

SOUTHWEST

Green Line LRT Extension



Corridor Management Committee

September 7, 2016



Today's Topics

- Chair's Update
- Project Update
 - Milestones achieved
 - Look ahead
- Construction Contracts Overview
- Next Meeting: Nov 2



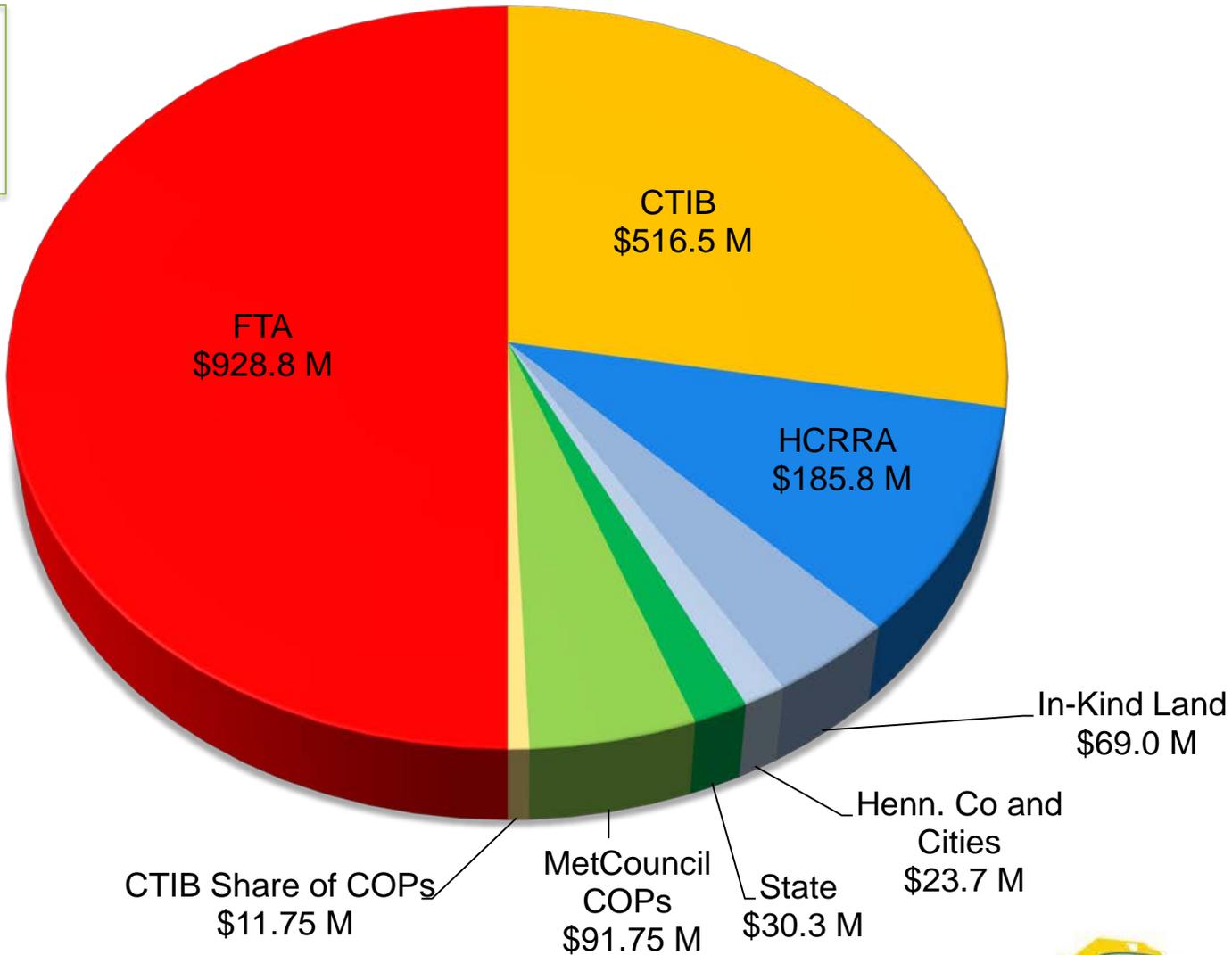
Chair's Update

Funding Sources

September 2016

\$1.858 Billion

**\$928.8 Million
Local Funds
Committed**



What is a Certificate of Participation (COP)?

- A COP is a Revenue Agreement
 - The financial market provides upfront funds for project expenses
 - The Council agrees to make scheduled payments from revenues
- COP is not Debt
 - Investors rely upon the Council's credit history and expectation that Council will continue to annually budget funds and make scheduled payments

How Will COPs be Repaid

- \$103.5M Certificates of Participation
 - Up to \$91.75M from Transit Operating Revenues
 - At least \$11.75M from CTIB Revenues
- Annual Costs
 - \$4-5M Council Transit Operations
 - ~ \$600,000 CTIB

Project Update

Project Milestones Completed

- Environmental reviews complete
 - Final Environmental Impact Statement
 - Record of Decision
 - FEIS Determination of Adequacy
- 90% of engineering and design complete
- Light Rail Vehicle procurement in negotiations
- Funding commitments for 100% (\$928.8 M) of the local share complete
- Application for Entry into Engineering complete

Milestones Look Ahead:

Milestone	Rev. 10.0 Submitted 8/19/16
FTA Approves Entry into Engineering	Nov 2016
Complete 100% Design Package for Civil	Dec 2016
Submit FFGA Application	Early 2017
Complete 100% Design Package for Systems	March 2017
Complete 100% Design Package for OMF	May 2017
FTA Approves FFGA	July 2017
Heavy Construction	2017-2020
Revenue Service	2021

Construction Contracts Overview

5 Main Contracts

- Civil
- Systems
- Operations and Maintenance Facility (OMF)
- Light rail vehicles (LRV)
- Fare Collection

Civil Contract Scope

- 15 Stations
 - Vertical Stations
 - West Lake St.
 - Bryn Mawr
 - Bassett Creek Valley



Civil Contract Scope

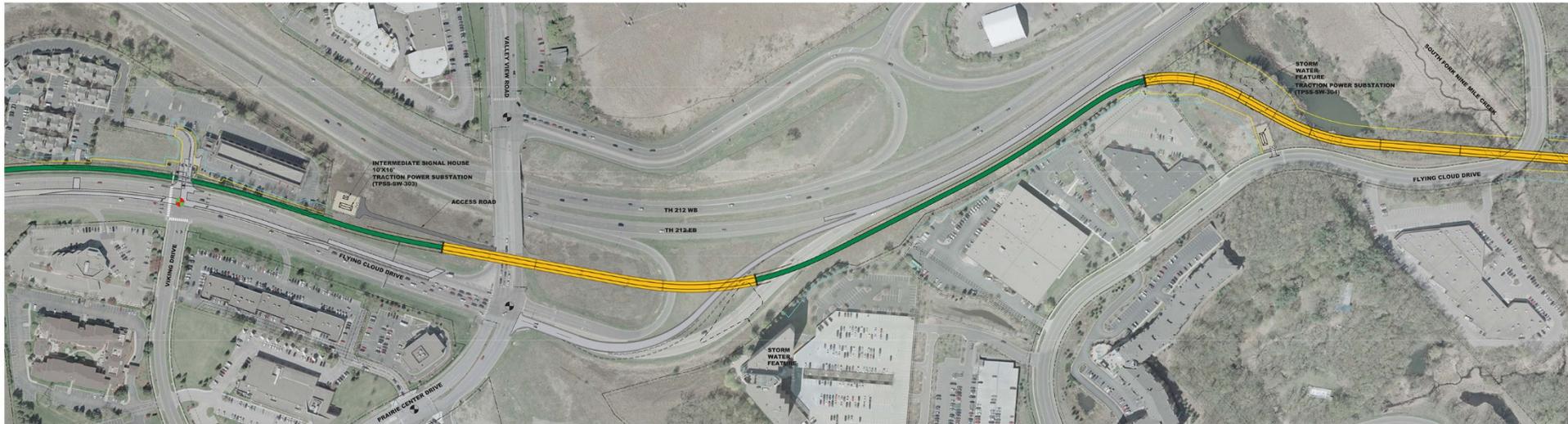
- Park-and-rides
 - 7 Surface lots with a total of 1,747 spaces
 - 1 Ramp at SouthWest Station with 2 elevators



Civil Contract Scope

- 44 structures
 - 29 new bridges (LRT, Pedestrian, Roadway, Freight)
 - 7 existing bridges with modifications
 - 6 pedestrian tunnels
 - 2 cut and cover tunnels (TH62 582 ft., Kenilworth 2,236 ft)
- 110 retaining walls
- Track (153,440 TF)

Valley View and Nine Mile Creek Bridges



SOUTHWEST LRT ALIGNMENT
 SEGMENT W1 / W2 - EDEN PRAIRIE
 NINE MILE CREEK



COLOR KEY

Green	LET TRACK AREA	Red	EXISTING SIGNALIZED INTERSECTION
Light Green	ALTERNATE / DESIGN AREA	Yellow	PROPOSED SIGNALIZED INTERSECTION
Dark Green	STATION PLATFORM	Blue	STATION TRUCK SUBSTATION
Red	RAILWAY	Black	STREET LIGHTING (OPTIONAL MARKS)
Orange	ROADWAY	Black	RAILWAY
Yellow	RAIL / STREET	Black	RAILWAY PROPERTY ACQUISITION
Light Blue	SURFACE PARKING	Black	PARTIAL PROPERTY ACQUISITION
Dark Blue	BRIDGE	Black	RIGHT OF WAY
Grey	RETAINING WALL	Black	PROPERTY LINE
		Black	UTILITY CONSTRUCTION EXISTENT



JANUARY 2016

THE PROPOSED SOUTHWEST LRT PROJECT IS NOT FINAL, BUT IS STILL UNDER ENVIRONMENTAL REVIEW AND THE PROJECT IS SUBJECT TO CHANGE. THESE PLANS ARE NOT FINAL. THE PROJECT AND SITE OF THE PROJECT ARE SUBJECT TO ENVIRONMENTAL REVIEW AND THE LOCAL AND STATE AGENCIES. THE LOCAL AND STATE AGENCIES WILL REVIEW THE PROJECT AND THE LOCAL AND STATE AGENCIES WILL REVIEW THE PROJECT AND THE LOCAL AND STATE AGENCIES WILL REVIEW THE PROJECT.



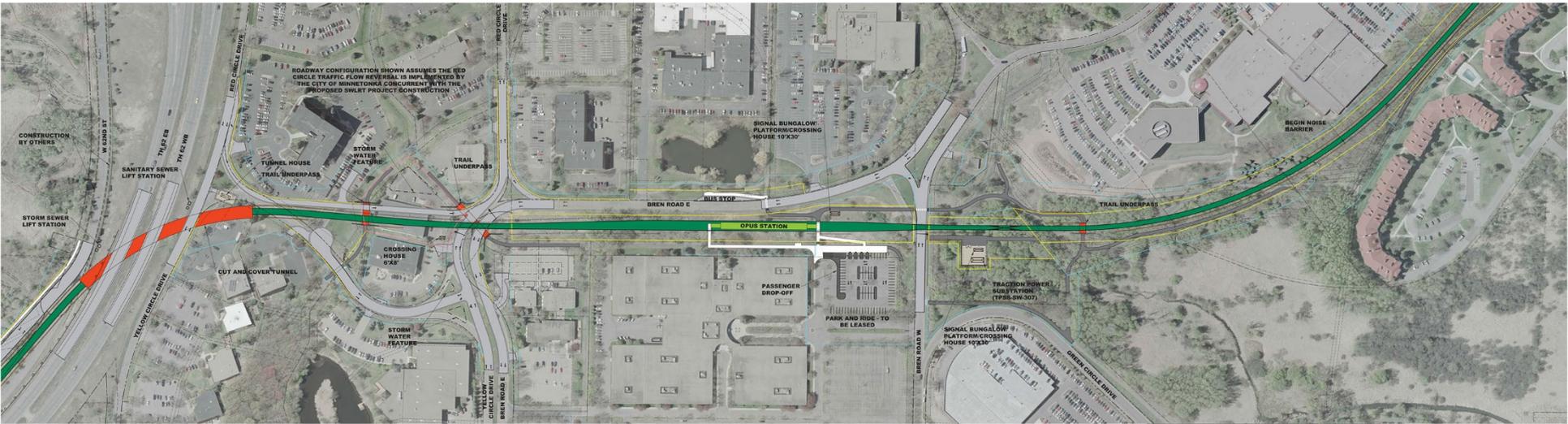
Valley View Bridge



Nine Mile Creek Bridge



Tunnel Under TH 62



SOUTHWEST LRT ALIGNMENT
SEGMENT W2 / W3 - EDEN PRAIRIE / MINNETONKA
OPUS STATION

COLOR LEGEND	
[Green Line]	LRT TRACK AREA
[Red Line]	EXISTING SIGNALLED INTERSECTION
[Orange Line]	PROPOSED SIGNALLED INTERSECTION
[Blue Line]	STATION PLATFORM
[Yellow Line]	TRACTION POWER SUBSTATION
[Black Line]	STATION BUILDING DESIGN MARKER
[Red Line]	STREET
[Blue Line]	DATE LINE
[Green Line]	TOTAL PROPERTY ACQUISITION
[Yellow Line]	PARTIAL PROPERTY ACQUISITION
[Black Line]	RIGHT OF WAY
[Red Line]	PROPERTY LINE
[Blue Line]	TEMPORARY CONSTRUCTION EXISTENCE

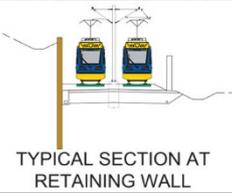
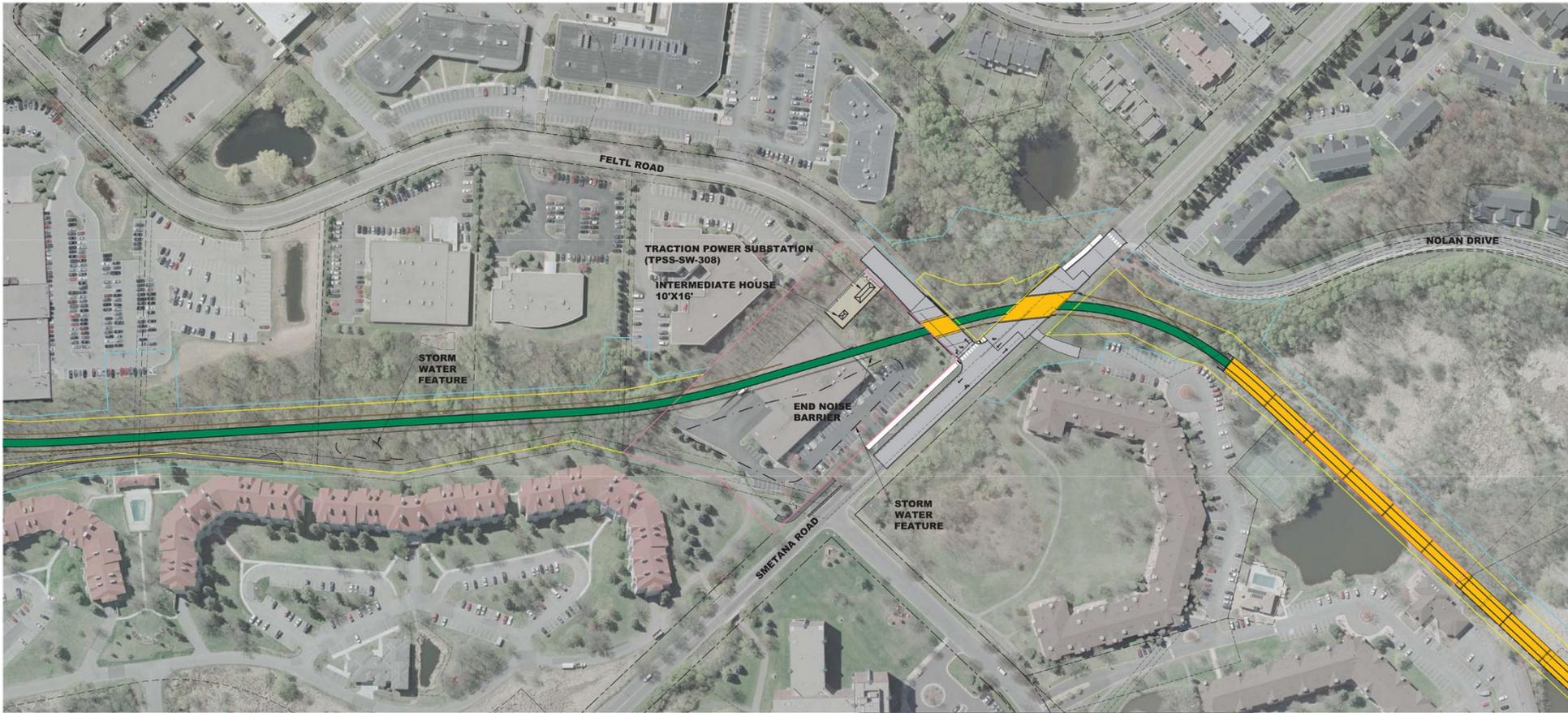


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THE PROVIDED DOCUMENT SET PROJECT IS NOT FINAL, BUT IS STILL UNDER ENVIRONMENTAL REVIEW AND THE PROJECT IS SUBJECT TO CHANGE. THESE PLANS ARE NOT FINAL. THE DESIGN, CONCEPT AND DEVELOPMENT OF THESE PLANS SHALL NOT BE USED FOR ANY OTHER PURPOSES WITHOUT THE WRITTEN PERMISSION OF SOUTH WEST METRO TRANSIT. THE PROJECT DESIGN AUTHORITY IS WHOLLY PROVIDED BY THE COUNCIL, NOT METRO TRANSIT. IF THE PROJECT IS PLACED THROUGH TO CONSTRUCTION, THE COUNCIL WILL NOT TAKE FINAL ACTION ON THIS MATTER UNLESS THE COUNCIL PROCEEDS WITH THE PROJECT AFTER THE FACTS RECORD OF DECISION AND THE COUNCIL'S DETERMINATION OF NECESSITY.



Minnetonka-Hopkins Bridge



SOUTHWEST LRT ALIGNMENT SEGMENT W3 - MINNETONKA / HOPKINS MINNETONKA / HOPKINS BRIDGE

COLOR LEGEND

	LRT TRACK AREA		EXISTING SIGNALIZED INTERSECTION
	PEDESTRIAN / SIDEWALK AREA		PROPOSED SIGNALIZED INTERSECTION
	STATION PLATFORM		TRACTION POWER SUBSTATION
	ROADWAY		SYSTEMS BUILDING (DESIGN VARIES)
	TUNNEL		GATE ARM
	TRAIL / BIKEWAY		TOTAL PROPERTY ACQUISITION
	SURFACE PARKING		PARTIAL PROPERTY ACQUISITION
	BRIDGE		RIGHT OF WAY
	RETAINING WALL		PROPERTY LINE
			TEMPORARY CONSTRUCTION EASEMENT



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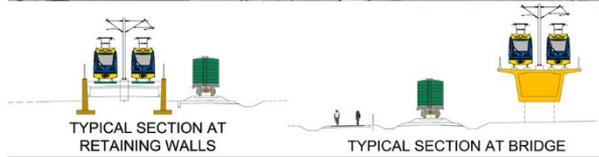
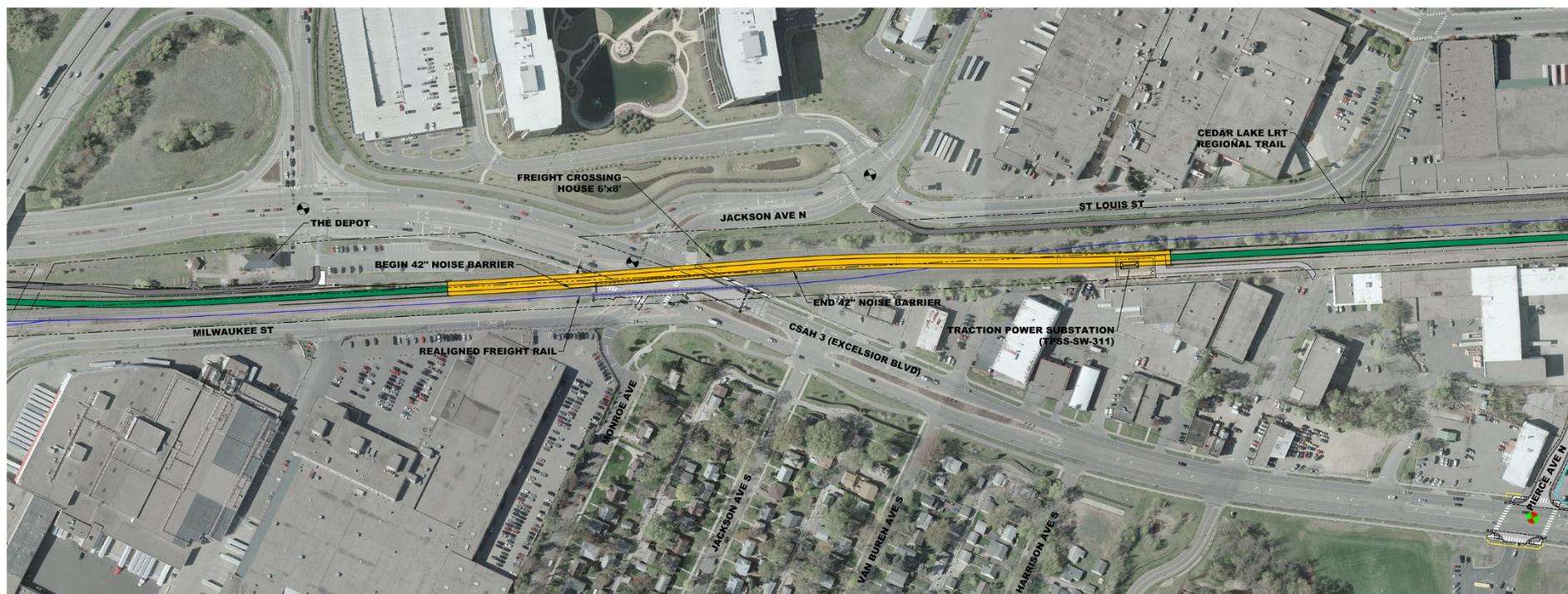
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Minnetonka-Hopkins Bridge



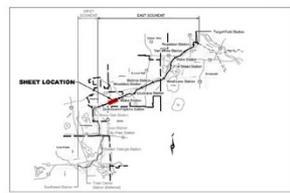
Excelsior Blvd Bridge



SOUTHWEST LRT ALIGNMENT SEGMENT E1 - HOPKINS EXCELSIOR BLVD. CROSSING

COLOR LEGEND

	LRT TRACK AREA		EXISTING SIGNALIZED INTERSECTION
	PEDESTRIAN / SIDEWALK AREA		PROPOSED SIGNALIZED INTERSECTION
	STATION PLATFORM		TRACTION POWER SUBSTATION
	TUNNEL		SYSTEMS BUILDING (DESIGN VALUES)
	ROADWAY		GATE ARM
	TRAIL / BIKEWAY		TOTAL PROPERTY ACQUISITION
	SURFACE PARKING		PARTIAL PROPERTY ACQUISITION
	BRIDGE		RIGHT OF WAY / PROPERTY LINE
	RETAINING WALL		TEMPORARY CONSTRUCTION EASEMENT



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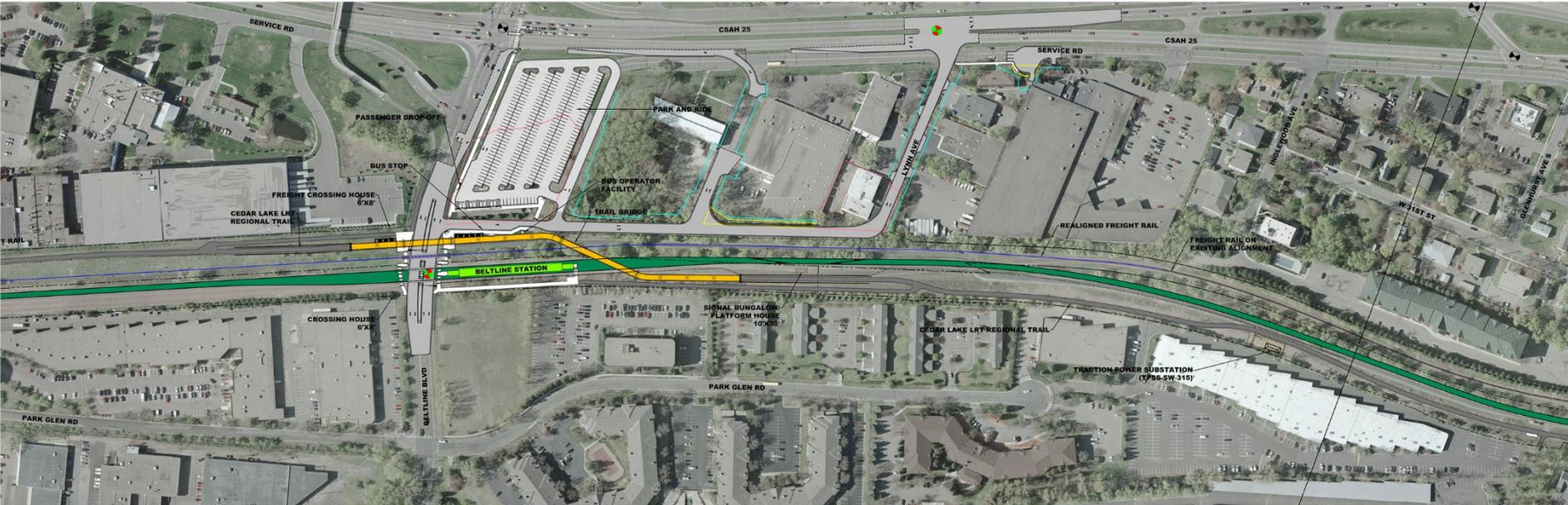
SCALE: 1" = 100' (VERTICAL FEET)

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Excelsior Blvd Bridge



Beltline Boulevard Station



SOUTHWEST LRT ALIGNMENT
 SEGMENT E2 - ST. LOUIS PARK
 BELTLINE STATION

COLOR LEGEND	
[Green Box]	LRT TRACK AREA
[Light Green Box]	BIKEWAY / SIDEWALK AREA
[Yellow Box]	STATION PLATFORM
[Red Box]	TUNNEL
[Grey Box]	ROADWAY
[Blue Box]	TRAIL / BIKWAY
[Orange Box]	SURFACE PARKING
[Light Blue Box]	BRIDGE
[Dark Blue Box]	RETAINING WALL
[Red Circle]	EXISTING SIGNALIZED INTERSECTION
[Green Circle]	PROPOSED SIGNALIZED INTERSECTION
[Red Square]	TRACTION POWER SUBSTATION
[Blue Square]	SYSTEMS BUILDING (DESIGN 300'x150')
[Yellow Square]	RAIL YARD
[Red Square]	TOTAL PROPERTY ACQUISITION
[Orange Square]	PARTIAL PROPERTY ACQUISITION
[Dashed Line]	RIGHT OF WAY
[Dotted Line]	PROPERTY LINE
[Light Blue Line]	TEMPORARY CONSTRUCTION EASEMENT



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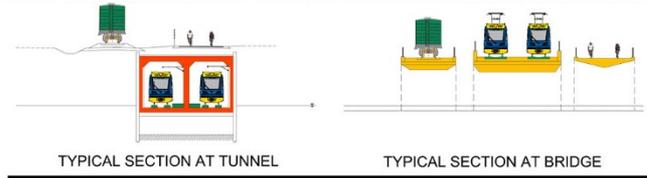
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Beltline Boulevard Station

- 268 space surface park-and-ride lot



Kenilworth Corridor



SOUTHWEST LRT ALIGNMENT SEGMENT E3 - MINNEAPOLIS CEDAR LAKE PKWY CROSSING

COLOR LEGEND	
[Green Box]	LRT TRACK AREA
[Yellow Box]	PEDESTRIAN / SIDEWALK AREA
[Red Box]	STATION PLATFORM
[Blue Box]	TUNNEL
[Grey Box]	ROADWAY
[Orange Box]	TRAIL / BIKEWAY
[Light Blue Box]	SURFACE PARKING
[Light Blue Box]	BRIDGE
[Light Blue Box]	RETAINING WALL
[Green Circle]	EXISTING SIGNALIZED INTERSECTION
[Red Circle]	PROPOSED SIGNALIZED INTERSECTION
[Red Circle]	TRACTION POWER SUBSTATION
[Red Circle]	SYSTEMS BUILDING (DESIGN WARNERS)
[Red Circle]	GATE ARM
[Red Line]	TOTAL PROPERTY ACQUISITION
[Yellow Line]	PARTIAL PROPERTY ACQUISITION
[Red Line]	RIGHT OF WAY
[Red Line]	PROPERTY LINE
[Red Line]	TEMPORARY CONSTRUCTION EASEMENT



SOUTHWEST METROPOLITAN

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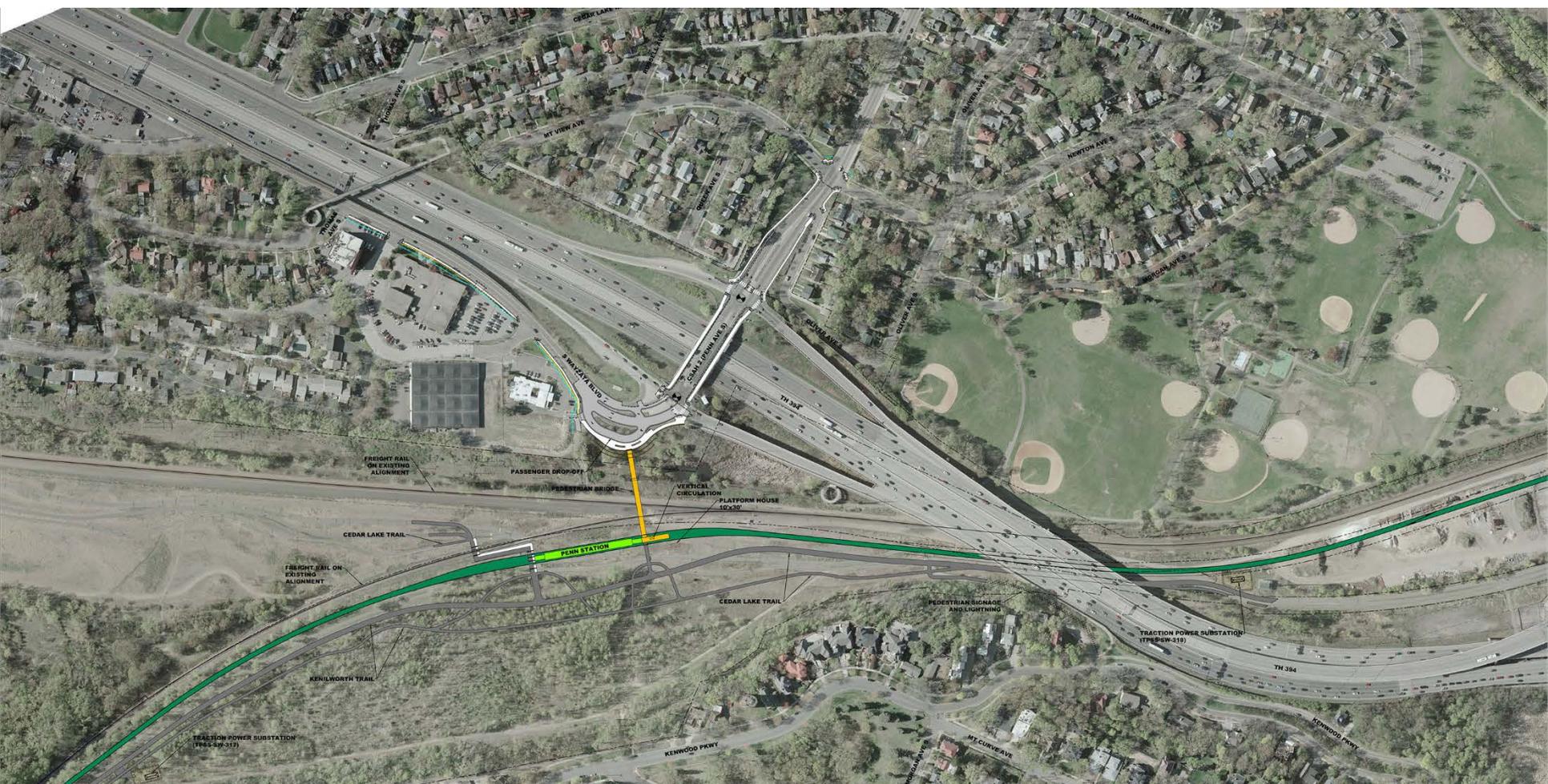
SCALE: HORIZONTAL 1" = 100' VERTICAL 1" = 10'

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Kenilworth Corridor: North Portal



Bryn Mawr Station



SOUTHWEST LRT ALIGNMENT
SEGMENT E4 - MINNEAPOLIS
PENN STATION

COLOR LEGEND

Light Green	LRT TRACK AREA	Black	EXISTING SIGNALLED INTERSECTION
Dark Green	EXISTENCE OF SIGNAL AREA	Red	UNPAVED SIGNALLED INTERSECTION
White	STANDARD PLATFORM	Blue	TRACTION POWER SUBSTATION (GENERAL LINE)
Orange	CEPANEL	Green	LOCAL BACKLASH SIGNAL (LOCAL)
Yellow	ROADWAY	Black	MTS SIGN
Light Blue	UNPAVED ROADWAY	Red	LOCAL INTERSECTION SIGNAL
Dark Blue	TRAIL	Yellow	LOCAL INTERSECTION SIGNAL
Light Purple	TRAIL	Blue	RIGHT OF WAY
Dark Purple	TRAIL	Red	PROPERTY LINE
Light Green	TRAIL	Black	UNPAVED INTERSECTION SIGNAL



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Bryn Mawr Station

- One elevator and pedestrian bridge from station platform to passenger drop off area at Penn Ave



Civil Contract Scope

- Demolition of 14 existing buildings
- Soil improvements
- Roadways and trails
- Systemwide cable trough/ductbank/foundations
- Utilities and drainage
- Urban design and landscaping
- Freight (BNSF, TCWR and CP)

Systems Contract



Systems Contract Scope

- Systems site work
- Traction power substations (TPSS)
 - 19 TPSS on main line
 - 2 at the OMF
- 3 Tunnel systems houses
 - 2 for Kenilworth tunnel
 - 1 for TH 62 tunnel
- Overhead contact system
- LRT and freight signaling systems
- Tunnel facilities systems
 - Tunnel power
 - Ventilation
- Communications systems
 - Supervisory Control and Data Acquisition (SCADA)
 - Rail Control Center (RCC)
 - Radio
 - Public Announcement/Variable Message Signs
 - Intrusion detection
 - Close Circuit TV (CCTV)
 - Emergency call boxes
 - Telephones
 - Building Management Systems
- SWLRT systems integration

Traction Power Substation



Signaling Systems



Security Features



Security camera



Emergency phone

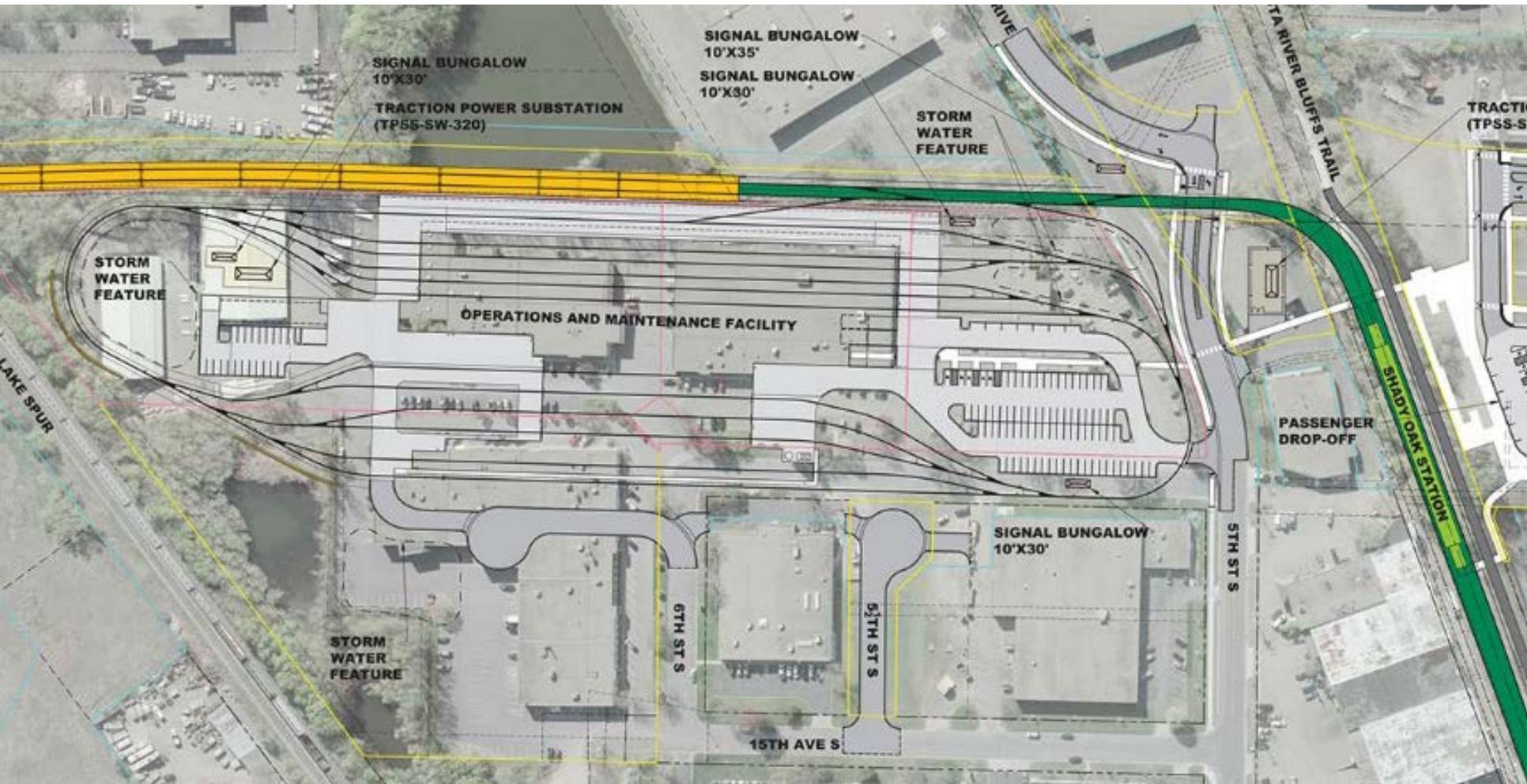
OMF Contract



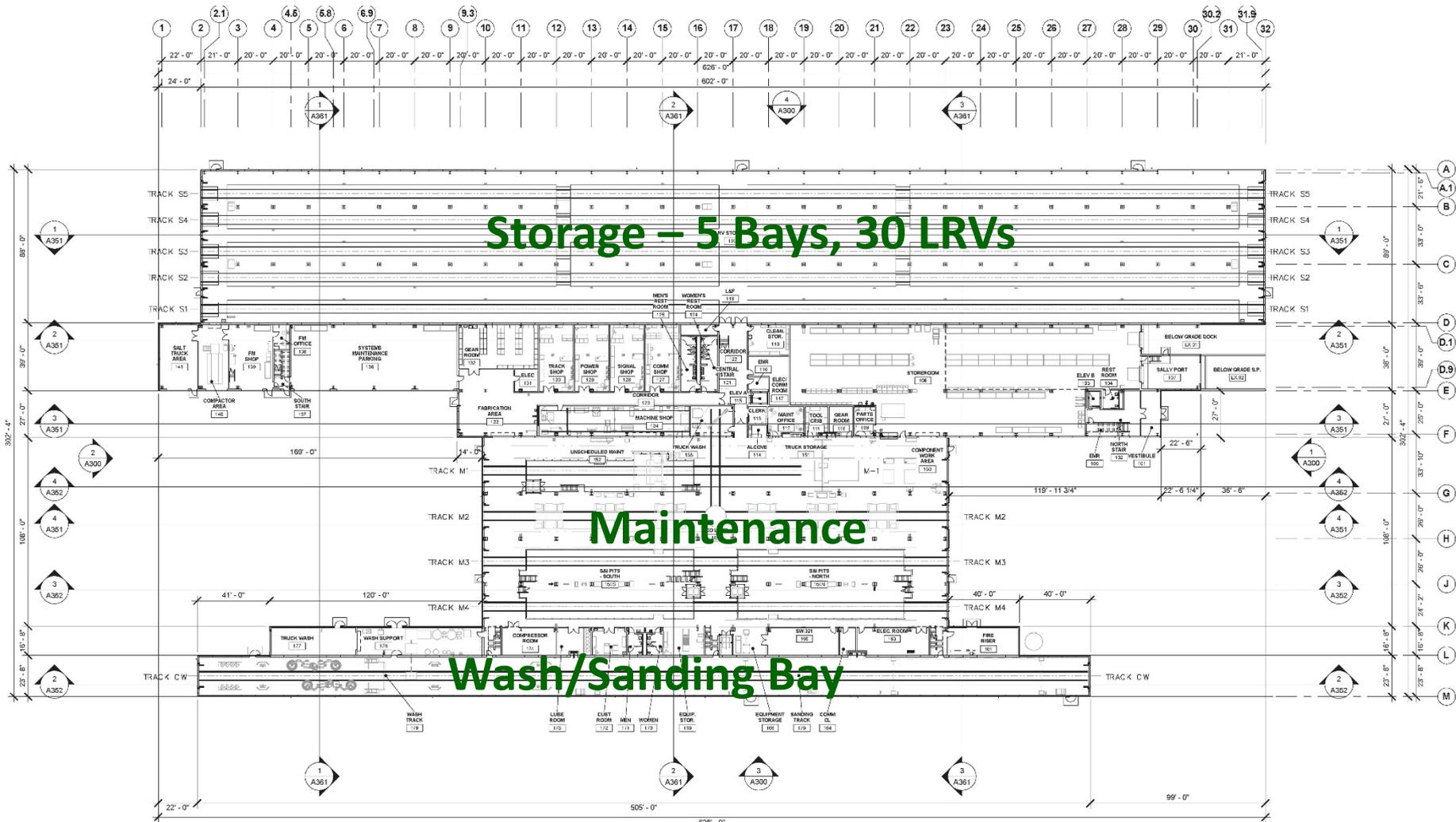
OMF Contract Scope: Construction

- Demolition of 6 existing buildings
- Soil improvements
- Yard track
- OMF building (2 story, 162,356 s.f.)
- Access roads
- Systemwide electrical cable trough/ductbank/foundations
- Utilities and drainage
- Urban design and landscaping

Operations and Maintenance Facility



Operations and Maintenance Facility Layout



Operations and Maintenance Facility



Light Rail Vehicles Contract



Light Rail Vehicles Scope

- Type III LRVs
 - Base order: 27
 - Options: Up to 50
- Evaluation: In progress with single proposer
- Limited Notice to Proceed: Q4 2016

Fare Collection Contract



Fare Collection Scope

- Ticket Vending Machines (TVM): 43
- Smart Card Validators: 66
- Conduit provided for 30 future TVMs in Civil contract

More Information

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Email:

SWLRT@metrotransit.org

Twitter:

www.twitter.com/southwestlrt

