



# City of Sunnyvale

## Agenda Item-No Attachments (PDF)

---

File #: 18-0118, Version: 1

---

### REPORT TO COUNCIL

#### **SUBJECT**

Overview of the Consultant's Report for the Department of Public Safety: Comprehensive Community Risk Assessment, Standards of Cover Study, and Station Location and Deployment Study (Information Only)

#### **BACKGROUND**

The Department of Public Safety (DPS) has operated its Bureau of Fire Services since the 1960's with the same number of fire stations, essentially the same types and numbers of fire apparatus, and the same staffing configuration with minor changes. During that same time frame, the nature of the Department's risk and the population of the City have changed. Since the year 2000, previous evaluations of the Department's operations have included a study by Matrix Consulting Group, *Optimum Staffing Study for the Department of Public Safety*, December 2005 and Fitch and Associates, *EMS System Design Report*, May 2001. While both reports provided a review of fire service delivery, neither provided an in-depth fire services industry-standard review like this effort.

To evaluate our community risk, the geographical location of our resources, the deployment of those resources, the condition of our fire stations and to benchmark our organization against the best practices of the fire service industry, the City engaged a consultant to conduct a Comprehensive Community Risk Assessment, Standards of Cover Study, and Station Location and Deployment Study. Through the City's procurement process, Citygate Associates, LLC was selected to conduct this study. This type of report is based on industry best practice standards, recommendations and guidelines from the Commission on Fire Accreditation International (CFAI), the National Fire Protection Association (NFPA) and the Insurance Services Office (ISO).

A Community Risk Assessment is a process to identify and prioritize local risks. A Standards of Cover is defined by CFAI as the process (known as "deployment analysis") of written procedures which determine the distribution and concentration of fixed and mobile resources of an organization. The purpose for completing such a document is to assist the agency in ensuring a safe and effective response force for fire suppression, emergency medical services, and specialty response situations. The Fire Station Location and Deployment component of this overall project was an assessment of the current station location and response workload. This looked at historical data and identified build out projections within the City General Plan to determine station location effectiveness. As the stations are approaching 70 years of age, a minor review of their life cycle was conducted. The findings of that review will help guide a future fire station master plan study which has already been funded.

#### **EXISTING POLICY**

**General Plan - Chapter 6, Safety and Noise (SN)**

**GOAL SN-1 ACCEPTABLE LEVELS OF RISK FOR NATURAL AND HUMAN-CAUSED HAZARDS**

Ensure that natural and human-caused hazards are recognized and considered in decisions affecting the community and that land uses reflect acceptable levels of risk based on identified hazards and occupancy.

Policy SN-1.6 Operate a response system that will provide effective control and investigation of hazardous materials emergencies.

**GOAL SN-5 EFFECTIVE FIRE SERVICE RESPONSE SYSTEM** Provide a fire service response system that will control the spread of fire in buildings and other properties and maintain minimal casualties and property loss from fire and other related emergencies.

Policy SN-5.1 Assure that equipment and facilities are provided and maintained to meet reasonable standards of safety, dependability and compatibility with fire service operations.

**GOAL SN-6 EFFECTIVE EMERGENCY RESPONSE CAPABILITY** Provide effective response capability for emergency medical events and other non-fire incidents that may directly endanger the lives, property and well-being of the community.

**ENVIRONMENTAL REVIEW**

The action being considered does not constitute a “project” with the meaning of the California Environmental Quality Act (“CEQA”) pursuant to CEQA Guidelines sections 15378 (b) (5) in that it is a governmental organizational or administrative activity that will not result in direct or indirect changes in the environment and 15378 (b) (4) in that it is a fiscal activity that does not involve any commitment to any specific project which may result in a potential significant impact on the environment.

**DISCUSSION**

The Department of Public Safety (DPS) engaged a consultant who specializes in emergency services consulting to conduct a fire service industry specific evaluation of the Bureau of Fire Services, Division of Fire Operations. The purpose of this evaluation was to assist DPS in ensuring that we are providing a safe and effective response force for fire suppression, emergency medical services, and specialty response situations. The document will serve to guide our long-term operational and fiscal planning.

On October 30, the consultant presented their findings to the Council in a Study Session. The final document is presented here so Council may review the complete Standards of Cover document. This is an informational Report to Council and no action is required.

The final report presented by Citygate Associates, LLC was delivered in three (3) volumes. Volume 1 of 3 is the Executive Summary and contains the overall findings and recommendations. Volume 2 of 3 is the Technical Report and provides the documentation supporting the findings and recommendations. Volume 3 of 3 is the Map Atlas that displays fire apparatus travel time coverage of the City.

The consultant’s report provides 26 findings identified below and stated, *“In conclusion, Citygate finds*

*a best practices-based agency with very committed and caring employees that take pride in what they do, how they do it, and in taking care of their City.”*

**Finding #1:** While DPS has component response time measures spread across nine budget programs, the City has not adopted an integrated and best-practices-based deployment measure or set of specialty response measures for all-risk emergency responses that includes the beginning time measure from the point of the DPS Communications Center receiving the 9-1-1 phone call, nor a goal statement tied to risks and outcome expectations. If the current technology of the computer dispatch and fire incident records systems do not allow for the capture of all of these time intervals, consideration should be given to the need for those time intervals to be collected upon the next technology upgrade. The deployment measure should have a second measurement statement to define multiple-unit response coverage for serious emergencies. Making these deployment goal changes will meet the best-practice recommendations of the CFAI.

**Finding #2:** The current number of six fire stations can reach 91 percent of the street segments within 4 minutes travel time if traffic congestion is not present. This is excellent coverage for an urban area.

**Finding #3:** Traffic congestion impacts constrain the 4-minute travel time coverage during morning and evening commute times. The gaps during peak traffic periods mean that the City needs at least all six fire station locations, or the coverage will remain significantly worse during traffic congestion hours as the City adds vertical populations and increased density in some areas.

**Finding #4:** During non-traffic congestion hours, 92 percent of the City, except for an area southwest of Fire Station #3, is within the 8-minute travel time of an ERF assignment of four engines, two ladders, one rescue squad, and one Battalion Chief, which is compliant with the NFPA recommendations in Standard #1710.

**Finding #5:** Relocating Station #1 improves northwest City coverage.

**Finding #6:** The City's time-of-day and day-of-week calls for service demands are very consistent. This means the City needs to operate a fairly consistent 24/7/365 response system.

**Finding #7:** The performance of the City's DPS Communications Center, at 2:06 minutes for 90 percent of the EMS and fire emergencies, is slower than a best-practice recommendation of 1:30 minutes where the dispatch process queries the caller as to the severity of a medical emergency.

**Finding #8:** The Department's turnout times are only slightly over 2 minutes from station to station and only need slight monitoring for improvement.

**Finding #9:** The first-due unit travel times, Citywide, are better than or close to a best-practice goal of 4 minutes travel time, which is reflective of the good placement of the six fire stations. Performance this good in urban areas is almost nonexistent and Sunnyvale should feel very good about its fire unit response times and coverage.

**Finding #10:** The City's *travel time / response time* for a minimum of four units to critical fires, known as the ERF, ranges in year 2015 from 6:38 to 10:53 minutes. Three of six stations' jurisdictions have travel times that are slightly higher than 8 minutes, which, given the City's road network design and traffic congestion at times, are near the best-practice recommendation of 8 minutes.

**Finding #11:** At present, none of the City's fire units experience troublesome incident demand workload saturation, even hour to hour, during daylight hours when human activity is the greatest. However, the City is adding vertical and more dense development, which increases incident demand per square mile and may increase unit workload to the point where a company could be needed to cover the peak-hour workload.

**Finding #12:** In Sunnyvale, mutual aid, both given and received, is a small amount of incident volume. The modest amount of incident activity is routinely handled by the six fire stations. Stated this way, Sunnyvale is not dependent on its neighboring fire departments to handle routine, day-to-day events.

**Finding #13:** The DPS needs a second, dedicated, full-time, certified/licensed, and qualified EMS Program Clinical Supervisor and Educator, as a regular agency member and familiar with the items unique to a public safety operation, to handle the emergency medical services training and clinical oversight workload.

**Finding #14:** Sunnyvale fire station facilities are appropriately located to provide nationally recognized best-practice response travel times throughout nearly all areas of the City *during non-peak traffic congestion periods*.

**Finding #15:** Station #1 vehicle egress onto North Mathilda Avenue is regularly impacted by traffic congestion, particularly during commute hours.

**Finding #16:** All fire station facilities conform to regulatory requirements relative to seismic safety for

essential services buildings.

**Finding #17:** All fire station facilities conform to nationally recognized best practices relative to smoke and carbon monoxide alarms, prevention of vehicle exhaust contamination, and standby emergency electrical power supply.

**Finding #18:** Fire station facilities range from zero to 56 years of age, averaging 44.33 years of age for all stations, and 53.2 years of age excluding the new Station #5.

**Finding #19:** Except for Station #5, the overall condition of all fire station facilities is adequate considering facility age and cumulative use impacts.

**Finding #20:** Except for Station #5, all stations lack secured parking areas.

**Finding #21:** Station #2 lacks secure indoor or covered parking for the duty Battalion Chief and reserve command vehicles.

**Finding #22:** Except for Station #5, all fire station facilities generally lack adequate storage space for equipment and supplies.

**Finding #23:** Except for Station #5, all fire station facilities lack adequate personal locker/storage space for assigned personnel.

**Finding #24:** Oxygen cylinder refilling and maintenance is conducted in the open fire apparatus room at Station #4. This potentially exposes medical equipment to particulate hazards from diesel exhaust. The filling station should be placed in a separate room.

**Finding #25:** Except for Station #5, although not required by law, all fire station facilities lack automatic fire sprinkler system protection.

**Finding #26:** Station #5 is a state-of-the-art public safety facility that will meet the Department's anticipated space and functional needs for many years.

The consultant's findings included 10 recommendations that have been reviewed in depth by staff. Recommendations 1 through 3 are under evaluation and may be addressed during a future budget process. Staff has taken some initial actions concerning those recommendations as follows:

***Recommendation #1:*** *The City should continue to provide the funding to maintain the existing Battalion Chief (Public Safety Captain) and Team Coordinator (Public Safety Lieutenant) coverage 24/7/365 with fully qualified and experienced Incident Commanders.*

**Staff Response:** The Battalion Chief (BC) positions within DPS are filled by three (3) Public Safety Captains. Public Safety Captains are exempt management employees typically working a 40-hour work week throughout the Department managing various divisions working varying schedules. Currently DPS Captains assigned to the BC assignment work the same 24-hour shift duty schedule that their assigned team works rather than the typical 40-hour work week. Staff has implemented a

scheduling change to address Recommendation #1, so that when a BC is on vacation or away during their assigned shift that a Team Coordinator, a DPS Lieutenant specialty position, is available to provide incident command coverage as appropriate to their assignment.

Additionally, following the Department's recent strategic planning process, a goal was added to further develop staff knowledge, skills and abilities within the fire service. This goal is contained in Goal 4: Training and Professional Development of the Sunnyvale Department of Public Safety Strategic Plan for the Future (2017).

***Recommendation #2: Citygate recommends that, as funds allow, restoring the second Rescue Operator to the Rescue 42 unit be given priority consideration.***

Staff Response: Rescue 42 is our Hazardous Materials response unit. Prior to FY 2012/13, it was staffed with two PSO positions on each team. Since that time, it has been staffed with one PSO on each team. Staffing Rescue 42 with two personnel per team would require three full-time equivalents (FTEs). DPS's current staffing levels do not provide the staff to be able to fill these FTE positions without affecting other operational units. As staffing stabilizes this recommendation will be considered during annual budgetary meetings.

***Recommendation #3: The City of Sunnyvale should consider adding a supervisory certified/licensed and qualified EMS Program Clinical and Educator position to the DPS dedicated to EMS program oversight, quality assurance, and quality improvement.***

Staff Response: In response to the 2001 EMS System Design Report recommendations, the Emergency Medical Services (EMS) Unit of DPS was created. At that time, the unit was budgeted for one Public Safety Lieutenant and two civilian positions. During FY 2010/11; however, in response to economic impacts on the budget, the Public Safety Lieutenant and one of the two civilian positions were defunded. While this recommendation is being evaluated, a temporary part-time casual professional employee is assisting the EMS unit.

***Recommendation #4: Citygate recommends that DPS maintain a careful watch on the amount of non-9-1-1 incident commitment time for at least six patrol units every hour. If major blocks of a shift on a predictable, repeated pattern show patrol cannot spare six officers to critical firefighting, then DPS should add patrol officers to both maintain proactive policing capacity as well as surge capacity to serious fire or EMS events.***

Staff Response: Staff within the Bureau of Police Services monitors this on an ongoing basis.

***Recommendation #5: Adopt City Council Deployment Measures Policies: The City should adopt updated, complete performance measures to direct fire crew planning and to monitor the operation of the Department. The measures of time should be designed to save patients where medically possible and to keep small but serious fires from becoming greater alarm fires.***

Staff Response: Staff is reviewing the proposed measures for incorporation into the City's performance measures utilizing the City's existing performance measure adoption process.

DPS' current dispatch computers (CAD) are not able to capture for export, the data needed to monitor the recommended measures readily without significant manual extraction. Both the records

management system for DPS fire records and CAD are due for replacement and this recommendation will therefore be further evaluated during the replacement process.

One component of DPS response time is the time it takes to get to the scene. To improve that response time, the City is in the final stages of completing project 831900-Emergency Vehicle Traffic Signal Preemption. This project provides electronic preemption for fire apparatus and marked patrol cars when responding in emergency mode to calls for service and was designed to improve DPS' ability to safely and quickly respond to calls for service.

The consultant's report found that DPS' response times to emergent incidents are better than or just over their recommended 7:30 minutes. Fire Station 5 response times were found to be slightly over their recommended response times. This report is based on data developed with the old Fire Station 5 which experienced delays in response time performance due to the light rail placement. As trains approached responding apparatus were delayed until the train cleared the intersection. This has been alleviated with the opening of the new Fire Station 5 in a different location.

***Recommendation #6:*** As the City approaches build-out, it should consider the relocation of Fire Station #1.

***Recommendation #7:*** Maintain fire station facilities to meet all applicable regulatory health and safety standards.

***Recommendation #8:*** Consider relocating oxygen cylinder refilling and maintenance to a dedicated, secure, air-conditioned room free of dirt, oils, and other contaminants.

***Recommendation #9:*** Consider retrofitting Fire Stations #1, #2, #3, #4, and #6 with automatic fire sprinkler systems.

***Recommendation #10:*** Consider developing a long-range Facilities Master Plan that addresses, at a minimum, facility replacement or relocation and addition criteria, priority, timing, estimated costs, and funding options.

Staff Response: Recommendations 6 -10 will be further studied through the existing funded project 832870-Fire Station Master Plan.

## **FISCAL IMPACT**

None at this time. Fiscal impacts will be analyzed as individual projects and issues are addressed.

## **PUBLIC CONTACT**

Public contact was made by posting the Council agenda on the City's official-notice bulletin board outside City Hall, at the Sunnyvale Senior Center, Community Center and Department of Public Safety; and by making the agenda and report available at the Sunnyvale Public Library, the Office of the City Clerk and on the City's website.

Prepared by: Steve Drowniany, Deputy Chief of Public Safety

Reviewed by: Phan S. Ngo, Director of Public Safety

Reviewed by: Teri Silva, Assistant City Manager

Approved by: Kent Steffens, City Manager

**ATTACHMENTS**

1. Volume 1 of 3 - Executive Summary April 27, 2018
2. Volume 2 of 3 - Technical Report April 27, 2018
3. Volume 3 of 3 - Map Atlas April 27, 2018