

# Bill Seed Lean Construction Institute

#LeanLPS

Organiza y promueve

Promueve



Patrocina



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# LAST PLANNER, FOUNDATION FOR IMPROVEMENT

**William R (Bill) Seed**  
**Chairman, Lean Construction Institute**

Customers  
Clients  
Owners

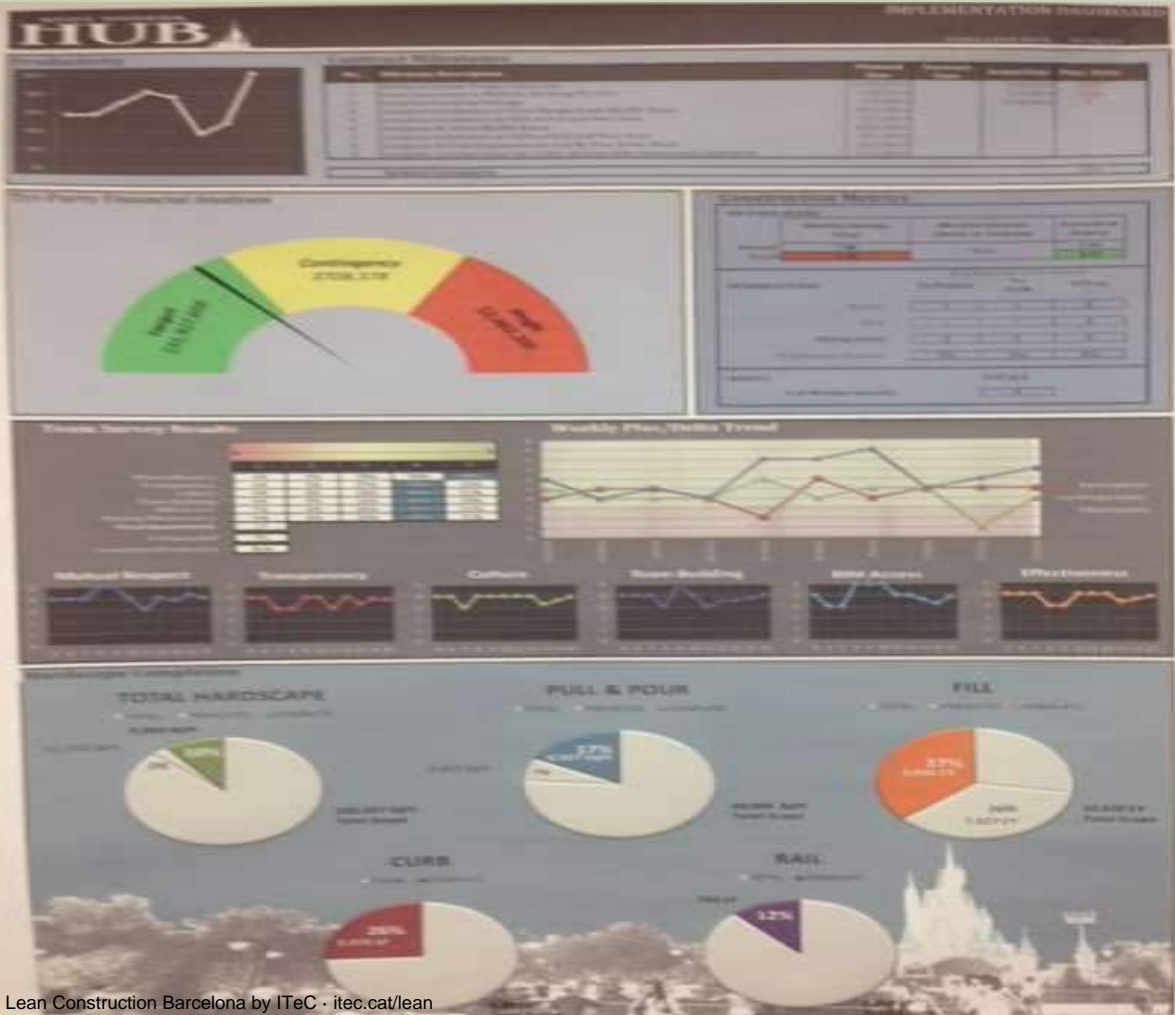
# LAST PLANNER SYSTEM



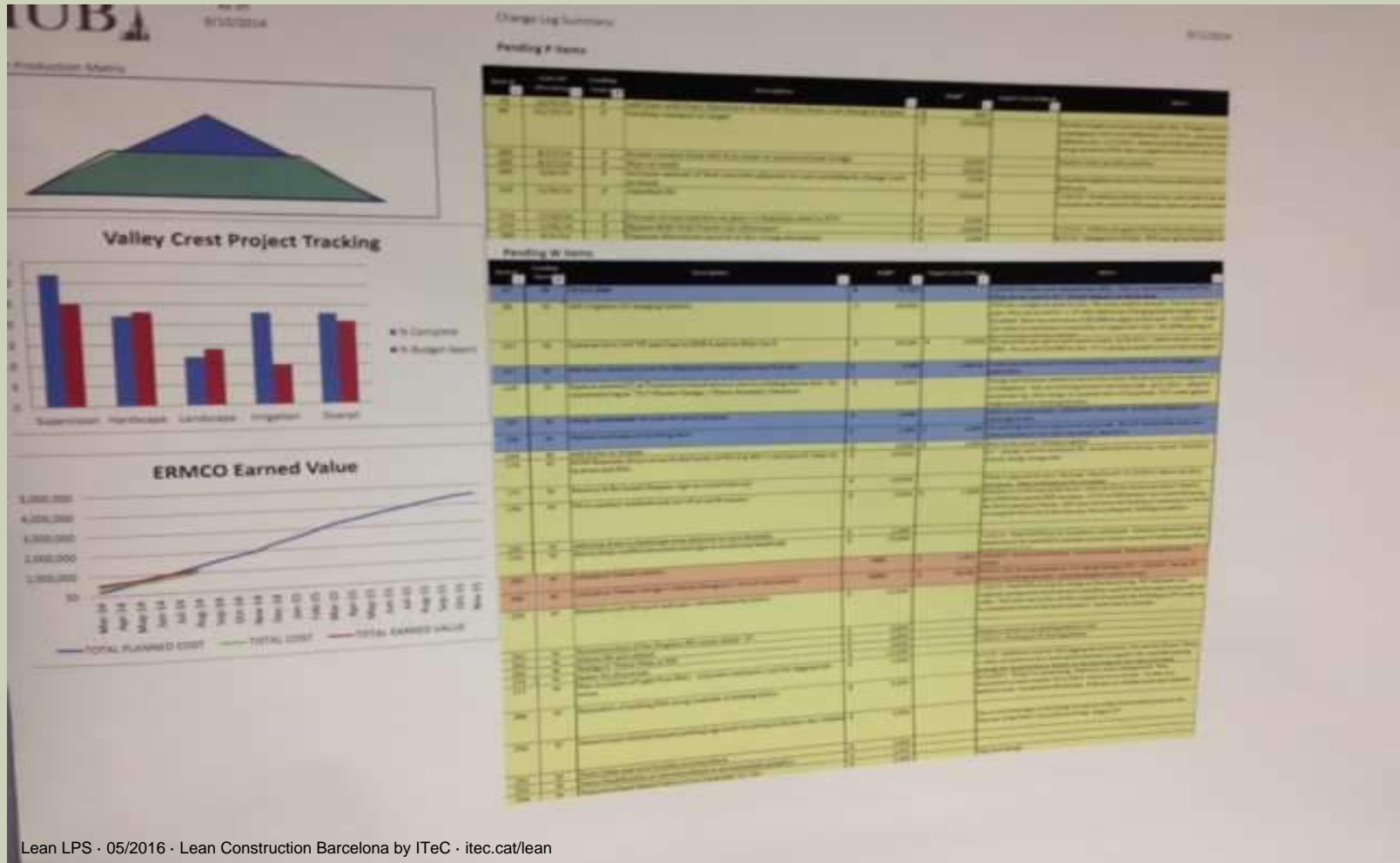
# MEETING MANAGEMENT



# PROJECT HEALTH



# VISIBLE METRICS



# A3 COLLABORATION



# A3 LEARNING AND DECISION MAKING

Electrical Systems

Cluster Group	Design Set	Design Solution ID														
<p><b>PROBLEM STATEMENT</b></p> <p>Can we meet the current and future demand for power in the building and maintain requirements for the existing electrical infrastructure?</p> <p><i>CAUTION</i></p>	<p><b>COUNTER MEASURES</b></p> <p>The following steps must be considered to maintain the building service system:</p> <ol style="list-style-type: none"> <li>1. Complete a full inventory of the existing equipment to be relocated.</li> <li>2. Analyze a complete list of new and existing equipment to be added to the building.</li> <li>3. Identify power requirements for the additional building lighting requirements.</li> <li>4. Identify power requirements for the additional Color Change lighting.</li> <li>5. Identify requirements for leaving existing car-lots. This action would require us to bring it up to current code requirements.</li> </ol> <p><i>Provide clear and quantified countermeasures options</i></p> <p><i>OPTION 1 is "DOE CODE" RECOMMENDED</i></p> <p><i>OPTION 2 &amp; 3 are additional.</i></p> <p><b>* PROVIDE OPTIONS &amp; SUPPORT INFO (INCL. COST) * HERE</b></p>	<p><b>ANALYSIS</b></p> <p>Describe the design for alternatives, and identify the potential cost, schedule, &amp; quality impacts to the overall project. Describe any criteria used to evaluate the alternatives.</p> <p>Option 1: Relocate the existing service unit. Relocate the transformer (T-4), replace panelboards, incorporate new elevator equipment, relocate existing car-lot and bring up to current code.</p> <p>Option 2: Maintain the existing service unit. Relocate the transformer (T-4), Relocate existing panelboards, incorporate new elevator equipment, remove existing car-lot.</p> <p>Option 3: Upgrade the existing service. Provide new transformer (T-6), replace panelboards, incorporate new elevator, relocate existing car-lot and bring up to current code.</p> <p><b>RECOMMENDATION</b></p> <p>Developed recommendation option, supporting decision with analysis from evaluation. Develop a recommendation for the best possible solution, adding the Choosing by Advantages model to support that decision with the values listed below.</p> <p><b>IMPLEMENTATION</b></p> <p>Identify and describe the resources needed and expected challenges in implementing recommended solution.</p> <table border="1"> <tr> <th>CATEGORY</th> <th>Value</th> </tr> <tr> <td>Cost</td> <td>1</td> </tr> <tr> <td>Schedule</td> <td>2</td> </tr> <tr> <td>Quality-CR</td> <td>3</td> </tr> <tr> <td>Quality-MQ</td> <td>4</td> </tr> <tr> <td>Safety</td> <td>5</td> </tr> <tr> <td>Support</td> <td>6</td> </tr> </table> <p>5.30</p> <p>Multiple Offices</p> <p>FCOB</p>	CATEGORY	Value	Cost	1	Schedule	2	Quality-CR	3	Quality-MQ	4	Safety	5	Support	6
CATEGORY	Value															
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Schedule	2															
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<p><b>BACKGROUND INFORMATION</b></p> <p>The current scope includes reworking the existing service to the building and relocating the existing branch panel with a new panel the same size.</p> <p>Dependencies:</p> <ul style="list-style-type: none"> <li>Design CR - Electrical Design</li> <li>Design CR - Electrical</li> <li>Design CR - MEP</li> <li>Design CR - MEP</li> </ul> <p><i>W/ HIGH PRIORITY</i></p>	<p><b>TARGET / GOAL</b></p> <p>Meet the power requirements for each structure and compare that to the available service of each structure at agreement in the service. By identifying the total power requirement for each structure we can develop a better plan of attack for where to make a service size or equipment change if required.</p>	<p><b>CAUSE ANALYSIS</b></p> <p>The current building structures each have a 200k service to the building. The East service is limited by the T300A transformer fed from 300k. On the West side there are two parallel cables at 300k each that are limited by the building transformers. There are additional features being added to the facility to help match the current code efforts of the Cause. Building Overlay is being added to the new structure that didn't previously exist on the previous structure.</p>														



# VISIBLE CONSTRAINT LOG

MAGIC KINGDOM <b>HUB</b>		Constraint Log					Update Date:	
Project: <b>MMK Hub Hardscap Refresh</b>								
Project No.: <b>121</b>								
Constraint Number	Constraint Description	Responsible Person	Responsible Company	Date Identified	Date Need Resolution	Date Resolution Promised	Actual Date Resolved	
65	Shop Drawings - FOUNTAIN	P.B.	BC	HOAR	8/7		9/15	
77	Relocation of Ice Maker	Tim H.	BC	EXP	8/27	9/4		
34	PTZ camera locations/access	Eric	HOAR	WDI		7/8	9/4	
64	Pier access sample approval	BC	D. Min.	WDI	8/7		9/4	
47	ID EER POC for PTZ	BC	BC	WDI			9/4	
36	Fountain interior finish approval	Barric	HOAR	HOAR	6/22	7/22	8/20	
50	Revise design details Vis. Int. M-07	BC	Joe F.	HHCP	7/15	8/1	8/20	
38	Pier cap fenestration - security	Barric	HOAR	HOAR	6/22	7/22	9/4	
39	TLT Master design / WTR FOUNTAIN CLEANOUT	Barric	KP	PIS	6/22	7/22	8/20	
53	Survey/layout subject to request	BC	Joe F.	HHCP	7/15	8/10		
61	Balcony design vis. int. M-07	BC	Joe F.	HHCP	7/17	7/25	8/20	
13	M-3 cornice/Mansard detail	Barric	HOAR	HOAR	7/2	7/11		

# POLY PARTY CONTRACTING

Disney • PIXAR  
**TOY STORY MIDWAY MANIA!**  
**3RD TRACK THE DEAL**  
 Working Session  
 Date: September 9, 2014  
 Disney's HOLLYWOOD STUDIOS

## OVERALL

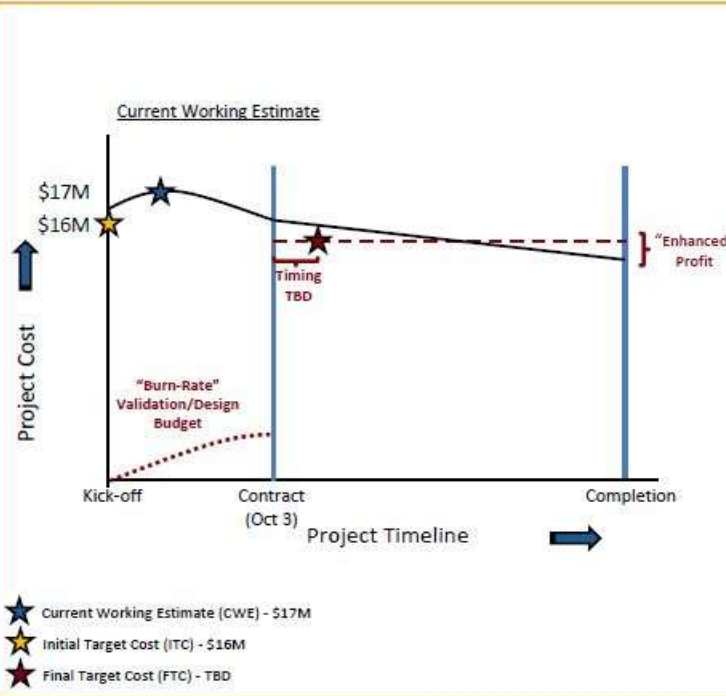
Target Contract Date	October 3
50% Design Documents	October 6
Demo Begins	October 6
100% Design Documents	December 8

## CONTRACT STRATEGY

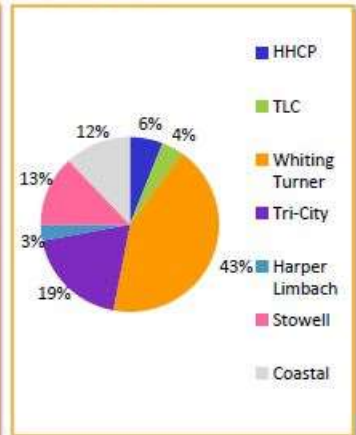
### Poly-Party Contract



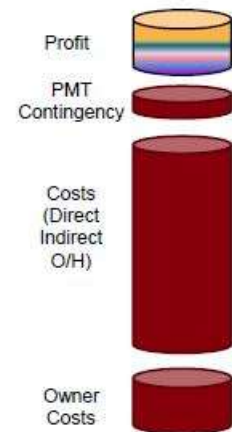
## ESTIMATE



## PROFIT POOL



## BUCKETS OF MONEY



2014					2015												2016					
A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
Facility Design Jul '14 – Dec '14																	Subject to Change					
					Facility Construction Oct '14 – Aug '15						Queue Tie-in Construction Aug '15 – May '16											
					▲ Target IFOA		▲ Final Permanent Docs Permit		▲ Structural Power Complete		▲ Ready for Track Install		▲ Dust Free		▲ Ready for Murals and Theme Paint		▲ Fire Alarm & Sprinkler Tie In		▲ Queue Tie In Complete			
<b>Payment Milestones</b> Lean LPS · 05/2016 · Lean Construction Barcelona by ITeC · itec.cat/lean																						

# CONSOLIDATED COMMUNICATION DASHBOARD

**Project 87**  
**3<sup>rd</sup> THEATER**  
**WEEKLY STATUS REPORT**  
 Date: September 8, 2014

OVERALL RISK ASSESSMENT	
SCHEDULE	MED
BUDGETAL	LOW
TECHNICAL	LOW




**SAFETY**  
 Weekly Safety Topics: Information Safety / Security  
 Be aware of your information security. Remember to use strong, individual passwords for each site. Be aware of what information you share or post online.

**PROJECT OBJECTIVES**  
 The team has identified Conditions of Satisfaction for the project and are actively working towards identifying clear measurable goals and objectives, including:

- Zero safety incidents and near misses
- Integrate new fall protection standards
- Add 50% capacity to existing attraction and increase flow capacity for the attraction
- Minimize attraction downtime
- Optimize drawings and reduce steel count
- Match show quality across all theaters, including new Digital Concourse & Global Film Stage
- Maintain clear communications to Operations regarding project progress
- Patch and enable all contractors to perform at their best

**DECISION LOG**  
 The following decisions have been finalized & recorded on the team decision log (see box site):

1. The team has decided to pursue a poly party B&B contract. (8/7/14)
2. Team is recommending an elevator location near the men's restroom. (8/11/14)
3. Team to pursue a split gender restroom option, utilizing Food Backspace. (8/11/14)
4. Team is addressing with the facility in the current proposed location (flexibility). (8/11/14)
5. Team to use structural lift, no substantial structural alterations discovered. (8/23/14)
6. Team to begin utility work and review of utility, technical investigation. (8/26/14)
7. Team will take no further action on trailer parking. (8/26/14)
8. Team will request main loop utilities above grade using existing theaters. (8/26/14)
9. The existing Show / Facility transformer will remain in its current location (9/2/14)
10. Max slab will be designed with a 3 ft thickness (3 ft savings) (9/2/14)
11. Team will not move the existing utility loop (9/2/14)

**RISK REGISTER**  
 \*Risk Register to be populated for the next dashboard release

**OVERALL**  
 A reminder that the project has not been announced. Be aware of your environment when discussing and collaborating on the project.  
 Please use the code name: "Project 87" in all contracts, permits, and public documents.

**DESIGN PACKAGING STRATEGY**  
 The team has identified the following design packaging strategy:

**3<sup>rd</sup> Theater**

- Package #1 - Surface Civil Design- Early September (8/9/2014)
- Package #2 - Utility Relocate & Dewatering- Mid October (10/17/2014)
- Package #3 - Sub & Foundation- Late October (10/23/2014)
- Package #4 - Early Structural Steel- Late November (11/27/2014)
- Package #5 - Facility & Fit Out- Late January (1/29/2015)
- Site Package (M to MG)

**Existing Space:**

- Package #6 - Existing Seating Facility- Early February 2015

**Lead Facilities**

- Package #7 - Lead Facility Improvement- Mid April 2015

**Dates**

- Area Development (Dry Trailer) - Mid October 2014
- Area Development (Operations Complete) - Mid October 2014

Dates listed are "in for permit" dates. Not planning assist for overall design (focusing on the 3<sup>rd</sup> theater package) occurred on 9/3/2014. Check-ins established for 15 minutes twice a week on Tuesdays & Thursdays (9:30 am) to share design commitments via Glotbox. Please ensure you are represented if you have commitments on the log.

**CLOUD UPDATES / FORECAST**  
**BIM Implementation:** Team is working on establishing technology needs for the project site trailers. Additional, team is formulating model and drawing LOD expectations.  
**Design Validation:** Team is working to understand appropriate ground layers using input from WDW ID and Operations.

**PRECONSTRUCTION ACTIVITIES**  
 To prepare the team for a lean project design and delivery the following preconstruction activities have been identified:

- Existing trailer removal to begin 5/5.
- B&B Agree to coordinate haul mat survey for Food Backspace by 8/8.
- Team to work with Soil Health Survey to validate remaining preconstruction facility and utility location questions. Southeastern to begin work by 8/8, Matt Saghieski to update as 8/8.

**TEAM LEADERSHIP**  
 The Project 87 team consists of the following leadership groups:

**SMT:** Mark Kohn (W&A), Scott Krupel (PC), Jim Younglove (Mantis), Jim Morehead (Mader), Sydney Ekouze (Steel Fab), Mark Petrus (Grunau), Gil Brooker/Dough (Harper), Lashach, David King (H&C), David Rootel (exp), Mark Aberson (Allen and Conrad), Joe Harris (Harris).

**FMT:** Vanessa Sobarsky (W&A), Chance Barnes (PC), Joel Pratt (Mantis), Jeff Henderson (Mader), Mike Russell (Steel Fab), Terry Callaghan (Grunau), Chris Smith (Harper), Imbach, Joe Morgan (Erickson), Kristen Williams (exp), Mark Aberson (Allen and Conrad), David Taylor (Harris).



**CONTRACTING TIMELINE**  
 To move the project towards signing a successful poly party B&B contract, the following sequence has been identified:

- Provide Comments on Contract to PMT - September 3, 2014
- Review Contract Language with Tony P. / Howard A. - September 8-22, 2014
- Current Working Estimate Review - September 15, 2014
- Develop Risk Register - September 15, 2014
- Agree to initial Target Cost - September 15, 2014
- Finalize Contract Language - September 24, 2014
- Contract Ready for Execution with IFC - October 15, 2014
- Update Risk Register - November 15, 2014
- Finalize Schedule - December 15, 2014
- Finalize Estimate - December 15, 2014
- Agree to Final Target Cost - December 15, 2014

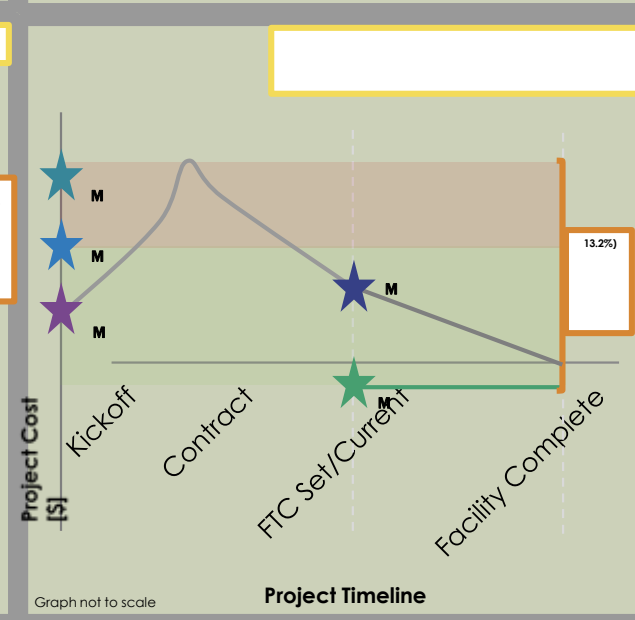
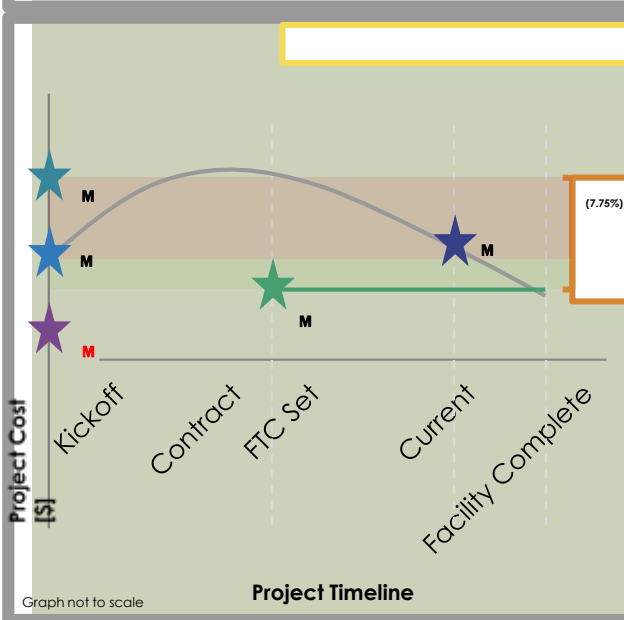
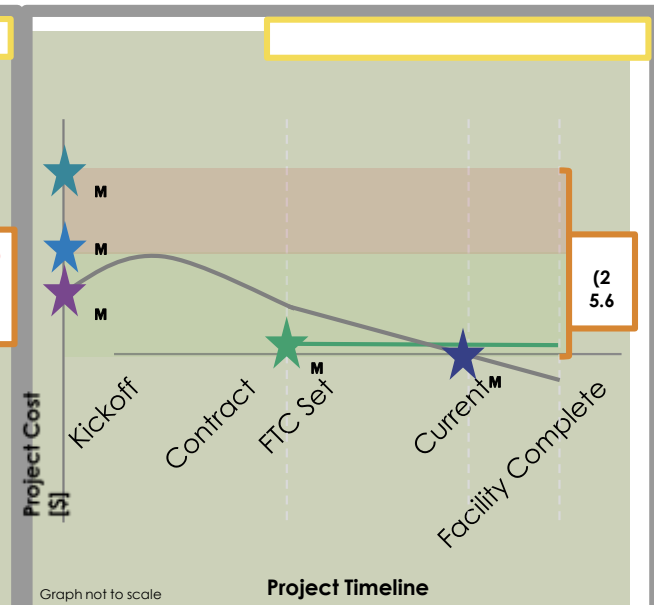
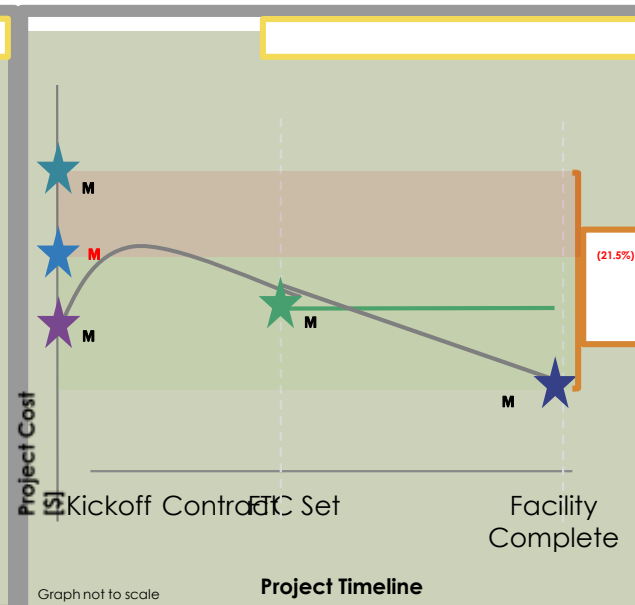
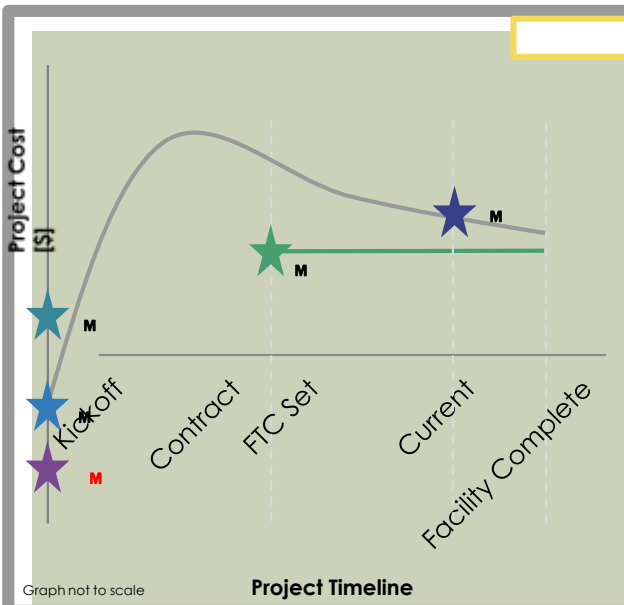
**HOT TOPICS / CRITICAL ISSUES**  
 The team has identified the following hot topics to solve:

- Finalizing details and coordination for all remaining preconstruction activities.
- Drafting and obtaining consensus on B&B contract and construction details.
- Detailing B&B data for the remaining design packages and aligning with the B&B01.02&4.03&5&6.



# SUTTER HEALTH SYSTEM COMMENTS

- At Sutter, on our best projects, the way work gets described, gets planned, gets tracked, gets reported, gets estimated, gets billed, gets programmed, gets designed, gets modeled, gets fabricated, gets installed, gets commissioned has all been radically changed. That doesn't leave much process wise that's remained intact.
- “pick anything and start there, it's all a mess”



Easier	Better	Faster	Cheaper
<p>Earlier definition of the project schedule and final cost by permit time, reducing RFI and field changes</p> <p>Greater insight into trade partner operations, skill sets and capabilities</p> <p>Increased visibility and assignment of risk</p> <p>Less chaos on the job</p> <p>Partners as owner advocates – ex. track switches, ride steel, wetland mitigation</p>	<p>Eliminated value engineering scope cutting</p> <p>Higher overall morale in the field and in the office</p> <p>Increased future value of partner supply chain knowledge</p> <p>Add back decisions were made earlier – ex. Restaurant renovation and Unspent Contingency</p>	<p>Improved partner cash flow through faster change reconciliation and settling of cost</p> <p>Smarter, selective use of overtime</p>	<p>Saved contingency, which increased predictability</p>

- ★ ILPD Team Validated Estimate
- ★ Current Working Estimate (CWE)
- ★ internal Estimate
- ★ internal Estimate + Contingency

# INTANGIBLES/CAN'T YET MONETIZE

Easier	Better	Faster	Cheaper
<p>Earlier definition of the project schedule and final cost by permit time, reducing RFI and field changes</p>	<p>Eliminated value engineering scope cutting</p>	<p>Improved partner cash flow through faster change reconciliation and settling of cost</p>	<p>Saved contingency, which increased predictability</p>
<p>Greater insight into trade partner operations, skill sets and capabilities</p>	<p>Higher overall morale in the field and in the office</p>	<p>Smarter, selective use of overtime</p>	
<p>Increased visibility and assignment of risk</p>	<p>Increased future value of partner supply chain knowledge</p>		
<p>Less chaos on the job</p>	<p>Add back decisions were made earlier –</p>		
<p>Partners as owner advocates – ex. <i>Mania track switches, Soarin' ride steel, Wilderness Lodge wetland mitigation</i></p>	<p>ex. <i>Wilderness Lodge added Roaring Forks and Concierge lounge</i></p>		