

# Capital Improvement Plans and Budgets

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## Why do planners need to know about capital budgeting and finance?

Capital expenditures at the local level will be significant during the next three decades. New capital facilities will be needed to meet the needs of anticipated population growth in the United States, and many existing facilities will need to be replaced. At the local level, these costs are projected to be \$276 billion annually in 2001\$. Even if spending does not accelerate to address new capital needs, actual capital expenditures by municipal governments are already substantial. In 2001 they accounted for \$247 billion which amounts to about 2.5% of the 2001 GDP, or if these had been federal funds, 15% of the federal budget.(Elmer 2004)

Capital budgeting and finance should be important for planners because of the impact these expenditures have on issues close to the heart of the profession: community and economic development, environmental planning and the urban form. In addition, the capital budget can be a more powerful tool than zoning to implement the comprehensive land use plan for the local jurisdiction. Many planners involved with permitting individual projects also may need to insure that off site capital facilities needed by the project will be available. Finally, the planner may be the lead staff person for the development of an individual capital facility, such as a new city hall, a low income housing project, or a downtown revitalization plan.

Yet frequently the capital budgeting process is dominated by engineers or the finance department, with little involvement from the planners and the planning commission. In other instances, long term capital investments are planned and financed for the jurisdiction by special purpose districts or other agencies that are not part of the municipal or county government, such as those that are responsible for schools, airports, water, sewers and some transportation facilities. Capital investment decisions may be made based on technical assumptions that are inconsistent with community values and local land use plans. The local capital improvement plan and budget, however, are strategic tools that can be used to coordinate decision making within and between jurisdictions and to insure that capital investments promote community goals and objectives.

Most planners are currently not actively involved in the preparation of a Capital Improvement Plan and budget. These will be the responsibility of the departments who

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will design, construct and operate the capital facilities. Why then should planners care about policies for these documents and how they should be prepared? The answer was provided earlier: because the capital improvement plan and budget are almost, if not more important, for the implementation of the municipality's general plan than zoning. Yet often critical decisions about capital facilities are not made with the input of the planner, or with the concepts of the comprehensive plan or general plan in mind. The planner needs to know how these systems work to be able to insure that the CIP truly does implement the general plan and the vision of the community for its future. Some jurisdictions do mandate consistency between these documents, but in others, the planner needs to play an active role to insure this relationship. The following describes the components of the CIP and budget and then outlines the major steps in the preparation of the documents.

## **The Capital Budgeting "System"**

The capital budgeting system can be described in terms of the kind of projects and facilities that must be financed and budgeted, the major capital budget documents, and the actors that are involved in the process.

### ***What are Capital Projects?***

Capital projects include all long lived infrastructure such as water facilities, sewers, streets, parks and buildings along with equipment like fire trucks, radios, police cars, telecommunications equipment, furniture and computers. Capital projects also include low income housing projects and the purchase of land. The charter of Anne Arundel County in Maryland defines a capital project as "1) any physical public betterment or improvement and any preliminary studies and surveys relative thereto; 2) the acquisition of property of a permanent nature for public use; and 3) the purchase of equipment for any public betterment or improvement when first constructed."(Anne Arundel County 2004)

Capital projects can be thought of as belonging to one of the following categories:

- Water and Waste
- Streets, Streetscapes and Transportation
- Community Facilities
- Energy and Telecommunications
- Housing for Low and Moderate Income Families
- Equipment and Vehicles

**Water and Waste.** Capital projects that the planner should be aware of include those associated with the **water supply**, such as reservoirs, water treatment plants and distribution systems. **Sanitary sewer systems** have a network of pipes to take sewage from its source to the treatment plant. **Storm water** runoff must be dealt with, often requiring capital facilities for collection or flood control. **Solid waste disposal** requires

trucks for collection, and facilities such as transfer stations, landfills and recycling centers. These projects are often self supporting through user fees that are placed into an enterprise fund. These are the most common types of projects operated by a special district (excluding schools).

**Streets, Airports, Ports and Transit Facilities.** At the municipal level, capital projects include **local streets** and **bridges**. Municipalities are also responsible for **streetscapes**, **sidewalks** and medians along with **signs**, traffic control devices, **street lighting**, many utility boxes, and local **public art** projects. Local bus stops, **bicycle racks**, and transit stations are other kinds of capital projects. These projects are usually funded by general fund or in some cases gas taxes. These projects are the bread and butter of the municipality's engineering department, although they may also be the responsibility of a redevelopment agency associated with the municipality. **Airports, ports and marinas** have heavy investments in physical plants that must be part of a capital plan and budget. They are frequently self-supporting financially and may be operated by a municipal department or an independent authority.

**Community Facilities.** These are perhaps the most obvious municipal capital projects. Community facilities include public buildings such as civic centers, schools, libraries, museums, police and fire departments, court houses, jails, parks, recreation facilities, pools and tennis courts. Some public buildings are the responsibility of the local school district, a library commission, an area wide park district, or in the case of jails and courthouses--of the county or state. However, these facilities are usually locally planned and financed, frequently with local taxes or other unrestricted revenues—the “general fund”. Community facilities may also include quasi public buildings like concert halls, convention centers and sports stadiums and hospitals. Quasi-public facilities are financed with local government support but are usually owned and operated by the private or non-profit sector and may also have their own revenue streams.

**Telecommunications and Energy.** Although for the most part capital facilities for telecommunications and energy are publicly provided, a small but thriving sub-industry of local public energy and telecommunications utilities exists. Every municipality also has its own internal needs for telecommunication facilities for police, fire and emergency services. Some of the more aggressive municipalities are starting to install mesh wireless networks for their citizens and public safety officers, all of which are capital facilities that must be budgeted and financed. The planner may also be involved with helping to obtain financing for private telecommunication and energy facilities for economic development purposes.

**Housing for Low and Moderate Income Households.** Another source of capital projects are funds that the municipality allocates for the construction of low and moderate income housing. These can be overlooked since these funds often come from Community Development Block Grant program or from a local redevelopment district where funds are specifically allocated for low and moderate income housing and do not “compete” against other capital facilities. Nevertheless, these belong in the capital

budget. Some local governments also develop special funding sources or allocate general funds for this purpose.

**Equipment.** This category of capital projects includes police and fire vehicles, along with refuse collection trucks, as well as radios and cell phones for police and fire officials. General administrative vehicles also fall into this category. Investment in new furniture is often put in the capital budget since these are assets that will last beyond the term of the annual or bi-annual operating budget.

### ***Definitions of Key Elements in the Capital Budgeting System***

Capital projects are planned for and built over a period of several years. Therefore the regular annual budgeting process for the local government would find it difficult to accommodate these projects since construction cannot begin without the entire amount of the project being committed to by the locality. Yet design and construction payments might take place over a period of more than one year. The average local capital project takes from 3 to 5 years from start to finish. Many capital projects are funded through bond issuances, unlike the funds used to pay for staff and other operating expenses. Repayments of bond issues can take place anywhere from 5 to 20 years, and require a long term approach to revenues and taxation.

For both these reasons the professional associations for municipal budgeting officers have recommended that local jurisdictions adopt a short term (3 to 5 years) Capital Improvements Plan (or Program) and a separate Capital Budget as part of the regular budgeting process. In the best of all possible worlds, each of the capital project areas outlined above would develop a CIP based on a much longer term Capital Needs Study that would funnel into the annual or biannual Capital Budget.

**What is a Capital Needs Study?** The ideal *capital needs study* is a long term assessment of the capital needs for all areas based on the vision embodied in the long term comprehensive land use plan, tempered by fiscal realities into a strategic approach. It includes a comprehensive inventory of existing facilities, an assessment of their condition, a schedule for repair and replacement, and identification of new facilities. When the program is funded by fees, such as water, sewer or solid waste, it may also contain a budget and an analysis of alternative fee structures. The capital needs study for a specific facility may also be called a *master plan* or a *program plan*. Sometimes engineers call the capital needs study a *technical plan*, to distinguish between a plan which takes the provision of service at a certain level as a given, and the *strategic planning* done by planners and financial officers that is concerned about the overall goals and objectives of the organization. (See The Capital Needs Study paper by Elmer, 2005 for more on this.)

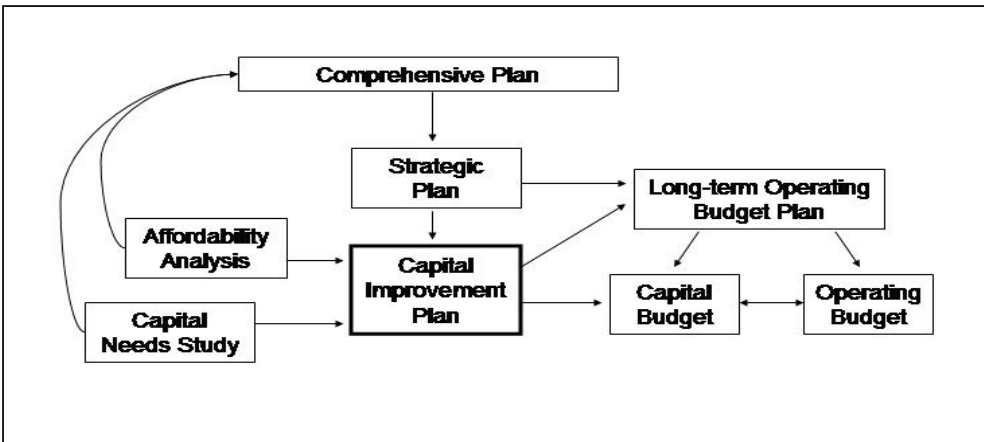
**What is the Capital Improvements Plan or Program (CIP)?** The Capital Improvements Plan or Program (CIP) is a plan that assesses capital facility needs in a jurisdiction against its overall goals and objectives, using a multi-year planning horizon—usually five years. The capital plan contains projects budgeted in the current

Fiscal Year as well as projects in subsequent years for which funding may not have been obtained or authorized. Since the CIP is not a legally binding document, it can and does change in the “out” years. The CIP is often spoken of as a rolling document since older projects drop off and new ones are added each year. (Robinson 1991)

**What is the Capital Budget?** The capital budget is the first (or first and second year) of the Capital Improvement Plan or Program. The capital budget is the document where the funds for the capital projects are identified and authorized for expenditure by the elected officials. The major difference between the capital budget and the capital improvement plan (CIP) is that the capital budget is a legal document, usually adopted yearly by the elected officials and the CIP’s five year listing does not legally obligate the elected officials to these projects. Indeed, the out year projects often change. (Robinson 1991)

See Figure 1 for a diagram of the relationships.

**Figure 1 Relationship of Capital Improvement Plan to Other Documents**



Source: Reprinted from Elmer & Leigland, Forthcoming, *Infrastructure Planning and Finance*. Point Arena, CA: Solano Press. Kurt Svendsen, 2003. Anne Arundel County, Maryland. Used with permission.

***Relationship of Capital Budget and the Operating Budget***

The capital budget is usually a separate budget document from the operating budget. It contains detailed information about the design, costs, financing and schedule for the capital projects for that fiscal year (or two). Just as the elected body’s approval of the operating budget authorizes recurring expenditures, its approval of the capital budget authorizes each infrastructure project in concept. However, line item expenditures for these projects which include internal staff, consultants and construction contracts are also usually included in the operating budget.

Some localities permit staff to enter into project contracts without returning for authorization from the elected officials, while others require approval again if the contract exceeds a certain limit. Even though many construction contracts last longer than one fiscal year, the entire amount is authorized in the operating budget for that fiscal year. Unexpended amounts are then re-authorized as “carryover” funds towards the end of that fiscal year and are not considered as available in the following year’s budget discussions.

### ***Who Runs the Capital Budgeting System?***

In most cities and counties, the capital needs studies, the CIP and the capital budget are prepared by the public works and finance departments of the local general purpose government. The city or county manager is usually quite involved in the process. In the case of water, sewer, transit, ports, schools, airports and many hospitals, capital needs may be determined by special districts or authorities that have independent elected or appointed boards. Some localities have telecommunications systems and power systems they are responsible for, but capital facilities for these systems generally are planned for by the private sector.

## **Relationship of the Capital Budgeting System to the World of Planning**

### ***Brief History***

In the post WWII years as rapid suburbanization transformed the make-up of the metropolitan areas, planners were quite involved in capital facilities planning. (Tabors, Shapiro et al. 1976) T.J. Kent Jr.’s *The Urban General Plan* was the high water mark for this concept especially since it recommended that utilities like water supply, drainage, and sewage disposal deserved their own section in the general plan because of their influence on land use patterns. (Kent 1964) However, in the late sixties through the eighties, the planning profession drew back from involvement in physical planning. Concern about social issues in the sixties along with the backlash against the urban renewal programs from the 50’s caused many planners to criticize physical planning as being elitist and insensitive to social and environmental issues. The comprehensive plan, and along with it, capital facilities planning and budgeting, was seen as irrelevant to planners more concerned with issues of social inequality. (Gerckens 2001)

Since capital facilities continued to be planned and built during this era, the gap was filled by engineers. In fact, in its 1969 *Urban Planning Guide*, the American Society of Civil Engineers (ASCE) stated that since “civil engineers direct the planning and development of large urban engineering works that form the structure and shape of cities,” such engineers will make “outstanding urban planners.” The ASCE went on to say that “the civil engineer is already planning our communities in large measure and will continue to do so.” (Claire 1969)

### ***Renewed Interest by Planners in Physical Planning***

During the 1990's as the boom years resulted in the influx of new jobs, population and development in the west and south, planners began to be involved again in capital facilities discussions. Land use patterns, concern with sprawl, and the adequacy of capital facilities and infrastructure to support the new growth began to dominate planners' agendas in many localities. Forward thinking states and localities began to require consistency between the capital budgets of local governments and their land use plans.

### **Local Capital Budgeting: Status and Issues**

Although capital budgets and their accompanying documents are becoming more prominent as an important part of the local budgeting process, their quality at the local level is uneven. The following surveys the existing literature to determine the status of local capital improvement plans and budgets and then describes the major issues today with local capital budgeting.

### ***Capital Improvement Plans and Budgets***

Multiyear capital improvement plans and capital budgets are common in the United States, and their use is growing. A survey of state governments at the end of the 1980's found that 42 of the 50 states had capital budgets (Hush and Peroff 1988), while a 1992 survey of cities with populations over 75,000, found that 73% prepared capital budgets, and 61% prepared the capital budget as a separate document (Forrester 1993). In a similar survey in 2000, over 88% of the cities reported that they had a Capital Improvement Plan, 80% indicated that it was linked to their comprehensive plan, and 71% stated they had formal criteria in place to assess projects (Campbell Public Affairs Institute 2000).

Almost all of the counties in a 2002 survey had long term capital improvement plans prepared with citizen input (Campbell Public Affairs Institute 2002). In 2001, only 3 states did not have a capital improvements plan and budget and 68% included all their assets in the plan. About half the states used some formal criteria for ranking and selecting projects, but only 20% coordinated the CIP with a statewide strategic plan (Campbell Public Affairs Institute 2001).<sup>2</sup>

One expert classifies local jurisdictions into four categories, according to their relative sophistication in capital budgeting. The following is adapted from: Vogt, 2004. *Capital Budgeting and Finance: A Guide for Local Governments*, ICMA.(Vogt 2004)

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<sup>2</sup> These surveys did not attempt to assess the quality of the capital budget, the citizen process, the criteria, nor the quality of the linkage between the comprehensive or strategic plan and the capital budget.

1. **Project Specific Capital Financing and Little Debt.** Multiyear capital planning occurs but it is project specific. Capital financing comes mostly from annual revenues and operating fund balances or grants and state loans. The procedures and forms used for capital budgeting are the same as for the operating budget.
2. **Special Procedures for Capital Projects and Basic Debt Instruments.** Although there is no jurisdiction-wide capital planning or financial forecasting, multi-year planning occurs for equipment replacement, some utilities, and perhaps streets. Capital financing is from operating revenues, earmarked reserves and basic debt instruments. Special procedures and formats are used for capital projects but the process is part of the general operating budget context.
3. **Strategic Planning, Asset Management Systems and Special Budget Procedures.** Multiyear and jurisdiction-wide capital planning and financial forecasting occurs and the jurisdiction uses strategic planning principles. Condition assessment and cost information comes from asset management systems. Capital financing comes from a wide variety of sources. Special budgeting procedures and formats are used for capital projects in a separate budget and authorization process. Coordination with land use plan occurs.
4. **Interjurisdictional Coordination for Capital Facilities Planning.** Same as 3, but all infrastructure providers in the jurisdiction are involved in capital planning. Comprehensive asset management systems use the same location and investment conventions. Coordination with land use plans occurs.

Interestingly, whether the locality has a strong mayor or a city manager form of government appears to impact both the kind of process set up by the city, as well as the amount of funds going into capital improvements. City manager cities spend more per capita on water, sewer and road infrastructure than do strong mayor cities. Policies for preparing capital improvement programs are more formalized in city manager cities than in strong mayor cities.(Nunn 1996)

The following goes into more detail about some of the issues surrounding capital planning and financing at the local level.

#### ***Technical Tools Need Improvement***

A survey done in 1987 from a sample of cities with over 50,000 population of finance officers found that the most popular methods of evaluating capital projects were the less sophisticated quantitative methods, and that non quantitative methods predominated. (Kee, Robbins et al. 1991) This may be appropriate for smaller jurisdictions since quantitative models for evaluating capital investments such as IRR (Internal Rate of Return), or (NPV) Net Present Value, and cost-benefit ratios are designed to consider the time value of money when comparing alternative projects. In smaller jurisdictions when a capital investment project such as a library or a replacement for city hall has been long anticipated and debated extensively in the political arena, these tools may not be necessary.

By far the largest proportion of capital projects come with their own revenue streams—such as airports, parking garages, and water systems. These projects do not really compete with capital projects in other areas. However, within each functional area, it can be beneficial to analyze investments from a lifecycle perspective or to consider the time value of money to compare projects funded by the same revenue stream. Use of these tools has been vigorously promoted in the transportation, water and waste water industries.

Parks and community facilities, streets and sidewalks compete with each other for the scarce general fund tax dollars. These projects are usually highly visible and the “time value” of the money is evaluated in the political arena. The challenge for the planner is to resist the pressure to under-estimate the costs, and to provide nimble analyses of the land use impact of different scenarios as appropriate.

### ***Lack of Routine, Comprehensive Assessment of Infrastructure Needs***

An article written in the mid 1980’s lamented the fact that state and local jurisdictions had no routine procedure for assessing their capital facility needs. The article noted that cities could not even differentiate between backlog, recurring and growth-oriented needs (Kaplan 1986). The lack of a routine, quantified and comprehensive condition assessment for existing capital facilities as well as solid projections for future needs is still one of the most significant problems for local capital budgeting. This issue is being actively addressed today by the transportation, water and wastewater utilities under the rubric of asset management. A jurisdiction however, need not spend a lot of money to begin gathering together what already exists and then make incremental improvements year by year.

### ***Comprehensive Plan and CIP Often Not Related***

The capital improvements program process can be an important part of implementing the comprehensive plan, and indeed, some capital budgets are organized into “elements,” that parallel those in the comprehensive land use plan. However, in practice, the distance between long-range comprehensive planning for capital facilities and the preparation of a capital improvements program may not occur. In many jurisdictions, “the comprehensive planning process is detached procedurally, politically, and practically from the planning for public facilities.” (Kelly and Becker 2000)

Most jurisdictions regard the long range comprehensive plan as suggestive rather than prescriptive. In some jurisdictions, the plan is not up to date, while in others, the goals and policies are too general to guide the construction of capital facilities. Additionally, zoning ordinance changes to implement the most recent general plan update may not have been done. Some comprehensive plans and related zoning ordinances may propose uses without any reference to the availability of public services. Finally, real fiscal constraints may not be integrated into the planning process. So, planners and plans may be seen by local budget and public works officials to be irrelevant to the highly specific nature of the CIP process.(Kelly 1993)

### ***Strategic Planning Not Routinely Done***

A strategic plan is a short term plan that develops goals and objectives and then assesses available resources in order to deploy them for maximum impact on these goals. A strategic plan can be used to integrate the capital plans for individual functional areas if this has not already occurred in the comprehensive plan. Strategic plans are a useful way to insure that transportation, sewer and water decisions made by one department in a city or county can be coordinated with capital decisions made by other departments.

However, strategic plans are not common at the state and local level. Only 10% of states had strategic plans for the state as a whole in 2001 (Campbell Public Affairs Institute 2001). Maryland's strategic plan for infrastructure investment as part of its Smart Growth strategy is an exception. At the county level 25% had strategic plans. (Campbell Public Affairs Institute 2002) Some large cities, such as Dayton, Ohio, and Phoenix, Arizona, and counties such as Fairfax, Virginia, and Santa Barbara, California, also plan strategically for capital projects. (U. S. General Accounting Office 1998) Generally, this is the exception at the local level.

### ***Local Governments Don't Control All Capital Funding***

Although 80% of capital facilities in the United States (excluding military installations) are provided at the local level, a significant amount are under the jurisdiction of special districts with elected boards independent from the local general purpose government (GPG). Regional transportation planning bodies plan for regional needs and disburse funds locally. However, they are not required to consider land use implications in their plans. (U. S. General Accounting Office 2000)

With some well known exceptions (New Jersey and Maryland for example) most states do not provide an overall growth strategy framework for their own capital investments that could be used by local governments as well. Many water and wastewater treatment districts are not part of the local government with land use planning responsibility. The same is true for some regional landfills.

Presently, the linkages between all the capital facilities providers in an area are informal, and it is a rare CIP and budget that addresses capital facilities projects for other agencies.

## **The Components of the CIP and Capital Budget**

### ***Relationship to Land Use Plans***

A growing number of local governments are setting local policies that require the capital improvement plan to be consistent with the general or comprehensive plan. Some also require that the planning commission review the CIP before adoption. See the text box below for Fairfax County's policies relating capital budgeting and comprehensive planning. Note that the Planning Commission is authorized to review and recommend

the CIP, and that the criteria used to select projects for the budget must be consistent with the comprehensive plan.

**Fairfax, Virginia: Principles Relating Capital Budgeting to the Comprehensive Plan**

1. The Board of Supervisors' goals and the adopted Comprehensive Plan, specifically the Land Use Plan and the Policy Plan, are the basis for capital planning in Fairfax County.
2. The Capital Improvement Program (CIP) shall execute the goals and objectives of the adopted Comprehensive Plan for Fairfax County. The Planning Commission shall review and recommend annually the County's Capital Improvement Program based on the adopted Comprehensive Plan.
3. The CIP shall support the County's efforts to promote economic vitality and high quality of life, including assessing the impact on private reinvestment in support of County land use policy.
4. Criteria consistent with the Comprehensive Plan shall be established to guide the selection and prioritization of CIP projects.

Source: Adapted from Fairfax County, Virginia materials on capital programming. 2003,(Fairfax County 2003)

Some states, such as Washington and Wisconsin, also require some special districts to insure that their capital plans and budgets for individual infrastructure systems have consistent boundaries with local land use plans for key capital facilities. For example, the State of Wisconsin has established a requirement that by 2010 all sewer plans develop boundaries for service that are consistent with the local land use elements and that population and demographic projections used for each are consistent.(State of Wisconsin and University of Wisconsin 2002) The state of Washington requires urban growth boundaries, and has mandated that infrastructure service areas (areas in which capital expenditures for service occur) be consistent with these boundaries.

***Capital Improvement Projects***

The heart of the Capital Improvements Plan or Program (CIP) is the project. What is defined as a Capital Project differs from jurisdiction to jurisdiction. Usually all long lived capital facilities are included (water, water and sewers, streets, parks, buildings) along with equipment such as fire trucks, radios, police cars, telecommunications equipment, furniture and computers. The capital budget may also include a land purchase as a capital project. The charter of Anne Arundel County in Maryland defines a capital project as "1) any physical public betterment or improvement and any preliminary studies and surveys relative thereto; 2) the acquisition of property of a permanent nature

for public use; and 3) the purchase of equipment for any public betterment or improvement when first constructed.”(Anne Arundel County 2004)

Below is a definition from Lexington, Massachusetts that shows how a charter definition as above, can be operationalized.

### **What is a Capital Improvements Project?**

In Lexington, Massachusetts, a capital improvement project is defined as a major, non recurring expenditure that includes one or more of the following:

1. Any acquisition of land for a public purpose;
2. Any construction of a new facility (a public building, or water lines, playfield etc), or an addition to, or extension of, such a facility;
3. A nonrecurring rehabilitation (something which is infrequent and would not be considered annual or other recurrent maintenance) or major repair of all or a part of the a building, its grounds, or a facility, or of equipment, provided that the cost is \$25,000 or more and the improvement will have a useful life of 10 years or more;
4. Purchase of major equipment (items with a cost individually, or in total, like radios), of \$25,000 or more, which have a useful life of five years or more);
5. Any planning, feasibility, engineering, or design study related to an individual capital improvement project, or to a program that is implemented through individual capital improvement projects.

Source: Adapted from Bowyer, Robert A. 1993. *Capital Improvement Programs*. (Bowyer 1993)

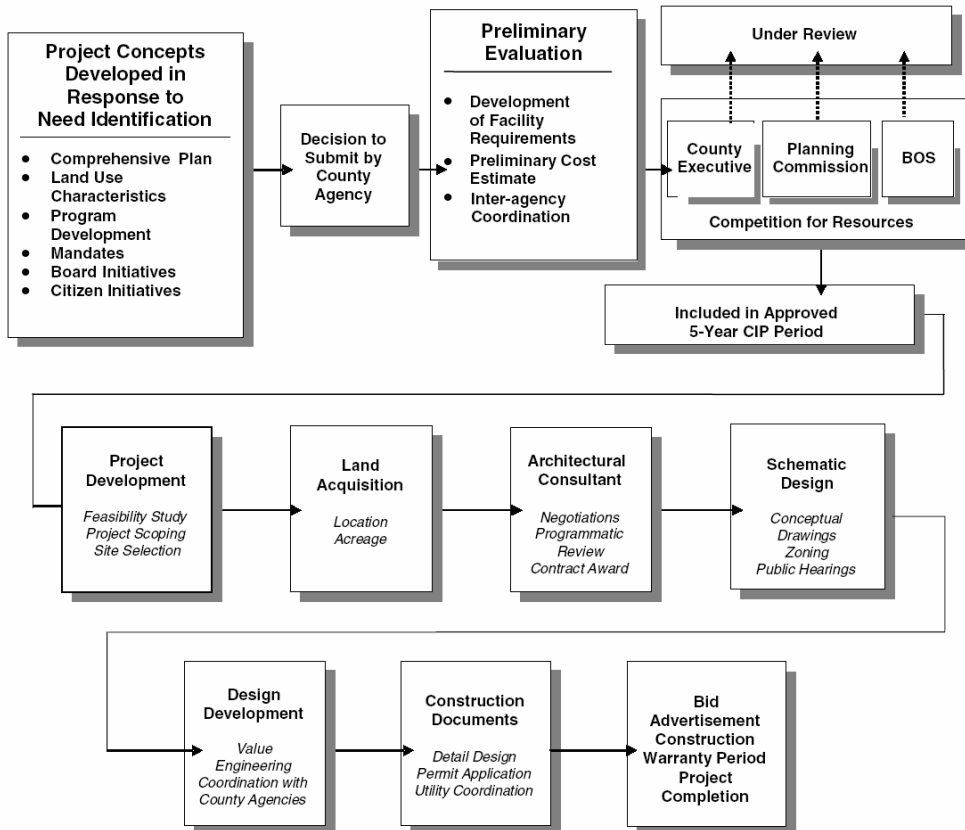
Capital improvement projects and their components can be defined differently from jurisdiction to jurisdiction however. In addition, for example, although street resurfacing is technically “maintenance” these projects are usually in local CIP’s because of their large expense. One author notes that deferred or capital maintenance that extends the life of the facility or rehabilitates it can be included in the capital budget.(Vogt 2004)

The costs of engineering, architecture, and landscaping studies are not physical improvements, but when they are done in order to build a large capital facility project, they too are contained in a CIP and can be funded by bond financing. Sometimes flexibility about a definition can be extremely helpful in solving sticky problems, however, although care should be taken not to stretch the definition of a capital project too far.(Svendsen 2003)

The dollar amount cutoff for a capital project differs from jurisdiction to jurisdiction, ranging from \$1,000 to \$250,000, and often differing for equipment and other projects. (Vogt 2004)

Figure 2 The Life Cycle of a Capital Project from Fairfax, Virginia's CIP Budget

## Capital Improvement Program Evolution of Projects

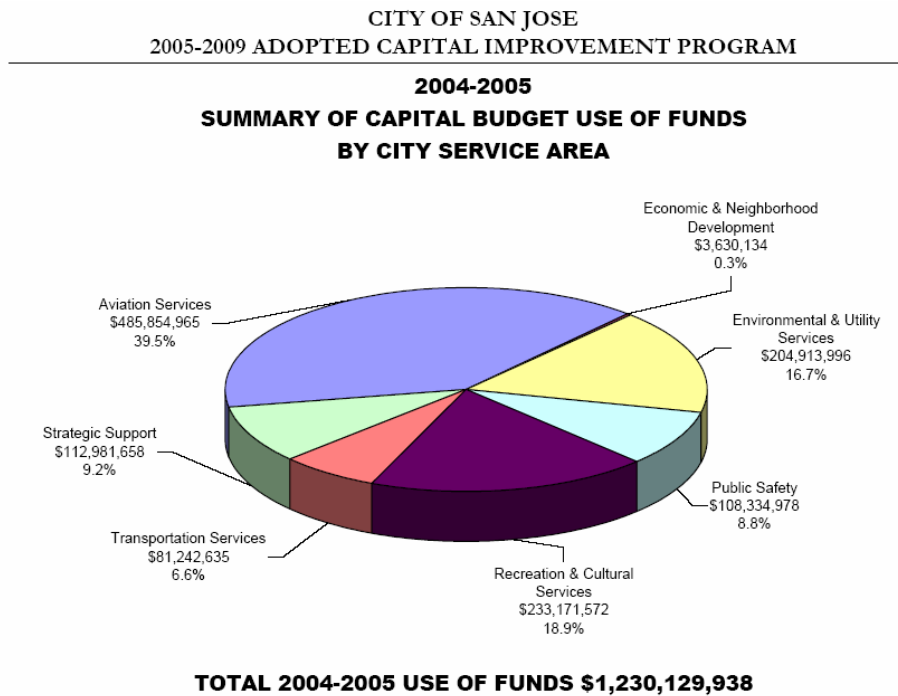


**The Capital Improvement Plan and Budget**

The Capital Improvement Plan (CIP) assesses the capital facility needs in a jurisdiction against its overall goals and objectives using a multi-year planning horizon; and then evaluates and prioritizes specific capital projects that the jurisdiction will fund. In many jurisdictions, the CIP is a document separate from the operating budget. It contains projects for the construction of new facilities, as well as major rehabilitation or replacement of existing facilities. As noted previously, the CIP should be based on a capital needs study that identifies long term needs on a system by system basis, and a strategic plan for the jurisdiction which identifies timely capital investments based on fiscal realities and the vision embodied in the long-term comprehensive land use plan.

**Content of the CIP.** Ideally, the CIP and its projects should be in major categories that correspond to the major elements of the comprehensive plan: housing, economic development; environmental resources (water, sewer); open space and recreation; public facilities; and transportation. See Figure 4-2 to see how the City of San Jose characterized their service areas.

**Figure 3 City of San Jose’s Adopted Capital Improvement Program by City Service Area**



The CIP also consists of a series of tables that shows what projects will be built, when, where, and how much they will cost. As projects are built, they drop off from the CIP, and others are added. The CIP usually has a summary budget message from the chief executive of the jurisdiction. The CIP and capital budget are often presented together. The CIP also usually contains a summary of funding sources. In some CIPs all of the borrowing activity is presented and analyzed. For high growth counties, the debt strategy decisions will be an important part of the CIP. (See the appendices for portions of various CIP from Santa Barbara County, Fairfax County and others.)

The accepted wisdom is that the CIP should be for at least five years. Fairfax County's CIP is for 5 to 7 years. Some jurisdictions have longer plans, particularly water and transportation agencies where some needs can be forecast anywhere from 20 to 40 or 50 to 100 years in advance.

In some jurisdictions, projects are categorized by organizational entity. This should be avoided to mitigate the tendency of managers to stay within their organizational silos. In addition the public is usually more concerned about the service and not who provides it. An exception to this might be when independent component units of government are funded by the general purpose government, such as the school board, the library or the community college. However, this is not critical. It is more important to maintain a similar format over time so that it is easier for the public to track historical information such as relative shares of spending. (Svendsen 2003)

**Funded and Unfunded Needs.** There is disagreement in practice whether the CIP should contain the total capital needs whether they can be funded or not, or just those that will be funded. This paper advocates presenting both funded and unfunded CIP projects so that the policy makers understand the universe of needs in making the budget decision. For example state transportation plans have a CIP and an unfunded project work plan (UPWP) and each has a different time horizons.

Table 1 is a summary of the total capital needs for Santa Barbara County, California as well as the needs that are addressed in its proposed 2005 FY budget.

**Table 1 Santa Barbara County Five Year Capital Improvement Program and Unfunded Needs**

Five Year CIP through Fiscal Year Ending June 30, 2010  
(In thousands of dollars)

Fiscal Year	Funded	Unfunded	Total
2005-06	\$ 55,446	\$ 47,700	\$ 103,146
2006-07	64,117	66,516	130,633
2007-08	60,000	74,381	134,381
2008-09	42,329	73,529	115,858
2009-10	42,129	54,397	96,526
<b>Five Year Total</b>	<b>\$ 264,021</b>	<b>\$ 316,523</b>	<b>\$ 580,544</b>

Source: Feb, 2005 Proposed CIP, Santa Barbara County, California.

**The Capital Budget.** The capital budget is the implementing document for the legislative body that contains the expenditures for the next fiscal year or two. In many jurisdictions both the CIP and capital budget are prepared together and are separate documents from the operating budget, although the line item expenditures for the capital budget (as noted earlier) for the next fiscal year (or two) are included in the operating budget.

Capital expenditures have several characteristics that merit a separate budget: their long life, their infrequency and the large expense. Once capital expenditures are made, they cannot be changed easily. Capital facility projects take a long time to build, and the benefits aren't obtained until the project is completed. Therefore the budgeting process for annual expenditures is not appropriate, and something which reflects the "lumpy" nature of the capital expenditures is required.(Robinson 1991)

There are other reasons to separate capital and operating budgets and decision making about the two. Capital facility projects are frequently funded by one-time, special funds, and separating these funds from the operating budget helps to insure that they are used for the correct purposes. In addition, the process that is used to develop the capital budget differs markedly from that used for the operating budget. A list of projects must be prepared, ranked, and compared against each other. As projects are built, or as funds become available, new projects are added to the list, while programs and services funded by an operating budget generally are the same from year to year. Programs and services are usually not compared to each other for funding purposes using a common set of criteria.

Finally, the time frame for the capital and operating budgets differ. All the activities funded by an operating budget occur in one or two fiscal years, while the projects in a capital budget often take three to five years to complete, or even may be part of a larger program envisioned over a 20 to 30 year period. The funds required for a particular project may be uneven—small initially, and larger in the out years as construction begins. A capital budget provides for separate accounting for the projects, which permits financing oversight.(Government Finance Officers Association 1993)

### **The Process of developing the CIP and Capital Budget**

There are five steps in developing the CIP and Capital Budget: 1) organizing the process; 2) identifying the projects; 3) selecting the projects; 4) formatting and presentation of the material; 5) Adoption and Implementation. The following is drawn from Bowyer, 1993. (Bowyer 1993) The appendices contain samples of CIP instructions from local jurisdictions and some forms.

#### **1.0 Organizing the Process**

##### **1.1 Designate Lead Department**

The process is begun by a decision to prepare a CIP and Capital budget, and the designation of the lead department. Typically the budget or finance office begins the process by setting up a committee from the major departments with capital facilities: at

least public works, community development, for capital facilities, and police and fire for rolling stock. One local manager suggests two permanent CIP committees. The first would consist of the department heads (or their deputies) for the big players-- those with the dedicated revenue sources. The participation of the planning director is critical. This committee may be headed by the CEO or the deputy. Working under the direction of the senior committee is a second group, composed of staff who do the work—usually planners and engineers. The engineering staff from public works or the budget staff can be the lead for convening this.(Brown 2003)

The institutional location of the lead, or at least the roles of the departments in the preparation of the capital plan, reflects the type of capital plan desired by the jurisdiction. If a major policy change is desired by the jurisdiction to address serious growth or decline issues, the planning department needs to have a significant role along with the planning commission. If the emphasis is on maintenance issues, and replacing existing capital facilities, then more involvement from the public works department is appropriate. Territorial disputes between departments can be put aside, it is ideal for finance/budget to take the lead with the other departments participating according to their expertise.

## **1.2 Develop Process, Forms, Criteria and Schedule**

The next step in the preparation of the CIP is to develop the overall budget schedule, the forms to solicit project proposals from the affected departments, the criteria for qualifying as a capital project, and the criteria that will be used to evaluate and select the projects. At this time, a rough idea of the amount of un-earmarked money available should also be developed. (See the earlier discussion on debt affordability.)

The forms that are to be sent out to the departments should be developed or revised. The CIP technical committee reviews the forms, makes suggestions, and takes the lead on working with their department to insure that appropriate projects are developed in a timely way. Many localities include a section for future operating costs resulting from the project which includes the number of staff, annual cost, additional capital equipment expenditures needed and all other operating costs. The County of Santa Barbara, California, for example, uses four forms: the first to describe and justify the project, the second is a summary, the third is the impact of an individual project on the operating budget, and the fourth is a program area summary. In Santa Barbara, depreciation is also contained on this form.(Brown 2003) See Appendix II for examples of forms used by some localities.

An important step is the development of criteria that will be used to allocate the funds. If the locality is going through a strategic planning process, these goals and objectives should be reflected in the criteria. The criteria should be based on the policies that the jurisdiction has established to guide its growth, or which are generally perceived to be consistent with the values of the elected officials. In a built out community with little new residential or commercial growth, the most important criteria might be the maintenance of existing capital facilities.(Bowyer 1993)

### 1.3 Decide Upon Citizen and Stakeholder Involvement Process

The process to involve citizens and important stakeholders (other capital facilities providers in the area) should be decided upon. Sometimes the locality has a public works commission that is interested, while other times, the local planning commission or budget committee composed of citizens is concerned. In some counties and cities, the local charter may dictate a specific role for citizens in the planning and capital budgeting process. The more the citizens are involved, the more the CIP will be used to further the strategic goals and objectives of the city or county.

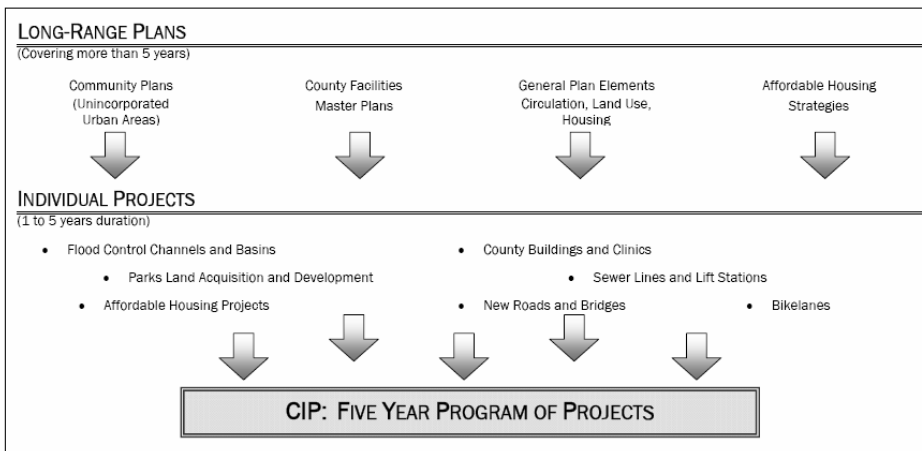
The City of Phoenix has a citizen’s bond committee, which has subcommittees that correspond to individual program areas. This committee assesses the financial capacity of the city, prioritizes projects within and then across program areas before recommending a bond program. This goes to the City Council, and if approved, then to the voters. Capital programs for enterprise funds, for the airport and water, for example, are also reviewed by the citizen’s rate review committees before the plan goes to the Council.

### 2.0 Identifying the Projects and Funding Options

The projects should be drawn from the “capital needs studies” for the individual systems. They should reflect the strategic and geographic priorities of the locality. However, if the capital needs studies and comprehensive inventories do not exist, it is still possible to put together an effective CIP without them.

In Santa Barbara, California, for example, capital improvement projects come from utility master plans, the comprehensive land use plan, affordable housing strategies and from small municipalities within the county. See Figure 4-3.

**Figure 4 Sources of Capital Projects for the CIP**



Source: Letter of Transmittal, Tables and Charts, Feb 15, 2005 Santa Barbara County Proposed Capital Improvement Program. p. A-2.

In a typical CIP preparation process, there will generally be one department that already has an excellent multi-year program and that is in a position to start to look at its capital projects in a more strategic manner. There will probably also be a department that is not very sophisticated budget-wise. The project request forms should be developed to accommodate both types of situations.

Although most texts recommend that a funding strategy be developed after the projects are selected, realistically projects are developed within available budget strategies. Identifying the projects should be complemented with a long term financial forecast done by the budget office for the jurisdiction as a whole that will set the framework for individual program areas.

### **3.0 Selecting the Projects**

Once all the project proposals have been submitted, they need to be evaluated and prioritized. Although the textbooks indicate that the evaluation of all the projects should be done without regard to the funds available for the best results, in actuality this works only where there is a surplus of general funds or for enterprise funds, when there is the possibility of raising the fees. Leveraging should not be ignored. For instance, certain projects that otherwise might not be funded in fact do get funded because they will leverage a 50% match from the state government.(Svendsen 2003)

The first level of review is against the criteria that were sent out at the beginning of the process. This can be done numerically, or qualitatively. The projects can then be divided into priority groups—ie, those which are urgent and for which efforts should be made to find funding; those which should be done as funds become available and so on. Projects with existing funding, from enterprise funds, should also be evaluated.

The next step is to actually decide on what will be funded. There are several options at this point. Projects can be deferred, and like projects which should be coordinated, can be assessed and scheduled in common. The project can be funded, but at a lesser amount than requested, or approved contingent upon obtaining other funds and grants. Several projects can be grouped, and a bond issue proposed. Finally, it may be determined that the project is not likely to be funded in the near future.

Projects competing for general funds, that is, un-earmarked money, generally have the most scrutiny. Local sewer, water, and transportation projects funded from development mitigation or enterprise funds are frequently, merely ratified by the CIP, having gone through a review process when fees were set or the capital needs study done.

All special fund capital facility projects should be reviewed for consistency with the comprehensive plan or the strategic plan. Each department should review projects from other departments on cross cutting issues—water, sewer, and transportation projects need to be coordinated geographically and in time.(Svendsen 2003)

#### **4.0 Prepare and Recommend a Capital Plan and Budget.**

The selected program is then compiled and presented for approval to the decision making body—usually the elected officials. It is important to present the capital budget in a user friendly way. The capital plan need not be fancy to be readable. There should be a series of hearings, workshops and other outreach efforts to insure that all stakeholders and interested parties can provide feedback on the capital plan and budget.

Performance indicators and project development milestones should be developed for the recommended capital plan for subsequent reporting purposes. Project management and performance indicator systems are important capital budget implementation tools. Planners are typically not involved with these activities.

#### **5.0 Adoption of the Capital Budget.**

There are three ways that the projects can be approved as part of the capital budget. The first way is to adopt it as part of the operating budget whether it is an annual or biennial budget. This method funds the projects only a year or two at a time with the funds needed for the project for that year. This is a common way of proceeding. Generally the locality has a very specific plan for the entire amount for each project, even if all the funds are not authorized for that year. One of the drawbacks of this system is that the project comes up for “approval” each year by the elected officials.

A second way of approving the capital budget is to adopt the capital budget with the entire amount for all the projects approved in that fiscal year, regardless of whether it will be spent that year or not. Although this is how the federal government and many state governments operate, it is not usual at the local level. In addition, carryover funds for capital projects from one year are usually put into the next year’s budget and approved again by the elected officials. A third method is to approve the bond authorizing the project(s). However, the annual or biennial appropriations for the project are usually still required by state and local regulations.(Government Finance Officers Association 1993)

The finance department usually takes care of these matters and the planner is not involved.

### **Conclusions and Recommendations**

Rapid growth in many areas during the past several decades has brought capital facilities back to the attention of the planning profession. There has been much discussion of the importance of good capital planning to reduce sprawl. Equally compelling have been the discussions in the transportation arena about the impact of embedded technical standards on the environment. Involvement by the planner in the capital budgeting process is a key step in addressing some of these concerns. The following are some specific recommendations for planners.(Elmer 2004)

- **Establish policies to require the CIP to relate to the local land use plan.** One of the most important things for a local planner to determine, is whether the jurisdiction has policies in place that require the CIP and the Capital Budget to be related to the comprehensive land use plan. In the ideal world, the individual capital projects implement policies are set out in the comprehensive plan and other long range planning documents. The Planning Commission should be in the review process for the CIP.
- **Establish or participate in a local capital budgeting process to focus infrastructure investments strategically and to insure life-cycle budgeting.** Although traditionally the domain of the engineers and the finance departments, planners should be actively involved in putting together the capital budget to insure that the capital budget supports the jurisdiction’s comprehensive land use plan as well as strategic neighborhood initiatives. Planners with an eye to the future and their policy perspective can provide a viewpoint for the budgeting process that few others offer.
- **Influence capital facilities provision by other providers.** Planners should know what other capital facility providers are doing within the metropolitan area and how their capital decisions will affect the jurisdiction. The planner should actively participate in or initiate cross-jurisdictional efforts to insure that coordinated long term capital planning occurs and that the capital investment decisions by all the agencies in the jurisdiction are coordinated and at least keep his own jurisdiction informed about other capital planning projects.
- **Employ demand management and conservation strategies for the jurisdiction’s infrastructure and require the same of others.** Change comes hard to those who design many local capital facilities. The dominant paradigm for building roads, water supply facilities, sewers and public buildings has been to meet the demand even when this results in an inefficient use of resources and damage to the environment. Planners in cities and counties can promote local regulations that require “green building,” and water and energy conservation plans from new development. Within the city or county, planners can advocate the use of fees to regulate demand for capital facilities.
- **Increase public participation with decision support tools.** A continuing challenge is to expand meaningful public participation in capital facility projects funded by special purpose user fees and developed by special districts. Many of these decisions fly below the public’s radar. A new generation of decision support tools is making possible sophisticated visual and spatial representations to explain the land use and environmental impacts of different infrastructure decisions. Using these tools can permit more community members to participate in even the most technical infrastructure decisions.

Comment [A1]: What does “this” refer to?

## **Additional Material**

### **Recommended Readings**

Bowyer, R. A. (1993). *Capital Improvements Programs: Linking Budgeting and Planning*. Chicago, Illinois, American Planning Association: 1-49. Although this is over 10 years old, a very good primer for planners on how planning and the budgeting process interface and what this means for the planner.

Government Finance Officers Association (1993). *Planning and Budgeting for Capital Improvements. Budgeting: A Guide for Local Governments*. Chicago, Illinois, Author.: 170-196. The official overview for finance officers.

Robinson, S. (1991). *Capital Planning and Budgeting. Local Government Finance*. J. E. Petersen and D. R. Strachota. Op. Cit.

U. S. General Accounting Office (1998). *Leading Practices in Capital Decision Making* GAO/AIMD-98-110. Washington, D.C., Author. Although this study was done to provide guidance for federal agencies, it reviewed local municipal and state practices as well as private industry. A good overview.

Vogt, J. A. (2004). *Capital Budgeting and Finance: A Guide for Local Governments*. Washington, D.C., International City/County Management Association. This is an outstanding book for the practitioner, with many local examples. Does not address land use planning issues however. Highly recommended as an authoritative source on capital budgeting.

### **Useful Websites**

American Public Works Association [www.apwa.org](http://www.apwa.org)

American Planning Association [www.planning.org](http://www.planning.org)

American Society of Civil Engineers [www.asce.org](http://www.asce.org)

International City/County Managers Association [www.icma.org](http://www.icma.org)

Government Finance Officers Association [www.gfoa.org](http://www.gfoa.org)

<http://phoenix.gov/BUDGET/bud03cip.html>

Capital budget for Phoenix, AZ.

<http://www.ci.austin.tx.us/budget/05-06/downloads/20050407.pdf>

<http://www.countyofsb.org/cao/pdf/budget/0506/Sectione.pdf>

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