



CITY COUNCIL AGENDA STATEMENT



August 14, 2018

File ID: 18-0361

TITLE

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CHULA VISTA ADOPTING AN ADDENDUM TO THE CHULA VISTA FIRE FACILITY, EQUIPMENT, AND DEPLOYMENT MASTER PLAN

RECOMMENDED ACTION

Council adopt the resolution.

SUMMARY

On January 28, 2014, Chula Vista City Council approved and adopted Resolution Number 2014-018, adopting the Chula Vista Fire Department Fire Facility, Equipment, and Deployment Master Plan (Plan). Since then, portions of the Plan have become outdated for several reasons. There is a need to re-locate Fire Station 9, and address the outstanding issue of retaining the station for the long term. As part of the Fire Department response capability, there is also a need to address response time threshold issues which call for the addition of a Strategic, Quick-Unit Apparatus Delivery (SQUAD) and 4.0 staffing. Lastly, the current apparatus and equipment retention plan is obsolete requiring the establishment of a modern replacement policy to the Plan. The addendum will update the Plan so that it can be used as a source for future Fire Department improvements up to and including buildout of development.

ENVIRONMENTAL REVIEW

The Director of Development Services has reviewed the proposed activity for compliance with the California Environmental Quality Act (CEQA) and has determined that the activity (addendum to the Fire Facilities Master Plan) falls under a Statutory Exemption pursuant to Section 15262 (Feasibility and Planning Studies) of the State CEQA Guidelines because the action is only amends a portion of the adopted Plan and does not include approval of any of facilities discussed in the Plan. The Plan does not include site specific descriptions for new stations. In the future when the fire facility project(s) are further defined additional environmental review will be completed prior to commencing any of the projects.

BOARD/COMMISSION/COMMITTEE RECOMMENDATION

Not applicable

DISCUSSION

The addendum to the Plan provides necessary changes that bring the plan up to date to reflect current and future changes. The addendum updates or addresses four items within the Plan. Each item is briefly discussed below.

Item 1: Implementation of Strategic, Quick-Unit Apparatus Delivery (SQUAD)

Fire Department response thresholds require the arrival of the first unit on scene to a fire or medical emergency within seven minutes, 90% of the time. To achieve these response times, the Fire Department has included in the modification to the Plan, the deployment of the SQUAD.

Fire Department on scene arrival is a function of three considerations; distribution, concentration, and resource availability/reliability. Distribution is the geography of emergency resources and the travel time to emergencies to initiate stabilization of the emergency. Concentration is the ability to assemble multiple units at one emergency within the adopted time to transition from stabilization of the emergency to mitigation of the emergency. Resource Availability/Reliability is the degree to which the resources are ready and available to respond.

In Chula Vista, distribution of resources has proven to be an issue affecting the Fire Department's ability to arrive on scene within 7 minutes 90% of the time. The primary performance measure that drives the distribution/location for fire stations is travel time. The distribution of fire stations is a primary factor in the ability to meet response times. As mentioned earlier, distribution is the geography or placement of emergency response resources and their travel time to emergencies to initiate stabilization at the scene. Adequate distribution will allow for acceptable response time travel.

Distribution of resources creates challenges on the east side of the City. Station locations are spread out further from one another and do not provide overlap of coverage that is seen on the west side of the City. In addition, the street network in the east does not provide an even spaced grid of street networks as it does in the west. An improvement to the distribution of resources is necessary to meet the 90% response time standard.

The probability of any given unit's availability (or unavailability) is one indicator of the Fire Department's response reliability. Response reliability is defined as the probability that the required number of competently prepared staff and properly equipped apparatus will be available when a fire or emergency call is received. As the number of emergency calls per day increases, the probability that a needed piece of apparatus will be busy when a call is received also increases. Consequently, if the right amount of redundancy is not built into the system to ensure timely and adequate response to emergency calls can be maintained, the Department's response reliability decreases. To measure response reliability, all types of calls for service must be considered. Today, EMS calls have an impact on the availability of Fire Department resources and are considered in the overall evaluation of Department reliability. Response reliability can be determined from historical run data and is typically expressed as a per/company statistic as well as an agency-wide statistic. Over the last 5 years, Department run data shows a 31% increase in call volume.

In order to achieve the response threshold, it is necessary to identify opportunities to create a greater degree of overlap of the response districts within the distribution network in the east which will also improve reliability/availability. One way to achieve this is to build more fire stations and staff them with resources. Another way is to add less expensive SQUADS to the distribution of resources. The SQUADS will serve areas of the City with high call volume, or areas that are vacated due to another unit going out of district for fuel, mechanical repairs, or training. The SQUADS will also supplement areas of the City known to have poor response times as indicated by data already collected by the Fire Department.

SQUADS will provide additional units to the response network thereby bolstering the distribution of resources. Providing better distribution through implementation of SQUADS allows for the improvement of availability/reliability discussed earlier. With increased distribution of response units and the

improvement to units being available to respond, response times will trend downwards towards the goal of 7 minutes 90% of the time.

Item 2: Implementation of 4.0 Staffing

As discussed earlier in this report, reliability and availability are two key factors that affect operational performance. The transition to 4.0 staffing on E51 was the first step towards increased staffing of engine companies in the Fire Department. Since implementing 4.0 staffing, Engine 51 has improved system reliability through increasing by more than nearly 107 hours, its availability to receive calls. As a result of improvements to Engine 51's reliability and availability, it could accept emergency calls more often, thereby reducing response times that otherwise would have required a further unit to respond.

Implementation of 4.0 staffing will continue with funding from Measure A, and has been separated into short and long term staffing plans. This approach will allow SQUAD implementation and 4.0 staffing to begin in areas believed to be critical in terms of call volume loads and maximum impact and benefit to the network of resources. Short term 4.0 staffing areas include: Engine 52 located at 80 East J. Street, Engine 55 currently located at 391 Oxford Street, Engine 57 located at 1640 Santa Venetia, Engine 60 at Millenia, and future Engine 61 at the Bayfront.

Long term operational staffing costs may be funded using additional Measure A revenues that surpass current projections, followed by other general fund dollars which will be considered as part of the annual budget process. Long term staffing includes implementation of 4.0 staffing at Engine 53 located at 1410 Brandywine, Engine 54 located at 850 Paseo Ranchero, Engine 56 located at 805 San Miguel Road, and Engine 58 located at 1180 Woods Drive.

The long term plan will also see the implementation and addition of a 4.0 staffed engine (Engine 59) which will complete the full and necessary compliment of one engine located in each fire station district throughout the City. The City currently runs one engine short at Fire Station 3. The addition of a 4.0 staffed truck (Truck 50) at the Bayfront fire station, a 4.0 staffed truck at Fire Station 4 (Truck 54), and a 4.0 staffed engine at the Village 8 fire station is also part of the long term staffing plan and indicated in the current Fire Facility, Equipment, and Deployment Master Plan.

Item 3: Relocation and Retention of Fire Station 9

Operational Necessity of Fire Station 9

The current Plan addresses the placement of twelve fire stations in the network. Specifically, fire station 9 has been addressed by the 2014 Council resolution which modified the Plan to say:

- Fire Station 9 will continue to operate. After all three proposed new stations (Millenia, Otay Ranch Village 8, and Bayfront) are constructed and operating, an analysis will be completed to determine whether or not operation of this station is still necessary.

Subsequent to the 2014 Council resolution, staff has conducted additional rigorous analysis and determined that there is a need to relocate and operate Station 9 as a permanent facility.

In 2014, when Council modified the resolution to continue operation of Fire Station 9, and to conduct an operational necessity assessment after construction of Millenia, Bayfront, and Village 8 fire stations; Fire Department staff at that time did not address the need to replace the aging and dilapidated building.

Since that time in 2014, the station has suffered several costly major repairs due to mold growth and ongoing deteriorated underground plumbing and was subsequently found to contain asbestos. Station 9 was built in 1960, and has far exceeded its life as a dependable facility. It was not built to earthquake standards and therefore is not considered an essential building. It is limited in terms of housing modern fire equipment since the door height is too low and cannot accommodate current fire apparatus.

Due to the critical need to rebuild Station 9, Fire Department staff recognized the urgent need to conduct the assessment of operational necessity immediately versus after construction of all three proposed new stations (Millenia, Otay Ranch Village 8, and Bayfront).

Staff possesses specialized computer software technology called ADAM (Apparatus Deployment Analysis Module). ADAM is a “what if,” predictive modeling tool that uses historic CAD data, GIS map data, and a projection algorithm that projects the impact on response times due to adding units or stations, and relocating apparatus. Optimizer is yet another modeling software used in conjunction with ADAM and utilized by the Fire Department to provide the most effective deployment plan in terms of locations for stations and apparatus.

Using the ADAM and Optimizer technology, and based on established fire department metrics set at 90% compliance; response thresholds are closest to being achieved in three metrics when Fire Station 9 remains as a permanent resource. The permanent closure of the station at buildout, negatively affects the department’s ability to achieve compliance. Most notable is the Effective Response Force (ERF) at 68.57% compliance versus 82.16% compliance when the station remains open.

Staff has analyzed data and determined that Fire Station 9 is an integral part of the operational network of resources and should remain as a necessary permanent facility.

Relocation of Fire Station 9

The fire department has evaluated this opportunity to assess whether station 9 should be rebuilt on the existing property or whether there is an alternate location that will produce improved overall response times in the network of fire stations in the west/southwest; with consideration being given to the fact that fire station 5 will be relocated and the Bayfront fire station will be built in approximately 2021.

After researching alternate locations for both fire station 5 and 9, data shows an improved response capability when the Bayfront station is located near J Street and Bay Boulevard, fire station 5 is located at Fourth Avenue and Orange Avenue, and Fire Station 9 is located near the intersection of Moss Street and Naples Street. This ideal location for station 9 improves response times overall. This combination gives the best performance improvement to better serve the community and to make improvements to response metrics.

Item 4: Policy and plan for the purchased and retention of fire apparatus and equipment

The Fire Department responds to Fire, Rescue and Emergency Medical incidents both within the City and

surrounding cities. In addition, the Fire Department provides mutual aid assistance throughout the State of California on a reimbursable basis. These emergency services are provided with the following frontline fire apparatus – eight (8) triple combination pumper engines, two (2) aerial ladder trucks, one (1) heavy rescue (urban search and rescue) unit, one (1) brush engine and two (2) command vehicles. The reserve fire apparatus currently consists of the following – five (5) reserve triple combination pumper engines, one (1) reserve aerial ladder truck and two (2) reserve command vehicles.

Due to several factors including decreased vehicle replacement funding, excessive years of service, escalating maintenance costs, increased downtime of frontline apparatus, decreased fleet depth, decreased reliability and safety issues; the Fire Department and Public Works – Fleet Management Division have been significantly challenged with maintaining an adequate fire apparatus fleet (frontline and reserve).

In recent years, the Fire Department and Public Works – Fleet Management Division have seen drastic increases in overall mechanical repair expenses with routine repairs as well as major system repairs. These unpredictable increases in expenses have caused budgetary problems for the Public Works – Fleet Management Division. In addition, fire apparatus “out of service” times, lack of reliability and safety concerns all increased to a point that the Fire Department was negatively affected with emergency fire and medical service response capabilities.

National Fire Protection Association (NFPA) Standard 1901 on Automotive Fire Apparatus and other National Fleet Maintenance Organizations recommend large vehicle replacements based on several criteria to include, years of service, mileage, maintenance costs, functional obsolescence, and inability to obtain repair parts as well as technology and safety improvements. After extensive research of National industry standard recommendations and standards adopted by other Fire Departments, the Fire Department and Public Works – Fleet Management Division recommend the adoption of a revised Apparatus and Equipment Replacement Policy (Attachment A) to supersede the original policy adopted by Council on February 2, 1985 as resolution #11924 (Attachment B).

The revised Apparatus & Equipment Replacement policy includes a range for years of frontline and reserve service for specific fire apparatus, command vehicles and equipment. This range is designed into the policy to enable the Fire Department and Public Works – Fleet Management Division to work collaboratively to assess each replacement to determine the most appropriate replacement year within the range.

As part of the overall assessment of when to make the replacement within the range, the Fire Department and Public Works – Fleet Management Division will assess several factors to include:

- Age
- Mileage
- Engine Hours
- Pump Hours
- Out of Service Hours
- Maintenance Costs
- Obsolescence

Timeline Goals for Replacement of Apparatus

- A. It will be the goal to replace all fire apparatus (triple combination pumper engines, aerial ladder trucks, heavy rescue units (urban search and rescue), and type III brush engines at:
 - a. 17 years of total service
 - i. 10 to 12 years in frontline service
 - ii. 5 to 7 years in reserve service
- B. All command vehicles at:
 - a. 10 to 12 years of total service
 - i. 7 years in frontline service
 - ii. 3 to 5 years in reserve service
- C. All Staff vehicles at:
 - a. 10 years of service and/or 100,000 miles

In addition, it will be the goal of the Fire Department to replace other critical equipment at specific intervals per NFPA recommendations, manufacturer recommendations, or Cal-Osha regulations due to improvements in functionality, technology and safety as well as overall wear and tear of the equipment.

With the use of Measure “P” funds, the Fire Department and Public Works – Fleet Management Division have implemented a specific Measure “P” – Apparatus and Equipment Spending Plan. This plan has begun to correct the issues associated with the aging apparatus fleet and equipment. The plan includes the escalations of some apparatus, command vehicle and equipment purchases on altered time intervals. These adjusted purchase intervals are required to eventually create sustainable and consistent replacement cycles for the entire fleet of apparatus and equipment.

DECISION-MAKER CONFLICT

Staff has reviewed the decision contemplated by this action and has determined that it is not site-specific and consequently, the 500-foot rule found in California Code of Regulations Title 2, section 18702.2(a)(11), is not applicable to this decision for purposes of determining a disqualifying real property-related financial conflict of interest under the Political Reform Act (Cal. Gov't Code § 87100, et seq.).

Staff is not independently aware, and has not been informed by any City Council member, of any other fact that may constitute a basis for a decision maker conflict of interest in this matter.

LINK TO STRATEGIC GOALS

The City’s Strategic Plan has five major goals: Operational Excellence, Economic Vitality, Healthy Community, Strong and Secure Neighborhoods and a Connected Community.

The addendum to the Chula Vista Fire Department Fire Facility, Equipment, and Deployment Master Plan has a direct link to the City’s strategic goals of Strong and Secure Neighborhoods as well as Operational Excellence.

CURRENT-YEAR FISCAL IMPACT

There is no fiscal impact in FY2018-19 as a result of this resolution. This resolution is requesting City Council accept the addendum document to the Chula Vista Fire Department Fire Facility, Equipment, and Deployment Master Plan.

ONGOING FISCAL IMPACT

There is no ongoing fiscal impact as a result of this resolution. This resolution is requesting City Council accept the addendum document to the Chula Vista Fire Department Fire Facility, Equipment, and Deployment Master Plan.

Any future fiscal impacts will be considered by the City Council as part of the annual budget process.

ATTACHMENTS

Chula Vista Fire Department Fire Facility, Equipment, and Deployment Master Plan addendum document

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