

Operational Impacts of Capital Improvement Projects

Capital improvement projects generally have one of two impacts. New or expanded facilities usually result in staffing requirements along with new operating costs such as utilities, supplies, and maintenance requirements. Replacement of older facilities has the opposite effect; efficiencies gained from more efficient equipment, lower maintenance costs, and on occasion, lower staffing requirements reduce operating and personnel costs.

In the water, wastewater, and stormwater departments, the city has embarked on a multi-million dollar, multi-year program to accelerate the replacement of aging infrastructure. Over the last few years, the city has been experiencing more frequent and more costly failures. Often, these failures “detour” employees from their planned preventative maintenance schedules and incur significant overtime costs. Commercial paper is playing a more prominent roll in accelerating a number of programs pending the issuance of bonds, state funds and increased revenues to be received in later years.

Improvements to parks and recreation centers throughout the city are budgeted for \$1 million. This project provides for fencing, bollards, gates, athletic courts and field repair / installation, ancillary and playground equipment, fall surfacing, renovations and improvements to community centers, Americans with Disabilities Act repairs, signage, and landscaping. The parks and recreation department targets several facilities per year for these upgrades / improvements. Each improved facility will have lower maintenance, repair and utility expenses.

Annual funding of \$175,000 is also provided for courts, sidewalks and trail improvements. These improvements include lighting upgrades that improve visibility and reduce energy consumption, maintenance and repair costs.

For both new and replacement facilities, opportunities are sought to incorporate “green” sustainable features into the design. These commonly include highly reflective roof surfacing, “cool roofs,” day lighting, energy efficient lighting, hands free faucets, and other water savings measures. Additionally, HVAC (heating, ventilating, air conditioning) systems are designed to both minimize energy and maintain good air quality.

Specific projects include:

- **Investing in Neighborhoods** – One of the mayor’s key programs is entitled “Investing in Neighborhoods.” In FY03, \$2.6 million was devoted to this program and has since grown to \$6.45 million. These neighborhood improvement projects directly impact the quality of life and safety of Tampa’s residents – a valuable investment.

Road Resurfacing and Maintenance – The program this year will repave approximately 36 miles of roadway.

Street Signage – The signage program includes street name signs, illuminated signs, traffic signs, and marking installations. This year we expect to replace 5,000 signs throughout the city and 20 intersections will receive illuminated signs.

Sidewalks – The sidewalk program will install and repair nearly eight miles of sidewalk this year to help ensure pedestrian safety and contribute to our sense of community.

Traffic Calming – Traffic calming devices help promote and maintain the safety and livability of our residential streets. This year more than seven projects are planned throughout Tampa’s neighborhoods.

- **Landscape and Xeriscape Replacement** - Xeriscape landscaping is environmentally friendly for a climate such as Florida. The parks and recreation department will increase the number of xeriscape projects in an attempt to decrease water consumption.
- **Irrigation and Lighting - Radio Controlled** - This project provides for upgrade, installation and repair of the city-wide radio controlled irrigation system. This system is controlled by a central computer, which communicates with field units necessary to operate the various irrigation zones throughout the city. The system has the ability to manage the amount of water dispensed for any zone and will shut down any zone that malfunctions. It also controls the on/off function of lights in various parks. The parks and recreation department is establishing security lighting throughout the city. This system can be placed on the existing radio controlled system, which will turn the lights on and off.
- **New / Replacement Fire Stations** – Starting in FY07, this project provides for constructing two new fire stations (FS) and replacing two stations over the next five years. In FY07, funds provided for the design and construction for FS #19 in Port Tampa. Due to the larger building size, the cost to operate the new facility will increase by approximately \$9,000. Construction of FS #22 in New Tampa will commence in FY09. Operating and one-time capital costs for FS #22 will include: \$1.8 million for payroll and benefits for 30 firefighters; \$33,000 for bunker gear and clothing; \$913,000 for a ladder truck; \$313,000 for a fire engine; and \$42,000 for utilities. Similar expenses are projected for two stations, one replacement and one new, programmed in FY10 and FY11.

- **Traffic Signal Upgrade to Light Emitting Diodes (LEDs)** - This project, which started in FY07, provides for the upgrade of traffic signal displays to LED signal heads for emergency operation of signals on backup power systems. Current signals require too much power to operate on backup power systems. LED traffic signals reduce power demand by 70-80%, enabling the use of batteries or generators as backup power sources. This project is directed at the top 100 emergency priority intersections and will free up Tampa police officers from traffic duty during emergency situations. The cost of this project will be recovered quickly, with an average annual cost of \$887 per signal, and savings of approximately \$67,000 each year per 100 signals.
- **Climate Control / HVAC Systems** - Funding is provided, in the amount of \$152,180 annually, for the replacement of deteriorated HVAC systems at various locations throughout the city. Many of these systems have exceeded their useful lives and repair parts are becoming more difficult and costly to obtain. Energy savings will accrue with their replacement. In FY08, several HVAC air handlers at the Tampa Municipal Office Building need to be replaced.
- **Video Detection Installation** - This project provides for the installation of video detection devices at the city's busiest intersections to replace the detection loops embedded in pavement at each leg of the intersection. Although initial installation cost is high, installing video detection systems at intersections with detector loop damage will be more cost-effective over time and will provide better traffic signal functionality.
- **Parking** - Utilizing bond funds, operating revenue control equipment is being installed at the Twiggs Street, William F. Poe, Tampa Convention Center, Whiting Street, and Fort Brooke garages. As additional funds become available, the parking division will continue the program for new equipment installation at the remainder of the critical parking locations. Upon completion of this equipment installation, the parking division will be able to increase operating efficiencies through enhanced revenue accountability and reduced equipment maintenance costs. FY08 dollars are also provided for routing and sealing cracks in the floors, walls, beams, and columns to reduce maintenance costs throughout the following garages: Centro Ybor; South Regional; and Palm Avenue.
- **Howard F. Curren Advanced Wastewater Treatment Plant** - During FY08, replacement of equipment will increase system reliability and reduce overall operation and maintenance costs. The wastewater department will rehabilitate digester #6 at the treatment plant. The equipment within the digester has reached the end of its useful life and is no longer cost effective to maintain. Four aerator units at the high purity oxygen reactor #3 require replacement as they have reached the end of their useful life and the replacement parts have become obsolete. The new aerator units will have additional energy efficient gear boxes and motors to reduce operating costs.
- **Water** - The 42 " / 36" DIP Transmission Main will be replaced by a 42 inch ductile iron pipe (DIP) from the treatment facility to the Hillsborough River and from the river north to Busch Boulevard. In addition, the new system will tie into the transmission main south of the river crossing. The operational benefits of this new main include increased remote tank fill rates to meet future demands and cost savings due to the reduced use of wholesale water. In the same way, the Sulphur Springs weir project provides for the modification of gates by installing a five foot wide weir at the exit of the run to prevent salinity incursions. This project allows for a lower minimum flow and the use of Sulphur Springs water at the dam, thereby saving money by lowering the amount of water purchased from Tampa Bay Water.