

CAPITAL BUDGETING FOR 2030: ACHIEVING THE GOALS OF PLAN NYC

Citizens Budget Commission

December 2007



FOREWORD

Founded in 1932, the Citizens Budget Commission (CBC) is a nonprofit, nonpartisan civic organization devoted to influencing constructive change in the finances and services of New York State and New York City governments. A major activity of the Commission is conducting research on the financial and management practices of the State and City.

All research by the CBC is overseen by a committee of its Trustees. This report was prepared under the auspices of the Competitiveness Committee, which we chair. The other members of the Committee are: Lawrence D. Ackman, Paul R. Alter, Eric Altman, Paul T. Bader, Seth P. Bernstein, Larry Bettino, Kenneth W. Bond, Lawrence B. Buttenwieser, Herman R. Charbonneau, Cynthia R. Darrison, Roger W. Einiger, Bud H. Gibbs, Barry Gosin, H. Dale Hemmerdinger, Jack D. Hidary, Fred P. Hochberg, Robert N. Hogle, Deborah Buresh Jackson, Peter A. Joseph, Jerome C. Katz, Eugene J. Keilin, Peter J. Kiernan, Alan M. Klein, Peter C. Kornman, Marianne E. Kozlowski, Hugh R. Lamle, David N. Lebenstein, Louis Lowenstein, Andrew S. Lynn, Robinson Markel, Randy M. Mastro, Frances Milberg, Stephen W. Nislick, James S. Normile, Steven M. Polan, Lester Pollack, Hector P. Prud'homme, Carol Raphael, John Rhodes, Heather L. Ruth, Donald Schapiro, Adam Solomon, Alair A. Townsend, W. James Tozer, Jr., Cynthia King Vance, Ronald G. Weiner, Kevin Willens, and James L. Lipscomb, ex-officio.

The Competitiveness Committee's work focuses on maintaining the vitality and competitiveness of New York; infrastructure is a critical element of this. This report analyzes PLANYC, a new long-range planning initiative for the New York City's capital assets and infrastructure. CBC is part of a coalition of civic, business, environmental, labor and community groups that support the goals and strategic direction of PLANYC; however, the Committee recognizes that successful implementation of the PLANYC will require effective capital planning and budgeting procedures. This report identifies the four greatest challenges confronting this initiative and makes recommendations for overcoming them.

The report was written and researched by Maria Doulis, Research Associate. Will Hattar, Administrative and Research Assistant, and Tammy Pels, Research Associate, provided research assistance. The report was developed under the direction of Charles Brecher, Director of Research and Executive Vice President.

The author and the Committee are grateful to all those who reviewed a preliminary draft of the paper and offered their perspective: Stuart Klein, First Deputy Director of the New York City Office of Management and Budget, and the OMB staff; Marcia Van Wagner, Deputy Comptroller for the Budget, and Comptroller's staff; Michael Keogh, Director of the New York City Council Finance Division; Christopher Jones, Vice-President of Research at the Regional Planning Association; Preston Niblack, Deputy Director of the New York City Independent Budget Office; and Jeff Kaye, Director of the Mayor's Office of Operations. We thank them for their cooperation and for their helpful comments in the course of research for the paper, though that does not mean they necessarily endorse the views presented within it.

David Tanner
Co-Chair

David Greenbaum
Co-Chair

December 17, 2007

TABLE OF CONTENTS

EXECUTIVE SUMMARY	i
INTRODUCTION: CAPITAL BUDGETING FOR 2030.....	1
NEW YORK CITY’S CAPITAL ASSETS	3
Federal Government	3
New York State.....	3
State Authorities.....	4
The Private Sector.....	6
New York City.....	8
THE CONDITION OF NEW YORK CITY’S ASSETS.....	13
Recent History of Capital Asset Management	13
New York City Assets.....	14
Factors Contributing to Lack of SOGR.....	18
Non-City Owned Assets	22
PLANYC vs. TRADITIONAL CAPITAL PLANNING AND BUDGETING PROCESSES.....	24
The PLANYC Agenda.....	24
Traditional Capital Planning and Budgeting.....	25
Integration of PLANYC and the Traditional Processes.....	33
THE NEXT GENERATION OF SPENDING	35
Spending by Function	35
Spending by Time Period.....	36
Spending by Purpose.....	37
PLANYC Agencies vs. All Other Agencies.....	38
CBC FRAMEWORK FOR EVALUATING THE TEN-YEAR CAPITAL STRATEGY	40
CBC Framework.....	40
Bringing Capital Assets to and Maintaining Them in a State of Good Repair	41
Expanding and Enhancing Capital Assets.....	45
RECOMMENDATIONS.....	53
Expand and Institutionalize the PLANYC Approach.....	53
Develop a Plan to Bring City Assets to a State of Good Repair and the Capacity to Assess Non-City Assets.....	54
Place Capital Assets on Replacement Cycles and Fund Replacement from the Operating Budget.....	55
Pursue Expansion Projects Based on Rigorous Economic Analysis.....	55

EXECUTIVE SUMMARY

Mayor Michael Bloomberg has launched the PLANYC 2030 initiative— a plan centered on ten goals for preparing New York City for an anticipated population increase of one million by 2030. PLANYC is a strategic plan for the City’s capital assets and infrastructure that is new and visionary; its goals are ambitious and broad, and achieving them will require active cooperation from multiple stakeholders. Responsibility for its implementation rests with the newly-created Office of Long-Term Planning and Sustainability, but most of the capital resources required by PLANYC will be subject to the City’s traditional capital budgeting procedures.

Successful implementation of the PLANYC agenda will require strengthening the City’s current capital planning and budgeting procedures. Specifically, this report makes four overarching points about PLANYC and the City’s capital budgeting practices:

1. New York has a vast universe of capital assets and infrastructure, and planning for these assets requires a long-term, strategic, and comprehensive perspective. PLANYC is based upon such a perspective, but omits some of the City’s most important capital assets. Its approach should be extended to a broader range of public infrastructure. A vibrant future for New York requires that this type of effort be institutionalized and expanded in scope.
2. Capital planning begins with condition assessments of capital assets. The City’s assessment mechanism, which reports on assets that need to be brought to a state of good repair, is extremely limited in scope, and the City also has limited information on non-City owned assets. Even where good information exists, state of good repair work is not prioritized and often does not guide capital spending. The City should improve its needs assessments, and develop a systematic plan or timetable for bringing all capital assets to a state of good repair.
3. Maintaining competitive infrastructure and capital assets requires proactive, not reactive, planning. Capital assets should be properly maintained until the end of their useful lives, at which point they should be replaced. Scheduling of these replacement cycles should guide capital spending, and is best funded from operating revenues; however, neither of these practices characterizes capital planning in the City. The City should place all its capital assets on regular replacement cycles according to their useful lives and fund their replacement with operating revenues, not from the capital budget.
4. A substantial portion of resources for capital improvements are dedicated to expansion projects. Planned expansion projects for the next ten years total \$23 billion, but few of these projects are rationalized in terms of greater service or anticipated benefits. Expansion projects should be clearly explained and justified with data that demonstrates economic and other benefits, or a high rate of return on the investment of public funds.

Expanding and Institutionalizing PLANYC

Challenge: PLANYC is a new planning process for the City’s infrastructure that is broad, long-term and visionary, but overlooks some large and important classes of assets.

PLANYC addresses important components of New York City’s infrastructure: the water and sewer system, the transit system, energy supply and delivery, roads and bridges, housing, parks, and brownfields. It lays out a plan for these assets for the next 25 years, with clear goals and

Citizens Budget Commission

benchmarks for interim achievements, and necessitates the participation of other entities, including the State and State authorities.

In these ways, it represents an improvement over the City's current Ten-Year Capital Strategy, which focuses solely on City-owned assets, often lacks clear strategic objectives and is too short to manage and plan for large infrastructure components. At the same time, the Strategy is too long to allow for credible financial planning, as expenditure estimates beyond the four-year commitment plan have been consistently underestimated. In the 2000-2009 Strategy, for example, capital expenditures planned during the first four years (\$23.0 billion) corresponded closely with actual expenditures (\$22.8 billion). In the last six years, 2004-2009, the Strategy will have underestimated spending by over \$33 billion, or 128 percent, if current plans for 2008-2009 are implemented.

However, while all agencies are required by the City Charter to do ten-year capital planning, PLANYC applies only to certain agencies with assets that represent only part of the vast universe of capital assets in the City. Omitted from PLANYC are other capital assets critical to the City's vitality, particularly the school system and telecommunications network.

The case for expanding PLANYC is illustrated by the recently adopted Ten-Year Capital Strategy. The Strategy calls for \$83.7 billion in capital investments over the next ten years. But, only 47 percent of this planned capital spending is directed toward agencies with a PLANYC goal; the majority of spending, 53 percent, will fund capital improvements for other agencies and assets that are not covered by the scope of PLANYC. Capital spending for these agencies was derived in the context of traditional capital planning and budgeting processes.

For the City's three most valuable capital asset classes, the water and sewer system (\$18.4 billion asset value), schools (\$11.8 billion), and transportation (\$6.5 billion), two were guided by PLANYC (water and sewer and transportation), while the other (schools) was governed by traditional capital planning and budgeting. There should be one consistent approach for all agencies.

Recommendation: Institutionalize and expand the PLANYC approach.

All agencies would benefit from a plan for maintaining and improving infrastructure that reflects the long-term strategic perspective embodied by PLANYC. PLANYC assesses current conditions and projects future needs, and establishes clear, long-term goals for addressing those needs. These goals espouse a much broader perspective than the City's standard capital plan, requiring key players like the State, the Metropolitan Transportation Authority and the Port Authority to participate in the process. This is an improvement upon the traditional capital planning process, and efforts to institutionalize PLANYC should be pursued: first, through City Council approval of legislation establishing the Office of Long-Term Planning and Sustainability as a mayoral office; and second, through revision of the City Charter.

The strategic approach should also be expanded to encompass other agencies and capital assets. For all agencies, a long-term strategic capital planning document (such as that released by PLANYC) should be accompanied by a shorter-term document that translates the goals in the longer one with specific agency objectives and expenditure estimates. A fixed, short-term capital plan would allow for better financial planning and capital budgeting, since rising construction costs and changing circumstances make expenditures difficult to estimate beyond a few years. Such a tiered planning

process also would allow for judging progress against the goals and needs identified in the broader document in a way that is not possible with current capital planning documents.

Achieving a State of Good Repair

Challenge: Effective capital planning in the City is hindered by lack of important information on capital assets within its boundaries and clear goals for capital spending.

Planning for the future requires knowledge of current condition and use. The City lacks much of this needed information for two important reasons. First, the City does not survey the elements of public infrastructure it does not own or manage. The federal government, the State, State authorities and the private sector own important assets— such as airports, bridges, the mass transit system, energy delivery, telecommunication networks and parkland— in the City, but the City’s knowledge of the status of these assets is limited, and its capital planning is not integrated well with that of other important agencies.

Second, the City’s system of tracking the condition of its own assets has major gaps. While some municipal agencies conduct thorough and frequent inspections of their capital assets and publish data on their condition in yearly reports, a full citywide perspective is missing. The City’s report on state of good repair, the Asset Information Management System (AIMS), is extremely limited in scope. Major omissions include smaller assets with a replacement cost under \$10 million and larger systems, such the East River Bridges, all housing assets, and assets owned by public authorities, including the water and sewer system financed by the Municipal Water Finance Authority.

As a result of these limitations, most agency plans for capital spending in the Ten-Year Capital Strategy are not linked to condition assessments or based on a standard for maintaining the condition of the asset. Furthermore, planned spending is not connected to a goal, timetable or plan for achieving or maintaining state of good repair, a condition in which assets are structurally sound and functionally adequate.

While PLANYC calls for achieving a state of good repair for transportation infrastructure by 2030, the same goal is not applied to other public infrastructure; neither have meaningful alternatives been established. In fact, most agencies consistently underfund necessary investments. The most recent assessment published in the AIMS report for fiscal year 2008 estimates that about \$5.4 billion is required to achieve a state of good repair for the assets covered by the report; but planned spending is less than half the need, leaving a gap of \$2.8 billion. This lack of funding indicates that there is no clearly policy for funding maintenance and repairs, and more generally, for achieving a state of good repair.

Recommendation: Develop a systematic plan for bringing all City-owned assets to a state of good repair.

Initial steps in this direction have been taken by PLANYC, which has identified state of good repair needs for transportation and transit services, and has devised a plan to meet these needs by 2030. This thinking should be expanded to all of the City’s capital assets by expanding the AIMS report to cover all capital assets and integrating the condition assessments of major capital asset systems conducted by agencies into a comprehensive reporting structure. Once it fully assesses the needs of all its assets, the City should then develop a systematic plan to eliminate deferred maintenance and

Citizens Budget Commission

bring all its capital assets and infrastructure systems to a state of good repair. Any long-term or short-term capital plans should be tied directly to this plan.

Using Replacement Cycles to Fund Replacement with Operating Revenues

Challenge: Expenditures that should be funded with operating revenues are instead funded with borrowing through the capital budget.

At the end of its useful life, an asset should be replaced; in so far as useful lives are predictable, assets should be placed on regular replacement schedules. The City's capital spending, however, is not strictly guided by regular replacement cycles; instead, assets tend to be repaired or replaced when they malfunction or break with funds from the capital budget. Events such as water main breaks and broken playground equipment may trigger capital spending for replacements, but they are also associated with varying scales of disaster and service disruption that regular care and replacement cycles avoid.

The value of a capital asset is depreciated yearly to reflect its "wear and tear" during the course of its useful life. Prudent management and generally accepted accounting principles require that this yearly depreciation be recognized as an operating expense, and that a budget cannot be deemed "balanced" unless operating revenues cover all expenses, including depreciation. New York City, like many public entities, has not followed this basic principle; it does not recognize depreciation as an operating expense and routinely funds repairs and replacements by borrowing for these investments.

This is legally permissible, but shortsighted: Paying for this expense with borrowed funds rather than current revenues has two negative consequences. First, the City incurs interest costs for the borrowing. Second, it creates disincentives for performing regular maintenance, as agencies forego maintenance from the operating budget until assets deteriorate to the point where they can be replaced with funds from the capital budget. If replacement were to be funded with operating revenues equivalent to depreciation expense, these disincentives would disappear, the costs of borrowing would be reduced, and capital funds would be freed for other investments.

Recommendation: Place capital assets on appropriate replacement cycles and fund their replacement with operating revenues.

Maintaining competitive infrastructure and capital assets requires proactive, not reactive, planning. The City should place all its capital assets on regular replacement cycles according to their useful lives. This would impose greater discipline and predictability in capital planning.

The City also should allocate funds in its operating budget for regular replacement. The annual allocations should be linked to the depreciation of assets calculated on the basis of replacement cost. This would eliminate the need for costly borrowing for regular replacement by providing a steady fund to replace assets based on their useful lives. Debt and the associated interest costs should be incurred only for investments that bring assets to a state of good repair and for expanding the capital stock.

The City Comptroller reports that depreciation of the City's major assets was \$3.0 billion based on historical cost in fiscal year 2007; CBC estimates this depreciation would be \$4.9 billion when based on replacement cost. In the same fiscal year, the City had \$6.5 billion in unanticipated revenues above those budgeted in its financial plan, enough to fully absorb the cost in that year. In less prosperous years, the City can phase-in funding for replacement or establish a percentage of revenues to be dedicated to a fund for regular replacement costs. While the funding requirement may seem large, it is outweighed by long-term savings from better asset management and foregone debt service costs.

Providing Greater Justification for Expansion Projects

Challenge: The City's rationale for pursuing many of its expansion projects is unclear or unstated.

With the exception of the \$3.0 billion investment in Hudson Yards, none of \$24 billion in new capital investments to be pursued by the City in the next ten years is clearly justified on the basis of anticipated economic benefits. While some projects are described as necessary for improving government services, no justification exists for most projects. PLANYC documents justify some of the proposed projects in terms of improving services and accommodating emerging needs in the City, with limited data provided in a few cases to demonstrate the anticipated improvement in service; in most others, however, there is no such data. Still, expansion projects pursued under the PLANYC agenda are more thoroughly described and rationalized as part of the overall strategic direction of the City's capital planning than non-PLANYC expansion projects found in the Ten-Year Capital Strategy.

Recommendation: Pursue expansion projects based on clearly explained priorities and data demonstrating benefits that will accrue to the City.

New, large capital projects should be selected based on a clear set of priorities rooted in the ability to provide a higher or more efficient level of service, or in terms of providing a high rate of return on the investment of public funds. Expansion projects should be clearly explained and their benefits should be demonstrated through rigorous economic analysis presented in documents made available to the public. Presenting such analyses would ensure that scarce public resources are allocated in a transparent and beneficial manner.

INTRODUCTION: CAPITAL BUDGETING FOR 2030

Since the nationwide census began in 1790, New York City has been the largest city in the United States.¹ Today, over 8.2 million people live in New York City, more than twice the number in the second-largest city, Los Angeles. The New York City metropolitan area, which incorporates adjacent regional areas in Long Island, northern New Jersey, and downstate New York suburbs, is also the largest in the nation, with over 18 million residents, many of which commute into the city for work, shopping, cultural outings, or other leisure activities. These regional commuters are joined by millions of tourists that visit the city each year – approximately 44 million in 2006.²

A vast system of infrastructure and capital assets accommodates the city's residents, commuters and visitors. Throughout its 322 non-contiguous square miles of land, the city's capital assets include 20,000 miles of streets and highways, 130,000 energy transmission and distribution lines, 324,000 street lights, 6,200 miles of water mains, 2,027 bridges and tunnels, and over 1,000 school buildings.³ New York City is a city of tremendous capital assets.

These assets are all essential to basic daily activity, government operation, commercial enterprise and public safety. As the city continues to grow – population is expected to hit 9 million by 2030 and plans are to increase tourism to 50 million visitors in 2015⁴ – maintaining these assets and infrastructure and improving upon them will be instrumental to the city's ability to thrive and remain competitive by attracting residents, businesses and visitors.

Keeping the city's capital assets competitive will require creative and pragmatic long-term capital planning. To this end, Mayor Michael Bloomberg has launched the ambitious PLANYC agenda – a 127-initiative plan centered on 10 goals for preparing the City's infrastructure and maintaining quality of life in the face of anticipated population increases. The PLANYC goals focus on clean water and air, reliable energy, improved mass transit and transportation, and increased supply of parks and housing, and the initiatives to implement them require support and cooperation not only

¹ U.S. Bureau of the Census. Table 1: Rank by Population of the 100 Largest Urban Places, Listed Alphabetically by State: 1790-1990. Internet Release Date: June 15, 1998. Accessed 3 January 2007. Available online at <http://www.census.gov/population/documentation/twps0027/tab01.txt>.

² NYC & Company. "NYC Statistics." Accessed 3 January 2007, available online at <http://www.nycvisit.com/content/index.cfm?pagePkey=57>.

³ City of New York, "Capital Asset Statistics by Function/Program – Ten Year Trend," *Comprehensive Annual Financial Report, Fiscal Year 2006*, pps. 318-319; City of New York, Mayor's Office of Operations, *Mayor's Management Report, Fiscal Year 2006*, September 2006; New York City Department of Transportation, "Frequently Asked Questions – Bridges," accessed 3 January 2007, available online at http://www.nyc.gov/html/dot/html/about/faqs_bridge.html; Consolidated Edison of New York, "2005 Annual Report," p. 1.

⁴ New York City Department of City Planning. *New York City Population Projections by Age/Sex and Borough, 2000-2030*. December 2006. Available online at <http://www.nyc.gov/html/dcp/html/census/popproj.shtml>.

City of New York. "Mayor Bloomberg and NYC & Company Announce 44 Million Tourists Visited New York City in 2006, Pumping \$24 Billion Into Economy." Press Release, 27 November 2006. Available online at http://www.nyc.gov/portal/site/nycgov/menuitem.c0935b9a57bb4ef3daf2f1c701c789a0/index.jsp?pageID=mayor_press_release&catID=1194&doc_name=http%3A%2F%2Fwww.nyc.gov%2Fhtml%2Fom%2Fhtml%2F2006b%2Fpr451-06.html&cc=unused1978&rc=1194&ndi=1.

Citizens Budget Commission

from City agencies, but from the State, State authorities, the private sector and the federal government.

Accomplishing the broad goals of the PLANYC agenda is partly contingent on the cooperation of these outside actors, but will largely rely on the traditional capital planning, budgeting and management process. The City's traditional vehicle for long-term capital planning, the Ten-Year Capital Strategy, describes the capital agenda of all city agencies for the next ten years. Funds for implementing PLANYC have been included in the most recent Strategy released in April for fiscal years 2008-2017. This Strategy calls for \$83.7 billion in spending, with significant investments going toward areas highlighted by the PLANYC initiatives – the water and sewer system, transportation, housing and parks.

This report assesses the viability of the accomplishing the PLANYC agenda through the City's traditional capital planning, budgeting and management processes. The first section overviews the vast universe of capital assets and infrastructure within the City, and demonstrates that there are several entities besides the City of New York with significant capital holdings. The second and third sections overview the City's capital planning, budgeting and management practices and how they bear upon the condition of capital assets. The following sections analyze capital spending planned in the Ten-Year Capital Strategy according to anticipated outcomes for bringing assets to a state of good repair and maintaining them properly, and examine the basis for pursuing new expansion projects. The final section offers some recommendations for institutionalizing PLANYC and strengthening capital planning and budgeting to accomplish PLANYC's goals.

The conclusion is simple: Getting to 2030 will require repairing New York City's capital processes.

NEW YORK CITY'S CAPITAL ASSETS

Capital assets in New York City are defined as physical assets that are not easily converted to cash and have a long-term use and purpose. State and local governments vary widely in how they define capital assets with respect to their value or useful life. New York City defines capital assets as land, buildings, equipment or infrastructure with a value greater than \$35,000 and a useful life greater than 5 years.⁵

In distinguishing capital assets, it is often useful to consider them according to function. Capital assets in New York City aid these general functions: Transportation, Transit, Environmental Protection, Education, Housing, Public Safety and Justice, Health, Sanitation, Energy, Telecommunications, and Parks, Libraries and Cultural Institutions. A glance at these categories indicates that the universe of capital assets within the City's boundaries is large, complex and varied.

Control of this universe of assets does not rest squarely with New York City government; many large and significant assets – including the airports, the subway system, the energy delivery system, telecommunications networks, and most major bridges and tunnels – are controlled by other entities, namely the federal government, the State, State authorities or the private sector. Still other assets – such as the water and sewer system and public housing and hospitals – are controlled by the City through its public authorities. The following provides an overview of capital assets owned or controlled by entities other than New York City or its component units.

Federal Government. The federal government owns relatively few capital assets in the city. According to the New York City Department of City Planning (DCP), facilities owned by the federal government include six criminal justice and correctional facilities and three veterans' hospitals. There is also some federal parkland managed by the National Park Service, including the 9,155-acre Jamaica Bay Wildlife Refuge and the 1450-acre Floyd Bennet Field in Brooklyn, which was once the site of New York City's first airport. Other notable federally-controlled sites included Ellis Island and the Statue of Liberty, Governors Island and Castle Clinton in downtown Manhattan.⁶

New York State. New York State does not have a public inventory of its assets, nor does it report on capital asset holdings or values by city or location, making it difficult to identify and value all its assets in New York City. According to DCP, the State operates some courthouses, correctional facilities, medical centers, hospitals, and cultural and recreational facilities throughout the city;⁷ however, its largest direct holdings are in higher education and state parkland. The State operates four State University of New York (SUNY) campuses in New York City⁸ and is responsible for the

⁵ City of New York. Office of the Comptroller. *Comprehensive Annual Financial Report of the Comptroller for the Fiscal Year Ending June 30, 2006*, page 61.

⁶ National Parks Service. "New York." Accessed 25 October 2007, updated 25 October 2007, available online at <http://www.nps.gov/state/ny/>.

⁷ New York City Department of City Planning. Selected Facilities and Program Sites in New York City: 2005.1 Release. Database available for digital download online at <http://www.nyc.gov/html/dcp/html/bytes/applbyte.shtml>

⁸ These colleges are the State College of Optometry, the Fashion Institute of Technology community college, Downstate Medical Center in Brooklyn, and Maritime College in the Bronx. See State University of New York Campus Listing, available online at http://www.suny.edu/Student/campuses_complete_list.cfm.

Citizens Budget Commission

13 senior colleges of the City University of New York (CUNY) system. The State also controls 337 acres of parkland and recreational facilities at six different locations in all five boroughs.⁹

State Authorities. Significant infrastructure assets in the City are not controlled by the City or State directly, but are the responsibility of State public authorities. The lack of transparency and accountability that often characterizes the governance of public authorities makes it difficult to identify all State public authorities with capital asset holdings in New York City. There are several small public authorities, such as the Battery Park City Authority and the Roosevelt Island Operating Corporation, with relatively small capital asset holdings in specific areas or functions in the city. Others, such as the New York State Thruway Authority and the New York Power Authority, have assets that play a role in statewide operations, and hence also serve the city and adjacent areas. Two State authorities own and operate large capital assets particularly critical to New York City in transit and transportation.

The Port Authority of New York and New Jersey. The Port Authority was established in 1921 as a bi-state agency with a jurisdiction in both New York State and New Jersey. Much of the Port Authority's activity is centered on connecting New York City with northern New Jersey; as such, more than half of its \$13.35 billion in assets are based in New York City and include bridges and tunnels, PATH buses and trains, airports, ports and ferries.

Table 1
Port Authority of New York and New Jersey
Value of Capital Assets in New York City,
Net of Depreciation, Fiscal Year 2006
(dollars in millions)

Airports	\$2,785
Bridges and Tunnels	2,104
PATH Train	1,836
World Trade Center	471
P.A. Bus Terminal	387
Waterfront Development	124
Port Commerce	64
Ferries	58
Total	\$7,829

Source: The Port Authority of NY & NJ, *Financial Statements and Appended Notes*, Year 2006, Schedule F

The Port Authority controls the major transportation routes from New York City to New Jersey, and offers transit services along these routes. The most trafficked bridges and tunnels to New Jersey – the Lincoln and Holland Tunnels, the George Washington Bridge, the Outerbridge Crossing, the Goethals Bridge and the Bayonne Bridge – are all controlled by the Port Authority, and are valued at \$2.1 billion. Likewise, the Port Authority operates the PATH train system that brings commuters from New Jersey into Manhattan, and vice versa, valued at \$1.84 billion.

Inside the city, the Port Authority also has substantial capital assets: it runs both major New York City airports, John F. Kennedy (JFK)

⁹ These park facilities are: Bayswater Point in the Rockaways, Gantry Plaza Parks in Long Island City, Clay Pit Ponds in Staten Island, Empire-Fulton Ferry Park in Brooklyn, Riverbank Park in Manhattan and Roberto Clemente Park in the Bronx.

See New York State Office of Parks, Recreation and Historic Preservation, Map of New York City Region, accessed 3 January 2007, available online at <http://nysparks.state.ny.us/regions/nycity.asp>.

International Airport and LaGuardia Airport. JFK spans 5,000 acres, has over 30 miles of roadway and is valued at more than \$2.1 billion. LaGuardia Airport services domestic flights only, and at 680 acres with 3 miles of roadway, is much smaller than JFK. It is worth \$593 million.

The Port Authority also operates a bus terminal (\$387 million) and two ports in Brooklyn (\$64 million). In addition, it is pursuing waterfront development in Queens worth \$124 million.

The Metropolitan Transportation Authority. The Metropolitan Transportation Authority (MTA) was created in 1965, and brought management of several independent transit services in the region under a single umbrella organization. Thus, the MTA system serves the larger New York City metropolitan area, making it the largest public transportation system in the United States: its services span over 5,000 square miles, from New York City to Long Island, southeastern New York State and Connecticut.¹⁰

The size of the transit system within New York City alone is unsurpassed: it has the most buses in North America and utilizes the largest subway fleet in the world.¹¹ The subway system boasts a fleet of 6,200 subway cars that travel along 840 miles of tracks – long enough to stretch from New York City to Chicago if laid end to end. Subway cars stop at 468 stations across the city, accommodating 4.9 million riders each day.¹² Over 4,500 buses serve 12,581 bus stops in 243 routes across the city. This includes previously privately-owned bus lines in Queens and Staten Island, making annual bus ridership 741 million in 2006.¹³

Regional commuter trains that provide access to New York City from Long Island and other parts of New York State are also important to the city’s vitality. With an annual ridership of approximately 80 million, the Long Island Rail Road runs over 700 trains daily, from Pennsylvania Station in midtown Manhattan to the end of Long Island in Montauk.¹⁴ The

Table 2
Metropolitan Transportation Authority
Value of Capital Assets,
Net of Depreciation, Fiscal Year 2006
(dollars in millions)

Buildings and Structures	\$9,337
Infrastructure	9,149
Passenger Cars	6,633
Land and Construction	5,392
Bridges and Tunnels	1,344
Buses	870
Other	5,582
Total	\$38,307

Source: MTA, *Comprehensive Annual Financial Report for the Year Ending in 2006*, p.47

¹⁰ Metropolitan Transportation Authority. *2005 Annual Report*, pages 47-48. Also available online at http://mta.info/mta/investor/investor_02.htm

¹¹ Metropolitan Transportation Authority. “About NYC Transit.” Accessed 4 January 2007, available online at <http://mta.info/nyct/facts/ffintro.htm>

¹² Metropolitan Transportation Authority. “Subways.” Accessed 26 October 2007, available online at <http://mta.info/nyct/facts/ffsubway.htm>

¹³ Metropolitan Transportation Authority. “Buses.” Accessed 26 October 2007, available online at <http://mta.info/nyct/facts/ffbus.htm> .

¹⁴ Metropolitan Transportation Authority. “About MTA Long Island Rail Road.” Accessed 4 January 2007, available online at <http://mta.info/lirr/pubs/aboutlirr.htm>. For ridership information, see MTA 2006 Preliminary Budget, July 2005, p III-6.

Citizens Budget Commission

Metro-North Railroad is about as large, carrying about 75 million riders annually, with stations in seven counties in New York State and two in Connecticut. Trains into New York City operate through Grand Central Station.¹⁵

Besides transit services, the MTA also provides other key services vital to keeping New Yorkers, commuters and visitors moving: it controls and operates bridges and tunnels throughout the city. Its holdings include seven major bridges and two large tunnels: the Triborough Bridge, the Throgs Neck Bridge, the Verrazano Bridge, the Whitestone Bridge, the Hudson Bridge, the Gil Hodges Bridge, the Cross Bay Bridge, the Brooklyn Battery Tunnel and the Queens Midtown Tunnel. In addition to these, MetroNorth and the Long Island Railroad operate some minor bridges and tunnels on their rail lines. Bridges and tunnels under the control of the MTA are valued at \$1.3 billion; the MTA's entire capital asset portfolio is \$38.3 billion.

The Private Sector. Private individuals or corporations own capital assets in virtually each of the general functional areas identified. For some functions, such as environmental protection, government owns all capital assets and exclusively provides services; however, in other areas, such as transportation and transit, the private sector supplements existing infrastructure or government services, or provides additional services for profit. Some private bus lines, for example, continue to operate in Staten Island for routes not serviced by the MTA; private ferry service, water taxi and cruise companies operate across the city for sightseeing and commuting purposes; and, some terminals are operated privately at JFK airport.

In still other areas, like housing, hospitals and education, private capital investments are essential to ensuring vibrant communities, and are substantial. By far, the largest private investments are in property: the full value of taxable real property in the City was \$614 billion in fiscal year 2006.¹⁶ The value of private, tax-exempt property totaled \$26.5 billion, \$12 billion of which was for religious, charitable, cultural, non-profit, medical and educational institutions.¹⁷ Medical and educational facilities comprise half, or \$6 billion, of that total, illustrating the pervasiveness of these institutions in communities. Rivaling the largest public school system in the country, New York City has an extensive system of private schools: approximately 950 K-12 private, parochial and charter schools, and over 90 private colleges and universities.¹⁸ There are also 260 hospitals and nursing homes throughout the city, most of which are privately owned.¹⁹

There are two areas where the private sector's investments are not only substantial, but also almost exclusively responsible for managing infrastructure and providing services: energy delivery and telecommunications. In delivering energy to New York City and Westchester, Consolidated Edison

¹⁵ Metropolitan Transportation Authority. "About MTA Metro-North Railroad." Accessed 4 January 2007, available online at <http://mta.info/mnr/html/aboutmnr.htm>. For ridership information, see MTA 2006 Preliminary Budget, July 2005, p III-6.

¹⁶ New York City Department of Finance. "Annual Report on the New York City Property Tax: Fiscal Year 2006." September 2006, p 1.

¹⁷ New York City Department of Finance. "Annual Report on the New York City Property Tax: Fiscal Year 2006." September 2006, p 14.

¹⁸ New York City Department of City Planning. Selected Facilities and Program Sites in New York City: 2005.1 Release. Database available for digital download online at <http://www.nyc.gov/html/dcp/html/bytes/applbyte.shtml>.

¹⁹ New York City Department of City Planning. Selected Facilities and Program Sites in New York City: 2005.1 Release. Database available for digital download online at <http://www.nyc.gov/html/dcp/html/bytes/applbyte.shtml>.

of New York has assets valued at \$16.6 billion.²⁰ Its energy delivery network includes 93,612 miles of underground transmission and distribution lines, 36,047 miles of overhead distribution and transmission lines, 4,297 miles of gas mains and 105 miles of steam mains.²¹

Telecommunications is an increasingly important part of infrastructure; besides regular telephone lines, this includes cell phone towers, fiber optic cables that can transmit digital and broadband services, and wireless internet networks. Approximately 3 million miles of fiber optic network infrastructure have been installed by corporations in the city, with seven firms franchised to operate broadband networks.²² Two of the largest companies in this arena are Verizon and Time-Warner cable, but the multitude of players and changes in telecommunications landscape over time make it difficult to estimate the value of all telecommunications infrastructure.

Table 3
Non-City Control of Capital Assets in New York City

	Federal Govt.	State Govt.	Port Authority	MTA	Other Authorities*	Private Sector
Transportation		✓	✓	✓	✓	✓
Transit			✓	✓		✓
Environmental Protection						
Education		✓			✓	✓
Housing					✓	✓
Public Protection & Justice	✓	✓				
Health	✓	✓				✓
Parks, Libraries & Cultural	✓	✓				✓
Sanitation						✓
Energy					✓	✓
Telecommunications						✓

Note: ✓ denotes capital asset holdings by government, authority or private sector in that functional area.

*Capital assets controlled by "Other Authorities" include assets owned or managed by the New York State Thruway Association (transportation), the Dormitory Authority of the State of New York (education), the Battery Park City Authority (housing), the Roosevelt Island Operating Corporation (housing), and the New York Power Authority (energy).

Table 3 provides an overview of non-city capital asset holdings that demonstrates the extent to which non-city entities control or manage various aspects of capital and infrastructure within New York City. With the exception of environmental protection, the private sector and State government – directly or through its authorities – have capital assets in every functional area. In fact, most important infrastructure systems are not directly in the control of City government: the

²⁰ Consolidated Edison of New York. *2006 Annual Report*, p. 79.

²¹ Consolidated Edison of New York. *2005 Annual Report*; p 4.

²² *Telecommunications and Economic Development in New York City: A Plan for Action*. A Report to Mayor Michael R. Bloomberg prepared by the New York City Economic Development Corporation, the New York City Department of Technology and Telecommunications and the New York City Department of Small Business Services. March 2005.

Citizens Budget Commission

MTA controls the transit system, the private sector controls energy delivery and telecommunications systems, and the MTA and Port Authority control much of the interregional transportation and transit systems. In sum, the capital landscape is fragmented, with responsibility for all of the city's capital assets not entirely in the hands of any single government or entity.

New York City. New York City government assumes control of the greatest realm of assets: Either directly or through its component units, the City has \$60.5 billion in capital assets.

Table 4
City-controlled Capital Assets in New York City, Net of Depreciation, FY 2007
Total Value: \$60,464 million
(dollars in millions)

	New York City Government	New York City Authorities			
		Water	Housing	HHC	Others*
Environmental Protection		\$18,436			
Education	\$11,904				
Transportation services**	6,454				
Housing	97		\$5,124		
Public Protection & Justice	3,840				
Health	459			\$2,419	
Parks, Libraries & Cultural	2,581				
Sanitation	760				
Social services	763				
General Government	2,781				\$154
Land and construction	4,694				
Telecommunications	✓				
Total Asset Values	\$34,331	\$18,436	\$5,124	\$2,419	\$154

Note: ✓ denotes capital asset holdings by City government whose values cannot be calculated.

*Capital asset holdings for Housing Development, Economic Development, and Off-Track Betting Corporations and other nonmajor component units of city government reported in the City's Comprehensive Annual Financial Report.

** Includes ferry transit service operated by the Department of Transportation.

Source: City of New York, Office of Comptroller, Comprehensive Annual Financial Report, Fiscal Year 2007.

Several sources of data provide inventory information for City-controlled capital assets. The City Comptroller keeps a fairly comprehensive inventory and publishes it in the City's *Comprehensive Annual Financial Report*. The Office of Management and Budget also publishes limited inventory information by department in its annual survey of assets, the Asset Information Management System (AIMS), and the Department of City Planning publishes an inventory of selected facilities. Information on vehicle fleets, citywide and by department, can be found in the *Mayor's Management Report*. Finally, some departments publish information about the capital assets under their control on their websites, or in separate reports.

Taken together, these sources provide the most complete view of the City's capital assets available, though one that is incomplete. To the extent possible, the following section describes New York City's capital assets by general government function and provides asset values as reported by the Comptroller for each area.

Environmental Protection. Delivering water to and removing sewage from New York City requires a vast system of infrastructure, valued at \$18.4 billion. This system is controlled by the City's Department of Environmental Protection in collaboration with the New York City Water Board and the Municipal Water Finance Authority.

Water delivery involves a large system of dams, 24 reservoirs, 3 aqueducts and 3 water tunnels that begin upstate and cover hundreds of miles to bring water to the faucet tap. The dams, reservoirs and aqueducts in this network are mostly outside the boundaries of the City. Distribution of water into the city relies on two large water tunnels, with a third currently being constructed. From these tunnels, water distribution within the City occurs via 6,200 miles of water mains.²³

There are 6,600 miles of sewer pipes, 135,000 storm water drains and 14 wastewater treatment plants in the city.²⁴ The sewers collect and transport waste to the treatment plants, where sludge is removed from water, which is then treated and returned to the ocean. Seepage basins allow water collected from storm water drains to pass into the ground.

Transportation. The infrastructure assets of the Department of Transportation (DOT) total \$6.4 billion. DOT is responsible for maintaining 5,800 miles of streets and highways and 787 of the over 2,000 bridges and tunnels in the city.²⁵ Most (684) DOT-operated bridges are highway bridges. The 100 waterway bridges operated by DOT include the four major East River bridges, the Queensboro, Manhattan, Brooklyn, and Williamsburg Bridges. DOT also operates six tunnels and several of the 150 piers and bulkheads in the city. The Departments of Environmental Protection and Parks and Recreation also operate some piers, bulkheads and bridge structures.²⁶

Transit. While transit services in the city and the region are mostly provided by the MTA and the Port Authority, DOT operates a ferry service to Staten Island that employs 7 ferries and 15 ferry terminal facilities.

Education. There are 1,040 public school buildings in New York City, worth about \$11.8 billion. Approximately 70 percent, or 715, of these buildings are used for elementary education; 181 buildings house intermediate or junior high schools, and the remaining 144 facilities are high

²³ New York City Municipal Water Finance Authority. *Comprehensive Annual Financial Report for the Fiscal Year Ended June 30th, 2005*. p 2.

²⁴New York City Department of Environmental Protection. "New York City's Wastewater Treatment." Available online <http://www.nyc.gov/html/dep/html/wssystem.html>.

²⁵ City of New York. Mayor's Office of Operations. *The Mayor's Management Report, Fiscal Year 2007*. September 2007, p. 59.

²⁶ New York City Department of Transportation. "Frequently Asked Questions (FAQs) – Bridges." Accessed 25 October 2007, available online at http://www.nyc.gov/html/dot/html/faqs/faqs_bridge.shtml.

Citizens Budget Commission

schools.²⁷ The City is also responsible for the capital costs associated with the six community colleges of the City University of New York; these assets are valued at \$83 million.

Housing. Public housing assets in New York City are mostly the properties constructed, managed and maintained by the Housing Authority. The Housing Authority is the largest public housing authority in North America, with assets valued at \$5.1 billion that include 178,466 units of housing in 2,644 buildings.²⁸ New York City itself, through the Department of Housing Preservation and Development, owns \$97 million of housing, mostly in the form of foreclosed properties.

Public Protection and Justice. While personal service costs for uniformed officers tend to come to mind when thinking of public protection and judicial services, there are also significant capital costs related to supporting the operations of police, fire and correction officers. Currently, there are 243 firehouses, 77 police precinct houses, 21 courthouses and 14 correctional/detention centers in operation throughout the city.²⁹ The police and fire departments also have large fleets of vehicles: 8,838 vehicles for the police department and over 2,055 for the fire department.³⁰ These assets and others are valued at \$3.8 billion.

Health. The City's public hospitals are run by the Health and Hospitals Corporation, a component unit of City government with capital assets of \$2.4 billion. HHC operates 11 hospitals, as well as six treatment centers, four long-term care facilities and 100 neighborhood clinics.³¹ Other health facilities, such as public health offices and clinics, operated directly by the Department of Health and Mental Hygiene, are worth \$459 million.

Parks, libraries and cultural institutions. New York City is known for its museums, cultural institutions and sports and recreational facilities; some of these are privately-owned, but many are City-owned. There are 285 museums and other cultural institutions, 24 libraries and five stadiums in the city.³²

The City also boasts 1,700 parks, covering over 29,000 acres of land, as well as 990 playgrounds, 550 tennis courts, 52 outdoor swimming pools, 14 miles of beaches, 13 golf courses, six ice rinks and four zoos.³³ These assets are worth \$2.4 billion.

²⁷ City of New York. Office of the Comptroller. "Capital Asset Statistics by Function/Program – Ten Year Trend." *Comprehensive Annual Financial Report, Fiscal Year Ending June 30, 2007*, pages 325-326.

²⁸ New York City Housing Authority. "Fact Sheet: New York City Housing Authority." Accessed 25 October 2007, updated October 2007, available online at <http://www.nyc.gov/html/nycha/html/about/factsheet.shtml>.

²⁹ City of New York. Office of the Comptroller. "Capital Asset Statistics by Function/Program – Ten Year Trend." *Comprehensive Annual Financial Report, Fiscal Year Ending June 30, 2007*, pages 325-326.

³⁰ City of New York. Mayor's Office of Operations. *The Mayor's Management Report, Fiscal Year 2007, Supplementary Indicator Tables*. September 2007, pgs. 148-149. Supplementary tables available online at http://www.nyc.gov/html/ops/html/mmr/mmr_sub.shtml.

³¹ City of New York. Mayor's Office of Operations. *The Mayor's Management Report, Fiscal Year 2007*. September 2007, p. 13.

³² Under the terms of the deals to construct new stadiums for the Mets and Yankees, the City will no longer own the stadiums for these teams, as it does now.

³³ City of New York. Mayor's Office of Operations. *The Mayor's Management Report, Fiscal Year 2007*. September 2007, p. 97.

Sanitation. Most residential sanitation services are provided by the Department of Sanitation, which has \$760 million in capital assets. There are over 5,500 sanitation vehicles, including not only garbage collection trucks, but also vehicles used for other purposes, like street cleaning and snow removal.³⁴ In addition, there are 67 transfer stations, where garbage is trucked for removal to remote landfills, throughout the city.³⁵

Telecommunications. The City is slowly taking a more active role in facilitating the development of new telecommunication infrastructure. Partnering with Nokia, a telecommunications firm, the City has made free wireless broadband internet service, or “wi-fi,” available in 17 parks locations across the city.³⁶ The City is also actively examining prospects for expanding free wi-fi throughout the city.³⁷

Other Capital Assets. The City also has sizable capital assets in land and new construction (\$4.7 billion) and in assets used for general government purposes (\$2.8 billion), mostly government buildings. Social service agencies have \$763 million in capital assets, almost entirely buildings used for their operations. Other component units of City government, including the Off-Track Betting Corporation and the Economic and Housing Development Corporations, have \$154 million in capital assets.

Capital assets in New York City encompass a broad scope of infrastructure, buildings, equipment and vehicles that provide the foundation for government services, commercial enterprise and personal daily activity into, throughout and out of the city. Many of these assets are not owned or operated by New York City directly; however, the City is still the majority owner. With \$60.5 billion worth of capital assets, the City owns more than the MTA and the Port Authority combined.

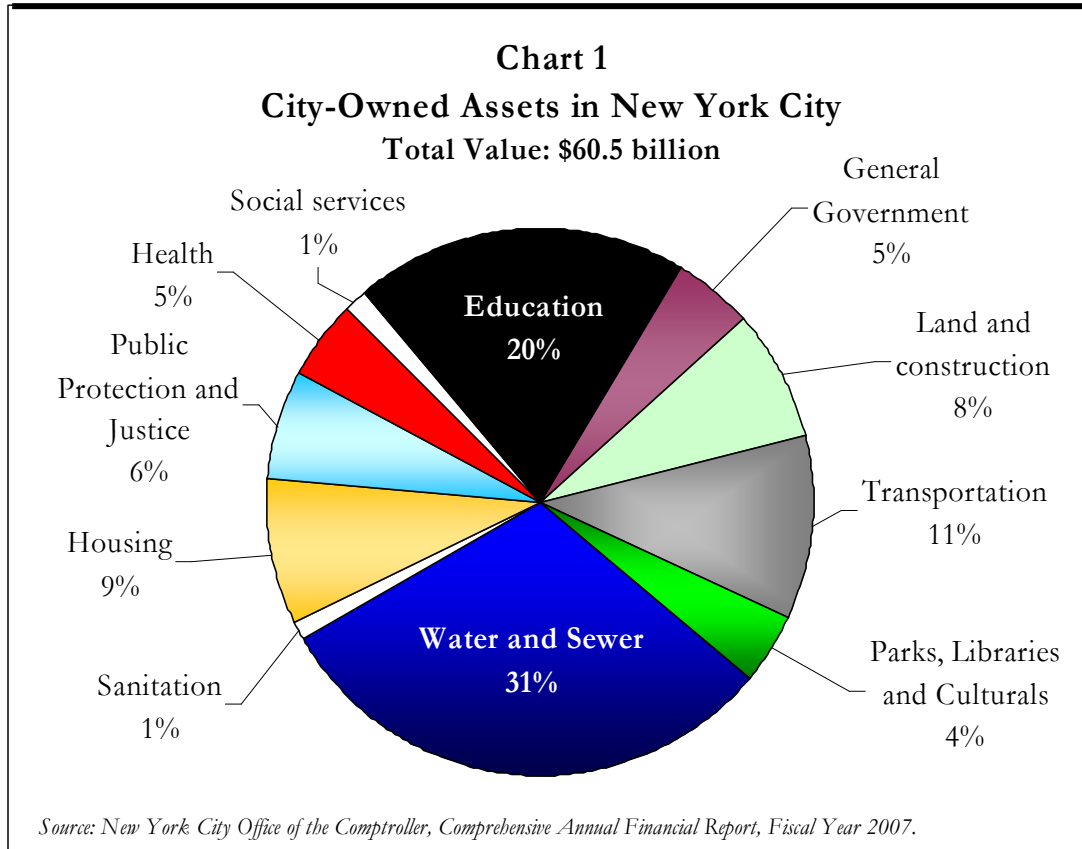
The most valuable of these assets are the water and sewer system and school buildings, which together account for more than half of the total value of capital assets. Transportation infrastructure is also a significant portion, comprising 11 percent of total, as are housing assets at 9 percent. Other large capital asset holdings include non-depreciable assets in land and construction-in-progress (8%), those in public protection and judicial services (6%), hospitals and health institutions (5%) and assets used for general government purposes (5%).

³⁴ City of New York. Mayor’s Office of Operations. *The Mayor’s Management Report, Fiscal Year 2007, Supplementary Indicator Tables*. September 2007, pg. 146. Supplementary tables available online at http://www.nyc.gov/html/ops/html/mmr/mmr_sub.shtml.

³⁵ City of New York. Office of the Comptroller. “Capital Asset Statistics by Function/Program – Ten Year Trend.” *Comprehensive Annual Financial Report, Fiscal Year Ending June 30, 2006*, pages 318-319.

³⁶ New York City Department of Parks and Recreation. “Park Wi-Fi: New York City Department of Parks and Recreation.” Accessed 26 October 2007, available online at http://www.nycgovparks.org/sub_your_park/wifi/index.html.

³⁷ Chan, Sewell. “New York to Examine Creating Citywide Broadband Network.” *The New York Times*. 7 July 2006.



The capital assets not under the control of New York City are also extensive, with state and federal governments, State authorities and the private sector owning capital assets in virtually all general functional areas. Public authorities and private corporations replace the City as owners or operators of some of the largest and most valuable aspects of infrastructure: mass transit, energy and telecommunications. Valuing these assets, however, is difficult; while the MTA and the Port Authority provide sufficient details with respect to their capital assets, the State and its authorities do not. State capital documents do not provide inventories of assets, include no regional breakdowns for capital assets in financial statements, and do not necessarily incorporate or integrate the capital assets of authorities into financial statements or budgeting documents. Major privately-held capital assets, such as those in telecommunications, are also difficult to value and inventory due to the multiplicity of entities and individuals implicated and the lack of City-specific data available in financial statements. As a whole, there is no single authoritative and comprehensive inventory of the entire universe of assets in New York City.

THE CONDITION OF NEW YORK CITY'S ASSETS

One of the central themes of PLANYC is to maintain and improve the City's infrastructure. Key components of the City's infrastructure are already or will be more than 100 years old by 2030. While New York City was officially consolidated in 1898, some of the City's infrastructure, such as the Croton water system, which became operational in 1842, and the sewer system, which was first constructed in 1849, pre-dates that milestone. Much of the rest of the City's infrastructure was constructed in the 50 years that followed: for example, the East River bridges were completed by 1909, the first water tunnel was completed in 1917, the energy grid was built during the 1920s, and signaling technology for subways was first installed in the 1940s.

As PLANYC acknowledges, continuing to maintain this infrastructure, especially as it comes under new pressure from a growing population, will present the City with a unique challenge. In order to be successful in managing this challenge for not only its infrastructure, but all capital assets generally, the City must have disciplined capital management practices that can ensure that it can achieve and maintain a state of good repair for all assets.

Recent History of Capital Asset Management. Keeping assets properly functioning requires keeping up with routine maintenance and performing necessary repairs in a timely fashion (see text box). During the 1970s and early 1980s, a general disinvestment in capital assets caused by fiscal pressures meant that such maintenance and repairs were deferred, resulting in the widespread deterioration of the city's infrastructure and capital assets. This deterioration became most publicly and symbolically visible in the full or partial closure of the East River bridges.

Since that time, the City has been catching up on this deferred maintenance, trying to fix old assets and bring them to a state of good repair. At the same time, investments have been made to maintain properly functioning assets through continued maintenance work, programmatic replacement, and other upgrades. In sum, the City has spent over \$110 billion in capital expenditures since fiscal year 1991 (constant dollar terms).³⁸

Understanding State of Good Repair

*When a capital asset is purchased, it is expected to last for a certain length of time, called its **useful life**. This expectation is based on the presumption that all routine maintenance and necessary repairs will be performed on the asset as scheduled or needed, keeping the asset properly functioning and in what is known as a **state of good repair**. An asset in good repair both functions as it is supposed to and is safe to use.*

When regular maintenance and repairs are not performed, however, the functionality of an asset is impaired, and it may break down before reaching the end of its useful life. In those cases, the costs of performing major repairs to restore assets to a proper working condition or to replace them are funded through the capital budget, and can outweigh the costs of performing routine maintenance and keeping them in a state of good repair. Simply speaking, it is much cheaper and wiser to fix a leak in the roof than to be forced to replace the entire roof.

Therefore, achieving and maintaining state of good repair is imperative to good capital asset management and to minimizing expenses.

³⁸ Capital commitments since 1991 summed and adjusted for inflation by CBC.

Citizens Budget Commission

These investments have generally improved the City's infrastructure, most notably bridges and tunnels. Since the 1980s, the City has spent approximately \$3 billion rehabilitating the East River Bridges to bring these bridges to a fair condition.³⁹ Work continues on these bridges and will enter its final stage, a seismic retrofit that upgrades the bridges to meet current standards, in 2013.⁴⁰ The Harlem River bridges are also close to being completely rehabilitated, at a cost of close to \$1 billion.⁴¹

Understanding how the City's investments have improved other assets in the City's capital stock – schools, housing, parks and hospitals – over the past fifteen years is more difficult. A citywide overview of progress made on upgrading capital assets or achieving state of good repair is unavailable. Some agencies, such as the Department of Transportation, review their capital assets and publish reports, but agencies generally do not associate their capital spending with a state of good repair goal, making it particularly difficult to assess improvements in terms of a single question: Has the City achieved a state of good repair for all its capital assets and infrastructure?

The following sections overview the information available on the condition of assets owned by New York City government and by other entities.

New York City Assets. Information on New York City assets is available from three sources: a landmark 1998 report by the Comptroller; data from the annual Asset Information Management System (AIMS) report; and individual agency assessments. All sources indicate that the City has not yet achieved a state of good repair (SOGR) on all its capital assets.

Dilemma in the Millennium. In 1998, City Comptroller Alan Hevesi's office undertook a comprehensive review of the City's capital assets to determine whether they were in a state of good repair. The findings, issued in a report entitled *Dilemma in the Millennium*, were that \$70 billion in capital spending was needed in order to bring capital assets to a state of good repair and address emerging capital needs over a ten-year period.⁴² At the time of the report, the City planned for \$42 billion in capital spending for fiscal years 1998–2007, presumably insufficient to meet the City's

Table 5
Total Estimated Cost of
Rehabilitating East River Bridges
(dollars in millions)

Manhattan Bridge	829
Queensboro Bridge	772
Williamsburg Bridge	1032
Brooklyn Bridge	547
Total	\$3,180

Note: Includes complete work, work in progress and work to be completed.

Sources: NYC Department of Transportation, *2006 Bridges and Tunnels Annual Condition Report, Appendix A-1*

³⁹ \$3 billion for East River Bridges includes work in progress and seismic retrofits on bridges to be completed in the future. See NYC Department of Transportation, *2006 Bridges & Tunnels Annual Condition Report*, Appendix A-1 and Appendix C-1.

⁴⁰ New York City Office of Management and Budget. *Ten-Year Capital Strategy, FY2008-2017*. "Department of Transportation – Bridges." April 2007, pg. 21.

⁴¹ New York City Department of Transportation. *New York City's Harlem River Bridges: The Reauthorization of the Transportation Equity Act for the 21st Century*. January 2004.

⁴² Does not include needs identified for the transit system. Inclusive of these needs, total capital spending needs identified by the Comptroller for fiscal years 1998-2007 was \$91.83 billion.

capital requirements.⁴³ During that period, the City has committed approximately \$59 billion,⁴⁴ substantially more than planned in 1998, but still \$11 billion short of the needs identified in the Comptroller's report.

AIMS Report. The City does not formally certify the condition of all its major capital assets on a yearly basis,⁴⁵ but is mandated by the City Charter to report on the amount of spending necessary to keep assets at or bring them to a state in good repair in AIMS. Assets in a state of good repair are in proper working condition, with routine maintenance and repairs performed on schedule. The AIMS report relies on engineers to survey a quarter of the City's assets each year on a rolling basis, and then issue recommendations for achieving state of good repair. Recommendations are made for spending in both the capital and expense budgets,⁴⁶ and later on, the City publishes an agency reconciliation report that shows how much of the spending recommended actually is or will be funded.

By the City's account, shortfalls in funding state of good repair requirements documented by the Comptroller's 1998 report have persisted. Chart 2 shows the increase in total capital and expense budget recommendations from \$4.2 billion to \$5.4 billion in fiscal years 2000 to 2008. At the same time, total funding generally decreased. Whereas approximately \$3 billion in SOGR work was undertaken by agencies in fiscal years 2000 to 2002, this funding slipped to \$2.6 billion in fiscal year 2008. As a result, funding for recommendations slipped below 50 percent, demonstrating consistent shortfalls in spending on necessary maintenance and repairs, with deficits totaling billions of dollars each year. In the current fiscal year, this shortfall totals \$2.8 billion, and clearly demonstrates that the City has not reached a state of good repair.

This shortfall is understated, given that AIMS is limited in its scope. The City Charter exempted capital assets with a replacement cost of less than \$10 million and a useful life of less than 10 years from AIMS, thereby omitting a good deal of assets from reporting. Also excluded are assets not easily or readily observable by field engineers, such as underwater elements of piers and bulkheads, and the four East River Bridges, as well as other special systems like traffic and street lighting systems, internal or aesthetic components, and equipment and vehicles. As a result, state of good repair estimates in AIMS capture just a portion of an agency's assets; depending on the type of assets an agency has, it may be a large fraction of assets or a smaller one.

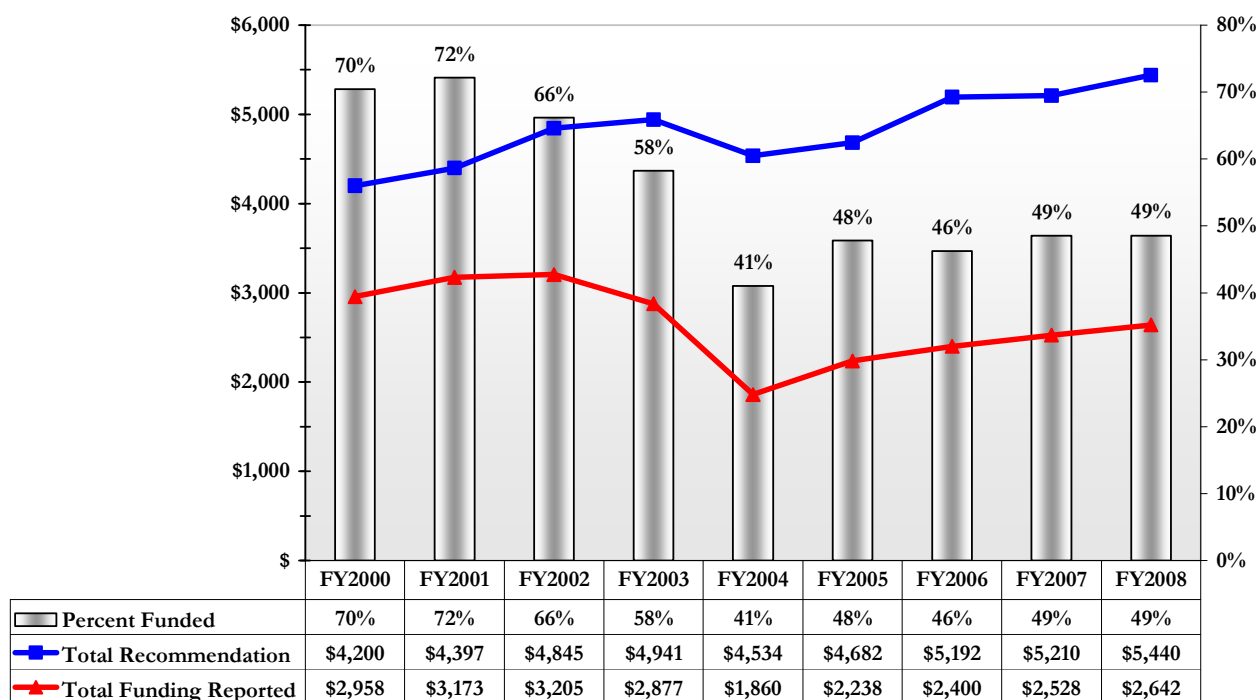
⁴³ Spending does not include subsidies and other payments for the transit system in the capital plan totaling \$10.24 billion.

⁴⁴ Excludes subsidies and payments to the transit system. Capital commitments from fiscal years 1998 to 2007 certified by Comptroller.

⁴⁵ If the City complied with Governmental Accounting Standards Board Statement Number 34 with the modified approach, it would certify the condition of its assets yearly and document the expenditures dedicated to keeping them in good condition. The City's chosen method of compliance, depreciation expense accounting, does not require such certification of assets. For more on Statement No. 34, pages 30-31.

⁴⁶ Capital budget recommendations are for repairs or the replacement of assets with a value greater than \$35,000 and a useful life of more than five years; expense budget recommendations are for repairs or replacement of assets with a value under \$35,000 or a useful life under five years. Together, these recommendations represent what an agency views as outstanding need in order to bring assets to a state of good repair.

Chart 2
Change in Funding of AIMS Recommendations, Fiscal Years 2000-2008



Source: New York City Office of Management and Budget, *Asset Information Management System*, Fiscal Years 2000-2008.

Another reason state of good repair estimates in the AIMS report are understated is that it does not include capital assets managed by public authorities. The City Charter exempted public authorities from AIMS, meaning that no information is included on some of the City’s most valuable assets: public housing managed by the Housing Authority, and more importantly, the water and sewer system managed by the Municipal Water Finance Authority. For the water and sewer system, bridges and other large assets, some agencies conduct their own detailed agency assessments; however, these assessments do not necessarily offer a quantification or description of state of good repair needs.

Individual Agency Assessments. The water and sewer system is evaluated independently by engineers hired by the Water Authority. Two other major asset systems – the school system and bridges and tunnels – are evaluated independently of AIMS, as well. The Department of Transportation (DOT) and the Department of Education (DOE) issue their own reports in which each asset (school, bridge or tunnel) is inventoried, inspected, assessed, and assigned a rating or priority code for repairs.

Water and Sewer System. The water and sewer system is evaluated by engineers who perform selected inspections of operating facilities and major on-going construction programs, evaluate other comparable water and wastewater systems and review the capital and operating budgets, as well as the long-term capital program, to determine the condition of the system. The latest review by the engineers, published March 20, 2007, found that the water and sewer system is in adequate condition, meaning that it shows no major signs of deterioration and requires only routine maintenance.

The report also states that the Department of Environmental Protection undertook a Risk Based Prioritization (RBP) Assessment of its major assets, evaluating them using a uniform methodology that would allow for prioritization (high, medium, low) of repairs and maintenance. DEP's intent is to address high priority repairs in fiscal year 2008, and the report states that the Authority's expense and capital budgets are adequate to address the immediate needs of the system and for setting priorities; however, the report goes on to state:

“The planning level construction cost estimates are adequate for identifying immediate needs and setting priorities, but are not sufficiently detailed for budgetary commitment. It is therefore recommended that more comprehensive assessments be conducted for each major facility in the near future using this initial assessment as a program guideline. This will allow future facility upgrade projects to be entered into the [capital improvement plan] in an orderly fashion.”⁴⁷

The RBP assessments are not published in the report or elsewhere, making independent evaluation or the synthesis of information with AIMS impossible.

Streets and Highways. According to PLANYC documents describing the condition of the City's infrastructure, 3,000 lane miles— of a total of approximately 19,000— need repairing to achieve state of good repair, at a projected cost of almost \$2 billion.⁴⁸

Bridges and Tunnels. DOT releases the *Bridges and Tunnels Annual Condition Report*, which details the condition of the 790 bridges under the jurisdiction of DOT's Division of Bridges, annually. The bridges are rated according to statewide standards of “very good,” “good,” “fair” or “poor.” “Very good” and “good” bridges exhibit only minor deterioration and need little, if any, repairs in addition to routine maintenance. “Fair” bridges exhibit greater deterioration and require considerable reconstruction, while “poor” bridges are far from being in a state of good repair, exhibiting serious damage to the point where they could be hazardous. A well-maintained bridge, one in proper functioning condition and on which maintenance and repairs are performed regularly, should never fall below a rating of “good.”⁴⁹

After deterioration in the 1970s and 1980s, substantial investments were made in bridges and their condition has improved overall. Data from the most recent report, for calendar year 2006, show that 328 bridges, approximately 40 percent, were rated good or very good, a substantial increase from 1997. But the majority of bridges continue to be rated fair, indicating they are barely in a state of good repair, and require substantial repairs or reconstruction to prevent further deterioration. The City has made progress in reducing the number of fair bridges, and has made substantial advances in rehabilitating poor bridges and bringing them to a state of good repair. Where 40 bridges were rated poor in 1997, only three poor bridges remained in 2006.

⁴⁷ New York City Municipal Water Authority. *Fiscal Year 2007 Consulting Engineer's Report*. Prepared by Metcalf & Eddy of New York, Inc. March 20, 2007, pg. 9.

⁴⁸ PLANYC. “Transportation Infrastructure.” Accessed 25 October 2007, available online at http://www.nyc.gov/html/planyc2030/html/challenge/maintainyc_transportation.shtml.

⁴⁹ Ross Sandler and Samuel I. Schwartz. “Spanning the 21st Century: Reconstructing a World Class Bridge Program.” Report to Mayor Edward I. Koch. New York City Department of Transportation. 1988.

Table 6
Bridge and Tunnel Ratings

	<u>1997</u>	<u>2000</u>	<u>2003</u>	<u>2006</u>
Poor	40	13	4	3
Fair	530	481	429	456
Good	145	180	209	210
Very Good	55	85	111	118
Total	770	759	753	787

Note: In 2004, NYCDOT acquired 40 bridge structures from other city agencies; 30 of these bridges were rated fair, and 1 was rated poor.

Source: NYC Department of Transportation, 2006 Bridges and Tunnels Annual Condition Report

Table 7
School Building Ratings

	<u>FY2002</u>	<u>FY2006</u>
Good	1%	3%
Fair to good	21%	28%
Fair	77%	69%
Fair to poor	2%	0.2%
Poor	0%	0%

Source: City of New York, Mayor's Management Report, FY2007

School Buildings. The New York City School Construction Authority (SCA) performs an annual assessment of school buildings in the Building Condition Assessment Survey (BCAS). After thorough architectural, mechanical and electrical inspections, inspectors detail deficiencies and violations of safety codes, and provide a condition rating on a scale of 1 to 5 (1 being good and 5 being poor). The *Mayor's Management Report* aggregates this school-level data, which indicates that, in fiscal year 2006, virtually no school buildings were rated as fair-to-poor or poor in condition; however, the majority, 69 percent, were rated as “fair,” indicating there is substantial repair work needed.

These reports are useful in directly evaluating the condition of the assets they examine; however, most agencies have fewer or less valuable capital assets than the bridges, tunnels and schools, and hence, do not publish separate, individual department or asset reports. Furthermore, these agency assessments do not dovetail with AIMS reporting, making a full and complete citywide perspective on capital assets unavailable.

Why hasn't SOGR been achieved? AIMS reports and agency documents verify that state of good repair has not yet been achieved for a good deal of the City's assets. Four factors contributing to this are reviewed below.

1. *Agencies do not fully fund AIMS recommendations.* Agencies that report under AIMS have some indication of their state of good repair needs; however, as shown in Chart 2, agencies do not make the investments they identify as necessary to achieve a state of good repair. The overall recommendation for achieving state of good repair has increased over the past several years, but agencies have not increased their investments in closing the state of good repair gap; instead they have devoted fewer funds to state of good repair work. The most recent state of good repair estimate for fiscal year 2008— which is understated due to the exemptions from AIMS reporting — showed \$5.4 billion in need citywide; but less than 50 percent of this was funded by agencies covered in the report.

2. *There is no clear citywide policy for funding maintenance and repairs, or more generally, for achieving a state of good repair.* Properly maintaining and repairing capital assets is essential to keeping assets in good working condition and ensuring that they reach the end of their useful lives. Expenditures for such routine maintenance should come from the operating budget, but few agencies report maintenance expenditures. Furthermore, any funding of maintenance and repairs stated by agencies in the AIMS report is not comparable to budgeted amounts, since this funding represents activities potentially undertaken in more than one fiscal year.

Table 8
AIMS Expense Recommendation Compared to Expense Budget, by Agency, Fiscal Year 2008
(dollars in thousands)

	AIMS, Fiscal Year 2008		Adopted FY2008 OTPS Budget	Recommendation as a Percent of OTPS Budget	Adopted FY2008 Expense Budget	Recommendation as a Percent of Expense Budget
	Expense Budget Recommendation	Percent Funded				
Education	116,659	13%	4,907,275	2.4%	16,974,359	0.7%
Transportation	75,686	95%	340,751	22.2%	647,266	11.7%
Parks and Recreation	21,483	13%	92,550	23.2%	366,810	5.9%
Health & Hospitals Corp.	12,972	75%	138,087	9.4%	138,087	9.4%
Citywide Administrative	11,053	37%	905,905	1.2%	1,027,800	1.1%
Cultural Affairs	10,326	0%	164,616	6.3%	168,542	6.1%
Police Department	10,231	74%	283,400	3.6%	3,886,954	0.3%
Small Business Services	8,843	58%	152,315	5.8%	172,387	5.1%
City University	7,848	61%	240,220	3.3%	641,222	1.2%
Sanitation	4,902	10%	521,192	0.9%	1,246,980	0.4%
Homeless Services	4,633	100%	565,766	0.8%	680,767	0.7%
Correction	4,454	52%	118,908	3.7%	933,060	0.5%
All Libraries	3,011	35%	41,446	7.3%	41,446	7.3%
Health & Mental Hygiene	2,079	83%	1,217,681	0.2%	1,601,639	0.1%
Fire Department	2,044	95%	136,716	1.5%	1,472,908	0.1%
Human Resources*	1,434	25%	7,854,301	0.0%	8,562,681	0.0%
Children's Services	659	11%	2,325,893	0.0%	2,751,760	0.0%
Juvenile Justice	311	73%	89,270	0.3%	127,432	0.2%
Subtotal	\$298,628	45%	\$20,096,292	1.5%	\$41,442,097	0.7%
All Other			\$7,179,812		\$18,915,424	
TOTAL	\$298,628	45%	\$27,276,104	1.1%	\$60,357,521	0.5%

*Fiscal Year 2008 amounts reflect budget of the Department of Social Services.

Note: All other equals budgets of city agencies with no reporting under Asset Information Management System (AIMS).

Sources: City of New York, Office of Management and Budget, Adopted Budget, Fiscal Year 2008 and Asset Information Management System, Fiscal Year 2008.

The AIMS report shows clearly that some agencies may neglect these expenditures, even though they constitute a small percentage of any agency's operating budget (See Table 8). For example, the Department of Sanitation funded only 10 percent of its total expense budget recommendation of \$4.9 million; funding its entire recommendation, however, would have constituted less than half a percent of the department's expense budget in fiscal year 2008, and less than one percent of its total OTPS budget. Citywide, agencies reporting under in AIMS have funded 45 percent of their expense budget recommendations, even though these recommendations constitute less than 1 percent of the total expense budget for these agencies.

Citizens Budget Commission

Also revealing is the wide variation in agency funding of such repairs (contrast the Department of Sanitation with Homeless Services, two agencies with approximately the same AIMS expense budget recommendation), indicating that there is no clear citywide policy or directive on funding them. As a result, agencies can scrimp on maintenance expenditures in their expense budgets, resulting in assets that malfunction before their time and necessitating more costly capital expenditures for heavy repairs, reconstruction or replacement. For example, the consulting engineer's report on the water and sewer system states that some necessary bridge and dam upgrades have been deferred to later years, which may require greater maintenance to extend the life of the infrastructure. Such practices have resulted in repairs on the water and sewer system focused on "immediate needs,"⁵⁰ rather than preventive maintenance.

Lack of a clear policy for funding these expenditures makes ensuring capital assets are being well-managed and well-maintained difficult. Furthermore, lack of funding for capital recommendations, and the absence of a planned time horizon for achieving state of good repair system-wide, raise serious questions about the priorities guiding capital spending and how this spending improves the condition of the City's capital assets across all service areas.

3. Regular replacement cycles do not guide asset replacement.

Once an asset is purchased, it is expected to last or be useful for a certain length of time, called its useful life. When it reaches the end of this useful life, the asset should be replaced; in so far as useful lives for assets are easily determined, assets can be placed on regular replacement cycles. These replacement cycles, however, require performing routine maintenance and necessary repairs to ensure that an asset reaches the end of its useful life.

The City generally does not use replacement cycles to guide the replacement of capital assets; it generally identifies the useful life of some asset classes (buildings, infrastructure, equipment), but tends to replace assets on an ad-hoc basis that focuses resources on where they are most needed, i.e. toward assets that malfunction unexpectedly. Besides the unpredictability it imposes on the planning process, failure to plan for the replacement of assets on regularly scheduled cycles also creates disincentives for performing regular maintenance; instead of funding maintenance from operating revenues for which there are always competing demands, agencies can forego or minimize this maintenance, allowing assets to deteriorate. At that point, they can be replaced anew with funds from the capital budget.

Practical Benefits of Maintenance and Replacement Cycles

The benefits of performing regular maintenance and placing assets on replacement cycles are demonstrated by the experience of the MTA, recently covered by The New York Times. In the 1960s and 1970s, little attention was given to subway cars after their purchase; their condition would deteriorate rapidly, resulting in trains that malfunctioned often. In the 1980s, the MTA began a program of preventive maintenance and replacement of asset parts based on their useful lives. As a result, service dependability has increased markedly, as has the useful life of subway cars: whereas subway cars broke down every 4,800 miles traveled on average in 1979, today they break down an average of every 149,000 miles.

Source: William Neuman. "After 45 Years, New York's Subway Chief Has Reached His Stop." The New York Times. October 13, 2007.

⁵⁰ New York City Municipal Water Authority. *Fiscal Year 2007 Consulting Engineer's Report*. Prepared by Metcalf & Eddy of New York, Inc. March 20, 2007, pg. 8.

4. Capital funds that could be used for state of good repair work are devoted instead to replacement and expansion of assets. The capital budget represents a finite amount of resources that can be devoted to capital improvements. These capital funds are generally devoted to three purposes: state of good repair work; replacements of assets which can no longer be used with new ones; and purchase of new capital assets. In so far as allocations toward one purpose mean that less is available for another, then funds dedicated to replacement or expansion mean that less is available to achieve state of good repair.

Table 9
AIMS Capital Recommendation and Funding Compared to Capital Budget, by Agency, Fiscal Year 2008
(dollars in thousands)

	AIMS Report, Fiscal Year 2008			Adopted FY2008 Capital Budget	Planned Activities as a Percent of Capital Budget	Recommendation as a Percent of Capital Budget
	Capital Budget Recommendation	Agency Planned Activities	Percent Funded			
All Libraries	17,643	6,065	34%	84,490	7.2%	20.9%
Education	784,663	196,304	25%	3,242,730	6.1%	24.2%
City University	43,311	10,481	24%	44,296	23.7%	97.8%
Police Department	37,140	34,226	92%	181,158	18.9%	20.5%
Fire Department	11,932	5,393	45%	168,519	3.2%	7.1%
Children's Services	1,455	334	23%	29,898	1.1%	4.9%
Homeless Services	34,388	17,974	52%	37,754	47.6%	91.1%
Correction	125,147	57,910	46%	23,758	243.8%	526.8%
Human Resources	5,227	2,992	57%	8,790	34.0%	59.5%
Cultural Affairs	60,850	29,024	48%	295,844	9.8%	20.6%
Juvenile Justice	4,529	3,374	74%	N/A	N/A	N/A
Small Business Services	216,130	28,775	13%	483,207	6.0%	44.7%
Health & Mental Hygeine	11,213	10,230	91%	43,455	23.5%	25.8%
Health & Hospitals Corp.	178,113	59,839	34%	51,666	115.8%	344.7%
Sanitation	73,456	17,683	24%	211,114	8.4%	34.8%
Transportation	3,037,457	1,919,745	63%	2,126,750	90.3%	142.8%
Parks and Recreation	405,914	64,469	16%	816,920	7.9%	49.7%
Citywide Administrative	92,807	42,531	46%	1,133,871	3.8%	8.2%
Subtotal	\$5,141,375	\$2,507,349	49%	\$8,984,220	27.9%	57.2%
				\$6,339,882		
TOTAL	\$5,141,375	\$2,507,349	49%	\$15,324,102	16.4%	33.6%

Note: All other equals budgets of city agencies with no reporting under Asset Information Management System (AIMS).

Sources: City of New York, Office of Management and Budget, Adopted Budget, Fiscal Year 2008 and Asset Information Management System, Fiscal Year 2008.

Comparing capital funding for AIMS recommendations and the capital budget illustrates this point. AIMS capital recommendations in fiscal year 2008 totaled \$5.1 billion, with \$2.5 billion in funding for capital activities planned. For the agencies covered by AIMS, the capital budget adopted for fiscal year 2008 was \$9.0 billion. While fully funding the AIMS recommendation would mean that 57 percent of the fiscal year 2008 capital budget would be devoted to achieving a state of good repair, planned capital activities under AIMS (\$2.5 billion) equal less than 30 percent of the total capital budget for all agencies reporting under AIMS. The remaining 70 percent of the capital budget is devoted to expansion and replacement projects.

Costs for replacement in the capital budget can be reduced by scheduling replacement of an asset based on its useful life. As it is depreciated over the course of its useful life, operating revenues can

Citizens Budget Commission

be set aside for its replacement along the lines of its yearly depreciation expense, mitigating the costs of borrowing for these expenses, and freeing capital funds for state of good repair.

Non-City Owned Assets. Overall, the depth of information available on the condition of assets owned by New York City varies greatly, from very much, as in the case of detailed condition inspections performed on bridges, to very little, in the case of facilities and special systems exempted from reporting under AIMS. While there are limitations to the information available about certain assets, the combination of the AIMS report and individual agency assessments does provide, at the very least, a clear understanding that City-owned assets are not in a state of good repair, even if concrete improvement has been made in some areas.

Such information on state of good repair for non-City owned assets is generally not available, with few exceptions. The MTA, the largest non-City asset holder, has invested \$21 billion in achieving a state of good repair, but still faces a \$16.5 billion gap for NYC Transit (\$14.6 billion), LIRR (\$1.65 billion) and Metro North (\$250 million).⁵¹ In real terms, this means that 60 percent of the MTA's stations are not in a state of good repair. At its current rate of spending, the MTA does not anticipate achieving a full state of good repair on these systems until 2029.

The Port Authority reports on operations and maintenance expenditures for each of its capital assets in its annual report and financial statements, but does not include any reporting on the condition of its assets. The State also reports on maintenance expenditures and certifies the condition of its highways and bridges yearly, but does not report on these aspects by region. Furthermore, little information is known about the condition of State-owned assets besides transportation infrastructure.

City officials work closely with their counterparts at the State level to ensure inspections or maintenance are performed on assets such as bridges, but there is no formal public reporting on the condition of these assets. For most other assets that the City does not own or operate, however, little is known; the PLANYC process has focused more broadly on gaining an understanding of the condition of these non-City infrastructure assets than the traditional capital planning process, which focuses exclusively on City-owned assets.

In sum, there are limitations to the information available on New York City's capital assets, but for some non-City assets like the transit system and for most assets managed by the City, it is clear that these systems are not in a state of good repair. With respect to the City's assets, the underlying factors for this lie with the City's capital asset management practices: failure to fully fund AIMS recommendations; lack of a policy for funding maintenance, repairs and state of good repair; poor use of replacement cycles; and excessive reliance on capital funds for funding replacement of assets.

These practices impose several additional, unnecessary costs upon taxpayers. First, failure to perform regular, preventative maintenance to keep assets properly functioning leads to greater costs later on, when an asset has so thoroughly deteriorated it has to be replaced before the end of its useful life. A special report on the City's bridges published in 1988 by the New York City Department of Transportation found that it was "nearly three times less expensive to maintain a

⁵¹ PLANYC. "Transportation Infrastructure." Accessed 25 October 2007, available online at http://www.nyc.gov/html/planyc2030/html/challenge/maintainyc_transportation.shtml.

bridge than to let it deteriorate and be forced to rebuild it in 50 years.”⁵² In simple terms, fixing the leak in the roof this year is much less expensive than replacing the entire roof next year.

Second, replacing assets that malfunction before their time also leads to increased costs in the form of interest from borrowing used to fund the capital budget, as well as other hidden costs in the form of delays and disruptions to services necessitated by emergency repairs. The explosion of an 84-year old steam pipe near Grand Central Station in July 2007 led to one death, 45 injuries, service disruption in up to 20 buildings, \$2 million in damages and an estimated \$30 million in lost economic activity.⁵³ While the cause of the explosion has yet to be determined, the explosion – which was followed in the same summer by a bridge collapse in Minnesota and the suspension of subway service in New York City due to flooding– underscores the importance of properly surveying, maintaining and repairing infrastructure to prevent extreme damage, service disruption and emergency repairs.

Even without incidence of catastrophe, meeting the challenges faced by an aging infrastructure and a growing population will require developing a plan for achieving state of good repair, a policy for funding maintenance and repairs, and disciplined capital management and planning practices to ensure that capital assets are continually well-managed. Otherwise, the City will not be in the position to implement the goals of PLANYC effectively.

⁵² Ross Sandler and Samuel I. Schwartz. “Spanning the 21st Century: Reconstructing a World Class Bridge Program.” Report to Mayor Edward I. Koch. New York City Department of Transportation. 1988.

⁵³ Jim Polson and Henry Goldman. “Con Edison Crews Speed Up Work at New York Blast Site (Update1).” Bloomberg.com. 21 July 2007. Accessed 25 October 2007, available online at “<http://www.bloomberg.com/apps/news?pid=20601103&sid=azTwX25CmN30&refer=us>.”

PLANYC vs. TRADITIONAL CAPITAL PLANNING AND BUDGETING PROCESSES

Capital planning is an ongoing and dynamic process that includes citizens, community district boards, borough presidents, and most importantly, city agencies, the City Planning Commission, the Mayor and the City Council. Most recently, a new actor has also emerged on the stage: The Mayor's Office of Long-term Planning and Sustainability, which has developed the PLANYC agenda through a separate process.

The following section overviews both PLANYC and City's traditional capital planning and budgeting processes. It identifies the areas in which the PLANYC process represents an improvement to the current process, but also raises questions and concerns that should be addressed before continuing implementation of PLANYC or institutionalizing its practices.

The PLANYC Agenda. In December 2006, the Mayor announced the PLANYC program: a long-term planning process that would focus on preparing the city for an anticipated population increase of one million people by 2030. With the population expanding and the city's infrastructure continuing to age, the PLANYC initiative stated ten broad goals for improving and expanding infrastructure and enhancing the overall sustainability and quality of life in the city. These goals, which are listed in the table below, include bringing the transportation, transit and water and sewer systems to a state of good repair and increasing the availability of affordable housing and parks. The Mayor created a new Office of Long-term Planning and Sustainability (OLPS) to oversee the development of a more specific implementation plan to achieve these goals.

Table 10
Ten Goals of PLANYC

OPENYC

- 1 Create homes for almost a million more New Yorkers, while making housing more affordable and sustainable.
- 2 Improve travel times by adding transit capacity for millions more residents, visitors and workers.
- 3 Ensure that all New Yorkers live within a 10-minute walk of a park.

MAINTAINYC

- 4 Develop critical back-up systems for the aging water network to ensure long-term reliability.
- 5 Reach a full "state of good repair" on New York City's roads, subways, and rails for the first time in history.
- 6 Provide cleaner, more reliable power for every New Yorker by upgrading our energy infrastructure.

MAINTAINYC

- 7 Reduce global warming emissions by more than 30%.
- 8 Achieve the cleanest air of any big city in America.
- 9 Clean up all contaminated land in New York City.
- 10 Open 90% waterways for recreation by reducing water pollution and preserving our natural areas.

Source: City of New York, The Mayor's Sustainability Advisory Board, December 2006, also available online at <http://www.nyc.gov/html/planyc2030>.

OLPS launched a website and released informational materials describing the current and emerging needs of the City with respect to each of the goals. For example, transportation data was used to

demonstrate that maintaining current levels of spending on street resurfacing would result in a decrease in the percent of lane miles in a state of good repair, and would not result in a state of good repair for the MTA until 2029. Furthermore, an increasing population would impose new pressures on the transit and transportation system, resulting in even more congestion on certain roads and subway and rail lines. New Yorkers were encouraged to read about these problems and email their own suggestions on how to improve the sustainability of the City. This information was also presented to over 100 advocacy organizations and during a series of community forums and town hall meetings.

Feedback from these activities was used to form a plan, released in April 2007, composed of 127 specific initiatives aimed at accomplishing the ten PLANYC goals. For each initiative, the City identified the agencies expected to lead its implementation, non-city action need to accomplish it, milestones for its completion, and additional funding sources required from the City's capital and operating budgets. Many of the initiatives require non-City action: 30 initiatives require non-City sources of funding and approximately 20 initiatives require State legislation. Besides the State action, the plan also requires the active cooperation of the MTA, the Port Authority, Con Edison and the New York State Energy Research and Development Authority (NYSERDA).

In October 2007, OLPS released a 6-month update on progress made on each of the PLANYC initiatives. One hundred and four of the 127 initiatives have been launched, and the update provides short blurbs describing the steps taken for each of those initiatives. For those not yet started, OLPS described the planning process being undertaken. The update reiterated the 2009 implementation milestones presented in the April report, and included new implementation milestones for those initiatives which originally did not have any.

Traditional Capital Planning and Budgeting. The PLANYC agenda was developed outside the processes outlined by the New York City Charter. The Charter generally defines the structure of the capital planning and budgeting process, the role that City departments, elected officials and citizens play in that process, and basic standards for capital asset accounting and management. In different ways, these actors evaluate what the city has, decide what it will need, and plan for how capital goals can be accomplished. Beyond this, the City's accounting of capital assets has been shaped in recent years by requirements issued by the Governmental Accounting Standards Board.

Accounting for and Evaluating Capital Assets. Methods of accounting for capital assets vary among state and local governments. Like other governments, New York City uses historical cost, the original cost at which an asset was purchased, as the basis for assessing the value of a capital asset. The historical cost of an asset is depreciated evenly each year over the course of its useful life to reflect its use and decreased value, a method called straight-line depreciation. Likewise, capital improvements, which add value to an asset, are amortized over the useful life of the asset. In this way, both depreciation and improvements to assets are captured in the valuation of capital assets.

Unlike many other cities, New York City has recorded and valued most capital assets since 1980; infrastructure assets, however, were not inventoried and valued until 2001, when the City implemented new requirements issued by the Governmental Accounting Standards Board (GASB). GASB Statement No. 34 required state and local governments to capitalize infrastructure assets acquired after 1980 and to report on their condition or depreciation. Called "the most significant

Citizens Budget Commission

change in history of governmental accounting,⁵⁴ GASB 34's significance was two-fold: first, to highlight the governance and maintenance of long-term capital resources; and second, to include them in reporting in governmental statements so as to obtain a full picture of government operations.

To comply with GASB 34, the City Comptroller's office, the body responsible for implementation, keeps an inventory of the City's capital assets and reports the annual depreciation expense of both non-infrastructure and infrastructure assets.⁵⁵ This approach is in many ways simpler than another course the City could have taken to implement GASB 34 requirements: the modified approach. Under this accounting method, the City would not report annual depreciation expense; instead, the City would specify standards for the condition of its assets. It would be required to perform regular condition assessments using a standardized measurements scale and would have to report on the costs and expenditures required to preserve assets at the minimum acceptable condition level. The benefit of such an approach is that it is more extensive and informative than depreciation reporting, because it highlights expenditures devoted to asset maintenance and repairs and provides information on the condition of assets.

New York State employs the modified approach for evaluating major transportation assets. Since the State sets the standards for the condition of bridges and tunnels, the City Department of Transportation uses the State measurement scale to assess the condition of these assets and reports on their condition and maintenance in a separate annual report. The Department of Education also performs thorough and frequent condition assessments of public schools and reports data similar to that required under the modified approach. Most agencies, however, have less valuable assets than the bridges, tunnels and schools, and hence, do not publish individual department or asset reports.

A citywide perspective on capital assets is provided by the Asset Information Management System (AIMS), a yearly, City Charter-mandated report in which city agencies report the maintenance spending necessary to bring their assets to a state in good repair based on examinations by engineers. The scope of AIMS, however, is too limited to be truly useful for a citywide perspective; the City Charter exempted capital assets managed by the City's authorities from reporting, as well as smaller assets with a replacement cost of less than \$10 million and a useful life of less than 10 years. This means that no information is included on some of the City's most valuable assets – public housing managed by the Housing Authority, and more importantly, the water and sewer system managed by the Municipal Water Finance Authority – as well as less valuable but common assets like equipment and vehicles. Also excluded are the four East River Bridges, special systems, like traffic and street

⁵⁴ Quote by Tom L. Allen, GASB Chairman. See GASB News Release dated June 30, 1999, available online at <http://www.gasb.org/news/nr63099.html>.

⁵⁵ Since much of New York City's infrastructure, particularly its bridges and roads, was constructed over 100 years ago, many infrastructure assets that are still in use have technically reached the end of their useful lives and are fully depreciated. They continue to remain functional because of new capital improvements, such as road repavements and resurfacings and bridge reconstruction, performed upon them. Thus, the value of such assets is captured on the City's financial statements in terms of the value of outlays for new capital improvements, which are then depreciated yearly, as well.

For more information on New York City implementation of GASB Statement No. 34 requirements, see case study, "Statement 34 Implementation Focus: New York City," available online on the website of the Governmental Accounting Standards Board at <http://gasb.org/repremodel/nov2001.pdf>. Accessed 31 October 2006, Updated November 2001.

lighting systems, and internal or aesthetic components, such as landscaping. In short, there is no comprehensive recording or consistent measurement of the condition of the City's assets.

Developing a citywide strategy. Evaluating the condition and usefulness of major capital assets with respect to a larger, citywide capital agenda requires a broader analytical lens through which to filter and analyze demands. This lens is mostly crafted by the Department of City Planning (DCP), which performs two important functions. First, it analyzes requests to change or expand public facilities according to the "fair share" criteria, a set of guidelines for citing facilities intended to promote an equitable distribution throughout the City.⁵⁶ Second, reflecting the priorities set by the Mayor, DCP identifies changes to land use regulations that will facilitate capital improvements in its Strategic Plan. The Strategic Plan includes zoning, land use and other DCP initiatives that are particularly important with respect to major new expansion projects and to fostering new development; for example, the Department's most recent strategic plan, released in Summer 2005, sets forth goals and specific action plans for restoring lower Manhattan, implementing the Hudson Yards master plan, strengthening regional business districts and facilitating housing production, among others.⁵⁷

The Charter also requires DCP to assist the mayor in the creation of the Strategic Policy Statement, a document to be released every four years to summarize the long-term challenges facing the City and propose policy goals and strategies for addressing those challenges. In effect, the Statement would lay out the mayor's vision for government operations during his term, including implications for the expansion, operation, preservation and maintenance of certain capital assets. For example, in the 1999 Strategic Policy Statement, one of Mayor Giuliani's nine policy goals included "an efficient and competitive government." One strategy identified for achieving this goal was making the most of the City's capital assets. This strategy included improving signaling on transit system, reducing the pressures on the water and sewer system, pursuing year-round schooling to optimize use of school buildings, and improving maintenance on bridges, roads and parks.

The Strategic Policy Statement has not been published by the Bloomberg Administration, partially indicative of a changing role for DCP in the capital planning process. The Charter calls on DCP and the Office of Management and Budget (OMB) to issue jointly a Ten-Year Capital Strategy that solidifies capital priorities, provides a blueprint for capital spending, and describes the goals, priorities, policy constraints, financing mechanisms and assumptions which underlie the blueprint. In recent years, however, the roles of the two agencies in preparing the plan have diverged. DCP concentrates on the overall growth and development context and identifies key capital investments that need to be incorporated into the plan; OMB works more closely with agencies to analyze their capital requests and to address financing issues.⁵⁸

The Charter mandates that a preliminary version of the Ten-Year Strategy be issued on November 1 in even-numbered years; in recent years, however, the practice has been to release the Preliminary Strategy with the Preliminary Financial Plan in January of odd-numbered years. Following this release, the City Planning Commission, a thirteen-member panel chaired by the Director of the

⁵⁶ New York City Department of City Planning. "Fair Share Criteria: A Guide for City Agencies." 1998.

⁵⁷ New York City Department of City Planning. "Strategic Plan." Summer 2005. Available online at <http://www.nyc.gov/html/dcp/html/about/strategy.shtml>.

⁵⁸ Department of City Planning. Email Communication to Maria Doulis. January 9, 2007.

Citizens Budget Commission

DCP, conducts a review hearing and issues its response.⁵⁹ The City Council reviews this response, as well as those made by community boards and borough presidents, and holds hearings before issuing its own response in March. Based on these responses, OMB revises the plan and reissues it in April with the Executive Budget. As part of the budgeting process, the City Council holds hearings on the Strategy in May and is required to approve the plan by July 1.

While the Strategy is intended to be the ultimate vehicle for long-term capital planning, review of recent ten-year strategies show that the Strategy suffers from three procedural weaknesses that limit its effectiveness and credibility at a planning tool.

1. *The Ten-Year Strategy is not well integrated with other strategic planning activities.* Despite the Charter mandate, the Strategy itself does not establish broad strategic policy goals, or link clearly with DCP's Strategic Plan, facilities citing or zoning plans; instead, the Strategy has more general objectives to "maintain the existing infrastructure, accommodate economic and social change, and improve the quality of life."⁶⁰ Agency capital programs have more specific goals, but relating them to the broader citywide strategy is difficult. Older versions of the Strategy fulfilled the Charter mandate and were clear in establishing goals, explaining their logic, and highlighting the projects being undertaken to fulfill them; this is illustrated in Table 11, which shows how clearly stated citywide goals were aligned explicitly with agency goals in 1992-2001 Strategy.

The strategic objectives of the Strategy are also limited in another respect: they do not address capital assets beyond those directly under the City's control and financial responsibility. City government is not the sole guardian of the City's entire capital asset universe, as the infrastructure landscape is fragmented among several owners, including the private sector, the State and federal governments, and public authorities like the MTA and the Port Authority. The extensive asset holdings of others suggest that a capital planning document focused solely on the City's capital assets is inadequate to plan for capital assets at an optimal level; indeed, there is implicit recognition of the importance of such inter-jurisdictional planning in the goals set forth by PLANYC, which includes a state of good repair goal for the transit system controlled by the MTA.

⁵⁹ Besides the Chair, the Mayor appoints six additional members to the Commission. The public advocate and each borough president also appoint one member, for a total of 13. The commissioners serve staggered terms of 5 years, with the exception of the Chair, which serves at the Mayor's pleasure.

⁶⁰ New York City Office of Management and Budget. *Ten-Year Capital Strategy, Fiscal Years 2008-2017*, p.1.

Table 11
Comparison of Citywide Strategic Goals in the Ten-Year Capital Strategy

Ten-Year Capital Strategy, FY1992-2001

- ▶ Assisting those in need through major hospital reconstruction projects at four municipal hospitals and construction of homeless housing.
- ▶ Improving mobility through the rehabilitation of the City's major bridges, improving our roadways, and contributing funds for the rebuilding of the City's mass transit system.
- ▶ Building and preserving neighborhoods through neighborhood-specific housing initiatives and through improvements to community cultural facilities, libraries and parks.
- ▶ Enhancing the quality of the environment by implementing the Solid Waste Management Plan as well as providing for upgrades to Water Pollution Control Plants and creating new facilities to eliminate ocean dumping of sludge.
- ▶ Assuring public safety through increasing the capacity of correctional facilities, construction and upgrading of police facilities and providing additional criminal court buildings.
- ▶ Preparing our children by providing for construction and modernization of school buildings and for the acquisition and construction of daycare centers.
- ▶ Promoting economic growth through the construction of the new Futures Exchanges and small business development incubators in each borough.

Preliminary Ten-Year Capital Strategy, FY2008-2017

- ▶ Maintain existing infrastructure.
- ▶ Accommodate economic and social change.
- ▶ Improve the quality of life.

Source: City of New York, Office of Management and Budget, Ten-Year Capital Strategy, FY1992-2001; Preliminary Ten-Year Strategy, FY2008-2017

2. *The Ten-Year Strategy time-frame has proven to be ineffective.* Paradoxically, the Strategy's ten-year time frame is too short and too long. The ten-year period is too short for many aspects of strategic planning, particularly for a massive and aged infrastructure system like the water and sewer system.

At the same time, ten years is too long for credible financial planning. This is largely because most agencies conduct capital planning on a four- or five-year basis, with spending requirements becoming less concrete in later years. Unpredictable costs and the varying pace of implementation for capital projects make expenditure projections beyond more than four or five years highly unreliable; as such, for the "out-years," ten-year plans have become mechanical projection exercises with unrealistically low estimates rather than realistic investment plans for specific projects.

Citizens Budget Commission

The lack of reliability for out-year spending forecasts is illustrated by Table 12. The 1996-2005 Strategy called for total commitments of \$40.6 billion: \$15.4 billion for the first four fiscal years, 1996-1999, and over \$25 billion for the out-year period of fiscal years 2000-2005. For the first four years, the plan was relatively accurate with actual commitments being about \$1.3 billion, or 9 percent, above plan. But, in the last six years, there was a tremendous underestimation: actual commitments exceeded the scheduled amount by \$10.4 billion, or 41 percent. Driven by this greater out-year spending, the 1996-2005 Strategy underestimated commitments by close to \$12 billion for the entire ten-year period.

The same pattern is evident in the two more recent Strategies. In the 1998-2007 Strategy, commitments in the last six years were \$15 billion, or 56 percent, above plan. For the 2000-2009 Strategy, actual commitments in the last six years likely will exceed the initial plan amount by \$33.3 billion, or 133 percent, if current spending plans for 2007-2009 are implemented.⁶¹

Table 12
Planned vs. Actual Commitments for Ten-Year Capital Strategies
(dollars in millions)

	Four-Year Total	Six-Year Total	Ten-Year Total
	1996-1999	2000-2005	1996-2005
1996-2005 Capital Strategy	\$15,400	\$25,163	\$40,562
Actual Commitments	\$16,743	\$35,562	\$52,305
Difference	(\$1,343)	(\$10,399)	(\$11,743)
	1998-2001	2002-2007	1998-2007
1998-2007 Capital Strategy	\$19,776	\$26,900	\$46,677
Actual Commitments	\$18,700	\$41,861	\$60,561
Difference	\$1,076	(\$14,961)	(\$13,884)
	2000-2003	2004-2009	2000-2009
2000-2009 Capital Strategy	\$22,983	\$25,140	\$48,123
Actual Commitments*	\$22,759	\$58,474	\$81,233
Difference	\$224	(\$33,334)	(\$33,110)

*FY1996-2006 are actual commitments certified by the Comptroller; commitments in fiscal years 2007-09 are as projected by NYC OMB, September 2007 commitment plan. Includes reserve for unattained commitments in fiscal years 2008 to 2009.

Source: NYC Ten-Year Capital Strategy, FY1996-2005; NYC Ten-Year Capital Strategy, FY1998-2007; NYC Ten-Year Capital Strategy, FY2000-2009; NYC Comprehensive Annual Financial Report, FY1996-2007; NYC September 2007 Commitment Plan, FY2008.

⁶¹ Capital commitments for fiscal years 2007 to 2009 based on projections by the New York City Office of Management and Budget as of the September 2007 Commitment Plan. For fiscal years 2008 and 2009, estimates include the reserve for unattained commitments, which is estimated to be \$5.7 billion for fiscal year 2008.

3. *The Ten-Year Strategy does not appear to be firmly rooted in or guided by assessments of need based on the condition of assets.* Despite City Charter and GASB requirements, the available information on the condition of municipal assets falls short of what is needed for sound planning for many capital asset classes. Specific plans for capital spending outlined in the Strategy should be rooted in evaluations of the asset condition published in AIMS or agency-specific reports. This practice is exemplified by the Department of Transportation's bridge unit, which describes its capital program based on the ratings bridges receive in DOT's annual condition report; however, for all other agencies, there is no discernable connection between condition evaluations reported in AIMS and spending allocations in the Ten-Year Strategy. The Strategy categorizes spending according to state of good repair, programmatic replacement and expansion, but does not relate this spending back to needs quantified in AIMS, or even to any set goals or benchmarks for systematic capital asset improvement.

The primary reason for this disconnection lies in the limitations of AIMS, which excludes many classes of assets from its scope, including the assets of public authorities, the East River bridges, street traffic and lighting systems, and equipment and vehicles. Although condition surveys for some of assets are completed by their managing agencies, their absence from the more comprehensive system makes planning more fragmented and complex.

Even for those components for which relevant data is available from AIMS and other sources, agencies are not required to use these data to guide investment decisions. As demonstrated in the previous section, in fiscal year 2008, only 49 percent of the \$5.4 billion in spending recommended in the AIMS report was undertaken by agencies, leaving a \$2.8 billion shortfall.

Budgeting and Committing Funds. Despite these weaknesses, the Ten-Year Capital Strategy serves as the basis for capital budgeting. The capital budget is separate from the operating budget, but runs on the same procedural track: the Mayor issues a preliminary capital budget in January and a revised executive capital budget in April. The size of the capital budget is prescribed in part by the Statement of Debt Affordability, which states the level of debt the City can soundly incur and is also released on the same day. OMB determines debt affordability by making a judgment on how to best strike a delicate balance: providing for current and future capital needs and minimizing the costs of delaying improvements while restraining the impact that debt service costs have on competing priorities in the City's operating budget. The Council can alter and add to the capital budget, but cannot exceed the boundaries established by the Statement of Debt Affordability issued with the Executive Budget.

The capital budget is designed to give detailed spending estimates on a project-by-project basis for the current fiscal year by agency, and to project spending for the following three fiscal years. Each project included in the capital budget is given a distinct project ID and title with a brief description. The current fiscal year funding request, estimated funding needed in each of following the three years and an estimated date of completion are shown for each project. Other important details required, however, are often omitted: total prior appropriations, the total cost estimated to complete the project, and the cost of maintenance and operation for an asset once it is completed. Even more challenging is relating individual projects from the capital budget back agency goals and spending blueprints presented in the original Ten-Year Capital Strategy.

Many of the projects in the capital budget are labeled "continuing projects," indicating that they are not for discrete projects, but rather lump sums for capital work to completed on a discretionary

Citizens Budget Commission

basis. For example, the entire fiscal year 2008 capital budget of the Department of Education— which operates over 1,000 school buildings – is comprised of 20 major continuing projects, most of which are described as either the implementation of the \$13.5 billion five-year facilities plan or mayoral, council or borough president additions to it.

Budgeting for expenditures in such a way provides flexibility for an agency in implementing capital improvements, but does not create incentives for disciplined capital planning or maintenance: rather, rolling appropriations exist that are allocated to fix assets as they become damaged or to complete groups of projects whose individual parts are not reported upon. This thwarts transparency and frustrates the ability to track a project through time and understand the delays, cost-overruns and other changes a project undergoes.

Borrowing and the Capital Budget

The City finances few, if any, capital investments from current operating revenues. It relies primarily on long-term borrowing and, to a lesser extent, grants from the State and federal governments. Long-term borrowing is perceived as an equitable way to finance capital assets, which represent long-term investments that yield perennial benefits.

The City Council must approve the capital budget by July 1st. Ninety days thereafter, the Mayor must issue a schedule for implementation of the capital budget. These implementation schedules, called capital commitment plans, indicate when the City plans to register a contract for work on a capital project. The commitment plan provide details for specific projects by the budget lines used in the capital budget, and should allow for some reconciliation between how much money was approved in the capital budget and how much has been and will be appropriated; however, just as in the capital budget, many of the specific details regarding commitments of funds are lacking. Although budget lines allow for some tracking of projects, information in the two documents can be difficult to synthesize coherently, given that delays and other changes to the project produce changes in the commitment plan that are reflected in the on-going tri-annual updates of the plan, but are not accompanied by a narrative explaining the changes.

In recent years, understanding commitment plans has been further complicated by a large reserve for unattained commitments. The size of the capital program has led to a tendency to approve spending targets beyond the City's capacity to contract for or undertake the work. To manage this, total planned commitments are reduced by 35 percent to lower the commitment plan to an achievable level. This results in a multi-billion dollar reserve for unattained commitments that is rolled through the life of the commitment plan and that inflates spending in out-years, where it is typically underestimated. For example, in the most recent capital commitment plan, issued in September 2007, total commitments projected for fiscal year 2008 were \$20.3 billion; 35 percent of this, or \$5.7 billion, is to be held in the reserve for unattained commitments, resulting in a \$14.6 billion commitment plan for fiscal year 2008. This reserve increases spending in some years, but results in a net reduction for total planned commitments over the life of the plan.

This further complicates relating individual projects from the capital budget and commitment plans back to the agencies' goals and spending blueprints presented in the original Ten-Year Capital Strategy. In sum, consistency between these key capital documents is weak, and does not allow for easy monitoring of progress made toward achieving agency goals outlined under the Strategy.

Integration of PLANYC and the Traditional Processes. Although the PLANYC process occurred parallel to the traditional capital planning process, PLANYC had to be integrated with the City’s capital budgeting mechanisms in order to be implemented. After the PLANYC implementation plan was released in April, additional funding required to implement its initiatives was included in the Ten-Year Capital Strategy released with the Executive Budget.

The City identified \$1.6 billion in additional funding that was added to the April Strategy to implement PLANYC; however, that figure understates the total cost of the PLANYC program because it does not capture the parts of the City’s ongoing capital program that bear directly upon accomplishing the goals of PLANYC. For example, the April Strategy includes an additional \$121 million for resurfacing 100 additional lane miles per year, an acceleration of resurfacing called for under PLANYC; but the full street resurfacing program of the Department of Transportation, which has been ongoing and which will need to continue to achieve a state of good repair on roads by 2030, is \$1.3 billion.

CBC estimates that the costs of accomplishing the PLANYC initiatives, as reflected in the Strategy, are approximately \$39 billion – almost half the entire Strategy. (See Table 13.) This illustrates how broad PLANYC is, but also that it overlooks a great number of the City’s capital assets. Notably, the City’s most expensive capital program– \$28 billion in public school building improvements– is not covered by PLANYC; neither is telecommunications infrastructure.

Table 13
Capital Costs of PLANYC in the Ten-Year Capital Strategy, FY2008-2017
(dollars in millions)

	Dollars	Percent	Note
PLANYC Agencies	\$39,012	47%	
Environmental Protection	19,485		Entire Agency Capital Program
Transportation	11,106		Entire Agency Capital Program
Housing	4,713		Full Mayor's Housing Plan
Parks and Recreation	2,653		Entire Agency Capital Program
Transit Authority	767		Susbdy to MTA for replacement
Education	287		School Boiler Replacements
All other agencies	\$44,653	53%	
Ten-Year Capital Strategy, Total	\$83,665	100%	

Sources: City of New York, Office of Management and Budget, Ten-Year Capital Strategy, Fiscal Years 2008-2017; Office of Long-Term Planning and Sustainability, PLANYC Report, April 2007; CBC analysis.

Inclusion of funds for PLANYC into the Strategy signifies the partial integration of the two capital planning processes, but questions remain about how the two processes will mesh together going forward. PLANYC is currently being overseen by an arm of the Mayor’s Office, the Office of Long-

Citizens Budget Commission

term Planning and Sustainability (OLPS), different from the Office of Management and Budget, which oversees the capital budget. OLPS was created through mayoral initiative, but has not been institutionalized through local law or through the City Charter;⁶² therefore, there are no guarantees that OLPS or PLANYC will continue beyond the term of the current mayor.

If they are institutionalized, and OLPS continues to oversee the implementation of these initiatives and their redevelopment over time, then the City will not have a uniform capital planning process. The PLANYC process will cover capital planning for some infrastructure systems, housing and parks, but all other city agencies will adhere to the traditional process.

The PLANYC process can complement and improve the traditional capital planning process, since its impressive characteristics are in some of the areas where the traditional planning process is weak. Where the Strategy is not clearly linked to broad, citywide policy goals, and agency goals do not always flow from citywide strategy, PLANYC has developed a citywide strategy, states 10 broad objectives that translate to 127 specific initiatives to be implemented by city agencies, State agencies, public authorities and even the private sector. The PLANYC agenda requires the active cooperation of these non-City entities in recognition of the fact that the City does not fully control the capital asset universe; the Strategy, on the other hand, focuses only on City-controlled capital assets. Finally, where the Strategy is weakened by an ineffective time-frame, PLANYC espouses a long-term vision for the City that anticipates the state of major infrastructure systems, housing, parkland and air quality for the next 25 years.

Whether PLANYC is expanded to include all city agencies or is institutionalized, the success of its implementation will depend heavily on capital asset management and budgeting processes already in place. These processes have weaknesses that should be remedied. This will require devising a steadier financial groundwork than laid out by the ten-year capital strategy, greater transparency in the capital budget, and more realistic and clear commitment plans. It will also require a commitment by agencies to fund state of good repair and regular maintenance work at a level much greater than that demonstrated by AIMS reporting in recent years.

⁶² A bill has been introduced in the City Council to institutionalize the Office of Long-Term Planning and Sustainability that has not been passed as of the time of this writing.

THE NEXT GENERATION OF CAPITAL SPENDING

PLANYC is a strategic capital plan that is broad and visionary, but covers less than half the City’s capital assets. As far as plans for PLANYC have been incorporated in the April Strategy, the Strategy gives a more concrete picture of what to expect for the City’s capital assets for the next ten years. The results of capital spending for the next ten years will indicate whether stepping stones have been placed in the right direction for achieving the goals of PLANYC.

In April, the Mayor released the Ten-Year Capital Strategy for fiscal years 2008-2017. The Strategy proposes spending totaling \$83.7 billion for the ten-year period, and is the largest ten-year capital plan in the City’s history. Hudson Yards development, totaling \$3 billion for the extension of the Number 7 transit line and other infrastructure improvements, is absent from the Strategy, but is included here for the purpose of more comprehensive analysis and discussion.⁶³

The following section describes basic spending patterns in the plan according to three key aspects: government function, time period and purpose. It also examines capital spending planned for agencies with PLANYC mission and compares them to all other city agencies.

⁶³ Omission of Hudson Yards from the Strategy is inconsistent with the inclusion of investments for other legally distinct entities that may issue their own debt (such as the Municipal Water Finance Authority), but are component units of the City. The same definition applies to the Hudson Yards Development Corporation and Hudson Yards Infrastructure Corporation, and so, the project has been added to our consideration the Strategy.

Table 14: Ten Year Capital Strategy, FY2008-2017
(dollars in millions)

	Ten-Year Total	Percent
Education	28,463	33%
Education	28,231	33%
City University	232	0.3%
Environmental Protection	22,398	26%
Environmental Protection	19,485	22%
Sanitation	2,913	3%
Transportation Services	13,873	16%
Transportation	11,106	13%
Number 7 (Hudson Yards)	2,000	2%
Transit Authority	767	1%
Housing	4,713	5%
Preservation & Development	4,194	5%
Homeless Services	291	0.3%
Housing Authority	229	0.3%
Public Safety and Judicial	6,014	7%
Correction	1,845	2%
Courts	1,219	1%
Police	1,901	2%
Fire	1,024	1%
Juvenile Justice	25	0%
General Government	4,019	5%
Citywide Equipment	2,679	3%
Citywide Administrative	1,340	2%
Parks, Libraries, Cultural	3,300	4%
Parks and Recreation	2,653	3%
Cultural Affairs	535	0.6%
Public Libraries	111	0.1%
Economic Development	2,220	3%
Small Business Services	1,220	1.4%
Hudson Yards	1,000	1.2%
Health	1,257	1.5%
Health & Hospitals Corp.	973	1.1%
Health & Mental Hygiene	284	0.3%
Social Services	407	0.5%
Human Resources	195	0.2%
Children's Services	165	0.2%
Aging	47	0.1%
GRAND TOTAL	\$86,665	100%

Note: Includes \$3 billion in spending for Hudson Yards project not included in the Strategy, but added in by CBC.

Source: NYC OMB, Ten Year Capital Strategy, FY2008-2017

Citizens Budget Commission

Spending by Function. Spending in the Ten-Year Capital Strategy is planned by many city agencies for projects such as park reconstruction, new citywide computer equipment and information systems, rehabilitation of hospitals, police and fire facilities, and new court construction. Table 14 shows capital spending allocations by function, and within that, by agency. As the table shows, the two largest areas of spending are education (\$28.5 billion) and environmental protection (\$22.4 billion). Large portions of the plan are also dedicated to transportation improvements (\$13.9 billion), public safety and judicial facilities (\$6.0 billion) and the housing plan (\$4.7 billion).

Sizable amounts of capital spending are planned for parks, libraries and cultural institutions (\$3.3 billion), general government (\$3.0 billion), and economic development (\$2.2 billion). The least spending, a combined \$1.66 billion or 2 percent overall, is planned in health and social service areas. Overall, spending distribution by area in this plan generally mirrors the capital plans proposed by Mayor Bloomberg in 2004 and 2006.

Spending by Time Period. Examining the distribution of planned spending between the first four years and the out-years provides insight into the planning process and planning priorities. The City’s annual capital budget and capital commitment plans, the documents that more precisely lay out capital expenditures, are devised on a four-year basis. This is largely reflective of the fact that most agencies conduct capital planning on a four- or five-year basis, with spending requirements becoming less concrete in later years. The length of the ten-year plan also makes it susceptible to shifts in priorities resulting from a change in mayoral administrations.

Table 15
Commitments vs. Outyear Forecast in the Ten Year Capital Strategy, FY2008-2017
(dollars in millions)

	FY2008-2017	FY2008-2011		FY2012-2017	
	Total	Commitments	Percent	Forecast	Percent
Education	28,463	11,395	40%	17,067	60%
Environmental Protection	22,398	13,055	58%	9,343	42%
Transportation Services	13,873	6,916	50%	6,957	50%
Housing	4,713	2,044	43%	2,669	57%
Public Safety and Judicial	6,014	4,245	71%	1,769	29%
General Government	4,019	3,192	79%	827	21%
Parks, Libraries, Cultural	3,300	2,538	77%	761	23%
Economic Development	2,220	1,299	59%	921	41%
Health	1,257	766	61%	492	39%
Social Services	407	208	51%	199	49%
TOTAL	\$86,665	\$45,660	53%	\$41,005	47%

Note: Includes \$3 billion in spending for the Hudson Yards project not in the Strategy, but included by CBC: \$2 billion for the extension of the Number 7 line included in transportation services and \$1 billion for economic development. Expenditures for both aspects of the project were assumed to be equal for each year of the Strategy.

Source: New York City Office of Management and Budget, Ten-Year Capital Strategy, FY2008-2017

Given the tendency for poor estimation in the out-years, analyzing the current Strategy according to time period also reveals planning priorities, since more important projects will be included in the four- or five- year capital program of an agency, and will be front-loaded in the Strategy. Overall, slightly more than half of all spending will occur in the first four years (see Table 15). The proportion of investments for general government purposes (79 percent), parks, libraries and cultural institutions (77 percent), and public safety and judicial services (71 percent) are especially front-loaded. Interestingly, some of the heaviest investments in the Strategy, for education and housing, are planned almost evenly in each year for the course of the capital plan.

Spending by Purpose. The Strategy is the only document that provides information on the purpose of spending in terms of state of good repair, programmatic replacement, or expansion of capital assets. There is no clear definition provided on how expenditures are categorized in each of these three categories, no articulation of priorities for spending between the three types of spending, and no goal, timeline or replacement schedule associated with state of good repair or replacement spending; still, this information provides a view of capital spending that is unavailable at any other point in the capital planning and budgeting process.

Most spending, 46 percent, is for state of good repair. More than half (\$20.6 billion) of total state of good repair spending is for the reconstruction and rehabilitation of schools. Almost all spending by the Department of Transportation is for state of good repair work, while state of good repair spending represents only a small percentage of total capital spending for the Departments of Environmental Protection (DEP) and Housing Development and Preservation.

Table 16
Ten Year Capital Strategy by Purpose of Spending, FY2008-2017
(dollars in millions)

	Purpose of Spending			Percent		
	SOGR	Expansion	Replacement	SOGR	Expansion	Replacement
Education	20,566	6,658	1,238	72%	23%	4%
Environmental Protection	2,057	5,185	15,156	9%	23%	68%
Transportation Services	10,768	2,000	1,104	78%	14%	8%
Public Safety and Judicial	1,190	1,953	2,866	20%	32%	48%
Housing	818	3,877	19	17%	82%	0%
General Government	1,087	0	2,932	27%	0%	73%
Parks, Libraries, Cultural	2,589	711	0	78%	22%	0%
Economic Development	0	2,220	0	0%	100%	0%
Health	647	62	549	51%	5%	44%
Social Services	278	0	129	68%	0%	32%
GRAND TOTAL	\$40,000	\$22,666	\$23,994	46%	26%	28%

Note: Includes \$3 billion in spending for the Hudson Yards project not in the Strategy, but included by CBC: \$2 billion for the extension of the Number 7 line included in transportation services and \$1 billion for economic development.

Source: New York City Office of Management and Budget, Ten Year Capital Strategy, FY2008-2017

Citizens Budget Commission

When including Hudson Yards, expansion projects will total \$22.7 billion (as opposed to \$19.6 when omitted), or 26 percent of the Strategy. The remaining \$24 billion will be for programmatic replacement. Most spending for environmental protection will be for programmatic replacement, and this \$15 billion represents two-thirds of total replacement spending. Other major replacement spending is for the transit system, police and fire vehicle replacement, the replacement of citywide computer systems and major hospital renovation.

Replacement represents a small proportion of spending in education and housing, but there will be heavy investments for expansion in these areas: \$6.7 billion for new school construction and \$3.9 billion for new housing initiatives. Agencies for environmental protection and sanitation (\$5.2 billion), public safety and judicial services (\$2.0 billion) will also expand their capital stock. Other major expansion initiatives include economic development through Small Business Services and for Hudson Yards infrastructure (\$2.2 billion) and the expansion of the Number 7 subway line (\$2.0 billion).

PLANYC Agencies vs. Other Agencies. About \$38.7 billion in the Capital Strategy will be allocated toward accomplishing PLANYC objectives, compared to \$47.9 billion for all other agencies. Interestingly, agencies with a PLANYC mission will spend a lower percentage (38%) of on a state of good repair than all other agencies (53%), but a greater percentage (39%) on replacement. SOGR spending for PLANYC agencies is mostly in transportation and parks, while replacement is predominantly for the water and sewer system; this reflects PLANYC's goal to rehabilitate roads and parks and create redundancy in the water and sewer system. Expenditures to bring the school system to a state of good repair surpass all PLANYC agencies combined.

Table 17
Type of Spending in Ten-Year Capital Strategy, FY2008-2017, PLANYC Agencies vs. All Others
(dollars in millions)

	SOGR	Percent	Expansion	Percent	Replacement	Percent	TOTAL
PLANYC Agencies	\$14,764	38%	\$8,998	23%	\$14,962	39%	\$38,724
Environmental Protection	1,006	5%	4,641	24%	13,838	71%	19,485
Transportation	10,768	97%	0	0%	337	3%	11,106
Transit Authority	0	0%	0	0%	767	100%	767
Housing Pres. & Dev.	589	14%	3,604	86%	0	0%	4,194
Housing Authority	229	100%	0	0%	0	0%	229
Homeless Services	0	0%	272	93%	19	7%	291
Parks and Recreation	2,172	82%	481	18%	0	0%	2,653
All other agencies	\$25,240	53%	\$13,668	29%	\$9,032	19%	\$47,939
Education	20,435	72%	6,576	23%	1,219	4%	28,231
All others	4,804	24%	7,092	36%	7,813	40%	19,709
TOTAL	\$40,004	46%	\$22,666	26%	\$23,994	28%	\$86,664

Note: Includes \$3 billion in spending for the Hudson Yards project not in the Strategy, but included by CBC in its analysis of the plan. Included under all other agencies: \$2 billion for the extension of the Number 7 line included in transportation services and \$1 billion for economic development.

Source: New York City Office of Management and Budget, Ten Year Capital Strategy, FY2008-2017

Evaluating whether this is the right mix of spending overall requires a clear statement of capital priorities, some reference to the capital needs of the City, and an idea of the benchmarks or timetable associated with achieving pre-established goals rooted in capital priorities and objectives. These elements are lacking in the Ten-Year Capital Strategy, with the exception of the bridge program of the Department of Transportation, the Mayor's affordable housing plan, and the Department of Education's five-year capital plan. Instead, most agencies list general objectives (e.g. replacement of equipment or renovation of health care facilities), without describing the specific, attainable goals that spending outlined in the Strategy is expected to achieve (e.g. \$2 million to replace 2,000 vehicles at the end of their 10-year useful life, or \$150 million to bring the 3 last hospitals to a state of good repair by 2012).

Neither is spending directly related back to the City's needs assessment conducted in the AIMS report, or at the very least, the agency reconciliation that describes how much of the necessary state of good repair work is being or will be undertaken. These limitations make understanding the spending choices made in the Strategy difficult, and are precisely the weaknesses that will bear upon implementation of the PLANYC agenda through the traditional capital planning, budgeting and management process.

CBC FRAMEWORK FOR EVALUATING THE TEN-YEAR CAPITAL STRATEGY

The City's capital planning process should be guided by clear policies for fixing and maintaining capital assets and for undertaking large, new expansion projects. To this effect, CBC's framework for analyzing the Ten-Year Capital Strategy is based on three fundamental criteria for good capital spending:

1. Fixing old assets currently not in a state of good repair. The City should have a systematic plan for overcoming deferred maintenance and bringing old assets still deemed necessary for government functions to a state of good repair.

Capital assets should be inventoried, and their condition and usefulness assessed periodically. Capital assets that have suffered from deferred maintenance and that are not in a state of good repair should be identified, with the amount of spending necessary to bring them to a state of good repair specified. A plan should then exist to eliminate systematically deferred maintenance for assets that are still necessary to provide government services and to bring these assets to a state of good repair.

2. Maintaining and regularly replacing assets currently in a state of good repair. Keeping capital assets in a state of good repair requires keeping up with necessary repairs and placing an asset on a regular replacement cycle based on its useful life. City funding for the regular replacement of its assets should be equal to the replacement cost depreciation of those assets.

Once assets are brought to a state of good repair, or from the time new assets are purchased, routine maintenance and other repairs should be performed as scheduled or necessary, and should be funded from the operating budget. An asset should be placed on a schedule for regular replacement based on its useful life, and the funding for such replacement should come from funds set aside annually by the City based on its yearly depreciation expense. This depreciation expense should be based upon replacement cost, which takes into account what assets would cost if they were purchased today. Since replacement cost takes into account inflation and other factors, funding depreciation along the lines of replacement cost would require greater outlays than when calculated on the basis of historical cost, but would more truly approximate the costs of programmatic replacement.

3. Expanding and enhancing assets based on rigorous economic analysis. Priorities for new potential projects should be justified in terms of providing better or more efficient levels of service, or in terms of providing a high rate of return on investment.

New capital projects consume enormous capital resources, and increase operating costs, as they have to be operated and maintained with funds from the expense budget. When large, new capital projects are proposed, a clear set of priorities for selecting between such new expansion projects should be applied. These priorities should be rooted in the ability to provide a higher or more efficient level of service, or in terms of providing a high rate of return on the investment of public funds.

Spending in the Strategy is judged according to these criteria in two separate ways. First, the adequacy of spending planned for state of good repair and replacement is assessed based on a

quantification of these needs rooted in the AIMS report and calculations of replacement cost depreciation. Second, new expansion projects are evaluated based on whether they have been clearly justified on an analytical basis that demonstrates rate of return on investment or more efficient levels of service.

Bringing Capital Assets to and Maintaining Them in a State of Good Repair. The City quantifies the spending necessary to achieve state of good repair over a four-year period in the AIMS report. As Table 18 shows, this spending was estimated to be \$5.9 billion in fiscal years 2008-2011.⁶⁴ Due to the limitations in reporting in AIMS, specified in detail in previous sections, this estimate is clearly understated. This is most clear for some asset-heavy agencies, namely the Department of Environmental Protection, the Department of Housing Preservation and Development, and the New York City Housing Authority, which are completely excluded from reporting. In addition, assets owned by the Departments of Transportation and Parks and Recreation are only partially captured.

To quantify needs for replacement and maintenance spending, an estimate of replacement cost depreciation for the ten-year period was calculated using historical and replacement cost information published in the City's *Comprehensive Annual Financial Report*.⁶⁵ CBC estimates are based on replacement cost depreciation, as opposed to historical cost depreciation, because expenses for replacing assets will be more costly than suggested by the historical cost due to inflation and other factors. This also makes these estimates comparable to all other maintenance and replacement estimates, including those reported in AIMS, which use replacement values for calculating expenditures. For example, there would be no point in estimating how many 1987 dollars would be needed to buy a 2007 fleet of vehicles, and one certainly would not budget for a new fleet on this basis.

A calculation of replacement cost depreciation for the 2008-2017 period shows a funding requirement of \$60.4 billion, making the estimated total of funding requirements for state of good repair and replacement \$66.3 billion for the ten-year period from fiscal year 2008 to 2017. Even though this figure is quite large, it is still understated given limited data available in AIMS for state of good repair requirements.

⁶⁴ Combined four-year capital and four-year expense budget recommendations from the Asset Information Management System report for fiscal year 2008.

⁶⁵ The Comptroller publishes replacement cost information for capital assets in the statistical section of the *Comprehensive Annual Financial Report* (CAFR). Data from the fiscal year 2007 CAFR for historical and replacement cost was used as a basis for determining a factor for calculating replacement cost depreciation for each function of capital assets. This replacement cost depreciation was then projected for fiscal years 2008-2017 using a ten-year average of a historical construction costs from 1998-2007 using the McGraw Hill ENR Construction Cost Index as of October 2007.

Table 18
Estimated State of Good Repair and Replacement Need, FY2008-2017
(dollars in millions)

	Replacement Cost Depreciation	AIMS State of Good Repair Recommendation	Total Replacement and State of Good Repair Need
General government	6,355	364	6,719
Public safety and judicial	3,230	217	3,447
Education	18,265	1,050	19,315
City University	574	61	634
Social services	815	55	870
Sanitation	1,898	83	1,981
Transportation services	9,051	3,312	12,363
Parks, recreation and cultural	3,994	529	4,523
Housing	265	0	265
Health	347	15	363
Libraries	454	25	478
Subtotal, City Direct	\$45,248	\$5,711	\$50,958
Environmental Protection (WA)	10,397	0	10,397
Health and Hospitals Corp.	2,424	220	2,645
Housing Authority	2,324	0	2,324
Subtotal, Component Units	\$15,145	\$220	\$15,365
TOTAL	\$60,393	\$5,931	\$66,324

Notes: Need determined by adding (1) four-year AIMS capital and expense recommendations for state of good repair and (2) forecast of replacement cost depreciation for the FY2008-2017 period based on schedules in the *Comprehensive Annual Financial Report* and financial statements of component units. Replacement depreciation forecasted for a ten-year period based on ten-year historical average of construction cost index from McGraw-Hill companies, Engineering News Record, Construction Cost Index, October 2007. Transportation services does not include subsidies or payments to the Transit Authority.

Sources: New York City Comprehensive Annual Financial Report, FY2006; Asset Management Information System, FY2007; Municipal Water Finance Authority Annual Report, FY2007; NYC Health and Hospitals Corporation Annual Report, FY2007; NYC Housing Authority Annual Report, FY2006.

Is the spending provided in the Strategy adequate for addressing these needs? Spending in the Strategy is categorized as “state of good repair” and “replacement,” but the standards for project categorization in these categories are unclear. Nevertheless, spending planned in the Strategy for both state of good repair and replacement totals \$63.2 billion, with the majority of that spending, \$40 billion, going toward state of good repair.⁶⁶ Three-quarters of total spending on state of good repair and replacement, approximately \$47.6 billion, is directed toward the three areas with the largest funding requirements: Education, Environmental Protection and Transportation. Spending in education and transportation is concentrated in state of good repair, while spending for environmental protection is mostly for replacement.

Table 19
Planned Spending for Replacement and State of Good Repair in the
Ten-Year Capital Strategy, Fiscal Years 2008-2017
(dollars in millions)

	Replacement Spending	SOGR Spending	Total Spending for State of Good Repair and Replacement in the Strategy
General government	2,932	1,087	4,019
Public safety and judicial	2,866	1,195	4,061
Education	1,219	20,435	21,655
City University	19	131	149
Social services	148	278	426
Sanitation	1,318	1,050	2,368
Transportation services	337	10,768	11,106
Parks, recreation and cultural	0	2,491	2,491
Housing	0	589	589
Health	12	211	223
Libraries	0	98	98
Subtotal, City Direct	\$8,851	\$38,334	\$47,185
Environmental Protection (WA)	13,838	1,006	14,845
Health and Hospitals Corp.	537	435	973
Housing Authority	0	229	229
Subtotal, Component Units	\$14,376	\$1,670	\$16,046
TOTAL	\$23,227	\$40,004	\$63,231

Note: Replacement spending for the Transit Authority is excluded here.

Source: New York City Office of Management and Budget, Ten-Year Capital Strategy, FY2008-2017.

⁶⁶ Replacement spending for the Transit Authority totaling \$767 million is excluded from this analysis.

Citizens Budget Commission

The adequacy of funding in these areas, and for the City as a whole, is detailed in Table 20. Overall, City agencies are funding 93 percent of total state of good repair and replacement requirements, a shortfall of \$3.8 billion. There is great variance between agencies for funding provided. In three of the eleven government areas, City University, social services and libraries, funding represents less than half of the total calculated requirement.

At the opposite end, funding represents more than 75 percent of overall need for five areas—although a high funding ratio still translates into a \$1.3 billion shortfall in transportation services. The greatest shortfall, \$2.7 billion, is for general government assets, funded at only 60 percent. Conversely, for the other high-need area directly in the City’s charge, education, the entire need is funded over the ten-year period.

Table 20
Adequacy of Spending Planned in the Ten-Year Capital Strategy, FY2008-2017
(dollars in millions)

	Total State of Good Repair and Replacement Need	Total Spending for SOGR and Replacement Planned in the Strategy	ADEQUACY	
			Percent Funded	Surplus/ (Shortfall)
General government	6,719	4,019	60%	(2,699)
Public safety and judicial	3,447	4,061	118%	614
Education	19,315	21,655	112%	2,340
City University	634	149	24%	(485)
Social services	870	426	49%	(444)
Sanitation	1,981	2,368	120%	387
Transportation services	12,363	11,106	90%	(1,258)
Parks, recreation and cultural	4,523	2,491	55%	(2,032)
Housing	265	589	222%	324
Health	363	223	61%	(140)
Libraries	478	98	20%	(380)
Subtotal, City Direct	\$50,958	\$47,185	93%	(\$3,773)
Environmental Protection (WA)	10,799	14,845	137%	4,045
Health and Hospitals Corp.	2,424	973	40%	(1,452)
Housing Authority	2,324	229	10%	(2,095)
Subtotal, Component Units	\$15,547	\$16,046	103%	\$499
TOTAL	\$66,506	\$63,231	95%	(\$3,274)

Notes: Need determined by adding AIMS capital and expense recommendations for state of good repair and forecasting replacement cost depreciation for the FY2008-2017 period based on schedules in the *Comprehensive Annual Financial Report*. Transportation services need and capital plan spending do not include subsidies or payments to the Transit Authority.

Sources: *Ten-Year Capital Strategy, FY2008-2017*; *New York City Comprehensive Annual Financial Report, FY2006*; *Asset Management Information System, FY2007*; *Municipal Water Finance Authority Annual Report, FY2007*; *NYC Health and Hospitals Corporation Annual Report, FY2007*; *Housing Authority Annual Report, FY2006*; *CBC Analysis*.

In the third high-need area, environmental protection, funding seemingly exceeds necessary requirements. This is not the case for the other two major component units, the Health and Hospitals Corporation and the Housing Authority, for which funding will cover only 40 percent and 10 percent of need, respectively.

These estimated funding ratios are likely too high, for several reasons. First, as previously explained, estimates of total need are understated. This is particularly true for certain agencies and component units, such as the Department of Housing Preservation and Development, the Housing Authority (HA), and the Water Authority (WA). Since these agencies are excluded from AIMS, there were no estimates for state of good repair requirements for these assets. As a result, the highest funding ratios – for housing assets (222%) and the water and sewer system (137%) – are inflated since total need calculated was not comprehensive.

Nevertheless, the disparities between the adequacy of funding between agencies and the large overall unmet need point to the lack of clear policy for funding state of good repair work and the replacement of assets, and demonstrate that spending planned in the current Strategy will not be sufficient to meet these needs.

This is rooted in the fact that the City has no plan for achieving a state of good repair on its assets. The PLANYC program established such a plan for mass transit, roads, and bridges, and has emphasized the importance of repairing the water and sewer system and rehabilitating parks. According to this analysis, funding provided to achieve a state of good repair for transportation assets is not sufficient to meet anticipated needs over the next ten years; however, PLANYC has articulated clear priorities for achieving it over a longer term, by maintaining current investments to complete the current bridge rehabilitation program and increasing investments to resurface roads in need of repair by 2029. However, in the other major areas of the PLANYC agenda – housing, parks, and most likely, environmental protection – spending planned in the next ten years will not be sufficient to keep pace with maintenance, replacement and state of good repair needs, even as major expansions are planned in these areas.

Expanding and Enhancing Capital Assets. Of the ten goals of PLANYC (see Table 11), four require major investments by the City to enhance and expand its infrastructure and assets: creating housing for a million more New Yorkers; adding transit capacity to relieve congestion; developing back-up systems for the water network; and ensuring all New Yorkers live within a ten-minute walk of a park and have clean air to breathe.

Accomplishing these goals will require substantial new investments, most of which will come from the City's capital budget. These public investments should be justified in terms of providing better or more efficient levels of service, or in terms of providing a high rate of return on investment.

PLANYC documents do not justify these projects in terms of return on investment, but rather, in terms of improving services and accommodating emerging needs in the City. In a few cases, limited data is provided to demonstrate the anticipated improvement in service; in most others, however, there is no such data. Still, PLANYC expansion projects are better described as part of the overall strategic direction of the City under PLANYC than non-PLANYC expansion projects found in the Ten-Year Strategy. Overall, explanations for including these projects in the Strategy are lacking. In particular, economic development projects are not justified with any economic analysis that demonstrates benefits or a rate of return on investment.

Citizens Budget Commission

The following reviews and analyzes the four major expansion areas under PLANYC, as well as other major expansions planned in the Strategy.

Creating Housing. PLANYC has made increasing the supply of housing and creating affordable housing one of its key goals. These housing initiatives would create transit-accessible and affordable housing opportunities to accommodate 900,000 New Yorkers through rezonings, new homeownership and housing programs, and innovative approaches for siting new housing.

PLANYC builds on the Mayor's current ten-year housing plan for fiscal years 2004-2013. This plan calls for creating 92,000 units and preserving 73,000 units, for a total of 165,000 units to house 500,000 New Yorkers. These new units would provide housing for homeless, low and middle income individuals and families, at a cost of \$7.5 billion. Some of these costs will be paid through sources other than the capital budget, including the expense budget (\$1.3 billion), the Housing Development Corporation (\$548 million) and other special funds. In total, the plan anticipates \$4.6 billion dollars to come directly from the capital budget.

Due to the ambitious nature of the housing plan, the Bloomberg administration issued a separate planning document outlining its size and scope, and justifying this expansion in terms of social need, providing better services for New Yorkers, and in terms of return on investment. The City cited empirical research showing that its housing investments have produced a multiplier effect in terms of construction spending, jobs and personal income: the City's \$4.1 billion investment from 1986-1997 created 150,000 housing units and produced 99,000 jobs and \$4.5 billion in personal income from construction activity, as well as 25,000 jobs and \$900 million in personal income through consumer expenditures by residents of this housing.⁶⁷

This calculation of benefits relies on an uncommon approach of including construction activity as part of the long-term benefits accrued from initial investment. Furthermore, since affordable housing by definition is targeted toward lower-income populations, no comparative rate of return is calculated with respect to jobs and personal income revenues attributed to different types of residents; the figures cited by the City are likely lower than if restrictions and/or subsidies on this housing were removed and higher-income populations were allowed to move in. The City will be providing roughly a \$38,000 subsidy for each unit created and preserved under the proposed plan from the capital budget; the City does not provide any economic analysis to estimate the benefits this subsidy will provide for the City.

Neither is any rigorous economic analysis provided to estimate the benefits of the additional housing development planned after 2013 under the PLANYC agenda. Instead, the additional development is justified based on the need to increase the supply, as well as the affordability, of housing. This need is supported by data indicating that half of all New Yorkers pay more than 30 percent of their income toward rent, and that housing costs are a major factor for those moving out of the City.⁶⁸ PLANYC estimates that 265,000 units of housing are needed by 2030 in order to prevent further

⁶⁷ New York City Department of Housing Preservation and Development. *The New Housing Marketplace: Creating Housing for the Next Generation*. Published December 10, 2002; p. 9.

⁶⁸ PLANYC. "A Greener, Greater New York." City of New York. 22 April 2006. Available online at <http://www.nyc.gov/html/planyc2030/html/downloads/download.shtml>.

tightening of the housing market anticipated by the projected population increase;⁶⁹ therefore, the PLANYC housing agenda for 2014-2030 calls for housing for an additional 400,000 people beyond the 500,000 to be housed under the current housing plan (2004-2013).

For these additional units, the PLANYC housing strategy will focus on creating housing opportunities in new or underutilized areas: outdated municipal buildings, space occupied by government agencies that can be adapted or expanded for housing, new land created by decking over rail yards, rail lines and highways, underdeveloped or vacant waterfronts, and transit-accessible areas that are currently underutilized. Continuing, as it has in recent years, to pursue housing development near transit, the City will also use proposed transit expansions as a focal points for expanding housing in new areas: Ninety-five percent of new housing capacity would be created within a half-mile of mass transit.⁷⁰ All these initiatives are aimed at increasing the supply of housing, and responsibility for implementing them will fall primarily to the Department of City Planning.

The other part of the housing strategy focuses on developing and maintaining affordable housing options. The New York City Housing Authority will be building 6,000 affordable housing units, and the City will work to preserve the Mitchell-Lama program and HUD-financed properties. It will also expand inclusionary zoning, which enables developers to build larger buildings in exchange for dedicating a certain percentage of units constructed to affordable housing. Finally, it will continue financing programs developed under the current housing plan that provide down payment, capital acquisition or other financial assistance to the middle class. The Department of Housing Preservation and Development will be the lead agency for affordability programs, and its \$4.2 billion capital program includes \$1.5 billion in fiscal years 2014-2017 for new and continuing housing initiatives under PLANYC. The Department of Homeless Services and the New York City Housing Authority also have a combined \$140 million for expanding the affordable housing.

Adding Transit Capacity. Thirteen of the 25 largest counties nationwide with the longest commute times are in the New York City metropolitan region.⁷¹ The goal of PLANYC is to improve these travel times by adding capacity to the transportation and transit systems. More specifically, the PLANYC transportation initiatives would expand service on ferries, buses and commuter rails, particularly in underserved areas, and provide new commuter rail access into Manhattan. They would also increase capacity on key congested routes, add special bus, bike and HOV lanes throughout the City's roads and bridges, and pursue improvements to existing subways and bus stops. Finally, congestion pricing in Manhattan's Central Business District would be piloted.

Most of these improvements will be undertaken by the Department of Transportation (DOT) and the Metropolitan Transportation Authority (MTA). Based on this ambitious transportation agenda, PLANYC has identified 17 initial projects to enhance transportation infrastructure and transit service. Besides achieving a state of good repair, these projects include the addition of bicycle and express bus lanes, ferry-related improvements, bus rapid transit, congestion pricing, the first two

⁶⁹ PLANYC. "New York City's Housing Challenges through 2030." City of New York. Accessed 1 March 2007, available online at <http://www.nyc.gov/html/planyc2030/html/news/downloads.shtml>.

⁷⁰ PLANYC. "A Greener, Greater New York." City of New York. 22 April 2006. Available online at <http://www.nyc.gov/html/planyc2030/html/downloads/download.shtml>.

⁷¹ Census data cited in PLANYC, "A Greener, Greater New York." City of New York. 22 April 2006. Available online at <http://www.nyc.gov/html/planyc2030/html/downloads/download.shtml>. See pages 75-76.

Citizens Budget Commission

phases of the Second Avenue subway, extension of the 7 train to 10th Avenue, renovation of Penn Station, Metro-North Access to Penn Station, and a third track for the Long Island Rail Road.⁷²

Many of these projects have been long discussed or advocated for by community and transportation groups; but, the City has not clearly demonstrated why these projects should be pursued instead of others, or the economic benefits that can be expected from them. More specific data should be also released on how much congestion would be relieved by bringing these projects to fruition.

Expanding the Water and Sewer System. The water and sewer system is old and heavily utilized; the PLANYC agenda builds on the Department of Environmental Protection's (DEP) ongoing capital program to ensure long-term reliability for the water network, preserve the quality of city drinking water, address pollution issues stemming from combined sewage overflow, and meet state and federal mandates.⁷³ Investments for meeting the first phase of these long-term goals are included in the Strategy; however, the consulting engineer's report on the condition of the water and sewer system identifies several projects, including the Hillview Reservoir Cover, the Kenisco City Tunnel, and the Jamaica Bay Water Pollution Control Program, that will likely require greater funding than currently planned in the outyears of the Strategy.⁷⁴

The Strategy shows that DEP's capital resources are targeted almost exclusively toward replacement of assets (71 percent of funds in the Strategy) and programmatic expansion (24 percent). Expansion projects for the water and sewer system in the Strategy total \$4.6 billion and include a litany of major infrastructure construction and development, including the continued construction of the third water tunnel, the development of conveyance systems, sewer and water trunk and main extensions, construction of the Croton filtration plant, expanding wet weather capacity at treatment plants and increasing the use of High Level Storm Sewers. The Bluebelt program— which arranges wetlands and plants to create a system of retention ponds, drainage systems and natural filtering— will be expanded in Staten Island and other boroughs.

These expansion projects will likely improve service in a way that is critical to maintaining and improving upon a basic level of service expected by citizens and businesses. While it is difficult to calculate the return on such investments, much of the benefits rest in having a smoothly functioning water and sewer system that does not malfunction unexpectedly or impose serious disruptions, delays or damage in the event of an unexpected breakdown.

Parkland Initiatives. The City's initial goal for its open space initiatives was to have every New Yorker live within a ten-minute walk of a park. In addition to proximity, the City assessed need for open space based on another criteria: population density. New York City's 29,000 acre park system is one of the largest in the nation, but the City has fewer acres of green space per person than almost any other major American City. Today, there is approximately 1.5 acres of park space per 1,000 people;

⁷² PLANYC. "A Greener, Greater New York." City of New York. 22 April 2006. Available online at <http://www.nyc.gov/html/planyc2030/html/downloads/download.shtml>.

⁷³ PLANYC. "New York City's Water Network Challenges through 2030." and "New York City's Water Quality Challenges through 2030." Accessed 1 March 2007, available online at <http://www.nyc.gov/html/planyc2030/html/news/downloads.shtml>.

⁷⁴ New York City Municipal Water Authority. *Fiscal Year 2007 Consulting Engineer's Report*. Prepared by Metcalf & Eddy of New York, Inc. March 20, 2007.

by 2030, 59 neighborhoods of the City's 188 neighborhoods are expected to have less than 1.5 acres of park space per 1,000 people.⁷⁵

Initiatives to ensure adequate open space and playgrounds will involve making improvements to current sites to make them more available to New Yorkers. This will involve opening schoolyards available as playgrounds, rebuilding and opening athletic facilities for athletes and teams, and improving the length of time facilities can operate by installing new lighting and converting asphalt to multi-purpose fields. It will also involve making other improvements to the public realm: completing eight underdeveloped parks, with at least one in each borough; creating a public plaza in every community; expanding the Greenstreets program; planting trees; and reforesting 2,000 acres of parkland. The greening of the city through these initiatives will benefit both the appearance and air quality of the city.

The Department of Parks and Recreation (DPR) will be responsible for implementing most of these initiatives, and \$942 in funding has been added to the April Ten-Year Capital Strategy for that purpose, bringing DPR's total funding to \$2.7 billion – a 55 percent increase from the January Strategy. Of this, \$481 million is expansion spending for land acquisition and tree planting, with plans to plant over 45,000 trees per year from 2008-2017. DPR has entered into a public-private partnership with the New York Restoration Project to plant 1,000,000 trees citywide, with the City responsible for planting 60 percent of the new trees and the private sector responsible for the rest.⁷⁶

Other Expansion Projects in the Ten-Year Capital Strategy. The City's \$23 billion program for expansion focuses on using existing land more intensively and building infrastructure in areas particularly sensitive to population and employment growth trends. As such, over two-thirds of spending for expansion purposes will be concentrated on building new schools, creating housing and expanding capacity in the water and sewer system.

Both housing and environmental protection assets are central to the PLANYC agenda, but the \$6.5 billion the City will spend on constructing new schools has not been accounted for by PLANYC. Through the Strategy, the City will also be investing \$1.2 billion in commercial, industrial and waterfront development through the Department of Small Business Services. Notably, no transportation expansion projects were included in the Strategy: the extension of the Number 7 transit line as part of the \$3 billion Hudson Yards project was omitted. Omission of Hudson Yards from the Strategy is inconsistent with the inclusion of investments for other legally distinct entities that may issue their own debt, e.g. the Housing Authority and the Municipal Water Finance Authority, but are component units of the City. The same considerations apply to the Hudson Yards Development and Infrastructure Corporations, and so, the Hudson Yards project has been added to CBC's consideration of economic development projects.

Constructing New Schools. The Department of Education is currently operating under a five-year capital plan for fiscal years 2005-2009. This plan has been amended several times, mostly reflecting the absence and then award of State financing for the \$13.5 billion spending plan. The February 2007 amendment, the most recent, will allocate \$9.0 billion toward investing in existing

⁷⁵ PLANYC. "A Greener, Greater New York." City of New York. 22 April 2006. Available online at <http://www.nyc.gov/html/planyc2030/html/downloads/download.shtml>, pages 29-30.

⁷⁶ MillionTreesNYC. "About MillionTreesNYC." Accessed 2 November 2007 27, available online at <http://www.milliontreesnyc.org/html/about/about.shtml>.

Citizens Budget Commission

assets and restructuring current school space, and the remaining \$4.5 billion will be dedicated to the development of new capacity.⁷⁷ Overall, the Capital Strategy calls for \$28.2 billion in capital expenditures in education from fiscal years 2008-2017, \$6.5 billion of which will be devoted to new school construction.

The need to create new schools is based on projected enrollments and the necessity of providing adequate facilities for basic education services. Projections recently updated based on enrollments for the 2005-2006 school year predict a downward trend for total school enrollment, due primarily to stable birth rates, a decrease in immigrant students, and a rise in the number of charter schools. Whereas actual enrollment for pre-k through grade 12 was 1,033,525 in 2005, it is projected to decline to 929,600 by 2010 and further to 888,969 by 2015, a total loss of 14 percent and 144,556 students. However, shifting trends among ethnic groups in the city will be the major determinant of enrollment trends, and will likely result in pockets of growth in certain regions (Staten Island being one) amidst the overall projected decline.⁷⁸

Despite projected declines, the school system currently suffers from overcrowding. According to the *Mayor's Management Report*, 47.5 percent of high schools, 14.5 percent of intermediate schools and 24.3 percent of elementary schools exceeded capacity in fiscal year 2006.⁷⁹ DOE's 2005-2009 plan alleviates this overcrowding by adding 100 new school buildings, creating 63,000 new seats. Three thousand additional seats are also being created to eliminate transportable units and reduce class size in grades K-3, for a total of 66,000 seats.

The size of the education capital plan, and consequently its prominence within the ten-year capital strategy, is rooted in several factors, including the Campaign for Fiscal Equity lawsuit that deemed school facilities woefully inadequate and the priorities of the mayor. Furthermore, unlike any other functions of government, outside funds from the State are expected to supply over half of funding for the plan for the ten-year period. Consequently, these factors – rooted in political and judicial developments – have resulted in the largest school capital spending plan in history.

DOE's facilities plan aims to improve the educational experience for many of the City's students; however, it is questionable whether expanding capacity in the form of permanent, newly-constructed school buildings– which will require substantial maintenance once they become operational– is the wisest approach for doing so at a time when enrollments are projected to decline. Pockets of overcrowding that prevail in system could also be alleviated, if not eliminated, through changes in operations, as opposed to greater capital expenditures.

In 2004, CBC examined the prospects for alleviating overcrowding in its report [*Can New York Get an A in School Finance Reform?*](#). Its recommendations focused on two fundamental reforms

⁷⁷ New York City Department of Education. "Children First: 2005-2009 Five-Year Capital Plan: Proposed 2007 Amendment." February 2007. Also available online at <http://schools.nyc.gov/Offices/SCA/Reports/feb07amend.htm>.

⁷⁸ The Grier Partnership. "Enrollment Projections 2006 to 2015, New York City Public Schools." Volume II: Narrative Report. Prepared for the New York City School Construction Authority by Eunice and George Grier. January 2007. Accessed online at <http://schools.nyc.gov/Offices/SCA/Reports/grier06-15.htm>.

⁷⁹ City of New York. Mayor's Office of Operations. *The Mayor's Management Report, Fiscal Year 2007*. September 2007, p. 21.

that do not impose heavily on the capital budget: a rezoning of schools and the implementation of year-round schooling.

Most schools are “zoned,” meaning that they draw students from designated areas. In theory, zones for schools should be reviewed and revised periodically according to demographic changes, but in practice, rezoning has occurred only once. What has resulted is a wide variation in population by zone, with overcrowding prevailing in the more populous zones but an under-utilization of facilities occurring in other, less populated zones. Unused capacity, however, exceeds excess enrollment systemwide by more than 2 to 1. Reconfiguring school zones could provide seats for approximately 70,000 students.⁸⁰

Year-round schooling alters the conventional school calendar by eliminating traditional summers off, instead spreading vacation sessions throughout the calendar year. Combining this spread out school calendar with staggered scheduling for classroom instruction throughout the year better utilizes existing capacity and can increase the number of students that any school building can accommodate. Together, year-round schooling and rezoning could generate more than 200,000 seats, which would eliminate excess enrollment at schools while also allowing for the removal of transportable units and mini-buildings, as well as other initiatives like class size reduction⁸¹ - and saving \$4.5 billion in capital costs.

Economic Development Projects. The City will be investing \$1.2 billion in commercial, industrial and waterfront development through the Department of Small Business Services. This includes the development of central business districts in Long Island City, Queens and downtown Brooklyn and the redevelopment of a former naval base on Staten Island into a commercial district. Commercial development will be the largest type of spending, \$386 million, followed by improvements to piers and cruise terminals (\$282 million), infrastructure upgrades in industrial areas (\$155 million), and waterfront development to enhance and rehabilitate the public space around the City’s piers (\$142 million). Additional funding, totaling \$248 million, is provided for neighborhood revitalization and cultural and market development initiatives.

Economic development projects such as these should be justified in terms of the benefits the City can expect from them; for most of these projects, however, not enough detail is provided to understand with certainty what the projects are and where they will be sited, let alone to evaluate them. Investments for such projects should be rooted in a rigorous economic analysis that provides analytic support for directing resources toward development that will yield the highest long-term benefits for taxpayer resources.

The City performed and used such analysis in order to win approval and funds for the Hudson Yard project, \$2 billion of which will be for the extension of the Number 7 line and \$1 billion of which will be for general economic development that will include 25 million square feet of office space, 15,000 new housing units, 3,000 new hotel rooms, new park space and other

⁸⁰ Citizens Budget Commission. “Finding Space for a Sound Basic Education.” November 2004. Also available online at http://www.cbcny.org/CBC_WorkingPaper-FindingSpace_11-04.pdf

⁸¹ Citizens Budget Commission. “Finding Space for a Sound Basic Education.” November 2004. Also available online at http://www.cbcny.org/CBC_WorkingPaper-FindingSpace_11-04.pdf

Citizens Budget Commission

infrastructure.⁸² The Hudson Yards Infrastructure Corporation commissioned an analysis to assess the general viability of developing the Hudson Yards area, as well as the specific benefits that could be realized from each aspect of development in the hotel, office, residential and retail markets under different scenarios. The analysis determined that there would be over \$34 billion in revenues that could be realized from development over a 30-year period, allowing for the financing of construction expenditures through dedicated revenue streams from payments-in-lieu-of-taxes (PILOTs) and other payments.⁸³

No such analysis accompanies any of the economic development or expansion projects in the Strategy. Instead, the Ten-Year Strategy channels \$19.6 billion toward expanding and enhancing capital assets in the City without providing much of a concretely stated reason for doing so. It may be that all of these expansion projects will indeed improve the provision of services and yield a high rate of return on investments, but the Strategy should describe in detail how this is so, or refer to sources that do provide a clear, data-driven explanation.

⁸² Cushman and Wakefield, Inc. “Hudson Yards Demand and Development Study.” November 2006. Prepared for the Hudson Yards Infrastructure Corporation.

⁸³ Cushman and Wakefield, Inc. “Hudson Yards Demand and Development Study.” November 2006. Prepared for the Hudson Yards Infrastructure Corporation.

RECOMMENDATIONS FOR STRENGTHENING CAPITAL BUDGETING IN SUPPORT OF PLANYC

Keeping the City's capital assets competitive will require creative capital planning and pragmatic capital budgeting practices. PLANYC has outlined an expansive and visionary capital agenda for some of the City's most vital infrastructure systems; however, it has overlooked some major assets, such as public schools. The creativity and spirit of innovation that guide PLANYC should be expanded to planning for all of the City's assets, and accomplishing the goals of such planning will require more disciplined capital budgeting practices than those currently followed by the City.

The following four recommendations call for expanding the scope of PLANYC to cover all capital assets and for strengthening the City's capital budgeting practices to support such long-term planning and vision.

1) Expand and institutionalize the PLANYC approach.

The capital planning process behind the Ten-Year Strategy is inadequate in three major ways: (1) It does not establish a clear strategic agenda with actionable goals and is not well-integrated with other strategic planning activities; (2) It suffers from an ineffective time frame, one that is too short for true vision and too long for credible financial planning; and (3) It is not firmly rooted or guided by assessments of need.

The PLANYC initiative embodies a longer-term strategic perspective that is also more comprehensive than the current process. PLANYC has stated ten broad strategic goals for improving and expanding infrastructure and enhancing the overall sustainability and quality of life in the City over the next 25 years. Such long-run thinking is necessary for managing and improving large infrastructure components such as the water and sewer system, bridges and streets and highways.

In addition to focusing on a longer time frame, these goals assume a much broader perspective than the strategic plans put forth by the Department of City Planning or by the objectives of the Ten-Year Capital Strategy because they involve assets owned by or necessitate the participation of other entities, such as the State and the Metropolitan Transportation Authority. These entities have extensive capital asset holdings, including major infrastructure assets— highways, bridges, airports, telecommunications networks and energy delivery systems— vital to the City's competitiveness. Optimal strategic planning should assume the broadest perspective, one in which the plans of other authorities or governments integrate or occur in tandem with that of the City.

PLANYC is also an improvement over the current capital planning process in another sense: Its plans link the condition of the major infrastructure systems and projection of system needs to specific capital programs to address these needs and achieve clearly stated goals.

In short, the PLANYC process improves upon the traditional capital planning process in many areas where it is weak. The long-term, strategic approach should also be expanded to encompass other agencies and capital assets omitted in the current plan. All agencies should have a long-term strategic capital planning document tailored to the specific capital challenges faced by that agency. Such a document can vary in length by agency, but should be rooted in needs assessments and

Citizens Budget Commission

projections, relate directly to the City's larger strategic mission for capital assets, and look beyond only City-owned assets to those of the State, State authorities and others.

This longer-term strategic document should be accompanied by a shorter-term document that translates the goals in the longer one into specific agency objectives and expenditure estimates. A fixed, short-term capital plan allows for better financial planning and capital budgeting, since rising construction costs and changing circumstances make expenditures difficult to estimate beyond a few years. Such a tiered planning process also would allow for judging progress against the goals and needs identified in the broader document in a way that is not possible with current capital planning documents.

Such a planning process can build upon PLANYC and the City's current four-year capital budgeting and commitment practices, and should be institutionalized in the City Charter in place of the Ten-Year Capital Strategy. In the short-term, the City Council should also pass legislation to institutionalize the Office of Long-Term Planning and Sustainability in order to guarantee that long-term capital planning remains a priority for mayors in years to come.

2) Develop a systematic plan for bringing all City-owned assets to a state of good repair and the capacity to assess non-City owned assets.

For most assets, spending in recent Strategies has not been linked to condition assessments, based on a standard for maintaining the condition of the asset, or connected to a goal for achieving or maintaining state of good repair. The City does a good job of assessing the condition of its major classes of assets (bridges, schools, streets and highways), but more should be known about the needs of all capital assets in the City. The City should expand the AIMS report to cover all its capital assets, and should integrate the condition assessments of major capital asset systems conducted individually by agencies into a single reporting structure.

Once it fully assesses the needs of all its assets, it should then develop a systematic plan to eliminate deferred maintenance and bring all its capital assets and infrastructure systems to a state of good repair. Any long-term or short-term capital plans should be tied directly to this plan, with achieving a state of good repair made a priority.

For major capital assets outside the immediate authority of City government, the City should develop the capacity for analyzing the condition of those systems and work with the other owners of capital assets to keep them in proper working condition. For some systems, such as bridges and highways, such capacity already exists, with City officials working closely with their counterparts at the State level to ensure inspections or maintenance are performed. For most others, however, little is known. The City should be able to assess the condition of non-City owned assets and to impress upon asset-holders the importance of restoring and maintaining them as part of a broader, more comprehensive approach to capital planning. The first steps in this direction have been taken by PLANYC, which has identified state of good repair needs for transportation and transit systems, and has devised a plan to meet these needs for both these systems by 2030.

3) Place capital assets on appropriate replacement cycles and fund their repair and replacement with funds from the operating – not capital – budget.

Maintaining competitive infrastructure and capital assets requires proactive, not reactive, planning. Too much of the City’s capital planning is conducted on an ad-hoc basis, as demonstrated by lump-sums in the capital budget for “continuing projects” that are used for repair or replacement projects as they become necessary. Instead, the City should place all its capital assets on regular replacement cycles according to their useful lives. This would impose greater discipline and predictability in the capital planning process, and would also provide more information on the age and condition of the City’s assets. Furthermore, it would create incentives for better maintenance, since an asset would need to be routinely maintained in order to last to the end of its useful life.

Placing assets on firm replacement cycles would also allow the City to set aside funds from its operating budget along the lines of replacement cost depreciation for its assets. This would provide a steady fund to replace assets when they are scheduled to be replaced and eliminate the need for costly borrowing for replacement. Capital costs would be incurred only for bringing old, broken down assets to a state of good repair and for expanding the capital stock. This would also free up capital revenues so that they may be devoted to achieving state of good repair.

The City Comptroller reports that depreciation of the City’s major assets in fiscal year 2007 was \$3.0 billion based on historical cost; CBC estimates that it would be \$4.9 billion based on replacement cost. In the same fiscal year, the City had \$6.5 billion in unanticipated revenues above those budgeted in its financial plan, enough to fully absorb the cost in that year. In less prosperous years, the City can phase-in funding for replacement or establish a percentage of revenues to be dedicated to a fund for regular replacement costs. While the funding requirement may seem large, it is outweighed by long-term savings from better asset management and foregone debt service costs.

4) Pursue expansion projects based on clearly explained priorities and rigorous economic analysis that demonstrates the provision of better services or a high return on the investment of public funds.

New capital projects in the Ten-Year Capital Strategy total \$23 billion (including Hudson Yards), and will require substantial funds for operations and maintenance from the expense budget when they are completed. While some projects are justified as necessary for improving governmental services, none of the economic development projects – with the notable exception of Hudson Yards – are justified on the basis anticipated benefits that will accrue to the City.

When large, new capital projects are proposed, a clear set of priorities for selecting between such new expansion projects should be applied. Selection of projects should be rooted in economic analysis that demonstrates anticipated benefits, either in the ability to provide a higher or more efficient level of service, or in terms of providing a high rate of return on the investment of public funds. These benefits should be clearly explained in the Strategy and documented in accompanying analysis made available to the public. Presenting such analyses would ensure that scarce public resources are allocated in a transparent and beneficial manner.