



Construction Update

April 9, 2015

Transbay Transit Center

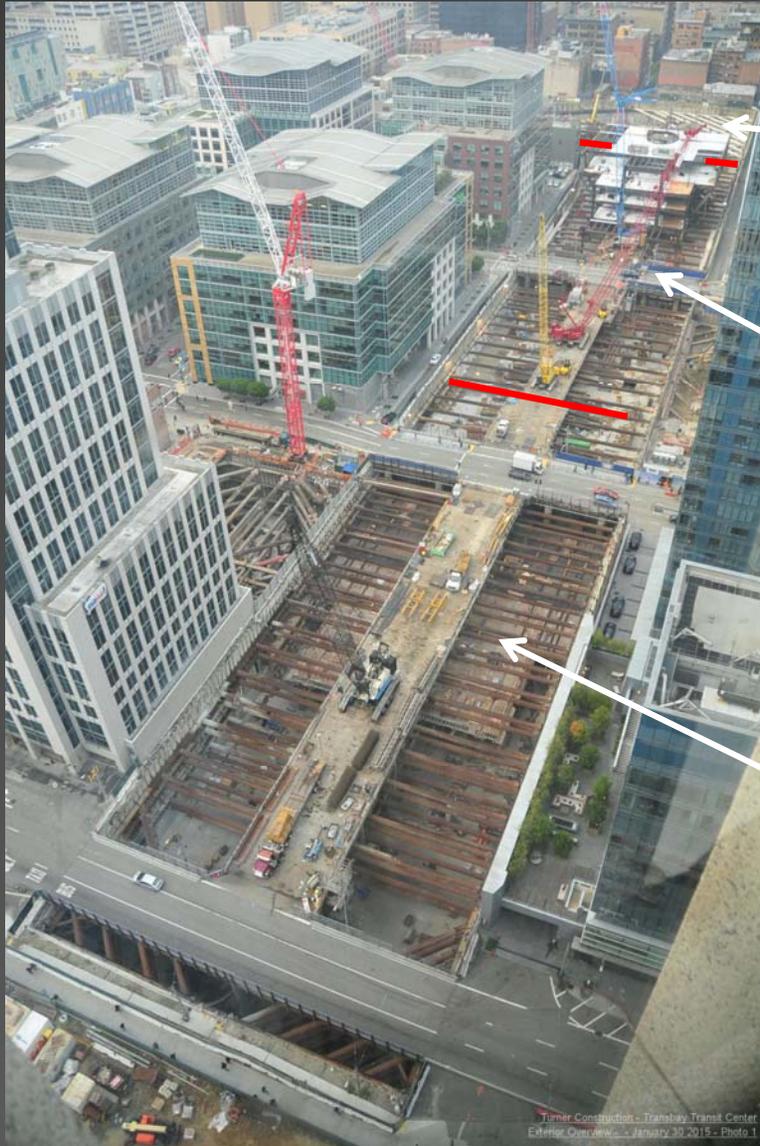
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Current Project Overview



Western Zone – Gridlines 1 to 10

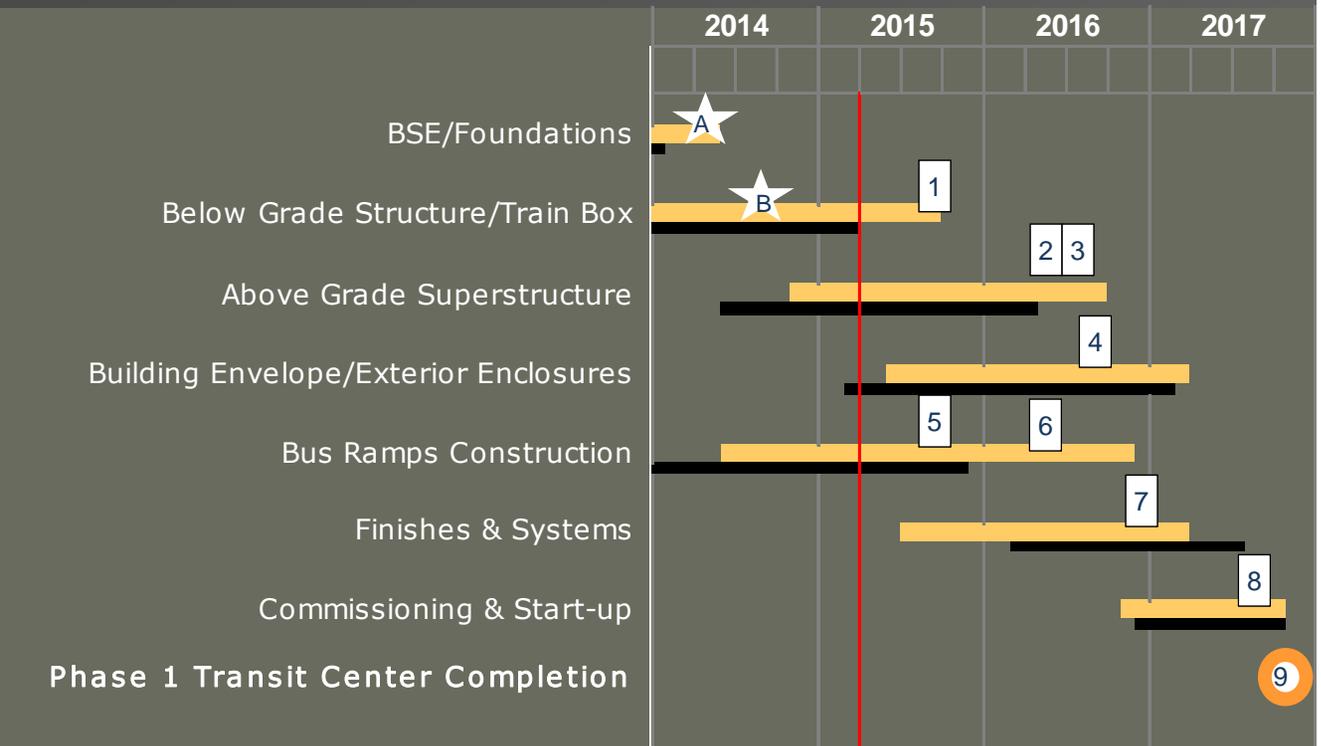
Central Zone – Gridlines 10 to 20

Eastern Zone – Gridlines 20 to 35



Project Status – Schedule

#	Milestone	Current
1	Complete TG 6.0 Below Grade Concrete	Q4 2015
2	Complete Structural Steel Erection and Welding	Q2 2016
3	Complete Above Grade Concrete	Q2 2016
4	Building Watertight	Q3 2016
5	Complete Bus Ramp Below Grade Concrete	Q3 2015
6	Complete Bus Ramp Viaduct and Cable Stay Bridge	Q2 2016
7	Permanent Power to Building	Q4 2016
8	Building Ready for Bus Driver Training	Q3 2017
9	Substantial Completion	Q4 2017



* The current critical path of the project is as follows; structural steel fabrication and erection, eastern zone wall lift 2, lower concourse slab, wall lift 3 and re-bracing.

Current Schedule
 Baseline Schedule

★ = Completed Work; A) excavation through “rat” slab installation (re-bracing remains). B) mat foundation slabs.



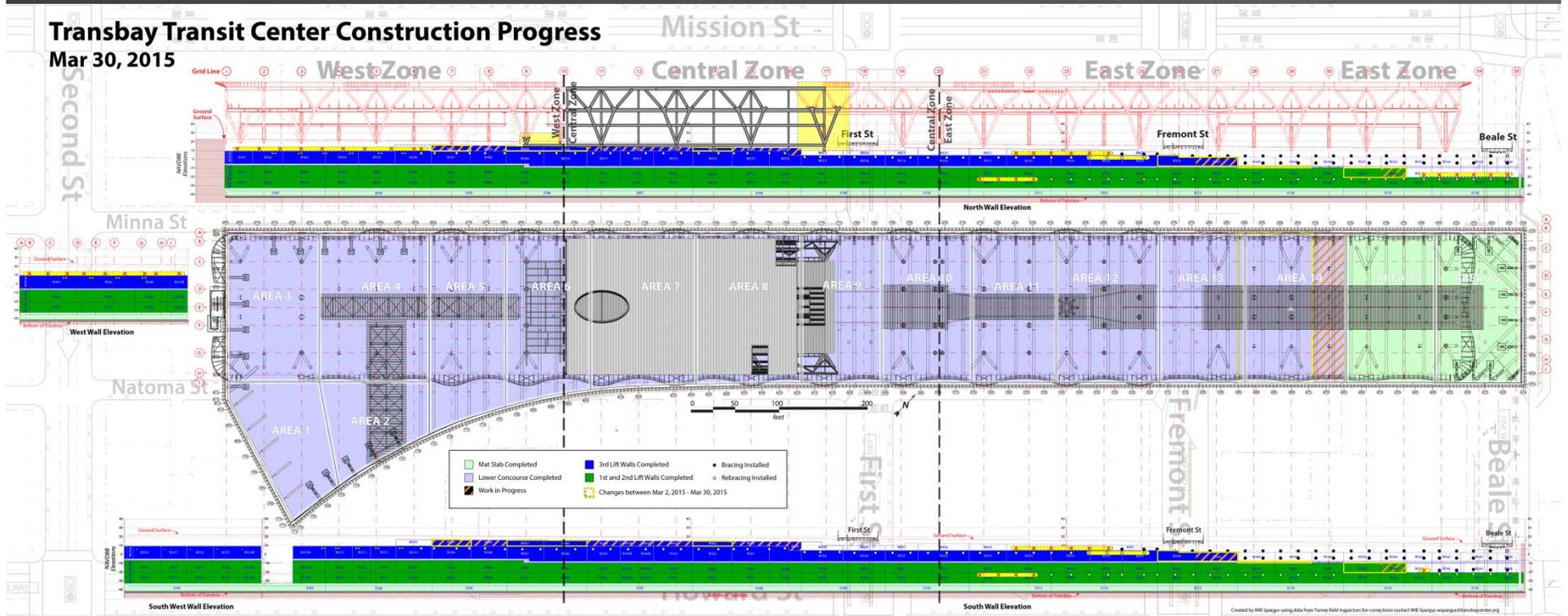
Project Status – Active Milestones

#	Milestone	Planned	Actual / Current
1	Complete TG 6.0 Below Grade Concrete	Q3 2015	Q4 2015
	Milestone Activity Start	March 2013	Jul 17, 2013 (A)
	Milestone Activity Finish	June 2015	November 2015 (trending toward late summer)
	Percent Complete as of Mar. 31, 2015	83%	91%
2	Complete Structural Steel Erection and Welding	Q1 2016	Q2 2016
	Milestone Activity Start	July 2014	Oct. 29, 2014 (A)
	Milestone Activity Finish	Dec. 2015	Apr. 2016
	Percent Complete as of Feb. 28, 2015	50%	20%



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Project Status Diagram





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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 Feb. 2015	(\$3.1)	(\$9.4)	(\$1.7)	(\$72.5)	(\$9.6)	(\$96.3)
Remaining Baseline Budget Amounts (Feb. 2015)	\$5.1	\$53.1	\$34.7	\$15.0	\$20.7	\$128.6
Structural Steel Change Orders			(\$0.0)			(\$0.0)
Total Draws/Addds March 2015	\$0.0	\$0.0	(\$0.0)	\$0.0	\$0.0	(\$0.0)
Remaining Balances	\$5.1	\$53.1	\$34.7	\$15.0	\$20.7	\$128.6



Project Status – Safety Statistics

	2010 / 2011 / 2012	2013	2014	2015 (through Mar. 31 st)
Total Craft Hours by Year	627,744	315,000	375,615	77,288
Number of Recordable Incidents	9	3	13	1
Number of Lost Time Incidents	1	0	4	0
WO Project Annual RIR / National Annual BLS RIR Average / California RIR Average	2.87 / 3.6 / 3.8	1.90 / 3.8 / 4.0	6.92 / tbd / tbd	tbd / tbd / tbd
WO Project Annual LTIR / National Annual BLS LTIR Average / California LTIR Average	0.32 / 1.9 / 1.8	0.00 / 1.8 / 1.7	1.60 / tbd / tbd	tbd / tbd / tbd

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.



Period Summary

- There were no recordable or lost time safety incidents this period.
- There have been over 1,395,000 craft hours completed, excluding demolition, through March 31, 2015. This is an increase of over 29,000 hours since our last construction update.
- Steel fabrication continues in all Structural Steel fabrication shops.
- For structural steel erection, the access trestle disassembly work continues and has been completed between gridlines 9 and 18. Next phase of disassembly work is on hold pending completion of steel erection over First Street.
- Structural steel erection with Crane #1 continues and is currently in progress between gridlines 16 and 17. Crane #2 began steel erection on the west side between gridlines 9 and 9.9 on March 17th.



Period Summary

- In the eastern zone, wall lift 2 work continues, followed by re-bracing and Lower Concourse formwork. Column concrete placement also continues in this area.
- In the western zone, work on the vehicle / bike ramp as well as interior walls continues. A level re-bracing has been completed.
- TG 7.2, above grade concrete, work continues with waterproofing and reinforcing steel for 4th lift walls between gridlines 6.5 and 16.5.
- In the eastern zone, another Lower Concourse slab placement was completed on March 21st. Total placement of lower concourse slabs is over 87% complete with 29 of 36 finished. Next placement is scheduled for April 13th. All Lower Concourse concrete placement is scheduled to complete in June.
- On the Bus Ramp / Bridge project, the pylon 9 pile cap was placed and the reinforcing steel for the tower is partially installed. Twenty-six of 29 CIDH piles have been completed for the ramp viaduct structure.



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Below Grade Concrete Progress Through March 31, 2015

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	35	100%
Central	20	20	100%	20	20	100%	20	20	100%
Eastern	35	35	100%	35	22	63%	35	12	34%
Total	90	90	100%	90	77	86%	90	67	74%

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	10	100%
Eastern	66	58	88%	16	9	56%
Total	176	168	95%	36	29	81%



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Western Zone Activity



Above Left : Work progressing on 4th lift walls including future utility penetrations.



Above Right: Continued work on vehicle / bike ramp.

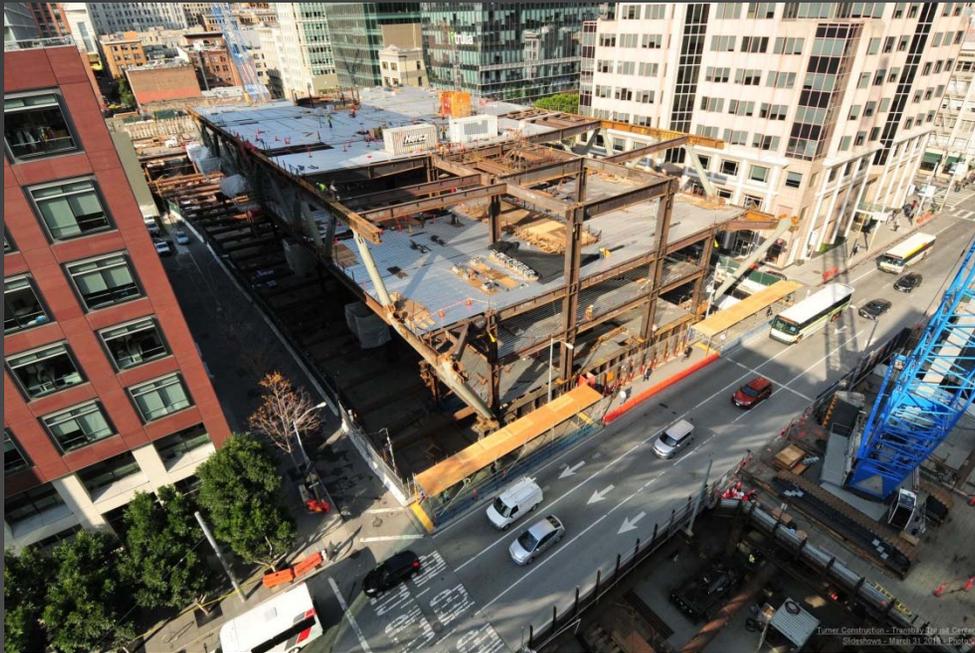


Below Right: Brace free northwest corner.



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Central Zone Activity



Above Left and Right: Overview of steel erection progress.



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Central Zone Activity



Above Left and Right: Ongoing steel erection activities.

Below Right: Orbital welding between pipe column and cast node.





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Eastern Zone Activity



Above: Formwork for ongoing Lower Concourse work.



Above Right: RA level bracing at 3rd lift walls.

Below Right: Ongoing column placement from Train Box to Lower Concourse.





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Ongoing Structural Steel Fabrication



Above: Ongoing fabrication at Herrick Steel in Southern California.



Above and Below Right: Pipe, Cast Node and Beam Fabrication at Oregon Iron Works.





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Cast Node Fabrication as of March 31, 2015

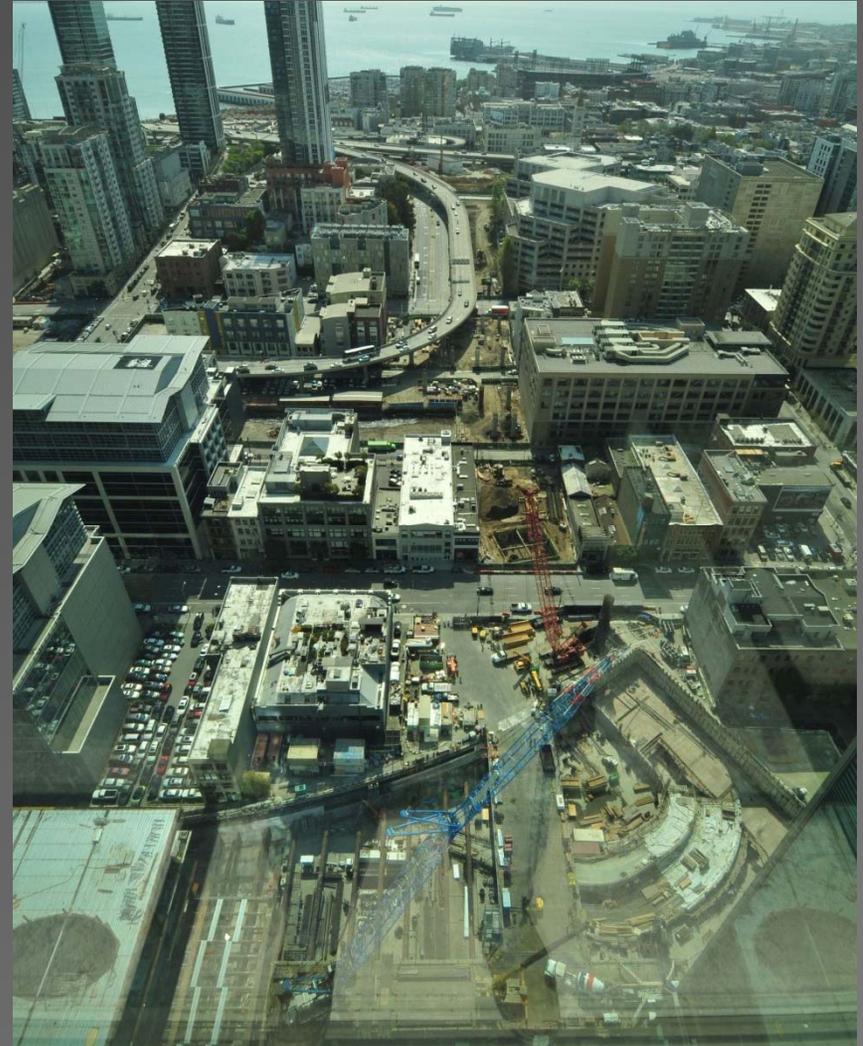
Casting Group	Totals	Shipments Mar.-May	Shipment May-June	Shipment August	Shipment September - October	Shipment November - December	Shipment January – March	Total Shipped to Date
Ground Level - Atchison 19,600 - 46,300 lbs	35	8	6	8	2	0	9	33
Bus Deck - Amite 9,500 - 22,800 lbs	75	16	5	10	16	8	18	73
Roof Level - Atchison 4,400 - 5,400 lbs	138	32	32	14	24	12	24	138
Light Columns	56	0	0	8	0	33	15	56
Totals	304	56	43	40	42	53	66	300

Of the 304 total cast nodes required for the project, a total of 300, or 99%, have shipped to the structural steel fabricators. There are 4 nodes remaining.



Bus Ramp and Bridge as of March 31, 2015

- Current Status
 - Contractor completed demolition of the necessary portions of the original bus ramp foundations and off-ramps.
 - CIDH Piles in progress, total of 26 CIDH piles completed through March 31st.
 - Ten columns have been placed.
 - CIDH Piles will be completed in the next 10 days.
 - Pylon 9 pile cap was placed and reinforcing steel installation is in progress for lower section.
 - Cable stay bridge materials are in fabrication.





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Bus Ramp and Bridge



Above: Bus Ramp alignment.

Right: Pile reinforcement placement.





Construction

The Next 90 Days

- Next 30 Days (Apr.)
 - Continue Lower Concourse decking, rebar and concrete in eastern zone.
 - Complete lift 2 foundation walls. Continue wall lift 3, re-bracing and columns in the eastern zone.
 - Continue structural steel fabrication and complete cast node fabrication.
 - Complete Bus Ramp CIDH pile work and continue above grade concrete work.
 - Continue structural steel erection and 4th lift wall construction in the western and central zones.
 - Continue MEPF Coordination.
 - Continue stair and ladder fabrication. Begin stair installation.
- Next 60-90 Days (May – Jun.)
 - Complete Lower Concourse decking, rebar and concrete in the eastern zone.
 - Continue re-bracing in eastern zones.
 - Continue Bus Ramp and Bridge work; falsework, abutments, columns and Pylon 9.
 - Continue trestle removal, structural steel erection and structural steel fabrication.
 - Start MEPF installation on decks, gridlines 10 to 20.
 - Continue installation of stairs/ladders.
 - Start concrete on metal decks in central zone.



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Bay Area Regional Labor Breakdown

	Through March 2015	
Location	Total Hours Completed	Percent of Total
East Bay (Alameda, Contra Costa, Solano)	483,454	35%
North Bay (Marin, Napa, Sonoma)	48,423	3%
South Bay (San Mateo, Santa Clara)	128,673	9%
San Francisco	247,338	18%
Other*	487,759	35%
Totals	1,395,647**	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.



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Bay Area Regional Apprentice Hours Breakdown

	Through March 2015	
Location	Total Hours Completed	Percent of Total
East Bay (Alameda, Contra Costa, Solano)	61,256	26%
North Bay (Marin, Napa, Sonoma)	11,305	5%
South Bay (San Mateo, Santa Clara)	32,022	14%
San Francisco	71,269	31%
Other*	55,214	24%
Totals	231,066*	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.



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Labor Breakdown by Trade through March 2015

Classification	TTC Building and RUP's*
Inspectors – Soils / Material Test	43
Carpenters and Related Trades	194
Cement Mason	77
Electrical – Utility Lineman	28
Electrician	51
Field Surveyor	38
Iron Worker	499
Laborer and Related Trades	730
Operating Engineer	436
Pile Drivers	179
Plumber	23
Roofer and Waterproofoer	40
Sheet Metal	5
Teamsters	178
Tile Setters / Finishers	7
Water Well Driller	9
Totals	2,537

* Relocation of Utilities Project



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Questions?

