AMARILLO FIRE DEPARTMENT

Community Risk Assessment- Standards Of Cover

Facilitated by

CPSE Center for Public Safety Excellence

Amarillo Fire Department

Community Risk Assessment – Standards of Cover

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Introduction

The Center for Public Safety Excellence (CPSE) accreditation model serves as a process to guide fire departments that are seeking organizational excellence. This *Community Risk Assessment/Standard of Cover* (CRA/SOC) reports specific risks that impact the citizens of Amarillo and defines how the department effectively and efficiently deploys resources to meet and mitigate those risks. The primary elements of this document, as defined by CPSE guidelines, are:

Community Risk Assessment: The evaluation of a community's fire and non-fire hazards and threats, taking into account all pertinent facts that increase or decrease risk in order to define standards of cover.

Standards of Cover: Those written policies and procedures that establish the distribution and concentration of fixed and mobile resources of an organization.

This document meets the requirements of CPSE's *Community Risk Assessment: Standards of Cover* (6th Edition). Two companion documents are also produced in the accreditation process: 1) a 5-year strategic plan, and 2) a self-assessment manual that identifies service gaps and identifies plans to address them. These documents will serve as the playbook to guide the Amarillo Fire Department over the next five years. At the end of that time, the reaccreditation process begins, which truly creates a continuous examination and improvement methodology to ensure the department will continue to meet its mission.

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Executive Summary

In November 2016, the Amarillo Fire Department embraced a commitment to achieve national accreditation through the Center for Public Safety Excellence (CPSE), which is the nationally-recognized organization that has accredited over 240 fire departments, both in the United States and across the globe. This commitment was made in response to the Amarillo City Council's and City Manager's *BluePrint for Amarillo*, which encourages each department to determine and implement best practices within their respective field of service. The administrative staff readily began the nearly two-year process with the understanding that an in-depth self-analysis of the department's service delivery programs, resources, policies, and procedures would either validate current systems or identify opportunities for improvement. Of equal importance is that the guided process includes CPSE's third-party confirmation that the department's operations meet fire service best practices.

To develop this *Community Risk Assessment/Standard of Cover*, the department reviewed the six emergency service delivery programs provided to the citizens of Amarillo: 1) Fire Suppression, 2) Emergency Medical Services, 3) Technical Rescue, 4) Hazardous Materials, 5) Aircraft Rescue and Firefighting, and 6) Wildland Firefighting Services. Supporting programs were also evaluated; these included: 1) Health and Safety, 2) Training, 3) Logistics, 4) Communications, 5) Fire Marshal's Office, and 6) Administrative Support.

The comprehensive self-assessment confirmed much of the department's resource and deployment strategies are credible, reliable, and effective in meeting the specific risks and hazards that confront the citizens of Amarillo. The foundation of this determination is the analysis of the department's emergency response times and data for the years 2014-2016, which are reported in detail in this document. An exceptionally noticeable improvement highlighted through the accreditation process was the greatly reduced call handling times by the Amarillo Emergency Communication Center (AECC) since 2016, when the Amarillo Fire Department and Amarillo Police Department were given oversight of the communications center. Another improvement found was the significantly reduced times for the period between firefighters receiving notification of an emergency and the point when the responding apparatus left the station.

The ultimate purpose of this document is to define and measure the level of service that should be provided to the public, based on community risk factors, operational strategies, historical performance, federal and state mandates, and national standards. The conclusions and recommendations that have been derived from the accreditation process provide support to the department's philosophy of continuous improvement and to meet the Amarillo Fire Department's Mission to *protect our community by providing the highest quality of compassionate and professional services*.

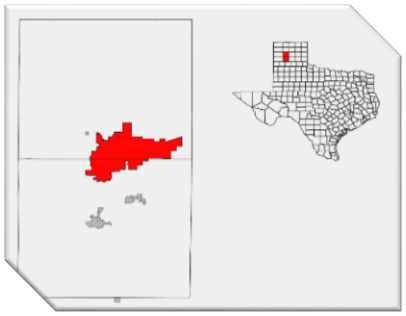
A. Description of Community Served

Community and Department Legal Basis

In 1913, twenty-six years after being incorporated as a city, the citizens of Amarillo voted in favor of establishing their own home rule charter. In doing so, Amarillo became the first city in the southwest, and only the fifth in the country, to adopt the Commission-Manager form of government. The council is made up of five positions, the mayor and four council members, which are elected, at-large, to two-year terms. The City Manager is appointed by the council as the administrative head of city government.

The Amarillo Fire Department (AFD) is established by the city charter, which states the city shall have the power "to provide for establishing and maintaining the fire department of the city." The fire chief is appointed by the city manager with the advice and consent of the Council.

History of the Community



Known as the helium capital of the world, Amarillo is the largest city in the Texas Panhandle. The original settlement, originally named Oneida, was established in 1887 during the Fort Worth – Denver City railroad construction across the Texas Panhandle, but it was later renamed Amarillo, the Spanish word for yellow. It is believed this originated from the yellow wildflowers that grow in abundance during the spring and summer. That summer Amarillo became the elected county seat in the established Potter County. The following summer Henry Sanborn, the "Father of Amarillo," and his business partner, Mr. Joseph Glidden, started buying land east of the city, encouraging business owners to move their establishments to avoid potential flooding of the populated low-lying areas. Over the next six years more and more residents moved to this new development, which lead to another county seat election for Amarillo and Potter County.

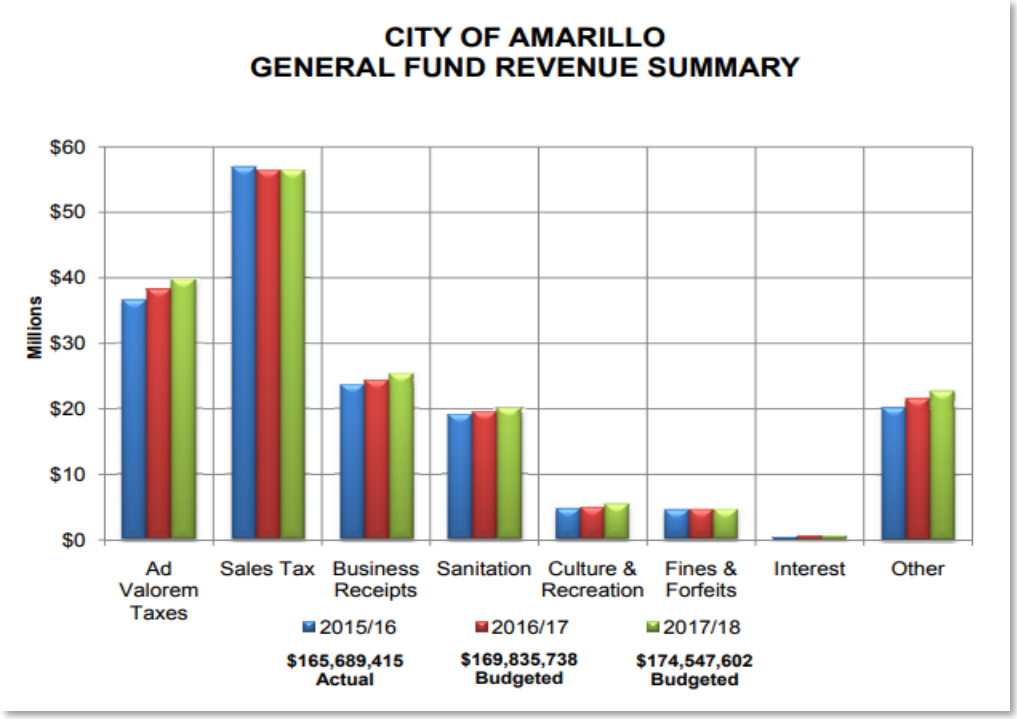
By the late 1890s, Amarillo had developed as one of the world's busiest cattle-shipping points, with a significant increase in residents. In 1893 Amarillo's population was listed as "between 500-600 humans and 50,000 head of cattle." After World War I, the industrial evolution of the area was emerging with the discovery of gas two miles north of Amarillo in the Hapgood well. This has grown to be the world's second largest gas field with pipelines delivering Panhandle gas as far away as the Atlantic seaboard, creating the world's largest natural gas development. In 1928 the discovery of the Cliffside gas field, with its high helium content, led to the establishment of the United States Helium Plant by the Federal Bureau of Mines, including the creation the U.S. National Helium Reserve at the Bush Dome Reservoir.

Community Financial Basis

The AFD is funded through the City of Amarillo's General Fund, which is supported through eight revenue sources. The two largest revenue streams are the sales tax (32%) and property taxes (23%) (See Figure 1).

The General Fund totals $175.0 million in the FY17 Budget. The public safety divisions' share of the fund is $85.7 million, by far its largest expenditure. The AFD's FY17 budget is $31.7 million, which is 37.0% of the funds allocated to public safety. The other five departments that make up public safety are the Police Department, Municipal Court, the Emergency Communications Center, Office of Emergency Management, and Animal Management and Welfare.

Figure 1 General Fund Revenue Summary, FY15-FY17



The City of Amarillo (COA) administration receives fiscal direction and planning from the City Council. The Finance Department is responsible for carrying out that direction through budgeting policies and processes. Annually, each city department develops a one-year, program-based operating budget and a five-year capital projects budget. Beginning in 2016, each division's capital expenditures are coordinated through the newly created Department of Capital Projects and Development Engineering to ensure more effective and efficient citywide planning.

In addition to analyzing prior year expenditures, the fire chief and deputy chiefs solicit input from the department's senior staff officers and program managers to set budget priorities based on the needs of the department to carry out its mission. Beginning in the FY17 budget cycle, the AFD will

now include the direction defined in the community-driven strategic planning process implemented in early 2017. These priorities and direction determine how available funds are reallocated and which new budget requests are developed. Once the department's budget has been developed, the chief and senior staff work with city administrators and the Finance Department to create the final budget that is presented to the City Council for approval and adoption.

Community Critical Infrastructure

The COA's critical infrastructure is comprised of components that are both typical and atypical for an isolated metropolitan community. Typical infrastructure sectors include transportation, energy, water supply and wastewater treatment, communications, and healthcare systems. Atypical sectors of the Amarillo area's critical infrastructure include a nuclear weapons facility and a cattle industry that has a nation-wide influence.

Transportation Systems Sector

Amarillo has six of the seven subsectors that the Department of Homeland Security (DHS) identifies as elements of the Transportation Systems Sector: Aviation, Highway and Motor Carrier, Mass Transit, Freight Rail, Pipelines, and Postal and Shipping. The one element the city does not have is a Maritime Transportation System.

Aviation:

The Aviation subsector includes aircraft, air traffic controls systems, and airports. Amarillo has within its limits an international airport and a privately-owned airport.

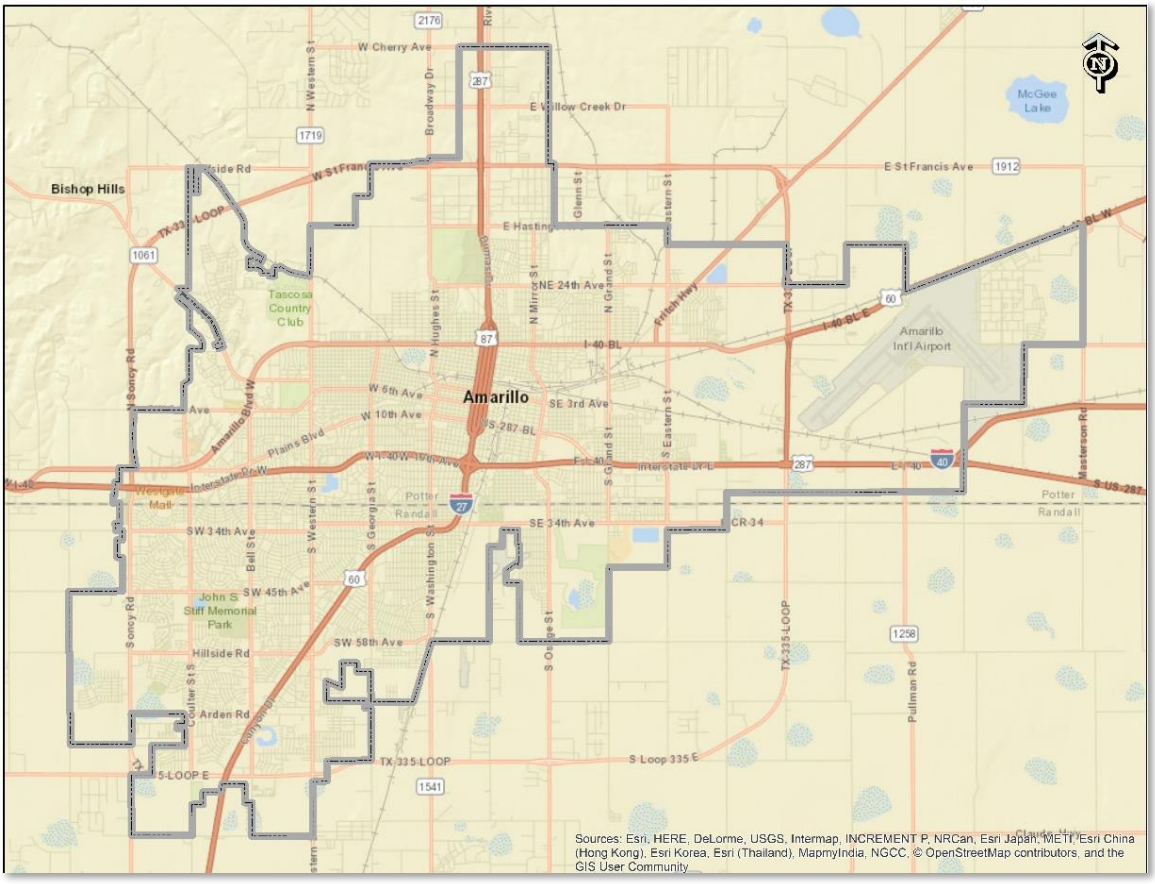
- *Rick Husband Amarillo International Airport (AMA)*: The airport is named after astronaut and city native, Rick Husband, who lost his life when the Space Shuttle *Columbia* disintegrated as it reentered the Earth's atmosphere. It is located on the eastern edge of the city just north of Interstate-40.
    - The airport manages 5,200 flights each month. Almost 50% of the air traffic is military training flights that take advantage of the long runways, which are 13,502-feet and 7,901-feet in length.
    - The remaining 50% of the air traffic is general aviation (35%), air taxi (13%) and commercial air carriers (12%). Three passenger carriers, American Airlines, Southwest Airlines, and United Express operate out of the airport.
    - Bell Helicopter has a major facility on the airport for the assembly and testing of tilt-rotor aircraft and several types of military and civilian helicopters.
- *Tradewind Airport (TDW):* The privately-owned airport is located on the southeast edge of the city limits. It is non-controlled and primarily used by small, private aircraft. Tradewind averages 121 flights a day, 99.9% of which are general aviation. In addition to a helipad, the airport has a 5,098-feet and a 3,000-feet runway.

Highway and Motor Carrier:

Three major highways intersect in Amarillo. Interstate 40 connects the east and the west coasts, from North Carolina to California. Interstate 27 runs south to Lubbock. There it ties into the state highway system leading to El Paso, San Antonio, and Austin. State Highway 287 leads south and connects Amarillo to the Dallas-Fort Worth metroplex, and, beyond that, Houston and Galveston on the Gulf Coast.

The road system within Amarillo totals 1,023 miles of streets, and another 496 miles of alleyways. Ninety-two percent of the streets are paved, but only forty-four percent of the alleys are. In Amarillo, most streets are laid out in a north/south and east/west orientation. The roads that run north and south are *streets*, and those running east and west are *avenues.* There are 6,218 intersections within the city limits. The city has both highway and railway overpasses and underpasses located throughout, but there are not any bridges that lead to isolated areas. Texas State Loop 335, which is the designated hazardous materials cargo route, encircles the city. Most of the loop in located in rural areas; however, on the west side of the city it is on Soncy Road, which is a major north/south roadway.

Figure 2 Amarillo's Major Roadways



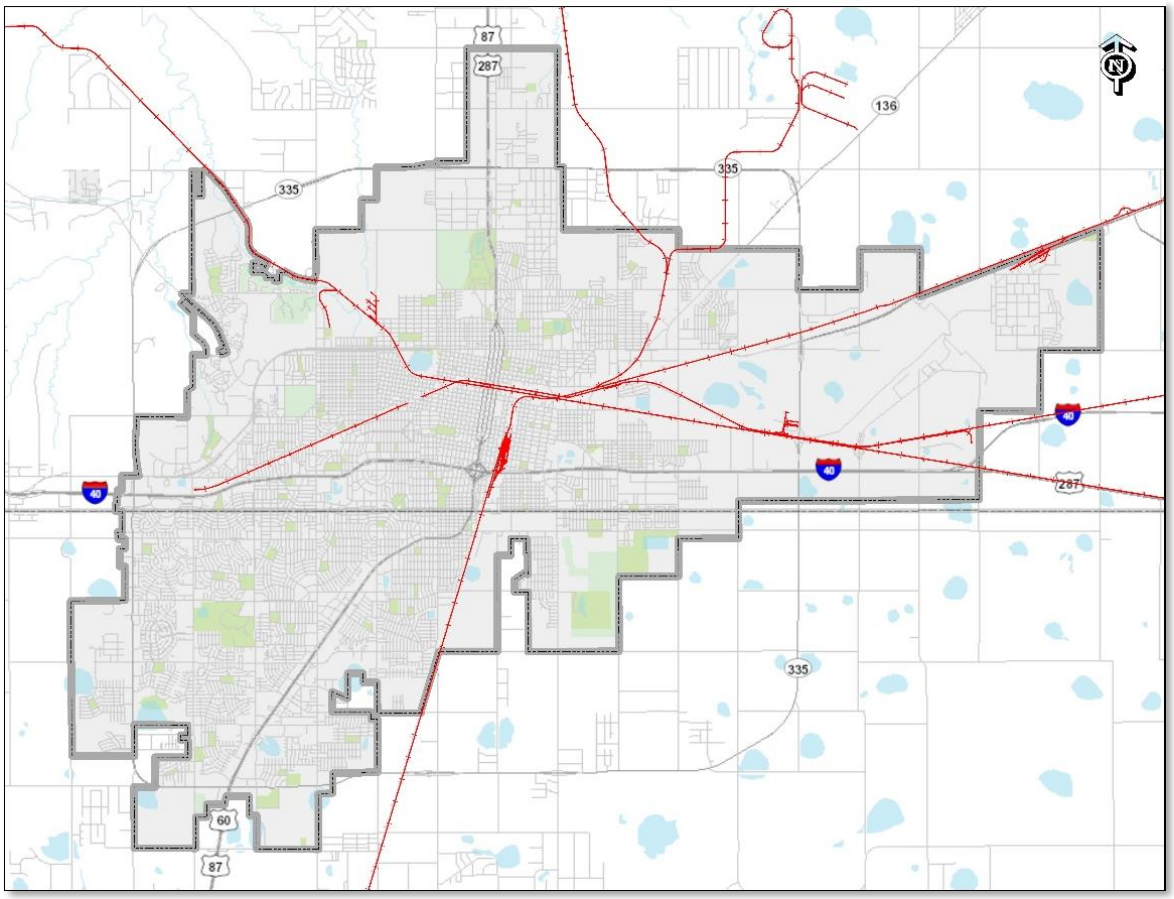
Mass Transit:

Amarillo does not have many of the mass transit systems that can be found in other metropolitan areas, such a passenger rail, subways, or rideshare programs. The only available public transportation is a bus system, which has been operated by the City of Amarillo's Transit Department since 1966. Currently, eight fixed bus routes are distributed geographically across the city. The COA also provides demand response services known as Spec-Trans to disabled individuals who are unable to utilize the fixed route system.

Freight Rail:

Burlington Northern and Santa Fe Railway (BNSF) is the only Class I railroad servicing Amarillo. Between 60 and 120 trains travel through Amarillo daily on five separate rail lines. The company operates two railyards in the downtown area, which contain between 800-1,300 railcars at any given time. A wide variety of goods, such as agricultural products, automobiles, coal, and building materials are transported through the city. In addition, the trains carry hazardous materials, including an average of 75 inhalation-hazard railcars each week.

Figure 3 Railways in Amarillo



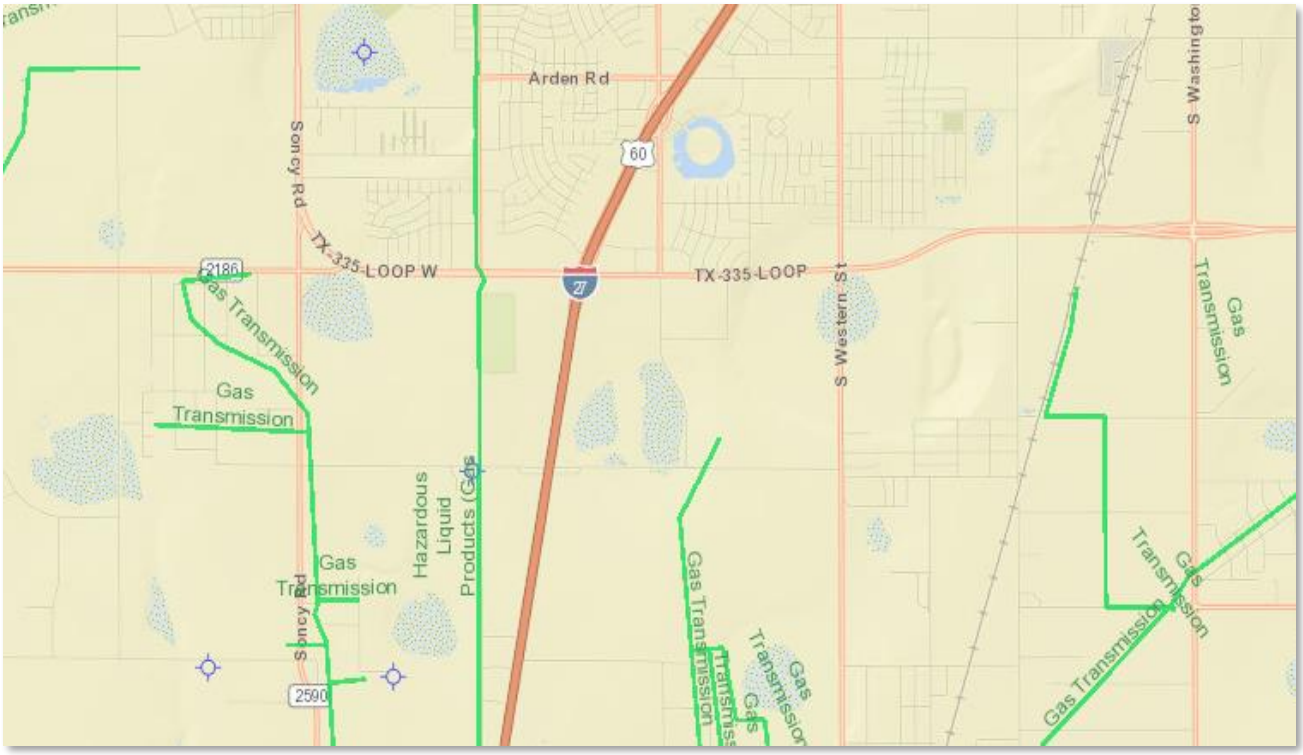
Pipelines:

The production of oil and natural gas from two major geologic formations, the Panhandle Field and the Granite Wash, created the need for an extensive transmission and distribution pipeline system in the Texas Panhandle. These pipelines transport materials as diverse as petroleum crude oil, gasoline, natural gas and ethane-propane mixtures at pressures ranging from 200-psi to 1,400-psi.

Amarillo has several of these high-pressure pipelines within the city limits. Two liquid petroleum lines transect the city, one of which runs directly under the parking area of Westgate Mall, the largest shopping mall in Amarillo. Two major gas transmission lines pass through the city near Rick Husband Amarillo International Airport.

Within the Extraterritorial Jurisdiction (ETJ), the number of oil and gas pipelines is staggering. A petroleum refinery and storage facility, just north of the city, alone is a gathering point for five hazardous liquid pipelines. There are also more than a dozen gas transmission lines, which flow up to 100,000-thousand cubic feet (100,000-Mcf) at pressures that can reach 1,000-psi that surround Amarillo on every side. Figure 4 details the pipelines that are located in the ETJ on the southwest corner of Amarillo.

Figure 4 Southwest Amarillo Pipelines



Postal and Shipping:

The United States Post Office (USPS) operates a relatively small postal processing and distribution center in south central Amarillo. The 24 hour a day/7days a week operation processes 500,000 letters and 35,000 parcels each day. The center routes mail to local post offices in the region, which, in addition to the Texas Panhandle, includes parts of Oklahoma and Kansas. The center also ships mail via semi-tractor to and from major distribution centers in Albuquerque, Denver, Oklahoma City, Dallas and Fort Worth.

There are two other parcel delivery services that have a significant presence in Amarillo. United Parcel Service (UPS) delivers 13,000-15,000 packages per day in Amarillo and to the western half of the Texas Panhandle. FedEx is the other delivery service, which operates three divisions in the city: FedEx Ground, FedEx Express, and FedEx Freight. Each day, FedEx Ground and FedEx Express deliver 7,500 packages and 4,100 packages, respectfully, in the Amarillo area. FedEx Freight makes approximately 200 shipments a day of palletized materials to local addresses.

Energy Sector

The Department of Homeland Security identifies the energy sector as "uniquely critical because it provides an enabling function across all critical infrastructure sectors." Amarillo has each of the three interrelated energy subsectors identified by the DHS:

- *Electricity*: Xcel Energy is the area's provider of electricity. Xcel Energy annually provides almost 2 billion kilowatts of electricity to 106,482 accounts in Amarillo. The private sector company operates a 1,000-megawatt coal-fired generating station and a 457-megawatt natural gas fired generating station within Amarillo's five-mile Extraterritorial Jurisdiction (ETJ).
- *Natural Gas*: Atmos Energy, a private sector company, is the area's supplier of natural gas. The city is in the Atmos Energy West Texas division, which has 305,814 customers, 7,834 miles of pipe, and an economic impact of $140 million dollars.
- *Oil*: As the only metropolitan city in the Texas Panhandle, Amarillo is a hub for oil and natural gas exploration and production industry in the region.

Water and Wastewater Systems Sector

Safe drinking water and properly treated wastewater are vital to public health. The water system is also critical to public safety as it provides a water supply for firefighting operations. The COA manages and operates both systems for its citizens.

- *Water System*: The city is a consortium member in the Canadian River Municipal Water Authority (CRMWA) and provides water distribution services for Amarillo. Water is supplied through a combination of well water from the vast Ogallala Aquifer and surface water from the Lake Meredith Reservoir. The system provides an average of 43 million

gallons of potable water each day. Peak demand in the summer can reach 75 million gallons per day.

- *Wastewater System*: The city maintains two treatment plants that manage 20 million gallons of wastewater daily. As an example of the interrelationships between critical infrastructures, both treatment plants sell water to Xcel Energy for use as a cooling agent at the two local power generating stations.

Communications Sector and Information Technology Sector

Like the energy sector, the communications sector provides an enabling function that spans the spectrum of critical infrastructure systems. The sector is comprised of interconnected land, wireless and satellite providers that manage the physical facilities, deliver communication transmissions, and aid in the monitoring and controlling of other infrastructure systems, such as traffic, the distribution of electricity, and the cleanliness of water.

The information technology sector, in close collaboration with the communications sector, develops and distributes the hardware and software that businesses, industries, and governments rely on to be efficient and effective. A major component of this sector is the Internet.

Many of the communications and information technology services in Amarillo, much like the rest of the nation, are primarily delivered by privately owned companies. Specifically, for the COA's divisions and departments:

- AT&T provides terrestrial phone services for the city.
- Two companies, AMA Techtel and Suddenlink Communications, provide Internet cable services.
- The radio communications systems, including those used by the public safety agencies, are managed by the Amarillo Area Office of Emergency Management, which is a COA department. They manage the VHF conventional system that has a network of 21 sites and approximately 1,900 radios. This system is in the process of being replaced with a P-25 compliant digital simultaneous trunked system. The project is scheduled for completion in June of 2018.
- The Amarillo Emergency Communications Center (AECC) is the Public Safety Answering Point (PSAP) for dispatching all fire, police, emergency medical services and animal control services in Amarillo. The AECC processes and dispatches 123,000 emergency response calls each year.

Healthcare and Public Health Sector

The healthcare and public health sector play vital roles in response and recovery during both natural and manmade disasters. Both components carry out vital roles in the COA:

- *Hospitals*: There are three full-service hospitals that service the citizens of Amarillo as well as the region. All three are co-located in the west part of the city just north of I-40.
  - Northwest Texas Hospital is 495-bed facility with a Level III trauma center, an emergency room, and a Cardiac Center.
  - Baptist St. Anthony's Hospital is a 445-bed facility with a Level IV trauma center, an emergency room with 48-examination rooms, and 48 ICU units.
  - Thomas E. Creek Department of Veterans Affairs Medical Center is a 44-bed facility with an 8-bed emergency room. The medical center provides inpatient and outpatient care to over 13,000 veterans in the Texas/New Mexico/Oklahoma region.
- *Public Health*: The COA's Department of Public Health is responsible for promoting health and preventing disease in the citizens of Amarillo, Potter County, and Randall County. Departmental programs include: Communicable Disease, Immunization, Refugee, Street Outreach, Health Advisories, and Emergency Preparedness.

Defense Industrial Base Sector

The Defense Industrial Base Sector consists of the Department of Defense (DOD) and the private companies that contract with them to provide the development, production, delivery and maintenance of the nation's military weapons. A Department of Energy-contracted nuclear weapon facility is located just inside the COA's ETJ.

- *Pantex Plant*: The primary purpose of Pantex is the assembly, disassembly, retrofit, and life-extension of nuclear weapons. Pantex employs approximately 3,300 people. There are more than 650 buildings on the heavily guarded 18,000-acre site.

Food and Agricultural Sector

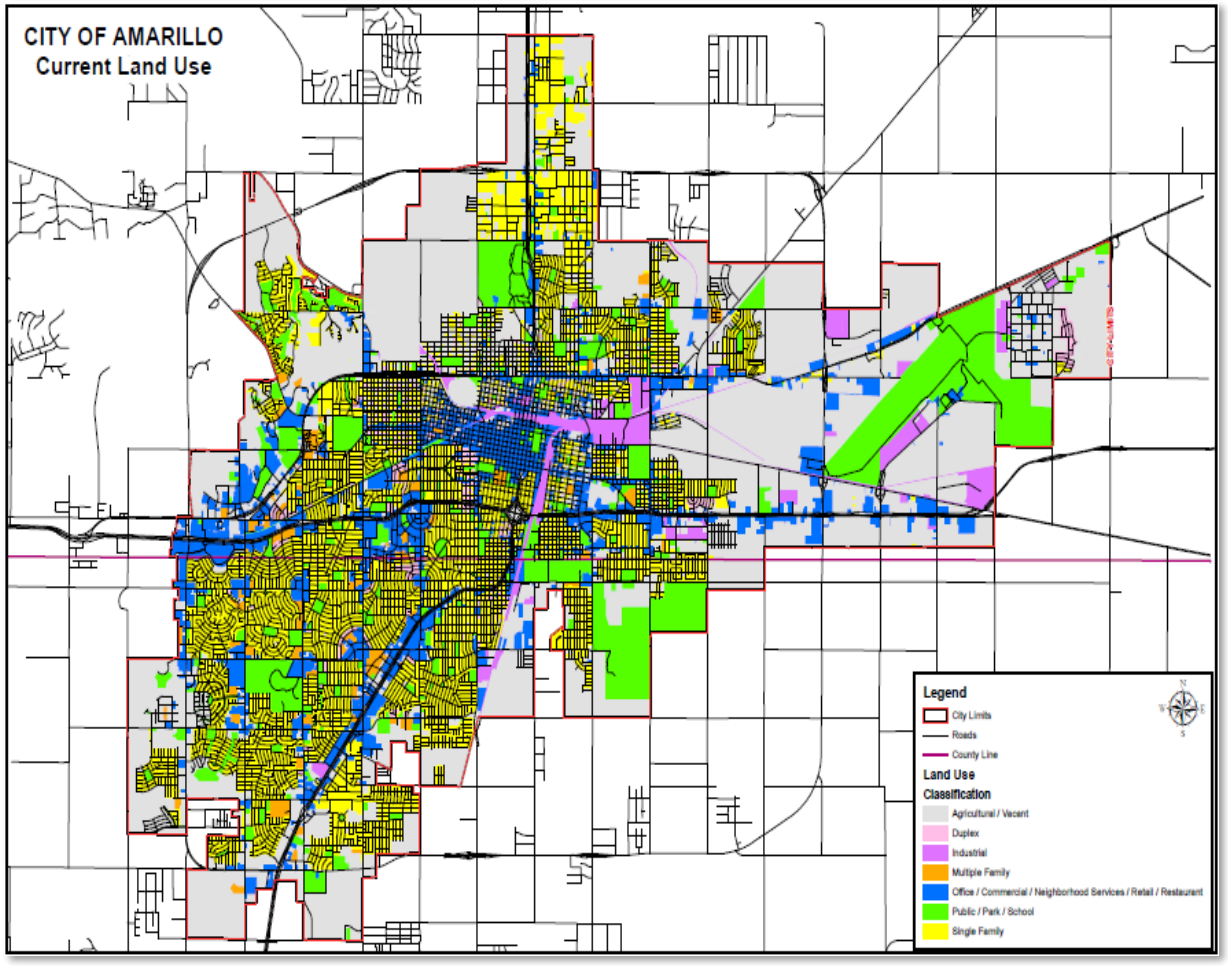
The food and agricultural sector, which includes farms and ranches, as well as food manufacturing, processing, and storage facilities, is a critical infrastructure that makes up one-fifth of the United States' economy. Amarillo is the regional hub for the agricultural industry, which is by far the largest segment of the region's economy. Two examples of the criticality of agriculture are:

- *Crop Production*: The High Plains crop production, led by corn, cotton and wheat, has a $2.7 billion impact on the area's economy.
- *Cattle Industry*: Amarillo area ranches and feedlots produce 30% of the nation's beef. There is an average of 5 million head of fed beef cattle in the Panhandle. This single facet of the region's $5.4 billion livestock industry is approximately $2 billion. Other cattle operations, such as dairy production and cattle ranching add another $900 million.

Community Land Use and Zoning

Of the 102.9 square miles within the COA, the largest part, 37.3-square miles (36.3%) is considered *Agricultural/Vacant* (Figure 5). Residential use makes up the second largest classification with 24.1 square miles (23.4%). Within the residential category, there are 64,225 *Single Family* residences and 21,836 *Multiple Family* structures. The other three land uses are *Public/Park/School* (12.4%), *Office/Commercial* (8.5%) and *Industrial* (3.2%). Of the 8,337 commercial and industrial structures in the city, most are located downtown and along Interstate 40 and Interstate 27. The remaining 16.3% of the city's land use is associated with the right of way areas.

Figure 5 City of Amarillo Current Land Use



According to Amarillo's 2010 Comprehensive Plan, the total number of housing units could increase to nearly 110,000 depending on population growth over the next 13 years. This would be a 22% increase over the current number of housing units in Amarillo. Several factors are driving the need for more residential structures:

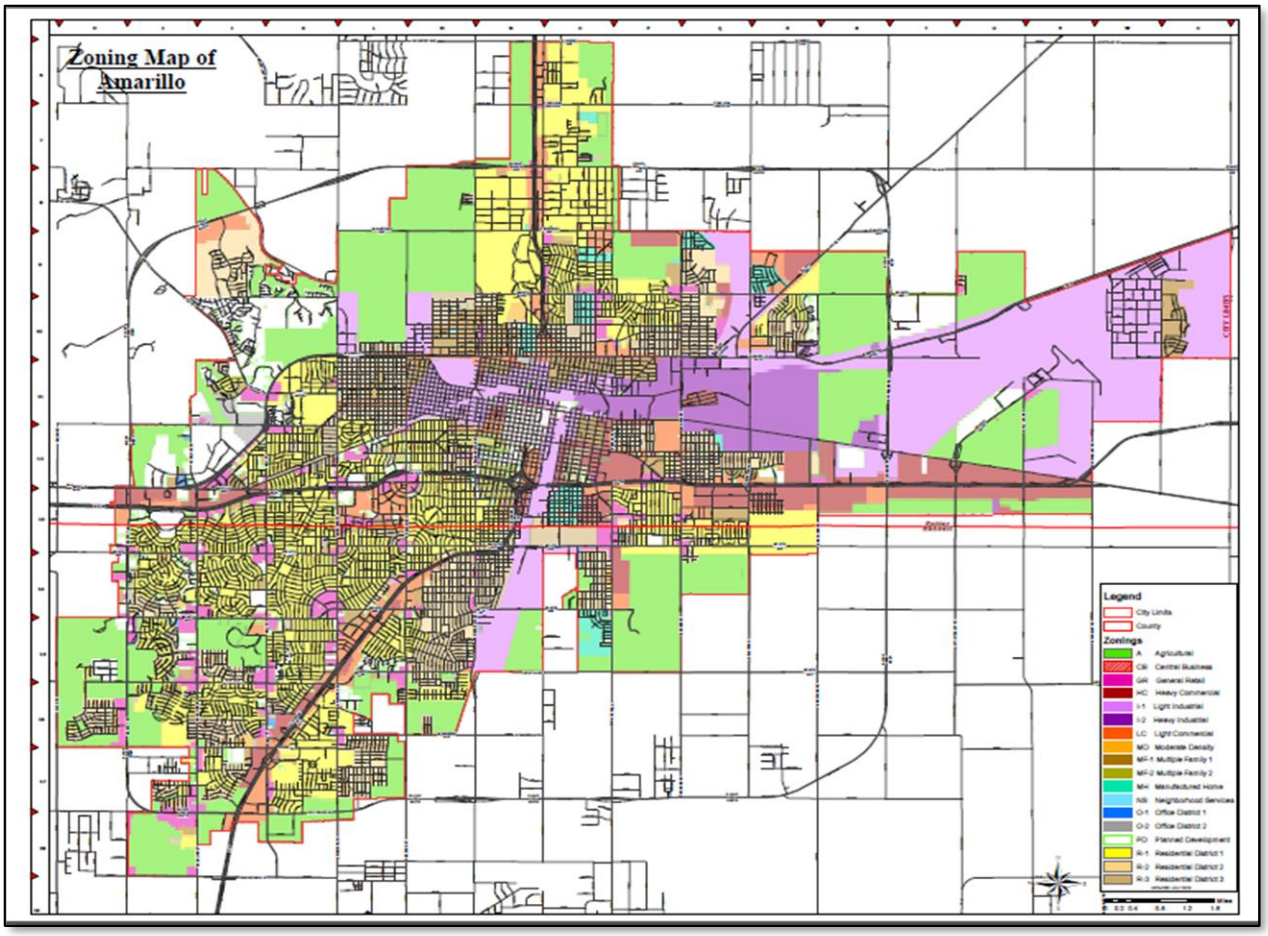
- A highly affordable housing market for many residents
- Economic migration from elsewhere in the nation
- Growth in the medical employment segment of the local economy
- Seniors moving to the bigger city from other Panhandle communities
- Revitalization of the downtown area drawing in residential development projects

The Comprehensive Plan identifies three action strategies on which the city will base residential and neighborhood planning decisions: 1) variety and balance, 2) quality and sustainability, and 3) neighborhood integrity. Using coordinated strategies, such as managing growth and capacity through zoning policies, implementing new roadway designs that incorporate traffic calming and bicycle/pedestrian usage, developing parks and playgrounds, and monitoring economic development opportunities, the COA will continue to meet the residential needs of the growing population and, simultaneously, address the citizen's quality of life expectations.

More than 10,000 businesses operate in Amarillo. Manufacturing, retail, healthcare, and social services are currently the major sectors of the economy. However, in the last five years high-tech industries, such as Bell-Textron's tilt-rotor and helicopter assembly facilities in the aviation sector and Gestamp Wind in the alternative energy sector, have brought new areas of economic development to Amarillo.

The Amarillo Economic Development Corporation (AEDC), which promotes business expansion in the city, identifies several strategic advantages the city has that will continue to strengthen the local economy. Amarillo's highly skilled workforce, a cost of living that is below the Texas and national averages, no personal or state income tax, and the incentives offered to companies locating to the city have made the COA #10 in the economic powerhouses of Texas. To remain a leading economic center, the AEDC priorities are to invest in local student's educations, draw renewable energy companies to the area, and add to Amarillo's involvement in the defense industry.

Figure 6 City of Amarillo Zoning



Community Physiography

Geography

Encompassing 102.9 square miles, the COA is located in the Texas Panhandle and straddles the southern Potter County and northern Randall County line. It is centrally located between the cities of Oklahoma City, Oklahoma and Albuquerque, New Mexico and sits at an elevation of 3602 feet. With the intersection of Interstate 40, Interstate 27, and US Highway 287 at the center of the city, Amarillo is a hub for transportation of goods from all over the country.

Topography

Located on the Llano Estacado region of the High Plains, Amarillo is relatively flat, and has been referred to as "85 percent sky and 15 percent grassland" (Stephen D. Bogener). The Llano Estacado, which is Spanish for *Staked Plains*, was named by early Spanish settlers who placed stakes as landmarks to guide them across the featureless landscape. The plain is transected by the highly eroded Red and Canadian River watersheds. The area is regularly interspersed with playa-lake beds, which are shallow, bowl shaped, wind eroded wetland areas that hold water during wet periods. These playa beds provide the bulk of the area's groundwater recharge through seepage.

Heavy soils and clay limit the types of woody vegetation on this portion of the High Plains. The more eroded watersheds are conducive to the occurrence of shrubs such as mesquites, junipers, and cottonwoods. In the "hardland" soils of the High Plains, blue grama, buffalograss, sideoats grama, vine mesquite grass, and star thistle are among the most common plants. There are more than 25 crops, such as grain sorghum, hay, and cotton, grown in the Amarillo area. The growth, storage, and transportation of these crops play a large role in the area's economy.

Geology

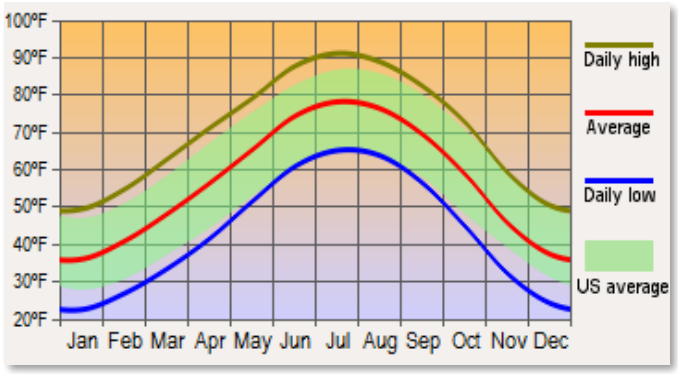
Amarillo's surrounding area exhibits several unique geological features. Along the Prairie Dog Town Fork of the Red River lies the Palo Duro Canyon; the second largest canyon in the United States. Amarillo also lies over the southern point of Ogallala Aquifer, which underlies eight states from Texas to South Dakota. The aquifer, along with the nearby Lake Meredith, provides the area with the majority of its fresh water. Because of the Panhandle Field, an extensive, 200,000-acre gas and oil producing area in the Pennsylvanian and Permian age granite wash, Amarillo has an extensive economic relationship with the energy industry. The area also has one of the largest helium deposits in the world. Amarillo is known as the *Helium Capital of the World*.

Ogallala Aquifer

Located 2500 feet below the Texas Panhandle lies the tip of an underground mountain range. The submerged granite mountains, lined by shallow faults and vast basins of oil and gas, are part of the Wichita Mountain range extending from Lawton, Oklahoma to Amarillo. The submerged granite mountains and shallow faults, along with the uplift caused by oil and gas drilling activities, have contributed to 35 earthquakes in the area since 1907.

Climate

Figure 7 Amarillo Monthly Average Temperatures



The High Plains of the Texas Panhandle has a semi-arid steppe climate, with four distinct seasons. Average temperatures in Amarillo range from 37°F in January to 78°F in July. An average temperature difference of 25°F each day is experienced year-round.

As a result of the semi-arid climate, Amarillo's annual precipitation of 20.36 inches per year is a third less than the average for the rest of the continental United States. The peak months for rain are in the summer. June and August, the two wettest months, average three inches of rain each. In winter, the annual snowfall is 17.8 inches. Almost half of the total snow, 8.4 inches, falls in December and January.

With an average wind speed of 13.6-mph, Amarillo has been identified as the windiest city in the United States. Although the wind is significant throughout the year, spring is the windiest season, with the peak occurring in April (14.7-mph). The highest recorded non-tornadic wind speed (81-mph) has occurred four times: April, 1973; June, 2008; July, 2011; and July, 2016.

The High Plains are at a moderately high elevation and relatively near the Rocky Mountains, which causes strong cold fronts to be funneled into the region from the north. As a result, Amarillo is known for its rapid weather and temperature fluctuations. The most extreme instance occurred in December of 1919, when a storm front dropped the temperature from 67°F to 23°F in an hour.

In addition to high winds and extreme temperature changes, The High Plains region experiences a variety of hazardous weather phenomena:

- *Extreme Cold*: Blizzards with white-out conditions and ice storms with significant ice accumulations occur in the region. The lowest temperature recorded is -16°F. Wind chill temperatures have fallen below -20°F.
- *Extreme Heat*: The summer months, especially July and August, bring temperatures that regularly exceed 100°F. The highest temperature recorded is 111°F.
- *Drought*: Between 2011 and 2013, Amarillo's precipitation totals were the lowest ever recorded over a 3-year period. The total precipitation in 2011 was only 7.0 inches.
- *Flooding*: Sudden, heavy rainfall causes flash flooding in low-lying areas, streets, and underpasses. The record rainfall in a 1-hour period is 3.36 inches.
- *Tornadoes*: In Potter and Randall Counties, which Amarillo straddles, there were 110 recorded tornadoes between 1950 and 2015. The last significant tornado in Amarillo struck in May of 1949, killing six people and injuring another seventy.

Community Population and Demographics

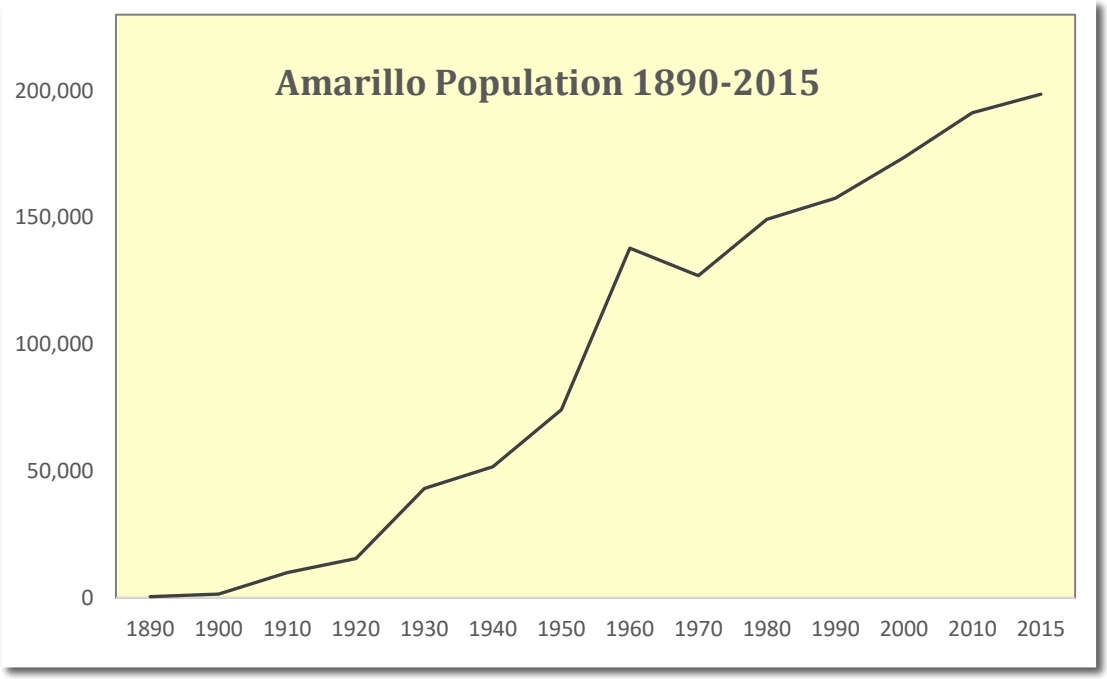
Population

Amarillo, with a population of 198,645, is the fourteenth largest city in Texas. In the rural Texas Panhandle, it is significantly larger than the next largest community of 18,300. The closest metropolitan city to Amarillo is Lubbock, which is 120 miles to the south.

Since its incorporation in the late 1880s, Amarillo has seen a steady 5% increase in population. The growth rate over the last 25 years has been steady as well, at just under 1% per year. The most significant variation in population growth was an increase in the 1960s when the city annexed the Pleasant Valley development area.

Amarillo's only negative growth occurred in the early 1970s when military personnel and their family members relocated due to the closure of the Amarillo Air Force Base in 1969.

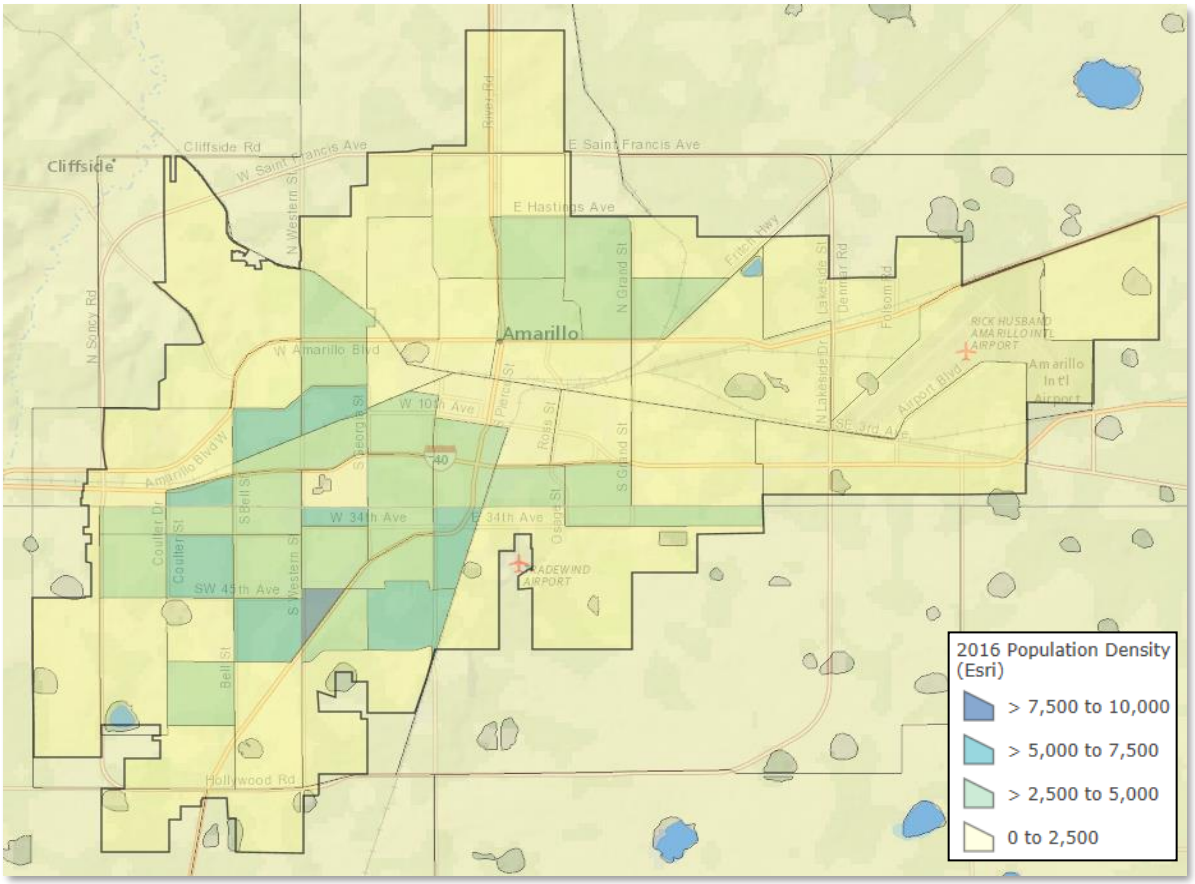
Figure 8 Population Growth (1890-2015)



Population Densities

The COA, with a population of nearly 200,000, is defined as an *urbanized area* by the US Census Bureau. However, 72% of the city's population lives in census tracts that are considered *rural*, which is an area with a population density of less than 2,500 people per square mile. Overall, the city's average population density is 1,964. The highest density is in the 45th Avenue and Virginia Street area, which has a high ratio of multi-family residences, with 9,140 people per square mile.

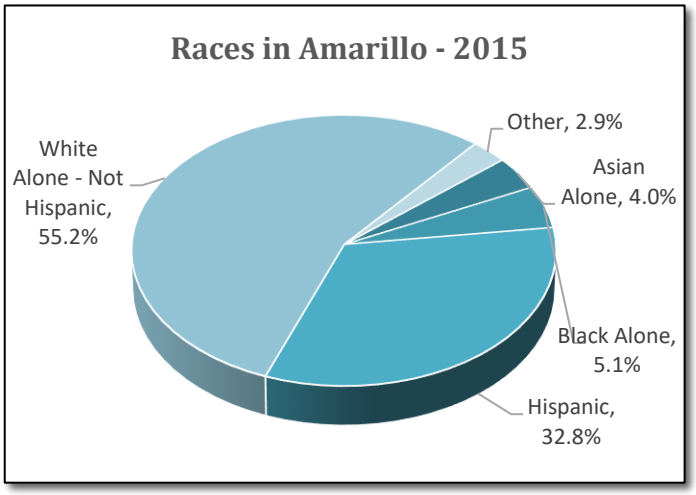
Figure 9 Population Densities (2016)



Demographics

The majority of citizens in the COA (55.2%) identify themselves as White. The second largest race, Hispanic, makes up another third of the population (32.8%). People that identified themselves as Black, Asian, American Indian, Pacific Islander, or of two or more races make up the remaining 12% of the population.

Figure 10 Population by Race (2010)



Several demographic indicators illustrate the high level of cultural diversity in Amarillo:

- Approximately 10% of the population says they were born outside of the United States.
- 23.3% of the population speaks a language other than English in the home.
- There are 39 different languages spoken by students in the Amarillo Independent School System. In one elementary school, 40% of the 600 students are English as a Second Language (ESL) learners.
- Compared to other Texas cities, Amarillo takes in the highest number of refugees per capita, approximately 500 per year.

Among the most vulnerable of Amarillo's population are minors, the elderly, and the disabled. Twenty-seven percent of the population is below the age of 18 years, and another 12% of the population is over the age of 65. In the population under 65 years old, 7.5% are disabled and 21.8% do not have health insurance.

The 2015 median household income in Amarillo is $45,818, well below the Texas median of $51,704. Amarillo's per capita income of $25,244 is also below that of the statewide average of $26,999. Seventeen percent of the population lives below the poverty line.

Amarillo is home to 4 independent school districts and 13 private schools that educate nearly 50,000 children from kindergarten through high school. Amarillo also has four institutions of higher learning: Amarillo College (10,087 students), Texas Tech University Health Sciences Center (690 students), a downtown campus for West Texas A&M University (367 students), and Wayland Baptist University (100 students, primarily online and night/weekend courses).

The median age in the COA is 33.1 years, which is comparable to the Texas median of 34.0 years.

B. History of the Fire and Emergency Services Agency

Major Historical Milestones of the Department

Pre-1900

The Amarillo Fire Department (AFD) found its beginnings on January 27, 1897 when the Amarillo Hook and Ladder Company #1 was organized with a foreman and a group of volunteers. The company's equipment consisted of a hook and ladder cart pulled by hand, carrying buckets, axes, picks and kerosene lanterns. The alarms to notify company members of a fire were sounded with a borrowed triangle and pistol shots in the air. The first official alarm system, a fire bell, was installed in the back of the courthouse in July of 1897.

1900-1910

Major portions of the business district were destroyed after two major conflagrations in 1900 and 1901, which prompted the city to acquire and reorganize the fire department in 1903. The assets from Hook and Ladder Company #1, which now included a hose cart with 1,000 feet of hose, were officially transferred to the city. Amarillo's first paid firefighter was hired later that year. He collected $40 a month for working 24 hours a day, seven days a week to care for the newly acquired horse-drawn chemical hose wagon and its team of horses. The fire station was a shoddy tin building for two years. In 1905, the city leased a building to house the department's apparatus and equipment. When the new city hall was built in 1907, it also housed the library and the first city-owned fire station.

1910-1920

A growing AFD, in 1911, added a second station at 16th and Harrison to house more firefighters and a growing fleet of apparatus. In 1911, the city purchased its first motorized apparatus, a Type 5 American La France combination hose and chemical truck. A Cadillac chassis with a home-built hose bed soon followed, and, by 1914, the city had purchased its first pumping apparatus, an American La France 750-gpm pumper. Another milestone of 1914 was that the organization became a fully-paid department. Five years later, in 1919, Amarillo's firefighters, began working in a two-platoon system.

1920-1930

Amarillo's first fire alarm system, a Gamewell, was installed in 1923. The city also built two more fire stations during the 1920s, Fire Station #3 at 610 Georgia Street in 1925 and Fire Station #4 at 311 NE 5th in 1928.

Two major milestones for the department occurred in 1929. In May, a spectacular fire occurred in the Elmhurst, a tourist hotel, where five men lost their lives and many more people were injured. It was the largest loss of life in a fire incident in Amarillo's prior 32-year history. Before the tragedy, Fire Chief H.B. Jones used the hotel as justification to purchase an aerial apparatus in a

letter to the city commission. Amarillo's first motorized aerial apparatus, an American La France 100-foot aerial tiller truck, was purchased by the end of the year.

1930-1940

The 1930s marked growth in the department. There were 51 firefighters operating out of four fire stations. Five engines, one combination pumper/aerial and a ladder company were in service.

On May 7, 1936, the first firefighter line-of-duty death occurred in Amarillo. Firefighter Austin "Hotshot" Williams died when a brick wall collapsed on him while he retreated from the fire at Bishop's Warehouse. The dollar loss of the fire, which originated next door at the Amarillo Sash and Door Company, totaled approximately $500,000, including $100,000 worth of relief supplies destined for the residents of 30 counties in the Panhandle. Every fire department apparatus in Amarillo responded.

In 1938, an E & J Resuscitator device was donated to the fire department to aid in lifesaving efforts. At the close of the decade, the fire department constructed a 5-story frame drill tower for training purposes.

1940-1950

Amarillo firefighters established a pension system in 1941 with the Amarillo Firemen's Relief and Retirement Fund. In 1944, voters in Amarillo adopted Civil Service for firefighters and police, which implemented the AFD's current competitive examination process for hiring and promotions.

By the mid-1940s, the department had grown to 83 members, working a 72-hour work week. The fleet had grown to nine companies, including a ladder company, responding from five stations. Amarillo's Fire Station #5 was a one room building in which the fire truck, kitchen, beds and firefighters all shared the same room.

By the end of the 1940s, the city had added Fire Station #6 on the south side of the Tri-State Fairgrounds and relocated Station #2 to a new building at 1601 Harrison. A new training facility with a modern, brick tower and adjacent burn structure had also been built.

1950-1960

The Walker's Convalescent Home fire in December of 1950 surpassed the Elmhurst Hotel fire as the largest single loss of life in a fire incident in Amarillo. The fire erupted at 4 o'clock in the afternoon and, still, ten elderly residents died in their beds.

Growth in the city during the 1950s brought growth to the department as well. The AFD grew from approximately 100 personnel to 171 by the end of the decade. Three additional stations were built, including Fire Station #9 in 1958, and which is still in use today. The fire fleet grew to 25 apparatus, including the department's first medical response unit, a panel truck equipped to respond to life-threatening emergencies such as heart attacks and major automobile accidents.

1960-1970

The growth of Amarillo in the 1950s was followed by a downturn in the 1960s. Amarillo Air Force Base began to shut down in the mid-1960s and was completely abandoned by 1969. Fire Station #10 was opened at the Amarillo International Airport and staffed by members of the department in 1968. The airport is still protected by AFD firefighters today.

1970-1980

On June 8, 1973, District Chief David Loar was fatally injured in the line of duty when he fell from an overpass while working at a vehicle accident on Interstate 27. He died four days later, on June 12.

The year 1975 marked the only time a significant layoff occurred at the AFD. This was the year the last detachment of B-52 bombers left Amarillo, which had operated out of the airport for seven years after the Air Force Base closed. The crews that protected the airfield were downsized, and several new firefighters were temporarily laid off for six months.

In 1976, the AFD began operating as a true first responder agency. Previously, the department only responded to calls for people having a heart attack and vehicle accidents with major injuries.

1980-1990

Amarillo's third firefighter fatality occurred as the result of a fire at the Badger Apartments in July of 1982. Firefighter Kenneth Caldwell was caught in an arson fire, which unexpectedly flashed through the stairwell he was in. Kenny died on August 16, 1982, almost a month after the fire.

On June 7, 1989, a significant fire impacted the area's cattle industry when the Amarillo Livestock Auction burned. The business was the largest independent livestock auction in the nation, and the fire damages exceed $1 million.

1990-2000

In 1996, the AFD achieved one of its most significant milestones when the department adopted four-person minimum staffing on all frontline fire suppression apparatus. The prior minimum staffing had been two personnel per apparatus. The AFD abandoned the philosophy of using mini-pumpers and shifted those personnel to fire engines and aerial apparatus. This policy also required several promotions to ensure that every crew operated with, at a minimum, an officer, driver and two firefighters.

Two significant fires occurred in the mid-1990s. On February 11, 1996, the historic St. Andrews church was a total loss when a fire, which was determined to have been caused by a spotlight turned toward the roof, burned though the sanctuary. The second significant fire occurred on March 18, 1997 at Johnson Filtration, a large commercial building. There was a life lost and $4 million in damages. This fire significantly impacted the department's policy of replacing out-of-service aerial apparatus with reserve pumpers. The incident commander, asking for more aerial

support, instead kept having pumpers arrive on the scene. The replacement policy was changed, and the department now maintains two reserve aerial apparatus for the three frontline aerials.

2000-2010

In 2004, the AFD purchased and deployed thermal imaging cameras (TICs) for the first time. In April of 2005, the AFD experienced its fourth line-of-duty death. Firefighter Christopher "Brian" Hunton fell from an enclosed cab on an aerial apparatus while responding to a fire incident. Brian's death sparked the National Fire Service Seatbelt Pledge.

On March 13, 2006, the AFD responded to assist with the *East Amarillo Complex Fire*. This fire in the Texas Panhandle burned over 750,000 acres in a 24-hour period, and it is considered the fastest burning major wildfire ever recorded in the United States. Twelve people, including a volunteer firefighter, lost their lives. The fire was the first of many significant fires that has since occurred in the region during a decade-long drought.

During the Christmas season in 2007, a blizzard caused a traffic accident on I-40 that involved more than 120 vehicles. A month later, in January 2008, another ice storm caused an 80-vehicle accident in the same location on the highway. While responding to the second pile-up, Engine-6 left the road and turned upside down in a ditch. The crew, who were all wearing seatbelts, were uninjured and able to initiate victim rescue and treatment.

In 2009, the AFD offered the first department-sponsored paramedic class to its members. After the students completed the course, the AFD began providing Advanced Life Support (ALS) medical response for the first time. The initial crews able to perform at the ALS level were Engine-1, stationed in the downtown area, and Engine-10, assigned to the airport fire station.

2010-Present

In January of 2010, the city moved to the Insurance Services Office (ISO) 2 rating. Later in the year, the department opened Fire Station #11, the first non-airport fire station added since Station #9 opened 52 years earlier.

The department responded to two wildfires on the outskirts of Amarillo in April of 2011. Twelve homes were lost, one of which was within the city limits. These fires focused the AFD on the need to examine and change the department's wildland interface firefighting tactics. These fires became the catalyst for forming a specialized Wildland Firefighting Team to combat wildland fires in Amarillo and the Panhandle of Texas.

On July 7, 2014, the greatest monetary fire loss in Amarillo occurred at the Town Square Village development. One of the four buildings in the complex, each with shops on the first floor and three floors of apartments above them, caught fire after the wooden framing had just been completed. The fire that raced through the structure caused $20 million in damages.

Current Legal Boundary of Service Area

The AFD responds to emergency incidents within the city limits of Amarillo, and, through automatic aid agreements, to 23 target hazards in Potter and Randall Counties. As a participant in the Panhandle Region Mutual Aid Agreement, the AFD is also committed to providing mutual aid, when requested, to emergency incidents that occur in any county or municipal jurisdiction in upper 26 counties of the Texas Panhandle.

Figure 11 Amarillo City Limits with Automatic Aid Locations

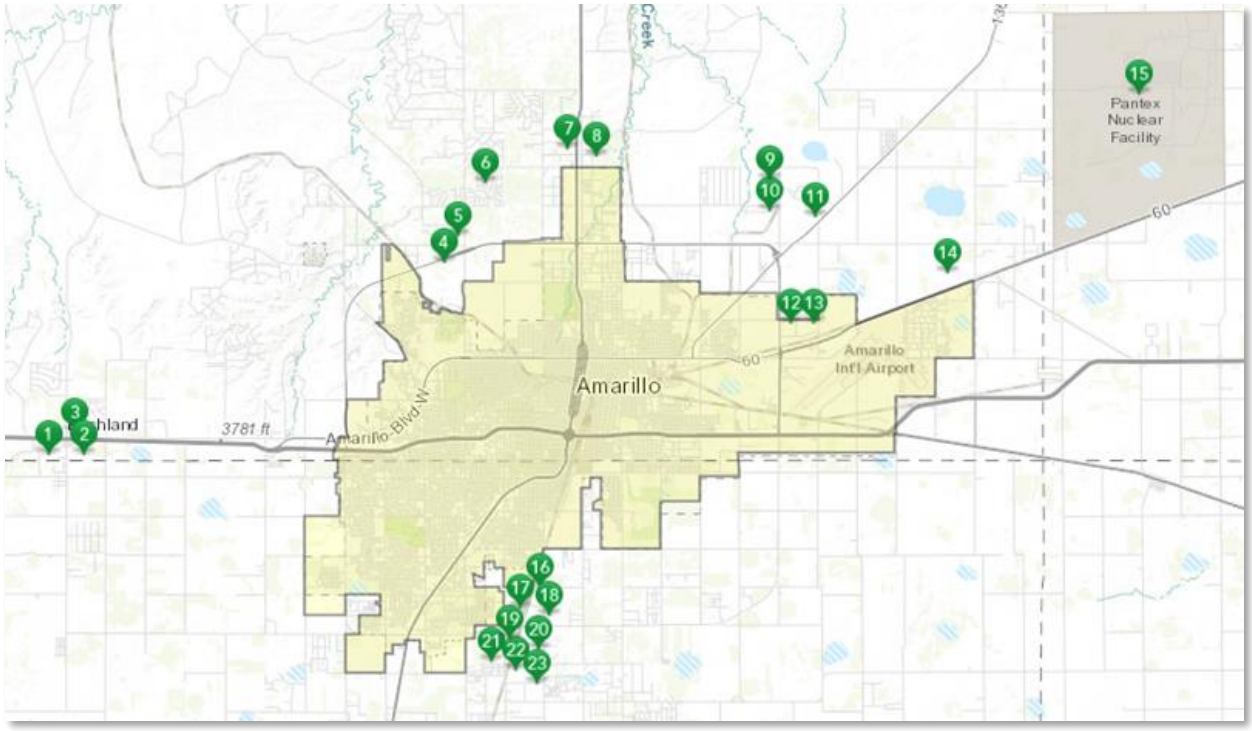


Table 1 Automatic Aid Locations - Potter County

Potter County Automatic Aid Locations		
Facility	**Description**	**Location**
1. Bushland Elementary School	Primary School (Pre-K - 4th Grades): 538 Students	2400 Wells Street, Bushland
2. Bushland Middle School	Primary School (5th - 8th Grades): 482 Students	20101 25th Street, Bushland
3. Bushland High School	High School (9th -12th Grades): 501 Students	1201 S. FM 2381, Bushland
4. NuStar Energy Terminal	Petroleum Products Terminal (Capacity 255,000 Barrels)	4100 Cliffside
5. Phillips 66 Terminal	Petroleum Products Terminal (Capacity 274,000 Barrels)	4300 Cliffside
6. Rolling Hills Elementary School	Primary School (Pre-K-4th Grades): 325 Students	2800 W. Cherry
7. River Road High School	High School (9th -12th Grades): 422 Students	101 Mobley
8. River Road Middle School	Primary School (7th-8th Grades): 200 Students	9500 Highway 287 N.
9. Xcel Energy Harrington Station	Electric Power Station: Coal-Fired	8400 N. Lakeside
10. Xcel Energy Nichols Station	Electric Power Station: Natural Gas-Fired	7201 N. Lakeside
11. Asarco Refinery	Copper and Precious Metals Refinery	7001 State Highway 136
12. TDCJ: Neal Unit	State Prison (Capacity - 1,732)	9601 Spur 591
13. TDCJ: Clements Unit	State Prison (Capacity - 3,798)	9601 Spur 591
14. Tyson Fresh Meats	Beef and Pork Processing Plant	5000 N. FM 1912

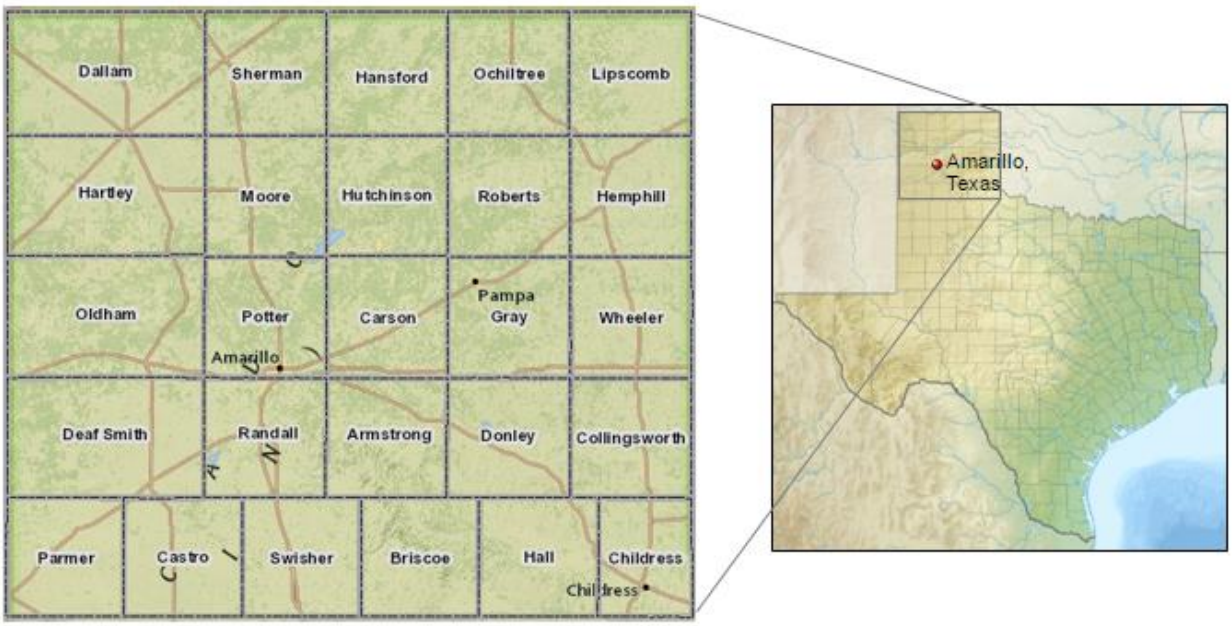
Table 2 Automatic Aid Locations - Carson County

Carson County Automatic Aid Locations		
Facility	**Description**	**Location**
15. Pantex Plant	Nuclear Weapons Facility	US 60 and FM 2373*
**Located within the City of Amarillo's Extraterritorial Jurisdiction*		

Table 3 Automatic Aid Locations - Randall County

Randall County Automatic Aid Locations		
Facility	**Description**	**Location**
16. CHS (Cenex Harvest States)	Oil-blending Facility	6300 S. FM 1541
17. Eaton Cooper Crouse-Hinds	Manufacturer: Electric Power Equipment	1901 W. Farmers Ave.
18. Affiliated Foods	Wholesale Food Storage and Distribution	1401 W. Farmers Ave.
19. Youth Center of the High Plains	Juvenile Detention Center (Capacity - 92)	9300 S. Georgia St.
20. Owens-Corning	Manufacturer: Fiberglass Composite Materials	1701 Hollywood Road
21. Randall County Jail	County Jail: (Capacity - 377)	9100 S. Georgia St.
22. American Tire Company	Wholesale Tire Storage and Distribution	9151 S. Georgia St.
23. Amarillo Gear Company	Manufacturer: Gearboxes and Pump Drives	2401 W. Sundown Lane

Figure 12 Texas Panhandle Counties



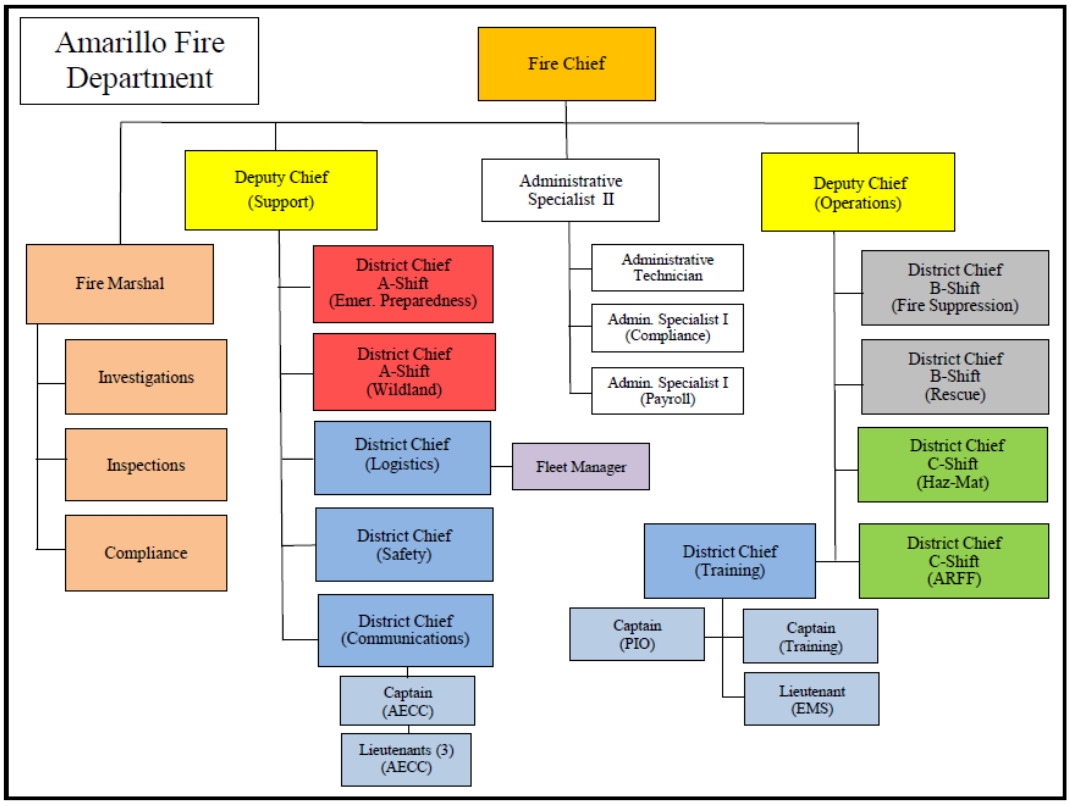
Current Organization/Divisions/Programs

Administration

The AFD's fire chief, who reports to an assistant city manager, leads the 282 men and women who work to provide compassionate and professional emergency services to the citizens of the city. The 264 uniformed members and 18 civilian personnel are the department's most valuable assets in carrying out its mission successfully.

Two deputy chiefs share leadership, strategic planning, and administrative management of the department with the fire chief, and each manages a division, Support and Operations. The deputy chief in charge of support manages the logistical needs of our personnel and facilities. In addition, the position oversees several major programs, including Safety, Communications, Emergency Preparedness, Wildland Firefighting and Mitigation, the AFD's Incident Management Team, Fire Fleet Maintenance, and the Fire Marshal's Office. The deputy chief of operations manages daily operational staffing, the Training Program, and oversees five emergency response programs: Fire Suppression, Emergency Medical Services (EMS), Hazardous Materials, Technical Rescue, and Aircraft Rescue and Firefighting (ARFF).

Figure 13 Amarillo Fire Department Organization Chart (2018)



Organization

Four of the AFD's major support programs are supervised by chief officers assigned to 8-hour day positions: Health and Safety, Training, Communications and Logistics. Other day positions include three company officers assisting the training chief and four others who share management of the Amarillo Emergency Communications Center (AECC) with Amarillo police officers. Four civilian administrative assistants provide office management, payroll, purchasing, compliance, recordkeeping, and customer assistance services.

Two hundred and fifty uniformed personnel, working out of 13 fire stations, directly respond to calls for emergency assistance. The firefighters follow a three-platoon Modified-Detroit schedule based on rotating 24-hour shifts (A, B, and C-Shifts). Two district chiefs share supervisory duties on each shift. A minimum of 69 firefighters per shift are required to ensure four-person minimum staffing on 12 fire engines, a rescue pumper and 3 aerial apparatus, as well as staffing one person on each of the AFD's 2 command units, the ARFF command unit, and two ARFF "crash" trucks. Eighty firefighters are assigned to each shift; however, overtime procedures are implemented to call back personnel when staffing levels fall below 69.

Support Programs:

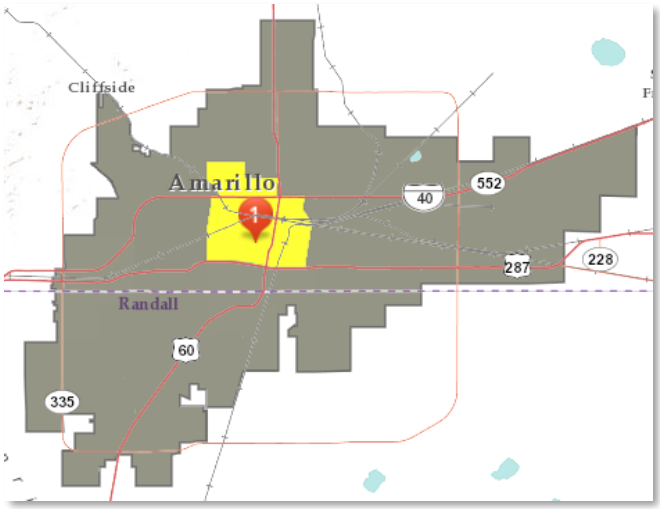
- The Safety Program is led by the Health and Safety Officer, which is a district chief's position. The Health and Safety Officer is responsible development and oversight of the department's health and well-being policies and procedures. Major components of the Safety Program include:
  - The National Institute of Occupational Safety and Health (NIOSH)-compliant respiratory protection
  - The National Fire Protection Association (NFPA)-compliant personal protective equipment and uniforms
  - Management of the fitness and wellbeing procedures, which includes the International Association of Fire Fighters (IAFF)/International Association of Fire Chiefs (IAFC) Wellness/Fitness Initiative protocols
  - Incident Safety Officer training and procedures
  - Injury and accident investigation
  - Development and implementation of Return-to-Work policies
- The Training Division has a district chief, two captains and an EMS lieutenant assigned to coordinate and manage all departmental training activities and to present fire and life safety education to the public. Significant responsibilities for the training staff include:
  - Lesson plan development and instruction
  - Establishing the department's annual training calendar
  - Management of the department's six-week orientation and training for probationary firefighters
  - Management of the 40-hour promotional orientation for officers
  - Management of the 40-hour promotional orientation for drivers
  - Coordination of program-specific training, such as that for EMS, technical rescue or hazardous materials response
  - Management of the AFD's Position Taskbook program
  - Interagency training and exercises coordination
  - Operational readiness of the AFD's training facility, apparatus, and equipment
  - The public information officer, a captain's position in Training, is responsible for public fire and safety education, media relations, and the department's involvement in community affairs.

- The Emergency Preparedness Program's district chief is responsible for ensuring the department's members have the necessary information, water supply, and equipment in place to improve the AFD response to emergency incidents. Major aspects of the program include:
  - Information gathering and dissemination for pre-incident planning
  - Maintenance and testing of fire hydrants
  - Coordination with the Traffic Department to repair and install Opticom traffic control systems
  - Oversight of the Knox Key-Secure system
- The Communications Program is managed by a district chief and provides support for the AFD's technological equipment and activities. The major responsibilities of the program's personnel include:
  - Management of the AECC in coordination with the Amarillo Police Department.
  - Coordination with the city's Information Technology (IT) Department to manage the department's technology hardware and software, email systems, and terrestrial and cellular phone systems
  - Coordination with of the city's Office of Emergency Management to maintain and repair department-owned mobile and portable radios, Locution fire station alerting system and personnel paging systems
  - Quality assurance of incident reports for federal reporting
- The Logistics Program's district chief is responsible for ensuring the department's members have the necessary facilities, apparatus, equipment and supplies to provide emergency services to the citizens of Amarillo. Major aspects of the program include:
  - Coordination of fire station and department-owned buildings maintenance and repair with the City's Facilities Department
  - Department liaison to Facilities and the construction companies building 3 fire stations and a new fleet maintenance facility in the next 5 years.
  - Oversight of AFD Fleet Services, which is responsible for ensuring the department's apparatus and vehicles are properly maintained and repaired. This group is also responsible for the maintenance and repair of all small power equipment and station fuel tanks.
  - Chair of the Apparatus Committee, which develops fire apparatus specifications.
  - Ensures the daily delivery of equipment and supplies to 13 fire stations.

Fire Stations/Apparatus/Equipment

Fire Station #1

Fire Station #1(Central Fire Station) is located at 400 S. Van Buren. The station was built in 1961 and extensively remodeled in 2009, including two new pull through bays and converted living spaces. Central is the only fire station in Amarillo to still have poles in it. This station's personnel are responsible for the EMS Program management and supplies.

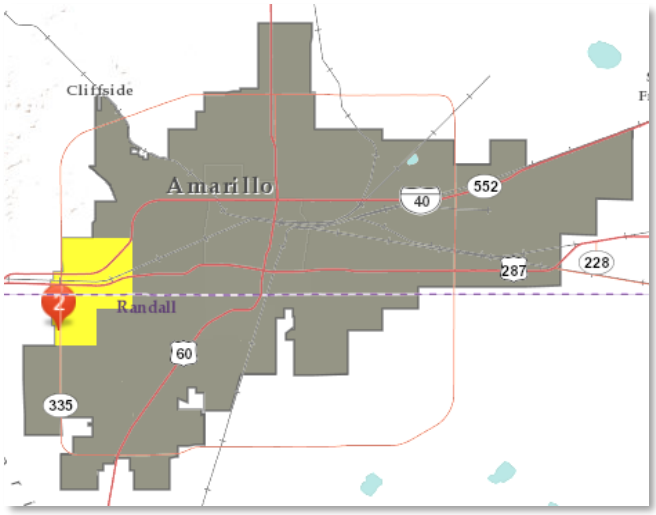


- Pop: 16,329
- Pop./mi.^{2}: 2,594
- Sq. Miles: 7.5
- Road Miles: 162.6
- Commercial: 28.5%
- Residential: 17.8%
- Open Space: 53.7%

Fire Station #1					
Apparatus	**Description**	**Year Built**	**City ID #**	**Status**	**Minimum Staffing**
Engine-1	Pumper: Ferrara 1250-gpm	2008	R7126	Active	4
Ladder-1	Quint: Ferrara 1500-gpm/107' Aerial	2008	R7105	Active	4
Unit-1	Command: Suburban 4 x 4	2015	R8093	Active	1
Engine -40	Pumper: ALF 1250-gpm	2004	R6627	Call Back	N/A
Unit-3	Command: Suburban 4 x 4	2013	R7598	Reserve	N/A
Unit-4	Command: Suburban 4 x 4	2016	R6788	Reserve	N/A

Fire Station #2

Fire Station #2 is located at 9000 SW 34th, and it was built in 1979. The station's crews, in coordination with Station #8's crews, are responsible for response to hazardous materials incidents at the Technician level. The Hazmat Team and equipment are a mutual aid resource for jurisdictions in 26 counties of the Texas Panhandle.

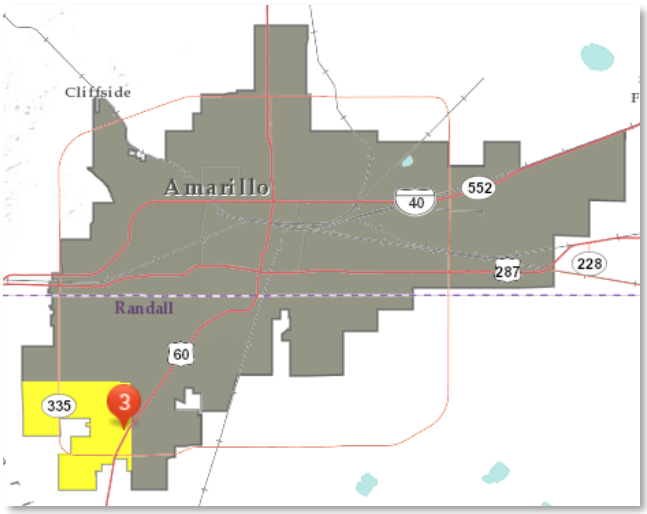


- Pop: 14,395
- Pop./mi.^{2}: 3,349
- Sq. Miles: 5.5
- Road Miles: 82.5
- Commercial: 39.4%
- Residential: 24.6%
- Open Space: 36.0%

Fire Station #2					
Apparatus	**Description**	**Year Built**	**City ID #**	**Status**	**Minimum Staffing**
Engine-2	Pumper: Ferrara 1250-gpm	2013	R7767	Active	4
HazMat-1	HazMat: American LaFrance	2002	R6200	Active	Cross-Staffed
Grass-2	Wildland: Ford F-550 4X4	2016	R8472	Active	Cross-Staffed

Fire Station #3

Fire Station #3 is located at 6009 Estacado Lane and was built in 1974. The firefighters at #3, along with those at Fire Station #13, are members of the AFD Technical Rescue Team. The crews here maintain the hydraulic rescue equipment used in vehicle extrications. Station 3 is scheduled to be relocated further to the southwest in 2018.

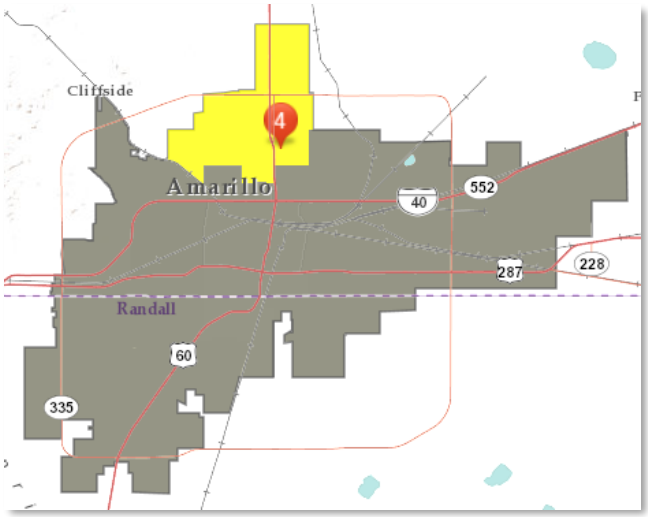


- Pop: 12,324
- Pop./mi.^{2}: 1,758
- Sq. Miles: 7.6
- Road Miles: 79.5
- Commercial: 11.7%
- Residential: 26.5%
- Open Space: 61.8%

Fire Station #3					
Apparatus	**Description**	**Year Built**	**City ID #**	**Status**	**Minimum Staffing**
Engine-3	Pumper: Ferrara 1250-gpm	2015	R8238	Active	4
Grass-3	Wildland: Ferrara 1000-gal. Tank	2008	R7127	Active	Cross-Staffed

Fire Station #4

Fire Station #4 is located at 208 East Hastings and was constructed in 1964. Crews assigned to Station #4 are responsible for managing the self-contained breathing apparatus (SCBA) program. They ensure the AFD's SCBA compressors are properly serviced and maintained as well as conducting face mask fit tests.

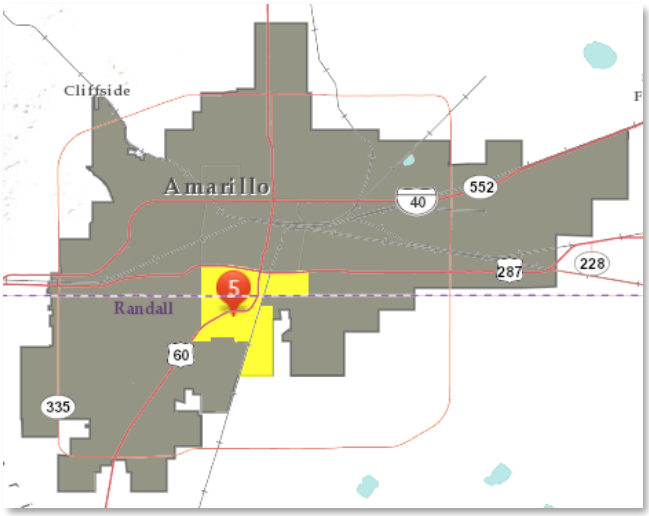


- Pop: 8,074
- Pop./mi.^{2}: 1,193
- Sq. Miles: 11.0
- Road Miles: 100.3
- Commercial: 15.7%
- Residential: 27.4%
- Open Space: 56.9%

Fire Station #4					
Apparatus	**Description**	**Year Built**	**City ID #**	**Status**	**Minimum Staffing**
Engine-4	Pumper: Ferrara 1250-gpm	2008	R7129	Active	4
Grass-4	Wildland: Ford 800-gal tank	1994	R5017	Active	Cross-Staffed

Fire Station #5

Fire Station #5 is located at 3200 South Washington and was built in 1953. Station #5 crews are responsible for the department's Fire Suppression Program. The station maintains the department's hose and nozzle inventory. Station 5 is scheduled to be rebuilt in the same location in FY2020-2021.

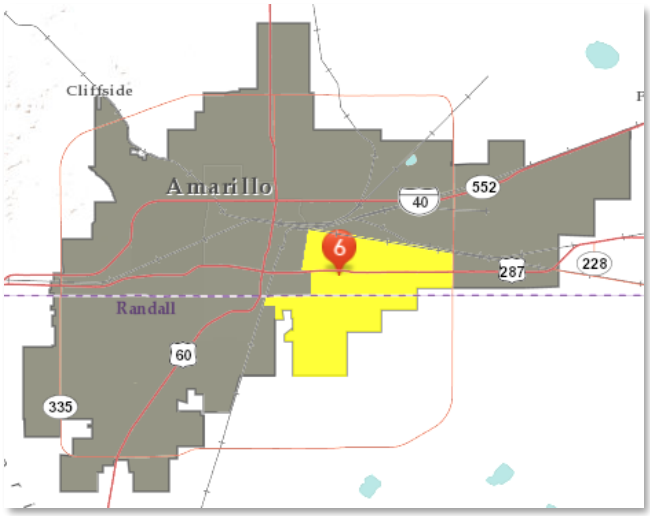


- Pop: 16,763
- Pop./mi.^{2}: 3,415
- Sq. Miles: 5.5
- Road Miles: 113.2
- Commercial: 25.0%
- Residential: 33.4%
- Open Space: 41.6%

Fire Station #5					
Apparatus	**Description**	**Year Built**	**City ID #**	**Status**	**Minimum Staffing**
Engine-5	Pumper: Ferrara 1250-gpm	2014	R8011	Active	4
Grass-5	Wildland: International 1000-gal. Tank	2000	R5702	Active	Cross-Staffed

Fire Station #6

Fire Station #6, located at 1904 South Fairfield, was constructed in 1974. The fire crews are responsible for implementing and managing the department's fitness programs. The firefighters assigned to Station #6 also support the ARFF Program with operational response to aircraft incidents at Rick Husband Amarillo International Airport.

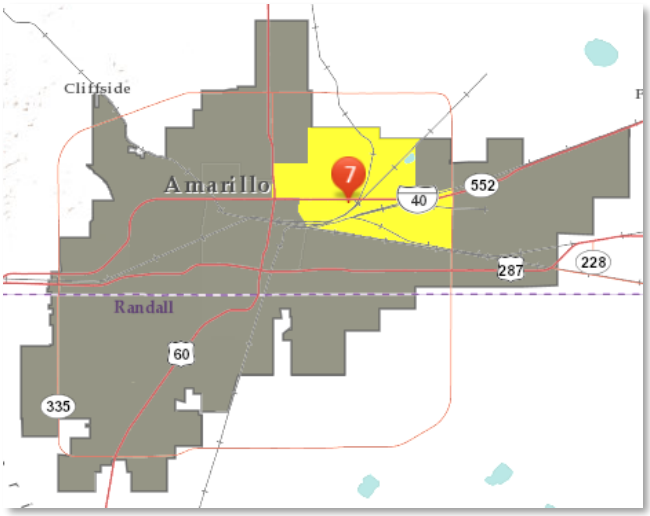


- Pop: 18,440
- Pop./mi.^{2}: 2,312
- Sq. Miles: 11.8
- Road Miles: 128.6
- Commercial: 32.9%
- Residential: 11.9%
- Open Space: 55.2%

Fire Station #6					
Apparatus	**Description**	**Year Built**	**City ID #**	**Status**	**Minimum Staffing**
Engine-6	Pumper: Ferrara 1250-gpm	2008	R7125	Active	4
Grass-6	Wildland: Ford F-550 4X4	2017	R8659	Active	Cross-Staffed

Fire Station #7

Fire Station #7 is located at 3618 Amarillo Boulevard East and was constructed in 2001. Fire department members here are responsible for the Uniform and Personal Protective Equipment Program. The firefighters assigned to Station #7 also support the ARFF Program with operational response to aircraft incidents at Rick Husband Amarillo International Airport.

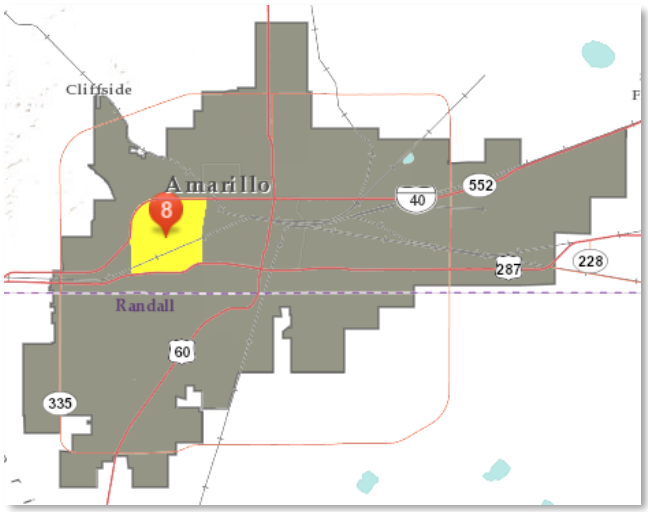


- Pop: 25,573
- Pop./mi.^{2}: 2,621
- Sq. Miles: 11.6
- Road Miles: 116.3
- Commercial: 26.2%
- Residential: 17.4%
- Open Space: 56.4%

Fire Station #7					
Apparatus	**Description**	**Year Built**	**City ID #**	**Status**	**Minimum Staffing**
Engine-7	Pumper: Ferrara 1250-gpm	2013	R7766	Active	4
Ladder-7	Quint: Ferrara 1500-gpm/ 77' Aerial	2014	R8044	Active	4
Grass-7	Wildland: Ferrara 1000 gal. Tank	2008	R7128	Active	Cross-Staffed
Ladder-25	Quint: ALF 1500-gpm/75'Aerial	2004	R6502	Ready Reserve	N/A

Fire Station #8

Fire Station #8 is located at 108 South Western and was built in 2010. This station's crews, in coordination with Station #2's crews, are responsible for response to hazardous materials incidents at the Technician level. The Hazmat Team and equipment are a mutual aid resource for jurisdictions in 26 counties of the Texas Panhandle.

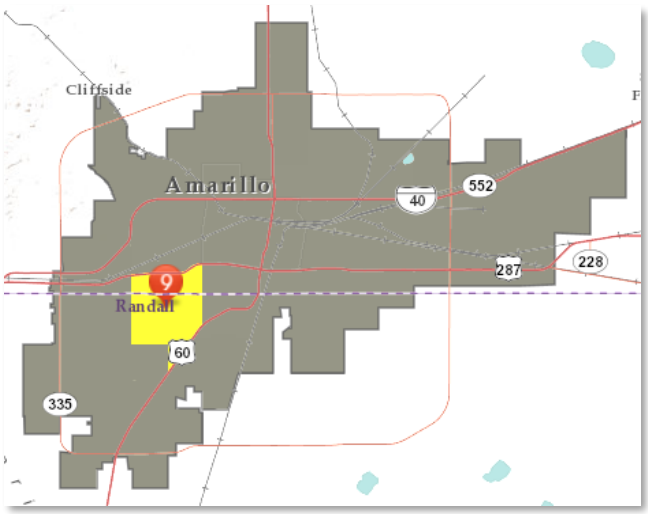


- Pop: 17,497
- Pop./mi.^{2}: 4,228
- Sq. Miles: 4.13
- Road Miles: 93.7
- Commercial: 24.9%
- Residential: 46.0%
- Open Space: 29.2%

Fire Station #8					
Apparatus	**Description**	**Year Built**	**City ID #**	**Status**	**Minimum Staffing**
Engine-8	Pumper: Ferrara 1250-gpm	2010	R7303	Active	4

Fire Station #9

Fire Station #9 is located at 3445 South Western and was built in 1958. Crews at Station #9 support the department's Communications Program. Firefighters assigned to the station manage the AFD's mobile and portable radio inventory as well as performing quality assurance for incident reports sent to the state's TEXFIRS incident reporting system. Station #9 is scheduled to be moved to a new location in FY2018-2019.

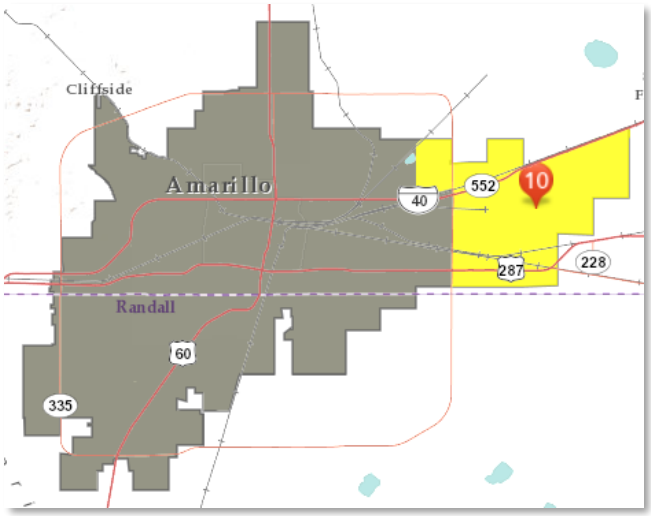


- Pop: 18,740
- Pop./mi.^{2}:5,012
- Sq. Miles: 4.4
- Road Miles: 89.9
- Commercial: 29.6%
- Residential: 41.6%
- Open Space: 28.8%

Fire Station #9					
Apparatus	**Description**	**Year Built**	**City ID #**	**Status**	**Minimum Staffing**
Engine-9	Pumper: Ferrara 1250-gpm	2011	R7571	Active	4
Engine-43	Pumper: ALF 1250-gpm	2000	R5853	Ready Reserve	N/A

Fire Station #10

Fire Station #10 is located on the property of Rick Husband International Airport, at 11311 Baker Street. The six-bay station was built in the 1950's and underwent a major renovation in 1994. The crews stationed here are responsible for the ARFF Program along with crews from Fire Stations #6 and #7.

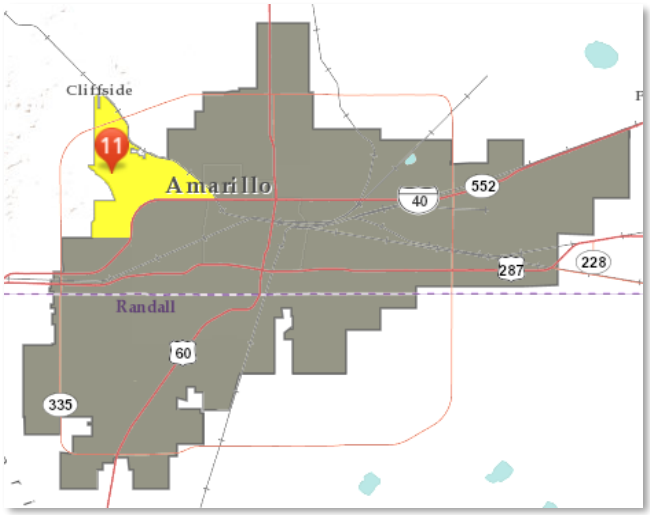


- Pop: 2,098
- Pop./mi.^{2}: 143
- Sq. Miles: 18.2
- Road Miles: 77.4
- Commercial: 49.5%
- Residential: 1.8%
- Open Space: 48.7%

Fire Station #10					
Apparatus	**Description**	**Year Built**	**City ID #**	**Status**	**Minimum Staffing**
Engine-10	Pumper: Ferrara 1250-gpm	2007	R6911	Active	4
Red-1	Command: Suburban 4X4	2013	R7757	Active	1
Red-2	ARFF: Oshkosh Striker 4x4	2015	R8412	Active	1
Red-5	ARFF: Rosenbauer Panther 4x4	2007	R6929	Active	1
Red-3	ARFF: KME/Extendable Turret	2001	R5804	Reserve	N/A
Red-4	ARFF: E-One Titan 3 4x4	1990	R4177	Reserve	N/A
Grass-10	Wildland: Ferrara 1000 gal./500-gpm	2011	R7572	Active	Cross-Staffed

Fire Station #11

Fire Station #11 is located 2401 North Coulter and was constructed in 2009. Crews stationed here are responsible for the Wildland Mitigation and Firefighting Program. The firefighters assigned to Station #11 manage the specialized wildfire equipment inventory, perform wildland urban interface (WUI) mitigation operations, and are available as mutual aid assets anywhere in the Texas Panhandle.

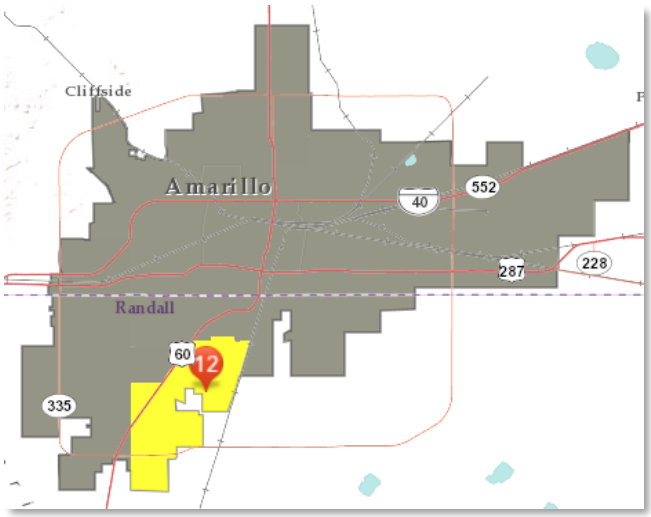


- Pop: 3,819
- Pop./mi.^{2}: 521
- Sq. Miles: 5.8
- Road Miles: 45.0
- Commercial: 22.1%
- Residential: 18.2%
- Open Space: 59.7%

Fire Station #11					
Apparatus	**Description**	**Year Built**	**City ID #**	**Status**	**Minimum Staffing**
Engine-11	Pumper: Ferrara 1250-gpm	2007	R6910	Active	4
Engine 8-32	Wildland: Freightliner Crew 4x4 750-gpm	2017	R8625	Active	Cross-Staffed
Engine 8-71	John Deere ATV 4x4 50-gpm/60-gal.	2010	R7311	Active	Cross-Staffed
Engine-41	Pumper: ALF 1250-gpm	2004	R6474	Call Back	N/A

Fire Station #12

Fire Station #12 is located at 3100 Southwest 58th and was constructed in 2011. Crews assigned to this station are responsible for preplanning businesses and pre-emergency functions for the department.

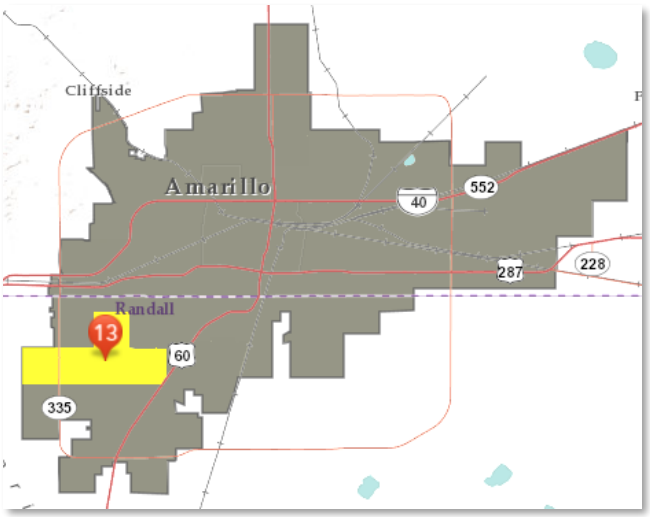


- Pop: 19,060
- Pop./mi.^{2}: 2,874
- Sq. Miles: 7.6
- Road Miles: 107.7
- Commercial: 19.1%
- Residential: 32.5%
- Open Space: 48.3%

Fire Station #12					
Apparatus	**Description**	**Year Built**	**City ID #**	**Status**	**Minimum Staffing**
Engine-12	Pumper: Ferrara 1250-gpm	2013	R7765	Active	4
Grass-12	Wildland: International 1000 gal. Tank	2000	R5701	Active	Cross-Staffed

Fire Station #13

Fire Station 13 is located at 6383 Southwest 45th and was constructed in 2013. Station #13 firefighters, along with those at Fire Station #3 are members of the AFD Technical Rescue Team. The Urban Search and Rescue heavy rescue apparatus and equipment are maintained at this location. The crews are available for the technical rescue in the 26 counties of the Texas Panhandle.

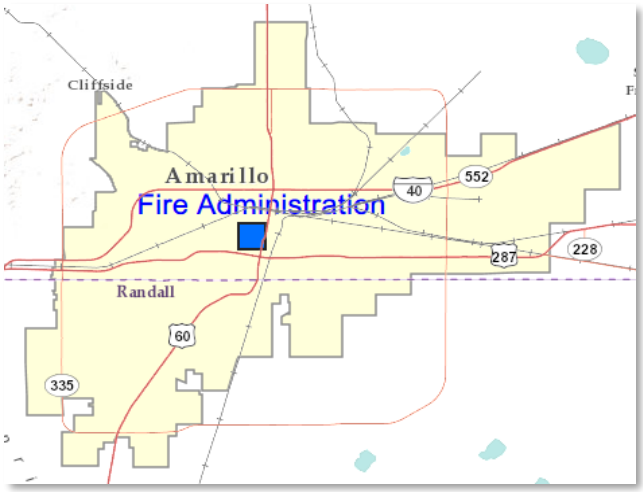


- Pop: 15,220
- Pop./mi.^{2}: 2,929
- Sq. Miles: 5.2
- Road Miles: 75.4
- Commercial: 29.3%
- Residential: 30.6%
- Open Space: 40.2%

Fire Station #13					
Apparatus	**Description**	**Year Built**	**City ID #**	**Status**	**Minimum Staffing**
Engine-13	Rescue Pumper: Ferrara 1500-gpm	2014	R8010	Active	4
Ladder-13	Quint: Ferrara 1500-gpm/77' Aerial	2011	R7348	Active	4
Unit-2	Command: Suburban	2015	R7975	Active	1
USAR-1	Rescue: Freightliner FL-80/Trailer	2006	R6708	Active	Cross-Staffed

Fire Administration

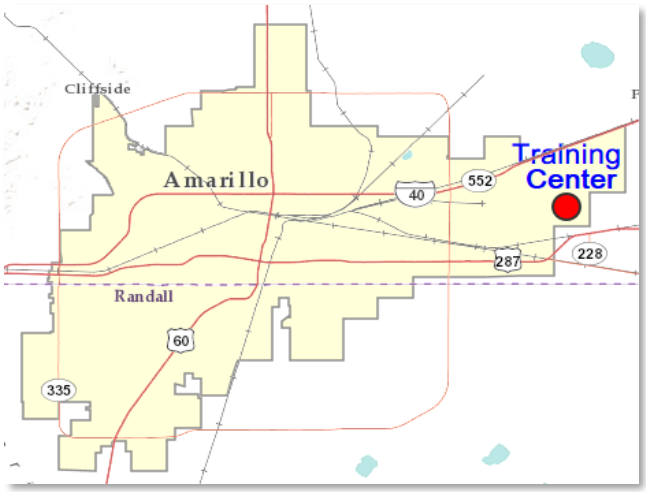
The Fire Administration was constructed in 2002. This building was created to co-locate fire administrative staff, the Fire Marshal's Office (FMO), and office support staff. Prior to Fire Administration being built, the Fire Chief and staff were located in Fire Station 1, and the FMO was in a separate city building at 823 S. Johnson.



Fire Administration					
Apparatus	**Description**	**Year Built**	**City ID #**	**Status**	**Minimum Staffing**
PIO-AFD	Pub Ed: Ford Fusion	2013	R7750	Active	1
952-FMO	Expedition 4x4	2011	R7326	Active	1
953-FMO	Chevy Tahoe SSV	2014	R7850	Active	1
954-FMO	Expedition 4x4	2014	R7931	Active	1
955-FMO	Chevy Tahoe SSV	2016	R8303	Active	1
956-FMO	Ford F-150	2014	R7927	Active	1
957-FMO	Chevy 1500 Extended Cab	2017	R8522	Active	1
958-FMO	Ford F-150	2005	R6510	Active	1

Training Center

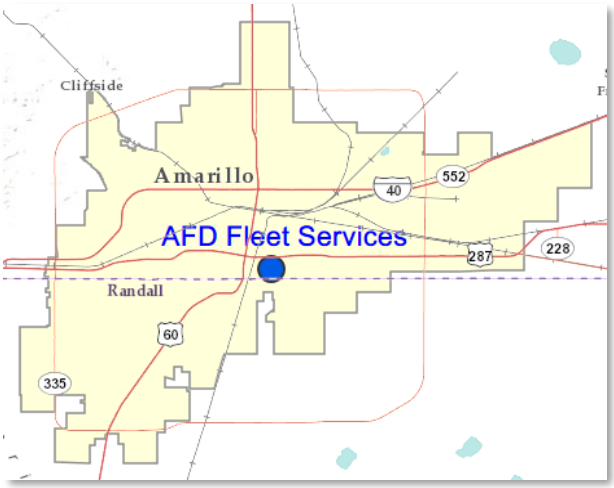
The AFD Training Center, which is located at 12400 Northeast 8th, was constructed in 2004 on airport property adjacent to Amarillo College's East Campus. The AFD uses the facilities for live fire, high angle rescue, ARFF burns and many other training needs. In addition to the six-story drill tower, the Training Center has two classrooms and a separate 3,720 square foot, three-bay truck room for training apparatus and equipment, including an SCBA compressor.



Training Center					
Apparatus	**Description**	**Year Built**	**City ID #**	**Status**	**Minimum Staffing**
Engine-15	Pumper: International 1250-gpm	1996	R5231	Training	N/A
UTV	Training: John Deere Gator	2014	R8033	Active	N/A

Amarillo Fire Department Fleet Services

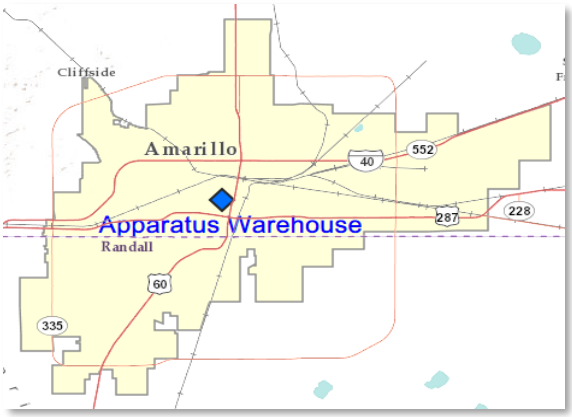
AFD's Fleet Services facility is located at 801 E. 23rd, which is a large complex used by several city departments. The AFD Fleet Services has three bays of Building C-5, which is shared with Streets and the Radio Shop. The fleet manager and four mechanics are responsible for keeping AFD's fleet of 78 vehicles operational. In FY2020-2021, Fleet Services is scheduled to be relocated adjacent to Fire Administration.



AFD Fleet Maintenance					
Apparatus	**Description**	**Year Built**	**City ID #**	**Status**	**Minimum Staffing**
Mech-1	Fleet Services: Ford 1-ton Utility	2013	R7841	Active	1
Mech-2	Fleet Services: Ford 1-ton Utility	2013	R7842	Active	1
Mech-3	Fleet Services: Ford 1-ton Utility	2016	R8453	Active	1
Mech-4	Fleet Services; Ford 1-ton Utility	2015	R8002	Active	1
Mech-5	Fleet Services: Ford 1-ton Utility	2001	R6022	Reserve	N/A
DECON-1	HazMat: Freightliner FL-70/Trailer	2004	R6340	Active	Cross-Staffed
Grass-51	Wildland: Ford 600 gal. Tank	1994	R4820	Reserve	N/A
Engine-18	Pumper: International 1250-gpm	1997	R5350	Reserve	N/A
Engine-42	Pumper: ALF 1250-gpm	2004	R6626	Reserve	N/A
Antique	1928 Seagraves	1928	R4555	Parade	N/A

City of Amarillo Apparatus Storage Warehouse

The City of Amarillo owns a 23,330 square foot building on the corner of 6th Street and S. Jackson Avenue. The converted auto dealership was constructed in 1943. The building is managed by the AFD, but several other city departments, including the Police and Public Health Departments, store vehicles and equipment at the facility.



Apparatus Warehouse: 413 South Jackson					
Apparatus	**Description**	**Year Built**	**City ID #**	**Status**	**Minimum Staffing**
Support Services	Ford Transit Van (Delivery)	2016	R8262	Active	1
Sparky-1	Ford Transit Van (Pub. Ed.)	2017	R8525	Active	1
Wildland-1	Wildland Recon: Ford F-350	2008	R6849	Ready Reserve	N/A
Wildland-2	Wildland: International Crew Cab	1993	R4752	Ready Reserve	N/A
Unit-111	Ford 250 Crew Cab	2005	R6567	Ready Reserve	N/A
MCI Trailer	EMS: Mighty Mover	2006	R7832	Active	N/A
Kids Safety	Pub Ed: F-350 w/ Scotty 35' Trailer	2016	R8409	Active	N/A
WL Mitigation	Wildland: 18' Enclosed Trailer	2016	R8485	Active	N/A
Foam Trailer	Suppression: 6x55 Gal AR-AFFF	1993	R3329	Active	N/A
Foam Trailer	HazMat: Foam Trailer w/Monitor	2011	R7620	Active	N/A
FMO Trailer	FMO: Fire Investigation Trailer	2015	R7969	Active	N/A
Staff Car	Ford Taurus	2008	R7090	Ready Reserve	N/A

C. Current Description of Levels of Service with Delivery Programs

Fire Suppression

The Amarillo Fire Department (AFD) is a fully-staffed, career department that responds to a wide array of fire-related incidents involving structures (ranging from residential to high-rise buildings), vehicles, dumpsters and other related *outside* fires, and wildland-urban interface fires (WUI). The department responds to fire-related incidents within the city limits of Amarillo, and, through automatic aid agreements, to 23 target hazards in Potter and Randall counties. As a participant in the *Panhandle Region Mutual Aid Agreement*, the AFD will also provide mutual aid response, when requested, to fire incidents that occur in any of the 88 county and municipal jurisdictions located in the Texas Panhandle.

The Fire Suppression Program consists of sixteen personnel based out of Fire Station #5. The program is responsible for the tactical support and coordination of all emergency incidents related to firefighting except those involving wildland fires. Additional responsibilities entrusted to the suppression program include: cooperatively working with the department's Training Division to provide department-wide training and firefighting drills, coordinating the repair and maintenance of the department's Thermal Imaging Cameras (TICs), performing annual tests on more than one-hundred ground ladders, and managing the department's hose, nozzles, and appliances inventory.

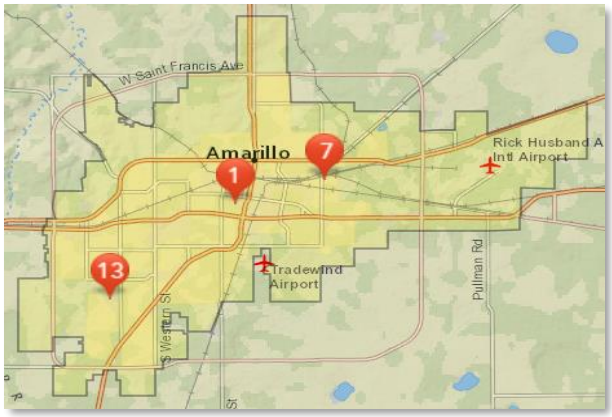
Training

To professionally serve the citizens of Amarillo, each uniformed AFD member is certified at the level of Firefighter II by the Texas Commission of Fire Protection (TCFP). The TCFP requires a minimum of 18 hours of continuing education annually for fire department personnel holding any firefighter certification. The members of the AFD significantly exceed this minimum requirement each year.

Apparatus and Equipment

The AFD staffs 16 frontline apparatus: 12 pumpers, 1 rescue pumper, and 3 quints (quintuple combination pumpers with aerial ladders). The three ladder trucks are assigned to each of the AFD's two-company fire stations: Fire Station #1 (Central), Fire Station #7, and Fire Station #13. In Amarillo, the ladder crews respond to the same types of emergency incidents and are responsible for the same response assignments as fire engines companies. The capacity to place the aerial ladder and carry additional tools and equipment are the only tactical exceptions.

Figure 14 Fire Stations with Aerial Apparatus



The minimum water tank capacity carried on AFD apparatus is 500-gallons. In addition, the minimum hose supply carried by firefighting apparatus is:

- 5-inch large diameter supply hose – 1,000 feet
- 3-inch medium diameter supply hose – 200 feet
- 2.5-inch large attack hose – 200 feet
- 1.75-inch attack hose – 350 feet

Since the AFD operates with 4-person minimum staffing, each apparatus carries two TIC's, which allows two teams of firefighters to work independently while still utilizing a TIC.

Emergency Medical Services

The AFD has an Emergency Medical Service (EMS) Program that strives to deliver the highest level of EMS care to the citizens of Amarillo. The department responds to all life-threatening emergency medical incidents within the city limits, and, through automatic aid agreements, to target hazards in Potter and Randall Counties. As a participant in the *Panhandle Region Mutual Aid Agreement*, the department will also provide mutual aid response, when requested, to incidents that occur anywhere in the Texas Panhandle.

The EMS program is guided by the EMS training lieutenant working under the supervision of the department's training chief. As of April 2017, all 16 frontline fire suppression apparatus are staffed and equipped to deliver 24/7 Advanced Life Support (ALS) services in all response districts. Additionally, the department's 39 paramedics are authorized by the medical director to perform paramedic level skills once an ALS ambulance arrives on scene. Amarillo Medical Services (AMS), which is owned and operated by American Medical Response (AMR), provides patient transport within the city limits.

Seven of the department's firefighters are attached to the Amarillo Police Department's SWAT team as tactical paramedics. These firefighters have volunteered to work in direct contact with the SWAT team and enter with them into hostile environments. They are specially trained to treat wounds caused by gunshots and explosive devices.

Training

All AFD firefighters are certified emergency medical technicians by the Texas Department of State Health Services (DSHS). The department requires personnel to hold, at a minimum, an Emergency Medical Technician-Basic (EMT-B) certification. However, personnel are encouraged to seek higher certification, on a voluntary basis, through department-sponsored EMT-Intermediate (EMT-I) and EMT-Paramedic (EMT-P) classes. These firefighters must pass the National Registry's written test and skill's examination to be certified by DSHS.

Currently, the number of personnel holding each level of certification is:

- EMT-B: 151
- EMT-I: 71
- EMT-P: 39

To retain certification, DSHS requires EMT's to complete continuing education. The number of required hours in the four-year period between certification each renewal is based on the EMT's level of certifications:

- EMT-B: 72 hours
- EMT-I: 108 hours
- EMT-P: 144 hours (with *Advanced Cardiac Life Support* and *Pediatric Advanced Life Support* refresher classes every two years)

In addition to the continuing education required by DSHS, all firefighters must complete the American Heart Association's cardiopulmonary resuscitation course every two years.

The firefighters assigned to the Tactical Medics Program must complete a 16-hour Tactical Casualty Combat Care (TCCC) course. Continuing education for team members includes approximately 40 hours of classroom and scenario-based training each year.

Apparatus and Equipment

The EMS Program is based out of Fire Station #1. The crews at this station maintain the department's inventory of replacement medical equipment and supplies as well as the AFD's mass casualty trailer. In addition to carrying ALS supplies, all frontline fire apparatus carry external defibrillators (AEDs), continuous positive airway pressure (CPAP) devices, and Active-Shooter Response Kits (ARKs). The mass-casualty trailer is supplied and equipped to treat 140 patients, which is the approximate number of people that could be on board the type of Boeing 737 aircraft that is regularly scheduled to operate out of Rick Husband Amarillo International Airport.

Technical Rescue

The AFD has a Technical Rescue Team available to respond to emergency incidents requiring advanced rescue skills and equipment. The program, which is led by a district chief, consists of 41 firefighters who, as a team, perform at the Rescue Technician level. The Rescue Team responds to incidents within the city limits of Amarillo and, through automatic aid agreements, to target hazards in Potter and Randall Counties. As a participant in the *Panhandle Region Mutual Aid Agreement*, the AFD Technical Rescue Team will also provide mutual aid response, when requested, to rescue incidents in the 26 counties of the Texas Panhandle.

The Technical Rescues Team's primary scope of work includes emergency response to incidents involving rope rescue, search and rescue (structural collapse), confined space, vehicle, water, trench and excavation, and machinery entanglement. Additional duties required of team members includes maintaining the program's specialized equipment, performing maintenance and repairs on the AFD's hydraulic rescue tools and training fire department members on rescue procedures and skills.

All department firefighters are capable of working within the incident command organization during rescue operations. The primary responsibilities for all non-team firefighters at a rescue incident are to recognize on scene hazards, isolate and deny entry into the danger zone, and supporting the technical rescue team as needed.

Training

The Technical Rescue Team's training follows the guidelines set forth for Technician Level as defined in NFPA 1670: *Standard on Operations and Training for Technical Search and Rescue Incidents*. Annually, all team members attended a minimum of 24 hours of specialized training in the technical rescue disciplines that are specific to the hazards in Amarillo and the surrounding area. Firefighters who are not on the rescue team are trained to work at the Operations Level at vehicle extrication incidents. They are trained to operate at the Awareness level at incidents involving the other rescue disciplines: water rescue, trench rescue, rope rescue, structural collapse search and rescue, confined space, and machinery entanglement incidents. All firefighters receive a minimum of four hours of rescue training each year.

Apparatus and Equipment

Technical Rescue Team members operate out of Fire Stations #3 and #13 and across each of the three shifts. The crews at Station #13 are assigned to the rescue pumper, which carries light rescue equipment, on a daily basis. The firefighters cross-staff the heavy rescue Urban Search and Rescue (USAR) tractor/trailer. The Technical Rescue Team's specialized equipment includes shoring lumber and breaching and breaking equipment for structural collapse, an Arizona Vortex for confined space rescue, Paratech shoring and Speed Shores/Fin Form systems for trench rescue, supplied-air respiration system (SARS), life safety rope, cold and swift water rescue equipment, and low-pressure air bag systems.

Hazardous Materials Response

The AFD has a dedicated FEMA Type II Hazardous Materials (HazMat) Response Team available to respond to emergencies involving hazardous materials. The AFD has 29 personnel directly assigned to the team, which is led by a district chief. The HazMat team responds to incidents within the city limits of Amarillo, and, through automatic aid agreements, to target hazards in Potter and Randall Counties. As a participant in the *Panhandle Region Mutual Aid Agreement*, the AFD HazMat team will also provide mutual aid response, when requested, to incidents that occur in any of the 62 municipal and 26 county jurisdictions located in the Texas Panhandle.

The HazMat team's scope of work includes identification, control and mitigation of biological hazards; Chemical, Biological, Radiological, Nuclear, and energetic material (CBRNE); and the nine hazard classes as identified by the Department of Transportation.

Training

HazMat Team members are certified at the Hazardous Materials Technician level as required by the Texas Commission on Fire Protection. Annually, members of the HazMat team complete three 8-hour scenario-based training days. In addition to these training days, each team member is required to complete at least eight continuing education hours to maintain the technician level certification. All other AFD operations personnel are required to be trained to the Awareness or Operations level, and they are required by department policy to take the same eight hours of continuing education as personnel with technician level certification. In the first quarter of each year, all AFD employees are required to have two hours of OSHA's Hazardous Communication (Standard 1910.1200) refresher training.

Apparatus and Equipment

The team members operate out of Fire Stations #2 and #8 and across each of the three shifts. The HazMat Response Team cross-staffs a dedicated hazardous materials vehicle, HazMat-1, with a four-person fire suppression engine crew. HazMat-1 carries research computers and print materials, a full complement of personal protective equipment, monitoring and detection devices, supplies to confine or contain hazardous substance releases, and equipment to establish a three-station decontamination operation for entry teams. The HazMat team also utilizes a mass decontamination tractor-trailer with an inventory of supplies to decontaminate up to 400 victims.

Major technical equipment assigned to the HazMat team includes a First-Defender RMX and Tru-Defender detector to identify the presence of unknown substances. These devices are an integral part of the emergency response team toolbox, providing critical and immediate response with accurate chemical identification. The team has a Razor Bio Identification system capable of identifying biological substances used in weapons of mass destruction. An AP2Ce is also available to detect chemical agents used that can be used as weapons.

Aviation Rescue and Firefighting Services

The AFD has an Aircraft Rescue and Fire Fighting (ARFF) Program responsible for aircraft-related emergency incidents. The program is led by a district chief who manages the 21 personnel directly assigned to Fire Station #10, which is located on Rick Husband Amarillo International Airport property. To provide operational support and reserve staff, another 49 ARFF-certified personnel are assigned to Fire Stations #6 and #7, the two fire stations nearest the airport. In addition to delivering ARFF response services, the personnel assigned to Fire Station #10 also provide ALS-level emergency medical services and respond to all other incident types, such as structural firefighting, wildland firefighting and operational level rescues.

Training

The AFD requires all personnel assigned to the ARFF Program to be trained, at a minimum, to the Texas Commission on Fire Protection's level of *Basic Aircraft Rescue Fire Suppression*. All personnel in the program also meet the training requirements set forth in the Federal Aviation Regulation (FAR) part 139, which includes 11 subject areas and an annual pit fire burn. The ARFF personnel complete 40 hours of annual training to maintain certification requirements. Each person who operates the ARFF vehicles is required to complete an additional 12 hours of specialized driver/operator training, and another six hours for the vehicle with a High Reach Extendable Turret (HRET).

Apparatus and Equipment

The AFD has four ARFF-specialized apparatus, two of which are reserves, to meet the Index B rating for Rick Husband Airport. These vehicles carry a minimum of 1,500 gallons of water, 180 gallons of foam, and 450 pounds of Purple K firefighting agent. Red 3, one of the reserve apparatus, has a High Reach Extendable Turret, or "snozzle." Also located at Fire Station#10 are an SUV-type command unit, a frontline fire engine, a Type 3 wildland firefighting vehicle, and the AFD's Rehab Unit. Major equipment dedicated to the ARFF Program includes a set of air-stairs, cockpit trainers, high-pressure airbags, and specialized extrication tools.

Wildland Fire Services

The AFD has a Wildland Firefighting Program responsible for wildland mitigation and suppression operations in wildland-urban interface (WUI) areas inside the city and the surrounding Extraterritorial Jurisdiction. Because the department is a participant in the *Panhandle Region Mutual Aid Agreement*, the team will also provide mutual aid response, when requested, to incidents that occur in any of the 26 counties in the Texas Panhandle. A district chief manages the wildland program and the other 39 AFD firefighters on the Wildland Firefighting Team.

The AFD has also committed as a state resource through the Texas Intrastate Fire Mutual Aid System (TIFMAS). Although TIFMAS responders are considered to be all-hazard assets, statewide callouts have primarily been for wildfire and weather-related emergencies. In addition to the 40 firefighters on the wildland team, another ten AFD firefighters are members of the department's TIFMAS response team.

The scope of work for the Wildland Firefighting Team begins with protecting life and property though WUI mitigation techniques, including public education employing *Firewise Communities* and *Ready, Set, Go* programs, trash removal, brush and grass trimming, as well as limbing up and falling trees. The team's wildland fire suppression activities include implementing direct and indirect firefighting techniques and structural protection. Team members are the department's specialists in implementing safety controls during wildfire operations, particularly Lookouts, Communications, Escape routes, and Safety zones (LCES). The team is also charged with developing operational tactics and procedures, monitoring and reporting the department's wildfire response effectiveness, maintaining the program's specialized personnel protective equipment/tools/radios cache, and teaching National Wildland Coordinating Group (NWCG)-based training to all department members.

All operational members of the department are capable of working within the incident command organization during wildfire operations. In addition to incident command responsibilities, the primary duties for all department firefighters are establishing tandem pump-and-roll operations and providing structural protection.

Training

All team members hold NWCG Firefighter Type 2 or higher qualifications. Annually, each member attends safety refresher training, which includes fire shelter practice. As proof of skills and capabilities, team members also complete specialized task books, such as those for Wildland Firefighter Type 1, Engine Operator, Engine Boss, or Incident Commander Type 5. To retain NWCG qualifications, each member must have at least one qualifying assignment every three years.

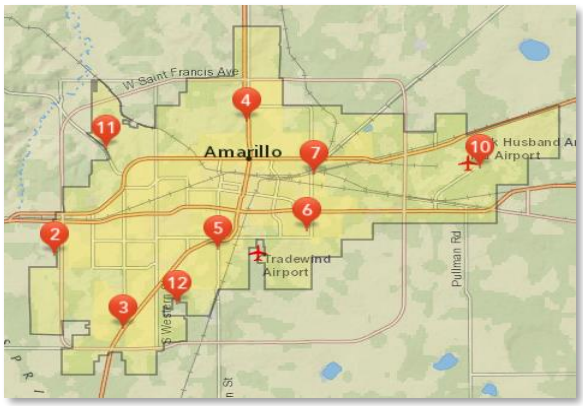
All AFD firefighters have taken NWCG *Introduction to Wildland Fire Behavior* (S-190) and *Fire Training–Blended* (S-130) training.

Apparatus and Equipment

The Wildland Firefighting Program's personnel are based out of Fire Station #11. The crews assigned to the fire engine cross-staff a Type 6 engine for wildland operations. Wildland-2 is a reserve apparatus that carries equipment and supplies for mitigation projects.

The department cross-staffs seven other Type 3 engines at each of the stations that border the perimeter of the city. At Fire Station #2, on the western boundary of the city, the crews cross-staff a Type 6 engine. Another vehicle, Wildland-1, is available for command support and reconnaissance during wildfire incidents. It is deployed as necessary by senior staff.

Figure 15 Fire Stations with Wildland Apparatus



The wildfire program utilizes an enclosed trailer for equipment maintenance in the field. Other specialized gear includes fire line packs, fire shelters, hand tools, portable pumps, hose and nozzles, chainsaws, brush cutters and drip torches.

Community Risk Reduction

Fire Marshal's Office

Leading community risk reduction for the AFD is the Amarillo Fire Marshal's Office (FMO). The Fire Marshal provides leadership, strategic planning and administrative management to four peace officers and three civilian employees that perform the functions of fire investigations and fire/life safety inspections.

The scope of work for the FMO is divided into three major components:

- The Fire Investigation Program provides fire origin and cause investigative services. The officers investigate all fire-related injuries and fatalities. The program gives the AFD the opportunity to focus service delivery on the fire and life safety issues that directly impact the citizens of Amarillo. It also allows for appropriate prosecution of alleged arsonists.
- The FMO's Inspections Program provides a multi-faceted approach to fire prevention by providing plans review, inspection, and testing services to property and business owners in Amarillo. The goal is to provide the highest quality of professional services to assist the public with ordinance, fire code, and life safety code compliance. The personnel in the Inspections Program also conduct educational presentations and ensure schools meet the state-mandated requirements for fire drills.
- The Compliance Program provides training, coordination and assistance to FMO personnel to ensure they have the knowledge, skills, and abilities to safely and effectively prevent the loss of life and property through fire investigations, fire and life safety code enforcement, and peace officer duties. This officer also ensures the FMO is in compliance with statutory mandates and national standards.

Training

The FMO has five personnel that hold peace officer certifications from the Texas Commission on Law Enforcement (TCOLE). To acquire this certification requires the completion of a 728-hour educational credits course. The continuing education requirement to maintain the TCOLE peace officer certification is a minimum of 40 hours over a two-year cycle.

All eight personnel working in the Fire Marshal's Office are required to hold a Texas Commission on Fire Protection (TCFP) Basic Fire Inspector certification. The TCFP 196-hour basic inspector course curriculum is composed of Fire Inspector I, Fire Inspector II and Plans Examiner I. Continuing education requirements are 20 hours annually.

Apparatus and Equipment

The Fire Marshal and staff have offices at Fire Administration. In addition to office spaces, the facilities include an evidence storage room and two interrogation rooms. The FMO has six vehicles assigned to it: two 4 x 4 Expeditions, two Tahoe SSVs, a Suburban, and an F-150 pick-up. Special equipment utilized by the FMO personnel includes evidence collection equipment and supplies, a Grace combustible liquid detector, fingerprint kits, and mobile computers and tablets, which are used to assist both fire investigations and fire/life safety inspections.

Amarillo Fire Department Public Information Officer

Another facet of community risk reduction for the AFD, in addition to the FMO, is the department's Public Information Officer (PIO) position. The PIO duties are performed by a captain assigned to the Training Division and reports to the Training Chief. The PIO is responsible for Freedom of Information Act requests, media relations, community involvement, fire victim assistance, a smoke alarm program, and public fire and safety education. The department's PIO not only makes public safety presentations, but also coordinates several AFD members who have volunteered to work overtime at the Kid's Safety House presentations, community educational opportunities, career days, and other community relations events. In 2016, the Public Education Program reached nearly 39,000 citizens in Amarillo.

Apparatus and Equipment

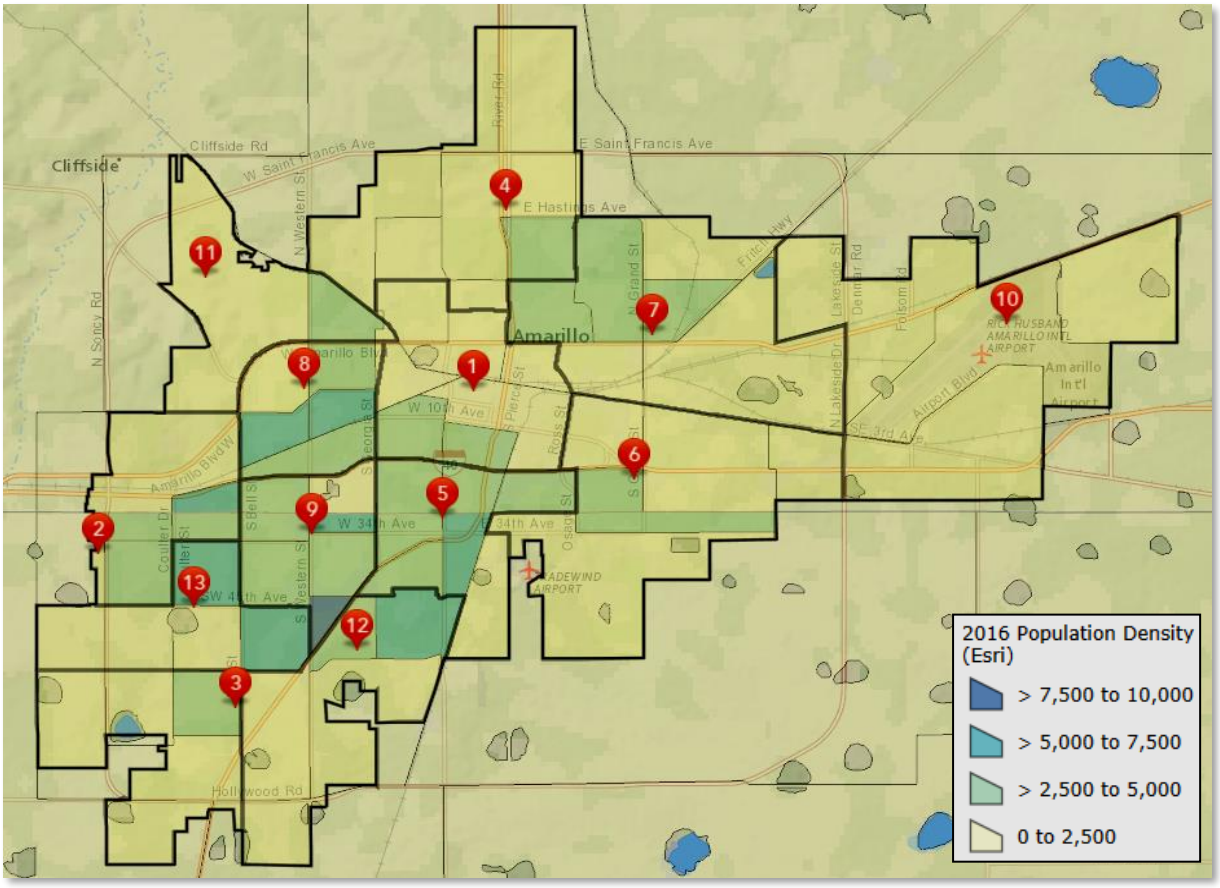
The PIO works at the Fire Administration building. The person in the position is assigned a Ford Fusion. The Public Education Program has a 35' Kid's Safety House trailer pulled by a Ford F-350 extended cab pick-up. The Safety House is used to present fire safety education to the third grades students at all Amarillo schools as well as many other community events, as requested. Specialized equipment used by in the public education program includes a Sparky the Fire Dog costume and a Bullseye Digital Fire Extinguisher Training System.

D. Current Deployment and Coverage Areas

Points of Service Delivery

The Amarillo Fire Department deploys emergency response resources from 13 fire stations located throughout the city. As shown below, the stations are concentrated in areas of high population densities.

Figure 16 Fire Station Locations with Population Density (2016)



E. Summary of Community Response History

The following charts and graphs summary the Amarillo Fire Department (AFD) response history between 2012 and 2016:

Figure 17 Total Incidents (2012-2016)

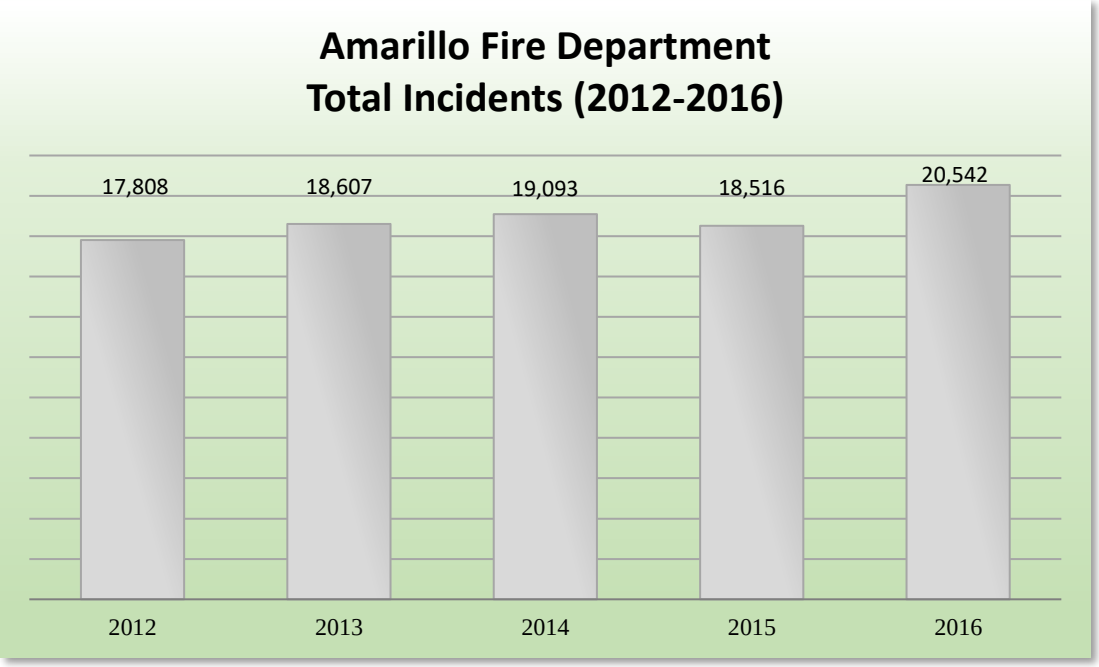


Figure 18 Incidents by Type (2012-2016)

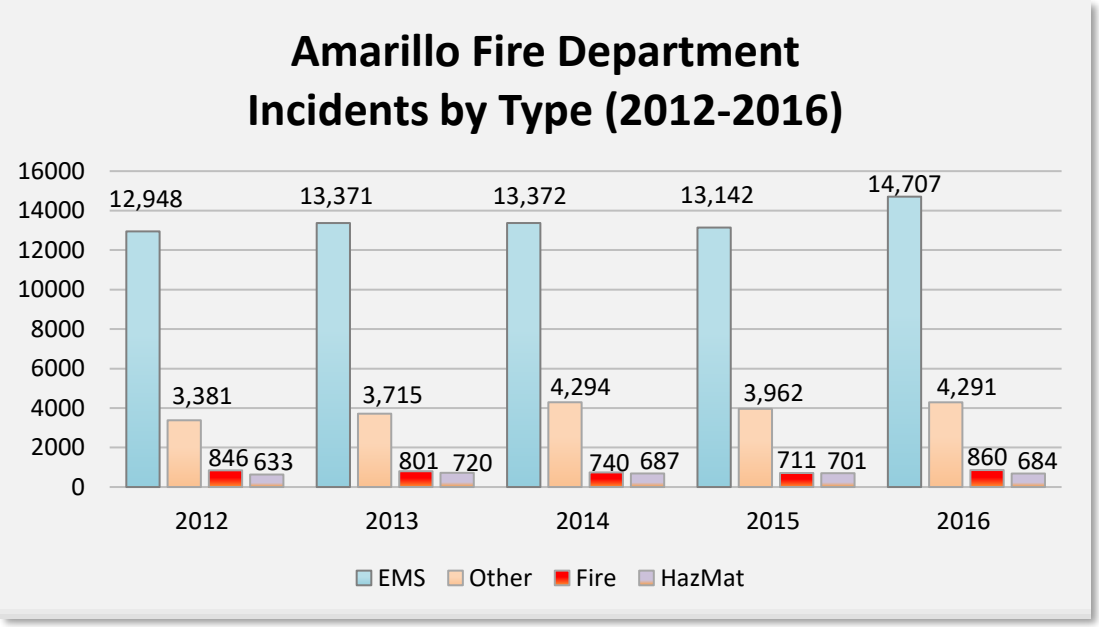


Figure 19 Incident by Month (2012-2016)

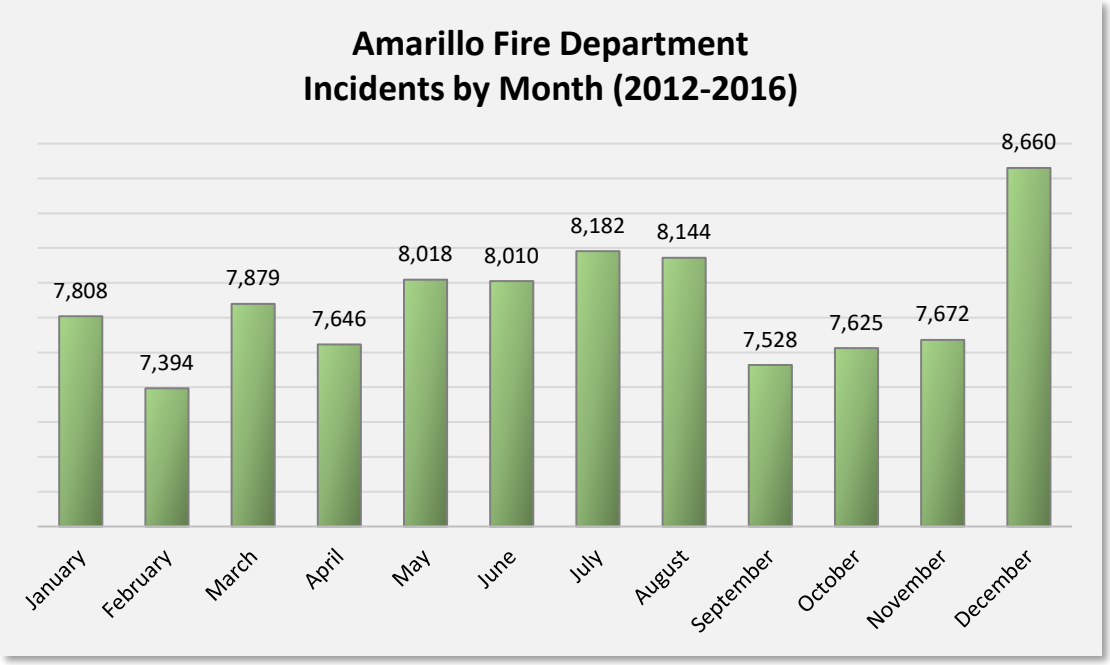


Figure 20 Incidents by Day of Week (2016)

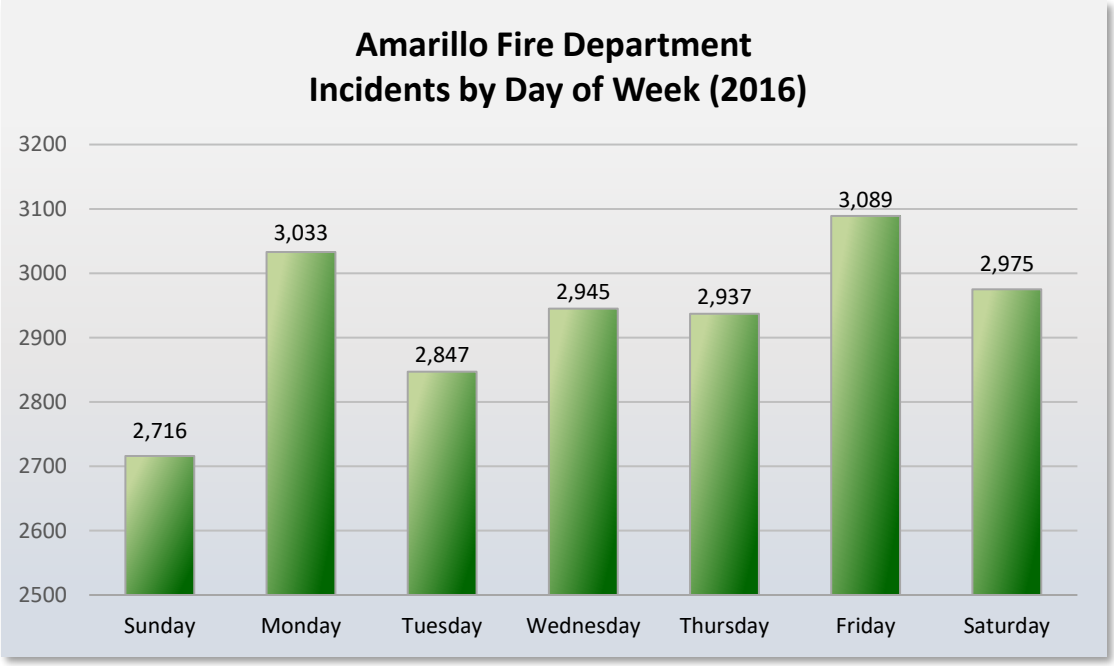


Figure 21 Incidents by Day of Week and Time of Day (2016)

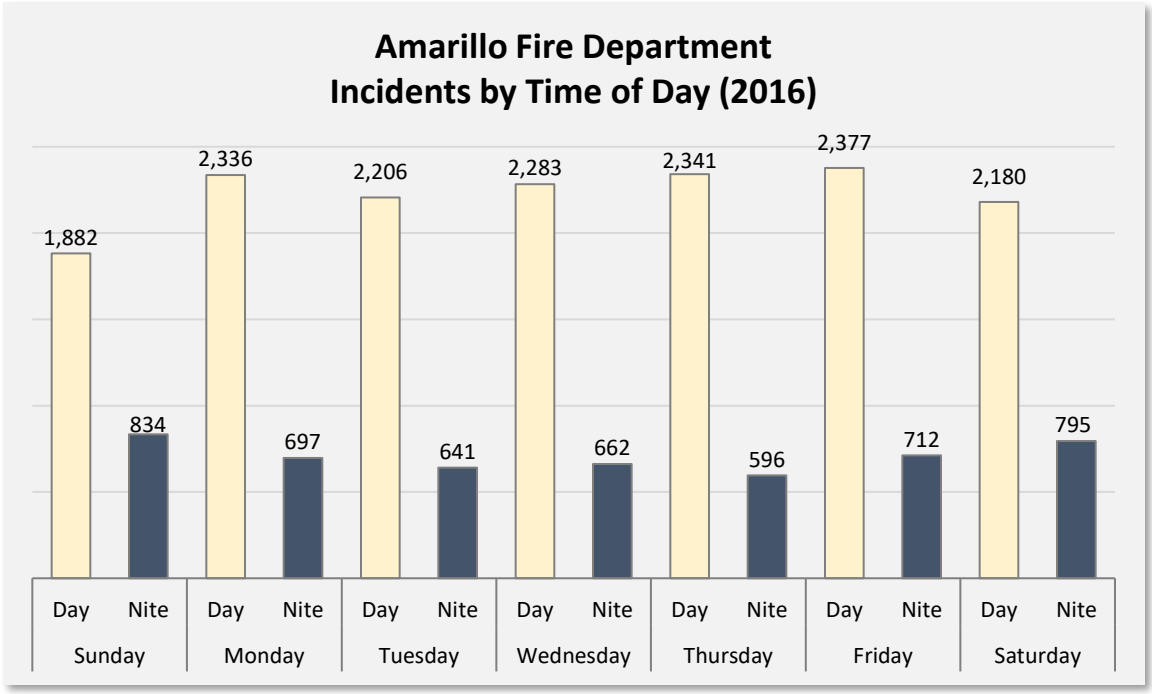
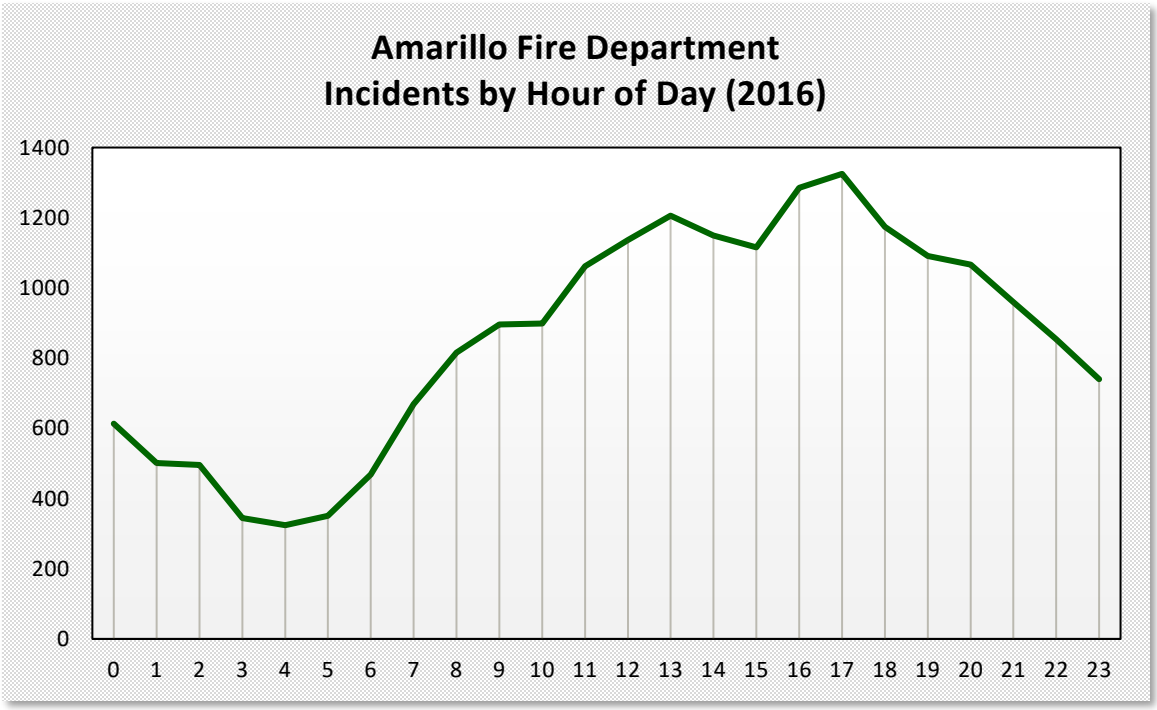


Figure 22 Incidents by Hour of Day (2016)



F. Community Priorities, Expectations, and Performance Goals

Mission Statement

In February of 2017, as part of the process to develop the Amarillo Fire Department's (AFD) strategic plan, the working group of AFD firefighters and civilian personnel reviewed and updated the mission statement that had been in place for nearly 20 years.

Figure 23 Amarillo Fire Department Mission Statement

Community Service Priorities

In February of 2017, the AFD also invited citizens and local public safety agency representatives to give their perspective on community priorities and expectations for the department that were to be included in the AFD's new strategic plan.

To best dedicate time, energy, and resources to services most desired by its community, the department needs to understand what the customers consider to be priorities for the AFD. With that, the external stakeholders were asked, through a process of direct comparison, to prioritize the programs currently being delivered by the department. The results were as follows:

Table 4 Community Priorities for Amarillo Fire Department Programs

Community Priorities		
Rank	**Program**	**Score**
1	Fire Suppression	229
2	Emergency Medical Services	217
3	Rescue – Basic and Technical	202
4	Wildland Fire Services	136
5	Hazardous Materials Mitigation	135
6	Domestic Preparedness Planning and Response	129
7	Aircraft Rescue and Firefighting	121
8	Community Risk Reduction	97
9	Fire Investigation	88
10	Public Fire and Life Safety Education	86

Community Service Expectations

Understanding what the community expects of its fire and emergency services organization is critically important to developing a long-range perspective. With this knowledge, internal emphasis may be redirected to fulfill the community needs. For some concerns, education on the level of service that is already available may be all that is required. The following is a list of the top ten expectations the citizens hold for the AFD:

Table 5 Community Expectation for Amarillo Fire Department Service Delivery

Rank	Community Expectations
1	Rapid Response to Emergency Incidents
2	Well-Trained, Knowledgeable Department
3	Professional Behavior - On and Off Duty
4	Active Community Involvement
5	Public Fire and Life Safety Education
6	First Class Service Delivery
7	Modern, Reliable Equipment and Facilities
8	Superior Emergency Medical Services
9	Collaboration with Public Safety Agencies
10	Provide for the Public's Safety

Historical Performance Goals

A rapid response to emergency incidents is the most important expectation the community identified for the AFD. The department historically considered a five-minute average response time met this expectation. This was primarily driven by the four-minute *travel time* maps the AFD developed for presentation during Insurance Service Office (ISO) inspections. However, performing a self-assessment for accreditation has made AFD administrators aware that reporting average travel time does not accurately reflect the entire progression of an emergency response. Performance measures that include *alarm time*, *turnout time*, and *travel time,* each based on 90th percentiles instead of averages, give the department and the public a more accurate measurement of response performance.

G. Community Risk Assessment and Risk Levels

Risk Assessment Methodology

Methodology (Probability/Consequence/Impact of Incident Risk)

The methodology employed by the department to assess community risk is an objective mathematical calculation based on an adaptation of Heron's Formula for Tetrahedrons (Figure 24). The formula considers the relativity between the probability of an incident occurring, the severity of the consequences it has on the community, and the impact the emergency response will have on the operations of the fire department.

The adaptation of Heron's Formula was applied to each of the department's emergency services (Fire Suppression, Emergency Medical Services, Technical Rescue, Hazardous Materials, Aircraft Rescue and Firefighting, and Wildland Fire Services) to calculate a value that numerically quantified four risk categories for each program: *Low*, *Moderate*, *High*, and *Maximum*. The department's methodology used a scale of 2 (*Low*) to 8 (*Maximum*) to represent the risk score for each of the formula's variables.

To determine the probability variable in Heron's Formula, each program's historical response data (2014-2016) was analyzed and scaled to develop the risk score. To establish the risk scores for the formula's second component, which addresses the consequences to the community, all ten district chiefs, the two deputy chiefs, and the fire chief were surveyed. These senior staff members used their fire service experience, which ranged between 18 and 30 years, to determine risk scores for the variable. The third factor of the formula, the impact to the department, was determined by a scaled (*2* through *8*) percentage of the 69 on-duty personnel that would be assigned to complete the critical tasks for each incident type and risk category. A sample of the calculation for a *Maximum Risk Technical Rescue* incident is shown below.

Figure 24 Heron's Formula Risk Assessment Calculation

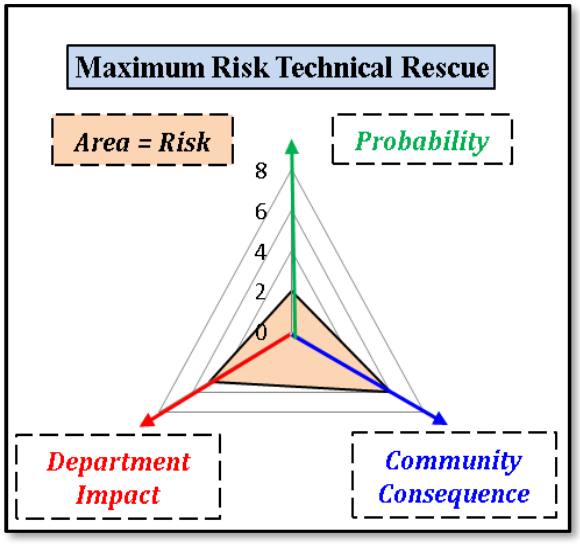
$$Risk \sqrt{\frac{(PC)^2}{2} + \frac{(CI)^2}{2} + \frac{(IP)^2}{2}}$$

Maximum Risk Technical Rescue	
Probability of Occurrence	2.00
Community Consequence	5.96
Department Impact	4.96
Heron's Formula Calculation:	**23.60**

The risks calculated by Heron's Formula can be illustrated by a three-axis graphic display (Figure 25). The Y-Axis of the model represents the *Probability of Occurrence*, or the relative threat that an incident of the service program's classification and the associated risk category will occur. The X-Axis indicates the *Community Consequences*, or the life safety, physical damage and financial losses the community could sustain as a result of the emergency incident. The Z-Axis of the model

represents *Department Impact,* which is the direct impact an incident may have on the agency or fire department. The impact risk score is reflective of the resources required to complete the critical tasks associated with engaging the hazard and the subsequent drain effect this has on the department's overall deployment and coverage capabilities. The result of the formula's calculation (risk area) is depicted by the triangular shape created by the risk scores ascribed to points on each of the three axis.

Figure 25 3-Axis Display of Heron's Formula Risk Assessment Calculation



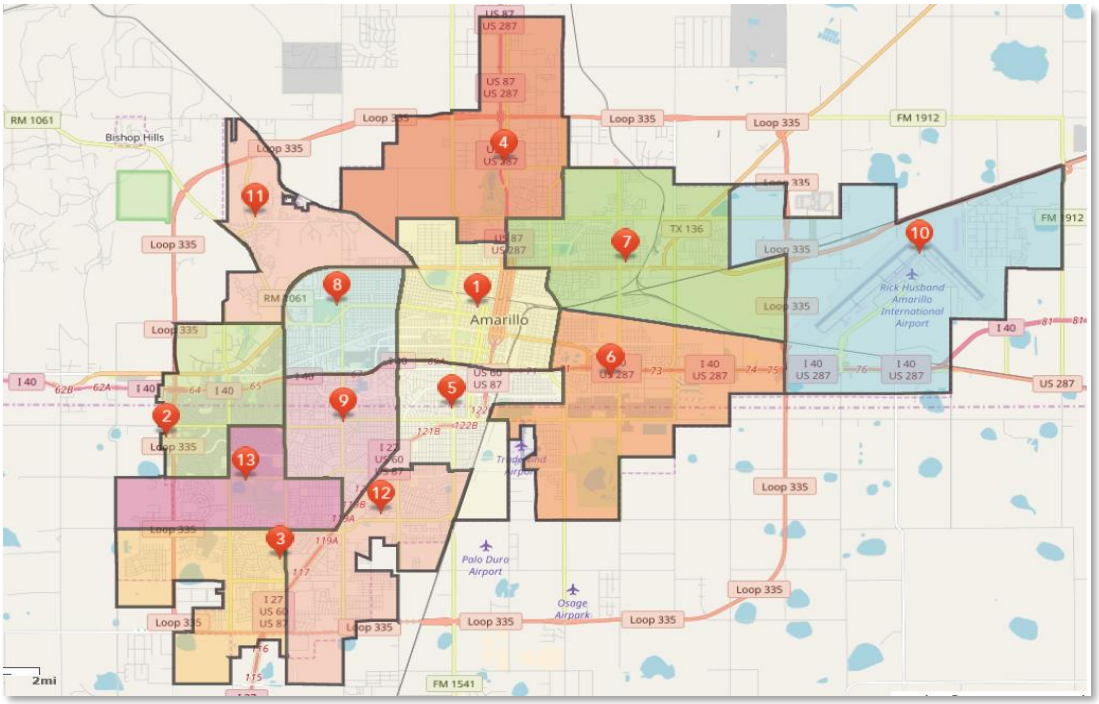
Planning Areas/Zones

The department employs two methodologies to organize response areas within the City of Amarillo. Both the *Fire Station Districts* and the *Geographic Planning Zones* (GPZ) divide the city into geographical sections that allow the department to analyze demographic information, risk potentials, and emergency response data to more precisely establish operational direction, policies, goals and objectives.

Fire Station Districts

The first type of geographically organized planning zone model used by the department is *Fire Station Districts* (previously identified in *Description of Department*). These district zones are based on the location of the 13 fire stations operated by the department (Figure 26). The districts are largely administrative in nature because the Amarillo Emergency Communications Center's (AECC) computer-aided dispatch (CAD) deploys the nearest emergency resources through an automatic vehicle locator (AVL) system.

Figure 26 Fire Station Districts



In addition to organizing information on emergency responses (Figure 27), potential risks, demographic data and the physical features of each district, the model also allows for the distribution of workload, such as pre-incident planning and hydrant maintenance, to the companies assigned to each fire station.

Figure 27 Risk Class Incidents by Fire Station District (2014-2016)

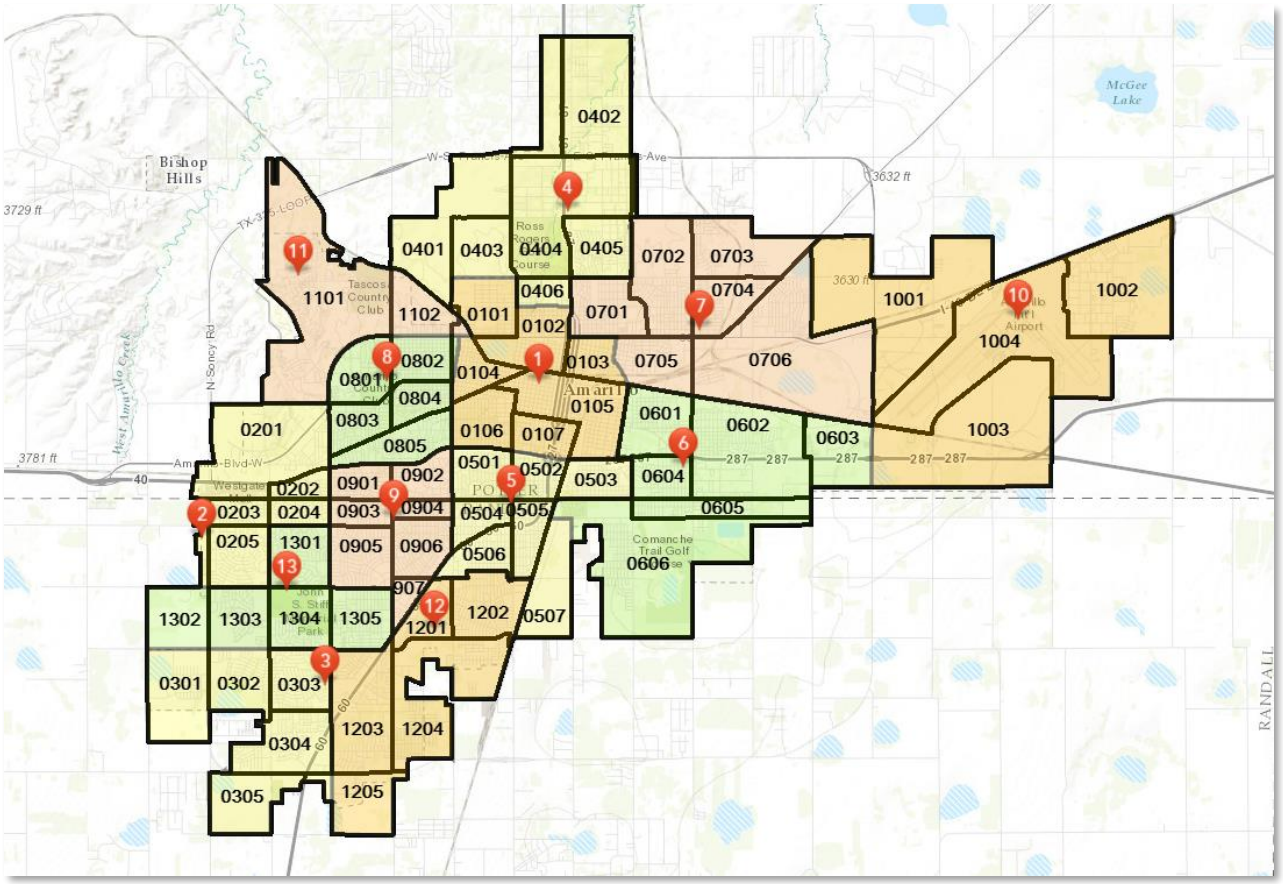
Incidents Volumes by Type for Each Fire Station Response District (2014-2016)										
Scale	Fire District	Fire	EMS	Rescue	HazMat	ARFF	Wildland	Other Emergencies	Non-Emergencies	Total
Most	1	324	6459	47	231	0	34	17	2064	9177
	2	112	3891	38	160	0	17	6	1599	5825
	3	60	1448	12	86	0	15	4	520	2148
	4	128	2246	7	105	0	50	1	502	3043
	5	176	3110	18	187	0	23	5	901	4425
	6	254	3715	7	201	0	48	3	1052	5286
	7	282	4889	10	231	0	46	4	1356	6825
	8	180	4150	12	206	0	24	2	1184	5766
	9	158	4710	30	207	0	14	9	1279	6416
	10	29	678	6	30	82	26	0	195	1056
	11	36	873	7	61	0	11	1	436	1436
	12	127	2498	6	168	0	13	5	714	3543
Least	13	72	2331	16	115	0	9	9	647	3212
	Total	1938	40998	216	1988	82	330	66	12449	58158

**The heat map table compares each Risk Class (columns) against each Fire Station District.*

Geographic Planning Zones

The second type of geographic area that allows the department to analyze information and response data in more detail are 72 *Geographic Planning Zones* (GPZ), which are based on the 57 census tracts established by the U.S. Census Bureau within the city limits of Amarillo. Several of the census tracts are split into different GPZs because they either border the city limits and are not contiguous or are located in two different fire station districts.

Figure 28 Fire Station Districts and Geographic Planning Zones



Each GPZ is assigned a four-digit number that identifies the fire station district in which it is located with the first two numbers and, with the second two numbers, the order number within the district. As an example of this system, Census Tract 216.06 is the third of five census tracts in Fire Station District 3, and is identified as Geographic Planning Zone 0303 (Figure 29).

Figure 29 Fire Station District 3 with Geographic Planning Zones

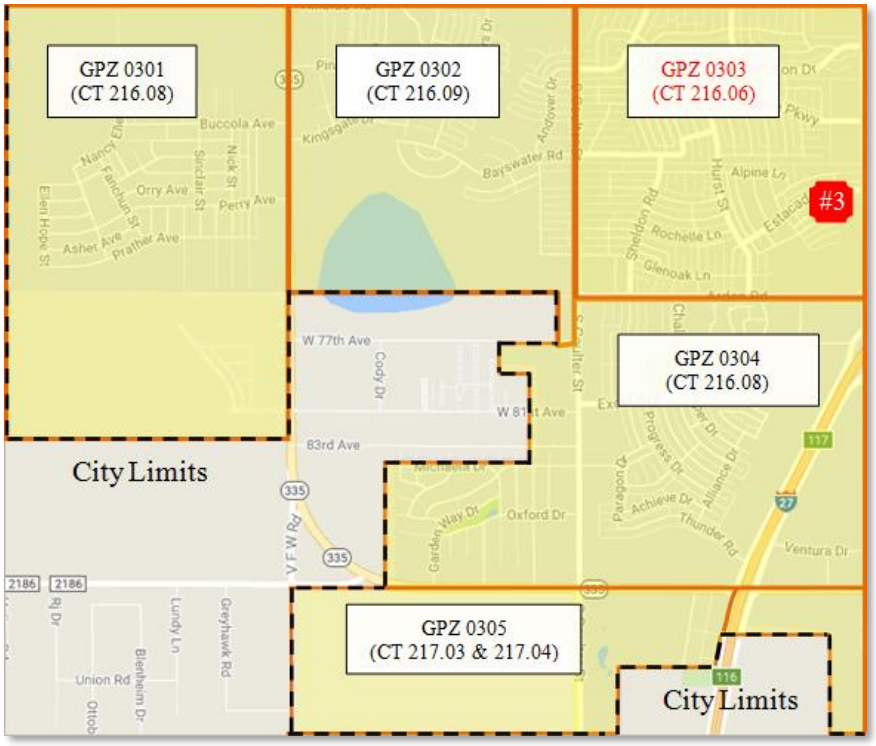
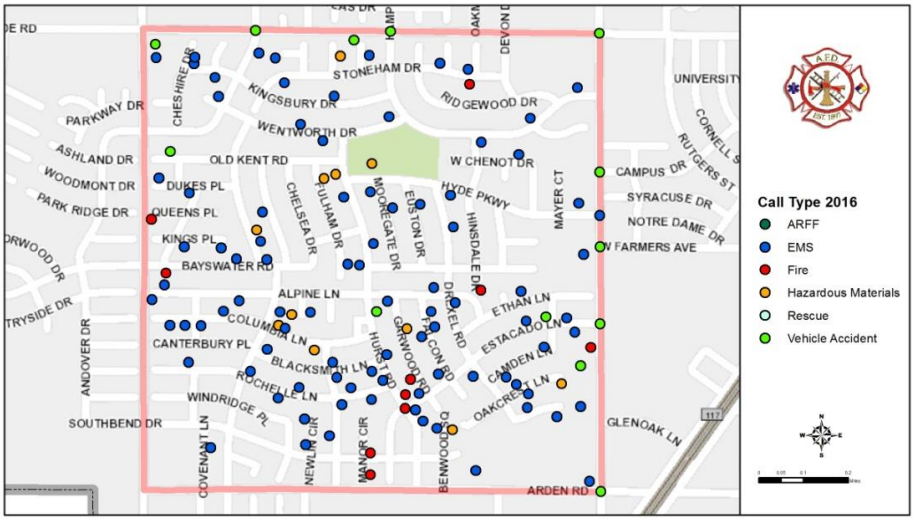


Figure 30 is an example GPZ established by the department to evaluate and document the geographic, demographic, and statistical information of each planning zone. A complete set of the department's GPZs is provided as Appendix A.

Figure 30 Sample Geographic Planning Zone

Geographic Planning Zone 0303 (Census Tract 216.06)

Estacado West/Windsor Square/South Park



Zone Profile:

North: Hillside Road
South: Arden Road
East: Bell Street
West: Coulter Street
Area: 1.05 sq. miles
Pop. Density: 4,679/mi^2
Pop. Rating: Urban
Roadways: 21.2 miles

Zone Description:

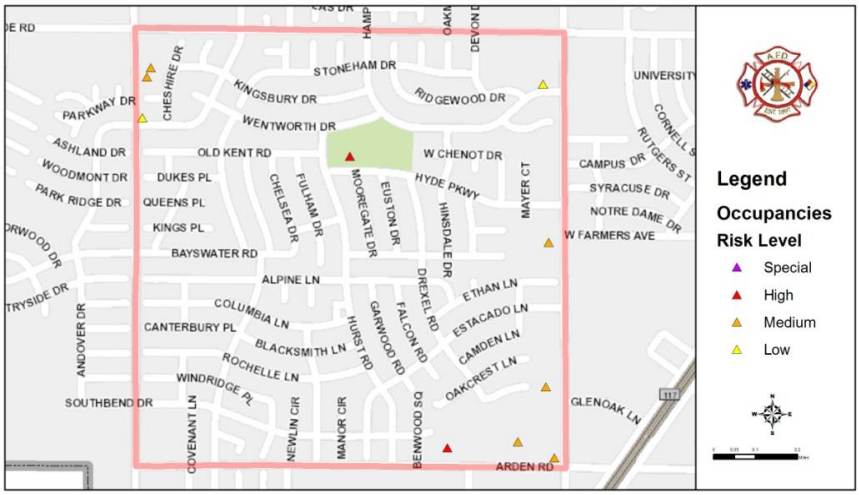
This is a residential area with a majority of it comprised of single family residences. These homes are primarily of wood frame construction and built up to 4,161 square feet. Windsor Elementary School (grades PreK-5) is located on Hyde Parkway, and the school does not have an automatic protection system. Other significant risks in GPZ 0303 include Stonegate Apartments, Victory Church, Victory Academy and Pinnacle Community Church. Light retail properties are located on the GPZ's boundary roadways.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	21	150	0	6	22
2015	9	131	3	9	35
2016	18	148	0	12	37
Total	48	429	3	27	94

Occupancy Risk Level

Risk	Number
Low Risk	2
Moderate Risk	6
High Risk	2
Special Risk	0

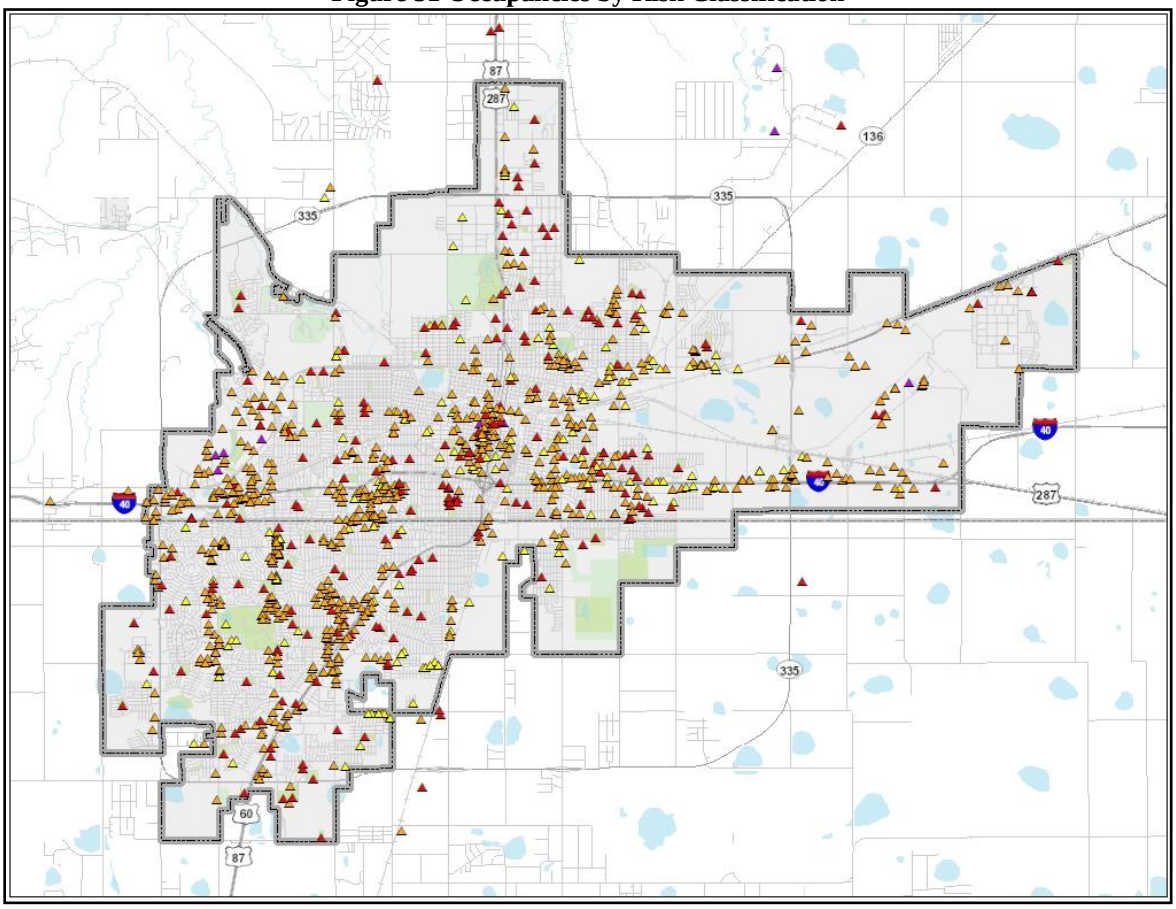


In addition to documenting demographic, geographic and emergency response information, risk assessments of critical infrastructure and commercial/industrial properties located within each GPZ determined a risk level associated with the evaluated structure or occupancy. The department uses the *RAFER Model Assessment* to determine the applicable risk classification of the 1,247 citywide occupancies for which the department has conducted pre-incident planning inspections. The RAFER methodology establishes *Occupancy Risk Classifications* based on the life safety hazard, occupancy type, hazard index, type of construction, building size, available firefighting water supply, and the impact that an emergency incident involving the assessed property could have on the community. The RAFER model identifies three risk classifications (*Low*, *Moderate*, and *High*) using a scale of 8 to 24:

- *Low Risk* (8-12 Score): Infrastructure and occupancies within this classification have a minimal probability of life safety and community impacts and have minimal construction, size, and incident complexity concerns.
- *Moderate Risk* (13-19 Score): Infrastructure and occupancies within the moderate risk classification have the potential for significant life safety and community impacts and may present operational difficulties for emergency responders due to construction types, size (up to 15,000 square feet), or hazards associated with the occupancy's use and processes.
- *High Risk* (20-24 Score): Structures and facilities within this classification have a high potential for life safety and community impacts. Emergency incidents will likely be complex and present operational challenges associated with multiple stories (3 or more) and expansive sizes.
- *Special Risk*: Although the RAFER assessment model only identifies the three risk classifications listed above, the department determined the need for a fourth level of risk for extreme life safety loss and community impact potentials. Such risks include major medical facilities, large assembly occupancies, or critical infrastructure that could present irreplaceable or catastrophic loss impacts to the community. Special Risks are considered to be an occupancy or structure rated as having a *High Life Hazard* (>99 occupants) combined with a *Severe* [Community] *Impac*t in the RAFER assessment.

Figure 31 identifies the occupancies that were evaluated for risk within the City of Amarillo and the surrounding Extraterritorial Jurisdiction. These occupancies are more precisely detailed as part of the risk assessments for each Geographic Planning Zone (Appendix A).

Figure 31 Occupancies by Risk Classification



Risk Assessment

Fire Suppression Services

The Amarillo Fire Department (AFD) continually staffs 13 engines and 3 quints as active fire suppression companies. Each fire crew is assigned a minimum of four personnel: an officer, a driver/operator, and two firefighters. Other than being able to operate an aerial device, ladder (quint) companies and fire engine companies are expected to perform the same tasks for each of the department's service delivery programs (i.e., fire suppression, emergency medical services, technical rescue, etc.)

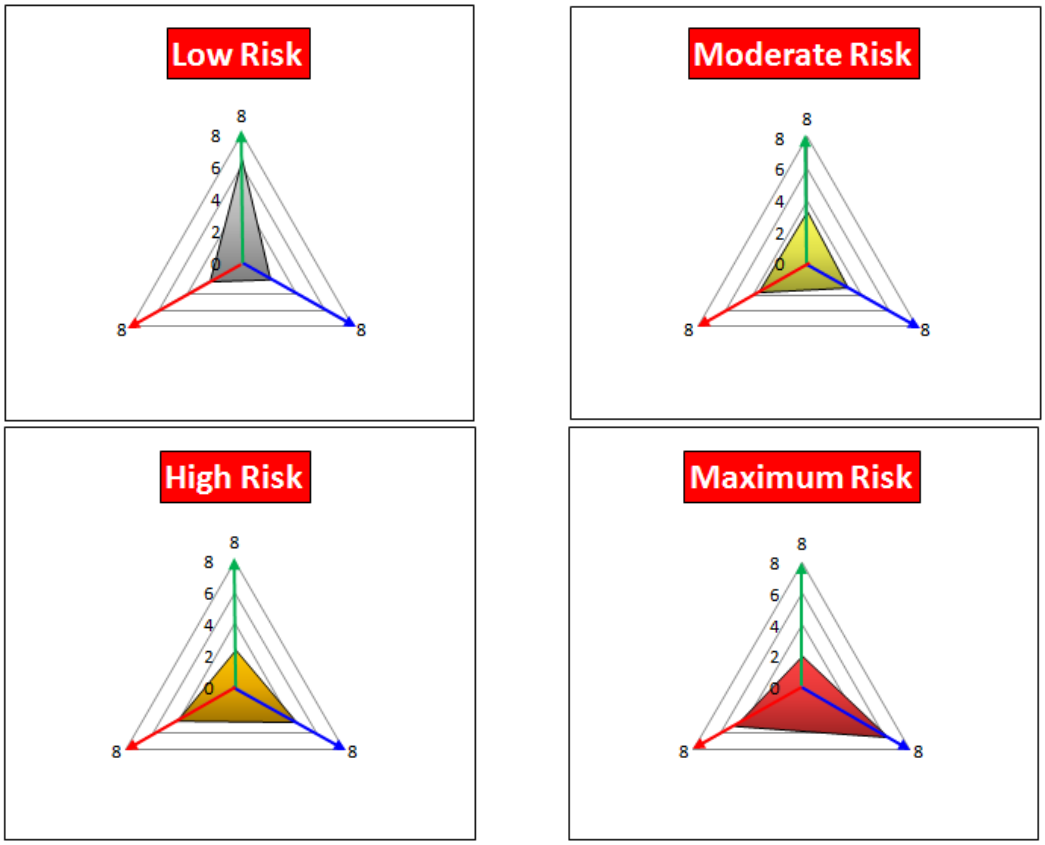
For low risk fires, the closest fire engine or quint apparatus is assigned to investigate and, if necessary, extinguish the fire. For moderate risk and higher fires, the department commits suppression resources using a deployment system from *1st Alarm*, which assigns four fire apparatus and two command staff units, to *3rd Alarm*. Each increase in level adds, at a minimum, two fire suppression companies and two command personnel. The next and highest level available beyond the *3rd Alarm* is a *General Alarm* to call back off-duty personnel and/or request mutual aid. The Risk Category levels are detailed in *Risk Classification and Categories*.

Table 6 Fire Suppression Incidents by Risk Category

Fire Suppression				
	2014	**2015**	**2016**	**Total**
Low Risk	315	293	325	933
Moderate Risk	214	235	248	697
High Risk	46	48	42	136
Maximum Risk	6	2	8	16

The assessment conducted for the fire suppression risk in the community considered the probability of a fire occurrence based on historical response data, the consequences such fires could have on the community, and the impact the commitment of resources would have on the department. The assessment (Figure 32) included all fire incident types except vegetation fires, which were included in *Wildland Firefighting Services* and aircraft fires, which are in *Aircraft Rescue and Firefighting Services*.

Figure 32 Fire Suppression Risk Assessments



Emergency Medical Services

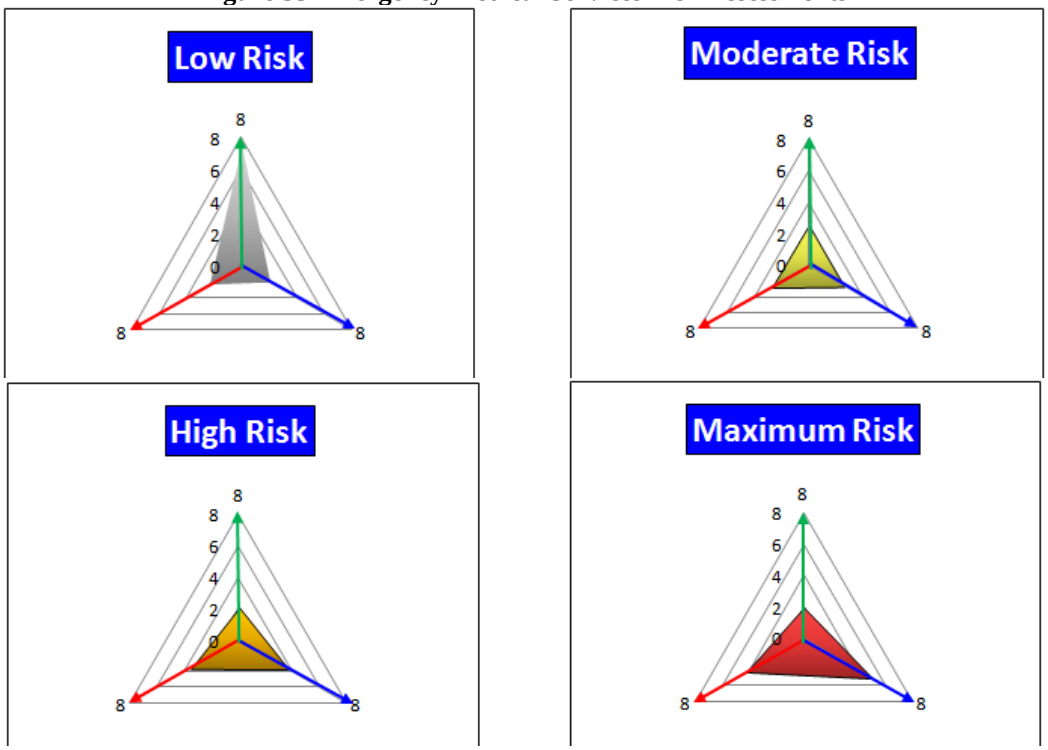
The AFD is a First Responder Organization that provides non-transport Basic Life Support (BLS) and Advanced Life Support (ALS) emergency medical services (EMS). At least one ALS-certified firefighter is assigned to each of the department's 16 frontline fire suppression engines and quints each shift. Ambulance transport services inside the City of Amarillo are provided by a permitted third-party private entity, Amarillo Medical Services, which is owned by American Medical Response. The department responded to 40,296 medical emergencies during 2014-2016, which was 70.5% of the total call volume.

Table 7 Emergency Medical Services Incidents by Risk Category

Emergency Medical Services				
	2014	**2015**	**2016**	**Total**
Low Risk	10896	9977	10883	31756
Moderate Risk	1935	2626	3252	7813
High Risk	192	237	293	722
Maximum Risk	2	1	2	5

The assessment conducted for the EMS risk considered the probability of an occurrence based on historical response data, the consequences such emergencies could have on the community, and the impact the commitment of resources would have on the department. The assessment included all motor vehicle accidents except those in which victim extrication was performed. Incidents requiring extrication were instead considered in *Technical Rescue Services*.

Figure 33 Emergency Medical Services Risk Assessments



Technical Rescue Services

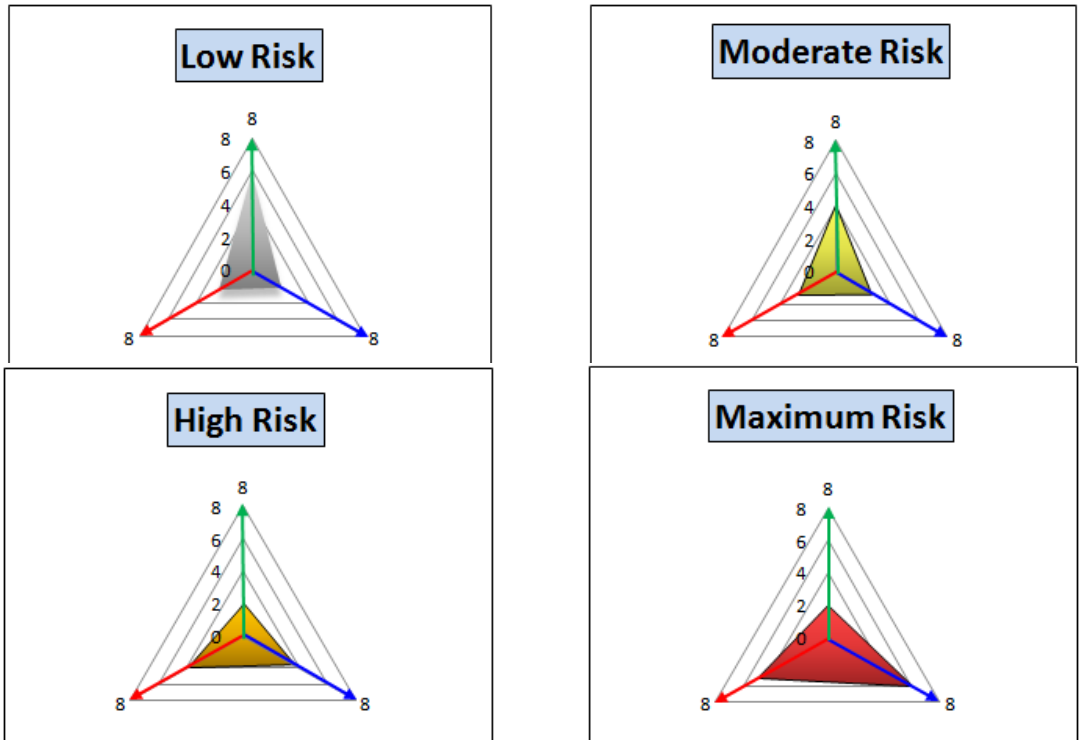
The AFD delivers 7 of the 13 rescue disciplines listed in National Fire Protection Association 1670: *Standard on Operations and Training for Technical Search and Rescue Incidents*. The seven disciplines include rope rescue, structural collapse, confined space, vehicle extrication, water rescue, trench rescue, and machinery extrication. The primary threat to the community, other than stalled elevators, is swift water associated with flash flood events. The rescue incident type that poses the greatest catastrophic threat to Amarillo and the region is that of tornados. The two counties that bisect Amarillo experienced 110 reported tornados between 1950 and 2015.

Table 8 Technical Rescue Incidents by Risk Category

Technical Rescue				
	2014	**2015**	**2016**	**Total**
Low Risk	31	48	29	108
Moderate Risk	33	31	23	87
High Risk	0	2	1	3
Maximum Risk	0	0	0	0

The assessment conducted for the technical rescue risks in the community considered the probability of an occurrence based on historical response data, the consequences technical rescue emergencies could have on the community, and the impact the commitment of initial response resources would have on the department. Motor vehicle accidents that required victim extrication were classified as rescue incidents for the purpose of the risk assessment.

Figure 34 Technical Rescue Risk Assessments



Hazardous Materials Services

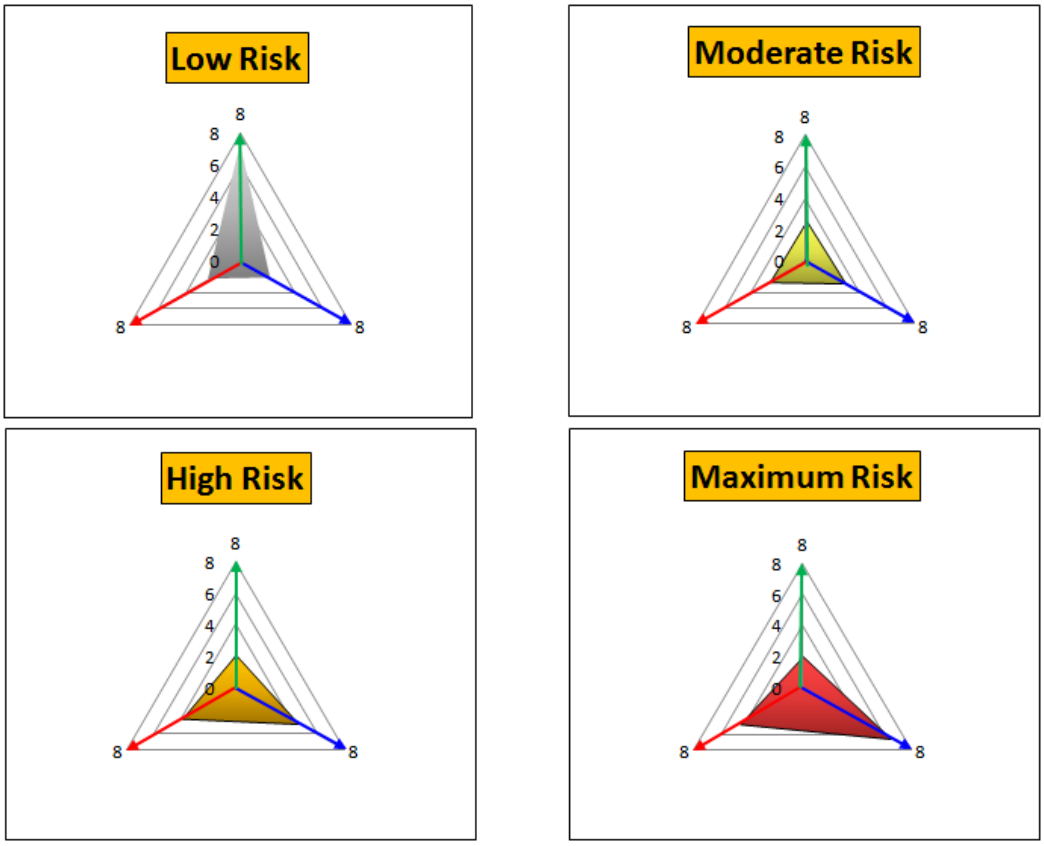
Due to the extent of fixed commercial and industrial facilities, agricultural businesses, and transportation systems that exist in the region, there is a significant potential for the release of dangerous and toxic substances that could pose a threat to emergency responders and the public in the Amarillo area. For instance, within the city and its 5-mile Extraterritorial Jurisdiction, there are 48 facilities that have Extremely Hazardous Substances (EHS) on location. In 2016, there were 222 facilities that submitted TIER II reportable quantities of hazardous materials (HazMat) to the Local Emergency Planning Committee.

Table 9 Hazardous Materials Incidents by Risk Category

Hazardous Materials				
	2014	**2015**	**2016**	**Total**
Low Risk	490	484	492	1466
Moderate Risk	89	119	121	329
High Risk	17	26	18	61
Maximum Risk	0	2	2	4

The assessment conducted for the HazMat risks in the community considered the probability of an occurrence based on historical response data, the consequences such emergencies could have on the community, and the impact the commitment of initial response resources would have on the department. A contributing factor to the assessment was the *Hazardous Materials Response Levels* detailed in *Annex Q: Hazardous Materials Response* of the *Amarillo/Potter/Randall Emergency Operations Plan*. The levels are based on an incident's intensity of threat to the public, the scale of evacuations required, and the amounts and types of response resources necessary to mitigate the emergency. The three categories are: *Level 1* (Potential Emergency Condition), *Level 2* (Limited Emergency Condition), and *Level 3* (Full Emergency Condition).

Figure 35 Hazardous Materials Risk Assessments



Aircraft Rescue and Firefighting Services

The AFD is responsible for the *Index B* Aircraft Rescue and Firefighting (ARFF) protection at the Rick Husband Amarillo International Airport, which provides year-round operations for general aviation aircraft, commercial air carriers and military training flights. The number of ARFF incidents, by risk category and year, are shown below.

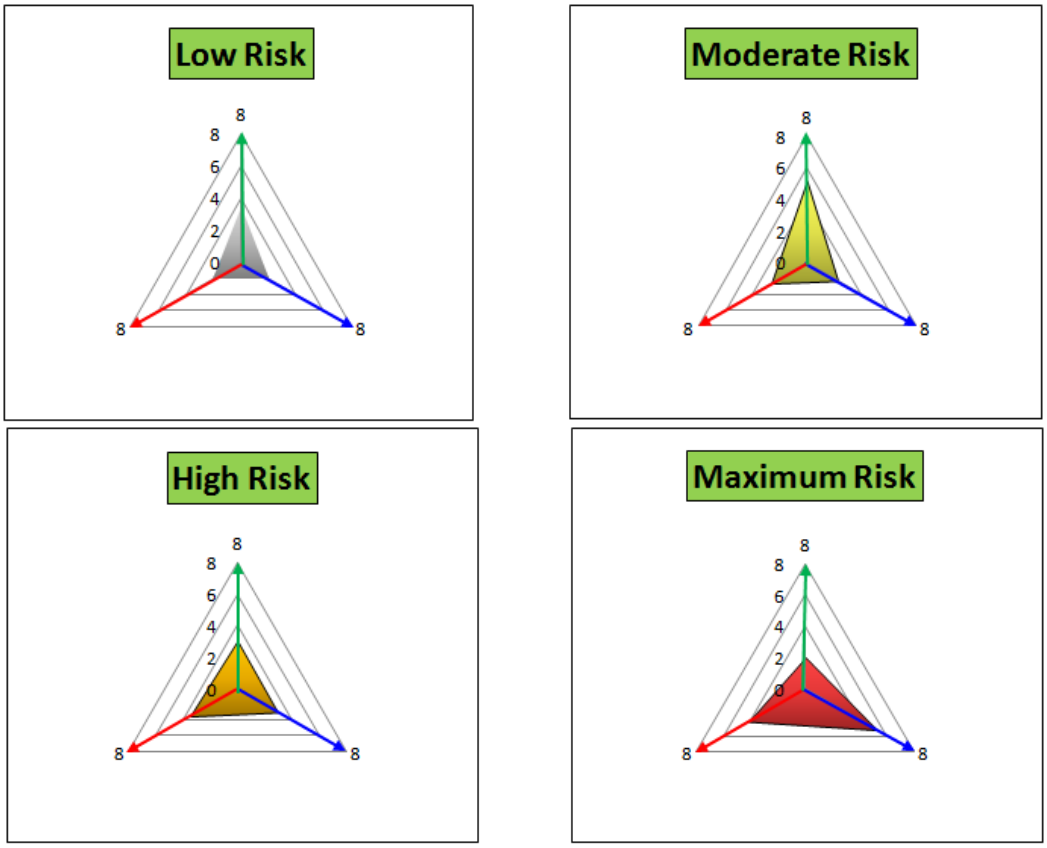
Table 10 Aircraft Rescue and Firefighting Incidents by Risk Category

Aircraft Rescue and Firefighting				
	2014	**2015**	**2016**	**Total**
Low Risk	5	10	4	19
Moderate Risk	8	8	5	21
High Risk	14	11	11	36
Maximum Risk	0	0	0	0

The assessment conducted for the ARFF risk in the community considered the probability of an occurrence based on historical response data, the consequences aircraft emergencies could have on the community, and the impact the commitment of initial response resources would have on the department. A contributing factor to the assessment was the Airport Emergency Categories outlined in *Annex AA: Aircraft Accident Response* of the *Amarillo/Potter/Randall Emergency Operations Plan*. The category levels, which range from *Alert 1* (Standby) to *Alert 3A* (Aircraft

Accident with 9 or more passengers), were used to aid in the determination of dispatched fire apparatus and personnel, as well as resources from other response agencies, to meet the critical tasks associated with ARFF incident risk levels.

Figure 36 Aircraft Rescue and Firefighting Risk Assessments



Wildland Firefighting Services

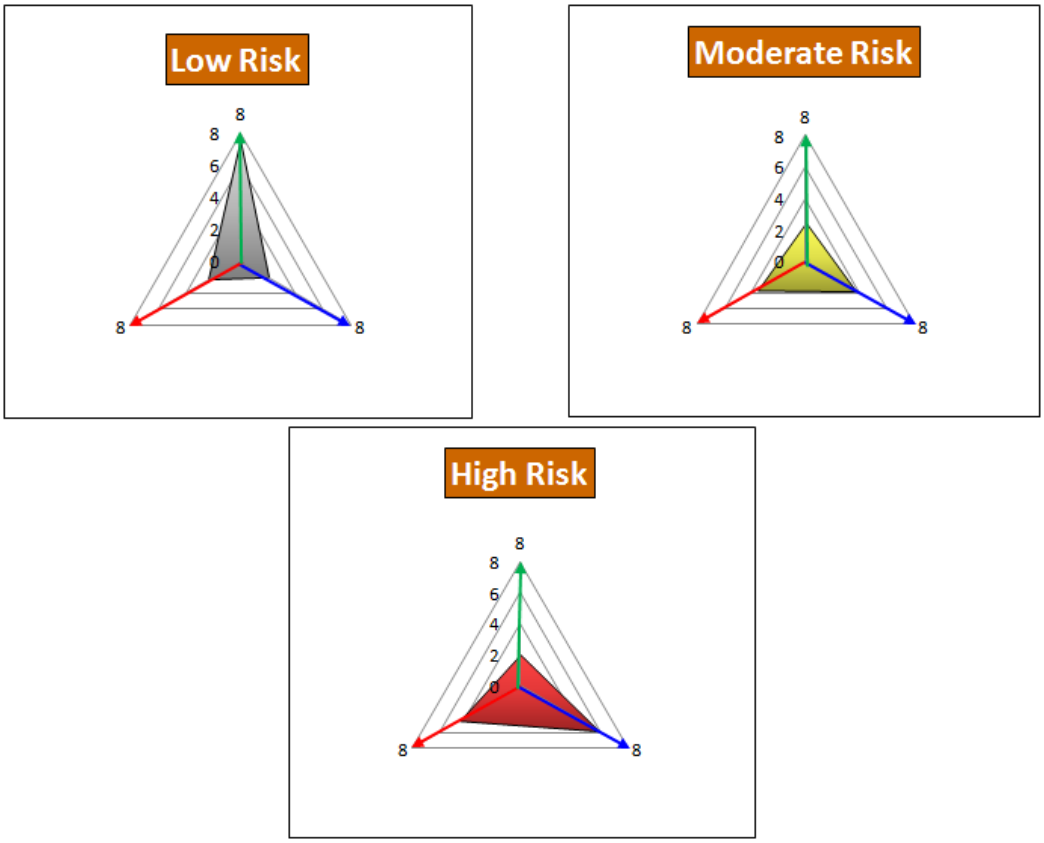
Wildland fires are a significant risk to the City of Amarillo and the surrounding area. The abundance of light fuels on the High Plains, combined with a wind speed average that is among the highest in the nation, creates a wildland-urban interface that is conducive to intense, fast-moving prairie fires. The greatest threat arises during late winter and early spring (February through April) due to the minimal precipitation the region receives between December and February and the peak winds that occur February through April.

Table 11 Wildland Firefighting Incidents by Risk Category

Wildland Firefighting				
	2014	**2015**	**2016**	**Total**
Low Risk	62	64	108	234
Moderate Risk	16	7	46	69
High Risk	0	0	0	0

The assessment conducted for the wildland risk considered the probability of an occurrence based on historical response data, the consequences wildland fires could have on the community, and the impact the commitment of resources would have on the department. An important component of the assessment is the department's policy that increases staffing levels by 24% when Red Flag weather conditions are forecasted. The department differentiated the wildland firefighting categories of *Moderate Risk* and *High Risk* using the Red Flag criteria, which are determined by the National Weather Service and defined as a relative humidity of 15% or less combined with wind speeds over 20-mph.

Figure 37 Wildland Firefighting Risk Assessments



Other Emergency Types

In addition to the emergency responses detailed in the six service delivery program risk assessments above, the department also responded to 66 other incidents between 2014 and 2016 that were identified as *Other Emergency Incidents* (Table 12).

Table 12 Other Emergency Incidents, by Type

Other Emergency Incident Types (2014-2016)					
Emergency Incident Type	**Code Series**	**2014**	**2015**	**2016**	**Total**
Overpressure, Rupture, Explosion, Overheat:	200 - 251	13	5	5	23
Severe Weather or Natural Disaster:	800 - 815	6	32	5	43
	Total:	**19**	**37**	**10**	**66**

Critical Task Analysis

To initiate an emergency response, meet the operational needs of an incident and mitigate the hazards to life and property, the department evaluates the basic tasks that must be performed for each category level of risk (i.e., *Low*, *Moderate*, *High*, or *Maximum*) within each risk class, such as *Fire Suppression* or *Emergency Medical Services*. Analysis of the critical tasks serves as the foundation for the department's deployment standards to ensure that appropriately capable human and physical resources, in sufficient capacities, are available to manage the magnitude and complexity of the emergency situation. The critical task analysis establishes the *Effective Response Force* (ERF) required to successfully engage incidents in each risk classification and category, which in turn allows the performance of the department's deployment model to be evaluated against established benchmarks and operational goals.

Risk Classification and Categories

Fire Suppression

Low Risk Fire Incidents

A single fire apparatus and crew is capable of managing low risk fire incidents that are minor in scope and intensity. Low risk fires may involve fences, passenger vehicles, dumpster/trash, downed power lines, commercial alarm investigations, or an odor investigation. The following table identifies the critical tasks required to mitigate such incidents, the Effective Response Force (ERF), and the resources assigned to low risk fires.

Table 13 Critical Task Analysis for Low Risk Fire Incidents

Fire: Low Risk CTA	
Task	**Personnel**
Command	1
Safety	*
Size Up (360°) *	*
Driver/Pump Operations	1
Fire Attack	1
Effective Response Force:	**3**

Fire: Low Risk Dispatch		
Unit Type	**Number**	**Personnel**
Pumper/Quint	1	4
Assigned:	**1**	**4**

** Part-Time Assignment*

Moderate Risk Fire Incidents

A *1st Alarm* response is required to manage a moderate risk fire incident. These types of incidents may involve a report of smoke in a building, small outbuilding fires, a commercial vehicle fire, a fire involving a single-family residence, a lightning strike to a structure, an automatic alarm at a high risk occupancy or a hazardous materials pipeline fire. The following table details the critical tasks required to mitigate moderate risk fires, the ERF, and the resources assigned to these fire emergencies.

Table 14 Critical Task Analysis for Moderate Risk Fire Incidents

Fire: Moderate Risk CTA	
Task	**Personnel**
Command	1
Safety	1
Size Up (360°)	*
Driver/Pump Operations	2
Ventilation/Utilities	2
Fire Attack Team 1	2
Fire Attack Team 2/Search & Rescue	3
Back-up Line	2
Rapid Intervention Team	2
Water Supply	*
Effective Response Force:	**15**

Fire: Moderate Risk Dispatch		
Unit Type	**Number**	**Personnel**
Command	2	2
Pumpers	3	12
Quints	1	4
Assigned:	**6**	**18**

** Part-Time Assignment*

High Risk Fire Incidents

A *2nd Alarm* response is required to engage the threats associated a high risk fire incident. This type of fire emergency may involve smoke in a high-life hazard occupancy, such as a school or skilled nursing facility; a fire in a single-family residence with multiple injured victims; a fire involving a multi-family residential building; or a moderate-sized commercial/industrial occupancy. Additional assignments may be required to expand operations. The following table details the critical tasks required to mitigate high risk fires, the ERF, and the resources the department assigns to these fire incidents.

Table 15 Critical Task Analysis for High Risk Fire Incidents

Fire: High Risk CTA	
Task	**Personnel**
Command/Support	2
Safety	1
Size Up (360°)*	*
Driver/Pump Operations	2
Water Supply	2
Standpipe/Sprinkler Control	2
Ventilation/Utilities	2
Fire Attack Team 1	2
Fire Attack Team 2	3
Search and Rescue	3
Back-up Line(s)	2
Rapid Intervention Team	4
Effective Response Force:	**25**

Fire: High Risk Dispatch		
Unit Type	**Number**	**Personnel**
Command	2	2
Pumpers	4	16
Quints	2	8
Assigned:	**8**	**26**

** Part-Time Assignment*

Maximum Risk Fire Incidents

A *3rd Alarm* response is required to immediately address the hazards associated a maximum risk fire incident. This level of fire emergency may involve a fire in a high-life hazard occupancy, such as a hospital or an assisted living facility; a fire in an apartment building; a working fire in a high-rise building; a fire involving a commercial or industrial occupancy; or a hazardous materials railcar or storage facility fire. Additional alarm assignments, additional command staff, the recall of off-duty personnel, or mutual aid assistance may be required to expand the operations beyond the identified critical tasks. The following table details the critical tasks required to engage maximum risk fires, the ERF, and the resources the department assigns to these fire incidents.

Table 16 Critical Task Analysis for Maximum Risk Fire Incidents

Fire: Maximum Risk CTA	
Task	**Personnel**
Command/Support	2
Safety	1
Size Up (360°)*	*
Driver/Pump Operations	2
Fire Attack	6
Search and Rescue	3
Standpipe/Sprinkler Control Team	2
1 - Recon Group	*
2 - Lobby Control/Elevator Control	2
3 - Water Supply Group	2
4 - Primary RIT	4
5 - Resource Group (Equipment)	4
6 -Secondary RIT	4
Effective Response Force:	**32**

Fire : Maximum Risk Dispatch		
Unit Type	**Number**	**Personnel**
Command	2	2
Pumpers	5	20
Quints	3	12
Assigned:	**10**	**34**

** Part-Time Assignment*

Emergency Medical Services

Low Risk Emergency Medical Services Incidents

A single fire crew is capable of managing low risk EMS incident. This type of emergency involves the BLS or ALS assessment and treatment of a single patient with a critical injury or illness, a non-life threatening medical call, lifting assistance or an EMS standby. The following table identifies the critical tasks required to manage the incident, the ERF, and the resources assigned to low risk medical incidents.

Table 17 Critical Task Analysis for Low Risk Emergency Medical Service Incidents

EMS: Low Risk Critical Task Analysis	
Task	**Personnel**
Command	1
Safety*	*
Documentation*	*
Family/Bystander Liaison*	*
Basic Life Support Treatment	1
Advanced Life Support Treatment	1
Effective Response Force:	**3**

** Part-Time Assignment*

EMS: Low Risk Dispatch		
Unit Type	**Number**	**Personnel**
Pumper/Quint	1	4
Assigned:	**1**	**4**

Moderate Risk Emergency Medical Services Incidents

The response of two fire suppression companies is required to mitigate moderate risk EMS incident. This emergency type involves the assessment and treatment of two patients with critical injuries or illnesses or a motor vehicle accident with 1-2 patients. The following table identifies the critical tasks required to manage the incident, the ERF, and the resources assigned to moderate risk medical incidents.

Table 18 Critical Task Analysis for Moderate Risk Emergency Medical Service Incidents

EMS: Moderate Risk Critical Task Analysis	
Task	**Personnel**
Command	1
Safety	*
Size Up (360°)	*
Basic Life Support Treatment	1
Advanced Life Support Treatment	1
Extrication/Hazard Mitigation	3
Effective Response Force:	**6**

** Part-Time Assignment*

EMS: Moderate Risk Dispatch		
Unit Type	**Number**	**Personnel**
Pumpers/Quints	2	8
Assigned:	**2**	**8**

High Risk Emergency Medical Services Incidents

A *1st Alarm* response is required to manage a high risk EMS incident. This type of emergency will have 3-8 patients whose conditions may range from minor to critical. Patient care will involve triage, BLS and ALS treatment, and the coordinated transport of patients. The following table identifies the critical tasks required to manage the incident, the ERF, and the resources assigned to high risk medical incidents.

Table 19 Critical Task Analysis for High Risk Emergency Medical Service Incidents

EMS: High Risk Critical Task Analysis	
Task	**Personnel**
Command	1
Safety	1
Triage Group	2
Treatment Group:	
Basic Life Support Treatment	5
Advanced Life Support Treatment	2
Transport Group	1
Effective Response Force:	**12**

EMS: High Risk Dispatch		
Unit Type	**Number**	**Personnel**
Command	2	2
Pumpers	3	12
Quints	1	4
Assigned:	**6**	**18**

Maximum Risk Emergency Medical Services Incidents

Multiple fire crews are required to mitigate a maximum risk EMS incident. This type of emergency will have nine or more patients whose conditions may range from minor to critical. Patient care will involve triage, BLS and ALS treatment, and the coordinated transport of patients. In the case of an active-shooter incident the response may require the establishment of rescue task force teams and casualty collection points to treat victims in the warm zone. The following table identifies the critical tasks required to manage the incident, the ERF, and the resources assigned to maximum risk medical incidents.

Table 20 Critical Task Analysis for Maximum Risk Emergency Medical Service Incidents

EMS: Maximum Risk Critical Task Analysis	
Task	**Personnel**
Command	2
Safety	1
Operations Section	1
Advanced Life Support Treatment	1
Treatment Group/Casualty Collection Pt.:	
Basic Life Support Treatment	6
Advanced Life Support Treatment	2
Evacuation Group	4
Transport Group	2
Staging	2
Effective Response Force:	**24**

EMS: Maximum Risk Dispatch		
Unit Type	**Number**	**Personnel**
Command	2	2
Pumpers	4	16
Quints	2	8
Assigned:	**8**	**26**

** Part-Time Assignment*

Technical Rescue

Low Risk Technical Rescue Incidents

A single fire crew is capable of managing low risk technical rescue incident. This type of emergency involves rescues that are minor in scope, such as a child locked in a vehicle, an elevator entrapment, a swimming pool rescue, or a minor mechanical entrapment. The following table identifies the critical tasks required to manage the incident, the ERF, and the resources assigned to low risk technical rescue incidents.

Table 21 Critical Task Analysis for Low Risk Technical Rescue Incidents

Technical Rescue: Low Risk CTA	
Task	**Personnel**
Command/Size-up	1
Safety	*
Basic Life Support Treatment	1
Extrication/Hazard Mitigation	2
Effective Response Force:	**4**

Rescue: Low Risk Dispatch		
Unit Type	**Number**	**Personnel**
Pumper/Quint	1	4
Assigned:	**1**	**4**

** Part-Time Assignment*

Moderate Risk Technical Rescue Incidents

The response of two fire suppression companies is required to mitigate a moderate risk technical rescue incident. Direct support from the Technical Rescue Team is generally not required. This type of emergency is associated with motor vehicle incidents that require victim extrication, the extrication of a single victim entangled in machinery or other equipment, or a victim trapped by downed power lines. The following table identifies the critical tasks required to manage the incident, the ERF, and the resources assigned to moderate risk technical rescue incidents.

Table 22 Critical Task Analysis for Moderate Risk Technical Rescue Incidents

Tech. Rescue: Moderate Risk CTA	
Task	**Personnel**
Command	1
Safety	*
Size Up (360°)	*
Basic Life Support Treatment	1
Advanced Life Support Treatment	1
Extrication/Hazard Mitigation	3
Effective Response Force:	**6**

Rescue: Moderate Risk Dispatch		
Unit Type	**Number**	**Personnel**
Pumpers/Quints	2	8
Assigned:	**2**	**8**

** Part-Time Assignment*

High Risk Technical Rescue Incidents

A fire suppression *1st Alarm* response that is enhanced with the full complement of on-duty Technical Rescue Team members and the department's specialty rescue apparatus is required to engage the complexity and scope of a high risk technical rescue incident. This type of emergency may involve full-scale operations in any of the seven rescue disciplines delivered by the department, from structural collapse to swift water (see *Technical Rescue*). High risk technical rescues are also associated with accidents involving multiple vehicles and victims that require extrication, commercial passenger carriers, or vehicles impacting a structure. Additional alarm assignments may be required to expand operations beyond the identified critical tasks. The following table details the critical tasks required to mitigate high risk technical rescues, the ERF, and the resources the department assigns to these incidents.

Table 23 Critical Task Analysis for High Risk Technical Rescue Incidents

Technical Rescue: High Risk CTA	
Task	**Personnel**
Command/Support	2
Safety	1
Size Up (360°)	*
Operations Section	1
Rescue Team Leader/Rescue Teams	6
Rescue Support Group:	8
(i.e., Stabilization, Monitoring, Air Supply, Rope Systems)	
Medical Group:	
Basic Life Support Treatment	2
Advanced Life Support Treatment	1
Effective Response Force:	**21**

Rescue: High Risk Dispatch		
Unit Type	**Number**	**Personnel**
Command	2	2
Pumpers	3	12
Quint	1	4
Light Rescue	1	2
Heavy Rescue	1	2
Assigned:	**8**	**22**

** Part-Time Assignment*

Maximum Risk Technical Rescue Incidents

A *3rd Alarm* response that includes the on-duty Technical Rescue Team members and the department's specialty rescue apparatus is required to initiate operations at maximum risk technical rescue incidents. This type of emergency may involve multiple points of operation for the type of rescue discipline being performed. Maximum risk technical rescues involve multiple victims that are endangered or trapped by structural collapse, swift water, or earth cave-ins. Additional alarm assignments may be required to expand operations beyond the identified critical tasks. During disaster situations, additional alarm assignments, additional command staff, the recall of off-duty personnel, or mutual aid assistance may be required to expand the operations beyond the identified critical tasks. The following table details the critical tasks required to mitigate maximum risk technical rescues, the ERF, and the resources the department assigns to these incidents.

Table 24 Critical Task Analysis for Maximum Risk Technical Rescue Incidents

Tech. Rescue: Maximum Risk CTA	
Task	**Personnel**
Command/Support	2
Safety	1
Operations Section	1
Entry Team Leader/Entry Teams	9
Rescue Support Group:	12
(i.e., Stabilization, Monitoring, Air Supply, Rope Systems)	
Medical Group:	
Basic Life Support Treatment	2
Advanced Life Support Treatment	1
Staging	1
Effective Response Force:	**29**

Rescue: Maximum Risk Dispatch		
Unit Type	**Number**	**Personnel**
Command	2	2
Pumpers	5	20
Quint	2	8
Light Rescue	1	2
Heavy Rescue	1	2
Assigned:	**10**	**34**

Hazardous Materials

Low Risk Hazardous Materials Incidents

A single fire company is capable of managing a low risk HazMat incident (*Level 1*). This type of emergency involves carbon monoxide (CO) alarms and unknown HazMat investigations without symptomatic victims, less than 20 gallon fuel spills, natural gas meter incident, downed power lines, equipment/electrical problems, or an attempted burning. The investigations of automatic alarms that signal a possible release of a hazardous material, such as ammonia at the Civic Center or chlorine at the Amarillo Water Treatment Plant, are considered low risk incidents. The following table identifies the critical tasks required to manage the situation, the ERF, and the resources assigned to low risk HazMat incidents.

Table 25 Critical Task Analysis for Low Risk Hazardous Materials Incidents

HazMat: Low Risk CTA	
Task	**Personnel**
Command/Size-up	1
Safety	*
Size Up (360°)	*
Hazard Mitigation	2
Effective Response Force:	**3**

** Part-Time Assignment*

HazMat: Low Risk Dispatch		
Unit Type	**Number**	**Personnel**
Pumper/Quint	1	4
Assigned:	**1**	**4**

Moderate Risk Hazardous Materials Incidents

The response of two fire suppression companies is required to mitigate moderate risk HazMat incidents (*Level 1*). Direct support from the HazMat Team is generally not required. This type of emergency may involve a CO alarm with symptomatic patients, fuel spills between 20 and 55 gallons, or a gas or petroleum products pipeline break without threatened exposures. Table 26 identifies the critical tasks, the ERF, and the resources assigned to moderate risk HazMat incidents.

Table 26 Critical Tasks Analysis for Moderate Risk Hazardous Materials Incidents

HazMat: Moderate Risk CTA	
Task	**Personnel**
Command	1
Safety	*
Size Up (360°)	*
Pump Operations/Decon	2
HazMat Group Supervisor	1
Hazard Mitigation	2
Effective Response Force:	**6**

HazMat: Moderate Risk Dispatch		
Unit Type	**Number**	**Personnel**
Pumpers/Quints	2	8
Assigned:	**2**	**8**

** Part-Time Assignment*

High Risk Hazardous Materials Incidents

A fire suppression *1st Alarm* response that is supplemented with the full complement of on-duty HazMat Team members and the department's specialty HazMat apparatus is required to engage a high risk HazMat incident (*Level 2*). This type of emergency may involve the establishment of operational zones (*Hot/Warm/Cold*) and the assignment of multiple support divisions and groups. High risk HazMat responses involve hazardous materials releases with 3-8 victims, gas leaks in a structure, hazardous materials release alarms with victims, flammable gas pipeline breaks with exposed structures, fuel spills more than 55 gallons, fuel spills into underground drainage or sewer systems, transportation and industrial chemical releases, or radiological incidents. A multi-agency response may be required to expand operations. Additional alarm assignments and additional command staff may also be required to expand operations beyond the identified critical tasks. The following table details the critical tasks required to mitigate high risk HazMat emergencies, the ERF, and the resources the department assigns to these HazMat incidents.

Table 27 Critical Task Analysis for High Risk Hazardous Materials Incidents

HazMat: High Risk CTA	
Task	**Personnel**
Command/Support	2
Safety	1
Size Up (360°)	*
Operations Section	1
Entry Team Officer/Entry Team	3
Back-up Entry Team	2
HazMat Support Group: (i.e., Historian, Science Officer, Monitor, Water Supply)	6
Decon Group	4
Medical Group:	
Medical Monitoring/Rehab	2
Effective Response Force:	**21**

HazMat: High Risk Dispatch		
Unit Type	**Number**	**Personnel**
Command	2	2
Pumpers	4	12
Quint	1	4
HazMat	1	2
Decon	1	2
Assigned:	**9**	**22**

** Part-Time Assignment*

Maximum Risk Hazardous Materials Incidents

A *3rd Alarm* response that includes the on-duty HazMat Team members and the department's specialty HazMat apparatus is required to initiate operations at maximum risk HazMat incidents (*Level 3*). This type of emergency may involve the establishment of operational zones (*Hot/Warm/Cold*) and the assignment of multiple support divisions and groups. Examples of maximum risk HazMat responses include nine or more contaminated or exposed victims, a refinery storage tank failure; hazardous materials railcar failure; or a weapon of mass destruction incident. A multi-agency response will be required to expand operations beyond the identified critical tasks. During these situations, additional alarm assignments, additional command staff, the recall of off-duty personnel, or mutual aid assistance may also be required to expand the operations. The following table details the critical tasks required to mitigate maximum risk HazMat emergencies, the ERF, and the resources the department assigns to these incidents.

Table 28 Critical Task Analysis for Maximum Risk Hazardous Materials Incidents

HazMat: Maximum Risk CTA	
Task	**Personnel**
Command/Support	2
Safety	1
Size Up (360°)	*
Operations Section	1
Entry Team Officer/Entry Teams	5
Back-up Entry Teams	4
HazMat Support Group: (i.e., Historian, Science Officer, Air Monitor, Water Supply)	8
Decon Group	4
Medical Group:	
Medical Monitoring/Rehab	4
Staging	1
Effective Response Force:	**30**

HazMat: Maximum Risk Dispatch		
Unit Type	**Number**	**Personnel**
Command	2	2
Pumpers	5	16
Quints	2	8
HazMat	1	2
Decon	1	2
Assigned:	**11**	**30**

** Part-Time Assignment*

Aircraft Rescue and Firefighting

Low Risk Aircraft Rescue and Firefighting Incidents

A single ARFF apparatus with a driver/operator is capable of managing low risk ARFF incidents. These emergencies, which require an *Alert 1* response, involve standbys for such events as medevac flights, refueling operations for aircraft with non-ambulatory passengers, or small aircraft on the ground with a minor operational defect. Depending on the nature of the emergency, the standby may be in the fire station or in an airport operations area. The following table identifies the critical tasks, the ERF, and the resources assigned to low risk ARFF responses.

Table 29 Critical Tasks Analysis for Low Risk Aircraft Rescue and Firefighting Incidents

ARFF: Low Risk CTA	
Task	**Personnel**
Command	1
Safety	*
Size Up (360°)	*
Fire/Rescue Standby	*
Effective Response Force:	**1**

ARFF: Low Risk Dispatch		
Unit Type	**Number**	**Personnel**
ARFF Crash Apparatus	1	1
Assigned:	**1**	**1**

** Part-Time Assignment*

Moderate Risk Aircraft Rescue and Firefighting Incidents

Moderate risk ARFF incidents are assigned an enhanced *Alert 1* response that includes all of the airport fire station's frontline apparatus and personnel. These incidents involve staged standbys for in-flight aircraft with a mechanical or instrument deficiency, but which normally does not cause serious difficulty in achieving a safe landing. These emergencies may include a feathered propeller on a multi-engine aircraft, an overheated engine, low engine oil pressure or minor ice buildup. The following table identifies the critical tasks required to mitigate such incidents, the ERF, and the resources assigned to moderate risk ARFF responses.

Table 30 Critical Tasks Analysis for Moderate Risk Aircraft Rescue and Firefighting Incidents

ARFF: Moderate Risk Critical Task Analysis	
Task	**Personnel**
Command	1
Safety	*
Size Up (360°)	*
Fire Attack Group Standby	2
Rescue Group Standby	2
Effective Response Force:	**5**

ARFF: Moderate Risk Dispatch		
Unit Type	**Number**	**Personnel**
Command	1	1
ARFF Crash Apparatus	2	4
ARFF Pumper	1	2
Assigned:	**4**	**7**

High Risk Aircraft Rescue and Firefighting Incidents

An *Alert 2* (less than 9 people onboard) or an *Alert 2A* (9 or more people), which consists of a full airport ARFF response supported by two in-town fire crews and two additional command officers, is required to address the threat associated with a high risk ARFF incident. This type of emergency involves any inflight aircraft with an operational defect that affects normal flight operations to the extent that an aircraft accident could occur. Examples of this type of emergency include the loss of an engine, interior smoke or fire in the in the aircraft, a malfunctioning landing gear, or low hydraulic pressure. Support agencies, such as law enforcement, ambulance services, and airport operations staff, will also be assigned to the response. The following table details the critical tasks, the ERF, and the resources the department assigns to high risk ARFF incidents.

Table 31 Critical Task Analysis for High Risk Aircraft Rescue and Firefighting Incidents

ARFF: High Risk CTA	
Task	**Personnel**
Command	1
Safety	1
Size Up (360°)	*
Operations Section	1
Fire Attack Group	4
Rescue Group	4
Medical Group	4
Staging	1
Effective Response Force:	**16**

ARFF: High Risk Dispatch		
Unit Type	**Number**	**Personnel**
Command	3	3
ARFF Crash Apparatus	2	4
ARFF Pumper	1	2
Pumper	1	4
Quint	1	4
Assigned:	**8**	**17**

** Part-Time Assignment*

Maximum Risk Aircraft Rescue and Firefighting Incidents

An *Alert 3* (less than 9 people onboard) or an *Alert 3A* (9 or more people), which includes a full airport ARFF response supported by four in-town fire crews and two command additional command officers, is required to address the threat associated with a high risk ARFF incident. This type of emergency involves an aircraft that has been in an accident on or near Rick Husband Amarillo International Airport. Support agencies, such as law enforcement, ambulances services, and airport operations staff, will also be assigned to the response. The following table details the critical tasks, the ERF, and the resources the department assigns to high risk ARFF incidents.

Table 32 Critical Task Analysis for Maximum Risk Aircraft Rescue and Firefighting Incidents

ARFF: Maximum Risk CTA	
Task	**Personnel**
Command	1
Safety	1
Size Up (360°)	*
Operations Section	1
Fire Attack Group	4
Rescue Group	6
Triage Group	3
Treatment Group:	
Basic Life Support Treatment	5
Advanced Life Support Treatment	2
Transport Group	1
Staging	1
Effective Response Force:	**25**

ARFF: Maximum Risk Dispatch		
Unit Type	**Number**	**Personnel**
Command	3	3
ARFF Crash Apparatus	2	4
ARFF Pumper	1	2
Pumper	3	12
Quint	1	4
Assigned:	**10**	**25**

** Part-Time Assignment*

Wildland Firefighting

Low Risk Wildland Fire Incidents

A single fire crew is capable of managing low risk wildland firefighting incident. This type of incident is minor in scope, structures are not threatened, and Red Flag conditions do not exist. Low risk grass fires may involve an outside smoke investigation, illegal or controlled burns, or a small vegetation fire. The following table identifies the critical tasks required to manage the incident, the ERF, and the resources assigned to low risk wildland fire incidents.

Table 33 Critical Task Analysis for Low Risk Technical Rescue Incidents

Wildland: Low Risk CTA	
Task	**Personnel**
Command	1
Safety	*
Size Up (360°)	*
Fire Attack	2
Total Effective Response Force:	**3**

Wildland: Low Risk Dispatch		
Unit Type	**Number**	**Personnel**
Pumper/Quint	1	2
Wildland Apparatus	1	2
Assigned:	**2**	**4**

** Part-Time Assignment*

Moderate Risk Wildland Fire Incidents

A *1st Alarm* response is capable of engaging a moderate risk wildland firefighting incident. Moderate risk wildland fires may involve a significant fire in brush; a brush pile at a chipping site; grass (including Conservation Reserve Program (CRP) grasses); or cultivated vegetation. Red Flag conditions do not exist, and structures may or may not be threatened. The following table identifies the critical tasks required to mitigate such incidents, the ERF, and the resources assigned to moderate risk wildland firefighting emergencies.

Table 34 Critical Task Analysis for Moderate Risk Wildland Fire Incidents

Wildland: Moderate Risk CTA	
Task	**Personnel**
Command	1
Safety	1
Recon Group	1
Flank Divisions	6
Water Supply	1
Structure Protection	4
Staging	1
Total Effective Response Force:	**15**

Wildland: Moderate Risk Dispatch		
Unit Type	**Number**	**Personnel**
Command	2	2
Wildland Apparatus	3	6
Pumpers/Quint (Cross)	3	6
Pumpers/Quint	1	4
Assigned:	**9**	**18**

High Risk Wildland Fire Incidents

An enhanced *2nd Alarm* response is required to immediately address the hazards associated a maximum risk wildland fire incident. This level of risk is associated with Red Flag conditions, and structures may or may not be threatened. The high risk wildland fires may involve a wildfire in brush; grass (including CRP grasses); cultivated vegetation, or in rare cases in the Texas Panhandle, woodland areas. Additional alarm assignments, additional command staff, recall of off-duty personnel, or the assistance of mutual aid may be required to expand the operations beyond the identified critical tasks. The following table details the critical tasks required to engage high risk fires, the ERF, and the resources the department assigns to these incidents.

Table 35 Critical Task Analysis for High Risk Wildland Fire Incidents

Wildland: High Risk CTA	
Task	**Personnel**
Command/Support	2
Safety	1
Recon Group	2
Lookout	1
Flank Divisions	10
Water Supply	2
Holding	4
Structure Protection	10
Staging	1
Total Effective Response Force:	**33**

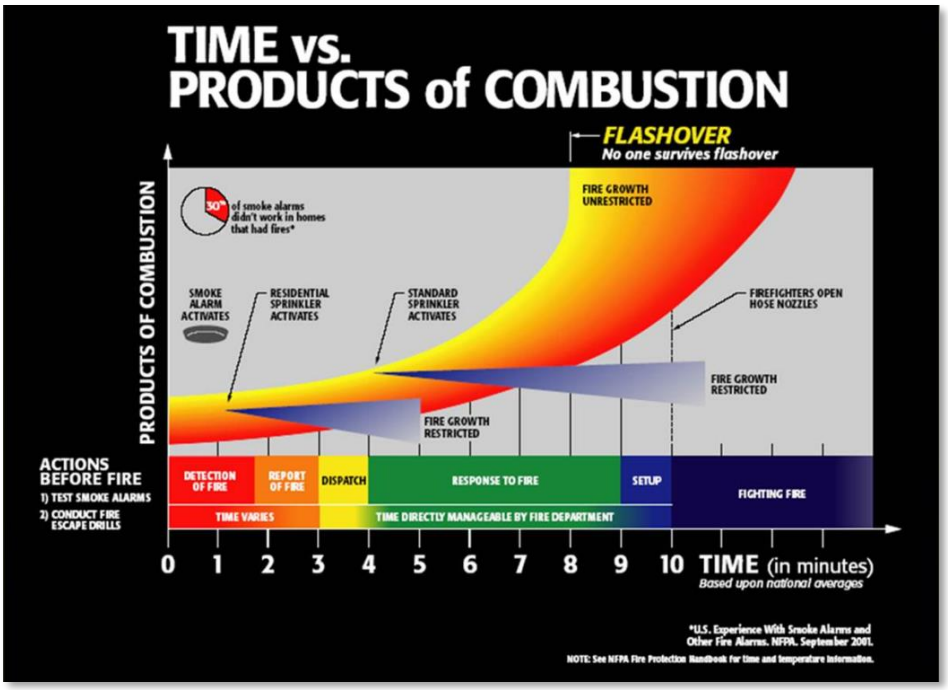
Wildland: High Risk Dispatch		
Unit Type	**Number**	**Personnel**
Command	2	2
Wildland Apparatus	5	10
Pumpers/Quint	6	24
Assigned:	**13**	**36**

H. Historical Perspective and Summary of System Performance

To gain insight into the time-based performance measurements of the Amarillo Fire Department's (AFD) response to emergency incidents, and to understand the distribution, concentration, and reliability factors that impact the AFD's deployment system, an understanding of some basic tenets of emergency response is helpful.

All fires pass through stages of growth, from smoldering to flashover. Flashover is the stage of fire when the contents of room or building are heated to ignition temperature, flames rapidly break out over the entire area, and unrestricted fire growth begins. At this point, conditions are such that the possibility of victim survival is extremely unlikely and property losses increase at a dramatic rate. The criticality of rapid intervention at incidents requiring fire suppression is illustrated in Figure 38. With modern materials and building practices, flashover can be expected to occur within 8-10 minutes of the fire's ignition. The more quickly firefighting assets can arrive on scene to interrupt the fire's growth, the greater the possibility of positive outcomes for saving lives, mitigating hazards, and preventing the escalation of property damage.

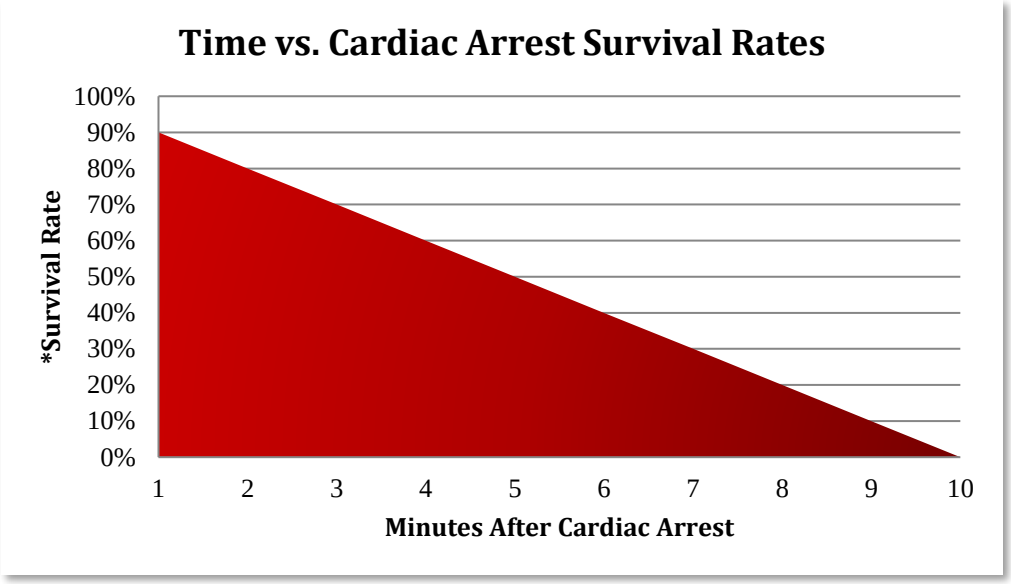
Figure 38 Time vs Products of Combustion



The swift response to emergency medical services (EMS) incidents is also necessary to begin life-saving treatment in the pre-hospital setting. Figure 39 demonstrates that the survival rate for a person in cardiac arrest decreases 7-10% for every minute they do not receive quality cardiopulmonary resuscitation (CPR) and defibrillation intervention. Alternatively, the American Heart Association reports that bystander-witnessed cardiac arrest patients with a heart rhythm

treatable with a defibrillator have a survival rate of 31% when EMS personnel provide quality CPR and defibrillate the heart inside within the survivability timeframe.

Figure 39 Cardiac Rates of Survival without CPR and Defibrillation



**Based on American Heart Association Statistics*

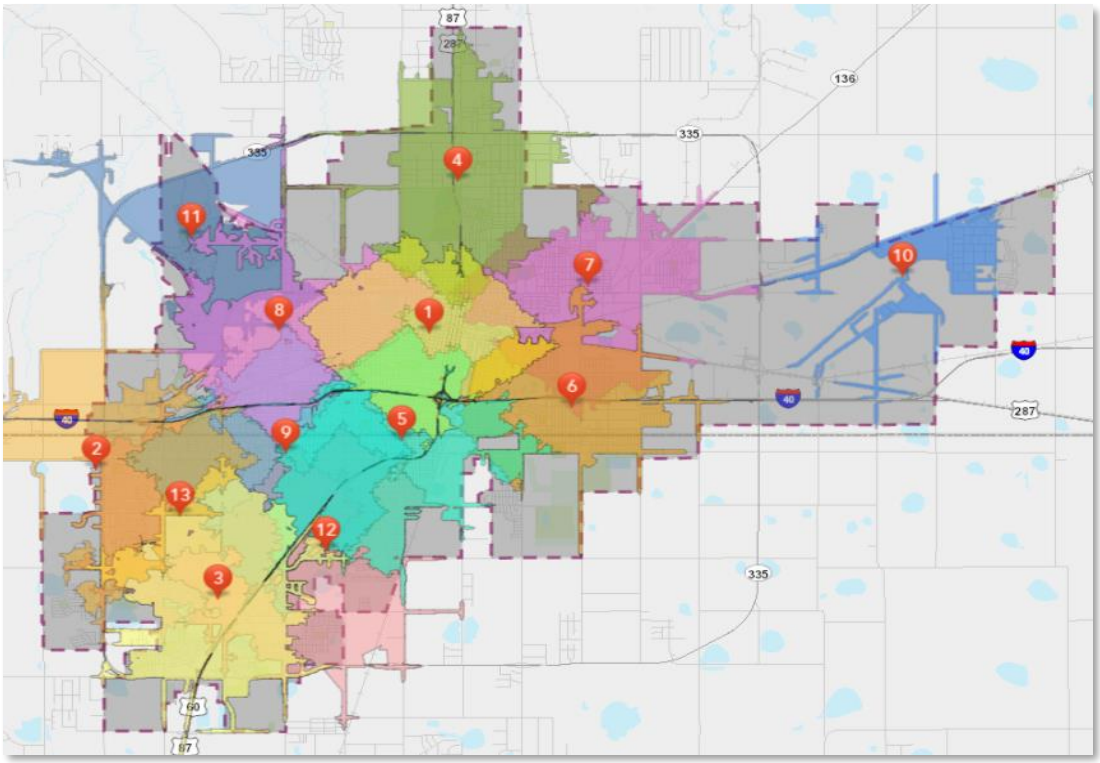
Another aspect of the deployment system that must be addressed is the need to have enough personnel on scene to quickly and effectively complete all of the tasks required to mitigate the emergency, whether it is a fire, technical rescue, or any other incident type. The tasks that must be completed depend on the scope and complexity (also defined as the *Risk Category*) of the emergency. As an example, a dumpster fire will only require a single fire company to assume command, operate the fire pump, and extinguish the fire. A house fire requires additional firefighting personnel to establish ventilation, conduct search and rescue operations, establish a water supply, control utilities, and have firefighters standing by as a rescue team. The number of firefighters dispatched to the different risk categories (*Low* to *Maximum*) has historically been defined as alarm levels (i.e., *1st-Alarm*, *2nd-Alarm*, etc.)

Distribution Factors

The first of the critical factors that identifies the ability of a fire department to deploy personnel and equipment that arrive quickly and begin initial operations at an emergency incident is *Distribution*, which is the geographic location of the resources that are first-due to the emergency scene. The measurement that quantifies the performance of a department's distribution system is *Travel Time*, or the time segment of the emergency response that it takes for the emergency vehicle to travel from the fire station to the incident scene.

The distribution points for the AFD are the 13 fire stations in the city. Each fire station has a minimum of one fire suppression apparatus, each of which has four-person staffing at all times. These fire apparatus are also staffed with at least one Emergency Medical Technician Intermediate (EMT-I) who is able to deliver Advanced Life Support (ALS) medical care. For wildland fire incidents, nine of the thirteen fire stations' crews cross-staff wildland firefighting apparatus. Figure 40 displays the optimal four-minute travel times for fire companies responding from each fire station.

Figure 40 Four-Minute Travel Time from Amarillo Fire Stations



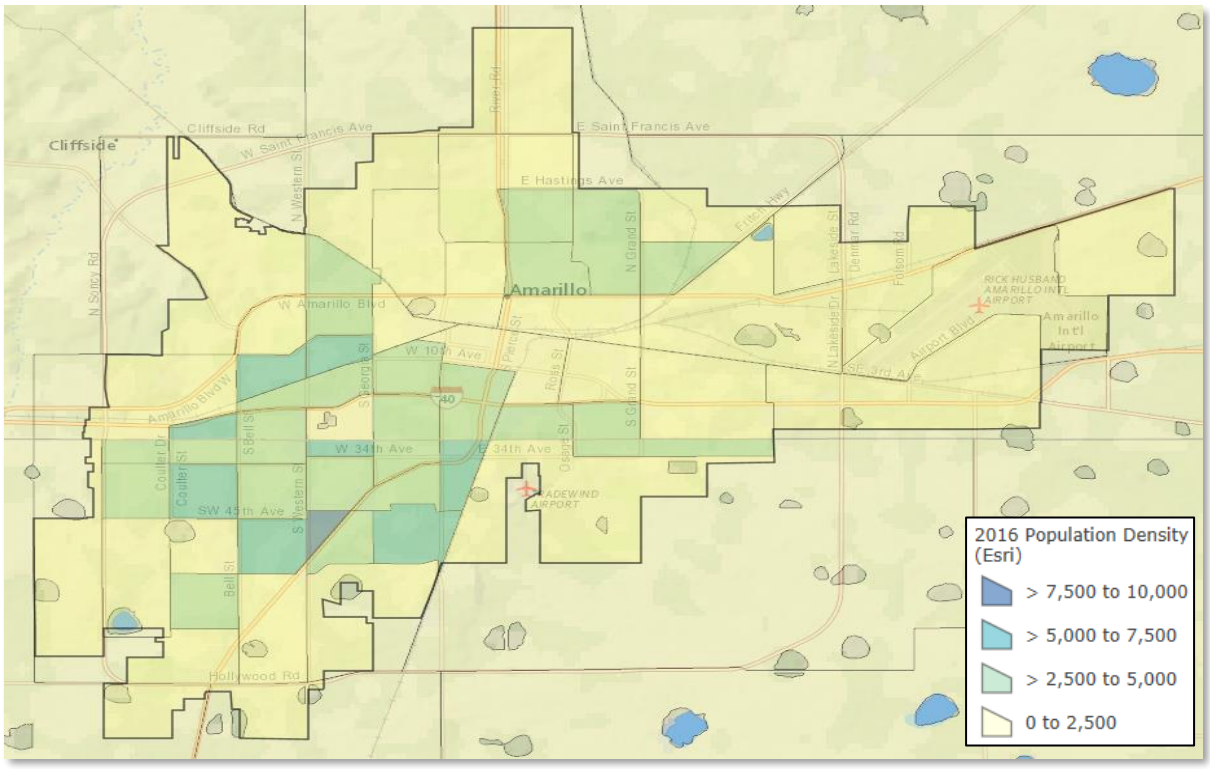
An important aspect of the AFD's distribution system is that the fire station districts are only administrative in nature, and emergency resources are not dispatched based on the geographic boundaries of the districts. Instead, the Amarillo Emergency Communications Center (AECC) dispatches fire assets using an automatic vehicle locator (AVL) system that dispatches the fire company(s) that is physically nearest to the incident's location.

Several features of Amarillo positively impact the travel times for the AFD. First, Amarillo is topographically flat and does not have areas isolated by rivers, land masses, or other geological features. Also, the city's streets are primarily paved, laid out straight (north/south and east/west), and rarely have impediments to slow traffic flow. Another positive impact is the weather. The city experiences more than 300 days a year without precipitation or other adverse weather conditions. When snow or ice conditions do exist, they are generally limited and of short duration (less than two days).

Concentration Factors

The second critical factor considered by the department regarding deployment of emergency resources is *Concentration*. As outlined previously, each risk classification (Fire Suppression, Aircraft Rescue and Firefighting, Technical Rescue, etc.) has various levels of risk that require a defined set of critical tasks be completed. The minimum complement of personnel who assemble and perform these tasks is the *Effective Response Force* (ERF). Concentration is the geographic spacing of multiple resources in an arrangement such that the ERF is able to arrive at the emergency scene in the timeframes established by the fire department to meet community expectations. In addition to showing the individual four-minute travel times from each fire station, Figure 40 also shows the areas where the travel times intersect and overlay each other. This overlap is a graphic display of the concept of concentration. Of particular importance is that the concentration components of the AFD's deployment are strongly aligned with the city's urban census tracts, which have the greatest population densities, as is illustrated by a comparison of Figures 41 and 40.

Figure 41 Population Densities (2016)



The AFD's four-person minimum staffing policy plays a significant role in the concentration-related deployment of fire companies. A defining example is the dispatch of personnel to a fire in a single-family residence, which is considered to be a *Moderate Risk*. The AFD requires an ERF of 15 firefighters on scene to complete the critical tasks needed to mitigate this type of emergency.

The AFD's current deployment for this type fire is six vehicles with 18 firefighters (4 fire apparatus with a total of 16 firefighters and 2 command units with a total of 2 command officers). In contrast, if the department had 3-person minimum staffing, the six responding fire assets would only place 14 firefighters on scene, one short of the required number for the full ERF. Another fire apparatus from a more distant fire station would be required to complete the ERF, which increases the time to assemble the necessary firefighters, increases the risks for victims and firefighters, and decreases the efficiency of the firefighting operations.

Reliability Factors

The third factor considered by the department regarding deployment of emergency resources is *Reliability*. This component reflects the probability that sufficient personnel, apparatus, and equipment are available when an emergency incident occurs. Several causes can reduce resource availability: 1) apparatus and equipment dependability, 2) fire prevention and public education scheduling, 3) training evolutions, and 4) simultaneous emergency incidents. For instance, when a fire company responds to a medical call in their district, they are unavailable when another emergency incident arises, and the next closest fire crew(s), which is identified by the AVL system, will have to be assigned. Since 10 of the AFD's 13 fire stations are single company stations, a second emergency in those ten districts will generally require a response from another fire station. When this happens, the reliability of the deployment system decreases.

Several indicators are used to measure the reliability of a fire department's deployment system, such as call volumes, apparatus and unit responses, travel times, concurrent calls, and availability from quarters. Figure 42 graphically displays how many incidents occurred in the fire districts while simultaneous calls were occurring citywide. For instance, there were 3,954 calls in Fire District 1 while another 6,763 ongoing incidents were being responded to citywide.

Figure 42 Citywide Simultaneous Incidents (2014-2016)

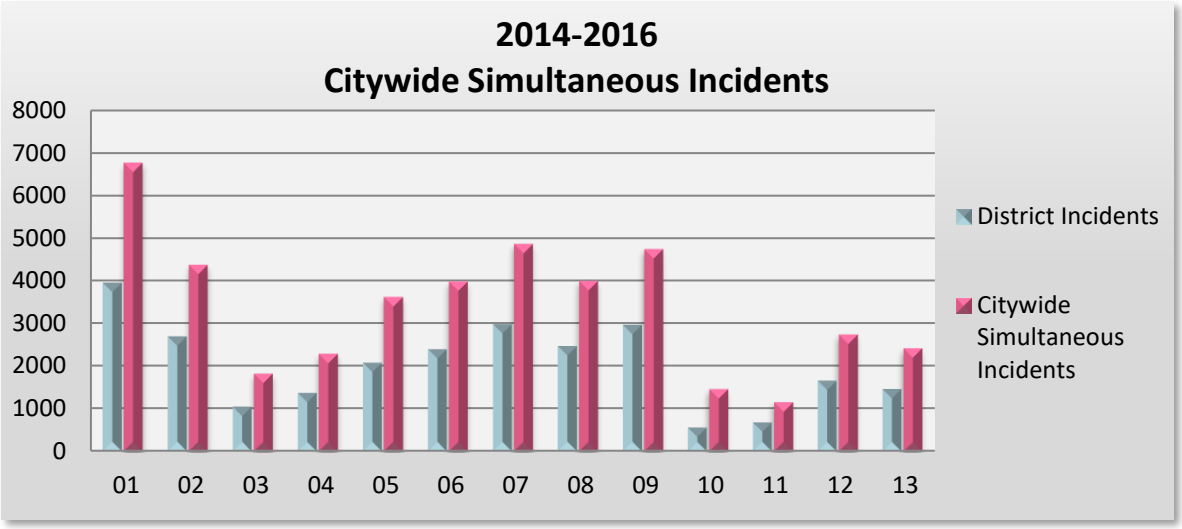


Table 36 identifies the number of times where more than one incident occurred in the district, both by total number and percentage of the total incidents in that district.

Table 36 Simultaneous Incidents (2014-2016)

2014-2016 Simultaneous Incidents by Fire District			
Fire District	**Number of Incidents**	**Simultaneous In District**	**Simultaneous In District %**
# 1	9177	1159	12.6%
# 2	5825	517	8.9%
# 3	2148	76	3.5%
# 4	3043	155	5.1%
# 5	4425	346	7.8%
# 6	5286	413	7.8%
# 7	6825	599	8.8%
# 8	5766	440	7.6%
# 9	6416	542	8.4%
# 10	1056	31	2.9%
# 11	1436	38	2.6%
# 12	3543	187	5.3%
# 13	3212	173	5.4%
All Incidents	58158	4676	8.00%

The AFD has policies in place to maintain a high reliability factor for the deployment system. The first is the four-person minimum staffing policy, which means that each shift has a minimum of 69 firefighters on duty at all times. With this force, the AFD can respond full ERF's to three separate *Moderate Risk* fire incidents, such as those in a single-family residence, or two simultaneous *High Risk* fires and still have four fire companies available to cover other emergency incidents in the city.

Other policies that address reliability are in place to ensure fire stations are not left empty for apparatus or equipment failure, administrative functions, or training evolutions. When a fire company has an administrative or maintenance issue, a crew from one of the three 2-company stations is reassigned to cover the district. Similarly, the department's policy is to only have three companies at a time in training classes, and the three fire engines in the two-company stations cover their districts during the classes.

Dataset Qualification

Data Collection Methodology

The data used to establish the AFD's historical response times for the years 2014-2016 were generated by the AECC's computer-aided dispatch (CAD) system. The information is collected and stored in the AFD's Record Management System (RMS) and retrieved using *My Fire Rules* reporting software. Once retrieved, the steps to analyze the data include:

- Classifying the incidents by Risk Classification (i.e., *Fire Suppression, Emergency Medical Services*, or *Technical Rescue*) using National Fire Incident Reporting System (NFIRS) incident type codes.
- Assigning the incidents to the appropriate Risk Category (i.e., *Low, Moderate, High*, and *Maximum*) using the number of personnel required to meet the critical tasks for each level of risk.
- Establishing the population density of the geographic location (*Urban* or *Rural*) for each incident. The AFD determines population density based on US Census Bureau census tracts. *Urban* and *Rural* areas are those with more than 2,500 population per square mile and less than 2,500 population per square mile, respectfully.
- Identifying the 90th percentile for each data set. The AFD defines the 90th percentile as the highest value of the lowest 90 percent of the data set being analyzed. In a set of 100 data points, the ninetieth value is the 90th percentile.

The AFD has established policy that sets thresholds for the inclusion of data for analysis in discerning trends in emergency operations. The thresholds allow the identification and exclusion of unusual or anomalous data, or outliers, that improperly distort the results of the analysis. Such instances include records with information missing or obvious data entry errors. Common outliers excluded from analysis are fire companies that are dispatched and assigned to an incident after it is no longer emergent, such as for relieving the initial fire crews on scene.

The primary process to determine outliers in the AFD's response times is based on scientific methodology for excluding data anomalies, which is applying two standard deviations from the mean in the data set being evaluated. This method allows for the inclusion of 95% or more of the data while excluding outliers that can cause a misrepresentation of the data. The two-standard deviation criterion was used to identify outliers for alert times for all risk classifications except Fire Suppression and Wildland Firefighting. In these two classifications, the AFD's policy defines emergent incidents in the risk categories (*Low* through *Maximum*) as the total personnel dispatched within the first 15 minutes of alarm notification. The two-standard deviation methodology was also applied to *Total Response Times* for all risk classifications except ARFF, which did not have significant outliers in this time segment.

The performance measurements identified through the data analysis are defined by the Center for Public Safety Excellence in *Community Risk Assessment: Standards of Cover* (6th Edition) and repeated in the AFD's *Policy Manual*:

Alarm Handling Time: The time interval from the receipt of the alarm at the primary public-safety answering point (PSAP) until the beginning of the transmittal of the response information via voice or electronic means to emergency response facilities and emergency response units. For reporting purposes, the performance objectives and measurements are based on when the Amarillo Emergency Communications Center answers the call and ends when the emergency response units are dispatched.

Turnout Time: The time interval that begins when the emergency response facilities' and emergency response units' notification process begins and ends at the beginning point of travel time.

Travel Time: The time interval that begins when a unit is en route to the emergency incident and ends when the unit arrives at the scene.

Total Response Time: The time intervals from the receipt of the alarm at the agency's PSAP to when the unit(s) arrives at the scene. The Total Response Time is calculated with the formula:

Alarm Handling Time + Turnout Time + Travel Time = Total Response Time

Baseline Performance Statistics (2014-2016)

The AFD's current performance is measured though Baseline Performance measurements, which are used to establish goals and objectives, to evaluate improvements, and to compare against ideal response times. The baselines in the following tables are reported as 90th percentiles for each risk classification's risk category for emergency incidents that occurred in 2014-2016. The measurements are further categorized by urban and rural population densities. Finally, the baseline performance measurements report *Distribution* (1st Due) and *Concentration* (Effective Response Force) times separately for each population density type.

Baseline Performance Tables

Low Risk Fire Suppression 90th Percentile Times Baseline Performance			2014-2016	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		2:12	1:44	1:56	2:33	1:00
Turnout Time	Turnout 1st Unit	Urban	1:38	1:29	1:37	1:43	1:20
		Rural	1:46	1:38	1:49	1:51	1:20
Travel Time	Travel Time 1st Unit **Distribution**	Urban	4:43	4:58	4:24	4:31	4:00
		n =	483	186	148	149	
		Rural	5:09	5:37	5:01	4:41	5:00
		n =	450	139	145	166	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	7:23	6:55	7:22	8:03	6:20
		n =	483	186	148	149	
		Rural	8:00	8:03	7:42	8:08	7:20
		n =	450	139	145	166	

Moderate Risk Fire Suppression 90th Percentile Times Baseline Performance			2014-2016	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		2:05	1:27	2:10	2:32	1:00
Turnout Time	Turnout 1st Unit	Urban	1:50	1:43	1:55	1:50	1:20
		Rural	1:50	1:50	1:54	1:49	1:20
Travel Time	Travel Time 1st Unit **Distribution**	Urban	4:02	4:12	3:45	3:54	4:00
		n =	383	130	134	119	
		Rural	4:51	4:51	4:52	4:20	5:00
		n =	314	118	101	95	
	Travel Time ERF **Concentration**	Urban	7:34	7:34	7:32	7:38	7:30
		n =	189	60	63	66	
		Rural	9:09	8:36	9:47	9:57	8:30
		n =	176	68	53	55	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	6:42	6:17	6:39	7:07	6:20
		n =	383	130	134	119	
		Rural	7:45	7:18	7:56	7:45	7:20
		n =	314	118	101	95	
	Total Response Time ERF **Concentration**	Urban	10:38	10:26	10:20	10:43	10:20
		n =	189	60	63	66	
		Rural	13:15	12:49	13:13	14:07	12:20
		n =	176	68	53	55	

High Risk Fire Suppression 90th Percentile Times Baseline Performance			2014-2016	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		2:13	1:35	2:13	2:23	1:00
Turnout Time	Turnout 1st Unit	Urban	2:11	1:49	2:31	2:07	1:20
		Rural	1:46	1:23	1:30	1:57	1:20
Travel Time	Travel Time 1st Unit **Distribution**	Urban	4:13	4:35	4:14	3:44	4:00
		n =	78	25	28	25	
		Rural	4:29	3:36	4:30	4:01	5:00
		n =	58	17	20	21	
	Travel Time ERF **Concentration**	Urban	10:16	8:49	14:18	8:23	8:30
		*n =	31	10	12	9	
		Rural	13:29	10:33	13:52	13:29	10:00
		*n =	23	7	9	7	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	7:11	7:21	7:16	6:56	6:20
		n =	78	25	28	25	
		Rural	7:18	5:55	7:28	7:18	7:20
		n =	58	17	20	21	
	Total Response Time ERF **Concentration**	Urban	18:16	15:51	18:16	18:20	15:00
		*n =	31	10	12	9	
		Rural	21:28	16:02	23:50	25:03	16:30
		*n =	23	7	9	7	

**Where n<10, the highest time for the data set is reported.*

Maximum Risk Fire Suppression: In 2014-2016, the AFD responded to 15 fire incidents (9 Urban/7 Rural) that qualified as *Maximum Risk*. Of these, the ERF arrived on scene four times. These data sets are statistically insignificant and therefore are not reported.

Low Risk Emergency Medical Services 90th Percentile Times Baseline Performance			2014-2016	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		1:16	1:07	1:17	1:23	1:00
Turnout Time	Turnout 1st Unit	Urban	1:36	1:27	1:39	1:42	1:00
		Rural	1:40	1:28	1:43	1:47	1:00
Travel Time	Travel Time 1st Unit **Distribution**	Urban	4:17	4:26	4:17	4:09	4:00
		n =	18,190	6,146	5,802	6,242	
		Rural	5:10	5:13	5:13	5:04	5:00
		n =	13,566	4,737	4,175	4,654	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	6:12	6:03	6:14	6:18	6:00
		n =	18,190	6,146	5,802	6,242	
		Rural	7:05	6:52	7:11	7:11	7:00
		n =	13,566	4,737	4,175	4,654	

Moderate Risk Emergency Medical Services 90th Percentile Times Baseline Performance			2014-2016	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		1:49	1:40	1:54	1:55	1:00
Turnout Time	Turnout 1st Unit	Urban	1:29	1:20	1:33	1:35	1:00
		Rural	1:36	1:29	1:37	1:42	1:00
Travel Time	Travel Time 1st Unit **Distribution**	Urban	4:00	4:08	3:55	3:52	4:00
		n =	4283	1,765	1,451	1,067	
		Rural	4:43	4:47	4:40	4:37	5:00
		n =	3530	1,487	1,175	868	
	Travel Time ERF **Concentration**	Urban	5:12	5:21	5:03	4:50	5:00
		n =	1788	750	606	432	
		Rural	6:08	5:59	6:18	6:07	6:00
		n =	1547	646	529	372	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	6:26	6:21	6:28	6:30	6:00
		n =	4283	1,765	1,451	1,067	
		Rural	7:19	7:07	7:21	7:42	7:00
		n =	3530	1,487	1,175	868	
	Total Response Time ERF **Concentration**	Urban	7:38	7:33	7:43	7:44	7:00
		n =	1788	750	606	432	
		Rural	8:46	8:24	8:47	9:07	8:00
		n =	1547	646	529	372	

High Risk Emergency Medical Services 90th Percentile Times Baseline Performance			2014-2016	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		2:07	1:52	2:20	2:12	1:00
Turnout Time	Turnout 1st Unit	Urban	1:27	1:17	1:36	1:30	1:00
		Rural	1:26	1:19	1:31	1:37	1:00
Travel Time	Travel Time 1st Unit **Distribution**	Urban	4:28	4:47	4:22	4:17	4:00
		n =	450	174	158	118	
		Rural	5:03	5:12	4:51	5:03	5:00
		n =	272	119	79	74	
	Travel Time ERF **Concentration**	Urban	7:05	7:02	7:05	8:40	7:00
		*n =	39	18	15	6	
		Rural	8:32	9:03	8:32	6:32	8:00
		*n =	26	11	10	5	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	7:39	7:39	7:01	7:47	6:00
		n =	450	174	158	118	
		Rural	8:15	7:42	8:35	8:13	7:00
		n =	272	119	79	74	
	Total Response Time ERF **Concentration**	Urban	12:04	12:12	9:58	23:17	9:30
		*n =	39	18	15	6	
		Rural	14:08	12:22	20:30	12:07	11:30
		*n =	26	11	10	5	

**Where n<10, the highest time for the data set is reported.*

Maximum Risk Emergency Medical Services: In 2014-2016, the AFD responded to five incidents that qualified as *Maximum Risk*. Of these, the ERF arrived on scene once. These data sets are statistically insignificant and are not reported.

Low Risk Technical Rescue 90th Percentile Times Baseline Performance			2014-2016	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		2:44	1:53	2:51	2:41	1:30
Turnout Time	Turnout 1st Unit	Urban	1:25	1:17	1:25	1:46	1:20
		Rural	1:29	1:13	1:50	1:29	1:20
Travel Time	Travel Time 1st Unit **Distribution**	Urban	4:49	5:31	5:07	3:07	4:00
		*n =	49	9	23	17	
		Rural	5:09	4:24	5:27	5:09	5:00
		n =	59	20	25	14	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	7:36	7:46	7:28	7:17	6:50
		*n =	49	9	23	17	
		Rural	8:03	6:11	9:02	8:36	7:50
		n =	59	20	25	14	

**Where n<10, the highest time for the data set is reported.*

Moderate Risk Technical Rescue 90th Percentile Times Baseline Performance			2014-2016	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		2:04	1:25	2:04	2:41	1:30
Turnout Time	Turnout 1st Unit	Urban	1:46	1:09	1:42	1:46	1:20
		Rural	1:38	1:03	1:27	1:56	1:20
Travel Time	Travel Time 1st Unit **Distribution**	Urban	4:12	4:13	3:21	4:03	4:00
		n =	35	12	12	11	
		Rural	5:02	4:17	4:09	6:08	5:00
		n =	52	11	19	22	
	Travel Time ERF **Concentration**	Urban	5:23	6:25	5:08	4:46	5:00
		*n =	25	9	10	6	
		Rural	6:30	5:43	6:49	6:30	6:00
		*n =	32	5	15	12	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	7:36	5:22	7:21	7:46	6:50
		n =	35	12	12	11	
		Rural	8:14	6:25	7:15	9:30	7:50
		n =	52	11	19	22	
	Total Response Time ERF **Concentration**	Urban	7:42	7:52	7:42	7:11	7:50
		*n =	25	9	10	6	
		Rural	9:30	9:01	10:21	9:30	8:50
		*n =	32	5	15	12	

**Where n<10, the highest time for the data set is reported.*

High and Maximum Risk Technical: In 2014-2016, the AFD responded to three incidents that qualified as *High Risk* and none that were *Maximum Risk*. These data sets are statistically insignificant and are not reported.

Low Risk Hazardous Materials 90th Percentile Times Baseline Performance			2014-2016	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		2:39	2:22	2:37	2:54	1:30
Turnout Time	Turnout 1st Unit	Urban	1:38	1:26	1:43	1:43	1:20
		Rural	1:50	1:33	1:48	2:02	1:20
Travel Time	Travel Time 1st Unit **Distribution**	Urban	4:53	4:41	4:57	4:42	4:00
		n =	865	314	289	262	
		Rural	5:39	5:45	5:43	5:30	5:00
		n =	601	178	195	228	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	8:00	7:27	7:59	8:16	6:50
		n =	865	314	289	262	
		Rural	8:57	8:35	8:51	9:23	7:50
		n =	601	178	195	228	

Moderate Risk Hazardous Materials 90th Percentile Times Baseline Performance			2014-2016	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		2:18	2:00	2:15	2:30	1:30
Turnout Time	Turnout 1st Unit	Urban	1:35	1:21	1:44	1:40	1:20
		Rural	1:41	1:34	1:44	1:49	1:20
Travel Time	Travel Time 1st Unit **Distribution**	Urban	4:19	5:05	4:35	4:04	4:00
		n =	176	62	69	45	
		Rural	5:15	5:07	4:58	5:17	5:00
		n =	153	59	50	44	
	Travel Time ERF **Concentration**	Urban	5:02	5:02	4:39	6:10	5:00
		n =	74	27	26	21	
		Rural	6:53	5:59	6:53	7:31	6:00
		n =	66	25	20	21	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	7:50	7:28	7:18	8:02	6:50
		n =	176	62	69	45	
		Rural	8:30	8:32	8:29	8:13	7:50
		n =	153	59	50	44	
	Total Response Time ERF **Concentration**	Urban	8:17	7:50	7:25	12:08	7:50
		n =	74	27	26	21	
		Rural	16:49	13:13	20:05	17:34	10:50
		n =	66	25	20	21	

High Risk Hazardous Materials 90th Percentile Times Baseline Performance			2014-2016	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		2:25	1:43	2:21	2:32	1:30
Turnout Time	Turnout 1st Unit	Urban	1:41	1:28	1:58	1:15	1:20
		Rural	1:39	1:33	1:34	1:41	1:20
Travel Time	Travel Time 1st Unit **Distribution**	Urban	3:41	3:49	3:39	2:58	4:00
		*n =	30	10	15	5	
		Rural	4:30	4:39	4:12	4:02	5:00
		*n =	31	8	11	12	
	Travel Time ERF **Concentration**	Urban	7:05	6:17	7:05	4:23	6:00
		*n =	9	4	4	1	
		Rural	9:36	5:25	9:36	10:37	7:00
		*n =	15	2	5	8	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	7:04	6:18	7:12	7:41	6:50
		*n =	30	10	15	5	
		Rural	7:27	7:13	7:29	7:27	7:50
		*n =	31	8	11	12	
	Total Response Time ERF **Concentration**	Urban	11:57	8:22	11:57	9:56	8:50
		*n =	9	4	4	1	
		Rural	14:18	12:18	13:53	22:08	11:50
		*n =	15	2	5	8	

**Where n<10, the highest time for the data set is reported.*

Maximum Risk Hazardous Materials: In 2014-2016, the AFD responded to four incidents that qualified as *Maximum Risk*. Of these, the ERF never arrived on scene. These data sets are statistically insignificant and therefore are not reported.

Low Risk Aircraft Rescue and Firefighting 90th Percentile Times Baseline Performance			2014-2016	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		0:54	0:54	0:52	0:57	0:50
Turnout Time	Turnout 1st Unit	Rural	1:00	2:29	0:45	2:09	1:00
Travel Time	Travel Time 1st Unit **Distribution**	Rural	1:00	6:39	1:00	0:38	1:00
		*n =	19	4	10	5	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Rural	3:28	7:39	2:00	2:54	3:00
		*n =	19	4	10	5	

**Where n<10, the highest time for the data set is reported.*

Moderate Risk Aircraft Rescue and Firefighting 90th Percentile Times Baseline Performance			2014-2016	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		1:52	1:52	1:27	2:16	1:00
Turnout Time	Turnout 1st Unit	Rural	0:40	2:35	0:06	1:09	1:00
Travel Time	Travel Time 1st Unit **Distribution**	Rural	0:43	0:59	0:47	0:43	1:00
		*n =	21	5	8	8	
	Travel Time ERF **Concentration**	Rural	1:29	0:52	1:29	4:07	2:00
		*n =	20	5	7	8	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Rural	2:50	3:21	1:32	3:12	3:00
		*n =	21	5	8	8	
	Total Response Time ERF **Concentration**	Rural	3:39	3:52	3:14	6:07	4:00
		*n =	20	5	7	8	

**Where n<10, the highest time for the data set is reported.*

High Risk Aircraft Rescue and Firefighting 90th Percentile Times Baseline Performance			2014-2016	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		1:25	1:06	1:25	1:32	1:00
Turnout Time	Turnout 1st Unit	Rural	0:19	0:16	0:28	0:16	1:00
Travel Time	Travel Time 1st Unit **Distribution**	Rural	1:00	0:57	0:27	2:03	1:00
		n =	36	11	11	14	
	Travel Time ERF **Concentration**	Rural	12:25	16:02	9:23	13:26	12:00
		*n =	16	6	3	7	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Rural	2:24	1:50	2:00	2:41	3:00
		n =	36	11	11	14	
	Total Response Time ERF **Concentration**	Rural	16:53	18:43	11:07	17:25	14:00
		*n =	16	6	3	7	

**Where n<10, the highest time for the data set is reported.*

Maximum Risk Aircraft Rescue and Firefighting: In 2014-2016, the AFD did not respond to any incidents that qualified as *Maximum Risk*.

Low Risk Wildland Firefighting 90th Percentile Times Baseline Performance			2014-2016	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		2:00	1:32	2:00	2:24	1:00
Turnout Time	Turnout 1st Unit	Urban	1:50	1:41	2:01	1:32	1:20
		Rural	1:52	1:51	2:05	2:02	1:20
Travel Time	Travel Time 1st Unit **Distribution**	Urban	7:14	6:32	7:35	7:19	6:30
		n =	102	44	31	27	
		Rural	9:48	7:55	9:06	10:48	8:00
		n =	132	64	33	35	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	11:18	9:55	11:15	11:19	8:50
		n =	102	44	31	27	
		Rural	13:14	11:22	14:31	13:21	10:20
		n =	132	64	33	35	

Moderate Risk Wildland Firefighting 90th Percentile Times Baseline Performance			2014-2016	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		2:06	1:09	1:38	2:35	1:00
Turnout Time	Turnout 1st Unit	Urban	1:29	1:22	1:21	1:09	1:20
		Rural	1:51	1:31	1:19	1:57	1:20
Travel Time	Travel Time 1st Unit **Distribution**	Urban	7:12	6:24	7:15	7:21	6:30
		*n =	35	25	3	7	
		Rural	8:16	7:34	6:27	9:45	8:00
		*n =	34	21	4	9	
	Travel Time ERF **Concentration**	Urban	21:28	21:28	N/A	7:55	15:00
		*n =	9	8	0	1	
		Rural	14:17	18:45	8:53	12:45	15:00
		*n =	10	4	3	3	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	11:14	10:43	9:19	11:55	8:50
		*n =	35	25	3	7	
		Rural	12:18	9:52	9:16	13:34	10:20
		*n =	34	21	4	9	
	Total Response Time ERF **Concentration**	Urban	24:30	24:30	N/A	11:45	18:00
		*n =	9	8	0	1	
		Rural	21:19	21:39	11:29	19:31	20:00
		*n =	10	4	3	3	

**Where n<10, the highest time for the data set is reported.*

High Risk Wildland Firefighting: In 2014-2016, the AFD did not respond to any incidents that qualified as *High Risk*. The AFD does not define a *Maximum Risk* Wildland Firefighting category.

I. Evaluation of Service Delivery

Performance Objectives – Benchmarks

The identification of the current performance measurements (baselines) alone does not capture the quality of the deployment system. A fire department must establish a standard of comparison to identify areas of strengths and weaknesses within the system. The Amarillo Fire Department (AFD) primarily sets these benchmarks based on National Fire Protection Association (NFPA) 1710: *Organization and Deployment of Fire Suppression Operations, EMS and Special Ops* standards. Historical data was used to identify performance objectives where NFPA 1710 standards are not addressed, such as for Wildland Firefighting or the time differences between *Urban* and *Rural* responses. The benchmarks for Aircraft Rescue and Firefighting (ARFF) responses were established based on standards from the Federal Aviation Administration's Title 14 Code of Federal Regulations Part 139.319: *Aircraft Rescue and Firefighting: Operational Requirements*.

The following benchmark objectives are provided for the distribution (initial response force) and concentration (effective response force) of the department's resources.

Fire Suppression Services Program

Distribution:

For 90 percent of all non-wildland fire suppression incidents, the total response time for the arrival of the first due unit, staffed with 3 firefighters and 1 officer, shall be: 6 minutes and 20 seconds in urban areas; and 7 minutes and 20 seconds in rural areas. The first due unit shall be capable of: providing 500 gallons of water and 1,250 gallons per minute (gpm) pumping capacity; initiating command; requesting additional resources; establishing and advancing an attack line flowing a minimum of 150-gpm; establishing an uninterrupted water supply; containing the fire; rescuing at-risk victims; and performing salvage operations. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

Concentration:

For 90 percent of all moderate risk non-wildland fire suppression incidents, the total response time for the arrival of the effective response force (ERF), staffed with a minimum of 15 fire personnel, shall be: 10 minutes and 20 seconds in urban areas, and 12 minutes and 20 seconds in rural areas. The ERF shall be capable of: establishing command, appointing an incident safety officer, complying with the Occupational Safety and Health Administration (OSHA) requirements of two in-two out, providing an uninterrupted water supply, ventilating the structure, advancing an attack line and a backup line for fire control, searching and rescuing at-risk victims, controlling utilities, and performing salvage and overhaul. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of all high risk non-wildland fire suppression incidents, the total response time for the arrival of the ERF, staffed with minimum 25 fire personnel, shall be: 15 minutes in urban areas, and 16 minutes and 30 seconds in rural areas. The ERF shall be capable of: establishing command, appointing an incident safety officer, complying with OSHA requirements of two in-two out, providing an uninterrupted water supply, ventilating the structure, advancing attack lines and backup lines for fire control, searching and rescuing at-risk victims, controlling utilities, and performing salvage and overhaul. The ERF shall also be capable of the controlling standpipe/sprinkler systems and placing elevated streams into service from aerial ladders. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the public.

For 90 percent of all maximum risk non-wildland fire suppression incidents, the total response time for the arrival of the ERF, staffed with minimum 32 fire personnel, shall be: 16 minutes in urban areas, and 17 minutes and 30 seconds in rural areas. The ERF shall be capable of: establishing command, appointing an incident safety officer, complying with OSHA requirements of two in-two out; providing an uninterrupted water supply, advancing attack lines and backup lines for fire control, completing forcible entry, searching and rescuing at-risk victims, ventilating the structure, controlling utilities, and performing salvage and overhaul. The ERF shall also be capable of the controlling standpipe/sprinkler systems, placing elevated streams into service from aerial ladders, and establishing an interior operations section. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the public.

Emergency Medical Services Program

Distribution:

For 90 percent of all emergency medical services (EMS) responses, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 6 minutes in urban areas; and 7 minutes in rural areas. The first-due unit shall be capable of: assessing scene safety and establishing command; sizing-up the situation; conducting an initial patient assessment; obtaining vitals and patient's medical history; providing advanced life support (ALS) treatment, including cardiopulmonary resuscitation (CPR) and automatic external defibrillation (AED); and assisting transport personnel with packaging the patient. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

Concentration:

For 90 percent of all moderate risk EMS response incidents, the total response time for the arrival of the ERF, staffed with minimum 6 firefighters and officers, shall be: 7 minutes in urban areas; and 8 minutes in rural areas. The ERF shall be capable of: establishing command, assessing scene safety and controlling hazards; conducting an initial patient assessment; obtaining vitals and patient's medical history; providing ALS treatment, including CPR and AED; and assisting transport personnel with packaging the patient. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of all high risk EMS response incidents, the total response time for the arrival of the ERF, staffed with minimum 12 firefighters and officers, shall be 9 minutes and 30 seconds in urban areas and 11 minutes and 30 seconds in rural areas. The ERF shall be capable of: establishing incident command; appointing an incident safety officer; completing patient assessment; and providing ALS treatment, including CPR and AED. The ERF shall also be capable of establishing triage, treatment, and transportation groups. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of all maximum risk EMS response incidents, the total response time for the arrival of the ERF, staffed with minimum 24 firefighters and officers, shall be 10 minutes and 30 seconds in urban areas and 12 minutes and 30 seconds in rural areas. The ERF shall be capable of: establishing incident command; appointing an incident safety officer; appointing a staging officer; completing patient assessment; and providing ALS treatment, including CPR and AED. The ERF shall also be capable of an establishing an operations section in addition to triage, treatment, and transportation groups. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

Technical Rescue Services Program

Distribution:

For 90 percent of all technical rescue incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 6 minutes and 50 seconds in urban areas; and 7 minutes and 50 seconds in rural areas. The first-due unit shall be capable of: establishing command; sizing up to determine if a technical rescue response is required; requesting additional resources; initiating basic extrication/disentanglement rescue; and providing ALS to victims without endangering response personnel. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

Concentration:

For 90 percent of all moderate risk technical rescue incidents, the total response time for the arrival of the ERF, staffed with a minimum of 6 fire personnel, shall be: 7 minutes and 50 seconds in urban areas; and 8 minutes and 50 seconds in rural areas. The ERF shall be capable of: establishing command; completing extrication/disentanglement rescue, and providing ALS to victims. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of all high risk technical rescue incidents, the total response time for the arrival of the ERF, staffed with a minimum of 21 fire personnel, including the technical rescue team, shall be 8 minutes and 50 seconds for urban areas and 10 minutes and 50 seconds for rural areas. The ERF shall be capable of: establishing command; appointing an incident safety officer; conducting advanced extrication/disentanglement rescue, and providing ALS to victims. The ERF shall also be capable of an establishing an operations section in addition to a rescue group, a rescue support group, and a medical group. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of all maximum risk technical rescue incidents, the total response time for the arrival of the ERF, staffed with a minimum of 29 fire personnel, including the technical rescue team, shall be 10 minutes and 50 seconds for urban areas and 12 minutes and 50 seconds for rural areas. The ERF shall be capable of: establishing command; appointing an incident safety officer; appointing a staging officer; conducting advanced extrication/ disentanglement rescue, and providing ALS to victims. The ERF shall also be capable of an establishing an operations section in addition to a rescue group, a rescue support group, and a medical group. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

Hazardous Materials Services Program

Distribution:

For 90 percent of all hazardous materials response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, shall be: 6 minutes and 50 seconds in urban areas; and 7 minutes and 50 seconds in rural areas. The first-due unit shall be capable of: establishing command; sizing up and assessing the situation for a potential hazardous material or explosive device; determining the need for additional resources; establishing hot, warm, and cold zones; and initiating basic confinement measures without endangering response personnel. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

Concentration:

For 90 percent of all moderate risk hazardous materials response incidents, the total response time for the arrival of the ERF, staffed with minimum 6 fire personnel, shall be: 7 minutes and 50 seconds in urban areas; and 10 minutes and 50 seconds in rural areas. The ERF shall be capable of: establishing command; sizing up and assessing the situation for a potential hazardous material or explosive device; determining the need for additional resources; establishing hot, warm, and cold zones; conducting emergency decontamination, and initiating confinement measures without endangering response personnel. These operations shall be done in accordance with department standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of all high risk hazardous materials response incidents, the total response time for arrival of the ERF, staffed with minimum 21 fire personnel, including the hazardous materials team, shall be 8 minutes and 50 seconds in urban areas and 11 minutes and 50 seconds in rural areas. The ERF shall be capable of: establishing command; appointing an incident safety officer; and conducting advanced confinement, containment, and decontamination procedures. The ERF shall also be capable of establishing an operations section and medical group. The ERF shall have the technical expertise, knowledge, skills, and abilities to mitigate a hazardous materials incident in accordance with department standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of all maximum risk hazardous materials response incidents, the total response time for arrival of the ERF, staffed with minimum 30 fire personnel, including the hazardous materials team, shall be 10 minutes and 50 seconds in urban areas and 12 minutes and 50 minutes in rural areas. The ERF shall be capable of: establishing command; appointing an incident safety officer; and conducting advanced confinement, containment, and decontamination procedures. The ERF shall also be capable of establishing a staging officer, an operations section, and medical group. The ERF shall have the technical expertise, knowledge, skills, and abilities to mitigate a hazardous materials incident in accordance with department standard operating procedures while providing for the safety of responders and the general public.

Aircraft Rescue and Firefighting Program

Distribution:

For 90 percent of all ARFF response incidents, the total response time for the arrival of the first-due unit, staffed with a minimum one fire driver/operator, shall be 3 minutes. The first-due unit shall be capable of: establishing command; assessing the situation; requesting additional resources; controlling the hazards; and providing basic life support for victims. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

Concentration:

For 90 percent of all moderate risk ARFF response incidents, the total response time for the arrival of the ERF, staffed with minimum 5 fire personnel shall be 4 minutes. The ERF shall be capable of: establishing incident command; assessing the situation; requesting additional resources; conducting rescue operations, fire suppression, and providing ALS in accordance with department standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of all high risk ARFF response incidents, the total response time for the arrival of the ERF, staffed with minimum 16 fire personnel, shall be 14 minutes. The ERF shall be capable of: establishing incident command; appointing an incident safety officer; establishing an operations section; providing for staging, and conducting rescue operations, fire suppression, and providing ALS in accordance with department standard operating procedures while providing for the safety of responders and the general public.

For 90 percent of all maximum risk ARFF response incidents, the total response time for the arrival of the ERF, staffed with minimum 25 fire personnel, shall be 16 minutes. The ERF shall be capable of: establishing incident command; appointing an incident safety officer; establishing an operations section; providing for staging, and conducting rescue operations and fire suppression. The ERF shall also be capable of providing ALS and establishing triage, treatment, and transportation groups. These operations shall be in accordance with department standard operating procedures while providing for the safety of responders and the general public.

Wildland Fire Services Program

Distribution:

For 90 percent of all wildland fire suppression incidents, the total response time for the arrival of the first due units, staffed with 3 firefighters and 1 officer, shall be: 8 minutes and 50 seconds in urban areas; and 10 minutes and 20 seconds in rural areas. The first due unit shall be capable of: providing 400 gallons of water and 100 gallons per minute (GPM) pumping capacity, establishing command, assessing the incident, requesting additional resources, and extending the appropriate fire attack. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the general public.

Concentration:

For 90 percent of all moderate risk wildland fire suppression incidents, the total response time for the arrival of the ERF, staffed with 15 firefighters and officers, shall be: 18 minutes in urban areas; and 20 minutes in rural areas. The ERF shall be capable of: providing 400 gallons of water and 150 GPM pumping capacity, establishing command; appointing an incident safety officer, a recon officer, and a staging manager; establishing fire attack divisions, a structure protection group, and an uninterrupted water supply. These operations shall be done in accordance with departmental standard operating procedures.

For 90 percent of all high risk wildland fire suppression incidents, the total response time for the arrival of the ERF, staffed with 33 firefighters and officers, shall be: 19 minutes and 20 seconds in urban areas; and 21 minutes and 20 seconds in rural areas. The ERF shall be capable of: providing 400 gallons of water and 150 gallons per minute (GPM) pumping capacity, establishing command; appointing an incident safety officer, a recon group, a dedicated lookout, and a staging manager; establishing fire attack divisions, a structure protection group, holding group and an uninterrupted water supply. These operations shall be done in accordance with departmental standard operating procedures.

Performance Objectives – Baselines

The performance of the department was measured by the actual response times (baselines) to emergency incidents that occurred during 2014-2016. The following baselines, reported for each service delivery program, are provided for the distribution and concentration of the department's resources:

Fire Suppression Services Program

The department's baseline statements reflect actual performance during 2014 to 2016. The department does not rely on the use of automatic aid or mutual aid from neighboring fire department to provide its effective response force complement of personnel. The department's actual baseline service level performance is as follows:

Distribution:

The first due unit for all risk levels is capable of: providing 500 gallons of water and 1,250 gallons per minute (GPM) pumping capacity; initiating command; requesting additional resources; establishing and advancing an attack line flowing a minimum of 150-GPM; establishing an uninterrupted water supply; containing the fire; rescuing at-risk victims; and performing salvage operations. The first due unit follows the department's standard operating procedures.

For 90 percent of all low risk non-wildland fire suppression incidents, the total response time for the arrival of the first due unit, staffed with 3 firefighters and 1 officer, is: 7 minutes and 23 seconds in urban areas; and 8 minutes in rural areas.

For 90 percent of all moderate risk non-wildland fire suppression incidents, the total response time for the arrival of the first due unit, staffed with 3 firefighters and 1 officer, is: 6 minutes and 42 seconds in urban areas; and 7 minutes and 45 seconds in rural areas.

For 90 percent of all high risk non-wildland fire suppression incidents, the total response time for the arrival of the first due unit, staffed with 3 firefighters and 1 officer, is: 7 minutes and 11 seconds in urban areas; and 7 minutes and 18 seconds in rural areas.

Concentration:
For 90 percent of all moderate risk non-wildland fire suppression incidents, the total response time for the arrival of the ERF, staffed with minimum 15 fire personnel, is: 10 minutes and 38 seconds in urban areas, and 13 minutes and 15 seconds in rural areas. The ERF is capable of: establishing command, appointing an incident safety officer, complying with the OSHA requirements of two in-two out, providing an uninterrupted water supply, ventilating the structure, advancing an attack line and a backup line for fire control, searching and rescuing at-risk victims, controlling utilities, and performing salvage and overhaul. These operations are based on the department's standard operating procedures.

For 90 percent of all high risk non-wildland fire suppression incidents, the total response time for the arrival of the ERF, staffed with minimum 25 fire personnel, is: 18 minutes and 16 seconds in urban areas, and 21 minutes and 28 seconds in rural areas. The ERF is capable of: establishing command, appointing an incident safety officer, complying with OSHA requirements of two in-two out, providing an uninterrupted water supply, ventilating the structure, advancing attack lines and backup lines for fire control, searching and rescuing at-risk victims, controlling utilities, and performing salvage and overhaul. The ERF is also capable of the controlling standpipe/sprinkler systems and placing elevated streams into service from aerial ladders. These operations are based on the department's standard operating procedures.

Maximum Risk Fire Suppression: In 2014-2016, the AFD responded to 15 fire incidents (9 Urban/7 Rural) that qualified as Maximum Risk. Of these, the ERF arrived on scene four times. These data sets are statistically insignificant and therefore are not reported.

Emergency Medical Services Program
The department's baseline statements reflect actual performance during 2014 to 2016. The department does not rely on the use of automatic aid or mutual aid from neighboring fire department to provide its effective response force complement of personnel. The department's actual baseline service level performance is as follows:

Distribution:
The first-due unit for all risk levels is capable of: assessing scene safety and establishing command; sizing-up the situation; conducting an initial patient assessment; obtaining vitals and patient's medical history; providing ALS treatment, including CPR and AED; and assisting transport personnel with packaging the patient. The first due unit follows the department's standard operating procedures.

For 90 percent of all low risk EMS responses, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, is: 6 minutes and 12 seconds in urban areas; and 7 minutes and 05 seconds in rural areas.

For 90 percent of all moderate risk EMS responses, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, is: 6 minutes and 26 seconds in urban areas; and 7 minutes and 19 seconds in rural areas.

For 90 percent of all high risk EMS responses, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, is: 7 minutes and 39 seconds in urban areas; and 8 minutes and 15 seconds in rural areas.

Concentration:
For 90 percent of all moderate risk EMS response incidents, the total response time for the arrival of the ERF, staffed with minimum 6 firefighters and officers, is: 7 minutes and 38 seconds in urban areas; and 8 minutes and 46 seconds in rural areas. The ERF is capable of: establishing command, assessing scene safety and controlling hazards; conducting an initial patient assessment; obtaining vitals and patient's medical history; providing ALS treatment, including CPR and AED; and assisting transport personnel with packaging the patient. These operations are based on the department's standard operating procedures.

For 90 percent of all high risk EMS response incidents the total response time for the arrival of the ERF, staffed with minimum 12 firefighters and officers, is 12 minutes and 04 seconds in urban areas and 14 minutes and 08 seconds in rural areas. The ERF is capable of: establishing incident command; appointing an incident safety officer; completing patient assessment; and providing ALS treatment, including CPR and AED. The ERF is also capable of establishing triage, treatment, and transportation groups. These operations are based on the department's standard operating procedures.

Maximum Risk Emergency Medical Services: In 2014-2016, the AFD responded to five incidents that qualified as Maximum Risk. Of these, the ERF arrived on scene once. These data sets are statistically insignificant and are not reported.

Technical Rescue Services Program
The department's baseline statements reflect actual performance during 2014 to 2016. The department does not rely on the use of automatic aid or mutual aid from neighboring fire department to provide its effective response force complement of personnel. The department's actual baseline service level performance is as follows:

Distribution:
The first-due unit for all risk levels is capable of: establishing command; sizing up to determine if a technical rescue response is required; requesting additional resources; initiating basic extrication/disentanglement rescue; and providing ALS to victims without endangering response personnel. These operations are based on the department's standard operating procedures.

For 90 percent of all low risk technical rescue incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, is: 7 minutes and 36 seconds in urban areas; and 8 minutes and 03 seconds in rural areas.

For 90 percent of all moderate risk technical rescue incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, is: 7 minutes and 36 seconds in urban areas; and 8 minutes and 14 seconds in rural areas.

Concentration:
For 90 percent of all moderate risk technical rescue incidents, the total response time for the arrival of the ERF, staffed with a minimum of 6 fire personnel, is: 7 minutes and 42 seconds in urban areas; and 9 minutes and 30 seconds in rural areas. The ERF is capable of: establishing command; completing extrication/ disentanglement rescue, and providing ALS to victims. These operations are based on the department's standard operating procedures.

High and Maximum Risk Technical: In 2014-2016, the AFD responded to three incidents that qualified as High Risk and none that were Maximum Risk. These data sets are statistically insignificant and are not reported.

Hazardous Materials Services Program
The department's baseline statements reflect actual performance during 2014 to 2016. The department does not rely on the use of automatic aid or mutual aid from neighboring fire department to provide its effective response force complement of personnel. The department's actual baseline service level performance is as follows:

Distribution:
The first-due unit for all risk levels is capable of: establishing command; sizing up and assessing the situation for a potential hazardous material or explosive device; determining the need for additional resources; establishing hot, warm, and cold zones; and initiating basic confinement measures without endangering response personnel. These operations are based on the department's standard operating procedures.

For 90 percent of all low risk hazardous materials response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, is: 8 minutes in urban areas; and 8 minutes and 57 seconds in rural areas.

For 90 percent of all moderate risk hazardous materials response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, is: 7 minutes and 50 seconds in urban areas; and 8 minutes and 30 seconds in rural areas.

For 90 percent of all high risk hazardous materials response incidents, the total response time for the arrival of the first-due unit, staffed with 3 firefighters and 1 officer, is: 7 minutes and 04 seconds in urban areas; and 7 minutes and 27 seconds in rural areas.

Concentration:

For 90 percent of all moderate risk hazardous materials response incidents, the total response time for the arrival of the ERF including the hazardous materials team, staffed with minimum 6 fire personnel, is: 8 minutes and 17 seconds in urban areas; and 16 minutes and 49 seconds in rural areas. The ERF is capable of: establishing command; sizing up and assessing the situation for a potential hazardous material or explosive device; determining the need for additional resources; establishing hot, warm, and cold zones; conducting emergency decontamination, and initiating confinement measures without endangering response personnel. These operations are based on the department's standard operating procedures.

For 90 percent of all high risk hazardous materials response incidents, the total response time for arrival of the ERF, staffed with minimum 21 fire personnel, including the hazardous materials team, is 11 minutes and 57 seconds in urban areas and 14 minutes and 18 minutes in rural areas. The ERF is capable of: establishing command; appointing an incident safety officer; and conducting advanced confinement, containment, and decontamination procedures. The ERF is also capable of establishing an operations section and medical group. The ERF has the technical expertise, knowledge, skills, and abilities to mitigate a hazardous materials incident, and these operations are based on the department's standard operating procedures.

Maximum Risk Hazardous Materials: In 2014-2016, the AFD responded to four incidents that qualified as Maximum Risk. Of these, the ERF never arrived on scene. These data sets are statistically insignificant and therefore are not reported.

Aircraft Rescue and Firefighting Program

The department's baseline statements reflect actual performance during 2014 to 2016. The department does not rely on the use of automatic aid or mutual aid from neighboring fire department to provide its effective response force complement of personnel. The department's actual baseline service level performance is as follows:

Distribution:

The first-due unit for all risk levels is capable of: establishing command; assessing the situation; requesting additional resources; controlling the hazards; and providing basic life support for victims. These operations are based on the department's standard operating procedures.

For 90 percent of all low risk ARFF response incidents, the total response time for the arrival of the first-due unit, staffed with minimum one fire driver/operator, is 3 minutes and 28 seconds.

For 90 percent of all moderate risk ARFF response incidents, the total response time for the arrival of the first-due unit, staffed with minimum one fire driver/operator, is 2 minutes and 50 seconds.

For 90 percent of all high risk ARFF response incidents, the total response time for the arrival of the first-due unit, staffed with minimum one fire driver/operator, is 2 minutes and 24 seconds.

Concentration:
For 90 percent of all moderate risk ARFF response incidents, the total response time for the arrival of the ERF, staffed with minimum 5 fire personnel is 3 minutes and 39 seconds. The ERF is capable of: establishing incident command; assessing the situation; requesting additional resources; conducting rescue operations, fire suppression, and providing ALS. These operations are based on the department's standard operating procedures.

For 90 percent of all high risk ARFF response incidents, the total response time for the arrival of the ERF, staffed with minimum 16 fire personnel, is 16 minutes and 53 seconds. The ERF is capable of: establishing incident command; appointing an incident safety officer; establishing an operations section; providing for staging, and conducting rescue operations, fire suppression, and providing ALS. These operations are based on the department's standard operating procedures.

Maximum Risk ARFF: In 2014-2016, the AFD did not respond to any incidents that qualified as Maximum Risk.

Wildland Fire Services Program
The department's baseline statements reflect actual performance during 2014 to 2016. The department does not rely on the use of automatic aid or mutual aid from neighboring fire department to provide its effective response force complement of personnel. The department's actual baseline service level performance is as follows:

Distribution:
The first due unit for all risk levels is capable of: providing 400 gallons of water and 100 GPM pumping capacity, establishing command, assessing the incident, requesting additional resources, and extending the appropriate fire attack. These operations are based on the department's standard operating procedures.

For 90 percent of all low risk wildland fire suppression incidents, the total response time for the arrival of the first due units, staffed with 3 firefighters and 1 officer, is: 11 minutes and 18 seconds in urban areas; and 13 minutes and 14 seconds in rural areas.

For 90 percent of all moderate risk wildland fire suppression incidents, the total response time for the arrival of the first due units, staffed with 3 firefighters and 1 officer, is: 11 minutes and 14 seconds in urban areas; and 12 minutes and 18 seconds in rural areas.

Concentration:
For 90 percent of all moderate risk wildland fire suppression incidents, the total response time for the arrival of the ERF, staffed with 15 firefighters and officers, is: 24 minutes and 30 seconds in urban areas; and 21 minutes and 19 seconds in rural areas. The ERF is capable of: providing 400 gallons of water and 150 GPM pumping capacity, establishing command; appointing an incident safety officer, a recon officer, and a staging manager; establishing fire attack divisions, a structure

protection group, and an uninterrupted water supply. These operations are based on the department's standard operating procedures.

High Risk Wildland Firefighting: In 2014-2016, the AFD did not respond to any incidents that qualified as High Risk. The department does not define a Maximum Risk Wildland Firefighting category.

Performance Gaps – Baseline to Benchmark Time Gap

An analysis of the baselines times, in comparison to the set benchmarks, assists a fire department with determining the current level of performance and identifies opportunities for improving the deployment system. Table 37 identifies the compliance percentages for the 1st due and the ERF meeting the AFD's set benchmarks for *Total Response Time*. For *1st due*, the Wildland responses had the lowest rate of compliance (71.9%) and ARFF had the highest (90.8%). The lowest compliance rate for ERF responses was in the non-vehicular EMS classification (74.1%) while Wildland had the highest level at 89.5%.

Table 37 Total Response Time Baselines to Benchmarks Compliance

1st Due and ERF Total Response Time Compliance			
Service Programs	**# of Incidents**	**1st Due %**	**ERF %**
Fire Suppression	1766	81.5	84.7
EMS: Non-Vehicular	32621	88.1	74.1
EMS: Vehicular	7670	85.8	84.3
Technical Rescue	195	82.1	87.7
Hazardous Materials	1856	77.7	81.1
Aircraft Rescue/Firefighting	76	90.8	86.1
Wildland Firefighting	303	71.9	89.5
All Incidents	44487	86.9	84.0

The following tables identify the time differences between the AFD's performance measurements (baselines) and the performance objectives (benchmarks) for the department's six risk classifications. Negative time gaps (see Figure 39: *Travel Time/1st Due/Rural*) indicate that the AFD's performance in that time segment of the emergency response was better than the benchmark.

Fire Suppression Services Program

Table 38 Low Risk Fire Suppression Baseline to Benchmark Time Gaps (2014-2016)

2014-2016 Low Risk Fire Suppression					
Time Segment	**1st Due**	**Urban/Rural**	**Baseline**	**Benchmark**	**Time Gap**
Call Handling	All	All	2:12	1:00	1:12
Turnout Time	1st Due	All	1:41	1:20	0:21
Travel Time	1st Due	Urban	4:33	4:00	0:33
Travel Time	1st Due	Rural	5:09	5:00	0:09
Total Response Time	1st Due	Urban	7:23	6:20	1:03
Total Response Time	1st Due	Rural	8:00	7:20	0:40

Table 39 Moderate Risk Fire Suppression Baseline to Benchmark Time Gaps (2014-2016)

2014-2016 Moderate Risk Fire Suppression					
Time Segment	**1st/ERF**	**Urban/Rural**	**Baseline**	**Benchmark**	**Time Gap**
Call Handling	All	All	2:05	1:00	1:05
Turnout Time	1st Due	All	1:50	1:20	0:30
Travel Time	1st Due	Urban	4:02	4:00	0:02
Travel Time	1st Due	Rural	4:51	5:00	-0:09
Travel Time	ERF	Urban	7:34	7:30	0:04
Travel Time	ERF	Rural	9:09	8:30	0:39
Total Response Time	1st Due	Urban	6:42	6:20	0:22
Total Response Time	1st Due	Rural	7:45	7:20	0:25
Total Response Time	ERF	Urban	10:38	10:20	0:18
Total Response Time	ERF	Rural	13:15	12:20	0:55

Table 40 High Risk Fire Suppression Baseline to Benchmark Time Gaps (2014-2016)

2014-2016 High Risk Fire Suppression					
Time Segment	**1st/ERF**	**Urban/Rural**	**Baseline**	**Benchmark**	**Time Gap**
Call Handling	All	All	2:13	1:00	1:13
Turnout Time	1st Due	All	1:57	1:20	0:37
Travel Time	1st Due	Urban	4:13	4:00	0:13
Travel Time	1st Due	Rural	4:29	5:00	-0:31
Travel Time	ERF	Urban	10:16	8:30	1:46
Travel Time	ERF	Rural	13:29	10:00	3:29
Total Response Time	1st Due	Urban	7:11	6:20	0:51
Total Response Time	1st Due	Rural	7:18	7:20	-0:02
Total Response Time	ERF	Urban	18:16	15:00	3:16
Total Response Time	ERF	Rural	21:28	16:30	4:58

Emergency Medical Services Program

Table 41 Low Risk Emergency Medical Services Baseline to Benchmark Time Gaps (2014-2016)

2014-2016 Low Risk Emergency Medical Services					
Time Segment	**1st Due**	**Urban/Rural**	**Baseline**	**Benchmark**	**Time Gap**
Call Handling	All	All	1:16	1:00	0:16
Turnout Time	1st Due	All	1:38	1:00	0:38
Travel Time	1st Due	Urban	4:17	4:00	0:17
Travel Time	1st Due	Rural	5:10	5:00	0:10
Total Response Time	1st Due	Urban	6:12	6:00	0:12
Total Response Time	1st Due	Rural	7:05	7:00	0:05

Table 42 Moderate Risk Emergency Medical Services Baseline to Benchmark Time Gaps (2014-2016)

2014-2016 Moderate Risk Emergency Medical Services					
Time Segment	**1st/ERF**	**Urban/Rural**	**Baseline**	**Benchmark**	**Time Gap**
Call Handling	All	All	1:49	1:00	0:49
Turnout Time	1st Due	All	1:32	1:00	0:32
Travel Time	1st Due	Urban	4:00	4:00	0:00
Travel Time	1st Due	Rural	4:43	5:00	-0:17
Travel Time	ERF	Urban	5:12	5:00	0:12
Travel Time	ERF	Rural	6:08	6:00	0:08
Total Response Time	1st Due	Urban	6:26	6:00	0:26
Total Response Time	1st Due	Rural	7:19	7:00	0:19
Total Response Time	ERF	Urban	7:38	7:00	0:38
Total Response Time	ERF	Rural	8:46	8:00	0:46

Table 43 High Risk Emergency Medical Services Baseline to Benchmark Time Gaps (2014-2016)

2014-2016 High Risk Emergency Medical Services					
Time Segment	**1st/ERF**	**Urban/Rural**	**Baseline**	**Benchmark**	**Time Gap**
Call Handling	All	All	2:07	1:00	1:07
Turnout Time	1st Due	All	1:27	1:00	0:27
Travel Time	1st Due	Urban	4:28	4:00	0:28
Travel Time	1st Due	Rural	5:03	5:00	0:03
Travel Time	ERF	Urban	7:05	7:00	0:05
Travel Time	ERF	Rural	8:32	8:00	0:32
Total Response Time	1st Due	Urban	7:39	6:00	1:39
Total Response Time	1st Due	Rural	8:15	7:00	1:15
Total Response Time	ERF	Urban	12:04	9:30	2:34
Total Response Time	ERF	Rural	14:08	11:30	2:38

Table 44 Low Risk Technical Rescue Baseline to Benchmark Time Gaps (2014-2016)

2014-2016 Low Risk Technical Rescue					
Time Segment	**1st Due**	**Urban/Rural**	**Baseline**	**Benchmark**	**Time Gap**
Call Handling	All	All	2:44	1:30	1:14
Turnout Time	1st Due	All	1:29	1:20	0:09
Travel Time	1st Due	Urban	4:49	4:00	0:49
Travel Time	1st Due	Rural	5:09	5:00	0:09
Total Response Time	1st Due	Urban	7:36	6:50	0:46
Total Response Time	1st Due	Rural	8:03	7:50	0:13

Table 45 Moderate Risk Technical Rescue Baseline to Benchmark Time Gaps (2014-2016)

2014-2016 Moderate Risk Technical Rescue					
Time Segment	**1st/ERF**	**Urban/Rural**	**Baseline**	**Benchmark**	**Time Gap**
Call Handling	All	All	2:04	1:30	0:34
Turnout Time	1st Due	All	1:40	1:20	0:20
Travel Time	1st Due	Urban	4:12	4:00	0:12
Travel Time	1st Due	Rural	5:02	5:00	0:02
Travel Time	ERF	Urban	5:23	5:00	0:23
Travel Time	ERF	Rural	6:30	6:00	0:30
Total Response Time	1st Due	Urban	7:36	6:50	0:46
Total Response Time	1st Due	Rural	8:14	7:50	0:24
Total Response Time	ERF	Urban	7:42	7:50	-0:08
Total Response Time	ERF	Rural	9:30	8:50	0:40

Table 46 Low Risk Hazardous Materials Baseline to Benchmark Time Gaps (2014-2016)

2014-2016 Low Risk Hazardous Materials					
Time Segment	**1st Due**	**Urban/Rural**	**Baseline**	**Benchmark**	**Time Gap**
Call Handling	All	All	2:39	1:30	1:09
Turnout Time	1st Due	All	1:43	1:20	0:23
Travel Time	1st Due	Urban	4:53	4:00	0:53
Travel Time	1st Due	Rural	5:39	5:00	0:39
Total Response Time	1st Due	Urban	8:00	6:50	1:10
Total Response Time	1st Due	Rural	8:57	7:50	1:07

Table 47 Moderate Risk Hazardous Materials Baseline to Benchmark Time Gaps (2014-2016)

2014-2016 Moderate Risk Hazardous Materials					
Time Segment	**1st/ERF**	**Urban/Rural**	**Baseline**	**Benchmark**	**Time Gap**
Call Handling	All	All	2:18	1:30	0:48
Turnout Time	1st Due	All	1:38	1:20	0:18
Travel Time	1st Due	Urban	4:19	4:00	0:19
Travel Time	1st Due	Rural	5:15	5:00	0:15
Travel Time	ERF	Urban	5:02	5:00	0:02
Travel Time	ERF	Rural	6:53	6:00	0:53
Total Response Time	1st Due	Urban	7:50	6:50	1:00
Total Response Time	1st Due	Rural	8:30	7:50	0:40
Total Response Time	ERF	Urban	8:17	7:50	0:27
Total Response Time	ERF	Rural	16:49	10:50	5:59

Table 48 High Risk Hazardous Materials Baseline to Benchmark Time Gaps (2014-2016)

2014-2016 High Risk Hazardous Materials					
Time Segment	**1st/ERF**	**Urban/Rural**	**Baseline**	**Benchmark**	**Time Gap**
Call Handling	All	All	2:25	1:30	0:55
Turnout Time	1st Due	All	1:41	1:20	0:21
Travel Time	1st Due	Urban	3:41	4:00	-0:19
Travel Time	1st Due	Rural	4:30	5:00	-0:30
Travel Time	ERF	Urban	7:05	6:00	1:05
Travel Time	ERF	Rural	9:36	7:00	2:36
Total Response Time	1st Due	Urban	7:04	6:50	0:14
Total Response Time	1st Due	Rural	7:27	7:50	-0:23
Total Response Time	ERF	Urban	11:57	8:50	3:07
Total Response Time	ERF	Rural	14:18	11:50	2:28

Aircraft Rescue and Firefighting Program

Table 49 Low Risk Aircraft Rescue and Firefighting Baseline to Benchmark Time Gaps (2014-2016)

2014-2016 Low Aircraft Rescue and Firefighting					
Time Segment	**1st Due**	**Urban/Rural**	**Baseline**	**Benchmark**	**Time Gap**
Call Handling	All	All	0:54	0:50	0:04
Turnout Time	1st Due	All	1:00	1:00	0:00
Travel Time	1st Due	Rural	1:00	1:00	0:00
Total Response Time	1st Due	Rural	3:28	3:00	0:28

Table 50 Moderate Risk Aircraft Rescue and Firefighting Baseline to Benchmark Time Gaps (2014-2016)

2014-2016 Moderate Risk Aircraft Rescue and Firefighting					
Time Segment	**1st/ERF**	**Urban/Rural**	**Baseline**	**Benchmark**	**Time Gap**
Call Handling	All	All	1:52	1:00	0:52
Turnout Time	1st Due	All	0:40	1:00	-0:20
Travel Time	1st Due	Rural	0:43	1:00	-0:17
Travel Time	ERF	Rural	1:29	2:00	-0:31
Total Response Time	1st Due	Rural	2:50	3:00	-0:10
Total Response Time	ERF	Rural	3:39	4:00	-0:21

Table 51 High Risk Aircraft Rescue and Firefighting Baseline to Benchmark Time Gaps (2014-2016)

2014-2016 High Risk Aircraft Rescue and Firefighting					
Time Segment	**1st/ERF**	**Urban/Rural**	**Baseline**	**Benchmark**	**Time Gap**
Call Handling	All	All	1:25	1:00	0:25
Turnout Time	1st Due	All	0:19	1:00	-0:41
Travel Time	1st Due	Rural	1:00	1:00	0:00
Travel Time	ERF	Rural	12:25	12:00	0:25
Total Response Time	1st Due	Rural	2:24	3:00	-0:36
Total Response Time	ERF	Rural	16:53	14:00	2:53

Wildland Fire Services Program

Table 52 Low Risk Wildland Firefighting Baseline to Benchmark Time Gaps (2014-2016)

2014-2016 Wildland Firefighting					
Time Segment	**1st Due**	**Urban/Rural**	**Baseline**	**Benchmark**	**Time Gap**
Call Handling	All	All	2:00	1:00	1:00
Turnout Time	1st Due	All	1:51	1:20	0:31
Travel Time	1st Due	Urban	7:14	6:30	0:44
Travel Time	1st Due	Rural	9:48	8:00	1:48
Total Response Time	1st Due	Urban	11:18	8:50	2:28
Total Response Time	1st Due	Rural	13:14	10:20	2:54

Table 53 Moderate Risk Wildland Firefighting Baseline to Benchmark Time Gaps (2014-2016)

2014-2016 Moderate Risk Wildland Firefighting					
Time Segment	**1st/ERF**	**Urban/Rural**	**Baseline**	**Benchmark**	**Time Gap**
Call Handling	All	All	2:06	1:00	1:06
Turnout Time	1st Due	All	1:31	1:20	0:11
Travel Time	1st Due	Urban	7:12	6:30	0:42
Travel Time	1st Due	Rural	8:16	8:00	0:16
Travel Time	ERF	Urban	21:28	15:00	6:28
Travel Time	ERF	Rural	14:17	15:00	-0:43
Total Response Time	1st Due	Urban	11:14	8:50	2:24
Total Response Time	1st Due	Rural	12:18	10:20	1:58
Total Response Time	ERF	Urban	24:30	18:00	6:30
Total Response Time	ERF	Rural	21:19	20:00	1:19

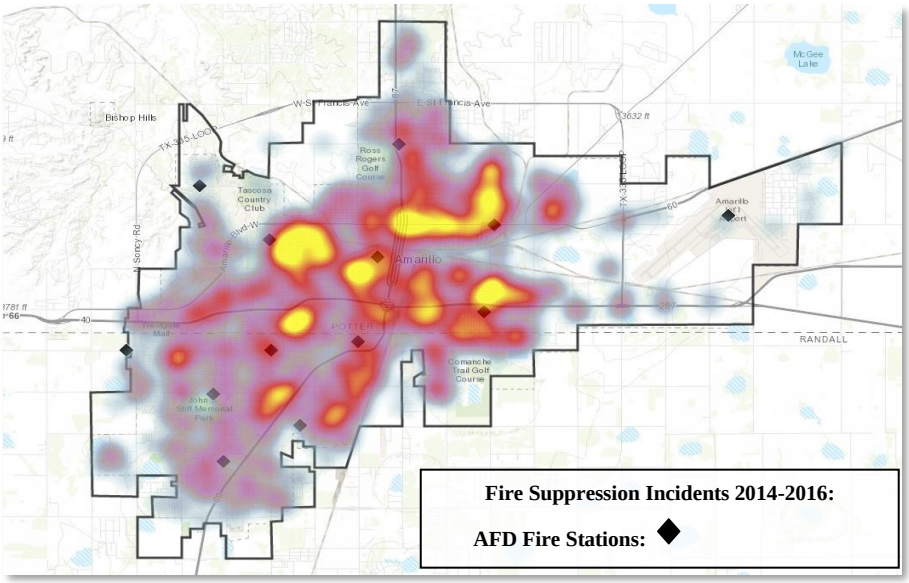
Community Areas where Program Delivery and Coverage Requires Improvement

The primary reason for a fire department to identify the time gaps between the current service performance and the objectives is to determine where the delivery and coverage areas can be improved. The process to determine such improvement opportunities for the AFD includes the study of heat maps that identify the location of incidents that occurred between 2014 and 2016 as well as those that display the Total Response Times that exceeded the benchmarks for each service program. With this, a clearer picture of actual requirements, such as the addition of a new fire station, the relocation of a special response unit, or the change of an operational policy, can be developed.

Fire Suppression

Analysis of the *Total Response Times* for the department's 1,766 fire suppression incidents (Figures 43 to 45), which accounts for 4.0% of the department's call volume, indicates the community is well-covered by the current deployment system. As expected, each of the primary hot spots shown for non-wildland fire suppression emergencies (Figure 43) cover areas that are of older construction and populations.

Figure 43 Fire Suppression Incidents Heat Map (2014-2016)



Figures 44 and 45 are heat maps of fire suppression incidents where the *Total Response Times* for the 1st due and the ERF, respectively, exceeded the department's benchmarks. The most significant hotspot for the 1st due (Figure 44) is located in an area that has limited access due to the major downtown overpass to the north and the rail yard to the west. However, there were only 19 fire suppression incidents in three years where the 1st due apparatus exceeded the benchmark. Importantly, the ERF (Figure 45) was able to arrive within the set benchmarks to support the required fire operations. The other 1st due hotspot is a cluster of seven fire incidents in the three-year period. Again, the ERF response covered the area within the established benchmarks.

Figure 44 Fire Suppression 1st Due *Total Response Times* Exceeding Benchmarks (2014-2016)

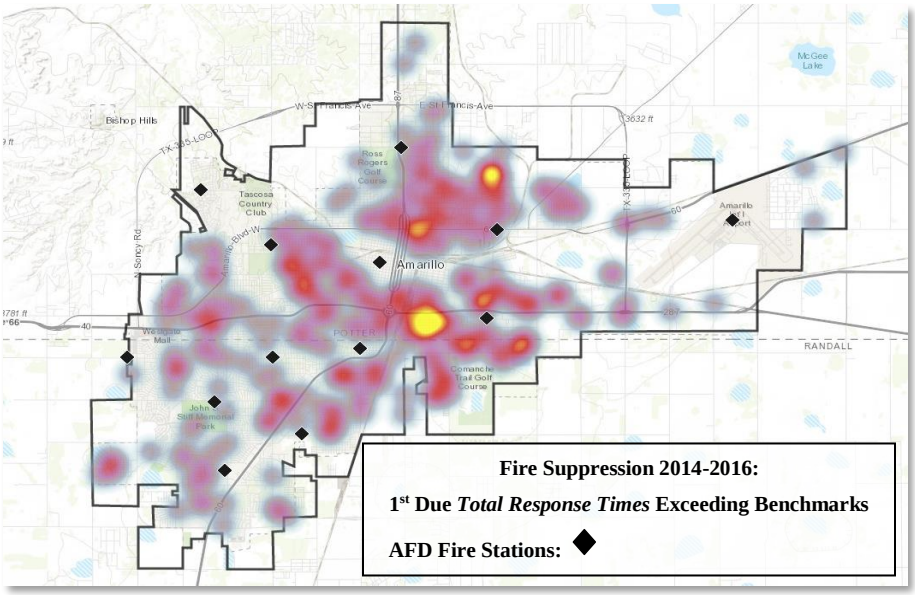
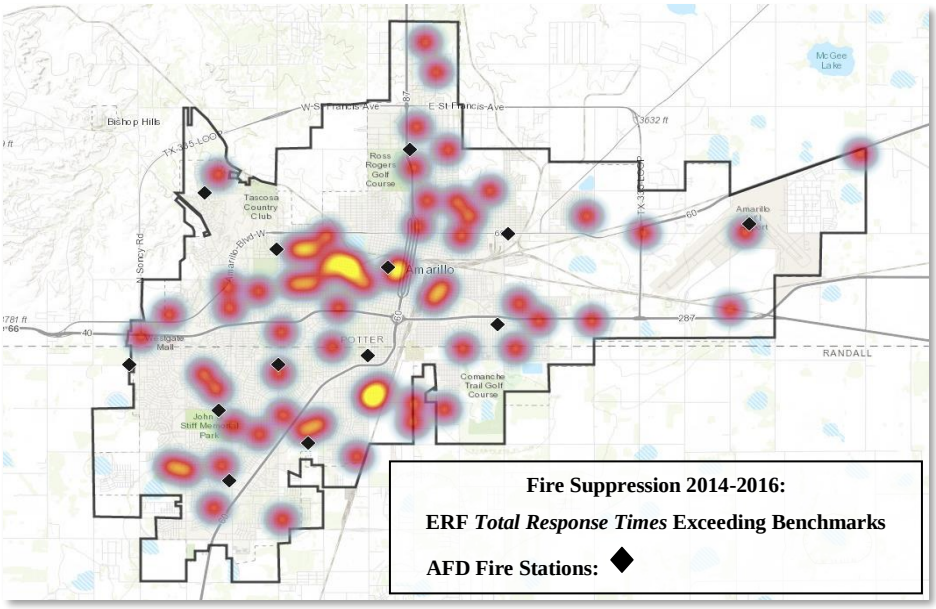


Figure 45 is a heat map of fire suppression incidents where the *Total Response Times* for the ERF exceeded the department's benchmarks. The most significant area is a cluster of 12 incidents located in the northwest central part of the city, between downtown and the San Jacinto subdivision. The other hotspot is three incidents in a residential area that has limited access from the east due to a rail line with only one nearby crossing point. The remaining spots distributed throughout the city are where the benchmarks were exceeded for one or two incidents.

Figure 45 Fire Suppression ERF *Total Response Times* Exceeding Benchmarks (2014-2016)

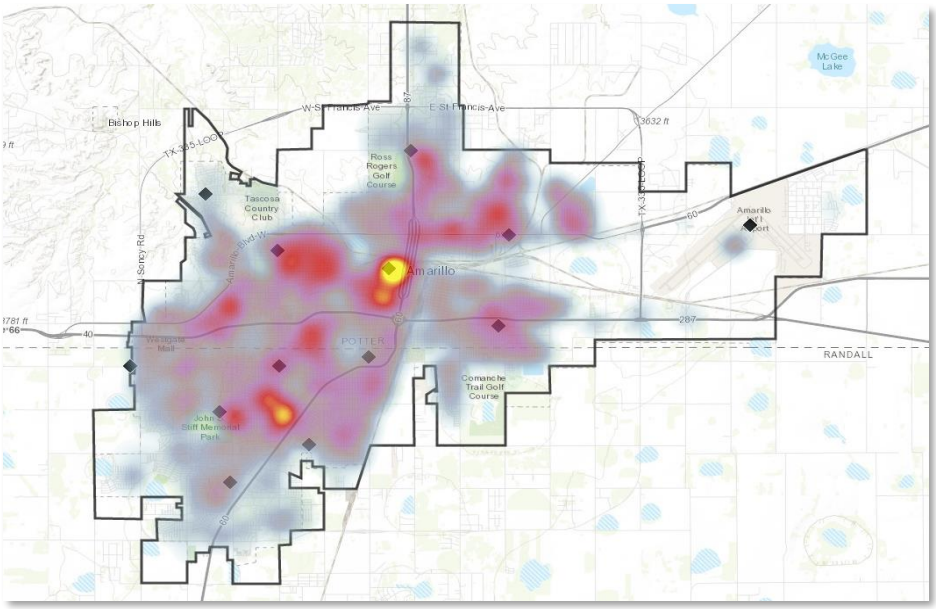


Emergency Medical Services

Figures 46 to 48 are heat maps illustrating the department's EMS incidents and where the *Total Response Times* for the 1st due and the ERF exceeded the department's benchmarks. These maps exclude automobile accidents, which are reported to the National Fire Incident Reporting System (NFIRS) as EMS incidents. Vehicle accidents distort the analysis of the EMS deployment system because they constitute 17.2% of all of the department's emergency responses. As a result, they were reviewed separately from the other EMS incidents.

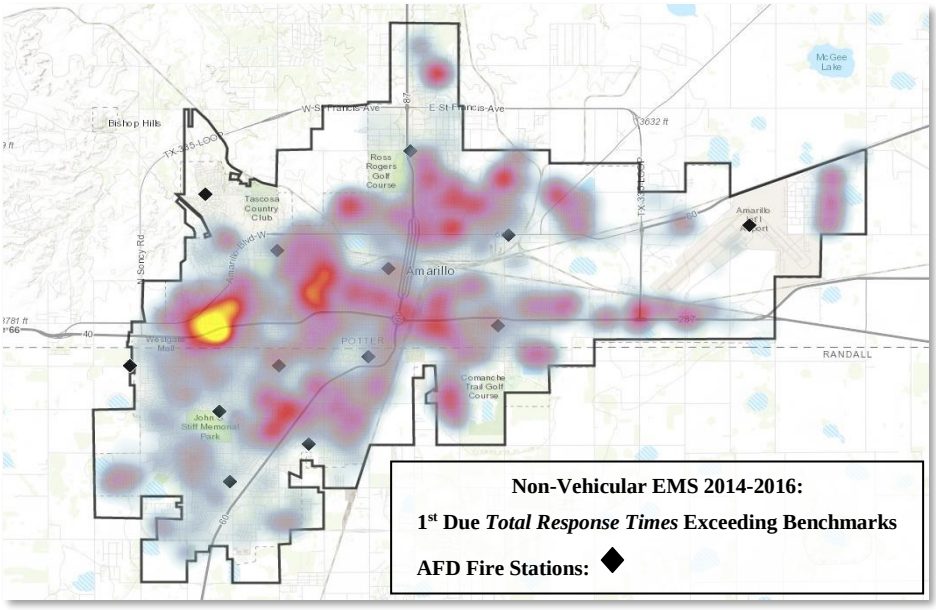
The heat map for the 32,621 non-vehicular EMS incident responses in 2014-2016 (Figure 46) shows the calls are well distributed throughout the central and southwest areas of Amarillo, with an elevated number of responses in the more densely populated areas. The intense hotspot in the downtown area is due to the department's 454 responses to the Salvation Army Shelter along with additional responses to similar facilities near Fire Station 1. The other hotspot, in the southwest quadrant of the city, is in the 45th Street and Virginia area. This census tract is the most densely populated in Amarillo due to a large number of apartment complexes.

Figure 46 Non-Vehicular Emergency Medical Services Incidents Heat Map (2014-2016)



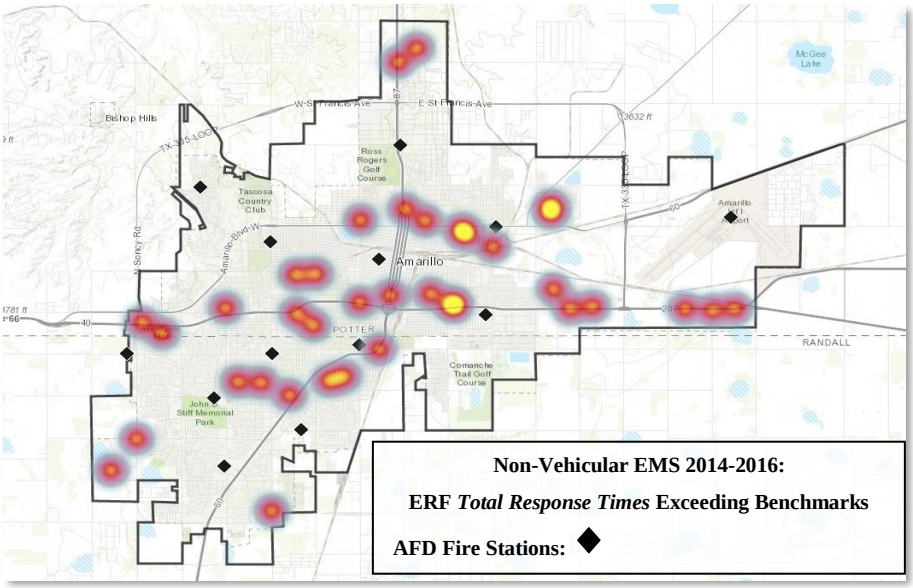
The *Total Response Time* benchmarks for 1st due apparatus were exceeded in 11.9% of the EMS incidents. Figure 47 shows these calls were also distributed throughout the central and southwest areas of the city, with a single hotspot located in the mixed commercial and residential area between Bell and Coulter Streets off Interstate-40.

Figure 47 Non-Vehicular Emergency Medical Services 1st Due *Total Response Times* Exceeding Benchmarks (2014-2016)



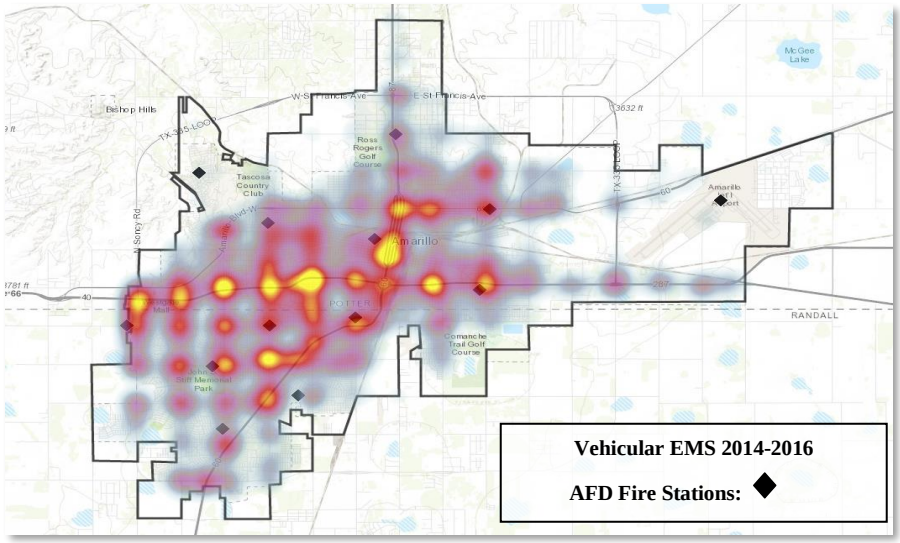
Of the 32,671 EMS incidents, the department only responded to 143 where a moderate or high risk ERF was deployed (Figure 48). Of these, 37 (25.9%) exceeded the department's benchmark set for the assigned risk category. The incidents were disbursed throughout the city, and no significant area of vulnerability was found.

Figure 48 Non-Vehicular Emergency Medical Services ERF *Total Response Times* Exceeding Benchmarks (2014-2016)



The department reports incidents that involve motor vehicle accidents (MVA's) as emergency medical calls. The exceptions are those coded as technical rescues when victim extrication is required. The department responded to 7,670 MVA's during 2014-2016 (Figure 49), which greatly exceeds the call volume of all other non-EMS service delivery program's responses combined. The intersections of Amarillo's main north/south streets and Interstate-40 and the downtown section of Interstate-27 have the most accidents in the city.

Figure 49 Vehicular Emergency Medical Services Incidents Heat Map (2014-2016)



As shown by Figures 50 and 51, both 1st due and ERF deployment policies cover the city's non-highway incidents. The portion of Interstate-40 from mid-Amarillo westward has the only hotspots where a significant number of both 1st due and ERF responses did not meet performance benchmarks.

Figure 50 Vehicular Emergency Medical Services 1st Due *Total Response Times* Exceeding Benchmarks (2014-2016)

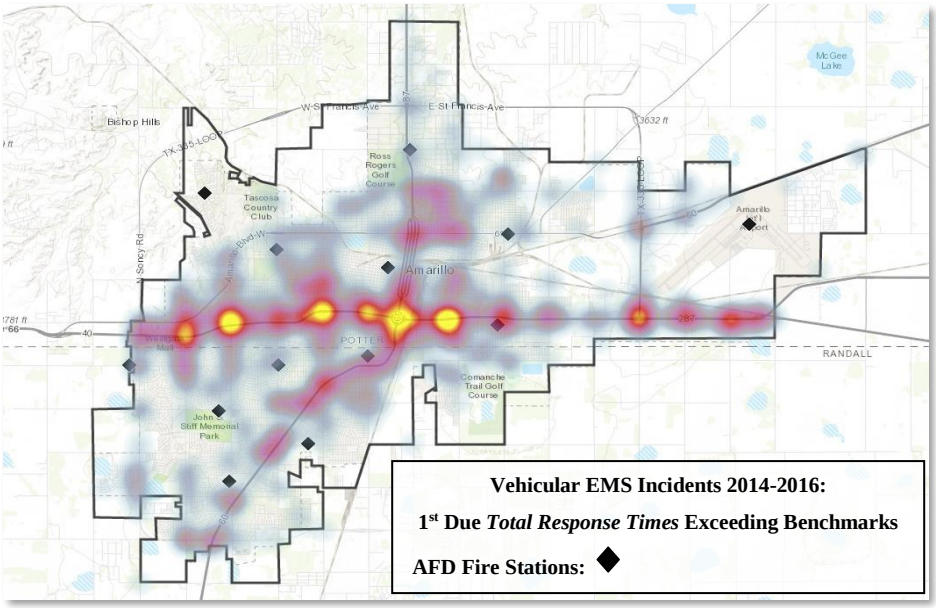
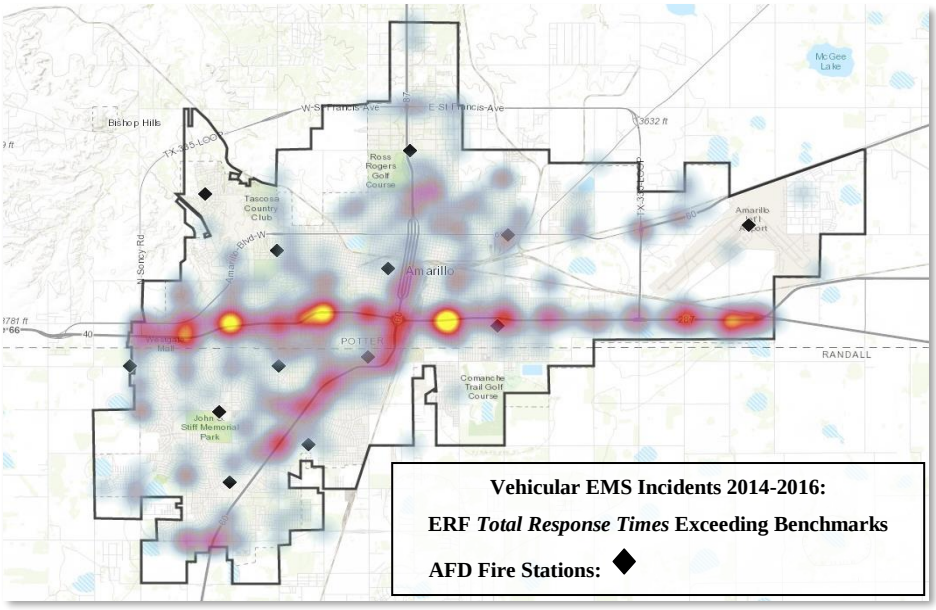


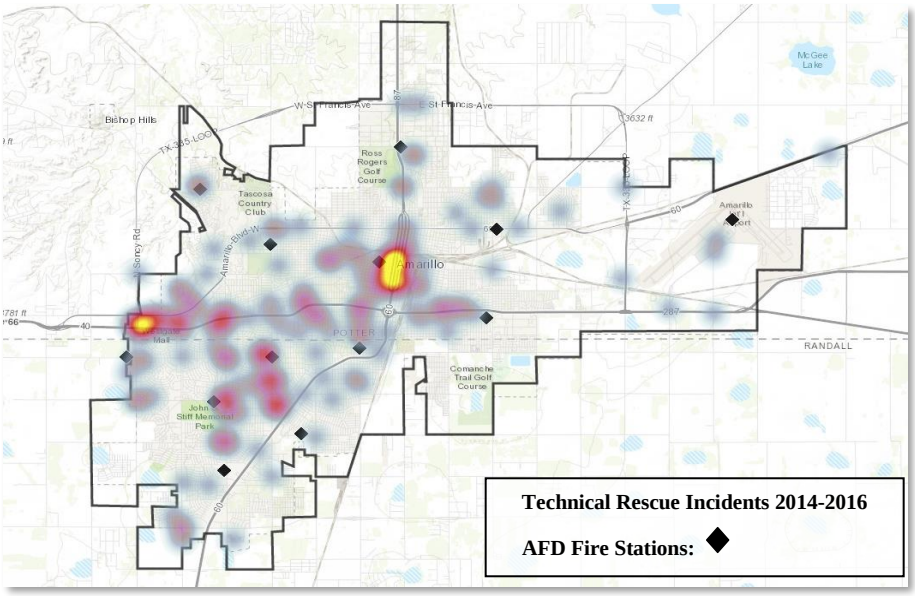
Figure 51 Vehicular Emergency Medical Services ERF *Total Response Times* Exceeding Benchmarks (2014-2016)



Technical Rescue

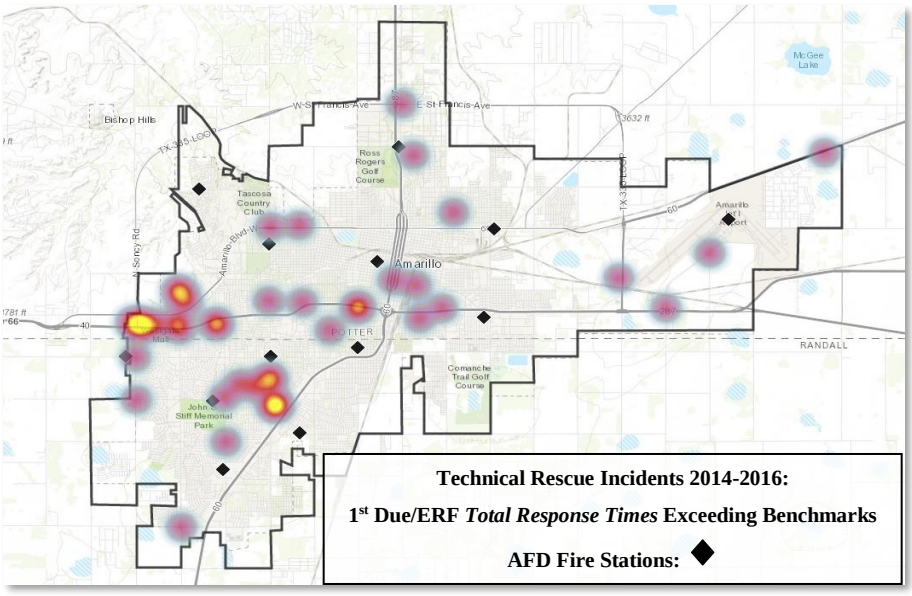
The 195 technical rescue incidents during 2014-2016 were less than 1.0% of the department's total call volume. The most common type is an elevator rescue (79), as is reflected by the hotspot (13 incidents) in the downtown area (Figure 52). The other two significant types of rescue calls are vehicle extrications (66) and swift water rescues (27).

Figure 52 Technical Rescue Incidents Heat Map (2014-2016)



The heat map of where both the 1st due and ERF benchmarks were exceeded for technical rescue incidents (Figure 53) indicates a grouping of nine incidents in the commercial areas bordering Interstate-40 and the hospital district just north of the highway.

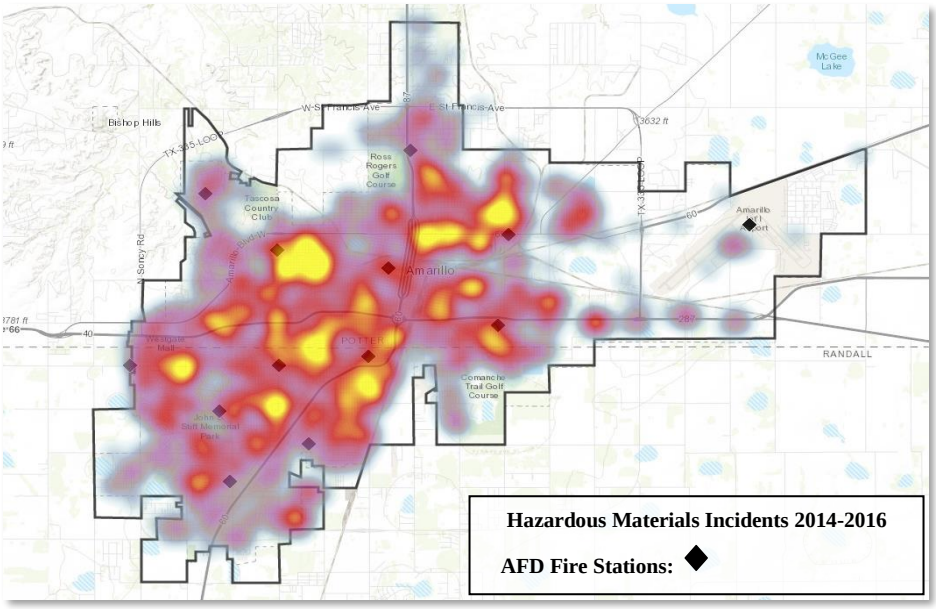
Figure 53 Technical Rescue 1st Due and ERF *Total Response Times* Exceeding Benchmarks (2014-2016)



Hazardous Materials

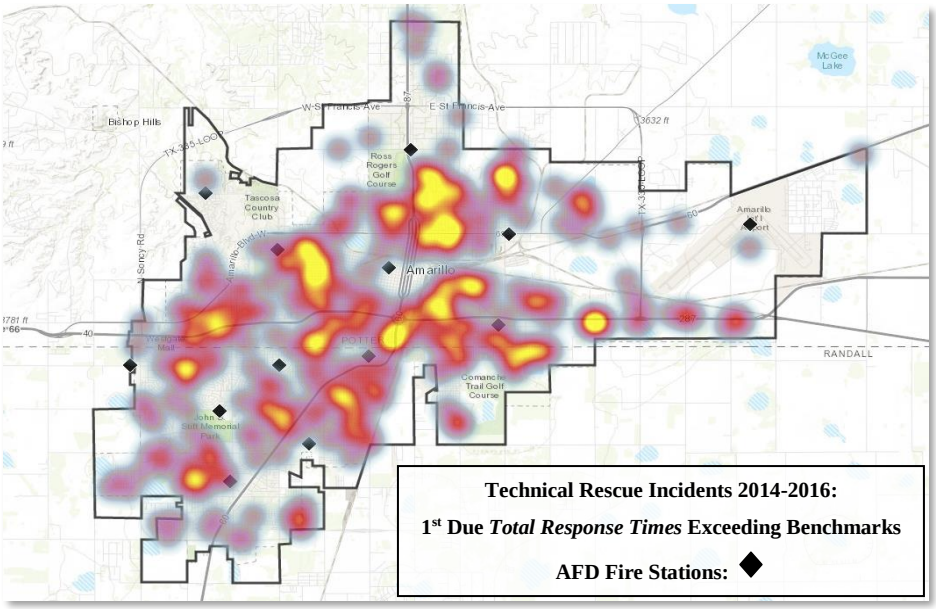
The department responded to 1,856 HazMat incidents during 2014-2016. The primary call types were 730 electrical malfunction incidents (arcing, downed power lines, etc.), 708 natural gas leaks, and 239 carbon monoxide incidents. Hazardous materials incidents account for 4.2% of the total call volume, which make it the second most active program for the department. These incidents, much like the fire suppression and EMS incidents, are primarily located in the central and southwest sections of Amarillo (Figure 54).

Figure 54 Hazardous Materials Incidents Heat Map (2014-2016)



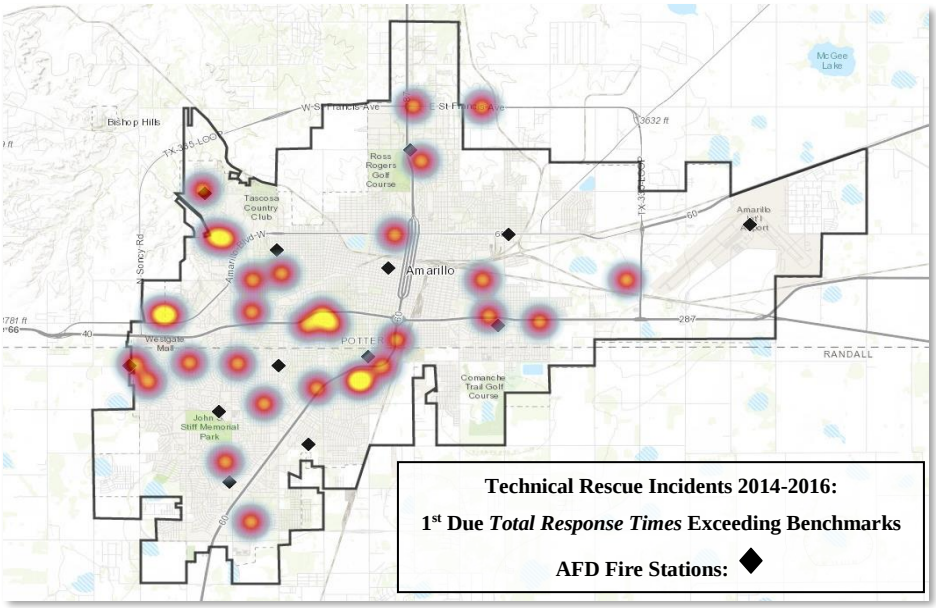
Figures 55 and 56 are heat maps of HazMat incidents where the *Total Response Times* for the 1st due and the ERF exceeded the department's benchmarks. The hotspots for the responses where the 1st due (Figure 55) exceeded total response time benchmarks are similar to the overall responses seen in the previous heat map for all HazMat incidents. This indicates that call volume is the driving factor for 1st due response times.

Figure 55 Hazardous Materials 1st Due *Total Response Times* Exceeding Benchmarks (2014-2016)



Similar to the technical rescue responses, there were few HazMat ERF responses where the benchmarks were exceeded (Figure 56). These were also distributed throughout the city, and no single area exceeded three incidents over the three-year period.

Figure 56 Hazardous Materials ERF *Total Response Times* Exceeding Benchmarks (2014-2016)



Aircraft Rescue and Firefighting Services

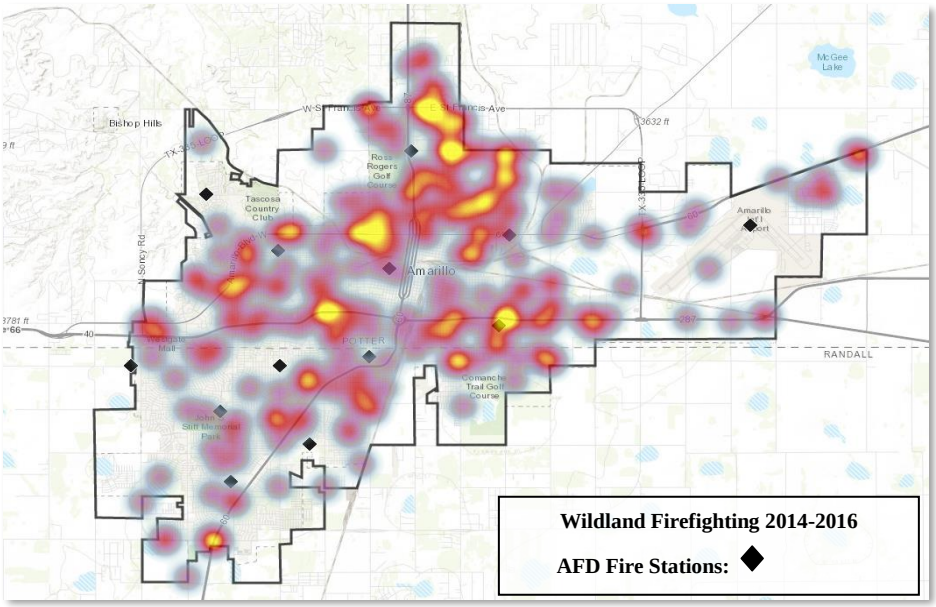
All emergency ARFF occurred at the Rick Husband Amarillo International Airport. During the three years reported, there were 19 *Low Risk*, 21 *Moderate Risk*, and 36 *High Risk* incidents. Of these 76 calls, the 1st due benchmark of 3:00 minutes was exceeded seven times (9.2%). The ERF benchmarks were exceeded in 5 of the 36 instances (13.9%) when the full ERF arrived on scene.

Wildland Firefighting

Figures 57 and 58 are heat maps of 303 wildland firefighting incidents that occurred during 2014-2016. A difference between these incidents and the fire suppression classification is that there are more concentrated areas in the north central section of the city for these types of fires.

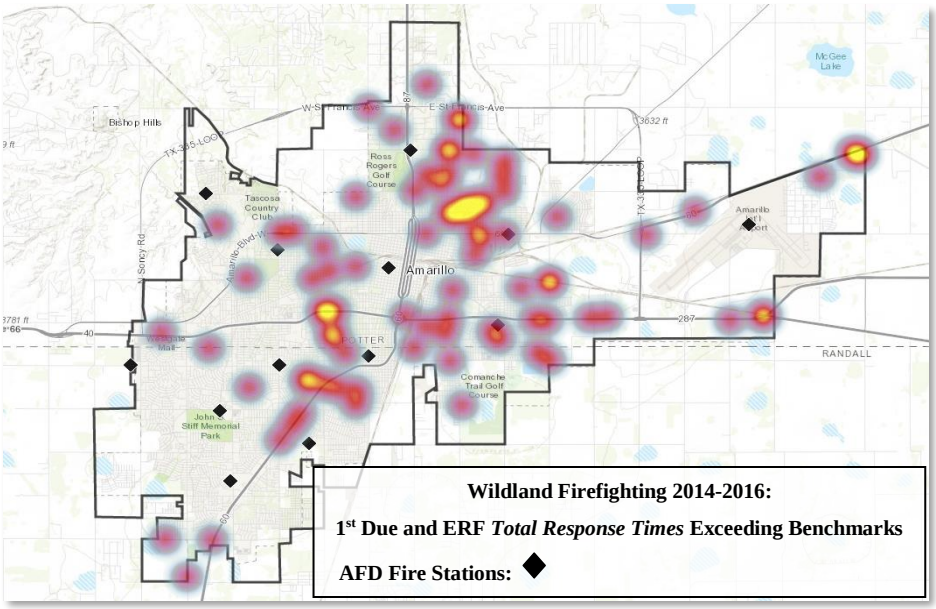
The most significant and complex wildland incidents the department responded to were those located in the two counties just beyond the city limits. In the three years between 2014 and 2016, the AFD gave mutual aid support for 14 wildfire incidents outside the city's jurisdiction. These responses did not have set benchmarks and were not analyzed for the standards of cover.

Figure 57 Wildland Firefighting Heat Map (2014-2016)



The wildland firefighting responses that exceeded benchmarks are correlated to the call volumes, and no specific area of vulnerability was identified. The single significant hotspot in the north central part of Amarillo was a group of seven *Low Risk* incidents (Figure 58). Only two wildland responses exceeded the ERF benchmark for *Moderate Risk* wildland fires. There were no *High Risk* incidents that occurred in the reporting period.

Figure 58 Wildland Firefighting 1st Due and ERF *Total Response Times* Exceeding Benchmarks (2014-2016)



Recommendations for Improved Effectiveness in Deployment and Coverage

After analyzing the performance measurements, three considerations to improve deployment and coverage for emergency responses, outside the ARFF program, are recommended by the administrative staff:

1. The first recommendation is that the AECC and the department continue to monitor call processing times and implement appropriate policies and procedures that will continue to reduce the call handling times for emergency responses. In February 2016, the Amarillo Fire and Police Departments were charged with the oversight of the communications center, and updated policies, procedures and training began to be implemented over the next six months. The positive impact of these changes is reflected in the significantly improved dispatch times that occurred for all call types and risk levels (Tables 54 to 56). Of note is the 1:05 decrease for moderate risk fire suppression incidents. It is expected that lower dispatch times will continue through 2017 and 2018 as a result of guidance and oversight of the AECC by the two public safety departments.

Table 54 Low Risk Incident Call Handling Times (2014-2016)

Low Risk Call Handling Times by Program				
Service Program	**2016**	**2015**	**2014**	**Difference**
Fire Suppression	1:44	1:56	2:33	0:49
Emergency Medical Services	1:07	1:17	1:23	0:16
Technical Rescue	1:53	2:51	2:41	0:48
Hazardous Materials	2:22	2:37	2:54	0:32
Aircraft Rescue/Firefighting	0:54	0:52	0:57	0:03
Wildland Firefighting	1:32	2:00	2:24	0:52

Table 55 Moderate Risk Incident Call Handling Times (2014-2016)

Moderate Risk Call Handling Times by Program				
Service Program	**2016**	**2015**	**2014**	**Difference**
Fire Suppression	1:27	2:10	2:32	1:05
Emergency Medical Services	1:40	1:54	1:55	0:15
Technical Rescue	1:25	2:04	2:41	1:16
Hazardous Materials	2:00	2:15	2:30	0:30
Aircraft Rescue/Firefighting	1:52	1:27	2:16	0:24
Wildland Firefighting	1:09	1:38	2:35	1:26

Table 56 High Risk Incident Call Handling Times (2014-2016)

High Risk Call Handling Times by Program				
Service Program	**2016**	**2015**	**2014**	**Difference**
Fire Suppression	1:35	2:13	2:13	0:38
Emergency Medical Services	1:52	2:20	2:12	0:20
Technical Rescue (< 10 Incidents)	-	-	-	-
Hazardous Materials	1:43	2:21	2:32	0:49
Aircraft Rescue/Firefighting	1:06	1:25	1:32	0:26
Wildland Firefighting (No Incidents)	-	-	-	-

2. The second recommendation is that the department continues to improve *Turnout Times* by prioritizing this time segment. Even a few seconds in the reduction of the turnout times, combined with the reduced dispatch times, can make up to 1:30 improvements in the total response measurements, which translates to safer operating environments for firefighters and improved outcomes for the community. The primary method to prioritize this department-wide is to educate firefighters on the importance of the performance metric benchmarks and to continuously report and review the baselines with them.

   Tables 57 to 59 detail the department's *Turnout Times* for 2014-2016. Improvements have been made over the three years in all programs except ARFF, which has a unique dispatch that involves the flight tower directly contacting the fire crews instead of notifying the AECC. The responding firefighters notify dispatch that an incident is occurring while en route to the emergency scene.

Table 57 Low Risk Incident Turnout Times (2014-2016)

Low Risk Turnout Times by Program				
Service Program	**2016**	**2015**	**2014**	**Difference**
Fire Suppression	1:38	1:49	1:51	0:13
Emergency Medical Services	1:28	1:43	1:47	0:19
Technical Rescue	1:17	1:50	1:46	0:29
Hazardous Materials	1:33	1:48	2:02	0:29
Aircraft Rescue/Firefighting	2:29	0:45	2:09	-0:20
Wildland Firefighting	1:51	2:05	2:02	0:11

Table 58 Moderate Risk Incident Turnout Times (2014-2016)

Moderate Risk Turnout Times by Program				
Service Program	**2016**	**2015**	**2014**	**Difference**
Fire Suppression	1:50	1:55	1:50	0:00
Emergency Medical Services	1:29	1:37	1:42	0:13
Technical Rescue	1:09	1:42	1:56	0:47
Hazardous Materials	1:34	1:44	1:49	0:15
Aircraft Rescue/Firefighting	2:35	0:06	1:09	-1:26
Wildland Firefighting	1:31	1:21	1:57	0:26

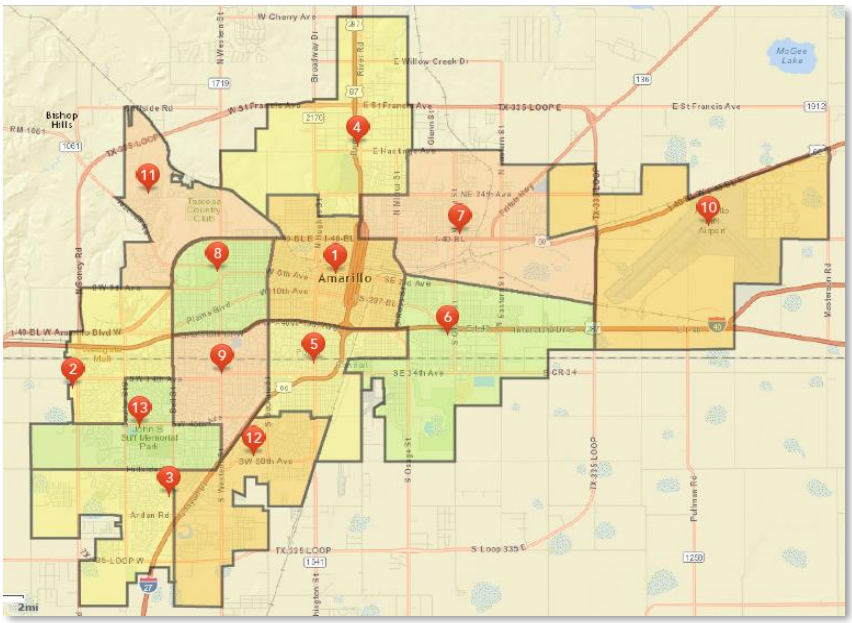
Table 59 High Risk Incident Turnout Times (2014-2016)

High Risk Turnout Times by Program				
Service Program	**2016**	**2015**	**2014**	**Difference**
Fire Suppression	1:49	2:31	2:07	0:18
Emergency Medical Services	1:19	1:36	1:37	0:18
Technical Rescue (< 10 Incidents)	-	-	-	-
Hazardous Materials	1:33	1:58	1:41	0:08
Aircraft Rescue/Firefighting	0:16	0:28	0:16	0:00
Wildland Firefighting (No Incidents)	-	-	-	-

3. The third recommendation to improve deployment and coverage is to continue with plans to relocate Fire Station 9 northward 1.5 miles to a location near Interstate-40 (Figure 59). As a result of the city's 2016 bond referendum, the relocation of the fire station is funded, and construction is scheduled for Fiscal Year 2019.

   A comparison of the relocation with the heat maps for the emergency response programs shows the move will improve ERF times to better support fire suppression in the west central section of Amarillo (Figures 43 and 45). In addition, it directly improves 1st due responses for EMS (Figure 47), vehicle accidents (Figure 50), and hazardous materials (Figure 55) in areas where the benchmarks are most often not met.

Figure 59 Current Fire Station 9 Location



J. Performance Maintenance and Improvement Plans

Compliance Team / Responsibility

The Amarillo Fire Department (AFD), through the development of the *2017-2022 Strategic Plan*, the 2018 *Fire and Emergency Service Self-Assessment*, and this *2018-2023 Community Risk Assessment/Standards of Cover*, has completed an extensive evaluation of the community's risks as well as the performance of the department's policies and systems that are in place to meet those risks. However, conducting a one-time evaluation without a continuous and effective methodology to monitor and improve the system establishes a futile vision in which the status quo becomes the organizational direction.

To ensure the department maintains current service level objectives and a commitment to progressive excellence, the department has organized a Compliance Team that is responsible for monitoring service delivery measurements, identifying performance gaps, and recommending potential improvement strategies. The Compliance Team consists of the Fire Chief; the two deputy chiefs; Fire Marshal; Accreditation Manager; the department's district chiefs, each of whom are responsible for one of the department's service delivery or support programs; the Emergency Medical Services Training Officer; the department's Administrative Specialist; and at least two members from the firefighter or officer ranks.

Performance Evaluation and Compliance Strategy

To ensure the department is meeting current service level objectives, baselines will be monitored and reported monthly. The reviews will summarize performance measurements, contrast current results to historical data, and compare the baselines for each service delivery program to set benchmarks. Additional evaluations to be conducted on a semiannual basis, at a minimum, include departmental progress on the goals and objectives identified in the current strategic plan, progress on recommendations developed during the accreditation process, and outcomes defined for the department's service delivery programs. An in-depth review of departmental operations, performance baselines, and strategic goals will be conducted annually. These regularly scheduled evaluations will allow compliance through the formulation of adjustments designed to eliminate or minimize performance gaps as they develop.

Compliance Verification Reporting

The department will formally monitor performance measurements and compliance results on both a monthly and annual basis. Monthly, the Compliance Team will review and report departmental response times for the service delivery programs: 1) Call Handling, 2) Turnout, 3) Travel (1st due and Effective Response Force), and 4) Total Response (1st due and Effective Response Force). Fire station districts and population densities will be included in the monthly analysis.

Annually, the AFD will conduct a comprehensive review of department's performance baselines and benchmarks, including both the previous year and previous five-year's response data. Baseline and benchmark statements in the standards of cover will be updated based on the most current year's performance and national deployment standards. Related data, such as service demand by geographic planning zones and fire station districts, will be a component of the review process. Additionally, each service program's annual successes, opportunities, and outcomes will be reviewed, and goals and objectives will be updated for the next year. Improvement opportunities and recommendations will be prioritized for budgetary and policy development consideration.

The monthly and annual reviews will be documented and distributed to all personnel to improve internal communications, which is Goal 1 of the department's *2017-2022 Strategic Plan*. The information will be included as a component of the company officer's quarterly meetings. The Compliance Team will publish an annual report for the city manager and city council that identifies citywide fire service demands, performance results, and an analysis of significant changes in service requirements.

Should the AFD be accredited by the Commission on Fire Accreditation International, an *Annual Compliance Report* will be submitted to confirm annual performance and progress on strategic recommendations.

Constant Improvement Strategy

The administrative staff of the AFD is committed to the constant improvement of current delivery systems as well as the implementation of any new levels of service that may be required to meet the needs and the expectations of the community in the future. To support this commitment, a perpetual process involving the monitoring of service delivery baselines, evaluation of performance gaps, development of improvement options, and implementation of effective strategies has been incorporated into the department's decision-making practices. Once implemented, the outcomes of the strategies will be monitored and revised as necessary to ensure compliance with the department's mission, goals, and objectives.

Monthly, the Deputy Chief of Operations will review the response demands within each geographic planning zone and fire station district. The deputy chief will determine if there have been changes within the planning zones, changes to service demands, changes in mandated requirements or adopted standards, or changes in departmental operations that impact the service level objectives or the standards of cover document. Every six months, the Deputy Chief of Support and the Fire Marshal will review the identified risks within the zones to determine if there have been changes or updated mandates/standards that impact service delivery objectives or the department's standards of cover.

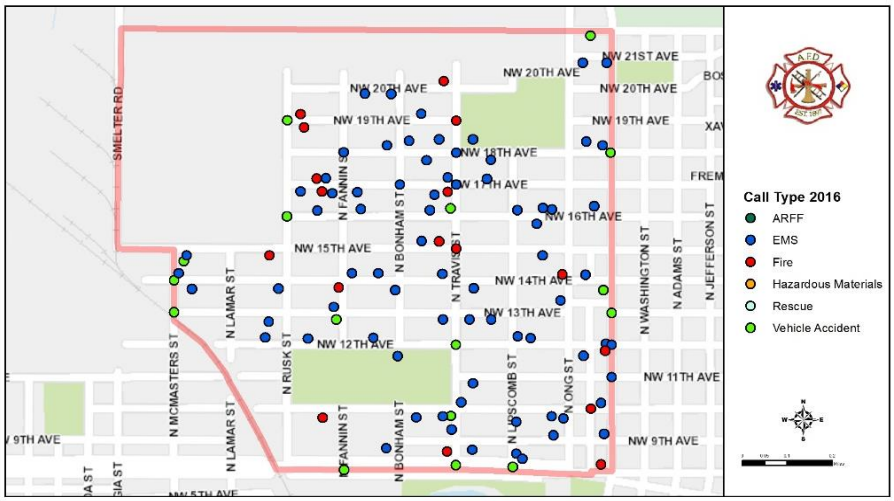
The Compliance Team will assemble response data and other related performance-based documentation to meet the review timelines described above. The Team will present the information, analysis results, and supporting recommendations for improvement toward achieving established benchmarks to the department's fire chief and two deputy chiefs. The senior administrative staff will consider and implement the recommendations in consideration of the current strategic plan, standards of cover, and self-assessment manual. The fire chief is responsible for engaging the city manager and city council when developments and requirements extend beyond the capabilities or scope of the department's resources or policies.

Appendix A – Geographic Planning Zones

Geographical Planning Zone 0101 (Census Tract 130B)
University Heights/North Heights/Miller Heights Area

Zone Profile:

North: Extends 24th Ave.
South: W. Amarillo Blvd
East: N. Hughes
West: Smelter Rd.
Area: .99 sq. miles
Pop: 1,647
Pop. Density: 1,769/mi^2
Pop. Rating: Rural
Roadways: 16.8 miles



Zone Description:

This GPZ is largely designated as a multiple-family residential zone with minor zones designated as residential. These homes are primarily of wood frame construction built up to 4,151 square feet. Carver Academy Elementary School (grades PreK-5), which is in the Amarillo Independent School District (AISD), is located on NW 12th Avenue. The school does not have an automatic protection system. Carver Early Childhood Elementary School, which is in AISD, is located on N Travis St. The school does not have an automatic protection system. The largest commercial building in the zone is 51,364 square feet.

Geographic Planning Zone Demand History*

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	24	204	0	5	15
2015	22	136	0	3	18
2016	20	129	0	1	21
Total	66	469	0	9	54

** Census tract split between Station Districts – all incidents reported.*

Occupancy Risk Levels

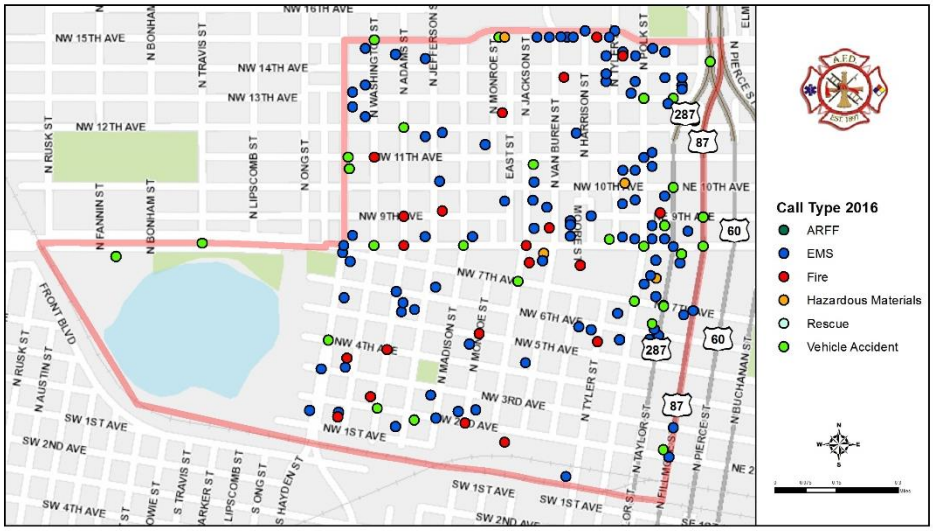
Risk	Number
Low Risk	1
Moderate Risk	2
High Risk	3
Special Risk	0

Geographical Planning Zone 0102 (Census Tract 148B)

North Heights/Miller Heights/Amarillo Heights/8 Smaller Subdivisions

Zone Profile:

North: N.W. 15th Ave.
South: S.W. 3rd Ave.
East: Fillmore
West: Front
Area: 1.63 sq. miles
Pop: 1,873
Pop. Density: 1,687/mi^2
Pop. Rating: Rural
Roadways: 27.8 miles



Zone Description:

This GPZ is largely a light industrial zone. The largest commercial property in the zone is 322,365 sq. ft. The north end of the GPZ is residential. The homes are primarily of wood frame construction built up to 3,486 square feet. North Heights Alternative High School (grades 9-12), in AISD, is located on N. Hughes St. The school does not have an automatic protection system.

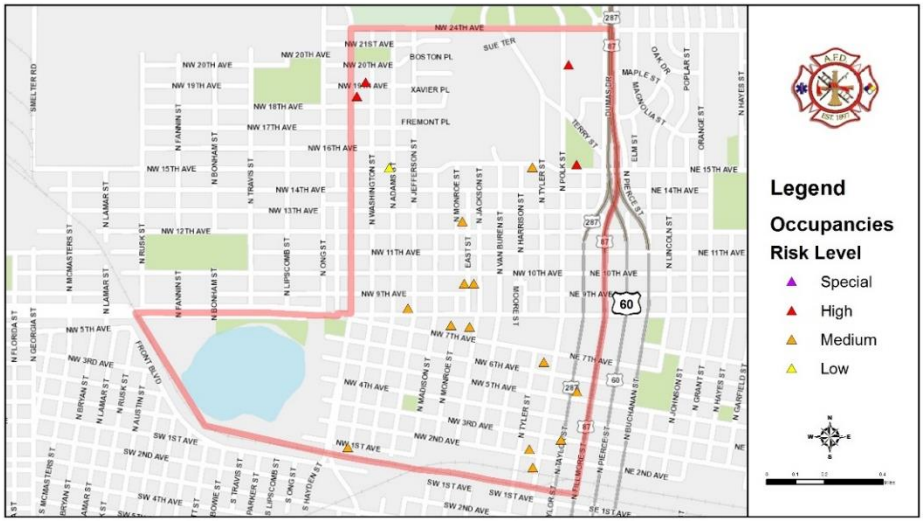
Geographic Planning Zone Demand History*

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	44	411	0	7	42
015	38	311	3	8	69
2016	38	295	1	9	66
Total	120	1017	4	24	177

** Census tract split between Station Districts – all incidents reported.*

Occupancy Risk Levels

Risk	Number
Low Risk	1
Moderate Risk	12
High Risk	4
Special Risk	0



Geographical Planning Zone 0103 (Census Tract 122A)
Glidden and Sanborn-Holland/Sadlers/Morningside/6 Smaller Subdivisions

Zone Profile:

North: E. Amarillo Blvd.
South: S.E. 3rd Ave.
East: Ross-Mirror Dr.
West: Fillmore
Area: .59 sq. miles
Pop: 1,834
Pop. Density: 2,374/mi^2
Pop. Rating: Rural
Roadways: 12.6 miles

Zone Description:

This GPZ has both light and heavy industrial zones. The largest commercial building is 107,400 square feet. A small portion of the GPZ is designate as a multiple-family zone. These homes are primarily of wood frame construction and built up to 2,967 square feet. Allen Middle School (grade 6), which is in AISD, is located on N. Lincoln Street. The school does not have an automatic protection system. Mann Middle School (grade 6-8), which is in AISD, is located on N Buchanan Street The school is partially protected by an automatic protection system. Emerson Elementary School (grades PreK-5), which is in AISD, is located on N. Cleveland Street. The school does have an automatic protection system.

Geographic Planning Zone Demand History*

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	34	371	2	13	112
2015	38	259	2	15	129
2016	62	282	0	8	158
Total	134	912	4	36	399

** Census tract split between Station Districts – all incidents reported.*

Occupancy Risk Levels

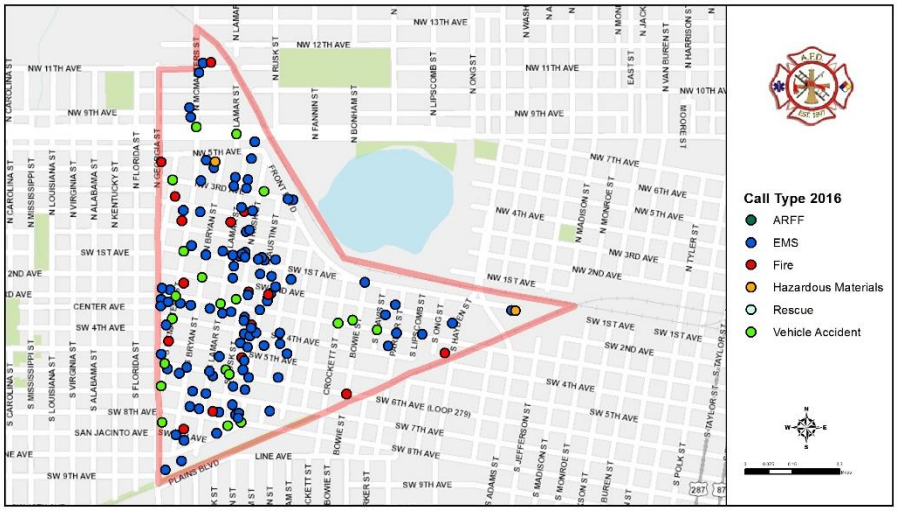
Risk	Number
Low Risk	1
Moderate Risk	4
High Risk	2
Special Risk	0

Geographical Planning Zone 0104 (Census Tract 120)

University Heights/Original Town of Amarillo/T and K/3 Smaller Subdivisions

Zone Profile:

North: N.W. 5th Ave.
South: Plains Blvd.
East: Front-S.W. 1st Ave.
West: Georgia St.-McMasters St.
Area: .75 sq. miles
Pop: 1,834
Pop. Density: 2,272/mi^2
Pop. Rating: Rural
Roadways: 19.8 miles



Zone Description:

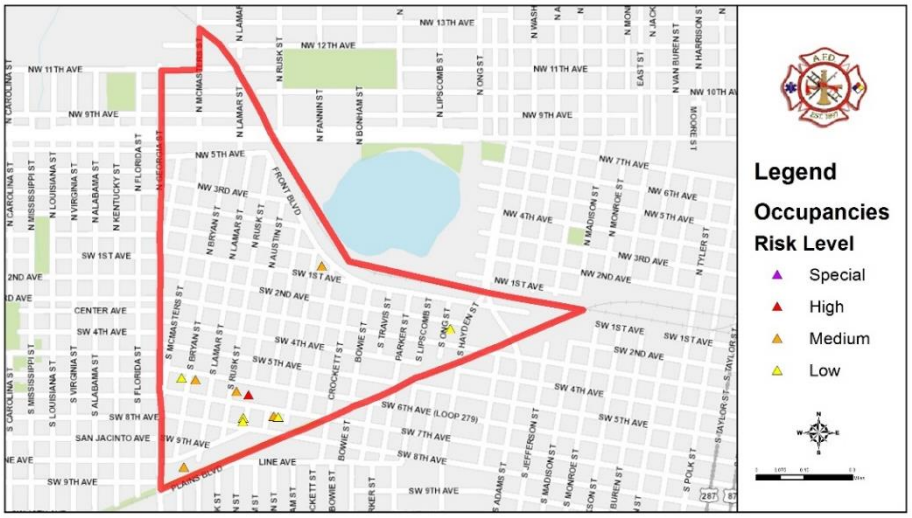
This GPZ is designated as light industrial zone. The largest commercial property is 157,898 square feet. The GPZ has a minor zone designated as multiple-family district in the northwest section. These multi-family homes are primarily of wood frame construction and built up to 3,265 square feet.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	48	332	2	9	23
2015	13	218	2	3	28
2016	28	251	0	3	40
Total	89	801	4	15	91

Occupancy Risk Levels

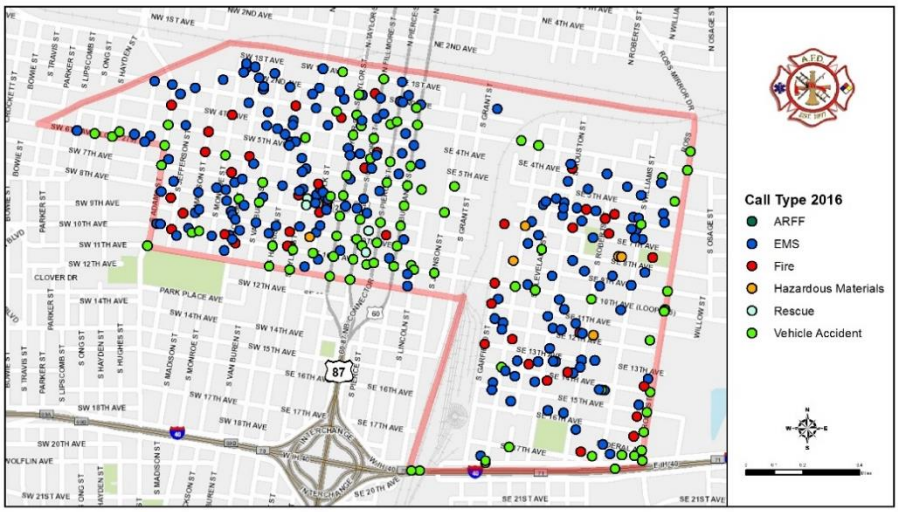
Risk	Number
Low Risk	5
Moderate Risk	4
High Risk	1
Special Risk	0



Geographical Planning Zone 0105 (Census Tract 154)
Mirror/Plemons/Glidden and Sanborn/15 Smaller Subdivisions

Zone Profile:

North: S.W. to S.E. 3rd Ave
South: S.W. 6th Ave/ S.W. to S.E. 10th Ave.
East: Ross St.
West: BNSF Railway/ Washington-Adams St/ Garfield St.
Area: 1.88 sq. miles
Pop: 2,434
Pop. Density: 1.608/mi^2
Pop. Rating: Rural
Roadways: 42.5 miles



Zone Description:

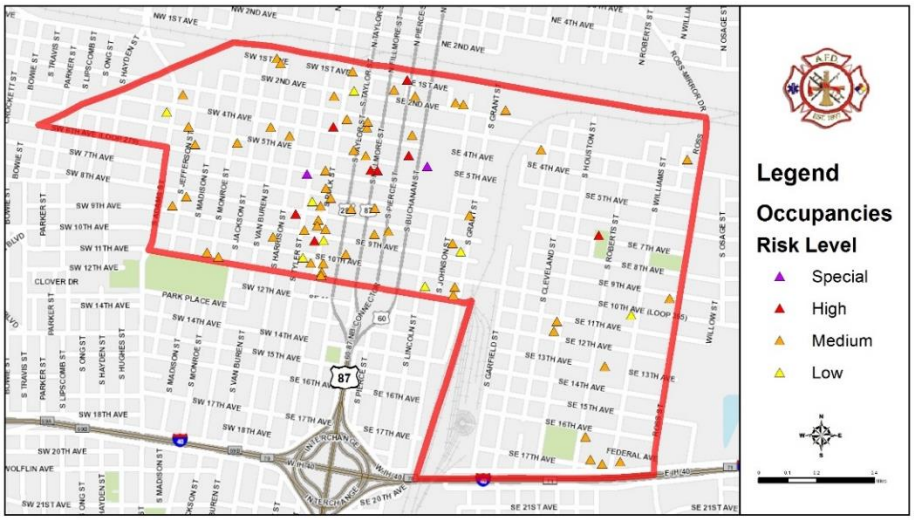
This GPZ is designated as a central business zone with two minor zones designated as light industrial and residential zone. The largest commercial structure is 326,387 square feet. The single-family residence homes are primarily of wood frame construction and built up to 2,856 square feet. Sanborn Elementary School (grades PreK-5), which is in the Amarillo Independent School District, is located on South Roberts Street. The school is partially protected by an automatic protection system.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	104	822	12	17	194
2015	109	707	21	16	209
2016	132	828	16	20	280
Total	345	2357	49	53	680

Occupancy Risk Levels

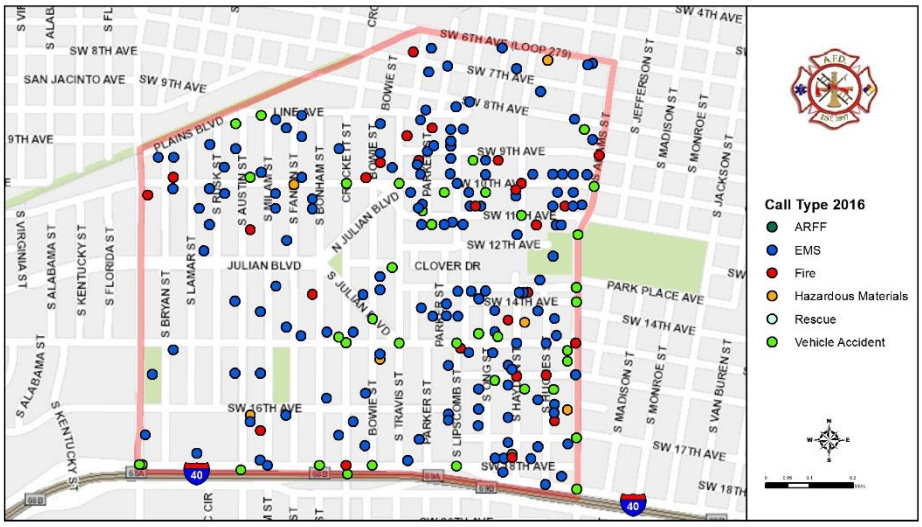
Risk	Number
Low Risk	8
Moderate Risk	63
High Risk	8
Special Risk	2



Geographical Planning Zone 0106 (Census Tract 115)
Bivins/Original Town of Amarillo/Bivins Estates/11 Smaller Subdivisions

Zone Profile:

North: Plains Blvd/ S.W. 6th Ave.
South: I-40
East: S. Washington-S. Adams St.
West: S. Georgia St.
Area: .95 sq. Miles
Pop: 3,599
Pop. Density: 4,278/mi^2
Pop. Rating: Urban
Roadways: 24.4 miles



Zone Description:

This GPZ has single and multiple-family residential zones. These homes are primarily of wood frame construction and built up to 7,794 square feet. Bivins Elementary School (grades PreK-5), which is in the Amarillo Independent School District, is located on Hyde Parkway. The school does not have an automatic protection system.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	32	352	1	11	55
2015	42	281	0	8	63
2016	42	279	0	9	91
Total	116	912	1	27	209

Occupancy Risk Levels

Risk	Number
Low Risk	4
Moderate Risk	3
High Risk	3
Special Risk	0

Geographical Planning Zone 0107 (Census Tract 147A)

Plemons/Mirror/Woflin/18 Smaller Subdivisions

Zone Profile:

North: 10th Ave.
South: I-40
East: Garfield St.
West: S. Washington-S. Adams St.
Area: .68 sq. miles
Pop: 2,868
Pop. Density: 4,173/mi^2
Pop. Rating: Urban
Roadways: 18.8 miles

Zone Description:

This GPZ largely a Planned Development District Zone on the west side of Highway-287 and light commercial on the east side. The largest commercial property is 169,000 square feet. A minor multiple family zone is located on the south end of the zone along Interstate-40. The multi-family homes are primarily of wood frame construction and built up to 4,400 square feet.

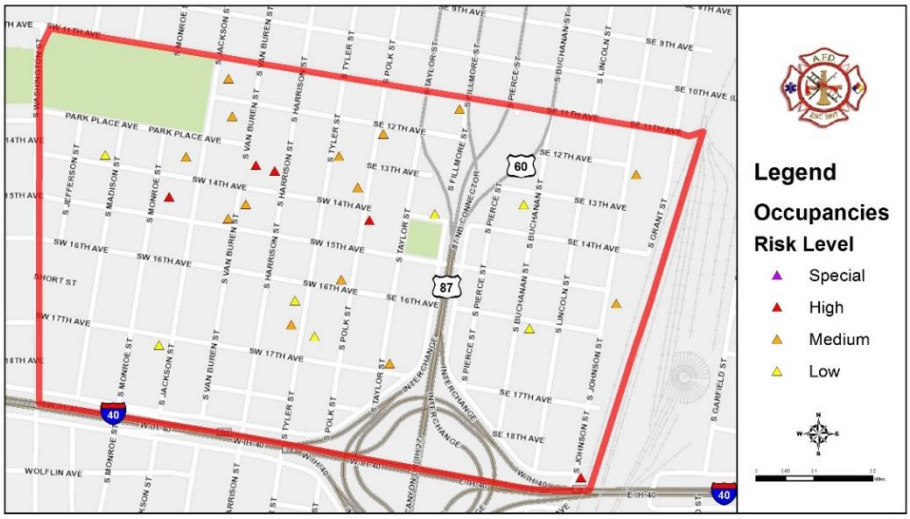
Geographic Planning Zone Demand History*

Year	Fire	EMS	Rescue	HazMat	Wildland
2014	42	573	1	9	90
2015	45	530	2	10	117
2016	42	571	3	14	139
Total	129	1674	6	33	346

** Census tract split between Station Districts – all incidents reported.*

Occupancy Risk Levels

Risk	Number
Low Risk	7
Moderate Risk	14
High Risk	4
Special Risk	0

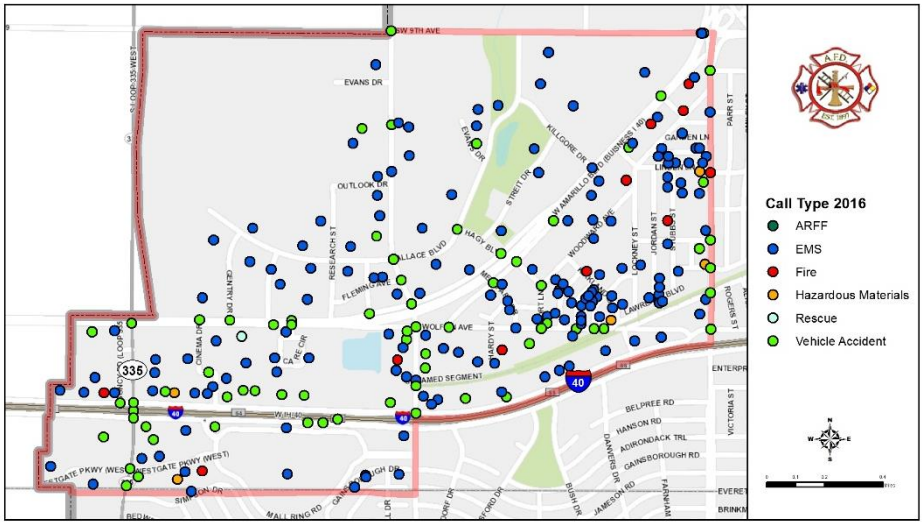


Geographical Planning Zone 0201 (Census Tract 117)

Amarillo Medical Center/Belmar/Puckett West/11 Smaller Subdivisions

Zone Profile:

North: S.W. 9th Ave.
South: Randall-Potter County Line/I-40
East: S. Coulter St/ Bell St.
West: City Limits
Area: 2.9 sq. miles
Pop.: 3,598
Pop. Density: 1,054/mi^2
Pop. Rating: Urban
Roadways: 34.8 miles



Zone Description:

The zone is a Planned Development Zone comprised largely of commercial, retail and medical-based properties, including Amarillo's 3 major hospitals. The residential area is comprised of both multiple-family and single-family residences. These homes are primarily of wood frame construction and built up to 3,512 square feet.

Geographic Planning Zone Demand History

	Fire	EMS	Rescue	HazMat	Vehicles
2014	54	1173	8	15	148
2015	64	1124	12	11	227
2016	64	1336	8	8	253
Total	182	3633	28	34	628

Occupancy Risk Levels

Risk	Number
Low Risk	0
Moderate Risk	65
High Risk	8
Special Risk	4

Geographical Planning Zone 0202 (Census Tract 101)

Belmar

Zone Profile:

North: I-40
South: Randall-Potter County Line
East: Bell Street
West: Coulter Street
Area: .38 sq. miles
Pop: 2,088
Pop. Density: 5,436/mi^2
Pop. Rating: Urban
Roadways: 9.7 miles

Zone Description:

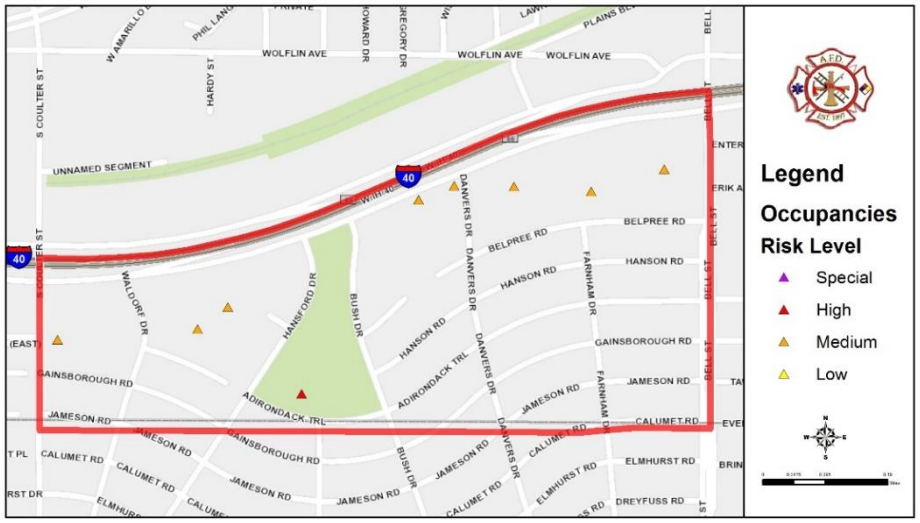
This GPZ is largely a residential area with both multiple-family and single-family homes. These single-family homes are primarily of wood frame construction and built up to 4,314 square feet. There are two general retail zones along I-40. The largest commercial property is 125,000 square feet. Belmar Elementary (grades PreK-5), in AISD, is located on Hyde Parkway. The school does not have an automatic protection system.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	10	162	1	3	26
2015	11	154	3	2	51
2016	19	152	3	6	49
Total	40	468	7	11	126

Occupancy Risk Levels

Risk	Number
Low Risk	0
Moderate Risk	8
High Risk	1
Special Risk	0



Geographical Planning Zone 0203 (Census Tract 216.03)

Puckett/Westgate Mall

Zone Profile:

North: Randall-Potter County Line
South: S.W. 34th Ave.
East: Coulter Street
West: City Limits
Area: .45 sq. miles
Pop: 1,916
Pop. Density: 4,442/mi^2
Pop. Rating: Urban
Roadways: 7.3 miles

Zone Description:

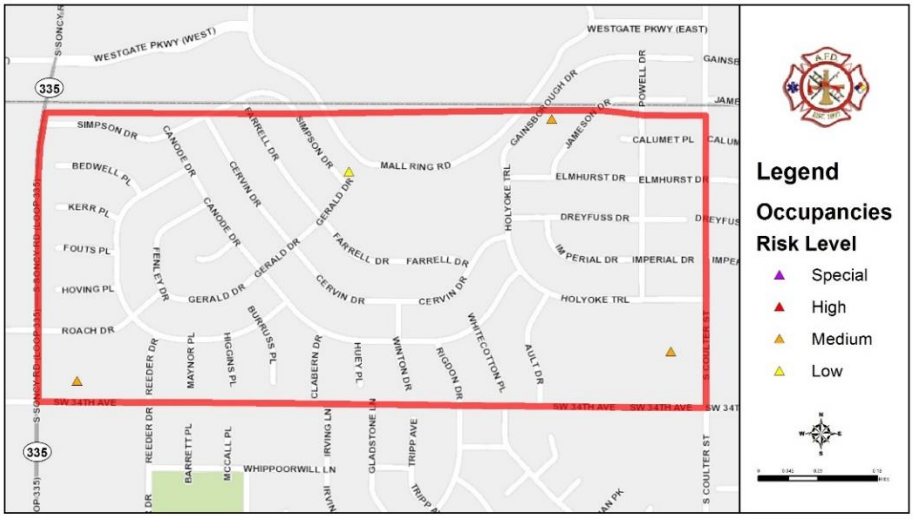
This GPZ is designated as a Residential District Zone. These single-family homes are primarily of wood frame construction and built up to 3,005 square feet. The city's largest shopping mall is located near Interstate-40 in the north central section of the GPZ.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	4	65	0	2	5
2015	1	65	0	6	10
2016	6	69	0	8	6
Total	11	199	0	16	21

Occupancy Risk Levels

Risk	Number
Low Risk	1
Moderate Risk	3
High Risk	0
Special Risk	0

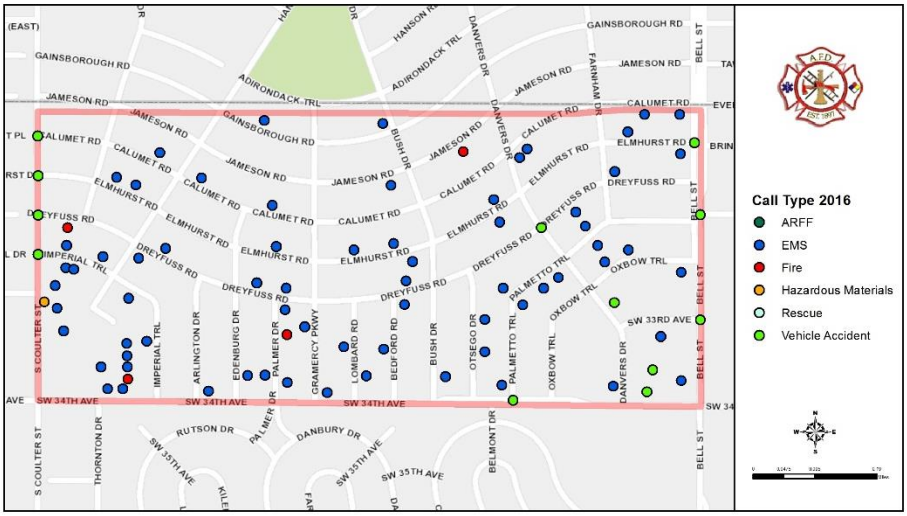


Geographical Planning Zone 0204 (Census Tract 201)

Belmar

Zone Profile:

North: Randall-Potter County Line
South: S.W. 34th Ave.
East: Bell Street
West: Coulter Street
Area: .46 sq. miles
Pop: 2,087
Pop. Density: 4,714/mi^2
Pop. Rating: Urban
Roadways: 10.0 miles



Zone Description

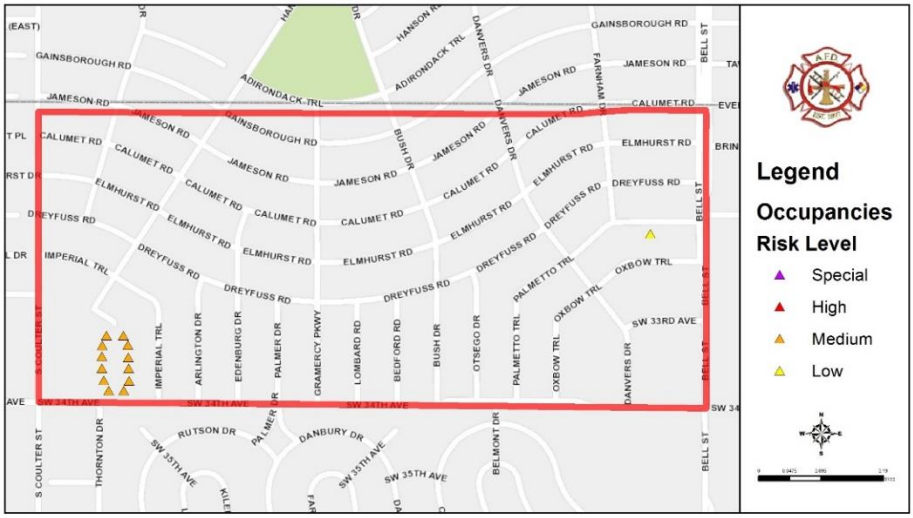
This GPZ is designated as a Residential District Zone. These single-family homes are primarily of wood frame construction and built up to 4,753 square feet.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	11	94	1	2	18
2015	11	92	0	4	20
2016	5	107	0	1	24
Total	27	293	1	7	62

Occupancy Risk Levels

Risk	Number
Low Risk	1
Moderate Risk	12
High Risk	0
Special Risk	0



Geographical Planning Zone 0205 (Census Tract 216.04)
Sleepy Hollow

Zone Profile:

North: S.W. 34th Ave.
South: S.W. 45th Ave.
East: Coulter St.
West: City Limits
Area: 1.04 sq. miles
Pop: 4,706
Pop. Density: 4,449/mi^2
Pop. Rating: Urban
Roadways: 18.2 miles

Zone Description:

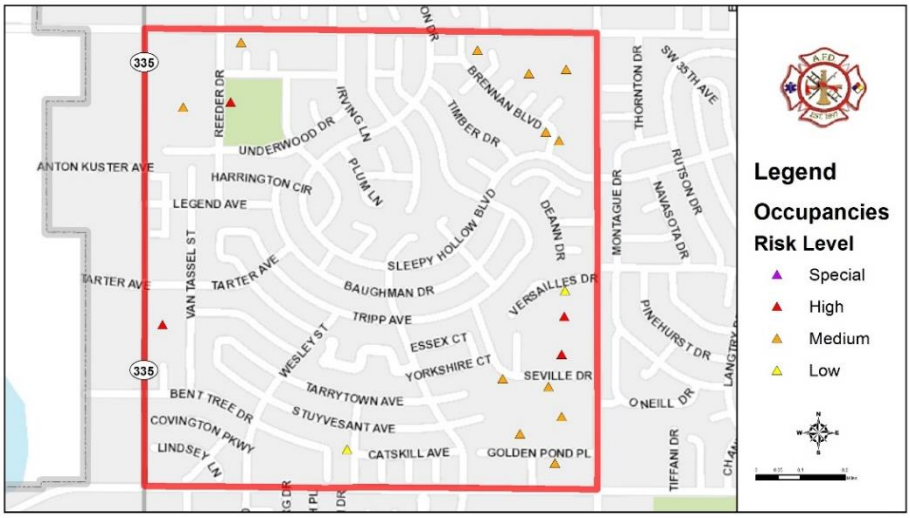
This GPZ is designated as a residential zone of single family homes that are primarily of wood frame construction built up to 8,618 square feet. Sleepy Hollow Elementary School (grades PreK-5), which is in the Amarillo Independent School District, is located on Reeder Drive. The school does not have an automatic protection system. General retail zones are located on the southwest and southeast corners of the GPZ.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	18	232	0	9	13
2015	14	234	0	10	26
2016	18	198	0	17	33
Total	50	664	0	36	72

Occupancy Risk Levels

Risk	Number
Low Risk	2
Moderate Risk	11
High Risk	4
Special Risk	0

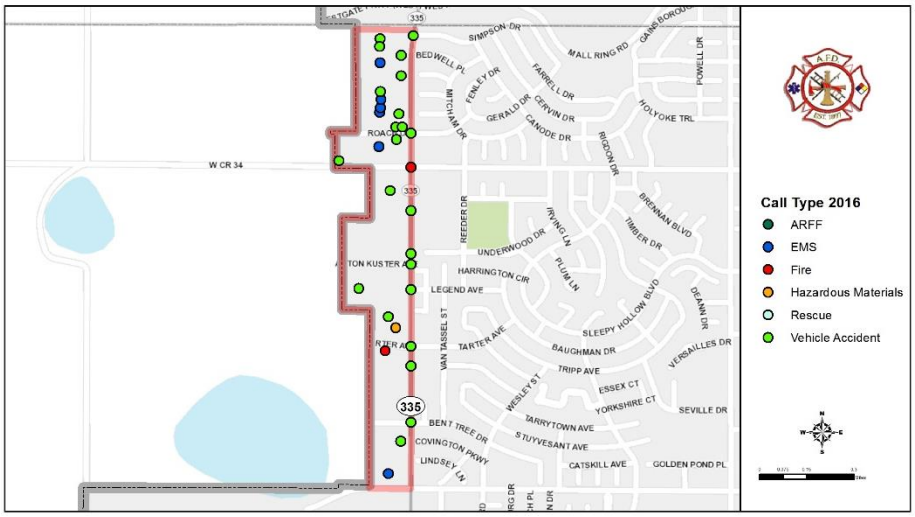


Geographical Planning Zone 0206 (Census Tract 216.08A)

Westgate Village

Zone Profile:

North: S.W. 34th Ave.
South: S.W. 45th Ave.
East: Coulter St.
West: City Limits
Area: 0.25 sq. miles
Pop: 0
Pop. Density: 0/mi^2
Pop. Rating: Rural
Roadways: 2.5 miles



Zone Description:

This GPZ is designated as a Planned Development Zone. The primary businesses are retail stores in large strip mall buildings. The largest commercial property is 154,000 square feet.

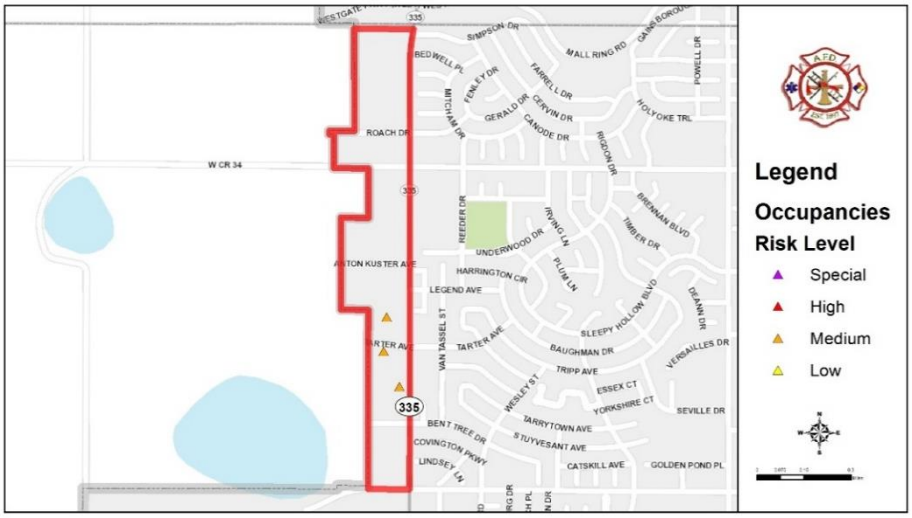
Geographic Planning Zone Demand History*

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	34	330	2	13	87
2015	32	354	4	11	122
2016	37	347	2	11	148
Total	103	1031	8	35	357

** Census tract split between Station Districts – all incidents reported.*

Occupancy Risk Levels

Risk	Number
Low Risk	0
Moderate Risk	3
High Risk	0
Special Risk	0

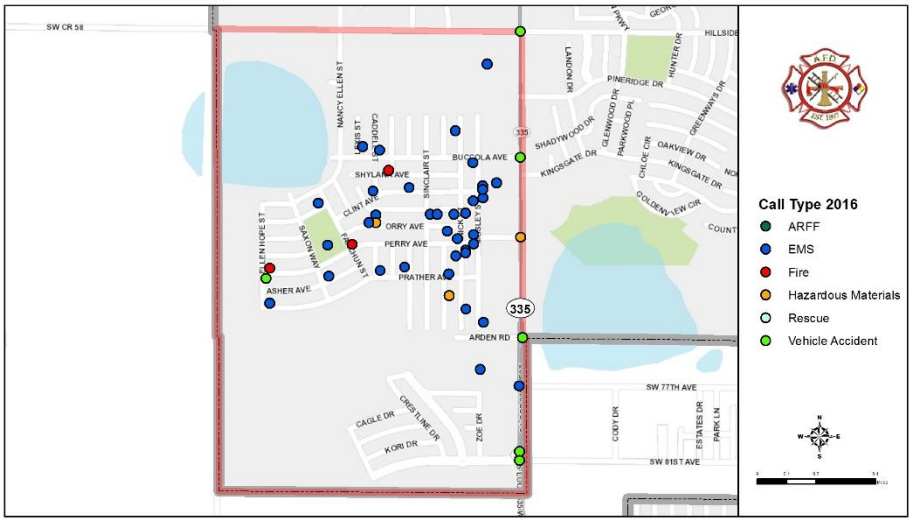


Geographical Planning Zone 0301 (Census Tract 216.08C)

Paramount Terrace/Heritage Hills/Hillside Terrace Estates

Zone Profile:

North: Hillside Road
South: City Limits
East: Soncy St.
West: City Limits
Area: 2.72 sq. miles
Pop: 884
Pop. Density: 518/mi^2
Pop. Rating: Rural
Roadways: 18.8 miles



Zone Description:

This GPZ is designated as a residential zone. These single-family homes are primarily of wood frame construction and built up to 5,291 square feet. Canyon ISD's Hillside Elementary is located at 9600 Perry Avenue. This school has an automatic protection system. A significant portion of the zone is agricultural.

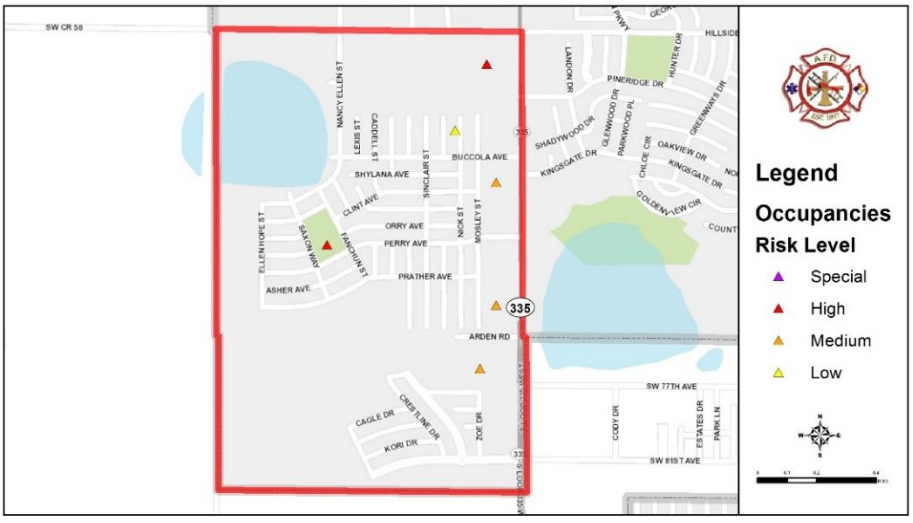
Geographic Planning Zone Demand History*

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	34	330	2	13	87
2015	32	354	4	11	122
2016	37	347	2	11	148
Total	103	1031	8	35	357

** Census tract split between Station Districts – all incidents reported.*

Occupancy Risk Levels

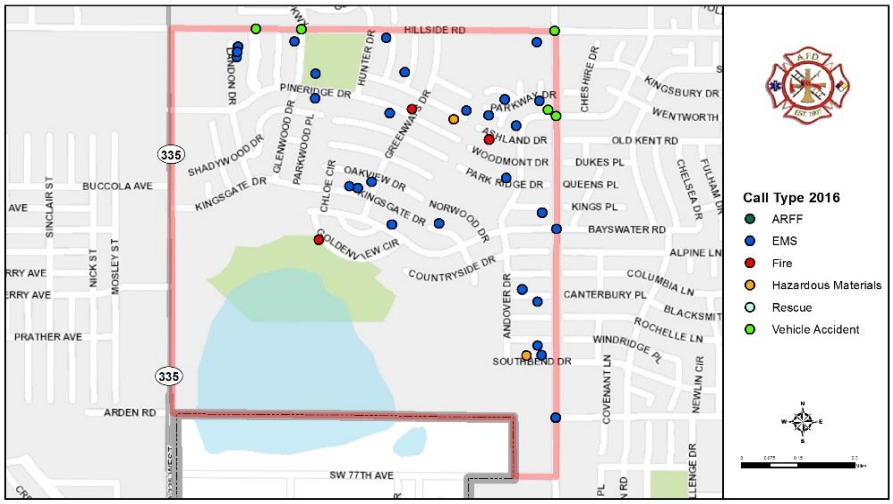
Risk	Number
Low Risk	1
Moderate Risk	3
High Risk	2
Special Risk	0



Geographical Planning Zone 0302 (Census Tract 216.09B)
The Greenway's at Hillside

Zone Profile:

North: Hillside Road
South: Arden Road/ S.W. 77th Ave.
East: Coulter Street
West: Soncy Street
Area: 1.07 sq. miles
Pop: 1,664
Pop. Density: 1,422/mi^2
Pop. Rating: Rural
Roadways: 13.1 miles



Zone Description:

This GPZ is designated as a residential zone. These single-family homes are primarily of wood frame construction and built up to 14,286 square feet. General retail areas are located on the northwest, northeast and southeast corners of the zone. Canyon ISD's Greenways Intermediate School is located at 8100 Pineridge, and it does have an automatic protection system.

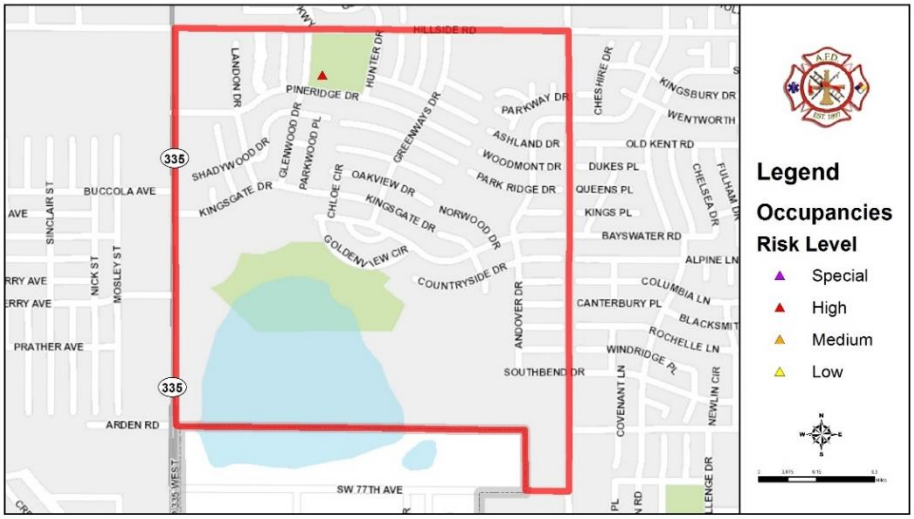
Geographic Planning Zone Demand History*

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	13	134	1	12	37
2015	17	120	1	11	71
2016	12	163	2	9	114
Total	42	417	4	32	222

** Census tract split between Station Districts – all incidents reported.*

Occupancy Risk Levels

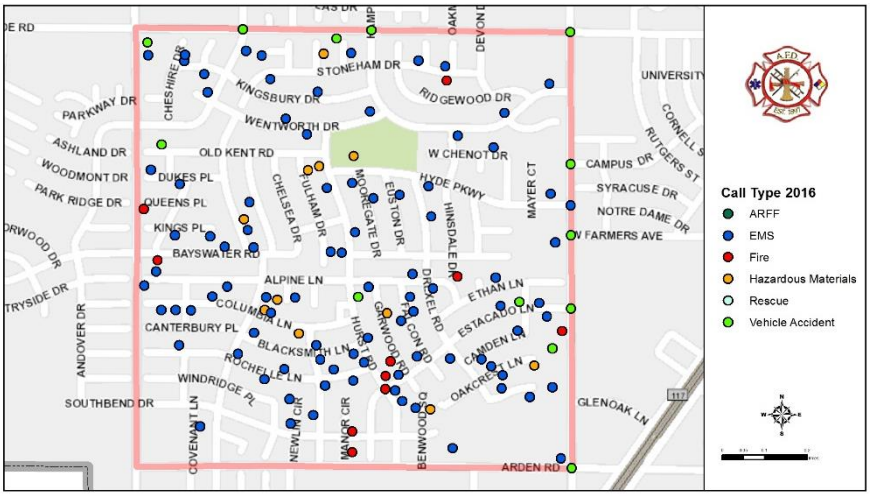
Risk	Number
Low Risk	0
Moderate Risk	0
High Risk	1
Special Risk	0



Geographic Planning Zone 0303 (Census Tract 216.06)
Estacado West/Windsor Square/South Park

Zone Profile:

North: Hillside Road
South: Arden Road
East: Bell Street
West: Coulter Street
Area: 1.05 sq. miles
Pop: 4,945
Pop. Density: 4,944/mi^2
Pop. Rating: Urban
Roadways: 21.2 miles



Zone Description:

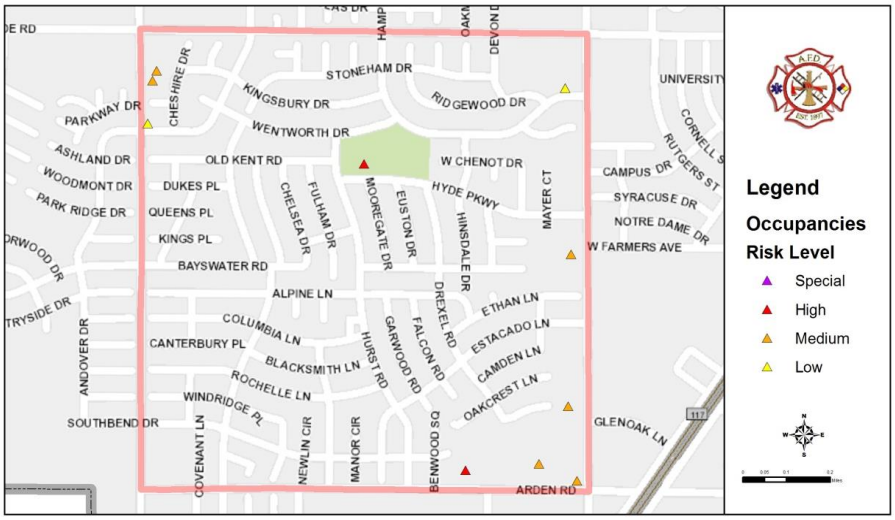
This GPZ is designated as a residential zone. These single-family homes are primarily of wood frame construction and built up to 4,161 square feet. Windsor Elementary School (grades PreK-5) is located on Hyde Parkway, and the school does not have an automatic protection system. Other significant risks in GPZ 0303 include Stonegate Apartments, Victory Church, Victory Academy and Pinnacle Community Church. Light retail properties are located on the GPZ's boundary roadways.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	21	150	0	6	22
2015	9	131	3	9	35
2016	18	148	0	12	37
Total	48	429	3	27	94

Occupancy Risk Levels

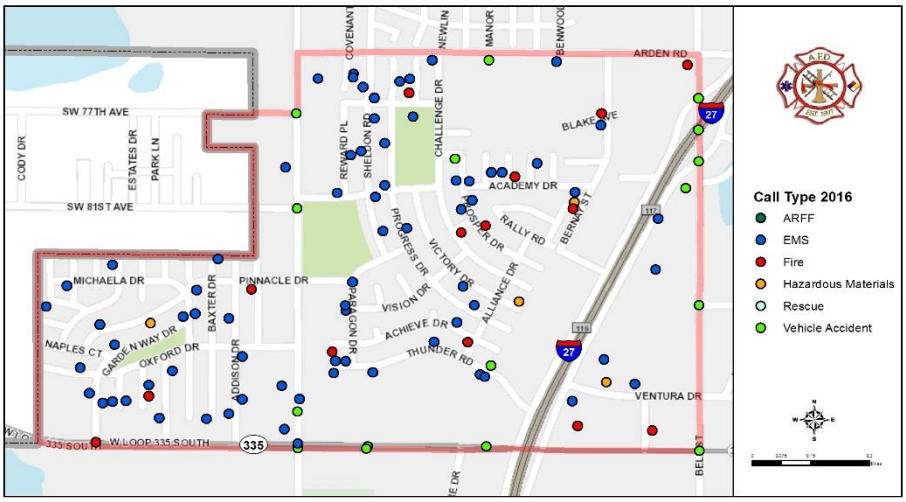
Risk	Number
Low Risk	2
Moderate Risk	6
High Risk	2
Special Risk	0



Geographical Planning Zone 0304 (Census Tract 216.08D)
Westover Village/Westover Park/Southgate/Hallmark Acres

Zone Profile:

North: Arden Rd.
South: S. Loop 335
East: Bell Street
West: City Limits
Area: 1.45 sq. miles
Pop: 4,651
Pop. Density: 3,456/mi^2
Pop. Rating: Urban
Roadways: 23.4 miles



Zone Description:

This is a residential area with a majority of it comprised of single family residences. These homes are primarily of wood frame construction and range between 1,700 and 5,000 square feet. Canyon ISD has two schools in this GPZ, Arden Elementary (grades Pre-K to 4) at 6801 Learning Tree and Westover Park Junior High School (grades 7-8) at 7200 West Parkway. Both schools have automatic protection systems. There is a light commercial zone on the east side of Interstate-27.

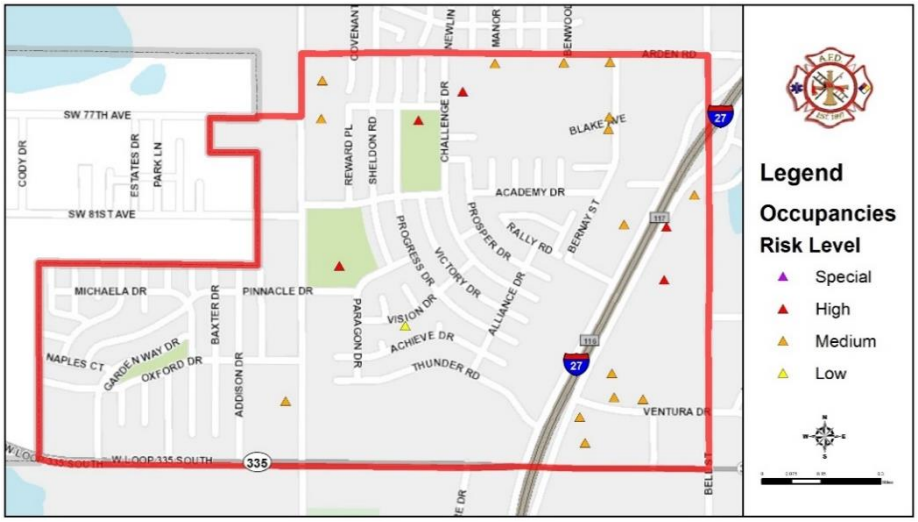
Geographic Planning Zone Demand History*

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	34	330	2	13	87
2015	32	354	4	11	122
2016	37	347	2	11	148
Total	103	1031	8	35	357

** Census tract split between Station Districts – all incidents reported.*

Occupancy Risk Levels

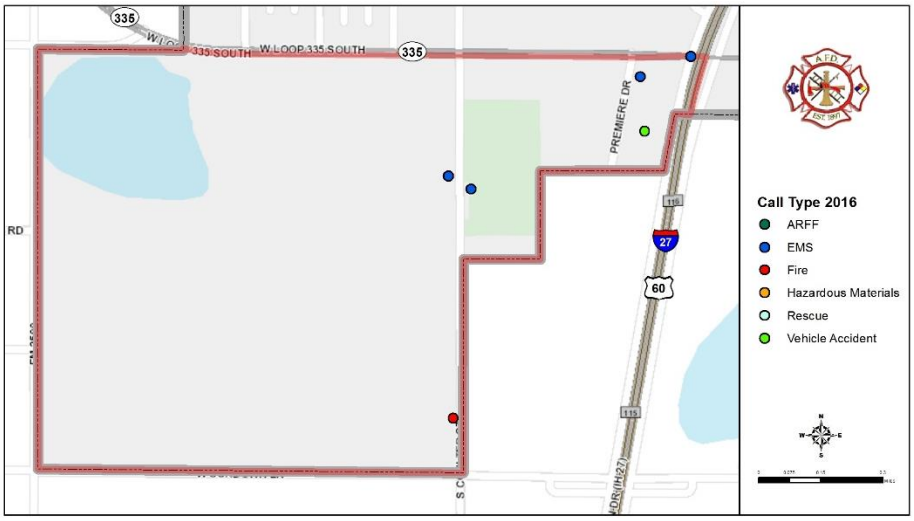
Risk	Number
Low Risk	2
Moderate Risk	22
High Risk	8
Special Risk	0



Geographical Planning Zone 0305 (Census Tract 217.04)
Redstone Addition/Starplex Cinema/6 Smaller Subdivisions

Zone Profile:

North: S. Loop 335
South: City Limits
East: City Limits
West: City Limits
Area: 1.21 sq. miles
Pop: 180
Pop. Density: 207/mi^2
Pop. Rating: Rural
Roadways: 0.9 miles



Zone Description:

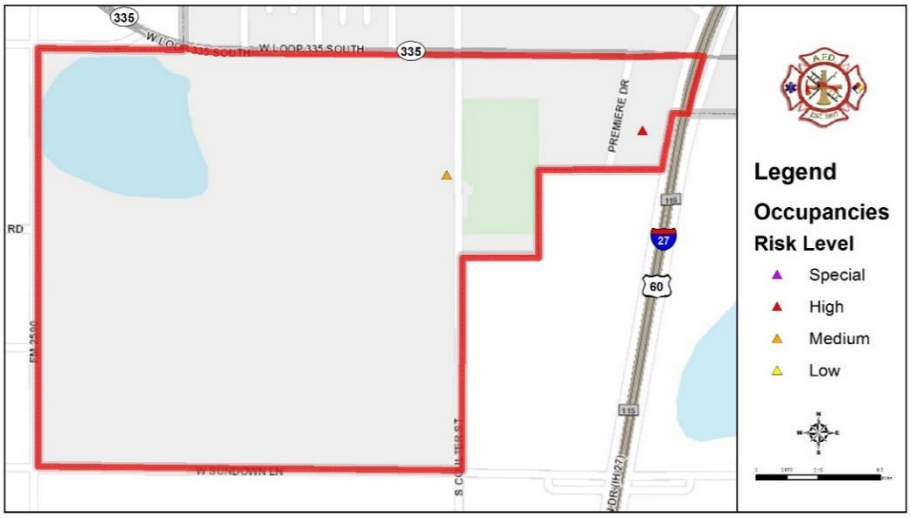
This GPZ is largely designated as an agricultural zone. A general retail zone is located along the TX-335 Loop. A light commercial zone is located in the northeast corner of the zone. A motel and a movie theater are located in this area near Interstate-27.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicle
2014	1	14	0	0	12
2015	5	7	0	0	21
2016	4	16	0	0	15
Total	10	37	0	0	48

Occupancy Risk Levels

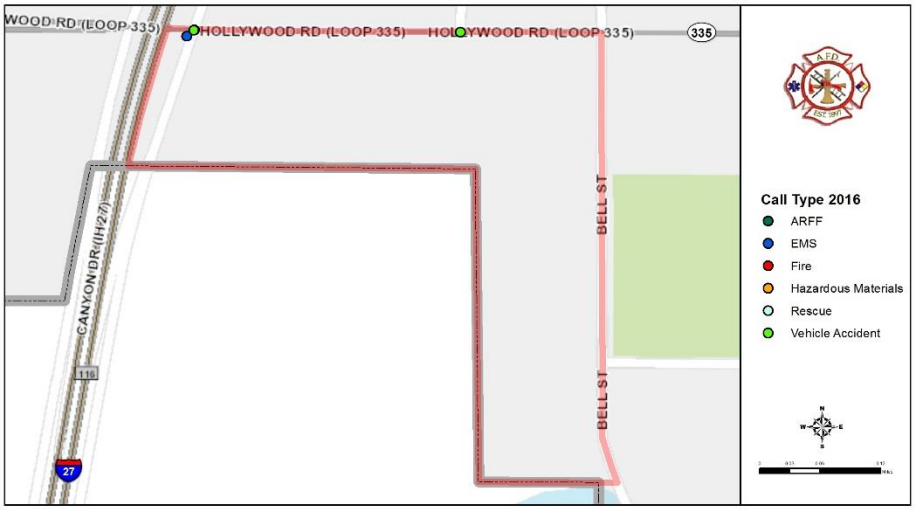
Risk	Number
Low Risk	1
Moderate Risk	1
High Risk	0
Special Risk	0



Geographical Planning Zone 0306 (Census Tract 217.03A)

Zone Profile:

North: S. Loop 335
South: City Limits
East: Bell Street
West: I-27 Highway
Area: 0.1 sq. miles
Pop: 0
Pop. Density: 0/mi^2
Pop. Rating: Rural
Roadways: 0.9 miles



Zone Description:

This GPZ is entirely an agricultural zone.

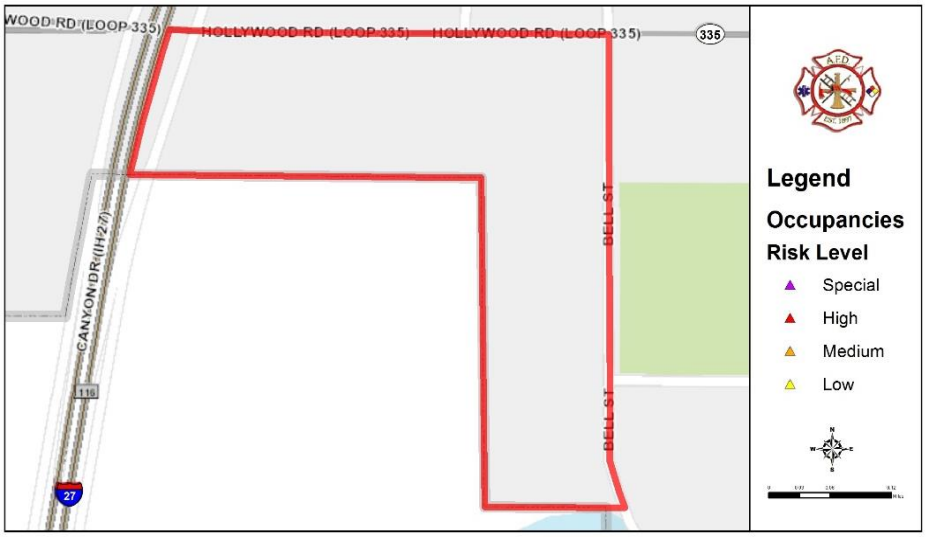
Geographic Planning Zone Demand History*

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	3	1	0	0	3
2015	2	5	0	0	3
2016	5	5	0	0	5
Total	10	11	0	0	11

** Census tract split between Station Districts – all incidents reported.*

Occupancy Risk Levels

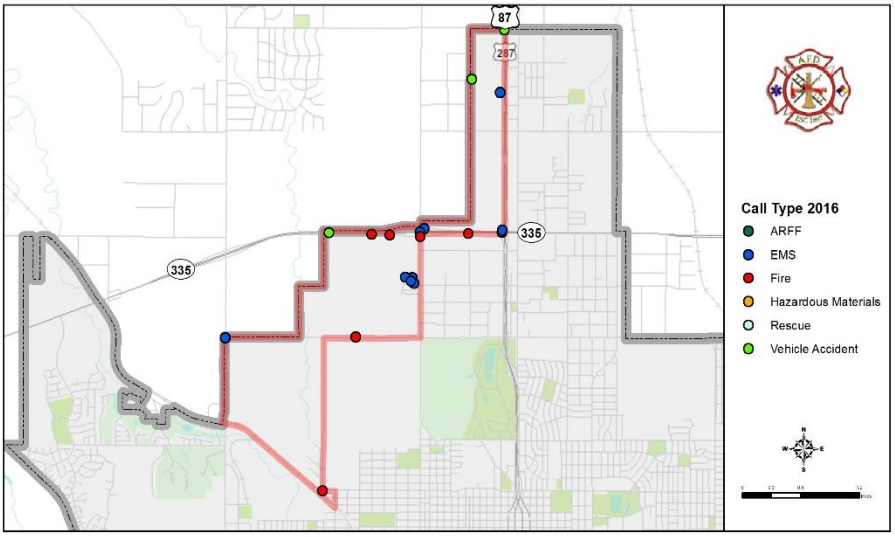
Risk	Number
Low Risk	0
Moderate Risk	0
High Risk	0
Special Risk	0



Geographical Planning Zone 0401 (Census Tract 134)
Vineyards/JC Heaton/University Heights/Rekeys

Zone Profile:

North: City Limits
South: BNSF Railway/ N.W. 24th Ave/ W. Loop 335 North
East: Smelter Rd/ Broadway Dr./HWY 287
West: N. Western St/ City Limits/Leroy Way
Area: 3.21 sq. miles
Pop: 124
Pop. Density: 39/mi^2
Pop. Rating: Rural
Roadways: 13.3 miles



Zone Description:

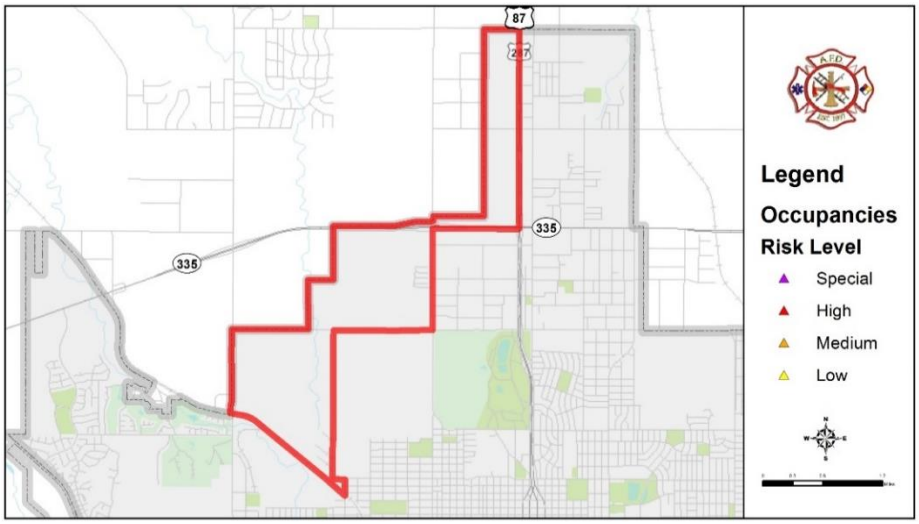
This GPZ is designated as an agricultural district with a minor zone at Broadway and W. Central designated as residential zone. These single-family homes are primarily of wood frame construction and built up to 2,478 square feet.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Wildland
2014	1	3	0	0	3
2015	3	4	0	0	11
2016	13	16	0	0	5
Total	17	23	0	0	19

Occupancy Risk Levels

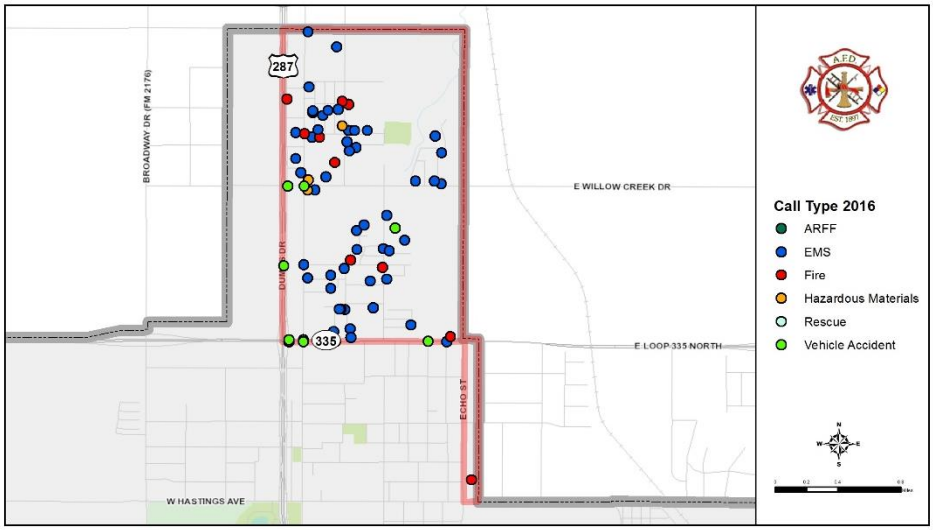
Risk	Number
Low Risk	0
Moderate Risk	0
High Risk	0
Special Risk	0



Geographical Planning Zone 0402 (Census Tract 151)
River Road Gardens/JC Heaton/Bourgeois/9 Smaller Subdivisions

Zone Profile:

North: E. Cherry Ave
South: E. Loop 335 N.
East: City Limits
West: Hwy 287
Area: 2.3 sq. miles
Pop: 1,169
Pop. Density: 627/mi^2
Pop. Rating: Rural
Roadways: 20.9 miles



Zone Description:

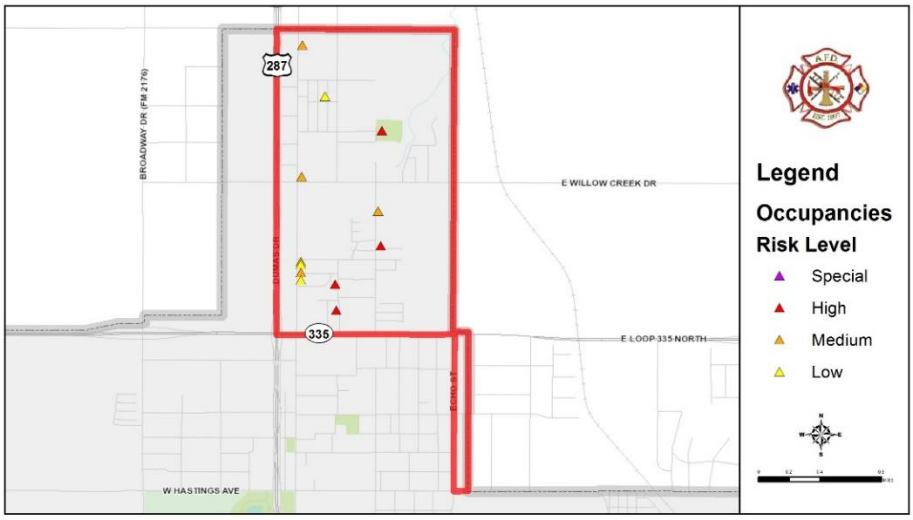
This GPZ is largely designated as a residential zone. These single-family homes are primarily of wood frame construction and built up to 3,592 square feet. There is a strip of light commercial zone bordering Interstate-27 on the west side of the GPZ. The largest commercial property is 39,700 square feet. There are two agricultural zones on the east side of the GPZ.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	19	143	0	3	8
2015	11	90	0	4	21
2016	17	81	0	4	21
Total	47	314	0	11	50

Occupancy Risk Levels

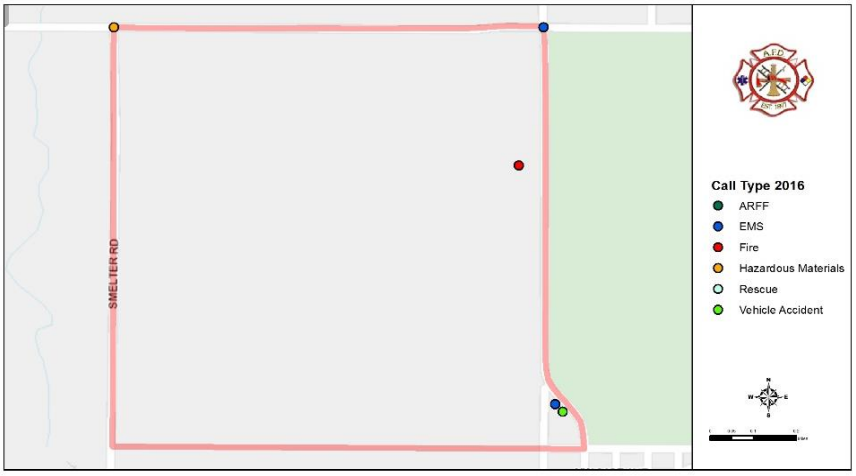
Risk	Number
Low Risk	3
Moderate Risk	5
High Risk	4
Special Risk	0



Geographical Planning Zone 0403 (Census Tract 130A)
University Heights/Miller Heights/North Heights/2 Smaller Subdivisions

Zone Profile:

North: W. Hastings Ave
South: Extension N.W. 24th
East: Broadway Dr.
West: Smelter Rd.
Area: 0.96 sq. miles
Pop: 0
Pop. Density: 0/mi^2
Pop. Rating: Rural
Roadways: 2.4 miles



Zone Description:

This GPZ is designated as an agricultural district.

Geographic Planning Zone Demand History*

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	24	204	0	5	15
2015	22	136	0	3	18
2016	20	129	0	1	21
Total	66	469	0	9	54

** Census tract split between Station Districts – all incidents reported.*

Occupancy Risk Levels

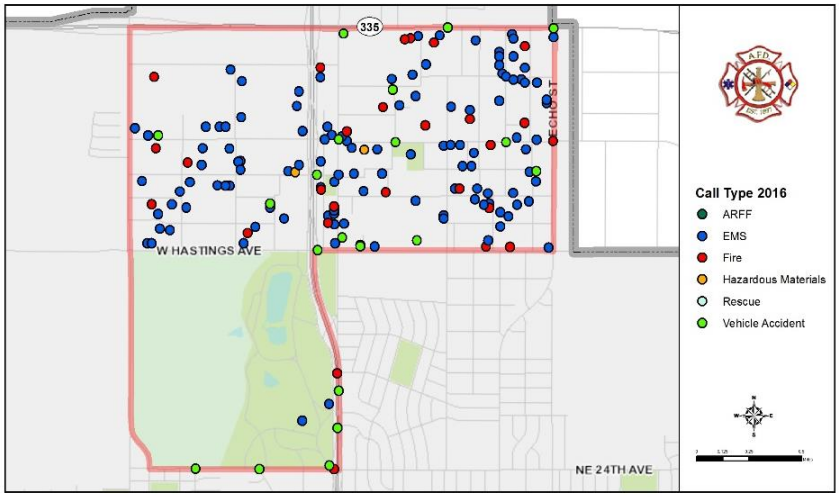
Risk	Number
Low Risk	0
Moderate Risk	0
High Risk	0
Special Risk	0

Geographical Planning Zone 0404 (Census Tract 152)

Pleasant Valley/Ross Rogers Municipal/Thompson Memorial Park/14 Smaller Subdivisions

Zone Profile:

North: W to E Loop 335 North
South: NW 24th Ave/E. Hastings
East: Hwy 287/City Limits
West: Broadway Dr.
Area: 3.01 sq. miles
Pop: 2,507
Pop. Density: 965/mi^2
Pop. Rating: Rural
Roadways: 34.2 miles



Zone Description:

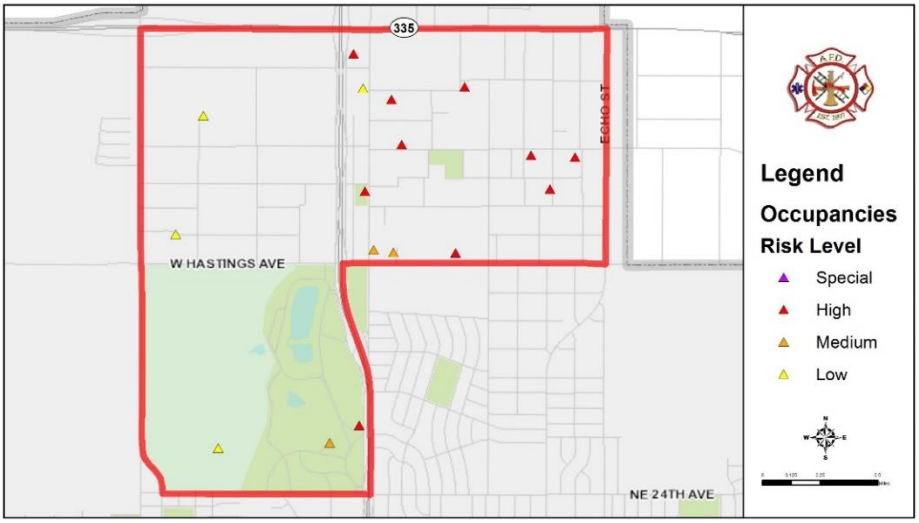
This GPZ is designated as a residential zone. These single-family homes are primarily of wood frame construction and built up to 4,221 square feet. Pleasant Valley Elementary School (grades PreK-5), which is in the Amarillo Independent School District, is located on River Road. The school does not have an automatic protection system. There is a light commercial zone bordering both sides of Interstate-27 and another at East Hastings and River Road. A large amusement park is located at Interstate-27 and NW 24th Avenue.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	25	197	1	1	23
2015	28	143	0	8	29
2016	39	187	1	2	31
Total	92	527	2	11	87

Occupancy Risk Levels

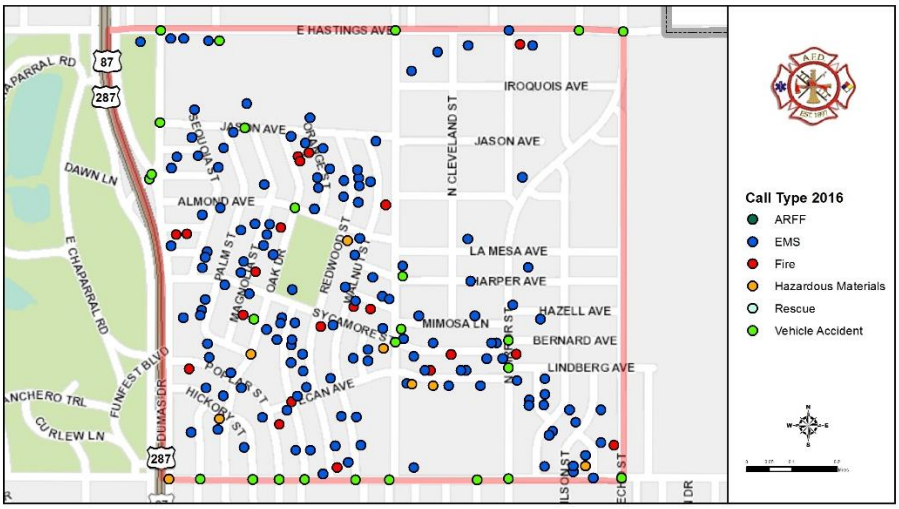
Risk	Number
Low Risk	4
Moderate Risk	3
High Risk	10
Special Risk	0



Geographical Planning Zone 0405 (Census Tract 139)
Hamlet/Beverly Gardens/Hillcrest/2 Smaller Subdivisions

Zone Profile:

North: E. Hastings Ave
South: NE 24th Ave
East: Echo St.
West: Hwy 287
Area: 1.06 sq. miles
Pop: 3,455
Pop. Density: 3,665/mi^2
Pop. Rating: Urban
Roadways: 21.6 miles



Zone Description:

This GPZ is designated as a residential zone with a minor zone designated as light commercial. These single-family homes are primarily of wood frame construction and built up to 3,218 square feet. The largest commercial structure is 55,705 square feet. Hamlet Elementary School (PreK-5), which is in the Amarillo Independent School District, is located on Sycamore Avenue. The school is partially protected by an automatic protection system.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	35	347	1	11	46
2015	36	303	1	7	57
2016	29	314	1	11	49
Total	100	964	3	29	152

Occupancy Risk Levels

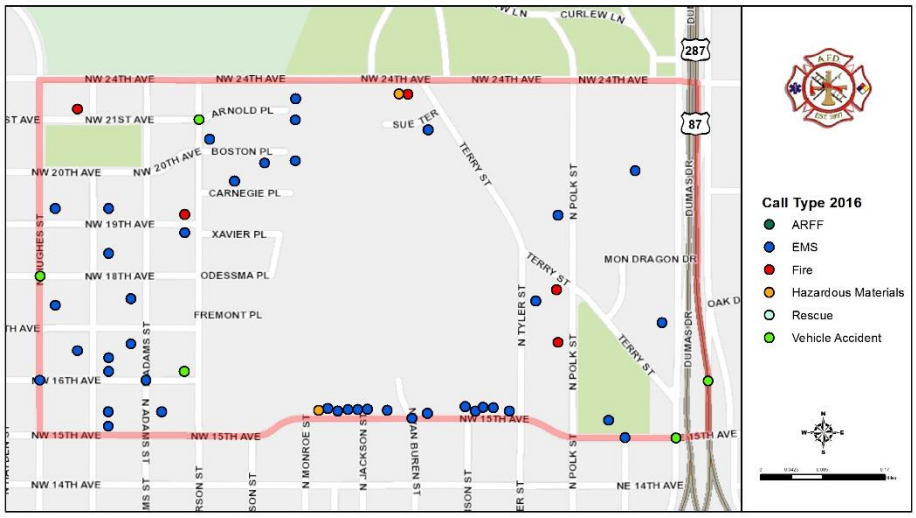
Risk	Number
Low Risk	0
Moderate Risk	6
High Risk	3
Special Risk	0

Geographical Planning Zone 0406 (Census Tract 148A)

Park Hills/North Heights/Miller Heights/3 Smaller Subdivisions

Zone Profile:

North: NW 24th Ave
South: NW 15th Ave
East: Hwy 287
West: N Hughes St
Area: 0.44 sq. miles
Pop: 819
Pop. Density: 1,862/mi^2
Pop. Rating: Rural
Roadways: 7.9 miles



Zone Description:

This GPZ is designated as a residential zone with both single family and multiple-family residences. These structures primarily of wood frame construction and range up to 3,486 square feet. Lee Elementary School (grades PreK-5), in AISD, is located on NE 15th Avenue. The school does not have an automatic protection system.

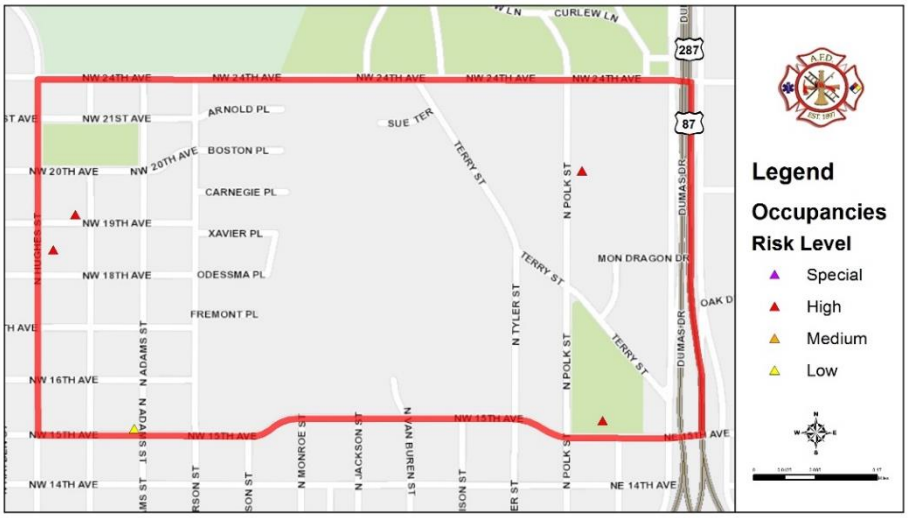
Geographic Planning Zone Demand History*

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	44	411	0	7	42
015	38	311	3	8	69
2016	38	295	1	9	66
Total	120	1017	4	24	177

** Census tract split between Station Districts – all incidents reported.*

Occupancy Risk Levels

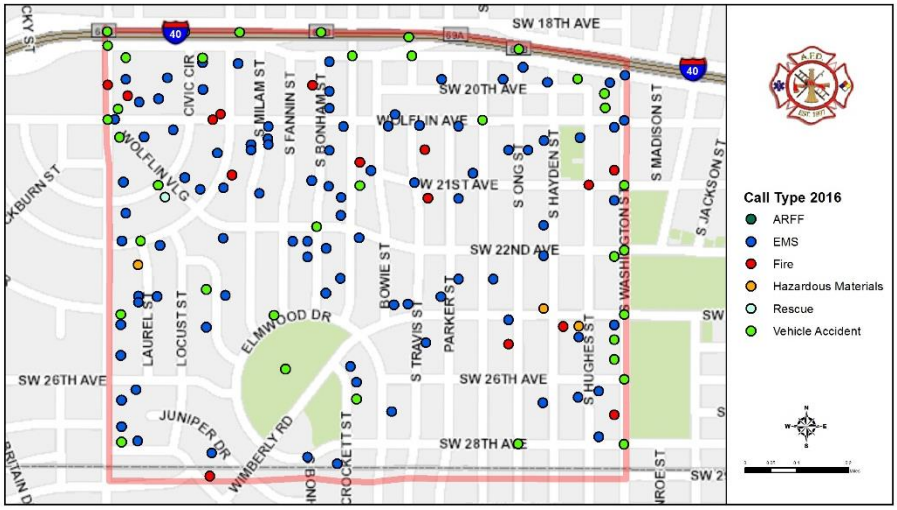
Risk	Number
Low Risk	1
Moderate Risk	0
High Risk	4
Special Risk	0



Geographical Planning Zone 0501 (Census Tract 104)
Wolflin Square/Wolflin Terrace/Sunnyside/4 Smaller Subdivisions

Zone Profile:

North: I-40
South: Randall-Potter County Line
East: S. Washington St.
West: S. Georgia St.
Area: .86 sq. miles
Pop: 3,385
Pop. Density: 3,938/mi^2
Pop. Rating: Urban
Roadways: 20.4 miles



Zone Description:

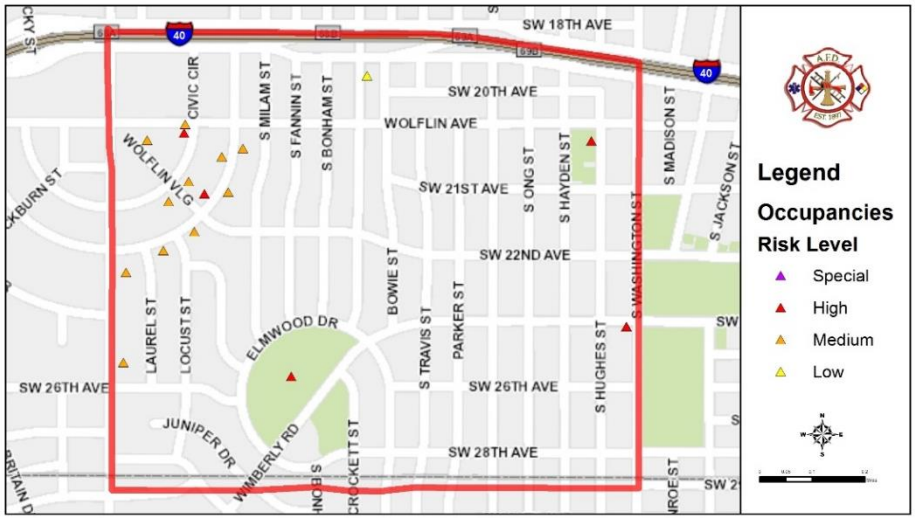
This GPZ is primarily a single-family residential zone. These homes are primarily of wood frame construction and range up to 8,173 square feet. Austin Middle School (grade 6-8), which is in AISD, is located on Wimberly Road. The school does not have an automatic protection system. Wolflin Elementary (grade PreK-5), which is in AISD, is located on South Hughes Street. The school does not have an automatic protection system.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	29	177	0	5	71
2015	22	191	3	4	80
2016	29	176	1	5	125
Total	80	544	4	27	276

Occupancy Risk Levels

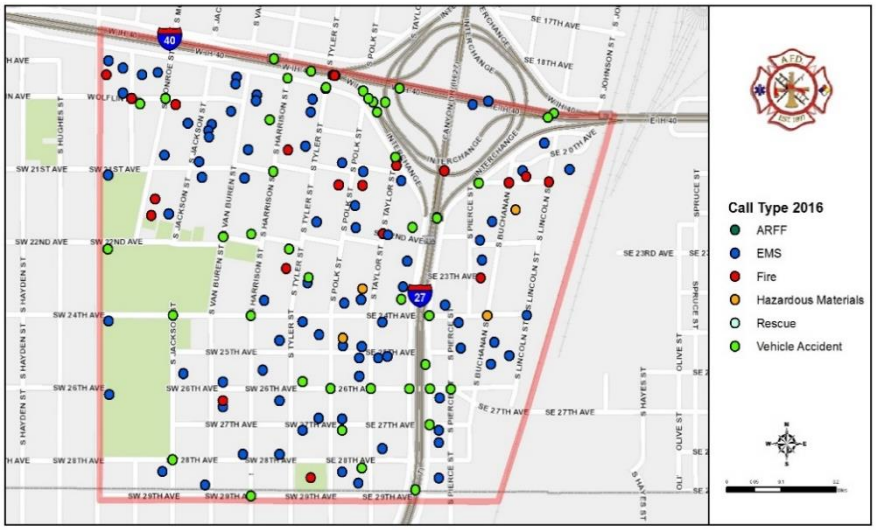
Risk	Number
Low Risk	1
Moderate Risk	11
High Risk	5
Special Risk	0



Geographical Planning Zone 0502 (Census Tract 147B)
Mrs. MD Oliver Eakles/Washington Center/Sunset/11 Smaller Subdivisions

Zone Profile:

North: I-40
South: Randall-Potter County Line
East: BNSF Railway
West: S Washington St.
Area: 0.62 sq. miles
Pop: 2,398
Pop. Density: 3,929/mi^2
Pop. Rating: Urban
Roadways: 19.5 miles



Zone Description:

This GPZ is primarily designated as a multiple-family residential zone with a small area zoned for single-family homes. The construction of these residences is primarily wood frame and range up to 4,400 square feet. There is a light commercial zone on the east side of Interstate-27. The largest commercial property in the GPZ is 169,100 square feet.

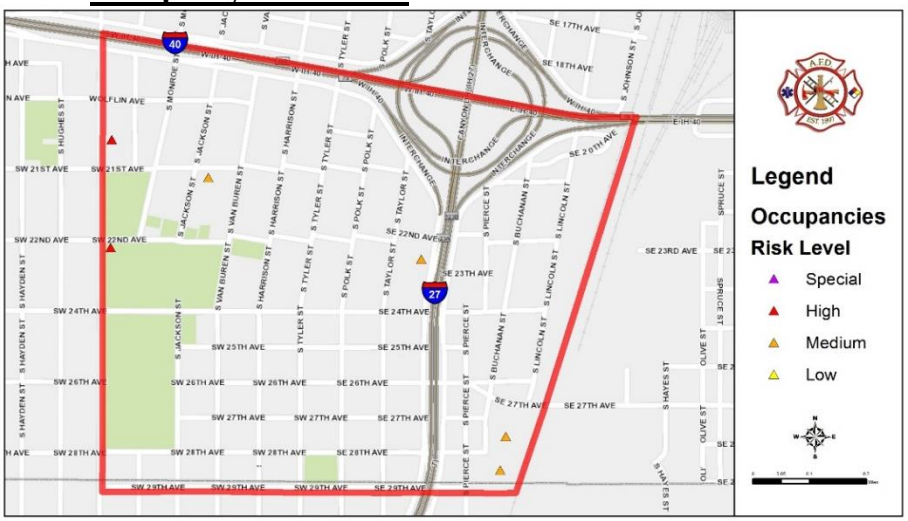
Geographic Planning Zone Demand History*

Year	Fire	EMS	Rescue	HazMat	Wildland
2014	42	573	1	9	90
2015	45	530	2	10	117
2016	42	571	3	14	139
Total	129	1674	6	33	346

** Census tract split between Station Districts – all incidents reported.*

Occupancy Risk Levels

Risk	Number
Low Risk	0
Moderate Risk	4
High Risk	2
Special Risk	0

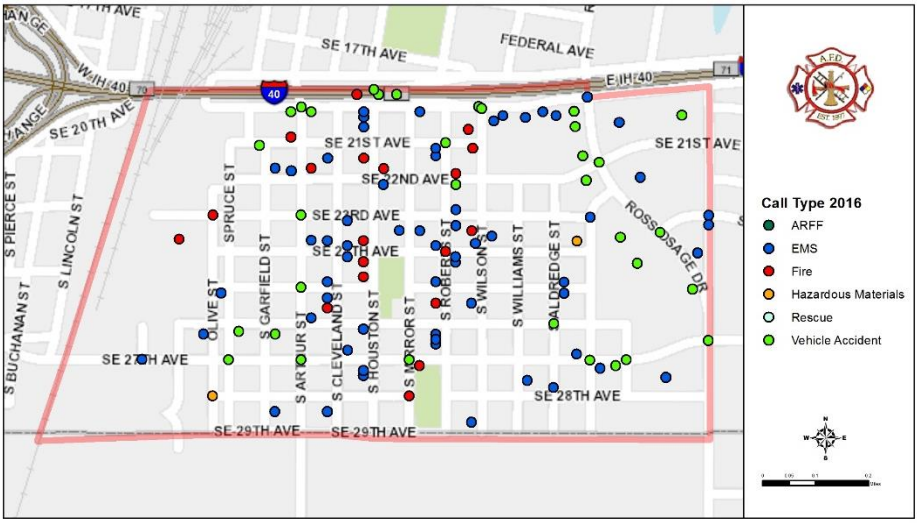


Geographical Planning Zone 0503 (Census Tract 106)

Air Park/Glenwood/4 Smaller Subdivisions

Zone Profile:

North: I-40
South: Randall-Potter County Line
East: S Osage St.
West: BNSF Railway
Area: .75 sq. miles
Pop: 2,408
Pop. Density: 2,909/mi^2
Pop. Rating: Urban
Roadways: 17.8 miles



Zone Description:

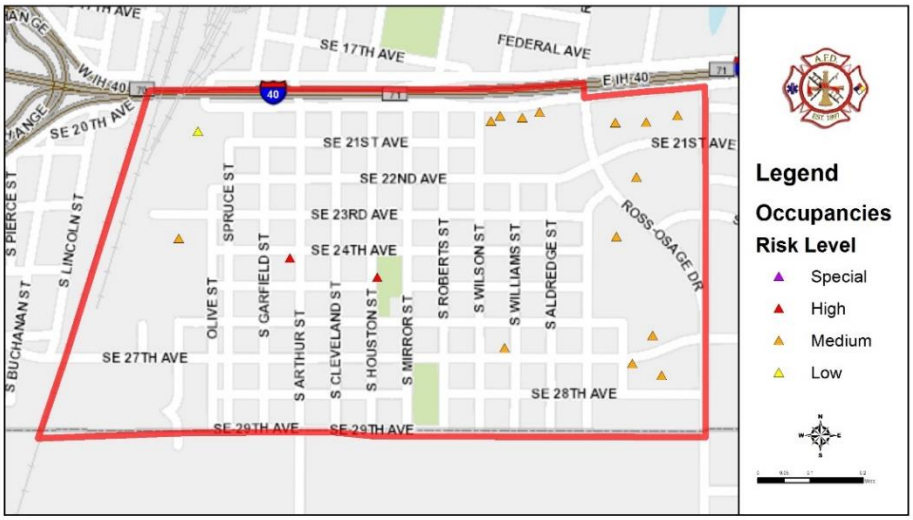
This GPZ is designated as a manufactured home zone with another zone designated for heavy commercial use on the east side and light commercial on the west boundary. The largest commercial structure is 181,798 square feet. Glenwood Elementary School (PreK-5), which is in the Amarillo Independent School District, is located on South Houston Street. The school does not have an automatic protection system.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	25	137	0	4	44
2015	17	129	0	3	32
2016	27	111	0	5	56
Total	69	377	0	12	132

Occupancy Risk Levels

Risk	Number
Low Risk	1
Moderate Risk	14
High Risk	2
Special Risk	0



Geographical Planning Zone 0504 (Census Tract 204)
Wolflin Park/Paramount/5Smaller Subdivisions

Zone Profile:

North: Randall-Potter County Line
South: I-27
East: S Washington St.
West: S. Georgia St.
Area: 0.59 sq. miles
Pop: 1,792
Pop. Density: 3,362/mi^2
Pop. Rating: Urban
Roadways: 13.6 miles

Zone Description:

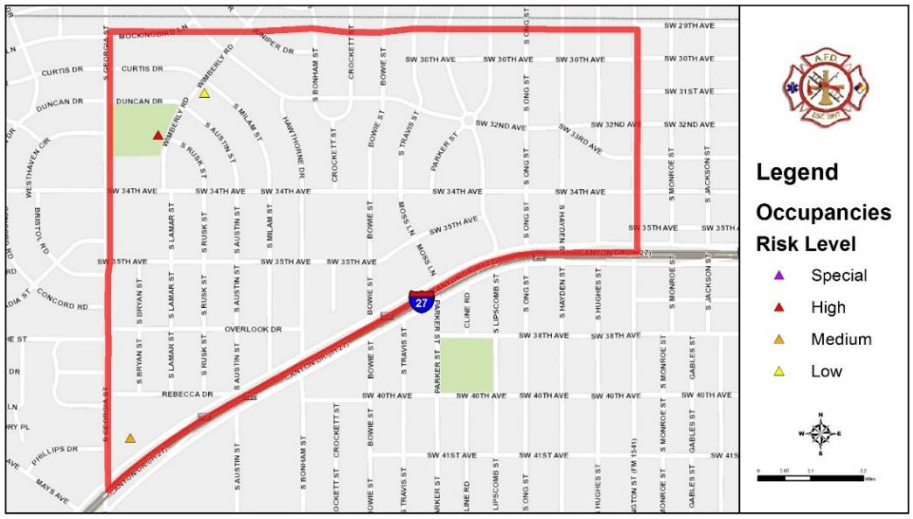
This GPZ is primarily designated as a residential zone. These single-family homes are primarily of wood frame construction and built up to 10,191 square feet. Coronado Elementary School (grades PreK-5), which is in the Amarillo Independent School District, is located on Wimberly Road. The school does not have an automatic protection system.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	10	85	0	3	41
2015	11	83	0	2	43
2016	18	71	0	2	64
Total	39	239	0	7	148

Occupancy Risk Levels

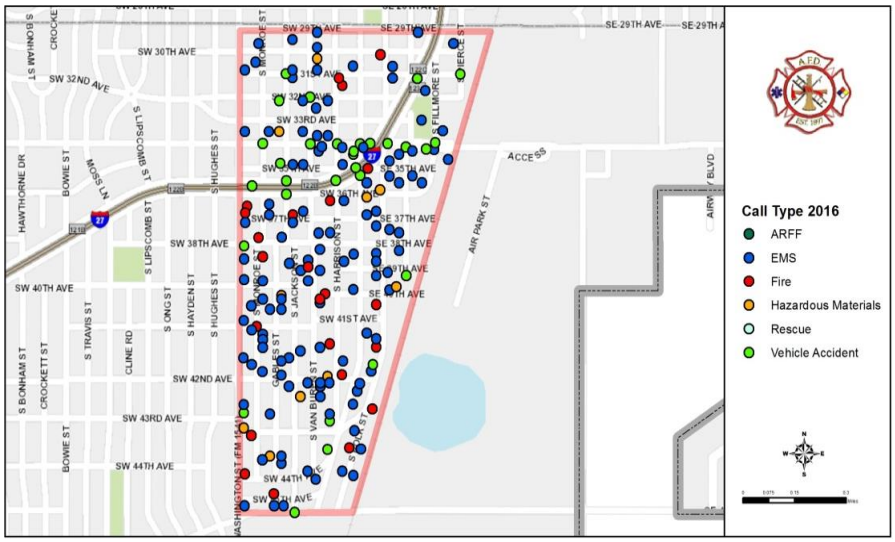
Risk	Number
Low Risk	1
Moderate Risk	1
High Risk	1
Special Risk	0



Geographical Planning Zone 0505 (Census Tract 205)
Broadmoor/Mrs. MD Oliver Eakles/Edgefield/3 Smaller Subdivisions

Zone Profile:

North: Randall-Potter County Line
South: SW 46th Ave
East: BNSF Railway
West: S Washington St.
Area: 0.70 sq. miles
Pop: 3,754
Pop. Density: 5,801/mi^2
Pop. Rating: Urban
Roadways: 20.5 miles



Zone Description:

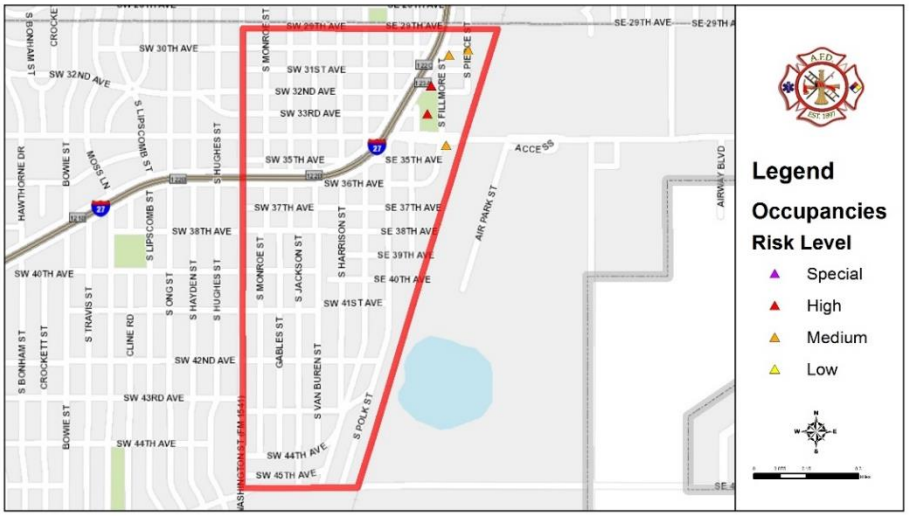
This GPZ is designated as a residential zone. These single-family homes are primarily of wood frame construction and built up to 3,864 square feet. Landergin Elementary School (grades PreK-5), which is in the Amarillo Independent School District, is located on South Taylor Street. The school does not have an automatic protection system.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	27	194	0	7	30
2015	31	199	0	8	34
2016	25	174	0	10	42
Total	83	567	0	25	106

Occupancy Risk Levels

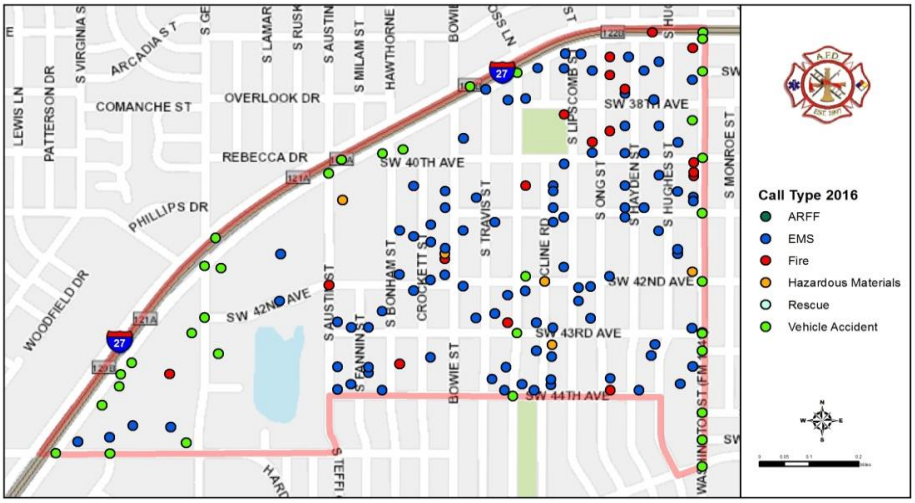
Risk	Number
Low Risk	0
Moderate Risk	3
High Risk	2
Special Risk	0



Geographical Planning Zone 0506 (Census Tract 209)
Southlawn/T-Anchor/10 Smaller Subdivisions

Zone Profile:

North: I-27
South: SW 45th Ave/ SW 44th Ave
East: S Washington St.
West: S Georgia St.
Area: 0.73 sq. miles
Pop: 3,026
Pop. Density: 3,964/mi^2
Pop. Rating: Urban
Roadways: 18.0 miles



Zone Description:

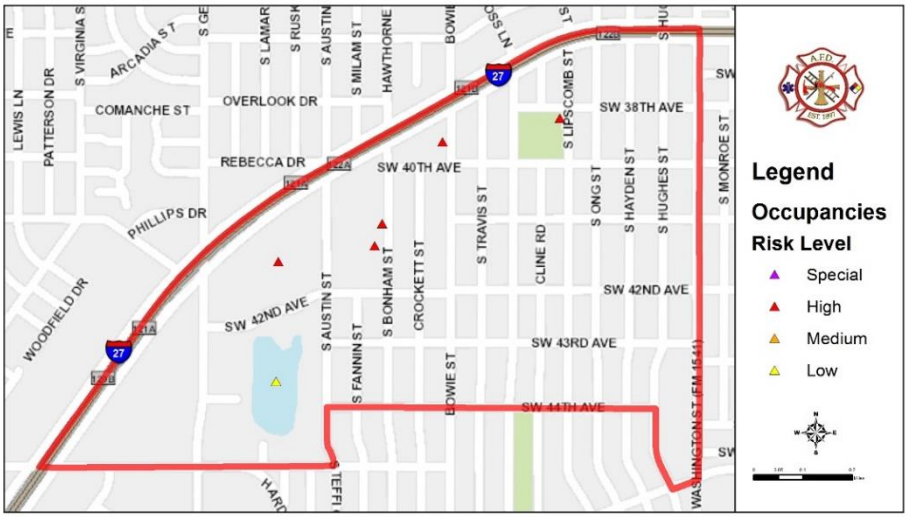
This GPZ is primarily designated as a residential zone with a minor zone designated as a light commercial zone along Interstate-27. The single-family homes are of wood frame construction and built up to 3,333 square feet. The largest commercial structure is 204,779 square feet. Lamar Elementary (grades PreK-5), which is in AISD, is located on South Lipscomb Street. The school does not have an automatic protection system.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	21	177	0	5	47
2015	23	124	0	5	69
2016	28	186	0	6	84
Total	72	487	0	16	200

Occupancy Risk Levels

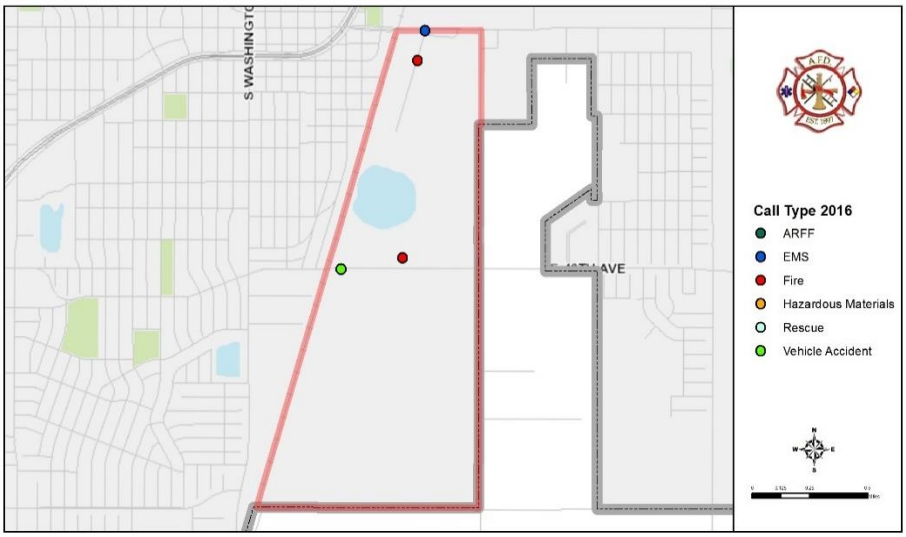
Risk	Number
Low Risk	1
Moderate Risk	0
High Risk	5
Special Risk	0



Geographical Planning Zone 0507 (Census Tract 220.02A)

Zone Profile:

North: City Limits
South: City Limits
East: City Limits
West: BNSF Railway
Area: 1.27 sq. miles
Pop: 0
Pop. Density: 0/mi^2
Pop. Rating: Urban
Roadways: 3.6 miles



Zone Description:

The north section of the GPZ is designated as a light commercial zone. There is a grain elevator and a vehicle unloading facility for railcars in this area. There is an undeveloped single-family residential zone in the south half of the GPZ.

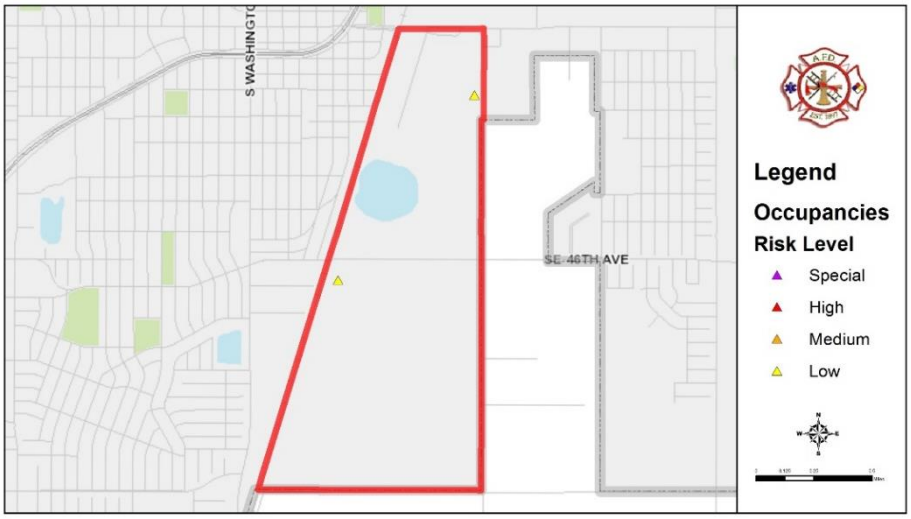
Geographic Planning Zone Demand History*

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	27	164	0	3	28
2015	22	187	0	4	39
2016	29	167	0	4	56
Total	78	518	0	11	123

** Census tract split between Station Districts – all incidents reported.*

Occupancy Risk Levels

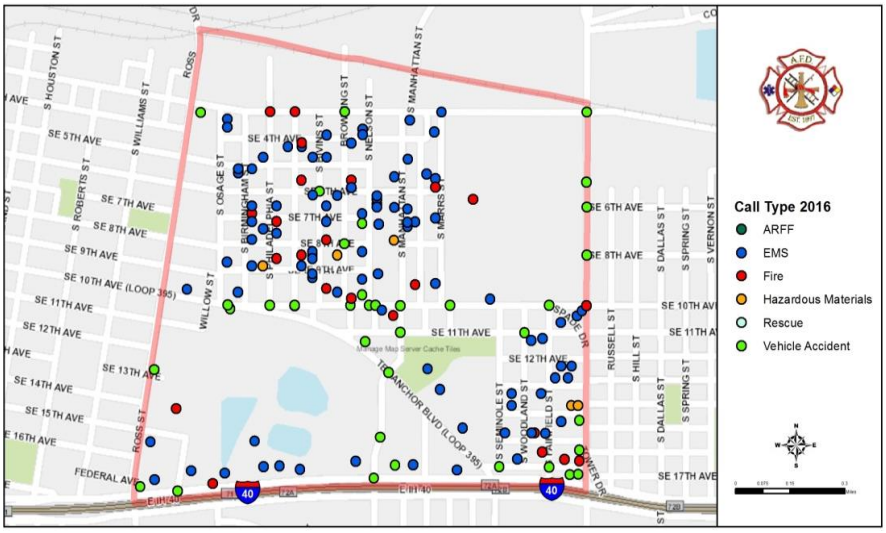
Risk	Number
Low Risk	2
Moderate Risk	0
High Risk	0
Special Risk	0



Geographical Planning Zone 0601 (Census Tract 110)
Denver Heights/Famous Heights Park/6 Smaller Subdivisions

Zone Profile:

North: BNSF Railway
South: I-40
East: S Grand St
West: Ross St
Area: 1.28 sq. miles
Pop: 1,872
Pop. Density: 1,952/mi^2
Pop. Rating: Rural
Roadways: 19.7 miles



Zone Description:

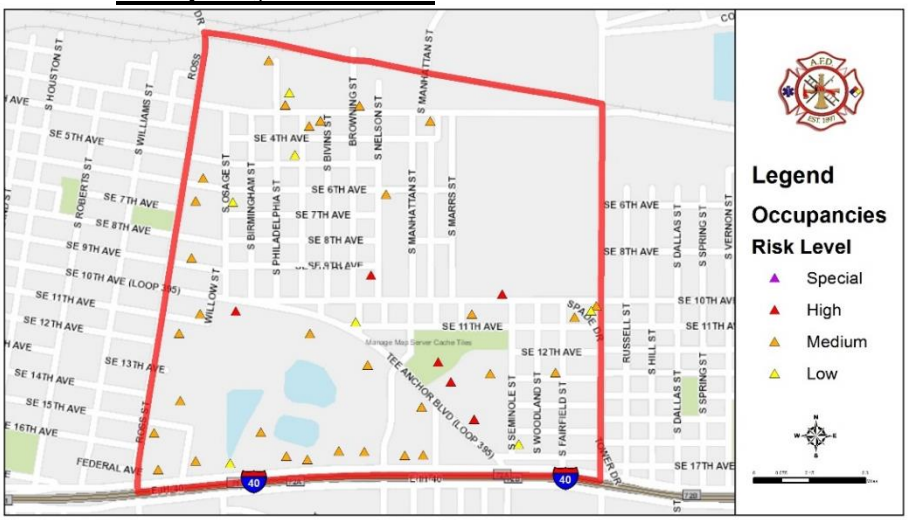
The southwest section of the GPZ is designated as a heavy commercial zone, and the east border is light commercial. The largest commercial structure is 127,363 square feet. The center section of the GPZ is a residential zone. These single-family homes are primarily of wood frame construction and built up to 3,303 square feet. Bowie Middle School is in AISD and located on Tee Anchor Boulevard. The 6th Grade building has an automatic protection system; the 7th-8th Grades building does not.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	25	219	5	12	38
2015	18	213	1	7	44
2016	38	252	2	6	72
Total	81	684	8	25	154

Occupancy Risk Levels

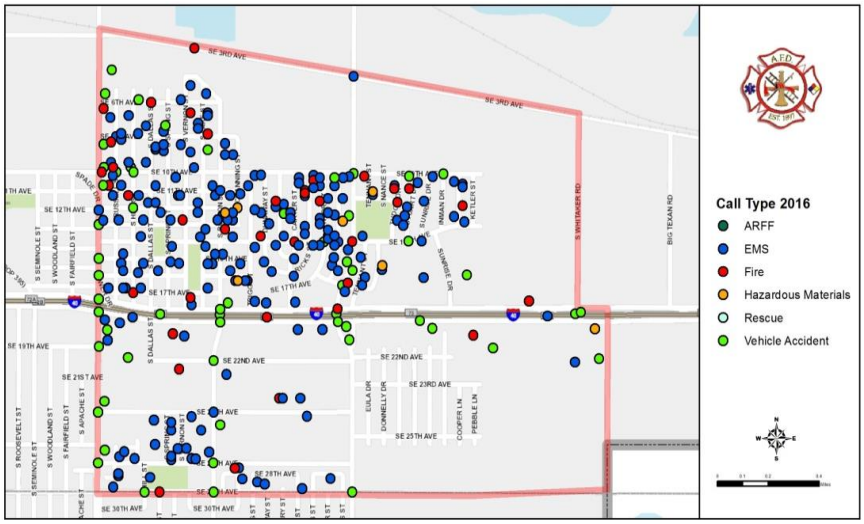
Risk	Number
Low Risk	7
Moderate Risk	31
High Risk	6
Special Risk	0



Geographical Planning Zone 0602 (Census Tract 145)
Bel-Aire/Fairview Townsite/Oakdale/6 Smaller Subdivisions

Zone Profile:

North: SE 3rd Ave
South: Randall-Potter County Line
East: S Whitaker Rd
West: S Grand St
Area: 3.02 sq. miles
Pop: 5,952
Pop. Density: 2,097/mi^2
Pop. Rating: Rural
Roadways: 43.8 miles



Zone Description:

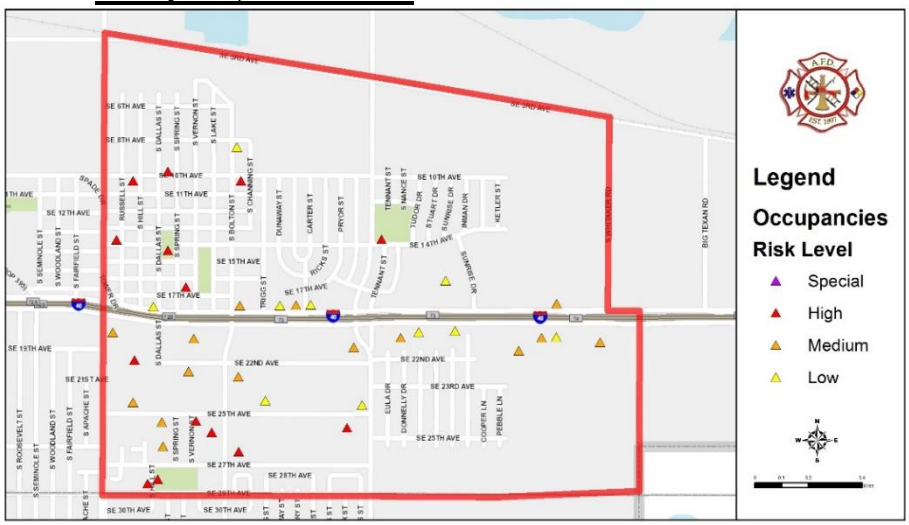
The northwest section of the GPZ is designated as a residential zone. These single-family homes are primarily of wood frame construction and built up to 3,408 square feet. Humphrey's Highland Elementary (grades PreK-5), is located on SE 15th Avenue. The school is partially protected by an automatic protection system. Oak Dale Elementary (grades PreK-5), on South Hill Street, and Sunrise Elementary (grades PreK-5), located on SE 14th Ave, do not have automatic protection systems. The I-40 corridor through the GPZ has heavy and light commercial sections. The largest commercial property is 210,000 square feet.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	69	438	0	14	76
2015	42	341	1	14	106
2016	57	3778	0	13	114
Total	168	429	1	41	296

Occupancy Risk Levels

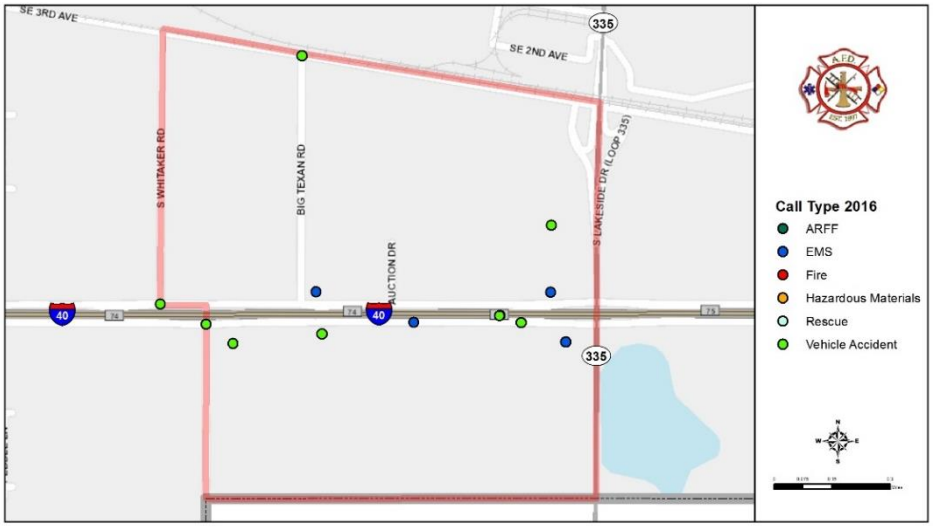
Risk	Number
Low Risk	10
Moderate Risk	15
High Risk	14
Special Risk	0



Geographical Planning Zone 0603 (Census Tract 144.01D)
Lakeside Park/12 Smaller Subdivisions

Zone Profile:

North: SE 3rd Ave
South: City Limits
East: Loop 335
West: S Whitaker Rd
Area: 1.19 sq. miles
Pop: 122
Pop. Density: 103/mi^2
Pop. Rating: Rural
Roadways: 10.4 miles



Zone Description:

The GPZ is designated as a heavy commercial zone along the I-40 corridor. There is also a light industrial area in the northeast section and a light commercial zone in the southeast corner. The largest commercial structure is 157,351 square feet.

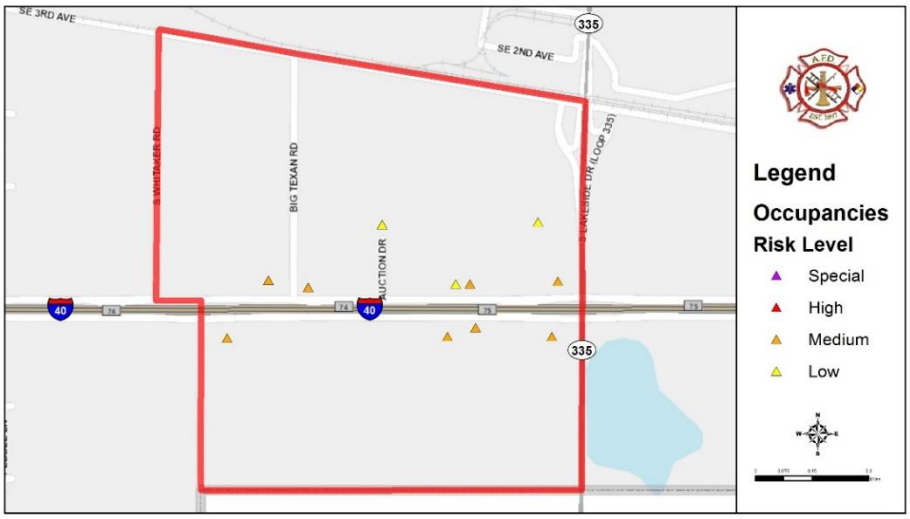
Geographic Planning Zone Demand History*

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	30	113	0	11	53
2015	15	125	0	6	77
2016	23	107	0	9	85
Total	68	345	0	26	216

** Census tract split between Station Districts – all incidents reported.*

Occupancy Risk Levels

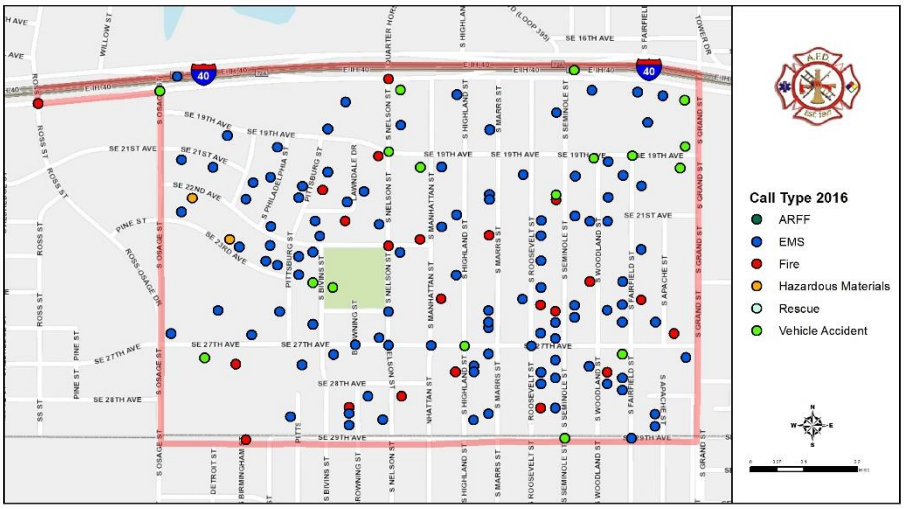
Risk	Number
Low Risk	3
Moderate Risk	8
High Risk	0
Special Risk	0



Geographical Planning Zone 0604 (Census Tract 107)
Lawndale/Grandview/8 Smaller Subdivisions

Zone Profile:

North: I-40
South: Randall-Potter County Line
East: S Grand St
West: Osage St
Area: 0.72 sq. miles
Pop: 3,590
Pop. Density: 4,715/mi^2
Pop. Rating: Urban
Roadways: 15.6 miles



Zone Description:

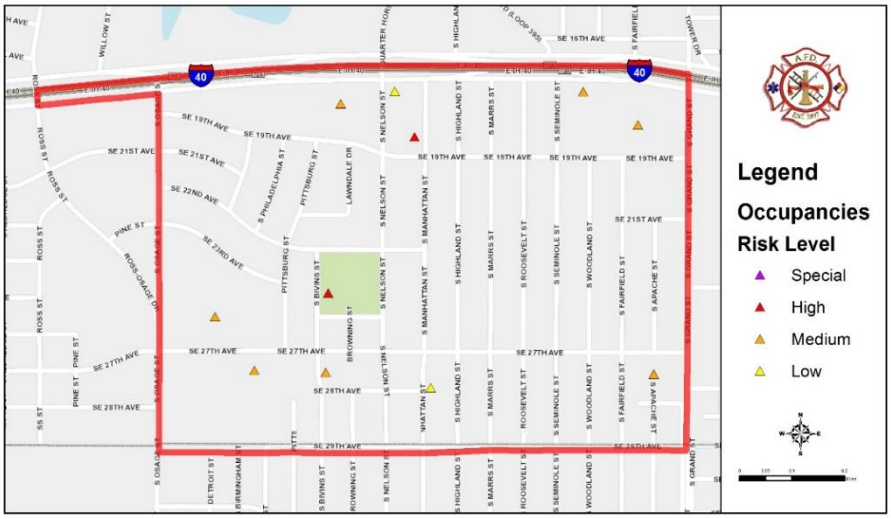
This is a residential area with a majority of it comprised of single family residences. These homes are primarily of wood frame construction and built up to 3,250 square feet. Lawndale Elementary School (grades PreK-5), which is in the Amarillo Independent School District, is located on S Bivins Street. The school does not have an automatic protection system. There are light commercial sections along I-40 and the Grand Street roadways.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	24	176	1	8	20
2015	26	162	0	7	38
2016	30	179	0	3	36
Total	80	517	1	18	94

Occupancy Risk Levels

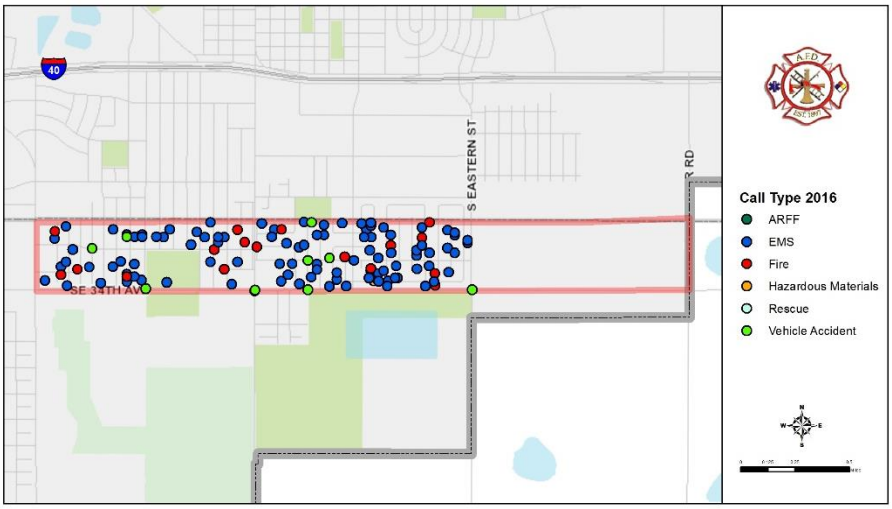
Risk	Number
Low Risk	2
Moderate Risk	7
High Risk	2
Special Risk	0



Geographical Planning Zone 0605 (Census Tract 206)
Oakdale/Grandview/Southeast Park

Zone Profile:

North: Randall-Potter County Line
South: SE 34th Ave
East: S Whitaker Rd
West: Osage St
Area: 0.97 sq. miles
Pop: 4,050
Pop. Density: 4,383/mi^2
Pop. Rating: Urban
Roadways: 15.8 miles



Zone Description:

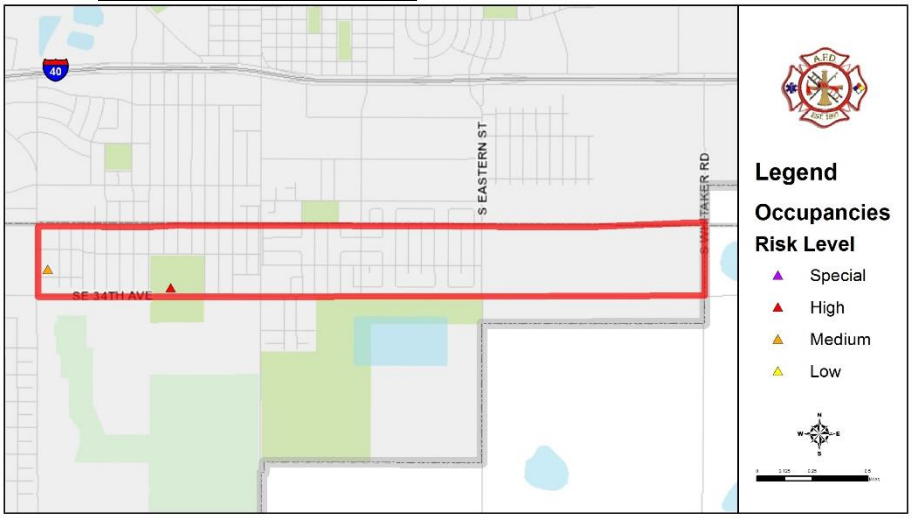
This is a residential area with a majority of it comprised of single family residences. These homes are primarily of wood frame construction and built up to 3,511 square feet. Caprock High school (grades 9-12), which is in AISD, is located on SE 34th Avenue. The school does not have an automatic protection system.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	21	159	0	8	10
2015	23	138	0	1	12
2016	26	164	0	1	10
Total	70	461	0	10	32

Occupancy Risk Levels

Risk	Number
Low Risk	0
Moderate Risk	1
High Risk	1
Special Risk	0

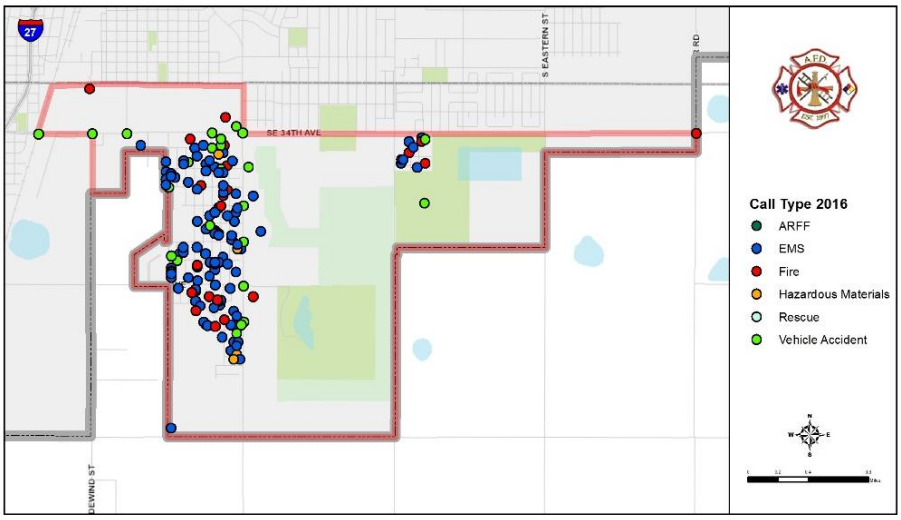


Geographical Planning Zone 0606 (Census Tract 220.02B)

Tradewind/Brook Hollow/Tradewind Square

Zone Profile:

North: Randall-Potter County Line
South: City Limits
East: S Grand St/ S Eastern St/S Whitaker
West: BNSF Railway/ Tradewind St/City Limits
Area: 4.6 sq. miles
Pop: 2,854
Pop. Density: 620/mi^2
Pop. Rating: Rural
Roadways: 23.2 miles



Zone Description:

The northwest section of the GPZ is a residential area comprised of single family residences. These homes are primarily of wood frame construction and built up to 4,448 square feet. The southwest area is designated as a manufactured home zone. Tradewind Elementary School (grades PreK-5), which is in the Amarillo Independent School District, is located on Williams Street. The school does have an automatic protection system. The east section of the GPZ has a golf course and a large outdoor sports complex.

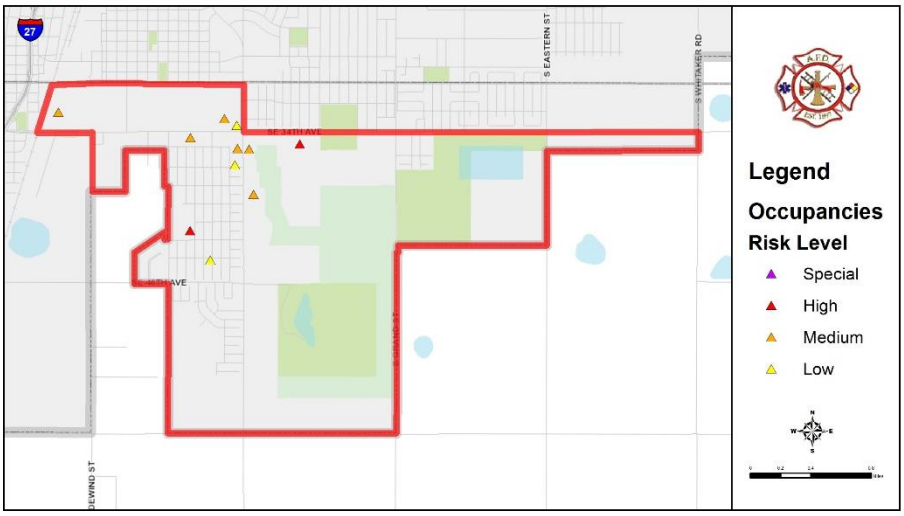
Geographic Planning Zone Demand History*

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	27	164	0	3	28
2015	22	187	0	4	39
2016	29	167	0	4	56
Total	78	518	0	11	123

** Census tract split between Station Districts – all incidents reported.*

Occupancy Risk Levels

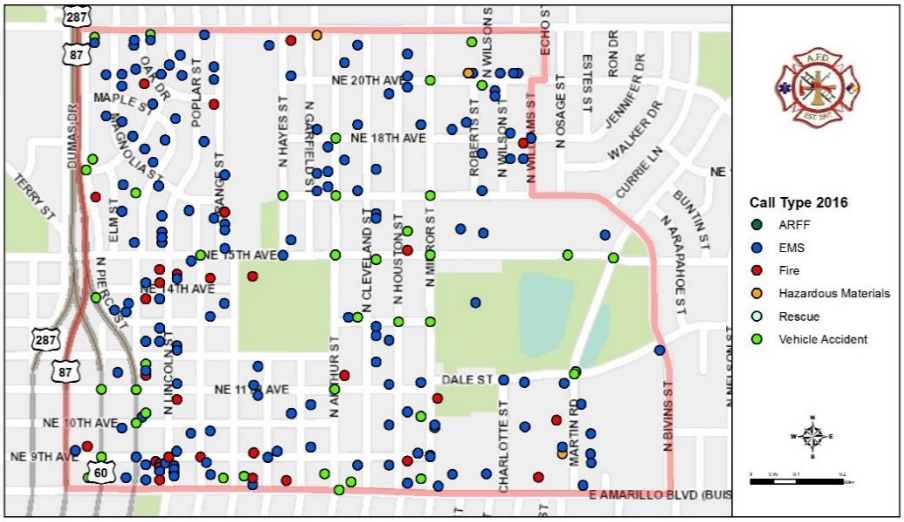
Risk	Number
Low Risk	3
Moderate Risk	5
High Risk	2
Special Risk	0



Geographical Planning Zone 0701 (Census Tract 128)
Hamlet/Belmont Park/8 Smaller Subdivisions

Zone Profile:

North: NE 24th Ave
South: E. Amarillo Blvd.
East: Echo St/ Williams St/Bivins St.
West: Fillmore/Hwy 287
Area: 1.15 sq. miles
Pop: 4,310
Pop. Density: 4,656/mi^2
Pop. Rating: Urban
Roadways: 21.5 miles



Zone Description:

This is a residential area with a majority of it comprised of single family residences. These homes are primarily of wood frame construction and built up to 3,200 square feet. Palo Duro High School (grades 9-12), which is in AISD, is located on North Grant Street. The school is partially protected by an automatic protection system. Rogers Elementary School (grades PreK-5), which is in AISD, is located on North Mirror Street. The school is partially protected by an automatic protection system.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	46	490	0	12	30
2015	41	419	0	12	61
2016	48	451	0	3	72
Total	135	1360	0	27	163

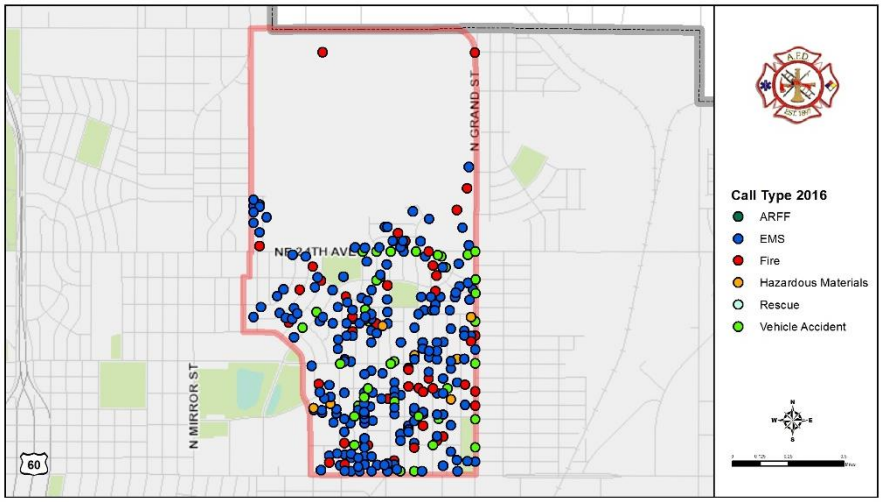
Occupancy Risk Levels

Risk	Number
Low Risk	7
Moderate Risk	16
High Risk	4
Special Risk	0

Geographical Planning Zone 0702 (Census Tract 150)
Martin/ Forest Hill/6 Smaller Subdivisions

Zone Profile:

North: E. Hastings Ave
South: E. Amarillo Blvd.
East: N. Grand St.
West: Echo St/
Williams St/Bivins St.
Area: 1.86 sq. miles
Pop: 7,665
Pop. Density: 3,884/mi^2
Pop. Rating: Urban
Roadways: 22.0 miles



Zone Profile:

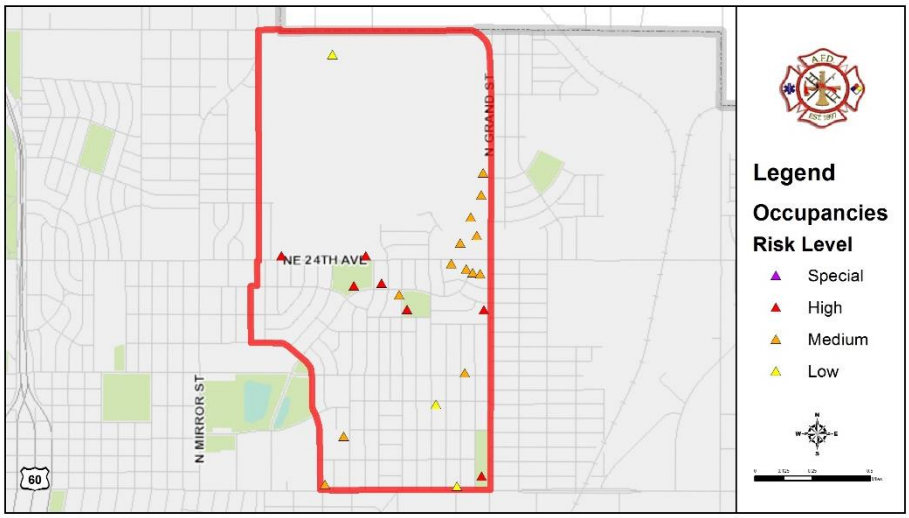
This is a residential area comprised of single family residences. These homes are primarily of wood frame construction and built up to 3,524 square feet. Travis Middle School has two campuses (6th grade and 7th-8th grades) in AISD. The 6th grade campus does have an automatic protection system. Forest Hill (grades PreK-5), which is in the AISD, is located on Amarillo Boulevard East. The school does not have an automatic protection system. Whittier Elementary (grades PreK-5), which is in AISD, is located on North Marrs Street. The school does not have an automatic protection system. The north section of the GPZ is largely agricultural.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	40	510	0	8	49
2015	45	413	0	7	50
2016	67	447	0	9	72
Total	152	1370	0	24	171

Occupancy Risk Levels

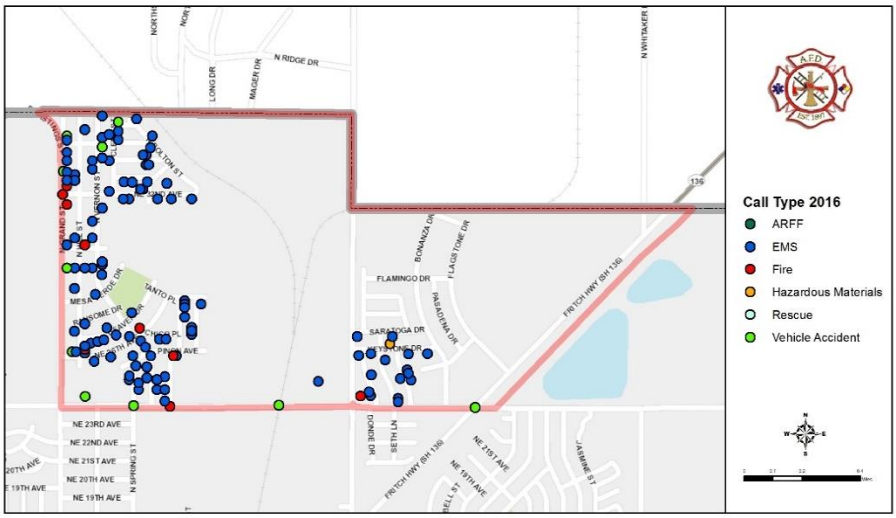
Risk	Number
Low Risk	3
Moderate Risk	12
High Risk	6
Special Risk	0



Geographical Planning Zone 0703 (Census Tract 141)
Mesa Verde/Park Terrace/2 Smaller Subdivisions

Zone Profile:

North: E. Hastings Ave/ City Limits
South: NE 24th Ave
East: Fritch Hwy 136
West: N. Grand St.
Area: 1.56 sq. miles
Pop: 2,020
Pop. Density: 548/mi^2
Pop. Rating: Rural
Roadways: 14.6 miles



Zone Profile:

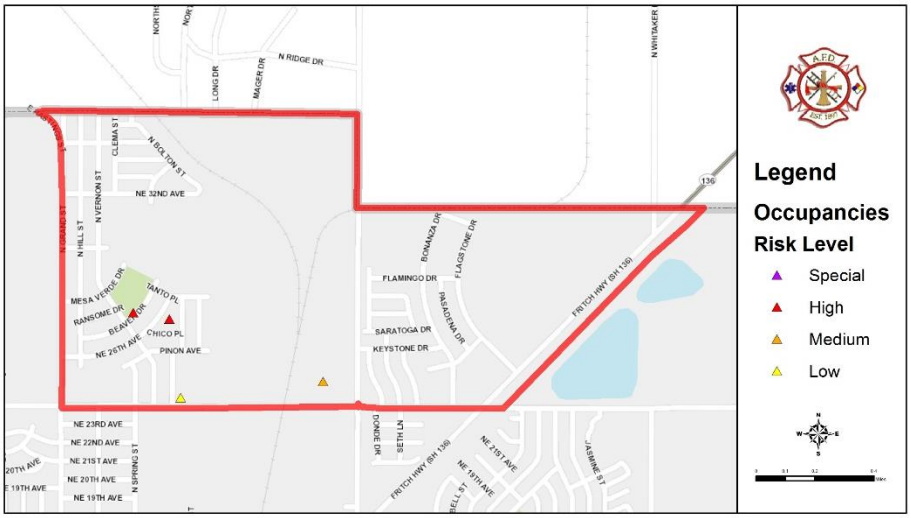
The GPZ has both single-family residences and a manufactured home zones (west and south central sections). The single-family residences are primarily of wood frame construction and built up to 2,863 square feet. The remaining areas are light industrial, light commercial, and heavy commercial along Fritch Highway. The largest commercial building is 155,200 square feet. Mesa Verde Elementary School (grades PreK-5), AISD, is located on Beaver Drive. The school is partially protected by an automatic protection system.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	22	125	0	1	4
2015	7	140	2	4	10
2016	14	168	0	1	15
Total	43	433	2	6	29

Occupancy Risk Levels

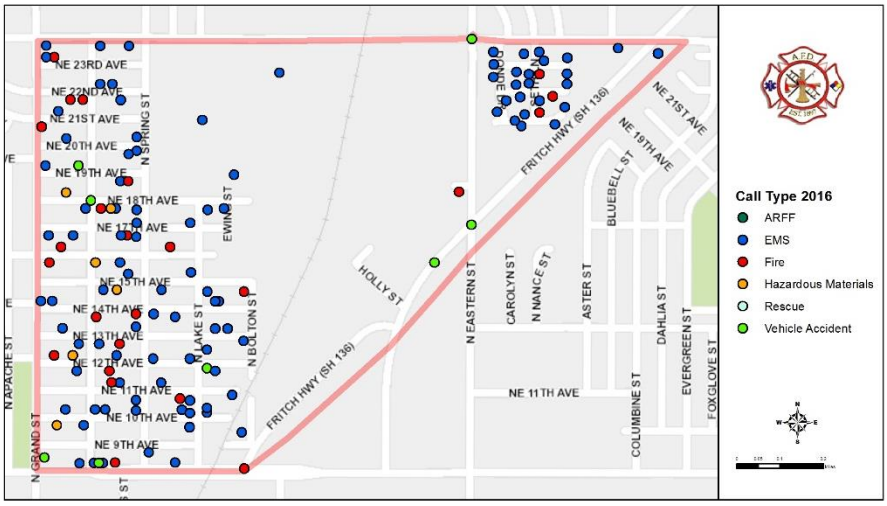
Risk	Number
Low Risk	3
Moderate Risk	8
High Risk	3
Special Risk	0



Geographical Planning Zone 0704 (Census Tract 126)
East Amarillo/Greentree Village/2 Smaller Subdivisions

Zone Profile:

North: NE 24th Ave
South: E. Amarillo Blvd.
East: Harbor St.
West: N. Grand St.
Area: 0.99 sq. miles
Pop: 3,570
Pop. Density: 3,298/mi^2
Pop. Rating: Urban
Roadways: 12.3 miles



Zone Description:

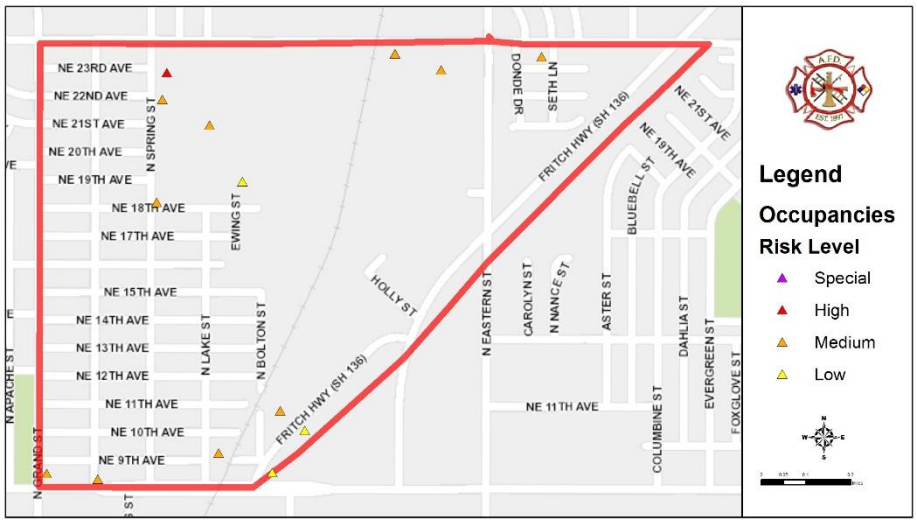
The western and northeast sections of the GPZ are residential areas of single family residences. These homes are primarily of wood frame construction and built up to 2,830 square feet. The central section of the GPZ is designated as light industrial. The largest commercial property is 262,300 square feet.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	20	166	0	6	14
2015	19	176	0	3	25
2016	29	141	0	6	17
Total	68	483	0	15	56

Occupancy Risk Levels

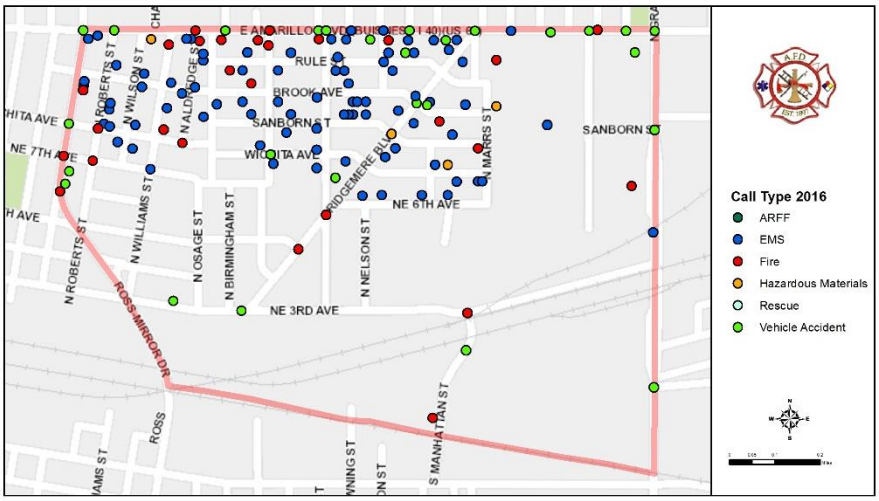
Risk	Number
Low Risk	3
Moderate Risk	10
High Risk	1
Special Risk	0



Geographical Planning Zone 0705 (Census Tract 122B)
Ridgemere/Morningside/12 Smaller Subdivisions

Zone Profile:

North: E. Amarillo Blvd.
South: BNSF Railway
East: S. Grand St.
West: Fillmore St.
Area: 1.05 sq. miles
Pop: 2,144
Pop. Density: 2,042/mi^2
Pop. Rating: Rural
Roadways: 15.1 miles



Zone Description:

The northwest section of the GPZ is a residential area with a majority of it comprised of single family residences. These homes are primarily of wood frame construction and built up to 2,967 square feet. The remaining areas of the GPZ is designated as a heavy industrial zone. The largest commercial property is 107,400 square feet.

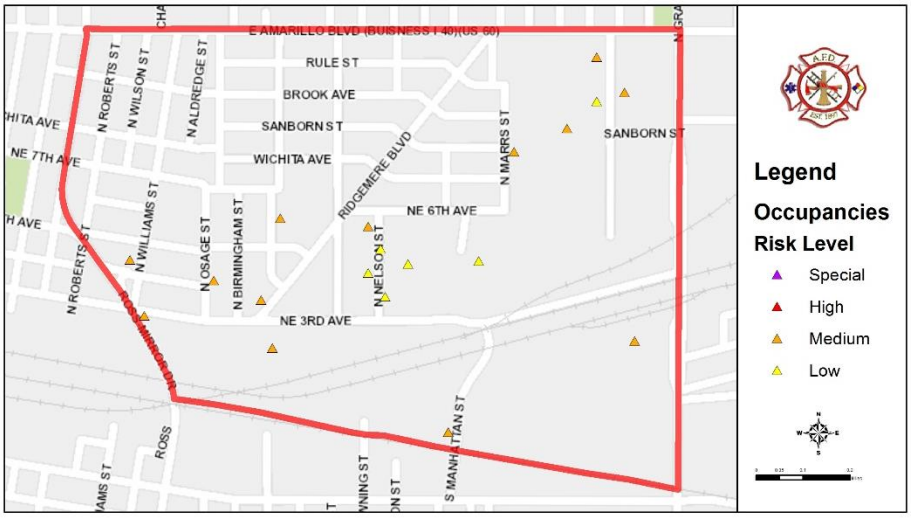
Geographic Planning Zone Demand History*

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	34	371	2	13	112
2015	38	259	2	15	129
2016	62	282	0	8	158
Total	134	912	4	36	399

** Census tract split between Station Districts – all incidents reported.*

Occupancy Risk Levels

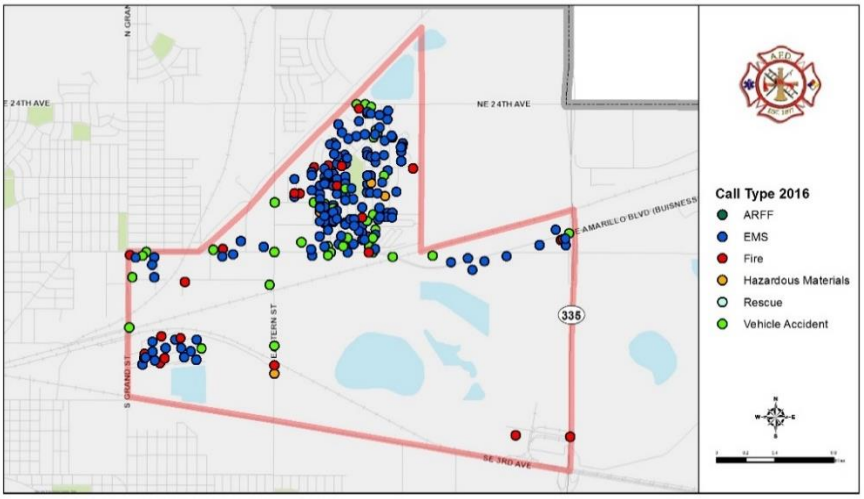
Risk	Number
Low Risk	6
Moderate Risk	13
High Risk	0
Special Risk	0



Geographical Planning Zone 0706 (Census Tract 149)
Eastridge/Industrial City/9 Smaller Subdivisions

Zone Profile:

North: E. Amarillo Blvd/ Harbor St/Fritch Hwy 136
South: E. 3rd Ave.
East: N. Whitaker Rd/ N. Lakeside Dr.
West: S. Grand St.
Area: 4.99 sq. miles
Pop: 5,864
Pop. Density: 1,297/mi^2
Pop. Rating: Rural
Roadways: 30.7 miles



Zone Description:

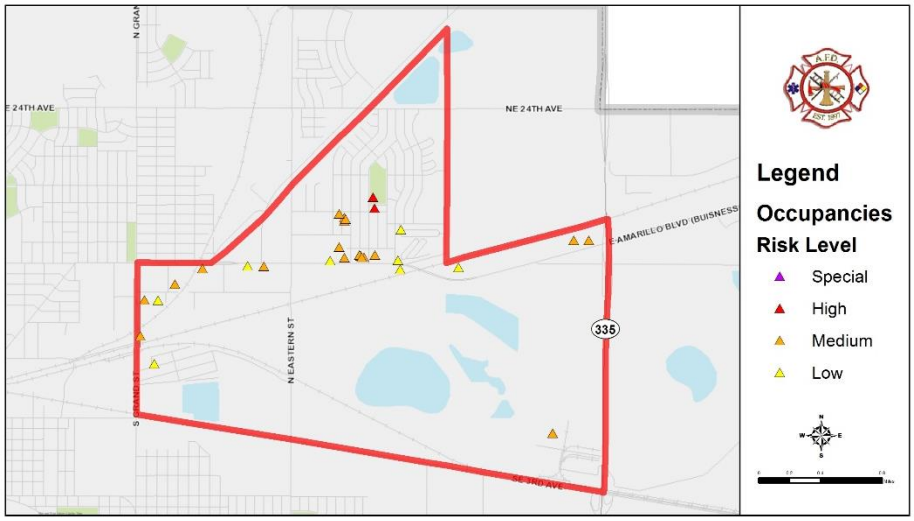
The north section of the GPZ is a residential area with a majority of it comprised of single family residences. These homes are primarily of wood frame construction and built up to 4,002 square feet. Eastridge Elementary School (grades PreK-5), which is in the Amarillo Independent School District, is located on Evergreen Street. The school is partially protected by an automatic protection system. The southwest section is designated as a heavy industrial area and the southeast section is largely agricultural.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	60	344	3	10	40
2015	38	328	1	8	62
2016	39	255	0	5	58
Total	137	927	4	23	160

Occupancy Risk Levels

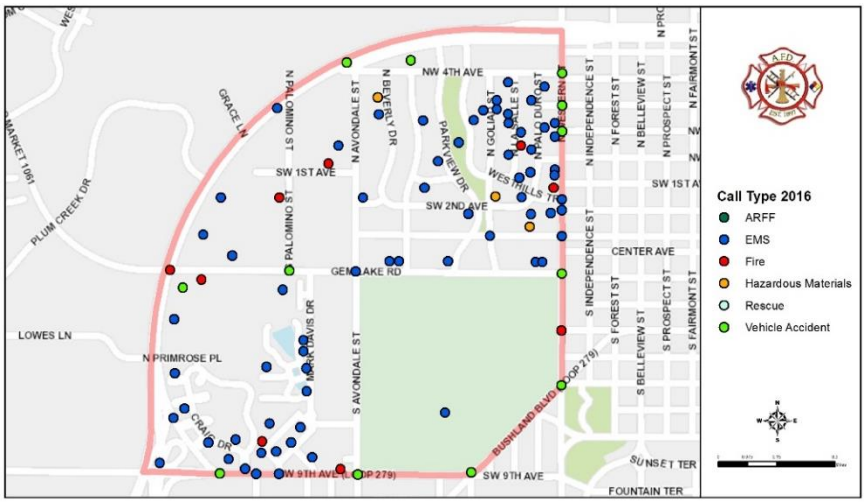
Risk	Number
Low Risk	8
Moderate Risk	19
High Risk	2
Special Risk	0



Geographical Planning Zone 0801 (Census Tract 132)
West Hills/Crestview/Los Altos/3 Smaller Subdivisions

Zone Profile:

North: W. Amarillo Blvd.
South: SW. 9th Ave/
East: N. Western St.
West: Bell St/
W. Amarillo Blvd.
Area: 1.00 sq. mile
Pop: 1,706
Pop. Density: 1,662/mi^2
Pop. Rating: Rural
Roadways: 16.4 miles



Zone Description

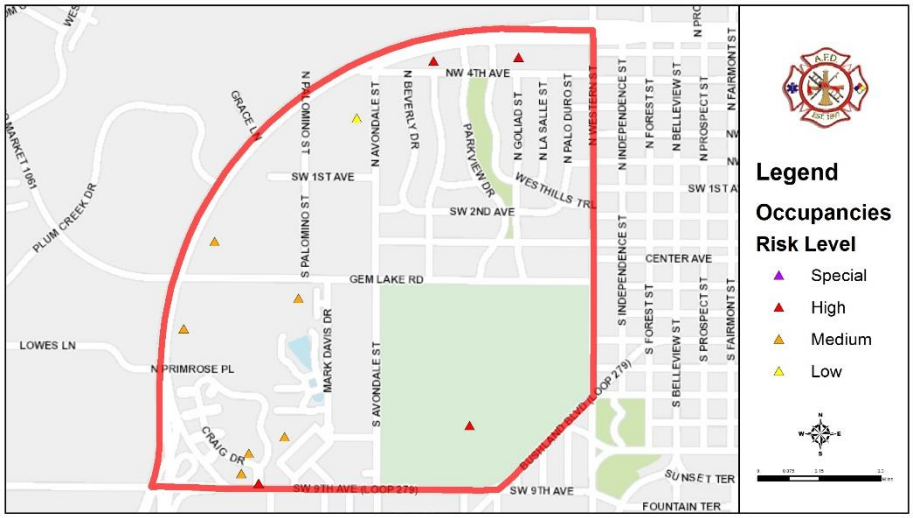
This is a residential area with a majority of it comprised of single family residences. These homes are primarily of wood frame construction and built up to 10,555 square feet. Avondale Elementary School (grades PreK-5), which is in AISD, is located on Avondale Street. The school does not have an automatic protection system. There is a central business area and a general retail zone in the southwest corner of the GPZ. The largest commercial property is 145,600 square feet.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	20	251	0	3	24
2015	22	259	0	4	41
2016	15	295	0	4	48
Total	57	805	0	11	113

Occupancy Risk Levels

Risk	Number
Low Risk	1
Moderate Risk	6
High Risk	4
Special Risk	0

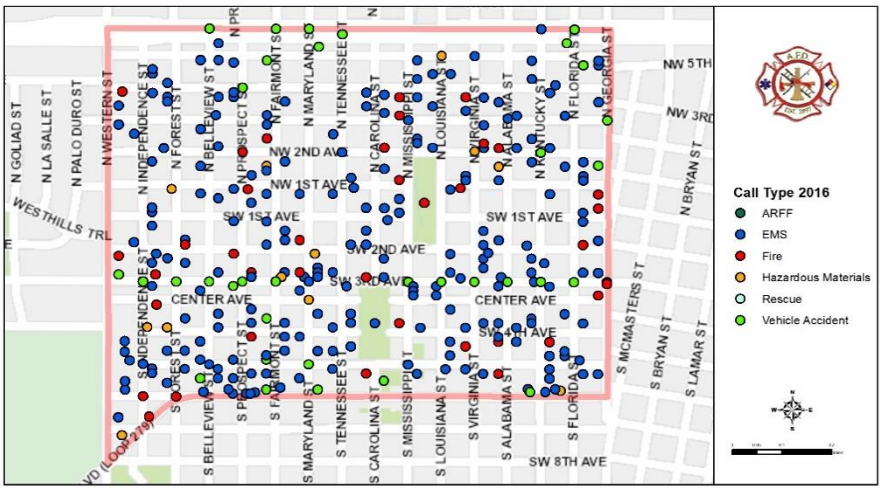


Geographical Planning Zone 0802 (Census Tract 153B)

San Jacinto

Zone Profile:

North: W. Amarillo Blvd.
South: Bushland Blvd/ S.W. 6th Ave.
East: N. Georgia St.
West: N. Western St.
Area: 0.77 sq. miles
Pop: 3,950
Pop. Density: 4,243/mi^2
Pop. Rating: Urban
Roadways: 25.0 miles



Zone Description:

This is a residential area with a majority of it comprised of single family residences. These homes are primarily of wood frame construction and built up to 4,162 square feet. San Jacinto Elementary School (grades PreK-5), in AISD, is located on SW 4th Avenue. The school does not have an automatic protection system.

Geographic Planning Zone Demand History*

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	52	432	0	20	45
2015	55	401	2	14	50
2016	60	548	0	20	64
Total	167	1291	2	54	159

** Census tract split between Station Districts – all incidents reported.*

Occupancy Risk Levels

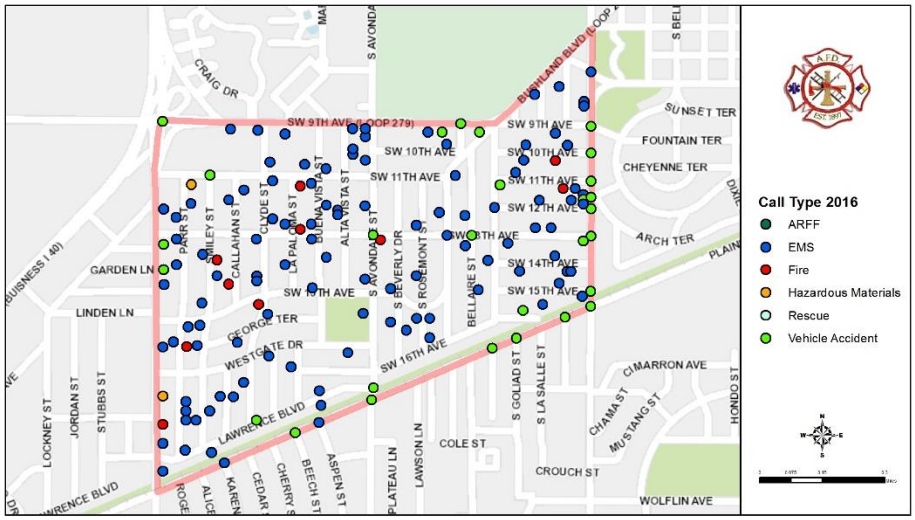
Risk	Number
Low Risk	1
Moderate Risk	4
High Risk	2
Special Risk	0

Geographical Planning Zone 0803 (Census Tract 118)

Country Club Terrace/ Westgate/ 9 Smaller Subdivisions

Zone Profile:

North: S.W. 9th Ave/ Bushland Blvd.
South: Plains Blvd.
East: N. Western St.
West: Bell St.
Area: 0.72 sq. miles
Pop: 3,933
Pop. Density: 4,718/mi^2
Pop. Rating: Urban
Roadways: 16.4 miles



Zone Description:

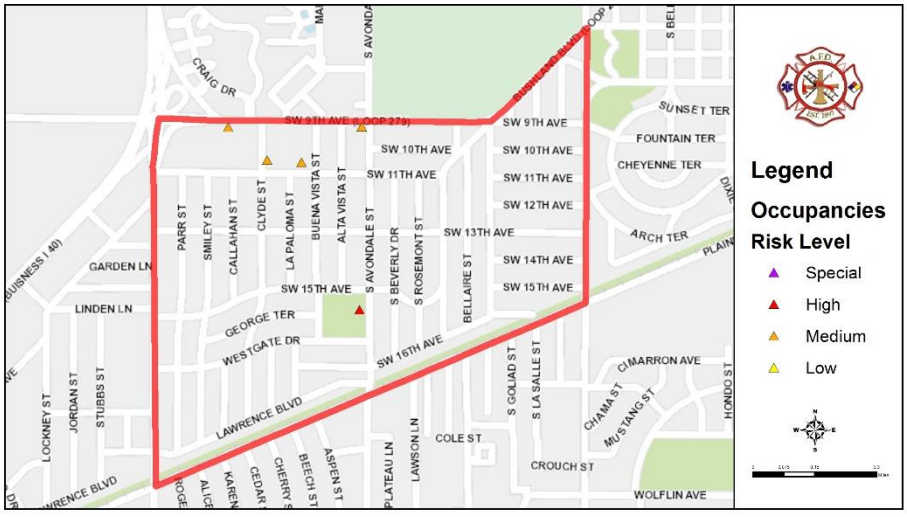
This is a residential area with a majority of it comprised of single family residences. These homes are primarily of wood frame construction and built up to 4,324 square feet.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	24	225	0	4	41
2015	24	275	0	3	49
2016	12	261	0	3	50
Total	60	761	0	10	140

Occupancy Risk Levels

Risk	Number
Low Risk	0
Moderate Risk	4
High Risk	1
Special Risk	0

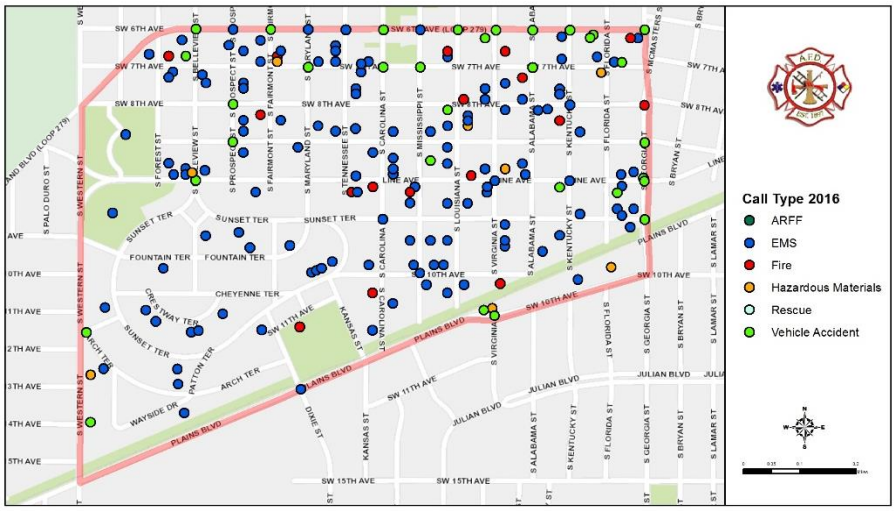


Geographical Planning Zone 0804 (Census Tract 119)

San Jacinto Heights/Summers/Country Club District

Zone Profile:

North: S.W. 6th Ave.
South: Plains Blvd/ S.W. 10th Ave.
East: Georgia St.
West: N. Western St.
Area: 0.60 sq. miles
Pop: 3,343
Pop. Density: 6,391/mi^2
Pop. Rating: Urban
Roadways: 15.9 miles



Zone Description:

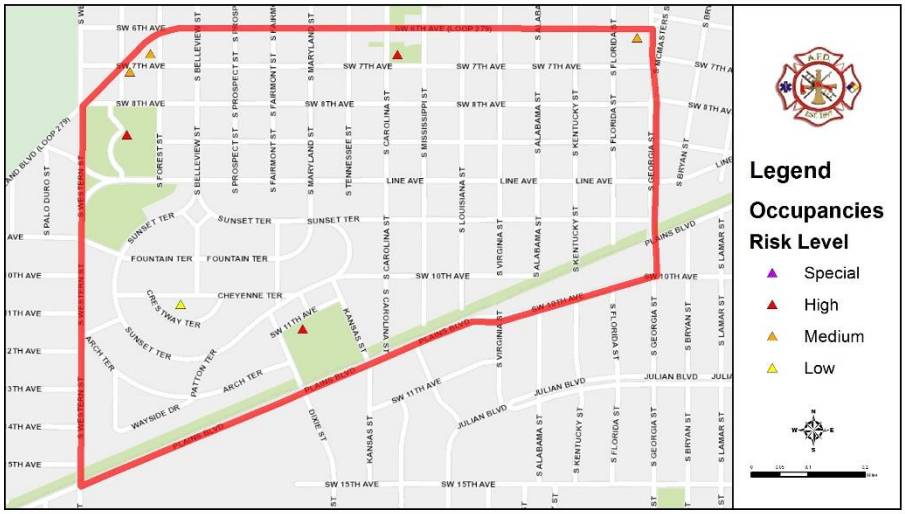
This is a residential area with a majority of it comprised of single family residences. These homes are primarily of wood frame construction and built up to 5,540 square feet. Houston Middle School (grades 6-8), which is in AISD, is located on Independence Street. The school is partially protected by an automatic protection system. Wills Elementary (grades PreK-5), which is in AISD, is located on SW 11th Avenue. The school does not have an automatic protection system.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	21	278	0	14	31
2015	27	219	0	8	43
2016	22	225	0	11	56
Total	70	722	0	33	130

Occupancy Risk Levels

Risk	Number
Low Risk	1
Moderate Risk	3
High Risk	3
Special Risk	0

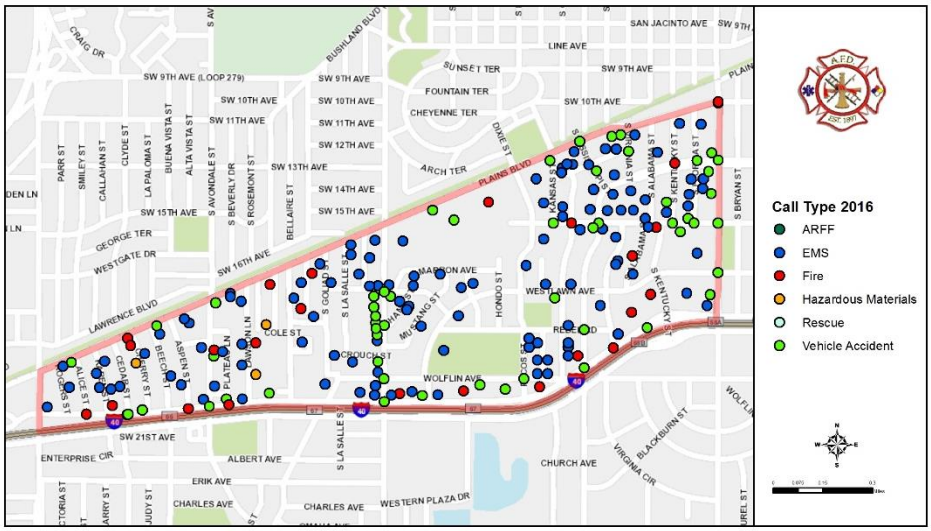


Geographical Planning Zone 0805 (Census Tract 116)

West Lawn/Avondale/19 Smaller Subdivisions

Zone Profile:

North: Plains Blvd/ S.W. 10th Ave.
South: I-40
East: Georgia St.
West: Bell St.
Area: 1.04 sq. miles
Pop: 4,565
Pop. Density: 4,125/mi^2
Pop. Rating: Urban
Roadways: 19.9 miles



Zone Description:

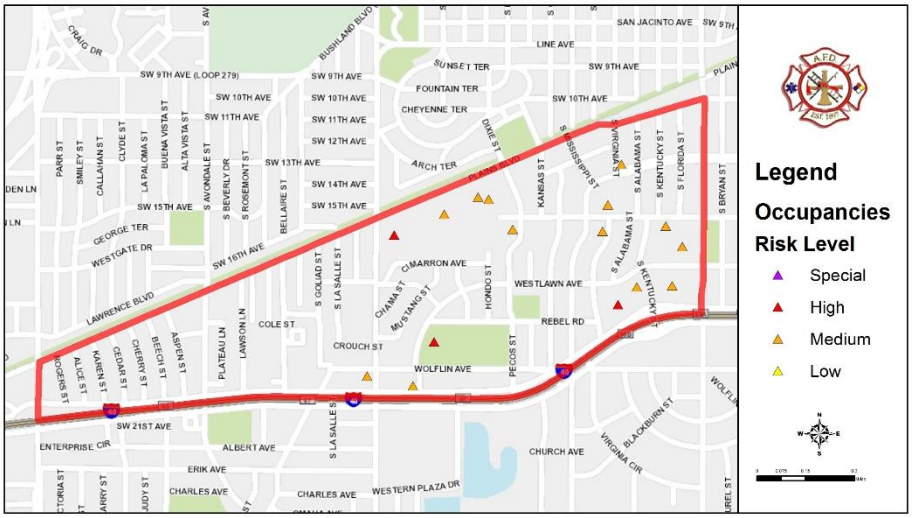
This is a residential area with a majority of it comprised of single family residences. These homes are primarily of wood frame construction and built up to 5,824 square feet. Tascosa High School (grades 9-12), which is in the Amarillo Independent School District, is located on Westlawn Avenue. The school does not have an automatic protection system.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	28	275	0	10	92
2015	30	256	4	8	106
2016	46	295	0	5	165
Total	104	826	4	23	363

Occupancy Risk Levels

Risk	Number
Low Risk	0
Moderate Risk	13
High Risk	3
Special Risk	0

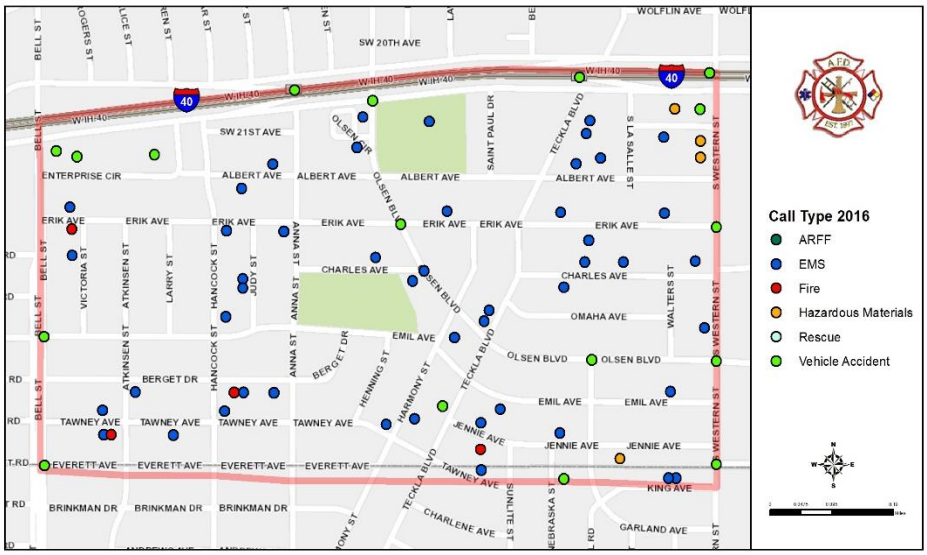


Geographical Planning Zone 0901 (Census Tract 102)

Olsen Park/4 Smaller Subdivisions

Zone Profile:

North: I-40
South: Randall-Potter County Line
East: S. Western St.
West: Bell St.
Area: 0.60 sq. miles
Pop: 1,888
Pop. Density: 3,242/mi^2
Pop. Rating: Urban
Roadways: 15.4



Zone Description:

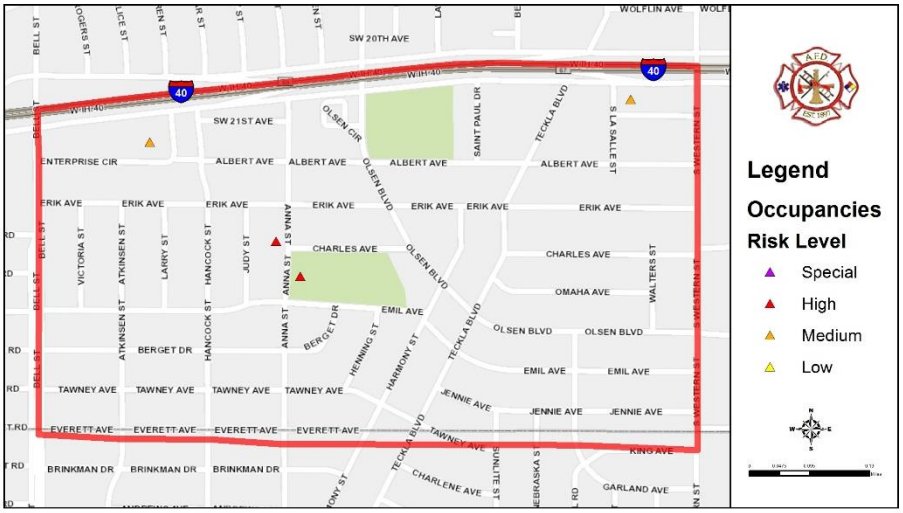
This is a residential area with a majority of it comprised of single family residences. These homes are primarily of wood frame construction and built up to 6,828 square feet. Olsen Park Elementary School (grades PreK-5), which is in the Amarillo Independent School District, is located on Anna Street. The school does not have an automatic protection system.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	14	98	0	6	26
2015	12	79	0	3	38
2016	8	77	0	5	39
Total	34	254	0	14	103

Occupancy Risk Levels

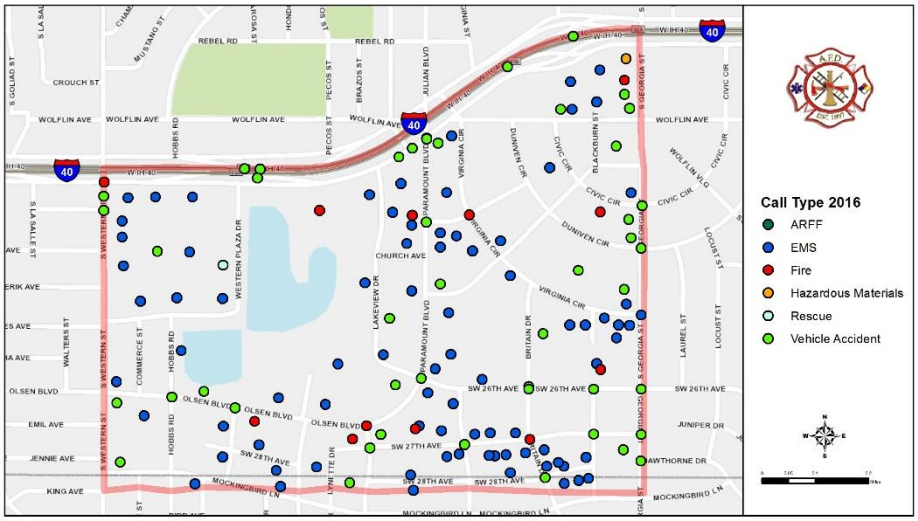
Risk	Number
Low Risk	0
Moderate Risk	2
High Risk	2
Special Risk	0



Geographical Planning Zone 0902 (Census Tract 103)
Lawrence Park/2 Smaller Subdivisions

Zone Profile:

North: I-40
South: Randall-Potter County Line
East: S. Georgia St.
West: S. Western St.
Area: 0.70 sq. miles
Pop: 1,307
Pop. Density: 1,986/mi^2
Pop. Rating: Rural
Roadways: 13.0 miles



Zone Description:

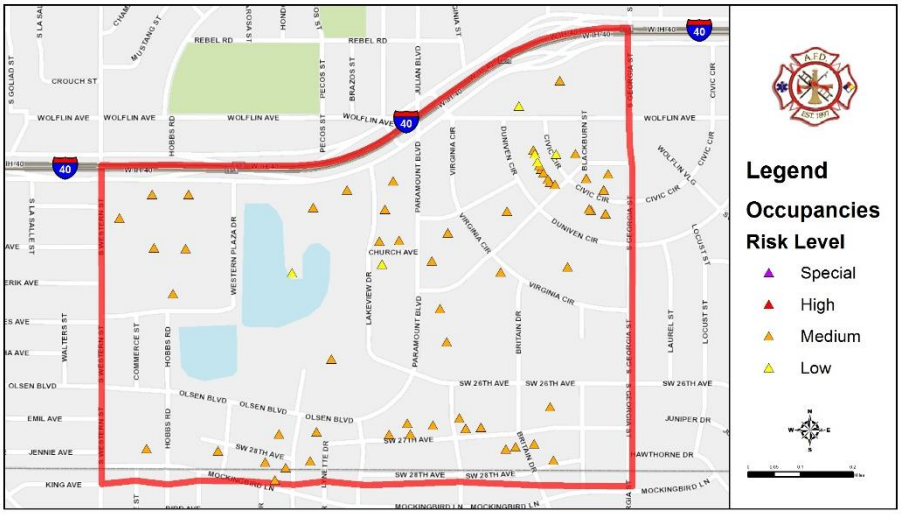
The GPZ is primarily designated as a light commercial zone. There are general retail zones in the north east and southwest corners of the GPZ. The largest commercial building is 143,000 square feet. There is a small residential area on the southern boundary with a majority of it comprised of single family residences. These homes are primarily of wood frame construction and built up to 2,574 square feet.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	31	261	0	5	75
2015	47	250	2	3	98
2016	55	341	2	3	144
Total	133	852	4	11	287

Occupancy Risk Levels

Risk	Number
Low Risk	6
Moderate Risk	51
High Risk	0
Special Risk	0

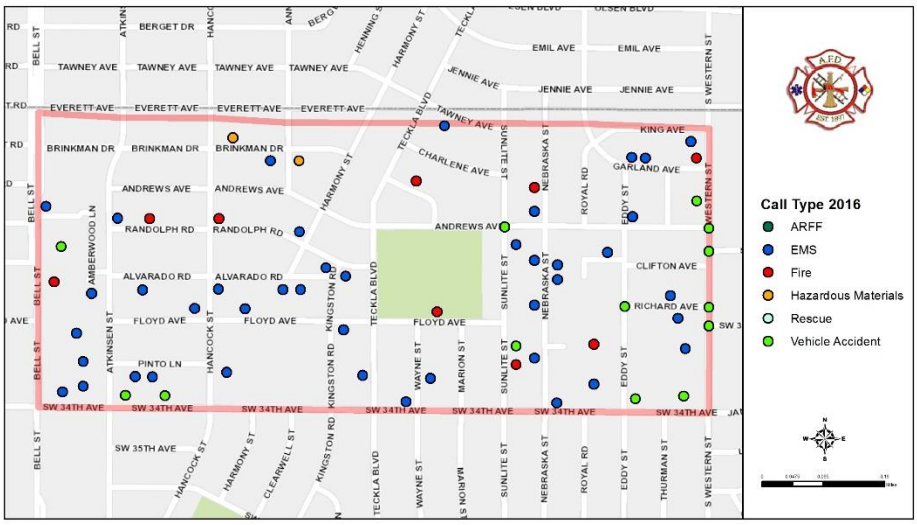


Geographical Planning Zone 0903 (Census Tract 202)

Olsen Park/2 Smaller Subdivisions

Zone Profile:

North: Randall-Potter County Line
South: S.W. 34th Ave.
East: S. Western Ave.
West: Bell St.
Area: 0.46 sq. miles
Pop: 2,194
Pop. Density: 4,526/mi^2
Pop. Rating: Urban
Roadways: 8.6 miles



Zone Description:

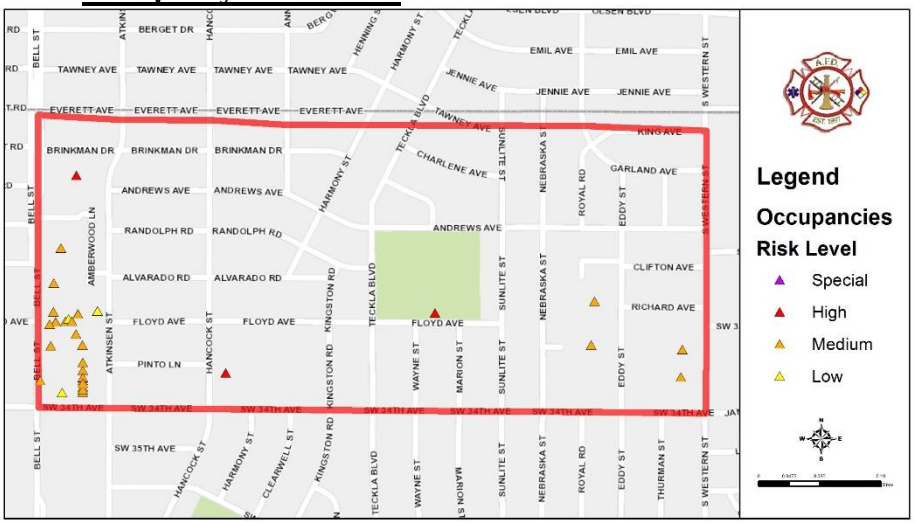
This is a residential area with a majority of it comprised of single family residences. These homes are primarily of wood frame construction and built up to 4,719 square feet. Crockett Middle School (grades 6-8), which is in the Amarillo Independent School District, is located on Floyd Avenue. The school does not have an automatic protection system.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	11	132	7	6	10
2015	14	90	2	4	18
2016	17	95	1	3	31
Total	42	317	10	13	59

Occupancy Risk Levels

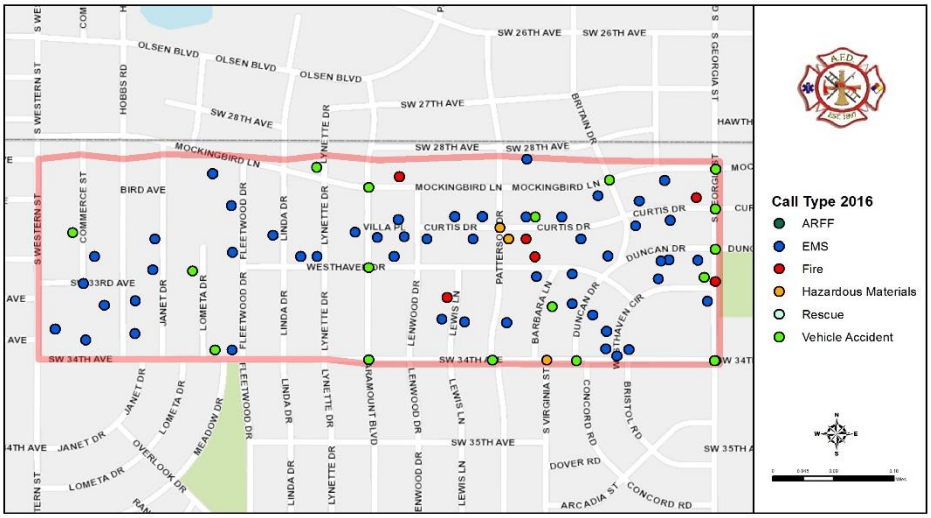
Risk	Number
Low Risk	3
Moderate Risk	24
High Risk	3
Special Risk	0



Geographical Planning Zone 0904 (Census Tract 203)
Westhaven Park/Lawrence Place/1 Smaller Subdivision

Zone Profile:

North: Randall-Potter County Line
South: S.W. 34th Ave.
East: S. Georgia St.
West: S. Western St.
Area: 0.31 sq. miles
Pop: 1,850
Pop. Density: 7,084/mi^2
Pop. Rating: Urban
Roadways: 6.7 miles



Zone Description:

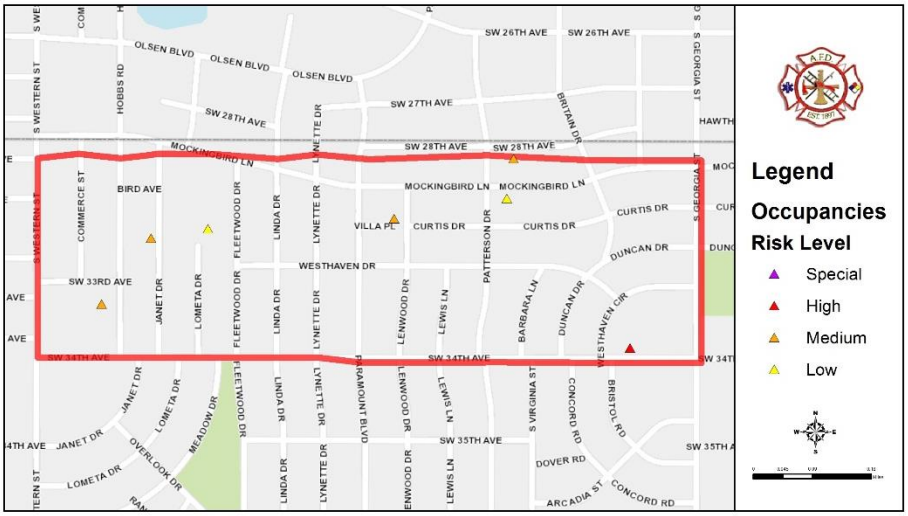
This is a residential area with a majority of it comprised of single family residences. These homes are primarily of wood frame construction and built up to 3,690 square feet. There are light commercial and general retail zones on the west and east boundaries, respectively. The largest commercial property in the GPZ is 23,500 square feet.

Geographic Planning Zone Demand History

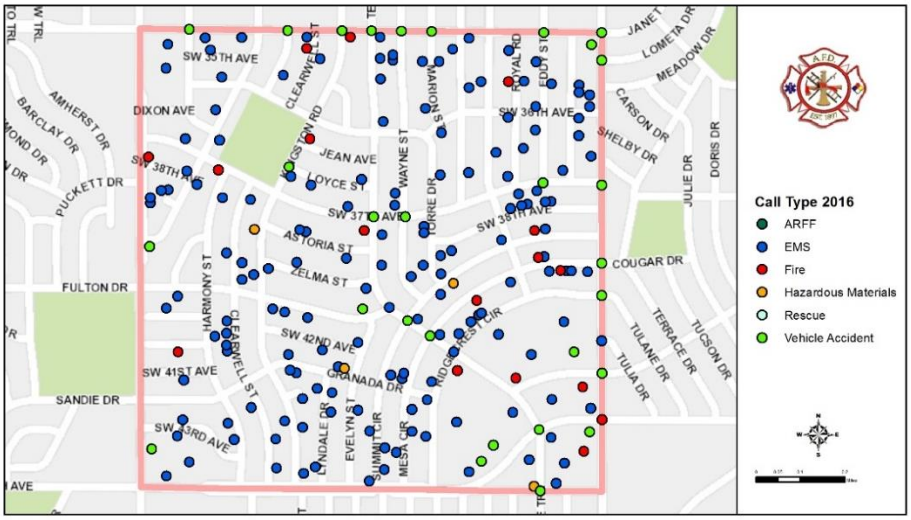
Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	5	72	0	5	37
2015	5	83	1	5	27
2016	10	101	0	10	52
Total	20	256	1	20	116

Occupancy Risk Levels

Risk	Number
Low Risk	2
Moderate Risk	4
High Risk	1
Special Risk	0



Geographical Planning Zone 0905 (Census Tract 212)
Ridgecrest



Zone Profile:

North: S.W. 34th Ave.
South: S.W. 45th Ave/ Prairie Ave
East: S. Western St.
West: Bell St.
Area: 1.06 sq. miles
Pop: 5,463
Pop. Density: 4,871/mi^2
Pop. Rating: Urban
Roadways: 20.9 miles

Zone Description:

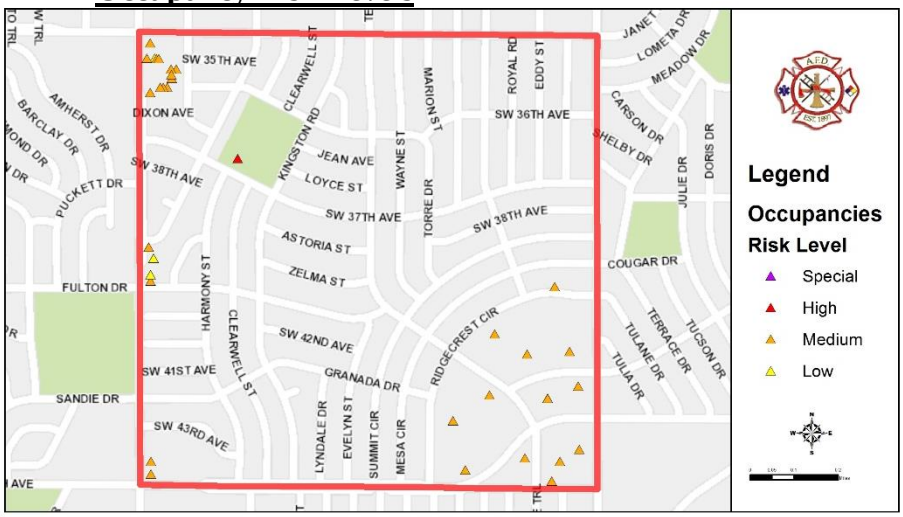
This is a residential area with a majority of it comprised of single family residences. These homes are primarily of wood frame construction and built up to 4,062 square feet. Ridgecrest Elementary School (grades PreK-5), which is in the Amarillo Independent School District, is located on SW 37th Avenue. The school does not have an automatic protection system. The southeastern corner of the GPZ is a general retail zone. The largest commercial building in this zone is 63,400 square feet.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	22	311	2	7	66
2015	28	324	5	12	80
2016	36	367	0	4	95
Total	86	1002	7	23	241

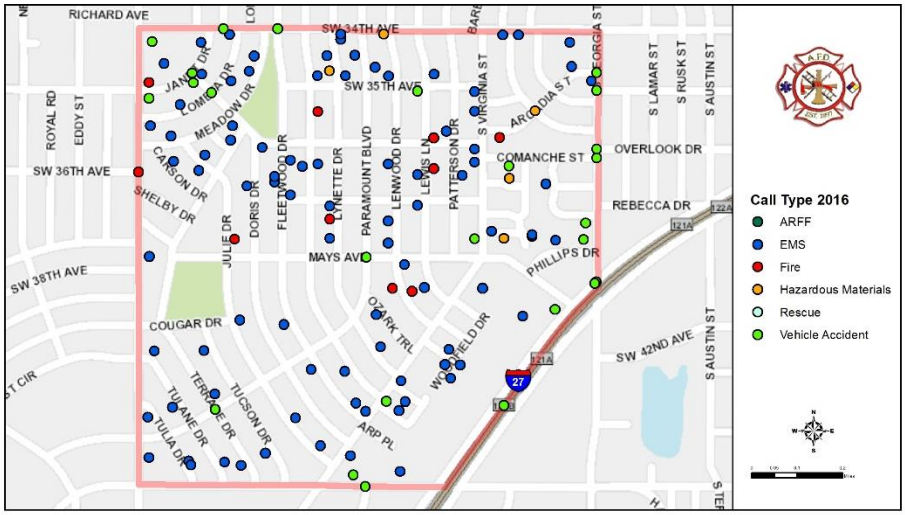
Occupancy Risk Levels

Risk	Number
Low Risk	3
Moderate Risk	29
High Risk	1
Special Risk	0



Geographical Planning Zone 0906 (Census Tract 211.01)

Paramount Terrace/Mays Heights/Sunset Haven/3 Smaller Subdivisions



Zone Profile:

North: S.W. 34th Ave.
South: S.W. 45th Ave.
East: S. Georgia St./I-27
West: S. Western St.
Area: 0.93 sq. miles
Pop: 4,053
Pop. Density: 4,233/mi^2
Pop. Rating: Urban
Roadways: 19.5

Zone Description:

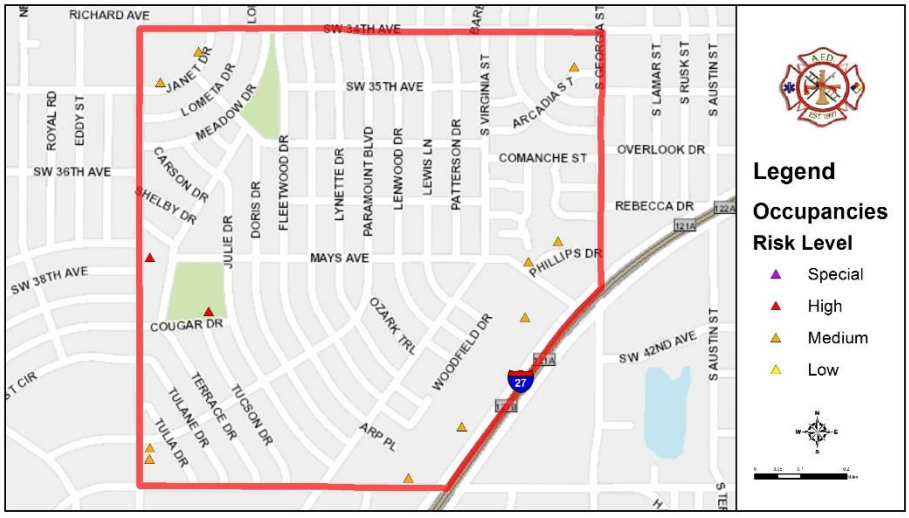
This is a residential area with a majority of it comprised of single family residences. These homes are primarily of wood frame construction and built up to 5,541 square feet. Paramount Terrace Elementary School (grades PreK-5), which is in the Amarillo Independent School District, is located on Cougar Drive. The school does not have an automatic protection system. The I-27 corridor is designated as a heavy commercial zone. The largest commercial property is 87,700 square feet.

Geographic Planning Zone Demand History

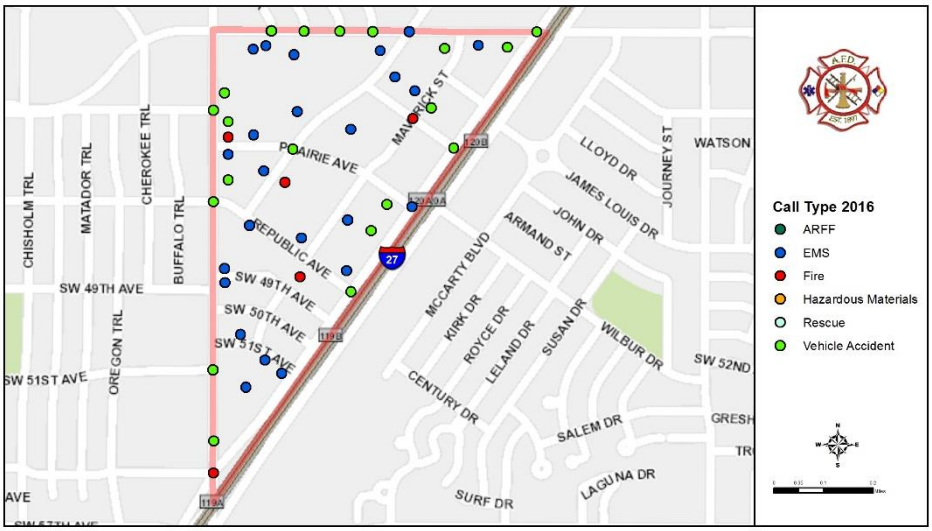
Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	23	204	0	4	31
2015	26	228	1	4	42
2016	17	175	0	6	36
Total	66	607	1	14	109

Occupancy Risk Levels

Risk	Number
Low Risk	0
Moderate Risk	10
High Risk	2
Special Risk	0



Geographical Planning Zone 0907 (Census Tract 211.02)
Western-Air/Western Express



Zone Profile:

North: S.W. 45th Ave.
South: I-27
East: I-27
West: S. Western St.
Area: 0.32 sq. miles
Pop: 1,985
Pop. Density: 9,140/mi^2
Pop. Rating: Urban
Roadways: 5.9

Zone Description:

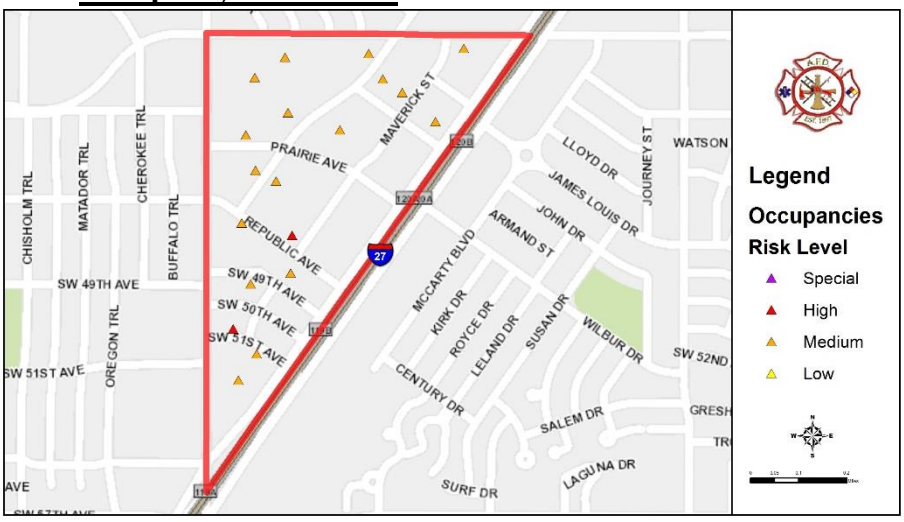
The north central section of this GPZ is a residential area with a majority of it comprised of multiple-family residences. Because of the number of apartment complexes located in this small area, the GPZ has the highest population density in the city despite a relatively small population. The remaining section of the GPZ is a heavy commercial zone. The largest commercial property is 146,600 square feet.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	20	373	1	0	31
2015	16	348	1	1	50
2016	19	393	3	1	80
Total	55	1114	5	2	161

Occupancy Risk Levels

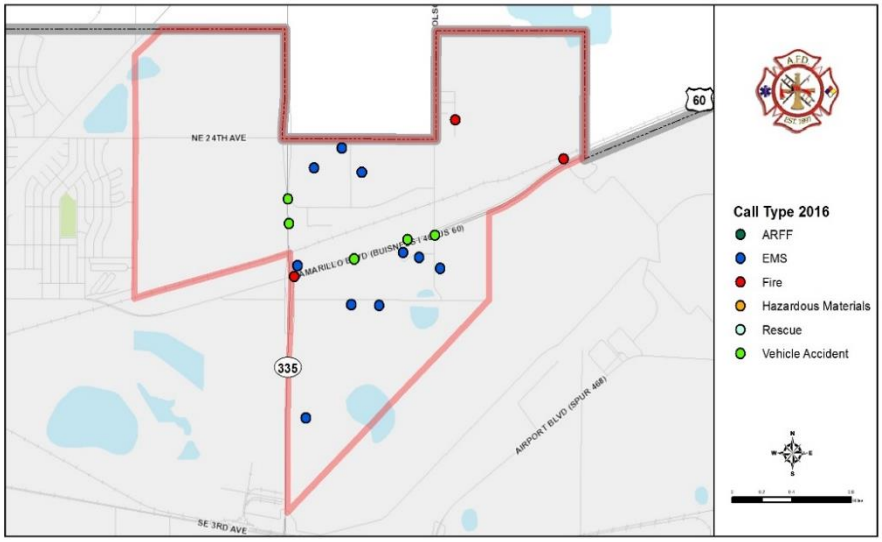
Risk	Number
Low Risk	0
Moderate Risk	17
High Risk	2
Special Risk	0



Geographical Planning Zone 1001 (Census Tract 144.01A)

Zone Profile:

North: City Limits/
N.E. 24th Ave.
South: Airport Perimeter/
BNSF Railway/
E. Amarillo Blvd.
East: N. Loop 335/
Folsom Rd. /City Limits
West: Fritch Hwy.
Area: 4.60 sq. miles
Pop: 304
Pop. Density: 66/mi^2
Pop. Rating: Rural
Roadways: 13.1



Zone Description:

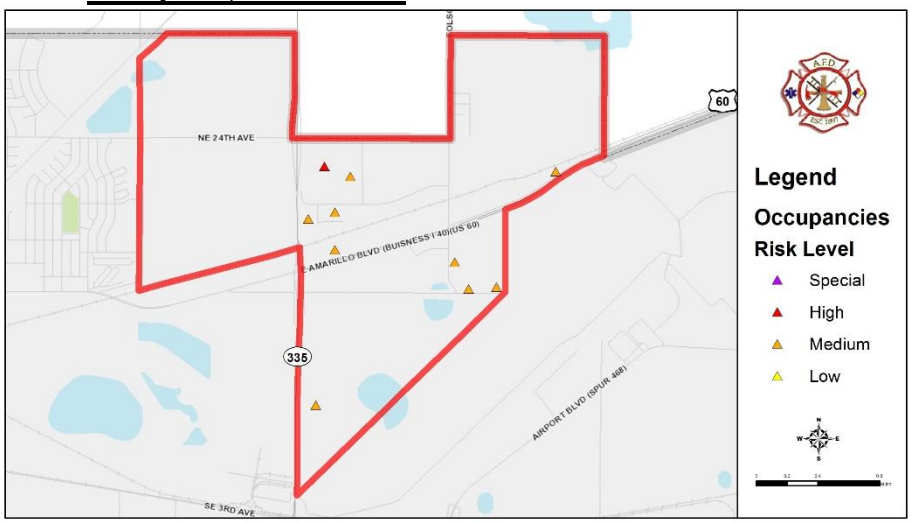
The northwest and northeast sections of the GPZ are agricultural. The section between and north of Highway-60 them is a planned development area. The southern section borders the Amarillo International Airport and is designated as an industrial zone. The largest commercial structure in the GPZ is 299,300 square feet.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	4	24	0	0	7
2015	7	15	0	1	8
2016	4	19	0	0	6
Total	15	58	0	1	21

Occupancy Risk Levels

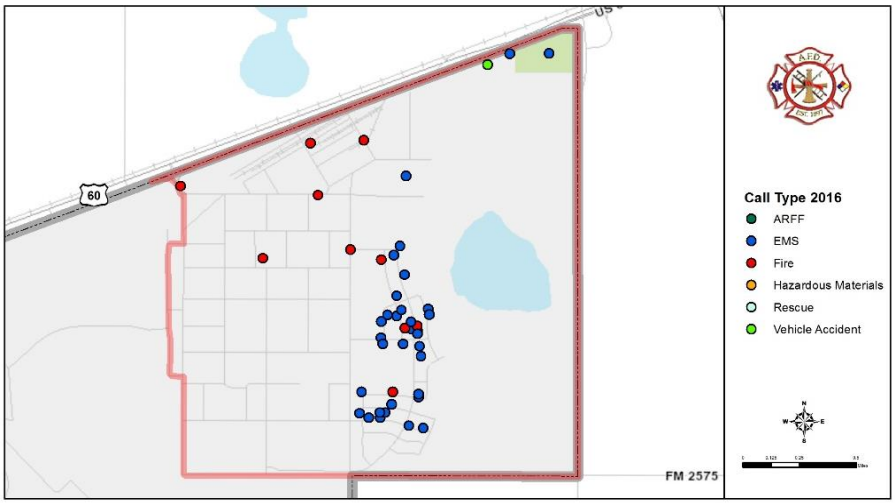
Risk	Number
Low Risk	0
Moderate Risk	9
High Risk	1
Special Risk	0



Geographical Planning Zone 1002 (Census Tract 144.01B)
Highland Park Village

Zone Profile:

North: E. Amarillo Blvd.
South: N.E. 8th Ave.
East: N. F.M. 1912
West: A Ave/B Ave.
Area: 2.99 sq. miles
Pop: 1,208
Pop. Density: 404/mi^2
Pop. Rating: Rural
Roadways: 13.1



Zone Description:

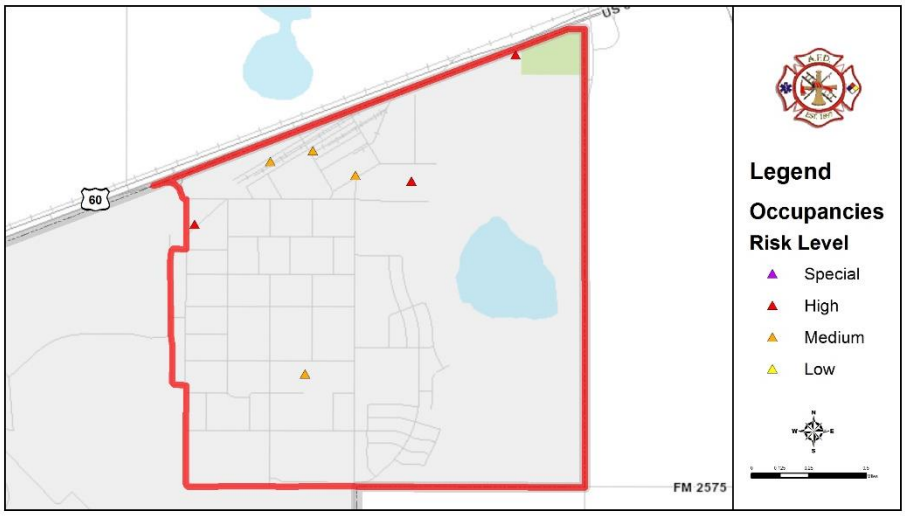
The center section of the GPZ is a residential area with a majority of it comprised of single family residences. These homes are primarily of wood frame construction and built up to 2,422 square feet. Highland Park ISD (grades PreK-12) is located on Amarillo Boulevard East. The school is partially protected by an automatic protection system. The remaining part of the GPZ is designated as a light industrial zone. Amarillo College East Campus is located in this area, along with Potter County Jail. The largest commercial property in the GPZ is 178,400 square feet.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	12	57	0	1	2
2015	5	44	0	2	4
2016	14	73	0	0	2
Total	31	174	0	3	8

Occupancy Risk Levels

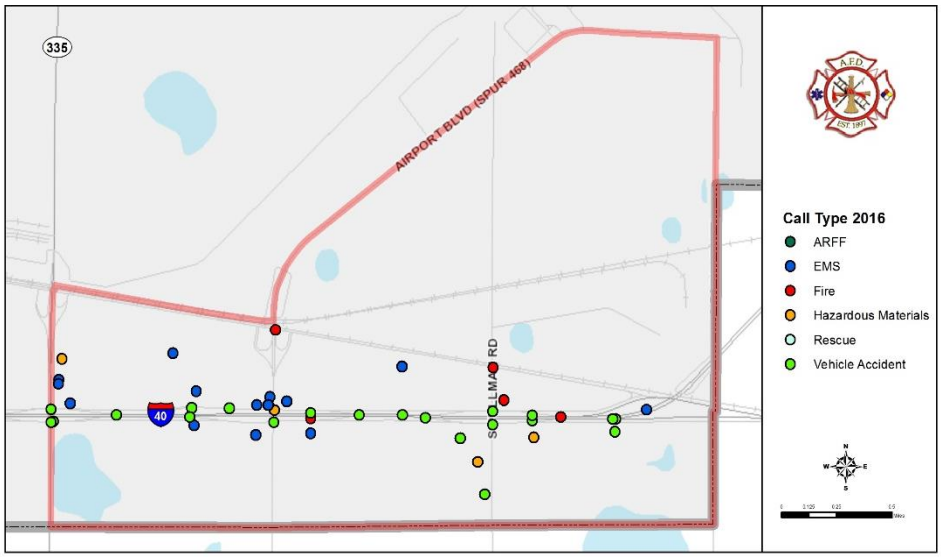
Risk	Number
Low Risk	0
Moderate Risk	4
High Risk	3
Special Risk	0



Geographical Planning Zone 1003 (Census Tract 144.01C)
Lakeside Park/8 Smaller Subdivisions

Zone Profile:

North: S.E. 3rd Ave/ Airport Blvd.
South: 46th Ave/ E. County Rd. 34
East: Parsley Rd.
West: S. Whitaker Rd.
Area: 5.75 sq. miles
Pop: 586
Pop. Density: 102/mi^2
Pop. Rating: Rural
Roadways: 29.0 miles



Zone Description:
The GPZ has a heavy commercial zone that is bisected by Interstate-40. The largest commercial property in the GPZ is 157,400 square feet. The remaining sections of the GPZ are agricultural.

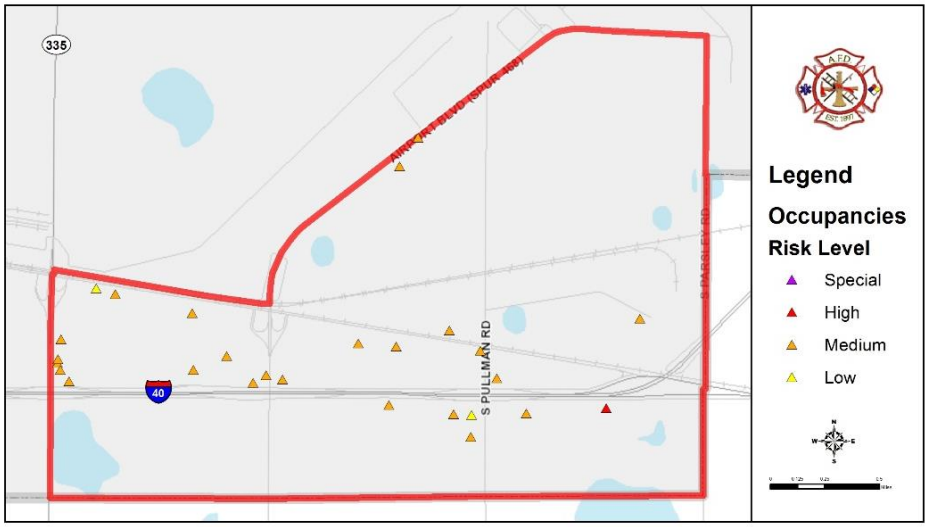
Geographic Planning Zone Demand History*

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	30	113	0	11	54
2015	15	125	0	6	77
2016	23	107	0	9	85
Total	68	345	0	26	216

** Census tract split between Station Districts – all incidents reported.*

Occupancy Risk Levels

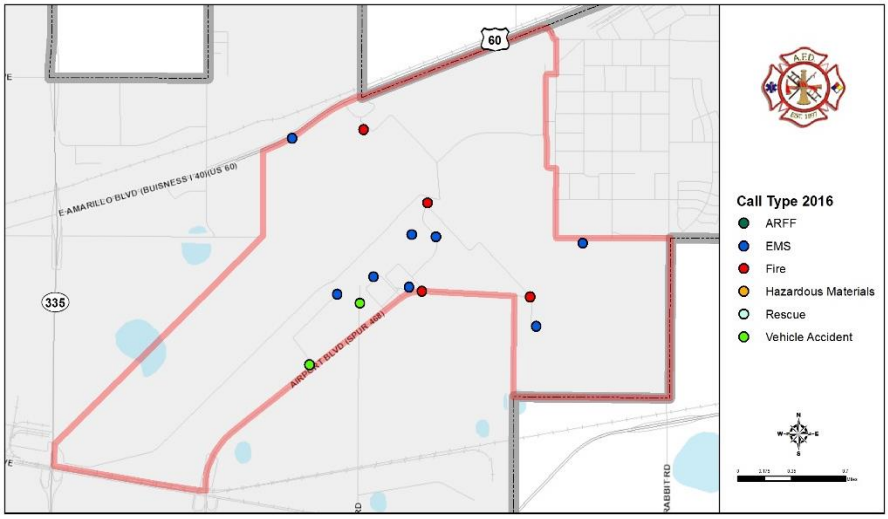
Risk	Number
Low Risk	2
Moderate Risk	24
High Risk	1
Special Risk	0



Geographical Planning Zone 1004 (Census Tract 9800)
Rick Husband Amarillo International Airport

Zone Profile:

North: E. Amarillo Blvd/ N.E. 8th Ave.
South: S.E. 3rd Ave.
East: Parsley Rd/A Ave/ B Ave/Spur 228
West: N. Loop 335/ Airport Perimeter
Area: 4.84 sq. miles
Pop: 0
Pop. Density: 0/mi^2
Pop. Rating: Rural
Roadways: 12.8



Zone Description:

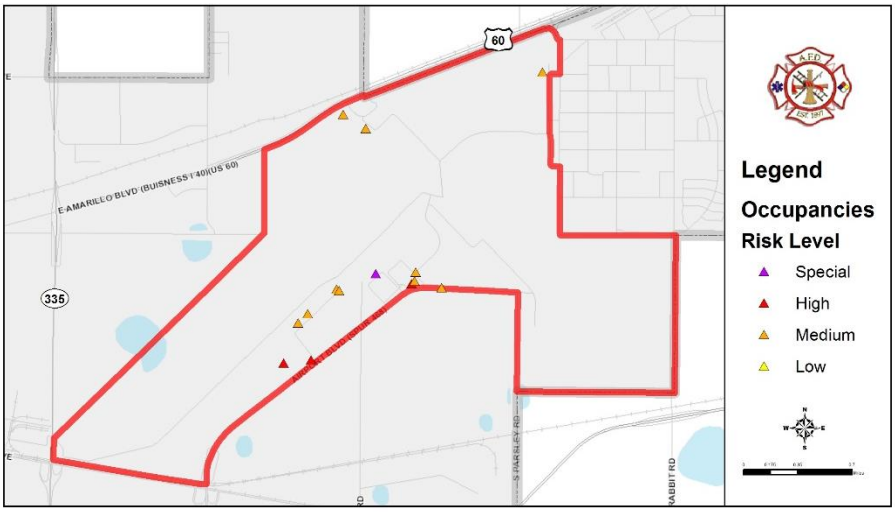
The Rick Husband Amarillo International Airport has its own census tract. Within the GPZ there is a light industrial area that includes the Bell Helicopter aircraft assembly plant. The facility has advanced protection systems in place.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	ARFF	Vehicles
2014	8	39	0	0	25	0
2015	13	37	1	2	32	2
2016	10	55	0	1	22	3
Total	31	131	1	3	79	5

Occupancy Risk Levels

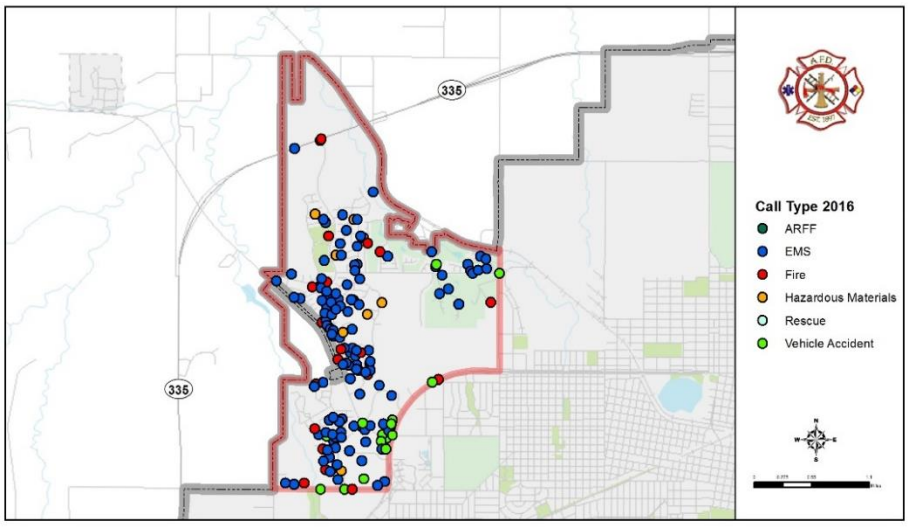
Risk	Number
Low Risk	3
Moderate Risk	8
High Risk	3
Special Risk	0



Geographical Planning Zone 1101 (Census Tract 133)
La Paloma/Tascosa Estates/The Woodlands of Amarillo/Westcliff Park/Quail Creek

Zone Profile:

North: City Limits
South: S.W. 9th Ave. /W. Amarillo Blvd.
East: N. Western St.
West: City Limits/ Boys Ranch Rd.
Area: 4.91 sq. miles
Pop: 3,415
Pop. Density: 573/mi^2
Pop. Rating: Rural
Roadways: 37.6 miles



Zone Description:

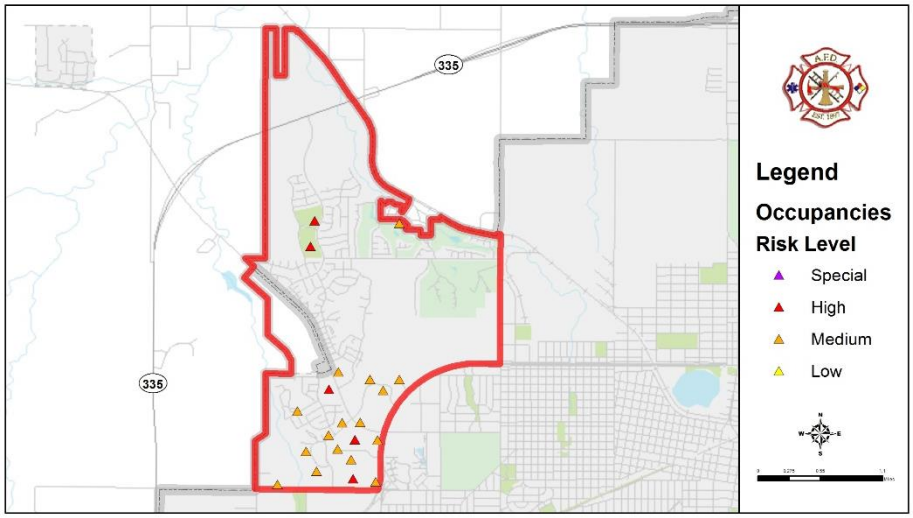
This is a residential area with a majority of it comprised of single family residences. These homes are primarily of wood frame construction and built up to 10,561 square feet. Two AISD schools are located at N. Coulter Street. De Zavala Middle School (grades 6-8) and Woodlands Elementary (grades PreK-5) both have automatic protection systems. Amarillo Colleges East Campus is also in this GPZ. The southern section of the zone contains a large number of medical facilities and offices.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	45	505	1	16	25
2015	38	496	0	12	30
2016	43	588	0	10	39
Total	126	1589	1	38	94

Occupancy Risk Levels

Risk	Number
Low Risk	0
Moderate Risk	15
High Risk	5
Special Risk	0

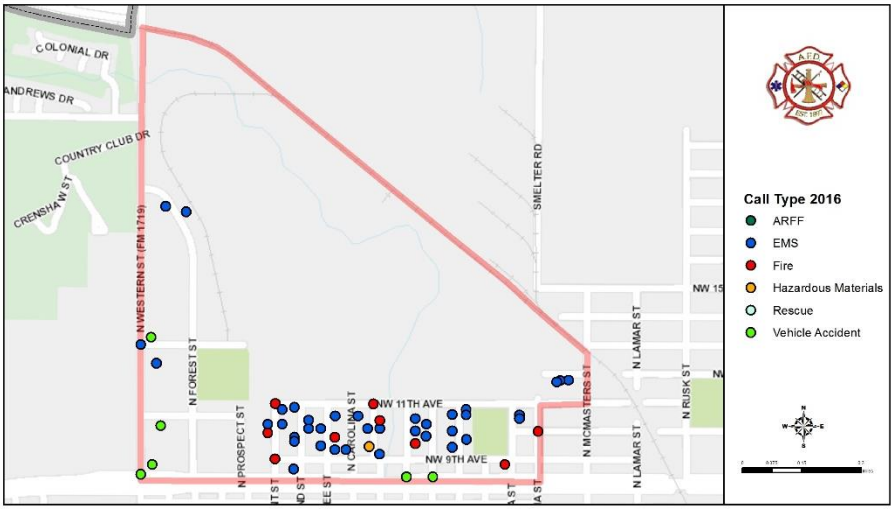


Geographical Planning Zone 1102 (Census Tract 153A)

Park City/West Amarillo Industrial Park/2 Smaller Subdivisions

Zone Profile:

North: BNSF Railway/ N.W. 11th Ave.
South: W. Amarillo Blvd.
East: Georgia St/ N. McMasters St.
West: N. Western St.
Area: 0.86 sq. miles
Pop: 404
Pop. Density: 470/mi^2
Pop. Rating: Rural
Roadways: 7.4 miles



Zone Description:

The southern section of this GPZ is a residential area with a majority of it comprised of single family residences. These homes are primarily of wood frame construction and built up to 4,162 square feet. Amarillo Area Center for Advanced Learning High School (grades 9-12), which is in AISD, is located on North. Forest Street. The school does have an automatic protection system. The northern section of the GPZ is agricultural.

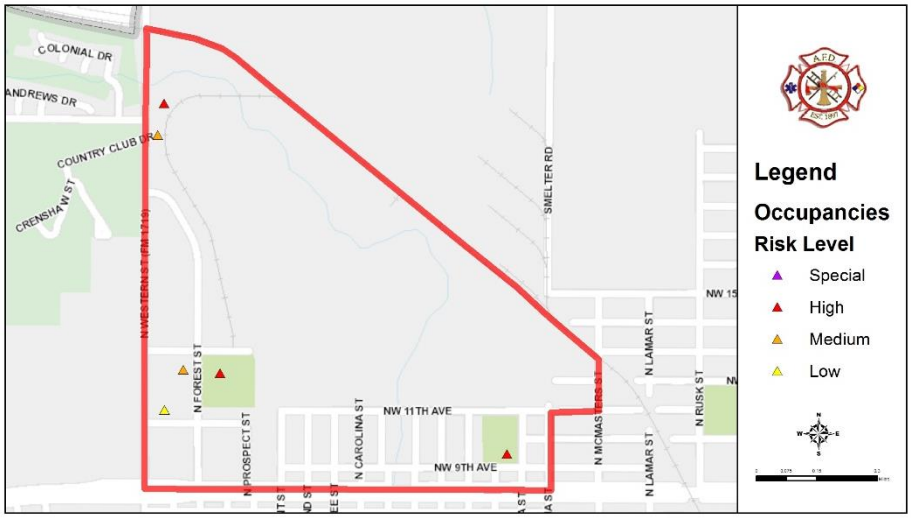
Geographic Planning Zone Demand History*

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	52	432	0	20	45
2015	55	401	2	14	50
2016	60	548	0	20	64
Total	167	1291	2	54	159

** Census tract split between Station Districts – all incidents reported.*

Occupancy Risk Levels

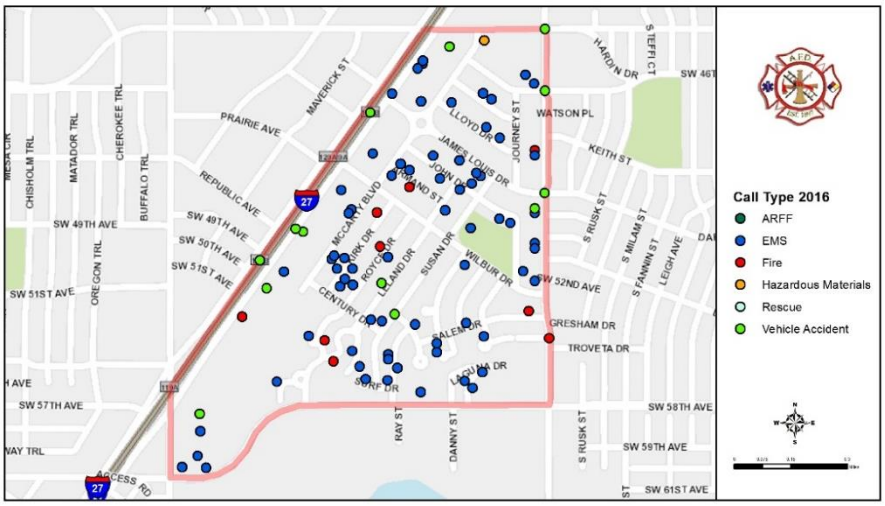
Risk	Number
Low Risk	1
Moderate Risk	2
High Risk	3
Special Risk	0



Geographical Planning Zone 1201 (Census Tract 210)
McCarty/South Georgia/The Shores

Zone Profile:

North: S.W. 45th Ave.
South: S.W. 58th Ave.
East: S. Georgia St.
West: S. Western St/I-27
Area: 0.72 sq. miles
Pop: 2,296
Pop. Density: 3,121/mi^2
Pop. Rating: Urban
Roadways: 14.3 miles



Zone Description:

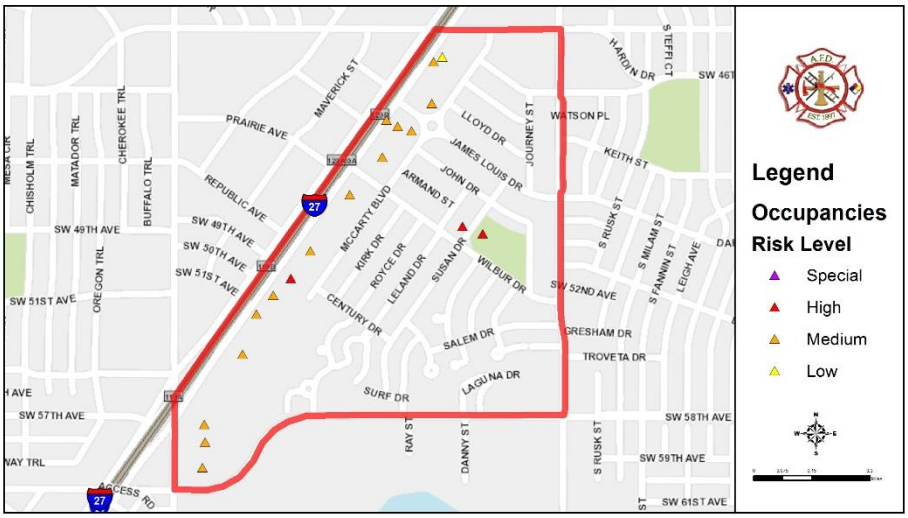
The majority of the GPZ is a residential area w comprised of single family residences. These homes are primarily of wood frame construction and built up to 4,420 square feet. South Georgia Elementary (grades PreK-5), which is in AISD, is located on Susan Drive. The school does not have an automatic protection system. The southwest corner and the border along Interstate-27 are designated as light commercial zones. The largest commercial property is 56,600 square feet.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	10	148	0	4	20
2015	15	147	0	4	18
2016	14	130	0	1	20
Total	39	425	0	9	58

Occupancy Risk Levels

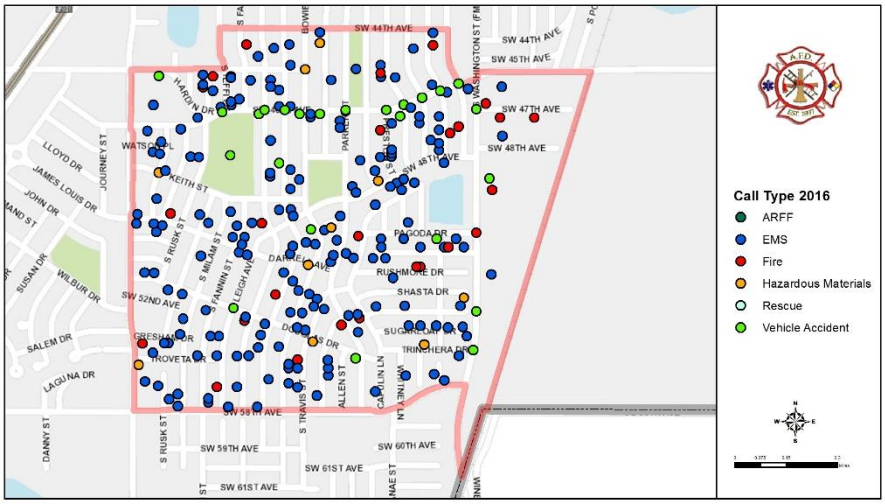
Risk	Number
Low Risk	1
Moderate Risk	14
High Risk	3
Special Risk	0



Geographical Planning Zone 1202 (Census Tract 208)
South Lawn/Willow Grove/2 Smaller Subdivisions

Zone Profile:

North: S.W. 46th Ave/ S.W. 45th Ave/S.W. 44th
South: S.W. 58th Ave
East: Austin St./Hughes/ BNSF Railway
West: S. Georgia St.
Area: 1.25 sq. miles
Pop: 7,026
Pop Density: 6,591/mi^2
Pop. Rating: Urban
Roadways: 23.3 miles



Zone Description:

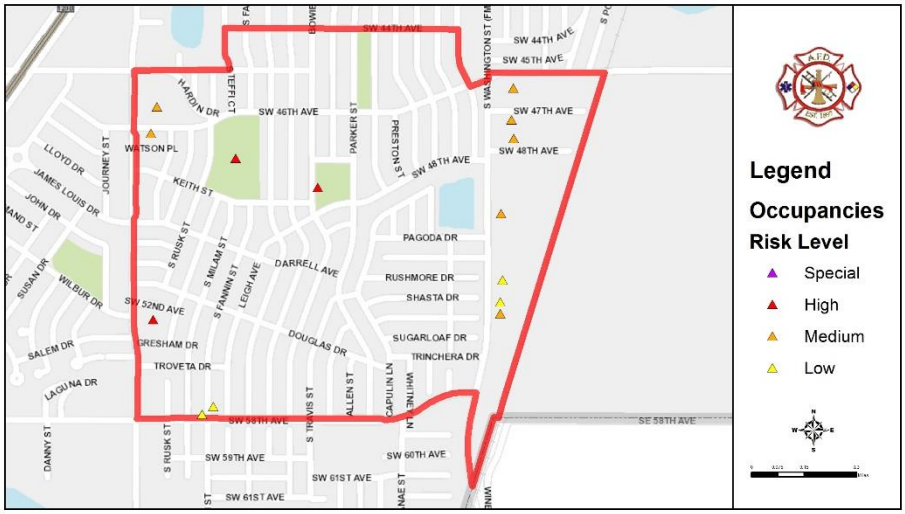
This is a residential area with a majority of it comprised of single family residences. These homes are primarily of wood frame construction and built up to 2,512 square feet. Fannin Middle School (grades 6-8), which is in AISD, is located on Rusk Street. The school does not have an automatic protection system. South Lawn Elementary School (grades PreK-5), which is in AISD, is located on South Bowie Street. The school does not have an automatic protection system.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	31	371	1	9	11
2015	54	322	1	11	39
2016	32	363	0	11	34
Total	117	1056	2	31	84

Occupancy Risk Levels

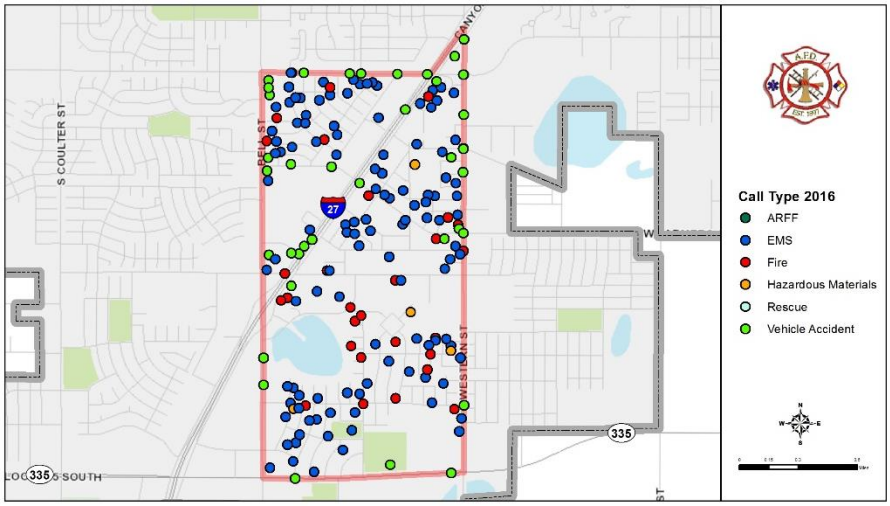
Risk	Number
Low Risk	4
Moderate Risk	7
High Risk	3
Special Risk	0



Geographical Planning Zone 1203 (Census Tract 215)
Glendale/ Southside Estates Hollywood/7 Smaller Subdivisions

Zone Profile:

North: Hillside Rd/I-27
South: S. Loop 335
East: S. Western St.
West: Bell St.
Area: 2.12 sq. miles
Pop: 4,611
Pop. Density: 2,480/mi^2
Pop. Rating: Rural
Roadways: 34.3



Zone Description:

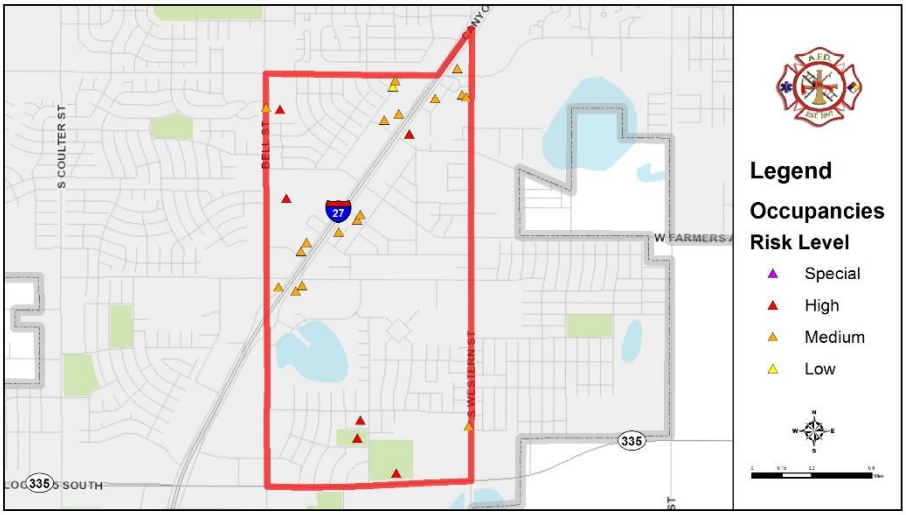
The majority of this GPZ is a residential area comprised of single family residences. These homes are primarily of wood frame construction and range between 1,700 and 5,000 square feet. Canyon ISD's Gene Howe Elementary, located at 5108 Pico, and it does not have an automatic protection system. There are heavy and light commercial zones along Interstate-27. The largest property in this GPZ is 301,600 square feet.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	17	160	0	14	44
2015	23	139	1	1	68
2016	35	164	0	7	79
Total	75	463	1	22	191

Occupancy Risk Levels

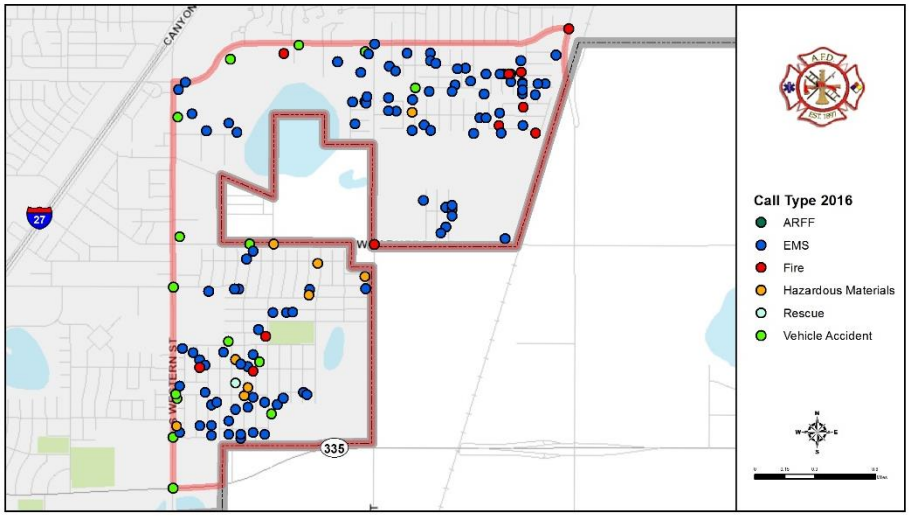
Risk	Number
Low Risk	1
Moderate Risk	17
High Risk	6
Special Risk	0



Geographical Planning Zone 1204 (Census Tract 220.01)
South Georgia Place/City View Estates/Southside Acres

Zone Profile:

North: S.W. 58th Ave.
South: S. Loop 335/ City Limits
East: City Limits/ S. Georgia St/ BNSF Railway/FM 1541
West: S. Western
Area: 2.52 sq. miles
Pop: 4,890
Pop. Density: 1,940/mi^2
Pop. Rating: Rural
Roadways: 31.2 miles



Zone Description:

The GPZ is largely designated as a residential area comprised of single family residences. These homes are primarily of wood frame construction and built up to 3,710 square feet. Canyon ISD's City View Elementary is located at 3400 Knoll Drive and does have an automatic protection system. There is a small light commercial section in the northwest corner of the GPZ, and two agricultural zones in the south and central areas of the northern section.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	14	133	0	20	15
2015	18	153	0	13	23
2016	13	163	1	10	34
Total	45	449	1	43	72

Occupancy Risk Levels

Risk	Number
Low Risk	16
Moderate Risk	8
High Risk	3
Special Risk	0

Geographical Planning Zone 1205 (Census Tract 217.03B)
The Pinnacle/Hollywood South

Zone Profile:

North: S. Loop 335
South: Sundown Ln.
East: City Limits
West: City Limits/Bell St.
Area: 1.01 sq. miles
Pop: 237
Pop. Density: 236/mi^2
Pop. Rating: Rural
Roadways: 4.4 miles

Zone Description:

This GPZ is designated an agricultural zone. However, Canyon ISD does have two schools in this GPZ. Sundown Lane Elementary is located at 4715 Sundown Lane, and it does not have an automatic protection system. Randall High School, at 5800 Attebury Road, has an automatic protection system in the West Campus' auditorium only.

Geographic Planning Zone Demand History*

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	3	1	0	0	3
2015	2	5	0	0	3
2016	5	5	0	0	5
Total	10	11	0	0	11

** Census tract split between Station Districts – all incidents reported.*

Occupancy Risk Levels

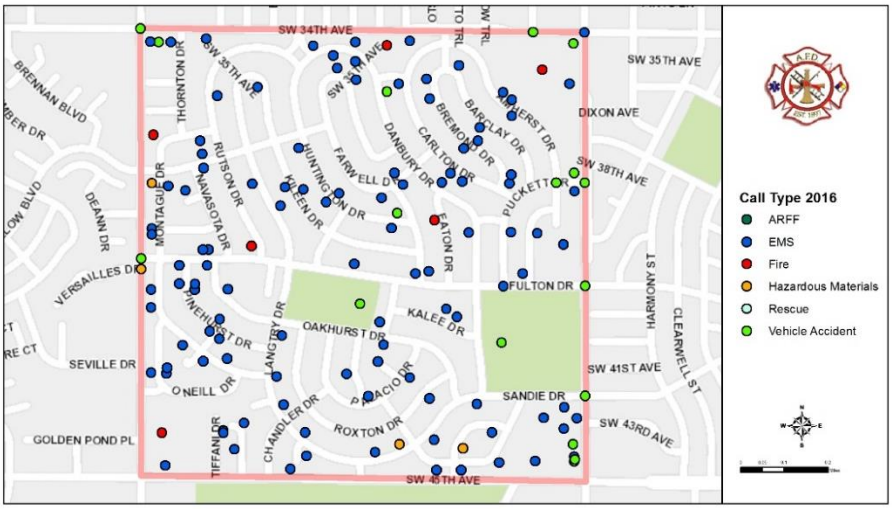
Risk	Number
Low Risk	0
Moderate Risk	2
High Risk	3
Special Risk	0

Geographical Planning Zone 1301 (Census Tract 216.02)

Puckett Place

Zone Profile:

North: S.W. 34th Ave.
South: S.W. 45th Ave.
East: Bell St.
West: S. Coulter St.
Area: 1.04 sq. miles
Pop: 5,125
Pop. Density: 4,841/mi^2
Pop. Rating: Urban
Roadways: 18.9 miles



Zone Description:

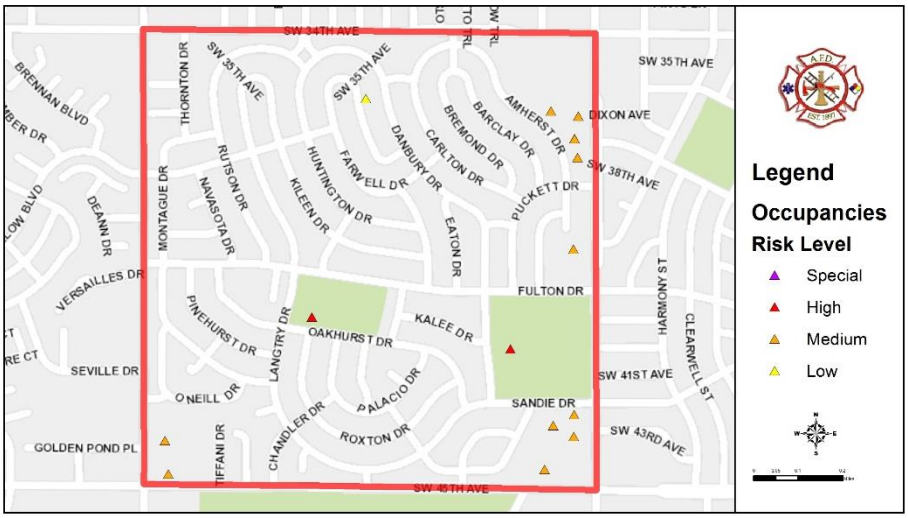
The GPZ is primarily a residential area comprised of single family residences. These homes are of wood frame construction and built up to 9,353 square feet. Amarillo High (grades 9-12), in AISD, is located on Danbury Street. The school does have an automatic protection system. Puckett Elementary (grades PreK-5), also in AISD, is located on Oakhurst Drive. The school does not have an automatic protection system. The four corners of the GPZ are general retail zones. The largest commercial property is 211,400 square feet.

Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	22	196	2	6	58
2015	19	206	5	8	73
2016	22	203	0	6	65
Total	63	605	7	20	196

Occupancy Risk Levels

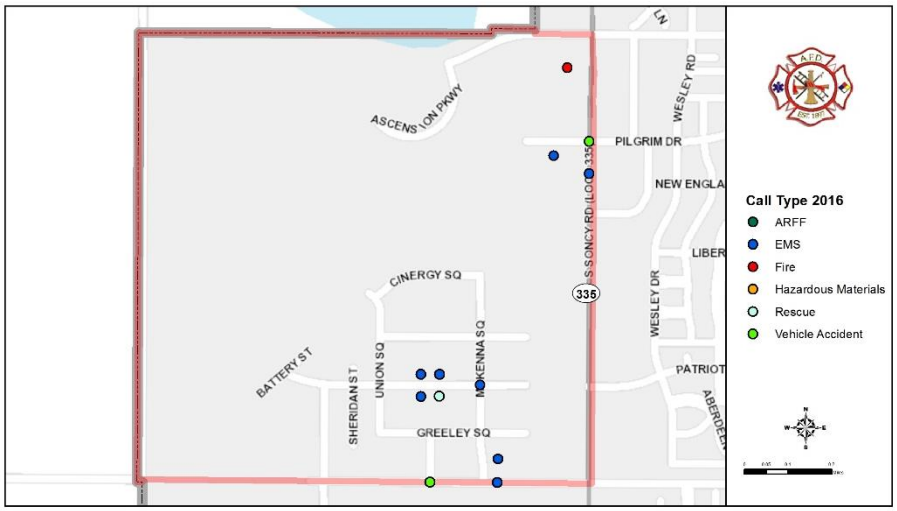
Risk	Number
Low Risk	1
Moderate Risk	11
High Risk	2
Special Risk	0



Geographical Planning Zone 1302 (Census Tract 216.08B)
Town Square/2 Smaller Subdivisions

Zone Profile:

North: Extension of S.W. 45th Ave.
South: Hillside Rd.
East: Soncy St.
West: Helium Rd.
Area: 1.08 sq. miles
Pop: 727
Pop. Density: 673/mi^2
Pop. Rating: Rural
Roadways: 6.4 miles



Zone Description:

The south central section of this GPZ is has a large multiple-family complex of four structures that are 154,000 sq. ft. each. It is surrounded by light commercial businesses. Ascension Academy (Grades K-12) is located in the north part of the GPZ. The remaining areas are agricultural.

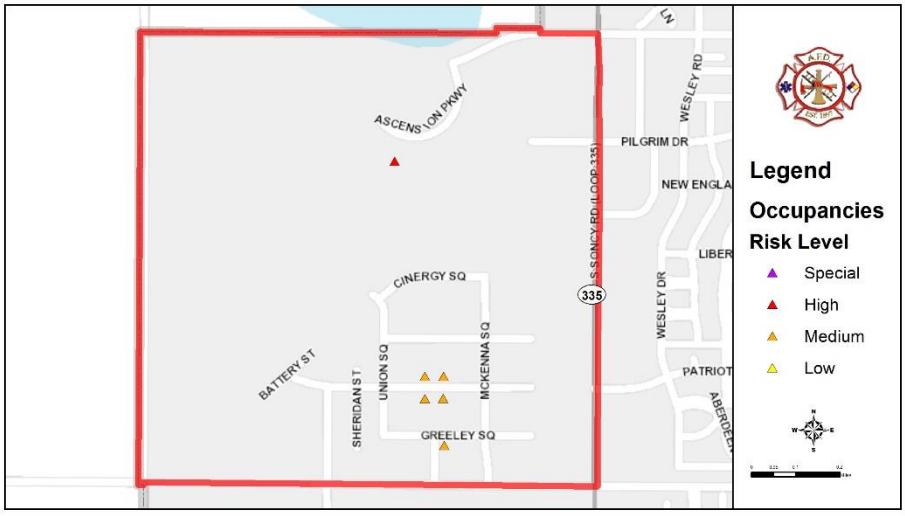
Geographic Planning Zone Demand History*

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	34	330	2	13	87
2015	32	354	4	11	122
2016	37	347	2	11	148
Total	103	1031	8	35	357

** Census tract split between Station Districts – all incidents reported.*

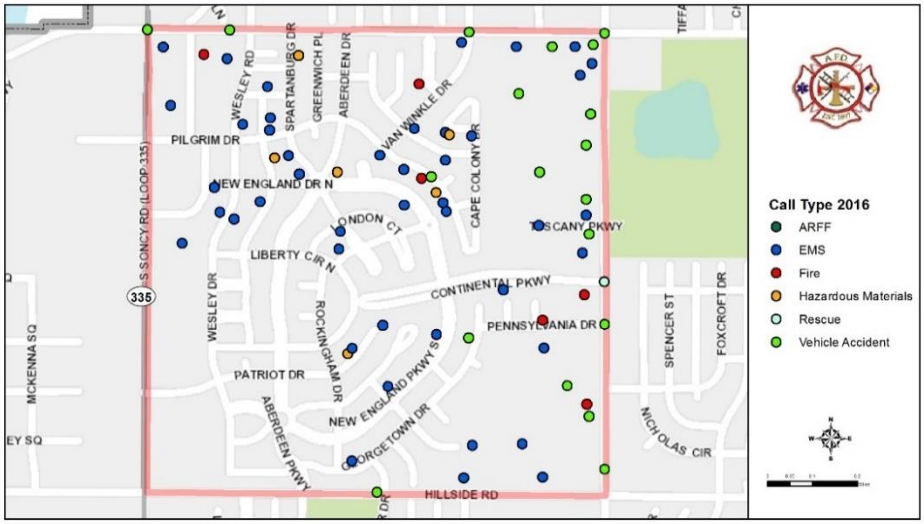
Occupancy Risk Levels

Risk	Number
Low Risk	0
Moderate Risk	5
High Risk	1
Special Risk	0



Geographical Planning Zone 1303 (Census Tract 216.09A)
The Colonies

Zone Profile:
North: S.W. 45th Ave.
South: Hillside Rd.
East: S. Coulter St.
West: Soncy St.
Area: 1.05 sq. miles
Pop: 2,054
Pop. Density: 2,165/mi^2
Pop. Rating: Rural
Roadways: 19.3 miles



Zone Description:
This is a residential area with a majority of it comprised of single family residences. These homes are primarily of wood frame construction that are up to 14,300 square feet. There are general retail zones along each of the bordering roadways. The largest commercial property is 202,500 square feet.

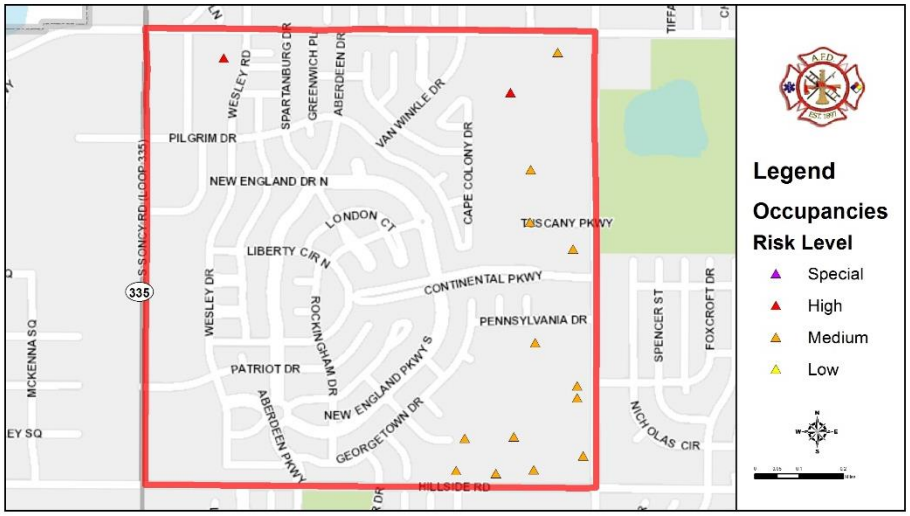
Geographic Planning Zone Demand History*

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	13	134	1	12	37
2015	17	120	1	11	71
2016	12	163	2	9	114
Total	42	417	4	32	222

** Census tract split between Station Districts – all incidents reported.*

Occupancy Risk Levels

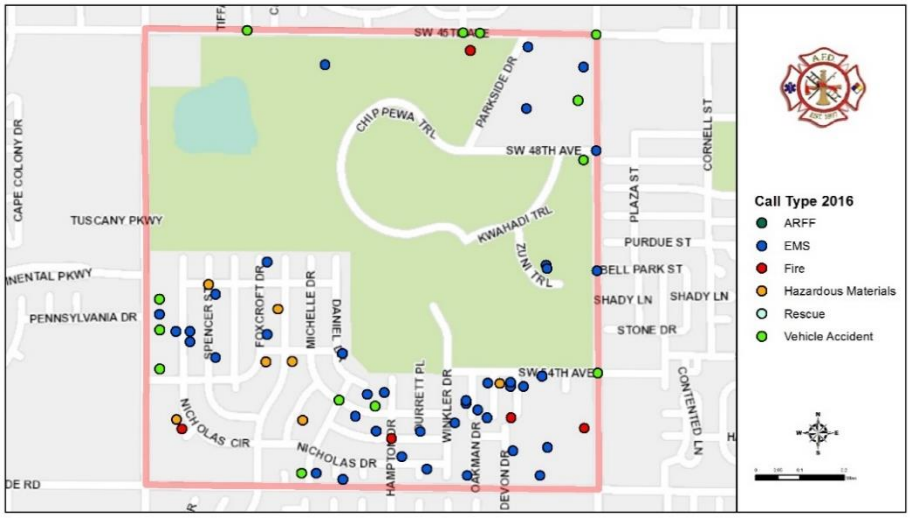
Risk	Number
Low Risk	0
Moderate Risk	13
High Risk	2
Special Risk	0



Geographical Planning Zone 1304 (Census Tract 216.05)
City Park/ South Park/ 4 Smaller Subdivisions

Zone Profile:

North: S.W. 45th Ave.
South: Hillside Rd.
East: Bell St.
West: S. Coulter St.
Area: 0.95 sq. miles
Pop: 2,014
Pop. Density: 1,832/mi^2
Pop. Rating: Rural
Roadway: 11.0 miles



Zone Description:

This GPZ has a residential area with a majority of it comprised of single family residences. These homes are primarily of wood frame construction and built up to 2,795 square feet. There are general retail zones along each of the bordering roadways. The largest commercial property is 102,900 square feet. There this a large city park that is a major area of the GPZ.

Geographic Planning Zone Demand History

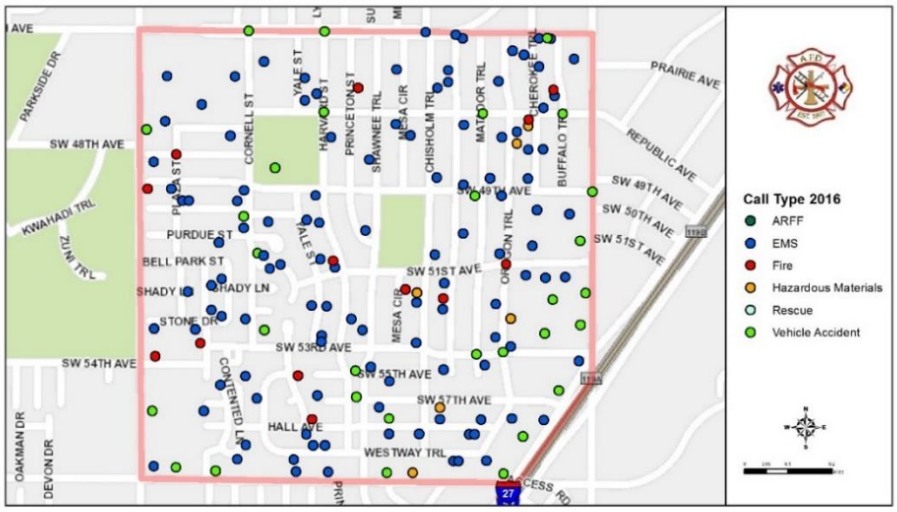
Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	19	256	1	4	41
2015	12	276	3	0	41
2016	15	359	0	8	55
Total	46	891	4	12	137

Occupancy Risk Levels

Risk	Number
Low Risk	3
Moderate Risk	13
High Risk	0
Special Risk	0

Geographical Planning Zone 1305 (Census Tract 213)
Western Plateau/5 Smaller Subdivisions

Zone Profile:
North: S.W. 45th Ave/
South: Hillside Rd/I-27
East: S. Western St.
West: Bell St.
Area: 1.04 sq. miles
Pop: 5,300
Pop. Density: 5,133/mi^2
Pop. Rating: Urban
Roadways: 19.8 miles



Zone Description:
This is a residential area with a majority of it comprised of single family residences. These homes are primarily of wood frame construction and built up to 4,256 square feet. Bonham Middle School (grades 6-8), which is in AISD, is located on SW 49th Avenue The school has an automatic protection system. Western Plateau Elementary (grades PreK-5), which is in AISD, is located on Shawnee Trail. The school does not have an automatic protection system. The four corners of the GPZ are designated as general retail zones.

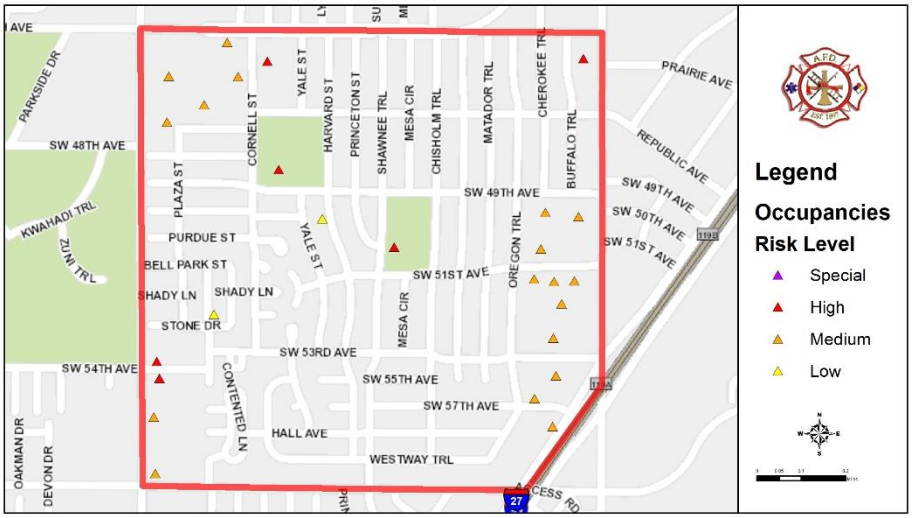
Geographic Planning Zone Demand History

Year	Fire	EMS	Rescue	HazMat	Vehicles
2014	17	301	2	5	28
2015	18	301	0	2	29
2016	26	312	0	7	41
Total	61	914	2	14	98

** Census tract split between Station Districts – all incidents reported.*

Occupancy Risk Levels

Risk	Number
Low Risk	2
Moderate Risk	18
High Risk	6
Special Risk	0



Appendix B – Baseline Performance Tables (2014-2017)

Low Risk Fire Suppression 90th Percentile Times Baseline Performance			2014-2017	2017	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		2:03	1:29	1:44	1:56	2:33	1:00
Turnout Time	Turnout 1st Unit	Urban	1:33	1:20	1:29	1:37	1:43	1:20
		Rural	1:41	1:19	1:38	1:49	1:51	1:20
Travel Time	Travel Time 1st Unit **Distribution**	Urban	4:35	4:36	4:58	4:24	4:31	4:00
		n =	652	169	186	148	149	
		Rural	5:12	5:14	5:37	5:01	4:41	5:00
		n =	600	150	139	145	166	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	7:07	6:15	6:55	7:22	8:03	6:20
		n =	652	169	186	148	149	
		Rural	7:47	7:17	8:03	7:42	8:08	7:20
		n =	600	150	139	145	166	

Moderate Risk Fire Suppression 90th Percentile Times Baseline Performance			2014-2017	2017	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		1:57	1:12	1:27	2:10	2:32	1:00
Turnout Time	Turnout 1st Unit	Urban	1:48	1:25	1:43	1:55	1:50	1:20
		Rural	1:46	1:39	1:50	1:54	1:49	1:20
Travel Time	Travel Time 1st Unit **Distribution**	Urban	4:06	4:11	4:12	3:45	3:54	4:00
		n =	500	117	130	134	119	
		Rural	4:51	5:00	4:51	4:52	4:20	5:00
		n =	408	94	118	101	95	
	Travel Time ERF **Concentration**	Urban	7:34	7:31	7:34	7:32	7:38	7:30
		n =	254	65	60	63	66	
		Rural	9:45	10:17	8:36	9:47	9:57	8:30
		n =	216	40	68	53	55	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	6:31	5:55	6:17	6:39	7:07	6:20
		n =	500	117	130	134	119	
		Rural	7:30	7:07	7:18	7:56	7:45	7:20
		n =	408	94	118	101	95	
	Total Response Time ERF **Concentration**	Urban	10:33	10:05	10:26	10:20	10:43	10:20
		n =	254	65	60	63	66	
		Rural	12:59	12:34	12:49	13:13	14:07	12:20
		n =	216	40	68	53	55	

High Risk Fire Suppression 90th Percentile Times Baseline Performance			2014-2017	2017	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		2:03	1:13	1:35	2:13	2:23	1:00
Turnout Time	Turnout 1st Unit	Urban	2:00	1:19	1:49	2:31	2:07	1:20
		Rural	1:37	1:23	1:23	1:30	1:57	1:20
Travel Time	Travel Time 1st Unit **Distribution**	Urban	4:12	4:06	4:35	4:14	3:44	4:00
		n =	116	38	25	28	25	
		Rural	4:58	5:28	3:36	4:30	4:01	5:00
		n =	92	34	17	20	21	
	Travel Time ERF **Concentration**	Urban	8:49	7:51	8:49	14:18	8:23	8:30
		*n =	41	10	10	12	9	
		Rural	10:55	10:55	10:33	13:52	13:29	10:00
		*n =	38	15	7	9	7	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	6:53	6:01	7:21	7:16	6:56	6:20
		n =	116	38	25	28	25	
		Rural	7:22	7:24	5:55	7:28	7:18	7:20
		n =	92	34	17	20	21	
	Total Response Time ERF **Concentration**	Urban	18:16	13:50	15:51	18:16	18:20	15:00
		*n =	41	10	10	12	9	
		Rural	18:34	14:38	16:02	23:50	25:03	16:30
		*n =	38	15	7	9	7	

**Where n<10, the highest time for the data set is reported.*

Maximum Risk Fire Suppression 90th Percentile Times Baseline Performance			2014-2017	2017	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		1:46	1:05	1:33	1:39	3:30	1:00
Turnout Time	Turnout 1st Unit	Urban	1:42	0:53	1:50	1:36	1:42	1:20
		Rural	1:19	0:56	0:35	N/A	1:22	1:20
Travel Time	Travel Time 1st Unit **Distribution**	Urban	3:06	3:06	3:01	2:11	3:05	4:00
		*n =	13	4	5	2	2	
		Rural	4:09	6:30	3:12	N/A	4:09	5:00
		*n =	10	3	3	0	4	
	Travel Time ERF **Concentration**	Urban	5:34	5:34	N/A	N/A	N/A	9:30
		*n =	1	1	0	0	0	
		Rural	26:00	26:00	6:28	N/A	16:41	11:00
		*n =	5	1	1	0	3	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	5:26	6:16	5:24	5:26	6:13	6:20
		*n =	13	4	5	2	2	
		Rural	7:12	4:45	4:48	N/A	7:12	7:20
		*n =	10	3	3	0	4	
	Total Response Time ERF **Concentration**	Urban	11:52	11:52	N/A	N/A	N/A	16:00
		*n =	1	1	0	0	0	
		Rural	28:09	28:09	15:21	N/A	27:36	17:30
		*n =	5	1	1	0	3	

**Where n<10, the highest time for the data set is reported.*

Low Risk Emergency Medical Services 90th Percentile Times Baseline Performance			2014-2017	2017	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		1:12	0:58	1:07	1:17	1:23	1:00
Turnout Time	Turnout 1st Unit	Urban	1:32	1:15	1:27	1:39	1:42	1:00
		Rural	1:35	1:21	1:28	1:43	1:47	1:00
Travel Time	Travel Time 1st Unit **Distribution**	Urban	4:22	4:34	4:26	4:17	4:09	4:00
		n =	24547	6357	6146	5802	6242	
		Rural	5:13	5:20	5:13	5:13	5:04	5:00
		n =	18948	5382	4737	4175	4654	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	6:08	5:53	6:03	6:14	6:18	6:00
		n =	24547	6357	6146	5802	6242	
		Rural	6:59	6:44	6:52	7:11	7:11	7:00
		n =	18948	5382	4737	4175	4654	

Moderate Risk Emergency Medical Services 90th Percentile Times Baseline Performance			2014-2017	2017	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		1:39	1:10	1:40	1:54	1:55	1:00
Turnout Time	Turnout 1st Unit	Urban	1:26	1:11	1:20	1:33	1:35	1:00
		Rural	1:31	1:18	1:29	1:37	1:42	1:00
Travel Time	Travel Time 1st Unit **Distribution**	Urban	4:07	4:21	4:08	3:55	3:52	4:00
		n =	5879	1596	1765	1451	1067	
		Rural	4:45	4:50	4:47	4:40	4:37	5:00
		n =	5011	1481	1487	1175	868	
	Travel Time ERF **Concentration**	Urban	5:17	5:28	5:21	5:03	4:50	5:00
		n =	2400	612	750	606	432	
		Rural	6:05	5:54	5:59	6:18	6:07	6:00
		n =	2166	619	646	529	372	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	6:19	5:48	6:21	6:28	6:30	6:00
		n =	5879	1596	1765	1451	1067	
		Rural	7:07	6:30	7:07	7:21	7:42	7:00
		n =	5011	1481	1487	1175	868	
	Total Response Time ERF **Concentration**	Urban	7:33	7:05	7:33	7:43	7:44	7:00
		n =	2400	612	750	606	432	
		Rural	8:29	7:28	8:24	8:47	9:07	8:00
		n =	2166	619	646	529	372	

High Risk Emergency Medical Services 90th Percentile Times Baseline Performance			2014-2017	2017	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		1:55	1:11	1:52	2:20	2:12	1:00
Turnout Time	Turnout 1st Unit	Urban	1:26	1:19	1:17	1:36	1:30	1:00
		Rural	1:24	1:18	1:19	1:31	1:37	1:00
Travel Time	Travel Time 1st Unit **Distribution**	Urban	4:35	5:20	4:47	4:22	4:17	4:00
		n =	592	142	174	158	118	
		Rural	5:16	5:30	5:12	4:51	5:03	5:00
		n =	375	103	119	79	74	
	Travel Time ERF **Concentration**	Urban	7:05	6:55	7:02	7:05	8:40	7:00
		*n =	51	12	18	15	6	
		Rural	9:03	11:53	9:03	8:32	6:32	8:00
		*n =	36	10	11	10	5	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	7:22	6:56	7:39	7:01	7:47	6:00
		n =	592	142	174	158	118	
		Rural	7:56	7:26	7:42	8:35	8:13	7:00
		n =	375	103	119	79	74	
	Total Response Time ERF **Concentration**	Urban	13:24	14:05	12:12	9:58	23:17	9:30
		*n =	51	12	18	15	6	
		Rural	15:39	16:14	12:22	20:30	12:07	11:30
		*n =	36	10	11	10	5	

**Where n<10, the highest time for the data set is reported.*

Maximum Risk Emergency Medical Services: Between 2014 and 2017, the AFD responded to eight *Urban* and two *Rural* incidents that qualified as Maximum Risk. Of these, the ERF arrived on scene three times. These data sets are statistically insignificant and are not reported.

Low Risk Technical Rescue 90th Percentile Times Baseline Performance			2014-2017	2017	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		2:48	3:05	1:53	2:51	2:41	1:30
Turnout Time	Turnout 1st Unit	Urban	1:22	1:06	1:17	1:25	1:46	1:20
		Rural	1:27	1:09	1:13	1:50	1:29	1:20
Travel Time	Travel Time 1st Unit **Distribution**	Urban	6:14	9:05	5:31	5:07	3:07	4:00
		*n =	76	27	9	23	17	
		Rural	5:45	6:37	4:24	5:27	5:09	5:00
		n =	86	27	20	25	14	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	9:21	12:30	7:46	7:28	7:17	6:50
		*n =	76	27	9	23	17	
		Rural	8:36	9:04	6:11	9:02	8:36	7:50
		n =	86	27	20	25	14	

**Where n<10, the highest time for the data set is reported.*

Moderate Risk Technical Rescue 90th Percentile Times Baseline Performance			2014-2017	2017	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		2:15	2:05	1:25	2:04	2:41	1:30
Turnout Time	Turnout 1st Unit	Urban	1:42	1:08	1:09	1:42	1:46	1:20
		Rural	1:36	1:13	1:03	1:27	1:56	1:20
Travel Time	Travel Time 1st Unit **Distribution**	Urban	4:27	5:58	4:13	3:21	4:03	4:00
		n =	47	12	12	12	11	
		Rural	4:31	4:31	4:17	4:09	6:08	5:00
		n =	67	15	11	19	22	
	Travel Time ERF **Concentration**	Urban	5:23	5:55	6:25	5:08	4:46	5:00
		*n =	31	6	9	10	6	
		Rural	6:03	5:25	5:43	6:49	6:30	6:00
		*n =	38	6	5	15	12	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	8:39	10:50	5:22	7:21	7:46	6:50
		n =	47	12	12	12	11	
		Rural	7:34	6:18	6:25	7:15	9:30	7:50
		n =	67	15	11	19	22	
	Total Response Time ERF **Concentration**	Urban	7:52	11:53	7:52	7:42	7:11	7:50
		*n =	31	6	9	10	6	
		Rural	9:30	17:25	9:01	10:21	9:30	8:50
		*n =	38	6	5	15	12	

**Where n<10, the highest time for the data set is reported.*

High and Maximum Risk Technical: Between 2014 and 2017, the AFD responded to four incidents that qualified as *High Risk* and none that were *Maximum Risk*. These data sets are statistically insignificant and are not reported.

Low Risk Hazardous Materials 90th Percentile Times Baseline Performance			**2014-2017**	**2017**	**2016**	**2015**	**2014**	**Agency Benchmark**
Alarm Handling	Pick-up to Dispatch		2:34	2:14	2:22	2:37	2:54	1:30
Turnout Time	Turnout 1st Unit	Urban	1:33	1:14	1:26	1:43	1:43	1:20
		Rural	1:44	1:18	1:33	1:48	2:02	1:20
Travel Time	Travel Time 1st Unit **Distribution**	Urban	4:48	4:47	4:41	4:57	4:42	4:00
		n =	1186	321	314	289	262	
		Rural	5:40	5:41	5:45	5:43	5:30	5:00
		n =	820	219	178	195	228	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	7:46	7:12	7:27	7:59	8:16	6:50
		n =	1186	321	314	289	262	
		Rural	8:45	8:07	8:35	8:51	9:23	7:50
		n =	820	219	178	195	228	

Moderate Risk Hazardous Materials 90th Percentile Times Baseline Performance			2014-2017	2017	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		2:14	1:39	2:00	2:15	2:30	1:30
Turnout Time	Turnout 1st Unit	Urban	1:33	1:15	1:21	1:44	1:40	1:20
		Rural	1:36	1:05	1:34	1:44	1:49	1:20
Travel Time	Travel Time 1st Unit **Distribution**	Urban	4:19	4:14	5:05	4:35	4:04	4:00
		n =	239	63	62	69	45	
		Rural	5:11	4:53	5:07	4:58	5:17	5:00
		n =	213	60	59	50	44	
	Travel Time ERF **Concentration**	Urban	5:09	5:09	5:02	4:39	6:10	5:00
		n =	100	26	27	26	21	
		Rural	6:37	5:11	5:59	6:53	7:31	6:00
		n =	86	20	25	20	21	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	7:28	7:26	7:28	7:18	8:02	6:50
		n =	239	63	62	69	45	
		Rural	8:14	7:41	8:32	8:29	8:13	7:50
		n =	213	60	59	50	44	
	Total Response Time ERF **Concentration**	Urban	8:17	7:51	7:50	7:25	12:08	7:50
		n =	100	26	27	26	21	
		Rural	11:43	7:21	13:13	20:05	17:34	10:50
		n =	86	20	25	20	21	

High Risk Hazardous Materials 90th Percentile Times Baseline Performance			2014-2017	2017	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		2:25	2:13	1:43	2:21	2:32	1:30
Turnout Time	Turnout 1st Unit	Urban	1:40	1:18	1:28	1:58	1:15	1:20
		Rural	1:39	1:24	1:33	1:34	1:41	1:20
Travel Time	Travel Time 1st Unit **Distribution**	Urban	4:18	4:39	3:49	3:39	2:58	4:00
		*n =	41	11	10	15	5	
		Rural	4:35	4:37	4:39	4:12	4:02	5:00
		*n =	43	12	8	11	12	
	Travel Time ERF **Concentration**	Urban	7:05	13:54	6:17	7:05	4:23	6:00
		*n =	12	3	4	4	1	
		Rural	9:36	10:22	5:25	9:36	10:37	7:00
		*n =	20	5	2	5	8	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	7:04	6:38	6:18	7:12	7:41	6:50
		*n =	41	11	10	15	5	
		Rural	7:39	8:22	7:13	7:29	7:27	7:50
		*n =	43	12	8	11	12	
	Total Response Time ERF **Concentration**	Urban	11:57	15:26	8:22	11:57	9:56	8:50
		*n =	12	3	4	4	1	
		Rural	13:53	11:53	12:18	13:53	22:08	11:50
		*n =	20	5	2	5	8	

**Where n<10, the highest time for the data set is reported.*

Maximum Risk Hazardous Materials: Between 2014 and 2017, the AFD responded to five incidents that qualified as *Maximum Risk*. Of these, the ERF never arrived on scene. These data sets are statistically insignificant and are not reported.

Low Risk Aircraft Rescue and Firefighting 90th Percentile Times Baseline Performance			2014-2017	2017	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		1:09	2:04	0:54	0:52	0:57	0:50
Turnout Time	Turnout 1st Unit	Rural	1:00	0:52	2:29	0:45	2:09	1:00
Travel Time	Travel Time 1st Unit **Distribution**	Rural	2:36	4:14	6:39	1:00	0:38	1:00
		*n =	28	9	4	10	5	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Rural	4:08	5:14	7:39	2:00	2:54	3:00
		*n =	28	9	4	10	5	

**Where n<10, the highest time for the data set is reported.*

Moderate Risk Aircraft Rescue and Firefighting 90th Percentile Times Baseline Performance			2014-2017	2017	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		1:58	1:58	1:52	1:27	2:16	1:00
Turnout Time	Turnout 1st Unit	Rural	0:40	0:38	2:35	0:06	1:09	1:00
Travel Time	Travel Time 1st Unit **Distribution**	Rural	0:59	1:43	0:59	0:47	0:43	1:00
		*n =	32	11	5	8	8	
	Travel Time ERF **Concentration**	Rural	2:01	2:01	0:52	1:29	4:07	2:00
		*n =	31	11	5	7	8	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Rural	2:54	2:54	3:21	1:32	3:12	3:00
		*n =	32	11	5	8	8	
	Total Response Time ERF **Concentration**	Rural	3:39	3:12	3:52	3:14	6:07	4:00
		*n =	31	11	5	7	8	

**Where n<10, the highest time for the data set is reported.*

High Risk Aircraft Rescue and Firefighting 90th Percentile Times Baseline Performance			2014-2017	2017	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		1:32	1:44	1:06	1:25	1:32	1:00
Turnout Time	Turnout 1st Unit	Rural	0:19	0:19	0:16	0:28	0:16	1:00
Travel Time	Travel Time 1st Unit **Distribution**	Rural	1:57	2:43	0:57	0:27	2:03	1:00
		n =	43	7	11	11	14	
	Travel Time ERF **Concentration**	Rural	13:26	18:01	16:02	9:23	13:26	12:00
		*n =	18	2	6	3	7	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Rural	2:49	3:17	1:50	2:00	2:41	3:00
		n =	43	7	11	11	14	
	Total Response Time ERF **Concentration**	Rural	17:25	20:29	18:43	11:07	17:25	14:00
		*n =	18	2	6	3	7	

**Where n<10, the highest time for the data set is reported.*

Maximum Risk Aircraft Rescue and Firefighting: Between 2014 and 2017, the AFD respond to a single ARFF incident that qualified as *Maximum Risk*. This data set is statistically insignificant and is not reported.

Low Risk Wildland Firefighting 90th Percentile Times Baseline Performance			2014-2017	2017	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		1:55	1:23	1:32	2:00	2:24	1:00
Turnout Time	Turnout 1st Unit	Urban	1:44	0:57	1:41	2:01	1:32	1:20
		Rural	1:48	1:24	1:51	2:05	2:02	1:20
Travel Time	Travel Time 1st Unit **Distribution**	Urban	7:07	4:44	6:32	7:35	7:19	6:30
		n =	127	25	44	31	27	
		Rural	8:45	5:51	7:55	9:06	10:48	8:00
		n =	184	52	64	33	35	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	10:41	6:17	9:55	11:15	11:19	8:50
		n =	127	25	44	31	27	
		Rural	12:03	7:43	11:22	14:31	13:21	10:20
		n =	184	52	64	33	35	

Moderate Risk Wildland Firefighting 90th Percentile Times Baseline Performance			2014-2017	2017	2016	2015	2014	Agency Benchmark
Alarm Handling	Pick-up to Dispatch		1:53	1:17	1:09	1:38	2:35	1:00
Turnout Time	Turnout 1st Unit	Urban	1:23	1:20	1:22	1:21	1:09	1:20
		Rural	1:26	1:14	1:31	1:19	1:57	1:20
Travel Time	Travel Time 1st Unit **Distribution**	Urban	6:28	4:27	6:24	7:15	7:21	6:30
		*n =	56	21	25	3	7	
		Rural	7:34	5:38	7:34	6:27	9:45	8:00
		*n =	59	25	21	4	9	
	Travel Time ERF **Concentration**	Urban	14:34	8:11	21:28	N/A	7:55	15:00
		*n =	12	3	8	0	1	
		Rural	12:54	9:21	18:45	8:53	12:45	15:00
		*n =	21	11	4	3	3	
Total Response Time	Total Response Time 1st Unit on Scene **Distribution**	Urban	10:01	6:01	10:43	9:19	11:55	8:50
		*n =	56	21	25	3	7	
		Rural	11:06	8:00	9:52	9:16	13:34	10:20
		*n =	59	25	21	4	9	
	Total Response Time ERF **Concentration**	Urban	17:37	10:13	24:30	N/A	11:45	18:00
		*n =	12	3	8	0	1	
		Rural	19:31	16:51	21:39	11:29	19:31	20:00
		*n =	21	11	4	3	3	

**Where n<10, the highest time for the data set is reported.*

High Risk Wildland Firefighting: Between 2014 and 2017, the AFD responded to four incidents that qualified as *High Risk*. Of these, the ERF arrived on scene twice. These data sets are statistically insignificant and are not reported. The department does not define a *Maximum Risk* Wildland Firefighting category.