

Construction Update

February 2018



Project Overview

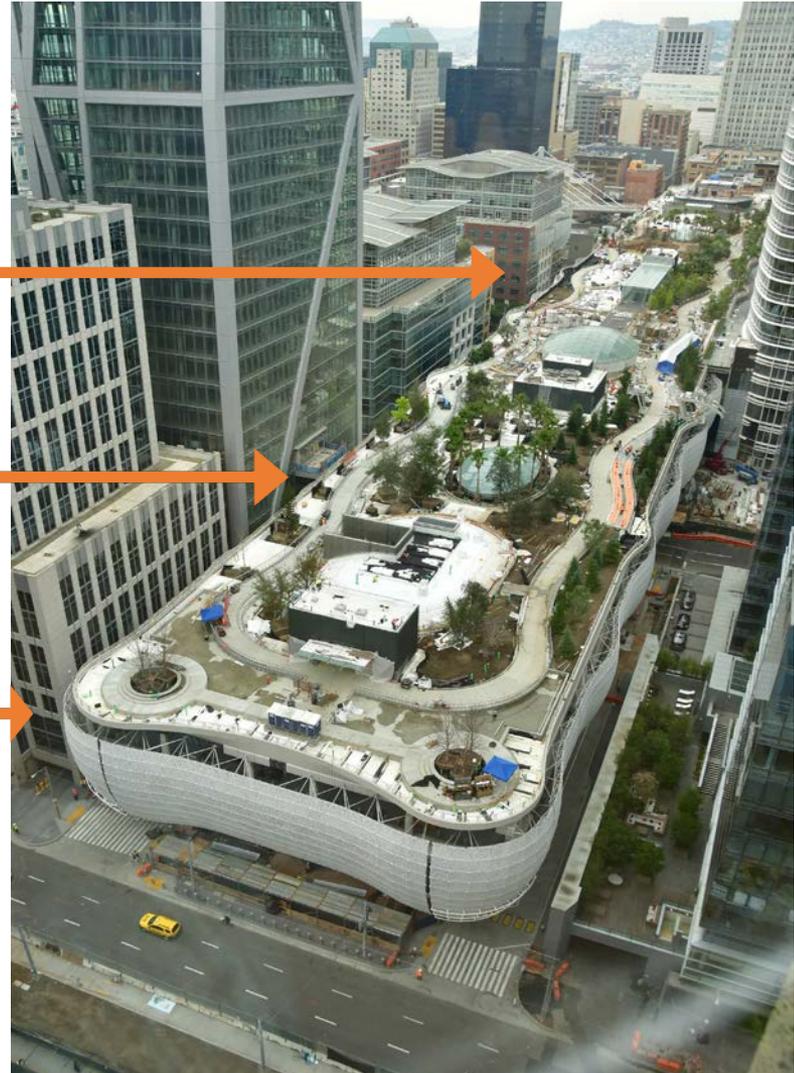
Western Zone Grid Line 1-10



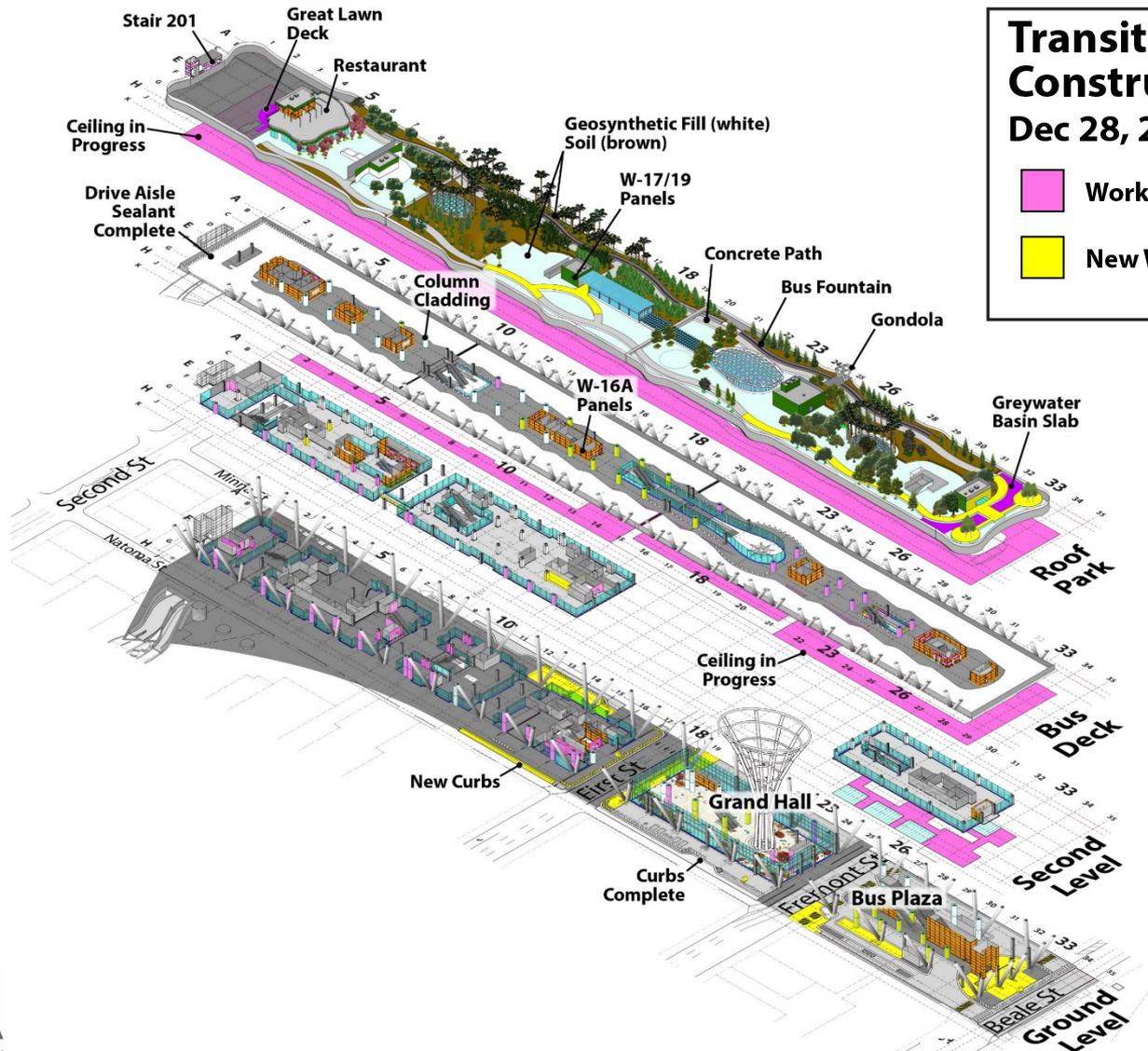
Central Zone Grid Line 10-20



Eastern Zone Grid Line 20-35



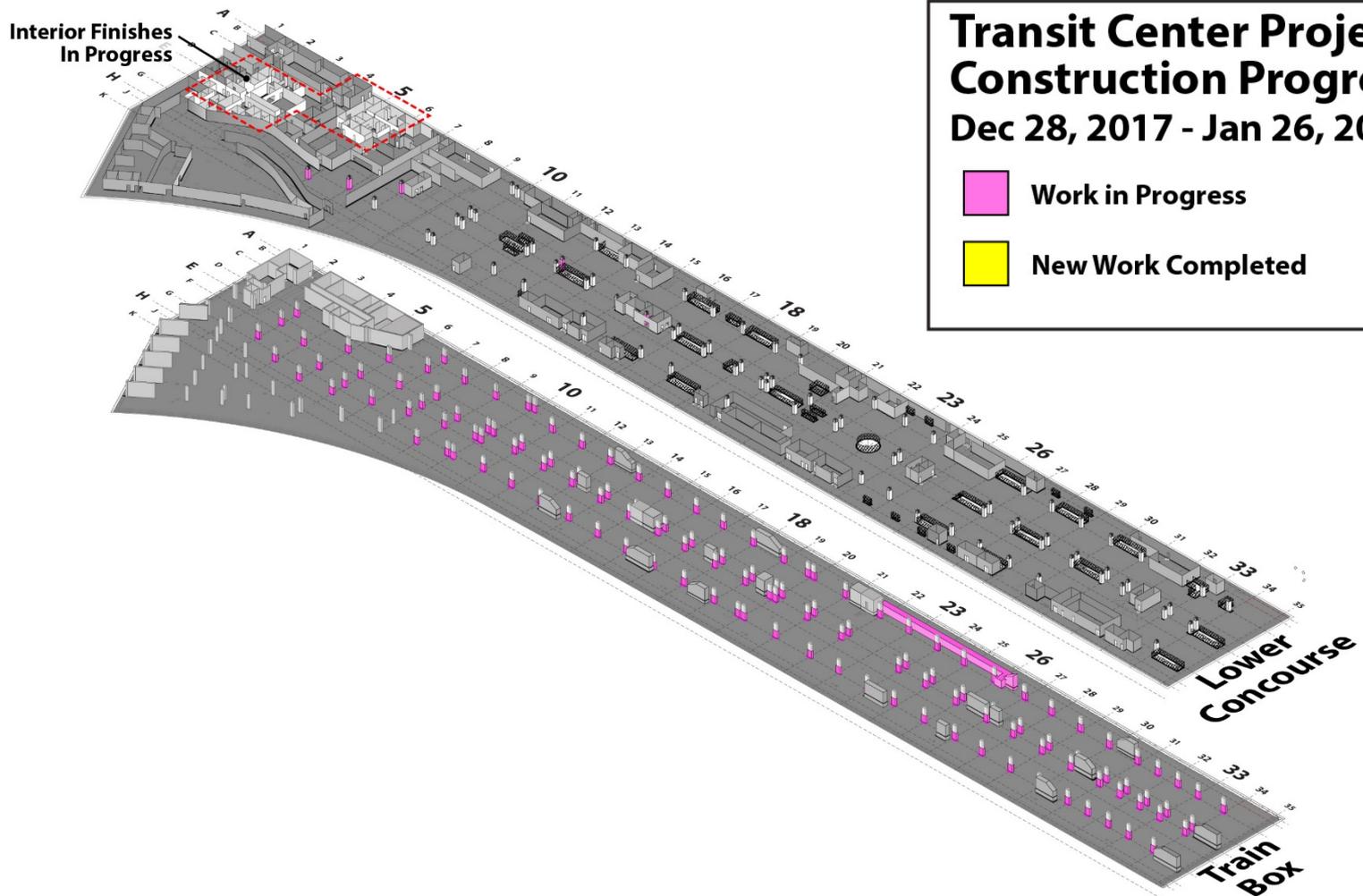
Recent Activity



**Transit Center Project
Construction Progress
Dec 28, 2017 - Jan 26, 2018**

- Work in Progress
- New Work Completed

Recent Activity



Construction Activity

Transit Center – West End (GL1-20)

- Roof Amphitheatre construction underway.
- Escalator canopy glass panels underway.
- Rooftop landscaping well underway.
- Rooftop granite pathway pavers underway.
- Bus Deck Mechanical, Electrical, Plumbing underway including hydrotesting.
- Bus Deck ceiling framing passenger island.
- Bus Deck column covers in progress.
- Bus Deck drive aisle coating complete.
- Elevators and Escalators underway.
- Ground Level sidewalks and roadways construction – Minna and Natoma.
- Electrical power cable distribution continues. Electrical conduits continue.
- Main Distribution (MDF) and Intermediate Distribution Frame (IDF) Rooms underway.
- Equipment rooms buildout in progress.
- Walls gypsum board and painting and Metal wall panels underway.

Transit Center – East End (GL20-35)

- Rooftop landscaping well underway.
- Rooftop granite pathway pavers underway.
- Bus Deck Mechanical, Electrical, Plumbing underway including hydrotesting.
- Bus Deck ceiling drip panels underway.
- Bus Deck column covers in progress.
- Bus Deck drive aisle coating complete.
- Elevator and Escalators underway.
- Grand Hall sidewalks and roadways construction –Natoma in progress.
- MUNI Bus Plaza drive aisle and pedestrian islands construction in progress.
- Electrical power cable distribution continues. Electrical conduits continue.
- Main Distribution (MDF) and Intermediate Distribution Frame (IDF) Rooms underway.
- Equipment rooms buildout in progress.
- Walls gypsum board and painting and Metal wall panels underway.

Grand Hall progress



Bus Deck Level – Bus Passenger Island

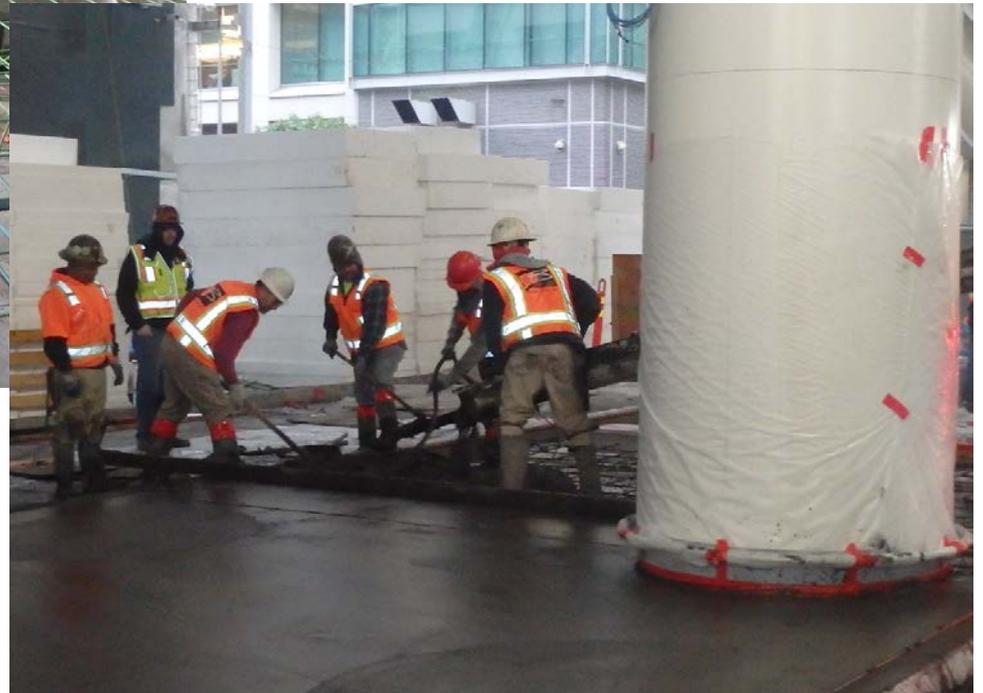


Construction progress –Eastern Zone

Retractable wedge barrier at
Fremont Muni Bus Plaza south

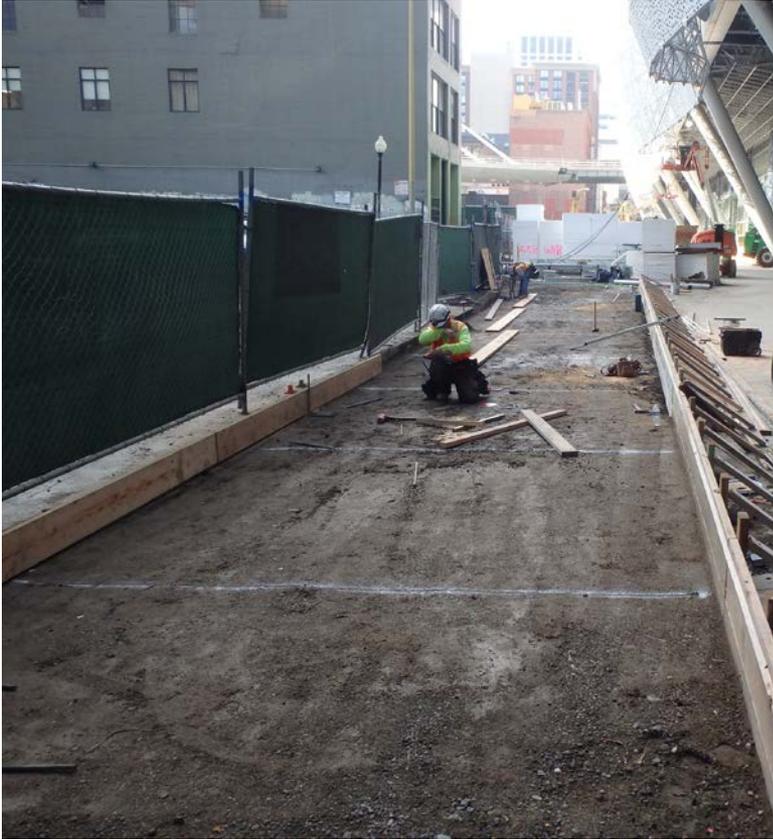


Concrete placement in passenger
island -Muni Bus Plaza south



Construction progress –Western Zone

Natoma Street buildout – west of First Street



Minna Street buildout- west



Utility Construction progress

Traffic Signal Conduits and pull boxes

Underground Sanitary Sewer connection
at Beale Street



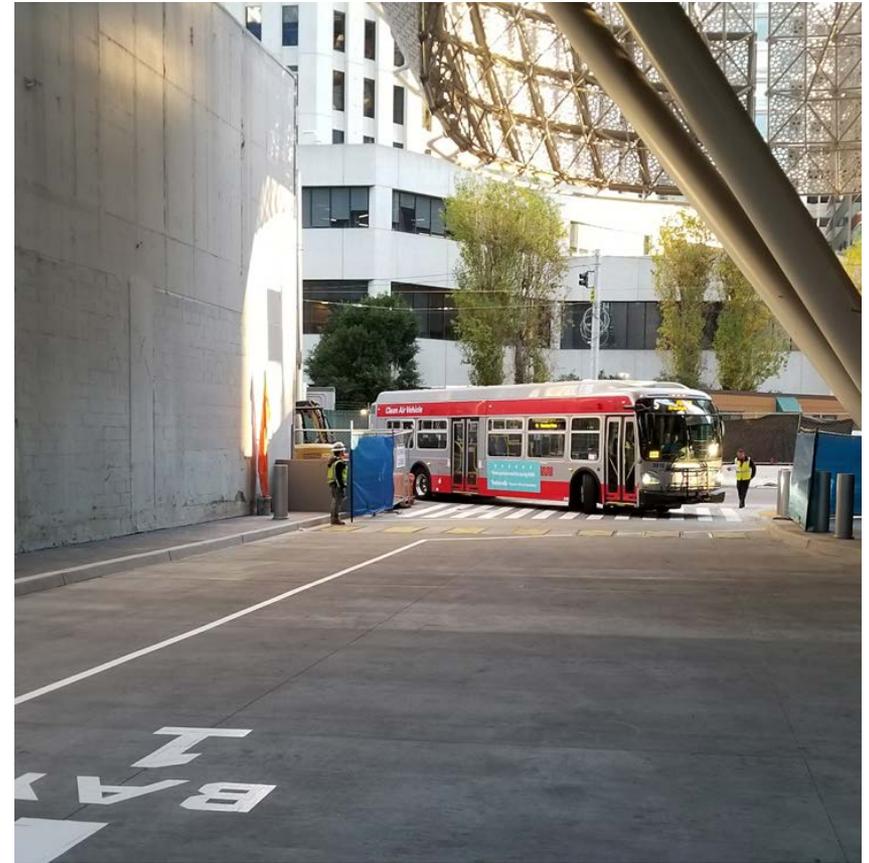
Rooftop Park –Landscaping buildout



Rooftop Park –Amphitheater buildout



MUNI Bus Plaza – Operation



Fulton #5 Operating from the Muni plaza since December 26th.

Tenant Improvement- Construction planning

Webcor Priority Room turnover to Lincoln Properties:

- Transit Center Mail Room #1380- Ground level.
- Greyhound Package Area Room #1221- Ground level.
- Greyhound [Amtrak] Passenger Waiting Area Room# 02220 – Level 2.
- Greyhound Passenger Service Room #3228 – Bus Deck level.
- Office Space - TJPA Offices Room # 02620- Level 2.

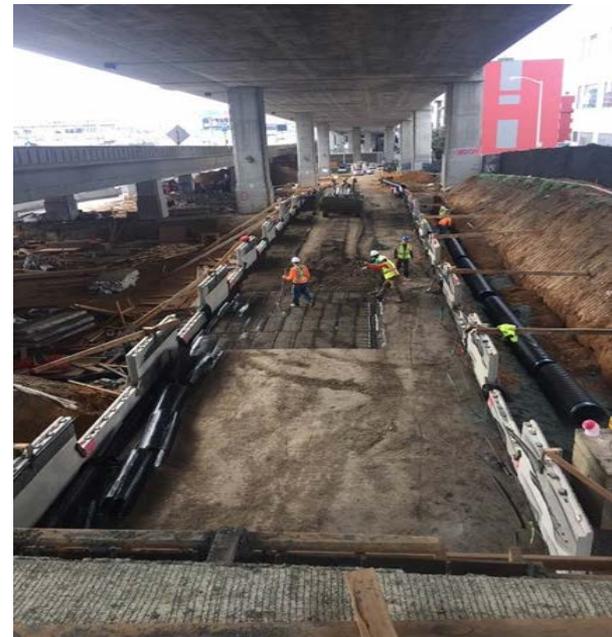
Lincoln Properties Room Buildout – Design Build:

- HVAC Bids advertised and site walk downs complete.
- Wall Framing Bids advertised and site walk downs complete.
- Safety Coordination between Turner Special Projects and Webcor-Obayashi completed.
- Outreach for LBE/SBE contractors completed.
- Outreach to SF Building Trades Council per PLA Project Labor Agreement.

Bus Storage Facility

Construction Progress

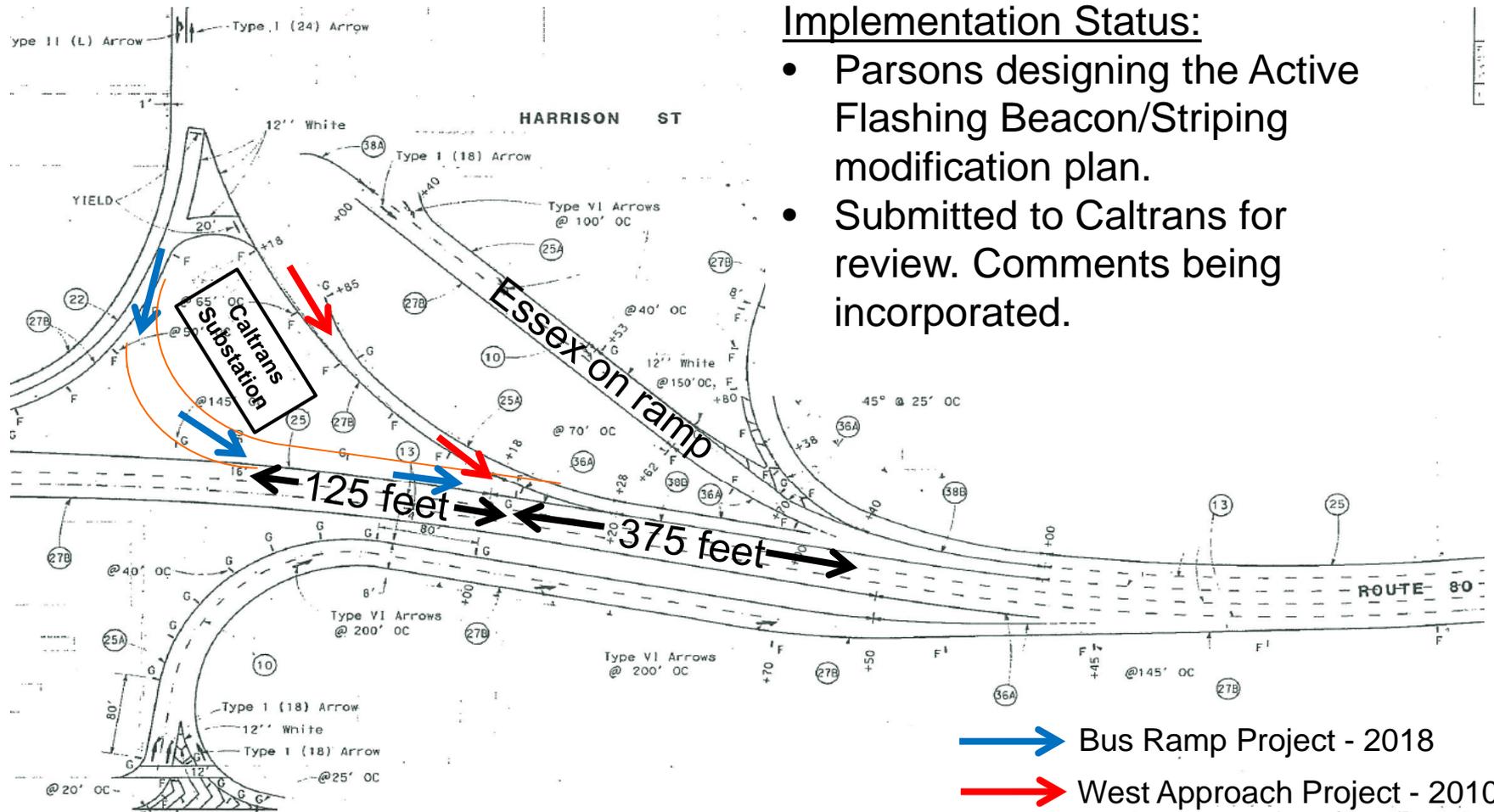
- Excavation/grading ongoing.
- Underground Utilities in progress.
- Retaining Wall Rebar & concrete pours ongoing.
- Bridge stem & soffit poured.
- Bridge deck poured. Falsework removal is completed mid-January.
- MSE Mechanically Stabilized Earth walls in progress and will complete in early February.
- Sound wall (noise attenuation) construction has started.
- Retaining Walls are in progress, near 80% complete.



Bus On-Ramp Merge Status

Implementation Status:

- Parsons designing the Active Flashing Beacon/Striping modification plan.
- Submitted to Caltrans for review. Comments being incorporated.



- ➡ Bus Ramp Project - 2018
- ➡ West Approach Project - 2010

Eastbound Bay Bridge Approach

Transit Center

Jobs Across the United States of America

As of December 2017

Washington

Thompson Metal, Vancouver
Steel Columns & Transfer Girders
Insulfoam, Puyallup
Insulation
McClean Iron Works, Everett
Steel Frames

Idaho

Base Line Irrigation, Boise
Irrigation Products

Oregon

Marks Metal Tech, Clackamas
Rolling & Metal Forming
Oregon Sandblasting, Tualatin
Metal Prep & Coating
Oregon Iron Works, Clackamas
Girders, Basket Columns
American Steel, Portland
Supply Steel Plates

California

Gerdau, Napa /San Diego/Long Beach
Reinforcing Bars

XKT Engineering, Vallejo
Cruciform SLRS Vertical Members

Bratton Masonry Inc., Fresno
Masonry

Mageba, San Jose
Pendulum Bearings

ISAT, La Mirada
Seismic Anchors

TWI, Los Angeles
Curtain Wall Steel Frames

Harris Rebar, Livermore
Reinforcing Bars

Pacific Erectors, Rocklin
Metal Wall Panel System

The Herrick Corp, San Bernardino
WF Shape, SLRS Steel Members

DYWIDAG-Systems, Long Beach
Reinforcing Bars/HS Rods

NMI Industrial, Sacramento
Steel for Stairs

Desert Mechanical, Sylmar
HVAC, Plumbing

Mason Industries Inc, Anaheim
Seismic bracing and Isolation

Montana

Microlab, Bozeman
Power Splitter/Couplers

Wyoming

Barold, Colony
Slurry for CIDH Piles

Nevada

Performance Pipe, Reno
Geothermal System

Southwest Specialty,
Las Vegas
Metal Ceilings

Kansas

Bradken, Atchison
Large Steel Shapes

Viega, Wichita
Pipe Fittings



Colorado

Rail Service Corp, Lakewood
Transit Communications Systems

Johns Manville, Denver
Insulation Systems

The Herrick Corp, San Bernardino
WF Shape, SLRS Steel Members

DYWIDAG-Systems, Long Beach
Reinforcing Bars/HS Rods

Coyote Steel, Fountain Hills
Steel Beams for Falsework

Clayton National, Scottsdale
Fireproofing

Vinyltech Corp, Phoenix
PVC Pipes

Arizona

Stinger Bridge & Iron, Coolidge
Cable Stay Steel Plates

Coyote Steel, Fountain Hills
Steel Beams for Falsework

Clayton National, Scottsdale
Fireproofing

Vinyltech Corp, Phoenix
PVC Pipes

Utah

Star Solsimc, Salt Lake City
Seismic Braced Frames

New Mexico

Insight, Rio Rancho
LED Lighting

Oklahoma

Hilti, Tulsa
Firestop Products, Anchors

North Dakota

GPK Products, Fargo
PVC Pipe Fittings

South Dakota

Daktronics Inc, Brookings
Bus Ramp Changable Message Signs

Nebraska

G4S Technology, Omaha
Security Systems

Diamond Plastic, Grand Island
PVC Pipe

Missouri

Bradken, St. Joseph
Cast Nodes

Architectural Systems, Monett
Metal Panels

Carboline, St. Louis
Performance Coatings

H.E. Williams, Carthage
Light Mountings

Bull Moose Tube, Chesterfield
Mechanical & Structural Tubing

Minnesota

Innovent, Minneapolis
Indoor Air Handling Unit
Valspar, Minneapolis
Extrusion Coatings
Twin City Hose, Rogers
Flexible Metal Hose

Iowa

EFCO Corp, Des Moines
Concrete Forms

Elco Const., Decorah
Metal Fasteners, Anchors

Viking Pump, Cedar Falls
Pumps

Illinois

Delta Structures Inc, Addison
Space Frame Design & Fab
Scott Forge, Spring Grove
Forged Pins

Circle Metal Specialties, Alsip
Custom Steel Design & Fab

Allied Tube & Conduit, Harvey
Rigid Steel

Larson Engineering, Chicago
Curtain Wall Engineering

General Cable, Highland Heights
Electrical Cable

Republic Conduit, Louisville
Electrical Conduit

Wisconsin Centrifugal,
Waukesha
Spun Cast Pipes

Well Pump Co, Cedarburg
Water Heaters/Controls

Wisconsin Centrifugal,
Waukesha
Spun Cast Pipes

Well Pump Co, Cedarburg
Water Heaters/Controls

Michigan

Williams Form Eng, Belmont
Supply HS Rods

Ward Connector, Holland
HVAC Components

Indiana

Crown Corr, Gary
Curtain Walls/Awning

RACO, South Bend
EMT Fittings

Nibco, Elkhart
Flow Control Products

Thermofiber, Wabash
Mineral Wool Insulation

Wisconsin Centrifugal,
Waukesha
Spun Cast Pipes

Well Pump Co, Cedarburg
Water Heaters/Controls

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Ohio

Lincoln Electric, Euclid
Welding Wire & Machines

Metal Tek, Sandusky
Spun Cast Pipe

Artco, Hannibal
Steel Plates

The Dyson Corp, Painesville
HS Rods

Picoma Industries, Cambridge
EMT Elbows, Steel Conduit

Columbia Eng. Rubber, Vandalia
Rubber Bellows

ClarkDietrich, West Chester
Steel Framing

Maine

Woods End Labs, Mt Vernon
Analytical Soil Testing

New Hampshire

Burndy, Manchester
Pipe Compression Connections

New York

Hohmann & Barnard, Hauppauge
Waterproofing

Watson Bowman Acme, Amherst
Structural Sealing Joint System

Karp Assoc Inc, Melville
Access Doors

Garlock, Palmyra
Pipe Fittings/Gaskets

Massachusetts

Berry Plastics, Franklin
Waterproofing

Sarnafil, Canton
Waterproofing

Rhode Island

APC, West Kingston
Uninterrupted Power Supply

Connecticut

Bridgeport, Stratford
Electrical Fittings

United Tech. Co., Farmington
Security Systems

Bellimo, Danbury
Actuators

West Virginia

American Airworks, Sophia
Breathing Air Systems

Pennsylvania

Ward Mfg, Blossburg
Pipe Fittings

Arctel/Arctel, Coatesville
Steel Plates

Chapel Steel, Pottstown
Steel Plates

ESAB, Hanover
Welding Materials

Wheatland Tube Co., Scranton
Conduit Locknuts, Bushings

PPG Industries, Pittsburgh
Industrial Coatings

Total Jobs Created

Local: 12,803* | Beyond SF Bay Area: 9,999

Cities: 500+ | Companies: 900+

* Jobs created in the San Francisco Bay Area from demolition of the old Transbay Terminal, construction of the Temporary Terminal, Transit Center and Bus Ramp.

Off-site Jobs Created



Safety and Labor Statistics

Recordable & Lost Time Incidents:

WOJV Recordable Incidents this period January 2018:	0	WOJV Lost Time Incidents this period January 2018:	0
Total Recordable Incidents -Year 2018	0	Total Lost Time Incidents - Year 2018	0

WOJV Average Annual Recordable Incident Rate 2011 Through 2016	2.99	WOJV Average Annual Lost Time Incident Rate 2011 Through 2016:	0.33
Nat'l/ State Annual Average Recordable Incident Rate- Public Works 2011 Through 2016:	2.90	Nat'l/ State Annual Average Lost Time Incident Rate 2011 Through 2016:	1.36

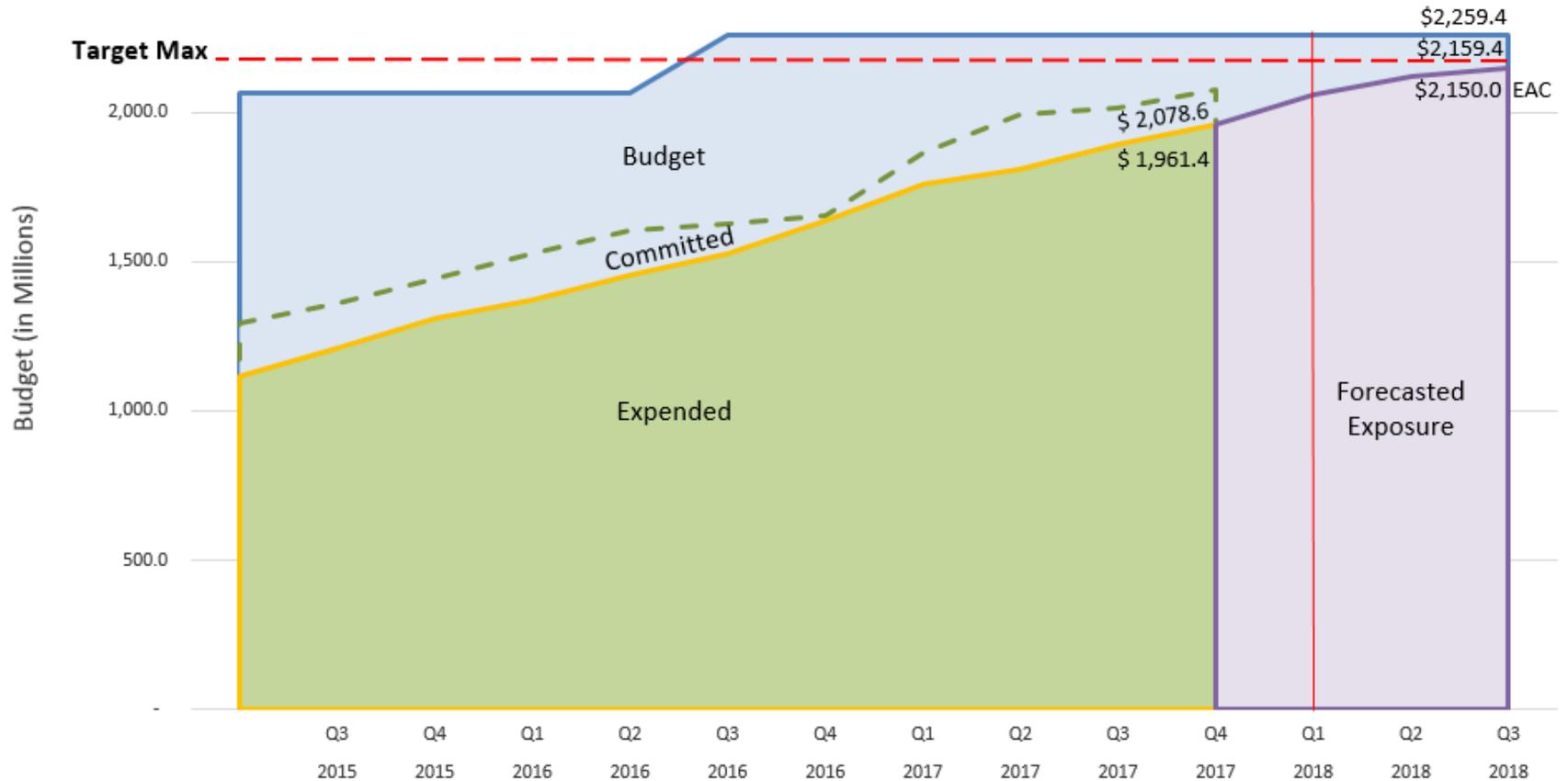
Craft Hours:

Total Transit Center Craft Hours 2011 - YTD 2018 :	Total Craft Hours <u>January 2018:</u>	Total Transit Center Craft Hours YTD 2018 :
4,583,812	101,492	101,492

Budget

Phase 1 - Transbay Program

Data thru: December '17



87% Program Budget
100% Contract Time

Contingency Cost

Contingency Tracking (\$millions)

	Construction Contingency	CM/GC Contingency	Program Reserve	Total Contingency & Reserve
Baseline Budget Amounts	\$61.8	\$32.5	\$117.0	\$211.3
Contingency Usage Through Dec 2017	(\$40.8)	(\$4.7)	(\$24.0)	(\$69.5)
Remaining Baseline Budget Amounts (Dec 2017)	\$21.0	\$27.8	\$93.0	\$141.8
Total Draws/Adds January 2018	(\$2.0)	\$0.1	(\$0.0)	(\$1.9)
Remaining Balances	\$19.0	\$27.9	\$93.0	\$139.9

Uses of Contingency this period

Bus Storage off-haul/disposal unit price adjustment and other changes, Transit Center Building revisions to rebar, storm water mitigation and other plumbing changes, changes to wedge barriers, temporary scaffolding.

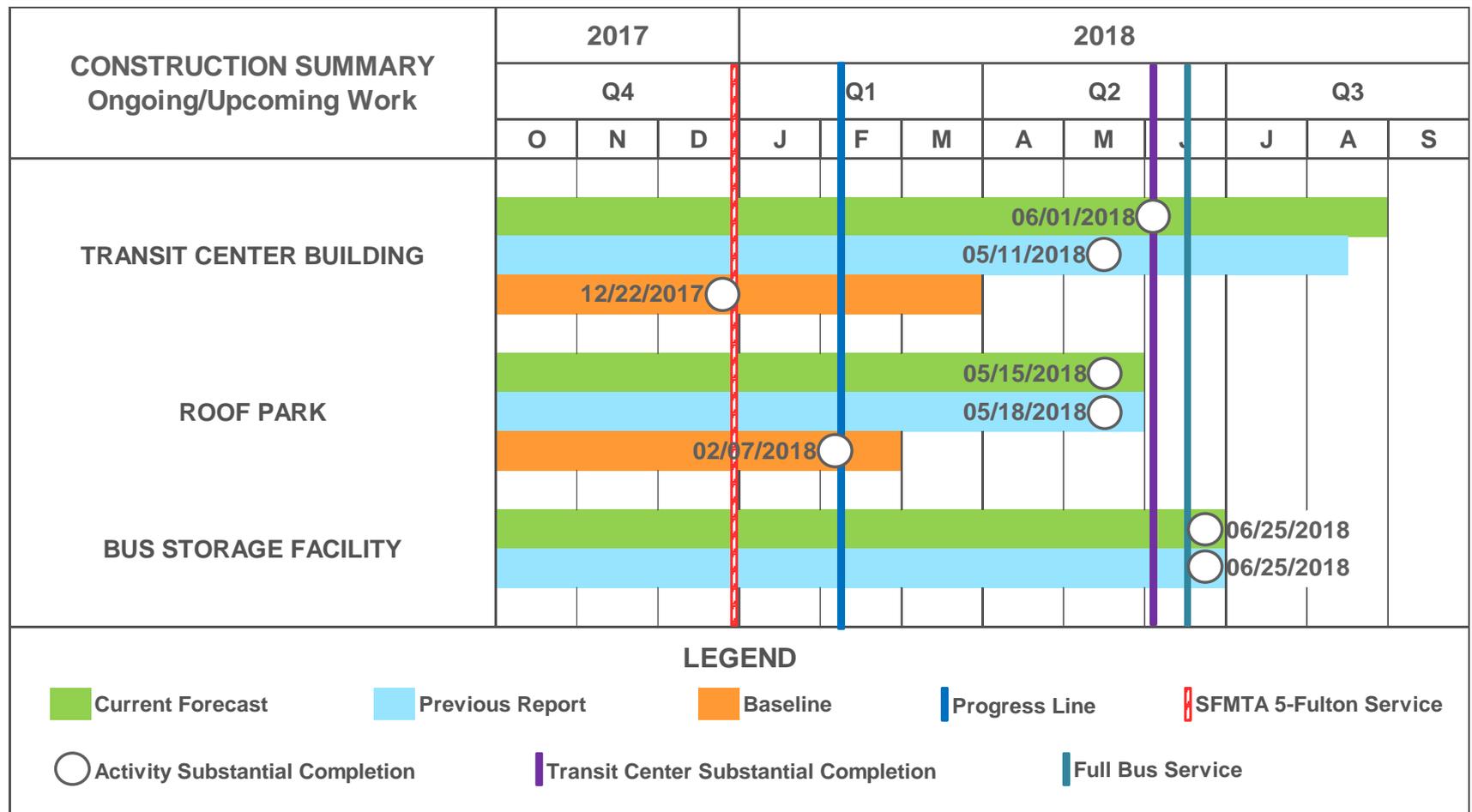
Forecasted Contingency Use

CM/GC: \$0.8M

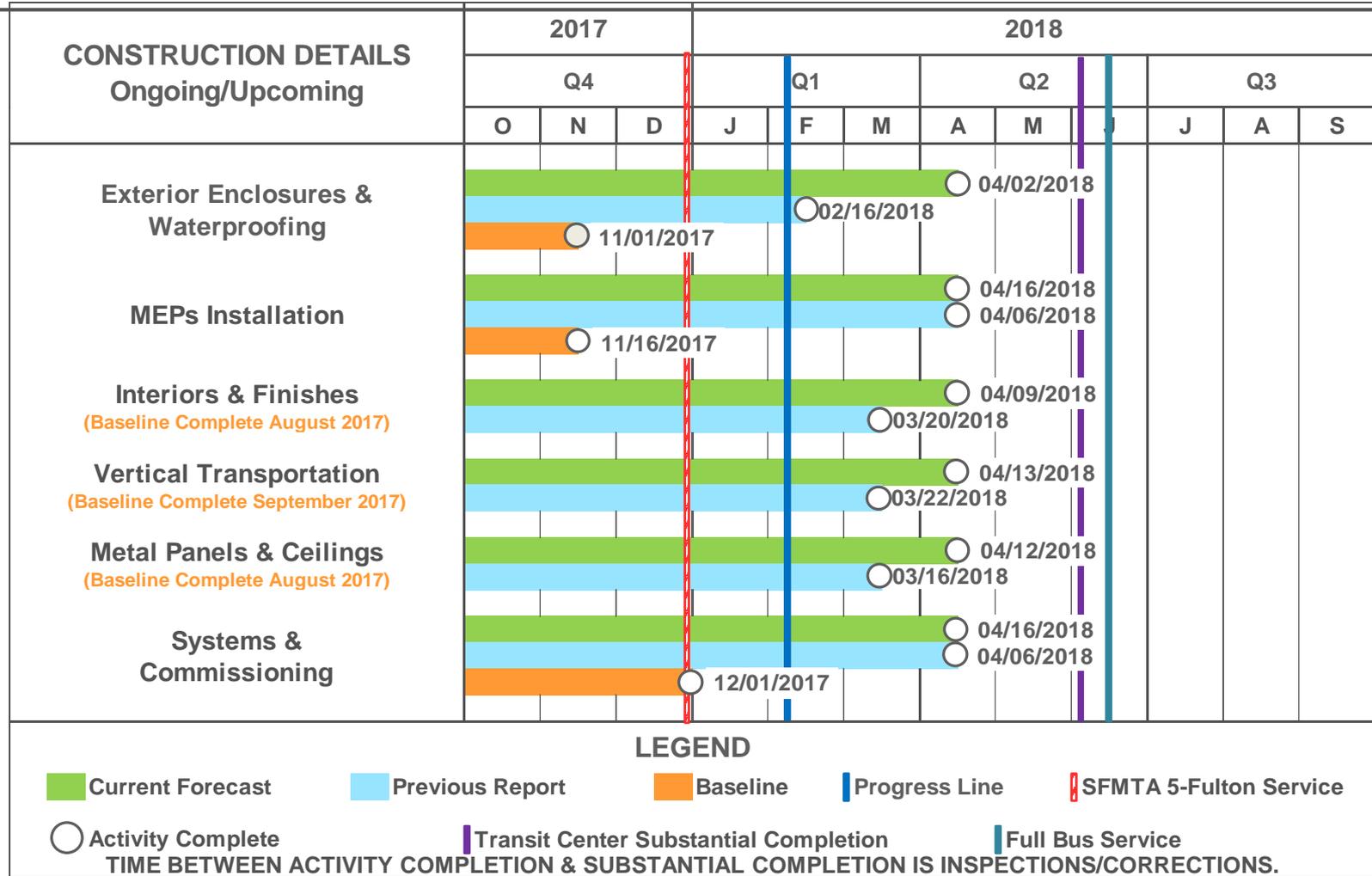
Construction: \$1.6M

Program Reserve: \$0.0

Schedule



Schedule



Risks

Schedule

Increased monitoring of Schedule Milestones indicate a mix of met and missed milestones yielding a net loss of schedule in the past month. Substantial Completion is currently forecasted for June 1, 2018.

Challenged Activities include:

1. Electrical Subcontractor continues meet an unsatisfactory level of milestone achievement.
2. Electrical Subcontractor's unmet commitments to Fabrication and Installation of E2 Pylons at Roof Park Level schedule.
3. Completion and Energizing of SFPUC power distribution vaults.
4. State of Completion Inspection Readiness.

Risks

Mitigation Measures

WOJV Mitigation Strategy Update:

1. Recent Low Voltage Scope transfer from Fisk to Rosendin Electric.
2. Additional Supplementation of Normal Voltage Electrical Work continues.
3. Scope Shift Between Subcontractors for Site Concrete Continues.
4. Column Cover Installation Progressing with Original Subcontractor.
5. Addressing Interior Finish concerns with Supplementation of Crews.
6. Concentrated effort between WOJV, SFPUC, and TJPA towards Completion and Energizing of SFPUC power distribution vault.
7. WOJV introduced additional Close-out Management to address State of Completion Inspection Readiness concerns.



Questions?

TJPA
TRANSBAY JOINT POWERS AUTHORITY

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