Transportation 2040
Implementation Report

Walking and Cycling Safety &
Active Transportation Corridors

June 12th, 2013
ECONOMY
...supports a thriving economy while increasing affordability

PEOPLE
Healthy citizens in a safe, accessible, and vibrant city

ENVIRONMENT
City that enhances its natural environment for its people and the planet
## Transportation 2040 Implementation

### Rapid Transit on Broadway

### False Creek Bridges Infrastructure Rehab and People Movement

### Local Transit Improvements

### Walking and Cycling Safety

### Active Transportation Corridors

### Public Plazas

### Enablers/ Monitoring

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1. Recent Transportation Trends
2. Walking & Cycling Safety
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4. 2013 Active Transportation Corridors
1. Recent Transportation Trends
Transportation 2040 Targets

TRANSPORTATION PLAN TARGETS

- **2008**: 40% of all trips on foot, bike, or transit
- **2020**: at least half of all trips on foot, bike, or transit
- **2040**: at least two-thirds of all trips on foot, bike, or transit

Legend:
- Orange: Motor Vehicle
- Blue: Transit
- Green: Walk
- Pink: Bike

For all trips originating in the City of Vancouver. Source: 2008 TransLink Trip Diary, City of Vancouver 2020 and 2040 targets
Moving Towards Our Targets

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For all trips originating in the City of Vancouver. Source: 2008 and 2011 TransLink Trip Diaries. Opinions expresssed do not necessarily represent the views of TransLink.
Recent Transportation Trends

Daily Walking Trips

- ~ 50,000 new walking trips in 2011
- ~ 300,000 daily walking trips in 2011
- Almost 20% increase in walk trips

*Daily trips originating in City of Vancouver. The research and analysis is based on TransLink Trip diary.

Data and the opinions expressed do not represent the views of TransLink.
**Daily Cycling Trips**

- **Fastest growing transportation mode**
- ~ 20,000 new cyclist trips in 2011
- ~ 67,000 daily cycling trips in 2011
- Over 40% increase since 2008

*Daily trips originating in City of Vancouver. The research and analysis is based on TransLink Trip diary. Data and the opinions expressed do not represent the views of TransLink.*
Moving Towards Our Targets

“A higher proportion of girls and women walking and cycling is seen to be an indicator of the quality and safety of a city’s infrastructure.”
Percentage of girls and women riding grows over time following separation from vehicle traffic.

**Hornby Street**
- Painted bike lane (2010) 28%

Legend:
- 41% citywide average

Bar Chart:
- Hornby 2010: 28%
- Hornby 2011
- Hornby 2012
• Percentage of girls and women riding grows over time following separation from vehicle traffic

Hornby Street

Painted bike lane (2010) 28%
Separated bike lane (2011) 32%
Downtown Separated Bike Lanes

- Percentage of girls and women riding grows over time following separation from vehicle traffic

**Hornby Street**
- Painted bike lane (2010) 28%
- Separated bike lane (2011) 32%
- Separated bike lane (2012) 37%

41% citywide average
Percentage of girls and women riding grows over time following separation from vehicle traffic

**Hornby Street**
- Painted bike lane (2010) 28%
- Separated bike lane (2011) 32%
- Separated bike lane (2012) 37%

**Other North American cities**
- Portland (2012) 31%
- San Francisco (2011) 28%

41% citywide average
Our Goal is to Move Toward Zero Traffic-Related Fatalities
Pedestrians & Cyclists are Most Vulnerable

- **Collisions**
  - Motor Vehicle Occupants: 97%
  - Pedestrians, Cyclists, Motorcyclists: 3%

- **Fatalities**
  - Motor Vehicle Occupants: 42%
  - Pedestrians, Cyclists, Motorcyclists: 59%

Sources: Insurance Corporation of British Columbia, Vancouver Police Department
Pedestrian Safety Comparison to other Cities

Moving Towards Our Safety Goal

Motor Vehicle Collision Rates with Pedestrians

Walking Trips Per Day

- 2008: 247,500
- 2011: 295,400

Collision Rates Per Year Per 10,000 Daily Trips

- 2008: 20
- 2011: 16

Walking Trips: + 19%
Collision Rates: - 20%

All numbers for the City of Vancouver. Collision rates based on ICBC data averaged over 3 years (2007-2009 and 2010-2012). Trip rates based on TransLink trip diaries conducted in Fall 2008 and Fall 2011. Opinions expressed do not necessarily represent the views of TransLink.
Cycling Safety Comparison to other Cities

Moving Towards Our Safety Goal

Motor Vehicle Collision Rates with Cyclists

All numbers for the City of Vancouver. Collision rates based on ICBC data averaged over 3 years (2007-2009 and 2010-2012). Trip rates based on TransLink trip diaries conducted in Fall 2008 and Fall 2011. Opinions expressed do not necessarily represent the views of TransLink.
Moving Towards Our Safety Goal

Emerging Research

Harvard School of Public Health (May 2013)

- Has concluded that separated bike lanes are safer than cycling on roads.

- The paper “Bicycle Guidelines and Crash Rates on Cycle Tracks in the United States” studied 19 newly constructed separated bike lanes in the US and finds that bicycle/vehicle crash rates declined following construction.
2. Walking & Cycling Safety
Partnerships

Government Agencies
- ICBC
- VPD
- TransLink
- Adjacent municipalities
- Health agencies (BCHealth, Vancouver Coastal, etc)
- Port Metro Vancouver
- Motor Vehicle Branch
- Vancouver School Board

Organisations
- University partnerships (UBC, SFU, Harvard)
- BC Trucking Association
- BCAA
- Centre for Hip Health and Mobility
- Coalition Linking Health and Science for Prevention
- HUB-The Bicycle Connection
- Canadian Institute for the Blind
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<th>Cycling Safety Study</th>
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<td>Review of Best Practices</td>
<td>✔️</td>
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<tr>
<td>Consideration of Causal Factors (who, what, when where, why)</td>
<td>✔️</td>
<td>✔️</td>
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<td>Spot Improvement “toolbox”</td>
<td>✔️</td>
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<tr>
<td>Status</td>
<td>Completed May 2012</td>
<td>Underway-Complete by Dec 2013</td>
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<tr>
<td>Future Updates</td>
<td>Bi-Annual</td>
<td>Bi-Annual</td>
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Pedestrian Hot Spots

2013 Pedestrian Hot Spots identified through:
- 2012 Pedestrian Safety Study findings

Pedestrian Improvement toolkit:
- Countdown Timers
- Street Lighting
- New Traffic Signals (where warranted)
- Priority Traffic Signal Measures

Future Pedestrian Hot Spots:
- Updates to 2012 Pedestrian Safety Study
- Public feedback through 3-1-1
- Annual review of ICBC collision data
2005 – 2010 Pedestrian Related Collisions:
- 511 collisions involving pedestrians/year on average
- 12 pedestrian fatalities/year on average
14 of the top 22 pedestrian collision locations
Countdown Timers

Additional Countdown Timers:
- All new and serviced signals
- Total of 76 intersections to date
- Funding partnership with ICBC
Lighting Upgrades

- 11 of the top 22 pedestrian collision locations
• 9 additional locations where large proportion of collisions occur at night
New Traffic Signals:
Total of 21 signals in 2012/2013
- 12 ped/bike signals
- 9 full signals
Collisions related to turning vehicles

Turning movements a factor at 11 of the 22 top pedestrian collision locations
Pedestrian Scramble Intersections

- Can help reduce turning conflicts
- Can provide priority for high volumes of pedestrians crossing diagonally

- Feasibility review findings for Vancouver context:
  - Limited pedestrian benefits at intersections with short cycle lengths
  - High delay to transit, goods movement and vehicles
  - Not supported by visually impaired pedestrians

- Alternative improvement – Leading Pedestrian Interval
  “Advanced walk for pedestrians ahead of vehicles moving”
Leading Pedestrian Interval Trial

“advanced walk for pedestrians”
Cyclist Hot Spots

2013 Cycling Hotspots Identified through:
- ICBC Collision Data

Cyclist Improvement toolkit:
- Countdown timers
- Signage/ Markings & Traffic Control Upgrades
- Corridor Improvements
- Green Paint at conflict zones

Future Cyclist Hot Spots:
- Updates to 2013 Cyclist Safety Study
- Public feedback through 3-1-1
- Annual review of ICBC collision data
Top 10 Cyclist Collision Locations

2007 – 2011 Top 10 Cyclist Collision Locations
• 487 collisions involving cyclists/year on average
• Less than one cyclist fatality per year on average
Countdown Timers

- 9 out of 10 cycling collision locations
• 4 out of 10 cycling collision locations
• 2 out of 10 cycling collision locations
• 5 out of 10 cycling collision locations
2 out of 10 cycling collision locations to be further addressed in 2014 Spot Improvement Program
3. Designing for Safety & Comfort
“Make walking safe, convenient, comfortable, and delightful”

“Make cycling safe, convenient, comfortable, and fun”

For people of All Ages and Abilities (AAA)
Pedestrian Spot Improvements

Transportation 2040 Plan Work Underway:
- False Creek Bridges
- Sidewalk width standards
- Curb ramp prioritization
- Pedestrian amenities (eg. lighting, benches, etc.)

Pedestrian Improvements Through Development:
- Weather Protection
- Street trees
- Wider sidewalks
- Ped/Bike Signals
- Pedestrian friendly buildings

Pedestrian Priority Measures:
- Accommodating Slower Walk Speeds at Signals
- Opening Closed Crosswalks (review underway)
- Minimizing Requirement to Push Buttons

Designing for Safety & Comfort
Transportation 2040 Plan Work Underway:
- False Creek Bridges
- Designing for All Ages and Abilities

Cycling Improvements Identified Through:
- Public feedback
- Staff identified improvement priorities
- Completed “Comfort Index” assessments

2013 Improvement Toolkit:
- Reversing stop signs (6 locations)
- Traffic Calming & Diversion (8 locations)
- Sign Improvements/ Traffic Control (20 locations)
- Ped/ Bike Signals (2 locations)
- Green Paint (15 locations)
- Repaving (~1.5km)
Designing for All Ages and Abilities

Based on research and results of completed projects:

- Enhanced markings & signals crossing arterials
- Traffic Calming
- Separation
- Traffic Volume
  - Higher
  - Lower
- Traffic Speed
  - Lower
  - Higher

Locations:
- Hornby
- Comox (West End)
- Comox (W of Denman)
- Comox (Thurlow to Burrard)
Designing for Safety & Comfort

Moving Towards All Ages and Abilities

More Comfortable

Less Comfortable

Shared Use Lane  Bicycle Lane  Buffered Bike Lane  Local Street Bikeway  Separated Bike Lane  Off-Street Pathway

All Ages & Abilities Facilities
4. 2013 Active Transportation Corridors
2013 Active Transportation Projects

Recommendations

Point Grey Cornwall Active Transportation Corridor In Consultation

Comox Helmcken Greenway Under Construction

2013 Active Transportation Corridors Recommended for Construction

- Union Street Bikeway Upgrade
- Canada Line Bridge Connections
- North End of the Cambie Bridge
- Richards Street Buffered Bike Lane
2013 Active Transportation Projects
Union Bikeway Upgrade – Recommended for construction
2013 Active Transportation Projects

Union Bikeway Upgrade – Initial All Ages & Abilities (AAA) Design

Looking Towards Downtown – Gore to Main

One-way eastbound separated bike lane

Painted separation between parking and bike lanes

One-way westbound separated bike lane

Recommended Design Prior to Meeting with Union Street Businesses
Looking Towards Downtown – Gore to Main

- One-way eastbound shared bicycle/vehicle lane
- Plastic bollards to discourage passing
- Painted separation between parking and bike lanes
- One-way westbound separated bike lane

Recommended Design Following Meeting with Union Street Businesses
2013 Active Transportation Projects

Union Bikeway Upgrade – Recommended for construction

- Vehicle street closure
- New sidewalk
- New crosswalk
- Partial street closure
- Parking maintained next to businesses
- Updated traffic signal
2013 Active Transportation Projects
Recommendations

A: That Council approve the following Active Transportation Capital Projects

• Union Street Upgrade
• Canada Line Bridge Pedestrian and Bicycle Connection
• North End of the Cambie Street Bridge to Beatty Street

B: That Council direct the manager of Legal Services to amend the Street and Traffic and the Parking Meter By-laws