

SOUTHWEST

Green Line LRT Extension



Corridor Management Committee Meeting

March 12, 2014



Today's Topics

- Welcome
- Resolution Thanking Commissioner Dorfman
- October 9, 2013 CMC Project Scope and Budget Recap
- Resolution of Support: Downtown Hopkins Station
- Southwest Station Update
- Responses to February 20 CMC Meeting
- Shallow Tunnel Update
- Surface Transportation Board Staff Meeting Update
- Railroad/Shippers' Comments
- Communications/Outreach Update
- Adjourn



October 9, 2013 CMC Project Scope and Budget Recap

SWLRT Project Development Technical Issues

Revision 04: 28 May 2013

Technical Issues:

- 1. Eden Prairie Alignment
- 2. Nine Mile Creek Crossing
- 3. Golden Triangle Station
- 4. Shady Oak Road & TH 212 Crossing
- 5. City West Station & TH 62 Crossing
- 6. Opus Station
- 7. Opus Hill/Minnetonka-Hopkins Bridge
- 8. Shady Oak Station

-  PEC West
-  PEC East
-  Joint PEC West/PEC East

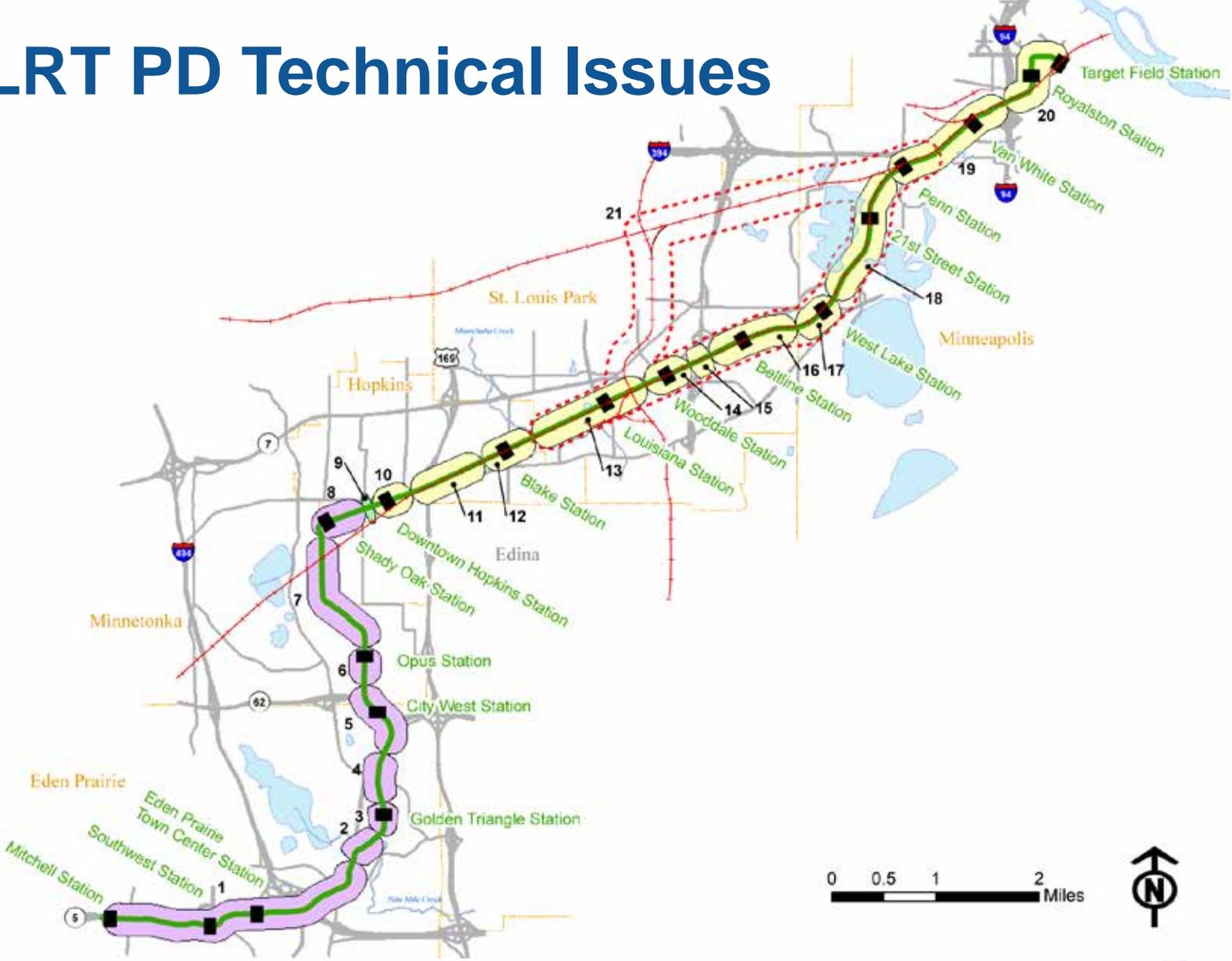
- 9. PEC West/PEC East Interface Point

- 10. Downtown Hopkins Station
- 11. Excelsior Blvd. Crossing
- 12. Blake Station
- 13. Louisiana Station
- 14. Wooddale Station
- 15. TH 100
- 16. Beltline Station
- 17. West Lake Station
- 18. Kenilworth Corridor
- 19. Bassett Creek Valley Corridor
- 20. Royalston Station/Interchange Project Coordination
- 21. Freight Rail Co-location/Relocation Alternatives

System-wide Technical Issues (not shown):

- 22. Traction Power Substation and Signal Bungalow Locations
- 23. Operation & Maintenance Facility (OMF) Location
- 24. Park & Ride, Kiss & Ride and Bus Layover Locations
- 25. Trails and LRT Interface Coordination

SWLRT PD Technical Issues



Technical Issues: 2-20, 22, 24 and 25

- At its October 9 meeting, the CMC voted to recommend to the Council as presented to the CMC on August 7 and August 28, 2013

Technical Issues: 2013 CMC Actions

- At its September 4 meeting, the CMC voted to recommend to the Council:
 - § TI #1: Eden Prairie Alignment: Comp Plan Alignment to Southwest Station
 - § TI #21: Removal of the Deep Bore LRT Tunnel option from further consideration
- At its September 11 meeting, the CMC voted to recommend to the Council:
 - § TI #23: Hopkins Site 9A for the OMF location
- At its October 9 meeting, the CMC voted to recommend to the Council:
 - § TI #21: Shallow LRT tunnels through the Kenilworth Corridor

Project Budget Recommendation

● SWLRT Base Project	\$1.390 B
● Freight Rail	
● Common Elements	\$.090 B
● Kenilworth Shallow LRT Tunnel	\$.160 B
● <u>Scope/Cost Reductions</u>	<u>(\$\$.087 B)</u>
● SWLRT Adjusted Budget	\$1.553 B*

*Includes 27% contingency allowance

TI #23: Operations and Maintenance Facility (OMF) Update

Hopkins: Downtown Hopkins Station

- Provide additional amenities
 - § Landscape and hardscape elements
 - § Enhanced bike facilities
- Prioritize additional civic plaza elements as contingency funds are available
- Identify non-project funding to help implement the ARTery project along 8th Ave from the station platform to Mainstreet

Downtown Hopkins Station

- Parking facility incorporates TOD redevelopment opportunities
- Compliments historic Mainstreet district and ARTery plans
- Improves pedestrian and bicycle facilities
- Proposed \$7 M CMAQ grant is matched with \$1.75 M of local funds



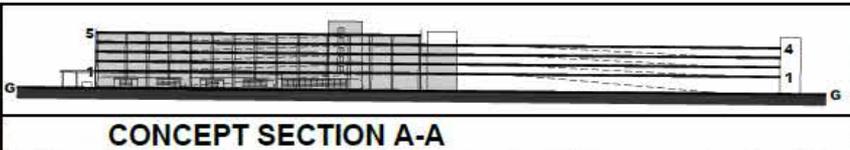
Resolution of Support: Downtown Hopkins Station CMAQ Funding Request

TI #1: Southwest Station Update

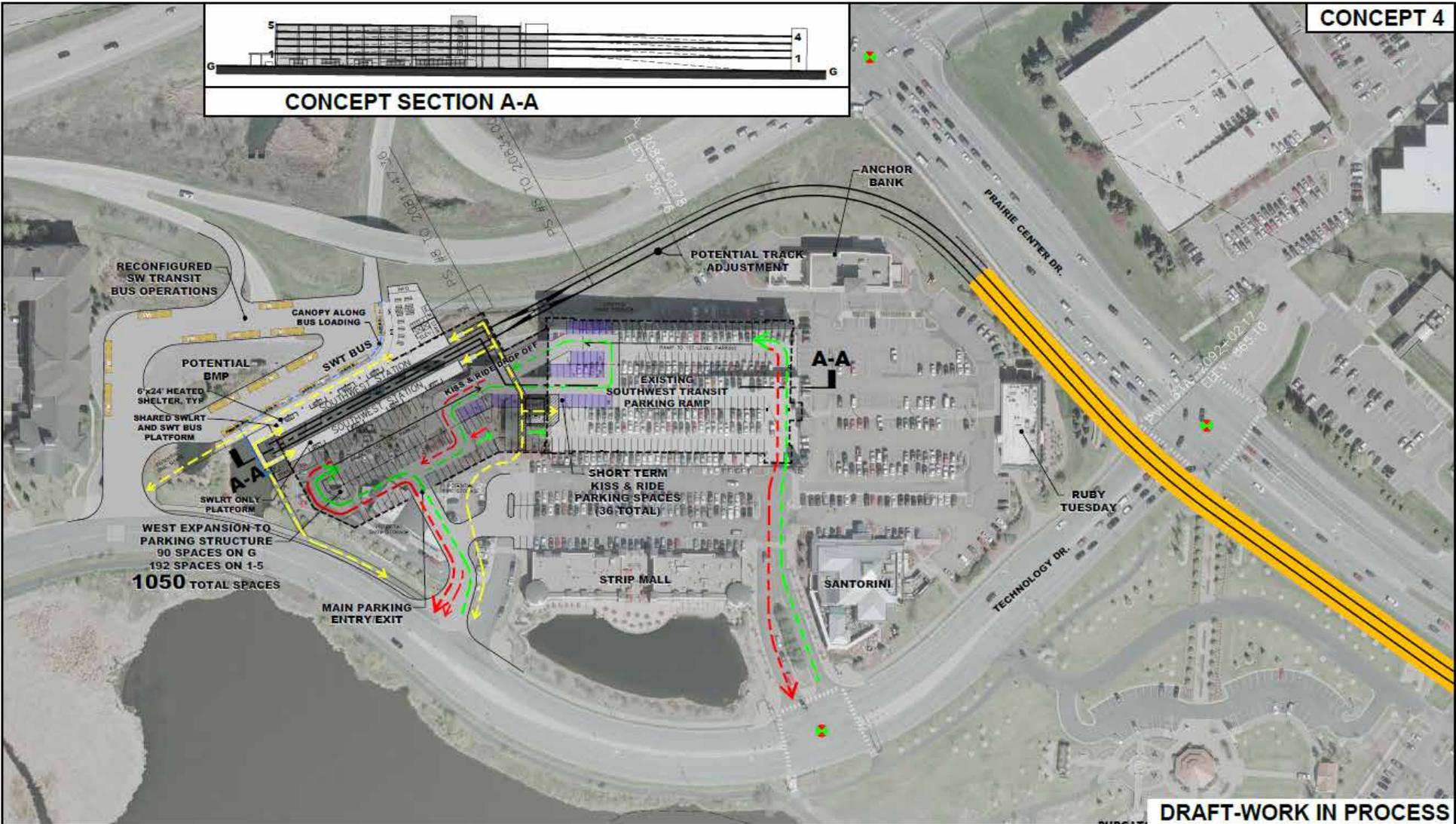
October 9, 2013 CMC Resolution

- Calls on SPO to design SWLRT so as not to preclude a future LRT extension from Southwest Station to Mitchell Road

Southwest Station: Concept #4



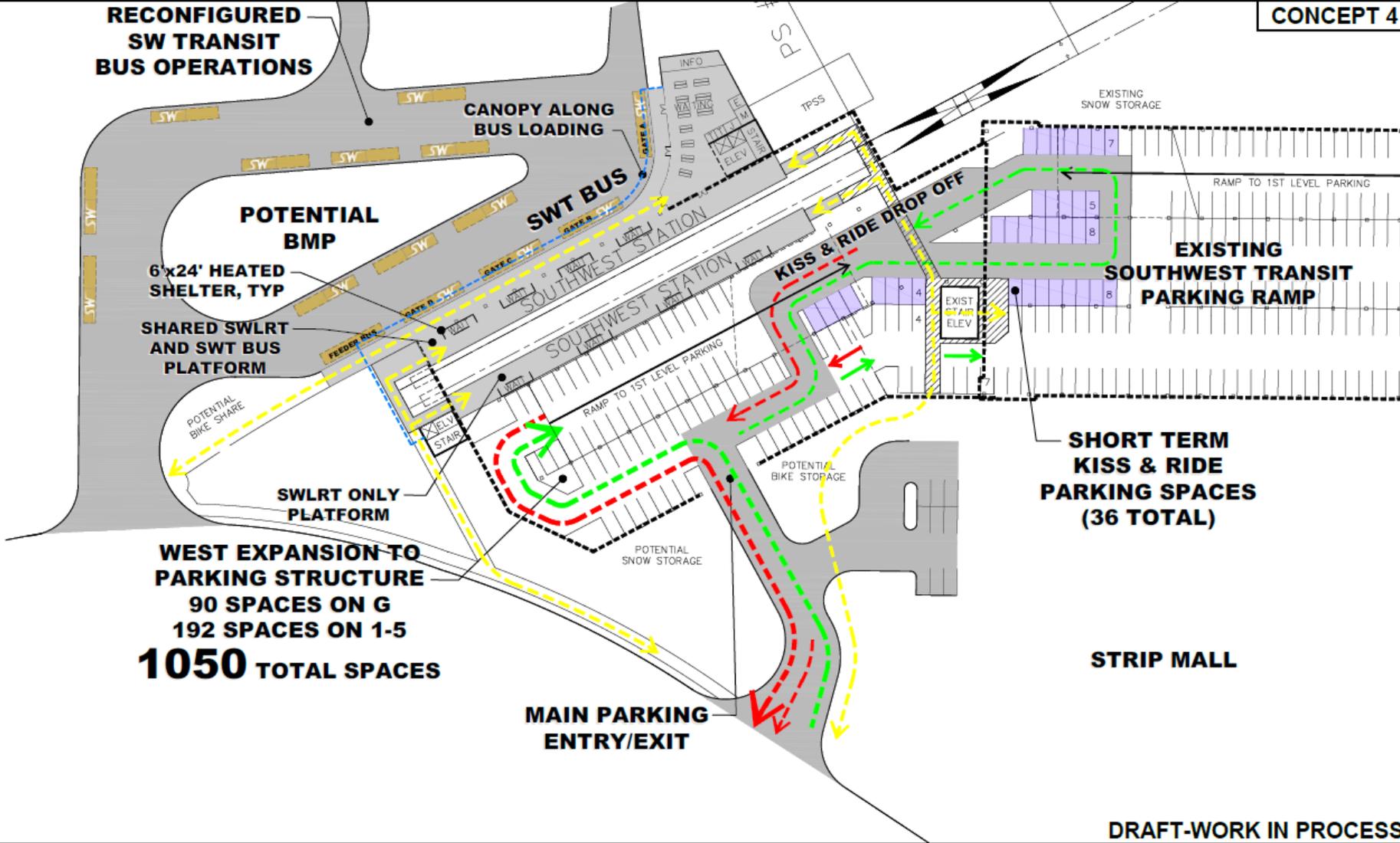
CONCEPT 4



DRAFT-WORK IN PROCESS

Southwest Station: Concept #5

CONCEPT 4



DRAFT-WORK IN PROCESS

February 20 CMC Questions

Freight Rail Relocation Draft Report Discussion

- Safety considerations
- Property impacts
- Cost
- Railroad operational considerations
- Developable land
- Additional community considerations

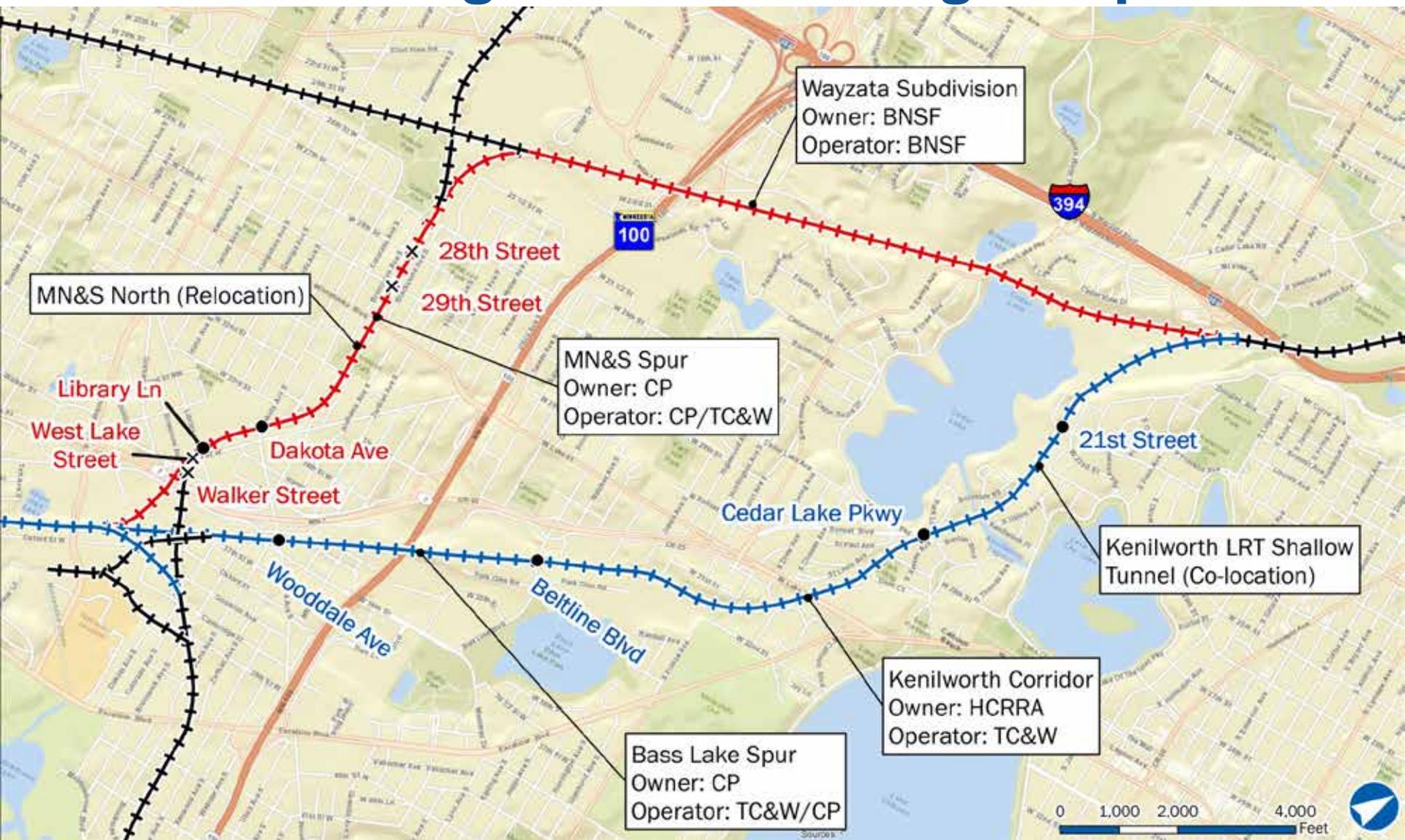
Freight Rail Location Comparison

Safety Considerations	Kenilworth LRT Shallow Tunnels (Co-location)	MN&S North (Relocation)
<p style="text-align: center; font-size: 2em;">Freight Rail</p>	<p>4 FR at-grade crossings (existing and proposed):</p> <ul style="list-style-type: none"> • Wooddale • Beltline • Cedar Lake • 21st • ADT: 33,600 	<p>6 FR at-grade crossings (existing):</p> <ul style="list-style-type: none"> • Walker • Library • Lake • Dakota • 29th • 28th • ADT: 15,000 <p>2 FR at-grade crossings (proposed):</p> <ul style="list-style-type: none"> • Library • Dakota

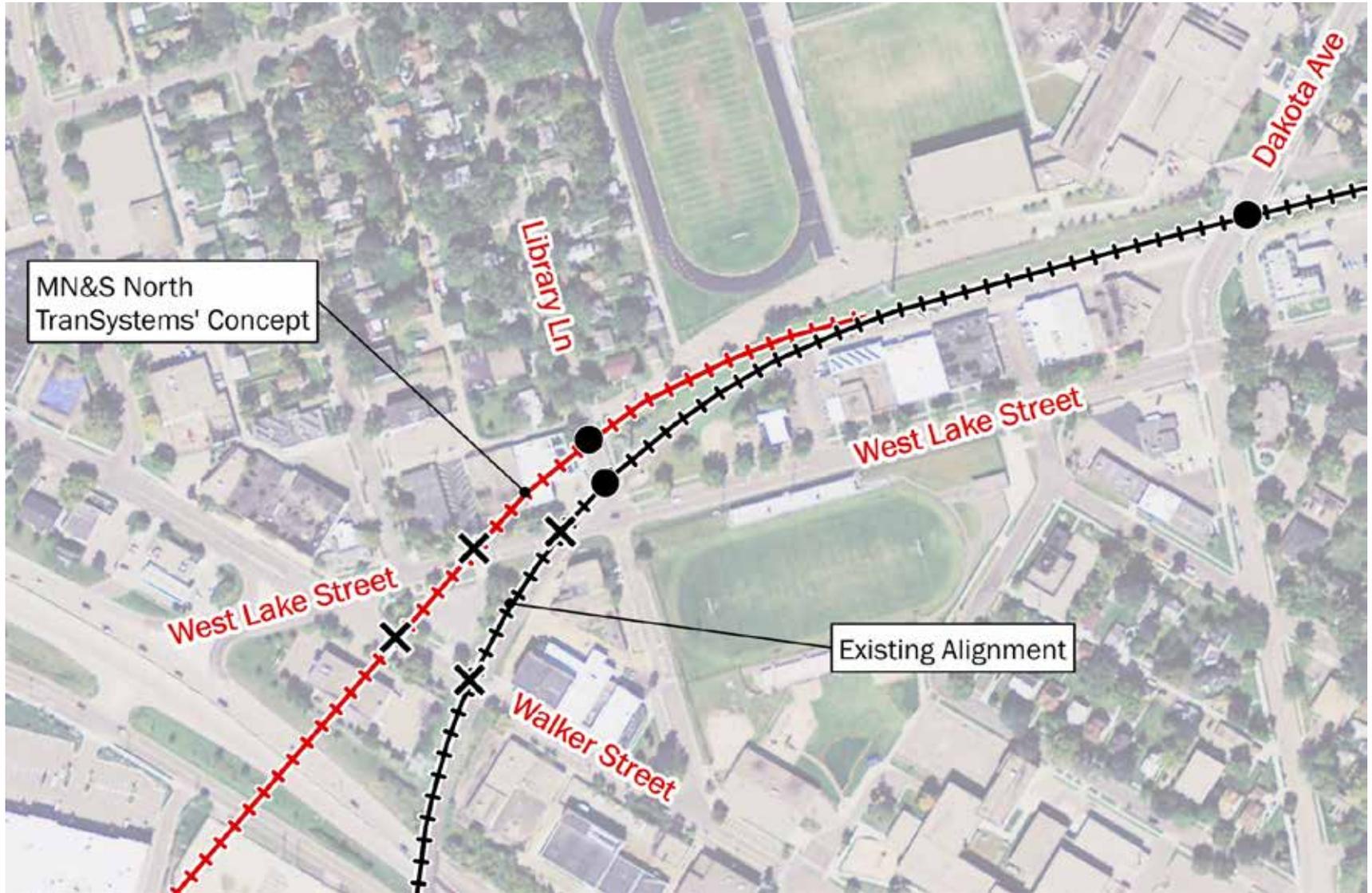
Freight Rail Location Comparison

Safety Considerations	Kenilworth LRT Shallow Tunnels (Co-location)	MN&S North (Relocation)
<p style="text-align: center; font-size: 2em;">LRT</p>	<p>2 LRT at-grade crossings with FR:</p> <ul style="list-style-type: none"> •Wooddale •Beltline <p>FR at station areas:</p> <ul style="list-style-type: none"> •Wooddale •Beltline •West Lake 	<p>3 LRT only at-grade crossings at roadways:</p> <ul style="list-style-type: none"> •Wooddale •Beltline •21st <p>No FR at station areas:</p> <ul style="list-style-type: none"> •Wooddale •Beltline •West Lake •21st

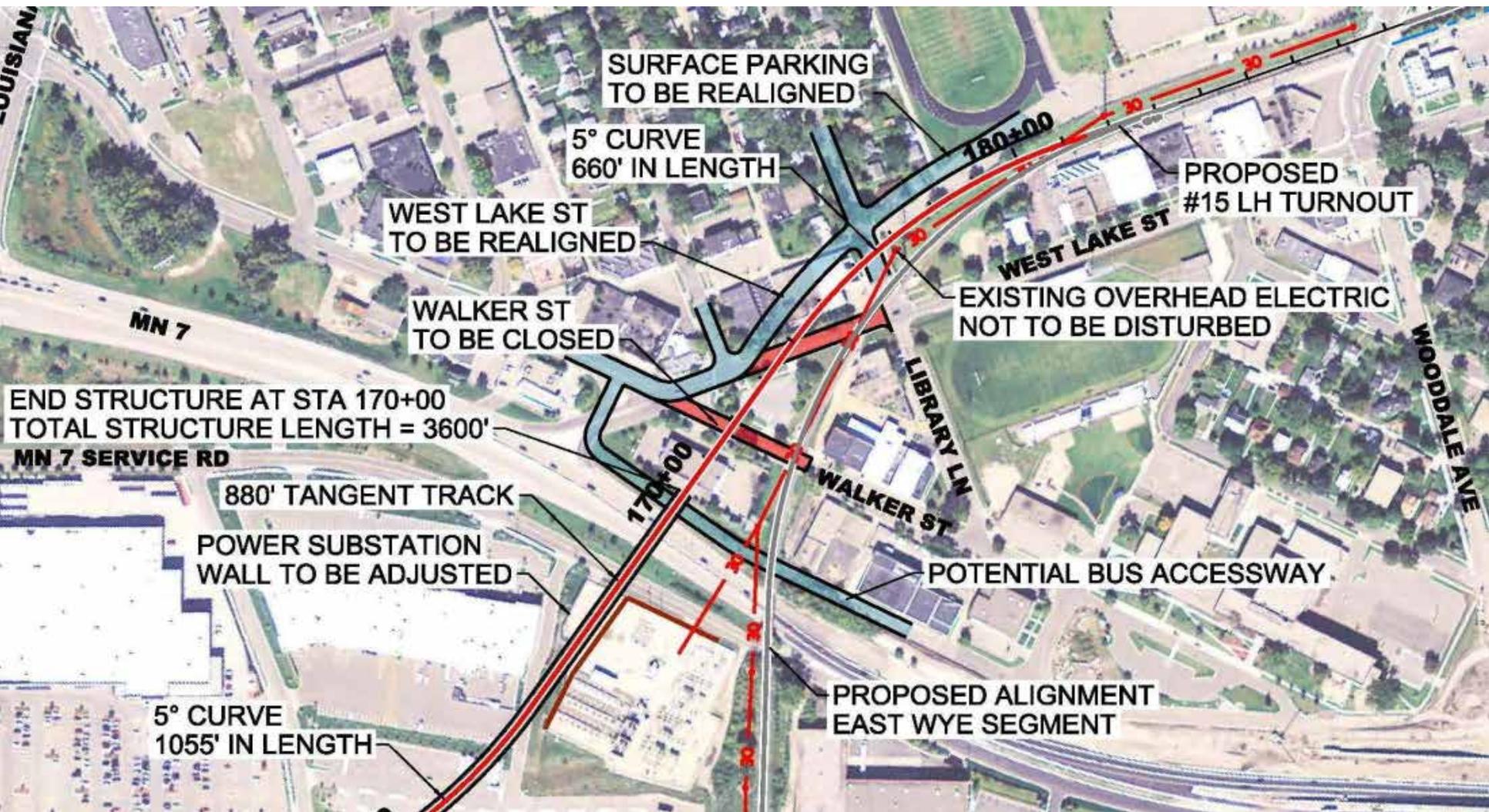
At-Grade Freight Rail Crossings Map



At-Grade Freight Rail Crossings Map



TranSystems' Concept MN&S North Relocation



Freight Rail Location Comparison

Proximity to Proposed Freight Rail Track Route	Kenilworth LRT Shallow Tunnels* (Co-location)	MN&S North** (Relocation)
Number of school buildings within 150' of FR tracks	0	1
Number of residential units within 150' of FR tracks	750	240

* Along Bass Lake Spur/Kenilworth Corridor from Louisiana Ave. to Cedar Lake Junction

** Along proposed MN&S North route/BNSF from Louisiana Ave. to Cedar Lake Junction

Freight Rail Location Comparison

Property Impacts*	Kenilworth LRT Shallow Tunnels (Co-location)	MN&S North (Relocation)
Full permanent acquisitions requiring relocation: <ul style="list-style-type: none"> • Residential • Private Business • Schools 	<p style="text-align: center;">0</p> <p style="text-align: center;">0</p> <p style="text-align: center;">0</p>	<p style="text-align: center;">6</p> <p style="text-align: center;">7</p> <p style="text-align: center;">1</p>

*Numbers do not include acquisitions required for LRT Louisiana Station or Southerly Connection, which are common to both options

Freight Rail Location Comparison

Cost (M) (\$YOE)	Kenilworth LRT Shallow Tunnels (Co-location)	MN&S North (Relocation)
Base Cost	\$150 - \$160	\$130 - \$140
Common Elements	\$85 - \$90	\$90 - \$100
TOTAL	\$235 - \$250	\$220 - \$240

TranSystems' MN&S North Concept

Unaccounted Costs: \$20 - \$25 M*

- Additional retaining walls for LRT: \$2 - \$3M
 - § Blake to Louisiana
- Additional Right-of-Way: \$12 - \$15M
 - § Skunk Hollow Rail Customer
 - § Property along North Frontage Road
 - § 27th Street Properties
- Bass Lake Spur/Kenilworth freight track removal: \$1M
 - § MN&S to Cedar Lake Junction
- North Cedar Lake Trail Bridge (Iron Triangle): \$5 - \$6M

* **NOTE: does not include Xcel substation impacts**

Freight Rail Location Comparison

Capital Cost (M) (\$YOE)	Kenilworth LRT Shallow Tunnels (Co-location)	MN&S North (Relocation)
Base Cost	\$150 - \$160	\$130 - \$140
Common Elements	\$85 - \$90	\$90 - \$100
TranSystems' Safety Recommendations	\$5-\$10	Included in Base Cost
Unaccounted Costs*		\$20 - \$25
TOTAL	\$240 - \$260	\$240 - \$265

* NOTE: does not include Xcel substation impacts

Freight Rail Location Comparison

	Kenilworth LRT Shallow Tunnels (Co-location)	MN&S North (Relocation)
Operating Cost Considerations	Increased operations and maintenance costs for ventilation, lighting and other tunnel systems	Maintenance costs for an additional 5,400 LF of FR bridge structure and 81,000 square feet of FR retaining walls

Freight Rail Operations – MN&S North



Freight Rail Operations – MN&S North



25 Car Train
1600' Long

MN&S North
TranSystems' Concept

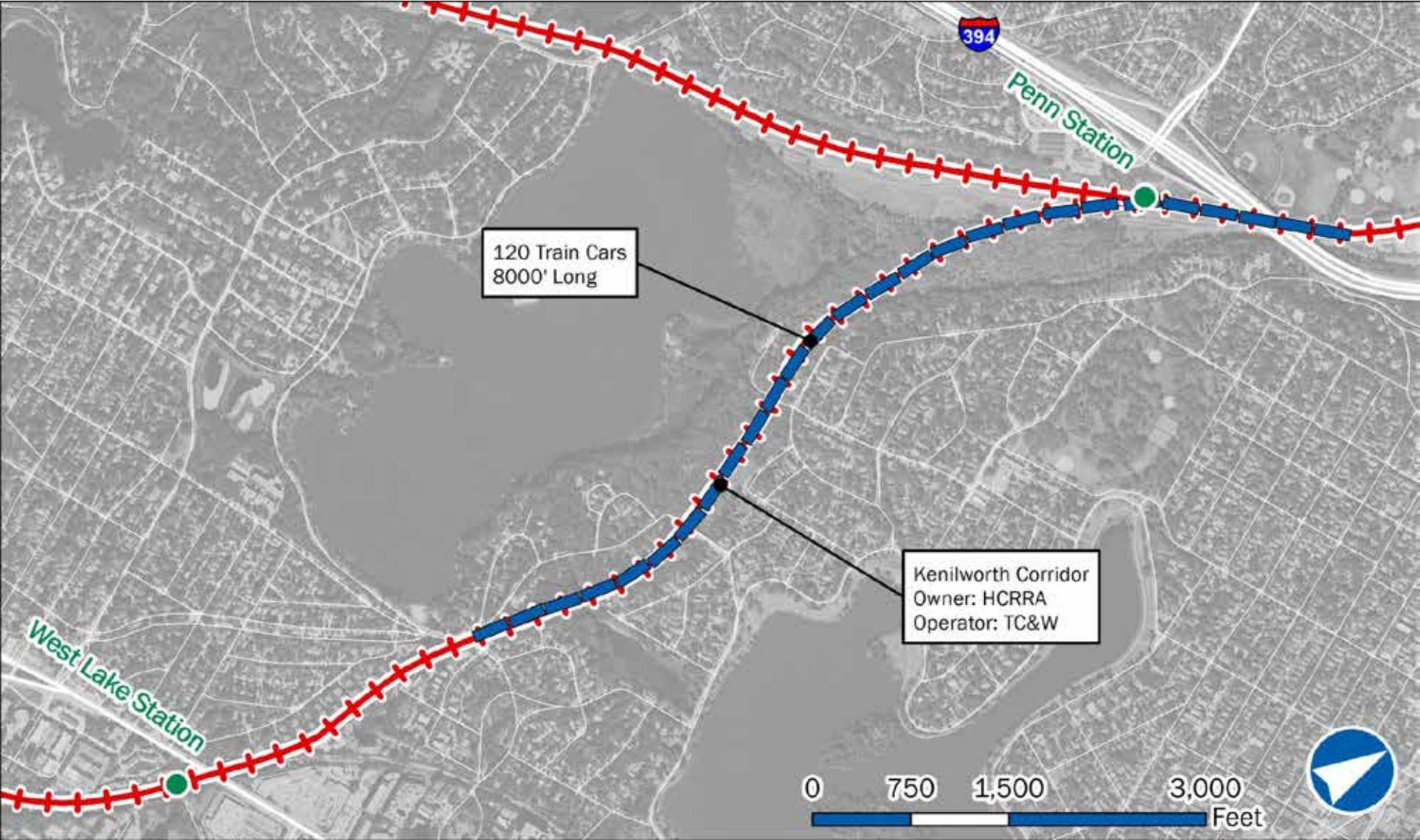
Louisiana
Station

Wooddale
Station

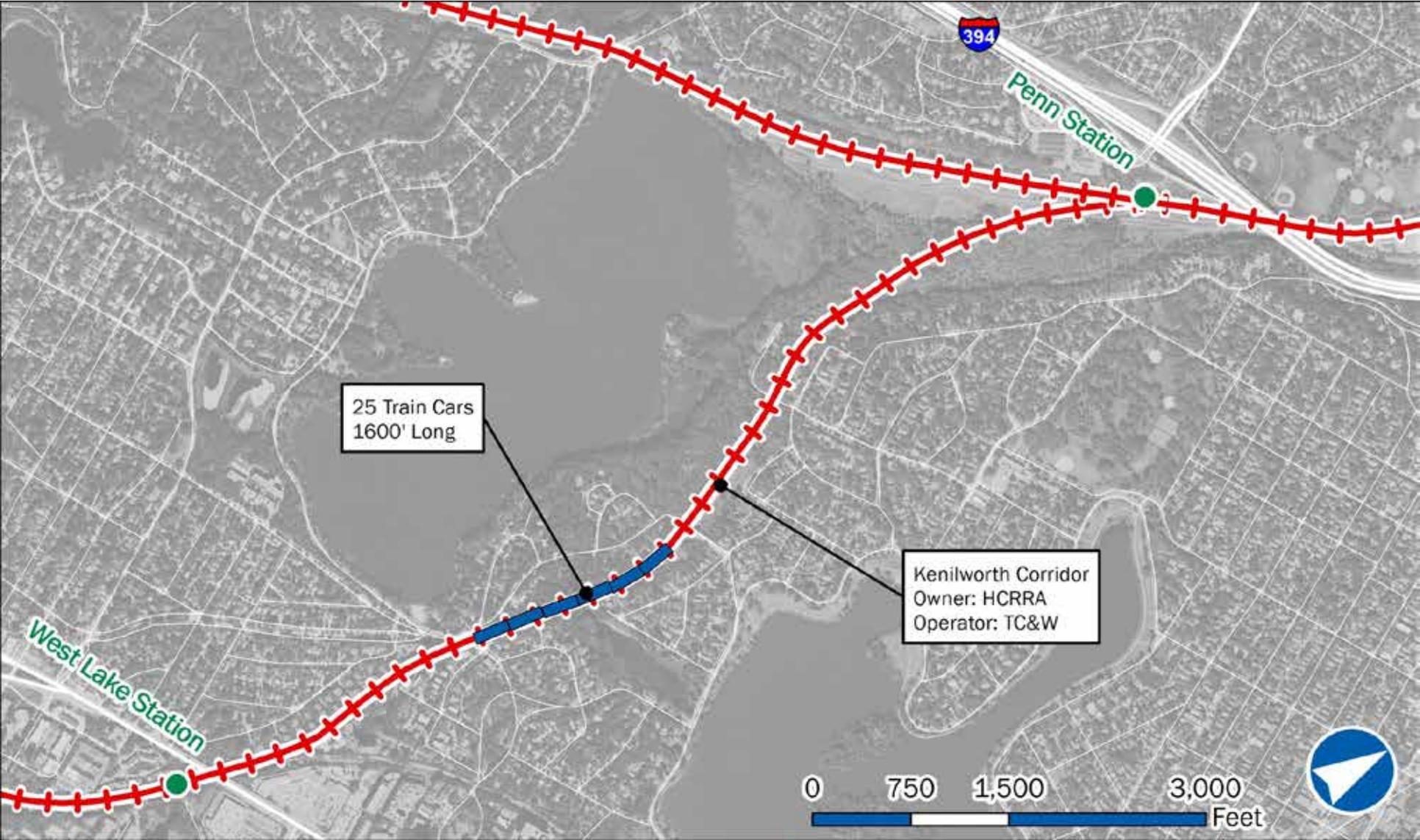
0 750 1,500 3,000
Feet



Freight Rail Operations – Kenilworth



Freight Rail Operations – Kenilworth



Freight Rail Location Comparison

	Kenilworth LRT Shallow Tunnels (Co-location)	MN&S North (Relocation)
Developable Land	<p>Feasibility of Joint Development (JD) concept of PnR over rail corridor with FR at Beltline station decreases possibly requiring PnR to locate on 2 acres of land otherwise available for redevelopment</p> <p>Net impact: reduction of 2 acres of developable land</p>	<p>Removal of FR from transit corridor could open up approx. 1 acre of land for redevelopment at Wooddale and about 3 acres of land combined at Beltline and West Lake for a total of approx. 4 acres</p> <p>Loss of approx. 3 acres of developed land due to full property impacts of reroute</p> <p>Feasibility of JD concept of PnR over rail corridor without FR at Beltline increases approx. 2 acres of land for redevelopment</p> <p>Net impact: addition of approx. 3 acres of developable land</p>

Freight Rail Location Comparison

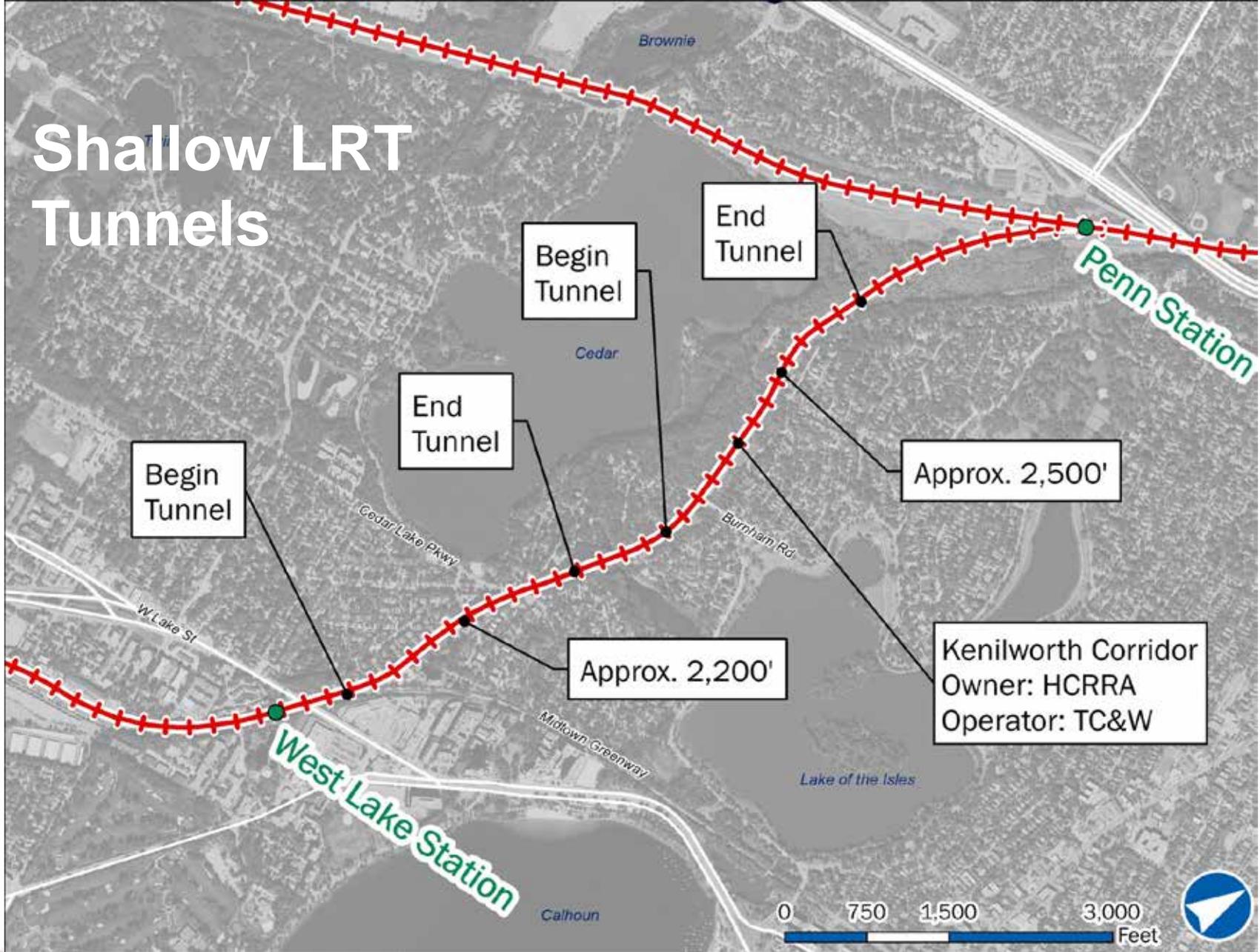
Additional Community Considerations	Kenilworth LRT Shallow Tunnels (Co-location)	MN&S North (Relocation)
CMC Discussion		

Shallow Tunnel Update

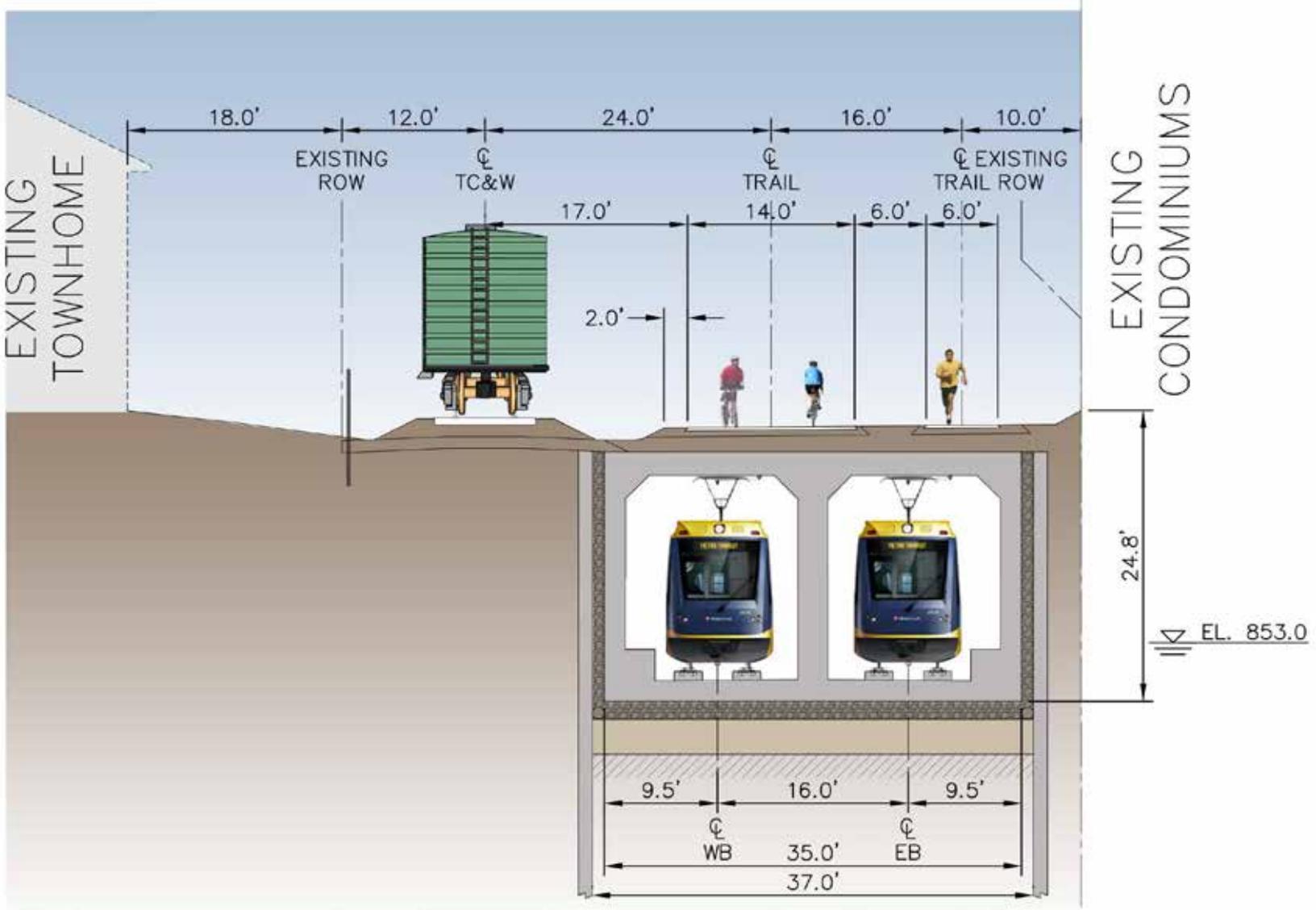
Feb 5, 2014 Minneapolis Park and Recreation Board Resolution

- Requests SPO to conduct a detailed engineering feasibility study and cost comparison of tunneling under the Kenilworth Channel as part of the shallow LRT tunnels option

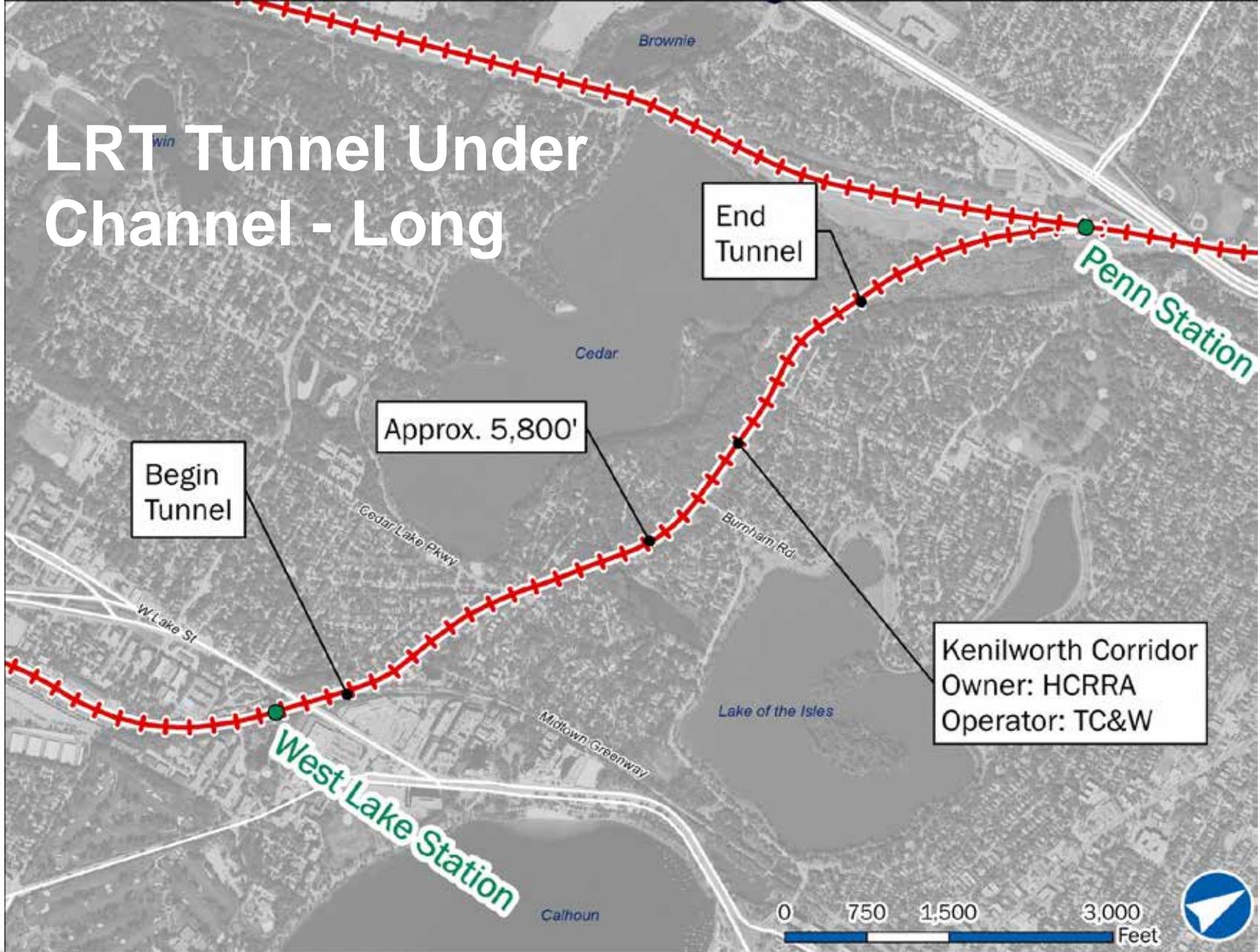
Shallow LRT Tunnels



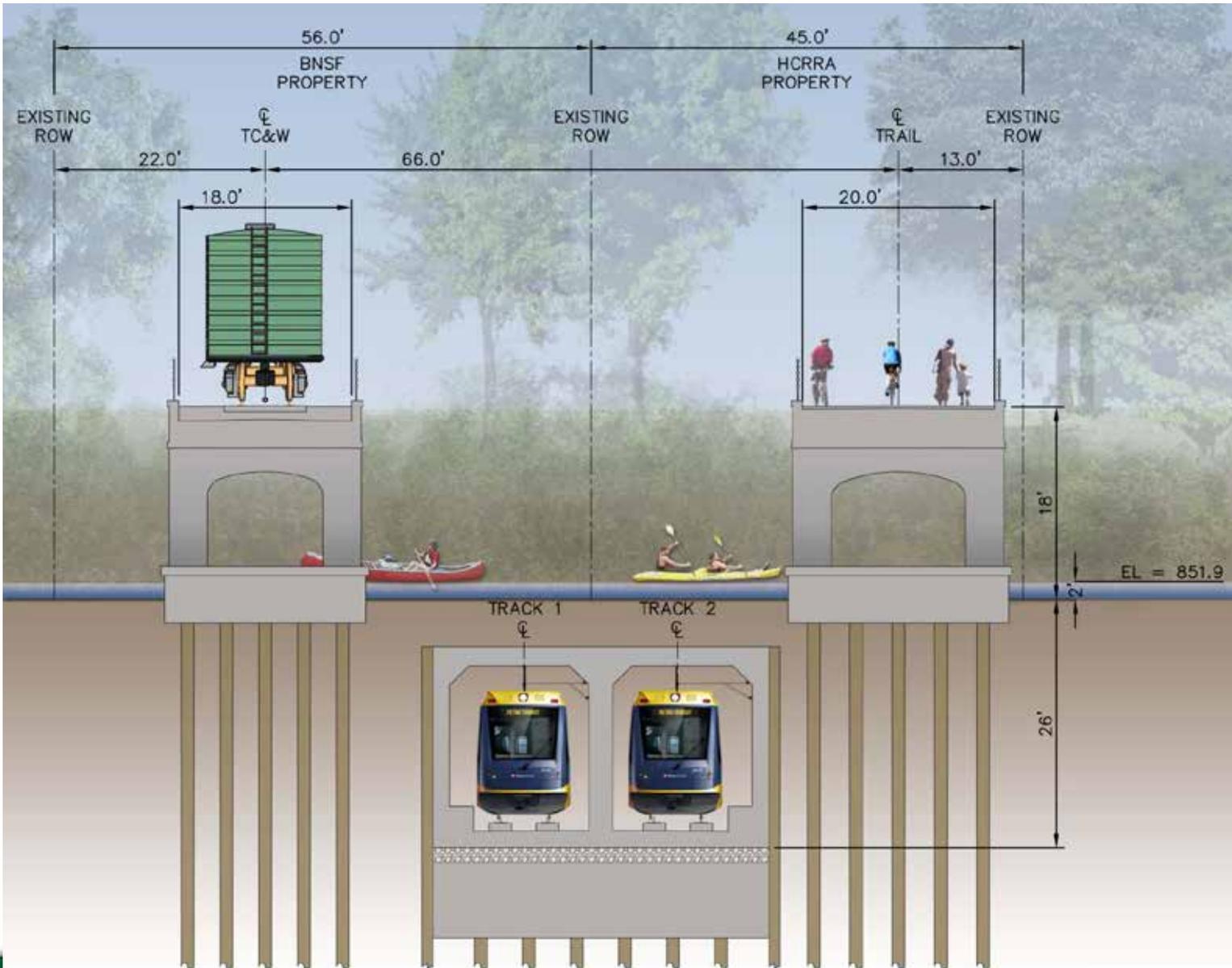
Kenilworth Shallow LRT Tunnel



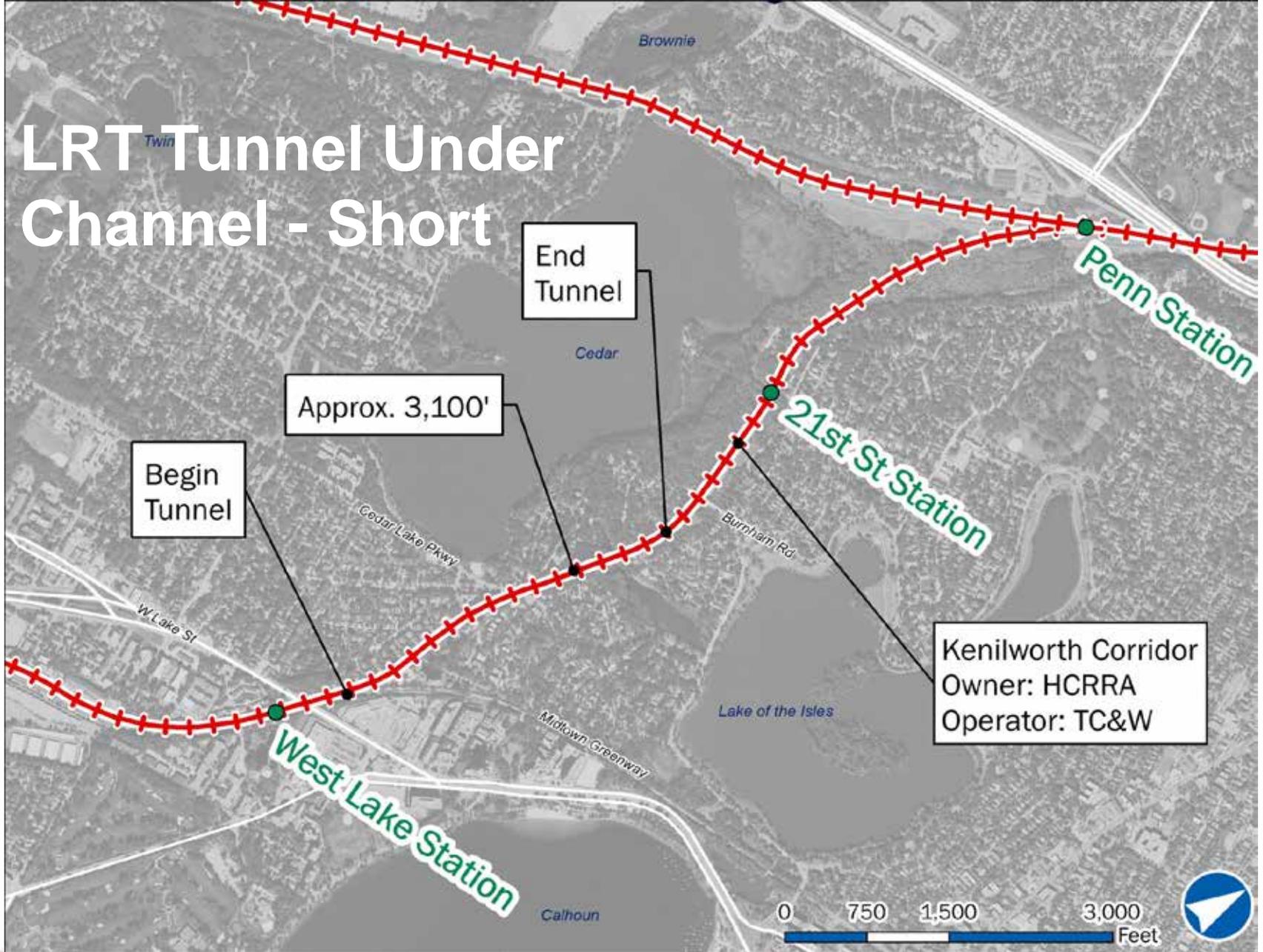
LRT Tunnel Under Channel - Long



Kenilworth Shallow LRT Tunnel – Under Channel



LRT ^{Twin} Tunnel Under Channel - Short



Metro Transit
St. Louis, Missouri
Cross-County Extension Project



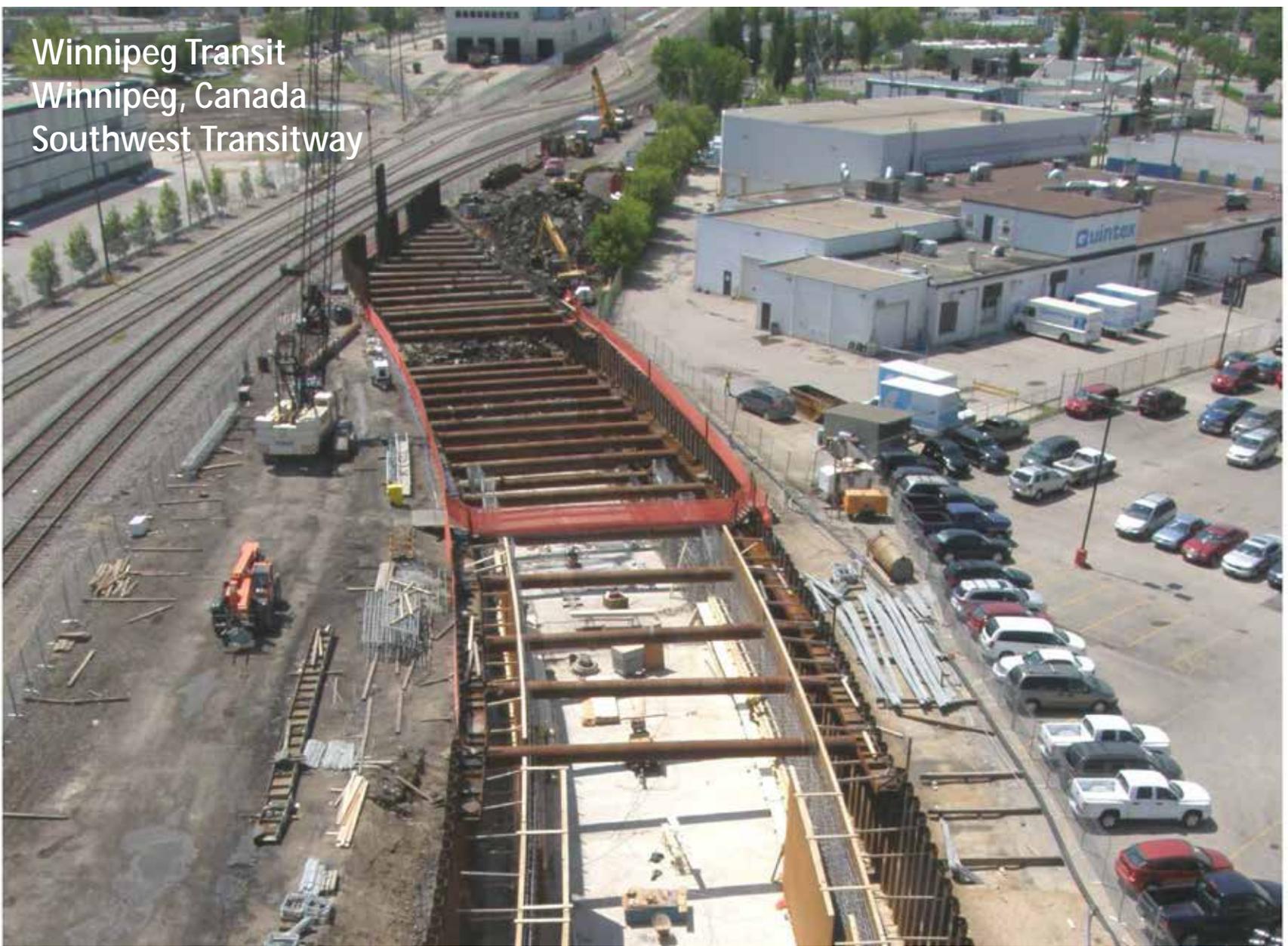
WMATA - Metrorail Blue Line Extension to Largo, Maryland





Wiener Linien (Vienna Lines)
Vienna, Austria
U-Bahn - U1 Extension

Winnipeg Transit
Winnipeg, Canada
Southwest Transitway



Deep Tunnel Under Kenilworth Channel

- Requires extensive retaining walls and bracing to support tunnel excavation
- Access to channel temporarily blocked during summer and winter conditions during construction
- Requires re-vegetation of channel embankments after the tunnel is constructed
- Requires additional one year of construction
- Requires additional cost:
 - § Long Tunnel: \$65 - \$85M
 - § Shorter Tunnel: \$30 - \$40M

Surface Transportation Board Staff Meeting Recap

Railroad/Shippers' Comments

Communications and Outreach Update

Communications and Outreach Update

- Business Advisory Committee Report
- Community Advisory Committee Report
- Public comments received on draft reports

More Information

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