

Effectively Developing a Capital Improvement Plan for the Rio Rancho Fire Department

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CERTIFICATION STATEMENT

I hereby certify that this paper constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions, or writings of another.

Signed: Richard Dedy

Abstract

The problem is the Rio Rancho Fire Department does not have an effective capital improvement plan (CIP) that allows for continued growth and identifiable funding sources of capital projects. The purpose of this research is to analyze and develop a progressive multi-year CIP designed to incorporate interdepartmental needs with identifiable revenue funding sources.

Action research was used to design and create a multi-year CIP that reflected the following research questions: a) What type of research and analysis needs to be generated before a CIP can be developed? b) How are CIP's developed and used in a municipal government funding format? c) How do municipal fire departments benefit from a CIP? d) What are the different types of alternative revenue generating concepts currently being used by municipal fire departments?

The research procedures for this ARP involved literature review, statistical analysis of City of Rio Rancho finance records, various interviews with individuals in charge of capital improvement plan development, and an external survey. The interviews conducted were comprehensive in covering information from a local fire chief, a finance supervisor, a finance administrator, and an ambulance billing supervisor. Results from the research outlined the importance of developing a comprehensive CIP formulated with data based analysis relating to the items that anticipate funding. The significance of a prioritization process that outlines capital projects based on departmental needs with a definitive funding source is critical to the success of a CIP.

Based on the statistical data and literary research, along with the interviews conducted, the recommendation of this author was to create a CIP with a six year marking. Furthermore, the creation of this CIP sets forth a foundation of projected needs, appropriate costs, and potential funding sources that will allow the Rio Rancho Fire Department to continue to fund capital projects well into the future.

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Introduction

The City of Rio Rancho is located north of Albuquerque in an area called the Rio Grande Valley. The city was incorporated in 1981 and experienced gradual growth in both population and in the city's fire department between the years of 1998-2009. The population of Rio Rancho is just over 90,000 citizens with an increase of 42% over the last 14 years. (USCB, 2014). For the first 25 years of incorporation, the city operated police, fire, and emergency medical service (EMS) as a combined Department of Public Safety (DPS). All police officers were cross trained in each respective discipline and responded accordingly.

Beginning in 2001, an increase in calls for service facilitated a need to separate the DPS system into separate police and fire departments. When this separation occurred, the fire department's administration was structured but the budgeting was still controlled by the police department's management. This created a number of funding issues because the police chief prioritized the financing of law enforcement capital items and very few fire department necessities. When fire apparatus were purchased in the past, the city would finance based on the recommendation of the police chief. This was the status quo for the next five years until a proclamation in 2006 finally granted the fire department its own financial budgeting control and complete separation from the police.

As the Rio Rancho Fire Department (RRFD) took control of its own budgeting and finances, there was a learning curve that needed to take place. The city of Rio Rancho provided assistance but ultimately the RRFD administration needed to prioritize financial needs and capital purchases. There was no process or system in place to facilitate this need or to determine when capital items needed to be built or replaced.

The problem is the Rio Rancho Fire Department does not have an effective capital improvement plan (CIP) that allows for continued growth and identifiable funding sources of capital projects. The purpose of this research is to analyze and develop a progressive multi-year CIP designed to incorporate interdepartmental needs with identifiable revenue funding sources.

The research procedures for this ARP will involve a literature review, statistical analysis of finance records, interviews various financial managers involved in city government both in the city of Rio Rancho and in other municipalities, and an external survey directed to other fire departments across the United States. Action research will be used to design and create a multi-year CIP that reflected the following research questions: a) what type of research and analysis needs to be generated before a CIP can be developed? b) How are CIP's developed and used in a municipal government funding format? c) How do municipal fire departments benefit from a CIP? d) What are the different types of alternative revenue generating concepts currently being used by municipal fire departments?

Background and Significance

The City of Rio Rancho has been the fastest growing municipality in the state of New Mexico continually for the last ten years (Bassi, 2008). The population sits at just over 90,000 but has increased 42% in the last 14 years (USCB, 2014). The city encompasses 104 square miles with seven fire stations. Five of the fire stations are staffed full time, one station is staffed one-half of the time, and the last station is a wildland urban interface station. The Rio Rancho Fire Department (RRFD) strives for excellence in all matters either internal or external. The core values of our department's mission statement are centered on dedication, pride, and professionalism.

RRFD currently employs 107 paid personnel staffing four engine companies, two truck companies, six rescue companies, and one battalion commander on a three shift rotation. All rescue companies are transport capable and RRFD transports 6,000 patients per year (ImageTrend, 2016). Included in the staffing are 90 personnel assigned to operations with the remaining personnel assigned to the administration, training division, fire marshal's office, and emergency management. A fifteen year comparison shows an overall call increase of 121% since 2000 (Imagetrend, 2016).

Table 1 - Total Call Volume 2000-2015

Year	Total Calls	Percent of Increase
2000	4449	(no previous data)
2005	5902	25%
2010	7875	26%
2015	9833	20%

The increase in call volume indicated in Table #1 and the lack of apparatus funding from the city has produced a number of problems. First, the 6,000 EMS transports per year has caused enormous maintenance issues with fire apparatus. Four of the seven frontline rescue units have more than 80,000 miles and five rescue units are older than five years old (Appendix E). In addition, six of the frontline fire engines are older than ten years and two have more than 100,000 miles (Appendix E). Both the rescue and fire apparatus exceed the recommendations listed by the National Fire Protection Association (NFPA 1901 2009, NFPA 1906). The revenue from medical transports exceeded \$1.6 million in 2014 (*City of Rio Rancho*, 2015). Those funds are not distributed back to the RRFD and are instead placed into the general operating fund of the city.

Second, the condition of four of the fire stations has continued to deteriorate over the last 20 years. All four stations are in need of remodeling or repair with structural, plumbing, electrical, and other maintenance concerns. The author managed the Logistics and Training Division for seven years and gathered estimates on various capital repairs to all stations and fire apparatus. RRFD does not have a CIP in place that prioritizes funding or estimates costs when revenue may be available.

Finally, with the continued increase in population in Rio Rancho and the estimates of population growth expected, building additional fire stations are important to maintain response times (CityGate, 2014). The locations, staffing, and most importantly, funding of those stations has not been addressed. There is no time table in place that illustrates a road map on how these stations will be built or even estimating the costs so that finance estimates can be determined.

There was a CIP defined by the city back in 2010 and set forth for a period of six years. That CIP did not contain funding costs in relation to the purchasing of fire apparatus, station remodeling, station building, or any large capital improvement items. There was no inflation costs built into the plan and recovery time frames for situations where capital funding could not be allocated for a particular item. If the city was unable to fund an item from a certain year, not only was it not funded, but it simply moved to the following year. Subsequently, any capital items on the CIP in later years would be all moved back one year. Obviously, the RRFD is still in need of that capital item and for it to be moved back indefinitely, sets forth the mentality that funding will never occur.

During the Executive Leadership course at the NFA, the students were taught and prepared in thinking systematically, purpose/integrity, negotiation, exercising leadership

practicum, and other relevant subjects. Each subject was viewed as vital in the overall leadership spectrum. Executive leadership includes how a fire department can maintain funding of vital services, personnel, apparatus, and equipment. This Applied Research Project is in conjunction with #3 Strategic Goal of the USFA to enhance the fire and emergency services' capability for response to and recovery from all hazards. Funding is the most critical component in operating a fire department and that subsequent capital allows for the improvement of departmental services. The design and implementation of a Capital Improvement Plan sets forth a plan to enhance the Rio Rancho Fire Departments services, response, and to assist the community in recovering from all hazards.

Literature Review

A review of various types of literature was conducted for this applied research project. The reviews consisted of analyzing books, articles, internet sources, state publications, and other applicable literature resources. There was a sufficient amount of information on the topic of capital project funding and CIP's at the Learning Resource Center (LRC) at the National Fire Academy; however, additional information was found at the Parish library at the University of New Mexico in Albuquerque.

Capital Improvement Programs (CIP) are designed to set forth a five to seven year projection of yearly expenditures of capital assets (Vogt, 2004). Capital assets are fixed, one time purchased designed to last longer than one year. A public building remodel, apparatus purchase, or a land acquisition are common capital assets but are not the only ones. As fire departments are involved in patient care and transport, capital costs can also include cardiac monitors, power assisted gurneys, and EMS mannequins (*City of Naperville, 2014*).

There are four general purposes for the CIP and how they should be modeled. First, when an effective CIP is in place, it will help facilitate for the orderly replacement of capital assets (Vogt, 2004). The template of the CIP will show each year and what capital assets are projected to be replaced or even remodeled. The rehabilitation and replacement are critical because all capital assets need to be maintained and kept in a serviceable condition. This should not be confused with service to a capital item since that cost will be covered by the general operating budget.

Second, the CIP allows for project design (Vogt, 2004). The remodel of a fire station can take time for the government to get architectural designs and blueprints made. The designing of a fire engine can often take six to twelve months. Cost of an apparatus can change from month-to-month based on demand and availability, so a CIP must have a cost variance to accommodate (Vogt, 2004).

Next, the CIP allows time for financing to be achieved (Vogt, 2004). If the government does not have funds in the general operating account, funding for the capital assets must be arranged or the project cannot move forward. Whether or not this funding is through a grant, bond, or another means, the process can take months or years. Most bonds have a voting aspect and it could take years for the decision on the vote to take place and even longer for the bond to be enacted (Vogt, 2004). As the CIP extends out over the years, inflation costs need to be added to each item. Costs on capital expenses will increase and having a gap of \$30,000 is significant and might cause the governing body to reject the expenditure.

Finally, the CIP allows time to identify and purchase land (Vogt, 2004). The building of a fire station is a major project for any town or city and the site for that station is critical. Data analysis plays a key role in determining where to build the station. Land owned by the local

government in a particular area may not be feasible for projected growth and fire call volume. Time is needed to research and make informed decisions (Vogt, 2004).

In most city governments, the city finance department in coordination with their respective department director's researches and creates the CIP (Vogt, 2004). A department director needs to be utilized because those officials have knowledge of the assets for that department. They are familiar with the costs, acquisition, and design to obtain capital items (Vogt, 2004). The local governments will have policies and procedures indicating the process to create the CIP and those will need to be adhered. As the process begins, the department director or manager should have researched relevant history of assets for that department (Vogt, 2004). . Knowing which asserts need to be replaced or purchased new, will factor into the CIP for that particular department (Vogt, 2004).

In regards to the steps in creating the CIP, essentially there are three key stages (Vogt, 2004). The formulation, review, and approval of the goals and policies is the first stage. This process will usually begin three to five months before the end of the fiscal budget. Here, the CIP coordinator starts by identifying which goals and policies will be a factor in the program (Vogt, 2004). In larger municipal governments, there may be a committee that sets forth the objectives and how they will be funded. A review of the anticipated budget is key to the process since the approval of the components of the CIP are dependent on funding sources. Once the goals have been approved by the coordinator or committee, then those goals need to be approved by the finance manager (Vogt, 2004).

The second stage involves the review of CIP requests and preparation of the recommended CIP In a troubled economy, fire departments nationwide institute new ways of

raising funds (Vogt, 2004). There can be a number of groups or public officials involved in this stage. The objective of this stage is to determine exact funding sources, analyzing requests from department managers, and preparing the CIP for approval by the head government official (Vogt, 2004). The funding sources can range from general operating budget funding, general obligation bonds, grants, and state funding. The knowledge that the funding will be available for the assets on the CIP determines if the asset will be funded. Each department manager will provide a list of recommended capital assets to be purchased. The CIP coordinator will have to determine which requests hold the most priority for funding and those will head the recommended list to the finance manager (Vogt, 2004). As the funding sources have been determined and the assets prioritized, the CIP will be forwarded to the finance manager for approval. This is, however, not the final approval.

The final step is the governing board review and final approval of the CIP (Vogt, 2004). The CIP is taken in front of the governing body, city manager, or mayor depending on the type of government in control of the municipality. Here, there can be citizen involvement in this stage since the approval of the CIP is often publicized (Vogt, 2004). The citizen may review the CIP and make public comments regarding thoughts on the assets listed and whether or not they agree or disagree with the recommendations. Ultimately, the CIP can be approved in part or whole or other recommendations can be added (Vogt, 2004).

In understanding the CIP method, it is important to know the overall capital budgeting process. Here, the organization sets forth a set of roles, procedures, and policies that incorporate planning, financing, authorizing, and implementing resolutions regarding capital purchasing (Shah, 2007). There are five general stages of the capital budget process:

1. Organization of the process
2. Planning for capital needs
3. Capital financing
4. Project decision making
5. Implementation

In stage one, organization of the process, defining the capital budgeting is critical in to the creation of the CIP. This involves determining who will participate in the process and what role will be taken in the development (Shah, 2007). There are some critical questions that have to be answered in the initial process: Who will coordinate the entire capital budgeting process? What information will be critical to accompany budget requests? How will prioritization of capital requests will conducted and who will have the ultimate authority in the ranking process? How will the annual budget reflect the CIP? All of these questions play a critical role in the CIP development and the individual(s) in-charge of the budgeting process must address these each in the initial stage (Shah, 2007).

Many local governments have developed policies that address all of the initial questions that arise in the budgeting process, including who takes charge of the CIP development. There may be legal requirements that determine how the budget process is formed or it may be determined by past practice. Either way, the government must examine the current financial situation, needs of the various departments, and prospective income gains or losses (Shah, 2007). Typically, the

larger the jurisdiction, the more involved the budgeting process. This occurs because the overall needs of the departments are a greater factor (Shah, 2007).

The second stage involves the planning for capital needs. The jurisdiction must identify capital projects and equipment needs. Department directors will compile a list of capital essentials and often prioritize those needs before presenting to the local government (Shah, 2007). The list often focuses on the replacement of equipment, the funding of projects, and the renovation of facilities. Many jurisdictions will have a strategic plan that identifies future capital needs and how those needs may be funded. The strategic plan will then transition into a CIP and as funding occurs, capital purchases can be made (Shah, 2007).

As previously indicated, the prioritization of capital projects and equipment is a must in any jurisdiction. Most local governments will not have the financial capabilities to purchase everything on a CIP and therefore must make a list of those capital items that need to be acquired quickly (Shah, 2007). All of the different departments are competing for funding of various capital projects and the jurisdiction needs to have a system in place to place priority on those purchases that cannot wait or are needed to allow the government function (Shah, 2007). The CIP identifies costs of capital projects over a period of several years and those items listed in the first few years usually have the highest priority. This all occurs as the CIP is developed (Shah, 2007).

Many jurisdictions use a ranking system to place the priority of capital needs and based on the ranking of capital projects, those higher priority items are purchases first. That ranking system often answers the following questions (Shah, 2007):

- Capital need reduces threats to public safety
- Is mandated by a regulation or law
- Solves a service delivery issue
- Is conducted based on governing body goals or objectives
- Allows jurisdictional facilities to operate for efficiently
- Promotes economic growth
- Uses funds that are available outside the jurisdiction if available
- Is often linked to other projects
- Community supported projects.

Many capital projects involve planning or architectural design. In these situations, the project will be listed in the CIP in a year separate from the actual building of the capital project (Shah, 2007). This is done for two main reasons. First, planning and design usually involves significant time in order to allow plans to be produced and submitted to the jurisdiction. Architectural designs can take months or even a year to produce (Shah, 2007). Second, the cost to hire and award project design can have significant costs to the jurisdiction and therefore is usually funded in a separate year (Shah, 2007).

The second stage commences with the preparing and approving of the CIP. The focus will be on the funding of capital projects and the impact of that funding on the general operating fund. Priorities have been identified during the development and now the CIP will be implemented (Shah, 2007). The CIP is only a road map for capital purchasing and often items are not funded because revenue forecasts change. However, if funding has been planned and money is available then the purchases should proceed in accordance with the CIP (Shah, 2007).

The general focus of the third stage is capital financing options. The first option is the pay-as-you-go source funding (Shah, 2007). As a jurisdiction collects taxes and brings in other revenue, they then utilize those funds to operate the government. Funds are dispersed for general operating and for items located within the CIP. The advantage of pay-as-you-go funding is that there is no interest paid since the purchases are done with existing funds (Shah, 2007). A disadvantage is that for larger projects or substantial purchases there is usually not enough funds to make a one-time purchase (Shah, 2007). In these situations, the jurisdiction will focus on a form of financing. The general pay-as-you-go funding sources are (Shah, 2007):

- Annual taxes
- Operating fund outstanding balances
- Special obligation debt
- Loans from state or national government “bond banks”
- Impact fees
- Some form of grants (National, State, or Local)

When using the existing operating balance, the jurisdiction must maintain an adequate fund balance to ensure operations are not compromised by the purchasing of capital goods. Some governments will funnel funds from existing positive balances to a capital reserve (Shah, 2007). The capital reserve will then be used as needed based on the CIP.

The fourth and fifth stages reiterate the recommendations and financing of capital projects. Essentially, focusing on the second and subsequent years in the CIP and how funding will be determined for those projects. Since forecasting can vary from year-to-year, how will future capital projects be funded if the general operating fund balances are compromised? The

concentration will then turn to borrowing money to ensure the operation of the jurisdiction is not impacted (Shah, 2007). Many local governments will use general obligation bonds (GO) to finance large capital projects. GO bonds are a pledge of the government to levy property tax to meet requirements. This allows the funding of the CIP to continue and since this type of financing is based on the jurisdictions taking authority to repay the debt.

In creating and formulating a CIP, it is critical to understand the strategizing methodology for financing capital improvements (Bland, 2007). The Pay-as-you-go financing was discussed and centers on current tax revenue in addition to grants, bonds, and impact fees. The tax payers are bearing the full impact in this funding option and the ability to maintain in tough economic times can be challenging (Bland, 2007). Pay-as-you-go is only one of several options for a jurisdiction trying to gain funding for capital projects. All of the following are funding options available (Bland, 2007):

- Revenue bonds - allows funding based on revenue specified by the municipality
- Authority Financing – here a state financing authority will issue funding based on reoccurring revenue anticipated to the jurisdiction. The repayment will be in terms of years and payment taken prior to disbursement.
- Tax Anticipation Notes – borrowing based on projected tax revenues
- Lease-Purchase Financing – acquiring property or equipment over a term with yearly payment made to the leaser.

Choosing which financing option is best is determined at the highest level in government. The impact of selecting the right financing option can have positive or negative effects on a jurisdiction for many years to come (Bland, 2007). Borrowing can be difficult because of the

future obligations but can also be critical for a government to expand and even generate future revenue.

The city of Newton Massachusetts has designed a CIP from 2013-2017 that has prioritized city-wide needs. The five year plan encompasses all city departments but also uses a risk-based approach in determining which capital funding is critical in keeping Newton operational (*City of Newton*, 2013). Newton employed a Risk-Based Prioritization grid as shown below.

		Consequence of Failure				
		2	4	6	8	10
Probability of Failure (%)	100	Second Priority			Highest Priority	
	80					
	60	Lowest Priority			Regular Monitoring	
	40					
	20					

Figure 1- Risk-Based Prioritization

The grid places a level of urgency on city-wide facilities or services that are in danger of failing (*City of Newton*, 2013). A city building that has a leaking roof which places an immediate danger to employees or citizens is placed as a top funding priority. As capital items are evaluated on this grid, they are placed in a box and their funding is dependent on available operating funds (*City of Newton*, 2013).

In addition to the Risk-Based grid, Newton designed a “Consequence of Failure” impact system that places importance of funding in the following order: impact on health and safety, city operations, programs/services, future cost/savings, property damage, quality of life, and mission/vision (*City of Newton, 2013*). Each item is given a particular point value. Example, health and safety is 10 points, city operations is 9 points, and so on. As a capital item is being evaluated, both the Risk-Based grid and the “Consequence of Failure” are used to place priority on the funding. All of the capital items are then ordered on the CIP with the most required items first and the least needed last (*City of Newton, 2013*). A fire station remodel with a project cost of \$5,700,000 is fifth on the list and a school repair with a cost of \$385,000 is first on the CIP. There is a risk factor assigned to each project. The CIP contains significant data analysis to each potentially funded item (*City of Newton, 2013*). This analysis illustrates how the city of Newton will be impacted by the having the item funded or not funded.

Each item on the Newton CIP has a designated funding source which dictates how that item will be acquired (*City of Newton, 2013*). The capital funding sources include bonds, grants, special funds, and general operating fund. Once the city government has passed the CIP as part of the general operating budget, capital items can then be purchased or funded as determined by the priority list.

In exploring alternative funding sources, the U.S. Fire Administration has published the *Funding Alternatives for Emergency Medical and Fire Services*. This publication is filled with different funding options available to most fire departments. The most available alternative funding tends to be federal grants (*Funding alternatives, 2012*). The initial priority for the local fire department is to identify all of the available grants followed by grant deadlines. Grants need

to be identified not necessarily to meet a project need, but rather, to see if it can meet the agency's needs (*Funding alternatives*, 2012). A fire department may not be in need of fire extrication equipment but if a grant is available, why not apply? Once the grants are identified then research needs to be conducted to determine the exact specification of each grant (*Funding alternatives*, 2012). There are a number of different grants that award funding for equipment, personnel, apparatus, and other related items. There are a number of questions that need to be answered during this stage (*Funding alternatives*, 2012):

- Is the fire department eligible to apply for this grant?
- What is the goal, timing and type of project that needs funding?
- Does the grantor have specified eligibility requirements?
- Can all or only part of the expenses be funded by this grant?

Answering these questions can assist in narrowing the available grants and determining which will meet the agency's needs.

Grants must contain a good narrative to explain the fire department's needs (*Funding alternatives*, 2012). This narrative should be written by knowledgeable department personnel that have information in the related topic. This involves research and data analysis to ensure the narrative reflects the agency's need (*Funding alternatives*, 2012). If there is a prevailing community or departmental risk that is mitigated by obtaining the grant, then that information must be reflected in the narrative. There must be data analysis to show that risk. An example could involve examining long response times analyzed by an inspection of fire department responses data. After the narrative has been completed, it is critical to ensure all of the

instructions for the grant are followed. This could be as simple as a signature or just confirming the grant deadline (*Funding alternatives*, 2012).

The next relevant funding method is an Emergency-Response Service Fee. This fee is designed to recoup costs associated with responding to emergency incidents. This process can involve charging auto insurance companies for fire departments responding to motor vehicle crashes or fire responses to medical calls. Based on the number of calls this can provide substantial funding to a fire department. The fee must be reasonable and justified or collection and community perception will be effected. There are opponents to this fee who believe that any emergency response is simply part of the fire departments duties and the fee should already be covered by local taxes (*Funding alternatives*, 2012).

The charge for fire department response to false alarms can generate significant funds. There has been an increase in fire detection systems in most commercial buildings and now in residential structures. Cities have begun enacting ordinances that allow for fining of alarm owners for false responses (*Funding alternatives*, 2012). This generates revenue but it also pressures responsible parties to maintain the alarm systems to prevent fines (*Funding alternatives*, 2012). Recent statistical numbers show that for every 10 fires responded, there are 16 false alarms (*Funding alternatives*, 2012). The issuance of fines has proved productive with a 50% reduction in alarms over a four year period (*Funding alternatives*, 2012). This type of nuisance alarm can translate to adding a fine for false medical alarms as well.

To summarize, the material researched focused on the understanding of the development of a CIP and how it related to the budgeting process. The CIP is the responsibility of the various department directors and the person in charge of overseeing the formulation process. Just

placing capital projects in a CIP will not get those items funded. The prioritization and justification of capital projects is dependent on department directors to research needs and understand how those needs relate to the accomplishing governmental objectives and goals. Funding is a critical aspect to any CIP, but the use of alternative funding sources helps in situations where the jurisdiction is unable to fund a project based on a lack of money. There are a number of different funding options available to most fire departments that do not impact the local municipal general fund. The research information gathered impacts the need for an effective CIP for the RRFD.

The literature found provided a clear representation of the capital improvement process and the obtainable funding options available to many jurisdictions. This literature supplies a foundation to answers the research questions as listed in this applied research project.

Procedures

This Applied Research Project was conducted to research, strategize, and create a Capital Improvement Plan. The research was conducted primarily at the Learning Resource Center (LRC) while the author was on campus and later continued using various internet and fire publications. The general procedures for this APR will include:

- A comprehensive literature review
- Analysis of City of Rio Rancho adopted budget
- An email with Steve Perkins who is an official from the City of Rio Rancho in-charge of ambulance billing.
- Interview with Donald Martinez Senior Financial Analyst with the City of Rio Rancho

- An interview with Jamie Embick Zoning Administrator for the Town of Silver City New Mexico
- An interview with Fire Chief David Downey from the city of Albuquerque Fire Department
- Interview with Jose Jaramillo with Siddons-Martin who is a distributor of Pierce Fire Apparatus.
- An external survey of similar sized fire departments across the county.

The gathering of literature for this project began with an initial visit to the LRC while on campus. Initially, StarWeb was used to locate Applied Research Projects (ARP) that matched the author's topic. The search involved the key words, "budget", "capital", "capital improvement", and "capital improvement plan." The search on the various key words yielded significant data both in the LRC and with online ARP's. The same search was conducted using WorldCat which produced several books that contained information on municipal budgeting and CIP. Additional literature was found at the Parish library at the University of New Mexico. During the research at those libraries, an electronic academic search engine through the internet produced additional information.

In the initial phase of procedural development, an external survey was created that reflected ideas, hypothesis, and research on the topic of a CIP's. In this phase, gathering interest on fire departments that use a CIP was the main focus. On December 17, 2015, an initial bulk email was sent to 181 recipients working for various fire departments around the nation. This was done before the survey was administered because only departments that used a CIP needed to answer the survey. The recipients were comprised of general fire department contacts the

author associates with, students that attended EFOP with the author, students from two other NFA courses, and contacts researched on the internet from information gained in a Firehouse Magazine article from 2011 on an article on fire department profiles. The subject of that email, which is shown in Appendix A, was to determine which fire departments were developing their own CIP's and how capital projects were funded in those respective departments.

An email was sent to Steve Perkins who is in-charge of ambulance billing for the City of Rio Rancho. The purpose of the email was to learn about the amount of money that is collected every year from the RRFID patient transporting.

An interview was conducted with Donald Martinez who is in-charge of CIP development for the City of Rio Rancho. The interview was conducted on February 2nd, 2016. Mr. Martinez was interviewed because of his role in the development of the CIP but also because he is educated in strategic planning and finance.

On February 5, 2015, an interview was conducted with David Downey who is the Fire Chief of the Albuquerque Fire Department (AFD). Chief Downey is in charge of strategic planning and CIP development for AFD.

An interview was conducted with Jaime Embick who is in-charge of CIP development for the Town of Silver City New Mexico. The interview was conducted on February 9, 2016.

In addition, Jose Jaramillo who is a sales representative for Siddons-Martin was also interviewed on February 9, 2016. Siddons-Martin is a sales distributor for Pierce fire apparatus.

There were several limitations discovered during the procedural induction of the ARP. First, when interviewing personnel from other fire departments and government agencies, there was a reluctance to discuss intricate information about specific CIP projects and funding. Questions regarding specific funding sources to purchase capital items, how money is appropriated, and decisions about prioritization of capital items was mostly met with hesitation and some “I’m not sure” responses. It is possible that the interviewed parties did not know the answer to those specific questions or were unsure if that information could be released.

Another limitation involved identifying and pursuing the correct individual(s) who have specific roles in developing the CIP. There were numerous emails and phone calls to the Albuquerque Fire Department, City of Albuquerque, and even the City of Rio Rancho to find individuals who played specific roles in the development of the CIP.

Results

All four of the research questions can be answered using information from a comprehensive review of City of Rio Rancho adopted budget, various interviews with subject matter experts, other records obtained from the City of Rio Rancho, and an external survey sent to departments across the county.

a) What type of research and analysis needs to be generated before a CIP can be developed?

On February 2, 2016, Donald Martinez, a Senior Financial Analyst for the city of Rio Rancho, was interviewed. The interview consisted of nine questions (Appendix D) developed to get an understanding of the strategic planning and CIP development of the City of Rio Rancho.

Mr. Martinez indicated that the City of Rio Rancho uses a six year Infrastructure Capital Improvement Plan (ICIP) that is essentially the same as a standard CIP (D. Martinez, Personal Interview, February 2, 2016). The six year plan encompasses the current year along with an added year at the end of the ICIP. Department directors are tasked with adding capital items to their budgets during the yearly budget preparation period which ends in January of each year (D. Martinez, Personal Interview, February 2, 2016). The research for those capital items is dependent on the department director. That research includes: needs analysis, quotes, and probable funding source (D. Martinez, Personal Interview, February 2, 2016).

Mr. Martinez advised his team will put together a list of prospective capital purchase based on a prioritization from department directors (D. Martinez, Personal Interview, February 2, 2016). City funding is typically listed as the funding source because, in most cases, grants or bond funding is undetermined (D. Martinez, Personal Interview, February 2, 2016). The city manager will then evaluate the needs analysis and funding sources to determine which items will be officially listed on the final budget recommendations to the mayor (D. Martinez, Personal Interview, February 2, 2016).

How capital purchases are funded can range from city operating fund balance, general obligation bonds, federal or state grants, utility fees, ambulance billing, and other funds (D. Martinez, Personal Interview, February 2, 2016). The city arranges the financing in three categories: Pay as You Go, Debt Financing, and To Be Determined. Mr. Martinez advised that the current political arrangement of the city council would rather “pay as you go” instead of incurring debt. In the 2016 adopted budget, Pay as You Go funding was 18% of the financing of capital purchases and Debt Financing was only 5% (D. Martinez, Personal Interview, February 2,

2016). Mr. Martinez indicated that the To Be Determined method of financing was 77% of all recommended capital purchases. These are deferred capital needs until funding is identified. The funding may not be determined for several years and could eventually never be funded (D. Martinez, Personal Interview, February 2, 2016). Mr. Martinez did not know the exact percentage of capital projects that are funded every year, only advising it varies from year to year.

In regards to using an inflation increase on future capital projects, Mr. Martinez said the city does not use any inflation rate when projecting future costs (D. Martinez, Personal Interview, February 2, 2016). He added that it can be a problem if a quote on a fire engine in 2015 is \$450,000 but in 2017 would cost \$480,000. Currently, the city does not have a plan to implement an inflation factor in the ICIP (D. Martinez, Personal Interview, February 2, 2016).

On February 9, 2016, an interview was conducted with Jamie Embick. Ms. Embick is a Zoning Administrator for the Town of Silver City, New Mexico and is in-charge of the Infrastructure Capital Improvement Plan (ICIP). All questions directed to Ms. Embick came from the external survey distributed to outside entities. Ms. Embick stated that Silver City follows state recommended guidelines of having an ICIP for a minimum of five years in order to receive various types of funding (J. Embick, Personal Interview, February 9, 2016). There is a prioritization process in place that starts with public meetings. This allows the general public to voice overall concerns and opinion on various capital projects. After the public's input, city department directors have an opportunity to indicate which capital projects are in most need. Ultimately, the Finance Manager will decide which projects move ahead and which are funded (J. Embick, Personal Interview, February 9, 2016).

Silver City funds capital projects by using a combination of grants, general fund revenues, general obligation bonds, and other revenue (J. Embick, Personal Interview, February 9, 2016). The Finance Manager is able to blend the different types of money together and fund necessary projects. Those projects could be fire apparatus, police units, road work, or sewer projects. If there is money available, other capital projects will receive funding. Ms. Embick stated that there is an inflation factor built into the ICIP that accounts for an increase in cost from year-to-year (J. Embick, Personal Interview, February 9, 2016). The increase is dependent on the capital project and varies.

A brief phone interview was conducted with Jose Jaramillo. Mr. Jaramillo is a sales representative for Siddons-Martin in Albuquerque. Siddons-Martin is the sale distributor for Pierce fire apparatus and has sold the City of Rio Rancho all of its fire engines. The sole purpose for the interview with Mr. Jaramillo is to determine the average amount of increase by percentage of fire apparatus on a yearly basis. Mr. Jaramillo indicated that a safe calculated percentage is 4% per year (J. Jaramillo, Personal Interview, February 9, 2016). That amount should cover the yearly increase in production cost.

b) How are CIP's developed and used in a municipal government funding format?

The interview with Donald Martinez also provided information on how the CIP is developed in regards to a municipal government funding format. Mr. Martinez indicated the city might only have enough money to fund ten capital projects each year (D. Martinez, Personal Interview, February 2, 2016). Those projects usually include all of the main city departments:

- Fire Rescue

- Police
- Libraries
- Parks and Recreation
- Public Works
- Motor Vehicle Division
- Senior Services

The city must set funding to accommodate all city departments but the process is done by examining the following seven requirements:

1. Legality
2. Equity
3. Effectiveness
4. Acceptability
5. Affordability
6. Ease of Administration
7. Efficiency

Mr. Martinez said the city maintains a mix of financing sources that range from pay as you go, grants, and some debt. This allows municipal government funding across all city departments without any one department receiving all of the funding (D. Martinez, Personal Interview, February 2, 2016). In addition, all department directors can look at the capital improvement

projects and prioritize which projects should be funded with the available monies. In order to qualify, the capital project must be more than \$10,000 and have an anticipated useful life of 10 years or greater (D. Martinez, Personal Interview, February 2, 2016).

Ms. Embick with the Town of Silver City was able to provide similar information as Donald Martinez in regards to how municipal funding is distributed to various departments based on need. Necessary purchased might include police units, fire apparatus, and public works projects (J. Embick, Personal Interview, February 9, 2016). What is necessary each year may vary based on the town's needs.

c) How do municipal fire departments benefit from a CIP?

On December 17th, 2015, an email was sent to Steve Perkins. Mr. Perkins is in-charge of ambulance billing for the City of Rio Rancho. The purpose of the interview with Mr. Perkins was to determine how much the revenue was received by the City of Rio Rancho. In 2014, the city of Rio Rancho collected about 65% of all ambulance billing or about \$1,700,000 (S. Perkins, Personal Communication, December 17, 2016). This figure has held firm for last three years (see Table 2). Mr. Perkins advised that all of the money collected from ambulance services goes into the general fund and is not directly redistributed back to the RRFD.

Table 2- Ambulance Revenue 2013-2015

Year	2013	2014	2015
Amount	\$1,416,404	\$1,457,240	1,669,159

On February 5th, 2016, David Downey the Fire Chief for the Albuquerque Fire Department (AFD) was interviewed. The interview questions followed the same format as the

external survey and the interview was conducted at Chief Downey's office. Chief Downey advised that the City of Albuquerque uses a decade CIP that is updated by department directors every two years (D. Downey, Personal Interview, February 5, 2016). During the update period, AFD is permitted to increase the capital budget by 20% in an attempt to purchase other capital goods. Chief Downey advised that AFD typically does not receive that increase (D. Downey, Personal Interview, February 5, 2016). The City of Albuquerque already increases the costs for each apparatus every year to account for inflation or additional costs (D. Downey, Personal Interview, February 5, 2016).

All of AFD's capital funding comes from general obligation (GO) bonds and is set forth in the CIP as the sole funding source. The prioritization process for determining how capital projects will be replaced, repaired, or renovated is done by Chief Downey. The primary focus is on age of apparatus followed by mileage and maintenance costs (D. Downey, Personal Interview, February 5, 2016).

Chief Downey indicated that AFD has a quarter cent public safety tax as an alternative funding method but that the tax is used for salaries and not capital projects. This shift in using the public safety tax for salaries instead of capital purchases occurred back in the mid 2000's (D. Downey, Personal Interview, February 5, 2016). Currently, AFD is looking at billing for about 500 transports per year in an attempt to provide some self-funding. This would occur after an agreement with Albuquerque Ambulance who provides transports for the City of Albuquerque (D. Downey, Personal Interview, February 5, 2016).

An external survey was designed and sent out to determine how other career fire departments utilize a CIP and to examine alternative funding options. The survey link was

accessed 86 times over a one month period starting December 17th, 2015 to January 17th, 2016. The first question asks respondents about the length in years that the CIP is formatted. About half of the respondents 41 (47.7%), indicated their departments CIP was designed for 4-5 years. The rest of the respondents answered as follows: 21 (24.4%) had a CIP for 3-4 years, 19 (22%) 6-7 years, and 5 (5.8%) have a CIP for more than 8 years.

The second question determined who is in charge of developing the CIP in each respondents fire department. The answers were: fire chief, deputy chief, administrative personnel, and City/County/Municipal Personnel. The majority of the respondents or 57 (66.3%) advised the fire chief was responsible for the CIP development. The deputy chief was next with 28 (32.6%) and City/County/Municipal Personnel had 1 (1.1%). No fire department responded that an administrative personnel member was involved in the creation of the CIP.

The third question focuses on whether or not the CIP contain a prioritization process for capital needs on a yearly basis and is answered “Yes” or “No.” A large majority or 76 (88.3%) of the respondents indicated there was a prioritization process for their fire department. Only 10 (11.7%) indicated they did not have a prioritization process.

The fourth question in the survey asked how often are capital items funded on a given year in the CIP? Only five possible answers were given. See Table 3 for results.

Table 3- Percent of Capital Projects Funded

Percent of Time	# of Respondents	Percentage
Less than 10%	6	7.0%
11%-25%	19	22.0%
26%-50%	48	55.8%

51%-75%	11	12.7%
More than 76%	2	2.3%

The fifth question concentrated on whether or not capital items that are not funded in a given fiscal year, or “rolled over” to the following fiscal year. There were 58 (67.4%) respondents that indicated “Yes.” The remaining 28 respondents equally answered as: “No” 14 (16.3%) and “Depends on Funding” 14 (16.3%)

The sixth question examines if the respondents fire departments factor inflation or cost projection on each capital items each year in the CIP. As with the third question, the majority of the respondents 74 (86%) answered “Yes.” Only 12 (14%) of the respondents answered “No.”

d) What are the different types of alternative revenue generating concepts currently being used by municipal fire departments?

In the external survey, the majority of respondents indicated that bonds were the primary source of funding methods for capital projects (see Table 4).

Table 4- Primary Source of Funding

Funding Option	# of Respondents	Percentage
General Operating Fund	6	7.0%
Grants	19	22.0%
Bonds	48	55.8%
Alternative Funding	11	12.7%

Question #8 in the survey was a simple yes/no question designed to find out if the respective fire department utilized alternative funding sources. The overwhelming majority, 80 (93%), indicated that they did use alternative funding. Only 6 (7%) respondents advised they did not use alternative funding methods.

The final question in the survey asks respondents about the different types of alternative funding used by their fire department. Respondents were allowed to select as many options as possible (see Table 5). Ambulance billing was the main funding option with 54 (61.8%) of the respondents indicating they used ambulance revenue to fund operations or capital projects.

Table 5- Types of Alternative Funding Methods

Funding Option	# of Respondents	Percentage
Ambulance Revenue	54	61.8%
Inspection Fees	47	54.7%
Wildland Revenue	36	41.8%
Home Subscription	11	12.7%
Public Safety Tax or Fee	29	33.7%
Other	28	32.6%
Does not apply	6	6.9%

The action research used in this ARP has led to the development of a Capital Improvement Plan that is set for a period of six years (Appendix E). The details of the CIP is describe in the next two sections of the ARP.

Discussion

The purpose of this research focused on the development of a CIP that reflected the true needs of the RRFD. After comparing the information obtained in the literature review and the results of the research data, external survey and various interviews it was found that there is a strong association between the two sections. The main emphasis on the information retrieved from the literature review pointed to the importance of developing a CIP that extends between five and nine years (Bland, 2007). The Town of Silver City, the City of Albuquerque, and the City of Rio Rancho all have CIP's that range from five to ten years. The length of time that CIP is in place is important but the critical point is how often the CIP is revised and updated. Fire Chief David Downey emphasized the importance of having the CIP updated every two years. This allows for updating in capital project prices, sources of revenue to fund the projects, and setting forth the updated needs of the department (D. Downey, Personal Interview, February 5, 2016). The Government Finance Officers Association (GFOA) recommends have a CIP with a minimum of six years projected capital spending (GFOA, 2000). Donald Martinez indicated that the City of Rio Rancho follows the GFOA recommendations on CIP length and most other recommendations (D. Martinez, Personal Interview, February 2, 2016). The external survey reinforced this time frame with 48% of all respondents indicating their departments had a CIP of 4-5 years.

Stannard (2014) covers in detail the significance of a CIP that reflects the needs of the community. If there are community needs that are not being met or are not addressed, then the reputation and trust in the city decreases. This decrease in trust makes it difficult to get votes and support for future capital projects (Stannard, 2014). The City of Newton Massachusetts

employs the Risk-Based prioritization process that supports the Stannard statement. The Risk-Based grid assigns funding need on the importance of how health and safety are impacted (*City of Newton*, 2013). Those items that rank higher on the health and safety impact are funded first. Jamie Embick with the Town of Silver City reiterated this point in advising that Silver City funds necessities first (J. Embick, Personal Interview, February 9, 2016). Those are defined as police, fire, and public works capital projects.

The City of Rio Rancho allows for the prioritization of capital projects to be decided by the city manager after input from department directors. This is very arbitrary process and as history has indicated, funding is often not given to public safety. City or town administrators must get involved in the capital improvement process in order to place priorities and funding accordingly (Tow, 2001). This lack of involvement is not fiscally responsible in the tight economy. While Tow may have been referring to the tough economic times after the Dot-Com bust, the concept is certainly relevant today. Priorities of funding public safety and other necessary projects are critical in maintaining a level of service the citizens come to expect. In the external survey, 88% of the respondents advised there was a prioritization process in place for the CIP.

In the interview with Donald Martinez, Mr. Martinez advised that he did not know what percentage of capital projects were funded each year (D. Martinez, Personal Interview, February 2, 2016). The author reviewed just the RRFD CIP and was able to determine a funding rate of between 40-50% of the last three years. This is consistent with the external survey where 48% of the respondents indicated there was funding between 26% and 50% each year. Both Silver City and Albuquerque indicated funding 100% of all capital projects on the CIP because funding is

pre-determined. If a hypothesis was created after talking to both municipalities, it would have tested as invalid since the external survey has a larger sampling total. Regardless, having a pre-determined funding source with actual financial backing provides for a better chance the project will move forward. The adopted 2016 City of Rio Rancho budget listed funding on 77% of all capital projects as “undetermined” (*City of Rio Rancho*, 2015). This is a result of the Pay as You Go funding option set forth by the city council (D. Martinez, Personal Interview, February 2, 2016).

This leads into the funding of capital projects. The external survey indicated the primary source of funding as bonds at 56%. The bonds are important debt for a municipality to fund capital resources (Vogt, 2004). In using a Pay as You Go method, by the time a municipality is able to save funds to pay for capital projects, the cost of the project has increased and the need to the community is usually severe (Stannard, 2014). Chief Downey indicated that all capital projects for AFD use GO Bonds and without the bonds as the revenue source, funding would be a challenge (D. Downey, Personal Interview, February 5, 2016).

Another important factor in the CIP process is the inflation factor on capital projects from year-to-year. The City of Albuquerque, Silver City, and 86% of the external survey respondents advised they use a yearly inflation factor. Donald Martinez said it was an area the City of Rio Rancho needed to address (D. Martinez, Personal Interview, February 2, 2016). Planning to purchase fire apparatus for \$500,000 two years from now, might actually cost \$540,000. Jose Jaramillo advised that it is safe to use a 4% increase each year when planning inflation costs (J. Jaramillo, Personal Interview, February 9, 2016). That increase in cost is significant and in a Pay as You Go system, might be enough to delay purchasing.

The majority of the respondents in the external survey indicated they used ambulance revenue as an alternative funding source (62%). The City of Rio Rancho does not use any of the \$1.7 million collected each year to directly fund capital projects (D. Martinez, Personal Interview, February 2, 2016). The U.S. Fire Administration's Funding Alternatives for Emergency Medical and Fire Services does not list ambulance revenue as a funding method. Presumably, this is because many fire departments do not offer medical transports and therefore it is not an option. Nevertheless, the City of Rio Rancho is able to generate considerable revenue from RRFD providing medical transports. The talk of allowing RRFD to use a portion of the ambulance revenue for capital projects has gained momentum over the last several years.

The general implications of allowing RRFD to self-fund, is necessary to add apparatus. This will allow the city to keep the larger percentage of the ambulance revenue. Adding a process for an inflation factor will give relevant estimates for projects versus using the same funding amounts each year.

Recommendations

As previously stated, the problem is the Rio Rancho Fire Department does not have an effective capital improvement plan (CIP) that allows for continued growth and any fund generating system that allows for self-funding of capital projects. After reviewing the data collected in the literature review and comparing it to the results, creating a CIP that covers a six year period and utilizes a self-funding process allows RRFD to effectively fund capital projects. The information gained during the literature review in comparison to the research procedures in this APR were validated in the results.

The first recommendation is the creation of a CIP that addresses a six year strategic plan (Appendix E). The CIP focuses on the acquisition of fire apparatus on a yearly basis to replace an aging fleet. Each year a 5% increase in cost is added to each apparatus to reflect the recommendation by Jose Jaramillo. This was a previous problem in CIP's submitted by the RRRFR administration in the past. In addition, the CIP outlines the use of ambulance revenues as the primary source of funding. The prior Rio Rancho Fire Chief James Tobin often pushed the city council and city officials to allow the RRFD to be able to use a third of incoming ambulance revenues to fund capital projects. This was a constant conversation with the many high ranking city officials and councilors favoring this option.

This ambulance funding source has the potential to take place in the near future if a primary needs analysis is completed by the fire administration. The current configuration of the city government favors the Pay as You Go funding process, and in that system the ability to purchase fire apparatus is difficult. The use of ambulance revenue has held steady at \$1.6 million over the last three years. The CIP only uses 35% of the total ambulance revenue in 2016 and increases only slightly each year (Table 6).

Table 2- Estimated Ambulance Revenue Expenditure

Year	Est. Ambulance Rev.	CIP Amount needed	% of Ambulance Rev.
2016	\$ 1,600,000	\$ 563,846	35%
2017	\$ 1,650,000	\$ 680,000	41%
2018	\$ 1,700,000	\$ 597,950	35%
2019	\$ 1,750,000	\$ 632,535	36%
2020	\$ 1,800,000	\$ 668,837	37%
2021	\$ 1,850,000	\$ 797,596	43%

The other funding sources are already being utilized by the RRRFR and are used to supplement capital projects over the six year period. The CIP uses no general fund or gross receipt revenues from the city and thus does not impact the overall revenue. This occurs because the \$1,100,000 in annual position vacancy saving (*City of Rio Rancho Budget, 2016*) from the city would more than supplement the ambulance revenue listed in the CIP.

The second recommendation is the formation of a committee comprised of members of the RRRFR that have a primary function in the development of the CIP. Those members would comprise of: Fire Chief, Deputy Chief of Support Services, Battalion Chief of Logistics, and the Captain of Logistics. This committee would conduct annual and mid-year needs analysis of fire apparatus pertaining to the following items:

- Overall maintenance costs
- Units utilization percentages
- Apparatus mileage
- Projected maintenance costs

All of the information obtained by the committee relates to the need of apparatus replacement and repair. While some of that information was documented and submitted to the Finance Department in the past, the opportunity to justify the need to replace fire apparatus has not taken place. This was indicated by Donald Martinez who indicated the information was simply submitted and reviewed by a budget analyst. Sitting in a budget justification hearing with the City Manager, Finance Director, Fire Chief, and the Deputy Chief with a budget justification and needs analysis provides the decision makers with face-to-face information.

The third recommendation focuses on the capturing of information that can be submitted to the CIP committee. This information is used to produce a needs analysis and justification for capital projects. In tight economic times, it is critical that a six year CIP is accompanied with a needs breakdown showing how capital purchases will be used and how it will benefit the community, city, and the fire department.

In regards to replacing fire apparatus, there needs to be a monthly maintenance report on each piece of apparatus. This report should contain all of the relevant data such as; mileage, repairs to the apparatus in the last 30 days, and anticipated repairs. The report should be reviewed and filed by the logistics supervisor. Prior to the budget formulation process in January of each year, members of the CIP committee will review all apparatus reports. The committee will then prepare and update the CIP to accommodate anticipated capital expenditures. The key to this process is an executive summary of for the City of Rio Rancho CIP board. The summary is essentially the needs analysis justifying the capital expenditures. It must be written using understandable terminology yet providing a firm point of reference for the members reviewing the requests.

In conclusion, a comparative literature review coupled with results from interviews, a survey, and data analysis has led to the creation of a six year capital improvement plan designed to replace apparatus at appropriate intervals and not using money from the city's general fund. With the implementation of this CIP, the RRFD will begin using a small amount of recommended ambulance revenue to create a self-funding process. The CIP is the first step in the progression followed by the development of a CIP committee and operational guidelines that facilitate a justification process and the prioritization of capital projects. The process gives the

RRFD the ability to serve the citizens of the City of Rio Rancho in the most efficient manner possible.

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Appendix A: Fire department survey list

FIRE DEPARTMENT	STATE	POPULATION	STAFFING
Avondale Fire Department	AZ	76,238	40
Buckeye Fire Department	AZ	52,764	83
Flagstaff Fire Department	AZ	60,611	79
Green Valley Fire District	AZ	40,000	unk
Lake Havasu City Fire Dept	AZ	52,527	87
Surprise Fire Department	AZ	117,517	126
Compton Fire Department	CA	99,769	107
Davis Fire Department	CA	68,894	49
Hemet Fire Department	CA	74,000	45
Modesto Fire Department	CA	220,000	133
Palm Springs Fire Department	CA	46,800	50
Redding Fire Department	CA	100,000	75
Redlands Fire Department	CA	73,000	61
Longmont Fire Department	CO	86,720	unk
Grand Junction Fire Dept	CO	58,566	105
Pueblo Fire Department	CO	102,000	143
Meriden Fire Department	CT	59,255	99

Lauderhill Fire Department	FL	70,824	96
Melbourne Fire Department	FL	78,427	134
Stanford Fire Department	FL	53,000	81
The Villages Fire Department	FL	82,000	67
Rome Fire Department	GA	95,000	unk
Sandy Springs Fire Department	GA	99,700	139
Sioux City Fire Department	IA	85,013	115
Champaign Fire Department	IL	78,000	117
Decatur Fire Department	IL	76,200	118
Glenview Fire Department	IL	65,000	82
Mount Prospect Fire Department	IL	54,000	97
Bloomington Fire Department	IN	75,000	unk
Elkhart Fire Department	IN	52,000	124
Lawrence Fire Department	KS	92,048	139
Monroe Fire Department	LA	51,682	unk
Sterling Heights Fire Department	MI	128,000	unk
St. Joseph Fire Department	MO	74,000	130
Billings Fire Department	MT	120,000	115
Missoula Fire Department	MT	68,876	95
Schenectady Fire Department	NY	61,871	unk
Springfield Fire Department	OH	62,060	127

Lawton Fire Department	OK	110,000	unk
Hilton Head Is. Fire Department	SC	50,000	148
Mount Pleasant Fire Department	SC	67,000	118
Bryan Fire Department	TX	75,000	114
Cedar Park Fire Department	TX	79,848	74
College Station Fire Department	TX	94,643	116
Eules Fire Department	TX	54,700	69
Harlingen Fire Department	TX	67,300	109
Lewisville Fire Department	TX	95,250	127
Longview Fire Department	TX	75,800	unk
Mansfield Fire Department	TX	58,949	81
Port Arthur Fire Department	TX	57,000	105
Ogden Fire Department	UT	83,000	123
Renton Fire Department	WA	118,800	133
Yakima Fire Department	WA	85,000	87
Kenosha Fire Department	WI	102,000	152
Waukesha Fire Department	WI	68,000	106
Casper Fire Department	WY	54,874	76
Cheyenne Fire Department	WY	57,000	88

Appendix B: Cover letter for external survey to department chief

Chief _____,

I am currently enrolled in the Executive Fire Officer Program at the National Fire Academy and I am currently working on my forth Applied Research Project (ARP). I work as a Battalion Chief for the third largest city in New Mexico and we are in the process of evaluating our need to improve how we formulate and develop Capital Improvement Projects (CIP).

If your fire department currently develops its own CIP, please take a few minutes to answer a short nine question survey.

If your department does not develops its own CIP, thank you for your time.

(Link [surveymonkey.com](https://www.surveymonkey.com))

Appendix C: Fire department survey

1. You have indicated by linking to this survey that your department develops its own Capital Improvement Plans (CIP). What is the length of time in years that your CIP is pre-planned?

- 3-4 years
- 4-5 years
- 6-7 years
- More than 8 years

2. Who is in charge of developing the CIP in your Fire Department?

- Fire Chief
- Deputy Chief
- Administrative Personnel
- City/County/Municipal Personnel
- Non-Governmental Personnel
- Other

3. Does your CIP contain a prioritization process for capital needs on a yearly basis?

- Yes
- No

4. How often are capital items funded on a given year in the CIP?

- Less than 10% of the time
- 11% - 25% of the time
- 26%-50% of the time
- 51%-75% of the time
- More than 76% of the time

5. Are capital items that are not funded in a given fiscal year, "rolled over" to the following fiscal year?

- Yes
- No
- Depends on Projected funding capabilities
- N/A

6. Does your department factor inflation or cost projects on each capital items each year in the CIP?

- Yes
- No

7. How are the majority of capital purchases funded?

- General Operating Fund
- Grants

- Bonds
- Alternative Funding Sources (Fees, subscription costs, inspection revenue, or other)

8. Does your department utilize alternative funding sources?

- Yes
- No
- Unsure

9. If your fire department utilizes alternative funding sources, select ALL that are currently in use?

- Ambulance Revenue
- Inspection Fees
- Wildland Revenue
- Home subscription costs
- Public Safety Tax or Fee
- Other
- Does not apply

Appendix D: Interview Questions Donald Martinez

Questions for Don Martinez:

1. How long have you overseen the ICIP process for the city?
2. What is the total time frame for the ICIP for the city?
3. So, dept. Directors establish which capital items are placed in the ICIP?
4. How does the prioritization process for funding take place for the ICIP?
5. How is funding determined in the ICIP process?
6. How often are capital items funded on a given year by percentage?
7. Are unfunded capital items “rolled over” to the following year?
8. Is there an inflation factor on capital items in the ICIP?
9. How are the majority of capital purchases funded?

Appendix E: RRFD Apparatus Maintenance Records

Ambulances

*Excludes Ambulance Units used for wildlife deployment and extended operations. Total Ambulances: 9

<u>Frontline</u>	1-79,999	80,000-120,000	>120,000	Total
1-5 years	2	0	0	2
> 5 years	1	2	2	5
Total Frontline	3	2	2	7
Reserve				
1-10 years	0	0	1	1
> 10 years	0	0	1	1
Total Reserve	0	0	2	2
Total Ambulances	3	2	4	9

Fire Engines/Trucks

*Total Fire Engines/Trucks: 10

<u>Frontline</u>	1-99,999	100,000-125,000	>125,000	Total
1-10 years	2	0	0	2
> 10 years	4	1	1	6
Total Frontline	6	1	1	8
Reserve				
1-10 years	0	0	0	0
> 10 years	2	0	0	2
Total Reserve	2	0	0	2
Total Fire Engines/Trucks	8	1	1	10

FIRE/EMS APPARATUS INVENTORY

#	Unit	Fire Apparatus	Make Model	Model Year	Date Acquired	Mileage	Replacement/Reserve Status	Station Assignment	Replacement Cost (incl. equipment)
1	901	TYPE 1 AMBULANCE	FORD 350	2003	2/24/2004	150,344	Replacement/Reserve Status	Stn 5, R50 (901)	\$ 200,000
2	904	TYPE 1 AMBULANCE	FORD 350	2005	3/15/2005	120,104	Replacement/Reserve Status	Stn 2, R20 (904)	\$ 200,000
3	905	TYPE 1 AMBULANCE	FORD 350	1997	1/1/1997	77,697	Reserve Status; Wildland Deployment	Stn 4, R4 WL (905)	\$ 200,000
4	906	TYPE 1 AMBULANCE	FORD 350	2006	3/7/2007	166,761	Active Frontline	Stn 1, R10 (906)	\$ 200,000
5	909	TYPE 1 AMBULANCE	FORD 350	2005	4/6/2006	66,066	Extended Operations Vehicle/Reserve	HQ, Rehab 1	\$ 200,000
6	929	TYPE 1 AMBULANCE	FORD 350	2008	9/4/2008	122,515	Active Frontline	Stn 5, R5 (929)	\$ 200,000
7	930	TYPE 1 AMBULANCE	FORD 350	2008	9/4/2008	112,812	Active Frontline	Stn 3, R3 (930)	\$ 200,000
8	960	TYPE 1 AMBULANCE	FORD 550	2007	2/19/2010	71,230	Active Frontline	Stn 6, R6 (960)	\$ 200,000
9	961	AMBULANCE	FORD 550	2007	2/19/2010	81,856	Active Frontline	Stn 2, R2 (961)	\$ 200,000
10	963	AMBULANCE	FREIGHTLINER M2	2012	5/7/2012	50,581	Active Frontline	Stn 7, R7 (963)	\$ 200,000
11	964	AMBULANCE	FORD E40	2013	9/1/2013	26,823	Active Frontline	Stn 1, R1 (964)	\$ 200,000
									\$ 2,200,000
1	907	LADDER	75 PIERCE	2007	6/7/2007	86,917	Active Frontline	Stn 1, E1 (907)	\$ 750,000
2	912	LADDER	65 PIERCE	1996	1/1/1996	93,776	Replacement/Reserve	Stn 1, RL-1 (912)	\$ 750,000
3	927	FIRE/EMS (LADDER)	75 PIERCE	2007	8/14/2007	75,339	Active Frontline	Stn 5, E5 (927)	\$ 750,000
									\$ 2,250,000
2	926	ENGINE	INTERNATIONAL	2001	1/1/2001	65,985	Replacement/Reserve Status	Stn 4, E4 (926)	\$ 500,000
									\$ 500,000
1	908	PUMPER	PIERCE	2005	1/27/2004	128,197	Active Frontline	Stn 6, E6 (908)	\$ 500,000
2	914	PUMPER/TENDER	PIERCE	1989	7/31/2002	44,037	Active Frontline	Stn 6, T6 (914)	\$ 500,000
3	921	PUMPER	PIERCE	2006	1/10/2007	110,235	Active Frontline	Stn 1, E10 (921)	\$ 500,000
4	957	PUMPER	PIERCE	2010	08/12/2010	56,680	Active Frontline	Stn 2, E2 (957)	\$ 500,000
5	959	PUMPER	PIERCE	2009	05/25/2010	60,728	Active Frontline	Stn 7, E7 (959)	\$ 500,000
6	965	PUMPER	PIERCE	2014	08/27/2014	5,635	Active Frontline	Stn 3, E3 (965)	\$ 500,000
									\$ 3,000,000
1	919	BRUSH	FORD 550	2000	1/1/2000	11,405	Active Frontline	Stn 1, B1 (919)	\$ 240,000
2	920	BRUSH	FORD 550	2003	4/9/2003	22,378	Active Frontline	Stn 5, B5 (920)	\$ 240,000
3	922	MINI PUMPER/BRUSH	GMC	2006	03/03/2007	8,123	Active Frontline	Stn 2, B2 (922)	\$ 500,000
									\$ 480,000
1	962	FUEL TRUCK	FORD	2012	12/9/2008	3,576	Active Frontline	Stn 5, Fueltruck (962)	\$ 100,000
									\$ 100,000
									\$ 8,530,000

TOTAL REPLACEMENT COST

\$ 8,530,000