Memorandum



DATE August 14, 2015

TO Honorable Mayor and Members of the City Council

SUBJECT FY 2015-16 Budget Workshop #8: Department of Street Services FY 2016 Proposed Budget

On Wednesday, August 19, 2015, the City Council will be briefed on the FY 2015-16 Budget Workshop #8: Department of Street Services FY 2016 Proposed Budget. The briefing materials are attached for your review.

Please let me know if you have any questions or need additional information.

Jill A. Jordan, P.E.

Assistant City Manager

GUZJUM

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FY 2015-16 Budget Workshop #8: Department of Street Services

FY 2016 Proposed Budget

August 19, 2015







Briefing Outline

 Provide an overview of the Department of Street Services

 Review proposed FY 2016 budget

Summarize scope of services

Street Services Strategic Direction

Minor Routine Street Maintenance



Street Repair Division (SRD)

To ensure safety of streets and mobility within the

City of Dallas,

enhancing economic vibrancy and qualify of life.

Major Street Maintenance



Service Maintenance Area (SMA)

Quality Assurance



Contracts Finance Inspections (CFI) Transportation Operations

Traffic Control Maintenance



Note: Refer to Appendix for Division Descriptions

Street & Alley Maintenance Budget

		FY 14-15 Budget		FY15-16 Proposed Budget		
	Business Unit					
		FTEs	Dollars	FTEs	Dollars	
1	Street Repair Division – Concrete	143.5	\$18,690,231	143.5	*\$19,169,851	
2	Street Repair Division – Asphalt	112.8	\$13,645,915	**107.6	\$13,295,626	
3	Service Maintenance Areas (potholes, service requests)	220.5	\$11,140,438	**214.7	\$11,326,235	
4	Right-of-Way Maintenance Contracts & Inspections	24.0	\$10,210,981	24.0	\$10,624,399	
5	Traffic Safety and Congestion Management	31.9	\$5,103,797	32.7	\$3,911,748	
6	Traffic Operations Maintenance	65.7	\$7,122,719	68.7	\$7,185,602	
7	Street Lighting	1.0	\$17,922,510	4.0	\$17,525,243	
8	Other Sources Storm Water Fund, TxDOT and other City Departments		\$7,586,845		\$7,386,984	
9	Operating Budget	599.4	\$91,423,436	595.2	\$90,425,688	
10	Total Street & Alley Improvement Fund				\$16,700,000	
11	Total STS Budget	599.4	\$91,423,436	595.2	\$107,125,688	
	*\$6.2K reduced from FY16 SRD Concrete to reflect total Street and Alley Improvement Fund of \$16.7K on Line 10 ** Reduction in FTE's due to vacancy rate adjustment					

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Department Services

- Service Maintenance Areas (SMA)
 - Initial intake for all street maintenance service requests (approximately 30,000 annually)
 - Provides routine maintenance:
 - Pothole patching
 - Small pavement repairs
 - Storm water inlet cleaning
 - Guardrail maintenance
 - General maintenance of unimproved streets and alleys
 - City surplus property maintenance (mowing and litter removal)
 - Asphalt rehabilitation
 - Night Operations sweeps CBD five nights per week

FY 15 Highlights

- On track to repair 40,500 potholes (35% increase from FY 14)
- In the process of procuring new equipment (A.P.E. Pothole Filler Machine)
- This machine will provide the department a new maintenance treatment to address pothole repairs and skin patch repairs





Pothole Repair



Roadside Drainage



Inlet Cleaning



Guardrail Repair



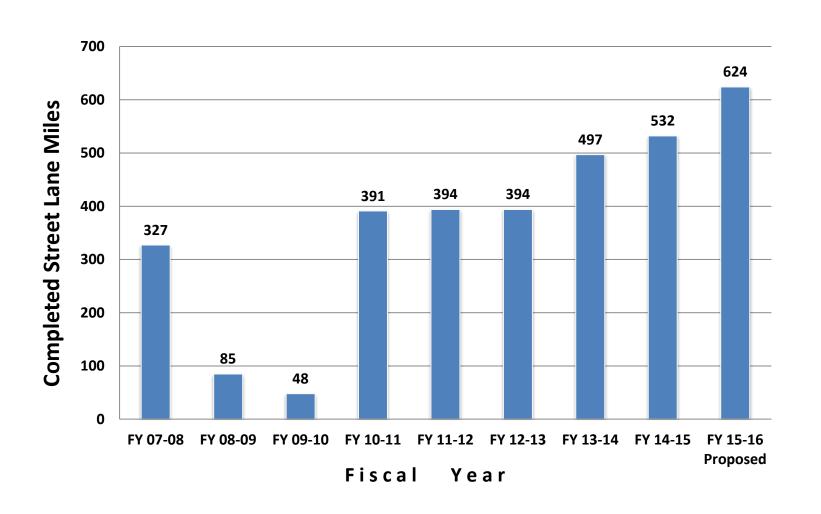
Street Repair Division (SRD)

- Major asphalt and concrete maintenance:
 - Asphalt rehabilitation
 - Asphalt restoration
 - Asphalt full-depth
 - Concrete partial reconstruction

FY 15 Highlights

- 532 street lane miles of planned work
- Barricade support for approximately 35 Special Events
- Assist and support other City departments:
 - Park Department: Parking lot, sidewalk and trail repair
 - Sanitation: Alley clips
 - Police and Fire: Barricades, demolition of damaged structures

Annual Planned Street Work



Full-depth Concrete Repair



Asphalt Street Overlay (Rehabilitation)



Asphalt Street Restoration



Concrete Curb and Gutter



- Transportation Operations (TRN)
 - Traffic control devices:
 - Design
 - Installation
 - Operations
 - Maintenance
 - Street lighting
 - Maintenance, installation and monitoring of 88,000+ streetlights
 - Klyde Warren Park Tunnel
 - Maintenance of lights, jet fans, fire suppression system, CCTV and generator
 - Traffic related service requests (approximately 25,000 annually)

Street Striping

- Inventory of striping needs
 - 9,000 crosswalks city-wide
 - Current level of Service Requests—1,222
 - FY 2015 production level via contractor 370 (30% of demand)
 - FY 2016 bring service in-house
 - 25% increase in production
 - Production level---460 (38% of demand)
 - 1,440 linear miles lane striping citywide
 - Current striping not visible—610 linear miles
 - Existing level of production—419 (70% of need)

Traffic Signals

Traffic Signal Components



Traffic Signal



Vehicle Detector



Controller



Controller Cabinet



Communication



Central Computer

Highlights – 2013-2015

- Secured \$3.5M in grant funds for traffic signals at 12 high accident locations – 2013 Highway Safety Improvement Program (HSIP)
- Secured \$6.2M in grant funds for traffic signals at 19 high accident locations – 2014 HSIP
- Secured \$1.7M in grant funds for retiming 304 traffic signals
- Secured \$2.5M in grant funds for communication equipment for Advanced Traffic Management System (ATMS project)
- Secured \$3.7M in grant funds for hardware, software and communication equipment for ATMS project

- Rights of Way Maintenance Contracts and Inspections (CFI)
 - Service Delivery Contracts
 - Sweeping of major thoroughfares once per month
 - Mowing
 - Preventative pavement maintenance
 - Inspections performed on all contract work as well as work of all divisions within department



- \$275,000 added to FY 15-16 budget for vegetation maintenance related to capital projects-- Green Ribbon and Complete Streets
- Renewal of sweeping contract (Aug)





TxDOT Maintenance

- Includes all TxDOT rights-of-way within the corporate boundaries of Dallas;
 - 1-20, I-30, I-45, US 67, US 75, US 80, 635, US175, SH180, SH183, SH310, SH345, S408, and S482
- Prior to 2011, TxDOT had responsibility for maintenance for these areas and provided 3 mow cycles and 12 litter cycles per FY
- In 2011 the City signed an amendment to the existing Municipal Maintenance Agreement (MMA) with with TxDOT which allowed for the City to assume responsibility for maintenance and be reimbursed \$815,000 annually
- City augmented TxDOT funds to increase cycle frequency
 - 11 mow cycles
 - 13 litter cycles
- US 75 center median, planters and bridge maintenance
 - New contract approved by Council in June which provides for:
 - Vegetation maintenance (monthly during growing season)
 - Litter maintenance (monthly)
 - Bridges and overpasses (monthly)
 - Watering (twice monthly Jun-Sept—once monthly Oct-May)
 - Tree pruning (annually)
 - Herbicide (monthly during growing season)

Median Mowing



Quality Assurance



Environmental Compliance



Street Sweeping

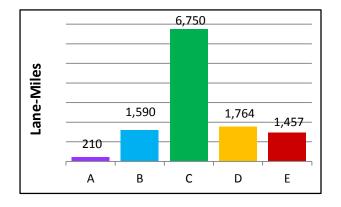


Department Responsibilities

- Maintenance Inventory:
 - 11,700 lane miles (LM) of streets
 - 1,400 miles of alleys
 - 55,000+ storm water inlets
 - 1,300+ miles of roadside drainage
 - 50+ miles of city-owned guardrail
 - 1,700 acres of medians and adjacent rights-of-way
 - 375,000+ traffic control signs
 - 1,500+ signals
 - 1,300+ school/pedestrian warning flashers
 - Lane line striping for 11,700 LM of streets
 - 9,000+ crosswalks



- Inclement weather conditions
 - Snow and ice
 - High wind damage
 - Flooding & heavy rain
- Removal of roadway debris



Prior Briefings

- April 2015, Council briefed on the city's street and alley conditions
 - Presented a ten-year funding model to achieve satisfaction rating goal and impact alley conditions
 - Reviewed work plan of the three departments that contribute to goal:
 - Department of Street Services—pay as you go/slow degradation
 - Dallas Water Utilities—paving is in relation to water main replacement
 - Public Works—paving with bond elections/increase % satisfaction ratings
 - Recommended to increase GF operating budget:
 - 20% increase in street maintenance funding for first year
 - 30% increase in alley maintenance per year

Dedicated STS Funds \$16.7M

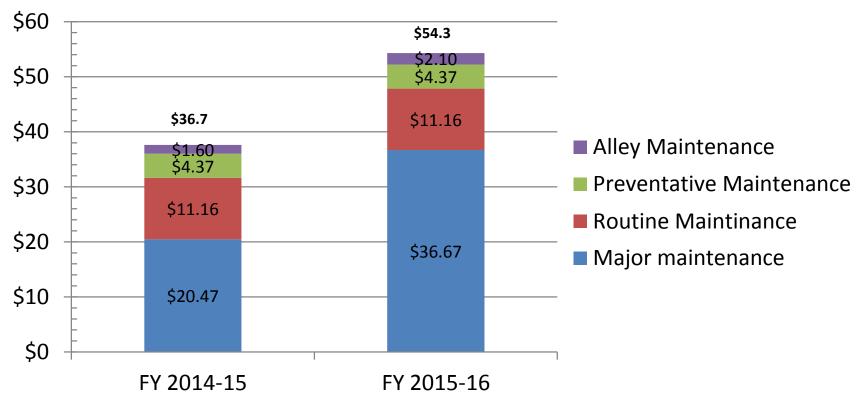
Sources of Capital Funds

Property tax revenue above 6.5%	\$6.2M
One-time transfer of excess FY14 GF ending balance	\$3.0M
DWU Street Rental increase from 5% to 6%	\$5.1M
Establish 1% Sanitation franchise fee	\$.7M
Miscellaneous one- time funds	\$1.7M
Total Funds	\$16.7M

Street/Alley Maintenance Budget

Treatment	FY15 Lane Miles \$37.6M	Additional Lane Miles \$16.7M	FY16 Total Lane Miles \$54.3M
Partial Reconstruction	115	23	138
Asphalt over Concrete	0	25	25
Restoration	12	44	56
Full Dept Asphalt	40	0	40
Rehabilitation	30	0	30
Slurry Seal	235	0	235
Micro Surfacing	100	0	100
Planned Lane Miles	532	92	624
Other: Potholes, SR's, etc.	95	0	95
Alleys	15	5	20
Total Lane Miles	642	97	739

FY 16 Budget Overview (\$ in millions)



- Major Maintenance: asphalt restoration, asphalt rehabilitation, concrete partial reconstruction and full-depth asphalt repair
- Routine Maintenance: pothole repair and level-ups and concrete spot repairs
- Major Preventative Maintenance: Micro Surfacing, Slurry Seal and Crack Seal

Street Condition Goals

- 1995 Council adopted street satisfaction goal of 75% to be completed by 2010
- 2006—Street condition goals revised and adopted by City Council
 - 87% satisfactory citywide
 - Minimum 80% satisfactory in each Council District
- Goals were to be achieved by completion of bond programs in conjunction with an enhanced Operating and Maintenance (O&M) program

Street Selection Process

- Step 1: Public Works pavement evaluation
- Step 2: Street Services (STS) candidate evaluation (July-Oct)
 - Conflicts and Coordination
 - DWU
 - Non-city utilities
 - Capital projects (Public Works and Dallas County)
 - Pavement Condition Index (PCI)
 - High Traffic Areas
 - Leveraging dollars
 - Distribution among Council Districts to support overall goal of 87% with a 80% Council District minimum
 - Treatment need
 - SRs/previous commitments
 - Council input
- Step 3: Projects selected and work begins (Oct-Nov)

Communication Plan

- To ensure transparency:
 - Creation of separate fund--\$16.7M
 - Project signage
 - Door hangers
 - Survey results
 - PIO newsfeeds
- The Budget, Finance and Audit committee will be briefed in Nov on FY 15-16 work plan
- Planned program work will be placed on the Department of Street Services' page on the City's website at www.dallascityhall.com

An Overall Approach To Pavement Maintenance: The Big Picture

- For every 1% change in street satisfaction ratings, an investment of \$90M is required
 - Capital programs are the vehicle for increasing satisfaction ratings (Public Works)
 - Pay as you go (General O&M) aids the process by slowing the rate of degradation (Street Services)
 - 10-year financial model (see appendix)

What is the impact of \$16.7M?

- Will aid in slowing the degradation rate
 - Major Thoroughfares
 - Provides immediate improvement to major thoroughfares
 - Removal and replacement of large, failed sections of concrete
 - Increases partial reconstruction from 115 to 163 lane miles
 - Local Streets
 - Total restoration of failed asphalt roads without curb and gutter
 - Bond program does not address these types of roads
 - Increases restoration from 12 to 56 lane miles
 - Technology Investment
 - Current vehicle used to measure roadway conditions is obsolete and will be replaced

Questions?

Appendix

- 1. Street Degradation Curve page 27
- 2. Street Conditions Ratings pages 28 and 29
- 3. 10 Year Financial Model page 30
- 4. Street Treatment Descriptions pages 31 thru 33
- 5. HSIP 2013 High Accident Locations pages 33 and 34
- 6. Green Ribbon Projects/Complete Streets page 36
- 7. Streets Service Requests Types and SLA—pages 37 and 38

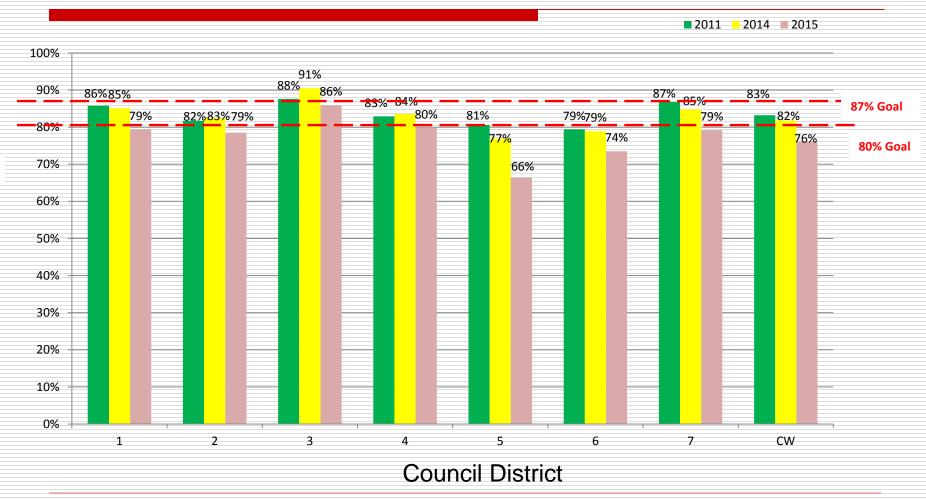
Street Degradation Curve, in Lane-miles

Streets degrade at varying rates over their life of up to 50 years, from as little as 0.3% to over 10% annually 6,750 Lane-Miles 100 1,590 1.764 1,457 90 **A**-streets: mild deterioration Pavement Condition Index 80 C В D **B**-streets: 70 moderate deterioration Mid-to-Low "C" streets receive proactive care by Street Services 60 C-streets: rapidly-increasing "D" streets require *resurfacing* by Public Works. deterioration Street Services can provide only temporary relief. **D**-streets: severe deterioration "E" streets require reconstruction by Public Works. 20 Street Services can provide **E**-streets: only temporary relief. severe deterioration 10 tapering off with time 0

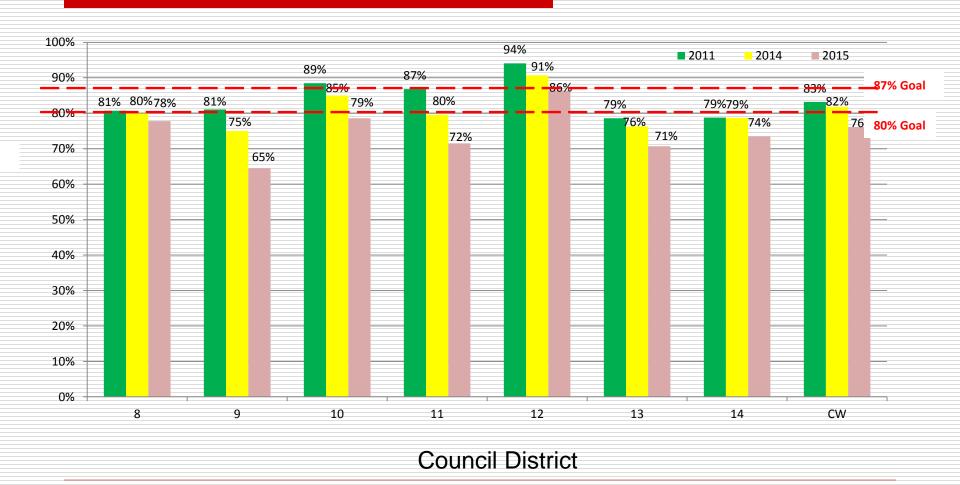
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2011, 2014 & 2015 Street Conditions Ratings



2011, 2014 & 2015 Street Conditions Ratings



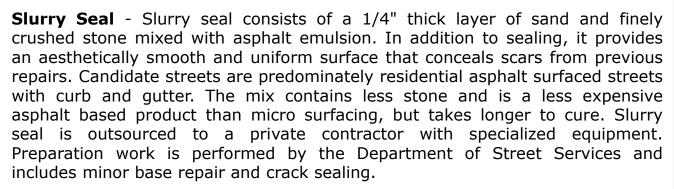
10 Year Model – Street Expenditures & Impact on Satisfaction Rating ("All-In" Scenario)*



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).



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.





Street Treatment Descriptions

Major Maintenance

Asphalt 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.

Asphalt 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.

Concrete 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.







HSIP 2013 High Accident Locations

Intersection		New/Upgrade	 Approved Est	Letting Date (FY)
Maple	McKinney	Upgrade	\$ 276,314	2015
Jefferson	Merrifield	New	\$ 309,210	2015
Clarendon	Westmoreland	Upgrade	\$ 379,230	2015
Loop 12	Webb Chapel Ext	Upgrade	\$ 311,000	2015
Loop 12	Webb Chapel	Upgrade	\$ 315,000	2015
Abrams	Forest	Upgrade	\$ 323,722	2016
Bruton	St Augustine	Upgrade	\$ 278,003	2016
Dilido	John West	New	\$ 282,190	2016
Bruton	Prairie Creek	Upgrade	\$ 161,614	2016
Bruton	Masters	Upgrade	\$ 176,419	2016
Commerce	Good Latimer	Upgrade	\$ 411,118	2016
Loop 12	John West	Upgrade	\$ 324,650	2016

HSIP 2014 High Accident

Locations

	Intersection	New/Upgrade	HSIP Year	Approved Est Construction Cost	Letting Date (FY)
Belt Line	Dallas Pkwy	Upgrade	2014	\$ 518,000	2016
Hampton	Clarendon	Upgrade	2014	\$ 255,000	2016
Hampton	Illinois	Upgrade	2014	\$ 245,000	2016
Hillcrest	Alpha	Upgrade	2014	\$ 276,000	2016
H 35E FR	SL 12	Upgrade	2014	\$ 144,000	2016
H 635 FR	US 75	Upgrade	2014	\$ 748,000	2016
olk	Wheatland	Upgrade	2014	\$ 258,000	2016
iL 12	Hampton	Upgrade	2014	\$ 244,000	2016
ruton	Second	Upgrade	2014	\$ 511,000	2017
orest	Audelia	Upgrade	2014	\$ 248,000	2017
⁄larsh	Rosemeade	Upgrade	2014	\$ 297,000	2017
lano	Miller	Upgrade	2014	\$ 284,000	2017
George Bush	Midway	Upgrade	2014	\$ 477,000	2017
toyal	Skillman	Upgrade	2014	\$ 304,000	2017
toyal	Abrams	Upgrade	2014	\$ 270,000	2018
killman	Walnut Hill	Upgrade	2014	\$ 313,000	2018
killman	Lovers	Upgrade	2014	\$ 284,000	2018
Valnut Hill	Abrams	Upgrade	2014	\$ 260,000	2018
Vebb Chapel	Larga	Upgrade	2014	\$ 233,000	2018

Green Ribbon Projects/Complete Streets*

Green Ribbon Projects:

- US 67/ IH 35 at Kiest
- IH 45/ Simpson Stuart
- IH 30/Winslow & Dolphin
- US67/Camp Wisdom
- US 175/Lake June
- US 175 Buckner
- IH 20 at Bonnie View
- IH 20 at Lancaster Rd
- IH 20 at Polk
- IH 20 at Hampton
- IH 20/ St. Augustine
- Loop 12 (IH30) at Buckner/Chenault
- Loop-12/Singing Hills Drive to University Hills Road
- US 75 from Woodall Rodgers to IH635-Phase 1 median
- US 75 from Woodall Rodgers to IH 635
 –Phase II bridges, side planters etc.
- US 75 from Woodall Rodgers to IH 635-Phase III replanting medians & bridges

- LBJ Skillman Pedestrian Bridge
- Denton Dr. (South) from Wyman to Empire Central
- MLK (Phases 1 &2)
- Mockingbird from Airline to Matilda
- Preston from Keller Springs to PGBT
- Samuel from Lawnview to Buckner
- Cedar Crest from 11th to Murrell
- Harry Hines/Walnut Hill Pedestrian Bridge
- Keller Springs/Westgrove Traffic circle
- Bexar from CF Hawn to Municipal
- Elm Street
- Greenville
- Jefferson Blvd
- Bishop Blvd
- SMU Blvd

Complete Streets Projects:

^{*}list of current and anticipated projects

STS Service Request Types and SLA*

Group Description Service Types	SLA
STS - District Engineering Speed Limit Change Request	45
Guardrail - New	45
Traffic Markings - New	80
Parking - Deep Ellum Residential Permit	14
Traffic - Street Closure	14
Traffic Sign - New	80
Traffic Markings - Maintenance	70
Traffic - General Request	14
Parking - Resident Only Permit	14
Traffic Signal - School Flasher New	80
Traffic - Road Hump Request	14
Traffic - Rumble Strips New (Alley Speed Hump)	14
Traffic - Rumble Strip Maintenance (Alley Spd Hump)	20
Traffic Signal - New	84
Traffic - Construction Signs	5
Sts - Markings Traffic Markings - Brkn Traffic Button	4
Sts - Signal Maintenance Traffic Signal - Stuck	4
Traffic Signal - Non Dispatch/Other	10
Traffic Signal - Timing	4
Traffic Signal - Head Turn (Conflicting)	4
Traffic Signal - Other Dispatch	4
Graffiti Traffic Signals	14
Traffic Signal - Visibility Obstruction	4
Traffic Signal - Knockdown	4
Traffic Signal - Bulb Out/Non-Conflict Head Turn	
/Visibility Obstruction	7
Traffic Signal - Flashing	4
Traffic Signal - School Flasher Maintenance	4

Group Description Service Types	SLA
Traffic Signal - All Out	4
STS - Signs Traffic Sign - One Way Knockdown	4
Traffic Sign - Maintenance (Other)	10
Traffic Sign - Pkg Mtr Remove/Install	30
Traffic Sign - Yield Knockdown	4
Graffiti Traffic Signs	14
Traffic Sign - Other Dispatch	4
Traffic Sign - Stop Knockdown	4
Traffic Sign - Visibility Obstruction	4
STS - Street Administration MOWmentum Program	20
Crew Complaints - Streets	14
Street Services General Request (Internal)	30
Sts - Street Dispatch Snow/Ice Sanding Request-	_
Hazardous-STS (DISPATCH)	5
Guardrail Repair - Hazardous	1
Sidewalk Repair - Hazardous	1
Tree down/low limbs - Emergency	3
Barricades - Reset/Replace	1
Flooding - Emergency	5
Street Spillage/Debris in Right of Way-Hazardous	1
Barricades - Pickup	1
Assist Police - 3-1-1	4
Objects Dropped in Inlet-Hazardous	1
Barricade Check List - 311	365
High Mateu Alegano Flooded Boody www. Magazine Costons	2
High Water Alarms Flooded Roadway Warning System	2
Shopping Carts Pot hole - Hazardous	7 1
	1
Inlet/Storm Drain - Hazardous	
Alley Repair - Hazardous	1
Street Repair - Hazardous	1

^{*}SLA- Service Level Agreements. The time period in which a service is expected to be completed.

STS Service Request Types and SLA

Group Description Service Types	SLA
Assist Fire - 3-1-1	4
Visibility Obstruction - Hazardous	1
Pot hole Repair Routine	5
Lid Cover Broken- Hazardous	1
Inlet Stopped Up-Hazardous	1
Lid Cover Missing-Hazardous	1
STS - Street Lighting Street Lighting -Maintenance	10
Street Lighting - New/Relocation	70
STS - Street Operations Street Repair -Routine	90
Inlet/Storm Drain/Ditch Cleaning	45
Illegal Dumping (Referrals from Code)	90
Median/ROW Maint - STS Operations	14
Inclement Weather - Tree Down/Low Limbs	5
Guardrail Repair - Routine	14
Sand Removal Request	90
Street Sweeping	30
Alley Repair - Routine	90
Visibility Obstruction	14
Graffiti City Streets & Bridges	14
Roll Off Container	90
Lid Cover Broken - Routine	14
Shopping Cart Routine Pickup	14
Inlet/Storm Drain/Drainage Ditch Repairs	45
STS - Street Operations High Weeds (Referral to Streets-Private)	14
Bike Paths/Routes	14