



BURLINGTON POLICE DEPARTMENT

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MEMORANDUM

To: Burlington City Council
Fr: Eric Fowler, Crime Analyst
Re: North Avenue Crash & Injury Data
October 12, 2016

Our department was asked to compile and review crash and injury data related to the North Avenue Pilot Project. This memorandum provides a summary of our work and findings.

Overview of Crash Data Compilation:

- Gathering the data to perform the following analyses was a multiple-step process.
 1. I extracted all car crash incidents from Valcour (the BPD's record management system) in the city of Burlington during the period 7/1-9/30 for each year from 2012 to 2016. This made up the city-wide crash sample.
 2. From this sample, I extracted all crashes that occurred in North Avenue Area A (Washington St to Plattsburg Ave) using the street address connected to the incident.
 - a. I then manually vetted each incident file on Valcour individually, examining the incident narrative as well as a scanned copy of the police report or ticket, to determine if the crash took place on a public area of the North Avenue Area A stretch or if it occurred in an adjacent parking lot or driveway. Incidents that occurred in these private areas were eliminated from the sample.
 - b. I also used this process to ascertain the type of crash that occurred and whether or not there were injuries.
 3. From this scrubbed sample I created a subset for North Avenue Area B (Route 127 to Shore Rd) using the street address connected to the incident.
 4. From here, I performed simple analyses on each sample to produce raw counts of crashes city-wide, on North Ave A, and on North Ave B as well as raw counts of crash types and crashes involving injuries for North Ave A and North Ave B.
 5. Below, I present analyses comparing these counts across years.

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*Officer James P. McGrath, end of watch May 12, 1904; Officer J. Albert Fisher, end of watch December 15, 1947;
Officer Robert W. Provost, end of watch January 13, 1954*

Summary of Crash Data:

Crashes by Year (7/1-9/30)

	2012	2013	2014	2015	2016	Change from Average
Citywide	475	513	511	503	520	+4%
North Ave A	18	18	19	23	10	-49%
Type of Crash						
Backing Into	1	0	1	0	1	0%
Broadside	7	4	2	4	1	-76%
Head On	1	1	2	2	0	-100%
Rear End	4	4	5	6	7	+47%
Roadside Obst	2	1	2	4	0	-100%
Sideswipe	2	3	5	4	1	-71%
Other/Unknown	1	5	2	3	0	-100%
North Ave B (subset of A)	13	10	8	12	6	-44%
Type of Crash						
Backing Into	1	0	0	0	0	0%
Broadside	6	2	1	3	0	-100%
Head On	1	0	2	1	0	-100%
Rear End	2	1	3	3	5	+122%
Roadside Obst	1	0	0	2	0	-100%
Sideswipe	2	2	1	2	1	-43%
Other/Unknown	0	4	1	1	0	-100%

- All crashes that occurred from 7/1-9/30 of 2012 through 2016 **CITY WIDE** including a metric comparing crashes in 2016 to the 4 year average
- All crashes that occurred from 7/1-9/30 of 2012 through 2016 in the **public** areas of **NORTH AVE A (Washington St to Plattsburg Ave)** and its encompassing intersections including a metric comparing crashes in 2016 to the 4 year average (crashes occurring in parking lots, driveways, or on adjacent streets are removed).
- A descriptive breakdown reflecting types of crashes per year in North Ave A area including a metric comparing counts of each crash type in 2016 to the 4 year average
- All crashes that occurred from 7/1-9/30 of 2012 through 2016 in the **public** areas of **NORTH AVE B - Subset of A (Route 127 to Shore Rd)** and its encompassing intersections including a metric comparing crashes in 2016 to the 4 year average (crashes occurring in parking lots, driveways, or on adjacent streets are removed).
- A descriptive breakdown reflecting types of crashes per year in North Ave B - Subset of A area including a metric comparing counts of each crash type in 2016 to the 4 year average

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Crashes Involving Injuries by Year (7/1 - 9/30)

	2012	2013	2014	2015	2016	Change from Weighted Average
North Ave A	18	18	19	23	10	-49%
Injuries	3	3	0	4	1	-60%
North Ave B (subset of A)	13	10	8	12	6	-44%
Injuries	3	1	0	3	0	-100%

- All injuries that occurred from 7/1-9/30 of 2012 through 2016 in the **public** areas of **NORTH AVE A (Washington St to Plattsburg Ave)** and its encompassing intersections including a metric comparing injuries in 2016 to the 4 year average (injuries occurring in parking lots, driveways, or on adjacent streets are removed).
- All injuries that occurred from 7/1-9/30 of 2012 through 2016 in the **public** areas of **NORTH AVE B - Subset of A (Route 127 to Shore Rd)** and its encompassing intersections including a metric comparing injuries in 2016 to the 4 year average (injuries occurring in parking lots, driveways, or on adjacent streets are removed).

Analysis:

- Crashes were up slightly city-wide during the intervention period (+4%) but down considerably in both North Ave segments (-49% and -44%).
- Injuries were down during the intervention period in both North Avenue segments (-60% and -100%) indicating that crashes in 2016 were not only fewer in number, but also less severe.
- The one exception to the overall decrease in crashes was for rear-end collision crashes, which increased 47% and 122% in the North Ave A and B respectively.
- Because of the small sample size and short duration of the pilot project, it is not possible to conclude to a degree of statistical significance that the intervention itself is the cause, and the only cause, of the reductions in crashes in the intervention areas.
- Additionally, because of the very small sample size and the short duration, it is not possible to conclude the intervention had an effect on crashes involving injuries. However, it may be interesting to note that there was only 1 accident where an injury was reported in the entirety of the intervention area during the project period 2016. That same incident involved an operator on a bicycle (the only such incident in 2016).
- Given the initial data appears to indicate a large reduction in crashes and fewer injuries along the North Avenue corridor during the intervention period, our department supports continuing the pilot project through the upcoming winter so that we can collect additional data and better evaluate the pilot's long-term safety impacts.

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