



Virtual information meeting on the REM in Laval – Highlights and answers to the remaining questions

Date and time: January 27, 2021, 6:30 to 8:30 p.m.

Location: Online via the icastPro platform

Highlights of the meeting

- 329 participants
- Nearly 50 questions received beforehand and asked during the evening
- Approximately 300 questions and comments received in writing during the evening
- Four stakeholders attended the information session and question period:
 - Virginie Cousineau, Public Affairs Manager, REM
 - Giovanni Cipolla, Segment Director, NouvLR
 - Marc Lafortune, Engineer and Highway Manager, CIMA+/Hatch
 - Pierre Guillot-Hurtubise, Facilitator

Meeting agenda:

- Presentation on the REM and the work
- Question period: Answers to questions submitted beforehand and those asked by participants during the evening (through a question module)

Content of the presentation:

- Background
- The REM in Laval
- Upcoming work in 2021
- Permanent noise barriers
- Communication tools

Main topics during question period:

- Heights of new elevated structures and retaining walls in Laval
- Cutting of vegetation, including mature trees and cedar hedges
- Noise barriers

Documentation

The video recording of the information session and the documentation presented during the evening are available at the following link <https://rem.info/en/events/virtual-information-meeting-laval>.

Written answers

Many questions were asked during the evening and our team could not answer all of them. Here are our answers to the remaining questions. Note that similar questions have been grouped together for ease of reading.

Îles-Laval sector

What is planned with the old railway bridge over the Rivière des Prairies between Pierrefonds and Laval? Can the old bridge be turned into a pedestrian and bicycle crossing? Who owns this bridge?

- While we are currently building a new bridge over the Rivière des Prairies, plans for the dismantling or maintenance of the old bridge and its future use, if any, have yet to be determined. We will be discussing this with the cities of Montréal and Laval in the coming months.
- Currently, the former railway bridge is owned by CDPQ Infra.

We are worried about the construction of retaining walls. Since the project was announced in 2016, you have stated that the REM's route on Île Bigras will be on an embankment. We are surprised to learn that there will be retaining walls on most of the route. Why are the embankments being replaced by retaining walls on Île Bigras? In Laval-sur-le-Lac, for the same width of right-of-way, you are building embankments. Could you add embankments on the adjacent land owned by the city of Laval along the route, to avoid retaining walls?

- The choice to use retaining walls is always a last resort. Walls are chosen when space for embankments is not available.
- On the Îles-Laval, the existing railway track will be doubled to allow for the frequent passage of the REM. The width of the railway right-of-way does not allow the use of sloped embankments in all locations.
- In addition, the flooding episodes of 2019 led the REM to re-evaluate the configuration of its infrastructure in the Îles-Laval sector. The design of the new crossing between Rue du Pont and Chemin du Bois was raised to take into account the 375-year flood levels and thus ensure the passage of vehicles between the two sections of the island even in the event of flooding.
- Lastly, the land adjacent to the railway right-of-way belonging to the city is used for the Chemin du Tour, Chemin du Mistral, Chemin des Rocailles and Chemin des Trilles, and therefore cannot be used by the REM to build embankments.

How high will the retaining walls be and what will they look like?

- The height of the retaining walls will vary between 1.5 and 6 metres, depending on the sector. The retaining walls in Laval will be made of textured concrete (lines, see image below as an indication).



Is it possible to prepare a cross-sectional view showing the elevation of the REM tracks along the Îles-Laval?

- This suggestion has been noted by our teams. An image will be prepared shortly to illustrate the elevation of the REM tracks on the Îles-Laval.

Most residents on Chemin du Mistral have mature cedar hedges. What will happen with these hedges? If they have to be cut down, will new cedars be planted? How high will they be?

- Every effort will be made to cut as little vegetation as possible. Our technical teams went to the site several times to optimize the design of the retaining wall and preserve as much vegetation as possible.
- Behind Chemin du Mistral, the work to be done will occupy the full width of the railway right-of-way. Thus, vegetation in the right-of-way will unfortunately have to be cut back. However, vegetation on residents' private property cannot be cut without prior agreement.
- If any cedar hedges are to be cut behind the Chemin du Mistral, we will offer to replant hedges after the work is completed, to help camouflage the retaining wall at this location.

We have concerns about the exterior aesthetics of the Île-Bigras station. Would it be possible to erect a lightweight, more aesthetically pleasing structure on the retaining walls? This structure could include glass and aluminum components like the other REM stations.

- Particular attention will be paid to the landscaping around the Île-Bigras station in order to better integrate this structure into the island's landscape.

Will the two elm trees west of the railway tracks near Chemin des Trilles be cut down?

- Yes, these two elms had to be cut down, as they were in direct conflict with the construction of the double tracks for the REM.

We have concerns about flooding on the Îles-Laval with the closure of the level crossing and the building of the temporary road. Why are you building this road in a flood zone? What measures

will be taken to ensure that the road does not flood? Have you taken into account that this area was flooded in 2017 and 2019?

- Yes, the temporary road is being built in an area that was flooded in 2017 and 2019. This road will be in place for the duration of the work, until the future permanent link is built near the station, outside the flood zone.
- At all times during the work, the NouvLR consortium will provide emergency access outside the flood zone that will allow the construction area to be crossed from west to east, in the event of flooding on the islands. Thus, in the event that the temporary road is flooded, another access will be available.

We are concerned about the temporary road on Île Bigras. Chemin du Tour on the east side of the tracks was flooded in 2017 and 2019. The neighbourhood on the west side is now protected by a dike built in the spring. The temporary road will create a breach that could flood the neighborhood to the west despite the dike.

- Close coordination is in place with the city of Laval to plan actions in the event of flooding and to anticipate the location of the temporary dikes installed by the city, taking into account the excavation of the embankment. Meetings are held with the city and a rapid coordination mechanism is in place with the NouvLR consortium and the city in the event of flooding.
- In addition, the temporary road will be slightly elevated, about 0.50 metres higher than the Chemin des Rocailles.

When the work is completed, will we have two safe, non-flooding passages on Île Bigras?

- The situation will be the same as it was before the work was done. With the REM, the current level crossing must be closed, but a new permanent link will be built between Chemin du Tour and Chemin des Bois to allow vehicles, pedestrians and cyclists to pass under the REM tracks. This new link will be built outside the flood zone, adjacent to the future Île-Bigras station. As for the passage on Chemin du Tour under the railway bridge, it will be reopened once the work is completed.

How deep will the future permanent link to Île Bigras between Chemin du Tour and Chemin du Bois be?

- The future permanent link between Chemin du Tour and Chemin des Bois will not be entrenched. It will simply benefit from a slightly downhill profile from Chemin du Tour to Chemin des Bois, since the latter is about 1 metre lower than Chemin du Tour in this sector.

We fear traffic problems around the Île-Bigras and Sainte-Dorothée stations. Is it possible to add a drop-off area on the east side of Île-Bigras station and on the north side of Sainte-Dorothée station, since traffic will also come from those sides?

- A drop-off is planned on the north side of the Sainte-Dorothée station, but it is reserved for paratransit. Any additional drop-offs would result in a loss of parking spaces. Thus, there are no plans to add any more drop-offs to those already planned at Sainte-Dorothée and Île-Bigras stations.

When will the Île-Bigras station work be completed? Why start work so quickly given that the network will not be in service until 2024?

- With the complete shutdown of the rail shuttle running on the former Deux-Montagnes commuter train line on December 31, 2020, work began in Laval in January. This allows us to take full advantage of the summer 2021 construction season and to advance the work as much as possible in anticipation of the six-month test period before the REM goes into service.
- The required test period on the Deux-Montagnes branch cannot begin until all work on this branch is completed. In this context, the schedule for commissioning remains fall 2024 in Laval. It is important to ensure that all the necessary tests are completed rigorously and diligently, in order to ensure the optimal and safe commissioning of the REM.

Your noise fact sheet states that in zone 1 areas, such as Île Bigras, station decibel levels should not exceed 45 decibels during the day and 40 decibels at night. What will reduce the noise of the station by 5 decibels at night?

- These levels correspond to the standards dictated by the Ministère de l'Environnement et de la Lutte contre les changements climatiques (MELCC), but these levels must take into account the initial ambient noise. On Île Bigras, the highest ambient noise at night has been calculated at 45 decibels. For reference, a noise level of 50 decibels at night applies in the municipal by-law for Laval. We use the most restrictive setting of 45 decibels at night.
- Several permanent mitigation measures will be in effect both during the day and at night, such as the installation of silencers for ventilation and air conditioning systems. It should also be noted that during REM off-peak periods, the ventilation rate will also be reduced.

Why aren't there any noise barriers near the Île-Bigras station? In Sainte-Dorothée, there are parking lots around, but on Île Bigras there are homes nearby.

- What dictates the location of the walls are the significant impacts resulting from the modelling based on the road noise policy. The sound modelling study shows that the passage of the REM will have no significant noise impact near the Île-Bigras station. The modelling considered several inputs, including topography, built environment, soil type, road network and traffic flow, etc.
- The sound monitoring program will allow us to verify the performance of the mitigation measures and to implement corrective measures if necessary.
- The model will soon be available on our website, so you can consult it.

On Île Bigras, will the REM tracks be built on retaining walls or on columns like we see along Highway 40?

- On Île Bigras, the REM tracks will be either on a vegetated embankment or on a retaining wall. There will be no columns as is the case on the western branch.

Which side of the tracks along Chemin du Mistral will the electrical infrastructure be installed on—the residential or non-residential side?

- The power supply poles for the REM cars will be positioned in the centre of the tracks.

Sainte-Dorothée sector

Why is the Sainte-Dorothée station so imposing?

- The stations must be long enough to accommodate the REM cars (about 80 metres) and high enough to allow users to walk on either side of the tracks depending on the direction they wish to travel. Since the REM stations are universally accessible, they also have elevators. The height of the station is designed to integrate these features.

What will happen with Graveline Street? When will the street be closed?

- The level crossing on Graveline Street will be closed when the extension of Des Bois Avenue to Chemin du Bord-de-l'Eau is completed. This is planned for 2022.

At Graveline Street, will the REM be higher than the existing rails, and if so, by how many metres?

- At Graveline Street, the REM tracks will be slightly higher than the old railway tracks, i.e. about 1 metre higher.

Have you conducted a noise study in connection with the increase in traffic on Des Bois Avenue?

- The sound modelling carried out for the REM takes into account, among other things, the anticipated increase in road traffic on the roads leading to the REM stations as well as ambient noise. However, changes in traffic (increase or decrease) anticipated on roads further away from the stations are not considered in the noise modelling.

When the Des Bois Avenue intersection is closed, will we have to use Hector-Nadon Street?

- During the work on Des Bois Avenue, Hector-Nadon Street will be temporarily connected to the new Chemin-de-Fer Street for a few weeks.
- It should be noted that the level crossing on Graveline Street will remain open and accessible until the extension of Des Bois Avenue to Chemin du Bord-de-l'Eau is completed, in order to maintain road traffic in this sector.

Will the connection of Hector-Nadon Street with the new Chemin-de-Fer Street be temporary or permanent?

- As part of the work on Chemin-de-Fer Street and Des Bois Avenue, NouvLR will temporarily connect Hector-Nadon Street with the new Chemin-de-Fer Street to facilitate vehicle traffic, particularly emergency vehicles. Hector-Nadon Street will therefore be temporarily open to traffic for the duration of the work, a period of approximately two weeks. Our intention is to restore the original configuration after the work.

With the road reconfigurations in Sainte-Dorothée, there will be only one option left to reach Chemin du Bord-de-l'Eau, via Des Bois Avenue. This intersection is in a flood zone, as we experienced in 2019. Have you taken this into account?

- The new Des Bois Avenue link that will pass under the REM tracks takes into account the flood zone in this area. Note that Des Bois Avenue will not be the only option to reach Chemin du Bord-de-l'Eau, as it will also be possible to take Jolibourg Boulevard.

Do you have any plans in the event of flooding under the Chemin du Bord-de-l'Eau overpass? If you lower the street under the overpass, it will increase the risk of flooding.

- In the case of the REM project, there are no plans to lower Chemin du Bord-de-l'Eau under the railway overpass.

Do you have a visual of the railway overpass that will be rebuilt over Chemin du Bord-de-l'Eau?

- We do not have a visual of this overpass at the moment.

The extension of Des Bois Avenue to Chemin du Bord-de-l'Eau was originally intended to connect with Gobeil Street. Why have the plans changed?

- The realignment of Gobeil Street with the new intersection of Des Bois Avenue and Chemin du Bord-de-l'Eau is currently under discussion between the REM project and the city of Laval.

Is the work to reconfigure Terrasse de Fontenelle into a dead-end scheduled for spring 2021?

- Work on Terrasse de Fontenelle is planned for late spring or summer 2021. This work is expected to last approximately four weeks.

Is the reconfiguration of Terrasse de Fontenelle into a dead-end permanent or temporary?

- Terrasse de Fontenelle will be permanently transformed into a dead-end, since Des Bois Avenue will soon be lowered at this location to pass under the REM tracks. The difference in level of these two streets will no longer allow Terrasse de Fontenelle to open onto Des Bois Avenue.

Will there be a pedestrian crossing between Terrasse de Fontenelle and Sainte-Dorothée station?

- Yes, to facilitate transit to the future REM station, a pedestrian and bicycle bridge will be built from the U-turn facility on Terrasse de Fontenelle, crossing over Des Bois Avenue.
- To view this future pedestrian and bicycle path's route, consult the Sainte-Dorothée station layout plan on our website under the "Stations" tab: <https://rem.info/en/stations/sainte-dorothee>.

Will trees be replanted on the south side of Terrasse de Fontenelle?

- A minimum of 2,000 trees will be replanted in Laval. The locations of the reforestation projects are being determined with the city of Laval and are not yet known at this time.
- One of the criteria for a site to host a reforestation project is an available area of at least 0.3 hectares.

Will the embankment be vegetated at the level of Graveline Street, as is the case for Les Cèdres Street and Les Érables Street?

- Yes, all embankments will be vegetated. The seeding will be composed of a mixture specific to the Deux-Montagnes branch, where blue will be the dominant colour. This means that there will be blue flowering or blue foliage species in the seeding mix.

During the construction work at Sainte-Dorothée station, will pedestrians on the north side of the tracks be able to cross to access the bus stops on the south side, and vice versa?

- With the establishment of the construction zone at the former Sainte-Dorothée station, it is no longer possible to cross the track on foot at this location. We must use the surrounding streets, either Graveline or Val-Brillant. When the extension of Des Bois Avenue is completed, it will be possible to use Des Bois Avenue to cross, since there will be a path for pedestrians and cyclists.

Currently, the park-and-ride lot on Des Bois Avenue is not functional. When will it be?

- The park-and-ride lot on Des Bois Avenue was completed in December 2020. Additional work is planned for 2021 in the parking lots for transitional measures, including the parking lot south of the station.

Will the electric charging stations that were removed at the Sainte-Dorothée station be replaced by new technology or by fast charging stations?

- At the Sainte-Dorothée station, 20 parking spaces with charging stations for electric cars are planned. The charging stations planned are level 2, i.e. 240 volts.

You say that the parking capacity of the Sainte-Dorothée station will be maintained. Will new parking spaces be required if existing spaces are removed?

- Our goal is to maintain a similar number of parking spaces, approximately 975 spaces in total, including 5 universal access spaces, 98 carpool spaces, and 20 spaces with charging stations for electric cars.

Will there be power cuts in 2021 in Sainte-Dorothée, considering that people are teleworking?

- If power outages are necessary, those affected will be notified in advance so they can plan their activities accordingly.

Are there any other expropriations planned because of the road reconfigurations in Sainte-Dorothée?

- No, no expropriation will take place in the area.

Will you take advantage of the work to widen Chemin-de-Fer Street, which runs alongside the railway tracks?

- Our goal is to provide safe access to the REM stations for pedestrians and cyclists. As for Chemin-de-Fer Street, the objective is to provide a safe link for people living in the neighbourhood to the north and west, as well as people who will use the parking lot near Antoine-Dalmas Street, and who will walk on Chemin-de-Fer Street to access the station.



Discussions are underway with the city of Laval to confirm which development will be chosen on Chemin-de-Fer Street.

What will be the final configuration of the lanes on Des Bois Avenue, with the bus shuttles?

- The number of lanes on Des Bois Avenue will not be changed as part of the REM project. However, when approaching the new intersection with Chemin du Bord-de-l'Eau, there will be a right turn track as well as a southbound left turn track to facilitate traffic flow.

It is difficult to find one's way around with the work on Des Bois Avenue. The city of Laval at 311 directs us to the REM, while the REM directs us to the city of Laval. There has been a lot of confusion since 2020. Is it possible to find a way to better inform the community?

- The work to the north of Des Bois Avenue was carried out by the city of Laval to create a reserved bus lane. The work carried out by the NouvLR consortium involves lowering part of Des Bois Avenue and extending it to Chemin du Bord-de-l'Eau. All the information on the REM work is available on our website in the "Works info" section: <https://rem.info/en/works-info>.
- We work in collaboration with the city of Laval to answer the questions we receive as best we can.

Will the parking lot on Des Bois Avenue, located between Rue Principale and Montée Champagne, remain in place permanently?

- We invite you to contact exo directly with this question.

Laval-sur-le-Lac sector

Will the mature trees and the cedar hedge along the railway tracks on Les Peupliers Street be cut or retained? If the hedge is cut, are there plans to replant a new hedge of sufficient height to camouflage the REM? Will the trees to be cut be identified in advance so that the decision to cut them can be appealed?

- The NouvLR consortium is sensitive to this aspect and acts in such a way as to cut down as few trees, shrubs and hedges as possible. The REM and NouvLR teams went walking along the route in Laval-sur-le-Lac to verify the possibility of minimizing the cuts. Our teams are continuing their analysis in order to limit the cuts required for future work in this sector as much as possible.
- Note that the trees to be cut are previously identified by ribbons, to ensure that only the minimum required for the work is cut.

Are you going to cut down trees outside the railway right-of-way on les Des Peupliers Street?

- Analyses are still underway with the NouvLR consortium for this sector.

Will the existing cedar hedges along Les Plaintes Street be cut or retained when the fence behind the homes is replaced? Many of these homes have mature trees that hide the railway tracks. If these trees are to be cut down, would it be possible to replant continuous vegetation tall enough to camouflage the REM?

- Analyses are still underway with the NouvLR consortium for this sector.

How wide will the embankments be along Les Plaines Street? Will mature trees have to be cut down to make these embankments?

- The doubling of the tracks and the required drainage infrastructure require the widening of the existing embankment. Along Les Plaines Street, the design is being optimized to try to avoid cutting mature trees within the railway right-of-way. This optimization is carried out wherever possible along the route.

We have concerns about the elevated structure in Laval-sur-le-Lac. The old commuter train was hidden by a cedar hedge and mature trees. This vegetation also reduces the sound. How will you camouflage the elevated structure so as not to destroy the unique character of the Laval-sur-le-Lac neighbourhood? How will you reduce the noise that will carry further with the elevation of the track, which will now be higher than the vegetation?

- We are aware of the concerns regarding the presence of an elevated structure in the landscape of Laval-sur-le-Lac and that is why particular attention will be paid to the landscaping in order to promote the elevated structure's harmonious integration.
- With regard to noise, all necessary measures will be put in place to comply with the regulatory standards to which the project is subject and to preserve the sound environment for local residents. Noise barriers will be installed wherever the modelling identified significant impacts. In addition, a sound monitoring program will confirm the performance of these measures during the operation of the REM and implement additional measures as needed.

It is distressing to damage the landscape of Laval-sur-le-Lac with an elevated structure. Why not move the entrance to the golf course further north, via Chemin St-Antoine? Has consideration been given to lowering the level of Les Cèdres Street and the entrance to the golf course to reduce the height of the elevated structure?

- We evaluated the option of moving the entrance to the golf course to the north on Chemin Saint-Antoine. Unfortunately, this option did not fit the financial framework of the REM project.
- The lowering of Les Cèdres Street under the railway tracks, which are maintained at ground level, is also a scenario that has been studied. Considering the significant impacts on Les Peupliers and Les Cèdres streets (to the south), as well as on the driveways and the neighbouring properties near the intersection, this scenario was not retained.

Will the REM be on the ground or elevated in Laval-sur-le-Lac? What will be the height of the track on Les Peupliers Street? We are concerned about the impact of an elevated structure on the landscape.

- The track will be elevated in two locations to eliminate level crossings: over Les Cèdres Street and over Les Érables Street. In both cases, the elevation of the track will be gradual, in order to respect the maximum embankments (see the map below, also available in the presentation).
- Maximum height above Les Cèdres Street: approximately 5.5 metres (including a 4.5-metre clearance under the structure).
- Most of the raised structure will be covered by a sloping vegetated embankment to mitigate its presence in the environment.



What will be the height of the structure over Les Cèdres Street, including the rolling stock?

- The REM is an Alstom Metropolis light rail system. The rolling stock is 3.9 metres high, while the structure over Les Cèdres Street will have a maximum height of 5.4 metres at the highest point. The image below illustrates this intersection with the rolling stock (also available in the presentation).



Can we discuss the appearance of the concrete on the portal frame at the entrance to the golf course and at the corner of Les Érables Street?

- The portal frame itself, i.e. the structure directly above Les Cèdres and Les Érables streets, will be constructed of flat concrete. The wall segments will be built in textured concrete, with lines.

The image of the structure above Les Cèdres Street is misleading. The proportions are not realistic. Why didn't you add the sound barrier and fences to this picture?

- This image was created by experts from engineering plans and the background images are from Google Street View. The renderings represent the planned structures, which are sloping vegetated embankment for most of the elevation, as well as a wall portion. The dimensions of the structure are to scale according to the latest technical drawings. The location of the embankments is also accurate.
- At the time of producing this image, we did not yet have all the data on the location of the noise barriers and fences. Above Les Cèdres Street, the noise barrier will be 1 metre high above the safety barriers.

On the image of Les Érables Street, the street seems unchanged. Are there no plans to lower the level of Les Érables Street?

- It is indeed planned to lower Les Érables Street slightly. The image representing this intersection is for information purposes and was produced according to the information available at the time.

Would it be possible to prepare a cross-sectional plan showing the gradual elevation of the tracks to span Les Érables Street, like the one presented for the golf course entrance?

- This suggestion has been noted by our teams. An image will be prepared shortly to illustrate the elevation of the REM tracks over Les Érables Street.

How long will the intersection of Les Cèdres and Les Peupliers be closed?

- The intersection of Les Cèdres and Les Peupliers will never be closed, as a temporary road will be built to allow entry and exit to the golf course. The temporary road is scheduled for installation in spring 2021.

Will golf delivery trucks be able to drive under the Les Cèdres Street railway overpass?

- Yes, the minimum clearance of 4.5 metres will allow delivery trucks to drive under the new railway overpass to access the golf course.

Have you considered planting grasses on the embankments in Laval-sur-le-Lac to improve their visual integration and maintenance?

- For the time being, what is planned is a seeding mix composed in part of grasses, where blue will be the dominant colour. We are also continuing our analysis to allow for a harmonious integration of the embankments in this sector.

Are there any plans to safely integrate the bike path at the intersection of les Érables and les Peupliers streets?

- Yes, the bike path on Les Peupliers Street will be connected to the bike path on Les Érables Street. The design calls for a new four-way stop at this intersection, as well as rerouting the bike path closer to the river, to the dam in the direction of Sainte-Rose Boulevard.

Does the height of the REM tracks in relation to the current tracks have an amplifying effect on noise when the REM passes by?

- The height of the REM tracks was considered in the sound modelling, which determined the locations where significant impacts are anticipated according to the MTQ's road noise policy and where mitigation measures must therefore be implemented.

Since when has the city of Laval been aware of the scenario chosen by CDPQ Infra for the Laval-sur-le-Lac neighbourhood?

- Discussions are underway with the city of Laval to agree on a mutually satisfactory scenario that respects the timelines and budgetary framework for the project. The chosen solution to access Club Laval-sur-le-Lac is the reference scenario known to all since 2016. Since the beginning of the project, we have been in contact with the city of Laval, among others, to present the work plans. The collaboration is ongoing.

Will there be an REM station in Laval-sur-le-Lac? You mentioned work near Les Cèdres Street.

- The Sainte-Dorothée station will be located on the same site as the former exo station. The work near Les Cèdres Street will eliminate the level crossing by raising the railway tracks above the street.

Will the doubling of the railway tracks in Laval-sur-le-Lac be done on the residential side or the golf side?

- Generally speaking, between Les Cèdres and Les Peupliers streets, the track will be doubled towards the golf course. The track remains within the railway right-of-way.

Where the track is already doubled along Les Peupliers Street, will you still carry out work and cut back vegetation?

- Although the track is already doubled at this location, work will be required to level the rails and adjust the track configuration to the rest of the route. As such, vegetation cutting may be required within the railway right-of-way for this work. Our teams are continuing their analysis in order to limit the required cuts as much as possible.

Do you have a picture of the REM between the golf course entrance and Les Érables Street? Will there be embankments and noise barriers at this location?

- Images illustrating the REM at the Les Cèdres and Les Érables intersection are available in the presentation of the January 27, 2021 meeting (on pages 14 and 15).
- There will be a noise barrier in the Laval-sur-le-Lac sector, up to approximately Les Bouleaux Street (see image below, also available in the presentation).



Do you know the dates of the upcoming work on Les Érables Street? During the closure of Les Érables Street, will there be a bypass to maintain traffic flow?

- The design is not yet complete for the work on Les Érables Street. This work is scheduled to begin in 2022.

Can you present a plan showing the location of the current fence, future anti-intrusion fences, and the construction limits of the REM at Laval-sur-le-Lac?



- The final position of the anti-intrusion fence in this area is still being designed. Your suggestion is well noted, when the information is available.
- It should be noted that the work carried out by the NouvLR consortium is planned within the boundaries of the land already owned by CDPQ Infra.

Will there be drainage in the REM right-of-way so as not to interfere with the drainage of water heading towards Les Plaines and Les Peupliers streets?

- Yes, the entire rail corridor will benefit from a complete drainage system located entirely within our right-of-way, with outlets agreed upon and accepted by the city of Laval.

Will Les Peupliers be a one-way street?

- There are no plans in the REM project to modify the existing lanes on Les Peupliers Street.

Permanent noise barriers and sound modelling

Will the sound studies be made public?

- The sound modelling studies will be available shortly on our website.

Do the noise studies demonstrate that the noise level will be equivalent to the current level, taking into account the locations where the tracks will be raised, the frequency of passage and the cutting of vegetation?

- For the modelling, several inputs specific to the different sectors were taken into consideration, including topography, built environment, soil type, road network, etc. In addition, the REM project infrastructure (e.g. route, elevation, structures) and equipment noise were taken into account using three rolling stock scenarios as a reference: the REM at a stop, the REM running at the speed profile in catch-up mode, and the REM running on a curve.
- In areas where sound modelling anticipates significant impacts according to the MTQ's road noise policy, noise barriers will be installed to mitigate impacts.

Will the noise barriers be installed only during construction or permanently once the REM is in operation?

- These are permanent walls for the operation phase of REM.

We could hear the sound of the old commuter train as it crossed the Rivière des Prairies, especially when the cloud cover was low. You don't have any noise barriers on the new railway bridges. We are concerned about that. What does your modelling study say about noise on railway bridges? Is it possible to add noise barriers to the bridge? If the noise is disturbing, will it be possible to add noise barriers later?

- First of all, it is important to distinguish between exo's old heavy train and the REM project's metro-style light train. These two types of vehicles do not produce the same sound and the REM's lighter weight does not generate as much vibration.
- Between Montréal and Île Bigras, the REM will use a new bridge with a concrete deck and welded rails, unlike the existing metal bridge. Between Île Bigras and Sainte-Dorothée, the deck of the existing bridge will also be modernized and the rails will be welded.

In Sainte-Dorothée, will there be noise barriers on the Chemin-de-Fer Street side? Why not have them all the way to Graveline Street?

- What dictates the location of the walls are the significant impacts resulting from the modelling. The sound modelling study shows that the passage of the REM will not have a significant noise impact near Graveline Street.
- The sound monitoring program will allow us to verify the performance of the mitigation measures and to implement corrective measures if necessary.

In Laval-sur-le-Lac, why will noise barriers be installed only on one side of the track? Walls installed on one side only will not be effective when the REM passes in the direction further away from the noise barriers.

- The modelling considered the areas along the golf course at the railway right-of-way as sensitive receptors. The results showed no significant impact on this sector. According to the road noise policy to which we are subject, the modelled noise levels on the golf course side are a low impact compared to the existing noise level and no mitigation measures are required.
- Noise barriers have features that absorb sound and prevent it from bouncing further away from the tracks.

Why are there no noise barriers on the structure that will span Les Érables Street?

- What dictates the location of the walls are the significant impacts resulting from the modelling. The sound modelling study shows that the passage of the REM will not have a significant noise impact in this sector.
- The sound monitoring program will allow us to verify the performance of the mitigation measures and to implement corrective measures if necessary.

Why are the noise barriers white? It is a visible colour that gets dirty and is prone to graffiti. Why didn't you choose green or vegetated noise barriers?

- The REM project's permanent noise barrier model is a proven technology that has been used on several other projects. The same type of noise barrier technology is used, for example, on the Evergreen LRT in Vancouver, on Highway 30 in Valleyfield, on Highway 91 in Richmond, British Columbia, and at the Winnipeg airport. This model can be integrated into a residential area to ensure tranquility. These noise barriers have features that block and absorb sound to prevent it from bouncing back.
- Considering that the walls are usually installed inside the fenced railway right-of-way, the noise barriers will not be accessible to the public, which will prevent graffiti.

Will the noise barriers be water-proof? Will the foam in the walls settle over time?

- The noise barrier model chosen is already used in Québec and is adapted to our weather conditions. This type of wall is a proven technology that meets current standards.
- The sound monitoring program will allow us to verify the performance of the mitigation measures and to implement corrective measures if necessary.

Will the noise barriers be treated with an anti-graffiti product? Or will they be cleaned up if there is graffiti?

- In general, noise barriers will be inside the railway right-of-way and not accessible to the public. If noise barriers are accessible, then a coating will be applied.

If noise barriers are to be added later, how will the walls be installed if there is no foundation for them?

- Should this occur, the new noise barriers to be installed will be designed and appropriate foundations will be put in place.

Will noise barriers cause snow and ice to accumulate near the rails in winter?

- The location of the walls takes into account certain operating and maintenance constraints such as snow removal. The acoustic panels are installed on low walls that serve as a foundation. They raise the signs to prevent damage from snow and ice accumulation and snow removal activities. If necessary, maintenance will be carried out by the REM operator (Groupe PMM).

How effective are noise barriers, according to your modelling? What is the percentage of noise reduction achieved with these noise barriers?

- The noise reduction achieved by noise barriers varies from case to case. The sound modelling will soon be available on our website and it will be possible to see the effect of the noise barriers in each sector.

What will be the difference in decibel levels of the REM compared to the old commuter train? What will be the difference in the range of the sound, in metres?

- The technology chosen for the REM is an automated light rail system. This type of technology is less noisy than heavy trains (no station entry whistle or level crossing alarm, electric brakes, less noisy wheel/rail interaction due to the fact that the vehicles are less heavy and less long, etc.).
- Yes, the sound modelling will soon be available on our website. It will be possible to consult it and check the sound levels obtained.

How many decibels will be generated by the passage of the REM cars?

- There is no single value, since there are several elements to consider when determining the decibel level emitted by an REM car: the speed, whether the train is stopped, whether the train is arriving in a station, the topography (trench, ground or elevated), the sector, etc.
- It is therefore not the single value that is considered, but rather the impact in the environment as a function of a set of elements integrated in the sound modelling.
- The primary objective of the sound modelling is to determine where the significant noise impacts are, in order to mitigate them with noise barriers.

Will the results of the noise monitoring program and the decibel levels measured with the REM be available for public consultation?

- Yes, the sound modelling will soon be available on our website for consultation.

When you say that the sound modelling used conservative assumptions, what does that mean?

- In particular, the modelling considered a higher-than-normal REM speed, called the "catch-up speed." This ensures that the mitigation measures put in place will be effective even in exceptional cases, such as at higher catch-up speed and in curves.

Is it possible to get a picture of the noise barrier that will be installed along Chemin du Mistral?

- The noise barriers will have the same appearance along the entire REM route (see image below, also available in the presentation).



Côté ferroviaire



Isolant acoustique



Vegetation

Will the vegetated embankments be covered with grass and clover only, or with more attractive plants? What is the viability of plants on vegetated embankments? What maintenance measures will be taken on vegetated embankments to control noxious weeds and comply with city of Laval standards?

- The vegetated embankments are seeded with a mixture of plants adapted to the site conditions, which optimize biodiversity and the resilience of the plantations. If necessary, during the first two years, areas where grasses have died will be reseeded to ensure the survival of vegetation on the embankments.
- Several embankment maintenance activities are planned, including mowing the embankments to a height of 10 to 15 centimetres from the ground once the vegetation reaches 60 centimetres in height. Unwanted species will also be removed as needed.

What will be the impact of the embankments on the adjacent trees, considering the reduction in sunlight and the roots that may be covered with a significant amount of soil?

- The embankments and drainage ditches will be located entirely within our right-of-way. With regard to the new embankments in the Laval-sur-le-Lac sector and the adjacent trees, our teams are currently evaluating the possibility of avoiding cutting mature trees and hedges. This assessment takes into account the impact that the work could have on the survival of this vegetation.

When you talk about reforestation programs, what does "forest reforestation" mean? What will be the diameter, age and varieties of the trees to be replanted?

- Forest reforestation refers to the type of plantation. The trees are large-stock seedling plugs. These trees are small and are planted with protective measures (e.g. mulch) according to planting patterns that meet the criteria of the Ministère de la Forêt, Faune et Parc (MFFP).
- Large-stock seedling plugs are trees that are generally two years old in the nursery. Depending on the species and season, these trees are usually between 30 and 60 cm tall when planted.

Will there be vegetation covering the anti-intrusion fence?

- There are no plans to cover the anti-intrusion fence with vegetation.

Will the vegetation be cut only in the railway right-of-way, or could trees be cut on residential properties?

- Vegetation cutting is done within our right-of-way. In the event that vegetation straddles our right-of-way and a residential lot, we will make arrangements with the lot owner.

Why are reforestation projects in Laval not developed in collaboration with citizens' associations?

- Reforestation programs are carried out in collaboration with municipal authorities who have the expertise and detailed knowledge of the territory to ensure the success of the program.

Is Earth Day's partner audited for its operations? Many scandals have emerged regarding similar compensatory programs in the past.

- A rigorous follow-up is done in the framework of this partnership.

Do you have landscaping experts on your team?

- Yes, our team is composed of many environment, architecture and landscape design experts.

Fences

The right-of-way fence sometimes acts as a boundary with a private residence. When replacing this fence, what communication is planned with neighbouring property owners, in case we need to move things or manage unleashed pets?

- We have already notified the owners concerned by this type of situation. If there are items attached to the current fence or leaning against the fence, we ask that homeowners move these items before May 1, 2021, when fence replacement will begin.
- When the right-of-way fence is removed, the NouvLR consortium will ensure the safety of property owners by installing a temporary gap-free site fence.

Will there be anti-intrusion fences in front of the embankments?

- Yes, there will be anti-intrusion fences except near the stations or where there is a wall higher than 2.4 metres (the height of the fence). Almost the entire right-of-way will be equipped with a 2.4-metre-high anti-intrusion fence to prevent any intrusion into the railway right-of-way and ensure everyone's safety.

Work

Is there a place where you can follow the work live?

- Cameras have been placed near some construction sites to monitor the work live. You can access them on our website, under the "Photos and videos" tab: <https://rem.info/en/photos-videos>.

Can we know the schedule for the work on the bridge over the Rivière des Mille-Îles?

- Work on the railway bridge began in 2021 and will continue until 2022. The rails will then be installed on the new bridge.

Will the bridge over the Rivière des Mille-Îles be lowered slightly? If so, have you thought about the spring flooding and the presence of the dam on the east side?

- At the end of the work, the bridge will be slightly higher. The level of the tracks will be between 2.5 and 3 metres higher than the old rails.

What type of retaining wall will be built?

- The walls are mainly mechanically stabilized earth (MSE) walls, as well as interlocking concrete block walls or T-Walls.

Will the pandemic slow down the work?

- The mandatory shutdown of construction in 2020 had an impact on the overall project schedule, but work could begin as early as January in Laval due to the final shutdown of the former Deux-Montagnes commuter train in December 2020. We do not anticipate any additional impact on the schedule. A rigorous evaluation was done with our experts to present a new adjusted schedule.
- To find out more, consult the news on our website: <https://rem.info/en/news/2020-schedule>.

General questions

What is the difference in height of the REM tracks compared to the current tracks in Laval?

- In general, the profile of the REM tracks will be similar to the profile of the existing tracks, with the exception of the following locations:
 - On the Îles-Laval: about 1.5 metres higher
 - Near Sainte-Dorothée station: about 1 metre higher
 - At the new structure that will span Les Cèdres Street: the maximum height of the structure, at its highest point, will be approximately 5.4 metres
 - Near the Rivière des Mille-Îles bridge: about 3 metres higher

Will the railway overpasses have sufficient clearance to allow the passage of heavy vehicles? The overpasses look too low in the images shown.

- Yes, there will be sufficient clearance under the new rail overpasses to allow for the passage of trucks, emergency vehicles, etc.

When will the project be completed? When is the REM scheduled to begin service in Laval?

- The REM project should be completed by the end of 2024 and the REM in Laval is scheduled to begin service in the fall of 2024.

How will we get to the airport from Laval?

- From Laval, you will take the REM towards Brossard and get off at the Bois-Franc station, where you will make a connection with the REM towards the airport.

To prevent users from parking their vehicles in the neighbourhoods surrounding the REM stations, will local residents be required to have parking stickers?

- The management of local streets remains the responsibility of municipal authorities. Municipalities have the authority to intervene if issues are identified.
- Our studies of ridership, traffic and bus feeder traffic show that the planned facilities meet the anticipated needs.

How much will a REM ticket cost?

- The Autorité régionale de transport métropolitain (ARTM) is responsible for setting the fare schedule for all transit networks in the greater Montréal area. The ARTM's evaluation is underway and we will have more details on the type of subscription once their analysis is complete.
- Our intention remains that the rates be comparable to what is currently paid for an equivalent distance.

How can we discuss issues with the REM team if we are not part of a citizens' association?

- You can contact our community relations team at 1 833 736-4636 or by email at info@rem.info.

Are other REM stations planned for Laval?

- Although we are already studying some extensions, including one in Laval, we do not have more details at this time. All the information on the projects under study can be found on the CDPQ Infra site at: <https://www.cdpqinfra.com/en/projects/studies>.

Will property values around the REM be affected by the project?

- There is no reason to believe that the value of the houses will be affected.
- We are aware that the arrival of the REM will transform neighbourhoods, in addition to improving the transportation offer, which is why the design of the infrastructure includes various architectural and landscape integration measures, particularly for stations located in residential neighbourhoods. For about 80% of the project, the route is integrated into existing railways and roads that have existed for decades. In the case of the Deux-Montagnes branch, it replaces a heavy train on a century-old track.

Are you going to use anti-graffiti products on the REM structures?

- The surfaces of structures or any wall cladding with a porous surface are treated with an anti-graffiti product. Among other things, this coating makes it easier to clean surfaces.
- We also made sure that the supplier responsible for the operation of the REM (Groupe PMM), will have to remove the graffiti quickly, within 4 to 48 hours, depending on the situation and the location.

Why will the Deux-Montagnes branch be in service after the Sainte-Anne-de-Bellevue branch? It seems that the stations and work will be completed well before the 2024 commissioning.

- We have to follow a sequence of work and test periods that takes into account the entire network. For example, in the Pierrefonds-Roxboro sector, an elevated section will be built using a launching gantry. This launching gantry must first have completed the work in the West Island.
- We also want to ensure that all necessary tests are completed thoroughly before commissioning. Although every effort is being made to optimize the schedule, the Deux-Montagnes segment is still scheduled for commissioning in fall 2024.

- When the segment between the Central Station and Du Ruisseau stations is opened, the transitional measures, notably the bus shuttles, will be directed towards the REM for boarding at the Du Ruisseau station. The planning of transitional measures at that time will be done by the ARTM and the operators responsible for public transit.

Could the financial issues of the airport station affect the REM in Laval? Why is the TBM running, when the funding for the airport station is not confirmed? Are you going to get financial assistance from governments?

- The REM station at the airport is of strategic importance; in the long run, this station will provide the link between downtown and the airport that the Montréal community has been waiting for.
- We remain confident that Aéroport de Montréal will find the necessary financial solutions to meet its obligations to the REM project.
- The REM project office is continuing the planned work in order to put this branch into service by the end of 2024.

Is it possible to put advertising in the REM?

- There will be screens in the REM cars for passenger information. These same screens could be used to display advertising.

Will all REM stations be equipped with escalators and elevators?

- All stations will be universally accessible. Depending on the configuration of each station, it will be equipped with either elevators or escalators, or both.
- To find out more, consult the information sheet of the stations you are interested in on our website, under the "Stations" tab: <https://rem.info/en/stations>.

I noticed on the maps that some REM stations have changed their names. Why was this change made? Why did you not consult the public to find names for the stations?

- With regard to station naming, a process was conducted with a committee of experts appointed by the transit operators who established guidelines for the naming of the entire network. These principles are as follows:
 - For existing service points (stations or terminals) that are directly connected to the REM or converted by the REM, we keep the existing names so we do not create confusion in landmarks for the existing clientele.
 - For new REM service points, we use the geolocation of stations (intersections or city names) so that network users can recognize their location rapidly.
 - We avoid using station or bus terminal names of existing networks that will not be connected to the REM.
- In 2019, following the work of the expert committee, a validation of the station names was carried out with the municipalities.

Will bicycles be able to be taken on the REM? Do the REM stations provide bicycle parking all year long? Are bike racks such as bike stations planned?



- Bicycles will be allowed on the REM outside of peak hours.
- The REM stations provide bicycle parking of varying capacities. In general, half of the bicycle racks at each station will be protected from the weather by a roof.

Will there be televisions on board the REM cars? Will there be toilets on board the REM?

- As in the Montréal metro, there will be screens for passenger information on board the REM cars, but there will be no toilets.

What will be the frequency of the off-peak REM in Laval? Why will the REM be in operation 20 hours a day, until late at night, when the Deux-Montagnes commuter train was almost empty in the evening?

- In off-peak periods, the frequency of the REM will be every 15 minutes.
- The vision of the REM project is long-term, with a 100-year perspective, and mobility needs will continue to grow over this period. We are currently building a transportation network for the next generations, so the current context cannot define our vision for the future.

Is there a risk that the winter period will cause delays in the passage of the REM?

- Each morning, prior to the beginning of service, the operations and maintenance crews will prepare the tracks according to existing or forecast weather conditions, such as heavy snowfalls and ice precipitation, using specialized maintenance equipment.
- Frequent car traffic, every 2.5 minutes during rush hours on the central segment, will prevent excessive snow accumulation on the tracks during normal operating hours (5:00 a.m. to 1:00 a.m.).
- The tracks will also be equipped to cope with the winter. For example, powerful switch heaters driven by natural gas will be installed to clear snow and ice from the switches. To learn more about REM in winter, you can consult our news on our website: <https://rem.info/en/news/rem-and-winter>.

How many people can two REM cars carry?

- The capacity on the Deux-Montagnes line will increase significantly. For example, during morning peak hours between 6:00 and 9:00 a.m., the REM will serve 42,100 people (compared to 17,100 currently).
- The maximum capacity per departure during the peak hour is 780 people (four cars) and 390 during the off-peak period (two cars).

Are the REM cars longer or shorter than the old Deux-Montagnes commuter train?

- REM trains are not commuter trains; their cars are more like metro cars from a technological standpoint. REM cars are smaller but will run much more frequently, which explains the substantially increased capacity. The space will be designed for smooth passenger flow at transfer station entrances and exits (e.g. wider spaces). Lastly, the cars will be heated in winter, air-conditioned in summer and connected to Wi-Fi.



Who is funding the REM project? How will you ensure that the budgets for the REM will be respected?

- The Caisse de dépôt et placement du Québec (CDPQ) is a long-term institutional investor with a global presence and net assets of over \$298.5 billion. CDPQ has been investing in the infrastructure sector for over 15 years. As part of the REM, CDPQ is contributing \$3.2 billion of the \$6.5 billion planned for the construction of the network.
- The Québec government is contributing to the financing of the REM by investing \$1.283 billion in preferred shares in the project. The Québec government also defined the needs in terms of transportation infrastructure and then gave CDPQ Infra the green light to plan the REM project.
- The government of Canada is also investing \$1.283 billion in the REM project.
- Hydro-Québec will contribute to the REM project as part of its objective to participate in the electrification of transportation. Hydro-Québec's financial participation is estimated at \$295 million and covers the fixed equipment required for the electrification of the REM.

Most Laval residents travel by car. In how many years will REM be profitable?

- CDPQ Infra's vision of the project is long-term, with a view to 100 years, during which time mobility needs will continue to grow. Efforts to reduce the carbon footprint generated by transport will also be stepped up. The project is part of a context of accessibility and speed of movement of people. We are currently building a transportation network for the next generations, so the current context cannot define our vision for the future.

What does "catenary system" mean?

- A catenary is the set of poles and elevated electric cables, located above the tracks, that supply the REM cars with electricity since the REM is a 100% electric system.

Will the exo line between Saint-Jérôme, Laval and Montréal be affected by the REM?

- No, the REM has no impact on the Saint-Jérôme line.

Is the station architecture committee's report public?

- It is not planned for the advisory committee to produce a report. However, you can learn more about the REM architectural charter by consulting the news available on our website: <https://rem.info/en/news/5-things-to-know-rem-architecture>.

Are the windows of the REM stations a danger to birds? How will you protect the animals and birds?

- The presence of glazed glass (a pattern of lines of different widths) in the glass walls of the REM stations reduces the risk of collision.

What impact will the project have on residents' tax bills?

- The REM will not have a direct impact on residents' taxes.

The city of Ottawa has experienced problems with the introduction of its light rail system. What actions will you take to avoid this same type of problem when the REM is commissioned?

- In order to ensure the reliability of the service, we rely on the test phases conducted prior to the commissioning of the REM. This is why we first tested a REM car in one of the best climatic chambers in the world, in Vienna. The objective was to demonstrate the soundness of the car design by verifying that the comfort of future passengers will be optimal and that no types of climatic conditions will impact critical features. The REM car was subjected to operating conditions comparable to those in Montréal: heavy snow, freezing rain, frost, ice, high winds, sudden temperature changes, etc. Multiple scenarios were examined during these tests, which lasted about a month. The overall test results were very satisfactory: the car and its functionalities performed as expected, between -38 °C and +38 °C, and under all weather conditions.
- Next, it is important to test all the components of the system to see how they interact with each other. In fact, we are among the first in the world to set up a representative segment, i.e. a segment that includes all the components that will be in the 67-kilometre network, to test the system. So, more than a year before commissioning, we are already testing the components on 3.5-kilometre stretch of the network.
- Lastly, tests will also be carried out before each commissioning.

You said that you will maintain the same number of parking spaces at the stations. Does this mean that the new temporary parking lots are an initiative by the city of Laval?

- In fact, our objective is to maintain approximately the same number of parking spaces for both stations in Laval. If you have any questions about park-and-ride facilities, we invite you to contact exo directly.

The bus shuttles leave their engines running in the parking lot near the Sainte-Dorothée station. Is there not an environmental concern?

- We invite you to communicate directly with the bus shuttle operator, either exo or the Société de transports de Laval, to report this.

What will be the options for Collège Beaubois students when the current shuttle ends in June 2021, considering that the REM will not be in operation until 2024?

- We invite you to contact Collège Beaubois directly to obtain this information. The mitigation measures implemented until 2024 are planned by Mobility Montréal, in collaboration with the various operators concerned.