Los Angeles County
Metropolitan Transportation
Authority
One Gateway Plaza
3rd Floor Board Room
Los Angeles, CA

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Board Report

File #: 2020-0669, **File Type:** Informational Report **Agenda Number:** 41.

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

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

Budget / Schedule

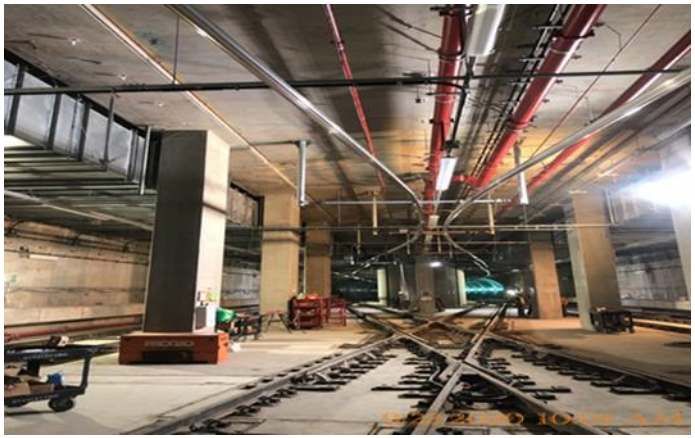
BUDGET

	Current	Forecast
TOTAL COST	$2,148M	$2,148M

SCHEDULE

REVENUE OPERATION	Current May 2021	Forecast 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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OK 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

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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

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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.

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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

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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.

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Construction Photos

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

Crenshaw Street restoration at 57th Street – looking southbound

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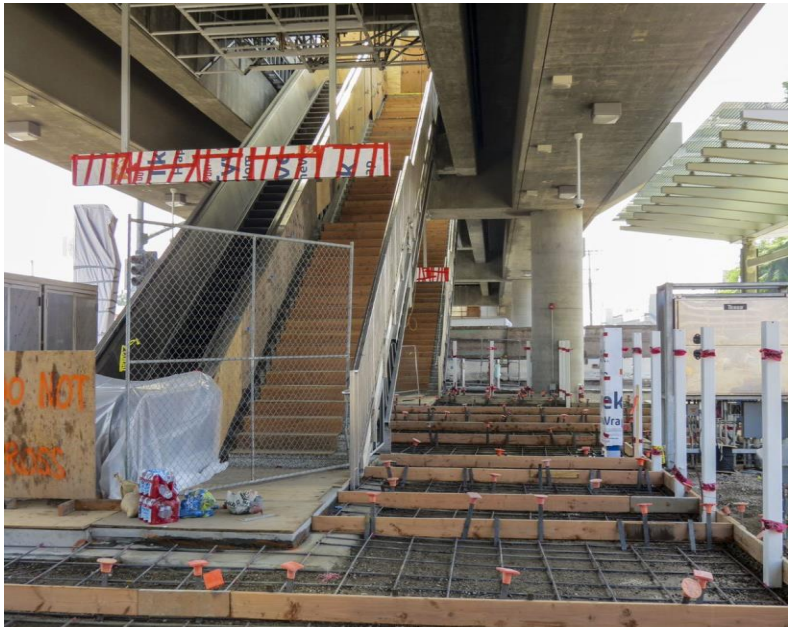
Construction Photos

Fairview Heights Station - parking, landscaping, and pedestrian crossing



Aviation Century Station – ready for concrete placement of plaza floor

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Construction Photos

Downtown Inglewood Station – crews installing the platform LCD message screen

Downtown Inglewood Station – plaza, tracks and platform

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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

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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

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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

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