



SFMTA

A blue-tinted photograph of a trolleybus on a city street. The trolleybus is in the center, moving from left to right. It has a sign on the front that says '58' and 'MAY 18 2019'. The background shows trees and buildings, including one with a sign that says 'OROGOLD'. The overall scene is a city street with a trolleybus.

Transit Performance Update Next 90 Day Plan

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SFMTA Board of Directors

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90 Day Plan - Lessons Learned

- Fewer actions with greater emphasis and connection to key performance indicators (KPIs).
- More intuitive data metrics to better translate results



Next 90-Day Action Plan Initiatives



Safety

Reduce preventable collisions and enhance passenger and operator security



Service Reliability

Improve reliability of transit service to ensure passengers are provided with the service they expect



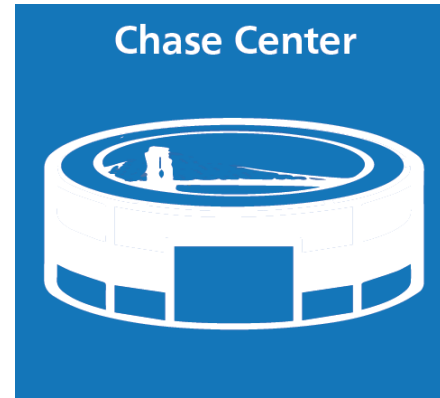
Subway Performance

Reduce delays in the subway and improve the customer experience during delays



LRV4

Ensure that benefits of the new fleet are realized, and project delivery is on track



Chase Center

Operationalize service plan and implement for Chase Center opening

Suggested Plan Metrics

Safety: Reduce preventable collisions

Service Reliability

- Increase service delivery
- Maintain consistent headways on Rapid bus routes
- Improve on time performance on low frequency routes
- Reduce rail switchbacks

Subway performance

- Reduce subway travel time (also report travel time by rail line line)
- Reduce subway delay

LRV4

- Reduce breakdowns in service
- Increase number of vehicles in service

Chase Center: % ready for opening day (self assessment)

LRV4 Modifications On Track

Door Sensitive Edge Modifications

- 35 cars completed as of June 11
- All cars on track for June 30

Couplers

- End stops removed and shear bolts replaced for units without damage will be complete by June 30
- This will allow return of LRV4 Two-car Revenue Service operations without restriction by end of June as forecast
- For couplers with bearing housing damage, removal and replacement of the affected parts to be completed by July 31



LRV4 Reliability Challenges

- LRV4s had increased breakdowns and reduced vehicle availability in May
- Multiple issues contributing, but most significant due to brake component failure
 - Hydraulic Power Unit failure prevents brake release (brakes stay in locked condition as a fail safe)
 - Siemens and brake vendor are working to diagnose
 - Component has experienced other issues (already being addressed) but uncertain whether this recent issue is related

Major Subway Delays (May 1- June 11)

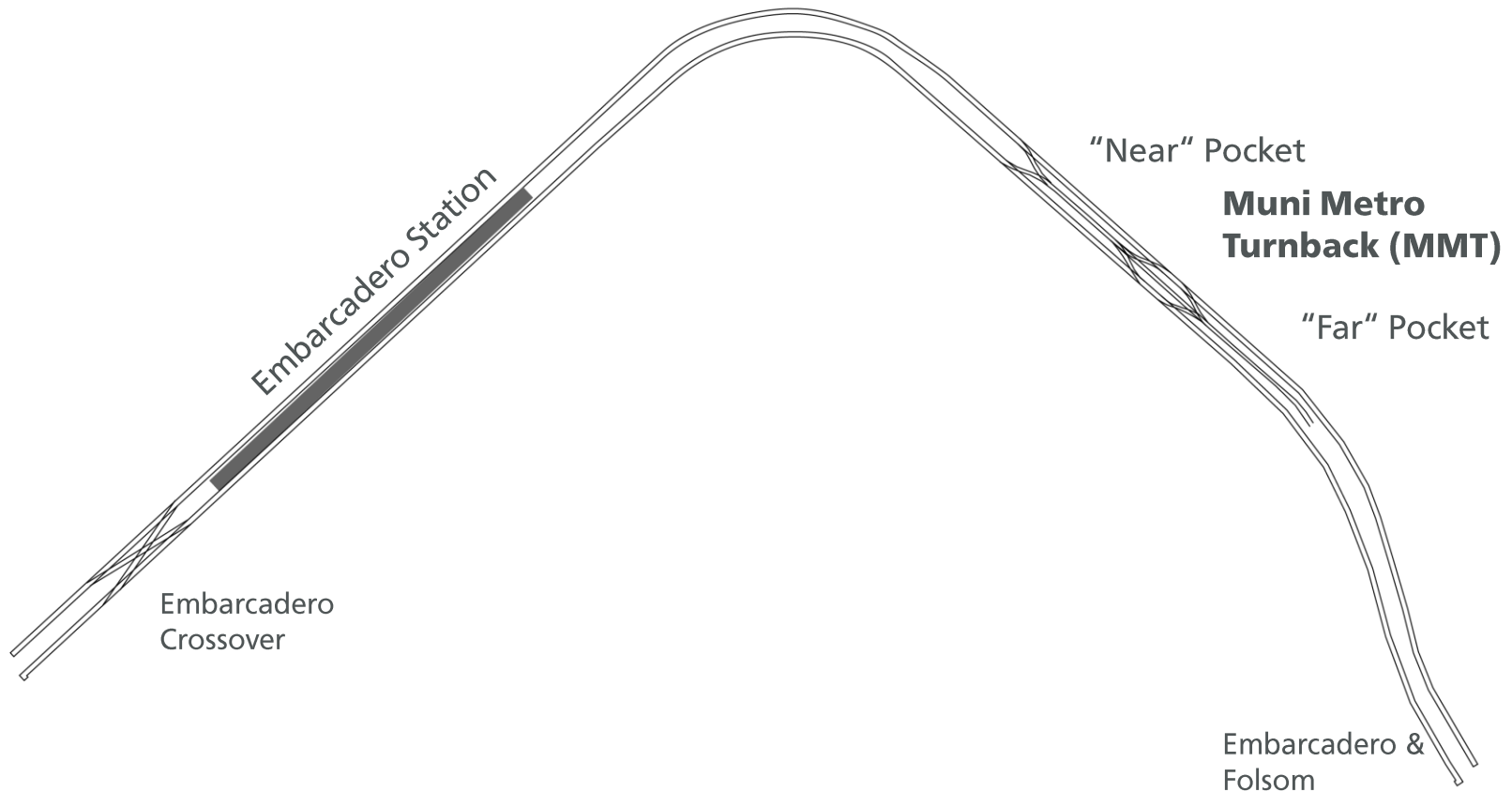
- Train signal issue at West Portal (May 21, early AM)
- Breda mechanical issue at Church Station (May 28, evening)
- LRV4 mechanical issue at Embarcadero Station (May 29, evening)
- LRV4 mechanical issue at Castro Station (May 30, PM peak)
- Switch violation (June 4, early AM to start of PM peak)
- Multiple compounding vehicle and infrastructure issues (June 10)
- Outbound service blocked by disabled train (June 11, AM Peak)

Subway Capacity Discussion

A blue-tinted photograph of a subway tunnel. The perspective is from a platform looking down the tracks. In the distance, a train is approaching with its headlights on. The tunnel walls are lined with metal mesh and various pipes and cables are visible overhead. The overall atmosphere is industrial and somewhat dimly lit, with the primary light source being the train's headlights.

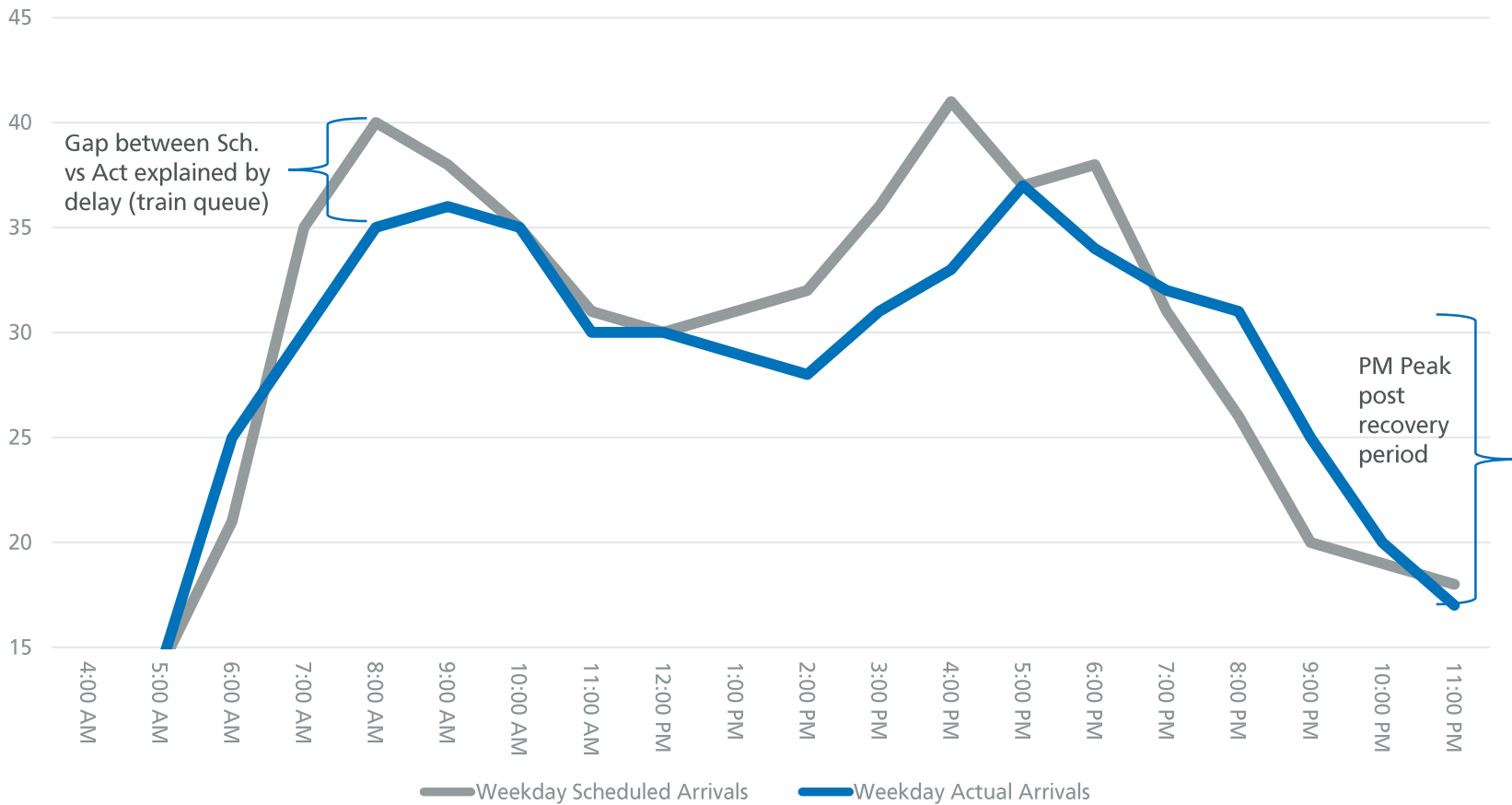
Follow up Board Item: Reducing Subway Congestion

Request: Investigate the effectiveness of using the Embarcadero crossover to turnback lines at Embarcadero



Weekday Actual vs Scheduled Subway Throughput

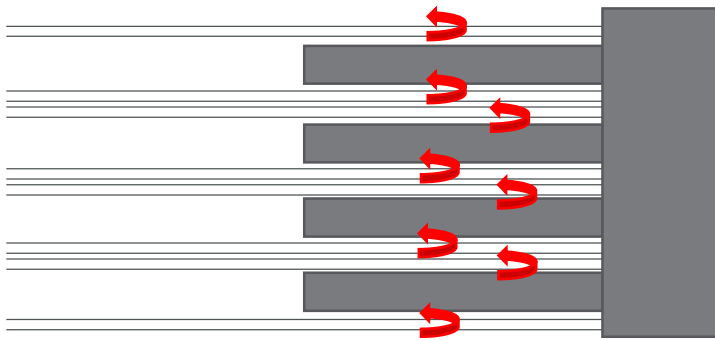
Subway Hourly Throughput



Lessons Learned from other Cities

Major Downtown Rail Terminals

Multiple simultaneous turnbacks at the terminal provide space and time for many trains to turnback at once.



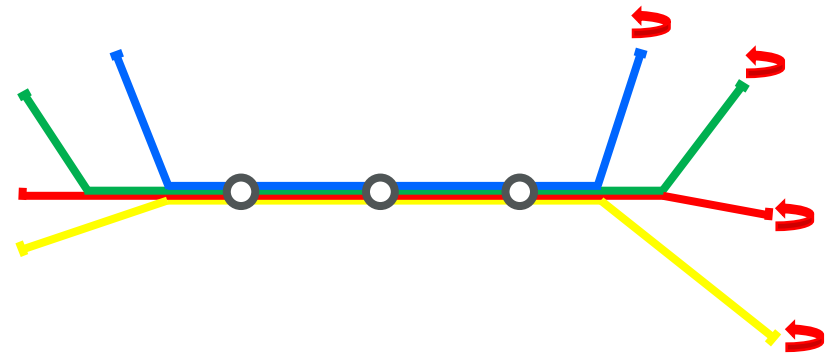
Examples

Grand Central Station, NY
4th & King Caltrain Depot, SF
Union Station, LA

Union Station, DC
Paddington Station, London
Gare du Nord, Paris

Downtown trunk line, turnbacks in the outskirts

Multiple simultaneous turnbacks off the main line provide space and time for many trains to turn at once

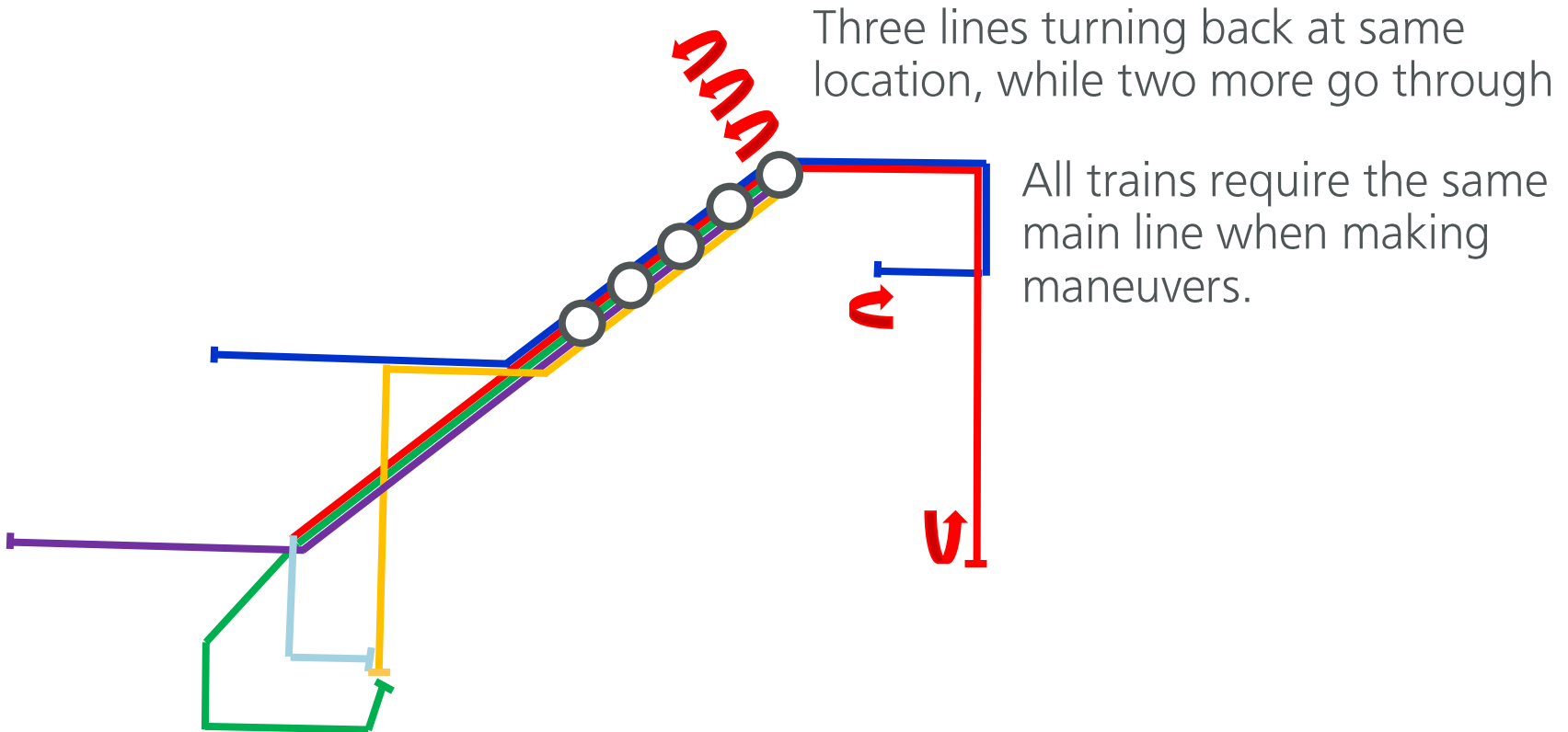


Examples

Paris
Berlin
Helsinki
DC Metro

Muni Subway Today

2 Turnbacks



Embarcadero Crossover

- Turnbacks on mainline reduce subway capacity because they block train movements in both directions for 3 to 4 min
- Embarcadero crossover is critical for managing incidents and gaps in service (similar to Castro)
- Current functionality of crossover limited, but will be enhanced as part of upcoming 90 day plan



Next Steps

To reduce subway congestion, we must:

- Reduce the number of trains turning back at MMT or;
- ➡ Increase the capacity to handle train turnbacks.

Short Term	Medium Term	Long Term
Continue to improve efficiency of turnback operations	Explore additional locations for pocket tracks	Evaluate major capital improvements that improve system capacity
Service changes targeted to reduce congestion	Improve efficiency of existing train control system	
Use Embarcadero/Harrison crossovers when beneficial	Pursue train control replacement	



Thank You

