



## Construction Update for CAC

May 13, 2014





#### **Period Summary**

- There were five safety related incidents since the last update in March. These incidents included three first aid cases, one recordable incident and one lost time incident. The recordable incident resulted from a nail puncturing the foot of a worker. The lost time incident resulted from a hand injury related to the use of an extension ladder. All incidents have been investigated and corrective actions have been taken.
- There have been over 1,030,000 craft hours completed, excluding demolition, through April 30, 2014. An increase of nearly 42,000 hours since our last construction update in March.
- Re-Bracing continues following wall pours in the west and central zones of the project (also known as zones 1 and 2).

#### **Period Summary**

- Concrete column forming and placement continues between the rail level and the Lower Concourse level in the west and central zones.
- Formwork for the Lower
   Concourse slab is in progress
   in the central and western
   zones. First Concourse Slab
   pour is scheduled for late May,
   or early June.
- Geothermal and Grounding is now complete in the eastern zone of the project (also known as zone 4). We continue to evaluate and mitigate any schedule impacts to this area resulting from the discovery of the human remains in Geothermal Field 11.
- Final mud slab placement will be made the week of May 5<sup>th</sup>.
   Waterproofing, protection slab and mat foundation slab work continues in the eastern zone.



## Current Project Overview

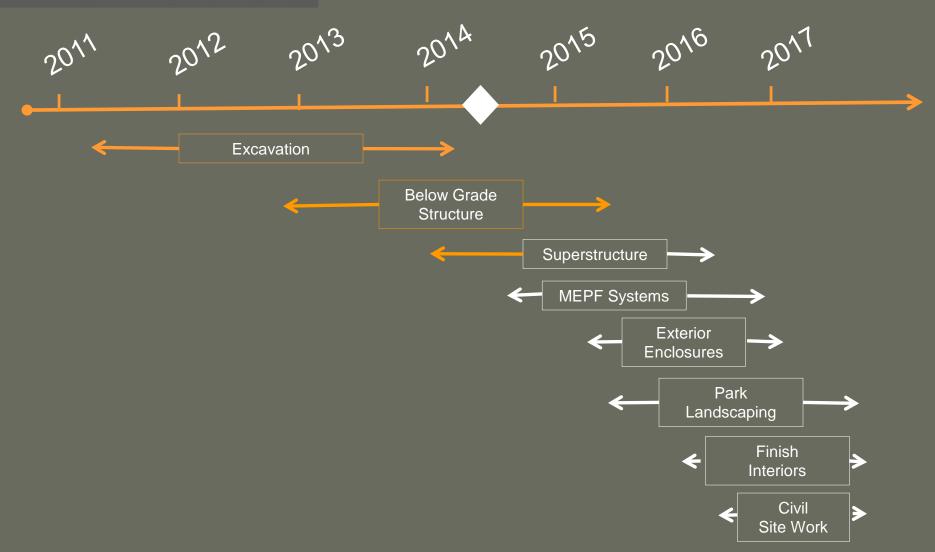
Western Zone – Gridlines 1 to 10

Central Zone – Gridlines 10 to 20

Eastern Zone – Gridlines 20 to 35

Transbay Transit Center

## Construction Timeline Summary



#### **Construction Milestones**

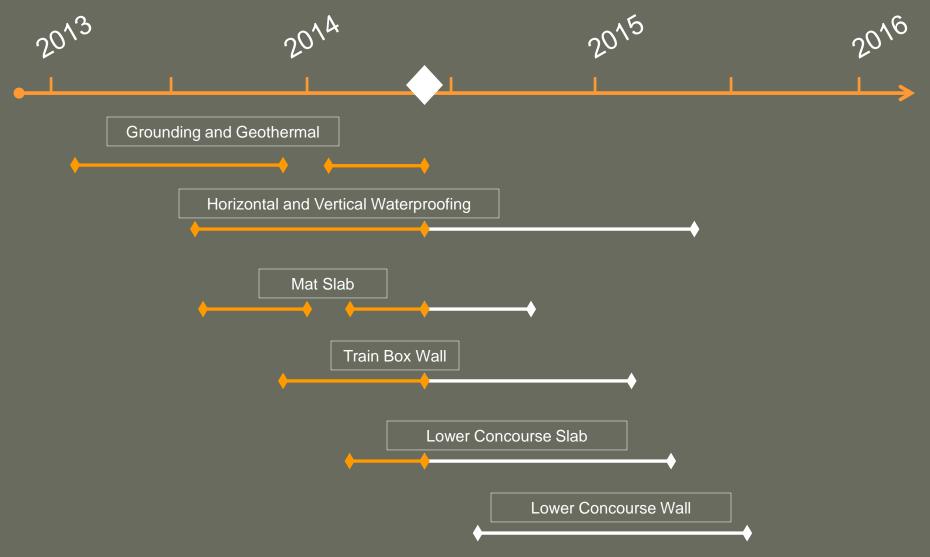
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Key Schedule Dates	Baseline	24-Mar-14		Float
Complete Utility Relocations	8-Jul-13	1-Jul-14		857
Complete First Mat Pour	8-Jul-13	9-Sep-13	Α	
Complete Zone 2 Mat Pour	27-Aug-13	24-Nov-13	Α	
Complete Excavation	6-Jan-14	31-Jan-14	Α	
Complete Zone 1 Concourse Level Deck	7-Mar-14	16-Oct-14		0
Begin Steel Erection	6-Jun-14	20-Aug-14		0
Complete Steel Superstructure	19-Nov-15	7-Jan-16		0
Connect Bus Ramps to Transit Center	1-May-16	25-Aug-16		44
Complete Rough Interiors	17-Aug-16	1-Dec-16		11
Complete Exterior Curtain Wall	5-Jan-17	23-Nov-16		35
Complete Finish Interiors	25-Jul-17	25-Jul-17		11
Substantial Completion / Bus Operations	23-Oct-17	23-Oct-17		0
Final Completion	28-Mar-18	21-Jan-18		0

A = Actual Completion Date

### Transbay Transit Center

## Below Grade Concrete Timeline Summary





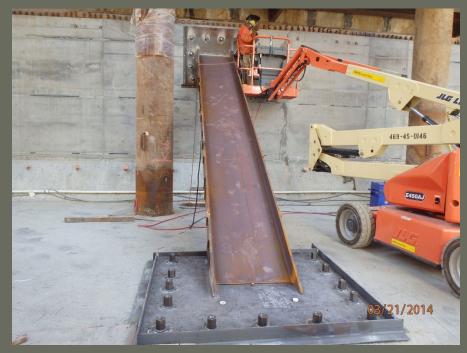
### Below Grade Concrete Progress Through April 28, 2014

Zone	Total Columns	Columns Complete	Percent Complete	Total 1st Lift Walls	1st Lift Walls Complete	Percent Complete	Total 2nd Lift Walls	2nd Lift Walls Complete	Percent Complete
Western	62	44	71%	35	35	100%	35	6	17%
Central	44	40	91%	20	18	90%	20	16	80%
Eastern	62	0	0%	35	0	0%	35	0	0%



#### **Western Zone Activity** (zones 1 and 2)

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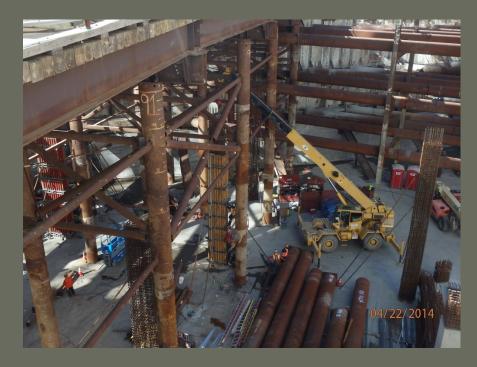
Final Bracing, Southwest Area

Wall Placement, **Northwest Corner** 





### Western Zone Activity (zones 1 and 2)



Column Installation, Western End





### Western Zone Activity (zones 1 and 2)



Continued Work on Foundation Walls and Re-Bracing





### Central Zone Activity (zones 2 and 3)



Lower Concourse Slab Forming Continues





## Central Zone Activity (zones 2 and 3)



Lower Concourse Slab Forming Continues





### Central Zone Activity (zones 2 and 3)



Second Foundation Wall Lift and Re-Bracing Continues





### Eastern Zone Activity (zones 3 and 4)

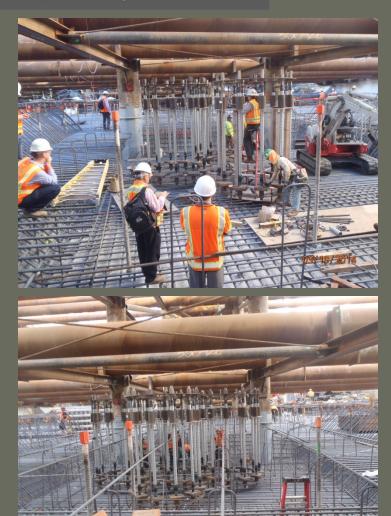


Foundation Slab
Placement, Section # 11



### Eastern Zone Activity (zones 3 and 4)

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Light Column Foundation and Anchor Bolts, part of Slab #12





#### Transbay Transit Center

### Eastern Zone Activity (zones 3 and 4)



Final Geothermal Work







### Eastern Zone Activity (zones 3 and 4)



Final Subgrade Preparation





## Eastern Zone Activity (zones 3 and 4)



Mud Slab and Waterproofing



### Cast Node Fabrication as of April 28, 2014

Casting Group	Totals	In-Process Pattern Completion	Casting and	First Fit-Up Basket Column Nodes Required	Total First Fit-Up Basket Columns Required	Release 1 Shipment #1 Week of March 24	Release 1 Shipment #2 Week of April 14	Release 1 Shipment #3 Week of April 21	Release 1 Total Shipped To Date
Ground Level - Atchison 19,600 - 46,300 lbs			16	Type 5	4	0	0	4	4
	35	12		Type 6	4	0	2	2	4
Bus Deck -	75	00	26	Type 21A	8	0	4	2	6
9,500 - 22,800 lbs		23		Type 21B	8	0	0	4	4
Roof Level - Atchison	138	2	34	Type 71	16	16	0	0	16
4,400 - 5,400 lbs	138			Type 72	16	16	0	0	16
Light Columns	56	25	36			0	0	0	0
Totals	304	62	112		56	32	6	12	50*

<sup>\*</sup> Shipment of remaining Release 1 Nodes (total 6) anticipated week of May 5th



#### **Cast Node Fabrication**



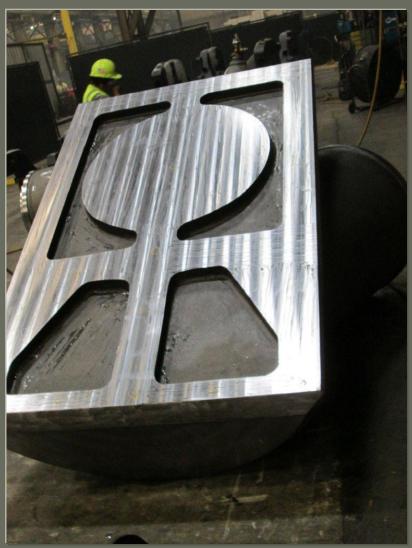
Type 19 Casting Just Shaken Out of the Mold



#### **Cast Node Fabrication**









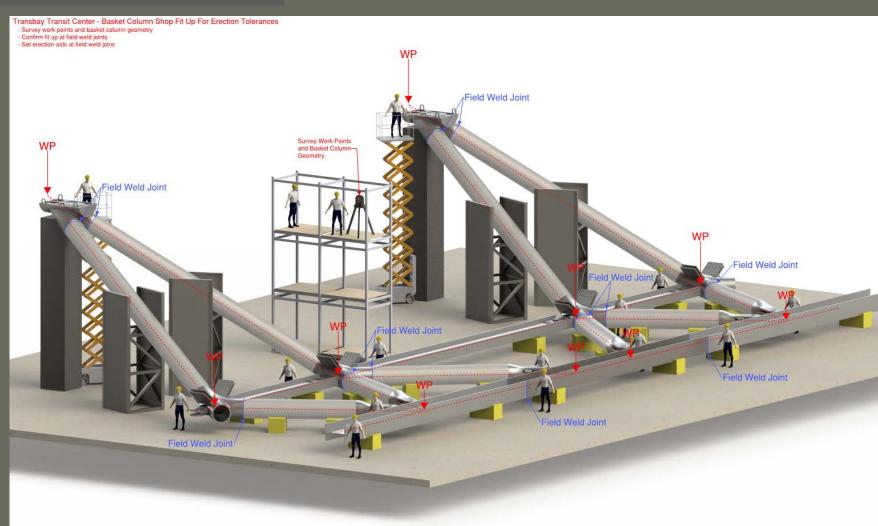
#### **Cast Node Fabrication**



First Nodes Arrive in Oregon



# OIW – Basket Column Trial Assembly Schedule and Location





### Utility Relocation - AWSS Installation Update

AWSS work continues at night at direction of SFMTA/MUNI to accommodate bus traffic. Mission Street repaving completed First to Second and Main to Beale Streets.



Mission Street AWSS System Completed :

First – Second Street

Main – Beale Street

<u>To Go – In Progress :</u>

First Street to Fremont Street - completion anticipated in May

Fremont Street to Beale Street - completion anticipated in July





## **Construction The Next 90 Days**

Transbay Transit Center

#### Next 30 Days (May)

- Continue foundation walls in central and west zones.
- Complete Zone 4 mud slab, waterproofing and protection slab installation.
- Continue Cast Node fabrication, final shipment of release 1 in progress.
- Continue AWSS work along
   Mission Street.
- Continue work on Lower
   Concourse slab in the central and western zones.
- Place mat slab 12 in Zone 3
- Complete Zone 4 micropile testing on top of mud slab.

#### In 60 Days (June)

- Continue foundation walls, columns and re-bracing in west & central zones.
- Start re-bracing in eastern zone
- Place mat slab 13 in eastern zone.
- Place first Lower Concourse slab in central zone

#### In 90 Days (July)

- Continue columns and walls as well as Lower Concourse slabs in central and western zones.
- Pour mat slab 14 and 15 in
   Zone 4.



### Questions?