

# **HVRA 2018 TRAFFIC STUDY REPORT**

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**September 23, 2018**

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**Merrill Swain and Julian Iacobelli**

## ***ABSTRACT***

An observational study of intersections within Harbord Village was conducted by 33 HVRA volunteers to assess risks facing pedestrians due to two traffic concerns: drivers driving the wrong way on one-way streets, and drivers not stopping at intersections. The study was conducted on June 12, 2018 between the hours of 7:00 to 10:00 am and 3:00 to 7:00 pm. The results revealed that Harbord Village has a high volume of traffic (6417 vehicles were observed at 7 intersections), with some intersections experiencing double or triple that of others. Traffic volume is highest during 4-5 pm. In total, 61 drivers were observed driving the wrong way, the number varying by intersection. The greatest number of wrong-way drivers were observed between 4-5 pm. On average, 52% of all drivers failed to stop at stop signs, the percentage varying by intersection. Drivers were more likely to stop when traffic volume was highest.

Additional observations revealed that when the Robert & Harbord crosswalk was occupied, drivers frequently did not stop. U-turns are a common problem at Lippincott & Ulster. And finally, although not part of the original plans for the study, many observers commented on (some even counting) cyclist behavior, noting that cyclists regularly travelled the wrong way and rarely stopped before entering an intersection.

We call on the City of Toronto to conduct more rigorous studies of the, to date, rarely recognized risks to pedestrians on our streets. We further call on the City to enforce existing laws and to educate the public about existing laws and fines for infractions. Finally, we need to consider and pilot new street designs as well as type and location of signage.

## ***INTRODUCTION***

The City of Toronto adopted Vision Zero, a comprehensive five-year (2017-2021) action plan focused on reducing traffic-related fatalities and serious injuries on Toronto's streets.<sup>1</sup> Unfortunately, since the start of the Vision Zero campaign, 90 pedestrians or cyclists have died as of May 16, 2018<sup>2</sup>.

Toronto residents are rightly concerned over the lack of traffic safety on their streets. The Harbord Village Residents' Association (HVRA) decided to consider issues of road safety, and on November 21, 2017, the Board of the HVRA voted to establish a Transportation Committee (TC) to address membership concerns of traffic safety in the neighbourhood, for example the issue of wrong-way drivers on one-way streets. At the same Board meeting, HVRA considered a request by the Engineering Dept of the University of Toronto to be a client for a student team in a first year Design Course. The TC wrote a proposal requesting that a student team study ways to reduce the frequency of wrong-way drivers on Harbord Village streets. The TC's proposal was accepted. Thus, the undergraduate engineering team met with members of the TC on several occasions, and submitted a final report<sup>3</sup> to HVRA, approved by U of T Engineering instructors. The report suggested three potential road safety improvement designs. However, their preferred design (because it was the least expensive and most easily implementable) suggested lowering street signs to allow better visibility, painting directional arrows on the pavement, and community involvement.

Buoyed by the suggestion of community involvement, the HVRA Board asked members at the HVRA Spring General Meeting to give their suggestions for dealing with the wrong-way issue. The result of that meeting was the suggestion that volunteers from the HVRA membership conduct an observational study of the problem in order to have data to present to City Council. At a subsequent meeting of the volunteers, a number of decisions were made:

- Three goals:
  1. count the number of wrong-way drivers
  2. count the number of drivers who entered an intersection
  3. count the number of drivers who entered an intersection without stopping
- Observations would be made between 7:00 am and 10:00 am, and between 3:00 pm and 7:00 pm on Tuesday June 12, 2018 (it was felt important to conduct the observations before school ended when traffic would be more "normal" than during the summer months).
- A schedule would be established for each volunteer
- A template would be prepared for each volunteer to use (see Appendix A)
- Intersections where observations were to be made were chosen (not all intersections in HV could be observed because only 33 volunteers were available). The 9 intersections observed were (see Appendix B):
  1. Ulster/Lippincott
  2. Ulster/Borden
  3. Ulster/Brunswick
  4. Ulster/Major

5. Sussex/Brunswick
6. Sussex/Major
7. Sussex/Robert
8. Russell/Robert
9. Harbord/Robert (It turned out to be difficult to count traffic on Harbord because it was so heavy. So, in the afternoon, the observers decided to focus on the number of drivers who did not stop at the crosswalk when people were crossing)

A preliminary report was submitted to Councillor Joe Cressy and City Council on June 19<sup>th</sup>. On June 24<sup>th</sup>, Council approved a motion put forward by Councillor Cressy to replace the crosswalk with traffic lights at the intersection of Harbord & Robert. The evidence presented in the HVRA's preliminary traffic report was useful in demonstrating a need for traffic lights at this intersection.

The present document constitutes the final report of HVRA's traffic study. Thirty-three volunteers participated in this observational study. In this document, we report on the number of drivers that passed through each intersection, the percentage of those drivers who did not stop at the stop sign, and the number of wrong-way drivers. Additionally, we present information about the crosswalk at Harbord & Robert: how often drivers continued through the crosswalk when it was occupied. We also present information about U-Turns at Ulster & Lippincott. Finally, we present some limited observations about cyclists.

## ***METHODOLOGY***

### ***Choice of Intersections***

As noted above, 9 intersections were chosen for observations. In general, the intersections were chosen because volunteers lived nearby and had a personal stake in a specific corner. Wrong-way drivers had been anecdotally reported at all 9 intersections.

### ***Date and Timing of the Study***

The study took place on Tuesday, June 12 before schools in the Harbord Village area were closed for summer break. Volunteers agreed that this date would represent a normal day of traffic in the Harbord Village area. A normal day of traffic includes commuters travelling to and from work, and children getting dropped off at school in the morning and getting picked up at school in the afternoon – each of which would change during the summer months.

The hours of observation (between 7:00 – 10:00 am and 3:00 – 7:00 pm) were chosen to try and capture the “rush hour” traffic period. It was agreed by volunteers that this timing would make maximal use of volunteers’ time and offered flexibility to volunteers who could choose to work either the morning or afternoon shift.

### ***The Observations***

Volunteers were provided with template sheets (see Appendix A) and asked to put a check for each car crossing the intersection, for each car that did not make a complete stop at the stop sign, and a check for each wrong-way driver. Additionally, they were asked to comment if they observed a distracted driver (e.g, talking or texting on phone), a speeding driver, a near accident, and to note the condition of the intersection (e.g. if the signs were covered with foliage/graffiti). Volunteers were requested to use one template sheet for each hour of observation.

### ***Data Analysis***

For two intersections (Harbord & Robert, Sussex & Brunswick), the data sets were incomplete. At Harbord & Robert, as noted above, the traffic on Harbord was too heavy to count, and so, in the afternoon, the observers focused on the crosswalk. The Sussex & Brunswick intersection was only observed in the afternoon. Thus, calculations for number of vehicles and wrong-way drivers are based on the remaining 7 intersections.

Calculations for no-stop drivers are based on only 6 intersections. One additional intersection (Ulster & Lippincott) was dropped from the analysis because no-stops were noted for almost all drivers, whereas observers at other intersections accepted “rolling stops” as stops because they could see that drivers slowed down before entering the intersection. The discrepancy between the Ulster & Lippincott data and other intersections was large enough to consider the Ulster & Lippincott data to be “outliers” and thus were not included in the analysis.

The check marks were counted and double-checked. Averages and percentages were calculated using Excel. The results are displayed by intersection and by time.

## ***STUDY LIMITATIONS***

### ***Choice of Intersections***

Observation of every intersection within Harbord Village was unattainable due to lack of human resources. Furthermore, none of the intersections with Bathurst, Spadina, Bloor or College were observed.

### ***Data Collection***

Volunteers were not given a “training session” on data collection. Despite each volunteer having the same template, there were inconsistencies in how the counts were recorded, some occasionally being idiosyncratic or illegible. Additionally, there were inconsistencies in how volunteers defined “a complete stop” which sometimes did and sometimes did not include “a rolling stop”, depending on the characteristics of the “rolling stop” (e.g. did the driver look both ways; did the driver apply his/her brakes, etc) which was based on the observer’s judgment as to whether what the driver had done was “safe” in the context. In a future study, it would be important to make clear the meaning of “a complete stop”, which would ensure more reliability of the data collected.

### ***Hourly observation period***

Our data collection template and excel spreadsheets were created with full one-hour collection periods in mind. However, some observers either did not complete a full hour, or completed with odd time slots (e.g. 8:40 am to 9:50 am). In order to correspond to our excel spreadsheets, it was necessary at times to estimate the hourly counts from the existing data.

### ***Length of study***

The study was held on one day in June for a total of 7 hours. Data collected over a longer period of time would have been preferable.

## ***RESULTS***

### ***Number of Vehicles Crossing Intersections***

A total of 6417 vehicles were tallied across the 7 intersections for which we have complete data. Note that this does not mean that 6417 unique cars passed through these intersections as the same driver may have driven through 5 different intersections. The average number of cars per intersection is 917. However, as shown in Figure 1, there is significant variation across



intersections. The most populated intersection for cars to the least populated are: Ulster & Lippincott (1314), Ulster & Borden (1272), Ulster & Brunswick (1190), Sussex & Robert (855), Sussex & Major (700), Ulster & Major (651), Russell & Robert (435). Interestingly, the greatest quantity of traffic is at the three intersection closest to Bathurst. Perhaps this suggests that drivers wish to avoid Bathurst more than Spadina? Or perhaps drivers are making their way to and from King Edward School?

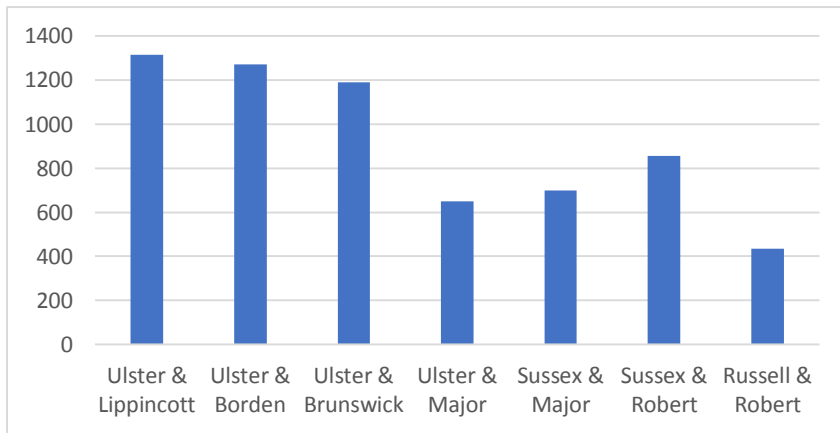


Figure 1: Total number of cars for 7 Intersections (Ulster & Lippincott, Ulster & Borden, Ulster & Brunswick, Ulster & Major, Sussex & Major, Sussex & Robert, Russell & Robert)

Figure 2 shows the total number of cars by time. There is a large increase in traffic volume from 7-8 am to 8-9 am. The greatest volume of traffic occurs during the 4-5 pm time slot, and then begins to decrease. As we will see, this may account for the percentage of no-stop vehicles (Figure 8) as there appears to be an inverse relationship between volume of traffic and percentage of no-stops.

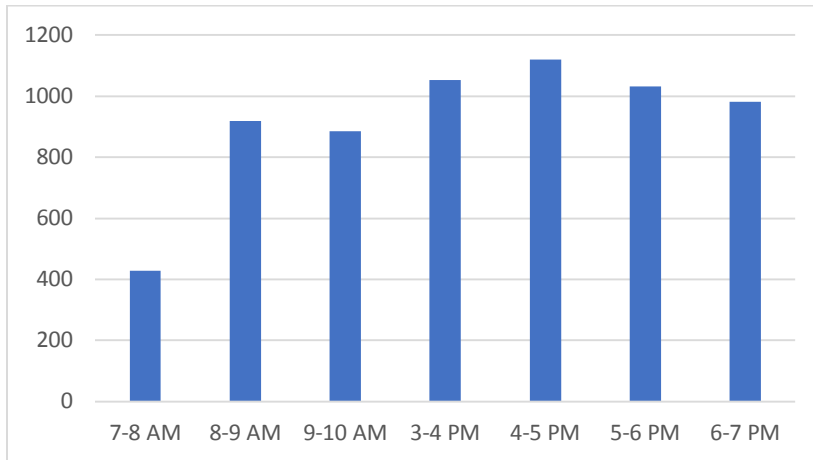


Figure 2: Total number of cars by time for 7 intersections (Ulster & Lippincott, Ulster & Borden, Ulster & Brunswick, Ulster & Major, Sussex & Major, Sussex & Robert, Russell & Robert)

### ***Wrong-way Drivers***

As Figure 3 illustrates, 53 drivers were observed travelling the wrong way across the 7 focal intersections (Note, however, that in the 4-hour observation time at Sussex & Brunswick, 5 wrong-way drivers were observed, and in the 5-hour observation time at Harbord & Robert, 3 wrong-way drivers were observed. *Thus, the total number of wrong-way drivers observed was 61.*) Sussex & Robert experienced the highest number of wrong-way drivers (a total of 13). This a significant spike in wrong-way drivers compared to the other intersections which are in the range of 5-8 drivers. This spike is related to four frustrated drivers caught behind a garbage truck on Robert who chose to back up and go east (wrong way) on Sussex (see Appendix D). Not considering these frustrated drivers, Sussex & Robert still topped the list with 9 wrong-way drivers observed.



Figure 3: Total Number of Wrong-Way Drivers for 7 intersections (Ulster & Lippincott, Ulster & Borden, Ulster & Brunswick, Ulster & Major, Sussex & Major, Sussex & Robert, Russell & Robert)

As shown in Figure 4, when wrong-way driving is analyzed with respect to time, the greatest number of wrong-way drivers (14) were observed during the 4-5 pm range.

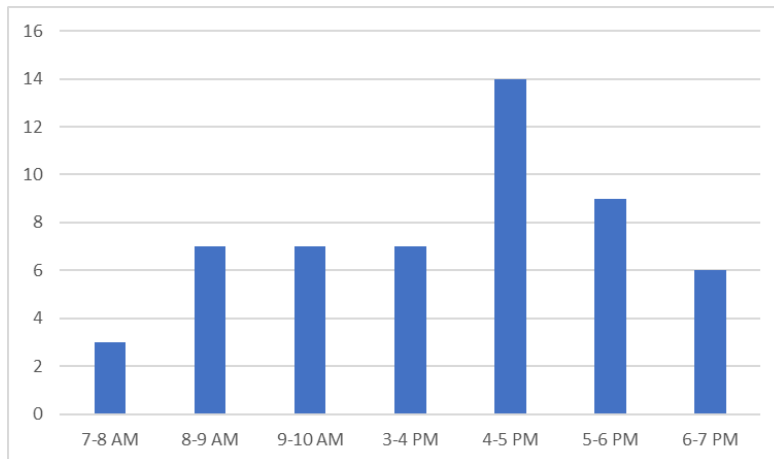


Figure 4: Total number of wrong-way drivers by time for 7 intersections (Ulster & Lippincott, Ulster & Borden, Ulster & Brunswick, Ulster & Major, Sussex & Major, Sussex & Robert, Russell & Robert)

### *No-stop Drivers*

Figure 5 shows the number of vehicles that passed through an intersection (blue bar) alongside the number of those vehicles that did not stop at the stop sign (orange bar). Ulster &

Borden had the greatest number of vehicles (1272) and no-stop vehicles (640) across the 6 intersections.

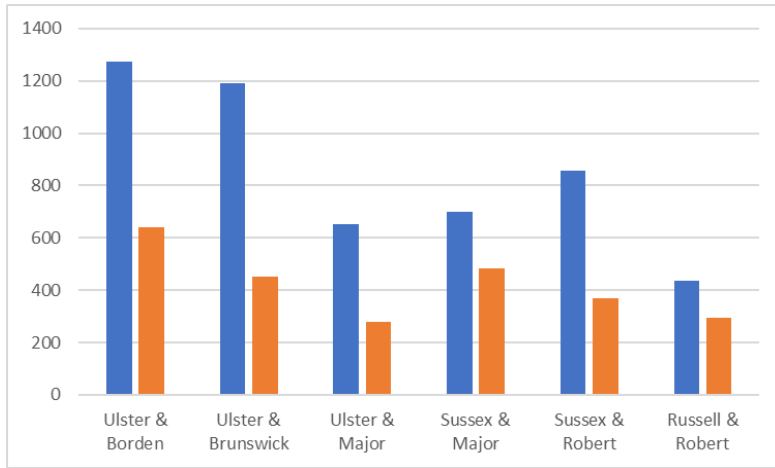


Figure 5: Total number of vehicles (blue bar) and no-stop vehicles (orange bar) for 6 intersections (Ulster & Borden, Ulster & Brunswick, Ulster & Major, Sussex & Major, Sussex & Robert, Russell & Robert).

In Figure 6, the no-stop drivers have been calculated as a percentage of all the drivers who passed through the intersection. The highest percentages are at Sussex & Major (69%) and Russell & Robert (68%). The lowest percentage is at Ulster & Brunswick (38%). Overall, 52% of all drivers failed to come to a complete stop at stop signs.

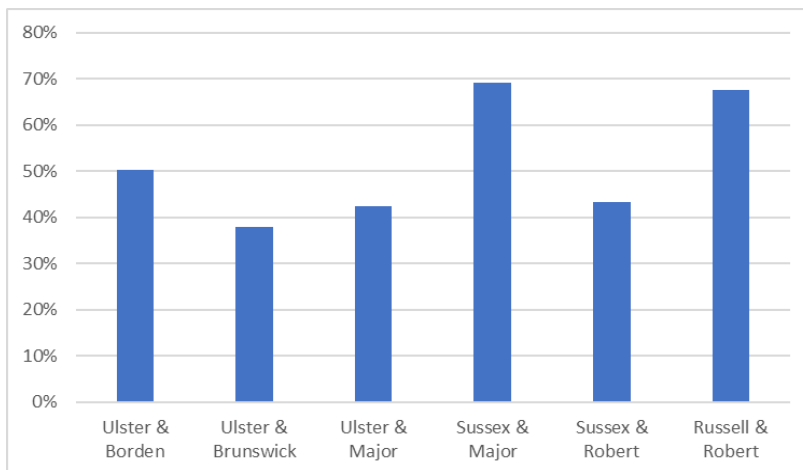


Figure 6: Percentage of no-stop drivers for 6 intersections (Ulster & Borden, Ulster & Brunswick, Ulster & Major, Sussex & Major, Sussex & Robert, Russell & Robert)

Figure 7 shows the total number of no-stop drivers by time; whereas Figure 8 shows the percentage of no-stop drivers by time. The lowest total number of no-stop drivers was found in the 7-8 am range (207). However, 7-8 am represented the highest percentage of no-stop drivers (63%). After the 7-8 am range, the total number of no-stop drivers fluctuates between a minimum of 324 cars and a maximum of 468 cars. However, a trend is noticeable for the percentage of no-stop drivers as time passes. The percentage of no-stop drivers decreases slowly until it reaches a minimum of 35% during the 4-5 pm range. It then increases from 35% to 58% for the 6-7 pm time period.

The trend noted in the percentages of no-stop drivers suggests that when the traffic is greatest (see Figure 2), drivers are more likely to stop at stop signs. This corresponds to general comments made by observers on their template sheets (see Appendix D), which also suggest that drivers are more likely to stop when pedestrians are evident.

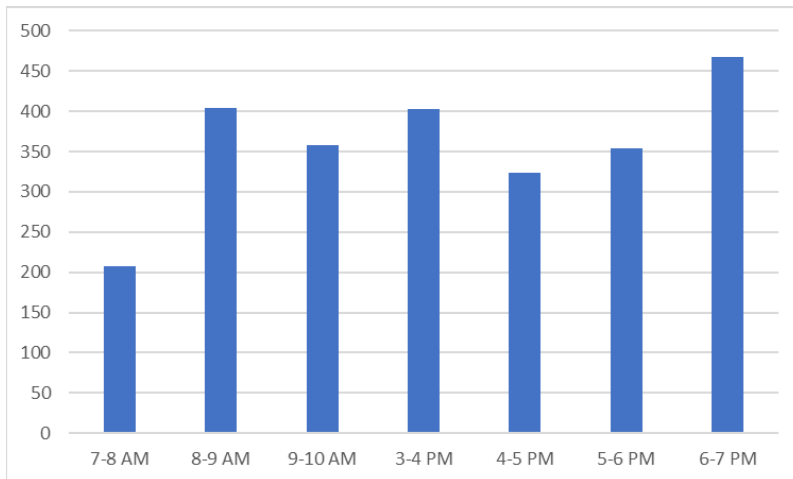


Figure 7: Total no-stop vehicles by time for 6 intersections (Ulster & Borden, Ulster & Brunswick, Ulster & Major, Sussex & Major, Sussex & Robert, Russell & Robert)

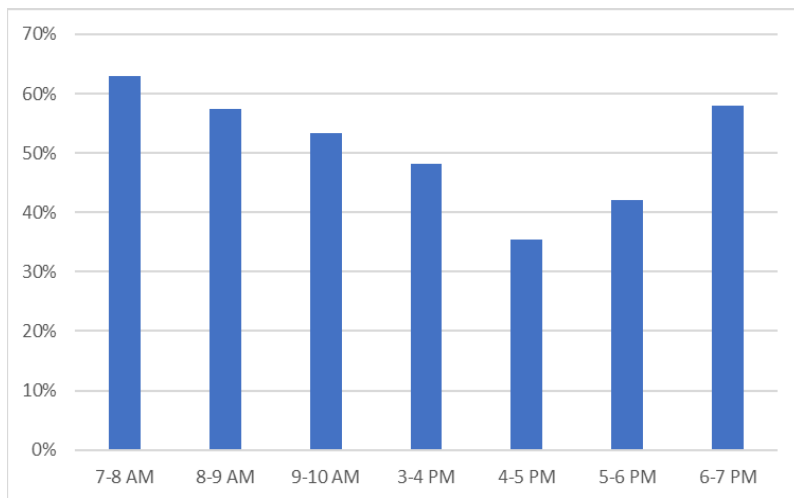


Figure 8: Percentage of no-stop vehicles by time for 6 intersections (Ulster & Borden, Ulster & Brunswick, Ulster & Major, Sussex & Major, Sussex & Robert, Russell & Robert)

### ***Crosswalk at Harbord & Robert***

Those observing at Harbord & Robert turned their attention to the crosswalk during the afternoon as they had seen a number of violations during the morning. From 3:00 pm to 7:00 pm, 418 persons used the crosswalk with the light flashing and during those occasions 136 vehicles did not stop at the crosswalk. The breakdown by hour is:

3-4 pm -- 89 people crossed; 28 drivers did not stop at the crosswalk

4-5 pm – 106 people crossed; 40 drivers did not stop at the crosswalk

5-6 pm – 101 people crossed; 31 drivers did not stop at the crosswalk

6-7 pm – 122 people crossed; 37 drivers did not stop at the crosswalk

### ***U-Turns at Ulster & Lippincott***

A different traffic concern appeared regularly at Ulster & Lippincott. Drivers entered the traffic maze from Bathurst onto Ulster St and then, probably realizing they could not continue east along Ulster St, made a U-turn and returned to Bathurst Street. This happened 12 times during the observation period.

A similar problem could arise for those entering the maze from Spadina onto Sussex going west. However, no U-turns were reported at Sussex & Robert. But 4 drivers went west on

Sussex (wrong way) (see Appendix D), so perhaps rather than make a U-turn, they continue west on Sussex?

### *Cyclists*

A number of observers chose to either count or comment on cyclist behavior (see Appendix D). Most cyclists were observed going the wrong way. In other words, cyclists continued in the direction they were headed which inevitably meant, given the maze, they travelled sometimes the right way on the street and sometimes the wrong way. Additionally, cyclists were rarely observed to stop at an intersection. Occasionally they slowed at an intersection, but just as frequently, they cycled through the intersection without slowing down at all.

## ***SUMMARY AND DISCUSSION***

This study was undertaken to better understand the risks to pedestrian safety by documenting the extent to which drivers travel on HV streets going the wrong way as well as the extent to which drivers do not stop at stop signs. Our findings are summarized below:

- HV has a high volume of traffic, with some intersections experiencing double or triple that of others.
- Traffic volume is highest during 4-5 pm.
- 61 wrong-way drivers were observed, the number varying by intersection.
- The greatest number of wrong-way drivers were observed between 4-5 pm.
- 52% of all drivers failed to stop at stop signs, the percent varying by intersection.
- Drivers were more likely to stop when traffic volume was highest.
- When the crosswalk was occupied, drivers frequently did not stop.
- U-turns are a common problem at Lippincott & Ulster
- Cyclists regularly travelled the wrong way and rarely stopped at stop signs.

These results suggest that pedestrians, cyclists and motorists are at risk on Harbord Village streets. Pedestrians, cyclists and drivers expect and rely on observance of the rules of the road. Safety is put at significant risk when these expectations are not met, and they are not being met in Harbord Village. There is a consistent pattern of disregard for traffic laws and the risks that drivers pose to pedestrians. Our findings suggest residents in downtown neighbourhoods are facing an unacceptable and, so far, invisible level of daily risk on our inner streets.

## ***RECOMMENDATIONS***

To enhance safety for everyone in Harbord Village, the HVRA Transportation Committee suggest there is an immediate need for:

1. Enforcement of existing laws by:
  - a. increasing traffic police presence in the Harbord Village area
  - b. use of technology such as cameras
  - c. following through with those who report wrong-way driving
2. Education of the public about existing laws, fine infractions, etc.
3. Consideration of new street design and signage and introduction, for example, of clearly marked cycle paths, etc.
4. A systematic and rigorous study of the issues.

Should other Resident Associations or groups wish to conduct a study for their local needs, HVRA prepared a “How To” document available at <https://harbordvillage.com/wp-content/uploads/2018/06/HVRA-Road-Safety-Audit-How-To-v-2-2.pdf>.

## ***CONCLUDING STATEMENT***

The frequency of traffic violations suggests Harbord Village to be an ideal site for a pilot safety audit and for testing the efficacy of various solutions.

## ***FOOTNOTES***

1. City of Toronto. (2017, December 06). Vision Zero Plan Overview. Retrieved from <https://www.toronto.ca/services-payments/streets-parking-transportation/road-safety/vision-zero/vision-zero-plan-overview/>
2. Harris, T. (2018, May 17). Nearly two years since Toronto announced Vision Zero, the city is on pace for its deadliest year for pedestrians and cyclists. Retrieved from <https://www.thestar.com/news/gta/2018/05/16/nearly-three-years-since-toronto-announced-vision-zero-pedestrian-and-cyclist-deaths-are-not-declining.html>
3. *Harbord Village: One Way Street Project*. (2018, March 10). Retrieved <https://harbordvillage.com/wp-content/uploads/2018/04/Engineering-student-report-with-disclaimer-2018.pdf>



**APPENDICES**

**Appendix A: Data Collection Template**

**NB: EACH SHEET COVERS ONE HOUR OF OBSERVATION**

Name \_\_\_\_\_ Email \_\_\_\_\_

Phone number \_\_\_\_\_ Intersection \_\_\_\_\_

Time (Start) \_\_\_\_\_ Time (End) \_\_\_\_\_

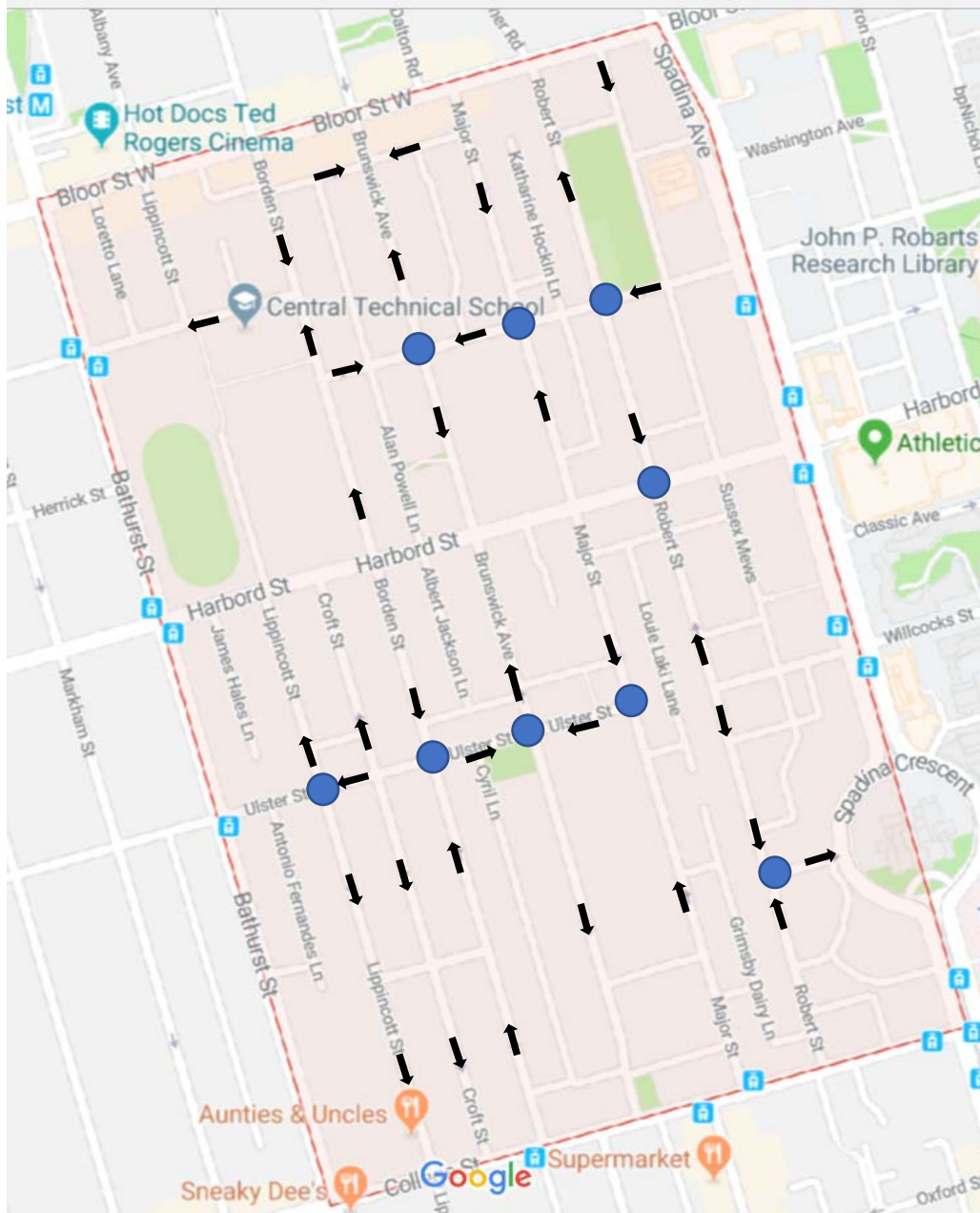
<b>Total Number of Cars Crossing Intersection</b> (put a check for each car)	<b>Wrong-Way Drivers</b> (put a check for each wrong-way driver, and note direction going)	<b>No-Stop Drivers</b> (put a check for each car that does not make a complete stop at stop sign)	<b>Comments</b> e.g. distracted driver (talking or texting on phone), speeding, near accident
Total:	Total:	Total:	

Condition of Intersection: (e.g. signs covered by foliage/graffiti)

General Notes:

Scan and email results to [transportation@harbordvillage.com](mailto:transportation@harbordvillage.com) or hand deliver to **49 Ulster Street (black mail box)**.

*Appendix B: Intersections Observed*



Appendix B: A map of Harbord Village taken from maps.google.ca. Access to this image can be found at: <https://www.google.ca/maps/place/Harbord+Village,+Toronto,+ON/@43.6613907,-79.4093621,16z/data=!4m5!3m4!1s0x882b3495277f4709:0x9e26feccc7f552e318m2!3d43.661904!4d79.4042712>. Blue circles identify the intersections studied and black arrows identify one-way streets have been overlaid onto the Google map image.

## Appendix C: Complete Data Set

		Ulster & Lippincott		Ulster & Borden		Ulster & Brunswick		Ulster & Major		Sussex & Brunswick		Sussex & Major		Sussex & Robert		Russell & Robert		Harbord/Robert - N/S		Total	%
			%		%		%		%		%		%		%		%		%		
7-8 AM	Number of vehicles	99	100%	63	100%	101	100%	42	100%	N/A	N/A	60	100%	41	100%	22	100%	16	100%	444	100%
	Wrong Way	1	1%	0	0%	0	0%	0	0%	N/A	N/A	1	2%	1	2%	0	0%	0	0%	3	1%
	No Stop	69	70%	36	57%	47	47%	31	74%	N/A	N/A	52	87%	29	71%	12	55%	0	0%	276	62%
	U-Turn	1	1%	0	0%	0	0%	0	0%	N/A	N/A	0	0%	0	0%	0	0%	0	0%	1	0%
8-9 AM	Number of vehicles	215	100%	215	100%	151	100%	38	100%	N/A	N/A	67	100%	126	100%	106	100%	37	100%	955	100%
	Wrong Way	1	0%	0	0%	0	0%	0	0%	N/A	N/A	0	0%	5	4%	1	1%	1	3%	8	1%
	No Stop	83	39%	111	52%	48	32%	33	87%	N/A	N/A	63	94%	83	66%	66	62%	0	0%	487	51%
	U-Turn	1	0%	0	0%	0	0%	0	0%	N/A	N/A	0	0%	0	0%	0	0%	0	0%	1	0%
9-10 AM	Number of vehicles	215	100%	154	100%	176	100%	70	100%	N/A	N/A	90	100%	100	100%	81	100%	49	100%	935	100%
	Wrong Way	0	0%	0	0%	0	0%	0	0%	N/A	N/A	1	1%	4	4%	2	2%	0	0%	7	1%
	No Stop	83	39%	57	37%	46	26%	38	54%	N/A	N/A	84	93%	58	58%	75	93%	0	0%	441	47%
	U-Turn	5	2%	0	0%	0	0%	0	0%	N/A	N/A	0	0%	0	0%	0	0%	1	2%	6	1%
3-4 PM	Number of vehicles	215	100%	192	100%	200	100%	125	100%	115	100%	134	100%	110	100%	76	100%	47	100%	1214	100%
	Wrong Way	1	0%	2	1%	1	1%	2	2%	2	2%	0	0%	1	1%	0	0%	2	4%	11	1%
	No Stop	24	11%	116	60%	47	24%	62	50%	81	70%	67	50%	55	50%	56	74%	5	11%	513	42%
	U-Turn	2	1%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	2	0%
4-5 PM	Number of vehicles	205	100%	250	100%	191	100%	116	100%	73	100%	106	100%	212	100%	39	100%	71	100%	1263	100%
	Wrong Way	2	1%	3	1%	4	2%	1	1%	2	3%	1	1%	2	1%	1	3%	0	0%	16	1%
	No Stop	8	4%	138	55%	32	17%	32	28%	43	59%	58	55%	41	19%	23	59%	22	31%	397	31%
	U-Turn	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
5-6 PM	Number of vehicles	190	100%	235	100%	200	100%	130	100%	73	100%	111	100%	125	100%	41	100%	N/A	N/A	1105	100%
	Wrong Way	1	1%	0	0%	3	2%	1	1%	0	0%	2	2%	0	0%	2	5%	N/A	N/A	9	1%
	No Stop	9	5%	97	41%	101	51%	18	14%	45	62%	66	59%	43	34%	29	71%	N/A	N/A	408	37%
	U-Turn	3	2%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	N/A	N/A	3	0%
6-7 PM	Number of vehicles	175	100%	163	100%	171	100%	130	100%	82	100%	132	100%	141	100%	70	100%	N/A	N/A	1064	100%
	Wrong Way	0	0%	2	1%	0	0%	1	1%	1	1%	2	2%	0	0%	1	1%	N/A	N/A	7	1%
	No Stop	15	9%	85	52%	131	77%	63	48%	51	62%	95	72%	61	43%	33	47%	N/A	N/A	534	50%
	U-Turn	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	N/A	N/A	0	0%
Total Vehicles		1314	100%	1272	100%	1190	100%	651	100%	343	100%	700	100%	855	100%	435	100%	220	100%	6980	100%
Total Wrong Way		6	0%	7	1%	8	1%	5	1%	5	1%	7	1%	13	2%	7	2%	3	1%	61	1%
Total No Stops		291	22%	640	50%	452	38%	277	43%	220	64%	485	69%	370	43%	294	68%	27	12%	3056	44%
Total U-Turns		12	1%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	0%	13	0%

## Appendix D: Written Comment Made by Observers by Intersection

### Lippincott/Ulster

- a) wrong-way/u-turns
  - Driver backed up wrong way on one-way street
  - Drivers enter neighbourhood wanting to go east, but can't so make u-turn (happened 5 times between 8:00 am and 10:00 am and 7 times between 3:00pm and 6pm)
  - u-turns originate from Bathurst
- b) No-stop
  - Drivers only stop when pedestrians or other cars are in the intersection
  - Most drivers slow at stop signs, but many do not stop. More likely to stop if other cars or pedestrians present
  - Large bus did not stop
- c) Condition of intersection
  - No-entry signs to Ulster covered in graffiti, both on planter and pole
- d) Other
  - Many drivers head north on Lippincott from Ulster to Harbord as a shortcut from Bathurst

### Borden/Ulster

- a) Wrong-way
- Started to go south on Borden but corrected
  - E-bike going north on Borden didn't stop at Ulster and continued north on Borden (wrong way)
  - Ambulance uses Borden to go north from College to Harbord
  - Near miss: cyclist going north on Borden does not look for cars at intersection and is almost hit by wrong-way driver going west on Ulster
  - Wrong-way driver had no idea she was going the wrong way (west on Ulster)
  - Almost all wrong-way drivers come from Brunswick (or Major). A possible reason is that the concrete planter at Brunswick and Ulster indicating no entry has been destroyed. It needs to be replaced.
  - One observer counted all cyclists and wrong-way cyclists between 7:15 am and 8:00 am. She observed 23 out of 29 going the wrong way (80%), and no cyclist stopped.
  - most cyclists go wrong way: they continue through the intersection in the direction they are going, and in so doing, some of their travel is wrong way
- b) No-stop
- Driver ignores pedestrian and rolls through intersection
  - Drivers stopped for pedestrians and cars, and when confused
  - Drivers stopped when traffic from N and S arrive at intersection at the same time
  - More traffic = more stopping
  - Near miss: bike flies through intersection going north on Borden as two cars try to turn east on Ulster
  - UPS driver did not stop
  - DHL driver did not stop
  - Drivers talking on phone
  - Driver didn't stop for pedestrian (2X)
  - Driver didn't stop and cyclist going wrong way (4X)
  - Drivers coming south on Borden come to a full stop more often than northbound cars
  - No cyclist stopped at intersection
- c) Condition of intersection
- Hedge at NW corner of intersection may be obstructing drivers' view looking west
  - Hedge at NW corner needs cutting for better view for drivers

### Brunswick/Ulster

- a) Wrong-way
- Many bikes going wrong way (straight along Brunswick)
  - So many cyclists ignoring both one-way and stops
  - Car rolls through west-bound Ulster weaving through groups of pedestrians
  - One driver turned east on Ulster (wrong way) and turned around at Major, back west on Ulster to Brunswick
  - One driver turned west on Ulster (wrong way) and turned around and went south on Brunswick.
  - One driver turned west on Ulster (wrong way) and continued past Borden
  - One driver turned west on Ulster and continued west

- One observer counted all cyclists and wrong-way cyclists from 7:00 to 8:30 am. She found 24 wrong-way cyclists out of 49 (50%).

b) No-stop

- Garbage truck sped around corner going east on Ulster without stopping or looking! Truck hit car. (Observer takes photos). Cars build up, honking, garbage collectors yell/swear at observer. Car does U-turn to avoid fray. Garbage collector yells at man on bike: “she’s racist, a#@ racist. Come up to me and say you hit a car and didn’t stop.” (the car was parked illegally). Much later, garbage truck again and stopped this time.
- Motorbike doesn’t stop
- Bikes rarely stop, but riders look
- Motor scooters don’t stop
- Basically, most drivers don’t come to a full stop
- Two kids on scooters roared through the intersections without stopping or even looking for oncoming traffic
- Two kids with mother rode diagonally through the intersection without stopping
- Near collision of car and bike
- Given the high percentage of drivers that do not stop, it would have been easier to count the cars that did stop!
- Moped speeding wrong way (north) on Brunswick, whipped right through intersection without slowing, looking or stopping
- Driver rolls through stop west → north while looking south
- Motor scooter north on Brunswick (wrong way)
- Motor scooter west on Ulster (wrong way)
- West on ulster towards Borden but turns around in laneway
- East on Ulster towards Major, catches self and U-Turns.

c) Conditions of intersection

- Stop sign oddly placed, approx. 20 ft from intersection obscured behind maple tree foliage. Some drivers confused about where to stop
- Stop sign SW corner of Ulster very high on pole
- Stop sign on NW corner is set back from intersection
- NW corner, the concrete flower box has been removed (it was damaged badly by a truck). It should be replaced.

Major/Ulster

a) Wrong-way

- Bikes going wrong way. NB - this group of observers counted the number of bikes going the wrong way during the entire observation period. The total was 197.

b) Conditions of intersection

- Good. All signs visible

Sussex/Major

a) Wrong-way

- Eastbound car travelling the wrong way on Sussex, approaching Major and continued driving eastbound on Sussex without stopping at Major
  - Car reversed eastbound on Sussex, approaching Major from the west; backed onto Major at intersection then turned eastbound
  - One car turned around at laneway on Major north of Sussex
  - One car (almost) went south down Major
  - One car backed up to park on Major north of Sussex
  - One car backed out of laneway north of Sussex and went north up Major to Bloor
- b) No-stop
- The very few drivers who came to a full stop did so to allow pedestrian to cross
  - “no stop” drivers ran the gamut from slowing almost to a halt, then proceeding; to slowing somewhat, then continuing on if the way appeared clear; to essentially continuing at driving speed. The distribution across the three “no stop” categories was approximately equal
- c) Conditions of intersection
- Southbound signage to discourage wrong-way drivers is clearer and more instructive than northbound. Southbound drivers have stop signs on both sides of the intersection at Sussex, and clustering of one-way and do-not-enter signs on the same pole, to reinforce desired actions. Northbound drivers have stop signs ONLY on the right-hand side at Sussex, and one-way signs are 15-20 feet away from the “do-not-enter” signs.

### Sussex/Robert

- a) Wrong-way
- Garbage truck on Robert so 4 cars backed up and went east on Sussex (they came from west on Sussex)
  - 4 west on Sussex
  - 3 east on Sussex
  - 2 north on Robert from Harbord
- b) No-stop
- Full stops happen because of pedestrians mostly
  - Taxis made full stops!
  - Cars that fully stopped were because a pedestrian was in the car’s way
- c) Condition of intersection
- SW and NW corner “do not enter” signs are covered by tree leaves.
  - Graffiti on “do not enter” sign on planter at SE corner. Also sign missing on SE corner
  - Need new signs that have “do not enter” printed below red circle with white bar in middle
- d) Other
- Most of the traffic is going west on Sussex (from Spadina)

## Russell/Robert

- a) Wrong-way
  - Two cars north on Robert to lane entrance
  - Some observers counted wrong-way cyclists. From 7-10 am, 28 cyclists went south (wrong way) on Robert. From 5-7 pm, of 87 cyclists, 74 (85%) went the wrong way
  
- b) No-Stop
  - Delivery truck didn't stop
  - 3 Canada Post vans didn't stop
  
- c) Other
  - Total of 6 buses noted around 8:30 am and 5 buses between 3 and 4 pm

## ***ACKNOWLEDGEMENTS***

We acknowledge with thanks the 33 volunteers who helped with this project: Paul Bagnell, Sheldon Benner, Peter Block, Gord Brown, Tamara Bukhanov, Leslie Carlin, Jill Cobb, Barbara Donaldson, Anne Fleming, David Fox, Carolyn Franke, Rob Hanks, Jeannie Hastie, Sarah Hastie, Julian Iacobelli, Brian Kucharski, Jacqueline Loeb, Anne Lindsay, Mary Louis, Elizabeth McCrae, Lena Mortensen, Christian Mueller, Diane Muller, Carolee Orme, Andrea Poptsis, Margaret Procter, Hari Rathod, Judith Robertson, Caitlin Smith, Linda Sully, Merrill Swain, Leslie Thompson, Kelly Weaver, Carol Westall.