



Memorandum

TO: HONORABLE MAYOR
AND CITY COUNCIL

FROM: Kip Harkness
Julia H. Cooper
Margaret McCahan

SUBJECT: SEE BELOW

DATE: March 2, 2018

Approved

Date

3/2/18

SUBJECT: ACTIONS RELATED TO THE AGREEMENTS BETWEEN THE CITY OF SAN JOSE AND THE EAST SIDE UNION HIGH SCHOOL DISTRICT AND SMARTWAVE TECHNOLOGIES LLC FOR A COMMUNITY WIRELESS NETWORK

RECOMMENDATION

Adopt a resolution authorizing the City Manager to:

- (a) Execute the First Amendment to the Agreement between the City of San José and East Side Union High School District to increase funding by \$2,000,000 for a total funding of \$4,700,000, expanding the Community Wireless Network to add the William C. Overfelt High School attendance area, and to provide ongoing maintenance and support for the James Lick and William C. Overfelt High School attendance areas.
- (b) Execute the First Amendment to the Agreement between the City of San José and SmartWAVE Technologies LLC (Suwanee, GA) to increase maximum compensation by \$1,323,811 for a revised maximum compensation amount not to exceed \$2,961,051 to expand the East Side Union High School District Community Wireless Network, to add the William C. Overfelt High School attendance area, including all required hardware, software, materials, professional services, maintenance and support, and applicable sales tax through December 31, 2021.
- (c) Negotiate and execute amendments and change orders to the Agreement with SmartWAVE Technologies LLC for contingency to cover any unanticipated changes in requirements or specifications, not to exceed \$200,000 and subject to the appropriation of funds.

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- (d) Negotiate and execute amendments to the Agreement with the East Side Union High School District to increase funding, as needed, to expand the Community Wireless Network including adding the Yerba Buena High School attendance area.
- (e) Negotiate and execute amendments and change orders to the Agreement with SmartWAVE Technologies LLC to expand the Community Wireless Network including adding the Yerba Buena High School attendance area and ongoing system maintenance and support of all attendance areas, subject to the appropriation of funds.
- (f) Adopt the following 2017-2018 Appropriation Ordinance and Funding Sources resolution amendments in the General Fund:
 - (1) Increase the East Side Union High School District Community Wireless Network Project appropriation to the Department of Public Works by \$2,000,000.
 - (2) Increase the estimate for Revenue from Local Agencies from \$2,000,000.

OUTCOME

This project provides greater internet access and services to underserved students in the East Side Union High School District (the District) to facilitate advancing student academic achievement through internet-based learning technologies and instruction both at home and at District facilities. This project provides opportunities for students to connect to career and college resources online.

BACKGROUND

Across the United States, school districts are investing in laptops and digital learning platforms and using funding mechanisms such as federal E-Rate funds to deliver lightning-fast broadband to the classroom. Those investments make a huge difference—but only on school grounds. Students who do not have home broadband risk getting left behind the digital learning revolution. At three of the District Schools – James Lick, Overfelt, and Yerba Buena, it is estimated that the majority of the students do not have broadband at home. Schools are aware of this lack of “digital equity” between the digital “haves” and “have-nots.” However, with no control over the broadband infrastructure in their surrounding communities, most districts struggle to find solutions.

On June 28, 2016,¹ the City Council adopted a resolution authorizing the City Manager to negotiate and execute an Agreement between the City of San José and the East Side Union High School District relating to the District’s payment to the City to install and maintain a Community Wireless Network in the District attendance areas for a term of five years in an amount not to exceed \$2,700,000. Before proceeding with subsequent Wi-Fi deployments in additional

¹ Council Memo 6/28/16: http://sanjose.granicus.com/MetaViewer.php?view_id=&event_id=2142&meta_id=583300

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attendance areas the City Council requested an update on fund raising activity and other potential technologies to support the project implementation.

On September 20, 2016,² the City Council authorized the City Manager to execute an Agreement with SmartWAVE Technologies LLC for the purchase and installation of a Wi-Fi Network Deployment for the James Lick attendance area of the East Side Union High School District, including hardware, software, services, maintenance, and support for an initial five-year term with a maximum compensation not to exceed \$1,535,600. A contingency of \$120,000 was also approved.

The James Lick attendance area Community Wireless Network went live on October 31, 2017.

ANALYSIS

The District's Community Wireless Network project is already having a major impact on the lives of their students. The network supports thousands of high-speed connections and Terabytes of data every month with most of the data coming from research and other education-based web sites. Low-income students who did not have online access to do their schoolwork at home can now take full advantage of digital curriculum and school-provided laptops. At the same time, the district is realizing more value from their digital learning investments, knowing that more students are using these tools to work and learn more effectively.

Based on the positive performance of the James Lick attendance area Community Wireless Network and the availability of additional funds, the District has requested expansion of the Community Wireless Network to the William C. Overfelt (Overfelt) High School Attendance Area and strongly desires deployment prior to the beginning of the next school year.

Fundraising Activity

Based on the success of the James Lick deployment, the District has committed an additional \$2,000,000 in bond funding to raise the current available funding from \$2,700,000 to \$4,700,000.

Potential Technologies

The James Lick attendance is using two different technologies to help close the access barrier of the digital divide: (i) the Community Wireless Network (outdoor Wi-Fi) and (ii) the 4G/LTE hotspots provided by the Sprint 1 Million Project Grant. Alternative technologies and other methods to close the digital divide including wired options, fixed wireless options, and other telco discount plans have been evaluated for the Overfelt attendance area. However, due to cost, schedule, adoption, and/or technology maturity considerations, these options will be reconsidered in the Yerba Buena attendance area.

² Council Memo 9/20/16: http://sanjose.granicus.com/Viewer.php?view_id=&event_id=2154&meta_id=592460

Technology Recommendation

It is the recommendation of the District and the City’s Office of Civic Innovation and Digital Strategy that the Overfelt attendance area utilize the same technology used in the James Lick attendance area.

Project Actuals and Revised Estimates

The James Lick total project actual cost at completion is \$1,451,885 which is significantly below the budget of \$1,925,600 because only 200 poles with Wi-Fi attachments were required to achieve coverage instead of the 300 poles originally estimated.

The Overfelt attendance area revised total project estimated cost increased to \$2,025,137. The cost increase is due to the amount of pole remediation necessary to support Wi-Fi attachments. The scope of the Overfelt attendance area estimates deployment of Wi-Fi attachments on 300 poles.

The Yerba Buena attendance area revised Total Project increased to \$2,025,137. The cost increase is due to the amount of pole remediation necessary to support Wi-Fi attachments. The scope of the Yerba Buena attendance area estimates deployment of Wi-Fi attachments on 300 poles.

The three-attendance area total projects costs are detailed in the table below.

Attendance Area	Smart WAVE Installation (includes Supplemental Services and Year 1 Maintenance)	Project Delivery (City Staff)	Contingency	Ongoing Maintenance and Support	Total Project Cost
James Lick (Actual)	\$971,115	\$200,000	\$101,640	\$179,100	\$1,451,855
Overfelt (Revised)	\$1,411,596	\$315,941	\$0	\$297,600	\$2,025,137
Yerba Buena (Revised*)	\$1,411,596	\$315,941	\$0	\$297,600	\$2,025,137
TOTAL	\$3,794,307	\$831,882	\$101,640	\$774,300	\$5,502,129

*Yerba Buena revised estimate based on Overfelt revised estimate.

Funding and Funding Gap

Revised total project cost estimate for three attendance areas	\$5,502,129
Contingency	<u>\$ 200,000</u>
TOTAL	<u>\$5,702,129</u>
Revised District Funding	<u>\$4,700,000</u>
Revised Funding Gap	<u>\$1,002,129</u>

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The City and District will pursue strategies to close the remaining funding gap of \$1,002,129 with the following fund development plan over the next year:

- Pursue private sector opportunities including broadband provide negotiations;
- Pursue opportunities as part of a larger City-wide Wi-Fi strategy;
- Pursue additional district technology bond funding;
- Pursue community benefit partnerships; and
- Approach other feeder school districts within the East Side Union High School District service area about funding the network and pursue agreements with these districts to access the network.

This project aligns with the recommendation from the Digital Inclusion and Broadband Strategy to explore opportunistic Wi-Fi until a city-wide Wi-Fi strategy can be formulated. A city-wide Wi-Fi strategy project is targeted for the spring or summer 2018.

Areas of consideration for a city-wide Wi-Fi strategy include but are not limited to:

- Evaluation of the District's three attendance area Community Wireless Network deployment;
- Evaluation of the Facebook Terragraph pilot;
- Evaluation of hotspot-based access used in the District's Wi-Fi program;
- Evaluation of other emerging technologies;
- Exploring the City's role as an Internet Service Provider which is current not recommended by the Digital Inclusion and Broadband Strategy;
- Expanding the District's access to the Community Wireless Network to non-student members of the community;
- Exploring collaboration with other agencies including education and transportation;
- Coverage area - City-wide vs. targeted area interventions vs. regional initiative;
- City staffing levels, skillset, and technology infrastructure to expand role as the internet service provider for community Wi-Fi;
- Underlying business case and funding model;
- User experience model – Starbucks “best effort” vs. carrier grade;
- Subscription model – free vs. paid vs hybrid; and
- Opportunities with broadband providers and value trading negotiations.

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EVALUATION AND FOLLOW-UP

To ensure that the District's Wi-Fi projects support student academic outcomes, the City's Library Department and the District collaborated to identify the following measures the following:

1. Frequency of access;
2. Types of access (types of devices utilized);
3. Amount of data used;
4. Types of sites and information accessed; and
5. Number of classroom teachers who report they are able to "flip the classroom," which means they require students to:
 - a. Research online;
 - b. Submit work online; and
 - c. Communicate online.
6. Number of students in these classrooms (as a number and percentage of target student population), who are researching, submitting work, and communicating online, as reported by the classroom teacher.

The District will also track the number of students who request a Sprint IMP hotspot and provide a qualitative comparative analysis of Wi-Fi adoption versus hotspot adoption.

Actual performance data will be reported back to the City by the District on a semi-annual basis.

The Office of Civic Innovation will publish Council Information Memoranda on performance updates, technology alternatives, and any plans to expand the deployment to the Yerba Buena attendance area pending closure of the remaining funding gap. Budget actions will also be brought forward to recognize the additional funding and appropriate the project funds, as available.

PUBLIC OUTREACH/INTEREST

In addition to reporting the measurements on academic outcomes, qualitative feedback from students, parents, and other educators that will be shared with the Council.

This memorandum will be posted on the City Council's Agenda website prior to the March 13, 2018 City Council meeting.

COORDINATION

This memo was coordinated with the City Attorney's Office, the Departments of Public Works, Library, and Information Technology, and the East Side Union High School District.

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COMMISSION RECOMMENDATION/INPUT

This item does not have input from a board or commission.

COST SUMMARY/IMPLICATIONS

As described above, the District has committed \$4.7 million to support the Community Wireless Network Project. This funding supports the deployment and full 5-year maintenance of two attendance areas (James Lick and Overfelt) at an estimated cost of \$3.6 million and provides funding of \$1.1 million to partially fund the third attendance area (Yerba Buena). Based on the revised cost estimate for Overfelt and Yerba Buena, there is a projected funding shortfall of approximately \$1.0 million. The project cost increase and remaining funding gap are largely driven by the need for electrical remediation of the City’s poles. Additional funding for the third attendance area funding gap and post five-year maintenance costs will be explored in collaboration with the District.

BUDGET REFERENCE

The table below identifies the fund and appropriations proposed to fund the contract costs recommended as part of this memorandum.

Fund #	Appn #	Appn Name	Total Appn	Amt. Increase	2017-2018 Adopted Operating Budget Page	Last Budget Action (Date, Ord. No.)
001	7860	East Side Union High School District Community Wireless Network Project	\$1,073,000	\$2,000,000	1106	10/17/2017 Ord. No. 30014
001	R090	Revenue from Local Agencies	\$23,741,738	\$2,000,000	145	02/13/2018 Ord. No. 78505

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CEQA

Exempt, Section 15303 New Construction or Conversion of Small Structure, File No. PP16-085.

/s/

JULIA H. COOPER
Director of Finance

/s/

KIP HARKNESS
Deputy City Manager, Civic Innovation &
Digital Strategy



MARGARET MCCAHAN
Budget Director

I hereby certify that there will available for appropriation in the General Fund moneys in excess of those heretofore appropriated therefrom, said excess being at least \$2,000,000.



MARGARET MCCAHAN
Budget Director

For questions regarding the Access East Side Project, please contact Dolan Beckel, Acting Director, Office of Civic Innovation and Digital Strategy, at (408) 535-8260. For questions regarding the SmartWAVE Agreement, please contact Mark Giovannetti, Finance Deputy Director, at (408) 535-7052.