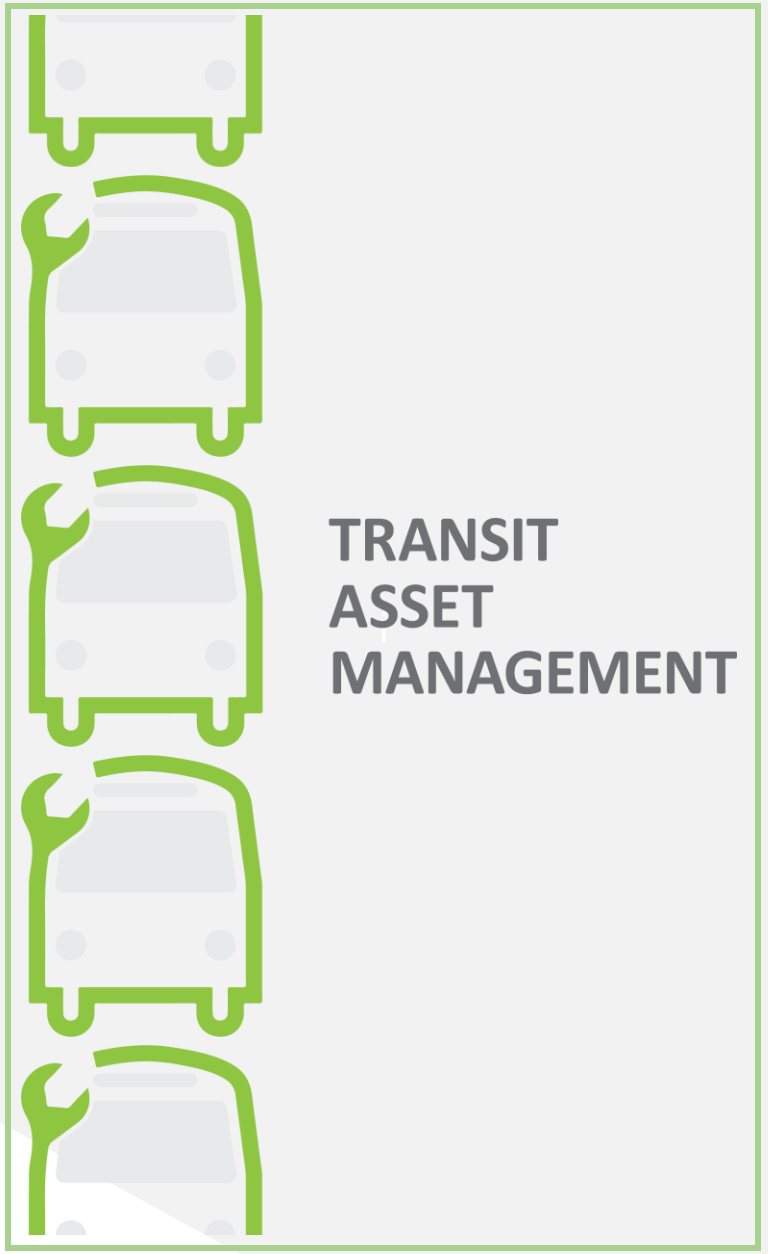
2024 Transit Asset Management (TAM) Roundtable

Theme: Continuous Improvement

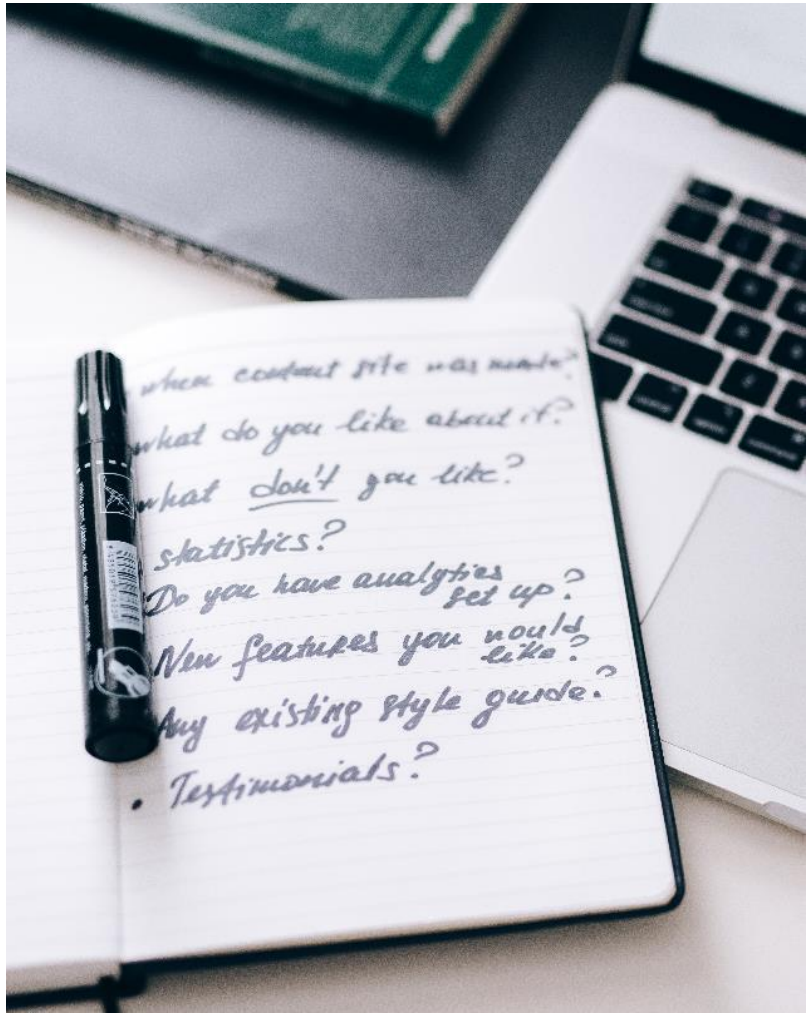
Chicago, IL

July 30-31, 2024



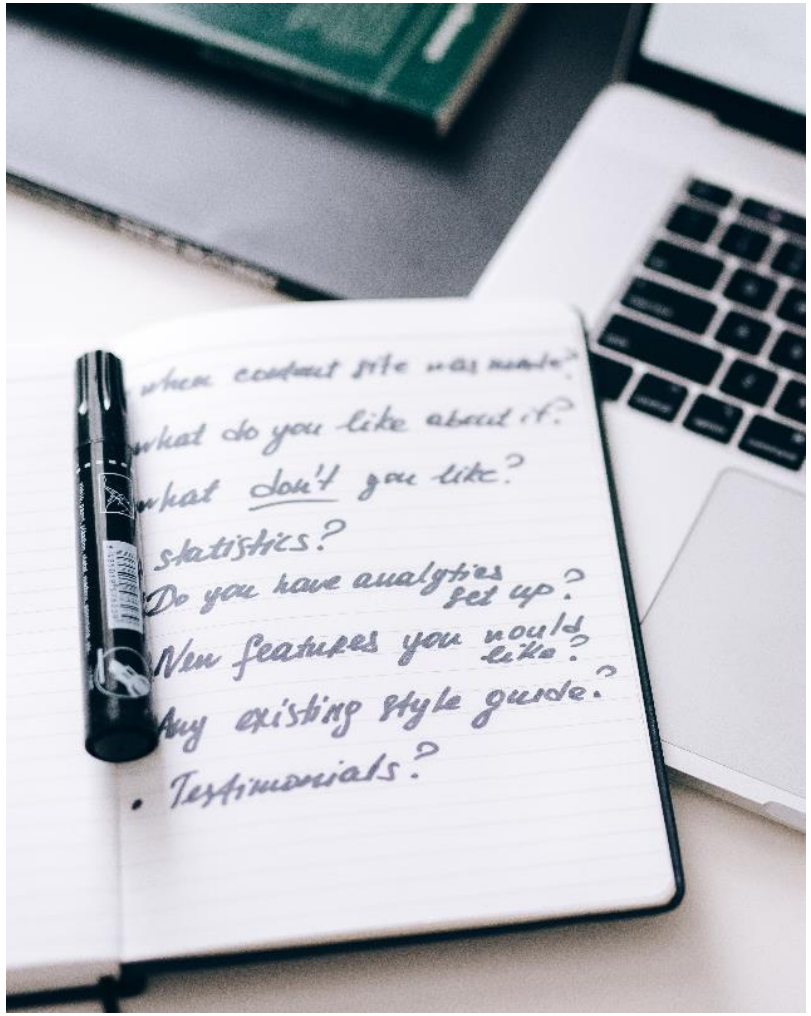
U.S. Department of Transportation
Federal Transit Administration

Agenda: Day 1



Time	Session
9:00 AM	Welcome
9:20 AM	Round Robin Introductions
10:15 AM	*Break*
10:25 AM	Strategies for Continuous Improvement Session
11:05 AM	Small Group Discussion and Report Back
11:45 AM	*Lunch (on your own)*
1:00 PM	CTA Keynote Speakers
1:30 PM	Q&A
1:45 PM	Tour(s)
5:00 PM	*End of Day 1*
6:00 PM	*Optional* Social Gathering

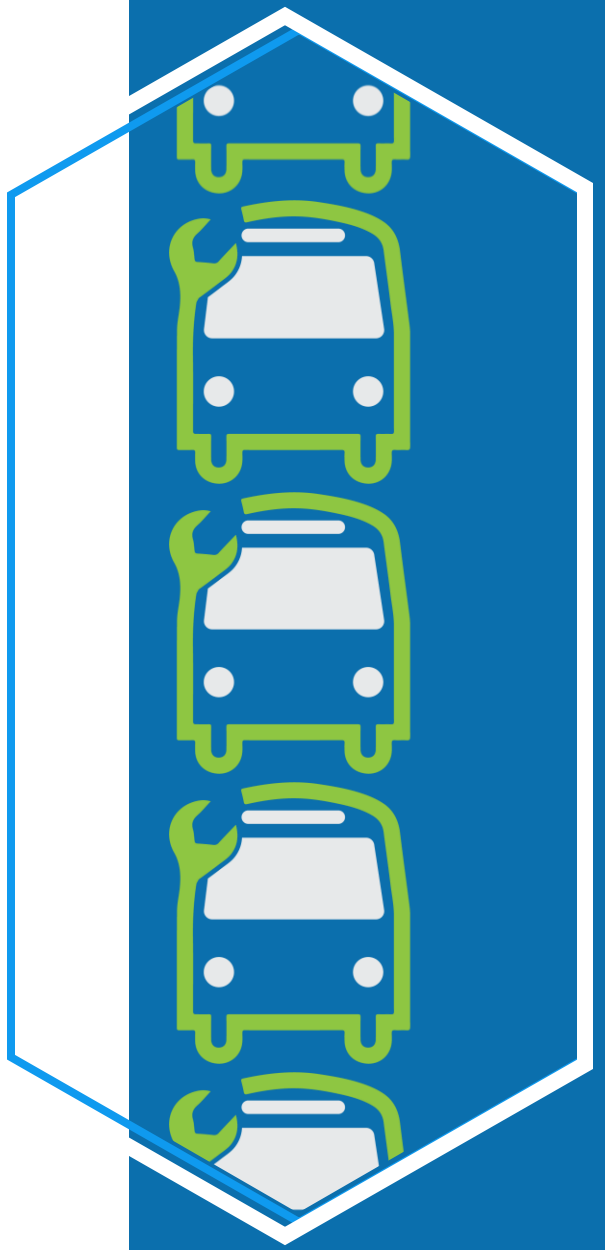
Agenda: Day 2



Time	Session
8:15 AM	Optional Peer to Peer Chat Session
9:00 AM	Welcome
9:20 AM	FTA TAM Program Updates
10:00 AM	*Break*
10:15 AM	TAM State of the Practice Review Panel Session
11:10 AM	Small Group Discussion and Report Back
12:00 PM	Wrap up & Evaluation
12:15 PM	*End of Day 2*

Welcome: Day 1

Kelley Brookins, FTA Region 5
Administrator



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Kelley Brookins

Regional Administrator

FTA Region 5

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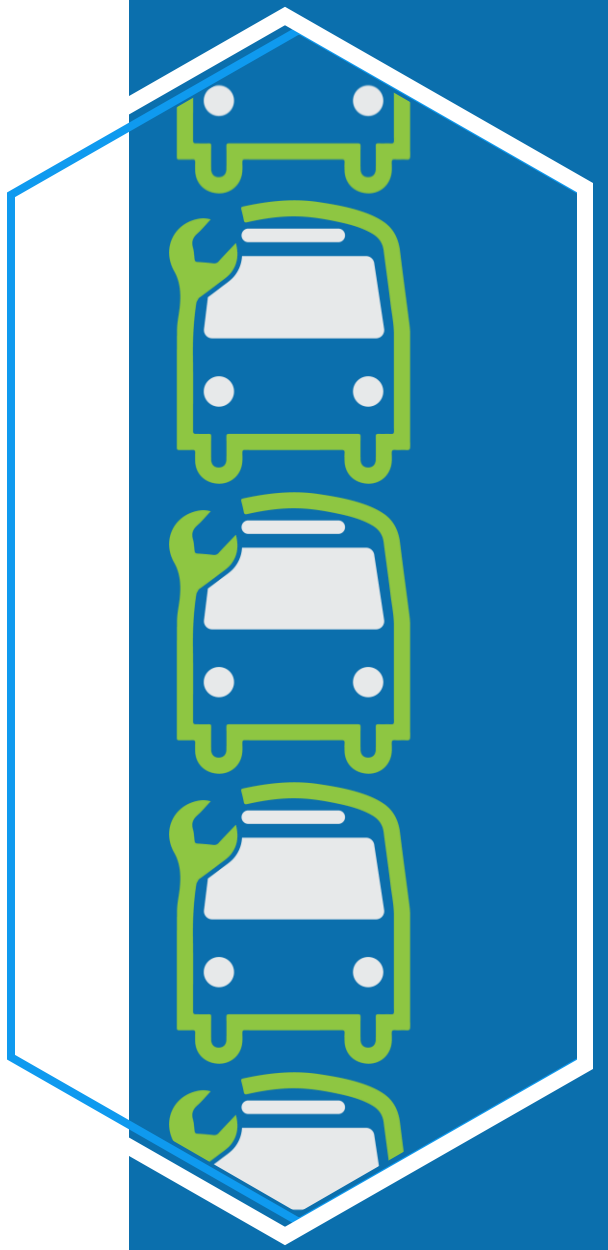
Round Robin Introductions



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Round Robin

Please share your name, organization, role and response to:

What part of TAM are you an expert in/ do you enjoy working on?

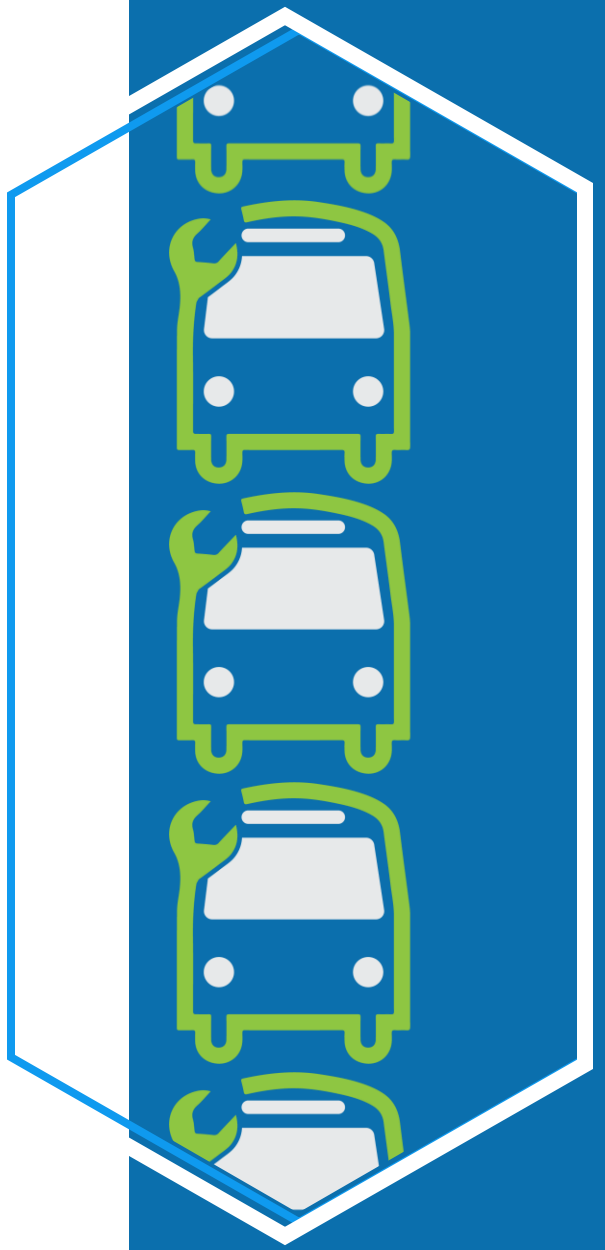
or

Where do you find yourself needing assistance?

Strategies for Continuous Improvement Session

Ryan Wilhite, IndyGo

Sheila Hockel, Metro Transit/Bi-State Development



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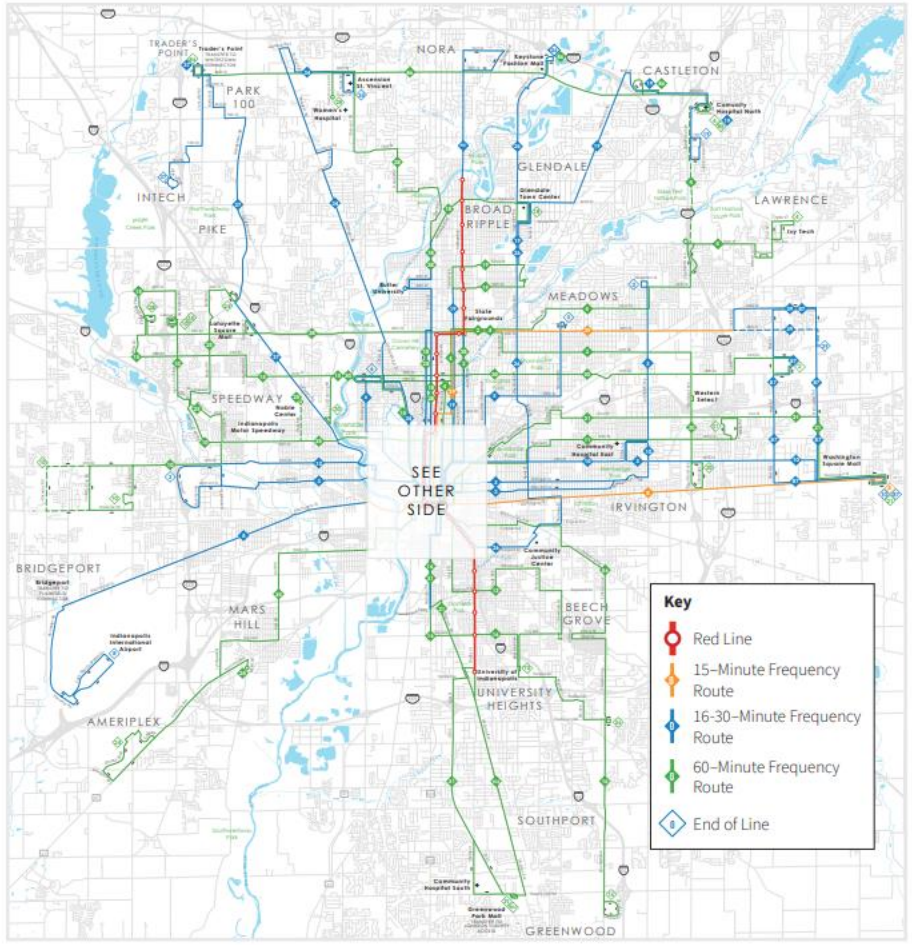
IndyGo SM

TAM Roundtable – IndyGo Maturity Assessment

Background on IndyGo

Tier I

- Tier I with a Group TAM (3 eligible subrecipients)
- ~200 FR revenue vehicles, ~80 paratransit cutaway vehicles
- ~7 M boardings
- Red Line BRT with Purple opening this year and Blue getting under construction
- Two main facilities (one garage), one paratransit, one transit center, two charging, and dozens of rapid transit stations



IndyGo SM

TAM Timeline

- Created first plan in 2018 (in-house)
- Implemented plan in 2019, 2020
- Updated plan in 2022 (in-house)
  - **Completed FTA self-driven maturity assessment – Pros/Cons**
- Hired Cambridge Systematics to assist with TAM knowledge
  - Two primary tasks
    - Software Solutions (sub)
    - TAM Maturity Assessment

TAM Maturity Assessment

Highlights

- Completed numerous interviews with dozens of staff
- Reviewed almost all aspects of asset management in the agency
- Completed maturity assessment including a list of areas to improve maturity and associated tasks

IndyGo TAM Next Step Actions

Subject Area (XX)	0 - Innocent 1 - Aware 2 - Developing 3 - Competent	**Action XX: Name** - with short description of what needs to be done if needed	Additional notes as to what the action item a
Subject Area (Subject Number)	**Subject Score**	**Action Item**	**Additional Not**
Asset Decommissioning and Disposal (21)	2 - Developing	**Action 1: Incorporate Additional Info. into Assets Disposal and Transfer Form** - Include sale price (if applicable) and a qualitative description of disposal/transfer as supplement	This would serve to improve the details aroun provide for data to base depreciation models
Operations and Maintenance Decision-Making (7)	1 - Aware	**Action 1: Develop a maintenance, repair, and replacement plan** – this can be used as the basis for the development of a program for continuous renewal, replacement, and refurbishment of transit assets	One of the evidence documents provided was developing a maintenance repair and replacer

TAM Continuous Improvement

Ways We Strive to Improve

- Participate in peer sharing (FTA/Volpe Center TAM Working Group2023)
- Hire outside consultants to review (CS 2022-2024)
- Hire internal capacity (Strategic Planner)
- Better document processes
- Support better documents/process across the agency (CS On-Call contract)

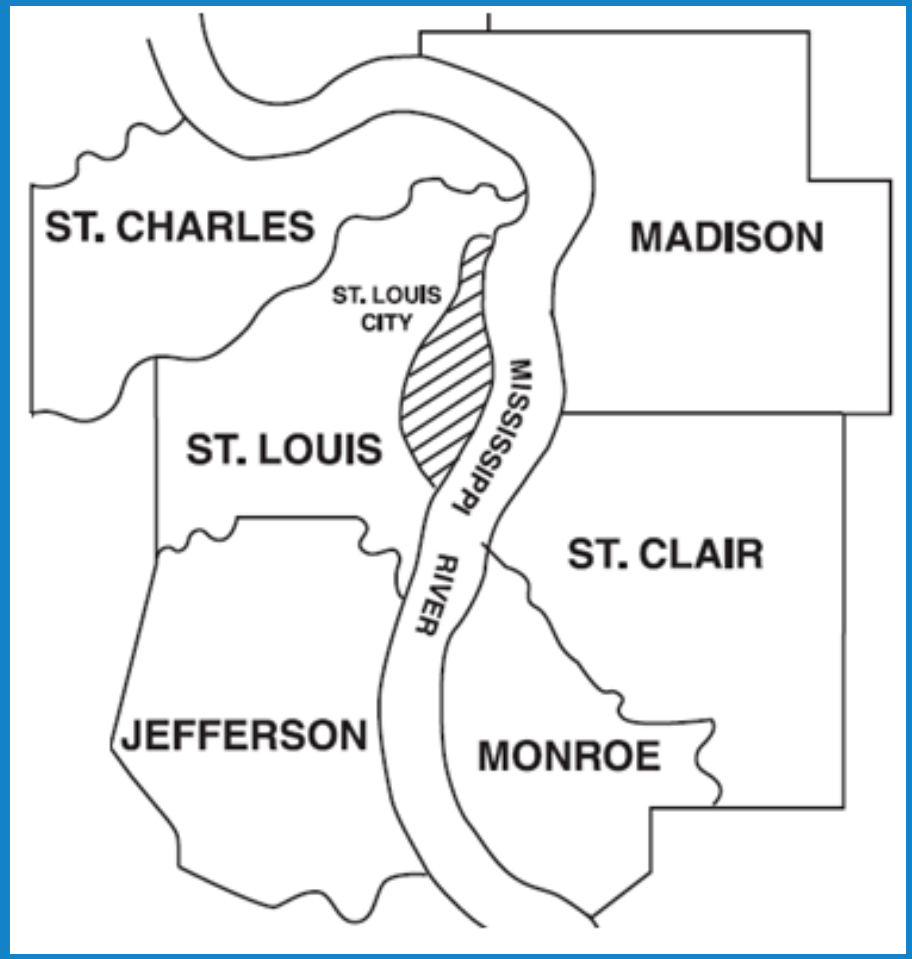
Continuous Improvement
New Asset Identification
July 2024

Sheila Hockel

Metro Transit, St. Louis

Bi-State Development

- Established in 1949 through an interstate compact between Missouri & Illinois
- Can cross local, county and state boundaries to plan, construct, maintain, own and operate facilities and infrastructure
- Authorized to issue revenue bonds, collect fees and receive federal, state and private funds
- Bi-State Development operates the Metro Transit system in St. Louis County, St. Louis City and St. Clair County



Metro Transit

MetroBus

- 500+ square mile service area
- 300-vehicle bus fleet includes 24 battery-electric buses

MetroLink

- 38 MetroLink stations
- 46 miles of rail in Missouri and Illinois

Metro Call-A-Ride

- Paratransit service
- Fleet of 120+ wheelchair lift-equipped vans

metro

MAP 21 The Start

- Moving Ahead for Progress in the 21st Century 2012
  - Safety & Asset Management
- Public Transportation Agency Safety Plan (PTASP) 2020
  - MetroLink State Safety Oversight (SSO)
  - Addition of bus and paratransit to SSO type auditing
- PTASP audit of Procurement

The Audit

- PTASP Section 12 Procurement Department
- Safety reviews
  - Procurement specifications,
  - Designs for facilities, equipment, or systems
- May affect the MetroLink safety of
  - employees
  - passengers

New Asset Identification SOP

- How and Why
- Purchase requisition for
  - Rolling Stock
  - Equipment
  - Contracts

Purchase Requisition Review

- Services – not tracked
  - Uniform services
  - Cleaning services
- Contracts – not tracked
  - Fuel
  - Consultants

Purchase Requisition Review

Purchase Req#	ID	Not added to EAM
194116 194115 194105 194102 194088 194076 194060 194030 193996 194216 194201 194155 194152 194148 194138 193357 194647 194646 194594 194557 194546 194540 194538 194530 194468 194650 194460 194452 194452 194435 194425 194415 194392 194380 194356 194752 194744 194714 194684 194663 194601 193880 193374 193351 179007		Service, not an asset. Only PR numbers will be recorded at this time. March 2024.
194058 194057 194052 193192 194600 194469 194740 194713 194704 194685 178142		Not tracked in EAM. Only PR numbers will be recorded at this time. March 2024.

Purchase Requisition Review

- New Asset
  - Asset is not tracked, or
  - Asset is tracked in Enterprise Asset Management (EAM) program
    - PM/asset owner is contacted
    - EAM asset identification is verified
    - New Equipment Form

Purchase Requisition Review

Unit	DESCRIPTION	From	SOURCE OF INFORMAITON	Status of addition (add date of each update)	Completed
EW- train jack	EwingTrain Jack Replacement	Hamm, Kelly	Purchase Requisition 194500	3-22-24 email to parker, huggans, hamm	
TC-NB chargers	Repair charger number two at North Broadway and Taylor Bus Transit center. The repairs would bring the electrical Charging system to full capicity.	Adkins, Kent	Purchase Requisition 194700	3-28-24 email sent to adkins and o'hara. Chargers are condition of 5. No additional action tacken.	x

More Sources of New Assets

- New Equipment Form
- Form 0221 Request for Disposal and Replacement of Fixed Asset
- Annual Asset Condition Review
- Leased and Other Non Revenue Vehicles
- Revenue Vehicles
- Procore Project Close out

Observations

- This SOP has been revised more than any other SOP.
- SOP has connected the dots between departments and TAM.

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Figure 2-7 IAM's Conceptual Asset Management Model FTA Report No 0173

IAM approval for use by BSD/Metro 4-6-21.

Question to the Group

- What other sources of new equipment is there?

metro

Audience Q&A

Small Group Discussion Questions

Has your organization attempted to evaluate your TAM program and plan?

- *If so, please share your experience.*
  - What were the findings or takeaways?
  - What steps did you take to coordinate with others to plan for the implementation of any related improvements to your TAM program or plan?
  - What were the biggest obstacles?

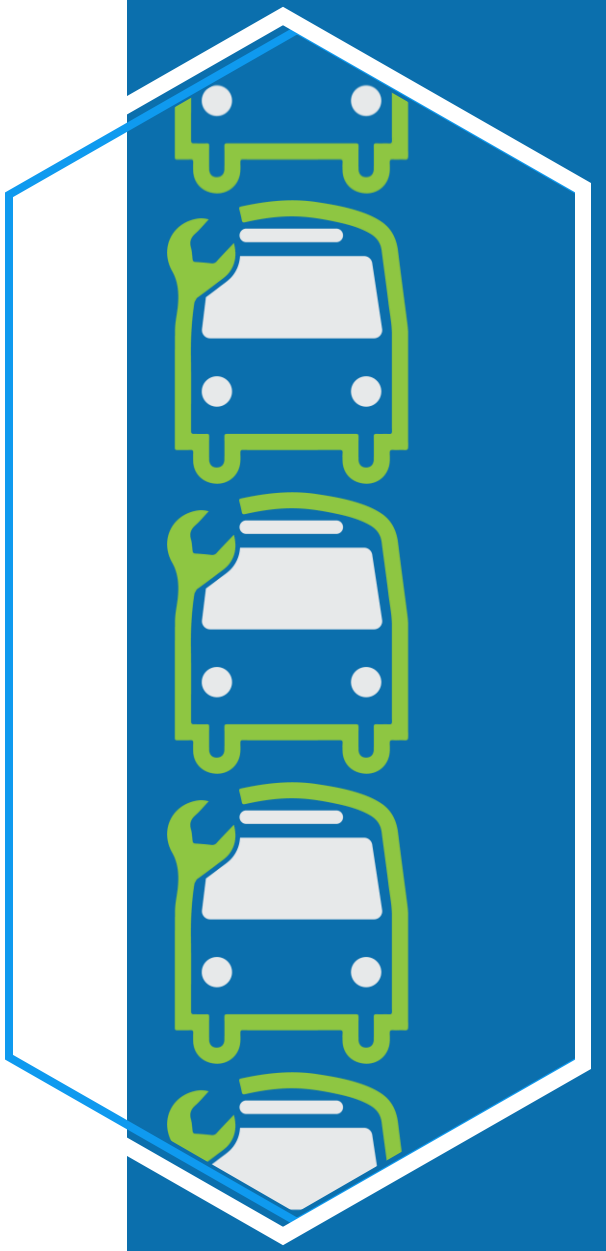
- *If not, please discuss:*
  - What has hindered assessment efforts,
  - Specific TAM areas in your organization that would benefit from an assessment, and
  - Any future plans for continuous improvement.

Report Back

CTA Keynote Speakers

Tom McKone, Chief Administrative Officer

Erin Fiorini, Director of Infrastructure
Capital Program Oversight



U.S. Department of Transportation
Federal Transit Administration

Transit Asset Management

Tom McKone

Chief Administrative Officer,
Chicago Transit Authority

Agenda

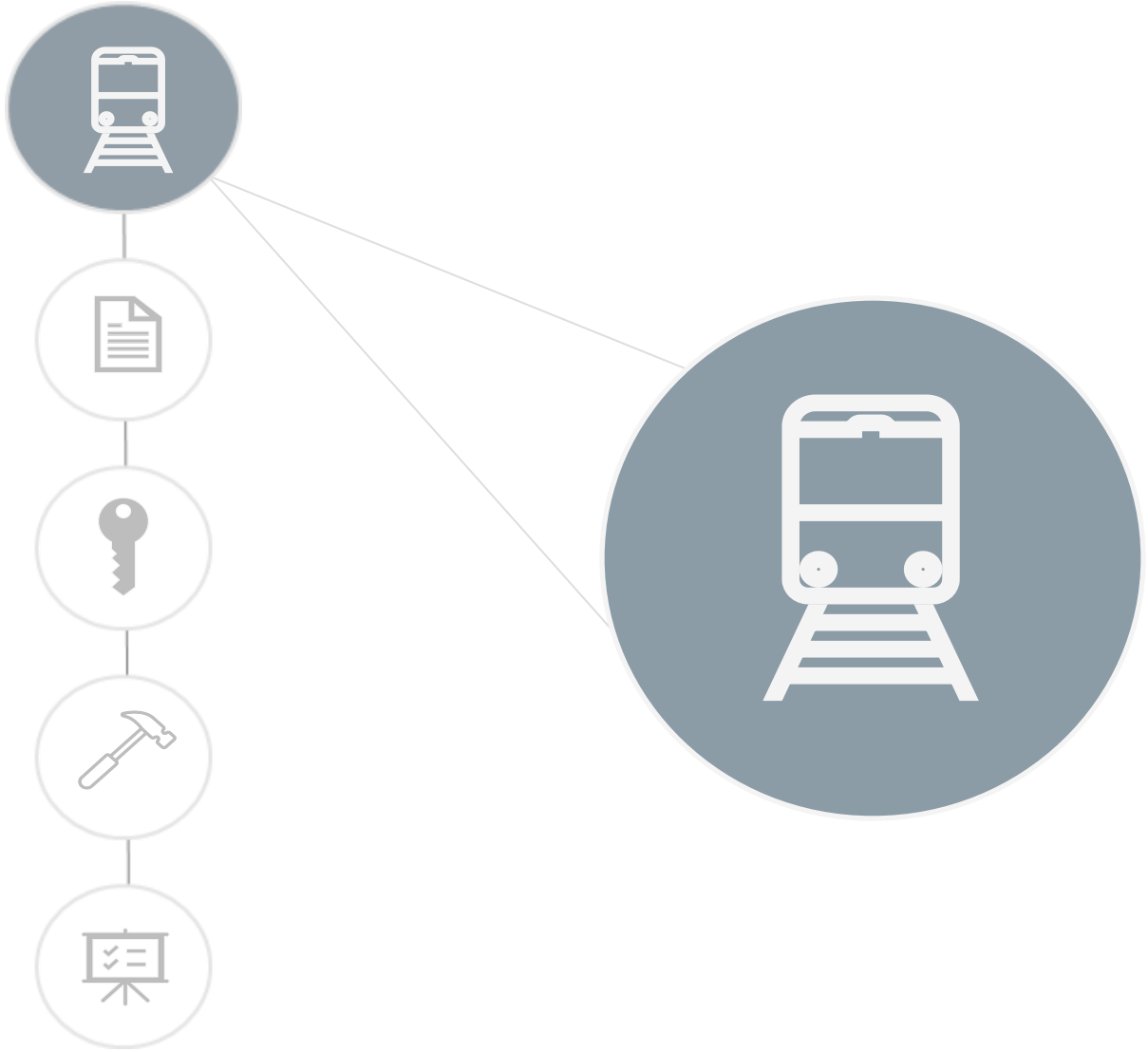
CTA Overview

TAM at CTA Overview

TAM Key Components

Projects

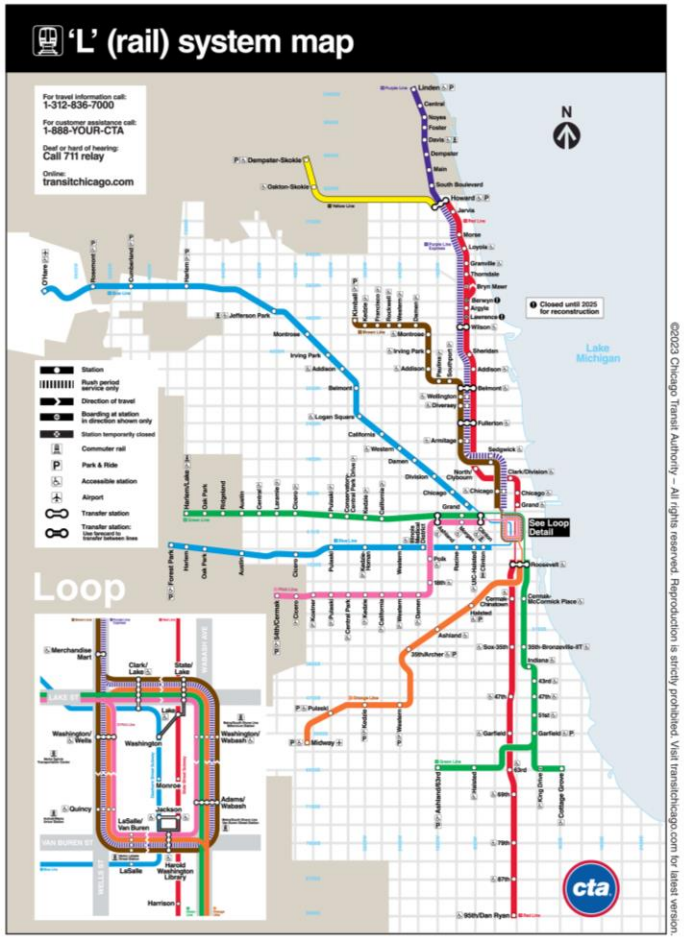
Conclusion



CTA Overview

CTA Overview

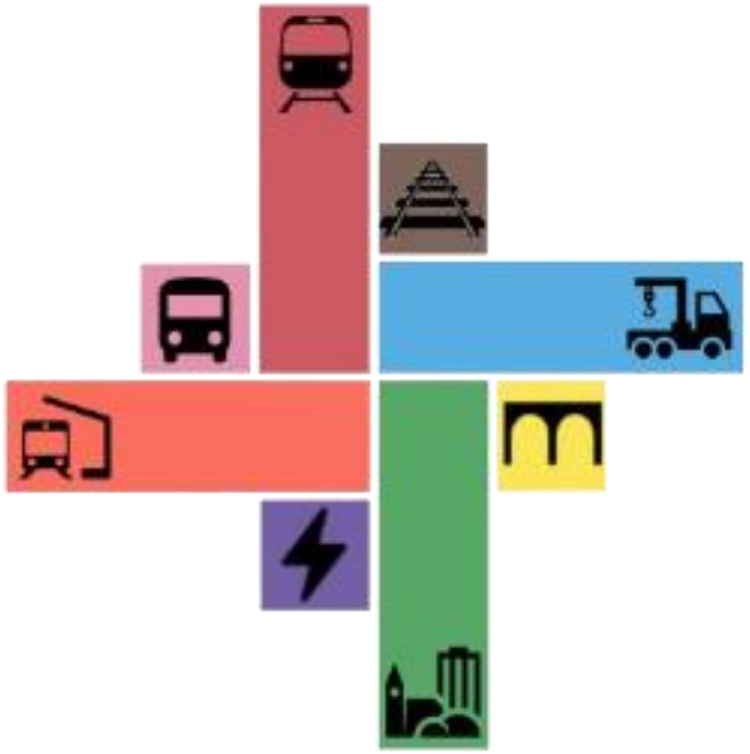
- **2nd largest** in the nation, serving 3.2M residents
- **Extensive coverage**: 310 sq. miles, including Chicago and 35 suburbs
- **Robust network**: 8 rail lines / 145 rail stations and 127 bus routes / approx. 11,000 bus stops
- **Impressive fleet:** 1,500 rail cars, 1,900 buses
- **Vital commuter lifeline:** 912.7k avg weekday riders (2024)
- **Significant impact**: 279.7m riders annually (2023)
- **Critical regional support:** Links to Pace and Metra
- **Major contributor:** 81% of public transit trips in the six-county area
- **Accessibility:** 24/7 rail service, with connections to two airports



TAM at CTA

CTA TAM Overview

- The CTA has a TAM business model that prioritizes and manages assets to minimize the total cost of owning and operating them while delivering the desired service levels. In doing so, we increase the ability to:
    - Operate safely
    - Meet regulatory and statutory obligations
    - Significantly reduce the cost of managing assets over their lives



CTA TAM Overview

2009 - 2016

Development of a regional capital needs analysis and Capital Optimization Support Tool (COST Model)

2012 - 2013

CTA conducted Facilities Condition Assessments at maintenance facilities and substations

2012

CTA began to re-implement the Infor-based work order system, to migrate data into a single enterprise asset management system

2016 - 2017

CTA retained WSP USA, Inc. to assess CTA's asset management practices and helped to develop CTA's first TAM Plan

2018

CTA issues TAM / SGR Policy via Executive Order and a dedicated Transit Asset Management team is established and staffed & the first FTA-compliant TAM Plan is issued

2022

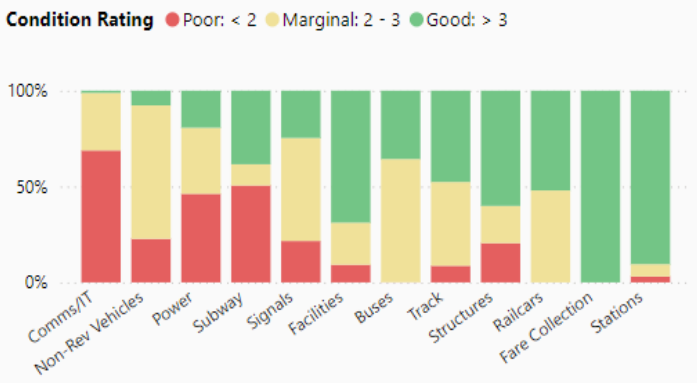
Quadrennial TAM Plan update completed and reissued

State of Assets

State of Assets

The condition ratings used in this report are generated by the RTA's COST Model: an altered version of the FTA's TERM Lite Model. All values assume there are no replacements or rehabilitations unless otherwise stated. All values are current unless otherwise stated.

Current Condition Rating Distribution by Asset Type

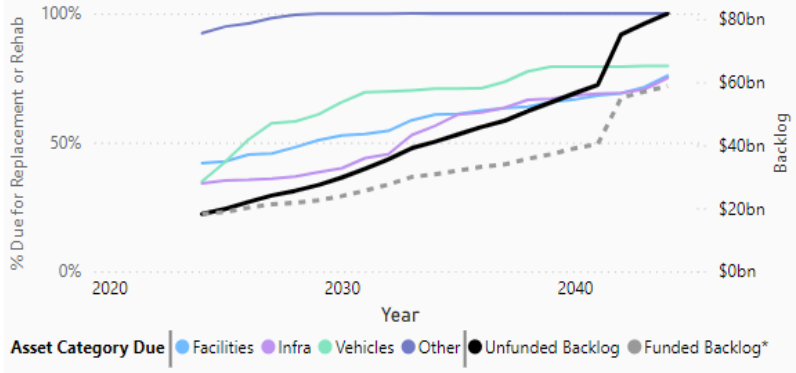


37%
Assets Exceeding ULB

$18bn
Total Backlog

3.08
Avg Condition Rating

Projected % of Assets Past Useful Life and Total Backlog by Year

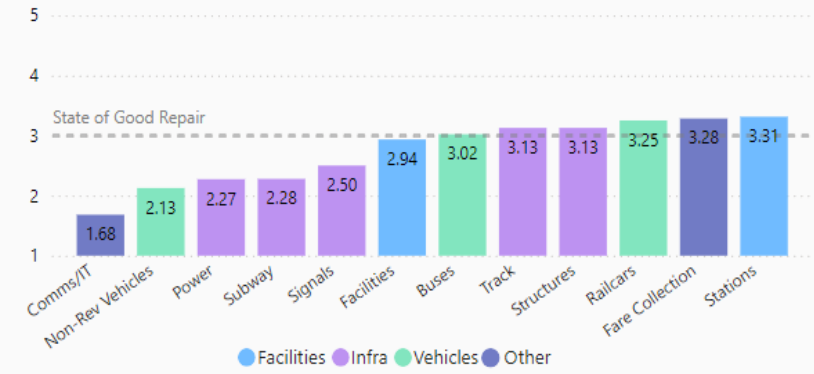


*This backlog was calculated using a funded scenario in which the CTA receives $909M, the average funding received from 2009-2022.

Current Backlog by Asset Type

Asset Type	Backlog
Structures	$6,985M
Railcars	$2,488M
Power	$1,900M
Track	$1,872M
Facilities	$1,291M
Signals	$1,024M
Stations	$822M
Subway	$744M
Buses	$707M
Comms/IT	$197M

Current Average Condition Rating by Asset Type

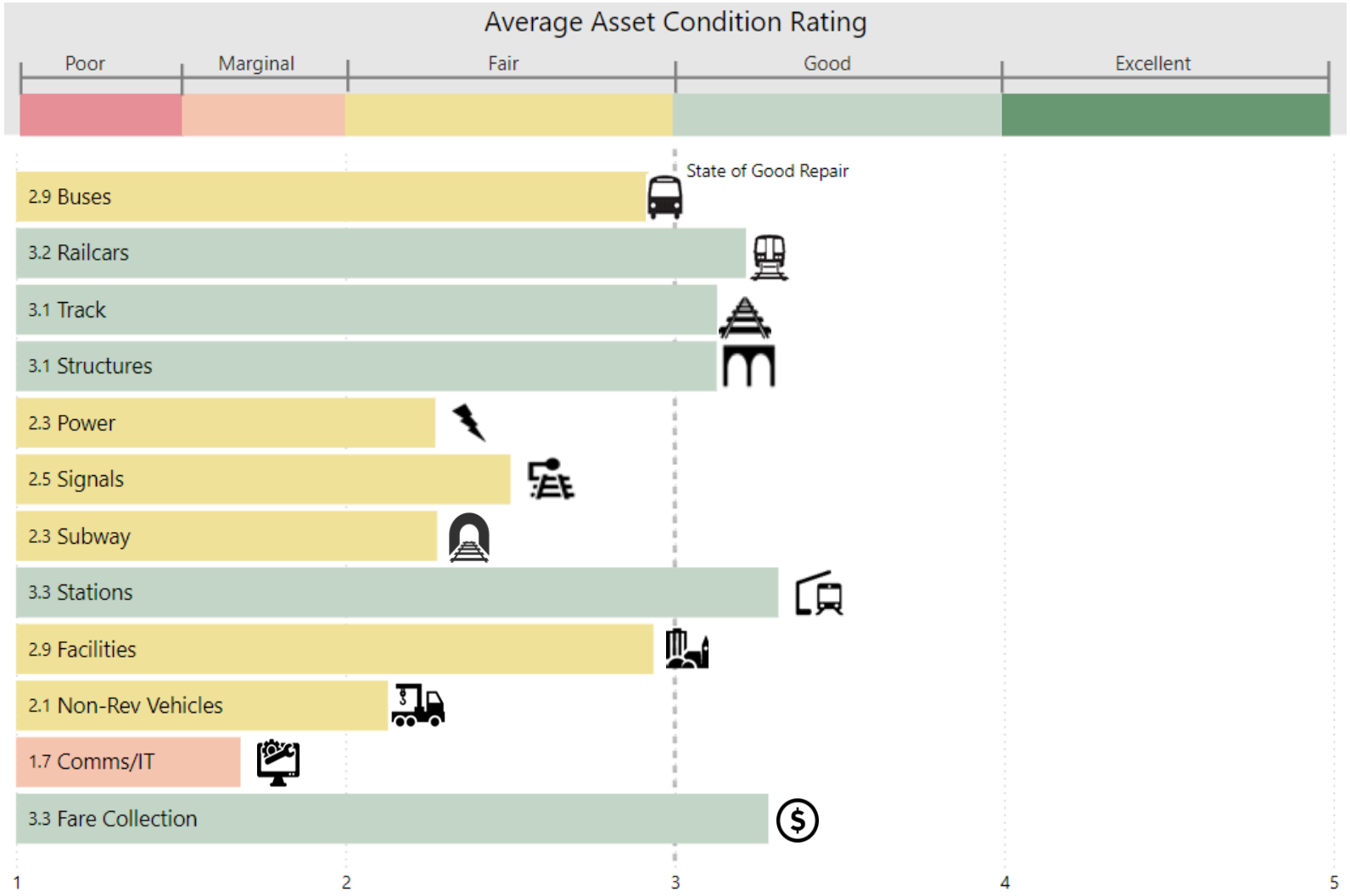


*Infrastructure and Comms/IT data is still being finalized

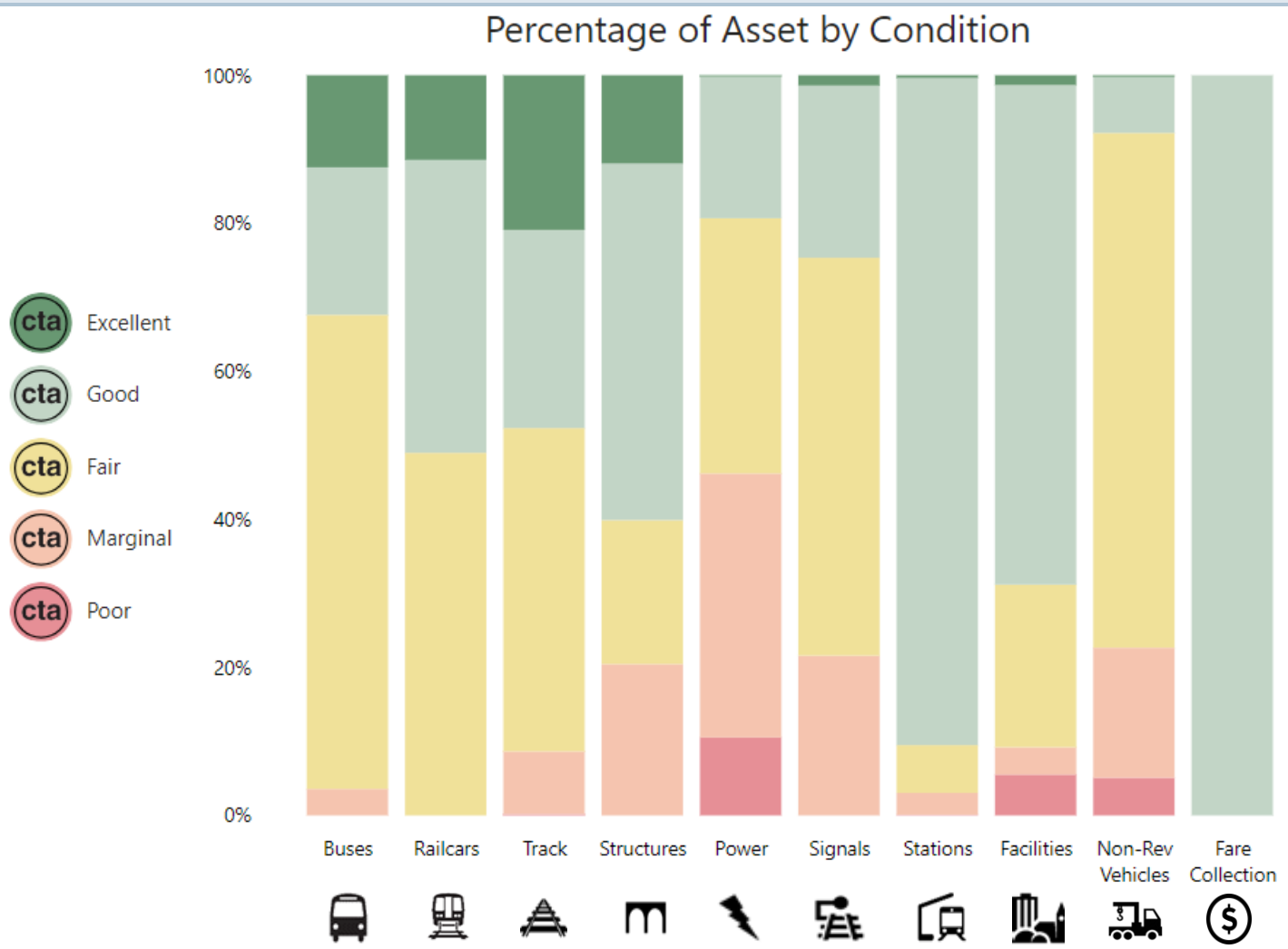
Current Backlog by Branch

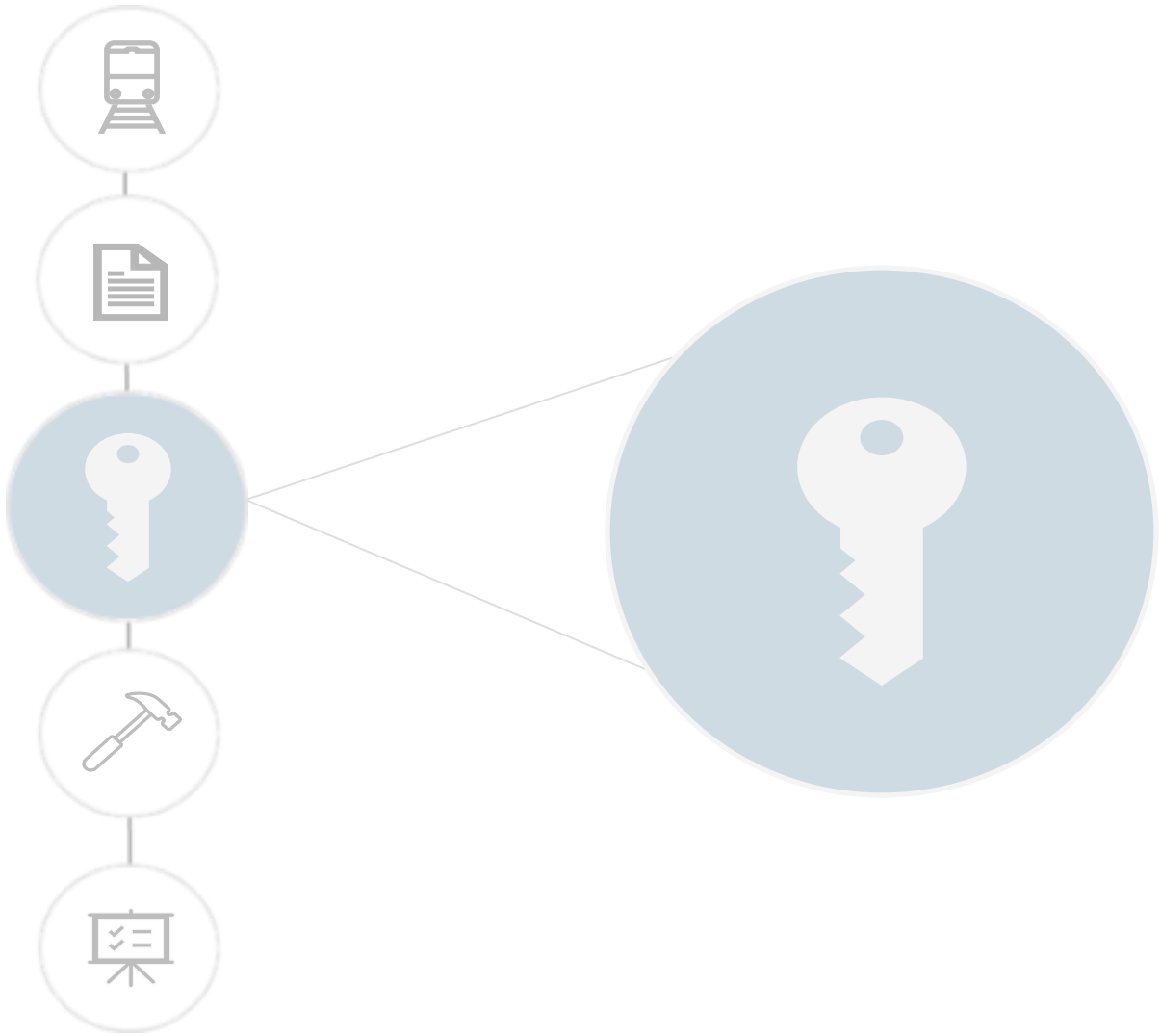
Branch	Facilities	Infrastructure	Other	Vehicles	Total
System	$480M	$0M	$102M	$3,375M	**$3,957M**
North Mainline	$98M	$2,846M	$9M	$0M	**$2,952M**
Ravenswood	$133M	$2,681M	$8M	$0M	**$2,822M**
Englewood	$129M	$1,243M	$1M	$0M	**$1,374M**
O'Hare	$267M	$1,044M	$14M	$0M	**$1,325M**
Evanston	$144M	$1,054M	$4M	$0M	**$1,201M**
Congress	$149M	$696M	$7M	$0M	**$852M**
Midway	$11M	$695M	$8M	$0M	**$714M**
Lake	$144M	$424M	$7M	$0M	**$574M**
Skokie	$14M	$468M	$2M	$0M	**$484M**
Dan Ryan	$203M	$239M	$6M	$0M	**$448M**
State Subway	$21M	$337M	$5M	$0M	**$363M**
Dearborn Subway	$22M	$254M	$6M	$0M	**$282M**

State of Assets



State of Assets





TAM Key Components

TAM Key Components

Inventory of Assets

- Cataloging all assets including buses, railcars, stations, equipment, and infrastructure

Condition Assessment

- Regular evaluations to determine the health and performance of assets

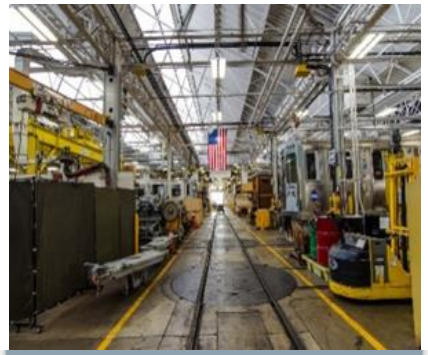
Decision Support Tools

- Software and analytical tools that assist in decision-making

Investment Prioritization

- Ranking and scheduling investments based on data-driven analysis

Inventory of Assets



Facilities

- 600+ assets - includes buildings, building components, equipment, storage yards

Stations

- 160+ assets - includes rail stations and parking lots

Guideway Elements

- 10,000+ assets - includes structures, trackwork, crossings, ties, turnarounds, etc.

Rolling Stock

- 3,800+ assets – includes revenue and non-revenue vehicles

Systems

- 1,200+ assets - communications, electrification, substations, utilities, etc.

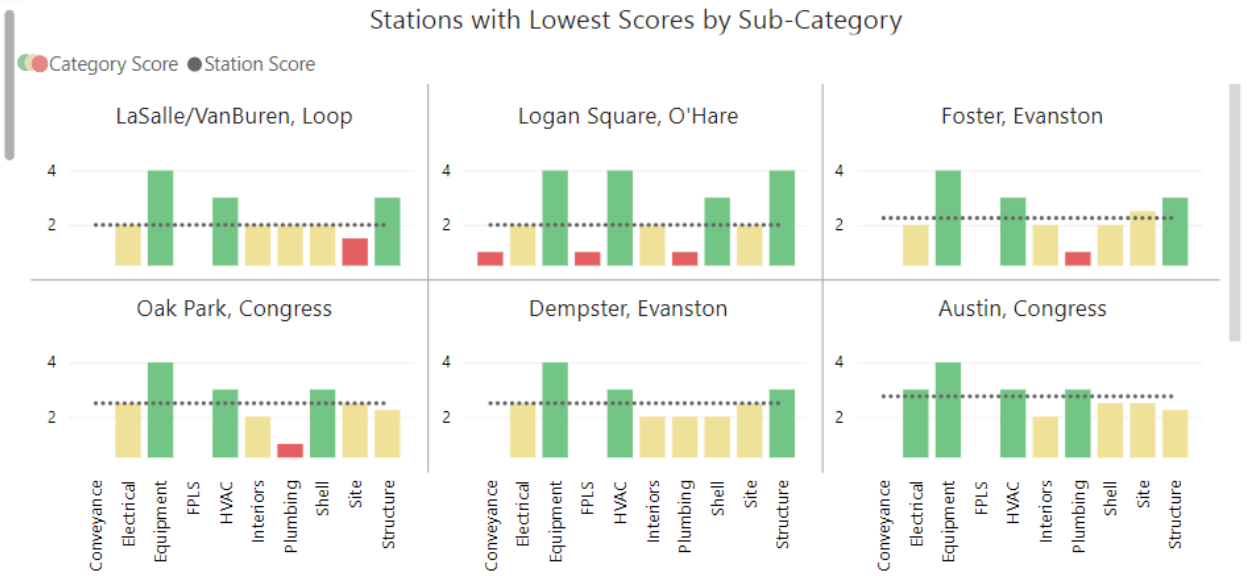
Facility Condition Ratings

Stations - Breakdown Categories

The condition ratings used in this report are generated by the CTA's Facility Condition Rating Report.

Return to Stations Summary

Branch	Name	Score	Age
Loop	LaSalle/VanBuren	2.00	127
O'Hare	Logan Square	2.00	54
Evanston	Foster	2.25	93
Evanston	Dempster	2.50	114
Congress	Oak Park	2.50	63
Englewood	Ashland/63rd	2.75	55
Congress	Austin	2.75	64
Congress	Harlem	2.75	64
Evanston	Main	2.75	114
Evanston	Noyes	2.75	93
Congress	Racine	2.75	66
Evanston	South Blvd.	2.75	93
Douglas	18th	3.00	31
South Mainline	35th-Bronzville-IIT	3.00	59
South Mainline	43rd	3.00	48
Dan Ryan	47th	3.00	55
South Mainline	47th	3.00	42
South Mainline	51st	3.00	28
Dan Ryan	63rd	3.00	55
Dan Ryan	69th	3.00	55
Dan Ryan	79th	3.00	55
Dan Ryan	87th	3.00	55
Loop	Adams/Wabash	3.00	128
O'Hare	Addison	3.00	54



Breakout Score Definitions

Conveyance Score Escalators, Elevators

Electrical Score Electrical Service & Distribution, Lighting Systems

Equipment Score Fare Collection Equipment

FPLS Score Fire Alarm and Detection System

HVAC Score HVAC

Shell Score Headhouse Roofs, Exterior Shell, Exterior Paint, Canopies & Gutters

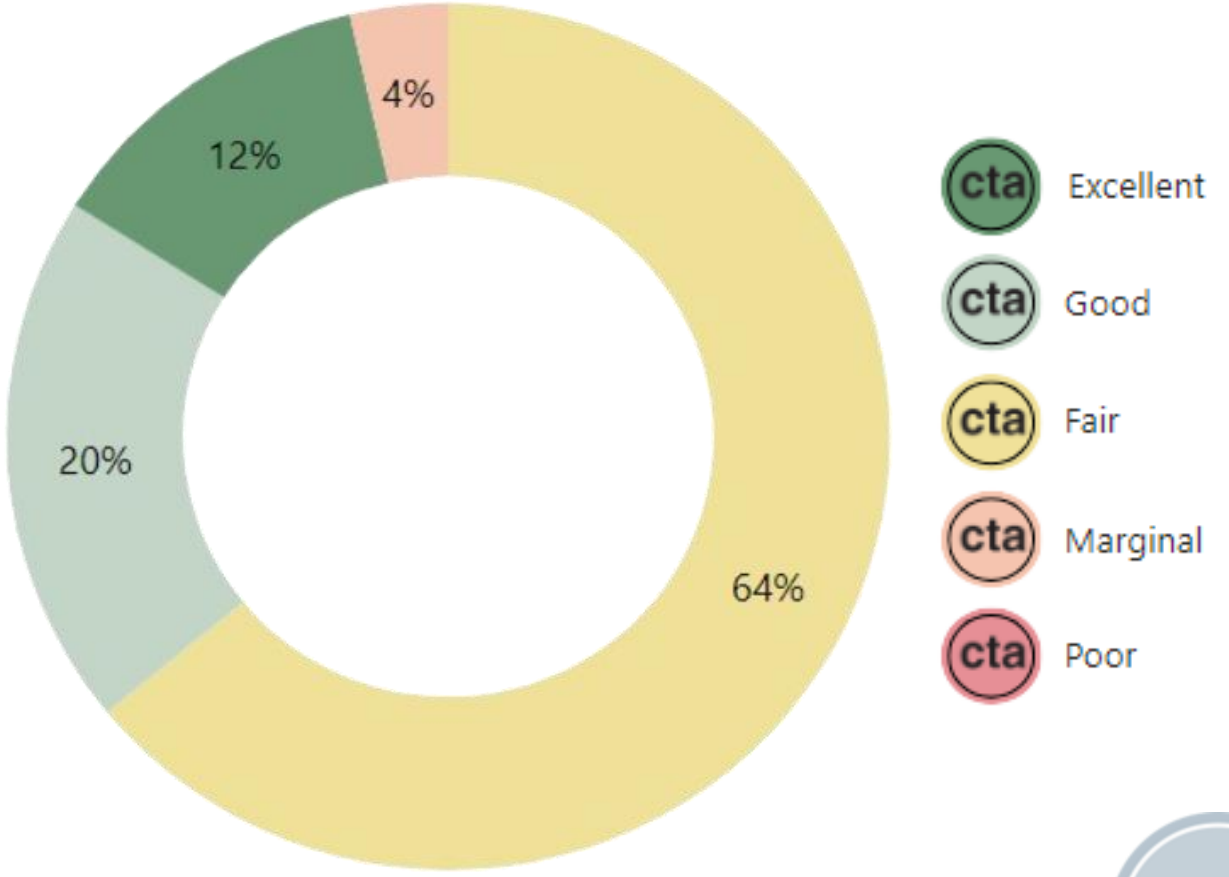
Interiors Score Flooring & Walls, Interior Paint, Platform Tactile Edge, Rail Terminal Interior Finishes, Platform Deck

Site Score Pavement, Bus Canopy Paint/Finishes, Drainage, Exterior Lighting, Signage, Perimeter Fences & Gates

Structure Score EAM Structure/Bent Inspection, Crash Barrier Walls, Elevator Shafts, Escalator Enclosures, Station House/Enclosure/Mezzanine, Platforms, Ramps, Stairs, Subway Tubes, Cross-Over Bridges

Bus Condition Distribution

- 2,155 total buses
- 1,847 40-foot buses and 308 60-foot buses
- 61% of our buses were put into service between 2000 and 2009
- Plan to purchase 500 40-foot buses to replace the oldest of the fleet



Bus Fleet Reliability

New Vehicles

- Over 50% of the 40-foot buses will age out over the next few years. This requires a major ongoing replacement program of 100 - 150 buses per year. Additionally, 100% high-capacity articulated 60-foot buses will age out by 2027.

Fleet w/o Replacement and Retirement

	2024	2025	2026	2027	2028
% of Fleet Past ULB	30.1%	45.1%	57.9%	61.3%	61.3 %
Average Fleet Age (Years)	12.2	13.2	14.2	15.2	16.2

Fleet w/ Replacement and Retirement

	2024	2025	2026	2027	2028
% of Fleet Past ULB	23.4%	31.7%	40.5%	38.4%	29.3%
Average Fleet Age (Years)	11.1	11	11.3	11.3	10.4

Existing Vehicle Maintenance and Overhaul

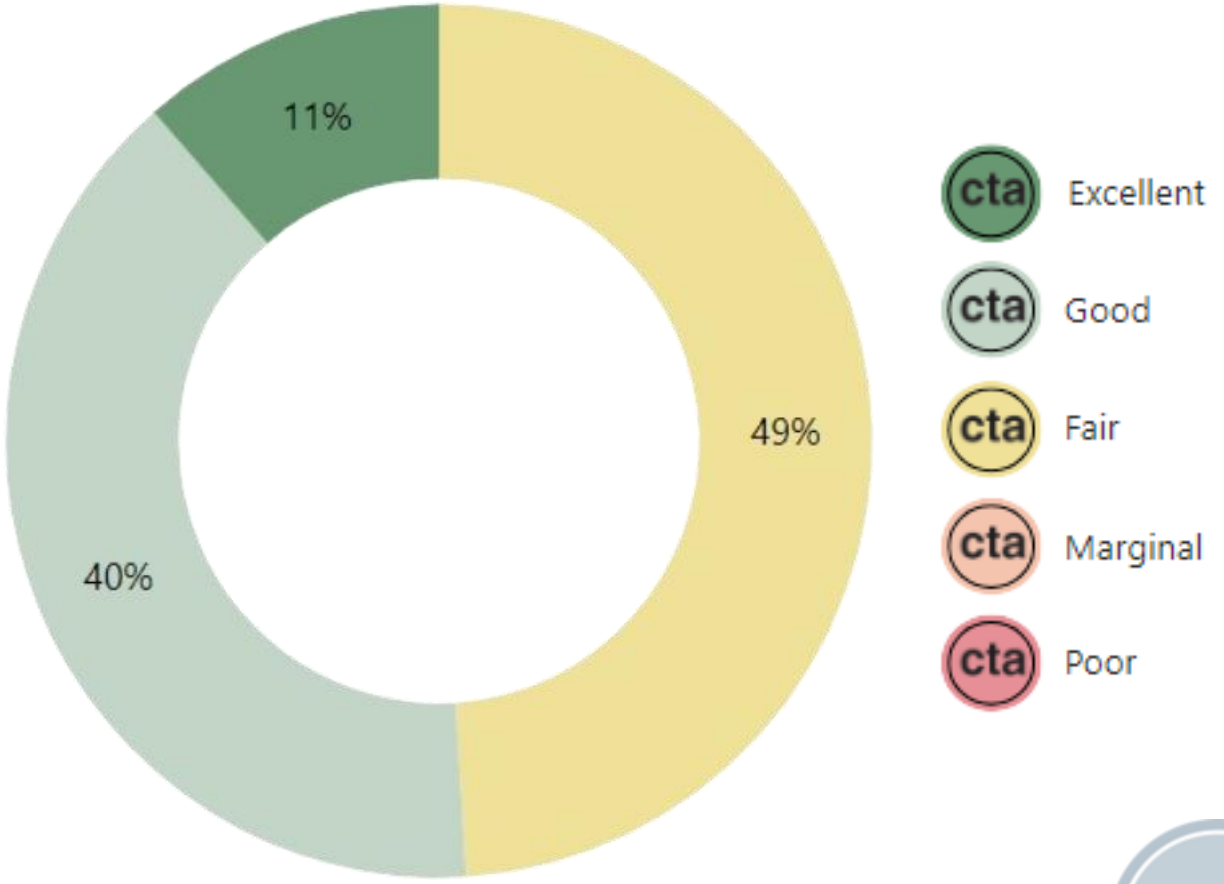
- Transit buses require an overhaul after 6-7 years to ensure reliability over their full 14-18 year lifespan.

New Electric Bus Technology

- 200 fully electric buses and additional charging facilities

Railcar Condition Distribution

- 1,520 total railcars
- 48% of CTA's railcars were put into service between 1981 and 1994
- 49% of fleet has a fair condition rating and will need to be replaced or overhauled soon
- Plan to purchase 800 railcars to replace the oldest of the fleet



Rail Fleet Reliability

New Rail Cars

- 26% of railcars are currently past their useful lives. This requires a major ongoing replacement program of 100 railcars per year.
- An additional 22% of railcars will surpass their useful lives by 2028.

Fleet w/o Replacement and Retirement

	2024	2025	2026	2027	2028
% of Fleet Past ULB	31.0%	31.0%	36.1%	48.0%	48.2%
Average Fleet Age (Years)	22.9	23.9	24.9	25.9	26.9

Fleet w/ Replacement and Retirement

	2024	2025	2026	2027	2028
% of Fleet Past ULB	26.1%	19.5%	17.9%	23.7%	21.1%
Average Fleet Age (Years)	20.6	18.8	17.1	15.6	15.1

Existing Rail Car Overhaul

- Transit rail cars require quarter-life and life-extending overhauls to ensure reliability over their full 31-34 year lifespan.

New Technology

- Replace obsolete video system on rail cars to ensure safety and security of customers and employees.

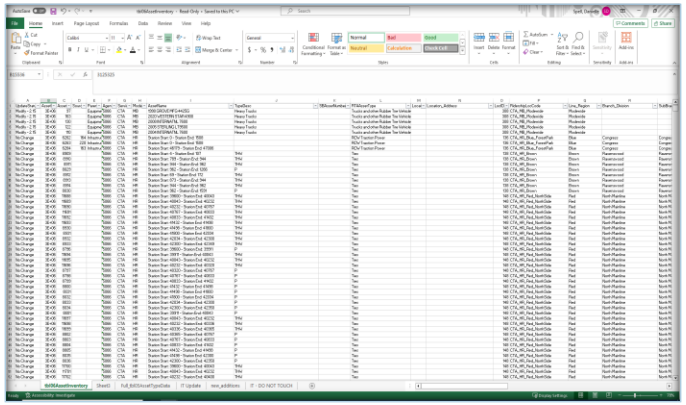
Decision Support Tools

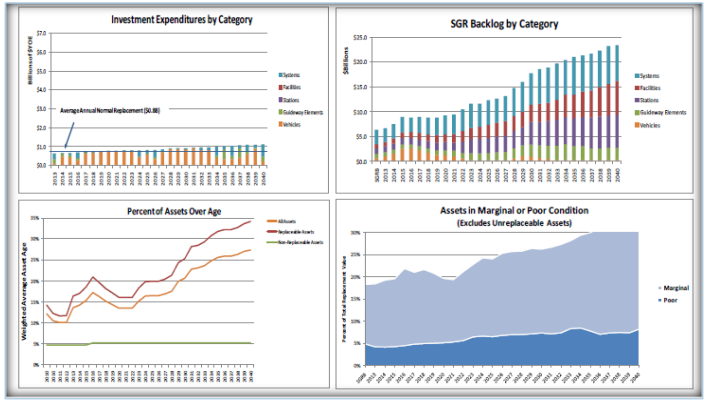
Data visualizations and dashboards are crucial tools to convey a large quantity of dense information to CTA asset managers. Such interactive tools may take the form of "canned" or built-in reports from EAM systems or may stand alone and draw on the underlying data from EAMs. The levels of development of such tools vary considerably within CTA by function and system.

The TAM Team primarily uses the following tools:

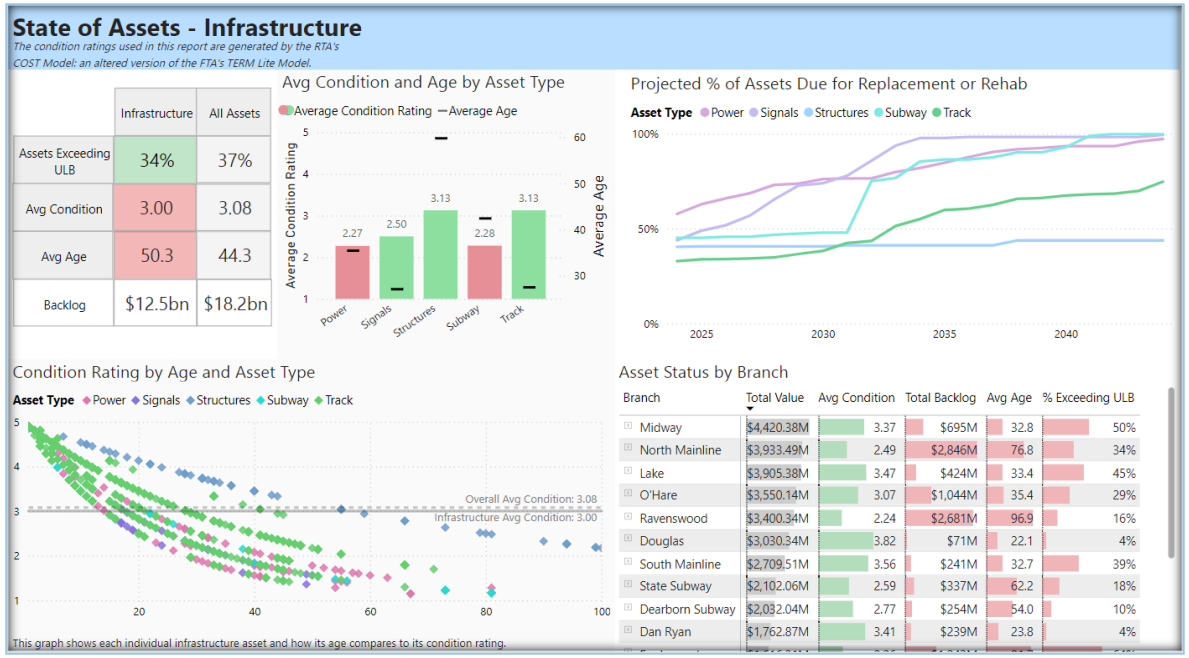
Decision Support Tools – RTA's COST Model

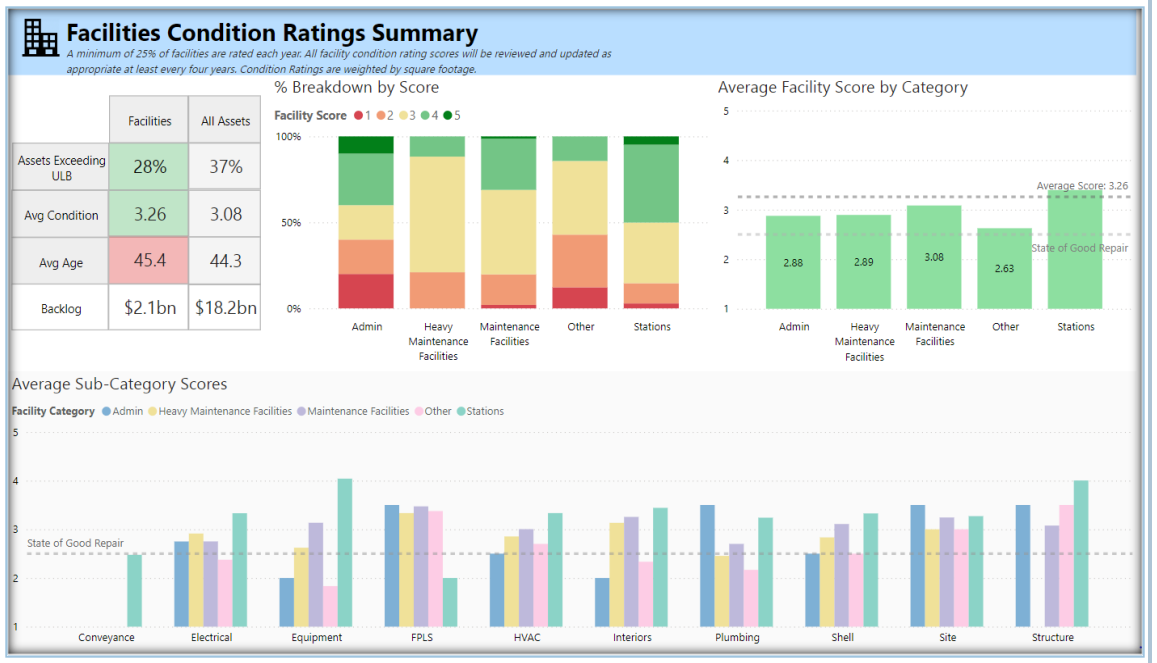
RTA's COST Model is an MS Access based analysis model (based on FTA's TERM Lite Model) designed to perform multiple analyses for RTA and its three Service Boards; CTA, Metra and Pace.





Decision Support Tools - PowerBI

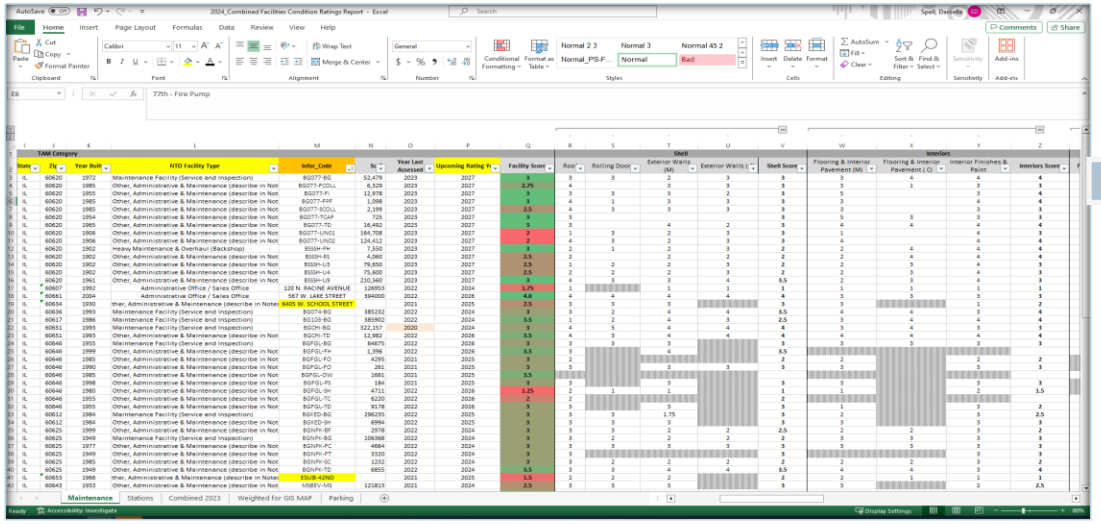


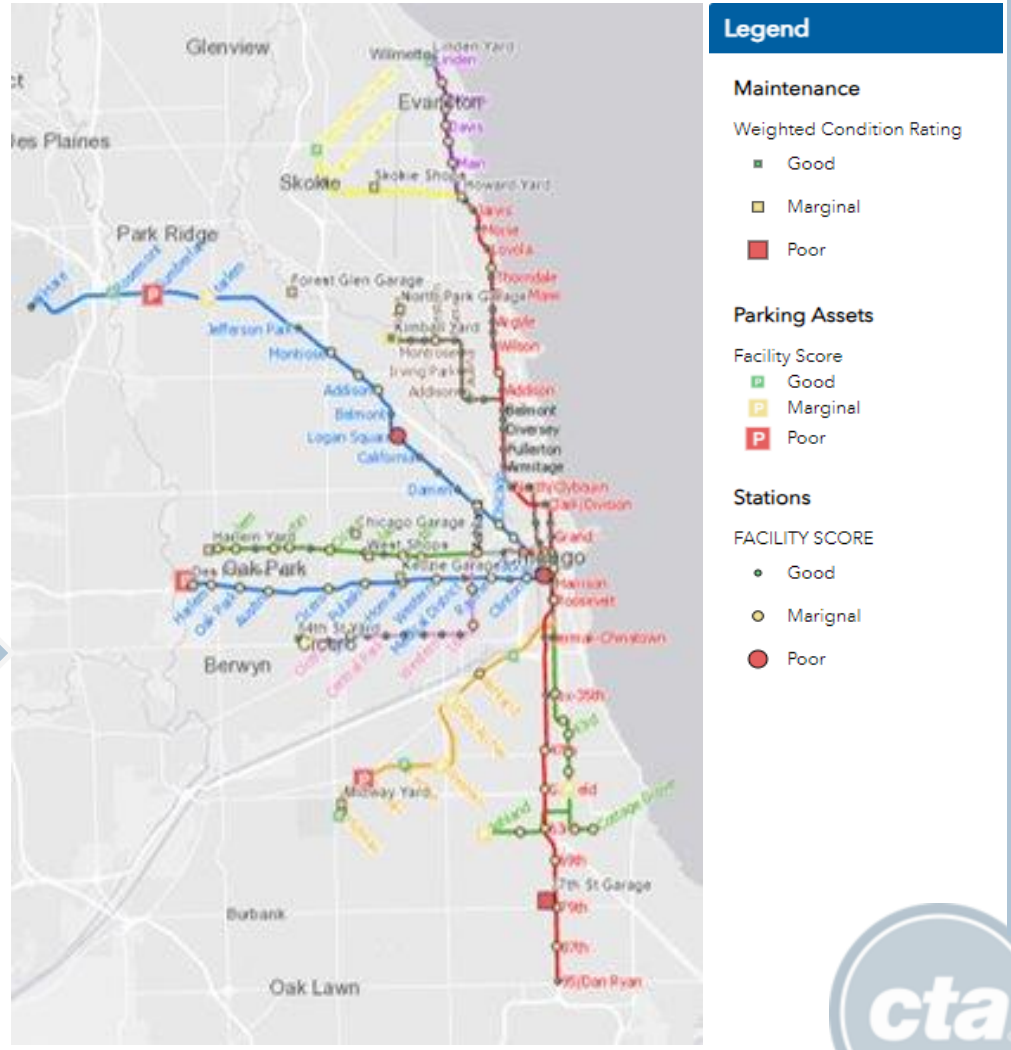


Decision Support Tools - Databases

Decision Support Tools - ArcGIS

The CTA maintains an internal GIS database to display geographic data. The TAM Team uses the data collected from the Facilities Condition Assessments to display conditions of maintenance buildings, stations, and parking facilities.

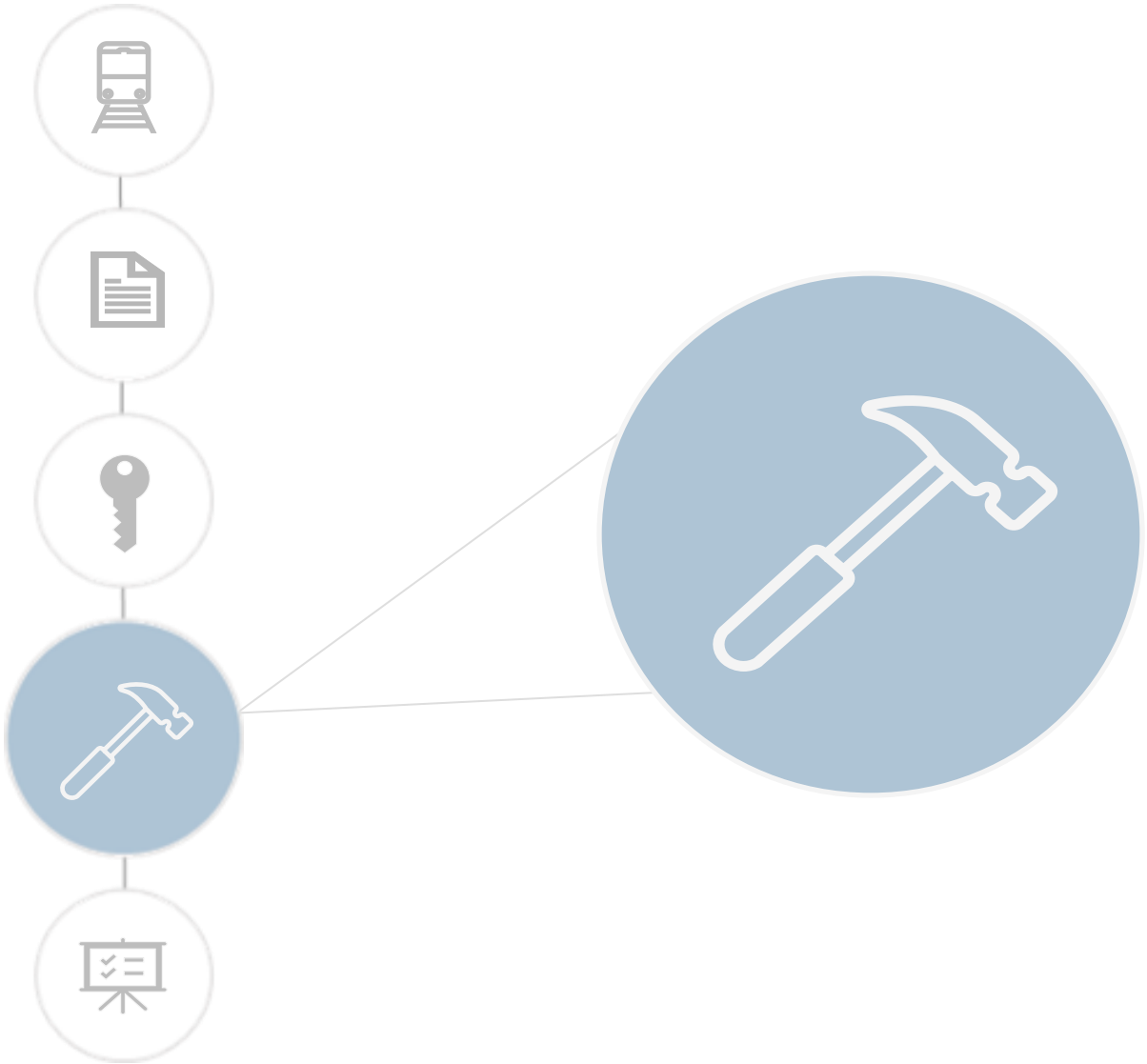




Decision Support Tools - Resulting Effects of Strategy

By using these support tools, TAM is able to:

- Open ongoing channels of communication with user groups to increase buy-in and engagement
- Help users better understand their data so they can focus their attention on areas of critical importance
- Streamline data processes that help to maintain control and keep data consistent
- Improve upon the data used for overall capital investment and SGR



Projects

Electric Buses Timeline

October 2014

CTA's first two all-electric buses (New Flyers) enter revenue service

June 2018

CTA enters into a contract for 20 more all-electric buses (Proterras)

April 2019

City Council adopts a resolution committing to 100% electrification of CTA's bus fleet by 2040

May 2019

Mayor Lightfoot's transition report endorses an all-electric bus fleet by 2040

August 2019

Bus Fleet Electrification Feasibility Study begins

October 2019

CTA receives approval for $39 million CMAQ funds to expand the electric bus fleet

January 2020

CTA's first six Proterra buses received

November 2020

Chicago/Austin charging station substantially complete

March 2021

Six Proterra buses entered revenue service in March 2021, Navy Pier charging station completed

Q4 2022

14 Additional Proterra buses to enter revenue service on Routes #63 and #66

February 2022

Three additional Proterra buses enter revenue service on Chicago Ave Route #66

Electric Buses

25 Electric Buses in Current Fleet

4 Bus Garages Equipped with Charging Facilities

4 Chargers at key layover/bus turnaround locations

\+

Lower Emissions
=
Improve Air Quality

$

Significant Savings in Fuel and Maintenance Costs

Electric Buses

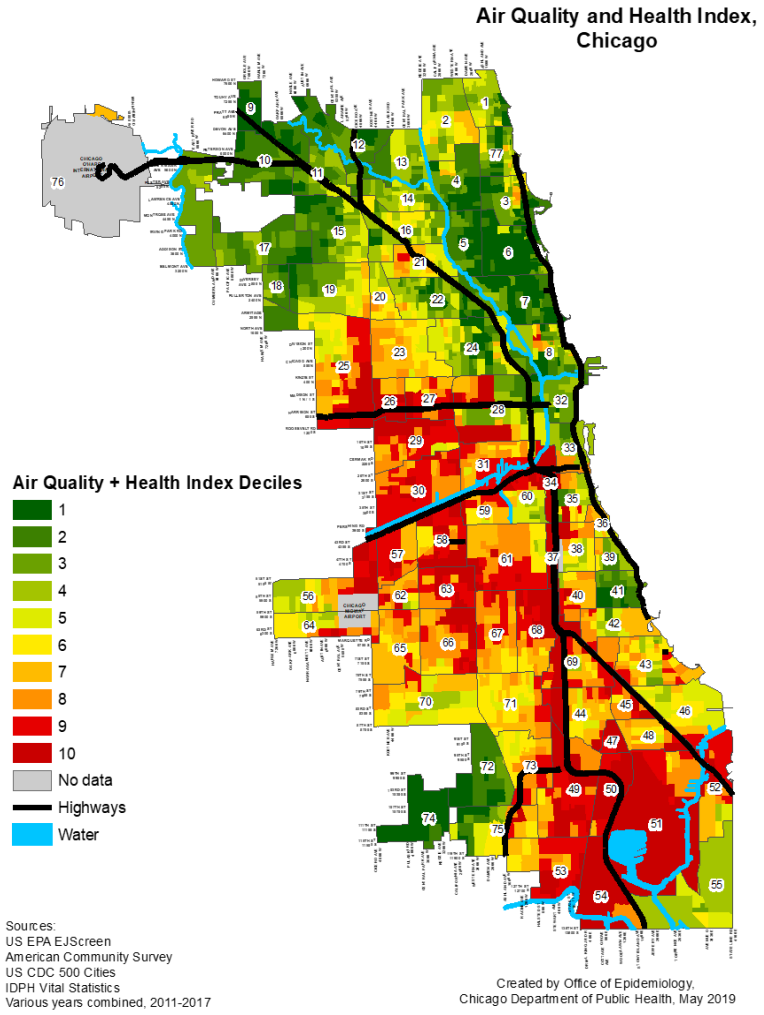
Moving Forward:

+ Additional Bus Purchases

⚒ Facility upgrades to accommodate bus electrification
- Construction of new garage by 2032
- Significant modernization of two additional garages between 2035 and 2038

Prioritization Consideration:

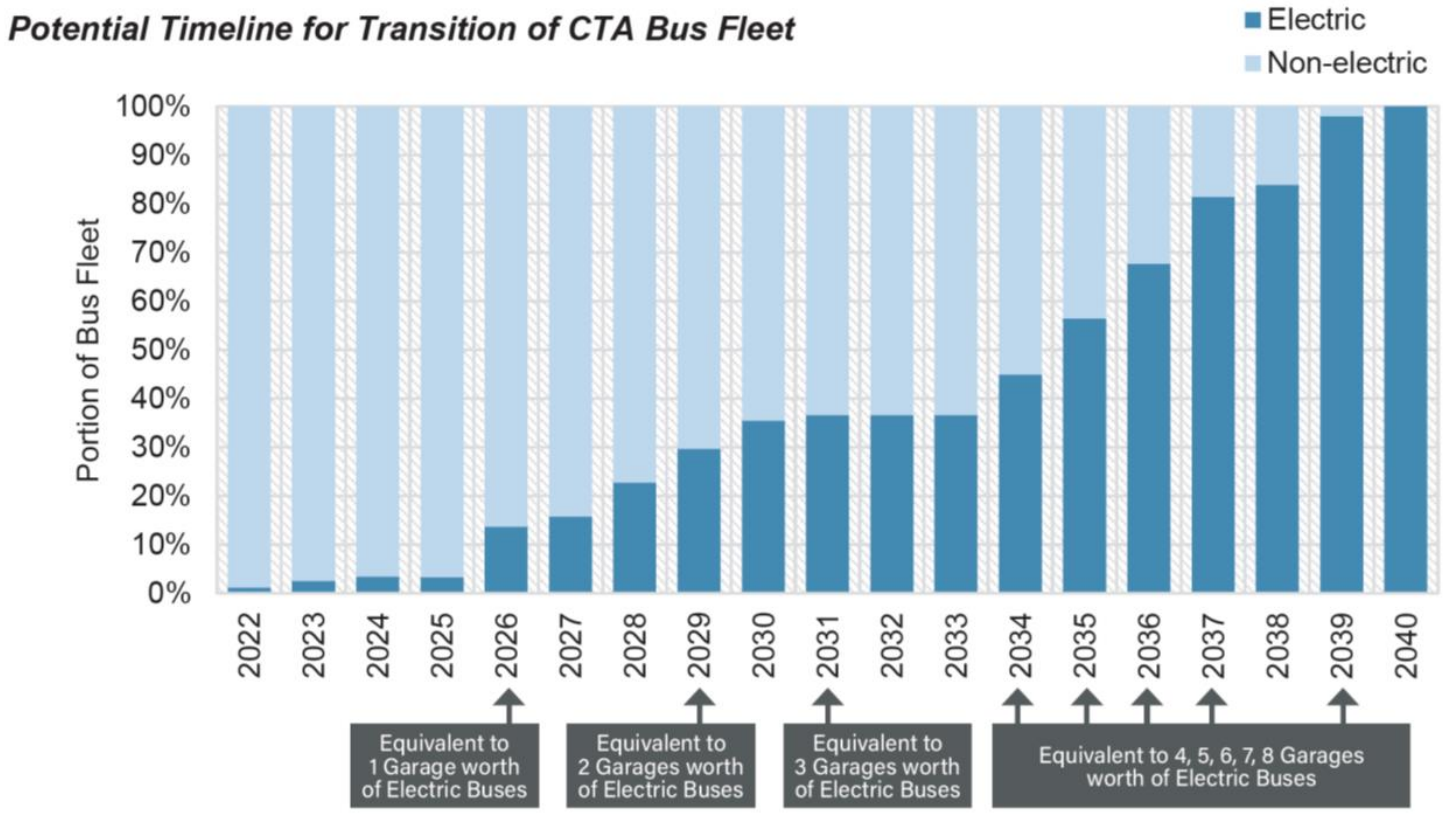
The order in which facilities are upgraded is based on equity considerations and the need to space out major construction projects.



Electric Buses

The bus transition timeline is driven by the availability of e-bus-ready garage capacity, including installed charging infrastructure.

Figures represent purchases that would be needed to replace all buses after 14 years of age.



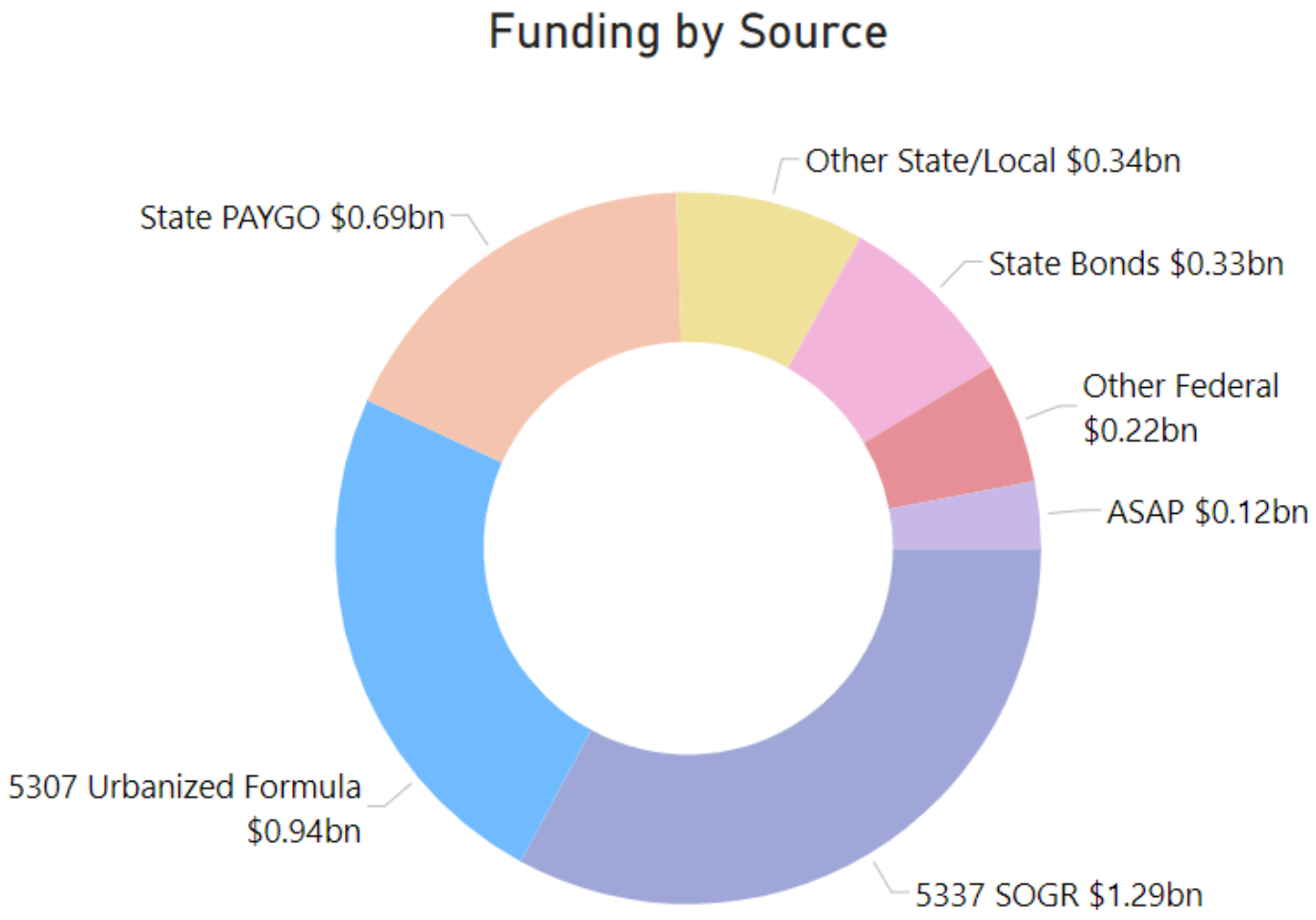
CTA Funding Sources 2023-2027

Federal Funding: $2.56B (65%)

- 5307 Urbanized Formula
- 5337 SOGR
- ASAP
- Other

State / Local Funding: $1.36B (35%)

- State PAYGO
- Other
- State Bonds



Red Ahead

The Red Ahead program is a comprehensive initiative for maintaining, modernizing, and expanding Chicago's most-traveled rail line. The program includes three major improvement projects: Red Line Extension, Red Line South (Completed 2013), Red and Purple Line Modernization (RPM)

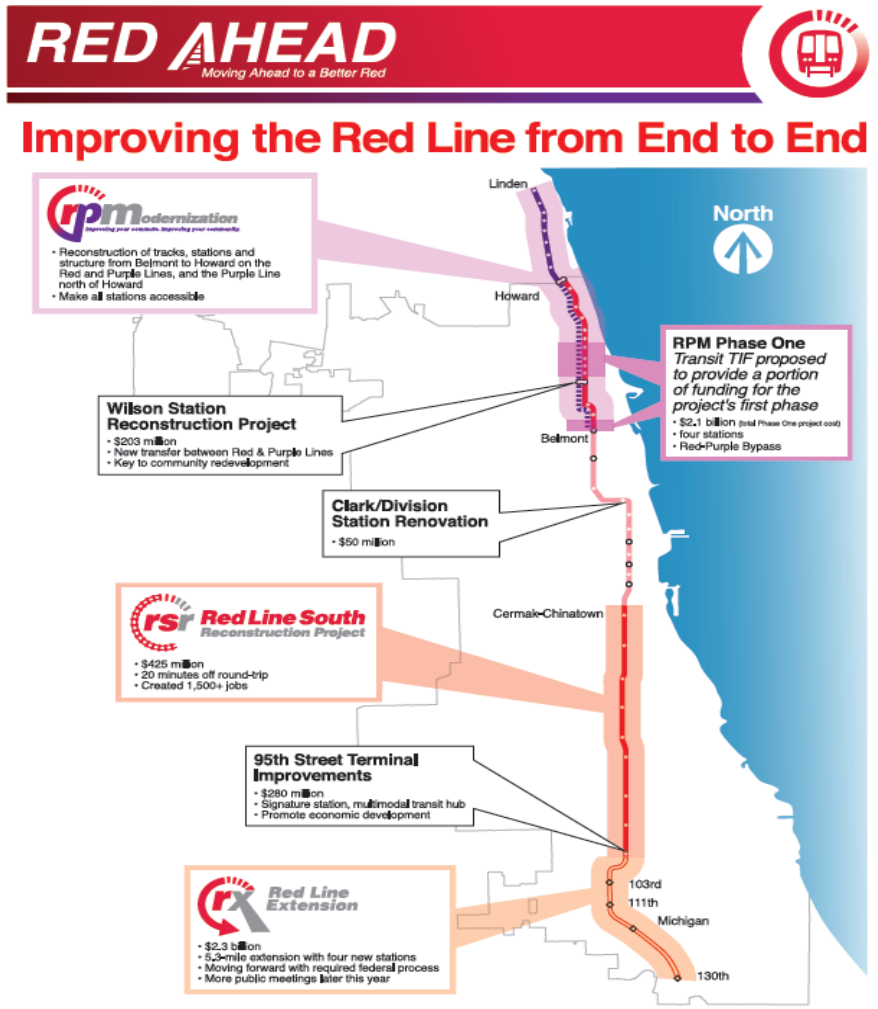
BUILDING A NEW CHICAGO

~26 miles long
~5 miles would be added by the extension

4 stations would be added by the extension

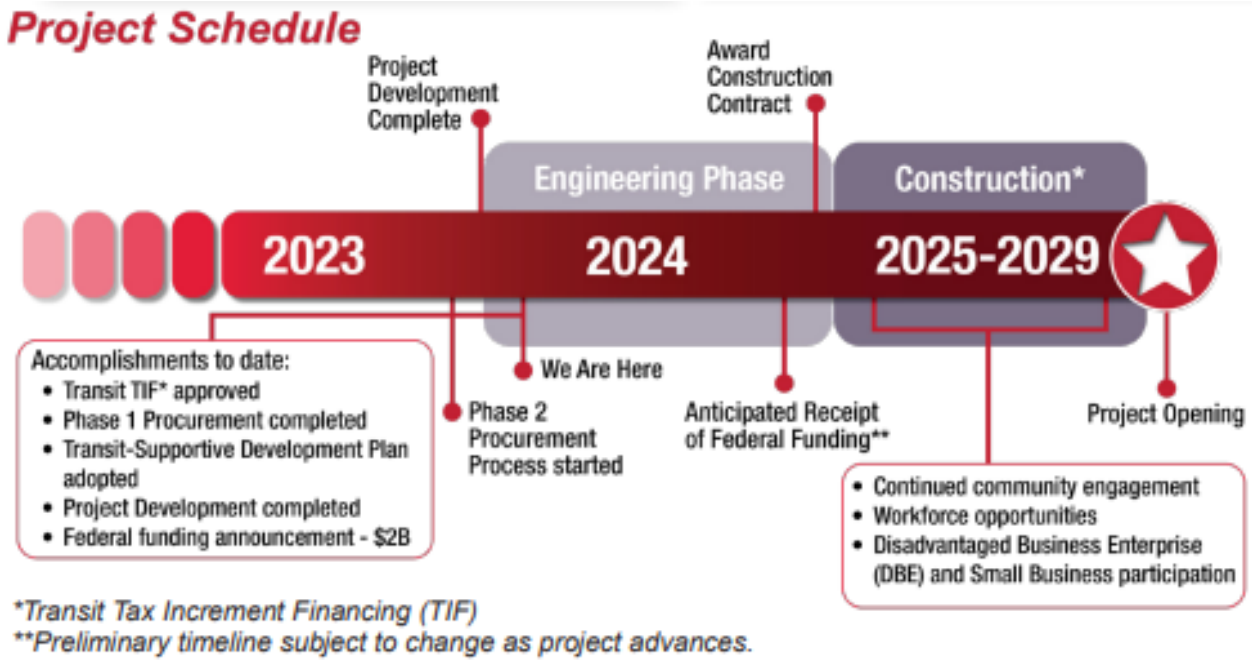
Red Ahead

- Red Line South – $425 Million track reconstruction and station rehabilitation project completed in 2013
- Clark and Division – $86 Million new accessible entrance and renovation completed in 2015
- 95th St. Terminal Reconstruction – $280 Million expansion and reconstruction completed in 2018
- Wilson Station – $203 Million project completed in 2018
- Red/Purple Modernization – $2.1 Billion Phase One project to be completed in 2025; Phase Two costs and schedule TBD
- Red Line Extension - $3.6 Billion extension from 95th to 130th Street (targeted opening 2029)



Red Line Extension Overview

Extending the Red Line 5.6 miles and includes four new fully-accessible stations and is a vital part of our economic initiative.



Equity-Focused RLE Project Highlights

- **Target Area Focus:** RLE serves a region with higher poverty and unemployment rates.
- **Commute Improvement:** Up to 30-minute time savings from 130th to the Loop.
- **Enhanced Job Access:** 46% more jobs accessible within a one-hour commute.
- **Economic Collaboration:** CTA and Chicago Department of Planning and Development jointly drive economic investment around future stations.
- **Critical Extension:** RLE extension is a vital part of this economic initiative.
- **Economic Opportunities:** Billions in economic opportunities and thousands of job prospects.
- **Federal Funding Potential:** Unique opportunity for significant Federal funding under the Biden Administration's equity-focused projects initiative.

RLE Strategic Plan Award

The CTA's Red Line Extension (RLE) Project "Transit-Supportive Development Plan" has won the 2023 Strategic Plan Award the American Planning Association – Illinois Chapter (APA-IL).

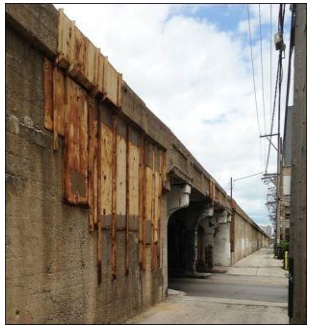
This notable award recognizes the CTA's vision and plan for transformational community impact related to the RLE project, which will build a 5.6-mile Red Line extension to 130th Street from 95th Street.

Red and Purple Line Infrastructure Overview

- **Century-Old Legacy:** Red Line North has a rich history spanning over 100 years and has urgent reconstruction needs.
- **Accessibility Gap:** Only 6 of 14 stations are fully accessible, creating a significant gap.
- **Outdated Signals:** Signal system in use for over 50 years.
- **Capacity Constraints:** Current infrastructure at maximum capacity; unable to handle more trains.
- **Peak Load Issues:** Overcrowding at key points (Belmont, Fullerton, North/Clybourn, Clark/Division).
- **Impact on Reliability:** Overcrowding leads to delays, affecting Red Line reliability.

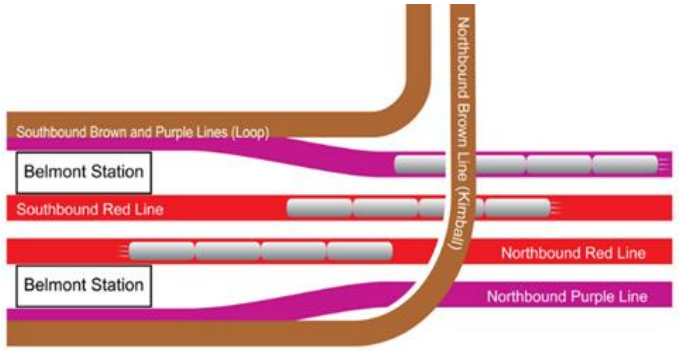
Crumbling viaduct at Hollywood Ave.

Crumbling retaining wall near Bryn Mawr



Crowding conditions at Belmont

RPM Bypass Project: 2019-2025



New Red-Purple Bypass

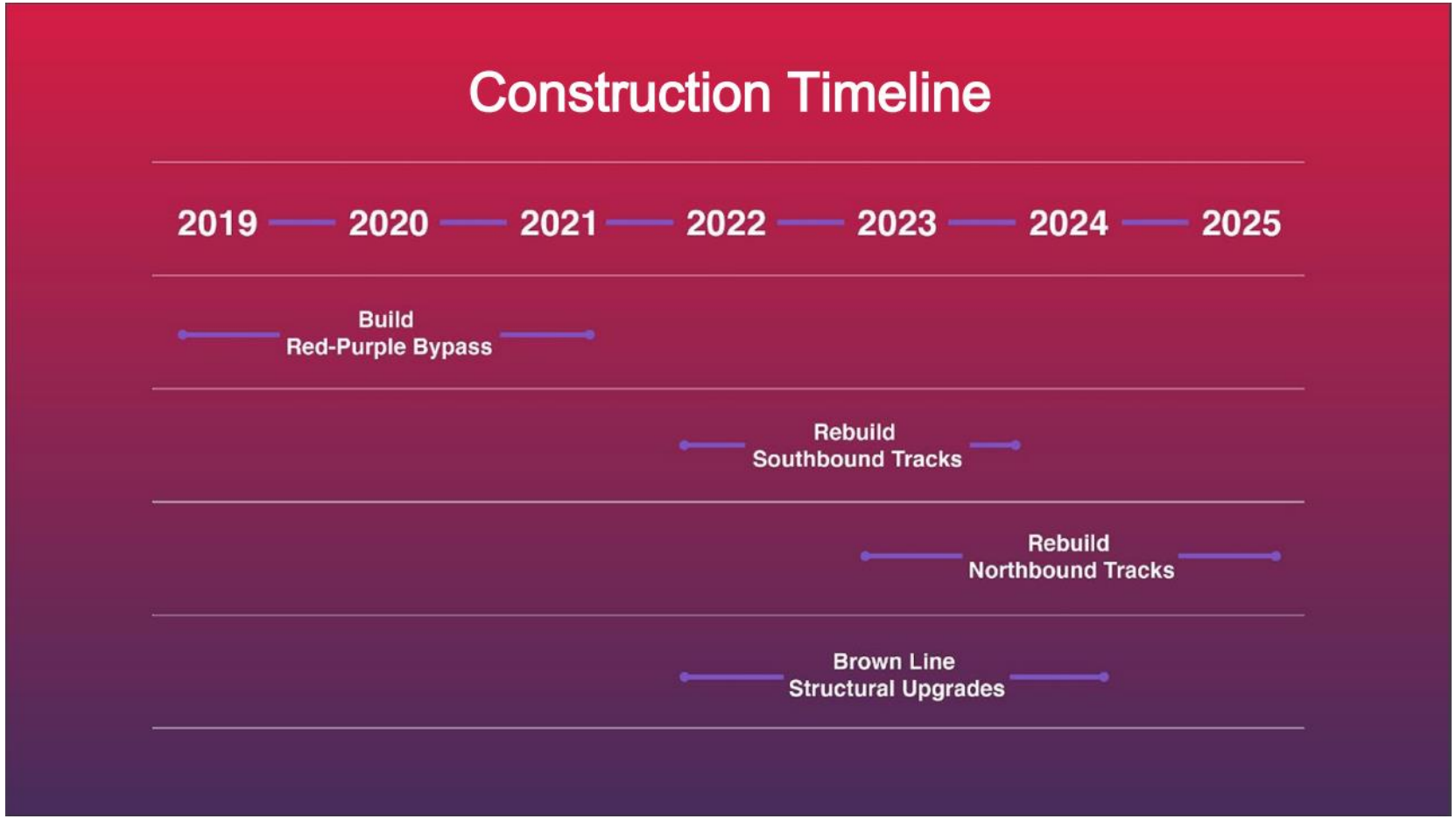
- A new rail bypass bridge for northbound
- Brown Line: New alignment, right
- New bypass, facing north, below in Oct. 2021

NEXT: North Main (Red & Purple) Line Reconstruction

- Red and Purple track structure realignment and reconstruction (2021-2025)

- New Red and Purple track structure rendering, W. Newport Ave.

RPM Bypass Project: 2019-2025



RPM Bypass Project: 2019-2025

Clark Street

Before

After

RPM Bypass Project: 2019-2025

Newport Avenue

Before

After

RPM Bypass Project: 2019-2025

Roscoe Street

Before

After

RPM Bypass Project: 2019-2025

School & Wilton

Before

After

RPM Bypass Project: 2019-2025

Sheffield Avenue

Before

After

RPM Lawrence to Bryn Mawr 2021-2025: New Stations and Trackwork underway

Lawrence

The station house at Lawrence opened in 1923 and closed in 1995, replaced with metal fencing. Right: rendering of the new Lawrence station

RPM Lawrence to Bryn Mawr 2021-2025: New Stations and Trackwork underway

Argyle

The Argyle station facility opened in 1922; at right, rendering of the new Argyle station

RPM Lawrence to Bryn Mawr 2021-2025: New Stations and Trackwork underway

Berwyn

The Berwyn station opened in 1923; at right, rendering of the new Berwyn station

RPM Lawrence to Bryn Mawr 2021-2025: New Stations and Trackwork underway

Bryn Mawr

The Bryn Mawr station facility opened in 1922; at right, rendering of the new Bryn Mawr station

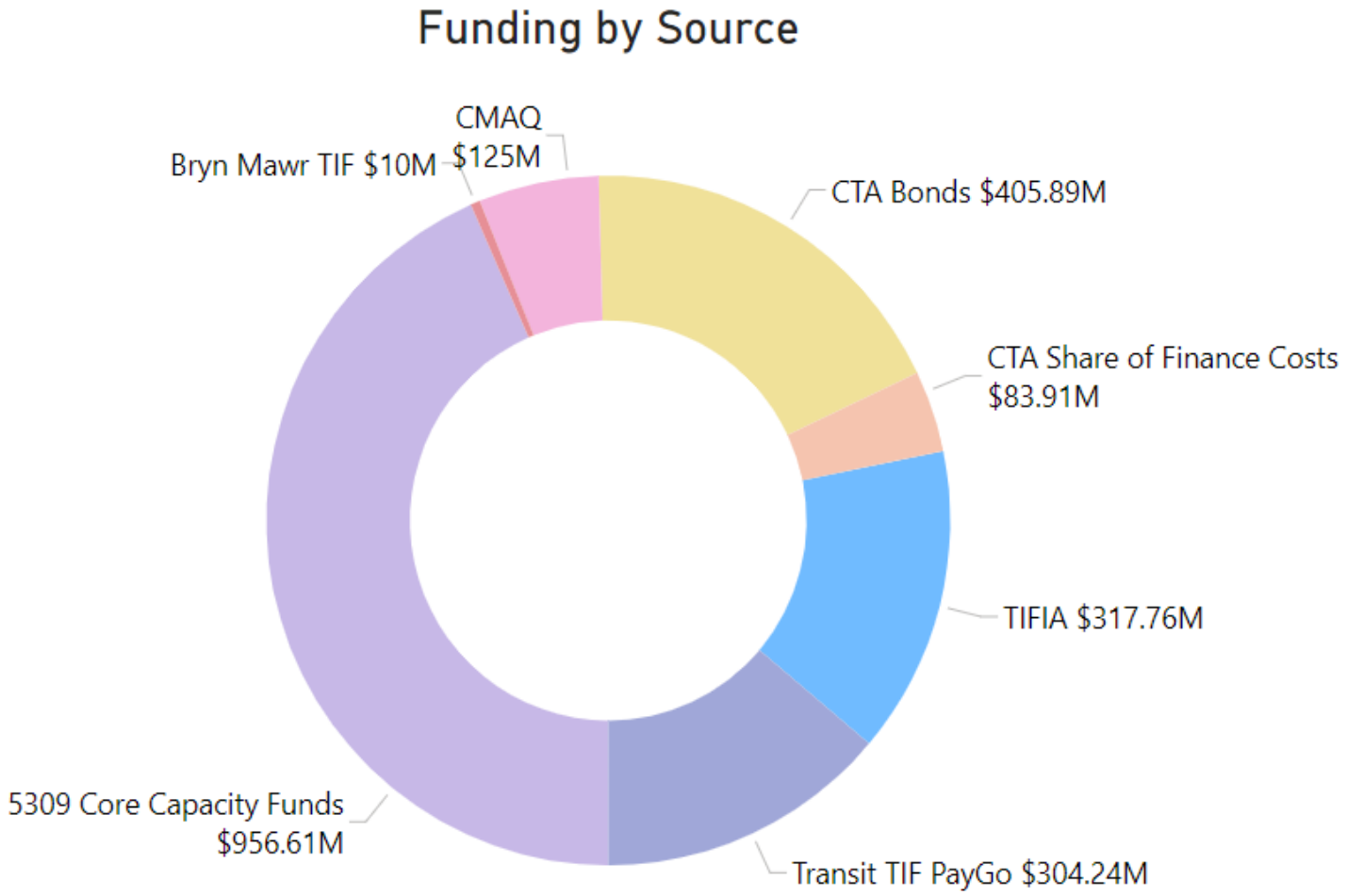
RPM Funding Sources

Local Funding: $1.12B (50.9%)

- Bryn Mawr
- CTA Bonds
- TIFIA
- Transit TIF PayGo
- CTA Share of Finance Costs

Federal Funding: $1.08B (49.1%)

- 5309 Core Capacity Funds
- CMAQ



New Damen Green Line Station

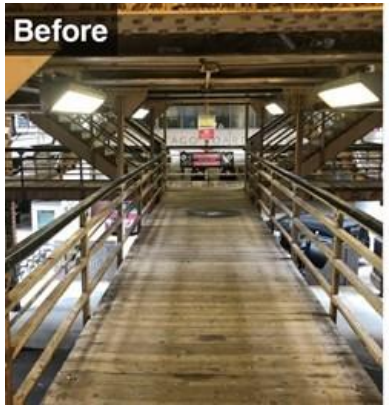
Rail Station Refresh and Renew

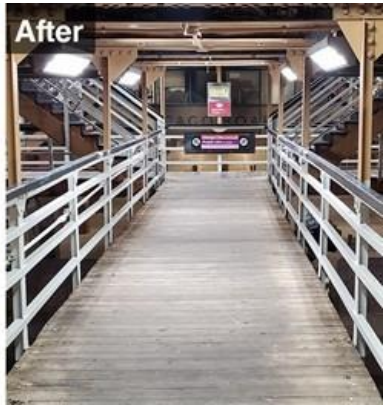
refresh &renew

- **$6.5 million** in improvements and repairs are planned for rail stations in 2024 through the Refresh & Renew program.
- This summer through Labor Day weekend, crews will focus on **14 rail stations** across seven lines, as well as improvements at **six bus turnarounds**.

- Deep clean power washing of all surfaces
- Painting
- Lighting upgrades
- Improved platform amenities
- Renewal of finishes and fixtures
- Utility and plumbing line repairs
- Removal of outdated fixtures and equipment
- Permanent repair work
- Updating of old/damaged signage

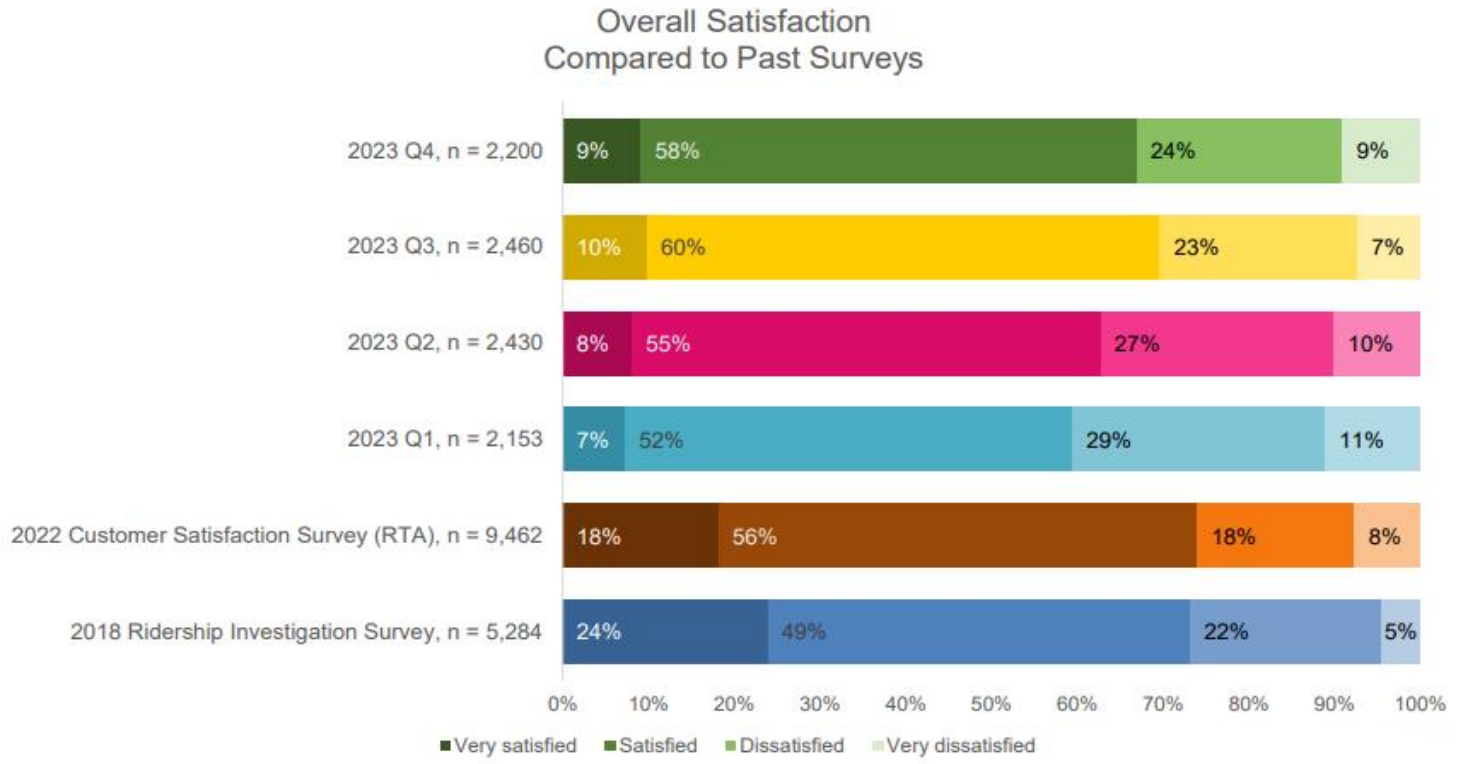
Refresh and Renew – Before and After





Customer Surveys

67% of Q4 2023 respondents reported being satisfied with CTA overall, an increase from 59% in Q1 2023.



Chatbot Initiative

Customer Messages

47,409

100.00%

Recognized

41,938

88.46%

Unrecognized

5,471

11.54%

Top 50 Customer Messages

Customer Message	Count
Train	2,542
Bus	2,123
Service issues	2,080
Just now	1,867
Disruptive behavior	1,424
Find the next bus/train	1,411
Cleanliness	879

Average Sentiment Score

Customers Told to Call 911

Conversations with "Call 911"

1,151

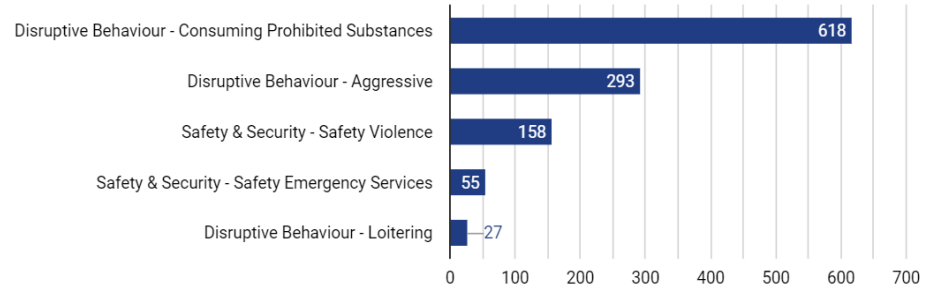
13.04% of Total Conversations

Kept Chatting and Generated Email

929

10.52% of Total Conversations

Topics Leading to "Call 911"



Conclusion

Conclusion - Tours

We hope you will consider joining us on one of our tours today!

Option 1:
Electric Bus Tour at Chicago Ave

Guides:
- Richard Lin, Assistant Chief Bus Equipment Engineer
- Amilcar Marquez, Electrical Engineer

Duration: 3 hours
Max 30 people

Option 2:
RPM Tour

Guide:
- Grace Ohs, Vice President of RPM

Duration: 3 hours
Max 40 people

Option 3:
Metra Facility Tour

Duration: 3 hours

THANK YOU!

Forest Park Branch Reconstruction

Erin Fiorini

Director, Infrastructure Capital Program Oversight

Chicago Transit Authority

Forest Park Branch Reconstruction

Congress Branch was built in 1958 alongside the I-290 expressway. Since then, only limited investment in tactical signal upgrades, limited investments at select stations, and routine track maintenance has occurred.

- Significant delays due to slow zones – 72.4% of the branch has slow zones
- Percentage of assets past their useful life: 77% of track, 61% of structure, and 79% of power
- 17.9 total miles of track, 8.8 total miles of structure
- Track condition is significantly beyond the useful life – worst average condition in the system and needs to be fully replaced, including drainage work
- Traction power upgrades are required to meet the projected demand
- 7 of 11 stations are not accessible
- Stations are exposed to expressway noise and harsh weather elements and need to be updated for accessibility
- Pedestrian access to the stations is constrained by the highway and narrow sidewalks
- The yard (built 1959) and shop (built 1962) is nearing end of useful life and is at capacity

Forest Park Branch Reconstruction

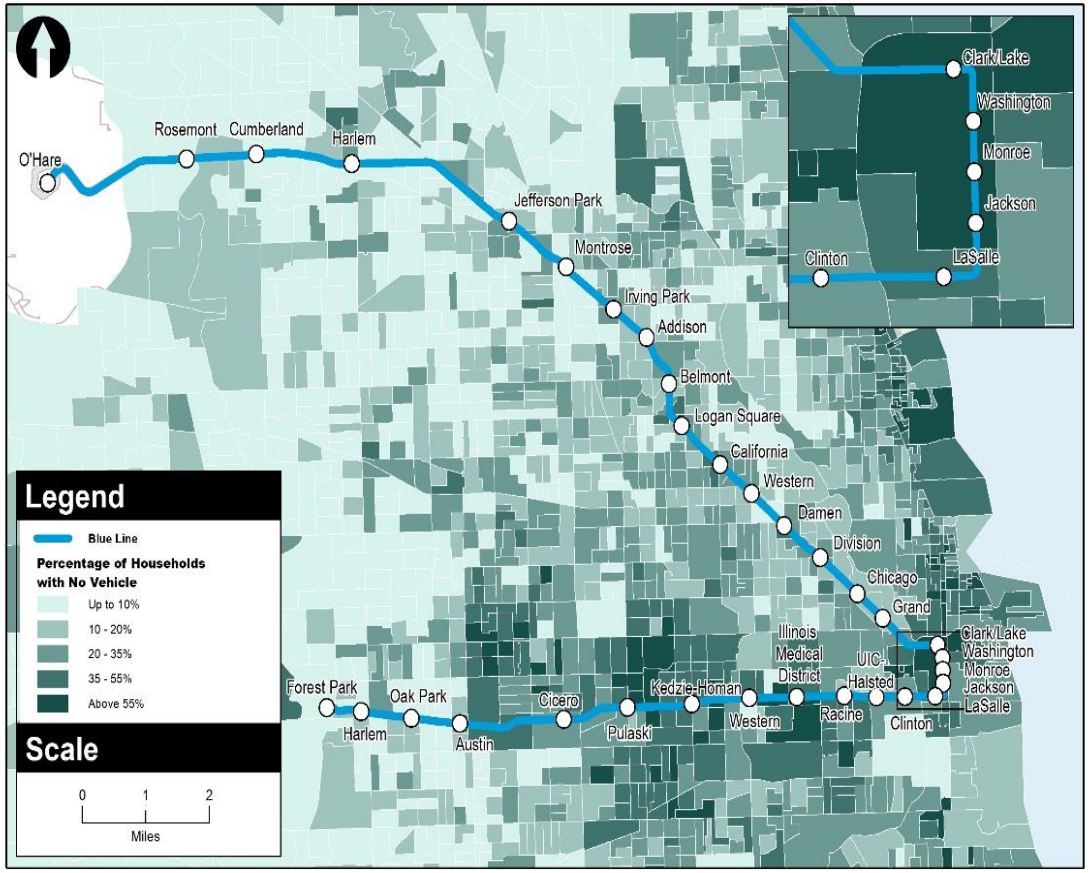
Status	Forest Park Stations
Completed	UIC Halsted
In Construction	Racine
Completed	Illinois Medical District
Unfunded	Western
Station Accessible	Kedzie-Homan
Funded; in Planning	Pulaski
Unfunded	Cicero
Unfunded	Austin
Unfunded	Oak Park
Unfunded	Harlem
Station Accessible; but rebuild needed	Forest Park

Out of the 11 Forest Park Branch stations:

- 4 stations are accessible today
- 7 stations are not accessible today, however, two stations (Racine and Pulaski) will be accessible, taking the total of remaining stations to be made accessible to 5.
- Racine station is estimated to complete construction in early 2025 and Pulaski Station is estimated to complete construction by end of 2028.

Forest Park Branch Reconstruction

- Forest Park Branch provided 8.5M annual boardings in 2019 and 3.9M annual boardings in 2022.
- Ridership grew along the corridor pre-pandemic. Average weekday boardings grew by 39% from 2000-2018 and by 19% from 2009-2018.
- Forest Park Branch serves diverse and minority communities.
  - 50% of the population within ½ mile is Black or African American
- Disadvantaged communities and Areas of Persistent Poverty in the corridor (within 1 mile):
  - 47 historically disadvantaged communities census tracts
  - 71 areas of persistent poverty census tracts
- There is high transit dependency and transit mode share in the corridor.
  - 32% of households within ½ mile are zero-car households
  - 29% of people within ½ mile commute via transit



Zero-Car Households

Source: Esri Business Analyst, 2020 Estimates

Forest Park Branch Reconstruction

Blue Line Vision Study, completed in 2017, identified improvements on the Congress Branch for State-of-Good Repair (SOGR) and Operational Improvements.

Study Recommendations –

- Rehabilitate infrastructure, starting with track work (address persistent slow zones)
- So far, 1.6 miles of track has been replaced (2020-2023)
- Propose wider station platforms and elevator access for each station
- Propose design features to improve customer experience including improved noise and weather protection and consistent aesthetics between stations
- Include a turn-back track to accommodate construction phasing
- Redesign the Forest Park Branch Terminal, Yard and Shop to modernize the maintenance area as well as bus and pedestrian connections

CTA Blue Line Vision Study Area

Forest Park Branch Reconstruction

- Maintenance work
  - In 2018, the City of Chicago provided $3.9M in ride-hailing service fees for CTA maintenance forces to perform dedicated maintenance to the Forest Park Branch. CTA forces used those funds quickly by 2019 due to poor track conditions.
  - Since then, CTA forces use other infrastructure capital funds just to continue with spot tie replacement and ballast improvements throughout all sections of the Forest Park Branch to allow service to continue.
  - But this work alone is just a patch and is not enough to keep up with the deteriorating conditions. A complete rebuild of the tracks including the sub-ballast and drainage is necessary to restore the system back to a state of good repair.
- Rebuild IL Capital Program and City of Chicago TIF
  - In 2020, the State of Illinois established the Rebuild IL capital program that has brought over $1B in Infrastructure upgrades to CTA, including a $268M capital project to rebuild the Forest Park Branch track from Halsted to Illinois Medical District Station, Racine Station ASAP upgrades and the construction of the new Morgan Substation. The City of Chicago contributed $21.5M in TIF funds for the track scope of this project.
- Further investment in the Forest Park Branch
  - CTA received a FY22 ASAP award for Pulaski Station.
  - CTA received a $111M Reconnecting Communities NAE grant for more than a mile of trackwork replacement between the fully funded Pulaski ASAP station to Kedzie Avenue.

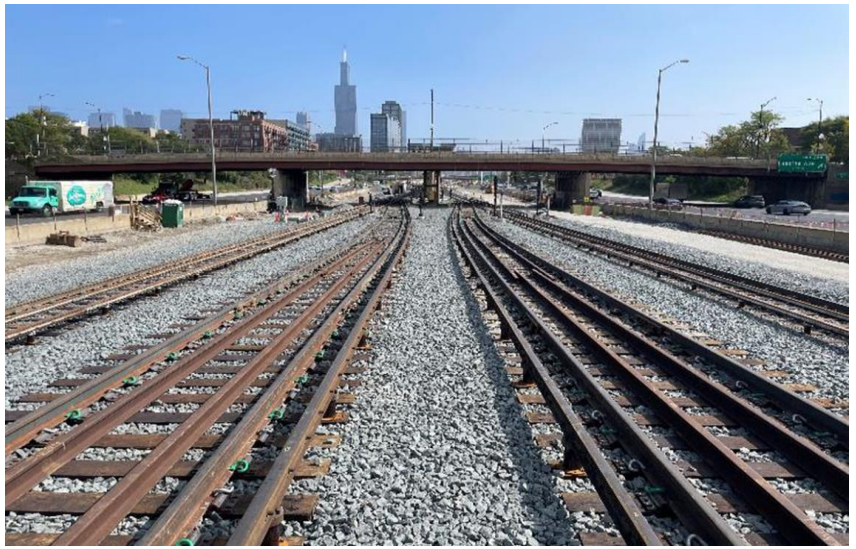
Forest Park Branch Reconstruction

Forest Park Branch Phase 1 Project

Total Project Budget: $268M

Scope of Work:

- Track Reconstruction
  - Complete replacement of all track including subgrade, ballast, ties, rail, fasteners, and other material.
  - Reconstruction of the track drainage system.
  - Replacement of Morgan Middle turnouts
  - Reconstruction of wayside traction power and signal components to accommodate trackwork
- Traction Power Improvements
  - New substation over the right-of-way at Morgan Street
  - Upgrades of switchgear, transformers, and rectifiers at Hermitage Substation
- Racine Station Improvements
  - New elevator and station house renovations at main Racine entrance
  - Platform extension to new stairs at Racine entrance
  - Upgrades to the Loomis auxiliary entrance



Forest Park Branch Reconstruction

Rendering of new Racine Station house from expressway level

Rendering of new Morgan Substation

Forest Park Branch Reconstruction

- Track work needs to be the first project(s) done as this is a critical component of this branch. Repairs to the track are estimated at $1B.
  - 77% of track is past its useful life
  - 70% of track is 66 years old
- Station work can be paired with track work packages, but could also be standalone work. Station accessibility on this line is estimated at $750M.
- Final set of work includes substation replacements, yard replacement and new Terminal station. Current need is estimated at $800M.

Forest Park Branch Reconstruction

- Other funding sought for the Forest Park Branch Reconstruction:
  - IDOT and CTA applied for a MEGA grant in FY22 and FY23 for bridge, track and stations between Cicero and Austin stations.
    - No awards were received for this project in either year
  - In FY24, CTA applied for the ASAP discretionary grant program to make Cicero and Austin stations accessible on the Forest Park Branch.
    - No award was received.
  - In FY24, IDOT applied for a Congestion Relief Program (CRP) discretionary grant on behalf of CTA for $28M in funding to advance track design work on the Forest Park Branch from Western Ave to Lathrop Ave.
    - Allows future grant applications for track work to be considered shovel-ready.
- CMAP, CTA and IDOT have partnered to create a Corridor Development Office (CDO) to continue the vision of the Forest Park Branch Program. The goal is to keep momentum on this corridor to seek funding, coordinate projects amongst agencies, and bring this portion of the Blue Line back to a state of good repair.

THANK YOU!

Audience Q&A

Logistics

Tours

- Ensure you attend the correct tour as assigned
- Day ends after tours conclude
- Groups will return to the venue

Tonight

- Optional social gathering
- 6:00pm
- Cheesecake Factory, North Michigan Ave

Tomorrow Morning

- Optional Peer-to-Peer Chat session
- 8:15-9:00 am
- Tomorrow morning in this room

Tour Assignments

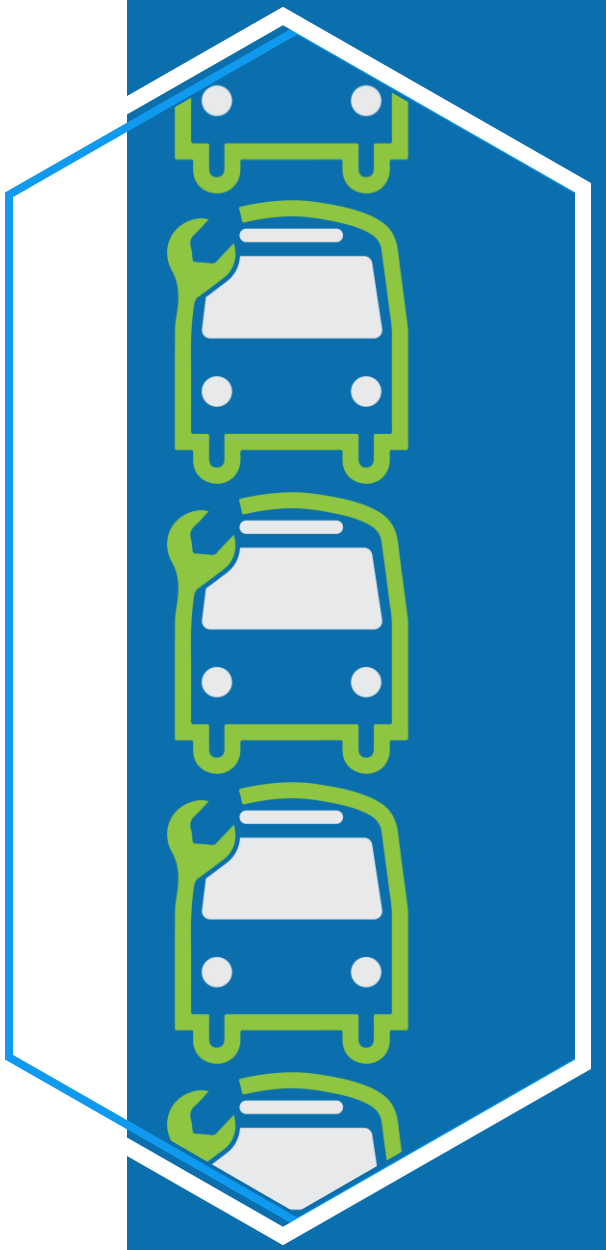
RED TOUR – CTA Rail - Red and Purple Modernization Tour (Group A)

GREEN TOUR – CTA e-Bus and Charging Facility Tour

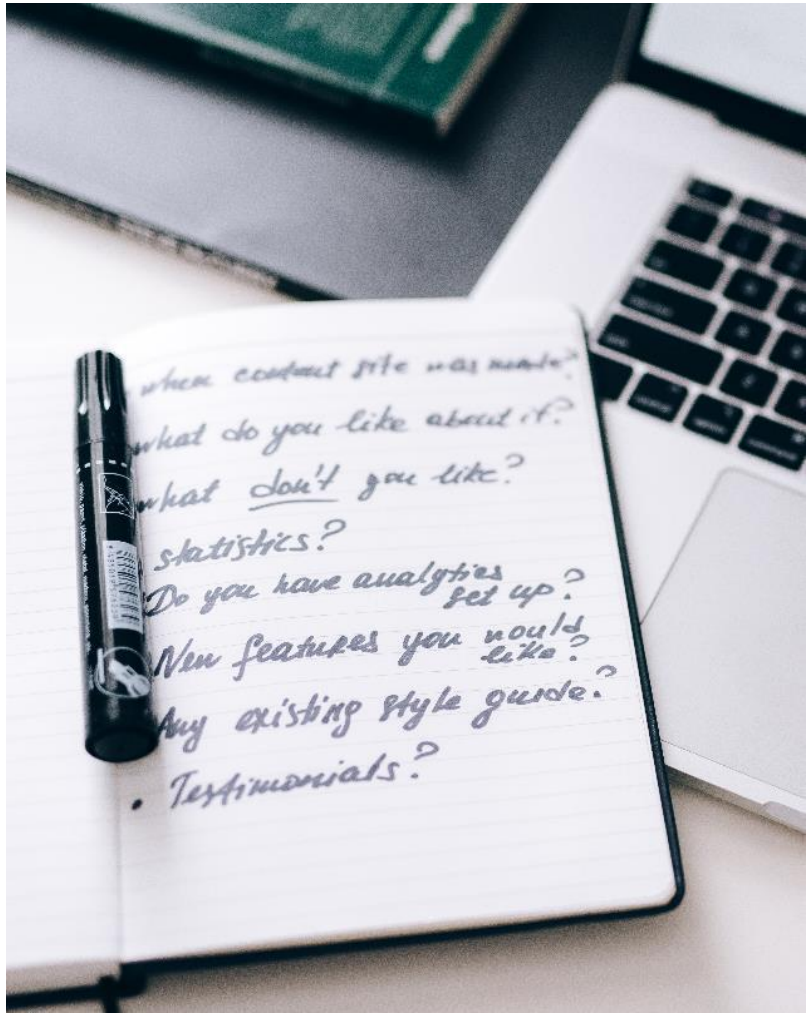
YELLOW TOUR – Metra Facilities Tour

BLUE TOUR – CTA Rail - Red and Purple Modernization Tour (Group B)

Day 2



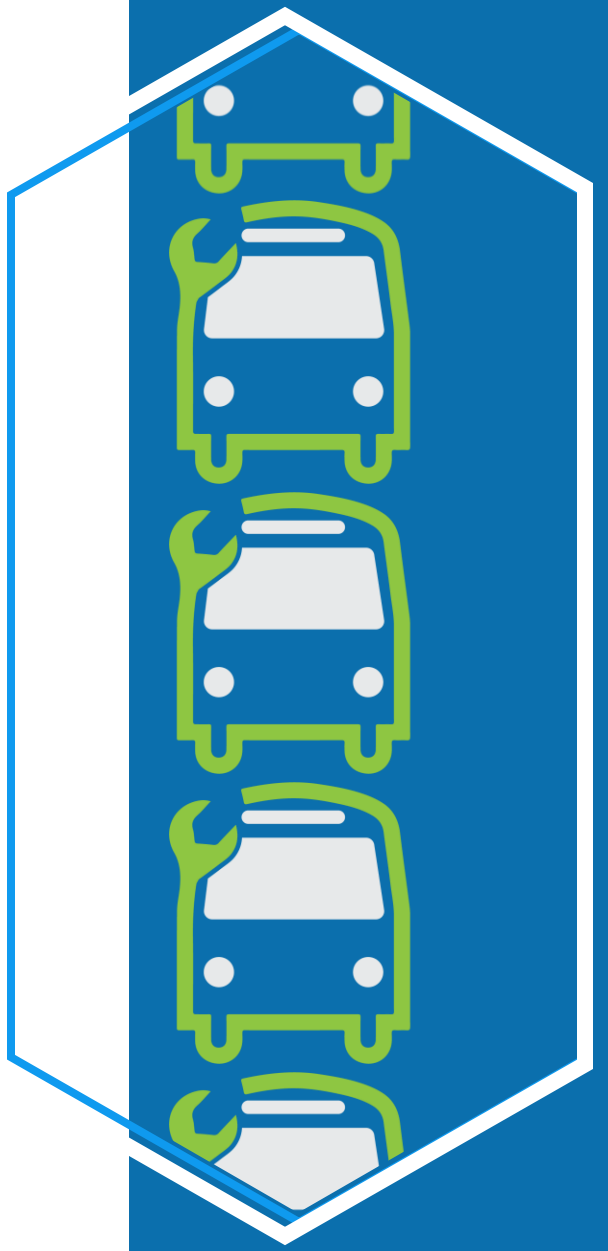
Agenda: Day 2



Time	Session
8:15 AM	Optional Peer to Peer Chat Session
9:00 AM	Welcome
9:20 AM	FTA TAM Program Updates
10:00 AM	*Break*
10:15 AM	TAM State of the Practice Review Panel Session
11:10 AM	Small Group Discussion and Report Back
12:00 PM	Wrap up & Evaluation
12:15 PM	*End of Day 2*

Welcome: Day 2

Maggie Schilling, FTA Strategic Planning and Analysis Director



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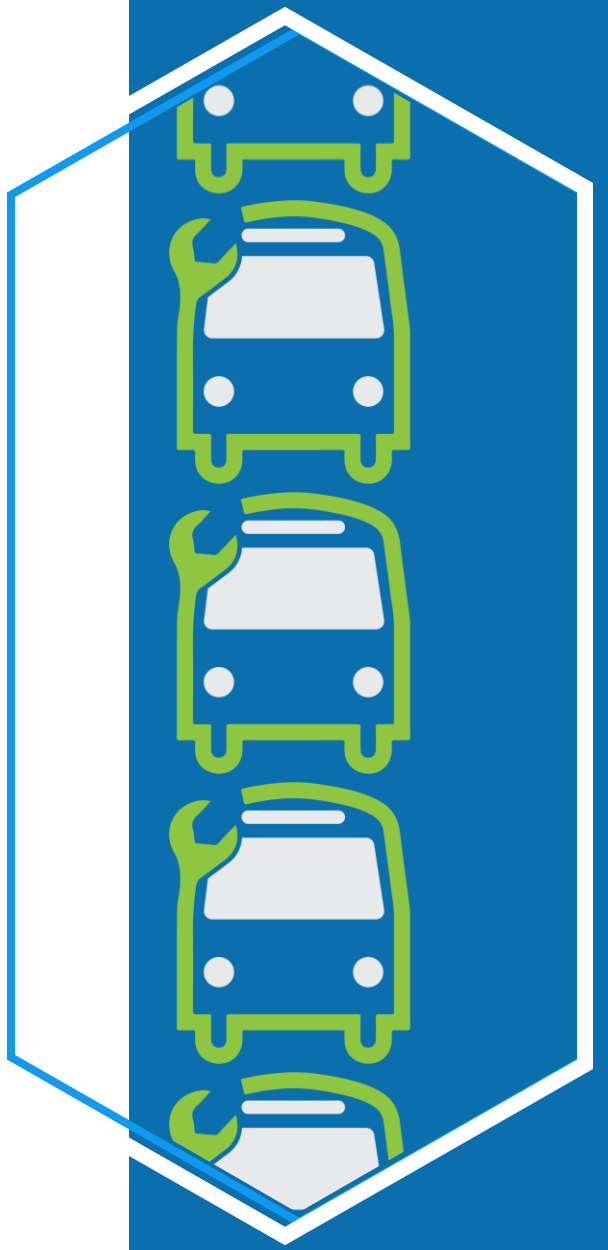
FTA TAM Program Updates

Tamalynn Kennedy, FTA TAM Program Manager



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Agenda

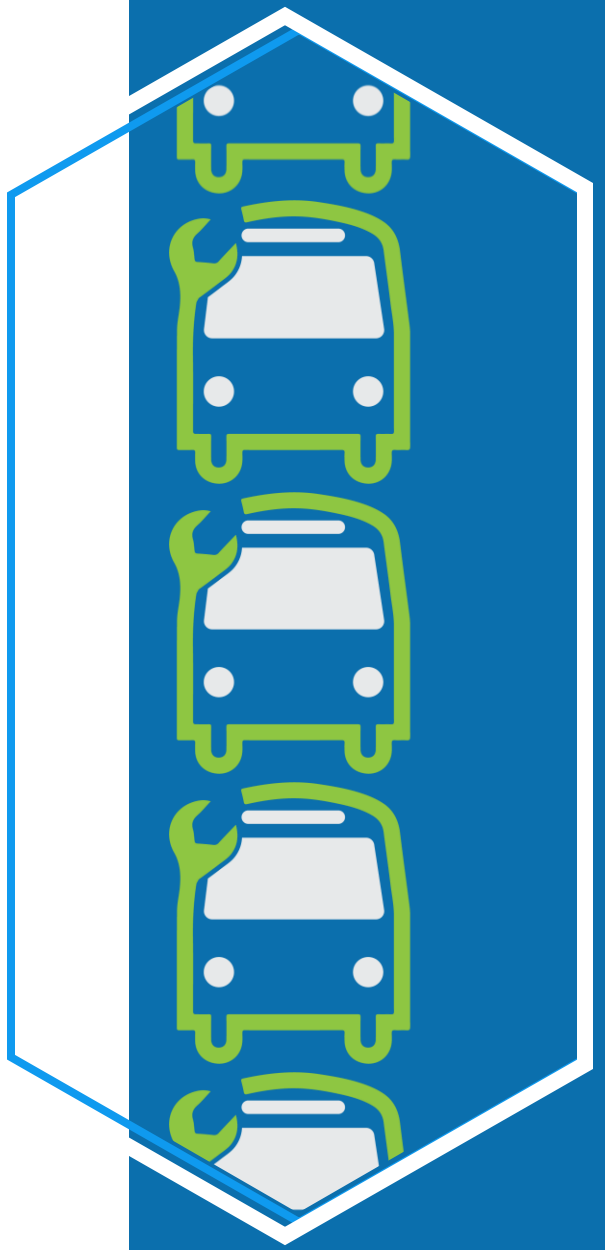
Upcoming Releases

- Course: Introduction to Transit Asset Management
- TAMPLATE
- Peer Program
- State of the Practice Reports

LDA Topic Modeling on A-90 Narrative Reports

- Background
- Application Overview
- Potential Use Cases
- Demo & Discussion

Upcoming Releases



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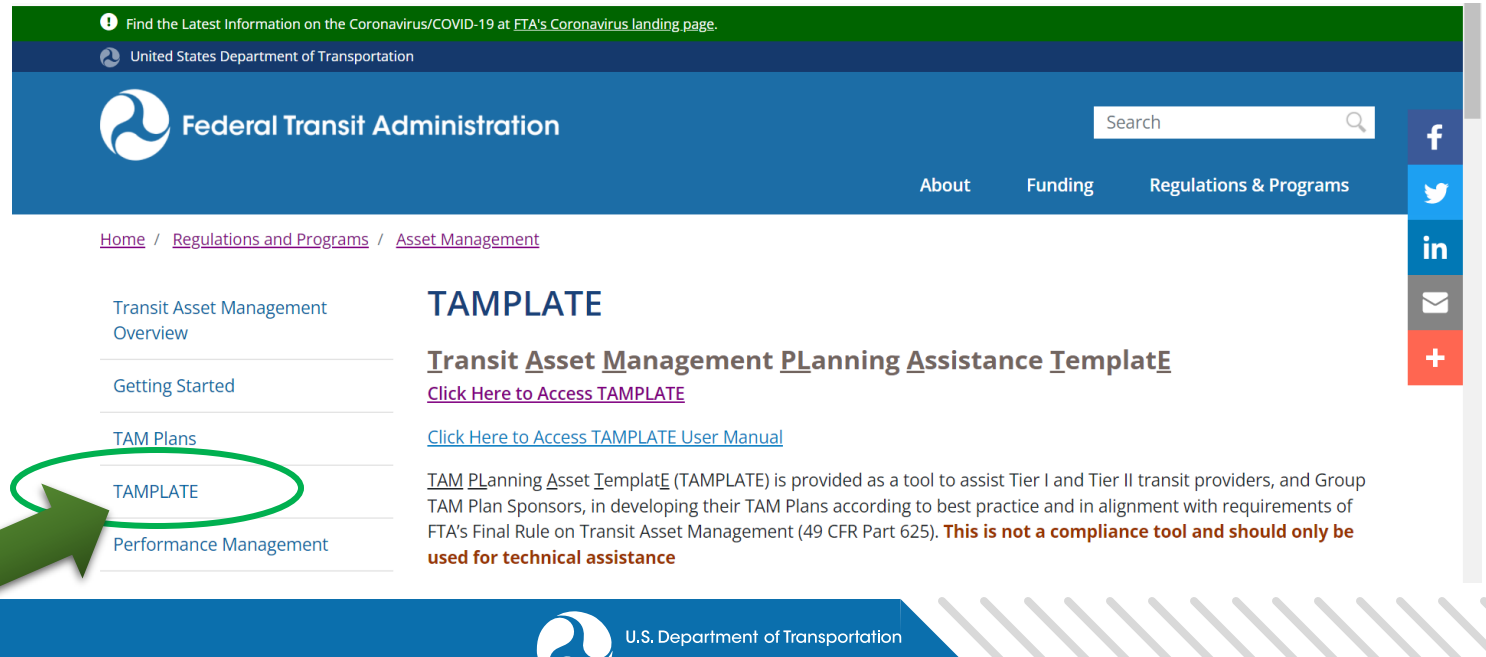
NTI Course: Introduction to Transit Asset Management (TAM)

- Introductory course for those that are new to TAM
- Original National Transit Institute (NTI) course was designed for in-person delivery
  - NTI stopped running it during the pandemic
- First offering is in September 2024, currently waitlisted, but more offerings to come
- NTI Course Details

TAMPLATE: New Functionality

- Ability for more than one person to edit a single TAM Plan
- All users able to share their plan with stakeholders/executives
- Infrastructure calculations for inventory and condition corrected
- Updated User Manual
- TAMPLATE



Peer Program

- Roundtable
- Webinars
- Peer Exchanges
- Peer Working Group
- Discussion Forums

- Sign up for updates

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FTA's Transit Asset Management (TAM) Program is providing two opportunities for transit agency staff to engage with peers and share strategies and best practices about asset management, including a working group on asset condition and a peer exchange for best practices in aligning asset management activities with other FTA requirements.

2024 TAM Peer Working Group Call for Participation

The FTA's Transit Asset Management (TAM) Program is continuing the success of the 2023 TAM peer working group with a new opportunity for 2024. The group will convene 11-15 participants in an online forum to discuss best strategies for determining asset condition. The group will meet regularly for one year, focusing on various aspects of strategies for condition assessment. Throughout the process, participants will promote peer learning, share peer-designed resources, and collaborate on best practices.

Applicants for the virtual TAM peer working group should complete and submit this form by Thursday, November 16.

Winter 2024 Peer Exchange Call for Participation

In February 2024, the FTA TAM Program will host an in-person peer exchange to discuss how agencies approach aligning their TAM activities with other related FTA requirements, such as:

- NTD reporting,
- developing Public Transportation Agency Safety Plans (PTASPs), and
- preparing for Comprehensive Reviews.

Peer Program Topics

Peer Exchanges

Winter 2024: Aligning FTA Reporting and Requirements

[Coming soon]

Peer Working Group

2023 Theme:

Data quality and utility

Creating the Foundation for Quality Asset Data

2024 Theme:
Asset condition and condition assessments

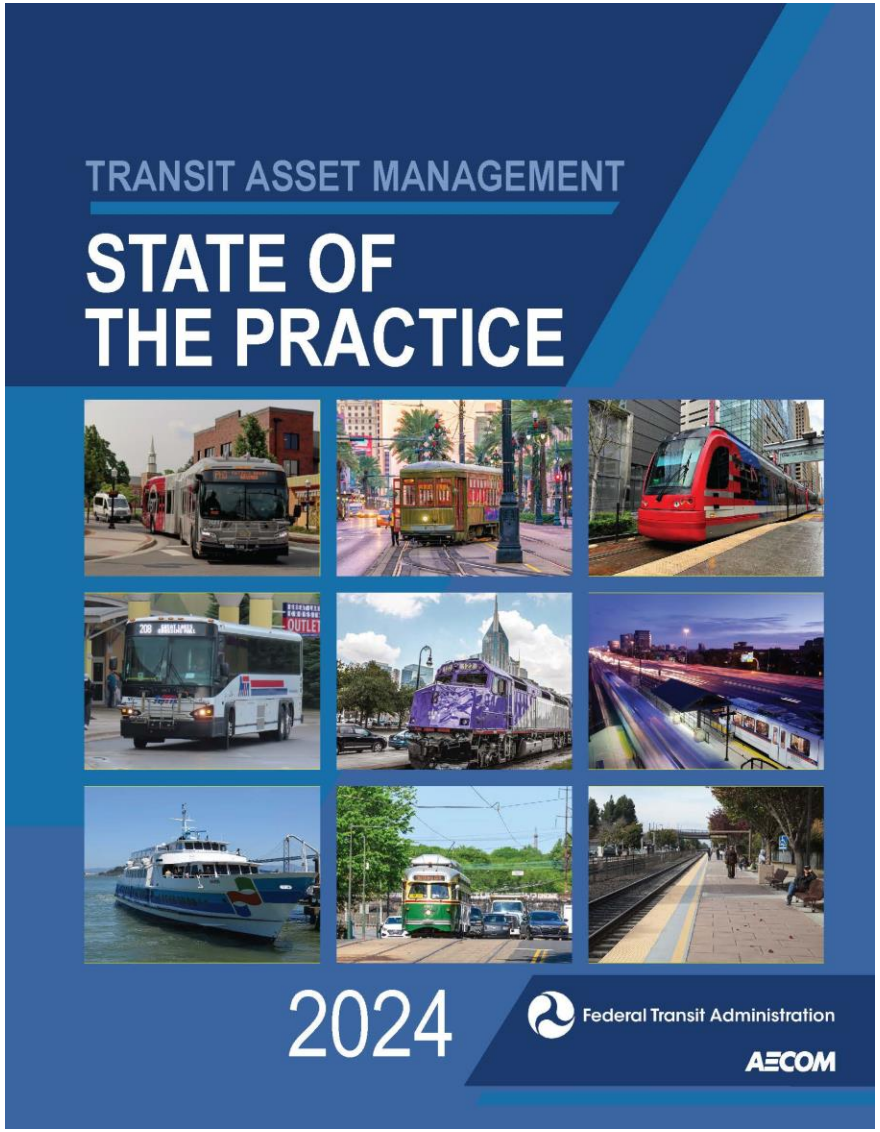
Discussion Forums

TAM Considerations for Zero-Emission Bus Fleets

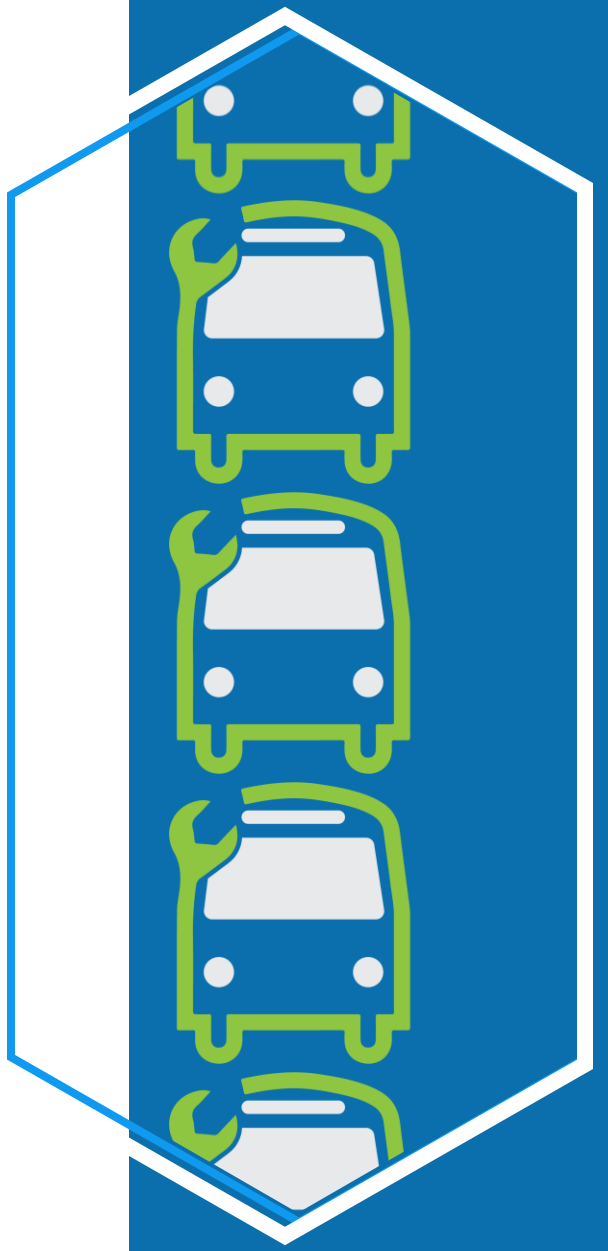
Setting TAM Performance Targets

State of the Practice Reports

- Identify AM processes and promote best practices
- There continues to be a need for skills and training for agency personnel
- Nine (9) Agency Reports
- Summary Report
  - **[Coming soon]**



LDA Topic Modeling on A-90 Narrative Reports



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TAM Program Multiyear Evaluation

- Covered 4 years, 2019-2022
- Collected information through interviews, focus groups, TAM Program event registration/feedback, National Transit Database including Narrative Reports
- Agencies requested clarification on the NTD Narrative Report Instructions
  - Addressed in 2021 with the updated Narrative Report Example Format

Narrative Reports

- FTA received over 600 narrative reports from agencies in Report Year 2022
- Each report goes into detail on the state of the agency's transit assets
- Internal resource to analyze these reports

National Transit Database Narrative Report Example Format

Under the FAST Act and MAP-21, "transit providers are required to submit an annual narrative report to the NTD that provides a description of any change in the condition of its transit system from the previous year and describes the progress made during the year to meet the targets previously set for that year."

This template is provided for your agency's convenience. **These questions are not required** to be answered, but are meant to facilitate narrative reports that meet the federal requirements while also supporting your agency's recordkeeping and justification of its TAM program. The information in each section is intended to illustrate the type of information that could be included rather than an exhaustive list.

Agency Information

- Agency Name:
- NTD ID:
- Contact Information:
  - Name of Point of Contact:
  - Job Title of Point of Contact:
  - Email Address:
  - Phone Number:
  - Address:
- Person Preparing This Narrative (if different from POC):

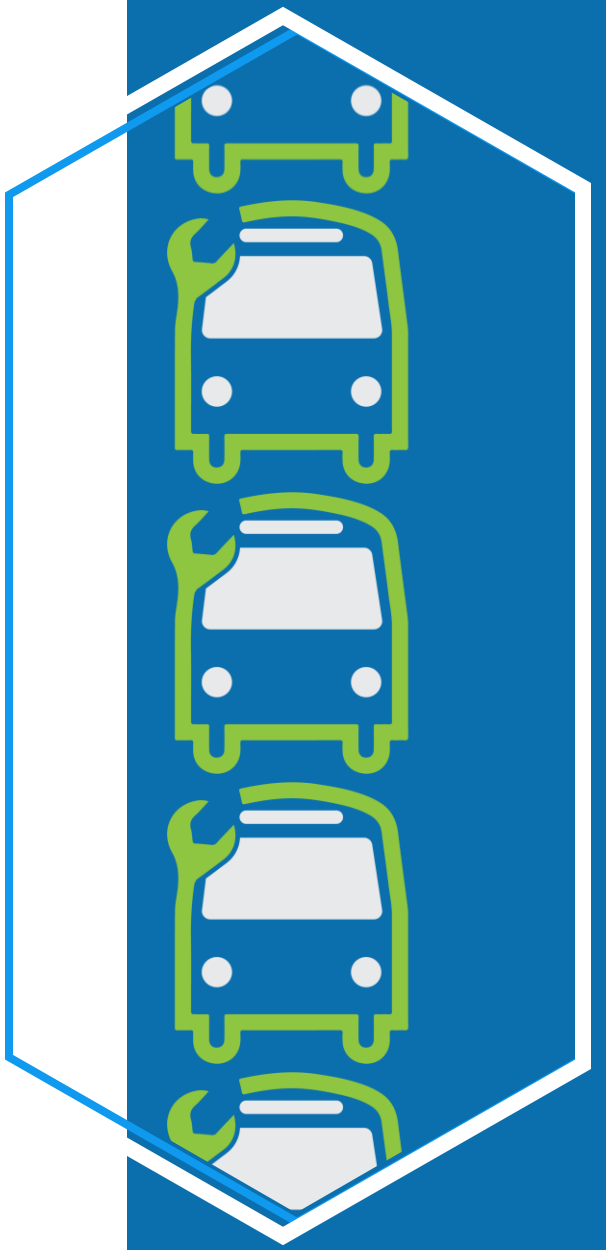
LDA Information

What is LDA (latent dirichlet allocation) Topic Modeling?

- Natural Language Processing technique
- Unsupervised learning model
  - Learns from unlabeled data
  - Uncovers hidden topics within the documents
- Up to end-user to infer meaning

Topic 1	Topic 2	Topic 3
Kitten	Woof	Gills
Meow	Puppy	Fins
Tabby	Bark	Swim

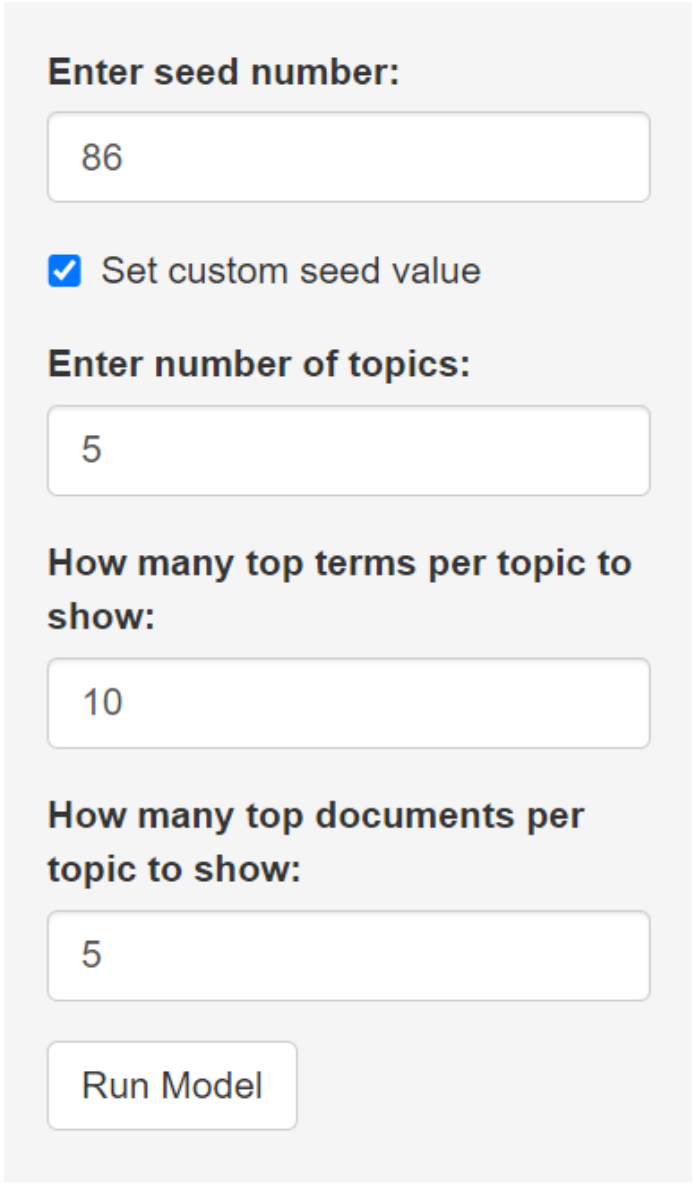
Application



User Interface

Input fields

- Seed number
- Number of topics
- Top terms per topic
- Top documents per topic



Outputs

Top Terms Per Topic - Revenue Vehicle Challenges

Topic 1	Topic 2	Topic 3	Topic 4	Topic 5
vehicle	bus	supply	challenge	fund
continue	order	chain	target	replacement
service	challenge	new	fleet	capital
state	cost	issue	meet	grant
pandemic	increase	delivery	face	available
agency	purchase	due	make	replace
good	receive	delay	useful	need
maintain	time	shortage	life	numb
impact	electric	procurement	cutaway	use
maintenance	able	part	progress	availability

```
Total documents read: 615
Total revenue vehicle challenges read: 195
Total revenue vehicle progress read: 198
Total non-revenue vehicle challenges read: 168
Total non-revenue vehicle progress read: 174
Total facilities challenges read: 161
Total facilities progress read: 118
Total infrastructure challenges read: 86
Total infrastructure progress read: 70
Total extenuating circumstances read: 291
```

60115 - Public Transit Services	1	0.3308270676691729	link
50033 - Interurban Transit Partnership	2	0.5088757396449705	link
90200 - Kings County Area Public Transit Agency	2	0.4387096774193548	link
90022 - City of Norwalk	2	0.3378378378378378	link
20072 - Suffolk County	2	0.3376623376623377	link
40018 - Transit Authority of River City	2	0.3083333333333333	link

Outputs

Agency Information:
TAM Plan Type: Individual TAM Plan / Tier I Provider

What challenges face your agency in making progress toward the targets?
Our first challenge is the availability of Paratransit vehicles. The agency has 9 cutaway buses on order that are delayed due to the nationwide parts back orders. This back order for new vehicles has increased the typical 6-8 month lead time from order to delivery to anywhere from 1 to 2 years.

Our second challenge is the cost of Paratransit vehicles. In 2018 the cost of a paratransit cutaway bus was $85,896 per bus, in 2021 a bus cost $109,914, and in 2022 the cost of the same bus is $174,491 each. The ITP's plan to order 31 buses in January 2023 will need to be scaled back due to the increased cost since our last request for funding, which was based on pricing before the bus manufacturer's price increases.

Outputs

Agency Information:
TAM Plan Type: Individual TAM Plan / Tier II Provider

What challenges face your agency in making progress toward the targets?
Due to issues with supply chain buses and bus part are creating significant issues with SGR. High[er] than anticipated mileage is accumulating on the fleet as buses are waiting 90+ days for replacement parts.

The transition to zero emission buses is also causing issues, attempting to balance new CNG bus orders with planned Electric Bus orders.

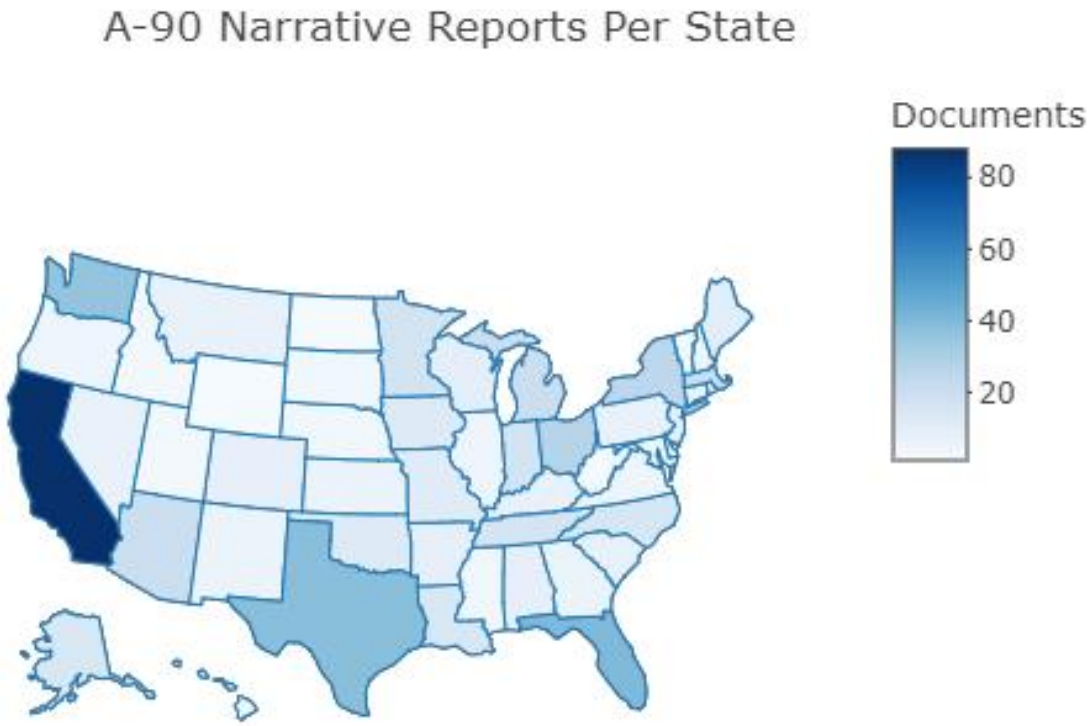
Capital funding is also challenge. We can not begin the transition to electric buses until we secure funding to [construct an] electric charging station.

Outputs - Regional

Top Terms Per Topic
Facilities Progress for Region 9 | Documents read: 24

Topic 1	Topic 2	Topic 3
facilities	maintenance	facility
condition	facility	construction
scale	currently	new
assessments	staff	city
term	center	funding
passenger	program	station
target	management	assessment
met	parking	basis
targets	targets	completed
administrative	already	condition

90214 - City of Redondo Beach	3	0.4656084656084656	link
90198 - City of Porterville	3	0.4391534391534392	link
90043 - City of Commerce	3	0.3830845771144279	link



Potential Use Cases

- Identifying factors that are negatively impacting the nation's public transportation assets
  - Identifying the agencies affected by these factors
- Seeing what projects agencies are undertaking to reach their state of good repair targets
  - Identifying the agencies taking these actions

FTA Mission, Vision, Values

Mission

Improve America's Communities through Public Transportation

Vision

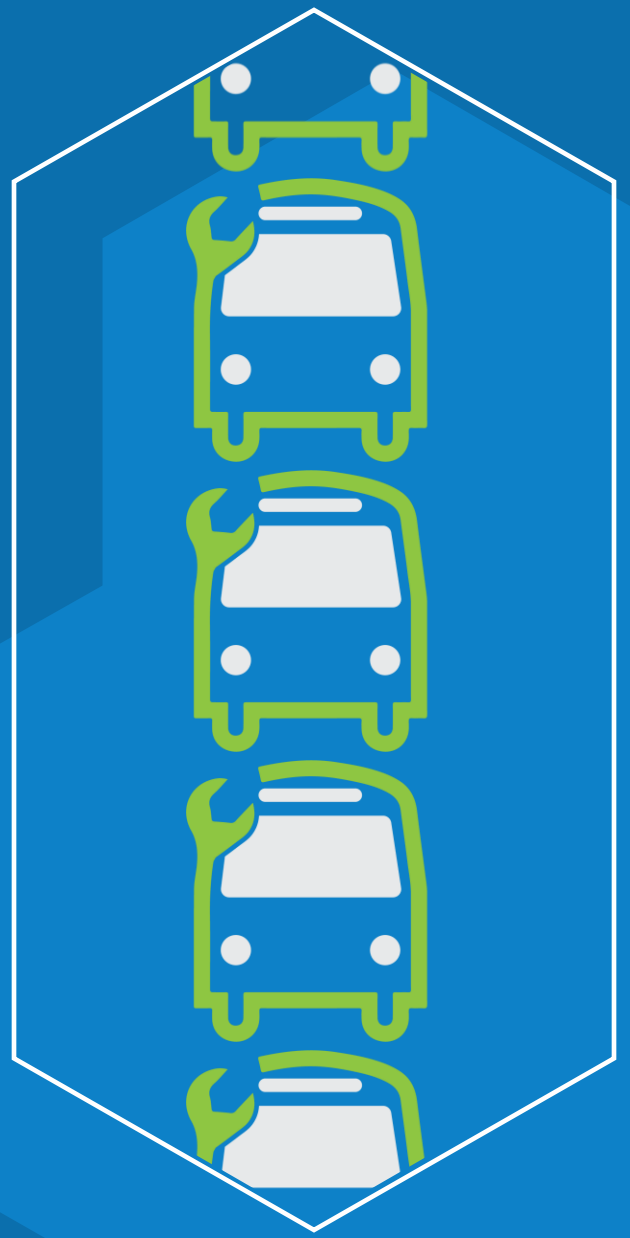
A Better Quality of Life for All Built on Public Transportation Excellence

Values

Service	Provide reliable, transparent, responsive, and anticipatory services to meet stakeholder needs
Integrity	Commitment to the highest professional and ethical standards
Innovation	Foster new ideas, concepts, and solutions for improved outcomes
Sustainability	Optimize decisions, resources, and systems to make long-term positive impacts on the environment, infrastructure, and safety
Equity	Remove barriers for systemically underserved communities to access all aspects of economic, social, and civic life

Thank you!

Tamalynn Kennedy
tamalynn.kennedy@dot.gov



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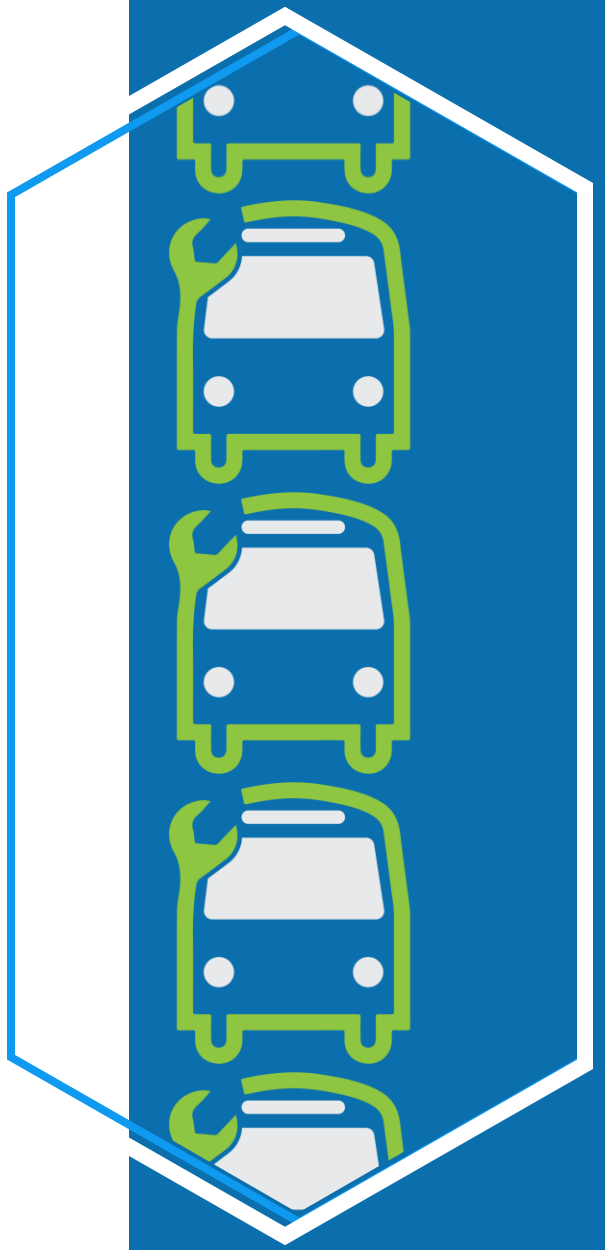
Audience Q&A

TAM State of the Practice Review Panel Session

Zach Trogdon, Virginia Department of Rail and Public Transit

Rene Vega, Southern California Regional Rail Authority/Metrolink

Patrick Hester, Nashville MTA/WeGo



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TAM Best Practices

Virginia Department of Rail and Public Transportation

Zach Trogdon, DRPT Acting Director

July 31, 2024

DRPT
VIRGINIA DEPARTMENT OF RAIL AND PUBLIC TRANSPORTATION

Virginia Department of Rail and Public Transportation

DRPT is the only state-level agency to participate in the State of the Practices Review.

DRPT's Group TAM Plan provides the required plan for 33 Tier II agencies across the state. These are agencies that operate 100 or fewer vehicles across all modes in peak service.

There are 6 Tier I agencies in the state that are required to maintain their own Plans.

First TAM Plan was developed and adopted in 2018 and the most recent is October 2022. The State of the Practices Review was completed in early 2024.

Our Setup

DRPT developed a new scoring and prioritization process for funding around the same time as regulations for TAM were being finalized.

The new process relied heavily on asset management principles by placing a high priority on funding projects to maintain State of Good Repair (SGR)

DRPT focused on the asset categories and performance measures from the TAM Final Rule: Rolling Stock, Equipment, and Facilities.

Performance Targets

Revenue Vehicle and Equipment/Service Vehicle Performance Targets

Asset Class	ULB	Target 2022
AB- Articulated Bus	14	5%
BU- Bus	14	15%
CU- Cutaway	10	10%
MV- Minivan	8	20%
BR- Over-the-Road-Bus	14	15%
VN- Van	8	20%
AO – Automobiles (non-revenue)	8	30%
TX – Trucks and other rubber tire vehicles (non-revenue)	14	30%

Facilities Performance Targets

Asset Class	TERM	Target 2022
Administrative/ Maintenance Facilities	<3.0	10%
Maintenance Facilities	<3.0	10%
Passenger Facilities	<3.0	15%
Parking Facilities	<3.0	10%

Recommendations

- Incorporate TAM principles in state law and mandate a statewide transit asset SGR prioritization process based on technical scoring.
- Provide – or at least acknowledge the possibility of having – a formal “bypass” process to treat unforeseen needs or strategic SGR programs.
- Encourage the development of a statewide transit asset database to use for a prioritization process that can interact with most of the systems used by local agencies.
- Create a TAM Plan oversight unit that reports directly to the Chief Executive Officer (CEO) or Deputy CEO to support the agencies’ asset owners and have one specialist responsible for each agency or for a group of agencies.

METROLINK

Transit Asset Management Best Practices Review Pilot

July 31, 2024

Metrolink System

6
Counties Served

7
Routes/Lines

545
Route miles

66
Stations

METROLINK

SUMMARY OF CAPITAL ASSET INVENTORY

TRACK	**396.42*** Track	**HOST RAILROADS:** SCRRA, BNSF, NCTD, UP
CROSSING	**353** Crossings	**MAINTAINER:** SCRRA
TURNOUTS	**556** Turnouts	**MAINTAINER:** SCRRA
BRIDGES	**251** Each	**MAINTAINER:** SCRRA
CULVERTS	**720** Each	**MAINTAINER:** SCRRA
TUNNELS	**6** Each	**MAINTAINER:** SCRRA
SIGNALS	**1804** Signals	**MAINTAINER:** SCRRA
COMMUNICATIONS	**834** Comms	**MAINTAINER:** SCRRA
MOW EQUIPMENT	**26** Each	**OPERATOR/MAINTAINER:** SCRRA
MOW VEHICLES (Non-Revenue Fleet)	**170** Vehicles	**OPERATOR/MAINTAINER:** SCRRA
LOCOMOTIVES	**60** Vehicles	**MANUFACTURER:** Electro-Motive Diesel (EMD), MotivePower (MPI)
PASSENGER CARS	**258** Cars	**MANUFACTURER:** Bombardier, Hyundai Rotem
FACILITIES	**16**† Facilities	**LOCATIONS:** Los Angeles County, Orange County, San Bernardino County, Riverside County, Ventura County

* SCRRA revenue, non-revenue, and branch line tracks

† SCRRA shared responsibility for ARROW Maintenance Facility

October 2022

Best Practices Review Pilot – Summary of Key Findings

- Strengths:
  - Organization/Leadership participation is strong
  - AM unit is robust and knowledgeable
  - Communication of AM factors is strong and fosters a culture that embraces AM principles
  - Strong alignment to Strategic Plan
  - The use of SGR data through various systems reflect forward-thinking approach and merging into a single system of record
- Limitations:
  - Enhancements needed for Trapeze EAM to fully realize intended potential
  - Decision support tools are informal or ad hoc. The lack of a formal, data-driven condition-based support tool means decisions are not made while considering the full life-cycle cost.
  - A formal plan for education and training is missing
- Raised awareness and importance of TAM
- Provided a good progress report on maturity level for agency and for the AM Champion

METROLINK

Thank you.

For questions reach out to Rene Vega

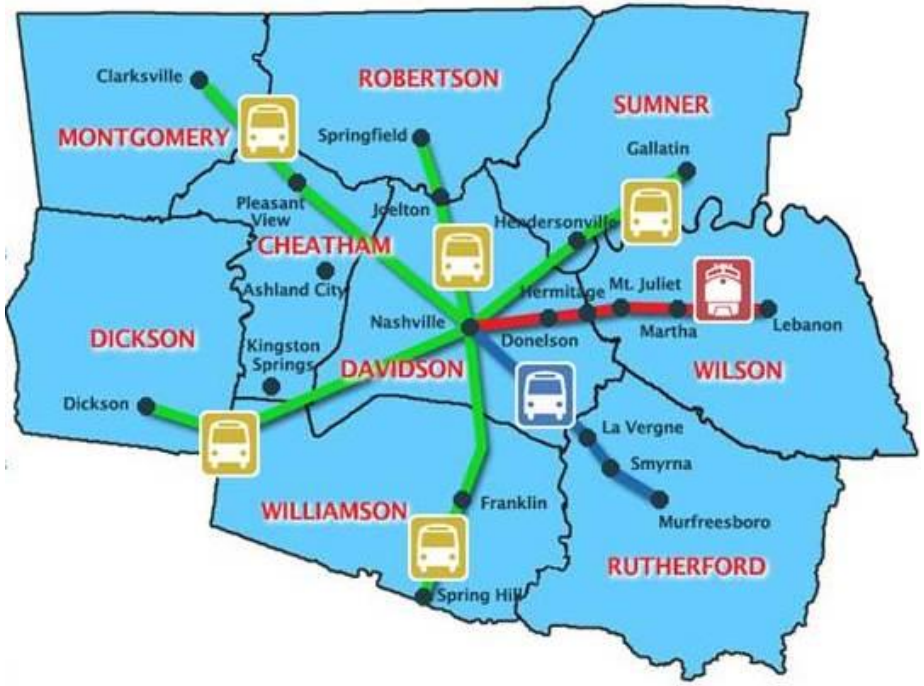
vegar@scrra.net

WeGo Public Transit

- Frequent
- Local
- Connector
- Express
- Star
- Star shuttles
- Access

Regional Transportation Authority

- Created by state statute in 1988 to plan and develop a regional transit system for Middle Tennessee
- Funded through member city and county dues, state and federal funds
  - Includes nine counties in Middle Tennessee
- Provides nine regional bus routes, WeGo Star rail, and vanpool services



Fleet

Facilities & Stops

Asset Management

AM Recommendations

Moderated Q&A

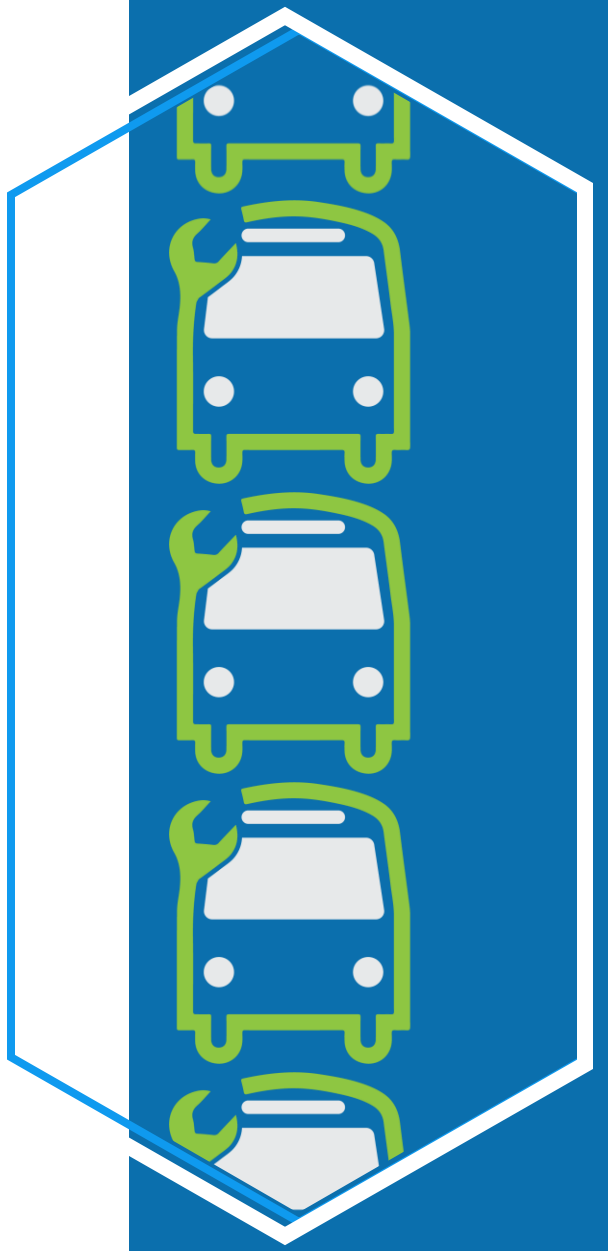
Audience Q&A

Small Group Discussion Questions

- Discuss the various types of evaluation for TAM programs and plans that we've heard about during the past two days. What are some benefits and concerns related to:
  - An internal review?
  - A review done by an outside consultant?
  - A review done by FTA's TAM Program?
- After hearing from panelists, how might your participation in this type of technical assistance help to improve your organization's TAM practices/procedures?
- Are there specific concerns or obstacles that could hinder your organization from participating?

Report Back

Wrap up & Evaluation



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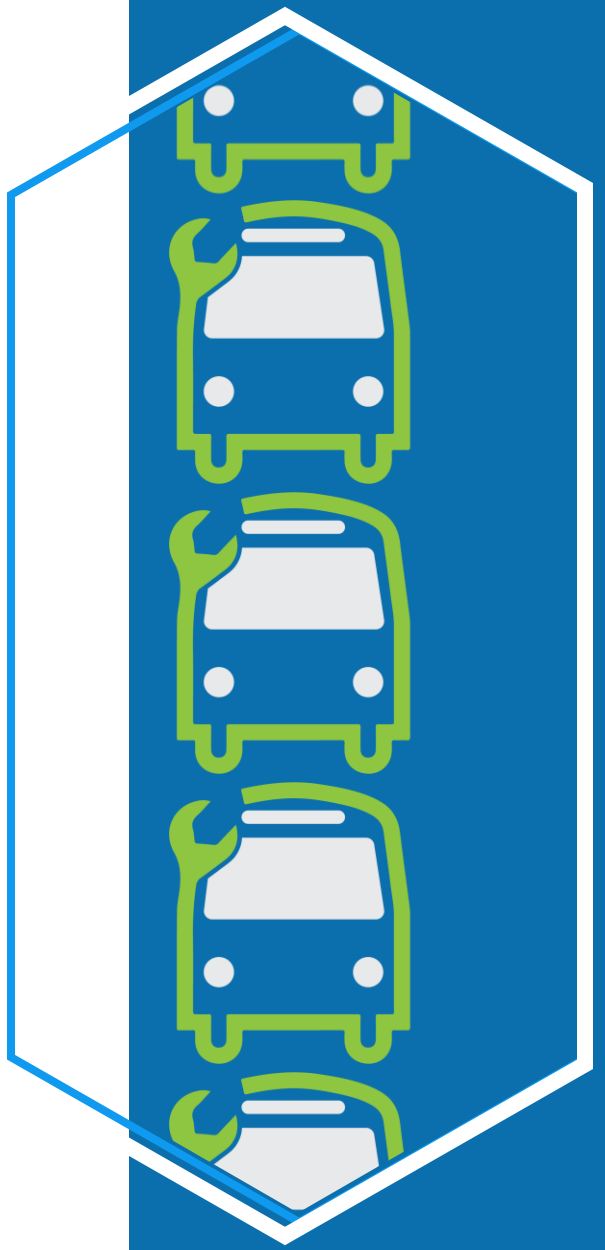
Thank you!



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Federal Transit Administration

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Standard Operating Procedure	SOP #	Date:	Page **1** of **12**
Asset Management	500-010- 03-20-2024	03-20-2024	REVISION 3C
Title: New Asset Identification			

Department Classifications: **Bi-State Development**

Issued by: Sheila Hockel Program Manager-Transit Asset Management

DocuSigned by:
Sheila Hockel
03E452F5508C45C...
4/12/2024

Supersedes: Revision 2 dated: 11-30-2022

I. PURPOSE

The purpose of SOP 500-010-03-20-2024 rev 3A is to document the sources of where new assets may be identified, ultimately to be entered into the Trapeze Enterprise Asset Management **(EAM)** facilities and rolling stock database.

II. OBJECTIVES –

A more complete EAM asset list will support Metro's fiscal responsibility goal. Preventative maintenance and state of good repair **(SGR)** are more completed with a complete and comprehensive list of assets.

III. DEFINITIONS –

ATP**-** Acceptance Test Procedures
EAM- Enterprise Asset Management
FYI- For-Your-Information
OEM- Original Equipment Manufacturer
SGR-State of Good Repair
SOP-Standard Operating Procedure
TAM-Transit Asset Management
VMD-Vehicle Maintenance Department

IV. RESPONSIBILITY –

Transit Asset Management (**TAM**) Department is responsible to read and revise this standard operating procedure (**SOP**) on an annual basis and when the process changes. After revision, TAM will ensure distribution and discussion with SOP and EAM users. TAM will maintain relationship with Procore and support the Engineering Department's project control process.

Supervisors using EAM, are responsible for reading and asking questions about the supervisor and new asset identification process.

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All cost center managers that operate in EAM are responsible to notify and provide new equipment information within 30 days of asset installation.

Financial Reporting Department is responsible for Form 0221 process and participating in review, comment and signing of this SOP.

Engineering Department project control will participate in the review, commenting and signing of this SOP.

V. PROCEDURES/PROCESS

There are several sources that TAM may receive new asset information. They include the following sources.

1. **New Equipment Form** – The new equipment form is completed by the asset owner when an asset is being replaced or purchased, or the project manager if the asset is replaced during a managed project. The new equipment form is found on the HUB under Forms and Metro, Transit Asset folders. The completed form is sent to TAM TAM@MetroStLouis.org .

   Non revenue rolling stock, such as trailers, man-lifts, lawn equipment and forklifts, will be sent to the truck shop at Central Facility, to be entered into EAM. Additional details pertaining to the nonrevenue vehicle process is listed in No. 5 of this section.

2. **Form 0221 Request for Disposal and Replacement of Fixed Asset** - At the start of a project, prior to disposal of assets, the maintainer of the assets and/or the project manager of the project, will complete Form 0221 to receive direction as to the proper disposal of the asset. The request for disposal is submitted to the Finance Department. The Finance Department Disposal of Asset Policy is attached.

   The new equipment form is included in Form 0221 process. TAM will receive the completed new equipment form after the equipment has been received. Form 0221 will be closed after the new equipment form is received.

   Form 0221 is found on the HUB and at W:\Forms\0221 Request for Disposal Fixed Assets.xls and W:\Forms\0221 Revised Request for Fixed Asset Disposal.xlsx . A copy is attached.

3. **Annual Asset Condition Rating Review -** Asset condition rating review is conducted annually. The asset owner receives a list of assets with condition ratings from the TAM department. When the condition rating is revised to a 5 (excellent), the asset owner identifies whether the asset is new or refurbished. This action can also be addressed through source 1 above.

4. **Review of completed purchase requisitions** - TAM receives a For-Your-Information (**FYI**) copy of purchase requisitions. The purchase requisition is entered

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to the New & Retired list at \\Metrofs07\workgroups\Maintenance Reports\Monthly\4 SALE & AUCTION LISTS\EAM To be entered in EAM\New & Retired EAM Assets .xlsx as either a new asset or not a new asset.

5. **Leased and Other Non Revenue Vehicles -** New leased and other non revenue vehicles, trailers, and gas/diesel powered equipment; and landscaping equipment ordering process is as follows.

   a. All non revenue vehicles and equipment, trailers, and gas/diesel powered equipment; and landscaping equipment are ordered through the Superintendent Main Shop and Paratransit (Thomas Spurgeon in 2023) and the Supervisor Non Revenue Maintenance-Main Shop (Darren Palmberger in 2023). For example, this includes forklifts, mobile vehicle lifts, and man lifts.

   b. Leased vehicles are ordered by the Superintendent Main Shop and Paratransit through the Enterprise web site or other appropriate vendor. Replacement information concerning current vehicle operator is provided to Enterprise or other vendor.

   c. License plates are ordered by TAM and provided to the Supervisor Non Revenue Maintenance-Main Shop. Order information is provided to the Rolling Stock System Administrator (Amanda Winters), who orders the license plates for the new vehicles. The Supervisor Non Revenue Maintenance-Main Shop (Darren Palmberger in 2023) receives and arranges for the license plates to be delivered to Enterprise or other vendor for installation on vehicles.

   d. Enterprise or other vendor delivers the vehicles to the Supervisor Non Revenue Maintenance-Main Shop. The Supervisor Non Revenue Maintenance-Main Shop does the following
      i. Arranges Metro driver/vehicle swap.
      ii. Provides Metro insurance card and Enterprise program book.
      iii. Provides TAM with the mileage, new vehicle operator name and who is responsible.
      iv. Arranges disposal of non revenue vehicles to be picked by Enterprise and arranges title transfer.
      v. Maintains the list of new and disposed vehicles.

6. **Revenue Vehicles -** New revenue vehicles ordering process is as follows.

   a. Director Quality Assurance and Training (Geoffrey Kehr in 2024) will incorporate the General Mangers of Paratransit (Call-A-Ride) (Geffrey Butler in 2024) and MetroBus (Marlon Stacker in 2024) in the development and review process of new vans and busses prior to ordering new vehicles.
   b. Revenue vehicles are ordered by Director Quality Assurance and Training. The VMD New Bus Information form is started as In-Preparation.
   c. Buses are delivered to Director Quality Assurance and Vehicle Maintenance

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Department (**VMD**), who inspects the buses upon arrival. The Director Quality Assurance and VMD oversees the acceptance test procedures (**ATP**) for Original Equipment Manufacturer (**OEM**)

d. The VMD New Bus Information form is completed and provided to TAM. The VMD New Bus Information form is attached.
e. When a vehicle is approved for and then disposed of TAM is notified.

7. **Procore Project Close Out** - Procore is the Engineering Department's project management program. Procore may be used by other departments for project management. A project charter should include responsibilities for reporting equipment removed and added to Property, to TAM.

   At the end of the project, the project close out action plan check list includes the identification of new assets to TAM. The TAM new equipment form is included and will be completed and provided to TAM.

VI. DOCUMENT REVIEW

A draft SOP will be distributed in electronic form to the applicable staff members. A time of approximately two weeks will be allotted for comments and revisions. Once all comments and revisions are returned within the specified time frame and have been discussed by the team, the SOP author will review the final draft and if approved by the Program Manager-TAM, the final draft will then be sent out for approval and sign off by all team members.

VII. CONCURRENCE SIGN-OFF

Following the publication of the final document, the concurrence sign-off form (Attached) will be distributed for signature by all team members. Service Advisories and Alerts do not require sign-off before distribution.

VIII. REVISIONS

Operating procedures, new equipment, and legal requirements may warrant revisions to existing documents. This policy allows for revisions to any published document.

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DocuSigned by:
Craig Bilbrey
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4/19/2024

Craig Bilbrey
Director Financial Reporting

Date

DocuSigned by:
Cynthia Scott
3F1D7DCD17044E9...

4/19/2024

Cynthia Scott
General Manager Paratransit (Call-A-Ride)

Date

DocuSigned by:
Dale Schaefer
240B638231AA486...

4/18/2024

Dale Schaefer
Chief Mechanical Officer

Date

DocuSigned by:
Marlon Stacker
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4/18/2024

Marlon Stacker
General Manager MetroBus

Date

DocuSigned by:
William Dee
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4/18/2024

William Dee
Vice President Procurement & Inventory Management

Date

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Vacant
Assistant Executive Director Transit Assets

Date

DocuSigned by:
Jerome Bochantin
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4/15/2024

Jerome Bochantin
Sr Director Maintenance of Way

Date

DocuSigned by:
Forrest Farthing
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4/18/2024

Forest Farthing
Manager Communications Maintenance Unit

Date

DocuSigned by:
982D155719194BB...

4/12/2024

Kelly Hamm
Sr Director Capital Projects – Transit Assets

Date

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DocuSigned by:
Enzo Stefano
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4/15/2024

Enzo Stefano — Date
Sr Director Bus & Rail Facility Maintenance & Support Services

DocuSigned by:
Geoffrey Kehr
75511BECB64A492...

4/16/2024

Geoff Kehr — Date
Director of Quality Assurance

DocuSigned by:
Brian Nichols
B99EEBD6D1884E6...

4/15/2024

Brian Nichols — Date
Accountant III

DocuSigned by:
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4/15/2024

Amanda Wedekemper — Date
Senior Manager Engineering & Project Control
Procore Administrator

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Metro

Policy for Disposal of Assets

Policy:
It is the policy of the Agency to sell and dispose of assets and property no longer needed for Agency purposes. Such sale and disposition shall be for fair market value or appraised value, unless otherwise approved by the Board. The Chief Procurement Officer shall be responsible for establishing procedures regarding the sale and disposal of excess equipment, materials and supplies.

Cost center managers are responsible for maintaining control over and safeguarding of assets. Disposal of any asset is initiated by a cost center manager completing a disposal form located on W: Forms/0221 Request for Disposal Fixed Assets.xlt and forwarding the completed form to the Fixed Asset Accountant. In order to maintain the proper information on asset disposals and assure compliance with all federal requirements, all requests should at least include tag number, if available, and reason for disposal, method of determining fair market value and the necessary approvals required on the form. (Disposal means sold, scrapped, lost, stolen, or retired).

The Fixed Asset Accountant will identify if there is any federal and/or state grant funding contributed toward this asset. If so, it's documented on the form with the grant award number and grant percentage of the federal and/or state interest. Any federal and/or state interest will require notification to FTA or other state agency. Therefore, this form will be forward to Capital Budgeting and Grants. If the estimated fair market value (FMV) is $5,000 or greater, then the approval by the Controller is required. If the disposed asset will be sold or scrapped, then the form will be forward to the Procurement Department. If the disposed asset is to be written off, the Fixed Asset Accountant will retain the form as documentation to remove from fixed assets in Oracle.

The Director of Program Development, Capital Budget and Grants is required to notify FTA and/or other state agency of the Agency's request to dispose of assets, which are no longer needed, lost, stolen, or retired. A letter is sent requesting concurrence to dispose or notifying of our intent to dispose of asset that has met its useful life. If an asset has a FMV greater than $5,000, unamortized value (book value) or receipts of proceeds greater than $5,000, then the grant percentage owed to FTA must be reimbursed. "In lieu of returning the Federal share to FTA, the Agency may elect to use the proceeds from the asset to acquire a similar asset of like kind. Under the Like-Kind Exchange Policy,

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proceeds from the asset sales are not returned to FTA; instead, all proceeds are invested in acquisition of the like-kind replacement asset."[3] With the concurrence from FTA, a liability for like-kind exchange is setup in the Agency's general ledger.

Assets to be sold or scrapped are forward to the Purchasing Department to be put out to bidders for sale. "If equipment is sold, and less than $100,000, then the President & CEO is authorized to approve contracts disposing of assets based on Board policies."[1] "If real property is disposed, then authorization is needed based on Board policies."[2]

(1) In accordance with Board policies of Bi-State Development Agency Chapter 50-5, J.2 effective 08-14-2009, "The President & CEO is authorized to approve contracts disposing of assets (excluding real property) having a fair market or approved value up to $100,000. The Board of Commissioners shall approve all sales and dispositions in excess of $100,000 fair market or appraised value."

(2) In accordance with Board policies of Bi-State Development Agency Chapter 40-3, A.1-3 effective 01/27/2012, "The Board of Commissioners shall approve any dispositions of real property where the appraised value exceeds $250,000. The President & CEO is authorized to approve any disposition of real property where the appraised value is $250,000 or less. The Vice President of Economic Development is authorized to approve any disposition of real property where the estimated value is $100,000 or less."

(3) In accordance with FTA C 5010.1D Chapter IV-26, I.6 effective 11-01-2008.

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BI-STATE DEVELOPMENT

REQUEST FOR DISPOSAL AND REPLACEMENT OF FIXED ASSETS

To be completed by requesting Cost Center.

Attach a list if more than one item DESCRIPTION OF ITEM TO BE DISPOSED: _____

BSD TAG NUMBER: _____ SERIAL NUMBER: _____

UNIT NUMBER (M5/EAM) _____

REASON FOR DISPOSITION: ☐ Surplus ☐ Stolen ☐ Damaged or non-functioning ☐ Trade-In

IF DAMAGED, ESTIMATED COST OF REPAIR: _____

IF ITEM WILL BE REPLACED, IS THERE TRADE-IN VALUE? ☐ Yes ☐ No

ESTIMATED FAIR MARKET VALUE (FMV): _____

REQUEST FOR WRITE-OFF/SALE BY CC MGR: _____ Signature _____ Date

If greater than $500:
APPROVAL BY DIVISION DIRECTOR: _____ Signature _____ Date

Is the fixed asset being replaced? If yes, complete the New Equipment Form, page 2 of this document. If no, TAM Manager sign off is required.

_____ Signature _____ Date

Forward to Property Accountant

To be completed by Property Accountant/Procurement

BOOK VALUE (BV): _____ DATE: _____

GRANT FUNDED? ☐ Yes ☐ No **Procurement Method of Disposal**

GRANT NUMBER: _____ Federal: _____ State: _____

GRANT PERCENTAGE: _____ Federal: _____ State: _____

_____ APPROVAL BY CONTROLLER (If > $5,000) _____ APPROVAL BY PROCUREMENT

If Est. FMV is $5,000 or greater forward to Capital Budgeting and Grants;
If to be sold or scrapped, forward to Purchasing Department;
If to be written-off, retain as documentation to remove from fixed assets.

To be Completed by Capital Budgeting and Grants

IF FMV IS GREATER THAN $5,000, UNAMORTIZED VALUE (BOOK VALUE) TIMES: _____

THE GRANT PERCENTAGE EQUALS: _____ (to be paid to FTA, if Book Value > $5,000)

DATE LETTER SENT TO FTA: _____

LETTER OF CONCURRENCE RECEIVED FROM FTA: _____ DATE CHECK SENT TO FTA: _____

APPROVAL BY CAPITAL BUDGETING AND GRANTS: _____ Signature _____ Date

If to be sold or scrapped, forward to Purchasing Department;
If to be written-off, return to Property Accountant

To be completed by Purchasing.

IF SCRAPPED, INDICATE TWO HIGHEST REPSONSIVE BIDDERS AND AMOUNT:

BIDDER #1: _____ AMOUNT: _____

BIDDER #2: _____ AMOUNT: _____

IF SOLD, INDICATE METHOD OF COMPETITIVE SALE: SELLING PRICE: _____

If, sold, and less than $5,000, forward this form to Treasury, with Cashiers Check

If, sold, and greater than 5,000, forward this form to President & CEO for approval.

If, sold, and greater than $50,000, forward this form to President & CEO for approval.

If, sold, and greater than $50,000, forward this form to President & CEO for approval along with recommendation request for approval by Board of Commissioners. Upon completion, forward one copy to Property Accountant

IF OVER $5,000, PRESIDENT & CEO APPROVAL IS REQUIRED

_____ Signature _____ Date

BSD Form 0221, December 15, (Microsoft Excel 97) Supercedes BSDA Form 0221, Nov 00, which is obsolete.

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New Equipment Form Revision 3	
Fill out all areas and email form to distribution group, TAM and, Brian Nichols. Attach a copy of invoice and title (if applicable)Please forward purchase documents, equipment manuals and warranty to TAM2 TAM2@MetroStLouis.org	
Replaces asset ID number	
Item Description	
Year	
Manufacturer	
Make	
Model	
Serial Number	
Purchase Date	
Purchase Amount	
Funding Sources (e.g. MO-54-0001-03, MO-05-0028--5, etc)	
In Service Date	
Vendor	
Location in building (if applicable)	
Condition Assessment Rating (1-Poor, 2-Marginal, 3-Adequate, 4-Good, 5-Excellent)	
Condition (New or Used)	
Life Expectancy	
Warranty (attach)	
Inspection Interval	
Latitude (for linear assets)	
Longitude (for linear assets)	
Owning Cost Center	
Owning Department	
Maintenance Cost Center	
Contact Name	
Contact Number	

Please forward purchase documents, equipment manuals and warranty to TAM2 TAM2@MetroStLouis.org

W:\Maintenance Reports\TAM Manager\References\New Equipment Form rev 3

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Required information for new buses:

1. Bus number and what locations (QA)
2. Title
    a. Manu/ Make/ Model
    b. VIN
    c. Title Date
    d. Title mileage
3. Delivery paperwork
    a. Delivery Date
    b. Delivery Mileage
4. Products, quantities
    a. Engine Oil Type
        i. Qty
    b. Transmission Fluid Type
        i. Qty
    c. Differential Fluid Type
        i. Qty
    d. Coolant Type
        i. Qty
    e. Power steering Fluid Type
        i. Qty
    f. Fuel Type
        i. Qty
5. Invoice –
    a. Purchase price
    b. Bus number
    c. VIN
    d. Vehicle Length
    e. Components SN