

# Lynn Fells Parkway Bridge Replacement

Melrose, MA

Design Public Meeting – October 13, 2020



\* Steel shown in blue for clarity, actual color will be black

# Meeting With You Today

- Mike Ryan – *MBTA Project Manager*
- Gary Orlando – *Project Manager (Barletta)*
- Bob Penfield – *Design Manager (VHB)*
- Andrew Burkholder – *Senior Engineer (VHB)*



# Meeting Outline

- Design-Build Program Overview
- Lynn Fells Parkway Bridge
  - Site Location / Existing Conditions
  - Project Needs and Goals
  - Bridge Layout and Design
  - Construction Staging
  - Traffic Impacts during Construction
  - Project Schedule
- Additional Public Outreach
- Questions

# H91CN01 - MBTA Rail Bridge Replacements Design-Build



**Intervale Road**  
Weston, MA



**Bacon Street**  
Wellesley, MA



**High Line**  
Somerville, MA



**Lynn Fells Parkway**  
Melrose, MA

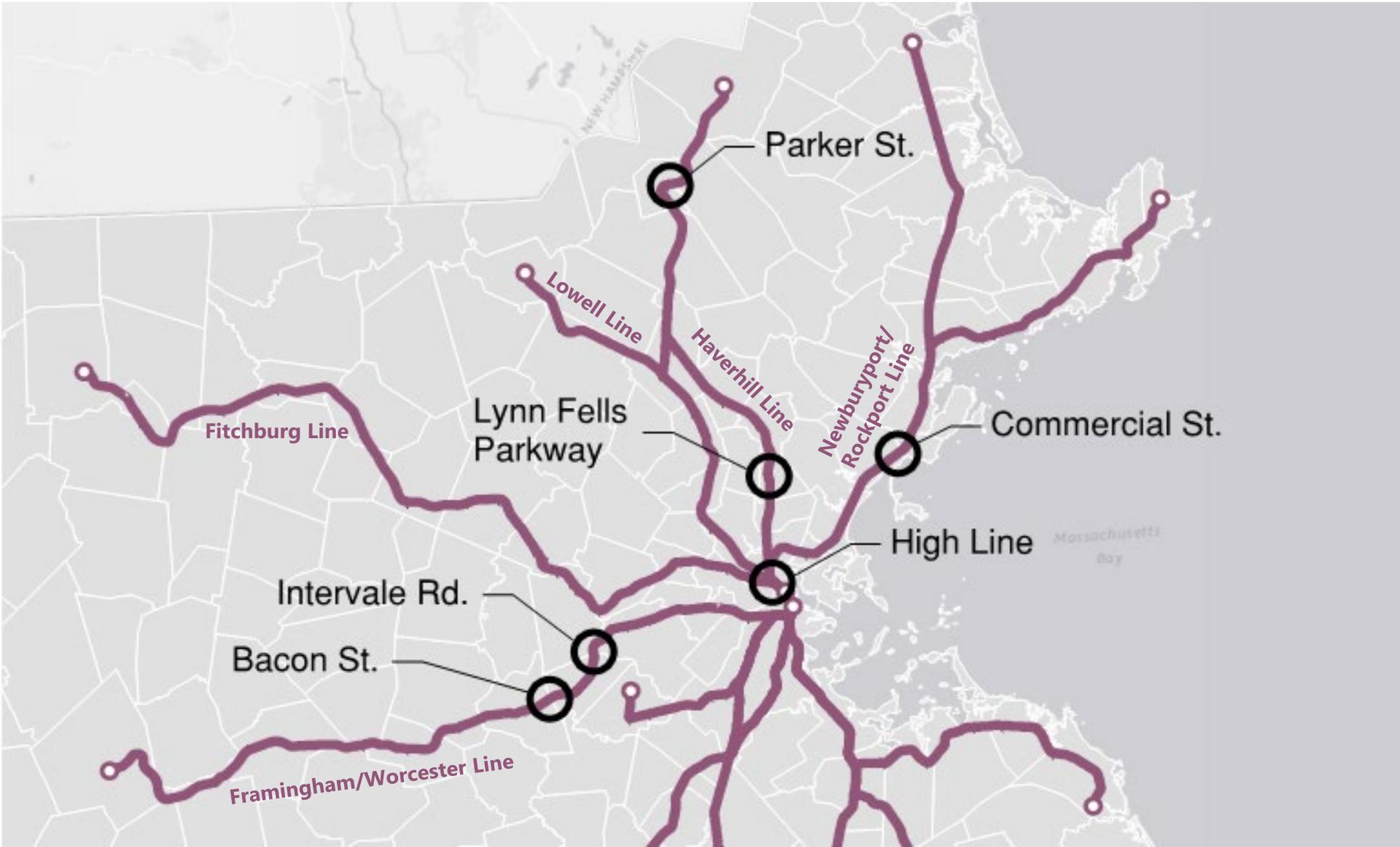


**Parker Street**  
Lawrence, MA



**Commercial Street**  
Lynn, MA

# H91CN01 - MBTA Rail Bridge Replacements Design-Build



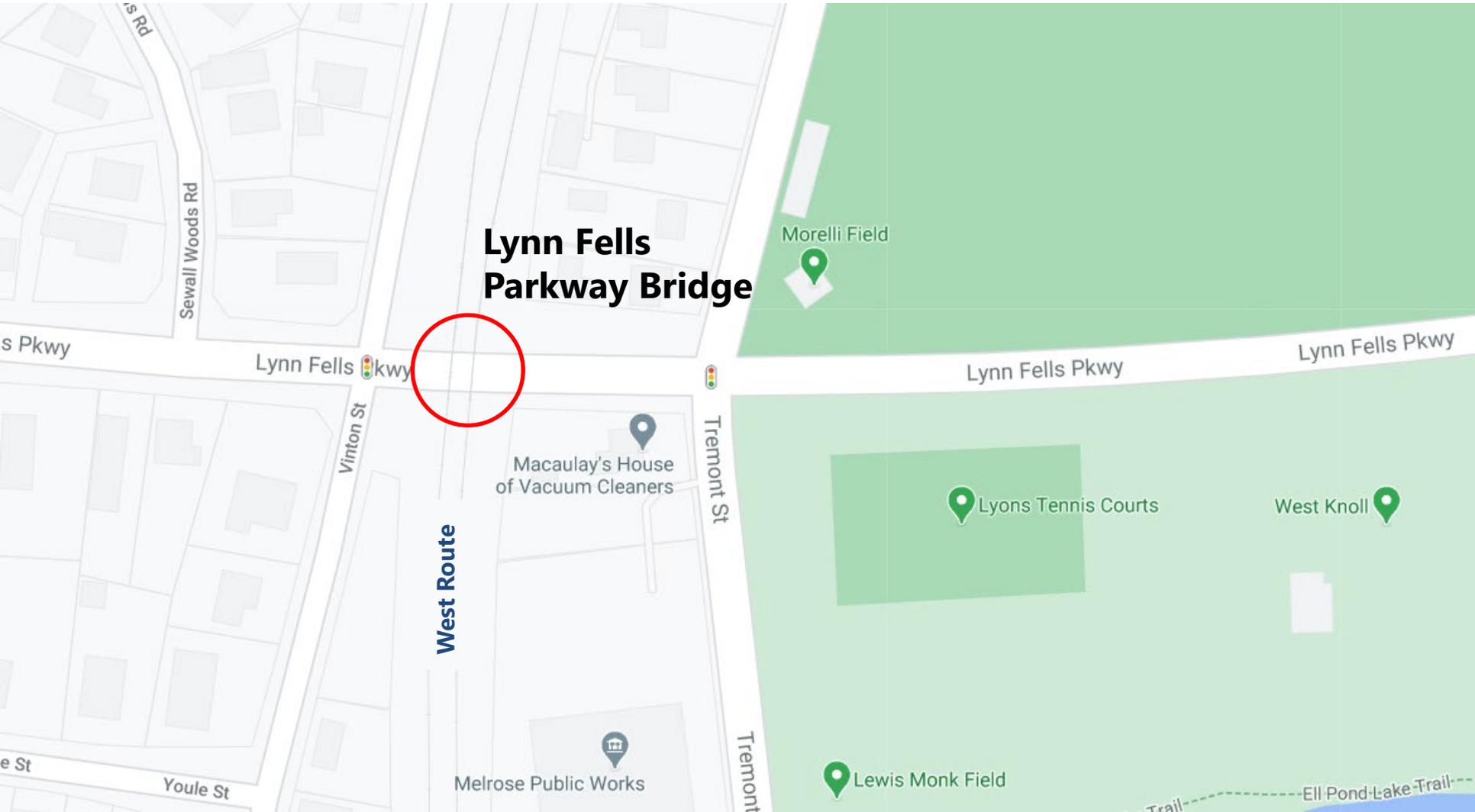
# Program Timeline

- 2016: Preliminary Design of the Bridges
- 2017: MBTA Capital Delivery – Accelerate pace of projects
  - Six individual projects combined into 1 large “program”
  - Use Design-Build to accelerate and encourage more innovation
- 2018-2019: Design-Build procurement
  - 9 Teams proposed, 3 Shortlisted
  - Barletta/VHB Team was the selected “Best-Value”
  - Highest Tech Score AND Lowest Price
- 2019-2022 - Final Design and Construction
  - Specific schedule varies by bridge
  - Full Program complete August 2022



# Lynn Fells Parkway Bridge

## Melrose, MA





# Lynn Fells Parkway – Existing Conditions

9

- Existing Bridge
  - Originally built in 1850 with a new superstructure in 1929
- Two track structure
  - Steel girders with ballasted deck
  - Concrete gravity abutments
- Roadway
  - 40'-0" face-to-face of curb
  - 7'-8" sidewalks (both sides)
- Utilities
  - Signal cables on bridge
  - PTC overhead
- Railroad Operations
  - 37 commuter trains on weekdays
  - 12 commuter trains on weekends
  - Local freight as well





# Lynn Fells Parkway – Project Need

- Existing bridge is in poor condition
  - Steel superstructure rated as 4 (out of 10)
- MBTA's continuing need to
  - Provide safe and efficient transportation for T riders and the public
  - Maintain and improve the state of good repair of its infrastructure





# Lynn Fells Parkway – Project Goals

- Restore the State of Good Repair
- Replace the structurally deficient bridge with one that:
  - Is resilient, with a 75-yr expected service life
- Minimize impacts to:
  - Abutters
  - Commuter Rail riders
  - Users of Lynn Fells Parkway





# Lynn Fells Parkway – Bridge Design

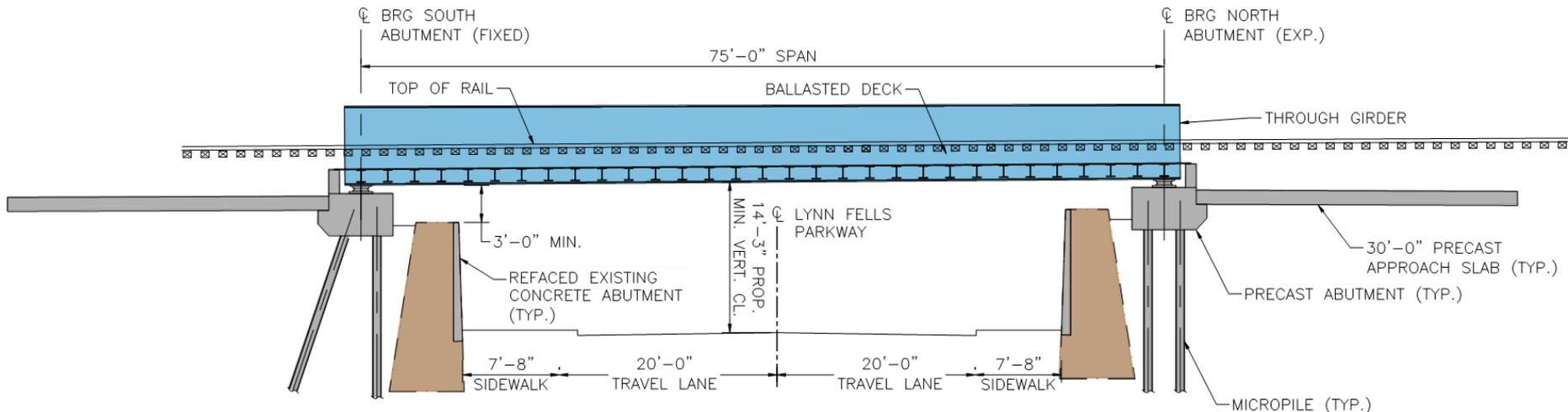
12

- Complete bridge replacement
  - Track profile and alignment to match existing
  - Use accelerated construction techniques to reduce impacts
- New structure
  - Single-span, with new abutments built behind existing abutments
- All construction within existing Right of Way
  - No anticipated easements required



# Lynn Fells Parkway – Bridge Design

- New concrete abutments built behind existing abutments
- Vertical clearance = 14'-3" (min.)
- Micropiles socketed into rock
- Steel color = black

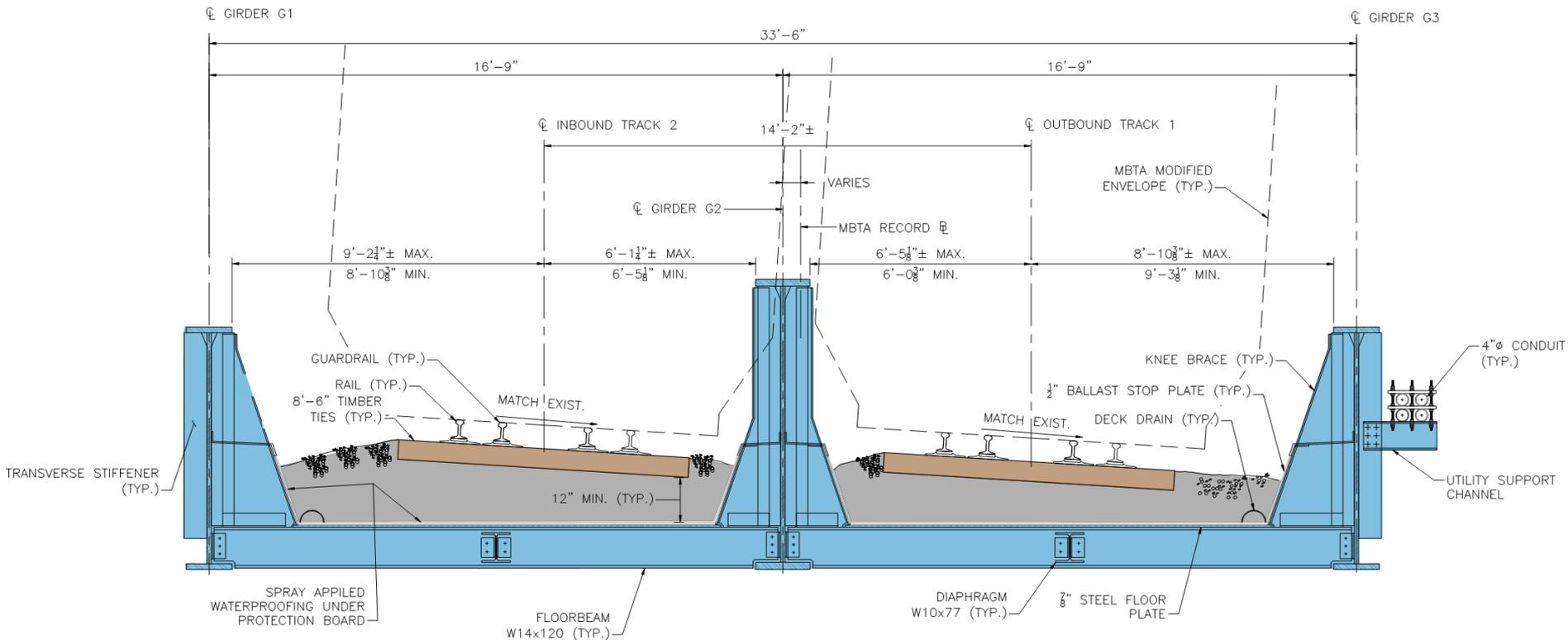


BRIDGE LONGITUDINAL SECTION



# Lynn Fells Parkway – Bridge Design

- Ballasted through-girder
- Supports 2 tracks



TRANSVERSE SECTION



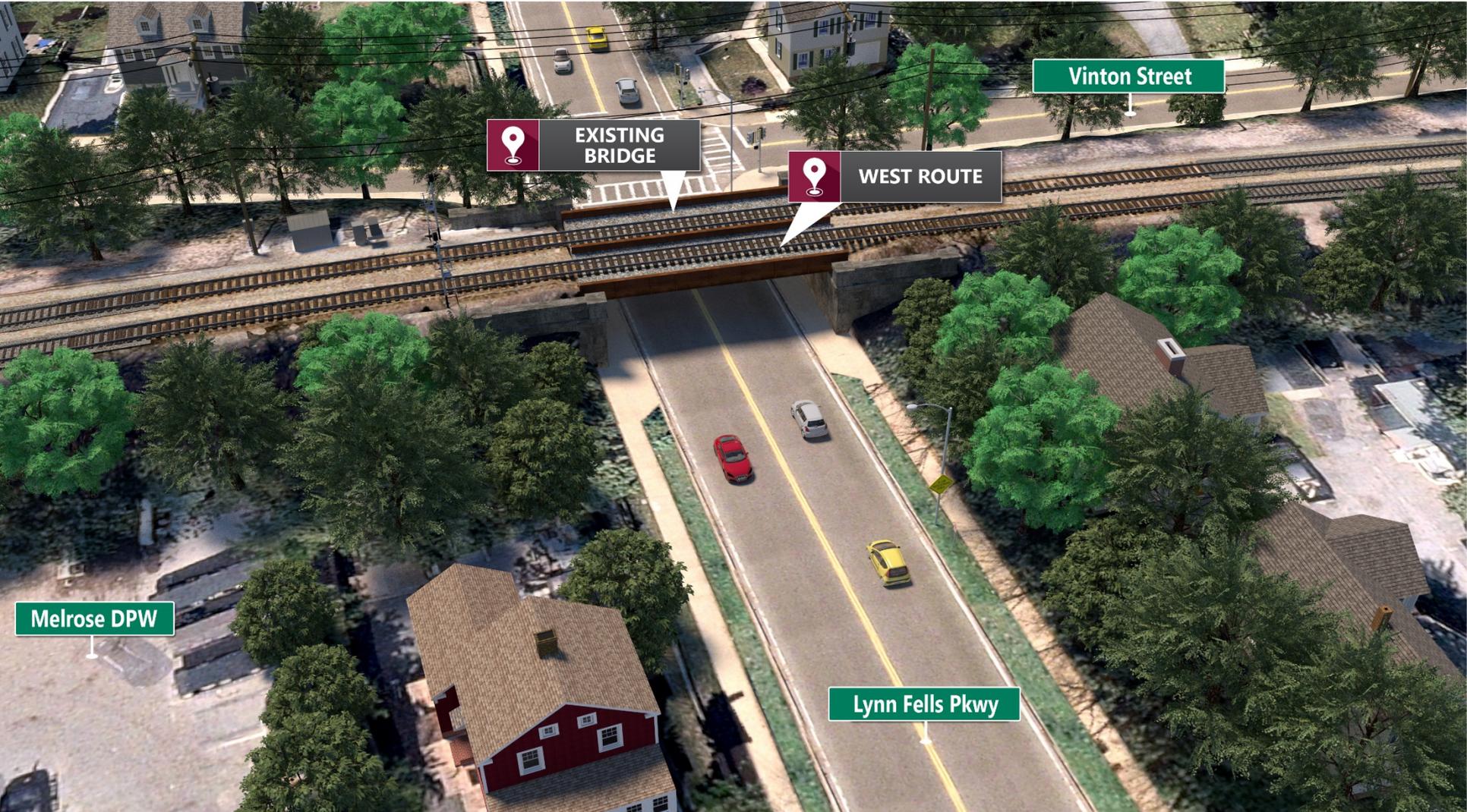


# Lynn Fells Parkway – Final Condition



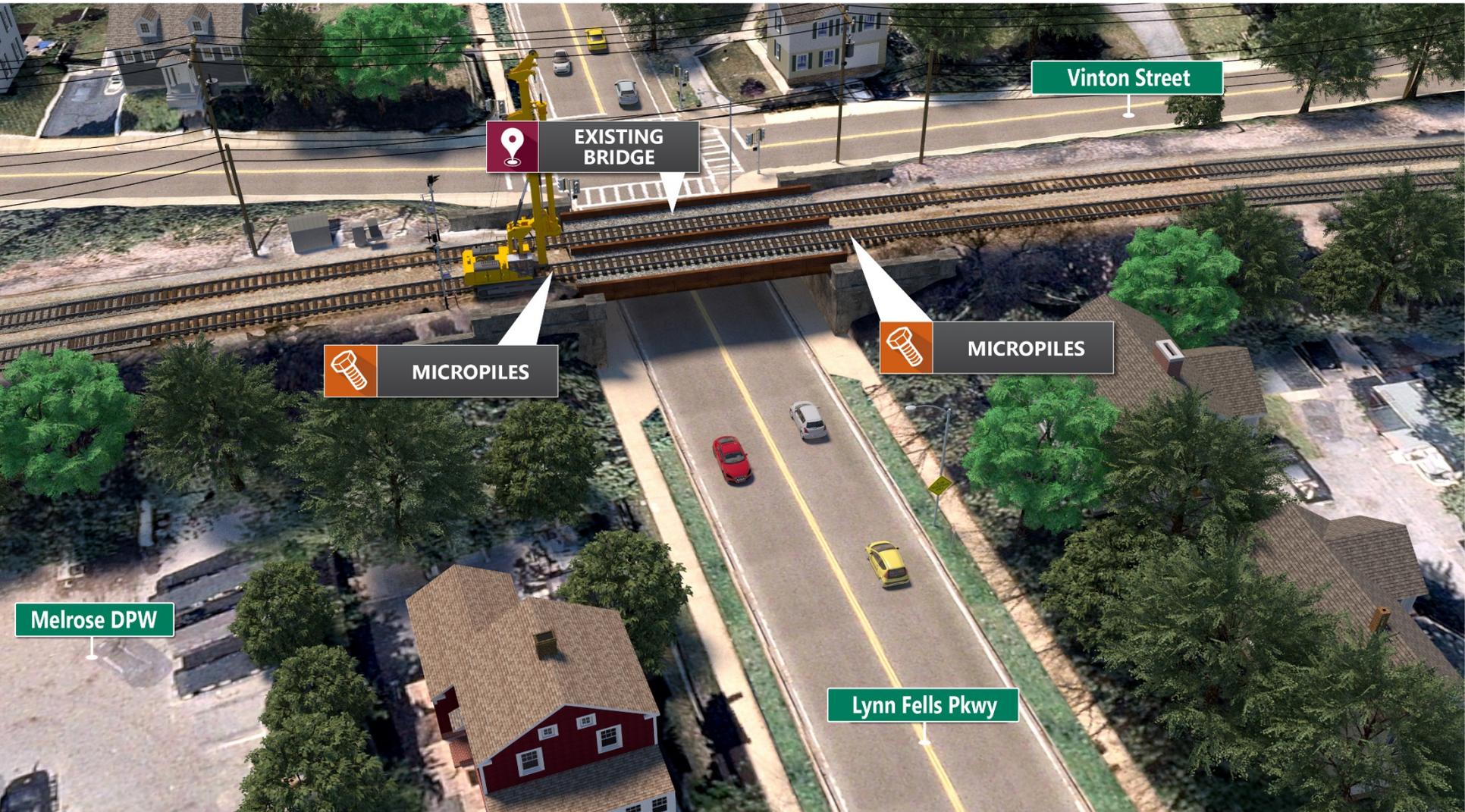


# Construction Staging



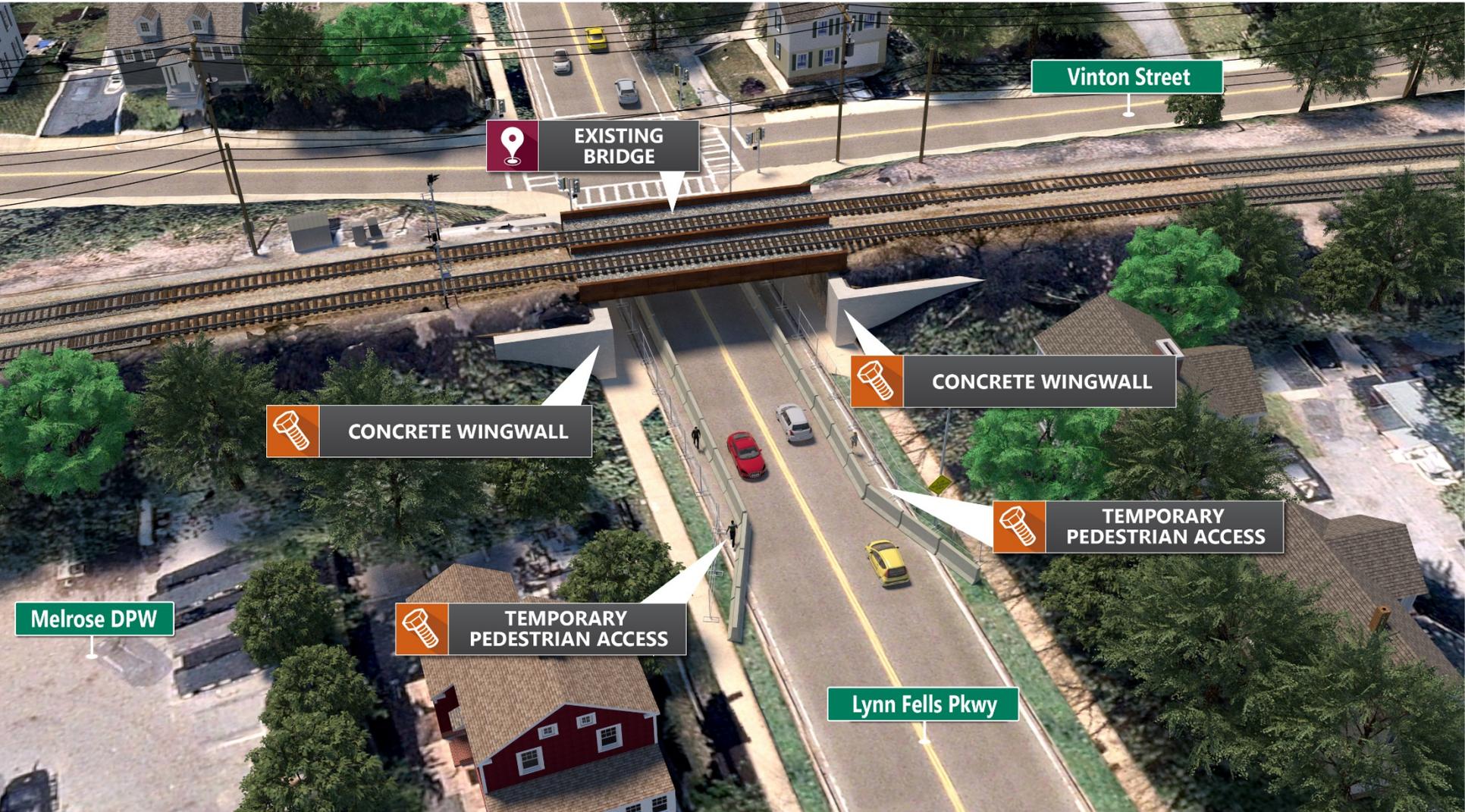


# Construction Staging



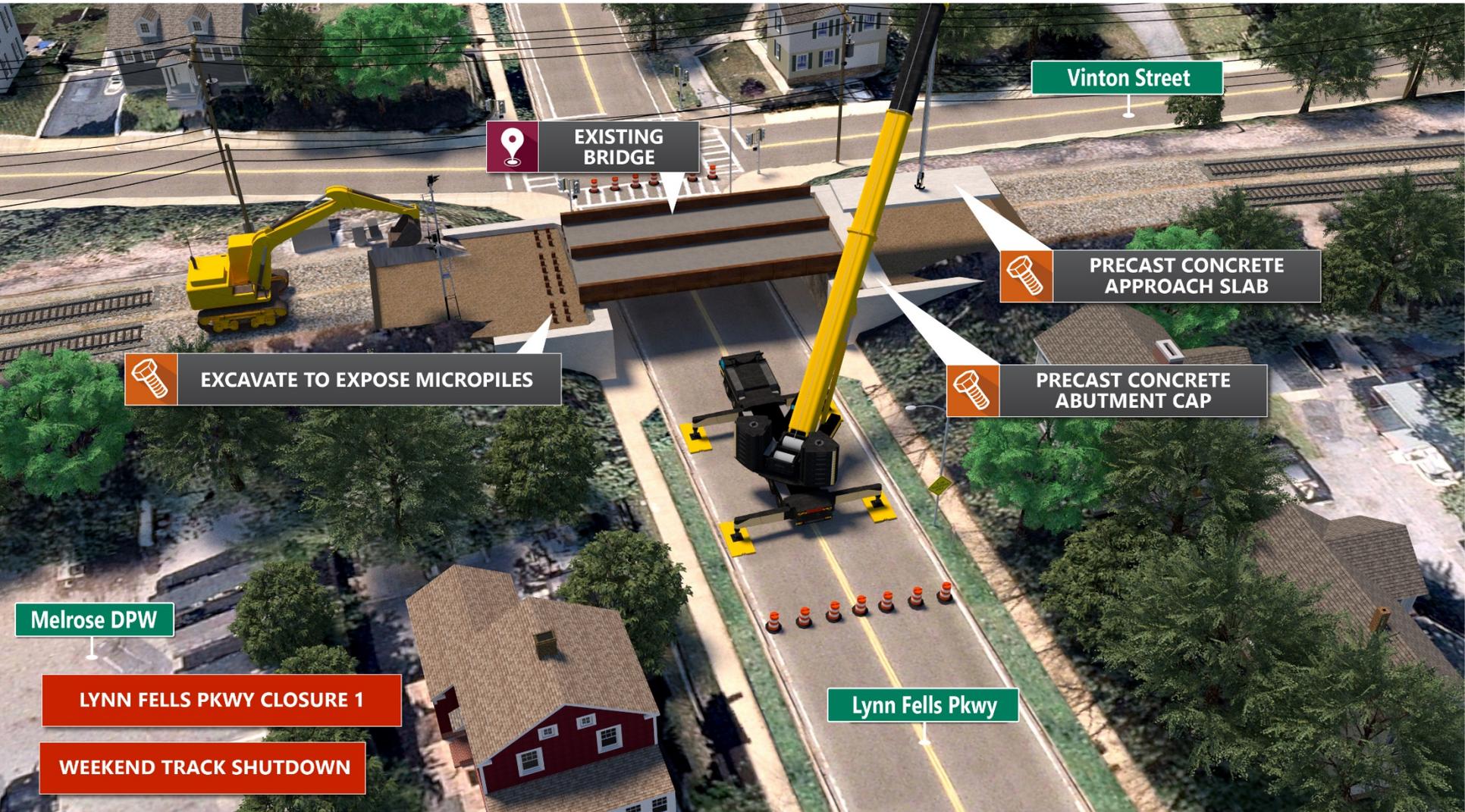


# Construction Staging





# Construction Staging



Vinton Street

EXISTING BRIDGE

PRECAST CONCRETE APPROACH SLAB

EXCAVATE TO EXPOSE MICROPILES

PRECAST CONCRETE ABUTMENT CAP

Melrose DPW

LYNN FELS PKWY CLOSURE 1

WEEKEND TRACK SHUTDOWN

Lynn Fells Pkwy

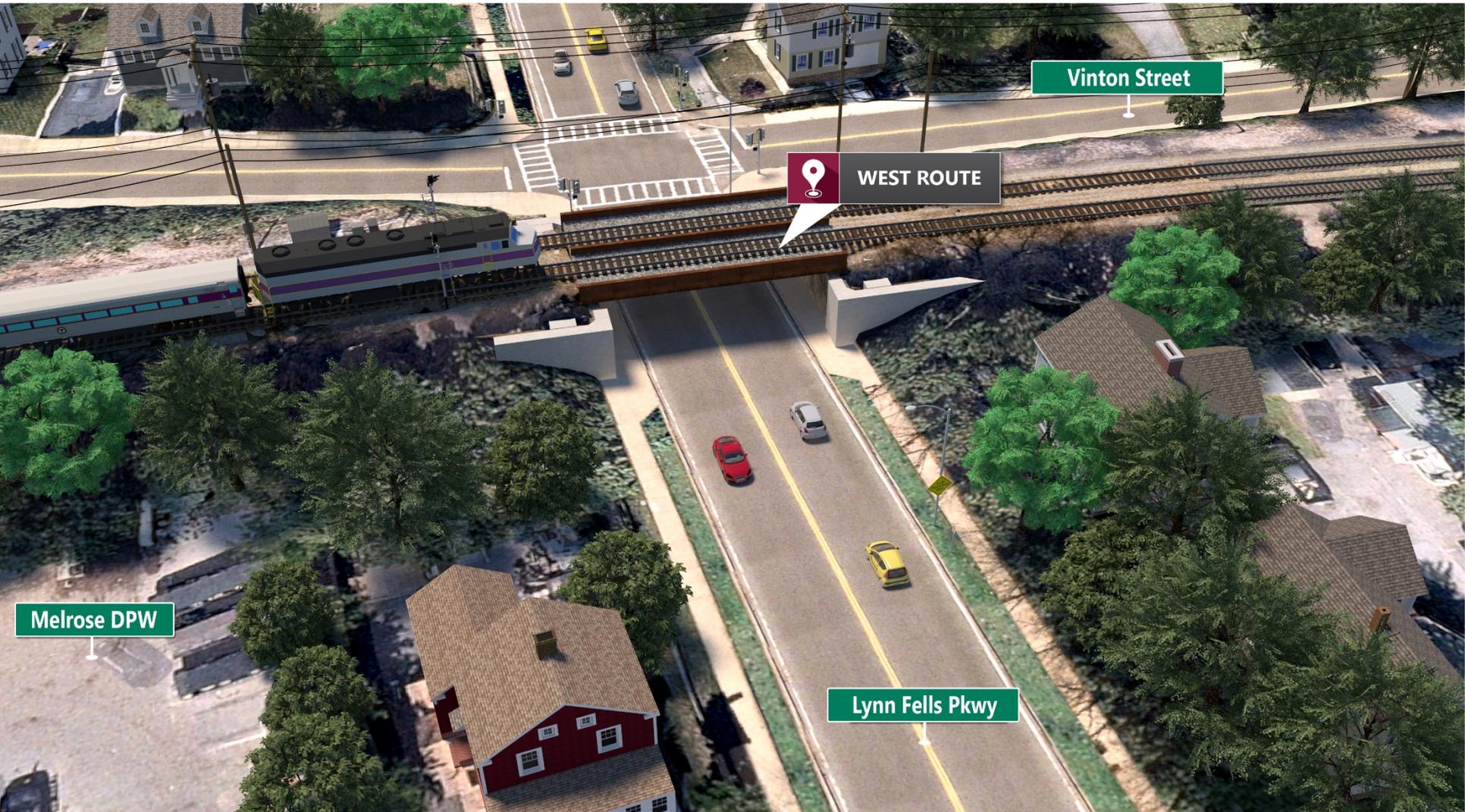


# Construction Staging



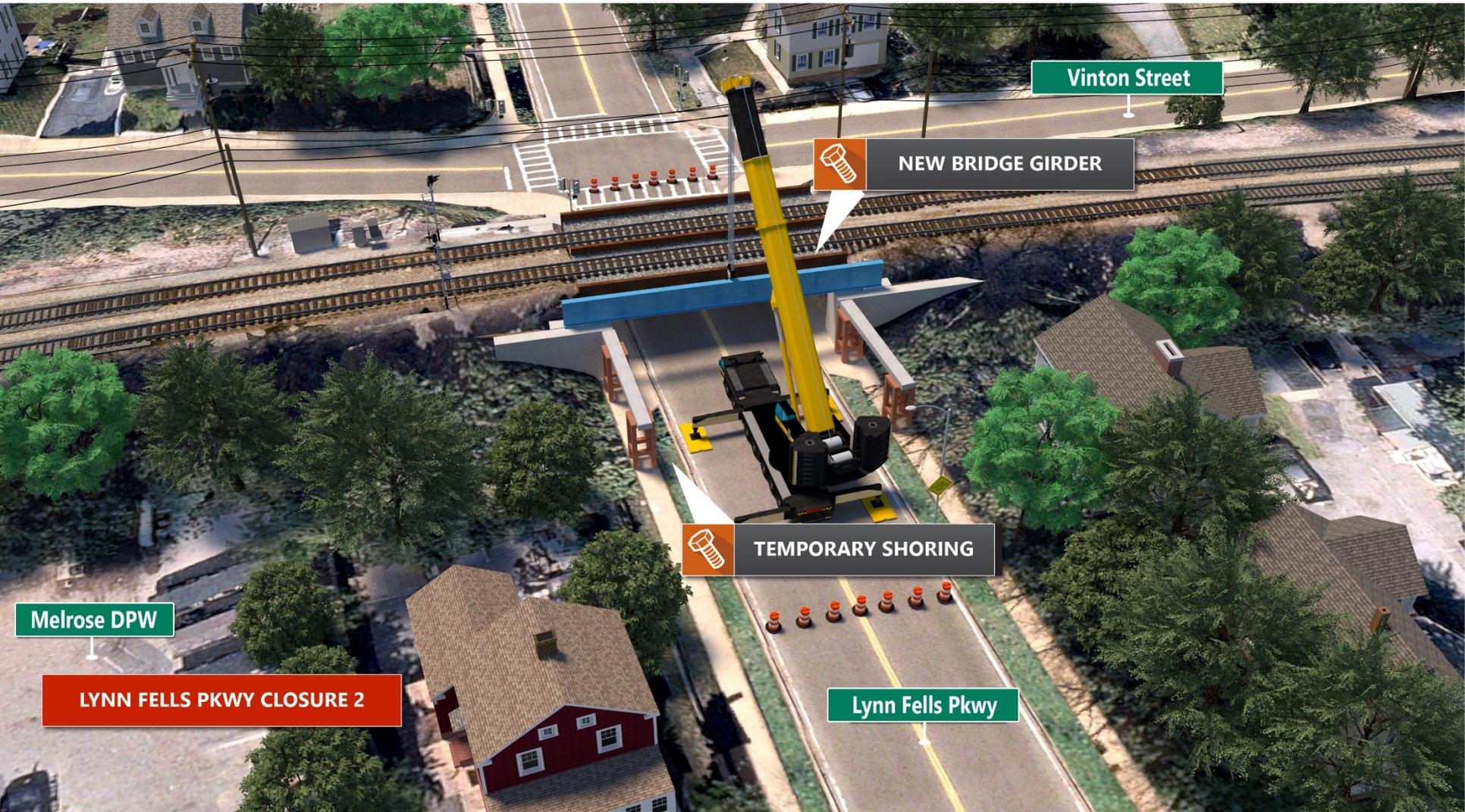


# Construction Staging





# Construction Staging



Vinton Street



NEW BRIDGE GIRDER



TEMPORARY SHORING

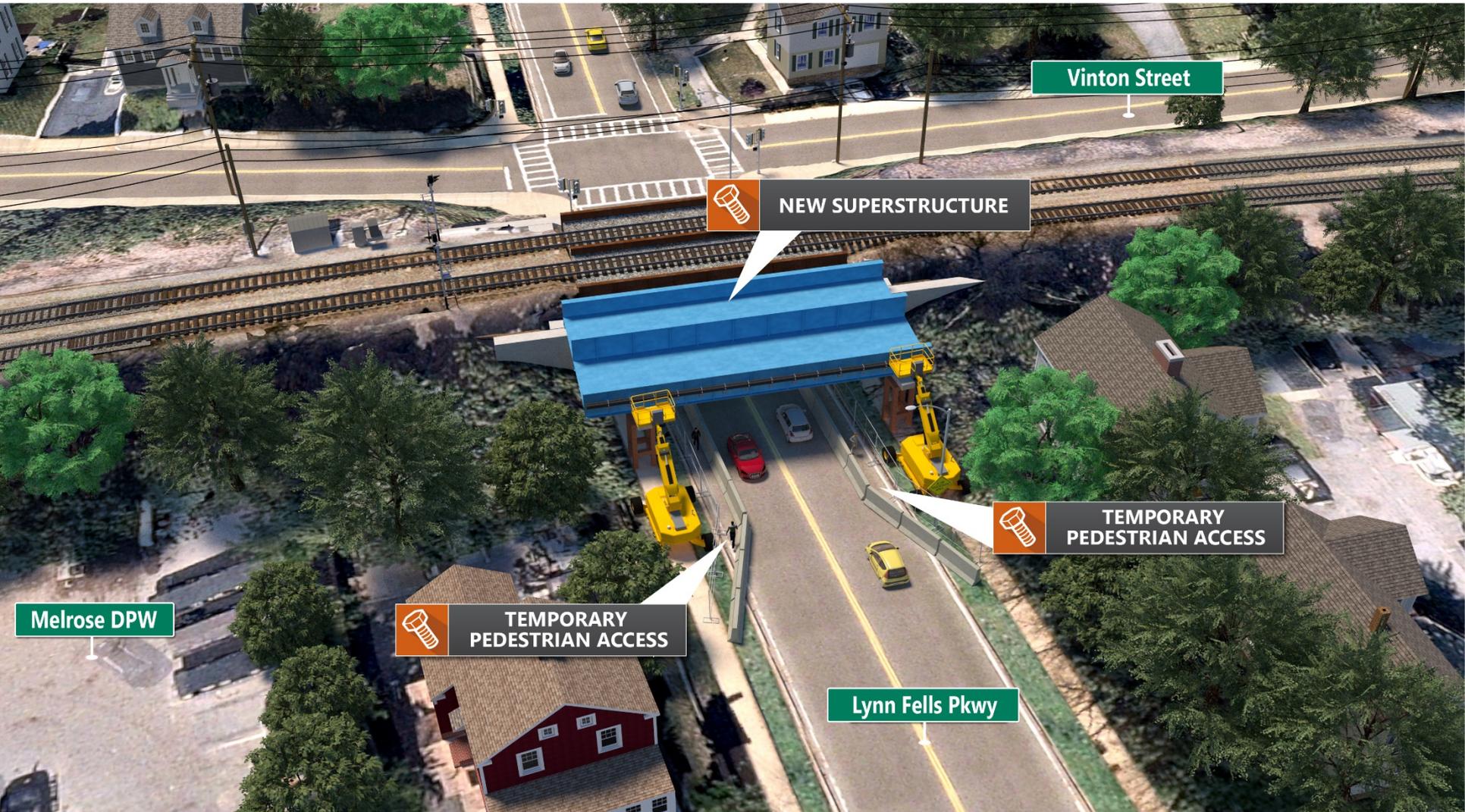
Melrose DPW

LYNN FELS PKWY CLOSURE 2

Lynn Fells Pkwy

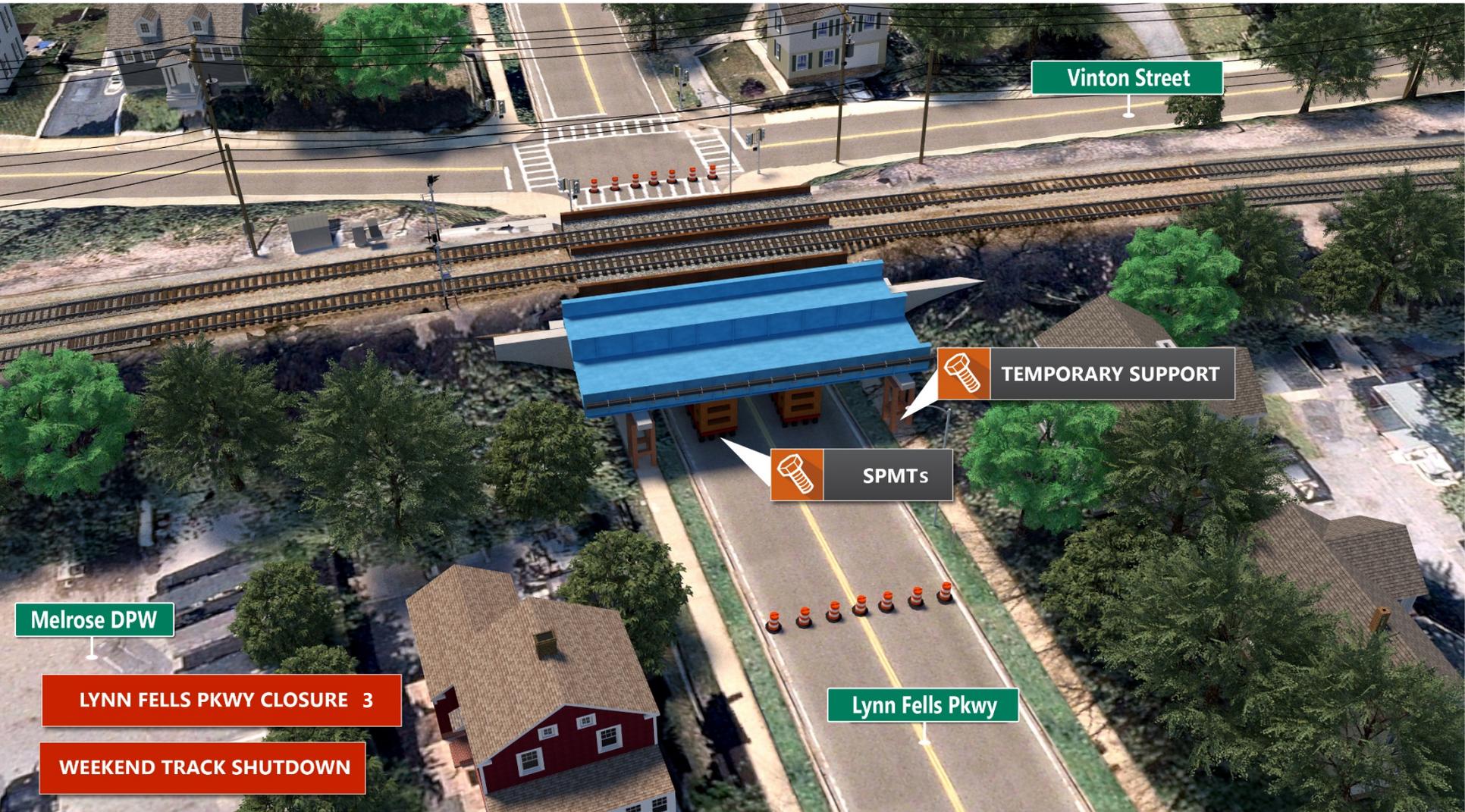


# Construction Staging





# Construction Staging





# Construction Staging



 DEMO EXISTING SUPERSTRUCTURE

Melrose DPW

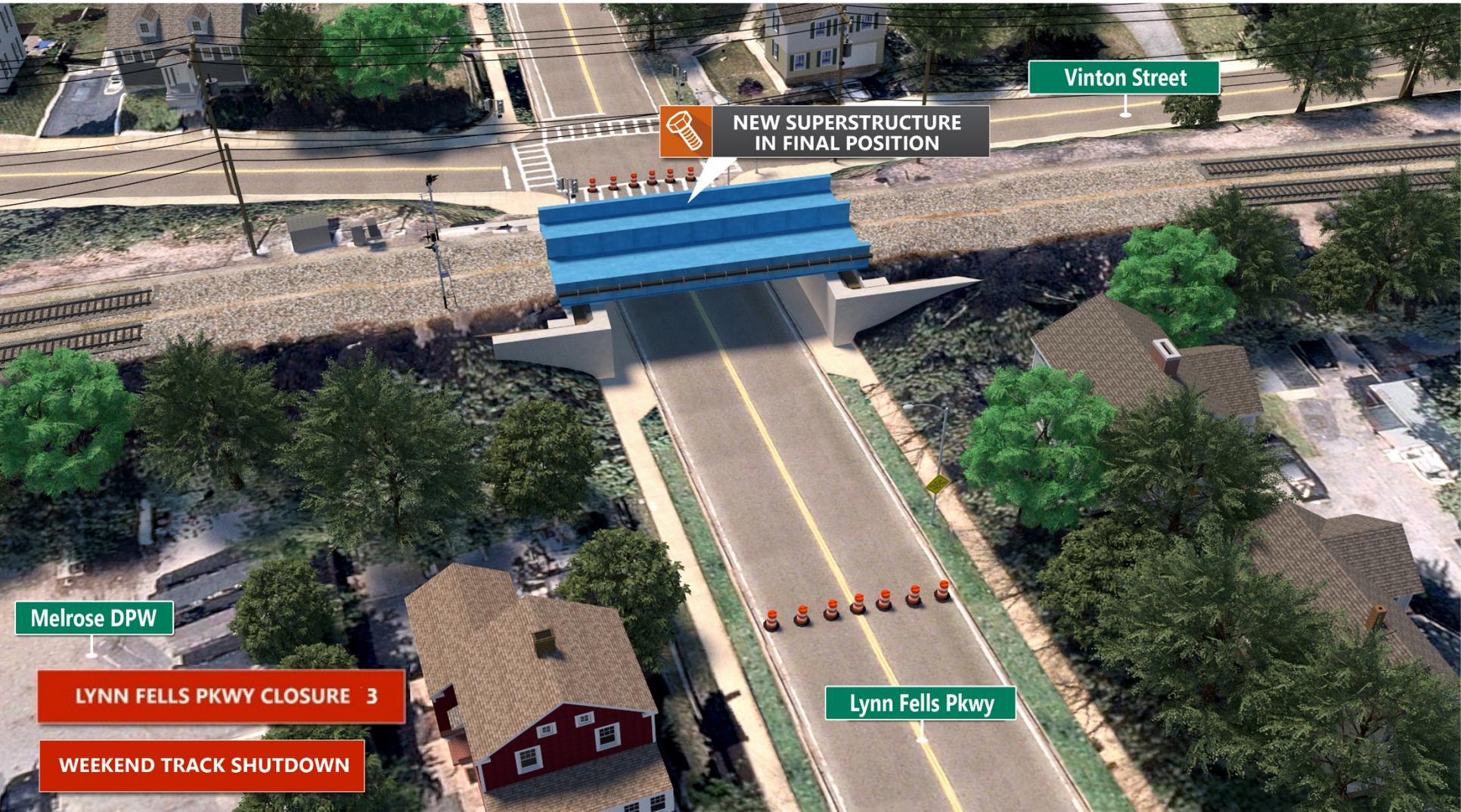
LYNN FELLS PKWY CLOSURE 3

WEEKEND TRACK SHUTDOWN

Lynn Fells Pkwy



# Construction Staging



Vinton Street

 NEW SUPERSTRUCTURE  
IN FINAL POSITION

Melrose DPW

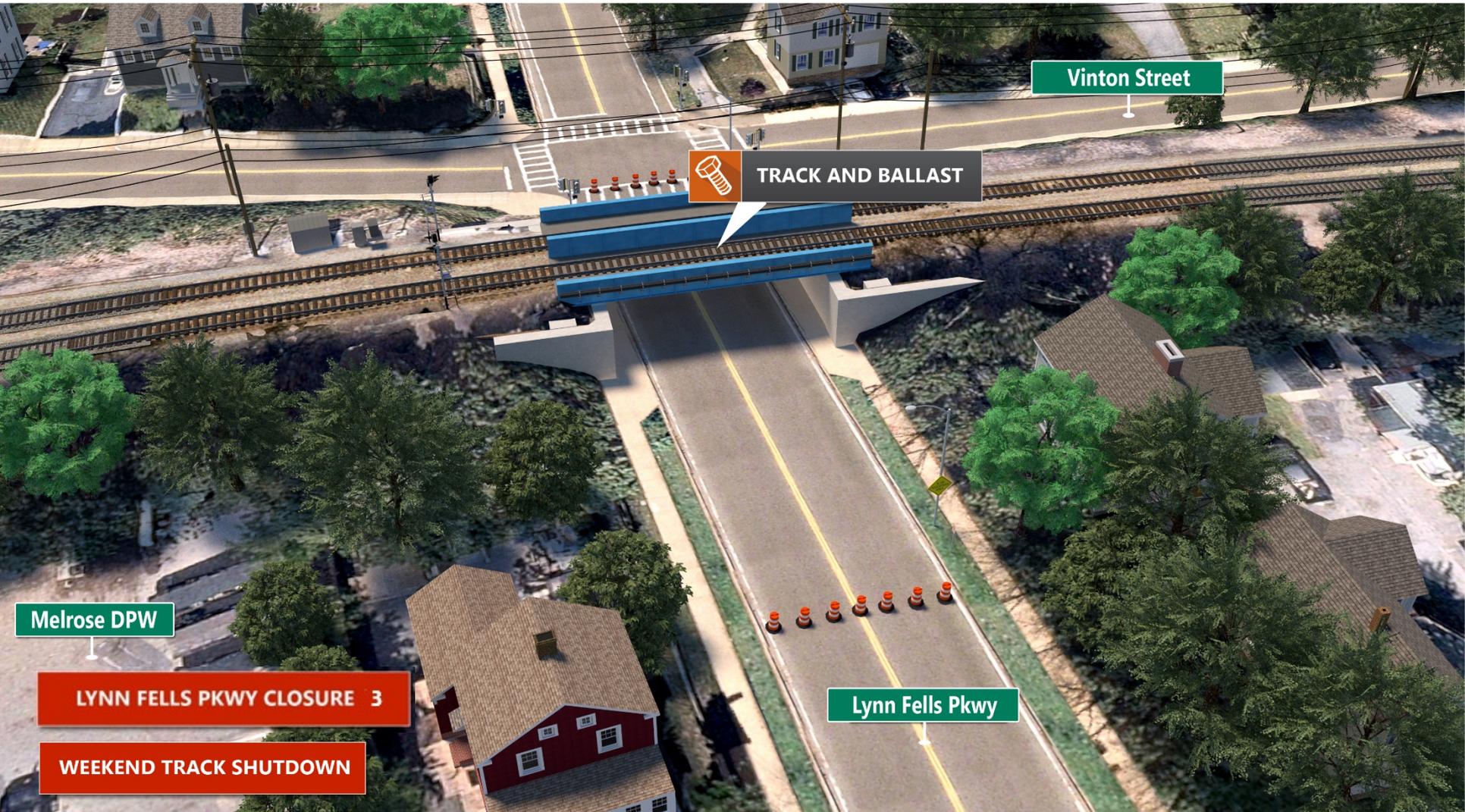
LYNN FELLS PKWY CLOSURE 3

WEEKEND TRACK SHUTDOWN

Lynn Fells Pkwy



# Construction Staging



Vinton Street



TRACK AND BALLAST

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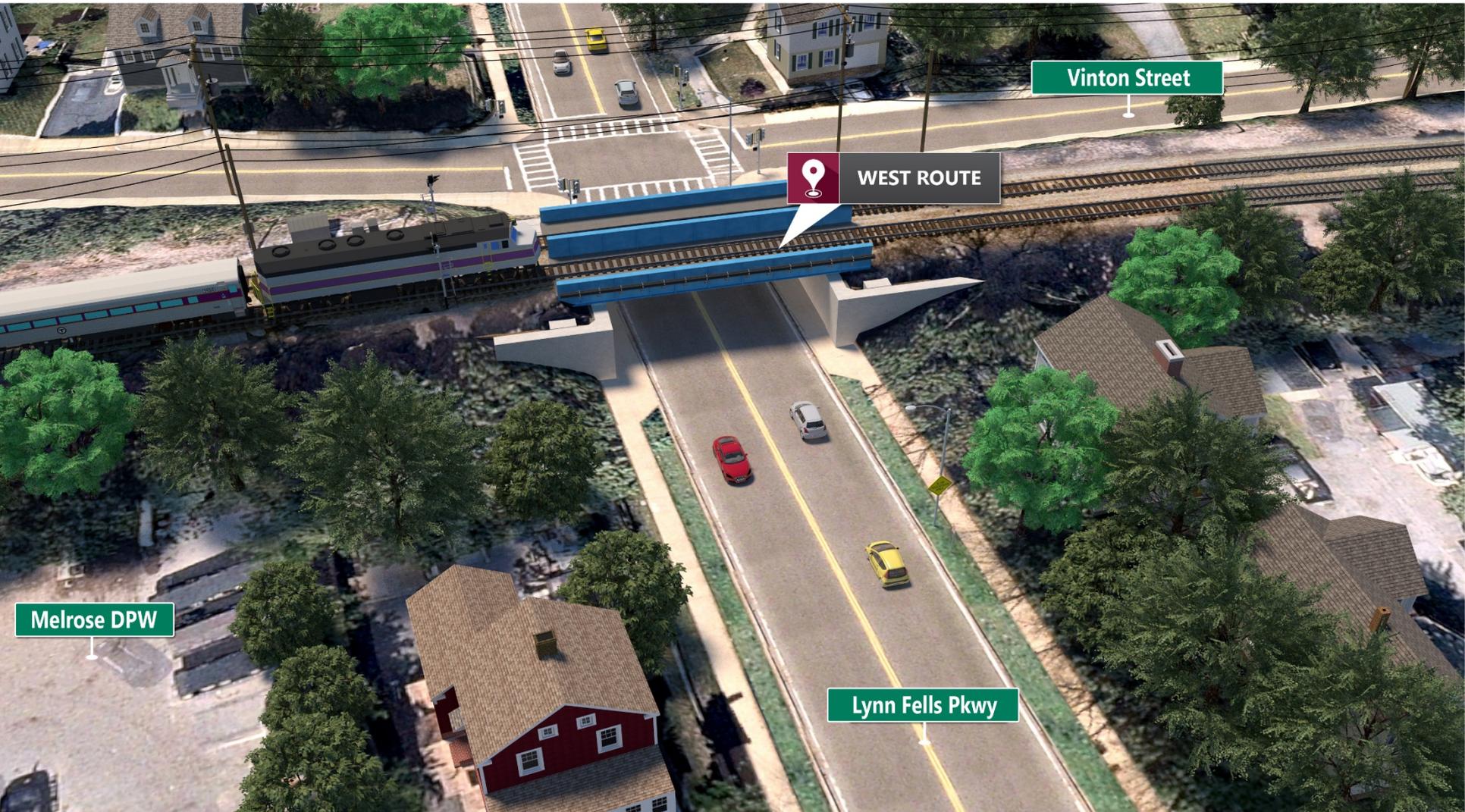
LYNN FELS PKWY CLOSURE 3

WEEKEND TRACK SHUTDOWN

Lynn Fells Pkwy

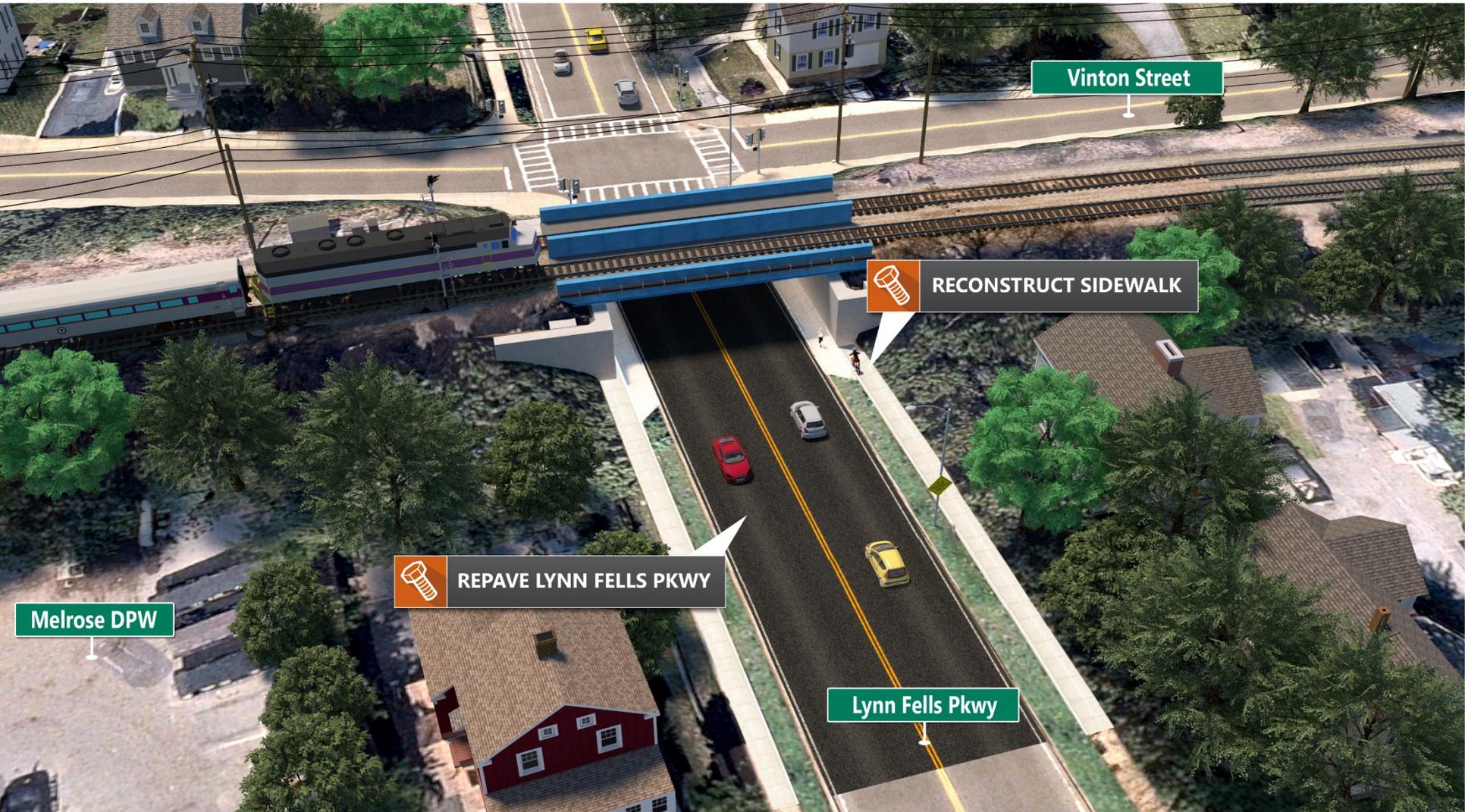


# Construction Staging





# Construction Staging



Vinton Street

RECONSTRUCT SIDEWALK

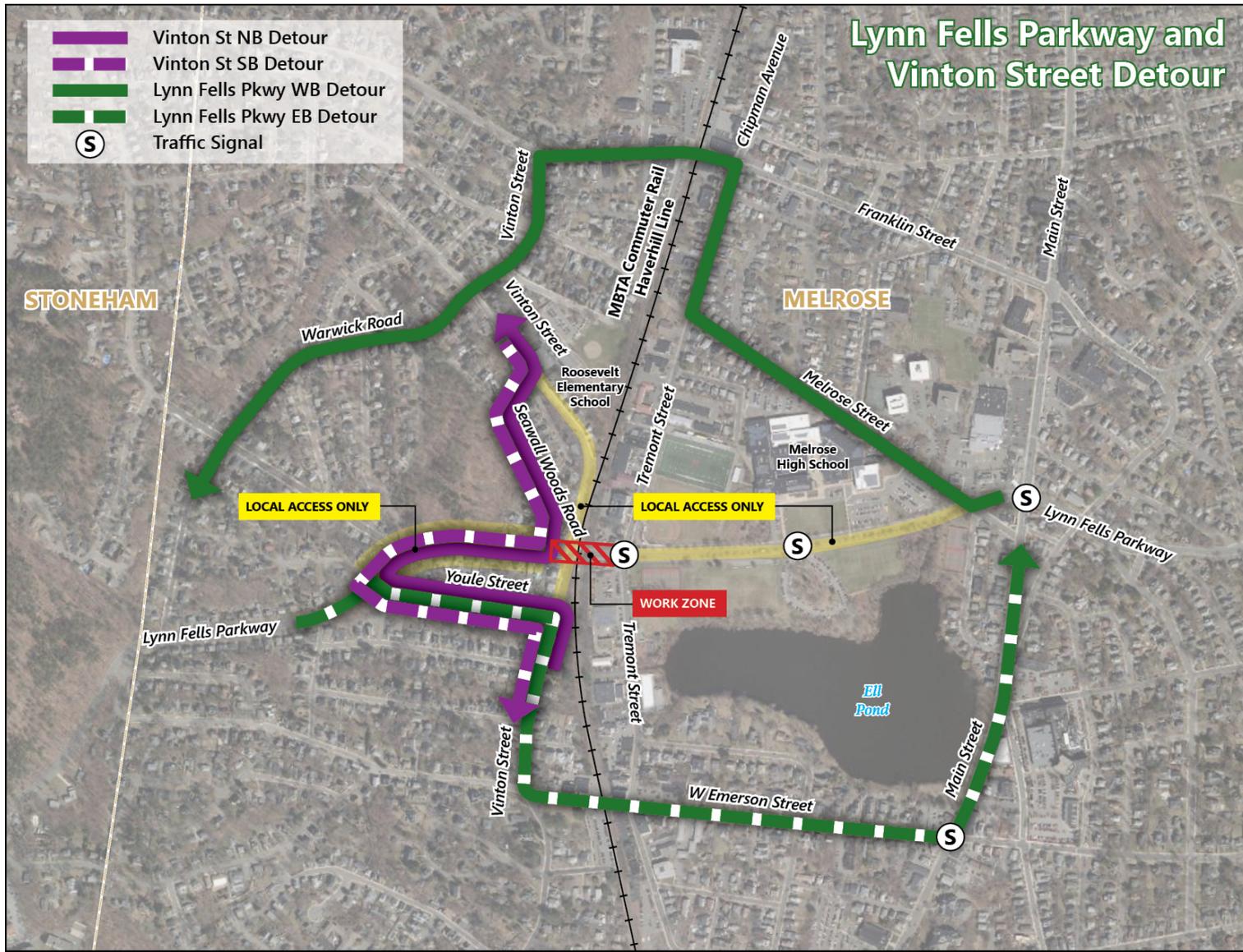
REPAVE LYNN FELLS PKWY

Melrose DPW

Lynn Fells Pkwy



# Traffic Detours





# Project Status and Schedule

- Construction
  - Site Clearing – Fall 2020
  - Site Prep - Fall 2020
  - Foundation Work – Spring 2021
  - Construct New Bridge – Summer 2021
  - Move New Bridge Into Place – Fall 2021
  - Site Cleanup – Spring 2022





# How Can You Reach Us?

- Project Website:  
[www.MBTA.com/LynnFellsPkwyBridge](http://www.MBTA.com/LynnFellsPkwyBridge)
- Email:  
[LynnFellsPkwyBridge@MBTA.com](mailto:LynnFellsPkwyBridge@MBTA.com)
- 24-Hour Hotline:  
(617) 571-7878

## Questions?

