TRANSPORTATION RESEARCH BOARD

# TRB Webinar: The Future of Commuter Rail in North America

September 22, 2025

2:00 - 3:30 PM



### **AICP Credit Information**

1.5 American Institute of Certified Planners Certification Maintenance Credits

You must attend the entire webinar

Log into the American Planning Association website to claim your credits

Contact AICP, not TRB, with questions

### **Purpose Statement**

This webinar will explore how commuter railroads are navigating the market dynamics, service, and upcoming funding challenges. Presenters will discuss current trends, examples in CA and PA, and explores alternative approaches to service schedules, simplified fare structures, and infrastructure options.

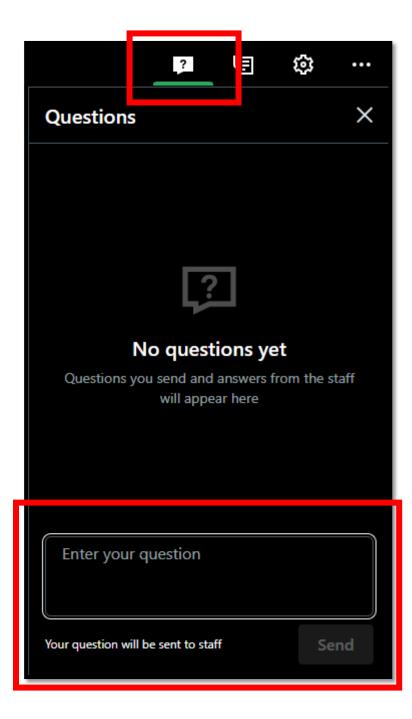
### **Learning Objectives**

At the end of this webinar, you will be able to:

- Differentiate between different types of commuter rail providers and understand their respective history and context
- Develop appropriate strategic planning
- Apply different regional strategies

### **Questions and Answers**

- Please type your questions into your webinar control panel
- We will read your questions out loud, and answer as many as time allows



### Today's presenters



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# Future of Commuter Rail in North America

TCRP J-11 Task 45 Report Webinar

# Future of Commuter Rail in North America TCRP J-11 Task 45

### **Objective**

"... identify implementable and practical strategies for commuter rail services in North America that will facilitate recovery from the effects of the COVID-19 pandemic, transformation, and continued relevance."

"... travel demand, service planning, operations, maintenance, funding, infrastructure (e.g., right-of-way ownership and access rights), marketing, customer and community relations, and interorganizational relationships."

### Agenda

### Scope

– What systems fall within the research scope?

# History of Commuter Rail

– How did the traditional market for commuter rail develop?

# Commuter Rail Systems Today

**Commuter Rail Systems** – What does the modern market for commuter rail look like today?

– What are the important factors in the modern commuter rail market?

#### **Thematic Case Studies**

- Caltrain: Electrification and new service

MBTA: Timetable changes

- Metra: Fare modernization

Connecticut DOT: Transit oriented development

UTA: Operational readiness

Metrolink: Public interest and support for change

S-Bahn: International example

# Implementation Strategies

– What long term strategies exist to manage the North American commuter rail market going forward?

### Scope

Commuter rail providers are diverse in their history, operational practices, and governance





The way to really fly.













































UTA झ FRONT RUNNER







# History of Commuter Rail Some modern commuter rail services have more than a century of history

#### **LEGACY**

Commuter rail systems which have been operational since before 1989























































### **History of Commuter Rail**

Commuter rail providers are diverse in their history, operational practices, and governance

#### **LEGACY**

Commuter rail systems which have been operational since before 1989























#### **NEW ALL DAY**

Commuter rail systems that began operations after 1989 and operate offpeak and/or weekend service





































## History of Commuter Rail

Commuter rail providers are diverse in their history, operational practices, and governance

#### **LEGACY**

Commuter rail systems which have been operational since before 1989





















#### **NEW ALL DAY**

Commuter rail systems that began operations *after 1989 and operate off- peak* and/or weekend service





















#### **NEW PEAK ONLY**

Commuter rail systems that began operations *since 1989 and only operate during peak periods* 









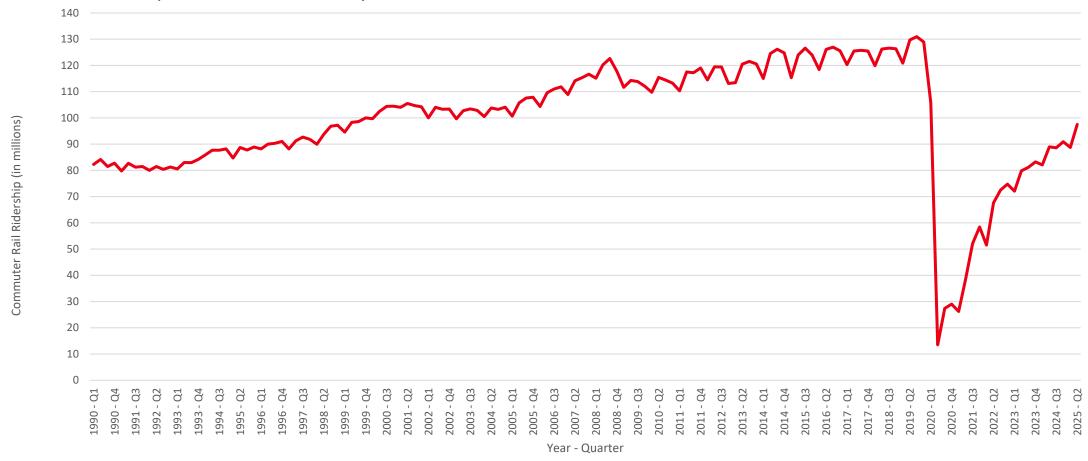






# Commuter Rail Systems Today Starkly different fortunes for commuter rail in the past three decades

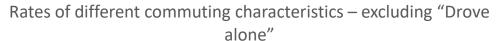
Commuter Rail Ridership in the United States by Quarter, 1990 Q1 – 2025 Q2. Source: APTA

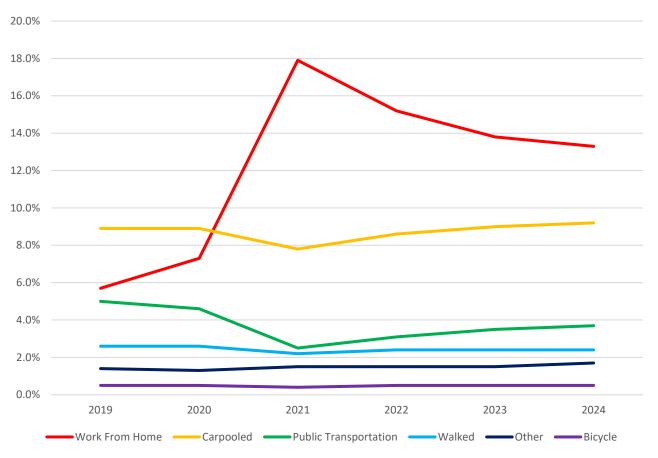


### Commuter Rail Systems Today Modern travel markets have shifted

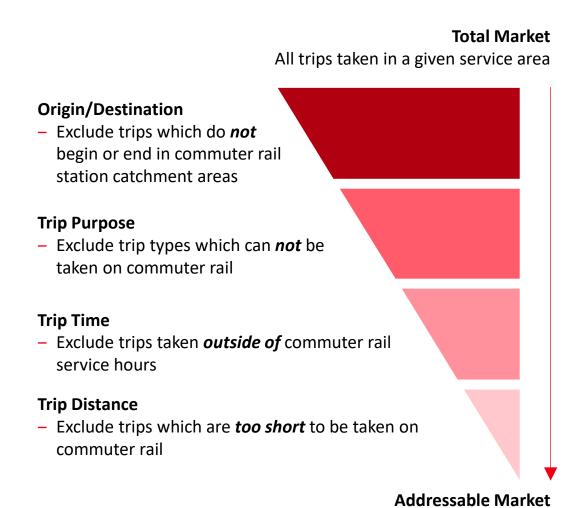
### Market analysis study areas:

- Miami TriRail
- Denver RTD
- Albuquerque/Santa Fe Rail Runner
- Baltmore/Washington D.C. MARC
- Los Angeles Metrolink





# Commuter Rail Systems Today Investigating how modern travel markets have shifted using market assessments



#### **Market Assessment**

### **Purpose**

- Define the Addressable Market
- Identify patterns of travel in a given service area
- See how travel markets change over time

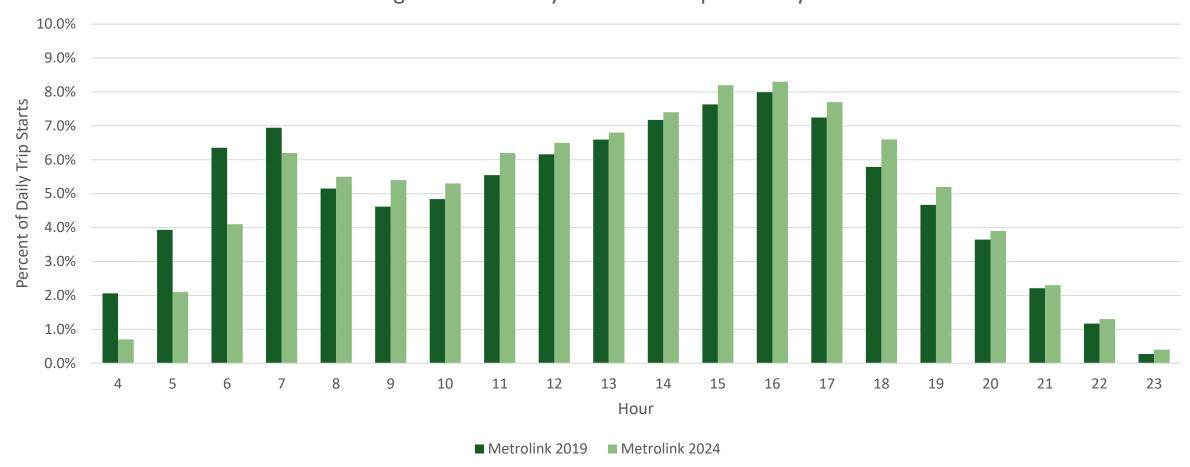
### Methodology

- 1. Identify Station Areas
- 2. Drawdown Data
- Process Data
- 4. Apply Appropriate Filters
- Analyze Results

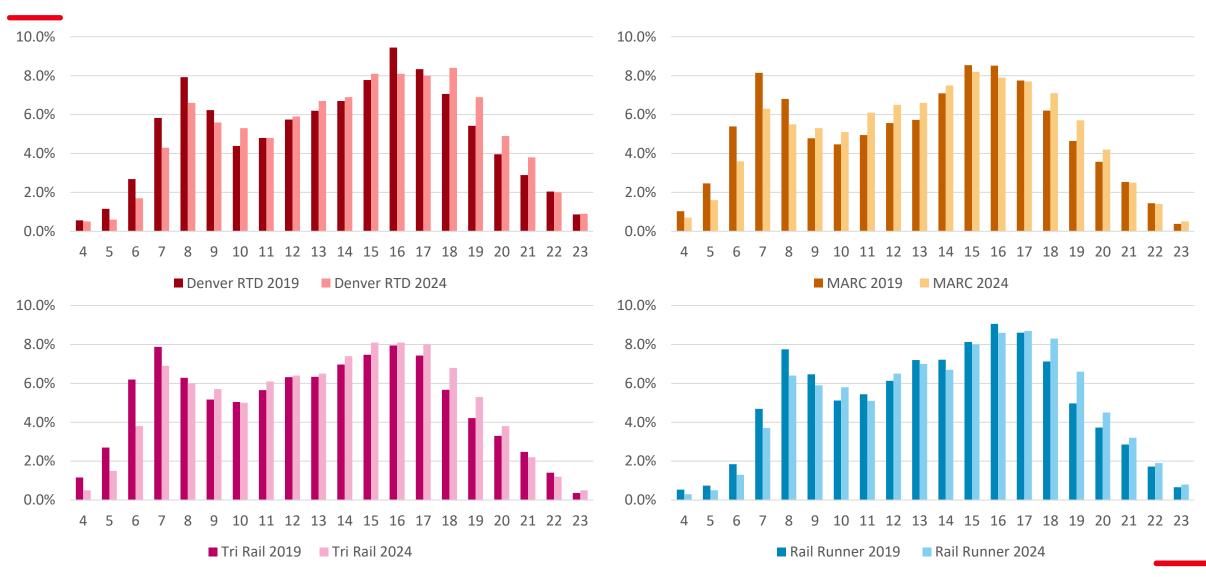
All trips which *could* be taken on commuter rail

### Commuter Rail Systems Today How has weekday travel changed?



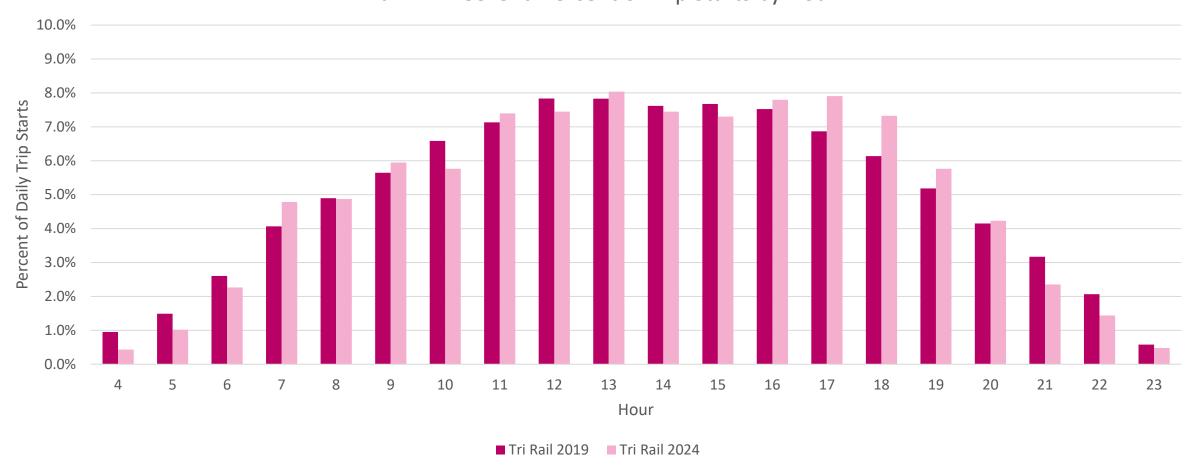


# Commuter Rail Systems Today We found similar changes in weekend travel patterns in the other study areas

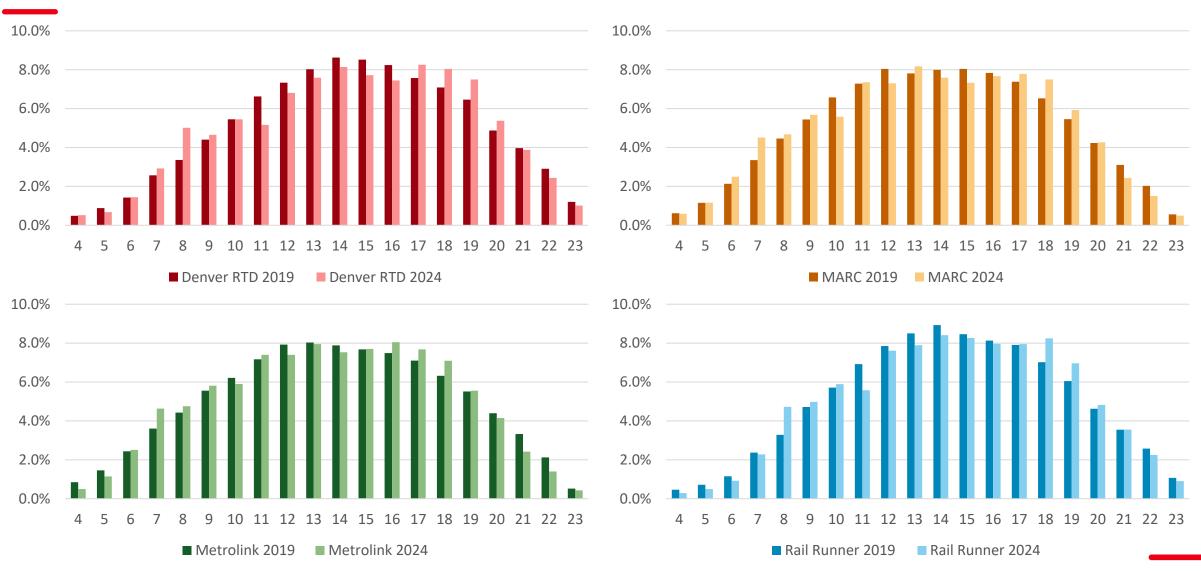


### Commuter Rail Systems Today How has weekend travel changed?

Miami – Weekend Percent of Trip Starts by Hour



# Commuter Rail Systems Today We found similar changes in weekend travel patterns in the other study areas

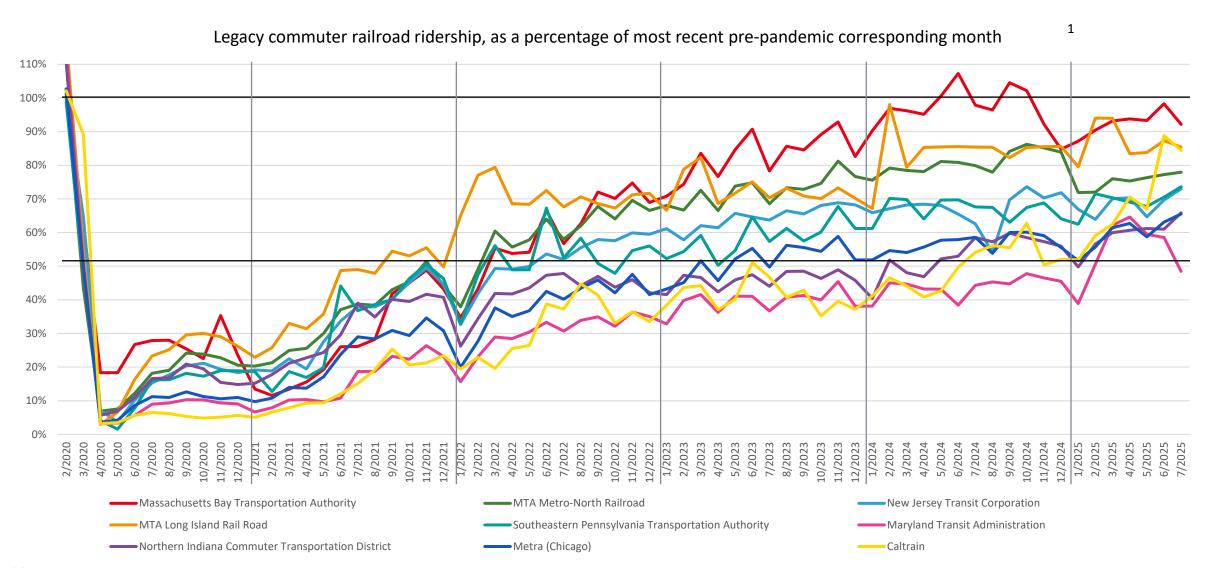


# Commuter Rail Systems Today We found similar changes in weekend travel patterns in the other study areas

- Takeaways:
- While each travel market is unique, we see some broad trends consistently across very different geographies and contexts
- The downtown peak commuter market was small in 2019 and has shrunk in 2024
- Midday, evening, and especially weekend markets in 2024 are strong, often almost as large if not larger than weekday peak markets
- Must be other reasons to explain the variation in recovery

# **Case Studies**

# Recovery patterns are extremely varied between systems Case studies help us understand the reasons behind the variation

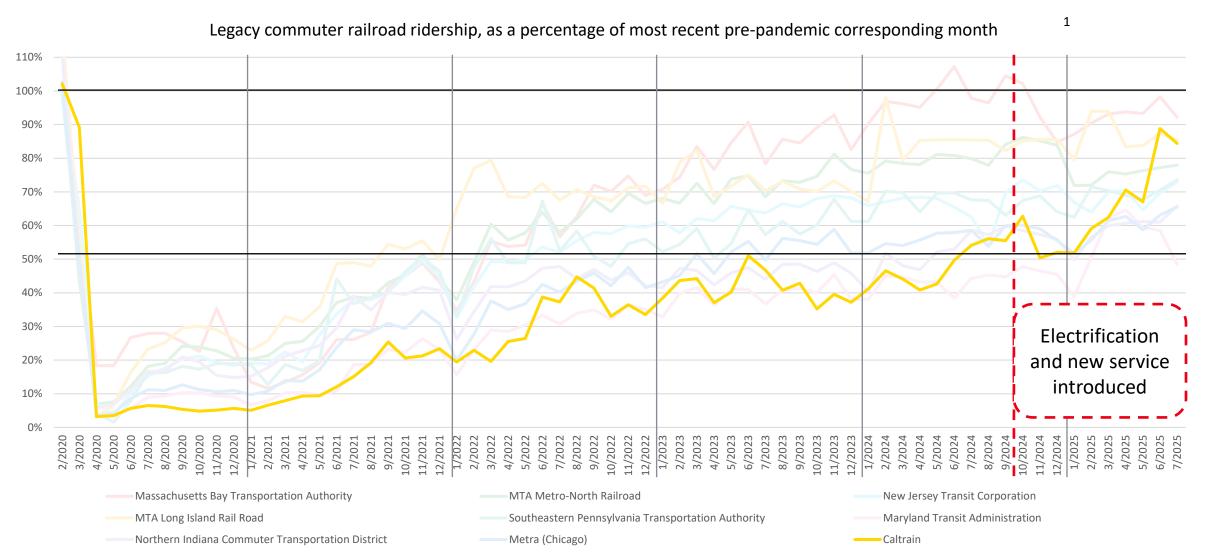


(1) e.g. September 2024 compared with September 2019; February 2024 compared with February 2020 DB E.C.O. North America | Future of Commuter Rail Report Findings Webinar

# Case Studies in Commuter Rail 7 thematic case studies to show specific lessons and emerging practices

Caltrain	Electrification and new service
MBTA	Timetable and service changes
Metra	Changes to fare structure
Connecticut DOT	Transit oriented development
UTA	Operational readiness
Metrolink	Public and internal support for change
Germany	International approaches

# Caltrain: Electrification and new service Clear effect of electrification and new service on Caltrain's ridership recovery



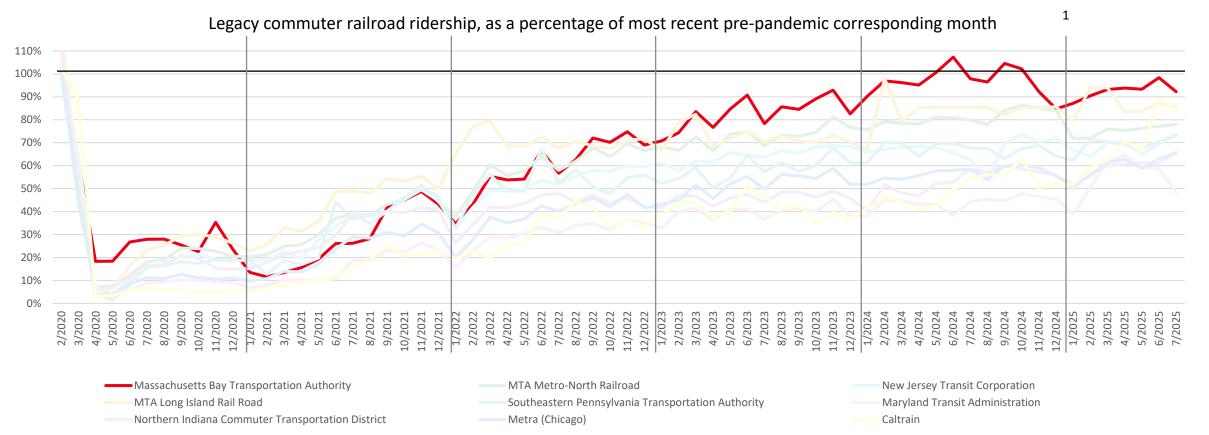
(1) e.g. September 2024 compared with September 2019; February 2024 compared with February 2020

# Massachusetts Bay Transportation Authority Commuter Rail Timetable change and its effect on ridership.

Increased ridership attributed to the following factors:

- 1. Focus on all day bi-directional service
- 2. Service expansions
- 3. Good on-time performance

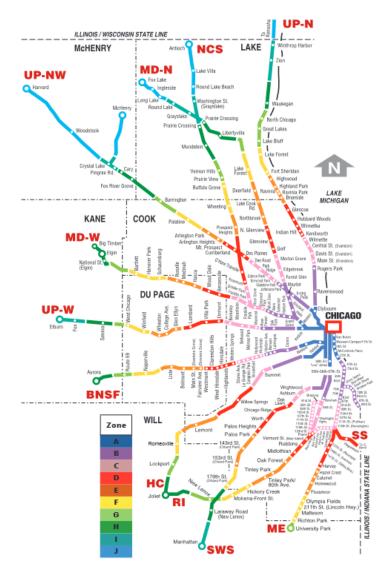
- 4. Fare promotions including \$10 all-weekend fare
- 5. Extensive marketing campaigns focusing on expanding the rider base beyond commuters
- 6. Traffic congestion and Boston employment market

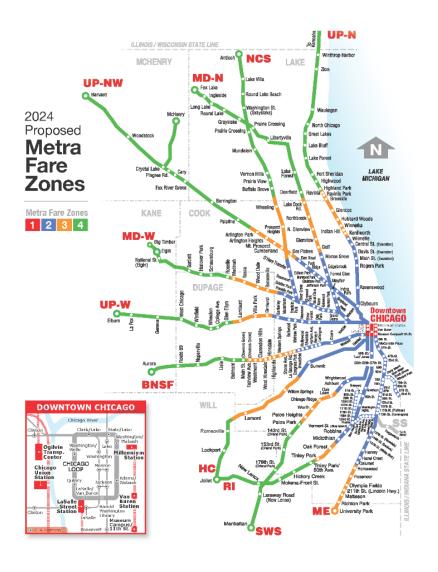


(1) E.G. September 2024 compared with September 2019; February 2024 compared with February 2020

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# Metra Commuter Rail Implemented a new fare policy to better reflect the post-COVID travel market





# Connecticut DOT Commuter Rail Created an intentional inter-departmental strategy for transit-oriented development



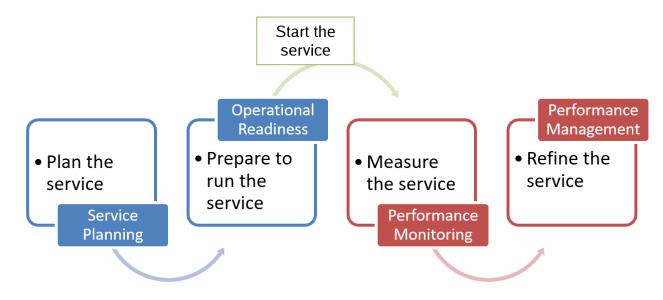
Source: Town of Windsor Locks

# Utah Transit Authority FrontRunner Operational readiness for future schedule implementation

Table 8: FrontRunner Current and Planned Timetable Overview

Current Service (2024)	Planned Schedule (2030)
61 trains on weekday	105 trains weekday
Peak trains every 30 minutes	Peak trains every 15 minutes
Off-peak trains every 60 minutes	Off-peak trains every 30 minutes
10 trainsets required	18 trainsets required
Mostly single track with sidings.	Sections of new double track, 1 new station

Source: Utah Transit Authority (2024)



### Overcoming funding and institutional barriers to making timetable changes

•	nedule October 2024, reorienting service to biall-day service with pulse schedules at Union Station.	April 2024 Octo  130 +349  8,600 +219  1,610 +239			
K	Daily Round Trips	130	+34%	174	
	Vehicle Revenue Miles	8,600	+21%	10,400	
	Daily Station Calls	1,610	+23%	1,987	
	Active Trainsets	38	-8%	35	
	Annual Operating Cost (FY 24 to FY 25)	\$132 million	+10% \$14	46 million	

- Planned as part of the preparation for the 2028 Olympics, enabled in 2024 by using travel data to show how changes in travel patterns necessitated an adjustment.
- Staff communicated to leadership how the new service would affect operations and infrastructure, including efficiencies and additional extra costs. Staff invested in engaging community about service change.

Source: Metrolink: 2024

### Example: Pomona to Van Nuys

SAN BERNAR	DIN	O LII	NE													San	Bern	ardin	o to	L.A
				N	ON	DA'	Y T	H R C	) U G	H F	RID	AY								FRI OI
Metrolink Train No.	301	303	305	307	309	311	313	315	317	319	321	323	325	327	329	331	333	335	337	33
San Bernardino - Downtown	3:47	4:19	4:38	5:11	5:37	5:58	6:21	6:57	7:58	8:45	9:57	11:32	12:26	1:33	3:10	4:01	5:15	6:13	7:44	9:3
San Bernardino Depot*	3:52	4:24	4:43	5:16	5:42	6:03	6:26	7:02	8:03	8:50	10:02	11:37	12:31	1:38	3:15	4:06	5:20	6:18	7:48	9:3
Rialto	3:59	4:32	4:50	5:23	5:49	6:11	6:33	7:09	8:10	8:58	10:09	11:44	12:38	1:45	3:22	4:13	5:27	6:25	7:54	9:4
ontana	4:06	4:38	4:57	5:30	5:56	6:17	6:40	7:16	8:17	9:04	10:16	11:53	12:47	1:52	3:31	4:20	5:34	6:34	8:02	9:
Rancho Cucamonga	4:14	4:47	5:06	5:38	6:04	6:26	6:49	7:24	8:25	9:17	10:25	12:02	12:56	2:01	3:40	4:29	5:43	6:55	8:11	9:
Jpland	4:22	4:54	5:13	5:46	6:12	6:34	6:56	7:32	8:33	9:24	10:33	12:09	1:03	2:09	3:47	4:36	5:51	7:03	8:18	10:0
Montclair	4:28	5:00	5:19	5:52	6:18	6:39	7:02	7:38	8:39	9:30	10:39	12:15	1:09	2:15	3:53	4:42	5:57	7:09	8:24	10:
Claremont	4:31	5:04	5:23	5:55	6:21	6:43	7:06	7:41	8:42	9:33	10:43	12:18	1:13	2:19	3:56	4:46	6:01	7:13	8:28	10:
Pomona - North	4:36	5:09	5:28	6:00	6:26	6:48	7:10	7:46	8:47	9:38	10:47	12:23	1:17	2:23	4:01	4:50	6:13	7:18	8:33	10:
Covina	4:47	5:20	5:39	6:11	6:37	6:59	7:22	7:57	8:58	9:49	10:58	12:34	1:29	2:35	4:12	5:02	6:24	7:30	8:44	10:
Baldwin Park	4:54	5:27	5:46	6:18	6:44	7:06	7:29	8:04	9:05	9:56	11:05	12:41	1:35	2:41	4:19	5:12	6:31	7:37	8:51	10:
El Monte	5:04	5:37	5:56	6:28	6:54	7:16	7:38	8:14	9:15	10:06	11:15	12:51	1:45	2:51	4:32	5:23	6:48	7:52	9:02	10:
Cal State L.A.	5:15	5:48	6:08	6:39	7:05	7:27	7:51	8:25	9:28	10:17	11:28	1:04	1:57	3:03	4:48	5:39	6:59	8:03	9:14	10:
L.A. Union Station	5:26	5:59	6:20	6:50	7:16	7:40	8:02	8:36	9:39	10:30	11:39	1:15	2:08	3:14	5:00	5:53	7:10	8:14	9:27	11:

							NUNU	AY-H	KIVA	ľ										
	301	305	307	309	311	313	317	319	321	325	327	329	333	335	337	341	343	345	349	353
Redlands-Downtown				5:25																
➤ Arrow arrives S.BDowntown		4:30	5:03		6:03	6:33	7:33		8:33	9:31		10:31	11:31		12:31	1:31		2:31	3:31	4:31
San Bernardino-Downtown departs	3:43	4:43	5:13	5:43	6:13	6:43	7:43		8:43	9:43		10:43	11:43		12:43	1:43		2:43	3:43	4:43
San Bernardino-Depot	3:48	4:48	5:18	5:48	6:18	6:48	7:48		8:48	9:48		10:48	11:48		12:48	1:48		2:48	3:48	4:48
Rialto	3:56	4:56	5:26	5:56	6:26	6:56	7:56		8:56	9:56		10:56	11:56		12:56	1:56		2:56	3:56	4:56
Fontana	4:02	5:02	5:32	6:02	6:32	7:02	8:02		9:02	10:02		11:02	12:02		1:02	2:02		3:02	4:02	5:02
Rancho Cucamonga	4:13	5:13	5:43	6:13	6:43	7:13	8:13		9:13	10:13		11:13	12:13		1:13	2:13		3:13	4:13	5:13
Upland	4:21	5:21	5:51	6:21	6:51	7:21	8:21		9:21	10:21		11:21	12:21		1:21	2:21		3:21	4:21	5:21
Montclair	4:27	5:27	5:57	6:27	6:57	7:27	8:27	8:57	9:27	10:27	10:57	11:27	12:27	12:57	1:27	2:27	2:57	3:27	4:27	5:27
Claremont	4:32	5:32	6:02	6:32	7:02	7:32	8:32	9:02	9:32	10:32	11:02	11:32	12:32	1:02	1:32	2:32	3:02	3:32	4:32	5:32
Pomona-North	4:38	5:38	6:08	6:38	7:08	7:38	8:38	9:08	9:38	10:38	11:08	11:38	12:38	1:08	1:38	2:38	3:08	3:38	4:38	5:38
Covina	4:49	5:49	6:19	6:49	7:19	7:49	8:49	9:19	9:49	10:49	11:19	11:49	12:49	1:19	1:49	2:49	3:19	3:49	4:49	5:49
Baldwin Park	4:55	5:55	6:25	6:55	7:25	7:55	8:55	9:25	9:55	10:55	11:25	11:55	12:55	1:25	1:55	2:55	3:25	3:55	4:55	5:55
El Monte	5:06	6:06	6:36	7:05	7:36	8:06	9:06	9:36	10:06	11:06	11:36	12:06	1:06	1:36	2:06	3:06	3:36	4:06	5:06	6:06
Cal State L.A.	5:16	6:16	6:46	7:16	7:46	8:16	9:16	9:46	10:16	11:16	11:46	12:16	1:16	1:46	2:16	3:16	3:46	4:16	5:16	6:16
L.A. Union Station	5:29	6:29	6:59	7:29	7:59	8:29	9:29	9:59	10:29	11:29	11:59	12:29	1:29	1:59	2:29	3:29	3:59	4:29	5:29	6:29

San Bernardino Line + Arrow train connections

#### 2019

- Departure and arrival times are unique for each train
- Transfers at Union Station are not consistent

#### MONDAY THROUGH FRIDAY

	MA																	
Metrolink Train No.	A759	901	101	103	903	905	907	107	909	109	911	155	115	117	119	121	123	913
L.A. Union Station	4:09	5:38	6:51	7:16	8:00	8:23	8:55	9:52	11:40	12:43	2:48	3:14	3:37	4:28	5:10	5:52	6:50	7:45
Glendale	4:22	5:48	7:03	7:27	8:10	8:34	9:07	10:03	11:50	12:54	3:00	3:26	3:48	4:39	5:21	6:03	7:03	7:56
Burbank - Downtown	<b>1</b>	5:54	7:09	7:34	8:18	8:41	9:14	10:10	11:58	1:01	3:06	3:32	3:55	4:46	5:28	6:10	7:10	8:03
Burbank Airport - South (VC Line)*	4:34	6:03	7:15	7:40	8:25	8:48	9:21	10:16	12:05	1:07	3:13	3:38	4:00	4:52	5:34	6:15	7:16	8:10
Van Nuys	4:44		7:25	7:48				10:24		1:16		3:46	4:08	4:59	5:41	6:23	7:23	
Northridge	4:53		7:33	8:03				10:32		1:24		3:54	4:16	5:07	5:54	6:32	7:31	
Chatsworth	5:06		7:39	8:11				10:41		1:31		4:03	4:22	5:13	6:00	6:38	7:37	
Simi Valley	5:19		7:52							1:43			4:34	5:30	6:11	6:53	7:50	
Moorpark	5:31		8:06							2:00			4:51	5:41	6:26	7:07	8:02	
Camarillo	5:46													5:53	6:38		8:13	
Oxnard	5:58													6:03	6:48		8:23	
Ventura - East														6:20	7:07		8:43	

### 2025

San Bernardino → L.A.

- Departure and arrival times are consistent each hour
- Transfers at Union Station are timed

M	ПN	ΠA	Y _	EB	In	۸V

	103	A761	107	A765	115	A769	117	119	121	123	A779	127	129	131	A785	139
L.A. Union Station	6:30	7:13	8:30	9:13	10:30	11:13	11:30	12:30	1:30	2:30	4:13	4:30	5:30	6:30	7:13	10:30
Glendale	6:41	7:26	8:41	9:26	10:41	11:26	11:41	12:41	1:41	2:41	4:26	4:41	5:41	6:41	7:26	10:41
Burbank-Downtown	6:47	7:33	8:47	1	10:47	1	11:47	12:47	1:47	2:47	4:32	4:47	5:47	6:47	1	10:47
Burbank Airport-South (VCL)	6:52	7:39	8:52	9:36	10:52	11:36	11:52	12:52	1:52	2:52	4:36	4:52	5:52	6:52	7:36	10:52
Van Nuys	7:01	7:47	9:01	9:44	11:01	11:44	12:01	1:01	2:01	3:01	4:44	5:01	6:01	7:01	7:44	11:01
Northridge	7:10	7:55	9:10	1	11:10	1	12:10	1:10	2:10	3:10	4:54	5:10	6:10	7:10	1	11:10
Chatsworth	7:18	8:02	9:18	9:59	11:18	11:59	12:17	1:17	2:18	3:17	4:59	5:18	6:18	7:18	7:59	11:18
Simi Valley	7:32	8:14	9:32	10:11	11:32	12:11			2:32		5:11	5:32	6:32	7:32	8:11	11:32
Moorpark	7:44	8:27	9:44	10:24	11:47	12:23			2:44		5:26	5:47	6:45	7:44	8:27	11:44
Camarillo		8:41		10:36	12:00	12:36					5:43	6:00	6:56		8:47	
Oxnard		8:56		10:54	12:11	12:51					6:00	6:11	7:07		8:59	
Ventura–East		1		1	12:28	1					1	6:28	7:26		1	
Ventura-Downtown/Beach		9:10		11:08		1:05					6:19				9:13	

### Example: Pomona to Van Nuys

7:02	7:38	8:39	9:30	10:39	12:15	1:09	2:15	3:53	4:42	5:57	7:09	8:24	10:09
7:06	7:41	8:42	9:33	10:43	12:18	1:13	2:19	3:56	4:46	6:01	7:13	8:28	10:13
7:10	7:46	8:47	9:38	10:47	12:23	1:17	2:23	4:01	4:50	6:13	7:18	8:33	10:17
7:22	7:57	8:58	9:49	10:58	12:34	1:29	2:35	4:12	5:02	6:24	7:30	8:44	10:29
7:29	8:04	9:05	9:56	11:05	12:41	1:35	2:41	4:19	5:12	6:31	7:37	8:51	10:35
7:38	8:14	9:15	10:06	11:15	12:51	1:45	2:51	4:32	5:23	6:48	7:52	9:02	10:47
7:51	8:25	9:28	10:17	11 8	1:04	1:57	3:03	4:48	5:39	6:59	8:03	9:14	10:59
8:02	8:36	9:39	10:30	11:39	1:15	2:08	3:14	5:00	5:53	7:10	8:14	9:27	11:12

- To arrive in Van Nuys at 3:15 p.m., depart at 10:47 a.m.
- Station to station journey of 2:29
- Train trave time of 1:25
- Waiting time of 1:59 between train arrival and target time

903	905	907	107	909	19	911	155	115	117	119	121	123	913
8:00	8:23	8:55	9:52	11:40	12:43	2:48	3:14	3:37	4:28	5:10	5:52	6:50	7:45
8:10	8:34	9:07	10:03	11:50	12:54	3:00	3:26	3:48	4:39	5:21	6:03	7:03	7:56
8:18	8:41	9:14	10:10	11:58	1:01	3:06	3:32	3:55	4:46	5:28	6:10	7:10	8:03
8:25	8:48	9:21	10:16	12:05	107	3:13	3:38	4:00	4:52	5:34	6:15	7:16	8:10
			10:24		1:16		3:46	4:08	4:59	5:41	6:23	7:23	
			10.00		1.04		2.54	4.17	E.07	E.E A	4.20	7.01	

4:21	5:21	5:51	6:21	6:51	7:21	8:21		9:21	10:21		11:21	12:21		1:21	2:21
4:27	5:27	5:57	6:27	6:57	7:27	8:27	8:57	9:27	10:27	10:57	11:27	12:27	12:57	1:27	2:27
4:32	5:32	6:02	6:32	7:02	7:32	8:32	9:02	9:32	10:32	11:02	11:32	12:32	1:02	1:32	2:32
4:38	5:38	6:08	6:38	7:08	7:38	8:38	9:08	9:38	10:38	11:08	11:38	12:38	1:08	1:38	2:38
4:49	5:49	6:19	6:49	7:19	7:49	8:49	9:19	9:49	10:49	11:19	11:49	12:49	1:19	1:49	2:49
4:55	5:55	6:25	6:55	7:25	7:55	8:55	9:25	9:55	10:55	11:25	11:55	12:55	1:25	1:55	2:55
5:06	6:06	6:36	7:05	7:36	8:06	9:06	9:36	10:06	11:06	11:36	12:06	1:06	1:36	2:06	3:06
5:16	6:16	6:46	7:16	7:46	8:16	9:16	9:46	10:16	11:16	11:46	12:16	1:16	1: 6	2:16	3:16
5:29	6:29	6:59	7:29	7:59	8:29	9:29	9:59	10:29	11:29	11:59	12:29	1:29	1:59	2:29	3:29

- To arrive in Van Nuys at 3:15 p.m., depart at 1:08/1:38 p.m.
- Station to station journey of 1:23/1:53
- Train trave time of 1:22
- Waiting time of 0:14 between train arrival and target time

	103	A761	107	A765	115	A769	117	119	121	<b>N.3</b>
L.A. Union Station	6:30	7:13	8:30	9:13	10:30	11:13	11:30	12:30	1:30	2:30
Glendale	6:41	7:26	8:41	9:26	10:41	11:26	11:41	12:41	1:41	2:41
Burbank-Downtown	6:47	7:33	8:47	<b>1</b>	10:47	1	11:47	12:47	1:47	2:47
Burbank Airport-South (VCL)	6:52	7:39	8:52	9:36	10:52	11:36	11:52	12:52	1:52	2.52
Van Nuys	7:01	7:47	9:01	9:44	11:01	11:44	12:01	1:01	2:01	3:01
Northridge	7:10	7:55	9:10	1	11:10	1	12:10	1:10	2:10	3:10

### Example: Pomona to Van Nuys

SAN BERNARDINO LINE		San Bernardino to L.A.	San Bernardino to L.A. San Bernardino Line			n Bernardino → L.A.
Metrolink Train No. 301 3	MONDAY THROUGH FRIDAY  303 305 307 309 311 313 315 317 319 321 323 32  4:19 4:38 5:11 5:37 5:58 6:21 6:57 7:58 8:45 9:57 11:32 12:5	5 327 329 331 333 335 337 339 26 1:33 3:10 4:01 5:15 6:13 7:44 9:30	301 305 Redlands-Downtown	MONDAY-FRIDAY 307 309 311 313 317 319 321 5:25		337 341 343 345 349 35
Monthly Ridership	January Fel	oruary Ma	rch Ap	ril M	lay	June
2023	311,000 32	1,000 359	,000 341,	000 360	,000	340,000
2024	•	•	,000 394, 5 YoY) (+15%		,000 % YoY)	360,000 (+6% YoY)
2025	•	·	,000 572, % YoY) (+45%		7,000 % YoY)	472,000 (+31% YoY)
A. Union Station Slendale Surbank - Downtown Burbank Airport - South (VC Line)* /an Nuys Northridge Chatsworth Simi Valley Moorpark Camarillo Dxnard	4:09         5:38         6:51         7:16         8:00         8:23         8:55         9:52         11:40         12:43         2:48           4:22         5:48         7:03         7:27         8:10         8:34         9:07         10:03         11:50         12:54         3:00           4:55         7:54         7:09         7:34         8:18         8:41         9:14         10:10         11:58         1:01         3:00           4:34         6:03         7:15         7:40         8:25         8:48         9:21         10:16         12:05         1:07         3:13           4:44         7:25         7:48         10:24         1:16           4:53         7:33         8:03         10:32         1:24           5:06         7:39         8:11         10:41         1:31           5:19         7:52         1:43         2:00           5:46         5:58	3 3:14 3:37 4:28 5:10 5:52 6:50 7:45 0 3:26 3:48 4:39 5:21 6:03 7:03 7:56 0 3:32 3:55 4:46 5:28 6:10 7:10 8:03 3:38 4:00 4:52 5:34 6:15 7:16 8:10 3:46 4:08 4:59 5:41 6:23 7:23 3:54 4:16 5:07 5:54 6:32 7:31 4:03 4:22 5:13 6:00 6:38 7:37 4:34 5:30 6:11 6:53 7:50 4:51 5:41 6:26 7:07 8:02 5:53 6:38 8:13 6:03 6:48 8:23 6:20 7:07 8:43	L.A. Union Station 6:30 7:1 Glendale 6:41 7:2 Burbank—Downtown 6:47 7:3 Burbank Airport—South (VCL) 6:52 7:3 Van Nuys 7:01 7:4 Northridge 7:10 7:5 Chatsworth 7:18 8:0 Simi Valley 7:32 8:1 Moorpark 7:44 8:2 Camarillo 8:4 Oxnard 8:5 Ventura—East ↓ Ventura—Downtown/Beach 9:1	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	2:47 1:47 2:47 4:32 2:52 1:52 2:52 4:36 1:01 2:01 3:01 4:44 1:10 2:10 3:10 4:54 1:17 2:18 3:17 4:59 2:32 5:11 2:44 5:26 5:43 6:00	4:30         5:30         6:30         7:13         10:3           4:41         5:41         6:41         7:26         10:4           4:47         5:47         6:47         1         10:4           4:52         5:52         6:52         7:36         10:5           5:01         6:01         7:01         7:44         11:0           5:10         6:10         7:10         1         11:1           5:18         6:18         7:18         7:59         11:1           5:32         6:32         7:32         8:11         11:3           5:47         6:45         7:44         8:27         11:4           6:00         6:56         8:47           6:11         7:07         8:59           6:28         7:26         J           9:13

# Implementation Strategies

# Institutional Considerations and Governance Who owns, operates, and funds Commuter Rail?

### **Commuter Rail Service**

#### **OPERATOR**

- Board structure
- Interactions with local transit
- Inter-agency cooperation

#### **FUNDER**

- State vs. regional vs. local
- Single vs. multiple entities
- Operating vs. Capital costs
- Fares vs. other funding sources

#### **OWNER**

- Who owns the rightof-way?
- Are their incentives aligned with Commuter Rail?

### Implementation Barriers and Opportunities



This research reveals a tremendous diversity of services, markets, operating models, built environments, and governance structures

Lessons from emerging practices and trends that are addressing the ridership, funding, and service challenges the industry faces.

Specific strategies involve an iterative process that includes evaluating markets, designing timetables to meet those markets, reviewing how to implement the service on the infrastructure, and then revisiting the market and timetable assumptions based on capacity constraints and funding realities in the short, medium, and long term.

### **Emerging and Innovative Practices: Summary**

The strategies identified below are a summary of those documented in the research contained in the report.

### **Short-Term Strategies**

- Develop a strategic planning initiative
- Review the travel markets
- Initiate a timetabling process
- Enhance current service that works toward the long-term strategic timetable
- Reevaluate fares and revise the fare structure
- Create marketing materials and strategies
- Set up a TOD unit with the goal of transforming under-utilized land near stations
- Identify and implement cost saving measures

### **Medium-Term Strategies**

- Release a strategic plan for the region
- Implement cost saving measures
- Create a governance strategy
- Implement a new timetable
- Develop fare sharing agreements with other agencies/divisions

#### **Long-Term Strategies**

- Develop new regional governance
- Secure long term and consistent funding
- Expand capacity where needed
- Electrify or implement new technology when warranted to meet environmental goals
- Develop existing land around stations to encourage ridership growth

#### **Future Research Needs**



The TCRP J-11 Report found the following research is needed to advance the industry:

- Exploring how staff levels, better maintenance practices, and equipment can affect commuter rail operational costs.
- Finding paths forward for future funding and system governance.
- Understanding best practices for commuter rail customer information and ease of use.
- Developing better land use coordination for commuter and regional-rail networks.
- Evaluating **first-mile/last-mile connections** for commuter rail users.



# Future of Commuter Rail in North America

TCRP J-11 Task 45 Report Webinar





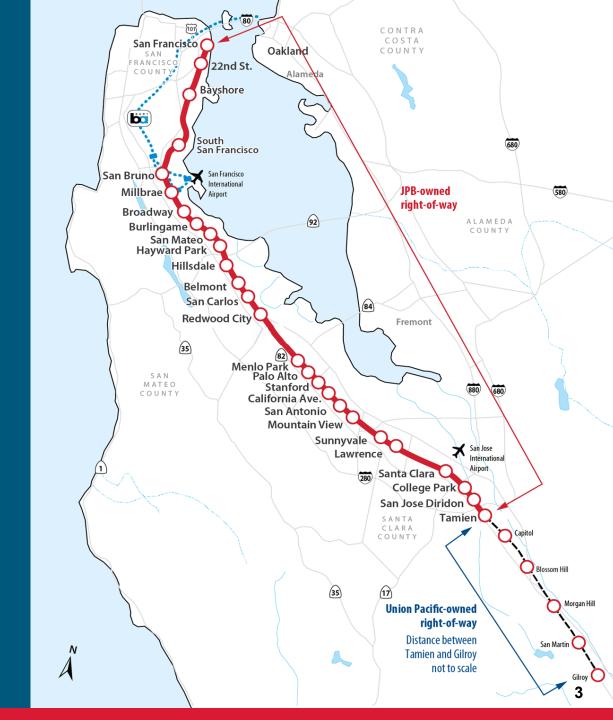


# Introduction



### **Caltrain Corridor**

- 77 miles of track from end to end
- 51 electrified miles San Francisco to San Jose
- 3 counties; 20 Jurisdictions; 31 stations
- Tenant railroads: UP, ACE, CC, Amtrak
- 104 trains per day
- Bi-directional commute



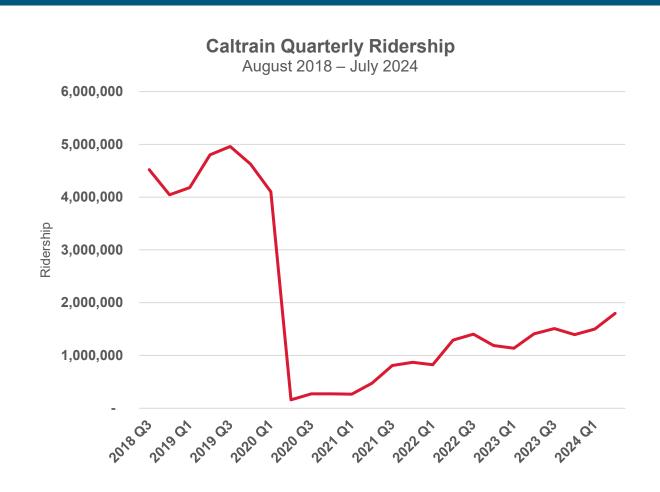
### **Pre-Electrification**

### **Pre-pandemic**

- 7th largest commuter rail in the country in 2019
- 70% farebox recovery
- Over 18 million Unlinked Passenger Trips (UPT) in 2019
- Frequently overcrowded trains, standing room only

#### **Post-Pandemic**

- Ridership dropped 70% in March 2020
- Caltrain significantly affected due heavy commuter ridership
- Service initially cut then increased to most daily trains ever (104) in 2022





## **Caltrain Electrification**













## **Electrification Launched 1 Year Ago**

Over 15,000 RSVPs; Events in Every City Along the Corridor

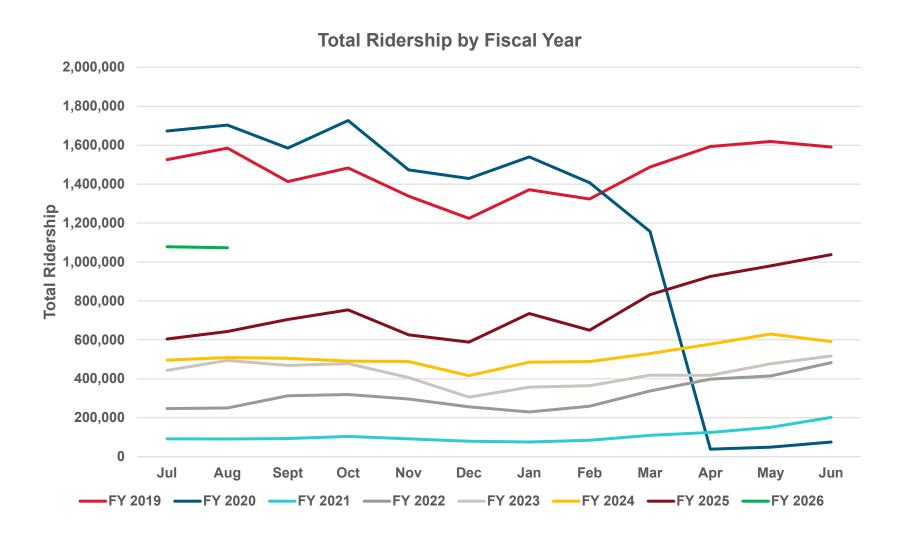


### **Electrification Benefits**

- Faster: Local & Express (60 mins San Francisco San Jose)
- More Frequent: Service every 30 minutes 7 days a week, with additional express service during rush hour (every 15-20 minutes)
- Doubled weekend frequency to half-hourly service
- Better Experience: Free wi-fi, outlets at every seat, bathrooms, digital displays, quieter inside and outside the trains
- Reliable: On-Time Performance over 95%



# Overall Ridership Numbers





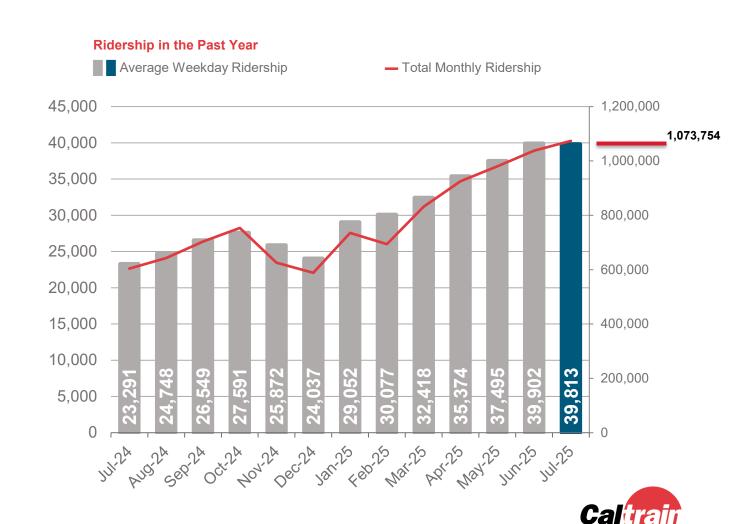
## Post Electrification Ridership Growth

### Month of July 2025

- Over 1 million riders
- Monthly +77.8% vs July 2024
- Weekday +70.9% vs July 2024
- Weekend +115.1% vs July 2024

#### Compared to 2019

64.2% (56.5% weekday, 161.4% weekend)



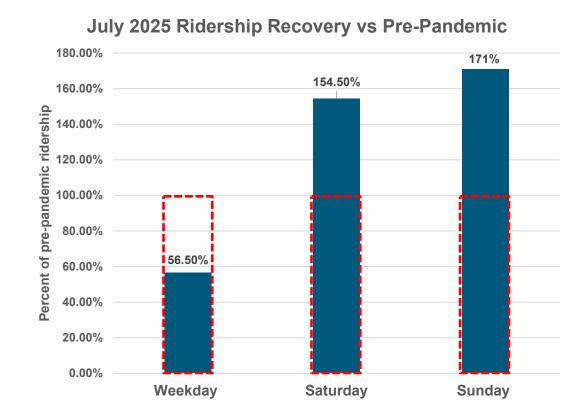
### Weekend Ridership Growth Surpasses Weekday

### **Overall Ridership Growth Accelerated**

- July up 77.8% year-over-year
- 64.2% of pre-pandemic ridership
  - Weekdays at +56.5%
  - Weekends at +162.7%

### **Weekend Ridership Growth**

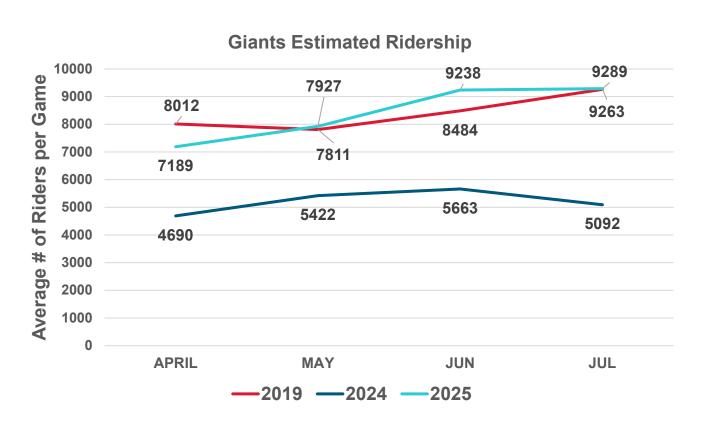
- Surpassed pre-pandemic levels
- Saturday +123% YoY (154% of 2019)
- Sunday +105.9% YoY (171% of 2019)





### SF Giants Ridership Surpasses Pre-Pandemic Levels

- Giants ridership exceeded 2019 levels May through July 2025
- 17% overall increase in ridership during Home games vs away days



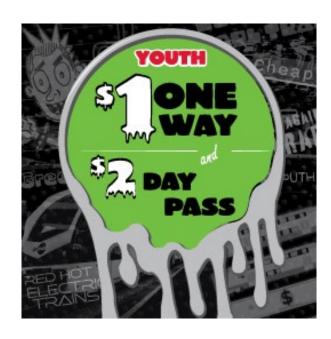
#### Average Ridership by Day Type and Giants Game Location

	Giants Game Location		Difference	
Day Type	Away	Home	Absolute	Percent
Weekday	29,174	34,659	5,485	18.8%
Saturday	16,740	19,297	2,557	15.3%
Sunday	14,442	16,898	2,456	17.0%

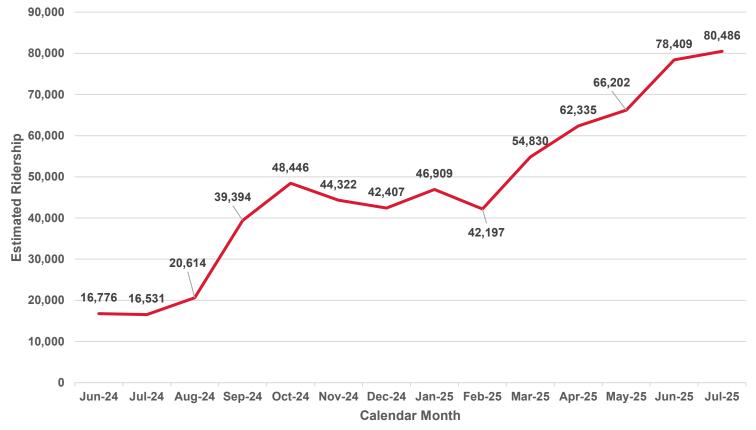


### Youth Ridership Quadruples Since July 2024

- Introduced \$1 Youth Fare in 2024
- Youth Fare Ridership has more than quadrupled to 80,486 monthly rides in July 2025



### **Estimated Youth Fare Ridership by Month**





# **Challenges and Opportunities**



### Challenges

### **Rising Costs and Fiscal Cliff**

- Long-term operating deficit
- Pressure to contain labor, energy and capital costs

### **Evolving Ridership Trends**

- Peak commuters not fully returning
- Continued work-from-home trends

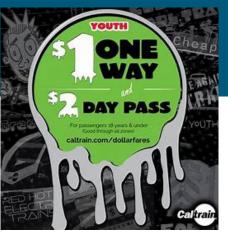


**Average Annual Deficit = \$75M/yr** 



### Ridership Growth Opportunities

- Focus on Fare Programs: \$1 youth fare; Caltrain GoPass (business/school program); PassForward equity program
- Customer Experience: Wi-fi, alerts, bicycle eLockers, new visual display signs
- Marketing: Partnership with event venues, always-on marketing campaign
- Regional Coordination: Coordinated transfers, schedule alignment (big sync), fare programs, better signage







# Non-Fare Revenue Opportunities

Monetize assets - exploring new revenue sources



**Special Events** 

Private car Charter train Sport events



Advertising and Naming Rights

Expand advertising & media package train wrapping naming rights of rolling stock and station asserts



Solar, Energy Storage Systems, EV Charging Leasing

Solar farm, energy storage facility for traction power and station energy needs



Fiber Optic Cable and Telecommunications Leasing

Cell tower leasing fiber leasing



TOD and Commercial Leasing

Property conveyance
lease
commercial leasing
Transit-Oriented
Development

## **Key Takeaways**

- Modernization, increased frequency and enhanced customer experience all are critical to bringing back riders
- Ownership of right-of-way allows more flexibility in service planning to better meet service demands
- Need to focus on different commute patterns; not just a commuter railroad anymore
- Funding challenges remain the most pressing issue

#### FOR MORE INFORMATION

WWW.CALTRAIN.COM



# SEPTA Reimagining Regional Rail

Innovating Our Commuter Rail Network for the 21st Century

TRB Webinar: The Future of Commuter Rail in North America

September 22, 2025

Jody Holton, Assistant General Manager, Planning & Strategy

### **SEPTA Overview**

### SEPTA Background

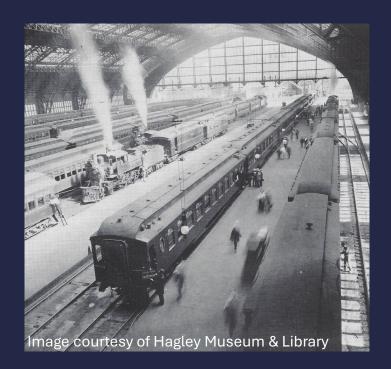
SEPTA is the sixth largest transit system in the U.S. and a crucial part of a transportation network that drives the economies of Greater Philadelphia and PA.

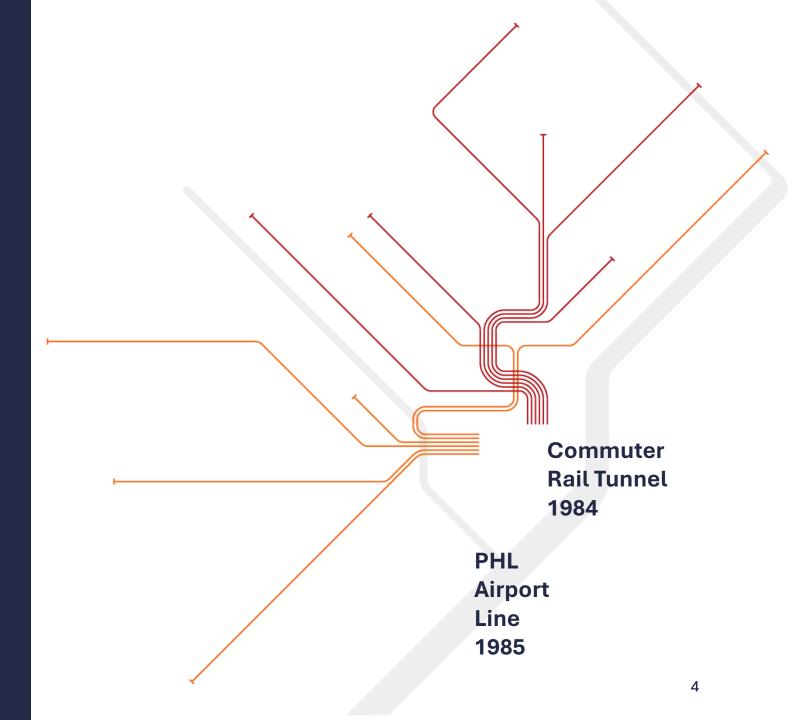
- 45% of five-county region lives within ½
   mile of rail or frequent transit service
- 2,200 sq mi five county service area
- 740,000 riders per day (FY25 average)
- 120+ bus lines
- 2 subway/elevated lines with 52 stations
- 9 trolley lines
- 13 Regional Rail lines, 280 track miles, and 156 stations



### → SEPTA Regional Rail

SEPTA inherited an impressive network from PA and Reading Railroads, maintained aging infrastructure for commuterbased services for decades, & took a major hit with COVID.

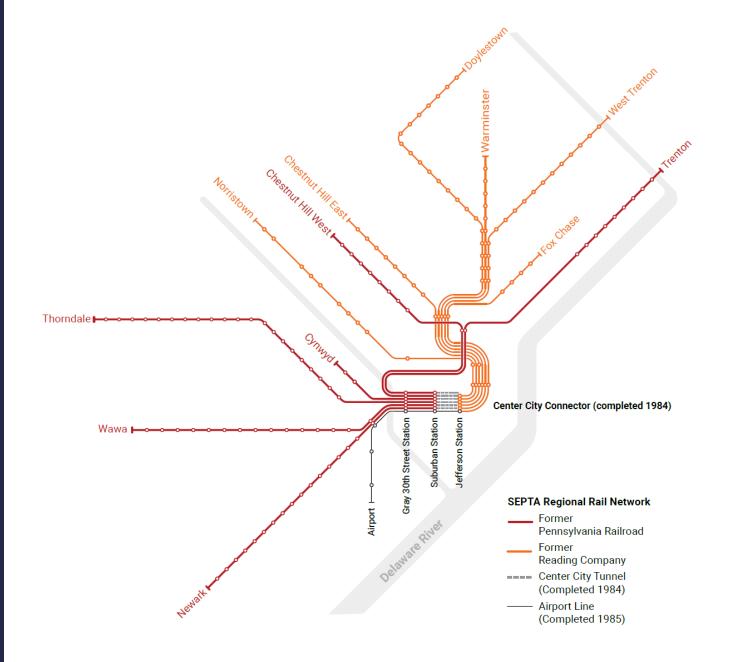




### → SEPTA Regional Rail

### By the Numbers:

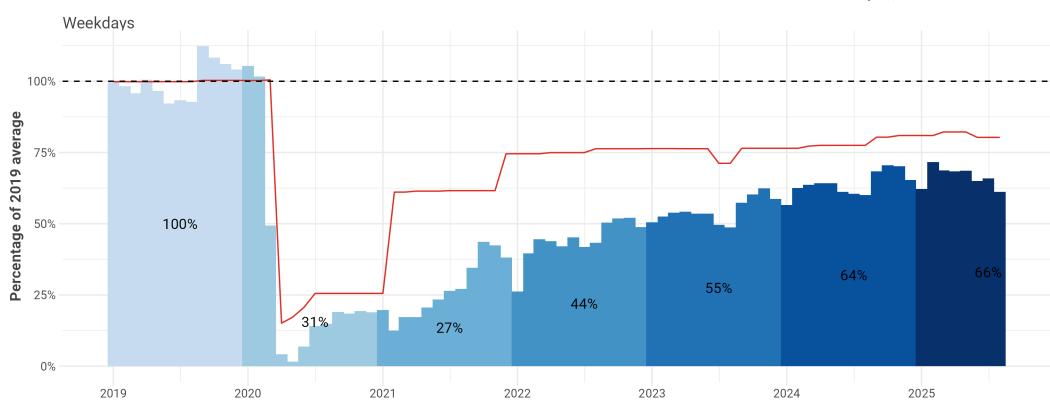
- 13 lines and 156 stations
- 120,222 riders/day (2019)
- 83,413 riders/day (2024)
- 280 fully-electrified track miles
- 392 train cars
- 25,817 parking spaces



# Regional Rail was severely impacted due to the pandemic but has returned to 81% service and 68% ridership of pre-COVID levels.

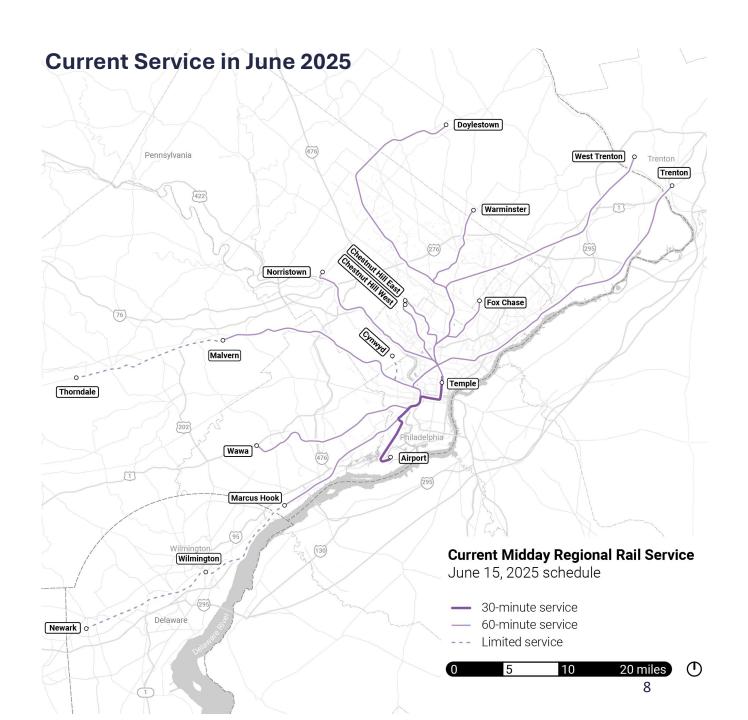
#### RR Ridership & Service Recovery, 2019-2025





# Regional Rail Master Plan & Early Actions

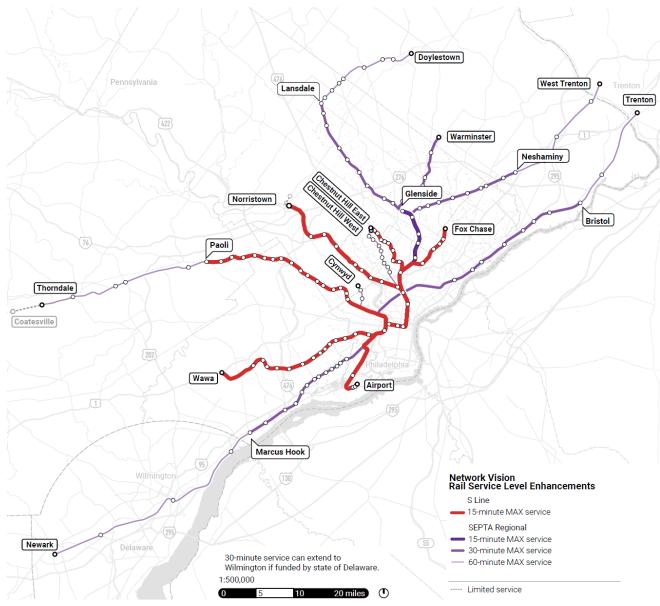
SEPTA Forward Strategic Plan, created during COVID, was the impetus for Reimagining Regional Rail initiative to redefine our future.



Reimaging Regional Rail proposes service levels on many of the lines at 15 minute or better service – like a Metro service.

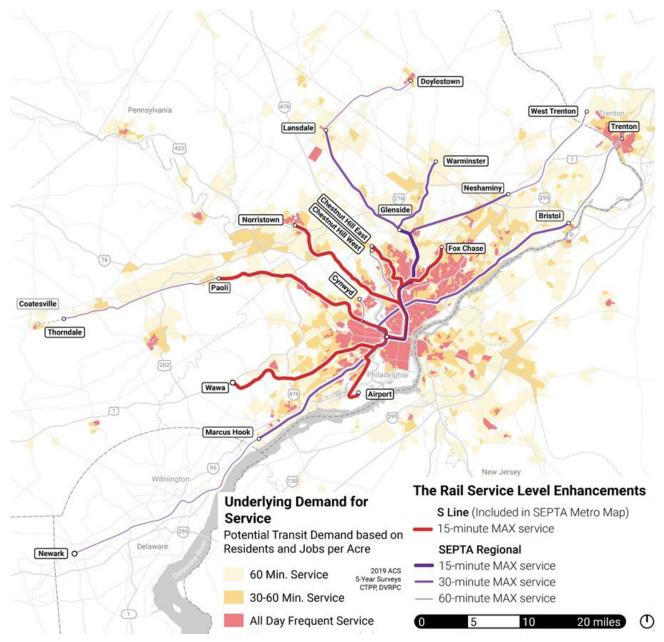


#### **RRMP Network Vision**



# The Network Vision provides all-day frequent service where demand warrants it.

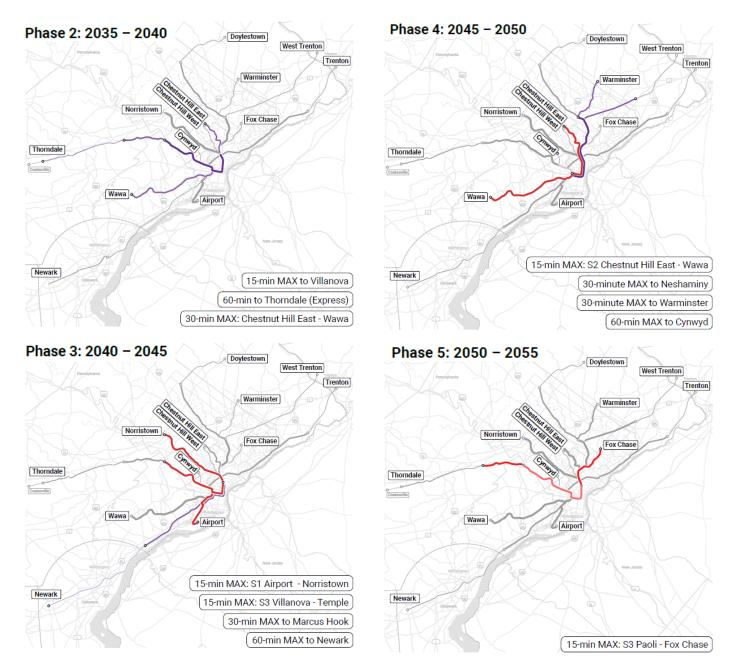
This represents a 42% increase in operating costs for a 101% increase in service and a more than doubling in estimated ridership over 2019 levels.



Implementation will take many phases over several decades but provides an innovative framework for action.

SEPTA programmed draft Regional Rail Master Plan in the following ways:

- Keystone Master Plan (Sept '24)
- MPO Draft LRP (Aug. '25)
- Draft PA State Rail Plan (Aug. '25)
- NEC C40 (under development)

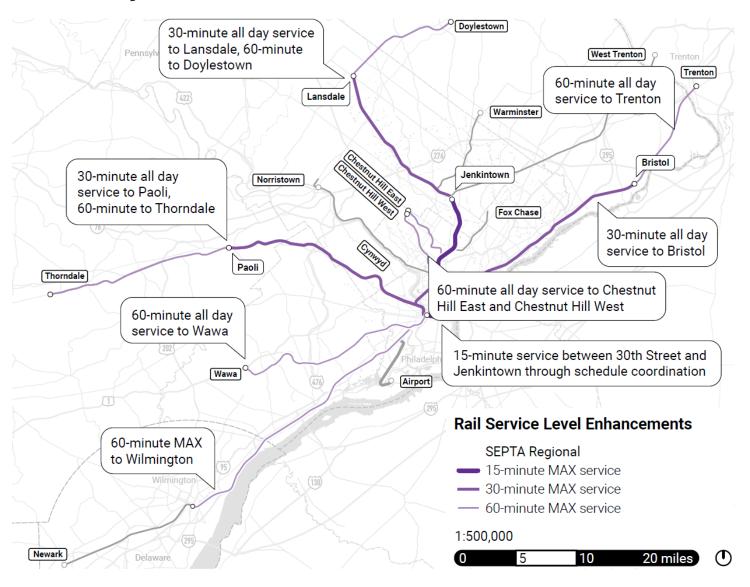


### SEPTA is building a foundation for the Network Vision by providing more service based on demand and aligned with RRMP Early Actions.

#### Service Goals Checklist:

- Re-establishing weekday hourly and peak services
- Improving weekend service levels from every two hours to hourly on most lines
- ✓ Improving Airport Line service from every two hours to 30-minute frequencies
- Establishing 15-minute frequencies on trunk
- Providing 30-minute all day frequencies to Paoli, Media, and Lansdale.

#### **RRMP Early Actions**



# Service Development Plan process is modeling Network Vision to validate Long-Term concepts (2055) & recommend Near-Term concepts (2026-2030).

**Regional Rail Master Plan** 



Service Development Plan

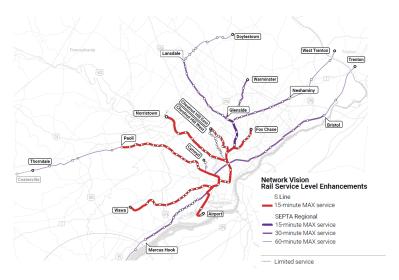


Project Planning & Development

"North Star" Network Vision

What is it for?

Direction – guideposts but no roadmap.



Viriato Approach

#### What is it for?

"Sketch" level modelling tool that enables iterative process of testing options in quick succession.

What if we add an interlocking here? What if we add more service on this line?

Set model -> see results -> test new options -> see new results -> repeat as desired to refine inputs in subsequent RTC modeling.

**RTC Modeling** 

#### What is it for?

"True" simulation model that accurately reflects environment, including specific timetables, randomized delays, recovery, etc.

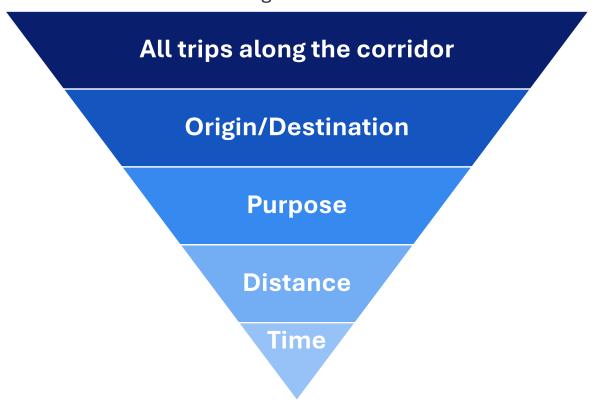
Figure 13 - ARSENAL – CIVIC Track #1 OOS



# Regional Rail Addressable Market Assessment

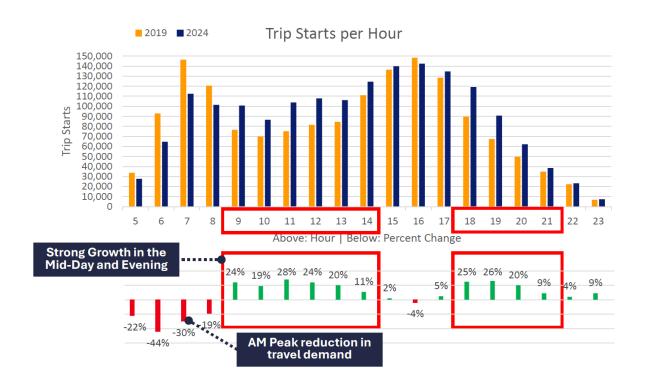
SEPTA partnered with DB to conduct RR addressable market assessment and understand 2019-2024 travel changes and apply findings to our near-term and future service plans.

These filters narrow the market to trips that can be captured by Regional Rail

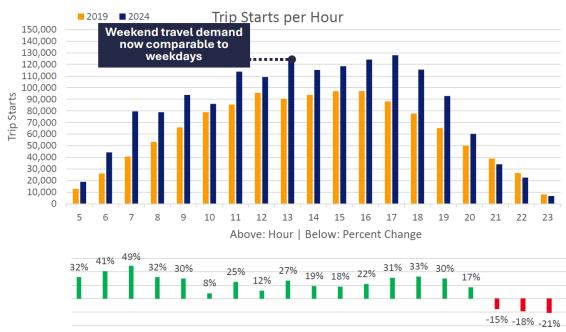


Findings shows weekday AM peak travel has decreased while mid-day and evening travel has grown. All-day Saturday travel has grown considerably.

#### Weekday Trip Starts per Hour (2019 vs 2024)

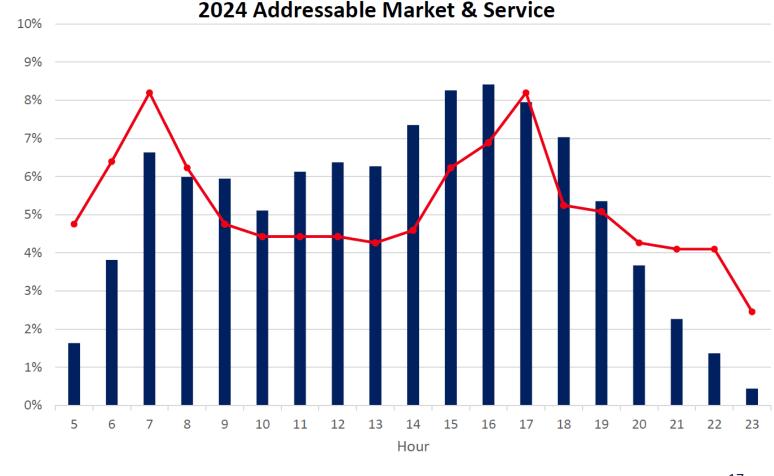


#### **Saturday Trip Starts per Hour (2019 vs 2024)**



## — How does the addressable market compare with SEPTA service levels? In midday and afternoon, service is mismatched with 2024 market demand.

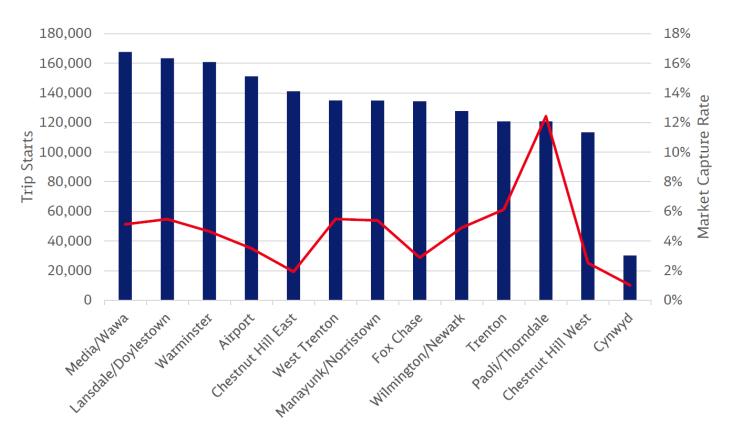
- System-wide service *proportion* is greater than the addressable market trip start proportion in the AM peak hours and latenight hours.
- System-wide service *proportion* is less than the addressable market trip start proportion in the midday hours.



# SEPTA Regional Rail service is currently capturing between 3 - 12% of the addressable market trips per weekday.

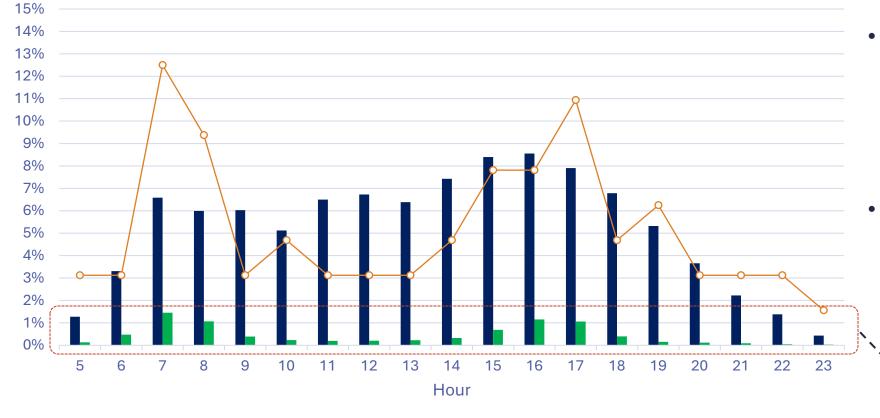
- Paoli/Thorndale stands out as highest capture rate at 12%.
- Other lines with all-day service range from 3%-6% which is at or below estimates of capture rates per *The Future of Commuter Rail in North America*.
- Capture rates generally higher on lines traveling longer distances presumably because travel time savings accumulate.

#### Addressable Market Trips and Capture Rate by Line (2024)



# How does the addressable market compare with Paoli Line service levels? One train per hour in the midday leaves almost all the addressable market behind.

## Paoli Line 2024 Addressable Market Trip Starts & Capture Rate vs Trains per Hour (as percentage of daily totals)



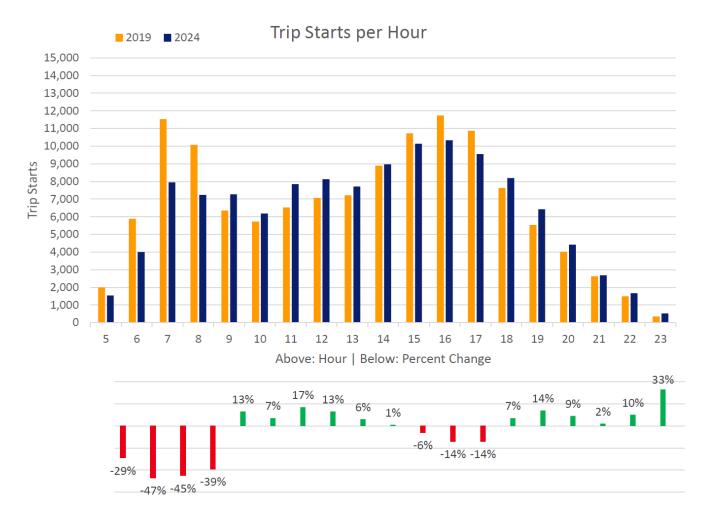
#### **Preliminary Takeaways**

- Service proportion is greater than addressable market trips proportion in the peak and early morning/late night hours
- Service proportion is less than addressable market trip start proportion in the midday hours

12% capture rate

#### Based on weekday findings, SEPTA could consider providing 30-minute allday service to Paoli with Amtrak coordination.

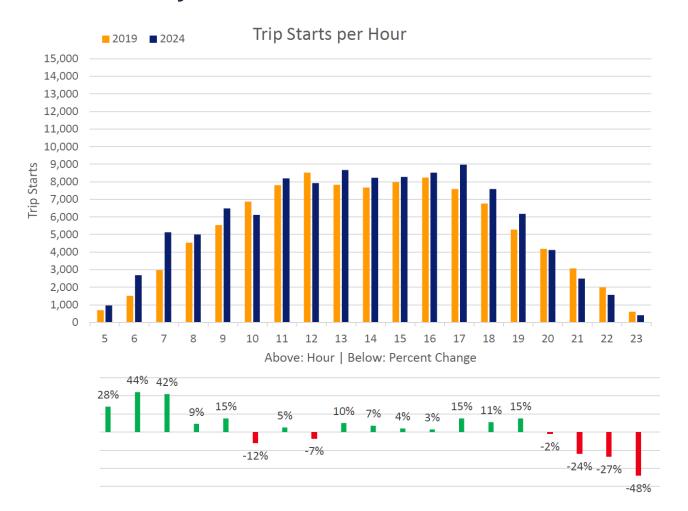
#### Paoli Line Hourly Addressable Markets – Weekdays 2019 & 2024



- The morning peak trip starts per hour dropped significantly (-47% to -39%) between 6 am and 9 am.
- The evening peak travel trips per hour decreased slightly (-6% to -14%) between 3 pm 5 pm.
- There were slight increases in the midday and post-peak evening hours.

Based on weekend findings, SEPTA could consider adding more service (30-min to Paoli) beyond the current hourly service depending on availability of crews, equipment, and operating budget.

#### Paoli Line Hourly Addressable Markets - Weekend 2019 & 2024



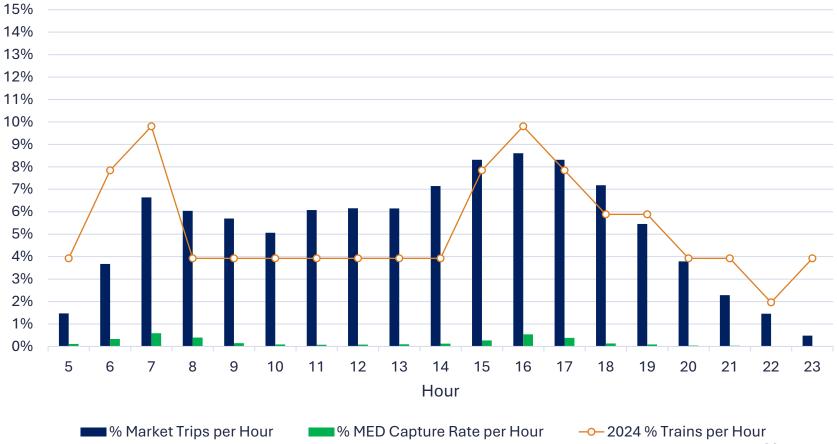
- Market demand is quite stable and consistent with a strong daytime plateau.
- There were significant increases (44% and 42%) in 6 am and 7 am early morning hours.
- There were slight increases throughout the day ranging from 3% to 15%.

#### → How does the addressable market compare with Media Line service levels?

#### **Preliminary Takeaways**

- Service proportion is greater than addressable market trips proportion in the morning and evening peaks and late-night hours
- Service proportion is less than addressable market trip starts proportion in the midday hours

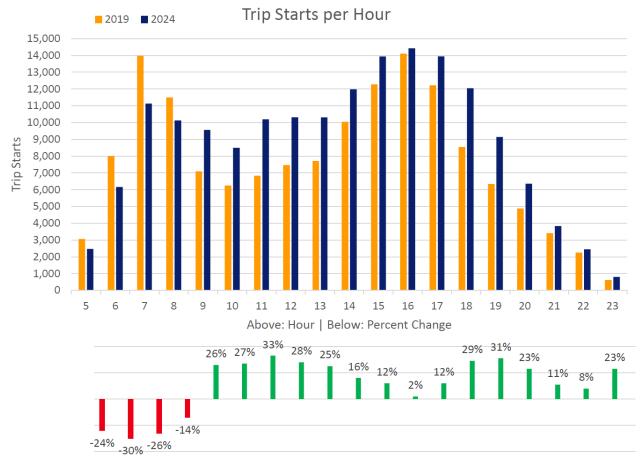
## Media Line 2024 Addressable Market Trip Starts & Capture Rate vs Trains per Hour (as percentage of daily totals)



# Based on weekday findings, SEPTA could consider adding more service all-day (30-minutes to Media). The addressable market is much higher than PAO.

#### Media Line Hourly Addressable Markets - Weekdays 2019 & 2024

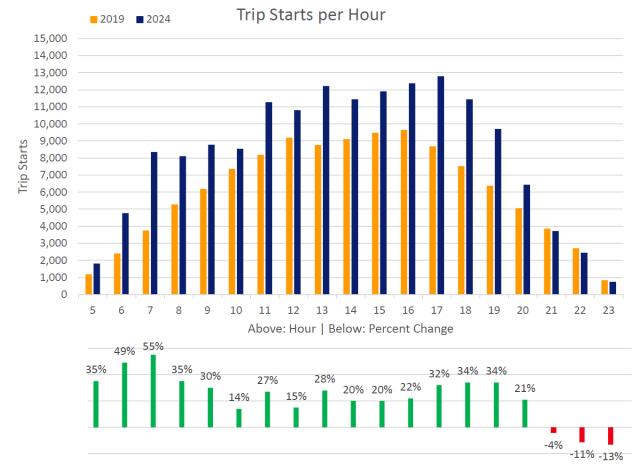
- Early morning trip starts per hour dropped considerably (-24 to -30%) from 5 am to 8 am.
- There were strong increases (16-33%) in the late morning through midday trip starts from 9 am to 3 pm.
- There were strong increases in the post-peak evening hours between 6 and 9 pm (23-31%).



Based on weekday findings, SEPTA could consider adding more service (30-minutes to Media) on weekends beyond the current hourly service depending on availability of crews, equipment, and operating budget.

#### Media Line Hourly Addressable Markets - Weekends 2019 & 2024

- There were strong increases
   (21-32%) and significant
   increases (34-55%)
   throughout the day from 5 am
   through 8 pm, with two
   exceptions at 10 am and noon.
- There were slight decreases (-4% to -13%) in the late evening hours between 9 pm and midnight.



# **SEPTA Fiscal Cliff Challenges**

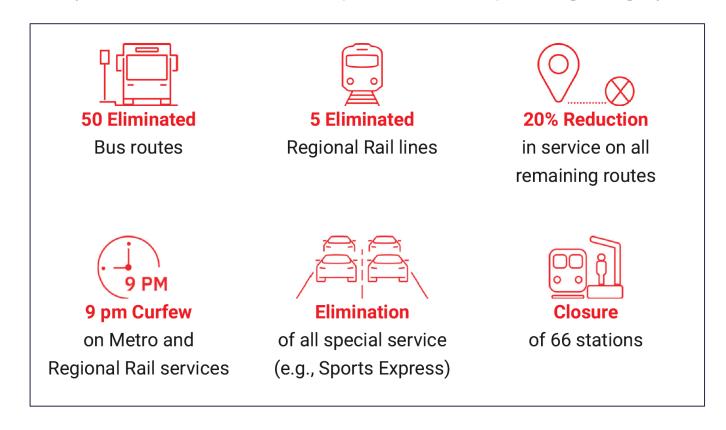
# Without a permanent funding solution, SEPTA will be forced (in two years) to take drastic steps to irreversibly shrink the system.

#### Fiscal Cliff Two-Year Deferral

- Governor allowed SEPTA
   to utilize about \$400M in Capital
   funds to fill the Operating Budget
   gap for this fiscal year (FY26) and
   FY27, which allowed SEPTA to
   reverse service cuts. This action
   will cause the deferral of capital
   projects.
- Fares were increased by 21.5% to also help close the funding gap.
- In the next two years, SEPTA will be utilizing information in the Addressable Market Report to optimize service plans and grow ridership and revenue.

#### Fall 2025 Service Cut

(Reversed due to flex of capital funds to operating budget)



# SEPTA Reimagining Regional Rail

Innovating Our Commuter Rail Network for the 21st Century

TRB Webinar: The Future of Commuter Rail in North America

September 22, 2025

Jody Holton, Assistant General Manager, Planning & Strategy

## Today's presenters



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# TCRP Day • October 1, 2025

Transit Unplugged podcast with



**Paul Comfort** 



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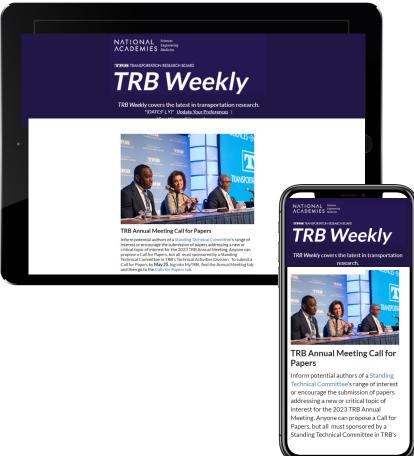
Sarah Meyer

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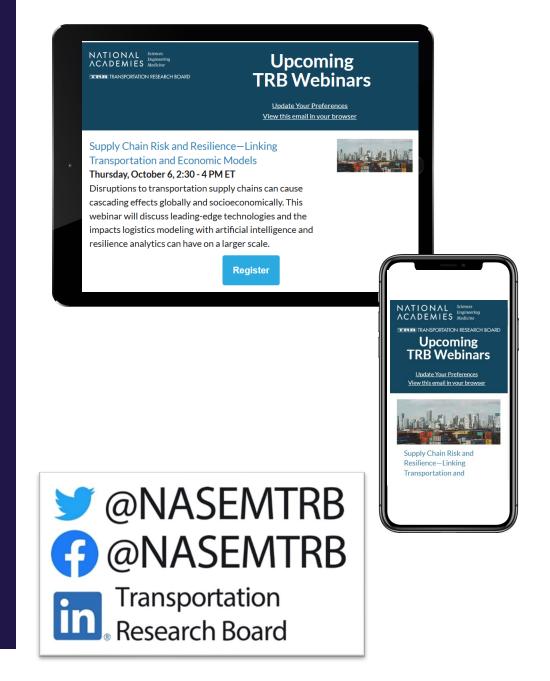
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