



## Board Report

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Agenda Number: 51.

### AD HOC CONGESTION, HIGHWAY AND ROADS COMMITTEE JUNE 21, 2018

**SUBJECT: FREIGHT ADVANCED TRAVELER INFORMATION  
SYSTEM (FRATIS) MODERNIZATION**

**ACTION: AWARD CONTRACT**

#### **RECOMMENDATION**

AUTHORIZE the Chief Executive Officer to award a four year, firm fixed price Contract No. PS48950000 to Cambridge Systematics, Inc. for professional services in an amount not to exceed \$5,489,479.96, for the Freight Advanced Traveler Information System (FRATIS) Modernization project, subject to resolution of protest(s), if any.

#### **ISSUE**

In October 2017, staff informed the Board that Metro received a grant through the Federal Highway Administration (FHWA) Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) Program. On December 15, 2017, Metro entered into a cooperative agreement with FHWA and the California Department of Transportation (Caltrans) to secure the grant funds. Funds were authorized in March 2018. Upon approval by the Board, staff will execute the contract with the consultant and formally initiate the planning phase of the project.

#### **BACKGROUND**

The Port of Los Angeles (POLA) and the Port of Long Beach (POLB) collectively comprise the largest goods movement complex in North America, handling 40 percent of the nation's import traffic and 25 percent of the nation's export traffic. This volume of freight and the associated truck traffic is expected to more than double by 2035, resulting in severe congestion problems, including truck trip delays in and near the ports, as well as general traffic congestion on metropolitan area highways and arterials. This increased truck traffic and roadway congestion also generates negative regional impacts on air quality, noise, safety, and economic competitiveness.

Due to this congestion and air quality issues, Metro and Gateway Cities Council of Governments (GCCOG), identified drayage optimization applications, such as FRATIS, as a top priority to increase the efficiency of container movement. FRATIS provides trucking companies the ability to efficiently plan daily container pick-ups and drop-offs at the ports. These applications can reduce truck congestion, improve air quality, and lower the use of fossil fuel in the Los Angeles region. FHWA has

invested in two pilot projects for FRATIS in POLA and POLB in the past five years.

In June 2016, Metro Highway Program applied for the ATCMTD Program grants to expand and enhance FRATIS. In October 2016, Metro was selected as one of the eight successful national recipients for the ATCMTD Program funds. As part of this project, Metro is seeking to modernize and enhance the FRATIS platform that has been developed to date and explore connected vehicle technologies for freight trucks. Metro plans to leverage the concepts from previous phases of FRATIS to modernize and enhance the FRATIS platform and increase the number of active marine terminal operators (MTOs), trucking companies, and other stakeholder users. The enhancement of FRATIS will result in more efficient movement of goods in and around the ports and along the I-710 South corridor. Evaluation of FRATIS has demonstrated a reduction in trip time, reduction in stop time, and improvement in trip time reliability.

The project will follow the systems engineering process, as required by FHWA for Intelligent Transportation System (ITS) and technology projects. The selected contractor will prepare all the necessary reports, designs, and tests identified in the systems engineering requirements for review and approval by FHWA and Caltrans. Staff anticipates the project will take approximately 24 months for deployment and 24 months of performance monitoring and evaluation.

The FRATIS project is identified in the Board approved Measure R I-710 South Early Action project list in the amount of \$3,000,000, which is being used as the matching funds for the ATCMTD Program grant. The total project budget, including the ATCMTD grant, is \$6,000,000.

Metro, FHWA, and Caltrans entered into a cooperative agreement on December 15, 2017 to secure the grant funds and identify Metro's responsibilities. In addition, Metro obtained Authorization to Proceed (E-76) on March 8, 2018.

### **DETERMINATION OF SAFETY IMPACT**

Approval of this item will have no adverse impact on the safety of Metro's patrons and employees.

### **FINANCIAL IMPACT**

Funding for the FRATIS project will be comprised of \$3,000,000 from FHWA ATCMTD Program grant matched with \$3,000,000 in Measure R I-710 South Early Action funds for a total project budget of \$6,000,000. For FY19, \$800,000 has been budgeted in Project 460316 (I-710 South Early Action Projects), Cost Center 4740 (Highway Program ITS), Account 50316 (Prof Tech Services).

Since this is a multi-year project, the Project Manager, the Cost Center Manager, and the Senior Executive Officer, Program Management - Highway Program will be responsible for budgeting costs in future years up to the approved Life of Project budget.

### **Impact to Budget:**

The source of funds for the Project is Measure R Highway Capital (20%) funds and FHWA ATCMTD

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Program funds. These funds are not eligible for bus or rail operations and are specific for this project. No other funds were considered.

**ALTERNATIVES CONSIDERED**

No other practical alternative is available. The Fixing America's Surface Transportation (FAST) Act and the ATCMTD program have strict reporting requirements on the progress of the grant project. In addition, the cooperative agreement states that the project will be deployed and operated by July 2020. Delaying contract award would impact the implementation of the project, and may lead to the deobligation of the federal grant funds.

**NEXT STEPS**

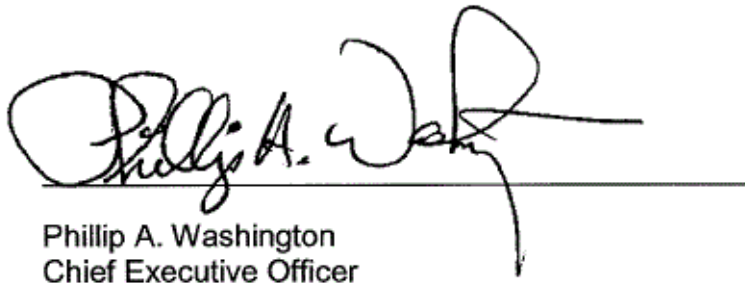
Upon approval by the Board, staff will execute the contract with Cambridge Systematics, Inc. and begin the planning studies and stakeholder coordination for the project.

**ATTACHMENTS**

Attachment A - Procurement Summary  
Attachment B - DEOD Summary

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Phillip A. Washington  
Chief Executive Officer

## PROCUREMENT SUMMARY

FREIGHT ADVANCED TRAVELER INFORMATION  
SYSTEM (FRATIS) MODERNIZATION/PS48950000

1.	<b>Contract Number:</b> PS48950000	
2.	<b>Recommended Vendor:</b> Cambridge Systematics, Inc.	
3.	<b>Type of Procurement (check one):</b> <input type="checkbox"/> IFB <input checked="" type="checkbox"/> RFP <input type="checkbox"/> RFP-A&E <input type="checkbox"/> Non-Competitive <input type="checkbox"/> Modification <input type="checkbox"/> Task Order	
4.	<b>Procurement Dates:</b>	
	<b>A. Issued:</b> 12/27/17	
	<b>B. Advertised/Publicized:</b> 12/27/17	
	<b>C. Pre-Proposal Conference:</b> 01/08/18	
	<b>D. Proposals Due:</b> 02/14/18	
	<b>E. Pre-Qualification Completed:</b> 02/21/18	
	<b>F. Conflict of Interest Form Submitted to Ethics:</b> 02/21/18	
	<b>G. Protest Period End Date:</b> 06/22/18	
5.	<b>Solicitations Picked up/Downloaded:</b> 76	<b>Proposals Received:</b> 2
6.	<b>Contract Administrator:</b> Andrew Conriquez	<b>Telephone Number:</b> (213) 922-3528
7.	<b>Project Manager:</b> Edward Alegre	<b>Telephone Number:</b> (213) 418-3287

**A. Procurement Background**

This Board Action is to approve Contract No. PS48950000 issued in support of the Freight Advanced Traveler Information System (FRATIS) Modernization Project. Board approval of contract awards are subject to resolution of any properly submitted protest.

The Request for Proposal (RFP) was issued in accordance with Metro's Acquisition Policy and the contract type is a firm fixed unit price.

Two amendments were issued during the solicitation phase of this RFP:

- Amendment No. 1, issued on January 25, 2018, updated the Letter of Invitation, Section LOI-01: Notice of Invitation updated the requested number of proposal hard copies and electronic copies at time of submission;
- Amendment No. 2, issued on January 30, 2018, extended the proposal due date to February 14, 2018.

A pre-proposal conference was held on January 8, 2018 and was attended by 24 people representing 16 companies. There were 13 questions submitted and responses were released prior to the proposal due date.

A total of 76 firms downloaded the RFP and were included in the planholders list. On February 14, 2018, two proposals were received in response to the RFP.

## **B. Evaluation of Proposals**

A Proposal Evaluation Team (PET) consisting of staff from Metro Highway Programs was convened and conducted a comprehensive technical evaluation of the proposals received.

The proposals were evaluated based on the following evaluation criteria and weights:

- |  |            |
|--|------------|
| • Experience and Qualifications of Firm                        | 20 percent |
| • Project Manager, Key Staff, Team Experience and Availability | 30 percent |
| • Understanding of the Work and Approach                       | 40 percent |
| • Cost   | 10 percent |

Several factors were considered when developing these weights, giving the greatest importance to Understanding of the Work and Approach.

Both proposals were determined to be within the competitive range and the firms are listed below in alphabetical order:

1. Cambridge Systematics, Inc.
2. ITS Roads

During the week of March 5, 2018, the PET met and interviewed the firms. The firm's project managers and key team members had an opportunity to present each team's qualifications and respond to the evaluation committee's questions. In general, each team's presentation addressed the requirements of the RFP, experience with all aspects of the required tasks, and stressed each firm's commitment to the success of the project. Also, each team highlighted its staffing plans, work plans, and perceived project issues. Each team was asked questions relative to each firm's proposed alternatives and previous experience.

At the conclusion of the evaluation process including oral presentations, Cambridge Systematics Inc. was determined to be the highest qualified firm in support of this project.

### **Qualifications Summary of Firms within the Competitive Range:**

#### **Cambridge Systematics, Inc.**

Cambridge Systematics, Inc. is internationally recognized for state-of-the-industry data, models and forecasts for some of the world's most challenging and visible transportation projects.

The Cambridge Systematics, Inc. team has experience in Intelligent Transportation Systems (ITS), connected/automated vehicles (C/AV), freight operations and logistics, and system performance measurement. Also, Cambridge Systematics and its sub-consultants displayed extensive local knowledge and experience of the Los Angeles region.

Cambridge Systematics, Inc. led the Los Angeles Gateway Cities Technology Plan for Goods Movement, a study that explored how emerging technologies could improve the efficiency of goods movement with the areas of the ports. In 2013, Cambridge Systematics led the first FRATIS prototype in the nation for the United States Department of Transportation (USDOT) for the Los Angeles area.

In addition, Cambridge Systematics, Inc. deployed a FRATIS system in South Florida that consisted of an emergency response tool that provided notifications based upon road closures, port conditions, and status of supplies at emergency depots after natural disasters.

### **ITS Roads**

ITS Roads is a privately-held company founded in 2015 that provides engineering, design, consulting, and oversight services for various groups to create innovative solutions, overhaul legacy systems, and extend product lifecycles.

The ITS Roads team has more than two decades of experience innovating and building large-scale freight, tolling, and enforcement systems and has unique expertise from nearly a decade of work with USDOT crafting federal Connected and Automated Vehicle (C/AV) policies and technical guidance.

The ITS Roads team demonstrated experience in areas of ITS, connected/automated vehicles, freight operations and logistics, and systems engineering. The ITS Roads team has some local experience in the Los Angeles region through its sub-consultants. ITS Roads has not managed a contract of a similar size to the FRATIS Modernization Project.

Table below provides the scores in order of rank.

	<b>Firm</b>	<b>Average Score</b>	<b>Factor Weight</b>	<b>Weighted Average Score</b>	<b>Rank</b>
<b>1</b>	<b>Cambridge Systematics Inc.</b>				
<b>2</b>	Experience and Qualifications of Firm	90.83	20.00%	18.17	
<b>3</b>	Project Manager, Key Staff, Team Experience and Availability	86.44	30.00%	25.93	
<b>4</b>	Understanding of Work and Approach	88.83	40.00%	35.53	

5	Cost	100.00	10.00%	10.00	
6	<b>Total</b>		<b>100.00%</b>	<b>89.63</b>	<b>1</b>
7	<b>ITS Roads</b>				
8	Experience and Qualifications of Firm	75.50	20.00%	15.10	
9	Project Manager, Key Staff, Team Experience and Availability	81.44	30.00%	24.43	
10	Understanding of Work and Approach	81.17	40.00%	32.47	
11	Cost	97.00	10.00%	9.70	
12	<b>Total</b>		<b>100.00%</b>	<b>81.70</b>	<b>2</b>

### C. Price Analysis

The recommended price has been determined to be fair and reasonable based upon price analysis, technical analysis, fact finding and negotiations.

	<b>Proposer Name</b>	<b>Proposal Amount</b>	<b>Metro ICE</b>	<b>Award Amount</b>
1.	Cambridge Systematics Inc.	\$5,489,479.96	\$5,526,990	\$5,489,479.96
2.	ITS Roads	\$5,712,951.87	\$5,526,990	N/A

### D. Background on Recommended Contractor

The recommended firm, Cambridge Systematics, Inc., located in Medford, MA, has been in business since 1972 and has an office in the Los Angeles area. Cambridge Systematics, Inc. specializes in transportation, development, implementation, planning, analysis and technology applications. Cambridge Systematics' personnel have over 20 years of transportation experience and the firm is recognized nationally and locally for intermodal freight transportation planning, systems engineering, implementation, modeling and analysis expertise. In addition, the project manager has 29 years of experience in transportation projects and led the national development of the system requirements for USDOT FRATIS. The Cambridge Systematics team has extensive experience working with the local stakeholders, and knowledge of the goods movement issues at the ports and freeways/arterials.

DEOD SUMMARY

FREIGHT ADVANCED TRAVELER INFORMATION SYSTEM (FRATIS) MODERNIZATION/PS48950000

**A. Small Business Participation**

The Diversity and Economic Opportunity Department (DEOD) established a 14% Disadvantaged Business Enterprise (DBE) goal for this solicitation. Cambridge Systematics, Inc. exceeded the goal by making a 14.03% DBE commitment.

<b>Small Business Goal</b>	<b>14% DBE</b>	<b>Small Business Commitment</b>	<b>14.03% DBE</b>
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	<b>DBE Subcontractors</b>	<b>Ethnicity</b>	<b>% Committed</b>
1.	OZ Engineering LLC	Hispanic American	7.10%
2.	Sutra Research	Hispanic American Female	6.93%
	<b>Total DBE Commitment</b>		<b>14.03%</b>

**B. Living Wage and Service Contract Worker Retention Policy Applicability**

The Living Wage and Service Contract Worker Retention Policy is not applicable to this Contract.

**C. Prevailing Wage Applicability**

Prevailing wage is not applicable to this Contract.

**D. Project Labor Agreement/Construction Careers Policy**

Project Labor Agreement/Construction Careers Policy is not applicable to this Contract.



# What is FRATIS?



- An effective travel demand management system currently focused on trucks
- Uses traveler information systems to address specific freight needs
- Integrates various data sources:
  - 3<sup>rd</sup> Party Data for wait times at Ports
  - 511 for incident alerts and traffic
  - Caltrans/CHP road closures and restrictions
- Communication channel between truck operators, Ports dispatch, freight dispatch, and others.

# Benefits



- Manages truck traffic on freeways and arterials
- Improves flow of containers to and from the Distribution Centers
- Reduces turn time and waiting time at the Ports
- Improves fleet and driver utilization
- Increases the rate of on-time arrivals for appointments
- Improves productivity and efficiency of operations
- Reduces idling/congestion related air quality impacts



**Metro**

# Benefits to I-710



- Supplements capacity enhancements and operational improvement projects in the I-710 Corridor
- Addresses existing and projected truck traffic volumes
- Alleviates congestion on mainline and adjacent roads
- Contributes to air quality and public health improvements in the I-710 Corridor

# This Project



**Metro**

- Four-year Project
- FRATIS enhancements and modernization
- Stakeholder Engagement to determine user needs and requirements
- Deployment of 500 Trucks
- Connected Vehicle Applications Exploration
- Coordination with I-710 Improvement Projects
- Coordination with FHWA, Caltrans, and Local Stakeholders

# Activities to Date

- Expedited Schedule with FHWA and Caltrans for Project Approvals and Procurement
- Cooperative Agreement has been executed with FHWA and Caltrans in December 2017
- RFP was released in December 2017
- Authorization to Proceed (E-76) issued by FHWA and Caltrans in March 2018