

Memorandum



CITY OF DALLAS

DATE March 23, 2012

TO Members of the Transportation and Environment Committee:
Linda L. Koop (Chair), Sheffie Kadane (Vice Chair), Sandy Greyson,
Delia Jasso, Vonciel Jones Hill, Pauline Medrano

SUBJECT 2012 Bond Program Planning – Streets and Transportation
Needs Inventory and Ranking Criteria Briefing

On March 26, 2012, you will be briefed on the 2012 Bond Program Planning – Streets and Transportation Needs Inventory and Ranking Criteria. The briefing material is attached for your review.

Please let me know if you need additional information.

A handwritten signature in black ink, appearing to read 'Jill Jordan'.

Jill A. Jordan, P.E.
Assistant City Manager

Attachment

c: The Honorable Mayor and Members of the City Council
Mary K. Suhm, City Manager
Thomas P. Perkins, Jr., City Attorney
Rosa A. Rios, City Secretary
Craig Kinton, City Auditor
Judge C. Victor Lander, Administrative Judge
A.C. Gonzalez, First Assistant City Manager
Ryan S. Evans, Assistant City Manager
Forest E. Turner, Assistant City Manager
Joey Zapata, Assistant City Manager
Jeanne Chipperfield, Chief Financial Officer
Jack Ireland, Director, Financial Services
Edward Scott, Director, Controller's Office
Frank Libro, Public Information Officer
Stephanie Pegues Cooper, Assistant to the City Manager - Mayor and Council Office

2012 Bond Program Planning Street and Transportation Needs Inventory and Ranking Criteria

Presented to the
Transportation and Environment Committee
March 26, 2012

Public Works Department



Outline

- What is the Needs Inventory?
- Developing the Needs Inventory
- Categories, Technical Criteria, and Relative Costs
- Street Condition Goals and Strategies

Defining the Needs Inventory

- ❑ Comprehensive inventory of known needs
- ❑ First developed for the 1995 Bond Program
- ❑ Dynamic listing that requires continual updating
- ❑ Projects are listed by category
- ❑ Prioritized by City Council-approved technical scoring criteria for most project categories

Developing the Needs Inventory

- Needs come from various sources
 - City Council members
 - Street and alley condition index
 - Economic Development initiatives
 - Private citizens and groups
 - 311 service requests
 - Neighborhood and homeowner's associations
 - Current or previous planning efforts
 - Master plans
 - Land use plans

Street and Transportation Needs Inventory Growth

- Current overall Street and Transportation Needs Inventory is \$ 4.4 billion
 - Over 10,000 different projects

- Needs Inventory will continue to grow and change as other planning efforts are completed.
Examples include:
 - Streetcar system
 - Bike plan
 - Complete streets
 - Downtown 360

Street and Transportation Categories of Needs

- Alley Petition
- Alley Reconstruction
- Barrier Free Ramp
- Bridge Repair and Modification
- Complete Street (formerly Streetscape / Urban Design)
- Intergovernmental Partnership Project
- Sidewalk Replacement
- Street Lighting
- Street Petition
- Street Reconstruction
- Street Resurfacing
- Target Neighborhood
- Thoroughfare
- Traffic Intersection, Capacity, and Safety Improvement
- Traffic Signal Upgrade – CBD and Citywide

Notes: 1) On-street bicycle facilities are included in the Needs Inventory under the appropriate category such as resurfacing, reconstruction, thoroughfares, etc. 2) Bike trails are included in the Park and Recreation Needs Inventory but may be included in the Streets proposition.

Street and Transportation Technical Criteria

- ❑ Developed by staff and approved by the City Council
- ❑ Used to rank and prioritize projects in the Needs Inventory
- ❑ Recommended projects in bond programs are based on ranking/priority and also geographic distribution

Street and Transportation

Relative Cost of Improvement Options

Type of Improvement	Cost
Alley – New or reconstruction	\$180 to \$200 per linear foot
Barrier Free Ramps	\$1,500 per ramp
Bike / Pedestrian Trail – Flatwork (ground level 12' wide trail)	\$1.1 M per mile
Bike / Pedestrian Trail – Bridges	\$1,500 per linear foot
Sidewalk – 4' wide	\$20 per linear foot
Sidewalk – 5' wide	\$25 per linear foot
Street – Resurfacing	\$200,000 per lane mile*
Street – New or reconstruction	\$1.0 M per lane mile*

**For calculation purposes, a lane mile is considered to be one 10' wide lane that is one mile long*

Street and Transportation

Needs Categories

Alley Petition Category

- Provides for design and construction of dirt or gravel alleys that have never been improved
- Abutting property owners petition the City to improve the alley
 - Agree to dedicate necessary right of way
 - Pay an assessment based on project cost and property frontage along the alley
- Ranked by date petition is approved
- Current inventory is valued at \$1.6 million

Alley Petition Category (cont'd)

Validated and Approved Alley Petitions

Alley Name and Location	Date Petition Validated	District
Bluffman Drive, Castle Hills Drive & Lovingood Drive - Lovingood Drive - Loud Drive	05/11/2006	8
Alley between Bishop Avenue and Haines Avenue from Neches Street to Wickford Street	03/10/2008	1
Capps Drive & Rexford Drive from Lemmon Avenue parallel to Glencrest Lane	03/24/2008	14
Alley between Hurley Way and Lenel Place from Williamsburg Road to "T" alley south of Walnut Hill Lane	04/08/2008	13
Alley southwest and parallel to Shoreview Road from Forest Trail to Nimrod Trail	01/22/2009	10
Alley between Idaho Avenue and Maryland Avenue from Holden Avenue 250' south to Dallas Power & Light property	08/24/2009	4
Alley between Hibernia Street and State Street from Boll Street to Worthington Street	08/02/2010	14
Alley between Hibernia Street and McKinney Avenue from Routh Street to Boll Street	08/11/2010	14
Alley between State Street and Thomas Avenue from Routh Street to Boll Street	09/14/2010	14
Alley between Mt. Nebo Street and Mt. Shasta Street from Mt. Royal Street to Mt. Ranier Street	09/28/2010	1
Alley between Manana Drive & Park Lane from Larga Drive to Marsh Lane	11/17/2010	6

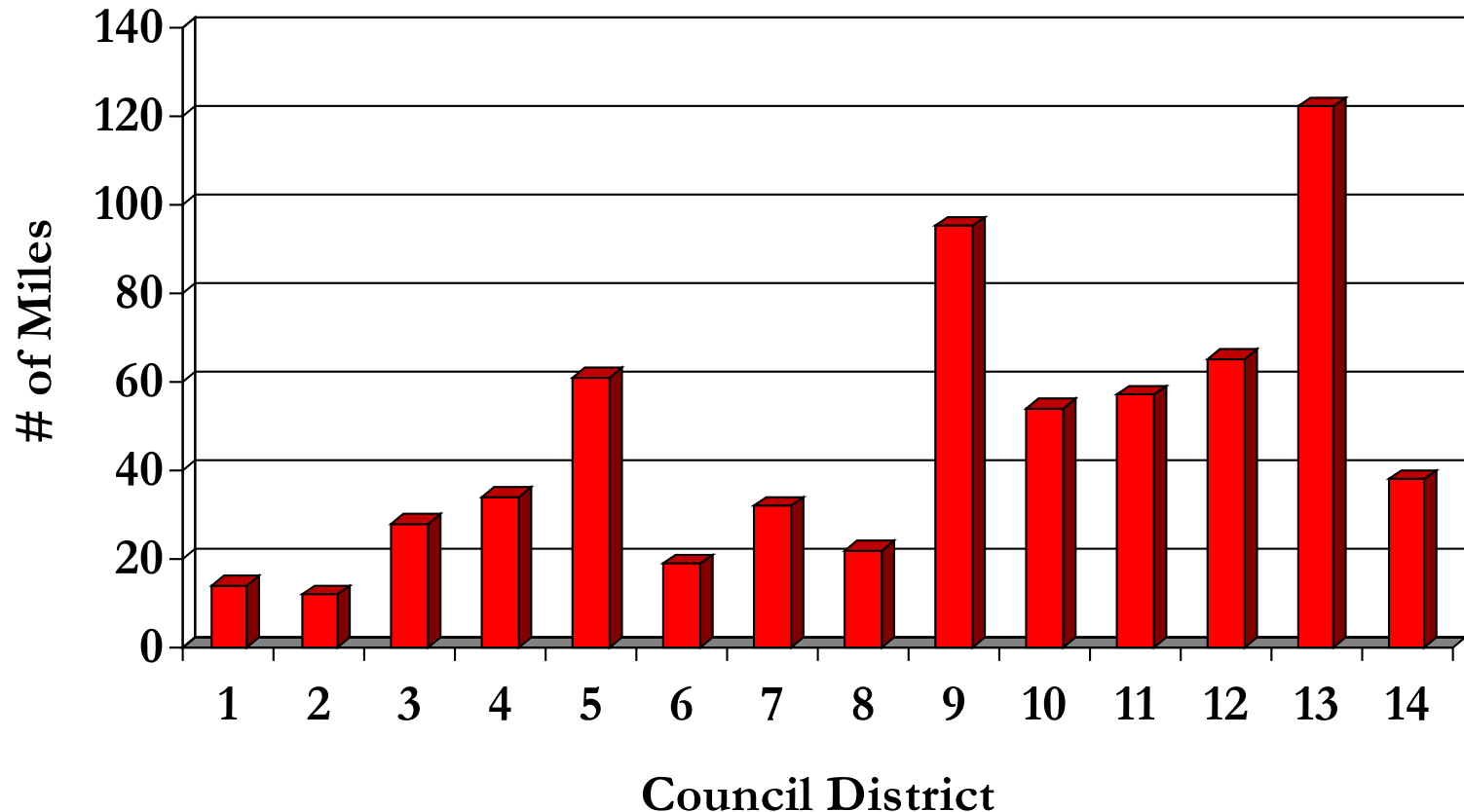
Alley Reconstruction Category

- Provides for reconstruction of asphalt or concrete alleys exceeding structural life expectancy
- Technical criteria includes:
 - Pavement Condition Index
 - Time in unsatisfactory condition
 - Alley used for rear entry
 - Alley used for garbage pickup
 - Availability of existing right-of-way
 - Drainage issues
- Current inventory is valued at \$618.8 million

Alley Reconstruction Category (cont'd)

■ Miles of Replacement

Total of 651 miles of alley reconstruction needed citywide



Barrier Free Ramp Category

- ❑ Provides for the construction of new barrier-free ramps (BFRs) at street intersections where requested by the general public in order to meet guidelines of the federal Americans with Disabilities Act
- ❑ Priority is given to walkways serving government offices and facilities, health care facilities, bus stops and transportation centers, commercial districts offering goods and services to the public, schools, followed by walkways serving residential areas
- ❑ Technical criteria includes:
 - Serving places of public accommodation
 - Posted speed
 - Date of request
 - Number of affected users
- ❑ From 2007-2011, approx. 120 ramps valued at \$210,000 were constructed annually due to funding limitations
- ❑ Current inventory is valued at \$1.9 million for 950 BFRs at 132 separate locations Citywide

Bridge Repair and Modification Category

- Provides for repair and modification of bridges due to structural deficiencies identified in the biannual Bridge Inspection and Appraisal Program (BRINSAP) performed by the Texas Department of Transportation
- Technical criteria includes:
 - Condition of bridge components
 - Critical structural element evaluation
 - Existing capacity vs. traffic volume
 - Is leveraged funding available?
- Current inventory is valued at \$13.1 million

Bridge Repair and Modification Category (cont'd)

Bridge Locations (in rank order based on criteria)	District
Hillcrest Road over White Rock Creek - two bridges; SB & NB	11
Second Avenue over White Rock Creek - SB/ 3 span	7
Second Avenue over White Rock Creek - SB/ 7 span	7
Houston Street over Trinity River & IH30	2, 3
Marsh Lane over Furneaux Creek	12
Second Avenue over White Rock Creek - NB	7
Woodmeadow Parkway over Long Branch	9
Jefferson Street over Trinity River & IH30	2
Military Parkway over White Rock Creek	7
Alexis Drive over Kiowa Branch	11
Rolling Rock Lane over Dixon Branch	10
Camp Wisdom Road over Rickett's Creek	5, 8
Cockrell Hill Road over Five Mile Creek - two bridges; SB & NB	3
Merrifield Road over Mountain Creek	3
Smith Street over Arcadia Creek	3
Liberty Grove Road over Cottonwood Creek	9
Youngblood Road over Five Mile Creek	8
Malcolm X Boulevard over DART/Santa Fe Railroad	7

Complete Street Category

(Formerly Streetscape and Urban Design)

- ❑ Provides for street landscape, enhanced sidewalks and crosswalks, pedestrian lighting and other amenities along with paving and storm drainage improvements where necessary
- ❑ No technical criteria for project selection - included based upon previous planning efforts and economic development initiatives
- ❑ If funded, commitments need to be secured for ongoing maintenance
- ❑ Current inventory is valued at \$403.3 million

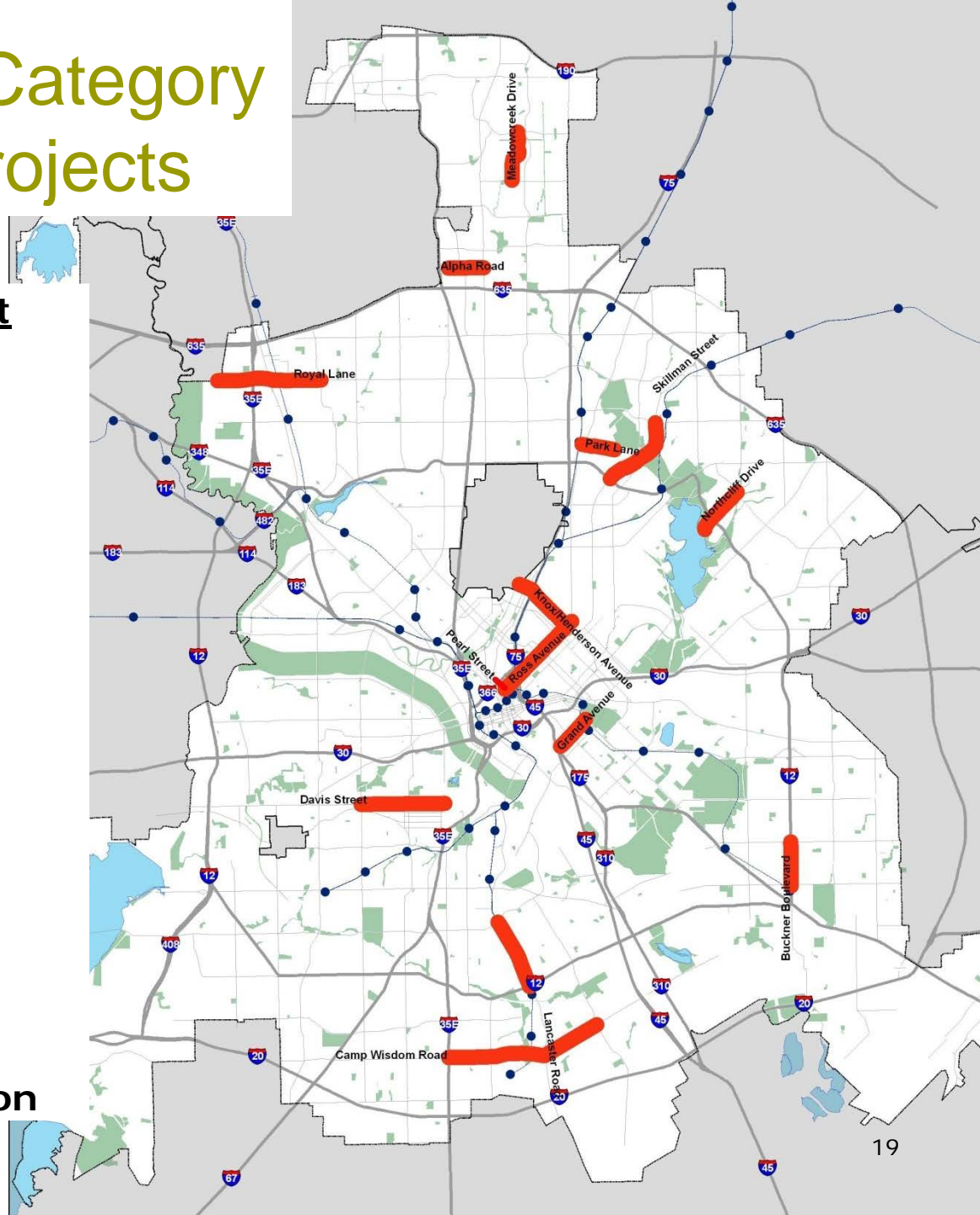
Complete Street Category (contd.)

(Formerly Streetscape and Urban Design)

- Category was renamed to include Complete Streets Initiative pilot projects:
 - Pilot Projects identified as opportunities to engage the community in showcasing and testing new complete street design concepts
 - Preliminary corridor planning is currently underway to identify community design preferences, develop cost estimates, and provide input into the Complete Streets Design Manual

Complete Streets Category Potential Pilot Projects

<u>Project</u>	<u>District</u>
□ Alpha Road	11
□ Buckner Boulevard	5
□ Camp Wisdom Drive	8
□ Davis Street	1,3
□ Grand Avenue	7
□ Henderson Avenue	2
□ Knox Street	14
□ Lancaster Road	4,5
□ Meadowcreek Drive	12
□ Northcliff Drive	9
□ Ross Avenue	14,2
□ Royal Lane	6,13
□ Skillman Street	10
□ Park Lane	13
□ Pearl Street	14
□ Cost Estimate ~\$39 million	



Sample Complete Street Projects

Complete Street Projects	District
Bishop from Jefferson to 8 th	1
Main Street from Good Latimer to Exposition	2
Commerce Street from Good Latimer to Exposition	2
Greenville from Belmont to Bell and from Alta to Ross	2, 14
Fort Worth Avenue from Westmoreland to Beckley	3, 6
M.L.K. from R.B. Cullum to S.M. Wright	7
M.L.K. from S.M. Wright to Gould	7
Winsted-White Rock Trail-W. Lawther from Garland Road to Park Entrance	9
S. Pearl Street from Canton Street to Marilla Street	14

Intergovernmental Partnership Project Category

- ❑ Provides for the planning, design, and construction of various street, trail, bridge, and intersection improvement projects with other agencies
- ❑ Projects generally undergo an extensive screening process to align with requirements outlined by other agencies
- ❑ Priority is based on amount of leveraged funds and time limits placed by partner agency programs
- ❑ Current inventory is valued at \$22.7 million

Intergovernmental Partnership Project Category (cont'd)

Project Location (in order by year funding is needed)	District	Amount Needed	Year Needed
Mountain Creek Parkway from southeast of Eagle Ford Drive to Clark Road	3	\$6.1 M	2013
LBJ / Skillman Gateway Phase 1 (Design and right of way acquisition)	10	\$4.8 M	2013
Keller Springs Road at Westgrove Drive round-a-bout (east side of Preston Road)	12	\$0.4 M	2013
Denton Drive from Webb Chapel Ext. to N. City Limits Phase 1 (Royal to Walnut Hill)	6	\$5.5 M	2014
East Dallas Veloway Phase 3	9	\$1.7 M	2014
East Dallas Veloway Phase 4	9, 13	\$4.2 M	2015

Sidewalk Replacement Category

- ❑ Provides for sidewalk replacement program created to assist residents with replacing deteriorated sidewalks
 - Cost Share – City and residents share in the cost on 50/50 basis
- ❑ Prioritized by date order of validated request...there is an on-going sign up
- ❑ Current on-going demand is valued at \$600,000 per year for approx. 250 locations each year

Street Lighting – Existing Thoroughfares

- Provides for street lighting on major arterials where there is no existing lighting or where existing lighting levels are substandard
- Technical criteria includes:
 - Existing illumination levels
 - Traffic volume
 - Pedestrian volume
- Current inventory is valued at \$1.9 million

Street Lighting – Existing Thoroughfares (cont'd)

Lighting Locations (in rank order by criteria)	District
Skillman - Merriman Pkwy to Fair Oaks	10
Markville / Vantage Point - Greenville to TI Blvd	10
Simpson Stuart - Bonnie View to Lancaster	8
Elm St. at Interstate 45	14
Abrams - Walnut Hill to Forest	10
Military Pkwy at Lawnview	7

Street Petition Category

- ❑ Provides for design and construction of unimproved gravel or asphalt streets with no curb, gutter, or underground storm drainage system
- ❑ Abutting property owners petition the City to improve the street
 - Agree to dedicate necessary right of way
 - Pay an assessment based on project cost and property frontage along the street - CDBG funding is available to pay assessment for qualifying residents
- ❑ Streets are ranked by date petition is approved
- ❑ Current inventory is valued at \$4.4 million

Street Petition Category (cont'd)

Validated and Approved Street Petitions

Street Name and Location	Date Petition Validated	District
Palacios Avenue from Ottawa Road to Canada Drive	04/24/2007	6
Rockwood Street from Jerden Lane to Pembroke Avenue	08/20/2008	1
Fernheath Lane from South Beltline Road to Dead End	08/10/2009	8
Longhorn Street from Bar X Street to Ferguson Road	12/22/2009	7
Lee Street from Milam Street to Alcott Street	08/05/2010	14
Stevens Street from Cayuga Drive to Davilla Avenue and Davilla Avenue from Stevens Street to Drake Street	08/09/2010	9
Crenshaw Drive from Cushing Drive to Old Seagoville Road	07/19/2011	8

Street Reconstruction Categories

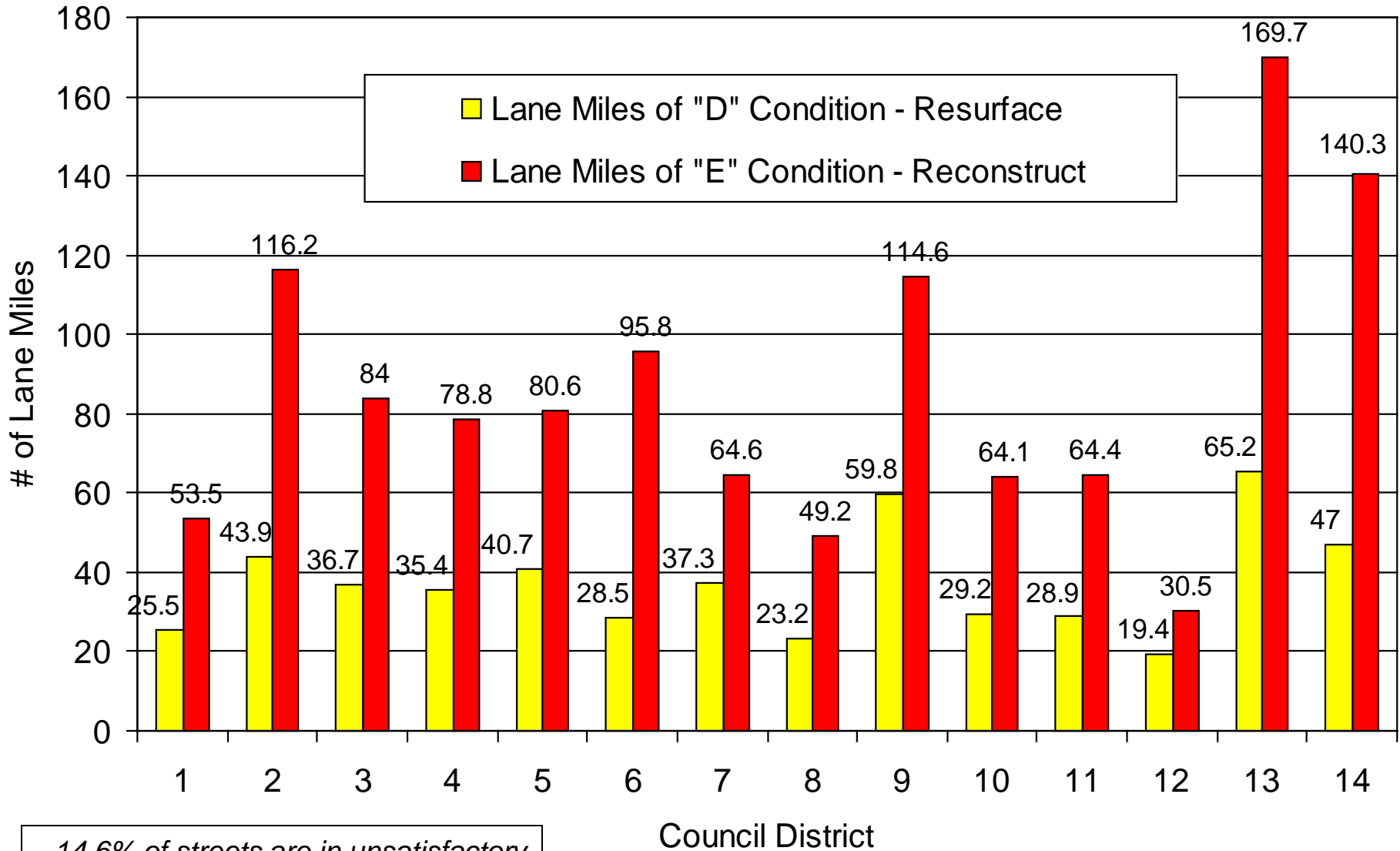
Arterial, Collector and Local

- ❑ Provides for the design and reconstruction of streets ranked “E” and exceeding structural life expectancy
- ❑ Technical criteria include:
 - Pavement Condition Index
 - Time in Unsatisfactory Condition
 - Zoning
 - Street Classification and Use
 - Economic Development Initiatives
 - DWU Work Plan (concurrent project)
- ❑ Current inventory is valued at \$957.4 million
- ❑ 1,206 lane miles of street reconstruction needed

Street Resurfacing Category

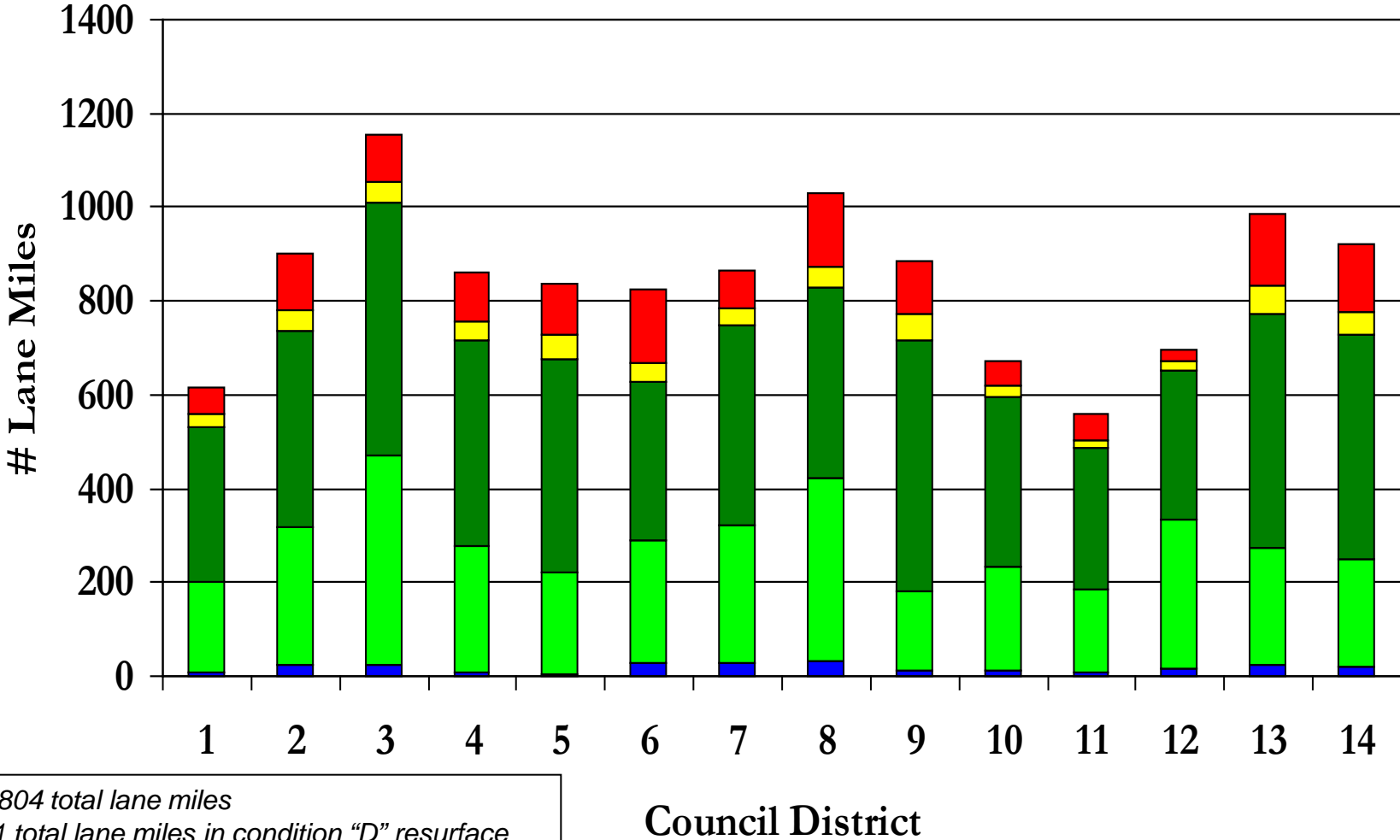
- ❑ Provides for surface milling, base repairs, and asphalt overlay of streets ranked “D” in unsatisfactory condition
- ❑ Technical criteria includes:
 - Pavement Condition Index
 - Time in Unsatisfactory Condition
 - Street Classification and Use
 - Economic Development Initiatives
 - DWU Work Plan (concurrent project)
- ❑ Current inventory is valued at \$170.9 million
- ❑ 521 lane miles of asphalt resurfacing needed

Total Lane Miles of Streets in Unsatisfactory Condition



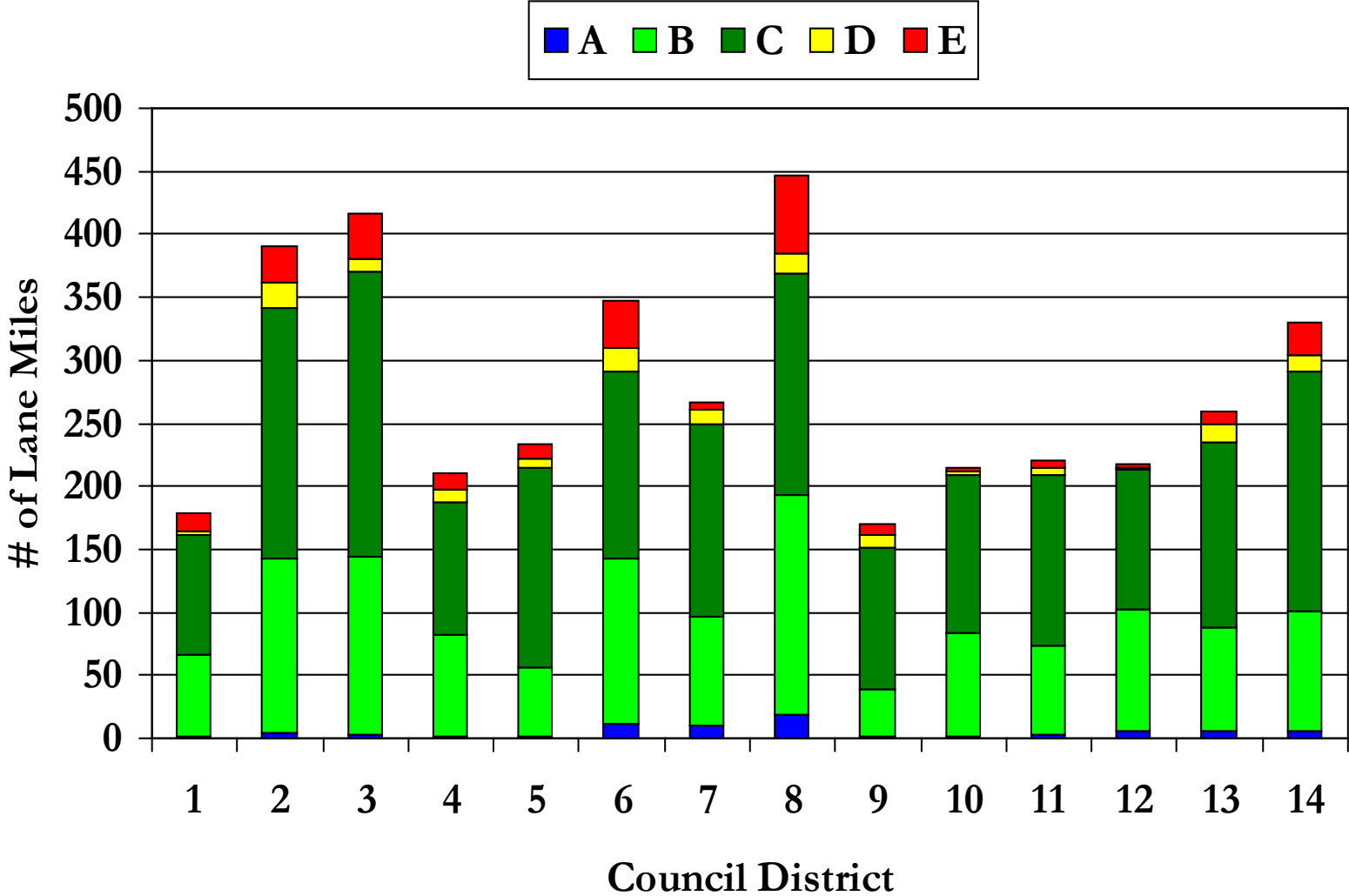
- 14.6% of streets are in unsatisfactory condition of "D" or "E"

Overall Street Condition

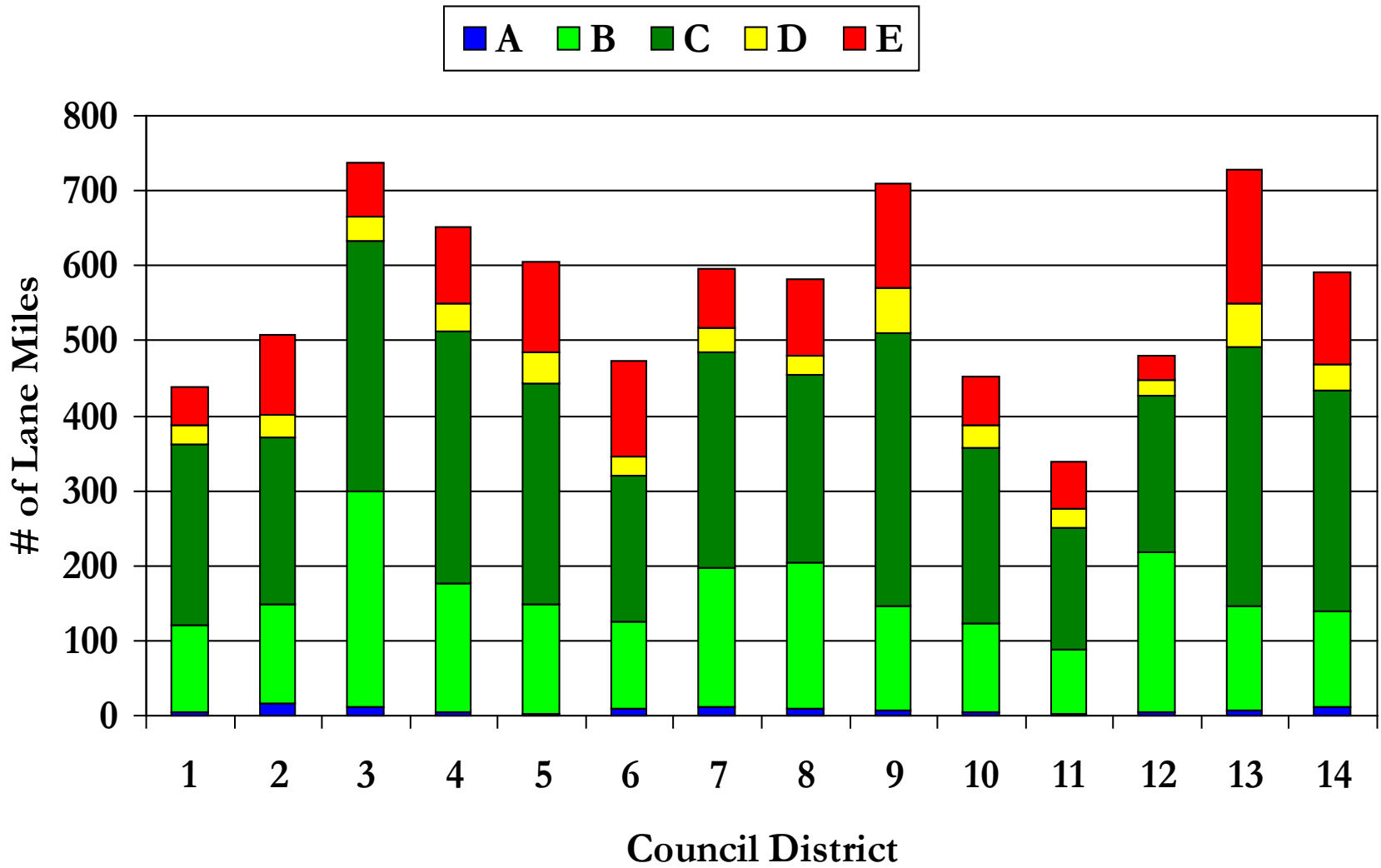


- 11,804 total lane miles
- 521 total lane miles in condition "D" resurface
- 1206 total lane miles in condition "E" reconstruct

Arterial / Collector Street Condition



Local Street Condition



Target Neighborhood Category

- ❑ Provides for design and construction of unimproved gravel or asphalt streets with no curb, gutter, or underground storm drainage system
- ❑ Needs are typically streets that have been unsuccessfully petitioned through the years
- ❑ Technical criteria includes:
 - Pavement Condition Index
 - Previous unsuccessful petition efforts
- ❑ Current inventory is valued at \$46.6 million

Sample Target Neighborhood Projects

Target Neighborhood Projects	District
Madison Avenue (N) from 9th Street to 7th Street	1
Adams (N) from Davis to 9th St	1
Hendricks Ave from Denley Drive to Moore Street	4
Urbandale Area Improvements	4
McVey Ave (E)- Seevers Avenue to Marsalis Avenue	4
Arizona from Saner to Kiest	4
Custer Drive from Biglow Street to Cardinal Drive	4
Grove Hill Road from Forney Road to Samuel Blvd	4, 7
Atlanta Street from Grand Avenue to Logan Street	7
Cigarette Heights / Cigarette Hill Area	8
Phoenix from Fair Oaks to Holly Hill	13
Holly Hill from Phoenix to Pineland	13

Thoroughfare Category

- ❑ Provides for the design and construction of new streets or street widenings to meet Thoroughfare Plan standards
- ❑ Current thoroughfare needs are not prioritized and include
 - Remaining thoroughfares never built to standard (32%)
 - Improved thoroughfares that may need to be widened or enhanced to “technically” meet standards (68%)
- ❑ Current inventory is valued at \$1,917.2 million
- ❑ 259 thoroughfare segments identified

Sample Thoroughfare Projects

Thoroughfare Projects	District
CBD-Fair Park Link from Main St to Hickory Street	2
Colorado Blvd Extension (Canyon) from Westmoreland to IH 30 frontage road	3
Sunnyvale from Kiest to Ann Arbor	4
Pemberton Hill from Lake June to Loop 12	5
West Dallas Gateway bridges under UPRR between Sylvan and Beckley (Eco. Dev.)	6
Lamar (S) from IH 45 to Hatcher	7
Lamar (S) from Hatcher to Haven	7
Highland Road from Ferguson to north of the entrance to Primrose at Highland (1500' to NE)	7
Crouch Road from Old Ox to Lancaster Road	8

Traffic Intersection Capacity & Safety Improvement Category

- ❑ Provides for the design and construction of intersection capacity and / or geometric improvements
- ❑ Technical criteria includes:
 - Traffic capacity
 - System continuity
 - Multimodal or intermodal
 - Accident data
 - Proximity to schools and parks
 - Pavement condition index
 - Economic development initiatives
- ❑ Current inventory is valued at \$42.4 million
- ❑ 110 capacity and safety improvements identified

Traffic Intersection Capacity & Safety Improvement Category (cont'd)

Intersection Projects (in rank order based on criteria)	District
Buckner at Lake June	4
Forest at Inwood	13
Forest at Marsh	13
Royal at Skillman	10
Lombardy at Brockbank	6
Forest at Midway	13
Buckner at CF Hawn Freeway	5, 8
Forest at Greenville	10
Garland at Gaston	2, 14
Greenville at Meadow - Walnut Hill	13
Greenville at Royal	10
Lemmon approaching Howell	14
Abrams at Forest	10
Buckner at East R.L. Thornton	7
Buckner at Hoyle	4
Camp Wisdom at Westmoreland	8
Forest at Preston Rd	11, 13
IH 35 at Ledbetter	4, 5
Ledbetter at Westmoreland	3, 8

Sample Traffic Intersection Capacity & Safety Improvement Projects

Traffic Intersection Safety Projects	District
Beckley at Zang / El Dorado	1
Jefferson at Hampton	1
Simpson Stuart at SH 310	8
Dallas North Parkway at Beltline	11
Dallas North Parkway at Frankford	12
Park Lane, Fair Oaks, and Pineland	13
Greenville at Mockingbird	14
Ross at Pearl, Leonard, Routh	14

Traffic Signal Upgrade Category

- ❑ Provides for replacement of structurally deficient traffic signal hardware, removes median-mounted signal heads, and upgrades span wire mounted signal hardware with permanent mast arm mounted hardware
- ❑ Technical criteria includes:
 - Age of hardware and type of mounting
 - Potential for hardware damage
 - Need for operational improvements
- ❑ Current inventory is valued at \$49.4 million

Traffic Signal Upgrade Category (cont'd)

Traffic Signal Locations (in rank order based on criteria)	District
Dallas Parkway at Spring Valley	11
Ewing at Morrell	4
Lagow at Spring	7
Simpson Stuart at S M Wright	5, 8
Arapaho at Dallas Parkway	11
Capitol at Peak	2
Cedar Hill at Davis (Llewellyn)	1
Commerce at Justice Center	6
Commonwealth at Stemmons	2, 6
Garden at Second	7
Gaston at Richmond	9, 14
Greenville at Richmond	2, 14
Nomas at Sylvan	6
Abrams at Glasgow	14
Abrams at Monticello(Sondra)	9, 14
Bonnie View at Corrigan (Stag)	8
Cherry Valley at Lancaster	8
Cockrell Hill at Redbird	3, 8
Houston School Rd at Ledbetter	4, 5
Lawnview at Scyene	7

Street and Transportation

Goals and Strategies

Street Condition Goals

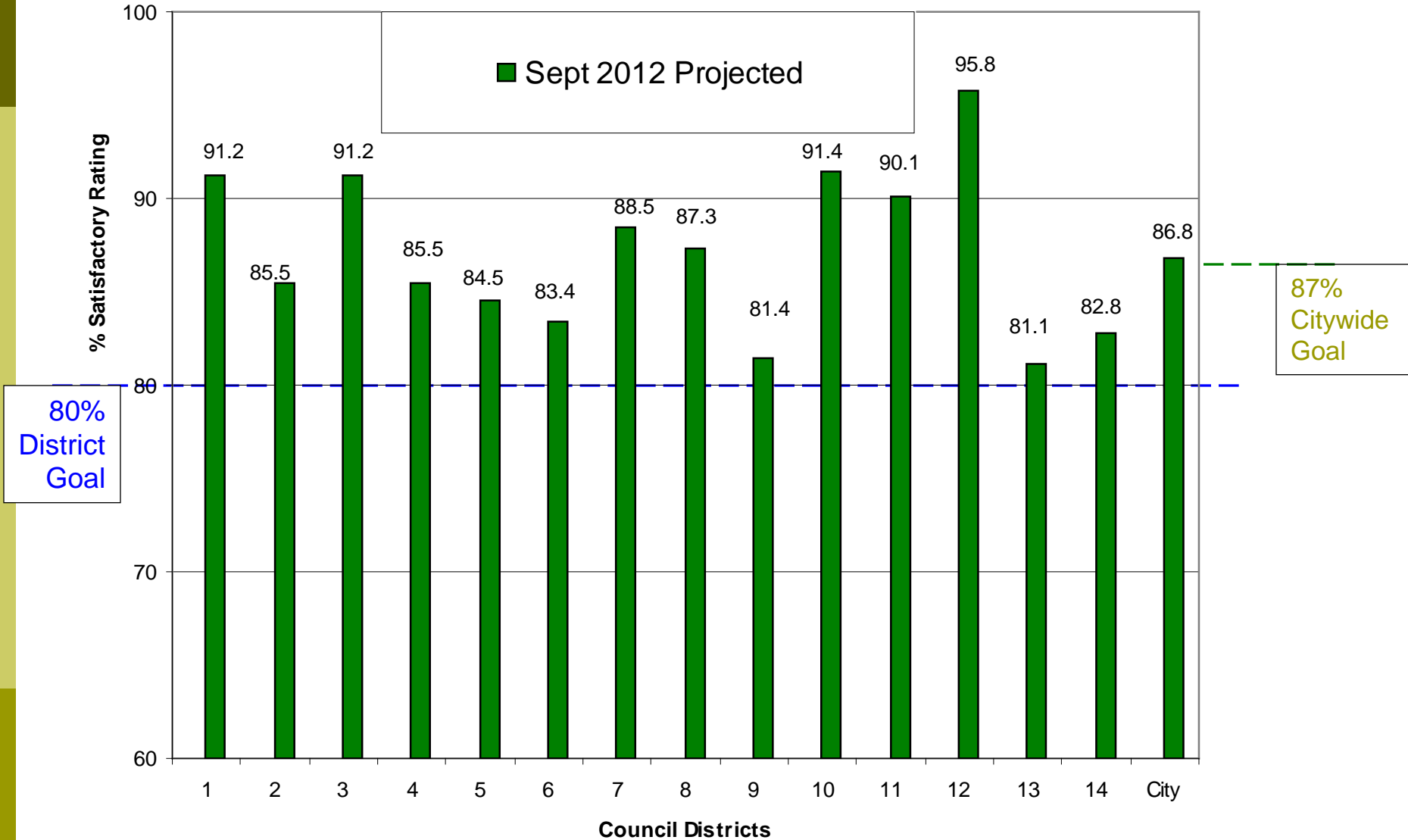
Satisfactory Condition Goals and Status

- Current stated goals are to achieve and maintain
 - 87% satisfactory street condition ratings citywide
 - Minimum of 80% satisfactory street condition ratings in each council district
 - These goals are expected to be met by the end of FY 11-12

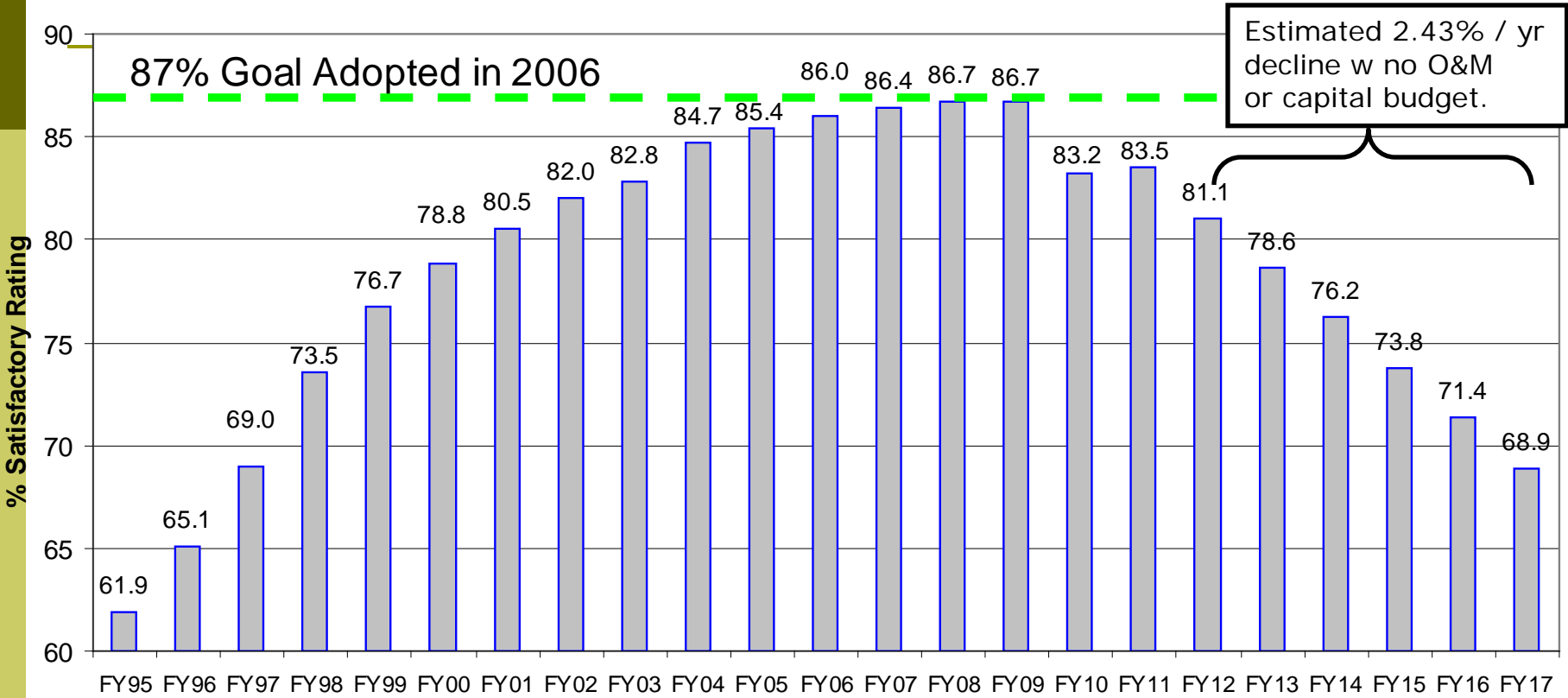
- Expected Citywide satisfactory rating by the end of FY 11-12 is 86.8%

- If no O&M or additional capital investment is made in streets, the overall satisfactory rating is expected to fall below 70% by 2017

Street Condition Ratings - Projected (through September 30, 2012)



Street Condition Ratings - projected thru 2017



- 15 years to improve from low of 62% in FY95 to peak in FY09
- Citywide rating decreased from 86.7% to 83.2% in FY10 due to deferred maintenance and development of a more precise condition rating system

Questions and



Discussion