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Risk Assessment

Risk Assessment Report May 2013

Basis of budget revision July 2013

Risk Refresh with FRA & FTA Spring 2014

- Collaboration with FRA & FTA
- Jointly held risk workshop
- Sharing of "Stripped and Adjusted" Baseline Cost Estimate
- Sharing of risk model results



Risk and Contingency Management Plan

- Establishes Risk Mgmt Committee "RMC"
- Sets milestone dates (cost, schedule)
- Contingency draw down curves (cost, schedule)
- Risk Register and Mitigation Plans



Risk Milestone #2

May 2014

- Committed:
 - Superstructure Concrete
 - Bus Ramps
 - Glazing
- Completed:
 - Zone 4 excavation
 - Zone 1 Lower concourse slab

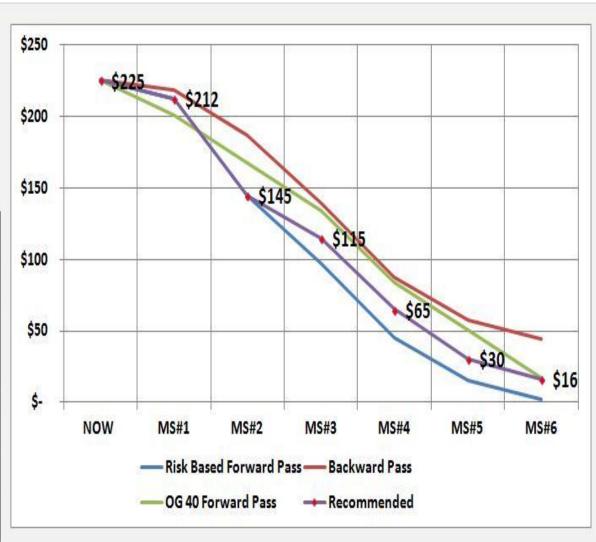




Cost Contingency Draw Down
Based on an SABCE of \$1.674 B and a
revised total Budget of \$1.9 B

All figures Millions YOE

Milestone	Risk Based Forward Pass		Backward Pass		OG 40 Forward Pass		Recommended	
NOW	\$	225	\$	225	\$	225	\$	225
MS#1	\$	212	\$	218	\$	201	\$	212
MS#2	\$	145	\$	187	\$	168	\$	145
MS#3	\$	97	\$	139	\$	134	\$	115
MS#4	\$	45	\$	87	\$	84	\$	65
MS#5	\$	16	\$	58	\$	50	\$	30
MS#6	\$	2	\$	44	\$	17	\$	16





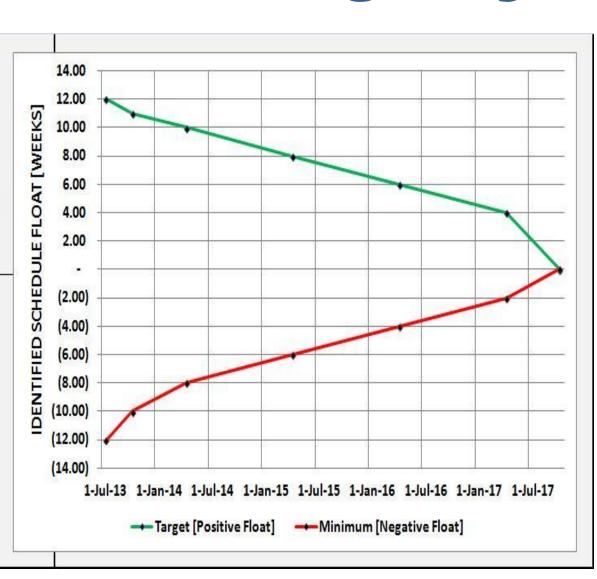
Schedule Contingency

Schedule Contingency Draw Down
Based on start Bus Operations Oct 17th
2017

Assumes 12 weeks Latent Float in current

Master Schedule

Milestone	Target [Positive Float]	Minimum [Negative Float]	
1-Jul-13	12.00	(12.00)	
1-Oct-13	11.00	(10.00)	
1-Apr-14	10.00	(8.00)	
1-Apr-15	8.00	(6.00)	
1-Apr-16	6.00	(4.00)	
1-Apr-17	4.00	(2.00)	
17-Oct-17		7578	





Risk Management Committee

Quarterly Meetings

- Review Risk Register, verify risk ratings
- Identify new risks / retire old risks
- Review each Risk Mitigation Plan "RMP"
- Secondary mitigation measures
- Roundtable: what keeps you awake at night?
- Identify issues for follow up



Quarterly Risk Report

- Minutes of the RMC
- Risk Refresh
- Current
 - Risk Register
 - RMPs
 - Schedule analysis



Risk Register

Currently 21 risks, 4 are significant:

- Market pricing of remaining bid packages
- Lack of coverage from the bidding community could result in bid overages
- Delays in securing additional funding
- Potential for claims



An RMP for Every Risk

Example Risk:

Potential for interface conflicts in the structure.

Example RMP:

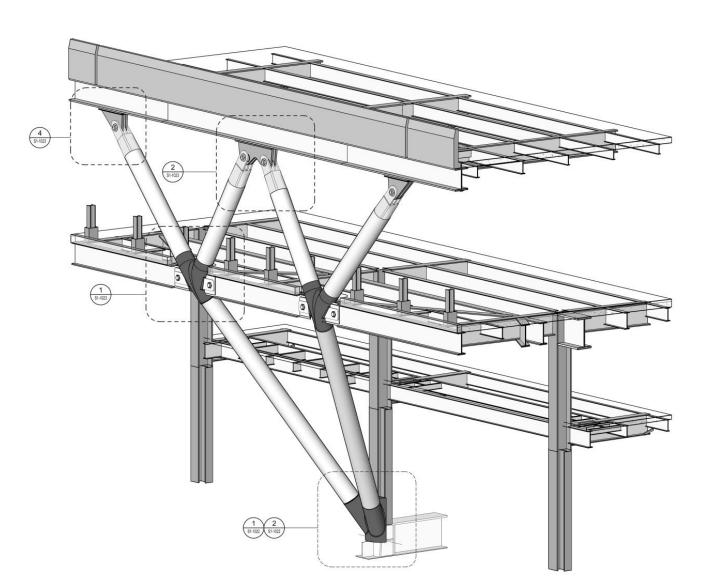
- Use BIM
- Continuous shop inspections
- Shop fit up trial assembly of basket column
- QMS plan for cast nodes

FRA Rail Program Delivery Meeting, Washington D.C. Aug. 4-6, 2014

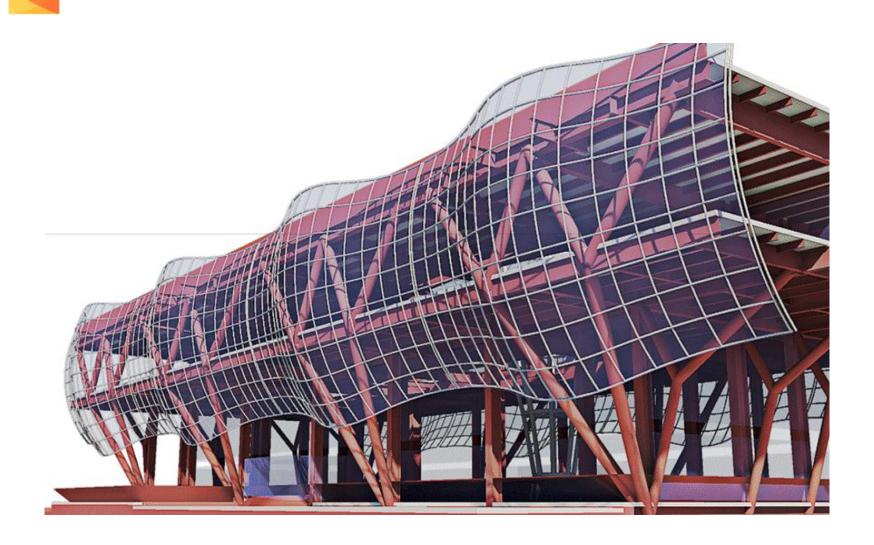
TJPA, CM/GC, and A/E shop visits



Cast Nodes



Cast Nodes



Cast Node at Foundry

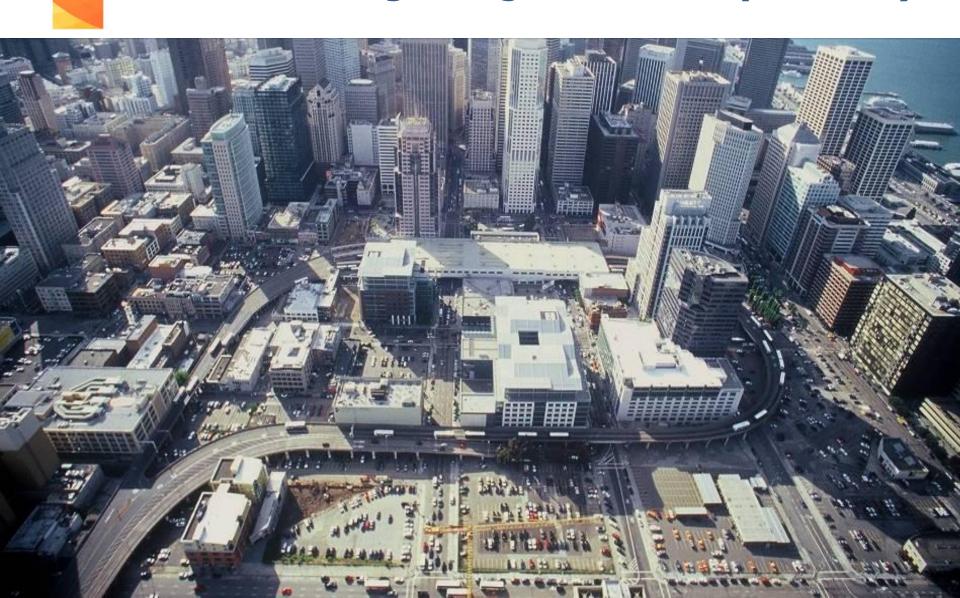




Market Conditions and Bidding Pool Risks

- In San Francisco
 - 62 Residential Projects, 40,000 Units to complete before 2017
 - 31 Commercial buildings, 13M sq.ft. to complete before 2017
- In Silicon Valley
 - Anticipating over \$9 billion in commercial projects including the Apple, Google, Nexus, Stanford, and Facebook projects

Transbay Project Area (before)



Transbay Project Area (now)



Transbay Project Area (future)





Saylor Bidder Survey

Recommendations:

- Update estimates to capture current market pricing
- Review CDs and bid manual to eliminate perceived designbuild responsibility
- Provide flexibility through use of performance specifications
- Minimize narrow design tolerances and/or provide greater flexibility
- Review general requirements
- Survey SBE availability for trade packages



Contractor Outreach

- Undertake additional bidder outreach to clarify scope of work for upcoming trade packages
- Streamline bidding manual language/clarify language
- Remove constraints on design-build work
- Implement Subguard insurance for subcontractors
- Continue to streamline payment processing
- Continue aggressive SBE outreach, update SBE goals



Risk Management Works

The Risk Assessment process allows the team to look ahead, evaluate and prepare options, and be ready to take action when necessary.

Secondary mitigation measures for schedule and cost are defined and can be implemented in real time.

The team's time and attention is focused in the right place!

Questions?

