

Capital Improvement Programs — Part I

by Michael Chandler

As you know, the comprehensive plan establishes policies for current and future land use throughout a community. However, we often forget that the plan, although an important instrument of public policy, cannot by itself produce change.

Zoning and subdivision regulations are the most familiar “tools” used to implement the plan. Another important implementation tool is the capital improvement program, usually referred to as the CIP.

This column will provide an introduction to the CIP. In the next issue of the *PCJ*, we will examine the steps in the CIP process with particular emphasis on the role of financial analysis and project review.

DEFINING THE CIP

The CIP is a management and fiscal planning tool communities can use for financing and constructing needed public improvements. Properly designed, a CIP enables a community to identify its capital needs, rank them by priority, coordinate their scheduling, and determine the best method of paying for them within the community’s fiscal capacity.

In most states, localities have the discretion to determine whether they want to prepare a CIP. Usually, the planning commission annually prepares a recommended CIP, and then forwards it to the local governing body for adoption.

Baseline requirements include that the CIP be based on the comprehensive plan and that it schedule capital improvements over a specific number of years (commonly three, five, or six).

Organizationally, CIPs are fairly straightforward documents. Most feature three sections:

The first provides the reader with an overview of the CIP process, and a listing of the benefits a community will derive

from the capital improvements.

The second section presents financial data. It usually includes charts outlining historical revenue and expenditure data, along with projected revenue, expenditure, and debt service.

The third section identifies and describes those projects recommended for funding in the CIP period. It also includes a justification for a project’s inclusion in the CIP (usually noting the project’s relationship to the comprehensive plan) and how the project is to be financed.

CAPITAL VERSUS OPERATING EXPENDITURES

CIPs only deal with a community’s capital expenditures — not its operating expenditures. Cost and frequency are the primary criteria used to classify whether a project is capital or operating in nature. Both criteria should be determined locally and applied simultaneously to determine if an item is a capital project.

Cost. The dollar limit that separates capital from operating projects depends largely on the size of the local budget and on what is considered a “major” expenditure. A commonly used threshold for smaller communities is \$2,500. Expenditures above this amount are considered “capital,” and those below it “operating.” Some larger localities use \$10,000, or even higher dollar amounts, as the breakpoint.

Frequency. A capital project should be non-recurring; that is, it should not occur every year. The Government Finance Officers Association recommends that a capital project should occur no more often than once every three years.

Capital projects that typically fit the cost/frequency criteria cited above include fire engines, bulldozers, landfills, libraries, schools, government buildings, treatment plants, water and sewer lines,

and street construction or reconstruction. Architectural and engineering fees, feasibility studies, land appraisal and acquisition costs, and furnishings are included as capital items. “Gray area” projects often involve vehicle and small equipment purchases, as well as repair and remodeling projects.

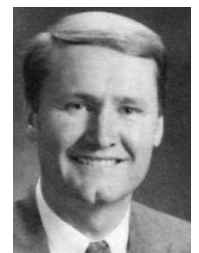
CIP BENEFITS

By requiring a community to balance its capital needs with available financing, a CIP helps foster a sound and stable financing program over a multi-year period.

In addition, using a capital improvement program provides the benefit of :

- Implementing the comprehensive plan’s policies by assuring the provision of new facilities and infrastructure improvements that meet the goals and needs of the community.
- Affording the public an opportunity to provide input in the process (and helping to increase public support for the proposed capital improvements).
- Enabling private businesses and citizens to have some assurance as to when public improvements will be undertaken so they can plan more efficiently and effectively.
- Eliminating poorly planned or unnecessary public improvements.
- Helping a community decide what financing techniques and options are needed to pay for capital projects. ♦

Michael Chandler is an Associate Professor and Community Planning Extension Specialist at Virginia Tech in Blacksburg, Virginia. Mike also conducts planning commissioner training programs across the country, and is a frequent speaker at workshops. His column appears in each issue of the PCJ.



Capital Improvement Programs – Part II

by Michael Chandler

A capital improvement program (CIP) can be prepared in any number of ways, take varying amounts of time, and involve a range of participants. As I noted in my last column, state law and local custom will influence the process. In larger localities, the CIP can easily be a year round function. In smaller communities, the CIP may take only one or two months to complete. For most localities, however, a time frame of four to six months will be required.

This column will highlight 10 basic steps in the preparation of a CIP.

1. *Designing the Process.* Before starting work on a CIP, decisions on how the process will be organized should be made. Most communities set up a CIP committee (with representatives from

To help you better understand what a capital improvement program looks like, portions of the Blacksburg, Virginia, CIP are excerpted on pages 18 and 19.

the planning, public works, finance, and administrative departments) to design and coordinate the process.

2. *Establish CIP Procedures.* This step is key. Decisions relative to CIP paperwork, schedules, project request forms, and the like are made at this time. If a CIP committee has been appointed, it will coordinate these decisions.

3. *Establish Criteria for Capital Expenditures.* A definition of capital expenditures should be made at the beginning of the CIP process. Keep in mind the cost and frequency criteria I discussed in the last issue of the *PCJ*.

4. *Inventory Existing Capital Facilities.*

A capital facilities inventory lists the fixed (capital) assets owned or leased by the community. Requests for capital projects will also include replacement, expansion, or repair of existing facilities and equipment. Accordingly, the inventory should include the age, condition, and original acquisition cost of each capital item. Sources of inventory information include the comprehensive plan, insurance policies, fixed asset schedules of audit reports, and various public works and housing studies.

5. *Determine Status of Previously Approved Capital Projects.* Information should be gathered on projects completed, as well as on-going projects and projects to be canceled. This information

continued on page 18

Typical Capital Improvement Program Schedule

JULY	CIP instructions and forms sent to all Department and Agency Heads
EARLY SEPTEMBER	CIP submissions due
MID/LATE SEPTEMBER	CIP submissions reviewed
EARLY OCTOBER	Meetings with Department and Agency Heads to clarify project submissions
MID/LATE OCTOBER	Chief Administrative Officer formulates proposed CIP (<i>note: in some communities the Planning Dept. is responsible for this</i>).
EARLY NOVEMBER	Proposed CIP forwarded to Planning Commission (<i>note: in some communities the CIP also goes to the Governing Body at the same time</i>)
LATE NOVEMBER	Planning Commission and Governing Body work session on proposed CIP
EARLY DECEMBER	Planning Commission holds public hearing on proposed CIP, and forwards CIP to Governing Body with its recommendations
EARLY JANUARY	Governing Body holds public hearing on proposed CIP
LATE JANUARY	Governing Body adopts CIP

Capital Improvement Programs

aids in monitoring the CIP and capital budget; it also helps in updating the CIP and preparing the new capital budget.

6. *Prepare Project Requests.* Project requests should be based upon a set of guidelines, and be submitted by the various municipal (or county) departments on a standard project request form. The engineering, financial, or planning staff is usually responsible for providing assistance to the other municipal departments in completing project request forms.

7. *Perform the Financial Analysis.* The purpose of the financial analysis is to estimate how much money is needed for general operations over the life of the CIP, and how much is available to fund approved capital projects. To do this, revenues and expenditures for the preceding five years are analyzed and patterns identified. In like fashion, revenue projections for the next five years are made. Net cash flow (the amount of money remaining after operating expenditures are subtracted from operating revenues) is estimated and, in turn, used to finance capital projects.

8. *Review the Proposed CIP.* Project requests are examined to see that they are complete, accurate, and in conformance with the CIP guidelines. This review also assesses proposed projects as to their feasibility, pricing, and consistency with the comprehensive plan.

9. *Adopt the CIP.* Before adopting the

CIP, the planning commission and governing body will hold public hearings.

10. *Monitor the CIP.* Once adopted, the planning commission and/or governing body should monitor the CIP — at least on a quarterly basis — relative to individual project status and performance.

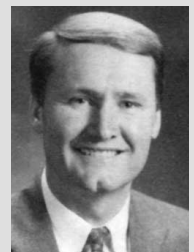
In the Summer issue of the *PCJ*, I will conclude this series on the basics of capital improvement programs with a closer look at the role of financial analysis and review. ♦

SUBMITTED AND RECOMMENDED CAPITAL IMPROVEMENT PROGRAM Fiscal Years 1997/98 - 2001/2002

(TABLE 15)

Project	FY 1997/98		FY 1998/99		FY 1999/00		FY 2000/01		FY 2001/02	
	Submitted	Recommended	Submitted	Recommended	Submitted	Recommended	Submitted	Recommended	Submitted	Recommended
Fire/Rescue Equipment									\$150,000	\$279,572
South Main Street Fire Station			\$735,000		\$215,000		\$40,000		\$1,280,000	
Traffic Light Priority System	\$135,000			\$0	\$215,000	\$0	\$40,000	\$0	\$1,430,000	
Subtotal	\$265,000	\$130,000	\$735,000	\$0	\$215,000	\$0	\$40,000	\$0	\$1,430,000	
Infrastructure Maintenance & Replacement										
Bridge Replacement	\$32,000	\$32,000			\$13,580	\$31,364			\$19,929	\$19,929
Curb, Gutter, & Sidewalk Replacement	\$24,560	\$24,560	\$17,984		\$31,390		\$31,390		\$31,390	
Groundwater Quality Monitoring	\$31,390				\$20,000		\$232,900	\$148,794	\$227,989	
Storm Drain Construction	\$80,500	\$80,500	\$20,000		\$295,000	\$295,000	\$295,000	\$295,000	\$295,000	\$295,000
Street Repaving	\$295,000	\$295,000	\$284,304		\$70,000	\$70,000	\$70,000	\$70,000	\$70,000	\$70,000
Tree Trimming/Right-of-Ways	\$70,000	\$70,000	\$70,000		\$429,970	\$396,564	\$690,651	\$443,794	\$644,308	\$314,929
Subtotal	\$533,450	\$502,060	\$434,374		\$429,970	\$396,564	\$690,651	\$443,794	\$644,308	\$314,929
Parks and Recreation										
Bicentennial Celebration	\$10,000		\$30,000		\$35,000					
Lyric Theatre Renovation	\$25,000	\$25,000								
Roller Hockey Rink	\$40,000									
Van Conversion	\$12,000		\$30,000	\$0	\$35,000	\$0	\$0	\$0	\$0	\$0
Subtotal	\$842,000	\$110,000	\$30,000	\$0	\$35,000	\$0	\$0	\$0	\$0	\$0
Property Services										\$95,813
Annual Holding Area	\$15,111		\$327,538							
Armory Parking Deck	\$32,574									
Data Center Renovation	\$15,000		\$12,150		\$12,150		\$12,150		\$12,150	
Document Imaging	\$12,150									
Facility Management Automation	\$11,828									
Fire Alarm Systems	\$18,000									
Fleet Management Automation	\$10,000		\$10,000		\$22,435		\$20,083	\$42,428	\$18,928	\$18,928
Greenway System Construction	\$21,150	\$18,265			\$10,000		\$10,000		\$10,000	
Major Equipment	\$10,000		\$38,694		\$35,170		\$54,450		\$90,577	
Network/Internet Integration	\$30,000						\$10,000		\$10,000	
Power Conditioning and Protection	\$16,000		\$10,000							
Public Works Facility Land Acquisition	\$10,000		\$24,840							
Roof Replacements	\$59,607	\$59,607								
Sign Automation	\$12,000									
South Main Street Slope Retention	\$92,068				\$105,034		\$35,877		\$208,518	
Stormwater Management Ponds	\$33,600	\$33,600	\$5,175		\$5,356		\$5,544		\$5,544	
Street Lighting	\$9,781	\$9,781	\$11,002		\$11,412		\$12,090		\$12,090	
Urban Forest Renovation	\$10,579						\$0	\$160,136	\$78,247	\$368,484
Subtotal	\$499,948	\$214,638	\$467,664	\$24,840	\$261,587		\$160,136	\$78,247	\$368,484	\$11,000

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**BLACKSBURG CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL SHEET**

Department: Town Manager's Office
Project Title: Lyric Theatre Renovation
Project Location: College Avenue
Project Status: New
Project Accomplished with:
 % Town Forces 100 % Private Contract

Description and Justification: The Lyric Council is a private, non-profit, tax-exempt Corporation, is the leader in the collaborative community effort to Bring Back the Lyric. The Lyric Council seeks to promote and encourage the use and development of the Lyric Theatre, and to enhance community awareness and appreciation of the arts through programs, entertainment, and/or education produced at the Lyric.

Relationship to Mission and Values: The effort to "Bring Back the Lyric" reflects the partnership that the Town has with the community. This effort also reflects the value of "An open, accessible government where citizen involvement, individually and collectively, is vital".

To best serve the community and enhance retail development in Blacksburg, the Lyric Council is initiating a \$500,000 fundraising campaign for renovations of the theatre. Major renovation is planned for the summer of 1997.

Relationship to Town Council Strategic Goals: This project relates to the Strategic Goals of Retail Business Retention and Development. Attendance at Lyric events brings significant traffic to Downtown, adding to retail and restaurant business. In addition, renovation efforts for the Lyric are planned to be completed in concert with the Bicentennial Celebration, another Town Council Strategic Goal.

Funds and donated materials and labor are being sought from the community for the renovation.

Relationship to Comprehensive Plan Five-Year Action Strategy: Supports Programs Action Strategy 2 "Continue Town-business liaison efforts to encourage retention and vitality of existing business" (Economic Development Objective A).

Planned Financing of Project:

Source of Funds	Total Project Estimate	Prior Allocation	1997/98	1998/99	1999
General Fund	\$25,000		\$25,000		
Total	\$25,000		\$25,000		



**BLACKSBURG CAPITAL IMPROVEMENT PROGRAM
PROJECT DETAIL SHEET**

Department: Planning and Engineering
Project Title: Greenway System Construction
Project Location: Townwide
Project Status: In Progress
Project Accomplished with:
 % Town Forces % Private Contract

Description and Justification: This project involves the gradual construction of the Townwide Greenway System. The Greenway System will serve as recreational facilities and provide scenic viewing areas. The Greenway priorities include: 1) Bicentennial Greenway - from terminus of Huckleberry Trail at Library through downtown to campus; 2) End of Bicentennial Greenway to Community Center (in conjunction with stormwater management pond); 3) South Main Street; 4) Tom's Creek Greenway; and 5) Stroubles Creek/Hethwood Greenway. In addition, bike racks for locations Downtown will be purchased as a part of the Bicentennial Greenway project.

Relationship to Mission and Values: This project supports the Values of: "Promoting a superior quality of life", and "A community renowned for its beauty and cleanliness".

Relationship to Town Council Strategic Goals: Not related to Town Council Strategic Goals.

Relationship to Comprehensive Plan Five-Year Action Strategy: Supports Projects Action Strategies 34 "Establish the greenway system in a manner which minimizes the potential impacts of flooding and erosion. Establish and follow construction standards for the greenway system" (Natural Environment Obj. D, E), 55 "Construct the Huckleberry Trail extension from the Library to the Community Center as a greenway demonstration project for the Town Bicentennial in 1998" (Greenways Obj. A), and #31 "Coordinate development of the greenway system with area stormwater management as part of a regional stormwater management program" (Natural Environment Obj. D).

Planned Financing of Project:

Source of Funds	Total Project Estimate	Prior Allocation	1997/98	1998/99	1999
General Fund	\$207,956		\$32,500		
DCR Grant	\$91,576		\$48,141		
Town's In-Kind Services	\$204,131		\$145,152		
Total	\$503,663		\$225,793		



Capital Improvement Programs – Part III

by Michael Chandler

In my last column, I outlined ten steps in the preparation of a capital improvement program (CIP). Although each step in the process is important, special consideration must be given to step seven (financial analysis) and step eight (CIP review process), for they constitute the very heart of the process.

FINANCIAL ANALYSIS

The major fiscal consideration in developing a CIP is deciding how to pay for proposed projects. In most localities the fiscal analysis will cover revenues and expenditures over an eleven year period including: the current budget year; the five preceding fiscal years; and five fiscal years into the future. The analysis will typically include the following steps:

1. *Organize the Data.* Pertinent financial data for the years to be analyzed must be gathered. Audit reports, past budgets, and the current budget will provide essential information.

2. *Analyze the Data.* Data about the past five years of revenue collection and expenditures is analyzed to obtain trends in revenue collections and expenditures.

3. *Make the Five Year Projections.* The trends identified in the preceding step, combined with reasonable expectations about future events, are used to make the five-year revenue and expenditure projections. Assumptions used in making the projections should be explicitly stated. As a rule, projections tend to be conservative and do not rely on possible changes in tax rates.

4. *Determine “Net Cash Flow.”* This is done by subtracting operating expenditures from operating revenues.

5. *Determine “Net New Capital Financing Required.”* This is done by subtracting the estimated cost of proposed capital projects from the projected “net cash

flow” to determine the amount of “net new money” needed to finance the CIP.

6. *Analyze Alternative Financing Services.* If the capital project costs exceed the “net cash flow” available, alternative funding sources must be identified. These may include:

- **Bonded Indebtedness.** Typically money raised either from revenue bonds (which are financed by user charges) or general obligation bonds (which are amortized by local tax revenues, such as property tax assessments).

- **Tax Rates.** Money obtained by raising taxes.

- **Unappropriated or Unreserved Fund Balance.** Money from operations that accumulates when revenues exceed expenditures.

- **Capital Reserves.** Money specifically set aside for future capital projects.

- **User Fees and Charges.** Fees charged for specific services or commodities (such as admission fees for use of a municipal swimming pool or garbage collection fees).

- **State or Federal Grants.** Often used to match some portion of specific capital projects.

CIP REVIEW PROCESS

The review and evaluation of proposed CIP projects should be structured and thorough. In most communities, the CIP program committee or coordinator will review each project to determine its scope, purpose, feasibility, and relationship to the criteria and guidelines outlined in the project request form (see step six in the CIP process, discussed in my last column).

During this phase of the review process, each project should be reviewed individually and not be judged relative to other proposals. Projects can fail this initial screening because some important piece of information about the project is

missing. Typically, the person or department who prepared the project request is then asked to resubmit the request with additional information.

It is important to note that projects passing this initial review will not necessarily be included in the proposed CIP. Factors such as need, funding limitations, and compatibility with the comprehensive plan will influence the final selection process. In many smaller communities, a simple three-tier evaluation system that ranks each project as *urgent*, *necessary*, or *desirable* has proven effective in determining fiscal priorities. Larger communities often use more complex scoring or rating criteria. Projects not scheduled for funding by the CIP are known as deferrals, and are usually listed in the CIP under such a heading.

Management expert Peter Drucker has observed that the measure of a plan's value is a function of the financial support it receives. The CIP, by providing a structured look at the community's needs and its financial resources, can provide citizens and decision-makers with a tool to help ensure that the actions the community wants to accomplish — as identified in the comprehensive plan — receive the funding they need. ♦

Michael Chandler is an Associate Professor and Community Planning Extension Specialist at Virginia Tech in Blacksburg, Virginia. He also conducts planning commissioner training programs across the country, and is a frequent speaker at workshops. This concludes his three-part series on capital improvement programs. In the next issue of the PCJ, Chandler will discuss developing a community “planning academy.”

