

# ICMA Benchmarking Project FY 2006 Data Report

Sanitation Services, Street Services and  
Public Works and Transportation

October 22, 2007



# About ICMA Benchmarking

- Dallas is entering its 4<sup>th</sup> year of participation in the International City/County Management Association (ICMA) Center for Performance Measurement
- The Center's purpose is to help local governments improve the effectiveness and efficiency of public services through the collection, analysis, and application of performance information
- The Center outlines a method for systematically collecting performance data for each participating organization's program or service.
- Over 160 jurisdictions participate with populations from 5,000 to 3.1 million



# ICMA Benchmarking Project FY 2006 Data Report

Mary Nix, Director  
Department of Sanitation Services



# What Are The Key Measures?

- Type of service
  - Frequency of collections  
(twice weekly garbage and weekly recycling)
  - Style of service: automated / manual mix
  - Number of customers served (over 200k)
- Tons collected per account
- O&M costs “per account” and “per ton”



Sanitation

# 3-Year Trend (FY 2004 – FY 2006)

- Garbage service
  - tons per account is decreasing by 5-10% per year
    - Aging of the population, less persons per household
    - Recycling bolsters diversion rate
  - costs per account are increasing – but marginally – and in line with annual changes in labor and supply costs
    - 2% increases from 2004 to 2005
    - 7% increases from 2005 to 2006
- Recycling service:
  - 100% increase over 3-year period in tons per account collected
    - Bridge year for “Too Good To Throw Away” recycling program increased the types of commodities that are eligible for recycling
    - Increased Public Education contributed to increased tonnages as well
  - Cost to manage accounts remained relatively flat
  - Cost per ton dropped 49% over the 3 year reporting period



## Sanitation

# Customer Feedback 2006

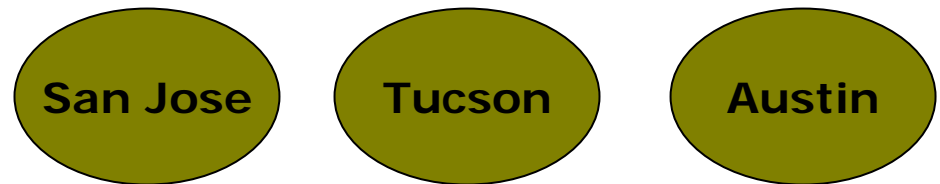
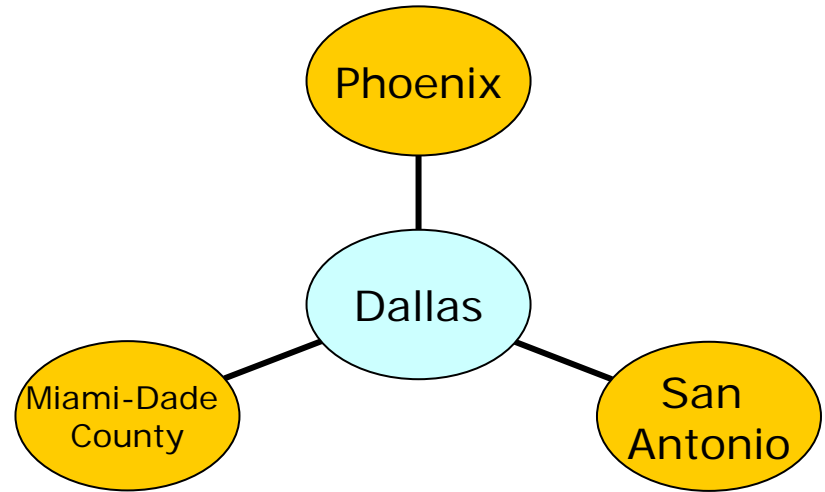
- Citizen's Survey (of 2007)
  - Recycling Service rated most improved score of all services surveyed (up +12 points from 2005)
  - Garbage & bulk trash collection continues to show improved scores (up +3 and +4 respectively)
- CRMS:
  - “Missed garbage” occurs less than 0.04% (opportunities)
  - “Missed garbage” in “Top 20” services requested, yet maintains a 93% on-time response rating (down from 98%)
  - “Missed recycling” had a on-time response rating of 97%; an improvement of 2% from 2005



## Sanitation

# Benchmarked Jurisdictions

- SAN selected 3 comparable jurisdictions:
- Common thread:
  - 200,000+ accounts
  - Residential collection frequency of twice-weekly
  - Mix of automated / manual services
- Also considered:  
(all are 1-x-week service)



Sanitation



# Comparative Position to Other Jurisdictions – FY 2006

- Garbage service:
  - Dallas remains most cost-effective (per ton) provider of garbage service
  - 34%-126% lower in “cost per account”
  - 67%-136% lower in “cost per ton collected”
  - ... and provides 3 times more frequent collection of bulk/brush waste
- Recycling service:
  - Maintained 2<sup>nd</sup> place status (out of 4 cities) in amount of “diverted tons per account”
  - Remains less costly than peers by 56%-238% in “cost per account”
  - Dallas service costs less “per ton collected” out of 4 peer cities

Sanitation

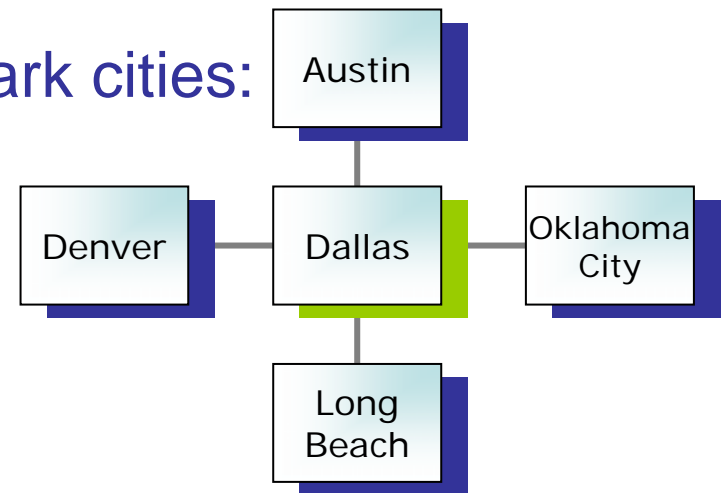




# Looking Forward

## *Comparing 2006 Cities (once-a-week)*

- Develop a once-a-week garbage & recycling plan
  - Increasing costs are projected to continue – unless change of service
  - Once-a-week will increase waste diversion figures and revenues
  - Consider starting plan with trial Phase-One area (D11, D12)
  - Prepare for multi-year phase-in plan
- Future comparisons for benchmark cities:
  - 120,000+ accounts
  - Residential collection frequency of **once-weekly**
  - Mix of automated / manual services



Sanitation



# Looking Forward

## *First Look at new Benchmark Cities*

- Garbage Service
  - The most cost effective city (Denver) is cheaper than Dallas for “cost per account” (131%) and “cost per ton” (36%)
  - The least cost effective city (OKC) is higher than Dallas for “cost per account” (16%) and “cost per ton” (38%)
  - Conclusion: while once-a-week is overall more cost effective, Dallas’ costs are still highly competitive
- Recycling Service
  - Dallas is just below average for “percent of tons diverted”
  - Recycling “tons per account” for once-a-week cities is 50-100% higher



## Sanitation

## Summary of Comparable City Data

FY 2006 ICMA Survey - Refuse & Recycling

NEW INFORMATION

DEMOGRAPHIC & SERVICE LEVELS					REFUSE COLLECTION						RECYCLING				
Jurisdiction	Population	Accounts Serviced	Frequency of Service	Customer Monthly Fee	Total Tons Collected	Total Tons Disposed	Tipping Fee Per Ton	Avg. Tons Per Account	O&M Per Account (includes landfill cost)	O&M Per Ton (includes landfill cost)	Avg. Tons Collected Per Account	O&M Per Account (Net \$)	O&M Per Ton of Collected Material (Net \$)	Tons Collected as % of All Refuse & Recycling (combined)	
ICMA Question	Q2	Q12	Q17	N/A	Q22	Q28	Q30	Q25	Q27	Q26	Q51	Q54	Q56	Q46	
Mean (over 100,000)		100,201	Refuse: 1.3x wk		173,067	257,011	\$35.56	1.73	\$81.36	\$50.31	0.22	\$17.81	\$103.52	11.1%	
Dallas	TX	1,260,950	232,450	Refuse: 2x wk Recycle: 1x wk Bulk: 12/year	\$17.88 (FY2006)	502,900	1,736,173	\$8.48 (ICMA=\$1.25)	2.16	\$92.31 (ICMA=\$73.96)	\$42.67 (ICMA=\$34.19)	0.18	\$8.69	\$47.64	7.7%
Phoenix	AZ	1,507,130	366,903	Refuse: 2x wk Recycle: 1x wk Bulk: 4x year	\$24.45	719,438	1,029,733	\$36.25	1.96	\$111.43	\$56.83	0.38	Data Not Provided	Data Not Provided	14.9%
Miami-Dade County	FL	1,399,046	323,883	Refuse: 2x wk Recycle: 1x wk Bulk: 2x yr	\$36.58	772,231	1,234,483	\$59.28	2.38	\$166.69	\$69.91	0.12	\$29.36	\$247.16	5.0%
San Antonio	TX	1,319,500	331,000	Refuse: 2x wk Recycle: 1x wk Bulk: 2/year	\$17.99	414,451	414,451	\$18.92	1.25	\$100.89	\$80.58	0.11	\$13.54	\$124.30	8.0%

DEMOGRAPHIC & SERVICE LEVELS					REFUSE COLLECTION						RECYCLING				
Dallas	Population	Accounts Serviced	Frequency of Service		Total Tons Collected	Total Tons Disposed	Tipping Fee Per Ton	Avg. Tons Per Account	O&M Per Account	O&M Per Ton	Avg. Tons Collected Per Account	O&M Per Account (Net \$)	O&M Per Ton of Collected Material (Net \$)	Tons Collected as % of All Refuse & Recycling (combined)	
ICMA Question	Q2	Q12	Q17		Q22	Q28	Q30	Q25	Q27	Q26	Q51	Q54	Q56	Q46	
2006 Mean		100,201	Refuse: 1.3x wk		173,067	257,011	\$35.56	1.73	\$81.36	\$50.31	0.22	\$17.81	\$103.52	11.1%	
2006	TX	1,260,950	232,450	Refuse: 2x wk Recycle: 1x wk Bulk: 12/year		502,900	1,736,173	\$1.25 (~ \$8.48)	2.16	\$73.96	\$34.19	0.18	\$8.69	\$47.64	7.7%
2005	TX	1,224,000	233,857	Refuse: 2x wk Recycle: 1x wk Bulk: 12/year		537,909	1,700,298	\$1.25 (~ \$11.00)	2.30	\$69.00	\$30.00	0.15	\$8.36	\$54.96	6.2%
2004	TX	1,206,667	235,209	Refuse: 2x wk Recycle: 1x wk Bulk: 12/year		638,247	1,843,045	1.25 (~ \$11.00)	2.71	\$67.71	\$26.32	0.09	\$8.57	\$93.91	3.20%
2005 to 2006 - %Comparative	3.0%	-0.6%			-6.5%	2.1%		-6.1%	7.2%	14.0%	20.0%	3.9%	-13.3%	24.2%	
2004 to 2006 - %Comparative	4.5%	-1.2%			-21.2%	-5.8%		-20.3%	9.2%	29.9%	100.0%	1.4%	-49.3%	140.6%	
2004 to 2005 - %Comparative	1.4%	-0.6%			-15.7%	-7.7%		-15.1%	1.9%	14.0%	66.7%	-2.5%	-41.5%	93.8%	



# Sanitation

# Sanitation Services Action Items

## Garbage Service

- Examine ways to match service levels of other cities
  - Decreasing number of cities with twice-weekly garbage
  - Continue planning to phase in once-weekly service
  - Consider changing bulk waste program to a “Monthly Green Waste” plus “Quarterly Bulk” collection service

## Recycling Program

- New “Too Good To Throw Away” recycling program is showing strong increases in diversion
- Freshen public education frequently
- Increase number of roll carts
- Examine commercial and multi-family recycling options



Sanitation

# ICMA Benchmarking Project FY 2006 Data Report

Gilbert Aguilar, Assistant Director  
Department of Street Services

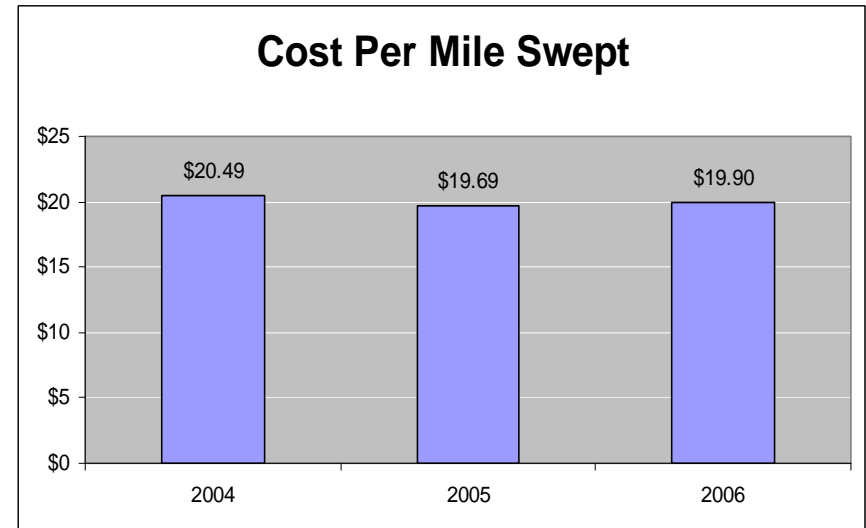
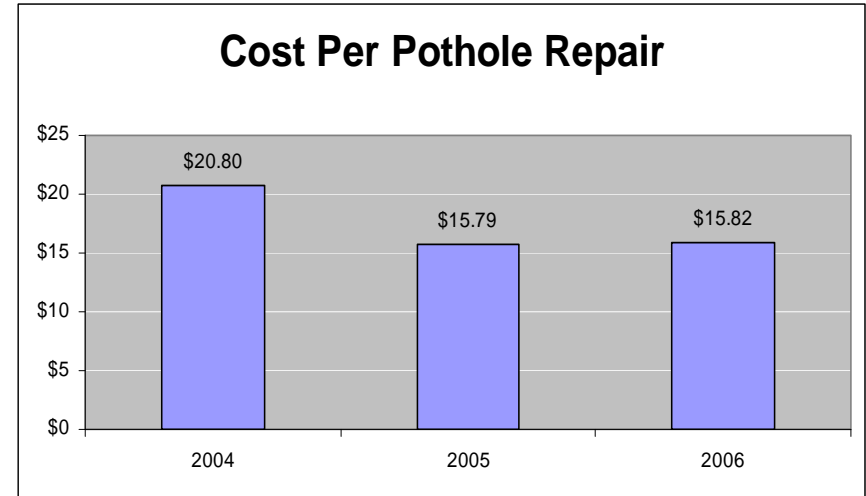


# 3-Year Trend (FY 2004 – FY 2006)

Pothole Repair  
Street Sweeping

## Areas of Strength

- Pothole costs remain low compared to 2004
- Street sweeping costs remain relatively constant since 2004

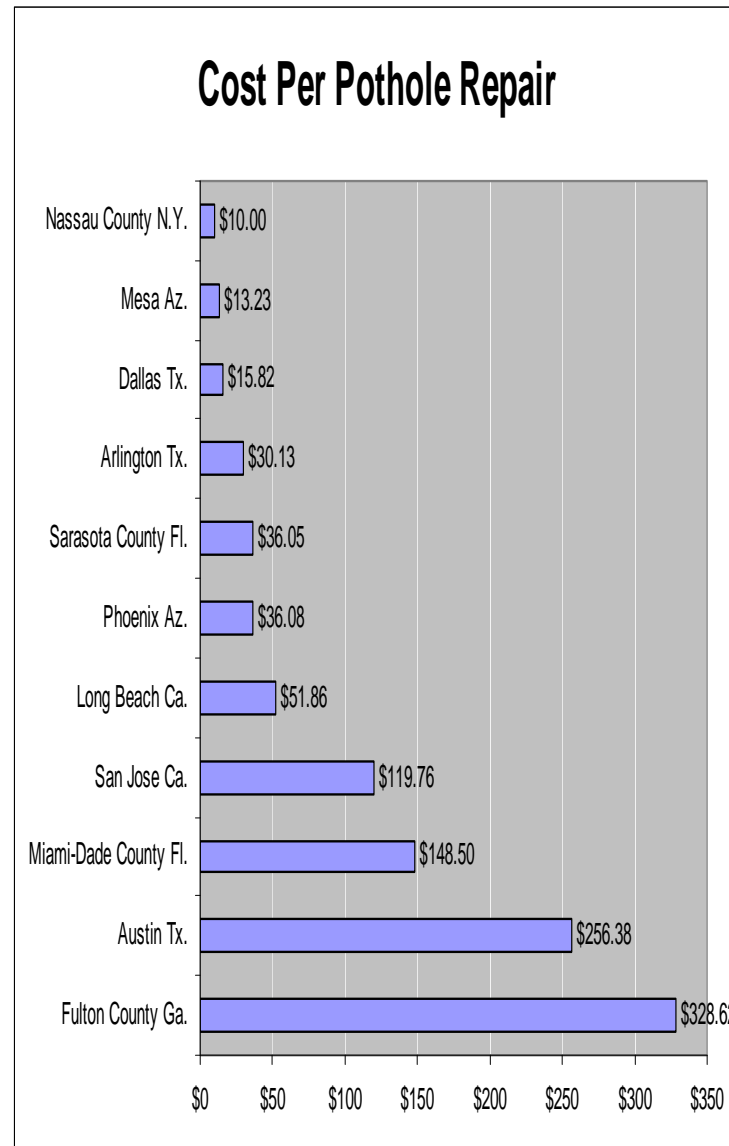


## Street Services

# Dallas' comparative position to other jurisdictions (Cost Per Pothole Repair)

Dallas compares relatively well versus peer jurisdictions with similar # of pothole repairs

<u>Jurisdiction</u>	<u>Repairs</u>	<u>Cost/Repair</u>
Nassau County	18,704	\$10.00
<b>Dallas</b>	<b>20,603</b>	<b>\$15.82</b>
Phoenix	15,406	\$36.08
Long Beach	27,000	\$51.86

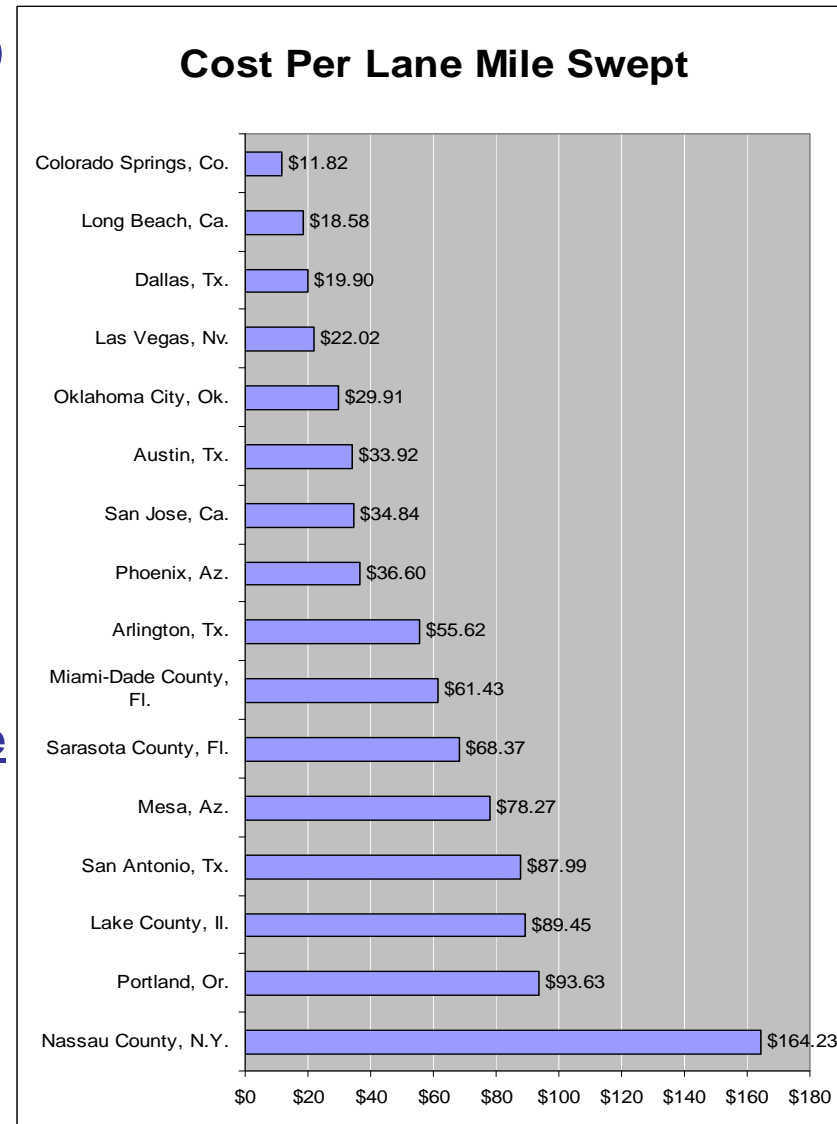


## Street Services

# Dallas' comparative position to other jurisdictions (Cost Per Lane Mile Swept)

Dallas compares relatively well versus peer cities with similar number of miles swept per year

<u>Jurisdiction</u>	<u>Miles Swept</u>	<u>Cost/Mile</u>
Colorado Springs	48,000	\$11.82
<b>Dallas</b>	<b>49,000</b>	<b>\$19.90</b>
Austin	49,000	\$33.92
San Antonio	39,000	\$87.99



## Street Services



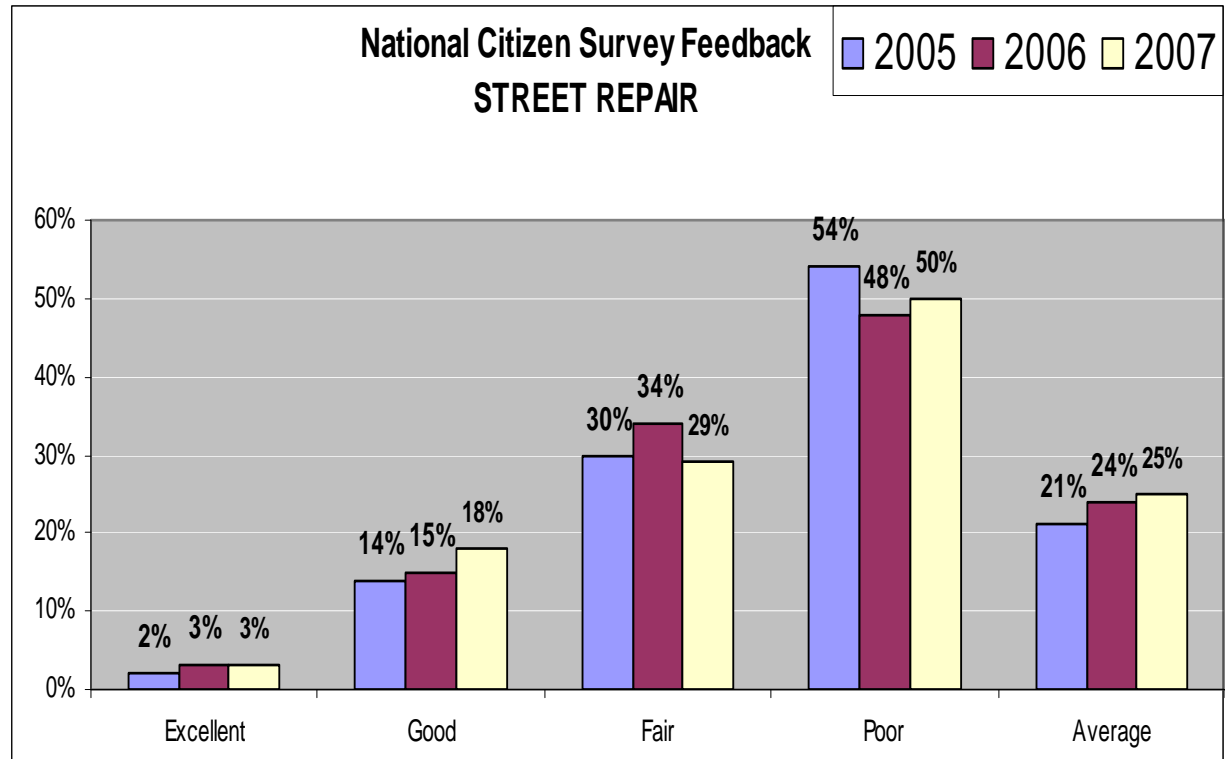
# Customer Feedback

## National Citizen Survey: 2005 thru 2007

When survey respondents were asked:  
How do you rate the quality of each of the following services?

### Street Repair

<b>Rating</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Excellent	2%	3%	3%
Good	14%	15%	18%
Fair	30%	34%	29%
Poor	54%	48%	50%
<b>Average</b>	<b>21%</b>	<b>24%</b>	<b>25%</b>



### Street Services



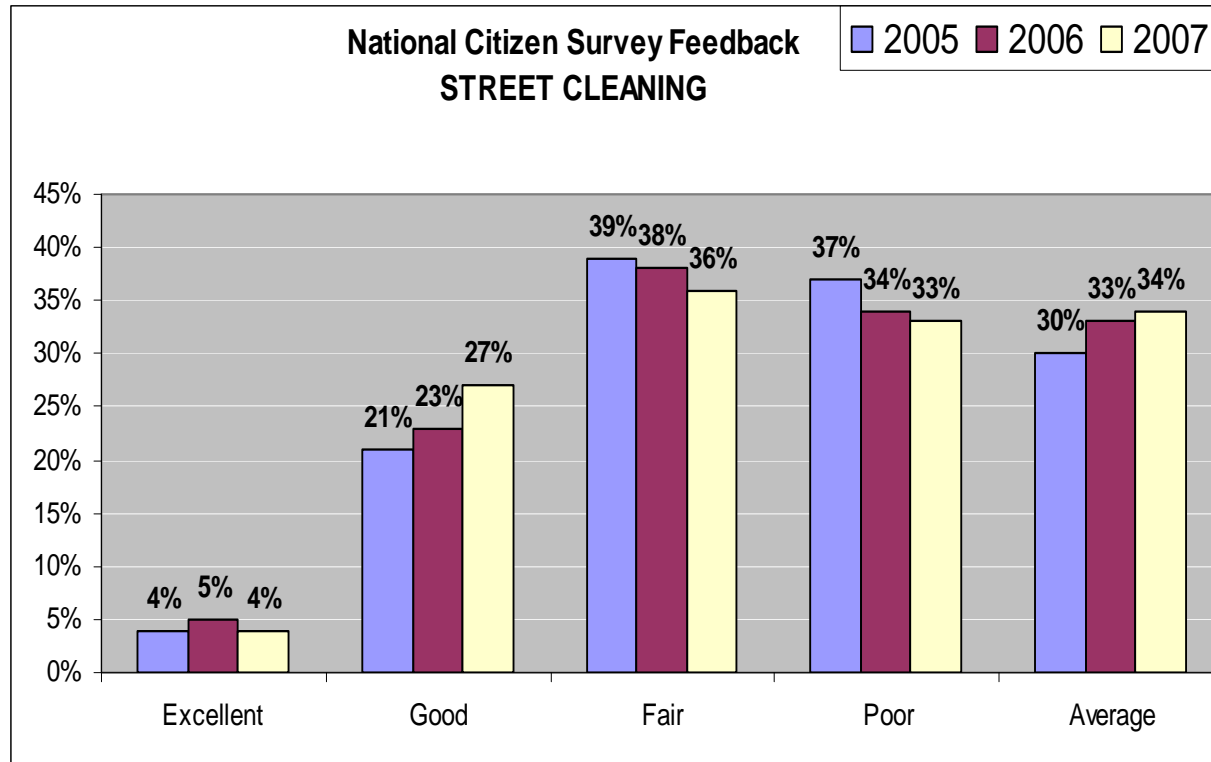
# Customer Feedback

## National Citizen Survey: 2005 thru 2007

When survey respondents were asked:  
How do you rate the quality of each of the following services?

### Street Cleaning

<b>Rating</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Excellent	4%	5%	4%
Good	21%	23%	27%
Fair	39%	38%	36%
Poor	37%	34%	33%
<b>Average</b>	<b>30%</b>	<b>33%</b>	<b>34%</b>



## Street Services

# Street Services Action Items

- Contact peer jurisdictions to:
  - Discuss Pothole Repair
    - Definition of potholes (size)
    - Scope of a pothole repair
      - level-up, full depth, compaction, etc
    - Type of material used
      - Hot mix
      - Cold mix
    - Type of equipment used
  - Discuss Street Sweeping Operations
    - Frequency of sweeping cycles
    - Scope of work included in street sweeping
    - Breakdown of arterial, residential and downtown sweeping
    - Outsourcing versus in-house staff
    - Type of equipment used

## Street Services



# ICMA Benchmarking Project FY 2006 Data Report

Beth Ramirez, Assistant Director  
Department of Public Works &  
Transportation – Traffic Signals



# ICMA - Traffic Signals

- Highway Road Maintenance includes benchmarking of traffic signal maintenance. The survey data allows comparison of traffic signal repairs and replacements.
  - Repairs are defined as any repair that can be made on initial field visit. Typically includes:
    - Bulb replacements
    - Signal controller and other electronic component failures
  - Replacements are defined as any repair that requires a second field visit. Typically includes repair of:
    - Pole knockdowns
    - Cable cuts
    - Damaged signal heads



# ICMA - Traffic Signals

## Background on Signal Replacements

- 2004 and 2005 signal replacement time was affected by the depletion of old-style pole equipment
- In 2004, the City stopped replacement of old-style mast-arm poles due to depletion of spare/salvaged equipment. New-style mast-arms require installation of a larger foundation.
- In 2004, the City lacked drill equipment to install larger foundations and used a private contractor. Costs to order foundations on demand was too high and orders had to be grouped to bring unit costs down. Group orders slowed replacement time significantly.
- In 2005, City purchased drill equipment to allow city forces to install foundations.



PW&T

# ICMA - Traffic Signals

## Background on School Flasher Replacements

- In 2005, the City began using solar powered school flashers. New hardware is more energy efficient and reliable.
- New flashers must be installed when flashers are knocked down and cable is damaged. Changes in electrical code prohibits splicing cables outside of conduit. Older designs use direct burial power cables.
- Replacements require engineering review to ensure that the flasher is still warranted. Staffing levels do not allow for proactive studies.



# ICMA - Traffic Signals

## Background on Number of Signal Indications & Poles

- Dallas has more heads and poles per intersection than other survey cities. Typical six-lane divided arterials and older pole designs resulted in many intersections with median poles.
- Other cities reported fewer divided roadways, fewer median poles and more opportunities to offset pole placement from the street.





# Updates from FY 05 “Proposed Actions”

- In 2006, reduced knockdown school flasher replacement time by changing engineering warrant study SLA from 30 to 10 days
- In 2007, began installing temporary portable school flasher units at locations with construction issues that delay repair time
- In March of 2007, dedicated a construction crew to repair damaged in-pavement vehicle sensors and eliminate backlog of damages sensors by June of 2009



# Relative Position from 2004 to 2006

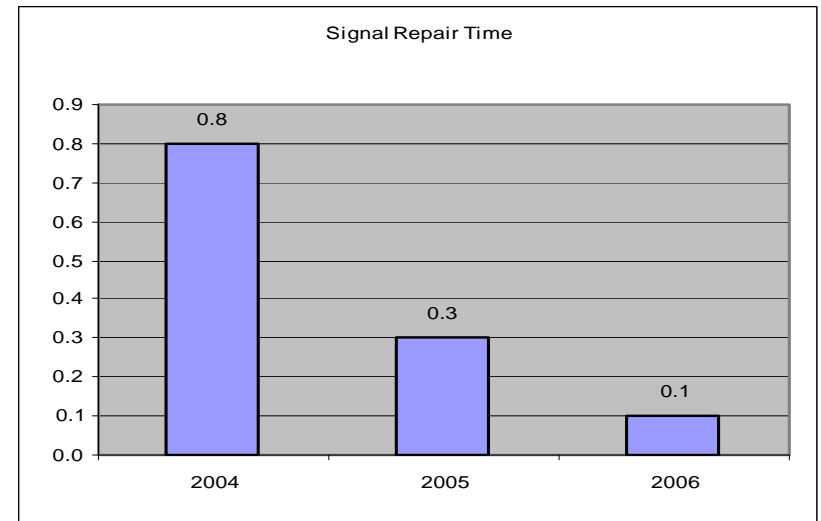
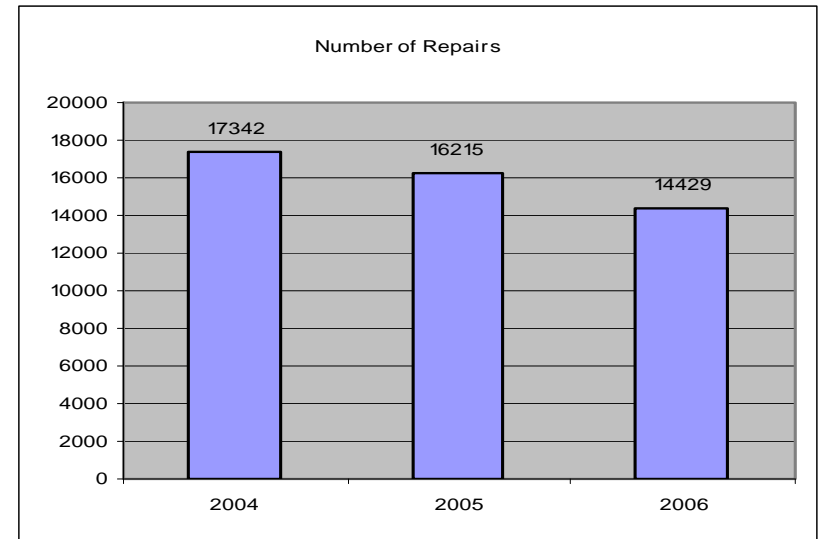
## Signal Repairs

### • Areas of Strength

- Detailed database allows trend analysis and focus on problem areas
- Repairs dropping due to LED bulbs, preventive maintenance, & new school flasher units

### • Areas of Concern

- Number of failures related to power outages
- Backlog of damaged vehicle sensors
- Portion of signal controllers approaching 15 year design life



# Relative Position from 2004 to 2006

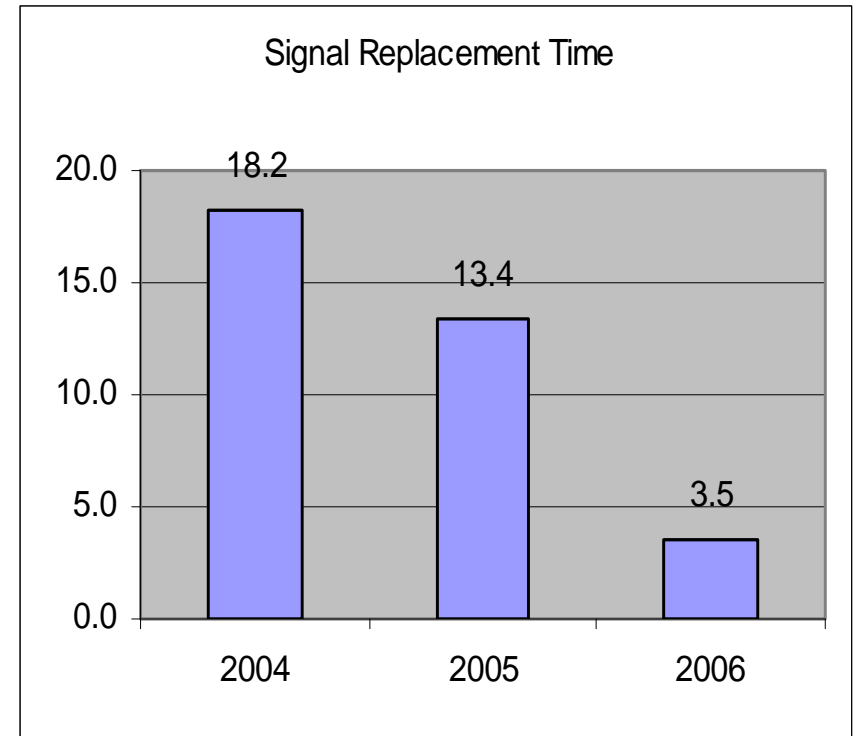
## Signal Replacements

### • Areas of Strength

- Temporary signals are typically placed within 1 day of knockdown
- Average replacement time fell after purchase of drill equipment and switch to city-force installations

### • Areas of Concern

- Downtime due to aging construction equipment (trucks, trailers, backhoe)
- Potential to strike underground utilities and pollute storm water systems during excavation



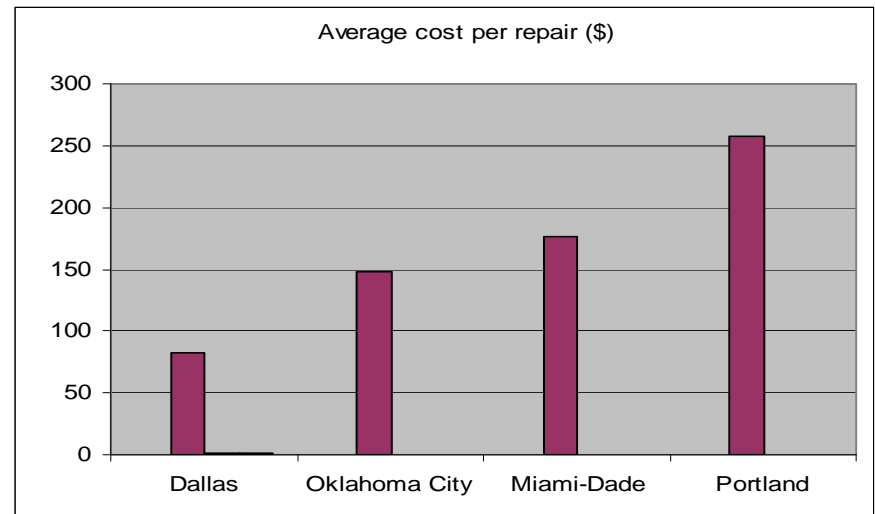
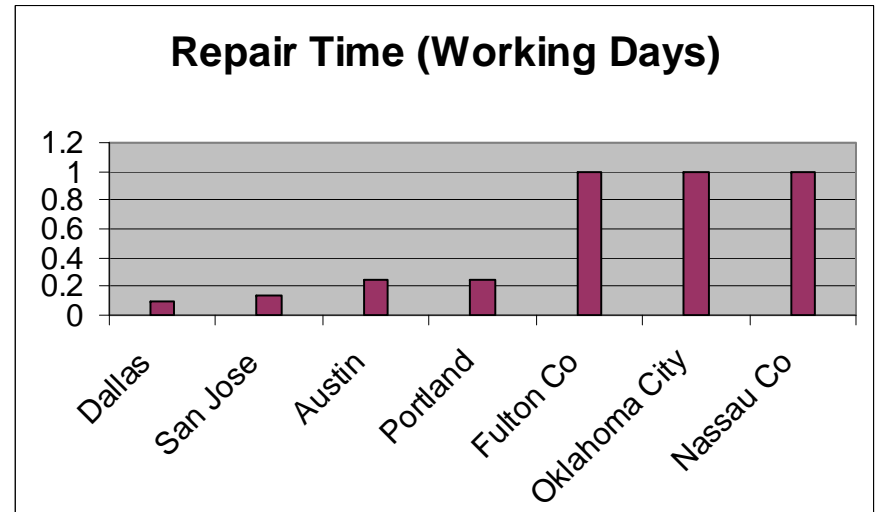
# Comparative Position to Other Jurisdictions 2006 - Signal Repairs

- **Areas of Strength**

- Best in average repair time
- Lowest average cost per repair
- All traffic signals connected to a centralized computer system

- **Areas of Concern**

- Signal failures experienced due to storms affect average response time and distort comparisons



# Comparative Position to Other Jurisdictions

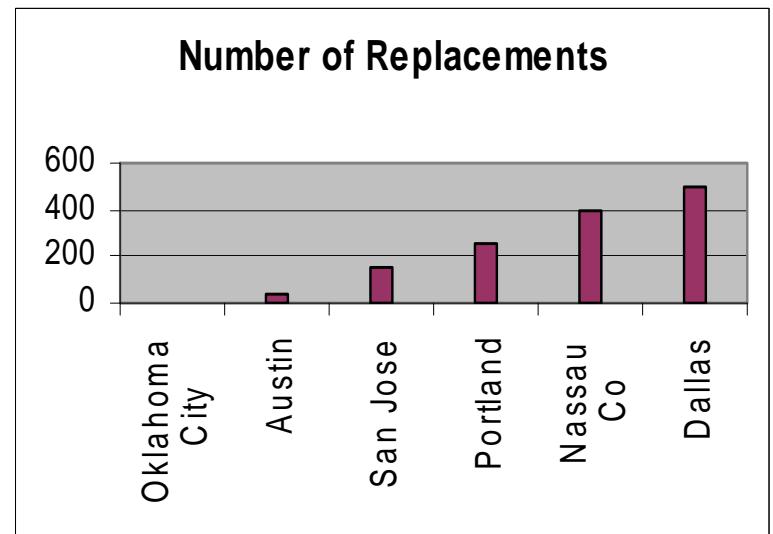
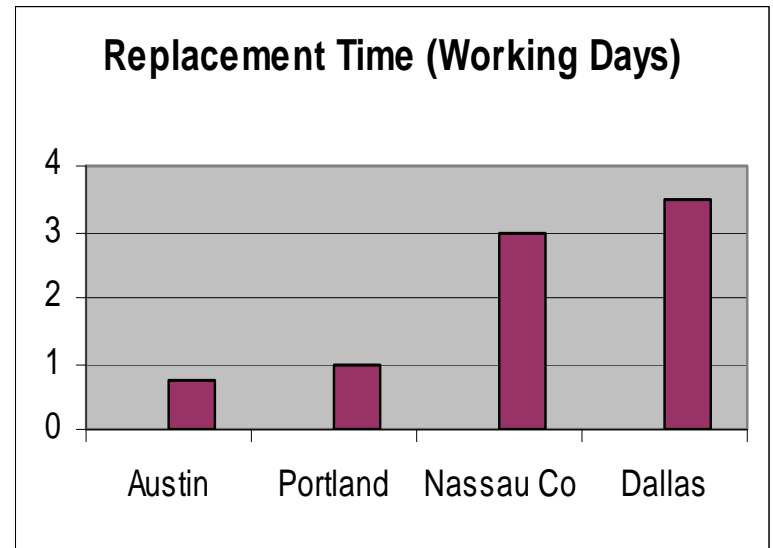
## 2006 - Signal Replacements

- **Areas of Strength**

- Average cost per replacement is lowest but only two other cities provided data

- **Areas of Concern**

- Greater number of poles, heads and constraints in pole placement result in higher number of damaged heads and poles than other cities
- Most cities do not have data on costs per replacement - only total budget



# Public Works and Transportation Action Items

## Signal Replacements

- Work with EBS Department to replace older equipment
- Request purchase of excavation truck. Water jet excavation eliminates hand digging and vacuum contains dirt/debris during operation
- Pursue funding to expedite removal of median signal poles
- Pursue property easements to allow new poles to be installed at a greater offset from street

## Signal Repairs

- Dedicated a crew to repair vehicle sensors and eliminate backlog
- 2006 bond program includes replacement of 5% of controllers and pilot installations of battery back up systems
- Implement battery backup systems to demonstrate costs and performance



PW&T

# Next Steps in ICMA Benchmarking

- Participating City Departments are preparing to report FY 2007 data
- Meeting with participating North Texas Cities to benchmark service delivery - Winter 2007-08
- Departments continue to contact other jurisdictions to research best practices and methods to improve service delivery

