Presentation Overview

1. 2015 Panel Survey Results
2. Seaside Greenway
3. Comox-Helmcken Greenway Health Studies
4. Monitoring Safety
5. Zero Traffic-Related Fatalities and Serious Injuries Action Plan
1. 2015 Panel Survey Results
Pedestrian travel high but steady
People cycling up again
Transit slightly down
Vehicle trips remain about the same

Daily Trips by Mode of Travel

Source: 2013-2015 Panel Surveys, excluding recreational trips
Total Cycling Trips

Total cycling trips increased 32% from 2014 to 2015.

At 2020 target of 7% of all trips

Source: 2013-2015 Panel Surveys, excluding recreational trips
Cycling Travel to work Mode Share at 10% could be higher than any other North American City over 500k population.
The average annual distance driven per person **fell 27%** from 2007 to 2015.

Source: *ICBC Vehicle Data and AirCare Data Odometer Readings. **City of Vancouver Panel Surveys
Growing Car Share in Vancouver

% of adults who are car share members:
- 2013: 13%
- 2014: 20%
- 2015: 26%

Number of car share vehicles:
- 2014: 1169
- 2015: 2342

2. Seaside Greenway
Seaside Greenway: Estimated Average Daily Bicycle Volumes (before project)

Bicycle Counter Estimates: August 2013 Weekday

- 450-650**
- 800-1000**
- 1150-1250**
- 50-100**
- 4500*

Source: *The data provided are approximate average daily two-way bicycle volumes at each location for midweek (Tuesday to Thursday) days in August. These include averages from automatic counters and comparable estimates based on 12 hour (7am - 7pm) manual bicycle counts (with factors derived from automatic counters for 2012-2013 plus August 2014). **City of Vancouver factored estimates based on manual counts.
Seaside Greenway: Average Daily Bicycle Volumes (after project completion)

Bicycle Counter Volumes: August 2014 Weekday

The data provided are approximate average daily two-way bicycle volumes at each location for midweek (Tuesday to Thursday) days in August. These include averages from automatic counters and comparable estimates based on 12 hour (7am - 7pm) manual bicycle counts (with factors derived from automatic counters for 2012-2013 plus August 2014).
Seaside Greenway: Average Daily Bicycle Volumes (after project completion)

Bicycle Counter Volumes: August 2014 Weekend

The data provided are approximate average daily two-way bicycle volumes at each location for weekend (Saturday and Sunday) days in August. These include averages from automatic counters and comparable estimates based on 12 hour (7am - 7pm) manual bicycle counts (with factors derived from the five automatic counters for the full month of August).
Burrard Bridge Cycling Volumes

Total annual cycling trips across the Burrard Bridge increased by more than 30% after South Intersection and Seaside Greenway upgrades.

Source: Burrard Bridge Automatic Bicycle Counter Data
Minimal Impacts on Transit Travel Times

**#22 Bus Route:** No significant travel time increases during or after construction.

**#4 Bus Route:** 4th Ave traffic volumes increased and transit travel times increased ~ 30 seconds.

Source: City of Vancouver staff monitored bus travel times for selected routes before, during and after construction
3. Comox-Helmcken Health Studies
Centre for Hip Health and Mobility: Active Streets, Active People – Comox-Helmcken Greenway

Perception of Comox Greenway

On the whole, do you think that the changes are...

- Not aware of changes: 10%
- Negative: 27%
- Neutral: 18%
- Positive: 45%

Age distribution in Canada, 2016

Source: Centre for Hip Health and Mobility, Active Streets Active People – Comox-Helmcken Greenway, 2011-2015
There are facilities to bicycle in or near my neighbourhood, such as special use lanes, separate paths or trails, or shared use paths for cycles and pedestrians.
- T1: Strongly Agree/Agree: 86%
- T2: Strongly Agree/Agree: 100%

There are sidewalks on most of the streets in my neighbourhood.
- T1: Strongly Agree/Agree: 96%
- T2: Strongly Agree/Agree: 98%

Sidewalks are separated from the road/traffic in my neighbourhood by parked cars.
- T1: Strongly Agree/Agree: 94%
- T2: Strongly Agree/Agree: 97%

The distance between intersections in my neighbourhood is usually short.
- T1: Strongly Agree/Agree: 73%
- T2: Strongly Agree/Agree: 92%

The speed of cyclists on most nearby streets is usually slow
- T1: Strongly Agree/Agree: 52%
- T2: Strongly Agree/Agree: 58%

Source: Centre for Hip Health and Mobility, Active Streets Active People – Comox-Helmcken Greenway, 2011-2015
Participants:

• 473 participants (red)

• 76 participants outside 500 m study area (blue)
Population Health

Participants living near the Comox-Helmcken Greenway reported:

• a **16.1%** increase in the number of days they engaged in moderate physical activity in a week

• an **8.0%** decrease in the time spent sitting and being sedentary

• a **9.8%** decrease in the number of days of poor physical and mental health

Source: UBC Health & Community Design Lab - Study of Travel, Health, and Activity, Comox-Helmcken Greenway: 2012-2015
Overall, mode share saw an increase in bicycle and transit trips, and a decrease in auto and walking trips.

Increased perceived ease of friendship formation:
“It is easy to make friends in my neighbourhood” (mean: 2.4 -> 2.5; somewhat disagree)
4. Monitoring Safety
Data Sources

• Transportation related Fatalities – VPD
  o Summary reports as they occur
  o Annual review

• Collisions involving – ICBC
  o Annual collision review
  o Last data received for 2013 - pending database update
Traffic-Related Fatalities - Summary

Pedestrian, Cycling, and Vehicle Fatalities are Decreasing

Population Increasing

Source: VPD Traffic Fatality Data (1996-2016)
Traffic-Related Fatalities by Mode in the past 6 years

Source: VPD Traffic Fatality Data, 2011-2016
Collisions in Vancouver by road user
Source: ICBC Collision Data, 2009-2013

Fatalities in Vancouver by road user
Source: VPD Traffic Fatality Data, 2009-2013
Traffic-Related Fatalities: Where?

Traffic Fatalities by Location

- 71% Intersection
- 28% Mid-Block
- 1% Parking Lot
- 1% Unknown

95% of all fatalities occur on arterial/collector roads, which comprise only 23% of all Vancouver roads.

Traffic Fatalities by Road Type

- Arterial/Collector Roads: 95% of all fatalities, 23% of all Vancouver roads
- Local Roads: 77% of all Vancouver roads, 4% of all fatalities

Traffic-Related Fatalities: Who?

**Traffic Fatalities by Gender**

- Female: 57% Fatalities, 51% Total Population
- Male: 43% Fatalities, 49% Total Population

**Traffic Fatalities by Age**

- 0-14: 10% Fatalities, 15% Total Population
- 15-24: 10% Fatalities, 15% Total Population
- 25-34: 15% Fatalities, 20% Total Population
- 35-54: 20% Fatalities, 25% Total Population
- 55-64: 10% Fatalities, 15% Total Population
- >=65: 25% Fatalities, 30% Total Population

Traffic-Related Fatalities: How?

2015 Fatalities

- 9 pedestrians
  - Through vehicle & pedestrian: 7
  - Right Turn vehicle & pedestrian: 1
  - Parking lot: 1

- 2 motorcyclists
  - Through & through
  - Left turn & through

- 1 driver
  - Left Turn & Through

5. Zero Traffic-Related Fatalities and Serious Injuries Action Plan
• THEREFORE BE IT RESOLVED THAT Council direct staff to report back on a strategy for achieving zero traffic-related fatalities and serious injuries, including:
  o A review of best practices from other jurisdictions,
  o An action plan, and
  o A funding strategy to accelerate implementation.

• BE IT FURTHER RESOLVED THAT Council direct staff to report back with quick start actions by June, 2016, and longer-term policies by November, 2016.
Vision Zero: Peer Cities Review

• Initiated by Sweden in 1997

• Other countries in Europe
  o Netherlands
  o Norway
  o Spain
  o Finland

• North America:
  o USA: 16 cities
  o Canada: Edmonton, Ottawa, Strathcona County, Surrey, Toronto
Vision Zero: Peer Cities Review

Core Principles

• Traffic deaths are preventable and unacceptable

• Human life takes priority over mobility

• Policies at all levels of government need to align to make safety a priority
Vision Zero: Peer North American Cities Review

Key Areas of Focus

- Engineering
- Legislation
- Evaluation
- Education
- Enforcement
Vision Zero: Peer Cities Review

Key Actions

• Identify Priority Corridors with high numbers of injuries and fatality

• Engineering interventions in high priority areas
  o Targeted speed reductions
  o Intersection and corridor improvements
  o Focus on vulnerable road users

• Vision Zero Task Force
• Education and Enforcement Strategies
• Legislation changes
Vancouver Safety Progress

• Transportation 2040: Zero Traffic Related Fatality goal
• Pedestrian Safety Study and Action Plan
• Cycling Safety Study and Action plan
• Creation of Traffic Safety Advisory group
• Working on sharing serious injury data
Vancouver Compared to Other Cities

Fatalities per 100,000 inhabitants:

- Oslo: 0.6
- Stockholm: 1.0
- Copenhagen: 1.3
- London: 1.5
- Amsterdam: 1.9
- Vancouver: 2.2
- Toronto: 2.4
- Edmonton: 2.6
- New York: 3.1
- Ottawa: 3.2
- Seattle: 3.5
- Boston: 3.6
- San Francisco: 3.7
- Washington DC: 4.0
- Los Angeles: 5.2
- Portland: 5.9
Moving Towards Zero: Action Plan

1. Enhanced Data
2. Evaluate and Prioritize Locations
3. Engineering Action Plan
4. Enforcement
5. Education & Public Outreach
6. Legislation
Enhanced data evaluation to understand traffic-related severe injuries and make data-driven decisions

**Actions:**

- Work with Health partners to better understand serious injury data
- Working with ICBC to share severity of traffic related injuries
- To better understand:
  - How many severe injuries happen per year?
  - Quantify non-vehicle related incidents
Develop Collision Prediction models

- Identify priority locations based on high risk fatal & severe injuries

- Conduct a vehicle & motorcycle study
  - 37% of fatalities

- Identify priority locations based on high presence of vulnerable road users (ie. seniors)
2. Evaluate and Prioritize Locations

Example: Focus on Seniors

- Correlate serious injuries and fatalities with seniors areas
- Work with the Seniors Advisory Committee to identify strategies
### 2. Evaluate and Prioritize Locations

- **Identify priority locations by countermeasure**

<table>
<thead>
<tr>
<th>Overrepresented type of collision</th>
<th>Countermeasure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedestrian collisions after dark</td>
<td>LED Lighting</td>
</tr>
<tr>
<td>Turning vehicles &amp; pedestrians at signals</td>
<td>Leading Pedestrian Intervals</td>
</tr>
<tr>
<td>Sidewalk bike riding &amp; falling into traffic</td>
<td>Protected bike lanes</td>
</tr>
</tbody>
</table>
2. Evaluate and Prioritize Locations

Detailed safety studies at priority locations
• Automated video conflict analysis at priority ranked locations
3. Engineering Action Plan

Develop best safety practices toolkit & select the most effective solutions to address priority locations

- Validate Toolkit
- Pilot New Items
3. Engineering Action Plan

Assess effectiveness and further implement

LED Lighting
Highlight conflict zones
Left turn arrows
Protected Intersections and turn phases

Evaluate pilot programs

Rectangular Rapid Flashing Beacons
3 locations in pilot
Accessible Pedestrian Signals
2 locations in pilot
Leading Pedestrian Intervals
1 location in pilot
Lagging Right Turn Phase
Explore pilot location
3. Engineering Action Plan

Proactive safety

- All Ages and Abilities Bike Network expansion
- Active & safe travel plans to school
- Review key routes around seniors areas
- Policies for new infrastructure
  - LED lighting
  - Countdown timers
  - Sidewalks
  - Curb ramps
4. Enforcement

**Target high risk behaviors**

**Actions:**

- Work with VPD to develop targeted enforcement programs to tackle dangerous behaviors at priority locations
  - Speeding
  - Failure to yield to pedestrians
  - Failure to stop at signals
  - Improper turning
  - Disobeying signs
  - Distracted/impaired driving
5. Education and Public Outreach

Engage Vancouverites to travel safely & continue to work in cooperation with safety partners

Actions:
- Create a Vision Zero website
- Report annual progress
- Work with VPD & ICBC on safety education campaigns
- Continue to work with Traffic Safety Advisory Group
Work with the provincial government towards zero safety goal

**Actions:**

- Explore expanding red light camera locations
- Advocate for the return of speed camera enforcement
  - School & parks
  - High fatal & severe injury locations
- Request changes to blanket speed limit
- Advocate for changes under the Motor Vehicle Act to protect vulnerable road users
  - Increased penalties for dangerous driving
Next Steps

• **Serious injury data analysis**
  o ICBC
  o Healthcare organizations

• **Priority Intersection, Corridors & Neighborhoods**
  o By countermeasure
  o By vulnerable road users (ie. seniors, pedestrians etc)
  o Select top locations for deep dive

• **Engineering Action Plan**
  o Best practices toolkit
  o Quick start action plan

Report Back November 2016
Questions