City of Atlanta
Office of the Mayor
December 2008

STATE OF THE CITY'S INFRASTRUCTURE

A Report by the Office of Program Management

State of the City's Infrastructure

INTRODUCTION

THE NATION'S DETERIORATING INFRASTRUCTURE: MINNEAPOLIS BRIDGE COLLAPSE

In recent years the deterioration of the nation's public infrastructure has become a critical source of concern for governments at the federal, state and local level. The levee system collapse in New Orleans, the Minneapolis bridge collapse, the steam pipe explosion in mid-town Manhattan, and countless emergency measures being implemented to offset crumbling dams, bridges and tunnels throughout the country have focused much-needed attention on the state of the nation's infrastructure. While the local details vary, what has been revealed is a systematic failure – at all levels of government - to invest in the nation's capital stock.

The watershed moment in many respects was the 2005 report card released by the American Society of Civil Engineers (ASCE) that claimed that 160,570 bridges - or just over one-quarter of the nation's bridge inventory - were rated structurally deficient or functionally obsolete. The ASCE estimates that $1.6 trillion is needed to bring the nation's infrastructure to a good condition. In Georgia, 20% of state's bridges are deficient or obsolete, 105 dams are deficient, and the water and waste water infrastructure alone needs $4.9 billion in investment. In addition, metro Atlanta's transit and transportation infrastructure has greater investment needs than almost any region in the country.

Despite the nation's impressive tradition of investing in public infrastructure - canals and railroads in the 19th century, transit and highways in the 20th century - the country's commitment to public infrastructure has waned in recent decades. Since 1980, the United States has invested less than 2% of its Gross Domestic Product (GDP) in infrastructure – less than what it spends on higher education. Europe spends 5% of its GDP on public infrastructure and China over 9%. China intends to invest $200 billion in its railways alone between 2006 and 2010.

> *"Establishing a long-term plan for the country's infrastructure must become a national priority"*
>
> *ASCE president William F. Marcuson*

Despite this lack of leadership from the Federal and State governments, the City of Atlanta has made significant strides to upgrade and maintain the quality of its public infrastructure. Since 2001, the City has secured funding for a $3.9 billion waste water infrastructure rebuild, a $5.4 billion infrastructure program at Hartsfield Jackson Atlanta International Airport, $150 million investment in streets and sidewalks through the Quality of Life Bond Program, $200 million for public buildings and facilities, and $43 million for 733 acres of new parks and

greenspace. In addition, the City is moving ahead with the development of a transit and parks corridor (the Beltline) that will add an estimated $2 billion to our greenspace and transit capital inventory.

INVESTMENTS ARE CRITICAL: NEW PUBLIC SAFETY HEADQUARTERS

While these investments represent important progress in upgrading our public infrastructure, they account for only a fraction of the City's long-term capital needs. Rapid population growth and the subsequent demand on public infrastructure will require the City to make additional investments in its capital stock. In recent years, the City has begun a program to systematically inventory and track its capital requirements with the goal of creating a fully-funded program designed to upgrade and maintain its inventory of capital assets.

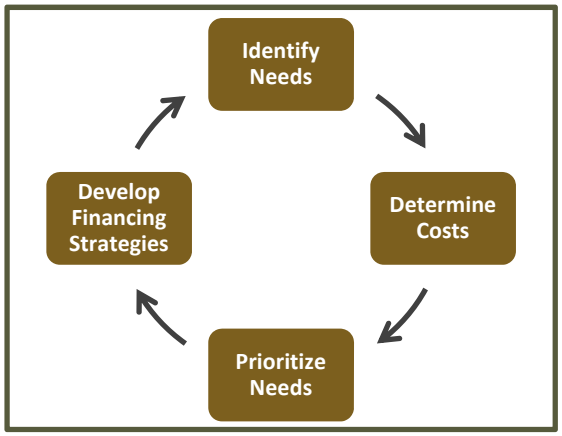
The purpose of this report is to provide an assessment of the public infrastructure currently under management by the City of Atlanta. This excludes infrastructure managed by other local government authorities such as that of the Atlanta Public Schools, the Metropolitan Atlanta Rapid Transit Authority (MARTA), the Atlanta Fulton County Recreational Authority, and Grady Hospital. The report further restricts its focus to infrastructure related to general government operations – specifically; it excludes the City's water/sewer infrastructure (including storm water management) and the infrastructure at Hartsfield-Jackson Atlanta International Airport where, in both instances, capital is financed through independent enterprise funds and not general government receipts.

GROWTH PLACES NEW DEMANDS ON CITY INFRASTRUCTURE - ATLANTIC STATION

The report also does not address the City's prospective capital needs to expand the inventory or capacity of its infrastructure. Between 2000 and 2007 the City of Atlanta grew at an annual rate of 3.2% and added approximately 100,000 new residents during that period. If that rate continues, the population of the City will double by 2030. New residents both increase the utilization of the existing infrastructure (thereby reducing its effective lifecycle) and increase its capacity requirements. For example, the recently completed *Connect Atlanta* plan suggests that the City needs to provide at least $2.8 billion in new transportation infrastructure funding to accommodate anticipated growth in the City. While we have not included these projections into this analysis, they should be incorporated in future long-term capital planning efforts.

APPROACH

The City of Atlanta has adopted an approach to planning and budgeting for capital infrastructure repairs and replacement as recommended by the Government Finance Officers Association (GFOA). As the diagram indicates, there are four steps to sound capital management (1) identification of capital needs, (2) determination of replacement, repair, and maintenance costs, (3) prioritization of needs, and (4) development of appropriate financing strategies.



Identify needs

Effective planning necessarily starts with an effective mapping of current infrastructure conditions. Included in this report is an inventory of the City's current capital infrastructure that has been compiled in conjunction with the City's operating departments. Each infrastructure component has been assigned a "lifecycle" based on original engineering specifications (where available). In cases where those specifications are not available, industry standards are applied. In addition, each infrastructure component was rated according to age and/or condition. Since much of the City's infrastructure exceeds its assumed lifecycle, it is important to assess its relative condition to inform the prioritization process described below.

Determine costs

For each infrastructure component standard replacement costs have been assigned. In general, these are based on 2007 costs as reported by the operating departments. Of course, as a practical matter, costs will vary based on the individual circumstances of each infrastructure element (i.e., no two bridges are exactly alike). However, for planning purposes standardized costs assumptions have been adopted.

Prioritize needs

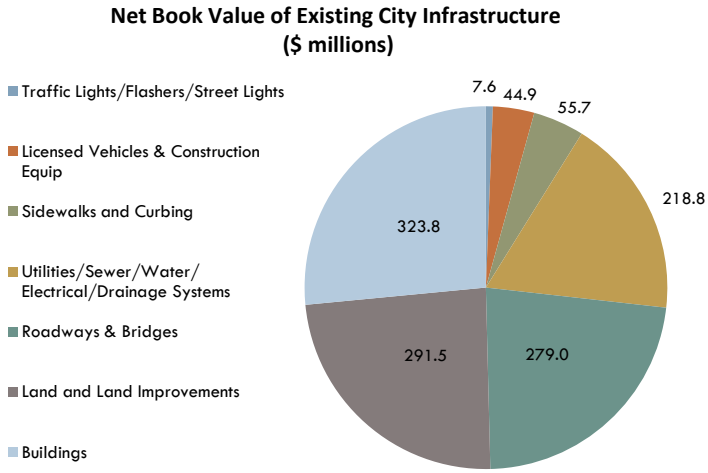
Given the limits on resources and the likely need to phase-in a capital investment program, prioritization is critical. In each of the capital categories under review, operating departments have been asked to rank the backlog inventories according to whether their condition was Critical (Priority 1), Urgent (Priority 2), or Important (Priority 3). Each department applied its own set of objective criteria (e.g., age, condition rating, etc) to this ranking exercise. It is important to note that no effort at this point has been made to prioritize across different capital categories. In other words, no attempt has been made to determine if repaving a street has a higher priority than replacing a fire station. Those trade-offs will naturally have to made once funding strategies have been identified.

Develop financing strategies

The strength of a capital infrastructure program is measured by its ability to access the financial resources necessary to implement replacement and repairs. While local governments have a diversity of financing tools available to support such programs - including the issuance of general obligation bonds, bonds issued by specially constituted authorities, and general government receipts – typically, local governments finance on-going capital needs through periodic general bond issuances.

CURRENT STATE

The City in its General Fund (again, excluding water/sewer and airport infrastructure) owns approximately $1.2 billion in capital assets. This is their "book value", which is their original cost depreciated over time. We estimate that it would cost $3.4 billion to replace this inventory today.



Like most governments around the country, the City has a significant backlog of capital infrastructure in need of replacement or major repair. This backlog is the result of decades-long practices of failing to catalog, track and fund capital needs in a systematic and timely manner. Consequently, the City operates with an infrastructure "deficit" that increases operating costs and inhibits the City's ability to meet operational performance targets.

For the purposes of this assessment, the City's infrastructure has been distributed into two categories. The first is "public infrastructure" - defined as infrastructure that is used primarily for public purposes. The second is "operational infrastructure" - defined as infrastructure that is required to support local government operations. The study focuses on the following components of infrastructure in each of those two categories:

Public Infrastructure	Operational Infrastructure
Transportation	**Motorized Fleet**
Traffic Signals	Fleet
Street Lights	
School Flashers	
Paved Streets	
Sidewalks & Ramps	
Bridges	
	Facilities
	Parks & Recreation
	Detention Center
	City Hall Complex
	Fire Stations
	Police Facilities
	Public Safety Training Facility

Public Infrastructure

TRAFFIC SIGNALS

Traffic signals are a critical component of the City's transportation infrastructure. Aside from ensuring safe passage through intersections, traffic signaling systems largely determine the carrying capacity of the urban street network and represent our most cost effective tool for mitigating traffic congestion.

There are more than 330,000 traffic signals in the United States. According to U.S. Department of Transportation (USDOT) estimates, as many as 75 % could be made to operate more efficiently by adjusting timing plans, coordinating adjacent signals, or updating equipment. The Federal Highway Administration (FHWA) recommends retiming signals every two to three years.

TRAFFIC SIGNAL

Optimizing signal timing is generally a low-cost approach to reducing congestion, costing from $2,500 to $3,100 per signal per update. Retiming signals in Seattle, for example, increased efficiency on its major arteries by over 25%.

The City of Los Angeles recently installed a new traffic signaling system – the Adaptive Traffic Control System (ATCS) – to improve traffic flows on city streets. The purpose of the system is to control all three critical components of traffic signal timing – cycle length, phase split, and offset – on a cycle-by-cycle basis. Extensive detector data collected in the signal network is continuously analyzed and evaluated, and the most appropriate signal timing for the existing condition is then implemented within one signal cycle. Any long-term traffic pattern changes and short-term variations in traffic conditions are automatically accommodated by ATCS. The result is fewer stops, fewer delays, and greater intersection operational capacities.

> ***"The payback in terms of capacity and public acceptance is significant. It's the one investment we can make in the near term that will make a difference in people's lives every day."***
>
> ***- Former Seattle Mayor Paul Schell***

A study was conducted to determine the benefits of L.A.'s ATCS over the Urban Traffic Control System that had been in operation as the city's central traffic control system; ATCS was shown to reduce travel time by 12.7 %, reduce average stops by 31 %, and decrease average delays by 21.4 %. Improvements in delay were more significant during the evening peak hours than at other times, but travel time and average stops were improved for all time periods.

While the focus of traffic congestion mitigation efforts in the metro Atlanta areas has generally been on the interstate system, congestion in the City network has been increasing in recent years. New dense residential and retail development – particularly in or near single-family neighborhoods – has increased traffic volumes on arterial and collector streets. For the most part, the opportunity to construct new roads to offset this increase in demand will be limited by the existing built environment. Instead, the City must seek ways to maximize the carrying capacity of its current street network, and modern traffic signaling technology will need to be part of the solution.

There are a total of 922 intersections with traffic signals located in the City of Atlanta. Some of the equipment currently deployed has the capability to communicate with the central system in the Atlanta Traffic Control Center where operators can monitor the operation of the traffic signals and make changes to signal timing or manually change the timing plans. However, only about 300 intersections of the 922 signals operated by the City of Atlanta have this capability. This lack of interconnection with the central system limits the coordination and synchronization of the City's traffic signals.

Remote management is only possible when a robust communication system is available that links all the signals within the system. Video surveillance – for example - can provide the central control system with real time data on street conditions and adjust signals to reflect changes in traffic flows. A strong communication system can also allow for the development of traffic responsive systems that would dynamically react to the change of unexpected traffic patterns caused by traffic incidents. While the dynamic signal control is resident within the new signals currently being deployed in the City, a major investment is needed to repair vehicle detectors and extend the communications network. This investment would further advance the systems capabilities and the intelligence within the system using video surveillance and communication links to the driving public. We estimate that investments in a new traffic signaling system will increase the efficiency of traffic flows by as much as 20-30% in the City of Atlanta.

A further benefit from an investment in a new signaling system is related to emergency management. The current signaling system has little capability to assist in a full or

Traffic Signaling 101

A traffic signal is typically managed by a ***controller*** *inside a* ***cabinet*** *mounted on a concrete pad. The cabinet typically contains a* ***power panel*** *to distribute electrical power in the cabinet, a* ***detector interface pan****el to connect to loop detectors and other detectors,* ***detector amplifiers****, the controller itself, a conflict monitor unit,* ***flash transfer relays****, and a* ***police panel*** *to allow the police to disable the signal in the case of an emergency.*

Solid state controllers are required to have an independent ***conflict monitor unit*** *(CMU), which ensures fail-safe operation. The CMU monitors the outputs of the controller, and if a fault is detected, the CMU uses the flash transfer relays to put the intersection to FLASH, with all red lights flashing, rather than displaying a potentially hazardous combination of signals. The CMU is programmed with the allowable combinations of lights, and will detect if the controller gives conflicting directions. The average signal intersection includes the following components:*

- *Displays consisting of 8 signal heads and 8 crosswalk displays*
- *One controller and conflict monitor*
- *One cabinet*
- *Wiring*
- *Timing devices*
- *Communication devices*

partial evacuation of the City. Law enforcement and other agencies would large rely on manual traffic management in the case of a serious emergency (e.g., act of terrorism, large chemical spill, etc). A fully-enabled system – such as those in operation in New York and other major cities – can be programmed to respond to an evacuation order by coordinating lights and directing traffic away from areas to be evacuated and toward pre-determined evacuation routes.

The City currently spends about $3 million annually to maintain the existing signaling system. Most of this expense relates to the spare parts and labor required to repair the aging system. This is labor-intensive work that is increasingly expensive to provide. A new system could reduce these costs by over half.

Utility costs comprise approximately $300,000 of these operating costs and they too represent a savings opportunity. Utility costs could be reduced by completing the conversion to LED displays. Today, only about 20% of the system uses LED displays. The conversion of the signal displays to LED technology would reduce utilities costs by approximately $240,000 annually.

Overall, nearly half of the components of the traffic signaling system are past lifecycle as outlined in the following table.

TRAFFIC SIGNALS INVENTORY (# of intersections)	LIFE CYCLE *(years)*	Obsolete	10+ years past	6-10 Years past	0-5 years past	LIFECYCLE	0-5 Years left	6+ years left	Total
Cabinets	10	45	--	165	482		74	156	922
LED Displays	5	722	--	--	--		200	--	922
Controller/Monitor	5	45	--	130	259		488	--	922
Wiring	20	45	100	165	482		74	56	922
Steel Pole	20	45	--	--	--		--	--	45
Signal Timing	5	--	460	--	--		462	--	922
Communication Signal	20	--	211	--	384		--	--	595
Communication Signal (F)	20	--	327	--	--		--	--	327
CCTV Communications	20	21	--	--	--		--	--	21

Prioritization of the traffic signal backlog is primarily a function of age. Each component has a specific lifecycle associated with it. The replacement of these components is assumed – for costing purposes – to include the upgrade in functionality needed to achieve the operating benefits of a modern signaling system.

It is also important to note that Communications Signal replacements can be one of two types: wireless or fiber optic. Each intersection requires one form of signal communication; however certain locations are unsuitable for wireless communication and fiber optic technology is necessary. The prioritization of the components of the traffic signaling system is depicted in the following table.

TRAFFIC SIGNALS – BACKLOG PRIORITIZATION (# of intersections)	Priority 1	Priority 2	Priority 3	Total
Cabinets	210	482	--	692
LED Displays	210	256	256	722
Controller/Monitor	175	259	--	434
Wiring	145	165	482	792
Steel Pole	45	--	--	45
Signal Timing	100	253	107	460
Communication Signal (Wireless)	211	384	--	595
Communication Signal (Fiber optic)	327	--	--	327
Communications (CCTV)	21	--	--	21

The overall cost of eliminating the backlog in the traffic signals system is $60.1 million. This cost includes both the replacement of the individual components listed above and the upgrades needed to introduce the traffic management capabilities described above.

TRAFFIC SIGNALS – BACKLOG COST ($millions)	Priority 1	Priority 2	Priority 3	Total
Cabinets	$3.8	$8.7	$0.0	$12.5
LED Displays	$3.8	$4.6	$4.6	$13.0
Controller/Monitor	$1.1	$1.6	$0.0	$2.6
Wiring	$1.2	$1.3	$3.9	$6.3
Steel Pole	$1.3	$0.0	$0.0	$1.3
Signal Timing	$0.4	$1.0	$0.4	$1.8
Communications (Wireless)	$1.3	$2.3	$0.0	$3.6
Communications (Fiber Optics)	$18.6	$0.0	$0.0	$18.6
CCTV Communications	$0.4	$0.0	$0.0	$0.4
TOTAL	**$31.7**	**$19.5**	**$8.9**	**$60.1**

STREET LIGHTS

STREET LIGHT AT CENTENNIAL OLYMPIC PARK

Street lights perform an important public safety function. By lighting roadways and crosswalks, they provide drivers with improved visibility of signs and pedestrian activity. Street lights also improve security on the streets by lighting sidewalks and their periphery.

The recent rise in energy prices has focused attention on the efficiency and effectiveness of street lighting programs around the country. Some towns have shut down their street lights completely in order to save electricity costs. Others – like the City of Santa Rosa in California - have instituted "adopt-a-street-light" programs that provide residents or businesses with the option of directly funding individual street lights.

Many cities are seeking new technologies that will reduce the energy consumption of their street light programs. LED and other bulb technologies can reduce energy consumption by more than 50%. The City of Anchorage Alaska has recently approved a $2.2 million program to replace all of their street lamps with LED bulbs, which will save $360,000 per year in energy expenses. The City of Ann Arbor in Michigan is installing motion detector systems that shut down lights when no one is nearby. Solar powered street lights are also available and they are in increasing use in southern and western states. With street light energy costs constituting between 50 and 75% of some city power bills, the efficiency of street lighting programs is receiving significant scrutiny.

There are a total of 50,734 street lights in the City of Atlanta. Of these, the City owns and operates 13,920 lights and leases the remaining 36,814 lights from Georgia Power. The City pays the energy bill for the street lights owned by Georgia Power, and also pays a flat annual rate of $3.96 per light for re-lamping of city-owned lights by Georgia Power. The City's total annual energy bill for street lighting is $7.4 million. The City almost exclusively uses High Pressure Sodium Vapor lights which are relatively low cost to operate.

Of the 13,920 lights owned by the City, 861 (or slightly over 6%) are missing and classified as "Absent". Another 2,950 have wiring that is six to ten years past lifecycle. Approximately 2,230 lights need to be repainted.

STREET LIGHTS BACKLOG (#)	LIFE CYCLE *(years)*	ABSENT*	6 – 10 years past	0 – 5 years past	LIFECYCLE	0 – 5 years left	6 – 10 years left	TOTAL
Wiring	30	--	2950	2036		6700	2234	13920
Pole	30	236	--	2950		4034	6700	13920
Shroud	30	625	--	--		--	1605	2230
Repaint	5	--	2230	--		--	--	2230

The replacement of the lights classified as "absent" is considered a high priority. It is also a high priority to repaint 2,230 street lights. Lack of paint not only significantly decreases the lifespan of these lights but also leaves the impression that the City does not maintain its infrastructure and invites vandalism.

Replacement of the 2,950 poles that are six to ten years past lifecycle is ranked as Priority 2. Finally, the 2,950 poles and the 2,036 lights with wiring that is past lifecycle by up to five years is rated as Priority 3.

STREET LIGHTS – BACKLOG PRIORITIZATION (#)	Priority 1	Priority 2	Priority 3	Total
Wiring	--	2950	2036	4986
Pole	236	--	2950	3186
Shroud	625	--	--	625
Repaint	2230	--	--	2230

The total cost to eliminate the entire backlog in street lights is $10 million. The cost to eliminate the Priority 1 backlog is $2 million.

STREET LIGHTS – BACKLOG COST ($ millions)	Priority 1	Priority 2	Priority 3	Total
Wiring	$ 0.0	$3.0	$ 2.0	$ 5.0
Pole	$ 0.2	--	$ 3.0	$ 3.2
Shroud	$ 0.5	--	--	$ 0.5
Repaint	$ 1.3	--	--	$ 1.3
TOTAL	**$2.0**	**$3.0**	**$5.0**	**$10.0**

SCHOOL FLASHERS

There are a total of 110 school flashers in the City of Atlanta. Their primary purpose is to regulate traffic speed in order to provide a safe environment for children walking to school.

All 110 of the City's school flashers are due for replacement. In fact, most of the components of the school flasher inventory are more than 10 years past their lifecycle.

The total cost to replace these school flashers is $0.7 million.

SCHOOL FLASHER

SCHOOL FLASHER- BACKLOG INVENTORY (#)	LIFE CYCLE	ABSENT	10+ years past	6 - 10 years past	0 - 5 years past	LIFECYCLE	0-10 Years left	TOTAL
Signage	5	--	--	35	75		--	110
Communications	10	110	--	--	--		--	110
Control Box / Signal	10	--	108	--	2		--	110

SCHOOL FLASHERS - BACKLOG PRIORITIZATION (#)	Priority 1	Priority 2	Priority 3	Total
Signage	35	75	--	110
Communications	110	--	--	110
Control Box / Signal Assembly / Wiring	110	--	--	110

SCHOOL FLASHERS – BACKLOG COST ($ millions)	Priority 1	Priority 2	Priority 3	Total
Signage	$0.0	$0.0	$0.0	$0.0
Communications	$0.3	$0.0	$0.0	$0.3
Control Box / Assembly / Wiring	$0.4	$0.0	$0.0	$0.4
TOTAL	$0.7	$0.0	$0.0	$0.7

PAVED STREETS

Paved streets constitute the largest segment of the City's General Fund infrastructure inventory. There are 1,705 miles of paved streets in the City of Atlanta that are the responsibility of the City to maintain (state roads are not included in this analysis, nor have unpaved roads been included). The City classifies

PAVED STREET WITH WATER DAMAGE

PAVED STREET WITH CRACKING

streets using five categories as outlined in the table below. Over 75% of the City's street network is residential. Each category of street has its own anticipated lifecycle; arterial and collector streets - which receive heavier traffic volumes and more truck traffic - will wear out more rapidly than those in residential areas.

STREET TYPE CATEGORIZATION	CLASSIFICATION CRITERIA	# of MILES	LIFE CYCLE *(years)*
Arterial streets	A multilane street that functions to move traffic from one district of the city to another and which is not designed to serve individual residences.	158	10
Collector streets	A multilane street that functions to move traffic from residential street to arterial streets.	242	15
Residential streets	A street that provides frontage for access to residential lots and carries traffic to and from adjoining residential access streets. Traffic generally has origin or destination in the immediate neighborhood.	1,298	20
Industrial Areas	Streets in industrial areas that carry extreme axial loadings as a result of increased tractor-trailer volumes.	7	10
Unpaved streets	Gravel and/or dirt streets that require routine maintenance (adding new material, shaping, & ditch cutting) on a quarterly basis and after each heavy rain.	15	n/a

Prior to this study, there were no data available for streets that had not been resurfaced in the past twenty years. The Department of Public Works (DPW) recently created a database that combined the data on street segments that have been resurfaced over the past twenty years, with a GIS dataset of the total inventory of paved streets. This new database now captures the resurfacing activity over the past twenty years for the entire paved street network and serves as the basis for the analysis.

Overall, 796 miles of streets – or 47% of the City's total street inventory - is past its resurfacing lifecycle. Nearly 85% of the streets that are past lifecycle are residential streets. This is despite the fact that the city repaved 242 miles of residential streets, 73 miles of collector streets, and 55 miles of arterial streets over the last five years. The over-representation of residential streets in the backlog reflects the priority the City has generally given priority to arterial and collector streets in its repaving programs. Only 26% of collector streets are past their lifecycle as opposed to 52% of residential streets.

PAVED STREETS – BACKLOG INVENTORY (miles)	LIFE CYCLE *(years)*	10+ year past	6 – 10 years past	0 – 5 years past		0-5 years left	6-10 years left	11-15 years left	16-20 years left	TOTAL
Arterial	10	7	6	39		51	55	--	--	158
Collector	15	11	18	35		45	60	73	--	242
Residential	20	225	225	225		100	199	82	242	1298
Industrial	10	2	1	2		1	1	--	--	7
Total		**245**	**250**	**301**		**197**	**314**	**155**	**242**	**1705**

LIFECYCLE

Of the 796 miles of streets that exceed lifecycle, approximately 245 are considered Priority 1 for replacement. [Note: since we do not have accurate data on the resurfacing age of nearly 675 miles of residential streets, they have been divided evenly among the "past lifecycle" categories. It is entirely likely that by doing so we are overestimating the quality of the residential street network and therefore understating the Priority 1 need. They are all, however, included in the backlog.] These are roads that are in urgent need of repaving and which drive an inordinate number of pothole complaints and lawsuits requesting damages for repairs associated with potholes and other street defects.

PAVED STREETS – BACKLOG PRIORITIZATION (miles)	Priority 1	Priority 2	Priority 3	Total
Arterial	7	6	39	52
Collector	11	18	35	64
Residential	225	225	225	675
Industrial	2	1	2	5
TOTAL	**245**	**250**	**301**	**796**

The cost to replace roadways varies by type. Streets that are more heavily trafficked require more expensive materials and labor inputs. Residential streets also tend to be narrower than arterial or collector streets and are therefore less expensive to resurface. Overall, it can cost anywhere from $250,000 to $800,000 to replace a mile of roadway in the City. The following table below provides the costs used to estimate replacement expenses for the four types of roads under consideration.

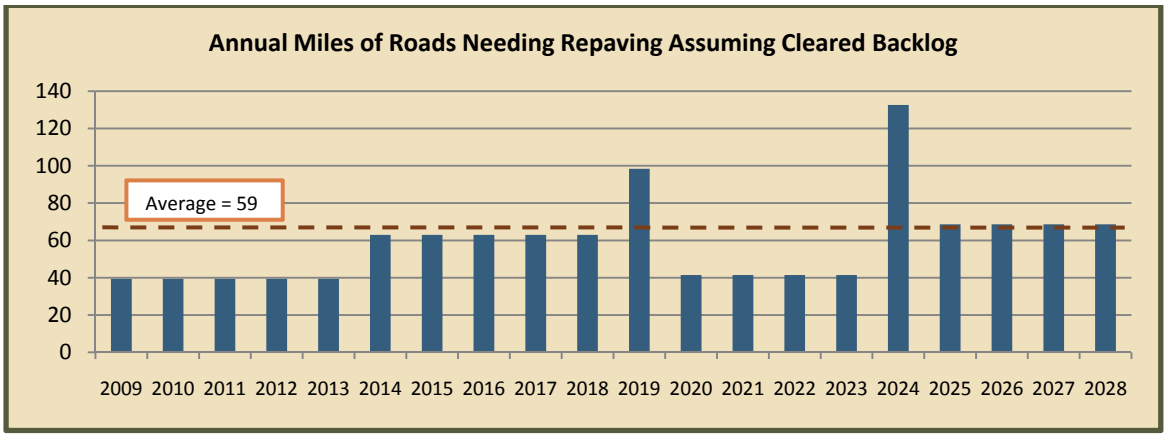
PAVED STREETS – BACKLOG COST PER MILE OF CONSTRUCTION	
Arterial	$ 800,000/Mile for 60' wide streets
Collector	$ 650,000 /Mile for 48' wide streets
Industrial	$ 680,000/Mile for 50' wide streets
Residential	$ 250,000 /Mile for 26' wide Streets

Based on this analysis, the total cost to eliminate the repaving backlog is $255.4 million. Replacing the Priority 1 backlog will cost around $70.4 million.

PAVED STREETS – BACKLOG COST ($ millions)	Priority 1	Priority 2	Priority 3	Total
Arterial	$5.6	$4.8	$31.2	$41.6
Collector	$7.2	$11.7	$22.8	$41.6
Industrial	$1.4	$0.7	$1.4	$3.4
Residential	$56.3	$56.3	$56.3	$168.8
TOTAL	$70.4	$73.4	$111.6	$255.4

The City has made significant progress in repaving its street network in recent years. Approximately 370 miles of streets have been repaved in the past ten years, due primarily to funding made available through the Quality of Life Bond Program approved by voters in 2000. This repaving effort has helped reduce pothole complaint volumes by approximately 60% and reduces the City's liability to damage caused by streets in disrepair.

Despite that progress, the rate of street repaving is significantly lower than the rate needed to keep streets from extending past their useful lives. As the chart below indicates, even if the City clears its backlog of 796 miles of streets, it would still have to resurface streets at the rate of nearly 60 miles per year to avoid the accumulation of another backlog.

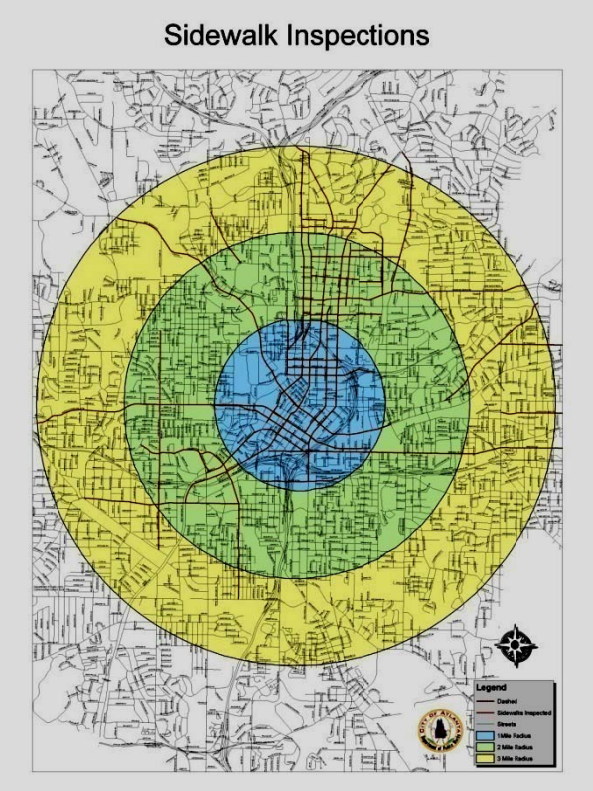


SIDEWALKS

Sidewalks constitute one of the largest segments of our capital inventory, yet little is known about them. The actual total length of sidewalks in the City of Atlanta is unknown. Their age and quality is also unknown. Based on constituent complaints, we know that many of our sidewalks are in poor condition, yet it is a challenge to estimate what the true capital requirements are.

CITY SIDEWALK - MIDTOWN

An additional complicating factor is that by City code the maintenance of sidewalks is the responsibility of the abutting property owners. The Commissioner of Public Works is authorized to cite a property owner for failure to maintain a sidewalk and - if property owner fails to comply - can order the repairs and bill the owner for the cost. However, it has been City policy not to site property owners unless funding is available to execute the repairs; since funding has not been available in recent years, few citations have been issued.



Total sidewalk miles have been estimated with the assistance of the Department of Planning & Community Development/Office of Transportation Planning and of Dr. John Peponis & Martin Scoppa of Georgia Institute of Technology. Based on their analysis, we estimate that there are 2,158 miles of sidewalks in the City.

There is no comprehensive assessment of the current condition of those sidewalks. To estimate that condition, data from a 2004 DPW pothole study was used to construct sample data on sidewalk defects. In this study, sidewalks assessments were conducted at randomly selected areas within a three mile radius of downtown Atlanta. This target area was divided into three zones and the rate of sidewalk defects identified.

Based on this survey, sidewalk defect rates vary considerable by geography. Those in the downtown area designated Zone 1 (blue inner circle in diagram) had a defect rate of 6.6%. Sidewalks in the areas farthest from downtown – designated as Zone 3 (yellow outer circle in diagram) had a defect rate of 18.9%. Neighborhoods between those two areas designated as Zone 2

(green circle in diagram) had the highest defect rate (21%). Based on the sample areas, the weighted average defect rate for the City overall is 18.3%.

While less accurate than what a comprehensive census of the sidewalks in the City would produce, this approach yields a reasonable estimate of the condition of the existing sidewalk infrastructure.

When the weighted average defect rate of 18.3% is applied to 2,158 miles, the result is an estimated 395 miles of defective sidewalks.

Since curbs are co-located with sidewalks, curb replacement needs are estimated by applying a 10% defect rate to the total sidewalk miles. The replacement of sidewalk ramps is estimated at 4 ramps per 500 feet of sidewalk (roughly equivalent to a block). Additionally, many corner ramps are in need of replacement in order to make them compliant with the Americans with Disabilities Act (ADA) standards. See Appendix A for a discussion of the methodology employed to estimate costs to replace sidewalk ramps.

Based on these cost assumptions, we estimate that the total cost of replacing defective sidewalks is $79.4 million. This cost includes the replacement of the sidewalks themselves, related curbing and sidewalk ramps, and a 10% charge for incidental fees.

SIDEWALKS – BACKLOG INVENTORY & COST	**Total Inventory *(miles)***	**Estimation Rate**	**Backlog**	**Backlog Unit Cost *(unit cost $)***	**Total Cost *($ millions)***
Sidewalk	2,158	18.3%	395 miles	$118,800 per mile	$ 46.9
Curbing	2,158	10 %	40 miles	$132,000 per mile	$ 5.3
Sidewalk Ramps	52,800	4 ramps per 500 ft	16,684 ramps	$1,200 per ramp	$ 20.0
Incidentals (professional service fees, etc)	NA	10%	NA	NA	$ 7.2
TOTAL					**$ 79.4**

BRIDGES

The Department of Transportation claims that over 25% of the nation's bridges are functionally obsolete or structurally deficient. Over 20% of Georgia bridges are similarly rated. Of the 157 bridges in the City of Atlanta, 18 bridges (or 11%) are rated as functionally obsolete or structurally deficient. As we witnessed with the bridge collapse on I35 in Minneapolis, allowing bridges to deteriorate can have catastrophic consequences.

BRIDGE AT FREEDOM PARKWAY

The City is responsible for the maintenance of all bridges in the public right-of-way within the City limits even if a bridge's construction was funded by another government entity.

All bridges are inspected and graded (i.e. given a "sufficiency rating") every two years by the Georgia Department of Transportation (GDOT). GDOT considers bridges with a sufficiency rating less than fifty (50) as candidates for replacement. Additionally, GDOT assigns the following actions codes to the sub structure of bridges: Immediate, Schedule, Monitor, and No Action.

For the purposes of this analysis, bridges rated below 30 are considered Priority 1 for replacement. Bridges rated between 30 and 50 are considered Priority 2. For a listing of bridges with sufficiency ratings of 50 or below, see Appendix B.

Overall, the City has eight bridges that have been rated by GDOT at or below 30 and these would be candidates for immediate replacement. A further 10 bridges are rated between 30 and 50, which suggests that their replacement should be considered in the short term.

BRIDGES – TOTAL INVENTORY BY SUFFICIENCY RATING	GDOT Sufficiency Rating	No. of Bridges
Unacceptable	0-30	8
Poor	31-50	10
Fair	51-75	52
Good	75-100	87
		TOTAL : 157

The total cost to complete the work on these bridges is estimated to be $162 million. Approximately $72 million is required to replace the eight bridges rated Priority 1.

BRIDGES – BACKLOG COST ($ millions)	Replace Bridges *(#)*	Cost
Priority 1 (Sufficiency Rating 30 or below)	8	$ 72.0
Priority 2 (Sufficiency Rating between 50 and 30)	10	$ 90.0
TOTAL	**18**	**$162.0**

Operational Infrastructure

FLEET

The Office of Fleet Management is responsible for over 5,241 units of rolling stock, of which 3,333 are operated by General Fund departments and 1,908 by Enterprise Fund departments (Department of Watershed Management and Department of Aviation). Fleet includes everything from fire trucks to back hoes.

The current depreciated value of the existing General Fund fleet inventory is approximately $45 million.

APD POLICE CRUISER

About 55% of the fleet is older than its established lifecycle. Despite recent investments in motorized equipment – the City has invested $38.4 million in new fleet in the last three years – a substantial backlog persists. The chart below shows how this backlog is distributed across departments.

MOTORIZED FLEET – BACKLOG INVENTORY	TOTAL INVENTORY	TOTAL BACKLOG	% BACKLOG
Atlanta Police Department	1105	640	58%
Public Works	723	347	48%
Atlanta Fire & Rescue	542	316	58%
Parks, Recreation & Cultural Affairs	549	312	57%
Executive Offices	248	163	66%
Planning and Community Development	120	4	3%
Other Departments	46	36	78%
TOTAL	**3,333**	**1,818**	**55%**

Of the 1,818 units that are past lifecycle, 100 are more than 10 years old. This equipment has been rated as Priority 1 for replacement. The 487 units that are 5-10 years past lifecycle are rated as Priority 2. The remaining 1,231 are rated as Priority 3. The next table shows the break down by department.

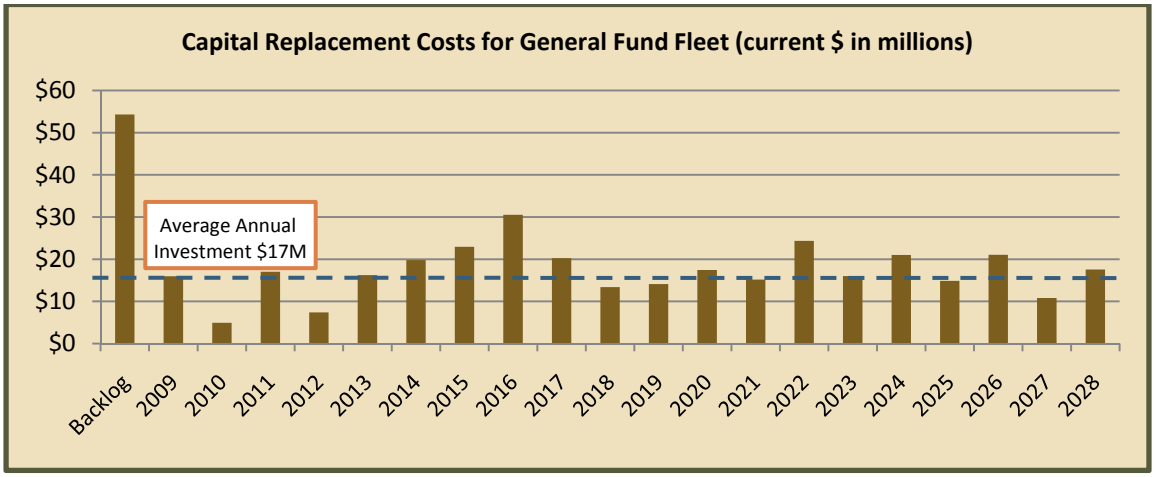
MOTORIZED FLEET – BACKLOG PRIORITIZATION	PRIORITY 1 *(>10 yrs past lifecycle)*	PRIORITY 2 *(5-10 yrs past lifecycle)*	PRIORITY 3 *(<5 yrs past lifecycle)*	TOTAL BACKLOG
Atlanta Police Department	13	167	460	640
Public Works	11	112	224	347
Atlanta Fire & Rescue	34	67	215	316
Parks, Recreation & Cultural Affairs	20	65	227	312
Executive Offices	22	68	73	163
Planning & Community Development	--	--	4	4
Other Departments	--	8	28	36
TOTAL	**100**	**487**	**1,231**	**1,818**

The cost to eliminate the entire backlog is nearly $55 million.

MOTORIZED FLEET – BACKLOG COST	PRIORITY 1 *($ millions)*	PRIORITY 2 *($ millions)*	PRIORITY 3 *($ millions)*	TOTAL BACKLOG COST
Atlanta Police Department	$0.4	$4.2	$10.5	$15.1
Public Works	$0.4	$6.2	$13.3	$19.9
Atlanta Fire & Rescue	$0.5	$1.4	$4.7	$6.6
Parks, Recreation & Cultural Affairs	$0.8	$2.9	$2.7	$6.4
Executive Offices	$1.0	$2.6	$1.7	$5.3
Planning & Community Development	--	--	$0.1	$0.1
Other Departments	--	$0.4	$0.6	$1.0
TOTAL	**$3.1**	**$17.7**	**$33.6**	**$54.4**

The graph below indicates the level of annual investments that is needed to replace fleet units on a timely basis and avoid a future replacement backlog. The first bar shows the cost of replacing the backlog fleet inventory in the General Fund as $54.4 million. Assuming that replacement occurred, the following bars show what additional investment would be required each year to replace fleet units as they reach the end of their respective lifecycles. While the cost in any given year will vary depending on which vehicles are due for replacement that year, on average the City should be spending approximately $17 million each year on fleet replacement.

BUILDING INSPECTION VEHICLE



It should further be noted that these capital investments will be offset to a significant degree by reductions in fleet maintenance expenses. The City currently spends approximately $14 million each year to maintain its fleet. Replacing vehicles on the appropriate schedule would ensure that many will be replaced prior to the expiration of their warranty, thus reducing the need to maintain them in-house. Leasing and other purchasing arrangements can also reduce the need for internally provided maintenance.

FACILITIES


LENWOOD A. JACKSON, SR. JUSTICE CENTER

Well-designed and maintained public buildings are critical to the efficient delivery of public services. The design of the physical structures within which people work has a significant impact on their productivity and morale. The age and condition of facilities also determines how efficiently energy and other resources are used.
The City of Atlanta's General Fund departments are supported by two types of facilities: general office buildings (e.g., City Hall, Jackson Justice Center) and field operations facilities (e.g., fire stations, police precincts, recreation centers). Overall, the City manages over 3.7 million square feet of space in support of its General Fund departments.

Like other categories of infrastructure, facilities have lifecycles. These lifecycles are generally based on the type and quality of materials employed in the construction of the facility combined with the intensity of use over time. These lifecycles are further affected by the consistency and quality of their on-going maintenance. For the purposes of this analysis, lifecycles for most of the City's buildings have been derived using industry standards and/or direct knowledge of the expectations of the builder. For other facilities – such as the City Hall Tower and the Detention Center – specific capital infrastructure needs have been identified based on analysis provided by the Office of Facilities Management.

In recent years the City has made significant investments in upgrading the quality of its general office buildings. Since 2005, over $140 million has been invested in a public safety headquarters, public safety annex, 911 call center, data center for the Department of Information Technology, office space for the Department of Parks, Recreation and Cultural Affairs, and a City Hall parking deck. A further $60 million has been spent on fire stations, recreational centers and police facilities.

In addition to providing operational efficiencies and service improvements, these investments have enabled the consolidation of the operations of the City's judicial agencies – which eliminated the need to maintain two court buildings and some leased office space - and will allow the City to vacate the City Hall East complex over the course of the next year. With the subsequent sale of that building, the City will eliminate a large capital asset well past its lifecycle and in need of significant capital upgrades and with it approximately $2.1 million in annual maintenance costs. The City will also significantly upgrade its 911 communications center and its main data center.

Despite these investments, there remains considerable capital needs in the other facilities assets of the City. These facility requirements are described in the next sections.

FACILITIES – PARKS & RECREATION

The Department of Parks, Recreation and Cultural Affairs (DPRCA) is responsible for the maintenance of 345 parks. Of these, eight are designated as regional parks, 13 as community parks, 50 as neighborhood parks and nine as large nature preserves. The rest of the parks are generally categorized as small preserves, block parks, circles, triangles and beauty spots.

PIEDMONT PARK

Unlike elements of other types of public infrastructure, parks are not "replaced" in accordance to established lifecycles. Instead, parks have capital elements within them that must be maintained and replaced at regular intervals. Each park has a unique set of capital assets, and as a result it is necessary to inventory those assets and track them individually.

Overall, there are 36 recreation centers and 112 playgrounds that the Department is responsible for maintaining. Of the 36 recreation centers, 13 are currently past lifecycle (see Appendix C for an assessment of the existing recreational centers). Approximately 42 playgrounds are due for replacement.

PARKS FACILITIES – BACKLOG INVENTORY	LIFE CYCLE *(years)*	10+ year past	6 – 10 years past	0 – 5 years past	LIFECYCLE	0-5 years left	6-10 years left	11-15 years left	16-20 years left	20 + years left	TOTAL
Recreation Centers	40	9	1	3		7	7	2	2	5	36
Playgrounds	15	--	21	21		23	23	24	--	--	112

In general, it costs $325/sq foot to build a new recreation center. Play grounds generally cost $50,000 to build. Therefore, the cost to eliminate the backlog in parks facilities is estimated to be $28.4 million.

CAPITAL NEEDS IN PARKS FACILITIES ($ millions)	Unit Cost	Backlog	TOTAL COST
Recreation Centers	$325/sq ft	13	$ 25.2
Playgrounds	$50,000 each	42	$ 3.2
TOTAL			**$28.4**

FACILITIES – DETENTION CENTER

CITY OF ATLANTA DETENTION CENTER

The Detention Center was completed in 1994. It contains approximately 1,300 cell beds, kitchen and other support facilities, office space, and electronic security systems. Based on a recent assessment of the center's facilities needs, $3.8 million in capital investments have been identified. These include: the replacement of old kitchen equipment; upgrade of security systems including the Sally Port doors (for cars); the loading dock gate and the electronic security system; upgrade of the simplex fire system; upgrade of the laundry equipment; replacement of the Property Room's conveyor system; major repair of two elevators; and various structural repairs due to plumbing leaks. Of secondary importance are renovations of the front lobby, replacement of soon-to-be obsolete lighting fixtures, and installation of new water backflow preventers to repair leaks.

FACILITIES – CITY HALL COMPLEX

The City Hall complex is comprised of two major buildings: the "Tower" was completed in 1930; an Annex was added in 1989.

Although the Tower is technically past its lifecycle, there is no expectation that it will be demolished and replaced as other facilities typically are. Instead, due to its architectural and historic significance, a program of renovations and major systems replacement is needed. An estimated $3.4 million in capital repairs have been identified. These include an upgrade of the cooling tower, waterproofing in the Tower, and an upgrade of security (including replacement of entry x-ray scanners, access control systems & CCTV). Additional repairs include the modernization of the freight elevators and HVAC system upgrades.

CITY HALL

FACILITIES – FIRE STATIONS

FIRE STATION FIVE

There are 31 active fire stations in the City (excluding stations at the airport). Since 2001 the City has closed one fire station (Station 7) in the West End and opened a new Fire Station (Station 36). There are an additional four fire stations under development that will open in 2009 and 2010. Overall, the City has allocated about $10.2 million since 2001 in building or renovating fire stations.

Over $56 million in Priority 1 and Priority 2 capital investment needs have been identified for fire stations and related facilities.

The stations listed below as Priority 1 and 2 are past their designed lifecycles and have been designated by AFR as candidates for immediate replacement. Priority 1 stations are actually decades past their life cycle. Departmental cost-benefit analyses indicate that it is more cost effective to replace these stations than to renovate and upgrade them. 16 stations are past lifecycle and each is estimated to require $3 million with a total cost of $48 million. See Appendix D for a list of all active fire stations by lifecycle.

FIRE FACILITIES – BACKLOG INVENTORY	LIFE CYCLE *(years)*	10+ years past	6 – 10 years past	0 – 5 years past	LIFECYCL	0-5 years left	6-10 years left	11-15 years left	16-20 years left	20 + years left	TOTAL
Fire Stations	50	5	3	8		2	1	2	2	8	31

FIRE FACILITIES – BACKLOG COST ($ millions)	Priority 1	Priority 2	Priority 3	Total
Fire Stations	$15.0	$9.0	$24.0	$48.0

FACILITIES – POLICE FACILITIES

There are a total of twenty-seven police facilities in the City. The major facilities are the six zone precincts (each populated by approximately 120 officers and detectives), the SWAT/Firing Range, and the Policy Academy. The remaining facilities include small mini-precincts, the Police Athletic League building, and a few offices for detectives.

ZONE FIVE POLICE PRECINCT

Industry standards recommend 15,000 – 20,000 square feet for every 100-125 officers. However, most APD precincts are only one-quarter of that size. Operational efficiency is optimized when officers and detectives are co-located but few of the existing facilities can accommodate that. Many of these precincts lack adequate bathroom facilities, locker or shower facilities, conference rooms, break rooms and secure parking.

Zone 2, 5 and 6 precincts are currently leased facilities. Zone 3 and 4 precinct are city-owned facilities of 3,700 square feet and 3,000 square feet respectively. However, each is only 20% of the required size to support operations at their respective locations. Further, SWAT officers currently operate in substandard trailers that are over 35 years old. The firing range, which is adjacent to the SWAT precinct, is used by all APD officers for weapons qualification annually. It is also used by officers from other jurisdictions throughout the State of Georgia and the Federal government. The range equipment is in need of replacement and significant upgrades, including the target system the shoot house foundation.

APD FACILITIES – BACKLOG COST ($ millions)	COST
SWAT/Pistol Range	$ 4.0
Build Zones 2, 5 and 6 Precincts	$ 12.0
TOTAL	$ 16.0

FACILITIES – CONSOLIDATED PUBLIC SAFETY TRAINING FACILITY

Atlanta's public safety agencies include the Atlanta Fire Rescue Department, Atlanta Police Department, and Department of Corrections. Each agency is responsible for maintaining its sworn and non-sworn employees trained to Georgia Peace Officer Standards and Training (P.O.S.T.) standards. However, the city faces the potential loss of the grounds and facilities housing two training academies, three in-service training sites, and the APD Special Operations Section and Crime Lab.

The City of Atlanta's public safety agencies face a critical need for new training facilities due to recent decisions made by the owners of those current facilities:

- The Atlanta Police Department (APD) and Atlanta Fire Rescue (AFR) have separately received notice from Atlanta Public Schools (APS) that the buildings housing their respective training academies have been placed on the market for sale.
- The Department of Corrections (DOC) conducts their required in-service training at Fulton County Public Safety Training Center (FCPSTC) and City Hall East. FCPSTC has requested DOC vacate their offices.
- APD's Special Operations Section (SOS) and crime lab are presently located in the same building as the police training academy.

A recent City of Atlanta Task Force recommended that the City purchase the current APD training facility from APS, while continuing to lease AFR's training facility. In the event that AFR's leased facility is sold, then AFR could consolidate with APD in the short-term. However, the optimal solution for the long term - and the one that both minimizes displacement risk and has the potential for revenue generation - is the construction of a 67,000 sq. ft. consolidated training facility to serve all of the City's public safety agencies.

PUBLIC SAFETY TRAINING FACILITIES – BACKLOG PRIORITIZATION & COST ($ millions)	PRIORITY 1	PRIORITY 2	PRIORITY 3	TOTAL COST
Purchase & upgrade current APD facility & consolidate with AFR	$ 5.0	--	--	$ 5.0
Build new consolidated facility at Key Road for APD, AFR & DOC	--	$23.0	--	$ 23.0
TOTAL	**$ 5.0**	**$ 23.0**	**--**	**$ 28.0**

SUMMARY AND RECOMMENDATIONS

The City has a total public and operational infrastructure backlog of $750 million. Approximately 36% of that total - $266 million – has been rated as having a Priority 1 replacement requirement. Paved streets and bridges account for 56% of the total capital backlog.

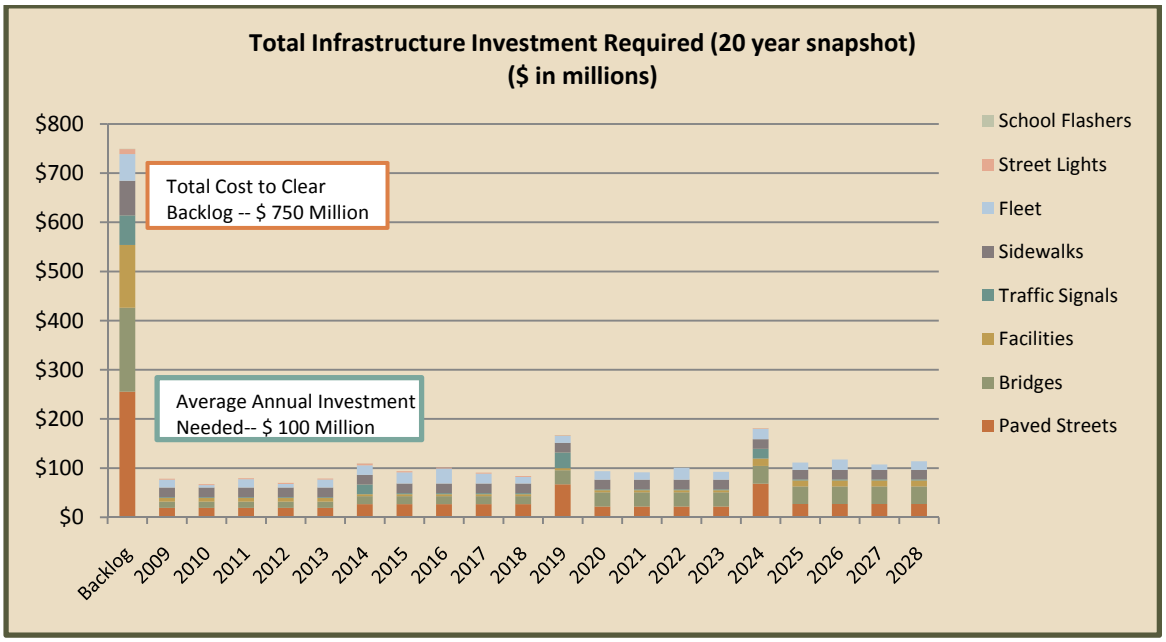
BACKLOG REPLACEMENT COSTS ($ millions)				
COMPONENTS	**PRIORITY 1**	**PRIORITY 2**	**PRIORITY 3**	**TOTAL**
Paved Streets	$70	$73	$112	$255
Bridges	$72	$90	$0	$162
Facilities	$59	$44	$24	$128
Sidewalks	$26	$26	$26	$79
Traffic Signals	$32	$19	$9	$60
Fleet	$3	$18	$34	$54
Street Lights	$2	$3	$5	$10
School Flashers	$1	$0	$0	$1
TOTALs	**$266**	**$274**	**$210**	**$750**

Note: All costs listed in the table above are rounded to the nearest $million.

The City averages around $50-60 million in capital investment each year. This is comprised of the City's annual capital budget of about $40 million plus an additional $10-20 million contained within the General Fund operating budget. A significant portion of this funding is dedicated to new (rather than replacement) capital, so not all of it is dedicated to reducing the capital backlog.

How much money should the City spend on capital each year? This question needs to be answered in two parts. First, the City needs to eliminate its backlog of capital. The $750 million backlog documented above is not stagnant; each year components of the City's capital inventory age and move past their lifecycle. Absent investments, the backlog will grow.

Second, even if the backlog is eliminated, the City needs to replace capital as it ages. As the next chart indicates, the City should be investing approximately $100 million each year in its existing capital infrastructure. That level of financing would allow the City to replace its capital asset base in a timely manner. The consequence will be higher productivity and lower on-going maintenance costs.



These investments are required to replace and maintain our existing capital infrastructure assets; the analysis assumes no growth in that infrastructure. Of course, as the City grows and new capital assets are added – new bridges, new roads, new transit, etc – this infrastructure requirement will grow commensurately.

FINANCING STRATEGIES

Public infrastructure is funded at the federal, state and local levels. The Federal government invests about $75 billion per year and participates significantly in the construction and maintenance of waste water systems, mass transit systems and interstate highways. State and local governments are generally responsible for drinking water systems, local roads and bridges, and parks and greenspace. Overall, State and Local governments provide 75% of the funds for public infrastructure.

Federal funds are allocated either directly to projects or are distributed to state governments where it is then allocated it to specific initiatives. Direct "earmarks" are also used with increasingly frequency (although Georgia ranks 44th in the nation in earmarks per capita with only $20 per year per resident).

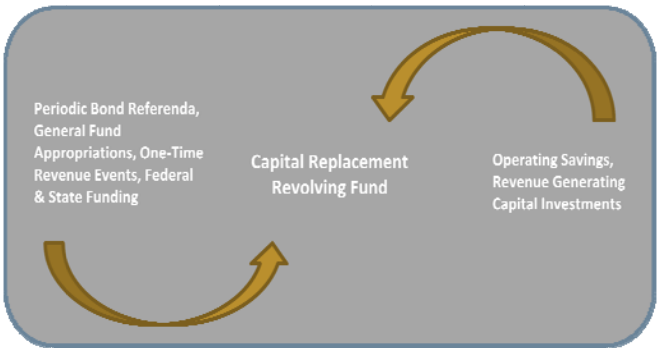
There are proposals currently under consideration in Congress to create new sources of infrastructure funding – either through a national infrastructure bank or some other mechanism. Efforts are also underway to re-orient Federal investments in infrastructure to shift funding to higher priority needs. Nevertheless, local governments such as the City of Atlanta are well advised to plan for their future infrastructure needs in the absence of an expectation of new Federal funding.

In general, local governments in Georgia have limited options for financing infrastructure. With little to no Federal and State infrastructure dollars available, the primary resource for the City of Atlanta has been its general fund revenue base, either through direct appropriations, Tax Allocation Districts, or general bond referenda.

Given the magnitude of the City's infrastructure deficit and the increasing demands placed on that infrastructure, the Administration recommends a structural change in the way the City funds its infrastructure. First, we recommend that the City create a Capital Replacement Revolving Fund (CRRF) that will serve as the central financing mechanism for general fund capital needs. This fund would be financed through the following potential revenue sources:

- Existing (restricted and unrestricted) capital sources (LARP, PIF, Impact Fees, etc)
- Receipts from sales of capital assets
- Receipts from other "one-time" events
- Funds provided by Federal or State government
- Annual General Fund appropriation (including the capture of operating savings achieved through capital investments)
- General bond referenda
- Other

While all of these sources of revenue can make a contribution towards the reduction of the infrastructure deficit, the primary source of funds needs to be general bond referenda. These referenda need to become regular, cyclical events that replenish the CRRF on a regular basis.



The primary purpose of the CRRF is to rebalance the City's priorities and concentrate more attention and resources on its capital needs. The City's traditional focus on its operating budget has led directly to the infrastructure deficit and ultimately to a lower return on its investment in those operations. City departments cannot deliver services efficiently and effectively if the infrastructure needed to deliver those services is in a deteriorated condition.

The first step in addressing this imbalance is to begin a process for eliminating our infrastructure backlog. We recommend placing on the ballot in 2009 a general bond referendum of $250 million. A referendum of that amount would address approximately one-third of our infrastructure deficit. It is an important first step in dealing with the long-term challenge we face.

Our proposal is to direct this first tranche of funding toward those portions of our infrastructure backlog most directly impacting public safety – bridges, traffic signal systems, fleet and public safety facilities, streets and sidewalks. Bridges are critical because their failure could lead to a catastrophic event and the alternative - shutting them down completely - will create significant traffic issues. The consistent failure of our traffic signaling system is endangering lives and impeding our ability to improve traffic flows and reduce congestion. Sidewalks not only reduce the demand for vehicle traffic (thereby reducing traffic accidents), their current state of disrepair creates considerable legal liability to the City. Up-to-date fleet and facilities directly associated with the delivery of public safety services (fire houses, police vehicles, forestry equipment, etc) are critical for advancing the public safety needs of the City. The poor condition of our major arterials and collector streets create hazardous conditions and increase the likelihood of accidents. The following table summarizes our recommended funding distribution:

Recommended Investment	Replace 8 Bridges	Replace Traffic Signaling System	Modernize Fleet and Public Safety Facilities	Upgrade Sidewalks	Resurface Streets
Approach	Replace 8 bridges immediately	Entire system overhaul including new signal management system	Fund Priority 1 and Priority 2 fleet needs ($21M); Priority 1 Fire Stations ($15M), all Police facilities needs ($16M)	Create and seed sidewalk investment revolving fund; revenues derived from owner billing	Fund Priority 1 arterial and collector streets
Rationale	Alternative is to shut them down, creating significant traffic issues	Malfunctions increasingly common with risk to drivers and pedestrians	Police and Fire fleets constitute over half of the need; fire houses and police facilities are in poor condition	Degraded sidewalks create pedestrian hazards	Poor road conditions in higher speed corridors create risks for accidents and increase city liability
Benefits of Investment	Eliminates risk of catastrophic event	Upgraded system will improve traffic flows and increase street carrying capacity	Reduction in fleet maintenance expenses and improved service delivery	New sidewalks will encourage pedestrian activity, reducing traffic	Fewer accidents, less liability, improved traffic flows
Cost	**$72 million**	**$60 million**	**$52 million**	**$36 million**	**$30 million**

These are our recommended priorities for General Fund support. The City will continue to seek alternative sources of funding – Federal, State and other sources – that can assist us in meeting the infrastructure needs of the City.

Eventually, the infrastructure crisis our nation faces will be addressed. We are confident that new, enlightened leadership in Washington will recognize that high-quality public infrastructure drives the growth and productivity of the nation's private economy. Since in a global economy access to high quality airports, roads, railways and ports is a critical driver of our competitiveness, our country's future economic prosperity is directly related to the level of investment we make in our public infrastructure.

Appendix A

SIDEWALK RAMPS COSTING

The cost estimates for sidewalk repair include the cost of replacing or installing corner ramps consistent with the standards established with the American with Disabilities Act (ADA). Costs have been calculated based on replacing ramps only when adjacent sidewalk repairs are made.

The cost to replace sidewalk ramps in conjunction with sidewalk repairs is $20 million. This does not include installing ramps in areas where sidewalks are in good condition (but still need replacement to be ADA compliant), so is an under-estimate of the total ramp needs in the City.

Cost Estimate – Ramps replaced with repaired sidewalks	
Total defective sidewalks	395 miles (2,085,600 linear ft.)
Four ramps per 500 feet	16,684 ramps
Ramp unit cost	$ 1,200
Total backlog cost	$ 20 million

Appendix B

BRIDGES WITH SUFFICIENCY RATINGS OF 50 OR LESS

BRIDGES WITH SUFFICIENCY RATINGS OF 50 OR BELOW	Sufficiency Rating	Year Constructed	Priority
Peachtree St. over CSX Rail line/Marta	2	1901	1
Pryor Street over CSX Railroad	10	1929	1
Bankhead Av. Over Southern & CSX R.R.	15	1912	1
Powers Ferry Road over Nancy Creek	16	1946	1
Mitchell Street over Southern Railroad	22	1924	1
M.L.K. Jr. Dr. over Parking Lot.	24	1924	1
Fairburn Road over CSX Railroad	25	1937	1
Edgewood Avenue over Southern Railroad	25	1906	1
Nelson St. over Southern R.R. & Park. Lot	31	1906	2
Park Drive over Southern Railroad	31	1916	2
Central Av. Over Ga. Railroad, Marta & L.W.	32	1926	2
Chester Bridge Rd. over CSX Railroad	40	1937	2
Piedmont Avenue over Southern Railroad	41	1936	2
Hollywood Road over Southern R.R. yard	42	1917	2
Mitchell Street over Abandoned Railroad	42	1911	2
West Lake Av. Over CSX & Marta Rail Line	43	1940	2
Courtland St. over Decatur St.& CSX R. R.	48	1906	2
Anderson Avenue over CSX & Marta Rail	50	1937	2

Appendix C

RECREATION CENTER LIFECYCLES

Name	Classification	SQ feet	App. Year of construction	Replacement Cost	Years from Life cycle
Bass	Comm Ctr.	6,290	1915	$2,201,500	-53
English Park	Rec	4,697	1940	$1,643,950	-28
John White	Rec	3,184	1940	$1,114,400	-28
Perkerson Park	Rec	4,038	1940	$1,413,300	-28
Zaban	Rec	4,844	1940	$1,695,400	-28
South Bend	Rec	3,000	1947	$1,050,000	-21
Peachtree Hills	Rec/Gym	7,356	1948	$2,574,600	-20
William T. Knight	Rec	2,180	1949	$763,000	-19
Brownwood	Rec	5,900	1953	$2,065,000	-15
Lang-Carson	Rec	14,781	1960	$5,173,350	-8
Arthur Langford	Rec	7,611	1964	$2,663,850	-4
C.A. Scott	Rec	5,824	1965	$2,038,400	-3
Anthony Flannigan	Rec	2,300	1965	$805,000	-3
Adamsville (old)	Rec/Gym	10,336	1970	$3,617,600	2
Pittman Park	Rec	21,642	1971	$7,574,700	3
Loretta J. Kimpson	Rec	14,781	1972	$5,173,350	4
Bedford Pine	Rec	15,577	1973	$5,451,950	5
Chastain Memorial	Rec/Gym	14,870	1973	$5,204,500	5
Drew Park	Rec	16,965	1973	$5,937,750	5
Grant Park	Rec	18,747	1973	$6,561,450	5
Coan Park	Rec	14,194	1975	$4,967,900	7
Collier Park	Rec	4,971	1975	$1,739,850	7
Thomasville Heights	Rec	19,940	1975	$6,979,000	7
Adams Park	Rec/Gym	17,723	1976	$6,203,050	8
Oakland City Park	Rec	5,386	1976	$1,885,100	8
JFK	Rec	14,792	1978	$5,177,200	10
Rick McDevitt	Youth	3,352	1978	$1,173,200	10
A.D. Williams	Rec	5,360	1980	$1,876,000	12
Anderson	Rec	15,338	1980	$5,368,300	12
JD Sims	Rec	5,766	1984	$2,018,100	16
Grove Park	Rec	25,264	1987	$8,842,400	19
Selena S. Butler	Rec	4,275	1994	$1,496,250	26
Southeast Atlanta	Rec	75,000	1995	$26,250,000	27
Ben Hill	Rec	35,000	1997	$12,250,000	29
Bessie Branham	Rec	20,447	1998	$7,156,450	30
New Adamsville	Rec	110,000	2003	$38,500,000	35

Appendix D

ACTIVE FIRE STATION LIFECYCLES (GENERAL FUND)

Address	Station No.	SQ feet	Year of Construction	Years from Life cycle
447 Flat Shoals Ave., SE	**Station 13**	1,950	1921	-36
1063 N. Highland Ave., NE	**Station 19**	5,424	1924	-33
590 Manford Rd., SW	**Station 20**	4,000	1926	-31
817 Hollywood Rd., NW	**Station 22**	2,653	1938	-19
2007 Oakview Rd., SE	**Station 18**	2,570	1940	-17
1545 Howell Mill Rd., NW	**Station 23**	5,265	1948	-9
2349 Benjamin E. Mays Dr., SW	**Station 25**	5,549	1948	-9
4260 Northside Dr., NW	**Station 27**	3,862	1953	-4
2040 Main St., NW	**Station 28**	4,280	1953	-4
10 Cleveland Ave., SW	**Station 30**	4,048	1956	-1
2406 Fairburn Rd., SW	**Station 31**	4,703	1957	0
447 Boulevard, SE	**Station 10**	6,817	1958	1
1288 DeKalb Ave., NE	**Station 12**	7,247	1958	1
2970 Howell Mill Rd., NW	**Station 26**	4,974	1958	1
2167 Monroe Dr., NE	**Station 29**	6,845	1958	1
71 Elliot St., SW	**Station 1**	16,000	1961	4
1048 Simpson Rd., NW	**Station 16**	7,744	1963	6
3501 Martin L. King Jr. Dr., NW	**Station 9**	8,500	1967	10
1711 Marietta Blvd., NW	**Station 8**	8,000	1969	12
2911 Donald L. Hollowell Pkwy., NW	**Station 38**	8,000	1972	15
1568 Jonesboro Rd., SE	**Station 2**	7,500	1977	20
4697 Wieuca Rd., NW*	**Station 39**	20,000	1979	22
3201 Roswell Rd., NE	**Station 21**	16,000	1984	27
170 10th St., NE	**Station 15**	9,900	1986	29
1489 Ralph D. Abernathy Blvd., SW	**Station 17**	6,100	1987	30
3671 Southside Industrial Pkwy., SE	**Station 34**	10,000	1988	31
2825 Campbellton Rd., SW	**Station 5**	12,000	1990	33
721 Phipps Blvd., NE	**Station 3**	9,162	1993	36
309 Edgewood Ave., SE	**Station 4**	8,000	2001	44
1203 Lee St., SW	**Station 14**	8,000	2001	44
1335 Kimberly Rd., SW	**Station 36**	N/A**	N/A	N/A

*Station 39 is operated by Fulton County but City of Atlanta owns the facility

**Station 36 is not housed in a city owned facility but currently operates from leased space

State of the City's Infrastructure

A Report by the Office of Program Management

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