

SOUTHWEST

Green Line LRT Extension



Corridor Management Committee Meeting

March 26, 2014



Today's Topics

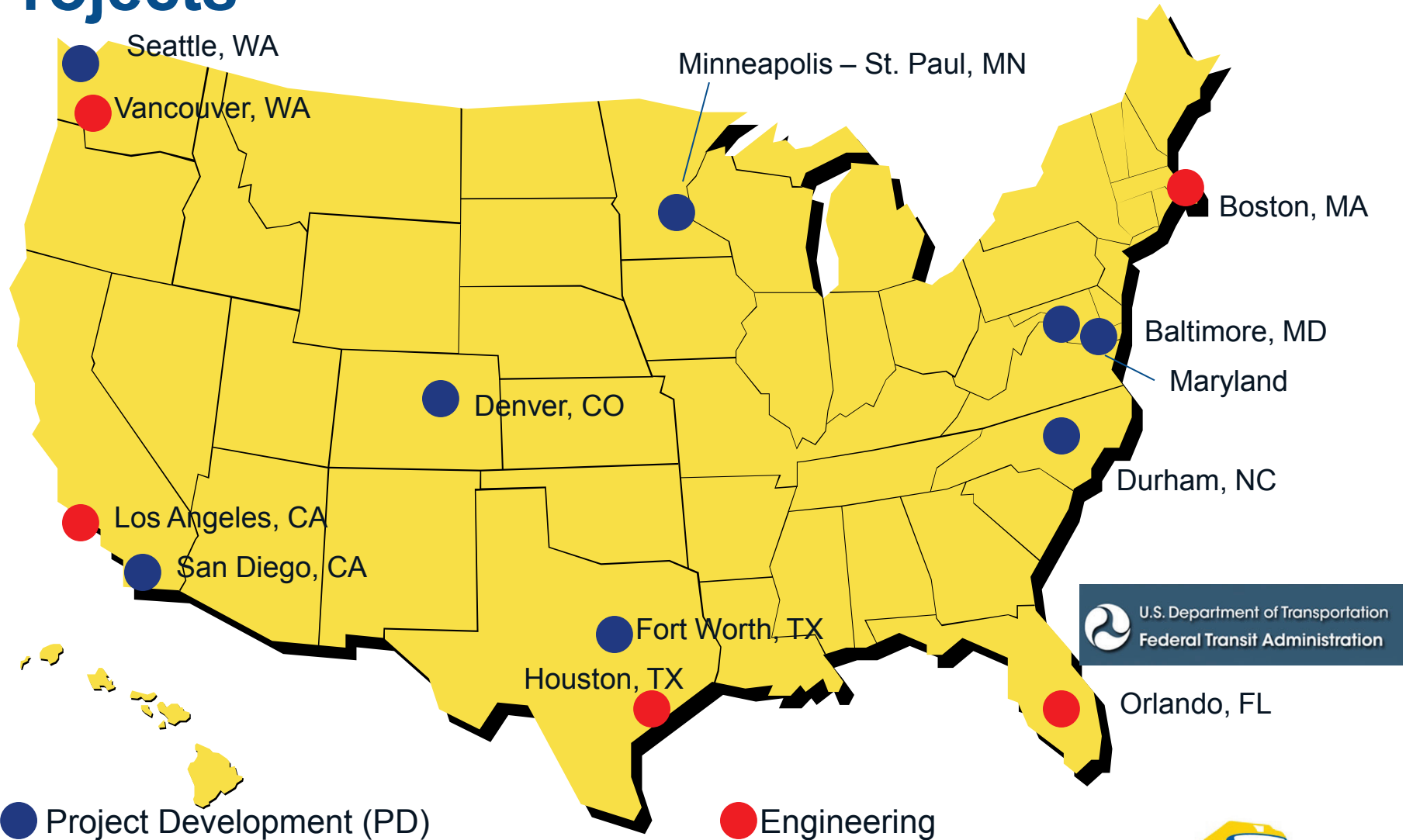
- Welcome
- Approval of Minutes
- New Starts Program Update
- Final Independent Reports
- Shallow Tunnel Update
- Project Schedule
- Project Budget
- Next Steps
- Adjourn



New Starts Program Update

Peer “New Starts” PD and Engineering Projects

March 2014 Status



New Starts Projects in FTA Pipeline

City	Project	2013
Los Angeles, CA	Regional Connector	PE
Los Angeles, CA	West Side Subway	PE
Sacramento, CA	South Phase 2	PE
San Diego, CA	Mid Coast	PE
Baltimore, MD	Red Line	PE
DC/Maryland	Purple Line	PE
Minneapolis, MN	Southwest	PE
Charlotte, NC	Blue Line Extension	PE
Houston, TX	University Corridor	PE
Vancouver, WA	Columbia River	PE
Denver, CO	Southeast Extension	--
Forth Worth, TX	TEX Rail	--
Orlando, FL	Sun Rail	--
Durham, NC	LRT Line	--
Seattle, WA	Lynwood Link	--

New Starts Projects in FTA Pipeline

City	Project	2013	2014
Los Angeles, CA	Regional Connector	PE	Eng
Los Angeles, CA	West Side Subway	PE	Eng
Sacramento, CA	South Phase 2	PE	FFGA
San Diego, CA	Mid Coast	PE	PD
Baltimore, MD	Red Line	PE	PD
DC/Maryland	Purple Line	PE	PD
Minneapolis, MN	Southwest	PE	PD
Charlotte, NC	Blue Line Extension	PE	FFGA
Houston, TX	University Corridor	PE	Eng
Vancouver, WA	Columbia River	PE	Eng
Denver, CO	Southeast Extension	--	PD
Forth Worth, TX	TEX Rail	--	PD
Orlando, FL	Sun Rail	--	Eng
Durham, NC	LRT Line	--	--
Seattle, WA	Lynwood Link	--	--

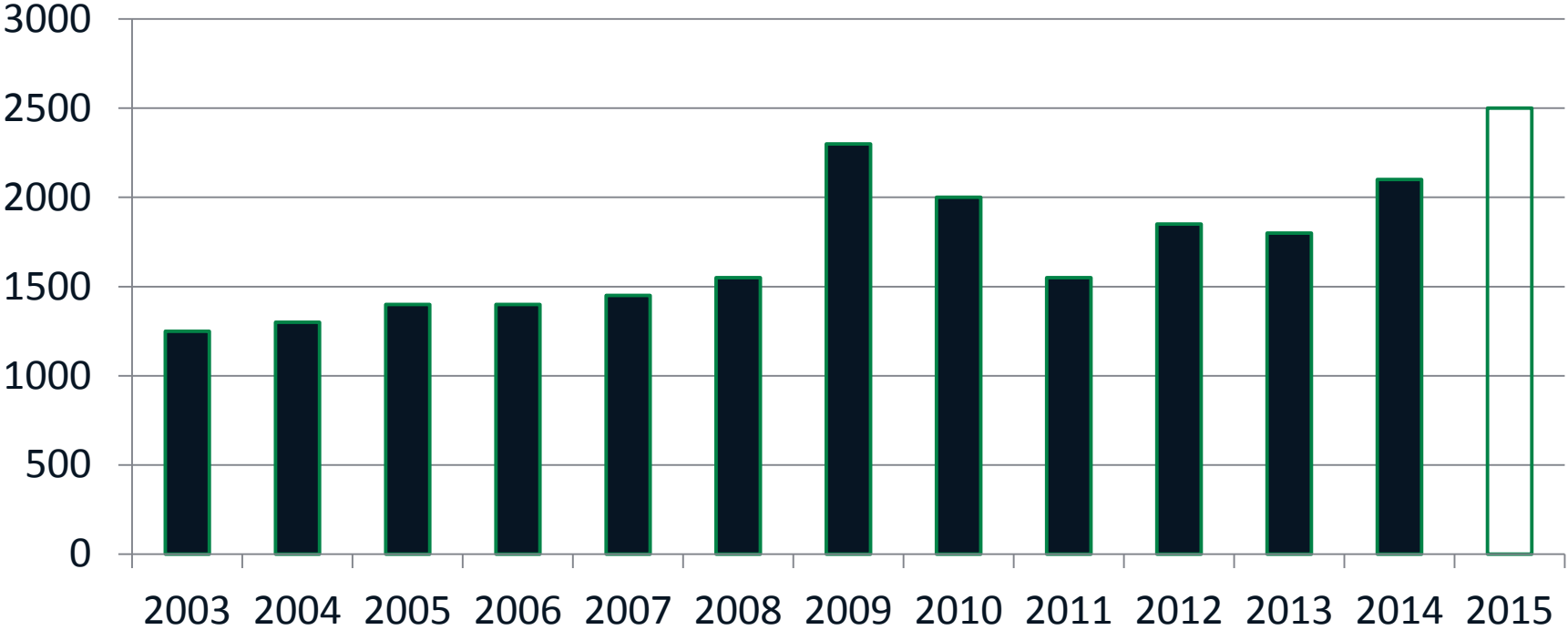
New Starts Projects in FTA Pipeline

City	Project	2013	2014	2015
Los Angeles, CA	Regional Connector	PE	Eng	FFGA
Los Angeles, CA	West Side Subway	PE	Eng	Eng*
Sacramento, CA	South Phase 2	PE	FFGA	Rev
San Diego, CA	Mid Coast	PE	PD	PD
Baltimore, MD	Red Line	PE	PD	PD*
DC/Maryland	Purple Line	PE	PD	PD*
Minneapolis, MN	Southwest	PE	PD	PD
Charlotte, NC	Blue Line Extension	PE	FFGA	FFGA
Houston, TX	University Corridor	PE	Eng	Eng
Vancouver, WA	Columbia River	PE	Eng	Eng*
Denver, CO	Southeast Extension	--	PD	PD
Forth Worth, TX	TEX Rail	--	PD	PD*
Orlando, FL	Sun Rail	--	Eng	Eng*
Durham, NC	LRT Line	--	--	PD
Seattle, WA	Lynwood Link	--	--	PD

* Recommended for FFGA in FFY 2015

New Starts Funding Levels

(in millions)



Notes:

- Horizontal axis represents federal fiscal years
- FY 2009 and 2010 include ARRA funding

Final Reports

Final Reports

	Nov 2013	Dec 2013	Jan 2014
Freight Rail Location Analysis	Notice to Proceed Issued Nov 27	Consultant Interviews with Project Partners and Railroads	Town Hall Meetings on Scopes of Work Jan 7 and 9 Draft Reports Released Jan 30; Public Comment Period Begins
Water Resources Evaluation		Notice to Proceed Issued Dec 4 Consultant Interviews with Project Partners	
Kenilworth Tree Inventory		Conduct inventory	

Final Reports

	Feb 2014	Mar 2014
Freight Rail Location Analysis	Consultant Presentations to SWLRT Advisory Committees on Draft Reports Town Hall Meetings Feb 10 and 12	Public Comment Period Concluded March 12 Final Reports Released March 21
Water Resources Evaluation		
Kenilworth Tree Inventory		

Final Reports: Freight Rail Relocation

- Viable options for freight rail consistent with January draft report
 - MN&S North
 - Kenilworth Corridor
- Design criteria must be agreed to by CP and TC&W if MN&S North selected
- Acknowledges public comments
 - MN&S North
 - Concern about locating freight rail near schools
 - Kenilworth Corridor
 - Concern about co-locating LRT with the freight
 - Support for looking at co-location options such LRT underground
- Identifies cost of \$112M before SPO adjustments, consistent with Feb 5 CMC presentation
- Acknowledges SPO's adjustments to establish built-up cost range of \$220 - \$240M (w/o unaccounted costs)
- Acknowledges most of SPO's list of unaccounted items

Final Reports: Water Resources

- Consistent with January draft report
 - No fatal flaws identified
- Recommendations consistent with January draft report
 - Add additional piezometers
 - Collect seasonal water data
 - Complete analysis of existing sanitary and storm sewer systems
 - Design for 100-year event
 - Use pre-treatment with infiltration systems
 - Complete Phase II Environmental Site Assessment (SPO to begin work in summer 2014)
 - Update monitoring plan
 - Collect/test groundwater for potential contaminants

Final Reports: Kenilworth Tree Inventory

- Consistent with January draft report
 - Over 75% of the study area consists of existing vegetation
 - 9% is native vegetation /restoration area
 - 26% is maintained vegetation (mowed grasses)
 - 6% is unmaintained vegetation (groundcover outside of the tree and vegetation area)
 - 59% is trees, understory, and groundcover vegetation
 - Remaining approx. 25% of the study area consists of freight ballast and track, trails and other paved surfaces
- Updated to include maps showing 12” diameter and larger trees in response to Minneapolis staff comment

Freight Rail Relocation and Co-Location Design Options

JULY 2013

Freight Relocation:

- Brunswick West
- Brunswick Central

Co-Location:

- All Modes At-Grade
- Trail Relocated
- Trail Elevated
- LRT Elevated
- Kenilworth Deep Bore LRT Tunnel
- Kenilworth Shallow LRT Tunnels



SEPTEMBER 2013

Freight Relocation:
Brunswick Central

Co-Location:
Kenilworth Shallow
LRT Tunnels



October 2013

Kenilworth Shallow
LRT Tunnels

Freight Rail Design Options

January 2014

Review of Freight Rail Alignments

- Western MN
 - Appleton to Benson
 - Granite Falls to Willmar
- Chaska Cutoff
- Highway 169
- Midtown Corridor
- Kenilworth Corridor
- UTU Route
- MN&S North:
 - DEIS
 - MN&S Modified
 - Brunswick East
 - Brunswick West (at-grade and elevated)
 - Brunswick Central (at-grade and elevated)
 - TranSystems' Concept
- MN&S South

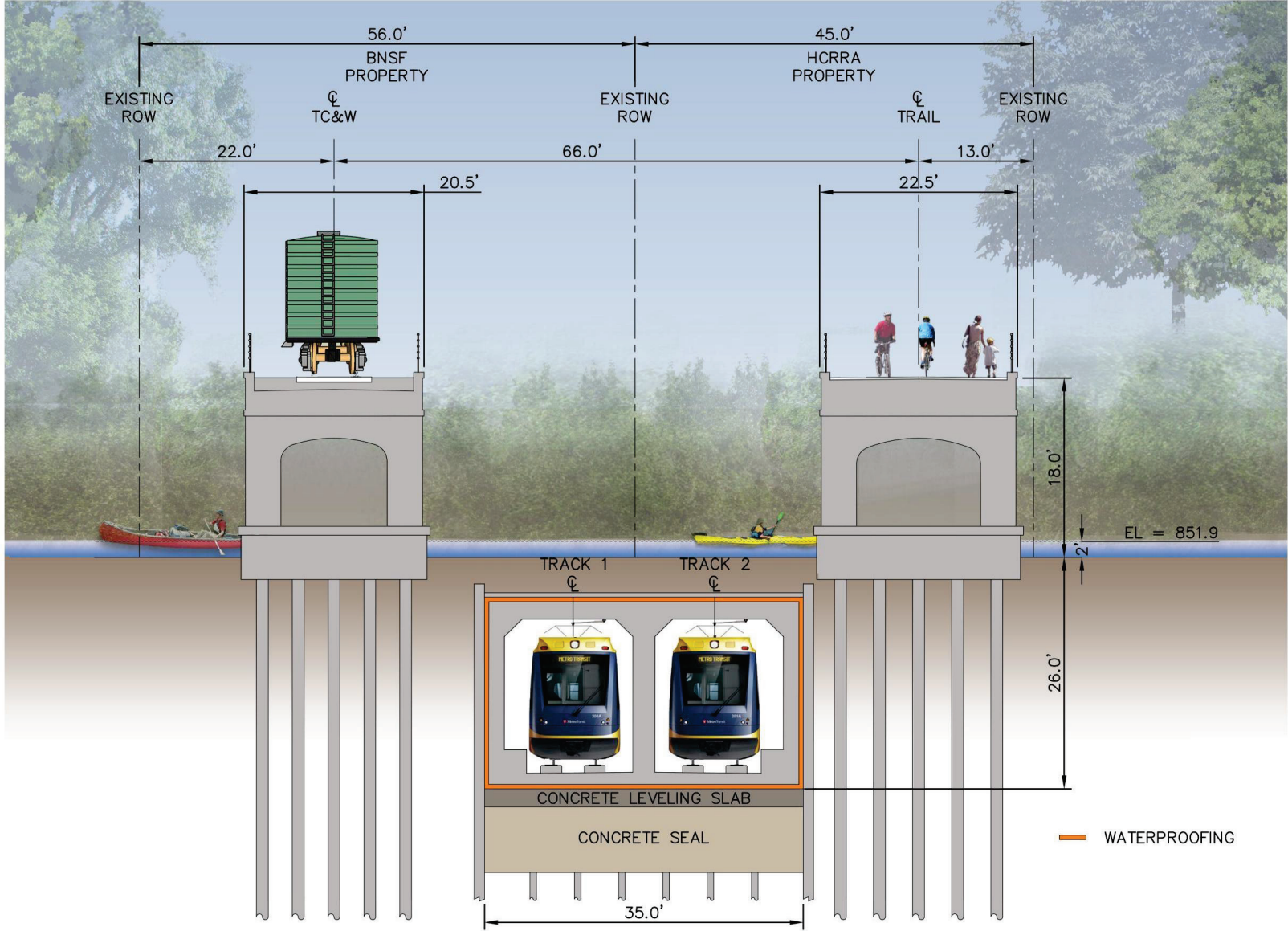


March 2014

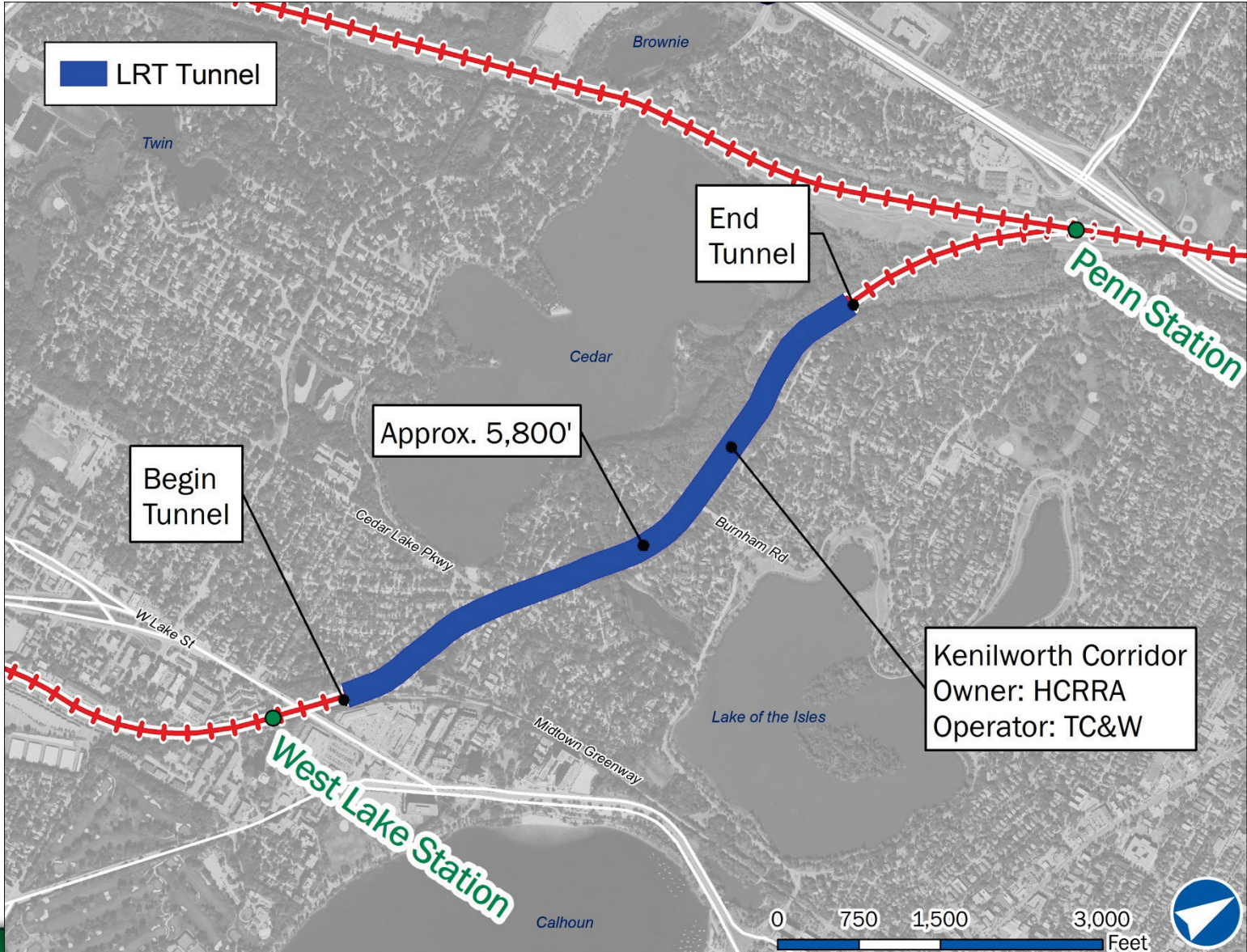
- MN&S North
- Co-Location in Kenilworth Corridor

Shallow LRT Tunnel Update

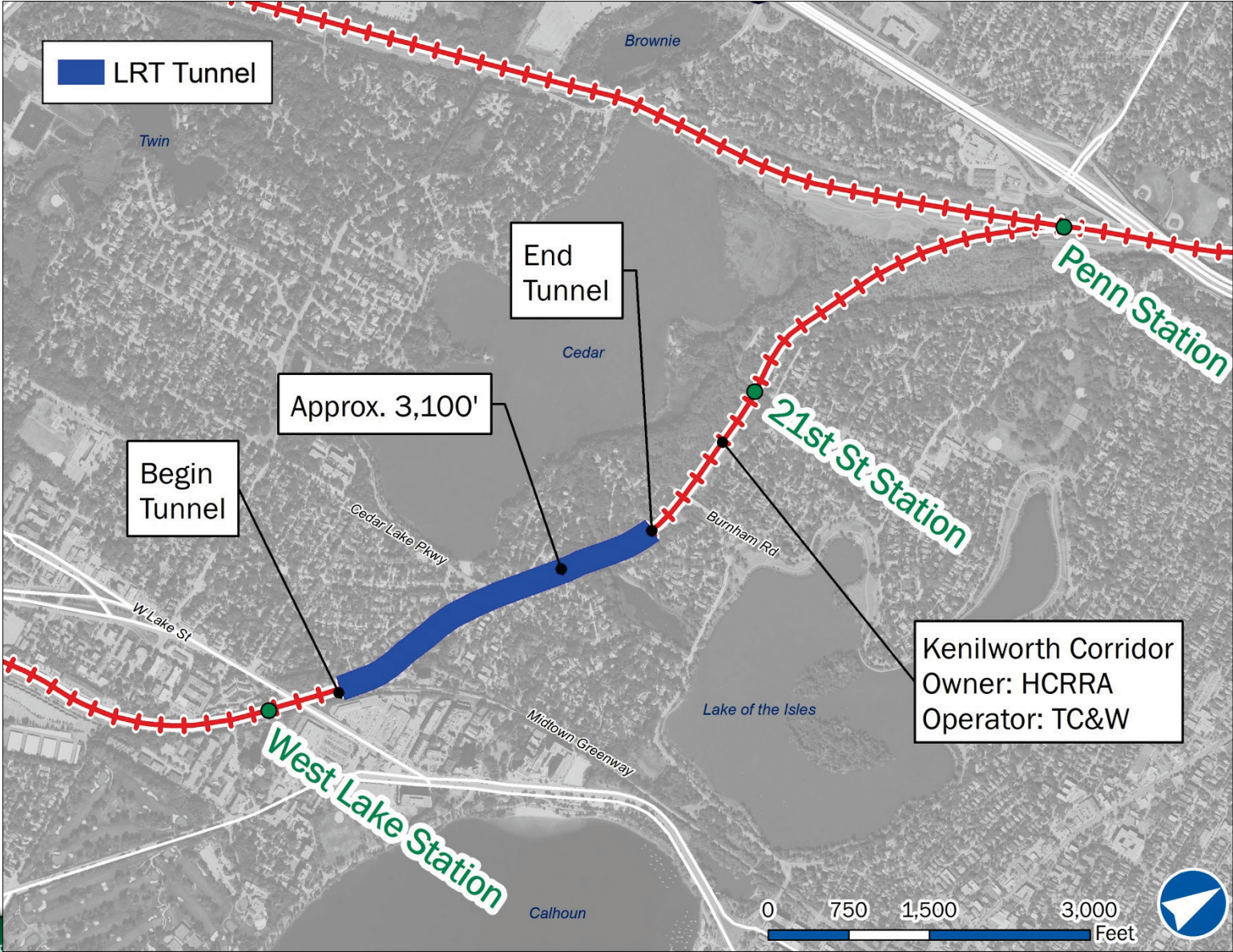
Kenilworth Shallow LRT Tunnel – Under Channel



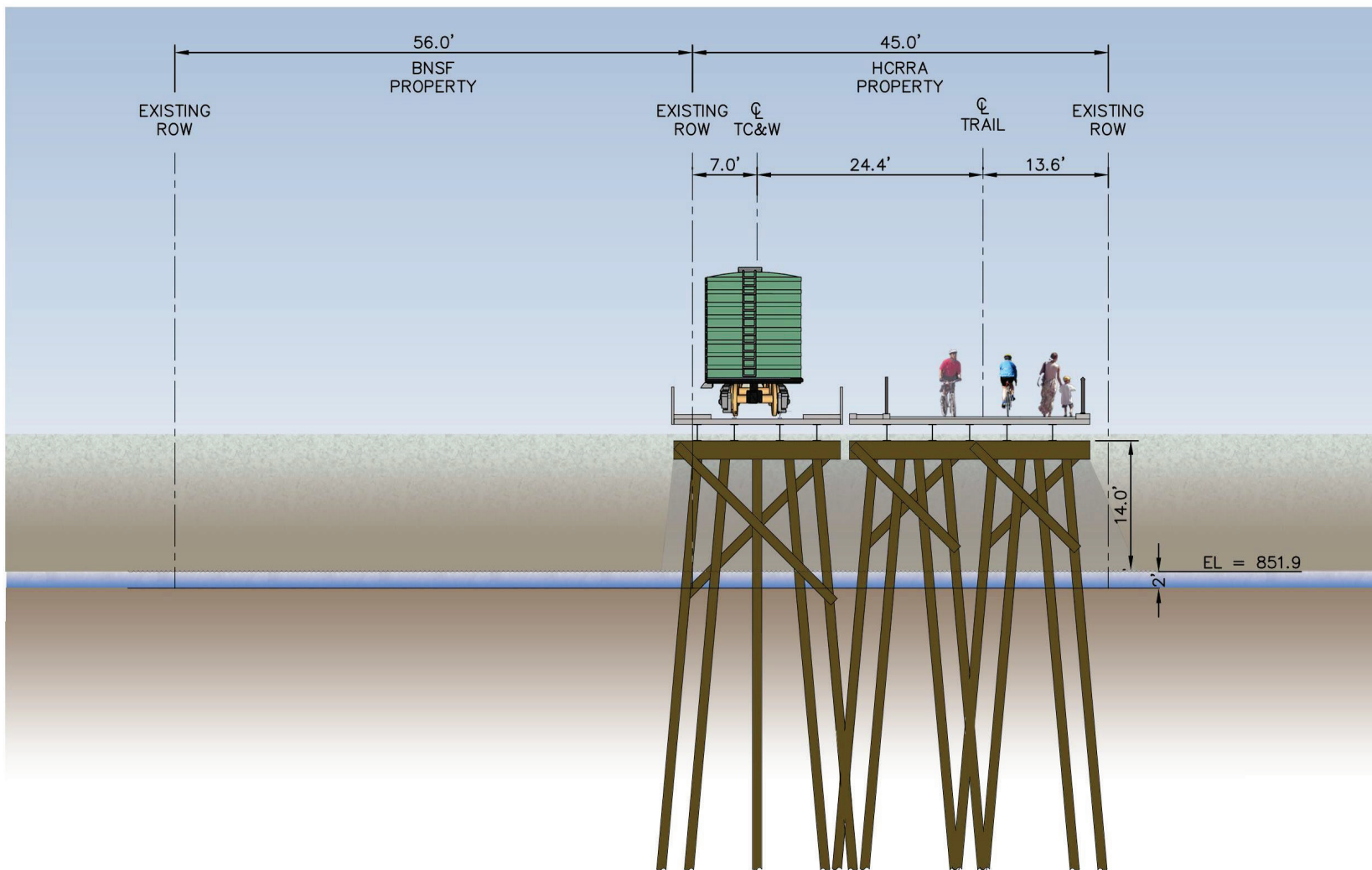
Kenilworth Shallow LRT Tunnel Under Channel - Long



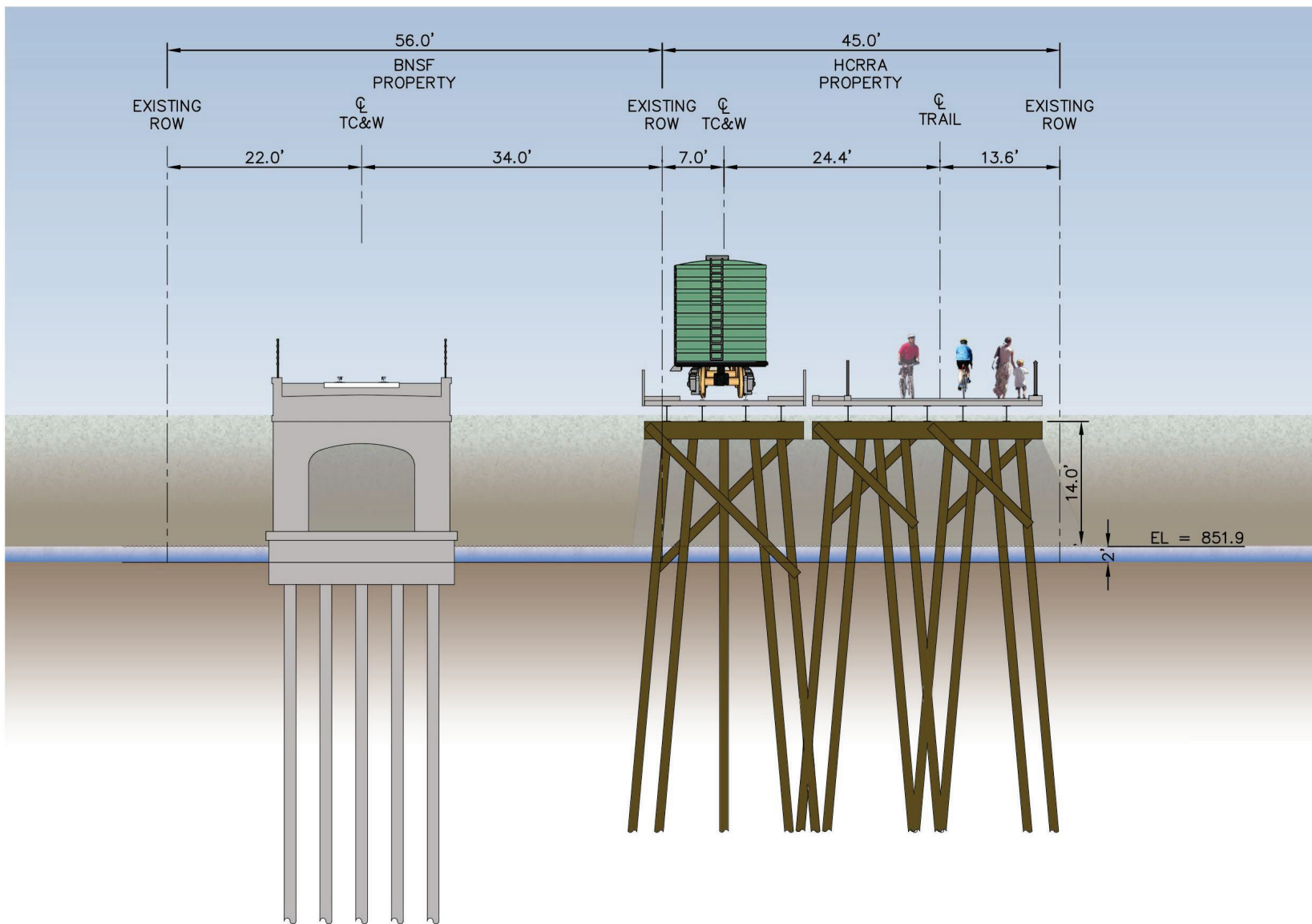
Kenilworth Shallow LRT Tunnel Under Channel - Short



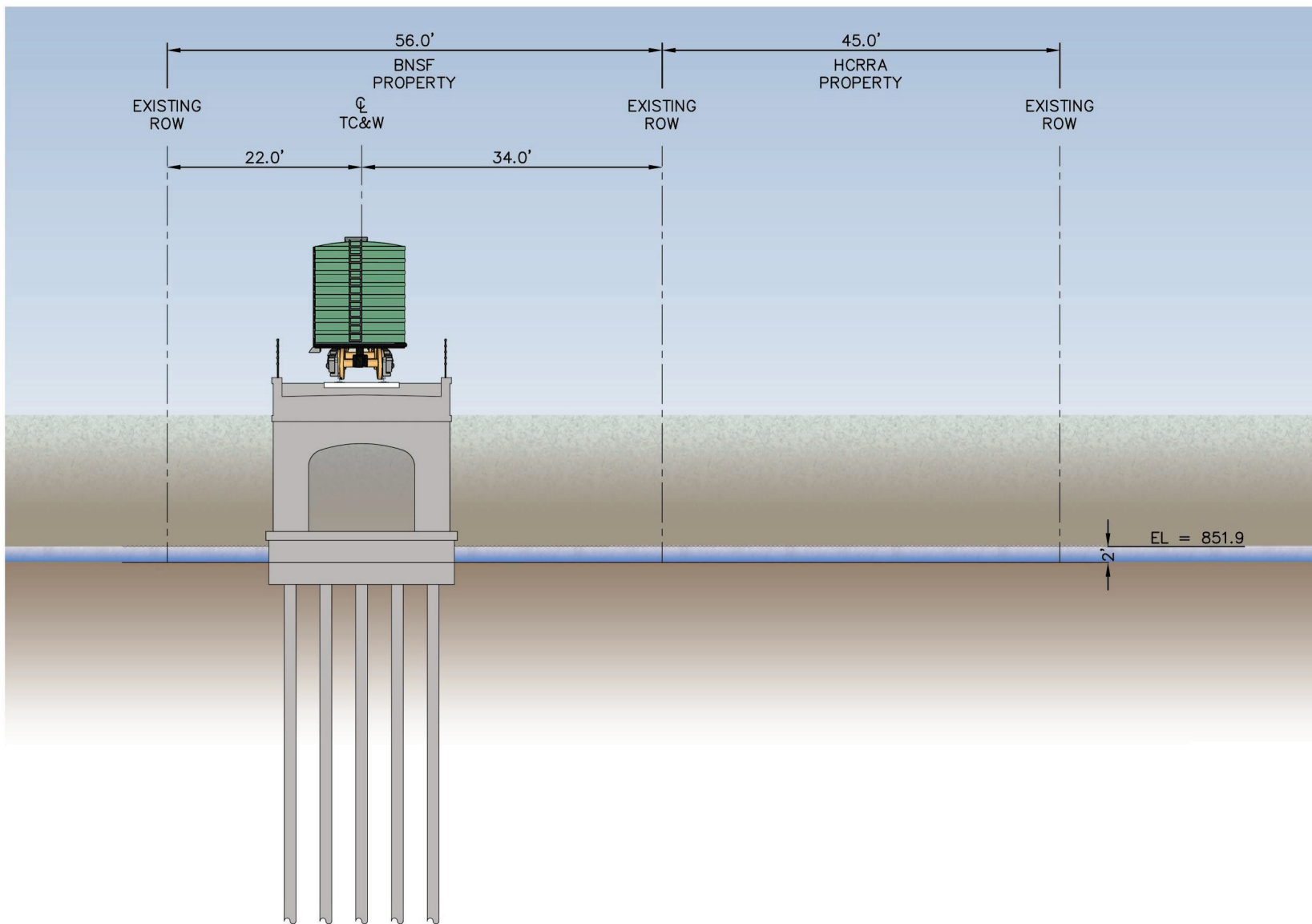
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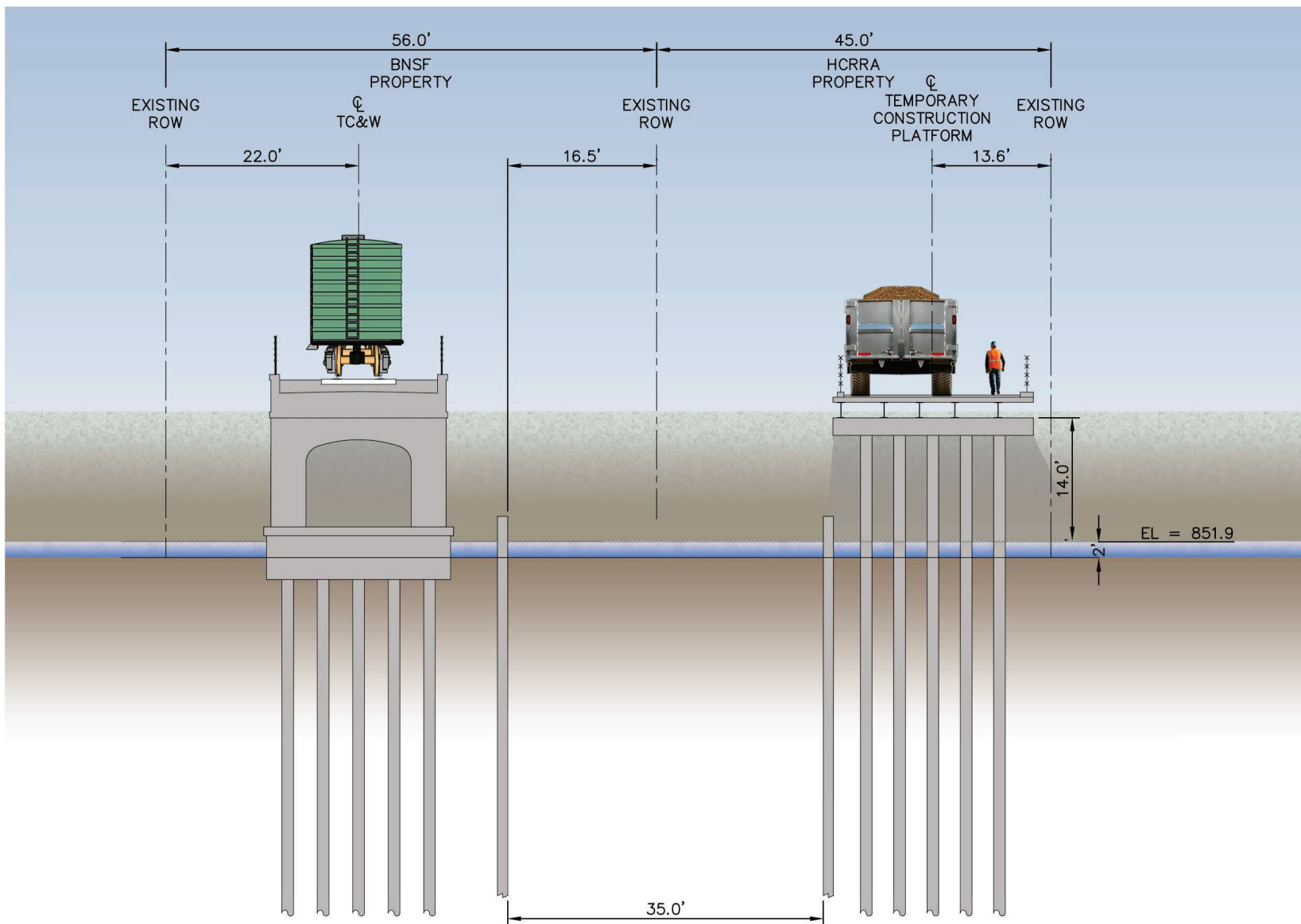
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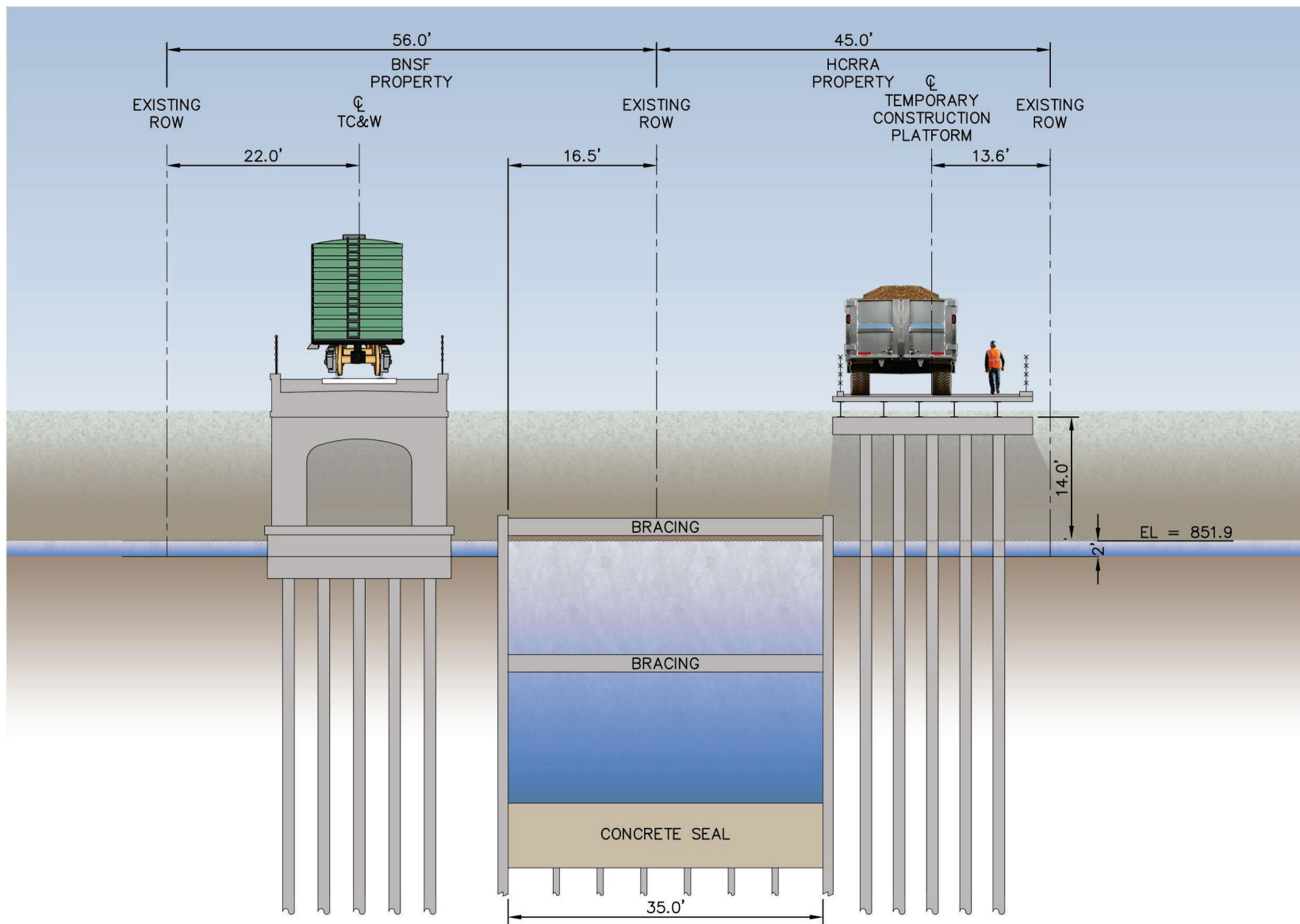
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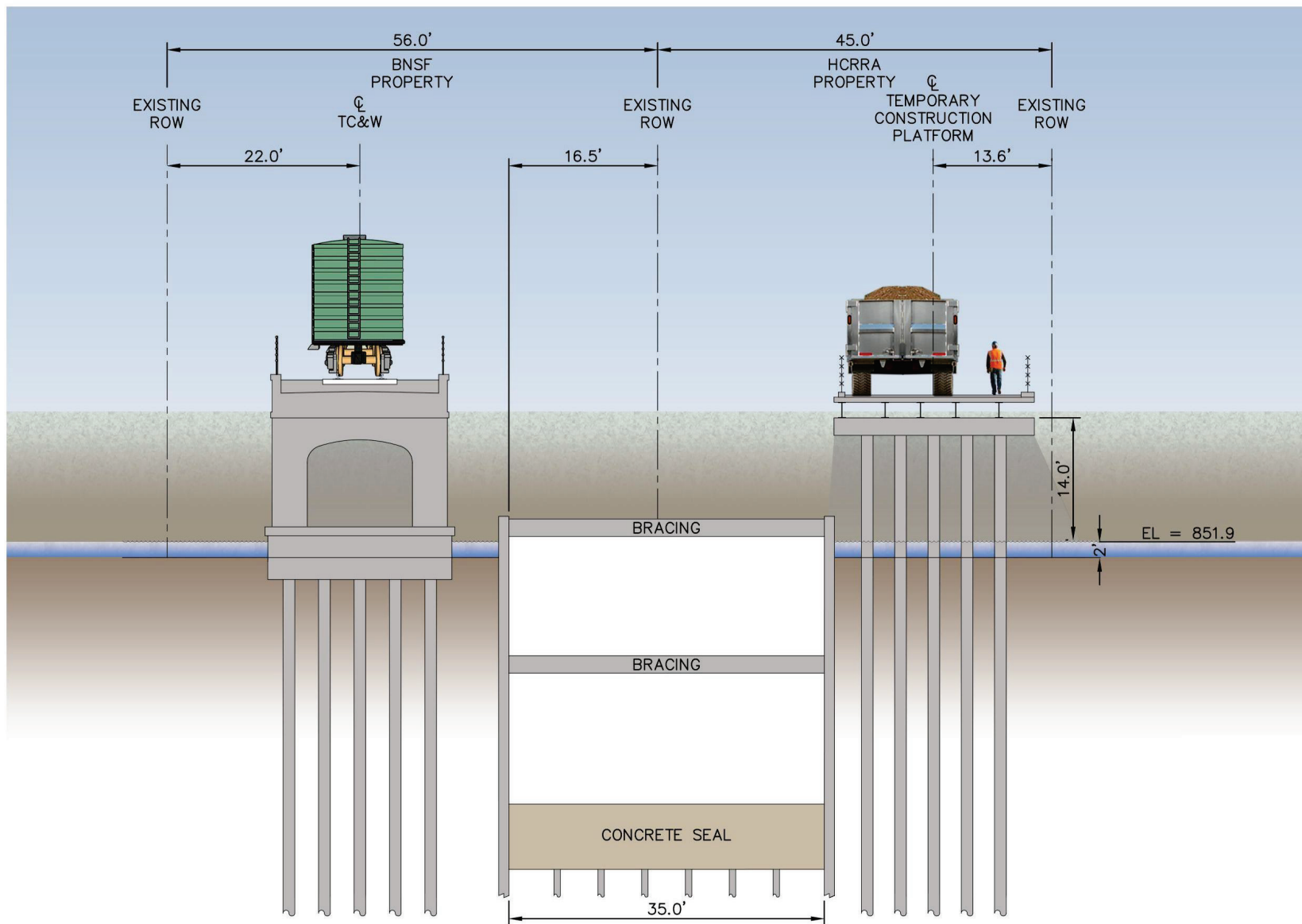
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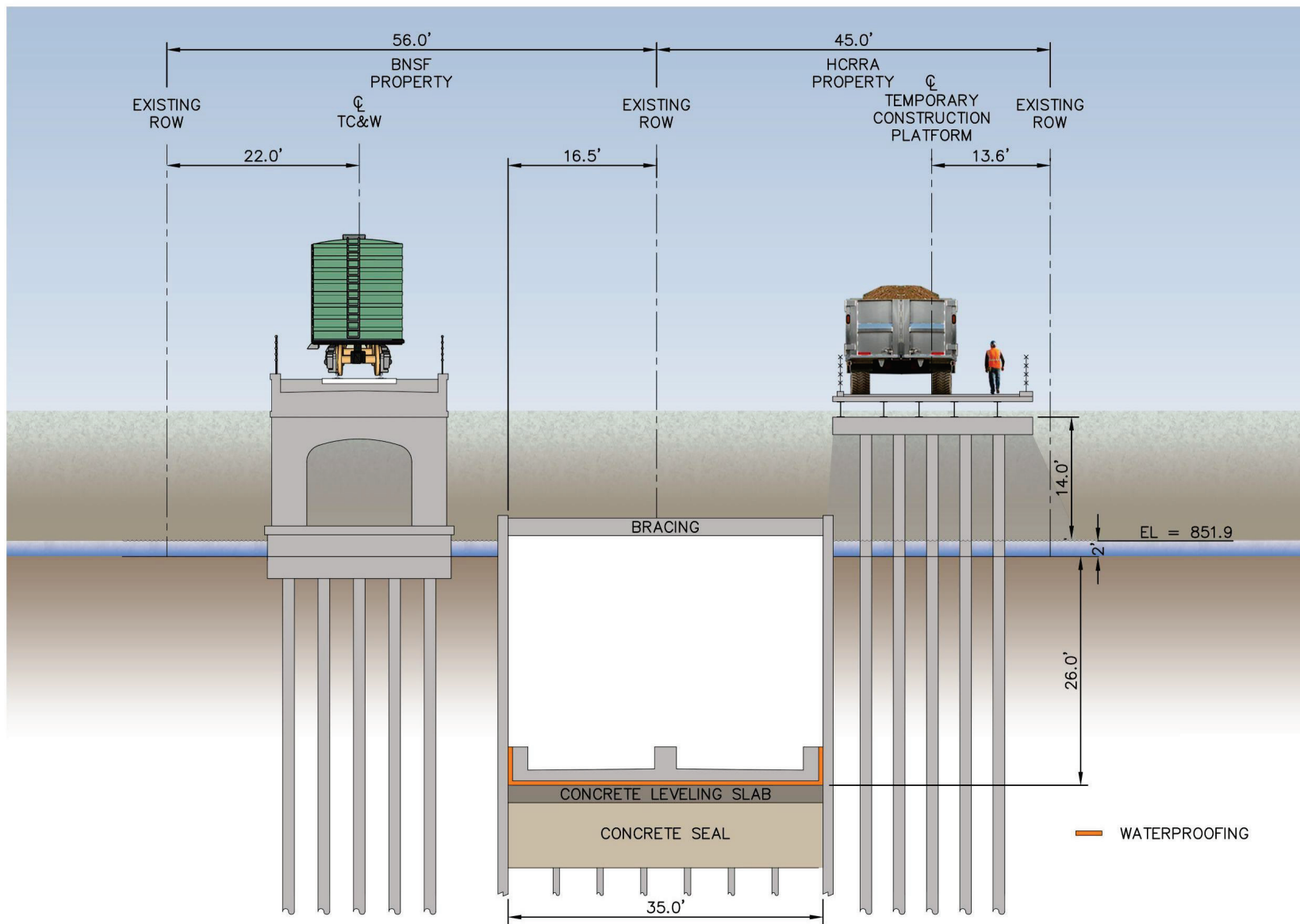
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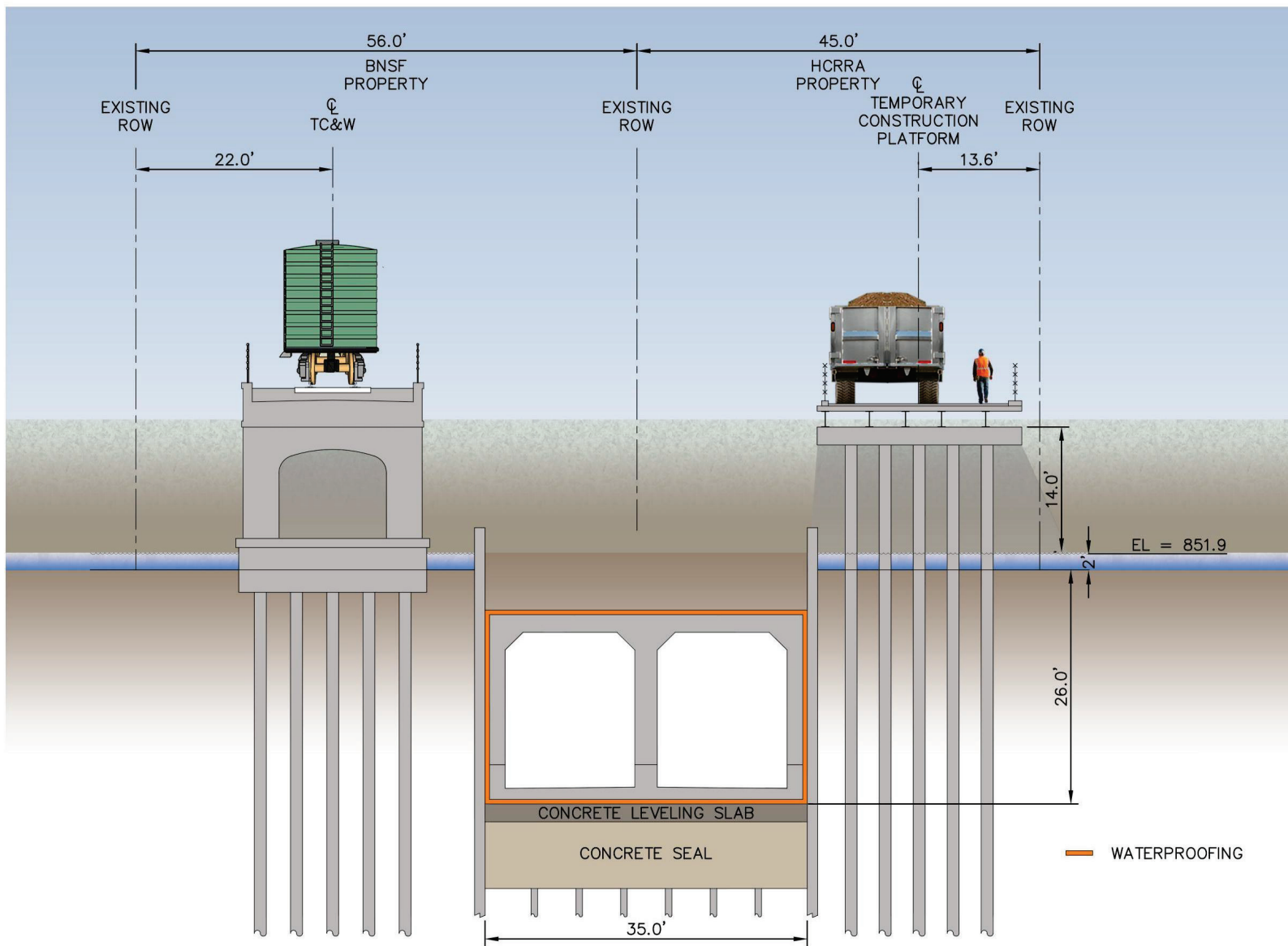
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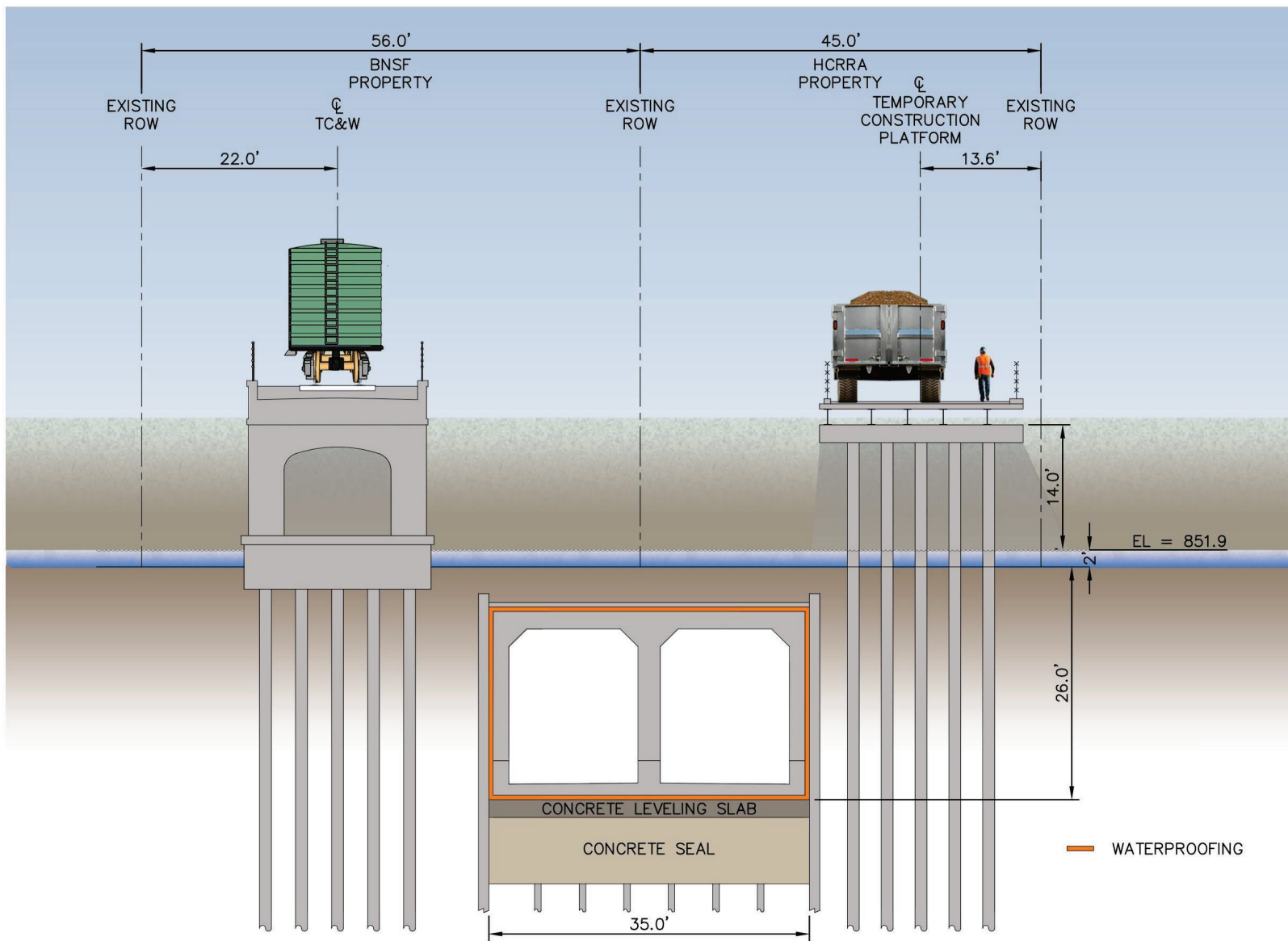
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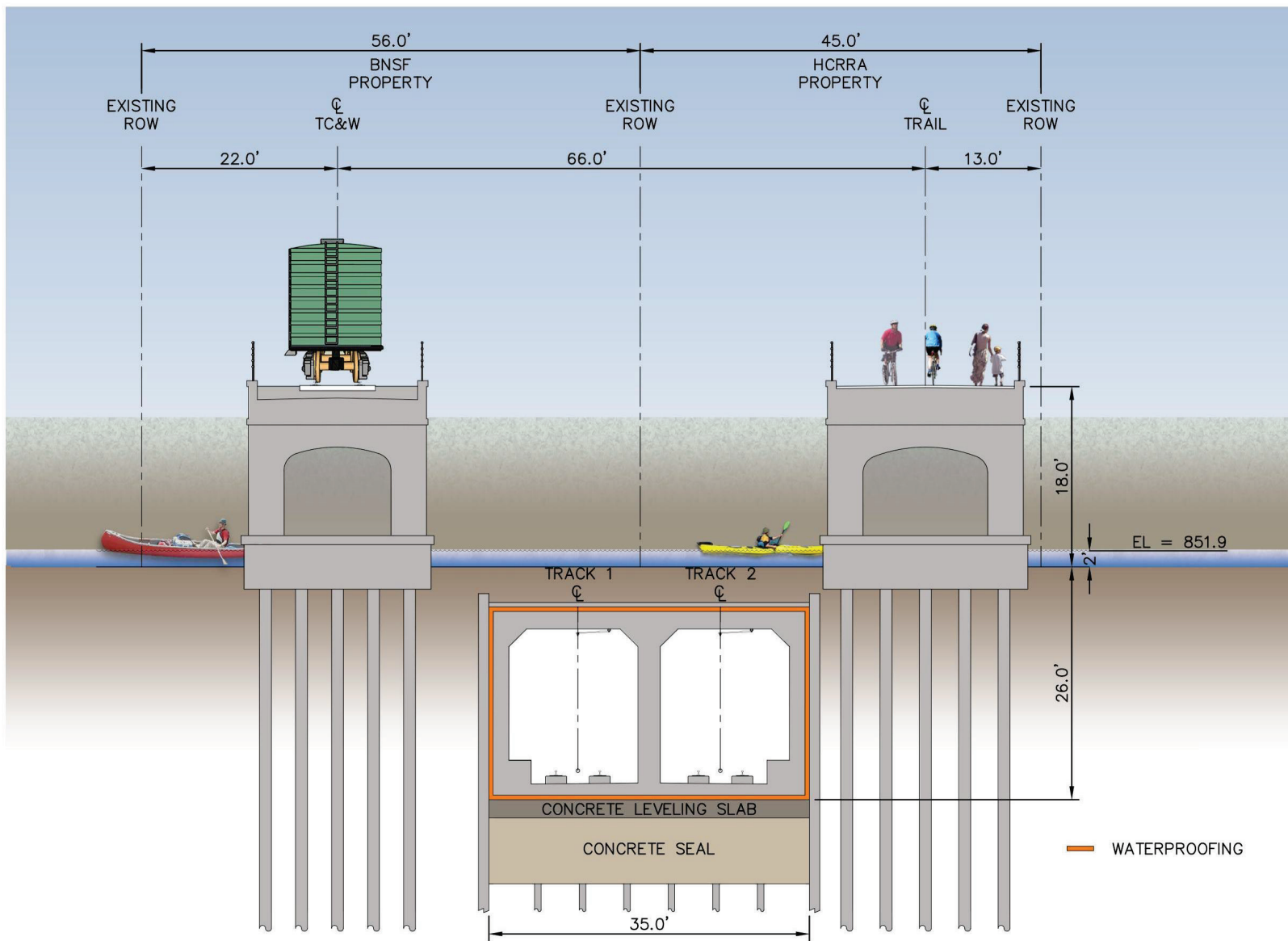
Kenilworth Shallow LRT Tunnel – Under Channel



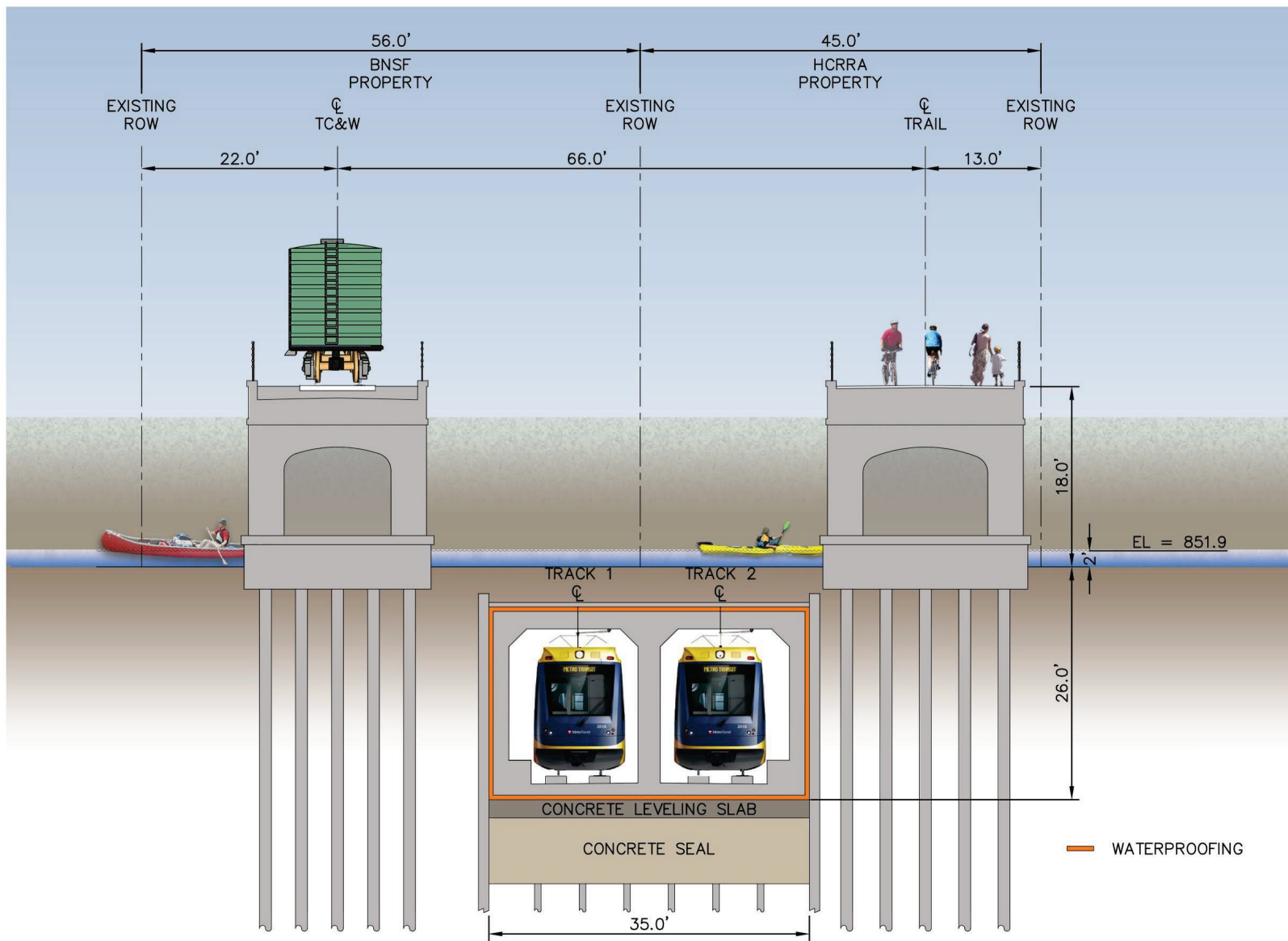
Kenilworth Shallow LRT Tunnel – Under Channel



Kenilworth Shallow LRT Tunnel – Under Channel



Kenilworth Shallow LRT Tunnel – Under Channel



LRT Shallow Tunnel Under Channel - Long: Cost Drivers

- Tunnel segment under channel \$35 - \$45M
 - Additional tunnel systems \$30 - \$40M
 - Ventilation, 2 egress, lighting, signals
-

Total Additional Cost **\$65 - \$85M**

LRT Shallow Tunnel Under Channel - Short: Cost Drivers

- 21st Street Station \$5 - \$10M
- Tunnel segment under channel \$35 - \$45M
- Additional tunnel systems \$25 - \$30M
 - Ventilation, 1 egress, lighting, signals
- Elimination of north tunnel segment (\$35 - \$45M)

Total Additional Cost

\$30 - \$40M

Comparison

ELEMENT	Shallow LRT Tunnel Under Channel – Long	Shallow LRT Tunnel Under Channel – Short	MN&S North Freight Rail Relocation	Kenilworth Shallow LRT Tunnels
Cost	\$305 - \$345M	\$270 - \$300M	\$240 - \$265M	\$240 - \$260M
Relocations (Kenilworth Corridor /MN&S Corridor)	0 homes 0 businesses 0 school	0 homes 0 businesses 0 school	6 homes 7 businesses 1 school	0 homes 0 businesses 0 school
Buildings w/in 150' of freight rail tracks	0 school 750 residential units	0 school 750 residential units	1 school 240 residential units	0 school 750 residential units
Average FR trains per day	MN&S: 2 Kenilworth: 3	MN&S: 2 Kenilworth: 3	MN&S: 5 Kenilworth: 0*	MN&S: 2 Kenilworth: 3
LRT Operations	200+ LRT trains/day in tunnel most of Kenilworth Corridor	200+ LRT trains/day in tunnel south half of Kenilworth Corridor	200+ LRT trains/day at-grade in Kenilworth Corridor	200+ LRT trains/day in tunnel; at-grade at Channel
Combined width of bridge(s)	43'	43'	54'	74'
Total width of rail/ped corridor over channel	88'	88'	54'	82'
21 st Street Station	Not included	Included	Included	Not included

* No FR at the following station areas: Wooddale, Beltline, West Lake, 21st Street

Project Schedule

SWLRT Key Milestones: Presented Nov 6, 2013

Project Milestone	Nov 2013
Met Council Approval	<i>(Postponed)</i>
Municipal Consent	Q1 2014
Record of Decision	Q1/Q2 2015
Full Funding Grant Agreement	Q4 2015
Revenue Operation	Q4 2018

SWLRT Key Milestones: March 2014*

Project Milestone	Nov 2013	Mar 2014*
Met Council Approval	<i>(Postponed)</i>	Q2 2014
Municipal Consent	Q1 2014	Q2 2014
Record of Decision	Q1/Q2 2015	Q2/Q3 2015
Full Funding Grant Agreement	Q4 2015	Q2/Q3 2016
Revenue Operation	Q4 2018	2019

*If the Met Council approves the October 9, 2013 Corridor Management Committee recommendation or similar resolution. If the policy direction is different, SPO staff will need an additional three weeks (either shallow tunnel under channel option) to five months (MN&S North) for design to develop more detailed municipal consent design plans based on scope recommendations.

Project Budget

Project Budget

- SWLRT Budget \$1.553B*
- Additional Considerations:
 - Freight rail scope
 - Cost of delay
 - Eden Prairie extension to Mitchell Road

*October 9, 2013 CMC Recommendation

Project Budget: Additional Considerations

- SWLRT Budget \$1.553B*
- Additional Considerations: **October 9, 2013 CMC Recommendation*
 - Freight rail scope:
 - Kenilworth Shallow LRT Tunnels: 2019 Opening
 - Additional cost of delay: \$45 - \$50M
 - Kenilworth Shallow LRT Tunnel Under Channel – Long: 2020 Opening
 - Additional capital cost: \$65 - \$85M
 - Additional cost of delay: \$90 – \$100M
 - Kenilworth Shallow LRT Tunnel Under Channel – Short: 2020 Opening
 - Additional capital cost: \$30 - \$40M
 - Additional cost of delay: \$90 - \$100M
 - MN&S North: 2021 Opening
 - Additional capital cost: \$0 - \$5M
 - Additional cost of delay: \$135 – \$150M
 - Eden Prairie extension to Mitchell Road: \$75 -\$80M

Project Budget: Summary

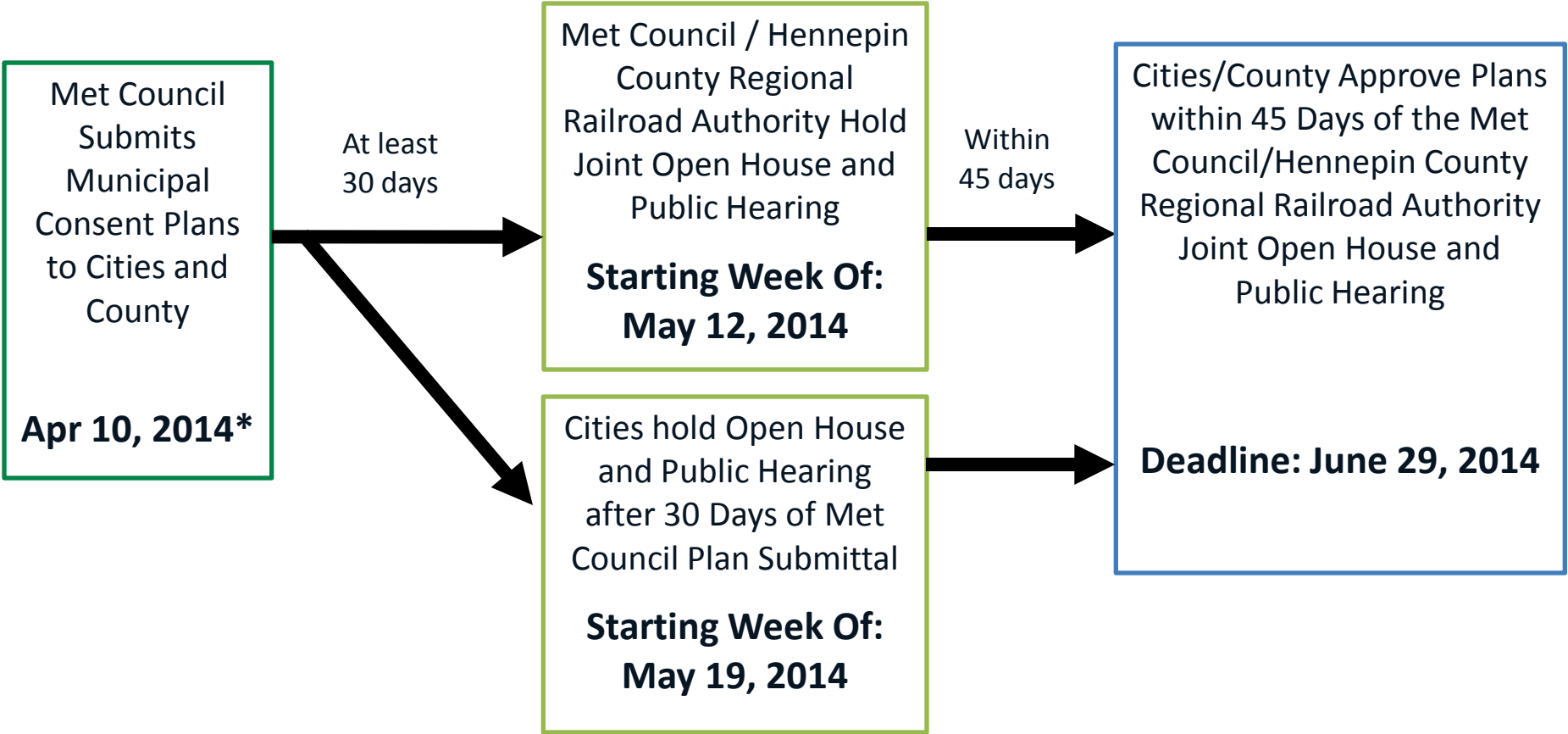
Option	Opening (Year)	Project Cost without Mitchell Station (\$M)	Project Cost with Mitchell Station (\$M)
Kenilworth Shallow LRT Tunnels	2019	\$1,598 - \$1,603	\$1,673 - \$1,683
Shallow LRT Tunnel Under Channel – Long	2020	\$1,708 - \$1,738	\$1,783 - \$1,818
Shallow LRT Tunnel Under Channel – Short	2020	\$1,673 - \$1,693	\$1,748 - \$1,773
MN&S North Freight Rail Relocation	2021	\$1,688 - \$1,708	\$1,763 - \$1,788

Next Steps

Project Scope and Budget

- 3/25 Business Advisory Committee
- 3/26 Corridor Management Committee
- 3/27 Community Advisory Committee
- 4/2 Corridor Management Committee
 - Public Testimony
 - Recommendation on Scope and Budget
- 4/2 Met Council Committee of the Whole
 - Informational Item
- 4/9 Met Council
 - Public Testimony
 - Adopt Scope and Budget

Municipal Consent Process



*If the Met Council approves the October 9, 2013 Corridor Management Committee recommendation or similar resolution. If the policy direction is different, SPO staff will need an additional three weeks (either shallow tunnel under channel option) to five months (MN&S North) for design to develop more detailed municipal consent design plans based on scope recommendations.

More Information

Online:

www.SWLRT.org

Email:

SWLRT@metrotransit.org

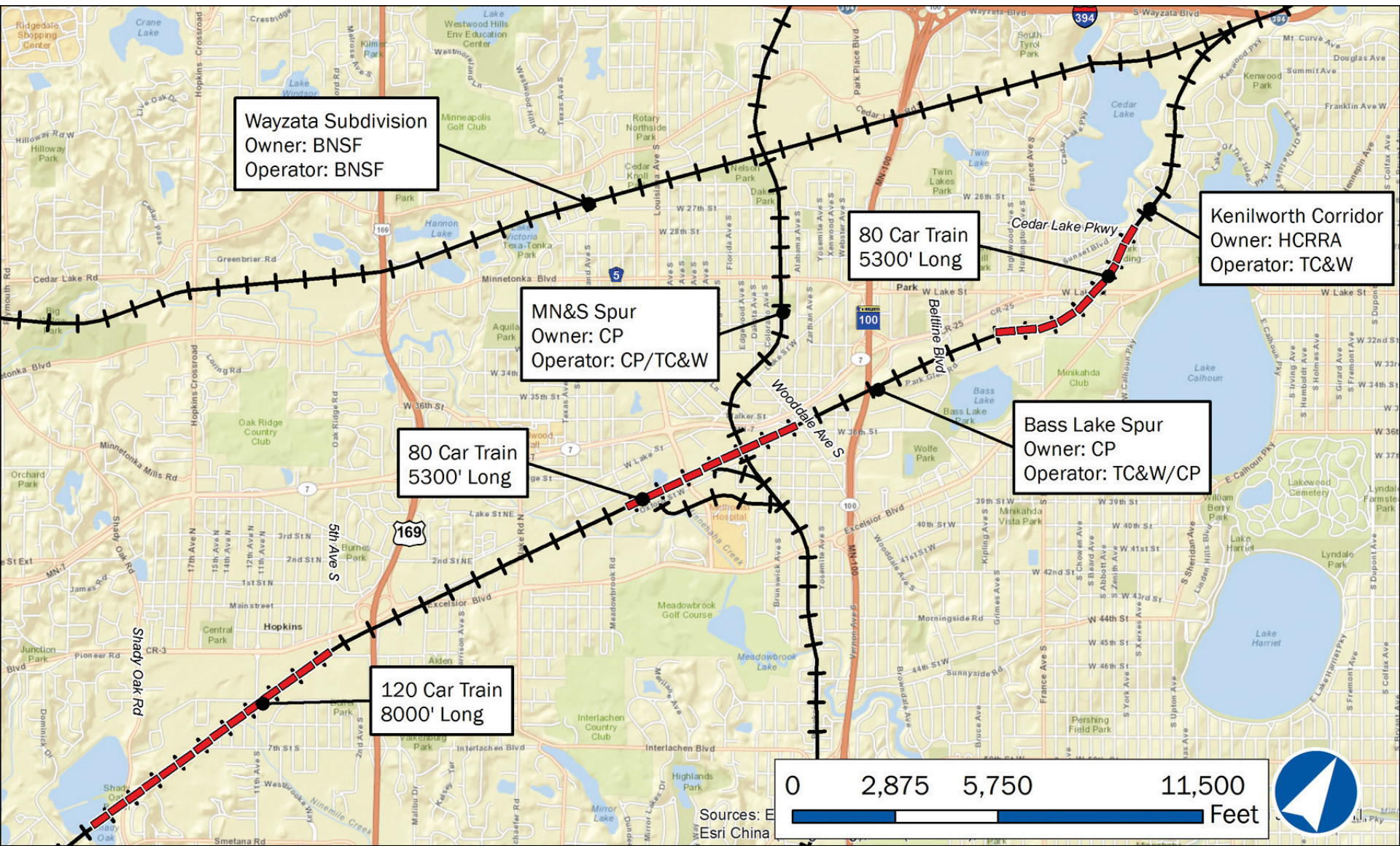
Twitter:

www.twitter.com/southwestlrt



REFERENCE SLIDES

Freight Rail Staging: Co-Location



Freight Rail Staging: MN&S North

