

Capital Improvement Planning: A City of Austin Case Study

By

Matthew Duree

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mdduree@hotmail.com



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ABSTRACT

Purpose. The purpose of this research is threefold. First, is to present ideal components of a municipal Capital Improvement Plan (CIP). The second purpose of this research is to assess the extent to which City of Austin's CIP program adheres to the ideal model presented in this research. The third purpose is to provide recommendations for improving the CIP program at the City of Austin. *Methods.* The data used in this study was collected from City of Austin documents detailing their capital improvement process as well as a structured interview with a City of Austin executive. This research compares the practical ideal type model developed from research to the City of Austin's capital improvement process. *Results.* The results show that the City of Austin met or exceeded the majority of categories developed in the practical ideal type model. *Conclusion.* The City of Austin has a successful and robust CIP process. By continuing with improvements that have already begun, and incorporating recommendations provided in the paper, the COA will have a highly successful CIP process.

EXECUTIVE SUMMARY

Purpose: The purpose of this research is threefold. First, is to present ideal components of a municipal Capital Improvement Plan (CIP). The second purpose of this research is to assess the extent to which City of Austin's CIP program adheres to the ideal model presented in this research. The third purpose is to provide recommendations for improving the CIP program at the City of Austin.

Ideal Model: The ideal model CIP, presented in Chapter 2, was created through research and exemplifies the characteristics necessary for a successful CIP program. The model consists of the following five (5) categories:

- Goals and Procedures
- Needs Assessment and Facility Audit
- Project Prioritization
- Project Selection
- CIP Committee

Each category consists of multiple criteria, thirty (30) in total, that define the specifics necessary for a successful CIP program. The City of Austin's CIP program was compared to the ideal model through document analysis and a structured interview with a City of Austin executive.

Results: The results of the case study are presented in Chapter 4. Three different levels of support were used to measure the findings; "Strong Support", "Limited Support", and "No Support". The City of Austin registered strong support for the vast majority of identified characteristics associated with the ideal model. The three categories where the City of Austin did not register strong support of the ideal model characteristics were the following:

- Goals and Procedures – 1 criteria item found limited support
- Needs Assessment and Facility Audit – 1 criteria item found limited support and 2 criteria items found no support
- Project Evaluation – 2 criteria items found limited support

Conclusion and Recommendations: A full list of recommendations is presented in Chapter 5, Table 5.1. By continuing with the 3rd phase of the rolling needs assessment, and incorporating a more in depth facility audit, the COA can improve on its already thorough Capital Improvement Program. Based on document analysis and the structured interview, it was found that the COA has a very successful and robust CIP process that meets the vast majority of characteristics identified through research.

ABOUT THE AUTHOR

Matthew Duree is a husband to a wonderful wife, a father of two small boys, a student, and a City of Austin employee. He has lived in Austin, TX since 2008 and has worked for the City of Austin's Capital Contracting Office since 2009. He enjoys reading, the outdoors, creative thinking, all things space, and having prolonged lightsaber duels with his sons on a regular basis. He received his undergraduate degree from Texas Tech University in 2005 and will receive his Masters of Public Administration degree from Texas State University in 2015. He is a proud Texan and grew up on the wide open plains of West Texas. He can think of nothing finer than being under the Texas sky, immersed in the vast openness of his home state. He has always felt the need to help and serve others and he enjoys public service in all forms.

"I shall pass through this world but once. Any good therefore that I can do or any kindness that I can show to any human being, let me do it now. Let me not defer or neglect it, for I shall not pass this way again." - Mahatma Gandhi

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Chapter 1: Introduction

Local and state governments are continuously trying to find a balance between planning, financing, and implementing projects that will affect the well-being of residents and commercial enterprises (Wendorf 2005, 73). The use of a capital budget can ease the process of determining and planning for community needs. Governments use the capital budget as a tool for planning, control, and allocation of scarce resources among the different competing needs and demands within their jurisdiction (Sekwat 1999, 15). A capital budget is defined as a separate budget that deals exclusively with the capital expenditures of an entity (Doss 1987, 60). Capital budgets use tools such as a capital improvement process to determine what projects a municipality will invest the public's money into. The capital budget is the blueprint of needed spending for the current or first year in the capital improvement plan (CIP) based on current revenue projections for the municipality (Wendorf 2005, 76).

Research Purpose

Municipalities have a strict responsibility to use taxpayer funds appropriately and in a manner that best fits the needs of the city. A focused and robust CIP process affords a municipality a tool to assist in determining what projects best suit its needs. The purpose of this research is threefold. First, is to present ideal components of a municipal CIP. The second purpose of this research is to assess the extent to which City of Austin's CIP program adheres to the ideal model presented in this research. The third purpose is to provide recommendations for improving the CIP program at the City of Austin. What follows is a brief history of capital budgets and the tools they use.

History

Even though today we see the creation and service of large infrastructure and public facilities as a responsibility of our local or state government, it was not always seen as their responsibility. “The acceptance of broad provision of public services and facilities as a base responsibility of the public sector has been of recent origin in the United States. Prior to 1825, governments attempted to meet only the most basic needs of the community (Bozeman 1984, 20). It took the Industrial Revolution followed by the effects of the New Deal projects of the Great Depression to bring about the resources and necessity to plan for large scale projects. In the early 1930’s a comprehensive approach to physical planning in cities emerged in the form of the Master Plan, with the first comprehensive capital program believed to have been installed in Kalamazoo, Michigan in 1921 (Bozeman 1984, 20). Creating a successful infrastructure, according to the needs of communities, has now become a vital part of a government organization.

Capital Budget Emergence

The emergence of the capital budget process can be attributed to several factors during the early 20th century (Bozeman 1984, 20-22):

- The creation, during the 1920’s, of official planning commissions and the commission’s attention to the development of the Master Plan. The planning movement emphasized the need for the orderly development of cities.
- The rise in the field of public administration and the public administrator’s effect on local and state government’s policies and procedures. The public administrator’s focus on budgeting was a particular reason for the emergence of the capital budget process.
- The effects of the Great Depression on local and state governments. After the Great Depression the financial realities resulting from that time period remained with governments.

- The effect of World War II on the population. During the war all resources were diverted to feed the war effort and the creation and upkeep of public facilities and infrastructure were placed on hold until the war ended. Once the war was over and soldiers returned home there were massive upturns in domestic growth that led to the baby boom and a large increase in the creation of suburbs across the country. Methods to build and finance the basic needs for water, sewers, roads, and schools in an efficient and timely manner had to be developed.

The above factors led to the development of procedures and the inclusion of capital budgeting practices in government planning. The concept of capital budgeting began to spread and grow throughout governments during the 1940's and established itself as a viable tool for the planning and management of local public projects (Wendorf 2005, 76). The capital budget process of the 1940's centered around three main areas: selection, scheduling and financing (Bozeman 1984, 23). These three factors remain a foundation of the capital budget process today.

As the country grew and expanded the capital budget process grew along with it. In a 1993 examination of the capital budgeting process it was found that 71% of cities indicated that their capital expenditures are usually structured separately from the operating budget (Forrester 1993, 94). The growth in the use of capital budgeting since Kalamazoo initiated its budget process in 1921 is clearly evident.

Who uses a Capital Budget?

Federal

At the federal level there is no separate capital budget. The federal government does use capital expenditures to pay for capital projects but those capital expenditures are included in the annual operating budget and are not separated into their own budget. There are four reasons for the federal government not having a capital budget. (Mikesell 2011, 291):

- Critics of a federal capital budget fear that a separate capital budget would not only create bias but also add to the existing bias toward deficit spending.
- The federal government is large enough that no single infrastructure project would alter current tax rates.
- The careful project planning used by state and local governments in their capital budgets in order to preserve their debt rating is not needed at the federal level.
- Adding another budget could provide federal bureaucrats and lawmakers with new means to conceal fiscal conditions in proposed policies and laws.

State and Municipal

State and municipal use of the capital budget is evident although entirely voluntary. At the state level the capital budget appears to be very prominent (Hush & Peroff 1988, 67). The form of capital budgets, the way they are enacted by the legislatures, the items covered in them, and the method of financing the capital projects vary greatly among all states that use a capital budget.

At the municipal level the use of capital budgets are also prominent. A study conducted by the National League of Cities and the United States Conference of Mayors surveyed 1,400 cities with a population over 30,000. According to the survey almost 90 percent of the respondents indicated that they had some sort of capital budgeting process; however the sophistication of that process was not factored into the survey (Doss 1987 58).

A majority of state and local governments use the capital budget process in some way to plan for the expenditures and manage projects that will become capital outlays. It is also clear that the methods for selection, planning, and management of capital expenditures vary widely among states and municipalities. Due to the fact that so many

governments choose to have a separate capital budget process we must assume that they are benefiting from using a capital budget process.

Purpose and Reasons of a Capital Budget

Why do governments use capital budgets? What are the benefits? Government's use of a separate capital budget has many benefits relating to the budget, efficiency, planning, financing, and the overall importance of capital projects within a jurisdiction.

Project Protection

As economic downturns influence the budget of state and local governments, it becomes imperative to have capital projects set apart from operating budgets in order to not lose funding for those projects. Annual budgets in local governments are usually made for short-term use which can become problematic for capital expenditures during economic downturns (Wendorf 2005, 73). The capital budget acts as a shield for high priority projects during difficult financial times. During budget shortfalls, short term solutions are often put in place that diminish established project planning and goals. By using and developing a capital budget plan that examines an organizations assets and maintenance, governments can budget for their financial impact on the organization and the community (Wendorf 2005, 73). A government's operating budget can be cut but the capital budget has been planned and financed and is difficult to alter, thereby protecting public goods and infrastructure needs. A separate capital budget allows government to defend against budget cuts that could influence local economic conditions resulting in poor infrastructure and development.

Government Efficiency

The efficiency of government is always in question by taxpayers. A capital budget allows high priority projects to be separated and considered more in depth in order to achieve smooth acquisition and maintenance of the project. The separate consideration of projects can improve both the efficiency and equity of providing and financing non-recurrent projects with long-term service flows (Mikesell 2011, 289). Reviewing high priority projects, in a process that might allow financing by borrowing, provides important opportunities to improve equity among local citizenry pools (Mikesell 2011, 289). The focus on efficiency in government has spurred interest in the tools that are needed to accomplish this. The capital budget process, as a result, is becoming a vital part of the financial planning and decision making process, especially regarding development, construction, and acquisition of new capital facilities (Sekwat 1999, 16).

Vogt's Six Reasons for Capital Budgets

John Vogt's guide for local governments on capital budgets describes six main reasons for a government to have a separate capital budget (Vogt 2004, 1-3):

- Stakes are high for items on the capital budget. The infrastructure, equipment, and facilities that are built or acquired by the government are expensive and large amounts of money are required to complete projects. Special planning, financing, and management procedures need to be used to ensure that the projects and acquisitions are needed and to ensure that the money invested in them is well spent.
- The length of time associated with projects on the capital budget, sometimes extends well beyond 5 years. Since the citizens and employees who will use these capital assets must live for many years with the results of the decisions those decisions need to be planned carefully. Items on a governments operating budget are budgeted for only a year or two. It makes sense economically to put expenditures that have long-term multiyear benefits on a separate capital budget.
- Spending varies from year to year on an operating budget. Capital assets have long lives so the need to replace them is typically infrequent. Since growth

and development occur in spurts, it requires local government's spending on infrastructure to fluctuate from year to year. A capital budget allows planning for this and the financial needs of capital projects often do not coincide with the financial abilities of the operational budget.

- Implementation takes time. "Depending on their size, complexity, environmental risk, and other factors, undertaking and completing most infrastructure and capital facility projects take anywhere from several years to as long as a decade."
- Repayment of debt financing for capital projects. Many capital projects are financed by issuing bonds or another form of debt that is repaid in installments with interest in future years.
- Capital projects differ from year to year. The difference in capital projects or acquisitions requested in one year are often very different from the ones approved the year before, this is due to the long useful life of capital projects and the need for them recurring infrequently. On the contrary operating budgets often change little from year to year.

With efficiency, finance, citizenry, planning, and the overall quality of a project improving due to the use of a capital budget, it is easy to understand why municipalities use capital budgets in some form. The purpose for, and positive outcomes of a capital budget process are clear.

What is included in a Capital Budget Process?

A capital budget is not a simple document submitted to the Finance Department of a specific government. It is an encompassing process that includes the identification, development, selection, control, and financing of projects (Mukherjee & Henderson 1987, 78). In order to successfully implement a capital budget a government must include the following (Wendorf 2005, 74):

- Creation of an inventory of capital assets.
- Development of a financing plan.
- Development of a capital improvement plan.
- Implementation of a capital budget plan.

The inventory of capital assets is the first step in a capital budget process and influences projects that will be placed on the capital budget later. This initial list also compiles the maintenance required for capital assets and takes that into account when formulating a finance plan (Bunch 1996, 18). The information contained in the initial inventory asset includes data for each facility regarding: its age, assessment of its condition, degree of use, its capacity, and its replacement cost (Mikesell 2011, 296). With an assessment of the existing situation of capital assets, it is possible to begin the planning and selection phases of the process.

Capital Improvement Plan

The most important and focused aspect of the capital budget process is the capital improvement plan. The capital improvement plan (CIP) is often given the most attention due to the selection of projects and planning involved when creating them. The CIP allows a government to manage its resources and assets, schedule projects over a 5 to 6 year period and select which projects to include (Bunch 1996, 9). The capital improvement plan is a multi-year summary of capital projects that details how and when to move a project forward (Wendorf 2005, 78). The most common tool used in the capital budget process is the CIP (Forrester 1993, 91). In a survey of state governments conducted by the National Association of State Budget Officers (NASBO) it was found that two thirds of states have a multi-year capital plan ranging from 3 to 10 years (Bunch 1996, 8). A CIP allows leaders and decision makers to identify interconnections among projects, achieve standardization and cost savings, while viewing the overall picture of capital needs and available resources (Wendorf 2005, 78). A CIP also allows leaders to select projects that are in line with the strategic goals of the institution. Since the CIP is

re-evaluated on a yearly basis it allows governments to alter or change priority of projects in relation to current growth trends and future agendas. A successful CIP should accomplish the following functions (Wendorf 2005, 78):

- Identify and evaluate the needs of capital facilities.
- Determine cost estimates for each project submitted.
- Determine potential sources of funding for such projects.
- Adopt policies for implementing capital improvement construction.
- Anticipate and pre-plan projects with an emphasis on seizing opportunities for partnerships and alternative funding.

Since coordinating and planning is much more important in capital budgets than in operating budgets, municipalities place a high priority on the CIP process. The evaluation of projects is often difficult because the decisions intertwine economic, political, and social forces (Mikesell 2011, 297).

City of Austin

The City of Austin (COA) is a municipality that is facing many exciting challenges in the years to come. The population of Austin is projected to double in 30 years (Imagine Austin 2012, 61). This population increase will place a heavy burden on the City's infrastructure. Transportation infrastructure, energy/water generation and delivery, community buildings, and health and human services are just a few of the capital project areas that will continue to play a very impactful role in Austin's future. Along with specific service areas the COA must look at urban planning and spending in order to ensure an equitable and sustainable future for city residents. According to the 2015-16 CIP, the COA will spend an estimated \$811 million dollars on capital projects in the 2014-15 fiscal year. Those dollars will branch out throughout the community

providing everything from sidewalks and dog parks to large scale civil and aviation projects. Now more than ever, it is imperative that the COA place a high emphasis on planning and implementing a successful CIP and its related functions.

Chapter Overview

Chapter 1 defined what a capital budget is and the reasons and purpose of the capital budget. The chapter also introduced the Capital Improvement Plan (CIP) and the importance of the project review and selection process for the capital budget. Chapter 2 will describe the key characteristics of a CIP, based on a review of literature and will develop a CIP model that consists of 5 key categories, each with key characteristics. The characteristics are organized in the form of a practical ideal type conceptual framework at the conclusion of the chapter. The methodology of the research is presented in Chapter 3 using document analysis and a structured interview to gauge the City of Austin's CIP process. Chapter 4 will present the findings of a review of the City of Austin's CIP process based on the CIP model developed in Chapter 2. Chapter 5 will discuss recommendations.

Chapter 2: Capital Improvement Plan Model

Chapter Purpose

The purpose of this chapter is to identify the components of an ideal CIP program for municipalities. Due to the varying ways in which municipalities determine what projects will be included on the CIP, there is a need for an assessment tool to gauge how effective a municipalities CIP process is. This chapter will determine, justify, and explain the components included in the CIP model.

Characteristics of a Successful Municipal Capital Improvement Plan

The selection of projects to be included in the CIP is a thorough process that weighs the costs and benefits of every project prior to being included in the CIP. A successful municipal CIP includes projects to improve facilities and infrastructure for the benefit of citizens. The importance of the CIP cannot be understated for any capital budget and the heart of the CIP is the project itself (Elmer 2005, 11). Although the evaluation, selection, and categorizing of capital projects may vary, there are certain characteristics that should be included in any municipal CIP. Research has shown municipalities should take the following areas into consideration when attempting to create a CIP:

- Goals and Policies
- Needs Assessment and Facility Audit
- Project Prioritization
- Project Evaluation
- CIP Committee

Each characteristic will be discussed and organized in the following pages to create the practical ideal conceptual framework.

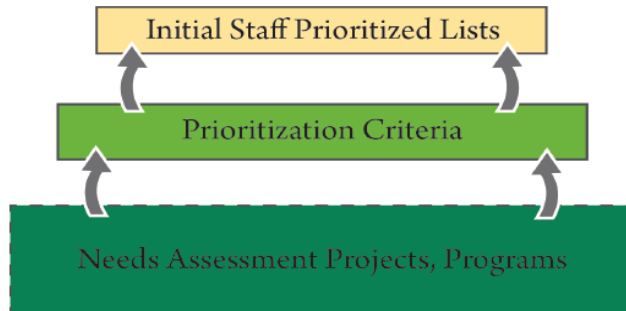
Goals and Procedures Considerations

Identifying and recommending goals and policies, or changes to them, is a key aspect of a successful CIP (Vogt 2004, 68). The approval of goals establishes a direction and identity for the projects that will be listed on the CIP. If a municipality's goal is to establish a more green transportation system, then that goal should be stated and projects that emphasize the goal can be included on the CIP. With stated goals in place, leaders can observe if projects are meeting those goals and help provide a framework to prioritize and manage future capital project requests (Wendorf 2005, 78).

Needs Assessment and Facility Audit Considerations

Often the first step of any CIP process is a needs assessment and/or a facility audit. The information captured in the facility audit would include a facility's age, its condition, and its frequency of use, capacity, and cost of upgrade or replacement (Mikesell 2011, 295). The needs assessment would not only identify problems with current facilities, but would also list possible new additions to the government's asset list based on need, such as a community center, bridge, road, etc. A detailed facility condition audit allows government officials to assess all current facilities on a needs based strategy in order to formulate an optimal CIP that weighs strategies such as renovation versus new construction and maintenance (Dufresne 2005, 60). The use of current physical capital data is critical to the success of the capital decision making

process (Grafton 1991, 77). The example below identifies the flow a project will follow based on a needs assessment (Imagine Austin 2012, 9).



Project Prioritization Considerations

Prioritizing projects is the most important aspect of the CIP and there are varying methods used by governments to determine inclusion. The six most commonly used approaches for prioritizing requested CIP projects are as follow (Vogt 2004, 89):

- Experience-based Judgment
- Departmental or functional priorities
- Broad categories of need
- Urgency-of-need criteria
- Weighted rating of urgency-of-need and related criteria
- Program priorities, goals, and service needs assessment and planning

Most governments will use one of the above methods or a combination of several to prioritize their projects. The most common process used by medium-and small-size local governments is the experience-based judgment approach (Vogt 2004, 90). This process allows local governments to rely on the experience and knowledge of their managers, professionals, staff, board members, citizens, and other experienced individuals who have

direct knowledge of the needs of the jurisdiction. Who is allowed to participate in this process will determine the selection of projects (Bland 2008, 1). When using this approach, the individuals need to be familiar with multiple aspects of many projects. Often requests are complex and there are too many decision makers with varying opinions of projects (Vogt 2004, 91).

The departmental or functional priorities approach allows department officials, who are familiar with the capital needs of their department, to prioritize project requests. In this approach, departments may be given full control of the selection process or asked to adhere to adopted criteria for project selection (Vogt 2004, 91). With this approach departmental officials must be very familiar with all the needs of their jurisdiction in order provide a thorough CIP.

The remaining approaches are rooted in priority of project need. Broad categories of needs, urgency-of-need criteria, and weighted rating of urgency-of-need all attempt to prioritize projects in the CIP application process. These approaches place need criteria and weighted rankings on projects in order to judge each project on its own merit (Vogt 2004, 92). Weighted ranking allows governments to place priority on specific needs identified in earlier studies. Rating systems can take a considerable amount of time to create and apply to projects. Departments may not have the resources available to allocate to a full CIP weighted review. A government may choose to use one or several of the above approaches for CIP projects.

Project Evaluation Criteria Considerations

Ranking each project proposal according to agreed-upon criteria is recommended (Bland 2008, 1). Uniform project selection criteria can be used to improve the capital project selection process effectiveness and efficiency. The decision whether to adopt criteria is straightforward. If the criteria fits the organization's goals and is feasible, then the criteria should be adopted. An organization can determine the weight of criteria according to individual departments or the organization as a whole. The criteria themselves often adhere to a broader guideline relating to the interpretation of the missions of an organization (Pagano 1986, 96). Criteria for project selection should be created and adopted by the central administration or authority and applied across the board (Pagano 1986, 96). If a strategic plan or list of organization objectives has been developed they should be reflected in the criteria (Elmer 2005, 17).

Setting up guidelines for developing criteria will allow an organization to focus the criteria on realistic goals and will create criteria that will be useful and relevant in explaining project selection decisions. The following is an example of guidelines for creating criteria (Millar 1998, 66):

- They refer to issues important to local governments
- They refer to items generally measurable in one form or another
- They permit at least some degree of objectivity in ratings
- They are applicable to a wide variety of capital projects

The use of guidelines can ensure that any criteria created and approved will be necessary and clear when applying to any capital project.

Selection criteria for projects are different for every government. The list below illustrates a group of suggested evaluation criteria to be used by local governments (Miller 1998, 66):

- Fiscal impact
- Health and safety effects
- Community economic effects
- Environmental, aesthetic, and social effects
- Disruption and inconvenience caused
- Distributional effects
- Feasibility
- Implications of deferring the project
- Amount of uncertainty and risk
- Effects on interjurisdictional relationships
- Advantages accruing from relation to other capital projects

Each of the criteria listed above has sub-categories associated with its definition. For example, criteria III community economic effects, includes future tax base, added jobs, income to citizens and stabilization of neighborhoods (Millar 1998, 67). It is suggested that local governments select certain criteria from the above list that they wish to use in the project selection process.

One study found the following criteria used by multiple counties and cities: asset age, condition assessment, health/safety issues, user-identified needs, and compliance with mandates (Ebdon 2004, 197). The same study found evaluation to be one of the weak points in many of the counties surveyed.

The Capital Programming Guide, issued by the Office of Management and Budget, also includes a short list of criteria to evaluate capital assets (OMB 2006, 14). This criterion includes availability, affordability, cost and benefits, sustainable design principles, and risk.

The state of Illinois uses the following criteria to prioritize projects: deferred maintenance, facility conditions, agency program needs, future operating costs, local and federal matching, the state comprehensive plan, agency efficiency, statewide strategic priority, and debt service impacts (Srithongrung 2010, 416).

Leveraging and sustainability can also be used as evaluation criteria. Leveraging opportunities should not be overlooked in any list of criteria. If a project can be partially funded by another organization then that project needs to have criteria that reflect that benefit. A sustainability criterion is also reflected in several lists but not inclusive across all evaluation criteria examples. A few other possible criteria that may not have been included in the multiple examples: implementation readiness, departmental coordination, community input, meets City/Departmental priorities, fits with adopted comprehensive plan, and service equity.

CIP Committee Considerations

A CIP board or committee is becoming more widespread and necessary as a tool not only for coordination purposes but input and oversight as well. CIP decision making can be strengthened with the use of a committee review process (Ebdon 2004, 197). The committee or board can be comprised of experts and citizens in order to gain input and opinions from both inside and outside the city. It is recommended that the committee review requests, rank proposals based on criteria, and assess assets prior to the CIP being finalized (Bland 2008, 1).

In addition to oversight of the selection process, committees should lead the process for formulating the goals of the CIP process as well. This leadership can come

from a single individual within an organization or a board representing multiple departments and interests. Citizen involvement can also be the responsibility of the CIP committee (Vogt 2004, 71). The committee should involve the public as often as possible in order to gain input into citizen wants and needs and also ensure that the public understands the needs for issuing debt and levying taxes (Vogt 2004, 71).

Conceptual Framework

Evidence suggests that capital budgets will continue to grow in both fiscal allocation and importance. The ability to plan, review, and implement capital projects are vital to any municipality that wants to acquire the most for its community from limited resources. A municipality that can select projects that have been scrutinized using a complete process allows for equity amongst selected projects and departments.

The conceptual framework below follows the practical ideal type model. The practical ideal type lends itself to this study because it acts as a reference point for comparison to reality (Shields 1998, 215). The term practical indicates that the criteria used are not perfect but are only a beginning point and are subject to revision (Shields and Tajalli 2006, 324). The practical ideal type allows recommendations to be made after assessing strengths and weaknesses (Shields and Tajalli 2006, 324). The characteristics associated with the framework were developed through literature review and interviews and are illustrated in Table 2.1.

Five distinct categories of a successful CIP were identified and included in the framework: Goals and Policies, Needs Assessment and Facility Audit, Project Prioritization, Project Evaluation, and CIP Committee.

Goals and policies is the first category in the practical ideal type. A productive CIP process should have established goals and policies (Vogt 2004, 68). Establishing goals up front is especially beneficial when allowing individual departments to conduct the initial CIP proposal process. If all departments have a clear vision of the municipality's expectations, less time will be spent on evaluating projects.

The second category is the use of a needs assessment and facility audit. In order to properly gauge what construction is necessary, an inventory of capital assets and their condition must first be done to determine what facilities a municipality currently has, and what condition those facilities are in. This will help to determine decisions such as renovation versus new construction (Dufresne 2005, 60). The needs assessment should be conducted annually along with the CIP process in order to gauge new priorities and to determine project reprioritization (Mikesell 2011, 299).

The third category is project prioritization. Governments use various methods to prioritize projects depending on size of city and the need of a certain type of project. The ability to prioritize prior to selection is a key to a successful CIP. Relying on the experience of staff and departmental needs while prioritizing projects is a common tool used by municipalities (Vogt 2004, 70). Determining priority is the first step in evaluating a project for inclusion on the CIP.

Project evaluation is the fourth category. This step of the CIP process it is often the most locally adjusted and depends on the current situation of the municipality. Evaluating priority projects can be accomplished many ways using varying criteria. Municipalities often create criteria to rank projects based on their strategic organizational

goals (Bland 2008, 1). To improve efficiency of the CIP process, the criteria created should reflect directly on a government's strategic plan or its mission (Elmer 2005, 17) as well as act as a universal tool to evaluate all projects regardless of sponsor department.

The fifth and final category is the CIP committee. A CIP committee strengthens the process of project selection by coordinating and overseeing the entire process (Ebdon 2004, 197). The CIP committee is a centralized hub of information for the public as well as the internal employees who have comments or questions regarding the CIP and its process (Vogt 2004, 71). The committee should be both the final step prior to sending the CIP for approval as well as the first step for creating the next CIP.

The identified categories and corresponding elements discussed in this review should be present in order for a municipality to have a successful CIP process. Table 2.1 illustrates the specific characteristics that should be included in each category in order to have a successful CIP process.

Table 2.1 Conceptual Framework for Capital Improvement Plan

Ideal Type Categories	Supporting Literature
<p><u>Goals and Procedures Considerations</u></p> <ul style="list-style-type: none"> • The CIP process should have approved goals and policies at the beginning of the CIP process • The CIP process should review and update CIP goals and policies annually • The CIP process should have written policies and procedures outlining the process of project inclusion • The CIP process should have written policies and procedures establishing the timeframe of the CIP process 	<ul style="list-style-type: none"> • Vogt, 2004 • Wendorf 2005
<p><u>Needs Assessment and Facility Audit Considerations</u></p> <ul style="list-style-type: none"> • The CIP process should have written procedures defining the process and procedures of a needs assessment • The CIP process should have written procedures defining the process and procedures of a facility audit • The CIP process should include a yearly facility audit and a needs-assessment at the beginning of the CIP process • The CIP's facility audit should include a facilities age, general condition, and degree of use • The CIP's facility audit should include the estimated cost of a facilities upgrade or replacement • The CIP's need assessment should list all possible new facilities • The CIP's need assessment should list new facilities in order of perceived need • The CIP's need assessment should use citizen input to assist in need determination 	<ul style="list-style-type: none"> • Trimble 2015 • OMB 2006 • Miller 1998 • Mikesell 2011 • Doss 1987 • Dufresne 2005 • Wendorf 2005
<p><u>Project Prioritization Considerations</u></p> <ul style="list-style-type: none"> • The CIP should allow departments to provide an initial prioritization of projects • The CIP should prioritize projects using input from stakeholders and the general public • The CIP should prioritize projects based on a projects impact on the operating budget • The CIP should prioritize projects using experience – based judgment 	<ul style="list-style-type: none"> • Vogt 2004 • GFOA 2006 • Trimble 2015 • Bland 2008 • Srithongrung 2010

<ul style="list-style-type: none"> • <i>The CIP should prioritize projects using departmental priorities</i> • <i>The CIP should prioritize projects using qualitatively defined categories of need</i> • <i>The CIP should prioritize projects based on the extent to which a project meets stated goals.</i> 	
<p><u>Project Evaluation Criteria Considerations</u></p> <ul style="list-style-type: none"> • <i>The CIP should develop and adhere to guidelines for creating project selection criteria</i> • <i>The CIP's criteria should be measurable and applicable to all proposed CIP projects</i> • <i>The CIP should include leveraging opportunity as a selection criteria</i> • <i>The CIP should include sustainability as a selection criteria</i> • <i>The CIP should include community benefit as a selection criteria</i> • <i>The CIP should include economic impact on community as a selection criteria</i> • <i>Projects should be evaluated annually for inclusion in the CIP</i> 	<ul style="list-style-type: none"> • <i>Millar 1998</i> • <i>Vogt 2004</i> • <i>Wendorf 2005</i> • <i>Mikesell 2011</i> • <i>Bland 2008</i> • <i>Pagano 1986</i> • <i>Elmer 2005</i> • <i>Ebdon 2004</i> • <i>OMB 2006</i>
<p><u>CIP Committee Considerations</u></p> <ul style="list-style-type: none"> • <i>The CIP process should include a CIP Committee</i> • <i>The CIP Committee should lead communication and coordination among departments</i> • <i>The CIP Committee should be responsible for the review process of the CIP</i> • <i>The CIP committee should include community input in decision making</i> 	<ul style="list-style-type: none"> • <i>Vogt 2004</i> • <i>Ebdon 2004</i> • <i>Bland 2008</i>

Chapter 3: Research Methodology

Chapter Purpose

The purpose of this chapter is to describe the methodology used to gauge the CIP process at the City of Austin. This research will use a case study approach that focuses on gauging the City of Austin's CIP process as compared to the ideal model presented. Document analysis is the primary method used to collect the data used in this case study. This method of data collection is explained in more depth throughout the chapter and linked to the conceptual framework presented within this chapter.

Research Method

The CIP model presented in chapter two fills a gap in the literature by consolidating methods used to successfully compile and complete a CIP. The case study methodology is appropriate because case studies are used in research to understand organizational, social, and political occurrences (Yin 2009, 4). Furthermore "case studies that use the gauging/practical ideal type framework pairing are almost always a form of program or policy evaluation" (Shields 2013, 165). The CIP program at the City of Austin presents itself as the "case" to be gauged or evaluated by this research. Case studies often are characterized by incorporating various forms of research, a process described as triangulation (Yin 2009, 114).

Case studies, as with most types of research, do have inherent weaknesses. Case studies are characterized by and need to use a variety of research methods. The lack of clear measurement or suppressed and skewed data can occur (Yin 2009, 50). These weaknesses will be addressed by following the practical ideal framework while using document analysis and structured interviews as data collection techniques. Document analysis has its own weakness

including irretrievability, the reporting bias of the investigator, and accessibility issues (Yin 2009, 102). During this research certain documents were considered public information while others, internal procedures and processes, were not available for analysis.

Document Analysis

Document analysis is one of the two tools utilized to access the CIP process at the COA. One of the main strengths of document analysis is that it is stable and the information can be reviewed repeatedly by the investigator (Yin 2009, 102). Document analysis in this case study is helpful because the availability of CIP plans both current and previous years, approved policies and ordinances, master plans, and procedures. Document analysis will be used to confirm the existence of the described characteristics within the categories established in the conceptual framework.

Document Analysis Sources

The documents used derived from the author's internal knowledge of the COA and from input of knowledgeable individuals within the COA. The quality and number of documents available for research will provide a sizeable foundation for determining the presence of the characteristics within the conceptual framework. The documents used in the case study include the City of Austin Long-Range Capital Improvement Program Strategic Plan 2015-16, City of Austin Capital Improvements Program Five Year Plan 2015-16, the Austin Around You Capital Improvement Program Overview, 2015 Comprehensive Infrastructure Assessment, and the Imagine Austin Comprehensive Plan.

In order to determine the presence and strength of the document analysis a scale of evidence was developed. Three different levels of support were used to measure the findings;

“Strong Support”, “Limited Support”, and “No Support”. The first level, strong support, indicates that there has been more than adequate attention or evidence supporting a specific criteria item. The second level, limited support, indicates that while information does exist, the support does not meet the adequate measure of having Strong Support. The third level, No Support, indicates that no evidence could be found to support a specific criteria item.

Structured Interview

Structured interviews are the second tool utilized to access the CIP process at the COA. Structured interviews allow questions to be directed regarding a specific topic to a person with knowledge of an organization or process. Interviews are seen as one of the most important sources of information of case studies (Yin 2009, 106). Structured interviews are also important because they provide a means for casual inferences and explanations (Yin 2009, 102). The weaknesses of interviews include interviewer bias resulting in poorly written questions and an interviewee having poor recall or knowledge of the referenced policy or organization. These weaknesses were addressed by using questions that were developed directly from the literature review and conceptual framework. The interview questions were open-ended, allowing the interviewee to address information provided from literature and document analysis.

Structured Interview Source

This case study had one interviewee, an executive in the Capital Planning Office. He was selected for an interview based on his knowledge of the CIP process and his responsibility within the COA. The Capital Planning Office at the COA is tasked with much of the responsibility of CIP creation and coordination. The interview focused on questions derived from the conceptual framework where document analysis could not provide a sufficient answer, specifically the

categories of needs assessment and facility audit, project prioritization, project evaluation, and CIP committee. Due to the position of the individual interviewed, and the intent of using open ended questions, gaps found during document analysis could be addressed.

The interview was conducted in Austin, TX on October 20th, 2015. The interview was held at City Hall and lasted less than one hour. For interview questions please see Appendix A.

Operationalizing the Conceptual Framework

Table 3.1 illustrates the link between the conceptual framework, ideal type categories, the methods used for collecting the data, the data collected, and the sources used for document analysis. Table 3.1 also shows the operationalization of the conceptual framework presented in Chapter 2. As seen in this table, this ideal type study analyzes the CIP process at the City of Austin.

Table 3.1 Operationalization of the Conceptual Framework

<i>Ideal Type Categories</i>	<i>Research Method</i>	<i>Evidence</i>	<i>Sources</i>
Goals and Procedures Considerations			
<i>The CIP process should have approved goals and policies at the beginning of the CIP process</i>	<i>Document Analysis</i>	<ul style="list-style-type: none"> • <i>Does the program have approved goals at the beginning of the CIP process?</i> • <i>Does the program have approved policies at the beginning of the CIP process?</i> 	<ul style="list-style-type: none"> • <i>City of Austin Capital Improvements Program Five Year Plan 2015-16</i> • <i>Austin Around You Capital Improvement Program Overview</i> • <i>Imagine Austin Comprehensive Plan.</i>
<i>The CIP process should review and update CIP goals and policies annually</i>	<i>Document Analysis</i>	<ul style="list-style-type: none"> • <i>Does the program review and update CIP goals and policies annually?</i> 	<ul style="list-style-type: none"> • <i>City of Austin Capital Improvements Program Five Year Plan 2015-16</i> • <i>Austin Around You Capital Improvement Program Overview</i> • <i>Imagine Austin Comprehensive Plan.</i>
<i>The CIP process should have written policies and procedures outlining the process of project inclusion</i>	<i>Document Analysis</i>	<ul style="list-style-type: none"> • <i>Does the program have written policies and procedures for project inclusion?</i> 	<ul style="list-style-type: none"> • <i>City of Austin Capital Improvements Program Five Year Plan 2015-16</i> • <i>Austin Around You Capital Improvement Program Overview</i> • <i>Imagine Austin Comprehensive Plan.</i>
<i>The CIP process should have written policies and procedures establishing the timeframe of the CIP process</i>	<i>Document Analysis</i>	<ul style="list-style-type: none"> • <i>Does the program have written policies and procedures establishing the timeframes for the CIP process?</i> 	<ul style="list-style-type: none"> • <i>City of Austin Capital Improvements Program Five Year Plan 2015-16</i> • <i>Austin Around You Capital Improvement Program Overview</i> • <i>Imagine Austin Comprehensive Plan.</i>

<i>Needs Assessment and Facility Audit Considerations</i>			
<i>The CIP process should have written procedures defining the process and procedures of a needs assessment</i>	<i>Document Analysis Structured Interview</i>	<ul style="list-style-type: none"> • <i>Does the COA have written procedures defining the process and procedures of a needs assessment?</i> 	<ul style="list-style-type: none"> • <i>City of Austin Capital Improvements Program Five Year Plan 2015-16</i> • <i>Imagine Austin Comprehensive Plan</i> • <i>2015-16 Long Range Capital Improvement Program Strategic Plan</i> • <i>2015 Comprehensive Infrastructure Assessment</i>
<i>The CIP process should have written procedures defining the process and procedures of a facility audit</i>	<i>Document Analysis Structured Interview</i>	<ul style="list-style-type: none"> • <i>Does the COA have written procedures defining the process and procedures of a facility audit?</i> 	<ul style="list-style-type: none"> • <i>City of Austin Capital Improvements Program Five Year Plan 2015-16</i> • <i>Imagine Austin Comprehensive Plan</i> • <i>2015-16 Long Range Capital Improvement Program Strategic Plan</i> • <i>2015 Comprehensive Infrastructure Assessment</i>
<i>The CIP process should include a yearly facility audit and a needs assessment at the beginning of the CIP process</i>	<i>Document Analysis Structured Interview</i>	<ul style="list-style-type: none"> • <i>Does the COA include a yearly facility audit and needs-assessment at the beginning of the CIP process?</i> 	<ul style="list-style-type: none"> • <i>City of Austin Capital Improvements Program Five Year Plan 2015-16</i> • <i>Imagine Austin Comprehensive Plan</i> • <i>2015-16 Long Range Capital Improvement Program Strategic Plan</i> • <i>2015 Comprehensive Infrastructure Assessment</i>
<i>The CIP's facility audit should include a facilities age, general condition, and degree of use</i>	<i>Document Analysis Structured Interview</i>	<ul style="list-style-type: none"> • <i>Does the COA facility audit include age, general condition, and degree of use for individual facilities?</i> 	<ul style="list-style-type: none"> • <i>City of Austin Capital Improvements Program Five Year Plan 2015-16</i> • <i>Imagine Austin Comprehensive Plan</i> • <i>2015-16 Long Range Capital Improvement Program Strategic Plan</i> • <i>2015 Comprehensive Infrastructure Assessment</i>

<i>The CIP's facility audit should include the estimated cost of a facilities upgrade or replacement</i>	<i>Document Analysis Structured Interview</i>	<ul style="list-style-type: none"> • <i>Does the COA facility audit include estimated cost of upgrade?</i> 	<ul style="list-style-type: none"> • <i>City of Austin Capital Improvements Program Five Year Plan 2015-16</i> • <i>Imagine Austin Comprehensive Plan</i> • <i>2015-16 Long Range Capital Improvement Program Strategic Plan</i> • <i>2015 Comprehensive Infrastructure Assessment</i>
<i>The CIP's needs assessment should list all possible new facilities</i>	<i>Document Analysis Structured Interview</i>	<ul style="list-style-type: none"> • <i>Does the COA needs assessment list all possible new facilities?</i> 	<ul style="list-style-type: none"> • <i>City of Austin Capital Improvements Program Five Year Plan 2015-16</i> • <i>Imagine Austin Comprehensive Plan</i> • <i>2015-16 Long Range Capital Improvement Program Strategic Plan</i> • <i>2015 Comprehensive Infrastructure Assessment</i>
<i>The CIP's needs assessment should list new facilities in order of perceived need</i>	<i>Document Analysis Structured Interview</i>	<ul style="list-style-type: none"> • <i>Does the COA needs assessment list new facilities in order of perceived need?</i> 	<ul style="list-style-type: none"> • <i>City of Austin Capital Improvements Program Five Year Plan 2015-16</i> • <i>Imagine Austin Comprehensive Plan</i> • <i>2015-16 Long Range Capital Improvement Program Strategic Plan</i> • <i>2015 Comprehensive Infrastructure Assessment</i>
<i>The CIP's needs assessment should use citizen input to assist in need determination</i>	<i>Document Analysis Structured Interview</i>	<ul style="list-style-type: none"> • <i>Does the COA needs assessment use citizen input to assist in need determination?</i> • <i>Is citizen input solicited, determined and recorded?</i> 	<ul style="list-style-type: none"> • <i>City of Austin Capital Improvements Program Five Year Plan 2015-16</i> • <i>Imagine Austin Comprehensive Plan</i> • <i>2015-16 Long Range Capital Improvement Program Strategic Plan</i> • <i>2015 Comprehensive Infrastructure Assessment</i>

Project Prioritization Considerations			
<i>The CIP process should allow departments to provide an initial prioritization of projects</i>	<i>Document Analysis Structured Interview</i>	<ul style="list-style-type: none"> • Does the COA allow departments to provide initial prioritization of projects? 	<ul style="list-style-type: none"> • City of Austin Capital Improvements Program Five Year Plan 2015-16 • Imagine Austin Comprehensive Plan • 2015-16 Long Range Capital Improvement Program Strategic Plan
<i>The CIP process should prioritize projects using input from stakeholders and the general public</i>	<i>Document Analysis Structured Interview</i>	<ul style="list-style-type: none"> • Does the COA prioritize projects using input from stakeholders and the general public? • Does the COA ensure public input is communicated to the decision makers? 	<ul style="list-style-type: none"> • City of Austin Capital Improvements Program Five Year Plan 2015-16 • Imagine Austin Comprehensive Plan • 2015-16 Long Range Capital Improvement Program Strategic Plan
<i>The CIP process should prioritize projects based on a projects impact on the operating budget</i>	<i>Document Analysis Structured Interview</i>	<ul style="list-style-type: none"> • Does the COA prioritize projects based on a projects impact to the operating budget? 	<ul style="list-style-type: none"> • City of Austin Capital Improvements Program Five Year Plan 2015-16 • Imagine Austin Comprehensive Plan • 2015-16 Long Range Capital Improvement Program Strategic Plan
<i>The CIP process should prioritize projects using experience –based judgment</i>	<i>Document Analysis Structured Interview</i>	<ul style="list-style-type: none"> • Does the COA prioritize projects using experience-based judgment? 	<ul style="list-style-type: none"> • City of Austin Capital Improvements Program Five Year Plan 2015-16 • Imagine Austin Comprehensive Plan • 2015-16 Long Range Capital Improvement Program Strategic Plan
<i>The CIP process should prioritize projects using departmental priorities</i>	<i>Document Analysis Structured Interview</i>	<ul style="list-style-type: none"> • Does the COA prioritize projects using departmental priorities? 	<ul style="list-style-type: none"> • City of Austin Capital Improvements Program Five Year Plan 2015-16 • Imagine Austin Comprehensive Plan • 2015-16 Long Range Capital Improvement Program Strategic Plan

<i>The CIP process should prioritize projects using qualitatively defined categories of need</i>	<i>Document Analysis</i> <i>Structured Interview</i>	<ul style="list-style-type: none"> • <i>Does the COA prioritize projects using qualitatively defined categories of need?</i> 	<ul style="list-style-type: none"> • <i>City of Austin Capital Improvements Program Five Year Plan 2015-16</i> • <i>Imagine Austin Comprehensive Plan</i> • <i>2015-16 Long Range Capital Improvement Program Strategic Plan</i>
<i>The CIP should prioritize projects based on the extent to which a project meets stated goals.</i>	<i>Document Analysis</i> <i>Structured Interview</i>	<ul style="list-style-type: none"> • <i>Does the COA prioritize projects based on extent that a project meets the stated goals?</i> 	<ul style="list-style-type: none"> • <i>City of Austin Capital Improvements Program Five Year Plan 2015-16</i> • <i>Imagine Austin Comprehensive Plan</i> • <i>2015-16 Long Range Capital Improvement Program Strategic Plan</i>
Project Evaluation Considerations			
<i>The CIP should develop and adhere to guidelines for creating project selection criteria</i>	<i>Document Analysis</i> <i>Structured Interview</i>	<ul style="list-style-type: none"> • <i>Does the COA develop and adhere to guidelines for creating project selection criteria?</i> 	<ul style="list-style-type: none"> • <i>City of Austin Capital Improvements Program Five Year Plan 2015-16</i> • <i>Imagine Austin Comprehensive Plan</i> • <i>2015-16 Long Range Capital Improvement Program Strategic Plan</i>
<i>The CIP's criteria should be measurable and applicable to all proposed CIP projects</i>	<i>Document Analysis</i> <i>Structured Interview</i>	<ul style="list-style-type: none"> • <i>Are the program's criteria measurable and applicable to all proposed CIP projects?</i> • <i>Do the criteria use qualitative and quantitative measurement?</i> 	<ul style="list-style-type: none"> • <i>City of Austin Capital Improvements Program Five Year Plan 2015-16</i> • <i>Imagine Austin Comprehensive Plan</i> • <i>2015-16 Long Range Capital Improvement Program Strategic Plan</i>

<i>The CIP should include leveraging opportunity as a selection criteria</i>	<i>Document Analysis Structured Interview</i>	<ul style="list-style-type: none"> • <i>Does the program include leveraging opportunity as a selection criteria?</i> 	<ul style="list-style-type: none"> • <i>City of Austin Capital Improvements Program Five Year Plan 2015-16</i> • <i>Imagine Austin Comprehensive Plan</i> • <i>2015-16 Long Range Capital Improvement Program Strategic Plan</i>
<i>The CIP should include sustainability as a selection criteria</i>	<i>Document Analysis Structured Interview</i>	<ul style="list-style-type: none"> • <i>Does the program include sustainability as a selection criteria?</i> 	<ul style="list-style-type: none"> • <i>City of Austin Capital Improvements Program Five Year Plan 2015-16</i> • <i>Imagine Austin Comprehensive Plan</i> • <i>2015-16 Long Range Capital Improvement Program Strategic Plan</i>
<i>The CIP should include community benefit as a selection criteria</i>	<i>Document Analysis Structured Interview</i>	<ul style="list-style-type: none"> • <i>Does the program include community benefit as a selection criteria?</i> 	<ul style="list-style-type: none"> • <i>City of Austin Capital Improvements Program Five Year Plan 2015-16</i> • <i>Imagine Austin Comprehensive Plan</i> • <i>2015-16 Long Range Capital Improvement Program Strategic Plan</i>
<i>The CIP should include economic impact on community as a selection criteria</i>	<i>Document Analysis Structured Interview</i>	<ul style="list-style-type: none"> • <i>Does the program include economic impact on community as a selection criteria?</i> 	<ul style="list-style-type: none"> • <i>City of Austin Capital Improvements Program Five Year Plan 2015-16</i> • <i>Imagine Austin Comprehensive Plan</i> • <i>2015-16 Long Range Capital Improvement Program Strategic Plan</i>
<i>Projects should be evaluated annually for inclusion in the CIP</i>	<i>Document Analysis Structured Interview</i>	<ul style="list-style-type: none"> • <i>Does the COA evaluate projects annually for inclusion in the CIP?</i> 	<ul style="list-style-type: none"> • <i>City of Austin Capital Improvements Program Five Year Plan 2015-16</i> • <i>Imagine Austin Comprehensive Plan</i> • <i>2015-16 Long Range Capital Improvement Program Strategic Plan</i>

<i>CIP Committee Considerations</i>			
<i>The CIP process should include a CIP Committee</i>	<i>Document Analysis Structured Interview</i>	<ul style="list-style-type: none"> • <i>Does the COA have a CIP committee as part of its program?</i> 	<ul style="list-style-type: none"> • <i>Imagine Austin Comprehensive Plan</i> • <i>2015-16 Long Range Capital Improvement Program Strategic Plan</i> • <i>Austin Around You Program Overview</i>
<i>The CIP committee should lead communication and coordination among department</i>	<i>Document Analysis Structured Interview</i>	<ul style="list-style-type: none"> • <i>Does the CIP committee lead communication and coordination among departments?</i> 	<ul style="list-style-type: none"> • <i>Imagine Austin Comprehensive Plan</i> • <i>2015-16 Long Range Capital Improvement Program Strategic Plan</i> • <i>Austin Around You Program Overview</i>
<i>The CIP committee should be responsible for the review process of the CIP</i>	<i>Document Analysis Structured Interview</i>	<ul style="list-style-type: none"> • <i>Is the CIP Committee responsible for the review process of the CIP?</i> 	<ul style="list-style-type: none"> • <i>Imagine Austin Comprehensive Plan</i> • <i>2015-16 Long Range Capital Improvement Program Strategic Plan</i> • <i>Austin Around You Program Overview</i>
<i>The CIP Committee should include community input in decision making</i>	<i>Document Analysis Structured Interview</i>	<ul style="list-style-type: none"> • <i>Does the CIP Committee include community input in decision making?</i> 	<ul style="list-style-type: none"> • <i>Imagine Austin Comprehensive Plan</i> • <i>2015-16 Long Range Capital Improvement Program Strategic Plan</i> • <i>Austin Around You Program Overview</i>

See Shields & Rangarajan (2013) or Shields & Tajalli (2006) for a discussion of building operationalization tables.

Human Subjects Protection

Human subjects were used in the interview process and protection is given to the interviewee's identity. The interviewee was provided with information about the research topic prior to the interview and was informed that responses will be held confidential by the author. The questions asked to the interviewee posed no conflict of interest or risks that would be negatively associated with the interviewee's current position within the COA. The interviewee was given contact information regarding the research results, his rights as an interviewee, and he was informed that participation was completely voluntary and could be terminated at any time. The Texas State Institutional Review Board reviewed the interview request and provided a category 2 exemption. A copy of the Institutional Review Board exemption is included in Appendix B.

Chapter Summary

Chapter Three presented a detailed outline of the methodology of this research, a case study approach. The techniques to accomplish the research include document analysis and structured interview. The strengths and weaknesses of both techniques were presented as well as the steps taken to protect the subjects involved. The criteria used to judge the document analysis; strong, limited, and no, was provided. The operationalization of the conceptual framework was presented to provide a link to all the factors associated with the research. Chapter Four presents the results of the data used to assess the City of Austin's CIP program.

Chapter 4: Results

Chapter Purpose

As stated previously the purpose of this research is to assess the City of Austin Capital Improvement Program in relation to the ideal type characteristics developed. This chapter will present and summarize the result of the assessment for each of the five components: Goals and Procedures, Needs Assessment and Facility Audit, Project Prioritization, Project Evaluation, and CIP Committee. The results are categorized based on the degree to which the criteria met the practical ideal type. As discussed in Chapter 3, the degrees of evidence are Strong Support, Limited Support, and No Support. Each practical ideal type will be summarized by category and illustrated using a table at the end of each section. A summary of findings table will also be presented at the end of the chapter.

Goals and Procedures

Chapter 2 introduced the first ideal type category of a CIP, goals and procedures. Identifying and recommending goals and policies, or changes in them, is a key aspect of a successful CIP (Vogt 2004, 68). The research found that a successful CIP needed to have the following characteristics; approved goals and policies at the beginning of the CIP process, goals need to be updated annually, program should have written policies and procedures for project inclusion, and the program should have written policies and procedures establishing the timeframes for the CIP process. The City of Austin documents reviewed for this category include the City of Austin Capital Improvements Program Five Year Plan 2015-16, the Austin Around You Capital Improvement Program Overview, and the Imagine Austin Comprehensive Plan. Throughout this chapter page numbers in parentheses are given following specific facts found

within the COA documents. This is both for reference and to ease future researcher's efforts on locating the information presented.

Goals and Procedures – Document Analysis

The documents used to analyze goals and procedures in the COA CIP program found that the guiding document is the Imagine Austin Comprehensive Plan. This plan states the overall goals of the COA and from that, individual department CIPs and Master Plans are created to meet these goals. The Imagine Austin document identifies the overall goals of the COA, determines what goals can be met in the future, and details how to meet these goals as well as how to measure the success of the COA in meeting the goals. The Imagine Austin document itself was developed using 5 rounds of surveys, 21 public meetings, 57 team meetings, 112 speaking events, and over 18,000 community inputs gathered over 2 years. The information collected was reviewed by multiple public committees and the Planning Commission before being endorsed by the City Council. The document identifies 6 core principles that the hundreds of individual plans and policies throughout the COA should strive toward. These include; grow as a compact and connected city, integrate nature into the city, provide paths to prosperity for all, develop an affordable and healthy community, sustainably manage water, energy and other environmental resources, and think creatively and work together (page 10). The plan further breaks down the goals and policies of the COA through building blocks (page 95), including city facilities and services (page 157). The plan identifies 48 individual city facility policies that should guide policies developed throughout the City. The Imagine Austin plan identifies itself as an umbrella plan that should guide master and small area plans as well as departmental plans (page 220).

A review of the City of Austin Capital Improvements Program Five Year Plan 2015-16 shows that it was produced and reviewed annually (page 3) and that it broke down goals and policies laid out in the Imagine Austin document into individual priority programs. The five year plan is further divided into individual departments with those departments listing their policies and procedures for project inclusion in the five year CIP. For example, the Public Works Department established five goals for its projects that support larger City initiatives similar to those identified in the Imagine Austin document (page 487). The Parks and Recreation Department (PARD) also established a set of their own goals in line with the City of Austin general vision that meet their internal PARD Long Range Plan.

The Austin Around You document highlights how departmental issues and master plans, such as the Parks Master Plan, supplements the Imagine Austin document by highlighting and developing strategies, policies, and regulations for capital improvement (page 2). The Austin Around You document lists the five key drivers for capital investments highlighting policy priorities as it relates to City Council approved master plan. The Austin Around You document goes on to list specific infrastructure categories for capital improvement including: area plans, aviation, electric, facilities, housing, land acquisition, mobility infrastructure, park amenities, stormwater, technology, vehicles and equipment, and water infrastructure.

The documents reviewed all create a cohesive set of goals and policies that feed up from the departments, to the 5 year CIP, and are guided by the Imagine Austin document. Goals and policies are written and reviewed across the City establishing a CIP that meets the direction and vision the City of Austin has established. The City of Austin overall met the goals and procedures criteria with strong evidence support captured in the document analysis. Table 4.1

summarizes the results of the goals and procedures considerations and assigns a level of support found through document analysis.

Table 4.1 Goals and Procedures Support

Categories	Evidence Support			Evidence
	Strong	Limited	No	
Does the program have approved goals at the beginning of the CIP process?	X			Approved goals listed in five year CIP and Imagine Austin document.
Does the program have approved policies at the beginning of the CIP process?	X			Approved policies listed in five year CIP, Imagine Austin document, and Austin Around You document.
Does the program review and update CIP goals and policies annually?	X			Imagine Austin document policies reviewed annually and five year CIP produced annually with updated policies.
Does the program have written policies and procedures for project inclusion?	X			Five year CIP included departmental policies and procedures for project inclusion. Policies and guiding procedures exist in Imagine Austin document.
Does the program have written policies and procedures establishing the timeframes for the CIP process?		X		The annual timeframe of the CIP is addressed in the Imagine Austin document. Specific timeframes for departments and commissions were not found.

Needs Assessment and Facility Audit

Needs assessment and facility audit concerns are identified in Chapter 2 as the second ideal type category. A detailed facility condition audit and needs assessment allows the city to assess all current facilities in order to formulate an optimal CIP (Dufresne 2005, 60). The literature suggests that in order to have a successful CIP the needs assessment and facility audit should include: written procedures defining the process of a needs assessment and facility audit, a yearly facility audit and needs assessment at the beginning of the CIP process, the facility audit should include age, condition, degree of use for facilities, and estimated cost of upgrade, the needs assessment should list all possible new facilities, new facilities should be listed in order of perceived need, citizen input should be used in need determination, and citizen input should be solicited and recorded. The City of Austin documents reviewed for needs assessment and facility audit category include the City of Austin Capital Improvements Program Five Year Plan 2015-16, the Imagine Austin Comprehensive Plan, the 2015-16 Long Range Capital Improvement Program Strategic Plan, and the 2015 Comprehensive Infrastructure Assessment.

Needs Assessment and Facility Audit – Document Analysis

The successful characteristics of needs assessment and facility audit were best demonstrated through document analysis of the 2015 Comprehensive Infrastructure Assessment. This document puts together a structure and processes that result in a comprehensive infrastructure assessment. The data from the Comprehensive Infrastructure Assessment is fed into the Long Range CIP in order to allow the City to plan more adequately for future needs (page 1). The document includes the City's mobility infrastructure, electric infrastructure, water infrastructure, parks infrastructure, flood control and water quality infrastructure, aviation infrastructure, vehicles and equipment, and public trees. The document itself is phase two of the

City's infrastructure assessment with phase one generated from the department themselves, and phase three coming in the near future (page 1). The document, however, is not a complete list of all COA facilities, instead acting as a guiding document for the infrastructure assets the City owns (page 17). The individual city departments were given the direction to gather information based upon condition, age, and the estimated capital cost of bringing asset to acceptable level of service. The document also outlines that Strategic Facilities Governance process, established in 2011, is tasked with creating the process and structure that will govern the decisions made regarding City of Austin facilities. The Comprehensive Infrastructure Assessment goes into great detail on the listed assets and provides departmental rankings based on asset condition, cost to upgrade, number of facilities, age, and others. The Comprehensive Infrastructure Assessment does not list all possible new facilities or list new facilities in order of perceived need.

Further document analysis of the Long Range Capital Improvement Program Strategic Plan found that a rolling needs assessment is completed yearly and included as part of the document (page 18). The Long Range document identifies the Comprehensive Infrastructure Assessment as a fairly new process that will create a framework for communicating condition information across asset categories. The document describes the rolling needs assessment's multiple purposes and processes. The rolling needs assessment, being a new process, will be updated annually in the future by individual departments to assist with the dynamic nature of CIP planning (page 26). The document includes a summary of capital needs based on departmental information, that summary is then used for the annual 5 year CIP plan.

Needs Assessment and Facility Audit – Structured Interview

In an interview with an executive within the City of Austin's Capital Planning Office the existence of strong evidence for the majority of categories identified was documented. However

as identified earlier, the interview confirmed the procedures and processes for infrastructure assessments, but not facility audits, those are left up to individual departments or building services to perform. It was also found that the COA does not list all possible new facilities but that task would likely soon be covered within the COA by the Strategic Facility Governance team. The interview also found that the City of Austin does not list facilities in order of perceived need. That task is left to individual departments through their project prioritization process for inclusion in the five year CIP. As confirmed through document analysis, all plans, policies, and assessments take advantage of citizen input whenever possible throughout the process.

Overall the documents reviewed and the interview conducted point to strong support that the City of Austin has in place policies and procedures to track the assessment of its current assets. Although there is not yet a comprehensive facilities list, there is a foundation in place that allows individual departments to track their facilities. The depth of information recorded and categorized by those two documents provides strong evidence for most concerns listed in the practical ideal category. However, there was no evidence found for the two following categories; needs assessment that lists all possible new facilities, and needs assessment that lists new facilities in order of perceived need. Table 4.2 summarizes the results of the needs assessment and facility audit considerations and assigns a level of support found through document analysis and structured interview.

Table 4.2 Needs Assessment and Facility Audit Support

Categories	Evidence Support			Evidence
	Strong	Limited	No	
Does the COA have written procedures defining the process and procedures of a needs assessment?	X			The Long Range CIP and the Comprehensive Infrastructure Assessment define the process and procedures.
Does the COA have written procedures defining the process and procedures of a facility audit?		X		The Long Range CIP and the Comprehensive Infrastructure Assessment define the process and procedures. However since only infrastructure assets were included limited support was given.
Does the COA include a yearly facility audit and needs-assessment at the beginning of the CIP process?	X			The Long Range CIP and the Comprehensive Infrastructure Assessment define the annual process.
Does the COA facility audit include age, general condition, and degree of use for individual facilities?	X			The Long Range CIP and the Comprehensive Infrastructure Assessment go into great detail regarding these specific categories and their use on facilities and infrastructure assets.
Does the COA facility audit include estimated cost of upgrade?	X			The Long Range CIP and the Comprehensive Infrastructure Assessment both use this category in facility and infrastructure reporting.
Does the COA needs assessment list all possible new facilities?			X	This characteristic was not found in Document Analysis and its absence was confirmed in the structured interview.
Does the COA needs assessment list new facilities in order of perceived needs?			X	This characteristic was not found in Document Analysis and its absence was confirmed in the structured interview.
Does the COA needs assessment use citizen input to assist in needs determination?	X			Existence of community input was found throughout the process and confirmed in the structured interview.
Is citizen input solicited, determined and recorded?	X			Existence of community input was found throughout the process and confirmed in the structured interview.

Project Prioritization

The third ideal type category identified in Chapter 2 is project prioritization. Prioritizing projects prior to evaluating them and placing them on the CIP is a vital step for any municipality. Prioritization can save time in the evaluation process and help to ensure the most thought out and needed projects are part of the CIP. The research found eight characteristics of successful project prioritization: departments should provide initial prioritization, prioritize projects using input from stakeholders and general public, ensure public input is communicated, prioritize projects based on impact on the operating budget, prioritize projects using experience based judgment, prioritize projects using departmental priorities, prioritize projects using qualitatively defined categories of need, prioritize projects based on goals met. Documents used to access the project prioritization characteristics are: City of Austin Capital Improvements Program Five Year Plan 2015-16, the Imagine Austin Comprehensive Plan, and the 2015-16 Long Range Capital Improvement Program Strategic Plan.

Project Prioritization – Document Analysis

The City of Austin Capital Improvement Program Five Year Plan 2015-16 document goes into great depth describing the COA's project prioritization process. This document describes how the CIP begins with City departments reviewing their capital improvement needs early in the fiscal year and prioritizing them for inclusion in the CIP (page 5). The departments are asked to prioritize projects using technical assessments of infrastructure condition and need, public input received, and requests from City Boards and Commissions. Public and stakeholder input is communicated up the chain by including it at the beginning of the prioritization process. The document also describes that along with departmental prioritization the departments use the following priorities; urgent needs, planning priorities, Council policy directives, and department

business priorities (page 5). It is clear that the beginning of the prioritizing process relies heavily on the departments, their experience, and input from the public and stakeholders.

Included in the City of Austin Capital Improvement Program Five Year Plan 2015-16 is each individual department's CIP that has been reviewed, approved. A review of Austin Water Utility's (AWU) capital improvement prioritization, for example, found a bottom up approach that identifies critical needs by relying on treatment and operation personnel to determine AWU priorities through their day to day operations. AWU also has an internal CIP coordination committee composed of different chairpersons from throughout AWU that evaluate projects based on identified priorities (page 115). The AWU capital improvement plan further illustrates how priorities to evaluate projects were adopted and incorporated from the Imagine Austin document (page 115). AWU also prioritizes the potential operating costs of their CIP projects and determines that in the 2015-16 CIP there will be inconsequential effect to the operating budget (page 116).

A review of the Public Works Department (PWD) capital improvement plan finds that PWD also prioritizes projects based on established criteria. These include; citizen input, coordination with other utilities, impact on public safety, pavement condition, significance in the transportation network, and support of economic development (page 490). PWD, along with AWU, link their project priorities to the Imagine Austin document and highlight how the core principles addressed in that document are used for project inclusion in their departmental capital improvement plans.

It is further confirmed in the 2015-16 Long Range Capital Improvement Program Strategic Plan that public input is first used in the CIP process at the departmental and organizational levels (page 7). The initial prioritization of projects is left to the departments,

since they are the subject matter experts. The use of experienced based judgment is a defining characteristic of project prioritization at the COA.

Project Prioritization – Structured Interview

In an interview with an executive in the City of Austin’s Capital Planning Office strong evidence was found in support of all the project prioritization characteristics identified in the practical ideal model. Specifically focusing on public input and how input is communicated to the decision makers. It was found that there is significant public input throughout the CIP process. This input begins at the departmental level and continues throughout the process to the CIP Steering Committee. The CIP Steering Committee is made up of department heads who review the draft CIP, as well as collect public input on the draft CIP prior to recommending to the Planning Commission and City Council. It is clear that from the beginning, to the end of the CIP process, public input is solicited, documented, and communicated to the decision makers.

Overall strong support was found for all the project prioritization characteristics. The COA relies on its experienced, departmental support staff to prioritize and review potential projects as well as the public input they gather. The departments are allowed to use their own priorities and align them with the priorities identified in the Imagine Austin document to ensure that the COA’s overall goals are being met. Table 4.3 summarizes the results of the project prioritization considerations and their level of support.

Table 4.3 Project Prioritization Support

Categories	Evidence Support			Evidence
	Strong	Limited	No	
Does the COA allow departments to provide initial prioritization of projects?	X			The five year CIP, the Long Range CIP, Imagine Austin document, and the structured interview all confirmed departmental prioritization.
Does the COA prioritize projects using input from stakeholders and the general public?	X			The five year CIP, the Long Range CIP, Imagine Austin document, and the structured interview all confirmed stakeholder and public input.
Does the COA ensure public input is communicated to the decision makers?	X			The five year CIP, the Long Range CIP, the Imagine Austin document, and the structured interview all confirmed that public input is communicated throughout the CIP process.
Does the COA prioritize projects based on a projects impact to the operating budget?	X			The five year CIP confirmed that individual departments review the impact on their operating budgets.
Does the COA prioritize projects using experience-based judgment?	X			The five year CIP, the Long Range CIP, Imagine Austin document, and the structured interview all confirmed that experience-based judgement is a top prioritization element.
Does the COA prioritize projects using departmental priorities?	X			The five year CIP, the Long Range CIP, Imagine Austin document, and the structured interview all confirmed the use of departmental priorities.
Does the COA prioritize projects using qualitatively defined categories of need?	X			The five year CIP, the Long Range CIP, Imagine Austin document, and the structured interview all confirmed the use of qualitatively categories of need. Most of these are created by individual departments.
Does the COA prioritize projects based on extent that a project meets stated goals?	X			The five year CIP, the Long Range CIP, and the structured interview all confirmed the use of a project meeting stated goals.

Project Evaluation

The fourth characteristic of the practical ideal model presented in Chapter 2 is the project evaluation stage of the CIP. Ranking potential projects based on agreed upon criteria is essential. Uniformed selection criteria can improve the selection process of a CIP (Bland 2008, 1). This stage of the CIP process can be considered one of the most crucial. Finally, selecting specific projects to be included in the CIP, to be financed with the capital budget, is the end of a long project selection process. The research found that the elements of successful project evaluation include: develop guidelines for creating project selection criteria, using measurable and applicable criteria for all projects, using qualitative and quantitative criteria, using sustainability as a selection criteria, using leveraging opportunity as a selection criteria, using community benefit as a selection criteria, using economic impact as a selection criteria, and the annual evaluation of projects for inclusion in the CIP. Document analysis of the project evaluation characteristics included the City of Austin Capital Improvements Program Five Year Plan 2015-16, the Imagine Austin Comprehensive Plan, and the 2015-16 Long Range Capital Improvement Program Strategic Plan.

Project Evaluation – Document Analysis

Document analysis of the Imagine Austin document found that the overall goals that the document highlights act as a guiding principle for project evaluation criteria. The Imagine Austin document lists building block priorities for city facilities that act as a guide for departments evaluating projects (page 249). The document breaks down the city facility goals into 46 individual policies that present departments with individual goals to strive for in creating project evaluation criteria (page 160). As well as specific policies, several of the Imagine Austin document's overall goals are criteria included in the ideal type model, including; sustainability

and community benefit. The document contains multiple qualitative criteria for departments to use in the evaluation process. Overall, the Imagine Austin document once again acts as a broad guiding principles document that is applicable across city departments giving them the overall goals to strive towards in their project selection process.

Document analysis of the City of Austin Capital Improvements Program Five Year Plan 2015-16 found the most support for the ideal type characteristics. The City of Austin Capital Improvements Program Five Year Plan 2015-16 lists the COA priority programs from the Imagine Austin document including sustainability, economic impact, and allowing individual departments to determine how their project evaluation process supports the priority programs (page 7). More specific evidence of project evaluation criteria can be found in the individual department plans that are contained in the five year CIP. A review of the Public Works Department (PWD) CIP plan found that project evaluation criteria had been developed including citizen input, sustainability, and economic development (page 490). The PWD plan went on to confirm that its projects were evaluated based on the assessment of the criteria as well as the timing of the pending projects (page 490). A review of the Parks and Recreation Department's (PARD) CIP plan found that in addition to citizen input and sustainability, PARD uses leveraging opportunities as project evaluation criteria (page 371). Leveraging allows departments and their municipalities to maximize capital investment impact, especially in large cities where multiple departments may be competing for limited resources.

Project Evaluation – Structured Interview

In an interview with an executive in the City of Austin's Capital Planning Office strong evidence was found in support of the majority of the project evaluation characteristics identified in the practical ideal model. The interview found that the COA originally had specific criteria

for departments to use in their CIP project evaluation. The original criteria were found to be unsuccessful due to the broad spectrum of projects across the City and the inability of some departments to evaluate projects based on the assigned criteria. This instigated the creation of the Imagine Austin document which created the needed guiding principles. Departments can now develop their own criteria based on the Imagine Austin document's guiding principles. The Imagine Austin document's guiding principles are more relevant overall than the general evaluation criteria developed by the COA originally. The interview also confirmed what was found in document analysis that there is no overall citywide ranking of projects. Instead the rankings are left to individual departments as they are the most knowledgeable and experienced in their respective fields. It was also confirmed in the interview that leveraging, while currently used by some departments, is becoming a more common project evaluation criteria due to the opportunity it represents.

Overall, strong support was found for the majority of the project evaluation characteristics. Only limited support was found for the use of quantitative measurement criteria. Limited support was also found for the ideal type characteristic determining if criteria is applicable to all proposed CIP projects. This, however, was addressed in the structured interview in that overall criteria had been attempted but failed. Table 4.4 summarizes the results of the project evaluation considerations and assigns a level of support found through document analysis and structured interview.

Table 4.4 Project Evaluation Support

Categories	Evidence Support			Evidence
	Strong	Limited	No	
Does the COA develop and adhere to guidelines for creating project selection criteria?	X			The five year CIP, Imagine Austin document, and the structured interview all confirmed the use of a guidelines.
Are the program's criteria measurable and applicable to all proposed CIP projects?		X		At the departmental level evaluation criteria is applicable to all CIP projects. However at the municipal level there is only guiding principles, not specific criteria.
Do the criteria use qualitative and quantitative measurement?		X		The five year CIP, Imagine Austin document, and the structured interview all confirmed the use of a qualitative measurement. Few instances of quantitative measurement could be found outside of the Comprehensive Infrastructure Assessment.
Does the program include leveraging opportunity as a selection criteria?	X			The five year CIP and the structured interview found the use of leveraging as a selection criteria.
Does the program include sustainability as a selection criteria?	X			The five year CIP, Imagine Austin document, and the structured interview all confirmed the use of sustainability as a selection criteria.
Does the program include community benefit as a selection criteria?	X			The five year CIP, Imagine Austin document, and the structured interview all confirmed the use of community benefit as a selection criteria.
Does the program include economic impact on community as a selection criteria?	X			The five year CIP, Imagine Austin document, and the structured interview all confirmed the use of economic impact as a selection criteria.
Does the COA evaluate projects annually for inclusion in the CIP?	X			The five year CIP, Imagine Austin document, and the structured interview all confirmed the annual evaluation of projects.

CIP Committee

The final characteristic of the practical ideal model presented in Chapter 2 is the existence of a CIP Committee and its functions. A CIP committee is becoming more popular among municipalities for its coordinating, review, and finalizing functions involving the capital improvement plan (Ebdon 2004, 197). A CIP committee, especially in a larger municipality, is almost a necessity in order to assist all departments with meeting the timelines and guidelines involved in creating the CIP. Research found four criteria relating to a CIP committee that a successful CIP process should have: existence of a CIP committee, the CIP committee leads communication and coordination among departments, the CIP committee should be responsible for the review process, and the CIP committee should include community input in decision making. Document analysis of the CIP committee characteristics included the Imagine Austin Comprehensive Plan, the 2015-16 Long Range Capital Improvement Program Strategic Plan, and the Austin Around You Program Overview.

CIP Committee – Document Analysis

Document analysis of the 2015-16 Long range Capital Improvement Program Strategic Plan found that there is not a sole CIP committee in the COA. Instead there are multiple offices and committees designed to provide departments assistance with creation and evaluation of their CIPs as well as coordinate the CIP process as a whole. The Capital Planning Office acts as a coordinating and guiding office in relation to the CIP (page 6). The Capital Planning Office provides strategic planning for the CIP as well as oversight of capital program implementation to ensure alignment with City priorities. The Capital Planning office also provides a central location to facilitate city-wide capital needs assessment and coordination of those needs, as well as provide transparency about future capital projects and program needs (page 7). The Capital

Planning Office is also responsible for the production of the Long Range Capital Improvement Program Strategic Plan. The Planning Commission is another oversight body found through document analysis. The Planning Commission, established by City Charter, is required to review and recommend the capital improvement necessary or desirable to implement the Imagine Austin plan (page 6). The Planning Commission reviews and recommends the CIP to the City Council on an annual basis. It was also found that the Budget Office, although not inherently invested in the creation of the CIP, is the ultimate producer of the Five Year CIP and is responsible for the development of it.

Document analysis of the Austin Around You document confirmed the roles of the Capital Planning Office and the Planning Commission; one acting as a facilitator and coordinator and the other acting as a reviewer and provider of a recommendation to approve the plan. The role of the Capital Planning Office also includes portfolio level management oversight for departments to ensure they are meeting the COA priorities. It is clear that the COA has made the creation, management, review, and approval of the CIP a priority. Creating multiple resources for departments to create the CIP only leads to a stronger and more thorough document.

CIP Committee – Structured Interview

In an interview with an executive in the City of Austin’s Capital Planning Office strong support of evidence was found for the majority of the CIP Committee characteristics identified. The interview confirmed the roles of the Capital Planning Office as well as the Planning Commission. The interview also confirmed the role of the CIP Steering Committee. The CIP Steering Committee is made up of multiple department heads and provides an additional review of draft versions of the CIP. Led by the heads of different departments, the CIP Steering

Committee is a valuable tool for the implementation of the CIP and has clear cross-departmental coordination benefits.

Overall strong support was found for all of the CIP Committee characteristics found in the research. Although the COA does not have a single entity leading its CIP process, it has multiple offices and commissions that each plays an important role. The role of each entity is clearly defined either by charter or policy. The use of multiple entities allows oversight to be shared across a broad field allowing more experts to have input in the CIP process as well as review the draft CIP. Multiple entities also make it much easier for departments to request assistance and gain valuable knowledge by those at the head of the CIP entities. Table 4.5 summarizes the results of the CIP Committee considerations and assigns a level of support found through document analysis and structured interview.

Table 4.5 CIP Committee Support

Categories	Evidence Support			Evidence
	Strong	Limited	No	
Does the COA have a CIP committee as part of its program?	X			The Long Range CIP, Austin Around You document, and the structured interview all confirmed the existence of multiple CIP entities.
Does the CIP committee lead communication and coordination among departments?	X			The Long Range CIP, Austin Around You document, and the structured interview all confirmed the communication and coordination among departments by multiple CIP entities.
Is the CIP Committee responsible for the review process of the CIP?	X			The Long Range CIP, Austin Around You document, and the structured interview all confirmed the multiple entities responsible for review at some point in the CIP process.
Does the CIP Committee include community input in decision making?	X			The Long Range CIP, Austin Around You document, Imagine Austin document, and the structured interview all confirmed community input throughout the CIP process.

Chapter Summary

This Chapter provided the research findings by using document analysis and a structured interview. The results of the research were presented and the level of evidence found was provided. The final chapter will draw the research to a conclusion and provide recommendations based on the findings. Table 4.6 summarizes the results of the document analysis and the structured interview.

Table 4.6 Results Summary

Ideal Criteria	Strong Support	Limited Support	No Support
Goals and Procedures			
Does the program have approved goals at the beginning of the CIP process?	X		
Does the program have approved policies at the beginning of the CIP process?	X		
Does the program review and update CIP goals and policies annually?	X		
Does the program have written policies and procedures for project inclusion?	X		
Does the program have written policies and procedures establishing the timeframes for the CIP process?		X	
Needs Assessment and Facility Audit			
Does the COA have written procedures defining the process and procedures of a needs assessment?	X		
Does the COA have written procedures defining the process and procedures of a facility audit?		X	
Does the COA include a yearly facility audit and needs-assessment at the beginning of the CIP process?	X		
Does the COA facility audit include age, general condition, and degree of use for individual facilities?	X		
Does the COA facility audit include estimated cost of upgrade?	X		
Does the COA needs assessment list all possible new facilities?			X
Does the COA needs assessment list new facilities in order of perceived needs?			X
Does the COA needs assessment use citizen input to assist in needs determination?	X		
Is citizen input solicited, determined and recorded?	X		

Project Prioritization			
Does the COA allow departments to provide initial prioritization of projects?	X		
Does the COA prioritize projects using input from stakeholders and the general public?	X		
Does the COA ensure public input is communicated to the decision makers?	X		
Does the COA prioritize projects based on a projects impact to the operating budget?	X		
Does the COA prioritize projects using experience-based judgment?	X		
Does the COA prioritize projects using departmental priorities?	X		
Does the COA prioritize projects using qualitatively defined categories of need?	X		
Does the COA prioritize projects based on extent that a project meets stated goals?	X		
Project Evaluation			
Does the COA develop and adhere to guidelines for creating project selection criteria?	X		
Are the program's criteria measurable and applicable to all proposed CIP projects?		X	
Do the criteria use qualitative and quantitative measurement?		X	
Does the program include leveraging opportunity as a selection criteria?	X		
Does the program include sustainability as a selection criteria?	X		
Does the program include community benefit as a selection criteria?	X		
Does the program include economic impact on community as a selection criteria?	X		
Does the COA evaluate projects annually for inclusion in the CIP?	X		
CIP Committee			
Does the COA have a CIP committee as part of its program?	X		
Does the CIP committee lead communication and coordination among departments?	X		
Is the CIP Committee responsible for the review process of the CIP?	X		
Does the CIP Committee include community input in decision making?	X		

Chapter 5: Conclusion and Recommendations

Chapter Purpose

The purpose of this research is threefold. First, is to establish, from research, a practical ideal type model for creating a CIP in a municipality. Second, is to assess the CIP process at the City of Austin using the model created. The third purpose is to provide recommendations for improving the CIP process at the City of Austin.

Chapter 2 described the ideal characteristics found in the literature and presented the ideal type model. Chapter 2 also developed the conceptual framework from the ideal type model to evaluate the City of Austin's CIP process. Chapter 3 outlined the research methodology used to gather data for the case study. Chapter 4 presented the results of the case study based on the data gathered from document analysis and structured interview. This chapter will provide recommendations for the City of Austin's CIP process as well as adjust characteristics in the ideal type model found to be inadequate during the case study.

Recommendations

The characteristics of the ideal type categories identified for recommendations in this chapter were found to have either limited evidence or no evidence of existence in Chapter 4. The categories in question are goals and procedures, needs assessment and facility audit, and project evaluation.

Goals and Procedures Recommendations

In the ideal type category of goals and procedures the only characteristic not identified as having strong evidence was the lack of written policies and procedures establishing the timeframes for the CIP process. Although this is a very minor concern in relation to everything

that goes into creating a successful CIP, it is still valuable to have the timeframes published for internal and external stakeholders. It is very likely that these timeframes are communicated by the Capital Planning Office and the Planning Commission but the researcher was unable to locate evidence of that. It is recommended that timeframes of the overall CIP process be included in the City of Austin Capital Improvements Program Five Year Plan as well as the Austin Around You document. Having the timeframes published in multiple external documents will allow for greater transparency of the CIP process as a whole. All other characteristics of the goals and procedures ideal type category were found to have strong evidence of support.

Needs Assessment and Facility Audit Recommendations

The ideal type category of needs assessment and facility audit had the most characteristics, three, lacking evidence of support after document analysis and the structured interview. Specifically the characteristic of written procedures defining the process and procedures of a facility audit was found to have only limited support. Two additional characteristics found no supporting evidence; does the needs assessment list all possible new facilities, and does the needs assessment list new facilities in order of perceived need.

The written procedures defining a facility audit were not discovered in document analysis, however it was found in the structured interview that these procedures are likely held by the Building Services Department or the individual departments themselves, therefore limited evidence was noted. In the future the COA needs to document the process defining a facility audit in the City's Comprehensive Infrastructure document and the ongoing Rolling Needs Assessment. This would make it clear to departments performing this task what exactly is expected of them during facility evaluations. This will be necessary, according to document

analysis, since a much more comprehensive facility assessment process will take place in the near future.

The two characteristics lacking evidence of support were: does the needs assessment list all possible new facilities, and does the needs assessment list new facilities in order of perceived need. It was found that the COA has a well thought out and defined infrastructure assessment but was lacking a facility assessment. It was found during document analysis and the structured interview however that this issue will likely be addressed in the future with the 3rd phase of the Rolling Needs Assessment. It was also found in the structured interview that the Strategic Facilities Governance Team or Real Estate Services would likely be responsible for a list of all possible new facilities. When there is a more comprehensive facilities list created in the future, it will be imperative, given the short amount of time the annual CIP is created, that those facilities are ordered by perceived need. This will easily communicate the need to decision makers when it is time to begin narrowing the field of projects for inclusion in the CIP. All other characteristics of the needs assessment and facilities audit category were found to have strong support.

Project Evaluation Recommendations

The third and final category to record less than strong support of evidence was project evaluation. In this ideal type category, document analysis and the structured interview found two characteristics that only had limited evidence in support of them: are the program criteria measurable and applicable to all proposed CIP projects, and do the criteria use qualitative and quantitative measurement.

While only limited support was found for the measurability and applicability criteria, it was discovered that this practice was originally established but was unsuccessful and therefore

discontinued in favor of departments adopting their own focused criteria. The COA is a very large municipality with a broad scope of capital projects it undertakes, therefore it is much more reasonable to develop criteria more specific to a certain type or field of projects. For example, projects proposed by the Public Works Department may be based on criteria that are different than the Health and Human Services Department. Allowing departments to develop their own criteria results in a much more focused and measured evaluation process for all projects city wide. The ideal type characteristic should be removed from the project evaluation category or adjusted to be geared more toward a departmental evaluation focus.

The second project evaluation characteristic with limited evidence of support is the use of qualitative and quantitative measurement criteria. Strong evidence was found in support of qualitative measurement criteria developed by departments, however there were limited examples of quantitative measurement criteria being used. Brief examples of quantitative measurement were found in the Comprehensive Infrastructure Assessment but similar criteria could not be located in the other documents reviewed. The use of quantitative data provided the decision makers with hard numbers to compare projects on a case by case basis. Using quantitative data can also assist in refining the list of proposed projects when there are a limited number of available spots on the CIP. All other characteristics, aside from the two listed above, were found to have strong evidence of support.

Table 5.1 summarizes the characteristics that were found to have limited or no evidence support as well as lists the recommendations provided by the author.

Table 5.1 Recommendations

Area	Evidence			Recommendation
	Strong	Limited	No	
Goals and Procedures				
Written policies and procedures establishing the timeframes for the CIP process.		X		Define established timeframes throughout the CIP process and publish them in the City of Austin Capital Improvements Program Five Year Plan as well as the Austin Around You document.
Needs Assessment and Facility Audit				
Written procedures defining the process and procedures of a facility audit.		X		Define established procedures of a facility audit and publish them in City’s Comprehensive Infrastructure document and the ongoing Rolling Needs Assessment. Ensure the Strategic Facilities Governance Team approves the procedures.
Needs assessment lists all possible new facilities.			X	Continue to expand the COA's rolling needs assessment into phase 3 and include all possible new facilities.
Needs assessment lists new facilities in order of perceived need.			X	When a comprehensive list of all possible new facilities exist, rank them in order of perceived need.
Project Evaluation				
Program’s criteria measurable and applicable to all proposed CIP projects.		X		Author’s ideal type characteristic should be adjusted to criteria measurable and applicable at the department level as evidenced in the research.
Criteria use qualitative and quantitative measurement.		X		Encourage departments to develop more quantitative criteria to use during their evaluation of projects.

Conclusion

Based on document analysis and the structured interview, it was found that the COA has a very successful and robust CIP process. The Capital Planning Office, the Planning Commission, individual departments, and all other entities involved in the creation of the CIP have assembled a CIP process that meets the vast majority of successful characteristics identified through research. It is evident that the COA strives to continually adjust and grow the CIP process to perfect the overall result. By continuing with improvements that have already begun, and incorporating the recommendations provided in this paper, the COA will have a highly successful process for managing the overwhelming amount of capital projects it undertakes.

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APPENDIX A

Interview Questionnaire

Goals and Procedures Considerations

Does the program have approved goals at the beginning of the CIP process?

Does the program have approved policies at the beginning of the CIP process?

Does the program review and update CIP goals and policies annually?

Does the program have written policies and procedures for project inclusion?

Does the program have written policies and procedures establishing the timeframes for the CIP process?

Needs Assessment and Facility Audit Considerations

Does the COA have written procedures defining the process and procedures of a needs assessment?

Does the COA have written procedures defining the process and procedures of a facility audit?

Does the COA include a yearly facility audit and needs-assessment at the beginning of the CIP process?

Does the COA facility audit include age, general condition, and degree of use for individual facilities?

Does the COA facility audit include estimated cost of upgrade?

Does the COA needs assessment list all possible new facilities?

Does the COA needs assessment list new facilities in order of perceived need?

Does the COA needs assessment use citizen input to assist in need determination?

Is citizen input solicited, determined and recorded?

Project Prioritization Considerations

Does the COA allow departments to provide initial prioritization of projects?

Does the COA prioritize projects using input from stakeholders and the general public?

Does the COA ensure public input is communicated to the decision makers?

Does the COA prioritize projects based on a projects impact to the operating budget?

Does the COA prioritize projects using experience-based judgment?

Does the COA prioritize projects using departmental priorities?

Does the COA prioritize projects using qualitatively defined categories of need?

Does the COA prioritize projects based on extent that a project meets the stated goals?

Project Evaluation Considerations

Does the COA develop and adhere to guidelines for creating project selection criteria?

Are the program's criteria measurable and applicable to all proposed CIP projects?

Do the criteria use qualitative and quantitative measurement?

Does the program include leveraging opportunity as a selection criteria?

Does the program include sustainability as a selection criteria?

Does the program include community benefit as a selection criteria?

Does the program include economic impact on community as a selection criteria?

Does the COA evaluate projects annually for inclusion in the CIP?

CIP Committee Considerations

Does the COA have a CIP committee as port of its program?

Does the CIP committee lead communication and coordination among departments?

Is the CIP Committee responsible for the review process of the CIP?

Does the CIP Committee include community input in decision making?

APPENDIX B

Exemption Request EXP2015I98093W - Approval

AVPR IRB [ospirb@txstate.edu]

Sent: Thursday, October 15, 2015 10:05 AM

To: Duree, Matthew D

DO NOT REPLY TO THIS MESSAGE. This email message is generated by the IRB online application program.

Based on the information in IRB Exemption Request EXP2015I98093W which you submitted on 10/14/15 14:34:52, your project is exempt from full or expedited review by the Texas State Institutional Review Board.

If you have questions, please submit an IRB Inquiry form:

http://www.txstate.edu/research/irb/irb_inquiry.html

Comments:

The project has been approved; however, under Category 2 exemption.

Institutional Review Board

Office of Research Compliance

Texas State University-San Marcos

(ph) 512/245-2314 / (fax) 512/245-3547 / ospirb@txstate.edu / JCS 489

501 University Drive, San Marcos, TX 78666

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