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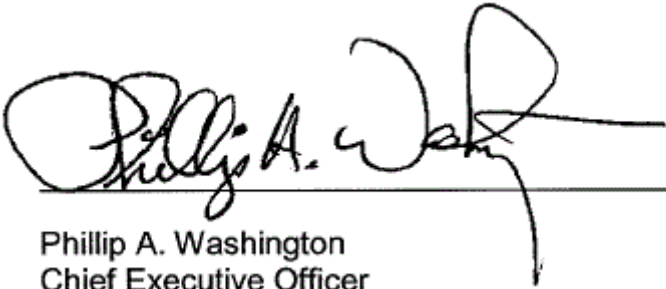
**REGULAR BOARD MEETING
DECEMBER 3, 2020**

SUBJECT: UPDATE CRENSHAW/LAX PROJECT

ACTION: ORAL REPORT

RECOMMENDATION

RECEIVE oral report on Crenshaw/LAX Project.



Phillip A. Washington
Chief Executive Officer

Crenshaw/LAX Transit Project Schedule Presentation – December 3, 2020



Budget / Schedule

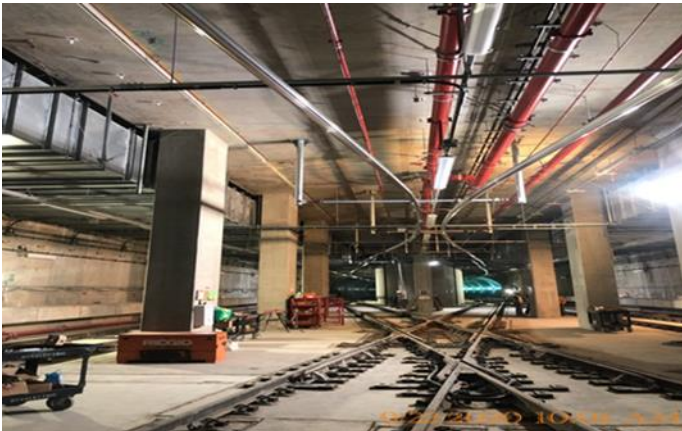
◆ BUDGET

	<u>Current</u>	<u>Forecast</u>
TOTAL COST	\$2,148M	\$2,148M

▲ SCHEDULE

	<u>Current</u>	<u>Forecast</u>
REVENUE OPERATION	May 2021	TBD - 2021

- Overall Project Progress is 97.0% complete
- Contractor is not applying sufficient work force to complete their remaining work
- Metro continues to work with contractor to mitigate the schedule forecast; emphasizing safety and reliability in final acceptance of project elements and systems
- Remaining work is primarily systems – power, train control, station/tunnel fire life safety and communications



EXPO/CRENSHAW STATION – Installing supports and fixtures for the crossover lighting at the invert level



MARTIN LUTHER KING JR. STATION – Installing edge lighting at the plaza level



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On target



Possible problem



Significant Impact

*Contractor Substantial Completion

Project Sequence of Completion

- Installation of Equipment (Contractor)
- Local Field Acceptance Tests – (LFAT) (Contractor)
- Systems Integration Tests – (SIT-1) (Contractor)
- Vehicle Software – (P3010) Metro (Carborne)/Contractor (Wayside)
- Systems integration Tests (SIT-2)- interface with Rail Operations Control (ROC) – Metro
- Training, Simulated Service, Emergency Drills - Metro
- Safety Certification – California Public Utility Commission
- Revenue Service



Status

- Contractor had committed to substantial completion by December 2020
- Progress monitoring indicates that this goal will not be achieved
- Schedule projections are dependent on number of variables - productivity, contractor resources, amount of re-work, testing success rate and complexity of work
- Contractor needs to make more progress in LFAT testing before a reliable estimate of completion can be made
- Consider strategies such as overlapping activities

WSCC Contract

Milestone Substantial Completion Forecast

- WSCC needs to make significant performance improvement by taking the following potential mitigation actions:
 - Add crews and resources to prepare/complete required prerequisites before conducting Local Field Acceptance Tests and System Integration Tests,
 - Double testing personnel and increase to two work shifts,
 - Double dedicated management and integration supervision to complement increased work force,
 - Develop a realistic plan to complete testing, and
 - Increase schedule measurement resource for real time tracking of progress.

Overall Systems Completion Status

Segment A (8+08.15 - 159+50)				
Systems	Traction Power	OCS /OCR	Train Control	Communication
Installation	100%	100%	100%	85%
LFAT Test	95%	75%	90%	9%
SIT-1 Test	10%	85%	5%	0%
Segment B1 (159+50 - 274+00)				
Systems	Traction Power	OCS /OCR	Train Control	Communication
Installation	95%	100%	100%	70%
LFAT Test	90%	95%	90%	10%
SIT-1 Test	10%	50%	5%	0%
Segment B2 (274+00 - 364+80)				
Systems	Traction Power	OCS /OCR	Train Control	Communication
Installation	100%	100%	100%	80%
LFAT Test	95%	91%	90%	10%
SIT-1 Test	N/A	46%	5%	0%
Segment C (364+80 - 448+34)				
Systems	Traction Power	OCS /OCR	Train Control	Communication
Installation	100%	100%	95%	65%
LFAT Test	95%	75%	85%	5%
SIT-1 Test	10%	0%	0%	0%



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Schedule considerations

- Current field team personnel (Metro, contractor, subcontractors) are experienced and committed to a successful start-up
- Equipment interfaces are very complex, but the technology is service proven
- The most recent tunneling project that Metro opened was a small section of the Eastside Extension, so there are systems project characteristics that are new to Metro projects as technology has advanced since then
- Metro working to remove pieces of scope from WSCC Contract. Most significant is agreement with the City of Los Angeles to perform paving work at Park Mesa Heights



Remaining Project Key Issues

These issues will determine the final completion dates:

- Significant amount of physical installation work that remains to be completed
- Volume of complex testing that remains to be done
- 1,340 LFAT's (54%) remain as of October 31, 2020
- Subcontractor coordination and integration management
- Labor resources
- Design resources
- Ability to control schedule delays
- Amount of re-work



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WSCC Contract Liquidated Damages

Milestones per Unilateral Non-Compensable Time Extension (September 2018)	Completion Date	\$'s per Day	Accrued to Date
No. 3 – Commence all Systems Integration Testing Phase 1	September 12, 2019	\$30,000	
No. 1 – Substantial Completion	December 11, 2019	\$36,800	
Total Accrued through October 31, 2020			\$13,519,200
The daily limit for accessing Liquidated Damages is \$36,800 and the Contract Limit is \$15,000,000			

- Contractor has missed both milestone completion dates.
- The time extension stipulated that the maximum daily limit for liquidated damages would be accessed if Revenue Service on May 23, 2020 was not achieved.
- Metro is accruing liquidated damages but has not yet accessed liquidated damages in the contractor's monthly payment application.
- Metro reserved the right to assess and withhold the accrued liquidated damages in the future.



Construction Photos



Leimert Park Station – plaza, lighting, landscaping, bollards, elevator and main entrance

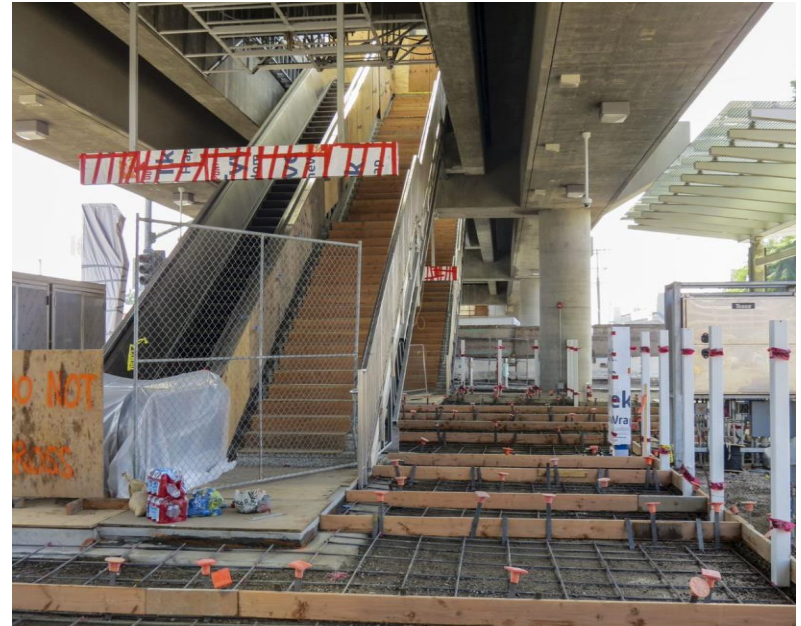


Crenshaw Street restoration at 57th Street – looking southbound

Construction Photos



Fairview Heights Station - parking, landscaping, and pedestrian crossing



Aviation Century Station – ready for concrete placement of plaza floor

Construction Photos



Downtown Inglewood Station – crews installing the platform LCD message screen



Downtown Inglewood Station – plaza, tracks and platform

Metro Efforts to Work With and Help WSCC

- Minimize additional change orders
 - Park Mesa Heights paving being done by others
 - Fiber optic diversification done by others
- Collaborative Review of Submittals
 - Same day review of critical submittals with WSCC staff present
 - RFI's reviewed in the field - allowing quicker turn around times
- Expedite required field witness testing
 - 7-day scheduling timeframe reduced to 2 days

Metro Efforts to Work With and Help WSCC (continued)

- Provide early punch list activities
 - Walk work areas early to identify potential punch list items to minimize last minute work
 - Identify remaining work required prior to closing work areas up to help reduce rework
- Weekly joint review of work schedule with WSCC and subcontractors
 - Identify scope gap issues early to allow work to occur efficiently
 - Discuss work execution logic to help work to occur efficiently
- Metro / WSCC review bi-weekly extended work schedules and activities to identify conflicts and plan future work



Conclusion

- Number of variables impact actual completion dates
- Metro continues to work with contractor to mitigate the schedule forecast
- Metro will continue to emphasize safety and reliability in final acceptance of Project elements and systems
- Remaining work is primarily systems – power, train control, station/tunnel life safety and communications