AGENDA

CITY COUNCIL SPECIAL MEETING

CAPITAL IMPROVEMENTS PLAN (CIP)

OCTOBER 17, 2023, 4:00 - 6:00 PM

Notice is hereby given the City Council for the City of Parker will meet on Tuesday, October 17, 2023 at 4:00 – 6:00 PM at the Parker City Hall, 5700 E. Parker Road, Parker, Texas, 75002. The City Council meeting will be open to the public and live streamed.

Pursuant to Texas Government Code § 551.127, notice is given that it is the intent of the City Council that a quorum of the Council will be physically present for the above-referenced meeting at Parker City Hall, 5700 E. Parker Road, Parker, Texas. Some council members or City employees may participate in this meeting remotely by means of video conference call in compliance with state law.

CALL TO ORDER – Roll Call and Determination of a Quorum

PUBLIC COMMENTS **The City Council invites any person with business before the Council to speak to the Council. No formal action may be taken on these items at this meeting. Please keep comments to 3 minutes.**

WORKSHOP

1. CAPITAL IMPROVEMENT PLAN (CIP)

   CONSIDERATION OF PHASED APPROACH

ADJOURN

In addition to any specifically identified Executive Sessions, Council may convene into Executive Session at any point during the open meeting to discuss any item posted on this Agenda. The Open Meetings Act provides specific exceptions to the requirement that a meeting be open. Should Council elect to convene into Executive Session, those exceptions will be specifically identified and announced. Any subsequent action, as a result of this Executive Session, will be taken and recorded in open session.

I certify that this Notice of Meeting was posted on or before October 13, 2023 by 5:00 p.m. at the Parker City Hall and required by Texas Open Meetings Act (TOMA) is also posted to the City of Parker Website at www.parkertexas.us.

Date Notice Removed

Patti Scott Grey

City Secretary

The Parker City Hall is Wheelchair accessible. Sign interpretations or other special assistance for disabled attendees must be requested 48 hours in advance by contacting the City Secretary's Office at 972 442 6811.

Council Agenda Item

Budget Account Code:	Meeting Date:	See above.
Budgeted Amount:	Department/ Requestor:	Council
Fund Balance-before expenditure:	Prepared by:	City Secretary Scott Grey for City Administrator Olson
Estimated Cost:	Date Prepared:	October 5, 2023
Exhibits:	*Please review information provided.*	

AGENDA SUBJECT

WORKSHOP:

CAPITAL IMPROVEMENT PLAN (CIP)

CONSIDERATION OF PHASED APPROACH

SUMMARY

Please review information provided.

POSSIBLE ACTION

City Council may direct staff to take appropriate action.

Inter – Office Use

Approved by:	Enter Text Here		
Department Head/ Requestor:	Patti Scott Grey	Date:	10/12/2023
City Attorney:	Amy J. Stanphill	Date:	10/xx/2023 via Municode
City Administrator:	Luke B. Olson	Date:	10/ xx /2023

BIRKHOFF, HENDRICKS & CARTER, L.L.P.
PROFESSIONAL ENGINEERS
Texas Firm F526

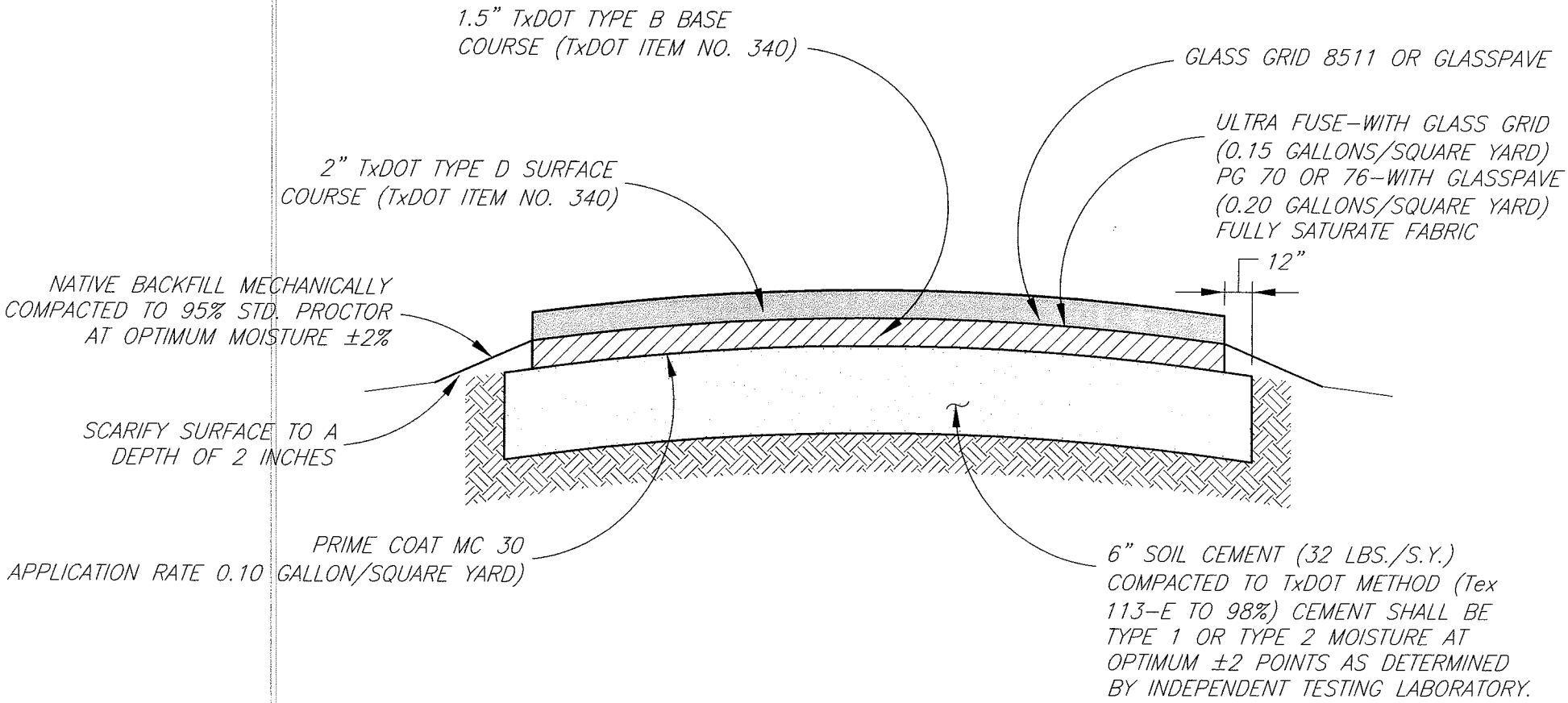
Project No. 4096-306

Client: CITY OF PARKER, TEXAS
Project: Roadway Remix & Glass Pave Dublin Road - Betsy to City Limit
25 Foot Width Remix Repave 5,300 L.F. 132,500 Square Feet

Date: 18-Aug-23
By: J.W.B.

ENGINEER'S OPINION OF CONSTRUCTION COST

Item No.	Description	Quantity	Unit	Price	Amount
1	For Scarifying, Mixing Existing Surface & Base, and Mechanically Compacting	14,725	S.Y.	$ 25.00	$ 368,125.00
2	For Cement Mixing (32 #/s.y.)	236	Tons	$ 240.00	$ 56,640.00
3	For MC30 Prime Coat 0.10 Gal/S.Y.	1,473	Gal.	$ 1.50	$ 2,209.50
4	For Furnishing & Laying 1.5-Inch HMAC Type "B"	1,215	Tons	$ 150.00	$ 182,250.00
5	For AC25TR Tack Coat / PG-70 / PG-76 0.2 Gal./S.Y.	2,945	Gal.	$ 3.50	$ 10,307.50
6	For GlasPave® 50	14,725	S.Y.	$ 7.00	$ 103,075.00
7	For Furnishing & Laying 2-Inch HMAC Type "D" Roadway Surface on Compacted subgrade, including Tack Coat	1,620	Tons	$ 170.00	$ 275,400.00
8	For Roadway Edge Grading	10,600	L.F.	$ 4.00	$ 42,400.00
9	For Barricades	1	L.S.	$ 20,000.00	$ 20,000.00
10	Thermo Plastic Stop Lines	1	EA.	$ 800.00	$ 800.00
	Subtotal:				**$ 1,061,207.00**
				Contingency (25%):	$ 265,301.75
				Testing (3%):	$ 31,836.21
				Engineer 3% [No Engineering Plans]:	$ 31,836.21
				Total:	**$ 1,390,181.17**



NOTES:

1. NO RECYCLED ASPHALT (RAP) IS ALLOWED.
2. PROVIDE IN–PLACE DENSITY TEST EVERY 500 FEET OF COMPACTED WORK TO THE CITY.
3. PLACE FABRIC OR GRID WITH MECHANICAL LAYDOWN MACHINE.
4. SURFACES SHALL BE CLEAN PRIOR TO PLACING TACK COATS.
5. FABRIC OR GRID SHALL LAY FLAT WITH NO WRINKLES. WRINKLES SHALL BE REMOVED BY LIFTING AND PLACING OR CUT WITH OVERLAP IN DIRECTION OF PAVING EQUIPMENT.

ROADWAY REMIX & GLASS GRID

CITY OF PARKER, TEXAS

ROAD REHABILITATION

BIRKHOFF, HENDRICKS & CARTER, L.L.P.
PROFESSIONAL ENGINEERS
TBPE Firm No. 526; TBPLS Firm No. 10031800
11910 Greenville Ave., Suite 600 Dallas, Texas 75243 (214) 361-7900

JULY 2023

BIRKHOFF, HENDRICKS & CARTER, L.L.P.
PROFESSIONAL ENGINEERS
Texas Firm F526

Project No. 4096-306

Client: CITY OF PARKER, TEXAS
Project: S-Curve Reconstruction Paving Only Edgemere to Creekside
1,250 L.F. 25 Foot Width

Date: 18-Aug-23
By: J.W.B.

ENGINEER'S OPINION OF CONSTRUCTION COST

Item No.	Description	Quantity	Unit	Price	Amount
1	Unclassified Excavation	1,495	C.Y.	$ 25.00	$ 37,375.00
2	Flex Base / Crushed Concrete	1,250	C.Y.	$ 70.00	$ 87,500.00
3	Prime Coat MC30 - 0.10 Gal./S.Y.	350	Gal.	$ 1.50	$ 525.00
4	Type B Asphalt 1.5 inches	290	Ton	$ 165.00	$ 47,850.00
5	ACTR 25 / PG 70 / PG 76 / 0.2 Gal./S.Y.	700	Gal.	$ 2.55	$ 1,785.00
6	For GlasPave® 50	3,472	S.Y.	$ 7.00	$ 24,304.00
7	Type D Asphalt 2.0 Inches	385	Ton	$ 170.00	$ 65,450.00
8	Double Yellow Center Line	800	S.F.	$ 5.00	$ 4,000.00
9	Edge Fill	100	C.Y.	$ 50.00	$ 5,000.00
10	3 Stop Signs with Post	6	EA.	$ 500.00	$ 3,000.00
11	Barricades	1	L.S.	$ 10,000.00	$ 10,000.00
	Subtotal:				**$ 286,789.00**
				Contingency (25%):	$ 71,697.25
				Testing (3%):	$ 8,603.67
				Engineer (10%):	$ 28,678.90
				Total:	**$ 395,768.82**

Summary of CIP meeting 8/8/2023

8/8 CIP Meeting Summary

- Defined the initial scope to include roads, drainage, water
- Subsequent scope to include building facilities
- Discussed previous work which identified priority streets
  - Collector, Residential
  - Phase 1, Phase 2
- Discussed Dublin Road S-curve (reconstruction and drainage issues)
- Discussed different road repair methods
  - Reconstruct, Remix, Overlay, Fog/Slurry Sealant
- Discussed an estimate of funds available for 2023-2024
- Created an initial high-level draft proposal to allocate funds toward projects (next page)
  - Consideration for High Traffic Collector Streets, Safety, Severe/Very Poor condition Residential Streets
- Noted that we should not move forward with Streets until Drainage and Water lines are scoped
- AR: Council to consider the initial draft proposal for 2023-2024 dtreetsand bring additional thoughts/questions/alternative proposals to the next meeting
- AR: Luke/Gary: Obtain more detailed cost estimates for Lewis, Curtiss and the South Dublin Road S-Curve in detail (safety) and to also look at Church, Grey and Donihoo for poor PCI numbers

Draft Initial Proposal – Street Repairs

Phase	Area	Street	Section	LF	Current Street Width	Avg DTV	Condition	Rating	Resurface Method	Cost/sqft	Total Sqft	Estimated Cost	Cost Estimate
	Collector Streets												
1	SW	Dublin Road - South	South	5,907	20	1,456	Very Poor	30-33	Reconstruct		118,140		200000 and 200000 N&S patching
1	NE	Lewis Lane		3,286	20	781	Poor	40	Reconstruct		65,720		200,000
2	SW	Dublin Road - North	North	7,957	20	1,640		45-50	Reconstruct		159,140		
2	NE	Curtis Road ^		1,783	21	1,185		40			37,443		200000
	Total Collector			18,933									
	Residential Streets												
1	NW	Church Lane		2,172	22		Severe	20	Reconstruct		47,784		200000
1	SW	Grey/Gray Lane		2,211	19	Preserve Access	Very Poor	25	Remix		42,017		200000
1	SW	Gregory Lane (Grey to Hogge)	Gray to 2551	1,277	22	289	Poor	40	Remix		28,094		
1	NW	Hackberry Lane	Donihoo to PecanOrchard	1,763	21	458	Poor	40	Reconstruct		37,023		
1	NE	Pecan Orchard (Springhill Estates to Hackberry Lane)	Springhill Estates to Hackberry Lane	1,146	20	433	Poor	50	Remix		22,920		
1	SE	Moss Ridge *		6,195	24		Fair	55			148,676		
2	NW	Donihoo Lane		2,037	21		Very Poor	35	Reconstruct		42,777		200000
2	SW	Gregory Lane (Bridge to end)	Bridge to End	4,171	22		Poor	40	Remix		91,762		
2	NW	Hackberry (Pecan Orchard to Cul de Sac)	Pecan Orchard to Cul-de-Sac	1,674	21		Poor	40	Reconstruct		35,154		
2	SW	Ranchview		1,002	19	109	Poor	40	Remix		19,039		
2	SW	Woodcreek		668	19		Poor	40	Remix		12,695		
2	NW	Kara Lane		2,606	20	287	Poor	45	Overlay		52,120		
2	NE	Pecan Orchard Drive (Hackberry to Cul de Sac)	Hackberry Lane to Cul de sac	1,088	20		Poor	50	Remix		21,760		
2	NW	Wagon Wheel		1,676	24	183	Poor	50	Remix		40,224		
2	NW	Windmill Creek Drive *		1,628	22		Poor	50	Overlay		35,816		
2	NW	Sycamore Lane		5,319	18	375		55	Reconstruct		95,742		
	Total Residential			36,633									

Discussion Material for CIP meeting 8/22/2023

Parker CIP Projects

Collector Roads that Require Reconstruction

- Dublin Road
- Lewis Lane
- Curtis Lane

*Need to also include plans for drainage and water lines

Types of Road Failures

1. Ruts

The longitudinal depressions or cuts in the flexible pavement are known as ruts. These are usually formed ion earth or W.B.M roads of one lane width due to repetitive traffic wheel loads on the same location, particularly under wheeled traffic.

5. Longitudinal Cracking

The formation of cracks in the longitudinal direction of road pavement is called longitudinal cracking.

This failure is caused due to frost action, different volume changes in subgrade, settlement of filling material, or due to sliding of side slopes.

6. Map Cracking

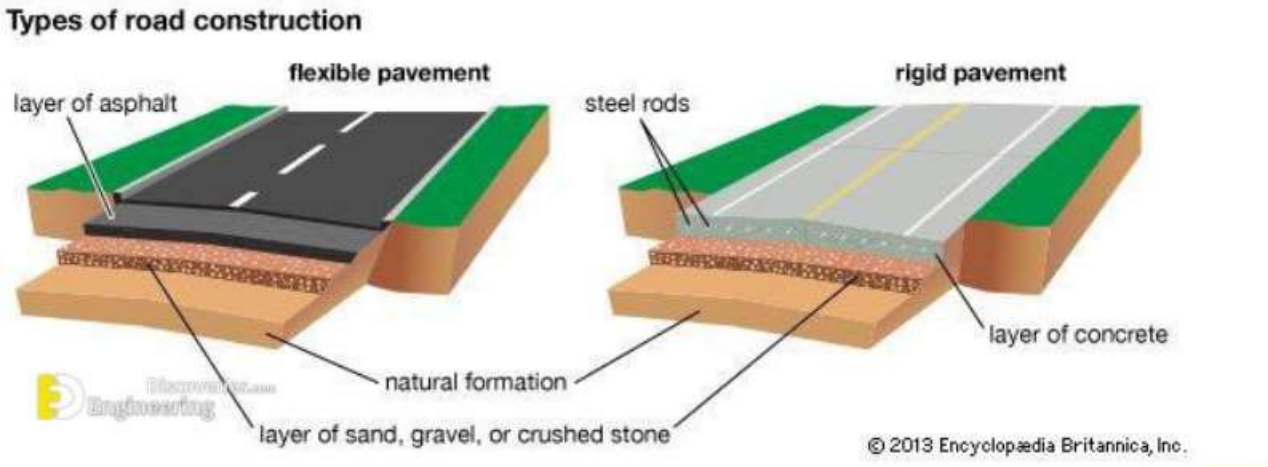
The development of irregular cracks, usually formed on bituminous surfacing is called map cracking.

This type of flexible road failure is due to excessive wear of the road surface or localized weakness in the underlying base course.

Dublin Road

- Dublin Road is a high traffic volume collector street
- Due to the extent of the “Aligator/Map Cracks”, Rut damage, and portions of failed base, Overlay method is not recommended
- Need to define the reconstruction method
- Reconstruction may include the following steps
  - Demolish, Haul Off, and/or “Recycle in Place” the existing asphalt
  - Prepare the roadway to be ready for flex base
    - Assume that we will widen the Street to 22 feet
  - Apply and compact a 12” flex base layer
  - Cover with 1.5” asphalt layer
  - Apply a primer/adhesion layer and GlasPave Road Fabric
  - Cover with 2” asphalt top layer
  - Apply Topcoat Sealant and Paint stripes and/or use reflective center markers
- Traffic control and “Right of Way” are needed

Reconstruction method



	Flexible Pavement	Rigid Pavement
1.	It consists of a series of layers with the highest quality materials at or near the surface of pavement.	It consists of one layer Portland cement concrete slab or relatively high flexural strength.
2.	It reflects the deformations of subgrade and subsequent layers on the surface.	It is able to bridge over localized failures and area of inadequate support.
3.	Its stability depends upon the aggregate interlock, particle friction and cohesion.	Its structural strength is provided by the pavement slab itself by its beam action.
4.	Pavement design is greatly influenced by the subgrade strength.	Flexural strength of concrete is a major factor for design.
5.	It functions by a way of load distribution through the component layers	It distributes load over a wide area of subgrade because of its rigidity and high modulus of elasticity.
6.	Temperature variations due to change in atmospheric conditions do not produce stresses in flexible pavements.	Temperature changes induce heavy stresses in rigid pavements.
7.	Flexible pavements have self healing properties due to heavier wheel loads are recoverable due to some extent.	Any excessive deformations occurring due to heavier wheel loads are not recoverable, i.e. settlements are permanent

Difference between Flexible Pavements and Rigid Pavements

courtesy: www.theconstructor.org

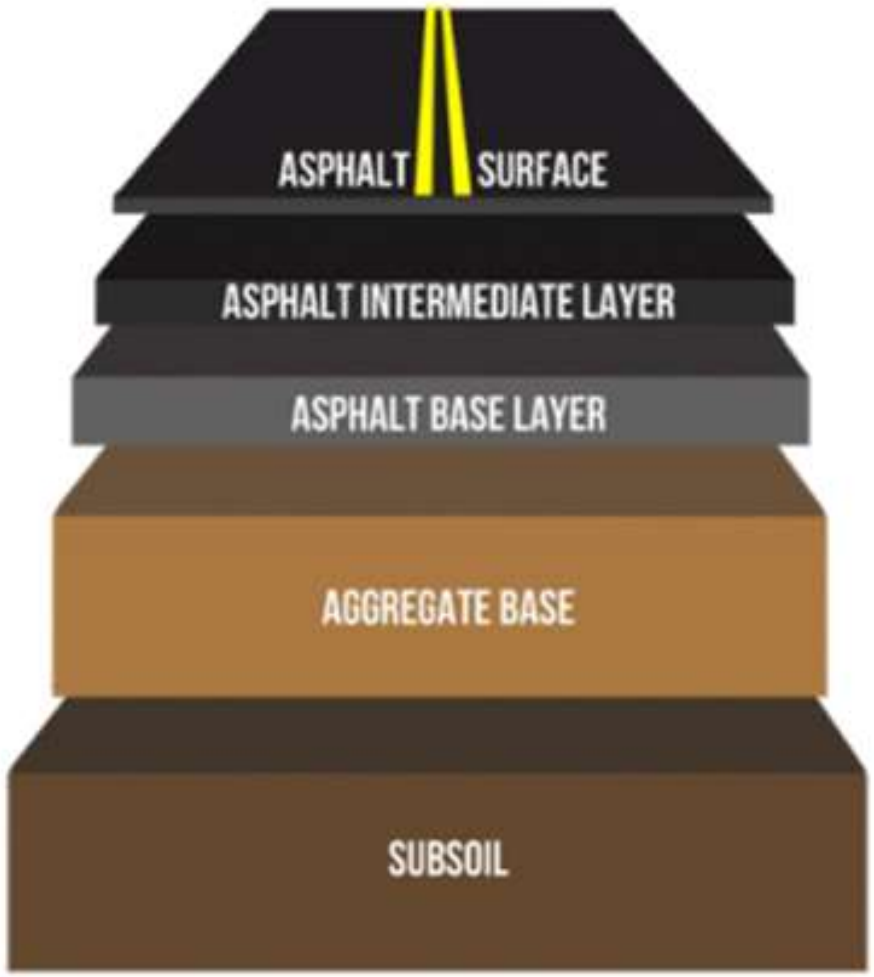
Reconstruct Cost Analysis

- Define the reconstruction method
  - For straight road segments versus S-Curve
- The goal is to achieve the most cost-effective price per square foot
  - Without sacrificing quality
- It will be important to get cost estimates for each layer/line item
- While prices for materials and labor do fluctuate, we need to assess ways to minimize the cost/sqft while maintaining quality

Estimated cost/sqft to Reconstruct with a Flexible Asphalt Road

Description	Cost/sqft
Recycle existing asphalt in place	$1.00
Flex Base Material (12" depth)	$1.00
Flex Base Delivery Fee	$1.68
Spreading and compacting the flex base	$0.50
Asphalt 1.5" sublayer	$3.00
GlasPave Material	$0.50
Asphalt 2" top layer	$3.00
Total	$10.68

Preliminary, Subject to Change (Not Verified, May Vary Widely)



Flexible Asphalt Road Layers

*Note: Engineer's Budgetary Cost Estimate to Reconstruct with Flex Base = $16.25/sqft

*Note: Engineer's Budgetary Cost Estimate to Remix = $10.20/sqft

Cost Analysis – Dublin Road South

- Demolition/Removal/Recycle existing Asphalt
  - What is the most cost-effective way to remove or reuse the existing asphalt?
- Grading and preparation of the sub-base
  - What is the scope of work for this phase and what is the estimated cost?
  - How many core samples are required and what impact could the data have on the project?
    - (12 core samples were recommended, can we get by with 3 or 4?)
- Flex Base
  - Need to consider the cost of the material and delivery cost
  - Need to know the specific grade or type of Flex Base and get pricing (from several sources)
  - Vendor “A” material cost = $15.00/ton, delivery $25.50/ton (Assumes 1.65 ton/cu yd)
  - Vendor “B” material cost = $59.00/cu yd, delivery cost $11.00/cu yd
- Asphalt base layer, Intermediate Asphalt Layer and Surface Layer
  - Need a cost estimate
  - Example: Vendor “C” estimated $3.00/sqft for a 2” asphalt overlay on an existing road
    - Need estimate for new construction asphalt road layers
- GlasPave
  - Which type do we need?
  - GlasPave 50 estimate $0.45 – $0.50 per square ft.
  - GlasPave 25 estimate $0.19 per square ft.

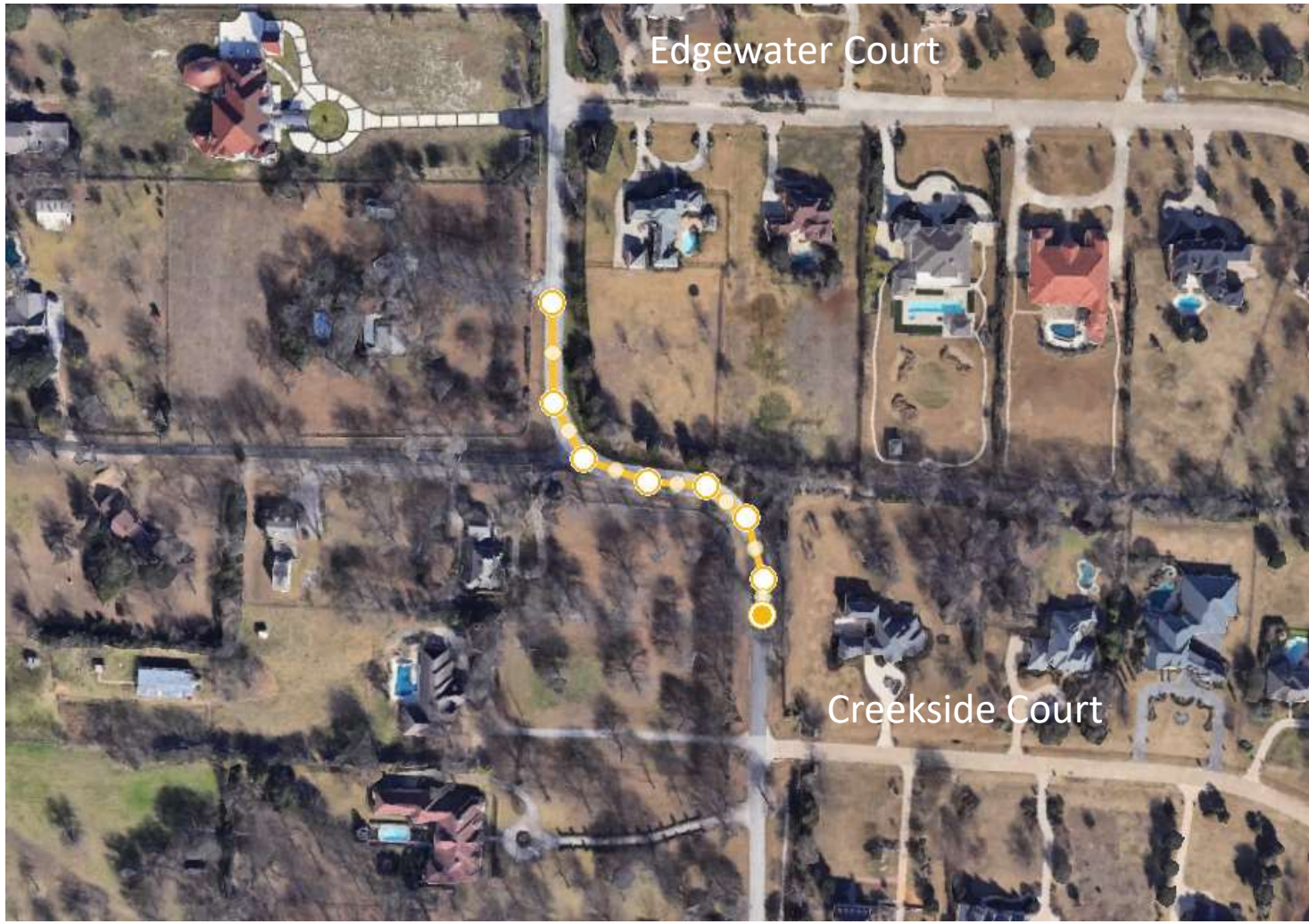
Cost Guidance from our City Engineer

Title	Product	Description	Cost	Cost/sqft
Concrete	Concrete	6" reinforced concrete w/ 6" lime treated subgrade	637	$26.54
Reconstruct	Asphalt	12' flexbase material, 1.5" asphalt, glass pave, and 2" asphalt	390	$16.25
Remix	Asphalt	remix existing roadbed w/ cement, placing 1" asphalt with glass pave and 1.5" asphalt	245	$10.20
Overlay	Asphalt	2" overlay with glas pave between existing and new	110	$4.58

- Also need to account for the design and costs for drainage, engineering, water lines, Right of Way, Traffic Control

Dublin Road S-Curve

- Full Reconstruction of the Road Base with flexible asphalt road
- 600 linear feet is shown
- Need to address drainage



Dublin Road South Cost Analysis and Proposal (Estimated)

- Assume Full Reconstruction of the Road Base with flexible asphalt road for 600 linear feet through the S-Curve
- Assume Remix method to be used for the straight roadway sections of Dublin Road South
- Is this a recommended solution?

Dublin Road South	
Length of section (linear ft)	5,907
New Road width (ft)	22
Total sqft	129,954
S-Curve Sub-Section	
Length of subsection section (lf)	600
New width of sub-section (lf)	22
Total stft for S-Curve sub-section	13,200
Cost per sqft (Full Reconstruction)	16.25
Total cost for S-Curve Sub Section	**$ 214,500.00**
Remaining Straight Road Sections for Dublin Road South	
Length of remaining straight roadway sections (5907 - 600)	5,307
New width of straight roadway sections	22
Total sqft for straight roadway sections	116,754
Cost per sqft (Remix)	10.2
Total cost for straight roadway sections for Dublin Road South	**1190890.8**
Total cost estimate for combination of Reconstruction and Remix	**$ 1,405,390.80**

Dublin Road Drainage

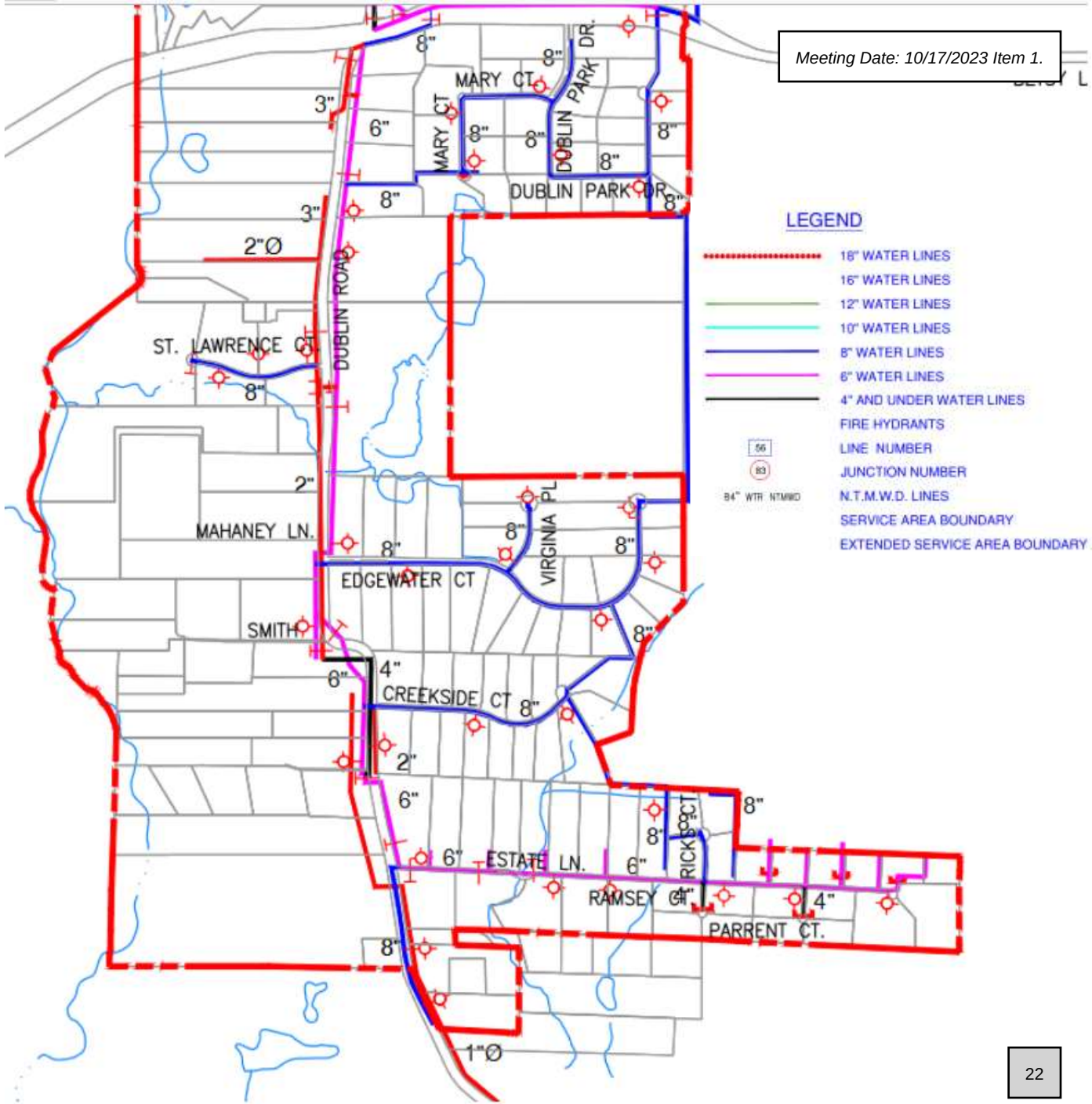
- Can we summarize the issue associated with drainage along the S-Curve?
  - Where does water collect or become obstructed from flowing?
- What are the options for a solution?
  - Mr. Birkhoff described one option to route the water to the East but requires an easement
  - Another option was to first route to the south then connect with an existing drainage channel
  - Can we see these options drawn on a map?
- The estimate for drainage for Dublin Road South is shown as 1.9M
  - What is involved in the solution?
  - What are the cost elements/ line items?
    - Sizes, type and number of culverts needed and lengths
    - Excavation costs (trenches)
    - Reestablishing vegetation
    - Right of Way
    - Engineering
    - Other?

Water Lines on Dublin Road South

- Define the scope of work needed for the project
- What water lines need to be replaced?
- Will we also need to replace valves, hydrants, other?
- What are the cost elements/ line items associated with the project?
  - Type of pipes needed and length
  - Excavation (trenches)
  - Right of Way
  - Engineering
  - Other?

Water Lines on Dublin Road South

- Identify which water lines need to be replaced



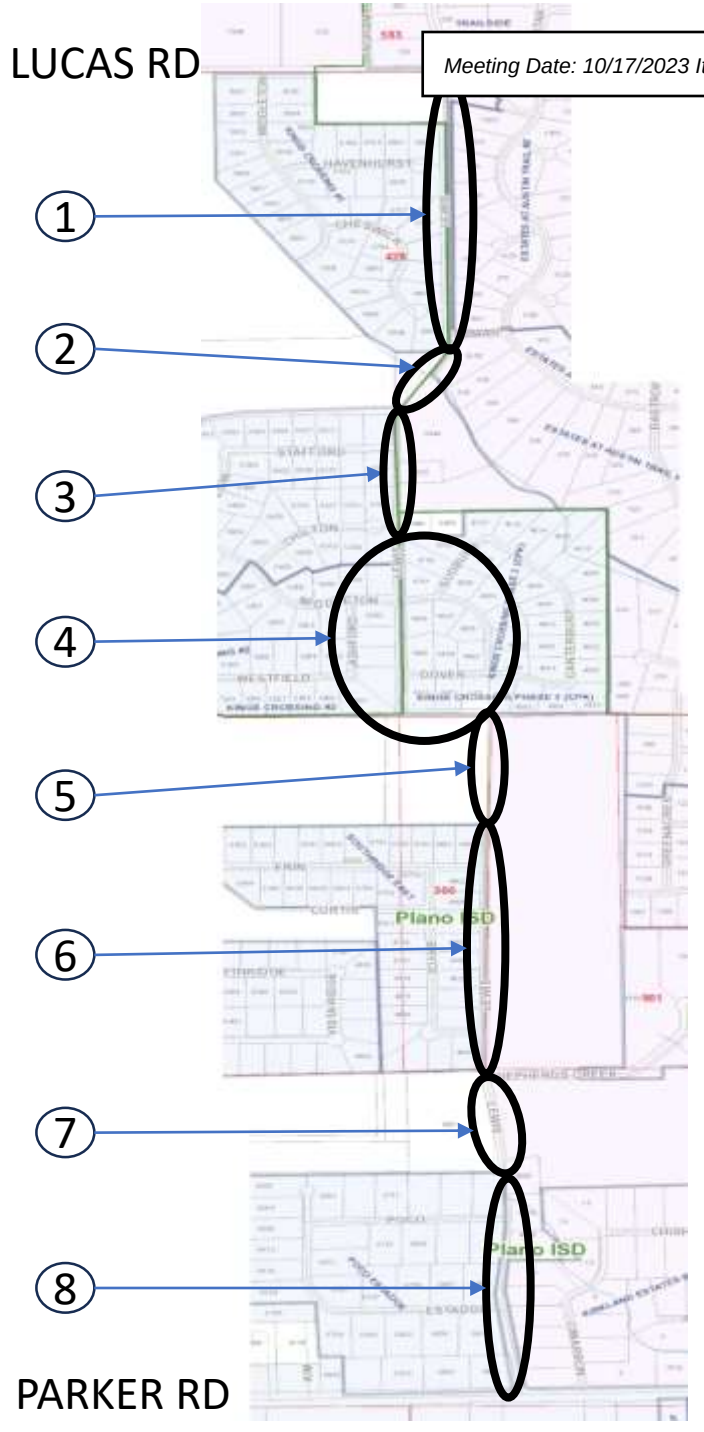
Lewis Lane

- Determine who owns each section
- Define the scope of work for 2023-2024
- Define the plan for near-term action and a long-term plan

Lewis Lane Right-of-Way

- Review the plats
- Discuss the issues
- Prepare a Plan
- Implement the Plan

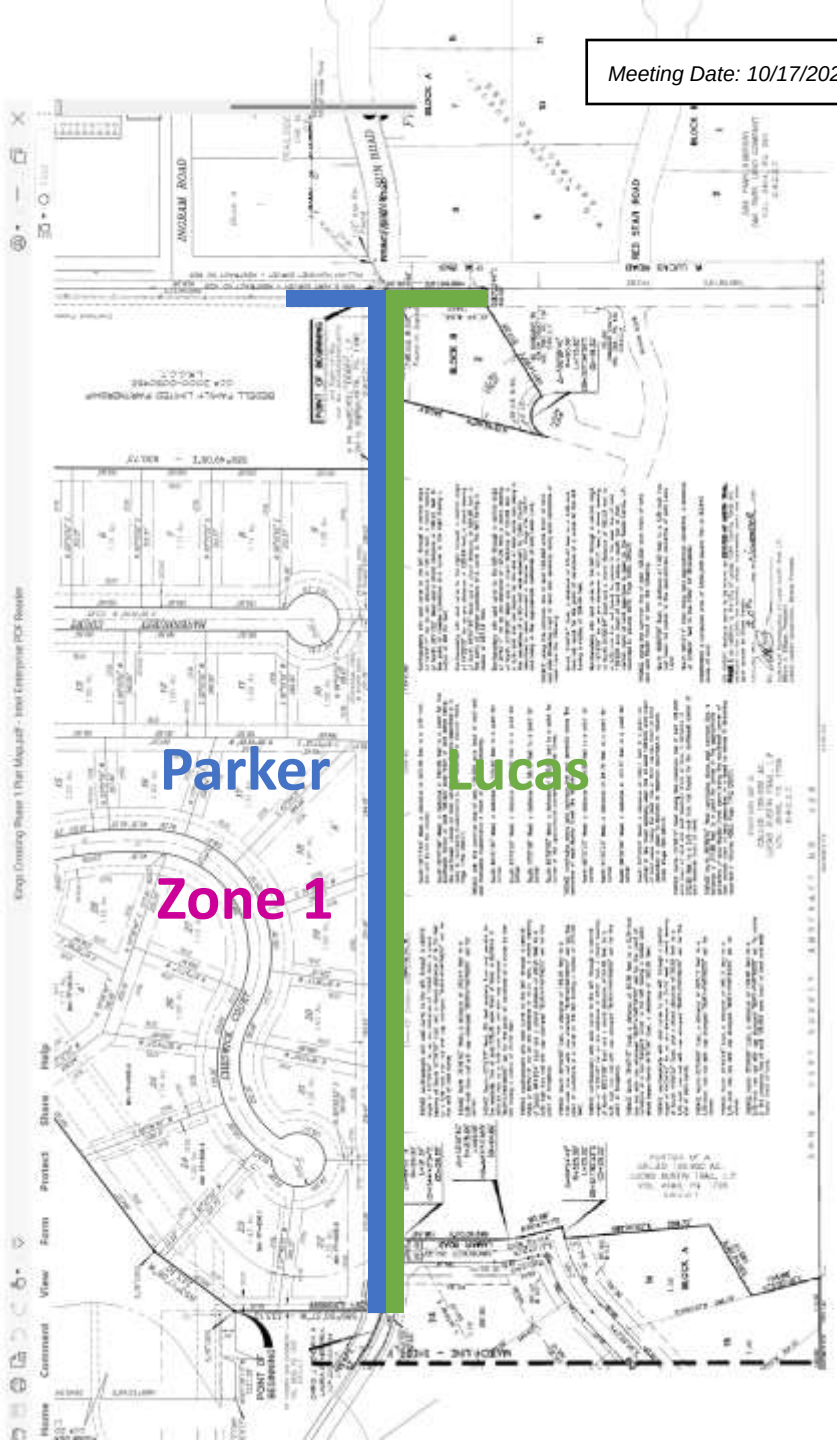
Right of Way Zones



Lewis Lane Right-Of-Way

Zone 1: From Lucas Road to the Southern border of Kings Crossing Phase 1

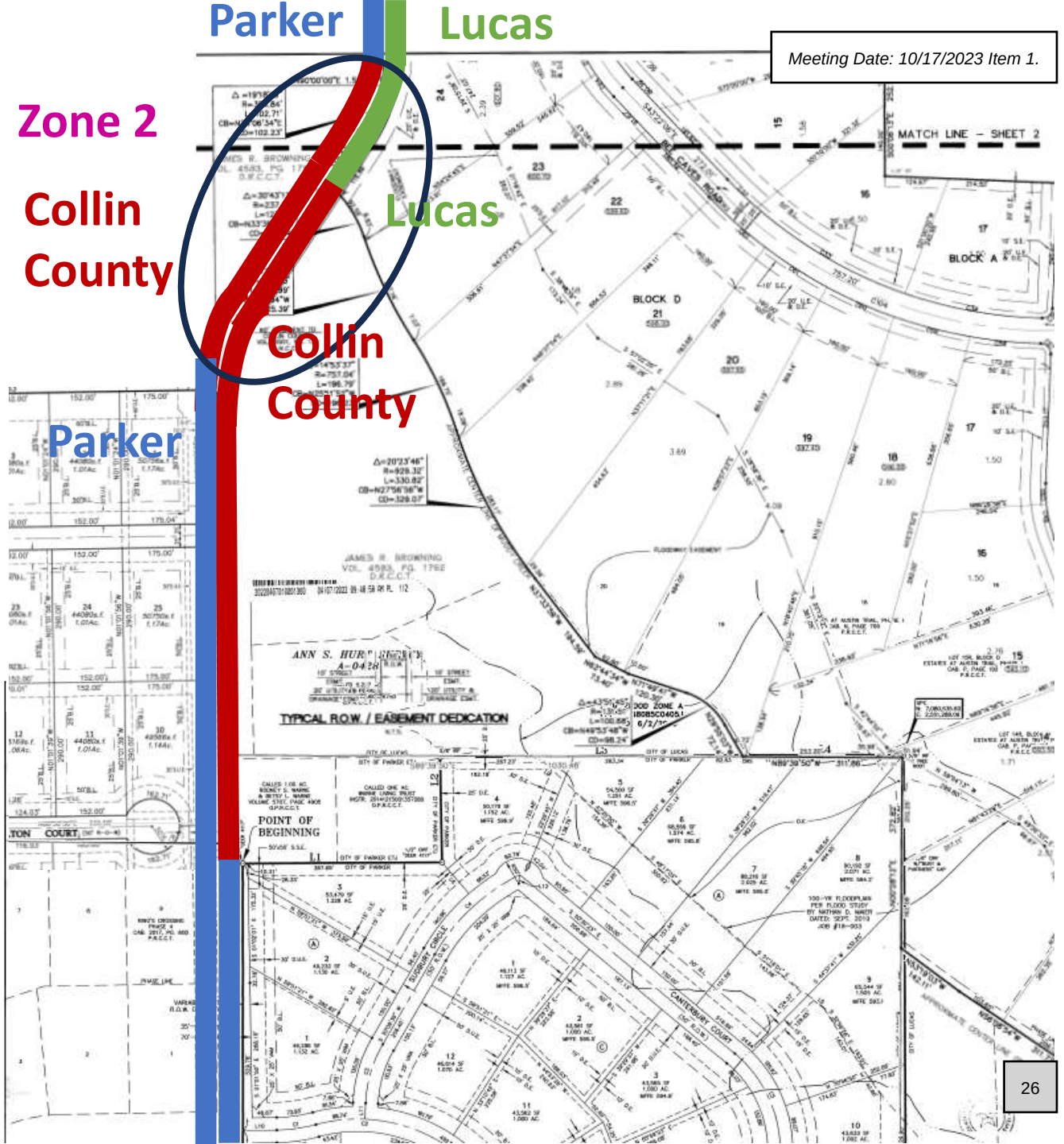
- Parker has Right of Way for the Southbound Lane (West Side)
- Lucas has Right of Way for the Northbound Lane (East Side)
- The Northbound Lane has significant damage
- Can we work together with Lucas to address the Northbound Lane damage?



Lewis Lane Right-Of-Way

Zone 2: From the Southern border of Kings Crossing Phase 1 to Northern border of Kings Crossing Phase 2

- Small Triangle partially owned by Lucas and Collin County
- Road Surface seemingly in good condition



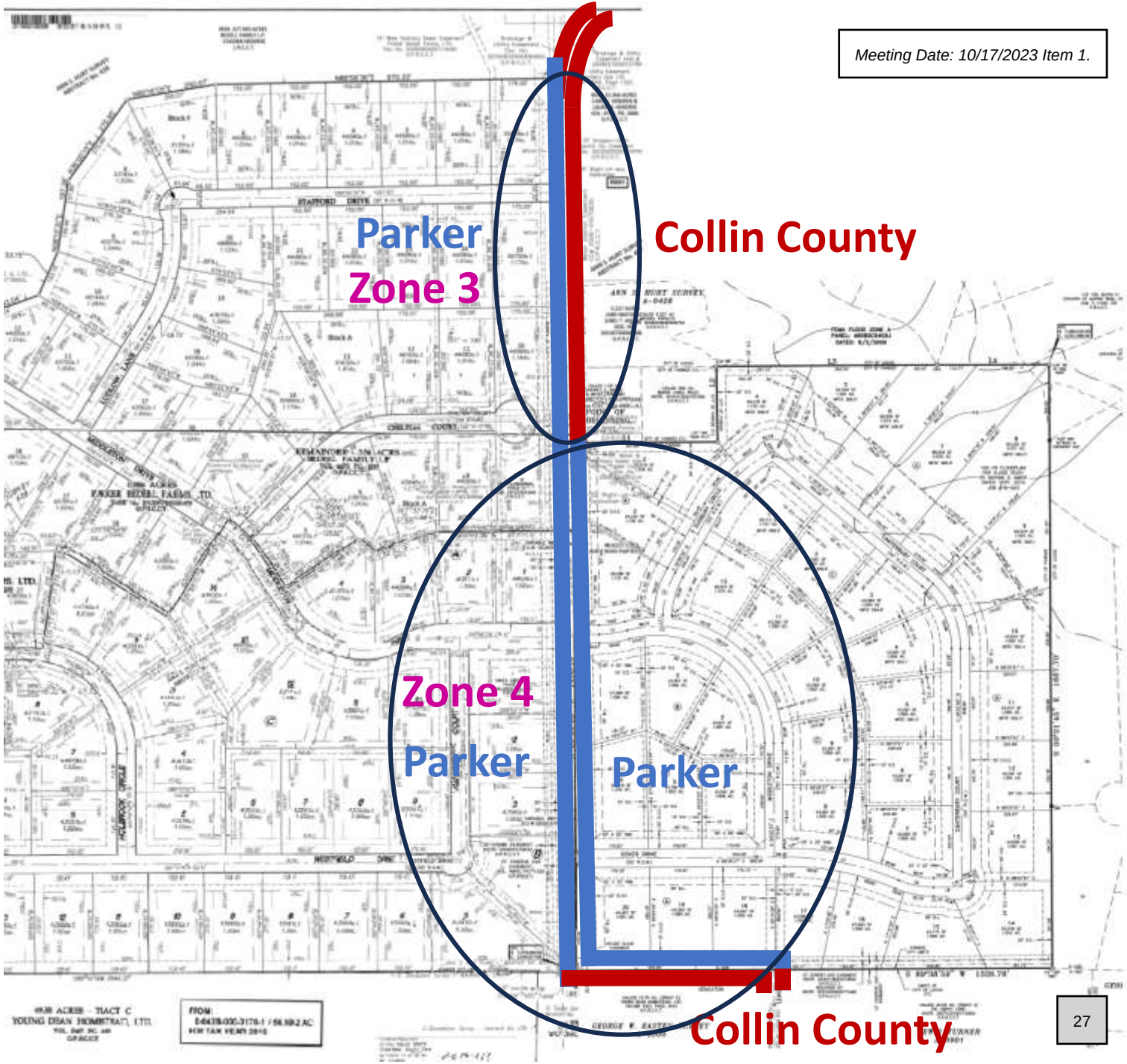
Lewis Lane Right-Of-Way

Zone 3: From Northern border of Kings Crossing Phase 2 to Northern Border of Kings Crossing Phase 3

- Partially owned by Parker and Collin County

Zone 4: From Northern border of Kings Crossing Phase 3 to Southern Border of Kings Crossing Phase 3

- Partially owned by Parker and Collin County
- Recently paved by the developer



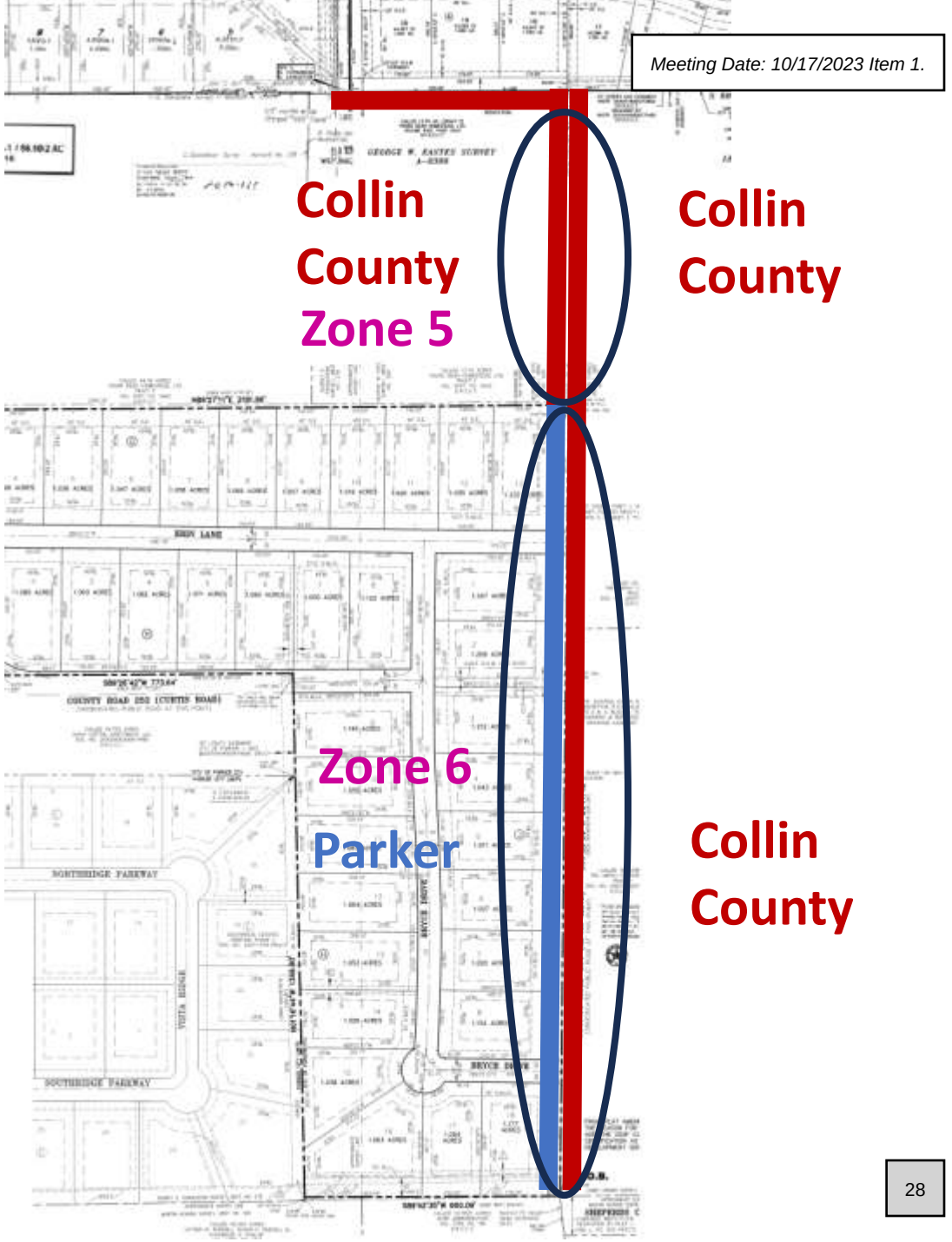
Lewis Lane Right-Of-Way

Zone 5: From Southern border of Kings Crossing Phase 3 to Southern Border of Northern Border of Southridge East

- Owned by Collin County

Zone 6: From Northern border of Southridge East to Southern Border of Southridge East

- Partially owned by Parker and Collin County



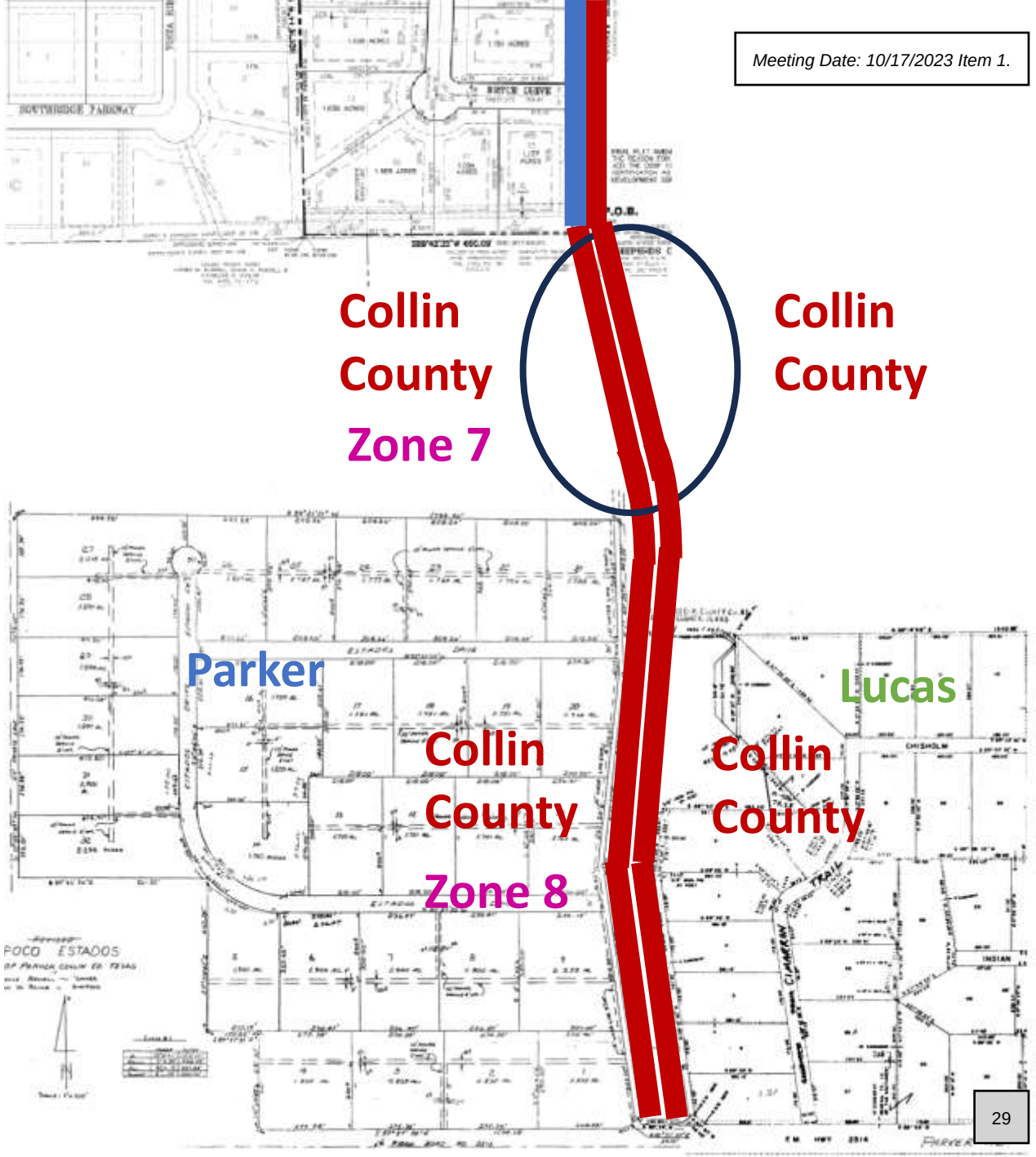
Lewis Lane Right-Of-Way

Zone 7: From the Southern border of Southridge East to the Northern border of Poco Estados

- Owned by Collin County

Zone 8: From the Northern border of Poco Estados to the Southern border of Poco Estados

- Owned by Collin County



Discussion and Next Steps

Phase	Area	Street	Section	LF	Current Street Width	Avg DTV	Condition	Rating	Resurface Method	Cost/sqft	Total Sqft	Estimated Cost	Cost Estimate	Drainage	Water	Safty Issues	FY23-24	FY24-25	FY25-26	FY26-27	FY27-28	FY28-29	FY29-30
	Collector Streets																						
1	SW	Dublin Road - South	South	5,907	20	1,456	Very Poor	30-33	Reconstruct	12.25	118,140	1,447,215	200000 and 200000 N&S patching				1,447,215						
1	NE	Lewis Lane		3,286	20	781	Poor	40	Reconstruct		65,720		200,000				300,000						
2	SW	Dublin Road - North	North	7,957	20	1,640		45-50	Reconstruct		159,140								1,800,000				
2	NE	Curtis Road ^		1,783	21	1,185		40			37,443		200000				75,000						
	Total Collector			18,933																			
	Residential Streets																						
1	NW	Church Lane		2,172	22		Severe	20	Reconstruct		47,784	?	200000						?				
1	SW	Grey/Gray Lane		2,211	19	Preserve Access	Very Poor	25	Remix		42,017		200000				200,000						
1	SW	Gregory Lane (Grey to Hogge)	Gray to 2551 Donihoo to	1,277	22	289	Poor	40	Remix		28,094												
1	NW	Hackberry Lane	PecanOrchard	1,763	21	458	Poor	40	Reconstruct		37,023												
1	NE	Pecan Orchard (Springhill Estates to Hackberry Lane)	Springhill Estates to Hackberry Lane	1,146	20	433	Poor	50	Remix		22,920												
1	SE	Moss Ridge *		6,195	24		Fair	55			148,676						256,000						
2	NW	Donihoo Lane		2,037	21		Very Poor	35	Reconstruct		42,777		200000										
2	SW	Gregory Lane (Bridge to end)	Bridge to End	4,171	22		Poor	40	Remix		91,762												
2	NW	Hackberry (Pecan Orchard to Cul de Sac)	Pecan Orchard to Cul-de-Sac	1,674	21		Poor	40	Reconstruct		35,154												
2	SW	Ranchview		1,002	19	109	Poor	40	Remix		19,039												
2	SW	Woodcreek		668	19		Poor	40	Remix		12,695												
2	NW	Kara Lane		2,606	20	287	Poor	45	Overlay		52,120												
2	NE	Pecan Orchard Drive (Hackberry to Cul de Sac)	Hackberry Lane to Cul de sac	1,088	20		Poor	50	Remix		21,760												
2	NW	Wagon Wheel		1,676	24	183	Poor	50	Remix		40,224												
2	NW	Windmill Creek Drive *		1,628	22		Poor	50	Overlay		35,816												
		Springhill Seal Coat																50,000					
2	NW	Sycamore Lane		5,319	18	375		55	Reconstruct		95,742												
	Total Residential			36,633														100,000					
																	2,278,215						

From: Luke Olson
To: Patti Grey
Subject: Fwd:
Date: Thursday, September 28, 2023 1:22:35 PM

Include this in packet for CIP pleaae

Get Outlook for iOS

From: Luke Olson <lolson@parkertexas.us>
Sent: Wednesday, September 27, 2023 2:10 PM
To: Luke Olson <lolson@parkertexas.us>
Subject:

The City of Parker will have the following pricing:

Mobilizations: Included for Cement Stabilization and $2,000 for each location
Traffic Control - $1,500 for every day flagging required (on average $1,500 every 600 tons)

Type B – Dallas County Interlocal less than 500 tons per street ($152.57 per ton)
Type B – Dallas County Interlocal more than 500 tons per street ($126.65 per ton)

Type D - Dallas County Interlocal less than 500 tons per street ($163.50 per ton)
Type D - Dallas County Interlocal more than 500 tons per street ($139.83 per ton)

Ellis County Interlocal Stabilization - $9.88 per SY includes Cement

Thank you,

Luke B. Olson
City Administrator

Luke Olson

Subject: FW: Dublin Road
Attachments: Dublin Road Estimate.pdf

From: Craig Kerkhoff
Sent: Tuesday, July 19, 2022 11:53 AM
To: Gary Machado <GMachado@parkertexas.us>
Subject: Dublin Road

Gary,

Here's a cost estimate for putting in a 24-foot wide concrete roadway thru the S curves and approx. 100-ft back each direction. Doesn't including engineering and assumes no ROW needed.

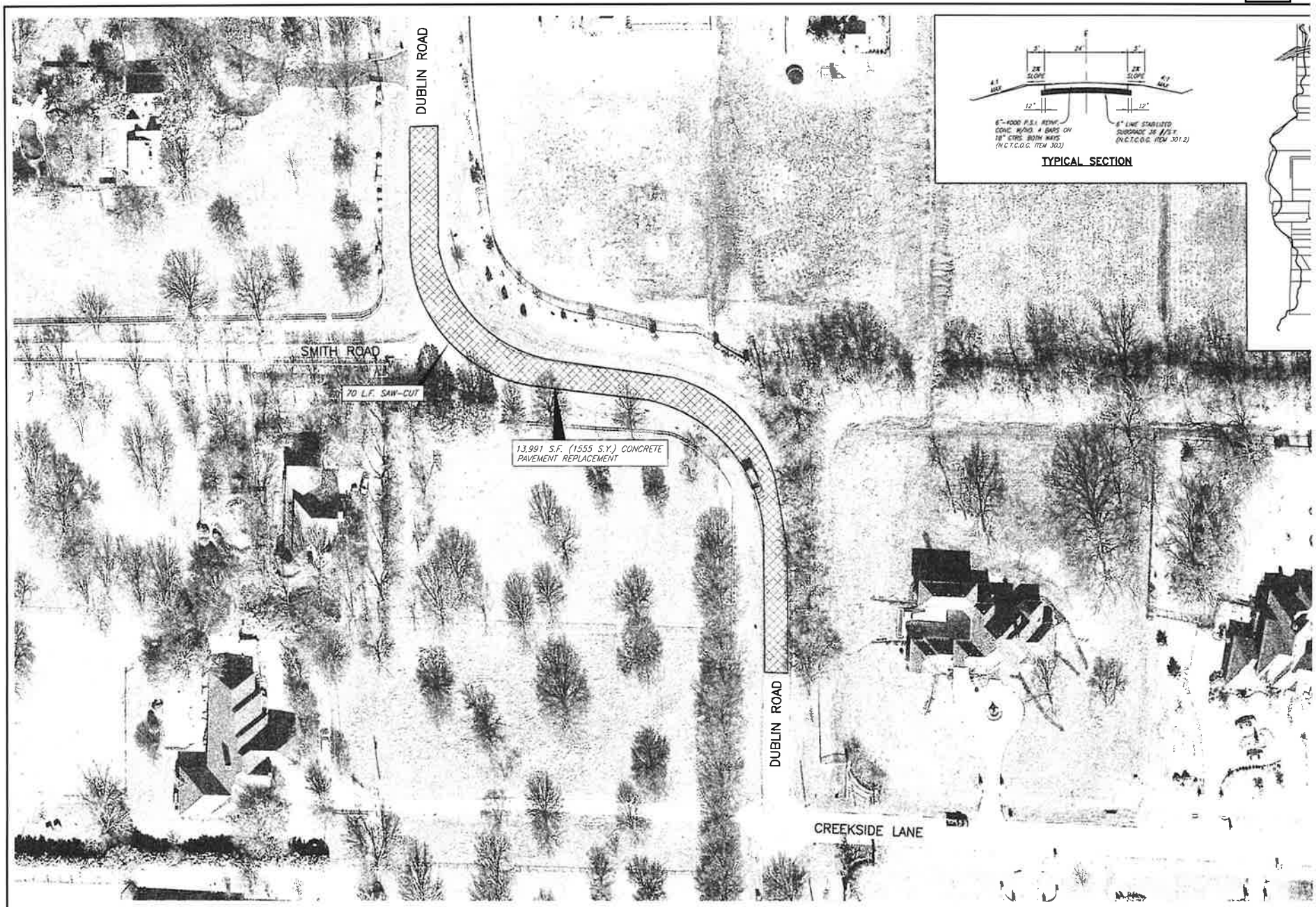
For the storm water, there really isn't a great answer just doing a quick look at it. The east side of the road appears to function as intended. The water travels down the channel from the north on the east side, where it intersects with a separate channel just north of Creekside Ct where it goes thru a culvert. Looking at the property on the northside of Creekside Ct, there is a 25-ft drainage easement in that yard, so it appears the side yard of that house was intended to convey the storm water flow.

The west side is flat and is where the water appears to be ponding. There is not a well defined channel on that side with the land being pretty flat. Thru the curve it can't drain across the adjacent property. The few options at a quick glance, such as this, would be to try to get an easement adjacent to the private drive of Smith Rd (that has several mature trees in the route) and dig the channel deeper to move the water. Or put in a storm water pump in the middle of the S curve and pump the storm water to a location in the channel that could convey it. The ponding water adjacent to the roadway is likely causing the subgrade to become saturated resulting in the failed roadway surface.

In short, to find a permanent solution we could recommend for construction, we'd need to do a drainage study of this area to determine the most feasible route with associated costs. For today's "rough" estimate, I'd double the cost of the roadway in this section to temporarily solve the drainage problems. So approx. $250k for the road and another $250k to get easements thru private property and dig out that channel down to Rowlett Creek or put in a storm water pump and force main.

Craig M. Kerkhoff, PE, CFM
Birkhoff, Hendricks & Carter, L.L.P.
TBPE Firm F526, TBPLS Firm 100318
11910 Greenville Ave., Suite 600
Dallas, Texas 75243
(P) 214-361-7900
(F) 214-461-8390

Birkhoff, Hendricks & Carter, L.L.P.
To excel in consulting municipal engineering
through creative, professional and ethical practice



These plans and related specifications were prepared for construction of the specific project only. Reuse of these documents is not permitted without written authorization of Birkhoff, Hendricks & Carter, L.L.P. if this drawing is converted to an electronic file, if any discrepancy occurs between the electronic file and the birkhoff, Hendricks & Carter, L.L.P. original document, the original document will govern in all cases.

BIRKHOFF, HENDRICKS & CARTER, L.L.P.
PROFESSIONAL ENGINEERS
TBPE Firm No. 526; TBPLS Firm No. 10031800
11910 Greenville Ave., Suite 600
Dallas, Texas 75243 (214) 361-7900

DUBLIN ROAD REHAB ESTIMATE

REVISED: 7/19/22 – DHWANG H:\Projects\Parker\4096\2022 Dublin Rd Rehab\Sheets\Dublin Road Estimate.dwg PLOT SCALE: 1:2 PLOT STYLE: 11x17.ctb PLOTTED BY: DAVID HWANG ON 7/19/2022

City of Parker Texas
Capital Improvement Plan
FY23-24 - FY28-29

10/17/2023 Rev 0.2

City Administrator: Luke Olson 10/17/23 Revised by: Parker City Council

Table of Contents

Conceptual Vision of the new Parker Water Department Facility
Goal for Completion: FY23-24

Introduction

The Parker Capital Improvement Plan (CIP) provides a blueprint for planning Parker's capital expenditures and informing the Annual Capital Budget. This plan is meant to be a tool for city officials and the public so that all are aware of future needs and projects. Ultimately, the plan encourages careful project planning and design to avoid costly mistakes and to help Parker reach desired community objectives within its fiscal capacity.

A well-planned maintained and executed capital plan is a wise investment that will enable the city to:

- maximize use of municipal assets,
- lower maintenance and replacement costs,
- decrease risk of injury or liability from using deteriorating capital assets,
- enhance efficiencies in vehicles and equipment,
- decrease future expenditures through proactive maintenance and replacement of equipment, facilities, and infrastructure,
- enhance Parker's credit rating and control of its tax rate, and
- increase the attractiveness of Parker as a place to live.

The CIP is updated annually to address:

- Progress made toward funding the planned projects,
- Updating the six-year projections, and
- Keeping current with changing information and priorities relating to the city's needs.

Adequate funding of capital needs presents many small cities with significant challenges, and Parker is no exception. With appropriate planning and careful use of resources, the City of Parker can address many of its most pressing needs affordably and sustainably.

This plan was developed in close collaboration with the Mayor, City Administrator, Finance Director, City Attorney, Department Directors, City Engineer, and the City Council. The effort could only come to fruition with these stakeholders' deep engagement.

Capital Planning Process Goals and Objectives

The Capital Planning Process defines the following objectives:

- To maintain Parker's physical assets by providing funding in the annual operating budget to protect its capital investments and minimize future maintenance and replacement costs.
- To pursue a preventive maintenance program as a cost-effective approach to protecting its capital investments and maximizing the useful life of its capital assets including the procurement of outside services where city staff capacity or expertise appears insufficient to perform such preventative maintenance.
- To provide and preserve the infrastructure and equipment needed for achieving the highest levels of public services and quality of life possible by annually updating a six-year Capital Improvement Plan to ensure adequate investment in the City's capital assets.

Definition of a Capital Asset

Capital assets are defined in Resolution 2022-700. Capital assets are real or personal property that have a value equal to or greater than the capitalization threshold defined and have an estimated life of longer than one year. Capital assets include land, land improvements, buildings building improvements, machinery and equipment, computer equipment, vehicles and heavy equipment, infrastructure, and construction in progress.

Per Resolution 2022-700, capitalization thresholds and estimated useful lives of capital asset categories are as follows:

Asset Description	Capitalization Threshold	Estimated Useful Lives
Land	$1	
Land Improvements	$12,500	20 Yrs
Buildings & Building Improvements	$25,000	30 Yrs - 40 Yrs
Vehicles and equipment		
• Computer Equipment	$25,000	3 Yrs – 10 Yrs
• Vehicles & Heavy Equipment	$1	5 Yrs – 20 Yrs
• Machinery & Equipment	$2,500	5 Yrs – 10 Yrs
Infrastructure	$25,000	20 Yrs
Water & sewer system		5 Yrs – 40 Yrs

Donated capital assets are recorded at their estimated fair market value at the time of acquisition plus ancillary charges. Assets acquired with grant funds will be capitalized based on the grant agreement.

Capital Improvements Planning Process

The annual capital planning process is a process by which the city identifies the need to acquire new capital assets, repair or replace existing assets, and the proposed financing of each. It is an annual process conducted with the Mayor, City Administrator, Finance Director, City Attorney, Department Directors, City Engineer, and the City Council. The process includes the following steps:

- conduct an annual review of the capital improvements program of the city as well as proposals addressing the needs of the city's municipal buildings or infrastructure and/or the acquisition and maintenance of capital assets,
- make recommendations and consider project scope and funding regarding the above,
- prepare and present an annual report, and
- update the Capital Improvement Plan.

The CIP is a living plan, and as such, projects are subject to change based on new service delivery needs, special financing opportunities, emergency needs, compliance with unfunded mandates, and changing economic conditions. Every effort is made to make the six-year plan as accurate, thorough, and predictable as possible.

Active Capital Projects (FY23-24)

An annual inventory of the upcoming year's active capital projects is a way to monitor the implementation of the Capital Plan. It is also a tool to be used in budget planning and staff resourcing. It can be used for identifying potential funding needs, sources, and re-allocations. It is a tool to help monitor our progress in achieving our stated goals and report on completion success.

Category	*Expenditure*	*Status*	*Total $ Appropriated*	*Funding Source*	*Grant $ Funding*	*Grant Source*
Facilities						
Water Department Building	Design and Build the Water Department Building located at the Dillehay Pump Station	IN DESIGN	875,000	TBD		
Fire Department Building	Build a divider wall in the lobby	IN PROGRESS	5,500	General Fund		
Vehicles and Equipment						
Police and Public Works	Replace Police and DPW Vehicles with Leased vehicles	IN PROGRESS	120,000	Fund 22		
Public Works	Replace 2006 Cub Cadet Utility Vehicle 4X4 (06-320)	IN PROGRESS	16,500	Fund 22		
Streets						
Maintenance (Patch)						
Curtis Road (Dillehay to Southridge Pkwy)	Patch Overlay 750'x20' Asphalt	IN PROGRESS	75,000	Fund 61		
Pecan Orchard Drive	Apply fog seal and crack sealant to the asphalt road (4675'x20')	IN PLANNING	21,505	Fund 61		
Wagon Wheel	Apply fog seal and crack sealant to the asphalt road (1700'x20')	IN PLANNING	7,820	Fund 61		
Sycamore Lane	Apply fog seal and crack sealant to the asphalt road (5300'x20')	IN PLANNING	24,380	Fund 61		
Springhill Estates (Parker Road to Northern border)	Apply fog seal and crack sealant to the asphalt road (5883'x24')	IN PLANNING	32,474	Fund 61		
Repair						
Lewis Lane Kings Crossing Phase 4N to KC Phase 3N	Remix section next to King's Xing Phase 4. 1000'x24' Asphalt w/ Glas Pave	IN PLANNING	300,000	Fund 61		
Gray Lane (Parker Rd to Gregory Ln)	PCI 25; 2211'x19' Asphalt Overlay	IN PLANNING	200,000	Fund 61		
Moss Ridge (All)	Repair Concrete with patch sections	IN PLANNING	256,000	Fund 61		

Drainage						
Dublin Road South	Engineering Study and construction of a drainage improvement for S-Curve	IN PROGRESS	300,000	Fund 62		
Water Infrastructure						
Water Impact Fee Study	2023-2033 Water Impact Fee Study (4/18/2023 Council Agenda)		25,800	Fund 60		
Dillehay/FM2551	Replacing and relocating FM2551/Dillehay Water Lines (1)	IN PROGRESS				
Dublin Road Water Lines Engr. Fee	Design new Water Infrastructure plan for Dublin Road (North and South)	IN PLANNING		ARPA		
Dublin Road – South Water Lines	Remove and replace existing water lines along Dublin Road - South	IN PLANNING	1,200,000	ARPA	1,200,000	

Capital Project Schedule (FY23-24 through FY28-29)

The FY23-24 through FY28-29 Capital Project Schedule is a working document that aims to identify as many known capital projects as possible. Projects on this schedule have been identified in a reference study or by a departmental director. Projects are listed in these categories: Facilities, Vehicles and Equipment, Streets, Drainage, Water Infrastructure, Parks and Public Spaces. While this schedule cannot possibly anticipate all future capital needs, it can allow the city to forecast, prioritize and schedule planned capital expenditures over a six-year horizon.

The budget figures included in this schedule are estimates to help identify the scale of the project. The budgeted value of a given project should be refined and justified as the project approaches the first year of the Capital Plan. If a project is expected to be supported with grant funds, where possible, potential funding sources have been identified.

Capital Project Schedule

Buildings and Improvements

Building	*Expenditure*	*FY23-24*	*FY24-25*	*FY25-26*	*FY26-27*	*FY27-28*	*FY28-29*	*Grand Total*	*Potential Source*	*Potential Grant $*	*Potential Grant Source*
Water Department Building	Design and Build the Water Department Building located at the Dillehay Pump Station	875,000						875,000	Fund 62		
Fire Dept. Bldg.	Build a divider wall in the lobby.	5,500						5,500	Fund 01		
Administrative Facility	Build a new or renovate existing Admin Building							-	Fund 65		
Police Station	Build a new Police Station			1,500,000				1,500,000	Fund 65		
	Building & Equipment Total	***880,500***	***-***	***1,500,000***	***-***	***-***	***-***	***2,380,500***			

Vehicles and Equipment

Department	*Expenditure*	*FY23-24*	*FY24-25*	*FY25-26*	*FY26-27*	*FY27-28*	*FY28-29*	*Grand Total*	*Potential Source*	*Potential Grant $*	*Potential Grant Source*
Police and Public Works	Replace Police and DPW Vehicles with Leased vehicles	120,000	130,000	150,000	150,000	160,000	160,000	870,000	Fund 22		
Public Works	Replace 2006 Cub Cadet Utility Vehicle 4x4 (06-320)	16,500						16,500	Fund 22		
Public Works	Replace 2006 Scag Mower (06-350)		12,000					12,000	Fund 22		
Public Works	Replace 2012 Scag 61" Velocity Plus Mower (12-352)			12,000				12,000	Fund 22		
Public Works	Replace 2021 Hustler Super Z 60" Mower (21-354)					12,000		12,000	Fund 22		
Public Works	Replace 2022 Hustler Super Z 60" Mower (22-355)						12,000	12,000	Fund 22		
Public Works	Replace 2003 Carrier 16' Enclosed Trailer (00-392)			6,000				6,000	Fund 22		

Capital Project Schedule

Public Works	Add Dump truck				150,000			150,000	Fund 01		
Fire	Replace 2002 Smeal Fire Truck-Pumper (02-811) Approved 9/19/2023 (est 2 yr Delivery)			880,000				880,000	Fund 22		
Fire	Replace 2016 Ford F-250 (16-812)			60,000				60,000	Fund 22		
Fire	Replace 2010 Ford F-750 Brush Truck (10-811) Approved 8/15/2023 (23-24 mo. Delivery)		200,000					200,000	Fund 22		
	Vehicle & Equipment Total	**136,500**	**342,000**	**1,108,000**	**300,000**	**172,000**	**172,000**	**2,230,500**			

Infrastructure

Street Segment	*Expenditure*	*FY23-24*	*FY24-25*	*FY25-26*	*FY26-27*	*FY27-28*	*FY28-29*	*Grand Total*	*Potential Funding Source*	*Potential Grant $*	*Potential Grant Source*
Streets											
Maintenance (Patch)											
Annual Maintenance Program	Based on Street Maintenance Plan	240,326	380,000	380,000	380,000	380,000	380,000	2,140,326	Fund 61		
Curtis Road (Dillehay to Southridge Pkwy)	Patch w/ Asphalt overlay 750'x20'	75,000						75,000	Fund 61		
Wagon Wheel	Apply fog seal and crack sealant to the asphalt road (1700'x20')	7,820						7,820	Fund 61		
Sycamore Lane	Apply fog seal and crack sealant to the asphalt road (5300'x20')	24,380						24,380	Fund 61		

Capital Project Schedule

Springhill Estates (Parker Road to Northern border}	Apply fog seal and crack sealant to the asphalt road (5883'x24')	32,474						32,474	Fund 61		
	Subtotal	**380,000**	**380,000**	**380,000**	**380,000**	**380,000**	**380,000**	**2,280,000**			
Repairs											
Dublin Road South (Park to South Limit)	Remix straight segments 5300'x22', Reconstruct S-Curve 600'x22', Asphalt w/ Glas Pave		1,785,950					1,785,950	Fund 61		
Dublin Road North (Parker to Park)	Remix complete section. 7957'x22', Asphalt w/ Glas Pave				2,985,223			2,985,223	Fund 61		
Lewis Lane (ALL)	Complete jurisdiction analysis and obtain written agreement mtce resp.							-	Fund 61		
Lewis Lane (Kings Crossing Phase 4N to Phase 3N)	Remix section 1000'x24' Asphalt road w/ Glas Pave	300,000						300,000	Fund 61		
Lewis Lane (Other Sections)	PCI 40, 3,286'(est total)		1,534,044					1,534,044	Fund 61		
Curtis Road (Dillehay to Southridge Pkwy)	PCI 40 (Repair delayed due to FM2551 Construction est comp)							-	Fund 61		
Church Ln	PCI 20; 2,172'			1,212,277				1,212,277	Fund 61		
Gray Ln	PCI 25; 2211'x19' Asphalt Overlay	200,000						200,000	Fund 61		
Donihoo Ln	PCI 35; 2,037'						1,392,786	1,392,786	Fund 61		
Gregory Ln (Hogge to Gray)	PCI 40; 4,171'			447,749				447,749	Fund 61		
Gregory Ln (Gray to End	PCI 40; 1,277'					1,674,370		1,674,370	Fund 61		

Capital Project Schedule

Hackberry Ln (Donihoo to Pecan Orchard)	PCI 40; 1,763'		919,625					919,625	Fund 61		
Hackberry Ln (Pecan Orchard to Cul de Sac)	PCI 40; 1,674'					1,069,708		1,069,708	Fund 61		
Ranchview Ln	PCI 40; 1,002'			351,343				351,343	Fund 61		
Woodcreek	PCI 40; 668'			234,279				234,279	Fund 61		
Kara Lane	PCI 45, 2,606'			410,246				410,246	Fund 61		
Pecan Orchard Ln (Springhill Estates to Hackberry)	PCI 50; 1,146'						492,243	492,243	Fund 61		
Pecan Orchard Ln (Hackberry to Cul De Sac)	PCI 50; 1,088'							-	Fund 61		
Wagon Wheel	PCI 50; 1.676'							-	Fund 61		
Windmill Creek	PCI 50; 1.628'				274,226			274,226	Fund 61		
Moss Ridge Rd.	PCI 55, 6,195', Repair Concrete with patch sections	256,000						256,000	Fund 61		
Sycamore Ln	PCI 55; 5,319'						3,636,834	3,636,834	Fund 61		
Chaparral Rd	Expand to 4-lane + bridge						-	-	Fund 61		
Springhill Estates	Expand to 4-lane						-	-	Fund 61		
	Subtotal	**756,000**	**4,239,619**	**2,655,894**	**3,259,449**	**2,744,078**	**5,521,864**	**19,176,903**			
	Streets Total	***1,136,000***	***4,619,619***	***3,035,894***	***3,639,449***	***3,124,078***	***5,901,864***	***21,456,903***			

Capital Project Schedule

Drainage

City Wide	Develop written policies and procedures relating to drainage impacting streets.							-	Fund 63		
Dublin Road South S-Curve	Engineering Study and construction of a drainage improvement for S-Curve	250,000						250,000	Fund 63		
	Drainage Total	***250,000***	***-***	***-***	***-***	***-***	***-***	***250,000***			
	Infrastructure Total	***1,386,000***	***4,619,619***	***3,035,894***	***3,639,449***	***3,124,078***	***5,901,864***	***21,706,903***			

Water and Sewer Systems

Project	***Expenditure***	***FY23-24***	***FY24-25***	***FY25-26***	***FY26-27***	***FY27-28***	***FY28-29***	***Grand Total***	***Potential Funding Source***	***Potential Grant $***	***Potential Grant Source***
Water Impact Fee Study	2023-2033 Water Impact Fee Study (4/18/2023 Council Agenda)	25,800						25,800	Fund 60		
Dillehay/FM2551	Replacing and relocating FM2551/Dillehay Water Lines From Water Impact Fee study 2016-2026.	1,011,396						1,011,396	CC Funds	CC Funds	1,011,396
Bois D' Arc Lane	From Water Impact Fee study 2016-2026. * 8-inch Water Line Cost $268,010 * Pressure Reducing Value Cost $385,164							-	-		
NTMWD Delivery Point No. 2	From Water Impact Fee study 2016-2026. Cost $2,118,404							-	Fund 60		
Dublin Road Water Lines Engineering Fee	Design new Water Infrastructure plan for Dublin Road (North and South)							-	Fund 03		-
Dublin Road – South Water Lines	Remove and replace existing water lines along Dublin Road - South	1,200,000						1,200,000	ARPA	ARPA	1,200,000

Capital Project Schedule

Dublin Road North Water Lines	Replacing Dublin Road – North Water Lines			1,200,000				1,200,000	Fund 03			
Chaparral Elevated Storage Tank	Design and Build 2nd Water Tower at Chaparral From Water Impact Fee study 2016-2026.						10,000,000	10,000,000	-			

Totals

	FY23-24	*FY24-25*	*FY25-26*	*FY26-27*	*FY27-28*	*FY28-29*	*Grand Total*	*From Other Sources*
Buildings and Improvements	880,500	-	1,500,000	-	-	-	2,380,500	-
Vehicles and Equipment	136,500	342,000	1,108,000	300,000	172,000	172,000	2,230,500	-
Infrastructure	1,386,000	4,619,619	3,035,894	3,639,449	3,124,078	5,901,864	21,706,903	-
Water and Sewer Systems	2,237,196	-	1,200,000	-	-	10,000,000	13,437,196	2,211,396
Total ALL	***4,640,196***	***4,961,619***	***6,843,894***	***3,939,449***	***3,296,078***	***16,073,864***	***39,755,099***	***2,211,396***

Capital Projects

Building and Improvement Projects

There are several major municipal facility capital projects that are in the planning and feasibility study stages. These projects can have a substantial impact on future capital needs and expenditures, so they should be monitored as part of the capital planning process. The Capital Improvement Planning process should consider recommendations for the initiation of feasibility studies, especially where projects may be partially supported by grant funds or bonds.

Project: New Water Department Building at the Dillehay Pump Station

Status: In Planning/Design - Construction planned for FY23-24

Department: Public Works Water Department

Project Scope: This project scope is to design and build a new Water Department Facility located on the same property as the new Dillehay pump station. The building is envisioned to be a 12,000 sqft. metal building with a brick façade. The building will have an enclosed office space within the larger building and several large garage doors to allow for equipment maintenance. An initial floor plan, preliminary design, and budgetary cost estimate have been completed. The scope of work for FY23-24 is to complete the design and construction of the building.

Background: The water department personnel have been operating out of the Old Parker Fire Station and the old white metal garage building (located adjacent to the old fire station). These buildings have offices, restrooms, work benches, tools and equipment, storage, and work facilities. The buildings have reached the end of their useful life and are not fit for reuse or renovation. The Old Fire Station is a metal building with a brick façade that was built in 1982. The old white garage is of similar vintage and is showing signs of age. Relocating the water department offices, storage, and shop facilities to the location near the Dillehay pump station will enable these buildings to be vacated, allowing for their demolition, making way for alternative uses of the land.

Funding: The project would be funded through the Utility Construction fund. An appropriation of approximately $875,000 will be necessary to provide sufficient resources in the fund. The source of these funds is TBD.

Timeline: The project should commence imminently.

Study: New Parker Police Building

Status: Feasibility study planned for FY23-24

Department: Parker Police Department

Study Purpose: To evaluate the design and construction of a new Police Department Building. A feasibility study is required to define the scope of this project. The study should consider options to repurpose the existing administrative building as a possible Police Department building. The study should reassess the space requirements summary, document existing conditions, establish design parameters, develop and evaluate alternatives, and recommend the most cost-effective and aesthetically cohesive solution possible for a first-rate Police facility.

Background: The Parker Police Department has operated out of a portable building for several years. It is costly to continue to pay rent for this facility, and that money could be better spent on a permanent building. The facility needs to be larger to meet the needs of the Police force. The city will be better served by investing money in a new structure that meets the 21st-century safety and readiness demands placed on our Police Department.

Funding: This project will be funded through the Capital Facilities Fund. The current fund balance including the FY23-24 transfer will be $1,200,000. This plus an additional $300,000 could fund this project.

Timeline: Based on the feasibility study results, we can expect to know in FY23-24 whether Parker will be ready to fund the new Police facility.

Study: New Administration Building or Building Reuse Study

Status: Feasibility Study Planned for FY23-24

Department: City Administration

Study Purpose: To rehabilitate or construct a new main City Administration Building including the Council Chambers. A feasibility study is required to obtain funding support for a new or rehabilitated City Administration Building. The study should include consideration for reuse of the existing building to address the best-suited use for this facility for the city.

Background: Parker City Hall is challenged to meet the space needs of the Parker Administrative Staff and the residents of the City of Parker. The space lacks proper ADA accessibility, sufficient parking, and has constrained meeting, office, and storage space, and is limited for expansion opportunities. The study will explore the feasibility of expansion and remodeling of the existing facility, but also consider other possible alternative use options, such as the Parker Police Department Facility.

Funding: The project will be funded through the Capital Facilities Fund. Financing options will be evaluated.

Timeline: The city should commence with a study to assess feasibility options for the existing administrative building to be completed by Spring 2024. If successful, the city would need to appropriate funds needed to design and build the new administrative building by FY25-26.

Project: Building and Improvement Maintenance

Parker owns a portfolio of at least 5 buildings of various ages. The City of Parker should conduct an annual building assessment (not feasibility studies) for the city properties. Roof, Septic, HVAC, and generator assessments should be conducted on an annual basis. These assessments inform the six-year capital plan. As additional properties are built, these properties should be added to the annual assessments.

Facility	*Address*	*PCA 360 Audit*	*Roof Assessed*	*Roof last Replaced*	*HVAC/ Boiler Replaced*	*Septic Replaced*	*Generators Replaced*
Parker City Hall	5700 E. Parker Road		2022		2015-2018		
Parker Fire Department	5700 E. Parker Road		2022		2008	2023	2009
Parker Police Dept.	5700 E. Parker Road		N/A		2014		
Parker Water Dept.	5700 E. Parker Road		2022		2020		
East Water Storage Facility	Parker Road						2007
Central Water Storage Facility	Dillehay			2021	2020-2021		2021

Infrastructure Projects (Streets and Drainage)

Infrastructure Capital Improvement planning is driven by the mission to provide a safe and reliable street and drainage system for residents and visitors. The plan considers both scheduled maintenance and repair of poor streets and other surface drainage issues.

Many of the projects for streets, drainage, and water are interrelated and are considered as one within the Capital Improvement Plan for specific projects. Below is a recap of projects grouped by the major project.

Project: FM2551 (from FM2514 to FM2170)

Status: Contract Let April 2023

Department: Public Works

Project Scope: Reconstruction and widening of FM2551 from 2 lanes to a 6-lane thoroughfare. Collin County is managing the project, and TXDOT has oversight of the construction. The city is responsible for the movement of water lines and utilities and providing input to project managers for the safety of residents.

Background: The continued local housing growth and development has resulted in a significant increase in the traffic volume on this road during recent years. Dillehay (2551) has been planned for expansion at both the county and state levels for quite some time. The scheduled widening of the road is taking place now. Parker has an obligation to fund the water infrastructure portion of the project.

Funding: Collin County has committed to provide $1,200,000 in funding for this project with any additional funds paid by the city. The city has an agreement with Collin County to cover $_____ of costs.
The city also has an agreement with Birkhoff & Assoc to perform engineering services for a cost not to exceed $____

Timeline: Construction Start: Fall 2023. End: Summer 2026

Project: Dublin Road – South (Betsy Lane to South City Limit)

Status: In Design

Department: Public Works

Project Scope: This project estimate includes the replacement of the road surface, addressing a critical S-Curve, and replacement of a water line. The water line replacement will be completed first with the road afterward. A drainage and right-of-way study will also be completed prior to the start of road work.

Background: The Street Condition Survey identified this street with a very poor rating of 30.

This is a significant collector street for subdivisions and private streets in the southern portion of Dublin Road. In addition, many people take this street to travel north and south as an alternative to FM2551 (Murphy Rd). A traffic study in 2021 showed an average traffic volume of 1,456 vehicles per day.

A city water line lies along and under this street. These lines are aging and undersized and need to be replaced. Such replacement should be coordinated with the reconstruction of the road. The current roadway is about 20’ wide. The width of this street will be increased to 22’-24’ wherever possible. The street has an S-curve that experiences accidents with drivers running off the street. The design will consider options to improve the safety of the road. In addition, stop signs will be put at the intersections at Creekside and Edgewater with the purpose of slowing travelers before they reach the curve. A drainage review will also be performed to determine that the streets will include proper drainage after construction. A right-of-way review will be performed to evaluate property ownership in conjunction with street widths and drainage needs.

Funding: This street project will be funded with money from Fund 61 (Capital Street Construction Fund) and the Water Line will be funded using available ARPA funds.

Timeline: This project should commence imminently after the water lines are replaced, and the drainage study is complete. The S-Curve drainage plan should be implemented in conjunction with the road reconstruction project.

Project: Dublin Road – North (Parker Road to Betsy Lane)

Status: In Planning

Department: Public Works

Project Scope: This project includes replacing the road surface and water lines. The water line replacement will be completed first with the road afterward. A drainage and right-of-way study will also be completed prior to the start of road work. The road surface will be repaired afterward.

Background: The Street Condition Survey identified this street to have a poor rating of 45-50.

This is a significant collector street for subdivisions and streets in the northern portion of Dublin Road. In addition, many people take this street for traveling north and south as an alternative to FM2551 (Murphy Rd). A traffic study in 2021 showed an average traffic volume of 1,640 vehicles per day.

In 2020, maintenance was performed on the street, providing important stabilization in areas that were in poor condition. However, the street has shown early signs of wear that need to be addressed.

A city water line lies along and under this street. These lines are aging and undersized. These lines need to be replaced. Such replacement should be coordinated with the reconstruction of the road. The current roadway is about 20' wide. The width of this street will be increased to 22'-24' wherever possible. The street has an S-curve that experiences accidents with drivers running off the street. The design will consider options to improve the safety of the road. In addition, stop signs will be put at the intersections at north and south of the curve with the purpose of slowing travelers before they reach the curve. A drainage review will also be performed to determine that the streets will include proper drainage after construction.

A right-of-way review will be performed to evaluate property ownership in conjunction with street widths and drainage needs.

Funding:

Timeline:

Project: Lewis Lane

Status: In Planning

Department: Public Works

Project Scope: The goal for FY23-24 is to complete a jurisdiction analysis and reconstruct one segment between Kings Crossing Phase 4 North to Phase 3 North.

The remaining portions that are within Parker's responsibility will be targeted for reconstruction in future years working with Lucas and Collin County to coordinate their segments at the same time. A drainage review will be performed prior to commencing work to ensure no significant drainage issues need to be addressed.

Background: The Street Condition Survey rated the total of Lewis Lane with a 40 PCI rating, one in poor condition. This is a collector street with increasing populations from residents in subdivisions within Parker and Lucas. In addition, this street is a north/south alternative for FM2551 (Dillehay)

This street is the responsibility of multiple entities (Parker, Lucas, and Collin County), and legal ownership of each section is not documented and agreed upon among the entities. This is critical to resolving the problems on this street. The Developer reconstructed a portion of the street (Kings Crossing Phase 3N to Phase 3S) in 2022. The remaining portions of the street are maintained by adding asphalt to patches, which wash away when rains occur.

Funding:

Timeline:

Project: Moss Ridge (All)

Status: In Planning

Scope: Replace selected concrete panels

Background: The Street Condition Survey rated Moss Ridge with a 55 PCI rating, a condition on the cusp of fair. This subdivision and associated street were built in the late 1980s. This is a concrete surface road, and a number of the panels are cracking.

This project will replace the concrete panels that are in poor condition. This will enable the street to move to a more acceptable condition and be good for years to come.

Over the years, the drainage easements have become less pronounced. Changes have occurred impacting the flow of water. A drainage review will be done prior to construction.

Funding:

Timeline:

Project: Gray Lane

Status: In Planning

Department: Public Works

Project Scope: Road reconstruction

Background: Gray Lane was evaluated by the Street Condition Survey with a very poor rating of 25

Funding:

Timeline:

Study: Drainage Policy and Procedures

Status:

Department:

Study Purpose: Develop written policies and procedures relating to drainage impacting streets.

Background: Residents frequently have questions about drainage including what the city policy is for maintaining drainage and who has responsibilities for the various aspects required to maintain a proper drainage structure throughout the city.

Funding:

Timeline:

Water and Sewer System Projects

Water Improvement planning is driven by the need to maintain our water systems in working condition, providing safe and sufficient water for residents as needed. Water improvements include the needs of our water lines, standalone or interconnected with storage tanks, valves, hydrants, and water towers.

The city has several water infrastructure projects in the planning stage for the future. The goal of these projects is to continue to provide a water distribution system that meets the necessary volume and peak demand projections associated with future growth projections of our city. The projects scoped here are derived from the Capital Improvement Plan for 2016-2026 Water Impact Fee Study.

Water infrastructure improvements connected to streets are identified in the Infrastructure Projects above.

Project: Build a Secondary Elevated Water Tower at Chaparral Road

Status: Unfunded - targeting FY28-29

Department: Public Works Water Department

Project Scope: To construct a secondary elevated water tower and 16" water pipe infrastructure to connect to the existing water distribution system. The first phase of this project will be to perform a study to determine the timing of the need.

Background: The Capital Improvement Plan for 2016-2026 Water Impact Fee recommends constructing a secondary water tower on or before FY28-29 to meet the projected water demand of residents based on future growth projections.

An Elevated storage tank within the Parker water distribution system is required by TCEQ to maintain system pressure. The Parker secondary elevated storage tank is expected to be sized to meet the maximum hourly demand working in conjunction with the pump stations, while maintaining system pressures.

The City currently has one 1.0-MG elevated storage tank located on Parker Road, adjacent to City Hall, with a high water level at 800-ft MSL. The Chaparral Elevated Storage Tank and water line project would consist of constructing an elevated storage tank with approximately 385 linear feet of 16-inch waterline connected between the new elevated tank and the existing 16-inch waterlines**.** The utilized capacity during the CFR period was calculated to be 63.0%

Funding: Secure grant or bond funding.

Timeline: Secure funding and commence construction on or before FY28-29.

Reference Reports for Capital Needs

Category	Plan Reference Title	Last Updated
Community Development	Comprehensive Plan	In revision
Buildings and Improvements	Facilities Maintenance Plan	Need to Create (update annually)
Infrastructure	Street Maintenance Plan	Need to Create (update annually)
Infrastructure	Street Condition Survey	2021 (update every X years)
Infrastructure	Drainage Maintenance Plan	Need to Create (update annually)
Water and Sewer System	CIP for 2016-2026 Water Impact Fee	2016 (update every X years)
Vehicles and Equipment	Equipment Capital Replacement Schedule	annual

Financing the CIP

CIP Projects are funded through general fund revenues and other resources available to the City. Funding considerations go beyond individual projects. The city's funding strategies will consider several variables, including amounts available in project funds, other City needs, debt, and the impact on taxpayers. Below, we will address the city's sources of funds and current funding.

Sources of Funds

Operational Revenue: Revenues generated in the

- General Fund through ad valorem taxes, sales taxes or fees.
- Proprietary Fund primarily through water & wastewater revenues.

Local Sales Tax – The city charges a 2% Sales Tax. The General Fund receives a 1% sales tax. In May 2023, the voters elected to adopt a 1% sales tax dedicated to repairing and maintaining existing city streets in accordance with Chapter 327 of the Texas Tax Code. The new tax goes into effect on October 1, 2023. These revenues are directly reported to the Street Construction Fund. This tax expires after four years unless a new election is held to reauthorize the tax.

Impact Fees – The city charges a **Water Impact Fee** on new Single-Family Residences based on a Water Impact Fee Study. New residential homes with a 1" meter pay a fee of $3,938.95, and those with a 2" meter pay $15,755.82 as approved by the city council on April 4, 2017. The use of these funds is restricted to financing capital improvements required by new developments in accordance with Chapter 395 of the Texas Local Government Code.

Developer Contributions: Contributions of capital infrastructure in conjunction with new development in the city.

Intergovernmental: Funds supplied through other governmental agencies such as TxDOT, Collin County, State, and/or Federal government.

Other Grants and Donations: Funds received from other organizations and individuals.

Bonds: Bonds refer to expenditures that are financing through borrowing. A bond is a written promise to pay a specified sum of money, called the face value (par value) or principle amount, at a specified date or dates in the future, called maturity date(s), together with periodic interest at a specified rate.

There are different kinds of borrowing, each with its advantages and disadvantages.

- **General Obligation Bonds (GO):** Debt instruments authorized by a vote among registered voters.
- **Certificates of Obligation (CO):** Debt instruments authorized by a vote of the City Council.
- **Revenue Bonds**: Debt instruments, the repayment of which depends on the revenue stream generated by the city's water & wastewater system.

Current Funding

General Funds

Fund		*FY22 – 23**	*FY23 - 24*		
#	**Title & Purpose**	**Fund Balance**	**Transfers**	**Other Rev**	**Total Additions**
22	Equipment Replacement Fund – Replacement of existing vehicles and equipment or lease of city vehicles	$700,509	$350,000	$165,000	$515,000
24	Technology Replacement Fund – Replacement of existing technology equipment	$73,997	$105,000	0	$105,000
61	Capital Street Construction Fund - Construction or maintenance of street projects.	$1,290,936	$970,000	$380,000	$1,350,000
63	Capital Drainage Fund - Construction or maintenance of drainage-related improvements	$313,239	$100,000		$100,000
65	Capital Facilities Fund - Land acquisition, construction, renovation, and equipping of city facilities.	$976,635	$300,000		$300,000
	Total	$3,355,316	$1,825,000	$545,000	$2,370,000

* Preliminary and unaudited.

These funds are supported from several sources, including:

- **Transfers:** The city has established a pay-as-you-go approach to addressing capital needs using special funds. A portion of the city's General Fund Operational Revenues are allocated each year to these funds during the annual budgeting process. They can only be used for the purpose specified without city council approval. The equipment replacement fund also receives a transfer from the Proprietary Fund (Water/Wastewater) Operational Revenue of $25,000.
- **Sales Tax**: These amounts are directly reported to the Street Construction Fund. The city anticipates approximately $380,000 in fiscal 2023-24.
- **Proceeds** from the sale of city property within these funds are directly allocated to these funds. The equipment replacement fund reflects $140,000 proceeds from the sale of city property.

Proprietary Funds (Water/Wastewater)

Utility Impact Fees Fund (Fund 60): This fund is supported by the Water Impact Fees from New Single Family Residential homes. As of September 30, 2023, the Utility Impact Fees Fund had a balance of $2,071,001.

Utility Construction Fund (Fund 62): This fund was supported from the $6,075,000 proceeds of the 2018 combination tax and revenue bond plus interest earned to construct facilities needed for water services operations. As of September 30,2023, $506,000 remained of those funds.

American Rescue Plan Act of 2021 (ARPA): The provisions of this act provided supplemental funds to the city in FY21 and FY22. These funds can only be used for specified purposes, including investment in water infrastructure. *Funding must be obligated by the end of calendar year 2024 and expended by the end of calendar year 2026.*

As of September 30, 2023, the City has $1,223,553 of these funds to be allocated for qualified capital projects. The City Council has the authority to spend these funds within the authority of the act.

County Funds: The city has a commitment to receive funds from Collin County for purpose of the 2551/Dillehay Project. For more information, refer to that project.

Existing Debt Obligations

Bond	Interest Rate	Maturity	Original Balance	Outstanding Balance	Remaining Principal +
Government Activities (General Fund)					
2015 Certificate of Obligation	2.09%	2025	$1,485,000	$320,000	$326,688
2019 General Obligation Refinancing Bond	3.00%	2028	$1,285,000	$583,914	$621,278
			$2,770,000	$903,914	$947,966
Business Type Activities (Water/Wastewater)					
2018 Combination Tax &Revenue Bond	3.00-4.00%	2038	$6,075,000	$5,755,000	$1,726,350
2019 General Obligation Refinancing Bond	3.00%	2028	$1,200,000	$543,170	$582,931
			$7,275,000	$6,298,170	$2,309,281

Long Term Debt

The Capital Plan and program is a means for identifying projects that are best accomplished through the use of debt financing.

Long-term debt is an important financing source for capital projects that cannot be accommodated within the annual operating budget. The Capital Plan and program is a means for identifying projects that are candidates for debt financing.

The amount of annual debt service to be authorized is an important consideration in determining options for long term debt. Optimal annual debt service is expected to range from 2% of operating revenues at the low end to no more than 10% of operating revenues at the high end.

Debt Ratio Calculations

	FY23-24		
Bond	**Debt Service**	**Budgeted Revenues**	**Debt Ratio**
Government Activities (General Fund)			
2015 Certificate of Obligation	165,016		
2019 General Obligation Refinancing Bond	170,256		
Total	***335,272***	***7,551,006***	***4%***
Business Type Activities (Water/Wastewater)			
2018 Combination Tax & Revenue Bond	395,950		
2019 General Obligation Refinancing Bond	158,994		
Total	***554,944***	***6,083,200***	***9%***

Capital Planning Cycle

The Capital Planning Cycle is held in coordination with the Annual Budget Cycle.

September- October: The fiscal year closes on September 30. Department heads assess progress in meeting goals outlined in the Capital Improvement Plan. A progress report will be presented to the council by the end of October.

The City Administrator meets with the selected department heads to review existing and proposed new major capital projects or equipment as they relate to the current Capital Improvement Plan. This is to include a roll forward of unfinished projects with the addition of new projects proposed for the sixth year. A report of this information will be provided to the council.

Early November: The City Council meets with the City Administrator, Mayor, City Attorney, and Finance Director, to receive preliminary guidance on the funding resources expected to be available for capital projects in the upcoming fiscal year.

November – December: The City Administrator meets with department leaders to discuss the specifics of their capital requests, review documentation framing the relative urgency of those requests, and review any cost estimates received as they pertain to the projects. This activity may continue into early January.

January: The City Administrator summarizes capital spending requests, including the updated cost estimates, and makes recommendations for the coming fiscal year, and presents a report to the City Council.

January: Council meets to discuss the City Administrator's recommendations. The council also will discuss the past year's CIP process, consider possible CIP process improvements, and begin working on the CIP plan revision for the coming year.

January: Financing Options are evaluated and presented to council. If a general obligation bond is considered, information must be available prior to ballot deadline in February.

January – February: Council holds workshops as needed to discuss the Capital Improvement Plan.

February: Ballot initiatives, if any are filed.

March: City Council adopts the annual update of the Capital Improvement Plan.

April – June: The Finance Director incorporates the Capital Improvement Plan items for the current fiscal year incorporated into the budget cycles.

May: Council appoints lead of Capital Improvement Plan.

July – August: Bond initiatives, if any, deemed for a November ballot are to be addressed at this time. Ballot initiatives, if any, are filed.

Appendix A

Capital Assets per the Audited Financial Statements as of September 30, 2022.

D. Capital Assets

A summary of changes in governmental activities capital assets for the year end was as follows:

	Beginning Balances	Increases	Decreases/ Reclassifications	Ending Balances
Capital assets, not being depreciated:				
Land	$ 843,484	$ -	$ -	$ 843,484
Construction in progress	58,337	18,839	-	77,176
Total capital assets not being depreciated	901,821	18,839	-	920,660
Capital assets, being depreciated/amortized:				
Land improvements	212,367	-	-	212,367
Buildings and improvements	2,616,328	-	-	2,616,328
Vehicles and equipment	4,443,915	112,928	(925,136)	3,631,707
Infrastructure	52,266,733	941,416	-	53,208,149
Right-to-use leased assets	-	277,247	-	277,247
Total capital assets, being depreciated/amortized	59,539,343	1,331,591	(925,136)	59,945,798
Less accumulated depreciation/amortization:				
Land improvements	(103,272)	(10,618)	-	(113,890)
Buildings and improvements	(974,038)	(61,183)	-	(1,035,221)
Vehicles and equipment	(2,817,752)	(418,153)	694,418	(2,541,487)
Infrastructure	(22,731,915)	(2,039,274)	-	(24,771,189)
Right-to-use leased assets	-	(196,856)	-	(196,856)
Total accumulated depreciation/amortization	(26,626,977)	(2,726,084)	694,418	(28,658,643)
Net capital assets being depreciated/amortized	32,912,366	(1,394,493)	(230,718)	31,287,155
Governmental Capital Assets	$ 33,814,187	$ (1,375,654)	$ (230,718)	$ 32,207,815

A summary of changes in business-type activities capital assets for the year end was as follows:

	Beginning Balances	Increases	Decreases/ Reclassifications	Ending Balances
Capital assets, not being depreciated:				
Land	$ 323,666	$ -	$ -	$ 323,666
Construction in progress	4,992,608	1,147,737	-	6,140,345
Total capital assets not being depreciated	5,316,274	1,147,737	-	6,464,011
Captial assets, being depreciated:				
Water and sewer system	22,774,416	978,150	-	23,752,566
Vehicles and equipment	238,274	6,837	(82,980)	162,131
Total capital assets being depreciated	23,012,690	984,987	(82,980)	23,914,697
Less accumulated depreciation				
Water and sewer system	(6,222,958)	(608,834)	-	(6,831,792)
Vehicles and equipment	(239,211)	(3,518)	82,980	(159,749)
Total accumulated depreciation	(6,462,169)	(612,352)	82,980	(6,991,541)
Net capital assets being depreciated	16,550,521	372,635	-	16,923,156
Total Captial Assets	$ 21,866,795	$ 1,520,372	$ -	$ 23,387,167

Revision History

Revision 0.2	Definition of Capital Asset - Changed to reflect Resolution 2022-706, approved 10/18/2022 (Agenda Packet).
	Reformatted categories to be in line with Assets as reflected in the Financial Statements and included Appendix A.
	Added items in spreadsheets • Public Work Dump Truck - FY26-27 (?) • Study drainage polices and procedures • Added streets – Chapparal and Springhill Estates
	Updated street amounts to reflect • Streets in years based on estimated costs from engineers estimates plus 25% engineering fee and 7% increase per year. • Dublin Rd – South street cost based on engineer's estimates. North street cost based on remix instead of reconstruction. • 2551/Dillehay updated to reflect information about Collin County funds.
Revision 0.1	Initial Draft