



CRC Item No. 6 – February 17, 2017

Phase 1 Final Revised Baseline Budget

Approved June 9, 2016



# Transbay Transit Center

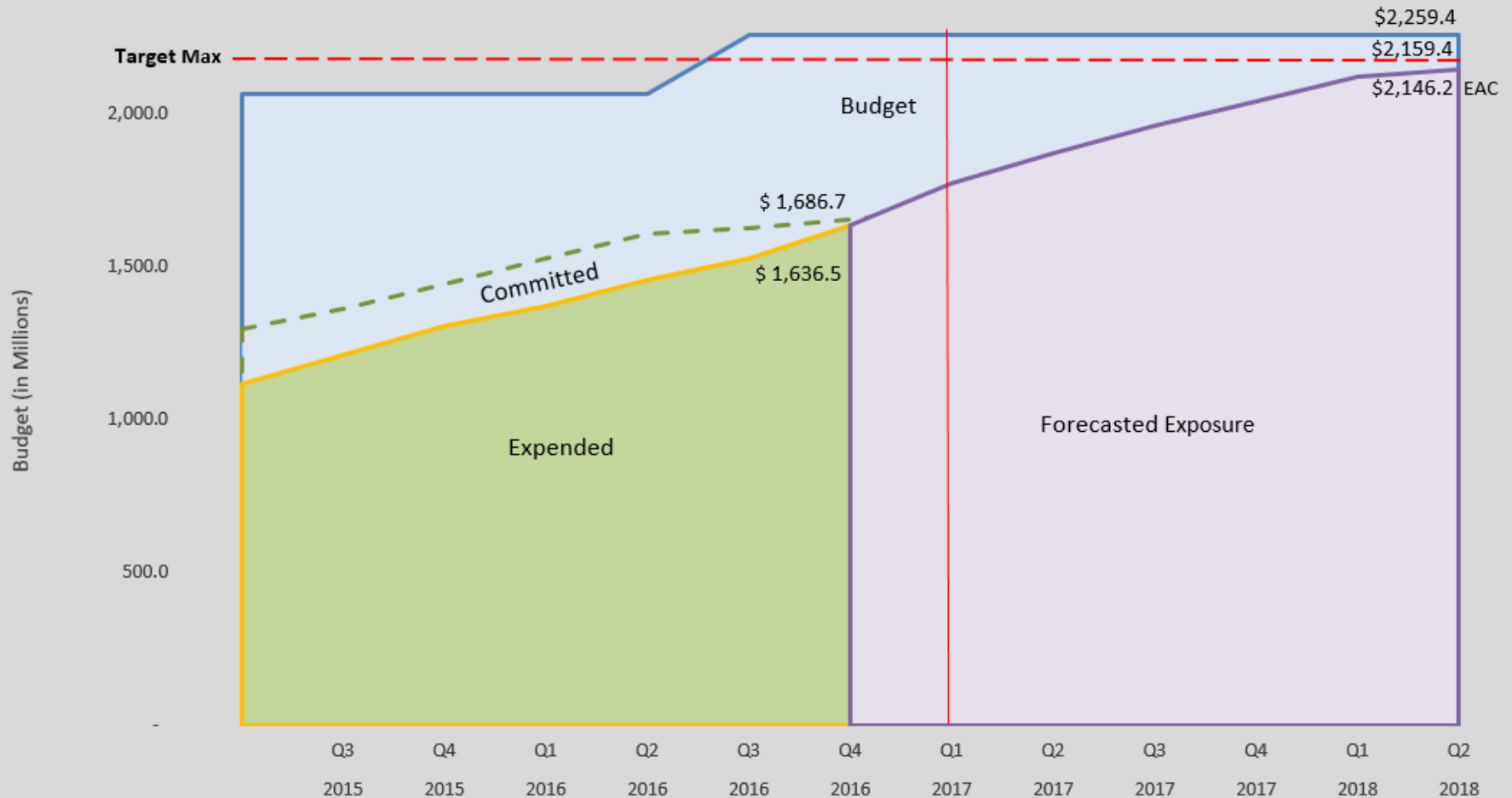
**TJPA**





## Phase 1 Transbay Transit Center

Data thru: December 16



72% Program Budget  
86% Contract Time



# Phase 1 Budget & Expenditures (in millions)

(\$ Millions)	<u>Budget</u>	<u>Committed</u>	<u>Expended</u>	<u>Balance</u> (Budget less Committed Costs)
Construction Costs	\$1,460.7	\$1,140.7	\$1,109.6	\$316.7
Program-wide Costs (Soft Costs)	\$595.3	\$546.1	\$526.9	\$49.2
Contingencies & Reserves	\$203.4	\$0.0	\$0.0	\$203.4
<b>TOTAL</b>	<b>\$2,259.5</b>	<b>\$1,686.7</b>	<b>\$1,636.5</b>	<b>\$572.7</b>



# Phase 1 Funding

Sources	Amount (\$millions)	Expended to Date	Balance
Land Sales	\$515.60	\$483.05	\$32.85
FRA Grants	\$402.70	\$401.80	\$0.90
TIFIA Loan	\$171.00	\$14.01	\$156.99
Bridge Lo	\$154.00	\$139.04	\$14.46
FTA Grants (including One Bay Area Grant)	\$68.40	\$61.70	\$6.70
FEMA Grants	\$0.10	\$0.10	\$0.00
Regional Measures 1 & 2	\$197.40	\$195.10	\$2.30
AB 1171	\$150.00	\$146.80	\$3.20
San Francisco Prop K	\$139.30	\$125.27	\$14.03
AC Transit Capital Contribution	\$39.40	\$37.45	\$2.25
Regional Transportation Improvement Program	\$10.20	\$10.20	\$0.00
Miscellaneous Local	\$12.70	\$13.80	\$5.30
San Mateo County Sales Tax	\$4.50	\$4.50	\$0.00
Transit Center District Plan (Mello-Roos CFD)	\$146.60	\$0.00	\$146.40
City Financing	\$247.50	\$3.66	\$237.54
<b>Total Funds</b>	<b>\$2,259.40</b>	<b>\$1,636.48</b>	<b>\$622.92</b>

Note: Expenditures include retention withheld, but not paid out.



# Contingency Tracking (in Millions)

	Construction Contingency	CM/GC Contingency	Program Reserve	Total Contingency & Reserve
<b>Baseline Budget Amounts</b>	<b>\$61.8</b>	<b>\$32.5</b>	<b>\$116.9</b>	<b>\$211.2</b>
Contingency Usage Through Nov 2016	(\$15.6)	(\$1.51)	\$9.79	(\$7.32)
<b>Remaining Baseline Budget Amounts (Nov 2016)</b>	<b>\$46.2</b>	<b>\$31.0</b>	<b>\$126.69</b>	<b>\$203.9</b>
Total Draws/Adds Dec 2016	(\$0.5)	(\$0.0)	\$0.0	(\$0.5)
<b>Remaining Balances</b>	<b>\$46.3</b>	<b>\$31.0</b>	<b>\$126.69</b>	<b>\$203.4</b>

### Uses of Contingency this period

- Final TG7.2 Curb Plate changes, and other miscellaneous changes to Plumbing, Civil/Sitework, and Interiors/Finishes.



# Risk Assessment Update for the \$2.259B approved budget

## Mitigated

Confidence Level	<u>Bottom Up Model</u>		<u>Top Down Mode (FTA)</u>	
	EAC	Anticipated Savings	EAC	Anticipated Savings
30%	\$ 2,146	\$ 114	\$ 2,157	\$ 103
50%	\$ 2,149	\$ 110	\$ 2,183	\$ 76
70%	\$ 2,154	\$ 105	\$ 2,216	\$ 43

- Assumes schedule is mitigated for December 2017 Substantial Completion, minimal claims, adherence to schedule and strict control over change orders.

## Unmitigated

Confidence Level	<u>Bottom Up Model</u>		<u>Top Down Mode (FTA)</u>	
	EAC	Anticipated Savings	EAC	Anticipated Savings
30%	\$ 2,200	\$ 60	\$ 2,175	\$ 85
50%	\$ 2,212	\$ 47	\$ 2,212	\$ 47
70%	\$ 2,230	\$ 29	\$ 2,258	\$ 1

- Assumes schedule slippage to March 19, 2018 and no mitigation.

NOTE: The information above are based on Risk Management Committee Meeting No. 8, in September 2016.



- **Schedule Mitigation**
- **Future Claims from trade contractors**
- **Compatibility Issues between various Building Management Systems and Communication Systems**
- **Market pricing - Bus Storage**

NOTE: The information above are based on Risk Management Committee Meeting No. 8, in September 2016.

# Phase 1 Construction Cost Update

as of January 2017

## Awarded to Date (direct cost)\* (\$ millions)

Transit Center	\$ 1,200.1
Utility Relocation	\$ 26.3
Demolition Old Terminal	\$ 15.5
Temporary Terminal	\$ 20.7
Bus Ramp	\$ 58.4
<b>Total Awards to Date</b>	<b>\$ 1,321.00</b>

\*Amounts include executed change orders





# Phase 1 Construction Cost Update

## Remaining Work to be Awarded (\$ millions)

<b>Trade Packages (Bids/RFPs)</b>	
IP Network/Security Software (PSIM, ECS/MNS)	\$ 6.00
Bus Storage Facility	\$ 20.02
<b>Subtotal</b>	<b>\$ 29.02</b>
<b>Strategic Change Orders</b>	
Traction Control	\$ 3.00
Artwork	\$ 1.46
Mission Street Island	} \$5.42
301 Mission Wall Replacement	
IP Network (DAS & physical interconnections)	
Extending Natoma sidewalk to 2 <sup>nd</sup> Street	
<b>Subtotal</b>	<b>\$ 9.88</b>
<b>Total</b>	<b>\$ 35.90</b>



# Construction Update

February 2017

## Transbay Transit Center

TJPA



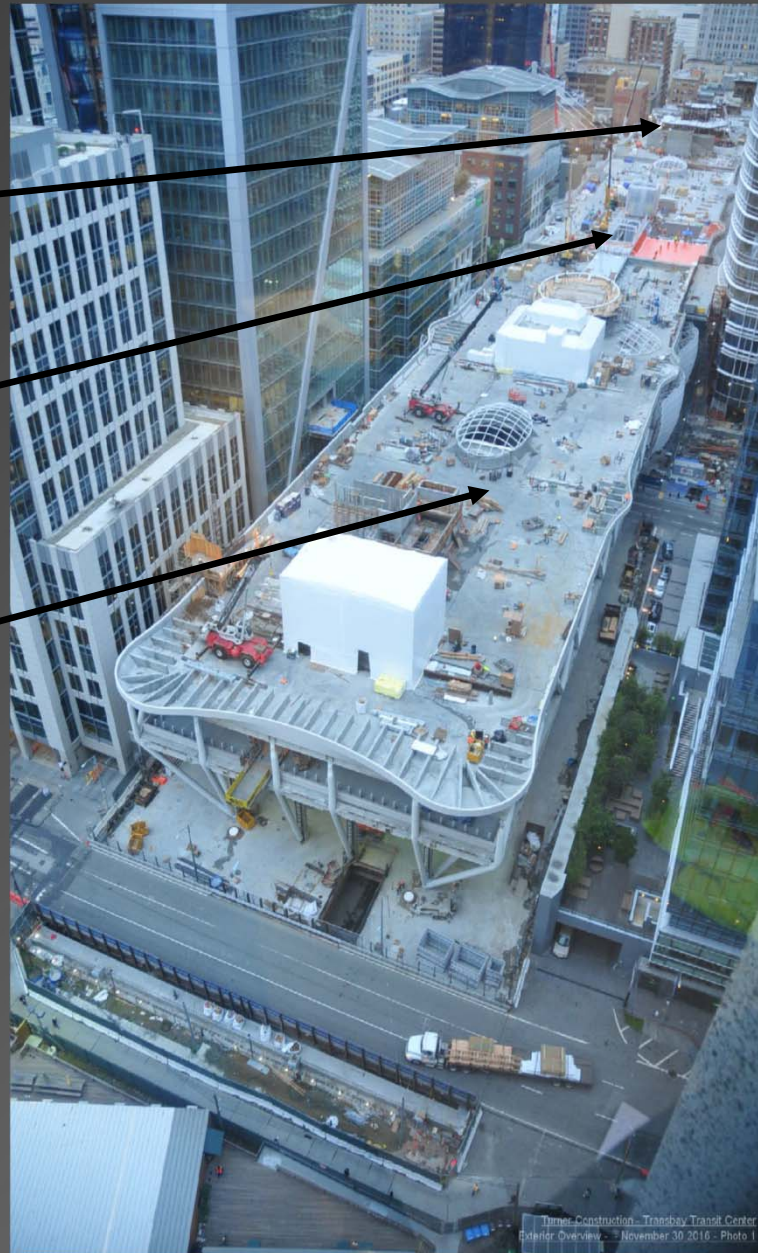


## Transbay Transit Center

Western Zone  
Gridlines 1 to 10

Central Zone  
Gridlines 10 to 20

Eastern Zone  
Gridlines 20 to 35









# Project Overview

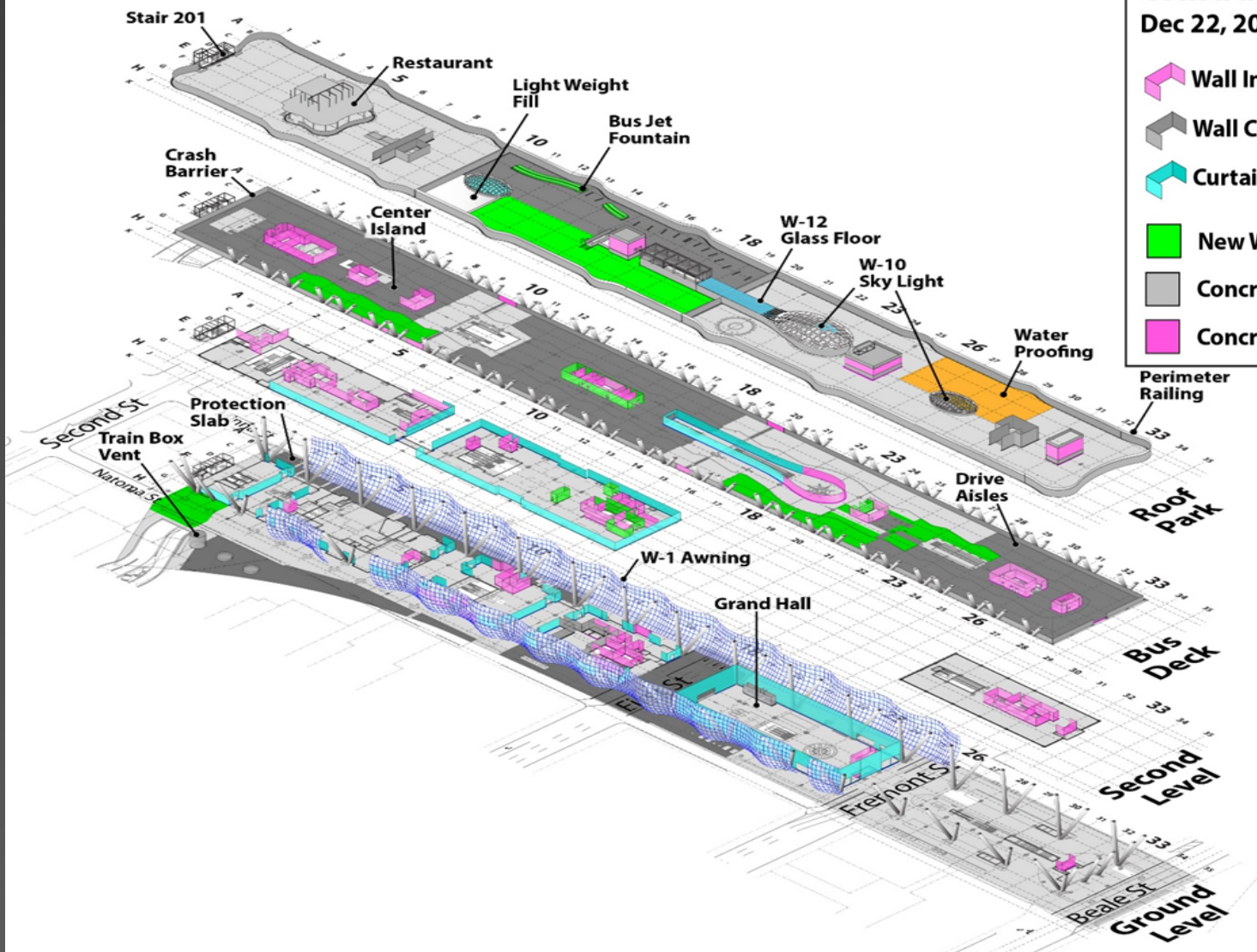
1. Construction Activity
2. Safety & Labor Statistics
3. Budget Overview
4. Contingency Cost
5. Schedule
6. Risks & Operational Readiness



## Transit Center – Upper Levels and Roof Park

**Transbay Transit Center  
Construction Progress**  
Dec 22, 2016 - Jan 27, 2017

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

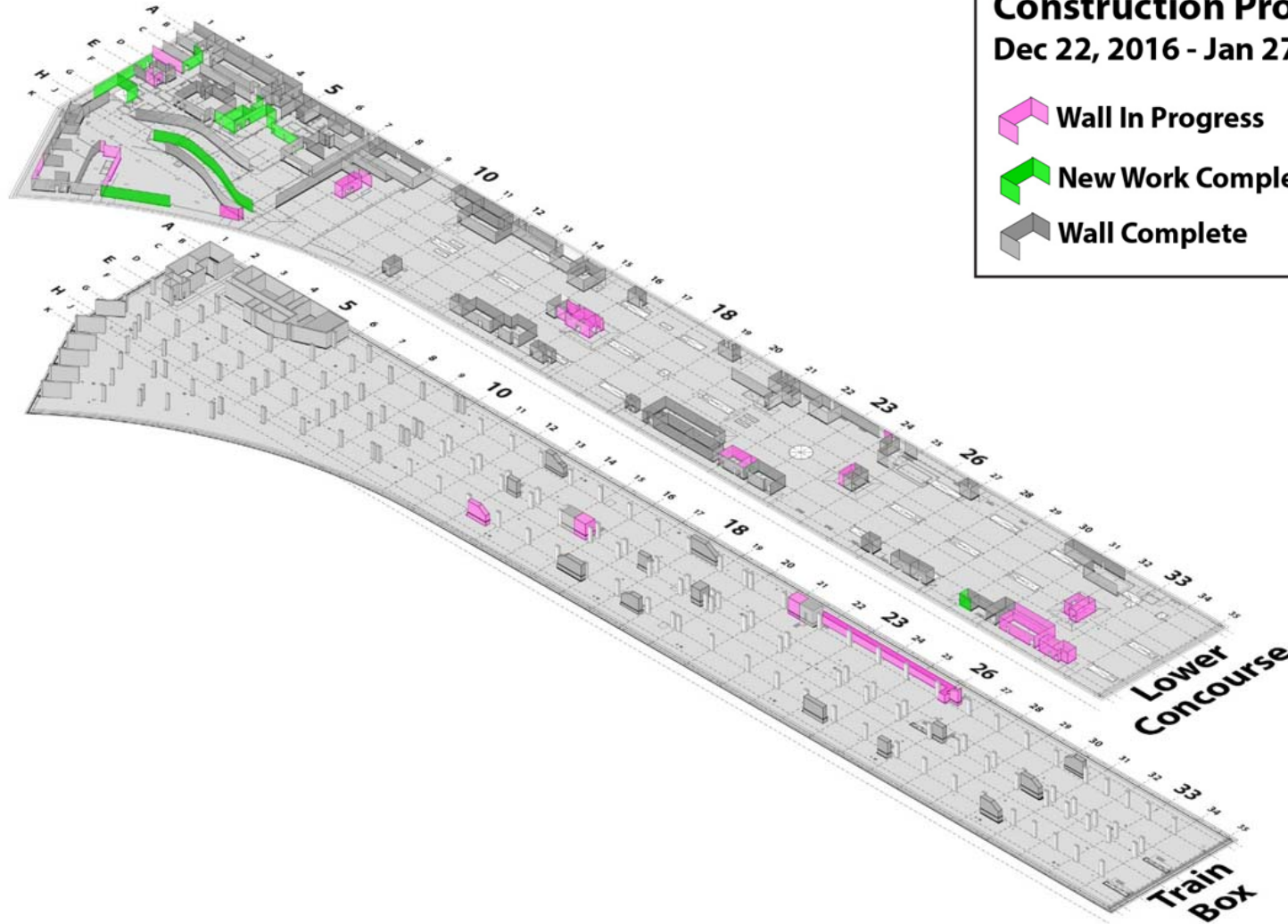




## Transit Center- Trainbox Lower Levels

**Transbay Transit Center  
Construction Progress**  
Dec 22, 2016 - Jan 27, 2017

-  Wall In Progress
-  New Work Completed
-  Wall Complete





## Western Zone (GL 1-10)

- Rooftop Western Skylight glazing installed and tested.
- Rooftop restaurant walls and decks rebar and concrete continues.
- Bus Deck drive aisle and pedestrian island concrete is complete.
- Mechanical/Electrical/Plumbing/Fire Sprinkler (MEPF) systems installation continues all levels.
- Main Electric, Switchgear and transformer rooms buildout in progress and readied for energization.
- Concrete Masonry Unit (CMU) wall installation nearing completion.
- Vehicle and Bicycle architecturally exposed ramp walls shotcrete in progress.



## Central Zone (GL 10-20)

- Rooftop trees are being delivered!
- Rooftop Landscaping underground conduit, piping and fountain precast is underway both north and south.
- Rooftop Glass Canopy framing at Escalator 407/408 is completed.
- All levels metal stud framing walls with MEP rough-in, also Glass Curtain wall systems installation continues.
- All levels continue with MEPF systems installation.
- Main Electric, Switchgear and transformer rooms buildout in progress and being readied for energization.
- First Street temporary bridge all steel removed in early January with concrete infill in progress and waterproofing, backfill and asphalt to follow in February.





## Construction Activity



### Eastern Zone (GL 20-35)

- Light Column “Oculus” Skylight glazing panels in progress.
- Rooftop Waterproofing has commenced in the eastern zone.
- Bus Deck drive aisle is complete with pedestrian island with crash bollards concrete remaining to complete.
- All levels metal stud framing walls and MEP rough-in, also Glass Curtain wall systems installation continues.
- Mechanical/Electrical/Plumbing/Fire Sprinkler (MEPF) systems installation continues all levels.
- Lower Concourse Elevator Fronts and machinery being installed.
- Concrete Masonry Unit (CMU) wall installation nearing completion.





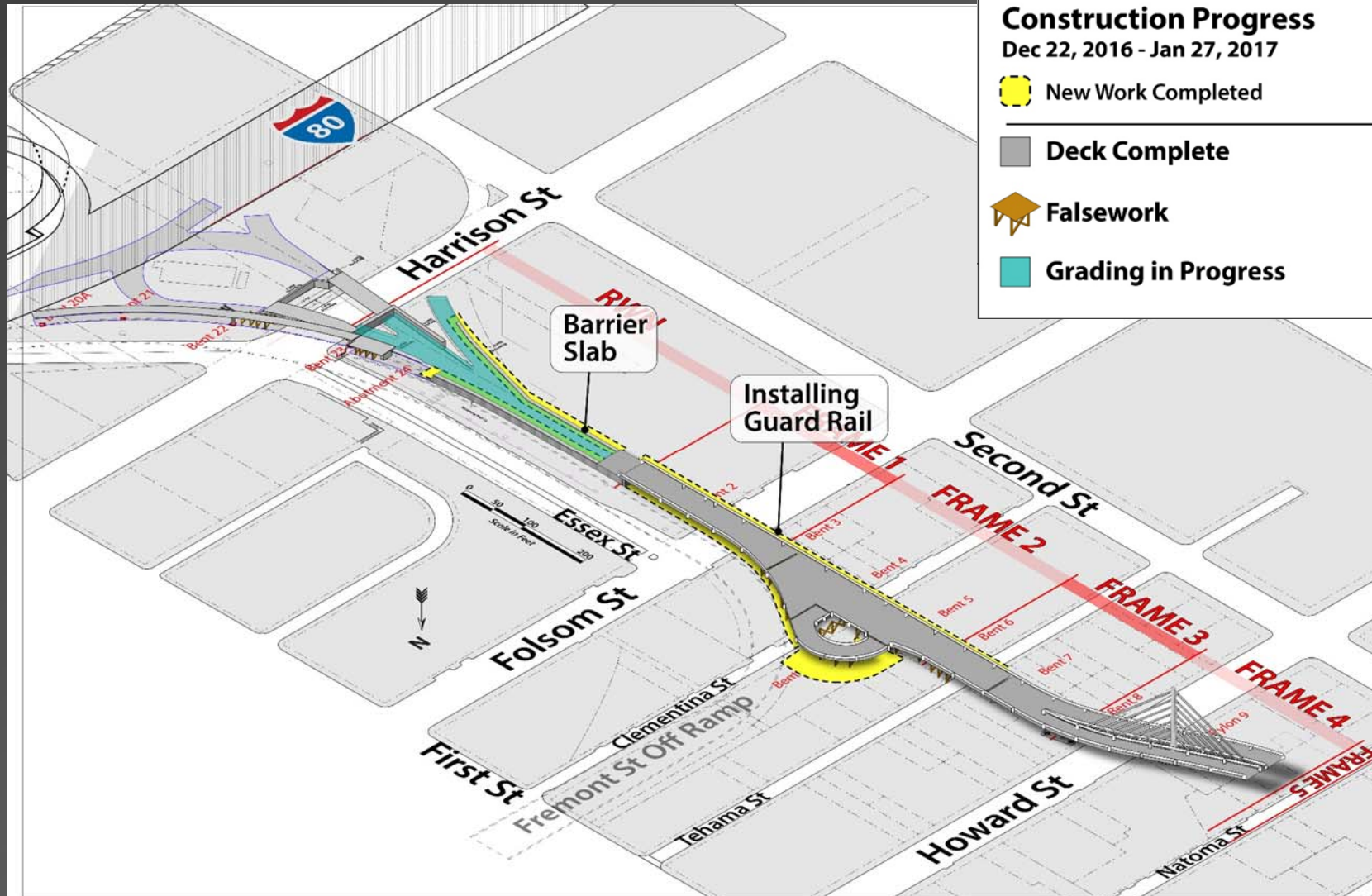
## Bus Ramp and Cable Stay Bridge

### Transit Center Bus Ramp

### Construction Progress

Dec 22, 2016 - Jan 27, 2017

-  New Work Completed
-  Deck Complete
-  Falsework
-  Grading in Progress





## Bus Ramp Bridge

- All Cable Stay Bridge ST-10 Railings are installed with cut and cap of cables starts early February.
- Bridge drop-in steel span connection to Transit Center being delivered to site early February.
- Mechanically Stabilized Earth (MSE) and retaining wall work progressing.
- Earthwork grading work in progress.
- Underground utility work continues.
- Viaduct electrical utility work continues.
- Viaduct bus turnaround (Frame 2 @ Clementina Street) completed with Falsework removal scheduled early February.





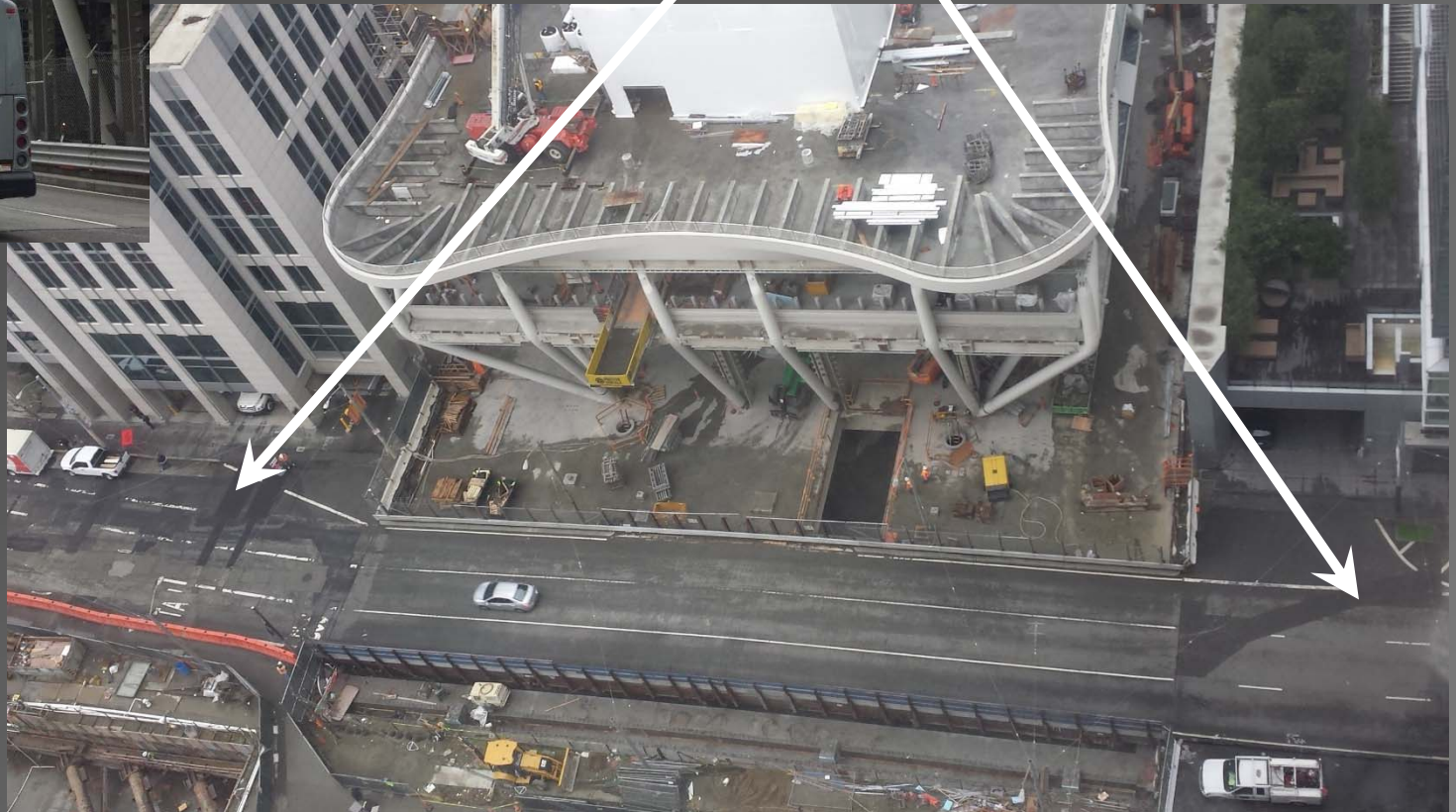
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# Temporary Steel Bridge Removal and Replacement at Beale Street



OCS Lines

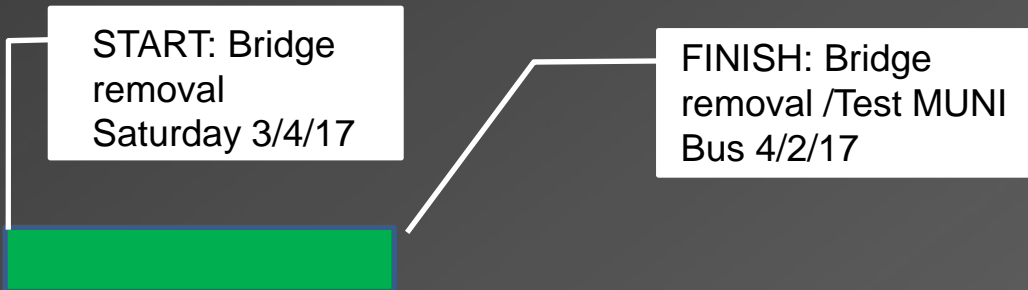
Limits of Work





Transbay Transit Center

# Temporary Steel Bridge Removal and Replacement at Beale Street



**28 DAY PLAN:** Complete temp bridge removal and final street restoration working two 8 hour shifts 6AM - 11:00PM (16 hours per day) including Saturday. Sundays days for other contractors – waterproofing, low voltage conduits and other low noise work.

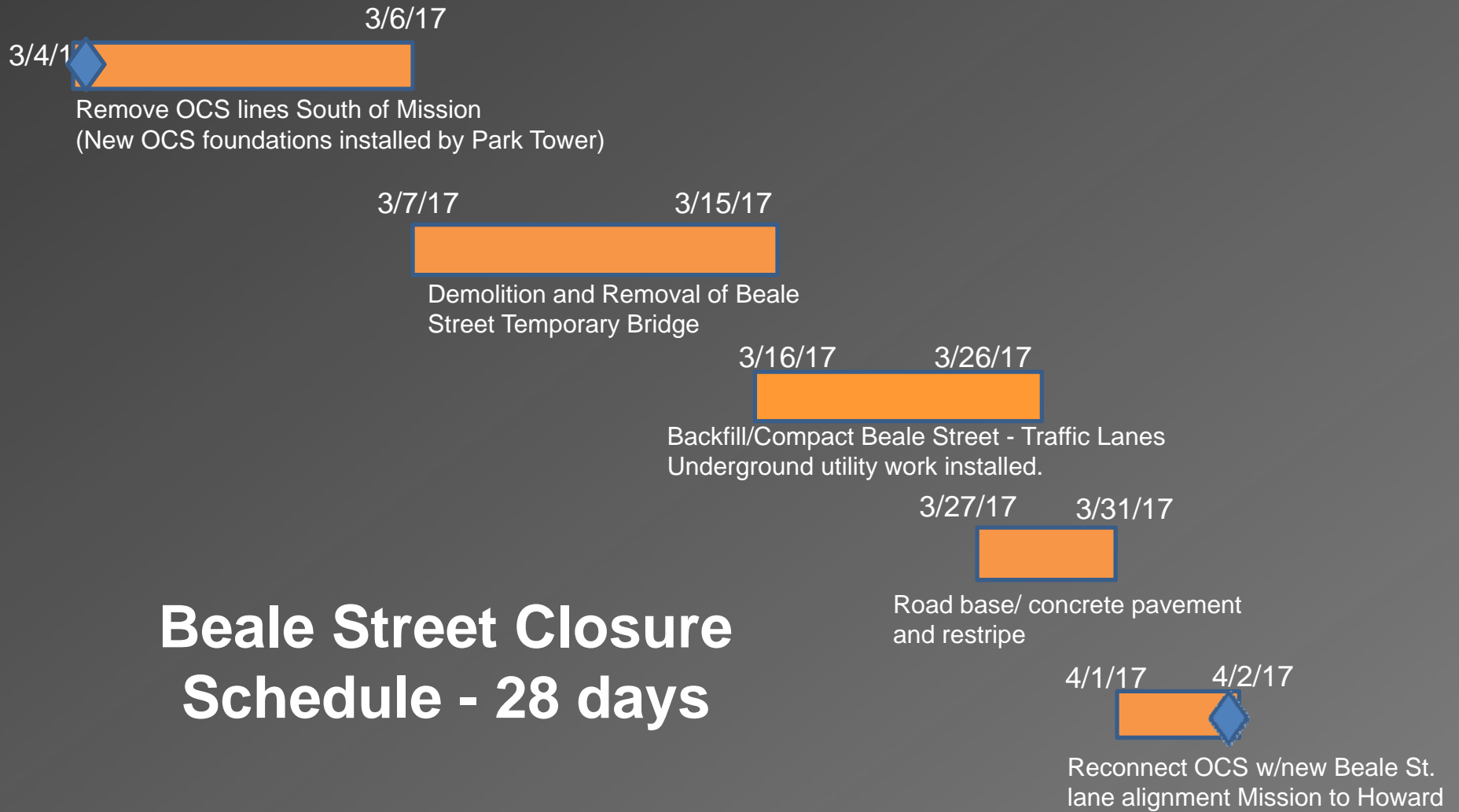


**7 MONTH IMPACT:** Beale Street traffic lane closures and OCS outage for bridge removal in Phases would take 6-7 months per the contractor. Fremont Bridge removal scheduled to start 7/2/17 would also be impacted.



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# Temporary Steel Bridge Removal and Replacement at Beale Street





## Recordable & Lost Time Incidents:

<b>Recordable Incidents in January time period:</b>	<b>1</b>	<b>Lost Time Incidents in January time period:</b>	<b>0</b>
<b>Total Recordable Incidents in 2017:</b>	<b>1</b>	<b>Total Lost Time Incidents in 2017:</b>	<b>0</b>
<b>WOJV Average Annual Recordable Incident Rate 2011 Through 2015</b>	<b>3.04</b>	<b>WOJV Average Annual Lost Time Incident Rate 2011 Through 2015:</b>	<b>0.38</b>
<b>Nat'l/ State Annual Average Recordable Incident Rate 2011 Through 2015:</b>	<b>2.76</b>	<b>Nat'l/ State Annual Average Lost Time Incident Rate 2011 Through 2015:</b>	<b>1.36</b>

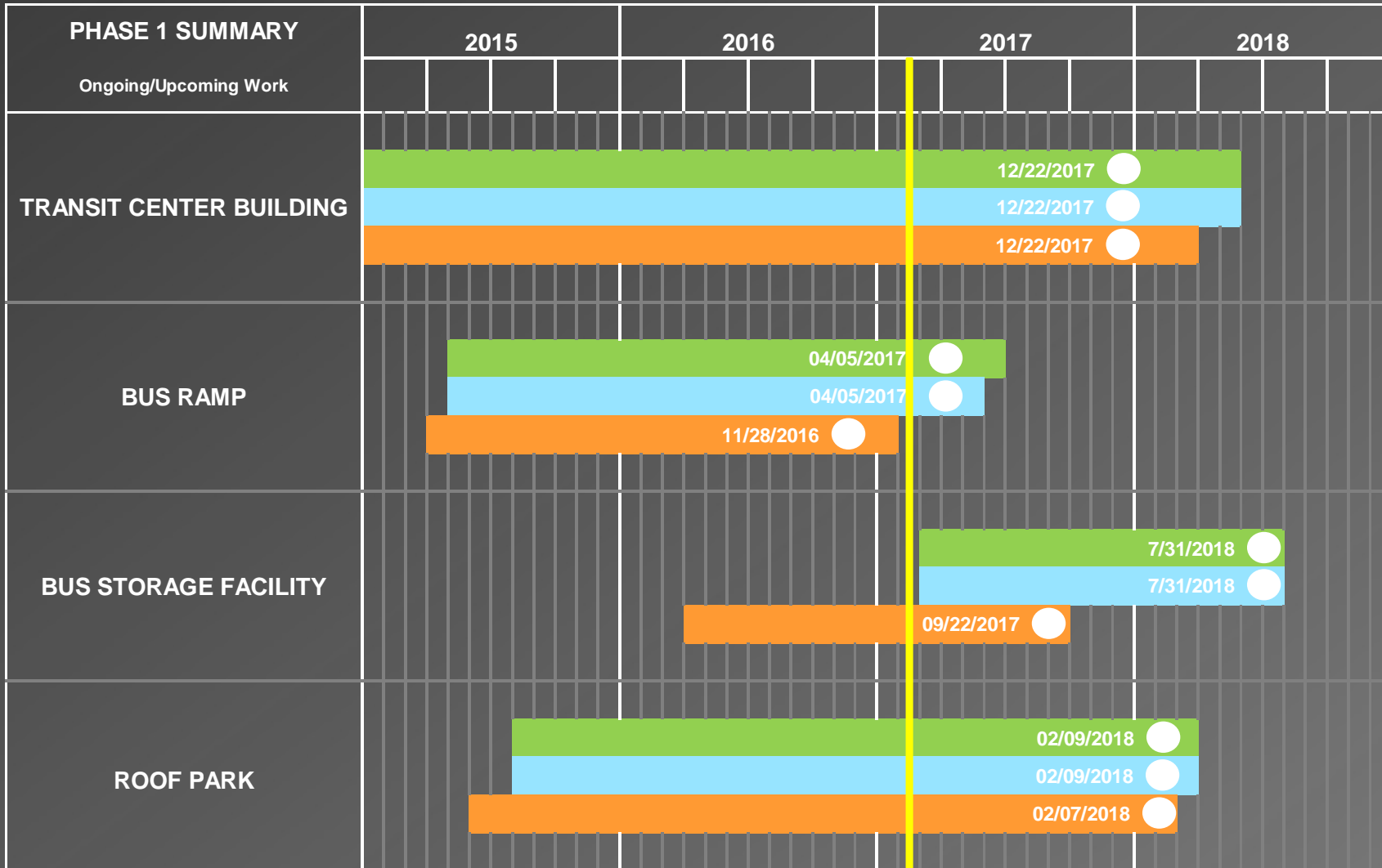
## Craft Hours:

<b>Total Transit Center Craft Hours 2011 through 2017:</b>	<b>Increase since last update Dec 31:</b>	<b>Total Transit Center Craft Hours YTD 2017 :</b>
<b>3,059,519</b>	<b>104,216</b>	<b>104,216</b>



# Transbay Transit Center

# Schedule



### LEGEND

- Current Forecast
- Previous Report
- Baseline
- Substantial Completion



## Schedule

Recovery Schedule continues to hold while Schedule tightness continues to represent risk to Project.

### Active Management

1. All Major Activities treated as Critical.
2. Project Leadership Team encouraging early issue elevation.
3. Continually seeking early warning of next challenge on the Horizon.

### Recent Actions

1. Re-sequenced Temporary Bridge Removals at Beale and Fremont Street.
  - Responds to constraints related to neighboring construction.
  - Affords schedule betterment at both locations.
2. Project Leadership issue resolution with languishing submittals & shop drawings including long lead lighting fixtures and signage.





## Concerns:

1. Master Lessee Delayed On-Boarding Impact.
  - Building Systems Commissioning.
  - Building Systems Testing, Training and Hand Off.
2. Timely Transit Operator's Transition.
  - Route "Sign-On" & Driver Training Schedules.
  - Transit Operator's Tenant Improvements, Fixtures, Furniture, & Equipment.

## Transition Update:

- Hiring of Facility Manager & Chief Security Officer advancing.
- AC Transit start of Operations remains with March 2018 forecast.
- Ramped up Transition Planning Meetings to Weekly.
- Transition Communication & Public Relations discussed with AC Transit.
- Muni training timeline also forecast March 2018 full operations.



## Discussion:

### Constraints of Substantial Completion & Training :

- Creates January & February 2018 transition window.
- Opportunity for “Soft Opening” or “Measured Migration” approach.
- More discussion with all Stakeholders Required.
- 1<sup>st</sup> Half 2017 Target for firm Transition Plan & Schedule.

### Discussion Topics:

- Public Relations & Communication Plan.
  - Transit Operations & TTC Passenger Education.
  - Event Planning & Scheduling.
- Operational Milestones and Expectations.

