SOUTHWEST
Green Line LRT Extension

Transportation Accessibility Advisory Committee (TAAC) Meeting

April 6, 2016

METROPOLITAN COUNCIL | Metro Transit | FTA | Counties Transit Improvement Board | Minnesota Department of Transportation | Hennepin

EDEN PRAIRIE | MINNETONKA | EDINA | HOPKINS | ST. LOUIS PARK | MINNEAPOLIS

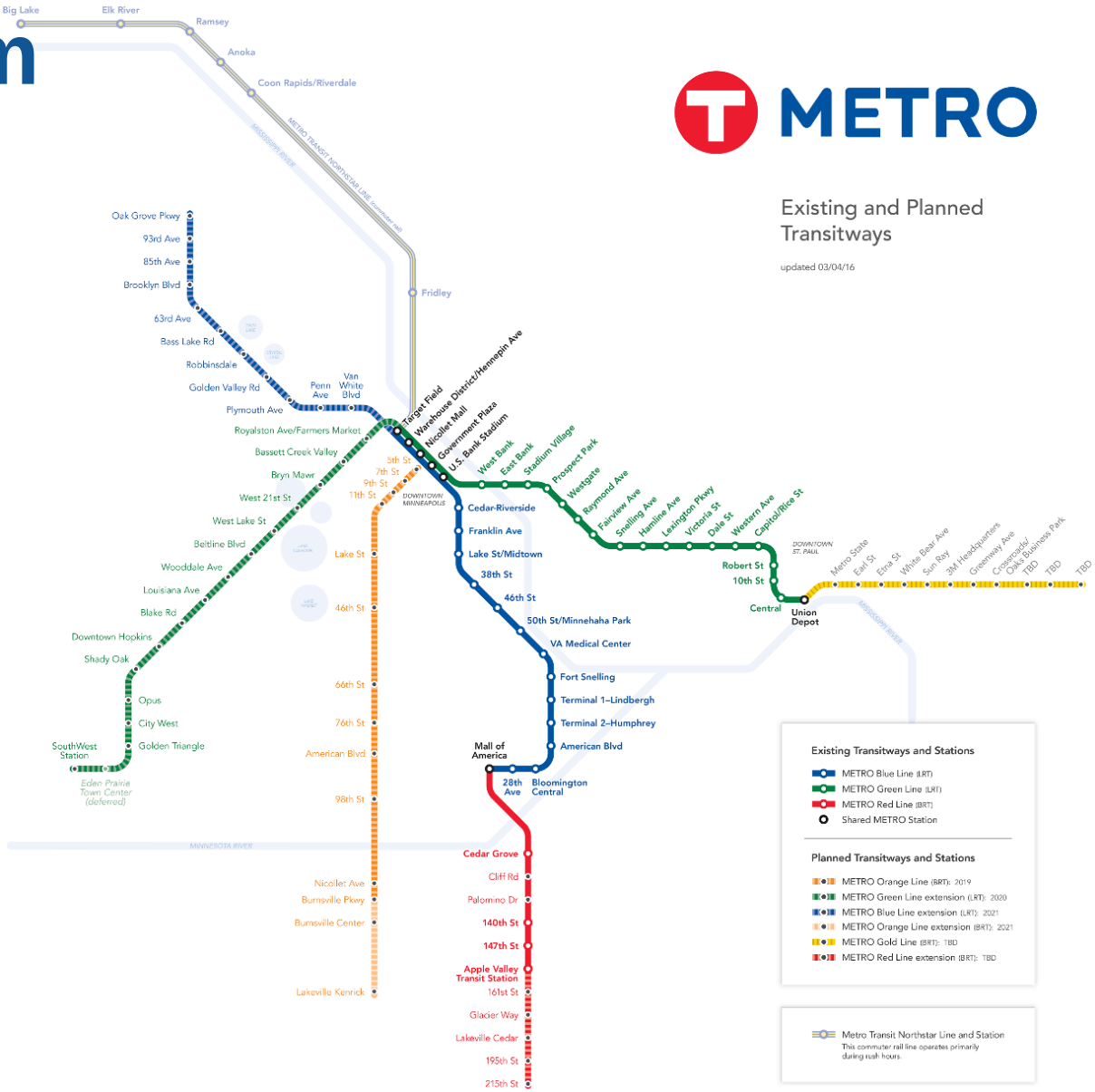
Today's Topics

- March 9 Workshop Summary
  - Project Overview
  - Lessons Learned From LRT Projects
  - SWLRT Station Design Features
  - Workshop Activities
  - What We Heard
- Proposed Design, Modifications and Next Steps

Project Overview

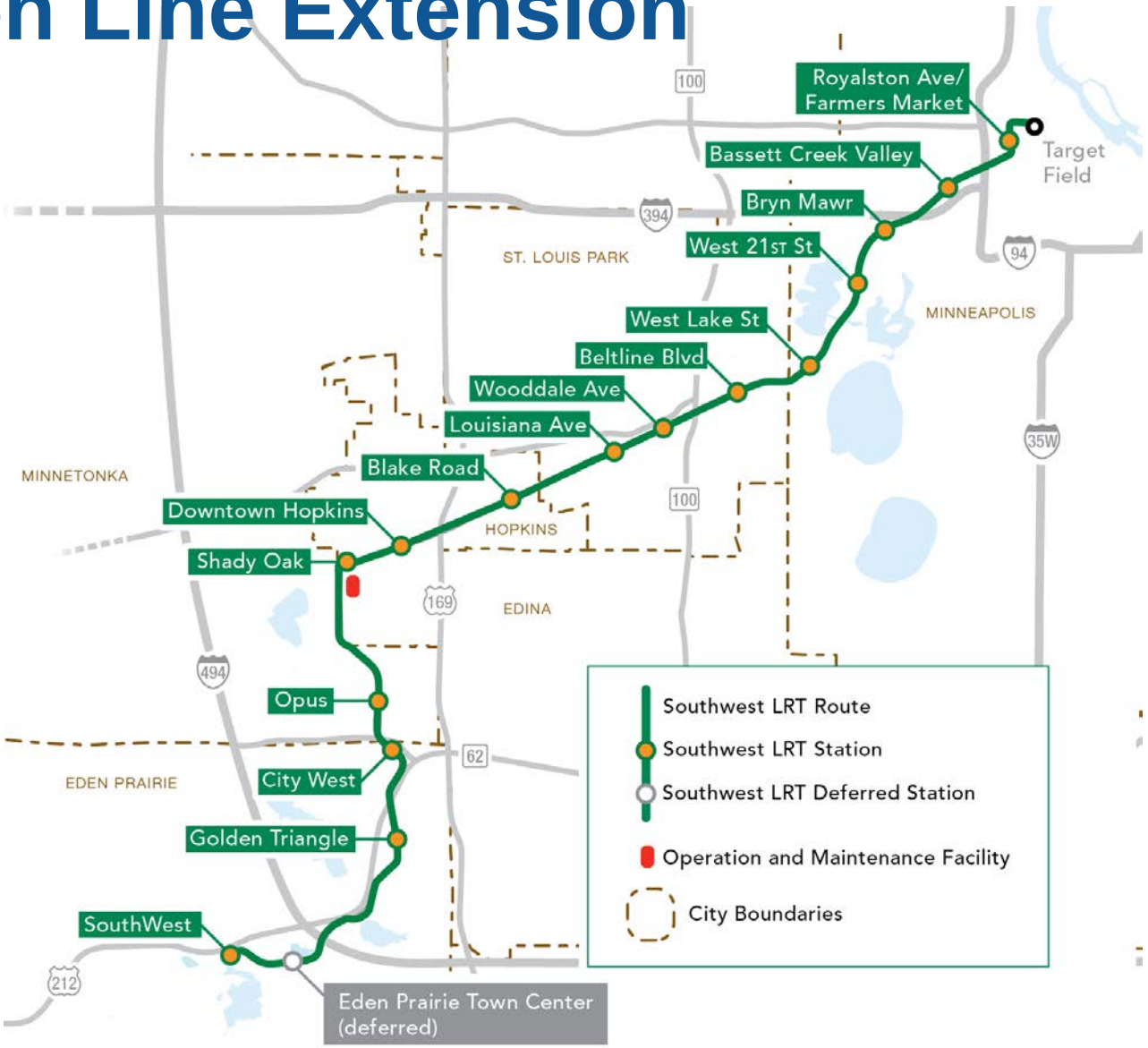
METRO System

- All-day, frequent service
- Light Rail Transit
  - Blue Line (2004)
  - Green Line (2014)
  - Green Line Extension (2020)
  - Blue Line Extension (2021)
- Bus Rapid Transit
  - Red Line (2013)
  - Orange Line (2019)
  - Gold Line (TBD)



METRO Green Line Extension

- 14.5 miles new track
- 15 new stations
  - 1 deferred station
- 34,000 average weekday rides in 2040
- One seat ride to St. Paul



Outreach To Date

- Topics
  - Alignment/ROW
  - Freight rail
  - Station locations
  - Station design
  - Environmental impacts
  - Kenilworth landscaping
  - Potential trail detours
  - Construction communications

Lessons Learned From LRT Projects

Lessons Learned From LRT Projects

- Consistency in station layout is important
- More space to ease circulation on the platform is needed
- Adequate shelter space for waiting passengers on the platform is important in our climate
- More bench seats versus leaning rails is desired

Lessons Learned From LRT Projects

- LRV door indicators on the platform are desired
- Guide barrier needed at the end of platform access
- Good sight lines and adequate lighting at track crossings are important
- Design track crossings as perpendicular to the track as possible
- Use barrier-free best practices for designing walkways/circulation spaces

Other Design Considerations

- Safety:
  - Provide clear views to and from the platform
  - Provide safe illumination levels and security cameras
  - Use detectable/tactile warning, guardrails, signage, and fencing to discourage passengers from walking on the tracks
- Aesthetics:
  - Create stations that have unique identity, while maintaining a corridor identity/consistency of platform elements

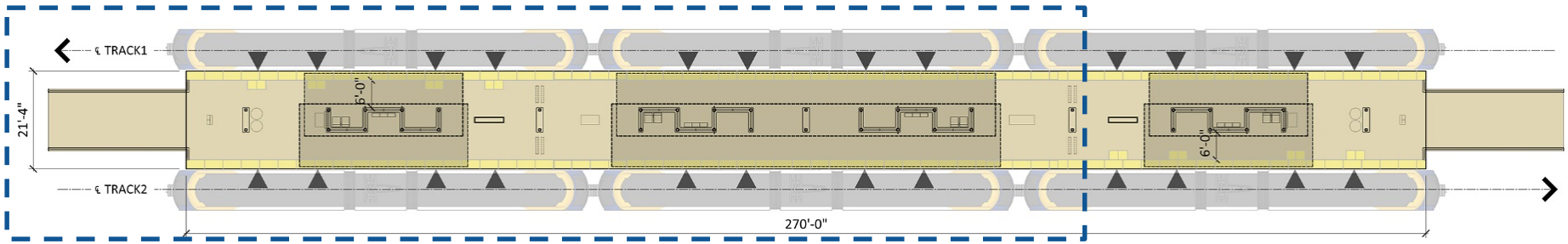
SWLRT Station Design Features

Typical Center Platform: Blake Rd Station

Design Features: Center Platforms

- 13 of 15 SWLRT stations have center platforms:
  - High level of consistency along the corridor
  - Easier to use

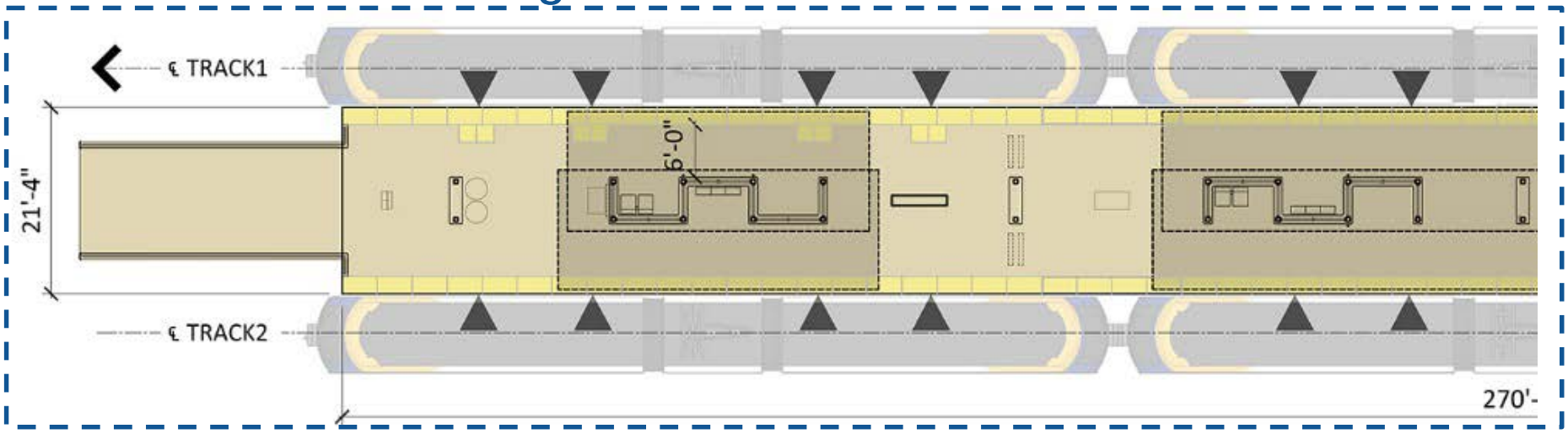
Center Platform



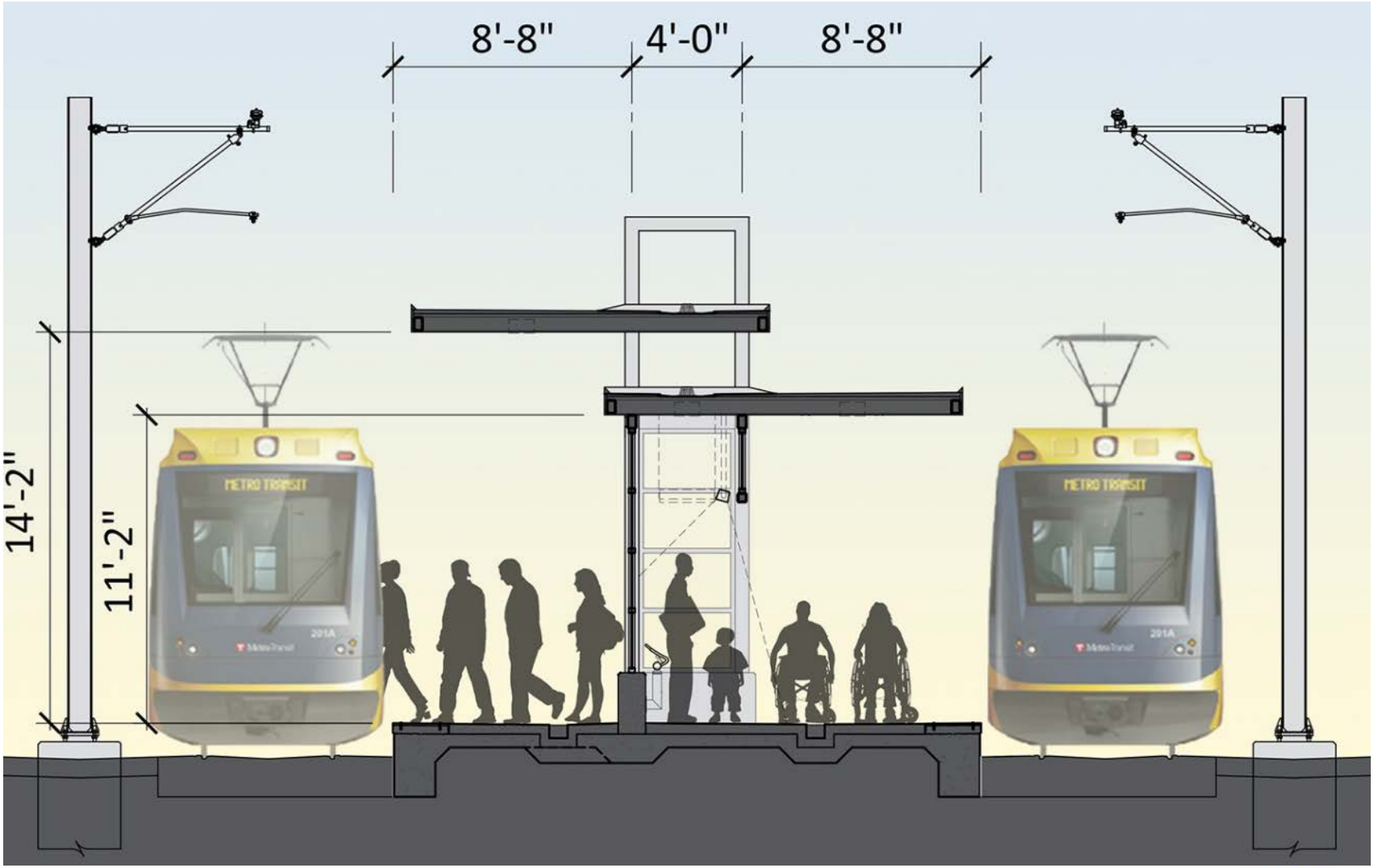
Design Features: Center Platforms

- SWLRT platforms will be 1 foot 4 inches wider:
  - Make platforms more comfortable
  - Allow passengers to move more easily

Center Platform Enlargement



Design Features: Center Platforms



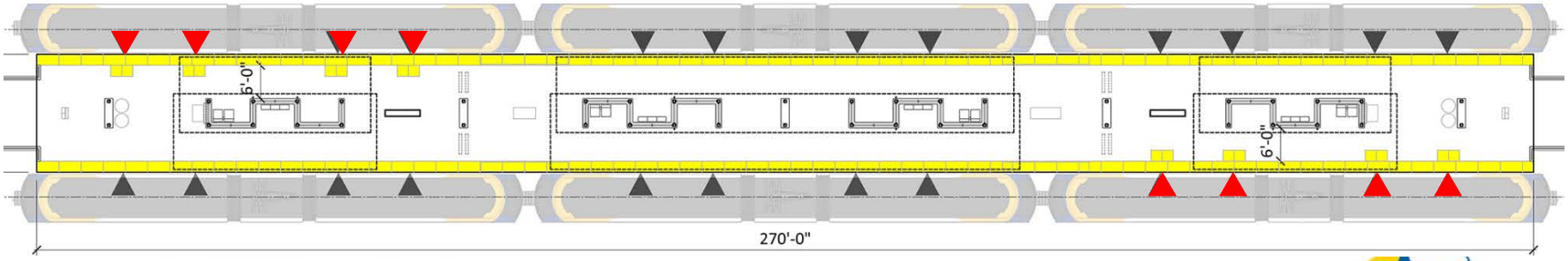
Typical Side Platform: Royalston/Farmers Market Station

Design Features: Side Platforms

- 2 of 15 stations have side platforms
  - Royalston Ave/Farmers Market Station has a layout similar to Union Depot and Stadium Village on the Green Line
  - A more unique design was needed for SouthWest Station to accommodate SouthWest Transit bus service
- No split platforms on SWLRT
  - Example: Snelling Ave is a split platform station on the Green Line

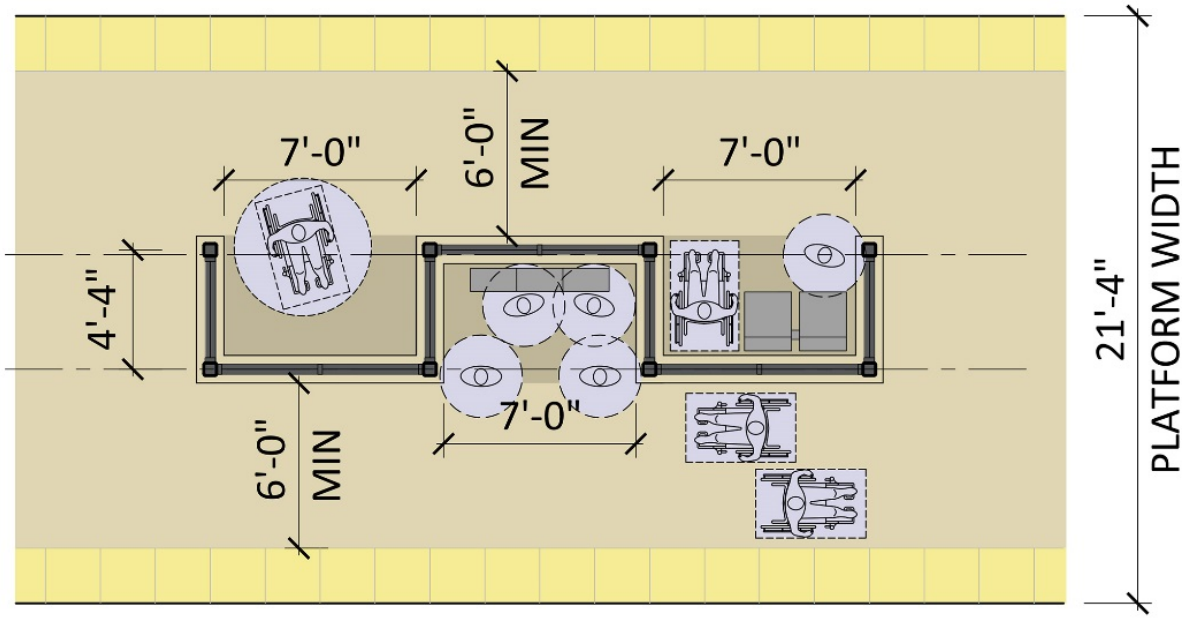
Design Features: Tactile Features

- Tactile features on station platforms provided:
  - As required, detectable warning along platform edge: 2 feet deep
  - In addition, directional bar mats at first LRV car doors: 4 feet wide by 2 feet deep
- Discussed in greater detail in workshop



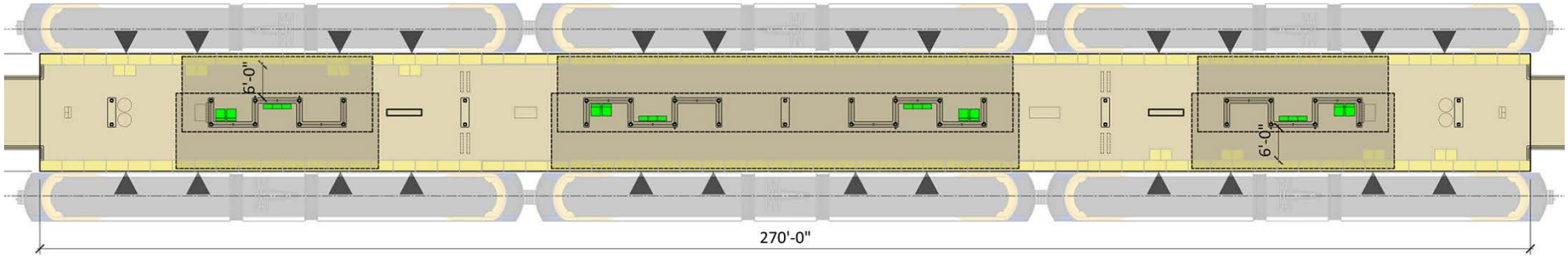
Design Features: Station Enclosures

- Narrow shelter opening less susceptible to wind and weather, provides denser heat coverage
- No barriers to prevent flow of people from shelters to the light rail vehicles
- Discussed in greater detail in workshop



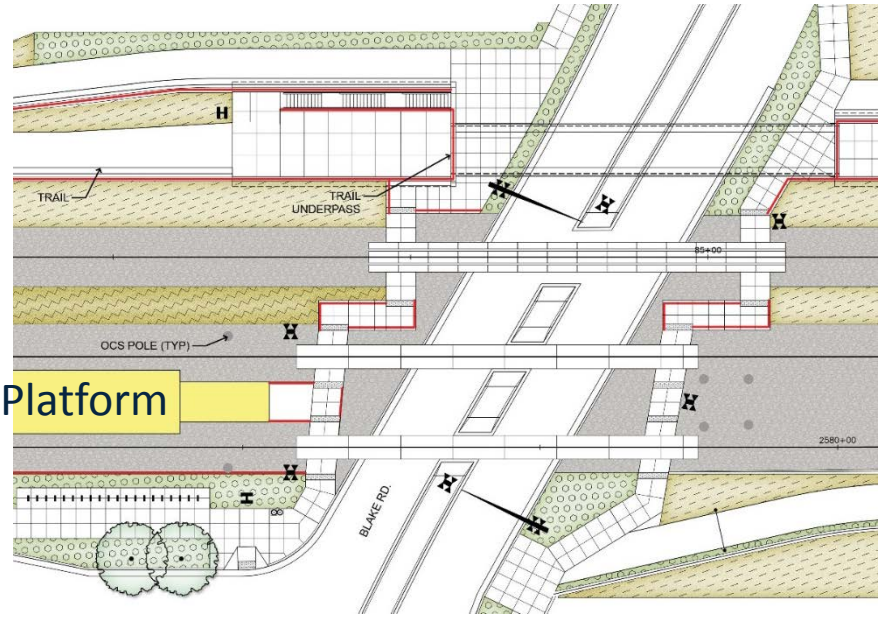
Design Features: Station Furnishings

- 12 enclosures total
- Initially had planned:
  - 4 with benches; 4 with a leaning rail; 4 are open
- Discussed in greater detail in workshop



Design Features: Track Crossings

- Graphic below demonstrates the following:
  - Guide barrier at the end of platform access
  - Crossing as perpendicular as possible to the tracks
  - Refuge space in crossing between freight rail and light rail
  - Active Warning Devices



Regional Trail Under Roadway

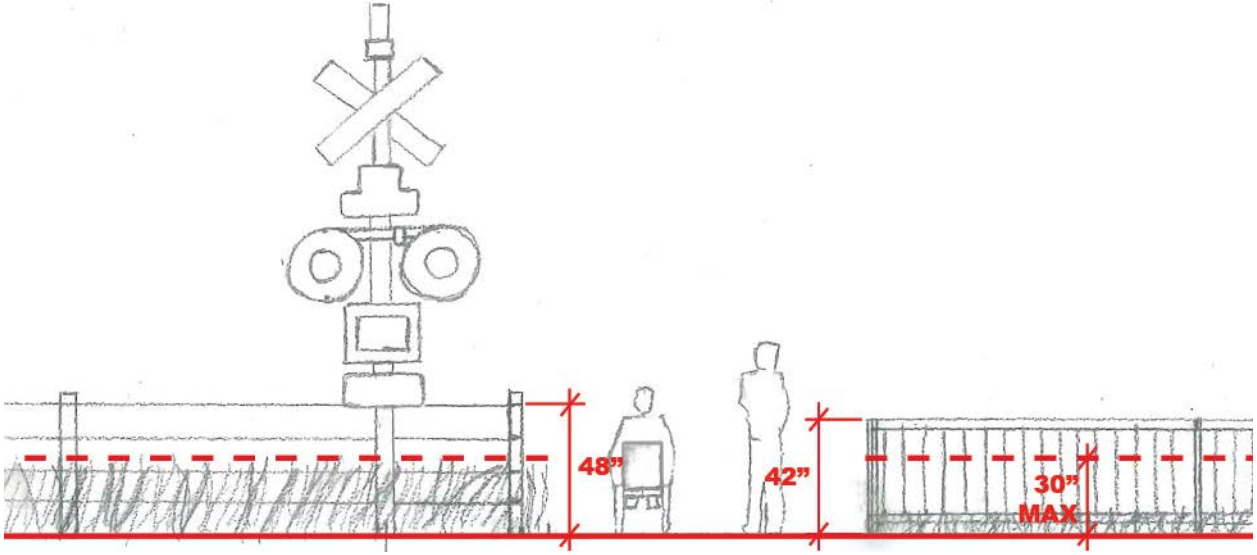
Freight Rail

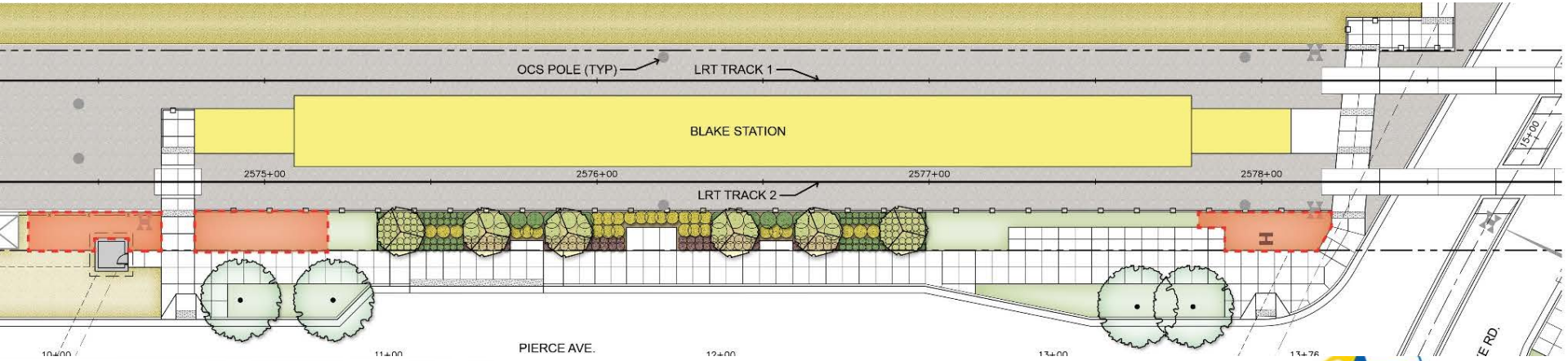
LRT Track 1

LRT Track 2

Design Features: Track Crossings

- Graphics below demonstrate approach to site lines



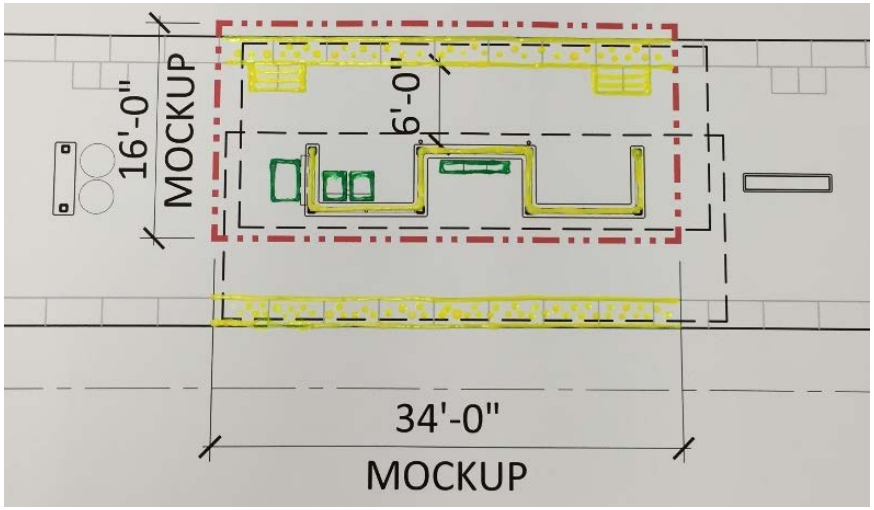


Workshop Activity 1:

Platform Mock-Up: Tactile Features and Enclosure Furnishings & Layout

Workshop Activity 1: Platform Mock-up

Tactile drawing of mock-up below



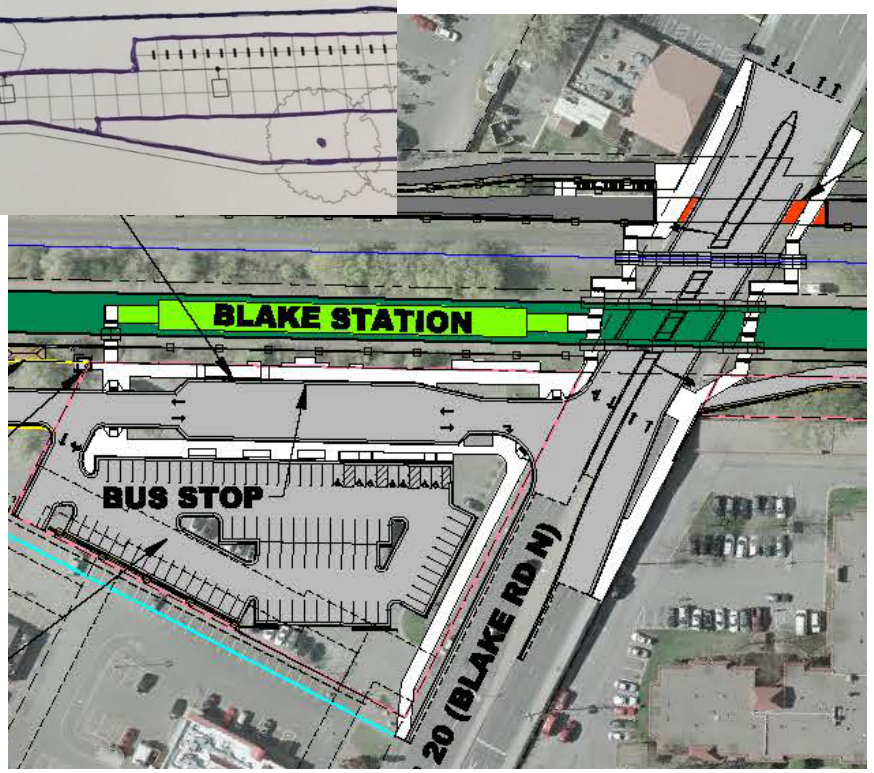
Photos taken during workshop activity 1

Workshop Activity 2:

Station Access

Workshop Activity 2: Station Access

Tactile drawing of station used for workshop discussion below



Station access at Blake Station discussed as part of workshop activity 2

Workshop Feedback: What We Heard

- SWLRT platform width and size of enclosures:
  - Platform width can accommodate two people passing in wheelchairs comfortably without crossing detectable warning edge
  - Enclosure size/layout can accommodate two benches and a person using a wheelchair comfortably
- Furnishings:
  - Not in favor leaning rails
  - Would like more benches
  - Providing an armrest on the outside edge of benches would be helpful and provide flexibility

Workshop Feedback: What We Heard

- Directional bar mat to indicate LRV doors:
  - Liked having something to indicate the door location for the first LRV
    - Doesn't help all people that are blind or have low vision; however, helpful for people that have limited mobility or other disabilities
  - Tactile bars should be perpendicular to the LRV and parallel to the boarding direction for people using a wheelchair
  - Directional bar mat should be a color other than yellow

Workshop Feedback: What We Heard

- Detectable warning on platform edge:
  - Detectable warning doesn't work for all people that are blind or have low vision
  - Does help with identifying the edge of the platform and where people should wait

Workshop Feedback: What We Heard

- Keep ends of the platforms barrier-free as possible
- Include audible beacon Ticket Vending Machines (TVMs) so they are easier to locate
- Consider Accessible Pedestrian Signals (APS) for pedestrian crossings at LRT/roadway intersections
- Sometimes hard to distinguish where audible detection is originating from on existing rail Active Warning Devices and APS depending on the environmental factors

Workshop Format: What We Heard

- Workshop participants:
  - Appreciated receiving materials prior to the workshop
  - Thought the opening presentation was helpful to “ground” participants with the project
  - Liked the interactive workshop activities; brought the platform experience to life and made it relevant
  - Appreciated having other agency/consultant staff in attendance to experience/understand issues first-hand

Proposed Design, Modifications and Next Steps

Proposed Design Modifications

- Furnishings:
  - No leaning rails
  - Two additional benches
  - Armrests on the outside edge of all benches
- Consolidate Smart Card Validators with platform structural elements to minimize barriers

Proposed Design Modifications

- Directional bar mat to indicate LRV doors:
  - Directional bar mats to indicate first car LRV doors
  - Tactile bars perpendicular to the LRV and parallel to the boarding direction
  - Color different than tactile edge (not yellow)

Proposed Design

- Detectable warning on the platform edge per Minnesota Accessibility Code 2015 and FTA/DOT Access Board requirements, detectable warnings are located at the platform board edge at a width of 24 inches wide and comply with code-requirements for dome size, spacing and visual contrast

Proposed Design

- Active warning devices at pedestrian crossings:
  - Red flashing lights and an electronic bell sound
  - Design follows current standards and guidelines for rail crossings
  - One exception: Royalston Ave/Holden St in Minneapolis
    - Near the proposed Royalston Ave/Famers Market Station, pedestrian crossing of LRT tracks and roadway controlled with “Walk – Don’t Walk” indications and Accessible Pedestrian Signals (APS)

Proposed Design

- Example of Active Warning Devices on the Green Line at Wheeler St and University Ave

SPO & BPO Next Steps

- Continued coordination with Blue Line Extension project for consistency in the system
- Coordination with the Metro Transit Light Rail Wayfinding Improvements Project
- Provide regular updates and receive feedback from TAAC

Metro Transit Next Steps

- Pedestrian crossings of LRT:
  - City of Minneapolis is incorporating APS into intersections; SPO can help coordinate a small group discussion with City staff/advisory committees
  - Recommend that the Metro Transit LRT Wayfinding Improvement Project explore potential options
- Further discussion needed on audible beacons on Ticket Vending Machine:
  - Recommend that the Metro Transit LRT Wayfinding Improvement Project explore potential options

More Information

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