




Northgate Project Impact

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Emergency Services Consulting International

Providing Expertise and Guidance that Enhances Community Safety



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Executive Summary

In conjunction with the staffing and resource deployment study requested by San Rafael Fire Department (SRFD), ESCI also evaluated the potential impact of a development project in process referred to as the Northgate Project. This evaluation was to provide SRFD leadership with information to be considered during discussions centered around this construction project. Of particular concern to city leadership was the potential offset requirements and impacts this project could have on fire rescue services. Considerations focused solely on the delivery of fire rescue services and did not evaluate any other factors of impact, such as traffic, utilities, etc.

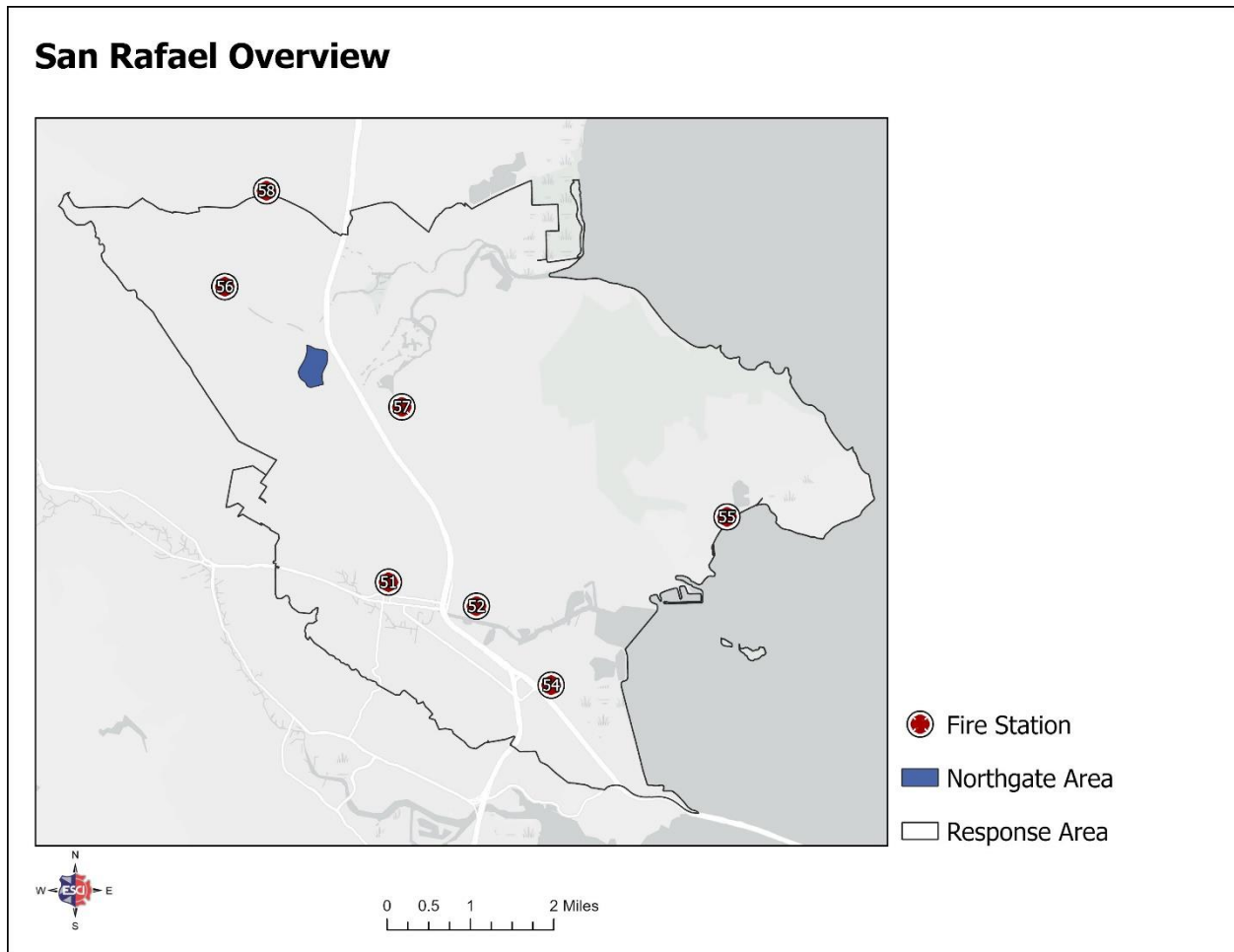
The Northgate Project is situated within the primary response zone for SRFD Station 56, which is staffed with three personnel on a daily basis. To predict the potential impact of the project, ESCI evaluated the current workload for Station 56 and current responses to the existing occupancies on the property slated for development. With a current average incident response of 89 incidents, it is projected that there will be an increase of 409–619 additional incidents annually. With a current workload of 6.4% (time committed to incidents, with a benchmark of 25% or less), it is projected that there would be an increase of 2–3% in workload.

Both of these estimates do indicate that there will be an impact on service delivery. However, the impact, though felt, appears not to reach a significant level. SRFD leadership and elected officials should consider this impact as they determine the need for any offsets required from the developer.

Background

The City of San Rafael contracted Emergency Services Consulting International to conduct a staffing and resource deployment study. While the full project is still in process, San Rafael Fire Department (SRFD) leadership requested assistance in projecting the impact of a proposed development within the Northgate area of the community, which is illustrated in the following figure.

Figure 1. SRFD Service Area





Northgate Town Square Project Description

The developer is currently working through approval processes with the City of San Rafael on this project. The proposed Northgate Town Square project, the first of its size in nearly 30 years, would replace the current commercial shopping mall with the following occupancies:

- Residential units – 1,000–1,422 (including affordable housing units)
- Commercial units – 250,000 ft²
- Buildings of 2–7 stories in height

The primary response station to this area is Station 56 with daily staffing of three firefighters each day. These personnel are cross-staff to both Engine 56 and Medic 56 when responding to incidents. During the five-year study period, SRFD units responded to the existing Northgate occupancies a total of 447 times (an average of 89.4 responses per year), as illustrated in the following figure.

Figure 2. SRFD Responses to Northgate, 2019–2023

| 2019 | 2020 | 2021 | 2022 | 2023 | Total | Average |
|------|------|------|------|------|-------|---------|
| 124 | 56 | 91 | 82 | 94 | 447 | 89.4 |

Station 56 units were assigned to incidents throughout the service area, and not just Northgate, for 558 hours within calendar year 2023, achieving a workload percentage of 6.4%. While there are no specific industry standards to which this may be compared, best practice indicates that units should have a workload of less than 25% in order to maintain the reliability of service within the community. The combined workload of the units at Station 56 is well below that level.



Impact Considerations on Service Delivery

The impact of the project will vary but may be considered based on the projected incident volume. Incident volume is extrapolated from the current number of incidents per 1,000 people within the City of San Rafael (0.20 incidents/1,000 people). This also is based on the current community demographic of 2.54 people per household. The adjusted incidents value is the projected incidents minus the average number of current incidents, as illustrated in the following figure.

Figure 3. SRFD Annual Projected Service Demand to Northgate

| Range | Households | People | Projected Increased Incidents |
|-------|------------|--------|-------------------------------|
| Low | 1,000 | 2,540 | 409 |
| Hi | 1,422 | 3,612 | 619 |

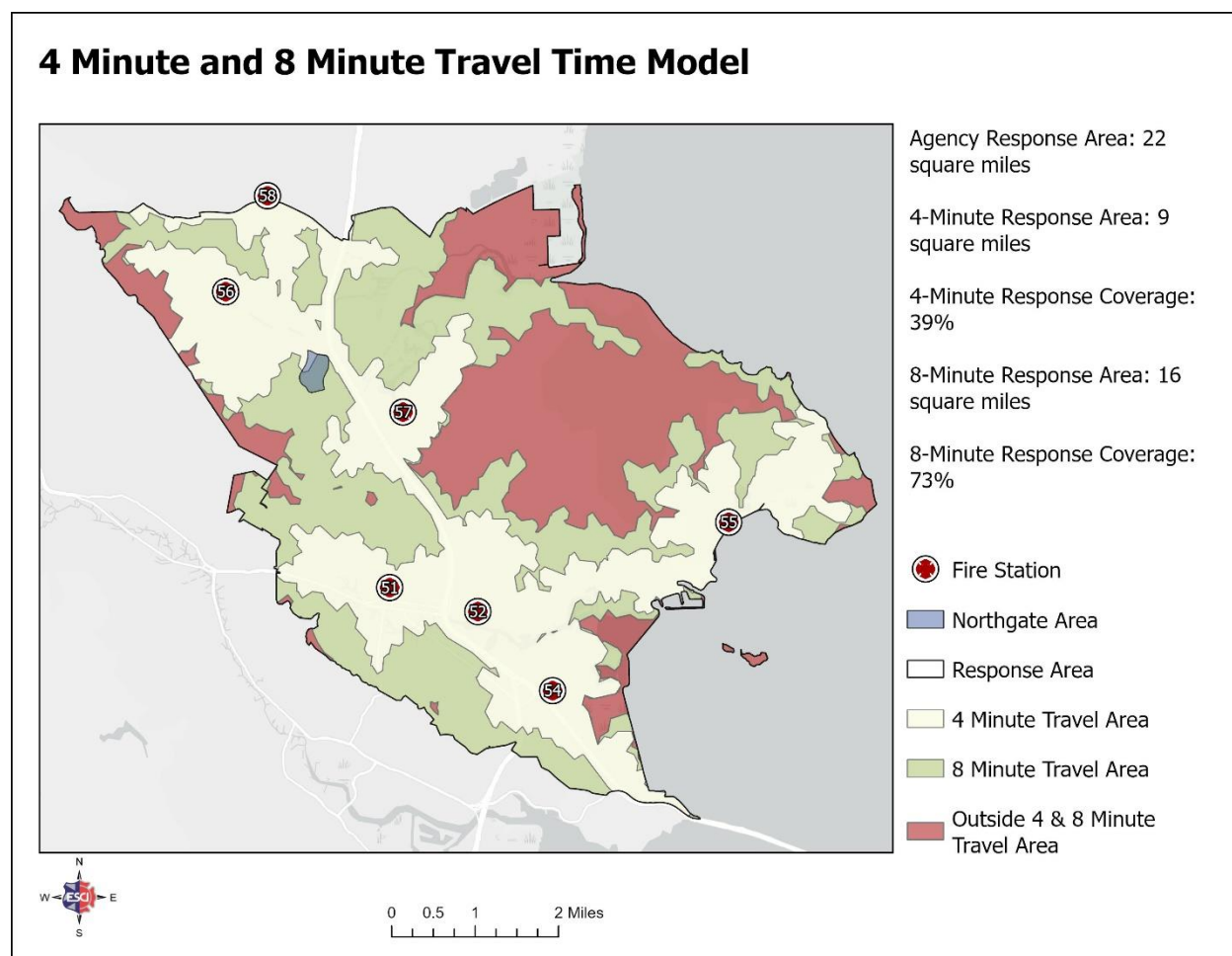
Combining the existing data for calendar year 2023 with the projected data (with a factor of 30 minutes per incident for projected demand), the following figure illustrates the projected workload for Station 56. While the higher projection is 2-3% greater than the current workload, it is still below the 25% benchmark.

Figure 4. SRFD Annual Projected Workload for Station 56

| Households | Incidents | Hours | Workload |
|------------|-----------|-------|----------|
| 1,000 | 2,371 | 762.7 | 8.7% |
| 1,422 | 2,581 | 867.7 | 9.9% |

During the five-year study period, the travel time for the first unit to arrive was 5 minutes, 51 seconds. This is slightly greater than the 4 minutes or less recommended by a standard issued by the National Fire Protection Association, NFPA 1710: *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*. The following figure illustrates that the majority of the Northgate property is just outside of the 4-minute travel from the closest stations.

Figure 5. SRFD 4/8-Minute Travel Time Model per NFPA 1710 Criteria

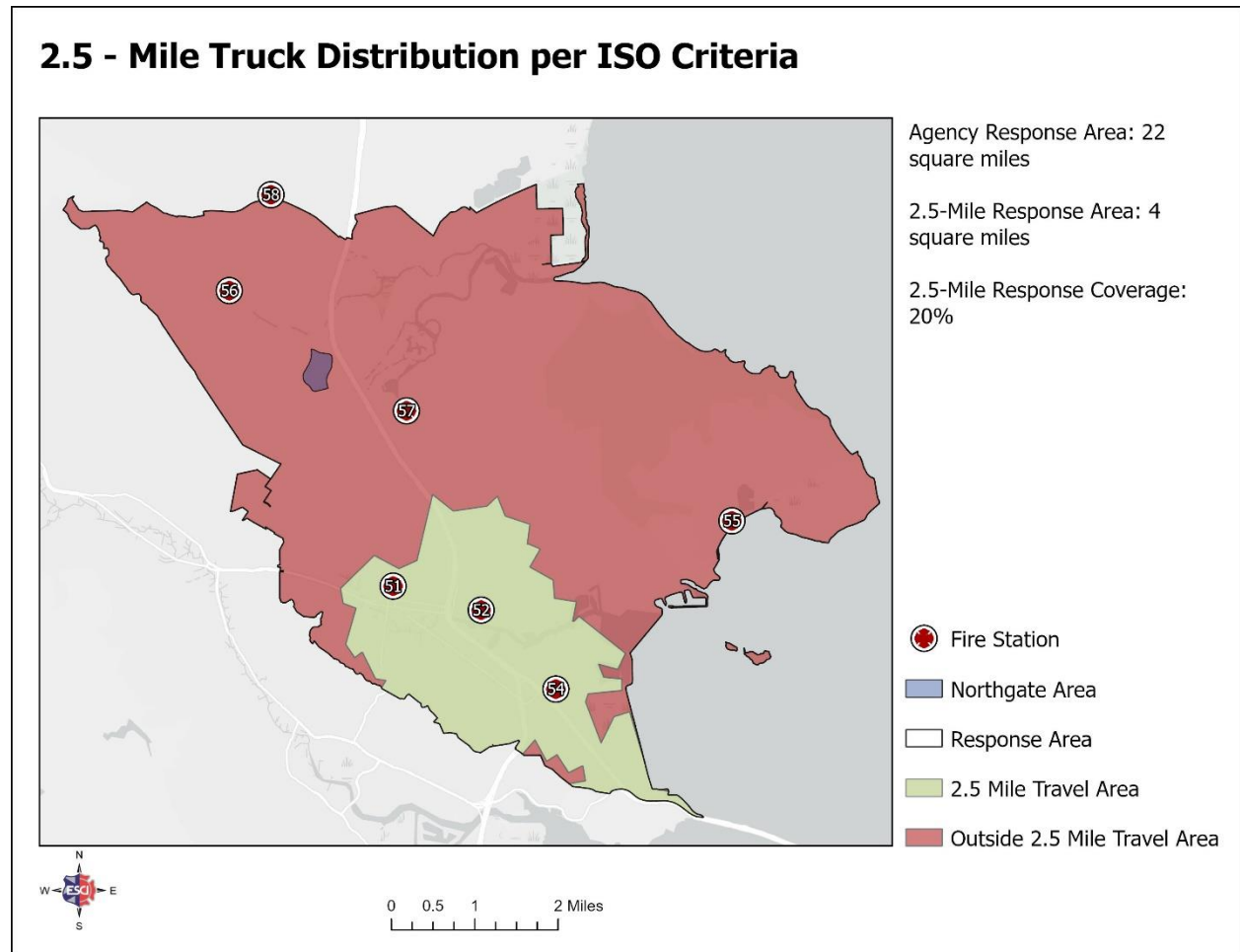


Additional consideration has been paid to the ability other apparatus to respond as well. A timely response of an aerial apparatus to the multi-story buildings within the proposed project was examined. The use of aerial apparatus is more specifically needed in areas of the community where there are five or more buildings of three stories (or 32-feet) or more in height, five or more buildings requiring a needed fire flow of greater than 3,500 gallons per minute, or five or more buildings meetings any



combination of these requirements. Industry standards for the evaluation of aerial apparatus placement consider the amount of the service area within a 2.5-mile travel distance of the aerial apparatus. As illustrated in the following figure, while 20% of the SRFD service area meets this benchmark, the entire Northgate property is well outside of that distance.

Figure 6. SRFD 2.5-Mile Aerial Distribution





Conclusion

The analysis of the Northgate Project's impact on the San Rafael Fire Department (SRFD) services highlights several key considerations regarding response times and the deployment of critical apparatus. The study period revealed that the average travel time for the first unit to arrive was 5 minutes and 51 seconds, exceeding the NFPA 1710 standard of 4 minutes or less. This finding indicates that a significant portion of the Northgate property falls outside the ideal response time radius from the nearest fire stations.

The evaluation also extended to the timely deployment of aerial apparatus, which is essential in areas with multi-story buildings and high fire flow requirements. The study demonstrated that while 20% of the SRFD service area meets the industry benchmark of a 2.5-mile travel distance for aerial apparatus, the Northgate property is notably beyond this range. This suggests a potential gap in coverage for high-rise and high-demand structures within the project area.

Despite these challenges, the projected impacts on service delivery do not appear to be critically significant. However, it is imperative for SRFD leadership and elected officials to consider these findings when negotiating potential developer offsets and exploring additional mitigation strategies. Recommendations include the strategic placement of new fire stations, upgrading current infrastructure, and continuous collaboration with urban planners and developers to enhance response times and service efficiency.

Moreover, ongoing monitoring and assessment of service delivery metrics will be crucial. Adapting strategies based on real-time data will ensure that SRFD can meet the evolving needs of the community, maintaining a resilient and responsive emergency service framework. Proactive measures in planning, resource allocation, and infrastructure development will be essential to safeguard public safety and optimize fire suppression operations within the Northgate Project area and beyond.

In summary, while the Northgate Project poses some risks to current service delivery standards, with thoughtful planning and strategic investments, these challenges can be effectively managed, ensuring continued protection and safety for the community.