

Scona Road – Traffic Safety and Speed Mitigation Strategies



Overview

*This presentation summarizes the results
of two independent traffic safety assessments*

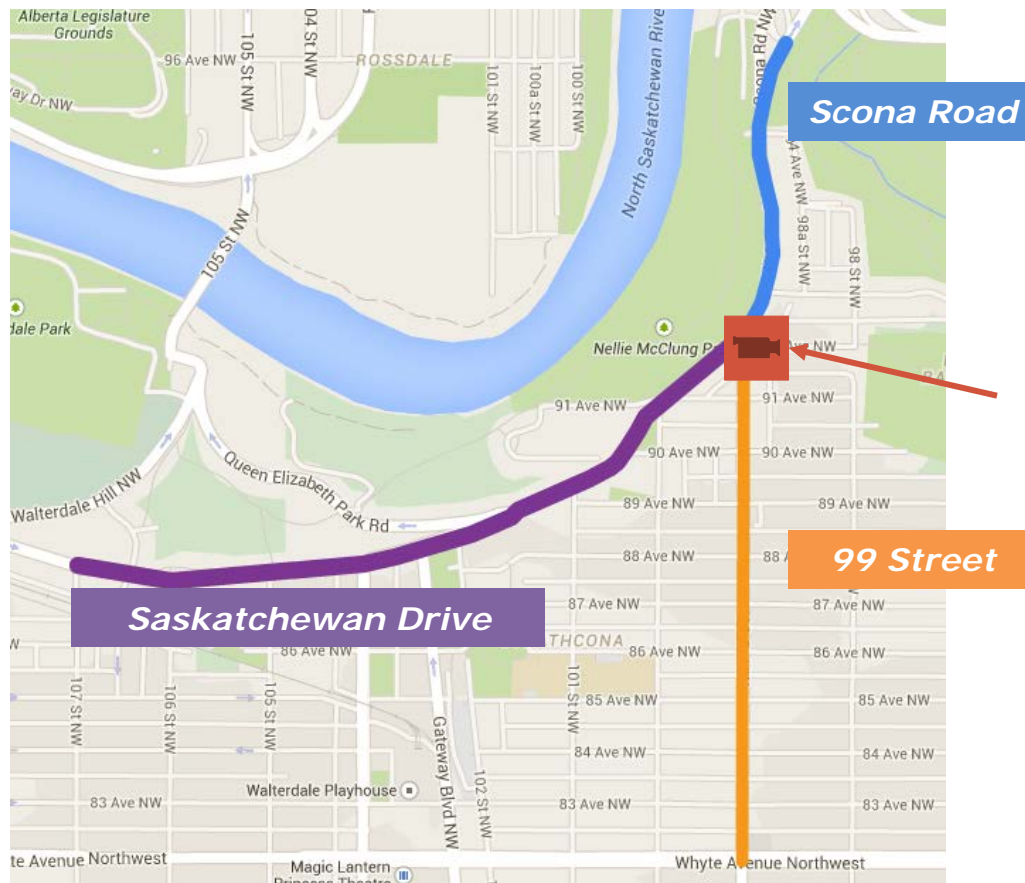


- University of Alberta
Traffic volume, speed & collision patterns



- University of British Columbia
State-of-the-art video based tool

Overview



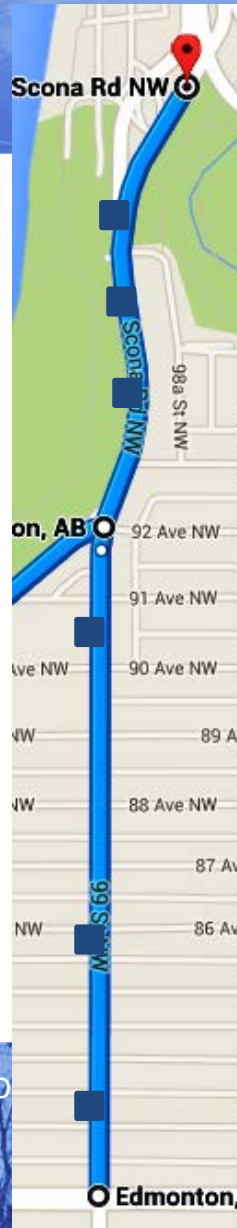
Application of
Automated
Video Analysis

Average Speed Profile



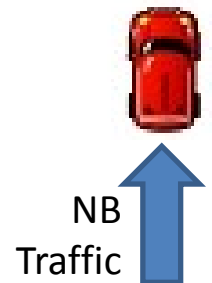
Speed Profile
Consistent
~60 km/h

Speed Profile
Consistent
~50 km/h

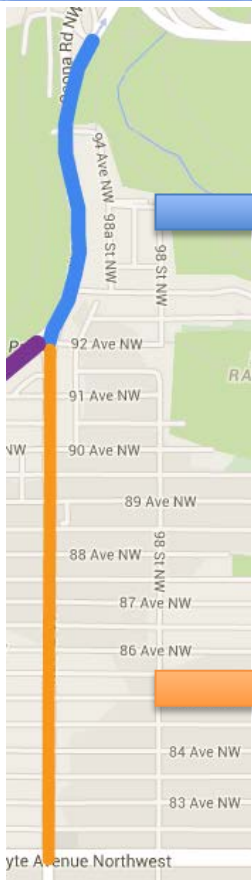


Speed Profile
Consistent
~60 km/h

Speed Profile
Consistent
~55 km/h



Collision Profile



Scona Road

After reconstruction

- No change in intersection collisions
- Collisions at midblock sections decreased in the after period

99 Street

After reconstruction

- Collisions increased at intersections closest to Scona Road
- Collisions at midblock sections decreased in the after period

Traffic Safety Assessments

Collisions

Reactive

- Lack of insight
- Requires waiting for 3+ years
- Often with serious consequences

Moving towards



Traffic Conflicts

Proactive

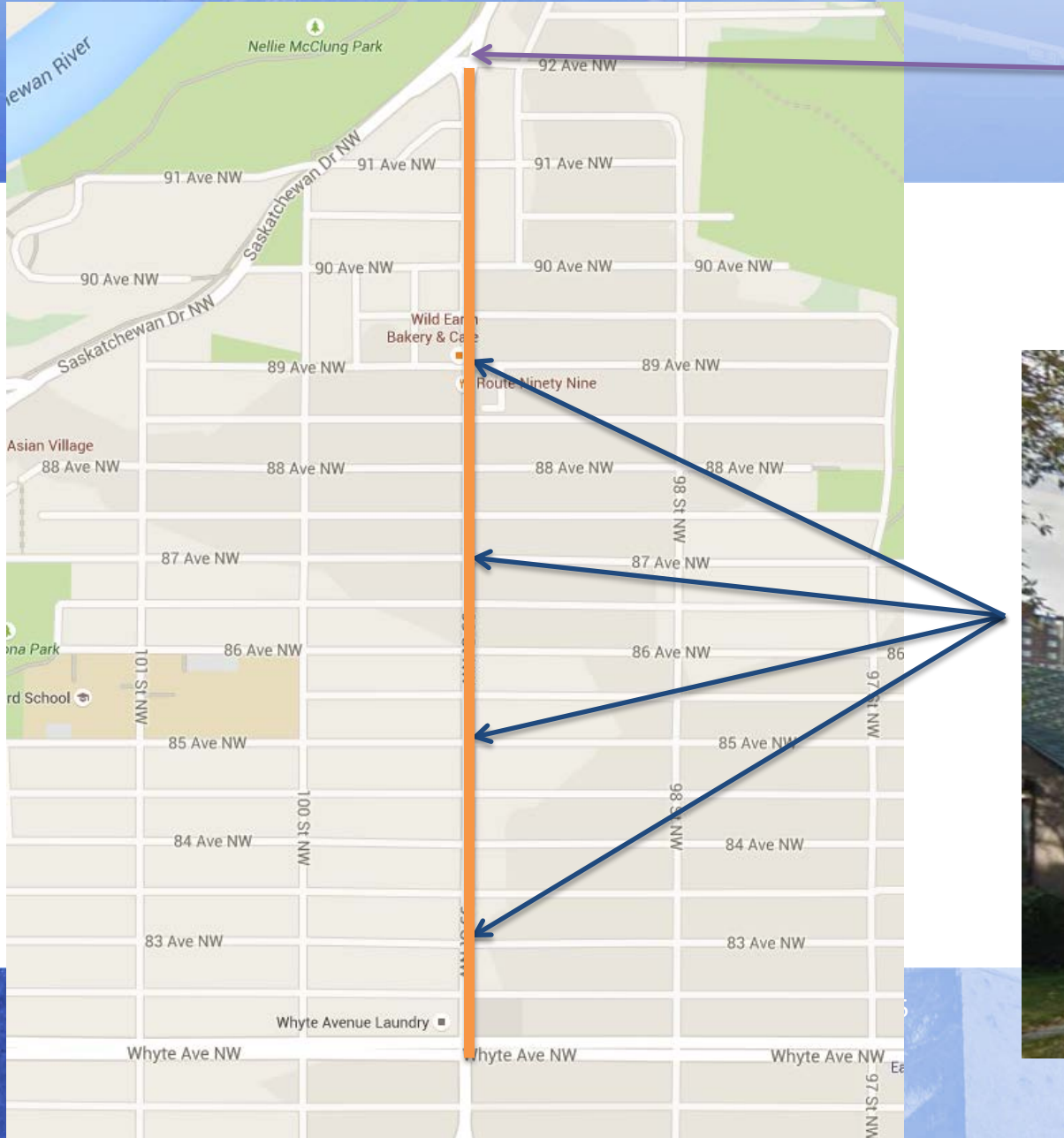
- Shorter time to evaluate safety
- Provides actual insight into behavior
- Occurs more frequently → more data

Types of Conflict

System detected following scenarios:

- Vehicle-Cyclists/Pedestrians Conflict
- Rear End Conflict
- Lane Change Conflict

Existing Pedestrian Measures



Vehicle-Cyclist/Pedestrian Conflict



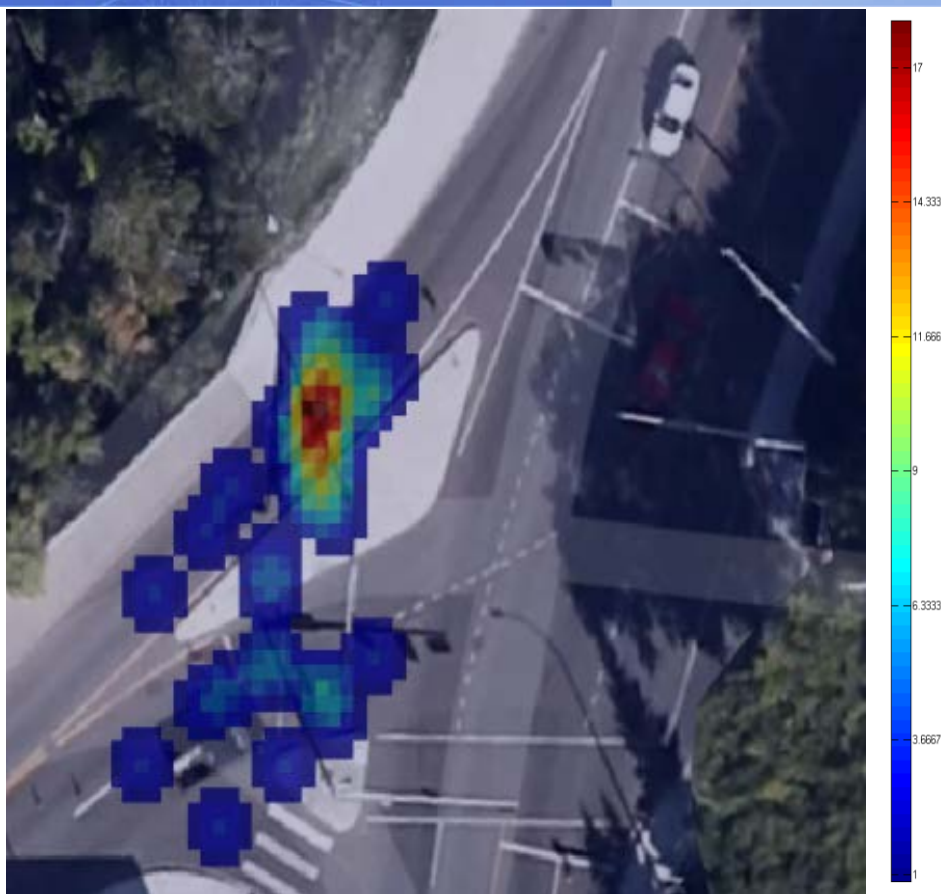
Vehicle-Cyclist/Pedestrian Conflict



Rear End Conflict



Vehicle-Cyclist/Pedestrian Conflict Summary



Lane Change Conflict



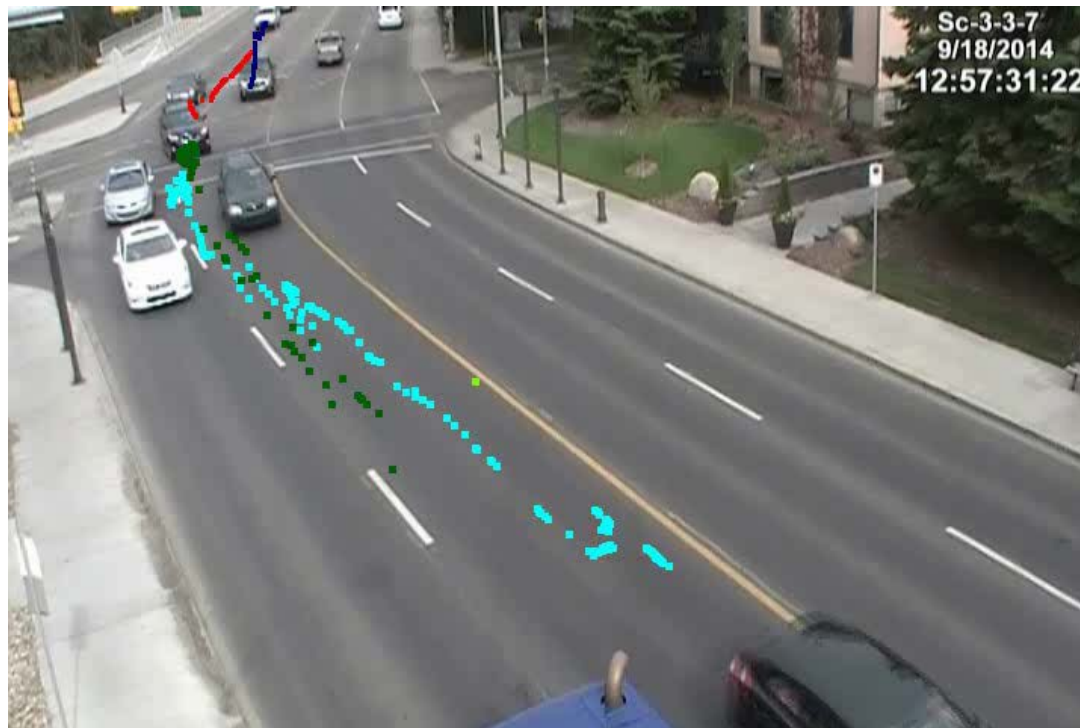
Lane Change Conflict



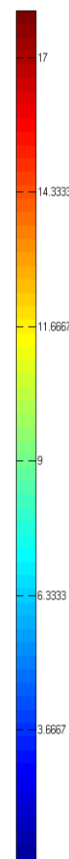
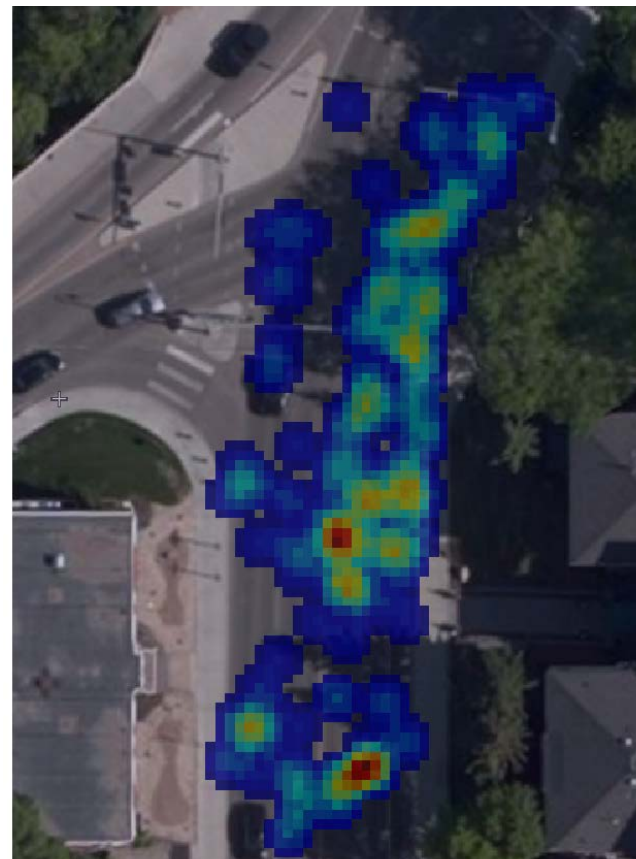
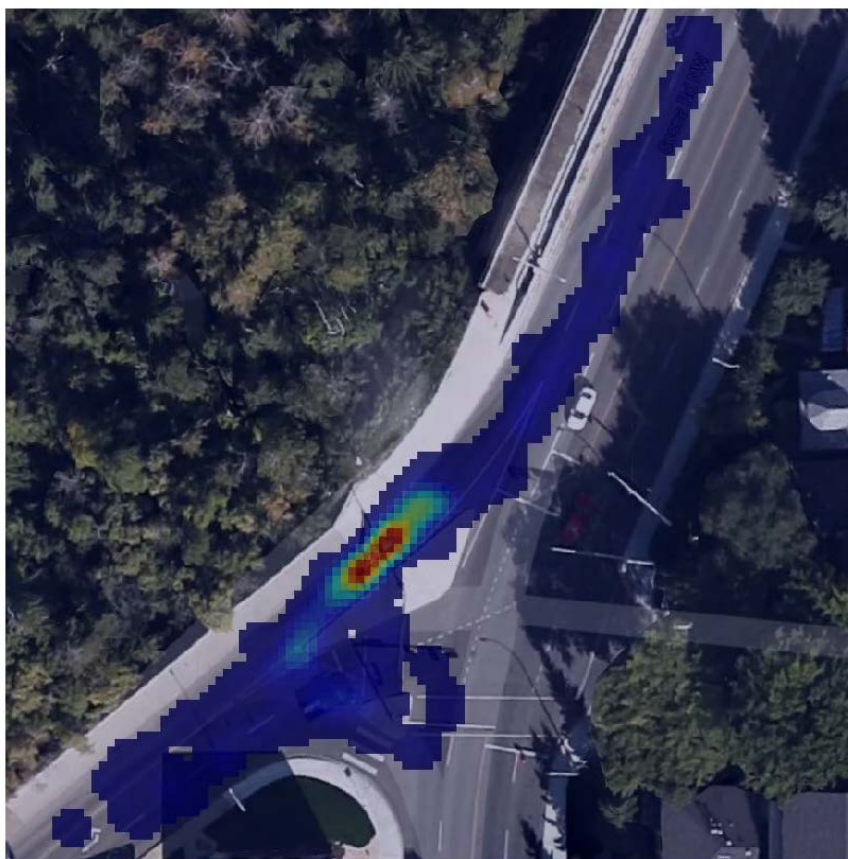
Lane Change Conflict



Lane Change Conflict



Vehicle-Vehicle Conflicts



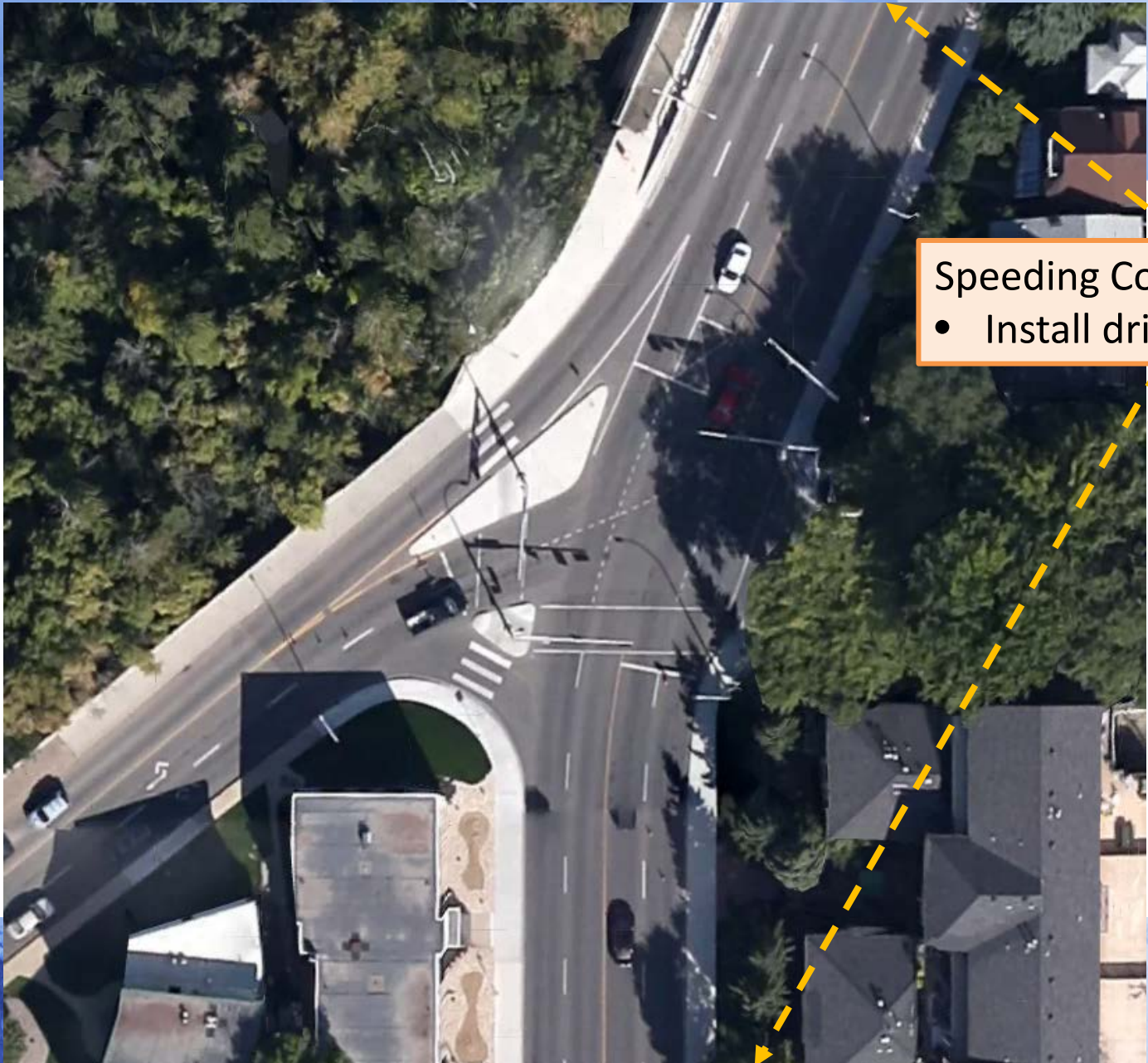
Traffic Safety Countermeasures

An aerial photograph of a road intersection. A yellow dashed arrow points from the top right towards a specific spot on the road, likely indicating the location for a countermeasure. The road has multiple lanes and a crosswalk. There are trees and houses surrounding the intersection.

Pedestrian/Cyclist measures:

- Install rapid flashing beacon
- Link to existing flasher

Traffic Safety Countermeasures

An aerial photograph of a road intersection. A dashed yellow arrow points from a text box to a speed feedback sign on the right side of the road. The sign is a rectangular white sign with a black border and a black arrow pointing to the right. The road is a multi-lane highway with a median. There are trees and houses on either side of the road.

Speeding Concerns:

- Install driver feedback signs

Traffic Safety Countermeasures

Signal Visibility:

- Addition of retroreflective tape
- Additional signal fixture

Traffic Safety Countermeasures

An aerial photograph of a road intersection. A dashed yellow line is drawn across the road, starting from the bottom left and extending towards the top right, indicating a lane change path. The road has multiple lanes with white markings. There are trees and houses visible around the intersection. A white car is visible on the road.

Improper Lane Change:

- Overhead lane use
- Bus stop relocation
- Enhanced pavement markings

Timelines

Countermeasure	Safety Concern	Timeline
Driver feedback sign	Speeding	Installed
Additional signal fixture	Signal visibility	Installed
Bus stop relocation	Improper lane changing	Moved
Overhead lane use	Driver confusion Improper lane changing	Fall 2015
Install a rapid flashing beacon	Reduced sightlines of crossing pedestrians/cyclists	Fall 2015
Enhanced pavement marking	Driver confusion Improper lane changing	Fall 2015
Retroreflective tape	Signal conspicuity	Fall 2015

The background of the slide is composed of several blue-tinted photographs. The top half shows a street scene with a crosswalk and a building. The bottom left shows a close-up of bare tree branches. The bottom right features the Edmonton logo on a dark blue background.

Questions?