Public Works Department Business Plan

Fiscal Years: 2007 through 2008

(10/1/06 through 9/30/08)

Plan Date: January 26, 2007

Approved by:

Esther L. Calas, P.E., Department Director

Ysela Llort, Assistant County Manager

TABLE OF CONTENTS

EXECUTIVE SUMMARY (if applicable)	Page 3
DEPARTMENT PURPOSE/MISSION	Page 5
STRATEGIC ALIGNMENT	Page 5
KEY PROGRAMS AND INITIATIVES	Page 7
PERFORMANCE MEASURES AND TARGETS	Page 8
CRITICAL SUCCESS FACTORS	Page 8
3 to 5 YEAR OUTLOOK	Page 9

Attachment 1
DEPARTMENTAL PROFILE
- Table of Organization
- Financial Summary
- Capital Budget Summary
- Business Environment

Attachment 2
BUSINESS PLAN REPORT

EXECUTIVE SUMMARY

The Miami Dade County Public Works Department consists of 15 divisions staffed with 933 positions dedicated to the mission of delivering excellent service every day. The Department is responsible for the development and maintenance of the County's roads, bridges, sidewalks, street signs, pavement markings, traffic signals and signs, and stormwater drainage facilities. Additional departmental responsibilities include the oversight of the Venetian and Rickenbacker Causeway operations, the maintenance of the Causeways' roadways and bridges, and beach aesthetics; the landscaping and beautification of the public rights-of-way; the creation and maintenance of Special Taxing Districts for enhanced security guard, landscape, streetlight, and lake maintenance activities; and the provision of mosquito control programs.

See Attachment 1 for Departmental Table of Organization.

Summary of major programs, initiatives or milestones to be achieved in the current and next fiscal year:

- Implement the Neighborhood Enhancement Action Teams (NEAT) to proactively address constituent safety concerns and aesthetic maintenance issues in a proactive and timely manner.
- Begin to address the backlog of concrete sidewalk repairs with the new sidewalk team; requesting a second team to continue concrete sidewalk efforts in FY 07-08.
- Implement an in-house traffic signal crew anticipated to install 8 to 10 signals annually, complimenting outside contracting efforts; requesting a second crew for FY 07-08.
- Install solar flashing beacons at pedestrian crosswalks for added safety and enhanced motorist awareness.
- Implement "Do Not Block The Box" signs to enhance traffic capacity at major intersections.
- Hire an additional six traffic engineers to increase signal retiming efforts and reduce from 410 to 234 signals per engineer to make traffic flow more efficient.
- Construct at least 50 intersection improvements to enhance traffic capacity.
- Implement a mosquito educational awareness campaign to reduce the number of complaints received and assist in identifying problems.
- Chemically treat 50,000 storm drains for mosquito control and request funding for another 50,000 storm drains to be treated in FY 07-08.

- Continue the Beach Renourishment Project which includes parking reconfiguration and sand replenishment of the south side of Hobie Beach and Virginia Key along Rickenbacker Causeway to protect County facility.

- Implement the drain-cleaning cycles increase from one cycle every 15 years to one cycle every 8 years to comply with Federal environmental pollution regulations.

- Continue ATMS installation at 400 intersections by December 31, 2006, and another 800 intersections completed by December 31, 2007, to update a 30-year old traffic control system for higher traffic signal efficiency.

- Award the Light Emitting Diodes traffic signal lamps project and begin implementation by March 2007; generating electrical savings from the use of 15 watts per signal lamp as opposed to 135 watts.

- Begin repairing potholes within 24 hours of a citizen's request to expedite street smoothness for the vehicular public.

- Implement the Illuminated Street Name Sign Program at 430 intersections which enhances safety for the vehicular public in the evening hours.

- Participate in a multi-agency committee to assist in creating a master plan for rejuvenating the County tree canopy.

- Restore tree foliage destroyed by the recent hurricane events.

- Implement enhanced landscape program for all new major roadway projects to continue providing an aesthetically-pleasing environment for residents and visitors.

- Research by MPO to address the feasibility of stop signs restructuring to maximize their ability to withstand storm/hurricane-force winds.

- Continue aesthetically-pleasing traffic calming projects with brick pavers and enhanced landscaping; seeking additional funding for FY 07-08.

Summary of significant factors critical to the Department's successful implementation of the business plan:

In order for the Department to successfully implement the Business Plan, it must maintain the maximum budgeted positions filled; must continue the accelerated implementation of the Quality Neighborhood Improvement Program (QNIP), People's Transportation Plan (PTP) and Building Better Communities (BBC) programs; be reorganized to reallocate its positions more effectively, especially in the under-funded areas of the Traffic Engineering and Traffic, Signals and Signs Divisions and address funding alternatives for significant Causeway capital projects that remain unfunded (Venetian and Rickenbacker bridge repairs and Rickenbacker road resurfacing) and the need to continuously seek funding allocation for traffic signals, traffic calming and bridge projects.

DEPARTMENT PURPOSE/MISSION

The Public Works Department's mission is to provide quality roadways and bridges with effective traffic signal and signs in an environment that is aesthetically pleasing and nuisance free by our team of professionals dedicated to delivering exceptional service.

Additional departmental information can be found in the Departmental Profile (Attachment 1).

STRATEGIC ALIGNMENT

The Department's efforts align with the following Miami-Dade County Strategic Plan Goals:

As part of the County's Strategic Plan, the Board of County Commissioners endorsed nine priority strategic themes countywide. This Department is primarily supportive of the following strategic themes:

- Transportation
- Neighborhood and Unincorporated Services

Supporting these themes are goals and priority outcomes that directly relate to this Department. These are provided along with the Department's Programs, Initiatives, and Performance Measures for Fiscal Year 2007.

Department-related Strategic Plan Goals:

- Maximize the use and efficiency of the existing transportation system on a neighborhood, county and regional basis.
- Promote responsible stewardship of natural resources and unique community environments.
- Use consistent, fair, and effective means to achieve code compliance.
- Enact programs to beautify and improve urban and residential areas.
- Provide timely and reliable public infrastructure services including road maintenance, stormwater, solid waste and wastewater management, and a safe and clean water delivery system consistent with the Comprehensive Development Plan (CDMP).
- Enable County departments and their service partners to deliver quality customer service.

Department-related Strategic Plan Priority Outcomes:

- Optimum signalized traffic flow.
  - Improve and maintain effective signalized traffic systems
- Restoration of County construction project site areas to original conditions in a timely manner.
  - Ensure restoration of post-construction sites
- Timely identification and remediation of nuisances, including unsafe structures.
  - Reduce mosquito nuisances
- Neighborhood and rights-of-way aesthetics that foster and enhance quality of life.
  - Maximize tree canopy and enhance landscape aesthetics
  - Maintain aesthetically pleasing neighborhood landscapes
  - Clean roadways and rights-of-way
  - Install and maintain effective and aesthetically pleasing traffic and street signage
- Improve neighborhood roadways, sidewalks, drainage, and reduced flooding.
  - Enhance drainage and canal maintenance
  - Improve quality of roadways and pathways
- Improved public infrastructure level-of-service standards and policies.
  - Improve permitting and review process
- Integrated traffic calming in neighborhoods.
  - Plan and develop traffic calming devices
- Safe, comfortable and convenient pedestrian rights-of-way.
  - Provide safe and effective traffic intersections
- Satisfied customers.
  - Improve customer satisfaction with public works services
- Planned necessary resources to meet current and future operating and capital needs
  - Effectively managing resources
  - Meet budget targets

KEY PROGRAMS AND INITIATIVES

The Department's key programs and initiatives are highlighted below and organized by balanced scorecard perspective.

Customer Perspective

The PWD has implemented several customer service activities in the organization to continue improving services such as:

- Comment cards at the service counters in the permit offices, copier office, and the Causeways.
- Surveys mailed to Special Taxing District residents.
- Advertisements, mailings and public meetings are held to provide the citizens input into new road improvement projects.
- Public involvement information plan will be utilized for customer feedback to revise construction projects and its management in the future.
- Telephone and e-mail feedback from the 311 Answer Center on service requests.

Financial Perspective

The Department will implement an aerial mosquito larvaciding program to cut operational costs and will be recommending several revenue increases in FY 07-08:

- Revise copying fees to cover new technology charges.
- Revise annual Causeway pass fee plans to cover bond debt.
- Increase permit fees to cover inspection and technology-enhancement costs.

Additionally, Secondary Gas Tax will continue to be affected in future funding allocation as it is currently utilized to offset non-reimbursable multiple hurricane expenses such as tree resetting, FEMA match to Hurricane Wilma work activities, and the possible annual match for the next five fiscal years for the traffic signal mast arm program.

Internal Perspective

The Department has several technological projects planned for FY 06-07. These projects include the development of a system to expedite permit process for the Public Works field inspectors and provide mobile connectivity, expansion of the barcode inventory system to other field operations to enhance accountability, and development of a mobile mosquito inspection system to enhance electronic transmissions from the actual field.

Learning and Growth Perspective

The Department has several training courses in FY 06-07:

- Certified Equipment Operator Training Program by a third party examiner to address training issues.

- Traffic Control Course to train staff to assist with traffic in an emergency mobilization.
- Duty Officer training to detail responsibilities in emergency public work issues on a daily basis.
- Cross-training provided as promotional opportunity for the various maintenance categories.

PERFORMANCE MEASURES AND TARGETS

For ease of reference, specific information regarding departmental objectives and performance measures including the targets for FY 2006-07 and FY 2007-08 can be found in Attachment 2 – Business Plan Report.

CRITICAL SUCCESS FACTORS

The Public Works Department received several service enhancements in FY 06-07 such as additional trees, new NEAT concept to provide a rapid and consistent proactive response to quality-of-life issues, traffic capacity and safety program to analyze the top 100 worst accidents in the intersections, an in-house traffic signal maintenance crew, additional traffic signal recalibration engineers, an in-house concrete sidewalk crew to lessen asphalt patching, clean arterial drains, continue the illuminated street name sign program, and add 10,000 street name signs to the roadways.

As the Department rapidly moves to implement the service enhancements, there are several other funding allocations that are critically needed for on-going success as listed below:

- Hire one electrician to perform maintenance on movable bridges; improving Departmental Efficiency and providing cost savings vs. current utilization of a consultant.
- Hire 17 employees vs. contracting survey services to efficiently and effectively provide survey work.
- Hire two bridge repairers proactively maintain UMSA sonovoid bridges; improving the maintenance from emergency repairs only to four proactive cycles.
- Hire two hydraulic mechanics to proactively repair and maintain fixed bridges in the County; providing quarterly preventative maintenance to 187 bridges to improve traffic and pedestrian safety.
- Hire five employees to increase the number of arterial roadway drain repairs from 100 to 350; reducing flooding and ponding on County maintained arterial roads.
- Contract for a proactive dead tree replacement plan; enhancing dead tree replacement from 5% to 100% within two days.
- Hire two employees to maintain six additional storm water pump stations; increasing inspection and repair from 11 to 17 pump stations on a weekly basis.

- Hire four employees to increase tree fertilization and watering from two to three cycles; adding the additional cycle will save the health of many trees and reduce costly tree replacement measures

- Hire four employees to grade and repair 150 miles of roadway shoulders; promoting drainage to assist in flood prevention.

- Hire nine employees to construct traffic signal installations; providing a second in-house crew to install eight to ten signals annually.

- Hire twelve employees to increase storm drain mosquito spraying from 50,000 to 100,000 twice a year; preventing mosquito nuisance.

- Contract a guardrail installation program; increasing guardrail linear feet installed from 2,000 to 10,000.

3 to 5 YEAR OUTLOOK

The PWD has outlined below its five-year needs to enhance and/or improve performance:

- Mosquito Control is in need of additional mosquito control facilities in the South and North to enhance productivity response. Also, the procurement of a fixed-wing airplane equipped for aerial spraying would reduce complete contractor reliance on this specific aerial spraying mode. The Department has requested a helicopter from the Federal Surplus Program.

- Continue to identify yearly 100 high-crash intersections, develop countermeasures and maximize the number of improvements.

- Enhancement of GIS applications for traffic engineering improvements, including safe routes to school mapping, signage inventory, traffic calming devices, work orders, etc.

- Fund the development and on-going maintenance of GIS layers for private roadways, secondary drainage canals, drainage infrastructure, lane miles, and sidewalks.

- Each year, the construction industry seems to experience material and/or labor shortages which drive up the costs for all construction projects. This may affect the Department's construction program in the future.

- Continue to educate County management and taxpayers that though road miles are being transferred to new cities, the PWD continues to add County lane miles through road-widening projects, transfers from the Florida Department of Transportation, and approved developments with road improvements which strain the road maintenance budget.

- Continue to provide resources for traffic calming program based on the large number of citizens' requests received by the Department.

Attachment 1

DEPARTMENTAL PROFILE

Department Description

In order to accomplish its mission, the Public Works Department concentrates its efforts and resources on core transportation and neighborhood services. Listed below is a brief description of the varied activities undertaken in the Department:

Causeways Division
Responsible for the collection of tolls at the Rickenbacker and Venetian Causeways and the maintenance of the rights-of-way and beach areas.

Construction Division
Responsible for issuing permits for and inspections in the public rights-of-way and provides construction management services for open construction contracts and specific major highway projects.

Highway Engineering Division
Prepares construction contracts and specifications for major infrastructure projects, responsible for preparing the Transportation Improvement Program and administration and coordination of consultant design contracts for major highway and bridge improvements.

Land Development Division
Responsible for reviewing, approving, and processing tentative and final plats for proposed subdivisions and construction improvements to the public right-of-way.

Mosquito Control Division
Responsible for countywide mosquito nuisance complaints by inspecting for mosquito breeding areas and applying insecticides and/or other eradication methods as needed and enforcing mosquito control ordinances throughout the County.

Right-of-Way Division
Responsible for the acquisition of all transportation related rights-of-way; including real estate title research and analysis, preparing maps, parcel sketches, and legal descriptions, land appraisals, surveys, technical support to the County Attorney's Office on eminent domain cases, acceptance of dedications of road rights-of-ways, and processing of road closures.

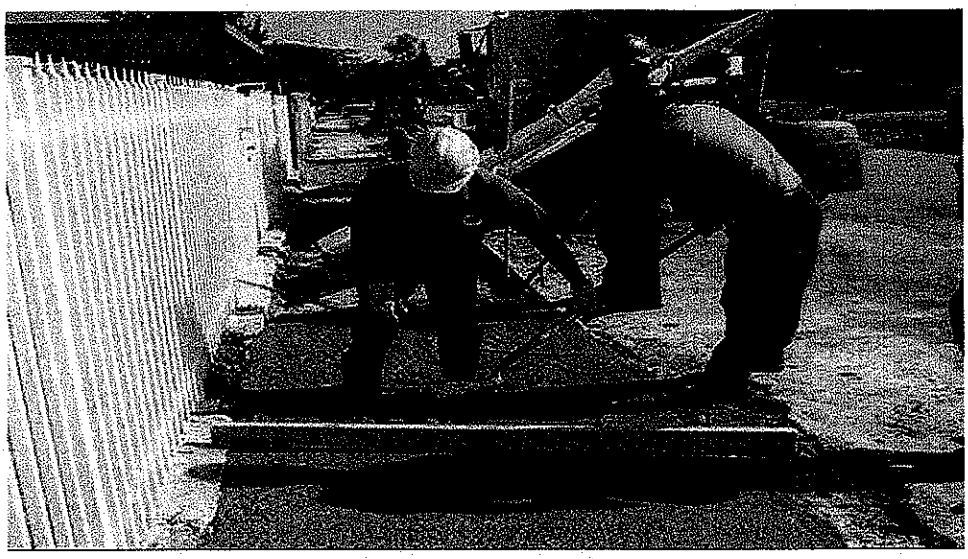
Road, Bridge, Canal Asset and Aesthetic Maintenance Division
Responsible for providing road and bridge maintenance, bridge operations, pothole patching, sidewalk repairs, stormwater drain cleaning, chemically and mechanically cleaning the County's secondary canal system, managing the Americans with Disabilities Act retrofits within County sidewalk program, managing contracts for median, roadside, and County transportation facilities landscape services, tree health and aesthetic structural pruning, and managing the Adopt-A-Road Program.

Special Taxing Districts
Responsible for creating, implementing, and/or administering special taxing districts for street lighting, security guards, lake maintenance, road, landscape, water and sewer improvements, as requested by citizens and developers.

Traffic Engineering Division
Responsible for studying, investigating and recommending the installation of traffic control devices and roadway improvements to increase capacity and improve the quality of life and safety of residents and school students.

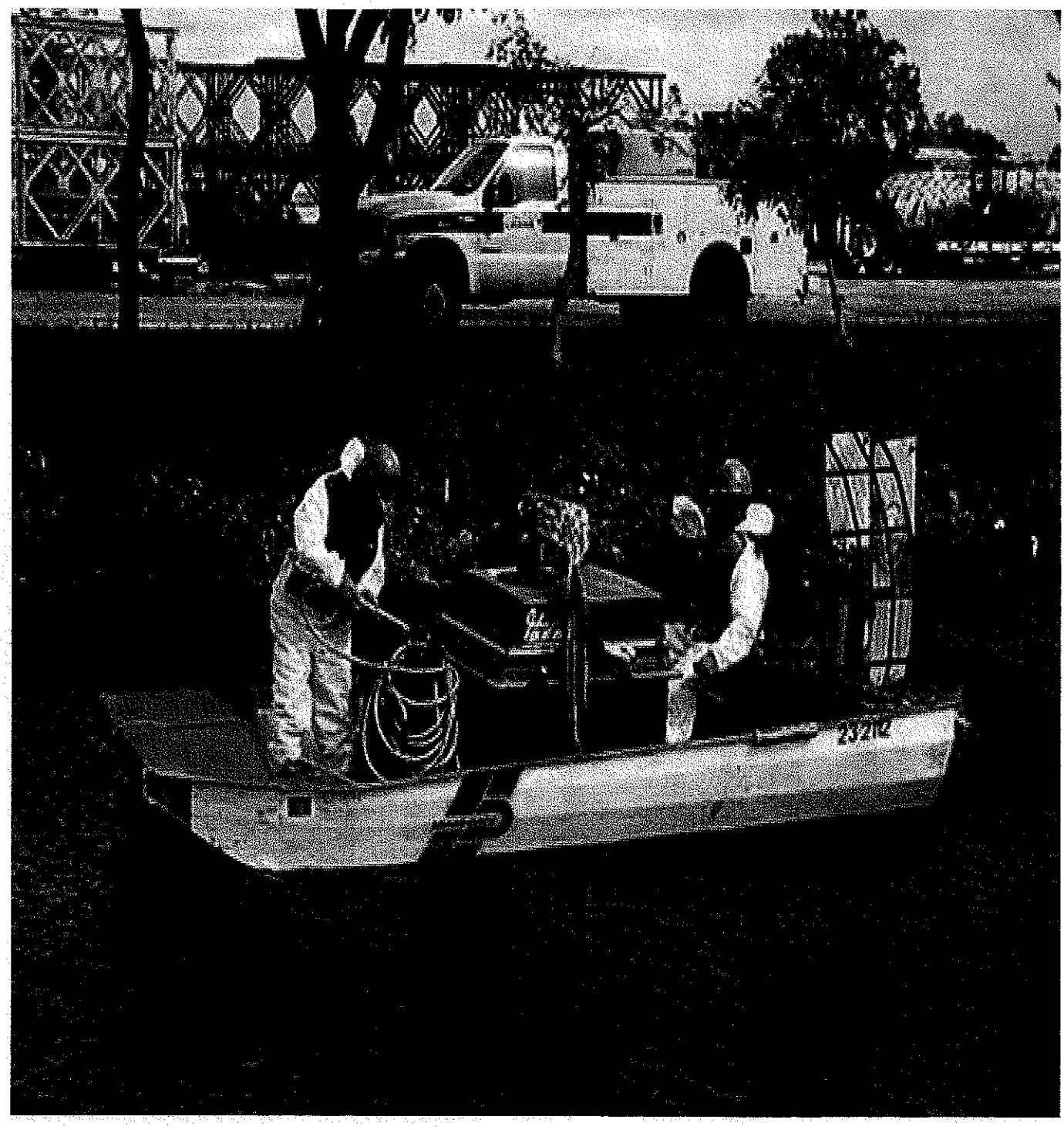
Traffic Signals and Signs Division
Responsible for the safe and efficient flow of pedestrian and vehicular traffic by maintaining and operating signs, streetlights, roadway striping, and traffic signals on the County's roadway system.

Additionally, the Department coordinates its activities with a variety of stakeholders through the community, including municipalities, community councils, homeowner associations, and other local and neighborhood focused groups. The Department also partners with state and federal agencies to ensure necessary regulatory compliance and cooperation on large-scale capital and infrastructure initiatives.

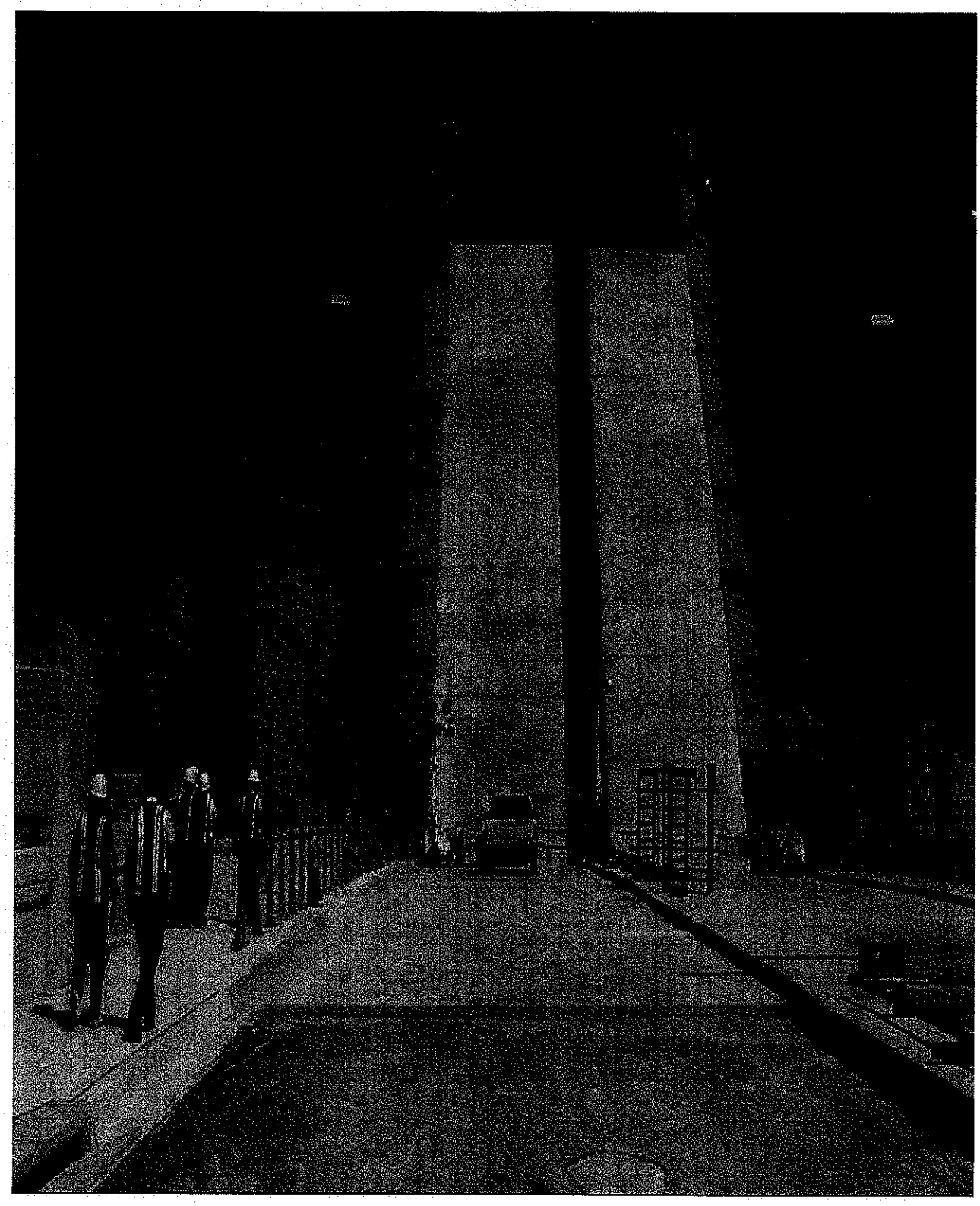


Sidewalks Repair

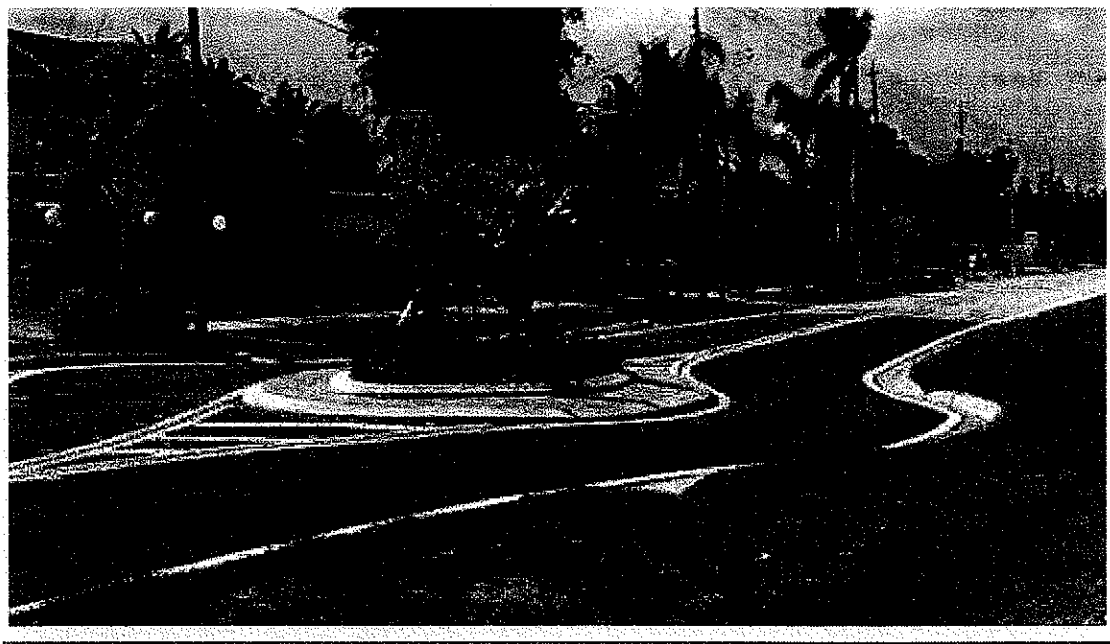
Trees Trimming



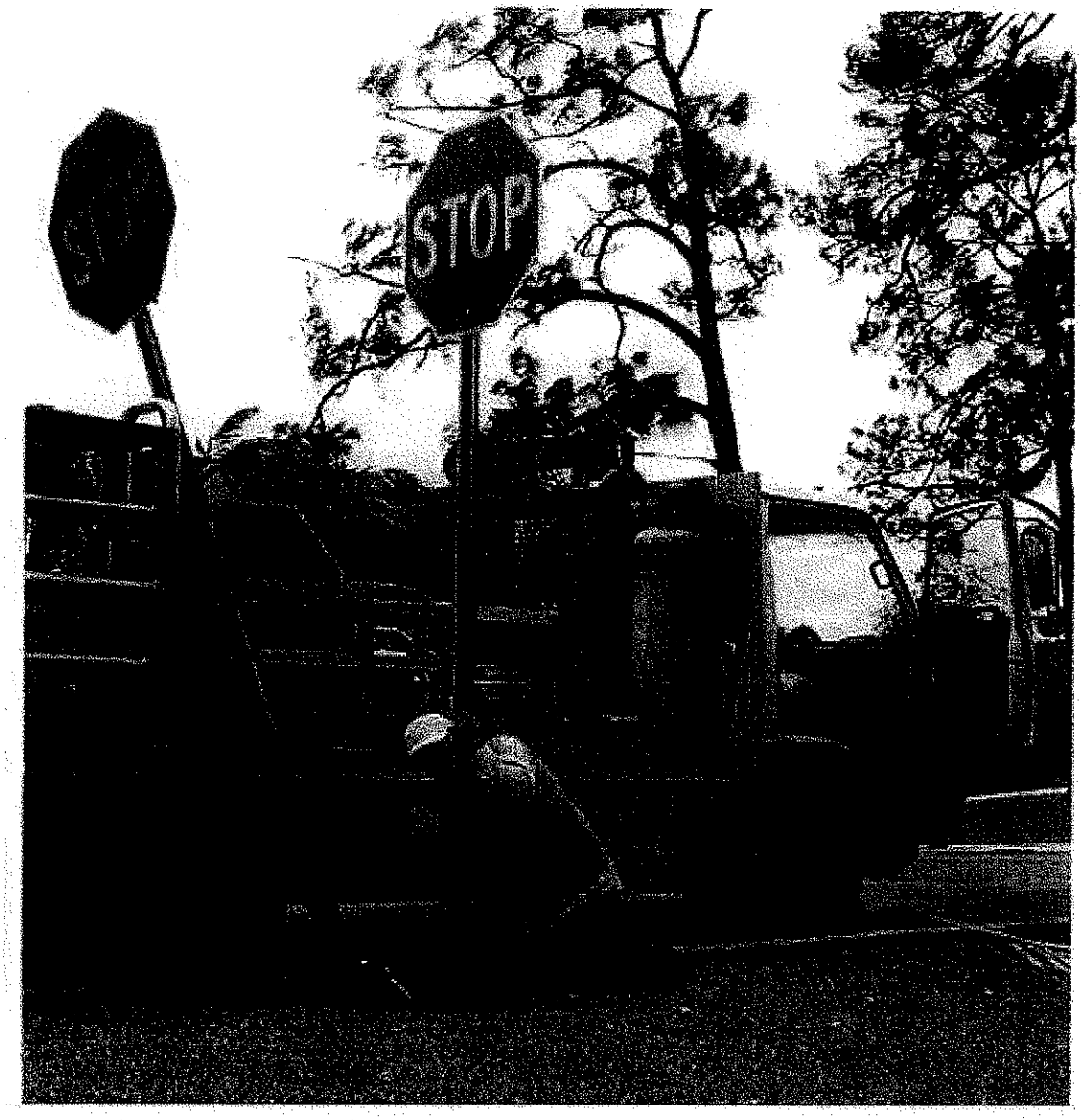
Canal Cleaning



Bridge Operation



Traffic Calming



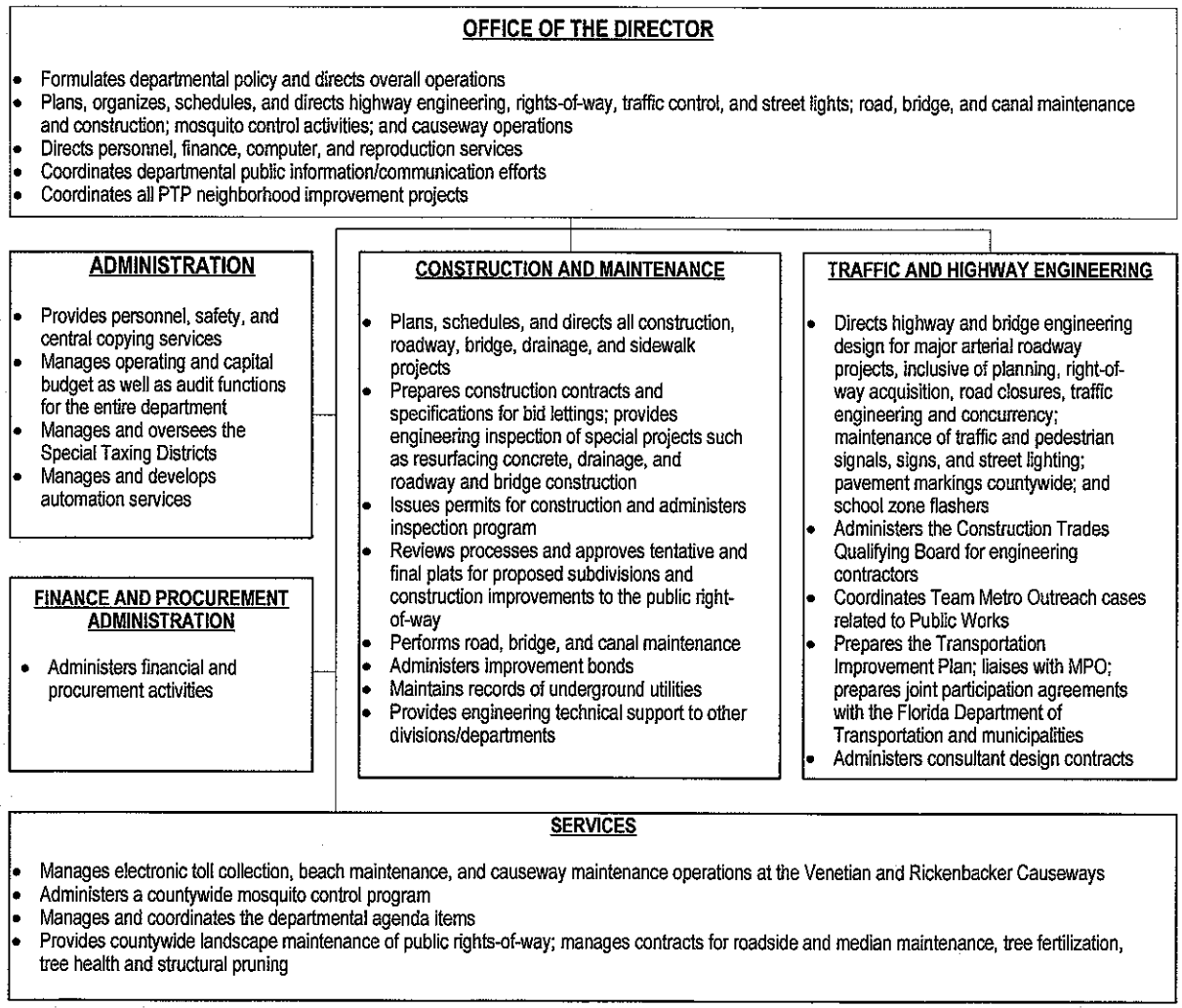
Signs Installation

Significant Events

The PWD continues to negotiate with FHWA and FEMA on acceptable reimbursements, infrastructure activities, and mitigation efforts.

Public Works

TABLE OF ORGANIZATION



Departmental Business Plan and Outlook
Department Name:
Fiscal Years: 2006/2007 – 2007/2008

FINANCIAL SUMMARY

(Dollars in Thousands)	Actual FY 04-05	Budget FY 05-06	Budget FY 06-07
Revenue Summary			
Carryover	5,354	3,793	5,095
Causeway Toll Revenues	6,164	7,500	8,085
Construction / Plat Fees	5,767	7,350	6,800
FDOT Payment	0	0	1,780
General Fund Countywide	28,264	28,496	35,550
General Fund UMSA	4,565	5,279	8,000
Interagency Transfers	2,499	3,868	3,169
Intradepartmental Transfers	11,214	8,919	10,971
Local Option Gas Tax	1,675	1,829	0
Mosquito State Grant	23	37	37
PTP Sales Tax Revenue	669	3,807	4,095
Secondary Gas Tax	5,670	6,720	7,030
Special Taxing Administration Charges	2,059	2,098	2,489
Special Taxing District Revenue	31,674	28,432	28,757
Stormwater Utility Fees (Municipalities)	12,237	13,451	15,374
Total Revenues	117,834	121,579	137,232
Operating Expenditures Summary			
Salary	34,629	39,142	42,392
Fringe Benefits	9,665	12,602	13,809
Other Operating	64,892	63,288	68,501
Capital	3,676	3,118	5,878
Total Operating Expenditures	112,862	118,150	130,580
Non-Operating Expenditures Summary			
Debt Service	0	502	0
Reserve	4,972	2,627	3,462
Transfers	0	300	3,190
Total Non-Operating Expenditures	4,972	3,429	6,652

(Dollars in Thousands) Expenditure By Program	Total Funding Budget FY 05-06	Total Funding Budget FY 06-07	Total Positions Budget FY 05-06	Total Positions Budget FY 06-07
Strategic Area: Transportation				
Administration	2,873	2,396	24	24
Causeways	6,538	5,735	69	69
Construction	7,822	8,822	81	142
Highway Engineering	2,158	2,101	24	22
People's Transportation Plan	3,807	4,095	55	55
Right-of-Way	4,400	4,626	65	65
Traffic Engineering	2,545	3,437	32	38
Traffic Signals and Signs	18,560	22,967	87	106
Strategic Area: Neighborhood and Unincorporated Area Municipal Services				
Administration	3,562	2,970	30	30
BBC Bond Program	728	744	9	9
Land Development	1,492	1,902	17	16
Mosquito Control	3,797	3,652	30	29
Right-of-Way Assets and Aesthetics Management	9,382	10,117	41	42
Road and Bridge Maintenance	7,063	11,280	89	112
Special Taxing Districts	28,432	28,757	0	0
Special Taxing Districts Administration	2,455	2,459	24	24
Stormwater Utility Canals and Drains	12,536	14,520	115	150
Total Operating Expenditures	118,150	130,580	792	933

CAPITAL BUDGET SUMMARY

(Dollars in Thousands)	PRIOR	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FUTURE	TOTAL
Revenue									
Building Better Communities GOB Program	17,216	7,648	7,963	4,583	10,224	9,981	5,041	31,678	94,334
Capital Impr. Local Option Gas Tax	2,050	2,278	2,278	2,278	2,278	2,278	2,278	2,278	17,996
Capital Outlay Reserve	0	5,536	1,700	1,700	0	0	0	0	8,936
Causeway Toll Revenue	415	3,090	2,950	2,050	0	0	0	0	8,505
FDOT Funds	9,930	1,300	2,550	2,550	1,300	1,495	1,570	1,649	22,344
FEMA Reimbursements	0	12,705	12,705	12,705	12,705	12,705	0	0	63,525
Financing Proceeds	19,555	0	0	0	0	0	0	0	19,555
Florida Department of Community Affairs	0	2,118	2,118	2,118	2,118	2,118	0	0	10,590
Future Financing	0	3,500	0	2,500	0	0	0	0	6,000
Municipal Contribution	0	0	500	500	0	0	0	0	1,000
People's Transportation Plan Bond Program	39,617	101,601	140,881	94,470	36,055	28,074	27,660	35,576	503,934
QNIP Phase IV UMSA Bond Proceeds	2,757	0	0	0	0	0	0	0	2,757
Road Impact Fees	105,681	31,542	22,399	20,787	20,739	20,478	8,716	10,716	241,058
Secondary Gas Tax	7,665	17,627	17,916	19,158	17,217	17,477	13,266	13,383	123,709
Stormwater Utility	0	1,200	1,200	1,200	1,200	1,200	1,200	1,200	8,400
Sunshine State Financing	0	7,000	0	0	0	0	0	0	7,000
Total:	204,886	197,145	215,160	166,599	103,836	95,806	59,731	96,480	1,139,643
Expenditures									
Strategic Area: Neighborhood And Unincorporated Area Municipal Services									
Departmental Information Technology	0	350	0	0	0	0	0	0	350
Projects									
Drainage Improvements	0	1,200	1,200	1,200	1,200	1,200	1,200	1,200	8,400
Hurricane Repairs	0	36	0	0	0	0	0	0	36
Infrastructure Improvements	10,481	11,849	7,913	5,428	4,569	4,831	6,346	20,023	71,440
Pedestrian Paths and Bikeways	0	300	200	0	0	0	25	3,440	3,965
Road Improvements - Local Roads	0	6,321	1,864	1,864	1,864	1,864	1,864	1,864	17,505
Strategic Area: Transportation									
ADA Accessibility Improvements	4,908	1,664	2,856	664	2,664	664	2,664	3,164	19,248

Causeway Improvements		415	6,590	4,150	4,550	0	0	0	1,500	17,205
Drainage Improvements		0	0	900	0	0	0	0	0	900
Infrastructure Improvements		30,264	48,788	42,676	25,411	27,529	31,303	17,118	50,139	273,228
Other		554	554	554	0	0	0	0	0	1,662
Road Improvements - Major Roads		47,089	101,517	136,933	90,598	40,677	28,157	21,610	10,816	477,397
Traffic Control Systems		23,807	51,026	51,083	45,691	27,554	29,167	9,899	10,080	248,307
	Total:	117,518	230,195	250,329	175,406	106,057	97,186	60,726	102,226	1,139,643

Current Business Environment

The Public Works Department lists the following issues that affect business processes:

- Customers continue to request web-based services in areas such as transportation concurrency, traffic engineering studies and reports, design standards, policies, and documents. The Department currently has implemented final plat search and punch list information and survey benchmarks on the County website.

- Major cost increases for construction projects will continue due to an abundance of work in the industry and challenges the Department's ability to completely fund the projects (asphalt, concrete, sign materials, sign posts, availability of contractors in the marketplace, etc.).

- Current boom in real estate values will cause increased prices on all property acquisitions for road-widening projects.

- With additional people moving into the southwestern part of the County and the inability of spraying the migrating mosquitoes in the Everglades National Park, service requests will continue to increase.

- Public awareness of the Roadway Beautification Program has increased requests for tree planting with very limited available resources.