



California High-Speed Rail: Operations Report

FY14-15, FY15-16 and Program Metrics

January 2016

Agenda

▶ Operations Report Metrics

- Executive Summary
- Right of Way (ROW)
- Environmental
- Third-Party Agreements
- Contract Management
- Finance/Budget
- Risk
- Back-Up ROW Information

Executive Summary

ROW Acquisition

- ▶ The current report presents ROW acquisition progress relative to CPI and CP2-3 through November 30, 2015. As of that date, the Authority has secured legal possession of 560 parcels, with 501 delivered to the design-builder. There were 15 parcels delivered in CPI and 35 parcels delivered in CP 2-3 during the month of November.
- ▶ California High-Speed Rail Authority (CHSRA) staff is focused on delivery of key early construction parcels through utilization of the Settlement Teams and partnering with TPZP. This partnering effort has been successful and will enable a total of 7 locations to be under construction by mid March 2016. The partnering efforts will continue to identify those key parcels need to continue meaningful construction.
- ▶ The CP2-3 ROW Acquisition plan will be re-baselined during the 1st Quarter of 2016 .
- ▶ The ROW dataset has been updated to incorporate additional parcels as a result of design refinements. The forecast has been updated to reflect the current scheduled delivery for each parcel. An “Alternative” forecast has been developed to reflect potential delays that are outside the control of the Authority and are more in line with recent trends. The most likely delivery schedule will be between these forecasts curves.
- ▶ Positive changes in delivery have the potential to significantly alter the outcome of the probabilistic analysis as it is based upon short term historical trends. As the dataset grows to include the benefits of these changes, improvements will be reflected in the results and reliability of the forecasts. Updating of the probabilistic analysis is planned for early 2016 after the rebaselining occurs in CP2-3. The probabilistic analysis update for CPI will be done after the 7 early construction locations are underway so the analysis can incorporate the updated critical path schedule from TPZP.

Executive Summary

Environmental

Where are we today?

- ▶ With the Authority's decision to deliver the high speed rail program benefits to the citizens of California and the traveling public sooner, the Authority committed to clear environmentally the program segments and projects in record time – by December 2017. Prior to this approach, the Authority was clearing program sections sequentially, following the project phasing identified in the Business Plans.
- ▶ To meet this aggressive schedule the program team has changed its organizational structure, processes and tools. We continue to look for ways to clear some of the project elements with a process that is less time intensive as environmental impact reports/ environmental impact statements (EIRs/EISs). We are adding staff resources to include environmental project managers, permitting experts, a mitigation manager, and compliance specialists. A new round of job postings went out in December.
- ▶ The hard-hitting schedule requires closer coordination among team members. It also demands additional resources for staffing and funds to advance mitigation and permitting. The Authority, with the US Office of the Secretary and Governor's Office met with federal and state resource agency partners on October 1, 2015 to present the delivery schedule and discuss ways to achieve them, along with the request to identify additional needed agency resources to participate in and review the environmental clearance documents on this aggressive schedule. These efforts are well-underway with all our state and federal partners' staffing contracts in process.
- ▶ Project management tools continue to be under development. To integrate the milestones tracking and reporting the new overall Project Management Information System (PMIS) and revised work breakdown structure are currently under review and revision. The revised system will be operational next month with a quick implementation among our team members.
- ▶ As part of a small group, the Authority has been invited to the White House to work with the Obama Administration to expand regional and landscape-scale environmental mitigation approaches and encourage greater private-sector investment in ecosystem and mitigation markets.

Executive Summary

Are we on target?

- ▶ For San Francisco to San Jose, we are revisiting Purpose & Need/Project Description to reflect blended infrastructure and operations within the Caltrain Corridor, delivering safety improvements, environmental benefits and greenhouse gas reductions.
- ▶ The Central Valley Wye administrative draft EIR/EIS is being written. Before the ROD can be issued, the least environmentally damaging practicable alternative (LEDPA) must be agreed upon by the US Army Corps of Engineers and the US Environmental Protection Agency to allow the alternative to be permitted and constructed.
- ▶ In the Central Valley the Bakersfield F Street Station Area supplemental EIR/EIS is also progressing, with the goal of obtaining a ROD by late 2016/early 2017.
- ▶ We have successfully delivered a number of plans this year. Among them are the Palmdale to Burbank supplemental alternatives analysis (SAA), being closely followed by the Bakersfield to Palmdale, Burbank to Los Angeles and Los Angeles to Anaheim SAAs in Winter/Spring 2016.
- ▶ In December, the environmental team completed a document identifying strategies to accelerate program-wide and section permitting leading to faster construction for the California High-Speed Rail Program.
- ▶ With completion of the Merced to Fresno EIR/EIS (Sep. 2012) and Fresno to Bakersfield EIR/EIS (Jun. 2014), work was previously completed in defining Purpose & Need and identifying study alternatives for the Central Valley Interconnections and Heavy Maintenance Facility.
- ▶ With USEPA and USACE approval of Checkpoint B (Sep. 2014), the identification of study alternatives for the San Jose to Central Valley section has been completed.
- ▶ The Authority and RDP continue to add additional staff resources, including new environmental project managers, environmental planners and permitting staff.

Executive Summary

What is our short term action plan?

- ▶ We issued an initial project management task order to the new environmental and engineering (E&E) services consultant for the San Jose to Merced section.
- ▶ We continue discussions with community stakeholders and the resource agencies to identify a preferred alignment for the Central Valley Wye and the administrative draft introductory chapters and a technical section are under review.
- ▶ In January 2016, we will decide on how best to advance our environmental work for the electrical power interconnections in the Central Valley. Field work is underway on the electrical interconnections to assess likely environmental impacts. How the Authority and FRA/STB decide to clear these may affect the Central Valley Wye administrative draft EIR/EIS and Bakersfield F Street Station Area supplemental EIR/EIS schedules.
- ▶ For the four Southern California sections, we continue work on preparing technical reports and meeting with regulatory agencies to prepare draft environmental documents for public review in 2017.
- ▶ Following the Oct. 1 meeting, we are establishing three regional federal and state agency coordination teams to facilitate decision-making and foster increased communications and technical exchanges. These regional coordination teams will begin meeting early in the new year.
- ▶ With the FRA we are working to implement the Federal Infrastructure Permitting Dashboard which will be used by the FRA, federal agencies and the public for tracking our progress in completing each environmental document. The dashboard will begin reporting progress by February.
- ▶ Going hand-in-hand are higher levels of stakeholder engagement to identify issues sooner and reach agreements on decisions that will “stick”. Meetings and working groups are underway across the state, and within program segments.
- ▶ To support this program, we are advertising and interviewing candidates for additional environmental planning, permitting and specialty resource positions.
- ▶ We have convened HSR section alignment meetings to identify and resolve project definition issues in NoCal and SoCal the past two months.
- ▶ We continue to work with the Regional Consultants (RCs) to collect data needed to update the forecasts.

Executive Summary

Third Party Agreements

- ▶ The current report presents Third Party Agreement execution progress relative to CP2-3 through December 11th. All the agreements for CPI are either completed or agreement templates have been agreed upon and will be executed as design is completed.
- ▶ The plan for agreement execution is based on the respective design-build contractor schedules and is updated monthly to reflect changes in the respective contractors schedule. The forecast for agreement execution is based on short term historical trends for agreement process durations.
- ▶ The agreements are broken into two separate groupings to account for differences among the Authority's obligations and risks. The Agreements are identified as: Master/Cooperative Agreements and Railroad Agreements.
- ▶ The reports show that most of the Master/Cooperative Agreements for CP2-3 have been executed and the Authority is forecasting execution of all agreements, except the County of Kings, Angiola Water District, and Deer Creek Storm Water District before the end of the year. For Railroads, the only pending agreements necessary to start construction are BNSF Relocation and Construction agreements for CPI and CP2-3 that need 100% DB design to execute.
- ▶ As Final Design progresses, better site information is becoming available as utility locations are being confirmed. This could result in an increase or decrease in the utility relocations. However, any changes in the number of relocations will not affect an agreement's status.
- ▶ In the event that a new relocation is identified, it is assessed to determine whether it is part of the contractors bid or will be paid as part of the project contingency. In the event it is not part of the contractors bid, the design is reviewed for alternatives that minimize the cost of relocating.

Executive Summary

Contract Management

- ▶ **CPI** - TPZP is progressing with construction at the Fresno River Bridge, including large diameter cast-in-drilled-hole foundation piles, fabrication of reinforcement cages for piles and columns, and placing concrete for bent columns and pedestals. Key critical and near critical path structure locations have been jointly identified and actions are being taken to start construction in the coming months. TPZP is completing design activities to facilitate construction at those locations, with construction scheduled to start at the Tuolumne Bridge in January.
- ▶ **CP2-3** - The Joint Venture of Dragados/Flatiron has been issued a full Notice to Proceed. The Joint Venture continues to mobilize and plan the work, including developing and submitting various design and construction plans. The Authority and the Joint Venture have reached an agreement on overall right-of-way acquisition strategies to advance the Right-of-Way Acquisition Plan. Field work has begun with geotechnical exploration activities.

Finance/Budget

- ▶ The program will rebaseline the budget and forecast in the coming months. In FY 2014/15, expenditure graphs tracked actuals and forecast. Going forward in FY 2015/16, the expenditure graphs will track budget along with actuals and forecast. Forecast will be published after the budget is rebaselined.
- ▶ November-2015 capital outlay expenditures were \$73.2M, as reported in the January-2016 Operations Report, a 167% increase over expenditures of \$27.4M reported in January-2015 the previous year.
- ▶ Delays in ROW are impacting construction schedules. Mitigation measures are in place to prioritize critical parcels required for major construction work. An analysis is currently being performed to verify that ARRA Federal Funds will not be at-risk even by using the Alternative Forecast. Continued monitoring will be performed to assess any changes should the ROW delivery be delayed further than anticipated.

Agenda

- ▶ Operations Report Metrics
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ROW Metrics - Context

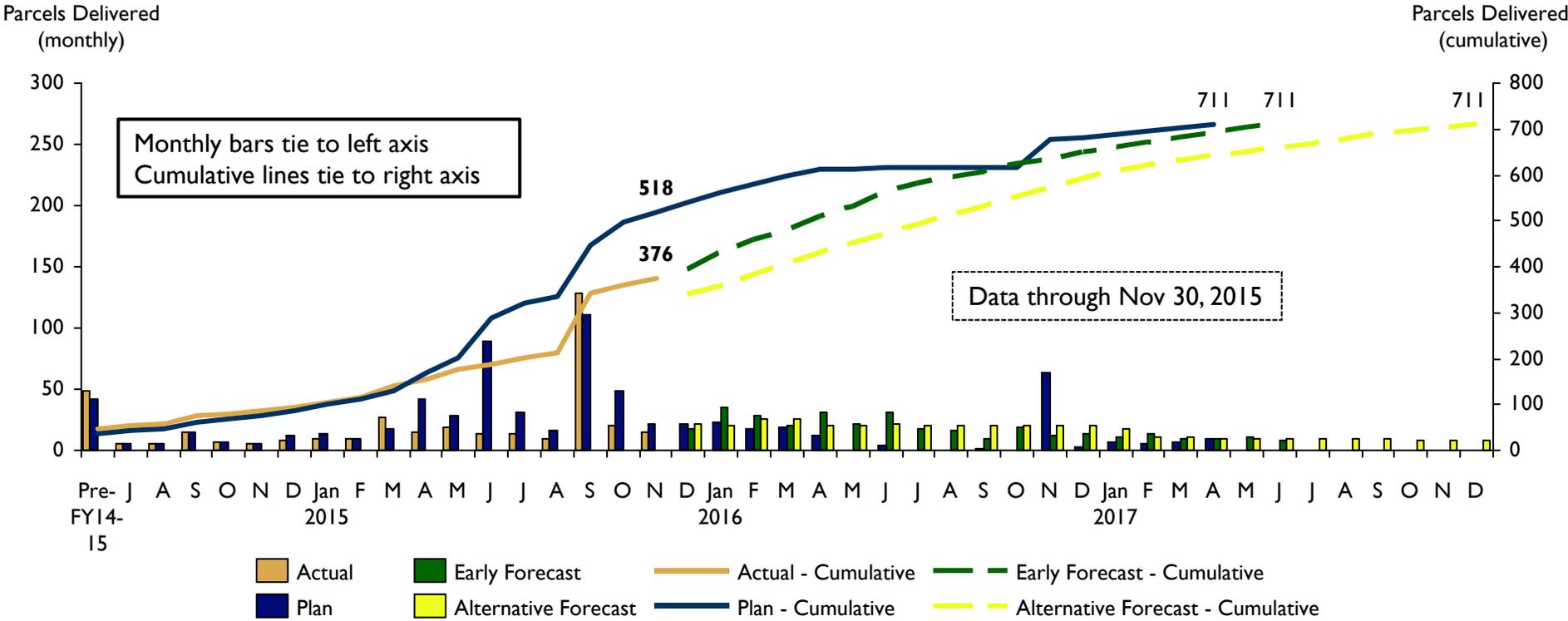
- ▶ The following slides track parcels delivered to **design-builder (DB)**, which is the last step of the ROW process
 - Four metrics related to “delivered to DB” are tracked:
 - Plan: For CPI, the negotiated schedule of parcel delivery as of December 2014 plus additional public parcels and design changes; for CP2-3, planned delivery is currently a placeholder and will be re-baselined during the 1st Quarter of 2016.
 - Actual: Actual parcels delivered each month
 - Early Forecast: Refined every month based on future expected delivery
 - Alternative Forecast: Forecast that anticipates additional delays for elements outside the control of the Authority and reflects rates more in line with historic delivery
- ▶ Forecasts are based on inputs from the ROW Consultants and the Authority
- ▶ The total number of CPI parcels needed for delivery has changed (542 to 711) over time for two main reasons:
 - The number of public property parcels were based upon 15% designs; as the ROW Transfer Agreements were completed with the local agencies, the number of parcels has been refined.
 - As the Design Builder refines the design, the ROW needs may also be changed. The number of parcels to be acquired can fluctuate up or down. In some cases, additional ROW may be required from previously completed acquisitions.
- ▶ The monthly flow model methodology has been updated as of December 15, 2015 to allow us to better track parcels that are “recycled” within the process, or have to repeat previous steps. As a result, some historic flow numbers may have been slightly adjusted. The model continues to be developed and enhanced. ¹

(1) Data prior to September 2015 has not yet been updated to the new model methodology.

ROW – CP1 Parcels Delivered to Design-Build by Month

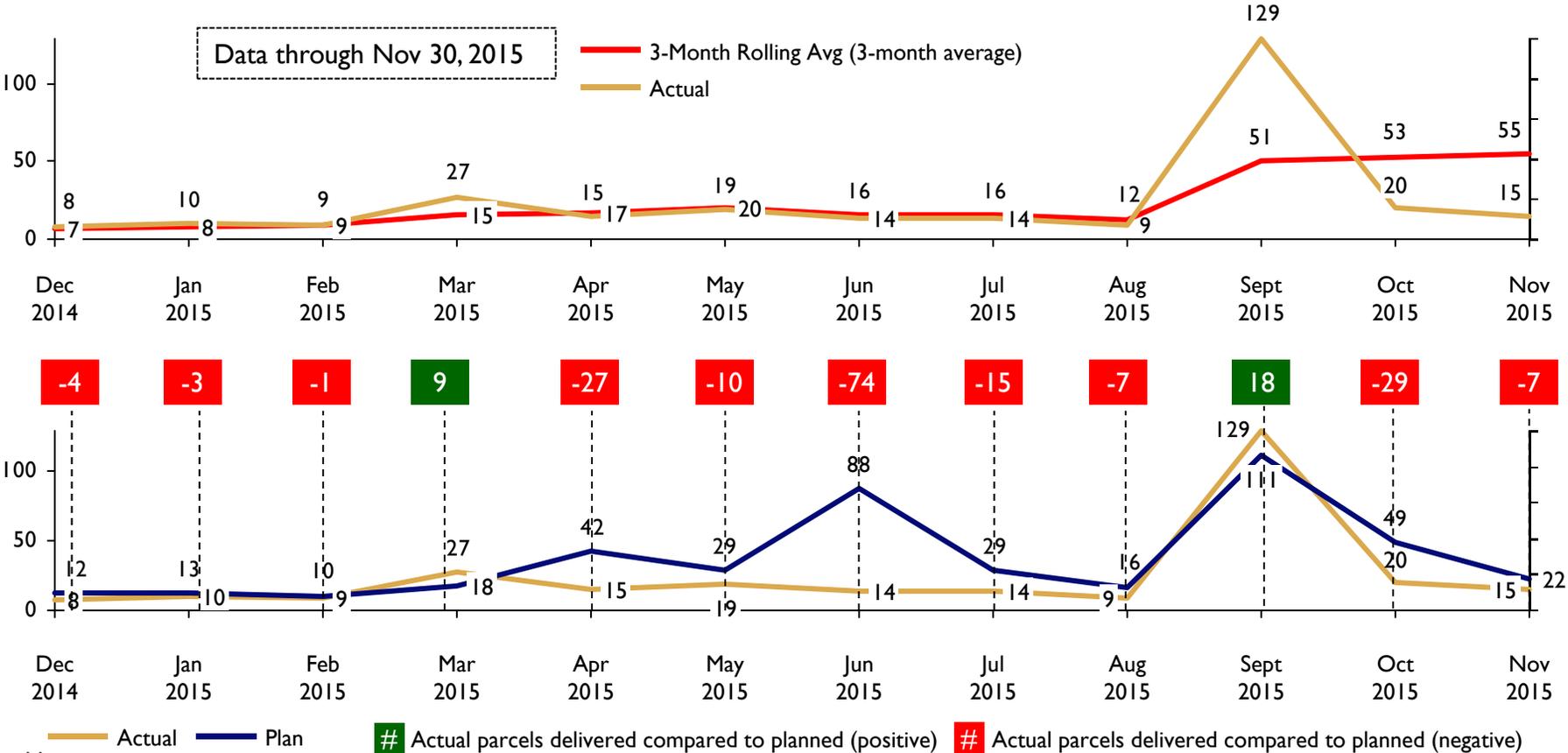
Plan vs. Actual vs. Forecast

CPI - Delivered to DB (number of parcels)



ROW – CP1 Historic Performance

CPI Performance (in number of parcels)



Notes:

1. "Plan": Negotiated schedule as of December 2014
2. Correction made from November Report for September 2015 data

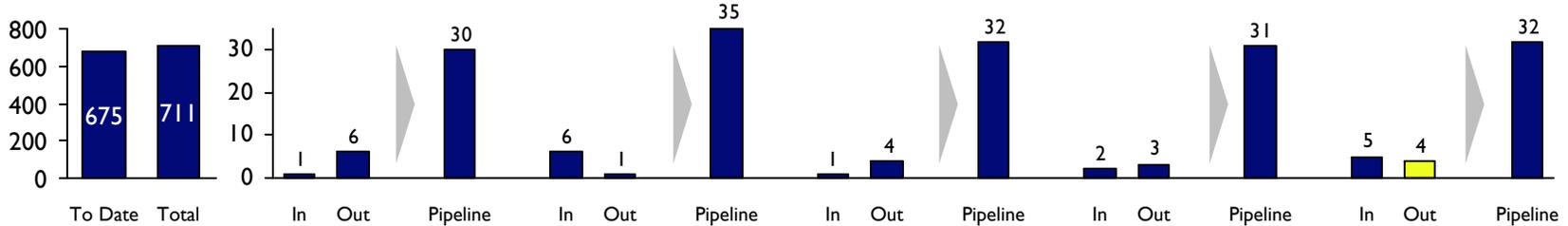
Source: Dec 11, 2015 ROW Weekly Report

ROW – CP1 Pipeline by Process (1 out of 4 pages)

Volume of Activity by Process (Flow) - Pipeline

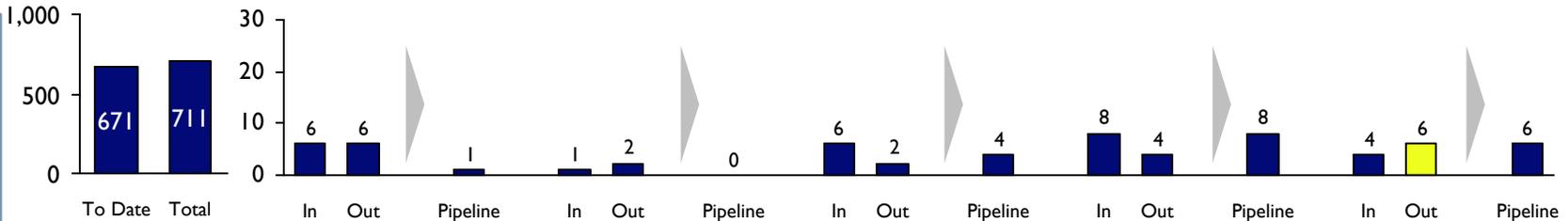


Appraisal



- Parcels in pipeline are a function of pending design refinement submittals, reviews and approvals

Just Compensation



- Parcels in pipeline pending DGS setting Just Compensation

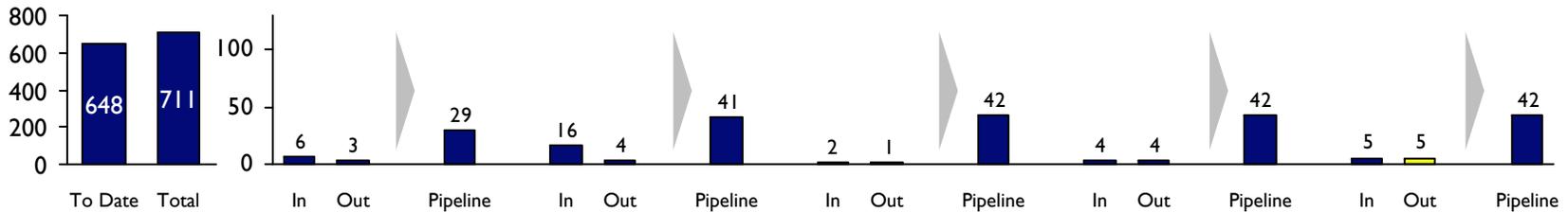
Source: Dec 11, 2015 ROW Weekly Report

ROW – CP1 Pipeline by Process (2 out of 4 pages)

Volume of Activity by Process (Flow) - Pipeline

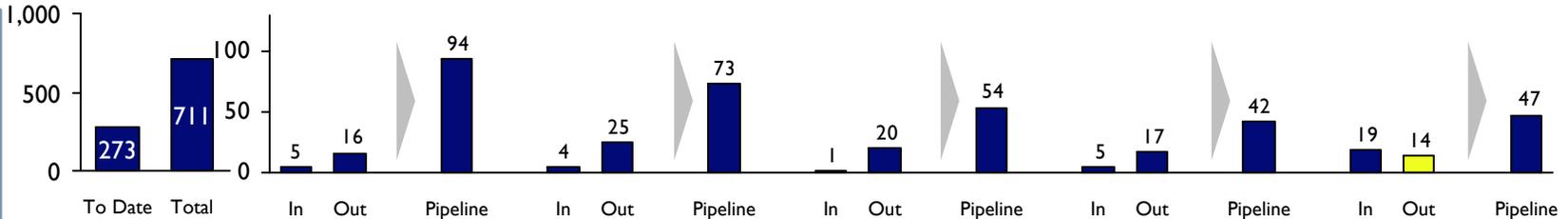


First Written Offer



- Much of this pipeline consists of railroad and State of California parcels that are acquired through various Railroad Agreements, even though we complete appraisals and set Just Compensation.

Negotiation Acquisition



- Pipeline consists of parcels with signed agreements in escrow and parcels with pending offers at property owner decision to sign or enter condemnation .

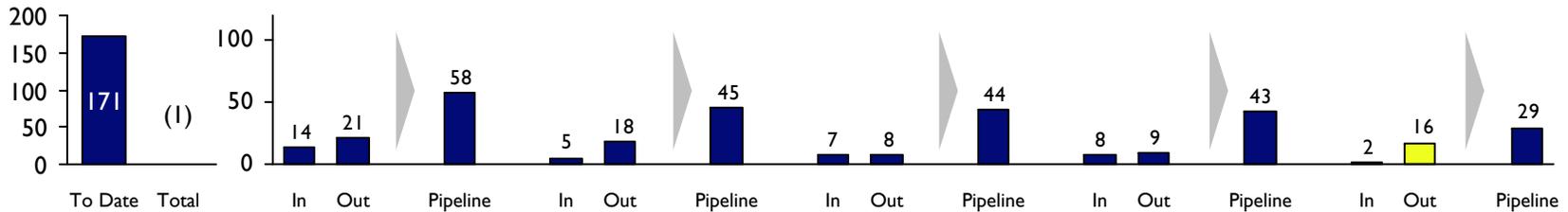
Source: Dec 11, 2015 ROW Weekly Report

ROW – CP1 Pipeline by Process (3 out of 4 pages)

Volume of Activity by Process (Flow) - Pipeline

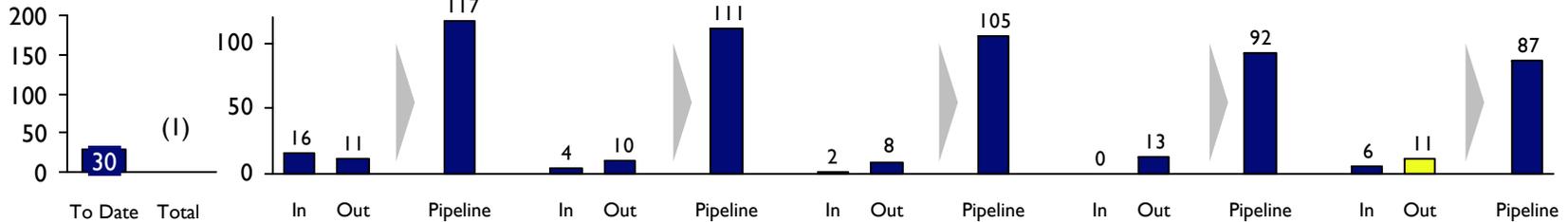


Condemnation



- Pipeline comprised of RONS being processed by CHSRA and ROW consultants and awaiting adoption by PWB. Also includes parcels being prepared by HSR to transfer to Caltrans Legal.

Eminent Domain



- Pipeline illustrates total number of parcels in the Eminent Domain process with Caltrans legal and have lawsuits filed. An Ordered of Possession (OP) is the next step if a settlement is not reached.

(1) Total parcels that may take the condemnation route is unknown

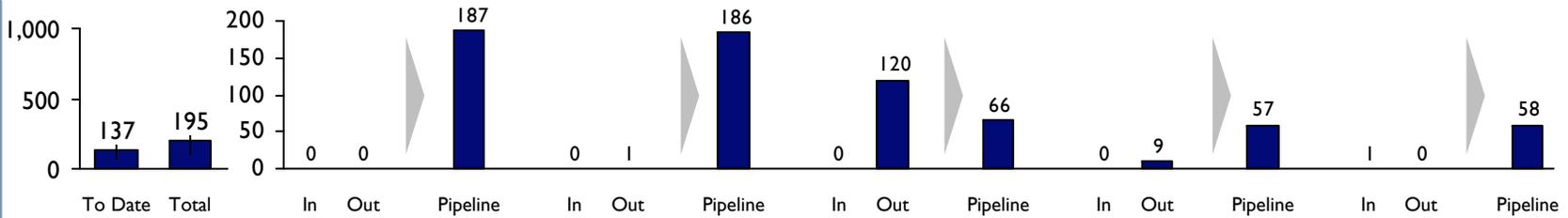
Source: Dec 11, 2015 ROW Weekly Report

ROW – CP1 Pipeline by Process (4 out of 4 pages)

Volume of Activity by Process (Flow) - Pipeline

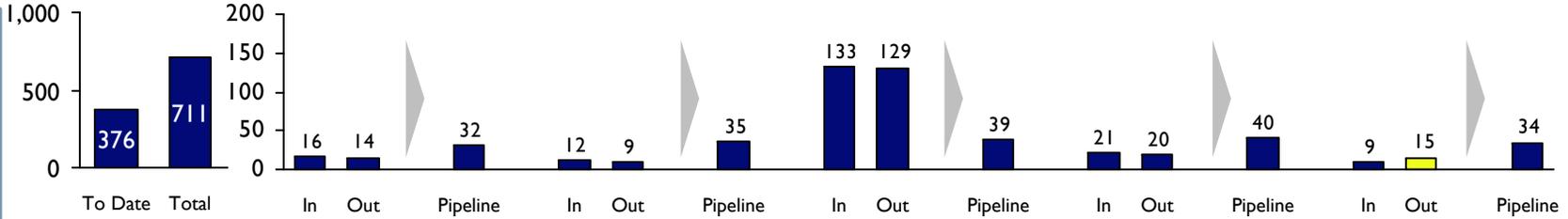


Public Agency / Railroad



- Comprised of 35 railroad parcels and 23 public parcels. Public parcels are being processed with Master Agreements before proceeding to individual utility relocation agreements and acquisitions.

Delivery



- Pipeline include parcels requiring relocations, parcels pending construction memo completion, and parcels available to be transferred to DB.

Source: Dec 11, 2015 ROW Weekly Report

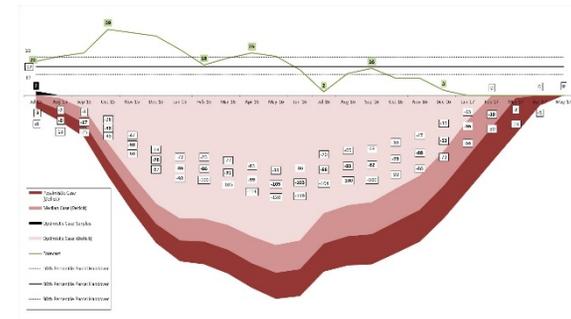
CP1 Probabilistic Analysis of Meeting CP1 Forecast

- ▶ The team has developed a new parcels handover forecast for CPI based on actual and past performance in terms of numbers of parcels delivered per month
- ▶ The forecast is refined monthly as new information is integrated and present a trajectory that the team uses to achieve the plan agreed with the contractor TPZP (negotiated schedule as of December 2014)
- ▶ A probabilistic distribution of monthly handover rates is specified based on monthly handovers during previous delivery periods (3 months and 6 months)
- ▶ The distribution is then compared to the forecast handover rates of each month in a Monte Carlo simulation to determine the probability of meeting monthly (clean slate) and cumulative (rolling over delayed parcels to next month) targets
- ▶ When relevant the analysis determines the likely delay to the forecasted completion date
- ▶ A Pessimistic case and an Optimistic case bracket the Median case; all presented in the detailed results in Appendix
- ▶ An updated probabilistic analysis will be prepared after the re-baselining of CP2-3. We expect this update to the probabilistic analysis to be completed in early 2016.

CP1 Probabilistic Analysis – Summary and Preliminary Results from August 2015 Forecasts

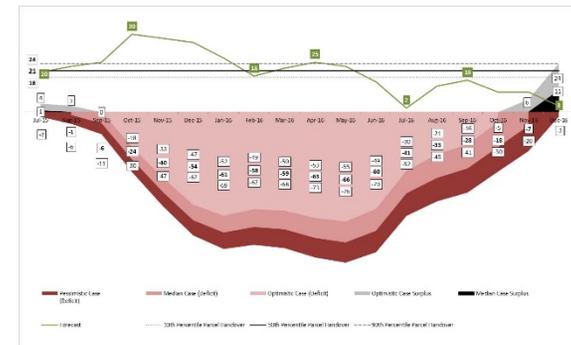
Past 6-Month Parcel Handover Rate

- Range used for historic period : 9 – 27 parcels per month (Median = 17 parcels per month)
- Meeting monthly targets (clean slate) : 9 / 18 months
- Meeting monthly targets (roll over) : 1 / 18 months
- Accumulated parcel delivery deficit of delivery of parcels (iceberg) reaches 105 parcels in the median case creating cost impacts to the contract if delays are not avoided or mitigated
- Handover of the final parcel anticipated to be delayed 7 months



Past 3-Month Parcel Handover Rate

- Range used for historic period : 15 – 27 parcels per month (Median = 21 parcels per month)
- Meeting monthly targets (clean slate) : 9 / 18 months
- Meeting monthly targets (roll over) : 4 / 18 months
- While the final parcel is likely (85.6%) to be delivered by Dec 2016, delays (and likely associated claims) will have been accumulated by that date.

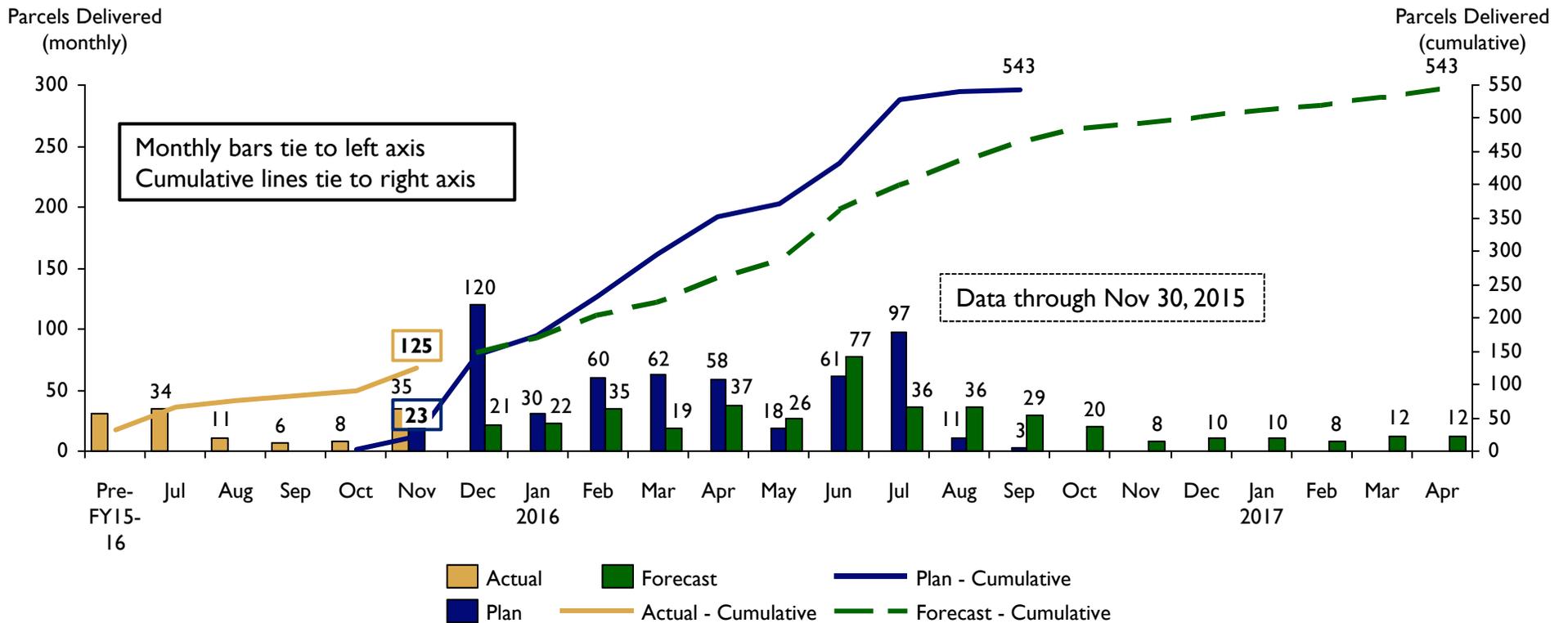


Notes: The deficits presented are in addition to the delays already accrued. Deficits measured against our own internal forecast NOT contractual obligations to the contractor.

ROW – CP2-3 Parcels Delivered to Design-Build by Month

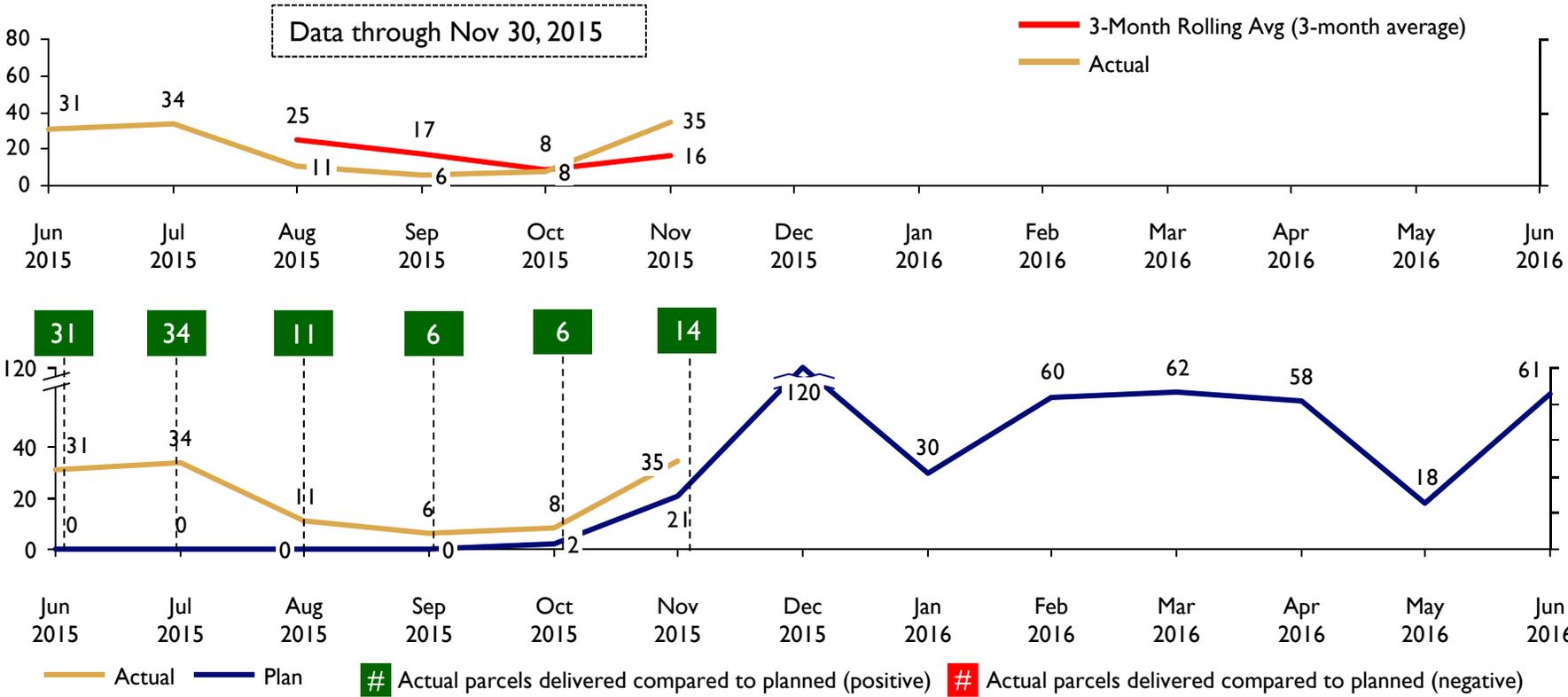
Planned vs. Actual vs. Forecast

CP2-3 - Delivered to DB (in number of parcels)



ROW – CP2-3 Historic Performance

CP2-3 Performance (in number of parcels)



Notes:

1. Per contract, "planned" to be re-baselined in November/December
2. Contract executed in June; 31 parcels delivered after contract execution

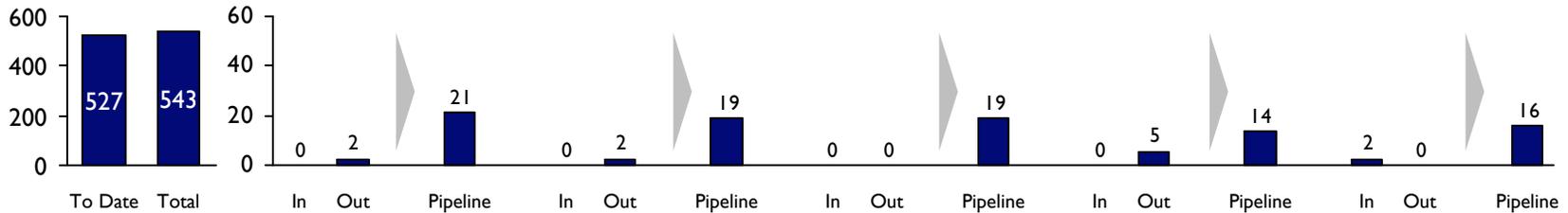
Source: Dec 11, 2015 ROW Weekly Report

ROW – CP2-3 Pipeline by Process (1 out of 4 pages)

Volume of Activity by Process (Flow) - Pipeline

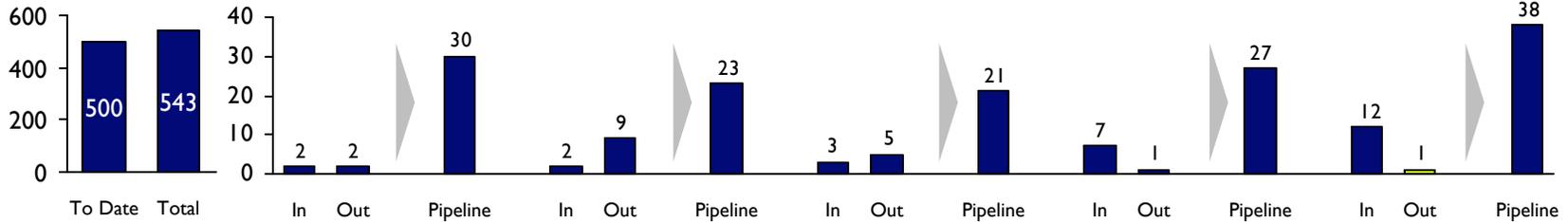
Completion July 2015 August 2015 Sept 2015 Oct 2015 **Nov 2015**

Appraisal



- Parcels in pipeline a function of pending design refinement submittals, reviews and approvals

Just Compensation



- Parcels in pipeline pending DGS setting Just Compensation

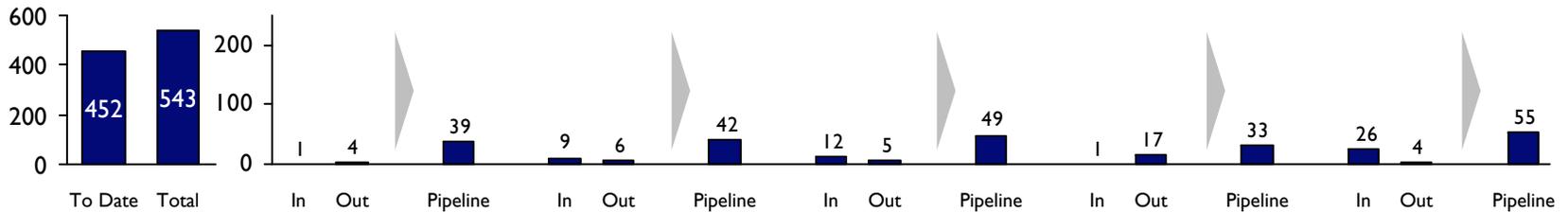
Source: Dec 11, 2015 ROW Weekly Report

ROW – CP2-3 Pipeline by Process (2 out of 4 pages)

Volume of Activity by Process (Flow) - Pipeline

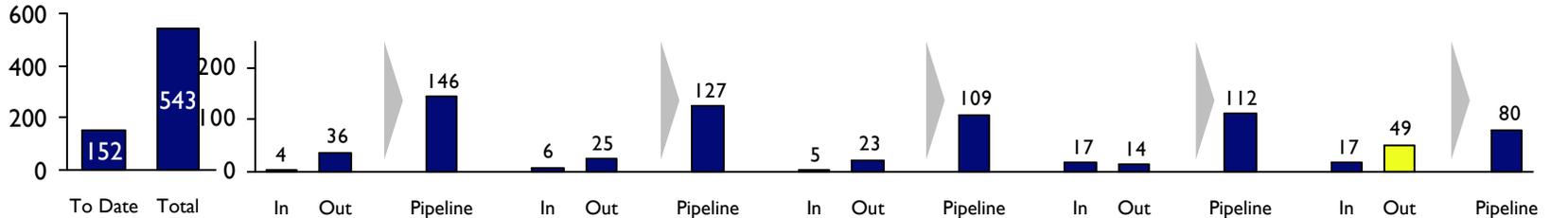
Completion July 2015 August 2015 Sept 2015 Oct 2015 **Nov 2015**

First Written Offer



- Pipeline consists of railroad parcels and non-railroad parcels.

Negotiation Acquisition



- Pipeline consists of parcels with signed agreements in escrow and parcels with pending offers at property owner decision to sign or enter condemnation.

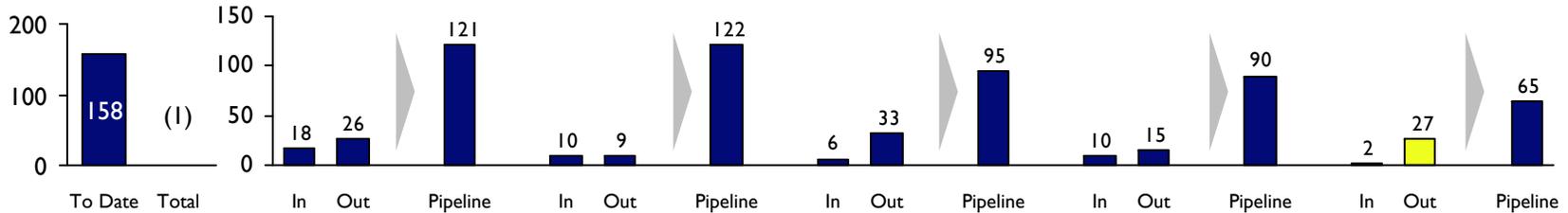
Source: Dec 11, 2015 ROW Weekly Report

ROW – CP2-3 Pipeline by Process (3 out of 4 pages)

Volume of Activity by Process (Flow) - Pipeline

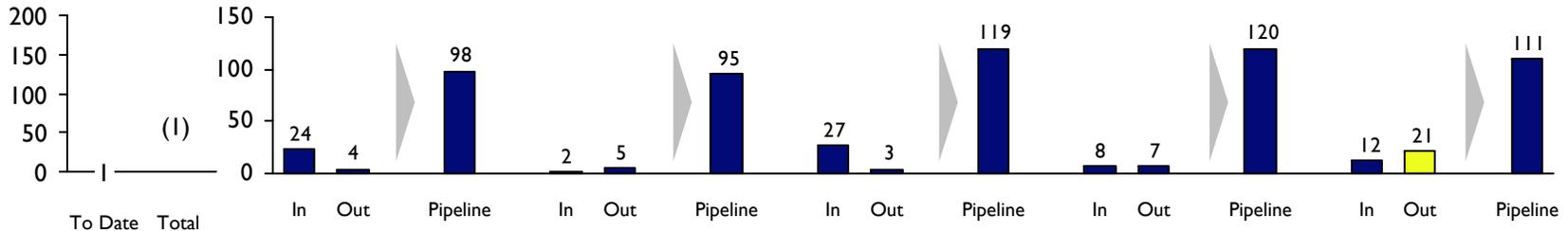
Completion July 2015 August 2015 Sept 2015 Oct 2015 **Nov 2015**

Condemnation



- Pipeline comprised of RONS being processed by CHSRA and ROW consultants and awaiting adoption by PWB.

Eminent Domain



- Pipeline comprised of suits (parcels) at Caltrans legal pending filing with the courts seeking Court Orders of Possession.

(1) Total parcels that may take the condemnation route is unknown

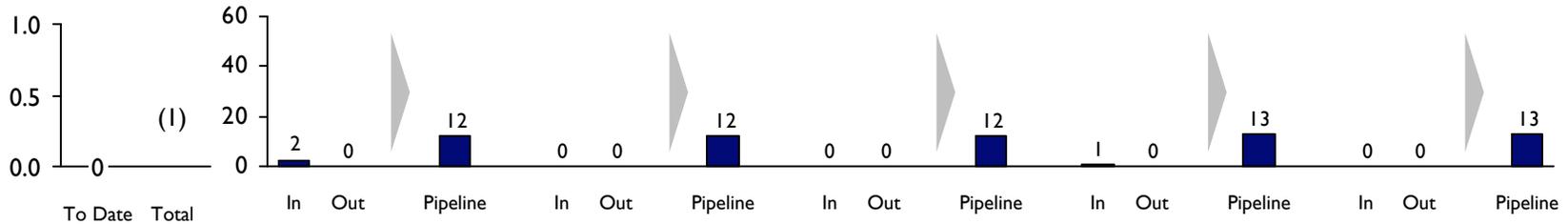
Source: Dec 11, 2015 ROW Weekly Report

ROW – CP2-3 Pipeline by Process (4 out of 4 pages)

Volume of Activity by Process (Flow) - Pipeline

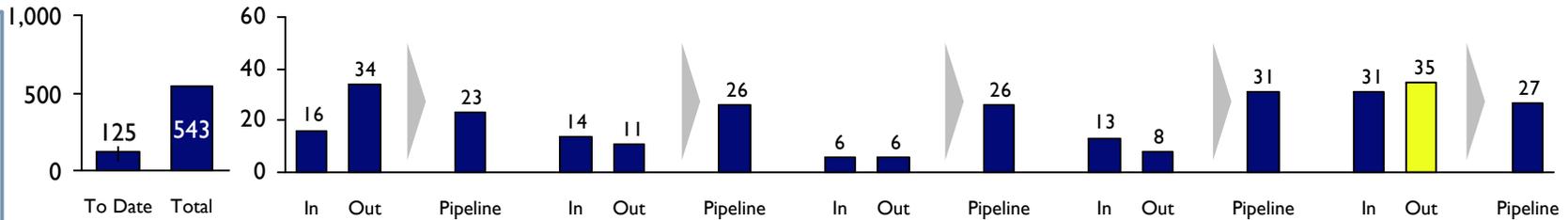
Completion July 2015 August 2015 Sept 2015 Oct 2015 **Nov 2015**

Public Agency



- Current parcel count only includes public parcels with APN's and value. Public Roadway parcels will be defined to add to the total number of distinct parcels.

Delivery



- Pipeline include parcels requiring relocations, parcels pending construction memo completion, and parcels available to be transferred to DB.

(1) Total number of public parcels to be identified

Source: Dec 11, 2015 ROW Weekly Report

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Environmental Clearance Metrics - Context

- ▶ The following slides track several metrics for each environmental segment/project related to:
 - Schedule and physical percent complete.
 - Key milestones.
 - Actual, planned and forecasted costs-to-completion dates:
 - As of July 2015, costs projections were re-baselined.
 - Starting in September 2015, forecasted costs were based on performance and trends, with planned costs remaining locked.
 - In early 2016 with a revised project control regime, the earned value and forecast costs will be reported monthly.
 - Actual costs are based on invoices received by the Authority. For this reporting period:
 - Program, Central Valley Wye, Bakersfield-Palmdale, Palmdale-Burbank, Burbank-LA and LA-Anaheim actual costs are based on monthly expenditures through November 30, 2015.
 - For remaining sections, actuals are from October.
- ▶ An additional slide in the back of report provides an overview for key, upcoming milestones across all environmental segments and projects.

Environmental Milestones Schedule (to ROD)

Information through November 2015

Segment	Progress to Date	Next Steps
San Francisco to San Jose	<ul style="list-style-type: none"> Initial task order for environmental and engineering contractor to be issued in December for project planning. 	<ul style="list-style-type: none"> Working to refine Purpose & Need and project definition to reflect implementation of blended infrastructure and operations within Caltrain corridor. Continuing coordinating infrastructure analysis with Caltrain to define the project. Developing strategy for complying with NEPA/404/408 Integration MOU. Continuing to analyze design features to achieve travel time goal.
San Jose to CV Wye	<ul style="list-style-type: none"> Initial task order issued for environmental and engineering contractor to begin project planning activities. 	
Central Valley Wye	<ul style="list-style-type: none"> The regional consultant continues to prepare the Ranch Road to Merced environmental re-exam. Technical reports and Administrative Draft for Central Valley Wye evaluation under development. 	<ul style="list-style-type: none"> Continuing coordination with stakeholders and resource agencies to identify a preferred alternative. Schedule under review to incorporate input from regulatory agencies and extension of CPI north from Ave 17 to Ave 19.
Central Valley Interconnections	<ul style="list-style-type: none"> Initial studies by PG&E completed for critical electrical interconnections for test track. Second phase PG&E study necessary for defining electrical improvements. In January 2016, environmental clearance approach will be decided. 	<ul style="list-style-type: none"> Continuing to coordinate with PG&E on electrical interconnections and upgrades. Field work on biological and cultural resources underway to assess likely environmental impact. Currently behind schedule in defining clearance approach.
HMF	<ul style="list-style-type: none"> In January 2016, environmental clearance approach will be decided. At the February Board meeting, staff will present HMF evaluation criteria. 	<ul style="list-style-type: none"> Will assess schedule performance once approach is finalized. If the environmental approach is delayed beyond January 2016, overall schedule will be impacted.
Bakersfield F St. Station Alignment	<ul style="list-style-type: none"> Technical reports and Administrative Draft for F Street evaluation under development. Design/Build Contractor for CP 2/3 now preparing environmental re-exam for alternative technical concepts. 	<ul style="list-style-type: none"> On-going field biological and cultural surveys. Continuing outreach, community and agency meetings.
Bakersfield to Palmdale	<ul style="list-style-type: none"> The Supplemental Alternatives Analysis will be shared with the Board Spring 2016. Conducting environmental technical studies. 	<ul style="list-style-type: none"> Defining maintenance and operations strategy/locations for clearance. Developing environmental document to eventually select a Preferred Alternative. Identifying third-party required agreements.

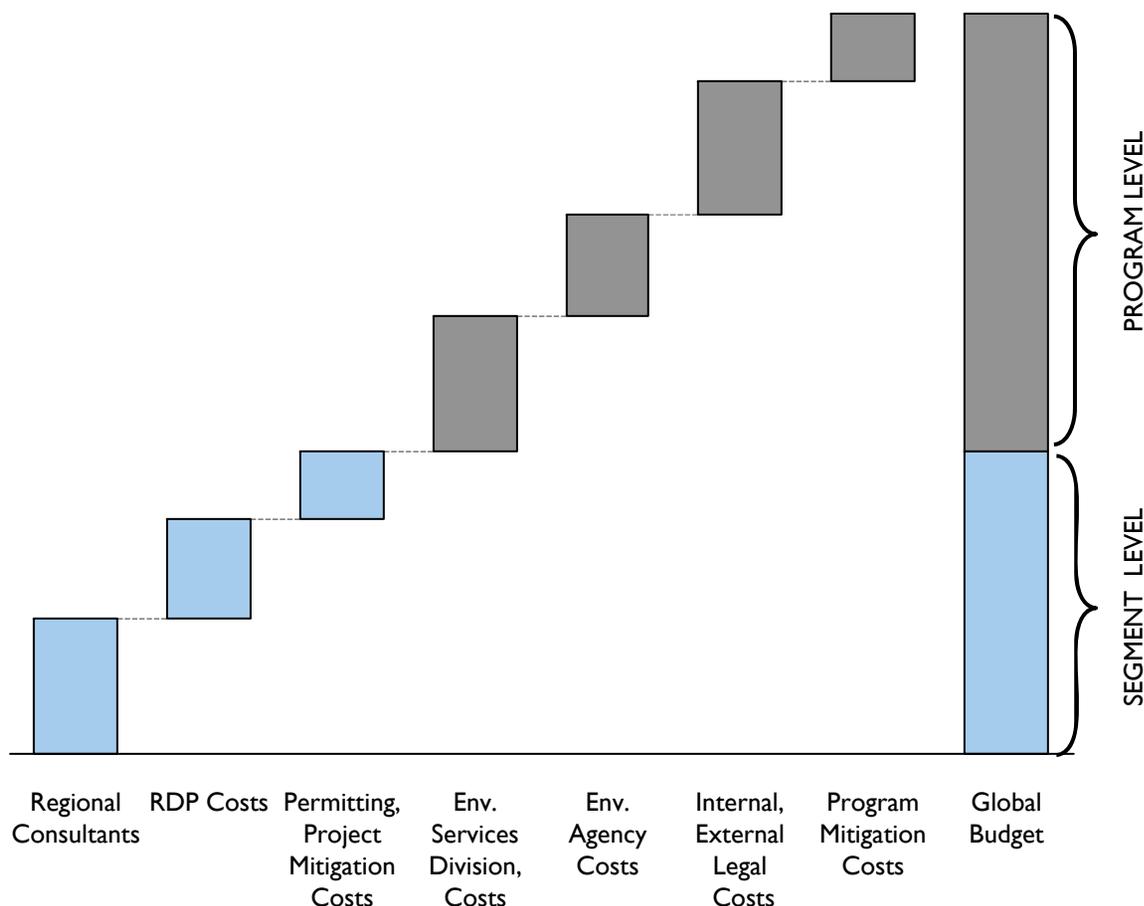
Environmental Milestones Schedule (to ROD)

Information through November 2015

Segment	Progress to Date	Next Steps
Palmdale to Burbank	<ul style="list-style-type: none"> Conducting environmental technical studies. Kicking-off station area planning in Burbank and Palmdale. With approval from the US Forest Service, geotechnical investigative work has begun in Angeles National Forest. 	<ul style="list-style-type: none"> Completing station and station area planning. Developing environmental document to eventually select a Preferred Alternative. Completing technical studies in winter 2016.
Burbank to LA	<ul style="list-style-type: none"> The Supplemental Alternatives Analysis will be shared with the Board Spring 2016. Technical baseline studies are underway. 	<ul style="list-style-type: none"> Completing station and station area planning for Los Angeles Union Station. Developing environmental document to eventually select a Preferred Alternative.
LA to Anaheim	<ul style="list-style-type: none"> The Supplemental Alternatives Analysis will be shared with the Board Spring 2016. Technical baseline studies are underway. 	<ul style="list-style-type: none"> Completing station planning, option evaluation and selection in Spring 2016. Developing environmental document to eventually select a Preferred Alternative.

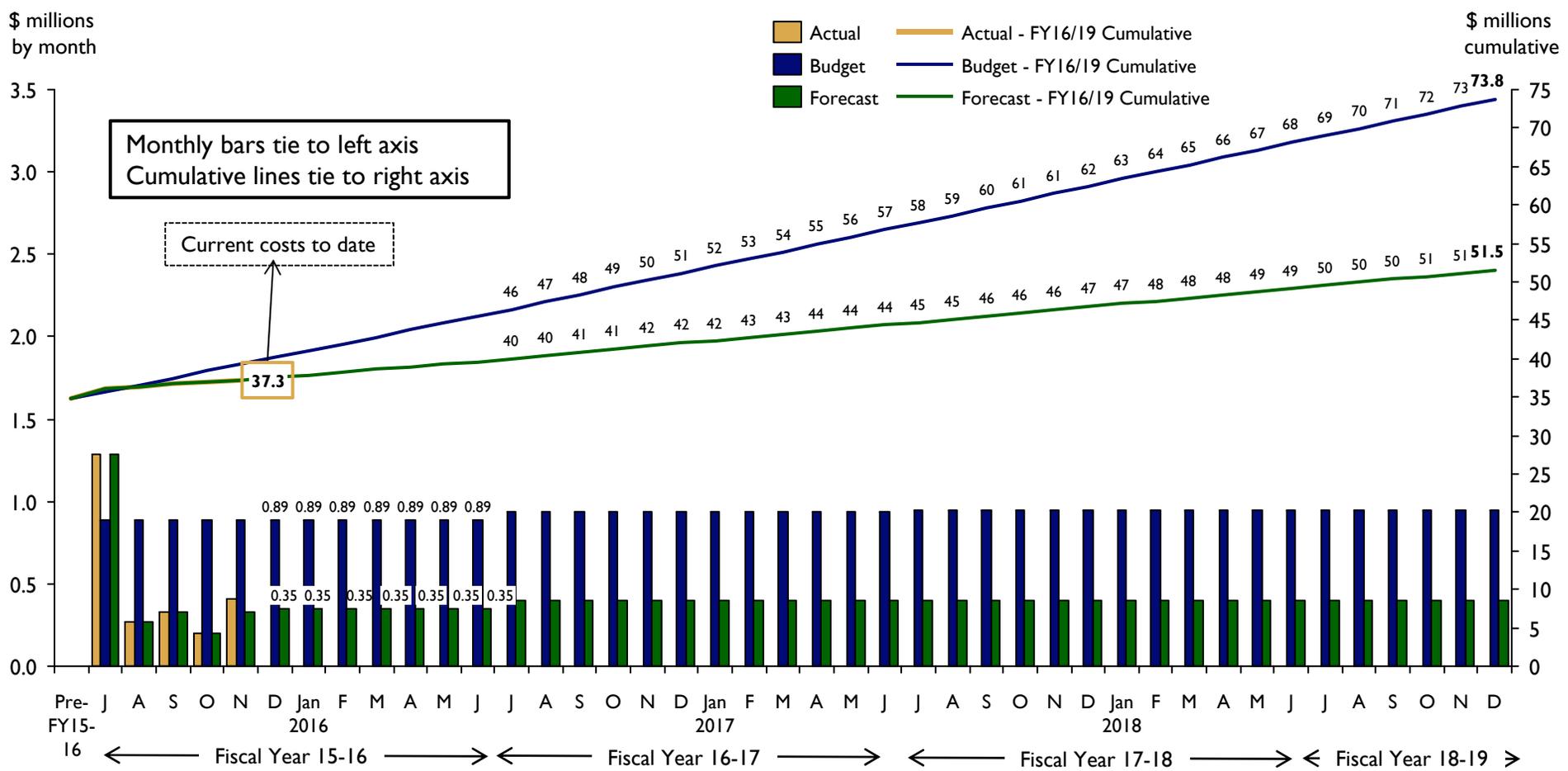
Global Environmental Budget includes activities involved in the scope at the program and segment levels

Cost Categories for Scope and Budget Definition



- ### Cost Categories
- **Regional consultants** costs include project management, outreach, engineering and environmental activities.
 - **RDP costs** include management, coordination, and technical reviews.
 - **Permitting and project mitigation costs** include obtaining permits required for construction and implementing project-level mitigation commitments.
 - **Authority costs** reflect management and staff costs for overseeing environmental program delivery.
 - **Environmental agency costs** are costs for agency staff to attend meetings, review technical reports, and provide technical guidance.
 - **Legal costs** are costs associated with in-house and outside legal reviews.
 - **Program mitigation costs** for costs associated with implementing EIR/EIS program-level mitigation commitments.

Program Level Budget



Environmental Milestones Schedule (to ROD)

Information through November 2015¹

	Segment	Progress	Purpose & Need Statement		Alternatives Analysis		Initial Preferred Alternative		Draft EIS		Final EIS / ROD / Permitting		Date EIR/EIS To Be Completed	
			Last Month	Current Month	Last Month	Current Month	Last Month	Current Month	Last Month	Current Month	Last Month	Current Month	Original Target	Revised Target
1	San Francisco to San Jose	Plan Forecast % Complete	Mar-16 Dec-15 65%	Mar-16 Feb-16 65%	Complete Complete 100%	Complete Complete 100%	Jul-16 Jul-16 7%	Jul-16 Jul-16 7%	Jan-17 Jan-17 7%	Jan-17 Jan-17 7%	Nov-17 Nov-17 0%	Nov-17 Nov-17 0%	Nov-17	No Change
2	San Jose to CV Wye	Plan Forecast % Complete	Dec-15 Dec-15 40%	Dec-15 Feb-16 40%	Apr-16 Apr-16 50%	Checkpoint B completed 100%	Sep-16 Sep-16 10%	Sep-16 Sep-16 10%	Feb-17 Dec-16 10%	Feb-17 Dec-16 10%	Nov-17 Nov-17 0%	Nov-17 Nov-17 0%	Nov-17	No Change
3	Central Valley Wye (M-F)	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Sep-15 Nov-15 50%	Sep-15 Feb-16 60%	Feb-16 Feb-16 30%	Feb-16 Nov-16 0%	Dec-16 Dec-16 0%	Dec-16 Oct-17 0%	Dec-16	Oct-17
4	CV Electrical Interconnections ²	Plan Forecast % Complete	Jan-16 Jan-16 10%	Completed with MF/FB EIR/EIS 100%	Mar-16 Mar-16 10%	Completed with MF/FB EIR/EIS 100%	Jul-16 Jul-16 0%	Jul-16 Aug-16 80%	Nov-16 Nov-16 0%	Nov-16 Nov-16 0%	Oct-17 Oct-17 0%	Oct-17 Oct-17 0%	Oct-17	No Change
5	HMF	Plan Forecast % Complete	Sep-15 Jan-16 60%	Completed with MF/FB EIR/EIS 100%	Complete Complete 100%	Completed with MF/FB EIR/EIS 100%	Apr-16 Apr-16 0%	Apr-16 Apr-16 0%	Sep-16 Sep-16 0%	Sep-16 Sep-16 0%	May-17 May-17 0%	May-17 May-17 0%	May-17	No Change
6	Bakersfield F Street Alignment (F-B)	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	Complete Complete 100%	May-16 May-16 15%	May-16 May-16 15%	Jul-16 Jul-16 5%	Jul-16 Jul-16 5%	Dec-16 Dec-16 0%	Dec-16 Jan-17 0%	Dec-16	Jan-17
7	Bakersfield to Palmdale ³	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Jan-16 Jan-16 80%	Jan-16 Jan-16 80%	Oct-16 Oct-16 15%	Oct-16 Oct-16 15%	Feb-17 Feb-17 5%	Feb-17 Feb-17 5%	Nov-17 Nov-17 0%	Nov-17 Nov-17 0%	Nov-17	No Change
8	Palmdale to Burbank ³	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Jun-15 Jun-15 100%	Complete Complete 100%	Aug-16 Aug-16 25%	Aug-16 Aug-16 25%	Mar-17 Mar-17 15%	Mar-17 Mar-17 15%	Nov-17 Nov-17 0%	Nov-17 Nov-17 0%	Nov-17	No Change
9	Burbank to LA	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Jan-16 Jan-16 75%	Jan-16 Jan-16 90%	Mar-17 Oct-16 5%	Mar-17 Oct-16 5%	Jun-17 Jun-17 5%	Jun-17 Jun-17 5%	Nov-17 Nov-17 0%	Nov-17 Nov-17 0%	Nov-17	No Change
10	LA to Anaheim	Plan Forecast % Complete	Complete Complete 100%	Complete Complete 100%	Jan-16 Jan-16 80%	Jan-16 Jan-16 85%	Mar-17 Oct-16 15%	Mar-17 Oct-16 15%	Jun-17 Jun-17 5%	Jun-17 Jun-17 5%	Nov-17 Nov-17 0%	Nov-17 Nov-17 0%	Nov-17	No Change

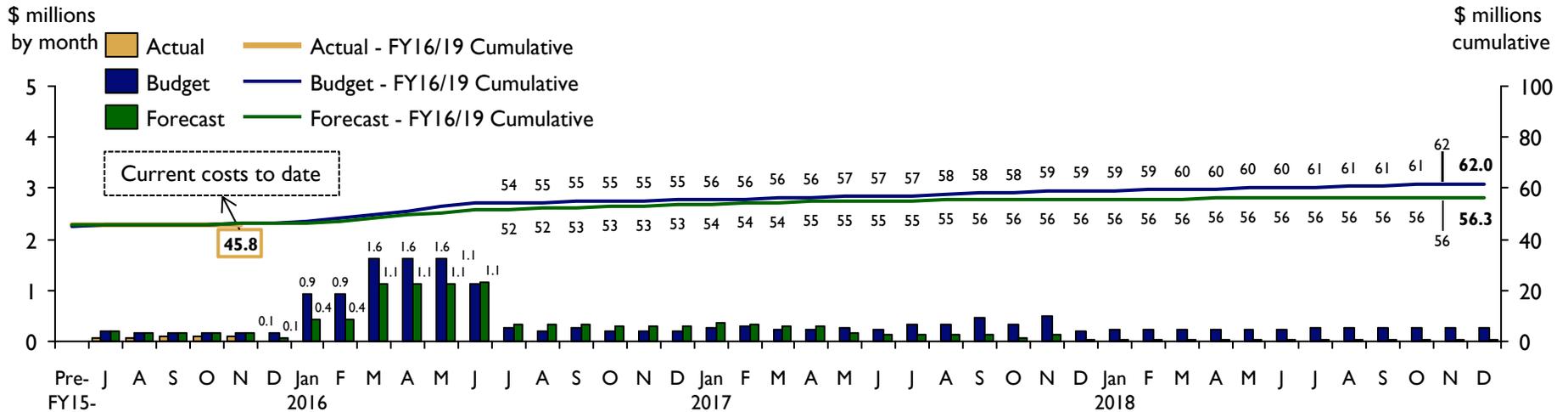
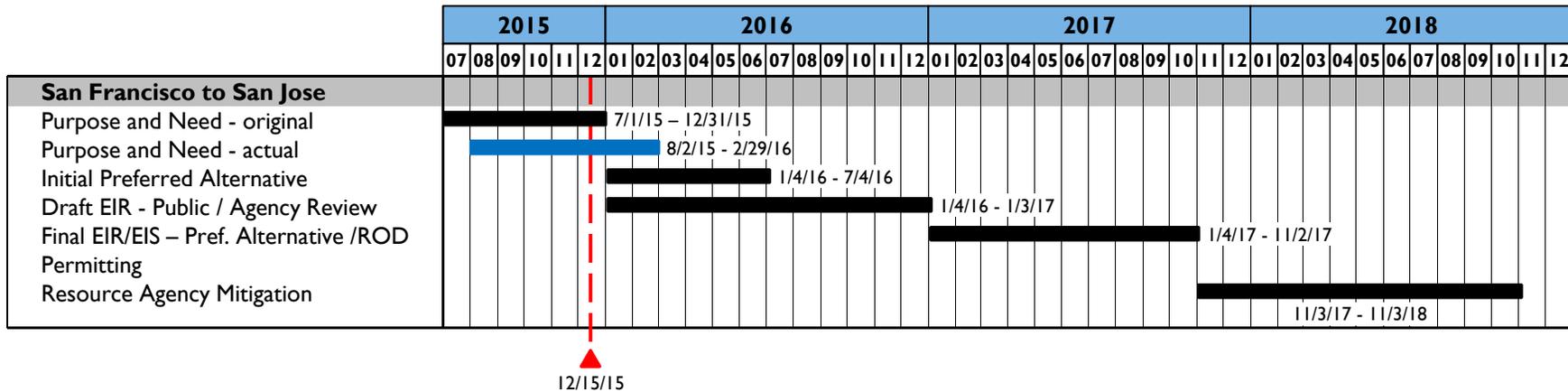
- Dates identified in red indicate change from previous month.
- Schedule reflects master plan for testing and commissioning of the HSR train; dates are subject to change pending Authority decision regarding type of environmental documentation needed.
- For Bakersfield-Palmdale and Palmdale-Burbank, the Plan dates have been revised for the Identification of the Preferred Alternative based on latest accepted baseline schedule.

Environmental Milestone Schedule (to ROD)

Information through November 2015

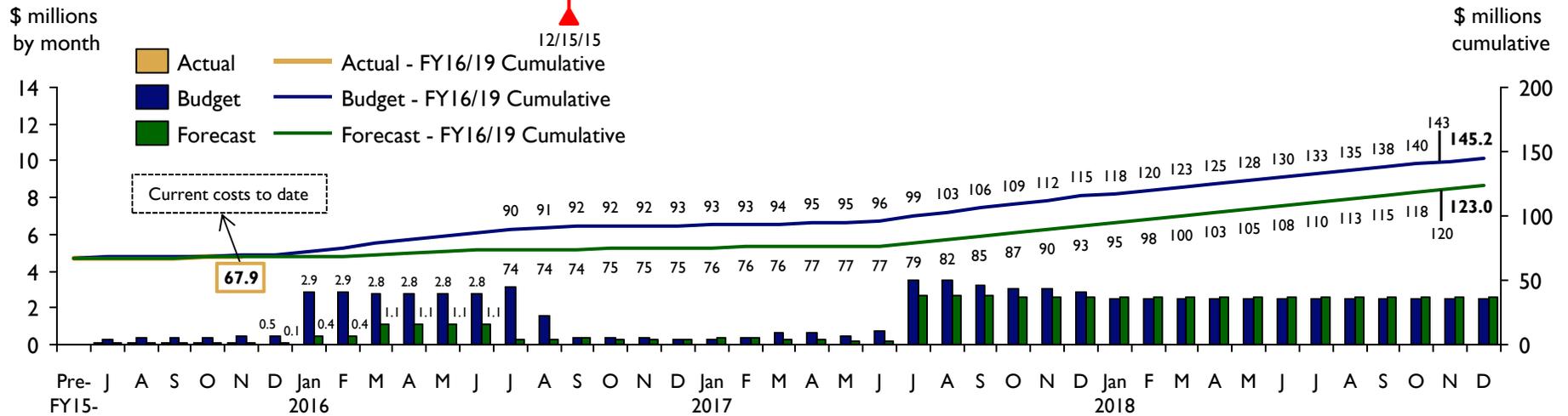
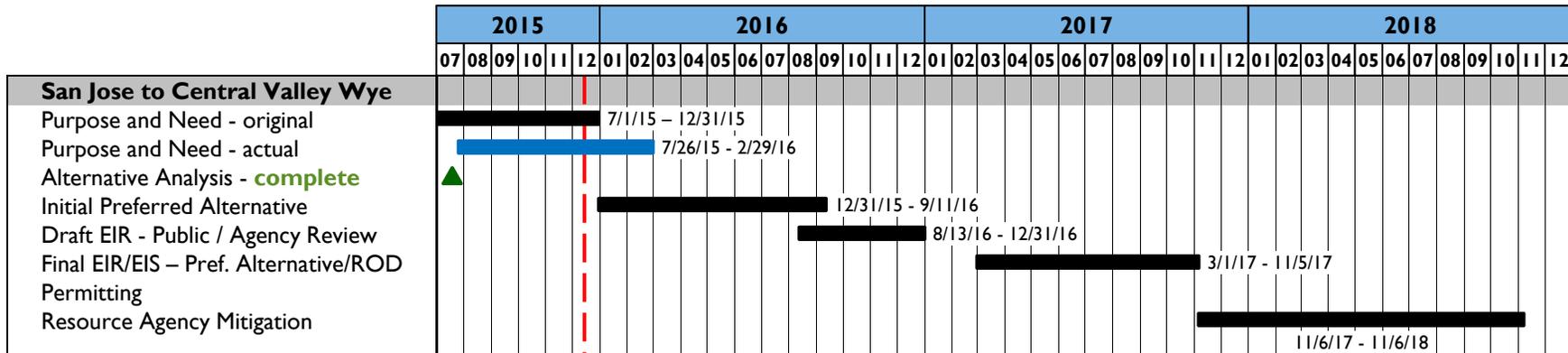
Segment	Schedule Status, Delay, and Mitigation Strategies
1 San Francisco to San Jose	<p>Current Delay for Achieving Purpose & Need Milestone Rationale for Delay: Purpose & Need delay to February 2016 resulting from ongoing blended project definition and coordination with Caltrain. Consequence: Delay will not change schedule or cost of successor activities or milestones. Other schedule efficiencies provide schedule float for this activity (e.g., definition of range of alternatives). Mitigation: No schedule mitigation is required.</p>
2 San Jose to CV Wye	<p>Current Delay for Achieving Purpose & Need Milestone Rationale for Delay: Purpose & Need delay to February 2016 resulting from ongoing project definition activities. Consequence: Delay will not change schedule or cost of successor activities or milestones. Other schedule efficiencies provide schedule float for this activity (e.g., definition of range of alternatives). Mitigation: No schedule mitigation is required.</p>
3 Central Valley Wye (M–F)	<p>Current Delay for Achieving Initial Preferred Alternative Milestone Rationale for Delay: Identification of preferred alternative delay because of ongoing technical review and coordination with stakeholders, USEPA and USACE. Consequence: Release of the Draft and Final EIR/EIS will be delayed by nine months at this time. Authority and RDP are reassessing costs. Mitigation: Authority staff to resolve issue with recommendation to the Authority Board in Winter/Spring 2016.</p>
4 CV Electrical Interconnections	<p>Current Delay for Identifying Initial Preferred Alternative Milestone Rationale for Delay: Environmental clearance approach is under review based on PG&E and CPUC requirements. Consequence: Identification of the initial preferred alternative will be delayed by one month. Mitigation: Schedule to be reviewed to compress activities to achieve original October 2017 ROD deadline.</p>
5 HMF	<p>No Delay Forecast at this Time December Environmental Milestone Schedule (EMS) report should have reported Purpose & Need and Alternative Analysis milestones have been completed. Environmental clearance approach remains under review.</p>
6 Bakersfield F Street Alignment (F–B)	<p>Current Delay for Achieving Record of Decision Milestone Rationale for Delay: Schedule for submittal of Hazardous Materials/Wastes Technical Report has been delayed because of need to identify a backup traction-powered substation; additional field work is needed. Consequence: At this time, the ROD date has slipped by one month. Mitigation: Schedule to be reviewed to compress activities to achieve original December 2016 ROD deadline.</p>
7 Bakersfield to Palmdale	<p>No Delay Forecast at this Time</p>
8 Palmdale to Burbank	<p>No Delay Forecast at this Time</p>
9 Burbank to LA	<p>No Delay Forecast at this Time</p>
10 LA to Anaheim	<p>No Delay Forecast at this Time</p>

San Francisco to San Jose



Source: Based on actual costs and future estimates for the RCs and RDP.

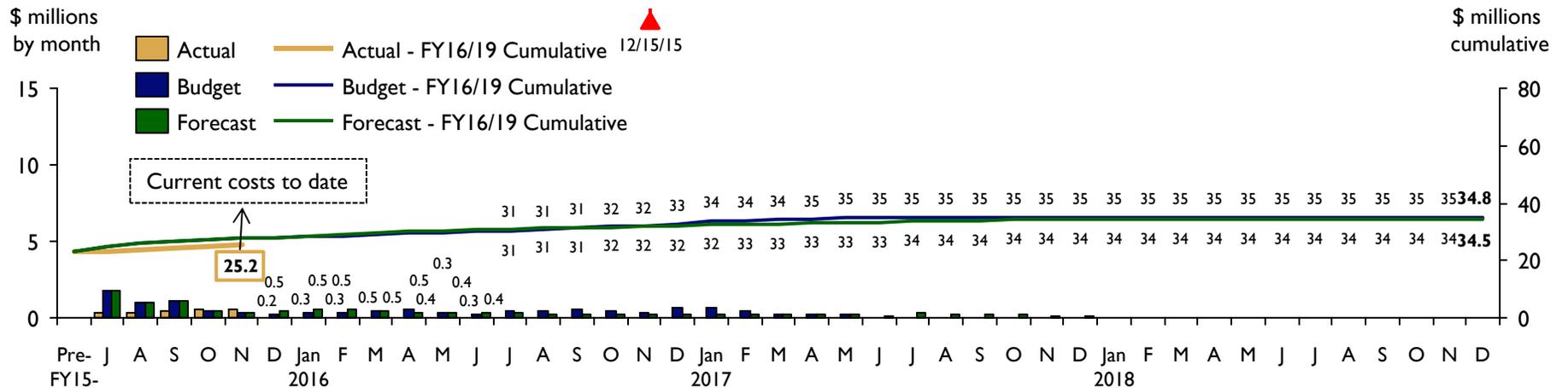
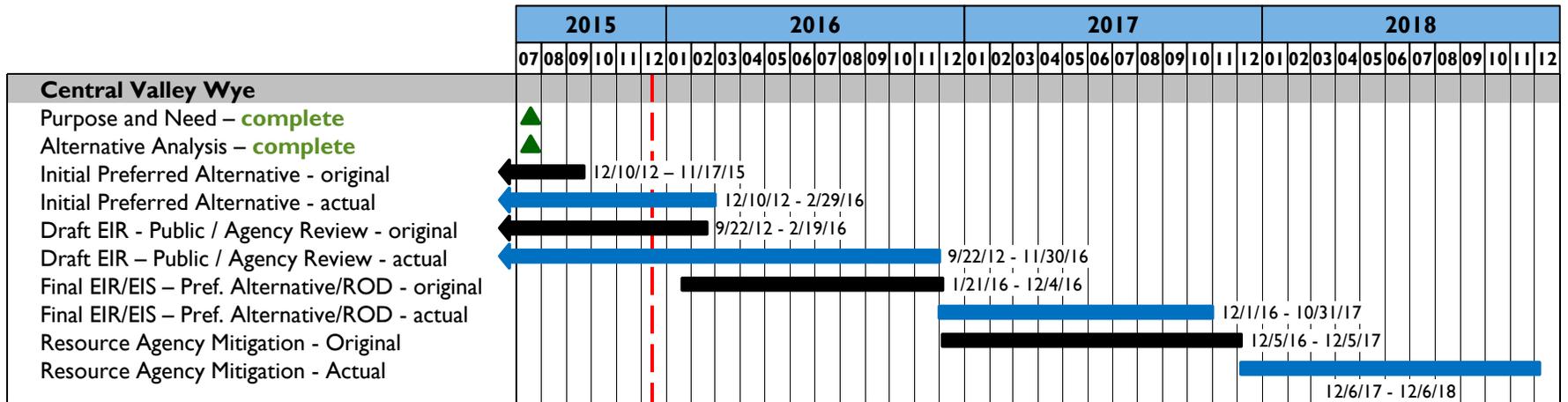
San Jose to Central Valley Wye



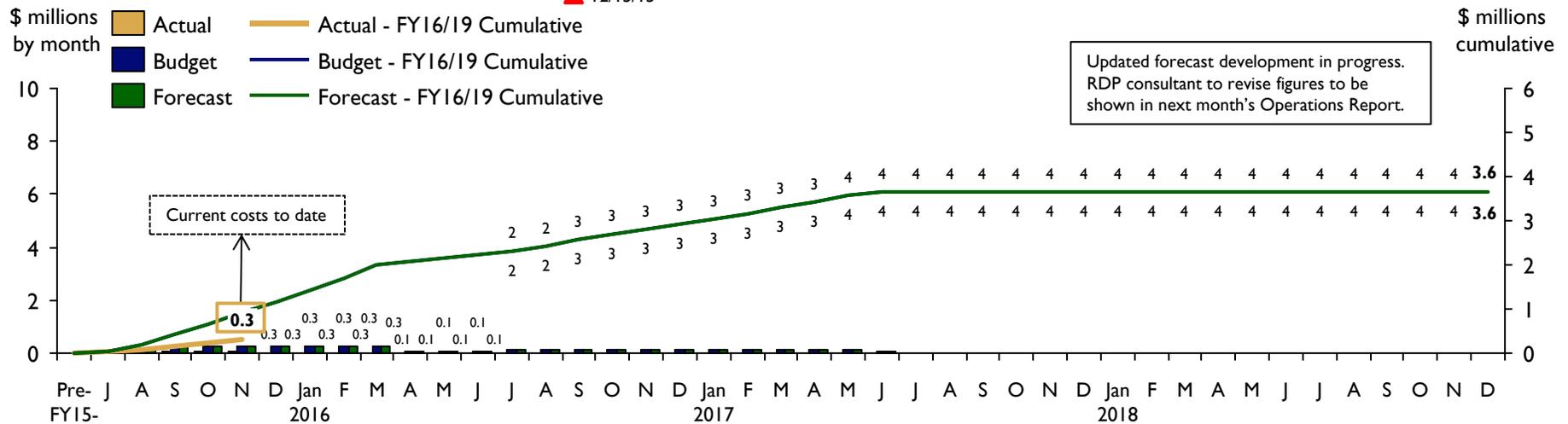
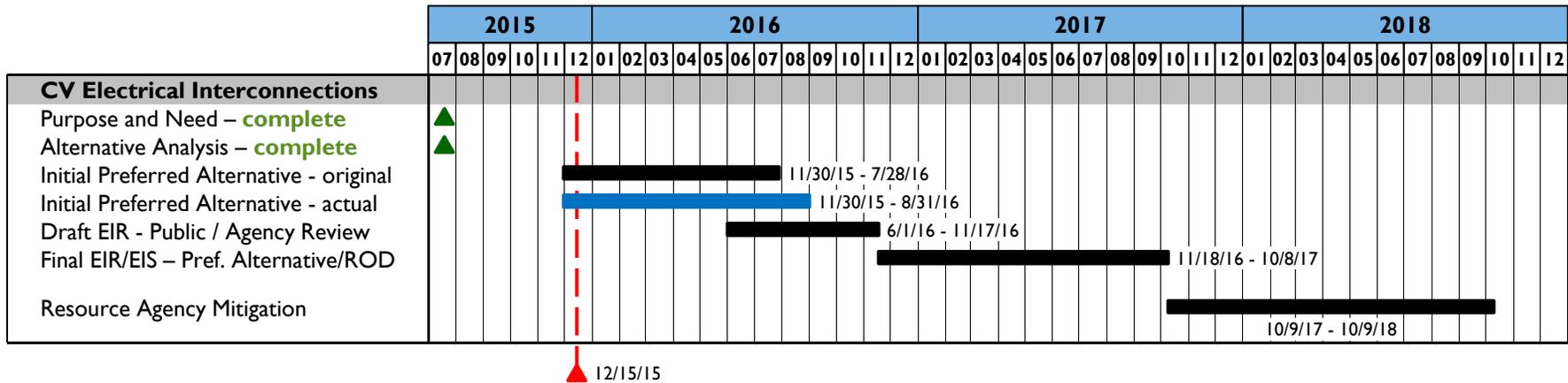
- Notes:
- 1) All estimates are preliminary and subject to change.
 - 2) July – November 2015 actuals for RDP only. Forecast based on December 2015 estimate through Dec. 2017.
 - 3) Habitat Mitigation included.

Source: Based on actual costs and future estimates for the RC and RDP.

Central Valley Wye



Central Valley Electrical Interconnections

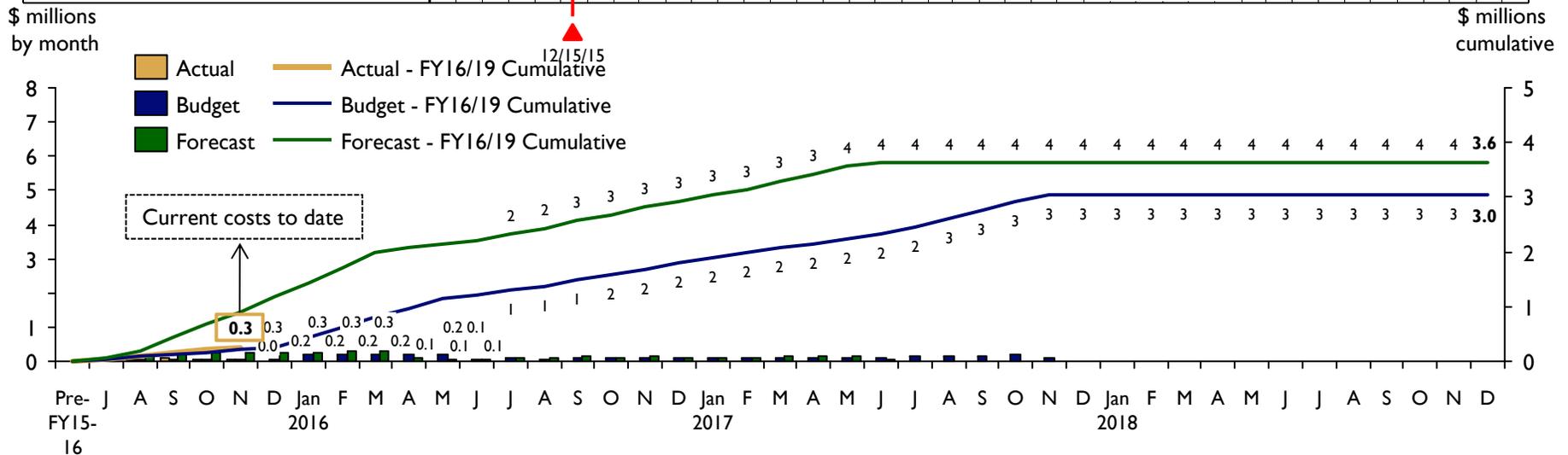
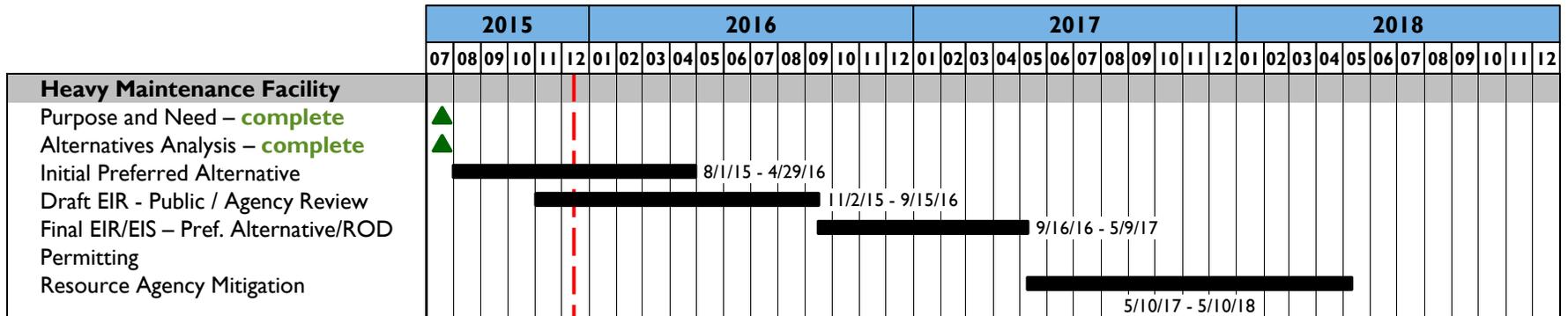


Notes:

- 1) All estimates are preliminary and subject to change. Environmental clearance approach under review.
- 2) At this time, no habitat mitigation assumed in estimate.
- 3) Includes actual RDP costs thru Nov. 2015; forecast includes RDP and RC Dec. 2015 through Dec. 2018.
- 4) Purpose and Need & Alternatives analysis completed prior to July 1, 2015.

Source: Based on actual costs and future estimates for the RC and RDP.

Heavy Maintenance Facility



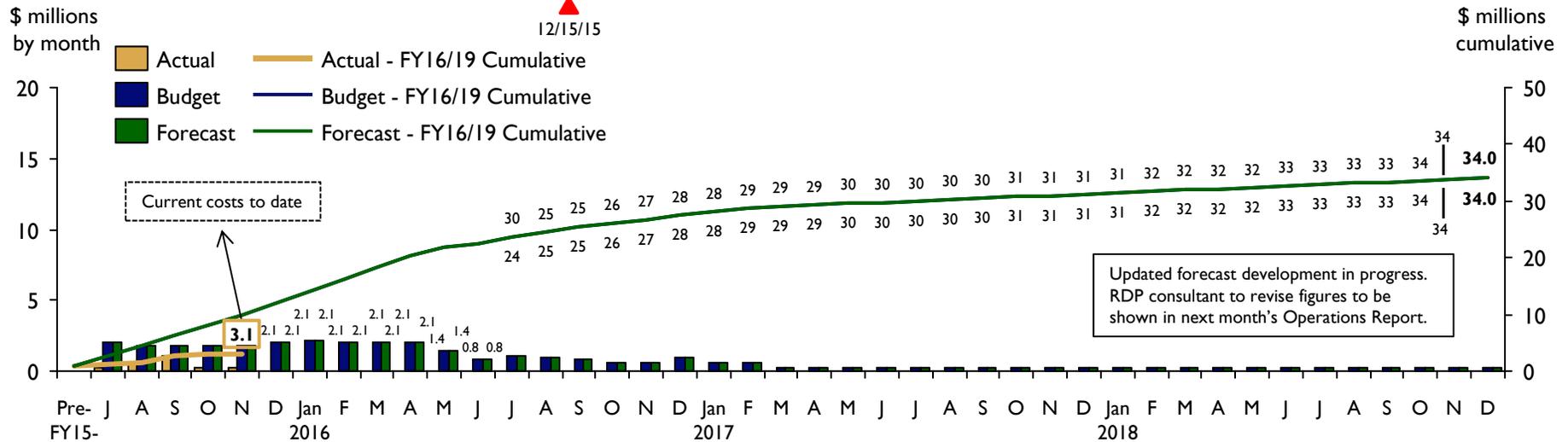
Notes:

- 1) All estimates are preliminary and subject to change.
- 2) Environmental clearance approach under review.
- 3) At this time, no habitat mitigation assumed in estimate.
- 4) Includes actual RDP costs thru Nov. 2015; forecast includes RDP and RC Dec. 2015 through Dec. 2018.
- 5) Purpose and Need & Alternatives analysis completed prior to July 1, 2015.

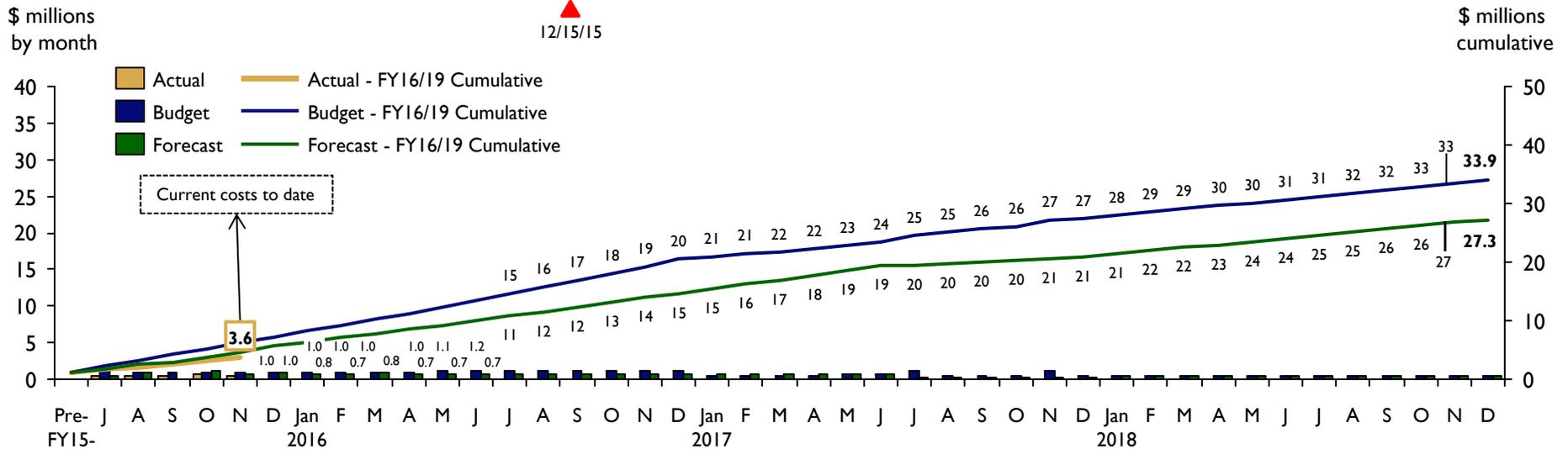
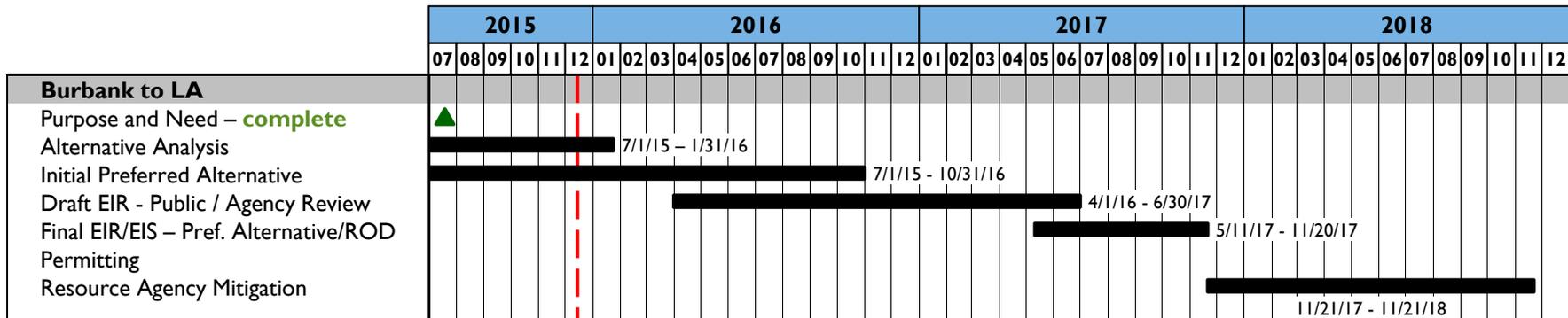
Source: Based on actual costs and future estimates for the RC and RDP.

Bakersfield F Street Station Alignment

	2015			2016												2017												2018																				
	07	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12						
Bakersfield F Street Alignment																																																
Purpose and Need – complete	▲																																															
Alternative Analysis – complete	▲																																															
Initial Preferred Alternative	7/1/15 - 5/10/16																																															
Draft EIR - Public / Agency Review	7/7/15 - 7/12/16																																															
Final EIR/EIS – Pref. Alternative/ROD	6/21/16 - 12/31/16																																															
Permitting																																																
Resource Agency Mitigation	1/1/17 - 1/1/18																																															



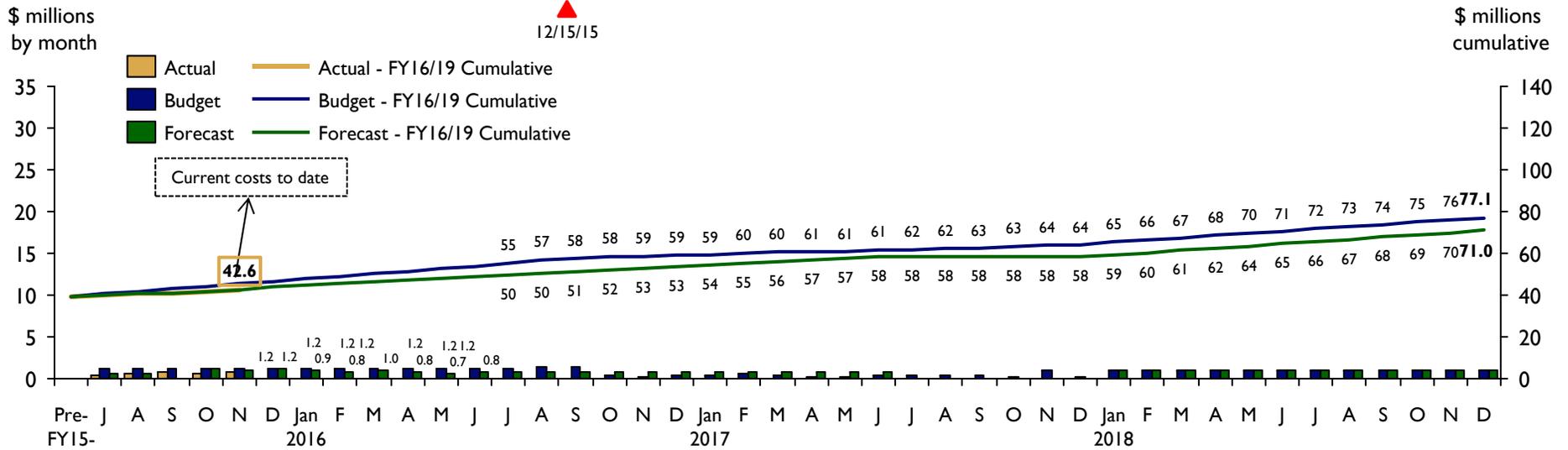
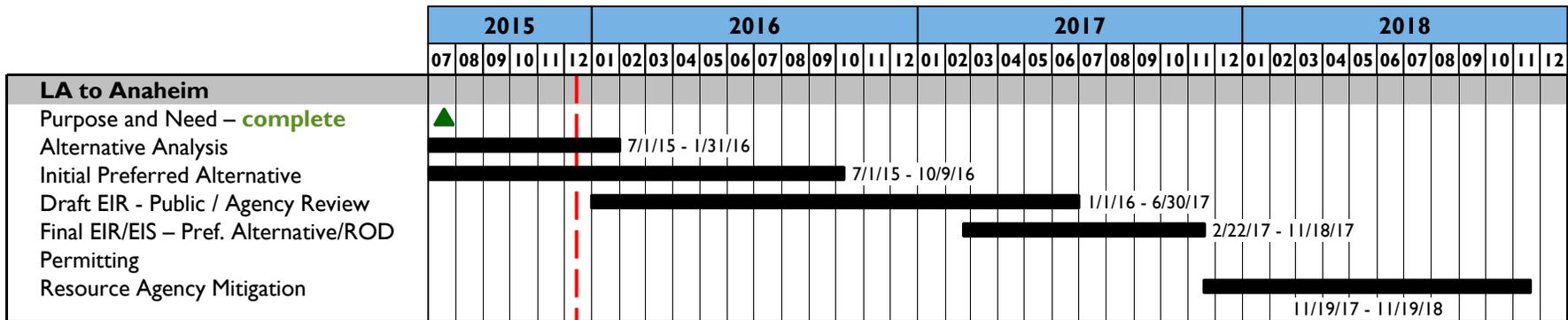
Burbank to LA



- Notes:
- 1) All estimates are preliminary and subject to change.
 - 2) Habitat Mitigation included.
 - 3) Purpose and Need analysis completed prior to July 1, 2015.

Source: Based on actual costs and future estimates for the RCs and RDP.

LA to Anaheim



4-month milestones look-ahead – all segments/projects

Milestone	Segment	Due Date	% Completion (Date Completed)	Status
Initial Preferred Alternative	Central Valley Wye	February 2016 ¹	60%	Late - Need LEDPA determination
Alternatives Analysis	Bakersfield to Palmdale	January 2016 ²	80%	On Target
Alternatives Analysis	Burbank to LA	January 2016 ²	90%	On Target
Alternatives Analysis	LA to Anaheim	January 2016 ²	85%	On Target
Purpose & Need ³	HMF	January 2016	100% (MF: Sept 2012/ FB: June 2014)	On Target
Alternatives Analysis ⁴	Palmdale to Burbank	January 2016	100% (June 2015)	On Target

Notes:

¹Identification of the Initial Preferred Alternative is still under discussion with interested stakeholders and regulatory agencies.

²Alternatives Analysis for Bakersfield-Palmdale, Burbank-Los Angeles, and Los Angeles-Anaheim to be presented to Board in Spring 2016.

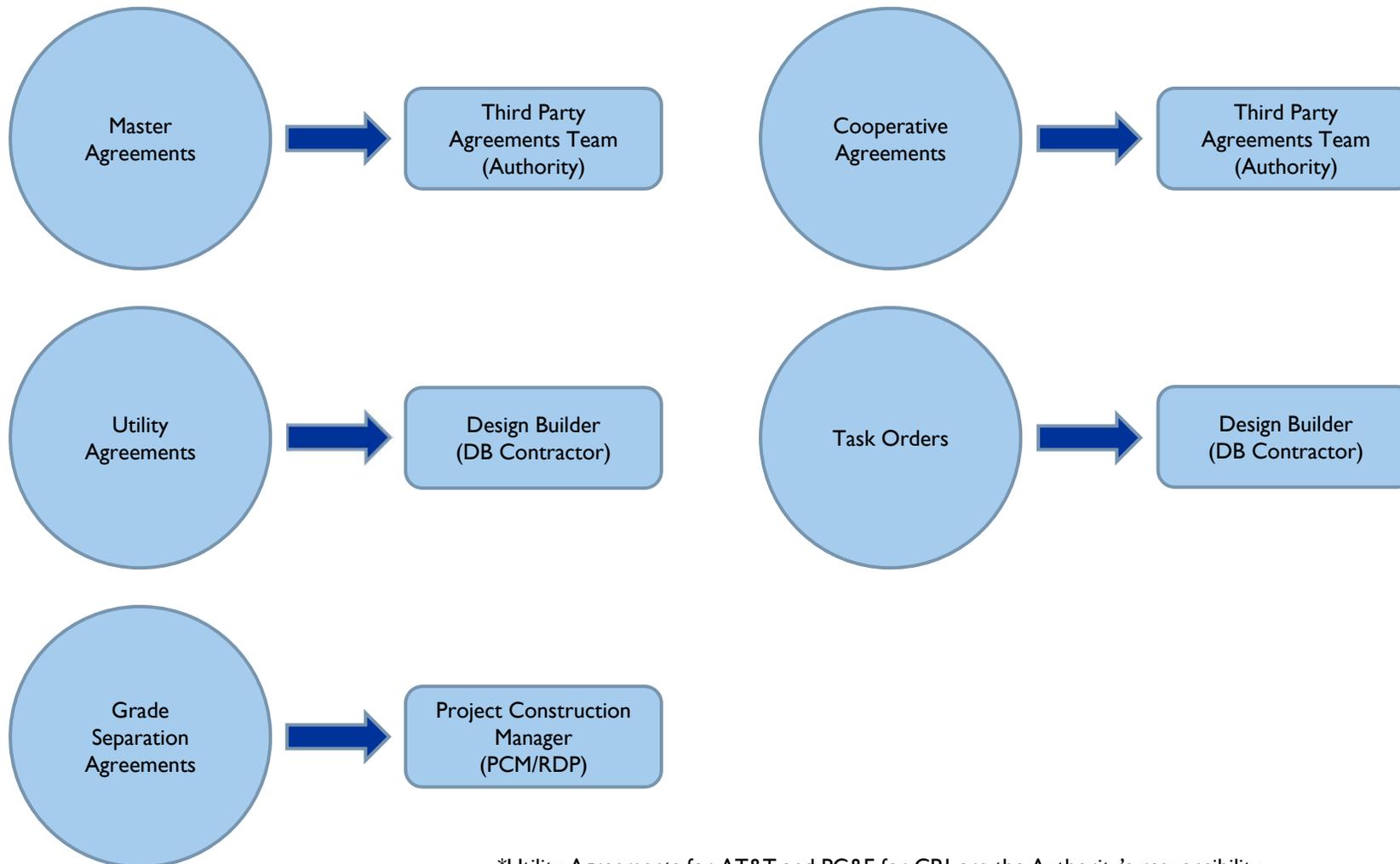
³HMF Purpose & Need documented as part of Merced to Fresno and Fresno to Bakersfield Final EIR/EIS documents.

⁴Palmdale to Burbank Supplemental Alternatives Analysis completed in Jun. 2015.

Agenda

- ▶ Operations Report Metrics
 - Executive Summary
 - Right of Way (ROW)
 - Environmental
 - Third-Party Agreements
 - Contract Management
 - Finance/Budget
 - Risk
 - Back-Up ROW Information

Categories of Agreements



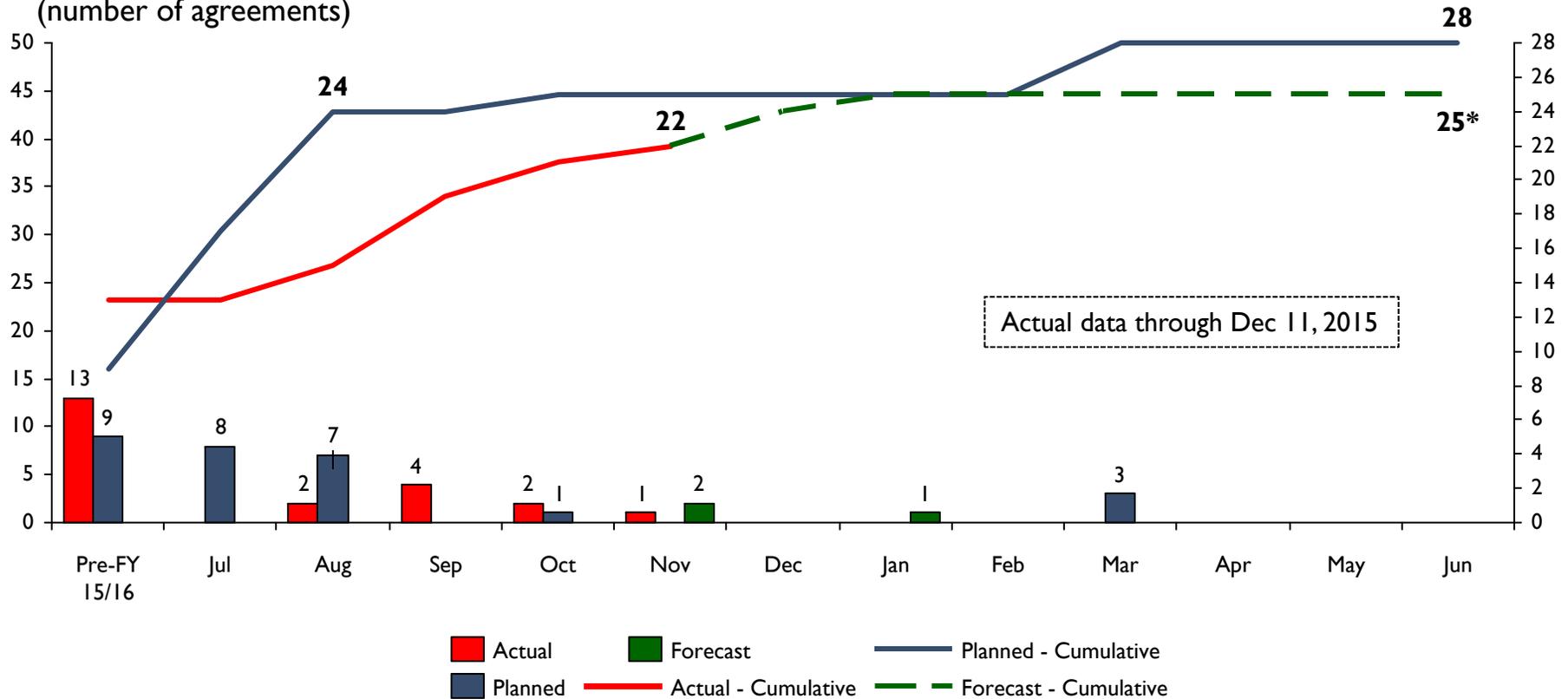
*Utility Agreements for AT&T and PG&E for CPI are the Authority's responsibility.

CP2-3 Third Party Agreements by Month

Plan vs. Actual vs. Forecast

CP2-3 Third Party Agreements (excluding Railroads)

(number of agreements)



Notes: 28 total CP2-3 agreements were previously expected to be executed

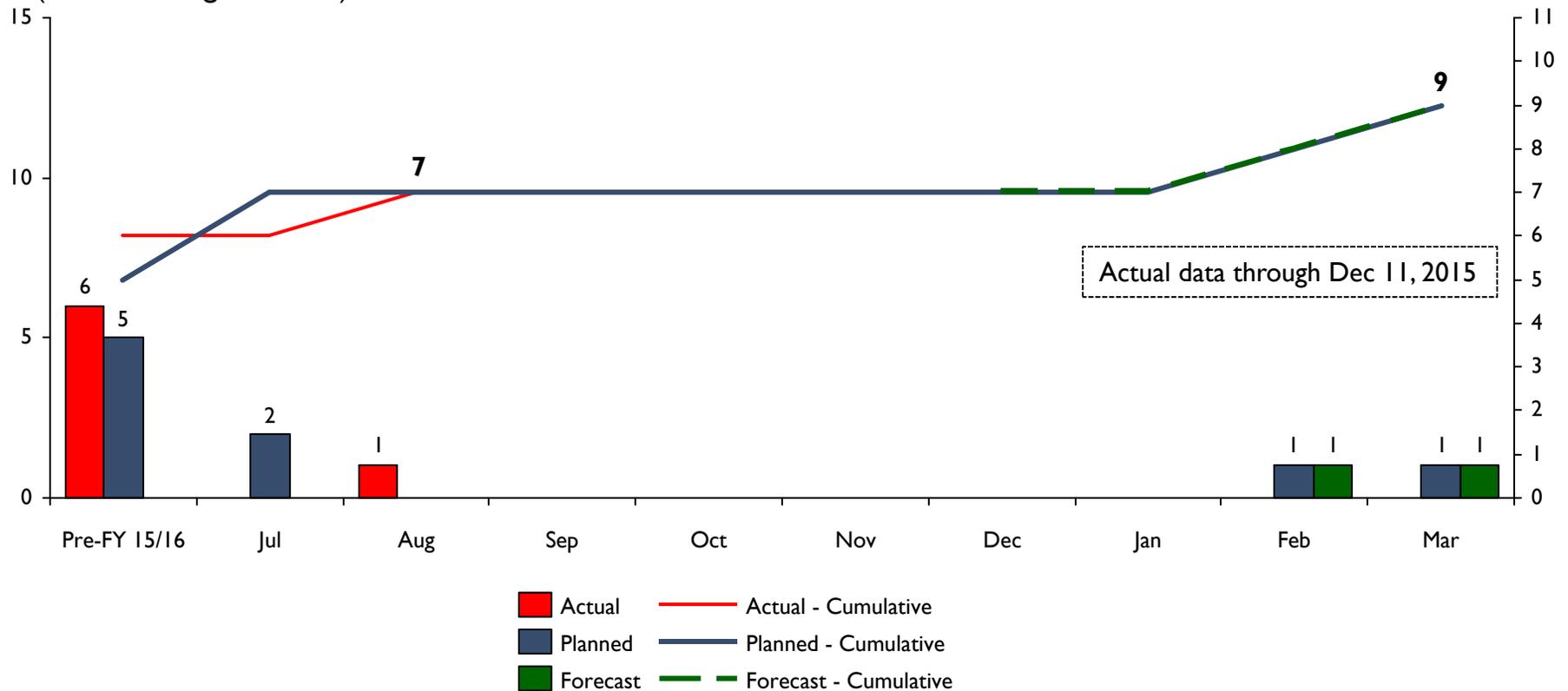
- Kings County, Angiola Water District, and Deer Creek Storm Water District agreements not expected to be executed

Railroad Third Party Agreements Separate from CP1 and CP2-3 by Month

Plan vs. Actual vs. Forecast

Railroads – Third Party Agreements Separate from CPI and CP2-3 DB Contracts

(number of agreements)



Notes: 9 total Railroad agreements to be executed. Execution is dependent on DB designs and Board Approval.

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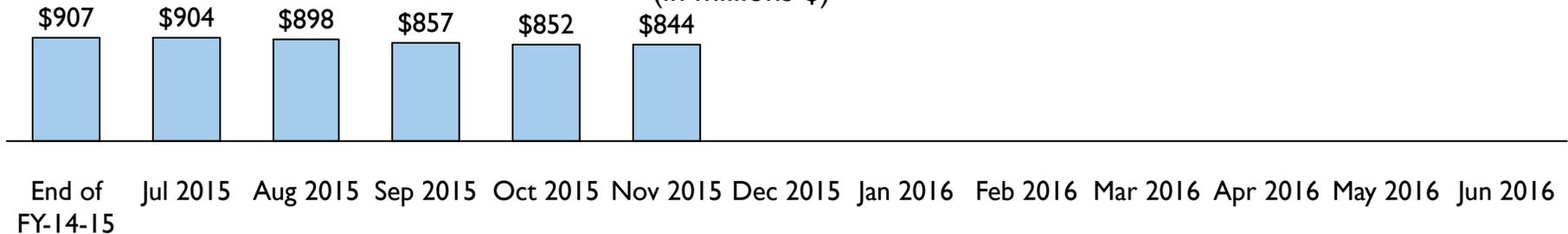
Contract Management Metrics - Context

- ▶ There are 2 contract management metrics included:
 - Contingency Value
 - This value is based on remaining contingency as a percentage of the remaining contract balance
 - Expenditure Schedule
 - Earned value refers to total invoices to date
 - Planned value refers to forecasted invoices to date
- ▶ Contract management metrics for CPI and CP2-3 are included
- ▶ Updates to the report will be made monthly
 - In October 2015, cut-off date for data reporting was adjusted to the end of the prior month

CP1 Contract Management – Contingency Value

CPI – Contract Balance Remaining

(in millions \$)

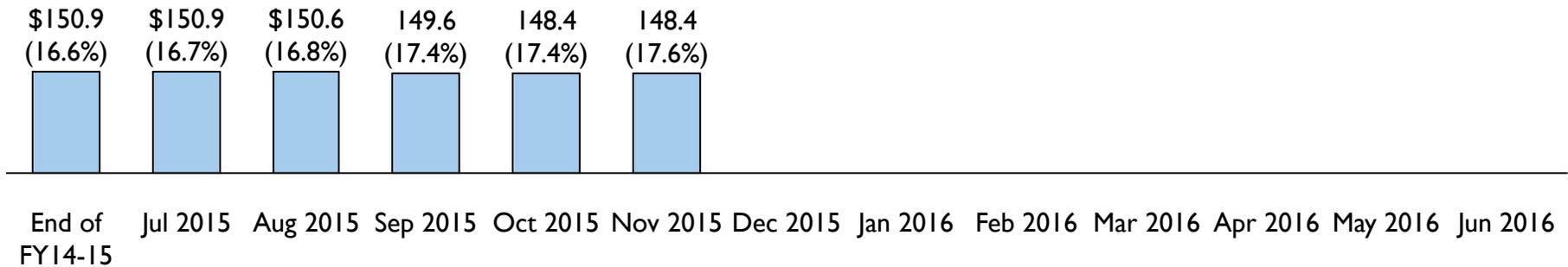


If remaining contingency against amount of contract / work left falls below 10%, corrective action may be necessary.

CPI – Contingency Balance Remaining

(millions \$)

(% of contract balance remaining)



Notes:

1. Contract balance only accounts for approved invoices in determining contract balance, so this number may not reconcile with "earned value" in schedule performance index metric

2. Based upon the amount of CP I work remaining, both the remaining contingency balance and the contingency percentage, measured against the contract balance remaining, fall within the established contingency envelope of the project

Source: December 15, 2015
CPI Performance Metric Report

CP1 Contract Management Raw Data: Contingency Value

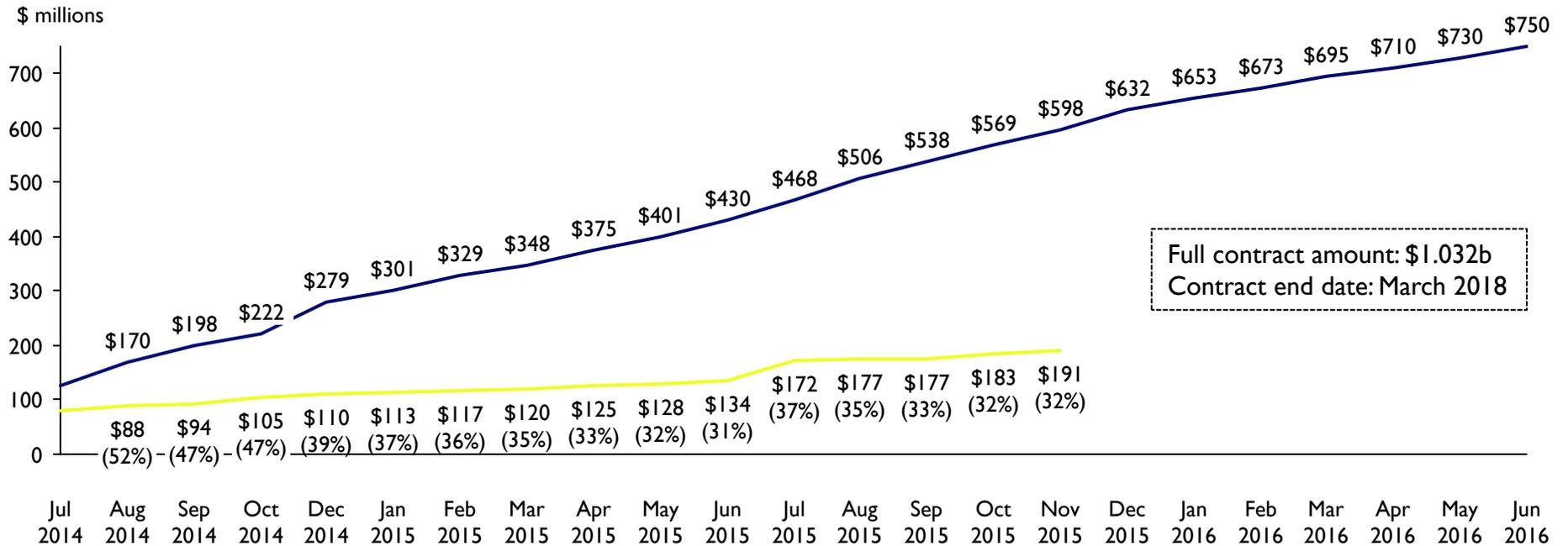
CPI – Contingency (millions \$)

	End of FY 14-15	July 2015	Aug 2015	Sept 2015	Oct 2015	Nov 2015	Dec 2015	Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	June 2016
Contract Balance Remaining	\$906.8m	\$904.2m	\$898.2m	\$857.4m	\$851.7m	\$843.9m							
Contingency	\$160m	\$160m	\$160m	\$160m	\$160m	\$160m							
Change Orders (from contingency)	\$9.1m	\$0	\$0.3m	\$1.0m	\$1.2m	\$0.02m							
Contingency Balance Remaining	\$150.9m	\$150.9m	\$150.6m	\$149.6m	\$148.4m	\$148.4m							
Contingency %	16.6%	16.7%	16.8%	17.4%	17.4%	17.6%							

Source: December 15, 2015
CPI Performance Metric Report

CP1 Contract Management – Schedule Performance Index

CPI Schedule – Total Planned Value of Contract Earned (in millions \$)



— Planned Value (forecasted value of contract earned)
— Earned Value/Invoiced to Date (actual value of contract earned)

Notes:

1. No report produced in November 2014
2. The increase in the CPI earned value during the August 2015 pay period (July 2015 data shown above) is primarily a result of revising the way the Contractor is compensated for administrative overhead incurred to date
3. Earned value flat from August to September 2015 because data reporting date was moved up in October 2015 creating a short period between data reporting dates in September and October 2015

Source: December 15, 2015
CPI Performance Metric Report

CP1 Contract Management Raw Data: Schedule Performance Index

CPI – Schedule (millions \$)

	End of FY 14-15	July 2015	Aug 2015	Sept 2015	Oct 2015	Nov 2015	Dec 2015	Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	June 2016
Earned Value/ Invoiced to Date	\$134.4m	\$171.5m	\$176.5m	\$176.5m	\$183.4m	\$191.2m							
Planned Value	\$430.3m	\$468.0m	\$505.8m	\$538.3m	\$568.9m	\$597.5m							
Schedule Performance Index	31%	37%	35%	33%	32%	32%							

Source: December 15, 2015
CPI Performance Metric Report

CP2-3 Contract Management – Contingency Value

CP2-3 – Contract Balance Remaining
(in millions \$)



If remaining contingency against amount of contract / work left falls below 10%, corrective action may be necessary.

CP2-3 – Contingency Balance Remaining
(millions \$)
(% of contract balance remaining)



Notes: Contract balance only accounts for approved invoices in determining contract balance, so this number may not reconcile with "earned value" in schedule performance index metric

Source: December 15, 2015
CPI Performance Metric Report

CP2-3 Contract Management Raw Data: Contingency Value

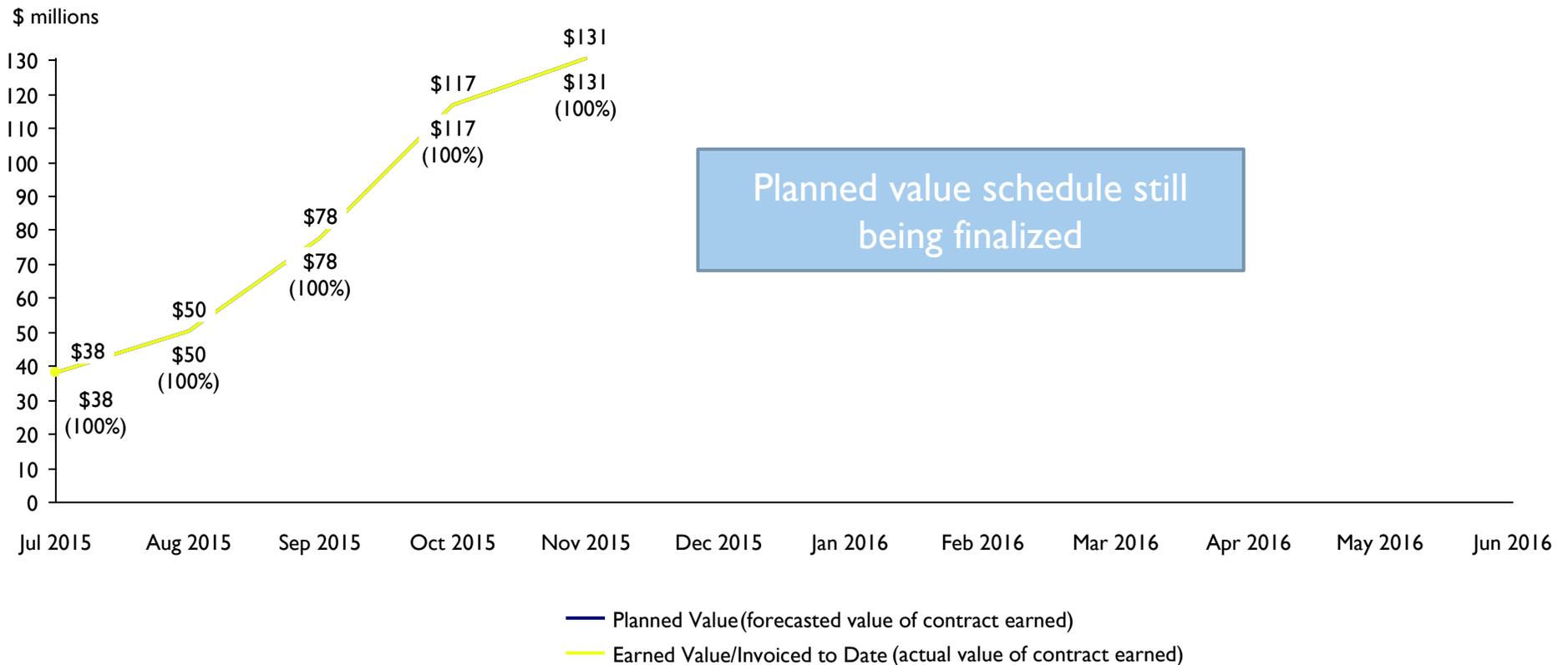
CP2-3 – Contingency (millions \$)

	July 2015	Aug 2015	Sept 2015	Oct 2015	Nov 2015	Dec 2015	Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	June 2016
Contract Balance Remaining	\$1,356m	\$1,345m	\$1,317m	\$1,278m	\$1,264m							
Contingency	\$261.2m	\$261.2m	\$261.2m	\$261.2m	\$261.2m							
Change Orders (from contingency)	\$0	\$0	\$0.3m	\$0	\$0.1m							
Contingency Balance Remaining	\$261.2m	\$261.2m	\$260.9m	\$260.9m	\$260.8m							
Contingency %	19.3%	19.4%	19.8%	20.4%	20.6%							

Source: December 15, 2015
CPI Performance Metric Report

CP2-3 Contract Management – Schedule Performance Index

CP2-3 Schedule – Total Planned Value of Contract Earned (in millions \$)



Notes: Total amount earned refers to progress on the schedule, not approved contract invoices

Source: December 15, 2015
CPI Performance Metric Report

CP2-3 Contract Management Raw Data: Schedule Performance Index

CP2-3 – Schedule (millions \$)

	July 2015	Aug 2015	Sept 2015	Oct 2015	Nov 2015	Dec 2015	Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	June 2016
Earned Value/ Invoiced to Date	\$38.1m	\$50.4m	\$77.7m	\$116.9m	\$130.6m							
Planned Value	\$38.1m	\$50.4m	\$77.7m	\$116.9m	\$130.6m							
Schedule Performance Index	100%	100%	100%	100%	100%							

Source: December 15, 2015
CPI Performance Metric Report

Agenda

- ▶ Operations Report Metrics
 - Executive Summary
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Finance/Budget Metrics – Context

- ▶ Metrics organized by:
 - Summary of current fiscal environment
 - FY 2015-16 finance/budget data, which includes ROW, planning, environmental and construction

- ▶ For FY 2015-16, this report presents:
 - Budget expenditures: based on FCP budget
 - Actual expenditures: incorporated each month
 - Forecasts: will shift each month and align with FY15-16 forecast from F&A Capital Outlay Report

- ▶ All data shown is at the end of each month
 - Numbers used reflect actual expenditures in the months they occur and may include adjustments from published versions of capital outlay reports
 - There is a 1-month lag to produce the F&A Capital Outlay Reports, which is the source of the data
 - For example, a July F&A Capital Outlay Report includes financial data through May

The Authority has spent 13.5% of FY15-16 budget, 35.3% of the ARRA Grant and 100% of FY 14/15 C&T funds

FY15-16 Expenditures* (as of November 2015)

Total appropriation includes some funding for Phase II planning and FY15/16 C&T creating a difference with the total budget below.

Total Appropriation	FY15-16 Budget		Expenditures Year to Date		Expenditures - % of Budget	
	Oct 31	Nov 30	Oct 31	Nov 30	Oct 31	Nov 30
\$7.292b	\$1.74b	\$1.74b	\$0.161b	\$0.235b	9%	13.5%

*F&A Capital Outlay Report, Jan 2016

Total Expenditures to Date* (as of November 2015)

ARRA expenditures are 35.3% of federal ARRA grant funds and 14.2% of \$6.34b total budget

	TOTAL		Planning		Construction	
	Budget	Expended	Budget	Expend to Date	Budget	Expend to Date
ARRA Grant*	\$2.553b	\$0.90b	\$0.322b	\$0.295b	\$2.231b	\$0.605b
FY10 Grant	\$0.928b	\$-	\$-	\$-	\$0.928b	\$-
PROP IA**	\$2.563b	\$0.133b	\$0.192b	\$0.133b	\$2.372b	\$-
LOCAL	\$0.052b	\$-	\$0.052b	\$-	\$-	\$-
C&T (FY14/15 only)*	\$0.250b	\$0.250b	\$0.059b	\$0.059b	\$0.191b	\$0.191b
Total	\$6.347b	\$1.283b	\$0.624b	\$0.487b	\$5.722b	\$0.796b

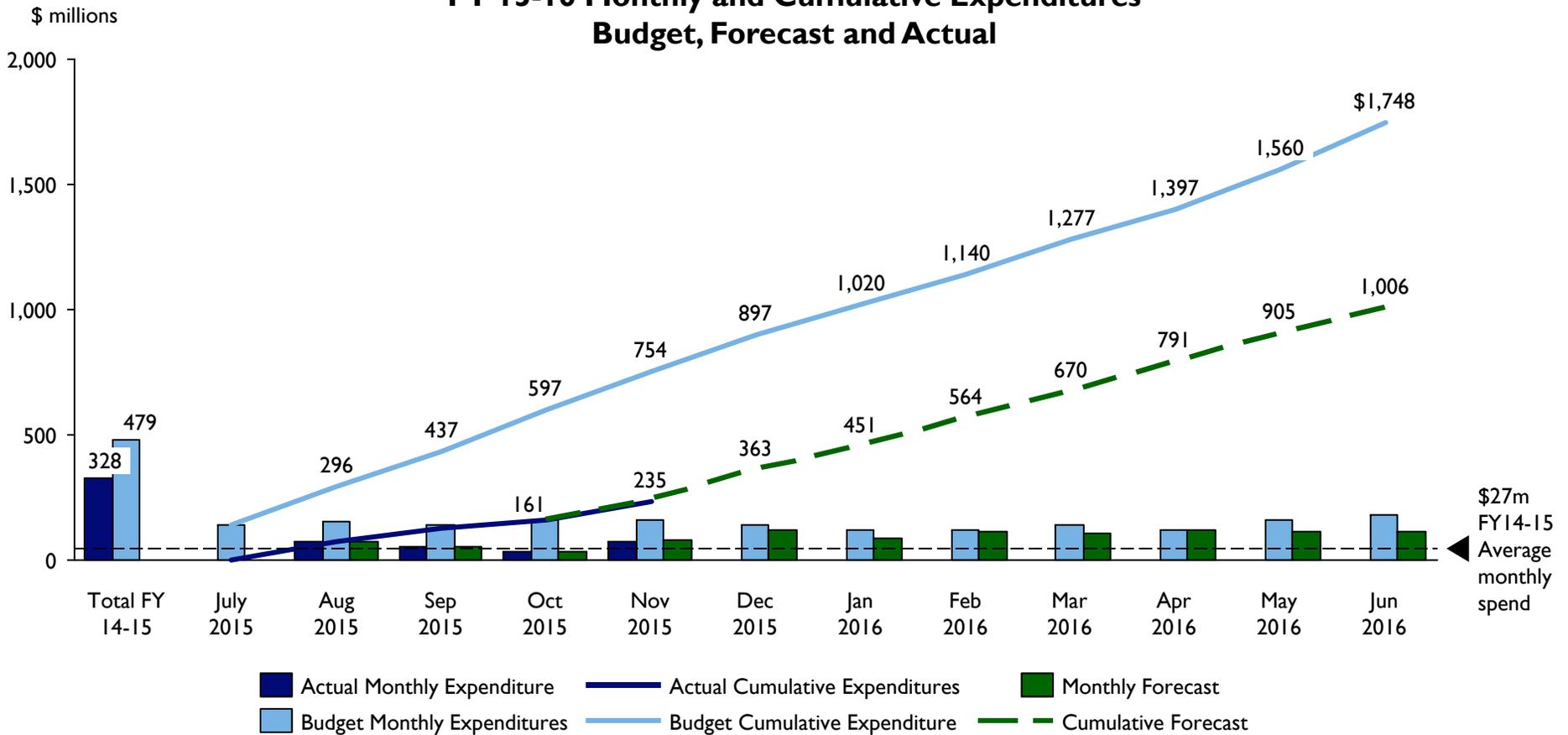
*Source: F&A Capital Outlay Report, January 2016 – balance subject to change due to pending approval of tapered match and federal reimbursements

**There is a total of \$2.8b in Prop IA appropriations, but the budgeted total excludes \$250m that were supplanted by C&T funds

Note: Numbers may not add due to rounding

Finance/Budget – FY15-16 Expenditures

FY 15-16 Monthly and Cumulative Expenditures Budget, Forecast and Actual



Source: F&A Capital Outlay Reports (Sept 2015 – Jan 2016)

Notes: Forecast data will shift each month (budget and forecasts only equal at outset of FY15-16)

- Expenditures for July-2015 were \$0 since invoices from vendors were not received by the monthly reporting deadline.

Finance/Budget Raw Data: Expenditures

FY14-15 Raw Data

	July 2014	Aug 2014	Sept 2014	Oct 2014	Nov 2014	Dec 2014	Jan 2015	Feb 2015	Mar 2015	Apr 2015	May 2015	June 2015
Total FY Budget	\$1.6b	\$1.6b	\$1.6b	\$1.6b	\$859m	\$859m	\$859m	\$522m	\$479m	\$479m	\$479m	\$479m
Expense to Date	\$24.7m	\$47.2m	\$66.9m	\$91.6m	\$119.0m	\$139.4 m	\$153.0m	\$174.4m	\$199.7m	\$218.3m	\$273.2m	\$327.6m
Monthly expenditures	\$24.7m	\$22.5m	\$19.7m	\$24.6m	\$27.4m	\$20.5m	\$13.6m	\$21.4m	\$25.3m	\$18.6m	\$54.9m	\$54.4m
Total FY Forecast	\$1.6b	\$1.5b	\$1.6b	\$838m	\$766m	\$728m	\$653m	\$522m	\$479m	\$416m	\$349m	\$336m

FY15-16 Raw Data

	July 2015	Aug 2015	Sept 2015	Oct 2015	Nov 2015	Dec 2015	Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	June 2016
Total FY Budget	\$1.7b	\$1.7b	\$1.7b	\$1.7b	\$1.7b							
Expense to Date	\$0	\$74.1m	\$125.5m	\$161.4m	\$234.5m							
Monthly expenditures	\$0	\$74.1m	\$51.4m	\$35.9m	\$73.2m							
Total FY Forecast	\$1.7b	\$1.7b	\$1.3b	\$1.0b	\$1.0b							

Source: F&A Capital Outlay Reports (Sept 2014 – Jan 2016)

Notes: Numbers may not add due to rounding; no July 2015 expenditures were received by the July-2015 reporting deadline.

Agenda

- ▶ Operations Report Metrics
 - Executive Summary
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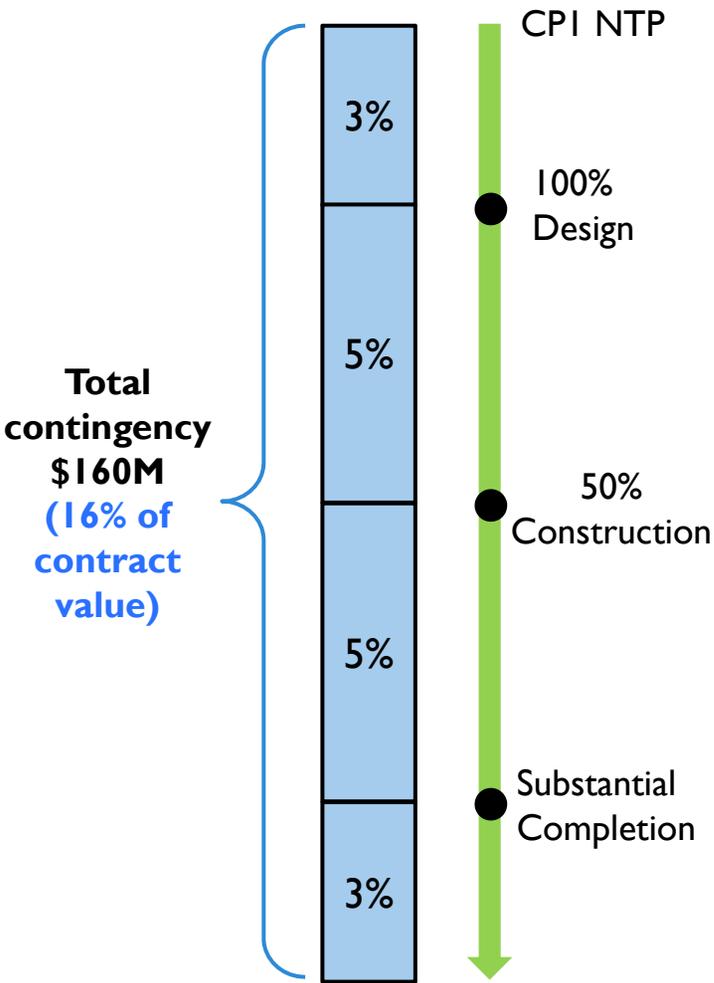
CP1 Contract – Current Contingency Level

Contract Milestones	CPI Contract Remaining Contingency	Major Change Orders Approved as of November 15, 2015
CPI Contract NTP	\$ 160.0 M	
As of 15-Nov-2015	\$ 148.4 M	<ul style="list-style-type: none"> • Class 1/2 Hazmat (\$5.25M) • Regulatory Changes - Archaeological, Biological, Native American monitoring (\$1.31M) • Ped.Arch Field Surveys; GIS Habitat Tracking • Scope Changes - Revised Shear Wave Boring, Weed Abatement, etc. • Trackway and Structures - Design Criterial Revisions • COF utility relocation cooperative agreement for design only • East American Avenue design speed variance • Small mammal burrow excavation; Built environment treatment plan • Env. Permit Changes, etc. • DRB expenses; Partnering workshop costs; Additional Space at 1401 Fulton • Other administrative, 3rd party, regulatory changes and additional scope items

Note: The approved change orders for CPI includes both anticipated and unanticipated risks/uncertainty initially considered in the contract contingency analysis (Aug 2013).

CP1 Contract – Establishing Contingency Floor

- ▶ Based on an analysis of the risks associated with CPI, a contingency of \$160M or slightly less than 16% of the contract value was set aside.
- ▶ 3% of the contract value or approximately \$31M of the contingency was reserved for potential additional costs arising at or following substantial completion. This percentage is based on FTA guidance and is intended to serve as an added layer of protection against potential unidentified (additional) costs.
- ▶ Between these points, the floor is set based on FTA’s contingency targets for the amount of work outstanding at each milestone, for example, an additional 10% of contract value was reserved for potential additional cost arising between the start of construction and substantial completion, making the total required contingency at the 100% design stage to 13% of the contract value.



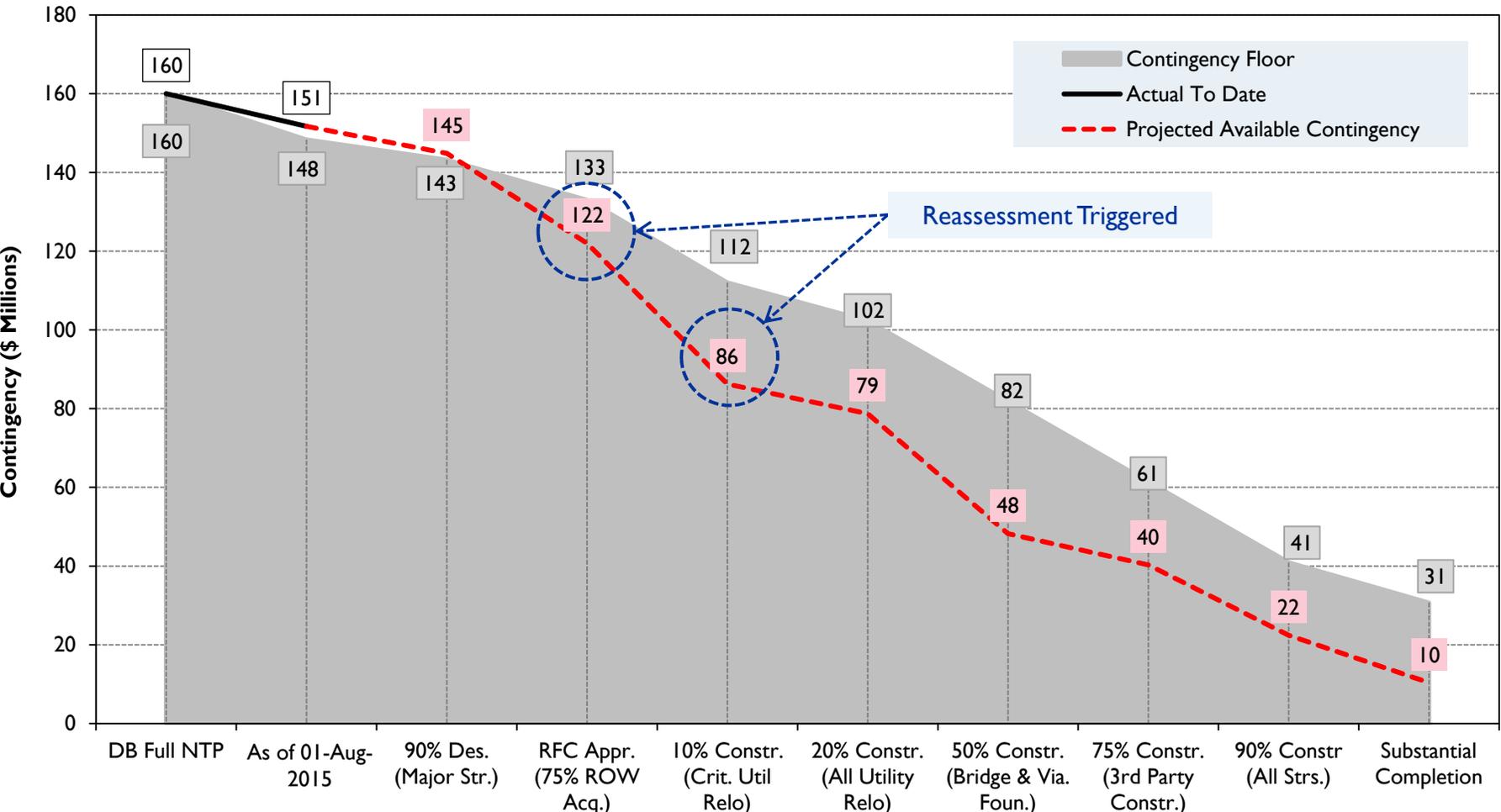
* Based on FTA Project and Construction Management Guidelines (July 2011)

Projected Available Contingency Level at Future Milestones

Contract Milestones	Projected Available Contingency (\$M)	Potential Risks Expected to Occur at Contract Milestones	Mean Rem. Risk Exposure (\$M)
As of Apr 01, 2015	151.7		
90% Design	144.8	<ul style="list-style-type: none"> • Scope changes as per environmental requirements modifications 	6.9
100% RFC Design	122.0	<ul style="list-style-type: none"> • Madera County Design roadway revisions (Avenues 9, 12, 13, 15 and 15.5) • Other Known scope changes incl. McKinley, GSB, etc. • City of Fresno Tier 2 requirements 	22.9
10% Construction	86.2	<ul style="list-style-type: none"> • Delays in agreement with RR agencies (50% impact) • ROW acquisition delays (50% impact) • Delays in obtaining permits (50% impact) • SJVRR Spurs - Scope considers one spur in the vicinity of Dry Creek Canal 	35.8
20% Construction	78.7	<ul style="list-style-type: none"> • Utility Provisional Sum • Construction contract work Prov. Sums 	7.5
50% Construction	48.2	<ul style="list-style-type: none"> • Changed/Differing Site Conditions • Class I & II Hazmat 	30.5
75% Construction	40.3	<ul style="list-style-type: none"> • Change or mis-representation of environmental requirements • SR99 & SRI80 Interface Coordination 	7.9
90% Construction	22.4	<ul style="list-style-type: none"> • Direct costs associated with intrusion protection 	17.9
Substantial Complete	10.4	<ul style="list-style-type: none"> • ROW acquisition delays (50% impact) • Delays in obtaining permits (50% impact) • Delays in acquiring compensatory mitigation sites 	24.1

Note: Content as of 01-Apr-2015. The projections for remaining contingency available will be reviewed and adjusted at major project milestones. This will take into account actual known impact of risks that are realized and free-up the mean impact of the risks that are avoided.

CP1 Contract - Contingency report



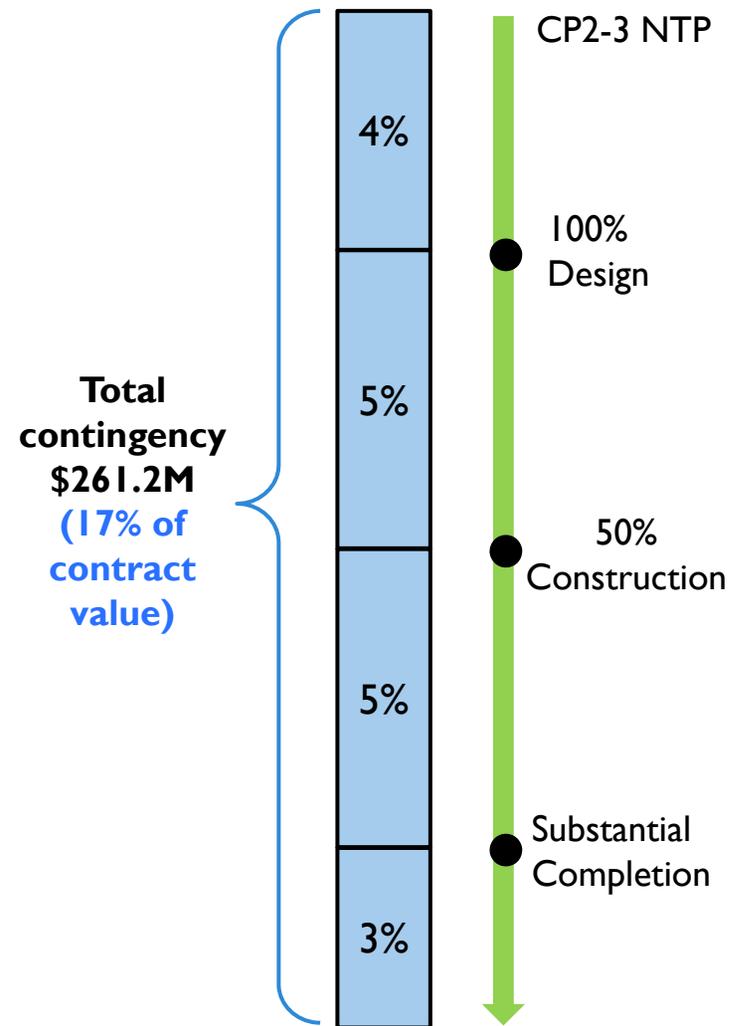
CP2-3 Contract Cost Summary

Base Cost item	Cost
CP2-3 D-B Base Cost	1,234,567,890
PG&E Allowance	160,000,000
Third Parties / Support Costs	140,000,000
Total CP2-3 Contract D-B Cost	1,534,567,890
Allocated Contingency	261,200,000

Note: Figures from Task 8 – Design-Build Funding Contribution Plan as of May 2015

CP2-3 Contract – Establishing Contingency Floor

- ▶ Based on an analysis of the risks associated with CP2-3, a contingency of \$261.2M or slightly over 17% of the contract value (base contract plus the PG&E provision sums and third party allowance) was set aside.
- ▶ Three percent of the contract value or approximately \$46M of the contingency was reserved for potential additional costs arising at or following substantial completion. This percentage is based on FTA guidance and is intended to serve as an added layer of protection against potential unidentified (additional) costs.
- ▶ Between these points, the floor is set based on FTA’s contingency targets for the amount of work outstanding at each milestone, for example, an additional 10% of contract value was reserved for potential additional cost arising between the start of construction and substantial completion, making the total required contingency at the 100% design stage to 13% of the contract value.



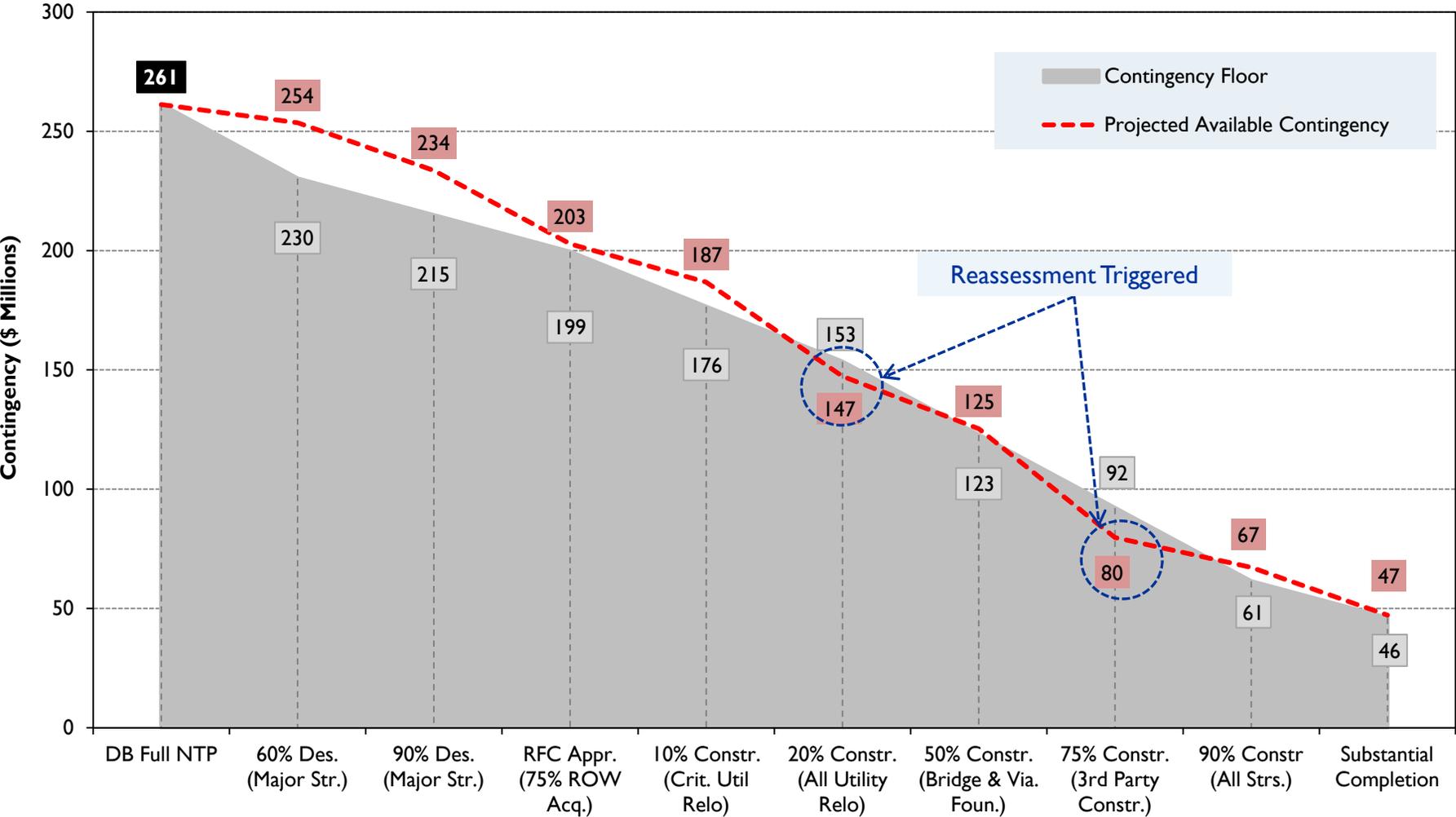
* Based on FTA Project and Construction Management Guidelines (July 2011)

Projected Available Contingency Level at Future Milestones

Contract Milestones	Projected Available Contingency (\$M)	Potential Risks Expected to Occur at Contract Milestones	P90 Risk Exposure (\$M)
CP2-3 NTP	261		
60% Design	253.6	<ul style="list-style-type: none"> • Scope changes as per Environmental requirement modifications 	15.3
90% Design	233.6	<ul style="list-style-type: none"> • Kings County Roadway Modifications • Notice of approval of restricted drawings 	20.0
100% RFC Design	202.8	<ul style="list-style-type: none"> • Fresno & Tulare County Roadway Modifications • SBE/DBE participation, community benefits agreement and NTHI 	30.8
10% Construction	186.8	<ul style="list-style-type: none"> • Delays in agreement with RR agencies (20% impact) • ROW acquisition delays (20% impact); Delays in obtaining permits (20% impact) • Uncooperative Kings County delaying HSR work (20% impact) • CPUC delays (20% impact) 	16.0
20% Construction	147.3	<ul style="list-style-type: none"> • Uncertainty in utility relocation costs; Uncertainty in canal relocation costs • Construction Water hard to find 	39.5
50% Construction	125.3	<ul style="list-style-type: none"> • Changed/Differing Site Conditions • Class I & II Hazmat 	22.0
75% Construction	79.7	<ul style="list-style-type: none"> • BNSF railroad intrusion protection measures (50%) 	45.6
90% Construction	67.2	<ul style="list-style-type: none"> • Agricultural crossings at Hanford and Cross Creek necessitated by embankments. 	12.5
Substantial Complete	47.2	<ul style="list-style-type: none"> • ROW acquisition delays (50% impact) • Delays in obtaining permits (50% impact) • Delays in acquiring compensatory mitigation sites (50% impact) 	40.1

Note: Content as of 11-Jun-2015. The projections for remaining contingency available will be reviewed and adjusted at major project milestones. This will take into account actual known impact of risks that are realized and free-up the P90 impact of the risks that are avoided.

CP2-3 Contract - Contingency report



Agenda

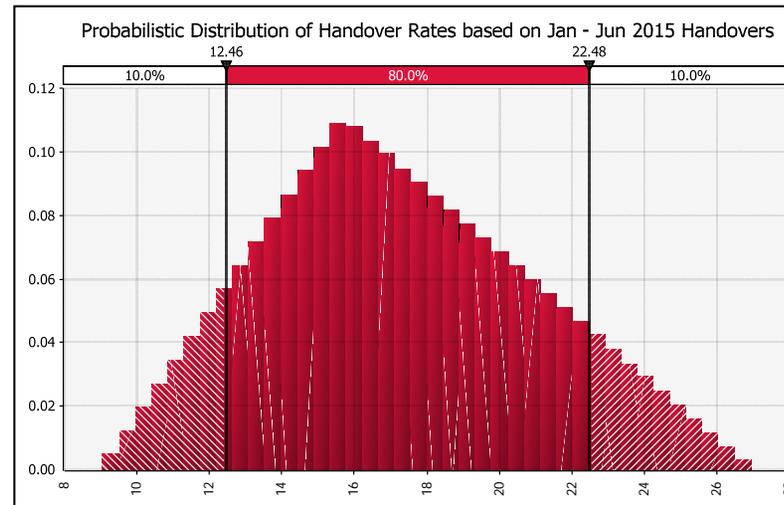
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ROW – CPI: Monthly Forecast Parcel Handover Rate vs Probabilistic Handover Rate based on prior 6 month’s results

	CLEAN SLATE Probability of meeting or bettering forecast	ROLL-OVER Probability of meeting or bettering forecast
Jul-15	24.0%	24.0%
Aug-15	7.8%	5.8%
Sep-15	2.0%	0.6%
Oct-15	0.0%	0.0%
Nov-15	0.0%	0.0%
Dec-15	0.0%	0.0%
Jan-16	0.0%	0.0%
Feb-16	39.7%	0.0%
Mar-16	12.3%	0.0%
Apr-16	2.0%	0.0%
May-16	7.8%	0.0%
Jun-16	70.0%	0.0%
Jul-16	100.0%	0.0%
Aug-16	86.7%	0.0%
Sep-16	59.3%	0.0%
Oct-16	99.2%	0.0%
Nov-16	99.2%	0.0%
Dec-16	100.0%	0.0%
Jan-17	100.0%	1.6%
Feb-17	100.0%	13.2%
Mar-17	100.0%	45.9%
Apr-17	100.0%	82.2%
May-17	100.0%	97.3%
Jun-17	100.0%	99.8%
Jul-17	100.0%	100.0%

A probabilistic distribution of monthly handover rates was specified based on monthly handovers during January – June 2015 period (below). This was then compared to the forecast handover rates of each month in a Monte Carlo simulation to determine the probability of meeting monthly and cumulative (rolling over delayed parcels to next month) targets.

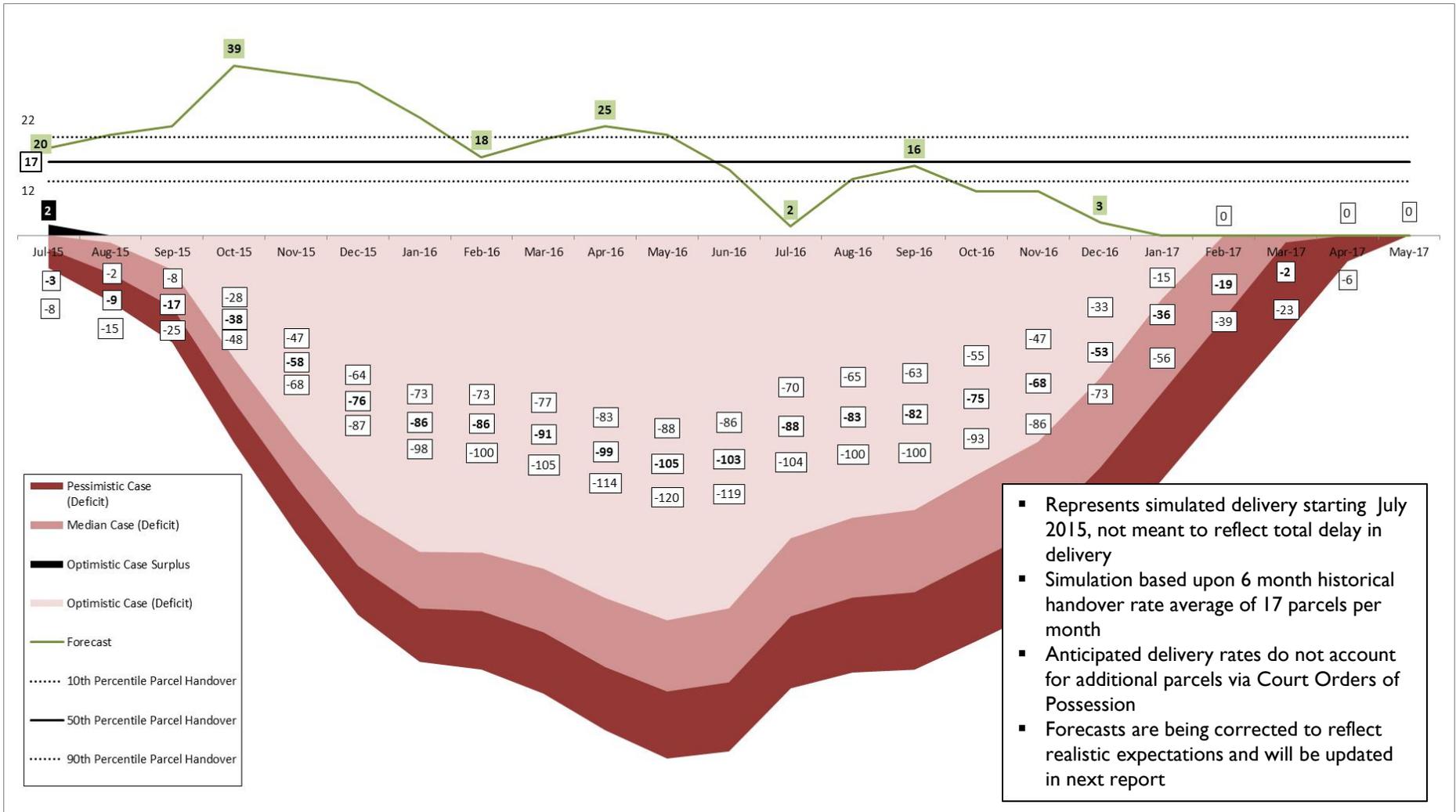
- Based on this analysis, the accumulated deficit of parcel delivery (iceberg) is large and reached 108 parcels in the median case
- The probability of handing over the requisite number of parcels by December 2016 is negligible
- It is projected that handover will not be complete until at least April 2017
- Analysis based purely on historic delivery. As such the additional parcels anticipated to be delivered court Orders of Possession starting in August and ramping up are not captured due to lack of history



ROW – CPI: Projected surpluses and deficits based on prior 6 month's handover rates (Jan – Jun 2015)

Deficits are projected to be *less than Pessimistic Case* 90% of the time

Deficits are projected to be *greater than Optimistic Case* 90% of the time



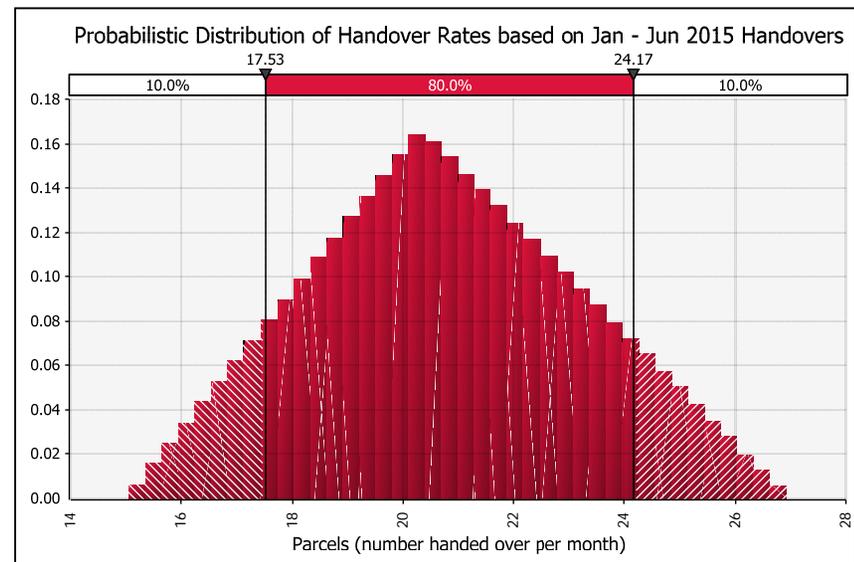
ROW – CPI: Probability of meeting or bettering forecast based upon 3 month’s results (March to May 2015)

Date	CLEAN SLATE Probability of meeting or bettering forecast	ROLL-OVER Probability of meeting or bettering forecast
Jul-15	60.9%	60.9%
Aug-15	20.0%	33.9%
Sep-15	5.0%	9.4%
Oct-15	0.0%	0.0%
Nov-15	0.0%	0.0%
Dec-15	0.0%	0.0%
Jan-16	0.0%	0.0%
Feb-16	85.9%	0.0%
Mar-16	31.2%	0.0%
Apr-16	5.0%	0.0%
May-16	20.0%	0.0%
Jun-16	100.0%	0.0%
Jul-16	100.0%	0.0%
Aug-16	100.0%	0.0%
Sep-16	98.4%	0.1%
Oct-16	100.0%	3.6%
Nov-16	100.0%	24.4%
Dec-16	100.0%	85.6%

It is projected that CPI will carry a deficit for much of the remaining ROW acquisition period, though the deficit is projected to diminish from Jun 16 forward and clear by the end of the handover period (Dec 2016).

The accumulated deficit of parcels delivery is less significant than the 6 month analysis and reaches 58 parcels in the median case

While 9 of 18 remaining months have individual forecasts that could be met by current handover rates, in 7 of these 9 handover rates are insufficient to address both the parcels due in that period and deficits accrued from previous periods



ROW – CPI: Projected surpluses and deficits end of July 2015 to end of December 2016 based upon 3 month's results (March to May 2015)

Deficits are projected to be *less than Pessimistic Case* 90% of the time

Deficits are projected to be *greater than* and *Surpluses* are projected to be *smaller than Optimistic Case* 90% of the time

