

Memorandum



CITY OF DALLAS

DATE: August 27, 2010

TO: Honorable Mayor and Members of the City Council

SUBJECT: Department of Street Services FY 2010-2011 Proposed Budget Briefing

On Wednesday, September 1, 2010, you will be briefed on the Department of Street Services FY 2010-2011 Proposed Budget. The presentation material is attached for your review.

If you have questions or need additional information, please let me know.

A handwritten signature in black ink, appearing to read 'Forest E. Turner'.

Forest E. Turner
Assistant City Manager

cc: Mary K. Suhm, City Manager
Deborah A. Watkins, City Secretary
Thomas P. Perkins, Jr., City Attorney
Craig D. Kinton, City Auditor
C. Victor Lander, Administrative Judge
Ryan S. Evans, First Assistant City Manager
A. C. Gonzalez, Assistant City Manager
Jill A. Jordan, P.E., Assistant City Manager
Jeanne Chipperfield, Chief Financial Officer
Frank Libro, Public Information Office
Helena Stevens-Thompson, Assistant to the City Manager

Department of Street Services

FY 2010-11 Proposed Budget

Presented to the Dallas City Council

September 1, 2010



Briefing Purpose and Overview

□ Purpose

Provide update of the FY 10-11 Proposed Budget

□ Overview

- Scope of Services
- Proposed Operating Budget
- FY 2010-11 Services
- Street Services Annual O & M Lane Miles
- Cost to Restore Historic Levels
- Other Information
 - Street Treatment Descriptions
 - PWT Service Descriptions
 - Street Condition Rating

Scope of Services

- ❑ Maintenance Inventory
 - ❑ 11,500 lane miles of streets
 - ❑ 1,350 miles of alleys
 - ❑ 1,650 acres of medians and adjacent rights-of-way
 - ❑ 60,000 storm water inlets
 - ❑ 1,300 miles of roadside drainage
 - ❑ 50 miles of city-owned guardrail
- ❑ Emergency Response
 - ❑ Inclement weather conditions
 - ❑ Snow and ice
 - ❑ High wind damage
 - ❑ Flooding
 - ❑ Removal of roadway debris

Operating Budget

Business Unit		FY 09-10 Budget		FY10-11 Proposed Budget	
		FTEs	Dollars	FTEs	Dollars
1	Service Districts (potholes, service requests)	228.3	\$8,574,312	218.3	\$8,537,920
2	Right-of-Way Maintenance Contracts & Inspections	17.0	\$3,237,292	22.0	\$2,846,344
3	Street Repair Division – Asphalt	105.6	\$8,149,130	111.6	\$8,102,907
4	Street Repair Division – Concrete	136.1	\$8,149,707	144.2	\$7,812,768
5	Budget	487.0	\$28,110,441	496.1	\$27,299,939
6	Other Sources				
	Reimbursable Work*		\$3,896,884		\$3,896,884
7	Storm Water Fund **		\$6,354,506		\$6,354,506
8	Total Operating Budget	487.0	\$38,361,831	496.1	\$37,551,329

* Work performed as pavement contractor for Housing, Parks, and Water Utilities departments
 ** Reimbursement for curb & gutter repair, storm drain maintenance, street sweeping, and litter removal



City of Dallas

1. Service Districts



Pothole Repair



Inlet Cleaning



Roadside Drainage



Guardrail Repair



Service Districts

- ❑ \$8.5M (218.3 FTEs)
 - ❑ Primary Responsibilities
 - ❑ Initial Intake for Service Requests, Emergency Response
 - ❑ FY 10-11 Proposed Budget
 - ❑ \$2M - Asphalt Street and Alley Repair
 - ❑ 28,000 pothole repairs
 - ❑ 70,000 sq. yds. of small asphalt level up repair
 - ❑ \$2.5M - Right-of-Way Maintenance
 - ❑ Guardrail maintenance and repair
 - ❑ Large city-owned tracks of property
 - ❑ Illegal dumping & litter removal
 - ❑ Unimproved alley repair
 - ❑ \$2M - Roadside Drainage and Inlet Maintenance
 - ❑ 20,000 inlets cleaned or inspected
 - ❑ 250 miles of roadside drainage maintenance

Service Districts (Cont.)

- ❑ \$0.7M - Emergency Response 24/7
 - ❑ Removal of roadway debris
 - ❑ Inclement weather

- ❑ \$0.4M - Street Sweeping and Cleaning in Central Business District
 - ❑ 5 nights a week in Central Business District
 - ❑ Sweeping of major thoroughfares is outsourced

- ❑ \$0.9M – Street Crack Sealing Program
 - ❑ Preventive maintenance that increases service life of street by preventing water penetration

2. Right-of-Way Maintenance Contracts & Inspections

Median Mowing



Street Sweeping



Quality Assurance



Environmental Compliance



FY 2010-11 Services

Right-of-Way Maintenance Contracts & Inspections \$2.8M (22.0 FTEs)

- ❑ Primary Responsibilities:
 - ❑ Median Mowing and Street Sweeping Contracts
 - ❑ Inspection and Compliance
- ❑ FY 2010-11 Proposed Budget
 - ❑ \$1.8M - Median & Right-of-Way Mowing and Litter Removal (outsourced)
 - ❑ 1,650 acres
 - ❑ 18 cycles per year, every 14 days during growing season
 - ❑ \$0.5M - Street Sweeping (outsourced)
 - ❑ 2,200 gutter miles on major thoroughfares
 - ❑ 12 cycles per year, once per month
 - ❑ \$0.5M - Inspection and Compliance
 - ❑ Outsourced contracts (median mowing and street sweeping)
 - ❑ Quality assurance inspection
 - ❑ ISO compliance (Environmental & Quality)



City of Dallas

3. Street Repair Division – Asphalt



Street Rehabilitation



Street Restoration



Street Overlay (Rehabilitation/Restoration)



Full-Depth Asphalt Repair



FY 2010-11 Services

Street Repair Division – Asphalt

- ❑ \$8.1M (111.6 FTEs)
 - ❑ Primary Responsibilities:
 - ❑ Asphalt maintenance of streets and alleys (generated from service requests)
 - ❑ Planned programs (street rehabilitation and restoration)
 - ❑ FY 2010-11 Proposed Budget
 - ❑ \$7.7M - Street Repair
 - ❑ Street Restoration Program (10 lane miles)
 - ❑ Street Rehabilitation Program (18 lane miles)
 - ❑ 30,000 square yards of full depth asphalt repairs
 - ❑ 60,000 square yards of large asphalt level up repairs
 - ❑ Overlays on concrete based street and bridge repairs
 - ❑ Tie-ins to concrete drive approaches and curb & gutter
 - ❑ \$0.2M - Alley Repair
 - ❑ 6,000 square yards of alley repairs
 - ❑ Overlays on concrete alleys

FY 2010-11 Services

Street Repair Division – Asphalt (cont.)

- ❑ \$0.2M – Emergency Response
 - ❑ Snow and Ice
 - ❑ Storm clean-up
 - ❑ Fire assistance

- ❑ \$1.4M - Asphalt Reimbursement Work for Other Departments
 - ❑ Paving Improvement Programs
 - ❑ Housing (Neighborhood Investment Program)
 - ❑ Dallas Water Utilities



City of Dallas

4. Street Repair Division – Concrete



Full-depth Concrete Repair



Inlet Repair



Curb and Gutter



Curb and Gutter w/Sidewalk



FY 2010-11 Services

Street Repair Division – Concrete

- ❑ \$7.8M (144.2 FTEs)
 - ❑ Primary Responsibilities:
 - ❑ Concrete maintenance of streets (generated from service requests)
 - ❑ Concrete maintenance of alleys (generated from service requests)
 - ❑ FY 2010 Proposed Budget
 - ❑ \$7M - Street Repair
 - ❑ 56,000 sq. yds. of full-depth repairs
 - ❑ 74,000 ln. ft. of curb and gutter repairs
 - ❑ 60,000 sq. ft. of sidewalk repairs (associated with curb & gutter repair)
 - ❑ Storm drainage inlets, bridges, retaining walls, slope protection
 - ❑ \$0.5M - Alley Repair
 - ❑ 6,000 sq. yds. of alley repairs

FY 2010-11 Services

Street Repair Division – Concrete (Cont.)

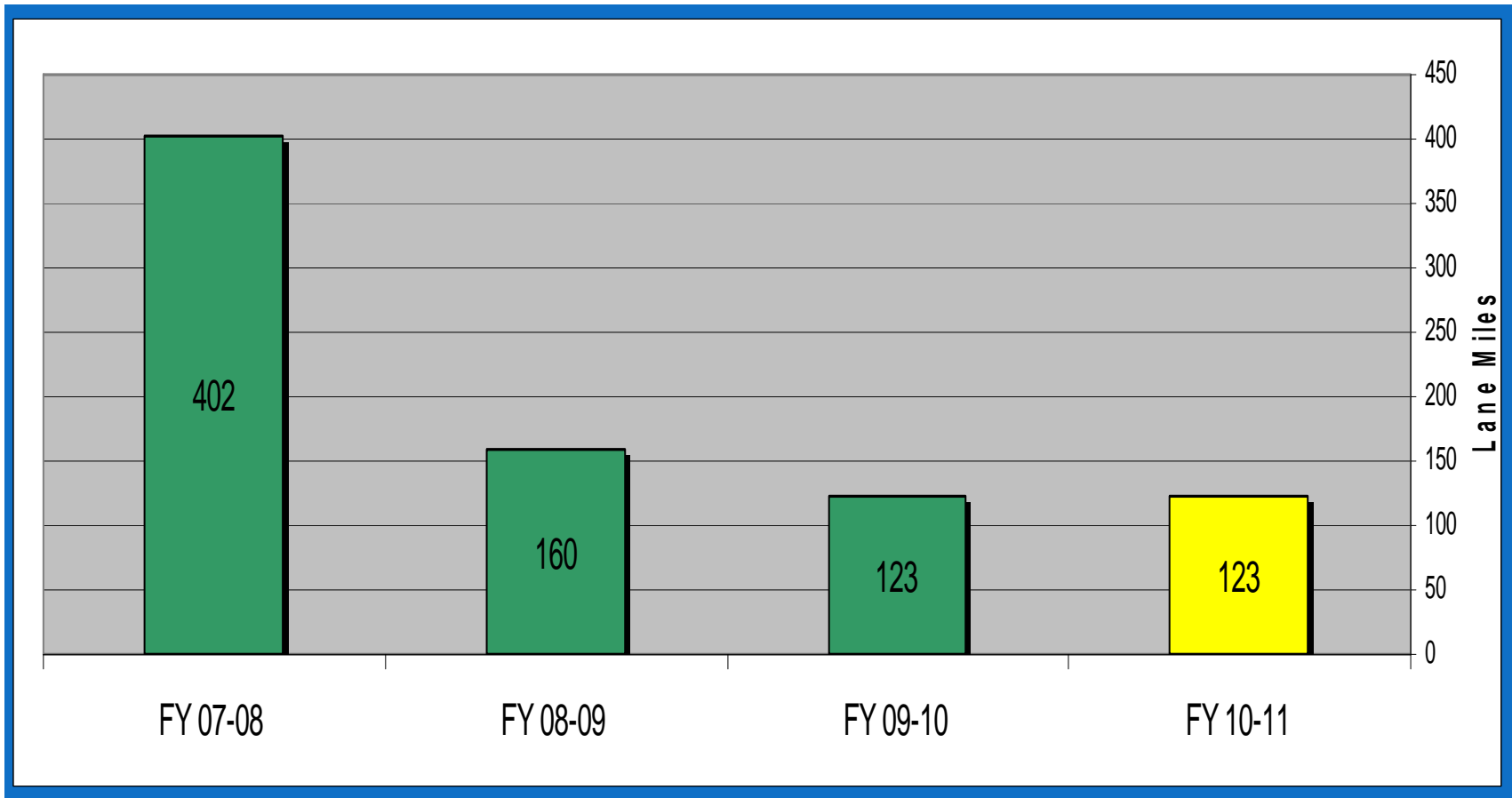
- ❑ \$0.1M - Special Event Barricades
- ❑ \$0.2M - Emergency Response
 - ❑ Snow and ice
 - ❑ Storm clean-up
- ❑ \$2.5M - Concrete Reimbursable Work for Other Departments
 - ❑ Paving Improvement Programs
 - ❑ Park and Recreation
 - ❑ Housing (Neighborhood Investment Program)



Annual O & M Lane Miles

Category	FY 07-08	FY 08-09	FY 09-10	FY 10-11 Proposed
Partial Reconstruction	52	31	0	0
Rehabilitation	30	24	18	18
Restoration	10	10	10	10
Full-depth Asphalt	60	20	20	20
Slurry Seal	125	0	0	0
Micro Surfacing	50	0	0	0
Other	75	75	75	75
Total Lane Miles	402	160	123	123
Budget	\$39,066,468	\$31,616,067	\$28,110,441	\$27,299,939
Capital Expenditure	\$87,883,135	\$66,464,152	\$109,712,654	\$142,304,779

Annual O & M Lane Miles

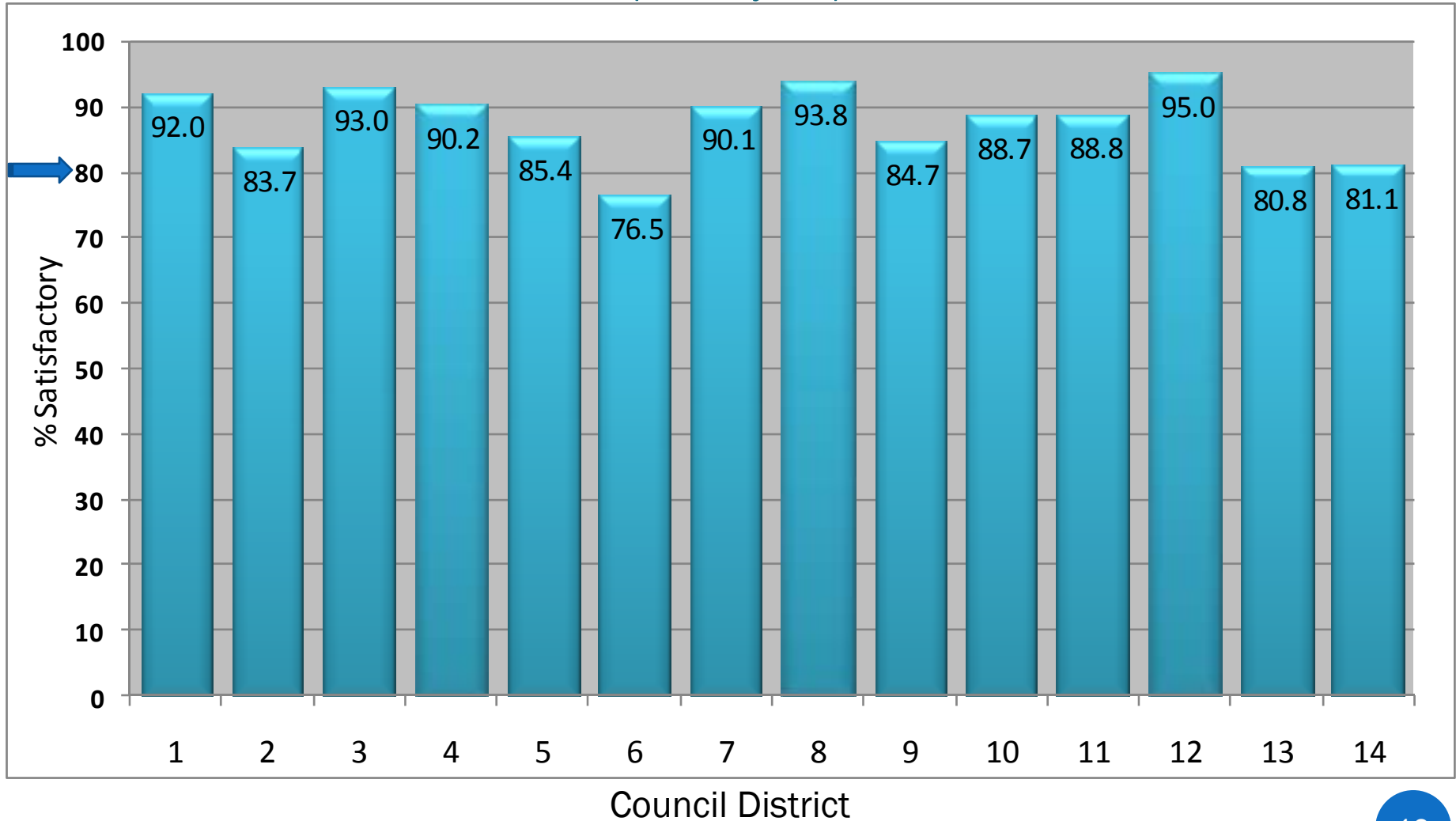


Street Satisfactory Rating History

- ❑ In 1981, the City of Dallas reached a high point of 89% of streets in satisfactory condition.
- ❑ In the late 1980s, the 1985 Capital Bond Program was delayed and budget cuts reduced or eliminated many street repair and preventative maintenance services.
- ❑ In 1994, after the downturn of the economy and budget cuts in the late 1980s, a low point of 62% of streets were in satisfactory condition.
- ❑ In 1995, the City Council adopted a goal to have 75% of streets in satisfactory condition by 2015. The goal was accelerated to 2010 the following year.
- ❑ In 2006, the City Council changed the goal to have 87% of streets in satisfactory condition by 2010. This included bringing all council districts to a minimum of 80% and having no council district fall below its current rating.
- ❑ In 2009, 87% of Dallas streets were rated in satisfactory condition (Council District 6 is rated at 76.5%).

Latest Street Satisfactory Rating

(87.3 Citywide)

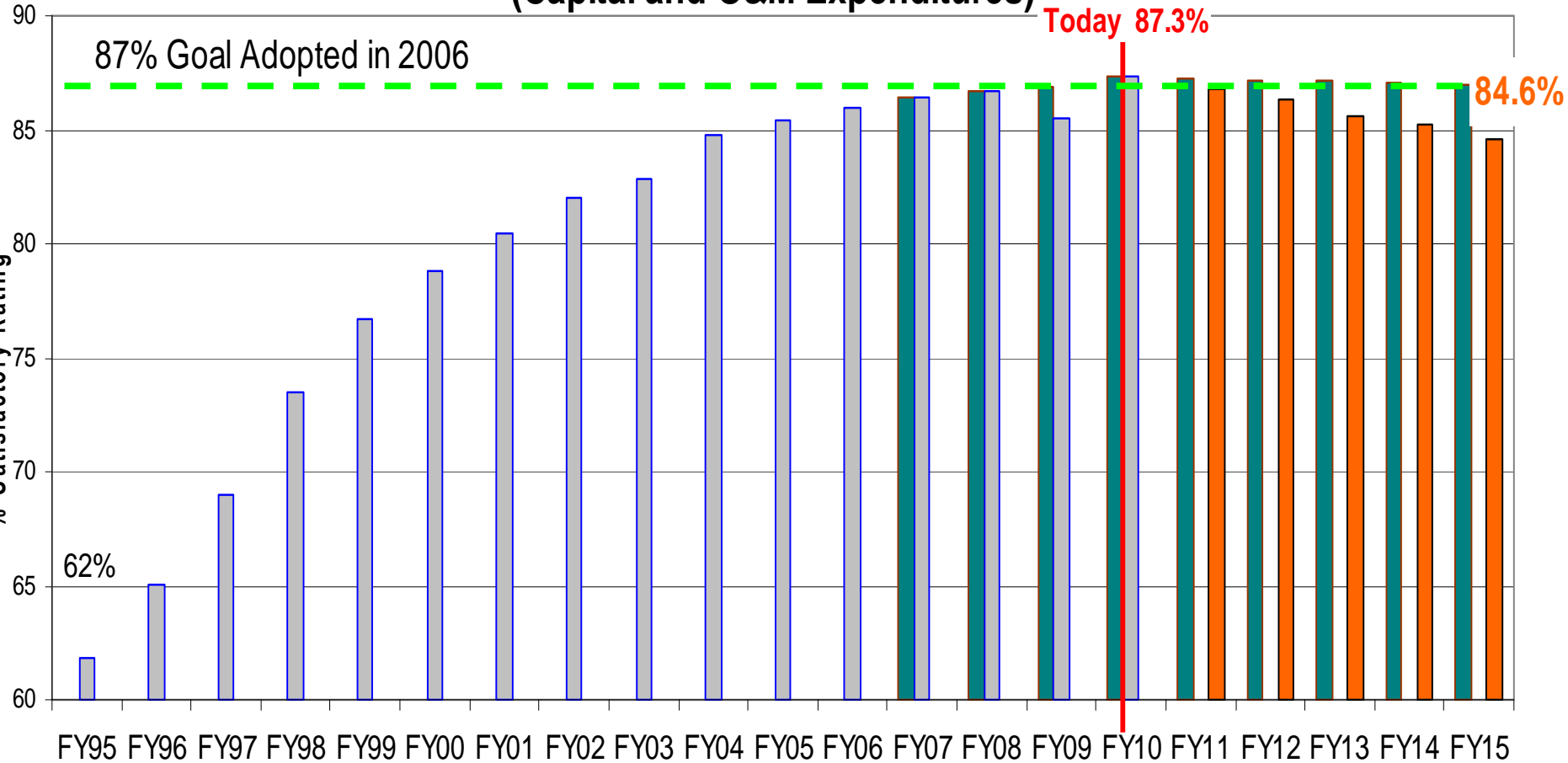




City of Dallas



Street Condition Ratings (Capital and O&M Expenditures)



- Actual
- As Planned in 2006 (402 lanes miles of O&M annually and capital expenditures)
- Projection (123 lane miles of O&M annually and capital expenditures)

- 15 years to improve from low of 62% in FY95
- Projected deterioration of 0.4 – 0.7% annually (based on 123 lane miles of preventive maintenance and a new capital program)



Cost to Restore to FY 07-08 Levels

(Not in Priority Order)



Street Services	FY 07-08 Level	FY 10-11 Proposed	Units to Restore to FY 07-08	\$ Amount to Restore to FY 07-08
Partial Reconstruction	52 lm**	0 lm	52 lm	\$6.0M
Rehabilitation	30 lm	18 lm	12 lm	\$1.8M
Restoration	10 lm	10 lm	0 lm	\$0
Full-depth Asphalt	60 lm	20 lm	40 lm	\$1.7M
Slurry Seal	125 lm	0 lm	125 lm	\$1.6M
Micro Surfacing	50 lm	0 lm	50 lm	\$1.2M
Other*	75 lm	75 lm	0 lm	\$0
Total	402 lm	123 lm	279 lm	\$12.3M
Other Street Related Maintenance				
Emergency Signal Response	24/7	M-F 14 hrs/day S-S 12 hrs/day	24/7	\$1.3M
Crosswalk Striping	123	60	63	\$75K
Street Lane Striping	376 miles	220 miles	156 miles	\$250K
Traffic Safety & Congestion Mgmt.	6,500 projects	2,500 projects	4,000 projects	\$957K
Traffic Signs	21,900 signs	11,000 signs	10,900 signs	\$512K
Total				\$3.1M

* Potholes, Level-ups, Full-depth Concrete

** Lane Miles

O&M Incremental Restore Options

(In Priority Order)

Street Services	Option 1		Option 2		Option 3	
	Unit	Cost	Unit	Cost	Unit	Cost
Partial Reconstruction	5 lm *	\$0.6M	15 lm	\$1.7M	52 lm	\$6.0M
Rehabilitation	6 lm	\$0.9M	12 lm	\$1.8M	12 lm	\$1.8M
Slurry Seal	-	-	100 lm	\$1.2M	125 lm	\$1.6M
Micro Surfacing	-	-	25 lm	\$0.6M	50 lm	\$1.2M
Full Depth Asphalt	-	-	-	-	40 lm	\$1.7 M
Total		\$1.5M		\$5.3M		\$12.3M
Other Street Related Maintenance						
Emergency Signal Response	24/7 adds 6 technicians	\$425K	24/7 adds 10 technicians	\$800K	24/7 adds 10 technicians	\$800K
Crosswalk Striping	63	\$75K	63	\$75K	63	\$75K
Street Lane Striping	-	-	156 miles	\$250K	156 miles	\$250K
Traffic Safety/Congestion Mgmt.	-	-	3,500 projects	\$520K	3,500 projects	\$520K
Traffic Signs	-	-	6,900 signs	\$338K	6,900 signs	\$338K
Total		\$0.5M		\$2.0M		\$2.0M

* Lane Miles

Priority Rationale

□ Street Services

- Partial Reconstruction was totally eliminated in FY 09-10. Restoring Partial Reconstruction prevent streets from deteriorating to “reconstruction-required” and extends the useful life of street segments not requiring full reconstruction. It costs 10 times as much to fully reconstruct a street than it does to partially reconstruct or resurface.
- Rehabilitation is the only program that addresses major maintenance on asphalt streets built on a soil base, and typically without curb & gutter. Some examples include Churchill Way in the north, Canada Drive in the west, Haymarket Road in the south, and Lawther Road in the east.
- Slurry Seal and Micro Surfacing is performed on streets that are already in good condition. Slurry Seal and Micro Surfacing are preventative maintenance treatments that prevent streets that are in satisfactory condition from deteriorating to “resurfacing-required” and extends the useful life of street segments .
- Full-Depth Asphalt repair is currently funded for 20 lane miles (30,000 square yards). Full-Depth Asphalt repair is a preventative maintenance treatment that prevents streets that are in satisfactory condition from deteriorating to “resurfacing-required” and extends the useful life of street segments .

Priority Rationale

❑ Other Street Related Maintenance

- ❑ A sufficient number of technicians are required to maintain 1300+ traffic signals and minimize the time that signals are malfunctioning, thereby reducing the time commuters are exposed to safety/congestion issues.
- ❑ Visible crosswalks are necessary to increase driver awareness at locations where young children cross the street walking to and from school.
- ❑ Visible lanes lines are necessary to define a safe path of travel during daylight, darkness and periods of heavy rain.
- ❑ Traffic safety and congestion are improved through engineering analysis and implementation of countermeasures.
- ❑ Traffic signs are necessary to safety, maximize vehicle carry capacity, provide way-finding and enforce traffic regulations. The design life of signs is 10 years. Although signs fade and lose reflectivity, they are still visible during the day.

Other Information

- ❑ Street Treatment Descriptions
- ❑ PWT Service Descriptions
- ❑ Street Condition Rating

Street Treatment Descriptions

Major Maintenance

Restoration - Street restoration is a treatment performed on an asphalt street where the entire surface and base have deteriorated to an unsatisfactory level. It includes rebuilding the entire base by recycling the old base and surface materials into the new base, followed by a chip seal and new two-inch layer of hot mix asphalt placed over the entire treated segment. Candidate streets are predominately residential asphalt surfaced streets without curb and gutter.

Rehabilitation - Street rehabilitation is a treatment performed on an asphalt street where a large portion of the surface and base have deteriorated to an unsatisfactory level. It includes the full-depth repair of base failures, followed by a chip seal and a new two-inch layer of hot mix asphalt placed over the entire treated segment. Candidate streets are predominately residential asphalt surfaced streets without curb and gutter.

Partial Reconstruction - Partial reconstruction is the removal and replacement of large, failed sections of concrete streets. The process includes breakout and removal of the old pavement section, repair of any existing base failures and the placement of new concrete in the failed areas. Residential and thoroughfare streets with less than 25% failed areas are candidates for partial reconstruction.

Street Treatment Descriptions

Preventive Treatments

Micro Surfacing – Micro surfacing consists of a 1/4" layer of crushed stone mixed with asphalt emulsion. In addition to sealing, it provides an aesthetically smooth and uniform surface that conceals scars from previous repairs. Candidate streets are predominately higher traffic volume asphalt surfaced streets with curb and gutter. The mix contains more stone and is more expensive than slurry seal, but cures quicker. Micro surfacing is outsourced to a private contractor with specialized equipment. Preparation work is performed by the Department of Street Services and includes minor base repair and crack sealing (and curb & gutter repair where necessary).

Slurry Seal - Slurry seal consists of a 1/4" thick layer of sand and finely crushed stone mixed with asphalt emulsion. In addition to sealing, it provides an aesthetically smooth and uniform surface that conceals scars from previous repairs. Candidate streets are predominately residential asphalt surfaced streets with curb and gutter. The mix contains less stone and is a less expensive asphalt based product than micro surfacing, but takes longer to cure. Slurry seal is outsourced to a private contractor with specialized equipment. Preparation work is performed by the Department of Street Services and includes minor base repair and crack sealing.

Crack Sealing – Crack sealing consists of applying a sealant material to an existing crack in an asphalt street. Effective crack sealing keeps water from entering and weakening the base or sub-base. It helps preserve the pavement adjacent to the cracks; prevents sand, stone, and dirt from making its way into open cracks causing compressive stresses; and extends pavement life by minimizing crack growth.

Street Treatment Descriptions (cont.)

Preventive Treatments

Full-depth Asphalt Repair - Repair to a surface and base failure on an asphalt street. Repairs are typically larger than a pothole, but smaller than an area that would necessitate a street resurfacing or street rehabilitation project. After the failed area is cut square and excavated, a new base and asphalt surface is placed and compacted.

Concrete Street Repair – Repair to a surface and/or base failure on a concrete street. Repairs are typically larger than a pothole, but smaller than an area that would necessitate a partial reconstruction or full street reconstruction project. After the failed area is cut square and excavated, a new concrete surface (and base if necessary) is placed.

PWT Service Descriptions

Traffic Signal Maintenance

Emergency Signal Response – In 2009, there were about 15,000 field visits made to repair malfunctioning traffic signals. The City maintains 1300+ signals. Typical malfunctions include: bulb outages, short green time, flashing red, and power outages. The number of technicians scheduled per shift should correspond to call volumes. The 24/7 emergency dispatch operation has been reduced from FY07/08 as follows:

M-F Day Shift:	6AM- 2PM	13 technicians reduced to 2 technicians
M-F Evening Shift:	12PM-8PM	7 technicians reduced to 2 technicians
M-F Evening Shift:	After 8PM	Eliminated
Weekend Day Shift:	6AM-6PM	1 technician maintained
Weekend Evening Shift:	After 6PM	Eliminated

Fewer repair technicians per shift results in longer repair time and longer periods that motorists are exposed to safety and congestion issues. During severe storms, 311 calls can increase from an average of 2 calls/hour to 20 calls/hour. On storm days, all crews are assigned to respond to the significant influx of calls. In between response calls, day-shift technicians repair electronic components and perform non-emergency maintenance (missing box covers, removing graffiti, and preventative maintenance); the evening shift patrols for street light outages.

Street Striping

Lane Line Striping – There are over 1,400 linear miles of lane line stripes applied to about 990 miles of road segments. The number of linear stripes per road mile varies depending on the number of lanes and roadway geometrics. In FY 08-09, the City began using a private contractor for lane line striping. Each year, staff reviews the visibility of lane lines and rates the roadway segments into three categories. The following table summarizes the current conditions and funds required to incrementally improve visibility.

Rating for Lane Line Striping		To date	FY10/11 220 Lm	\$160,000 +100 Lm	320,000 +200 Lm	480,000 +300 Lm	640,000 +400 Lm
A	Visible Lane Lines	13%	47%	52%	59%	66%	73%
B	Visible but worn	62%	53%	46%	39%	32%	25%
C	Little to no visibility	26%	0%	0%	0%	0%	0%

Crosswalk Striping – There are about 2,500 crosswalks at unsignalized intersections (mostly at school crossings). Crosswalks at signals are included in the linear miles of lane line striping shown above. The table below summarizes the current conditions and funds required to incrementally improve visibility of crosswalks.

Rating for Crosswalk Striping		To date	FY10/11 63 walks	\$ 300,000 + 250 walks	\$ 600,000 + 500 walks	\$ 900,000 + 750 walks	\$1,200,000 + 1000 walks
A	Visible Crosswalks	3%	2%	12%	22%	32%	42%
B	Visible but worn	10%	8%	8%	8%	8%	8%
C	Little to no visibility	87%	90%	80%	70%	60%	50%

PWT Service Descriptions

Traffic Safety and Congestion Management

Engineering Projects – Engineering studies are conducted at the request of residents to resolve issues concerning safety and traffic flow. Engineers conduct site visits and collect data to determine the appropriate countermeasure. Countermeasures can include signage, pavement markings, warning flashers or additional traffic signals. The proposed FY10-11 budget reduces the number of engineers available to study and implement safety improvements. This will require staff to eliminate/shelve low-priority requests.

Traffic Management and Signal Timing Projects – The amount of green time distributed to each street must be updated to reflect changes in traffic flow. Traffic flow can be affected by changes in land development or population. When commuters report congestion issues, engineers are assigned to make field observations and necessary signal timing adjustments. A recent 2009 survey by the City of Dallas found that residents believe traffic congestion is one of the five biggest problems in Dallas.

Accident Reduction Projects – Each year traffic engineers review the police accident database and search for intersections with specific crash trends. Site visits are conducted to determine the appropriate countermeasures required to reduce the accident trend. In the past, funding has been provided to fund countermeasures that cost on average \$10,000 to \$20,000. Countermeasures can include signs, signals, markings, guardrails, pavement traction treatments and geometric changes.

PWT Service Descriptions

Traffic Signs

Sign Repairs/Replacements – About 11,000 reports of sign damage are received each year and need immediate repair due to: 1) knockdowns, or 2) signs leaning and obstructing the road/sidewalk. 4,500 of those reports do not need new signs; only repairs. The other 6,500 are damaged beyond repair and need new signs.

Graffitied Signs – About, 2,400 graffitied signs are replaced each year at the request of residents. These sign replacements are currently unfunded.

Crime Prevention Signs – The Transportation and Environment committee approved a policy to supplement the cost of crime prevention signs. The first 10 signs ordered by a crime watch association are free with a full cost fee for any additional signs. The current proposed budget does not include any supplemental funding. CW groups will be required to pay the full cost of signs.

Proactive Sign Replacements – There are approximately 300,000 signs citywide. The majority of these signs have met their design life, are faded and have lost their night time reflectivity. The design life of new signs is 10 years. The City would need to fund the replacement of 20,000 sign per year to proactively replace signs on a 10 year life-cycle. The proposed FY10-11 budget does not fund any proactive sign replacements. It will be necessary to proactively replace signs in order to meet a federal mandate regarding minimum sign reflectivity. This mandate requires state and local agencies to replace all non-compliant warning and regulatory signs by 2015, and all guidance and street name signs by 2018.

Street Condition Rating



- Collect video log of street inventory
- Assess smoothness of ride, extent and severity of cracks, potholes, and other distress types
- Analyze data in order to recommend prioritized preventive maintenance and capital improvements

Pavement Record: IVY HILL DR (14791)

Pavement Condition - IVY HILL DR(14791)

Distress: 1-ALLIGATOR CRACKING **Severity:** Low
 Med.
 High

Quantity: 10 % = 780 SqFt **Calc %**

Add Update Delete Report

PCI: **96** Auto **Copy Distress from Last Segment**

DistressID	Severity	Quantity	Percentage	Modif
ALLIGATOR CRACKING	Low	3437.2	10%	DALLA
WEATHERING/RAVELING	Low	3437.2	10%	DALLA

Sug. Repair: DO NOTHING % **\$0**

Override: NO OVERRIDE

Drain Repair: DO NOTHING \$

Priority: 6022 Override 0 **Total Cost: \$**

Road Segment Info. M&R Activities Condition Projection

Length (Ft): 300. Width (Ft): 26. Area(SqFt): 7800.

of Lanes: 4 Traffic Vol: 1000 Contr. Date: 1 / 1 /1900

Surface Type: 2 Asphalt Func. Class: Urban Collector

From Street: BRIARGROVE LN From MP: 0

To Street: BELLERIVE DR To MP: 0

Route ID: Division:

Shoulder: Unknown Width: 0 Sidewalk: None

Notes:

Questions / Comments?