

**CITY OF SPRINGDALE
Committee Agendas
Monday, September 14th, 2015
Multipurpose Room #236
City Administration Building
Meetings begin at **5:30 p.m.****

Police and Fire Committee by Chairman Rick Culver:

1. **A Discussion** of the Needs Assessment Report for the Springdale Fire Department.
Presented by: Mike Irwin, Fire Chief

Street & CIP Committee by Chairman Rick Evans:

2. **A Discussion** of future road projects. Presented by: Mayor Doug Sprouse

**Springdale Fire Department
Needs Assessment Report**

To the Mayor and City Council



August 06, 2015

History:

As many of you are aware, the Springdale Fire Department opened two new relocated stations in our community. Thanks to the generosity of our fine citizens, and the commitment by the Mayor and City Council, the City was able to pass a fire department bond that allowed us to complete this much needed change in our department. We were a little shy of our original projected budget associated with such a large endeavor. We had envisioned not only being able to relocate these two stations, but also add an additional station. After months of planning, designing, needs assessment and overall concepts; it became too expensive for the three stations to be built using only bond money. Thoughts about taking the additional funding from the Capital Improvement Program (CIP) Funds was considered, until it was determined by the Mayor's Office that even the additional staffing needed was too expensive. That is when after discussions with all of you, the decision was made to postpone the building of station 7. With that decision came the reality that while we were going to address some of our needs with this bond, we have some work to do in order to bring the Springdale Fire Department up to the standards that are considered normal in our industry.

Upon my arrival, one of my first priorities in my new position was to scientifically identify good relocation positions, as well as future station locations to best serve our community. We completed that task with a GIS study completed by the IAFF and realized that for us to meet the requirements of the Insurance Services Office (ISO) we would actually need a total of 4 additional stations. That concept and need has never changed. We still need that today. The 2 new stations have been a great addition in addressing some of our concerns with lengthy response times in certain areas of our city as well as our distribution of resources. I and the Springdale Fire Department cannot thank you enough for your support in accomplishing this change. As helpful as the relocations of these two stations were to our operations, we are still in a need to improve our station numbers and locations, as well as increase personnel in order to improve our concentration and deliver an Effective Response Force (ERF) in order to meet the industry standard.

We have even forged a plan to pull our EMS response resources back to within the city limits of Springdale as it was becoming increasingly difficult to cover our calls. The only way to avoid an immediate need to add staffing on the EMS side was to consider the reduction in response coverage area. Keep in mind that historical data shows that this will only be a stopgap measure and will only delay adding additional EMS capabilities by one or possibly two years. Even with this move, our emergency all-risk response is still in jeopardy as we have not addressed adding any personnel or stations.

Scientific Backing for request:

Fire Behavior has changed. Scientific studies from National Institute of Science and Technology (NIST), along with Underwriter Laboratories (UL) have completed a lengthy study on fire behavior. While most fire service personnel knew of these impacts, we now have the science to back up those ideas. Fires today are much more aggressive than the fires of the past. Legacy fires typically burned natural products. Those past fires consisted of wood, cotton, wool, etc. There were no or very little synthetics in the legacy fires, which is what our procedures have been based on for hundreds of years. As we began to see the synthetics introduced into our everyday world, it began to change the dynamics of fire. Now more than ever, most if not all of our surroundings consist of synthetic materials. Many of these produce much more energy than the legacy fuels and will reach flashover much more rapidly than the legacy fuels. Our current response models are changing to adapt to these; however, we still rely on the response procedures based on legacy fuels.

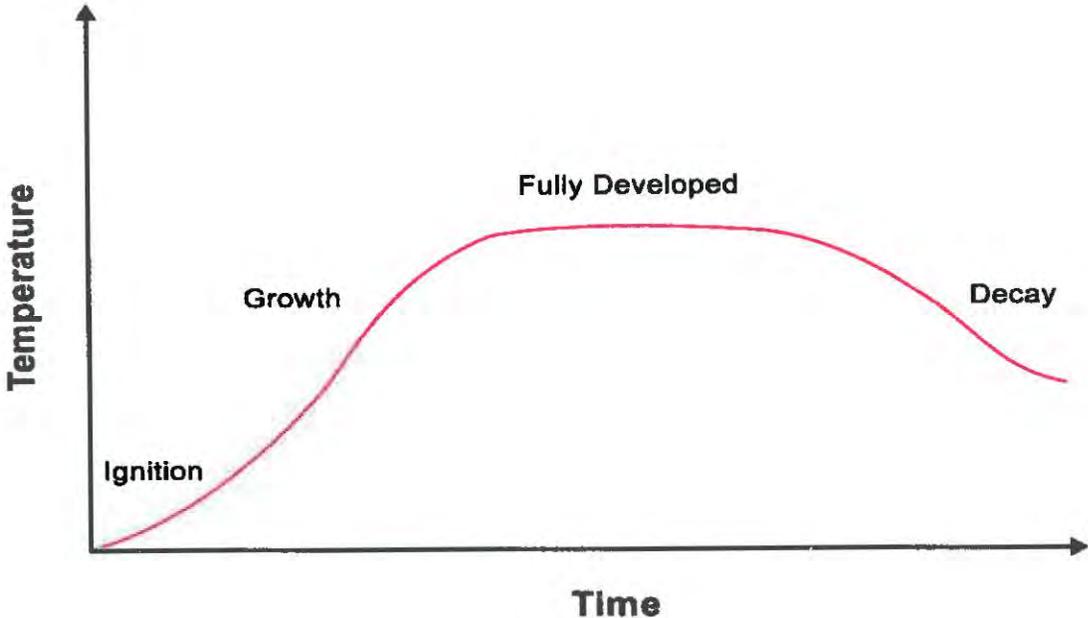
Our community is no different than most any other community in that this impact has caused our fires to become much more rapid in development. This directly impacts the citizens, visitors, and our firefighters, and means that risk of death rises more quickly with less time to escape. It also means that more damage will occur to the property. And last but not least, is the increased risk of injury or death of a firefighter because of the much more rapid development of flash-over. Flash-over is when everything in the room or building catches fire at the same time, engulfing the entire area in flames. It has been known for years that the fire services goal is to arrive and begin extinguishing methods prior to flashover, which will aid in life-safety, lessen property damage, and be less dangerous for firefighters.

Legacy fires typically showed flash-over times to be consistently around the 25-30 minute mark. If you consider the nationwide average total response time is around 8 minutes, it gave ample time for the fire department to do its work. In today's environment with the modern fuels, as described above, studies have shown that flash-over is occurring around the 8-10 minute mark. This is a tremendous data point to remember since this is typically when we are just arriving on scene. This phenomenon adds to the risk to life with the flash-over, the increased property damage, and the added risk to firefighters has shown that today it is even more critical to have our distribution of resources correct.

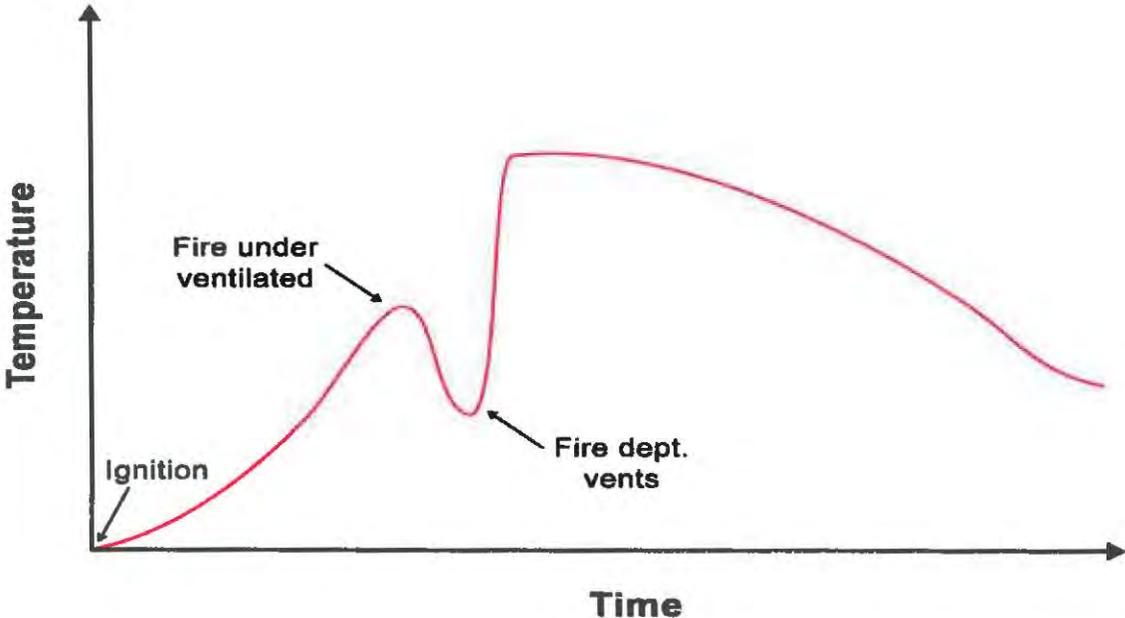
Added to this risk is now the development of light-weight construction, which through scientific research has proven to be much more prone to collapse much more rapidly when exposed to fire conditions. This breeds even more risk to the community, our citizens and visitors, and our firefighters.

Let's take a look at a legacy fire growth chart and the modern fire growth chart to further explain the differences in the types of fires I have been discussing.

Legacy Fire Growth Chart:



Modern Fire Growth Chart:



The Problem:

As I have described, the impacts on the lives of people in our community, our property, and our firefighters are predictable. We also have an impact on the very thing that the City of Springdale is trying to enhance, and that is to increase our revenue with growth, retail, industry, and population. Some underlying consequences of not addressing the issues are:

- A downgrade to our Insurance Service Office (ISO) classification. We simply cannot begin to even consider keeping our ISO classification of a Class 2 city without addressing some of the issues.
- Longer response times which puts our citizens and visitors at a higher risk
- An increased risk of firefighter injuries or death
- Stagnant or declining growth of jobs, retail, and industry as we see surrounding communities achieving emergency services coverage to meet industry standards.
- More property damage which will result in more lost revenue from tax declines, or even businesses and industry moving out to avoid continued exposure. Lost funds for the city to continue to address the needs of its citizens.

We know a problem exists when the number of alarms exceed the established performance standard. The industry standard is a total response time to the scene of an emergency for the first arriving unit as a benchmark of 5 minutes 12 seconds 90% of the time. Our Community Driven Strategic Planning group identified an acceptable time of 6 minutes and 50 seconds for a total response time 90% of the time for the first arriving unit. Currently, we are achieving a time of 6 minutes 58 seconds 90% of the time for our first arriving unit. While we are only a few seconds over, the data is showing a trend of longer response times each year. It will continue to be an issue as we begin to see calls occurring in our outlying coverage areas where we have longer distances to travel and increased response times.

Request:

We would like to ask the Mayor and Council to consider a plan to address our problems and the issues identified in this report. We are requesting that we move forward with completing station 7 as quickly as possible. We have the land, the design, and the engineering completed which should lower the overall costs of the station. After careful research and data collection of the past three years of calls, we are even willing to reallocate personnel to avoid hiring additional staffing to help with the overall costs. While this is not ideal, we are willing to compromise in

order to address some of the immediate needs. This would require a change in deployment as we would need to add a quint to the fleet to serve both as an engine and ladder.

We would also like to work with the Mayor and Council to develop a five year plan on how to achieve our complete needs build out based on our current situation. I would like to see stations 8, 9, and 10 planned, and station 8 built prior to the end of this timeframe. We will also have to look at staffing needs in order to deliver the distribution, and concentration of resources needed to protect our community to the level that they have defined and expect.

The reaction of our community and elected officials to the recent tragic deaths in our community to increase our police force was an acceptable decision. We all stood hand in hand knowing that something had to be done, and everyone agreed that additional officers was just one component of the puzzle. While I fully supported that decision then and even now, I do want to point out that I want to be proactive with the Springdale Fire Department and address our problems before our disaster occurs. I want to be able to look you and our citizens in the eye and explain that we have addressed our known issues, and we did the very best we could at preplanning to keep that next disaster as manageable as possible.

I understand that this is a major undertaking and investment. But, I also believe that if Springdale desires to compete with our surrounding cities for their market share, we cannot overlook these issues. Many studies have been completed as to what is important for prospective businesses and population when relocating to an area. Almost always, the top of the list on relocating is cost-of-living, schools, and public safety. I encourage each of you to consider what is being requested, and together let's find a way to plan to address the immediate needs and issues as a group with an understanding that we are truly investing in the future of Springdale. As always, I am available for any questions that you may have, and I also have a presentation of this report that I am willing to share with anyone interested. Again, I want to thank you for your support in the past, your continued support, and your future support of the Springdale Fire Department.

Mike Irwin

Fire Chief

Springdale Fire Department