



## Board Report

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### CONSTRUCTION COMMITTEE SEPTEMBER 17, 2015

**SUBJECT: LOS ANGELES CONSTRUCTION MARKET ANALYSIS UPDATE**

**ACTION: RECEIVE AND FILE**

#### **RECOMMENDATION**

RECEIVE AND FILE the **Los Angeles Construction Market Analysis Update August 2015 report.**

#### **ISSUE**

To better understand the factors influencing construction bid prices and Metro's ability to deliver the Measure R and other projects within the existing budgets, a construction market analysis was performed in 2013. A study was recently conducted to update the initial construction market analysis to today's current conditions to identify factors influencing bid prices and develop mitigation strategies (see Attachment A).

#### **DISCUSSION**

##### Scope of the Analysis

The construction market analysis primary objectives were to gather information to evaluate the international/national/regional/local economy as it relates to construction cost and bidding trends, the current and future amount of construction activities in the region and measure its impact on the proposed work in the region, the macroeconomic employment trends and skilled labor availability, the current trends in bid prices versus engineer's estimates, the number of bidders in the region, and gather feedback from contractors in regards to Metro specific contracts, processes, and procedures that may influence construction bid prices.

The desired outcome of the study is to continue our understanding of the factors influencing construction costs in the Los Angeles market, develop pricing projections for future forecasts, and determine potential solutions to mitigate rising bid prices to better ensure our ability to deliver the Measure R and other projects within existing project budgets. Because the majority of the Metro bids received in the current survey period come in under engineer's estimates, the focus of this update is to investigate possible trends for 2015 to 2018 and develop risk mitigation strategies for potential future price increases.

## Results of the Analysis

Leland Saylor Associates (Saylor) performed the Los Angeles Construction Market Analysis Update and completed a report in August 2015. In summary, the market analysis indicates the four (4) key factors that may influence potential future construction bid prices at Metro are as follows:

### 1) Recovering Los Angeles Construction Market

Data indicates that the Los Angeles region is in a strong growth mode. A review of recent bids in 2015 indicate most bids are coming in closer to the engineer's estimate, and there are few bidders per project in the first half of 2015 compared to 2013 and 2014. While the market is balanced currently, continued growth could result in fewer bidders and higher prices. Labor and material costs are expected to rise between 3 -3.5% in 2015-2016 while increases in bid pricing may exceed that growth, depending on constraints in labor. The increases are a result of lower productivity due to newer workers entering the market, coupled with both contractor and subcontractor margin increase due to a reduction in competition.

### 2) Size and Pace of the Metro Program

Continued growth of the Los Angeles region, coupled with the size and pace of the Metro Measure R projects, may cause shortages in labor and subcontractor capacity in 2016. With Metro's three mega transit projects underway (Crenshaw/LAX, Regional Connector, Westside Purple Line Extension Section 1), the civil employment and subcontractor capacity may be absorbed by 2016, potentially impacting bids in the 2016 window. This effect may be exacerbated by the growing housing market competing for available resources. There is a possibility that Metro may experience increases in bid prices in excess of labor and materials increases in 2015-2017 that are similar to the 2004-2006 economy.

### 3) Complex Interagency Approvals Process and Metro Specific Requirements, Processes, and Procedures

Most contractor interviews indicate Metro projects generally contain more risk than industry standard, and this could be a contributory factor in higher prices at Metro should the market become more constrained. The current greatest risk that the contractors perceived was the complex and diffuse approvals process among Metro, City and County of Los Angeles, and Caltrans. Concerns noted the unforeseen conditions, delays in third party approvals, and not being compensated for those delays.

Other Metro specific requirements, processes, and procedures that the contractors expressed concerns relate to the weight of extensive previous Metro experience on proposer qualification requirement, reliability of solicitation documents and specifications, and delays in change order processing procedures. Also, Metro is viewed as having higher administrative burdens than the general infrastructure community, including the Project Labor Agreement (PLA) and higher Disadvantaged Business Enterprise (DBE) goal requirements than the industry standard.

### 4) Mega Project Risk

Although Metro mega projects bid between 2013 and first quarter of 2015 came in under the engineer's estimate, records of mega projects over \$600 million in the infrastructure industry

generally have a long history of exceeding their budgets. The risks inherent in construction are magnified in large, complex, multi-year programs, and the possibility could exist that contractors are more sensitive to these risks than agencies and engineers, and price the risk premium into their bids.

### Report Recommendations

Saylor's report included the following recommendations:

- Establish more robust cooperative agreements and partnerships between Caltrans, City and County of Los Angeles to reduce delays in approvals
- Review change order procedures to reduce delays in processing
- Review PLA and DBE program to ensure that resources match requirements
- Focus on recruiting and retaining skilled staff to accommodate size of Measure R program
- Actively recruit new bidders to ensure competitive bidding

### NEXT STEPS

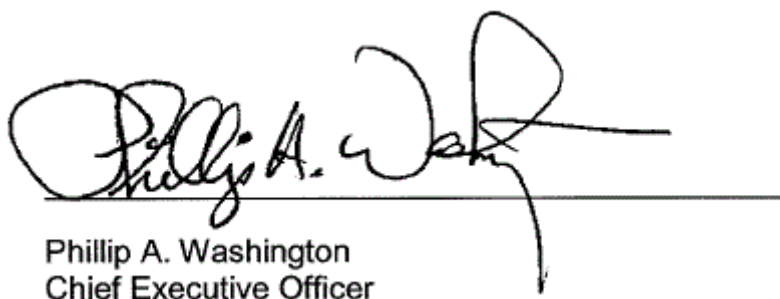
Metro staff will review the report's findings and recommendations and develop mitigation strategies to address the factors influencing bid prices on Metro construction projects. Staff will return to the Board in January 2016 and status our progress in response to Saylor's recommendations.

### ATTACHMENTS

Attachment A - Los Angeles Construction Market Analysis August 2015 Update, Executive Summary

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# Metro™

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY

## AUGUST 2015 UPDATE LOS ANGELES CONSTRUCTION MARKET ANALYSIS



Leland Saylor  
Associates  
A Certified DVBE

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY  
**LOS ANGELES CONSTRUCTION  
MARKET ANALYSIS**

**August 2015**

Prepared by

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## Project Background, Objectives and Scope

### Background

Los Angeles County Metropolitan Transportation Authority (LACMTA) noticed a significant upward trend in project bid costs starting in the mid 2012 timeframe. To better understand the factors influencing bid costs, LACMTA engaged Leland Saylor Associates (Saylor) to perform a comprehensive market analysis to explore factors influencing construction cost in the 2011, 2012, and 2013 timeframe.

Since the 2013 survey, the majority of LACMTA bids have come in under engineer's estimates, which may be due to changes in estimating methodology and risk mitigation measures. However, LACMTA noticed some signs of a tightening market and asked Leland Saylor Associates to update the market analysis to today's current conditions.

The primary objectives of this construction market analysis are to:

- Evaluate the international/national/regional/local economy as it relates to construction cost and bidding trends
- Evaluate the current and future amount of construction activities in the project region and measure its impact on the proposed work in the region
- Evaluate macroeconomic employment trends and skilled labor availability
- Evaluate current trends in bid prices versus engineer's estimates and number of bidders in the region
- Gather feedback from the contractor pool in regards to LACMTA specific contracts, processes and procedures that may influence construction bid prices

The desired outcome of the study is to better understand the factors influencing construction cost in the Los Angeles infrastructure market, develop pricing projections for future forecasts, and determine potential solutions to mitigate rising bid prices.

### Methodology

Leland Saylor Associates utilized extensive research of print and electronic media to develop our analysis of construction activity, employment trends, and bidding trends. Resources used for this study included:

- Federal economic indicators, such as Bureau of Economic Analysis, Bureau of Labor Statistics, Bureau of the Census, and the Department of Commerce
- State of California Economic Development Department
- Engineering and construction websites, including Associated General Contractors (AGC) and Engineering News Record (ENR)

- Business and Trade Journals
- Lead tracking services, such as Reed Construction Data and Dodge Reports
- Newspaper and magazine articles
- Agency websites and bid data

### Interviews

Interviews with contractors currently bidding or working on LACMTA projects were conducted via telephone. The survey consisted of questions on a variety of issues that can affect construction cost, including:

- Recent trends in labor and material costs and availability
- Profit and overhead trends
- Bidding trends
- Escalation forecasts
- LACMTA specific contractual conditions
- Project delivery methods
- Perceived risk, both industry specific and LACMTA specific
- Contracting and hiring goals
- Labor relations practices
- Recommendations to reduce cost/risk

In addition, data was collected from relevant owners in the region, including Caltrans, City of Los Angeles, County of Los Angeles, Port of Long Beach, Port of Los Angeles, OCTA, San Bernardino Association of Governments (SANBAG), and San Diego Association of Governments (SANDAG).

### Independent assessment of construction cost drivers in the region

Throughout 2011-2013, the majority of LACMTA bids were coming in over engineer's estimates, and the purpose of the 2013 study was to assess the causes of this variance. In the current survey period, (mid 2013 to current), the majority of LACMTA bids are coming in under engineer's estimates. While there has been at least one major project (the Southwestern Yard Project) in which bids significantly exceeded estimates, there is not enough data in 2015 to determine if this is a trend or just an outlier. Therefore, the focus of this updated study is not to answer why bids are coming in over estimates (as the majority are not), but to investigate possible trends for 2015 to 2018 and develop risk mitigation strategies for potential future price increases.

Using all the available data produced from external sources, interviews and internal review, Saylor developed its own independent analysis of the state of the market and possible measures to mitigate future cost increases.



## I. Executive Summary

### A. Key Points

#### i. Key Findings Having Significant Impact on Construction Costs in the Los Angeles Infrastructure Construction Market

##### **Economic, labor and spending trends indicate recovering construction economy**

Examination of key economic indicators (Gross Domestic Product (GDP), employment, construction employment and construction spending) all point to a recovering market. Both nationally and locally, the construction recovery has been led by rising home prices, resulting in increased residential spending. Dodge analytics, the only comprehensive source for regional construction starts, saw a 24% increase in Los Angeles starts in 2013, a mere 1.2% increase in 2014, and is projecting a 18.5% increase in 2015 and a 17% increase in 2016. If Dodge's projections are accurate, this could represent a 74% increase in starts since 2013 to 2016.

The construction employment sector in the Los Angeles region is also showing signs of growth, with 4% growth in 2013 and 6.5% in 2014. Construction employment still remains 18% below the peak of 2006 so excess capacity still remains in the labor market.

Surprisingly, employment in the heavy civil category, after increasing by 19% from 2011 to mid 2013, actually fell 1.5% from mid 2013 to current, leaving employment in that category 11% under the peak in 2007.

The majority of bids at LACMTA and in the region do not suggest that bids exceeding estimates is yet a trend either for LACMTA or the region in general. The evidence thus far collected suggests that the market is currently balanced although continued growth could create a more constrained market in late 2015 to 2016.

##### **Bidding trends analysis**

To perform the bidding trends analysis, 92 infrastructure bids from mid 2013 to current were collected from various Southern California infrastructure agencies. This time period was selected as the previous study had already analyzed bids from 2011 to mid 2013. The recent bids from mid 2013 to current indicate on average, bids received were 12% under engineer's estimate from mid 2013 to 2014, 3.5% under engineer's estimate in 2014, and approximately 2.9% under estimate in 2015. By contrast, LACMTA's bids averaged 21.5% under engineer's estimates in the latter half of 2013, 8.22% under estimate in 2014, and 2% over engineer's estimates for the first half of 2015. The trend in 2015 for bids closer to the estimate is evidence the market is becoming less competitive and more balanced.

On a bid average basis, LACMTA's program 2013 to 2015 is 13% under estimate. On a total program basis (all bids versus all estimates), LACMTA's program is 18.5% under estimates for the same time period.

### Contractor survey

While our data points to a recovering market, most contractors did not view the market as constrained. Most characterized it as a balanced market. Most contractors surveyed believed LACMTA had a higher risk profile than is industry standard, and this could be a contributory factor in higher prices at LACMTA should the market become more constrained. Interviews during the 2013 survey indicated the greatest possibility of risk came from unforeseen conditions and delays in third party approvals. During the current survey, the contractors mentioned that the unforeseen conditions risk had been mitigated to a great degree by the implementation of the advanced utilities relocation packages, which took this risk out of the general rail packages.

At this time, the greatest risk the contractors perceived was the complex and diffuse approvals process between LACMTA, City and County of Los Angeles, and Caltrans. Many cited the I-405 HOV Sepulveda Pass Widening Project as an example of the risks of this approvals process.

This risk is compounded by the change order process, which many indicated could take six to seven months or even longer for approved change orders.

All contractors considered the higher, race conscious DBE goal implemented in 2013 as a significant concern. With the Crenshaw /LAX and the Regional Connector Transit Projects ramping up construction, and the Westside Purple Line Extension Section 1 Project let, those three projects also represent over \$600 million in DBE commitment. The contractors are very concerned that all the qualified DBE firms will be “maxed out” and will not be available to bid the next large LACMTA project.

Contractor suggestions for reducing cost were:

- Continue to reduce risk of unforeseen conditions with advanced utility relocations
- Real partnering and a shared vision between LACMTA, Caltrans and City and County of Los Angeles to lessen risk of delay due to third party approvals
- One “point person” with decision making authority to help City departments work together
- Focus on hiring strong LACMTA project managers that can push through approvals. “Can make or break a project”
- Improving the change order processing procedure to reduce delays in payments of approved changes

### Independent analysis of cost risk variables:

With the exception of the Southwestern Yard project, bids have been coming in overall under estimates. However, our analysis did identify factors that may be a risk in later 2015-2017. Our analysis indicates the four major risks of price increases at LACMTA are:

- The recovering Los Angeles construction economy
- Size and pace of the LACMTA program
- LACMTA procedures and complex interagency approvals process
- Mega project risk

### **Recovering Los Angeles construction market**

A review of Dodge's starts projections, Southern California agency capital expenditure budgets, and construction employment data indicate that the Los Angeles region is in a strong growth mode. A review of recent bids in 2015 indicate that while still under estimates, most bids are coming in closer to estimate, and there are fewer bidders per project in the first half of 2015 than in 2013 and 2014. While the market is balanced currently, continued growth along the same trajectory could result in fewer bidders and higher prices.

### **Size and pace of the LACMTA program**

Continued growth of the Los Angeles market, coupled with the size of the LACMTA Measure R program, may cause shortages in labor and subcontractor capacity in 2016. With the Crenshaw/LAX and Regional Connector Transit Projects in full construction, and the Purple Line Extension Section 1 Project ramping up, the civil employment and subcontractor capacity may be absorbed by 2016, impacting bids in the 2016 window. This effect may be exacerbated by the additional pressures of the growing housing market, potentially siphoning off laborers and carpenters.

Moving into the future, LACMTA anticipates a staggering \$13.9 billion in construction spending from 2013 to 2019. This is equivalent to 1.5 times Caltrans' entire annual capital outlay. Rarely are transit programs of this magnitude performed in such a limited geographical area in such a short period of time, so it's difficult to predict the extent to which this may affect bid prices. However, with approximately \$5 billion of work under construction in the 2013-2015 timeframe alone, we believe there is a possibility, similar to spikes in the 2004-2006 economy, LACMTA may experience spikes in bid prices in excess of labor and material increases in 2015-2017, although they are not yet in evidence.

### **LACMTA specific requirements, processes and procedures**

While Saylor has not conducted any kind of audit on LACMTA specific conditions, contractor interviews indicate the pool perceives LACMTA projects generally contain more risk than is industry standard. Greatest areas of risk noted were unforeseen conditions, delays in third party approvals, not being compensated for those delays, and delays in change order processing if the changes are approved. However, LACMTA's current policy of advance utility relocation packages is mitigating the unforeseen conditions risk to some extent. In addition, LACMTA is viewed as having higher administrative burdens than the general infrastructure community, including the Project Labor Agreement (PLA) and higher Disadvantaged Business Enterprises (DBE) goals than are agency /industry standard.

### **Mega project risk**

Although the Regional Connector Transit and the Westside Purple Line Extension Section 1 Projects came in well under engineer's estimates, mega projects (\$600 + million) have a long history of exceeding their budgets. Several mega projects bid in the 2012-2013 timeframe (the Crenshaw/LAX Transit Project, SF MUNI 3<sup>rd</sup> Street Light Rail, and the San Francisco Transbay Transit Center) exceeded engineer's estimates, with the common denominator that they were all in dense urban corridors. The risks inherent in construction are magnified in large, complex, multi-year programs, and the possibility could exist that contractors are more sensitive to these risks than agencies and engineers, and price the risk premium into their bids. Currently, LACMTA's estimating methodology has accounted for these risks but as the market becomes more constrained, contractors may begin to price higher for the inherent risks of mega projects.

### **Forecast of future price increases**

While we expect labor and materials to rise in the 3-3.5% range in the 2015-2016 timeframe, spikes in bid pricing may exceed that growth, depending on constraints in labor. These spikes are a result of lower productivity due to newer workers entering the market, coupled with both contractor and subcontractor margin growth due to lack of competition.

Therefore, we recommend LACMTA add a minimum of 3.5% per year for labor and material escalation, and build in a 5-10% market contingency for price spikes that may occur during the late 2015-2017 window. A close watch should be kept on employment numbers, amount of bidders in the region, and estimate variances to assess whether the market is becoming constrained. Further recommendations are as follows:

## **B. Recommendations to Reduce Potential for Cost Overruns**

One of the recommendations that resulted from the 2013 survey was that the estimating methodology be reviewed and the pricing brought up to the current market. Reviewing the bids since the last report, it appears the estimating methodology and pricing since 2013 has included appropriate contingencies, as the total program is 18.5% under engineer's estimates for the mid 2013 to current timeframe.

### **Review change order procedures; focus on staffing to accommodate coming demand in 2015-2019**

Contractors mentioned delay in processing changes to be a significant risk in LACMTA construction. Many perceive LACMTA's three step process cumbersome. Even in the most well managed projects, change orders due to unforeseen conditions are inevitable, and delays in merit determination and payment of approved changes can increase contractor risk and costs. Saylor recommends a review of current change management procedures, and incorporation of industry best practices to streamline the process. To accommodate demand, it is recommended that LACMTA review staffing levels to assure adequate staffing of the change management function, and possibly establishing metrics for timely processing of changes.

**Continue to provide advance utility relocation packages**

One of the largest risks perceived by the LACMTA contractor pool includes the potential of unforeseen condition costs due to utility relocations. LACMTA's efforts to provide advance utility relocation packages was warmly embraced by the contractor pool and may be a contributory factor in the bids for the Regional Connector Transit and Westside Purple Line Extension Section 1 Projects coming in under engineer's estimates.

**Establish more robust cooperative agreements between Caltrans, City and County of Los Angeles**

The other significant perception of risk was the potential for delay due to third party approvals. Contractors indicated that a more cooperative approvals process had the potential to significantly reduce costs.

**Actively solicit new bidders on large programs**

Continued growth in the construction market could lessen competition in the 2016-2017 timeframe and consequently, increase costs. LACMTA is encouraged to actively solicit existing bidders as well as focus on bringing new bidders into the pool. LACMTA may want to consider relaxing the requirement for personnel to have worked with LACMTA in the past. Some bidders without previous LACMTA experience see this as a barrier to entry on LACMTA projects.

**Ensure DBE goal established for large projects reflects the amount of DBEs in the market place ready, willing, and able to take on LACMTA projects**

The current program shows \$5 billion under in design or under construction in the 2013-2015 timeframe, or approximately \$1 billion in DBE commitments (assuming a 20% DBE utilization). These prior commitments may limit the ability of DBE firms to take on new projects in 2016-2018. Project goals in 2016-2018 should consider how many DBEs are certified, can bond, and perform work in this timeframe. If goal outpaces available DBEs, this could impact costs.

**Continually assess labor demand; review PLA hiring practices to ensure adequate labor exists to meet goals**

The PLA will facilitate training of apprentices to accommodate demand. Continue to proactively work with unions and contractors to ensure labor exists to meet 2015-2019 demand. Should the economy continue to improve, review implementation of the hiring goals to assess added costs, if any, to the program.

**Review LACMTA staffing levels to match resources to size of projects**

The demands of managing \$13.9 billion in construction 2013-2019 may outpace current LACMTA staffing. Additionally, the complexity of the LACMTA program requires a high level of skill and the ability to push through approvals with other agencies to accomplish timely completion. The ability to hire and retain highly skilled project managers and support staff is integral to the success of any large building program. The Associated General Contractors is reporting that selected markets are showing difficulty in hiring skilled staff, including engineers and supervisory positions, and every effort should be made to recruit and retain skilled project management staff to run and manage the complex projects in LACMTA's Measure R Program.

**Ensure partnering continues in the field**

Contractors indicated that they perceived that the management of the agencies (LACMTA, Caltrans and the City of Los Angeles) strongly embraced partnering, but depending on the project manager, these concepts often do not translate to the field. It is critical that all project participants have the same goals and vision.