

January 25, 2022

Daniel Barnett
Planning and Economic Development Department
Development Planning, Heritage and Design – Urban Team
71 Main Street West, 5th Floor
Hamilton, ON L8P 4Y5

Maureen Wilson
Councillor Ward 1
71 Main Street West, 2nd Floor
Hamilton, ON L8P 4Y5

Dear Mr. Barnett and Ms. Wilson

**RE: UHOPA-20-012 and ZAC20-016
1107 Main Street West, Hamilton (Ward) 1
Environmental and Health Concerns relating to the Hamilton Airshed, Truck
Traffic Volume Flow and Decline of the Urban Forest
Applicant's failure to adhere to zoning by-law setback requirements contrary to
provisions set out in the PPS (2020)**

In prior letters of objection to the proposed development that were filed with the Planning Department I set out the reasons why I believed the site was vulnerable to several important environmental and health issues which have been enumerated in the Provincial Policy Statement. These included detrimental health impacts resulting from elevated levels of nitrogen dioxide levels and detrimental impacts to the Chedoke Creek Valley subwatershed by development stressors in the neighbourhood.

I now wish to provide supplemental information to these earlier objections letters as this new information will demonstrate the negative impacts on both the future occupants in the proposed development as well as the existing residents in the neighbourhood. Accordingly, the issues which I am addressing in this objection letter are based on: 1) Specific provisions in the PPS (2020) that are applicable to the proposed redevelopment; 2) Air quality, air pollution and the Hamilton Airshed Modelling System at the subject site; 3) Increased truck traffic volume along both Main Street West and Highway 403, and the projected increase in truck traffic congestion with the anticipated LRT; and 4) Climate change, green infrastructure and the severe decline of Urban Forest in the neighbourhood.

For each of these issues I have set out the concern in greater detail, as well as the supporting documentation, and the mitigation response which should be requested from the Applicant as part of the application process by the Planning Department.

A) Provincial Policy Statement (2020)

The PPS sets out relevant factors upon which any proposed development should be evaluated. It is clear that intensification at higher densities than currently exist, is a primary goal. However, it is equally clear that other provisions in the PPS must also be considered. Some of the pertinent provisions are found in the following policy sections in the PPS (2020) (italics are added for emphasis)

1.1.1 *Healthy, liveable and safe communities are sustained by:*

- a) promoting efficient development and land use patterns which sustain the financial well-being of the Province and municipalities over the long term;
- b) accommodating an appropriate affordable and market-based range and mix of residential types (including single-detached, additional residential units, multi-unit housing, affordable housing and housing for older persons), employment (including industrial and commercial), institutional (including places of worship, cemeteries and long-term care homes), recreation, park and open space, and other uses to meet long-term needs;
- c) *avoiding development and land use patterns which may cause environmental or public health and safety concerns;*
- h) *promoting development and land use patterns that conserve biodiversity; and*
- i) *preparing for the regional and local impacts of a changing climate.*

1.1.3.2 Land use patterns within settlement areas shall be based on densities and a mix of land uses which:

- c) *minimize negative impacts to air quality and climate change, and promote energy efficiency;*
- d) *prepare for the impacts of a changing climate;*

1.1.3.3 Planning authorities shall identify appropriate locations and promote opportunities for transit-supportive development, accommodating a significant supply and range of housing options *through intensification and redevelopment where this can be accommodated* taking into account existing building stock or areas, including brownfield sites, and the availability of suitable existing or planned infrastructure and public service facilities required to accommodate projected needs.

1.1.3.4 *Appropriate development standards should be promoted which facilitate intensification, redevelopment and compact form, while avoiding or mitigating risks to public health and safety.*

1.6.1 Infrastructure and public service facilities *shall be provided in an efficient manner that prepares for the impacts of a changing climate while accommodating projected needs.* Planning for infrastructure and public service facilities shall be coordinated and integrated with land use planning and growth management so that they are:

- a) financially viable over their life cycle, which may be demonstrated through asset management planning; and
- b) available to meet current and projected needs.

1.6.2 *Planning authorities should promote green infrastructure to complement infrastructure.*

1.7.1 *Long-term economic prosperity should be supported by:*

k) minimizing negative impacts from a changing climate and considering the ecological benefits provided by nature;

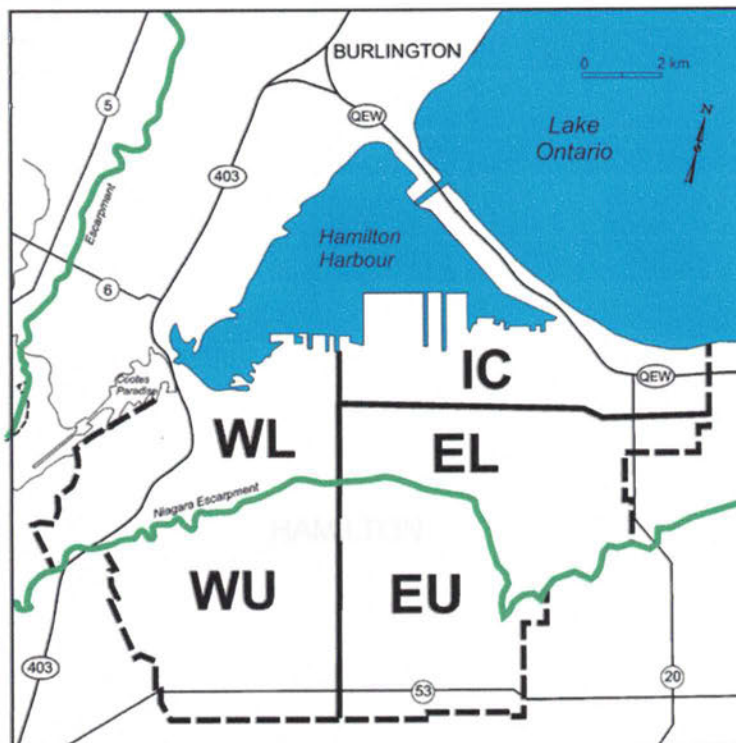
1.8.1 *Planning authorities shall support energy conservation and efficiency, improved air quality, reduced greenhouse gas emissions, and preparing for the impacts of a changing climate through land use and development patterns which:*

*f) promote design and orientation which maximizes energy efficiency and conservation, and considers the mitigating effects of vegetation and green infrastructure; and
g) maximize vegetation within settlement areas, where feasible.*

B) Air quality, air pollution and the Hamilton Airshed Modelling System

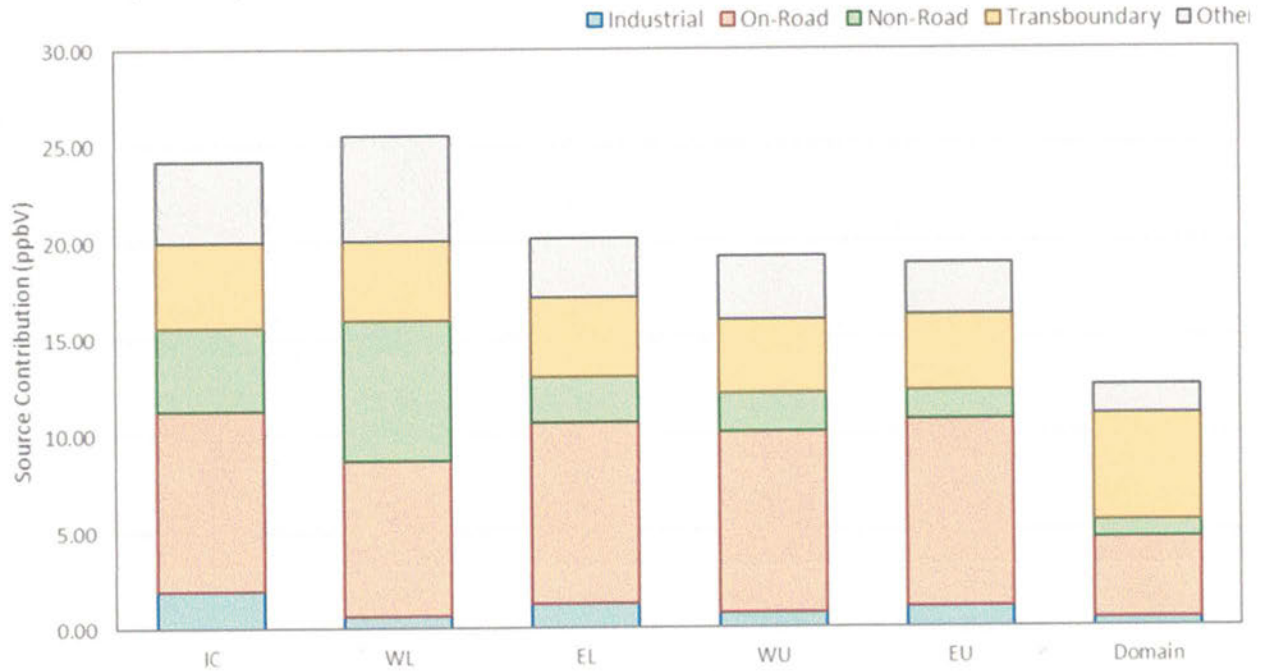
Clean Air Hamilton

In addition to the attachments that were previously set out in my letter of December 2020 and which contained the Nitrogen Dioxide readouts taken at the Hamilton West Ambient Monitoring Station, I am now attaching relevant information from Clean Air Hamilton that was published by Air Quality and Climate Change, Public Health Services, Healthy Environments Division, Healthy & Safe Communities Department, City of Hamilton in December 2019. This material pertains to the “Hamilton Airshed Monitoring System” which was completed in 2018 and which divided the City of Hamilton into five specific domain areas, one of which was West Lower (WL). This is the domain in which the subject site is located.



One of the important air contaminants being monitored in the Hamilton Airshed Modelling System was Nitrogen Dioxide and the study found that the levels of Nitrogen Dioxide were highest in the West Lower domain. Transportation on road sources account for the majority of emissions, but in West Lower area non-road sources were also higher.

Annually Averaged Source Contribution: NO2



The concentrations of Nitrogen Dioxide read at the Hamilton West Ambient Air Monitoring Station continue to have some of the highest in the Province of Ontario on temperature inversion days and the 20-30% of days in the year when the prevailing winds are out of the east, trapping the air contaminants in the “West Lower” domain which lies within the geographical confines of the escarpment. Unfortunately, the total number of temperature inversion days and changes in wind direction out of the east appear to be increasing due to climate change, exacerbating the detrimental impacts on the health of children and seniors.

C) Increased truck traffic along both Main Street West and Highway 403, and the projected increase in truck traffic congestion with the anticipated LRT

Metrolinx

As part of the LRT study for the City of Hamilton and Metrolinx, a report was issued by Steer Davies Gleave in February 2017 to examine ridership modelling and traffic, as well as the reduction of green gas emissions from road traffic. An important factor was Traffic Flow and the study produced four charts indicating AM LRT volumes 2031; PM Peak hour LRT volumes 2031; AM Peak hours BAU (Business as usual) without LRT; and PM Peak hours BAU Scenario (without LRT) 2031. (see pages 17, 18, 19 & 20)

All four charts indicate the extremely high traffic volume in the immediate vicinity of the proposed development, and when combining the traffic volume from Main Street West which passes the site to the north, and the traffic volume from Highway 403 it appears that this area has the highest Traffic Flow in the entire City of Hamilton. With indications of even greater truck traffic volume due to the potential widening of Highway 403 to accommodate increased traffic volume, the combined increased volume in heavy trucks along Highway 403 and Main Street West will result in a corresponding increase in Nitrogen Dioxide as it is directly produced by diesel truck emissions.

Table II: Forecasted Road Traffic Data (2031)

Road Name		Cars	Medium Trucks	Heavy Trucks	Total
Main Street	Daytime	41 166	762	12 524	54 452
	Nighttime	4 574	85	1 392	6 050
	Total	45 740	847	13 916	60 503
Highway 403	Daytime	110 462	4 664	7 610	122 736
	Nighttime	19 493	823	1 343	21 659
	Total	129 956	5 487	8 953	144 395

The Metrolinx Report on the LRT by Steer Davies Gleave also points out two other factors that must be considered in assessing the extremely high levels of Nitrogen Dioxide in the vicinity of the proposed development. The first is that Metrolinx does not anticipate any overall reduction in Greenhouse Gas Emissions from a reduction in overall vehicle kilometres travelled (VKT) as stated in one of its reports

“all Hamilton Rapid Transit investment options increase VKT during morning rush hour in 2041. This means the transit options are poor at reducing auto distance travelled, and therefor poor at providing a reduction in greenhouse gas emissions.” (italics added for emphasis)

The second factor recognized by Metrolinx was that in order to avoid traffic congestion along Main Street West it will be necessary to increase the signal timing for a higher green time for the traffic lights at the Highway 403/Main Street West interchange and at Main Street West and Dalewood for both the eastbound and westbound traffic flow. This will help avoid some congestion on Main Street West, but it will unfortunately result in more congestion and idling on the Highway 403 exit ramp for truck traffic waiting to turn onto Main Street West, and it will also increase the idling time for vehicles that are waiting to make right turns onto Main Street West from both Dow Avenue and Cline Avenue South. This is set out in Sections 5.18 and 5.19 and in Table 5.4 of the Steer Davies Gleave Report.

- 5.18 Work has been undertaken as part as an iterative process to mitigate the congestion and delays of traffic within the network. This is a time consuming and iterative process where ‘fixing’ an issue at one intersection pushes the traffic elsewhere within the network and it generates a new and different problem elsewhere.
- 5.19 Ultimately the network is not at a point where the impact is limited to a number of constrained points in the network. In order to get to this stage, a number of mitigations were required, some having more impact than others. These are set out in the table below.

Table 5.4: Network Changes required to accommodate LRT

Intersection	Signals	Changes
James and Main	Signal Timing	Higher green time to EBT
Main and Emerson	Signal Timing	Higher green time to EBT, WBT and EBLT
Main and Dalewood	Signal Timing	Higher green time to EB/WB
Main and Hwy 403	Signal Timing	Higher green time to EB/WB
Main and Longwood	Signal Timing	Higher green time to NBT

If this is combined with the increased amount of vehicle traffic diverted to adjacent roads as a result of the LRT line, it will lead to further increases in VKT and thereby again result in an unacceptable increase of nitrogen dioxide in the neighbourhood.

Hamilton Truck Route Master Plan

Another reason for concern relating to increases in the already higher levels of Nitrogen Dioxide in the neighbourhood is the that Main Street West is an important component of the Hamilton Truck Route Master Plan with a Full-Time major truck route extending from Longwood Road and westbound on Main Street West directly in front of the proposed development. The steady and increasing volumes of heavy truck traffic, does not bode well for air pollution reduction, as the truck route requires a faster-moving flow of traffic without delays or congestion, which may not be possible with the LRT along Main Street West. (see pages 21 & 22)

It is certainly appreciated that the Province of Ontario is seeking in the long term to enact measures to reduce the carbon content of transportation fuels, and to mandate improved vehicle efficiencies, such as aerodynamic improvements, speed limiters and anti-idling devices. Other measures may include hybrid-electric vehicles and truck stop electrification, however, given the fact that the truck traffic on Main Street West primarily consists of heavy truck commercial fleets, the more realistic and helpful option to reduce nitrogen dioxide is to take the steps that are readily available to the municipality such as requesting adherence to setback requirements, increasing green infrastructure, and requiring landscaping buffers and built forms that avoid the “street canyon” effect along this section of Main Street West.

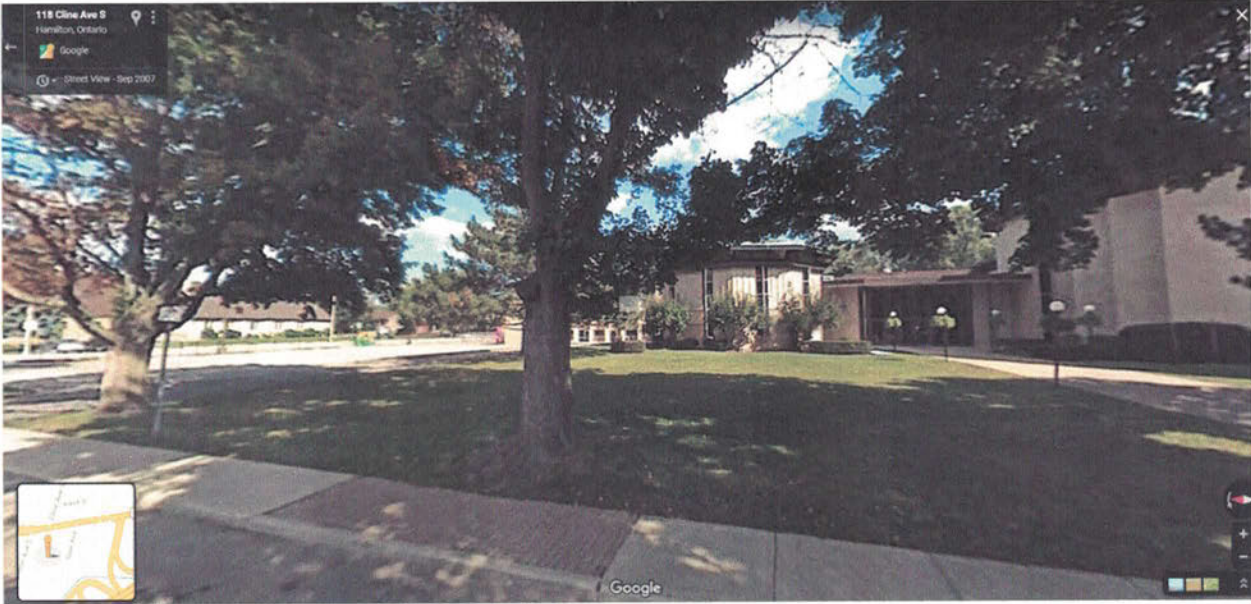
D) Climate change, green infrastructure and the decline of Urban Forest in the neighbourhood

Severe Decline of the Urban Forest

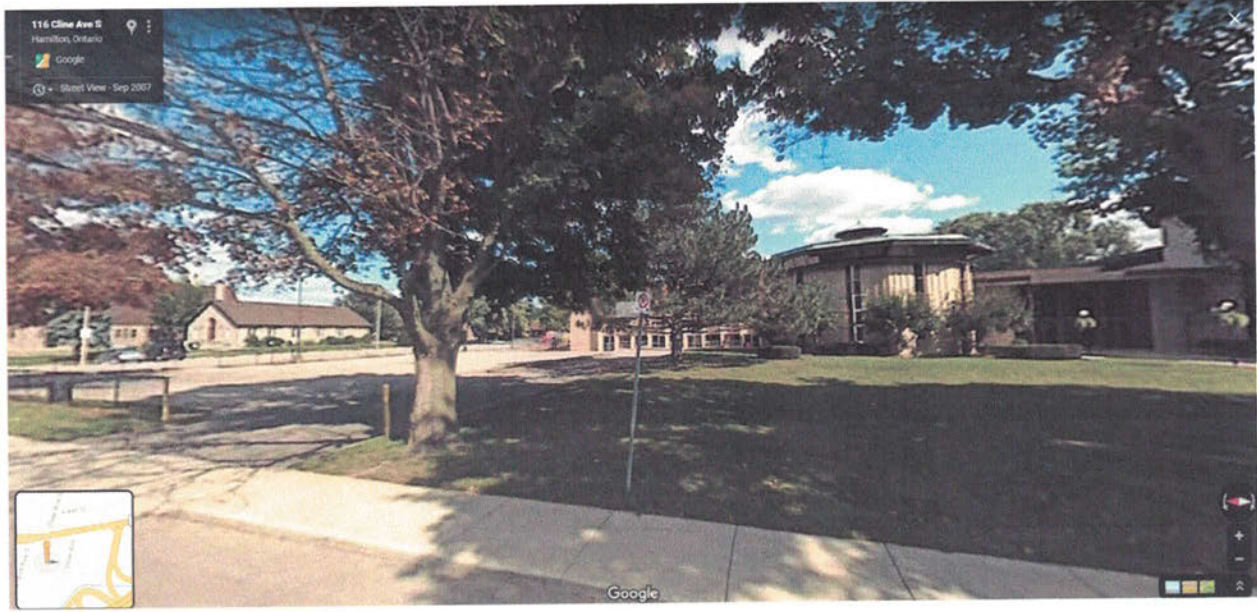
The extraordinary loss of mature trees in the neighbourhood surrounding the proposed development can best be explained by viewing the following pictures that show eight trees that

have been cut down and removed by the City of Hamilton, and the five small replacement trees which were planted to replace them. (There was a sixth tree at the corner of Main Street West and Cline Avenue South but it died and has been removed) It is not known whether the removal of the trees by the municipality was due to climate change or whether it was due to the effects of the very high level of air pollution in the neighbourhood, which these trees were, ironically, intended to mitigate against. I believe that the City of Hamilton Forestry & Horticulture Section would have records for the date of each removal and the reason why the various municipal trees were cut down.

An urban forest is recognized as the most optimum mitigation measure in absorbing harmful contaminants in the air, such as nitrogen dioxide, and an urban forest and a green landscaped buffering area is also considered a highly effective noise barrier from adjacent roadways and highways in close proximity to any site being developed. It is therefore most disturbing and alarming that the existing urban forest is already in dramatic decline, and when compounded with the removal of mature trees by the Applicant for the proposed development, it appears probable that the existing urban forest will no longer be able to mitigate the effects of the increasing levels of air pollution in the neighbourhood.



TWO TREES CUT DOWN IN FRONT OF THE ADAS ISRAEL CHAPEL



**TREE CUT DOWN NEXT TO PLAYGROUND DRIVEWAY
NEVER REPLACED**



**TREE CUT DOWN IN FRONT OF PLAYGROUND
NEVER REPLACED**



**TREE CUT DOWN NEXT TO CHURCH PARKING LOT
NEVER REPLACED**



**TREE CUT DOWN AT CORNER OF MAIN STREET WEST
AND CLINE STREET SOUTH
(TREE WAS REPLACED BUT SUBSEQUENTLY DIED AND NEVER REPLACED)**



REPLACEMENT TREE THAT DIED AND WAS REMOVED



MOST RECENT PICTURE SHOWING NO MUNICIPAL TREES



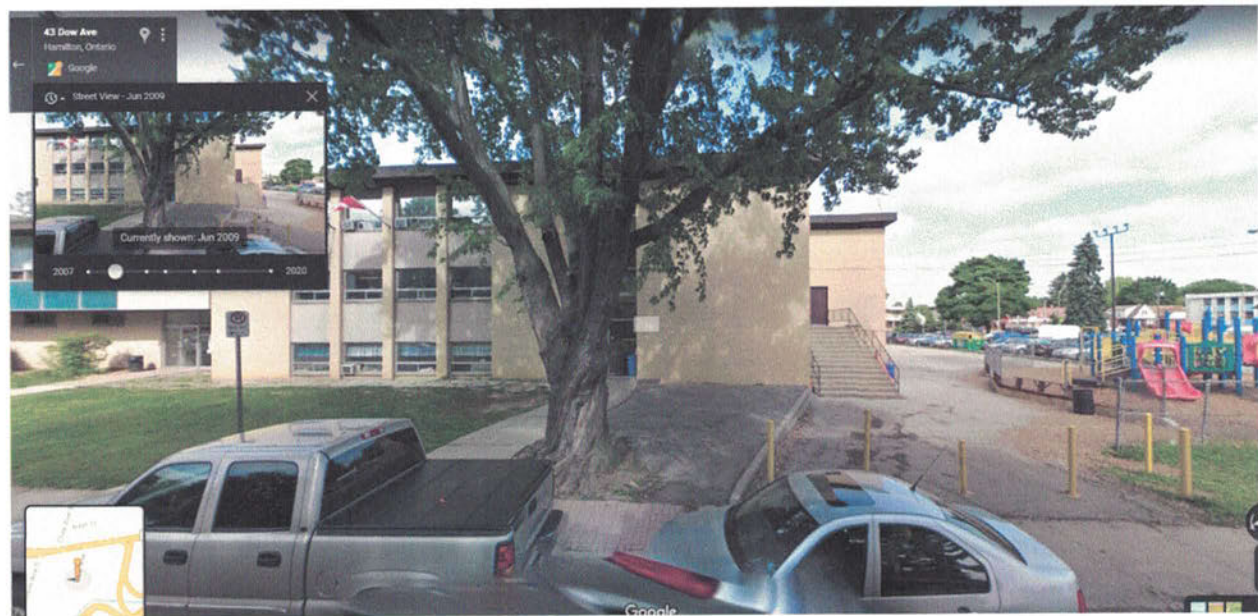
**RECENT VIEW LOOKING UP CLINE AVENUE SOUTH
WHERE FIVE MATURE TREES WERE REMOVED
THREE OF WHICH HAD NO REPLACEMENT**



**TWO REPLACEMENT TREES PLANTED BY CITY
NEXT TO FENCE**



LARGE TREE ON DOW AVENUE WHICH WAS CUT DOWN



**ANOTHER VIEW OF THE SAME TREE SHOWING
LARGE CANOPY**



**TWO SMALL REPLACEMENT TREES FOR THE
LARGE TREE CUT DOWN ON DOW AVENUE**



**TWO TREES AT THE CORNER OF PAUL STREET
AND CLINE AVENUE SOUTH WHICH WERE CUT DOWN**



**NO REPLACEMENT TREE PLANTED
(NEW TRANSFORMER BOX WHERE TWO TREES ONCE STOOD)**

It is therefore extremely important that all possible measures be taken to protect the urban forest and to promote a green infrastructure and green landscaping at the subject site and within the surrounding neighbourhood. Metrolinx is committed to using green infrastructure wherever possible in the construction of the LRT and it is therefore imperative that the Applicant similarly be required to utilize green infrastructure and to take the necessary mitigation measures to diminish the harmful effects of nitrogen dioxide in the neighbourhood. This can be accomplished by providing a healthy growth environment for mature trees, and by allowing for a sufficiently wide and deep area to permit the tree roots to become established in the soil and to reach the water table. Although the trees in the neighbourhood appear to be under the stress of climate change and the detrimental impact of high levels of nitrogen dioxide, appropriate land use planning can ensure the health of the existing urban forest canopy as well as the survival of the future urban forest which is to be planted as part of the redevelopment process.

Setbacks

The tools available for the Planning Department for ensuring a healthy urban forest which will suffer under the stress of climate change and traffic related air pollution are already found in the zoning by-laws and in the UHOP and the City of Hamilton's guidelines and policies planning documents. In this regard the Applicant should be required to adhere to the setback distances of **6.0 metres** on Dow Avenue and Cline Avenue South, and the **4.5 metres** on Main Street West, rather than granting relief to the **3.0 metres and 1.7 metres** distances which the Applicant applied for in its Application. In addition, the very large underground parking garage proposed by the Applicant should similarly observe all setback requirements from the lot line above and below grade, as it essential that the tree roots be able to reach the water table and have as much permeable surface area as possible.

“Canyon Effect” on the south side of Main Street West

Another applicable policy relates to avoiding the “canyon effect” on the south side on a street with an east/west axis. In this case the Planning Department should request compliance with its guidelines and insist that the Applicant separate its tower by a podium no higher than three-storeys as such a separation and reduction in height permits sunlight and wind penetration and helps in the dispersal of ambient air pollutants, such a nitrogen dioxide.

Cultural Heritage Policies in respect of Grace Lutheran Church and a landscaped Courtyard

The Cultural Heritage policies in the UHOP in the Cultural Heritage guidelines are also extremely relevant, as mitigation measures for the preservation and conservation of the extant building of the Church, in whole or in part, and an open courtyard with a permeable surface, will provide the neighbourhood with a much-needed landscaped courtyard with trees and shrubs to provide a “sense of place” and “vitality” to the neighbourhood. But most importantly, it will also provide an additional measure to help mitigate against the harmful effects of traffic related air pollution.

CONCLUSION

The issue of high levels of nitrogen dioxide in the Hamilton Airshed, increased heavy truck traffic volume flow, and climate change and the dramatic decline of the urban forest, are all factors that demonstrate the vulnerability of the proposed site.

The reduction in setback distance as set out in the proposed site-plan and the Applicant’s request for relief from the setback requirements in the TOC1 zoning by-law, as well as its non-compliance with the Urban Design guidelines and policies of the City of Hamilton, will exacerbate a critical situation that currently exists in the neighbourhood. Most importantly, the Applicant’s proposed development will create detrimental health impacts on not only the existing residents in the neighbourhood, especially children and seniors, but also all the intended occupants of its proposed buildings.

It is therefore respectfully requested that the Planning Department circulate this objection letter and the two previous objection letters relating to the health impacts of traffic related air pollution and the environmental issues relating to the Chedoke Creek Valley subwatershed, to the following departments for their respective comments on and response to the appropriateness or adequacy of the setbacks in the Applicant’s proposed site-plan:

Hamilton Conservation Authority, the Hamilton Board of Health, the Air Quality & Climate Change Division, Recreation Division, Healthy & Safe Communities Department, Healthy Environments Division - Public Works Department, Forestry and Horticulture Division – Public Works Department, Source Water Protection Planning – Public Works Department, and the Traffic Department.

In light of the provisions set out in the Provincial Policy Statement (2020) and the reasons set out above, I strongly believe that the Applicant's two Applications are not consistent with the PPS and that they should be denied by the Planning Department.

Yours truly,

A black rectangular redaction box covering the signature of the sender.

/John Ross

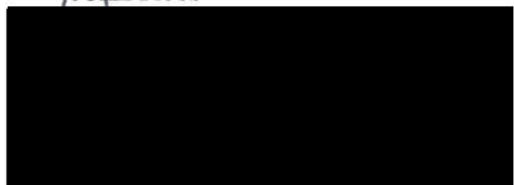
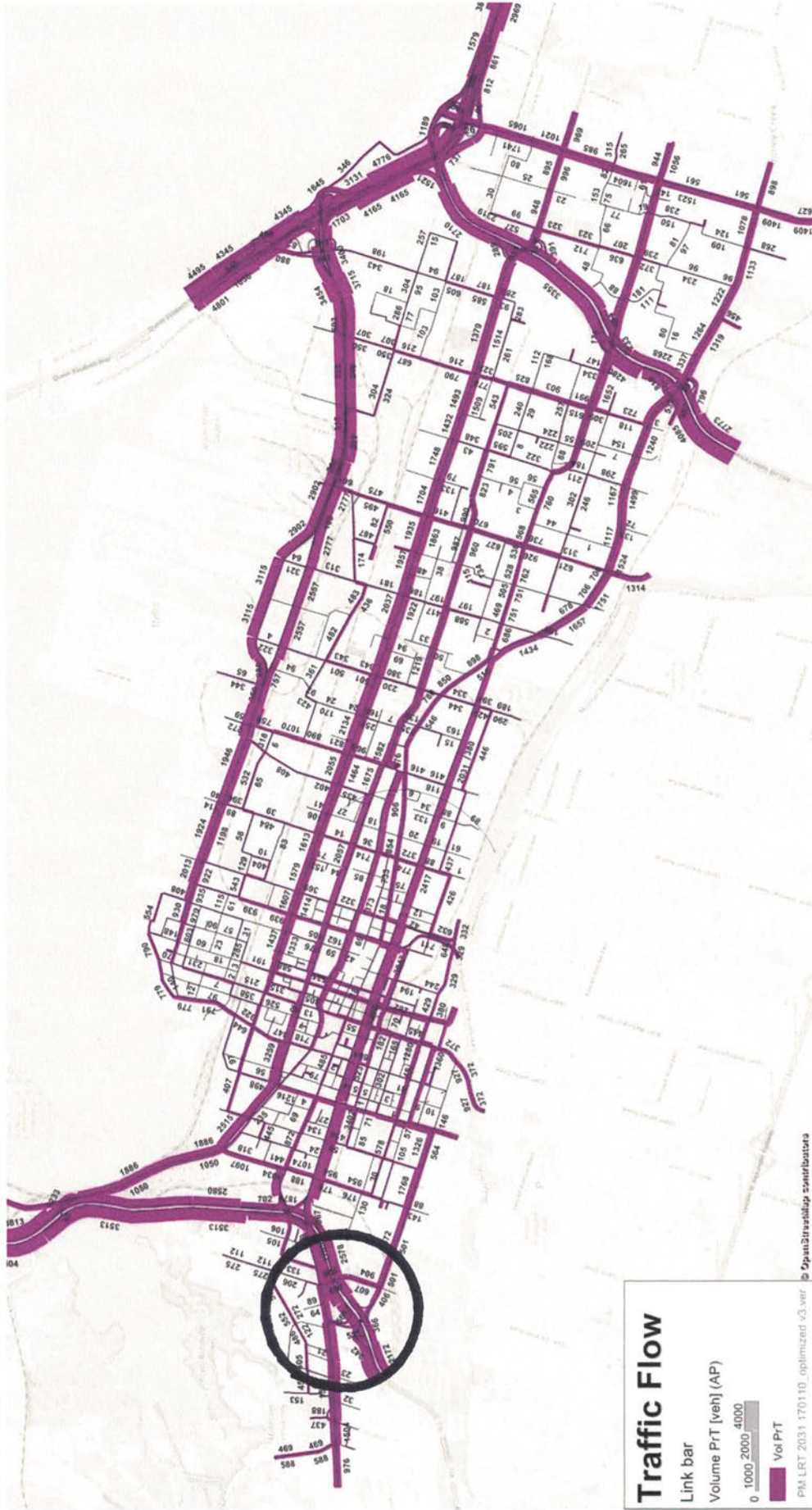
A large black rectangular redaction box covering the contact information of the sender.

Figure 5.3: 2031 AM LRT Volumes



17

Figure 4-8: 2031 PM Peak hour Volumes – LRT Scenario (with LRT)



18

Figure 4.2: 2031 AM BAU Volumes



Figure 4-7: 2031 PM Peak hour volumes BAU Scenario (without LRT)



© OpenStreetMap contributors

HAMILTON TRUCK ROUTE MASTER PLAN

Draft Recommended Truck Route Network

Truck Routes
 Full-Time (Provincial Highway) ———
 Full-Time ———
 Daytime Only (7am - 7pm) - - - - -
 Low Clearance Bridge □
 Employment / Business Area

CITY OF HAMILTON

Total km
 Provincial Highways = 218 km
 Full Time = 556 km
 Daytime Only = 159 km
TOTAL = 933 km

Base Information
 Major Arterial Road
 Minor Arterial Road
 Collector Road
 Local Road
 Escarpment
 Urban Area

0 0.42 0.85 km

IBI
 Hamilton

