

Goodyear Fire Department

Fire Station Study



KEY BENEFITS

- Projections of future incident demand, taking account of expected increases to population and demographic changes.
- Modeling optimal locations, in both the current urban area and development zones, to improve response times in the future.
- Phased plan approved by City Council.



Planning future locations in a city with a rapidly increasing population

KEY FACTS

Population: 80,000

Area Covered: 191 sq mi

Fire Stations: 6

Annual Incidents: 7,500

Budget: \$16,000,000

ABOUT GFD

The City of Goodyear is located 20 miles west of Phoenix in the Southwest Valley. Goodyear's population has grown dramatically since 1990 (6,250 to 80,000) and is projected to more than double over the next two decades. GFD is responsible for providing fire suppression and emergency medical response across Goodyear.

THE CHALLENGE

Growth within Goodyear will involve both in-fill and development of new areas of the City. This presents a challenge to GFD – how best to ensure swift response to fire and EMS incidents given increased

incident demand across a greater geographic area. GFD commissioned ORH to project demand to 2035 and determine the optimal locations for stations.

ORH'S APPROACH

ORH analyzed the current incident profile, response performance, vehicle utilisation and travel times. The results of this analysis were used to build a model of GFD's behavior in responding to incidents.

Future demand calculations took account of increasing population, an ageing population and an increase in the likelihood of an individual requiring EMS assistance. Additionally, ORH developed a future road network to allow for modeling of currently undeveloped areas.

ORH identified optimal sites in different parts of the City, with heat maps to highlight alternative locations. Simulation modeling quantified the response time and utilization impacts of potential changes.

RESULTS

ORH's recommended solution involved the construction of three new stations, the closure of one existing station, and the addition of two engine companies. Given the construction and recruitment challenges, ORH created a ten-year phased plan for GFD based on the modeled impacts of each change. The finalized plan, as approved by Council, will significantly improve response times across Goodyear.



ORH's fire station study will help to ensure that the short- and long-term needs of the City are met through responsible planning

Paul Luizzi, Fire Chief,
Goodyear Fire Department



Emergency
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Case Study

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About ORH

PLAN. PREPARE. PERFORM.

ORH helps emergency services around the world to optimize resource use and respond in the most effective and efficient way.



We have set the benchmark for emergency service planning, with a proven approach combining rigorous scientific analysis with experienced, insightful consultancy. Our expert team uses sophisticated modeling techniques to identify opportunities for improvement and uncover hidden capacity. Simulating future scenarios ensures that solutions are objective, evidence-based and quantified.

Every organization faces a unique set of challenges, so remaining independent and flexible allows us to deliver an appropriate solution every time. The outputs of our work enable clients to make robust, data-driven decisions and explain them clearly to stakeholders.

ORH's approach is always tailored to the needs of the client. Above all, we are committed to getting it right, for the good of our clients and the people who rely on their services.

ORH HAS WORKED WITH CAREER AND VOLUNTEER FIRE DEPARTMENTS TO HELP:

- Optimize station locations, both now and in the future
- Assess standards of cover in line with NFPA 1710
- Project future demand and the effects on utilization
- Support decision making in dispatch centers
- Quantify the impacts of providing EMS transportation
- Evaluate the potential for Low Acuity Vehicles



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