**Round Rock Fire Department**

# Memo

**To:** All Personnel

**From:** Deputy Fire Chief David Smith

**Date:** January 13, 2005

**Re:** MAG Report

---

## PLEASE READ THIS *BEFORE* YOU READ THE REPORT

We have received the report from our consultants and it is now available for your review. I want your feedback on this report and its recommendations, and look forward to your comments. All input we receive is valuable and will be considered before we recommend a final plan for the City Manager's and City Council approval.

It's important to remember that what is contained in this report is not the final say on Fire Department planning. This report has three options regarding station location, staffing and equipping. These are not the only options we will consider. We are awaiting a similar report from the IAFF. We will review the options in both documents, discuss them internally, discuss them with the City Council and also get public input on the proposals. Based on all the input we receive, we will develop a plan that will enable the Fire Department to meet its mission.

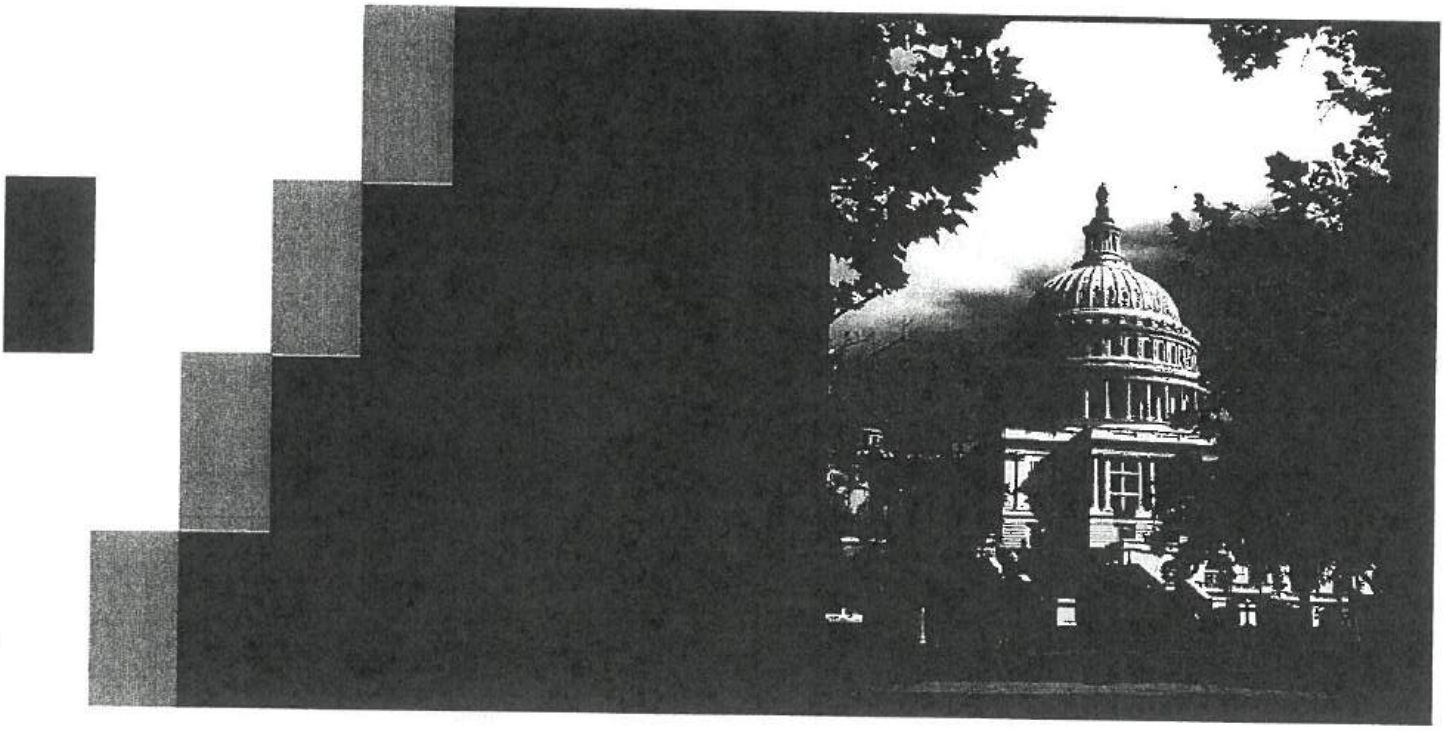
Our mission is: "Through a professional, well-trained and safe work force, the members of the Round Rock Fire Department are committed to delivering the highest level of fire suppression, emergency medical, fire prevention and disaster services within the City's financial capability for our rapidly changing residential, business and corporate communities."

The MAG report and overall RRFD issues will be among the primary topics of discussion at an all-day City Council retreat on Feb. 16. That's our first milestone in this planning process. Based on direction from the City Council, City Manager and Chief Hodge, we will continue to refine the plan in the months to come. Your input will continue to be solicited as we move forward.

There are also organizational recommendations. Again, these are only recommendations. Chief Hodge will have the final say and will certainly consider these recommendations as he reviews the Department and makes decisions on our organizational structure and staffing. Again, your input is vital in this decision making process.

So please take your time in reviewing your report, and make sure you put your comments in writing – either in email or handwritten notes, it doesn't matter – and forward them to me. I'll get them compiled in a one document to make sure no one's comments slip through the cracks.

MAG Management Advisory Group, Inc.



# Operational Review of the Fire Department

## City of Round Rock, Texas

## January 2005

# *Management Advisory Group, Inc.*

**15974 Cove Lane**
**Montclair, Virginia 22026**
**Phone: 703.590.7250**
**FAX: 703.590.0336**
Email: don@maginc.org
www.maginc.org


January 11, 2004

Mr. David Smith
City of Round Rock
221 E. Main Street
Round Rock, Texas 78664

Dear Chief Smith:

Enclosed is a report for the Operational Review of the Round Rock Fire Department performed for the City of Round Rock by Management Advisory Group.

As you know, the study was initiated in early October at a meeting with yourself, the City Manager, and Fire Department management team members. Substantial written information and maps were provided by City staff, for which we are most appreciative. We visited all stations and toured the City to ensure that we had an understanding of the environment. As you know, we also met with Williamson County EMS.

During October, we met with the Advisory Committee to obtain their input into the study.

In early November, we provided written feedback in the form of preliminary findings and observations in order to help in your assessment of candidates for the position of Fire Chief. We hope that information was helpful to the City Manager as part of the selection process.

We look forward to discussing the study results with you and others who have a sustained interest in ensuring a highly successful Fire Department.

Sincerely,

Donald C. Long
Senior Vice-President
Management Advisory Group, Intl., Inc.

Cc: City Manager Jim Nuse

# Operational Review of the Round Rock Fire Department

# For The City of Round Rock, Texas

January 11, 2005

By:


*Management Advisory Group, Inc.*

*Management Advisory Group, Inc.*
*15974 Cove Lane*
*Montclair, Virginia 22026*

# *EXECUTIVE SUMMARY*

**Overall Purpose of the Study:**

The City of Round Rock sought a comprehensive assessment of the management and organization of the fire protection services, fire related emergency response services as well as emergency medical services within the City. The City requested an immediate analysis and a long-term (10 years) vision for fire and EMS services.

This work effort has been the result of a cooperative and excellent working relationship on the part of all parties. The project has included extensive interactions with stakeholders in the organization, including management, employees, union members and others in the community with substantive observations or information to share.

**Positive Points**

Often, consulting reports will identify concerns and only focus on determining methods to improve upon those concerns. As a result, the strengths within the organization can be overlooked. We offer the following positive items for consideration:

- The fact that the City Manager initiated an outside review of the Department, with the goal of identifying any concerns, in order to prepare the Department for the challenges of the future, is a positive step. This is a risk taking strategy that not all municipal managers are willing to take.

- Communications with the work force appear to have improved within the last year due to initiatives of the city management team, including the establishment of an internal advisory committee for fire services. The management team has demonstrated its interest in listening to employee concerns.

- Relationships internally appear to have improved due to a more open and constructive set of interactions between Department management and personnel.

- Personnel within the Department appear to be dedicated to improving the day to day operations of the Department to ensure a good quality of service to citizens.

- The desire to create and implement a strategic plan that includes a wide range of recommended improvements is an excellent signal to the community that the City intends to aggressively address the anticipated future growth in the community.

- The condition of the apparatus and facilities indicate that Department personnel have pride in their department.
- Department personnel's rapid response from quarters indicates that they are motivated to provide a superior level of service.
- The interest in this study shown by personnel at all levels indicates a desire to create a superior fire service organization.

**Study Approach/Methodology**

The first portion of the study included a documentation and assessment of the issues and existing operations of the Department. The second major portion of the study was the creation of a series of recommendations that focused on the critical items for the study. Recommendations are balanced between the desired level of services and the cost-effectiveness of delivering those services. The third major portion of the scope of work has been the preparation of a report that includes a master plan of action. The Implementation Table includes time lines for action, responsibility for ensuring that actions are taken, and any fiscal impact anticipated as a result of each component of the plan.

**Fire Department Staff Observations**

MAG met with all levels of the Fire Department organization, including management and staff positions. Selected observations included:

- There is no existing strategic plan.
- If analysis indicates that the City should pursue a higher or different level of EMS services now, then that should be recommended.
- Staff agreed that by planning ahead over at least a five year period, the ability to pay for changes would be more easily absorbed.
- There was some level of agreement that there are overlapping response areas in the central portions of the city.

- The Department has not planned sufficiently and has not made incremental requests for resources. The Department has typically received very little relative to the perceived level of needs.

- Problems within the Department have evolved over time due to "management style". The relationship with the union is not perfect, but the overall relationship is perceived as better with the change in management.

- Department staff indicated that current communications with the City Manager are positive. The current City Manager provides a forum for input through regular meetings.

- Department staff concludes that the County wants to provide the entire EMS service without service contribution from the City, and that the City's leverage is the housing of County EMS staff at City stations.

- Round Rock Fire Department staff indicated that the VFD currently has "limited" usefulness, due to their other time obligations and the increasing level of training required in the fire service.

- The union indicated that the dispatch service is "horrible", and that average dispatch times are approximately two minutes. The goal for the average dispatch time is one minute 15 seconds. The Police Department staff indicated an average of approximately 30-45 seconds. That level of service appears to apply only to accidents (major and minor) in which the police department has been on scene and has collected information already.

- The City has grown significantly in the 1990's, and continues its growth. The City has established a development friendly environment. The General Plan forecasts that the current 80,000 population level will rise to 121,350 in 2014 and to 145,000 by the year 2020.

**Major Recommendations**

The report includes numerous structural, operational, and financial recommendations. These recommendations are detailed in section 4.0, and summarized in section 5.0, where an Implementation Table is provided. Several major options for service delivery are detailed, with each approach identifying personnel levels, major apparatus, and operational issues that would need to be addressed. Major recommendations may be classified into several areas of review. They include:

**Policy:**

- Develop Service Level Guidelines and submit to Advisory Group for input, then to Council for formal adoption.
- Develop RRFD response Goals and Objectives.
- Determine future fire station locations based on computer assisted map analysis and adopted RRFD response goals and objectives.
- Establish a written agreement with WCEMS for delivery of EMS within the City.
- Reconsider policy requiring dispatch of RRFD for every EMS incident.
- Establish EMS Peer Review Process.
- Evaluate and implement, as determined, RRFD EMS options.
- Emphasize utility in future station design.
- Encourage RRFD personnel input on station design.
- Develop plan for Accreditation effort for submission to CM and Council.
- Develop "firm" RRFD training objectives.
- Provide overtime funding for training.
- Establish Code Enforcement Objectives.
- Develop a code enforcement policy.
- Develop formal agreement regarding evolvement of RRVFD to RRFD Reserve.

**Organizational:**

- Expand Advisory Group (AG).
- Implement recommended administrative organization structure
- Establish EMS Advisory Committee.

**Operational:**

- Integrate RRFD and CAD system data.
- Take necessary action to improve dispatch of RRFD.

- Expand AED Public Access Program.
- Use computer assisted map analysis for future station location determination.
- Establish personnel performance feedback for significant incidents.
- Determine & Implement RRFD Deployment Plan.
- Develop a fire inspection manual.
- Transfer all Information Technology responsibility and authority to a new Data Analysis Unit.
- Implement RRFD Reserve program.
- Adopt NIMS for management of all incidents
- Modify RRFD's involvement in non-mission programs.
- Assign primary training responsibilities to Company Officers.
- Develop company equipment standards.
- Establish a RRFD Fleet Maintenance Unit
- Transfer all administration clerical functions to a new Administrative Unit managed by an Administrative Assistant, reporting directly to the Chief of Department.

**Personnel:**

- Establish position of RRFD Medical Director (MD).
- Establish a Data Analysis Officer position at the Captain level
- Establish a new Platoon Adjutant's position at the Captain's level for each of the 3 Platoons.
- Establish a RRFD EMS Coordinator/Training position at the Captain's level.
- Establish a Training / Safety Officer at Battalion Chief level.
- Re-designate the Fire Marshal's position as a Battalion Chief's position.
- Establish an Assistant Fire Marshal position at the Captain's level
- Establish an Assistant Training/Safety Officer position at Capt's level.

- Establish a non-sworn Training Specialist position to assist in development of RRFD training programs.
- Delete both Lieutenant positions now assigned to Training.
- Establish a non-sworn Specialist position for public fire and life safety education.
- Increase Dispatch Center Staffing.
- Establish a Chief Fire Mechanic position
- Transfer to Mechanics to the recommended RRFD Fleet Maintenance Unit

**Capital Improvement:**

- Create a new EOC facility adjacent to Dispatch Center
- Provide Mobile Computer Terminals for Reserve Apparatus
- Upgrade EMS dispatch hardware/software.
- Use metal, modular construction to facilitate relocation of future fire stations.
- Replace current Command Apparatus with van design vehicles.

Purchase reserve aerial apparatus (if Option 1, 2 or 4 selected for future deployment).

**Service Options:**

There are three major options for service delivery that are discussed in the report. They each address stations, staffing, and apparatus requirements. Costs for each are identified for the near term (1-2 years), mid-term (2-5 years), and long-term (5-10 years). It is suggested that a determination of future RRFD deployment should be made before any further apparatus or station improvement investments are made. The costs for the three options are as follows (personnel costs are annualized):

| Term/Option | One | Two | Three |
|---|---|---|---|
| **Near Term** | Facilities: $3,000,000<br>Apparatus: $1,775,000<br>Personnel $1,890,000 | Facilities: $4,000,000<br>Apparatus: $1,400,000<br>Personnel: $1,840,000 | Facilities: $3,000,000<br>Apparatus:$2,100,000<br>Personnel:$ 575,000 |
| **Mid Term** | Facilities: $1,000,000<br>Apparatus: $ 0<br>Personnel: $ 0 | Facilities: $ 0<br>Apparatus: $0<br>Personnel$1,350,000 | Facilities: $1,000,000<br>Apparatus:$1,400,000<br>Personnel:$ 800,000 |
| **Long Term** | Facilities:Undetermined<br>Apparatus: $ 0<br>Personnel: $ 0 | Facilities: Undetermined<br>Apparatus: $0<br>Personnel: $0 | Facilities:Undetermined<br>Apparatus: $ 700,000<br>Personnel $ 400,000 |
| **TOTALS** | **Facilities:$4,000,000**<br>**Apparatus: $1,775,000**<br>**Personnel: $1,890,000*** | **Facilities: $4,000,000**<br>**Apparatus: $1,400,000**<br>**Personnel: $3,190,000*** | **Facilities: $4,000,000**<br>**Apparatus: $4,200,000**<br>**Personnel: $1,775,000*** |

** Annual recurring costs*

# THE CITY OF ROUND ROCK, TEXAS

## OPERATIONAL REVIEW
## OF THE
## ROUND ROCK FIRE DEPARTMENT

# TABLE OF CONTENTS

# SCOPE OF WORK

# SECTION 1.0

# 1.0 SCOPE OF WORK

**Overall Purpose of the Study:**

The City of Round Rock sought a comprehensive assessment of the management and organization of the fire protection, fire related emergency response services as well as emergency medical services within the City. The City requested an immediate analysis and a long-term (10 years) vision for fire and EMS services. The City asked for specific recommendations on key elements of fire service provision.

This work effort has been the result of a cooperative and excellent working relationship on the part of all parties. The project has included extensive interactions with stakeholders in the organization, including management, employees, union members and others in the community with substantive observations or information to share.

Our consulting team worked closely with members of the city management team, members of the Fire Department, and others within the City structure to aggressively evaluate all options for improving efficiency and effectiveness of operations.

**Specifics of the Scope of Work:**

The overall purpose of the study effort is to conduct an operational review of both operations and administration of the Fire Department. The enclosed report includes the following analyses:

- Inventory and evaluation of resources available to the Fire Department, including staffing, equipment and facilities;
- Reference to national, state and local regulations and standards;
- Evaluation of existing Fire Department major operating policies and procedures;

- Demand projections and target levels of fire protection service, fire-related emergency response functions for the City reflecting the impact of population growth and development and taking into consideration the Comprehensive Land Use Plan, policy direction of the elected officials, input from key stakeholders, future growth and its geographic distribution;
- Standards developed by the National Fire Protection Association, Insurance Services Office, or other established standards;
- Short-term, mid-term and long-term methods to achieve and maintain the target levels of service throughout the City, including staffing and resources; and,
- Strategies that could apply to the current or recommended service delivery methods that would increase the efficiency and effectiveness of fire services both short term and over the next 10 years.

The enclosed report includes a comprehensive analysis of all major factors affecting the delivery of fire and EMS services in the City of Round Rock.

# APPROACH AND METHODOLOGY

## SECTION 2.0

# 2.0 APPROACH AND METHODOLOGY

## 2.1 Overview

The City identified critical areas of assessment that were grouped into four areas. Some items "overlap". They included:

**EXHIBIT 2-1**
**CITY OF ROUND ROCK FIRE SERVICES STUDY**
**OVERVIEW OF PROJECT SCOPE**

| |
|---|
| • Inventory and evaluate available resources, including staffing, equipment and facilities. |
| • Review the City's provision of services in reference to national, state and area guidelines.<br>• Compare apparatus manning and response protocols to appropriate standards of service and assess cost effectiveness.<br>• Evaluation of current Fire Department major practices. |
| • Develop short-term, mid-term, and long-term recommendations for methods to achieve target levels of service, including staffing and resources required.<br>• Identify strategies that could increase the efficiency and effectiveness of the Fire Department in the short-term and over the next ten years. |

The first portion of the study included a documentation and assessment of the issues and existing operations of the Department. This documentation and analysis provided a base of information upon which recommendations for action were based.

The second major portion of the study was the creation of a series of recommendations that focused on the critical items for the study. Recommendations are balanced between the desired level of services and the cost-effectiveness of delivering those services. MAG is sensitive to the demands of the fire and rescue services and the limitations of public funding for critical services.

The third major portion of the scope of work has been the preparation of a report that includes a master plan of action. The Implementation Table includes time lines for action, responsibility for ensuring that actions are taken, and any fiscal impact anticipated as a result of each component of the plan.

The dimensions of efficiency, effectiveness, and service delivery quality have been considered. Our recommendations are based on an analysis of costs and organizational needs, and their relationship to expected and common guidelines in the industry.

## 2.2 *Methodology*

The key elements of our methodology included:

- a clear understanding of the project background, goals and objectives, and the complex issues that must be addressed;
- a work plan that is comprehensive, well-designed, practical, and which provides ample opportunity for stakeholder input; and
- sufficient resources and a commitment to complete the project successfully within the desired time frame and at a reasonable cost.

## 2.3 Work Plan

Our project work plan consisted of seven major tasks. For each task, we identified the objectives to be achieved, the specific activities performed, and the project products. Exhibit 2-2 provides an overview of each phase and task.

**EXHIBIT 2-2**
**CITY OF ROUND ROCK FIRE SERVICES STUDY**
**WORK PLAN OVERVIEW**

Error! Not a valid link.

## PHASE I: INITIATE PROJECT

### TASK 1.0: INITIATE PROJECT

***Objectives:***

- Meet with the City Manager to gain a comprehensive understanding of the project's background, goals, and expectations.
- Establish a mutually agreed-upon project work plan, time line, deliverables, and monitoring procedures that will lead to the successful accomplishment of all project objectives.
- Collect and review existing operational data, information, agreements, relevant policies and procedures, and any prior studies, audits, or reports.

***Activities:***

1.1 Met with project management and key City officials to establish working relationships, make logistical arrangements, and determine communication lines.

1.2 Discussed the objectives of the project with the management team. Identified policy and issue concerns to be addressed during the review.

1.3 Obtained pertinent reports and background materials relevant to the review from the City, such as:

- capital and operational budgets for the current and last two fiscal years for the City;
- description of the current fire and rescue service delivery system, organization, and staffing levels;
- call records from the dispatch center;
- organization charts and staffing data for the Fire Department;
- location and description of stations, facilities, apparatus and equipment;
- existing performance indicators or similar data used to plan, budget, and measure labor requirements and/or performance;
- descriptions of staffing and deployment in meeting service demands at targeted service levels; and

***Deliverable:***

- Revised project work plan and time line as needed.

## PHASE II: OBTAIN STAKEHOLDER INPUT

### *TASK 2.0: CONDUCT LEADERSHIP INTERVIEWS*

***Objectives:***

- Identify expected service levels for fire services.
- Identify opinions of City and Fire Department management and other officials concerning the operations and performance of the Department.

***Activities:***

2.1 Worked with the Project Manager to finalize the interviewee list.

2.2 Drafted a comprehensive interview guide.

2.3 Established a final interview schedule that is convenient to all parties.

2.4 Conducted interviews as scheduled.

2.5 Summarized and analyzed interview results.

2.6 Developed summary report of interviews.

***Deliverable:***

- Briefing of key City project staff on consolidated data from interviews regarding existing fire service programs, service levels, and perceived strengths and weaknesses, and related issues.

### *TASK 3.0: CAPTURE INPUT FROM SERVICE PROVIDERS*

***Objectives:***

- Identify concerns and issues for service providers and concerned others regarding the Fire Department.
- Give providers opportunity for input.

***Activities:***

3.1 Developed interview questions. Included questions on operations, cost reduction opportunities, and service level focused issues.

3.2 Conducted interviews of providers at the management and staff levels.

3.3 Identified strengths, weaknesses, opportunities and threats to fire services City-wide.

3.4 Reviewed facilities, equipment and apparatus, and community exposures and hazards.

3.5 Reviewed feedback obtained from these interviews and meetings.

***Deliverable:***

- Summary of interviews and issues raised in monthly memos.

## PHASE III: PREPARE ANALYSES AND DEVELOP CORE STRATEGIES

### *TASK 4.0: EVALUATE CURRENT TRENDS, SERVICES, ISSUES, AND COSTS*

***Objectives:***

- Develop a clear understanding of the organizational structure, operations, budget structure, response policies, limitations, achievements, and opportunities for improvement of the fire services in the City.
- Collect cost information.
- Identify service delivery, demographics and budgetary trends in the City.

***Activities:***

4.1 Requested operational and financial information and cost data from City Officials and Fire Department management and staff not already obtained in Task 1.0. Such information and data requested and reviewed included:

- run data and call loads;
- station locations and response times;
- equipment and facilities;
- budget data;

- schedules and hours of work;
- workload statistics;
- service level data;
- operational costs and financial data.

4.2 Identified and assessed revenue issues.

4.3 Evaluated financial implications in reference to operational issues.

4.4 Confirmed the current level of service being provided by the Fire Department.

4.5 Evaluated first response capabilities in the City.

4.6 Assessed concerns associated with operations to include policies, major procedures, staffing, organizational structure, responsiveness, duplication of activities, uncovered service areas, overlapping services areas and unnecessary activities.

4.7 Evaluated existing relationships and agreements;

4.8 Determined the operational cost-effectiveness of the current level of services.

***Deliverable:***

- A report component that evaluates current trends in the City current services being provided within the City, current issues impacting service delivery, and current costs.

## *TASK 5.0: DEVELOP STRATEGIES FOR FIRE SERVICES*

***Objectives:***

- Build on our understanding of the current structure, operations, response policies, limitations, achievements, and opportunities for improvement.
- Identify the most cost-effective and/or the most efficient use of available resources to produce the desired level of services.

***Activities:***

5.1 Identified recommended levels of services for current areas of coverage and population.

5.2 Reviewed whether there are any opportunities where resources may be shared in order to provide services at a reduced level of cost or to improve services.

5.3 Evaluated whether there are any opportunities where functions may be consolidated.

***Deliverable:***

- A report component that addresses the desired level of services in the City with a series of recommendations focusing on opportunities for improvement.

## *TASK 6.0: PREPARE AN ACTION PLAN*

***Objective:***

- Prepare an Action Plan that identifies the critical action steps to ultimately achieve the recommended structure and service levels in the City.

***Activities:***

6.1 Established the most appropriate structure for the current and future delivery of services.

6.2 Determined the most effective short and long-range strategy to deliver fire and rescue services and identified the most appropriate deployment of resources.

6.3 Identified the changes in facilities, apparatus, and equipment that will ensure that the City is able to provide fire and first responder services at the desired level.

6.4 Estimated the capital expenditures that will be needed over the next ten years.

6.5 Evaluated financial implications in reference to operational issues.

***Deliverable:***

- A report component that recommends action steps needed, to include the specific action required, the assignment of responsibility, the timing of the action, and any financial costs associated with each action.

## PHASE IV: PREPARE FINAL REPORT

### *TASK 7.0: PREPARE AND PRESENT FINAL REPORT*

***Objectives:***

- Document the results of all previous tasks into a readable, comprehensive written report.
- Present the results of the study to the City Manager and City officials.

***Activities:***

7.1 Prepared a draft report on the results of all previous tasks. The report contains:

- executive summary of findings and recommendations;
- cost estimates;
- task methodology and activities;
- findings for the various tasks; and,
- report components addressing specific RFP questions.

7.2 Reviewed the draft report with the City's designated Project Manager and the other staff.

7.3 Revised the draft report as needed.

7.4 Prepared and issued the Final Report.

7.5 Delivered the oral presentation to City officials summarizing findings and recommendations.

***Deliverables:***

- Draft Report
- Final Report

# CURRENT SITUATION

# SECTION 3.0

# 3.0 CURRENT SITUATION

**Fire Department Staff Observations**

MAG met with all levels of the Fire Department organization, including management and staff positions. Staff had many observations about the current level of services, organization, and critical issues facing the Department over the next ten years. This section provides an overview of the points of information from staff.

## 3.1 Project Goals

The management and staff indicated an interest in an analysis of the current environment in which the Department operates as well as a reasonable plan for the future. There is no existing strategic plan. The Fire Department has not been monitored as closely in the past in the same manner as some of the other City departments. Recently, the local IAFF requested a review from the national IAFF, which the Texas association is funding. The IAFF study is not to include site visits, and is not viewed as a parallel study to this study, although there may be some overlap. The IAFF evaluators requested the completion of a 127 question checklist, in reference to compliance/noncompliance with NFPA 1710 (the City has not adopted NFPA 1710). In early meetings, it was noted that nothing should be regarded as "sacred" in either evaluation.

The primary goals noted by management and staff are in reference to the number and location of stations, appropriate level of staffing, and proper major equipment needs for the future. Regarding the issue of EMS, the desire was indicated to evaluate the service in the sense of what alternatives are available. If analysis indicates that the City should pursue a higher level of EMS services now, then that should be recommended. If analysis indicates that it may be better to establish a different level of EMS services in the future, the recommendations should reflect that need. Management and staff also sought recommendations on the structure of the Fire Department. At

the time of the initial meetings with staff, a noted concern was in regard to how to pay for the fire stations, and 4 personnel versus 3 personnel staffing for apparatus. The City is in good financial condition but doesn't want to pay for everything at one time. Staff agreed that by planning ahead over at least a five year period, the ability to pay for changes would be more easily absorbed.

### 3.2 Service Levels

There was some level of agreement that there are overlapping response areas in the central portions of the city. The previous Fire Chief indicated a desire to close Station #2, indicating that the City does not have sufficient stations, and due to overlapping/close response areas, Station #2 should be closed. Staff noted that this station runs approximately 1,000 calls per year, and provides back-up service to stations 3, 5 and 1. Fire staff demonstrated resistance to closing Station #2, including picketing of City Hall. This subsided when the Council did not make a change, and consulting input was sought from IAFF and Management Advisory Group, Inc..

Departmental budget requests are viewed as having been too "large" in past years. The point made is that the Department has not planned sufficiently and has not made incremental requests for resources. As a result of periodic "sticker shock" budget requests, the Department has typically received very little relative to the perceived level of needs.

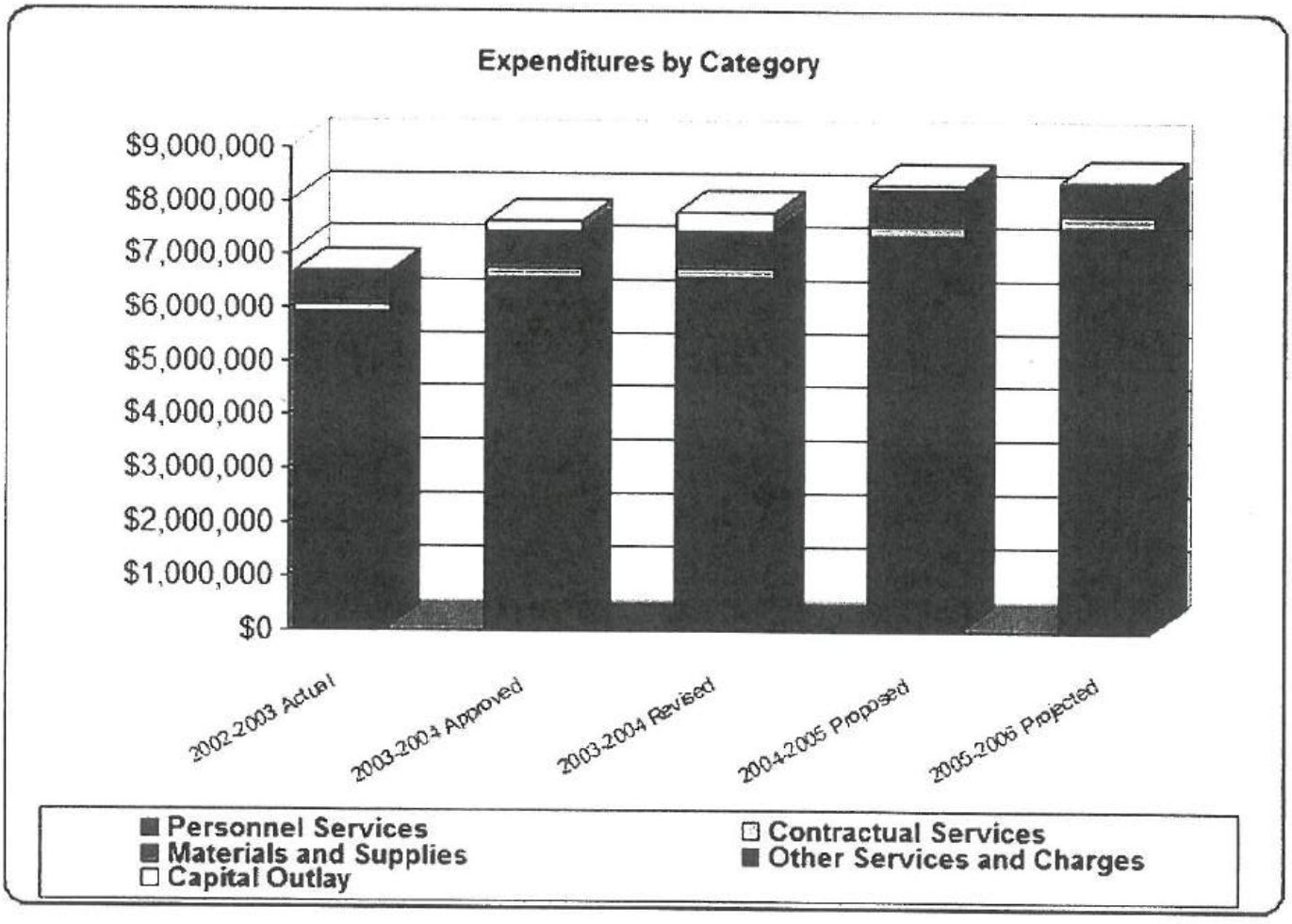
### 3.3 Finances

The City of Round Rock is reliant to a large extent (60%) on sales taxes ($36 million), particularly those derived from Dell ($18 million). There are 9,000 Dell employees in Round Rock. Stations and apparatus have been funded through 20 year General Obligation bonds. This approach is somewhat cumbersome, however, it offers the public an opportunity for input.

The following represents recent budget data for the Fire Department:

***Summary of Expenditures:***

| | 2003-2004 Approved Budget | 2003-2004 Revised Budget | 2004-2005 Proposed Budget | 2005-2006 Projected Budget |
|---|---|---|---|---|
| *Personnel Services* | $6,530,465 | $6,530,464 | $7,313,223 | $7,519,467 |
| *Contractual Services* | 187,320 | 187,320 | 199,668 | 186,443 |
| *Materials and Supplies* | 540,144 | 540,144 | 496,748 | 453,280 |
| *Other Services and Charges* | 136,500 | 136,500 | 178,901 | 146,500 |
| *Capital Outlay* | 174,800 | 341,368 | 79,600 | 43,200 |
| ***Total Expenditures:*** | $7,569,229 | $7,735,796 | $8,268,141 | $8,348,890 |
| ***Expenditures per Capita:*** | $94.79 | $96.88 | $98.20 | $94.34 |



The Fire Department staffing in recent years is as follows:

| | 2002-2003 Actual | 2003-2004 Approved Budget | 2004-2005 Approved Budget |
|---|---|---|---|
| Fire Chief | 1 | 1 | 1 |
| Deputy Fire Chief | 1 | 1 | 1 |
| Fire Marshall | 1 | 1 | 1 |
| Battalion Chief | 4 | 4 | 4 |
| Fire Captain | 0 | 0 | 0 |
| Fire Training Officer/Specialist | 2 | 2 | 2 |
| Fire Prevention Specialist | 1 | 1 | 1 |
| Fire Lieutenant | 18 | 21 | 21 |
| Fire Inspector/Safety Inspector | 2 | 2 | 2 |
| Driver | 18 | 21 | 21 |
| Firefighter | 30 | 36 | 43 |
| Office Manager | 1 | 1 | 1 |
| Administrative Technician I-II | 2 | 2 | 2 |
| Total | 82 | 94 | 101 |

## 3.5 Communications

Problems within the Department have evolved over time due to "management style." One example which staff took issue with management was a "unilateral decision" to move a station (#2). Staff would have preferred greater input into such a substantial system adjustment, although it is not universally accepted that station locations are optimal at this time (disagreement over the location of station 6 is an example). The relationship with the union is not perfect, but the overall relationship is perceived as better with the change in management. Communications were not positive in recent years. Fire Department employees are now covered under Texas Civil Service (Chapter 143). Prior to 2001, employees were at-will employees. Comments indicated that prior to being covered under Civil Service, they were regularly threatened in their employment status, and no new ideas were accepted or received. Department staff indicated that current communications with the City Manager are positive. The current City Manager provides a forum for input through regular meetings. The Strategic Planning Committee meets every Thursday at 9 AM to discuss fire service issues.

### 3.6 Emergency Medical Services

Fire Department staff indicated that EMS is a County based ALS transport service. The City houses County EMS staff in four (4) City stations. Staff believe that the County is not receptive to any more City EMS contribution, and does not allow Department staff to use paramedic skills (12 paramedics currently in the Fire Department). In reference to EMS medical calls, union representatives indicated that Round Rock firefighters are "jumping" to the County EMS transports, which then takes the engine out of service. The Fire Department had begun to move towards the use of paramedic engines, but had no endorsement or authority. There is no dedicated unit for Round Rock within the County system. The Fire Department has never taken the time to fully evaluate EMS options. Department staff concludes that the County wants to provide the entire service without service contribution from the City, and that the City's leverage is the housing of County EMS staff at City stations.

MAG consultants also met with County EMS staff, who indicated that there are 13 locations from which EMS operates. Twelve of the units run on a 24 hour basis, while one unit runs 8 AM to 5 PM. This "day" unit is responsible for planned transports between facilities, and completed 2,715 transfers in 2003. Each County unit is staffed with two paramedics, who work 24 on/48 off schedules. The state of Texas issues licenses to paramedics, however, they must be credentialed by a physician, and must work under the guidance of a medical director. The Medical Director has authority to dictate who works under his license. He can dismiss a paramedic at any time for any cause.

The County EMS covers 1100 square miles of territory, and uses System Status Management and a documented move-up process to ensure coverage. There are approximately 300,000 residents in the entire County (according to EMS), while Round Rock population is about 80,000. There are

100 positions in County EMS, including all administrative positions. EMS staff indicated that the County was very dissatisfied with EMS back in 1993 and almost got rid of it, mostly due to the Director's performance. County EMS won an award, 2003 EMS System of the Year. Also, VFW gave one of the paramedics an award of Paramedic of the Year in 2003.

County EMS staff indicated that there are approximately 24,000 calls per year for the 12 primary units. About 60% - 66% of the calls are transports. Although units are not exclusively assigned to Round Rock due to it being a County system, the units that run most of Round Rock calls are 11, 12, 13, and 14. These units run about 95-98 per cent of City calls. County EMS staff indicated that they rely heavily on first responders. There are 16 different fire departments responding, and a total of 19 different responding organizations in the County. The average EMS bill is $900. There is a $400 base rate and a $6.60 per loaded mile rate. The County EMS also charges a fee of $82.50 as a non-transport fee. The County subcontracts to a collection agency for an 8% fee. Last year there were $10 million in billings, and $4.5 million was collected. The County received $4.5 million minus 8%. There is a less than 50% collection rate. The EMS system cost is $7.5 million. EMS staff indicated that the County will have to open 1-2 stations each year for the next 10 years. Paramedics earn $46,000 plus benefits, or $16.40 per hour.

### 3.7 Volunteer Fire Department

The Volunteer Fire Department has provided service since 1978. Round Rock Fire Department staff indicated that the VFD currently has "limited" usefulness, due to their other time obligations and the increasing level of training required in the fire service. The VFD responds to "holes in the donut," or unincorporated areas within the City boundaries. VFD members receive certain benefits from the City, including interest free loans, ability to house VFD equipment (13 pieces) at the City stations, worker's compensation, and payment into a pension plan. Equipment is repaired by the City. The Fire Department staff indicated that they do not rely on the VFD for service responses.

One of the Fire Department "work teams" recommended that the VFD be disbanded, or that their contributions be redirected in areas where supportive actions are possible.

### 3.8 Growth

The City has grown significantly in the 1990's, and continues its growth. The City has established a development friendly environment, in contrast to the anti-growth practices of the City of Austin. The General Plan forecasts that the current 80,000 population level will rise to 121,350 in 2014 and to 145,000 by the year 2020. Cities in Texas are able to annex relatively easily. Recently, the ultimate boundaries (ETJ or Extra Territorial Jurisdiction) of the City of Round Rock have been established through negotiation with three adjacent communities, including Georgetown to the North, Hutto to the East, and Pflugerville to the South. The City of Austin has a common boundary on the Southwest side of the City of Round Rock. Height limits are typically 60 feet within the City. Under certain circumstances and along major highways, a 120 foot height limit is possible. The highest structure in the City of Round Rock is the Marriott hotel, which is eight (8) stories. The main hospital may rise to eight (8) stories at some point in the future, but that is not certain. Overall, the City has a relatively low profile of 2-3 stories. Dell is three stories. High value homes are located on the east side of the City.

There will be a continued accelerated pace of growth for the next 10 years in the City. The City of Round Rock is the dominant suburb of Austin. No other city in the area matches Round Rock in size. There are currently six (6) exits for Interstate 35, which runs through the City.

MAG has reviewed a substantial amount of planning and growth data in order to establish recommendations in Section 4.0 of this report.

### 3.9 GIS Services

The GIS system is fairly stable at this point. The data is in order. There is a central GIS server. Applications and databases are for Fire, Planning, and Parks and Recreation. The Police Department is scheduled next. Public Works will be last due to its size and complexity. The system includes parcels, zoning, annexations, streets with addresses, emergency service numbers, contours and water features, and railroads. The system goes to the current City limits and the ETJ. Fire hydrants are in the system, but their exact, precise location is not always known. There is a good approximation of their locations. There is a module that can be purchased, called Network Analyst. It can be applied to the system and hypothetical station locations can be determined, and speeds established for the purpose of determining how far an engine can travel within a specified period of time. The City is currently evaluating the purchase of this software for use in future station location evaluations.

### 3.10 Dispatch Services

The union indicated that the dispatch service is "horrible," and that average dispatch times are approximately two minutes. Staff indicated that the time required from the time of the call to the time of "crossing the line" is approximately 2.36 to 2.47 minutes. There is a "dedicated" fire "seat," however, that position must also provide dispatch service for police calls when calls are substantial. Historically, it appears that the placement of stations has been driven by the desire for response times of 4-6 minutes from the time of the call (FD notification) to the time of arrival, for medical calls and single engine response, and 6-8 minutes for multiple engine response. Union representatives indicated that NFPA 1710 indicates 8 minutes after the department receives the call. While the union indicated that the department has some of the best equipment overall, the rescue equipment is spread out.

There are about 80,000 annual calls for service into the CAD system. When a 911 medical call comes into the Police Department dispatch, the Dispatcher rings to the Fire Department and then

the County EMS. The goal for the average dispatch time is one minute 15 seconds. The Police Department staff indicated an average of approximately 30-45 seconds. That level of service appears to apply only to accidents (major and minor) in which the police department has been on scene and has collected information already. Major accidents are classified in that manner and distinguished from minor accidents by the presence of an injury, no matter how slight. Dispatch staff indicated that the function is Phase II compliant for cell phone identification, however, the providers are not. Therefore, precise identification of the location of cell phone calls is not possible at this time. Dispatch staff indicated that 70% of the incoming calls are cell phone calls. The address must be verified, which may lead to greater dispatch times. The CAD has been in place since May 2003. The engines have AVL, and their location can be identified at any time on large screens in the dispatch area. They do not have the same capability to identify County EMS units. Dispatchers are EMD trained and use the card system. Dispatch staff is cross-trained in fire and police dispatch. A near term goal identified by management is four police dispatch positions and four fire dispatch positions. About 10-12 years ago, there had been a general discussion of the consolidation of dispatch services in the area, but the cities did not support the consolidation.

City police dispatch concludes that its services are more efficient than the County's. The County dispatch reports directly to the County Judge, an elected/administrative position similar to County Administrator in some states. A new public safety facility is anticipated within two years, and dispatch will also move at that time. Finally, when asked what would be good outcomes for this study, staff responses included the identification of proper station locations, the development of a "road map" for future decisions, the creation of trust in logical recommendations, "lead" time for financial impact of the recommendations, and successful communication of results to the Council.

# FINDINGS AND RECOMMENDATIONS SECTION 4.0

# 4.0 FINDINGS & RECOMMENDATIONS

## 4.1. Fire Protection Planning – Findings

### 4.1.1. Lack of formal response policies

Elected officials have not created formal policies regarding the level of fire protection and emergency medical services to be provided by the Round Rock Fire Department (RRFD). Discussions regarding service levels typically occur during the budget review process. However, these discussions tend to focus on enhancements or diminishments of the previous budget cycle's service level without the benefit of previously determined local fire protection and emergency medical service standards.

### 4.1.2. Creation of an Advisory Group

The City has initiated an "Advisory Group" for this study of municipal fire protection and emergency medical services. The "Group" is made up of representatives of neighborhood associations, certain business interests, senior citizens, City staff, County EMS, former elected officials, nearby fire agencies, the International Association of Fire Fighters Local (IAFF/AFL-CIO) and other interested citizens. The stated purpose of this Advisory Group is to provide input to City staff in the development of a strategic RRFD resource deployment plan.

## 4.2 Fire Protection Planning - Recommendations

### 4.2.1. Expand Membership of the Advisory Group

The "Advisory Group" should be expanded to include a broader representation of the commercial/industrial sector and property developers. Several workshops on the same subject(s) may be necessary to assure access to a broad spectrum of the above stakeholders.

### 4.2.2. Evaluate Service Guidelines

City and Fire Department Administration should recommend several critical issues for consideration during these workshops. MAG is suggesting that service guidelines be discussed, evaluated, and then recommended by the Advisory Group for submission to the City Manager and City Council for additional consideration.

Examples of service level guidelines include (but are not limited to):

#### 4.2.2.1. Dispatch Time Guidelines

Dispatch time, i.e., elapsed time from the time the call is received at the City's Public Safety Answering Point [PSAP] to the completion of dispatch of all first alarm resources. For example:

- *Within one (1) minute of call receipt at the PSAP, all units to be dispatched to an alarm of a structure fire should be notified for 90% of all structure fire alarms*

#### 4.2.2.2. Fire and EMS Responses

The number and type of RRFD resources to arrive within a specific time to specific types of incidents should be considered. For example:

**Structure Fire Response**

- *Within 6 minutes, from time of alarm receipt at the "Public Safety Answering Point" (PSAP):*

  *First arriving fire fighting unit to arrive at 80% or more of "in-city" structure fires with a minimum of 3 personnel and apparatus meeting the requirements of NFPA Standard 1901 – 2003 Edition, Chapter 5 and / or Chapter 9.*
- *Within 10 minutes, from time of alarm receipt at the "Public Safety Answering Point"(PSAP):*

  *Sufficient fire fighting units to arrive at 80% or more of "in-city" structure fires, to provide a minimum of 14 personnel, including an "Incident Command Team" (Chief Officer and Adjutant with command apparatus); and an apparatus group equivalent to:*
  - *Sufficient Pumper Fire Apparatus meeting the requirements of the 2003 edition of NFPA 1901, Chapter 5, Standard for Fire Service Automotive Apparatus to deliver 2500 gallons per minute;*
  - *1 Aerial Fire Apparatus meeting the requirements of 2003 edition of NFPA 1901, Chapter 8, Standard for Fire Service Automotive Apparatus;*

***EMS Incident Response***

- *Within 6 minutes, from time of alarm receipt at the "Public Safety Answering Point"(PSAP):*

- *First arriving RRFD unit to arrive at 80% of "in-city" EMS incident with a minimum of 2 personnel.*

#### *4.2.2.3. Fire and Life Safety Inspections.*

Typical and common guidelines for fire and life safety inspections include the following.

- Hospitals, Senior Citizen Assisted Living, K-12 School and Pre-School Occupancies: Not less than twice per year.
- Industrial/Commercial (hazmat): Not less than twice per year.
- Public Assembly Occupancies (Churches, Theatres, Restaurants, Bars, etc.): Not less than once per year.
- Multi-Residential Occupancies: Not less than once per year.
- High-Rise (regardless of occupancy): Not less than once per year.
- Industrial/Commercial (general): As determined by Fire Marshal's risk appraisal.

#### 4.2.2.4. Fire Hydrant Inspection and Testing.

Typical guidelines for fire and life safety inspections include the following.

- All hydrants shall be inspected for damage, and tested as follows on an annual basis by RRFD personnel.
- The valve shall be fully opened and closed with a 3/4" hose line attached and directed in line with the adjacent curb or water control ditch so as to prevent the stream of water from wetting passing vehicles or pedestrians.
- All hydrants shall receive a formal flow test by the Round Rock Utilities Department as determined prudent by that agency.

#### 4.2.2.5. Fire Personnel Training.

Typical guidelines for fire and life safety inspections include the following:

- Each emergency response unit of the RRFD shall participate in multi-company training exercise not less than 4 times in any calendar year.
- All emergency response personnel shall participate in not less than 75 % of the training exercises scheduled for their assigned units
- All personnel shall accomplish training requirements established by the State, in addition to these RRFD training standards.

- All new Firefighter personnel shall receive not less than 80 hours of RRFD orientation prior to assignment to an emergency response unit.

**4.2.2.6. Public Education.**

Typical guidelines for fire and life safety inspections include the following:

- The RRFD shall, on an annual basis, make fire and life safety education available to 80% of all schools within the City limits.
- The RRFD shall make fire and life safety education available to 80% of all senior citizen facilities within the City limits at least once annually.

**4.2.2.7. "Built-in" Fire Protection Systems.**

Typical guidelines for fire and life safety inspections include the following:

- The installation of automatic fire sprinkler systems shall, within the limits of State law, be encouraged for:
  - All structures over 5000 square feet;
  - All structures over 24 feet in height from the floor of the entrance point to the structure (i.e. entry to be used by RRFD emergency response personnel when responding to a reported fire within the subject structure).

(In new construction, automatic fire sprinklers should be encouraged through "trade-offs," including more liberal hydrant spacing, main size requirements, street width requirements, limitations on "dead-end streets," and so forth.)

A methodology for facilitating and encouraging increased "built-in" protection for certain existing structures critical to the community (e.g., schools, historic buildings, etc.) should be developed.

**4.2.3. Develop Fire Service Goals and Objectives**

After concluding the workshops, City and Fire Department Administration should develop recommended Fire Service Goals and Objectives, based on workshop input, for consideration by the City Council. The presentation to the Council should include projected costs, as well as impacts on the community's fire and life safety

## 4.3. Fire Department Dispatch - Findings

### 4.3.1. Management of Dispatch

The dispatch function is under the supervision of the Police Department, which operates the City's Public Safety Answering Point (PSAP) as well as the Fire Department dispatch function.

### 4.3.2. Conflicting Dispatcher Duties

The Dispatch position, typically responsible for dispatch of RRFD units is, at the same time, responsible for answering the public's calls for police, fire, EMS, rescue, and hazardous materials emergencies. This can result in the inability to appropriately monitor radio channels being used by Fire Department units working at emergency incidents. In case of an unexpected episode, Dispatchers may not hear firefighters' requests for immediate aid, additional RRFD units, County EMS units, or RRPD assistance. There are documented instances of this situation having significant impact on firefighter safety.

### 4.3.3. Ineffective Automatic Vehicle Location (AVL) Equipment

Apparently, all RRFD apparatus are currently outfitted with automatic vehicle location equipment. However, MAG was advised that the equipment measured proximity to an incident "as the crow flies" rather than by road miles. Dispatchers therefore ignore the actual location of RRFD apparatus and dispatch by pre-set "Fire Districts." This situation may NOT result in the nearest RRFD apparatus being dispatched to an incident and brings into question the purpose of the RRFD's AVL system

### 4.3.4. Remote Central Command and Control

The current dispatch system does not provide facilities for a central "command and control" function this capability would be highly desirable in case of large scale incidents or a multiplicity of incidents where it might be necessary to:

- Prioritize response to incidents;
- Request mutual aid;
- Initiate emergency call back of off-duty personnel; and,
- Provide for move-up coverage when a portion of the City is without adequate fire protection due to adjacent units being committed to emergency incidents, training, and so forth.

The Command and Control function is now carried out at the Central Fire Station, which is remote from the Dispatch Center.

### 4.3.5. Dispatch Time

The generally accepted objective for dispatch of fire department resources to emergency incidents is 1 minute. It is apparent that the Dispatch Center is currently unable to consistently meet that objective. The average "dispatch times" as reported on the Round Rock Public Safety System data sheet (10/01/0 3 through 9/30/04):

- Dumpster Fire: 1 minute, 14 seconds
- Fire Alarm (ringing): 1 minute, 53 seconds
- Fire Other (no category): 1 minute, 57 seconds
- Fire Structure: 1 minute, 20 seconds
- Fire Vehicle: 1 minute, 20 seconds
- Grass Fire: 1 minute, 35 seconds
- Hazardous Material: 1 minute, 52 seconds
- Line Down (electrical): 1 minute, 34 seconds
- Medical Assist (EMS): 1 minute, 20 seconds
- Natural Gas Leak: 1 minute, 59 seconds
- Smoke Investigation: 1 minute, 58 seconds

### 4.3.6. Reserve Apparatus Mobile Computer Terminals Shortage

The RRFD operates several fully equipped back-up apparatus that are used when front-line apparatus are out of service for repairs or maintenance and as reserve apparatus, staffed with off-duty personnel recalled for when on-duty personnel and apparatus are over-whelmed by the number or magnitude of emergency incidents. Currently these apparatus are not equipped with mobile computer terminals used to communicate with the Dispatch Center. This situation has a significant adverse effect on the effectiveness of these apparatus.

## 4.4. Fire Department Dispatch - Recommendations

### 4.4.1. Initiate Dispatch Improvement Program.

The City should initiate a project to improve Fire Department dispatch operations. *NFPA 1221, Standard for the Installation, Maintenance, and use of Emergency Services Communications Systems* is available for reference for such a project. Such project should include the development of an AVL system, which would provide for the closest appropriate

apparatus being dispatched to emergency incidents. The goal of this improvement program should be to reduce the time required for RRFD units to arrive at the scene of reported emergencies.

#### 4.4.2. Enhance Dispatch Staffing Level

The City should provide sufficient personnel to staff the Dispatch Center at a minimum of 5 personnel (4 Dispatchers and 1 Supervisor).

#### 4.4.3. Establish a Command and Control Center

The City should construct a facility, immediately adjacent to the City's Dispatch Center to function as RRFD "Command and Control Center" and a City "Emergency Operations Center."

#### 4.4.4. Integrate RRFD and CAD System Data

City, Fire and Police administration should implement an integrated RRFD data system to coordinate and utilize data from the computer aided dispatch system for RRFD data analysis.

#### 4.4.5. Provide Mobile Computer Terminals for Reserve Apparatus

The City should acquire and install Mobile Computer Terminals for all RRFD reserve apparatus.

### 4.5. Emergency Medical Service (EMS) in Round Rock - Finding

#### 4.5.1. Current System is County ALS and City BLS

##### 4.5.1.1. RRFD Emergency Medical Response is BLS with AED

The RRFD responds "Code-3 Emergency" to all 9-1-1 EMS calls within the service area. This "First Responder" emergency medical service is provided by the RRFD at the Basic Life Support (BLS) (with Automated External Defibrillator (AED)) level. The RRFD responds to EMS calls by dispatching the closest Engine Company or Truck Company to the emergency incident. All Engine Companies and the Truck Company are equipped with BLS medical equipment and an automatic electronic defibrillator (AED). The fire companies also carry hydraulic extrication and rescue equipment. All existing line Firefighters are at least EMT-Bs. The RRFD currently employs 12 (12)) Paramedics. There are no EMT-Intermediates on staff.

#### 4.5.1.2. WCEMS Emergency Medical Response is Countywide ALS

Williamson County Emergency Medical Service (WCEMS) ambulances also respond to all 9-1-1 EMS calls within the service area. While four (4) ambulances are stationed in Round Rock, those 4 ambulances are not dedicated to the City. They are part of a County-wide system and can be dispatched throughout the County. WCEMS uses a "move-up" type of System Status Management (SSM) plan to cover the County as the number of ambulances available for dispatch is reduced by other ambulances being committed to emergency incidents. The four (4) ambulances stationed in Round Rock handle approximately 95 – 98% of the EMS calls in Round Rock.

### 4.5.2. RRFD Routinely Responds Prior to WCEMS

Because of the number of available Engine Companies and a Truck Company, dispatch call processing, and activity levels, a Round Rock Fire Company routinely arrives at an emergency medical incident ahead of the responding Ambulance. Ambulance response time is calculated by WCEMS as from the time the responding ambulance is dispatched by the Williamson County PSAP to the time the ambulance reports its arrival at the scene. Therefore, WCEMS response time does not account for time used by either Round Rock or the County dispatch functions (easily 2 minutes). WCEMS provided the following information for the period of September 2003 – September 2004:

- There were 4.400 EMS responses in the City of Round Rock;
- The average ambulance response time was 4.35 minutes (from time of ambulance dispatch by County dispatch, equating to "drive time");
- 87% of the calls had an ambulance response time (drive time) of 7 minutes or less;
- 91% of the calls had an ambulance response time (drive time) of 8 minutes or less;
- Less than 1% of the calls had an ambulance response time (drive time) of 15 minutes or greater; and
- WCEMS counts the full minute, i.e. 7 minutes is 7 minutes and up to 59 seconds.

### 4.5.3. Cardiac Arrest Patients are Less Than 1% of Total

Cardiac Arrest is a true time critical life threatening medical emergency. The national standards for emergency response to a Cardiac Arrest case is to have BLS Cardio-Pulmonary Resuscitation (CPR) and defibrillation started within 4 – 6 minutes and ALS started within 8 minutes from time of cardiac arrest. WCEMS reports that during the period of September 2003 – September 2004:

- There were 5,025 total patients in Round Rock; and,
- There were 41 cardiac arrest patients in Round Rock, which is 0.82% of the total number of patients

### 4.5.4. Most Patients Receive BLS Level of Care

WCEMS provided the following information regarding EMS patients in Round Rock during the above listed period of time. ALS patients are categorized as patients that were given one or more Paramedic level ALS procedures.

- 5,025 total patients
- 3,568 BLS patients – 71% of total
- 1,457 ALS patients – 29% of total

### 4.5.5. Time Critical Patient Care Procedures are Established

Time critical EMS procedures include the following:

- Patient assessment, and the following in rapid sequence as needed;
- Initiating CPR;
- Defibrillation;
- Airway management;
- Ventilation with oxygen administration;
- Control hemorrhage; and,
- Establishing an IV line for fluid resuscitation and to administer Medication

*The time required to perform the above procedures should be considered when evaluating what can or should be done by First Responders prior to the arrival of Paramedics.*

### 4.5.6. RRFD Paramedics Receive Assignment Pay Differential

All Firefighter First Responders are certified at the EMT-B level. There are 12 Firefighter/Paramedics and no Intermediates. The Fire Fighter/Paramedics receive a $100 per month Paramedic Assignment Pay Differential *although they are not allowed to provide ALS patient care by the WCEMS Medical Director.*

### 4.5.7. No RRFD EMS Coordinator for Quality Assurance

Currently, the RRFD does not have a designated EMS Coordinator to manage the EMS First Responder Program. There is not a designated EMS Training Officer. Nor is there a designated person to oversee QA/CQI efforts.

### 4.5.8. RRFD EMS Concerns

*There were no stated concerns about the quality of patient care delivered by WCEMS.* However, RRFD staff expressed the following issues regarding level of care provided by RRFD personnel and WCEMS accountability:

- The RRFD should be allowed to provide ALS level care.
- WCEMS personnel should be accountable to Fire Station Officers to perform station duties and other personal conduct, including attitudes, while at the fire stations, and at the scene of an emergency in the absence of a WCEMS supervisor.

### 4.5.9. Lack of Formal Agreement for EMS

There is no formal written agreement between the County and the City for the provision of emergency medical services. WCEMS management stated in interviews that in 1975 the County agreed to provide county-wide EMS in return for the cities and volunteer fire departments providing countywide fire suppression and rescue services. There are no formal written agreements covering the provision of these services. There are First Responder operational agreements between the First Responder Organizations (FROs) and Williamson County Emergency Medical Service (WCEMS).

### 4.5.10. Multiple PSAP Centers for EMS Dispatching

There are five Public Safety Answering Points (PSAP) dispatch centers in Williamson County. They are at Williamson County Communications, Round Rock, Georgetown, Leander, and Taylor. WCEMS ambulances (including those housed at RRFD stations) are only dispatched by the Williamson County PSAP. 9-1-1 calls received at the other PSAPs are processed by the receiving PSAP, which includes dispatching the First Responders. The calls are then forwarded to the Williamson County PSAP for EMS Ambulance dispatch. This situation can result in multiple additional minutes in dispatching a Paramedic Ambulance. Priority Dispatching (a "screening" process to determine if a EMS call requires response of both the BLS "First Responder" and the ALS ambulance) is not used in Williamson County.

### 4.5.10. Medical Director at top of Chain of Command

The Medical Director became a half-time employee approximately 5 years ago to improve the medical supervision and training. WCEMS chain-of-command for the supervision and management of the service is as follows:

- Director of EMS;
- Director of Operations;
- Captains as countywide Shift Commanders;
- Lieutenants as Regional Supervisors (Lieutenants staff ambulances as a crew member);
- Sergeants as Station Supervisors (Sergeants also staff ambulances as a crew member); and,
- Paramedics

### 4.5.11. Limited EMS Data Collection Capability

The Medical Director is responsible for the Quality Assurance (QA) and Continuous Quality Improvement (CQI) efforts. He is assisted by a Paramedic. The QA / CQI efforts include the Medical Director riding with EMS crews on a regular weekly basis. Dr. Benold indicated that EMS data collection has been hampered due to old computer software and lack of staff support for data entry and analysis. EMS data has only been collected during the past few years. WCEMS does not have a method of comparing its data with that of the Dispatch Centers or the First Responders.

### 4.5.12. No Routine EMS Training for Fire Departments

WCEMS provides the fire department first responder organizations with a 6 -module competency based training and skills testing curriculum. However, WCEMS does not routinely provide instructors or training for the fire departments. The fire departments are expected to do their own training and QA. Individual EMS crews may assist their local FROs with training.

### 4.5.13. Charges for EMS Service & Billing

In addition to being a tax supported County service, WCEMS charges for response and transportation. If a patient receives ALS services, the response charge is $400. If a patient receives BLS services, the response charge is $370.There is a transportation mileage charge of $6.60 per mile to the hospital. The average ambulance bill is $900. The County also charges $82.50 if a response does not result in a patient transport. The County contracts with a Houston area billing service for an 8% of the collection fee. Last year there was approximately $10 million in billings, and $4.5 million was collected. The County received $4.5 million, less the 8% fee. This helped to off set the $7.5 million WCEMS budget.

### 4.5.14. WCEMS Concerns

WCEMS management and the Medical Director indicated the following concerns:

- Future financial considerations affecting service delivery and growth;
- Secessions from the countywide EMS system by cities desiring to provide their own ambulance service;
- First Responders desiring to provide ALS, which could result in a reduced number of ALS skills being performed by WCEMS Paramedics. The concern focuses on maintaining paramedic level skills proficiency; and,
- FROs need to focus on improving their BLS skills, assisting the Paramedics at the scene, and ensuring their own quality continuing education training and QA/CQI. *The Medical Director does not support ALS level, and states that FROs should only provide BLS patient care.*

### 4.5.15. RRFD AED Program

The RRFD has installed automatic electronic defibrillators (AED) in several City buildings and teaches CPR for the public, free of charge, on a monthly basis. In the opinion of many

cardiac professionals, the provision of AEDs and CPR training for the public is the single greatest contribution to survival from cardiac emergencies that a community can implement.

## 4.6. Emergency Medical Service in Round Rock – Recommendations

### 4.6.1. Establish a Formal, Written EMS Agreement

The City should establish a formal written agreement with Williamson County regarding the provision of emergency medical services (EMS). It should focus on the level of service issues raised in this report, mutual obligations and responsibilities, and other protections for both parties.

### 4.6.2. Upgrade EMS Software

Software and hardware upgrades should be made to facilitate improved EMS performance and dispatch data collection and analysis for QA / CQI efforts

### 4.6.3. Prioritize EMS Responses

The City and Fire Administration should reconsider responding heavy fire apparatus "Code-3 Lights & Siren Emergency" to ALL 9-1-1 EMS calls as opposed to establishing a Medical Priority Dispatch criteria of Life Threatening Emergencies, Time Critical Emergencies, and EMS calls of lesser urgency. This could result in reducing the number of "Code-3 Emergency Calls," and possibly reducing the number of total calls responded to by First Responders, therefore improving the availability of RRFD resources for emergency response.

### 4.6.4. Designate an EMS Coordinator for QA

The RRFD should establish a position, and/or designate an existing Officer level person, as an EMS Coordinator/Training Officer to manage the First Responder Program, provide EMS training, perform QA & CQI activities, and be liaison with other service providers (including hospitals), and the community.

### 4.6.5. Establish an EMS Advisory Committee

An EMS Advisory Committee should be established within the RRFD consisting of RRFD personnel from various ranks including Firefighter/Paramedics and Firefighter/EMT-Bs.

The Committee should assist with the development, review and implementation of an EMS QA/CQI peer review process, EMS Standard Operating Guidelines (SOG), specifications for EMS equipment and supplies, and provide input on other EMS issues.

### 4.6.6. Establish an EMS QA/CQI Peer Review Process

An EMS QA/CQI Peer Review Process should be established that would involve the review of Patient Care Reports (PCR) of all responses that involved the use of an AED, expanded BLS skills and medications, any authorized ALS skills, and other types of patients and cases as identified as appropriate for review by the EMS Advisory Committee. The peer review should be performed by Firefighter/Paramedics and EMT-Bs from another work shift than the one that responded to the emergency. Findings from the peer review should be forwarded for any appropriate training if identified or other action.

### 4.6.7. Obtain Services of a Fire Department Medical Director

The services of a Fire Department Medical Director should be obtained by the RRFD. The Medical Director should be an experienced Emergency Medicine physician who is familiar with current practices and trends in EMS. The Medical Director would be responsible to RRFD Administration for the medical direction, medical oversight, medical supervision, EMS QA/CQI, and medical training of the RRFD.

### 4.6.8. Implement Procedures for Dispatch of Ambulances

Procedures should be developed and implemented that would result in the Round Rock PSAP dispatching WCEMS Paramedic Ambulances to EMS calls in Round Rock. Dispatch procedures are needed to improve ambulance response times and coordination with RRFD EMS responses. The linking of Computer Aided Dispatch (CAD) Systems should be considered.

### 4.6.9. Initiate a Public Access AED Program & Citizen CPR

The City should expand the Public Access AED Program to additional locations throughout the City. The City should also encourage and provide additional Citizen CPR Training opportunities in partnership with the American Heart Association and other medical organizations. These efforts save lives and make the EMS system more effective.

### 4.6.10. EMS System Options

The following are EMS delivery system options offered for consideration.

#### 4.6.10.1. Model One - ALS Engine Companies

This model would require all Engine Companies to be equipped with ALS equipment and supplies, and staffed with at least 1 EMT-Intermediate or Paramedic and 1 EMT-Basic as part of the crew at all times that the Engine is in-service as an ALS Engine Company. The cost of ALS equipment and supplies will vary depending on what is purchased. This could range from $10,000 - $30,000 per Engine Company. It would require approximately 3.5 EMT-Intermediates or Paramedics FTEs to staff one position. In order to staff 6 ALS Engines with appropriate medically trained personnel would require approximately 21 EMT-Intermediates or Paramedics FTEs. Even this staffing could not preclude the occasional use of overtime to fill for vacancies.

#### 4.6.10.2. Model Two - ALS Rescue Squads

This model would utilize "light apparatus" Rescue Squad Vehicles as First Responder Units instead of the more costly and heavier Engine apparatus. This approach would save wear & tear, maintenance costs and extend the life of more costly fire apparatus. It is anticipated that not less than 4 Rescue Squads would be required to provide adequate response to the majority of the City's population. The ALS Rescue Squads would be equipped with ALS medical equipment and supplies, and the extrication and rescue equipment currently carried on Engine Companies. The cost of a Rescue Squad Vehicle will vary depending on the size and specifications of the vehicle. It should range from $100,000 - $150,000 per vehicle. ALS equipment and supplies should range from $10,000 - $30,000.

Rescue Squads, as envisioned here, would be staffed with 1 Paramedic or Intermediate and 1 EMT-B and would be in addition to existing fire fighting companies. To staff 4 Rescue Squads, 14 Paramedics or Intermediates, and 14 EMT-Bs would be required. Overtime would be required on an occasional basis to fill vacancies.

#### 4.6.10.3. Model Three - ALS Rescue Ambulances

This model would put the RRFD in the ALS ambulance business. The RRFD would be the primary 9-1-1 EMS Provider Agency Ambulance Service in the City of Round Rock. WCEMS would no longer be the primary EMS Provider Agency serving Round Rock. WCEMS and RRFD could enter into a Mutual/Automatic Aid

Agreement to back-up each other. The RRFD would be required to be a State of Texas Licensed EMS Provider Agency.

WCEMS currently bases 4 Paramedic ambulances in the City. This model would also provide for **4 ALS Ambulances** to provide a rapid response throughout the City. The cost for each fully equipped ALS Rescue Ambulance should be approximately $130,000 (vehicle $68,000 each, and equipment $62,000 each). The vehicle cost could exceed $100,000 each depending on the type of ambulance vehicle purchased.

The ALS Rescue Ambulances *will require additional staff*. To ensure adequate fire protection and EMS coverage, Ambulances should not be cross-staffed with Engine Companies To staff 4 ALS rescue ambulances 24/7, on a 24 hour 3 Platoon/Shift basis, would require 14 Firefighter/Paramedics or Intermediates and 14 Fire Fighter/EMT-B's. These new employees would need to be trained and qualified as Firefighters, in part, to ensure that they qualify for a Fair Labor Standards Act (FLSA) 7 K overtime rule exemption for working a "53 hour annual average week." The personnel assigned to rescue ambulance duty should be rotated between the rescue ambulances and the Engine companies to ensure that they maintain their fire suppression and EMS skills, and minimize "burn-out." Adequate space should exist on the Rescue Ambulances for Self Contained Breathing Apparatus (SCBA) and firefighting personal protective equipment. The rescue ambulances should respond to fire calls to serve as a Rapid Intervention Crew/Team (RIC Team), and provide EMS.

To properly manage an ALS Rescue Ambulance EMS system, an appropriate level of dedicated management is needed. An additional **Chief Officer** should be employed to serve as the Fire Department EMS Chief. There should be a charge for ALS Ambulance Service. Billing and collection issues may require additional office support staff unless that function is "outsourced".

### 4.6.11. ALS Level First Responder Program

If the City of Round Rock elects to provide an improved level of life saving patient care and customer service, the RRFD should consider an ALS First Responder Program to provide at least Intermediate or Paramedic level ALS patient care services. If implemented, it would

result in more rapid advanced level airway management procedures, cardiac monitoring, manual cardiac defibrillation and cardioversion, IV therapy, and other authorized ALS procedures. The upgraded service level will require upgraded EMS training for existing personnel and the hiring of Paramedics as Firefighters. State Civil Service Law issues must be considered.

## 4.7. Fire Service Capital Funding - Findings

### 4.7.1. RRFD Staff View Station Costs as Higher than Necessary

It is the opinion of the majority of RRFD personnel interviewed that the most recently constructed fire stations were more costly than was required to serve their function as a Round Rock fire station.

### 4.7.2. Inefficient Station Design

It is the view of MAG personnel that building the area of a fire station that is to house apparatus, behind the other functional areas of the fire station, as is evidenced by new Fire Station 6, is counter-productive to efficient/effective fire protection. This design practice adds as much as 15 seconds to response time, which equates to having the station 1/8 of a mile further away from an alarm location.

### 4.7.3. Inappropriately Located Stations.

Fire station site locations do not appear to be based on efficient and effective fire protection coverage. This has resulted in inappropriate location of fire stations, leading to less cost effective fire protection and emergency medical services than would be the case with appropriately located fire stations.

### 4.7.4. Lack of a Specific Capital Program for Stations and Apparatus

There is no specific capital set-aside program in place at this time for fire facility construction, new equipment or apparatus needed to place new stations in operation or for replacement of current equipment or apparatus. Rather, the City typically depends on bond issues for these funding needs.

## 4.8 Fire Service Capital Funding - Recommendations

### 4.8.1. Use Metal Construction for Future Fire Stations.

The City should consider using metal construction for future fire stations rather than masonry or wood stud construction. These stations should be designed in such a manner

as to be movable and less costly, rather than permanent structures, in order to take advantage of future roadway construction to site stations at more cost effective locations. See Appendix for examples of a steel station.

#### 4.8.2. Allow Staff Input into Facility Design.

Fire facility design should be approved by the RRFD administration. Input from RRFD personnel should be sought, and considered in fire station facility design and construction.

#### 4.8.3. Utilize Computer Assisted Map Analysis for Station Locations.

Establishing fire station sites should be based on efficient and effective fire protection coverage as determined by computer assisted map analysis.

#### 4.8.4. Establish Capital Set Aside Program Consistent with Needs.

The City should establish a capital set-aside program for projected fire facility construction, equipment and apparatus necessary to place the station in service and for replacement of existing fire apparatus and equipment. Heavy fire apparatus costs range from $250,000 to $750,000 depending upon design specifications and how equipped. If deployment concepts are designed to shift EMS response to lighter, less costly equipment (in the $150,000 to $200,000 range), then heavy, fire suppression apparatus will be less often utilized, and RRFD's heavy apparatus, front-line service life spans should be expanded to approximately 15 years. Lighter apparatus front-line service life should approximate 7 years. The current funding of replacement fire apparatus through bonding does not allow sufficient flexibility to assure a fire service fleet meeting the needs of the community in a cost effective manner.

### 4.9. Fire Department Accreditation - Findings

#### 4.9.1. Departmental Interest in Accreditation

Seeking accreditation as a fire department is a relatively recent phenomenon. Fewer than 100 agencies have received this recognition. Agencies that have sought this confirmation have done so to shore up a public perception. The attainment of accreditation does **NOT** ensure more effective or efficient fire protection or emergency medical services.

#### 4.9.2. Accreditation Not Achieved

Although the Department has taken steps to achieve accreditation, it was not achieved.

## 4.10. Fire Department Accreditation - Recommendation

### 4.10.1. Develop a Formal Plan for Undertaking an Accreditation Effort.

The City should carefully evaluate the benefits of seeking accreditation relative to the staff time and costs. The Department should develop a formal plan, including a budget request for undertaking the accreditation process. The budget should clarify both direct and indirect costs so that City Administration and the elected officials have a clear picture of the Fire Department effort involved, the demands that will be made on other City Departments and officials, and what effect the process will have on other Department programs. Finally, the plan should assess the impact of "accreditation" on service levels delivered to the public.

## 4.11. Fire Department Quality Assurance – Findings

### 4.11.2. Lack of Quality Assurance Program.

No formal, consistent, Quality Assurance (QA) process exists for RRFD EMS, fire control or other emergency operations. MAG could find no reliable data, from either the RRFD or County EMS records to evaluate the RRFD's impact on emergency medical services. Performance evaluation for all aspects of a fire department's scope of services are critical to maintaining a high level of service, including EMS.

## 4.12. Fire Department Quality Assurance – Recommendations

### 4.16.1. Establish Performance Feedback for Significant Incidents

The Fire Department should establish a system of performance feedback for all significant incidents including EMS incidents where Fire Department personnel assisted in patient care.

## 4.13. Fire Department Emergency Operations Resource Deployment – Findings

(Note, the following findings assume the deployment of Engine Company 6 and sufficient personnel to staff the apparatus with a Lieutenant, Driver/Operator, and Firefighter on a 24/7 basis.)

### 4.13.1. Current Deployment (minimum staffing)

NOTE: Minimum staffing is used for comparison purposes as the total number of personnel can fluctuate depending on pension activity, long term injury or illness leave, off-site training, delay in hiring to replace retirements, etc.

| STATION | APPARATUS | STAFFING |
|---|---|---|
| 1<br>Commerce/Enterprise | Engine<br>Truck | Lieutenant, Driver Operator, Firefighter<br>Lieutenant, Driver Operator, Firefighter |
| 2<br>Florence/Blair | Engine | Lieutenant, Driver Operator, Firefighter |
| 3<br>Rawhide/Old West | Engine | Lieutenant, Driver Operator, Firefighter |
| 4<br>Gattis School/<br>Rusk Rd. | Engine | Lieutenant, Driver Operator, Firefighter |
| 5<br>Deepwood/Oakridge | Engine | Lieutenant, Driver Operator, Firefighter |
| 6<br>Hwy. 79/<br>Joe Dimaggio | Engine | Lieutenant, Driver Operator, Firefighter |
| TOTALS | 6 Engine Cos.<br>1 Truck Co. | 6 Lieutenants, 6 Driver Operators, 6 Firefighters<br>1 Lieutenant, 1 Driver Operators, 1 Firefighters<br>7 Lieutenants, 7 Driver Operators, 7 FF's |

This deployment should provide a 4 minute travel time for the first Engine Company at approximately 80% of "in-City" alarms. However, another alarm within the same company's district would delay response. This deployment is unlikely to provide Truck Company road time of 8 minutes or less to 80% of "in-City" structure fires. However, another alarm within the same company's district would delay response. It is also unlikely to provide more than 10 personnel at the scene of 80% of "in-City" structure fires within 8 minutes travel time.

#### 4.13.1.1. Engine Companies

The most common fire fighting unit in most fire departments, including the RRFD, is the Engine Company. Traditionally, the primary function of an Engine Company protecting a highly urbanized area, is to deliver water through hose lines to control unwanted fire. In more suburban areas (such as Round Rock) because of the limited number of support companies, Engine Companies take on additional roles such as those described below under "Truck Companies." The apparatus used by Engine companies are often referred to as "Pumpers" or a "Triple Combination," or an "Engine." A pumper is equipped with:

- A fire pump, driven by the vehicles Engine, capable (in the case of the RRFD) of delivering 1250 gallons per minute (gpm) at 150 pounds per square inch (psi).

- Fire hose of various diameters used to deliver water from a fire hydrant to the pumper and from the pumper to the burning material.
- A large water tank of 400 or more gallons, used on smaller fires where it is not necessary to connect to a fire hydrant or where hydrants are not accessible (e.g. Interstate 35 in Round Rock)
- Additionally, in Round Rock, pumpers are equipped with a variety of tools for forcible entry, ventilation, salvage, and EMS equipment.

Six Engine Companies are deployed by the RRFD:

- **Station #1 - Commerce / Enterprise:**

Built 1981; updated 1996; 1.14 Acre site; 4 Double deep Bays

- **Station #2 - Florence / Blair:**

Built 1976; .5 Acre site; 2 Double Bays, 1 Single Bay;

- **Station #3 - Rawhide / Old West**

Built 1991; .45 Acre site ; 3 Single Bays

- **Station #4 – Gattis School / Rusk Road**

Built 1994; 1.2 Acre site; 3 Bays

- **Station #5 – Deepwood / Oakridge**

Built 2000; 2.03 Acre site; 3 Bays

- **Station #6 - Hwy 79 / Joe Dimaggio**

Built 2004; 2.5. Acre site; 4 Double Bays

#### 4.13.1.2. Truck Companies (T-Co)

Truck companies traditionally perform such critical roles on the fireground as:

- Search and rescue
- Forcible entry
- Ventilation,
- Salvage (loss control)
- Ladder access

Truck companies, in urban areas, are typically provided at a ration of 1 Truck Company for every 2 or 3 Engine companies. In less urbanized areas, that ratio is often expanded, as it is in Round Rock, to 1 Truck Company for every 4 or 5 Engines (1 to 6 in Round Rock). The result of such an expanded ratio is to delay

the arrival of a Truck Company and shift some Truck Company roles to Engine companies, thereby slowing direct attack on fires.

The single Truck Company in Round Rock is located at Station 1 (Commerce and Enterprise). This location results in estimated response times of over 10 minutes to significant portions of the south, south-eastern, and eastern areas of the City.

The apparatus is equipped with a 100' "elevating platform" (a platform mounted on the end of the aerial device) and numerous tools to accomplish their varied emergency incident functions, including:

- Hydraulic Rescue Tools,
- Air Bags,
- High Angle Rescue Tools,
- Swift/flood Water Rescue,
- Stokes Litter Basket,
- Thermal Imager
- Various Ground Ladders (35', 24', 16' roof)
- Axes
- Power saws (Chain & Rotary)
- Salvage equipment

Additionally, the RRFD Truck Company apparatus carries sufficient hose, and a fire pump and water tank of sufficient capacities to qualify as a "Quint" or multi-function apparatus, capable of either Engine or Truck Company functions. Because of the long aerial device, and extensive tool inventory, this apparatus is significantly longer and heavier than the RRFD pumpers, and is therefore less maneuverable and nimble.

### 4.13.2. Current Resource Deployment

The current resource deployment does not provide a desirable level of either fire protection or first responder emergency medical services to a considerable number of existing and planned residential and commercial developments. In some of the older areas of the City, there is a superior, even redundant level of Engine Company capability.

Truck Company service from the single Truck Company (Truck 1) is inadequate, especially in the south, southeastern, and eastern areas of the City. In addition to ladder capability, the Truck apparatus carry ventilation equipment, forcible entry equipment, and certain rescue equipment. Delay in the arrival of this equipment can significantly adversely effect fire control operations.

Currently, to deliver 3 fire fighting companies and a "rapid intervention team" to an incident scene requires the dispatch of 4 companies (3 Engine companies and the Truck Company) for a total of 12 personnel (plus the Chief Officer). This is over 57% of the on-duty suppression personnel, 50% of the Engine companies and 100% of the Truck Company capability.

### 4.13.3. Staffing Variances Exist

Round Rock Firefighters are on a "3 Platoon" (shift) system. With 22 positions to fill on a 24/7 basis, 66 personnel are required. However due to vacancies created by various types of leaves, (e.g., vacations, holidays, injury and sick leave, etc.) additional personnel are carried as a "staffing pool." This creates a situation where the number of personnel on duty at any one time varies from day to day. Units are therefore staffed at various levels, depending on the number of personnel available at any particular time. Because fire fighting and rescue is, in the extreme, a team effort, staffing variances can result in inefficient, ineffective and possible unnecessarily hazardous operations.

### 4.13.4. Vacation Leave Policies a Factor in Staffing Variances

The current vacation leave policies create situations where personnel do not use all the vacation they have earned and sometimes lose accrued vacation leave. The current vacation leave practice is a factor in creating staffing variances.

### 4.13.5. Staffing Alternatives for Consideration

Overtime pay is used by the Fire Department to achieve minimum staffing when personnel vacancies exceed the capacity of the staffing pool. Generally, fire departments have several different options related to fire station staffing:

#### 4.13.5.1. Constant Staffing

Staffing at exactly the number of personnel needed in each rank to staff the apparatus at a pre-determined (by local policy) minimum staffing. Overtime hiring is

used to fill for vacancies caused by vacation, holidays, training assignments, sick / injury leave, etc.. This option is the most cost effective if the agency is not required to make additional payments for pension funding, health insurance, uniform allowance, etc. for the overtime worked

#### 4.13.5.2. Variable Staffing

Staffing at exactly the number of personnel needed in each rank to staff the apparatus at a set (by local policy) minimum staffing, then closing units / stations or running units with less personnel to fill for vacancies. This is a less expensive option, but also, from the standpoint of effective operations, the least desirable.

#### 4.13.5.3. Staffing Pool

In addition to the number of personnel needed to staff the apparatus at minimum staffing, establishing a "staffing pool" to be used for filling scheduled vacancies. The personnel in the staffing pool are not assigned a specific station or platoon ("A", "B", or "C" shift), but are shifted between stations and even platoons to meet scheduled vacancies created by vacations, holidays, out of City training, etc.. This system does not guarantee that all vacancies will be filled because of unpredictable paid leaves due to illness or injury.

#### 4.13.5.4. Constant Staffing With Pool and Overtime

In order to provide consistent staffing levels, a staffing pool is established to fill scheduled vacancies and overtime is used to fill unscheduled vacancies. This provides both a cost effective and operationally effective system. This is similar to the system in use by the RRFD, but the system is apparently "out of adjustment" as it results in some variable staffing for the companies.

## 4.14. Emergency Operations Resource Deployment – Recommendations

### 4.14.1. Adopt Resource Deployment Criteria

The following recommendations are based on an assumed response objective of 4 minutes driving time for the first arriving Engine Company (3 personnel) and 8 minutes driving time for the entire first alarm assignment (14 personnel, including the Shift Command Team, a Chief Officer and Adjutant). Allowing 1 minute for dispatch and 1 minute for "turnout time", this objective is projected to provide 6 minute response (4 minute driving time + dispatch and turnout time) for the first arriving Engine Company and 10 minute response time (8

minute driving time + dispatch and turnout time) for the entire first alarm assignment time, with a reliability factor of greater than 80%.

### 4.14.2. Deployment Options

It is recommended that the Department adopt one of the following deployment plans (assuming relocated stations):

**Option #1: 7 Engines / 3 Truck Deployment-3 Person Staffing**

Station 1: No relocation recommended

Station 2: No relocation recommended

Station 3: Move to the vicinity of Gattis School Road and Green Lawn Blvd. This location should provide 4 minute drive time to the area currently designated as Fire Station 3's District and allow Station 4 to be moved northeast by covering additional area to the east of the current location.

Station 4: Move to vicinity of Forrest Creek Drive and Red Bud Lane. This location should provide 4 minute drive time further north (beyond Palm Valley Blvd) and east (to the edge of the City limit) of the current location. The area west of Meister Lane should be covered by relocated Station 3.

Station 5: Move to vicinity of Round Rock Avenue and Lake Creek Drive. This location would provide 4 minute drive time further west along Round Rock Avenue.

Station 6: No change recommended at this time. The station location would have been improved by locating on or immediately adjacent to Palm Valley Blvd and in the vicinity of Harrell Parkway, however until additional roadways are completed, this location should be maintained.

Station 7 (new station): Locate in the vicinity of Chandler Road and I-35. As the northern area of the City is developed, this station should be moved easterly to the vicinity of FM 1431 and Stone Oak Drive, and an additional station placed in service in the vicinity of Chandler Road and Sandy Brook Drive.

| STATION | APPARATUS | SHIFT STAFFING |
|---|---|---|
| 1<br>Commerce/Enterprise | Engine<br>Truck | Lieutenant, Driver Operator, Firefighter<br>Lieutenant, Driver Operator, Firefighter |
| 2<br>Florence/Blair | Engine | Lieutenant, Driver Operator, Firefighter |
| 3<br>Gattis School Road / Green Lawn | Engine<br>Truck | Lieutenant, Driver Operator, Firefighter<br>Lieutenant, Driver Operator, Firefighter |
| 4<br>Forrest Creek Drive / Red Bud Lane | Engine<br>Truck | Lieutenant, Driver Operator, Firefighter<br>Lieutenant, Driver Operator, Firefighter |
| 5<br>Round Rock Avenue/ Lake Creek Drive/ | Engine | Lieutenant, Driver Operator, Firefighter |
| 6<br>Hwy. 79/Joe Dimaggio | Engine | Lieutenant, Driver Operator, Firefighter |
| 7<br>Chandler Road / I-35 | Engine | Lieutenant, Driver Operator, Firefighter |
| TOTALS | 7 Engine Cos.<br>3 Trucks Cos. | 7 Lieutenants, 7 Driver Operators, 7 FF's<br>3 Lieutenants, 3 Driver Operators, 3 FF's<br>10 Lieutenants, 10 Driver Operators, 10 FFs |

**Option #1 should be able provide sufficient resources so that:**

• An RRFD Engine or Truck Company should be able to drive the distance to an EMS incident street address within 4 minutes or less in over 80% of "in-City" EMS alarms, However, a previous alarm within the responding company's district could delay response.

• In over 80% of "in-City" EMS structure fires, 3 Engine companies, a Truck Company and 14 personnel, including the Shift Command Team (Shift Commander and Adjutant) should reach the street location within 8 minutes driving time. However, a previous alarm within any of the responding companies' districts could delay response.

***NOTE**: The Engine Company apparatus envisioned here should meet all requirements of NFPA 1901 (for pumper apparatus), be equipped with a 1500 gpm pump, 400 gallon water tank, pre-plumbed heavy stream appliance, carry 1000' of 5" hose, 800' of 2.5" hose, 600' of 1.75" hose, be no longer than 35'-bumper to bumper and be legally carried on a 2 axle chassis, and have sufficient storage compartments to carry all equipment indicated in NFPA 1901. The Truck Company envisioned here should meet all requirements of NFPA 1901*

*(for ladder Truck apparatus), be a tillered model, with a 100' aerial ladder, with storage compartments sufficient to carry all equipment indicated in NFPA 1901.*

**Option #2: 6 Engines / 3 Truck Deployment-4 Person Staffing**

Station 1: No relocation recommended.

Station 2: Relocate in the vicinity of Chandler Road and I-35. The current location of the Station will be redundant with the recommended relocation of Station 3 to the vicinity of Gattis School Road and Green Lawn Blvd.; Station 5 to the vicinity of Round Rock Avenue and Lake Creek Drive, and implementation of Engine Company 6 in the vicinity of Highway 79 and Joe Dimaggio . GIS mapping indicates that 90% of the area now designated as Fire Station 2's District will be within 4 minutes driving time, 6 minute response time, of 2 or more RRFD stations. As the northern area of the City is developed, this station should be moved easterly to the vicinity of FM 1431 and Stone Oak Drive, and an additional station placed in service in the vicinity of Chandler Road and Sandy Brook Drive.

Station 3: Move to the vicinity of Gattis School Road and Green Lawn Blvd. This location should provide 4 minute drive time to the area currently designated as Fire Station 3's District and allow Station 4 to be moved northeast by covering additional area to the east of the current location and Station 2 to be moved north to the vicinity of Chandler Road and I-35 by covering additional area to the north of the current location.

Station 4: Move to vicinity of Forrest Creek Drive and Red Bud Lane. This location should provide 4 minute drive time further north (beyond Palm Valley Blvd) and east (to the edge of the City limit) of the current location. The area west of Meister Lane should be covered by relocated Station 3.

Station 5: Move to vicinity of Round Rock Avenue and Lake Creek Drive. This location would provide 4 minute drive time further west along Round Rock Avenue, further east and north into the area currently assigned to Station 2.

Station 6: No change recommended at this time. The station location would have been improved by locating on or immediately adjacent to Palm Valley Blvd and in

the vicinity of Harrell Parkway, however until additional roadways are completed, this station should remain in its present location.

| STATION | APPARATUS | SHIFT STAFFING |
|---|---|---|
| 1<br>Commerce/Enterprise | Engine<br>Truck | Lieutenant, Driver Operator, 2 Firefighters<br>Lieutenant, Driver Operator, 2 Firefighters |
| 2<br>Chandler Road / I-35 | Engine | Lieutenant, Driver Operator, 2 Firefighters |
| 3<br>Gattis School Road / Green Lawn | Engine<br>Truck | Lieutenant, Driver Operator, 2 Firefighters<br>Lieutenant, Driver Operator, 2 Firefighters |
| 4<br>Forrest Creek Drive / Red Bud Lane | Engine<br>Truck | Lieutenant, Driver Operator, 2 Firefighters<br>Lieutenant, Driver Operator, 2 Firefighters |
| 5<br>Round Rock Avenue / Lake Creek Drive | Engine | Lieutenant, Driver Operator, 2 Firefighters |
| 6<br>Hwy. 79/ Joe Dimaggio | Engine | Lieutenant, Driver Operator, 2 Firefighters |
| TOTALS | 6 Engine Cos.<br>3 Trucks Cos. | 6 Lieutenants, 6 Driver Operators, 12 FF's<br>3 Lieutenants, 3 Driver Operators, 6 FF's<br>9 Lieutenants, 9 Driver Operators, 18 FFs |

**Option #2 should be able to provide sufficient resources so that:**

• An Engine or Truck Company will be able to drive the distance to the EMS incident street address within 4 minutes or less in over 80% of "in-City" EMS alarms, However, a previous alarm within the same company's district could delay response.

• In over 80% of "in-City" EMS structure fires, 2 Engine companies, a Truck Company and 14 personnel, including the Shift Command Team (Shift Commander and Adjutant) should reach the street location within 8 minutes driving time. However, another alarm within any of the responding companies' districts could delay response.

***NOTE:*** *The Engine Company apparatus envisioned here should meet all requirements of NFPA 1901 (for pumper apparatus), be equipped with a 1500 gpm pump, 400-500 gallon water tank, pre-plumbed heavy stream appliance, carries 1000' of 5" hose, 800' of 2.5" hose, 600' of 1.75" hose, be no longer than 35'-bumper to bumper and be legally carried on a 2 axle chassis, and have sufficient storage compartments to carry all equipment indicated in NFPA 1901.*

*The Truck Company envisioned here should meet all requirements of NFPA 1901 (for ladder Truck apparatus), be a tillered model, with a 100' aerial ladder, with storage compartments sufficient to carry all equipment indicated in NFPA 1901.*

**Option # - 3: 6 Quints / 6 Squad Deployment – 3/2 Staffing**

Station 1: No relocation recommended.

Station 2: Relocate in the vicinity of Chandler Road and I-35. The current location of the Station will be redundant with the recommended relocation of Station 3 to the vicinity of Gattis School Road and Green Lawn Blvd.; Station 5 to the vicinity of Round Rock Avenue and Lake Creek Drive, and implementation of Engine Company 6 in the vicinity of Highway 79 and Joe Dimaggio . GIS mapping indicates that 90% of the area now designated as Fire Station 2's District will be within 4 minutes driving time, 6 minute response time, of 2 or more RRFD stations. As the northern area of the City is developed, this station should be moved easterly to the vicinity of FM 1431 and Stone Oak Drive, and an additional station placed in service in the vicinity of Chandler Road and Sandy Brook Drive.

Station 3: Move to the vicinity of Gattis School Road and Green Lawn Blvd. This location should provide 4 minute drive time to the area currently designated as Fire Station 3's District and allow Station 4 to be moved northeast by covering additional area to the east of the current location.

Station 4: Move to vicinity of Forrest Creek Drive and Red Bud Lane. This location should provide 4 minute drive time further north (beyond Palm Valley Blvd) and east (to the edge of the City limit) of the current location. The area west of Meister Lane should be covered by relocated Station 3.

Station 5: Move to vicinity of Round Rock Avenue and Lake Creek Drive. This location would provide 4 minute drive time further west along Round Rock Avenue, further east.

Station 6: No change recommended at this time. The station location would have been improved by locating on or immediately adjacent to Palm Valley Blvd and in the vicinity of Harrell Parkway, however until additional roadways are completed, this location should be maintained

| Station | APPARATUS | SHIFT STAFFING |
|---|---|---|
| 1<br>Commerce/Enterprise | Quint<br>Rescue Squad | Lieutenant, Driver Operator, Firefighter<br>Driver Operator, Firefighter |
| 2<br>Chandler Road / I-35 | Quint<br>Rescue Squad | Lieutenant, Driver Operator, Firefighter<br>Driver Operator, Firefighter |
| 3<br>Gattis School Road and Green Lawn | Quint<br>Rescue Squad | Lieutenant, Driver Operator, Firefighter<br>Driver Operator, Firefighter |
| 4<br>Forrest Creek Drive and Red Bud Lane | Quint<br>Rescue Squad | Lieutenant, Driver Operator, Firefighter<br>Driver Operator, Firefighter |
| 5<br>Round Rock Avenue and Lake Creek Drive | Quint<br>Rescue Squad | Lieutenant, Driver Operator, Firefighter<br>Driver Operator, Firefighter |
| 6<br>Hwy. 79 / Joe Dimaggio | Quint<br>Rescue Squad | Lieutenant, Driver Operator, Firefighter<br>Driver Operator, Firefighter |
| TOTALS | 6 Quint Cos.<br>6 Rescue Squads | 6 Lieutenants, 6 Driver Operators, 6 FF's<br>6 Driver Operator, 6 FFs<br>6 Lieutenants, 12 Driver Operators, 12 FF's |

**Option #3 should be able to provide sufficient resources so that:**

• The first RRFD Rescue Squad will be able to drive the distance to the EMS incident street address within 4 minutes or less in over 80% of "in-City" EMS alarms, Another EMS alarm within the same company's district WOULD NOT delay response as the Quint remaining in quarters would be able to take the response.

• In over 80% of "in-City" EMS structure fires, 3 Quints, 3 Rescue Squads and 17 personnel, including the Shift Command Team (Shift Commander and Adjutant)

would reach the street location in 8 minutes driving time. However, a previous alarm within any of responding companies' districts could delay response.

***NOTE:*** *The "Quint" apparatus envisioned here should meet all requirements of NFPA 1901 (for Quint apparatus) have a 75' aerial ladder with a pre-piped heavy stream appliance, 1500 gpm pump,400 gallon water tank, carry 1000' of 5" hose, 800' of 2.5" hose, 600' of 1.75" hose, be no longer than 35'-bumper to bumper and legally carried on a 2 axle chassis. The Quint apparatus used by the St. Louis Fire Department are an approximate model.*

*The Rescue Squad envisioned here should meet all requirements of NFPA 1901 (for special apparatus), be similar but smaller than the Phoenix Fire Department Ladder-Tender. For additional recommendations for the Rescue Squad apparatus, see the Appendix.*

### 4.14.3. Discussion of Relative Merits of the Options

#### 4.14.3.1. Personnel Available:

**Option #1**: Three Engine Companies,1 Truck Company, and the Shift Command Team delivering 14 personnel to reported structure fire. Four Engine Companies 2 Truck Companies and 18 personnel remain available for further response

**Option #2**: Two Engine Companies, 1 Truck Company, and the Shift Command Team delivering 14 personnel to reported structure fire.. Four Engine Companies, 2 Truck Companies and 24 personnel remain available for further response

**Option #3**: Three Quints, 3 Rescue Squads, and the Shift Command Team delivering 17 personnel to reported structure fire. Three Quints and 3 Squads and 20 personnel remain available for further response.

#### 4.14.3.2. Pumping and Hose Capacity Available:

**Option #1**: Three Engine Companies responding, making 4500 gpm (assuming all Engines having 1500 gpm rated pumps), 3000' of 5" hose,

2400' of 2.5" and 1800' of 1.75" hose, available at reported structure fires. Four Engines available for further response.

**Option #2:** Two Engine Companies responding, making 3000 gpm (assuming all Engines having 1500 gpm rated pumps), 2000' of 5" hose, 1600' of 2.5" hose and 1200' of 1.75" hose, available at reported structure fires. Three Engines available for further response.

**Option #3**: Three Quints responding, making 4500 gpm (assuming all Quints having 1500 gpm rated pumps), 3000' of 5" hose, 2400' of 2.5" hose and 1800' of 1.75" hose, available at reported structure fires. Three Quints and 3 Squads available for further response.

#### 4.14.3.3. Ladder Availability at reported structure fire:

**Option #1:** One Truck Company responding making 1-100' aerial ladder, 2-35' ground ladders, 4-24' ground ladders, on scene (including Engine Company ladders). Two Truck Companies remain available for additional response.

**Option #2:** One Truck Company responding making 1-100' aerial ladder, 2-35' ground ladder, 4-24' ground ladders, on scene (including Engine Company ladders). Two Truck Companies remain available for additional response.

**Option #3:** Three Quints and 2 Squads responding, making 3-75' aerial ladders, 3-35' ground ladders, 3-24' ground ladders, on scene. Three Quints and 3 Squads remain available for additional response),

#### 4.14.3.4. EMS Response:

**Option #1**: Requires 1 Engine Company - 3 personnel on scene. Six Engine Companies and 3 Truck Companies remain available for additional response. A second EMS alarm in the responding companies district would require the Truck Company to respond in those stations (3 of 7) where Trucks are deployed, in the other 4 stations, another more distant station would be dispatched resulting in a delayed response.

**Option #2**: Requires 1 Engine Company - 4 personnel on scene. Five Engine Companies and 3 Truck Companies remain available for additional response. A second EMS alarm in the responding companies district would require the Truck Company to respond in those stations (3 of 6) where Trucks are deployed, in the other 3 stations, another more distant station would be dispatched resulting in a delayed response.

**Option #3:** Requires 1 Rescue Squad -2 personnel on scene. Six Quints and 5 Squads remain available for additional response. A second EMS alarm in the responding companies district would require the Quint Company to respond which would NOT result in a delayed response.

**4.14.3.5. Operations:**

**Option #1:** The majority of Engine Company Officers (4 out of 7 on-duty), will arrive prior to the Truck Company. If laddering above the 2nd floor is required,, if heavy ventilation is required, if difficult entry is required, if an elevated master stream is the appropriate attack, the Engine Company will be forced to await the arrival of the Truck Company. Or, if immediate interior attack is indicated, but there is no risk of injury to occupants, the Engine Company must await the arrival of the 2nd company to commence operations to meet the "2 in / 2 out" policy. Any of these scenarios will delay fire attack. With this deployment option, a Truck Company should arrive within 8 minutes driving time for more than 80% of structure fires. Only that area north/east of the intersection of FM1431 and Stone Oak Drive appears to be beyond the 4 minute driving time for the first arriving Engine Company and the 8 minute response for a Truck Company

**Option #2:** 50% of Engine Company Officers (3 out of 6 on-duty), , will arrive prior to the Truck Company. If laddering above the 2nd floor is required,, if heavy ventilation is required, if difficult entry is required, if an elevated master stream is the appropriate attack, the Engine Company will be forced to await the arrival of the Truck Company. Or if immediate interior attack is indicated, but there is no risk of injury to occupants, the Engine Company must await the arrival of the 2nd company to commence operations to meet the "2 in / 2

out" policy. Any of these scenarios will delay fire attack. Only that area north/east of the intersection of FM1431 and Stone Oak Drive appear to be beyond the 4 minute driving time for the first arriving Engine Company and the 8 minute response for a Truck Company

***NOTE:*** *Even though there are 4 personnel on the first arriving unit,* ***it is the position of MAG that the "2 in / 2 out" rule can not be met with only 4 firefighters on the scene.*** *The OSHA "2 in / 2 out" rule clearly states that no one functioning in a role that if abandoned would increase the risk of injury to persons inside the IDLH can be considered as a member of the initial Rapid Intervention Team. With members making fire attack inside the structure, the pump operator (Driver/Operator) has a critical role in maintaining the appropriate pressure and assuring a continuous flow of water. To abandon that position would be significantly increasing the risk of injury to firefighters inside the structure.*

**Option #3:** The officer of the first arriving Quint Company and accompanying Rescue Squad (which will occur over 90% of the time) can decide among several options including, but not limited to:

- Immediate coordinated fire attack with an interior hose line and products of combustion control (ventilation)
- Attack with elevated stream
- Attack on upper floors via aerial or 35' ground ladder

***NOTE:*** *If operating without the accompanying Rescue Squad (as would be the case less than 10% of the time), staffing should limit the Quint Company to functioning as either an Engine or Truck Company, not both simultaneously. If operating with a Rescue Squad, (as will be the case over 90% of the time) a Quint Company should be able to achieve some functions of both an Engine and Truck Company simultaneously.*

**4.14.3.6. Insurance Services Office (ISO) Grading Considerations:**

MAG has been advised by ISO staff that if a department dispatches at least 3 Quint companies to structure fires, that department will be given the same credit as if 2 Engine companies and a Truck Company were dispatched. In the case of the

Option #3, the City would receive credit for 6 Engine companies and 3 Truck companies

#### 4.14.3.7. Apparatus Cost Comparisons

**Option #1:**

| # Vehicles | Type | Per Unit Cost | Type Total |
|---|---|---|---|
| 7 | Pumper | $375,000 | $2,625,000 |
| 3 | Ladder Truck | $700,000 | $ 2,100,000 |
| TOTAL | | | **$ 4,725.000** |

**Option #2**

| # Vehicles | Type | Per Unit Cost | Type Total |
|---|---|---|---|
| 6 | Pumper | $375,000 | $2,250,000 |
| 3 | Ladder Truck | $700,000 | $ 2,100,000 |
| TOTAL | | | **$ 4,350,000** |

**Option #3**

| # Vehicles | Type | Per Unit Cost | Type Total |
|---|---|---|---|
| 6 | Quint | $500,000 | $3,000,000 |
| 6 | Rescue Squad | $200,000 | $1,200,000 |
| TOTAL | | | **$ 4,200,000** |

#### 4.14.3.7. Personnel Cost Comparisons

This analysis is based on the annual cost to staff the current, and 3 different optional deployment plans for 1 of the 3 platoons (shifts) without regard to overtime required to fill positions vacant to leaves, retirements, and training details. The figures are based on the number of positions required to staff the various deployments multiplied by the current highest salary step (04/05 Budget) for each rank. The purpose of this analysis is to reflect relative comparison of personnel costs for each of the options.

| DEPLOYMENT PLAN | SINGLE PLATOON COST | % INCREASE OVER CURRENT PERSONNEL COSTS |
|---|---|---|
| Option #1 | $1,515,357 | 43% |
| Option #2 | $1,980,567 | 68% |
| Option #3 | $1,656,966 | 25% |

### 4.14.2. Establish a Staffing Pool.

In order to provide for consistent staffing of emergency units, resulting in more effective and safer operations, it is recommended that a staffing pool be established to fill scheduled vacancies and overtime used to fill unscheduled vacancies. This provides both a cost effective and operationally effective system. The recommended process for establishing this program is as follows.

#### 4.14.2.1. Establish Minimum Staffing

Establish a "minimum staffing level" (using the required number of personnel to implement the "level of service" discussed above)

#### 4.14.2.2. Determine Vacancy Factor

Determine a "predictable vacancy factor" by calculating paid leave (vacations, holidays, out of City training, etc.).

#### 4.14.2.3. Schedule All Vacation and Holiday Leave

Schedule, to the extent possible, all vacation and holiday leave, for all emergency responder personnel, on an even basis throughout the year (calendar or fiscal).

#### 4.14.2.4. Use of Staffing Pool

Using the predicted vacancy factor, establish a "staffing pool" to be used for filling scheduled vacancies.

#### 4.14.2.5. Use of Overtime Budget

Include within the annual budget, an overtime fund for maintaining the "minimum staffing level." When overtime is required, a policy of "qualified relief" should be used wherein overtime is used on a rank for rank basis, i.e., a Lieutenant vacancy would be filled only by a Lieutenant working overtime, a Driver/Operator vacancy would be only filled by a Driver/Operator working overtime, and a Firefighter vacancy would be filled only by a Firefighter. In some situations (e.g. no off-duty Lieutenant can be contacted for overtime duty) it may be necessary to use "acting "Lieutenants and Driver/Operators from the immediate lower rank (e.g. a qualified Driver/Operator as a Lieutenant). Under no circumstances should Lieutenants be used as either "acting" Driver/Operators or Firefighters, or Driver/Operators used as "acting" Firefighters.

### 4.14.3. Amend Current Vacation Policies.

Vacation leave periods should be evenly distributed throughout the year and sufficient number of personnel allowed on leave during a period so that all personnel may utilize their earned vacation. The practice of selecting vacation periods should be continued, but all vacation time earned should be selected for the following year and vacation time not used, for any reason, should be "cashed-out" by the City at straight time rates.

### 4.14.4. Establish a Battalion Adjutant Position

A new position of "Battalion Adjutant" should be established at the rank of Captain requiring a total of 3 new Captain positions per shift or 9 total (no "staffing pool" of Captain's positions is recommended). This position would drive the command vehicle and assist the Shift Commander (Battalion Chief) at emergency incidents typically performing as the ICS Planning Section Chief*, but be available for any task assigned by the Incident Commander. Additionally, the "Command Team Adjutant" would perform those administrative tasks assigned by the Battalion Commander including (but not limited to), matters of staffing, report preparation, vacation approvals, overtime hiring, etc. In the absence of the Battalion Chief assigned as the Battalion Commander, the Captain assigned as the Battalion Adjutant would assume the role of the Battalion Commander. The Adjutant's position should be filled by one of the other Adjutants, failing that, a Lieutenant from one of that Platoon's Companies should be hired as the Battalion Adjutant. The Company Commander's (Lieutenant) position should then be filled as is the case with any vacancy in that rank.

## 4.15. Training – Findings

### 4.15.1. Facilities

Currently, the RRFD is without adequate training facilities.

### 4.15.2. Policies

Interviews and the summary of training policies indicate a training program in distress. The word "attempt" is used several times to describe the RRFD's training regime. Specific issues of concern include:

#### 4.15.2.1. Lack of Required Training

A lack of required, continuing education in fire fighting, fire prevention, apparatus operation, and hazmat.

#### 4.15.2.2. Lack of Incident Management Training

The description of incident management training appears very shallow. There was no indication of multi-company officer/company Incident Command Training focused on the command functions of incident management.

#### 4.15.2.3. Lack of Focus for Physical Fitness Training

Physical fitness training lacks instruction and monitoring. It is often argued that the lack of appropriate physical fitness is the greatest risk to the health and safety of firefighters.

#### 4.15.2.4. Lack of Recruit Basic Training

The RRFD does not conduct basic recruit training, rather the Department depends upon State certification. It is not reasonable to conclude that the generic programs conducted at the State level can provide critical information relating to RRFD specific equipment and operations.

#### 4.15.2.5. Lack of Company/Battalion Officer Involvement in Training

Interviews and review of RRFD written policies, indicate that company officers have little if any responsibility for, or training in educational / training protocols.

#### 4.15.2.6. Lack of EMS Coordination / Training

Currently, the RRFD has no one with the specific duty of EMS coordination or training.

### 4.15.3. Level of Training Staff is Inadequate

The current staffing for training functions is inadequate. This is due largely to the lack of training responsibilities at the company and Shift Commander level. With only 2 Lieutenants to research, develop, and present all training, failure of the training program seems a foregone conclusion.

### 4.15.4. Multi-Company Training Exercises not Sufficient

It is highly desirable for fire agencies not experiencing a significant number of complex incidents, to engage in multi-unit training exercises dealing with such complex emergencies. Currently, to do this in Round Rock, it is necessary to significantly reduce the available resources in some stations or in some cases to temporarily close stations.

### 4.15.5. Unclear Line of Reporting

Based on reviews of RRFD Position Descriptions and the "*Staffing and Expectations Report for the RRFD Training Division*" there appears to be some confusion as to the RRFD chain of command as it relates to the Training function. The Training Officer Position Description indicates the Training Officer reports directly to the Fire Chief, while the Report indicates that the Training Officer reports to the Administrative Battalion Chief

## 4.16. Training - Recommendations

### 4.16.1. Construct a Training Facility

A training site, adjacent to a current or planned fire station should be acquired by the City as soon as feasible to mitigate the increasing cost of land in the City. Security is the prime reason to site the training facility adjacent to a fire station. Plans for constructing training facilities should be developed with the following training challenges in mind:

#### 4.16.1.1. Multi-story

Multi-story fires requiring simultaneous fire attack on multiple floors, multi-floor search and rescue operations, salvage operations in conjunction with fire attack,

#### 4.16.1.12. Heavy Stream

Utilization of multiple heavy stream appliances. Water recovery system to be included.

#### 4.16.1.3. Restricted Visibility Challenge

"Smoke room" with reconfigurable walls

#### 4.16.1.4. Removal of Products of Combustion

Both vertical and horizontal ventilation should be considered with provisions for exercising roof opening procedures

#### 4.16.1.6. Flammable Liquid/Hazardous Material Control

"Environmentally appropriate" liquefied gas burner to emulate flammable liquid fire to be provided.

#### 4.16.1.7. Rescue - Confined Space / High Angle

"Tank" structure with viewing ports and emergency hatches.

### 4.16.2. Adjust Training Policies

#### 4.16.2.1. Training Responsibilities

Assign primary training responsibilities to Company Officers and Shift Commanders.

#### 4.16.2.2. Training Requirements

Establish training standards as "requirements" rather than "attempts"

#### 4.16.2.3. Training Goals and Objectives

Establish training goals and objectives for command staff.

### 4.16.3. Staffing

#### 4.16.3.1. Create Battalion Chief as the Training Officer

Create a Battalion Chief position as the RRFD "Training Officer." This position is to manage all RRFD programs within the goals and objectives established by the command staff

#### 4.16.3.2. Create Captain as Assistant Training Officer

Create a Captain's position for the Training Division as the Assistant Training Officer

#### 4.16.3.3. Hire an Education Specialist Position

Hire a civilian "Education Specialist" to provide professional adult education input to and assist in developing RRFD training programs.

#### 4.16.3.3. Delete Training Lieutenants

Delete both Lieutenants' positions from the Training staff

### 4.16.4. Provide Sufficient Overtime Funding for Training

It is recommended that sufficient overtime funding be budgeted each year so that while personnel of the on-duty shift are in training exercises, some stations can be staffed with overtime personnel.

## 4.17. Code Enforcement – Findings

### 4.17.1. State Certification Required

In order to conduct occupancy code enforcement inspections, personnel must be certified by the State as inspectors.

### 4.17.2. Staff Involvement in Public Fire and Life Safety Education

The Fire Prevention Division personnel, including the Fire Marshal, appear to be heavily involved in public fire and life safety education and the Department's data collection system.

### 4.17.3, Lack of Code Enforcement Policies

There does not appear to be any City or Department policies associated with code enforcement inspection activity.

### 4.17.4. RRFD Data System Assigned to Fire Marshal

The Fire Marshal appears to have the total responsibility for the Department's data collection and analysis program (Fire House software).

## 4.18. Code Enforcement - Recommendations

### 4.18.1.Staffing

It is recommended that the Fire Prevention Division staffing be modified as follows:

#### 4.18.1.1. Reclassify Fire Marshal to Battalion Chief Rank

The Fire Marshal position be reclassified at the Battalion Chief rank. This change would facilitate career development by making it possible for persons holding the Battalion Chief rank to rotate in and out of the position. This position should be rotated among Battalion Chiefs as a career development device, at the discretion of the Fire Chief.

#### 4.18.1.2. Reclassify Lieutenant to Captain (Assistant Fire Marshal)

The Lieutenant position in the Fire Prevention Division should be reclassified to a Captain's position and the position description modified to indicate this position's responsibility as the Assistant Fire Marshal. This position should be rotated among Captains as a career development device, at the discretion of the Fire Chief.

#### 4.18.1.3. Reclassify Inspector Positions to Lieutenant

The code enforcement positions currently ranked as "Driver" should be reclassified to the Lieutenant's position. Future promotions to the Lieutenant's positions should include appropriate testing for the code enforcement function. This position should be rotated among Lieutenants as a career development device, at the discretion of the Fire Chief.

### 4.18.2. Establish Code Enforcement Inspection Objectives

The RRFD should establish code enforcement objectives identifying inspection cycles for the various occupancies, e.g.:

- Hospitals, Senior Citizen Assisted Living, K-12 School and Pre-School Occupancies: Not less than twice per year.
- Industrial/Commercial (hazmat): Not less than twice per year.
- Public Assembly Occupancies (Churches, Theatres, Restaurants, Bars, etc.): As determined by Fire Departments risk appraisal.
- Multi-Residential Occupancies: Not less than once per year.
- High-Rise (regardless of occupancy): Not less than once per year.
- Industrial/Commercial (general): As determined by Fire Department risk appraisal.

### 4.18.3. Develop a Fire Inspection Manual

A fire inspection manual should be developed for Round Rock Fire Department in order to facilitate consistency in enforcement process. If sufficient time is not available for staff to

carry this out, the City should contract with a qualified person to produce a "fire prevention guide," specifically for Round Rock.

#### 4.18.4. Involve City Attorney's Office for Enforcement Actions

If compliance to a written notification of non-compliance is not forthcoming within a reasonable time period, the file should be forwarded to the City Attorney's Office for necessary legal action.

#### 4.18.5. Hire a Public Fire and Life Safety Education Specialist

The Department should hire a civilian Public Education Specialist with responsibilities for both the fire and life safety education and Public Information Officer roles and transfer this responsibility from the Fire Marshal to the Administrative Chief.

#### 4.18.6. Transfer Duties for the RRFD Data System

The RRFD data collection and analysis system (Firehouse) should be transferred to the Administrative Chief and a full-time information technology specialist assigned to the Department.

### 4.19. Round Rock Volunteer Fire Department (RRVFD) – Findings

#### 4.19.1. Extended Territorial Jurisdiction Area Responsibilities

While responsibility for fire protection and emergency medical service in the Extended Territorial Jurisdiction area adjacent to the City Limits of Round Rock have, for many years, been the responsibility of the Round Rock Volunteer Fire Department (RRVFD), from a practical point of view that responsibility has largely shifted to the Round Rock Fire Department (RRFD).

#### 4.19.2. RRVFD Fiscal Support

##### 4.19.2.1. Funding

Funding is primarily (90% or more) from County funds. Approximately $60,000 is paid to the City, by the County, for fire protection of the Extended Territorial Jurisdiction adjacent to the City limits. The City passes the funding on to the RRVFD.

##### 4.19.2.2. Fund Raising

Fund raising by the RRVFD amounts to about $5,000 per year

#### 4.19.2.3. City Support of RRVFD

The City provides, at no charge to RRVFD:

- Apparatus maintenance
- Free housing of apparatus
- Workman's Compensation Insurance

The RRVFD is petitioning for State certification which would make the Department eligible for certain grants

#### 4.19.2.4. Emergency Services District (ESD) Funding

ESD formation would require City authorization. As City would be required to pick up liability for any ESD incorporated into the City, it seems unlikely such approval will be forthcoming.

### 4.19.3. RRVFD Emergency Response

During business hours, the majority of the alarms in the area for which the RRVFD is responsible, are handled by the RRFD (the precise percentage was a matter of disagreement between the RRVFD and RRFD), as there are insufficient RRVFD personnel immediately available for response. After business hours, the RRFD continues to respond to EMS calls and sometimes to fire calls when made aware of those calls.

The RRVFD responds to about 230 alarms per year, and reports that the RRFD responds to about 40% of all RRVFD alarms per year (The RRFD believes that percentage is much higher). The RRVFD believes this number would be less if RRFD unit dispatch would be withheld for 3 minutes to determine of the RRVFD had available resources (the RRVFD would like a 3 minute delay during business hours before RRFD is dispatched). At this time, only the RRVFD Chief responds Code 3 in his POV. This is by order of the RRVFD Fire Chief.

RRVFD apparatus is not well located for volunteer responders but Station 6 will help.

ISO has recognized the RRVFD as a valid fire department for the unincorporated areas adjacent to the City

The majority of the officers of the RRFD have little confidence in the capability of the RRVFD to function effectively or safely in the control of structure fires.

- The RRFD has no control over hiring of RRVFD personnel.
- RRFD has no control over training of RRVFD personnel.
- RRFD has no input to RRVFD policies and practices.
- RRFD has no input regarding RRVFD discipline

### 4.19.4. Membership

The RRVFD has about 45 active members. All members live within the City limits

### 4.19.5. RRVFD EMS Capability

About 50% of the members have some type of emergency medical service certification.

- Six members have trauma kits and AEDs in their private vehicles and respond directly to EMS alarms in the unincorporated area.
- Three of the RRVFD brush Trucks have trauma kits and AEDs.
- The RRVFD has a medic van (no transport)

### 4.19.5. RRVFD Fire Control Capability

The RRVFD has 1 Engine and 1 water tender housed at Station 1. Engine will be paid off in 2005. The RRVFD has 4 brush Trucks

### 4.19.7. RRVFD Organization

The RRVFD has no Board of Directors. Policy is made by the membership of the RRVFD. There is no dedicated office, storage space or meeting place

### 4.19.8. RRVFD Training

There is no State training mandate for the RRVFD. The RRVFD Chief indicates he has instituted a more rigorous training program and documentation. No samples of that documentation were made available to MAG.

The majority of RRFD personnel have limited confidence in the training level of the RRVFD. Although the RRVFD Chief would welcome joint training with the RRFD, at this time there is no joint training.

## 4.20. Round Rock Volunteer Fire Department – Recommendations

### 4.20.1. Incorporate the Volunteer Department into the RRFD

The RRVFD should become an organizational element of the RRFD. All current RRVFD personnel should be considered as a "limited function resource," or "Reserves" under the overall direction of RRFD administration. The RRVFD, as a separate entity, should cease to function.

A Captain's position should be allocated to the Emergency Operations Branch to coordinate the organization, staffing, equipping, and training of the Round Rock Fire Department Reserve.

### 4.20.2. Develop a Formal Agreement between the City and RRVFD

The RRVFD and RRFD should develop a formal written agreement regarding:

- The cessation of the RRVFD as a separate entity;
- The RRFD chain of command for both administrative and emergency functions for "Reserve" personnel;
- Emergency services for which, under the command of RRFD officers, "Reserve" personnel will be authorized;
- Maintenance and housekeeping for which "Reserve" personnel, under the command of RRFD officers will be responsible;
- Disciplinary responsibilities for both RRFD and "Reserve" officers and personnel;
- Administration of and responsibilities for recruitment and hiring policies;
- Limited responsibility for fire protection and emergency medical services for the ETJ currently theoretically the responsibility of the RRVFD. The agreement should clearly state that no deployment of resources (station location) shall be based on providing the above emergency services to the ETJ, i.e., the services to be provided the ETJ may not be at the same level as the incorporated area of the City.

### 4.20.3. Assign and Provide Training in "Reserve" Emergency Services

Under the direction and control of RRFD officers, the City should provide training in, and utilization as, a damage control unit (salvage operations), e.g., spreading of salvage covers, removal of excess water, removal and safe storage of exposed

items of value, in order to reduce damage due to water application and other factors incidental to fire control operations. Other areas of assignment and training would include utilization as vegetation fire control units, as the ICS Logistics Section at those incidents where such organization is appropriate, and as support members of certain Special Teams (e.g. Hazmat Emergency Response, Water Rescue Team. Confined Space Rescue Team, High Angle Rescue Team, and Trench Rescue Team).

#### 4.20.4. Assign "Reserve" Maintenance and Housekeeping Duties

Assigned tasks would include routine cleaning of apparatus assigned to the "Reserve," and cleaning of RRFD facilities after use by the "Reserve."

#### 4.20.5. Assign Apparatus for "Reserve"

##### 4.20.5.1. Salvage Trailers

Four trailers should be assigned for the transport of appropriate salvage equipment, located in 4 different stations in order to facilitate timely "Reserve" personnel response from those stations, to those incidents where requested by RRFD officers.

##### 4.20.5.2. Brush Trucks

Four Brush Trucks, with heavy duty trailer hitches appropriate trailer hitch electrical wiring, located together with the above trailers, designed to be used for suppression of vegetation fire, and towing the above trailers, should be assigned.

#### 4.20.6. Provide Training to "Reserve" Personnel

Under the direction and control of RRFD officers, training in salvage operations, e.g., spreading of salvage covers, removal of excess water, removal and safe storage of exposed items of value, grass fire control, NIMS – Logistic Section functions, and Special Team support training, should be provided.

### 4.21. RRFD Data System – Findings

#### 4.21.1. Divided Responsibility for RRFD Data Collection and Analysis

Currently, the responsibility for Information Technology and data collection and analysis is divided between the Fire Marshal and the IT Manager (a half-time FPE).

#### 4.21.2. Data Differences

The data provided by the Dispatch Center and the RRFD appear to have some significant divergence.

### 4.22. RRFD Data System – Recommendations

#### 4.22.1. Assign Data System Responsibility Directly Under the Fire Chief

The responsibility for the RRFD data collection and analysis system should be re-assigned to the unit under the direct supervision of the Fire Chief.

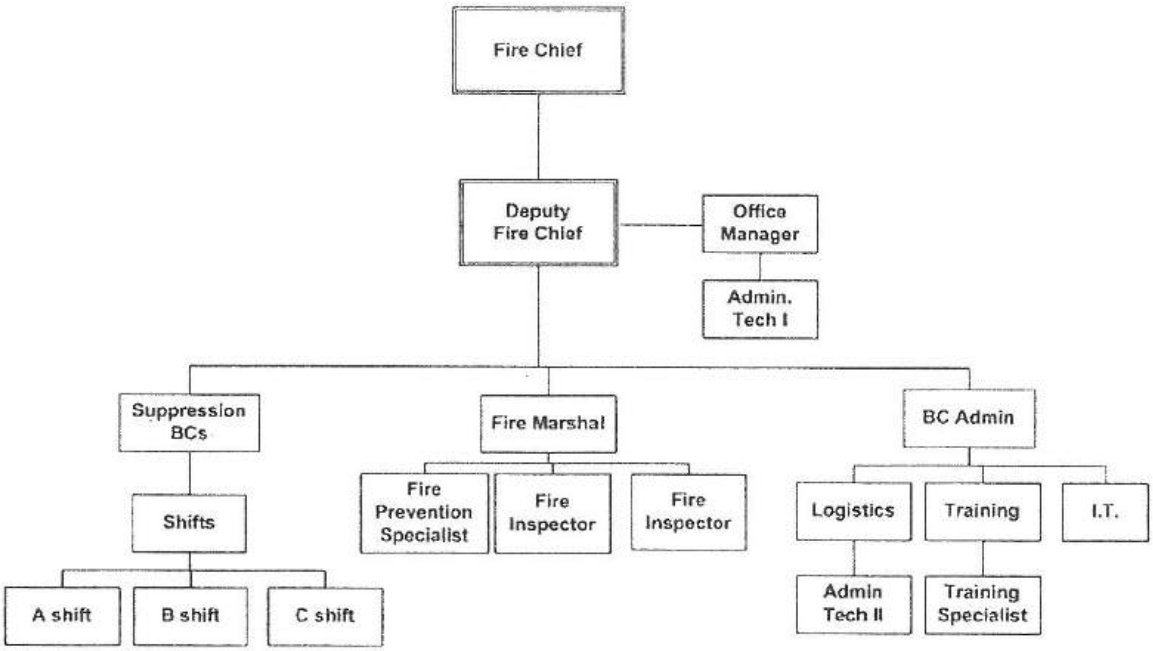
#### 4.22.2. RRFD / RRPD Dispatch Center

The RRFD should develop a means to coordinate information developed at the Dispatch Center with that developed internal to the Department.

## 4.23. Department Organization– Findings

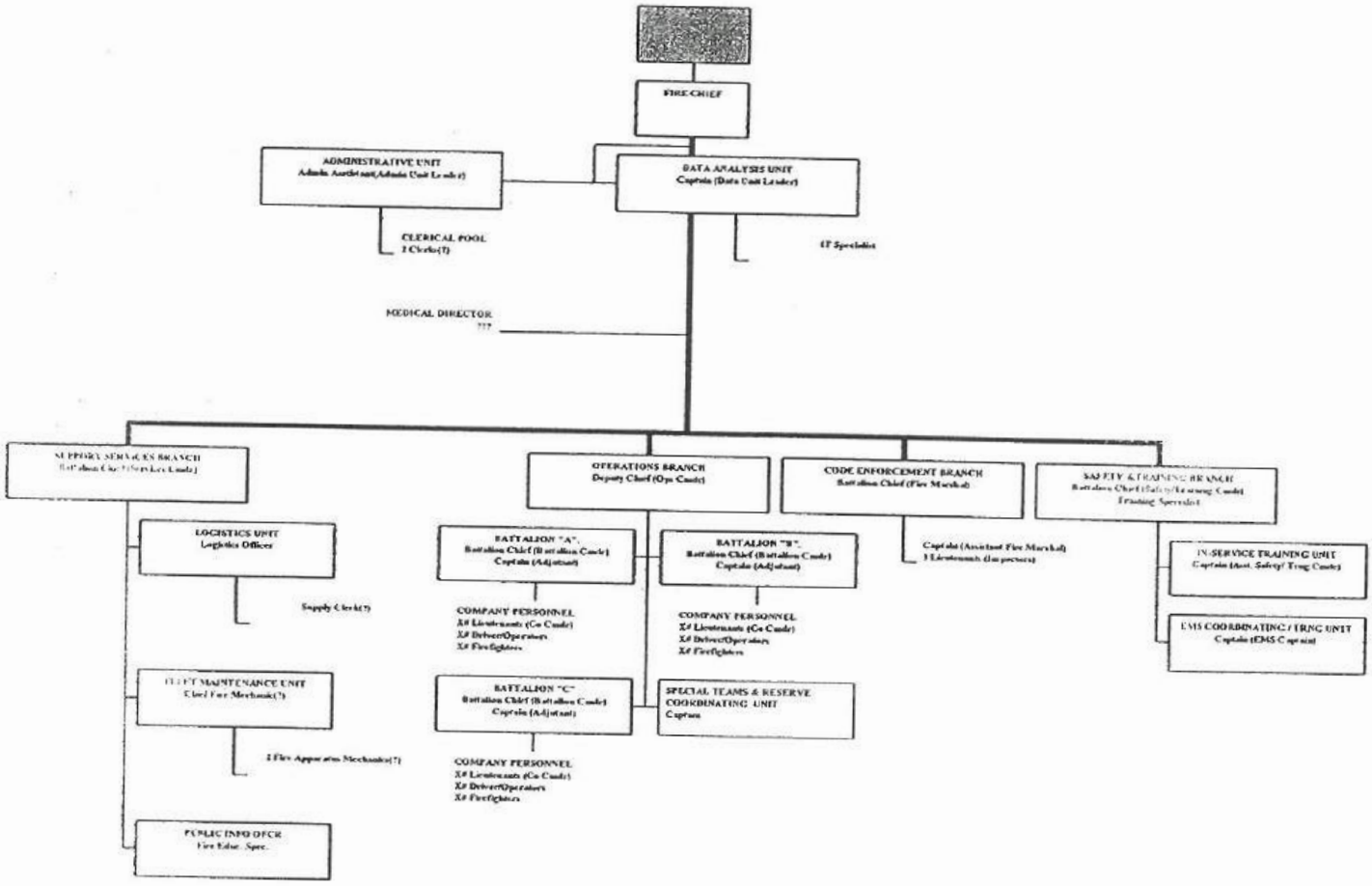
### 4.23.1. Department Organization

#### 4.23.1.1. The Current Organization



## 4.24. Department Organization – Recommendations

### 4.24.1. Recommended Department Organization



### 4.24.2. Position Functions

***NOTE: It is not the goal of this Section to describe the duties of any position in detail, but rather to indicate the overall responsibilities of the position.***

#### 4.24.2.1. Chief of Department - Fire Chief

- Reports directly to and receives direction from the City Manager.

- Provides overall direction to all personnel of the RRFD through his/her immediate subordinates:
  - Operations Branch Commander*
  - Support Services Branch Commander*
  - Fire Marshal*
  - Safety & Training Branch Commander*
  - Data Unit Leader
  - Administrative Assistant
  - Medical Director

    * Together with the Chief of Department, these positions make up the RRFD Senior Management Staff

#### 4.24.2.2. Operations Branch Commander - Deputy Chief

- Reports directly to and receives direction from the Chief of Department.
- In the absence of the Fire Chief, serves as the Chief of Department.
- Manages all personnel assigned to the Emergency Operations Branch through his/her immediate subordinates:
  - Battalion "A" Commander– Battalion Chief
  - Battalion "B" Commander– Battalion Chief
  - Battalion "C" Commander– Battalion Chief
  - Special Teams & Reserve Coordinator - Captain

- During regular business hours, responds to and takes command of:
- All greater alarm incidents (more than 50% of on-duty personnel dispatched to a single incident).
- Any incident when requested by the on-duty Battalion Commander.
- Functions as the on-call Emergency Operations Commander, on a scheduled basis as assigned by the Chief of Department, on a scheduled basis as assigned by the Chief of Department, responding to and taking command of:
- All greater alarm incidents.
- Any incident when requested by the on-duty Battalion Commander.
- When directed by the Chief of Department.
- All future appointments to the rank of either Fire Chief, Deputy Chief or Battalion Chief should be dependent upon the appointed person residing within 10 miles of one of the RRFD stations.

#### 4.24.2.3. Support Services Branch Commander - Battalion Chief

• Reports directly to and receives direction from the Chief of Department.

• Manages all personnel assigned to the Support Services Branch through his/her immediate subordinates:

- Logistics Officer
- Chief Mechanic
- Fire Education Specialist

• Functions as the on-call Emergency Operations Commander, on a scheduled basis as assigned by the Chief of Department, responding to and taking command of:

- All greater alarm incidents.
- Any incident when requested by the on-duty Battalion Commander.
- When directed by the Chief of Department.

#### 4.24.2.4. Fire Marshal – Battalion Chief

- Reports to and receives direction from the Chief of Department.
- Manages all personnel assigned to the Code Enforcement Branch through his/her immediate Subordinates:
    - Assistant Fire Marshal - Captain
    - Inspectors – 3 Lieutenants
- Functions as the on-call Emergency Operations Commander, on a scheduled basis as assigned by the Chief of Department, responding to and taking command of:
    - All greater alarm incidents.
    - Any incident when requested by the on-duty Battalion Commander.
    - When directed by the Chief of Department.

#### 4.24.2.5. Safety & Training Branch Commander

- Reports to and receives direction from the Chief of Department.
- Plans, coordinates and directs the comprehensive RRFD safety and training programs.
- Responsible for implementing senior RRFD management's vision of the Department's training program, including policy and procedures.
- Manages all personnel assigned to the Safety & Training Branch through his/her immediate Subordinates.
    - In-Service Training Unit Leader – Captain
    - EMS Training/Coordination Unit Leader – Lieutenant
    - Training Specialist – Training Technician
- Functions as the RRFD Safety Officer, using NFPA 1500 as a guide to establishing and managing a comprehensive RRFD Firefighter Safety and Health Program.
- Functions as the on-call Emergency Operations Commander, on a scheduled basis as assigned by the Chief of Department, responding to and taking command of:
    - All greater alarm incidents.
    - Any incident when requested by the on-duty Battalion Commander.
    - When directed by the Chief of Department.

#### 4.24.2.6. Administrative Unit Leader – Administrative Assistant

- Reports to and receives direction from the Chief of Department.
- Performs secretarial/clerical duties as assigned by the Chief of Department.
- Manages the Clerical Pool, providing clerical services to the Branches and Data Analysis Unit as needed.

#### 4.24.2.7. Data Analysis Unit Leader – Captain

- Reports to and receives direction from the Chief of Department.
- Provides data analysis for RRFD elements as directed by the Chief of Department.
- Supervises the Information Technology Specialist.

#### 4.24.2.8. Supply Unit Leader – Logistics Officer

- Reports to and receives direction from the Support Services Branch Commander.
- Manages the maintenance and procurement of:
  - Facility equipment and furnishings
  - Janitorial supplies;
  - EMS supplies and equipment
  - Office supplies
  - Firefighting, rescue, and other emergency operations tools
  - Personal protective equipment

#### 4.24.2.9. Fleet Maintenance Unit Leader – Chief Mechanic

- Reports to and receives direction from the Support Services Branch Commander.
- Manages the maintenance and repair of all RRFD vehicles and heavy equipment as a "working foreman."
- Directs the activities of 2 Fire Apparatus Mechanics.

#### 4.24.2.10. Fire Apparatus Mechanic – Fire Mechanic

- Reports to and receives direction from the Chief Fire Mechanic.
- Performs maintenance and repair work on RRFD vehicles and heavy equipment.

#### 4.24.2.11. Public Information Officer – Fire & Life Safety Education Specialist

- Reports to and receives direction from the Support Services Branch Commander.
- Responsible for planning and implementing a comprehensive fire and life safety education programs for the community.
- Serves as liaison to the media. Serves as spokesperson for the fire department providing the news media with information on fire department activities and information at the scene of an emergency.

#### 4.24.2.12. Medical Director

- Reports to and receives direction from the Fire Chief.
- Provides, through the Chief of Department
    - Medical oversight
    - EMS QA/CQI
    - Medical training

#### 4.24.2.13. Assistant Fire Marshal – Captain

- Reports to and receives direction from the Fire Marshal.
- Carries out code enforcement duties as directed by the Fire Marshal.
- In the absence of the Fire Marshal, serves as the Code Enforcement Branch Commander.
- Functions as the on-call RRFD Fire Investigator, on a scheduled basis as assigned by the Fire Marshal.

#### 4.24.2.14. Fire Inspector – Lieutenant

- Reports to and receives direction from the Code Enforcement Branch Commander.
- Carries out code enforcement duties as directed by the Fire Marshal.
- Functions as the on-call RRFD Fire Investigator, on a scheduled basis as assigned by the Code Enforcement Branch Commander.

#### 4.24.2.15. In-Service Training Unit Leader - Captain

- Reports to and receives direction from the Safety/Training Branch Commander.
- In the absence of the Battalion Chief in charge of the Safety/Training Branch, serves as the Safety/Training Branch Commander.
- Responsible for the development and management of RRFD non-medical training programs.
- Responsible for the RRFD "Train the Trainer" program providing all Battalion and Company Commanders, and other personnel specifically designated to provide "hands-on" training to Department personnel.

#### 4.24.2.16. EMS Coordination/Training Unit Leader - Captain

- Reports to and receives direction from the Safety/Training Branch Commander.
- In concert with the Department Medical Director, provide EMS training, perform QA & CQI activities, and be liaison with other service providers (including hospitals), and the community.

#### 4.24.2.17. Battalion Commander – Battalion Chief

- Reports to and receives direction from the Operations Branch Commander.
- Assumes command of any multi-company response. The Battalion Chief, with the Battalion Adjutant, form the Battalion Incident Management Team (BIMT).
- When directed, assumes the duties of the Operations Branch Commander.
- Responsible, through his/her immediate subordinates (i.e., Battalion Adjutant and Company Commanders) for:
    - The readiness of his assigned Battalion, resources, including level of personnel training, condition of equipment, and personnel discipline and physical fitness;
    - Responsible for the training of all subordinate officers assigned to his/her Battalion in emergency operations' strategy and tactics,

including an in-depth working knowledge of the National Incident Management System;

- Responsible, under the direction of the Operations Commander, for appropriate staffing of all units under his/her command;
- Responsible for the condition of apparatus and equipment under his/her command;
- Responsible for the investigation and report of any apparatus accident or incident for which he/she took command;
- Responsible for personally maintaining a Battalion Journal of all significant occurrences occurring during his/her duty period including (but not limited to) emergency responses, personnel actions, personnel injuries resulting in a "injury leave", apparatus accidents, and multi-company training.

#### 4.24.2.18. Battalion Adjutant - Captain

- Reports to and receives direction from the Battalion Commander.
- Drives the command vehicle.
- With the Battalion Commander, forms the Battalion Incident Management Team (BIMT) assisting the Shift Commander (Battalion Chief) at emergency incidents typically performing as the ICS Planning Section Chief, but available for any task assigned by the Incident Commander.
- Performs those administrative tasks assigned by the Battalion Commander including (but not limited to), matters of staffing, report preparation, vacation approvals, overtime hiring.
- In the absence of the Battalion Chief assigned as the Battalion Commander, the Battalion Adjutant assumes the role of the Battalion Commander. The Adjutant's position should be filled by one of the Lieutenants from one of that Platoon's Companies. The Lieutenant's position should then be filled as is the case with any vacancy in that rank.

#### 4.24.2.19. Special Teams & Reserve Coordinating Officer – Captain

- Reports to and receives direction from the Operations Branch Commander.
- Responsible, under the direction of the Operations Branch Commander, for the organization, staffing, equipping, and training of the Round Rock Fire Department Reserve.

#### 4.24.2.20. Company Commander – Lieutenant

- Reports to and receives direction from the Battalion Commander in charge of the Battalion to which the Company Commander is assigned.
- Assumes command of all incidents when he/she is the first company commander to arrive on scene and retains command until the arrival of the Battalion Commander, another senior officer, or until passing command to another Company Commander.
- When directed, assumes the duties of the Battalion Adjutant, or Battalion Commander.
- Responsible, through his/her immediate subordinates (i.e., Driver/Operator(s) and Firefighter(s)) for:
    - The control of incidents or elements of such incidents to which he/she is dispatched and in charge;
    - The carrying out of functions/responsibilities, through subordinates, assigned by other officers acting in roles of senior responsibilities at incidents;
    - The readiness of his assigned resources, including level of personnel training, condition of equipment, and personnel discipline and physical fitness;
    - The training of all subordinates assigned to his/her Station and Platoon in emergency operations' tactics, including an in-depth working knowledge of the National Incident Management System;
    - The condition of apparatus and equipment under his/her command;
    - The investigation and report of any apparatus accident or incident for which he/she took command;

- Personally maintaining a Company Journal of all significant occurrences occurring during his/her duty period including (but not limited to) emergency responses, personnel actions, personnel injuries resulting in a "injury leave", apparatus accidents, and company training activities.

#### 4.24.2.21. Apparatus Operator – Driver/Operator

- Reports to and receives direction from the Company Commander in charge of the Company to which the Driver/Operator is assigned.
- Drives and operates the fire apparatus and the equipment thereon to which the Driver /Operator is assigned and other apparatus to which he/she may be assigned to operate.
- Performs routine maintenance and minor repairs of apparatus, equipment facilities as directed by RRFD policy.
- Performs in the role of a Firefighter when so directed by an officer.
- In the absence of a Company Officer, performs the duties of that position.
- When assigned to an element without a Company Officer, perform the duties of a Company Officer

#### 4.24.2.22. Firefighter – Fire Fighter

- Reports to and receives direction from the Company Commander in charge of the Company to which the Driver/Operator is assigned.
- Performs routine maintenance and minor repairs of facilities as directed by RRFD policy.
- Performs the functions of a Driver/Operator when directed by a member of senior rank.
- Performs assigned duties at the scene of emergency incidents and at training exercises.

## 4.25. Special Teams – Findings

### 4.25.1. Hazardous Materials

#### 4.25.1.1. Current Response

Currently, the City of Round Rock is dependant on Williamson County Hazardous Material Emergency Response Team (WCHMERT) for response to incidents involving hazardous materials.

#### 4.25.1.2. Makeup of Williams County Hazardous Materials Emergency Response Team

The WCHMERT team is composed of personnel from several different agencies in the County.

#### 4.25.1.3. Response Time of WCHMERT

MAG is advised that response can be rather lengthy

#### 4.25.1.4. Hazardous Material Incident risk

The existence of major highways and a railway through the City make the likelihood of hazardous materials a high probability

#### 4.25.1.5. RRFD Hazardous Material Emergency Response Team

MAG is advised that the RRFD is in the development stage of forming a Hazardous Material Emergency Response Team.

### 4.25.2. No Policy for High Angle

No policy for high angle rescue incidents could be discovered.

### 4.25.3. Flood/Swift Water

#### 4.25.3.1. Flood/Swift Water Response

Currently, the RRFD uses all companies for water rescue.

#### 4.25.3.2. Special Equipment

Department policies stress the use of special water rescue equipment.

#### 4.25.3.3. RRFD Water Rescue Definition

The RRFD defines a water rescue as "any incident that involves the removal of a victim(s) from a body of water other than a swimming pool." This includes lakes, ponds, canals, washes, river whether still or moving.

#### 4.25.3.4. Trends for Water Rescue

There is a strong trend in the U.S. to create special teams of personnel to carry out such rescues, especially in flood waters or any fast moving bodies of water as the risk to rescuers in these situations is high.

### 4.25.4. Trench Rescue

#### 4.25.4.1. Trench Rescue Response

Currently, the RRFD uses all companies for trench rescue

#### 4.25.4.2. Department Policies

Department policies stress the use of special trench rescue equipment and advise that the equipment carried by the RRFD is suitable for trenches only to 8 feet deep and 6 feet wide. The policy states that for larger trenches "specialized equipment carried by trench rescue team must be incorporated." However there is no indication as to where such team is located, how such team can be contacted, or what ETA might be expected.

#### 4.25.4.3. Trends for Trench Rescue

There is a strong trend in the US to create special teams for trench rescue

### 4.25.5. Confined Space Rescue

#### 4.25.5.1. Confined Space Rescue

RRFD policy indicates that all personnel will be considered as trench rescue resources.

#### 4.25.5.2. Trends for Confined Space Rescue

There is a strong trend in the U.S. to create special teams of personnel to carry out such rescues as the risk to rescuers can be extreme in these situations.

## 4.26. Special Teams - Recommendations

### 4.26.1. Special Team Organization

It is recommended that Special Teams be organized to carry out Hazardous Materials Emergency Response, Trench Rescue, Confined Space Rescue, High Angle Rescue and Water Rescue functions.

### 4.26.2. It is further recommended:

#### 4.26.2.1. Creation of Coordinator Position

A Captain's position should be allocated to the Emergency Operations Branch to coordinate the organization, staffing, equipping, and training for such functions.

#### 4.26.2.1. Restrict Number of Team Members

The number of career members for Hazardous Materials Emergency Response, Trench Rescue, Confined Space Rescue, High Angle Rescue and Water Rescue functions on each Platoon should be limited to the number needed for direct operations in the high-hazard areas.

#### 4.26.2.1. Use of Reserve Force

That "Reserve Force" members be used to augment the "Special Teams" as support members of the "Teams."

### 4.26.3. Training

It is highly recommended that a skeleton crew receive advanced training in each specialty indicated above, prior to any equipment being purchased for any of those specialties.

## 4.27. Incident Management – Findings

Review of RRFD policies indicates that the system advocated by those policies are not totally "in-sync" with the new Federally required National Incident Management System. (NIMS)

## 4.28. Incident Management – Recommendations.

### 4.28.1. Train the Trainer Program

It is recommended that RRFD Safety/Training Branch be tasked with developing a "train the trainer" program for implementation of NIMS at all levels of the RRFD.

### 4.28.2. NIMS Trainers

It is recommended that "NIMS trainers" be identified for each RRFD Branch and for each Platoon of the Operations Branch.

### 4.28.3. NIMS Training Priority

It is recommended that NIMS training be given the highest priority for the entire Department

### 4.28.4. Use of NIMS Required

It is recommended that implementation of NIMS be required for all emergency incidents

## 4.29. Non-Emergency Assignments - Findings

It has come to the attention of MAG that hosting of children's birthday parties and participation in various parades has essentially become a function of highest priority for RRFD emergency responders. The RRFD has, in many cases, substituted public relations activities for such essential activities as pre-incident planning and training in emergency operations. There would appear to be a significant risk of injury to the children and consequent liability to the City for this practice

## 4.30. Non-Emergency Assignments – Recommendations

### 4.30.1. Discontinuation of On-Duty Parade Assignments

The practice of using on-duty emergency response resources to participate in parades should be abolished.

### 4.30.2. Modifying Station Birthday Party Use

The practice of using RRFD stations for children's birthday parties should be radically modified.

- The parties should not be hosted by on-duty career personnel.

- Reserve personnel should be used for this practice at a station where such activities can be limited to areas remote from training activities and on-duty apparatus.

## 4.31. Apparatus - Findings

### 4.31.1. Command Apparatus

The current RRFD command apparatus is an SUV type vehicle. Complex incidents require that the IC and assisting personnel operate outside the vehicle in whatever weather conditions prevail. Such an arrangement is NOT conducive to effective, efficient incident management

Back-up command personnel must respond from their residences to Station 1 to pickup vehicles with their personal protective equipment and RRFD radios.

### 4.31.2. Aerial Apparatus

Currently, there is no reserve apparatus for the aerial platform

### 4.31.3. Pumper Apparatus

#### 4.31.3.1. Cab Size

Currently, the RRFD is buying cabs designed for a crew of 6.

#### 4.31.3.2. Radio Inventory Inconsistency

There appears to be inconsistency as to the number of portable radios assigned to various Engines.

#### 4.31.3.3. Unsafe Tool Storage

Currently, some RRFD has more rescue tools assigned than space to safely carry them. (both Lieutenants and Drivers stated, the compartments were over-loaded to the point of being a hazard.

#### 4.31.3.4. Inconsistency in SCBA Inventory

There appears to be inconsistency as to the number of SCBA and spare SCBA cylinders carried.

## 4.32. Apparatus – Recommendations

### 4.32.1. Command Apparatus

#### 4.32.1.1. Standardize Command Vehicles

RRFD Command Apparatus should be standardized as full-size vans to allow incident managers to function out of the weather conditions. Vans should be equipped to allow 4 persons to be seated facing a work table, with headsets and independent radios.

#### 4.32.1.2. Assignment of Command Vehicles

The Operations Branch Commander, Administrative Branch Commander, Fire Marshal, and Safety / Training Branch Commander should be assigned Command Apparatus and be required to use such vehicles on a 24/7 basis whenever they are functioning as the "On-Call Operations Commander".

### 4.32.2. Aerial Apparatus

#### 4.32.2.1. Need for Reserve Truck Apparatus

If the RRFD is to continue operating independent Truck companies, a reserve aerial apparatus should be purchased immediately. This need not be a new apparatus. An older apparatus in reasonable condition would be appropriate

#### 4.32.2.2. Convert Current Truck 1 Apparatus to Special Call

If the RRFD converts to the Quint/'Squad concept, the current Truck 1 should be converted to "special call" status and only staffed when specifically requested by an Incident Commander. In this case, no reserve would be required.

### 4.32.3 Pumper Apparatus

#### 4.32.3.1. The RRFD should consider:

- Specifying 4 person cabs in order to gain additional storage on the apparatus, or,
- Request bids with both 4 and 6 person cabs to determine if there are any economies possible

#### 4.32.3.2. Equipment Standards

he RRFD should establish a standard for equipment carried on Engine companies.

#### 4.32.3.3. Rescue Squad Tools

If the RRFD adopts the Quint/Squad concept, rescue tools should be reassigned to the Rescue Squad apparatus

# IMPLEMENTATION PLAN

# SECTION 5.0

## *IMPLEMENTATION PLAN*

## CITY OF ROUND ROCK

## IMPLEMENTATION TABLE FOR FIRE DEPARTMENT RESOURCE ALLOCATION STUDY

| Section # | Action Step | Responsibility | Timing | Impact | Projected Cost Implications |
|---|---|---|---|---|---|
| 4.2.1. | Expand Advisory Group (AG) | City Manager | Near-Term | Achieve broader base of public input | Staff time |
| 4.2.2. | Develop Service Level Guidelines and submit to AG for input | City Manager<br>Fire Chief<br>Police Chief<br>Bldg. Official | Near-Term | Obtain broad based input as to desired service levels | Staff time |
| 4.2.3. | Develop Fire Service Goals and Objectives | City Manager<br>Fire Chief/Staff | Near-Term after input from AG | Establish RRFD Goals & Objectives | Staff time |
| 4.4.1. | Initiate Fire Department Dispatch Improvement Program | City Manager<br>Fire Chief<br>Police Chief | Near-Term | A more effective dispatch system resulting in improved level of service & greater FF safety | Undetermined at this time |
| 4.4.2. | Increase Dispatch Center Staffing | City Manager<br>Police Chief | Near-Term | A more effective dispatch system resulting in improved level of service & greater FF safety | Approximately $44,000 per year for Communications Operator needed to provide appropriate minimum staffing (see NFPA 1221) |
| 4.4.3. | Create a new EOC facility adjacent to Dispatch Center | City Manager<br>Police Chief | Mid-Term | More effective management | Undetermined at this |

## CITY OF ROUND ROCK

## IMPLEMENTATION TABLE FOR FIRE DEPARTMENT RESOURCE ALLOCATION STUDY

| Section # | Action Step | Responsibility | Timing | Impact | Projected Cost Implications |
|---|---|---|---|---|---|
| | | Fire Chief | | | |
| 4.4.4. | Integrate RRFD and CAD system data | City Manager<br>Fire Chief<br>Police Chief | Mid-term | A more useful and dependable data system | Undetermined at this time |
| 4.4.5. | Provide Mobile Computer Terminals for Reserve Apparatus | City Manager<br>Fire Chief | Near Term | More effective and safer emergency operations | Undetermined at this time |
| 4.6.1. | Establish a written agreement with WCEMS | City Manager<br>Fire Chief | Mid-Term | The creation of a base for planning RR EMS | Staff time |
| 4.6.2. | Upgrade EMS hardware/software | WCEMS<br>City Manager<br>Fire Chief | Mid-term | Provide basis for RRFD QA/CQI efforts | Undetermined at this time |
| 4.6.3. | Reconsider EMS dispatch policy | City Manager<br>Fire Chief<br>WCEMS | Mid-term | Reduce emergency demand for RRFD resources | Staff time |
| 4.6.4. | Establish a RRFD EMS Coordinator/Training position | City Manager (HR)<br>Fire Chief | Near-Term | Improve RRFD EMS operations and service level | $81,000 per year including benefits for a RRFD Captain |
| 4.6.5. | Establish EMS Advisory Committee | Fire Chief | Mid-term | Improve RRFD EMS operations and service level | Limited overtime for Committee Mtgs |
| 4.6.6. | Establish EMS Peer Review | Fire Chief | Mid-Term | Improve RRFD EMS | Staff time |

## CITY OF ROUND ROCK

## IMPLEMENTATION TABLE FOR FIRE DEPARTMENT RESOURCE ALLOCATION STUDY

| Section # | Action Step | Responsibility | Timing | Impact | Projected Cost Implications |
|---|---|---|---|---|---|
| | Process | | | operations and service level | |
| 4.6.7. | Establish position of RRFD Medical Director (MD) | City Manager<br>Fire Chief | Mid-Term | Improve RRFD EMS operations and service level | Undetermined at this time |
| 4.6.8. | Improve procedures for dispatch of RRFD units to EMS alarms | City Manager<br>Fire Chief<br>Police Dispatch Mgr<br>WCEMS | Mid-Term | Improve level of service by reducing response time for RRFD units to EMS alarms – | Undetermined at this time |
| 4.6.9. | Initiate AED Public Access Program | City Manager<br>Fire Chief<br>WCEMS | Mid-Term | Improve life safety for RR citizens | Approximately $2500 per location |
| 4.6.10 | Evaluate and implement RRFD EMS options | City Manager<br>FD Chief<br>WCEMS | Mid-Term | Provide a more effective/efficient EMS program for RR | Dependant upon option selected |
| 4.8.1. | Use metal buildings for future fire stations | City Manager<br>Fire Chief | Near-Term | Reduction in cost for future fire stations – facilitate movement of stations | Estimated savings of 30% per station built |
| 4.8.2. | Encourage RRFD personnel input on station design | City Manager<br>Fire Chief | Near-Term | Improve viability of new fire stations | Probable reduction in station cost |
| 4.8.3. | Use computer assisted map analysis for future station location | City Manager.<br>FireChief | Near-Term | Improve effectiveness and efficiency of RR fire and emergency medical services | Staff time. Software on order |

## CITY OF ROUND ROCK

## IMPLEMENTATION TABLE FOR FIRE DEPARTMENT RESOURCE ALLOCATION STUDY

| Section # | Action Step | Responsibility | Timing | Impact | Projected Cost Implications |
|---|---|---|---|---|---|
| | determination | GIS Dept | | by efficient location of stations | |
| 4.8.4. | Establish Capital Set-Aside for replacement of apparatus and equipment | City Manager<br>Fleet Manager<br>Fire Chief | Near-Term | Improve apparatus and equipment replacement planning | Dependent upon deployment option selected |
| 4.10.1. | Develop plan for Accreditation effort for submission to CM | Fire Chief | Mid-Term | Achieve support of CM and Council for effort | Full-time RRFD Capt for 1 year (<u>$81,000 per year including benefits</u>) |
| 4.12.1. | Establish performance feedback for significant incidents | Fire Chief | Near-Term | Improve personnel performance | Staff time |
| 4.14.2 | Determine & Implement RRFD Deployment Plan | City Manager<br>Fire Chief | Near-Term<br>Mid-Term<br>Long-Term<br>(see NOTES) | Improve service level to citizens | <u>Current</u><br>Apparatus Total: $2,600.000<br>Total Personnel: 100%<br><br><u>Option 1</u><br>Apparatus Total: $4,725,000<br>Total Personnel: 43%*<br><br><u>Option 2</u><br>Apparatus Total: $4,350,000<br>Total Personnel: 68%*<br><br><u>Option 3</u><br>Apparatus Total: |

## CITY OF ROUND ROCK

## IMPLEMENTATION TABLE FOR FIRE DEPARTMENT RESOURCE ALLOCATION STUDY

| Section # | Action Step | Responsibility | Timing | Impact | Projected Cost Implications |
|---|---|---|---|---|---|
| | | | | | $4,200,000<br>Total Personnel: 25%*<br><br>*Percent increase over current annual salary costs |
| 4.16.1. | Develop & implement plan for RRFD Training Center | City Manager<br>Fire Chief | Mid-Term | Improve service level to citizens, Firefighter safety, RRFD effectiveness | Dependent on site and plan developed - A large investment, |
| 4.16.2. | • Assign primary training responsibilities to Company Officers<br>• Establish training requirements<br>• Establish training goals & objectives | City Manager (HR)<br>Fire Chief | Near-Term | Improve service level to citizens, Firefighter safety, RRFD effectiveness through increased training | Staff time & possible overtime costs to provide Company Officers with instructor training |
| 4.16.3 | • Create Training / Safety Officer at Battalion Chief level<br>• Create Asst. Training/Safety Officer at Capt's level<br>• Create non-sworn Education Specialist position<br>• Delete both Lieutenant positions now assigned to Training | City Manager (HR)<br>Fire Chief | Near Term | Significant service level improvement through more professional and better staffed Training element | • BC: $94,000 including benefits<br>•Capt: $81,000 including benefits<br>•Ed Spec:$75,000 including benefits<br>• Delete Lts.( Savings): ($150,000)<br>• Net: $100,000 per year |
| 4.16.4. | Provide overtime funding for | City Manager | Mid-Term | Improve level of service by maintaining fire suppression | $60,000 to $80,000 depending on |

## CITY OF ROUND ROCK

## IMPLEMENTATION TABLE FOR FIRE DEPARTMENT RESOURCE ALLOCATION STUDY

| Section # | Action Step | Responsibility | Timing | Impact | Projected Cost Implications |
|---|---|---|---|---|---|
| | training | Fire Chief | | and EMS capability during multi-company training | deployment option used |
| 4.18.1. | Modify Fire Prevention Division as follows:<br>• BC<br>• Lt. To Capt<br>• 3 Dos to Lts. | City Manager (HR)<br>Fire Chief | Mid-Term | Improve personnel development | • BC: No additional cost<br>• Lt to Capt: $6,000<br>• DO to Lt: $6,000<br>TOTAL: $24,000 |
| 4.18.2. | Establish Code Enforcement Objectives | Fire Chief | Mid-Term | Improve fire and life safety | No Cost |
| 4.18.3 | Develop a fire inspection manual | Fire Chief | Mid-Term | Improve consistency in fire and life safety inspections | Staff time |
| 4.18.4. | Develop a code enforcement policy | Fire Chief | Mid Term | Improve fire and life safety in Round Rock | Staff time |
| 4.18.5. | Create a Fire and Life Safety Education Specialist position (this may require negotiation with Texas Fire Council) | City Manager (HR)<br>Fire Chief | Mid-Term | Improve fire and life safety education and relieve Fire Inspectors of this task | $75,000 + benefits |
| 4.18.6. | Transfer data system to new Capt's position | City Manager.<br>Fire Chief | Near-Term | Improve value of RRFD data system, thereby improving planning | $81,000 |
| 4.20.1. | • Dissolve RRVFD<br>• RRVFD to RRFD "Reserves"<br>• Establish Capt as Reserve Coord | City Manager (HR)<br>Fire Chief | Mid-Term | Maintain organization for volunteers. Provide RRFD with additional staffing for | $81,000 |

## CITY OF ROUND ROCK

## IMPLEMENTATION TABLE FOR FIRE DEPARTMENT RESOURCE ALLOCATION STUDY

| Section # | Action Step | Responsibility | Timing | Impact | Projected Cost Implications |
|---|---|---|---|---|---|
| | (also Special Teams Coordinator – see 4.26.1.) | RRVFD Chief<br>County Manager | | salvage, grass fires, etc. | |
| 4.20.2. | Develop formal agreement regarding RRVFD to RRFD Reserve | City Manager<br>FD Chief<br>RRVFD Chief | Mid-Term | Establish responsibility ro provide limited fire protect and emergency medical services to ETJ | Staff time |
| 4.20.3. | • Implement RRFD Reserve program<br>• Training for Salvage, ICS Logistics and grass fire suppression<br>• Training for Special Teams | City Manager<br>Fire Chief | Mid Term | Provide RRFD with additional staffing for salvage, grass fires, etc. | No significant costs |
| 4.20.4. | Assign Reserve maintenance and housekeeping duties | Fire Chief | Mid-Term | Clarify Reserve role | No cost |
| 4.20.5. | Purchase Reserve apparatus and equipment | City Manager<br>Fire Chief | Mid-Term | Provide Reserve Unit with tools to work | 4 Trailers $40,000<br>4 Brush Apparatus: $300,000 |
| 4.24.1.<br>4.24.2. | Implement recommended administrative organization structure | City Manager<br>Fire Chief | Mid-Term | Provide clear organizational structure for management of the RRFD | 1 Battalion Chief $94,000<br>7 Captains $567,000<br>Fire Ed Spec: $75,000<br>Training Spec.: $75,000<br>Total: $811,000 |

## CITY OF ROUND ROCK

## IMPLEMENTATION TABLE FOR FIRE DEPARTMENT RESOURCE ALLOCATION STUDY

| Section # | Action Step | Responsibility | Timing | Impact | Projected Cost Implications |
|---|---|---|---|---|---|
| 4.26.1<br>4.26.2.. | • Assign RRFD Reserve Coordinator, coordination duties of Special Teams<br>• Assign career members of Special Teams<br>• Assign Reserve members of Special Teams | City Manager (HR)<br>Fire Chief | Mid-Term | Initiate implementation of Special Teams | • See 4.20.1 for cost of Coordinator<br>• No cost to assign |
| 4.26.3. | Initiate Special Team Training | City Manager<br>Fire Chief | Mid-Term | Development of Special Team Leaders | Undetermined cost of Special Team Training |
| 4.28.4. | Adopt NIMS for incident management | Fire Chief | Near-Term | Improved incident management | Limited cost of sending some personnel to "Train the Trainer "for NIMS |
| 4.30.1.<br>4.30.2. | Modify RRFD's involvement in non-mission programs | Fire Chief | Near-Term | Reduce non-mission roles for emergency responders freeing time for pre-fire planning, training, etc. | Limited cost savings |
| 4.32.1. | • Purchase Command Apparatus (see NOTES) | City Manager<br>Fire Chief | NearTerm:<br>• Shift Comder:<br>• Ops Cmder:<br>• Safety | Improve incident management capability | $150,000 |

## CITY OF ROUND ROCK

## IMPLEMENTATION TABLE FOR FIRE DEPARTMENT RESOURCE ALLOCATION STUDY

| Section # | Action Step | Responsibility | Timing | Impact | Projected Cost Implications |
|---|---|---|---|---|---|
| | | | LongTerm<br>• Admin Cmdr<br>• Fire Marshal | | |
| 4.32.2. | • Purchase reserve aerial apparatus (if necessary) | City Manager<br>Fire Chief | Near-Term | Provide apparatus for Truck Company when front-line Truck is down for maintenance | $150,000 |
| 4.32.3. | • Write new pumper specifications<br>• Develop Engine Co. equipment standard | Fire Chief | Near-Term | Improve fire-ground operations | No cost |

**NOTES TO IMPLEMENTATION TABLE:**

Timing

- Near-Term: 1-2 years
- Mid-Term: 2-5 years
- Long-Term 5-10 years

Personnel Costs

Personnel costs calculated at top step (when known)

- 4.14.2 – Deployment Options
  - Determination of future RRFD deployment should be made before any further apparatus or station improvement investments are made

- **Option 1:**

**NEAR TERM:**

| IMPROVEMENT | ESTIMATED EXPENSE |
|---|---|
| • Build Station 7 (Chandler Road and I-35) | $ 1,000,000 (assuming metal construction) + property cost |
| • Acquire Pumper apparatus for Station 7 - Coordinate with Station 7 completion | $375,000 |
| • Hire and train additional staffing for new Engine 7 – 1 Lt., 1 D/0, 1 FF on 24/7 basis - Coordinate with Station 7 completion | 3 Lts, 3 D/Os, 3 FFs $630,000 – annual |
| • Relocate Stations 3 (Gattis School Road and Green Lawn Blvd ) and 4 (Forrest Creek Drive and Red Bud Lane ) - Coordinate for simultaneous completion | $2,000,000 (assuming metal construction), no cost for land as older stations can be sold |
| • Acquire Aerial apparatus for Stations 3 and 4 - Coordinate with opening of relocated Stations | $1,400,000 |
| • Hire and train additional staffing for 2 new Truck Companies to provide 1 Lieutenant, 1 Driver/Operator, 1 Firefighter on a 24/7 basis on all companies – Coordinate with opening of Truck 3 and 4 | 6 Lts, 6 D/Os, 6 FFs $1,260,000 annual |
| • Total Estimated Near-Term Expense | Facilities: $3,000,000<br>Apparatus: $1,775,000<br>Personnel (annual): $1,890,000 |

**MID TERM**

| IMPROVEMENT | ESTIMATED EXPENSE |
|---|---|
| • Relocate Station 5 (Round Rock Blvd and Lake Creek Drive) | $ 1,000,000 (assuming metal construction) , no cost for land as older stations can be sold |
| • Total Estimated Mid-Term Expense | Facilities: $1,000,000<br>Apparatus: $0 |

| | |
|---|---|
| | Personnel: $0 |

LONG TERM

| IMPROVEMENT | ESTIMATED EXPENSE |
|---|---|
| • Consider relocation of Station 6 after evaluating roadway access | Undetermined |
| • Total Estimated Long-Term Expense: | Facilities: Undetermined<br>Apparatus: $0<br>Personnel: $0 |

• Option 2:
NEAR TERM:

| IMPROVEMENT | ESTIMATED EXPENSE |
|---|---|
| • Relocate Station 2 (Chandler Road and I-35), Station 3 Gattis School Road and Green Lawn Blvd), Station 4 (Forrest Creek Drive and Red Bud Lane), and Station 5 (Round Rock Blvd and Lake Creek Drive) – Coordinate for simultaneous opening | $4,000,000 (assuming metal construction), Station 2 property expense should be off-set by sale of land dedicated to new Station 2 in "center city, Stations 3 & 4 property cost should be off-set by sale of current Stations property |
| • Acquire Aerial apparatus for Stations 3 and 4 - Coordinate with opening of relocated Stations | $1,400,000 |
| Hire and train additional staffing to provide all Truck Companies (1, 3, 4) with 1 Lieutenant, 1 Driver/Operator, and 2 Firefighters on a 24/7 basis.- Coordinate with opening of Trucks 3 and 4 | • Additional Firefighter for Truck 1: $190,000<br>• Additional staffing for Trucks 3 & 4: 6 Lts, 6 D/Os, 12 FFs: $1,650,000 |
| • Total Estimated Near-Term Expense | Facilities: $4,000,000<br>Apparatus: $1,400,000<br>Personnel (annual): $1,840,000 |

MID TERM

| IMPROVEMENT | ESTIMATED EXPENSE |
|---|---|
| • Provide additional staffing for all 7 Engine Companies to provide 1 Lieutenant, 1 Driver/Operator, 2 Firefighters on a 24/7 basis | 21 additional Firefighter positions: $ 1,350,000 |
| • Relocate Station 5 (Round Rock Blvd and Lake Creek Drive) | $1,000,000, property expense should be off-set by sale of existing fire Station 5 property |
| • Total Estimated Near-Term Expense | Facilities: $1,000,000<br>Apparatus: $0<br>Personnel (annual): $1,350,000 |

LONG TERM

| IMPROVEMENT | ESTIMATED EXPENSE |
|---|---|
| • Consider relocation of Station 6 after evaluating roadway access | Undetermined |
| • Total Estimated Long-Term Expense: | Facilities: Undetermined<br>Apparatus: $0<br>Personnel: $0 |

• Option 3:
NEAR TERM:

| IMPROVEMENT | ESTIMATED EXPENSE |
|---|---|
| • Relocate Station 2 (Chandler Road and I-35) | $ 1,000,000 (assuming metal construction) Station 2 property expense should be off-set by sale of land dedicated to new Station 2 in "center city |
| • Acquire Quint and Squad apparatus for Station 1– Place Truck 1 apparatus in reserve status (staffed on special call only) - Truck 1 Driver/Operator and Firefighter positions redeployed to Squad 1 Coordinate with relocated Station 2 completion | $700,000 |
| • Delete 3 Lieutenant FTEs (from Truck 1) | ($225,000) |
| • Relocate Station 3 Gattis School Road and Green Lawn Blvd) and Station 4 (Forrest Creek Drive and Red Bud Lane),– Coordinate for simultaneous opening | $2,000,000 |
| • Acquire Quint and Squad apparatus for relocated Station 3 and Station 4 – Coordinate with opening of relocated Stations | $1.400,000 |
| • Hire and train sufficient additional personnel to staff Squads 3 and 4 with 1 Driver/Operator and 1 Firefighter position for each of 3 Platoons (shifts) – Coordinate with opening of relocated Stations | $800,000 |
| • Total Estimated Mid-Term Expense: | Facilities: $3,000,000<br>Apparatus: $2,100,000<br>Personnel (annual) : $575,000 |

MID TERM

| IMPROVEMENT | ESTIMATED EXPENSE |
|---|---|
| • Relocate Station 5 (Round Rock Blvd and Lake Creek Drive) | $ 1,000,000 (assuming metal construction) property expense should be off-set by sale of existing fire Station 5 |

| | |
|---|---|
| | property |
| • Acquire Quint and Squad Apparatus for Stations 5 and 6 – Coordinate with opening of relocated Station 5 - | $1,400,000 |
| • Hire and train sufficient additional personnel to staff Squads 5 and 6 with 1 Driver/Operator and 1 Firefighter position for each of 3 Platoons (shifts) – Coordinate with opening of relocated Station 5 | $800,000 |
| Total estimated mid-term expense | Facilities: $1,000,000<br>Apparatus: $1,400,000<br>Personnel (annual): $800,000 |

LONG TERM

| IMPROVEMENT | ESTIMATED EXPENSE |
|---|---|
| • Acquire Quint and Squad Apparatus for relocated Station 2 | $ 700,000 |
| • Hire and train sufficient additional personnel to staff Squad 2 with 1 Driver/Operator and 1 Firefighter position for each of 3 Platoons (shifts) | $400,000 |
| • Consider relocation of Station 6 after evaluating roadway access | Undetermined |
| Total estimated long-term expense | Facilities: Undetermined<br>Apparatus: $700,000<br>Personnel (annual): $400,000 |

**• Command Vehicles**

Three vehicles should be acquired for the Shift Command Team, the Operations Chief and the Safety / Training Commander in the Near-Term, and replaced during the Mid-Term with 2 of the older vehicles going to the Fire Marshal and Administrative Commander

***NOTE:*** *In the case of this option, the station could initially be built using a single apparatus bay design, as a cost saving measure. However, the Station should be designed to facilitate the addition of an apparatus bay and enlargement of other portions of the station at some point in the future in order to accommodate the housing of additional resources here.*

Station 5: Move to vicinity of Round Rock Avenue and Lake Creek Drive. This location would provide 4 minute drive time further west along Round Rock Avenue, further east and north into the area currently assigned to Station 2.

Station 6: No change recommended at this time. The station location would have been improved by locating on or immediately adjacent to Palm Valley Blvd and in the vicinity of Harrell Parkway, however until additional roadways are completed, this station should remain in its present location.

***NOTE:*** *In the case of this option, a RRFD controlled traffic control device should be located at the intersection of Joe Dimaggio Blvd. and East Palm Valley Blvd. to facilitate response of the companies housed at Station 6.*