

Montréal, April 15, 2021

Public Consultation PVM Richelieu
Dear Commissioners,

I want to thank you for giving me the possibility to share some of my opinions on this project in the session held today that were followed by your valuable questions.

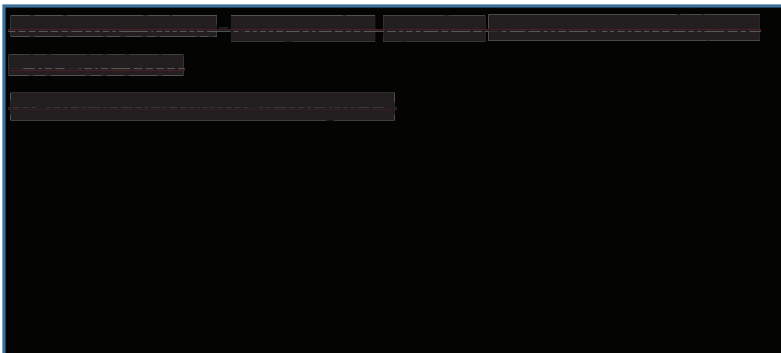
I also highly value your effort in translating and summarizing them for the attendees.

Despite I provided spontaneous responses to your questions, I will be delighted to further elaborate, fill gaps of information, or respond to any other inquiries you might consider relevant for the preparation of your report.

Please do not hesitate to contact me if you have any additional demand.

Following the publicized instructions the commission accepts until today the Written Statements, therefore I'm sending you the following notes comprising some of the opinions I have expressed earlier today and expanding on other aspects that the limitation of time wouldn't make possible.

Thank you once again,
Kind regards
Mauricio Horn



Statement. Mauricio Horn.

Dear Commissioners:

I'm a resident of  It is the oldest building of all the closest constructions from the proposed work.

As a resident and homeowner this PVM Richelieu project will injure me: my health, wellbeing, and my property.

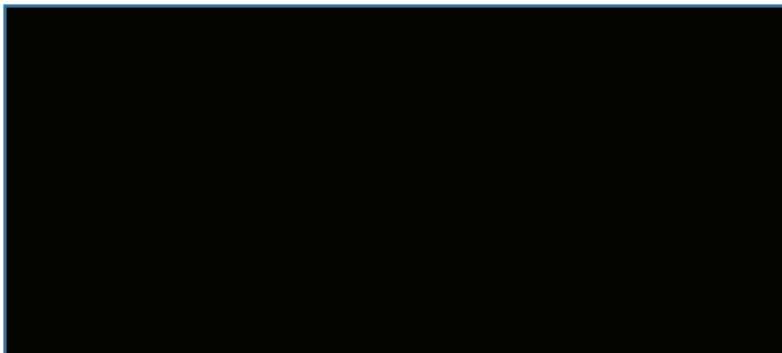
I endorse the preoccupations expressed by my neighbors: the noise, the vibrations, the dust, the pollution, the possible damage to the foundations of our homes, that are some of the main matters, though not exclusively; and I want to further illustrate and expand on some.

On three different occasions, during 2020 and 2021, the firms [ABS](#) and [Explora-Sol](#) dedicated to geosciences, construction and drilling, worked in the location, comprised of the two lots acquired by STM including the surroundings beyond such private property.

Two reports on the findings have been placed online this week by STM, one about the building itself and other one on the environment, underground soils and water, enabling me to better understand what had been occurring.

Several days in May, July and August 2020 (perhaps other periods I don't account for) perforations were done in the areas indicated in the following accompanying picture.

I could tell by then, without being in expert, that the main tasks were comprised by drilling and taken samples from underground.





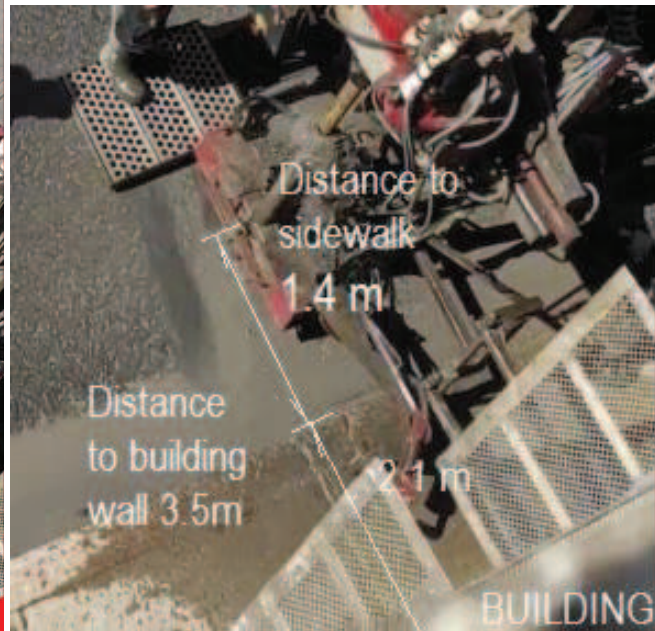
Picture 1 Some marks of drilled spots. Photo taken: April 13, 2021



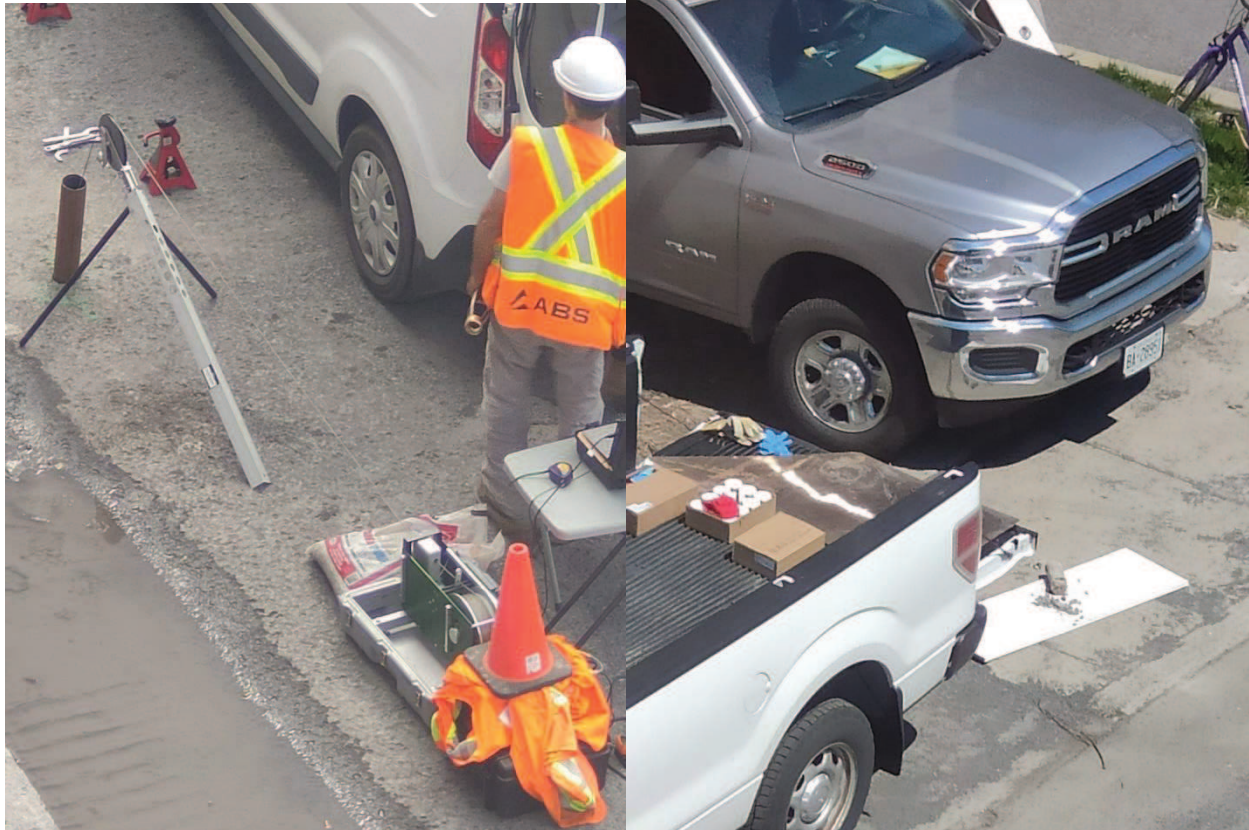
Picture 2 Drill machinery and trucks. Photo taken: May 7 2020 10.51 AM



Picture 3 Drilling on Richelieu, corner Sainte-Marguerite. Video frame, taken August 5, 2020 2.56 PM



Picture 4 Drilling on Richelieu, corner Sainte-Marguerite. Video frames and zoom in, taken August 5, 2020 2.56 PM



Pictures 5 Photo taken July 28, 2020 4.14 PM Picture 6 Photo taken May 7, 2020 11.26 AM

Some, or all, of these works were done in preparation of this construction plan. As the final report from ABS states, upon request from STM done in December 2019.

It is puzzling that some perforations were done before STM took possession of the lot on the 31st of July of 2020, and others were done afterwards. Some were done on the private property others over city property on the street.

Without signaling, it was difficult to identify who was responsible and accountable for each work. As some pictures show, several perforations were performed at an extreme close distance to our building. I assume all were done with a permit from the Ville.

Those performed on the street had no signalization for traffic and for pedestrians, there was no communication of notice or anticipation within the residents, which made this more disturbing and intriguing since city works affecting normality are most of the times communicated with anticipation.

The reference to these perforations is done because they cast, they evidence, and they likely anticipate what -in a much larger scale- would happen if the PVM and adjacent PAB are built as they have been proposed, and it can be seen as its continuity.

During the perforations drilling sounds were more than excessive. The noises were extreme. The noises were unbearable and indescribably perturbing.

Some of this scene and its noise was captured by these videos:

https://www.dropbox.com/s/u0ew4bfawymmbtv/VID_20200805_145633%20DRILLING.mp4?dl=0

https://www.dropbox.com/s/hepqh06m9brrkmj/VID_20200805_145701%20DRILLING.mp4?dl=0

Many of those days, temperature rose over 30 °C. My apartment receives direct sunlight from many directions, it has windows to the front, to the back, to the side, and also a skylight, additionally the roof is right above it. Thus, with the sun warming all its surfaces and windows it the indoor temperature can easily exceed 38°C if there is no proper ventilation. Nevertheless, to mitigate the noises starting at 7 AM the only option was to keep all the windows closed.

As consequence of opening a window for just a while, everything would get dust. Everything. All objects, furniture, electronic devices, curtains, carpets, rugs, clothing, floors, and each corner of every room would get covered by dust.

I haven't taken pictures of the dust accumulating during the working days, but I can show what remained stuck to -previously clean- windows.



Picture 7 Window dust accumulation after works. Photo taken April 10, 2021, 12.36 AM



Picture 8 Window dust accumulation after works. Photo taken April 13, 2021, 7.48 PM



Picture 9 Window dust accumulation after works. Photo taken April 14, 2021, 6.32 PM

As mentioned, my apartment has windows towards the front of the building, over Rue Sainte-Marguerite, towards the back alley, the Ruelle Verte, and three windows on side wall towards the Autoroute Ville-Marie/Turcot and the lots acquired by STM. **The latter are the only windows accumulating an enormous amount of dust (as these pictures show) demonstrating that the dust is not disseminated evenly, but from one, or both, of these two sources.**

I'm not presenting this for the annoyance of cleaning glasses, but instead, as **evidence of what is already in the air of the area, either from the pollution of the Autoroute and Turcot, or from what has been produced from the perforations.**

Unavoidably, I also breathed the dust during the perforations, and it was noticeable how it got accumulated in my nose and nostrils. I don't know if it has produced, or can eventually bring me further respiratory health problems.

In the same way, it is hard to describe to what extent the noise produces temporary or permanent damage. An expert will likely affirm that hearing damage is likely accumulative.

Preventively, during those works I began utilizing ear plug -naturally- while I wasn't on a call, working remotely, or either taking or delivering classes. I also had to purchase premium Sennheiser noise cancellation headphones to be able to work.

Also, it is well-known how noises alter the nervous system. Having no history of mental health conditions, for the first time in my life, during those days I was medicated with a tranquilizer and suffered sleep disorder.

As I am a university professor, delivering my classes was not possible. Having no alternative place during the lockdown, I delivered some remote lectures with my smartphone from the Parc Saint-Henri, that has a decent free Wi-Fi signal, since my home was too noisy.

I want the Commissioners to clearly take note that this is not unpleasant; it is simply unlivable.

My family proposed and insisted on just leaving the apartment for the duration of those works and perforations.

The first days of those works I thought moving was exaggerated, but as the works continued, I truly pondered such possibility. But I had no alternative residence to go, and no budget for accommodation elsewhere.

This is not a matter of preference. Those works made normal living impossible. Having to choose whether to close the windows to mitigate the noise, remaining with no air during hot days, or to open a window to get a breeze, but full of dust, are not options.

As the pictures and videos of the drillings show, they were done openly and there was not a noise reduction strategy in place, while the proximity to our building was very high.

I am not aware of any method utilized to prevent from disseminating dust or producing vibrations. I assume there was not.

These are the main issues that affected, palpably, directly, my personal and my family's health and wellbeing. At least those are which have left more empirical evidence, that one can see and feel, as the dust, and hear as a noise.

In the presentation of the PVM Richelieu construction plan it was said that the noise of the new system and technology has a level comparable to a household dishwasher. I want to highlight that the problem I find is not only the noise emitted by the new PVM, isolated, but **the noises the construction will produce, combined with the noises from other sources (machinery, trucks, blasts, etc.) during a very long period in a place that I notably perceive as already saturated of disturbing frequent and regular noises.**

A rigorous professional study would analyze this better, but at first glance, in that location, we currently perceive noises coming from:

- Transit of Autoroute Ville-Marie (720).
- Transit of Turcot Exchange (500 meters away)
- Trains: Vaudreuil–Hudson line (Exo1), Saint-Jérôme line (Exo 2), Candiac line (Exo4)
- Passing truckloads of snow, notice the snow dump is in the parking lot next to the current STM ventilation.
- PVM, currently operating
- PAB, currently operating
- Machinery working on Turcot and Autoroute

- Public Works on Bethune Street in Westmount (with a tunnel and municipal garage; see video linked)
- Other habitual sources: garbage collection trucks, snow removal on sidewalks and street, cars.

As the Memoire of the Ruelle-Verte mentions, the decibels measured in site are already very high. From my experience living this place, **the problem is not one single source of noise, but the combination.**

The sounds become a great disturbance depending on more variables than just its level, but its characteristics, its frequencies, its duration, its repetitions, among others, that an expert could better inform.

Simply put, knocking a door or ringing doorbell once a day wouldn't be a source of distress, if it's done continuously or frequently, it definitely is. Also, to better illustrate, when the current PVM is turned on (mostly during nights until the mornings) it measures over 90 dB standing on Rue Richelieu, which I have tested. Its noise and vibrations are so intense, they can be felt from my bed, on a third floor, with all the double-glass-panel windows closed. Though fortunately, the PVM is not always operating. The PA (the reduction transformer in a cage) actually operating, instead, buzzes more slightly, but constantly.

Thus, there are many moments **when the combination and cumulative effect is unbearable, and this is regardless of any potential new work.**

The noise barriers recently installed next to the Turcot and Autoroute unfortunately haven't seem to notably mitigate the noise of traffic, which are combined with the trains passing by, and machines operating, entering and exiting from 'Public Works' in Westmount.

The following videos, taken with a normal phone and zooming-in from inside my apartment, capture the noise perceived -indoors and with the window open- between 6 and 6.25 AM (on April 15, 2021). Additionally notice, when it is focused to the left side, the activity and machinery that is operating at Public Works in Westmount (upper left corner of screen) that is perceived as one of the sources of noise in combination with the Autoroute/Turcot:

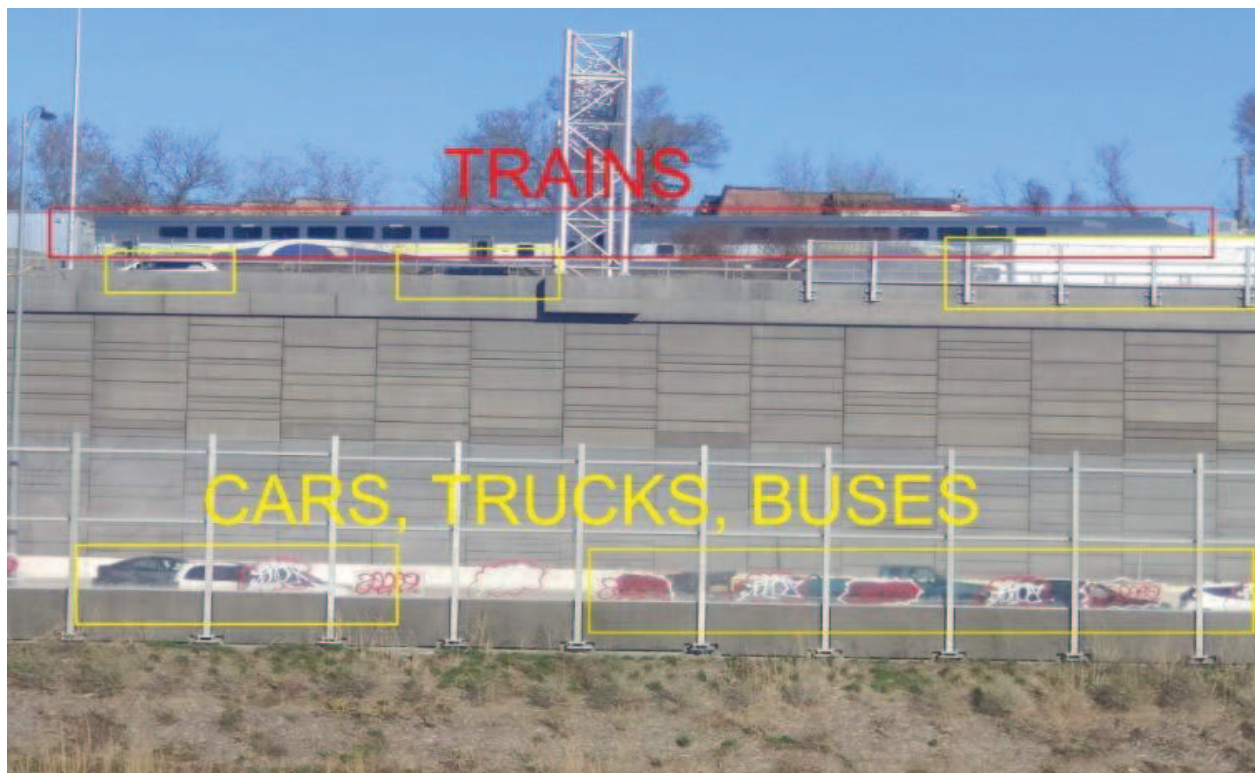
https://www.dropbox.com/s/buxcymeovkv36e05/VID_20210415_061817%20-%20Noise%2C%20autoroute%20and%20public%20works.mp4?dl=0

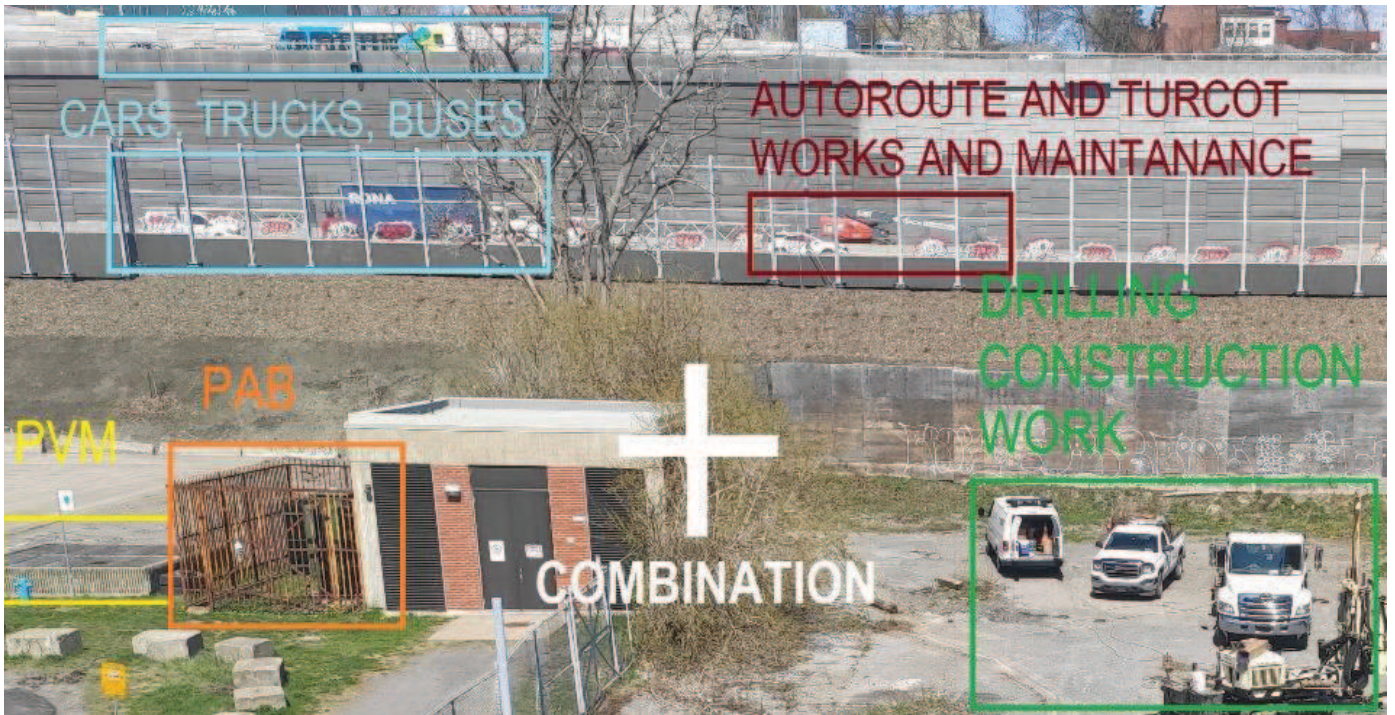
https://www.dropbox.com/s/fhmeeomgpry2mwo/VID_20210415_061953%20-%20Public%20works.mp4?dl=0

https://www.dropbox.com/s/5f3364ijjhw5fud/VID_20210415_062357%20-%20Noise%2C%20autoroute%20and%20public%20works.mp4?dl=0

Only these two or three sources are nowadays forcing us to restrict the time of keeping our windows open. This is happening now, not eventually with the construction. In summary, I consider there is no room for more noise.

This is analog with the dust and the air. The Turcot and Autoroute seem to be producing levels of air pollution that constitute the baseline, over which this project aims to be developed. Again, **this is notably over tolerable thresholds, and there is no room for more pollution in the area.**





With this personal experience I aimed to portray an every-day life, human dimension of the problem, and risks of worsening it.

This has been only a reference to how this affects my indoor life, mitigated by windows and closure, **but how it will affect outdoor life and activities, pedestrians, the daycare, its playground, deserves a special treatment and should be a matter of higher concern for the entire community, and largely exceeds this opinion.**

A different aspect I ask the Commissioners to acknowledge, and report is the economic.

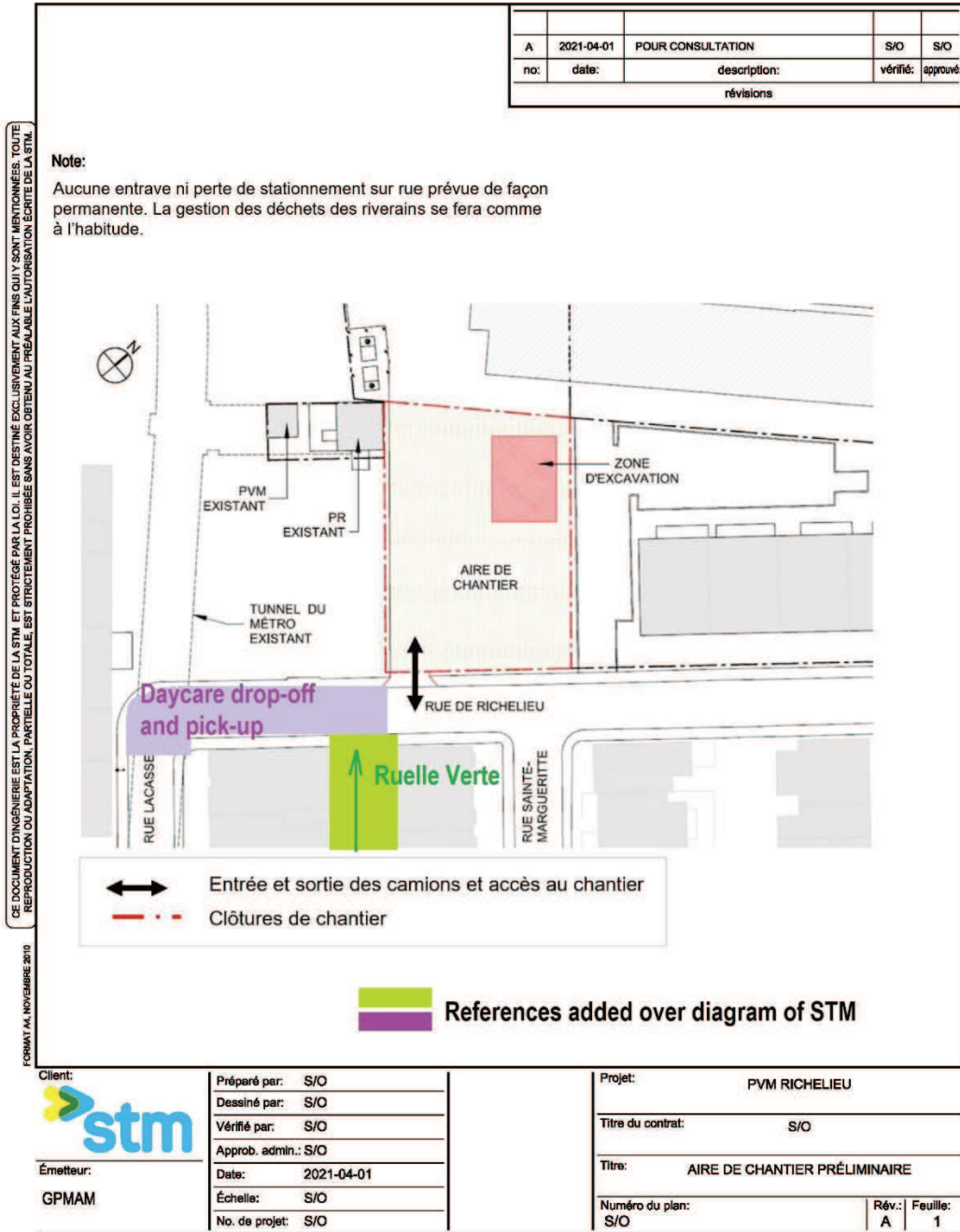
From the moment this 3 yearlong construction project is announced, my apartment, my property, reduces notably the probability of being sold. With a demand plummeting, its price will also fall.

If I decided to move to a same-price-similar apartment -escaping from this construction, despite its unfairness-, since the announcement of the construction I just cannot do it.

My apartment becomes now, almost unsellable. And then, once the works begin and, for over 3 years, I will have even less chances of selling it. **Thus, in this regard, the project will not inflict me an economic burden, it already has.**

I presume that the risk analysis of the insurance company for both, my apartment, and the building, will differ and increase its prime. Even if it does not increase the prime, claiming to the insurance a reimbursement for any possible damage as result of the construction will further increase the prime.

This diagram recently uploaded by STM shows the proposed entrance and exit of trucks that will be removing the loads of rock and soil.



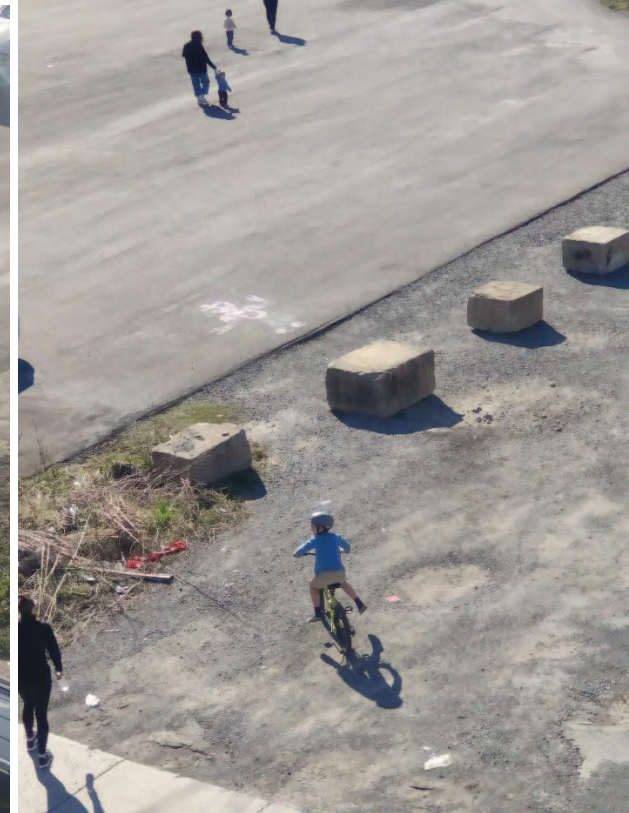
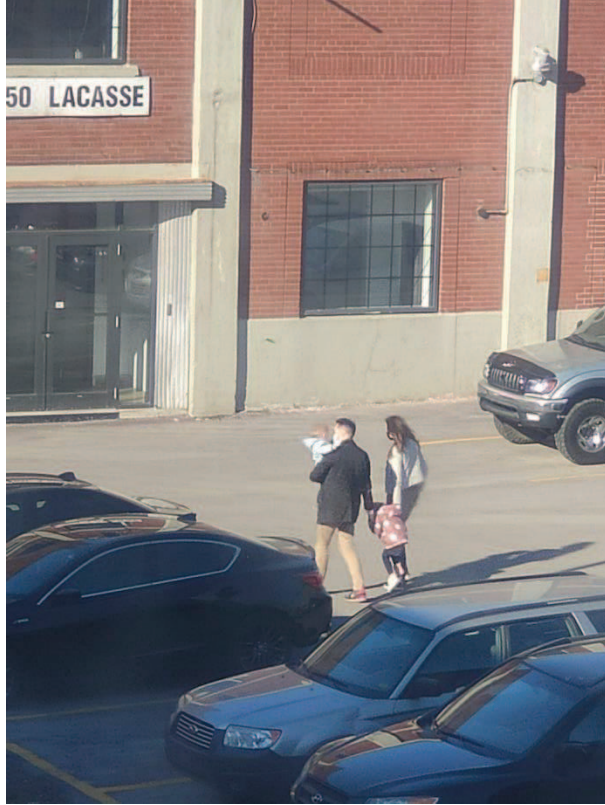
Rue Richelieu is a narrow residential corridor.

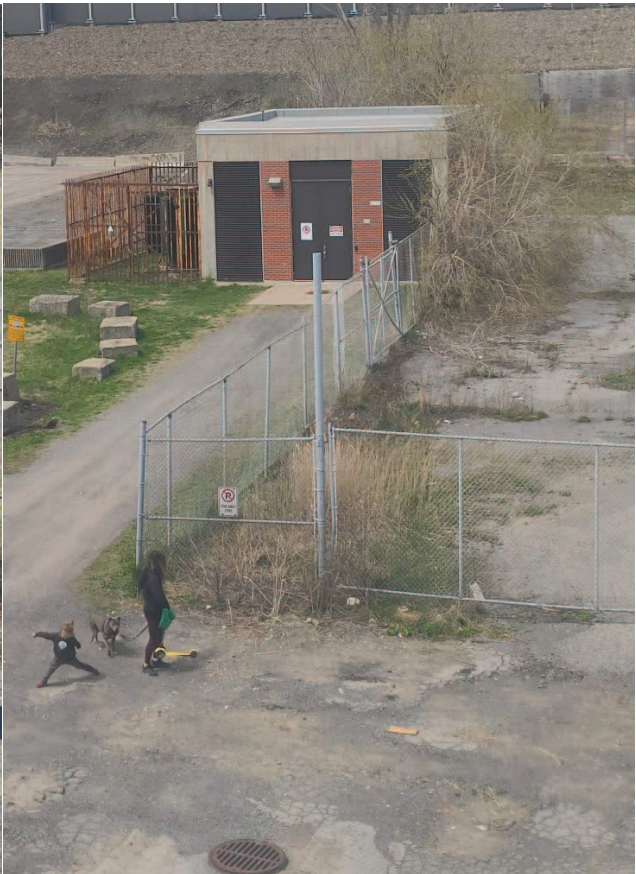
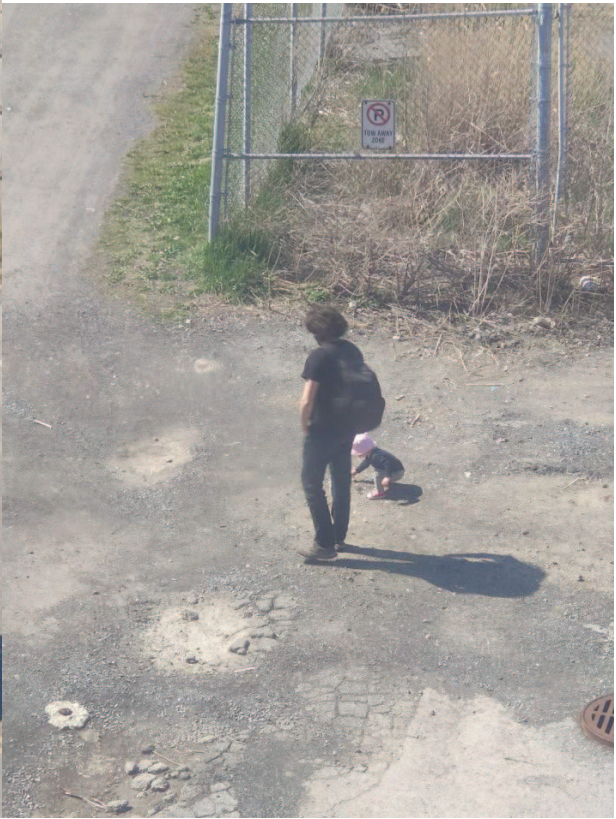
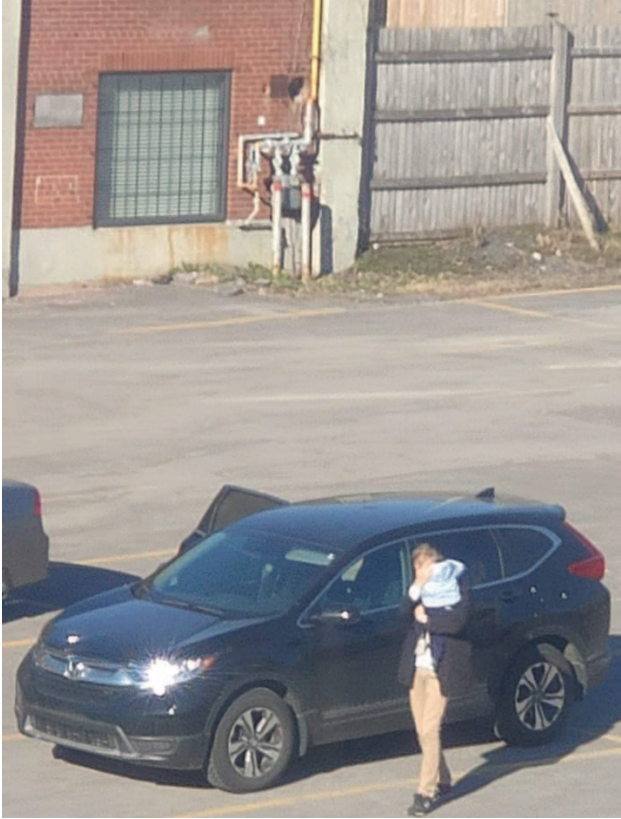
Children play in the Alley and it can be noticed in the diagram how the Ruelle-Verte is facing this entrance.



On Rue Richelieu, between Rue Sainte-Marguerite and the curve merging with Rue Lacasse, many cars line-up, either parked or driving by to drop their children at the [nursery and preschool “Imagination”](#) or stopping briefly for the encounter with teachers and staff. Other parents walk or bike with their children to the daycare.

This is the habitual scene in the mornings, and it repeats starting from noon to afternoon as the children’s pick-up time frame. COVID-19 has probably reduced this partially, but it is the dynamic of a street that has increasing become a place for children as these pictures show.





Additionally, if a detailed observer compares the fence next to building of 4295 Rue Richelieu with the historical one, it will be noticed that the fence has been moved backwards over 10m over the lot, widening leaving a wide open space next to the sidewalk on the public side.

The reason -the older residents explain- is that Rue Richelieu did not have enough room to maneuver load trucks.



Original picture from (2008) Société historique de Saint-Henri, p.29.,
retrieved from [«Rapport D'étude sur la valeur patrimoniale »](#)

Thus, the additional space was created by changing the fence line.

Moving it backwards left room that would allow large load trucks to maneuver *over* the lot instead of maneuvering entirely over a street with insufficient space for (mandatorily) turning to a side.



The change of fence would have been an historic palliative for a street that does not have the width needed for trucks to turn.

These analysis and observations diminish the feasibility of carrying out a great work as the one proposed in such narrow residential corridor.

A different issue I ask the Commissioners to notice is the consultation process itself and the preparedness of this work.

Many aspects of this have been sufficiently addressed, as for instance the insufficient time between announcing this work, the availability of the reports and the collection of opinions. In this regard, it is a proven fact that neighbors, organizations and even elected officials we have consulted didn't have information. This is profusely articulated in the Ruele-Verte Memoire.

In this context, as individuals with limited time and resources, we must carry out our own research in an attempt to elaborate a grounded and rational opinion. We can even arrive to wrong conclusions. From the information I was able to collect on the construction techniques and methods, I aim to highlight some that concern me most and that helped me elaborate my opinion.

It was informed that micro-blasting with dynamite is an option for this construction, though other options would be assessed. However, those options were not informed. Consequently, I question that such aspects of the work can be decided subsequently, if they are crucial to provide our opinion. The opinion cannot be a blank check. This difference matters.

For the recently launched construction of the Saint-Grégoire PVM, located in the parking lot of the EMEMM (École des métiers de l'équipement motorisé de Montréal), where a shorter tunnel is projected (64-m long, 6,790m³ of bedrock removal, less than Richelieu) some aspects of micro-dynamiting methods are informed on the STM website as follows:

Saint-Grégoire mechanical venti x +

Not secure | stm.info/en/info/service-updates/stm-work...

venome

Paix
 Pie-IX
 Place-des-Arts
 Place-Saint-Henri
 Plafontaine
 Rosemont
 Verdôme
 Villa-Marie
 Vau
 Alexandre-DeSève mechanical ventilation station
 Bero mechanical ventilation station
 Fulum mechanical ventilation station
 Saint-Grégoire mechanical ventilation station
 Towers mechanical ventilation station for the métro
 Ventilation improvement testing
 Richelieu mechanical ventilation station
 Quiz STM Works- October 2020
 Elevator service updates
 REM travel info
 Messages

Construction of the Saint-Grégoire mechanical ventilation station

Project summary | Impact on customer trips | **Impact on local residents** | Learn more about the project

Impact on local residents

Summary of the questions asked by participants at the virtual information session and answers given

Start of excavation

We will start digging in late February 2021. First, we will use a hydraulic rock breaker to dig the 18-metre-deep vertical shaft.

Then micro-blasting will be used to excavate the underground part of the ventilation station, starting in mid-April 2021.

Micro-blasting work starting in mid-April 2021

What measures will be implemented to ensure safety around the worksite?

- The construction site has already been fenced off, and the micro-blasting will be done within its perimeter. Noise screens have also been installed.
- Blasting mats will be installed over the rock to contain the micro-blasts.
- Safety instructions will be posted around the site.
- No explosives are stored on site.
- A professional firm specialized in monitoring vibrations has been mandated to ensure compliance with the standards established by the City of Montréal and the STM.

Saint-Grégoire mechanical venti x +

Not secure | stm.info/en/info/service-updates/stm-work...

venome

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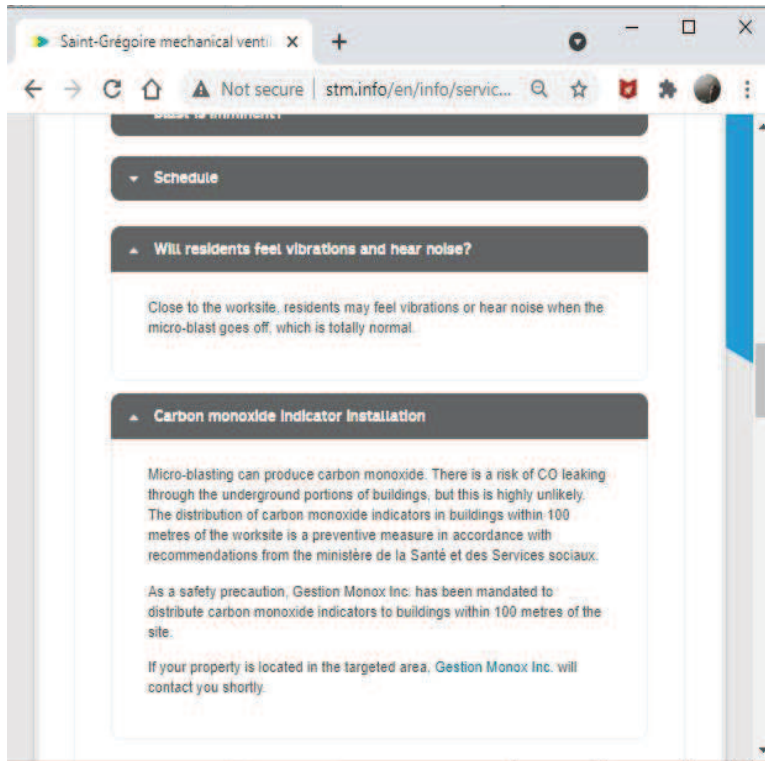
What measures will be implemented to ensure safety around the worksite?

What is the usual procedure for warning nearby residents that a blast is imminent?

- 12 whistle or siren sounds
- 30-second wait
- Micro-blast
- One long whistle or siren sound
- End of blasting

Schedule

Micro-blasting will begin in mid-April 2021 and continue until spring 2022. We will start with two to three micro-blasts a week, then increase it to one to three a day each week.



Retrieved on Wednesday 14, 2021, from STM Website

It is said on STM website that micro-blasting starts in April 2021 and continues until Spring 2022, which is more than year. It also says that the usual procedure consists of 12 whistles or siren sounds, 36 second of wait, followed by the blast, and another long siren announcing the end of the explosion.

This starts with 2 to 3 blasts per week, increasing to 1 or 3 per day.

It is not said how fast it will ramp-up, and can reach 3 blasts per day, for more than a year.

Then, it is informed that residents may feel vibrations or even hear noise when the micro-blast goes off, which is “*totally normal*”. It is puzzling how “*totally normal*” is here defined.

In my opinion this description is comparable to a war zone: Siren, Blast, Siren, Vibrations, Siren, Blast, Siren, Vibrations, repeatedly up to 3 times per day.

It is also disturbing to know that PVM Richelieu is an even larger project compared to Saint-Grégoire, and **no alternative to micro-dynamite method has been informed.**

I ask the Commissioners to keep in mind that this is being proposed in the proximity to the playground, the daycare, the RCA Building workplaces and our homes -also converted into workplaces due to the COVID-19 lockdown-.

It is also said that “Micro-blasting can produce carbon monoxide, and there is a risk of CO leaking through the underground portions of buildings”. These procedures were not informed in the past information session of March 30, 2020. We have seen several slides with the architecture proposed, the trees, the façade with details of colors, materials, and these crucial procedures were omitted.

I ask the Commissioners to request to STM to facilitate all the information about the project, even the critical and uncomfortable, otherwise the trust is hindered. Our community needs that trust to work jointly and be supportive, expecting reciprocity, understanding that these projects are ultimately for the best interest of all.

I acknowledge that it is said that CO will be monitored.

In the same fashion it was said in the information session that building structures will be monitored, and noise levels will be monitored.

However, it remains unknown what would happen if CO is detected.

As a homeowner I claim knowing what would happen if structural damages in the buildings are identified as result of monitoring them.

In the same fashion, it is not said, what would happen if it is proven that noises largely exceed what is tolerable, or exceed what is permitted under city regulation.

The Carbon monoxide, the noise, the dust, the vibrations, the damage of building, are all informed as possible outcomes by STM. Nevertheless, what is *possible* can be more accurately defined. **The possibilities and risks can, and should, be better analyzed and not left to fate.**

I contemplate, in case any, or some, of these outcomes occur, would this work be suspended?

Also, wouldn't any interruption, delay or extension of the construction term be much more costly for STM?

The numerous questions lead to ask, whether for STM and the Ville it wouldn't it be savvier to place this PVC in a place or a position further away from residences.

The STM has done some investment in this place, relying on its feasibility, but not counting on it. For this reason, STM has hired firms, consultants and is asking the public. It is an inherent risk for STM since the expropriation: the project may find its way exactly as initially planned, or may not, or may differ slightly or differ greatly.

Since numerous apprehensions are emerging, I inquire if in the long run it wouldn't be less costly to carry out this project in a place where there are less risks, less possible damages, further away from residences.

Analyzing the list of other PVM -under construction or planned- we can notice that these adopt different characteristics: some are under buildings, others on parks, others next to sidewalks, adopting different configurations, shapes and distances between the ventilation tunnel and main tunnels of the metro network.

I asked at the information session how it was arrived to this option for PVM Richelieu, to the decisions of this project, the context: the answer received was that it had to be placed between two stations. Exploring with detail the map and exploring the area we can find multiple spots between Place Saint Henri and Vendome with less residences: were any of those pondered?

The response I expect, and I have asked the Commissioners to request to STM, is about such different options, if explored, their possible advantages and disadvantages.

Simply put, was there a technical effort done to analyze alternatives? If not, my request for the Commissioners, for STM Staff and Board is to analyze and elaborate, creative alternatives if they are necessary to further minimize risk and damage.

Conclusions

From my daily experience, living in the building adjacent to the proposed PVM, the place is currently notably and perceivable saturated of noise and dust, exceeding normal parameters.

Unless this threshold decreases there is no room for a construction project that aggravates this pollution during its long-term execution.

STM has not provided rigorous studies on the sound or the air quality and pollution, which are essential as proof over the main and fundamental conditions that make this construction feasible.

Besides the “material” dimensions of the project, it is key to also carefully analyze and ponder the social, the cultural and historical conditions as another baseline: especially the social resilience of a community, that 1) has been especially marginalized, displaced and stressed by its lower socio-economic status; 2) has been highly disturbed by more than 7 years of construction of the Turcot; 3) is recovering and still traversing the pandemic.

I ask the Commissioners to firmly demand this before making progress in other domains of the construction.

The recent experience of perforations conducted by a firm hired by the STM evidenced several flaws and disturbances that severely hinders the trust in the STM its compliance to best practice and accountability with the community.

The experiences of other PVM projects, such as Bishop Street or Sainte-Gregoire, lead us to raise numerous questions and concerns.

The fact that this consultation is conducted, as per it is required to pursue an administrative procedure, but not originated in a legitimate interest of STM and/or the City in understanding the communities’ interests, is somewhat disappointing.

Nevertheless, it seems an opportunity to be rectified, especially given the committed and devoted response of Saint-Henri’s community which rapidly engaged -even constrained by time and resources- in a creative and rigorous discussion of ideas and proposals that are partially

expressed in the Memoire Signed by Ruelle-Verte, Solidarité Saint-Henri, and more than 50 individuals.

Besides the ideas and proposals, it is important to highlight that the public, mostly residents, have been already appropriated the open space comprised by the lots acquired by STM in a continuity with its surroundings (where the demarcation is not clear for pedestrians) using it for sports, for exercising, for biking, for walking dogs and other recreational activities, adopting this place in a unique and creative way. Despite isolated situations of vandalism (as graffitiing); the majority of the public and pedestrians have been entering and utilizing the space as a “park”, revealing the unmet demand for this type of green and open space in the area, and peoples’ creative appropriation ([see compilation here](#))

I ask the Commissioners to take note that as an individual, I do not support consent to pursue with this work, as it was presented to-date, since it harms me, my wellbeing, and harms the community.

I ask the Commissioners to take note and to report that the independent, unbiased, and highly representative survey that is included in the memoire of Ruelle-Verte Marguerite with an annex including extensive responses, coincide in its general trend expressing preoccupation and a need to better understand the consequences and impacts of this work; as such, those opinions do not provide a consent to pursue with this work, as it was presented so far.

I aspire this information reaches the STM, its decision-makers, especially its Board of Directors; and given its significance can also inform the Mayor and the elected officials of the Ville, to whom I ask to carefully hear the claims expressed in the survey, pausing this project until all concerns are truthfully dissipated.

I ask all decision-makers, STM and the Ville to resume the planning of this project jointly with the community, neighbors and business, on a planning board, that can collect the judicious evidence -especially on pollution- so the decisions of the community can be informed by facts, evidence and science, as exemplary participatory practice for the City.

I'm confident that Board of Directors of STM, the Mayor and the elected officials, will accompany the communities' needs and best interests, caring for its health, wellbeing, and the sustainability of environment above all.

Thank you,

Sincerely,

Mauricio Horn