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AGENDA REPORT

TO: Sabrina B. Landreth
CITY ADMINISTRATOR

FROM: Sean Whent
Chief of Police

Katano Kasaine
Interim Chief Information Officer

SUBJECT: Intake of Wireless 9-1-1 Calls and
Mapping Technology Grant

DATE: January 28, 2016

City Administrator
Approval

Date

2/10/16

RECOMMENDATION

Staff Recommends That The City Council: 1) Approve A Plan To Intake All Wireless 9-1-1 Calls Currently Rerouted To The Oakland Police Department Communications Section Call Center From the California Highway Patrol (CHP); and 2) Adopt A Resolution Authorizing The City Administrator Or Designee To Accept 9-1-1 Geographic Information System (GIS) Mapping Equipment, Configuration, And Installation, Valued At One Hundred Sixty Three Thousand, Four Hundred Seventy Dollars (\$163,470) And Computer Monitors And Related Equipment, Valued At Sixteen Thousand Five Hundred Thirty Dollars (\$16,530), Funded By The California Governor's Office Of Emergency Services (CalOES) Public Safety Communications California 9-1-1 Emergency Communications Branch, To Develop 9-1-1 GIS Mapping Capacity At The Oakland Police Department (OPD) Communications Section Call Center, Requiring No Initial City Of Oakland Funds To Implement This Project.

EXECUTIVE SUMMARY

The Oakland Police Department (OPD), in coordination with the Information Technology Department (ITD) recommends that the City Council approve a plan to intake all wireless 9-1-1 calls for service. Currently, these calls are transmitted by wireless towers to the California Highway Patrol (CHP) Call Center, and then rerouted to the OPD Communications Center ("Comm Center"). The vast majority of cities and governmental bodies in California now directly receive wireless emergency calls in their own respective communication centers. The Oakland Comm Center would need additional resources for positions and maintenance costs to directly receive these calls.

New 9-1-1 GIS mapping software and monitors must be installed at the Comm Center to support incoming 9-1-1 calls generated directly from mobile telephones. The new software will

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allow OPD Police Communications Dispatchers (PCDs) and Police Communications Operators (PCOs) to map the actual locations of individuals who call 9-1-1 using a mobile phone, providing for a more efficient and safe emergency response. The California Office of Emergency Services (CalOES) will provide software and hardware with no immediate cost to the City of Oakland. Annual maintenance costs will be covered by the vendor in the first year and are estimated to cost the City approximately \$25,000 annually thereafter. OPD will need approximately 14 additional PCOs by 2018 to support the increased call volume once the City eventually receives all mobile-phone generated 9-1-1 calls (see Cost Summary section below).

BACKGROUND AND LEGISLATIVE HISTORY

The Comm Center receives and processes 9-1-1 calls for service generated within the City. The Comm Center takes calls for police service, as well as for fire and medical care. Fire and medical calls are then rerouted to the Oakland Fire Department's (OFD) separate call center. This OPD dispatch center is known by CalOES as a Public Safety Answering Point (PSAP).

In 2014, the Comm Center received 587,904 calls; 44,137 of these calls resulted in Priority 1 incidents or calls for service being created (calls requiring immediate response) for dispatch. In 2015, the Comm Center received approximately 582,098¹; 43,190 of these calls resulted in Priority 1 incidents or calls for service being created. Mobile calls are answered by the CHP Call Center and then re-routed to the Comm Center. Currently, mobile users are only able to reach the Comm Center direct by dialing 510-777-3211 for emergencies or 510-777-3333 for non-emergency matters. While CHP has not provided the City with a detailed analysis, it is the experience of the Comm Center staff that routing calls via CHP creates a delay in answering and responding to the needs of the caller. At present, the CHP Call Center routes only calls to the OPD Comm Center that are intended for the Comm Center.

Historically, mobile phones were car phones, so CHP built the original telephonic infrastructure for receiving these mobile car-phone calls from cellular networks. Mobile phones using 3G and 4G networks have since become ubiquitous in Oakland as in most of the U.S. Residents and visitors rely on their handheld mobile phones for communications including emergency 9-1-1-calls. CHP began working with cities in California in 2001 to directly intake their mobile wireless calls. Of the 451 PSAPs in California, all but four (Atherton, California State University Pomona, Fort Hunter Liggett, and Oakland) now directly receive wireless calls, or have begun the process to directly intake these calls. This translates to 99.5 percent of PSAPs in California directly receiving wireless calls. CHP and OPD agree that Oakland must build the infrastructure to directly receive the mobile calls sent to local towers.

Why is Oakland one of the few remaining PSAPs not directly receiving wireless 9-1-1 calls?

CalOES and the Comm Center anticipate that Oakland will receive approximately 156,000 more calls each year in addition to the 600,000 calls currently received once all mobile 9-1-1 calls are routed from mobile phone antennas directly to the Comm Center. OPD anticipates that this

¹ The Comm Center is providing an approximate count due to a software crash that affected the call count for non-emergency calls made in November and December 2015.

greater call volume will require additional Comm Center staffing as well as upgraded technology. These hurdles have delayed progress in directly receiving wireless 9-1-1 calls. OPD and ITD are now requesting authorization of a plan, as well as GIS mapping equipment, configuration, and installation from CalOES, so that the Comm Center can be prepared to start the wireless intake process.

An article titled Highway Patrol Given Outsized Load of Wireless 911 calls, by Ryan Gabrielson of California Watch², dated April 10, 2012, explains that “the California 9-1-1 Emergency Communications Office has worked since 2007 to shift wireless calls from the highway patrol’s dispatch centers to those operated by local law enforcement.” The article explains that already in 2012, “most of the departments still relying on the highway patrol for wireless 911 calls are small and receive relatively few emergency reports.” The report singles out Oakland and Sacramento as the larger cities that at the time had still not begun to directly take wireless 9-1-1 calls; Sacramento has since begun the migration process.

The report received by the Public Safety Committee entitled “Wireless 9-1-1 Calls,” dated November 14, 2013, (**Attachment A**) explains on page 2 that “There are hundreds of cellular towers in the City, many of which are believed to be areas of the City that receive a large amount of calls for service. Having the ability to capture those 9-1-1 wireless calls directly would enhance the City’s ability to disseminate information to patrol officers in a timelier manner thereby enhancing crime-fighting efforts.” Page 2 of the report also states that “staffing levels must be increased to manage full receivership of wireless 9-1-1 calls.”

The November 14, 2013 “Wireless 9-1-1 Calls” Report was presented to the Public Safety Committee on December 17, 2013 where it was unanimously filed and received. During the discussion, OPD explained that the Comm Center was already understaffed for then-current call volumes and lacking in adequate technology to take on additional calls. OPD explained that it expected an approximate call volume increase of 57 percent with the intake of all wireless emergency calls, and that CHP was then receiving approximately 390,000 annual 9-1-1 calls from within City of Oakland.

During the December 17, 2013 presentation, Council Members asked if OPD could identify particular wireless towers where more call traffic specific to Oakland and the Comm Center could be located (as opposed to calls that would need to be rerouted to other jurisdictions). The GIS mapping software will allow OPD and ITD to focus on the call data of particular towers and identify towers most appropriate for rerouting from CHP to the Comm Center, should the wireless intake plan be approved. During the previous committee discussion, the “grant” of a wireless mapping system was discussed, and councilmembers agreed that OPD should pursue this grant as a first step toward an eventual full migration of wireless 9-1-1 calls.

² <http://californiawatch.org/dailyreport/highway-patrol-given-outsized-load-wireless-911-calls-15690>

ANALYSIS AND POLICY ALTERNATIVES

Accepting Wireless 9-1-1 Calls

The OPD Comm Center, as explained above, expects a greater call volume as wireless phone calls to 9-1-1 and the associated cell towers are re-routed. The number of calls dispatched may be the same, but the incoming number of calls will increase. Currently CHP determines which calls should be transferred directly to OPD. Some calls are not appropriate for 9-1-1. Other calls may pertain to different jurisdictions. If the plan to intake all 9-1-1 calls is approved by the City Council, the Comm Center will manage the rerouting of calls to appropriate communications centers once it directly receives all wireless calls in the coming years.

The increase in total call volume will require an increase of 14 PCOs. OPD arrived at this figure based on an average of 2014 and 2015 call volume (approximately 580,000 incoming calls per year) and the expected increase of 150,000 annual calls. Currently, many dispatchers receive incoming calls, essentially serving as PCOs – in addition to their role dispatching calls. OPD will need more PCOs, who are only authorized to take calls, as wireless calls are routed to the Comm Center. OPD and ITD recommend that the City Council approve this plan to migrate all wireless calls directly to the Comm Center and hire more PCOs starting in the FY 2016-17 mid-cycle budget. OPD and ITD recommend this plan because of the public safety benefits of directly receiving all calls for service. If the City Council approves this plan, OPD will hire an additional four to five PCOs each year over the next three years to accommodate the increase in calls.

The mapping software will allow the Comm Center to pinpoint different wireless antennas and phase in the gradual rerouting of all wireless mobile call signals. The Comm Center staff is collaborating with CalOES, and is prepared to begin a three-year roll-out plan to reroute different wireless antennas in phases. The Comm Center expects to be able to take the first direct 9-1-1 calls from some of Oakland's many wireless carrier antennas as soon as March 2016 if the necessary technology is in place by then. Staff expects that a complete roll-out of all towers from all the major wireless carriers could occur by the end of 2018.

The Comm Center also faces the challenge of not having the capacity to visually map the call locations of the 9-1-1 callers. Precise location capabilities would provide invaluable information for dispatchers trying to connect callers to emergency services. The Comm Center needs a mapping system that will support both the migration of mobile calls as well as call mapping technology.

The recommendation to authorize the City Administrator or designee to accept 9-1-1 GIS mapping equipment as well as the configuration and installation (see "9-1-1 GIS Mapping System" below) will provide the Comm Center with the necessary infrastructure to begin to directly receive wireless mobile phone calls currently received by CHP. However, OPD anticipates the need to eventually hire more staff (14 PCOs) to fully manage the increased call volume if and when all wireless calls are routed directly to OPD. Therefore, there are four policy options to consider related to the intake of wireless 9-1-1 calls currently rerouted to OPD from the CHP.

The four options are as follows:

1. Approve a plan to intake all wireless 9-1-1 calls currently routed to OPD from CHP – which involves the eventual hiring of up to 14 PCOs to manage the increased call volume – and authorize the City Administrator or designee to accept the 9-1-1 GIS mapping equipment, configuration, and installation; or
2. Approve a plan to intake all wireless 9-1-1 calls currently routed to OPD from CHP – without authorizing a plan for any additional staffing to manage the increased call volume – and authorize the City Administrator or designee to accept the 9-1-1 GIS mapping equipment, configuration, and installation; or
3. Approve a plan to intake only some wireless 9-1-1 calls currently routed to OPD from CHP – without authorizing a plan for any additional staffing to manage the increased call volume – and authorize the City Administrator or designee to accept the 9-1-1 GIS mapping equipment, configuration, and installation; or
4. Do NOT approve a plan to intake wireless 9-1-1 calls currently routed to OPD from CHP and do NOT authorize the City Administrator or designee to accept the 9-1-1 GIS mapping equipment, configuration, and installation.

The table 1 and 2 below illustrate the anticipated consequences of each policy option.

Table 1: Explanation of Wireless 9-1-1 Intake Policy Options

Policy Options	Policy Consequences
Policy Option 1: Accept all wireless calls + plan to hire additional staff + receive 9-1-1 GIS equipment.	This is the staff recommendation and would allow the OPD Comm Center to modernize its infrastructure with GIS Mapping Software (see “9-1-1 GIS Mapping System” below), begin working with wireless phone companies to migrate wireless cell towers, hire the staff to manage the increased call volume.
Policy Option 2: Accept all wireless calls + no plan to hire additional staff + receive 9-1-1 GIS equipment.	This option would allow the OPD Comm Center to modernize its infrastructure with GIS Mapping Software (see “9-1-1 GIS Mapping System” below), begin working with wireless phone companies to migrate wireless cell towers, but not hire the staff to manage the increased call volume. The experience of other cities confirms that OPD’s emergency 9-1-1 (as well as non-emergency) call volume will increase, and continue to increase, once OPD’s Comm Center directly receives these calls. If OPD is unable to hire additional PCOs above currently budgeted staffing but receives the GIS Mapping Software, then OPD will begin to work with wireless phone companies to migrate wireless cell towers; however, as the call volume increases, staff anticipates that 9-1-1 call wait time will increase. Callers will likely wait longer before speaking with a dispatcher or PCO and it is possible that some callers will receive “busy” signals if too many calls come in to the Comm Center at any one time.

<p>Policy Option 3: Accept <i>some</i> wireless calls + no plan to hire additional staff + receive 9-1-1 GIS equipment.</p>	<p>This option is very similar to Option 2 except that the approved plan acknowledges that the Comm Center would not be able to intake all 9-1-1 wireless calls without additional staff and so the plan will be to reroute only some of the cell phone towers to intake a yet-to-be-determined level of wireless calls. This plan will still likely lead to longer 9-1-1 call wait times and possibly “busy” signals as call volume will still increase. However, the State of California may eventually mandate that the City of Oakland accept <i>all</i> wireless 9-1-1 calls – forcing the City into Policy Option #2, unless a plan to hire additional PCO staff (Policy Option #1) is approved.</p>
<p>Policy Option 4: No plan to intake wireless calls + no plan to hire additional staff + do not receive 9-1-1 GIS equipment.</p>	<p>This option maintains the status quo of relying on CHP to receive all wireless phone calls and reroute them to OPD’s Comm Center. In this option, the City does not receive the GIS Mapping Software (see “9-1-1 GIS Mapping System” below). Additionally, as in Policy Option #3 above, the State of California may eventually mandate that the City of Oakland accept <i>all</i> wireless 9-1-1 calls – forcing the City into Policy Options #1 or #2 above.</p>

Table 2: Summary of Wireless 9-1-1 Intake Policy Options

Policy Option	Accept Wireless 9-1-1 Calls	Hire Additional Staff	Receive 9-1-1 GIS Equipment	Change to 9-1-1 Call Wait Time
1	Yes - All	Yes	Yes	Possible
2	Yes - All	No	Yes	Very likely
3	Yes - Some	No	Yes	Very likely
4	No	No	No	No

Other California Cities Experience Migrating Wireless Calls from CHP

The City and County of San Francisco was the first jurisdiction in California to accept wireless 9-1-1 calls, as they began doing so in 2002. The Department of Emergency Management also began accepting and dispatching Fire Department calls during the same time frame and substantially increased staffing. However, it is not possible to analyze how much additional staffing was needed to accept wireless 9-1-1 calls and how much was needed for Fire calls. San Francisco did not report any unanticipated developments in their transition. Seventy percent of all 9-1-1 calls to the San Francisco Comm Center are now wireless.³

The City of Palo Alto began accepting wireless 9-1-1 calls in 2004. It took about a year to get all of the wireless providers on board. They experienced a 40 percent increase in call volume and did not increase staffing. However, their communications manager stated that this is not possible for a larger city. San Mateo County Public Safety Communications provided

³ Phone call between Tim Birch and Cecile Soto, Operations Manager, San Francisco Department of Emergency Management, December 15, 2015

information about the transition to wireless 9-1-1 concerning transition plans and costs.⁴ This information is provided as follows:

- *The most important issues in making the transition from wired to wireless 9-1-1:*
 - *Having more accurate data as to where the wireless call should be directed. Today, OPD is receiving calls that were already received by another agency [CHP] and then transferred. OPD will get them directly, allowing any routing errors to be reported and corrected [and providing] good analysis of where calls should have gone as opposed to where they landed (ie., programming towers/sections correctly). Being able to accurately analyze call routing and fixing it decreases total call processing. Decreasing transfers is highly desirable unless...transferring them to the secondary PSAP, ie., Fire/County*
 - *This is good for the public. It decreases transfers and potential of them disconnecting. It allows for a continuity in rapport between the R[eporting] P[arty] and call taker without having to technically transfer, announce the transfer and reset the questioning process.*
 - *Continuity of service delivery is achieved. You're now doing what your neighbors are doing and disparate service won't be an issue...*
- *Issues that were unforeseen/lessons learned:*
 - *[S]ince OPD is one of the last in the State to convert, the issues have been well vetted by others. There really isn't anything that is unforeseen anymore. The issues are all out there and the industry continues to [have concerns] with the FCC and [wireless] carriers about the technical issues that remain in the system. The [FCC and carriers] think the biggest lesson learned is that the public's perception of wireless is the same as wireline. What was unforeseen is the time on task that it take in order to locate someone if their location is not known or accurate.*
- *Costs usually incurred:*
 - *[The State reimbursement] formula...has an equation of traffic load on trunk lines. The problem with that is [that San Mateo County] equips the Dispatch Center with 9-1-1 on ALL consoles. So if the formula says [there is] traffic for 10 9-1-1 lines, but 18 consoles [are equipped with 9-1-1], then the balance of the equipment costs is on [OPD]. When [San Mateo County] implemented [wireless 91-1-] in 2008, [the county paid] about \$350,000 out of pocket for GIS software, additional telephone consoles, and mapping monitors. [These were] all onetime costs, but more equipment replacement maintenance costs [are incurred as a result].*
 - *There is also training overtime if [OPD doesn't] train on shift, and any overtime that implementation will incur between tech staff and operations.*
- *Other/operational impacts (such as additional staff):*
 - *The training should be simple.*

⁴ Email message from San Mateo County Public Safety Communications Director Jaime Young to Timothy Birch, sent December 22, 2015 at 10:08 am Pacific time.

An October 2015 report by the Google 9-1-1 Team⁵ found that the number of accidental wireless calls increased in San Francisco from 2012 to 2014 and these calls took longer to resolve than accidental landline calls. The same report stated that at least 50 percent of wireless 9-1-1 calls to the City of New York are accidental.

Joey McDonald, Communications Manager for the San Jose Police Department explained⁶ that their call volume increased once they began accepting wireless calls. The City of San Jose, similar to Oakland, currently receives about 600,000 emergency calls per year. Ms. McDonald explained that San Jose did not immediately hire more operators, but later hired more operators as the city worked with the state to reroute wireless towers. San Jose's 9-1-1 call volume continues to increase as the population increases and more people acquire wireless phones.

The Sacramento Police Department (SPD) is currently in the multi-year process of migrating wireless 9-1-1 calls from CHP. Captain Jim Beezley from SPD⁷ explained that so far they have not experienced a large call volume increase. However, the greater metropolitan area surrounding Sacramento is less populated than the area surrounding Oakland, so comparisons cannot be automatically assumed. Similarly, Oakland cannot easily be compared to the City and County of San Francisco, which is essentially a 47 square mile area with only one land border with another jurisdiction. The City of San Jose is a large, essentially flat area bordering many cities only at its edges with separate communications centers for police and fire. The City of Oakland does not easily fit into any of these profiles with its many jurisdictional borders and high emergency call volume.

9-1-1 GIS Mapping System

CalOES has provided OPD with a letter (**Attachment B**) awarding funding to implement a Geographic Information Systems (GIS) mapping system and server technology. This funding will allow the Comm Center to begin to migrate the mobile calls currently routed to CHP, directly to the Comm Center. CalOES funding is also provided so that the Comm Center staff can view actual caller location. The new GIS mapping system will include modern GIS mapping software and new monitors. The software will be integrated into the current call taking system and allow call takers to identify the mobile phone tower antennas from which the calls are being sent.

Real-time location from GIS mapping provides 9-1-1 call takers with accurate and critical information. Call takers can see if callers are giving incorrect or incomplete street names and addresses. This technology also allows call takers to keep track of callers if they are moving rather than stationary. Call takers will have a real location based on satellite and GIS data. Accurate location helps the Comm Center dispatch calls for service to police, fire, emergency medical and other response resources. Accurate GIS data also helps emergency service providers respond to fires or crimes where a caller is not able to communicate one's location.

⁵ San Francisco's 9-1-1 Call Volume Increase: Findings Paper by the Google 9-1-1 Team:
https://docs.google.com/document/d/1b6OT8u01smq0ZV_mtvF1juj9RZT-36rYKtgILcwl3jU/edit?pref=2&pli=1

⁶ Phone call between Joey McDonald, San Jose Police and Bruce Stoffmacher, January 7, 2016.

⁷ Phone call between Captain Jim Beezley, Sacramento Police and Bruce Stoffmacher, January 5, 2016.

The callers themselves may not know exactly where they are in times of emergency or how close they are to identifiable landmarks.

Currently, when the public calls 9-1-1, OPD call takers and dispatchers can see the address associated with the telephone number and the name of the telephone carrier. This listed address may not provide accurate information as it is based on billing and payment information – not the real-time location. A modern GIS mapping technology platform will provide the capacity to directly receive wireless calls dialed to 9-1-1 and provide the GIS-enabled location. Along with new computer monitors paid for through this grant from CalOES, the Comm Center will have the capacity to see where people are calling from in real time.

CalOES plans to purchase a GeoLynx Server 9-1-1 GIS Mapping System from GeoComm. The quote for this system is included as **Attachment C**. The Comm Center reached out to several vendors on behalf of CalOES and received different proposals, but only GeoComm’s proposal meets system needs, including database analysis, configuration, testing, implementation, training and one year of full system support and maintenance. Additionally, the GeoComm proposal for \$163,470 allows CalOES to also provide needed computer monitors and Barracuda Load Balancer hardware without going over their \$180,000 full spending limit.

FISCAL IMPACT

The table below provides a breakdown of the equipment provided to OPD by CalOES.

Table 3: Technology Provided by CalOES to the OPD Comm Center

CalOES Equipment and Software	Amount
911 Mapping Software	\$163,470
Computer Monitors and Related Hardware	\$16,530
TOTAL	\$180,000

The \$163,470 proposal from GeoComm includes a year of full system support and maintenance. However, OPD anticipates that it will need to enter into a professional services agreement for approximately \$25,000 per year starting in 2017 to continue needed system support. OPD will develop a budget proposal to ensure ongoing system support. No funding will be received by OPD from CalOES. Only equipment will be received.

OPD anticipates the need for 14 additional PCOs at the Comm Center by 2018 to manage the additional 156,000 mobile calls each year – should the City Council approve a plan to intake all wireless 9-1-1 calls currently rerouted to OPD from CHP. OPD and ITD will continue to monitor call volume at the Comm Center and report expected needs to the City Administrator’s Office. The below table provides costs associated with hiring four additional PCOs in FY 2016-17 and five additional PCOs in each of the following two fiscal years – for a total of 14 additional PCOs hired by December 31, 2018. OPD will seek funding for the four PCOs in FY 2016-17 as part of the mid-cycle budget process. OPD will seek funding for the remaining 10 PCOs as part of the FY 2017-19 biannual budget process.

Table 4: Personnel Costs for Additional PCO Positions

Fiscal Year	2016-17	2017-18	2018-19**
Fully Loaded Cost per PCO*	\$120,146	\$123,132	\$125,594
Number of Additional PCOs for that Fiscal Year	4	5	5
Cost of Additional PCOs for that Fiscal Year	\$480,584	\$615,658	\$627,971
Overall Number of Additional PCOs	4	9	14
Overall Cost of Additional PCOs	\$480,584***	\$1,108,185	\$1,758,320

* Fully Loaded Cost includes salary, fringe benefits, and Central Service Overhead (CSO).

** Estimated cost with 2 percent overall increase; not yet determined per MOU.

***The hiring process for the first PCOs in FY 2016-17 may result in a later initial hire date than July 1, 2016, therefore lowering the overall costs for FY 2016-17.

Table 5: Operations and Maintenance Costs for Additional PCOs

Fiscal Year	Number of PCOs	O&M Cost per PCO*	Total O&M Cost per Year
2016-17	4	\$520.75	\$2,083
2017-18	5	\$520.75	\$2,604
2018-19	5	\$520.75	\$2,604
Total			\$7,291

* O&M Cost includes workstation technology and uniforms.

PCOs must go through 120 hours of State-approved training within the first year of being hired, in order for the PSAP (the Comm Center) to maintain State accreditation. Although PCOs need to be hired in each of the next three fiscal years, only two training modules are needed. OPD will train five to ten PCOs in each module. This approach is taken because it is more efficient to train two groups of seven PCOs than it is to train three groups of four to five PCOs.

Table 6: Projected Training Costs for Additional PCOs

Fiscal Year	Number of PCOs	Training Cost per Class
2016-17*	7	\$35,000
2017-18**	7	\$35,000
Total	14	\$70,000

* For all PCOs hired in FY 2016-17 and some PCOs hired in FY 2017-18

** For remaining PCOs hired in FY 2017-18 and all hired in FY 2018-19

Table 7: Summary of Personnel, O&M, and Training Costs for Additional PCOs

Fiscal Year	Number of PCOs	Personnel, O&M, and Training Costs
2016-17	4	\$517,667
2017-18	5	\$1,145,789
2018-19	5	\$1,795,424
Total	14	\$3,459,380

PUBLIC OUTREACH / INTEREST

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PUBLIC OUTREACH / INTEREST

No outreach was deemed necessary for the proposed action beyond the standard City Council agenda noticing procedures.

COORDINATION

This report was reviewed by the Budget Office, the Controller's Bureau, and the Office of the City Attorney.

SUSTAINABLE OPPORTUNITIES

Economic: There are no economic opportunities identified in this report.

Environmental: There are no environmental opportunities identified in this report.

Social Equity: A more accurate and effective 9-1-1 emergency call and dispatch systems benefits all Oaklanders who at times rely on OPD emergency response.

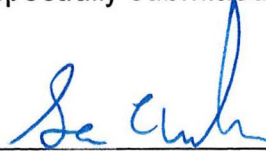
ACTION REQUESTED OF THE CITY COUNCIL

Staff Recommends That The City Council: 1) Approve A Plan To Intake All Wireless 9-1-1 Calls Currently Rerouted To The Oakland Police Department Communications Section Call Center From the California Highway Patrol (CHP); and 2) Adopt A Resolution Authorizing The City Administrator Or Designee To Accept 9-1-1 Geographic Information System (GIS) Mapping Equipment, Configuration, And Installation, Valued At One Hundred Sixty Three Thousand, Four Hundred Seventy Dollars (\$163,470) And Computer Monitors And Related Equipment, Valued At Sixteen Thousand Five Hundred Thirty Dollars (\$16,530), Funded By The California Governor's Office Of Emergency Services (CalOES) Public Safety Communications California 9-1-1 Emergency Communications Branch, To Develop 9-1-1 GIS Mapping Capacity At The Oakland Police Department (OPD) Communications Section Call Center, Requiring No Initial City Of Oakland Funds To Implement This Project.

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Finance and Management Committee
Public Safety Committee
February 23, 2016

For questions regarding this report, please contact Bruce Stoffmacher, Legislation Manager, OPD Research and Planning, at (510) 238-6976.

Respectfully submitted,



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Oakland Police Department



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Attachments (3)

A: Wireless 911 Calls Report to Public Safety Committee, Dated November 14, 2013

B: CalOES Award Letter

C: GeoComm 9-1-1 GIS System Quote

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Finance and Management Committee
Public Safety Committee
February 23, 2016



FILED
OFFICE OF THE CITY CLERK
OAKLAND
2013 DEC -5 PM 1:43

AGENDA REPORT

TO: DEANNA J. SANTANA
CITY ADMINISTRATOR

FROM: Sean Whent
Interim Chief of Police

SUBJECT: Wireless 911 Calls

DATE: November 14, 2013

City Administrator
Approval

Date

12-5-13

COUNCIL DISTRICT: City-wide

RECOMMENDATION

Staff recommends that Council accept this informational report on the capability of the City of Oakland (City) to receive and process wireless 911 phone calls through the Oakland Police Department (OPD) Call Center, one of the City's two Public Safety Answering Points (PSAPs).

This report was generated at the request of Council Member Dan Kalb.

EXECUTIVE SUMMARY

As requested by the Public Safety Committee, the following information provides an overview of the current state of the OPD Call Center and its ability to receive wireless 911 calls generated within the City's jurisdiction.

While the OPD Call Center does receive some wireless calls that are transferred from the California Highway Patrol (CHP), thousands of other calls generated within the City's jurisdiction are currently being handled by the CHP.

The City is one of 12 PSAPs in California that are not currently taking wireless 911 calls (see *Attachment A*). In order to identify trends and analyze impact, staff has been closely following the wireless 911 call-taking issue since local agencies began taking these calls in 2007. As a result, staff has identified various impacts and complications that currently hinder the City from taking on this responsibility, and this report summarizes the history and staff findings.

OUTCOME

Given the limitations of staffing and physical dispatch space, uncertain and changing nature of dispatching operations for the City, anticipated population growth and the imminent arrival of Next-Generation 911 services (text, video, and other data submission to 911), staff recommends

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December 17, 2013

Deanna J. Santana, City Administrator
Subject: Wireless 911 Calls
Date: November 14, 2013

that the City consider hiring an expert consultant to help the City fully vet all of the concerns raised in this memorandum.

While there is no mandate for City PSAPs to accept wireless 911 calls, should the City decide to move in this direction, the City should begin the planning process to prepare its PSAP to receive wireless 911 calls for service. It is clear that staffing levels must be increased to manage full receivership of wireless 911 calls; however, it is unknown whether or not the infrastructure can sustain the additional staff. The City must consider infrastructure needs and evaluate whether or not the center should be expanded or moved.

There are hundreds of cellular towers in the City, many of which are believed to be areas of the City that receive a large amount of calls for service. Having the ability to capture those 911 wireless calls directly would enhance the City's ability to disseminate information to patrol officers in a timelier manner thereby enhancing crime-fighting efforts. Staff believes a phased implementation approach is something the City could consider as it will enhance the City's ability to begin the training process and to conduct a thorough impact analysis. This approach would afford the City an opportunity to identify cellular towers within high crime areas and route calls received from those towers directly to the PSAP.

BACKGROUND

Beginning in the 1980's, wireless 911 calls in the Bay Area were routed to the CHP PSAP in accordance with Public Utilities Code 2892(1) (see *Attachment B*). During the 1990's, cellular phone usage increased and 911 wireless calls overwhelmed the CHP's dispatch center. As a result, the CHP began to experience a large amount of dropped calls and callers frequently received busy signals when calling 911 from a wireless phone.

In 2007, it was determined that 42% of the 11.6 million wireless calls in the State of California were not being answered.* To address the overload issue, the State of California developed a plan known as the Routing on Empirical Data (RED) project. The RED project recommended that calls be redistributed to local PSAPs.

The success of the RED Project relied on primary PSAPs across the State of California agreeing to accept wireless 911 calls generated within their jurisdictions. At that time, it was anticipated that local PSAPs would experience a 40% increase in call volume. As an incentive, the State of California provided funding for training and equipment upgrades to agencies agreeing to accept wireless calls. No funding was allocated for staffing.

During this transfer process, the CHP executed the deployment of wireless calls to local PSAPs in six phases. It has since received agreements from all but 12 agencies, with Oakland being the largest.

* 2011 CalNENA - CA Wireless e9-1-1 Routing on Empirical Data (RED)

Deanna J. Santana, City Administrator

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According to CHP statistics shown in Table 1, should the City decide to receive all 911 wireless calls generated within the Oakland jurisdiction, the City should expect an increase of approximately 57% in call volume. However, options are available to the City to identify cell towers that clearly do not generate a public safety response from the City and reroute them to the appropriate agency. Furthermore, the City has the option of only receiving calls from towers in designated areas of the City as deemed beneficial to enhance public safety response.

Table 1. City of Oakland Wireless 911 Call Volume, October 1, 2012 – September 20, 2013

Tower Summary	Total Call Volume	Total Calls Transferred	% of Total Calls Transferred	Total Calls Transferred to OPD	% of Calls Transferred to OPD	Total Calls Transferred to OFD	% of Calls Transferred to OFD
ATTMO	137,613	36,227	27.35%	11,396	12.01%	4,674	6.14%
MetroPCS	97,514	44,662	41.07%	17,956	16.46%	12,324	13.06%
Nextel	375	152	48.68%	70	31.92%	51	42.2%
Omni	115	51	71.93%	4	3.51%	4	3.51%
Sprint	52,951	22,203	43.25%	8,123	17.17%	3,808	9.44%
T-Mobile	51,827	14,945	30.3%	5,655	15.31%	2,607	9.41%
Verizon	57,792	22,605	39.42%	7,221	16.3%	3,092	8.27%
Total	398,187	140,845	35.37%	50,425	35.80%	26,560	18.85%

OPD currently receives approximately 612,000 calls for service each year. Based on the CHP numbers provided, OPD could expect to receive approximately 348,000 additional calls for service annually (total call volume less total calls transferred to OPD, Table 1), a 57% increase in call volume. Given the potential for a 57% increase in call volume by taking wireless 911 calls, staff is certain that the increased call volume would have a negative effect on normal PSAP operations, and it would certainly impact current efforts to meet the State of California recommended 10-second call-taking answering speed. Challenges include physical dispatch space and staffing limitations, as detailed below.

Physical Dispatch Space

The primary City PSAP is located at the Municipal Services Center at 7101 Edgewater Drive. This PSAP was commissioned at its current location in January of 1999, in response to the urgent need to relocate the center out of the Police Administration Building following the 1989 Loma Prieta earthquake.

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The current building is approximately 11,805 square feet and is constructed of masonry block walls and a steel building frame. The main features of the building include:

- Administrative offices;
- Men's and women's restrooms;
- Staff locker room;
- A single classroom;
- The primary PSAP call-taking area;
- The radio dispatch floor;
- A backup dispatch room for the Oakland Fire Department.

The center also has a small kitchen, workout area, a computer data center with uninterruptible power supply and an emergency generator.

The City also operates a secondary PSAP for OFD at the Emergency Operations Center. This center, operated by OFD, handles all incoming fire and medical emergency calls, including radio dispatch.

Each of the City's two PSAPs has the ability to transfer calls to the other in order to maintain continuity of operations in the event either center requires evacuation.

Space Limitations

The primary PSAP currently houses 20 call-taking positions. Normal operating conditions generally allow for up to two of these positions to be out of service for maintenance, leaving 18 positions, which are normally allocated as nine active positions, and nine standby positions to accommodate shift changes. Given current staffing levels, the center rarely operates nine active call-taking positions. On average, the staffing level in the call-taking section of the unit is six or seven.

Once the center reaches authorized staffing levels, operating nine to ten call-taking positions would be normal during peak call periods. Should the City ever return to its 1999 authorized staffing level of ninety-two dispatchers, staff believes the building will be at its capacity. In order to accommodate additional dispatchers, the 911 call center would need to be expanded, or it would need to be relocated.

Staffing

When the City's primary PSAP Center moved to Edgewater Drive in 1999, the authorized staffing level was 102 (see Table 2, page 5). Personnel included a Captain of Police, four Civilian Supervisors, four Sergeants of Police, ninety-two Police Communication Dispatchers (PCD's), and one Police Records Specialist.

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Due to budgetary limitations in Fiscal Year 2003-2004, PCD staffing was reduced to 73 positions. Since that time, the City of Oakland has struggled to meet the State of California recommended 10-second call-taking answering speed.

Currently, the center is authorized one Lieutenant of Police, one Police Services Manager, four Civilian Supervisors, four Acting Sergeants of Police, seventy-five Dispatchers, and one Police Records Specialist.

Staffing Limitations

As a result of decreased staffing levels, the OPD call center answering speed for 911 calls consistently falls short of the State's 10-second goal.

Table 2. Authorized Staffing Levels (1999 and 2013) vs. Current Staffing at the OPD PSAP

Classification Title	1999 Authorized Staffing Level	2013 Authorized Staffing Level	Current Staff	Difference
Captain of Police	1	0	0	-1
Lieutenant of Police	0	1	1	+1
Police Services Manager	0	1	1	+1
Supervisor (Civilian)	4	4	4	0
Sergeant of Police	4	4	3	-1
Dispatcher (PCD)	92	70	59	-33
Operator (PCO)	0	5	1	+5
Police Records Specialist	1	0	0	-1
Total	102	85	68	-34

It is important to note that while the Center is currently authorized to have 70 dispatchers, 5 of these approved positions were only recently added (in the 2013 budget). In addition, the center currently operates with 59 dispatchers (meaning there are 16 active vacancies in this classification).

In summary, the Center is currently operating with 33 fewer dispatchers than were authorized in 1999, a 36% cut.

Further, since 2008, the call center has been tasked with the additional duties of answering the OPD Internal Affairs Division "24-Hour" Complaint Hotline after hours, documenting misconduct allegations and service complaints.

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Due to the severe shortfalls in staffing and added complaint hotline duties, current PSAP staff is regularly subjected to mandatory overtime during high call-volume periods in order to fill vacant positions due to scheduled leaves (vacation, sick, family leave) and injuries.

The abnormally high workload due to staffing shortages and increased call volumes, coupled with the high demand for professionally trained dispatchers across the region, has recently resulted in unusually high staff attrition rates. This has made recruitment and retention in this classification very challenging.

Staff is concerned that current call volumes will likely increase over the next five to ten years given factors including population growth and unfunded mandates such as Next-Generation 911 (text, video, and other data submission to 911). These factors are anticipated to impact the operations of the PSAP. Calls for service will increase and there will be a need for more physical operating space to accommodate additional dispatchers and call-taking equipment. Staff recommends that OPD and DIT collaborate to develop a plan to address the challenges that will be presented by Next-Generation 911.

ANALYSIS

Mapping Application

In addition to the physical space limitations mentioned above, it is important to note that while the current PSAP telephone system is capable of accepting wireless 911 calls, OPD will need to invest in a mapping application in order to display wireless callers' locations.

This investment could be accomplished without any fiscal impact to City as the State of California has made funding available to all PSAPs in order to accommodate this need. Specifically, the State has allocated \$15,000 per funded position, and the City's primary PSAP has 20 funded positions for a total of \$300,000. Staff estimates the time involved to procure and install such a system would be approximately 24 weeks.

An agreement to accept wireless 911 calls would better position the City to request GIS funding from the State of California for procurement of a mapping system, an essential tool in processing wireless 911 calls.

Increase Staffing Levels

Prior to accepting any wireless 911 calls, staff recommends that the City should first ensure the OPD call center is fully staffed to the current authorized staffing level of 70 dispatchers and 5 operators in order to better understand if the PSAP is able to meet the current 10-second answering goal or if additional staffing at or near the 1999 levels is necessary.

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Returning the PSAP to full staffing is an on-going challenge given the extremely high demand for trained dispatchers. Much like a police officer, the public safety dispatcher position is highly specialized and highly stressful, requiring unique and specific skills. Individuals who apply must come pre-qualified with a high level of computer operator background, undergo and pass a detailed background investigation, and then complete several months of training and testing.

Due to the extensive nature of the hiring process, staff recommends that the City consider posting the position of Dispatcher as an ongoing available position, and either offer continuous testing for Dispatchers, or allow OPD to conduct the testing several times throughout the year.

Organizational Impact

Accepting wireless 911 calls would have to be prioritized along with other significant organizational initiatives and transitions that are currently under way, such as:

- Ceasefire
- Reorganizing the Animal Shelter
- Geographic Policing Implementation
- NSA Benchmark Plan Compliance

Therefore, any initiatives that require further organizational change, within OPD, should be undertaken in a measured manner.

PUBLIC OUTREACH/INTEREST

This item did not require any additional public outreach other than the required posting on the City's website.

COORDINATION

The Budget Office and the City Attorney's Office were consulted in preparation of this report.

COST SUMMARY/IMPLICATIONS

There are no fiscal impacts associated with this informational report.

SUSTAINABLE OPPORTUNITIES

Economic: Acting on the recommendations of this report will generate jobs in the local economy.

Environmental: None to report.

Social Equity: None to report.

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Deanna J. Santana, City Administrator

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Date: November 14, 2013

For questions concerning this report, please contact Police Services Manager Regina Harris-Gilyard at 510-777-8803.

Respectfully submitted,



SEAN WHENT
Interim Chief of Police
Oakland Police Department

Prepared by: Regina Harris-Gilyard
Police Services Manager, Communications
Oakland Police Services Agency

ATTACHMENTS

Attachment A – Wireless Deployment Status

Attachment B – Public Utilities Code 2892 (c)

Attachment C – Salary Comparison

ATTACHMENT A – Wireless Deployment Status

Handout #6



Cal OES
GOVERNOR'S OFFICE
OF EMERGENCY SERVICES

**Wireless 9-1-1 Deployment Status
As of September 3, 2013**

The following 12 Public Safety Answering Points (PSAPs) have not submitted a Letter of Agency to the CA 9-1-1 Division requesting to deploy wireless:

1. Atherton Police Department (officially withdrew original letter)
2. China Lake Emergency Communications Center USN
3. East Bay Regional Park District
4. Fort Hunter Liggett Fire Department
5. Los Banos Police Department
6. Oakland Police Department
7. Sierra County Sheriff
8. Travis Air Force Base
9. Cal State Poly Pomona Police Department
10. CSU Fresno Police Department
11. CSU Northridge Police Department
12. CSU San Jose Police Department

The following agency has submitted a Letter of Agency but not deployed:

1. Sacramento County Sheriff

The following agency has indicated they will deploy and have started deployments on a limited basis.

1. Sacramento City Police Department

ATTACHMENT B - Public Utilities Code 2892 (c)

State of California
Wireless E9-1-1 Project

The following is the California Law, Public Utilities Code 2892 (c) that allows Public Safety Answering Points to receive Wireless Enhanced 9-1-1 calls when certain requirements are met and an agreement is made between the PSAP, California Highway Patrol, and Department of General Services (DGS-TD). This law was enacted after Assembly Bill 1263 passed in January 2001.

2892. (a) As used in this section, the term "commercial mobile radio service" has the same meaning as the term "commercial mobile service," as defined in subsection (d) of Section 332 of Title 47 of the United States Code.
- (b) A provider of commercial mobile radio service shall provide access for end users of that service to the local emergency telephone systems described in the Warren-911-Emergency Assistance Act (Article 6 (commencing with Section 53100) of Chapter 1 of Part 1 of Division 2 of Title 5 of the Government Code). "911" shall be the primary access number for those emergency systems. A provider of commercial mobile radio service, in accordance with all applicable Federal Communication Commission orders, shall transmit all "911" calls from technologically compatible commercial mobile radio service communication devices without requiring user validation or any similar procedure. A provider of commercial mobile radio service may not charge any airtime, access, or similar usage charge for any "911" call placed from a commercial mobile radio service telecommunications device to a local emergency telephone system.
- (c) A "911" call from a commercial mobile radio service telecommunications device may be routed to a public safety answering point other than the Department of the California Highway Patrol only if the alternate routing meets all of the following requirements:
- (1) The "911" call originates from a location other than from a highway or county road under the jurisdiction of the Department of the California Highway Patrol.
 - (2) The alternate routing is economically and technologically feasible.
 - (3) The alternate routing will benefit public safety and reduce burdens on dispatchers for the Department of the California Highway Patrol.
 - (4) The Department of the California Highway Patrol, the Department of General Services, and the proposed alternate public safety answering point, in consultation with the wireless industry, providers of "911" selective routing service, and local law enforcement officials, determine that it is in the best interest of the public and will provide more effective emergency service to the public to route "911" calls that do not originate from a highway or county road under the jurisdiction of the Department of the California Highway Patrol to another public safety answering point.

Information may also be retrieved from <http://www.leginfo.ca.gov/calaw.html>. Select "California Law", then select "Public Utilities Code", then Search for "2892".

ATTACHMENT C – Salary Comparison

Agency	Hourly Pay	Employee Contribution PERS	PERS Retirement Formula	Shift Premium	Uniform Allowance	Employee Concessions	MBSD	Medical/Dental Yes/No	Meal Allowance	Source Of Information
Oakland PD	34.26	8%	2.7 @ 55 OR 2.5 @ 55	0.89 & 1.09	173.00	4% PERS	12 (EXCUSED DUE TO STAFFING)	YES	10.75	CITY OF OAKLAND MOU
Alameda PD	34.95	8.868%		0.07502 of salary per month	775.00	ZERO	ZERO	YES	19.00	CITY OF ALAMEDA MOU
Emeryville PD	33.34	1% to 6 % progressive ending at 7%			250.00	ZERO	ZERO	YES		CITY OF EMERYVILLE MOU
San Leandro PD	33.90	6% YR 1 4% YR 2 2% YR 3 0% REMAINING	2.5 @ 55 OR 2 @ 55	100.00 MO	500.00	ZERO	ZERO (MOU MBSD EXCUSED – VERIFICATION BY DISPATCH CENTER PERSONNEL)	YES	N/A	CITY OF SAN LEANDRO MOU
Berkeley PD	43.28	ZERO	2.7 @ 55	7.5% SWING 10% GRAVE	1,400.00	ZERO	ZERO	YES	N/A	CITY OF BERKELEY MOU
Hayward PD	37.30 OR 40.91 (SR)	8%	2.5 @ 55	ZERO	250.00	ZERO	ZERO	YES	10.00	CITY OF HAYWARD MOU
Richmond PD	39.31	8%	2.7 @ 55	5 % SWING 7.5% GRAVE	600.00	ZERO	ZERO	YES	9.75	CITY OF RICHMOND MOU
Albany PD	34.80	8%	2.5 @ 55		1,000.00	ZERO	ZERO	YES		CITY OF ALBANY MOU



August 21, 2015

Tracking Number: 18751

Regina Harris
Oakland Police Department
7101 Edgewater Dr., Bldg. 8
Oakland, CA 94621

Subject: Customer Premise Equipment (CPE) Fixed Allotment Funding

Dear Ms. Harris

The California 9-1-1 Emergency Communications Branch (CA 9-1-1 Branch) has received your August 17, 2015 Advance Notification for Customer Premise Equipment Funding form indicating your intent to replace the 9-1-1 telephone system at your Public Safety Answering Point (PSAP). Acceptance of CPE Allotment funds from the CA 9-1-1 Branch commits your agency to PSAP operations 24 hours-a-day, seven days-a-week, for a minimum of five years. If PSAP operations are not maintained at that level, the Oakland Police Department may become financially responsible for all subsequent CPE maintenance and 9-1-1 network service charges. Our evaluation of recent 9-1-1 emergency call volume qualifies the Oakland Police Department for a Fixed Allotment in the amount of \$635,000. The Fixed Allotment funding will expire June 30, 2017 if your CPE approval process has not been initiated. Years six (6) and seven (7) of extended maintenance will not be deducted from your Fixed Allotment. Extended maintenance cost in year eight (8) and beyond is the PSAPs responsibility.

The CA 9-1-1 Branch has implemented a non-mandatory Master Purchase Agreement (MPA) that enables participating vendors to invoice the CA 9-1-1 Branch directly for the purchase of 9-1-1 systems and services. User instructions for the MPA are available at:

<http://www.caloes.ca.gov/for-governments-tribal/public-safety/ca-9-1-1-emergency-communications-branch/ca-9-1-1-services-contracts>

Please contact me directly with any questions by email at elizabeth.mclean@caloes.ca.gov or (916) 657-9180.

Sincerely,

ELIZABETH McLEAN, 9-1-1 Consultant
California 9-1-1 Emergency Communications Branch

cc: Sean Whent, Chief of Police, Oakland Police Department
Donneshia Taylor, Finance Officer, Oakland Police Department

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Pricing

Prices are valid for a period of 90 days.

*Total does not include sales tax. Applicable taxes will be determined upon contract signing.
City of Oakland is responsible for paying all sales taxes.*

GeoComm proposes to implement an active/passive GeoLynx Server system capable of supporting 20 Dispatch Mapping positions. The proposed system does not include routing functionality.

GeoLynx Server Dispatch Mapping

Base Pricing	
GIS Map Data, ALI Database, and MSAG Analysis Service	\$3,595.43
GeoLynx Server GIS Setup Services	\$901.11
GeoLynx Server Licenses (active/passive)	\$40,521.12
GeoLynx Server Dispatch Mapping Licenses (20)	\$78,300.00
GeoLynx Server 9-1-1 Call Viewing	Included
GeoLynx Server (active/passive) with Dispatch Add-on Module Installation	\$6,583.90
GeoLynx Server (active/passive) with Dispatch Add-on Module Training	\$6,621.50
Base Pricing Total:	\$136,523.06
Annual Pricing	
GeoLynx Server Licenses (active/passive) Annual Support and Maintenance	\$12,452.31
GeoLynx Server Dispatch Add-on Modules Annual Software Support and Maintenance	\$14,494.20
GeoLynx Server 9-1-1 Call Viewing Annual Software Support and Maintenance	Included
Annual Pricing Total:	\$26,946.51
Total:	\$163,469.57
<p>Notes: Pricing is based on CMAS contract 3-06-70-2372A unless not applicable.</p> <p>Server hardware specification capacity is recommended for <50 simultaneous users. Performance is impacted based on a number of things including network performance, map data configuration, and the number of users.</p> <p>GeoComm proposes GeoLynx Server in an N+1, Active + Passive type architecture. Use of the GeoLynx Server backup license will provide redundancy in instances when the active server is not available such as for routine maintenance and/or in the event the primary GeoLynx Server is inoperable. The use of both GeoLynx Server licenses simultaneously is not permitted.</p> <p>Hardware meeting minimum specifications outlined by GeoComm is required for system functionality. Pricing does not include system hardware. The City of Oakland is responsible for providing hardware. If the City of Oakland provides a dedicated web server with more than one quad core processor (four cores of processing), additional GeoLynx Server license fees will apply.</p>	

Notes (continued from previous page):

The proposed system does not have routing functionality. To achieve basic routing using local data in GeoLynx Server, the City of Oakland may implement an Esri Network Routing Dataset with one-way, speed, distance, and minutes attributes. ArcGIS Network Analyst Extension for Desktop is required to create, edit, and maintain the routing dataset. GeoComm may provide pricing for the ArcGIS Network Analyst for Desktop and/or associated services to develop and maintain the dataset. Additional pricing may be provided for GeoComm to develop advanced routing attributes.

ArcGIS Network Analyst extension for Server is required for routing in GeoLynx Server.

Alternatively, to achieve routing in GeoLynx Server, the City of Oakland may use ArcGIS Online to access the World Route service through Esri. The World Route service requires a subscription to ArcGIS Online and will consume "credits" with each route used; currently, simple routes consume 0.04 credits per route. The World Route service uses commercial data which is not intended for use in public safety operations. It is the City of Oakland's responsibility to determine the usability of the World Routing service and to acquire an ArcGIS Online World Routing Service subscription through Esri. Pricing for the ArcGIS Online World Routing Service subscription is determined based on the terms of use between the City of Oakland and Esri. GeoLynx Server version 8.10 or higher is required to make use of this routing service.

Training price above includes GeoLynx Server Train-the-Trainer and Administrator training, and GeoLynx Server Dispatch Add-on Module training. Through the Train-the-Trainer training, a City of Oakland representative will be trained by a GeoComm Implementation Specialist to train other system users and administrators of the City on the GeoComm software. Installation and Training pricing is valid if contracted for together.

GIS Data Analysis pricing is based on receiving GIS data which includes minimum fields and files required to complete a comprehensive analysis. GeoComm does not assume responsibility for correcting preexisting GIS data errors. If a substantial number of errors exist, GeoComm may provide GIS data remediation services, for a fee.

Interfaces to third party systems such as CAD are not included in this proposal.

Fees from third party vendors are not included in this proposal.

Software support and maintenance services shall commence after software installation and continue for one year.

The City of Oakland is responsible for paying applicable sales tax. Taxes will be determined at contract signing.

FILED
OFFICE OF THE CITY CLERK
OAKLAND

OAKLAND CITY COUNCIL

Doreia Hynes
City Attorney

2016 FEB 10 PM 5:13 RESOLUTION No. _____ C.M.S.

RESOLUTION AUTHORIZING THE CITY ADMINISTRATOR OR DESIGNEE TO ACCEPT 9-1-1 GEOGRAPHIC INFORMATION SYSTEM (GIS) MAPPING EQUIPMENT, CONFIGURATION, AND INSTALLATION, VALUED AT ONE HUNDRED SIXTY THREE THOUSAND, FOUR HUNDRED SEVENTY DOLLARS (\$163,470) AND COMPUTER MONITORS AND RELATED EQUIPMENT, VALUED AT SIXTEEN THOUSAND FIVE HUNDRED THIRTY DOLLARS (\$16,530), FUNDED BY THE CALIFORNIA GOVERNOR'S OFFICE OF EMERGENCY SERVICES (CALOES) PUBLIC SAFETY COMMUNICATIONS CALIFORNIA 9-1-1 EMERGENCY COMMUNICATIONS BRANCH, TO DEVELOP 9-1-1 GIS MAPPING CAPACITY AT THE OAKLAND POLICE DEPARTMENT (OPD) COMMUNICATIONS SECTION CALL CENTER, REQUIRING NO INITIAL CITY OF OAKLAND FUNDS TO IMPLEMENT THIS PROJECT.

WHEREAS, the call center of the OPD Communications Section (Communications) receives and processes 9-1-1 calls for service generated within the City, as well as for fire and medical care; and

WHEREAS, in 2014, Communications received 587,904 calls, including 44,137 priority 1 calls, and is now preparing for a significant increase in this call volume in the form of approximately 156,000 mobile or wireless calls currently routed to the California Highway Patrol (CHP) call and dispatch center; and

WHEREAS, OPD expects to eventually hire at least 14 additional Police Communications Operators in the coming years to support the increased call volume; and

WHEREAS, CHP and OPD agree that Oakland must build the infrastructure to directly receive the mobile calls sent to local wireless carrier call antennas; and

WHEREAS, Communications also faces the challenge of not having the capacity to visually map call locations of wireless 9-1-1 callers; and

WHEREAS, precise locations provide invaluable information for dispatchers trying to connect callers to emergency services; and

WHEREAS, a 9-1-1 GIS mapping system integrated into the current Communications infrastructure will allow OPD to phase-in the re-routing of wireless calls currently routed to CHP's call and dispatch center, such that they connect directly with OPD Communications; and

WHEREAS, a 9-1-1 GIS mapping system will also allow Communications to visually map the location of wireless 9-1-1 calls, enabling Communications to provide more efficient and safer emergency response service; and

WHEREAS, CalOES has agreed to directly purchase a 9-1-1 GIS mapping software package valued at \$163,469.57 as well as additional funding of \$16,530.43 to purchase monitors and related hardware equipment for a total of \$180,000 in funding for the purchase, installation, configuration, training, and related system support of the 9-1-1 GIS mapping system; therefore be it

RESOLVED: That the City Administrator, or designee, is hereby authorized to Accept 9-1-1 Geographic Information System (GIS) mapping equipment, configuration, and installation, valued at one hundred sixty three thousand four hundred seventy dollars (\$163,470), and computer monitor and related hardware equipment, valued at sixteen thousand five hundred thirty dollars (\$16,530), funded solely by the CalOES Public Safety Communications California 9-1-1 Emergency Communications Branch, to develop 9-1-1 GIS mapping capacity at OPD Communications Section call center, requiring no City of Oakland funds to implement this project; and be it

FURTHER RESOLVED: That the City Administrator, or designee, is hereby authorized to complete all required negotiations, certifications, assurances and documentation required to accept, modify, extend and/or amend the grant award.

IN COUNCIL, OAKLAND, CALIFORNIA, _____, 20_____

PASSED BY THE FOLLOWING VOTE:

AYES - BROOKS, CAMPBELL WASHINGTON, GALLO, GUILLEN, KALB, KAPLAN, REID, and
PRESIDENT GIBSON MCELHANEY

NOES -

ABSENT -

ABSTENTION -

ATTEST: _____
LaTonda Simmons
City Clerk and Clerk of the Council of the
City of Oakland, California