

Transportation Services Department

Hunt Club Road & Riverside Drive In-Service Road Safety Review



April 20, 2020

Outline

1. Introduction and Site Context
2. Safety Analysis
 - a) Historical Collision Data
 - b) Field Investigation
 - c) Online Survey
3. Recommendations
 - a) Short-Term
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INTRODUCTION AND SITE CONTEXT

Introduction

- IBI Group was retained by the City of Ottawa to complete an In-Service Road Safety Review (ISRSR) of the Hunt Club Road & Riverside Drive intersection.
- This intersection is among the top-ranking intersections for collisions in the city.



Introduction (continued)

- The study was initiated due to concerns regarding:
 - Safety at the intersection;
 - High traffic volumes; and
 - The potential impacts of the proposed development at 3690 & 3630 Riverside Drive.

Introduction (continued)

- The purpose of the study was to review existing conditions at the intersection and to identify countermeasures to improve safety for all users.
- Recommendations were developed based on:
 - Analysis of eleven years (2008-2018) of collision records;
 - In-person field investigations; and
 - Online survey responses.

Existing Conditions

- The speed limits on Hunt Club Road and Riverside Drive are 80 km/h and 60 km/h, respectively.
- Both roadways are designated as truck routes.
- Dedicated bike lanes are provided on the east-, west- and northbound approaches as well as left-turn bike lanes on the north- and eastbound approaches.

Future Conditions

- The City of Ottawa Transportation Master Plan (TMP) proposes widening of Hunt Club Road to 6 lanes from Riverside Drive to Bank Street after 2031.
- Widening of Riverside Drive to 6 lanes between Limebank Road and Hunt Club Road is also being considered at some time after 2031.
- Transit priority measures are also proposed along Hunt Club Road at some time beyond 2031.

Future Conditions (continued)

- Both roadways are designated as major cycling routes in the City's cycling network.
- A mixed-use development is proposed at 3630 & 3690 Riverside Drive on land northwest of the intersection.

Future Conditions (continued)

- As part of the 3630 & 3690 Riverside Drive development, the following road network modifications will be implemented:
 - New signalized access intersection ~270m north of the Hunt Club Road & Riverside Drive intersection.
 - New northbound left-turn lane at the signalized access intersection.
 - Extension of the southbound right-turn lane at the Hunt Club Road & Riverside Drive intersection.

SAFETY ANALYSIS

- Three sources of information were reviewed in the study:
 - Historical Collision Data (2008-2018);
 - In-Person Field Investigations; and
 - Online Survey Responses.

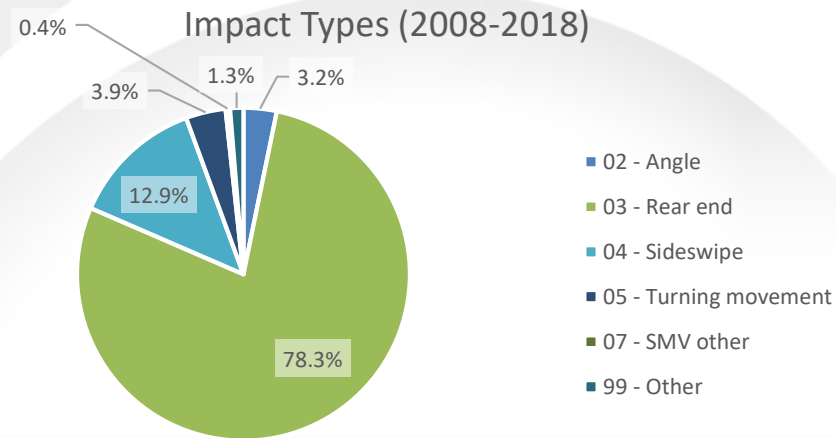
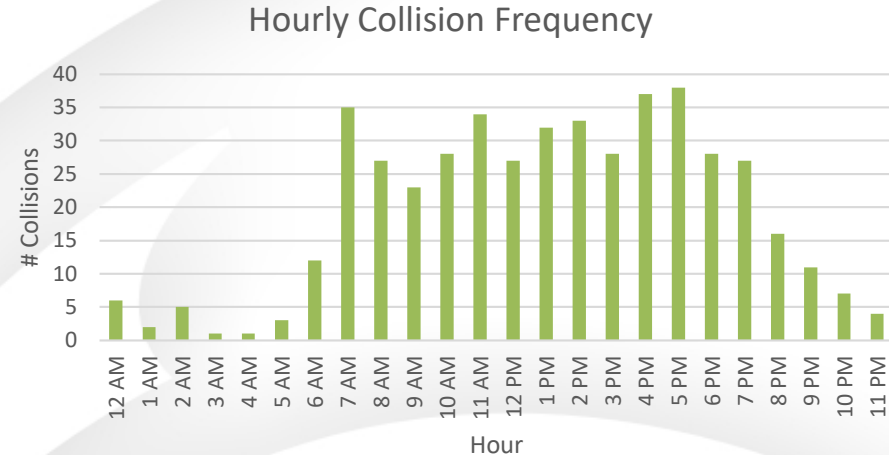
SAFETY ANALYSIS HISTORICAL COLLISION DATA

Overall Collision Trends

- 465 collisions were recorded at the intersection between 2008 and 2018 (average of ~42 per year).
- 81% resulted in property-damage only (PDO) and 19% were non-fatal injury collisions. No fatal collisions were recorded.
- Two cyclist collisions were recorded during the period and there were no collisions involving pedestrians.

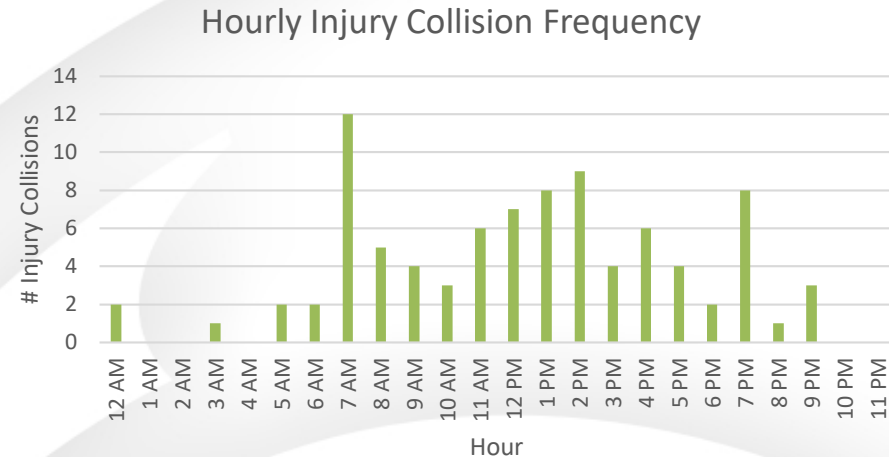
Overall Collision Trends (continued)

- Hourly collision frequencies increase sharply around 7 a.m. and begin to taper off around 5 p.m. which coincides with the peak periods of traffic at the intersection.
- The majority of collisions were rear-end collisions, followed by sideswipe, turning movement, angle, other and single motor vehicle (SMV) collisions.

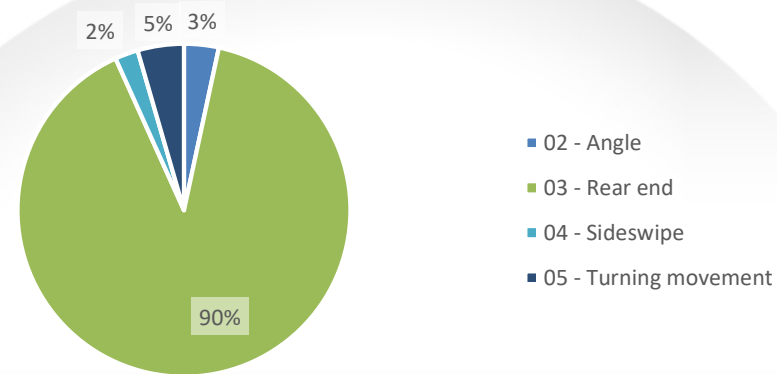


Injury Collision Trends

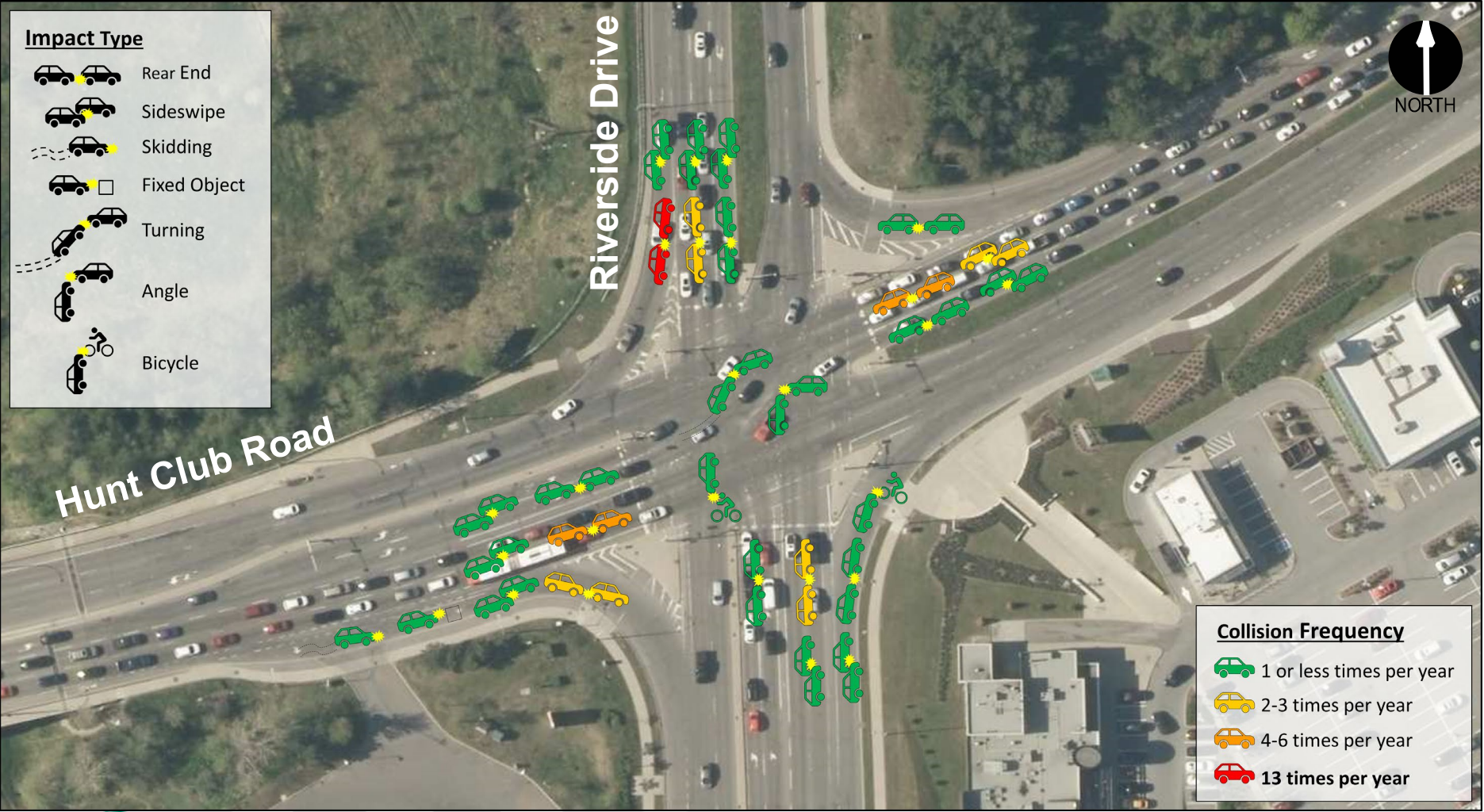
- Most injury collisions occurred during periods of high traffic.
- Rear-end collisions made up the majority of injury collisions and most occurred in the:
 - Southbound right-turn lane;
 - Eastbound through lanes; and
 - Westbound through lanes.



Impact Types (Injury Collisions, 2008-2018)



Collision Diagram: Frequency and Location of Recorded Collisions, 2008-2018



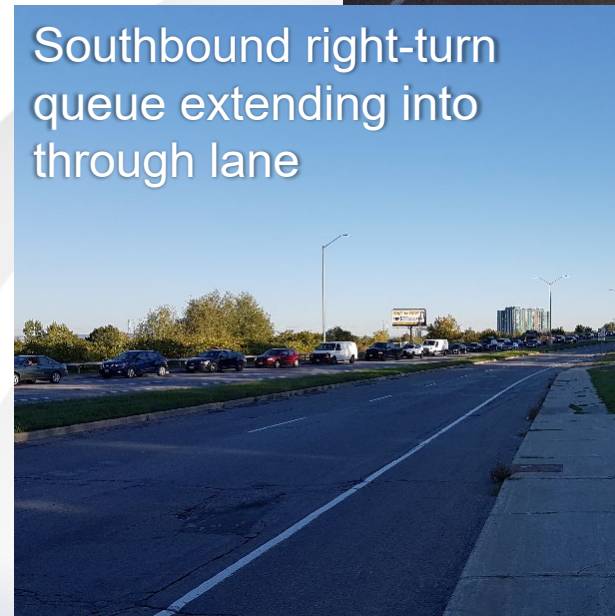
Collision Diagram (continued)

- As the collision diagram illustrates, rear-end collisions in the southbound right-turn, eastbound through and westbound through lanes were the most frequent.
- Rear-end collisions in the northbound through, southbound through and eastbound right-turn lanes as well as sideswipe collisions in the westbound through lanes occurred on average 2-3 times per year.
- Most other impact-type/direction combinations occurred less than once per year on average.

SAFETY ANALYSIS FIELD INVESTIGATION

Southbound Right-Turn

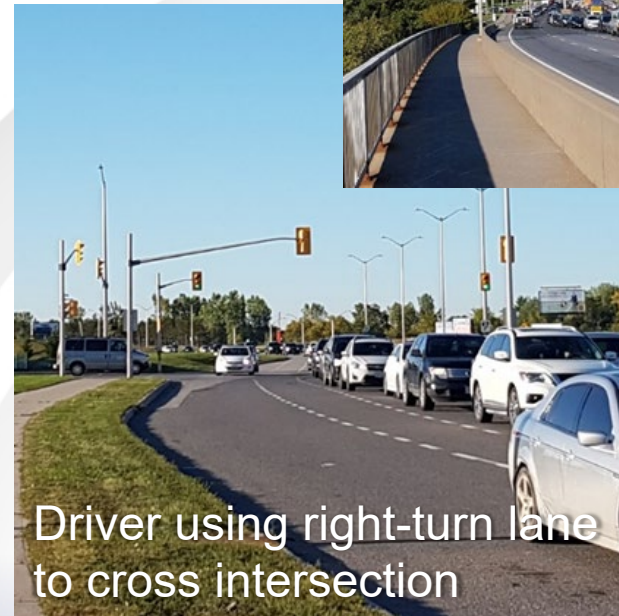
- The following were noted as possible contributing factors to issues experienced at this location:
 - Sun glare
 - Sharp angle for checking for approaching vehicles
 - Driver's need to check for both westbound through and northbound left vehicles
 - Queue spills into through lane



Other Issues Observed

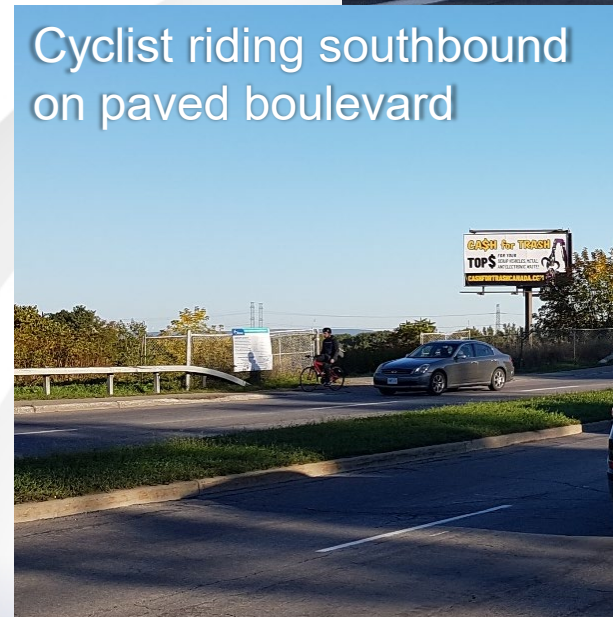
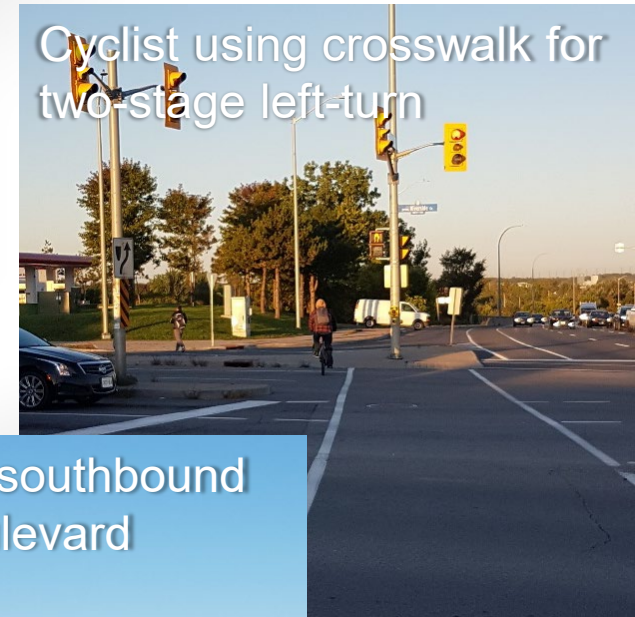
- The eastbound left-turn queue in the morning extended up to and beyond Prince of Wales Drive.
- Several driver's were observed illegally using the northbound right-turn lane into Hunt Club Marketplace to by-pass the queue and turn right onto Hunt Club Road.

Eastbound left queue spills back into eastbound through lane



Cyclists Issues

- It was observed that:
 - Cyclists prefer using the crosswalks to turn left rather than use the left-turn bike lanes provided; and
 - Some preferred riding on the paved boulevard north of Hunt Club Road rather than on the road with general traffic.



SAFETY ANALYSIS ONLINE SURVEY RESPONSES

Overall Survey Results

- The survey was conducted between November 11, 2019 to December 18, 2019.
- A total of 1,431 surveys were completed.
- The vast majority of respondents indicated that they felt there was a safety issue at the intersection and that congestion was the primary cause.
- Over half of the respondents had experienced a collision or a close call at the intersection.

Overall Survey Results (continued)

- Many of the previously identified issues were repeated by respondents, validating the findings of the data analysis and field observations.
- Other issues noted in the survey included:
 - Speeding along Hunt Club Road; and
 - Snow drifting across the southbound lanes.
- Many indicated they felt the intersection was unsafe for pedestrians and cyclists.
- A number of recommendations were made by the public to improve safety at the intersection which were considered in the evaluation of potential countermeasures.

RECOMMENDATIONS

Recommended Potential Short-Term Measures

(To be implemented in 6 months to 1 year)

1. Increase the pedestrian 'Don't Walk' phases (recently completed)
2. Consider high-visibility crosswalk markings
3. Install snow fencing along west side of Riverside Drive, north of the intersection
4. Trim vegetation in northeast corner
5. Begin Implementation of an Adaptive Traffic Signal Control System

Options for Potential Long-Term Measures (>1-5 years)

1. Convert all right-turn channels to 'smart channels'
2. Implement two-stage left-turn bike boxes (interim measure)
3. Incorporate protected intersection features such as cross-rides and cycle tracks (ultimate measure)
4. Add a southbound cycle track, replace northbound bike lane with a cycle track
5. Add a boulevard between the roadway and sidewalks on the westbound and southbound approaches
6. Review turning path delineation markings
7. Add a curb extension on the northeast corner of the Riverside Drive & Hunt Club Marketplace intersection