

### **INFORMAL PROCUREMENT**

#### CITY OF LOS ANGELES MAYOR'S OFFICE OF PUBLIC SAFETY

DATE ISSUED: November 20, 2017

TITLE: Los Angeles Earthquake Early Warning Mobile Application

#### I. Summary

The City of Los Angeles (City) seeks proposals from qualified firms who have demonstrated experience in developing mass notification mobile applications to design an Earthquake Early Warning (EEW) Mobile Application (Mobile App) for use by City residents. The Mayor's Office of Public Safety (Mayor's Office) will oversee this procurement and manage the project (Project). The selected contractor shall provide:

- A. Software design, development, maintenance, and support for the Mobile App;
- B. Mobile App system integration services; and
- C. Infrastructure and application hosting services.

#### II. Background

The City seeks to produce an EEW notification system for its residents that utilizes the <u>United</u> <u>States Geological Survey (USGS) ShakeAlert notification platform</u>. The City intends to embark on a demonstrational project to test a EEW notification system for a limited period involving approximately fifty (50) thousand City employees and gradually scaling up to approximate four (4) million residents in the Los Angeles area.

Working with the City partners at Amazon, Google, Apple, cellular providers, and the USGS, the selected contractor shall build out and support the EEW infrastructure and mobile application that allows the City to delivery early earthquake notifications to its residents.

The ShakeAlert System (ShakeAlert) is the underlying technology for EEW. Its purpose is to identify and characterize an earthquake a few seconds after it begins, calculate the likely

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intensity of ground shaking that will result, and deliver warnings to people and infrastructure in harm's way. ShakeAlert detects the first energy to radiate from an earthquake, the <u>P-wave</u> energy, which rarely causes damage. Using P-wave information, ShakeAlert first estimates the location and the magnitude of the earthquake. It then calculates the anticipated ground shaking across the region to be affected and provides a warning to local populations before the strong shaking arrives.

The seconds to minutes of advance warning can allow people and systems to take actions to protect life and property from destructive shaking. USGS, in collaboration with several partners, has been working to develop ShakeAlert, which is designed to cover the West Coast States of California, Oregon, and Washington.

### Mobile App Goal

The USGS will issue public warnings of potentially damaging earthquakes and provide warning parameter data to government agencies and private users on a region-by-region basis, as soon as the ShakeAlert system, its products, and its parametric data meet minimum quality and reliability standards in those geographic regions. Working with partners at Amazon, Google, Apple, cellular providers, and USGS, the City will select a Contractor to build out and support the Mobile App, which shall allow the City to deliver early earthquake notifications to its residents.

### III. Scope of Work

### A. Mobile App Specifications

- 1. The selected contractor shall build and support the Mobile App for both Android and Apple iOS mobile devices.
- 2. The selected contractor shall build the Mobile App with messaging, warning, and instruction capabilities in at least the English and Spanish languages.
- 3. The Mobile App shall deliver notifications of pending earthquakes to users via Push and SNS Notifications, as defined by Apple iOS and Android proprietary notification systems.
- 4. The selected contractor shall build the Mobile App Infrastructure to ingest USGS Apache ActiveMQ alerts and push into an Amazon SNS. Contractor shall work with Amazon Web Services (AWS) to use Apache ActiveMQ to SNS ingesture currently in Beta.

### B. Mobile App Features

- 1. The selected contractor shall ensure that the average time for the Mobile App to receive, comprehend, and distribute the alert from the ShakeAlert system is no longer than five (5) seconds, for at least 95 percent of users.
- 2. The selected contractor shall ensure that the total average message delivery time is no longer than ten (10) seconds, for at least 95 percent of users.
- 3. The selected contractor shall build the Mobile App to keep track of users' locations and display shaking intensity expected in their current location.

- 4. The selected contractor shall employ all measures necessary to ensure a short response time and shall provide the average response time and distribution metrics to the City.
- 5. The Mobile App shall cover at least the entirety of the City of Los Angeles and possibly the County of Los Angeles.

# C. Mobile App Development

- 1. The selected contractor shall set up Dev, Test, and Production environments that mirror each other for purposes of the Mobile App's development.
- 2. The selected contractor shall use Github to publish code, manage issues, and communicate with City technical staff.
- 3. The selected contractor shall agree to publish the Mobile App design on a repository publication open source platform such as MIT, Apache, or GPL, on a timeline to be mutually agreed upon by City and the selected contractor.
- 4. The selected contractor shall provide authentication methodology to allow control of user base to City authorized pilot users.

# D. Mobile App Deployment

a. Contractor to propose method for deploying and managing the mobile app.

# E. Messaging

a. In coordination with U.S. Geological Survey and other communication specialists, the selected contractor, will develop appropriate messaging in at least English and Spanish with additional seismic and emergency preparedness and response education information.

# F. Dashboard

The selected contractor shall develop a Web-based dashboard to measure the effectiveness and timing of alerts including, but not limited to, mean message travel time between each level of infrastructure, average number of messages delivered before an earthquake, and other relevant metrics. The selected contractor shall suggest and develop additional metrics in conjunction with City personnel and store all metrics in a machine-readable format.

# G. Service

The selected contractor shall provide support services for the Mobile App for a period of one (1) year following its completion and complete delivery.

# IV. Budget/Cost Summary

The contractor should provide breakdown of initial implementation costs, as well as any other costs, including but not limited to cost of annual support and maintenance, upgrades, or enhancements. The Agreement with the selected applicant will be on a fixed-price contract basis.

### V. Contract Term

The contract performance period shall be for two (2) years, from the date of execution of an agreement for this project.

### VII. Public Records Act Compliance

- A. All proposals submitted in response to this RFP shall become the property of the City of Los Angeles and subject to the State of California Public Records Act. Proposers must identify all copyrighted material, trade secrets or other proprietary information that the proposers claim are exempt from the California Public Records Act (California Government Code Section 6250 et seq.).
- B. In the event a proposer claims such an exemption, the proposer is required to state in the proposal the following:

"The proposer will indemnify the City and its officers, employees and agents, and hold them harmless from any claim or liability and defend any action brought against them for their refusal to disclose copyrighted material, trade secrets or other proprietary information to any person making a request therefore."

Failure to include such a statement shall constitute a waiver of a proposer's right to exemption from this disclosure.

### VIII. Proposer Qualifications

Proposals will be accepted only from proposers that meet all of the following requirements:

- 1. Be qualified to conduct business in the State of California;
- 2. Be in good standing with the Secretary of State, if a Corporation or Limited Liability Company;
- 3. Have not been determined to be non-responsible nor has the Proposer been debarred by the City;
- 4. Have not been debarred by the Federal Government, State of California, or local government;

- 5. If the Proposer has contracted with the State of California or the City of Los Angeles, it must not have an outstanding debt which has not been repaid or for which a repayment agreement plan has not been implemented. If it has contracted with any city agency, it must not have an outstanding disallowed cost or other liability to the City;
- 6. Have financial stability and ongoing ability to provide the services proposed;
- 7. Have availability of adequate staffing, including support and backup staff, with sufficient experience and technical expertise;
- 8. Have the ability to work independently and efficiently with a very rigorous timeline;
- 9. Have a strong working knowledge of the private and public sector and their integration as it pertains to cybersecurity;
- 10. Have the ability to work with board members, City officials, and also bring collaborate and network with other companies;
- 11. Have the ability to disseminate accurate and helpful information and manage subscriptions and cyber updates.

### IX. Submission Requirements

### A. <u>Proposal Requirements:</u>

- 1. A detailed project proposal, describing the Mobile App's proposed specifications, features, and other development process, as defined in Section III.
- 2. A detailed budget that describe all services and products that the proposer will provide;
- 3. The types of projects on which the proposer has previously worked;
- 4. A list of at least three (3) professional references with the names and contact information of customers for whom the service was provided, dates and periods during which the indicated service was provided, and the extent and exact nature of the services rendered; and
- 5. Any additional supporting documentation/reports demonstrating the organization's ability to deliver the services.

### B. <u>Questions:</u>

Please submit all questions to Justin Harris at justin.harris@lacity.org

### C. <u>Deadline for Proposal Submission:</u>

The Proposal is due on January 2, 2018 at 5:00 PM (Pacific Standard Time). Please email proposals to: Justin Harris, Los Angeles Mayor's Office of Public Safety via justin.harris@lacity.org.

The email subject line must be clearly identified as "Earthquake Early Warning Mobile App"

Timely submission of the proposal is the sole responsibility of the Proposer. The City reserves the right to determine the timeliness of all submissions. Late proposals will not be reviewed.

#### All proposals delivered after the stated deadlines will not be accepted.