



# Update

## Réseau express métropolitain

Media presentation  
June 2021

Réseau  
express  
métropolitain



# Agenda



○ Primary active construction sites in 2021

○ Project update (schedule and budget)

○ Progress report – Testing period

○ Question period

# The REM



**100% automated  
light rail project**

**67 km  
of track**

**26 stations  
in the Greater  
Montréal area**

**3 connections  
to the Montréal metro**

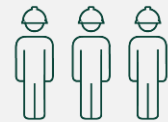
# 2021: the project's busiest work season

REM construction sites are active on all 67 km of the future network

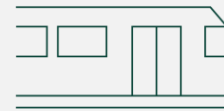
Currently, there are...



> **30**  
active sites



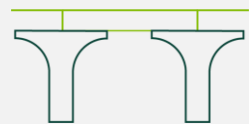
> **3000** workers and  
employees  
deployed



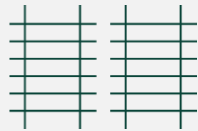
**23** stations under  
construction



**12,7** km of  
elevated structure  
completed



+/- **500**  
columns in place



**13,7** km of rail  
installed



Nearly **1M** m<sup>3</sup> of soil  
excavated



+/- **135k** m<sup>3</sup> of  
rock excavated



**Primary construction  
sites active this year**

No.1

# 23 stations under construction this year



3 stations completed

*Exterior and interior finishes completed*



9 stations partially completed

*Exterior finishes completed*



11 stations started

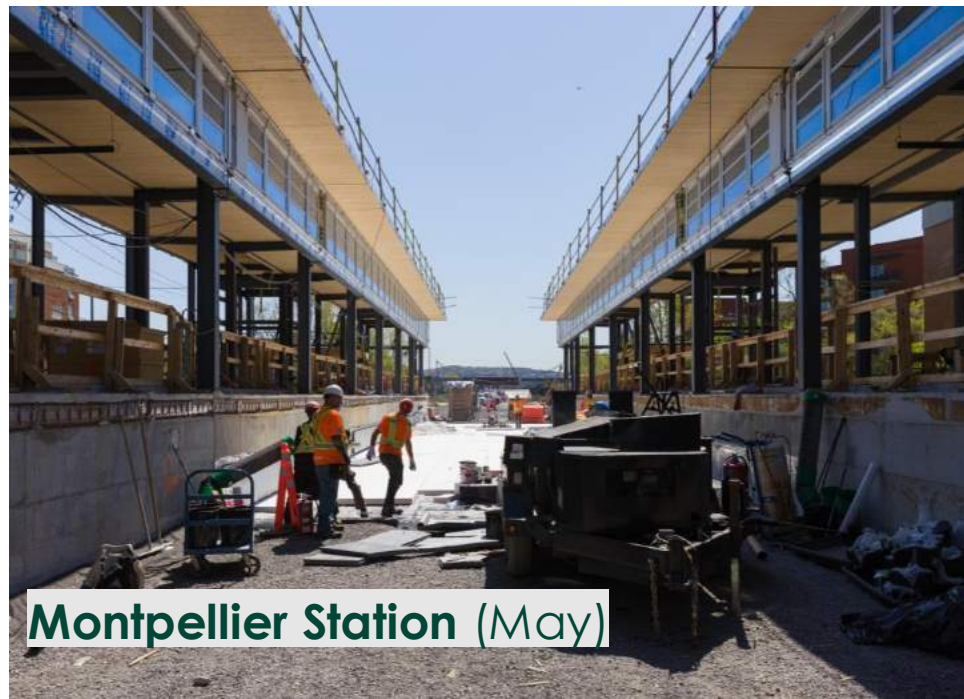
*Steel structure completed*



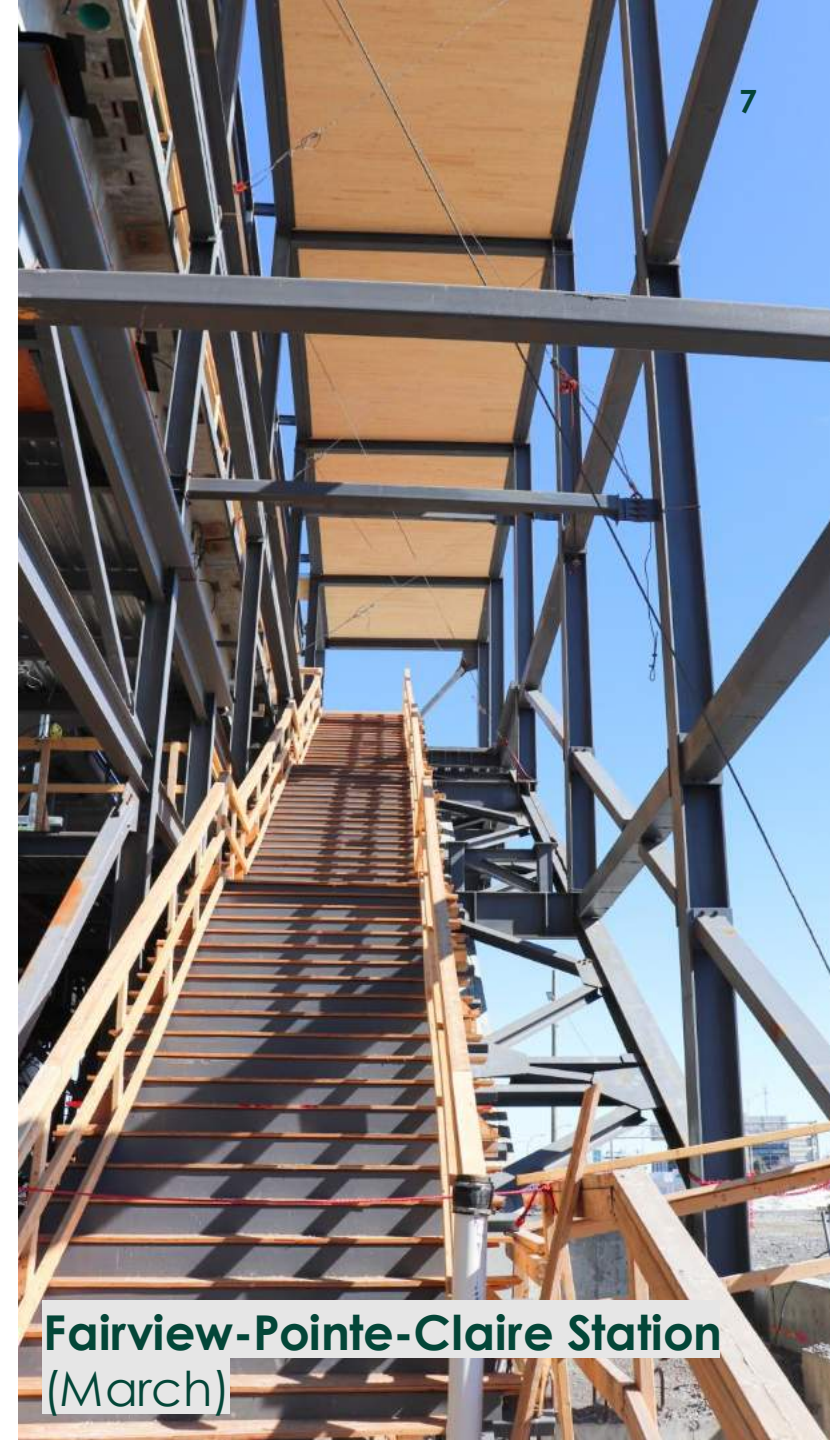
**Brossard Station**  
Interior finishes (March)



**Ville-de-Mont-Royal**  
Station entrance (April)



**Montpellier Station** (May)

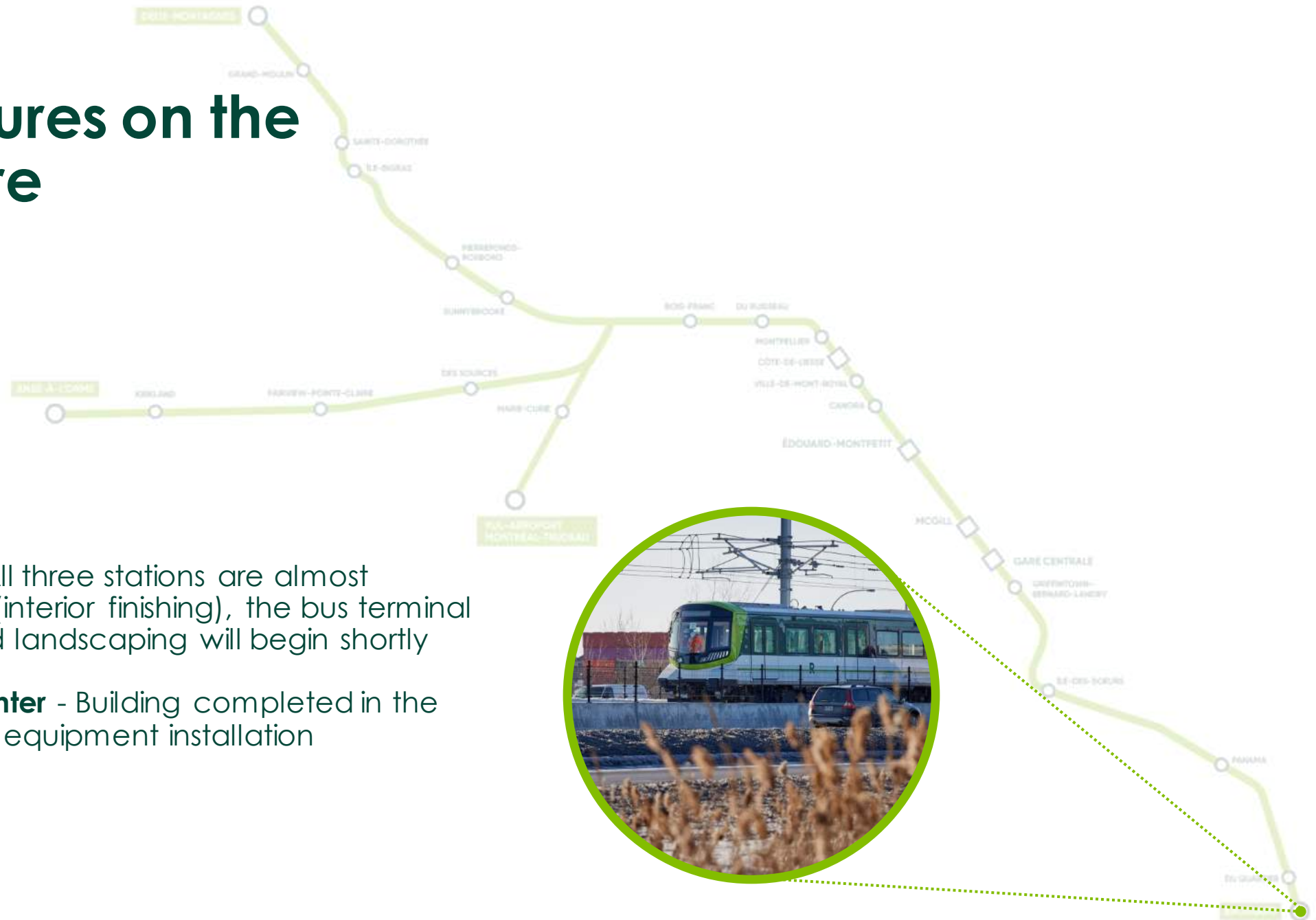


**Fairview-Pointe-Claire Station**  
(March)

No.1  
**Stations  
under  
construction**

No.2

# Infrastructures on the South Shore



**Stations** - All three stations are almost complete (interior finishing), the bus terminal as well and landscaping will begin shortly

**Control center** - Building completed in the spring and equipment installation





**Brossard terminal station site (May)**



**Work in Panama sector (May)**

No.2  
**Infrastructures  
on the  
South Shore**



**Platform sliding doors – Brossard (March)**



**Infrastructures in Brossard (April)**

No.3

# Mont-Royal Tunnel



Reinforcement work on the southern section

**McGill** – Installation of the steel structure

**Édouard-Montpetit** – Blasting will be completed this summer, construction of station entrance started, installation of high-speed elevators



Édouard-Montpetit (May)



Édouard-Montpetit (May)



Central Station (May)



McGill (May)



McGill (May)

No.3 **Mont-Royal Tunnel**

No.4

# West Island and airport



**West Island** – Completion of 14.5 km of elevated structure and installation of tracks and systems

**Airport** – Tunnel boring work continues (250 metres drilled to date) as well as elevated structure construction in the Technoparc sector



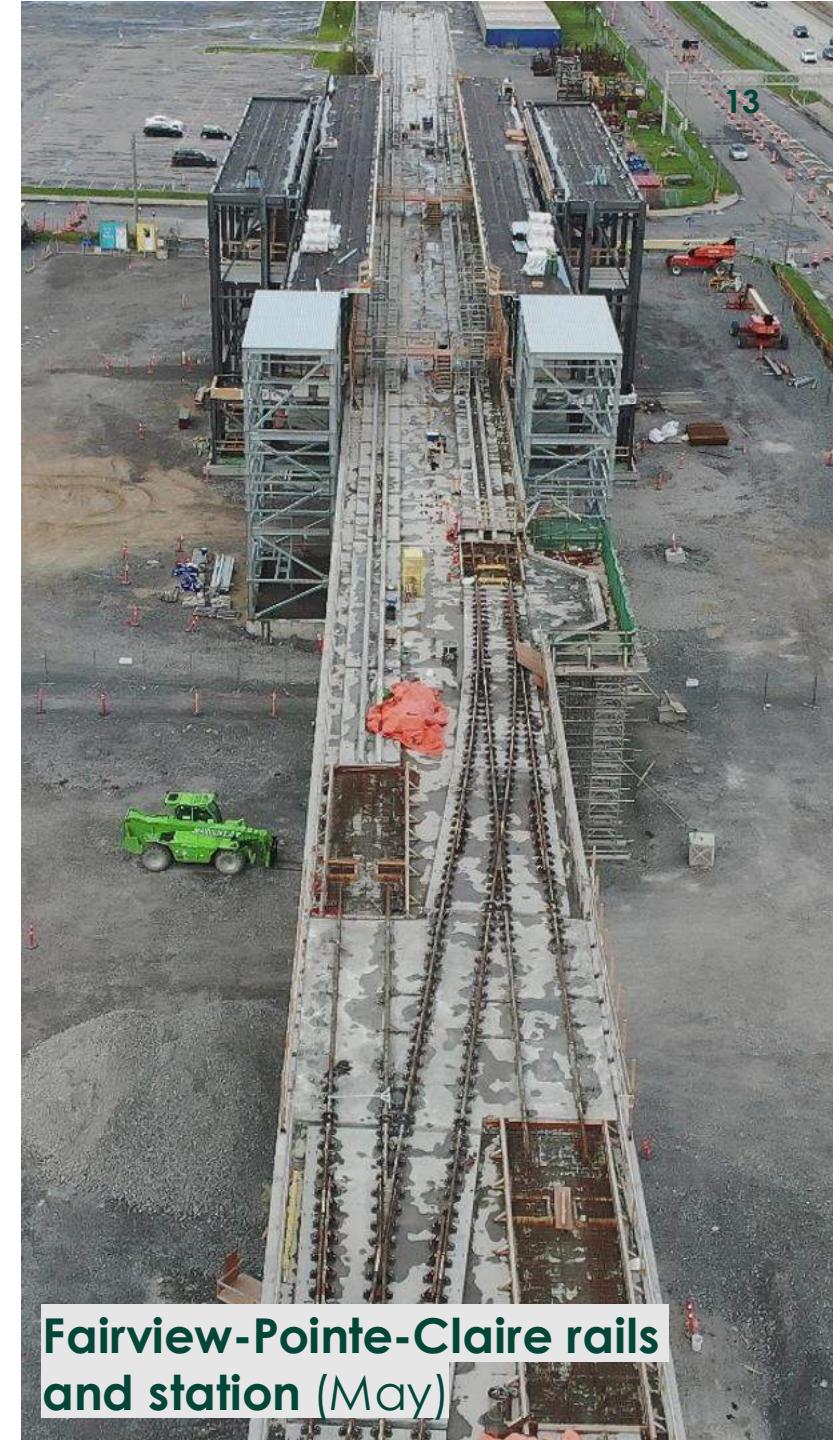
Anne and Marie – restoration of service (April)



Anse-à-l'Orme Station (May)



Laying of the rails



Fairview-Pointe-Claire rails and station (May)

No.4

# West Island and airport

No.5

# North Shore and Pierrefonds-Roxboro



**Conversion of grade crossings to railway overpass**

**Wrap-up of work on the** Rivière-des-Prairies 1 and 2 bridges and continuation of Mille-Îles River bridges construction work

**Doubling** of the railway track



**Columns at Pierrefonds-Roxboro (May)**



**Start of construction on the Deux-Montagnes line (May)**



**Deux-Montagnes Station demolition (April)**



**Mille-Îles River bridge (May)**



**Start of construction at Sunnybrooke (April)**

No.5

# North Shore and Pierrefonds-Roxboro

## North Shore and Pierrefonds-Roxboro

**Conversion of grade crossings to railway overpass**

**Wrap-up of work on the** Rivière-des-Prairies 1 and 2 bridges and continuation of Mille-Îles River bridges construction work

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No.5



No.3



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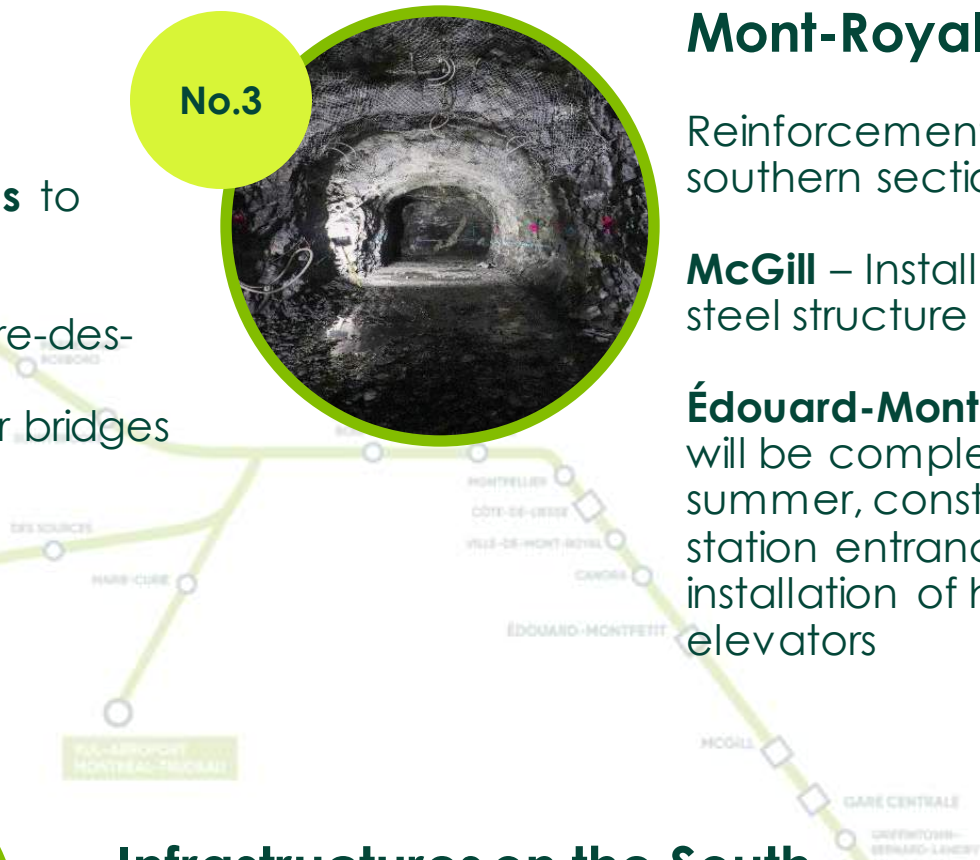


## Infrastructures on the South Shore

**Stations** - All three stations are almost complete (interior finishing), the bus terminal as well and landscaping will begin shortly

**Control center** - Building completed in the spring and equipment installation

No.2

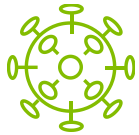






# Project update (schedule and budget)

# Exceptional events in 2020



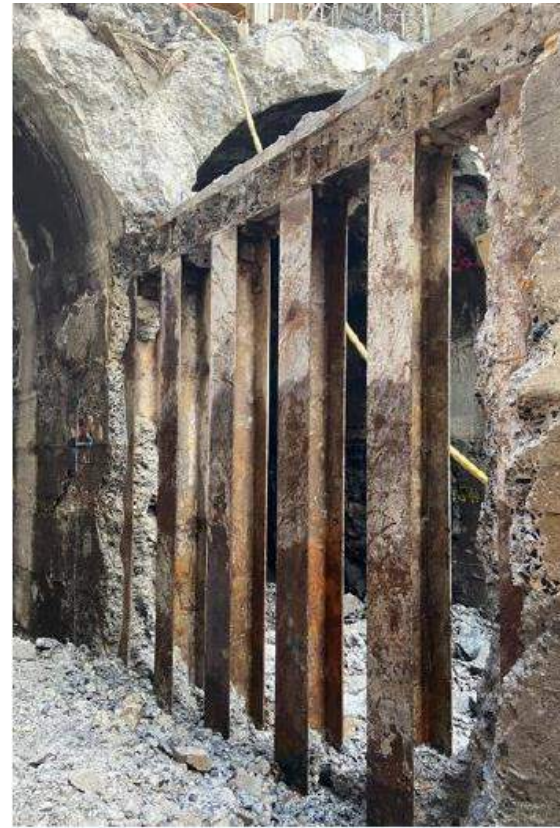
**COVID-19 impact**



**Unplanned detonation of a century-old explosive charge**



**General condition of the tunnel beneath McGill College Avenue**



# Reminder of the updated schedule



# Projected ridership – post-pandemic context

## Key factors for analysis:



Public transit in the centre of the **mobility matrix** and the appeal of active transportation  
*The road network limitations and saturation are still an issue*



**Levelling out of rush hour** and growing interest in travel between peak times



**Attraction of polycentric networks** (suburb to suburb) vs. monocentric (to downtown)



**Search for premium office space**



**Continued real estate development** within the radius of major transit stations  
*Interest in developing human-scale communities around public transit*

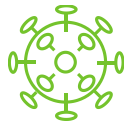
**Traffic projections maintained over the long term:** the REM is extremely resilient in the post-pandemic outlooks analyzed

# Financial update

## Context

- Global pandemic and management of complex issues
- Thorough situation analysis process
- **Additional amount covered by CDPQ Infra**

## Three components



**\$200 M**

**special allocation:** actions taken in response to COVID-19 and to mitigate impacts on procurement and skilled labour



**\$150 M**

interface with communities and project optimizations



**Under negotiation**

exceptional events related to the Mount Royal Tunnel  
(unexpected detonation of a 100-year-old explosive charge and observation of the deteriorated conditions of the tunnel beneath McGill College Avenue)

Amount added to the financial model

**\$350 M**

# Design, planning and consulting phase



**April 22, 2016:** presentation of a reference project valued at \$5.5 billion

**Fall 2016:** addition to the project of three stations in downtown Montreal valued at \$400 million

**Spring 2017:** series of adjustments to the project to respond to the various requests received during the consultations and the BAPE (improvement of frequency, fluidity of travel and urban integration - addition of accesses, relocation of equipment, extension of the airport tunnel, creation of an agricultural land trust, etc.)

**Winter 2017-2018:** request for proposals for two major contracts:

- Infrastructure Engineering, Procurement, and Construction (EPC) contract
- Rolling stock, Systems, Operations and Maintenance services (RSSOM) contract

**April 12, 2018:** financial close of the project at **\$6.3 billion**

# Construction phase



	Construction and execution		
	Spring 2018	Fall 2019	Spring 2021
CDPQ Infra	\$2.95 B	\$3.18 B	\$3.33 B
CDPQ Infra <b>Special allocation for COVID-19</b>	N/A	N/A	<b>\$200 M</b>
Gouvernement du Québec	\$1.28 B	\$1.28 B	\$1.28 B
Canada Infrastructure Bank (CIB)	\$1.28 B	\$1.28 B	\$1.28 B
Hydro-Québec	\$295 M	\$295 M	\$295 M
ARTM	\$512 M	\$512 M	\$512 M
<b>Adjustment and enhancements</b>	Financial closure following procurement process + August 2018 BIC funding confirmed	Optimization agreement to protect the schedule	Measures taken in relation to COVID-19, coordination with third parties and project optimizations
<b>TOTAL</b>	<b>\$6.3 B</b>	<b>\$6.5 B</b>	<b>\$6.9 B</b>

# Financial parameters of the project maintained



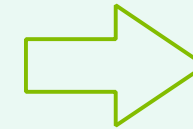
## No additional investment required from government authorities

- Consistent with the 2015 and 2018 agreement between the government of Québec and CDPQ Infra
- Off-balance sheet project for the government

72¢

## Maintenance of fare established in the integration agreement between the ARTM and CDPQ Infra in 2018

- Financing of capital and operating costs
- Reserve for long-term network maintenance
- Competitive rate
- High level of predictability for public authorities (cost of living variation)



## Performance targets maintained

- Performance target for CDPQ Infra maintained between 8 and 9% and the government of Québec close to 4%
- Important milestones achieved (start of construction, receipt of rolling stock, etc.), thereby reducing project risks



## Implementation method that transfers the project owner's risks to CDPQ Infra, significantly limiting the financial risks for the government

- Construction and Traffic Risks





# Progress report – Testing period



# Progress report

- Tests carried out in a climatic chamber in the fall of 2020 (between - 38 °C and + 38 °C)
  - Simulations of heavy snowfall, freezing rain, frost, ice, strong winds, temperature variations, etc.
- Multiple tests (more than 200 hours) on site on all components of the future network and rolling stock
  - Manual (high speed) and automated (low speed) driving
- Twenty 2-car trainsets received to date at the maintenance centre (about 20% of the trains)

**Next step:** installation of a carousel near the future Panama station to simulate frequent round trips and accelerate the pace of testing

A total of **500 km** to be covered by each car



More than **600 km** run by 2 trains

More than **200 hours** of tests performed

More than **fifty** train exits

**40** cars (two 2-car trainsets) received at the depot

**Upcoming event – Thursday, June 10**

# **Next stop: Brossard station**

**Invitation to the media to board the REM**  
**Tour of the station and car during operation**



**Question**

**period**



**More info**  
**rem.info**

