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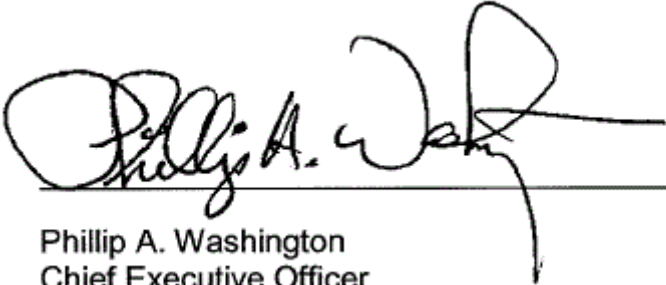
Agenda Number: 26.

**OPERATIONS, SAFETY, AND CUSTOMER EXPERIENCE COMMITTEE
AUGUST 20, 2020**

SUBJECT: ORAL REPORT ON REGIONAL CONNECTOR SERVICE PLAN UPDATE

RECOMMENDATION

RECEIVE oral report on Regional Connector Service Plan Update.



Phillip A. Washington
Chief Executive Officer

Regional Connector Operating Plan

August 2020



Metro

Public Engagement and Outreach – Environmental Phase (2008-2014)

- Prior to the Board of Directors selection of the Locally Preferred Alternative (LPA):
 - Elected Official briefings
 - Over 100 Stakeholder Working Group briefings:
 - Little Tokyo, Arts District, Financial District, Grand Ave Cultural Institutions, Bunker Hill, Broadway, Historic Core, and Project area-wide groups
 - Community Update Meetings
 - Collateral materials
- Positive community and stakeholders support of the North-South, East-West service alignment



Public Engagement and Outreach – Construction Phase (2014-2020)

- Continued outreach following Board approval of the LPA:
 - Distribution of Final EIS/EIR
 - Elected Official briefings
 - Community Leadership Council (CLC)*
 - Monthly community meetings
 - Special events in downtown LA and Boyle Heights
 - Printed and online materials:
 - Project website, social media, agency blogs, e-newsletters
 - Little Tokyo Community Office
 - Title VI Program Update – Office of Civil Rights
- Community and stakeholders continue to support the North-South, East-West service alignment
- Minimal interest in maintaining north/south Gold Line connection

Purpose

- Purpose – Validate Locally Preferred Alternative (LPA) as continued to be supported by stakeholders and the community through the environmental and construction phases.
- Criteria for validating alternatives include:
 - Travel patterns to/from each segment
 - Network simplicity
 - Headway consistency
 - On Time Performance
 - Peak vehicle requirement
 - Revenue vehicle hours

Service Scenarios

Three primary service scenarios being evaluated:

Alt A: Long Beach – Azusa,
Santa Monica – Atlantic*

Alt B: Long Beach – Atlantic,
Santa Monica – Azusa

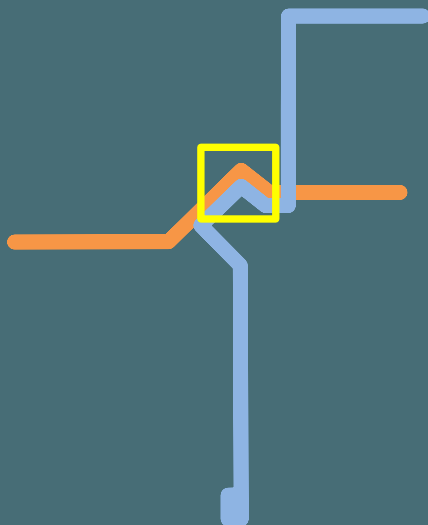
Alt C: Long Beach – Atlantic/Azusa
Expo – Atlantic/Azusa



* Locally Preferred
Alternative



Travel Patterns: Alternative A



All Trips

	Origin (O) to Destination (D)	All Trips	Outside DTLA – Outside DTLA	Inside DTLA – Inside DTLA	Outside DTLA – Inside DTLA
East Flows	O: Expo D: Gold Line East	100%	12%	52%	36%
	O: Blue D: Gold Line (US – APU)				
West Flows	O: Gold Line East D: Expo	100%	12%	53%	35%
	O: Gold Line (US – APU) D: Blue				

Transit Trips

	Origin (O) to Destination (D)	All Trips	Outside DTLA – Outside DTLA	Inside DTLA – Inside DTLA	Outside DTLA – Inside DTLA
East Flows	O: Expo D: Gold Line East	100%	12%	24%	64%
	O: Blue D: Gold Line (US – APU)				
West Flows	O: Gold Line East D: Expo	100%	8%	25%	67%
	O: Gold Line (US – APU) D: Blue				

Travel Patterns: Alternative B



All Trips

East Flows
West Flows

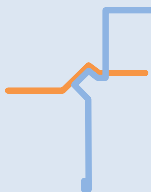
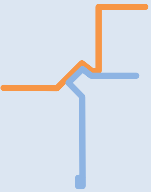

Origin (O) to Destination (D)	All Trips	Outside DTLA – Outside DTLA	Inside DTLA – Inside DTLA	Outside DTLA – Inside DTLA
O: Expo D: Gold Line (US – APU) O: Blue D: Gold Line East	100%	14%	51%	35%
O: Gold Line (US – APU) D: Expo O: Gold Line East D: Blue	100%	14%	51%	34%

Transit Trips

East Flows
West Flows

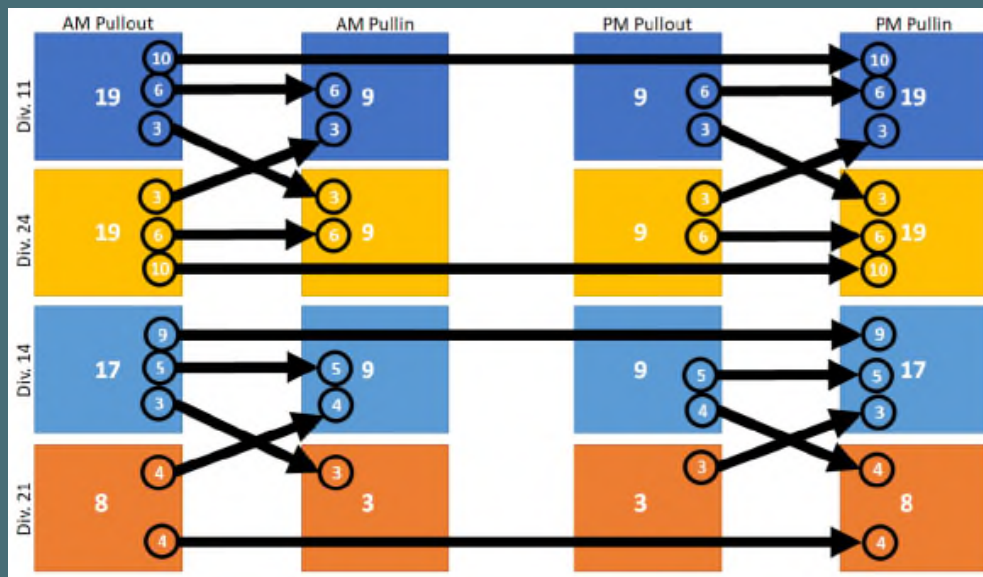
Origin (O) to Destination (D)	All Trips	Outside DTLA – Outside DTLA	Inside DTLA – Inside DTLA	Outside DTLA – Inside DTLA
O: Expo D: Gold Line (US – APU) O: Blue D: Gold Line East	100%	14%	24%	62%
O: Gold Line (US – APU) D: Expo O: Gold Line East D: Blue	100%	9%	25%	66%

Network Simplicity: Wait and Transfers

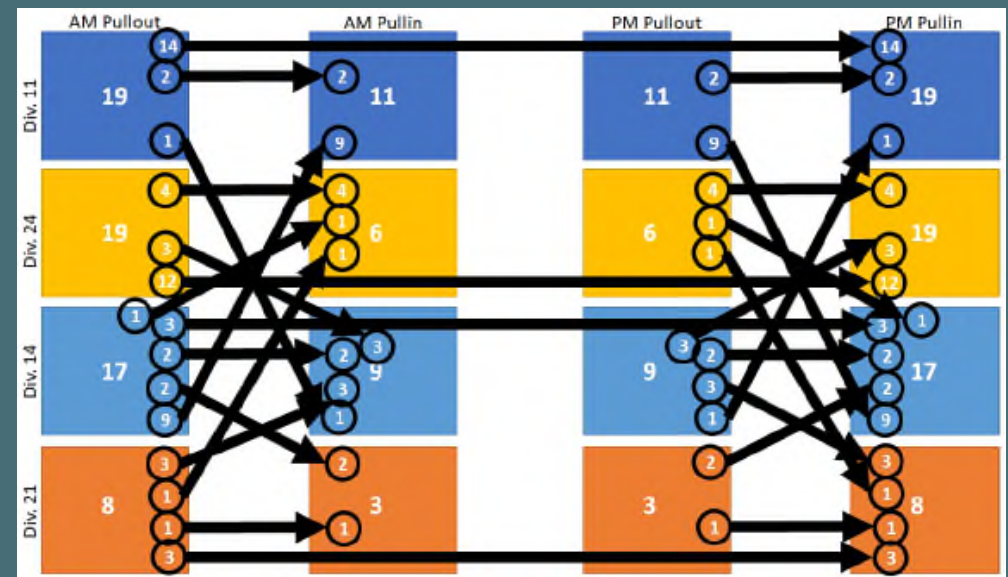
Alternative	Route	Initial Wait	Transfer	Total
 <p>A</p>	Santa Monica - Atlantic	3	0	3
	Santa Monica - APU/CC	3	3	6
	Long Beach - Atlantic	3	3	6
	Long beach - APU/CC	3	0	3
 <p>B</p>	Santa Monica - Atlantic	3	3	6
	Santa Monica - APU/CC	3	0	3
	Long Beach - Atlantic	3	0	3
	Long beach - APU/CC	3	3	6
 <p>C</p>	Santa Monica - Atlantic	6	0	6
	Santa Monica - APU/CC	6	0	6
	Long Beach - Atlantic	6	0	6
	Long beach - APU/CC	6	0	6

Network Simplicity: Train Cycling Plans

Alternative A and B



Alternative C



Headway Regularity

Alternative	Percent of Scheduled Headway (NB/EB)						
	100%	110%	120%	130%	140%	150%	Greater
A	55%	73%	82%	87%	90%	92%	8%
B	57%	71%	78%	82%	85%	87%	13%
C	53%	67%	75%	81%	85%	88%	12%
Current	69%	81%	87%	92%	95%	97%	3%

Alternative	Percent of Scheduled Headway (SB/WB)						
	100%	110%	120%	130%	140%	150%	Greater
A	60%	75%	83%	87%	90%	92%	8%
B	59%	73%	79%	83%	86%	88%	12%
C	57%	71%	79%	84%	87%	89%	11%
Current	67%	78%	85%	90%	93%	96%	4%

- Alternative A performs the best for regularity of headways
- No alternative performs as well as current because traffic signal delays on Blue and Expo will spread to Gold Line

Resource Requirement

Alternative	Total Peak Vehicles	With 20% Spares	Weekday Revenue Car Hours	Annual Revenue Car Hours	Annual Operating Cost
A	195	234	2,658	901,461	\$433M
B	192	231	2,621	889,027	\$427M
C	195	234	2,753	933,582	\$448M

Service Plan Recommendation

Alternative A (Long Beach – Azusa, Santa Monica – Atlantic)

- Approved as Locally Preferred Alternative
- Significant outreach and support for Alt A
- Simple to understand (and operate) network that minimizes wait and transfer times
- Performs best in headway regularity
- Second least costly operations
- Opportunities to improve upon Alternative A with train delay mitigations

Train Delay Mitigations

- Delays through the Regional Connector due to variability in run times can be mitigated through better signal priority/preemption along the current A (Blue) and E (Expo) Line street running territory and more consistent dwell times;
- Otherwise, in-line schedule recovery of up to 5 minutes approaching the junctions will need to be built into the schedules to ensure trains enter the Regional Connector on time.



Headway Regularity

Alternative	Percent of Scheduled Headway (NB/EB)						
	100%	110%	120%	130%	140%	150%	Greater
A	55%	73%	82%	87%	90%	92%	8%
B	57%	71%	78%	82%	85%	87%	13%
C	53%	67%	75%	81%	85%	88%	12%
Current	69%	81%	87%	92%	95%	97%	3%
Recovery	58%	82%	90%	94%	96%	97%	3%

Alternative	Percent of Scheduled Headway (SB/WB)						
	100%	110%	120%	130%	140%	150%	Greater
A	60%	75%	83%	87%	90%	92%	8%
B	59%	73%	79%	83%	86%	88%	12%
C	57%	71%	79%	84%	87%	89%	11%
Current	67%	78%	85%	90%	93%	96%	4%
Recovery	60%	84%	92%	96%	98%	99%	1%

- Scheduled holds improve headway regularity to current levels

Resource Requirement

With No In-Line Schedule Recovery

Alternative	Total Peak Vehicles	With 20% Spares	Weekday Revenue Car Hours	Annual Revenue Car Hours	Annual Operating Cost
A	195	234	2,658	901,461	\$433M
B	192	231	2,621	889,027	\$427M
C	195	234	2,753	933,582	\$448M

With In-Line Schedule Recovery

Alternative	Total Peak Vehicles	With 20% Spares	Weekday Revenue Car Hours	Annual Revenue Car Hours	Annual Operating Cost
A	208	250	2,835	961,558	\$462M
B	205	246	2,799	949,221	\$456M
C	208	250	2,936	995,820	\$478M

Implementation Recommendation

- Implement Alternative A (Long Beach – Azusa, Santa Monica – Atlantic) which is the Locally Preferred Alternative (LPA).
- Initially implement in-line schedule recovery before the junction to improve the headway regularity of service running through the Regional Connector.
- Continue to work with LADOT to reduce street signal delays on the Blue and Expo Lines near Downtown LA so that in-line schedule recovery can be minimized or eliminated.

Next Steps

- Board Staff briefing and oral report to OSCE Committee in August 2020
- Ongoing Construction Relations outreach for final phases of construction
- Board approval of recommendation in September 2020

Questions?