



CAC Construction Update

November 6, 2014

Transbay Transit Center

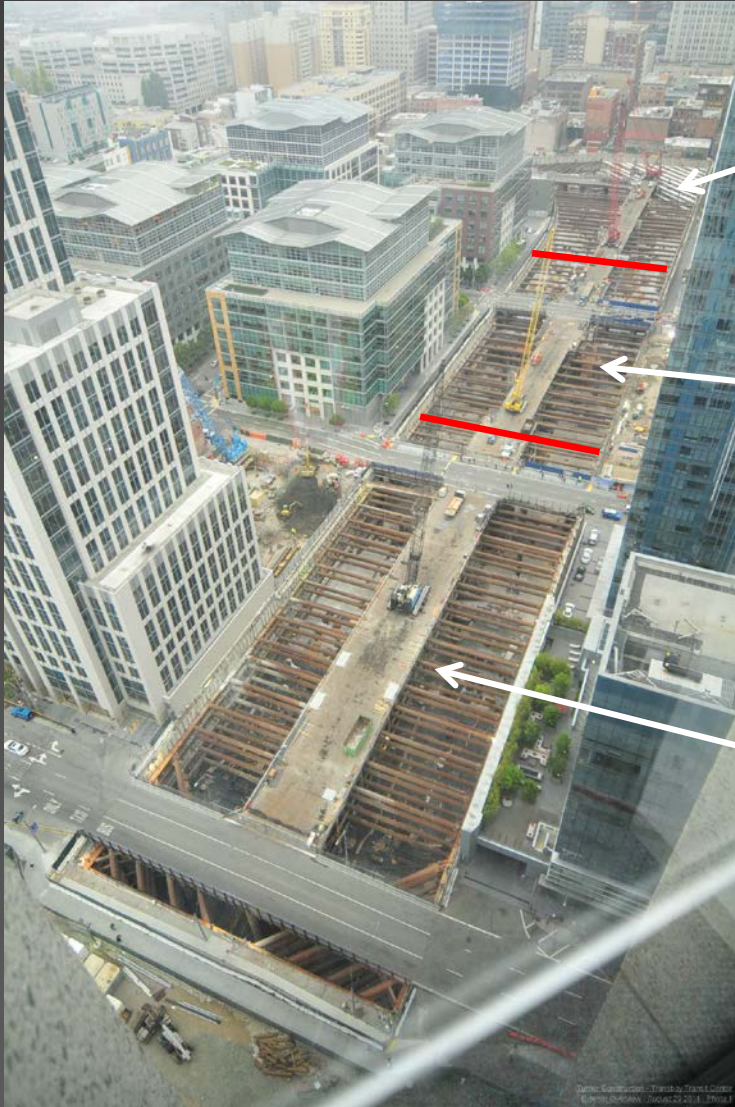
TJPA





Transbay Transit Center

Current Project Overview

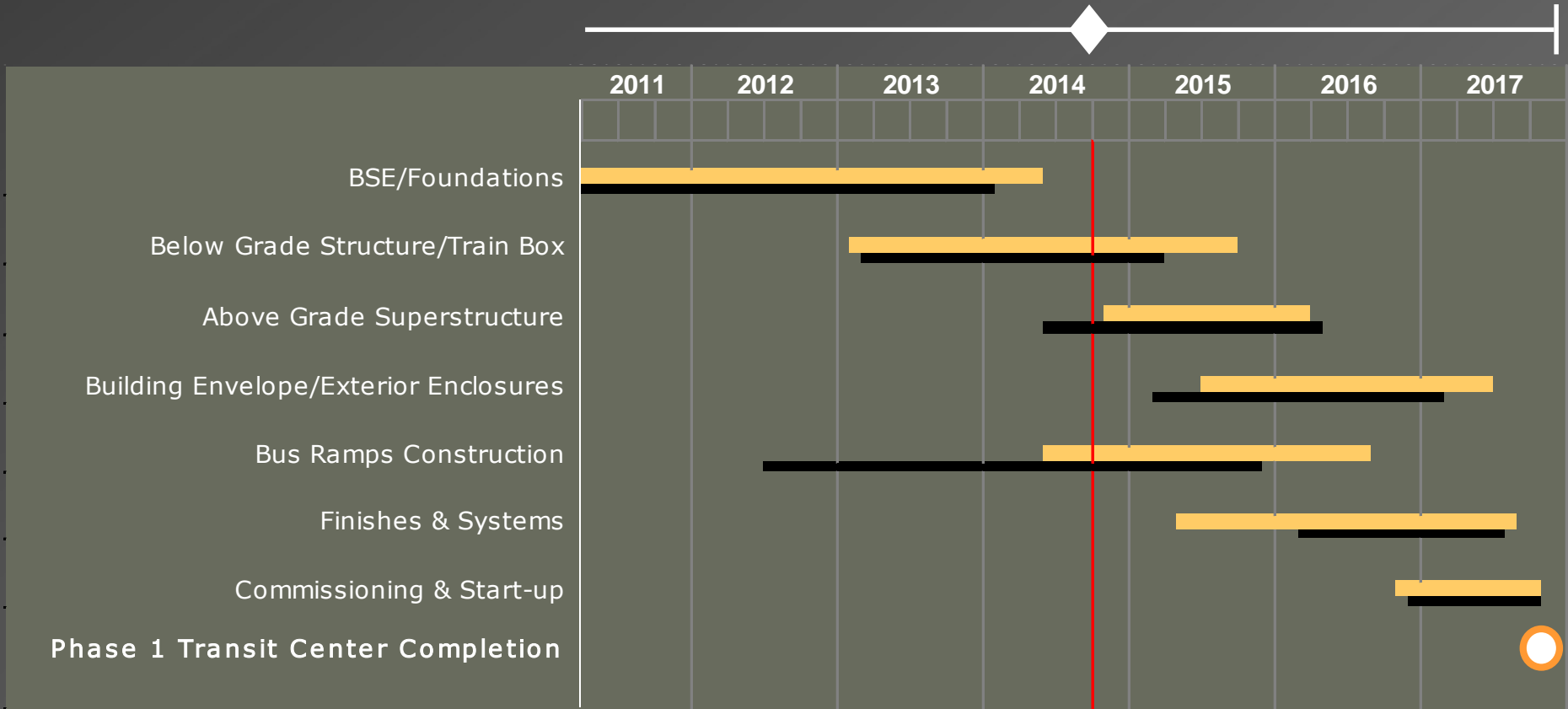


Western Zone – Gridlines 1 to 10



Central Zone – Gridlines 10 to 20

Eastern Zone – Gridlines 20 to 35

Project Status – Construction Schedule (Critical Items*)



* The current critical path of the project is as follows; structural steel fabrication (GL's 10 -16), central zone lift 3 walls, structural steel fabrication (GL's 16 – 20) and eastern zone train box mat slab, walls lifts 1 & 2 and re-bracing.

Current Schedule 
 Baseline Schedule 



Project Status – Contingency Tracking (\$millions)

Trend	Design Contingency	Construction Contingency	CM/GC Contingency	Program Reserve	Escalation	Total Contingency & Reserve
Baseline Budget Amounts (July 2013)	\$8.2	\$62.5	\$36.4	\$87.5	\$30.3	\$224.9
Contingency Usage Through Sept. 2014	(\$2.5)	(\$2.1)	(\$1.8)	(\$44.7)	(\$4.4)	(\$55.5)
Remaining Baseline Budget Amounts (Sept. 2014)	\$5.7	\$60.4	\$34.6	\$42.8	\$25.9	169.4
Utility Relocation Change Orders						(\$0.0)
BGS Change Orders						(\$0.0)
BSE Change Orders		(\$0.7)				(\$0.7)
1 Trade Package Award (10/09/14)	(\$0.0)		(1.7)	(\$0.4)	(\$0.6)	(\$2.7)
Total Draws/Addds October 2014	(\$0.0)	(\$0.7)	(\$1.7)	(\$0.4)	(\$0.6)	(\$3.4)
Remaining Balances	\$5.7	\$59.7	\$32.9	\$42.4	\$25.3	\$166.0

Project Status – Safety Statistics

	2011	2012	2013	2014 (through Oct. 31 st)
Total Craft Hours by Year	203,560	421,488	315,000	299,134
Number of Recordable Incidents	3	6	3	10
Number of Lost Time Incidents	1	0	0	3
WO Project Annual RIR / National Annual BLS RIR Average / California RIR Average	2.95 / 3.10 / 3.8	2.85 / 3.20 / 3.6	1.90 / tbd* / tbd*	n/a
WO Project Annual LTIR / National Annual BLS LTIR Average / California LTIR Average	0.98 / 0.90 / 1.8	0.00 / 1.10 / 1.7	0.00 / tbd* / tbd*	n/a

NOTES:

RIR = recordable incident rate, LTIR = lost time incident rate.

These rates are calculated as follows: RIR and LTIR = (# of recordable or lost time incidents for the year X 200,000) / actual hours worked.

* BLS is the Bureau of Labor Statistics, U.S. Department of Labor and State of California, it takes these agencies more than 18 months to produce the statistics after year's end. As a result, 2013 statistics are not yet available.



Period Summary

- There were no safety incidents this period.
- There have been over 1,240,000 craft hours completed, excluding demolition, through October 31, 2014. An increase of over 50,000 hours since our last construction update.
- Steel trial assembly and fabrication continues in all Structural Steel fabrication shops.
- The crane to be used for the steel erection arrived on site October 9th.
- In preparation for the start of structural steel erection the access trestle disassembly, beginning at gridline 9.5, started on October 27th as scheduled.
- The first structural steel sections were delivered to the site on October 29th. Below grade steel erection began on the same day.



Period Summary

- The final mat foundation section was placed on October 11th.
- In the eastern zone, wall lifts 1 & 2 are in progress followed by re-bracing. Column concrete placement is now 50% complete.
- On the Bus Ramp project the CIDH pile work and barrette pile work began this period.
- Lower Concourse slab placement is 80% complete in the central zone and the next pour is scheduled for November 6. In the western zone the Lower Concourse concrete placement is complete.
- Third lift train box walls continued in the western and central zones.



Below Grade Concrete Progress Through October 31, 2014

Steel Erection Zones	1st Lift Walls	1st Lift Walls Poured	1st Lift Walls Percent	2nd Lift Walls	2nd Lift Walls Poured	2nd Lift Walls Percent	3rd Lift Walls	3rd Lift Walls Poured	3rd Lift Walls Percent
Western	35	35	100%	35	35	100%	35	4	11%
Central	20	20	100%	20	20	100%	20	16	80%
Eastern	35	20	57%	35	8	23%	35	0	0%
Total	90	75	83%	90	63	70%	90	20	22%

Steel Erection Zones	Columns	Columns Poured	Columns Percent	Lower Concourse Decks	Lower Concourse Poured	Lower Concourse Percent
Western	62	62	100%	10	10	100%
Central	48	48	100%	10	8	80%
Eastern	66	28	42%	16	0	0%
Total	176	138	76%	36	18	36%



Above and Right: West end Lower Concourse concrete placement.



Above: North side 3rd Lift Wall progress.

Right: South side RA Bracing in place.





Central Zone Activity



Above: Removing all Bracing Level A supports.

Below: Construction Access Trestle has been removed to facilitate start of steel erection..





Central Zone Activity



Above: Column Anchor Bolts cast into Lower Concourse
Above and Below Right: First steel delivery (columns) arrive early on the morning of October 29th.





Central Zone Activity



Left: First Column of below grade steel hoisted into place.
Above: First column landed on anchor bolts cast into Lower Concourse.



Central Zone Activity



Left: Transfer Girder hoisted into place.

Right: Bolt up of Transfer Girder.



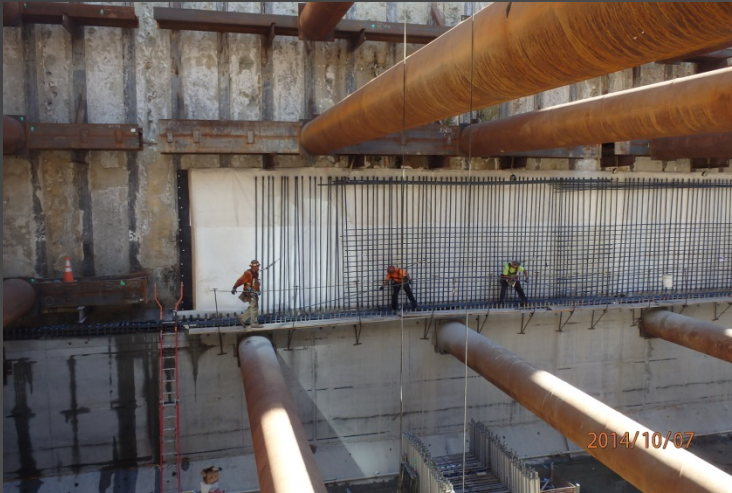


Above and Right: Final mat slab foundation pour. Thirteen months, sixteen pours, over 55,000 cubic yards of concrete.





Eastern Zone Activity



Above Left: Wall lift 2 reinforcing steel installation.

Above Right: Decking for Lower Concourse.

Left: Inspection of column reinforcing in preparation for formwork.



Structural Steel Fabrication



Above and Right: Connection of ground level cast node to transfer girder.



Cast Node Fabrication as of October 20, 2014

Casting Group	Totals	Shipments Mar.-May	Shipment May-June	Shipment August	Shipment September - October	Shipment November - December	Shipment January - February	Total Shipped to Date
Ground Level - Atchison 19,600 - 46,300 lbs	35	8	6	8	2	0	0	24
Bus Deck - Amite 9,500 - 22,800 lbs	75	16	5	10	16	0	0	47
Roof Level - Atchison 4,400 - 5,400 lbs	138	32	32	14	24	0	0	102
Light Columns	56	N/A	0	8	0	0	0	8
Totals	304	56	43	40	42	0	0	181

Additional Information: 90% of all nodes have been cast. A total of 230 nodes, 75%, have been inspected and released for shipment.



Bus Ramps and Bridge

- Current Status
 - Contractor submittals in progress.
 - Contractor demolition of portions of original bus ramp foundations continues.
 - CIDH Piles in progress, casings completed, first CIDH pile completed October 30th.
 - Pylon 9 Barrette Pile work started October 28th. First concrete pour scheduled for Nov. 11th.





Bus Ramps and Bridge



Above Left: Demolition along bus Ramp right away.

Left: Reinforcing cage being lowered into first CIDH pile.

Above Right: Pylon 9 Barrette Pile equipment at work.



Construction

The Next 90 Days

- Next 30 Days (Nov.)
 - Continue Lower Concourse decking, rebar and concrete in eastern zone.
 - Continue foundation walls (lift 3) and re-bracing in the west and eastern zones.
 - Continue foundation walls (lifts 1 & 2) and columns in the eastern zone.
 - Continue Structural Steel and Cast Node fabrication.
 - Continue Bus Ramp work on both Barrette and CIDH piles.
 - Continue structural steel work onsite.
 - Start MEPF Coordination.
- Next 60-90 Days (Dec. – Jan.)
 - Continue concrete foundation walls and columns of the Train Box at various levels in west, central and eastern zones.
 - Continue Lower Concourse decking, rebar and concrete in the eastern zone.
 - Continue re-bracing in all zones.
 - Continue Bus Ramp and Bridge work; CIDH and Barrette Piles.
 - Continue Structural Steel and Cast Node fabrication.
 - Structural steel erection gridlines 10 to 14.
 - Continue MEPF coordination.

Bay Area Regional Labor Breakdown

	Through October 2014	
Location	Total Hours Completed	Percent of Total
East Bay (Alameda, Contra Costa, Solano)	420,718	34%
North Bay (Marin, Napa, Sonoma)	42,965	3%
South Bay (San Mateo, Santa Clara)	112,386	9%
San Francisco	222,595	18%
Other*	443,114	36%
Totals	1,241,778**	100%

*Other includes workers from throughout California including the Central Valley as well as workers from out of state who are onsite for specific tasks.

**Total hours are for the Transit Center construction work and do not include the initial Demolition work represented by a total of approximately 55,000 craft hours.

Bay Area Regional Apprentice Hours Breakdown

	Through October 2014	
Location	Total Apprentice Hours	Percent of Total
East Bay (Alameda, Contra Costa, Solano)	51,808	25%
North Bay (Marin, Napa, Sonoma)	9,478	5%
South Bay (San Mateo, Santa Clara)	29,985	15%
San Francisco	65,433	32%
Other*	46,051	23%
Totals	202,755	100%

*Other includes workers from throughout California including the Central Valley as well as workers from out of state who are onsite for specific tasks.



Labor Breakdown by Trade through October 2014

Classification	TTC Building and RUP's*
Inspectors – Soils / Material Test	43
Carpenters and Related Trades	172
Cement Mason	74
Electrical – Utility Lineman	28
Electrician	47
Field Surveyor	35
Iron Worker	358
Laborer and Related Trades	653
Operating Engineer	391
Pile Drivers	162
Plumber	22
Roofer and Waterproofoer	39
Sheet Metal	5
Teamsters	166
Tile Setters / Finishers	7
Water Well Driller	9
Totals	2,211

* Relocation of Utilities Project



Transbay Transit Center

Questions?

