



# **Leander Fire Department Master Plan and Guide**

**Leander Fire Department**

**Master Plan and Guide**

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# Executive Summary



Leander Fire Department

2011-2015

## **Summary**

This report provides information about the fire department, the information for future planning, and the actions that are in the process in detail. The report talks about the services provided and how those services are being delivered at the highest level possible for the amount of resources that are available. This is a transition point for the Leander Fire Department. The next couple of years will bring increasing demands on the fire department for services. The current level of available resources in the fire department will not be able to meet all those demands. The plans provided in this document give a strategic and fiscally responsible way to address those increases and the challenges of adding additional staff, addition/replacement of apparatus, and preparing for future station locations.

The near future calls for the:

- Adding of the staff to open fire station 3
- Replacement of a current fire apparatus
- Procurement of property for future fire station sites

While the department works on planning items for itself it also has great partnership with other city departments. The department is working with other departments in the city to make the City better and safer by a comprehensive approach. Some of the current items include:

**Planning and Zoning-** Adjusting the zoning to allow the option for brick or stone cap end columns in fences to help eliminate fire spread during events from the fence or yard to the house.

**Engineering Department** - Adjusting traffic light specifications to make preemptive alerting devices part of the standard specification on all new installed traffic lights starting in 2012. Preemptive devices will control the lights when emergency vehicles approach the lights in an emergency allowing the vehicles to receive a green light making for quicker response times. The departments are also working to coordinate and align the current roadway standards to match the fire code and make a simpler approach for development.

**Economic Development-** Collaborating to provide information to the business community on fire safety, continuity of business during disasters, and current relevant information about major events. The department is also working to with the Economic Development department on using the Leander Internet Television for expanded information delivery to the citizens of the area.

**Water Department** - Completing and updating hydrant repair status, hydrant location by GPS, and hydrant markers for the roadway. The department benefits by participating with the water department in performing annual hydrant testing by view the hydrant location, determining the working status, and knowing the hydrant flow as well as the water department's ability to know which hydrants need repair and maintenance from the information shared during the testing.

In the future the City of Leander will need to address emergency medical ambulance, 9-1-1 communications and dispatching, hazardous material response teams, and mass notification systems. Those items were not addressed in this plan and will come the forefront as special items as needed. The desire for this report was to provide the reader with current information about the fire department and help local officials with planning.

The projections for the City of Leander are strong and the fire department wants to be a large part of making this a truly livable and viable city. To make this happen we must catch up on personnel and resources from our previous growth and have a plan to keep pace in the future. We believe this plan provides us guidance in making that happen.

# Leander Fire Department Staffing Plan



Bill Gardner, Fire Chief

2011-2015

The Leander Fire Department was established by the City of Leander in 2001 with the hiring of 6 firefighters. The staff system at that time was designed to be supported by part time firefighters and volunteers to provide enough firefighters to respond to the emergencies.

Time has changed in the City of Leander with additional fire stations, fire inspections duties, and a larger population to be served. These changes have created a strain on both the volunteer and career staff. To address these issues a plan has been created for the current needs and visions for the City in the future.

The department continues to support the concept of being a combination department (career and volunteer firefighters) because of the benefits it provides to the city and the department. This plan continues to recognize this as part of the soul of this organization.

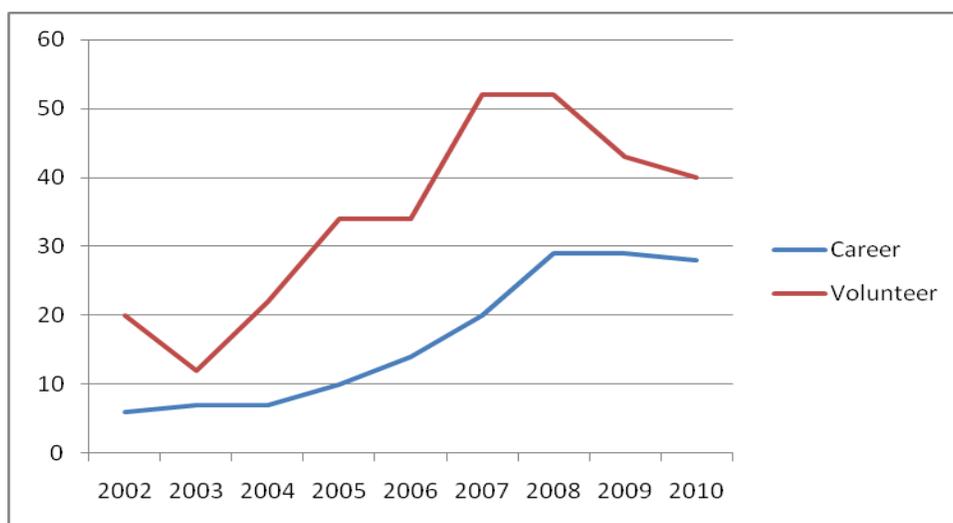
### Current Staffing

Fire Station One is staffed with four career staff. This station staffs a fire engine full time and, when volunteers are on shift at this station, three staff are on the engine and two staff are on a squad. This happened approximately 61% of the time in 2009 and the first part of 2010.

Fire Station Two has three career staff and when volunteer staff are available may have four person staffing, this facility operates one fire engine.

Fire Station Three is staffed with one career person, the Battalion Chief. Their job is to supervise the staff on duty and provide direction during events on that shift. **No fire trucks are staffed at this facility.**

The graph below shows the number of career and volunteer staff the department has had from 2000 until 2010 identified by year:



### Reason for Plan

The chart shows the beginning of the decline in volunteer activity in the fire department. Volunteer activity decline has been a national epidemic for several years although LFD has not been hit as hard as other departments. Some departments have not been able to manage and keep the volunteers, or very few volunteers. This is attributed to the economy, lack of support for volunteers, and inability by the agency to provide the minimum training required in being a volunteer firefighter in most jurisdictions.

While LFD has been able to maintain a volunteer group, the decline requires the need to supplement career staff to balance the decline in those numbers as well as provide for the ability to continue to meet with increasing demands brought about from a growing population as well as relieve the burden placed on our long term active volunteers.

This staffing plan was designed to address primarily the current staffing needs and projections as based on current growth rates. If growth was to return to rates of previous years the plan would need to be adjusted for those rates. These objectives are the target points:

- Station Three full staffed by January 2013 operating an Engine or Quint
- Build support structure for the fire department to move into the next several years
- Meet the needs of customers both in emergent and development roles

### Comparison

To make sure the plan was functional we compared our plan and department with 5 other cities of similar size, economic, and social characteristics. Those cities were selected following the 2010 census results and were all from Texas.

The comparison for this report covered request for service, staff size and total budget. The following is the results of that survey:

| <u>City</u>    | <u>Population</u> | <u>City</u>    | <u>Service Request</u> |
|----------------|-------------------|----------------|------------------------|
| Rosenberg      | 30618             | Rosenberg      | 3357                   |
| Waxahachie     | 29621             | Waxahachie     | 3500                   |
| Harker Heights | 26700             | Harker Heights | 3197                   |
| Southlake      | 26575             | <b>Leander</b> | <b>2593</b>            |
| <b>Leander</b> | <b>26521</b>      | Little Elm     | 2200                   |
| Little Elm     | 25898             | Southlake      | 2000                   |

| <u>City</u>    | <u># of Staff</u> | <u>City</u>    | <u>Budget</u>         |
|----------------|-------------------|----------------|-----------------------|
| Southlake      | 51                | Southlake      | \$5,280,251.00        |
| Waxahachie     | 49                | Waxahachie     | \$5,032,644.00        |
| Harker Heights | 42                | Harker Heights | \$3,500,000.00        |
| Rosenberg      | 38                | Rosenberg      | \$3,356,142.00        |
| Little Elm     | 35.5              | Little Elm     | \$3,340,000.00        |
| <b>Leander</b> | <b>29</b>         | <b>Leander</b> | <b>\$2,832,523.00</b> |

After the comparison we confirmed that the City of Leander is currently understaffed for our current call volume, but with this plan would be able to meet the median staffing level that is necessary without a huge economic impact to the citizens.

### Staffing Plan

The staffing plan is broken down by budget years showing the order of the request for staff and the functions those staff would fill when put into service.

- *2011-2012 Budget Year*

The current budget year is funded for a position and reclassification of a position.

Those positions would be a full time Fire Marshal and Training Officer.

The Fire Marshal will oversee and perform certain tasks related to the plan review process, inspections process, preplan process, investigation process, fire code regulations and development assistance. These processes are time consuming and very technical in nature. The ability to have someone trained in this specialty and a passion for doing this daily is important to the safety of the city and the growth of the city into the future.

The Training Officer will oversee and perform tasks related to Training and Emergency Management. This position would be responsible for the volunteer training academy, initial EMS education programs, and mandatory continuing education programs for current staff including fire, EMS, and specialty services

such as rescue and disaster response. This position would manage the training field and the use of this facility. This position would also assist the Fire Chief with Emergency Operation Center functions during major events and disaster education.

- *2012-2013 Budget Year*

This budget year request would be for three (3) Lieutenants and (3) firefighters, thus allowing Station 3 to be opened and staffed. This staffing would be able to staff either a Quint or Engine. This would give the eastern part of the city a full time fire and medical response unit.

This budget year request would also include the replacement of the Deputy Fire Chief position with an Assistant Fire Chief position that was removed during the 2011-2012 Budget year following the retirement of the previous fire chief.

The Assistant Chief would be added to assist the Fire Chief with the management of logistics such as fleet, facilities, equipment, and certain personnel duties.

- *2013-2014 Budget Year*

This budget year would be to request an Emergency Management Coordinator and Administrative Clerk Position.

The Emergency Management Coordinator would be needed to meet the change in city size for disaster planning, event planning and management, hazard mitigation, federal requirement needs, and recovery assessments.

The Administrative Clerk would be needed to offset with the additional work items created. This would include additional payroll administration, records management, and inspection record activities. The single current administrative position would not be able to support staff and complete the required tasks.

- *2014-2015 Budget Year and continuing*

This budget year request would be for 3 firefighters. The 3 firefighters would be added to Fire Station One. This would allow for an addition staff on each shift to cover sick, vacation, injury time off, and training time.

Every year following would be a request for three additional firefighters this would be done to start hiring staff ahead of station openings to eliminate the circumstances of empty fire stations and the need to hire 9-12 people during a single budget year as we get ready to open new fire stations.

The opening of the new stations would then only require the reclassification of positions to create advancement opportunities and staffing the station.

## Conclusion

The following of this plan and time line would allow us to meet the median range for current staffing needs.

This plan does not address when additional stations are added prior to staff being hired. The current potential growth in the far west and east corridors of the city will require additional stations. The addition of new stations would require twelve (12) new staff for each station. The hiring of 12 staff per station would be adequate staff to open the facility plus one additional person per shift. This additional person would be cheaper than what the impact would be for the additional cost of overtime to cover sick and vacation benefit time for this total number of employees.

This staffing concept would need to be discussed and reviewed when dealing with development agreements, station property acquisitions, and commercial growth plans as to be able to properly prepare for this process and determine if the hiring of staff should be done over several budget cycles prior to

opening the facility. The process for this could be managed as discussed above by hiring three to four people per year for three years prior to opening a station.

This plan should be a guide in the future, as we move forward, allowing us to plan and adjust for a better Leader.

# Fleet Replacement and Purchase Schedule



The Leander Fire Department depends on the trucks and vehicles that make up the fleet to be able to provide efficient, timely, and safe service to our customers. The fleet maintenance is important and it is part of the department's every day activities to maintain and check that fleet for readiness and repair needs. The department works closely with the city mechanics and truck manufacturers to ensure that all repairs and routine maintenance items are taken care of to keep the trucks functioning and meeting the life expectancy of these investments.

Mileage, maintenance cost, and hours are all factors, but some units have many short runs and some put more miles on a truck because the runs are longer. So, the wear will be different on each vehicle but the key is the volume.

Repair and parts for repair is a huge subject. Large national vendors keep parts, that they manufacture, attainable for as long as there is a large number of that type of truck in service. Manufacturers strive to improve their product, which means that there will be change, but if parts do go "obsolete", there is usually a replacement from those companies.

On a normal pumper, the life expectancy recommend by manufacturers and public safety fleet managers is around 10 – 12 years front line and 3 to 5 more in reserve status – depending on the department, call volume, maintenance, etc. NFPA has their own recommendations but it's longer than the normal FD can go by because NFPA has to take into consideration the small volunteer departments that run one call a week or less. As departments get larger and have increased call volume with more events and shorter run times, you have to start a trend to 7 year turn in leases. Since this process puts no units into reserve status issues are caused when trying to perform preventive maintenance and regular repairs.

For aerials(ladder trucks), the normal life expectancy is around 15 – 17 years front line – again depending on how it's run - with an additional 5 years in reserve.

For rescue units, it just depends on how much it runs and what they run on. Call volume, dedication to maintenance (general and preventative) are the keys to these trucks but a normal rescue should be able to handle 15 – 20 years, if it's run as a rescue and not as a routine response vehicle.

### **Replacement Process and Time**

The ability to get fire department vehicles that are manufactured for the type of stress and wear the vehicle faces as part of normal fire department operations takes time for design and specifications to be complete. Once the design process is complete it can take up to one year before the vehicle is delivered (for larger fire apparatus).

The planning and purchasing of a new fire apparatus needs time to be completed and should be started prior to reaching replacement date of its predecessor. The cost of fire apparatus is a big impact when purchased and the ability to plan for how the vehicle will be paid for is just as important. A new fire engine similar to what is currently used by the Leander Fire Department costs approximately \$540,000.00 and an aerial can be as much as \$1,000,000. These cost are a necessity to have the equipment needed and must be planned for prior to the time of need.

The purchases can be handled in several ways; one way is the tradition of purchasing from general fund cost other options include, lease programs, loan programs, bonds and designated funds. All of these programs have benefits and draw backs.

The list below shows how the current fleet and equipment has been obtained:

| <b><u>Description</u></b>          | <b><u>Year</u></b> | <b><u>Obtained</u></b>     |
|------------------------------------|--------------------|----------------------------|
| Ford F-150 Prevention Unit         | 2006               | Financed -Paid Off         |
| Pierce Lance Pumper                | 1999               | Purchased from Volunteers* |
| Ford/ Horton F-450 Batt Chief Unit | 2008               | Bond                       |
| Ford F-150 4x4 Training Unit       | 2008               | Bond                       |
| Pierce/Ford F-550 Brush Truck      | 2002               | Purchased from Volunteers* |

|                               |      |                                     |
|-------------------------------|------|-------------------------------------|
| Pierce/Ford F-550 Brush Truck | 2002 | Purchased from Volunteers*          |
| Chevy Tahoe Chief Unit        | 2011 | Cost Recovery Program               |
| Trailer 1 (Light and Air)     | 2007 | Bond                                |
| Trailer 2 (Mass Casualty)     | 2006 | Bond                                |
| Pierce International Tender   | 2001 | Financed - Pay Off 2011/2012 Budget |
| Pierce Contender Pumper       | 2008 | Bond                                |
| Ford/Pierce Super Duty Squad  | 2008 | Bond                                |
| Ford F-550 4x4 Brush Truck    | 2009 | Bond                                |
| Ford F-550 4x4 Brush Truck    | 2009 | Grant/Cost Recovery Program         |
| E-One Typhoon Quint           | 2005 | Financed -Paid Off                  |
| Horotn/International Rescue   | 2008 | Bond                                |
| Mack Suburban Pumper          | 1981 | Purchased from Volunteers*          |
| Pierce Contender Pumper       | 2000 | Financed -Paid Off                  |
| Ford F250 Support Unit        | 2003 | Financed -Paid Off                  |
| Ford Expedition               | 2004 | Financed -Paid Off                  |

\* Units were purchased in 2003 when the City of Leander Fire Department and Leander Volunteer Fire Department became one department under city direction. Until that time the VFD had purchased the vehicles for the department and managed the fleet.

### **Replacement Schedule**

Currently the Leander Fire Department recommends the following schedule based on our current call volume and response district”

Pumpers - 12 year main line and 3-5 years in reserve

Aerials/Rescue/Tender - 15 year main line and 3 years in reserve

Brush/Squad - 10 years main line and 5 years in reserve

Admin/Support – 8 years main line and 2 years in reserve

| <b><u>Description</u></b>          | <b><u>Year</u></b> | <b><u>Replacement Frontline</u></b> | <b><u>Replacement Reserve</u></b> |
|------------------------------------|--------------------|-------------------------------------|-----------------------------------|
| Pierce Contender Pumper            | 2000               | 2013                                | 2020                              |
| Ford F-150 Fire Marshal Unit       | 2006               | 2014                                | 2016                              |
| Pierce Lance Pumper                | 1999               | 2014                                | 2017                              |
| Ford/ Horton F-450 Batt Chief Unit | 2008               | 2016                                | 2018                              |
| Ford F-150 4x4                     | 2008               | 2016                                | 2018                              |
| Pierce International Tender        | 2001               | 2016                                | 2019                              |
| Ford/Pierce Super Duty Squad       | 2008               | 2018                                | 2023                              |
| Chevy Tahoe Chief Unit             | 2011               | 2019                                | 2021                              |
| Ford F-550 4x4 Brush Truck         | 2009               | 2019                                | 2024                              |
| Ford F-550 4x4 Brush Truck         | 2009               | 2019                                | 2024                              |
| Pierce Contender Pumper            | 2008               | 2020                                | 2023                              |
| E-One Typhoon Quint                | 2005               | 2020                                | 2023                              |
| Trailer 2 (Mass Casualty)          | 2006               | 2021                                | -                                 |
| Trailer 1 (Light and Air)          | 2007               | 2022                                | -                                 |
| Horotn/International Rescue        | 2008               | 2023                                | 2026                              |
| Mack Suburban Pumper               | 1981               | -                                   | -                                 |
| Pierce/Ford Brush Truck            | 2002               | Done                                | 2017                              |
| Pierce/Ford Brush Truck            | 2002               | Done                                | 2017                              |
| Ford F250 Support Unit             | 2003               | Done                                | 2013                              |
| Ford Expedition                    | 2004               | Done                                | 2014                              |

### **Upcoming Purchases**

The need to replace the 2000 Pierce Contender due to heavy use for several years after purchase as the main unit by the department on all calls and the increasing costs to keep the truck running as a mainline

unit. This unit was out of service or under limited service for almost 45% of the past year which has been a struggle for response during busy call volumes. This truck was purchased by the volunteer department and was not within current specifications used by the department to help get longer life out of the fleet. This unit will need to be replaced with a new pumper. The department is recommended in the 2012-2013 budget year that the funds for payments be budgeted to purchase the new engine. This would allow for a serviceable unit at all stations and dependable response. The cost for this project is estimated at \$540,000 dollars. The department recommends financing the apparatus for 15 years. The payment is projected to be \$50,000 per year.

### **Conclusion**

The replacement plan outlines the replacement of vehicles and indicates ongoing expense in the budgeting process for the foreseeable future. A new unit will be needed for each new station as the City of Leander grows while paying attention to replacing existing units to keep an effective fleet. The ability to have a defined fleet replacement schedule gives the chance for predicting costs. This cost will need to be considered when planning future bonds, development agreements incentives, budget costs, and tax rates.

Support vehicles and command vehicles will continue to be an on-going expense also, but can be managed by municipal financing and can be paid off in five years with normal payment plans as part of the operational budgets of the department.

# Fire Station Planning and Construction Guide



## **Station Location Plan**

The placement of the fire stations provides for the security of the citizens and an investment in the community. The decision of where, when, and what size of these stations is important and should not be done without making sure the station location will ensure the following for the City of Leander:

1. Ensure the station when staffed will deliver to the citizens in the area more timely service.
2. The additional station will provide for an overall impact on the ability to meet National Standards for fire safety and improve ISO scoring.
3. Ensure the station is a positive impact on the community and an overall value to the neighborhood in which it is placed.

Historically, decisions for fire station locations have been driven by the donation of property to the city as either gifts or part of a development agreement. This history has been helpful in getting the department established but as the City of Leander grows and need for the ability to have a balanced coverage plan that has the greatest impact to the citizens is the most important. The plan should take into consideration the development agreement process making sure that the City continues to work with developers for the appropriation of the property but not necessarily using that as the deciding point for when to start construction of the facility.

The property locations meet the city's projected growth patterns as defined on the zoning map and Extraterritorial Jurisdiction annexation. The plan also meets proper fire engine distribution as required by Insurance Service Organization (ISO). ISO sets the insurance rate for property owners in the State of Texas. The standard from ISO is as follows:

*Item 560 of the ISO Fire Suppression Rating Schedule (FSRS) provides the criteria:*

### ***560. DISTRIBUTION OF COMPANIES (DC):***

*The built-upon area of the city should have a first-due engine company within 1-1/2 miles and a ladder-service company within 2-1/2 miles.*

*ISO establishes "standard response districts" around each existing fire station. The standard response district for an engine company is a polygon defined by streets leading from the fire station out to a distance of 1.5 road miles. For a ladder-service company, the standard response district is a polygon defined by streets out to a distance of 2.5 road miles.*

*For each fire station, we count the fire hydrants within the standard response district. When fire hydrants are not available, we measure the total linear road miles in the standard response district.*

*We then identify contiguous built-upon areas in the community that do not have a fire station within the specified distance. If such an area has at least 50 percent of the number of fire hydrants (or, in areas without hydrants, 50 percent of the linear road miles) found in the standard response district, we consider that the area may need a fire station.*

### ***Response-Time Considerations***

*In evaluating a community's public fire protection, ISO considers the distribution of fire companies. Generally, ISO's criteria say that a built-upon area of a community should have a first-due engine company within 1.5 road miles of the protected properties and a ladder-service company within 2.5 road miles.*

Those benchmark criteria produce an expected response time of 3.2 minutes for an engine company and 4.9 minutes for a ladder-service company, based on a formula developed by the RAND Corporation.

RAND conducted extensive studies of fire department response times. They concluded that the average speed for a fire apparatus responding with emergency lights and siren is 35 mph. That speed considers average terrain, average traffic, weather, and slowing down for intersections.

Taking into account the average speed and the time required for an apparatus to accelerate from a stop to the travel speed, RAND developed the following equation for calculating the travel time:

$$T = 0.65 + 1.7D$$

Where

$T$  = time in minutes to the nearest 1/10 of a minute

0.65 = a vehicle-acceleration constant for the first 0.5 mile traveled

1.7 = a vehicle-speed constant validated for response distances ranging from 0.5 miles to 8.0 miles.

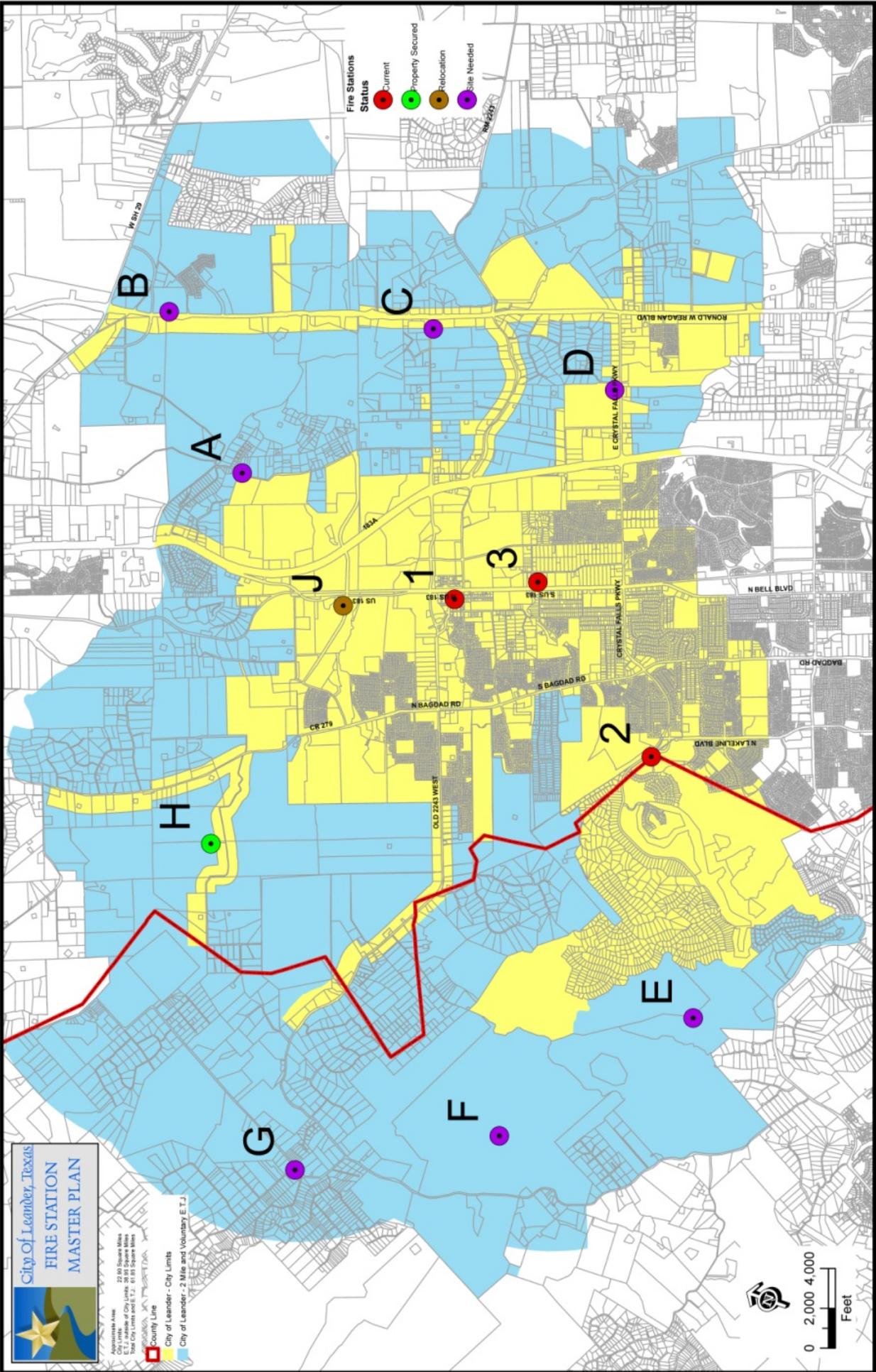
$D$  = distance

ISO, working with several fire departments, recently conducted its own review of the formula and found the earlier RAND work still valid as a predictive tool.

In our analysis of company distribution, ISO does not measure or use actual historical response times of individual communities. Many fire departments lack accurate and reliable response-time information, and there is no standardized national record-keeping system that would allow us to determine accurate departmental response times.

Also, it would be inappropriate to incite fire-service personnel to push fire apparatus beyond a safe driving speed for the sake of faster response times, especially since U.S. Fire Administration statistics for 2005 indicate that 17% of firefighter on-duty fatalities resulted from responding to alarms.

The attached maps shows the areas the stations need to be placed, not the property the City needs to secure for future fire stations to provide adequate coverage, the map **DOES NOT** show stations that would be in the Transit Orient Development area. (This was not included because some of these facilities will need to be built with TIF funds and will need to be determined as the Master Plan for the TOD is completed and development begins.)



**Fire Stations Status**

- Current
- Properly Secured
- Relocation
- Site Needed

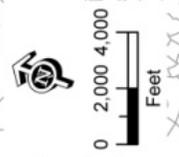
**City of Leander, Texas**  
**FIRE STATION**  
**MASTER PLAN**

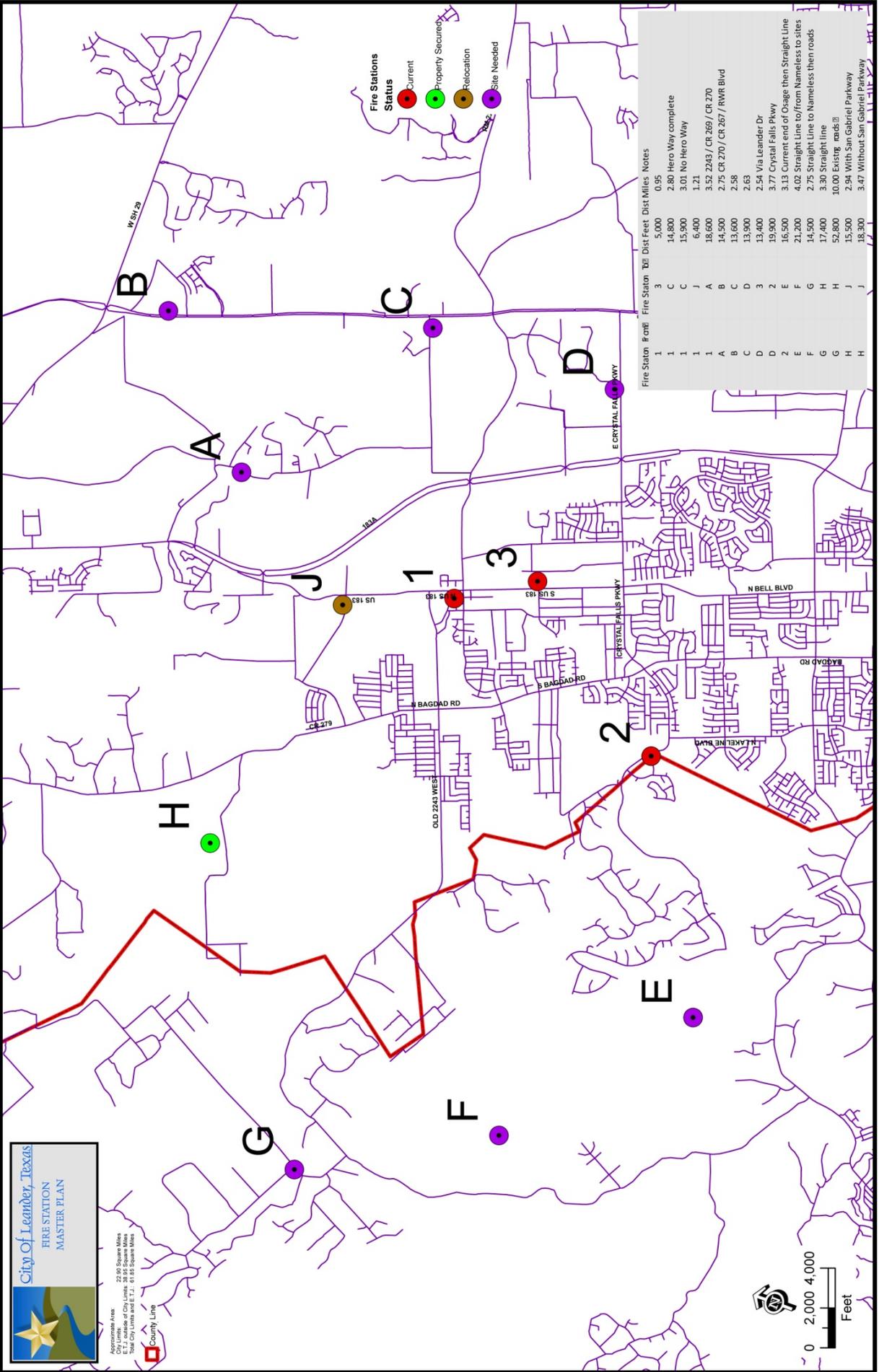
Approximate Area:  
 City Limits of City Limits: 22,000 Square Miles  
 Total City Limits and E.T.J.: 60,000 Square Miles

County Line

City of Leander - City Limits

City of Leander - 2 Mile and Voluntary E.T.J.





## **Decision Points for When to Build a Station**

Due to rapid growth and the City of Leander's effort to keep pace with this growth over time we have acquired property the City has needed to build a station. Moving forward the ability to get ahead of those needs will be financially beneficial to the City and allow for multiple funding options.

The decision for fire stations should be service driven, the need for the service or impending need should determine when a station is built and staffed. Indicators for this could be single or multiple, but would not require all three of the indicators (below) to be in place prior to starting construction of a fire station. The indicators are as follows:

- **Large Acreage Developments**

The development of 2800 acres or greater in an area that is adjoined or almost adjoining properties would need at least one station, depending on the site development plan, especially roadway access. This includes areas where the development may be multi-phased and construction will occur over time. The timeline for station construction would then be measured against the timeline for the phases of the project and identified when the phase begin to reach greater than 33% development. Then the fire station would need to be started.

- **Vicinity has increased calls that match or exceed 10% of the total call volume**

As the City of Leander grows the projection of growth patterns may be incorrect or certain types of development may change the service needs required by an area. These circumstances could cause a need for additional stations in that area. The indicator to determine this need would be if a geographic region of the city that did not have a fire station within 2 road miles of that area was having 10% of the emergency call volume in that area then a need to locate and station in that area would occur. If the area was already populated and a suitable site could not be selected for fire station construction then the option for adding a staffed additional unit at the closest station then could help with the calls, keeping in mind this would still allow for possible delays impacting service delivery to that area.

- **The Call volume exceeds the recommended National Standard for Fire Department responses times.**

The National Standard for fire department response is based on the type of area in which the event occurs. There should be an understanding in the community that someone that lives in a rural area that is several miles from the City will not get the same time efficiency in service delivery that a person living in the community receives. This includes fire department services. It is not feasible or practical to design a system of service delivery that allows for every person to receive a fire truck in front of their home in 9 minutes during an emergency if they live 10 miles from town, but it is a reasonable expectation for people living in the Incorporated City to receive that service 90% of the time. When an area of the City of Leander is not meeting the service times that is an indicator of the need for construction of a fire station in that area. If a fire station is in that area then it may require the staffing of an additional unit at that station.

The following is the National Standards for response times for fire departments:

| <b>Demand Zone</b> | <b>Demographics</b>             | <b>Response Time (minutes)</b>        | <b>Meets Objective (%)</b> |
|--------------------|---------------------------------|---------------------------------------|----------------------------|
| Urban area         | >1000 people/mi <sup>2</sup>    | 4                                     | 90                         |
| Suburban area      | 500–1000 people/mi <sup>2</sup> | 5                                     | 80                         |
| Rural area         | <500 people/mi <sup>2</sup>     | 9                                     | 80                         |
| Remote area        | Travel distance ≥ 8 mi          | Directly dependent on travel distance |                            |

## **Fire Station Design and Cost**

The City of Leander has taken time to evaluate and provide investments in the community when constructing the fire stations. The fire stations have been welcomed partners into the neighborhoods they are located because of the architectural design and appearance of the buildings. The department has evaluated the stations and found the model used for Fire Station # 2 to be the desired floor plans for stations and making the necessary architectural adjustments so the facility meets the appearance for the neighborhood in which it is built.

The current fire station plans are approximately 10,200 ft<sup>2</sup> the estimate cost per is \$185-\$200 per ft<sup>2</sup> given a construction cost of \$1,887,000 - \$2,040,000. This cost does not include the expense for property or furnishings.

# Fire Department Divisions and Responsibilities



Leander Fire Department  
2011-2015

Leander Fire Department is divided into five different divisions to allow for easier management and direction. The divisions are Administration, Operations, Training, Fire Prevention/Investigation, and Emergency Management. Each division has specific task and goals that are connected to the department's mission of "Saving lives and Property with Commitment and Excellence". That mission is part of the Cities goal for having a "livable city".

## **Administration**

The Administration Division is in place to manage the Department as a whole and provide direction for each of the other divisions. The Administration Division is overseen directly by the Fire Chief. Administration makes sure our customers receive excellent safety services. Some of those services include extinguishing fires, providing emergency medical first response, rescue services, educating the community on fire prevention and safety issues, disaster preparedness and hazard mitigation. In addition to the traditional service the department believes the prevention of any emergency or loss is one of our responsibilities and strives for this through our community involvement, codes, and ordinances pertaining to safety.

The Fire Administration also oversees personnel, budget, planning, and policy. The strength of the organization is the people, this is made possible by the partnerships with the Leander Professional Firefighters Association and Leander Volunteer Fire Department, Inc. Every day the department strives to meet our mission "**Saving Lives and Property with Commitment and Excellence**", this mission is met by working on solving the needs of both our internal and external customers.

Leander Fire Department is a unique organization that sets its own path by applying current science and reflecting on historical events. By doing this we are creating an organization respectful of the fire service traditions without being hampered by the fear of change.

Fire Administration has requested during this current fiscal year that the City of Leander receive a site visit from the Insurance Service Organization (ISO), ISO establishes the insurance rates for a community. This visit should help to lower the current classification of the city and lower property insurance rates.

Fire Administration is also working with the residents who live just outside the City of Leander to establish an Emergency Services District (ESD), the ESD will create a taxing authority for those residents to help raise funding to be able to create or contract with a municipality for the delivery of fire department services. The department feels very strongly the City of Leander will be requested to continue to provide these services and would receive the possibility of \$230,000 per year for those services. Currently those services are provided on a fee process or at no cost.

## **Operations**

The Operations Divisions primary responsibility is to provide fire containment, emergency medical first response, and rescue services to the areas inside the City limits of Leander. However, the department also responds to areas immediately outside the City limits in unincorporated areas of Williamson *and* Travis Counties.

The City of Leander Fire Department is a values driven organization that is in place to protect lives and property. The Fire Department takes its ability to promote the general welfare of the community very seriously and is proud to serve the community to the best of our abilities and training. We try to provide outstanding personal service utilizing our guiding documents such as **The Leander Way** and the **Leander Customer Service Principles**.

The operations division is what most people visualize when they think about a fire department. It is the fire trucks, the firefighters, and the fire stations. The daily tactical decisions and staff management is overseen by the Battalion Chief assigned to the specific shift working on that giving day. The operations staff works a traditional fire department schedule of on duty for 24 hours and off for 48 hours. Currently emergency responses are responded to from two stations, Fire Station #1 located at 201 N. Brushy Dr.

and Fire Station #2 located at 1950 Crystal Falls Parkway. Fire Station #3 is constructed but not staffed at this time. The staffing plan in this report calls for staffing of this facility in the 2012-2013 budget year.

Fire Station #1 responds first due to emergencies in the northern portions of the City, including Benbrook Ranch, Westwood, Leander Heights, and Vista Ridge.

Fire Station #2 protects the southern portion of the City, including Crystal Falls, Horizon Park, Hernandos Hideaway, and County Glen.

Administration/Fire Station #3 is actually two facilities in one. On one side is the Administrative Headquarters and Office of the Chief of Department. The opposite side is a fully functional fire station that is currently not staffed. The area around Fire Station #3 is covered by the units from Station #1 and Station #2.

Minimum staffing of career firefighters is 7 per day, yet with the assistance of volunteer firefighters, as many as 14 firefighters could be on duty. Firefighters are available 24 hours a day, 365 days a year to provide rapid response. These firefighters are also State of Texas EMS certified and respond to medical emergency calls.

The Leander Fire Department operates several large state of the art fire apparatus, as well as smaller support or utility vehicles are kept at the ready. On duty firefighters meticulously check and re-check the preparedness of equipment that is sometimes used only a handful of times in a year.

Leander firefighters also train every shift on some function of their job. Department wide training is held weekly.

This fiscal year the Operation Division will be implementing a new Computer Aided Dispatch (CAD) system, the CAD will provide real time updates to responding units, directions and mapping, and provide the closest unit recommendation to the dispatch center. This system will be interlinked with other fire departments, EMS, and the Sheriff's Office.

The operations staff will also complete the federally mandated radio transition this year. This will meet the new federal guidelines and allow for station specific notifications of emergency calls for those units.

## **Training**

It is the mission of the Leander Fire Department's Training Division to provide the highest quality and most progressive education and training to ensure our personnel can safely and effectively deliver exceptional service in all risk-related disciplines.

To function most effectively, the Operations Division must maintain the highest level of proficiency in accordance with standards and criteria established at the federal, state, and local level. The Training Division has the responsibility of monitoring these changing requirements and implementing training activities to ensure the department is well prepared. The development of training programs occurs through the research of new and innovative training practices and review of departmental curriculum. The responsibilities of the Training Division include:

- *Fire Suppression and Emergency Operations Training*
- *Emergency Medical Continuing Education and Refresher Courses*
- *Annual Cadet School (SFFMA Accredited Advanced certificate)*
- *Vehicle Extrication Course*
- *Hazardous Materials Training*
- *Firefighter Safety and Survival Training*
- *Officer and Career Development*
- *Texas Commission on Fire Protection Certification Courses*
- *Technical Rescue Training*
- *Emergency Medical Technician Course (for F.D. members only)*

Routine tasks for the Training Division include:

- *Development of programs*
- *Revise existing curriculum*
- *Acquisition of new materials*
- *Maintenance and monitoring of certifications*
- *Maintenance of instructor skills*
- *Participation in applicant and promotional testing*
- *Delivery and development of the Annual Training Plan*

The Training Division is located in the Leander Fire Department Administrative and Training Facility located at 101 E. Sonny Drive. The Training division oversees a state of the art training facility that is used not only by the Leander Fire Department but also by law enforcement, other fire departments, EMS agencies from around the county, region, and state. The training facility has the following features:

- *A 60 seat classroom*
- *A 60 seat dirty room w/ garage door*
- *A 10 seat computer lab*
- *A simulation Lab*
- *Work out facility*
- *Department Library*

**2-story burn building:**

- *Multiple burn rooms*
- *Garage fire simulator*
- *Attic fire simulator*
- *Sprinkler system*
- *Pitched roof ventilation prop.*

**4-story Training Tower:**

- *Confined space simulator*
- *Forcible entry simulator*
- *Standpipe system*
- *Anchors for rappelling*
- *Smoke generator leading to all floors*

**LPG Props:**

- *Propane tank*
- *Upright vessel*
- *Industrial cabinet*
- *Vehicle fire prop*

The Leander Fire Department is a combination which means the staff of the department is made up of career and volunteer professionals. Firefighting is a dangerous job, this danger is made manageable by quality training and equipment. The department takes it responsibility to make firefighting as safe as possible for its members seriously, in doing this we require our volunteer members to receive training before responding to emergency incidents. This academy is designed for our new members to receive that training. The academy approach has been adopted by several other departments since Leander Fire Department began this program, currently the department receives request from other agencies in the area to allow their members to attend our training academy.

The Cadet Academy is a 10 month program designed to teach selected candidates the knowledge and skills to work proficiently as a volunteer firefighter with the Leander Fire Department. Classes are held on Tuesday and Thursdays nights with occasional Saturday classes. Some of the topics taught in the Academy include:

- *Fire Science*
- *Firefighter Safety*
- *Fire Hose*
- *Rescue Operations*
- *Wildland Firefighting*
- *Vehicle Extrication*
- *Hazardous Materials*
- *Public Fire Education*
- *Emergency Medical Technician*

Cadets graduate the Academy with a State Fireman's and Fire Marshals' Association accredited Advanced Firefighter certificate and a Texas Department of State Health Services EMT. After the Academy, Probationary Firefighters are assigned a station to complete their probationary period. During

this time Probationary Firefighters practice their skills, receive evaluations on their performance, and respond to emergencies.

Te graduates are eligible to challenge for the Texas Commission on Fire Protection Structural Firefighter Test, upon successful completion of this challenge are eligible to be paid firefighters. Several graduates work for the Leander Fire Department while many others have gone to work at several departments around the area. This program allows us to continue a workforce development program for the department in the future.

### **Prevention/Investigation Division**

The Prevention Division is charged with the task of maintaining safety as Leander continues to grow. Along with new construction inspections and Certificate of Occupancy, the Leander Fire Department performs annual inspections, as governed by State, County, and municipal requirements for Daycare Centers, Group Daycare, In-home Daycare, Registered Family Homes, Foster / Adoption Care, Nursing Homes, Hospitals / Clinics.

There are a number of occupancies within the City of Leander that receive regular fire and life-safety inspections. Examples include day cares, health care facilities, and institutional occupancies. Inspections also ensure that all fire protection systems within structures (sprinklers, alarms, elevators, etc.) in the City receive an annual inspection by an independent third-party contractor (this is a state requirement enforced by local municipalities). Any business within the City is subject to a periodic fire and life safety inspection by the Prevention Division. The Prevention Division inspects all multi-family residential occupancies within the City. Due to the unique risks posed by multi-family residential structures the department has made them a priority for regular fire and life safety inspections. The Prevention Division also maintains annual inspections on Public Assemblies, a Public Assembly building is any structure that is designed for 50 or more people to meet for entertainment, worship, dining or amusement.

The Prevention Division also coordinates and delivers the departments Wildfire Education Programs, and coordinates neighborhoods that are working in the Fire Wise Program, the Fire Wise Program is a national program that gives guidance to neighborhoods and communities on how to protect the neighborhood from wildfires and wildfire urban interface events by cleaning up the areas, planting fire resistant plants, preparing for evacuations, and making the homes fire resistant. This has become a very popular program and currently is being done in three separate neighborhoods in the Leander.

The Prevention Division also oversees the Annual Pre-Plan Program, the Annual Pre-Plan Program is a program in which each individual fire company performs several detailed pre-plans buildings in their response territory. These pre-plans include information on the building's location, occupancy, hazards, fire department connections and hydrants, building layout, and other pertinent data that would assist the fire department in case of an emergency. These pre-plans are then accessible by computer during an incident at that location.

The Prevention Division also meets with developers, builders and investors that are building or want to build in Leander to provide them information about codes, ordinances, and cost effective means to meet the requirements.

The Prevention Division is responsible for determining causes for all fires that are the responsibility of the Leander Fire Department, the investigators in the division work with local law enforcement for arrest and prosecution on arson and criminal mischief cases. Each fire is investigated in the City and by ordinance is the responsibility of the fire department.

The coming year the Prevention Division will be working to expand the Fire Code to be enforced in the Extraterritorial Jurisdiction so as the City of Leander grows the building that are annexed will meet the safety standards of the City.

The Prevention Department works on a regional level with Fire Departments and Cities in the Capitol Area to keep all codes in the same version so as to keep building construction cost similar in all cities.

## **Emergency Management**

The Emergency Management Division or Office of Emergency Management (OEM) is responsible for the planning, coordination, and implementation of all emergency management and homeland security related activities for the City of Leander. The Mission of the OEM is to lessen the loss of life and reduce injuries and property damage during natural or man-made incidents through mitigation, preparedness, response, and recovery in accordance with the City of Leander's Emergency Operations Plan.

OEM also coordinates the activities for the City's Emergency Operations Center (EOC). The EOC, when activated is a central location where representatives of local government and private sector agencies convene during disaster situations to make decisions, set priorities and coordinate resources for response and recovery.

All City OEM activities are focused around the four primary phases of emergency management; Mitigation, Preparedness, Response and Recovery.

**Mitigation:** Actions taken to avoid an incident or to intervene to stop an incident from occurring in the effort to protect lives and property.

**Preparedness:** Activities such as planning, training, public education and outreach to create awareness of potential dangers and increase readiness in our community.

**Response:** Use of available resources to meet the needs of the community when disaster strikes. Depending on the severity of the disaster, this can include local, county, State and Federal resources, to include fire and EMS services, public works, and law enforcement.

**Recovery:** The long range support of restoring the community to pre-disaster conditions. This phase includes damage assessments to public and private property, as well as social services to assist citizens. The length of the recovery phase depends on the magnitude of the disaster.

The Emergency Management Division is responsible for guiding the City of Leander to meet Federal requirements established by Presidential Order 5 and Presidential Order 8. These Orders define what the minimum training is needed by responders and local government employees for disaster preparedness response, and recovery. The Orders also defined the steps that must be followed during a disaster.

The Emergency Management Division is presenting the first phase to City Council a new Hazard Mitigation Plan for acceptance. This plan is part of a regional plan by design but allows for specific targeted hazards in each city. This will be the first adopted mitigation plan for the City of Leander and will address flooding, wildfire, and hazardous material issues in the city.

The Emergency Management Division will also start delivery of the mandatory National Incident Management Course required by all level of employee in municipal government. These will be the first courses that are part of a two year plan working towards an exercise to test the City of Leander's response and operations during a major disaster. This planning will take into account the development and application of a Continuation Operations Plan that will be developed during this time frame.

# Appendices



**Appendix A**  
**Plan Cost and Revenue Estimates**

| Budget Year | Additional Items                 |               | Budget Increase | ESD Revenue # |
|-------------|----------------------------------|---------------|-----------------|---------------|
| 2012-2013   | 3 Lieutenants and 3 Firefighters |               |                 |               |
|             | Use current Drivers on the Squad |               |                 |               |
|             | to Open Fire Station 3*          | \$ 261,669.00 |                 |               |
|             | Assistant Fire Chief*            | \$ 78,236.00  |                 |               |
|             | Additional funding for payment   |               |                 |               |
|             | on New Engine to replace         | \$ 27,900.00  |                 |               |
|             | Fire Engine at Station1**        |               | \$ 367,805.00   | \$ 230,000.00 |
|             |                                  |               |                 |               |
| 2013-2014   | Emergency Management Coord*      | \$ 55,207.00  |                 |               |
|             | Administrative Clerk*            | \$ 28,968.00  |                 |               |
|             | Administrative Vehicle***        | \$ 9,000.00   |                 |               |
|             |                                  |               |                 |               |
| 2014-2015   | 3 Firefighters *                 | \$ 113,793.00 | \$ 113,793.00   | \$ 230,000.00 |
|             | Totals                           |               | \$ 574,773.00   | \$ 690,000.00 |
|             | Difference                       |               |                 | \$ 115,227.00 |

\*All numbers based on 2011-2012 salaries does not include benefits

\*\* Additional funds added to current tanker payment that is complete during 2011-2012 budget year

\*\*\*Annual Payment for vehicle and equipment for Administrative Vehicle

# Funds projected if ESD established and contract received

**Appendix B**  
**2011 Fire Storm Events**

**Gran Mesa Fire**

|   |    |              |
|---|----|--------------|
| City of Leander Cost                      | \$ | 35,076.59    |
| Other Agency Cost                         | \$ | 73,210.76    |
| Total Bill Sent to FEMA                   | \$ | 108,287.35   |
| Expected reimbursement                    | \$ | 81,215.51    |
| Reimbursement Estimate to City of Leander | \$ | 26,307.44    |
| Amount Not Reimbursed                     | \$ | 8,769.15     |
| Property Value Lost                       | \$ | -            |
| Property Value Threatended                | \$ | 9,000,000.00 |

**Horseshoe Fire**

|   |    |               |
|---|----|---------------|
| City of Leander Cost                      | \$ | 38,348.12     |
| Other Agency Cost                         | \$ | 27,176.46     |
| Total Bill Sent to FEMA                   | \$ | 65,524.58     |
| Expected reimbursement                    | \$ | 49,143.44     |
| Reimbursement Estimate to City of Leander | \$ | 28,761.09     |
| Amount Not Reimbursed                     | \$ | 9,587.03      |
| Property Value Lost                       | \$ | 335,644.00    |
| Property Value Threatended                | \$ | 11,105,000.00 |
| Home Lost                                 |    | 15            |
| Homes Damaged                             |    | 5             |
| Homes Effected                            |    | 16            |
| Homes Saved                               |    | 100           |

**Moon Glow Fire** (Estimates still calculating Expenses)

|   |    |               |
|---|----|---------------|
| City of Leander Cost                      | \$ | 42,300.00     |
| Other Agency Cost                         | \$ | 40,195.00     |
| Total Bill to be Sent to FEMA             | \$ | 82,495.00     |
| Expected reimbursement                    | \$ | 61,871.25     |
| Reimbursement Estimate to City of Leander | \$ | 31,725.00     |
| Amount Not Reimbursed                     | \$ | 10,575.00     |
| Property Value Lost                       | \$ | 1,738,732.00  |
| Property Value Threatended                | \$ | 42,960,000.00 |
| Home Lost                                 |    | 9             |
| Homes Damaged                             |    | 9             |
| Homes Effected                            |    | 38            |
| Homes Saved                               |    | 370           |

|                          |     |                  |                  |
|--------------------------|-----|------------------|------------------|
| Total Homes Saved        | 470 | Total Threatened | \$ 63,065,000.00 |
| Total Homes Lost/Damaged | 92  | Total Loss       | \$ 2,074,376.00  |

## Appendix C

### 2011 Wildfire Summary

The Texas 2011 Wildland Fire Season was the worst season on record for the State of Texas. The City of Leander was not spared the damaging effects of this drought produced disaster. The City of Leander faced three major fires in the City during 2011, the Gran Mesa Fire starting on June 16th, The Horseshoe Fire starting on August 15th, and the Moon Glow Fire starting on September 5<sup>th</sup>. These fires caused more than \$2 million dollars in property loss to the City of Leander. The fires also cost over \$200,000 dollars to local agencies to combat and saw the injury of three firefighters during these events.

Currently 80% of the structures, buildings, fences, cars, or out buildings destroyed or impacted by the fires have been cleaned up with plans established for the remaining items. 95% the victims of these fires have been either placed in or received plans for housing and moved out of short term solutions. Long term assistance is being continued to be established for those remaining without a new home.

These events were tragic but some positive items that must be taken from these disasters was the ability to save over \$63 million dollars worth of property that was threatened and no loss of life. The Leander Fire Department and the City of Leander as a whole was tested and strained during this time but was able to respond during this crisis to help bring normalcy back to a chaotic time.

The ability to respond and manage these events in a professional manner is a testament to the members of the fire department, the employees of the City of Leander, and the strong partnerships and relations that have been built by these people with other local, state, county, and federal agencies to make sure the Citizens of Leander are protected.

The Leander Fire Department will continue to learn from these types of events and will work to improve the outcomes, with that said I believe the actions by the fire department were heroic and exceptional in the actions taken by the members of the department during these events that lead to no loss of life and limited devastation of property

Another great positive was the out pouring of support, donations, and work by the citizens of Leander to want to help, support and assist their neighbors was beyond anything that could have been expected or imagined. The ability of neighbor helping neighbor and even strangers helping each other to make it through these events was very touching.

The support of elected officials during these events was appreciated. The understanding by the elected officials of their role during this time is greatly appreciated and not a luxury that all agencies in the State of Texas received during the times they had major events. Thank you again.

The recovery of from these devastating fires is still ongoing and work with the Federal and State agencies will continue for the next year in completing the necessary documentation, reviews, and lesson learned after action reviews. While we never hope we face these disastrous events again we know that circumstances for these types of events continue to develop and will be with us for several years to come.

The memories of these fires will be with the community and the victims for years to come but in those memories there will be the positives that there community stepped up and help them.