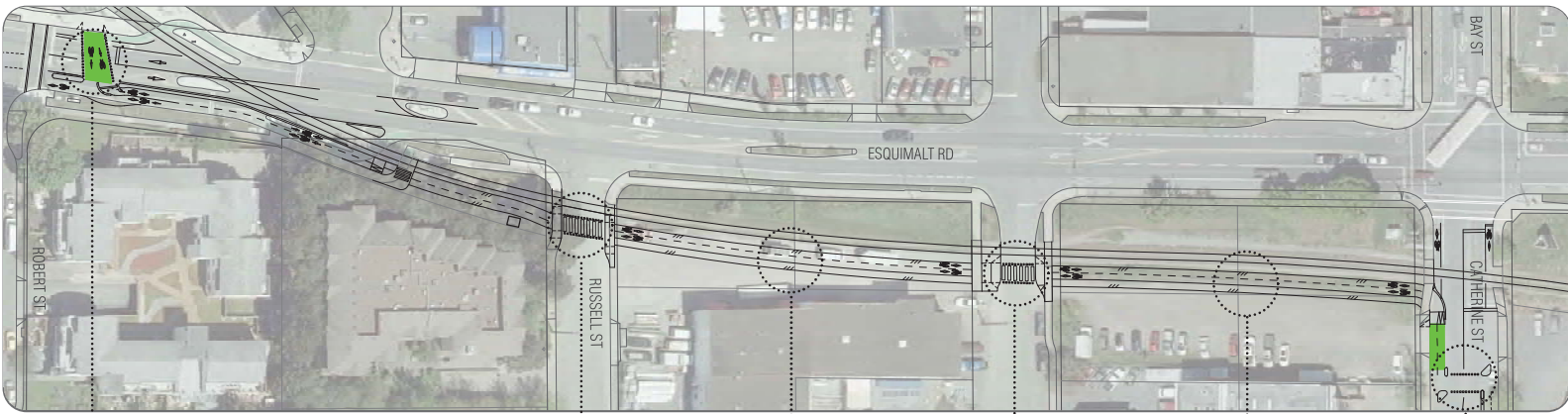
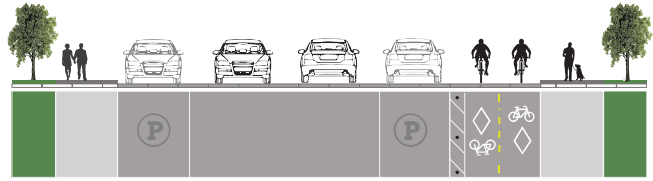
Appendix B.1 Kimta / E&N Connection | SEGMENT A - Robert St to Saghalie Rd

Recommended Design Overview

Existing Cross Section



Proposed Cross Section



Connection to E&N regional trail and time limited left turn restriction

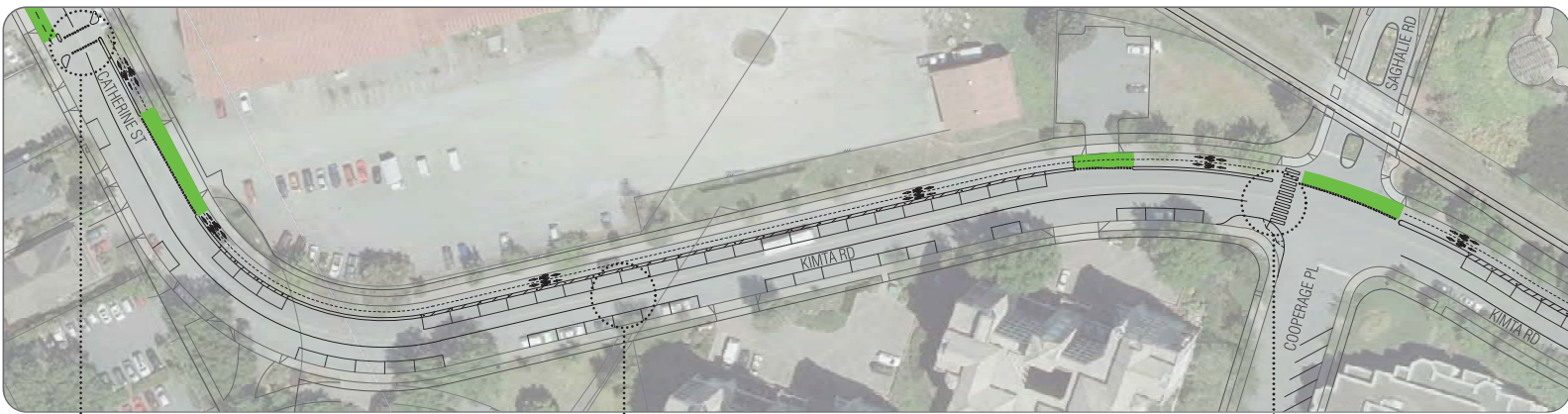
Add crossing for pedestrians and cyclists

Separate cyclists and pedestrians where feasible

Add crossing for pedestrians and cyclists

Separate cyclists and pedestrians where feasible

Add crossing for cyclists



Add crossing for cyclists

Retain on-street parking where feasible

Add pedestrian crossing and curb bulb-out



Proposed angle parking on Paul Kane Place

Kimta / E&N Connection | SEGMENT A - Robert Street to Saghalie Road

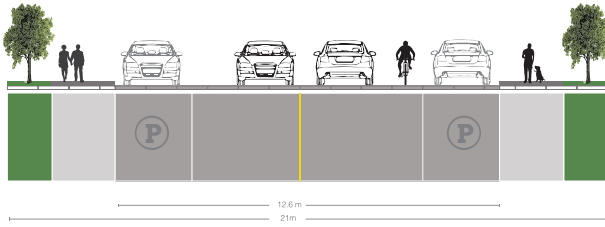
Recommended Design Changes & Rationale

Existing Conditions	Proposed Conditions	Rationale
Cycling Facilities		
No cycling facilities	Off-street two-way bike lane (Robert Street to Catherine Street) and two-way protected bike lane on the north side of Kimta Road (Catherine Street to Tyee Road)	To provide a comfortable cycling environment for people of all ages and abilities, a two-way protected bike lane is being proposed. Advisory bike lanes are not being proposed due higher level of cyclist protection provided by protected bike lanes.
Pedestrian Amenities		
Sidewalks and pedestrian crossings in select areas.	2 new multi-use crossings proposed at Russell Street, and Mary Street. New pedestrian crossing at Saghalie Road	Provides a safer and more accessible pedestrian environment.
Public Realm / Landscaping		
Street trees in sidewalk.	No new street trees or landscaping proposed.	No change.
Vehicle Speeds		
Speed limit is 50 km/hr.	Posted speed limit of 50 km/hr to be retained.	No change.
Vehicle Volumes & Circulation		
Existing traffic volumes ~2,000 vehicles per day.	Traffic volumes are expected to increase as development sites are built out. No changes to vehicle circulation proposed.	No change.
On-street Parking / Loading		
~92 parking stalls.	~81 (-11) parking stalls.	A net loss of ~11 parking stalls is required to provide adequate width for all road users. Off sets to parking impacts can be provided with angle parking on Cooperage Place.
Road Classification		
Secondary Collector.	Secondary Collector.	No change.
Transit		
There is no transit service on Kimta Road.	There is no transit service planned for Kimta Road.	No change.

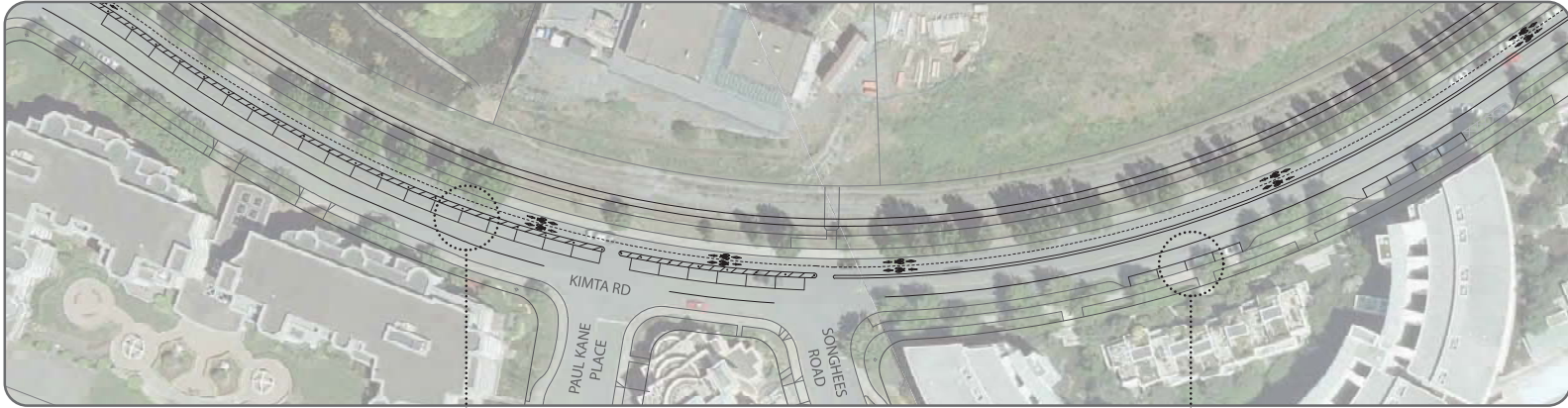
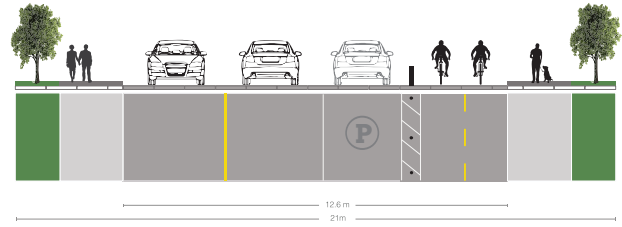
Appendix B.2 Kimta / E&N Connection | SEGMENT B - Saghalie Rd to Johnson St Bridge

Recommended Design Overview

Existing Cross Section



Proposed Cross Section



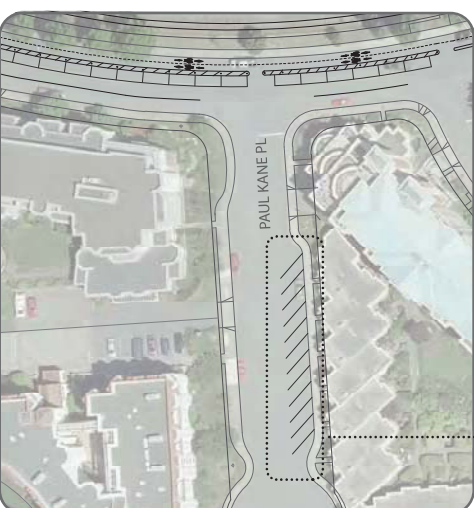
Parking to be retained on north side of Kimta Road

Parking to be retained on south side of Kimta Road



Add curb bulb-outs and 3 way stop condition to improve crossing for pedestrians and cyclists

Improve surface conditions, retain trees and add pedestrian lighting where applicable



Proposed angle parking on Paul Kane Place

Kimta / E&N Connection | SEGMENT A - Saghalié Road to Johnson Street Bridge

Recommended Design Changes & Rationale

Existing Conditions	Proposed Conditions	Rationale
Cycling Facilities		
No cycling facilities	Two-way protected bike lanes on north side of Kimta Road.	To provide a comfortable cycling environment for people of all ages and abilities, a two-way protected bike lane is being proposed. Advisory bike lanes are not being proposed due higher level of cyclist protection provided by protected bike lanes.
Pedestrian Amenities		
Sidewalks and pedestrian crossings in select areas.	New pedestrian crossing at Tyee Road.	Provides a safer and more accessible pedestrian environment.
Public Realm / Landscaping		
Street trees in sidewalk.	No new street trees or landscaping proposed.	No change.
Vehicle Speeds		
Speed limit is 50 km/hr.	Posted speed limit of 50 km/hr to be retained.	No change.
Vehicle Volumes & Circulation		
Existing traffic volumes ~2,000 vehicles per day.	Traffic volumes are expected to increase as development sites are built out. No changes to vehicle circulation proposed.	No change.
On-street Parking / Loading		
~92 parking stalls.	~46 (-40) parking stalls.	A net loss of ~40 parking stalls is required to provide adequate width for all road users. Off sets to parking impacts can be provided with angle parking on Paul Kane Place.
Road Classification		
Secondary Collector.	Secondary Collector.	No change.
Transit		
There is no transit service on Kimta Road.	There is no transit service planned for Kimta Road.	No change.

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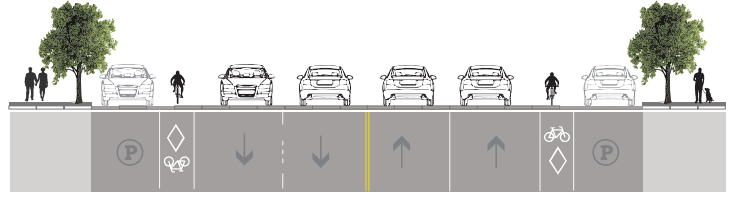
APPENDIX C

GOVERNMENT STREET NORTH CORRIDOR

CORRIDOR LOCATION

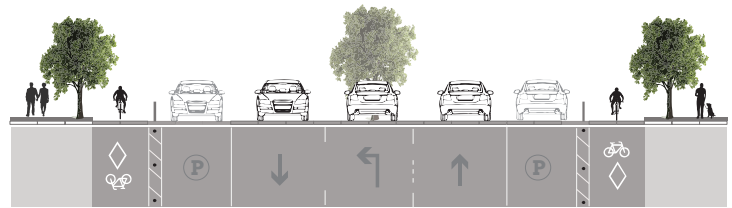


Existing Conditions

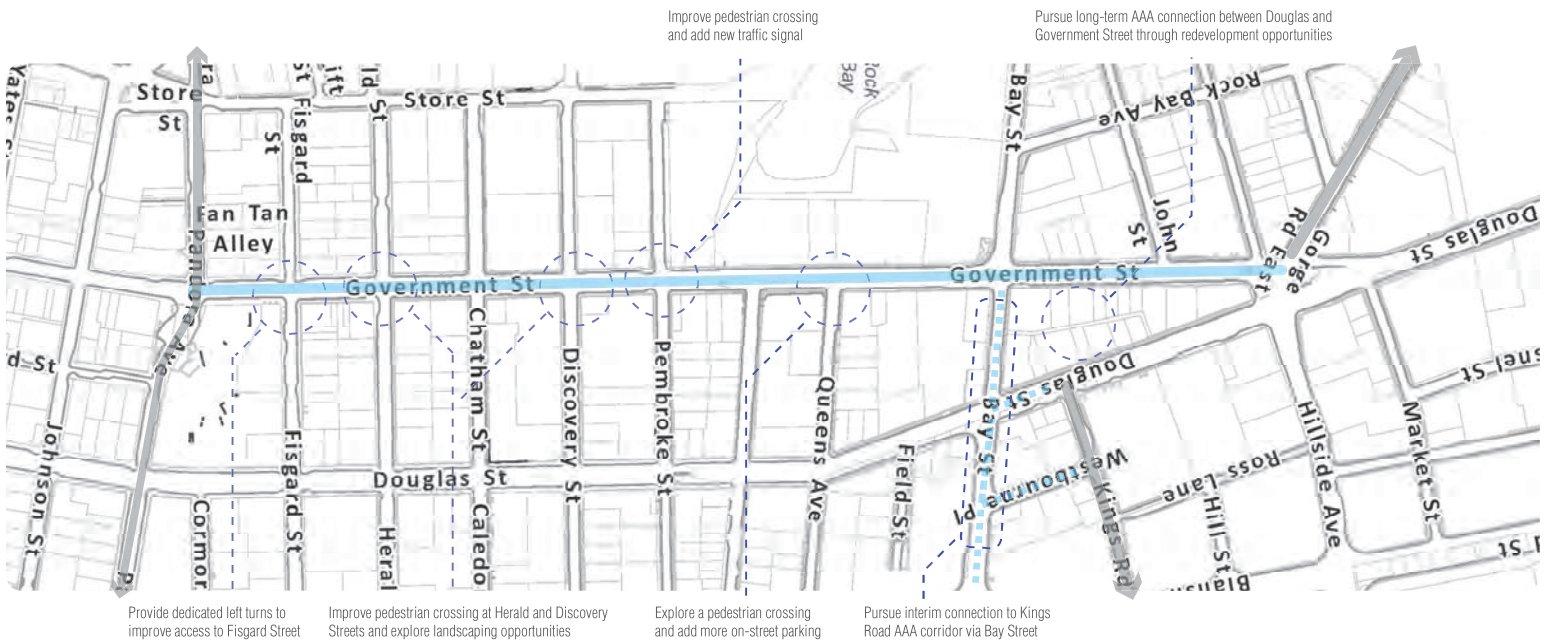


Proposed Conditions

(one-way protected bike lanes)



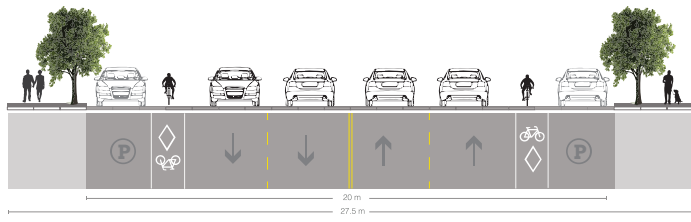
CORRIDOR HIGHLIGHTS



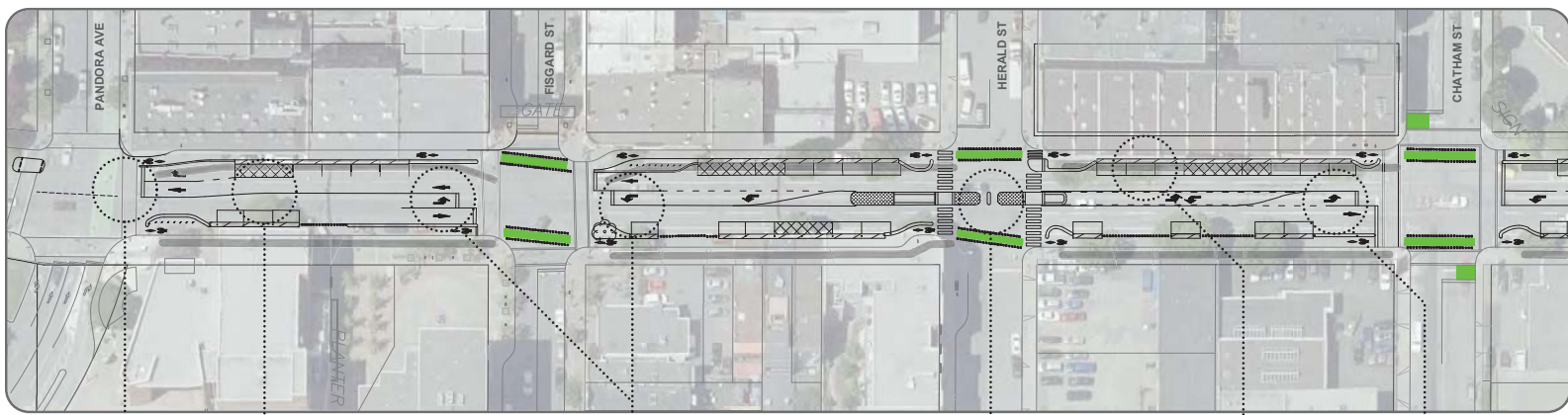
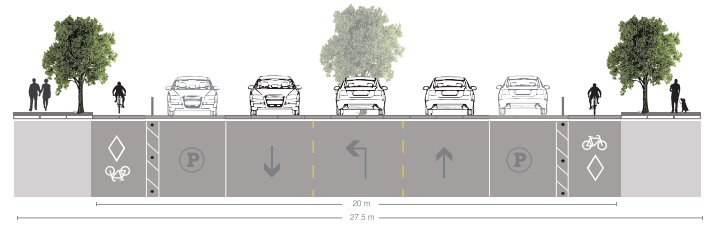
Appendix C.1 Government Street North | SEGMENT A - Pandora Ave to Pembroke St

Recommended Design Overview

Existing Cross Section



Proposed Cross Section



Connection to AAA cycling facilities on Pandora Avenue

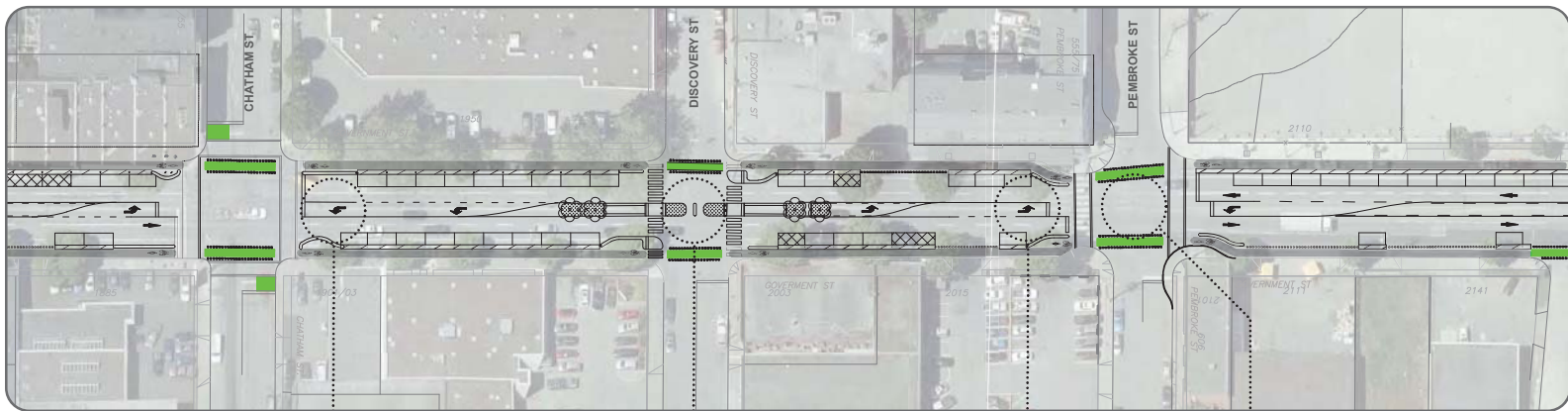
Retain on-street parking and loading throughout the corridor and use parking as a buffer between cyclists and traffic

Provide a dedicated left turn to improve road user safety and enhance access to Fisgard Parkade and Store Street

Improve pedestrian crossing with median islands and explore opportunities for landscape and public realm enhancements

Explore opportunity for a parklet

Provide a dedicated left turn to improve road user safety and enhance access to Store Street



Provide a dedicated left turn to improve road user safety and enhance access to Chatham Street and Caledonia Avenue

Improve pedestrian crossing with median islands and explore landscaping opportunities - access for emergency vehicles to be maintained

Provide a dedicated left turn to improve road user safety and enhance access to Store Street

Improve pedestrian crossing and explore new traffic signal

Government Street North | SEGMENT A - Pandora Avenue to Pembroke Street

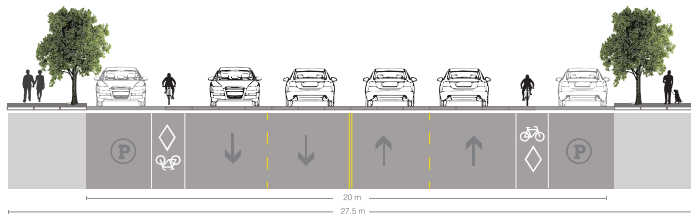
Recommended Design Changes & Rationale

Existing Conditions	Proposed Conditions	Rationale
Cycling Facilities		
Conventional painted bike lanes.	Uni-directional protected bike lanes	To provide a comfortable cycling environment for people of all ages and abilities, one-way protected bike lanes are being proposed. A bi-directional protected bike lane is not being recommended due to more significant construction impacts, projects costs and traffic delays for all road users.
Pedestrian Amenities		
Sidewalks and pedestrian crossings in select areas.	3 new pedestrian crossings proposed at Herald Street, Discovery Street and Pembroke Street. Further separation of pedestrians from vehicle lanes.	Provides a safer and more accessible pedestrian environment.
Public Realm / Landscaping		
Street trees in sidewalk.	Opportunities for new street trees / landscaping in median islands proposed in select locations.	To support the Parks and Open Space Master Plan, Downtown Core Area Plan and Official Community Plan.
Vehicle Speeds		
Speed limit is 50 km/hr.	Posted speed limit of 50 km/hr to be retained.	No change.
Vehicle Volumes & Circulation		
Existing traffic volumes range from 15,000 to 18,000 vehicles per day.	Traffic volumes are expected to remain the same. Vehicle circulation changes proposed at Herald and Discovery Streets restricting east-west through movements and left turns .	Turning restrictions proposed at Herald and Discovery Streets to improve safety for all road users.
On-street Parking / Loading		
~77 Parking stalls	~66 (-11) Parking stalls	A net loss of ~11 parking stalls is required to provide adequate sightlines at intersections and driveways.
Road Classification		
Secondary Arterial.	Secondary Arterial.	No change.
Transit		
There is no transit service on this portion of Government Street.	There is no transit service planned for this portion of Government Street.	No change.

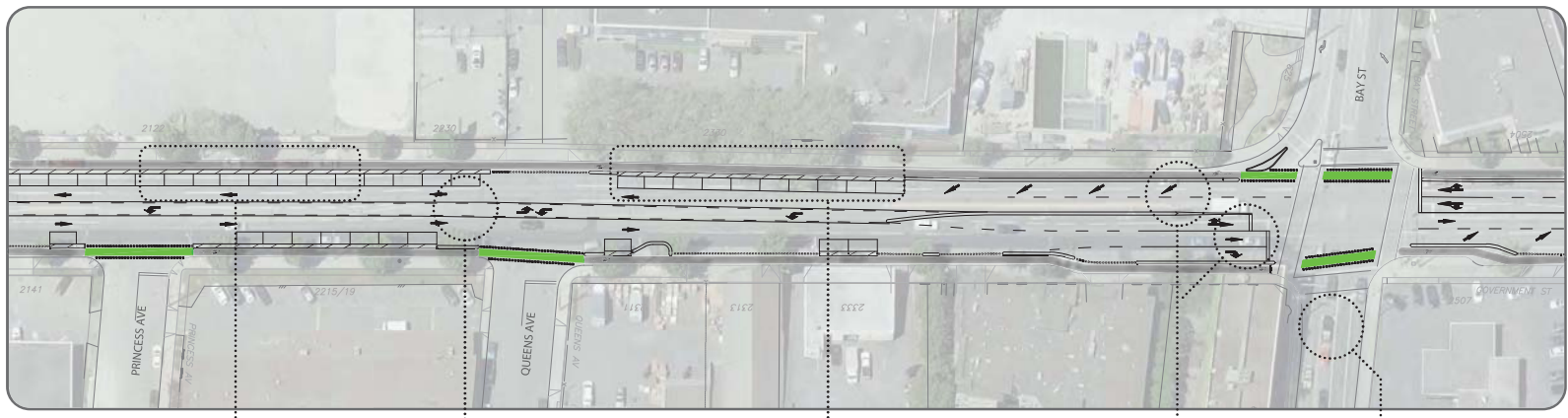
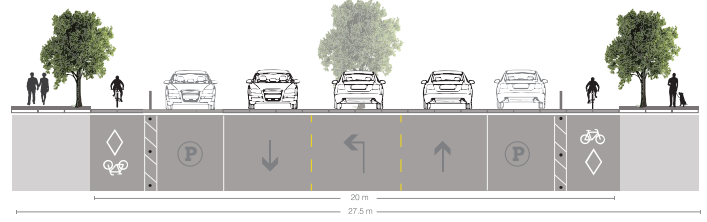
Appendix C.2 Government Street North | SEGMENT B - Pembroke Street to Gorge Road

Recommended Design Overview

Existing Cross Section



Proposed Cross Section



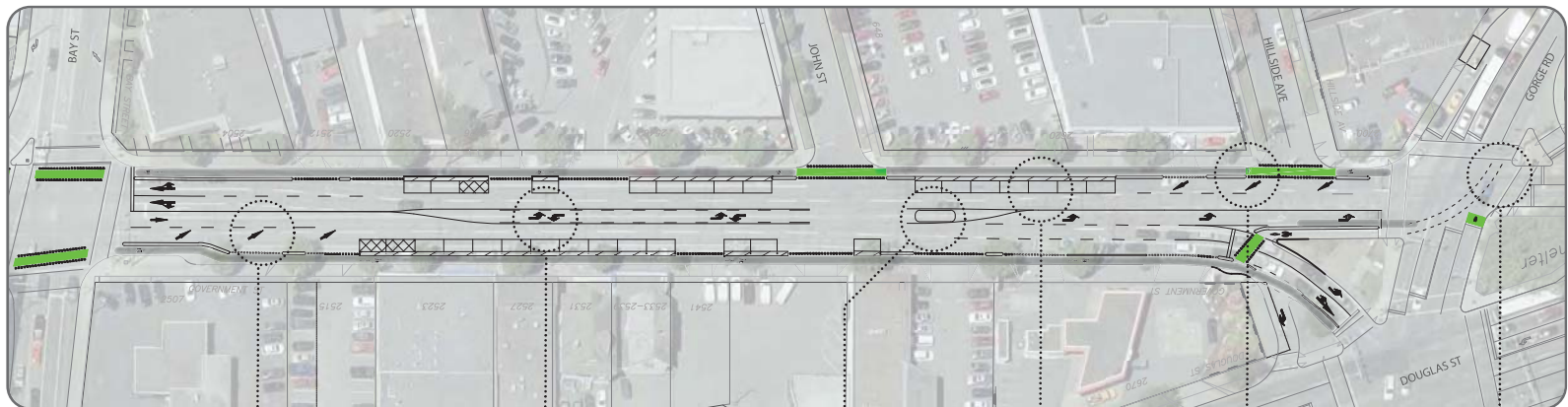
Opportunity for additional on-street parking

Evaluate addition of pedestrian crossing

Opportunity for additional on-street parking

Accommodate existing and future traffic volumes along Government Street

Pursue interim cycling connection on Bay Street to Kings Road AAA cycling facilities through future paving work



Accommodate existing traffic volumes and vehicle level of service along Government Street

Provide a dedicated dual left turn lane to improve road user safety and enhance access to businesses and side streets

Evaluate addition of pedestrian crossing

Opportunity for additional on-street parking on west side of Government Street

Accommodate existing traffic volumes and vehicle level of service along Government Street

Future connection to AAA bike lane planned for Gorge Road (2022)

Recommended Design Changes & Rationale

Existing Conditions	Proposed Conditions	Rationale
Cycling Facilities		
Conventional painted bike lanes.	Uni-directional protected bike lanes	To provide a comfortable cycling environment for people of all ages and abilities, one-way protected bike lanes are being proposed. A bi-directional protected bike lane is not being recommended due to more significant construction impacts, projects costs and traffic delays for
Pedestrian Amenities		
Sidewalks and pedestrian crossings in select areas.	2 new pedestrian crossings will be evaluated at Queens Avenue and John Street. Further separation of pedestrians from vehicle lanes.	Provides a safer and more accessible pedestrian environment.
Public Realm / Landscaping		
Street trees in sidewalk.	Opportunities for new street trees / landscaping in median islands proposed in select locations.	To support the Parks and Open Space Master Plan, Downtown Core Area Plan and Official Community Plan.
Vehicle Speeds		
Speed limit is 50 km/hr.	Posted speed limit of 50 km/hr to be retained.	No change.
Vehicle Volumes & Circulation		
Existing traffic volumes range from 15,000 to 18,000 vehicles per day.	Traffic volumes are expected to remain the same. No changes to vehicle circulation are proposed.	No change.
On-street Parking / Loading		
~29 Parking stalls	~76 (+47) Parking stalls	A net gain of ~47 parking stalls is possible with the proposed laning.
Road Classification		
Secondary Arterial.	Secondary Arterial.	No change.
Transit		
There is no transit service on this portion of Government Street.	There is no transit service planned for this portion of Government Street.	No change.

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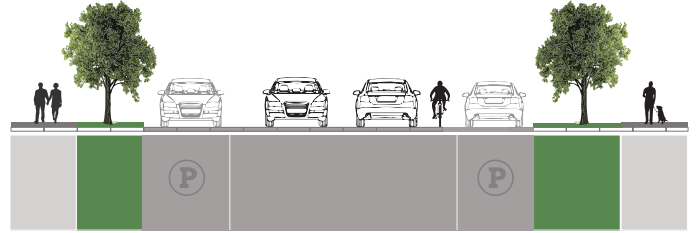
APPENDIX D

RICHARDSON STREET CORRIDOR

CORRIDOR LOCATION

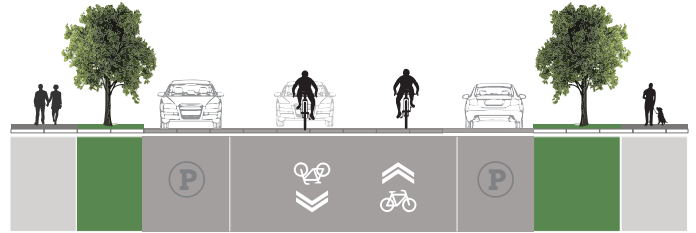


Existing Conditions

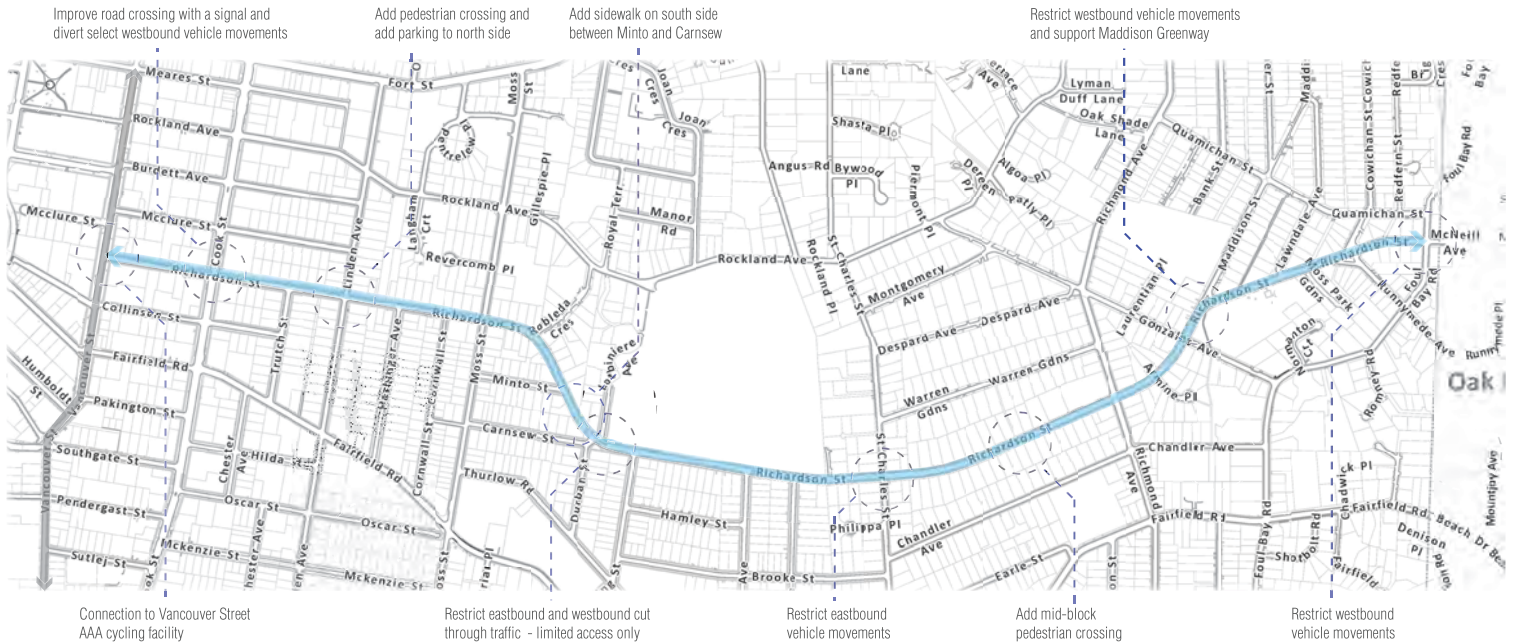


Proposed Conditions

(Shared use neighbourhood bikeway)



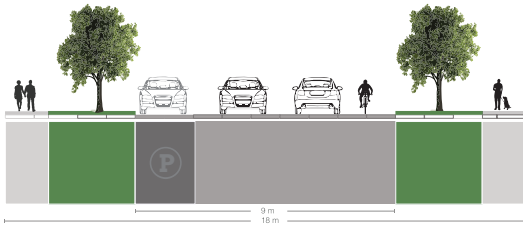
CORRIDOR HIGHLIGHTS



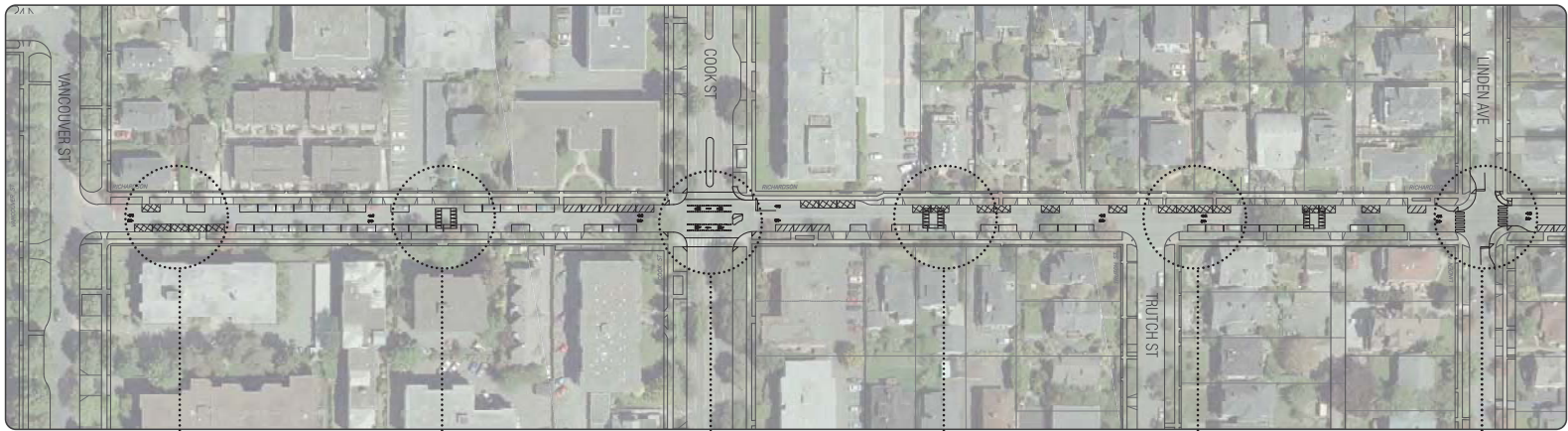
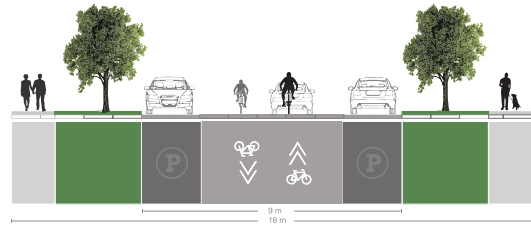
Appendix D.1 Richardson Street | SEGMENT A - Vancouver Street to Lotbiniere Avenue

Recommended Design Overview

Existing Cross Section



Proposed Cross Section



Add on-street parking in select areas

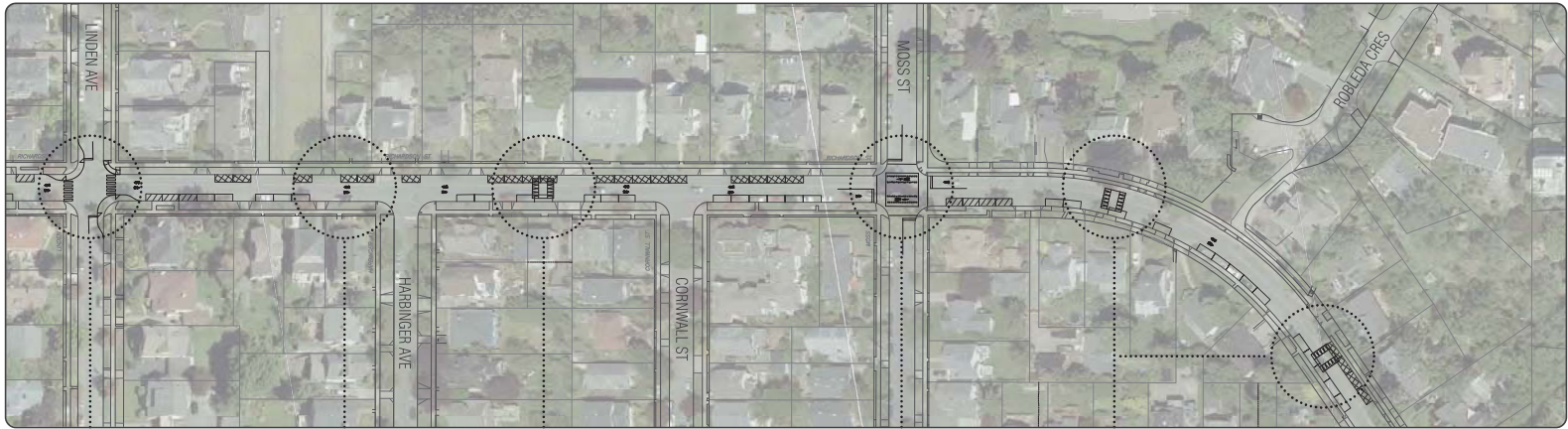
Add speed humps in select areas

Add signalized road crossing and restrict southbound left turns and eastbound through movements

Add speed humps in select areas

Add on-street parking in select areas

Add new pedestrian crossings and bulb outs



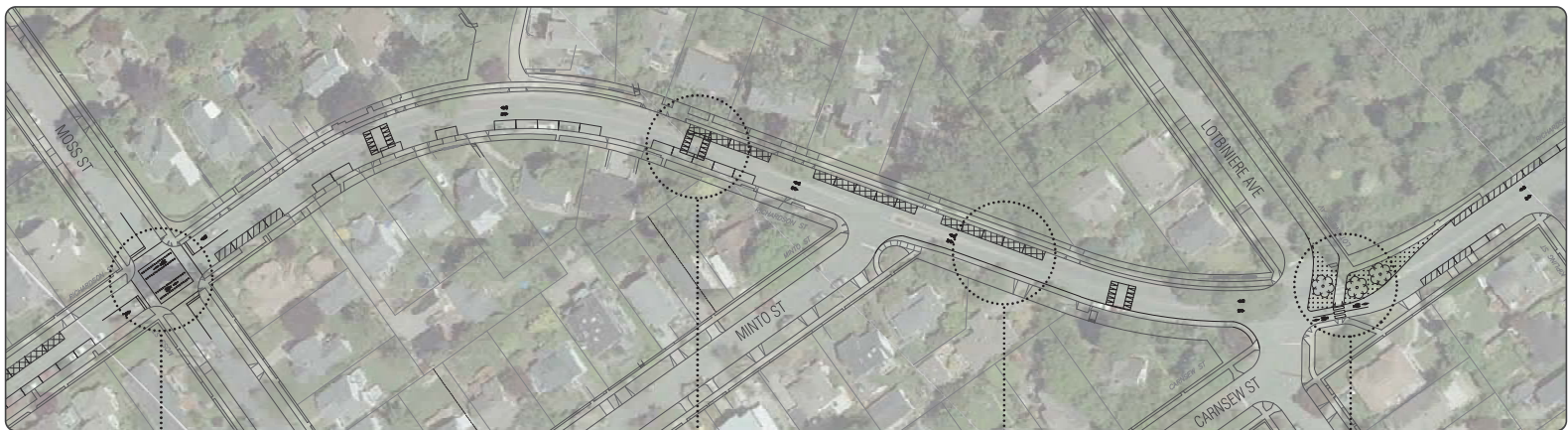
Add new pedestrian crossings and bulb outs

Add on-street parking in select areas

Add speed humps in select areas

Add pedestrian and cyclist road crossing markings

Add speed humps in select areas



Add pedestrian and cyclist road crossing markings

Add speed humps in select areas

Add sidewalk between Minto Street and Carnsew Street and relocate on-street parking to north side

Add landscaped plaza to reduce cut through traffic - transit, emergency vehicles and cyclists to be permitted

Richardson Street | SEGMENT A - Vancouver Street to Lotbiniere Avenue

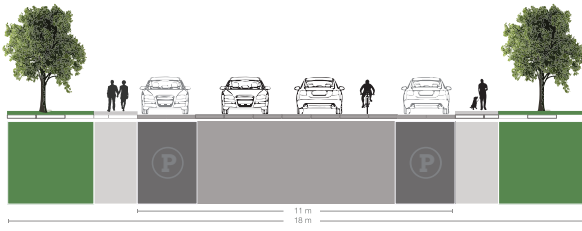
Recommended Design Changes & Rationale

Existing Conditions	Proposed Conditions	Rationale
Cycling Facilities		
Signed bike route	Shared use neighbourhood bikeway	To provide a comfortable cycling environment for people of all ages and abilities, traffic volumes between 500 and 1,000 vehicles per day and vehicle speeds of less than 30 km/hr are required. A shared use design retains on-street parking, reduces project costs, and traffic calms neighbourhoods.
Pedestrian Amenities		
Sidewalks buffered by boulevards in select areas.	1 new pedestrian crossing at Linden Avenue and 3 pedestrian crossing upgrades proposed at Cook Street, Moss Street, and Lotbiniere Avenue. New sidewalk on south side of Richardson from Minto Street to Carnsew Street.	Provides a safer and more accessible pedestrian environment.
Public Realm / Landscaping		
Sidewalks buffered by boulevards in select areas and landscaped median islands in select areas.	Additional landscaping and public realm opportunities at traffic diversion locations at Cook Street and Lotbiniere Avenue.	To support the Urban Forest Master Plan, Parks and Open Space Master Plan, Greenways Plan and Official Community Plan.
Vehicle Speeds		
Speed limit is 50 km/hr.	Posted speed limit will be 30 km/hr.	To accommodate a safer cycling environment.
Vehicle Volumes & Circulation		
Existing traffic volumes on range from 3,500- 4,000 vehicles per day.	Anticipated traffic volumes are 500 -1000 vpd. Vehicle circulation changes at Cook Street include restricting southbound left turns and eastbound through movements. Vehicle circulation changes at Lotbiniere Avenue include restricting east-west through movements.	Traffic volumes will be reduced as cut-through traffic is redirected to Fairfield Road and other east-west collector and arterial roads.
On-street Parking / Loading		
~87 parking stalls.	~138 (+51) parking stalls.	A net gain of ~51 parking stalls is possible as curb side space is repurposed in select locations.
Road Classification		
Secondary Collector.	Local Road (500 - 1000 vpd).	New designs will result in local road conditions on Richardson Street.
Transit		
Transit service on Richardson Street is provided by Route 1 service.	Transit service on Richardson to be retained with operational changes to be explored between Gonzales Avenue and Foul Bay Road.	Given the low frequency of transit service on Richardson, retention of transit service can be accommodated without impacting the cycling facility.

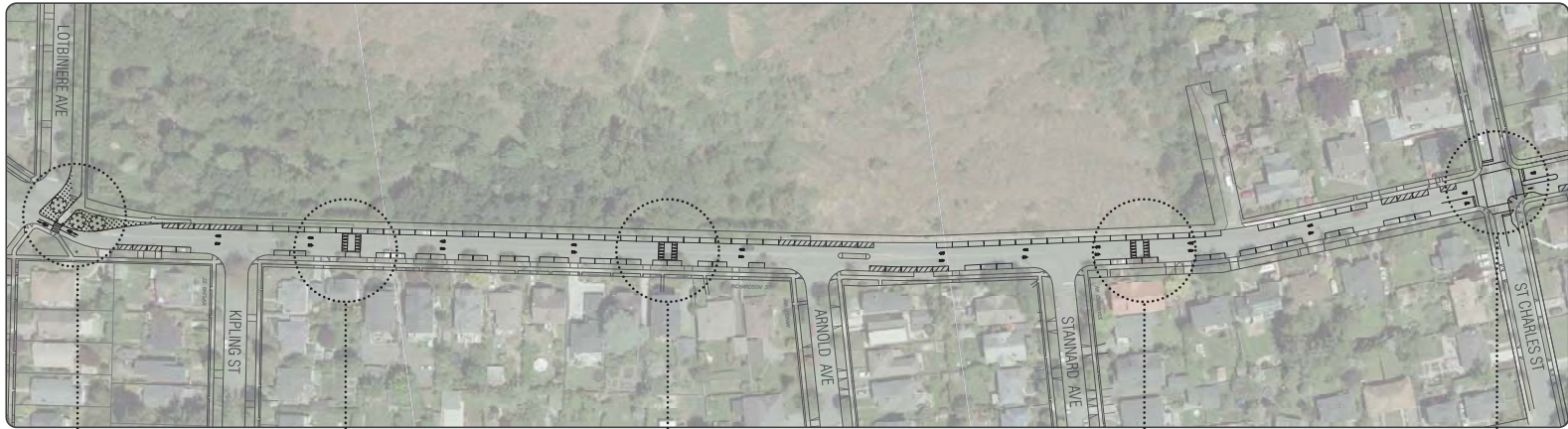
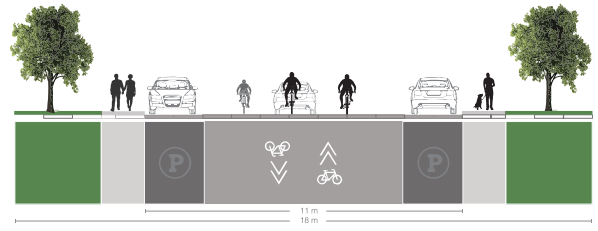
Appendix D.2 Richardson Street | SEGMENT B - Lotbiniere Avenue to Foul Bay Road

Recommended Design Overview

Existing Cross Section



Proposed Cross Section



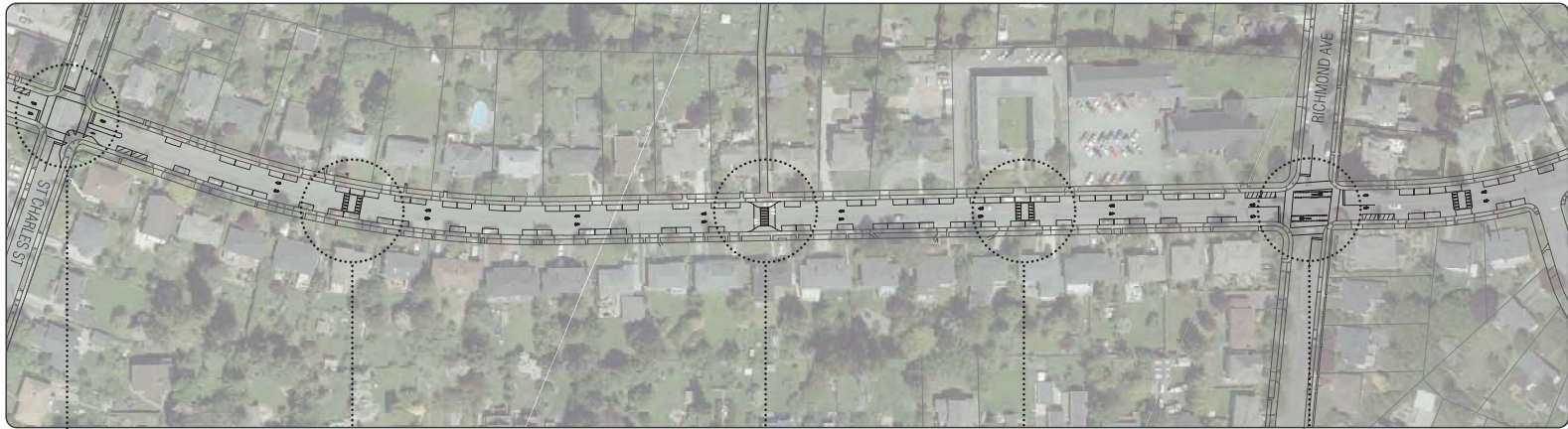
Add landscaped plaza and restrict cut through traffic

Add speed humps in select areas

Add speed humps in select areas

Add speed humps in select areas

Restrict eastbound traffic - permit transit, emergency vehicles and cyclists



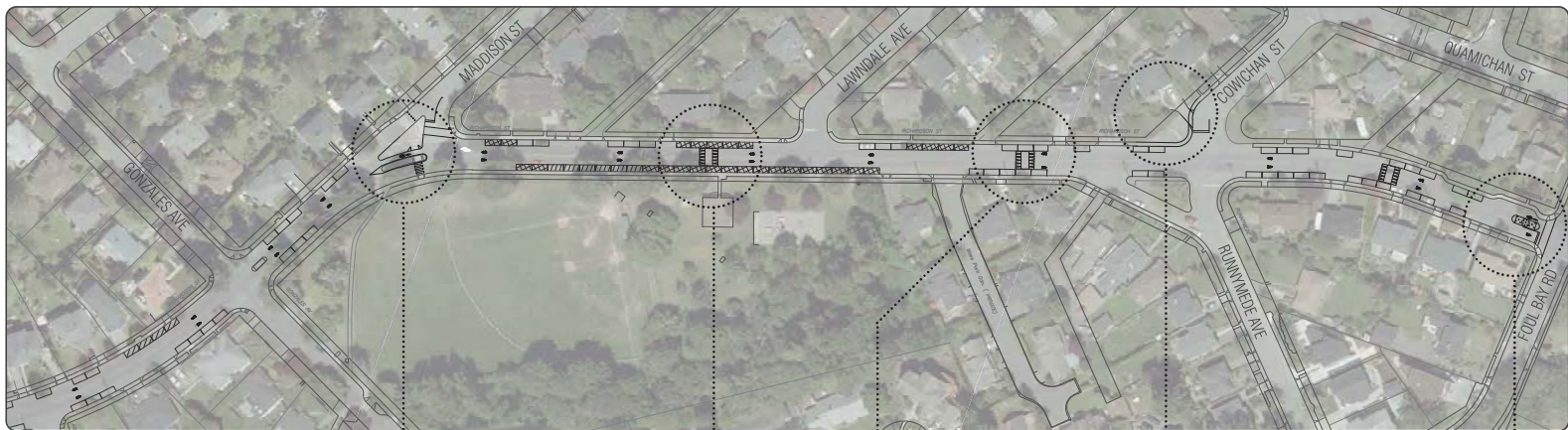
Restrict eastbound traffic - permit transit, emergency vehicles and cyclists

Add speed humps in select areas

Add grade raised mid-block crossing

Add speed humps in select areas

Add pedestrian and cyclist road crossing markings



Restrict westbound traffic and explore landscaping opportunities

Add on-street parking in select areas

Add speed humps in select areas

Improve pedestrian crossing and normalize intersection

Restrict westbound traffic and explore landscaping opportunities

Recommended Design Changes & Rationale

Existing Conditions	Proposed Conditions	Rationale
Cycling Facilities		
Signed bike route.	Shared use neighbourhood bikeway	To provide a comfortable cycling environment for people of all ages and abilities, traffic volumes between 500 and 1,000 vehicles per day and vehicle speeds of less than 30 km/hr are required. A shared use design retains on-street parking, reduces project costs, and traffic calms neighbourhoods.
Pedestrian Amenities		
Sidewalks buffered by boulevards in select areas.	4 pedestrian crossing upgrades at St. Charles Street, Richmond Avenue, Maddison Street and Foul Bay Road. 1 new mid-block crossing between St. Charles Street and Richmond Avenue. Reduced vehicles speeds and traffic volumes.	Provides a safer and more accessible pedestrian environment.
Public Realm / Landscaping		
Sidewalks buffered by boulevards in select areas and landscaped median islands in select areas.	Additional landscaping and public realm opportunities at traffic diversions locations including Maddison Street, Cowichan Street and Foul Bay Road.	To support the Urban Forest Master Plan, Parks and Open Space Master Plan, Greenways Plan and Official Community Plan.
Vehicle Speeds		
Speed limit is 50 km/hr.	Posted speed limit will be 30 km/hr.	To accommodate a safer cycling environment.
Vehicle Volumes & Circulation		
Existing traffic volumes range from 2,800 - 3,800 vehicles per day.	Anticipated traffic volumes are 500 -1000 vpd. Vehicle circulation changes at St. Charles Street include restricting eastbound movements. Vehicle circulation changes at Maddison Street and Foul Bay Road include restricting westbound movements.	Traffic volumes will be reduced as cut-through traffic is redirected to Fairfield Road and other east-west collector and arterial roads.
On-street Parking / Loading		
~ 258 parking stalls	~ 279 (+21) parking stalls	A net gain of ~21 parking stalls is possible as curbside space is repurposed in select locations.
Road Classification		
Secondary Collector.	Local Road (500 - 1000 vpd).	New designs will result in local road conditions on Richardson Street.
Transit		
Transit service on Richardson Street is provided by Route 1 service.	Transit service on Richardson to be retained with operational changes to be explored between Gonzales Avenue and Foul Bay Road.	Given the low frequency of transit service on Richardson, retention of transit service can be accommodated without impacting the cycling facility.

Appendix E Haultain / Vancouver AAA Connection | Cedar Hill-Chambers-Princess Ave

Recommended Design Overview

SECTION LOCATION



Network Connection

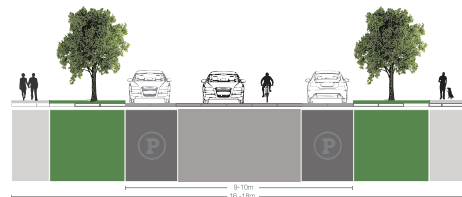
- 2020 AAA Projects
- 2019 / 2020 Approved Projects
- Complete
- - - In progress
- Future project



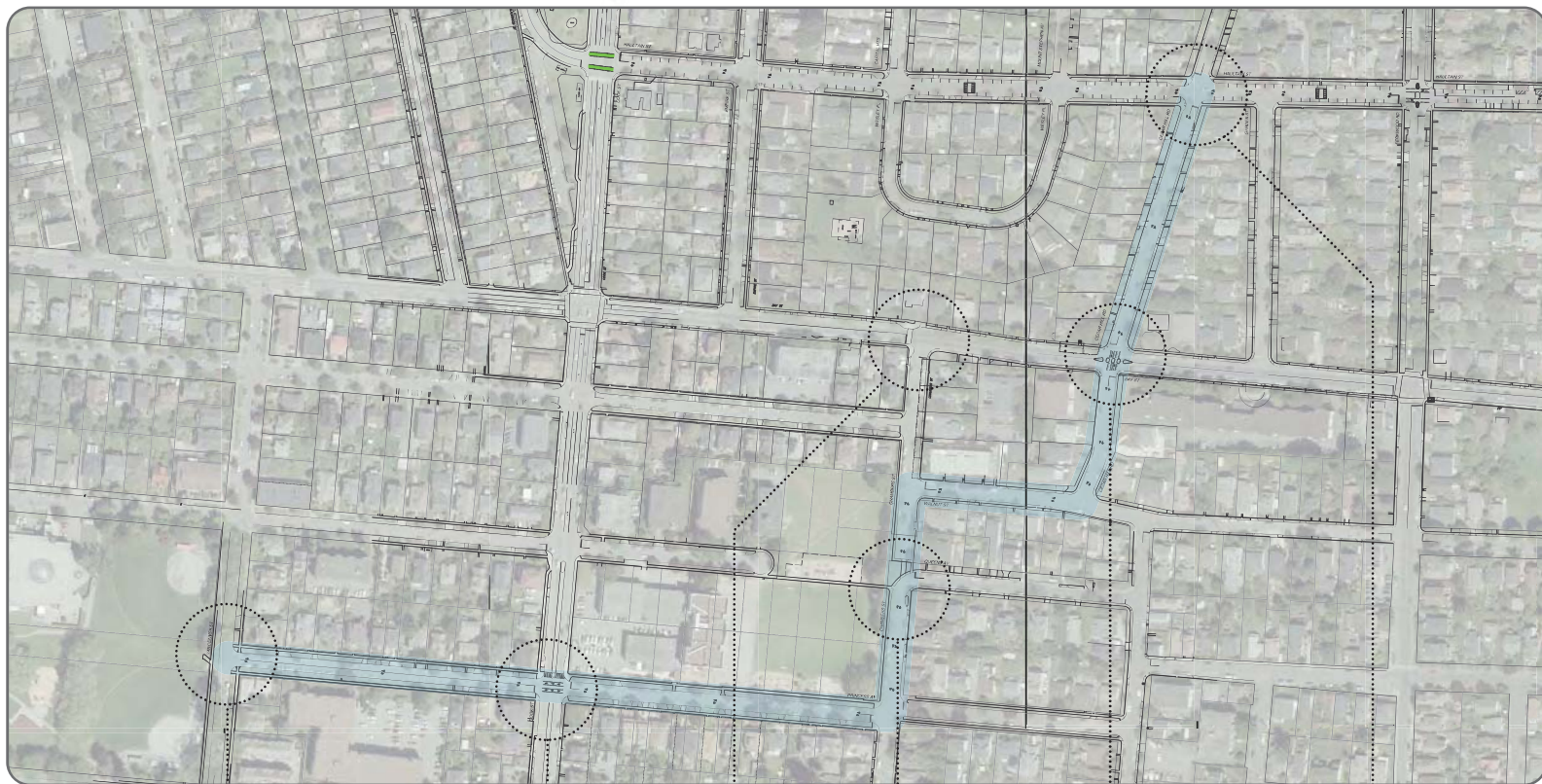
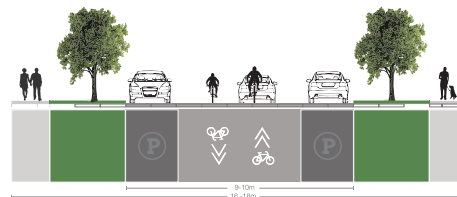
NETWORK CONTEXT:

To facilitate a better cycling connection between the Haultain Street and Vancouver Street AAA corridors and provide a AAA cycling connection to George Jay Elementary a neighbourhood bikeway was explored through consultation activities and largely supported by the community.

Existing Cross Section



Proposed Cross Section



Connection to Vancouver Street AAA neighbourhood bikeway

Provide signaled crossing for pedestrians and cyclists

Improve pedestrians crossing with flashing beacons

Improve access at existing road closure with new stop condition, signage and paint markings

Improve crossing for cyclists with centre median that will restrict left turns and north-south through movements

Connection to Haultain Street AAA neighbourhood bikeway

Existing Conditions	Proposed Conditions	Rationale
Cycling Facilities		
No cycling facilities.	Shared use neighbourhood bikeway.	To provide a comfortable cycling environment for people of all ages and abilities, traffic volumes between 500 and 1,000 vehicles per day and vehicle speeds of less than 30 km/hr are required. A shared use design retains on-street parking, reduces project costs, and traffic calms the neighbourhood.
Pedestrian Amenities		
Sidewalks buffered by boulevards in select areas.	Improved pedestrian crossings and traffic calming.	Provides a safer and more accessible pedestrian environment.
Public Realm / Landscaping		
Sidewalks buffered by boulevards in select areas and landscaped median islands in select areas.	Additional landscaping opportunities to be explored through the detailed design process.	To support the Urban Forest Master Plan, Parks and Open Space Master Plan, Greenways Plan and Official Community Plan.
Vehicle Speeds		
Speed limit is 50 km/hr.	Posted speed limit will be 30 km/hr.	To accommodate a safer cycling environment.
Vehicle Volumes & Circulation		
Existing traffic volumes are less than 1,000 vehicles per day.	Anticipated traffic volumes are 500 -1000 vpd. Vehicle circulation changes at Bay Street and Cedar Hill Road include restriction of left turns and north-south through movements.	Vehicle circulation changes are required to support a safe road crossing for cyclists at Bay Street and maintain low traffic volumes on Cedar Hill Road.
On-street Parking / Loading		
No change.	No change.	No change.
Road Classification		
Local Road.	No change.	No change.
Transit		
N/A.	N/A.	N/A.

Appendix F Government-Kings Connection | Bay Street - Government to Blanshard St

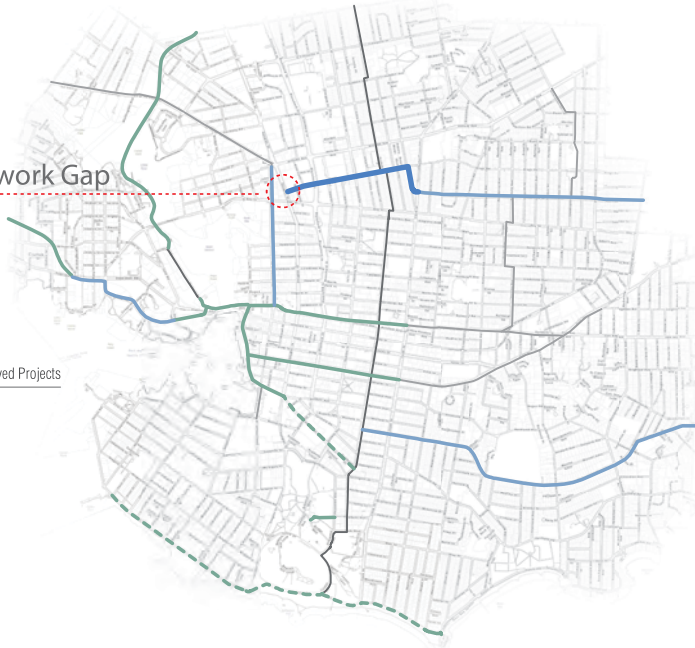
Recommended Design Overview

SECTION LOCATION



Network Gap

- 2020 AAA Projects
- 2019 / 2020 Approved Projects
- Complete
- - - In progress
- - - Future project

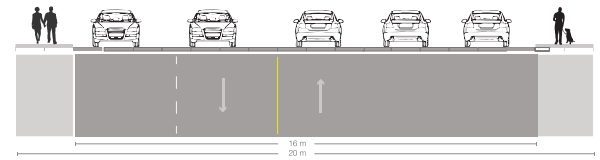


NETWORK CONTEXT:

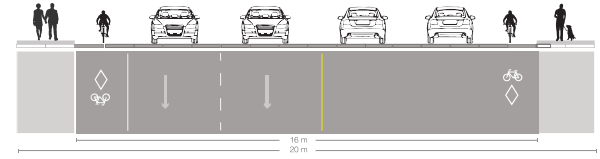
To facilitate a cycling connection between the Kings Road and Government Street AAA corridors, conventional painted bike lanes on Bay Street are being proposed to improve road user safety on Bay Street. These will be coordinated with repaving scheduled for 2021.

A long term AAA connection will continue to be pursued through property re-development.

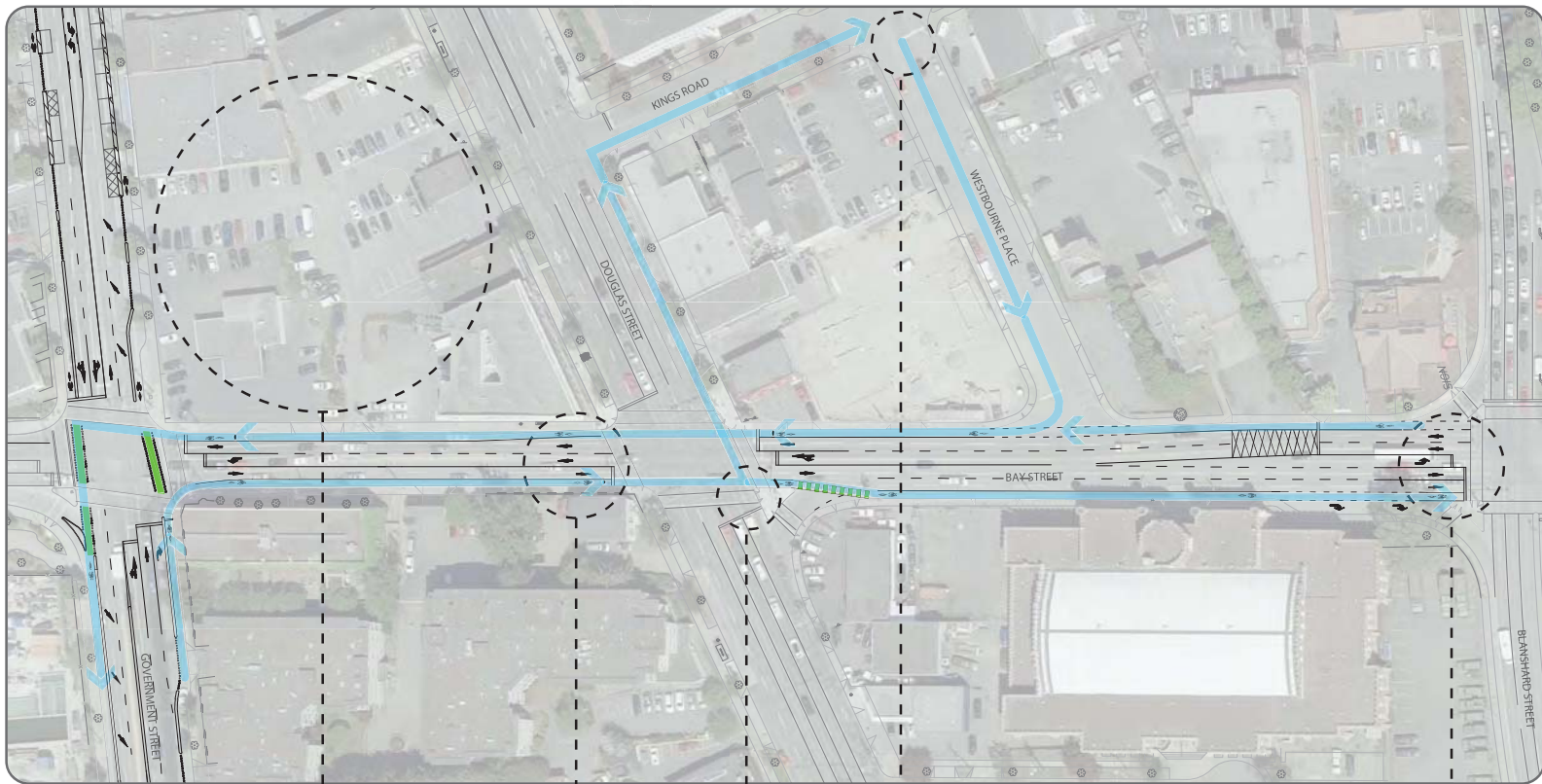
Existing Cross Section



Proposed Cross Section



*sample cross section between Douglas Street and Westbourne Place



Pursue AAA connection between Douglas Street and Government Street through future redevelopment opportunities

Eastbound left turn to be removed to improve traffic flow

Add a bike box for 2 stage turn

Connection to Kings Road AAA cycling facility

Extend painted bike lanes to connect to painted bike lanes on Blanshard Street

Government-Kings Connection | Bay Street - Government to Blanshard Street

Recommended Design Changes & Rationale

Existing Conditions	Proposed Conditions	Rationale
Cycling Facilities		
No cycling facilities.	Conventional painted bike lanes.	To improve cycling infrastructure and road user safety through future capital improvements.
Pedestrian Amenities		
Sidewalks and crossings at signalised intersections.	Further separation from vehicle lanes.	Improves the pedestrian environment
Public Realm / Landscaping		
Existing conditions illustrated in cross sections.	No identified opportunities for additional landscaping.	No change.
Vehicle Speeds		
Speed limit is 50 km/hr.	Posted speed limit to remain the same (50 km/hr).	No change.
Vehicle Volumes & Circulation		
Existing traffic volumes ~18,000 vehicles per day.	Traffic volumes anticipated to remain the same. Improved left turn circulation in select areas.	No change to traffic volumes.
On-street Parking / Loading		
0 parking stalls.	0 parking stalls.	No change.
Road Classification		
Arterial Road.	Arterial Road.	No change.
Transit		
Frequent transit service corridor	No change.	Accomodate transit service where applicable.