Report No: 13-326b
Meeting Date: May 13, 2015

Alameda-Contra Costa Transit District

STAFF REPORT

TO: AC Transit Board of Directors

FROM: Kathleen Kelly, Interim General Manager

SUBJECT: Computer Aided Dispatch/Automated Vehicle Location System, Project ID 1861

ACTION ITEM

RECOMMENDED ACTION(S):

Consider awarding a contract to Clever Devices, LTD., for the replacement of the District's Computer Aided Dispatch/Automated Vehicle Location (CAD/AVL) and Voice Communications Systems.

EXECUTIVE SUMMARY:

This project will replace the District's Computer Aided Dispatch/Automated Vehicle Location (CAD/AVL) and bus radio communication systems. The existing system, known as OrbCad 2000, was installed in 1999 and currently runs on unsupported software and aging, non-repairable servers.

This contract will replace all onboard equipment installed on District vehicles, provide voice, data, and text communications with the Operations Control Center, provide more accurate vehicle position information and greater security for vehicles, operators and passengers.

The contract is a firm-fixed price contract valued at $21,117,755 with a period of performance from contract award for 30 months. Attachment 1 contains a detail of all items included in the base contract, including a 5 year warranty on all software and hardware. Attachment 1 also contains a list of the following optional items that will be included in the contract: additional training vouchers, an OCC furniture allowance, and Real Time Passenger Information Display signs. The District desires to use the additional training vouchers at a later time as needed, and the OCC furniture allowance and Real Time Passenger Information Display signs as installation specification details become clearer. Extended hosting and warranty options for years 6 through 10 are also available. These extended options are not included in the base contract, and will be paid through operational, not project funds. The District may exercise any of these options within the next 5 years. Attachment 2 contains a list of all extended warranty options.

Of the total contract value, $622,060 will pay for goods and services from small/local/disadvantaged business enterprises.

BUDGETARY/FISCAL IMPACT:

The funding breakdown for this contract is as follows.

Fund Source	Total
FTA Section 5307	$16,894,204.00
District Match	$4,223,551.00
Total	$21,117,755.00

The procurement is fully grant funded and all funds are included in the current capital budget.

The total project costs are as follows:

Contract	Amount
Project Management/Owner's Representation (IBI Group)	$1,525,806
Clever Devices' CAD/AVL Contract	$21,117,755
Wireless infrastructure upgrade for 4 garages	$285,000
Cellular Subscriptions	$36,000
46 Real Time Passenger Information Signs paid by BRT project included in Clever Devices contract	($757,972)
Subtotal	$22,206,589
Internal Staff Costs	$1,925,339
Additional Temporary Transportation Supervisors Staff Costs	$1,283,676
Total	$25,415,604
Contingency 18%	$4,574,809
Total Project Costs	**$29,990,413**

BACKGROUND/RATIONALE:

This project will replace the District's XEROX CAD/AVL system, originally installed between 1999 and 2000, with Clever Devices' CAD/AVL solution using cellular technology for both data and voice communication instead of the existing radio-based communication.

The contract requires Clever Devices to deliver:

- Computer Aided Dispatch/Automated Vehicle Location solution,
- A Voice Over IP voice communication solution that permits superior coverage at a lower cost,
- A Real Time Passenger Information System, including the replacement of NextBus, to provide more accurate and timely bus location information to our passengers,
- Secure Bus, a Vehicle Safety solution that permits the OCC to disable a coach in the event of unauthorized use or other incident,
- Integration with HASTUS Daily Operations, and
- Purchase and installation of Console furniture for the new Operations Control Center

The successful CAD/AVL implementation will provide a number of benefits to the District, including:

- For Vehicle Operators, an improved and safer operator experience with tools that will:
  - Implement a single point logon by allowing one tap of the operator's badge to log the operator on to the CAD/AVL system, the farebox, the CLIPPER Driver Console, and the headsign, and retrieve the operator's assignment from the HASTUS Daily system
  - Provide improved graphical displays including schedule and headway adherence (for BRT) the operator's route and paddle, and turn-by-turn navigation directions on their data terminal
  - Provide increased security with the activation of the emergency alarm and covert microphone.

- For Operations Controllers and Road Supervisors, increased decision making and communication capabilities with tools that will:
  - Allow the Controller to proactively manage the fleet through headway management, detour creation, and control of stop announcements
  - Provide flexibility in communication modes with vehicle operators using Voice over IP, mobile radio in fallback mode, or text messaging
  - Provide immediate vehicle location information upon a request to talk or emergency alarm

- For the District Planning and Scheduling Departments, improved data management tools that will:
  - Enhance the schedule import process, providing alerts of long-term schedule changes and detours that may need to be maintained between signups
  - Provide bus stop data gathering and identification tools, eliminating the need to physically visit a new bus stop to identify its GPS location

- For the Passenger, an improved passenger experience that will:
  - Provide automatic stop announcements
  - Provide accurate bus arrival predictions with the replacement of NextBus, and accurate feeds to 511.Org and Google Transit.

- For Information Services, elimination of server maintenance, and a reduction of system down time as the new solution will be hosted offsite.

Anticipated Project Staff Needs:

The identified costs associated with current staff necessary for project implementation totals $1,952,339.

During the training and installation phase of this project, staff projects the need for an additional Database Administrator to manage and construct ad-hoc query reporting, all database functions, and additional data analysis. The BRT project will need 6 temporary Transportation Supervisors to perform Operations Control at the new Operations Control Center while current operations continue at the current Emergency Operations Center. The identified cost associated with additional staff totals $1,283,676.

Procurement Type and Timeline: The procurement methodology used was a 2-step process. The District first issued a Request for Information (RFI) on the District Website, the Oakland Tribune, and to known CAD/AVL vendors. From the results of the RFI, an evaluation panel created a list of three (3) vendors who demonstrated the capability, capacity and experience to implement the system and who would receive the Request for Proposal that constituted the second step. The procurement proceedings and results are recorded in the following tables.

Action	Date
Board authorization to issue solicitation	October 9, 2013
Request for Information issued	June 19, 2014
Request for Proposal Issued	October 8, 2014
Pre-bid conference	October 27, 2014
Solicitation closed	December 16, 2014
Evaluations complete	February 4, 2015
Best and Final Offer invitation submitted:	March 19, 2015

Metric	Value
Request for Information: Number of firms solicited	28
Number of local/small business firms solicited	4
Number of disadvantaged business enterprises solicited	1
Number of firms that responded	5
Request for Proposal: Number of firms solicited	3
Number of firms determined to be responsive	3
Number of firms evaluated	3

A panel of 6 AC Transit employees evaluated the three proposals and performed vendor reference checks (round 1), hosted vendor demonstrations at the AC Transit General office, (round 2), and visited properties that have implemented the vendors' solution (round 3). After final scores were submitted, the vendors' price proposals were evaluated by the Procurement

Department and the IBI Group, the firm under contract to the District to provide technical expertise for this project. Through all rounds of the evaluation process, Clever Devices ranked highest in all categories: qualifications, technical solution, and past performance. Finally, when cost proposals were evaluated, Clever Devices again ranked highest for providing the lowest cost for the CAD/AVL solution. The evaluation process showed Clever Devices to be the best qualified vendor with the lowest price proposal.

The panel found that Clever Devices submitted a proposal responsive to the District's needs. They demonstrated depth in qualifications and staff reflected in the length of years of technical experience in CAD/AVL and communication implementations. Their technical approach directly suited the needs of the District as demonstrated at the vendor demonstrations, particularly in their experience with offsite server hosting. They displayed superior problem solving experience with CAD/AVL systems as reported by other properties during reference checks and during the site visit to Washington Metropolitan Area Transit Authority (WMATA).

The recommended contract is a firm-fixed price with a total value of $21,117,755 and a period of performance from contract award for 30 months. There are no option periods for this contract.

Award of this contract to the recommended awardee would result in $622,060 going to small/local/disadvantaged businesses, as shown in the table below.

Firm	SLDBE Type	Participation in dollars
A (prime): Clever Devices, LTD	N/A	$20,495,695
Subcontractor One: ESP Services, Houston Texas	DBE	$622,060
Contract Total:		$21,117,755

ADVANTAGES/DISADVANTAGES:

Award of this contract would permit staff to implement the Board's direction regarding this project (Staff Report 13-326).

ALTERNATIVES ANALYSIS:

Do Nothing. The Board could opt to maintain the situation as-is, resulting in implementation delays or termination.

Select an alternate awardee. The Board could override the staff recommendation and order contract award to an alternate awardee. This would lead to unpredictable consequences; among them is an increase in the probability of a protest and delay in the project, and selection of a less qualified candidate.

Order a re-competition. The Board could abandon this procurement and direct staff to re-compete the contract. This would be appropriate if the Board finds that statutory, regulatory or public policy interests have not been satisfactorily addressed by the procurement procedures.

This would delay project implementation while staff addresses the deficiencies in the procurement and re-conducts it.

PRIOR RELEVANT BOARD ACTIONS/POLICIES:

Staff Report 13-326: Consider approval for solicitation of a Computer Aided Dispatching/Automatic Vehicle Location (CAD/AVL) system to replace its current system. Additionally, consider approval of a solicitation of Project Management/Owner's Representation Assistance in the planning, engineering, and implementation of the District's CAD/AVL system replacement.

ATTACHMENTS:
1: Contract Costs
2: Extended Hosting and Warranty Options

Executive Staff Approval:	Aida R. Asuncion, Interim Chief Planning, Engineering and Construction Officer
Reviewed by:	Jon Medwin, Director of Purchasing and Materials James Pachan, Chief Operating Officer/Interim Chief Financial Officer Thomas O'Neill, Chief Information Services Officer Denise C. Standridge, General Counsel
Prepared by:	Sandra Lewis-Williams, Information Services Project Manager

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Attachment 1

Contract Costs

Item/Description	Price (USD)
PART 1: Project Services	$1,488,234
PART 2: Onboard System	$6,056,477
PART 3: Central Site Systems	$1,678,433
PART 4: Voice and Data Radio Communication	$169,041
PART 5: Testing	$625,223
PART 6: Training	$148,042
PART 7: Spares	$150,896
PART 8: Hardware and Software Warranty and Maintenance Years 1-5	$2,409,834
PART 9: Real-time Passenger Information (RTPI)	$58,865
PART 10: Hosted Central Solution	$931,068
PART 11: Additional Onboard Equipment	$174,837
PART 12: Additional Contractor Provided Software Licenses	$96,875
PART 13: HASTUS Daily Operations Interfaces	$300,267
PART 14: Voice-over-Internet-Protocol (VoIP) Voice and Data Communications Solution	$1,625,057
PART 15: Backup Hosted Site years 1-2	$420,881
PART 16: Bus Security Technology	$1,308,668
Part 17 a: Real time feeds using SIRI protocols when required	$92,374
Part 17 b: AC Transit API Data Views	$181,269
Part 18: Advanced HASTUS integration	$582,694
SUB-TOTAL	$18,499,035
CLEVER DEVICES(Management Discount)	($1,275,000)
BASE Sub-TOTAL	**$17,224,035**
Equipment Sales Tax	**$533,311**
Base Grand Total	**$17,757,346**

Optional Items to Include in Contract

Option 3: Additional Training Vouchers	$242,602
Option 10: Operations Control Center Furniture Allowance	$411,000
Option 11: Real Time Passenger Information Wayside Passenger Display System	$2,615,278
Subtotal	**$3,268,880**
Equipment Sales Tax for optional items	$91,529
Grand total Optional items	$3,360,409
Total Contract Value (Base + Optional totals)	**$21,117,755**

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Attachment 2

Extended Hosting and Warranty Options

Item/Description	Year 6	Years 6-10
Extended Hardware Warranty	$221,942	$1,178,320
Extended Software Maintenance and Warranty	$402,135	$2,132,858
Hosted site	$175,878	$914,770
Backup Hosted Site (year 3 and years 3 - 5)	$111,839	$593,771
Real Time Passenger Display System Warranty	$73,360	$389,478
Voice-over-Internet-Protocol (VoIP) Voice and Data Communications Solution: Extended Warranty	$122,365	$649,006
Bus Security Technology Extended Warranty	$50,140	$265,862
Advanced HASTUS Integration Solution Warranty	$22,284	$118,311
API Views Warranty	$23,212	$123,236
Totals	$1,203,155	$6,365,612