

**Board Report**

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**File #:**2016-0041, **File Type:**Contract

Agenda Number:

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**SYSTEM SAFETY, SECURITY AND OPERATIONS COMMITTEE  
FEBRUARY 17, 2016****SUBJECT: INCIDENT BASED SURVEILLANCE SYSTEM****ACTION: AWARD CONTRACT****RECOMMENDATION**

- A. Authorize the Chief Executive Officer to award Contract No. PS16867 to SmartDrive Systems Inc. in the amount not-to-exceed \$16,556,545 to provide Incident Based Surveillance System (IBSS) services on Metro's bus and rail fleet.
  
- B. Authorize the amendment of the FY16 operating budget by \$660,000 upon authorization of the SmartDrive contract.

**ISSUE**

The overall mission of Metro's bus and rail system is to ensure Los Angeles transit riders a safe and efficient mode of transportation throughout the greater Los Angeles region. Over the years, significant effort and progress has been made to reduce accidents and vehicle code violations through the initiation of an aggressive bus and rail operator training policy and program. Metro has also implemented technological strategies to improve bus and rail operator training techniques and processes for its employees, as well as refining and improving its operations through careful and diligent accident investigation. The implementation of this IBSS is one of these strategies.

The recommended contract award will allow Metro to continue to maintain its focus on safety and security. Currently, SmartDrive's IBSS is installed on the entire bus fleet as well as twenty-five rail cars on the Blue Line. This new five-year contract will maintain video surveillance services across Metro's bus fleet (approximately 2400 buses) and expand services to up to 518 rail cars by the completion of the five year contract term. The contracted service will provide the recording, timely access, and review of key operational activities in order to maintain and improve the safety and quality of Metro's transit services. Video events are saved and made available to Metro staff. The contract also includes the ability to provide auto-generated alerts via web browser to key personnel during critical events that can be quickly and remotely reviewed at any time.

The IBSS recording device consists of two cameras: one front facing camera (street/track view) and one operator facing camera. The device records video and sound onto digital flash memory, capturing whatever the operator sees and hears. The system is triggered by forward and/or lateral g-forces that are generated during accidents, hard acceleration, sudden stops or sharp curves. The

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video storage trigger can also be manually activated by an operator using a self-activation button. The unit is constantly recording and overwriting data, but when the device is triggered, the video event is stored to the system's memory which tags 15 seconds prior and 15 seconds post the triggered event for external review and event classification. This before and after triggered event period provides a visual of both the operator and the vehicle's operating conditions prior to the g-force triggered event for determining event cause and effect.

When a bus returns to its home division, the recorded video event files are automatically downloaded from the bus to a server via a secure Wi-Fi connection. The files are then sent to an externally hosted server where they are reviewed and categorized by event types which have been pre-established/developed by Metro. All events that meet Metro's criteria for further review are then made available to Metro staff via a secure web portal for Metro Operations review and validation. Operations staff will review the event as appropriate per an established standard operating procedure. The information is used to identify operator habits that may require operator re-training or counseling. Operator performance may be positively impacted by learning to anticipate and avoid triggering events. The video event is also used to assist Risk Management in determining liability for accidents and is used as key evidence in legal proceedings to defend Metro against lawsuits or to recover costs of collision repairs. A similar process will be followed for rail operations except that video events will be transferred via cellular data connection on a more frequent basis. Video events are generally accessible by Metro for review within 1-4 hours of the event.

New video cameras and related equipment shall be installed and/or replaced by Metro personnel per the current labor agreement. The contractor shall be responsible for the implementation/verification of the managed hosted services, training, scheduling coordination, equipment logistics and data management review.

## **DISCUSSION**

In 2008, Metro installed its first IBSS on the bus fleet. The system allows Operations and Corporate Safety staff to review incidents such as accidents to determine culpability and to identify potential training opportunities for staff. The system has proven itself to be a very important element in managing operational claims from a risk management perspective as well as understanding and refining operator training solutions that will enhance operations while reducing legal risk exposure.

Since the installation of the IBSS across the bus fleet, Metro has seen a noticeable reduction in critical vehicle code violations. Clearly, the cause of this decline is multifaceted and includes improvements in training and accountability, but the IBSS has played a key role in these and other safety and operational improvements.

The proof of concept of the IBSS solution for rail has shown clear safety benefits for Metro's rail operations. There was also a notable reduction of critical observations on the 25 rail cars during the proof of concept period. The tables below describe the year over year benefit over a nine month period for both bus and rail modes. The decrease has been notable and consistent for both bus and rail. The most significant reduction is related to the use of mobile devices and reinforces Metro's mobile use policy.

**Bus**

Observations	Jan. - Sep. 2013	Jan. - Sep. 2014	% Difference
Speeding	1666	723	-56.6%
Collision	263	239	-9.1%
Mobile	207	33	-84.1%
Railroad Crossings	859	305	-64.5%
Stop Light	1243	1101	-11.4%
Stop Sign	1003	307	-69.4%

**Rail**

Observations	Jan. - Sep. 2014	Jan. - Sep. 2015	% Difference
Collision	11	3	-72.7%
Red Light	8	3	-62.5%
Stop Sign	18	5	-72.2%
Driver Safety Device	11	3	-72.7%
Mobile	2	0	-100.0%
Food	123	54	-56.1%
Drinking	167	65	-61.1%

Some IBSS level benefits achieved in the past 5 years are:

1. The IBSS solution provided timely access to incident video to better understand Metro's culpability and legal exposure to assess a recommended path forward in resolving potential future claims.
2. The IBSS provided a means to identify operator training deficiencies to help focus on areas of high risk (i.e. operator mobile phone usage has significantly decreased from the period prior to the IBSS installation).
3. The web-based system provides 24/7/365 access to all events (incidents ) which can be accessed by Division and Management staff from any web portal (access controlled) at any time so that Operations staff always has access to time-sensitive information.
4. Video events are filtered by category, so that only relevant incident information (Metro-defined) is captured and managed. This has reduced the unnecessary downloading and review of video (manpower) that have limited value.

**DETERMINATION OF SAFETY IMPACT**

The IBSS provides a significant safety benefit to Metro operations. The system provides automatic identification of problem areas in operator performance which helps improve operator training. The

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IBSS solution has had a significant impact in reducing key safety concerns including mobile phone use since its original installation. The IBSS implementation on the Blue Line has also demonstrated a proactive approach in addressing the Board's Rail Red Light Violations and Agency Safety Culture concerns raised by Directors Antonovich, Solis, Ridley-Thomas and Knabe in the form of a Board motion presented at the February 26, 2015 Board Meeting

### **FINANCIAL IMPACT**

Funding for this service will increase the FY16 budget approximately \$660,000 through the remainder of the fiscal year. Since this is a multi-year project, the project manager and the Chief Information Officer will be responsible for budgeting the cost in future years.

#### **Impact to Budget**

The funding for this action will be a combination of local operating funds such as Prop A, Prop C, and TDA.

### **ALTERNATIVES CONSIDERED**

The Board may choose to not proceed with the contract award. This option is not recommended based on the positive operational and risk management benefits that have been realized in the form of safer operations, accident reduction, improved safety/training and fault liability verification on accidents as well as cost recovery.

### **NEXT STEPS**

Upon approval of the Board, staff will execute contract PS16867 with SmartDrive Inc. to provide IBSS services for Metro's bus and rail fleet.

### **ATTACHMENTS**

Attachment A - Procurement Summary

Prepared by: Al Martinez, Director, IT Transit Applications (213) 922-2956

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## PROCUREMENT SUMMARY

## INCIDENT BASED SURVEILLANCE SYSTEM PS16867

1.	<b>Contract Number: PS16867</b>	
2.	<b>Recommended Vendor:</b> SmartDrive Systems 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> August 21, 2015	
	<b>B. Advertised/Publicized:</b> August 21 – 23, 2015	
	<b>C. Pre-proposal/Pre-Bid Conference:</b> September 3, 2015	
	<b>D. Proposals/Bids Due:</b> October 29, 2015	
	<b>E. Pre-Qualification Completed:</b> December 11, 2015	
	<b>F. Conflict of Interest Form Submitted to Ethics:</b> January 19, 2016	
	<b>G. Protest Period End Date:</b> February 29, 2016	
5.	<b>Solicitations Picked up/Downloaded:</b> 20	<b>Bids/Proposals Received:</b> 1
6.	<b>Contract Administrator:</b> Tamara Reid	<b>Telephone Number:</b> (213) 922-7215
7.	<b>Project Manager:</b> Al Martinez	<b>Telephone Number:</b> (213) 922-2956

**A. Procurement Background**

This Board Action is to approve contract PS16867 issued in support of Incident Based Surveillance System (IBSS) services on Metro's bus and rail fleet.

The RFP was issued in accordance with Metro's Acquisition Policy and the contract type is a fixed unit rate, not-to-exceed amount.

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

- Amendment No. 1, issued on September 9, 2015 clarified the project funding source as state/locally funded and extended the due date from September 17, 2015 to October 1, 2015;
- Amendment No. 2, issued on September 11, 2015 provided answers to questions related to the RFP;
- Amendment No. 3, issued on October 1, 2015 extended the due date from October 1, 2015 to October 29, 2015;

On September 3, 2015 a pre-proposal conference was held with five firms (SmartDrive, Panasonic, VectorUSA, Fluidmesh Networks, Fabian Escalante) in attendance.

A total of one proposal from SmartDrive Systems Inc. (SmartDrive) was received on October 29, 2015.

Metro staff conducted market survey to determine why there were no other bids were received per the Acquisition policy and Procedures Manual. Three firms responded with the following reasons:

1. Potential bidder felt the scope was outside of their capabilities.
2. Potential bidder downloaded the RFP but chose not to participate.
3. Potential bidder felt the specifications and requirements were targeted toward alternative technology/solutions that they were not capable of providing.

Based on the market survey and further analysis, it was determined that the solicitation was not restrictive and the decisions not to bid were based on individual business considerations as affirmed by the responses. Adequate competition exists as the solicitation was performed in an environment where all bidders believed that competition was available. Based on the market survey, there is no evidence that a new procurement would result in a different outcome. Therefore, this solicitation can be awarded as a competitive award.

## **B. Evaluation of Proposals**

A Proposal Evaluation Team (PET) consisting of staff from ITS, Rail Vehicle Acquisition and Maintenance, Facilities, Safety and Operations was convened and conducted a comprehensive technical evaluation of the proposal received.

The proposal was evaluated based on the following evaluation criteria and weights:

- Work Plan/Project Approach 40 percent
- Experience and Qualifications of Proposed Contractor and/or Personnel 20 percent
- Price 40 percent

The evaluation criteria are appropriate and consistent with criteria developed for other, similar procurements

During the week(s) of November 2, 2015 and November 9, 2015 the evaluation committee met to discuss SmartDrive's proposal and how well it met the requirements of the RFP. The committee agreed that SmartDrive provided a valid proposal that met all of the requirements of the RFP.

A series of negotiation meetings were held after which SmartDrive lowered its price by 18 % from \$20,206,861 to \$16,556,545.

## Qualifications Summary of Firms Within the Competitive Range:

### SMARTDRIVE SYSTEMS INC.

SmartDrive Systems Inc. is a leader of incident-based safety systems. SmartDrive is the only provider of video-based safety programs for both bus and rail and their systems are deployed on over 10,000 vehicles across 40 different agencies and transit operators. Since 2009, SmartDrive has supplied Metro with its current video-based surveillance system that is administered over its entire fleet of 2700 buses and 25 of its railcars.

As a means to ensure customer success and contract compliance, SmartDrive has proposed to implement a customer success team assigned to Metro at the beginning of the project and will work with Metro throughout the implementation of the IBSS for bus and rail solutions. This team will be comprised of a Strategic Program Manager, Customer Success Manager, Field Service Project Manager, Field Service Manager an Authorized Service Provider The members of the Customer Success team are all cross-trained to ensure continuity with service delivery regardless of any personnel changes.

Additionally, SmartDrive leverages a variety of key performance indicators (KPI) to support LA Metro in measuring the effectiveness of the IBSS for bus and rail programs and manage progress toward lowering risk. These KPIs include: Safety Score, SmartDrive Safety Score, % of Events Coached, Coaching Impact on Safety Score.

A summary of the Proposal Evaluation Team's evaluations are as follows:

<b>1</b>	<b>Firm</b>	<b>Average Score</b>	<b>Factor Weight</b>	<b>Weighted Average Score</b>	<b>Rank</b>
<b>2</b>	<b>SmartDrive</b>				
<b>3</b>	Work Plan/Project Approach	8.33	40.00%	33.33	
<b>4</b>	Experience and Qualification of Proposed Personnel	9.00	20.00%	18.00	
<b>5</b>	Price	10.00	40.00%	40.00	
<b>6</b>	<b>Total</b>		<b>100.00%</b>	<b>91.33</b>	<b>1</b>

**C. Cost/Price Analysis**

The recommended price has been determined to be fair and reasonable based upon cost analysis performed that included registered GSA rates, MAS audit findings, and historical pricing.

	<b>Proposer Name</b>	<b>Proposal Amount</b>	<b>Metro ICE</b>	<b>Negotiated or NTE amount</b>
1.	SmartDrive Systems Inc.	\$20,206,861	<b>\$21,111,024</b>	<b>\$16,556,545</b>

**D. Background on Recommended Contractor**

The recommended firm, SmartDrive Systems Inc., located in San Diego, California has been in business since 2004, providing incident-based safety systems. SmartDrive is a provider of video-based safety programs for both bus and rail and their systems are deployed on over 10,000 vehicles across 40 different agencies and transit operators.

Currently SmartDrive is providing IBSS services across 2400 of Metro’s bus vehicles and 25 rail cars. Their performance is satisfactory.