



# Bloor-Yonge Station Capacity Improvements Project

## TTC Board Meeting – December 2021

December 8, 2021



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# Project Drivers

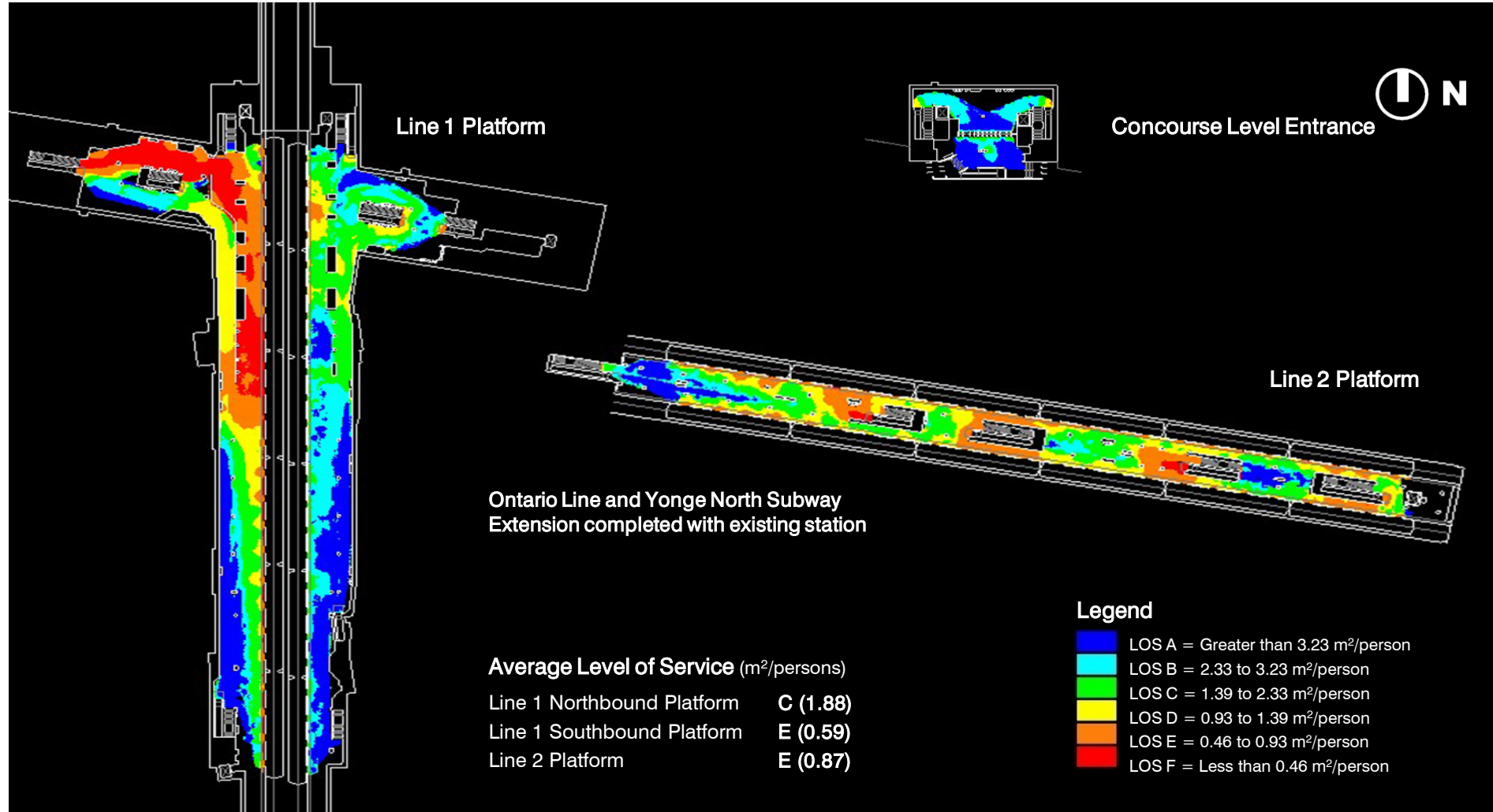
Modification & expansion of the existing Bloor-Yonge Station required to address current issues and future ridership demand as follows:

- Overcrowding of the Line 2 platform due to substandard platform width and congested vertical circulation in the AM and PM peak hour
- Overcrowding of the Line 1 platforms due to poor passenger distribution leading to congestion and queuing at vertical circulation in the AM and PM peak hour
- Overcrowding of Lines 1 and 2 platforms AM and PM peak hour hampering alighting and boarding leading to increase in dwell time for trains
- Projected ridership growth will exacerbate current deficiencies in station performance
- Projected ridership growth will greatly extend recovery time from a missed headway
- Line 1 expansion to Richmond Hill



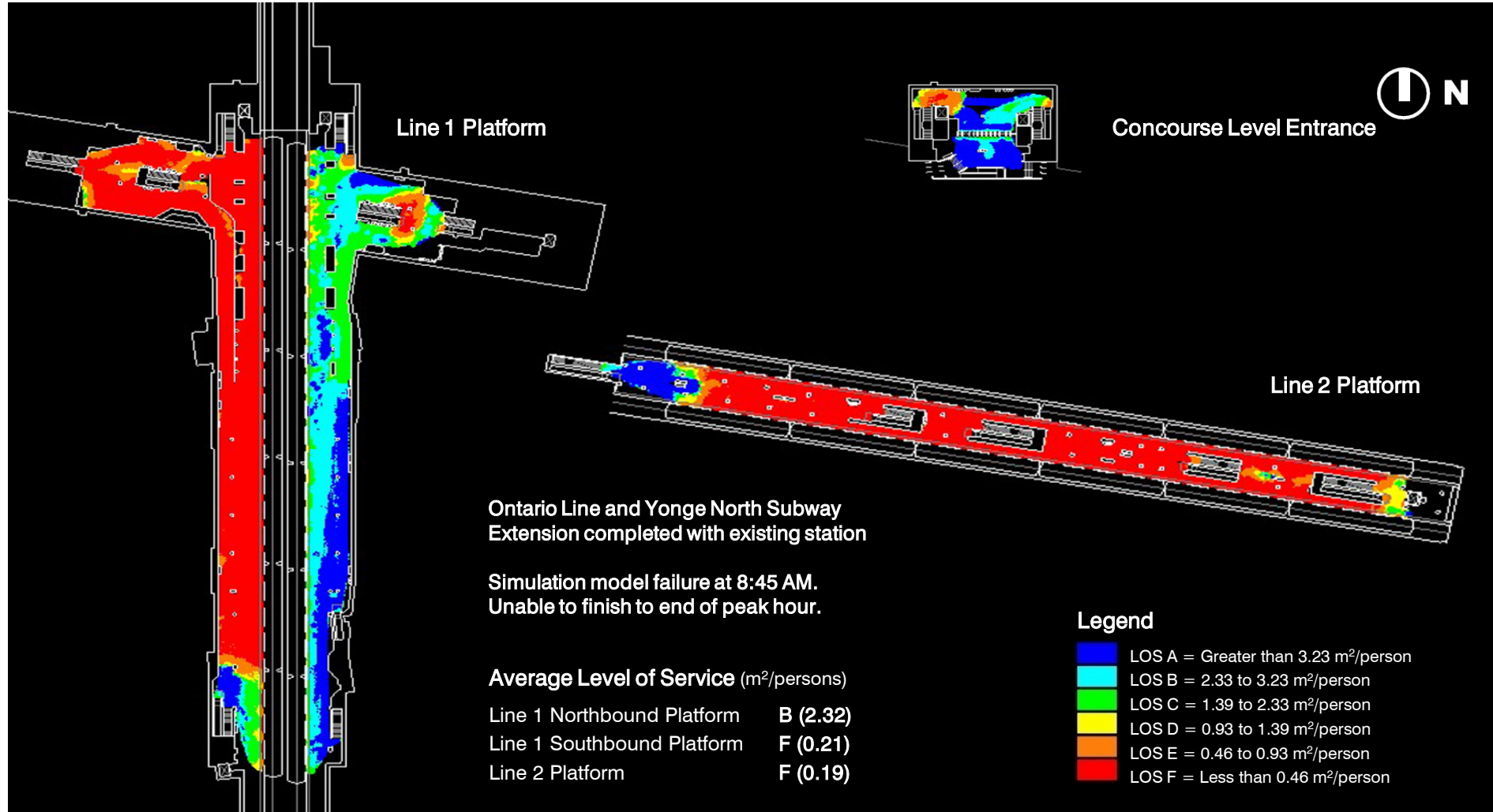
# Level of Service

## DO NOTHING PROJECTION – 2031 AM PEAK w/ EXISTING STATION DESIGN

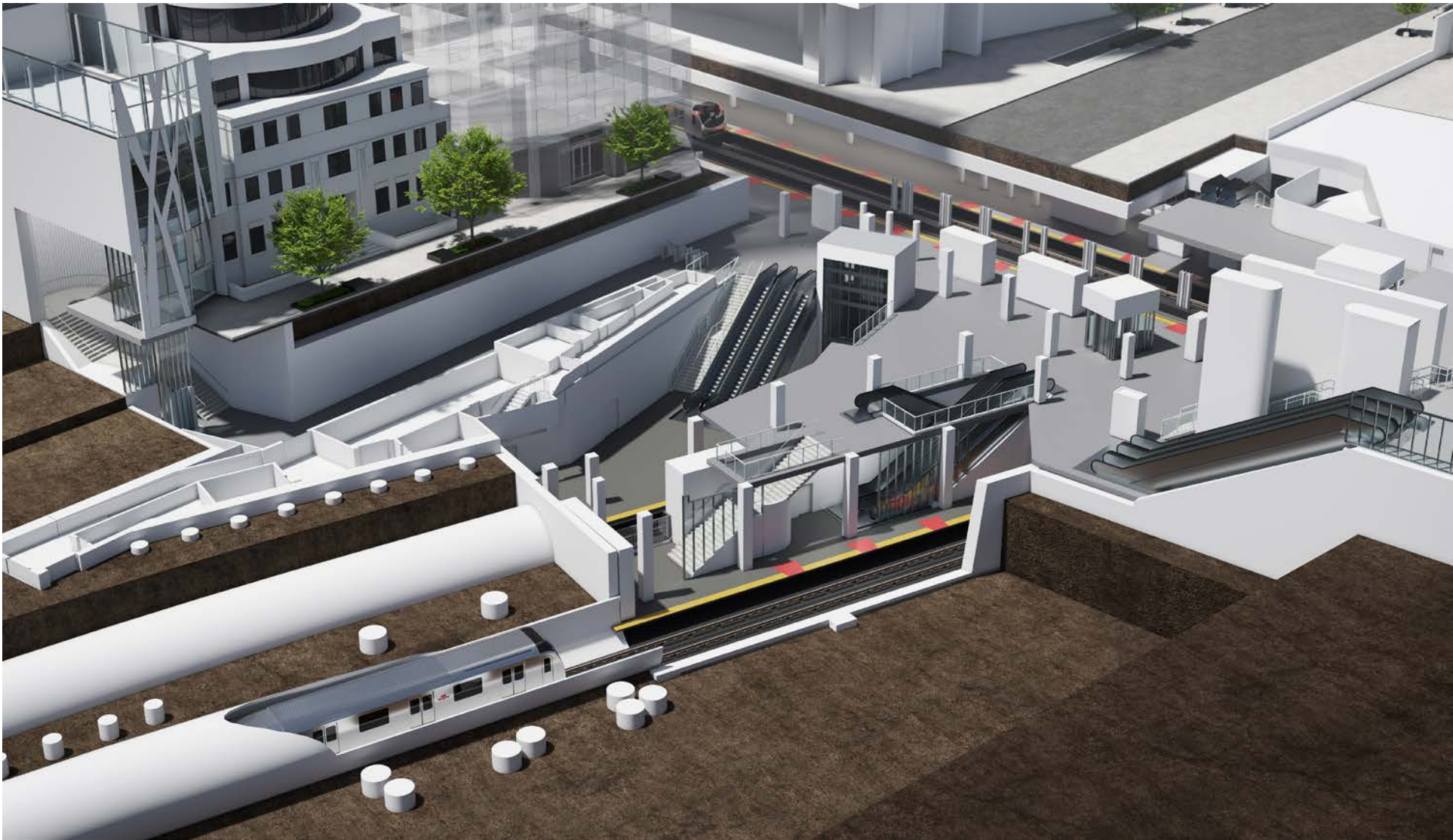


# Level of Service

## DO NOTHING PROJECTION – 2056 AM PEAK w/ EXISTING STATION DESIGN



# New Look – Bloor-Yonge – Cutaway looking south-west

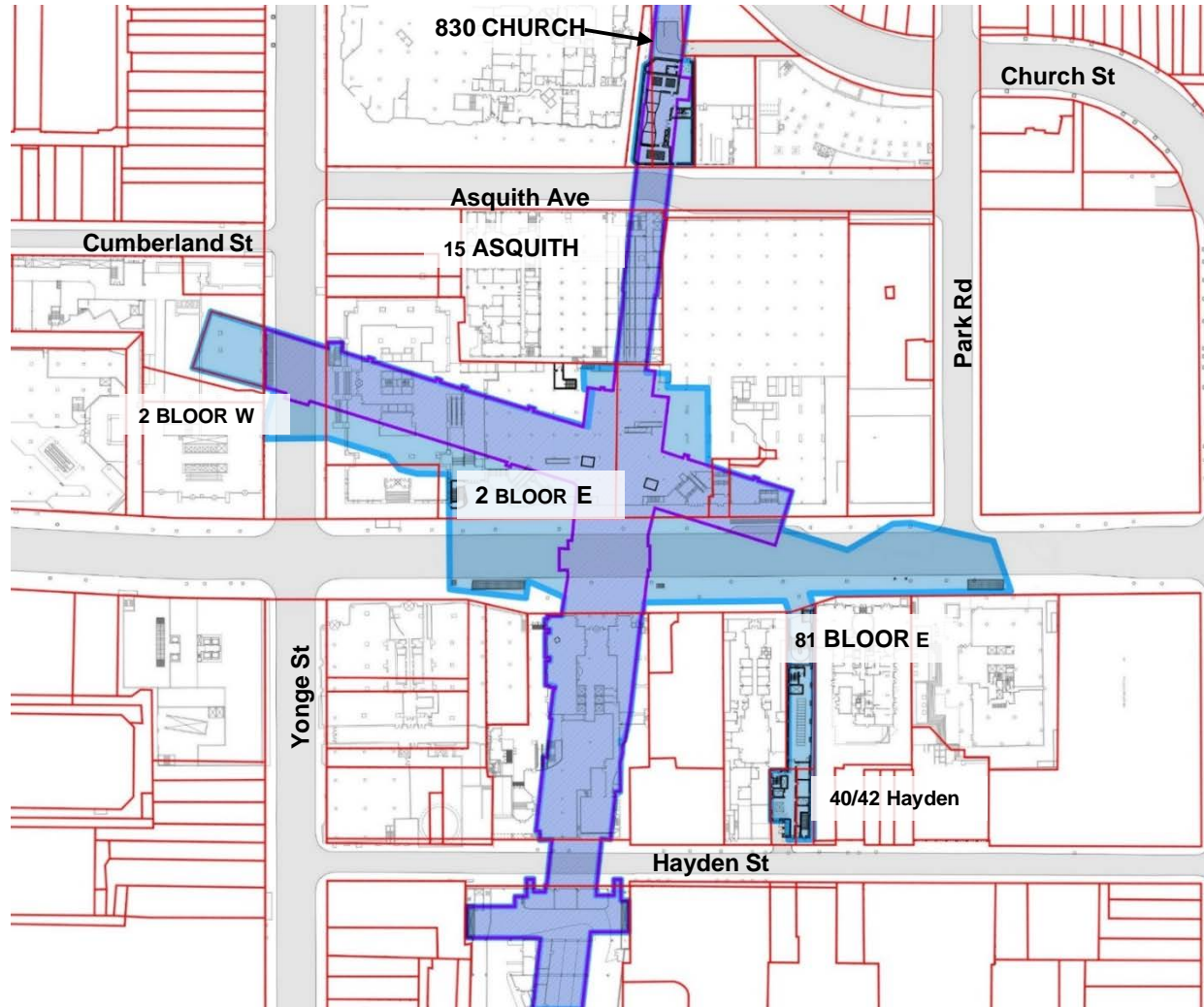




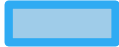
# Project Benefits

- Improve accessibility
- Expanding capacity and improving circulation for Line 1 and 2
- More frequent service on Line 1 and 2
- Less platform overcrowding
- Reduced travel times
- A new barrier-free entrance
- A new exit to Bloor Street
- New escalators, elevators and stairs
- New public art and station finishes
- One new electrical substation to enhance power to our trains and systems
- Improved ventilation, air circulation and fire safety features
- Utility upgrades



# Bloor-Yonge Station Footprint



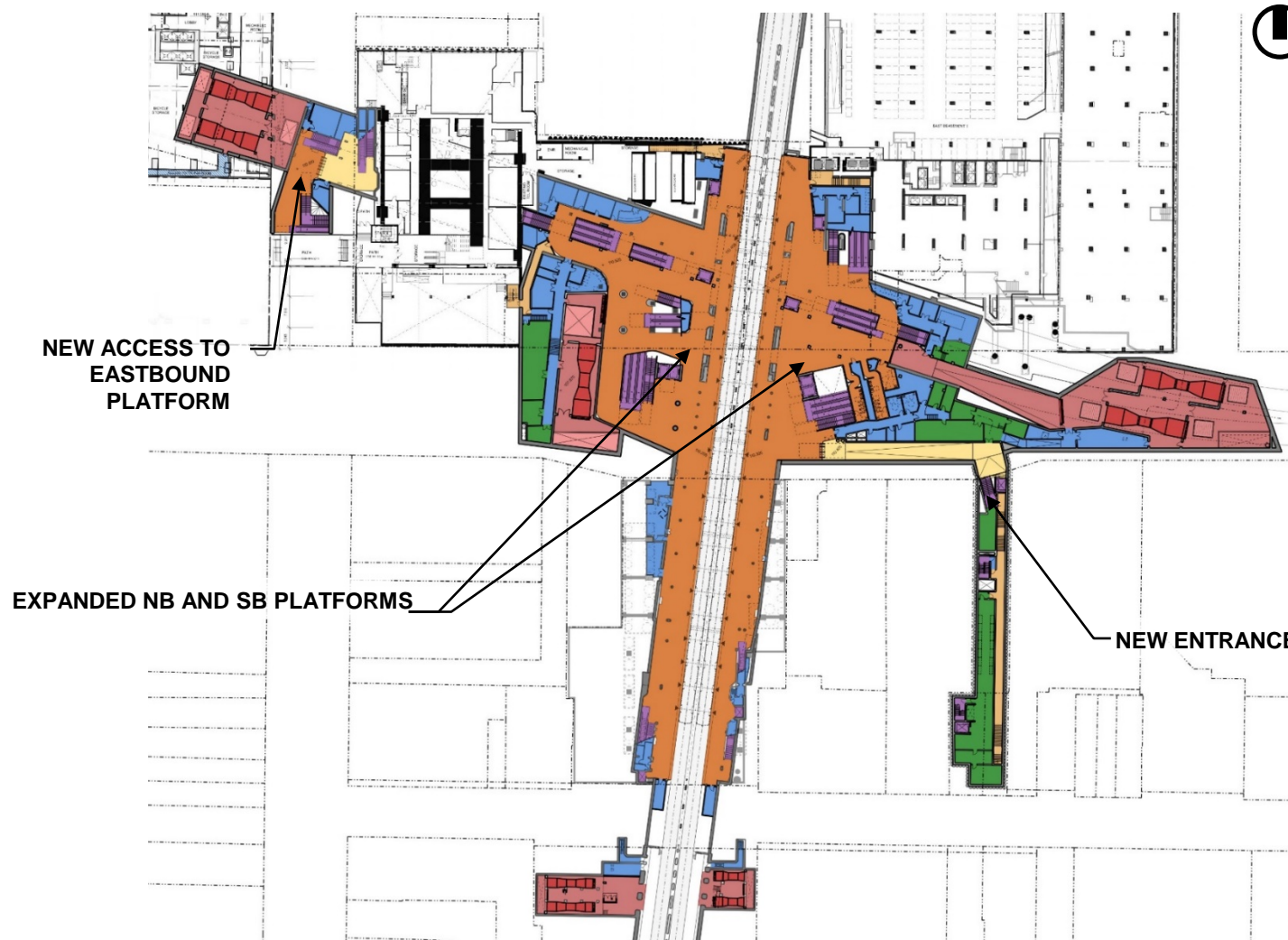
-  PROPERTY LINES
-  EXISTING STATION BELOW GRADE
-  PROPOSED STATION BELOW GRADE





# Bloor-Yonge – Line 1 Platform Level

## Scope of Work

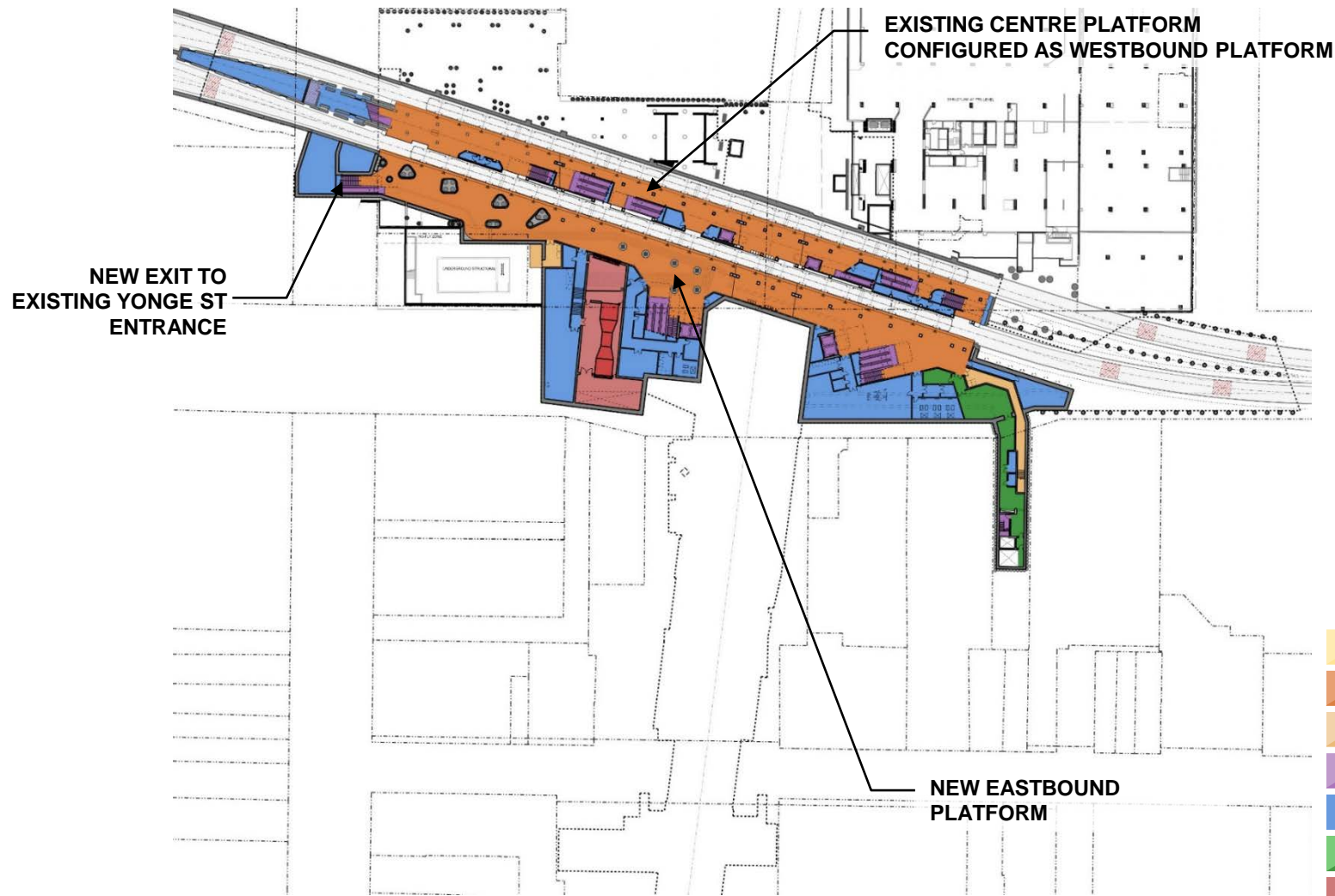


- Expansion of Line 1 NB and SB platforms
- New electrical substation
- New fan plants
- Vertical circulation elements: escalators, elevators, stairs
- Modified main entrance and fare line
- New accessible entrance on Bloor St. (south side)

# Bloor-Yonge – Line 1 NB Platform looking south



# Bloor-Yonge – Line 2 Platform Level



## Scope of Work

- **Second** platform to Line 2 (eastbound)
- New fan plants
- Vertical circulation elements: escalators, elevators, stairs

## Bloor-Yonge – Line 2 EB Platform looking west



## Stage Gate 3 Deliverables

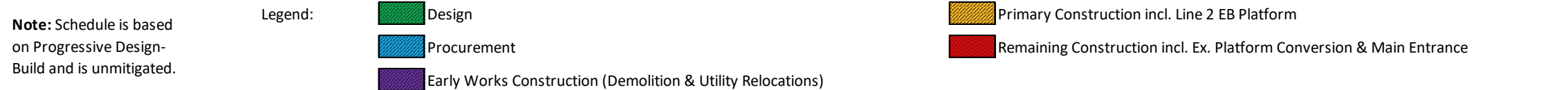
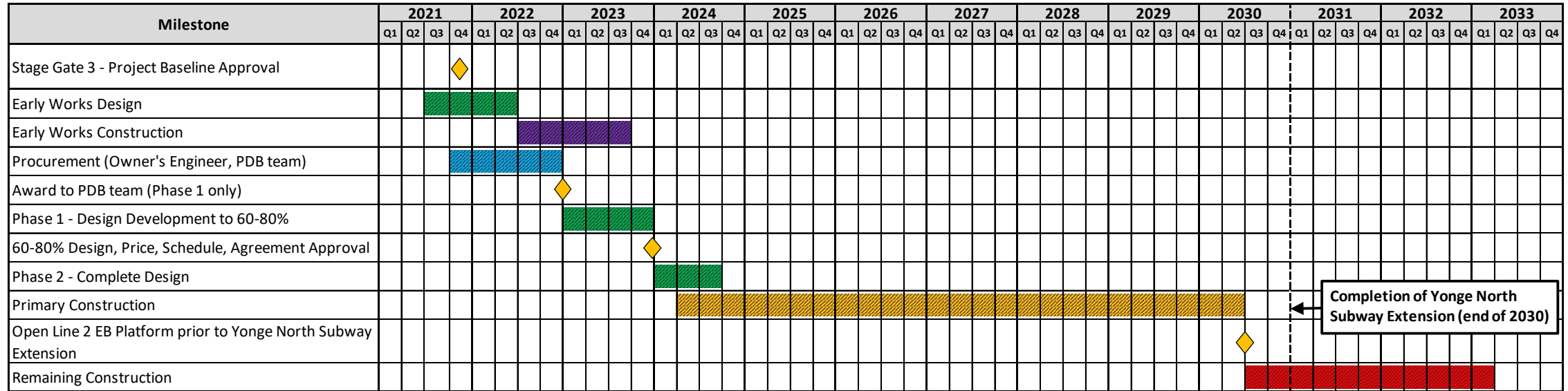
- Completed Stage Gate 3 deliverables for Bloor-Yonge Capacity Improvements Project include:
  - Project Charter
  - Project Management Plan
  - Risk Register
  - Procurement Options Analysis
  - Level 3 Schedule
  - Class 3 Cost Estimate
  - Business Case

# Procurement Options Analysis

- **Purpose** – To analyze current procurement models and trends, and identify the **best strategy to deliver the Bloor-Yonge Capacity Improvements project** including review of relevant industry background information and precedent projects, industry market sounding, Value for Money analysis, and Quantitative Risk Analysis
- **Recommendation** – **Progressive Design-Build (PDB)** as the preferred procurement model for the following reasons:
  - Greater collaboration
  - Early contractor involvement
  - Market experience with Design-Build
  - TTC's recent experience with Design-Build (McNicoll Garage)
  - Risk allocation between parties developed collaboratively, negotiated and agreed at 60-80% design
  - Integrate changes up to 60-80% design
  - Earlier completion of construction compared to Design-Bid-Build

# Bloor-Yonge – Project Preliminary Design Baselines

## • Project Schedule with Risk Allowance (Unmitigated)

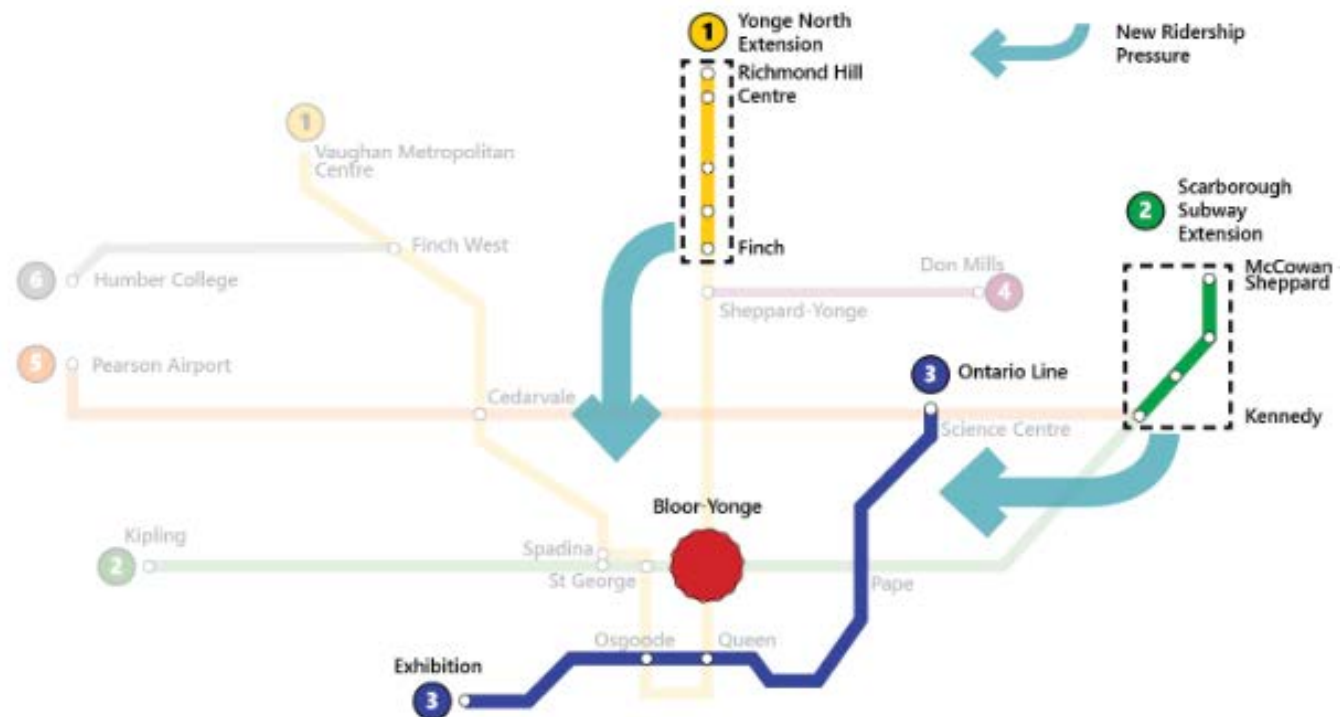


## • Project Cost Estimate

- Class 3 cost estimate – total project cost = \$1.505 billion (\$1.514 billion budget)
- Based on 30% design
- Completed peer review, value engineering, and quantitative risk analysis

# Business Case

- 60 year lifecycle
- Bloor-Yonge is a prerequisite for the Yonge North Subway Extension, Scarborough Subway Extension, and Ontario Line
- Net positive Benefit-Cost-Ratio (BCR) of 1.49





# Customer Benefits

- More frequent service on Line 1 and 2
- Less platform overcrowding and improved vertical transfers between Line 1 and 2
- Reduced travel times
- New accessible entrance on Bloor St. (south side)
- Modified main entrance and fare line
- Improved accessibility within station via new escalators and elevators
- New public art and station finishes
- Intuitive wayfinding



## Next Steps

- Finalize the contribution agreement with Provincial and Federal partners;
- Retain an Owner's Engineer by Q1 2022;
- Prepare a Request for Qualifications (RFQ) and then a Request for Proposal (RFP) for the selection of the Progressive Design-Build team by Q1 2023;
- Prepare and tender early works construction packages to advance underground servicing, utility relocations, and other works by Q3 2022; and
- Prepare the 60-80% Design Development stage, and establish revised schedule and cost baselines to report back to the TTC Board for approval, which is expected by Q4 2023.

