



Mitigating the Impacts of Transportation Infrastructure in Toronto

By Adam Smith

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With budget crunches and staff shortages in a city starved for revenue, it is no wonder that there is little time to devote to mitigating the impacts transportation infrastructure has on local communities and the appearance of Toronto in general. The visual impacts on our streets are bad enough with the necessity of streetcar wires overhead, but Toronto is also now suffering from a lot of “pole pollution” in addition to added light pollution.

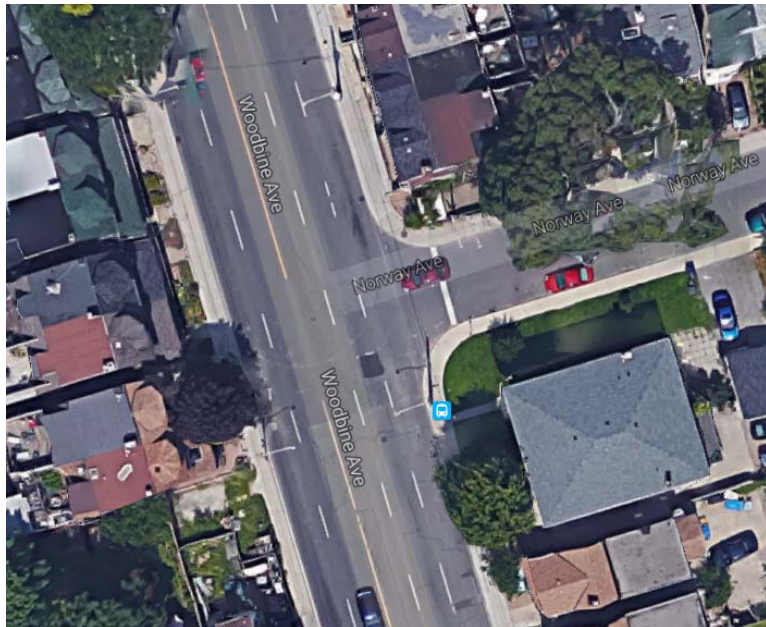
Understandably the city cannot afford to build every intersection with more attractive poles, like the ones newly installed at Queen St E and Leslie St, but the stark utilitarian grey poles used for most intersections really make the city a more drab place to live. What compounds the issue is using cookie-cutter solutions that make no attempt to reduce the number of poles. Another complication is the ownership of our street poles: some are owned by the city, some by Hydro, and some by the TTC. The territoriality of pole ownership creates difficulties when suggesting consolidating the items on nearby poles, and is complicated further by each party not coordinating the installation of new poles with each other.

This is an analysis of the Woodbine Ave – Norway Ave intersection, and a suggestion for Toronto to adopt a safer more efficient design of 3-way intersections.

Woodbine & Norway

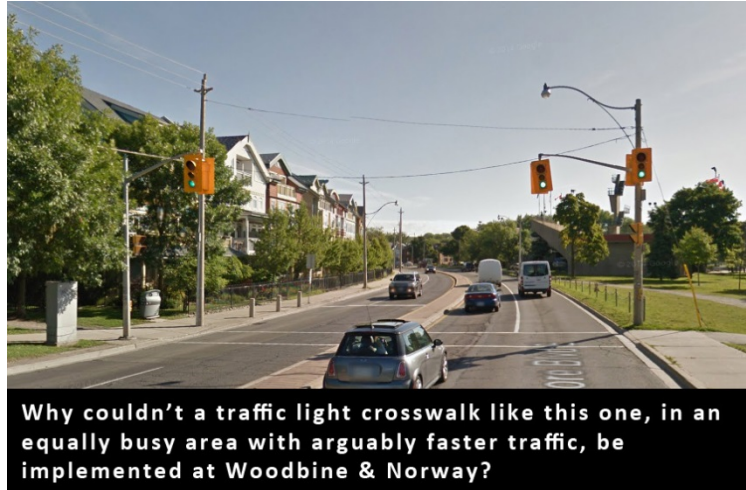
Norway Ave is a westbound one-way street, ending in a three-way intersection where it meets Woodbine Ave. For years the community had requested a safe and lawful place to cross Woodbine Ave between Queen St and Kingston Rd. We thought our prayers answered by the Woodbine-Norway intersection, but we got more than we bargained for.

The only purpose of the intersection was to create a crosswalk, the traffic on Norway is light and no car drivers were complaining or requesting a light to enable them to turn south onto Woodbine. But because there is no time and money to properly plan every detail of the city, broad solutions to specific problems end up being implemented.



Crosswalk turned Intersection

The pedestrian traffic is very light crossing Woodbine between Queen and Kingston, past studies showing low numbers delayed the possibility of a crosswalk. But a crosswalk was on the mind of many residents and a petition was circulated and the city acquiesced. The traffic is quite heavy on Woodbine between Kingston Road and Queen as it links Kingston Road to the Lakeshore, so the city felt a traditional crosswalk was inappropriate. What's not clear is why a traffic light crosswalk, implemented in many other parts of the city (such as south of Queen where Woodbine bends into Lakeshore), would not have sufficed?



Instead the decision was made to build a full-blown intersection. What is even more puzzling is that knowing the whole purpose of the intersection was simply to have a crosswalk (for a very light amount of pedestrian traffic), why did they build two east-west crosswalks instead of just one on the north side? If the city had only built a crosswalk on the north side, they could have eliminated the need for at least one pole, and the only car

drivers affected by the light, those turning left from Norway onto Woodbine, would not be impeded or in conflict with pedestrians using the south side crosswalk. This would have ensured better safety for pedestrians and unimpeded traffic flow for drivers coming off of Norway. Pretty much every three-way traffic light intersection in the city, outside of pedestrian-heavy downtown or where the intersecting street is a major avenue, could be reduced in this way.

Pole Pollution

Of deeper concern however is the lack of attempt to mitigate the number of new poles going into the intersection. It was one of the construction crew installing the poles that chuckled to me as he described the intersection, coining the phrase, "Yeah, it's a bit of pole pollution". The cover page photo illustrates the proliferation of grey poles that suddenly sprouted. For a small one-way side street we got 7 new poles, one less than 6 feet from an existing Hydro pole, and one less than 6 feet from the nearest house.



Instead of creating a less than 6 foot gap between poles, the wooden Hydro pole could have held all the items of the nearby traffic pole, and the poles with nothing but pedestrian signals on them could have been consolidated with other poles. There are many examples around the city where poles combined traffic lights, pedestrian lights, pedestrian buttons, light standards, and Hydro. It was indicated to me by one of the workers that the standards for the visually impaired dictate the placement of pedestrian signal buttons, but considering most intersections of the city are built completely different from one another in that detail, it seems the standard is flexible. If we are truly considering the needs of the visually impaired, our structure of pedestrian signals needs to be far more consistent and predictable, instead of the random hodgepodge it is now.

The insensitive placement of these traffic lights right outside residents' windows begs the question if considering impacts on residents is part of the equation when planning such an intersection.



One of the greatest resident impacts is that the placement of the traffic lights facing Norway is almost exactly in the view of the windows of the houses it's in front of. They now have a perfect view of the back of a traffic light, when a different configuration could have had the lights closer together, or shifted to the south.

Even more frustrating is that barely more than a year after building the intersection, the city just installed a new light standard/Hydro pole a few feet away that could have had the traffic lights on it. It is this lack of coordination that leads to poles going up without any consideration to impact or attempt to consolidate with other poles.



Light Pollution



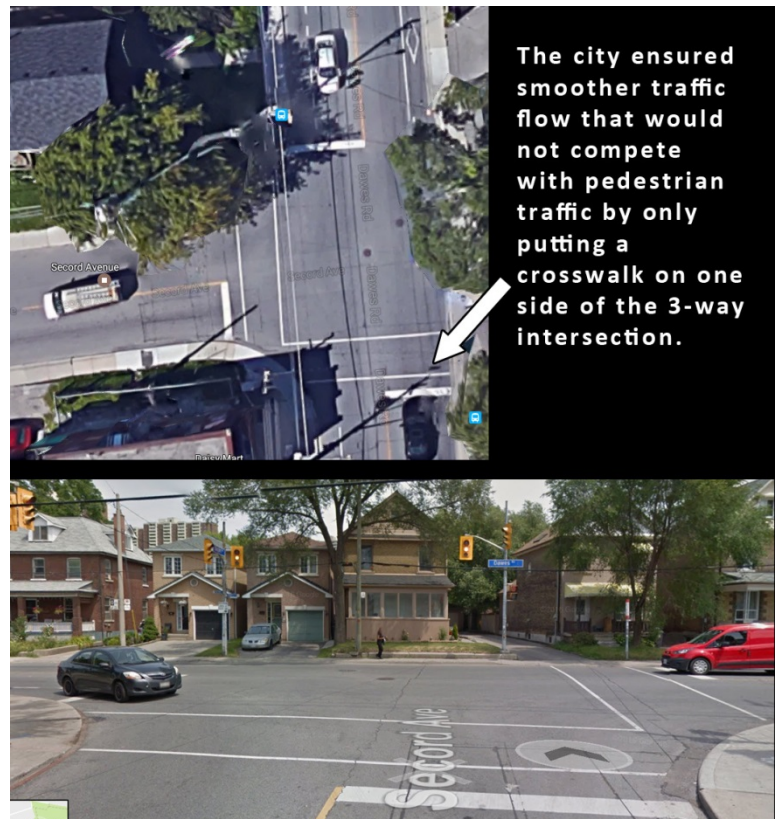
Another major impact is the new amount of lights that glare into people's houses at night. A traffic light crosswalk like the one at Lakeshore and Woodbine would have necessitated far less lights, and the traffic lights would be parallel to people's windows, instead of the two on Norway facing them perpendicularly. While it is commendable that the city has switched to LED lights to save energy, they could save even more by cutting down how bright they are. The new lights are significantly and unnecessarily brighter than the old lights, what is the need for traffic lights, and worse, pedestrian lights, to shine so bright they can be seen many

blocks away? When the pedestrian signal changes to walk during the night, it is like a spotlight shining into my living room, and is many lumens brighter than the stop hand. This discrepancy should be properly measured and adjusted accordingly, it makes little sense the pedestrian walk signal, which only needs to be seen from across the street, is much brighter than all the other lights. To see how bright the walk signal is when it changes, please watch this video: <https://vimeo.com/212471326>

Rethinking 3-way Intersections

As mentioned previously, most of the 3-way intersections in Toronto have been overbuilt in a way that puts pedestrians and cars in each other's way, and unnecessarily impedes traffic flow. There are examples where the city has consciously solved this issue, like the lights at Dawes Rd and Secord Ave.

Unlike Norway, Secord is 2-way, and so also has traffic turning right from Dawes onto Secord that would be in conflict with pedestrians, but considering the similarities of these two intersections it is strange it would not be the standard for such intersections.

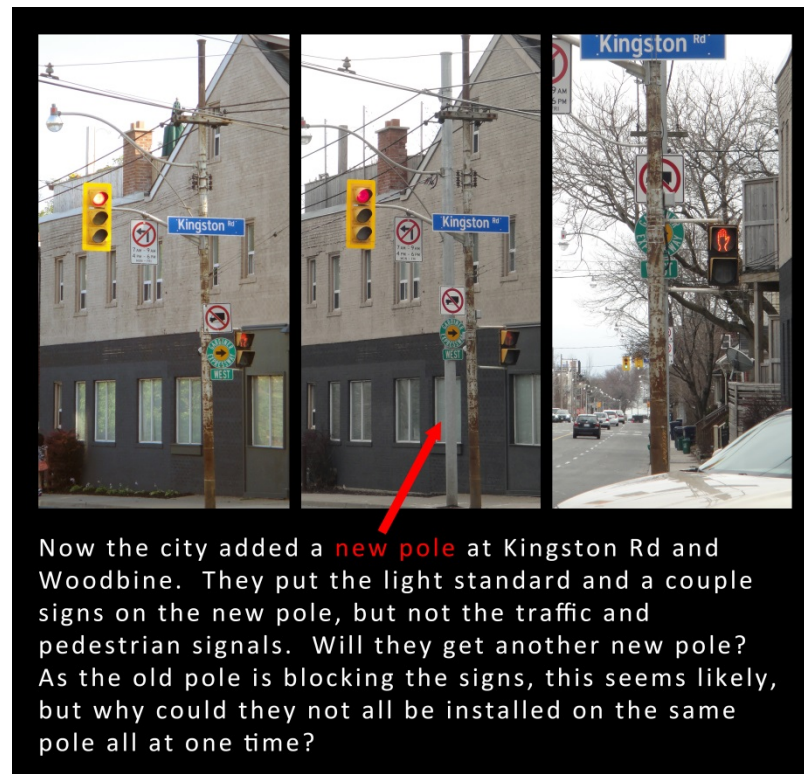


Conclusions

The Woodbine-Norway intersection did not just mar the visual landscape by adding a bunch of drab grey poles that could have been combined with other poles, while increasing light pollution significantly, it also spent scarce resources on materials and labour that could have been done more efficiently in less time with less labour and less materials for less money. This loss of efficiency only serves to slow down the progress of the city while consuming resources that could be used elsewhere. A little extra planning and coordination would have saved money, not cost more.



There are numerous examples around the city of poles combining far more infrastructure and using a variety of part sizes.



Now the city added a **new pole** at Kingston Rd and Woodbine. They put the light standard and a couple signs on the new pole, but not the traffic and pedestrian signals. Will they get another new pole? As the old pole is blocking the signs, this seems likely, but why could they not all be installed on the same pole all at one time?

I hope the city reconsiders not just the design of our intersections, but takes into account their effect on the residents who have to live with them, and explore the possibility they are not being designed with maximum efficiency.

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adam8mith@gmail.com