

# The Light Rail System Safety & Grade Crossing Equipment

A Peer Review Provided by the American Public  
Transportation Association (APTA)

Presented by: Mark Benedict, Director, Light Rail Operations and Transportation

# Peer Review Team

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# Methodology

- Utilized the APTA Peer Review Process
- Highly experienced and respected professional panel
  - Documentation Review
  - Field Observations
  - Briefings
  - Listening Sessions
  - Interviews of Staff

## Scope of Review

- Examine the adequacy and effectiveness of static signs associated with advance warning to the general public
- Examine safety devices and equipment at grade crossings, including street crossings, bike paths and stand-alone pedestrian crossings
- To identify gaps in existing management practices, safety rules, supervision and disciplinary framework

# Recommendations

## Signage

- Ensure compliance with approved crossing orders from regulatory agency ✓
- Blue Line pedestrian crossing signage is standardized ✓
- Blue Line crossing at 46<sup>th</sup> Street is over-signed and has too many ‘Look’ and ‘Stop’ at mid-track ✓
- Green Line has a left turn ‘To 280’ sign in the median that is confusing and should be relocated in coordination with the city ✓
- Pedestrian signs should be pedestrian sized and oriented towards crossing user ✓

# Observations

## Signage

- Considered to be compliant, adequate and sufficient
- Green Line 'TRAIN' flashing sign for pedestrians is beneficial
- Green Line flashing blank out signs for vehicles is effective
- Second train warning signs deliver a consistent message
- Operation Life Saver campaign messaging is effective
- Wayfinding signage messaging is effective











# Recommendations

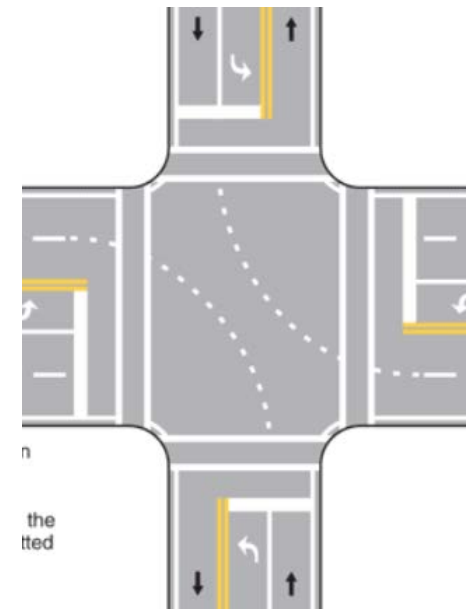
## Equipment

- Some crossings too wide for pedestrians – channelize, remove some tactile strips, eliminate straight-through crossings ✓
- Crossing bells continue sounding for too long after departure of trains ✓
- Install pull gates adjacent to Blue Line bike and pedestrian trail ✓
- Review additional location for extending concrete surfaces on Blue Line ✓
- Install fencing at Snelling on both sides ✓
- Install a stop bar at 46<sup>th</sup> Street ✓
- Extend fencing at US Bank, 38<sup>th</sup> St., and other downtown locations. ✓

# Recommendations

## Equipment (continued)

- Pursue traffic signal preemption/priority on Green Line and downtown Minneapolis ✓
- Add candle sticks on median, thermal plastic arrow, and turkey track markings (dashed lines) at 5<sup>th</sup> Street ✓



# Observations

## Equipment

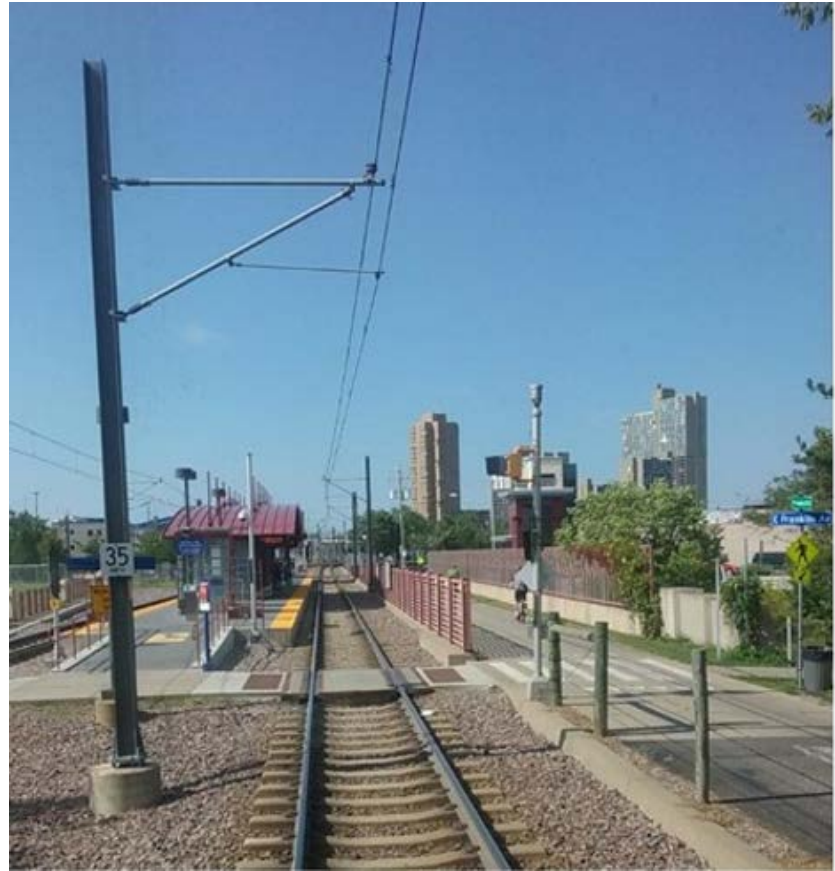
- Wig wag lights on trains increase train visibility
- Green Line mid-block pedestrian crossings are good
- Sight lines for train operators are not obstructed
- Equipment in state of good repair
- Station platform area discourage pedestrians from crossing tracks

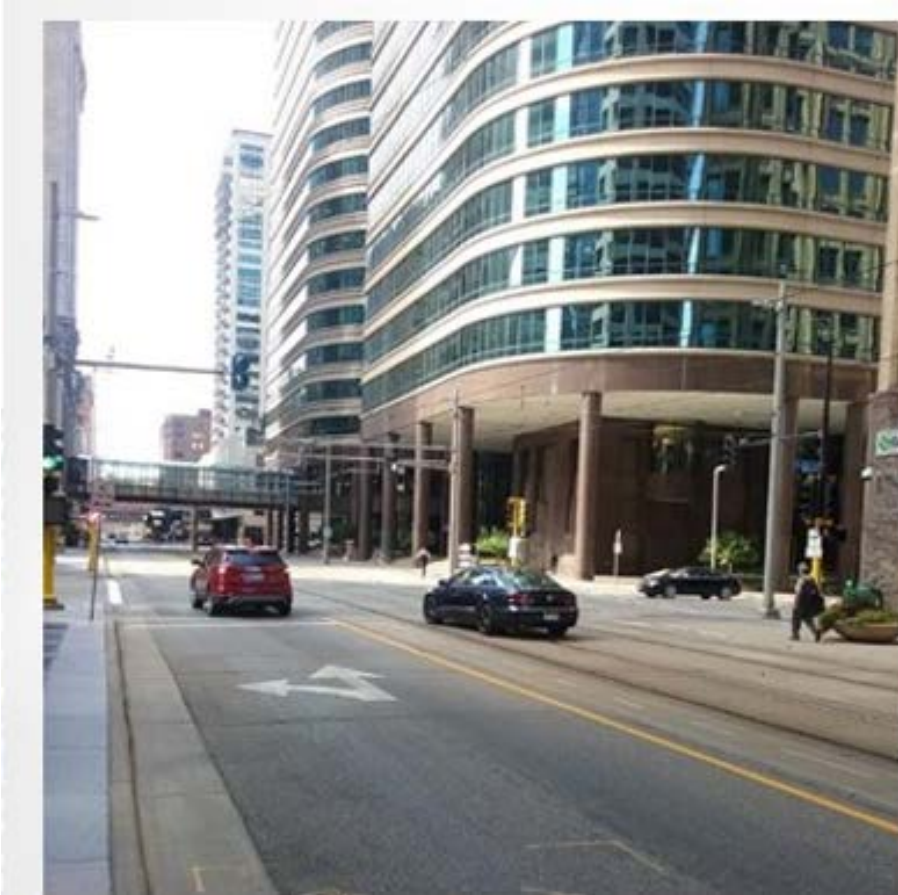


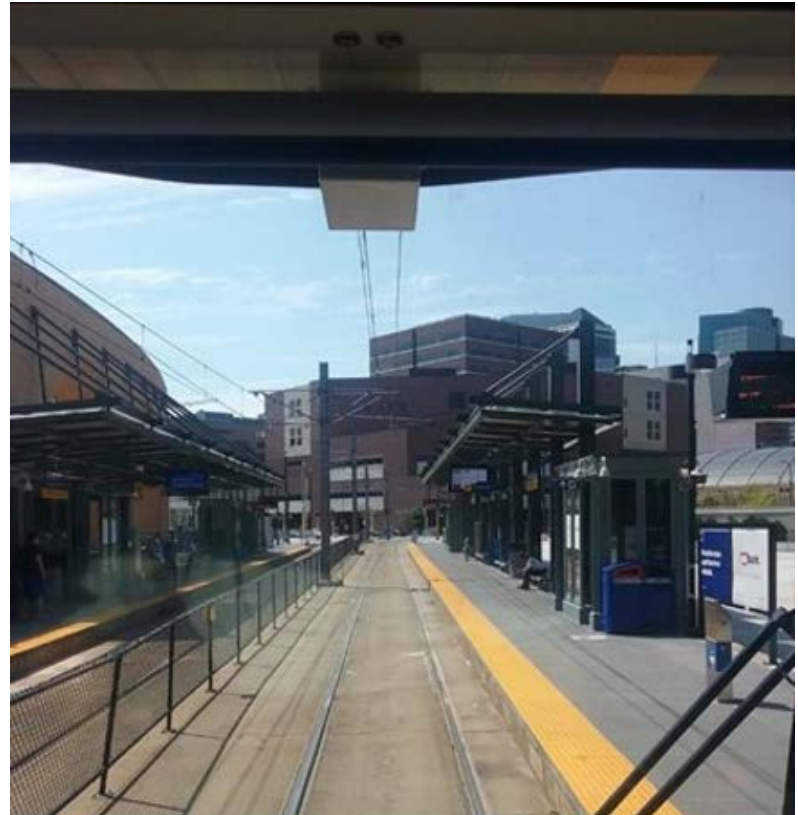














# Recommendations

## Management Practices

- Consider more Safety Blitzes and outreach ✓
- Improve coordination between Public Relations/MTPD and PO ✓
- Consider adequacy of supervisory staffing levels ✓
- Expand Green Line train operator training ✓
- Consider expanding recertification beyond the current requirements ✓
- Review the process of how safety and security decisions are made, implemented and tracked ✓
- Response to a hazard report should include feedback with a resolution to the originator ✓
- Add rail safety message on the rear of buses ✓

# Observations

## Management Practices

- Operational changes enhance safety, such as horn for left turn cars, horns for trains passing, horn on mushroom, etc.
- Speeds are considered acceptable at pedestrian crossings and platforms
- Coordination with the University of Minnesota is good
- Communications between Metro Transit safety staff and project offices is well established
- Review panel considers Metro Transit accident rates are within industry norms
- Train operators correctly emphasized safety over schedule



## QUESTIONS