



# Memorandum

**TO:** PUBLIC SAFETY, FINANCE  
AND STRATEGIC SUPPORT  
COMMITTEE

**FROM:** Robert Sapien, Jr.

**SUBJECT:** Fire Department Emergency  
Medical Services Annual  
Report

**DATE:** March 6, 2025

Approved

Date:

3/13/2025

## **RECOMMENDATION**

Accept the annual report on Fire Department Emergency Medical Services delivery, including a feasibility analysis of Med 30 services as part of future county-wide ambulance services.

## **SUMMARY AND OUTCOME**

This report provides the Public Safety, Finance and Strategic Support Committee with a status update on the current activities centered around the Department's Emergency Medical Services delivery including an overview of 9-1-1 ambulance services, transitioning system design, and how these systems influence and integrate with the Fire Department's (Department) current emergency medical call volume, emergent community health issues, and staffing trends related to its Emergency Medical Services (EMS) delivery.

## **BACKGROUND**

On April 20, 2023, the Department presented its inaugural *Annual Fire Department Emergency Medical Services Report*<sup>1</sup> to the Public Safety, Finance and Strategic Support Committee (Committee). Subsequently, March 21, 2024, as directed by the Committee, the Department presented the *Santa Clara County 9-1-1 Ambulance Services Status Report and Fire Department Emergency Medical Services Annual Report*<sup>2</sup>. Resuming regular annual reporting, the Department offers an analysis of its EMS delivery experience in Fiscal Year 2023-2024, including the City Council's referral on June 11, 2024, to explore the feasibility of restoring services akin to the EMS Field

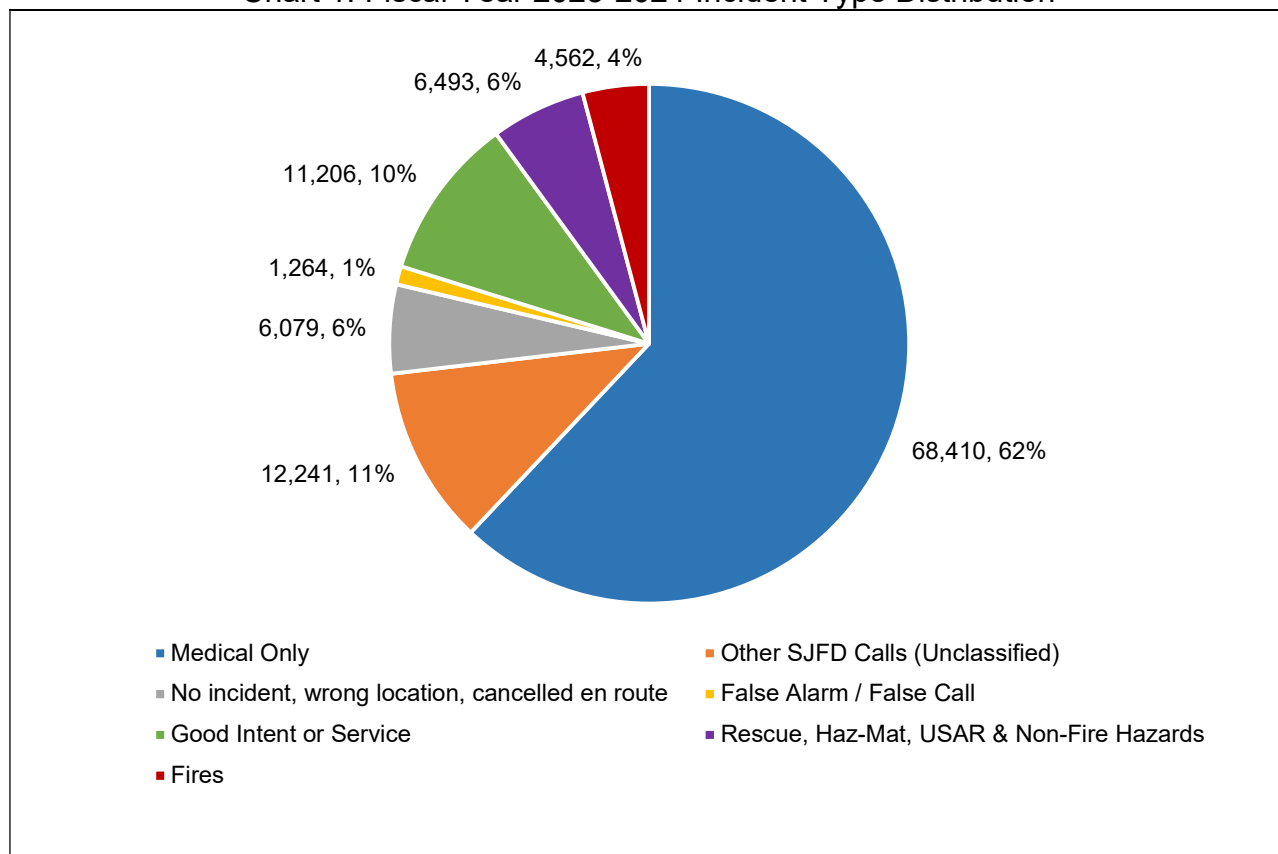
<sup>1</sup> <https://sanjose.legistar.com/View.ashx?M=F&ID=11900852&GUID=8035EC5B-8E51-4E17-8649-390263F4A951>

<sup>2</sup> <https://sanjose.legistar.com/View.ashx?M=F&ID=12771238&GUID=BAE4CFB4-F09C-4F2B-AC58-D23AA720B0E7>

Coordinator (Med 30) program through a potential bid opportunity for county-wide ambulance services.

The San José Fire Department's mission is to protect life, property, and the environment through prevention and response. One facet of the Department's all-hazards response capabilities is emergency medical first response. EMS requests comprise the greatest number of overall emergency services requests. As illustrated below in Chart 1, in Fiscal Year 2023-2024, 62% of the 110,255 total responses were categorized as Medical Only.

Chart 1: Fiscal Year 2023-2024 Incident Type Distribution



Fire-based first responder EMS is an essential component to prehospital care because firefighters, solely, are trained and equipped to engage in hazardous environments, effect rescues, suppress fires, decontaminate patients exposed to hazardous materials, and other scene mitigations, all towards accessing patients and initiating care at the earliest possible moment. For example, a trapped vehicle accident victim may require disentanglement, extrication, and supportive fire control. In this circumstance, firefighters would be trained and equipped to protect themselves and the victim from hazards, initiate stabilizing medical interventions, and perform rescue and extrication.

All sworn personnel are trained and certified to the emergency medical technician-defibrillation level to provide Basic Life Support (BLS) patient care, which includes cardiopulmonary resuscitation (CPR) and first-aid skills. Other practices within the BLS scope include chest compressions, administering oxygen, securing basic airways, utilization of Automatic External Defibrillators (AEDs), spinal motion restriction, bleeding control, emergency childbirth with newborn resuscitation, and conducting fundamental patient assessment. Advanced Life Support (ALS) care requires Firefighter/Paramedics to be trained and equipped to deliver a broader scope of practice than Emergency Medical Technicians (EMTs), including endotracheal intubation, establishing intravenous lines, administering pain/therapeutic medications, conducting electrocardiogram analysis, synchronized cardioversion, manual defibrillation, and differential diagnosis.

The Department provides first-responder ALS patient care through an agreement between the City of San José and the County of Santa Clara under *California Health and Safety Code § 1797.178, 1797.204, and 1798*, which establishes the Santa Clara County Emergency Medical Services Agency (County EMSA) as being responsible for system coordination, medical oversight, and support of EMS delivery within Santa Clara County. The County EMSA provides services through contracted agencies, including fire departments that offer first responder ALS and BLS. ALS 9-1-1 ambulance services in the County are provided by Rural/Metro Ambulance (owned by AMR), which operates within an exclusive operating area (EOA) that includes Mountain View, Santa Clara, Cupertino, Milpitas, Sunnyvale, Los Altos, Los Altos Hills, Campbell, Los Gatos, Monte Sereno, Saratoga, San José, and Morgan Hill.

The *9-1-1 Emergency Medical Services Provider Agreement between City of San José and the County EMS Agency<sup>3</sup> (9-1-1- EMS Provider Agreement)* went into effect on July 1, 2011. Options to extend the agreement were fully exercised, and the *9-1-1 EMS Provider Agreement* will expire on June 30, 2025.

## **ANALYSIS**

### *Medical Priority Dispatch Services*

On September 14, 2020, Assembly Bill 1945 was signed into law, reclassifying 9-1-1 Dispatchers as first responders, recognizing the critical role 9-1-1 Dispatchers play in emergency response. Requests for EMS response are most often initiated via the 9-1-1 system. 9-1-1 calls are first answered by the Police Communications-Dispatch, the City's primary public safety answering point. Calls for fire services are transferred to Fire Communications, a secondary public safety answering point. Fire Communications

Public Safety Radio Dispatchers (PSRDs) are trained as Emergency Medical Dispatchers and initiate the responses by providing life-saving instructions over the phone while first responders are en route to the emergency location. Pre-arrival instructions include bleeding control, tourniquet application, burn treatment, childbirth assistance, abdominal thrusts for suspected choking victims, high-performance CPR, and other life-saving actions. These interventions can be critical to patient survival. For example, pre-arrival instruction directing high-performance CPR is supported by study findings indicating doubled likelihood of survival<sup>4</sup> when CPR is initiated prior to EMS responder arrival. PSRDs utilize the International Academies of Emergency Dispatch Medical Priority Dispatch System (MPDS)<sup>5</sup>, asking callers a series of triage questions to determine the nature of the emergency to determine resource needs while continuing to provide the caller with potentially life-saving instructions. Based on the triage, PSRDs will accurately dispatch the closest available responders to provide emergency medical services.

The Department's Fire Communications Division performs monthly quality assurance audits to determine compliance with call-taking protocols. In Fiscal Year 2023-2024, 95% of calls reviewed through the Division's quality assurance program were identified as being in High Compliance or Compliant with MPDS protocols, whereas the average for all Accredited Centers of Excellence worldwide was 88.43%.

### *9-1-1 System Frequent User Referral*

The Department maintains a 9-1-1 system frequent user referral process which attempts to connect individuals with medical needs that are not being met by prehospital emergency care providers and Emergency Departments (EDs). Through this process, the Department's on-staff Nurse Practitioner coordinates with the County of Santa Clara Social Services Agency and private healthcare insurance providers to identify and match the right resources for the individual. Additionally, the Department monitors facilities from which EMS response requests frequently originate, providing 9-1-1 system use education to minimize response to low acuity medical events. As EMS service demand continues to trend upward, strategies to match community medical needs with the right resources will serve to preserve response resources for the most critical emergencies.

### *Public Access Defibrillators*

Heart disease is the leading cause of death in the United States, with over 700,000 cardiac-related deaths in 2022<sup>6</sup>. Survival from cardiac arrest doubles when a bystander

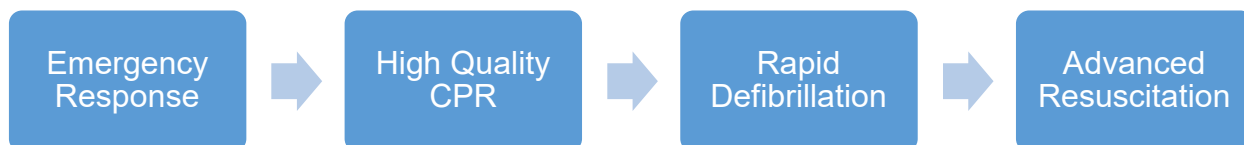
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<sup>4</sup> <https://www.ahajournals.org/doi/10.1161/CIRCULATIONAHA.118.038179>

<sup>5</sup> <https://www.emergencydispatch.org/what-we-do/emergency-priority-dispatch-system/medical-protocol>

<sup>6</sup> <https://www.cdc.gov/heart-disease/data-research/facts-stats/index.html#:~:text=Heart%20disease%20in%20the%20United%20States&text=Heart%20disease%20is%20the%20leading,every%205%20deaths.12>

utilizes an Automated External Defibrillator (AED) before first responders arrive<sup>7</sup>. The American Heart Association uses the term “Chain of Survival” to describe the initial processes that are required for an individual to survive cardiac arrest:



In 2007, the City of San José adopted the goal of becoming a “Heart Safe City” by improving cardiac safety for the community<sup>8</sup>. One of the methods recognized to accomplish this goal was the establishment and promotion of a Public Access Defibrillator (PAD) program throughout City of San José facilities. When the PAD program was initiated, there were 19 AEDs at different City-owned buildings. The Department provided oversight on the inspection, maintenance, and training of this program – to which there are now over 246 AEDs available across 96 facilities. The Department continues these efforts further to follow State and Local regulations by requiring City employees to be trained on how to perform CPR and use the AED.

### *EMS Integrated Response*

Upon receipt of a request for EMS response, Fire Communications requests an ambulance response via the Santa Clara County Communications Center. Santa Clara County 9-1-1 ambulance services are contracted by the County to Rural/Metro Ambulance, a private, for-profit provider. The system is designed to provide continual ALS-level care with ALS first responder response and ALS ambulance response. A typical medical emergency within San José involves a dual response of both one Department frontline company with ALS/Paramedic-level capabilities and one County ambulance that provides patient transport to definitive care at one of the emergency departments (ED) at a local hospital. Once Department personnel arrive on scene, they provide patient assessment and initial treatments. When the ambulance arrives on scene, patient care is formally transferred to the ambulance paramedic and the fire crews assist with patient packaging and loading for transport. In circumstances where the patient is in critical condition, the responding Department Firefighter/Paramedic will ride in the transport ambulance, supporting patient care until arrival at the hospital ED.

County agreements with provider agencies establish performance requirements, including response times. First responder agencies must meet an 8-minute response time standard in urban areas 95% of the time when responding with lights and sirens. The ambulance provider agreement requires a 12-minute response time in urban areas 90% of the time under the same conditions. Failure to meet response time requirements

<sup>7</sup> <https://www.sciencedirect.com/science/article/pii/S0735109710005863?via%3Dihub>

<sup>8</sup> [http://www3.sanjoseca.gov/clerk/CommitteeAgenda/PSFSS/092007/PS092007\\_06.pdf](http://www3.sanjoseca.gov/clerk/CommitteeAgenda/PSFSS/092007/PS092007_06.pdf)

results in liquidated damages for first responder agencies and financial penalties for the ambulance provider.

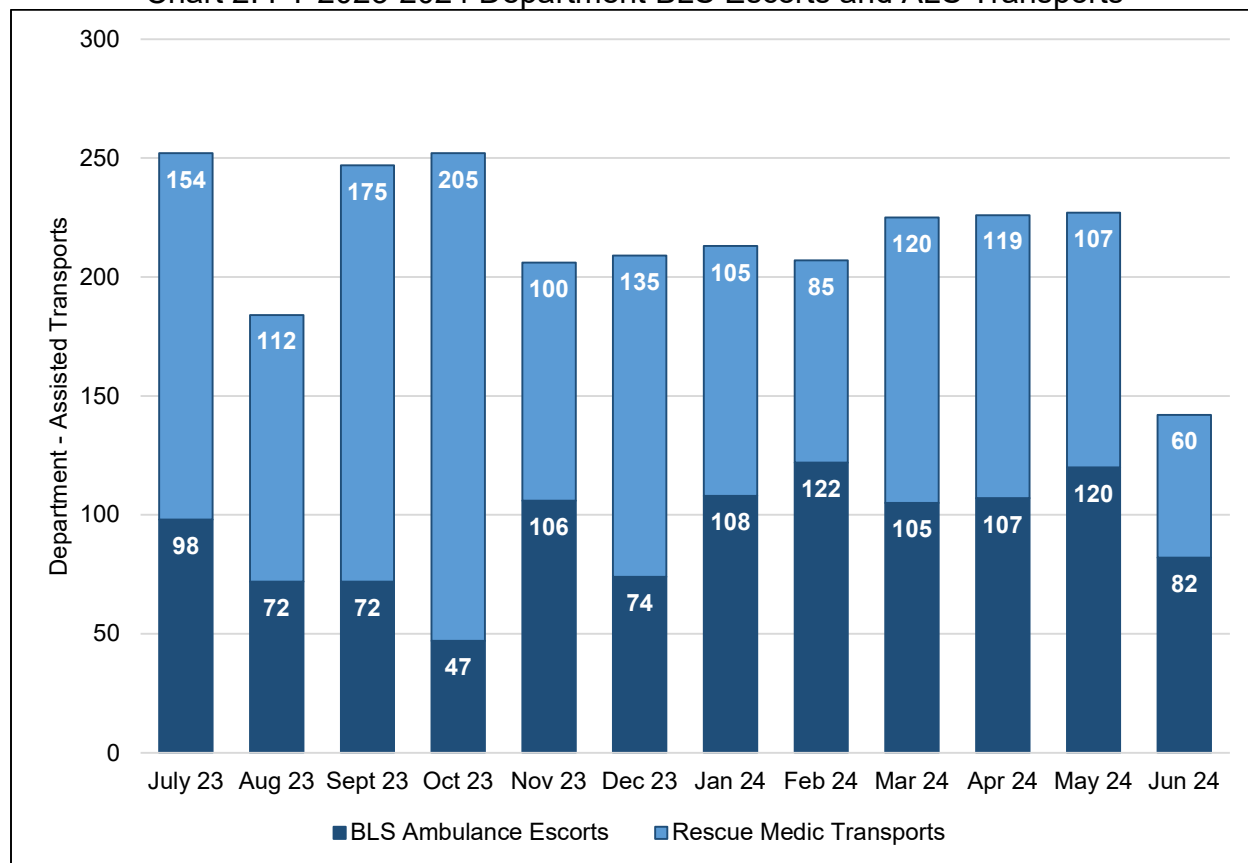
### *Fire Department Ambulance Transport*

The *9-1-1 EMS Provider Agreement* authorizes the Department to provide ambulance transport services on a limited basis to augment the services provided by the County's contracted ambulance provider, Rural/Metro. Presently, the Department deploys three Rescue Medics staffed with a single Fire Engineer and Firefighter/Paramedic, equipped to provide routine emergency medical response and patient transport. The Department also has five additional Rescue Medic vehicles in reserve that could be activated and staffed on an overtime basis. The *9-1-1 EMS Provider Agreement* allows the Department to provide patient transport under the following four specific scenarios:

1. Immediate life-saving transportation is required.
2. Material failure of the contracted ambulance provider when emergency transport is required (the ambulance provider is out of ambulances).
3. Delays with the contracted ambulance provider when emergency transport is required.
4. Emergent needs that require approval from the County EMS Agency Duty Chief.

When the *9-1-1 EMS Provider Agreement* became effective, Department ambulance resources were expected to experience fewer than 10 transports annually, and for several years, annual transports did not exceed that estimate. In recent years, however, Department Rescue Medics have been called upon to provide transport services at much greater frequency, principally because of scenarios listed as 2 and 3 above. Ambulance unavailability results in delayed transport of critical patients, extended on-scene times for first responder agencies, and extended response times to subsequent emergencies. The County's inability to provide timely ambulance response has presented serious and persistent challenges to local jurisdictions expecting customary levels of service. To ensure that ambulances are available in their respective jurisdictions, fire agencies within the county have increased utilization of their existing ambulances and others have even invested to add ambulances to their fleets. As illustrated in Chart 2 below, a substantial workload has shifted to the Department as a result of ALS ambulance unavailability, including 1,447 Department-assisted Rescue Medic transports and 1,113 instances where Firefighters/Paramedics rode in Rural/Metro ambulances to maintain BLS patient care in Fiscal Year 2023-2024.

Chart 2: FY 2023-2024 Department BLS Escorts and ALS Transports



### *Santa Clara County 9-1-1 Ambulance Services*

In effect since July 1, 2011, the agreement between the County of Santa Clara and Rural/Metro for 9-1-1 ambulance service has been amended nine times<sup>9</sup>. Modifications to the original agreement have introduced significant changes to the emergency medical services system, including substantially reduced performance and service level requirements present in the original agreement. Because first responder agencies must maintain patient care until transfer to an appropriate care provider, delayed ambulance responses result in longer on-scene times, challenging the Department resource availability and response time performance. Additionally, the introduction of BLS ambulances in the Ninth Amendment to the Agreement, effective April 16, 2024, has resulted in Department paramedics escorting their patients on Rural/Metro ambulances to EDs to maintain necessary ALS-level care, also resulting in strained resource availability and significantly higher workload for Department personnel.

<sup>9</sup> <https://files.santaclaracounty.gov/exjcpb1541/migrated/2022%20-%200707%20%20EOA%20Agreement-Amendments-Exhibits%20Metro.pdf?VersionId=VI6VbUNDcjESuV0bLHr6FPzExPPNq8Ff>

The County EMSA monitors EMS system stability. When necessary to stabilize the EMS System, the EMS Agency Executive Leadership Team, EMS Duty Chief, or County Communications has been authorized to activate emergency dispatch orders (SDOs) to stabilize the system on a short-term basis. Four of the 30 distinct SDOs increased in frequency over the past four years, including:

- **SDO 3:** Order to dispatch BLS ambulances to “Alpha” and/or “Omega” EMS events.
- **SDO 10:** Order to place all available EOA and non-EOA ambulances in service for dispatch.
- **SDO 11:** Order to notify Fire Departments with permitted ambulances that unrestricted use of fire-based ambulances has been authorized within their respective jurisdiction.
- **SDO 17:** Order that automatic ambulance dispatches are suspended until a first response unit arrives on-the-scene and verifies that a patient needing emergency transport exists.

Table 1 below displays SDO 10, SDO 11, and SDO 17 activations from Fiscal Year 2020-2021 to Fiscal Year 2023-2024. SDO 3 is excluded due to its constant use from the onset of Rural/Metro implementing BLS ambulances in a tiered model response since June 2022.

Table 1: SDO 10 / 11 and SDO 17 Activation Minutes

<b>Fiscal Year</b>	<b>SDO 10 and 11 Activation Minutes</b>	<b>SDO 17 Activation Minutes</b>
2020-2021	4,919	0
2021-2022	8,895	104
2022-2023	49,575	3,117
2023-2024	82,467	5,659

In extreme circumstances, County EMSA will activate SDO 17 where no ambulances are assigned to EMS incidents. Once first responders arrive on scene, they can provide updates including communicating the need for an ambulance response; however, ambulances may be unavailable or significantly delayed.

#### *County EMS Response Time Compliance Funding*

The *9-1-1 EMS Provider Agreement* includes a provision that is contingent on the performance criteria of the EMS Resource Management (Category A) requiring Emergency Medical Dispatch and MPDS and Response Time Performance (Category B). The Department’s Fire Communications Division’s operational procedures conform to the Category A requirements. In Fiscal Year 2023-2024, the Department met



adjusted response time performance requirements for 12 consecutive months. This performance resulted in approximately \$3.3 million in first responder funding. The cost incurred by the Department to operate ALS-level EMS services is approximately \$4.6 million, with a 72% cost recovery realized from first responder funding in Fiscal Year 2023-2024. Table 2 below provides a five-year overview on the Department's performance in meeting response time guidelines under the County's First Responder Funding reimbursement program.

Table 2: EMS Response Time Compliance Funding

	<b>FY 19-20</b>	<b>FY 20-21</b>	<b>FY 21-22</b>	<b>FY 22-23</b>	<b>FY 23-24</b>
<b>Total Revenue</b>	\$3,093,373	\$3,392,633	\$3,487,324	\$3,614,331	\$3,799,221
<b>Total Liquidated Damages</b>	\$(341,750)	\$(338,900)	\$(549,250)	\$(430,700)	\$(501,950)
<b>Total Revenue Received</b>	<b>\$2,751,623</b>	<b>\$3,053,733</b>	<b>\$2,938,074</b>	<b>\$3,183,631</b>	<b>\$3,297,271</b>

Emergency call volume has continued to rise over the term of the agreement, increasing over 57.6% from 73,327 calls in Fiscal Year 2011-2012 to 115,589 calls in Fiscal Year 2023-2024. 64% of emergency calls in Fiscal Year 2023-2024 were medical in nature.

### *Department Staffing*

The Department seeks to maintain 173 Firefighter/Paramedics to meet daily staffing demands. Due to a lapse in paramedic education and training during COVID-19 isolation, ALS providers across the state have struggled to recover to normal staffing levels. The Department experienced the impacts of the shortage, finding few licensed paramedics in applicant pools amidst increasing vacancies created by attrition. The result was increased and excessive demand for overtime on Firefighter/Paramedics. In response, the Department asked former paramedics in the ranks of Fire Engineer and Fire Captain to reactivate their paramedic licensure and accreditation, becoming "Support Paramedics" to ease the overtime pressure on the Firefighter/Paramedics. This strategy has shown continued success in decreasing mandatory callback hours with a current count of 110 Support Paramedics and 115 Firefighter/Paramedics available. The Department continues to work toward onboarding more paramedics to close the gap, including 20 qualifying paramedics that entered the firefighter recruit academy on March 3, 2025.

### *Ambulance Patient Offload Delays*

California Assembly Bill 40 (AB 40)<sup>10</sup>, aims to address ambulance patient offload delays (APODs) by requiring local EMS agencies to adopt standards for timely offloading patients at hospitals. The bill sought to mitigate the extended wait times ambulance

<sup>10</sup> [https://leginfo.ca.gov/faces/billNavClient.xhtml?bill\\_id=202320240AB40](https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=202320240AB40)

crews experience when transferring patients from their care to hospital EDs — a problem that has strained emergency response systems across California. APODs occur when EDs are overcrowded, forcing ambulances to wait with patients until hospital staff can assume responsibility. This delay keeps ambulances out of service for extended periods, reducing their ability to respond to new emergencies.

In Fiscal Year 2023-2024, it was observed that seven of the ten receiving hospitals in the County failed to meet the California State EMS Authority's target of a 20-minute ambulance patient offload time<sup>11</sup>, with Valley Medical Center having the highest APOD times, averaging 50 minutes or more. APOD exacerbates ambulance unavailability and stretches Department resources further as the time committed to each patient transport is extended.

### *EMS Trends*

From Fiscal Year 2020-2021 to Fiscal Year 2023-2024, Department EMS call volume increased by over 15%. This increase in demand for EMS services within San José and the County can be attributed to several factors:

- Aging Population: According to the *Santa Clara County Area Plan on Aging 2020-2024*<sup>12</sup>, the number of County residents above age 65 will account for 11% of the total population by 2030, and County residents aged 85 and older are estimated to become 2% of the total population. Those 85 and older have a significantly higher rate of severe chronic health conditions and functional limitations that result in the need for more health and supportive services. The rapid growth of this age group has many implications for the healthcare sector.
- Increased Homelessness: The *2023 Homeless Count and Survey Comprehensive Report* determined that the number of unhoused individuals within San José has increased from 4,350 in 2017 to 6,266 in 2023<sup>13</sup>, an increase of 44% over that six-year span. In that same survey, unhoused individuals self-reported several health conditions that may affect their ability to maintain housing or employment:
  - Psychiatric/Emotional Conditions (34%)
  - Alcohol & Drug Use (31%)
  - Post-Traumatic Stress Disorder (32%)
  - Chronic Health Conditions (25%)
  - Physical Disability (20%)
  - Traumatic Brain Injury (10%)

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<sup>11</sup> <https://emsa.ca.gov/wp-content/uploads/sites/71/2020/12/EMSA-APOT-Report-to-Legislature.pdf>

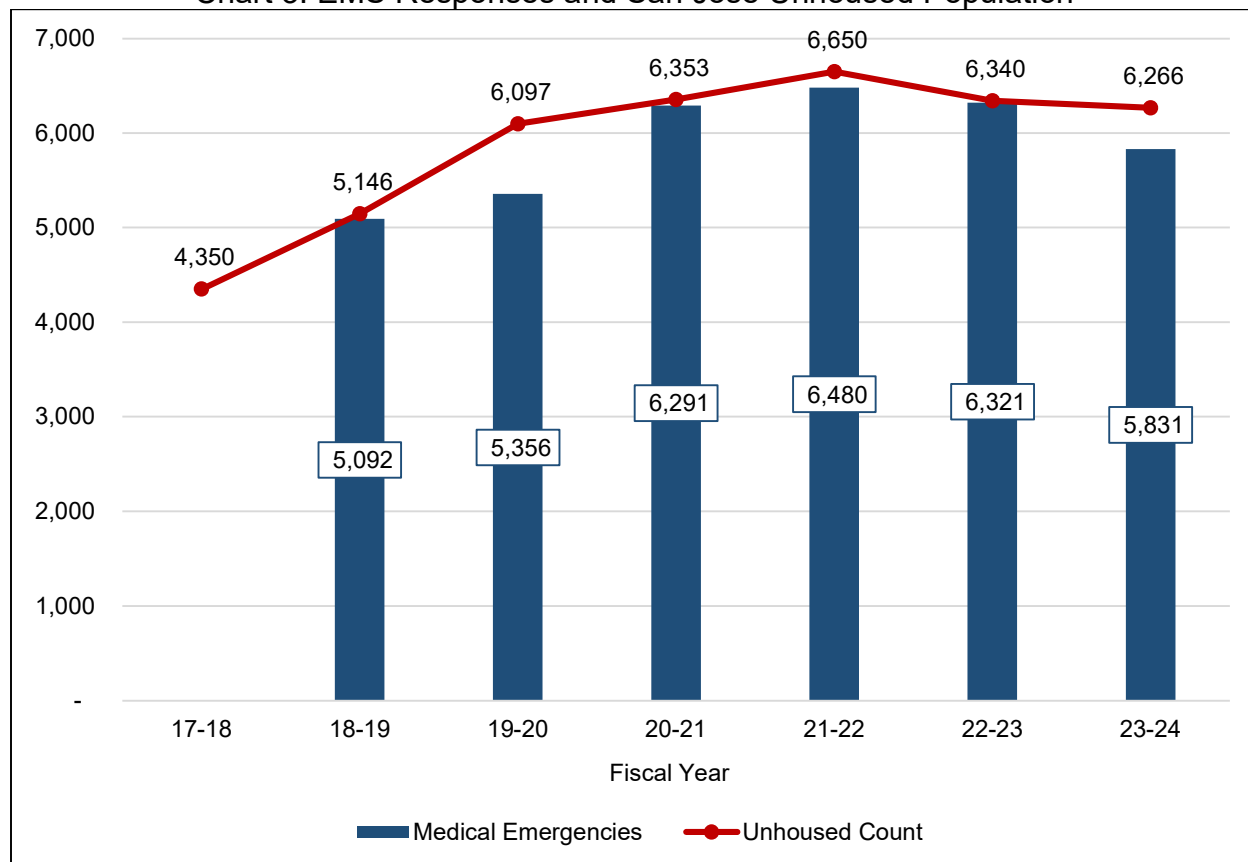
<sup>12</sup> <https://www.mysourcewise.com/wp-content/uploads/2021/03/Sourcewise-Area-Plan-on-Aging-20-24.-sml.pdf>

<sup>13</sup> <https://www.sanjoseca.gov/your-government/departments-offices/housing/resource-library/homeless-reports/homeless-reports-executive-summary>

- HIV/AIDS-Related Illness (3%)

These health conditions could lead to an increase in utilization of 9-1-1 EMS resources as many unhoused individuals cannot afford healthcare through typical insurance providers. Chart 3 provides a comparison between the number of unhoused residents in San José and the number of unadjusted EMS responses by fiscal year. As the number of unhoused individuals in San José increases, so does the number of EMS responses related to homelessness. In Fiscal Year 2023-2024, responses for homeless medical emergencies accounted for 8.5% of total EMS responses. As high-density housing increases in development, homeless encampments or temporary housing locations become more concentrated, and mass transportation becomes more readily available, impacts will likely continue to be unbalanced across fire station response areas, further straining resource availability.

Chart 3: EMS Responses and San José Unhoused Population



### Med 30 Duties

Med 30, established as a Paramedic Field Coordinator in 1995 when the Department began providing ALS-level care, was eliminated via budget action in Fiscal Year 2023-2024. This action included the elimination of three Fire Captain positions and was

concurrent with the addition of three Battalion Chief positions and the establishment of a sixth battalion (Battalion 35) to reduce travel distances and response times for command staff in eastern and central areas of San José. The elimination of Med 30 was not without impact and was of concern to the City Council during budget deliberations. To allow time for the Department to transition through the resource elimination, funding was allocated to continue Med 30 for an additional six months through December 31, 2023, with a proceeding extension through June 20, 2024. Subsequently, during Fiscal Year 2023-2024 budget deliberations, City Council directed staff to explore the feasibility of restoring services akin to the EMS Field Coordinator (Med 30) program through a potential bid opportunity for county-wide ambulance services and to report findings to the Public Safety, Finance and Strategic Support Committee.

On March 14, 2023, the County Board of Supervisors adopted Resolution BOS-2023-392 in accordance with Health and Safety Code Section 1797.230 (AB 389). The resolution confirmed the County EMSA's intent to initiate a competitive bid process through a request for proposals (RFP) for ambulance service contracts. The Eighth Amendment to the EMS Agreement between the County and Rural/Metro extended the original contract to June 30, 2024, with an option for a three-year extension.

On April 16, 2024, the County approved the Ninth Amendment to the EMS Agreement, further extending the contract through December 31, 2025. This amendment includes an automatic three-year extension unless the County provides written notice of its intent to decline at least 365 days in advance. Without such notice, the agreement will remain in effect until at least December 31, 2028. The County has not yet issued the anticipated RFP.

The EMS Agreement between Rural/Metro and the County of Santa Clara requires a minimum of three Paramedic Field Coordinator vehicles staffed at all times. Should the County release the RFP and the Department choose to respond with a proposal, the feasibility of staffing field supervisors will be considered and may, in fact, be required as part of the proposal to ensure the effective delivery of emergency medical services.

### *Opioid Settlement Outreach Efforts*

The Department was allocated funding to hire a graduate student intern to be engaged in a critical public health initiative to raise awareness among San José residents regarding the dangers of opioid abuse. Strategies include marketing campaigns and an in-person educational campaign, maximizing available resources and focusing on no-cost initiatives to advance objectives while future budgetary needs are identified. These efforts include leveraging existing tools and volunteer efforts to maintain progress while preparing for the implementation of a fully funded strategy. The current initiatives include:

- Overdose emergency flyers that are printed in-house and laminated.
- Event attendance
- Tabling school lunches
- School presentations
- Partnering with charities
- Partnering with the Community Emergency Response Team (CERT) program

Further efforts include strategically placed advertisements, informational videos, banners, flyers, billboards, and targeted social media advertisements to amplify outreach efforts and effectively achieve the campaign's objectives. Each outlet will be analyzed and used to measure the campaign's success.

### *Public Education*

The Department remains committed to enhancing community awareness and understanding of the emergency medical services that are provided through targeted education and engagement initiatives. As part of this effort, the Department has developed a series of paramedic-focused videos, including *Path to Service*, which highlights individuals' journeys in joining the Department, and *Tools Tuesday*, which showcases the essential tools and equipment used by paramedics. Additionally, a series of FAQ videos have been created to clarify the distinctions between EMTs and paramedics, as well as the Department's role in medical emergency responses. To further emphasize the importance of first-aid and CPR, the Department has shared real-life incident stories that highlight the critical work of its crews. Ongoing community engagement efforts also include promoting opioid awareness and education in high schools, as well as developing resources for distribution in encampments. The Department's comprehensive opioid awareness website serves as a key resource, providing FAQs and essential information to support these outreach initiatives.

### *Quality Improvement and System Performance Initiatives*

The Department's Bureau of EMS and Training – EMS Division conducts comprehensive reviews of electronic patient care reports following patient contact. This data serves as a critical tool in identifying trends and gaining deeper insights into the factors contributing to EMS call volume.

Table 3: Major Observation on Patient Primary Impressions

	<b>Department Provider's Primary Patient Impression</b>	<b>FY 18-19</b>	<b>FY 19-20</b>	<b>FY 20-21</b>	<b>FY 21-22</b>	<b>FY 22-23</b>	<b>FY 23-24</b>
1	Traumatic Injury	8,978	8,252	7,701	9,259	9,746	10,541
2	General Weakness	3,545	3,355	3,886	4,387	4,914	5,292
3	Respiratory Distress	3,291	3,476	3,807	4,201	4,651	4,604
4	Abdominal Pain / Problems	2,776	2,743	3,156	3,521	3,978	3,913
5	No Medical Complaint / Findings	3,839	3,648	3,194	3,171	3,463	3,480
6	Behavioral/Psychiatric Crisis / Excited Delirium	2,395	2,282	2,564	2,785	3,064	3,278
7	Altered Level of Consciousness (Not Hypoglycemia or Seizure)	2,082	2,274	2,591	2,617	2,894	2,699
8	Alcohol Intoxication / Overdose	2,436	2,411	2,274	2,488	2,583	1,744
9	Non-Traumatic Body Pain	2,234	2,132	2,315	2,473	3,015	3,200
10	Chest Pain / Dysrhythmia / Hypertension	2,027	1,965	1,861	2,210	2,431	2,237

Through ongoing quality improvement efforts, data-driven analysis, and the development of strategic initiatives, the Department remains committed to addressing evolving challenges, including the growing demand for emergency medical services:

- Geriatric EMS Patients: In 2024, the Department conducted mandatory training for all sworn personnel regarding proper protocol concerning geriatric EMS patients, focusing on how to conduct patient assessments for older adults.
- Trauma Care: In August 2024, the Department conducted mandatory training for all sworn personnel to address trauma-related patient care. The training focused on hip immobilization devices. For trauma patients, the “Golden Hour” is a well-practiced benchmark of advanced EMS systems where the goal is to transport patients with head, thoracic, or abdominal injuries to the operating room within the first hour of sustaining the injury. The Department tracks elapsed time for crews to perform initial extrication and treatment, but the metric for overall “Golden Hour” performance is incomplete due to ambulance data being proprietary and unavailable for interagency sharing.

- Advanced Cardiac Monitors and Defibrillators: In February 2023, the Department submitted and was awarded a proposal for the Assistance to Firefighters Grant<sup>14</sup> through the Federal Emergency Management Agency (FEMA) to replace over half of the current inventory of LifePak 15 cardiac monitor-defibrillators utilized by Firefighter/Paramedics to conduct electrocardiogram analysis. The entire fleet of the LifePak 15s was replaced and is now in service. These devices are critical for ALS providers to determine if a patient is suffering from a potential heart attack. These devices can deliver precise levels of electrical defibrillation for patients in cardiac arrest.
- High-Performance “Pit Crew” CPR: The concept of High Performance or “Pit Crew” CPR encompasses several key concepts, including coordinated communication amongst rescuers, CPR efficiency and choreography, and implementation of mechanical chest compression devices. In March 2022, the Department’s EMS Division and Fire Communications Division sent personnel to attend the “Resuscitation Academy.” The objective of this training was to increase survival from sudden cardiac arrests using public health data, academic medical research, and partnerships with non-government organizations, such as the American Heart Association. Participants were tasked with bringing back valuable knowledge and training to advance the Department’s delivery of cardiopulmonary resuscitation CPR techniques, data collection methods, and analysis in an effort to continuously monitor and improve quality of care. This training remains a foundational component of field treatment protocols for cardiac arrest, contributing to ongoing advancements in clinical outcomes.
- Return of Spontaneous Circulation Data: Return of Spontaneous Circulation (ROSC) is when the heart returns to a rhythm that sustains circulation and perfusion of the body after sudden cardiac arrest. It should be noted that ROSC does not definitively result in survival; it is simply the first of many steps that must be taken to ensure that the patient survives and is neurologically intact. The Department monitors ROSC performance, which is displayed in Table 4.

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<sup>14</sup> <https://www.fema.gov/grants/preparedness/firefighters>

Table 4: Return of Spontaneous Circulation Rates

	<b>FY 19-20</b>	<b>FY 20-21</b>	<b>FY 21-22</b>	<b>FY 22-23</b>	<b>FY 23-24</b>
<b>Cardiac Arrest – Non-Traumatic</b>	771	968	927	990	933
<b>Cardiac Arrest - Traumatic</b>	45	73	67	65	70
<b>TOTAL CARDIAC ARREST</b>	816	1,041	994	1,055	1,003
<b>Return of Spontaneous Circulation (ROSC)</b>	201	250	234	107	166
<b>ROSC Rate</b>	25%	24%	24%	10.4%	16.5%

- AED Usage Prior to EMS Arrival: As stated previously in this memorandum, providing rapid defibrillation for a sudden cardiac arrest patient dramatically increases the probability of survival. The Department tracks the number of occurrences where an AED was utilized for a sudden cardiac arrest patient prior to the arrival of first responders, as shown in Table 5, and continues to increase AED availability throughout the community by managing the City PAD program. With the current stock of AEDs approaching the end of its operational lifespan, the Department is actively exploring potential funding opportunities to facilitate the replacement of all 246 units.

Table 5: AED Utilization on Sudden Cardiac Arrest Patients Prior to EMS Arrival

	<b>FY 19-20</b>	<b>FY 20-21</b>	<b>FY 21-22</b>	<b>FY 22-23</b>	<b>FY 23-24</b>
<b>AED Utilized Prior to Arrival</b>	8	9	10	5	9

- Administration of Naloxone: All Department first responders, both EMT and Paramedics, are trained in administering Naloxone (brand name Narcan) to reverse the effects of opioids in suspected overdose scenarios. EMTs can administer the medicine via intranasal spray, and Paramedics are trained to administer the medicine via intravenous therapy. Examples of opioids involved in overdose are heroin, fentanyl, oxycodone, hydrocodone, and morphine. The Department tracks Naloxone administration for overdose patients, shown in Table 6.

Table 6: Administration of Naloxone

	<b>FY 19-20</b>	<b>FY 20-21</b>	<b>FY 21-22</b>	<b>FY 22-23</b>	<b>FY 23-24</b>
<b>Naloxone Usage</b>	194	267	266	380	461



### *1996 EMS Agenda for the Future*

In 2014, the National EMS Advisory Council recommended an update to the *1996 EMS Agenda for the Future*<sup>15</sup> to pave the way for the industry's continued evolution. Throughout the last several years leading up to 2019, EMS professionals, stakeholders, and members of the public shared ideas through regional meetings, webinars, conference sessions, and public comment. The result is *EMS Agenda 2050*, a new vision for the future that provides a framework for the next thirty years of EMS system advancement.

Improvements in financial incentives now focus stakeholder awareness on the value of EMS in providing either "patient navigation" throughout the healthcare system, efficiently and effectively directing each patient to the right care in the right setting at the right time, or patient advocacy (mental health, social services) for underserved portions of the community.

The healthcare finance reforms now being enacted are creating an environment more conducive to implementing the EMS Agenda 2050. Specifically, the reforms are shifting focus to care provided to entire communities rather than individuals and to proactive rather than reactive care. They are also addressing the need to evaluate the ability for agencies to have cost recovery that is not solely based on transport fees.

The Department, much like other fire and EMS agencies, is positioned to participate in innovative service delivery models to help meet the goals of the EMS Agenda 2050, by transforming from a transportation system focused on stabilizing and transporting patients to a mobile healthcare system-focused delivery model. This transformation will enhance the value of EMS to healthcare system stakeholders and help fully realize the vision of the EMS Agenda 2050.

### *Conclusion*

The Department plays a critical role in the County's EMS system. In Fiscal Year 2023-2024 the Department responded to 68,410 EMS responses, almost 50% of the County ambulance provider's 137,120 responses county-wide. Increasing call volume, continued elevated use of Rescue Medic transports, and marked increases in paramedic escorts have added burden to Department resources. The current EMS ambulance model does not result in effective operational coordination between Rural/Metro managers and the Department. County EMSA holds regulatory responsibilities and operational control of EMS. This means that the first responder agencies and the ambulance provider have little opportunity to coordinate effective resource deployment. This arrangement is particularly limiting as the ambulance provider struggles to deploy sufficient ALS ambulances.

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<sup>15</sup> <https://rosap.ntl.bts.gov/view/dot/13747>

Current system revenues are not structured to fully sustain the Department's ongoing commitment to the EMS system. To address this, the Department is actively engaged in negotiations with a third-party vendor to enhance billing processes for EMS transports.

Should the County release its Request for Proposal (RFP) for 9-1-1 ambulance services, the Department will evaluate its options for improved cost recovery and operational integration<sup>17</sup>. The Department continues to work within a targeted strategic planning process to ensure that it is positioned to respond to any announcement of an RFP or EMS system changes. The Department seeks a path to providing adequate and sustainable EMS resource levels throughout the County that are operationally integrated with fire agencies and that do not compromise fire agency response to other emergencies.

## **COORDINATION**

This memorandum has been coordinated with the City Attorney's Office and the City Manager's Budget Office.

A handwritten signature in black ink, appearing to read "Robert Sapien, Jr.", with a stylized flourish at the end.

ROBERT SAPIEN, JR.  
Fire Chief, Fire Department

For questions, please contact Robert Sapien, Jr., Fire Chief, at [robert.sapien@sanjoseca.gov](mailto:robert.sapien@sanjoseca.gov) or (408) 794-6952.

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<sup>17</sup> <https://sanjose.legistar.com/View.ashx?M=F&ID=12366820&GUID=CF5EDE39-4F02-44B0-88DC-14F5272E9DCE>