



2020 STORMWATER UTILITY RATE STUDY

CITY OF WILLOW PARK, TEXAS

AUGUST 2020

Prepared by:



Weatherford Office Address:

1508 Santa Fe Drive, Suite 203

Weatherford, Texas 76086

(817) 594-9880

www.jacobmartin.com

Firm F-2448



1508 Santa Fe, Suite 203 – Weatherford, Tx 76086
www.jacobmartin.com – (817)594-9880



516 Ranch House Rd – Willow Park, Texas 76087
www.willowpark.org – (817)441-7108

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During the course of this rate study, key City staff members expended considerable time and effort in assisting with this study. These employees include Bryan Grimes, Toni Moore, and many others. We sincerely thank these individuals for their hard work, dedication and professionalism, without whom this study would not have been successfully completed.

Jacob and Martin has relied upon the extensive data supplied by the City. Thus, the integrity of the study is largely dependent upon the accuracy of the data contained herein. Every effort has been made by Jacob and Martin to validate and confirm the information contained herein prior to the preparation of the final study documents. This report presents no assurance or guarantee that the forecast contained herein will be consistent with actual results or performances. This report represents forecasts based on a series of assumptions about future behavior, and are not guarantees. Any changes in assumptions or actual events may result in significant revisions to the forecast and its conclusions. The cash flow projections and debt service coverage calculations are not intended to present overall financial positions, results of operations, and/or cash flows for the periods indicated, which is in conformity with guidelines for presentation of a forecast established by the American Institute of Certified Public Accountants.



Section 1

Executive Summary



1.1 General Background

The City of Willow Park has requested Jacob and Martin, LLC to initiate a stormwater program and to recommend an assessment rate and structure to meet the current and future stormwater needs.

This report was prepared according to the recommendations of the Master Drainage Plan prepared in 2019. Like similar cities, the City of Willow Park is faced with the challenge of paying for increased costs to comply with state and federal stormwater quality mandates as well as ongoing maintenance and improvements to the existing drainage system.

The City of Willow Park is proposing to collect stormwater utility fees from it's existing utility customers and as new development occurs. The objective of this study was to review and establish a stormwater management program and determine rates and fees to be implemented. Maintaining an up to date stormwater program has many benefits, including ensuring the City is receiving adequate funding to provide for maintenance, replacement, improvement and administration of the stormwater system. This report also breaks down the usage of the funds and denotes what will be used for capital improvement projects.

1.2 Stormwater Utility Funding

The stormwater utility is a proven method of providing a reliable funding source for the management of stormwater programs. This funding source is provided through a user fee similar to the fees collected for public water and wastewater services. The stormwater utility is unique (when compared with water and wastewater utilities) in that the service cannot be disconnected for nonpayment, service is provided to all citizens without choice, and the actual service to a particular property is difficult to quantify. Consequently, the successful implementation of a stormwater utility requires a good stormwater management program with well-defined deliverables as well as public support through education and outreach. This type of funding mechanism has been coined Stable, Adequate, Flexible, and Equitable (SAFE).



- **Stable** – a stormwater utility is stable because it is separated from the annual budget process and does not compete with other public services and programs such as roads, schools, public safety, and solid waste. This stable revenue source allows stormwater managers to effectively implement their stormwater program and complete drainage projects.
- **Adequate** – a stormwater utility is adequate because the user fee is calculated based on a detailed evaluation of program needs and the capital improvement plan.
- **Flexible** – a stormwater utility is flexible because the rate structure can include any number of modifiers such as caps, economic incentives to reduce user fees, variables for land use types (vacant land, special use or tax-exempt properties), and secondary funding methods to meet the stormwater management program objectives.
- **Equitable** – a stormwater utility is equitable because the user fee is proportional to the rate of stormwater runoff from each parcel and demand put on the city-owned and maintained drainage system.

1.3 Benefits of a Stormwater Utility

Stormwater is the runoff of water that flows over land or impervious surfaces which is not absorbed by the ground. Examples of sources of runoff include paved streets, parking lots, building rooftops and construction sites. The stormwater that is not absorbed then collects pollutants like trash, chemicals, and oils that harm our environment, especially bodies of water. These pollutants also contaminate the City's sewer system, which results in the need for additional treatment and, therefore, more cost to the City. The City of Willow Park currently does not have stormwater utility in place. The proposed stormwater utility is to be considered enterprise fund activities within the City of Willow Park's operating budget, similar to water and wastewater utilities. The City of Willow Park's proposed stormwater utility shall have its own accounting and financial reporting mechanisms for municipal services, for which fees are charged in exchange for goods and services to the public.

There are five primary areas that need to be reviewed, assessed, and updated from time to time for utility enterprise funds to operate properly. The five key areas are as follows:

- Maintain sufficient funding/income to operate and provide services.
- Ensure fairness and minimize impact on the utility customers.



- Maintain competitiveness with other cities, in order to promote growth.
- Provide funding for utility improvements and growth of infrastructure.
- Ensure compliance with state and federal regulations.

Making repairs and improvements, planning new projects, meeting growing customer demands in current and expanding areas of service, dealing with rising costs of operations, and complying with new laws and regulations are all factors to consider in operating municipal stormwater systems. Each of these elements have a financial impact on the system. As development occurs, it may become apparent that current stormwater revenues are inadequate. Questions that must be addressed regarding funding of a stormwater program include: How much additional revenue is needed? How would rates be impacted? How would ratepayers react? These are just some of the questions that can be addressed by performing a utility rate study. Providing answers to some of these questions is the purpose of this report.



Section 2

Stormwater Program



2.1 Future Stormwater Program of The City of Willow Park

The City of Willow Park currently does not have a Stormwater Management Program in place. In addition to the Master Drainage Plan prepared in 2019, this study will serve as the basis for creation of the program. Stormwater Management Programs are developed to prevent pollution in stormwater to the maximum extent practicable and to prohibit illicit discharges into the system. A sample of control measures that should be contained in the stormwater program is outlined below:

Public Education, Outreach, and Involvement – Distributing educational materials and performing outreach to inform citizens about the impacts polluted storm water discharges can have on water bodies and steps the public can take to reduce pollutants in storm water runoff. Providing opportunities for citizens to participate in program development and implementation including effectively publicizing public hearings and/or encouraging citizen representatives on a local storm water management panel.

Illicit Discharge Detection and Elimination – Developing and implementing a plan to detect and eliminate illicit discharges to the storm sewer system (includes maintaining a system map and informing the community about hazards associated with illegal discharges and improper disposal of waste).

Construction Site Storm Water Runoff Control – Developing, implementing, and enforcing an erosion and sediment control program for construction activities that disturb one or more acre(s) of land. This section includes the development and implementation of an ordinance or other regulatory mechanism as well as sanctions to ensure compliance to the extent allowable under state, federal and local law, to require erosion and sediment control.

Post-Construction Storm Water Management in New Development and Redevelopment – Developing, implementing and enforcing a program to address discharges of post-construction storm water runoff from new developments and redevelopments that discharge into the City. This program will address projects that disturb one acre or more, including projects that disturb less than one acre that are part of a larger common plan of development or sale.

Pollution Prevention and Good Housekeeping for Municipal Operations – Developing and implementing a program with the goal of preventing or reducing pollutant runoff from municipal operations. The program must include municipal staff training on pollution prevention measures and techniques.



A sample stormwater management policy that was prepared in the Master Drainage Plan Report is outlined below. This sample policy is for reference only and is not currently enacted by the City of Willow Park.

It shall be the City of Willow Park’s Policy to:

1. Use best management practices for drainage and control of stormwater runoff
2. Use natural drainage ways in developments, if possible.
3. Using structural controls shall follow the order of preference below:
 - a. Conveyance Methods
 - i. Channel Modifications
 1. Vegetative lined channels
 2. Stone or riprap lined channels
 3. Concrete lined channels
 - ii. Public Storm Drain
 - b. Storage Methods
 - i. Regional Storage Facilities
 1. Detention
 2. Retention
 - ii. On-Site Storage Facilities
 1. Detention
 2. Retention
4. Coordinate with local municipalities, districts, and counties to utilize non-structural approaches to stormwater management such as:
 - a. Annexation
 - b. Purchase of land for open spaces
 - c. Acquiring floodway easements and right-of-way in flood hazard areas

North Central Texas Council of Governments’ (NCTCOG) Manual for Site Development and Construction and Integrated Storm Water Management (iSWM) Manual have guidelines for drainage design and policies for stormwater management. These resources provide all the construction related information



needed to adhere to the rules and regulations regarding stormwater. These manuals have guidelines for upgrading the current stormwater system but mainly focus on new construction and new developments. The existing stormwater system substantially consists of open ditches or “bar ditches” with small sections of underground storm water piping systems in more recently developed areas. Surface drainage, as well as street maintenance, is handled by the public works department.

The City’s stormwater ordinance should state the purposes of having a stormwater utility fee and what the fund is used for. All of the discharge regulations and penalties should be included in the ordinance. It is common for entities to base comparisons on residential developments. This can be seen in the term equivalent dwelling units (EDUs). For stormwater comparisons, it is common to see the single-family home as the basis. Since the average single-family home size is somewhat dependent on location, this study has incorporated the average single-family home square footage for the single-family unit (SFU). The stormwater ordinance should discuss what the current single-family unit is in terms of square footage, and how residential, non-residential, and other properties are billed. For this report, 30 properties within the City Limits were selected at random and analyzed to determine an average living area for single family homes in the City. A map showing these locations is included in Appendix B. All information gathered was obtained from Parker County Appraisal District and no guarantee is made of the accuracy of this information. Based on the properties studied, the average living area for single-family homes in the City is 2,085 square feet. For this study, the fee will be based on 1 SFU, which is equivalent to 1,500 square feet of living area (LVAR) for single-family structures, and multipliers thereof. Due to the recent and forecast growth of developments with smaller, denser homes, 1,500 square feet was used to accommodate the anticipated runoff increase. In the case of institutional and commercial facilities, the gross building square footage (GBSF) and the impervious area, respectively, are used instead of the living area. This ensures that the appropriate amount of square footage is used in calculating the stormwater utility fee. The living area square footage and the gross building square footage can be obtained from the Parker County Appraisal District or from other sources prior to issuance of a certificate of occupancy.



Section 3

Levels of Service



3.1 Residential Properties

Residential properties are classified as any single-family or multi-family house, duplex, triplex, quadplex, condominiums, townhomes, or apartment complexes. The stormwater utility rate should be based on a single-family living area unit equivalent (SFU). When calculating fees for stormwater, residential properties are separated into two subcategories; single-family and multi-family. Multi-family homes typically have more impervious area, therefore, produce more stormwater runoff.

3.2 Non-Residential Properties

Non-residential properties are classified as any building that is not used for permanent living accommodation. Office buildings, commercial buildings, industrial facilities, and hotels are a few that would be classified as non-residential.

3.3 Institutional Properties

Institutional properties consist of educational facilities and religious institutions.

3.4 Level of Service Assessment

Level of Service (LOS) for a stormwater utility is the measure of the quality of service provided by a municipality. Since the City of Willow Park does not currently have a stormwater utility, a LOS Level D will be assumed. However, the City is moving toward a Level C by implementing a stormwater capital improvement plan for repair and replacement of stormwater structures within the City. A summary of the different levels of service is shown below.

Level A

- Includes funding for Level B LOS.
- Additional O&M for further increased staffing and increased maintenance.
- Repair and replacement of stormwater collection system over 10-year period.

Level B

- Includes funding for Level C LOS.
- Additional O&M for increased staffing and increased maintenance.
- Repair and replacement of stormwater collection system over 20-year period.

Level C

- Includes funding for Level D LOS.
- Additional O&M for public outreach, increased contract services and maintenance.
- Repair and replacement of stormwater collection system over 50-year period.

Level D

- Includes limited funding for CIP projects.
- Limited capital improvements projects performed.
- Repair and replacement of stormwater collection system over 100-year period.

Level E

- No funding for CIP projects.
- No capital improvements projects performed.
- No repair and replacement of existing stormwater assets.

Table 1: Level of Service Breakdown

Level of Service	Program Management Activities	NPDES Compliance Activities		Capital Improvement Projects
		Non-O&M Related Compliance Activities	O&M Program Activities	
A	Comprehensive Planning and Full CIP Implementation	Exemplary Permit Compliance	Fully Prevention Routine	10-year Plan
B	Pro-Active Planning and Systematic CIP Implementation	Pro-Active Permit Compliance	Mixture of Routine and Inspection Based	20-year Plan
C	Priority Planning and Partial CIP Implementation	Minimal Permit Compliance	Inspection Based Only	50-year Plan
D	Reactionary Planning and Minimal CIP Implementation	Below Minimum Permit Compliance	Responsive Only (Complaint Based)	100-year Plan
E	No Planning and No CIP Implementation	Non-Compliance	Less than full response to all complaints	No Plan

The TCEQ requires a permit for the discharge of stormwater for small MS4s (Municipal Separate Storm Sewer System) that are fully or partially located within an urbanized area as determined by the U.S. Census. The City of Willow Park is currently located in an urbanized cluster and is not required to maintain a permit for the discharge of stormwater. However, due to the anticipated growth in the area, the City may be included into the DFW urbanized area classification in the future.

Section 4

Stormwater Utility Rate Calculations and Financial Forecast



4.1 Capital Improvement Projects

A key factor in the development of the City's long term stormwater utility rate plan is the amount of additional debt forecast to be issued by the City to fund capital projects, which would not be funded through development fees or other sources such as price sector development agreement financing or grants. Currently, there are several active projects within the stormwater program. Examples of these projects include culvert and channel improvements at Sam Bass Road and Pleasant Ridge. These locations were identified in the CIP as improvements to be completed in the 1-5 year period. A recently completed project was the installation of approximately 625 linear feet of 54" RCP and an area inlet along Ranch House Road, which was identified as Priority 1 in the 1-5 year CIP. The following is a list of stormwater utility projects, which are recommended for the City of Willow Park to consider. These construction projects were highlighted in the Master Drainage Plan and would become part of the City's stormwater debt service, if added to the City's budget.

The key projects outlined in the capital improvements plan during the 1-5 year period are as follows:

1. Culvert and Channel Improvements at Sam Bass Rd and Pleasant Ridge

Summary Description: Clear debris blocking channels and upsize culverts at Sam Bass Road and Pleasant Ridge.

Total Estimated Cost: \$275,000.00

Operating Budget Impact: No direct financial impact on the maintenance budget is expected as a result of this project. No additional staff will be required, as it is expected that the City's third-party engineer will be engaged to design the project and an outside contractor would perform the work. However, current staff members will be involved with the project and must dedicate time to oversee the project. This would take staff time away from routine duties, creating an indirect impact on the operating budget.



2. I-20 and Chuckwagon Trail Drainage Improvements

Summary Description: Clear debris blocking channel and causing stagnant water and install concrete area inlet to divert water from the west side of Chuckwagon Trail.

Total Estimated Cost: \$130,000.00

Operating Budget Impact: No direct financial impact on the maintenance budget is expected as a result of this project. No additional staff will be required, as it is expected that the City’s third-party engineer will be engaged to design the project and an outside contractor would perform the work. However, current staff members will be involved with the project and must dedicate time to oversee the project. This would take staff time away from routine duties, creating an indirect impact on the operating budget.

3. Channel Improvements near Valley Court and El Chico Trail

Summary Description: Improve approximately 1,600 linear feet of drainage channel near Valley Court and El Chico Trail. A map of the proposed improvement is included in Appendix E.

Total Estimated Cost: \$500,000.00

Operating Budget Impact: No direct financial impact on the maintenance budget is expected as a result of this project. No additional staff will be required, as it is expected that the City’s third-party engineer will be engaged to design the project and an outside contractor would perform the work. However, current staff members will be involved with the project and must dedicate time to oversee the project. This would take staff time away from routine duties, creating an indirect impact on the operating budget.

4. Culvert Improvements at 133 Sam Bass Rd.

Summary Description: Install a 36” RCP Culvert with headwalls under Sam Bass Rd.



Total Estimated Cost: \$28,000.00

Operating Budget Impact: No direct financial impact on the maintenance budget is expected as a result of this project. No additional staff will be required, as it is expected that the City's third-party engineer will be engaged to design the project and an outside contractor would perform the work. However, current staff members will be involved with the project and must dedicate time to oversee the project. This would take staff time away from routine duties, creating an indirect impact on the operating budget.

5. Major Undersized Culvert Improvements

Summary Description: Improve major undersized culverts throughout the City.

Total Estimated Cost: \$800,000.00

Operating Budget Impact: No direct financial impact on the maintenance budget is expected as a result of this project. No additional staff will be required, as it is expected that the City's third-party engineer will be engaged to design the project and an outside contractor would perform the work. However, current staff members will be involved with the project and must dedicate time to oversee the project. This would take staff time away from routine duties, creating an indirect impact on the operating budget.

6. Castlemount Drainage Improvements

Summary Description: Grading and storm drain improvements.

Total Estimated Cost: \$100,000.00

Operating Budget Impact: No direct financial impact on the maintenance budget is expected as a result of this project. No additional staff will be required, as it is expected that the City's third-party



engineer will be engaged to design the project and an outside contractor would perform the work. However, current staff members will be involved with the project and must dedicate time to oversee the project. This would take staff time away from routine duties, creating an indirect impact on the operating budget.

7. Vista Drive Drainage Improvements

Summary Description: Grading channel improvements.

Total Estimated Cost: \$200,000.00

Operating Budget Impact: No direct financial impact on the maintenance budget is expected as a result of this project. No additional staff will be required, as it is expected that the City’s third-party engineer will be engaged to design the project and an outside contractor would perform the work. However, current staff members will be involved with the project and must dedicate time to oversee the project. This would take staff time away from routine duties, creating an indirect impact on the operating budget.

8. Live Oak Road Drainage Improvements

Summary Description: Grading and channel improvements.

Total Estimated Cost: \$80,000.00

Operating Budget Impact: No direct financial impact on the maintenance budget is expected as a result of this project. No additional staff will be required, as it is expected that the City’s third-party engineer will be engaged to design the project and an outside contractor would perform the work. However, current staff members will be involved with the project and must dedicate time to oversee the project. This would take staff time away from routine duties, creating an indirect impact on the operating budget.



The key projects outlined in the capital improvements plan during the 6-10 year period are as follows:

1. Minor Undersized Culvert Improvements

Summary Description: Improve minor undersized culverts throughout the City.

Total Estimated Cost: \$1,174,000.00

Operating Budget Impact: No direct financial impact on the maintenance budget is expected as a result of this project. No additional staff will be required, as it is expected that the City's third-party engineer will be engaged to design the project and an outside contractor would perform the work. However, current staff members will be involved with the project and must dedicate time to oversee the project. This would take staff time away from routine duties, creating an indirect impact on the operating budget.

4.2 Types of Rate Structures

Stormwater fees are designed to share the costs in a community to cover stormwater expenses that may include program costs, infrastructure costs, maintenance costs, and capital improvement costs. Those community shared costs include stormwater that originates from shared public infrastructure like roads and thoroughfares. Even though each parcel is billed an amount due to the characteristics of their specific parcel, a community's utility rate structure is designed to share the entire stormwater expense. These include expenses that are beyond individual properties. Billing is done per parcel to provide user fees that are deemed fair and equitable to everyone within a user class, without preference to any one user or special characteristics of that user. All users must contribute and will benefit from the community's stormwater infrastructure and program.

There are predominantly two stormwater utility rate types, flat fees and variable fees.

1. Flat Fees – the fees in this system are the same for each parcel regardless of the land use, acreage, imperviousness, etc. This method is the simplest, as everyone pays the same amount. Collection

is tied to an existing database which reduces billing costs and duplication errors. However, this method can be difficult to justify and is not considered fair or equitable among rate payers as it does not consider differences of parcel size, land use, and stormwater runoff from impervious areas.

2. Variable Fee – the fee varies depending on the parcel based on acreage, assessed value, land use, impervious area, or a combination of these. This allows for a fairer and more accurate determination of what a rate payer should be paying. Within the variable fee category, there are four subcategories that the fee could be based on.
 - a. Acreage Based – a flat rate per acre. This method is simple since everyone pays something and it is based on readily available acreage data. However, it can be difficult to justify and is not considered fair or equitable among rate payers since it does not consider differences in land use and stormwater runoff.
 - b. Assessed Value – equivalent to a percent of assessed property value. This method is simple since everyone pays something and it is based on readily available assessment data. However, it can be difficult to justify and is not considered fair or equitable among rate payers since it does not consider differences in land use and there is no direct correlation between a property’s assessed value and stormwater runoff.
 - c. Land Use – tiered flat rate or runoff coefficient. Both land use methods can be effective since they consider land use and its correlation to stormwater runoff. Although collection can be based on an existing database of land use codes, the rate assigned to each code is an average for typical land use and will not reflect actual imperviousness and its impact on stormwater runoff.
 - d. Impervious Area – average impervious area, actual impervious area for all land use types, or actual impervious area for only a particular land use type. Each of these methods takes into consideration either the average or actual impervious area for each land use. Since impervious area is directly correlated to the quantity and quality of stormwater runoff, the impervious methods are the fairest and most equitable of all the rate types. However, since impervious area data may not be readily available, developing the initial database can be labor-intensive making it more expensive and time-consuming than methods based on land-use. Using a typical impervious area size for residential properties (known

as “Single-family Unit” – SFU”) which normally constitute a large percentage of parcels in a community, instead of determining actual imperviousness of each residential parcel greatly reduce the initial engineering fees. This also reduces future ongoing administrative costs of database maintenance and is therefore a very popular and common procedure for utilities that set the user fees based on imperviousness. Additionally, areas with no impervious areas still generate runoff and contribute stormwater volume and pollutants to some degree. These unimproved parcels also benefit from the overall stormwater program. Therefore, the impervious area method may be modified to collect a nominal flat fee from unimproved parcels (with no impervious area), typically set as a fraction of 1 SFU. This should be a minimum for the unimproved parcels.

Assessing fees based on impervious area is the most common and the fairest stormwater utility rate method in the United States. The only downside of the impervious cover method is the initial set up cost. It takes time and money to create an accurate database that will allow for a fair rate to be selected. It is recommended that the City of Willow Park use a form of the impervious area rate structure.

4.3 Proposed Rate Structure

The proposed rate structure for the City of Willow Park is based on the living area (LVAR) for single family residential properties, the gross building square footage (GBSF) for multi-family, religious and education institutions, and the overall impervious area for commercial properties. The proposed rate is \$5.50 per SFU minimum, or \$1.83 per 1/3 SFU, for residential and institutional properties and \$0.0055 per square foot of impervious area for commercial properties, which equates to \$5.50 per 1,000 square feet. The following provides a breakdown of how each type of property is billed:

Single-Family Home:

$$\# \text{ of SFU} = \frac{LVAR}{1500}$$

Multi-Family Home:

$$\# \text{ of SFU} = \frac{GBSF * 1.5}{1500}$$

Commercial Properties:

$$\text{Amount Billed} = IA * 0.0055$$

Religious or Education Institutes:

$$\# \text{ of SFU} = \frac{GBSF}{1500}$$

Undeveloped or Agricultural Properties:

$$1 \text{ SFU}$$

The proposed rates shown are based on other municipalities with stormwater utilities, proposed capital improvement projects, and the anticipated growth rate of the City of Willow Park.

4.4 Forecast Stormwater Accounts

Table 2 below breaks down the structures in the City of Willow Park into three main categories. These represent the number of stormwater accounts to be billed inside and outside the City Limits, as of April



of 2020. Since water is the most used utility, it provided a clear representation of the total number of accounts. In instances where customers were on private wells, the trash account was used. These values were based on the number of water services and trash accounts from available data and used as an estimate only. As the growth of the stormwater utility and the City’s infrastructure occurs, this table can be expanded to reflect the actual number of units within the service area, instead of the number of water or trash services.

Table 2: Breakdown of Properties

Breakdown of Properties	
Type of Structure	# of Meters
Residential	
Single-Family	2,005
Multi-Family	51
Non-Residential	
Commercial and Industrial	103
Tax Exempt	
Institutional	128
Total	2,287

Table 3 below shows the population projections for the City of Willow Park from the Capital Improvements Plan. One can assume that as population increases the amount of pervious area within the City will decrease, due to new development. The table shows that in the next 30 years the City is expected to experience a 4% increase in population per year.



Table 3: Population Projections

Year	Estimated Population
2010	3,779
2011	3,885
2012	4,003
2013	4,131
2014	4,305
2015	4,804
2016	5,083
2017	5,314
2018	5,416
2019	5,855
2020	6,323
2025	7,598
2030	7,954
2035	9,256
2040	10,771
2045	12,535
2050	14,587

Given the increase in population over the next 30 years, one can expect that the number of accounts will also go up by roughly the same percentage as the population. Table 4 shows the forecasted number of billed properties. These numbers give an estimated count of how many stormwater utility accounts the City will bill, in the given years.

Table 4: Forecasted Number of Accounts

Forecasted Number of Stormwater Accounts for the Next 10 Years					
Year	Single-Family	Multi-Family	Commercial & Industrial	Institutional	Total
2019	2,005	51	103	128	2,287
2020	2,108	52	104	130	2,394
2021	2,215	52	106	132	2,505
2022	2,328	53	107	133	2,622
2023	2,446	54	109	135	2,744
2024	2,570	55	110	137	2,872
2025	2,700	55	112	139	3,006
2026	2,835	56	113	141	3,146
2027	2,978	57	115	143	3,293
2028	3,127	58	117	145	3,446
2029	3,283	59	118	147	3,607

4.5 Forecasted Cost of Service

Table 5 below shows the projected cost of service for the City of Willow Park’s stormwater utility. The cost of service includes all of the expenses necessary to operate, maintain, and improve the stormwater system. Projecting future costs associated with operations and also capital improvement projects are key to this study. It allows for an accurate rate recommendation and can confirm how often the rate needs to be updated.



Table 5: Cost Forecast

Cost Forecast											
Fiscal Year	No. of SFUs/yr	Rate per SFU	SFU Revenue	Comm. Area	Rate per Sq. Ft.	Commercial Revenue	Total Revenue	Operating and Maintenance Expense	Debt Service	Total Expenses	Net
2020-2020	22,735	\$5.50	\$125,042.50	5,562,000	\$0.0055	\$30,591.00	\$155,633.50	\$10,000.00	\$22,066.72	\$32,066.72	123,566.78
2020-2021	23,834	\$5.50	\$131,087.00	5,639,312	\$0.0055	\$31,016.21	\$162,103.21	\$10,300.00	\$32,498.27	\$42,798.27	119,304.94
2021-2022	24,975	\$5.50	\$137,362.50	5,717,698	\$0.0055	\$31,447.34	\$168,809.84	\$10,609.00	\$40,522.52	\$51,131.52	117,678.32
2022-2023	26,177	\$5.50	\$143,973.50	5,797,174	\$0.0055	\$31,884.46	\$175,857.96	\$10,927.27	\$80,643.82	\$91,571.09	84,286.87
2023-2024	27,432	\$5.50	\$150,876.00	5,877,755	\$0.0055	\$32,327.65	\$183,203.65	\$11,255.09	\$103,111.72	\$114,366.81	68,836.84
2024-2025	28,749	\$5.50	\$158,119.50	5,959,456	\$0.0055	\$32,777.01	\$190,896.51	\$11,592.74	\$167,305.72	\$178,898.46	11,998.05
2025-2026	30,128	\$5.50	\$165,704.00	6,042,292	\$0.0055	\$33,232.61	\$198,936.61	\$11,940.52	\$167,305.72	\$179,246.24	19,690.36
2026-2027	31,569	\$5.50	\$173,629.50	6,126,280	\$0.0055	\$33,694.54	\$207,324.04	\$12,298.74	\$214,408.12	\$226,706.86	(19,382.82)
2027-2028	33,083	\$5.50	\$181,956.50	6,211,435	\$0.0055	\$34,162.89	\$216,119.39	\$12,667.70	\$214,408.12	\$227,075.82	(10,956.43)
2028-2029	34,659	\$5.50	\$190,624.50	6,297,774	\$0.0055	\$34,637.76	\$225,262.26	\$13,047.73	\$261,510.52	\$274,558.25	(49,295.99)

Notes:

1. No. of SFUs estimated based on monthly data from April 2020
2. Estimated average impervious area for commercial/industrial properties is 54,000 square feet. Current number of commercial properties estimated at 103, then projected to increase at 4.7% per year.
3. Operating Expenses expectation of 3% increase per year.
4. The deficit shown is to be covered by impact fees.



The costs can be broken down into four main categories; operating expenses, personnel, capital outlays, and debt (principal and interest).

1. Operating Expenses – are the expenses associated with the daily activities performed by the stormwater management program. They include supplies, maintenance, and contractual services.
2. Personnel – are the salaries and other employee expenses from the stormwater management program.
3. Capital Outlays – are the expenses needed to fund the purchase of a fixed asset or to extend the life of a fixed asset. Machinery, equipment, and the drainage system are included in capital outlays.
4. Debt – the expenses currently associated with debt.

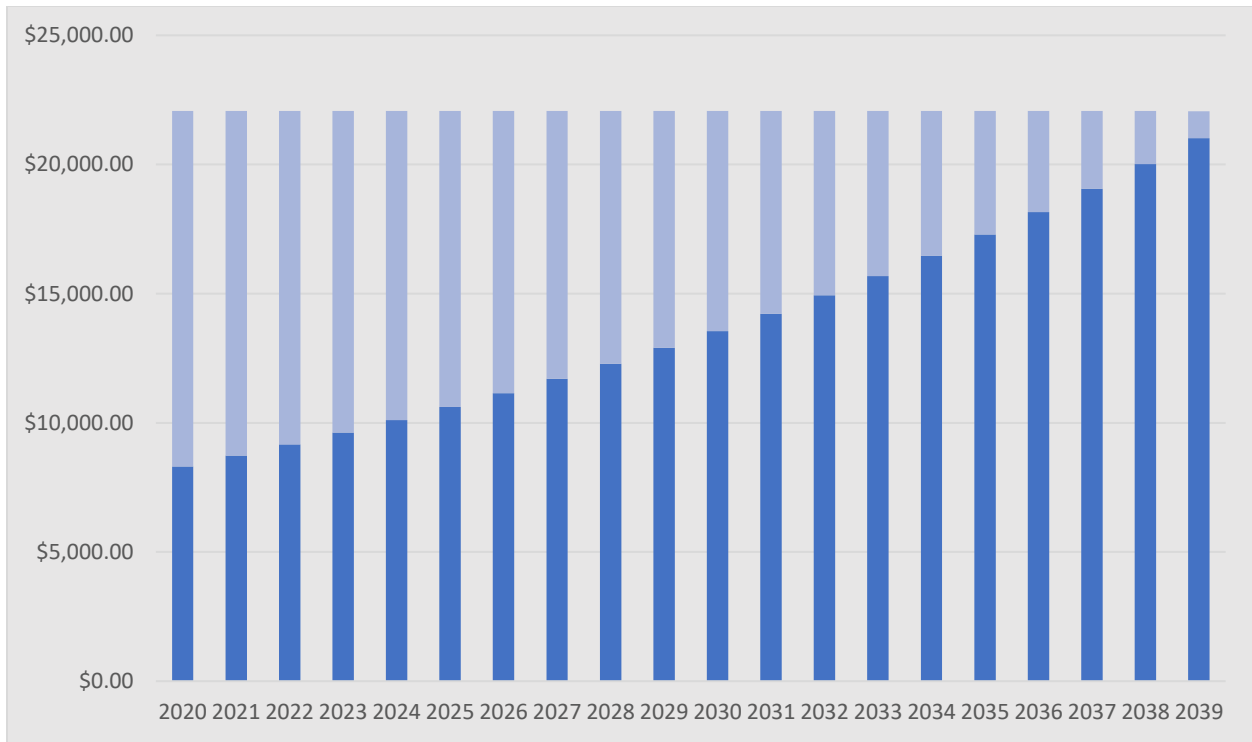


The following are debt amortization tables that are specific to the eight proposed projects, from the capital improvement section of this report. The projects are proposed to begin in 2020 and stagger to limit the initial impact of monthly payments.

**City of Willow Park
Sam Bass and Pleasant Ridge Culvert Improvement Projects
20 Years at 5.00%**

<u>Year</u>	<u>Principal Outstanding</u>	<u>Principal Payment</u>	<u>Interest Payment</u>	<u>Total Payment</u>
2020	\$275,000.00	\$8,316.72	\$13,750.00	\$22,066.72
2021	\$266,683.28	\$8,732.56	\$13,334.16	\$22,066.72
2022	\$257,950.72	\$9,169.18	\$12,897.54	\$22,066.72
2023	\$248,781.54	\$9,627.64	\$12,439.08	\$22,066.72
2024	\$239,153.90	\$10,109.03	\$11,957.69	\$22,066.72
2025	\$229,044.87	\$10,614.48	\$11,452.24	\$22,066.72
2026	\$218,430.40	\$11,145.20	\$10,921.52	\$22,066.72
2027	\$207,285.20	\$11,702.46	\$10,364.26	\$22,066.72
2028	\$195,582.74	\$12,287.58	\$9,779.14	\$22,066.72
2029	\$183,295.15	\$12,901.96	\$9,164.76	\$22,066.72
2030	\$170,393.19	\$13,547.06	\$8,519.66	\$22,066.72
2031	\$156,846.13	\$14,224.41	\$7,842.31	\$22,066.72
2032	\$142,621.72	\$14,935.63	\$7,131.09	\$22,066.72
2033	\$127,686.08	\$15,682.42	\$6,384.30	\$22,066.72
2034	\$112,003.67	\$16,466.54	\$5,600.18	\$22,066.72
2035	\$95,537.13	\$17,289.86	\$4,776.86	\$22,066.72
2036	\$78,247.27	\$18,154.36	\$3,912.36	\$22,066.72
2037	\$60,092.91	\$19,062.07	\$3,004.65	\$22,066.72
2038	\$41,030.83	\$20,015.18	\$2,051.54	\$22,066.72
2039	\$21,015.66	\$21,015.66	\$1,050.78	\$22,066.44

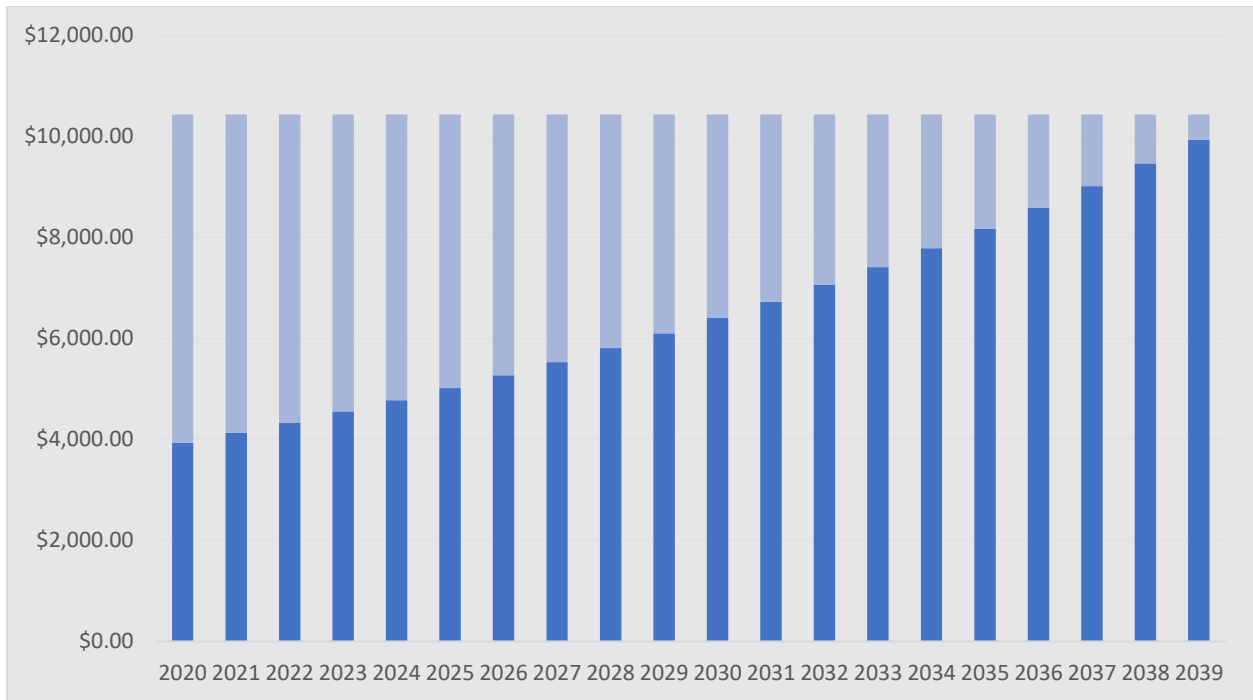




**City of Willow Park
 Chuckwagon and I-20 Drainage Improvement Project
 20 Years at 5.00%**

<u>Year</u>	<u>Principal Outstanding</u>	<u>Principal Payment</u>	<u>Interest Payment</u>	<u>Total Payment</u>
2020	\$130,000.00	\$3,931.55	\$6,500.00	\$10,431.55
2021	\$126,068.45	\$4,128.13	\$6,303.42	\$10,431.55
2022	\$121,940.32	\$4,334.53	\$6,097.02	\$10,431.55
2023	\$117,605.79	\$4,551.26	\$5,880.29	\$10,431.55
2024	\$113,054.53	\$4,778.82	\$5,652.73	\$10,431.55
2025	\$108,275.70	\$5,017.76	\$5,413.79	\$10,431.55
2026	\$103,257.94	\$5,268.65	\$5,162.90	\$10,431.55
2027	\$97,989.29	\$5,532.09	\$4,899.46	\$10,431.55
2028	\$92,457.20	\$5,808.69	\$4,622.86	\$10,431.55
2029	\$86,648.51	\$6,099.12	\$4,332.43	\$10,431.55
2030	\$80,549.39	\$6,404.08	\$4,027.47	\$10,431.55
2031	\$74,145.31	\$6,724.28	\$3,707.27	\$10,431.55
2032	\$67,421.02	\$7,060.50	\$3,371.05	\$10,431.55
2033	\$60,360.52	\$7,413.52	\$3,018.03	\$10,431.55
2034	\$52,947.00	\$7,784.20	\$2,647.35	\$10,431.55
2035	\$45,162.80	\$8,173.41	\$2,258.14	\$10,431.55
2036	\$36,989.39	\$8,582.08	\$1,849.47	\$10,431.55
2037	\$28,407.31	\$9,011.18	\$1,420.37	\$10,431.55
2038	\$19,396.12	\$9,461.74	\$969.81	\$10,431.55
2039	\$9,934.38	\$9,934.38	\$496.72	\$10,431.10

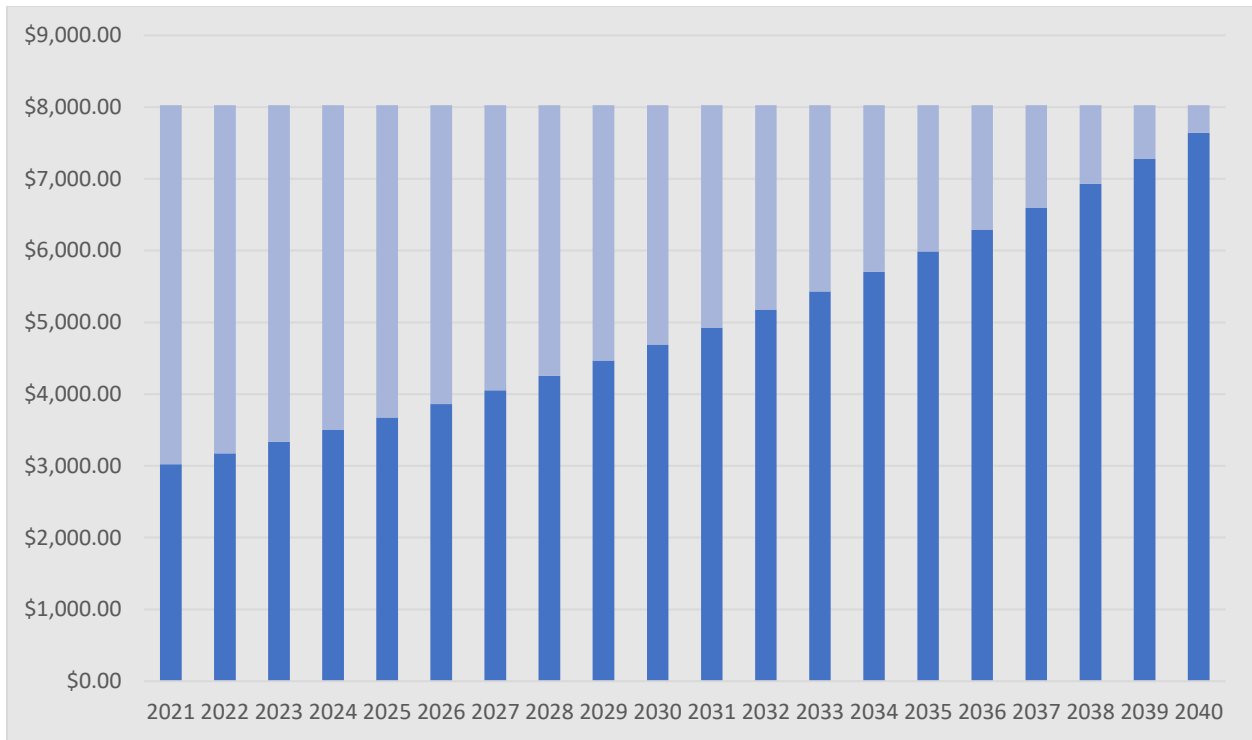




**City of Willow Park
Castlemount Drainage Improvements
20 Years at 5.00%**

<u>Year</u>	<u>Principal Outstanding</u>	<u>Principal Payment</u>	<u>Interest Payment</u>	<u>Total Payment</u>
2021	\$100,000.00	\$3,024.25	\$5,000.00	\$8,024.25
2022	\$96,975.75	\$3,175.46	\$4,848.79	\$8,024.25
2023	\$93,800.29	\$3,334.24	\$4,690.01	\$8,024.25
2024	\$90,466.05	\$3,500.95	\$4,523.30	\$8,024.25
2025	\$86,965.10	\$3,675.99	\$4,348.26	\$8,024.25
2026	\$83,289.11	\$3,859.79	\$4,164.46	\$8,024.25
2027	\$79,429.32	\$4,052.78	\$3,971.47	\$8,024.25
2028	\$75,376.53	\$4,255.42	\$3,768.83	\$8,024.25
2029	\$71,121.11	\$4,468.19	\$3,556.06	\$8,024.25
2030	\$66,652.91	\$4,691.60	\$3,332.65	\$8,024.25
2031	\$61,961.31	\$4,926.18	\$3,098.07	\$8,024.25
2032	\$57,035.12	\$5,172.49	\$2,851.76	\$8,024.25
2033	\$51,862.63	\$5,431.12	\$2,593.13	\$8,024.25
2034	\$46,431.51	\$5,702.67	\$2,321.58	\$8,024.25
2035	\$40,728.84	\$5,987.81	\$2,036.44	\$8,024.25
2036	\$34,741.03	\$6,287.20	\$1,737.05	\$8,024.25
2037	\$28,453.83	\$6,601.56	\$1,422.69	\$8,024.25
2038	\$21,852.27	\$6,931.64	\$1,092.61	\$8,024.25
2039	\$14,920.64	\$7,278.22	\$746.03	\$8,024.25
2040	\$7,642.42	\$7,642.42	\$382.12	\$8,024.54

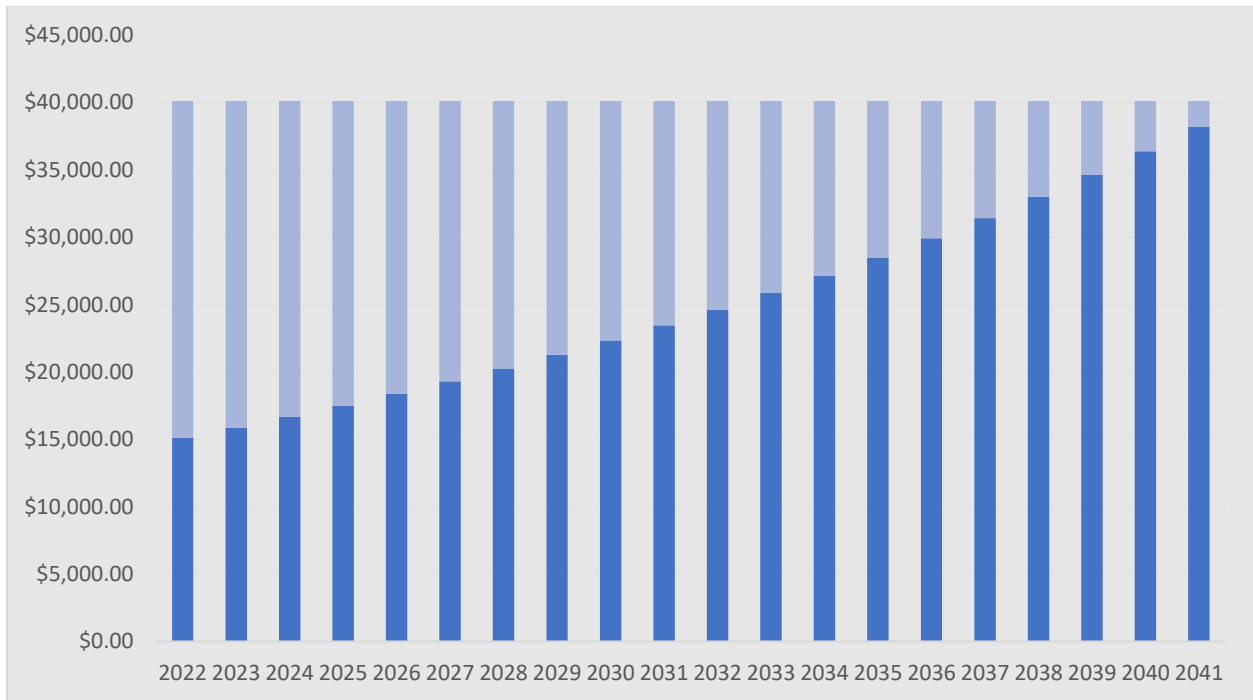




**City of Willow Park
El Chico Drainage Channel Improvement Project
20 Years at 5.00%**

<u>Year</u>	<u>Principal Outstanding</u>	<u>Principal Payment</u>	<u>Interest Payment</u>	<u>Total Payment</u>
2022	\$500,000.00	\$15,121.30	\$25,000.00	\$40,121.30
2023	\$484,878.70	\$15,877.37	\$24,243.94	\$40,121.30
2024	\$469,001.34	\$16,671.23	\$23,450.07	\$40,121.30
2025	\$452,330.10	\$17,504.79	\$22,616.51	\$40,121.30
2026	\$434,825.31	\$18,380.03	\$21,741.27	\$40,121.30
2027	\$416,445.27	\$19,299.04	\$20,822.26	\$40,121.30
2028	\$397,146.24	\$20,263.99	\$19,857.31	\$40,121.30
2029	\$376,882.25	\$21,277.19	\$18,844.11	\$40,121.30
2030	\$355,605.06	\$22,341.05	\$17,780.25	\$40,121.30
2031	\$333,264.01	\$23,458.10	\$16,663.20	\$40,121.30
2032	\$309,805.91	\$24,631.00	\$15,490.30	\$40,121.30
2033	\$285,174.91	\$25,862.55	\$14,258.75	\$40,121.30
2034	\$259,312.35	\$27,155.68	\$12,965.62	\$40,121.30
2035	\$232,156.67	\$28,513.47	\$11,607.83	\$40,121.30
2036	\$203,643.21	\$29,939.14	\$10,182.16	\$40,121.30
2037	\$173,704.07	\$31,436.10	\$8,685.20	\$40,121.30
2038	\$142,267.97	\$33,007.90	\$7,113.40	\$40,121.30
2039	\$109,260.07	\$34,658.30	\$5,463.00	\$40,121.30
2040	\$74,601.77	\$36,391.21	\$3,730.09	\$40,121.30
2041	\$38,210.56	\$38,210.56	\$1,910.53	\$40,121.09

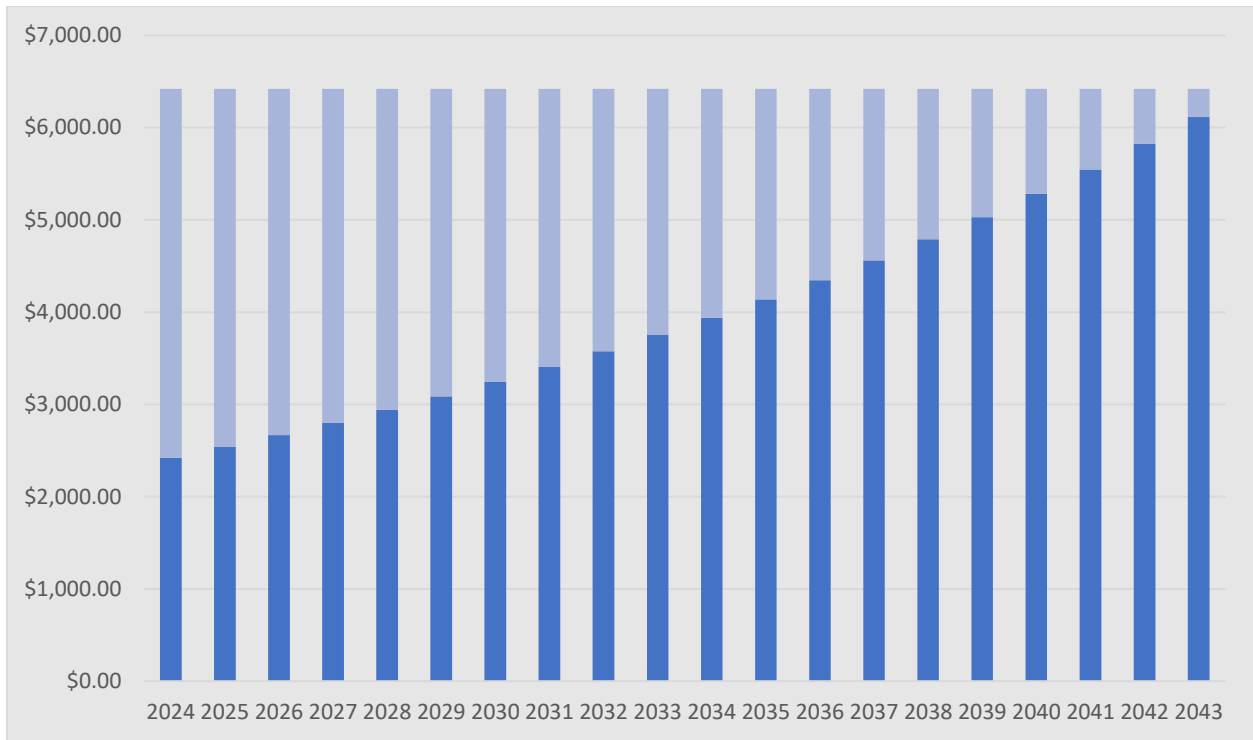




**City of Willow Park
Live Oak Drainage Improvements
20 Years at 5.00%**

<u>Year</u>	<u>Principal Outstanding</u>	<u>Principal Payment</u>	<u>Interest Payment</u>	<u>Total Payment</u>
2024	\$80,000.00	\$2,419.40	\$4,000.00	\$6,419.40
2025	\$77,580.60	\$2,540.37	\$3,879.03	\$6,419.40
2026	\$75,040.23	\$2,667.39	\$3,752.01	\$6,419.40
2027	\$72,372.84	\$2,800.76	\$3,618.64	\$6,419.40
2028	\$69,572.08	\$2,940.80	\$3,478.60	\$6,419.40
2029	\$66,631.29	\$3,087.84	\$3,331.56	\$6,419.40
2030	\$63,543.45	\$3,242.23	\$3,177.17	\$6,419.40
2031	\$60,301.22	\$3,404.34	\$3,015.06	\$6,419.40
2032	\$56,896.89	\$3,574.56	\$2,844.84	\$6,419.40
2033	\$53,322.33	\$3,753.28	\$2,666.12	\$6,419.40
2034	\$49,569.05	\$3,940.95	\$2,478.45	\$6,419.40
2035	\$45,628.10	\$4,138.00	\$2,281.40	\$6,419.40
2036	\$41,490.10	\$4,344.89	\$2,074.51	\$6,419.40
2037	\$37,145.21	\$4,562.14	\$1,857.26	\$6,419.40
2038	\$32,583.07	\$4,790.25	\$1,629.15	\$6,419.40
2039	\$27,792.82	\$5,029.76	\$1,389.64	\$6,419.40
2040	\$22,763.06	\$5,281.25	\$1,138.15	\$6,419.40
2041	\$17,481.82	\$5,545.31	\$874.09	\$6,419.40
2042	\$11,936.51	\$5,822.57	\$596.83	\$6,419.40
2043	\$6,113.93	\$6,113.93	\$305.70	\$6,419.63

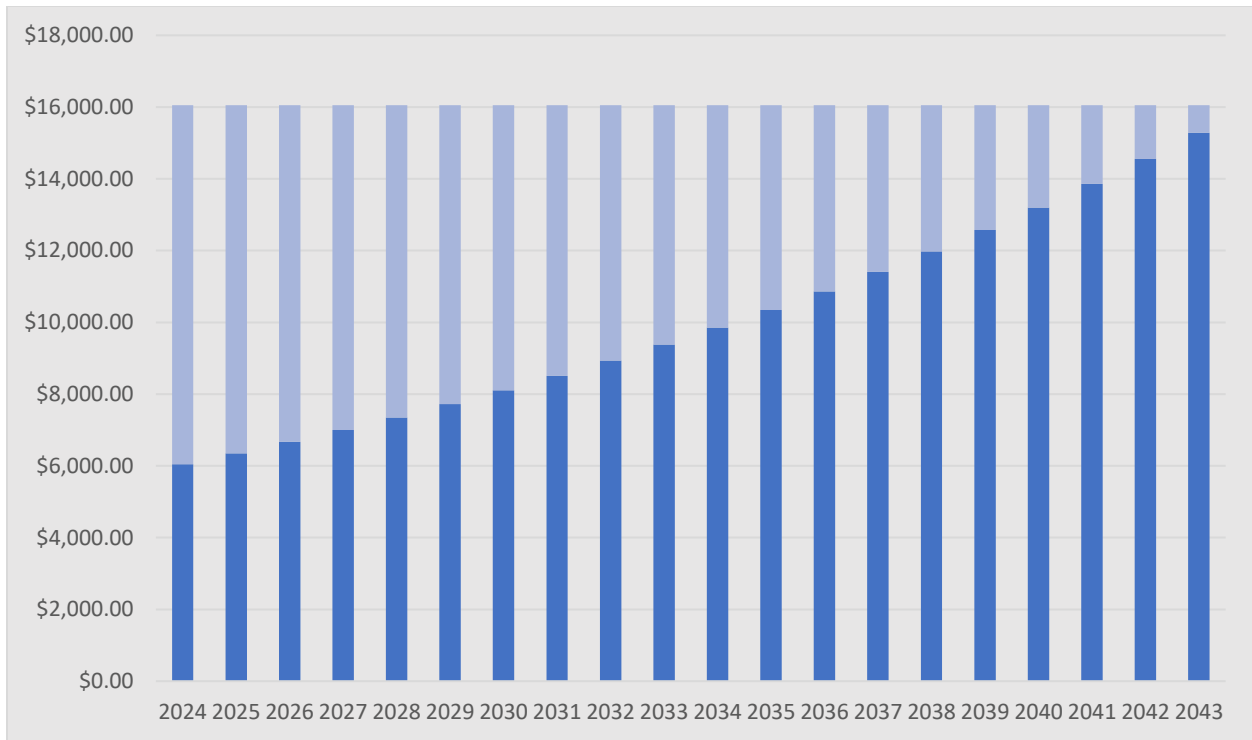




**City of Willow Park
Vista Dr Drainage Improvements
20 Years at 5.00%**

<u>Year</u>	<u>Principal Outstanding</u>	<u>Principal Payment</u>	<u>Interest Payment</u>	<u>Total Payment</u>
2024	\$200,000.00	\$6,048.50	\$10,000.00	\$16,048.50
2025	\$193,951.50	\$6,350.93	\$9,697.58	\$16,048.50
2026	\$187,600.58	\$6,668.47	\$9,380.03	\$16,048.50
2027	\$180,932.10	\$7,001.89	\$9,046.61	\$16,048.50
2028	\$173,930.21	\$7,351.99	\$8,696.51	\$16,048.50
2029	\$166,578.22	\$7,719.59	\$8,328.91	\$16,048.50
2030	\$158,858.63	\$8,105.57	\$7,942.93	\$16,048.50
2031	\$150,753.06	\$8,510.85	\$7,537.65	\$16,048.50
2032	\$142,242.21	\$8,936.39	\$7,112.11	\$16,048.50
2033	\$133,305.83	\$9,383.21	\$6,665.29	\$16,048.50
2034	\$123,922.62	\$9,852.37	\$6,196.13	\$16,048.50
2035	\$114,070.25	\$10,344.99	\$5,703.51	\$16,048.50
2036	\$103,725.26	\$10,862.24	\$5,186.26	\$16,048.50
2037	\$92,863.02	\$11,405.35	\$4,643.15	\$16,048.50
2038	\$81,457.67	\$11,975.62	\$4,072.88	\$16,048.50
2039	\$69,482.06	\$12,574.40	\$3,474.10	\$16,048.50
2040	\$56,907.66	\$13,203.12	\$2,845.38	\$16,048.50
2041	\$43,704.54	\$13,863.27	\$2,185.23	\$16,048.50
2042	\$29,841.27	\$14,556.44	\$1,492.06	\$16,048.50
2043	\$15,284.83	\$15,284.83	\$764.24	\$16,049.08

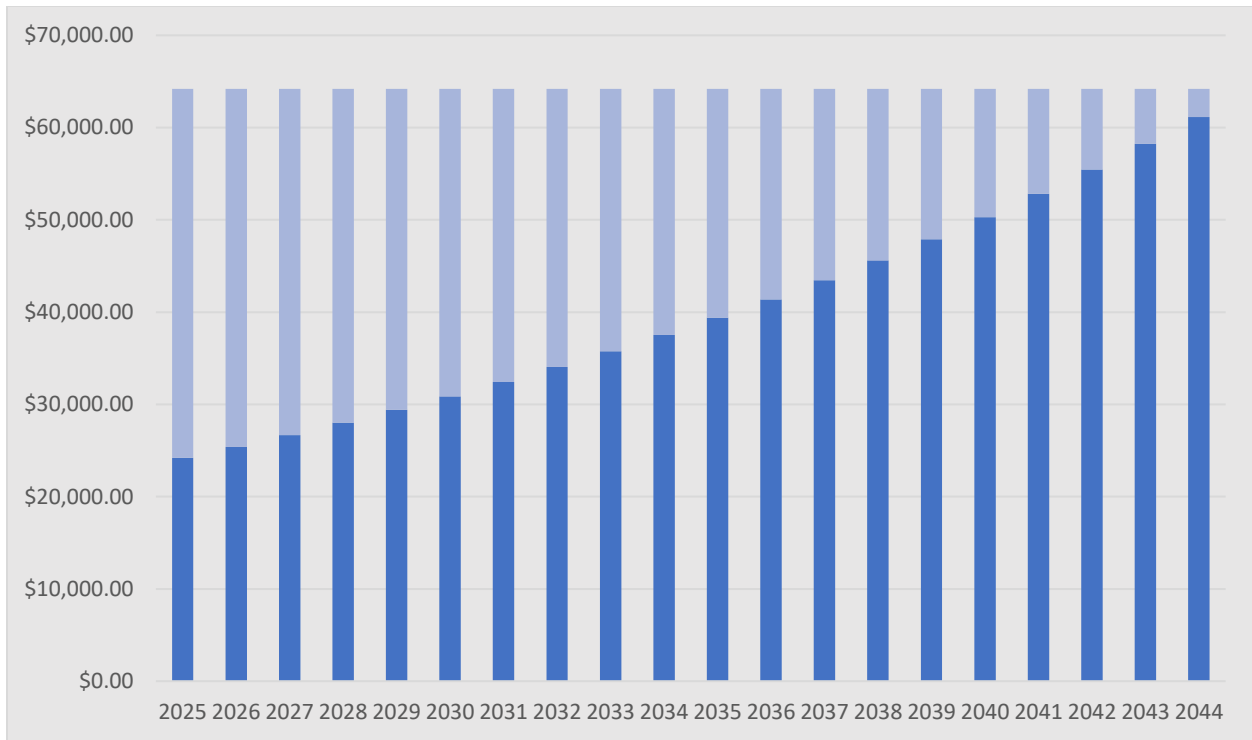




**City of Willow Park
Major Culvert Improvement Projects
20 Years at 5.00%**

<u>Year</u>	<u>Principal Outstanding</u>	<u>Principal Payment</u>	<u>Interest Payment</u>	<u>Total Payment</u>
2025	\$800,000.00	\$24,194.00	\$40,000.00	\$64,194.00
2026	\$775,806.00	\$25,403.70	\$38,790.30	\$64,194.00
2027	\$750,402.30	\$26,673.89	\$37,520.12	\$64,194.00
2028	\$723,728.42	\$28,007.58	\$36,186.42	\$64,194.00
2029	\$695,720.84	\$29,407.96	\$34,786.04	\$64,194.00
2030	\$666,312.88	\$30,878.36	\$33,315.64	\$64,194.00
2031	\$635,434.52	\$32,422.27	\$31,771.73	\$64,194.00
2032	\$603,012.25	\$34,043.39	\$30,150.61	\$64,194.00
2033	\$568,968.86	\$35,745.56	\$28,448.44	\$64,194.00
2034	\$533,223.30	\$37,532.83	\$26,661.17	\$64,194.00
2035	\$495,690.47	\$39,409.48	\$24,784.52	\$64,194.00
2036	\$456,280.99	\$41,379.95	\$22,814.05	\$64,194.00
2037	\$414,901.04	\$43,448.95	\$20,745.05	\$64,194.00
2038	\$371,452.09	\$45,621.40	\$18,572.60	\$64,194.00
2039	\$325,830.70	\$47,902.47	\$16,291.53	\$64,194.00
2040	\$277,928.23	\$50,297.59	\$13,896.41	\$64,194.00
2041	\$227,630.64	\$52,812.47	\$11,381.53	\$64,194.00
2042	\$174,818.18	\$55,453.09	\$8,740.91	\$64,194.00
2043	\$119,365.09	\$58,225.75	\$5,968.25	\$64,194.00
2044	\$61,139.34	\$61,139.34	\$3,056.97	\$64,196.31

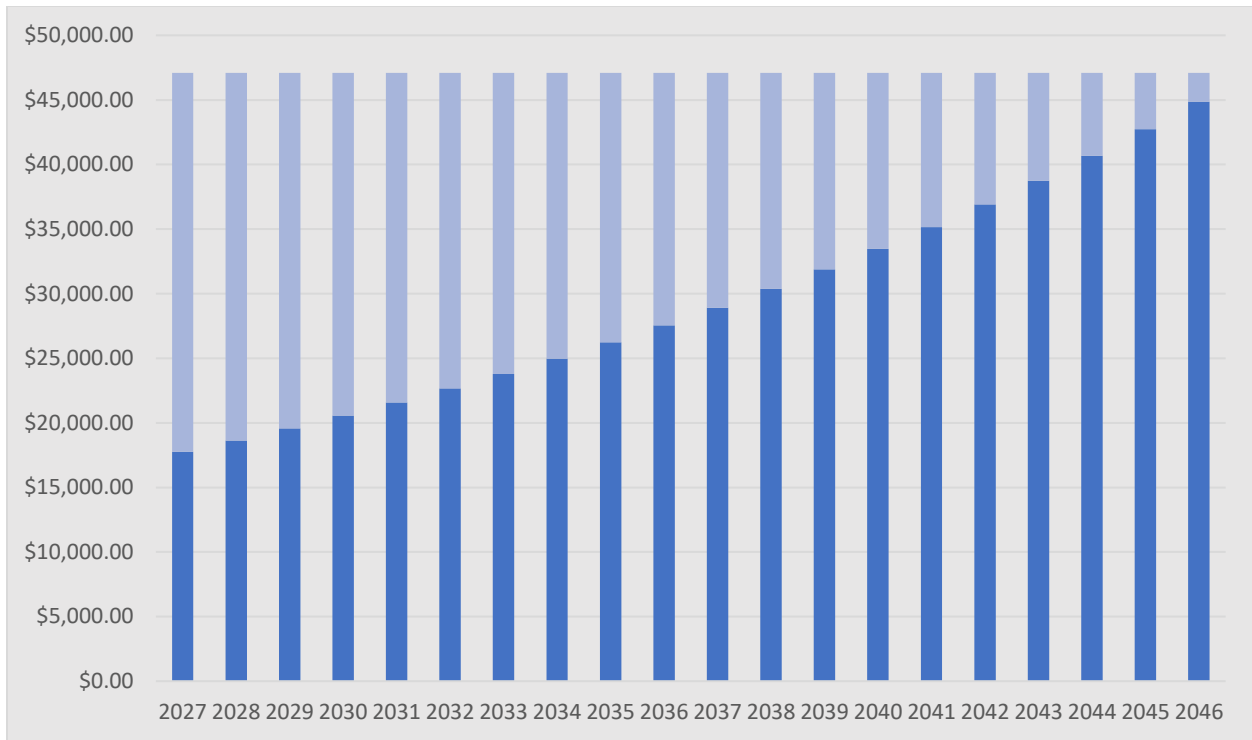




**City of Willow Park
Minor Culvert Improvement Projects-Phase I
20 Years at 5.00%**

<u>Year</u>	<u>Principal Outstanding</u>	<u>Principal Payment</u>	<u>Interest Payment</u>	<u>Total Payment</u>
2027	\$587,000.00	\$17,752.40	\$29,350.00	\$47,102.40
2028	\$569,247.60	\$18,640.02	\$28,462.38	\$47,102.40
2029	\$550,607.58	\$19,572.02	\$27,530.38	\$47,102.40
2030	\$531,035.56	\$20,550.62	\$26,551.78	\$47,102.40
2031	\$510,484.94	\$21,578.15	\$25,524.25	\$47,102.40
2032	\$488,906.78	\$22,657.06	\$24,445.34	\$47,102.40
2033	\$466,249.72	\$23,789.91	\$23,312.49	\$47,102.40
2034	\$442,459.81	\$24,979.41	\$22,122.99	\$47,102.40
2035	\$417,480.40	\$26,228.38	\$20,874.02	\$47,102.40
2036	\$391,252.02	\$27,539.80	\$19,562.60	\$47,102.40
2037	\$363,712.22	\$28,916.79	\$18,185.61	\$47,102.40
2038	\$334,795.43	\$30,362.63	\$16,739.77	\$47,102.40
2039	\$304,432.80	\$31,880.76	\$15,221.64	\$47,102.40
2040	\$272,552.04	\$33,474.80	\$13,627.60	\$47,102.40
2041	\$239,077.25	\$35,148.54	\$11,953.86	\$47,102.40
2042	\$203,928.71	\$36,905.96	\$10,196.44	\$47,102.40
2043	\$167,022.74	\$38,751.26	\$8,351.14	\$47,102.40
2044	\$128,271.48	\$40,688.83	\$6,413.57	\$47,102.40
2045	\$87,582.65	\$42,723.27	\$4,379.13	\$47,102.40
2046	\$44,859.39	\$44,859.39	\$2,242.97	\$47,102.36

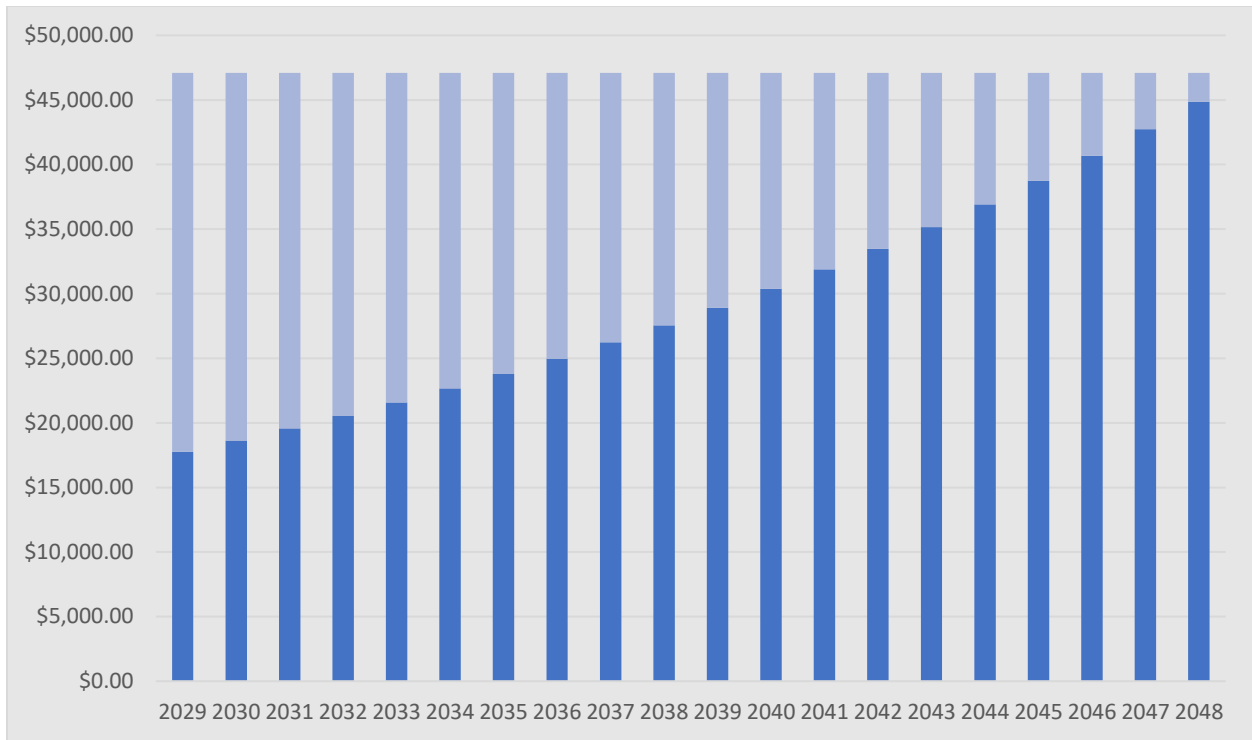




**City of Willow Park
Minor Culvert Improvement Projects-Phase II
20 Years at 5.00%**

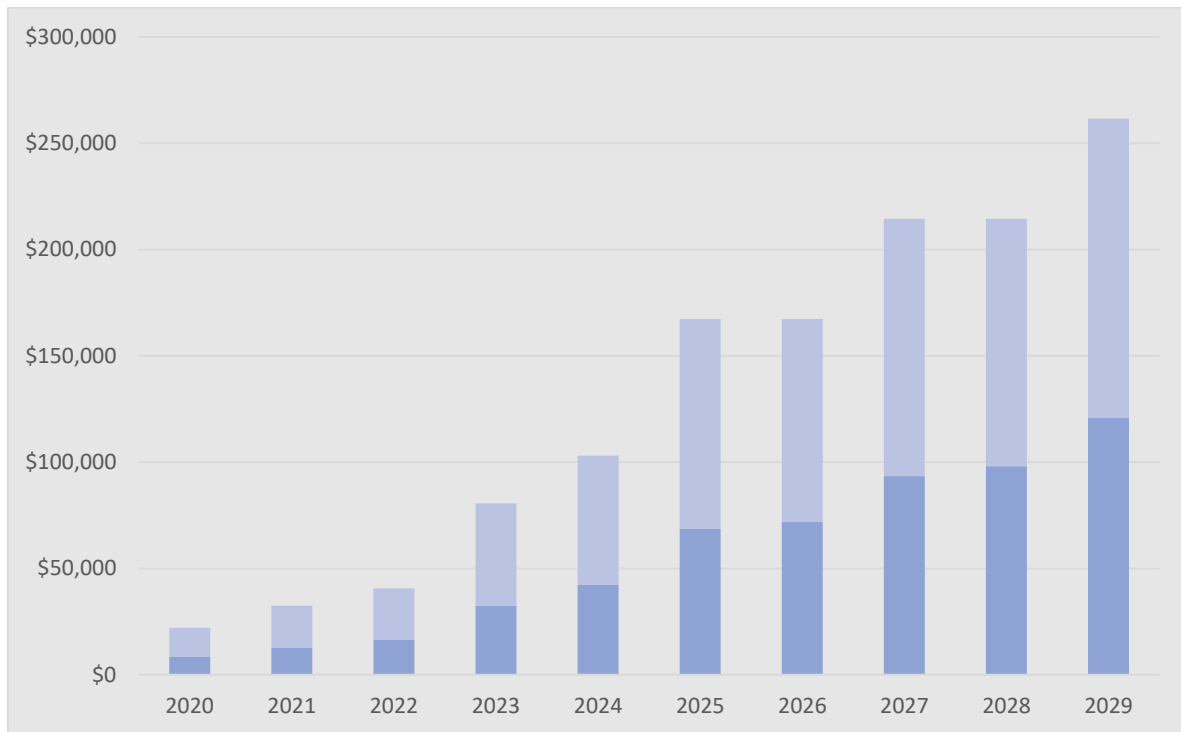
<u>Year</u>	<u>Principal Outstanding</u>	<u>Principal Payment</u>	<u>Interest Payment</u>	<u>Total Payment</u>
2029	\$587,000.00	\$17,752.40	\$29,350.00	\$47,102.40
2030	\$569,247.60	\$18,640.02	\$28,462.38	\$47,102.40
2031	\$550,607.58	\$19,572.02	\$27,530.38	\$47,102.40
2032	\$531,035.56	\$20,550.62	\$26,551.78	\$47,102.40
2033	\$510,484.94	\$21,578.15	\$25,524.25	\$47,102.40
2034	\$488,906.78	\$22,657.06	\$24,445.34	\$47,102.40
2035	\$466,249.72	\$23,789.91	\$23,312.49	\$47,102.40
2036	\$442,459.81	\$24,979.41	\$22,122.99	\$47,102.40
2037	\$417,480.40	\$26,228.38	\$20,874.02	\$47,102.40
2038	\$391,252.02	\$27,539.80	\$19,562.60	\$47,102.40
2039	\$363,712.22	\$28,916.79	\$18,185.61	\$47,102.40
2040	\$334,795.43	\$30,362.63	\$16,739.77	\$47,102.40
2041	\$304,432.80	\$31,880.76	\$15,221.64	\$47,102.40
2042	\$272,552.04	\$33,474.80	\$13,627.60	\$47,102.40
2043	\$239,077.25	\$35,148.54	\$11,953.86	\$47,102.40
2044	\$203,928.71	\$36,905.96	\$10,196.44	\$47,102.40
2045	\$167,022.74	\$38,751.26	\$8,351.14	\$47,102.40
2046	\$128,271.48	\$40,688.83	\$6,413.57	\$47,102.40
2047	\$87,582.65	\$42,723.27	\$4,379.13	\$47,102.40
2048	\$44,859.39	\$44,859.39	\$2,242.97	\$47,102.36





**City of Willow park
Stormwater Utility Fund Debt Schedule
Combined Total Debt for Proposed Bond Projects Over 10-Year Period**

<u>Year</u>	<u>Principal Outstanding</u>	<u>Principal Payment</u>	<u>Interest Payment</u>	<u>Total Payment</u>
2020	\$405,000	\$8,317	\$13,750	\$22,067
2021	\$492,752	\$12,664	\$19,834	\$32,498
2022	\$976,867	\$16,322	\$24,201	\$40,523
2023	\$967,698	\$32,259	\$48,385	\$80,644
2024	\$1,215,439	\$42,340	\$60,772	\$103,112
2025	\$1,973,099	\$68,651	\$98,655	\$167,306
2026	\$1,904,448	\$72,083	\$95,222	\$167,306
2027	\$2,419,365	\$93,440	\$120,968	\$214,408
2028	\$2,325,925	\$98,112	\$116,296	\$214,408
2029	\$2,814,813	\$120,770	\$140,741	\$261,511



This Includes the following:

1-5 Year

- Sam Bass Road and Pleasant Ridge Culvert Improvements
- Chuckwagon Trail and I-20 Channel Improvements
- El Chico Trail Channel Improvements
- Major Culvert Improvements
- Castlemount Drainage Improvements
- Vista Drive Drainage Improvements
- Live Oak Road Drainage Improvements

6-10 Year

- Minor Culvert Improvements

4.6 Proposed Stormwater Utility Fee

Based on the results of this study, it is recommended that the monthly stormwater fee be set to \$5.50 per single-family unit (SFU) or \$1.83 per 1/3 SFU. For residential properties, it would be broken down into two classes which would be based on the SFU. Any single-family residential property would have the square footage converted into SFUs, then have that number multiplied by the cost per SFU. Residential homes that fall below the SFU square footage total would pay the minimum, which is equivalent to 1 SFU. For Multi-Family homes, the Living Area (LVAR) would be multiplied by 1.5 before being converted to SFUs. Therefore, a 3,000 square foot multi-family complex would be billed 3 SFUs per month. Any non-residential property would have the impervious square footage (buildings, parking lots, etc.) multiplied by the rate. For example, if a non-residential property is 12,500 square feet, that square footage would be multiplied by \$0.0055 per sq. ft., resulting in \$68.75 per month. All properties' SFUs would be rounded up to the nearest 1/3 SFU. The table below breaks down the different types of properties and their cost per month.



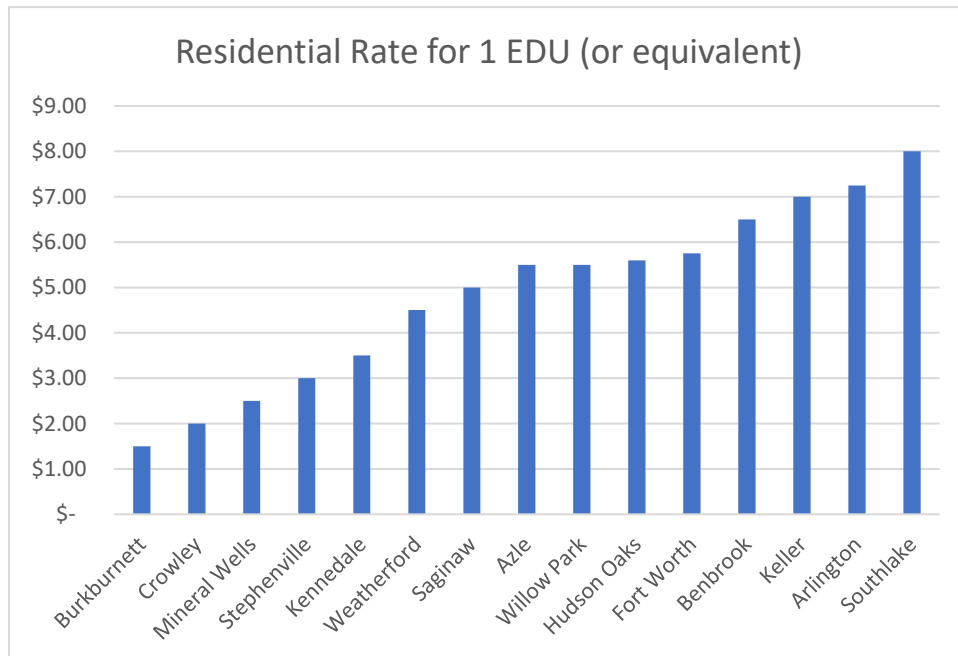
Table 6: Cost Breakdown

Cost Breakdown of Stormwater Utility Fees		
Type of Property	No. of SFUs	Cost per 1/3 SFU
Residential – Single-Family	= LVAR/1500 sq. ft.	\$1.83
Residential – Multi-Family	= LVAR*1.5/1500 sq. ft.	\$1.83
Non-Residential/Commercial	= SF*0.0055	
Religious/Educational Institutes	= SF/1500 sq. ft.	\$1.83
Undeveloped/Agricultural	1 SFU	\$1.83

The rates were calculated by taking the total amount of funds needed to operate the stormwater program, the expenses related to the proposed capital improvement projects, and rates from comparison municipalities. During the research phase of this report, the data in the following table was compiled. The extended calculations and tables for the given data can be found in Appendix A.

Table 7: Comparison Rates for Other Municipalities

City	Rate for 1 EDU (or equivalent)
Arlington	\$ 7.25
Azle	\$ 5.50
Benbrook	\$ 6.50
Burkburnett	\$ 1.50
Crowley	\$ 2.00
Fort Worth	\$ 5.75
Hudson Oaks	\$ 5.60
Keller	\$ 7.00
Kennedale	\$ 3.50
Mineral Wells	\$ 2.50
Saginaw	\$ 5.00
Southlake	\$ 8.00
Stephenville	\$ 3.00
Weatherford	\$ 4.50
AVERAGE	\$ 4.83



30 single-family properties were selected at random as a basis for the average lot size in the City. Based on existing land use, there are currently only 2 multi-family complexes in the City. 20 commercial properties were selected at random as a basis for the average commercial property in the City. Table 8 below shows a summary of the properties analyzed in this study.

Table 8: Average Impervious Area Data

Average Impervious Area Data				
No.	Type of Property	Average Lot Size (sq. ft.)	Average Impervious Area (sq. ft.)	Percent Impervious
1	Single-Family	55,891	7,886	14.11%
2	Multi-Family	44,606	33,366	74.80%
3	Commercial	99,872	*72,739	72.83%

*This value reflects the true average of the properties surveyed. In the revenue estimate, two very large properties were taken out of the average to reflect a more realistic average.

The following table shows examples of several different bills for the classification of property and how their monthly bill would be affected by the proposed rate change. These examples are arbitrary and do not necessarily represent actual properties in the City.

Table 9: Billing Charges Example

Customer Class	LVAR or GBSF	Multiplier	SFU Total	SFU Total Rounded	Proposed Stormwater Rate	Proposed Monthly Bill
Single-Family	1,500	1.0	1.00	1.00	\$5.50	\$5.50
Single-Family	2,000	1.0	1.33	1.33	\$5.50	\$7.32
Single-Family	3,000	1.0	2.00	2.00	\$5.50	\$11.00
Single-Family	8,985	1.0	5.99	6.00	\$5.50	\$33.00
Single-Family	6,990	1.0	4.66	4.67	\$5.50	\$25.69
Single-Family	5,985	1.0	3.99	4.00	\$5.50	\$22.00
Multi-Family	1,500	1.5	1.50	1.67	\$5.50	\$9.19
Multi-Family	2,000	1.5	2.00	2.00	\$5.50	\$11.00
Multi-Family	3,000	1.5	3.00	3.00	\$5.50	\$16.50
Multi-Family	40,000	1.5	40.00	40.00	\$5.50	\$220.00
Multi-Family	23,330	1.5	23.33	23.33	\$5.50	\$128.32
Commercial	1,500	1.0			\$0.0055	\$8.25
Commercial	2,000	1.0			\$0.0055	\$11.00
Commercial	3,000	1.0			\$0.0055	\$16.50
Commercial	183,750	1.0			\$0.0055	\$1,010.63
Commercial	61,500	1.0			\$0.0055	\$338.25
Commercial	53,745	1.0			\$0.0055	\$295.60
Commercial	41,745	1.0			\$0.0055	\$229.60
Institutional	1,500	1.0	1.00	1.00	\$5.50	\$5.50
Institutional	2,000	1.0	1.33	1.33	\$5.50	\$7.32
Institutional	3,000	1.0	2.00	2.00	\$5.50	\$11.00
Institutional	575,715	1.0	383.81	384.00	\$5.50	\$2,112.00
Institutional	21,495	1.0	14.33	14.33	\$5.50	\$78.82
Institutional	11,520	1.0	7.68	8.00	\$5.50	\$44.00



Section 5

Conclusion and Recommendations



5.1 Recommendations

As a result of this study, it is recommended that the City of Willow Park institute the following changes to their stormwater utility funding structure:

- Create a stormwater utility with the following utility rates set.
 - Residential and Institutional: \$5.50 per SFU minimum, which is equivalent to \$1.83 per 1/3 SFU.
 - Agricultural and Undeveloped: Flat fee of \$5.50
 - Commercial: \$0.0055 per sq. ft. of impervious area, which is equivalent to \$5.50 per 1,000 sq. ft.
- Conduct a Stormwater Utility Rate Study at least every 10 years to ensure accuracy and to update the rate based on the changes of the community.



Appendix A

Rate Comparisons to Similar Municipalities



1508 Santa Fe, Suite 203 – Weatherford, Tx 76086
www.jacobmartin.com – (817)594-9880



516 Ranch House Rd – Willow Park, Texas 76087
www.willowpark.org – (817)441-7108

Stormwater Utility Fees for Arlington		
Type	Fee	
Residential	\$7.25	minimum
Non-residential	\$7.25	per ERU based on impervious area
Equivalent Residential Unit	(ERU)	1 ERU = 2800 sqft

Stormwater Utility Fees for Azle		
Type	Fee	
Residential	\$5.50	minimum
Non-residential	\$1.83	per each 1/3 SFU or portion thereof
Single Family Unit	(SFU)	1 SFU = 1500 sqft

Stormwater Utility Fees for Benbrook	
Type	Rate
Residential	\$6.50 per dwelling unit
Commercial	Impervious area (sq. ft) x \$0.00204/SF/month

Stormwater Utility Fees for Burkburnett	
Type	Rate
Residential	\$1.50 per SLUE
Commercial	\$1.50 per SLUE
SLUE =	Single-family Living Unit Equivalent
SLUE =	3,500 Sq. Ft.

Stormwater Utility Fees for Crowley	
Type	Rate
Residential	\$ 2.00
Non-Residential	Area (sq. ft) x \$0.00080/SF/month



Residential Stormwater Utility Fees for Fort Worth			
Tiers	Garage Capacity (number of spaces)	Living Area (Sq. Ft.)	Monthly Rates
Tier 1 (0.5 ERU)	0	0 - 1300	\$2.88
	1	0 - 1040	
	2	0 - 781	
	3	0 - 521	
	4	0 - 262	
Tier 2 (1 ERU)	0	1301 - 2475	\$5.75
	1	1041 - 2215	
	2	782 - 1956	
	3	522 - 1696	
	4	263 - 1437	
Tier 3 (1.5 ERU)	0	2476 - 3393	\$8.63
	1	2216 - 3133	
	2	1957 - 2874	
	3	1697 - 2614	
	4	1438 - 2355	
Tier 4 (2 ERU)	0	3394+	\$11.50
	1	3134+	
	2	2875+	
	3	2615+	
	4	2356+	

Stormwater Utility Fees for Hudson Oaks	
Type	Rate
Residential	\$5.60 per ERU
Commercial	Calculated ERU based on Impervious area (sq. ft)

Stormwater Utility Fees for Keller		
Type	Rate	
Residential	\$7.00	single rate
Commercial	\$7.00 min, \$56.77 max	depends on "hard surface area"



Stormwater Utility Fees for Kennedale	
Type	Rate
Residential	\$3.50
Non-Residential	\$0.00126/sq. ft. of impervious area
Religious	\$3.50

Stormwater Utility Fees for Mineral Wells		
Type	Rate	
Residential	\$2.50	per water meter
Commercial	\$2.50	per water meter

Stormwater Utility Fees for Saginaw		
Type	Rate	
SF	\$5.00	single rate per unit
MF	\$5.00	single rate per unit
Commercial	3.31	single rate per unit

Stormwater Utility Fees for Southlake	
Type	Rate
Residential	\$8.00
Non-Residential	\$0.00125/sq. ft. of impervious area

Stormwater Utility Fees for Stephenville			
Type	Rate		
	Less than 5,000 SF	5,000-21,780 SF	Over 21,780 SF
Residential	\$2.00	\$ 3.00	\$ 4.00
Non-Residential	\$3.00		
Religious	\$3.50		

Stormwater Utility Fees for Weatherford						
Example:						
25,000 sq. ft. hard surface	ERU	Billing units	Billing units	Rate	Monthly Payment	
	25000	3300	7.5758	8 \$4.50	\$36.00	



Appendix B

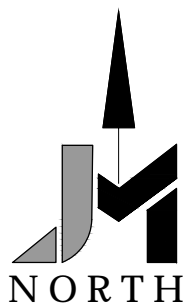
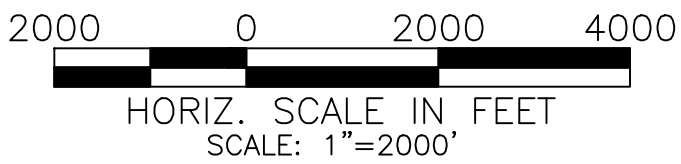
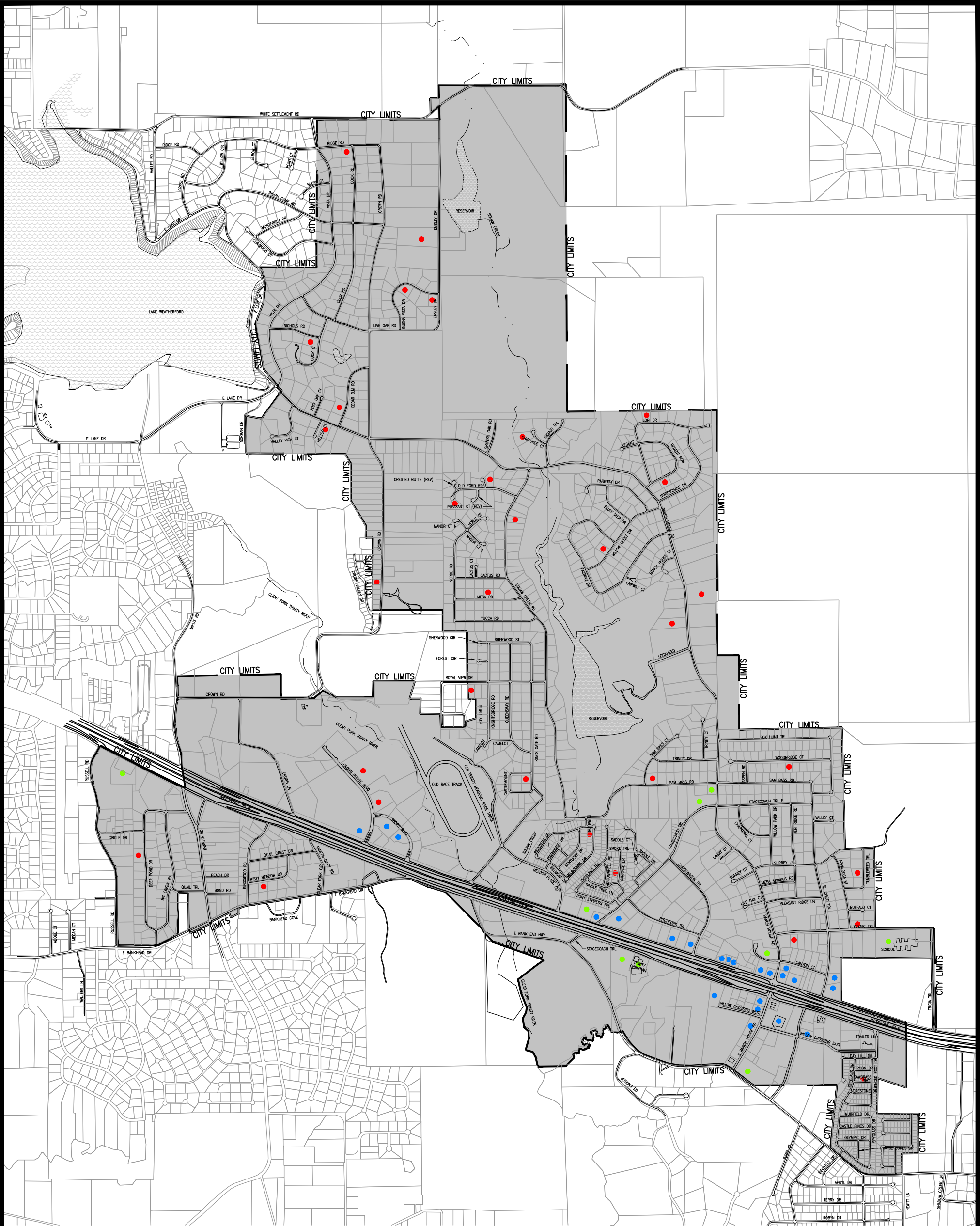
Property Location Map



1508 Santa Fe, Suite 203 – Weatherford, Tx 76086
www.jacobmartin.com – (817)594-9880



516 Ranch House Rd – Willow Park, Texas 76087
www.willowpark.org – (817)441-7108



LEGEND

- RESIDENTIAL PROPERTY
- COMMERCIAL PROPERTY
- INSTITUTIONAL PROPERTY

CITY OF WILLOW PARK
 Parker County, Texas
STORMWATER FEE STUDIES
 PROPERTY LOCATION MAP



JACOB MARTIN
 FIRM # F-2448

3465 CURRY LANE
 ABILENE, TX 79606
 325-695-1070

1508 SANTA FE DR, STE 204
 WEATHERFORD, TX 76086
 817-594-9880

1014 BROADWAY STREET
 LUBBOCK, TX 79401
 806-368-6375

Appendix C

Financial Statement as of December 2019



1508 Santa Fe, Suite 203 – Weatherford, Tx 76086
www.jacobmartin.com – (817)594-9880



516 Ranch House Rd – Willow Park, Texas 76087
www.willowpark.org – (817)441-7108



**City of Willow Park
Financial Update
Financial Reports as of December 31, 2019**

Financial Highlights			
	General	Water	Wastewater
-FYTD 2019-2020 Revenue Actual	\$ 1,568,752	\$ 620,896	\$ 201,295
-FYTD 2019-2020 Expense Actual	927,979	596,338	71,565
-FYTD 2019-2020 Net Change	\$ 640,773	\$ 24,559	\$ 129,730
-FY 2019-2020 Revenue Budget	\$ 3,957,636	\$ 2,488,264	\$ 704,754
-FY 2019-2020 Expense Budget	\$ 3,954,931	\$ 2,342,534	\$ 628,595
-FYTD 2019-2020 Revenue - Actual to Budget %	40%	25%	29%
-FYTD 2019-2020 Expense - Actual to Budget %	23%	25%	11%

Capital Project Tracker			
	Fort Worth Water Line (100%)	Public Works Building	Ranch House Road
Original Net Bond Proceeds	\$ 13,770,000	\$ 5,205,000	\$ 4,610,000
Interest Earned to Date	-	148,058	65,256
Costs Incurred to Date	(751,790)	(4,916,880)	(4,058,437)
Remaining to Spend	\$ 13,018,210	\$ 436,178	\$ 616,819

Monthly Performance			
	Dec-19	Dec-18	Change
General Fund			
Revenue			
Property Tax & Other Taxes	\$ 988,106	\$ 578,808	\$ 409,297
Franchise Fees	284	252	32
Development & Permit Fees	9,803	12,142	(2,338)
Fines & Forfeitures/Other Revenue	8,026	14,460	(6,434)
Expenses			
Personnel Expense	169,126	172,297	(3,171)
Supplies (Maintenance & Operations)	17,339	26,131	(8,792)
Utilities	7,566	252	7,314
Operational & Contractual Services	109,453	53,924	55,530
Capital Outlay & Interfund Transfer	1,033	3,000	(1,967)
Net Income (Loss)	\$ 701,702	\$ 350,058	\$ 351,644
Water & Wastewater Funds			
Revenue	\$ 230,341	\$ 208,738	\$ 21,603
Expense			
Personnel Expense	64,848	45,033	19,816
Supplies (Maintenance & Operations)	1,206	11,991	(10,785)
Utilities	11,939	306	11,634
Operational & Contractual Services	12,610	23,076	(10,466)
Capital Outlay/Debt Service	197,073	34,875	162,198
Net Income (Loss)	\$ (57,335)	\$ 93,458	\$ (150,793)

**General Fund
Profit & Loss Budget vs Actual
For the Fiscal Year to Date December 31, 2019**

	Adopted Budget	PYTD Actual	YTD Actual	Amount Remaining	Pct Spent/ Collected
Revenue					
Property Tax & Other Taxes					
M & O TAX	\$ 1,542,410	\$ 582,437	\$ 979,359	\$ 563,051	63%
SALES TAX	1,150,000	263,797	292,142	857,858	25%
MIXED BEVERAGE TAX	24,506	8,816	7,738	16,768	32%
AUTO/TRAILER TAXES	325	-	-	325	0%
DELINQUENT TAXES	6,977	9,860	614	6,363	9%
Total Property Tax & Other Taxes	2,724,218	864,910	1,279,853	1,444,365	47%
Franchise Fees					
TXU ELECTRIC	165,836	-	-	165,836	0%
A T & T	70,000	13,940	13,714	56,286	20%
TEXAS GAS	7,500	-	-	7,500	0%
MISC FRANCHISE	5,000	1,185	590	4,410	12%
MESH NET	3,024	756	788	2,236	26%
WATER FRANCHISE FEE	98,020	-	-	98,020	0%
WASTEWATER FRANCHISE FEES	28,553	-	-	28,553	0%
Total Franchise Fees	377,933	15,881	15,093	362,840	4%
Development & Permit Fees					
BUILDING PERMITS	175,000	40,618	185,218	(10,218)	106%
HEALTH PERMITS	9,000	7,580	4,020	4,980	45%
SUBCONTRACTORS PERMITS	15,000	4,946	10,733	4,267	72%
REGISTRATION FEES	4,500	630	850	3,650	19%
OSSF PERMITS	1,200	600	1,800	(600)	150%
WELL APPLICATION FEE	-	1,500	-	-	0%
PLAN REVIEW	35,000	6,000	27,859	7,141	80%
SPECIAL EVENT PERMITS	-	-	350	(350)	0%
REVIEWS/REQUESTS	600	1,875	630	(30)	105%
METER RELEASE	-	1,000	250	(250)	0%
RENTAL INSPECTIONS	400	-	-	400	0%
LATE HOURS ALOCHOL PERMIT FEE	-	-	770	(770)	0%
NSF FEES	-	-	30	(30)	0%
FIRE ALARMS	1,000	500	1,500	(500)	150%
FIRE SPRINKLER	1,000	500	2,000	(1,000)	200%
CERTIFICATE OF OCCUPANCY	1,000	-	450	550	45%
Total Development & Permit Fees	243,700	65,749	236,459	7,241	97%
Fines & Forfeitures					
NON-PARKING	100,000	22,274	15,126	84,874	15%
PARKING	1,000	320	230	770	23%
WARRANTS/CAPIAS	1,300	394	250	1,050	19%
STATE LAW - CLASS C	15,000	3,094	2,015	12,985	13%
COURT ADMINISTRATION	75,000	14,702	11,739	63,261	16%
COURT SECURITY	4,700	-	-	4,700	0%
TIME PAYMENT	400	50	63	338	16%
MC TECH FEE	6,700	-	-	6,700	0%
SEAT BELT	500	300	-	500	0%

	Adopted Budget	PYTD Actual	YTD Actual	Amount Remaining	Pct Spent/ Collected
TEEN COURT FEE	-	100	40	(40)	0%
FIRE SPRINKLER	10,000	-	-	10,000	0%
Total Fines & Forfeitures	214,600	41,235	29,462	185,138	14%
Other Revenue					
INTEREST - OPERATING FUND	15,000	9,878	4,741	10,259	32%
REFUNDS/BANK CREDITS	100	89	1,692	(1,592)	1692%
MISCELLANEOUS	1,135	928	54	1,081	5%
OPEN RECORDS FEES	150	-	-	150	0%
OTHER REIMBURSEABLES	200	5,000	-	200	0%
REVENUE RECOVERY	5,000	396	348	4,652	7%
POLICE CONTRIBUTIONS	-	237	256	(256)	0%
ACCIDENT REPORTS	600	154	231	369	39%
ROAD CONTRIBUTIONS	-	63	44	(44)	0%
PARK CONTRIBUTIONS	-	47	23	(23)	0%
VFD CONTRIBUTIONS	-	345	366	(366)	0%
BOND PROCEEDS	-	373,072	-	-	0%
SALE OF ASSETS	-	-	131	-	0%
ACCOUNT TRANSFERS	375,000	256,003	-	375,000	0%
Other Revenue	397,185	646,212	7,885	389,431	2%
Total Revenue	3,957,636	1,633,987	1,568,752	2,389,015	40%
Expenditures					
Personnel					
SALARIES	1,743,669	438,175	446,700	1,296,969	26%
PAYROLL EXPENSE	27,331	6,728	7,041	20,290	26%
WORKERS COMPENSATION	33,152	35,288	33,099	53	100%
HEALTH INSURANCE	217,076	55,693	50,342	166,734	23%
RETIREMENT	135,708	34,949	36,372	99,336	27%
UNEMPLOYMENT INSURANCE	253	36	-	253	0%
CELL PHONE STIPEND	6,811	1,881	1,669	5,142	25%
CERTIFICATE PAY	35,879	7,071	8,076	27,803	23%
OVERTIME	87,173	26,454	39,725	47,448	46%
FLOATER SHIFTS	16,000	2,082	2,265	13,735	14%
DENTAL INSURANCE	20,747	3,748	3,643	17,104	18%
LIFE INSURANCE	3,417	1,272	1,232	2,185	36%
PHYSICALS & GYM MEMBERSHIPS	6,980	-	500	6,480	0%
BAILIFF DUTIES	1,400	175	351	1,049	25%
Total Personnel	2,335,596	613,552	631,014	1,704,582	27%
Supplies (Maintenance & Operations)					
POSTAGE & SHIPPING	4,748	53	121	4,627	3%
OFFICE SUPPLIES	16,255	2,948	981	15,274	6%
FLOWERS/GIFTS/PLAQUES	4,690	1,551	991	3,699	21%
BASIC OPERATING SUPPLIES	15,977	2,464	4,200	11,777	26%
PRINTING & BINDING	1,854	298	353	1,501	19%
MINOR EQUIPMENT: OFFICE	11,030	2,202	1,710	9,320	16%
MV OILS, LUBRICANTS & FLUIDS	515	-	-	515	0%
MV REPAIR & MAINTENANCE	88,061	4,766	12,069	75,992	14%
UNIFORMS & SUPPLIES	36,752	3,295	84	36,668	0%
TRAFFIC & STREET SIGNS	3,605	125	180	3,425	5%
FINANCE CHARGES	360	163	207	153	57%

	Adopted Budget	PYTD Actual	YTD Actual	Amount Remaining	Pct Spent/ Collected
PPE AND SUPPLIES	60,601	7,008	2,278	58,323	4%
MEDICAL SUPPLIES	14,906	1,821	2,580	12,326	17%
FOAM SUPPLIES	1,803	1,750	-	1,803	0%
ROAD ABSORBENT SUPPLIES	1,654	-	-	1,654	0%
MINOR TOOLS	3,060	-	-	3,060	0%
EQUIPMENT	515	-	-	515	0%
MISC TOOLS/SUPPLIES	-	292	-	-	0%
ASPHALT MATERIALS	35,000	2,086	-	35,000	0%
ROAD BASE MATERIALS - PAVING	19,800	4,569	-	19,800	0%
ICE & INCLEMENT WEATHER	4,635	-	-	4,635	0%
CONCRETE REPLACEMENT	15,000	3,600	-	15,000	0%
DRAINAGE	20,000	-	-	20,000	0%
BARRICADES/MARKERS	2,500	-	-	2,500	0%
SAFETY EQUIPMENT & SUPPLIES	22,455	12,000	480	21,975	2%
BUILDING & FACILITIES REPAIRS	33,920	4,314	391	33,529	1%
FACILITIES MAINT SUPPLIES	14,490	232	935	13,555	6%
MINOR EQUIPMENT: FIELD	6,800	-	-	6,800	0%
OPERATING SUPPLIES NON CONSUMABLES	1,030	46	-	1,030	0%
SUBSCRIPTIONS & PUBLICATIONS	3,376	-	1,857	1,519	55%
PROMOTIONS	4,600	3,110	-	4,600	0%
MV FUEL	35,900	5,383	3,308	32,592	9%
MV TIRES, TUBES & BATTERIES	4,120	573	-	4,120	0%
SPECIAL EVENTS	1,000	-	-	1,000	0%
AMMUNITION & WEAPONS RELATED	3,500	481	-	3,500	0%
EMERGENCY RESPONSE SUPPLIES	8,000	3,631	-	8,000	0%
Total Supplies (Maintenance & Operations)	502,512	68,763	32,726	469,786	7%
Utilities					
ELECTRICITY	33,372	5,575	11,492	21,880	34%
GAS	4,000	210	813	3,187	20%
TELEPHONE	15,000	-	-	15,000	0%
COMMUNICATION SERVICES	51,180	8,596	14,989	36,191	29%
Total Utilities	103,552	14,381	27,294	76,258	26%
Operational & Contractual Services					
TRAVEL & TRAINING	74,154	3,506	2,029	72,125	3%
CONSULTANTS & PROFESSIONALS	119,755	11,765	2,765	116,990	2%
ADVERTISING & LEGAL NOTICES	8,753	3,549	2,246	6,507	26%
PRINTING & BINDING	4,424	313	515	3,910	12%
PROPERTY & LIABILITY	38,250	37,757	37,714	536	99%
REPAIR & MAINTENANCE	-	423	991	(991)	0%
PROFESSIONAL LICENSE	1,400	-	-	1,400	0%
DUES & MEMBERSHIPS	16,245	8,220	745	15,500	5%
SPECIAL EVENTS	12,500	5,801	4,750	7,750	38%
PERMITS & APPLICATIONS	-	-	-	-	0%
LAB TESTING	3,000	-	1,165	1,835	0%
OTHER RENTAL	-	-	410	(410)	0%
FINANCE CHARGES	-	-	8	(8)	0%
LEGAL/CITY ATTORNEY	55,000	8,808	9,550	45,450	17%
ACCOUNTING & AUDITOR	40,000	2,700	3,300	36,700	8%
CONTRACTUAL SERVICES	223,250	27,486	16,157	207,093	7%
ELECTIONS ADMINISTRATION	5,700	-	-	5,700	0%
INMATE HOUSING	1,200	-	71	1,130	6%

	Adopted Budget	PYTD Actual	YTD Actual	Amount Remaining	Pct Spent/ Collected
MUNICIPAL JUDGE	14,400	2,400	2,400	12,000	17%
MAGISTRATE	3,000	200	1,000	2,000	33%
FOOD SERVICE INSPECTOR	5,870	3,695	3,170	2,700	54%
ENGINEERING/CITY ENGINEER	5,150	7,056	449	4,701	9%
SOLID WASTE COLLECTION	-	561	561	(561)	0%
SOFTWARE TECH SUPPORT	15,500	5,014	2,054	13,446	13%
EQUIPMENT TECH SUPPORT	20,540	-	600	19,940	3%
POOL INSPECTOR	1,700	-	-	1,700	0%
BLACKBOARD CONNECT	5,963	3,824	3,824	2,139	64%
IT CONTRACT	27,692	6,736	4,491	23,201	16%
JURY SERVICE	200	-	-	200	0%
GOVERNMENT & MISC OPERATING	47,470	4,798	3,794	43,676	8%
EQUIPMENT RENTAL	11,660	1,945	4,053	7,607	35%
VEHICLE LEASE	58,945	-	92,595	(33,650)	157%
ANIMAL CONTROL	66,550	13,613	13,613	52,938	20%
ECONOMIC DEVELOPMENT	5,000	-	10,000	(5,000)	200%
Total Operational & Contractual Services	893,271	160,168	225,017	668,254	25%
Capital Outlay					
OFFICE EQUIPMENT	-	-	1,033	(1,033)	0%
FACILITIES: PARKS	5,000	3,000	-	5,000	0%
TECHNOLOGY PROJECTS	-	(3,816)	-	-	0%
SOFTWARE	-	-	23,795	(23,795)	0%
EQUIPMENT PURCHASE	-	-	-	-	0%
UTILITIES: DRAINAGE	-	-	(13,199)	13,199	0%
PARKER COUNTY STREET IMPROVEMENTS	115,000	-	-	115,000	0%
PAYING AGENT FEES	-	300	300	(300)	0%
Total Capital Outlay	120,000	(516)	11,928	108,072	10%
Transfers & Restricted Funds					
INTERFUND TRANSFER	-	-	-	-	0%
Total Expenditures	3,954,931	856,348	927,979	3,026,953	23%
Net Income	\$ 2,705	\$ 777,639	\$ 640,773	\$ (637,937)	

Water Fund
Profit & Loss Budget vs Actual
For the Fiscal Year to Date December 31, 2019

	Adopted Budget	PYTD Actual	YTD Actual	Amount Remaining	Pct Spent/ Collected
Revenue					
USER CHARGES	\$ 2,225,964	\$ 447,162	\$ 540,612	\$ 1,685,352	24%
PENALTIES	30,000	6,807	4,539	25,461	15%
NEW ACCOUNT FEES	13,000	3,490	2,440	10,560	19%
TAP FEES	3,000	-	1,500	1,500	50%
IMPACT FEES	165,000	23,825	51,209	113,791	31%
INTEREST REVENUE	10,000	16,465	11,793	(1,793)	118%
METER FEE	25,000	3,662	4,379	20,621	18%
METER BOX FEE	4,500	1,250	1,600	2,900	36%
RECONNECT FEES	10,000	2,555	2,660	7,340	27%
RETURNED CHECK FEES	600	270	240	360	40%
MISCELLANEOUS REVENUE	1,200	(75)	(75)	1,275	-6%
Total Revenue	2,488,264	505,411	620,896	1,867,368	25%
Expenditures					
Personnel					
SALARIES	548,377	99,215	145,349	403,028	27%
PAYROLL EXPENSE	8,439	1,523	2,213	6,226	26%
WORKERS COMPENSATION	11,396	9,461	8,498	2,898	75%
HEALTH INSURANCE	89,178	16,081	21,901	67,277	25%
RETIREMENT	42,021	7,745	11,329	30,692	27%
UNEMPLOYMENT INSURANCE	99	270	-	99	0%
CELL PHONE STIPEND	4,320	976	896	3,424	21%
CERTIFICATE PAY	2,280	129	108	2,172	5%
OVERTIME	16,817	5,925	8,702	8,115	52%
DENTAL INSURANCE	12,579	1,059	1,537	11,042	12%
LIFE INSURANCE	1,401	405	504	897	36%
Total Personnel	736,907	142,789	201,036	535,871	27%
Supplies (Maintenance & Operations)					
POSTAGE & SHIPPING	15,000	4,500	1,500	13,500	10%
OFFICE SUPPLIES	5,000	1,466	998	4,002	20%
FLOWERS/GIFTS/PLAQUES	300	-	-	300	0%
BASIC OPERATING SUPPLIES	2,000	21	30	1,970	2%
MINOR EQUIPMENT: OFFICE	3,000	514	1,020	1,980	34%
MV REPAIR & MAINTENANCE	10,400	278	6,029	4,371	58%
UNIFORMS & SUPPLIES	5,370	1,697	200	5,170	4%
FINANCE CHARGES	1,800	918	584	1,216	32%
MISC TOOLS/SUPPLIES	2,850	165	14	2,836	1%
ROAD BASE MATERIALS - PAVING	-	129	-	-	0%
CHEMICALS	10,048	1,270	2,551	7,497	25%
FIRE HYDRANTS	10,400	-	-	10,400	0%
SAFETY EQUIPMENT & SUPPLIES	2,874	2,075	1,478	1,396	51%
BUILDING & FACILITIES REPAIRS	3,984	1,633	205	3,779	5%
FACILITIES MAINT SUPPLIES	-	28	177	(177)	0%
MINOR EQUIPMENT: FIELD	2,850	-	1,542	1,308	54%
SUBSCRIPTIONS & PUBLICATIONS	500	-	-	500	0%
MV FUEL	27,000	4,074	5,321	21,679	20%
WATER DISTRIBUTION SUPPLIES	135,000	9,386	6,005	128,995	4%

	Adopted Budget	PYTD Actual	YTD Actual	Amount Remaining	Pct Spent/ Collected
WATER PRODUCTION SUPPLIES	50,000	-	1,068	48,932	2%
Total Supplies (Maintenance & Operations)	288,376	28,153	28,723	259,653	10%
Utilities					
ELECTRICITY	100,000	11,295	24,842	75,158	25%
MOBILE TELEPHONE	5,700	750	342	5,358	6%
COMMUNICATION SERVICES	6,132	1,004	1,000	5,132	16%
Total Utilities	111,832	13,049	26,184	85,648	23%
Operational & Contractual Services					
TRAVEL & TRAINING	4,050	1,200	-	4,050	0%
CONSULTANTS & PROFESSIONALS	25,000	3,595	-	25,000	0%
ADVERTISING & LEGAL NOTICES	1,000	-	-	1,000	0%
PROPERTY & LIABILITY	5,500	5,394	5,530	(30)	101%
DUES & MEMBERSHIPS	555	-	-	555	0%
PERMITS & APPLICATIONS	5,000	-	5,566	(566)	111%
LAB TESTING	4,140	-	502	3,638	12%
PROPERTY DAMAGE	2,500	-	-	2,500	0%
ACCOUNTING & AUDITOR	13,500	-	-	13,500	0%
CONTRACTUAL SERVICES	-	-	539	(539)	0%
ENGINEERING/CITY ENGINEER	36,000	6,130	13,488	22,512	37%
SOLID WASTE COLLECTION	-	-	211	(211)	0%
SOFTWARE TECH SUPPORT	2,000	-	2,060	(60)	103%
BLACKBOARD CONNECT	2,750	956	956	1,794	35%
IT CONTRACT	3,852	962	642	3,210	17%
WELL SITE MAINTENANCE	15,608	360	-	15,608	0%
EQUIPMENT MAINTENANCE	4,540	-	-	4,540	0%
WATER TANK MAINTENANCE	6,000	-	-	6,000	0%
BUILDING MAINT - WELL SITES	3,000	1	-	3,000	0%
EQUIPMENT RENTAL	8,000	1,005	7,419	581	93%
VEHICLE LEASE	70,000	-	-	70,000	0%
WATER DISTRIBUTION CONTRACTUAL	45,000	354	1,135	43,865	3%
WATER PRODUCTION CONTRACTUAL	50,000	8,592	379	49,621	1%
Total Operational & Contractual Services	307,995	28,549	38,426	269,569	12%
Capital Outlay					
VEHICLES	85,000	-	162	84,838	0%
WATER PURCHASES (EMER WATER)	-	21,044	-	-	0%
SOFTWARE	-	-	3,749	(3,749)	0%
UTILITIES: WATER DISTRIBUTION	-	14,338	13,072	(13,072)	0%
UTILITIES: WATER PRODUCTION	-	36,623	91,998	(91,998)	0%
PAYING AGENT FEES	-	275	353	(353)	0%
DEBT ISSUANCE COST	-	-	192,635	(192,635)	0%
FRANCHISE FEES	98,020	-	-	98,020	0%
DEBT SERVICE PAYMENTS	339,404	-	-	339,404	0%
TRANSFER TO GENERAL FUND	375,000	-	-	375,000	0%
Total Capital Outlay	897,424	72,281	301,969	595,455	34%
Total Expenditures	2,342,534	284,820	596,338	1,746,196	25%
Net Income	\$ 145,730	\$ 220,591	\$ 24,559	\$ 121,171	

Wastewater Fund
Profit & Loss Budget vs Actual
For the Fiscal Year to Date December 31, 2019

	Adopted Budget	PYTD Actual	YTD Actual	Amount Remaining	Pct Spent/ Collected
Revenue					
USER CHARGES	\$ 585,358	\$ 142,170	\$ 148,679	\$ 436,679	25%
TAP FEES	667	500	1,500	(833)	225%
IMPACT FEES	100,000	16,546	39,750	60,250	40%
INTEREST REVENUE	15,468	4,062	3,366	12,102	22%
REFUNDS/BANK CREDITS	3,261	-	-	3,261	0%
SALE OF ASSETS	-	-	8,000	(8,000)	0%
Total Revenue	704,754	163,278	201,295	503,459	29%
Expenditures					
Personnel					
SALARIES	85,571	18,203	18,677	66,894	22%
PAYROLL EXPENSE	1,303	270	348	955	27%
WORKERS COMPENSATION	2,072	2,365	2,124	(52)	103%
HEALTH INSURANCE	14,005	2,575	4,017	9,988	29%
RETIREMENT	6,488	1,367	1,752	4,736	27%
UNEMPLOYMENT INSURANCE	18	-	-	18	0%
CELL PHONE STIPEND	498	208	166	332	33%
CERTIFICATE PAY	-	198	-	-	0%
OVERTIME	2,142	125	5,212	(3,070)	243%
DENTAL INSURANCE	936	170	281	655	30%
LIFE INSURANCE	221	65	100	121	45%
Total Personnel	113,254	25,547	32,677	80,577	29%
Supplies (Maintenance & Operations)					
POSTAGE & SHIPPING	2,000	-	-	2,000	0%
OFFICE SUPPLIES	1,200	240	-	1,200	0%
BASIC OPERATING SUPPLIES	1,200	136	-	1,200	0%
MINOR EQUIPMENT: OFFICE	1,000	920	-	1,000	0%
MV OILS, LUBRICANTS & FLUIDS	500	-	-	500	0%
MV REPAIR & MAINTENANCE	2,400	-	-	2,400	0%
UNIFORMS & SUPPLIES	1,930	629	-	1,930	0%
WASTEWATER SUPPLIES	4,000	-	-	4,000	0%
EQUIPMENT	2,900	(553)	-	2,900	0%
MISC TOOLS/SUPPLIES	1,000	320	-	1,000	0%
CHEMICALS	60,478	2,205	2,939	57,539	5%
SAFETY EQUIPMENT & SUPPLIES	2,775	199	-	2,775	0%
BUILDING & FACILITIES REPAIRS	5,000	-	-	5,000	0%
FACILITIES MAINT SUPPLIES	-	16	-	-	0%
MV FUEL	3,875	40	-	3,875	0%
WASTEWATER COLLECTION	35,000	81	880	34,120	3%
WASTEWATER TREATMENT	10,000	399	912	9,088	9%
Total Supplies (Maintenance & Operations)	135,258	4,633	4,731	130,527	3%

	Adopted Budget	PYTD Actual	YTD Actual	Amount Remaining	Pct Spent/ Collected
Utilities					
ELECTRICITY	61,200	10,499	12,556	48,644	21%
COMMUNICATION SERVICES	-	-	-	-	0%
Total Utilities	61,200	10,499	12,556	48,644	21%
Operational & Contractual Services					
TRAVEL & TRAINING	3,500	297	-	3,500	0%
PROPERTY & LIABILITY	5,500	5,394	5,530	(30)	101%
REPAIR & MAINTENANCE	7,650	-	-	7,650	0%
DUES & MEMBERSHIPS	333	-	-	333	0%
PERMITS & APPLICATIONS	3,500	-	1,553	1,947	44%
LAB TESTING	19,700	3,111	1,973	17,727	10%
ACCOUNTING & AUDITOR	10,000	-	-	10,000	0%
CONTRACTUAL SERVICES	12,000	1,637	-	12,000	0%
ENGINEERING/CITY ENGINEER	12,000	-	-	12,000	0%
SLUDGE HAULING	78,000	9,607	11,138	66,862	14%
IT CONTRACT	3,852	962	642	3,210	17%
LIFT STATION EQUIPMENT MAINT	55,550	16,232	765	54,785	1%
GOVERNMENT & MISC OPERATING	3,000	-	-	3,000	0%
EQUIPMENT RENTAL	1,000	-	-	1,000	0%
Total Operational & Contractual Services	215,585	37,240	21,600	193,985	10%
Capital Outlay					
VEHICLE LEASE	80	-	-	80	0%
FRANCHISE FEES	28,553	-	-	28,553	0%
DEBT SERVICE PAYMENTS	74,665	-	-	74,665	0%
Total Capital Outlay	103,298	-	-	103,298	0%
Total Expenditures	628,595	77,919	71,565	557,031	11%
Net Income	\$ 76,159	\$ 85,360	\$ 129,730	\$ (53,572)	

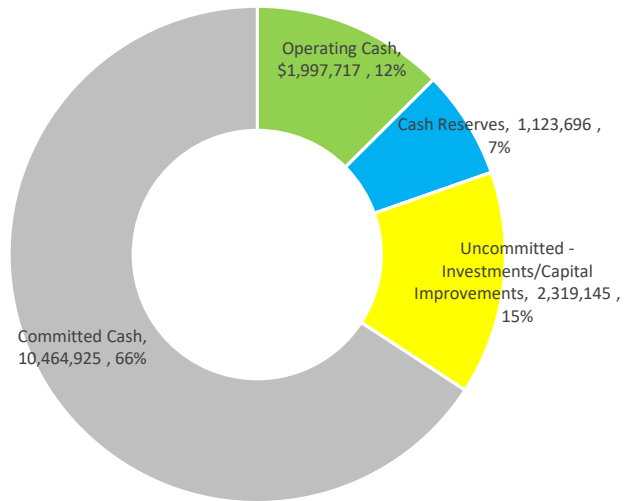
**City of Willow Park
Bank Account Balances**

	<u>At 12/31/2019</u>	<u>At 11/30/2019</u>	<u>At 9/30/2019</u>
<u>General Fund</u>			
Operating Cash - General	\$ 774,089	\$ 117,251	\$ 164,461
General Fund Cash Reserve	236,512	236,251	235,624
TexStar General Fund Investment	512,901	512,221	510,738
General Fund CD - 65686	126,040	126,040	126,040
	<u>1,649,541</u>	<u>991,762</u>	<u>1,036,863</u>
<u>Water Fund</u>			
Operating Cash - Water	453,394	606,324	522,905
Water Cash Reserve	887,185	886,208	883,855
Water Capital Improvements (Water Line Clearing)	68,410	-	-
UMB TWDB Escrow (52%)	6,899,277	-	-
TexStar Water Capital Improvements	257,524	449,689	448,387
TexStar Water Investment	1,267,886	1,073,697	1,071,587
Water Deposits - 56788	105,926	105,926	105,926
	<u>9,939,601</u>	<u>3,121,843</u>	<u>3,032,661</u>
<u>Wastewater Fund</u>			
Operating Cash - Wastewater	375,136	357,624	254,894
Wastewater Package Plant	124,645	124,645	124,645
Wastewater Capital Improvements	359,581	359,185	358,231
TexStar Wastewater	52,738	52,668	52,516
	<u>912,100</u>	<u>894,123</u>	<u>790,286</u>
<u>Other Funds</u>			
Operating Cash - Solid Waste	395,098	443,992	412,534
Operating Cash - Court Security	35,132	35,130	35,130
Operating Cash - Court Technology	53,671	53,317	52,496
Operating Cash - General (Police Training)	4,816	4,816	4,966
Drainage Fund	-	104,365	300,000
Police Contributions	444	444	444
Construction Fund - Building	436,178	700,622	925,970
Construction Fund - Roads	616,819	624,541	1,257,779
Debt Service (I&S)	1,121,435	368,354	344,031
Police Seizure (Federal)	1,657	1,656	1,651
Police Seizure (State)	7,491	7,483	7,463
Tourism	68,317	68,248	63,038
TIRZ Reimbursement Fund	111,299	20,749	4,215
First Responder	47,497	41,597	26,734
TexStar Parks & Recreation	504,386	503,716	502,258
	<u>3,404,241</u>	<u>2,979,030</u>	<u>3,938,709</u>
Total Cash	\$ 15,905,483	\$ 7,986,758	\$ 8,798,518



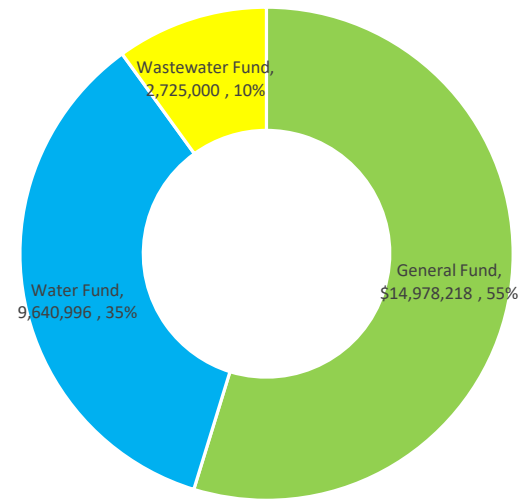
**City of Willow Park
Key Metrics & Trends
As of December 31, 2019**

Cash Balances as of December 31, 2019



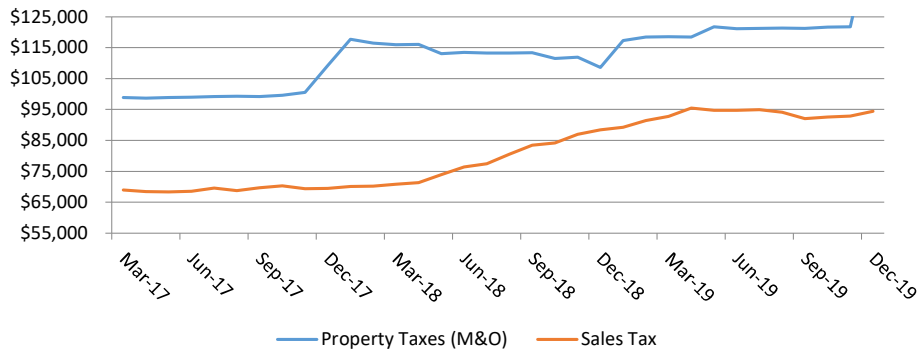
■ Operating Cash ■ Cash Reserves ■ Uncommitted - Investments/Capital Improvements ■ Committed Cash

Debt Balance by Fund as of December 31, 2019



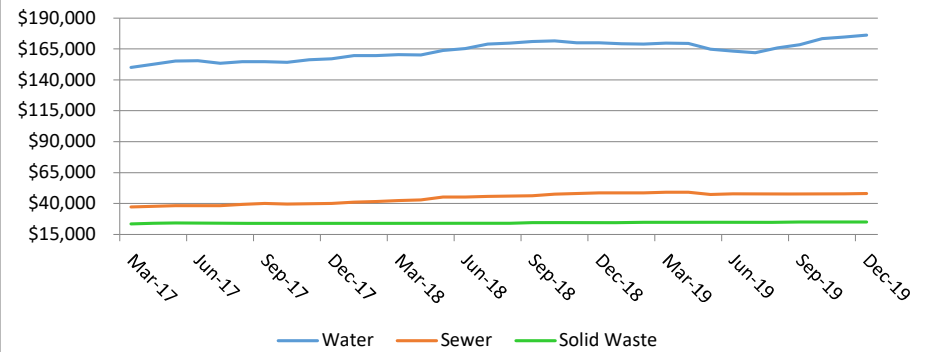
■ General Fund ■ Water Fund ■ Wastewater Fund

General Fund Tax Revenues (12 M Moving Avg)



— Property Taxes (M&O) — Sales Tax

User Charge Billings (12 M Moving Avg)



— Water — Sewer — Solid Waste

Overview of Tourism Fund (Hotel Occupancy Tax)

	Hotel Occupancy Tax Revenue	Tourism Cash Balance
Fiscal Year-End 2018	\$ 12,730	\$ 56,814
Fiscal Year-End 2019	\$ 5,031	\$ 63,038
Year-to-Date Dec 2019	\$ 5,042	\$ 68,317

Appendix D

Single-Family, Multi-Family, and Commercial Average Impervious Area Data



Average Impervious Areas

No.	Property ID	Address	Type of Property	Estimated Impervious Area (sq. ft.)	Estimated Lot Size (sq. ft.)	Percent Impervious
1	R000026849	3016 Mesa Rd	SF	6,749	39,040	17.29%
2	R000033571	302 Willow Crest Dr	SF	6,652	44,830	14.84%
3	R000084808	41 Crown Rd	SF	5,285	18,949	27.89%
4	R000013962	117 Cedar Elm Rd	SF	10,521	66,640	15.79%
5	R000002910	324 Buena Vista Dr	SF	5,531	58,806	9.41%
6	R000079111	1230 Woodbridge Ct	SF	6,405	31,799	20.14%
7	R000084956	226 Carriage Dr	SF	3,265	7,187	45.43%
8	R000007436	202 Scenic Trl	SF	10,164	46,609	21.81%
9	R000084052	108 Sawgrass Dr	SF	3,501	6,435	54.41%
10	R000033817	3329 Royal View Dr	SF	9,827	45,291	21.70%
11	R000023241	104 Old Ford Rd	SF	6,254	43,865	14.26%
12	R000026901	217 Squaw Creek Rd	SF	6,872	57,000	12.06%
13	R000036677	1700 Ranch House Rd	SF	12,508	43,560	28.71%
14	R000019144	106 Regent Row	SF	5,589	40,075	13.95%
15	R000026784	109 Cherokee Ct	SF	6,710	72,746	9.22%
16	R000019105	131 Lori Dr	SF	5,905	40,948	14.42%
17	R000033594	424 Deer Pond Dr	SF	5,893	46,333	12.72%
18	R000033668	4804 Misty Meadow Dr	SF	10,996	38,861	28.30%
19	R000029229	216 Sam Bass Rd	SF	4,191	54,293	7.72%
20	R000023236	101 Crested Butte Ct	SF	8,572	43,821	19.56%
21	R000036695	1717 Ranch House Rd	SF	13,696	143,748	9.53%
22	R000002903	340 Buena Vista Dr	SF	5,266	53,143	9.91%
23	R000014128	457 Cook Rd	SF	8,148	48,617	16.76%
24	R000013980	3611 Nichols Rd	SF	10,498	56,459	18.59%
25	R000013918	3551 Ranch House Rd	SF	8,842	48,510	18.23%
26	R000047767	401 Emsley Dr	SF	22,147	347,173	6.38%
27	R000103068	199 Melbourne Dr	SF	3,722	8,847	42.07%
28	R000033782	812 Kingsgate Rd	SF	5,305	35,602	14.90%
29	R000007485	325 Tumbleweed Trl	SF	8,531	43,560	19.58%
30	R000007468	313 Scenic Trl	SF	9,049	43,996	20.57%
Averages				7,886	55,891	19.54%
Totals				236,594	1,676,743	14.11%



Average Impervious Areas

No.	Name of Complex	Address	Type of Property	Estimated Impervious Area (sq. ft.)	Estimated Lot Size (sq. ft.)	Percent Impervious
1	Olympus Apartments	180 Crown Pointe Blvd	Multi-Family	56,000	69,567	80.50%
2	Village at Crown Pointe	180 Crown Pointe Blvd	Multi-Family	10,732	19,644	54.63%
Averages				33,366	44,606	67.57%
Totals				66,732	89,211	74.80%

Notes: Values found by measuring using Google Earth



Average Impervious Areas

No.	Name of Complex	Property ID	Address	Type of Property	Estimated Impervious Area (sq. ft.)	Estimated Lot Size (sq. ft.)	Percent Impervious
1	Sonic	R000007421	102 Ranch House Rd	Commercial	25,448	26,746	95.15%
2	Whataburger	R000007375	4915 E I-20 Service Rd N	Commercial	36,975	94,356	39.19%
3	North Texas Retina Consultants	R000007322	101 Chuckwagon Trl	Commercial	33,980	69,740	48.72%
4	Trinity River Dental	R000007320	4969 E I-20 Service Rd N	Commercial	31,425	51,836	60.62%
5	Texas RV Outlet	R000007560	5050 E I-20 Service Rd S	Commercial	244,500	255,118	95.84%
6	Trinity Oaks Center	R000007428	136 El Chico Trail	Commercial	64,797	81,022	79.97%
7	Texas Health	R000095792	101 Crown Pointe Blvd	Commercial	240,144	348,480	68.91%
8	Fuzzy's Tacos	R000099895	149 Willow Bend Dr	Commercial	38,580	46,174	83.55%
9	Lazy J Ranch Wear	R000007553	104 S Ranch House Rd	Commercial	37,913	40,467	93.69%
10	Ace Hardware	R000007315	4951 E I-20 Service Rd N	Commercial	34,396	125,670	27.37%
11	Brookshires	R000034063	5118 E I-20 Service Rd S	Commercial	190,427	191,992	99.18%
12	Aledo Endodontics	R000007554	108 S Ranch House Rd	Commercial	71,467	85,416	83.67%
13	Drake's Yoke	R000101066	220 Shops Blvd	Commercial	108,057	171,378	63.05%
14	Fish Creek	R000070847	4899 E I-20 Service Rd N	Commercial	26,077	49,241	52.96%
15	McDonald's	R000007547	5090 E I-20 Service Rd S	Commercial	36,002	43,560	82.65%
16	Gemini Tech Svcs Complex	R000097124-6	5019 E I-20 Service Rd N	Commercial	25,406	41,178	61.70%
17	Pizza Hut, BBVA Bank, etc	R000007419	5135 E I-20 Service Rd N	Commercial	70,513	114,790	61.43%
18	Shell	R000007414	5111 E I-20 Service Rd N	Commercial	45,805	52,922	86.55%
19	Taco Casa/Tiger Mart	R000007373	101 Ranch House Rd	Commercial	38,088	43,560	87.44%
20	TG Mercer Consulting	R000007431	120 El Chico Trl	Commercial	54,785	63,797	85.87%
Averages					72,739	99,872	72.88%
Totals					1,454,785	1,997,443	72.83%

Notes: Values found by measuring using Google Earth and Parker CAD



1508 Santa Fe, Suite 203 – Weatherford, Tx 76086
www.jacobmartin.com – (817)594-9880

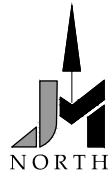


516 Ranch House Rd – Willow Park, Texas 76087
www.willowpark.org – (817)441-7108

Appendix E

Proposed Capital Improvements





SCALE: 1"=200'

JERI RIDGE RD

EL CHICO TRAIL

REPLACE CULVERT

PLEASANT RIDGE LN

EXISTING CHANNEL

PROPOSED RIP RAP

CITY OF WILLOW PARK
Parker County, Texas

Stormwater Fee Studies
1-5 Year Improvements Priority #1a

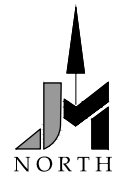


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3465 CURRY LANE
ABILENE, TX 79606
325-695-1070

1508 SANTA FE DR, STE 203
WEATHERFORD, TX 76086
817-594-9880

FIRM# F-2448



SCALE: 1"=200'



CITY OF WILLOW PARK
Parker County, Texas

Stormwater Fee Studies
1-5 Year Improvements Priority #1b

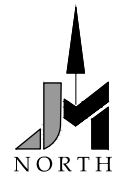


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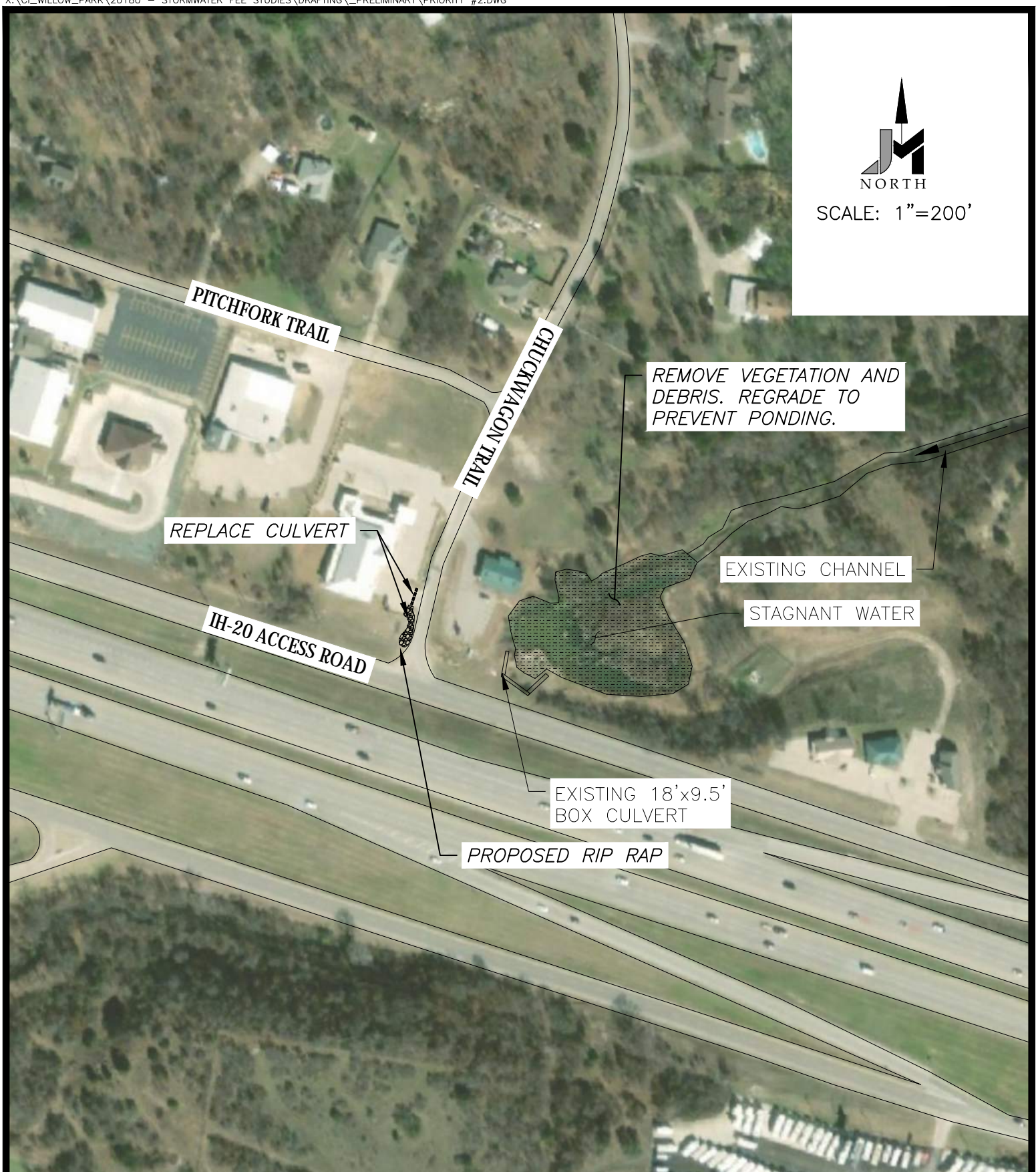
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325-695-1070

1508 SANTA FE DR, STE 203
WEATHERFORD, TX 76086
817-594-9880

FIRM# F-2448



SCALE: 1"=200'



CITY OF WILLOW PARK

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1-5 Year Improvements Priority #2



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FIRM# F-2448



CITY OF WILLOW PARK

Parker County, Texas

Stormwater Fee Studies

1-5 Year Improvements Priority #3

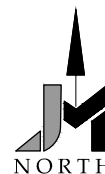


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SCALE: 1"=100'



CITY OF WILLOW PARK

Parker County, Texas

Stormwater Fee Studies

1-5 Year Improvements Priority #4



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FIRM# F-2448



SCALE: 1"=100'



CITY OF WILLOW PARK

Parker County, Texas

Stormwater Fee Studies

1-5 Year Improvements Priority #5

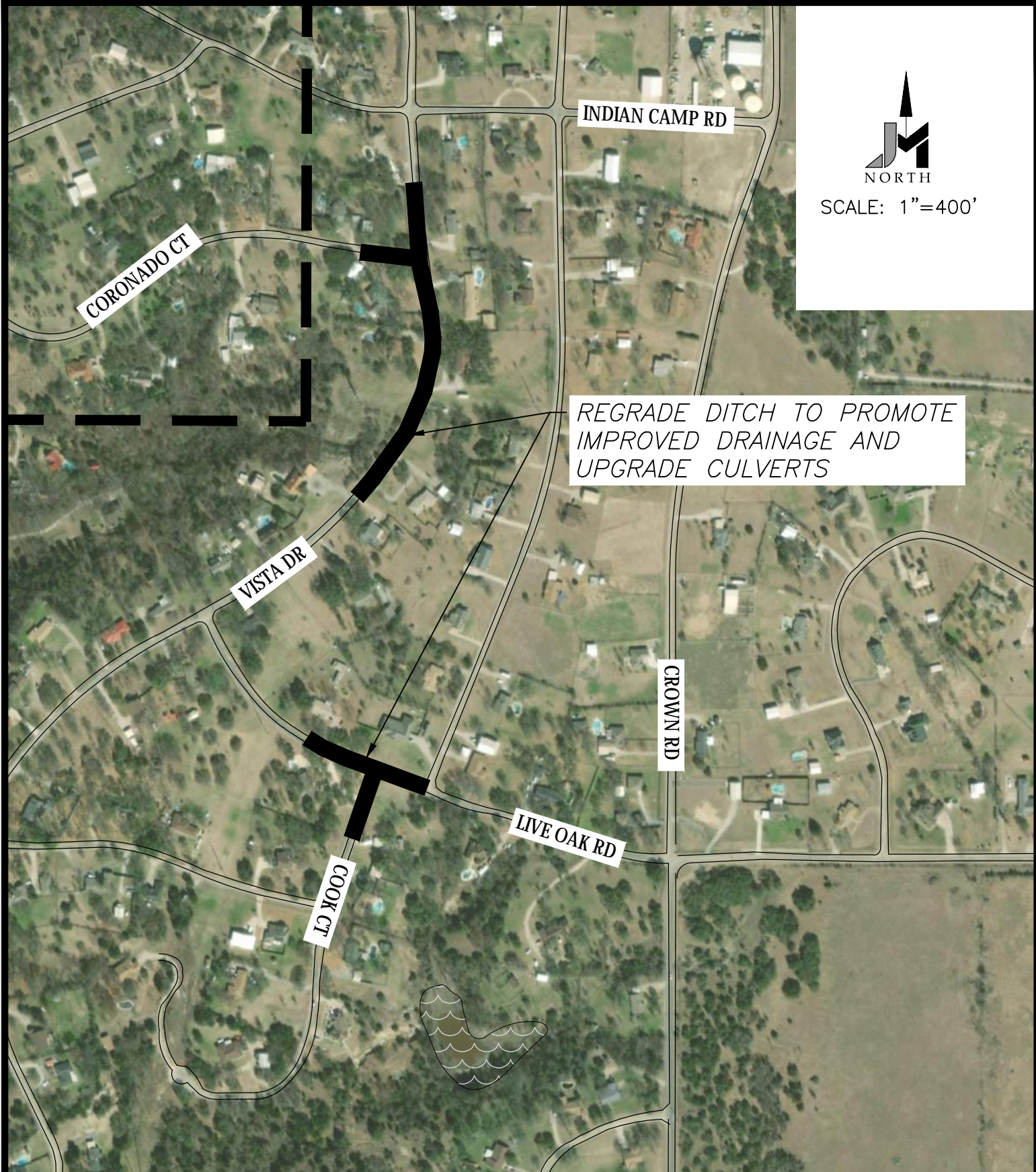


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325-695-1070

1508 SANTA FE DR, STE 203
WEATHERFORD, TX 76086
817-594-9880

FIRM# F-2448



NORTH

SCALE: 1"=400'

REGRADE DITCH TO PROMOTE IMPROVED DRAINAGE AND UPGRADE CULVERTS

CITY OF WILLOW PARK
 Parker County, Texas

Stormwater Fee Studies

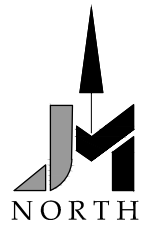
1-5 Year Improvements Priority #6 & #7

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 ABILENE, TX 79606
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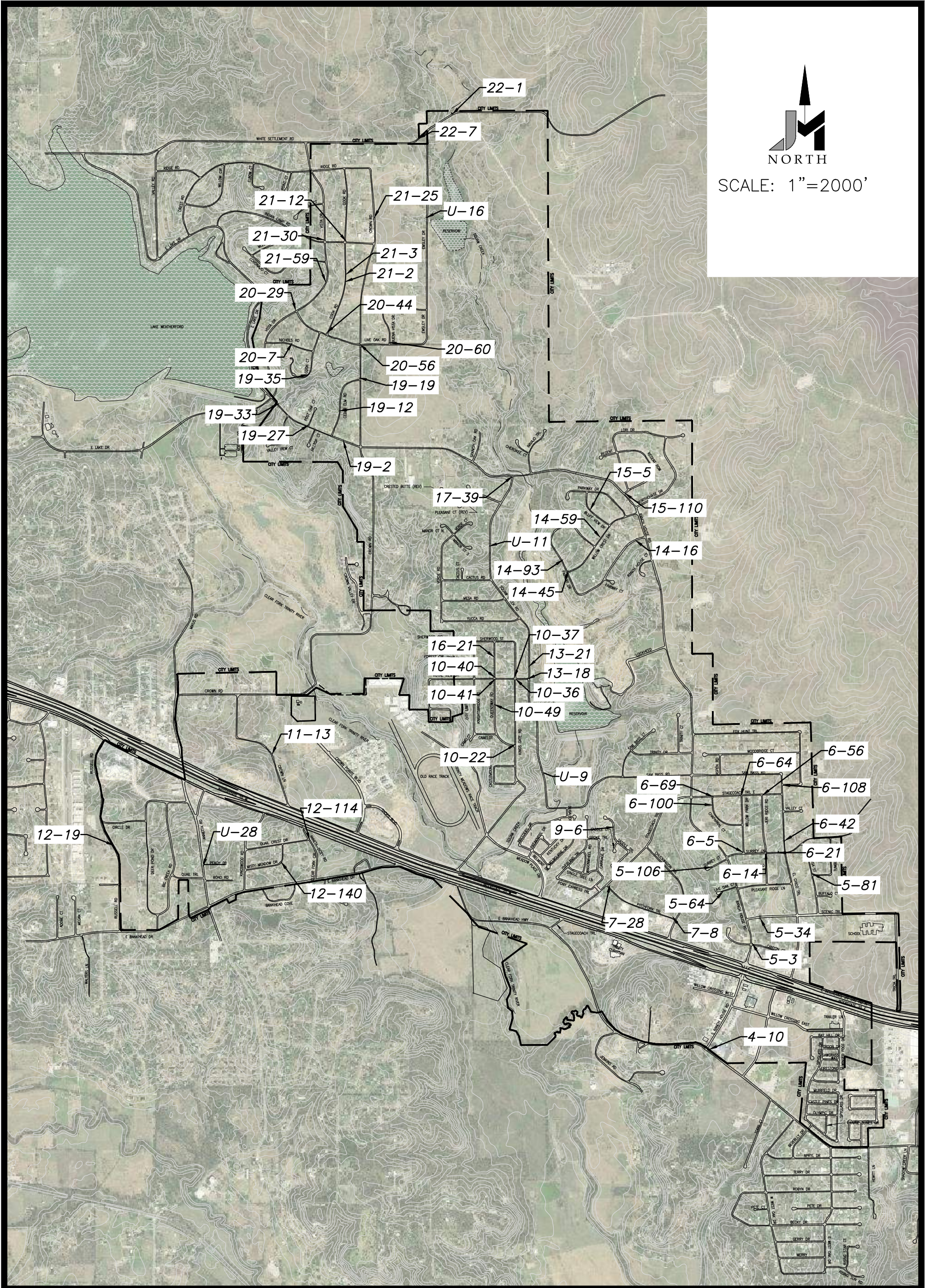
1508 SANTA FE DR, STE 203
 WEATHERFORD, TX 76086
 817-594-9880

FIRM# F-2448

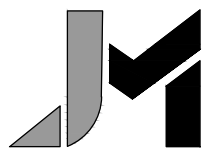


NORTH

SCALE: 1"=2000'



CITY OF WILLOW PARK
Parker County, Texas
Stormwater Fee Studies
1-10 Year Culvert Improvements



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ABILENE, TX 79606
325-695-1070
1508 SANTA FE DR, STE 204
WEATHERFORD, TX 76086
817-594-9880
1014 BROADWAY STREET
LUBBOCK, TX 79401
806-368-6375