



CRC Item No. 6 – August 31, 2017

Program Budget & Construction Update August 2017

TJPA
TRANSBAY JOINT POWER AUTHORITY





Transbay Program

Western Zone
Gridlines 1 to 10

Central Zone
Gridlines 10 to 20

Eastern Zone
Gridlines 20 to 35



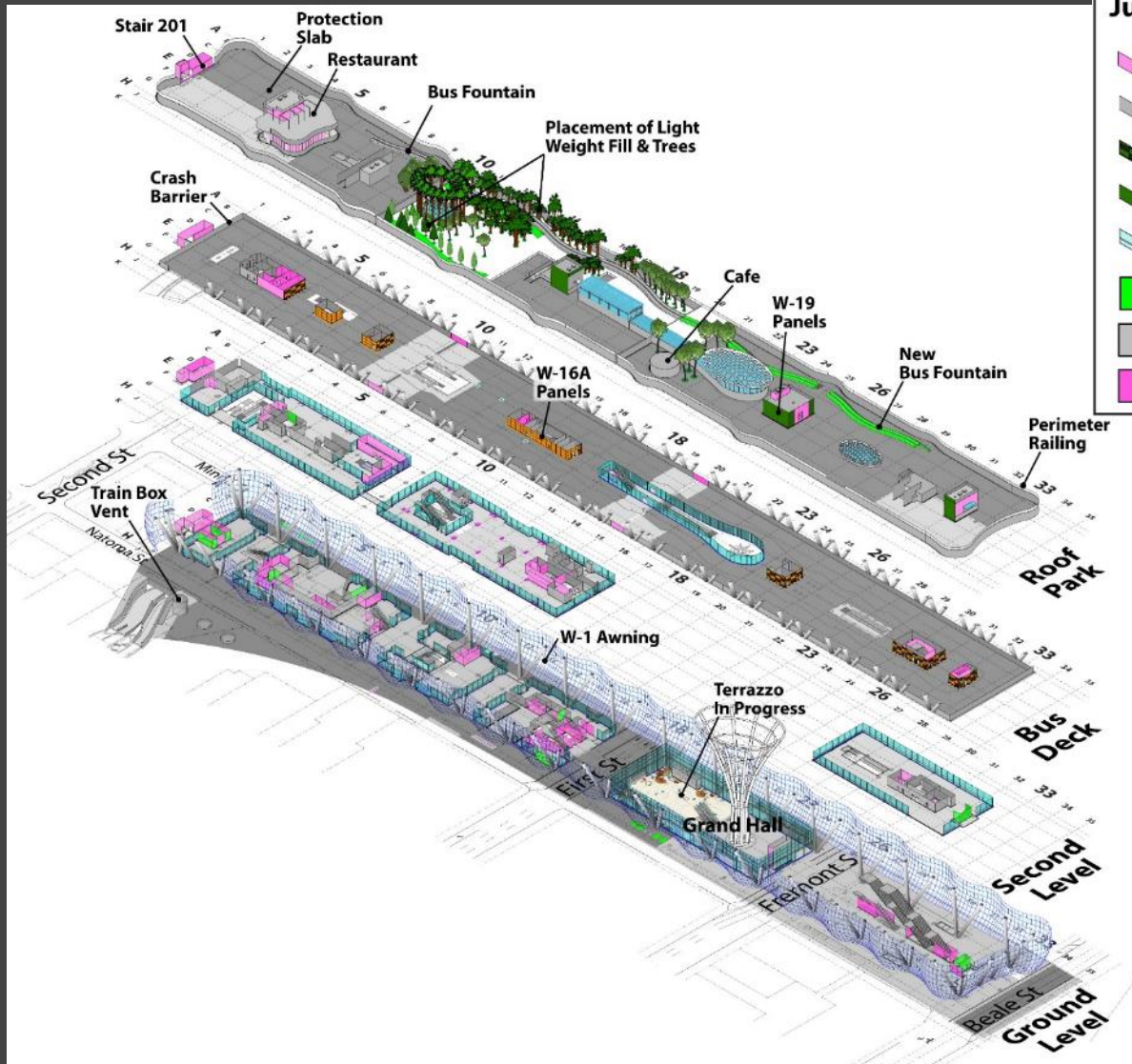
Project Overview

1. Construction Activity
2. Safety & Labor Statistics
3. Budget Overview
4. Contingency Cost
5. Schedule
6. Risks



Transit Center

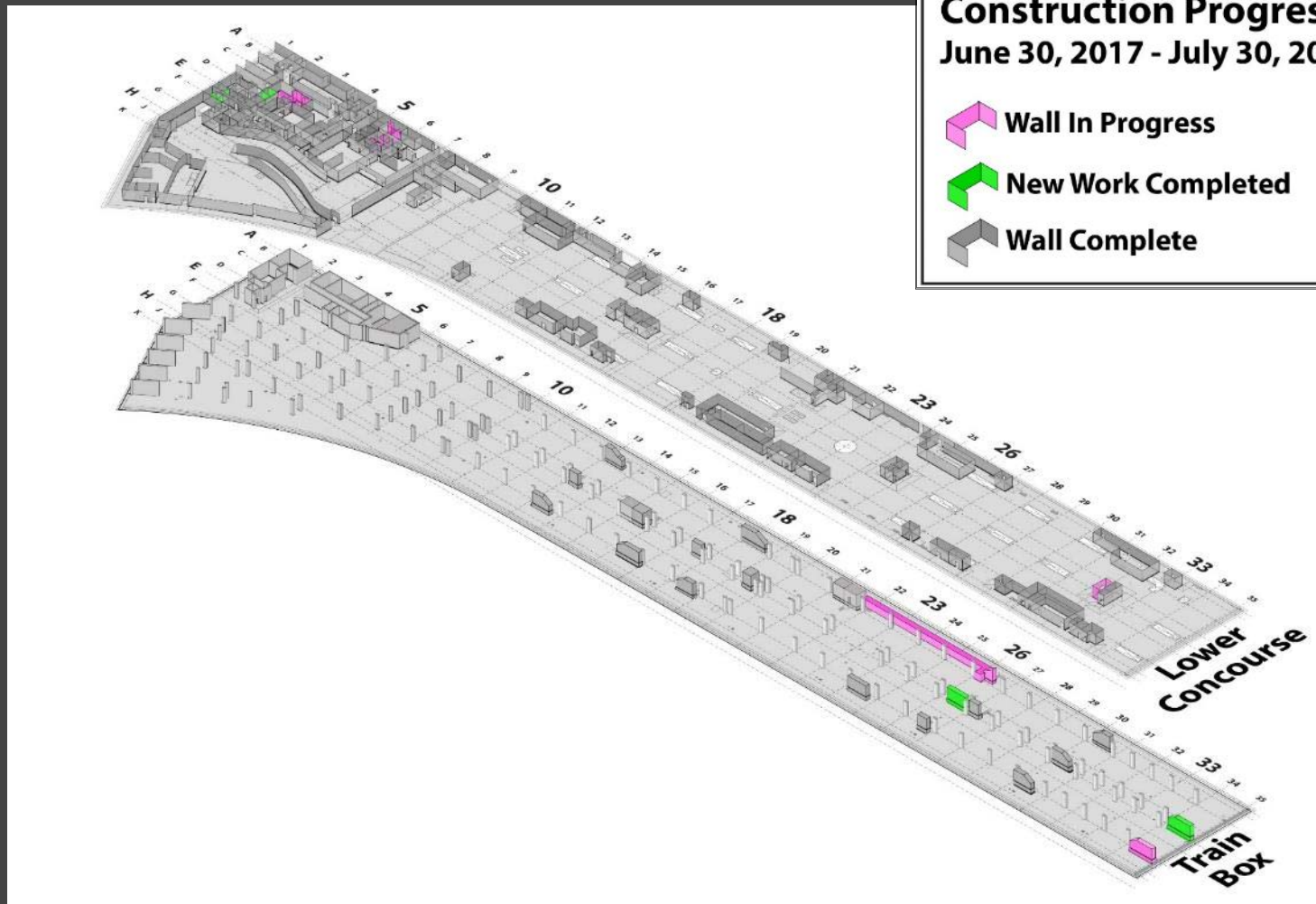
Construction Progress June 30, 2017 - July 30, 2017



- Wall In Progress
- Wall Installed
- Wall Finish In Progress
- Wall Finish Complete
- Curtain Wall Complete
- New Work Completed
- Concrete Slab Complete
- Concrete Slab In Progress



Transit Center



Construction Progress June 30, 2017 - July 30, 2017

-  Wall In Progress
-  New Work Completed
-  Wall Complete



Transit Center - West (GL1-20)

- Rooftop waterproofing and protection is nearly complete.
- Rooftop landscaping and pathway construction underway.
- Bus Deck ceiling framing now complete.
- Metal stud framing of walls, gypsum board, and curtain wall underway.
- Elevator and Escalator construction and enclosures install underway.
- Main Distribution Frame (MDF) Room and Intermediate Distribution Frame (IDF) Rooms are underway. Electric switchgear and transformer rooms near completion.
- Equipment rooms buildout in progress. (Fire water tanks, Pumps, HVAC Units)

Transit Center - East (GL20-35)

- W1 Awning eastern corners completed.
- Rooftop waterproofing and protection is nearly complete.
- Rooftop landscaping and fountain construction is underway.
- Bus Deck ceiling framing underway.
- Light Column "Oculus" painting/coatings completed. Scaffold removed.
- Radiant Heating started at Grand Hall.
- Terrazzo install started at Grand Hall.
- Elevator and Escalator construction and enclosures install underway.
- Main Electric Rooms are now under SFPUC jurisdiction.
- Intermediate Distribution Frame (IDF) Rooms are underway.
- Equipment rooms buildout in progress. (Pumps, Tanks installed, HVAC Units)



Transbay Program

Construction Activity July 2017





Transbay Program

Construction Activity Rooftop Elevator Penthouse





Transbay Program

Construction Activity Bus Deck Ceiling Framing





Transbay Program

Construction Activity Terrazzo placement at the Grand Hall

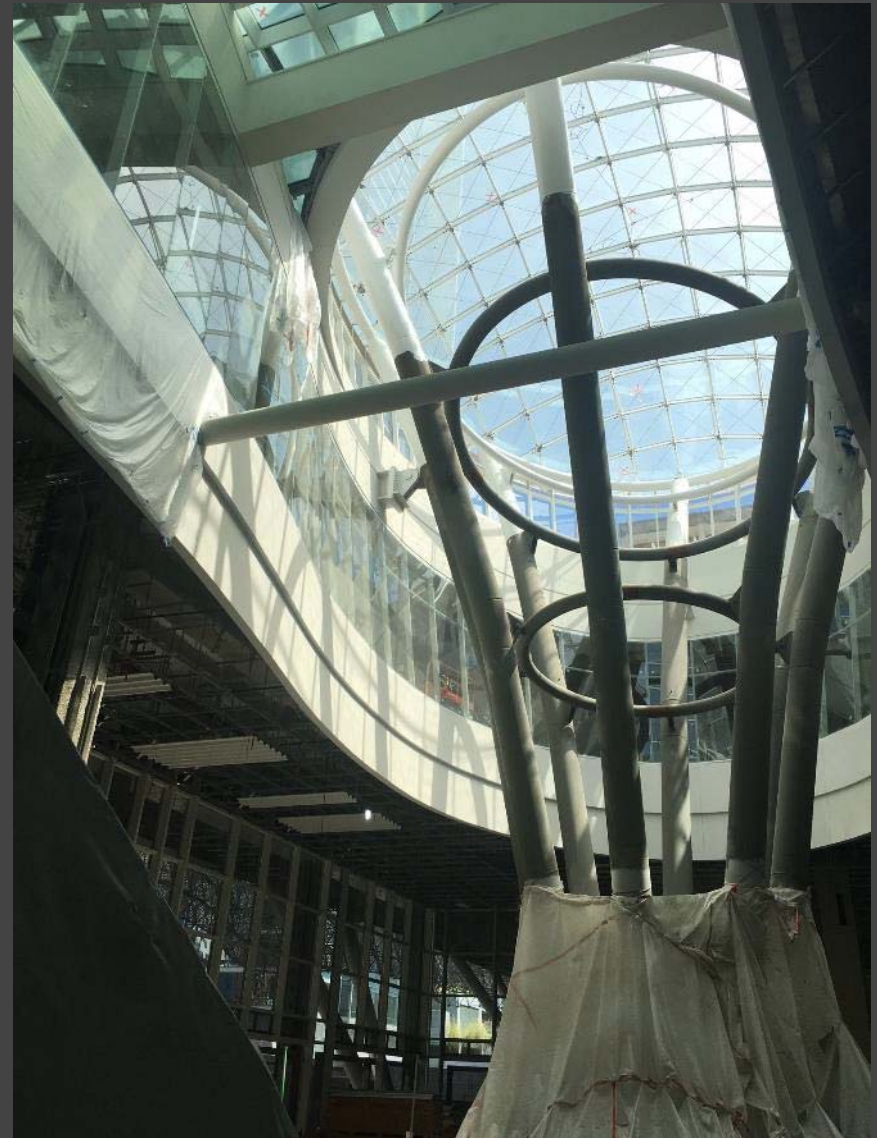
Terrazzo – Artist Julie Chang





Transbay Program

Construction Activity July 2017





Transbay Program

Grand Hall - Light Column LED lights



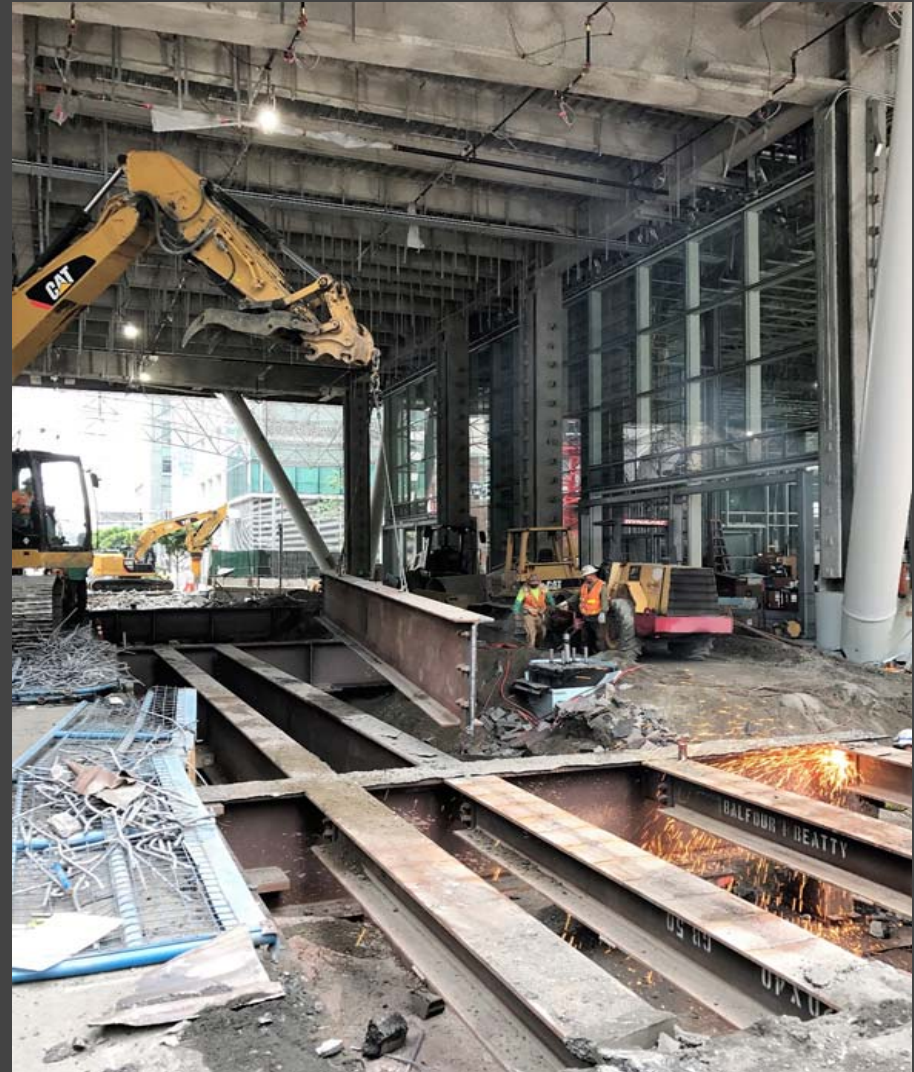


Transbay Program

Fremont Street Bridge Removal

Fremont Street Temporary Traffic Bridge Removal

- Multiple Phase approach.
- Public Outreach completed in advance. Permit issued mid-July.
- All temporary bridge steel and decking was removed over two weekends in July and August.
- Nights and weekend work required due to SFMTA traffic requirements.
- Transbay work is coordinated with both Salesforce Tower and 181 Fremont Projects.





Bus Ramp/Cable Stay Bridge

- Security Guard Booth systems and security cameras are in testing.
- Bus Ramp street lights and electrical lighting are in service.
- Bus Ramp final Punchlist and painting touchup is underway.
- Bus Ramp underground piping and street lighting conduits underway.
- Sidewalk restoration is scheduled after underground utility work.
- Under-ramp Parcels final site grading in is underway.
- Under-ramp Parcels asphalt is scheduled after final grading work.
- Under-ramp Parcels final fencing after asphalt is completed.





Bus Storage Facility

- Construction continues with site Underground Utilities such as sewer and storm drain system work.
- Construction has completed the CIDH pile drilling in July.
- Construction continues with Falsework erection for viaduct concrete construction.
- Concrete formwork, rebar and concrete placement for viaduct bents, walls and abutment walls continues.
- Construction completion is Summer 2018.





Safety and Labor Statistics

Recordable & Lost Time Incidents:

Recordable Incidents this period – July 2017:	1	Lost Time Incidents this period – July 2017:	1
Total Recordable Incidents in 2017:	7	Total Lost Time Incidents in 2017:	3
WOJV Average Annual Recordable Incident Rate 2011 Through 2015	3.04	WOJV Average Annual Lost Time Incident Rate 2011 Through 2015:	0.38
Nat'l/ State Annual Average Recordable Incident Rate 2011 Through 2015:	2.76	Nat'l/ State Annual Average Lost Time Incident Rate 2011 Through 2015:	1.36

Craft Hours:

Total Transit Center Craft Hours Year 2011 - YTD 2017 :	Total Hours this Period – <u>July 2017</u> :	Total Transit Center Craft Hours - YTD 2017 :
3,780,665	104,392	934,750



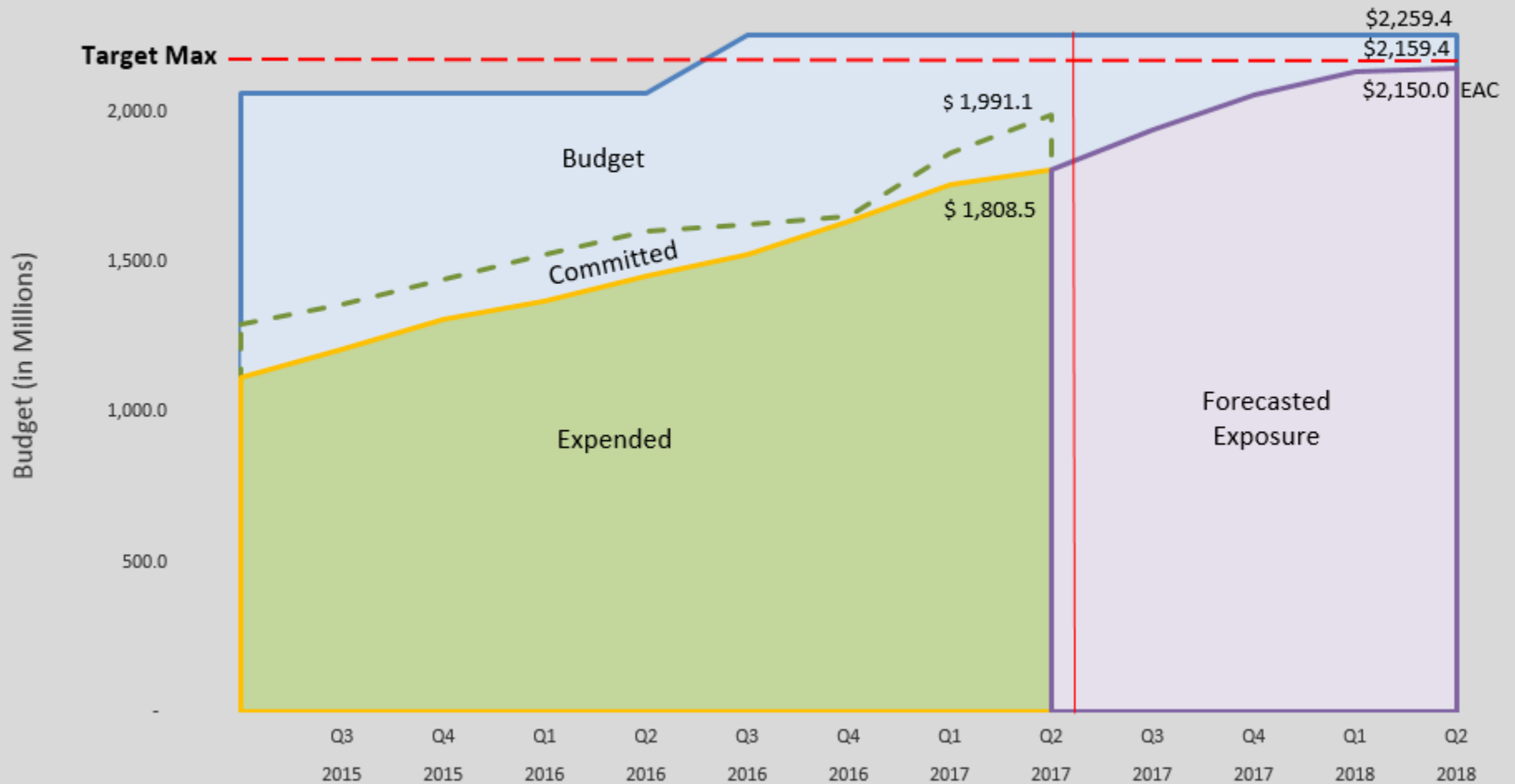
Transbay Program

Budget Overview

Phase 1

Transit Center

Data thru: June 17



80% Program Budget
93% Contract Time



Transbay Program

Phase 1 Budget & Commitments (in millions)

(\$ Millions)	<u>Budget</u>	<u>Committed</u>	<u>Expended</u>	<u>Balance</u> (Budget less Committed Costs)
Construction Costs	\$1,473.9	\$1,428.8	\$1,261.0	\$45.0
Program-wide Costs (Soft Costs)	\$597.1	\$562.3	\$547.5	\$34.9
Contingencies & Reserves	\$188.4	\$0.0	\$0.0	\$188.4
TOTAL	\$2,259.4	\$1,991.1	\$1,808.5	\$268.3



Contingency Tracking (\$millions)

	Construction Contingency	CM/GC Contingency	Program Reserve	Total Contingency & Reserve
Baseline Budget Amounts	\$61.8	\$32.5	\$116.9	\$211.3
Contingency Usage Through June 2017	(\$21.9)	(\$3.3)	\$4.6	(\$20.6)
Remaining Baseline Budget Amounts (June 2017)	\$39.9	\$29.3	\$121.6	\$190.7
Total Draws/Adds July 2017	(\$1.2)	(\$0.2)	\$0.0	(\$1.4)
Remaining Balances	\$38.7	\$29.1	\$121.6	\$189.4

Uses of Contingency this period

- MEP – Rooftop Park Restaurant Sprinklers.
- Bus Ramp – Hinge 9 Modifications
- MEP – Added 6A Light Fixtures in Stairwells

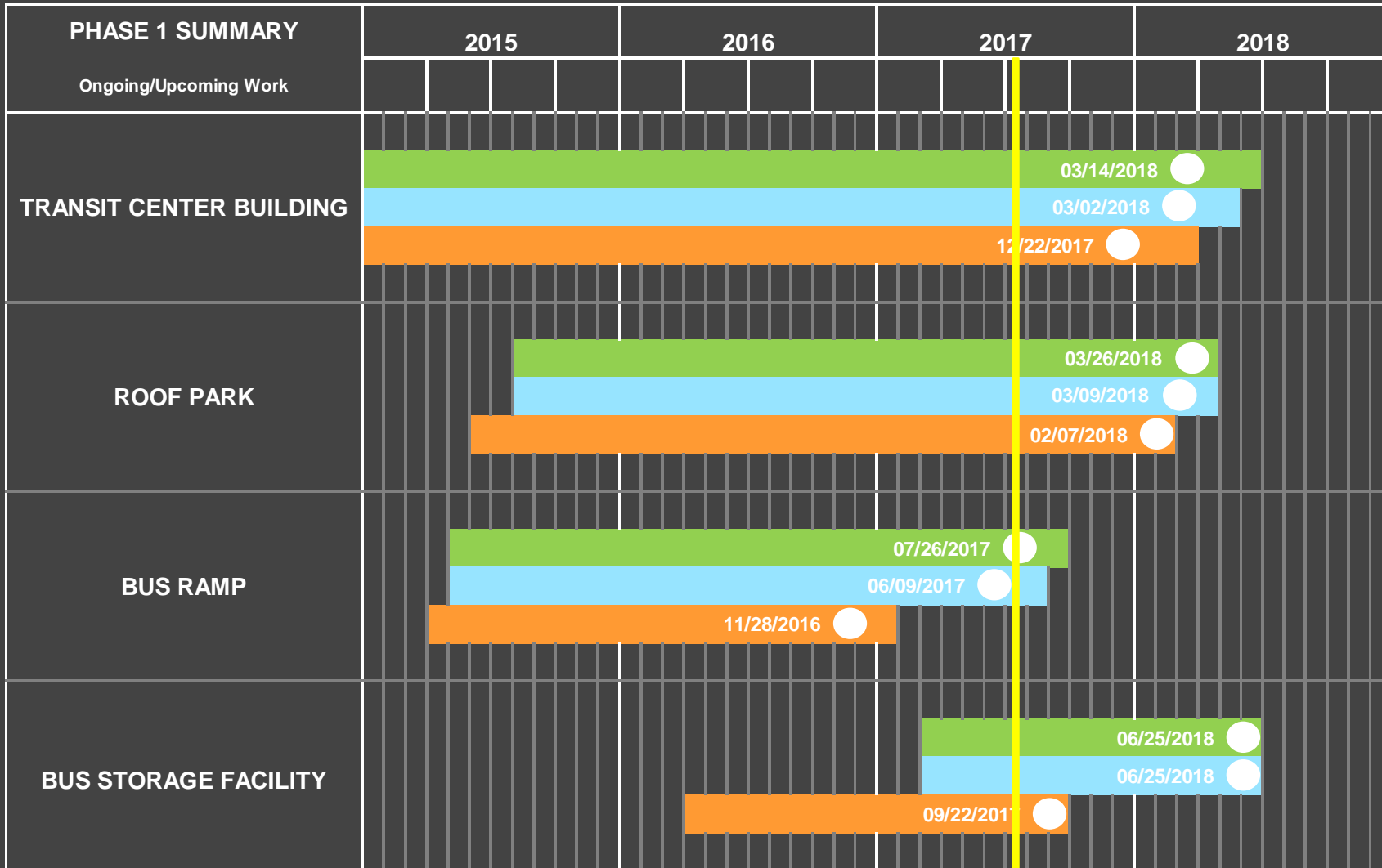
Forecasted Contingency Use

- CM/GC: \$0.3M
- Construction: \$4.8M
- Program Reserve: (\$1.6M)



Transbay Program

Schedule



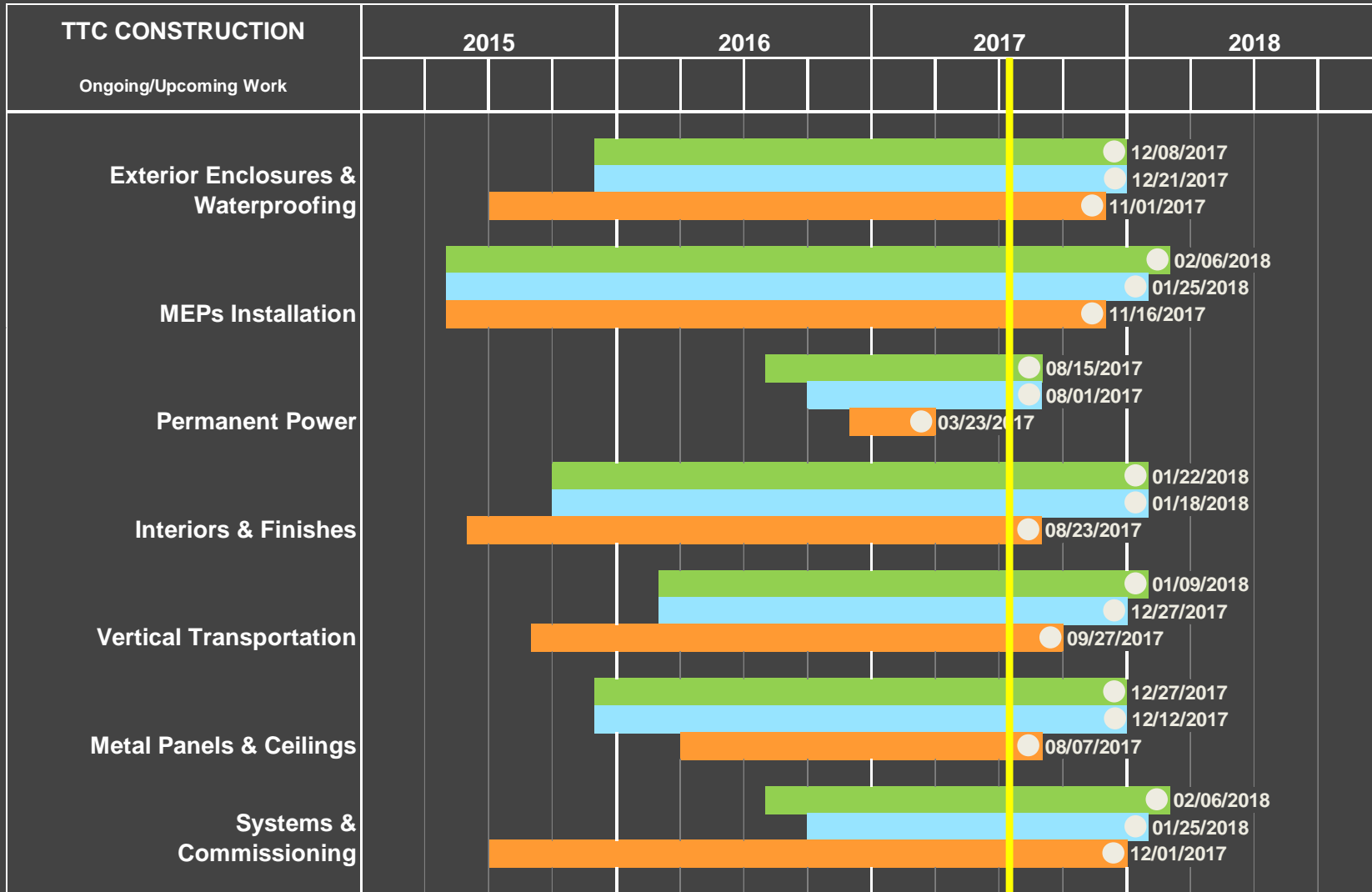
LEGEND

- Current Forecast
- Previous Report
- Baseline
- Substantial Completion



Transbay Program

Schedule



LEGEND

- Current Forecast
- Previous Report
- Baseline
- Construction Complete



Systems Installation & Commissioning

Building Management, Fire / Life Safety and Security Systems installation and commissioning activities will drive the schedule as we approach Substantial Completion.

Pre-Mitigation Strategy:

1. Focus of Bi-monthly Temporary Certificate of Occupancy (TCO) Meetings.
 - Continuing Activity Concentration on Priority Electrical and Data Rooms.
 - Permanent Power, Normal Power & Signal conductor distribution.
 - Continue vigilant watch over of SFFD Fire Alarm Review /Approvals.
2. Specific Items to monitor:
 - Rooftop Park Pylons relationship to Fire Alarm System as well as Emergency Communication System / Mass Notification.
 - Door Hardware interface & coordination with Building Management Systems & Security Systems.



Sub-Contractor Closeout Challenges

Our TJPA Management and WOJV Teams are collectively striving to achieve subcontract close out of early Trade Package to retire cost risk currently being carried by EAC, including:

- TG18.1 - Bus Ramp (Shimmick)
- TG7.2 - TTC Above Grade Concrete (Shimmick)
- TG7.1R - Structural Steel (Skanska-Civil)

With close out resolution, the Scope and Risk Exposure can be retired; however, challenged by the following issues:

- Final negotiations of quantum cost of merited changes.
- Outstanding Potential Claims from Trade Package Sub-contractor.
 - Back Charge Cost Impacts amongst sub-contractors and WOJV.
 - Time Impacts amongst sub-contractors and WOJV.



Schedule

Schedule currently indicating about 12 weeks beyond contractual Substantial Completion

Concerns include:

1. Electrical Subcontract Production Rates in both Normal Voltage and Low Voltage Distribution.
2. Main & Intermediate Distribution Frame Rooms. (MDF & IDF Rooms) cabling and installation overdue without benefit of recovery schedule from Fisk.
3. Rooftop Park Progress albeit soil installation has been all but resolved with Material Submittal acceptance completed.
4. Column Covers Fabrication and Installation.
5. Interior & Finishes Subcontractor labor resources.
6. Advancement of Bus Plaza and Perimeter Site Work.



Schedule

WOJV Mitigation Strategy Framework

1. Targeted overtime to accelerate critical trades
 - W-13 glass floor in Grand Hall
 - Terrazzo floor in Grand Hall
 - Zone 4 site work
 - Metal Ceilings
2. Column cover mitigation
 - Current focus is on resolution of quality control issues and successful completion of mock-ups
 - Resequencing work to avoid delays to follow-on trades
 - Overtime, second shift and additional manpower at subcontractor's cost
3. Doors Specialist is on board and currently reviewing Hardware & Security Controls Integration



Schedule

WOJV Mitigation Strategy Framework

4. Interior finishes manpower

- Added framing crews
- Supplementing subcontractor quality control and supervision

5. Electrical work

- Retained two general foremen from another electrical subcontractor to closely monitor daily progress and assess current status
- Applying pressure to electrical subcontractor for mitigation options
- Evaluating options such as supplementation or potential default



Schedule

WOJV Mitigation Strategy Framework

6. Working with TJPA to prioritize areas for a phased completion strategy
 - Muni Bus Plaza
 - Retail Tenant Improvements
 - Grand Hall and Bus Deck
 - Security Operations Center



Transbay Program

Questions

