City of Josephine, Texas

Wastewater Master Plan

March 2024

Prepared for:
City of Josephine

Prepared by:
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Kimley-Horn Project Number: 064512909

CITY OF JOSEPHINE

RESOLUTION NO: 2024-03-11A

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF JOSEPHINE, TEXAS ADOPTING A WATER MASTER PLAN AND WASTEWATER MASTER PLAN AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, in order to adequately plan for the future infrastructure needs of the City of Josephine, the City retained the services of professional engineering firm Kimley-Horn and Associates, Inc. to create a Water Master Plan and Wastewater Master Plan.

WHEREAS, improvement projects recommended by the Water Master Plan and Wastewater Master Plan will serve as a guide for future planning, design, construction and financing of facilities required to meet the City's water and wastewater demands.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF JOSEPHINE, TEXAS:

Section 1. The City of Josephine 2024 Water Master Plan and Wastewater Master Plan are hereby approved.

Section 2. The Resolution shall take effect from and after its date of adoption.

PASSED AND APPROVED by the City Council of the City of Josephine, Texas this 11th day of March, 2024.

Jason Turney, Mayor

ATTEST:

Patti Brooks, City Secretary

CITY OF JOSEPHINE OFFICIAL SEAL EST. 1888 TEXAS

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1 Executive Summary

This wastewater master plan report is prepared for the City of Josephine to present analysis, findings, and recommendations for implementation of a plan to meet the City of Josephine's wastewater infrastructure needs for the growth identified in the City by 2033 (10-year) and build-out. Growth and population projections were based on recommendations from the City as well as information from the City of Josephine Comprehensive Plan. **Table 1** shows a summary of the population projections for the City of Josephine. **Table 2** lists the existing wastewater flows for the City in addition to the projected flows in 10 years and at build-out.

Table 1 - Population Projection Summary

Year	Total Population
2023 (Current)	8,209
2033 (10-Year)	38,250
2077 (Build-out)	199,942

Table 2 - Flow Projection Summary

Year	Average Daily Flow (MGD)	Total Peak Flow (MGD)
2023 (Existing)	0.22	0.88
2033 (10-year)	3.37	13.47
2077 (Build-out)	17.31	71.42

The existing wastewater infrastructure currently includes 7 lift stations and associated force mains, a 0.07 million gallon per day (MGD) lagoon wastewater treatment plant, a 0.5 MGD sequencing batch reactor (SBR) wastewater treatment plant, and gravity wastewater lines. A map of the existing wastewater system in illustrated in **Appendix A – Existing Wastewater System Map.** The city limits, CCN boundary, and expanded wastewater service area are illustrated in **Appendix B – Wastewater Service Area Map**.

Table 3 summarizes the projects required within the next 10 years in order to keep up with projected population growth based on the identified development takedown schedules provided by the City of Josephine, accompanied by an opinion of probable construction cost (OPCC). These projects are also illustrated in **Appendix C – 10-Year Capital Improvements Map** and **Appendix D – 10-Year Capital Improvements Opinion of Probable Construction Cost.**

Appendix F – Build-out Wastewater Map illustrates the infrastructure needs at build-out for the City of Josephine.

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Table 3 – 10-Year Capital Improvements Plan Summary

Project No.	Project Name	Project Cost	Market Scarcity Adjustment (1.5x)
1	Shepherd Place 480 GPM Lift Station	$1,590,000	$2,385,000
2	West Basin 210 GPM Lift Station	$2,880,000	$4,320,000
3	Milton St. 12" & 15" Interceptor	$1,230,000	$1,845,000
4	Abbott Acres 80 GPM Lift Station	$2,010,000	$3,015,000
5	Jordan Rd. 15" Interceptor	$1,140,000	$1,710,000
6	Waverly Estates 8" Force Main	$420,000	$630,000
7	East St. 12" & 15" Interceptor	$1,560,000	$2,340,000
8	Caddo St. 15" & 12" Interceptor	$830,000	$1,245,000
9	Wildflower 24" & 30" Interceptor	$3,440,000	$5,160,000
10	Hunt County MUD 48" Interceptor	$10,110,000	$15,165,000
11	Josephine WWTP Improvements	$35,070,000	$52,605,000
12	Southeast 3 MGD WWTP	$178,060,000	$267,090,000
13	South Central 1 MGD WWTP	$60,700,000	$91,050,000
TOTAL		$299,040,000	$448,560,000

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2 Introduction

2.1 Description of Project Area

The City of Josephine is located in both Collin County and Hunt County, Texas. The current population is approximately 8,209 people based on current connection counts provided by the City of Josephine. The current city limits and CCN boundary for the wastewater service area are shown in **Appendix B – Wastewater Service Area Map**. The City of Josephine plans to expand their wastewater service area to approximately 16,800 acres and serve roughly 199,942 people at buildout by 2077. The rapid growth within the City of Josephine triggers the need for long term planning as the City continues to develop.

2.2 Objective and Scope of Study

The objective of this study is to evaluate the infrastructure compared to growing population demand. The method for evaluation is desktop analysis. The design criteria are established based on projected growth and TCEQ regulations.

2.3 Wastewater System Definitions

The following terms are used throughout the report. The definitions and acronym may be helpful in better understanding the subtle differences between several of these terms.

Capital Improvement Plan (CIP) – Recommended improvements to the wastewater distribution system based on population and wastewater demand projections for future conditions.

ETJ – Extra Territorial Jurisdiction

Geographic Information System (GIS) – Computer mapping system that creates, manages, analyzes, displays geographically referenced data.

GPD – Gallons Per Day

Infiltration and Inflow (I&I) – Expressed in units of gallons per acre day (gpad). This represents a design allowance to account for stormwater (inflow) and groundwater seepage (infiltration) into the collection system.

LF – Linear Feet

MGD – Million Gallons Per Day

MUD – Municipal Utility District

Peaking Factor – The factor applied to the maximum day demand to determine peak hour and minimum hour demand during maximum day demand conditions.

Per Capita Flow – Represents the average daily discharge per person, usually expressed in gallons per capita per day (gpcd).

Sequencing Batch Reactor (SBR) – A wastewater treatment plant type of single batch reactor using a fill and draw system of activated sludge treatment.

TCEQ – Texas Commission on Environmental Quality

NTMWD – North Texas Municipal Water District

OPCC – Opinion of Probable Construction Cost

3 Data Collection and Land Use

3.1 Data Collection

The evaluation of the existing City of Josephine wastewater system required physical data to calculate flow projections and make assumptions for the future infrastructure recommendations. This data included flow summary reports from the existing Josephine MUD Wastewater Treatment Plant and the Josephine Lagoons. In addition, the City of Josephine provided the following record plans as listed in **Table 4** for the evaluation of the existing wastewater system.

Table 4 – Josephine Record Documents Provided

Document Title	Document Type	Date
Bradley Estates	Final Plat	August 2022
De Berry Heritage	Final Plat Record Drawings	January 2022 November 2022
Fountain View • Phase 1 • Phase 2 • Phase 2 Lots 2R, 3R, & 19R-1, Block F • Phase 3 • Phase 4	Final Plat	 • August 2005 • August 2005 • July 2015 • July 2014 • July 2016
High Meadow Estates • Phase 1 • Phase 2	Final Plat	 • April 2004 • April 2007
Magnolia Pointe • Phase 1 - 10 • Phase 5 Lift Station • Phase 10 Lift Station • County Road No. 2886 Improvements • Magnolia Pointe Offsite Water	Final Plats & Record Drawings	 • June 2018 – Feb. 2023 • January 2020 • February 2023 • July 2020 • February 2022
Murray Manor Estates	Final Plat	August 2022
Riverfield • Phase 1 • Phase 2 • Riverfield MUD No. 1 Offsite Water and Sanitary Sewer Plans	Construction Plans Record Drawings	 • February 2023 • July 2023 • May 2023
Wavery Estates • Phase 1 TXDOT Submittal • Phase 1A • Phase 1A Lift Station • Phase 1B • Phase 4	Record Drawings Construction Plans	 • April 2023 • February 2023 • October 2021 • February 2023 • June 2023
Sanitary Sewer Facilities	Record Drawings	1986
Caddo Street 15" Sanitary Sewer Line	Construction Plans	October 2022
Operations & Maintenance Instructions for Magnolia Pointe MUD #1 0.5 MGD SBR WWTP	O&M Manual	August 2018

3.2 Existing Land Use

Existing land use for the area was derived from the existing development information provided by the City of Josephine. Collin County Central Appraisal Data was also utilized to identify which existing parcels were residential or non-residential. **Table 5** below shows a summary of acreage for the existing and the current and planned developments identified for future construction. The existing developments have been constructed, current developments are in active construction, and the planned development have not started construction yet or are future phases of existing or current developments.

Table 5 – Existing Land Use Acreage Summary, 2023 Comprehensive Plan

Place Type	Acreage (ac)	Residential Lot Counts
Existing Developments	795	2,357
Current & Planned Developments	3,517	11,465
Total	**4,312**	**13,822**

3.3 Future Land Use

The future land use for the City of Josephine was obtained from the City of Josephine Comprehensive Plan. The Comprehensive Plan identified 11 different place types. The Comprehensive Plan identified assumed residential densities for each place type in dwelling units per acre (du/ac). The density assumptions utilized in the Comprehensive Plan are summarized in **Table 6.** The Comprehensive Plan is included as **Appendix I –**

Table 6 – Future Land Use Summary

Place Type	Acreage (ac)	Residential Density (DU/ac)	Residential Population per Acre (ppl/ac)
City Center	32.78	0	0
Commercial	116.75	0	0
Industrial	2.86	0	0
Institutional	91.23	0	0
Low Density Residential	3,283.30	4	12.4
Medium Density Residential	83.84	6	18.6
Mixed Use	17.98	20	54
Multi-Family Residential	0.25	30	36
Neighborhood Services	44.27	0	0
Parks & Open Space	47.49	0	0
Utility	427.33	0	0

3.4 Population Projection

The population was projected using the existing land use and future land use assumptions, as well as lot takedown schedules for proposed developments provided by the City of Josephine and DR Horton. The existing population was determined using existing connection counts and a residential demand assumption of 3.1 people per unit for single family and 1.8 people per unit for multifamily. The existing population with the City of Josephine is estimated to be 8,209 people.

Takedown schedules providing estimates for ongoing and future development were provided by DR Horton for the following subdivisions:

- Magnolia Phase 10
- Riverfield
- Waverly Estates
- Wildflower

The takedown schedule provided by DR Horton is included in **Appendix I – DR Horton Takedown Schedule**.

The City of Josephine also provided total estimated lot counts for future development subdivisions where a takedown schedule or confirmed timeline was not available. In those cases, it was assumed that construction would begin shortly with residential lots requiring wastewater service beginning in 2025. Development of the lots was assumed to take place at an equal rate over the course of five years with two exceptions. In the case of development by Hunt County MUD No. 3 and Josephine 325 developments, meetings with the City and developer indicated water and wastewater service would not be available to begin until 2028. Due to the sizes of those two developments, it was also assumed the construction would take place in phases over ten years instead of five. The subdivisions that were counted in this method are listed in **Table 7**.

Table 7 – Planned Future Subdivision Lot Counts

Subdivision	Total Lots
Grandstone	145
Hunt County MUD No. 3	2500
Josephine 325 Development	1400
Liberty Ranch	185
Liberty Ranch West	43
Meadow Ridge	141
Morningside Phase 1	215
Morgan Farms (Morningside Phase 2)	415
Abbott Acres	98
Harvest Bend	11
Hidden Creek (MF)	368
Legend Park	43
Shepherd Place (MF)	260

The projected population for the areas outside of confirmed subdivisions was determined using the land use summary acreage found in **Table 6**. A large portion of the proposed service area is also outside of the planning boundary and did not have future land use assigned since it was outside of the ETJ and not incorporated into the Comprehensive Plan completed in 2023. The medium density residential place type was applied to the land area outside of the planning boundary at the request of the City. Since the water and wastewater service areas are different, the identified 10-year wastewater CIP population and the wastewater buildout population are specific to the wastewater service area and not to Josephine's ETJ or city limits.

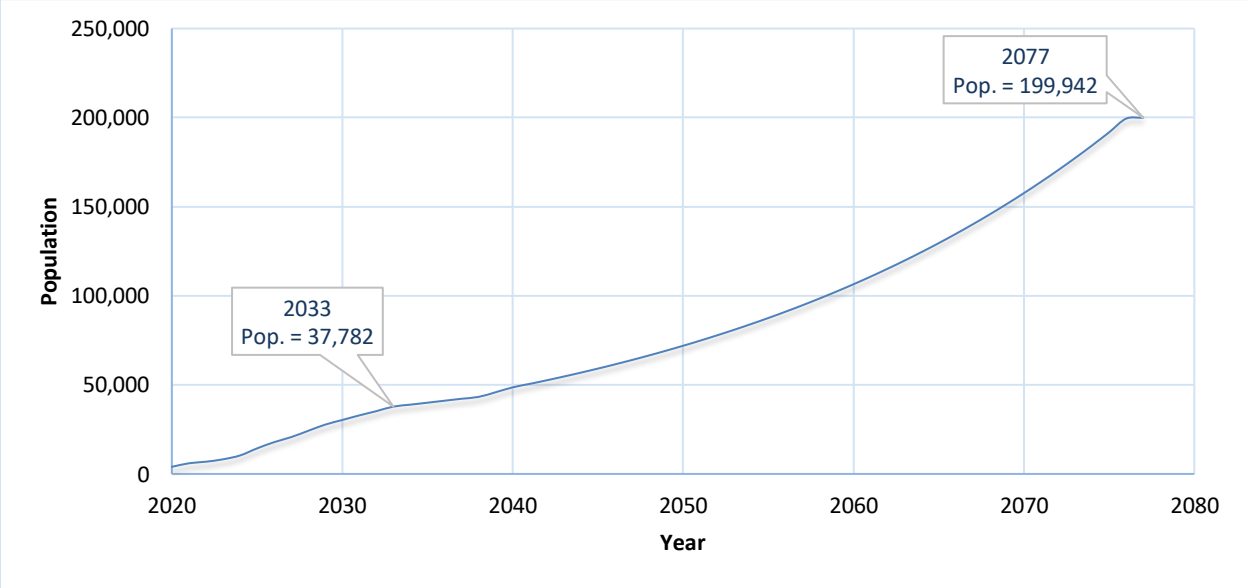
Table 8 shows the estimated population per year as well as the growth rate. These growth rates were determined using historical population information as well as proposed development timelines and takedown schedules provided by the City of Josephine and DR Horton. As the City continues to develop, the growth rate should be monitored and eventually re-evaluated to ensure the accuracy of this curve. Dramatic changes to the growth rate could accelerate the need for infrastructure.

Table 8 - 10-Year Population Growth

Year	Growth Rate	Population at End of Year
2023 (Current)	-	8,209
2024	26%	10,364
2025	39%	14,422
2026	25%	18,006
2027	16%	20,933
2028	24%	24,560
2029	20%	28,147
2030	14%	30,739
2031	13%	33,330
2032	11%	35,705
2033	22%	38,250

Figure 1 shows the estimated growth curve for the City of Josephine. Over the next 10 years, the City is projected to grow rapidly based on proposed developments already in the area and their estimated completion dates.

Figure 1 – City of Josephine Wastewater Service Area Population to Build-Out



4 Wastewater Flow Projections

Wastewater flow projections for the 10-year planning period are based on the population projects discussed in the previous Section 3.0. Average day demand additions were estimated for each of the identified subdivisions and land use planning areas based on the design criteria discussed in Section 6.0. The existing, 10-year, and buildout wastewater flow projections are listed in **Table 9.**

Table 9 – 10-Year Wastewater Flow Projections

Year	Average Daily Flow (MGD)	Total Peak Flow (MGD)
2023 (Existing)	0.22	0.88
2033 (10-year)	3.37	13.47
Buildout	17.31	71.42

The City of Josephine wastewater planning boundary was split into six major basins. The major basins and subbasin delineation are shown in **Appendix E – Wastewater Basin & Subbasin Map**. The total flow for each basin was calculated based on future land use within the sewer shed basins and the wastewater criteria assumptions set and discussed in Section 5.0. **Table 10** shows the projected demand at build-out for each of the six major basins.

Table 10 – Total Peak Flow in Major Basins

Major Basin	Average Daily Flow (MGD)	Total Peak Flow (MGD)
West Basin	3.51	16.25
Midwest Basin	3.78	15.10
Central Basin	1.32	5.29
North Central Basin	1.46	5.83
Northeast Basin	1.47	5.87
East Basin	5.76	23.05
Total Flow	**17.31**	**71.42**

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5 Design Criteria

The following criteria were established by Kimley-Horn and the City of Josephine as minimum standards from which to evaluate current and future wastewater system components. These criteria could change over time based on demand patterns and regulatory mandates. The assumptions used throughout this study are shown in **Table 11**.

Table 11 – Wastewater Criteria Used

Assumption	Value	Units
Residential Flow	90	gpcd
Single Family Residential Density	3.1	Person/ unit
Multifamily Residential Density	1.8	Person/ unit
Peaking Factor	4	
Non-Residential Flow		
Neighborhood Services	1,500	gal/acre/day
Commercial	1,600	gal/acre/day
Institutional	1,500	gal/acre/day
Industrial	1,400	gal/acre/day
City Center	1,800	gal/acre/day
Parks & Open Space	150	gal/acre/day
Utility	300	gal/acre/day

5.1 TCEQ Design Criteria

Chapter 217c of the Texas Administrative Code design criteria for domestic wastewater systems, highlights various requirements in the design and planning for conventional gravity collection systems, lift stations and force mains. Chapter 217c indicates gravity lines must be sized for peak flow conditions. The gravity interceptors were sized in this report to meet the TCEQ minimum slopes provided in Chapter 217c using Manning's Formula with an assumed "n factor" of 0.013. **Table 12** summarizes the minimum slopes required in Chapter 217c. TCEQ states that all pipes over 39 inches in diameter should be determined using the manning's formula to maintain a velocity greater than 2.0 feet per second and less than 10.0 feet per second.

Table 12 – Minimum Slopes

Pipe Size (in)	Minimum Slope (%)	Capacity (MGD)
12	0.20	1.03
15	0.15	1.617
18	0.115	2.302
21	0.095	3.156
24	0.08	4.135
27	0.07	5.296
30	0.06	6.494

5.2 Pipe Design

Table 12 shows the minimum slope requirements from the TCEQ. The design of the wastewater lines in the buildout scenario for the City of Josephine utilized the TCEQ minimum slope unless the size of the line was larger than 36", then a slope was determined to maintain a velocity that satisfied the TCEQ requirements. All lines were sized based on the peak flow within each basin and subbasin. The subbasins are shown in **Appendix E – Wastewater Basin & Subbasin Map.** The capacity for each of the subbasins was calculated using the criteria shown in **Table 11**.

5.3 Lift Station and Force Main Design

The various proposed lift stations and force mains in the City of Josephine buildout scenario allow for wastewater to be conveyed in areas where gravity flow cannot be achieved. The proposed lift stations and force mains were sized based on the criteria shown in **Table 11** and in accordance with the TCEQ pump capacity design requirements per rule 217.61. Proposed lift stations are sized to meet peak day demands. Where peak flow is greater than 300,000 gallons per day, the lift stations will use three or more pumps. Less than or equal to 300,000 gallons per day, the lift stations will use two pumps. The force mains are sized to be able to stay between 3-6 fps for peak day demands.

5.4 Wastewater Treatment Plants

The proposed wastewater treatment plants within the City of Josephine buildout scenario were determined based on the established criteria shown in **Table 11**. These facilities were sized based on average daily flow into the wastewater treatment plant.

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6 Existing Infrastructure

6.1 Overview

The City of Josephine collects and treats wastewater within their own collection system. An overall map of the existing wastewater system is included in **Appendix A – Existing Wastewater System Map.** Currently, the City uses a combined total of seven (7) lift stations to lift wastewater from the collection system to the two existing wastewater treatment plants. Four (4) lift stations direct flow from the Community ISD school and subdivisions to the lagoon treatment plant located east of central Josephine and 3 lift stations lift wastewater from existing subdivisions to the Josephine Municipal Utility District (MUD) wastewater treatment plant. A project to expand the lagoon treatment plant is currently under design. The Josephine MUD constructed a 0.5 MGD Sequencing Batch Reactor (SBR) wastewater treatment plant with plans to expand to 1.5 MGD to serve the Magnolia developments. The City of Josephine operates the MUD wastewater treatment plant.

6.2 Wastewater Lines

The wastewater distribution system consists of approximately 150,640 total feet of pipeline based on the available GIS data provided by the City. **Table 13** summarizes a list of the existing gravity lines that serve the City of Josephine.

Table 13 - Existing City of Josephine Wastewater Lines

Size	Total Length (LF)
4”	220
6”	32,145
8”	89,850
10”	28,440
Total:	**150,640**

The existing pipelines range in age and material. A condition assessment of the existing wastewater lift stations, pipelines, and manholes was not conducted as part of this master plan.

6.3 Lift Stations and Force Mains

The City of Josephine’s current wastewater infrastructure includes seven existing lift stations and three lift stations under construction. These are summarized in **Table 14**. In addition, there are approximately 33,050 linear feet of force main in the City’s wastewater system, summarized in **Table 15**.

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Table 14 – Lift Station Facilities

Lift Station Name	Description	Firm Capacity (gpm)
Existing Lift Stations		
CISD LS	Two (2) pumps of unknown size	Unknown
High Meadow Estates (CR 640) LS	Two (2) HOMA Pumps with 27 HP motors	Unknown
Hubbard LS	Two (2) Vaughn Pumps with 2.5 HP motors	Unknown
Fountain View LS	Two (2) Vaughn Pumps with 15 HP motors	Unknown
Magnolia Phase 5	Two (2) Vaughn Pumps with 15 HP motors	400
Magnolia Phase 8	Two (2) pumps of unknown size	Unknown
Magnolia Phase 10	Two (2) pumps of unknown size	Unknown
Under Construction		
Liberty Ranch LS	Two (2) pumps of unknown size	Unknown
Waverly Estates LS	Two (2) pumps of unknown size	Unknown
Cook Street LS	Two (2) pumps of unknown size	Unknown

Table 15 - Existing City of Josephine Force Mains

Size	Total Length (Linear Feet)
2”	320
4”	18,060
6”	10,122
8”	4,556
Total:	**33,050**

6.4 Lagoon Wastewater Treatment Plant

The City of Josephine currently owns and operates a lagoon wastewater treatment plant. The treatment train includes an aeration oxidation ditch and two mixed lagoons. The current permit allows for a daily average flow of 0.07 MGD. The WWTP is located in the northeast area of the city and existing flows from the west region of the city are lifted to the lagoon wastewater treatment plant.

A project to expand the current wastewater treatment plant and add an additional 0.75 MGD treatment capacity is currently under design by DBI. DBI is also pursuing a new wastewater permit with the TCEQ. This master plan report assumes the 0.75 MGD addition will be incorporated onsite.

6.5 SBR Wastewater Treatment Plant

The Josephine Municipal Utility District (MUD) constructed the Sequencing Batch Reactor (SBR) treatment plant for the Magnolia Phase 1 – 10 subdivision. The City of Josephine owns and operates the WWTP. The plant is currently permitted to treat a daily average flow of 0.5 MGD with a final phased expansion to 1.5 MGD. The WWTP currently includes one treatment train and in general includes the following treatment units: headworks with fine screens, influent lift station, sequencing batch reactor basins, post-flow equalization basin, and aerobic digestor basin, filtration, and UV disinfection.

7 Future Infrastructure Analysis and Recommendations

The analysis and recommendations for future infrastructure needed at build-out was determined using design criteria and assumptions previously discussed in Section 5.0 in this report.

7.1 Wastewater Lines

Each major basin shown at buildout has proposed main trunk lines and gravity interceptors that will serve the subbasins. These are shown in the the buildout exhibit included in **Appendix F – Build-out Wastewater Map.**

7.2 Lift Stations and Force Mains

7.2.1 Proposed Decommissioned Lift Stations

The proposed major basin layout at buildout includes gravity interceptors and major trunklines located near existing and proposed lift stations. The locations of these lift stations could potentially allow for gravity interceptor bypass and decommissioning.

Table 16 - Proposed Decommissioned Lift Stations

Name	Capacity (gpm)	Description
Community ISD Lift Station	Unknown	Decommission LS and direct flow to a 30" gravity interceptor to SC WWTP
High Meadow Estates Lift Station	Unknown	Decommission LS and direct flow to a 12" gravity interceptor to SC WWTP
Liberty Ranch Lift Station	Unknown	Decommission LS and direct flow to a 36" gravity interceptor to SC WWTP
Hubbard St. Lift Station	Unknown	Decommission LS and direct flow to a 21" gravity interceptor to SE WWTP
Fountain View Lift Station	80	Decommission LS and direct flow to a 18" gravity interceptor to SE WWTP
Waverly Estates Lift Station	Unknown	Decommission LS and direct flow to a 18" gravity interceptor to SC WWTP
Cook St. Lift Station	Unknown	Decommission LS and direct flow to a 18" gravity interceptor to SC WWTP
Shepherd Place Lift Station	490	Decommission LS and direct flow to a 15" gravity interceptor to SC WWTP
Abbott Acres Lift Station	Unknown	Decommission LS and direct flow to a 10" gravity interceptor to SE WWTP

7.2.2 Buildout Lift Stations

Four lift stations will be required at build-out to convey wastewater into the gravity collection system. **Table 17** summarizes the future lift station's required capacities.

Table 17 – Build-out Lift Station Facilities

Name	Design Flow (gpm)	Note
West Basin Lift Station	**Buildout: 11,300** Phase 1: 210 gpm	Buildout recommendation to combine West basin with Midwest basin and lift to proposed South Central WWTP
Magnolia Phase 5	Unknown	Existing Lift Station to pump flow from Magnolia to existing MUD Facility
Magnolia Phase 8	Unknown	Existing Lift Station to pump flow from Magnolia to existing MUD Facility
Magnolia Phase 10	Unknown	Existing Lift Station to pump flow from Magnolia to existing MUD Facility

The implementation of the Southeast and South Central Regional WWTPs (discussed in Section 8.3) into the City of Josephine wastewater system would allow wastewater from the entire service area to be diverted to flow by gravity to the respective facility, eliminating the need for several lift stations. Lift stations that may be eligible for decommissioning are listed in **Table 16**, in addition to the infrastructure that would need to be in place to allow for the decommissioning of the lift station facility. This is illustrated in **Appendix F – Build-out Wastewater Map.**

7.3 Josephine Regional Wastewater Treatment Plants

Two (2) regional wastewater treatments plants are proposed to service the Josephine wastewater service area at buildout based on the major sewer shed basins. One (1) WWTP is required to serve the East half of the service area and one (1) WWTP is required to serve the West half of the service area. In order to combine the total flow into one WWTP, major lift stations would be required to lift half of the total peak flow across the City to the other half.

The east side of Josephine flows naturally down Brushy Creek past Caddo Mills to Caddo Creek to the northwest branch of Lake Tawakoni. West and Central Josephine flow naturally down Sabine Creek through Royse City to join the South fork of the Sabine River to the west fork of Lake Tawakoni. Sabine River and Brushy Creek do not meet as they enter separate parts of the lake on either side of Quinlan.

Kimley-Horn recommends two projects to begin site review and development of the two proposed WWTP sites for permitting, design, and construction. The two sites should be planned and phased for interim treatment within the 10-year CIP through buildout.

Table 18 summarizes the various phases of the proposed wastewater treatment facilities needed at build-out. The recommendation would be for the development of a new Southeast Regional WWTP with phased expansion in 4 phases to a buildout of 12.00 MGD (ADF). The proposed South Central Regional WWTP is planned to be 5 phases to a buildout of 12.00 MGD (ADF). The phased expansions are preliminary recommendations based on modular design and ease of construction to buildout. The selected design flow and expansions to the WWTPs will need to be permitted and updated based on the realized population growth and TCEQ requirements.

Table 18 – Proposed Wastewater Treatment Facilities

Phase	Capacity (MGD)
South Central WWTP	
Phase 1	1.00
Phase 2	3.00
Phase 3	6.00
Phase 4	9.00
Phase 5	12.00
Southeast Regional WWTP	
Phase 1	3.00
Phase 2	6.00
Phase 3	9.00
Phase 4	12.00

7.4 Regional Wastewater Treatment Plant Teaming Opportunities

This Master Plan report included a preliminary study to identify possible teaming partners for regionalization of the proposed WWTPs in the City of Josephine. In particular, if adjustments were made to the proposed locations of the two WWTPs in Josephine, would there be opportunities for the City to work with neighboring cities—Royse City and Caddo Mills—on funding and operating a regional WWTP.

7.4.1 Royse City

There is an existing WWTP (regional Sabine Creek WWTP) in Royse City on the Sabine River which the West half of Josephine could potentially send wastewater flow to instead of the proposed South Central Regional WWTP. The Sabine Creek WWTP is owned and operated by NTMWD and serves both Royse City and Fate. The WWTP location is shown in **Appendix G – Sabine Creek Wastewater Treatment Plant Map**.

Before the proposed Josephine WWTP can be permitted and designed, NTMWD would need to be consulted to confirm if Sabine Creek could accept the identified flow as required during the TCEQ permitting process, since the proposed WWTP is located within a 3-mile radius of the Royse City sewer infrastructure and is on the same effluent tributary. Kimley-Horn recommends convening with NTMWD to initiate conversations regarding regionalization before pursuing the proposed Josephine South Central WWTP.

Kimley-Horn also noted during records research that the Sabine Creek WWTP recently completed an expansion and permit amendment based on development in Royse City. The WWTP is currently permitted for a final phase at 7.0 MGD. Sabine Creek WWTP buildout capacity is planned for a Buildout ADF of 18.2 MGD. It appears the site is expandable; however, it would depend on Royse City's ability to accept flow from Josephine into their distribution system and if the WWTP could be expanded to accept an additional flow of 8.92 MGD.

This option would also likely require the City of Josephine to help fund the additional infrastructure improvements (increases to transmission lines and WWTP expansions) necessary in Royse City outside of Josephine's wastewater service area and CCN boundary.

7.4.2 Caddo Mills

Caddo Mills currently owns and operates their own WWTP within their city limits. Kimley-Horn noted during records research that Caddo Mills appears to be lifting half of their system to their WWTP located in the center of the city.

There is potential for a new regional WWTP that would allow the City of Josephine to join flows from the East half of the city with Caddo Mills. Josephine would likely be the primary contributor, depending on the growth identified by Caddo Mills. The challenge of the regional WWTP with Caddo Mills would be finding a suitable site, and extending the gravity line far enough South that it would benefit both Josephine and Caddo Mills.

Potentially, a new regional WWTP with Caddo Mills could pick up half of the flow from Caddo Mills that is currently on lift stations, as well as new development, in addition to a small portion of Royse City this is identified as buildout to be lifted to the Sabine Creek WWTP, as well as land in between the CCN boundaries on the outskirts. The existing Caddo Mills WWTP and proposed siting for a regional WWTP is shown in **Appendix H – Caddo Mills Wastewater Treatment Plant Map**.

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8 Capital Improvements Plan

From the creation of the wastewater master plan, a list of recommended projects in the 10-year planning phase has been developed. Projects within both the 10-year and build-out lists may need to be accelerated based on future growth rates as well as future appetite for development in certain areas of the City. All 10-year improvements are shown in **Appendix C – 10-Year Capital Improvements Map** and a detailed opinion of probable construction cost for each 10-year project is shown in **Appendix D – 10-Year Capital Improvements Opinion of Probable Construction Cost**. **Table 19** summarizes the 10-year capital improvement plan. The opinions of probable construction cost assume no design has been completed, are based on 2023 pricing, do not account for any inflation, and do not include any property acquisitions unless specifically noted.

8.1 10-Year Capital Improvements Plan Projects

Table 19 – 10-Year Capital Improvements Plan Summary

Project No.	Project Name	Project Cost	Market Scarcity Adjustment (1.5x)
1	Shepherd Place 480 GPM Lift Station	$1,590,000	$2,385,000
2	West Basin 210 GPM Lift Station	$2,880,000	$4,320,000
3	Milton St. 12" & 15" Interceptor	$1,230,000	$1,845,000
4	Abbott Acres 80 GPM Lift Station	$2,010,000	$3,015,000
5	Jordan Rd. 15” Interceptor	$1,140,000	$1,710,000
6	Waverly Estates 8" Force Main	$420,000	$630,000
7	East St. 12” & 15” Interceptor	$1,560,000	$2,340,000
8	Caddo St. 15" & 12" Interceptor	$830,000	$1,245,000
9	Wildflower 24” & 30" Interceptor	$3,440,000	$5,160,000
10	Hunt County MUD 48” Interceptor	$10,110,000	$15,165,000
11	Josephine WWTP Improvements	$35,070,000	$52,605,000
12	Southeast 3 MGD WWTP	$178,060,000	$267,090,000
13	South Central 1 MGD WWTP	$60,700,000	$91,050,000
TOTAL		$299,040,000	$448,560,000

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#1 – Shepherd Place 480 GPM Lift Station
Project cost: $2,385,000
Notes: This project consists of approximately 2,920 linear feet of 6" force main along Cook St. to the proposed Milton St. 12" wastewater line and connect to proposed Project #3.

#2 – West Basin (Phase 1) 210 GPM Lift Station
Project cost: $4,320,000
Notes: This project consists of approximately 2,650 linear feet of 10" wastewater line from the developments to the lift station and 11,246 linear feet of 6" force main from the lift station & along Cook St. to the proposed Shepherd Place Lift Station—connecting to proposed Project 1.

#3 – Milton St. 12" & 15" Interceptor
Project cost: $1,845,000
Notes: This project consists of approximately 1,468 linear feet of 12" wastewater line and 1,700 linear feet of 15" wastewater line along Milton St. from Cook St. force main to the proposed Caddo St. wastewater line and connect to proposed Project #8.

#4 – Abbott Acres 80 GPM Lift Station
Project cost: $3,015,000
Notes: This project consists of two alternatives for the wastewater flows from the Abbott Acres developments. The project cost assumes the first alternative will be needed in the interim until the proposed Wildflower development can accept flow.

- Alternative 1 consists of 3,365 linear feet of 4" force main directing the flow to the existing 6" wastewater line along Greenville St.
- Alternative 2 consists of 3,185 linear feet of 6" gravity interceptor directing the flow to the proposed Wildflower development wastewater system.

#5 – Jordan Rd. 15" Interceptor
Project cost: $1,710,000
Notes: This project consists of approximately 2,575 linear feet of 15" wastewater line along Jordan Rd., down Thelma St. connecting to the existing and proposed Caddo St. wastewater lines.

#6 – Waverly Estates 8" Force Main
Project cost: $630,000
Notes: This project consists of approximately 2,050 linear feet of 8" force main directing the flow to the proposed East St. 12" Interceptor and connect to proposed Project #7.

#7 – East St. 12" & 15" Interceptor
Project cost: $2,340,000
Notes: This project consists of approximately 1,930 linear feet of 12" wastewater line and 1,930 linear feet of 15" wastewater line alone East St.

#8 – Caddo St. 12" Interceptor
Project cost: $1,245,000
Notes: This project consists of approximately 2,023 linear feet of 12" wastewater line along Caddo St. to the existing Lagoon Wastewater Treatment Plant, parallel to the existing Caddo St. 15" wastewater line.

#9 – Wildflower 24" & 30" Interceptor
Project cost: $5,160,000
Notes: This project consists of approximately 2,855 linear feet of 24" wastewater line & 2,940 linear feet of 30" wastewater line connecting to the proposed Hunt County MUD interceptor which is included as proposed Project #10.

#10 – Hunt County MUD 48" Interceptor
Project cost: $15,165,000
Notes: This project consists of approximately 7,210 linear feet of 48" wastewater line from the proposed Wildflower interceptor to the proposed Southeast Wastewater Treatment Plant and connect to proposed Project #11.

#11 – Josephine Wastewater Treatment Plant Improvements
Project cost: $52,605,000
Notes: This project consists of an expansion to the existing Josephine wastewater treatment plant from 0.07 MGD capacity to 2.0 MGD capacity in anticipation of the addition of the proposed developments. This project is anticipated to be a temporary expansion until the proposed Project #12 and Project #13 are in service. At that time, the lift stations could be decommissioned, and flow redirected from the Josephine WWTP. This project consists of rehab to the existing lagoons, the addition of a 2MG package plant, yard piping, electrical and SCADA improvements.

#12 – Southeast 3 MGD Wastewater Treatment Plant
Project cost: $267,090,000
Notes: This project consists of a wastewater treatment plant with a 3 MGD capacity receiving flow from the Wildflower and Hunt County MUD developments.

#13 – South Central 1 MGD Wastewater Treatment Plant
Project cost: $91,050,000
Notes: This project consists of a wastewater treatment plant with a 1 MGD capacity, 11,655 linear feet of 15" wastewater line, 12,820 linear feet of 18" wastewater line, and 10,030 linear feet of 6" force main from the West Basin Lift Station. The capacity accounts for flows from developments in west and central Josephine. The proposed trunk lines could allow decommissioning 3 lift stations along central Josephine.

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Appendices

Appendix A – Existing Wastewater System Map

Appendix B – Wastewater Service Area Map

Appendix C – 10-Year Capital Improvements Map

Appendix D – 10-Year Capital Improvements Opinion of Probable Construction Cost

Appendix E – Wastewater Basin & Subbasin Map

Appendix F – Build-out Wastewater Map

Appendix G – Sabine Creek Wastewater Treatment Plant Map

Appendix H – Caddo Mills Wastewater Treatment Plant Map

Appendix I – DR Horton Takedown Schedule

Appendix J – City of Josephine Final Comprehensive Plan (July 2023)

Appendix A – Existing Wastewater System Map

547

547

Hubbard Lift Station
(Existing)

Liberty Ranch Lift Station
(Under Construction)

CISD Lift Station
(Existing)

High Meadow Estates LS
(Existing)

Lagoon WWTP
Capacity: 0.07 MGD
Future Permitted Capacity: 0.75 MGD
*Permit currently under review

6

Cook Street Lift Station
(Under Construction)

Magnolia Phase 8 Lift Station
(Existing)

6

Fountain View Lift Station
(Existing)

Waverly Estates Lift Station
(Under Construction)

Magnolia Phase 5 Lift Station
(Existing)

SBR WWTP
Capacity: 0.5 MGD
Future Permitted Capacity: 1.50 MGD

Magnolia Phase 10 Lift Station
(Existing)

66

Legend

- Lift Station
- WWTP
- Cleanout
- Manhole
- Wastewater Lines
- Force Main
- ETJ
- City Limit
- Wastewater Service Area
- Parcels

N

0 1,000 2,000 4,000 6,000 8,000 Feet

JOSEPHINE EXISTING WASTEWATER SYSTEM

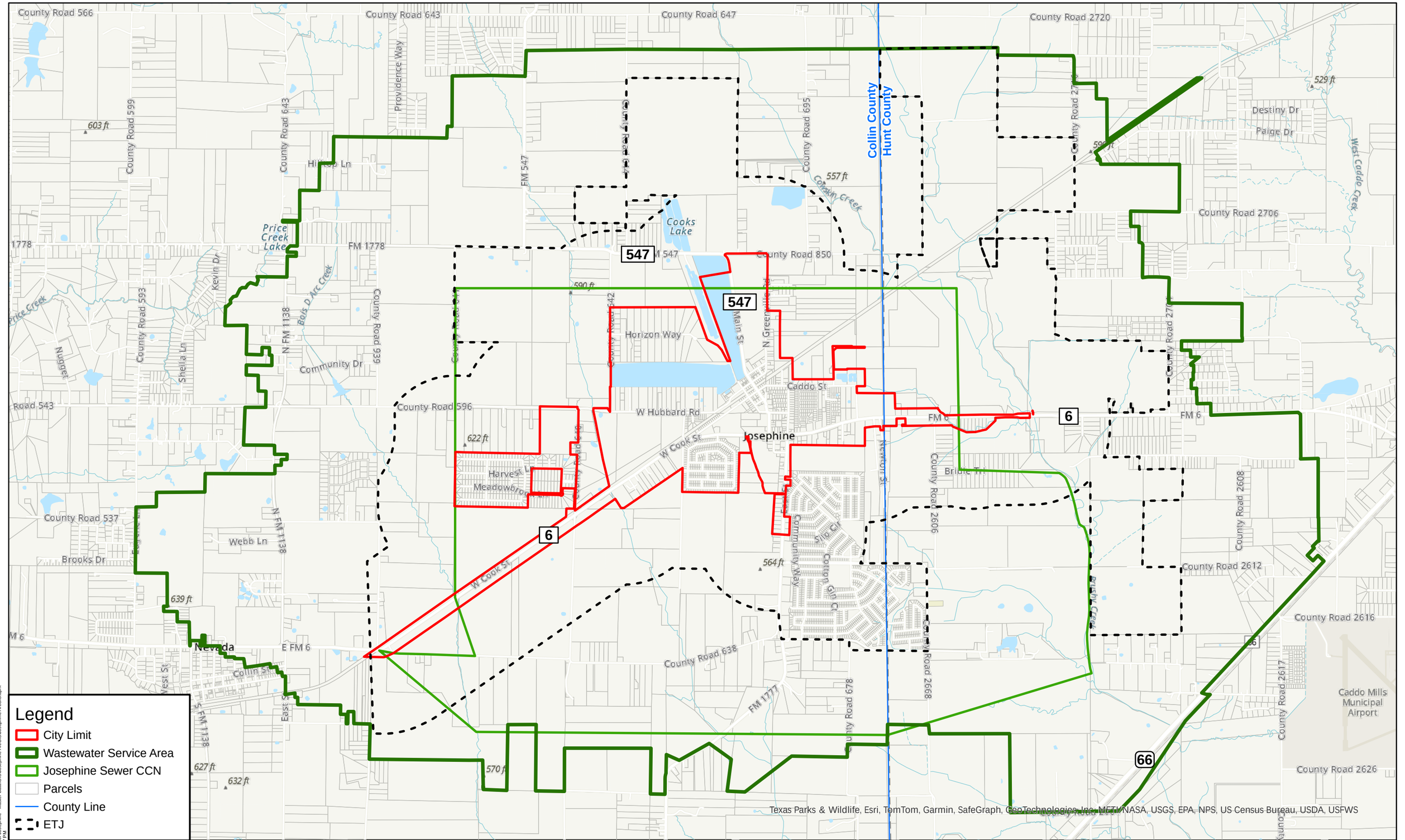
Kimley»Horn

The City of Josephine TEXAS

CITY OF JOSEPHINE
WASTEWATER MASTER PLAN

APPENDIX
A

Appendix B – Wastewater Service Area Map



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JOSEPHINE CITY LIMIT AND SERVICE AREAS

Kimley»Horn

The City of Josephine TEXAS

CITY OF JOSEPHINE
WASTEWATER MASTER PLAN

APPENDIX
B

Appendix C – 10-Year Capital Improvements Map

Legend

- Existing WWTP
- Lift Station
- Cleanouts
- Existing Manhole
- Existing Wastewater Lines
- Existing Force Main
- Proposed WWTP
- Proposed Lift Station
- Proposed Manhole
- Proposed Force Main
- Proposed Wastewater
- Wastewater Service Area
- Parcels
- Subdivisions
- Floodplain

Proposed Abbott Acres Lift Station
Capacity: 84 GPM

Proposed Shepherd Place Lift Station
Capacity: 475 GPM

Proposed West Basin Lift Station
Phase 1 Capacity: 210 GPM

South Central WWTP
Phase 1 Capacity: 1 MGD

Southeast WWTP
Phase 1 Capacity: 3 MGD

Proposed 10-Year Project List	
Project No.	Project Name
1	Shepherd Place 475 GPM Lift Station
2	West Basin 210 GPM Lift Station
3	Milton St. 12" & 15" Interceptor
4	Abbott Acres 80 GPM Lift Station
5	Jordan Rd. 15” Interceptor
6	Waverly Estates 8" Force Main
7	East St. 12” & 15” Interceptor
8	Caddo St. 15" & 12" Interceptor
9	Wildflower 24” & 30" Interceptor
10	Hunt County MUD 48” Interceptor
11	Southeast 3 MGD WWTP
12	South Central 1 MGD WWTP

N

0 1,000 2,000 4,000 6,000 8,000 Feet

10-YEAR CIP PLAN

Kimley-Horn

The City of Josephine TEXAS

CITY OF JOSEPHINE
WASTEWATER MASTER PLAN

APPENDIX
C

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Appendix D – 10-Year Capital Improvements Opinion of Probable Construction Cost

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**City of Josephine**	**Date:**	**1/24/2024**
Project:	**City of Josephine Wastewater Master Plan**	**Prepared By:**	**AH**
KHA No.:	**064611415**	**Checked By:**	**HMM**

Title: **001 - Shepherd Place 480 GPM Lift Station**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization, Bonds, and Insurance	1	LS	$ 32,000	$ 32,000
2	Lift Station	1	LS	$ 720,000	$ 720,000
3	6" PVC ASTM D2241 (Force Main)	2,920	LF	$ 90	$ 262,800
4	SWPPP	1	LS	$ 20,000	$ 20,000
5	Block Sod, Fertilization, & Site Restoration	2,920	LF	$ 10	$ 29,200
6	Traffic Control	1	LS	$ 20,000	$ 20,000
7	Trench Safety	2,920	LF	$ 3	$ 8,760

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 1,100,000
Conting. (%,+/-)	20	$ 220,000
Eng/Survey/CCA (%,+/-)	20	$ 270,000
Total:		**$ 1,590,000**

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable construction costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**City of Josephine**	**Date:**	**1/24/2024**
Project:	**City of Josephine Wastewater Master Plan**	**Prepared By:**	**AH**
KHA No.:	**064611415**	**Checked By:**	**HMM**

Title: **002 - West Basin (Phase 1) 210 GPM Lift Station**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization, Bonds, and Insurance	1	LS	$ 47,000	$ 47,000
2	10" PVC ASTM D3034 SDR 26	2,650	LF	$ 150	$ 397,500
3	Lift Station	1	LS	$ 315,000	$ 315,000
4	6" PVC ASTM D2241 (Force Main)	11,246	LF	$ 90	$ 1,012,140
5	SWPPP	1	LS	$ 20,000	$ 20,000
6	Block Sod, Fertilization, & Site Restoration	13,896	LF	$ 10	$ 138,960
7	Traffic Control	1	LS	$ 20,000	$ 20,000
8	Trench Safety	13,896	LF	$ 3	$ 41,688

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 2,000,000
Conting. (%,+/-)	20	$ 400,000
Eng/Survey/CCA (%,+/-)	20	$ 480,000
Total:		**$ 2,880,000**

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable construction costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**City of Josephine**	**Date:**	**1/24/2024**
Project:	**City of Josephine Wastewater Master Plan**	**Prepared By:**	**AH**
KHA No.:	**064611415**	**Checked By:**	**HMM**

Title: **003 - Milton St. 12” & 15” Interceptor**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization, Bonds, and Insurance	1	LS	$ 25,000	$ 25,000
2	12" PVC ASTM D2241 (Force Main)	1,468	LF	$ 150	$ 220,200
3	15" PVC ASTM D3034 SDR 26	1,700	LF	$ 220	$ 374,000
4	5' Manhole (12" - 27" Main)	7	EA	$ 20,000	$ 140,000
5	SWPPP	1	LS	$ 20,000	$ 20,000
6	Block Sod, Fertilization, & Site Restoration	3,168	LF	$ 10	$ 31,680
7	Traffic Control	1	LS	$ 20,000	$ 20,000
8	Trench Safety	3,168	LF	$ 3	$ 9,504

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 850,000
Conting. (%,+/-)	20	$ 170,000
Eng/Survey/CCA (%,+/-)	20	$ 210,000
Total:		**$ 1,230,000**

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable construction costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**City of Josephine**	**Date:**	**1/24/2024**
Project:	**City of Josephine Wastewater Master Plan**	**Prepared By:**	**AH**
KHA No.:	**064611415**	**Checked By:**	**HMM**

Title: **004 - Abbott Acres 80 GPM Lift Station**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization, Bonds, and Insurance	1	LS	$ 41,000	$ 41,000
2	Lift Station	1	LS	$ 990,000	$ 990,000
3	4" PVC ASTM D2241 (Force Main)	3,365	LF	$ 80	$ 269,200
4	SWPPP	1	LS	$ 20,000	$ 20,000
5	Block Sod, Fertilization, & Site Restoration	3,365	LF	$ 10	$ 33,650
6	Traffic Control	1	LS	$ 20,000	$ 20,000
7	Trench Safety	3,365	SF	$ 3	$ 10,095
	Subtotal:				$ 1,390,000
	Conting. (%,+/-)	20			$ 280,000
	Eng/Survey/CCA (%,+/-)	20			$ 340,000
	Total:				**$ 2,010,000**

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable construction costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**City of Josephine**	**Date:**	**1/24/2024**
Project:	**City of Josephine Wastewater Master Plan**	**Prepared By:**	**AH**
KHA No.:	**064611415**	**Checked By:**	**HMM**

Title: **005 - Jordan Rd. 15" Interceptor**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization, Bonds, and Insurance	1	LS	$ 23,000	$ 23,000
2	15" PVC ASTM D3034 SDR 26	2,575	LF	$ 220	$ 566,500
3	5' Manhole (12" - 27" Main)	6	EA	$ 20,000	$ 120,000
4	SWPPP	1	LS	$ 20,000	$ 20,000
5	Block Sod, Fertilization, & Site Restoration	2,575	LF	$ 10	$ 25,750
6	Traffic Control	1	LS	$ 20,000	$ 20,000
7	Trench Safety	2,575	LF	$ 3	$ 7,725

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 790,000
Conting. (%,+/-)	20	$ 160,000
Eng/Survey/CCA (%,+/-)	20	$ 190,000
Total:		**$ 1,140,000**

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable construction costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**City of Josephine**	**Date:**	**1/24/2024**
Project:	**City of Josephine Wastewater Master Plan**	**Prepared By:**	**AH**
KHA No.:	**064611415**	**Checked By:**	**HMM**

Title: **006 - Waverly Estates 8" Force Main**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization, Bonds, and Insurance	1	LS	$ 9,000	$ 9,000
2	8" PVC ASTM D2241 (Force Main)	2,050	LF	$ 100	$ 205,000
3	SWPPP	1	LS	$ 20,000	$ 20,000
4	Block Sod, Fertilization, & Site Restoration	2,050	LF	$ 10	$ 20,500
5	Traffic Control	1	LS	$ 20,000	$ 20,000
6	Trench Safety	2,050	LF	$ 3	$ 6,150

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 290,000
Conting. (%,+/-)	20	$ 60,000
Eng/Survey/CCA (%,+/-)	20	$ 70,000
Total:		**$ 420,000**

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable construction costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**City of Josephine**	**Date:**	**1/24/2024**
Project:	**City of Josephine Wastewater Master Plan**	**Prepared By:**	**AH**
KHA No.:	**064611415**	**Checked By:**	**HMM**

Title: **007 - East St. 12" & 15" Interceptor**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization, Bonds, and Insurance	1	LS	$ 32,000	$ 32,000
2	12" PVC ASTM D3034 SDR 26	1,930	LF	$ 190	$ 366,700
3	15" PVC ASTM D3034 SDR 26	1,930	LF	$ 220	$ 424,600
4	5' Manhole (12" - 27" Main)	8	EA	$ 20,000	$ 160,000
5	SWPPP	1	LS	$ 20,000	$ 20,000
6	Block Sod, Fertilization, & Site Restoration	3,860	LF	$ 10	$ 38,600
7	Traffic Control	1	LS	$ 20,000	$ 20,000
8	Trench Safety	3,860	LF	$ 3	$ 11,580

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 1,080,000
Conting. (%,+/-)	20	$ 220,000
Eng/Survey/CCA (%,+/-)	20	$ 260,000
Total:		**$ 1,560,000**

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable construction costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**City of Josephine**	**Date:**	**1/24/2024**
Project:	**City of Josephine Wastewater Master Plan**	**Prepared By:**	**AH**
KHA No.:	**064611415**	**Checked By:**	**HMM**

Title: **008 - Caddo St. 12" Interceptor**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization, Bonds, and Insurance	1	LS	$ 17,000	$ 17,000
2	12" PVC ASTM D3034 SDR 26	2,023	LF	$ 190	$ 384,370
3	5' Manhole (12" - 27" Main)	5	EA	$ 20,000	$ 100,000
4	SWPPP	1	LS	$ 20,000	$ 20,000
5	Block Sod, Fertilization, & Site Restoration	2,023	LF	$ 10	$ 20,230
6	Traffic Control	1	LS	$ 20,000	$ 20,000
7	Trench Safety	2,023	LF	$ 3	$ 6,069

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 570,000
Conting. (%,+/-)	20	$ 120,000
Eng/Survey/CCA (%,+/-)	20	$ 140,000
Total:		**$ 830,000**

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable construction costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**City of Josephine**	**Date:**	**1/24/2024**
Project:	**City of Josephine Wastewater Master Plan**	**Prepared By:**	**AH**
KHA No.:	**064611415**	**Checked By:**	**HMM**

Title: **009 - Wildflower 24" & 30" Interceptor**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization, Bonds, and Insurance	1	LS	$ 70,000	$ 70,000
2	24" PVC ASTM F-679 PS 46	2,855	LF	$ 280	$ 799,400
3	5' Manhole (12" - 27" Main)	6	EA	$ 20,000	$ 120,000
4	30" PVC ASTM F-679 PS 46	2,940	LF	$ 350	$ 1,029,000
5	6' Manhole (30" - 36" Main)	6	EA	$ 40,000	$ 240,000
6	SWPPP	1	LS	$ 20,000	$ 20,000
7	Block Sod, Fertilization, & Site Restoration	5,795	LF	$ 10	$ 57,950
8	Traffic Control	1	LS	$ 20,000	$ 20,000
9	Trench Safety	5,795	LF	$ 3	$ 17,385

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 2,380,000
Conting. (%,+/-)	20	$ 480,000
Eng/Survey/CCA (%,+/-)	20	$ 580,000
Total:		**$ 3,440,000**

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable construction costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**City of Josephine**	**Date:**	**1/24/2024**
Project:	**City of Josephine Wastewater Master Plan**	**Prepared By:**	**AH**
KHA No.:	**064611415**	**Checked By:**	**TLS**

Title: **010 - Hunt County MUD 48" Interceptor**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization, Bonds, and Insurance	1	LS	$ 205,000	$ 205,000
2	48" PVC ASTM F-679 PS 46	7,210	LF	$ 800	$ 5,768,000
3	7' Manhole	15	LS	$ 60,000	$ 900,000
4	SWPPP	1	LS	$ 20,000	$ 20,000
5	Block Sod, Fertilization, & Site Restoration	7,210	LF	$ 10	$ 72,100
6	Traffic Control	1	LS	$ 20,000	$ 20,000
7	Trench Safety	7,210	LF	$ 3	$ 21,630

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [x] Final Design

Subtotal:		$ 7,010,000
Conting. (%,+/-)	20	$ 1,410,000
Eng/Survey/CCA (%,+/-)	20	$ 1,690,000
Total:		**$ 10,110,000**

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable construction costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**City of Josephine**	**Date:**	**1/24/2024**
Project:	**City of Josephine Wastewater Master Plan**	**Prepared By:**	**AH**
KHA No.:	**064611415**	**Checked By:**	**TLS**

Title: **011 - Josephine WWTP Improvements**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization, Bonds, and Insurance	1	LS	$ 709,000	$ 709,000
2	Rehab of Existing Lagoons	1	LS	$ 100,000	$ 100,000
3	2 MG Package Plant on Site	1	LS	$ 20,000,000	$ 20,000,000
4	SWPPP	1	LS	$ 20,000	$ 20,000
5	Site Restoration	1	LS	$ 30,000	$ 30,000
6	Yard Piping	1	LS	$ 400,000	$ 400,000
7	Electrical and SCADA	1	LS	$ 3,082,500	$ 3,082,500

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 24,350,000
Conting. (%,+/-)	20	$ 4,870,000
Eng/Survey/CCA (%,+/-)	20	$ 5,850,000
Total:		**$ 35,070,000**

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable construction costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**City of Josephine**	**Date:**	**1/24/2024**
Project:	**City of Josephine Wastewater Master Plan**	**Prepared By:**	**AH**
KHA No.:	**064611415**	**Checked By:**	**TLS**

Title: **012 - Southeast 3 MGD Wastewater Treatment Plant**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization, Bonds, and Insurance	1	LS	$ 3,602,000	$ 3,602,000
2	SBR Treatment Plant	1	LS	$ 120,000,000	$ 120,000,000
3	Traffic Control	1	LS	$ 20,000	$ 20,000
4	SWPPP	1	LS	$ 20,000	$ 20,000

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Subtotal:		$ 123,650,000
Conting. (%,+/-)	20	$ 24,730,000
Eng/Survey/CCA (%,+/-)	20	$ 29,680,000
Total:		**$ 178,060,000**

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable construction costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**City of Josephine**	**Date:**	**1/24/2024**
Project:	**City of Josephine Wastewater Master Plan**	**Prepared By:**	**AH**
KHA No.:	**064611415**	**Checked By:**	**TLS**

Title: **013 - South Central 1 MGD Wastewater Treatment Plant**

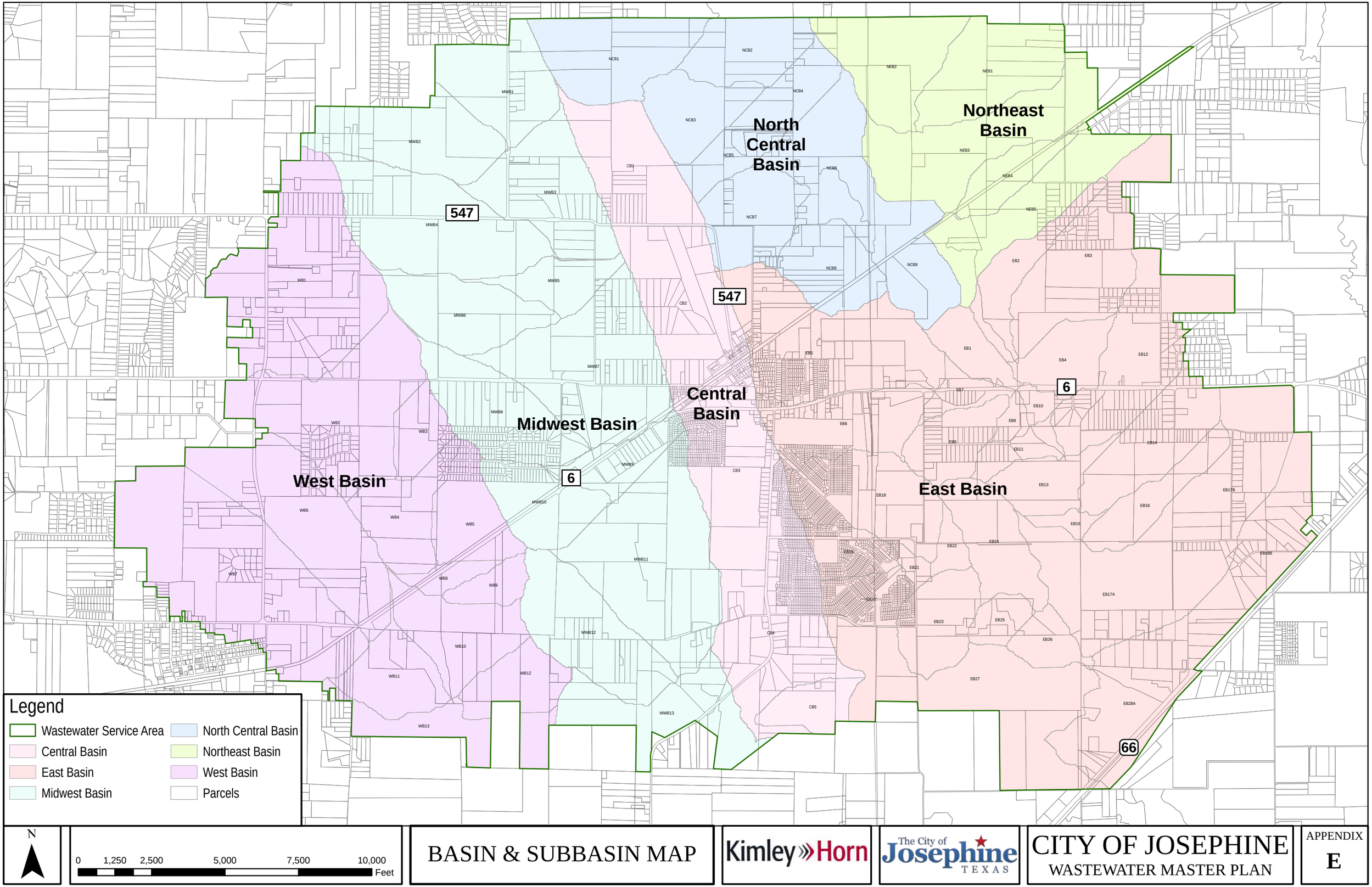
Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization, Bonds, and Insurance	1	LS	$ 1,202,000	$ 1,202,000
2	6" PVC ASTM D2241 (Force Main)	10,030	LF	$ 90	$ 902,700
3	SBR Treatment Plant	1	LS	$ 40,000,000	$ 40,000,000
4	Traffic Control	1	LS	$ 20,000	$ 20,000
5	SWPPP	1	LS	$ 20,000	$ 20,000
	Subtotal:				$ 42,150,000
	Conting. (%,+/-)	20			$ 8,430,000
	Eng/Survey/CCA (%,+/-)	20			$ 10,120,000
	Total:				**$ 60,700,000**

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable construction costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

Appendix E – Wastewater Basin & Subbasin Map



BASIN & SUBBASIN MAP

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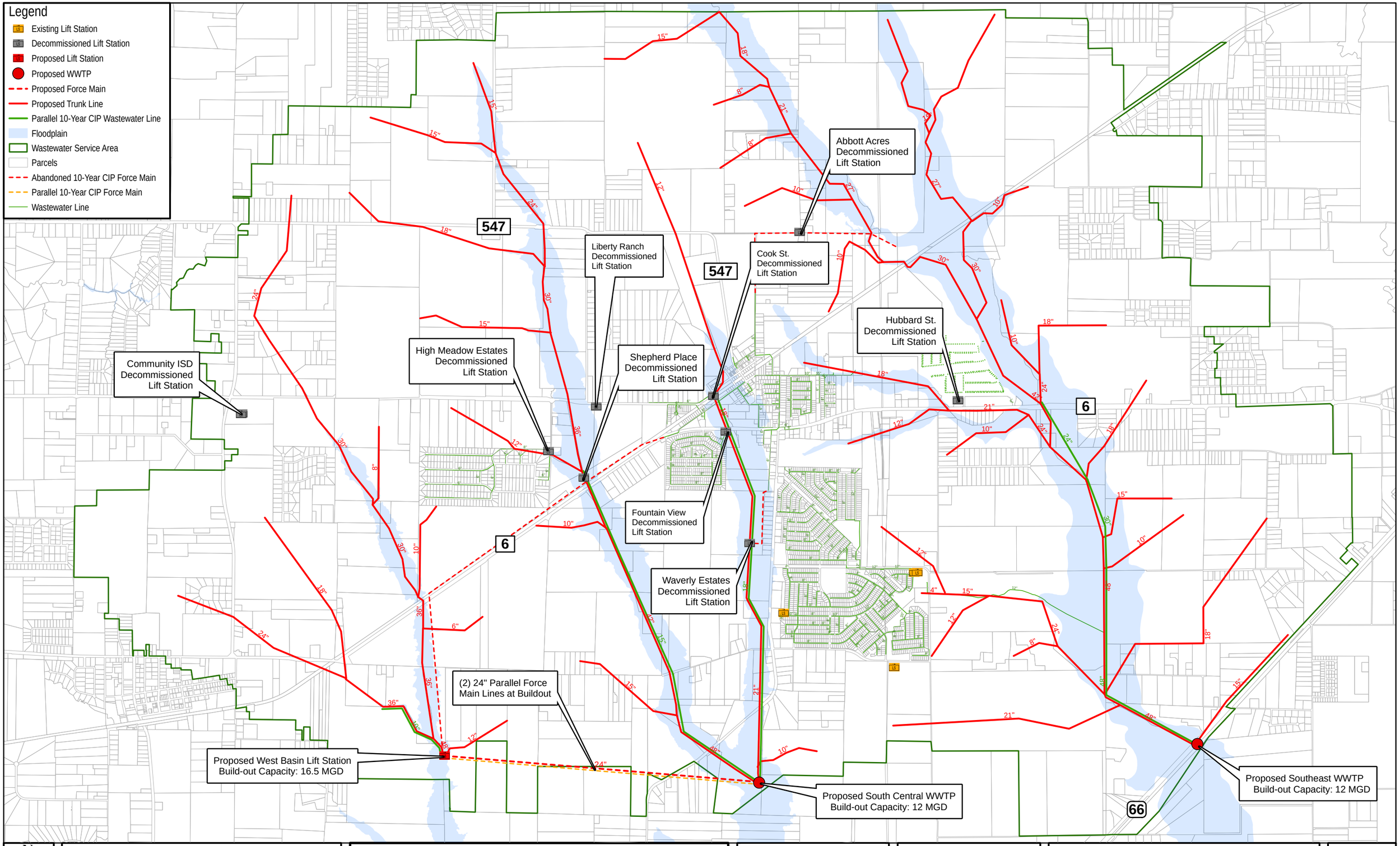
Kimley»Horn

The City of Josephine TEXAS

CITY OF JOSEPHINE
WASTEWATER MASTER PLAN

APPENDIX
E

Appendix F – Build-out Wastewater Map



BUILD-OUT WASTEWATER MAP

Kimley-Horn

The City of Josephine TEXAS

CITY OF JOSEPHINE
WASTEWATER MASTER PLAN

APPENDIX **F**

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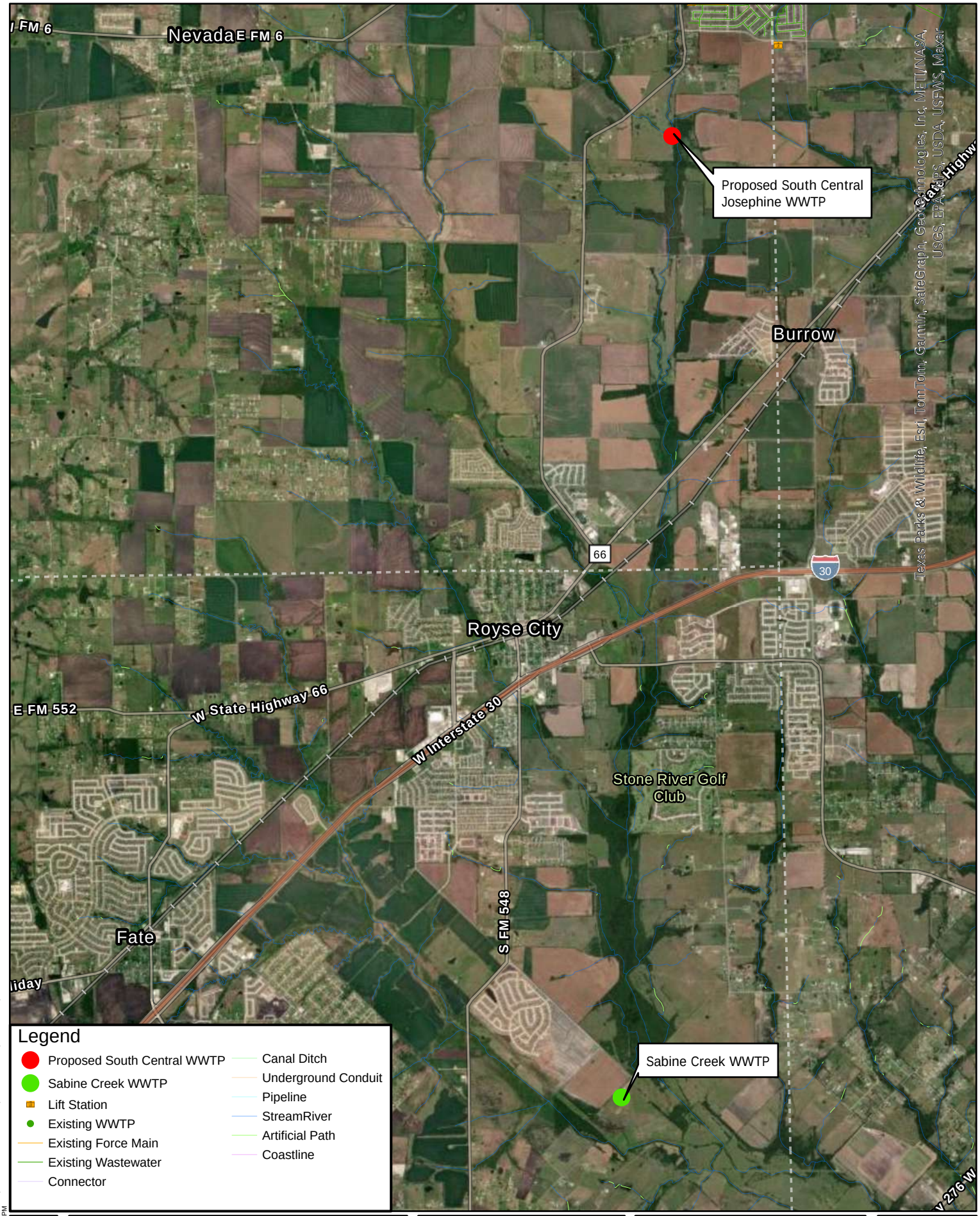
Appendix G – Sabine Creek Wastewater Treatment Plant Map



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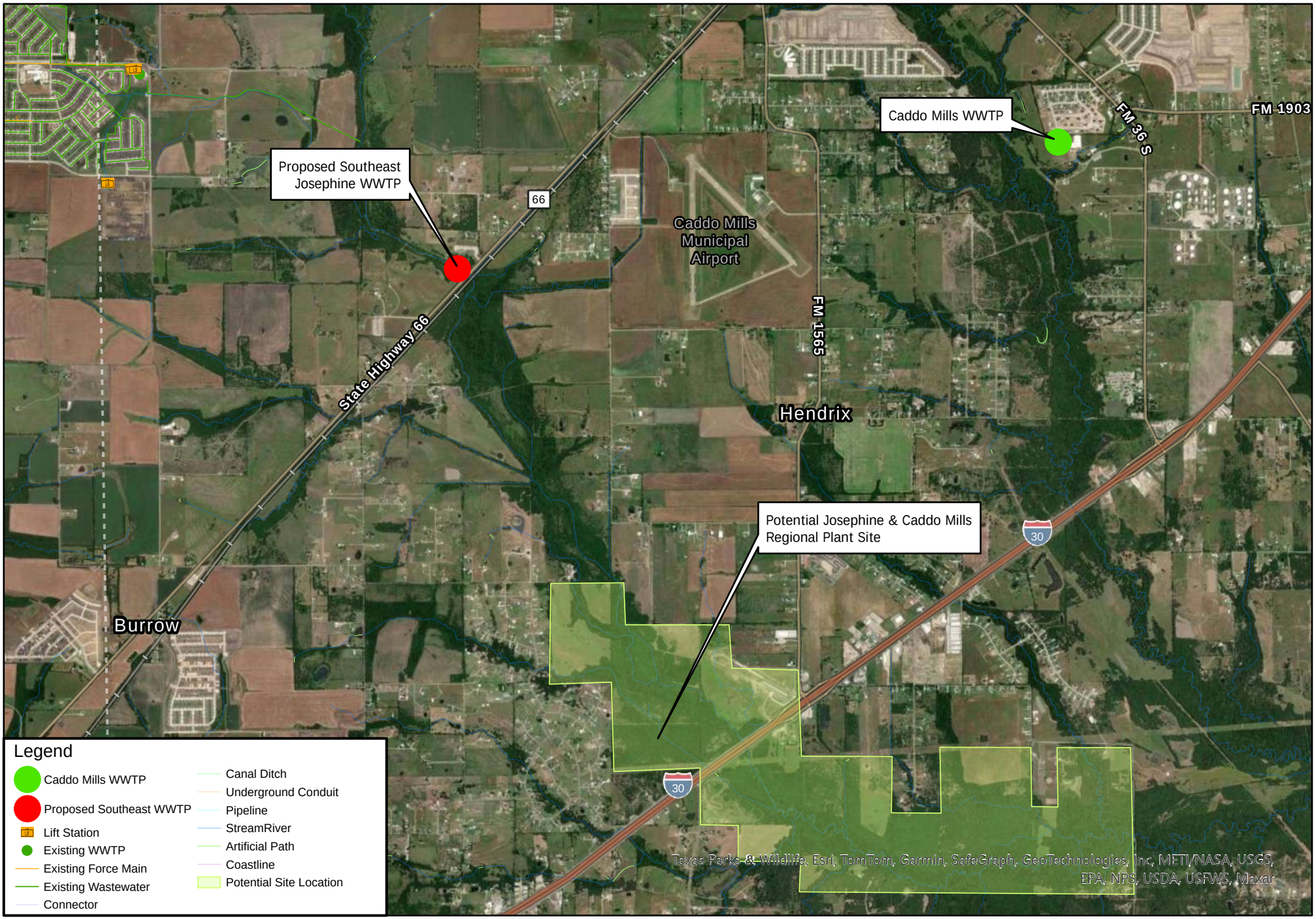
Appendix H – Caddo Mills Wastewater Treatment Plant Map



Legend

- Caddo Mills WWTP
- Proposed Southeast WWTP
- Lift Station
- Existing WWTP
- Existing Force Main
- Existing Wastewater
- Connector
- Canal Ditch
- Underground Conduit
- Pipeline
- StreamRiver
- Artificial Path
- Coastline
- Potential Site Location

N

0 1,000 2,000 4,000 6,000 8,000 Feet

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The City of Josephine TEXAS

APPENDIX H

Appendix I – DR Horton Takedown Schedule

DR Horton - Home Closing Project - Josephine - at 3/31/23

Closings (inception to date):			**1,571**	-	-	-	-	-	-		**1,571**	**1,571**
		Initial Closing Est	**ongoing**	**7/23**	**4/23**	**7/23**	**1/24**	**1/25**	**4/25**			
	Year	***DHI Qtr***	**Magnolia 1-9**	**Mag 10**	**Waverly 1a,1b,2**	**Riverfield 1-4**	**Waverly 4,3**	**Wildflower**	**Waverly Vlg**		**Total by Qtr**	**Total by Year**
		Est units left to close	*17*	*330*	*416*	*821*	*368*	*3,600*	*64*			
jan - mar	2023	*2Q*	-	-	-	-	-	-	-		-	
apr - jun	2023	*3Q*	-	-	-	-	-	-	-		-	
jul - sep	2023	*4Q*	-	30	15	-	-	-	-		**45**	
oct - dec	2023	*1Q*	-	65	30	30	-	-	-		**125**	**170**
jan - mar	2024	*2Q*	-	65	30	60	-	-	-		**155**	
apr - jun	2024	*3Q*	17	65	30	90	-	-	-		**202**	
jul - sep	2024	*4Q*	-	65	30	90	-	-	-		**185**	
oct - dec	2024	*1Q*	-	40	30	90	10	-	-		**170**	**712**
jan - mar	2025	*2Q*	-	-	30	90	30	40	-		**190**	
apr - jun	2025	*3Q*	-	-	30	90	30	90	24		**264**	
jul - sep	2025	*4Q*	-	-	30	90	30	90	24		**264**	
oct - dec	2025	*1Q*	-	-	30	90	30	90	16		**256**	**974**
jan - mar	2026	*2Q*	-	-	30	90	30	120	-		**270**	
apr - jun	2026	*3Q*	-	-	30	11	30	120	-		**191**	
jul - sep	2026	*4Q*	-	-	30	-	30	120	-		**180**	
oct - dec	2026	*1Q*	-	-	30	-	30	120	-		**180**	**821**
jan - mar	2027	*2Q*	-	-	11	-	30	120	-		**161**	
apr - jun	2027	*3Q*	-	-	-	-	30	120	-		**150**	
jul - sep	2027	*4Q*	-	-	-	-	30	120	-		**150**	
oct - dec	2027	*1Q*	-	-	-	-	28	120	-		**148**	**609**
jan - mar	2028	*2Q*	-	-	-	-	-	120	-		**120**	
apr - jun	2028	*3Q*	-	-	-	-	-	120	-		**120**	
jul - sep	2028	*4Q*	-	-	-	-	-	120	-		**120**	
oct - dec	2028	*1Q*	-	-	-	-	-	120	-		**120**	**480**
jan - mar	2029	*2Q*	-	-	-	-	-	120	-		**120**	
apr - jun	2029	*3Q*	-	-	-	-	-	120	-		**120**	
jul - sep	2029	*4Q*	-	-	-	-	-	120	-		**120**	
oct - dec	2029	*1Q*	-	-	-	-	-	120	-		**120**	**480**
jan - mar	2030	*2Q*	-	-	-	-	-	120	-		**120**	
apr - jun	2030	*3Q*	-	-	-	-	-	120	-		**120**	
jul - sep	2030	*4Q*	-	-	-	-	-	120	-		**120**	
oct - dec	2030	*1Q*	-	-	-	-	-	120	-		**120**	**480**
jan - mar	2031	*2Q*	-	-	-	-	-	120	-		**120**	
apr - jun	2031	*3Q*	-	-	-	-	-	120	-		**120**	
jul - sep	2031	*4Q*	-	-	-	-	-	120	-		**120**	
oct - dec	2031	*1Q*	-	-	-	-	-	120	-		**120**	**480**
		Subtotal:	**17**	**330**	**416**	**821**	**368**	**3,190**	**64**	**-**	**5,206**	**5,206**
		At Buildout:	**1,588**	**330**	**416**	**821**	**368**	**3,190**	**64**	**-**	**6,777**	**6,777**

Appendix J – City of Josephine Final Comprehensive Plan (July 2023)

Josephine's Journey

A Comprehensive Plan for Growth

DUNAWAY

Adopted July 10, 2023

The City of Josephine TEXAS

Acknowledgments

The Citizens of the City of Josephine

Josephine Comprehensive Plan Steering Committee

Bethanie Wallgren
Bob Fries
Carri Crawford
Dale Davenport
Dawn Balch
Jessica Ward
Joel Elam
Katrina Heifner-Donihoo
Kevin Bowman
Lloyd D. Brown
Pam Sardo

The City Council of the City of Josephine

Mayor: Jason Turney
Mayor Pro-Tem: Doug Ewing
Place 2: Jane Ridgway
Place 3: Bryan Piccola
Place 4: Doug Thomas
Place 5: Joyce Miller

The Planning and Zoning Commission of the City of Josephine

Chairman: Lloyd D. Brown
Gary Chappell
Greg Garcia
Kodi Wallgren
Patrick Cusic

City Staff

City Administrator: Lisa Palomba
City Secretary: Patti Brooks

Dunaway Team

Project Manager: Stephen A. Cook, AICP
Planning Senior Discipline Lead: Barry Hudson, AICP, CNU-A
Planner: Ellen Soward, AICP

Table of Contents

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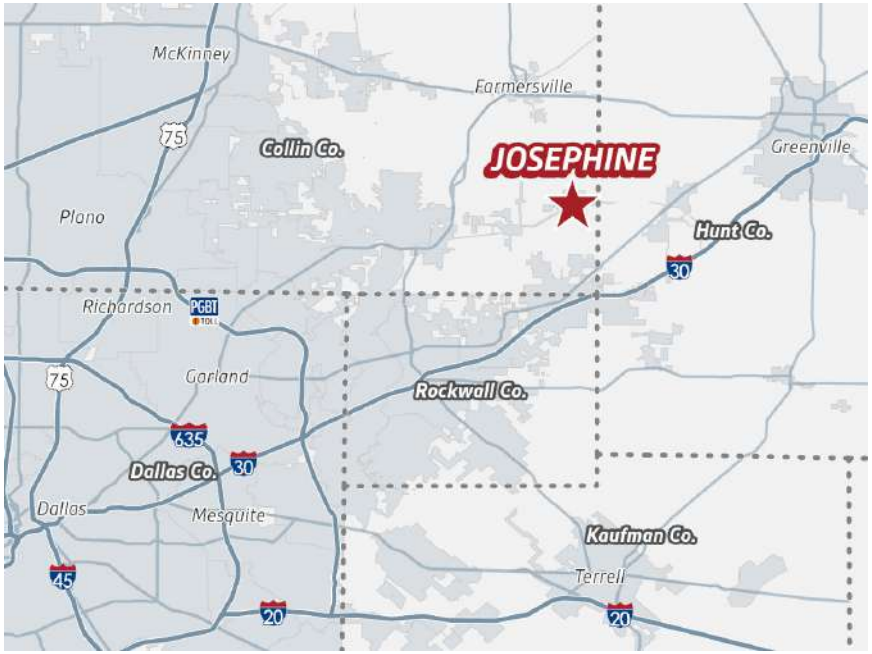
Table of Figures

Vision and Introduction to Plan
Chapter 1

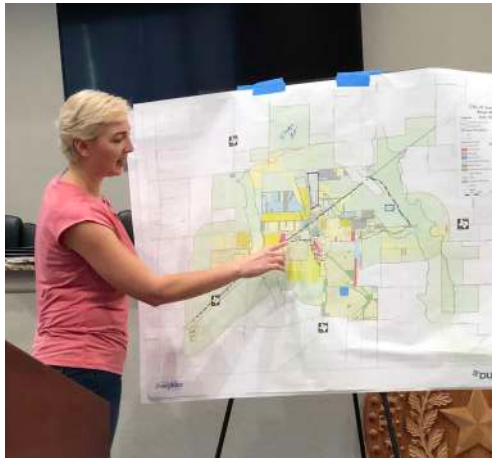
Josephine, Texas, lies within the North Texas Region in an area of great potential change. Located in eastern Collin County and western Hunt County, the community has experienced significant population and housing growth in the past ten years as more commuters seek housing on the urban / rural boundaries of an expanding North Texas Region.



Regional location map of Josephine.

A part of any comprehensive planning process is the creation of a vision and the involvement of community leaders and residents. The public involvement process is important in that the plan is ultimately defined by the residents and elected and appointed officials. The process allows input and feedback on past decisions regarding zoning, land use, capital improvements, and growth. The visioning process helps shape an articulated basis in which future decisions can be made.

Development of the Vision



The Steering Committee used maps, among other tools, to craft a vision for the city.

On July 12, 2022, a Steering Committee made of local leaders, elected and appointed officials, and city staff assembled in Josephine's City Hall to discuss the issues important for the positive growth of the city. Various visioning exercises were conducted with the attendees in order to formulate the vision of Josephine. The objective of the meeting was to inform the assembled group of the planning process, explain the purpose of the comprehensive plan, gather feedback on the vision, and begin marking areas on maps of Josephine for future growth. Attendees were split into groups and tasked to draw areas of growth in the city.

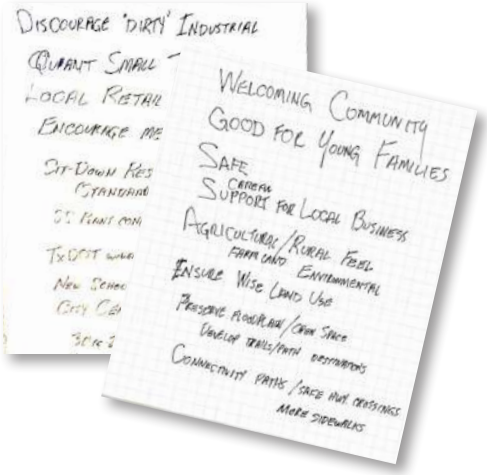
On September 14, 2022, the Steering Committee met online to review and provide feedback on goals and objectives. A public meeting was then held on November 30, 2022, in City Hall. In this come-and-go public forum, the Steering Committee and community were provided an opportunity to discuss the goals, objectives, strategies, and maps.

Vision

The city's vision is an expression of its values. This vision guides all of the city's goals, objectives, and strategies and will be the basis on which decisions are made for the future. During the meeting of the Steering Committee on July 12th, the committee was asked to provide language and words which came to mind when considering Josephine and its

future. The following were the active words provided by the Committee during the meeting:

- Welcoming Community
- Good for Young Families
- Safe
- Careful Support for Local Business
- Agricultural / Rural Feel
- Ensure Wise Land Use
- Preserve Floodplain and Open Space – Develop Trails / Paths and Destinations
- Quaint Small Town



Vision words formulated by the Steering Committee.

The discussion also listed several types of land uses which should be encouraged in the community. These include local retail (not big box), medical and professional offices, sit-down family restaurants, and a civic center with governmental uses. Following the discussion, a vision statement was drafted and then re-worked by the Steering Committee. Below is the vision statement for the City of Josephine Comprehensive Plan.

Prior Comprehensive Planning Efforts

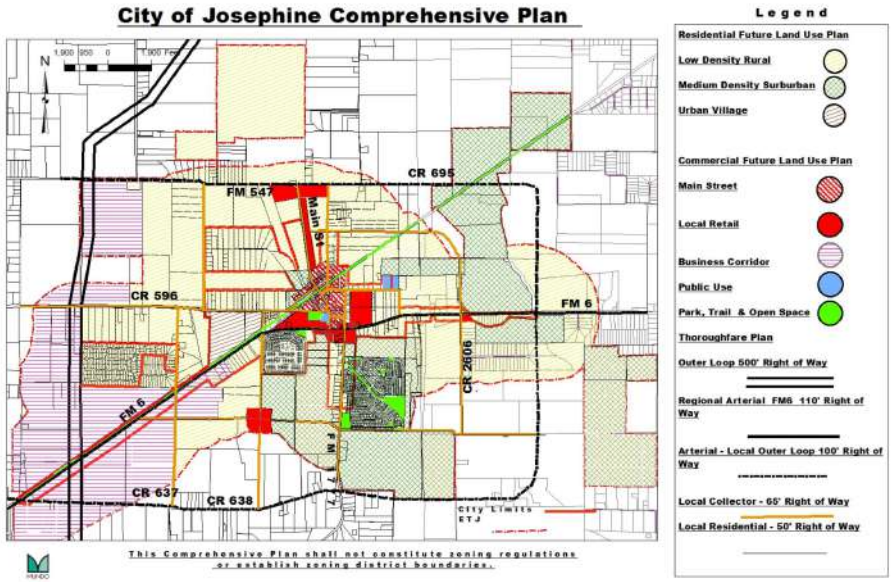
A previous comprehensive planning effort was completed in 2015 with a future land use plan. Focus was made on creating local retail efforts within the main street areas of the community at the intersection of FM 1777 and FM 6. Additionally, a business corridor was indicated on the west side of the city with the potential of the Collin County Outer Loop projected to be constructed connecting US 380 to Interstate 30. While residential development shown on the 2015 map has begun to fulfill the vision from that time, retail and commercial development has not increased significantly in the intervening eight years.

Comprehensive Plans in Texas

The State of Texas has established laws which govern how municipalities are able to regulate land use, provide for basic services, and construct and maintain public infrastructure. In Chapter 213 of the Texas Local Government Code, the text allows the governing body of a community

"Josephine is a welcoming community with a vision to manage new growth while strengthening neighborhoods.

- *It is a thriving community supported by investment in people and encouraging an increase in the quality of life.*
- *Josephine will continue to invest in water and wastewater utilities, roads, and sidewalks.*
- *The city is a safe, vibrant place with opportunities to build new schools, and encourage locally responsive commercial development."*



Future land use plan from previous comprehensive planning effort in 2015. Source: Mundo 2015

to adopt a comprehensive plan for the long-range development of the municipality. A municipality may define the content and design of the comprehensive plan. Further, the plan can include, but is not limited to provisions on land use, transportation, and public facilities.

A comprehensive plan is not a zoning ordinance. The comprehensive plan does, however, serve as a basis on which zoning decisions are made, as specified in Chapter 211 of the Texas Local Government Code. Zoning changes should be compatible with the vision and goals of the plan, but a comprehensive plan does not constitute zoning regulations or establish zoning district boundaries. For example, zoning districts do not have to be identical to what is shown in a future land use map. All in all, the comprehensive plan is an important tool for land use and development, serving as a guide for other processes and considerations.

Community Survey Results

As part of the public engagement process in developing a comprehensive plan for the City of Josephine, an online survey was developed asking questions about the level of service, quality of life, and functionality of the city. Residents, property owners, and stakeholders were invited to complete the survey. The purpose of the survey was to gain an initial understanding of how Josephine operates and what opportunities the city could offer.

The survey was live for a total of a month during October and November 2022. In that time period, a total of 285 responses were received. A majority of responses came from the Magnolia neighborhood that resides just outside the city limits of Josephine within its extra territorial jurisdiction (ETJ). Other responses were from the Fountain View and High Meadow neighborhoods or within the original townsite. There were a few responses from outside the city limits and ETJ.

The responses indicated that Josephine is generally a good place to live and raise children. The city could use additional vocational resources for more jobs within the area, but overall the survey respondents felt that Josephine maintained a high quality of life.

The population of the survey responses were mostly from young families between the ages of 25 and 35 and that population was reflected in many of the answers to the questions in the survey. Overall, quality of parks and recreation spaces scored strongly in the “very satisfied” or “satisfied” categories, while fewer positive responses were provided in regards to street maintenance and access to library services.

In regards to where the city might put forth effort to improve, more customized and larger single family residential lots were cited as the most desirable residential type. In commercial development, a grocery store, sit down restaurant, and fast food restaurants were the top three most requested.

As will be reflected in this plan, there is a strong desire from the survey respondents for a commercial center of the community. The results of the survey are attached to this plan within the appendix.

Brochure promoting the comprehensive plan survey to the community.

Josephine Background
Chapter 2

History

Josephine was established in 1888 with the St. Louis, Arkansas and Texas Railway as a part of the Cotton Belt Route bringing cotton from Missouri to Texas. The city was named in honor of J.C. Hubbard's daughter. The Cotton Belt Route had cargo and passenger traffic to and from Dallas to Texarkana and on to St. Louis. As the railroad was such a defining aspect of the community for such a long time period, there were sub-industries and products based in the community supporting the rail. In particular, this section of Collin County produced a product called Gumbo Gravel in making the base stabilization in which railroad ties were set for the track to be laid. Josephine was incorporated as a City with the State of Texas in 1955. The railroad right-of-way (ROW) is still found through the community; however the tracks have been removed and there is no active railroad use of the ROW. The ROW parallels FM 6 heading to the south and west of the city center. The ROW is now owned by the Northeast Texas Rural Rail Transportation District (NETEX) and could potentially be utilized for future commuter rail and trails.

Seal of the City of Josephine.

Education

The City of Josephine is served by the Community Independent School District, which comprises eighty-nine (89) square miles. Enrollment as of October 2022 was 4,143, according to the Texas Education Agency (TEA), and is expected to continue to grow along with the population growth of the area. The school district bond program projected that by the 2028/29 school district year, the district could have enrollment of 8,353. As part of the 2022 bond election, voters approved two new campuses in Josephine: Mildred B. Ellis Elementary and Community Creek Middle Schools are to be constructed near the intersection of Greenville Avenue and Main Street.

Among the adult population of the community, the U.S. Census Bureau estimates that 19.7% of people 25 years of age or older have a bachelor's degree or higher form of education, with over 98% of that group holding at least a high school diploma, equivalency, or degree of higher education. These numbers will have a tendency to increase over time as more households continue to purchase their residence in Josephine and make it their home.

Demographics

Figure 1:
City of Josephine Population Growth

Year	Population	% Increase
1960	296	-
1970	296	0.00%
1980	416	40.50%
1990	503	20.90%
2000	605	18.10%
2010	812	36.70%
2020	2,119	160.96%
2021	4,565*	115.43%

** As estimated for July 1, 2021 by the US Bureau of Census*

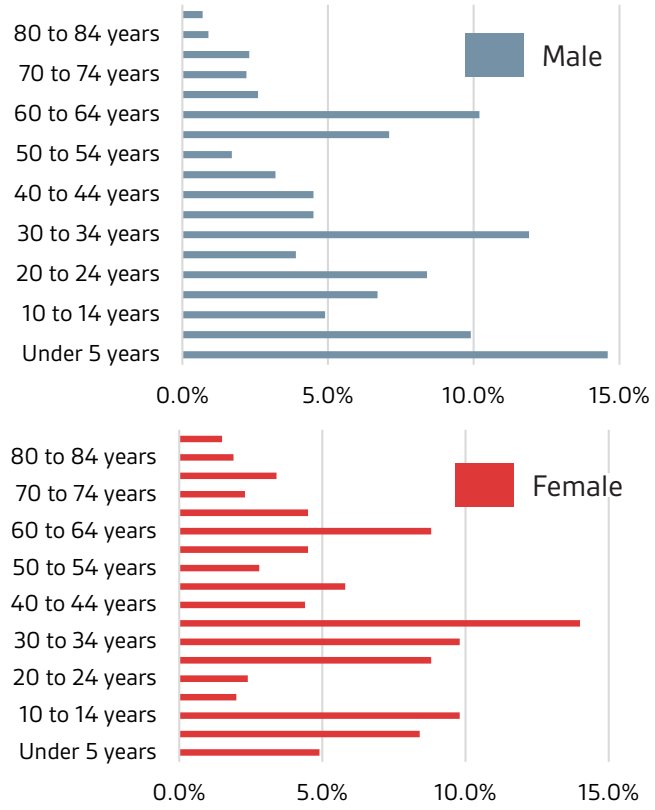
Source: U.S. Bureau of Census

Along with several other communities on the east side of the Dallas/Fort Worth (DFW) area, the community has been labeled as a "Boomtown" by the *Dallas Morning News* (*DMN*, October 14, 2022). After many decades

of slow growth, the city has been steadily increasing in population within the city limits and immediately adjacent within the ETJ. As the DFW area has experienced some of the highest growth anywhere in the United States since the housing market downturn in 2008-2010, developers have been purchasing and developing properties in the surrounding counties outside of Dallas and Tarrant Counties. The rapid amount of growth has made it difficult for historically smaller cities to provide adequate services in the form of utilities, emergency services, street capacity infrastructure, and parks and open spaces.

Figure 2:

Population by Age Cohort



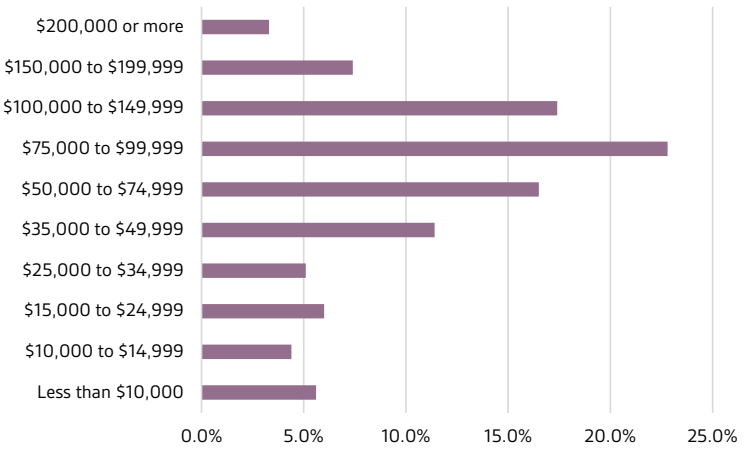
Source: U.S. Bureau of Census 2020

Figure 2 above breaks down Josephine's age distribution by male and female residents. Split into 5-year cohorts, it serves as an indicator of a younger population. Showing significant higher percentages of children within school age and strong percentages of adults under 40 years of age, Josephine is full of young families. There is also a significant bump in those of the 60-64 age group, indicating active retirees within the community.

From the last decennial Census taken in 2020, the population of Josephine indicated that seventy-one (71%) percent of the population indicated that they identified as white; slightly less than six (5.89%) percent of the population identified as black or African American; and nine (8.8%) percent identified as more than one race. The remaining two percent were distributed among Native Americans, Asian, and Pacific Islander population.

Figure 3:

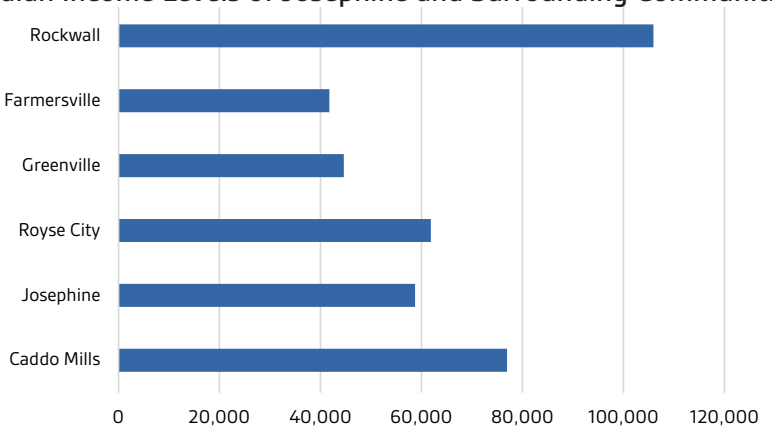
Josephine Income Levels by Percentage of Households



Source: U.S. Bureau of Census ACS 2019

Figure 4:

Median Income Levels of Josephine and Surrounding Communities



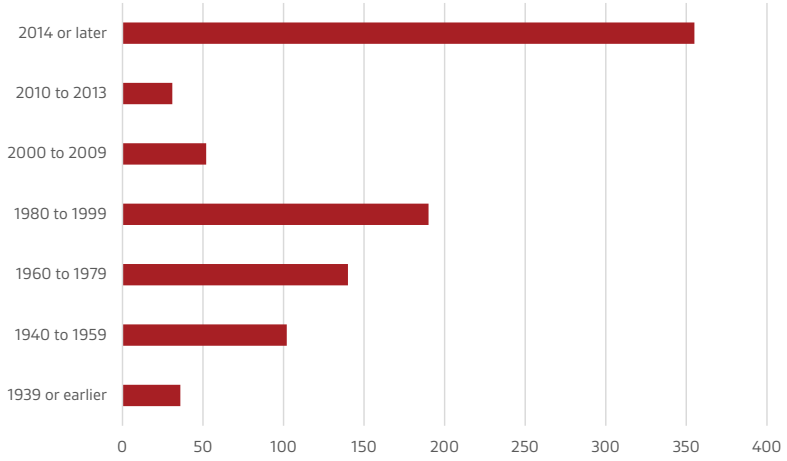
Source: U.S. Bureau of Census ACS 2019

Income levels of a community can serve as indicators of the strength of existing employment and to show the level of potential retail growth. The greater amount of disposable income that is available to households, the more attractive retail environments can be. While Josephine's median income is within the center of the above grouping of neighboring communities in Hunt, Collin, and Rockwall Counties, that has not yet translated into significant retail opportunities within the community. Coupled with a rising number of younger families, retail opportunities are increasing for the community. Income level growth can be influenced by the increase of employment in the community. Living, working, and recreating in your own community is very attractive to residents.

The Magnolia development has brought many new homes to Josephine's ETJ. Source: City of Josephine

Figure 5:

Number of Housing Units Constructed by Year



Source: U.S. Bureau of Census ACS 2019, DALP

It is obvious through the examination of Figure 5 that the majority of housing growth in the City of Josephine has been in the last ten years.

New neighborhoods have been developed both north and south of FM 6 with major new developments occurring to the northeast of the city. The Magnolia development to the south of the city, within Josephine's extraterritorial jurisdiction, greatly impacts the level of service of the road network and demands of services throughout the city.

Figure 6:

Constructed and Proposed New Developments in Josephine (2023)

New and Proposed Developments	Number of Units	Potential Population (2.9 persons/DU) Per Development
Bradley Estates	26	75
DeBerry Heritage	100	290
High Meadow Estates Ph. 2	196	568
Liberty Ranch	185	537
Liberty Ranch West	43	125
Meadow Ridge	141	409
Morningside Ph. 1	219	635
Murray Manor	51	148
TOTAL PER CURRENT CITY	***961***	***2,787***
Harvest Bend	11	32
Hidden Creek Village*	350	1,015
Magnolia Ph. 1-4	656	1,902
Magnolia Ph. 5-9	932	2,703
Magnolia Ph. 10	330	957
Morningside Ph. 2	406	1,177
Riverfield	821	2,381
Waverly Estates	784	2,274
Wildflower	3,061	8,877
TOTAL FOR CURRENT ETJ	***7,351***	***21,318***
Hunt County Proposed Dev.	TBD	TBD
TOTAL FOR OUTSIDE ETJ	***TBD***	***TBD***
TOTAL FOR ALL NEW DEVELOPMENT	**8,312**	**24,105**

**Pending approval and annexation by City Council.*

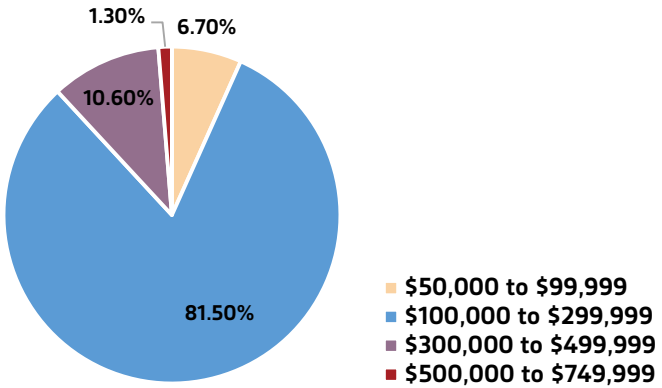
Single family home construction is driving Josephine's growth. Source: City of Josephine

The table on page 11 outlines a total of over 8,000 housing units that have or have the potential to be constructed in and around Josephine. The extraterritorial jurisdiction (ETJ) is adjacent to the city and is an area in which the city may enforce subdivision regulations. At present, the ETJ may extend out one-half (1/2) mile from the existing city limits, if there is not an agreement or conflict with other municipalities' ETJs. Once the population of Josephine is officially over 5,000, the city may incorporate an expansion of the ETJ to one mile

New development within the community has the potential to add over 24,000 new residents within the city and immediate vicinity, if and when all of the potential developments build out. As will be shown in the following sections, the city has more opportunities for additional single family development and can choose to address how development occurs through appropriate growth management.

Figure 7:

Home Valuation in Josephine



Source: U.S. Bureau of Census ACS 2021

Figure 7 shows that as per the housing valuation, a majority of homes are within the $100,000 to $500,000 range. New housing growth and changing materials costs since 2020 have increased median home prices almost forty-eight (48%) percent. This has significant impact on new homebuyers' ability to purchase new homes within the area. Rising housing costs also impact the ability of aging adults who may transition to fixed incomes to purchase and maintain a home within a community. Understanding how different housing types may be utilized to respond to this need is crucial to ensuring that residents can age in place within the Josephine community.

Land Use

The Existing Land Use Map is provided in this plan. It shows the city limits and extraterritorial jurisdiction. The map indicates the locations of different land uses by category as well as the location of vacant and underused land. It is different from the Future Land Use Plan, which shows the desired land uses for the city. The acreage and percentage of total land devoted to these land uses is shown in the following figures. Initial classification of areas was completed using a windshield survey of properties in Josephine by driving through the city and noting the land uses. Additional interpretation of land uses was determined through recent aerial imagery and correlated to an extensive land use survey conducted by the North Central Texas Council of Governments in 2015.

See Figure 8: "Existing Land Use Map" on page 13.

City of Josephine
Existing Land Use

- County Line
- Road
- Parcel
- Josephine City Limits
- Other City Limits
- Josephine ETJ
- 100 Year Floodplain

Existing Land Use

- Agricultural
- Single Family Residential
- Manufactured Housing
- Multi-Family Residential
- Commercial
- Industrial
- Institutional
- Parks and Open Space
- Utility
- Vacant/ Undeveloped

Created by DUNAWAY
May 16, 2023

The City of Josephine TEXAS

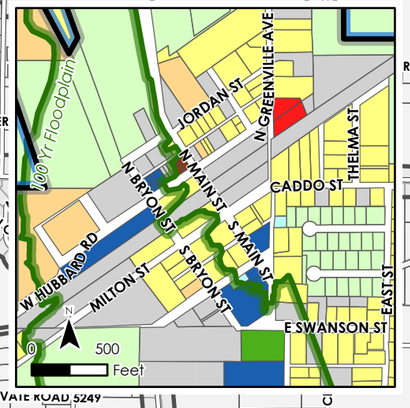


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Figure 9:

Existing Land Uses Inside Josephine City Limits

Land Use	Acres	% of CL
Single Family	450.51	32.26%
Manufactured Housing	109.93	7.87%
Multifamily	0.25	0.02%
Commercial	10.38	0.74%
Institutional	6.75	0.48%
Industrial	2.97	0.21%
Utility	14.22	1.02%
Parks and Open Space	5.70	0.41%
Vacant/Undeveloped	157.29	11.26%
Agricultural	477.26	34.18%
Transportation*	161.23	11.55%
TOTAL	*1,396.48*	*100%*

Figure 10:

Existing Land Uses Within Josephine ETJ

Land Use	Acres	% of ETJ
Single Family	979.05	13.97%
Manufactured Housing	28.15	0.40%
Multifamily	-	0.00%
Commercial	11.76	0.17%
Institutional	14.90	0.21%
Industrial	-	0.00%
Utility	10.19	0.15%
Parks and Open Space	79.13	1.13%
Vacant/Undeveloped	178.94	2.55%
Agricultural	5,510.05	78.60%
Transportation*	197.68	2.82%
TOTAL	*7,009.84*	*100%*

** Includes roadway and railroad rights-of-way.*

Land use in Josephine both inside the city limits and within the ETJ is predominated by agricultural land. Single Family residential is the other most prevalent land use type. The North Texas Municipal Water District (NTMWD) water treatment residuals monofill property consisting of four hundred ten (410) acres within the northern section of Josephine's ETJ is a considerable land use and will be addressed further in the plan. Existing Land Use Map is not a zoning map of the city, but rather a snapshot of what types of land uses exist at this point of time and how will future growth change this map in the future.

Capacity for Growth Based on Existing Land Uses

A holding capacity model is a forecasting tool looking at available vacant land, current zoning, and at what density new growth could be built to accommodate population growth. Calculations for the holding capacity are made utilizing existing land uses and zoning district regulations. Existing land use data that is assigned as vacant and agricultural (potential to be developed) is compared with the zoning and its development properties. A sum of the total vacant land area and properties which may be agricultural now but could have future potential for development is created. For each area, a total potential number of housing units is assigned based on the maximum number of units (or minimum lot size) allowed. Each zoning district has its own density allowance. Housing units are then multiplied by the average household size from the U.S. Bureau of Census for owner occupied units to indicate a population capacity.

Certain assumptions must be made based on the ultimate additional build out number:

- All future and existing residential properties are assumed to be 100% occupied. This means that subdivisions currently under development with vacant lots would be built out.
- Existing areas zoned residential will remain unchanged throughout build out.
- Large tract residential properties (one single family house with some agricultural uses) were labeled as Single Family residential and were not included for potential future subdivisions.
- All vacant and agricultural land potentially used for residential would build out at maximum density as currently zoned. These are properties which do not have a specific development plan but are zoned for future development.
- Areas labeled as vacant but had floodplain over 50% of the parcel were eliminated from the study.
- Potential population on build out utilized 2.9 persons per household as per the 2020 U.S. Census numbers for the City of Josephine.
- Zoning districts not zoned for residential and containing vacant land were eliminated from this calculation.

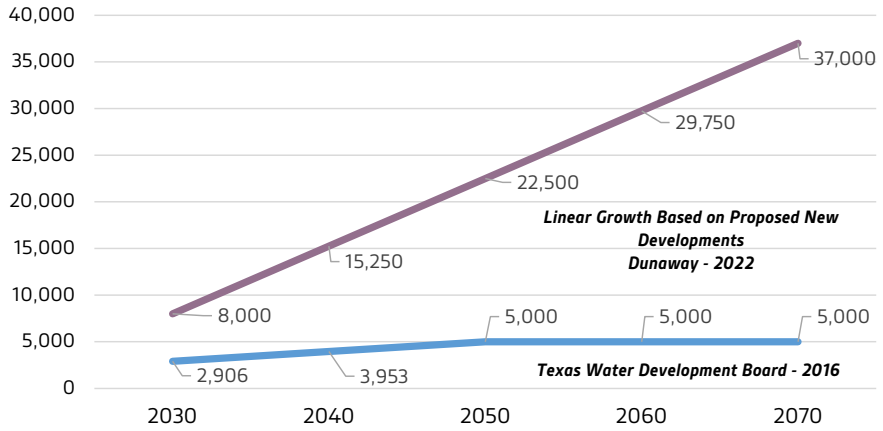
Figure 11:

Holding Capacity for City of Josephine

Zoning	Vacant Acres	Vacant Acres within Floodplain	Developable Acres	DU/Ac	DU Allowed	Persons
SF-1	288.97	26.66	262.31	4.0	1,049.24	3,042.80
SF-2	13.76	3.29	10.47	6.0	62.84	182.23
MH-1	43.00	-	43.00	6.0	257.97	748.13
MF	2.13	2.13	-	15.0	-	-
PD Morningside	55.07	11.44	43.63	4.8	210.00	609.00
PD Murray Manor	13.85	0.66	13.19	3.9	51.00	147.90
				TOTAL	*1,631.05*	*4,730.05*

Figure 12:

Population Projections City of Josephine



Source: Dunaway, Texas Water Development Board

Population Projections

The Texas Water Board is charged with projecting water consumption rates and demand for the future population of Texas. The agency creates a county-by-county population projection through the cohort survival method. This method takes population by age group or cohort and "ages" them progressively year-by-year. It also factors in the birth and death rates of each individual county and then factors in the emigration rate (movement into and out of the county). Each individual subgroup of the county (cities and municipal utility districts) are then provided a "share-of-the-growth" of the county. The share each city or municipal utility district is assigned is usually based on the historical percentage of the county as a whole.

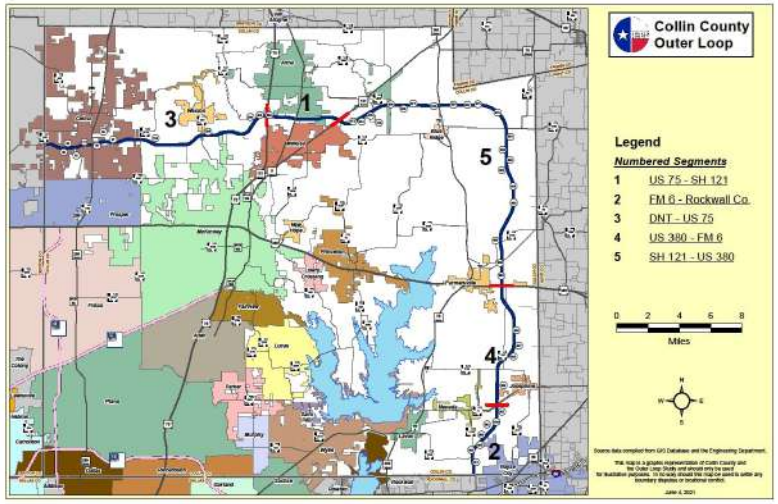
As is shown with Figure 6 on page 11, the potential of growth within the current city limits of Josephine could result in over 900 new housing units, translating into over 2,500 new residents. Additional growth of new subdivisions on the periphery of the city in the ETJ could, through appropriate negotiation and agreements with the city, be annexed into the community and contribute additional population. Based on these factors, the population projections into the future of the city have been reflected in a linear progression of approximately 3,500 new residents per every ten years. Population forecasts are only an estimate of the city's potential population growth.

Development Constraints

Constraints to development are either inherent to the land itself or represent a limitation placed on the property. Examples of constraints inherent to the land itself include steep topography, creeks, and flood-plain. Limitations placed on the property include things such as zoning, rights-of-way, and political boundaries.

Josephine is situated on a relatively flat plain which was conducive in the construction of the railroad. Floodplains have been indicated on the Existing Land Use Map. Any development within floodplain is required to meet Federal Emergency Management Agency (FEMA) standards and is more costly and time consuming to develop. A major impediment to some of the key goals for the community is floodplain located immediately to the west of the intersection of FM 6 and FM 1777. This area, while attractive as a center point for the community, will need to be specifically designed to accommodate new commercial and housing growth while maintaining enough drainage capacity to ensure the safe maintenance of surrounding properties.

Provision of infrastructure such as water, sewer, and roads is the most significant enabling and constrictive force in city development. The railroad, FM 6, and FM 1777 connected the community to commerce and trade. The railroad right-of-way continues to affect the potential for development as new construction begins adjacent to the right-of-way. Additionally, the Collin County Outer Loop project – a regional highway envisioned to connect Interstate 30 with US 30 through eastern portions of the county – has the potential to impact several of the existing neighborhoods in Josephine directly if original alignments determined over a decade ago hold fast as part of the final design.



Overview map of the Collin County Outer Loop project alignments. Source: Collin County 2021

Like streets and roads, utilities also affect development. Josephine has made investments in the wastewater system. Water utilities are available in much of the community through investment in elevated storage facilities. Even with these investments, development pressure is considerable, and some developments are seeking alternatives to city-provided utilities and are investigating municipal utility districts as the primary source of water and wastewater. Coordination of all the types of city services expected by residents can be complicated with multiple municipality organizations.

With this in mind, political boundaries represent an additional constraint on managed growth. Texas municipalities have limited ability to annex property. Only through negotiation with developers are cities able to have new development voluntarily annex into the city. Cities may only annex within their extraterritorial jurisdiction. In 2022, as a general law city, Josephine's population restricts the ETJ of the city to a boundary of 0.5 miles from existing city boundaries. There are areas to the east and south where the limits of the ETJ is based on request from landowners.

See Figure 13: "Existing Zoning Districts Map" on page 17 and Figure 14: "Development Constraints Map" on page 18.

City of Josephine
Existing Zoning Districts

- County Line
- Road
- Parcel
- Josephine City Limits
- Other City Limits

Zoning Districts

- A, Agricultural
- SF-E, Single-Family Residential - Estate
- SF-1, Single-Family Residential - 1
- SF-2, Single-Family Residential - 2
- TF, Two-Family Residential (Duplex)
- MH-1, Manufactured Home
- MF, Multifamily
- C, General Commercial Business other than Retail
- LR, Local Retail
- M-1, Manufacturing/ Industrial - Light
- PD, Planned Development

Created by DUNAWAY
June 5, 2023

The City of Josephine TEXAS

DISCLAIMER:
This is **NOT** the City's official zoning map and should be only used as reference in the context of the Comprehensive Plan. No development decisions should be made based on this map and all zoning information should be confirmed with the City.

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City of Josephine
Development Constraints

- County Line
- Road
- Stream
- Pond
- Parcel
- 100 Year Floodplain
- Josephine City Limits
- Other City Limits
- Josephine ETJ

Created by DUNAWAY
May 16, 2023

The City of Josephine TEXAS

Collin Co.
Hunt Co.

Nevada

Price Creek
George Creek
Rowlett Creek
Sabine Creek
Cowskin Creek
Brushy Creek
West Caddo Creek

LA ESPERANZA RD
FM 1778
1778
JUSTIN PL
CR 939
939
SIMS LN
COMMUNITY DR
N FM 1138
CR 543
543
CR 596
596
CR 913
913
WEBB LN
CR 595
595
HORSESHOE DR
1138
DILLARD DR
E FM 6
EVE ST
COLLIN ST
KERENS ST
EAST ST
CR 592
592
CR 637
637
CR 638
638
PRIVATE ROAD 5525
CR 641
641
CR 642
642
CR 644
644
CR 695
695
MITCHELL LN
FM 547
547
KVANLI LN
PRIVATE ROAD 5455
CR 850
850
CANALES RD
N MAIN ST
N GREENVILLE AVE
HORIZON WAY
CR 1003
1003
JORDAN ST
THELMA ST
CADDO ST
TOM LN
689
CR 689
LLOYDS LN
S BYRON ST
W HUBBARD RD
MILTON ST
E COOK ST
NEWTON ST
CR 640
640
ROLLING MEADOW LN
HARVEST LN
HIGHVIEW LN
MEADOWBROOK LN
CREEKVIEW LN
JASMINE CIR
MAGNOLIA DR
HAWTHORN DR
AZALEA DR
PLUM DR
CEDAR LN
MALLARD DR
W COOK ST
EAST ST
CR'679
679
CR 678
678
1777
FM 1777
1213
CR 2668
2668
LONESOME DOVE RANCH
PRIVATE ROAD 2671
2667
2666
CR 2606
2606
BRIDLE TRL
CLAY DR
FM 6
6
CR 2604
2604
CR 2602
2602
CR 2612
2612
HENSON DR
CR 2608
2608
CR 2610
2610
CR 2706
2706
CR 2708
2708
CR 2716
2716
CR 2718
2718
CR 2714
2714
CR 2712
2712
DESTINY DR
PAIGE DR
JANA WAY
BRANDEN LN
KAITLYNN CT
KASEY CT
KRISTEN CT
QUAIL LN
CR 2704
2704
CR 2702
2702
CR 2617
2617
CR 2613
2613
SKY VIEW CT
CR 2615
2615
2616
STATE HIGHWAY 66
66

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Feet

Source: Mills

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Growth Management
Chapter 3

Growth Management Goal:

Josephine will have residential and commercial growth while retaining its agricultural community feel.

As seen in Chapter 2, population growth prior to the last several years in Josephine has been slow. However, Josephine is now embracing its "Boomtown" status, and management of growth is important to the city. Residential and small, locally-owned commercial growth is desired, but must not be developed in a haphazard manner. It should not impede the opportunity of redevelopment of areas in and about the original townsite of Josephine but should be appropriate and sustainable for many years after construction. These qualifications on growth translate into rate and quality.

Growth will continue to occur in Josephine, and the rate of growth will likely accelerate in the near future. Proactive planning is considered the preferable approach, defining the rules by which growth will benefit the most people. Proactive planning requires preparation and an investment in resources in anticipation of growth.

Anticipation of the adverse impact of growth is a key element in proactive planning. In reactive planning, preparation is not necessary. Without proactive planning, growth is solely driven by consumer demand, and planning for governmental services and utility systems is done after the fact. The growth management strategy contains objectives that keep Josephine a step ahead. All other goals and objectives in the comprehensive plan must adhere to the growth management goals.

Objective 1: Manage observed increase in single family residential units according to the Future Land Use Plan.

The Future Land Use Map is located further in this document. The map indicates the desired location for growth. Infrastructure and zoning are vital to making sure that residential growth is located in appropriate places in relationship to utility lines and roads.

Much of Josephine's future growth will come from new single family home construction. Source: City of Josephine

The plan encourages residential development to occur in low densities of less than four (4) units to the acre or less. Some areas may develop at a medium density of five (5) units to the acre. Higher density development such as townhomes, single family attached structures, and multifamily development should occur in mixed use developments with adequate public facilities or in stand-alone developments near to open space amenities with access to higher capacity traffic patterns. These developments, in accordance with the city's current zoning tolerances, should be limited to a maximum of twenty (20) units to the acre. *Mixed use* refers to a development style that creates areas which combine a mix of land uses within one defined zoning district. Residential, retail, restaurants, office, and public uses may be allowed within the same building, same lot, tract, or zoning district. By mixing uses, public infrastructure efficiency can be maximized, costing the city and developers less in development costs. When designed correctly, mixed use areas can increase pedestrian movement and minimize land consumption. These types of densities can be attractive for

starter homes or for those who no longer wish to maintain a large yard, but want to stay within a community and continue to participate in their social, religious, and community life.

Strategies:

a. Examine ultimate densities for residential housing in the city's zoning ordinance. Understand where flexibility for densities might be advantageous for development. Modify zoning ordinance to allow mixing of uses based on appropriate design.

b. Accommodate multifamily residential development in limited forms. Multifamily development should be located in areas which provide transitions between lower and higher intensity uses, and in a manner that will not negatively impact surrounding uses. Multifamily uses should be located in small groupings around the city in a manner that provides a mix of uses and densities, rather than concentrating multifamily uses in one area which can have negative impacts upon the city.

Objective 2: Increase the number of commercial and retail uses to provide more shopping opportunities for residents and visitors.

New retail areas can bring more local options for residents and visitors.

Commercial development is a significant part of the health of a community. Virtually all commercial uses provide employment, while retail and hotel uses also provide revenue for the city through sales and occupancy taxes which can be used to ensure high quality services to the community. Enough of these types of revenues can provide stability in the city's property tax rate. Commercial development growth should, like residential, be located where the infrastructure investment has been made by the city and in logical locations, such as where wastewater installation does not require new lift stations and where water systems can be maintained charged and looped.

Strategies:

a. Accommodate future commercial uses at key nodes throughout the city. It is recommended that commercial development and uses not be located along corridors in a "strip" manner.

b. Accommodate businesses in several activity centers. At the intersection of FM 1777 and FM 6, a newly purchased area comprised of undeveloped land and floodplain has the potential for commercial development. This City Center should be focused on local retail, potentially containing restaurants, and local medical or office based services.

c. In other commercial nodes, specifically at the intersections of FM 6 and County Roads 640 and 595, a variety of regionally-oriented medical facilities and retail would be appropriate. Development around these intersections will need to accommodate the railroad right-of-way on the northwest side of FM 6.

Objective 3: Recognize Josephine's unique characteristics which should be preserved and incorporated into potential design recommendations for new structures.

Future residential development within established residential areas would be developed in a manner that responds to the existing residential development with compatible land uses and development patterns.

Strategies:

a. The center of any infill development surrounding the original Josephine city core, including the open spaces and surrounding neighborhoods, should provide a focus on preservation of what is historically important. Restoration, redevelopment, and infill in these areas could provide a more central location for the community along the FM 6 and FM 1777 intersection.

In the historic city core, Josephine has a unique character that should be considered while planning for new development.

b. The development standards of the zoning ordinance will be examined to ensure that new development will be in compliance with appropriate architectural, landscaping, and setback design standards which are keeping with the vision of Josephine.

Objective 4: The city will work with Municipal Utility Districts (MUDs) and Public Improvement Districts (PIDs) in order to create synergistic relationships to provide adequate public services – including water, wastewater, and transportation – which is efficient and safe.

Josephine has made very strong investments in its public infrastructure by extending water and wastewater services. Tying into these existing facilities can greatly reduce the development costs for new development and manage where positive growth can occur. With demand of new residential subdivisions in the community at a high rate, it is in the city's interest to strongly work with existing property owners and new developers to have standard development agreements to manage the timing of growth in the community.

Coordination with MUDs and PIDs will be crucial as new developments are built in and around Josephine. Source: City of Josephine

Strategies:

a. The city should prepare an annexation strategy and coordinate the availability of municipal services with areas likely to experience development pressure with higher densities. The strategy will require coordination with other master plans that address water, wastewater, transportation, parks, and capital improvement programs.

b. The city will not encourage development at the far edges of its ETJ, in recognition of the higher costs of "leapfrog" development and haphazard sprawl. Incentives such as partnering with new development for capital improvements and infill development should be implemented, particularly within existing city limits.

c. Properly manage development in new growth areas through development agreements, annexation policies, and the application of zoning regulations that support the recommended land uses plan.

d. The city will work with adjacent municipalities to determine shared boundaries and will execute interlocal agreements based upon mutual agreement that will benefit affected property owners.

Future Land Use
Chapter 4

Future Land Use Goal:

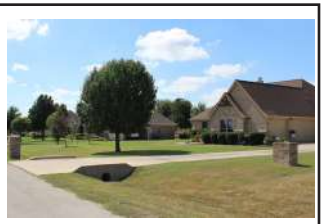
Josephine will have safe and convenient places to live, work, worship, and play.

Expectations for future land uses of property are important for residents and businesses. Future land uses play an important role in infrastructure investment, guiding decisions on where to place additional utilities and streets. Most communities provide distinct places for residents to live that are separate from places where they shop and work. Historically, this has taken place to avoid conflicts of traffic, noise, and, in some cases, odors and vibrations. In recent years, value has been placed on finding ways to mix residential, retail, and office uses in a way that avoids conflict.

The Future Land Use Plan is a guide. It does not establish any regulations. It is a best guess as to where future land uses should go and can provide the Planning and Zoning Commission and City Council information as to whether they should modify zoning and the arrangement of new development. The Future Land Use Plan has been developed through the City of Josephine Steering Committee and public input. It focuses on creating spaces for new commercial, retail, and employment growth; providing opportunities for the right kind of mixed uses of commercial, office, and higher density residential; and preserving a large amount of land for low and medium density residential uses.

The community's vision for future land use is depicted in the Future Land Use Map and described on the following pages.

Figure 15:
Future Land Use Typologies

	Low Density Residential — Single-family detached residential structures are examples of low-density residential uses. Typically speaking, low-density residential land uses will include density of less than four (4) units to the acre. These are estate style lots. Low-density residential is the primary land use within the City of Josephine.	
	Medium Density Residential - The medium density residential can support a variety of housing types, including small-lot single family detached, patio homes, and limited townhomes in a more compact network of streets that are easy to navigate. Density can be between five (5) units to the acre for single family detached and twelve (12) units to the acre for townhomes.	
	Multifamily Residential — This land use recognizes the need for housing at more affordable price points and to accommodate younger families and mature adults wishing to live in the community without the burden of maintaining a home and a yard. These units range from duplexes to apartment complexes. Densities should be at a maximum of up to a range of twenty (20) units to the acre.	

Mixed-Use — This category combines single family, multifamily residential, and low intensity commercial uses designed to co-exist side-by-side without adverse impacts. Examples are apartments, townhouses, retail shops, restaurants, office, and public uses, which may be allowed in the same building, same lot, same tract, or block. These areas could be located within the City Center through a specific planned development.

Neighborhood Service — Uses include small-scale retail and services that support the surrounding residential neighborhood. Locally-owned medical offices and dental practices, standalone businesses such a drug stores, and small shopping centers with several uses such as laundromats and retail shops all fit into the Neighborhood Service designation.

Source: Binyamin Mellish (Pexels)

Commercial — These uses are regionally-oriented commercial development with high traffic and high employment. Businesses may include grocery stores, hotel/motels, big box retail, restaurants, and commercial services.

Institutional — Uses in this category include city buildings, schools, community centers, or other public service-types of uses. Churches are considered institutional even if they are located within residential areas due to the potential traffic impact they may have on the community.

Industrial — Industrial uses may be business parks containing offices and light industrial uses which generate few objectionable conditions. Examples of light industrial uses include assembly, research and development, and warehousing and distribution. Focus should be on flex-industrial spaces which can be used for a variety of corporate functions, storage, and office spaces. Industrial uses would be appropriate on a very limited basis.

Josephine City Center — Josephine City Center is the confluence of the original community. This designation represents small-scale retail, office and dining opportunities.

Parks and Open Space — This category is reflective of existing and proposed park areas within Josephine and may include community ballparks, neighborhood parks with playgrounds, natural trails, Rails-to-Trails, and other open space areas.

Floodplains — Areas designated on the map that are within a federally identified floodplain. Portions of these areas may develop under the correct circumstances, but the majority of this area will remain open and provide opportunity for open spaces and trails.

See Figure 16: "Future Land Use Plan" on page 24.

City of Josephine
Future Land Use Plan

- County Line
- Existing Road
- Proposed Road
- Parcel
- Josephine City Limits
- Other City Limits
- Josephine ETJ
- 100 Year Floodplain

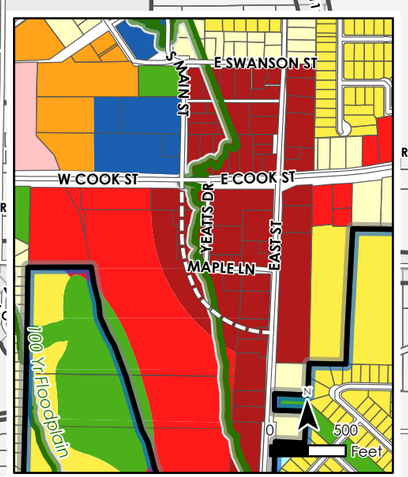
Future Land Use

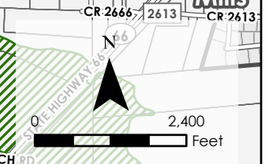
- Low Density Residential (4 units/acre or less)
- Medium Density Residential (5-12 units/ acre)
- Multi-Family Residential
- Neighborhood Services
- City Center
- Mixed Use
- Commercial
- Industrial
- Institutional
- Parks and Open Space
- Utility
- Monofill (Water Treatment Residuals)

Created by DUNAWAY
May 16, 2023

The City of Josephine TEXAS

A Future Land Use Plan shall not constitute zoning regulations or establish zoning district boundaries.





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Future Land Use Areas

The following tables illustrate the future land use areas for the community.

Figure 17:

Future Land Uses Inside Josephine City Limits

Land Use	Acres	% of CL
Low Density Residential	608.75	43.59%
Medium Density Residential	236.91	16.96%
Multifamily Residential	19.63	1.41%
Neighborhood Services	58.70	4.20%
City Center	37.15	2.66%
Mixed Use	14.15	1.01%
Commercial	100.36	7.19%
Industrial	2.97	0.21%
Institutional	95.28	6.82%
Parks and Open Space	47.45	3.40%
Utility	14.22	1.02%
Transportation*	160.91	11.52%
TOTAL	*1,396.48*	*100%*

Figure 18:

Future Land Uses Within Josephine ETJ

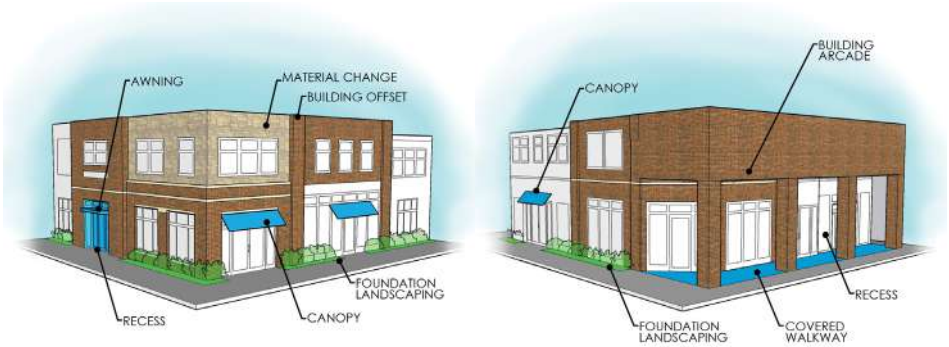
Land Use	Acres	% of ETJ
Low Density Residential	3,597.32	51.32%
Medium Density Residential	2,440.37	34.81%
Multifamily Residential	36.27	0.52%
Neighborhood Services	7.22	0.10%
City Center	-	0.00%
Mixed Use	34.21	0.49%
Commercial	75.61	1.08%
Industrial	-	0.00%
Institutional	26.64	0.38%
Parks and Open Space	175.65	2.51%
Utility	10.19	0.15%
NTMWD Monofill	408.69	5.83%
Transportation*	197.68	2.82%
TOTAL	*7,009.84*	*100%*

** Includes roadway and railroad rights-of-way.*

The Future Land Use Plan for the city indicates that the majority of land within the city limits and within the ETJ will still be oriented to low and medium density residential. Some areas have been designated as potential sites for multifamily residential with a new city center focused on the intersection of FM 6 and FM 1777.

Urban Design in Future Land Uses

Urban design is a term used to define how a community manages the physical and visual character of its built environment. The design of new development within the city and ETJ of Josephine has become increasingly more important as new neighborhoods and the potential of commercial development increases. The design quality of the built environment can have a profound effect on the economic and social health of a city. The quality of the surroundings where people work, live, and play affects the city's image and attractiveness to developers searching for high quality business and residential locations. By contrast, a poorly designed urban environment can be a barrier to investment and economic development. Urban design should be included with the arrangement of land uses and is included in this plan with aims to substantially raise the quality of Josephine's urban environment.

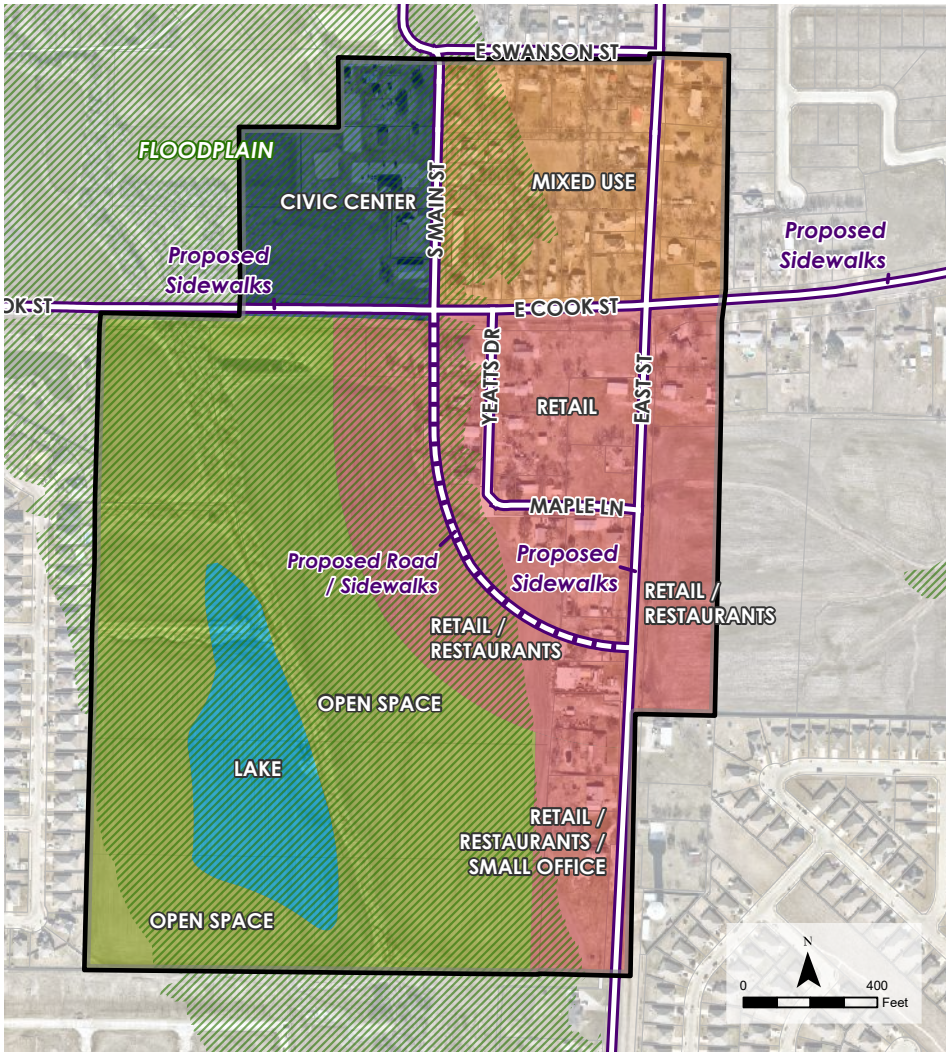


Attention to elements of urban design can create an attractive built environment.

Urban design and future land use planning strategies need to acknowledge economic realities and functional necessities. Practical and reasonable expectations require that urban design efforts are concentrated on the "public environment," referring specifically to areas that are either physically accessible or visually prominent to the members of the general public. Josephine seeks to maximize both the public and private benefits by improving visual quality.

In order to improve the urban design of new development, the city will strive to review the design context of residential, commercial, institutional, and industrial development. Site analysis will be considered an important aspect during the development, design, and construction proposals, and will include:

» Careful consideration of proportions, details, and context of the buildings in relationship to the property and adjacent properties.



*This **concept example** illustrates how the new City Center could feature a mixture of land uses and attract desired development.*

» Mixed use and compatibility. Mixed uses that meet pre-determined standards may be permitted within neighborhoods and provide a variety of housing for people in different stages of their lives. Buildings may have a variety of functions but must be compatible with one another in size and their relationship to the street. Uses may change within the buildings both horizontally and vertically. Neighborhood services should be accessible within a five-minute walk. Retail may be integrated with residential but should be specifically designed to enhance a neighborhood rather than detract from it.

» Public spaces should be integrated with new development. Buildings should be sited carefully to create defined public space. Build-to-lines should be utilized to establish a consistent series of building facades and to promote regular alignment. The street is an important form of public space that is shaped by design standards.

City Center

Josephine has a grand vision for the future of creating a new city center, and it will take an effort by the community to realize the vision. The city, partnering with property owners and developers along with the Texas Department of Transportation, will need to be involved in nearly every aspect of implementing the City Center.

Property owners and future businesses will need to understand their role of connecting to the rest of the community and of developing in an environment which will have environmental and transportation constraints.

Guiding principles of developing a city center:

» Investment will have sustained value and reflect the character of Josephine.

» Regulations or development standards intended to create community and connectivity of the City Center may increase development costs which could be offset through corresponding economic incentives or capital improvements.

» Uses in the City Center should be marketed and maintained as a single district and be branded and provided signage for any open spaces or civic gathering places.

» Capital improvements will reflect ease of vehicular and pedestrian movement through the City Center.

» Shops, restaurants, and small office uses may be located within the core area of the City Center. This area is intended to be the core area. Adjacent to the core, mixing of uses may occur incorporating some mixed density housing and open spaces to accommodate floodplain. Trails and sidewalks will interconnect the City Center.

Objective 1: Develop land in accordance with the Future Land Use Plan.

Throughout the planning process, Josephine expressed strong support for preserving existing neighborhoods and character while encouraging appropriate growth.

Josephine has identified an opportunity to work with a developer of an area on the southwest corner of FM 6 and FM 1777 intersection. This area, identified as the City Center, would enhance the community by bringing a variety of commercial uses which would be oriented toward the surrounding existing and new residential development. The intent of this area would be to include local retail, restaurants, public open space, and new roads and sidewalks. The city should ensure that public improvements and private investments are oriented and improved to complement the surrounding land uses and to include privately-owned public spaces such as plazas or green spaces to make the development attractive for people to stay and enjoy multiple locations within the site.

Strategies:

a. Use the Future Land Use Map categories and areas to establish and communicate clear guidelines and refine regulations consistent with the vision for future development with the public and potential developers.

b. Maintain a continuous and coordinated public planning process that involves citizens, the Planning and Zoning Commission and City Council, local public and private entities, and regional organizations in policy development and decision making.

c. Rezone properties in accordance with the Future Land Use Plan.

d. Encourage multifamily development in locations which make sense for the traffic accessibility and market.

e. Encourage the types of non-residential uses which provide retail and services desirable by the community to locate in Josephine. Through the planning process, initial feedback suggests interest in locally-oriented retail and medical offices, a grocery store or supermarket, entertainment, and family friendly type activities.

f. Encourage a thematic design that can be easily transformed into sustainable new developments as uses may come and go within the development.

g. Develop a unified internal streetscape and signage plan with recommendations for the incorporation of sidewalks, pedestrian seating, thematic public lighting, and signage and wayfinding.

h. Coordinate between transportation planning and land use planning to ensure that potential impacts of the site development on roadway congestion (stacking of cars, turn lanes, intersections) are carefully considered and that uses and transportation improvements are mutually beneficial.

Objective 2: Develop a set of expectations for the Extraterritorial Jurisdiction and Voluntary Annexation.

One of the contributing factors of the high growth of Josephine is the development of new neighborhoods just outside of the city limits. The city has worked extensively with these developers to understand their development goals and housing yield and has provided access to city services where available. Voluntary annexation, where the developer of property chooses to annex into a city, is the only option available to municipalities in the State of Texas. Josephine has the strong tool of water and wastewater services that can leverage the location, timing, and quality of growth in the city.

Strategies:

a. Encourage housing development in an orderly manner building on existing and future water and wastewater systems to naturally increase the infrastructure.

Objective 3: Ensure new development compatibility with existing neighborhoods in Josephine.

Strategies:

a. Development regulations which include zoning and the subdivision ordinances of the city must be revised to place greater emphasis on the importance of urban design. These can include:
   - » The relationship between different buildings;
   - » The relationship between buildings and the street, parks, and other spaces which make up the public domain.

b. Visual quality objectives and a healthy business environment should not be considered mutually exclusive. Urban design should be incorporated into private development plans early in the development process.

c. The impact of public features such as signage, utility locations, valve boxes, utility risers, solid waste containers, sidewalks, landscaping, and parking lots should be recognized as important factors in affecting community appearance.

Utility poles, lines, and boxes are important factors in community appearance and should be considered in urban design standards.

North Texas Municipal Water District (NTMWD) Monofill

NTMWD plans to construct a Water Treatment Residuals Monofill on their 410-acre property within Josephine's ETJ. The planned site is half a mile north of Josephine city limits and on both sides of County Road 644. The monofill itself is proposed to take up 310 acres, while the remaining acreage will be used for supporting activities, including a temporary storage area and a building to house dewatering equipment.

A "monofill" is a landfill for one type of waste – in this case, the byproducts (or "residuals") removed from lake water while treating it for drinking water. The site in Josephine will be exclusively used for the disposal of water treatment residuals.

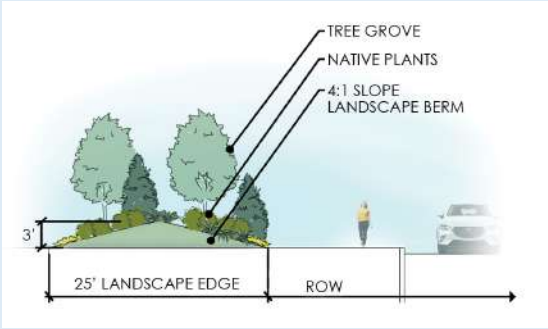
According to the current plan, NTMWD will build a pipeline to convey the water treatment residuals from the Wylie Water Treatment Plant (WTP) to the Monofill. Residuals will arrive in a sludge-like state and will be dewatered before being permanently disposed into the Monofill. The draft permit from Texas Commission on Environmental Quality (TCEQ) would allow up to 100,000 dry tons of residual disposal per year. If issued, the TCEQ permit would be up for renewal in five years.

Aerial map of planned site of NTMWD Water Treatment Residuals Monofill. Source: NCTCOG 2021

Construction of the pipeline from the Wylie WTP could start as early as 2025, with the monofill operations beginning in 2027 or 2028. If the pipeline is not built as planned, NTMWD has stated that the alternative would be transporting the residuals via trucks – with an estimated average of 50 trucks a day coming and going from the site. The city should work with NTMWD and Collin County to establish a preferred truck route and to plan for any necessary roadway improvements to handle the increased truck traffic if a pipeline is not constructed in time for the site's opening.

As with any land use, it is critical to examine the impacts to the Josephine community and what potential nuisances may arise. On a positive note, the Monofill will not generate biogas or methane, since the water treatment residuals do not contain significant amounts of organic material. With the planned pipeline, traffic impacts should be minimal. Additionally, the TCEQ permit and regulations do not allow any contamination of local surface and ground waters. Stormwater run-off will be controlled through surrounding berms and a clay liner under the disposal areas. TCEQ also requires that nuisances (such as insect infestations and odors) be controlled. NTMWD has stated that any potential odor would smell like lake water and that any issues would be addressed through proven technologies.

Visual impacts of a large facility like the Monofill are also important considerations. According to the NTMWD, the site will be designed to blend into its surroundings by use of green spaces, screening, landscaping, and buffering from the fence line. These visual barriers will be key to helping maintain the existing rural / agricultural character of the area. At first, the Monofill will not be visible from the right-of-way or adjacent properties. Over time, as the residuals disposal compounds, it will appear like a gradual sloping hill.



Example of landscaping and berm design that can provide an aesthetically-pleasing buffer between uses.

The city should maintain a conversation with NTMWD during the site planning process to ensure a final design that will minimize impacts to current and future development. As new residential communities are built in the area, the city and developers should consider the Monofill when reviewing site layout, landscaping, and buffering. For example, aesthetically, it may be preferable to keep the Monofill out of the line of sight from homes as much as possible. Additionally, lots that are developed along the boundary edges of the site should be at low-density rural style lots of at least one acre or more with homesites setback as far from the boundary of the site as possible to reduce the potential of negative impacts.

The Monofill's expected lifespan is over 100 years. Once it reaches capacity, the land could likely be transitioned to other uses, such as parks and recreation. However, it is difficult to predict what community preferences and needs will be that far in the future, especially since the City of Josephine and available technologies will look very different from today.

Transportation
Chapter 5

Transportation Goal:

Josephine will have a transportation network which meets basic needs for movement, access, safety, and reasonably rapid travel for people and goods through and within the city.

Because roads do not stop at the city limits, coordination with neighboring cities, Collin County, Hunt County, and TxDOT is vital to encourage connectivity between developments throughout the community as well as ensuring safe travel for cars, trucks, bicycles, and pedestrians. Josephine is transitioning from a primarily rural community to a more suburban style community. It is dependent on primary and secondary arterial roads that are maintained by Collin County and TxDOT for much of the access to developed property throughout the community. Josephine residents indicated in the city survey that there is also a need and desire for sidewalks, bike paths, and trails. There needs to be walkable areas connecting the neighborhoods to their open spaces (either public or private); to schools; and to the potential new City Center.

Traffic and Congestion

Two of the three common components of traffic congestion are based on the physical construction of the roadway (number of lanes and demand, known as volume and capacity). The function of a roadway is impacted by the number of cars traveling at any given time and the number of available lanes. The third aspect has to do with the potential hazards at key intersections and access points to private property, also known as driveways. Analysis of the existing and future road network revealed that Josephine roads will have challenges in both capacity and the volume needed for estimated future demand. The Level of Service (LOS) for FM 6 has been estimated from level D or E and the intersection with FM 1777 at level F.

This term, LOS, is commonly used by transportation planners to study and make recommendations for the road network. Level of Service (also called Quality of Service or Service Quality) refers to the speed, convenience, comfort, and security of transportation facilities and services as experienced by users. Level of Service (LOS) ratings, typically from A (best) to F (worst), are widely used to evaluate problems and potential solutions.

Level of Service (LOS)

The following travel flow characteristics (V/C Ratio) are used to determine needs and deficiencies during the planning process:

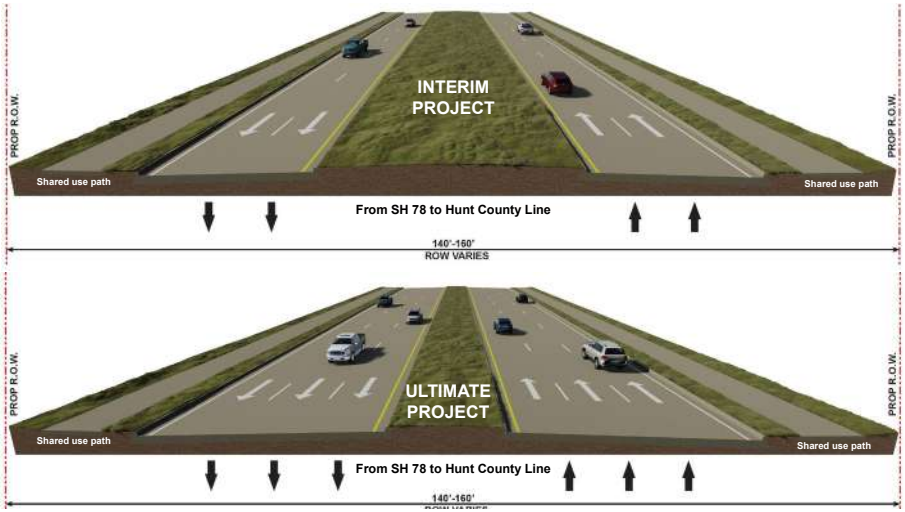
A	Virtually free flow; completely unimpeded: Volume/Capacity ratio less than or equal to .60.
B	Stable flow with slight delays; reasonably unimpeded: Volume/capacity ratio .61 to .70.
C	Stable flow with delays, less freedom to maneuver: Volume/Capacity ratio .71 to .80.
D	High density but stable flow: Volume/Capacity ratio .81 to .90.
E	Operating conditions at or near capacity; unstable flow: Volume/Capacity ratio .91 to 1.00.
F	Forced flow, breakdown conditions: Volume/Capacity ratio greater than 1.00.

Such ratings systems can be used to identify problems, evaluate potential solutions, compare locations, and track trends. Current planning tends to evaluate transportation system performance based primarily on motor vehicle traffic speed and delay (also known as "traffic"). Note the focus on motor vehicle mobility, which contributes to continued automobile dependency. This plan also considers other forms of mobility as result of community input – addressed in both this plan and, potentially, a future Parks and Trails Master Plan.

Texas Department of Transportation (TxDOT) and County Proposed Improvements

Two major roadway improvements in Josephine are intended for the city:

» *Increased Capacity for FM 6.* TxDOT intends to improve FM 6 in a two-stage capacity improvement. Initially four lane with an ultimate of six lanes, it will be constructed with curb and gutter with a raised median along the length. Additional right-of-way will be acquired along FM 6 which will impact some of the existing land uses (predominantly single family residential) along the southern right-of-way. The proposed ROW width is 140 feet. The intention of the plan is to install ten (10') foot wide multi-use paths on the roadway alignment. This project has been designed from the City of Nevada to the Hunt County line through the City of Josephine. The project is estimated to cost $131 million. The project has been designed but not yet funded.



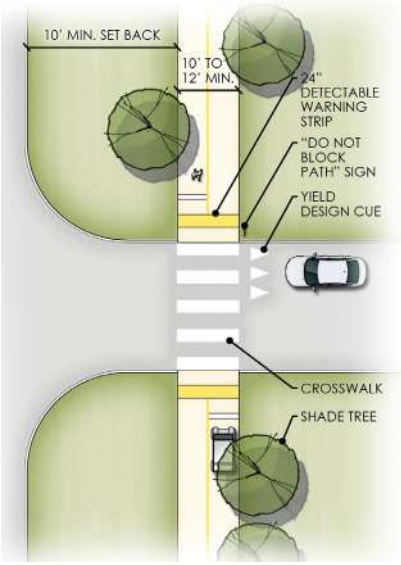
Proposed typical sections for TxDOT's FM 6 project. Source: TxDOT 2022

Median openings will be limited along this stretch of highway. The Hunt County Thoroughfare Plan adopted in January 2022 cites that FM 6 will be improved to a six lane rural principal arterial as a short-term project. The plan defines a short-term project as those which would provide the greatest immediate benefit to support existing development, economic growth, reduce congestion, or redistribute travel demand.

TxDOT has not placed this project on their statewide planning map, but intends to initially fortify the roadway through a seal coat. In order to move potential projects forward on the TxDOT funding schedule, the city should involve the North Central Texas Council of Governments' service as the regional Metropolitan Planning Organization (MPO). The MPO is designated for each urbanized area to carry out a continuing, cooperative, and comprehensive multimodal transportation planning process, including the development of a Metropolitan Transportation Plan (MTP) and a Transportation Improvement Program (TIP). These are the long-range planning documents for transportation improvement in the region. Every two years, a Unified Planning Work Program is formulated for future fiscal years to apply federal and state funding toward transportation improvement projects that have been requested from representatives of the regional transportation agencies and local governments.

» *Increased Capacity for FM 1777.* In a similar manner to FM 6, TxDOT intends to improve FM 1777 in a two-stage capacity improvement. Initially four lane with an ultimate of six lanes, it will be constructed with curb and gutter with a raised median along the length. The intention of the plan is to install a ten (10') foot wide multi-use paths on the east side of the highway and a six (6') foot sidewalk on the west side. This project has been designed from Royse City to the intersection of FM 6 in the City of Josephine and has not been funded by TxDOT.

Improvements to both of these prime corridors will necessitate the need to improve the intersection of FM 6 and FM 1777. TxDOT traffic data from 2020 and 2021 show approximately 7700 annual average daily trips passing through this intersection accounting for both directions. This amount has increased significantly from previously observed counts which from 2017-2019 only had observations of 4,235 trips. Currently FM 6 has unrestricted movement through the intersection while FM 1777 has both north and southbound stop signs awaiting gaps in FM 6 vehicles for traffic movement. The intersection is planned for signalization



Example design standards for development along highway expansion projects.

to assist in the controlling of traffic through both corridors. However, with the planned increase of commercial development as part of the City Center, care must be taken into consideration with the design of the intersection to accommodate drive approaches into surrounding commercial development and future pedestrian activity.

Driveway approaches on an ultimate six lane, divided highway will be required to be setback at a minimum distance of two hundred (200') feet or even greater. Right hand deceleration lanes may be required for adjacent development in order to not interfere with free flow traffic on the highways. Josephine should encourage the use of mutual access easements (MAE) interconnecting commercial development within these surrounding developments to manage traffic outside of the highway and interconnect parking areas.

The traffic signalization itself should incorporate highly visible pedestrian crossing elements including signage, street markings, and pedestrian demand signalization. Sidewalks should be wider (ten to twelve feet) to accommodate spacing as a multi-use path and have enough separation from the main lanes of traffic to keep pedestrians safe.

Objective 1: Use concepts for Context Sensitive Design when improving existing streets and building new streets, interconnections, and sidewalks.

Build-to-lines should be utilized to establish a consistent series of building facades and to promote regular alignment along the street. The street is an important form of public space, and the buildings that define it should be expected to reinforce and enhance the streetscape corridor. Therefore, as new streets are designed and existing ones are increased in capacity, the design of the street should be reflective of the types of uses adjacent to that particular section.

In order to design for neighborhoods and pedestrian-oriented areas, decision makers must understand the key relationship between transportation and land use. In particular, flexibility may be needed in roadway design to accommodate a changing urban form within the community. Understanding key community objectives for land use within the community is also important in order to ensure that public infrastructure investments are in line with ultimate land use objectives. One way to do this is through context sensitive solutions.

Context sensitive solutions (CSS) is the practice of developing transportation projects that serve all users and meet the needs of the neighborhoods through which they pass. Developing solutions must be a collaborative process that involves all stakeholders in street designs which fit into the character of surrounding neighborhoods while maintaining safety and mobility. The key is making sure that elements of streets complement surrounding or adjacent development in order to generate a neighborhood or "roadway experience."

CSS might include wide sidewalks and street furniture in more walkable areas.

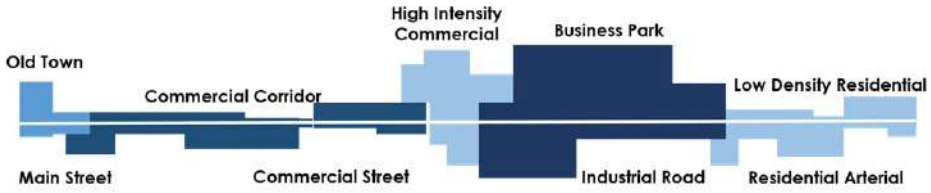
The process of designing CSS roadways is similar to the process of designing traditional thoroughfares: automobile traffic is considered with traffic counts, traffic demand, and level of service information-gathering efforts. The difference is that, in addition to automobile traffic, other elements – such as pedestrian traffic, built environment, and land use – are also carefully considered.

The most notable publication and guidebook for CSS is *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach* published by the Institute of Transportation Engineers (ITE). This publication includes information on balancing the transportation needs of the community with adjacent land uses. In particular, the CSS approach recommends designing thoroughfares based upon:

- Community objectives
- Functional classes
- Thoroughfare types
- Adjacent land use

New streets, sidewalks, and bikeways as well as street upgrades should be planned with the recommendations of CSS. The below graphic shows how one road could be designed to have different capacity and profile based on the intensity of land uses abutting the road.

Figure 19:
Context Sensitive Corridor Example



As a street winds through the city, its function and street section may change based on the surrounding land uses – rather than a one-size-fits-all pattern.

As Josephine grows, a larger road network containing more lane miles will need to be maintained. Most of Josephine's existing network contains asphalt surface materials which over time will deteriorate through use, heavy loads, edge encroachment by grass, and stresses through extreme temperature change. A Pavement Management System is an organized effort to index the surface and subsurface condition of all the city's roads and, based on a numerical grade on those conditions, provide an annual plan for crack repair, pothole repair, mill and overlay techniques, and eventual roadway and subsurface replacement. The Pavement Management System allows the community to move from a demand response model of road repair to a standardized, quantitative program of repair so that labor and material costs can be normalized and repair activities can be focused on extending the lifetime of road surfaces. The system also allows communities to save capital expenses for future expansion and replacement.

Strategies:

a. Integrate the concept of context sensitive design into all transportation project design standards.

Objective 2: Fund and build improvements to existing streets as shown on the Master Thoroughfare Plan.

Strategies:

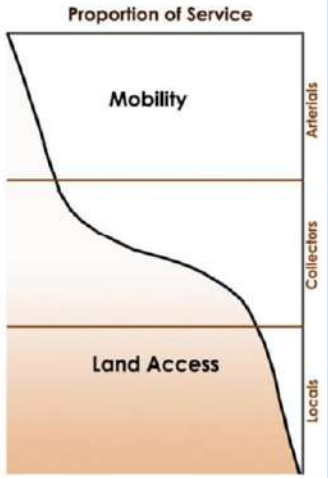
a. Continue to fund improvements through the city's Capital Improvements Program (CIP) and available grants and loans.

b. Create a Pavement Management System which extends existing roadway life and manages the CIP for future roadway replacement.

c. Continue to coordinate with the Texas Department of Transportation, Collin County, and Hunt County to address long-range transportation needs.

d. Organize a formal opposition to the proposed alignment of the Collin County Outer Loop that would travel through the western section of the City of Josephine. Provide feedback that a more preferred route would be to improve SH 78 along the east side of Lake Lavon. This process should be made through coordination with the Collin County Transportation Plan, NCTCOG, and TxDOT.

Figure 20:
Roadway Functional Classification System

Functional System		Service Provided
Arterial		Provides the highest level of service at the greatest speed for the longest uninterrupted distance with some degree of access control.
Collector		Provides a less highly developed level of service at a lower speed for shorter distances by collecting traffic from local roads and connecting them with arterials.
Local		Consists of all roads not defined as arterials or collectors; primarily providing access to land with little or no through movement.

Source: FHWA - Flexibility in Highway Design

Objective 3: Require developers to dedicate right-of-way and construct collector and arterial streets as shown on the Master Thoroughfare Plan.

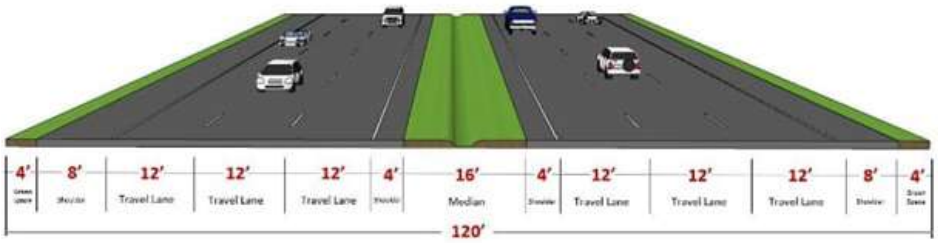
The Federal Highway Administration (FHWA) functional classification system of roadways is the predominant method for roadway classification used by transportation planners. This classification ranges from

arterials that are streets meant for high speed, long distance travel, carrying large volumes, and not hindered by local access. And at the other end of the spectrum, a local street, meant to feed other streets, carries small volumes at low speeds. In between is a collector street that collects traffic from local streets, maybe has fronting commercial uses like commercial, and feeds the arterial system.

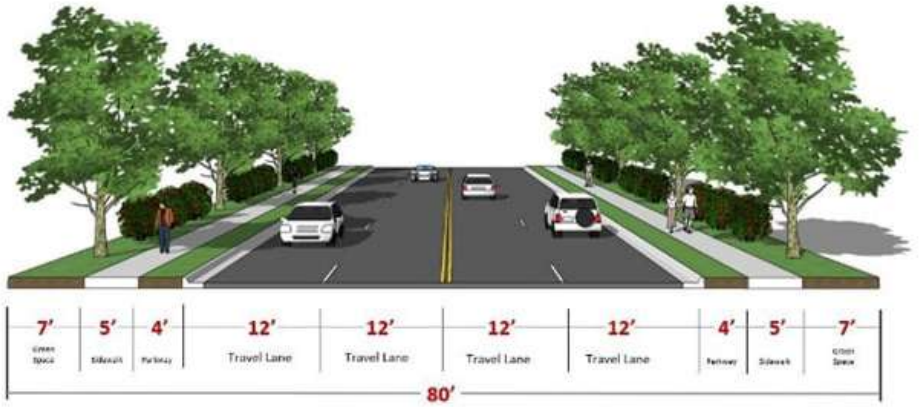
Each of the roadway types has a consistent right-of-way width and sidewalk/buffer improvements. Figure 21 shows typical functional classification rights-of-way. While not including every scenario, these graphics help illustrate capacity improvements in the community. Through the Capital Improvement Program budget, the city should consider how much of their network should be improved and at what time.

New developments to the community may propose alternative street designs and capacities based on their traffic demand and density. Figure 23 on page 38 delineates where these roadway types may be assigned to roads in Josephine. Future roads on this Master Thoroughfare Plan Map are suggested locations and connections. Specific engineering and land planning will determine the final location of the roadways.

Figure 21:
Example Typical Street Sections

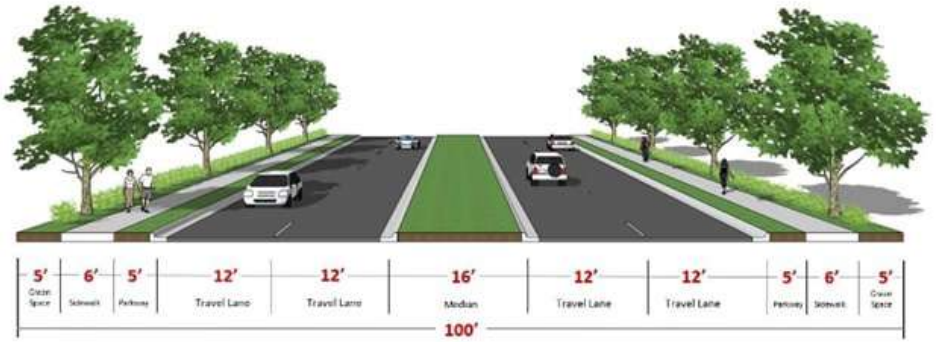


6 Lane Rural Principal Arterial



4 Lane Urban Collector

2 Lane Urban Collector



4 Lane Divided Urban Collector

Source: Hunt County Thoroughfare Plan 2022

Objective 4: Make important interconnections of streets to activity centers.

Activity centers, such as places of worship, schools, business, and industry, thrive when access is made easy. Street connections are important for residents and businesses alike. Dead-end streets impede movement, especially for school buses and emergency services.

Strategies:

a. Minimize use of cul-de-sacs in new neighborhoods so that emergency services can be provided as quickly as possible when needed.

b. Design right-of-way through the City Center project to interconnect with FM 1777 and provide access internal to the site.

Objective 5: Improve existing sidewalks and construct new sidewalks for pedestrian access and citizen health.

Citizen health largely depends on access to food, medical support, and exercise. Sidewalks can improve citizen health by promoting walking, especially to schools and parks. Persons who cannot drive a car are especially helped by having sidewalks. In the heat of the summer, these sidewalks can still be used in the morning and evening.

Strategies:

a. Fund and build sidewalks to help create an interconnected sidewalk system throughout the city.

b. When designing new sidewalks along existing streets, recognize that right-of-way may not be sufficient for the ideal street cross-section shown in the typical street section examples. In these circumstances, provide the widest sidewalk possible for pedestrians.

Objective 6: Consider using unused railroad right-of-way for new trails as part of an interconnected trail system.

Josephine was originally built around a traditional urban core based on the growth of the railroad which previously passed through the town. This railroad right-of-way corridor can continue to contribute to the health, transportation, and well-being in the community. There are national programs through active organizations which provide a set of financial and policy tools to assist communities in identifying and securing resources when there may be limited appropriate space for multi-use trails.

One organization, Rails-to-Trails, enhances local transportation networks by providing non-motorized local connections that are sometimes preferable to on-road bike lanes or sidewalks located on congested, dangerous roadways. Rails-to-Trails benefit railroads, too. In most cases, the trail manager purchases a use easement or license from the railroad, providing financial compensation and, in some cases, reducing liability responsibility and cost to the railroad. In some instances, a fully developed trail can also provide the railroad with improved access for maintenance vehicles.

The railroad right-of-way in Josephine is owned by the Northeast Texas Rural Rail Transportation District (NETEX). The district is a subdivision of the state similar to a municipality and has the authority under Texas Transportation Code to issue bonds and generate revenue for economic development purposes. While the district was formed to preserve existing rail corridors for redevelopment and potentially connect new rail lines for passenger and cargo transportation, the right-of-way through Josephine is of significant size and location that could serve as a trail connection between communities. When trails are built in the corridor, care should be given to preserve future commuter rail traffic to the DFW center.

Strategies:

a. Work with the railroad right-of-way owner and nearby property owners to develop a plan for new trails in railroad right-of-way.

b. Provide direct access to adjacent properties with minimal interference to movement and safety of traffic on public roadways.

No longer containing tracks, the railroad right-of-way (evident through the tree lines) could potentially be used as part of a trail system.

Objective 7: Evaluate floodplains for the construction of trails.

Josephine has several floodplains connecting the city north to south. These floodplains, when preserved and protected, can ensure the protection of property from flooding and provide natural connections between neighborhoods and areas of the city.

Strategies:

a. Discourage and/or prevent construction of permanent structures in the floodplain to help protect property and environmental quality. If construction in existing floodplain is deemed necessary for any project, then measures should be taken to raise the land out of the floodplain and to amend the flood zone map.

b. Encourage the siting of trails based on natural topography of slope to ensure the lowest impact of the existing conditions by trail construction.

c. Look at opportunities to construct trails within floodplain areas which are grade separated from high-capacity roads.

d. Examine opportunities in new developments where natural connections can be made to trails through floodplain corridors connecting each neighborhood to another. Plan into the design of new neighborhoods trailhead connections to the full trail system.

Floodplain corridors often provide opportunities for trails.

Objective 8: Adopt transportation impact fees to assist in the funding of systemwide roadway improvements.

Funding Sources

The implementation of any transportation program, whether it be improvement to the road network or the creation of opportunities for pedestrian movement through the city or the Josephine original townsite area, is going to need to be based on practical demands for additional sources of funding. As discussed in Objective 8, the creation of a transportation impact fee can allow the city to keep up with funding capacity improvements in a manner directly related to the growth the community is experiencing. The table in Figure 22 on page 37 identifies other various funding sources and opportunities to leverage the amount of growth Josephine is experiencing to the availability of funding for which the city could be eligible.

Strategies:

a. Implement a roadway impact fee study, separating out the different roadway areas of the community in order to accurately charge and relate the fee to those growth areas.

Figure 22:

Potential Transportation System Funding Sources

Program	Agency	Purpose	Eligibility	Use of Funds
Highway Safety Improvement Program (HSIP)	TxDOT (from the Federal Highway Administration)	For highway safety projects that eliminate or reduce the number of fatalities and serious injuries on all public roads.	Any local agency that owns, operates, and maintains public roadways.	Improvements that address the crash types identified in the Texas Strategic Highway Safety Plan (SHSP). Funds are provided for construction and operational improvements both on and off the state highway system.
Transportation Infrastructure Finance and Innovation Act (TIFIA)	Build America Bureau, US Department of Transportation	To fill market gaps and leverage substantial private co-investment by providing supplemental and subordinate capital.	State and local governments, transit agencies, railroad companies, special authorities, special districts, and private entities.	Highway projects and transit capital projects are eligible.
Transportation Alternatives Set-Aside Program	Federal Highway Administration – administered by TxDOT	Preserve historic, archaeological, scenic, and environmental resources related to surface transportation and to facilitate bicycle and pedestrian use.	Local governments, school districts, natural resource or public land agencies, non-profit entities responsible for the administration of local transportation safety programs.	Bicycle infrastructure improvements; shared use paths; sidewalk improvements; infrastructure related projects to improve safety for non-motorized transportation.
Rails-to-Trails Conservancy	Assistance with finding funding and designing rails-to-trails projects	Find excess or unused rights-of-way to develop regional and local trail systems.	State and Local Governments usually partnered with a railroad right-of-way owner.	Assists in the design, grant writing, and finding funding sources for these projects.

See Figure 23: "Master Thoroughfare Plan Map" on page 38.

City of Josephine
Master Thoroughfare Plan

- Planned Traffic Signal
- Proposed Traffic Signal
- County Line
- Stream
- Pond
- 100 Year Floodplain
- Parcel
- Josephine City Limits
- Other City Limits
- Josephine ETJ
- New Development

Functional Class

- Collin Co. Outer Loop Alternative
- Existing Primary Arterial
- Proposed Primary Arterial
- Existing Major Arterial
- Proposed Major Arterial
- Existing Minor Arterial
- Proposed Minor Arterial
- Existing Collector
- Proposed Collector
- Existing Local Road
- Proposed Local Road

Created by DUNAWAY
May 16, 2023

The City of Josephine TEXAS

2010 Collin Co. Outer Loop Alignment

Alternative B: Major Shift to West **Not In Favor**

Outer Loop Alternative C: Larger Shift toward Hwy 78 / Lavon Lake **In Favor**

Alternative A: Minor Shift to West **Not In Favor**

Proposed Realignment / Intersection Improvements

Nevada

Wildflower

Riverfield

Riverfield Tract 2

Morningside Phase 1

Morningside Phase 2

Meadow Ridge

Liberty Ranch West

Liberty Ranch

Village Center

Bradley Estates

Murray Manor

DeBerry Heritage

Josephine Lakeside District

Waverly Estates Phases 1-4

Magnolia Phases 1-4

Magnolia Phases 5-9

Magnolia Phase 10

Harvest Bend

Hidden Creek Village

Hunt County Proposed Development

Collin Co.
Hunt Co.

CR 644 CR 695 CR 642 CR 641 CR 640 CR 596 CR 543 CR 913 CR 595 CR 592 CR 637 CR 638 CR 678 CR 679 CR 689 CR 1003 CR 850 CR 2718 CR 2714 CR 2712 CR 2716 CR 2706 CR 2710 CR 2708 CR 2704 CR 2604 CR 2602 CR 2606 CR 2668 CR 2612 CR 2608 CR 593 CR 1138

FM 547 FM 1777 FM 6 N FM 1138 S FM 1138

MITCHELL LN · PRIVATE ROAD 5455 · KVANLI LN · CANALES RD · HORIZON WAY · JORDAN ST · N GREENVILLE AVE · N MAIN ST · THELMA ST · CADDO ST · REESE ST · W HUBBARD RD · MILTON ST · FOUNTAIN VIEW LN · JASMINE CIR · MAGNOLIA DR · HAWTHORN DR · AZALEA DR · PLUM DR · ELM DR · MALLARD DR · EAST ST · LLOYDS LN · NEWTON ST · E COOK ST · W COOK ST · ROLLING MEADOW LN · HARVEST LN · HIGHVIEW LN · GREEN CT · MEADOWBROOK LN · CREEKVIEW LN · JUSTIN PL · SIMS LN · COMMUNITY DR · REENA DR · SHEILA LN · WEBB LN · DILLARD DR · HORSESHOE DR · N COLE ST · W FM 6 · E FM 6 · MAPLE CIR · WEST ST · S WARREN ST · CENTER ST · EVE ST · COLLIN ST · KERENS ST · EAST ST · SOUTH ST · CLAY DR · BRIDLE TRL · LONE SOME DOVE RANCH · PRIVATE ROAD 2471 · BRANDEN LN · KAITLYNN CT · KASEY CT · KRISTEN CT · QUAIL LN

0 2,300 Feet

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Economic Development
Chapter 6

Economic Development Goal:
Josephine will develop a resilient economic base.

Josephine has a long history with the railroad and the connectivity to surrounding land and neighboring communities. The city's current economy consists primarily of revenues from its property tax base. The community desires a greater diversity of business and industry. It aspires to be a unique place that is more than a bedroom community. To that end, the city is more involved in economic development activities through the Josephine Community Development Corporation (JCDC), a Texas Type B Economic Development organization authorized by the voters of the City of Josephine. Economic development corporations' missions are to stimulate investment and development opportunities while preserving the aspects of their cities which makes them home. Focus by the JCDC is to leverage the rural nature of the community with its proximity to the greater Dallas/Fort Worth regional area and the high amount of growth which is occurring within eastern Collin County.

Typical activities that an economic development corporation may wish to continue in the community include:

- Increase innovation and entrepreneurship for local businesses in the community.
- Brand and market the city.
- Increase access to capital for new and existing businesses.
- Foster key economic development catalyst projects.

The Future Land Use Plan supports notable areas of key development. These can be defined as catalyst sites. These areas are intended to attract diverse development that do not compete with one another. These areas are intended to create a portfolio of assets for the City of Josephine.

City Center

The City Center of Josephine is rebuilding the historical center of the city and is intended to be a large economic driver for the community. In the Future Land Use Plan, the City Center has its own land use designation. Development of a city center can be very special to the community, and therefore should be designated as such. Diversity of land uses can be capitalized on by providing key destinations and employment opportunities for residents and visitors. Introduction of diverse housing types are planned in the surrounding area to support the growth of the City Center. The City Center should include diverse retail and restaurant opportunities.

Objective 1: Encourage neighborhood professional and medical offices to service the local community.

Neighborhood medical offices can provide an important local service. Source: Binyamin Mellish (Pexels)

Many communities across the country diversify their economic base to reduce exposure to risk. The growth of locally-owned or operated businesses often generates a substantial share of revenue that is recirculated and spent locally, ultimately reinvesting in a city's economy.

Strategies:

a. Strengthen and diversify the office / employment space offerings in Josephine to include more varied opportunities for emerging needs such as co-working, small businesses, and entrepreneur incubator space.

b. Encourage the expansion of local, community serving retail and service industries. Consider developing a "new resident" guide to provide information on community resources and local businesses.

c. Foster public/private partnerships that both enhance the local quality of life and strengthen the economy. Invest in public spaces and facilities co-located with private development.

Objective 2: Concentrate efforts on attracting destination-based local-oriented retail, grocery stores, and restaurants.

To invigorate and support retail growth that will sustain residents of Josephine and reduce their commute time for daily essentials and attract new retail and employment, the community should focus on the accessibility and development opportunities of the FM 6 corridor. The retail encouraged within this area must be destination-driven and market appropriate. The timeline for measuring the successful implementation of this strategy must take a long-term outlook.

Destination restaurants can contribute to local employment and economic development.

One of the major changes in municipalities in Texas in recent years is the increase of local option elections for the creation of package alcohol sales storefronts (Liquor Stores). Because the local option petition is a grassroots, community-based effort and not driven by the city, the city has to take a balanced reactive/proactive approach to the potential election. Package alcohol sales can be limited to certain zoning districts within a permitted use table and those zoning districts limited to prime locations within the city for retail use. The Texas Alcoholic Beverage Commission (TABC) allows cities to regulate the minimum distance that a package alcohol sales store is from schools, churches, hospitals, and playgrounds. The sale of alcohol in a community can bring sales tax revenue, but through land use tools such as zoning, the city can ensure that the uses remain well designed, safe, and do not become a nuisance to the rest of the community.

Strategies:

a. Work to attract predominantly convenience-based Class A retail spaces along the FM 6 corridor – specifically at the City Center, CR 640, and CR 595/CR 637 intersections.

   1. Design standards must remain focused on traffic movement and landscaping as this is the visual entry to the community from neighboring communities.
   2. Although convenience-based retail is easier to attract with demographics than destination-driven retail, the city can focus on some types of criteria as to what tenants would find appropriate. This includes reducing development permitting costs, creating potential tax incentives, and providing public infrastructure capital improvements.
   3. Family-based retail needs traffic, land, infrastructure, and visibility to be sustainable. Providing these elements can bring restaurants, larger retail, and ancillary entertainment venues. The community has expressed interest at bringing a full-service grocery store to the city.

b. Commercial and neighborhood service land uses in Josephine should reflect a combination of visitor and resident-based retail availability especially in the City Center.

   The retail environment will be heavily dependent on the development of the City Center. Additional employment density will be required to make any retail sustainable. To provide the required demand, the Center should have employment opportunities as well. The International Council of Shopping Centers estimates that workers with easy access to retail spend an average of $2,350 annually near their workplaces. Most of this spending is food and beverage purchases (about 61%), while the remaining are neighborhood goods and services and general merchandise

sales. Clustering the local and destination retail environments with civic and cultural uses gives restaurants and retail shops a broad-based market. Civic and cultural events and uses increase retail demand.

c. Concentrate efforts on retail attraction and retention. The catalyst for retail attraction and retention is customers, whether they are local or visiting. Workforce retail demand can be generated by focusing efforts on developing a local office park adjacent to local neighborhoods.

Objective 3: Consider how the branding of the city may bring economic development and create a streetscape made up of streetlights, gateway elements, and wayfinding signs in the community.

Having grown along the railroad corridor, Josephine is a fairly linear community. Access to the community typically comes from FM 6 and FM 1777. A distinctive logo such as the current city logo or brand (which can be a graphic icon or other easily repeatable image) carefully sited throughout the city is needed to help tourists and travelers identify Josephine as different from other communities.

Branding of a community can:

- Create a common vision for the future of the community and its potential.
- Provide a consistent representation of the place.
- Enhance its local, regional, and/or global awareness and position.
- Become a recognizable and repeatable icon for tying a community together physically through signage.

The Josephine city logo has been placed on the city's elevated storage tanks. Combined with the potential logos of new schools in the community, the logo and/or color could be a basis for the brand. A brand can be made to make the connection between the physical location of the community and the actions that the community is undertaking to bring new investment, development, and residents to the city. Additional signage, marketing materials, city communications, and online presence should all be coordinated.

While TxDOT signage identifies the community, it does not communicate the city's brand nor provide guidance to area attractions. Source: Waymarking.com

Wayfinding is a method to help direct residents and visitors to significant places in a community. The term "wayfinding" was first used in 1960 by architect Kevin Lynch in *The Image of the City*, in reference to maps, street numbers, directional signs, and other elements as "wayfinding" devices. Effective wayfinding tools include appropriately scaled signs, clearly delineated roads, distinctly identified transit corridors, and consistent lighting. These tools help to furnish cognitive maps that allow people to quickly grasp an environment. In addition, it can be used to highlight and inform observers of significant historical/cultural sites within a particular district. Pointing out major institutions, for example, makes them easier to find and engenders pride in the residents, business owners, and customers that inhabit the community.

Highway signs and markers issued by TxDOT to identify Josephine as a community, but they do not direct customers to the heart of Josephine. They do not indicate that there is the potential for available retail along any of the major arterials. Therefore, future customers unfamiliar with the area could have difficulty finding the City Center. The addition of limited access by way of a median will increase the need to specify turning movements from the FM roads to significant points in the community.

Strategies:

a. Focus on signage at the entry points of the city through entry gateway signs at both the northern and southern ends of the community. Ideally these would be placed near the city limits. These entrances are the first opportunity that the city has to capture the imagination and interest of pass-through traffic made up of consumers and people looking for a new community in which to work and to live. The gateway entrances should incorporate the unique brand identifier and include appropriately designed signage that directs people to the amenities within the city, but also informs them of the relevance of the community to the region as a whole.

b. Develop a design plan for public lighting, median design, signage, and landscaping near the City Center then repeat the design in other focused areas such as the gateway signage and future entry features to new communities.

Objective 4: Develop standard practices in the use of cooperative 380 agreements for the incentivization of new commercial growth.

Chapter 380 agreements are allowed under the Texas Local Government Code and are the most broadly defined agreement between municipalities and private entities. Cities can incentivize developers, landowners, and businesses to perform in a way that is of most benefit to the community. The Texas Supreme Court provided a test of public purpose for these types of agreements. In short, the agreement must have the intent to accomplish a public purpose, rather than benefit a private party. Forms of acceptable incentives include programs that grant or loan public funds and provide city personnel and services. Public control over the funds must be retained to ensure the public purpose is accomplished, to protect the public's investment, and to see that the city receives a sufficient return for the funds or property.

Strategies:

a. Work with the school district and Collin and Hunt Counties to understand possibilities of coordinating 380/381 agreements to increase the draw for economic development possibilities within Josephine.

b. Develop guidelines for the negotiation of a 380 agreement on behalf of the city including sales tax incentives levels; performance benchmarks; and offset levels on the benefit of the recipient for costs associated with construction and infrastructure.

c. Ensure reporting to the Texas State Comptroller's office all 380 agreements and their status.

Objective 5: Consider the development of a Municipal Development District.

A Municipal Development District (MDD) is a special purpose district created for the purpose of generating economic development and growth opportunities within the boundaries of the district. In 1997, the Texas Legislature recognized cities located in two neighboring counties may not be able to take advantage of other economic development tools allowed within the state because some cities are already at the two-percent sales tax "cap" in some portion of the city but not others. The MDD is funded through a local sales tax. State law permits a tax rate of one-eighth to one-half of one percent. MDDs only affect the purchase of taxable items within the MDD.

The state authorizes expenditures of MDD funds for a variety of economic development activities, including:

» Certain infrastructure improvement projects;

» Recreational or community facilities;

» Projects related to business enterprises that create or retain primary jobs;

» Projects that promote new or expanded business development;

» Convention center facilities and related improvements; and

» Hiring of necessary staff for authorized activities.

The MDD, if formed, is governed by a board which may be appointed by the City Council. Policies and guidelines that will govern the actions of the MDD board should be approved by the City Council.

Strategies:

a. Determine the boundary of a Municipal Development District based on the desired placement of commercial development generating the greatest opportunity for sales tax.

b. Establish a rate and preliminary budget plan which will provide guidance to positive results from election and implementation of the MDD.

Housing
Chapter 7

Housing Goal:

Josephine will have a variety of housing types available to all incomes. All housing will be safe and decent for residents.

Josephine's dominant housing type is single family detached dwellings, although there are a few options of higher density housing being proposed in the city. Through the survey and in discussions with the community, the city has identified the need for a greater variety of housing types to support lifestyles of all ages and income levels.

Having a variety of housing types allows for residents to choose the type of home they can both afford and prefer. Housing needs are different throughout different stages of life. Providing for all types of housing allows residents to gracefully age in place.

Elements of housing relates to three generalized areas – Affordability, Preservation, and Diversity of housing type:

- *Affordability* refers to the overall housing costs and ensuring that a range of price options exist in the city. Home valuation in Josephine has increased significantly with the housing boom of new homes in the area.
- *Preservation* refers to the ability to maintain and retain existing homes and neighborhoods of Josephine, as well as ensuring the ability of residents to stay in their homes over time. Aging housing in the original city core has caused some removal of homes in the area, while adjacent underdeveloped areas have become new residential neighborhoods.
- *Diversity of housing* is related to affordability; it also refers to the needs of the household through different stages of life. Younger families have different housing needs than retirement age people wishing to spend less time and resources on maintenance of a structure or on a yard.

Neighborhoods are important to the community. Creating strong neighborhoods with connections to the civic life of the city, to schools, and to recreation opportunities is vital to sustaining a healthy environment. The following are some common characteristics of neighborhoods which can enhance development in the city.

Life-Cycle Housing	Connectivity	Society	Recreational Access
Allow a variety of housing types and sizes to accommodate different stages of life within Josephine. Ensure that all housing types are built to the highest possible quality.	Encourage connected neighborhoods, emphasizing both internal and external connectivity. Neighborhoods should be linked to each other as well as to the community as a whole.	Encourage events (such as Fourth of July), block parties, and other neighborhood events to promote social interaction among neighbors and to foster a sense of community.	Create parks in order to provide outdoor recreational opportunities for both neighborhoods and the community.

Quality Development	Neighborhood Conveniences	Open Space	Neighborhood Signage
Consider minimum residential standards that reduce maintenance and preserve long-term appearance.	Incorporate neighborhood retail centers in strategic locations which optimize convenience for adjacent neighborhoods. Encourage walkability and connectivity to adjacent neighborhoods.	In addition to parks and trails, neighborhoods should include open space in order to preserve some rural aspects of Josephine.	Delineate different neighborhoods through entrance features and signage.

A variety of lot sizes results in a mix of housing options. Requiring minimum lot sizes sets the character of the neighborhood by determining the type of development intended for the neighborhood; however, it does not limit homes to be the same size and style. Regulations for new subdivisions should account for the existing character of the area. Policy considerations should be made to ensure that lot sizes are distributed among small, medium, and large estates within each neighborhood.

Josephine's housing stock also includes older homes surrounding the original townsite area and brand new single family housing throughout subdivisions in the ETJ. Some properties have a lack of property maintenance with overgrown yards and planted materials, storage of debris, and some dilapidated structures which can contribute to the degradation of the community's appearance and has a strong effect on self-image. For health, safety, and community pride, efforts to improve property maintenance are key to a successful future.

Objective 1: Promote development of all housing types: single family detached units, attached units, townhouses, and apartments.

As mentioned above, most of Josephine's housing stock is single family detached units. To have a diversity of ages, incomes, and affordable housing in the community, a variety housing types are needed. In particular, more multifamily housing is needed in the form of apartments and townhouses. The Existing Land Use Map shows where existing houses have been developed. The Future Land Use Plan shows areas for greater density in housing.

Strategies

a. Support development of new areas for attached housing, townhouses, and apartments as shown on the Future Land Use Plan and where there is access to existing or planned services, jobs, and retail. These can be found within medium density, high density, or mixed use areas.

b. To the extent possible, allow for a mixture of housing types within larger neighborhoods to support a variety of age groups and income levels.

c. Redevelop existing residential lots where buildings have been removed. Doing so would provide opportunities for homebuilders looking for lower-cost land to build homes based on traditional Texas style architecture.

d. Promote replatting of lots to make sure that housing meets minimum lot standards for zoning districts.

e. Modify the zoning ordinance to improve opportunities for multifamily housing in appropriate locations and designs to serve younger populations.

Much of Josephine's existing housing stock should continue to be maintained, as it contributes to the unique feel of the community.

Objective 2: Maintain and improve the existing housing stock.

Before the housing boom of the last several years, most of the housing stock in Josephine was built between 1970 and 2000. Almost all is well maintained but as housing ages, maintenance needs increase. Not all property owners can afford to keep up with needed improvements, but assistance can be made available.

Strategies:

a. Expand programs to maintain the existing housing stock such as those offered by Habitat for Humanity and other organizations and agencies.

b. Use the development review process to evaluate private projects and their contributions to urban design.

c. Align zoning and future land use allocation to ensure housing is located where it can be served by infrastructure without creating a burden on city services.

Objective 3: Promote the ability to provide a variety of mixed housing densities to allow residents to age-in-place through senior age-restricted housing and assisted living development.

Strategies:

a. Develop zoning land use categories and design standards for age-restricted and assisted living development within medium and high density zoning districts.

b. Support the nonprofit community in creating housing opportunities for seniors and people with disabilities.

c. Negotiation with development agreements and the creation of planned developments can provide opportunities to include various housing options.

By providing senior living housing, a community enables older residents to transitition to appropriate accomodations while remaining near their existing social network. Source: cottonbro studio (Pexels)

Parks and Recreation
Chapter 8

Parks, Recreation, and Open Space Goal:
Have excellent parks and recreational areas and preserve important natural resources.

Attractive, safe, and well-maintained public parks, open spaces, and recreation facilities are essential elements of Josephine's future in image and quality of life. When strategically placed and equitably distributed, parks provide a wide array of opportunities for both individual and community enrichment. In addition, parks and open spaces protect environmentally sensitive lands from potentially harmful effects of new development, while preserving their recreation and transportation benefits.

Parks and open spaces are places to play, to relax, to enjoy the natural environment, and to connect socially with others in the community. They can define a neighborhood and provide cultural focal points. If properly designed and maintained, parks enhance the economic value of nearby properties. Linear open spaces knit together neighborhoods with other important elements of the city including schools, city centers, and commercial development. These areas can also serve as effective buffers between incompatible land uses.

Josephine City Park is part of the city's existing park system.

Spraygrounds offer fun and recreation in the hot summers.

The City of Josephine has an existing park system that includes the Josephine City Park in the original townsite area of the city. Located at 201 S. Main Street, the park features playground equipment, a backstop for baseball/softball, basketball courts, a splash pad playground opened in 2022, and public restrooms. The park, while centrally located to the community, does not feature opportunities for organized sports activities or a large community gathering. There are a few parking spaces available for off-street parking.

There are privately maintained open spaces and playground structures in the new neighborhoods being constructed in Josephine. These are modern in design and safety, but are restricted to use by the residents of the particular neighborhood. They are fenced in with a keycode access point. These facilities are typically maintained by homeowners associations of the residential neighborhoods.

Of all the city-provided services, parks and recreation appears to be the most desired improvement that is reflected in the community survey.

Three-quarters of the respondents were either neutral, dissatisfied with, or unaware of recreational facilities in the community.

Developing a Tiered Park System

The City of Josephine is in the process of developing a new community center at the site of a former church building. The community center, supported by the JCDC, will be a place of gathering and recreation for a wide range of ages and skill levels. Development of parks within a tiered system allows for a variety of experiences and uses. The following park typologies are commonly used in a tiered park system.

- *Open Space Preserve* – Typically acquired and managed in accordance with land use, preservation, and environmental objectives.
- *Urban Open Space* – Typically 2,500 square feet to 1 acre. Servicing the immediate area (less than 1/8-mile radius), it can be a public or private park. Typical development within the park may be passive or limited recreation. These parks include squares, plazas, gardens, formal spaces, and public art.
- *Linkages, Greenways, and Trails* – These can be any size but will serve several neighborhoods. Ideally these parks serve an entire jurisdiction. They may include hard and soft trails for hiking, bicycles, or skating. They connect neighborhood areas to schools, parks, civic buildings, and commercial areas.
- *Neighborhood Parks* – Sized to provide 2.5 acres per 1,000 residents, these parks are usually 5 to 20 acres in area. These will have playgrounds, picnic areas, court games, trails, and minimal parking. Roughly half of the park should be set aside for passive recreation areas.
- *Community Park* – Sized to provide 3 acres per 1,000 residents and may be 30 to 50 acres. These serve several neighborhoods and include "drive to" recreation facilities as well as facilities found in neighborhood parks. Recreational multi-purpose centers, competitive sports fields, and water areas are typically located within a community park. They may serve as the trailhead for community-wide trail systems.
- *City-wide Park* – Sized to provide 7 acres per 1,000 residents and may be greater than 50 acres. These serve the entire jurisdiction with unique, one-of-a-kind amenities such as garden centers, water parks, outdoor theaters, civic centers, fitness centers, senior centers, and multi-field athletic complexes.

Figure 24:
Tiered Park System Summary

Type	Size/Acres	Service Area	Acres per 1,000 Population
Open Space Preserve	Variable	Variable	Variable
Urban Open Space	2500 S.F. - 1 Acre	Less than 1/8-Mile Radius	Variable
Linkages, Greenways, and Trails	Variable	Several Neighborhoods	Variable
Neighborhood Park	5-20 Acres	Local Neighborhood	2.5 Acres / 1,000
Community Park	30-50 Acres	Several Neighborhoods	3 Acres / 1,000
City-wide Park	Greater than 50 Acres	Entire Jurisdiction	7 Acres / 1,000

Objective 1: Assess the community needs and desires for additional public passive and active parks in a tiered park system located throughout the community in a parks, recreation, and open space master plan.

Strategies:

a. Creation of a tiered park system based on serving a variety of uses and purposes including open space preserve, linkages and greenways, neighborhood parks, community parks, and city-wide parks. Prepare a Parks, Recreation & Open Space Master Plan, and apply for a Texas Parks & Wildlife parks grant.

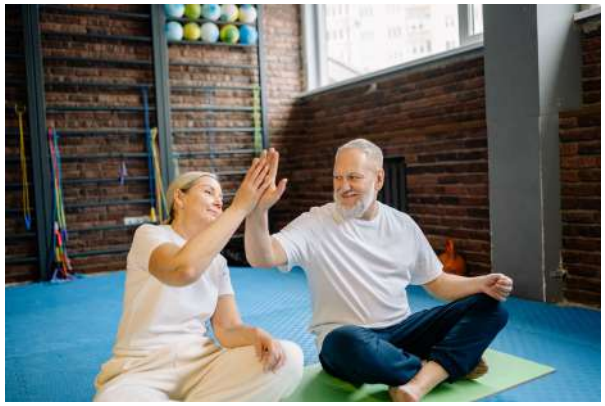
b. Parks and open spaces may be located in or adjacent to floodplains, where possible, to aid in floodplain conservation efforts and to enhance recreational opportunities. Such areas may be developed with recreation facilities or set aside as open space to preserve sensitive areas. Use of floodplains should be an amenity to the parks system and an option, not the primary source of parkland.

c. The city should acquire and develop parks in combination with other public facilities to provide the most cost-effective public

services. Park property could be developed jointly with new schools, storm water detention basins, drainage channels, or new city facilities. This strategy should not contradict the spatial distribution objective of parks and recreation facilities to be located throughout the community.

Objective 2: Provide community programming at the new community center which is responsive to a variety of age groups and activity levels.

By seeking and identifying new recreation programming which will provide the highest quality recreation experience, the city can improve the physical, mental, and emotional well-being of the community through the community center.



Community centers can provide activities for all ages. Source: Yan Krukau (Pexels)

Strategies:

a. Improve partnerships with recreation providers to give residents access to a wide variety of cost-effective programs.

b. Be flexible in program offerings to respond to the changing needs of residents.

c. Increase program offerings to attract residents to the community center.

d. Evaluate opportunities to co-locate programming for indoor and outdoor activities for more program offerings.

Objective 3: Protect the floodplain for property preservation, water and environmental quality, and the inclusion of a trail system.

Preserving floodplains has great value for a community. Limiting development helps to protect lives and property. In addition, the floodplain can act as a filter for water entering creeks, streams, rivers, and lakes. It can also provide a location for passive recreation and trails and paths.

Strategies:

a. Discourage and/or prevent construction of permanent structures in the floodplain or reducing the size of natural floodplain by engineering and construction to help protect lives and property. If construction in existing floodplain is deemed necessary for any project, then measures should be taken to raise the land out of the floodplain and to amend the flood zone map.

b. Encourage planting of trees and shrubs in the floodplain (but not in floodway) to help improve water quality.

Objective 4: Influence new development to provide public spaces in addition to private amenity centers.

Strategies:

a. Develop additional community parks on the eastern and southern sides of Josephine to expand publicly-owned parkland acreage and balance the spatial distribution of recreation facilities in the community.

b. Develop multi-use trails to meet high demand for recreation and connectivity in the community.

c. Develop additional nature areas, picnic/pavilion facilities, a community garden, and a dog park.

d. Obtain dedicated parklands in new residential subdivisions and for the purpose of neighborhood and community parks to provide recreation options for residents.

e. Acquire parklands for the development of publicly-owned indoor recreation facilities.

f. Require parkland dedication in new subdivisions.

Figure 25:

Potential Funding Sources for Parkland Improvements

Program	Agency	Purpose	Eligibility	Use of Funds
National Recreational Trail Fund	Federal Highway Administration, administered by Texas Parks and Wildlife	To fund motorized and non-motorized trail projects	Local governments	Funds can be spent on both motorized and non-motorized recreational trail projects such as the construction of new recreational trails, to improve existing trails, to develop trailheads or trailside facilities, and to acquire trail corridors.
National Parks Service – Rivers, Trails, and Conservation Alliance (RTCA)	National Parks Service (NPS)	Building healthy communities, conservation, engaging youth in outdoor recreation and facilitating between NPS and communities	State and local governments, non-profits, or citizen organizations	This program provides technical assistance to community led conservation and outdoor recreation projects throughout the country. The types of assistance include: community outreach strategies, developing concept plans for trails and parks, creating project management and action plans, engaging collaborative partners and stakeholders, and other consulting services that can be tailored toward the needs of the project.
Local Parks Grants	Texas Parks and Wildlife Department (TPWD)	Assist local governments with the acquisition and/or development of public recreation areas and facilities	Small communities less than 20,000 in population; for non-urban outdoor recreation, less than 500,000 in population	Basic outdoor facilities and related support facilities. Developed new, renovated, or redeveloped on owned land. Playgrounds, trails, golf courses, sports courts, community gardens.
Recreational Trails Grants	Texas Parks and Wildlife Department (TPWD)	With FHWA paid for on gas taxes	Local governments	Funds for motorized and non-motorized trails projects. Including maintenance, signage, and to acquire trail corridors.

See Figure 26: "Parks and Open Space Map" on page 50.

City of Josephine
Parks and Open Space

- Existing Trail
- Potential Trail
- Planned Trail
- County Line
- Road
- Stream
- Pond
- Parcel
- 100 Year Floodplain
- Josephine City Limits
- Other City Limits
- Josephine ETJ

Parks and Open Space

City-Owned
- Existing
- Proposed

Private / HOA-Owned
- Existing
- Proposed

Created by DUNAWAY
May 16, 2023

The City of Josephine TEXAS

Potential Trail Connection

Potential Trail Connection

Planned TxDOT FM 6 Trail (10' wide)

Planned TxDOT FM 6 Trail (10' wide)

Potential Trail Connection

Potential Rails-to-Trails Route

Planned Riverfield Trail

Josephine City Park

Magnolia Pointe Playground

Hunt County Proposed Development

Collin Co.

Hunt Co.

Nevada

Josephine

Wildflower

Riverfield

Morningside Phase 1

Morningside Phase 2

Bradley Estates

DeBerry Heritage

Murray Manor

Liberty Ranch West

Liberty Ranch

Josephine Village Center

Meadow Ridge

Josephine Lakeside District

Waverly Estates Phases 1-4

Magnolia Phases 1-4

Magnolia Phases 5-9

Magnolia Phase 10

Riverfield Tract 2

Harvest Bend

Hidden Creek Village

Caddo Mills

Price Creek

Bois d'Arc Creek

George Creek

Brushy Creek

Cowskin Creek

Sabine Creek

Subtle Creek

CR 644

CR 695

FM 547

MITCHELL LN

PRIVATE ROAD 5455

KVANLI LN

CR 850

CANALES RD

N MAIN ST

N GREENVILLE AVE

HORIZON WAY

CR 642

CR 641

JORDAN ST

CR 1003

CADDO ST

W HUBBARD RD

REESE ST

MILTON ST

TOM LN

CR 689

W COOK ST

E COOK ST

SEBASTIAN LN

JASMINE CIR

MAGNOLIA DR

HAWTHORN DR

AZALEA DR

PLUM DR

MALLARD DR

EAST ST

NEWTON ST

CR 679

CR 2668

CR 2716

CR 2718

CR 2714

CR 2712

DESTINY DR

PAIGE DR

BRANDEN LN

KAITLYNN CT

KASEY CT

KRISTEN CT

CR 2706

CR 2710

CR 2708

QUAIL LN

CR 2702

CR 2704

CR 2606

CR 2604

BRIDLE TRL

CR 2608

CR 2612

HENSON DR

CR 2615

CR 2617

CR 2613

LONESOME DOVE RANCH

PRIVATE ROAD 2671

CR 2667

CR 637

CR 638

PRIVATE ROAD 5525

FM 1777

CR 678

CR 592

CR 596

CR 543

CR 913

CR 939

CR 640

CR 595

CR 1138

JUSTIN PL

SIMS LN

COMMUNITY DR

WEBB LN

DILLARD DR

HORSESHOE DR

ROLLING MEADOW LN

HARVEST LN

MEADOWBROOK LN

CREEKVIEW LN

HIGHVIEW LN

LISA LN

E FM 6

COLLIN ST

KERENS ST

SLATTING

EVE ST

S WARREN ST

S FM 1138

N FM 1138

EAST ST

STATE HIGHWAY 66

FM 6

CLAY DR

BRIDLE TRL

0 2,300 Feet

N

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Utilities, Infrastructure, and City Services
Chapter 9

Utilities, Infrastructure, and City Services Goal:

Josephine will have high quality infrastructure and service provision to support residents, businesses, and institutions in the city.

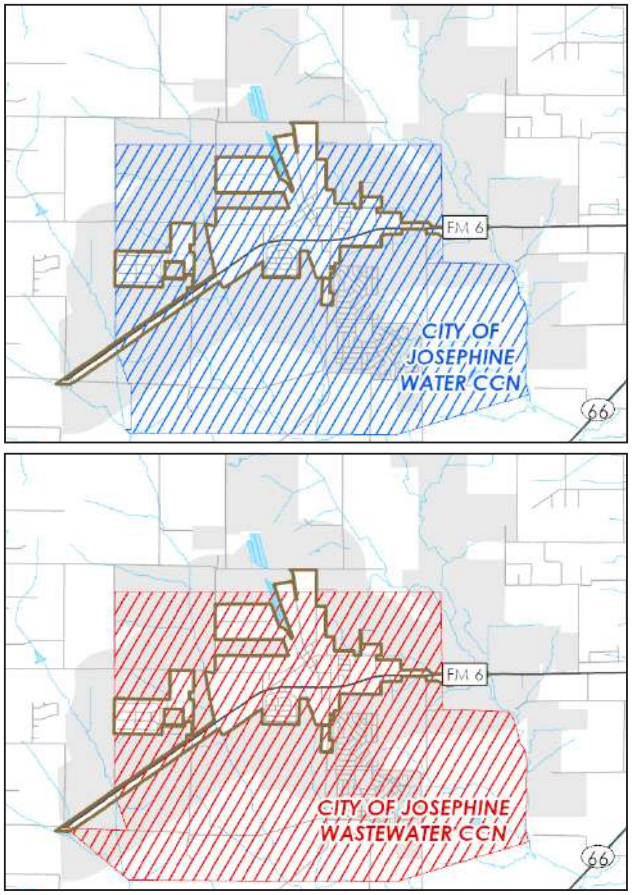
City government exists to ensure that the needs of residents, property owners, businesses, and visitors are adequately addressed. These needs include public safety, streets, water and sewer facilities, libraries, public safety, and other services. The City of Josephine has invested millions of dollars over the years to provide the highest quality services and facilities to its residents.

This chapter on community facilities covers provision of water, wastewater treatment, stormwater management, solid waste management, libraries, and other services and facilities owned and managed by the City of Josephine. These buildings and activities contribute in large part to the quality of life for all residents, businesses, and visitors to Josephine.

The City of Josephine has its own water and wastewater Certificates of Convenience and Necessity (CCN) districts. The water CCN boundary is generally centered on the original townsite and then to the south of the community. Other water local government entities exist within the area, including the Caddo Basin Special Utility District, the Nevada Special Utility District, and the BHP District. Josephine provides water supplied from the North Texas Municipal Water District, specifically from the Wylie Water Treatment Plant. The city maintains 50.6 linear miles of water lines and has two concrete-composite elevated water storage tanks. The first is a 500,000 gallon capacity and the second a 200,000 gallon capacity.

The wastewater CCN boundary is very similar to the water CCN boundary. The city maintains 31.1 linear miles of wastewater lines. There are two wastewater treatment plants in the city. The north plant is located east of County Road 1003 and has a current capacity of 80,000 gallons

Figure 27:
City of Josephine Water and Wastewater CCN Boundaries



per day. The plant has the ability to be expanded to a future 750,000 gallons a day. The Magnolia treatment plant is on County Road 679, east of FM 1777, and carries a 500,000 gallon a day capacity which may be expanded to 1,500,000 gallon a day capacity in the future. The city currently maintains five (5) wastewater lift stations in order to provide continuous flow over ridge points. The density of development in the city is a direct result of the city's ability to provide wastewater systems. Without this system, new residential development would be required to develop a large lot subdivision with individual septic systems.

Objective 1: Continue to foster strong relationships with surrounding municipal utility districts through shared information about new development and adequate service provision.

A Municipal Utility District (MUD) is a type of special district that allows a developer to fund development typically outside of a city's corporate boundary. While typically residential or mixed-use in nature, a MUD can also be commercial or industrial. Once established, a MUD may issue bonds to fund water, wastewater, drainage, electrical services, roads, or other infrastructure and services within the MUD boundary pursuant to Article III, Section 52 or Article XVI, Section 59 of the Texas Constitution. MUDs are established through application to and approval by the Texas Commission on Environmental Quality (TCEQ) or through the Texas legislature.

The following strategies apply to MUDs within the city's extraterritorial jurisdiction (ETJ). The city should not permit MUDs to be created within the city limits. The city is committed to working with MUDs toward an equitable agreement that allows both the city and the MUD to achieve their goals. The following strategies should:

- Guide discussions between the city and the MUD;
- Outline the city's goals, expectations, and priorities;
- Act as a resource to evaluate MUDs; and
- Provide a basis for development agreement between the city and the MUD, if the agreement is beneficial.

Strategies:

a. Josephine's goals, objectives, and strategies for future development as set out in this plan will be guiding principles for new development to achieve equivalent or better quality of development undertaken within potential MUDs.

b. The city will establish an equitable arrangement between the MUD and the city in order to influence the development as much as possible.

c. Establish clear guidelines with respect to MUDs for the benefit of City Council, city staff, and the MUD, and to ensure collaboration with Collin and Hunt Counties and neighboring communities as applicable.

d. Encourage alignment with the city's technical design standards, including by not limited to: roads, water, wastewater, and stormwater standards.

e. Verify the long-term fiscal sustainability of the MUD in order to protect the residents' investments and ensure that a financial burden is not placed on the residents of the MUD or the City of Josephine.

Josephine will need to continue investing in water infrastructure. Source: City of Josephine

Objective 2: Through Capital Improvement Project (CIP) planning, provide sufficient quantity and quality of water for the existing community and to promote new development and growth.

Strategies:

a. Examine all long-range agreements for the procurement of water. Make sure the quantity is scalable to meet future demand by new development growth.

b. Utilize capital improvement programming to indicate appropriate new system construction for the promotion of new growth and land development.

c. Maintain active participation with the development process of properties within and adjacent to the city's CCN boundaries to

anticipate new growth and negotiate development agreements, potential system tie-in, and construction of new mains.

Objective 3: Through Capital Improvement Project (CIP) planning, provide wastewater collection and treatment to meet all state and federal standards.

Strategies:

a. Utilize capital improvement programming to indicate appropriate new system construction for the promotion of new growth and land development.

b. Maintain active participation with the development process of properties within and adjacent to the city's CCN boundaries to anticipate new growth and negotiate development agreements, potential system tie-in, and construction of new mains.

Objective 4: Provide for stormwater management that prevents flooding and siltation of creeks and streams and meets all state and federal regulations.

Strategy:

a. Develop a stormwater management plan to ensure that flooding does not occur in the city.

Objective 5: Continue to provide solid waste disposal service in the city.

Solid waste collection in the city is provided through a contract with Homeland Waste Management. Recycling is not currently provided to residents but would be an added service to the community. Commercial services have to be independently contracted.

Strategies:

a. Promote the use of recycling to reduce the volume of waste deposited in landfills and therefore keep the cost of disposal at a reasonable level.

b. Monitor the needs of the community for solid waste disposal options and act in a timely fashion to meet these needs.

c. Promote mulching and composting of green wastes, such as leaves, tree limbs, grass clippings, brush, etc., as part of the recycling and waste minimization efforts.

Objective 6: Continue to provide police services and programs to create a safe environment for all citizens in Josephine.

The City of Josephine maintains a professional police department of officers and administrators. Dispatch services are provided through the Collin County Sheriff's Office.

Strategies:

a. Foster the development of an emergency response summit including city, county, and state policing entities to determine the best organization for redefining inter-local agreements regarding jurisdictional boundaries; mutual response to emergent situations; and cross jurisdictional communication systems in both radio and dispatch technologies.

b. Develop and maximize the use of human resources through effective management and training. These human resources include police personnel, other governmental agencies, the private sector, and the citizens of Josephine.

c. Evaluate the need for additional personnel and implement procedures to select only the most qualified personnel.

d. Update and advance technology to meet increasing challenges and legal requirements.

e. Monitor pay for police officers and adjust as needed to attract well-qualified personnel.

Objective 7: Continue and enhance the relationship with the Josephine Volunteer Fire District for firefighting and protection services through the development of a new joint facility housing both city-provided and volunteer emergency professionals.

Josephine Volunteer Fire District (JVFD) is a volunteer emergency response organization which responds to fire, EMS, and rescue incidents within the city limits of Josephine.

The District is comprised of approximately twenty-two (22) personnel with firefighting and emergency medical technician experience. The area the JVFD covers is approximately forty-two (42) square miles surrounding the community. Currently, the district operates through the facility located to the north of the railroad right-of-way in the original townsite of the community. The City of Josephine is in the process of designing the new public safety building. This structure will help provide faster response times, better office environment for emergency personnel, and higher security for city assets.

JVFD responds to over 600 calls a year with volunteers and equipment such as this firetruck. Source: Josephine Volunteer Fire Department

Strategies:

a. Assure relationships that ensure adequate fire protection facilities, equipment, and water pressure to respond to and fight a fire in any part of the community in a timely and efficient fashion.

b. Monitor the need for additional personnel, equipment, and facilities to provide timely response in all areas as the community increases in land area and population.

c. Continue to upgrade the emergency medical services so as to provide the highest level of service possible to the residents of Josephine/Collin County.

d. Focus on education of the public in areas of fire prevention and accident prevention.

e. Establish an Emergency Operations Center (EOC).

f. Consider additional fire stations in various parts of the city as the community grows in greater land area.

g. Consider economic and demographic growth factors in the future development of a mixed career / volunteer fire department for the city. These factors may include general fund revenues, service demand of taller buildings, or buildings closer together requiring specialized emergency equipment. Studies have shown that when administration costs for fire protection increase enough, mixed and career departments have lower costs than a volunteer department.

Objective 8: Explore ways to provide additional library services to residents.

A public library provides books, newspapers, magazines, and access to the internet to help meet the need for information and answers to questions on a broad range of topics. Currently, the City of Josephine does not provide a public library. The cities of Royse City, Farmersville, and Greenville maintain public libraries within a short distance of Josephine. In the future, the city should explore whether additional library services are needed including building a library in Josephine.

Objective 9: Continue to provide city administrative services from City Hall.

Josephine's public buildings are located in the original townsite area. For a growing community, there may be a lack of enough office space and parking in the primary city building. The city should examine opportunities for additional civic office opportunities within the central city development. In the interim, the current city facility continues to operate as the administration building for city services and programs. It provides chambers for the elected City Council and appointed committees to conduct meetings.

Strategies:

a. Conduct a facilities demand study based on future human resource budget for operational office space needs.

b. Keep the City Hall building in a good state of repair so that it continues to be an asset and an example of good stewardship for the community.

The city might need more facilities, in addition to City Hall, to provide sufficient services for the growing community.

Objective 10: Practice good stewardship of all city-owned properties.

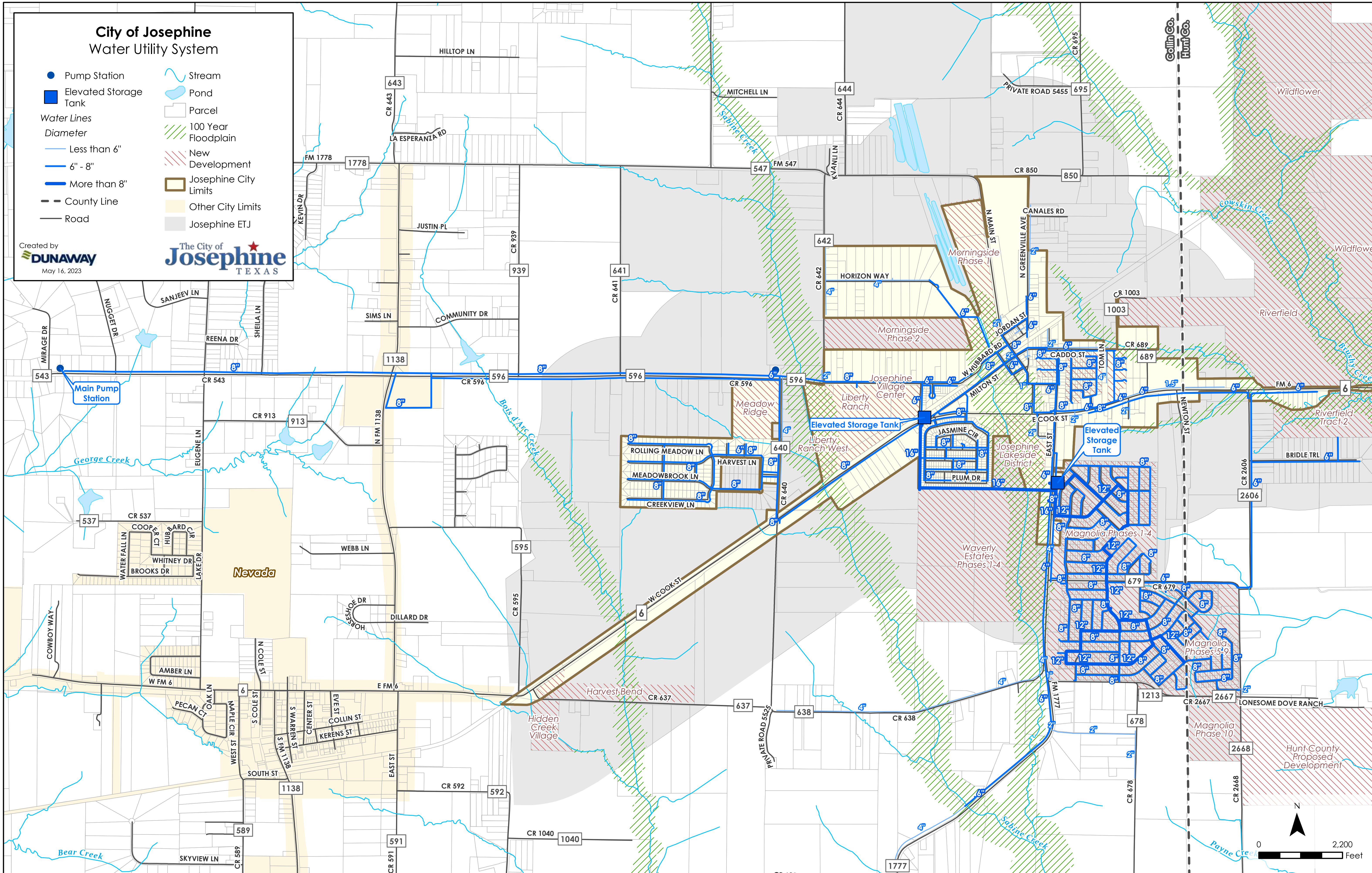
The city owns a number of properties used for city functions and by the community. In order to provide for future use, maintenance is key. However, some of these properties are vacant and currently have no programmed use. Banking of properties may be important to prevent the need to purchase new properties in the future.

Strategies:

a. Assure that city-owned property is adequately maintained and landscaped.

b. Dispose of public property which has no foreseeable use or which other types of development could better utilize.

See Figure 28: "Josephine Water Utility System Map" on page 56 and Figure 29: "Josephine Wastewater Utility System Map" on page 57.


City of Josephine
Water Utility System
Pump Station
Elevated Storage Tank
Water Lines
Diameter
Less than 6"
6" - 8"
More than 8"
County Line
Road
Stream
Pond
Parcel
100 Year Floodplain
New Development
Josephine City Limits
Other City Limits
Josephine ETJ
Created by
DUNAWAY
May 16, 2023
The City of Josephine TEXAS
Main Pump Station
Elevated Storage Tank
Elevated Storage Tank
Nevada
Morningside Phase 1
Morningside Phase 2
Josephine Village Center
Liberty Ranch
Liberty Ranch West
Meadow Ridge
Josephine Lakeside District
Magnolia Phases 1-4
Magnolia Phases 5-9
Magnolia Phase 10
Waverly Estates Phases 1-4
Wildflower
Riverfield
Riverfield Tract 2
Harvest Bend
Hidden Creek Village
Hunt County Proposed Development
Collin Co.
Hunt Co.
Sabine Creek
Bois d'Arc Creek
George Creek
Bear Creek
Cowskin Creek
Brushy Creek
Payne Creek
W COOK ST
E COOK ST
FM 6
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FM 547
FM 1778
CR 596
CR 543
CR 913
CR 537
CR 637
CR 638
CR 639
CR 850
CR 1003
CR 689
CR 679
CR 2667
CR 2606
CR 2668
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CR 939
CR 641
CR 642
CR 643
CR 644
CR 695
CR 640
N FM 1138
FM 1777
HILLTOP LN
MITCHELL LN
PRIVATE ROAD 5455
LA ESPERANZA RD
JUSTIN PL
SIMS LN
COMMUNITY DR
SANJEEV LN
REENA DR
SHEILA LN
NUGGET DR
MIRAGE DR
KEVIN DR
EUGENE LN
HORIZON WAY
CANALES RD
N MAIN ST
N GREENVILLE AVE
JORDAN ST
W HUBBARD RD
MILTON ST
CADDO ST
TOM LN
NEWTON ST
EAST ST
JASMINE CIR
PLUM DR
ROLLING MEADOW LN
HARVEST LN
MEADOWBROOK LN
CREEKVIEW LN
BRIDLE TRL
LONESOME DOVE RANCH
PRIVATE ROAD 5525
WEBB LN
HORSESHOE DR
DILLARD DR
COOPER CT
HUBBARD CIR
WHITNEY DR
BROOKS DR
WATER FALL LN
LAKE DR
COWBOY WAY
AMBER LN
OAK LN
PECAN CT
MAPLE CIR
S COLE ST
N COLE ST
S WARREN ST
CENTER ST
EVE ST
COLLIN ST
KERENS ST
WEST ST
S FM 1138
SOUTH ST
EAST ST
SKYVIEW LN
N
0
2,200
Feet

City of Josephine
Wastewater Utility System

- Lift Station
- Wastewater Treatment Plant
- *Sewer Main*
- *Diameter*
  - 8" or less
  - More than 8"
- County Line
- Road
- Stream
- Pond
- Parcel
- 100 Year Floodplain
- New Development
- Josephine City Limits
- Other City Limits
- Josephine ETJ

Created by DUNAWAY
May 16, 2023

The City of Josephine TEXAS

Wastewater Treatment Plant

Wastewater Treatment Plant

Nevada

Wildflower

Riverfield

Riverfield Tract 2

Meadow Ridge

Liberty Ranch West

Liberty Ranch

Josephine Village Center

Josephine Lakeside District

Morningside Phase 1

Morningside Phase 2

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Magnolia Phases 5-9

Magnolia Phase 10

Harvest Bend

Hidden Creek Village

Hunt County Proposed Development

Collin Co.
Hunt Co.

Price Creek
Sabine Creek
Cowskin Creek
Brushy Creek
Bois d'Arc Creek
George Creek
Payne Creek

0 2,200 Feet

N

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Implementation Summary & Table

Chapter 10

The Josephine Comprehensive Plan provides information about the city and a list of goals, objectives, and strategies to achieve those points. Creating a plan can provide for the protection of private property and ensures future development occurs in a coordinated and organized manner consistent with the plan. Based on this plan, decisions will be made that will influence many aspects of the city's built and social environments. The plan can provide a very important tool for city staff to communicate with property owners and new development in the community.

Implementation of plans and policies takes place in many ways. Voluntary measures, staffing, capital improvements, regulations, consistent application of policy, and overall budgetary support represent the ways most localities implement their Plan. The strategies in each chapter of the Plan are recommendations which utilize different tools available to Texas cities. Each tool is described in more detail below.

Voluntary Measures

The largest role in implementation occurs by residents and property owners. They make conscious decisions related to where they live, what programs they financially support, which businesses they frequent, and what changes they make to land they own or on which they reside. They can develop habits such as recycling, water conservation, carpooling, and lower energy consumption that will ultimately have an effect on landfill costs and the environment. When residents support local businesses, local dollars go back into Josephine's economy.

Land developers also play a part in the implementation of the city's Comprehensive Plan. For example, when developers adhere to best management practices for water quality, they help the environment. When developers make conscious decisions to respond to recommendations and requests by staff and property owners, they help to implement the Plan.

Individual voluntary measures for cost reductions include recycling and water conservation. Source: Cottonbro Studios, Miriam Alonso (Pexels)

Through partnering with the city on several levels, various area organizations also help to implement the Comprehensive Plan. Through these partnerships, both parties complete work that helps to further individual goals. For instance, the city can partner with a local housing non-profit on a new multifamily development by providing a portion of necessary funding, assisting with grant applications, or helping with placement of qualified residents. By working together, a considerable amount of work is lessened by shared responsibility and participation.

Regulatory Measures

Implementation sometimes requires more than voluntary action and regulatory measures must be taken. Many of these regulatory measures have been in place for decades, such as state and local building codes and floodplain protection. Two key sets of measures are the Zoning Ordinance and Subdivision Ordinance.

Zoning Ordinance

Zoning is another implementation tool used to ensure that activities in a community are properly located in relation to each other. Zoning also attempts to provide for residential density where houses and residents

can be adequately served by roads, schools, and utilities. The Zoning Ordinance places other controls on development to protect the health, safety, and general welfare of city residents. Zoning is intended to ensure light, air, and compatibility of uses and to provide regulations for land use, building use, building heights, and setbacks. It ensures safety and uniformity of site development. Zoning use and development regulations only apply to properties within the city limits.

Future decisions about zoning changes should be compatible with the vision and goals of this comprehensive plan. However, a comprehensive plan does not constitute zoning regulations or establish zoning district boundaries. Zoning districts do not have to be identical to what is shown in the future land use map for a particular area.

Subdivision Ordinance

The Subdivision Ordinance sets the parameters for physical development such as the creation of lots and blocks. Subdividing is the process of splitting a parcel of land into two or more parcels. This process is regulated to make sure the pattern of development recommended in the Comprehensive Plan actually occurs. During the subdivision process, streets and blocks are surveyed and designed to adequately support expected uses and forms of development. Lot size is largely determined by zoning regulations, but the shape, location, ability to be served by utilities, drainage improvements such as storm sewers, and construction of sidewalks occur through application of subdivision regulations.

This aerial shows the Magnolia and Waverly Estates subdivisions, where the pattern of development is clear when seen from above. Source: Nearmap 2022

As mentioned above, other measures include floodplain protection and building codes. State stormwater regulations, TxDOT road requirements, and other engineering requirements ensure safe and orderly development. Subdivision Ordinance regulations apply to all properties within the Josephine city limits and in the ETJ.

Consistent Application of Policies

Consistent application of city policies protects the integrity of the Comprehensive Plan. The Comprehensive Plan is like a muscle in the body – the more it is exercised, the stronger it becomes. Regular use of the Comprehensive Plan in decision making provides the City Council with strong legal backing. It also sends a message to residents and future developers that the vision for the city is not a lofty thought, but an expected reality.

Funding

One of the most important ways the city implements its plan is through funding staff and programs, construction, and maintenance. City revenues come from property taxes, sales taxes, permits, fees and licenses, and funding from the state or federal government.

Capital Improvements Program

The Capital Improvements Program (CIP) is the way in which the city determines, schedules, and prioritizes major public facilities and services needed to implement the Comprehensive Plan. This program is critical to the success of implementing the Plan.

State and Federal Funds

While both state and federal governmental financial support for localities has diminished over time, these sources of funding still provide for programs. Through a wide variety of grant making programs, many governmental agencies assist the city in work related to achieving the Comprehensive Plan goals. For instance, the federal Department of Housing and Urban Development provides programs to help with housing and recreation for low income facilities. However, federal and state funds are expected to continue diminishing over time.

Bonds

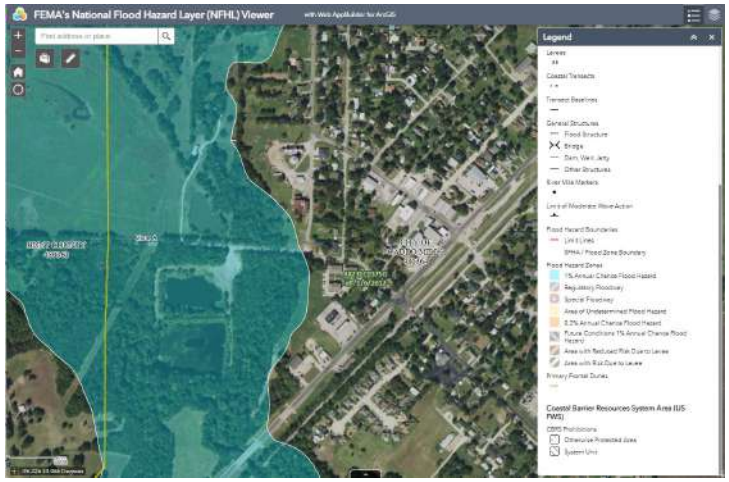
Many communities issue bonds to help fund infrastructure improvements. High bond ratings are important for cities to create more ease in issuing bonds for funding.

Grants

There are many non-governmental or semi-governmental grant programs for the enhancement of city facilities. An example is the Rails-to-Trails program. Independently funded through donations and a foundation, the program assists communities in small trail projects which can utilize excess railroad rights-of-way. Some grants and other sources of funding for Parks and Transportation have been listed in the individual chapters.

Maps and Mapping Tools

Maps are tools that can be used to help implement the Comprehensive Plan. The Federal Emergency Management Administration (FEMA) floodplain maps are used by most localities help prevent flood damage to life and property. They are essential to helping property owners know when flood insurance is required. They also help the city identify where land development should and should not take place.



FEMA's National Flood Hazard Layer Viewer is a valuable online resource. Source: FEMA

Strategic Planning

Strategic planning is a tool that helps decision makers prioritize projects and spending. It is the next step after development of the Comprehensive Plan to make objectives and strategies a reality. Strategic plans provide a specific roadmap for implementation to occur during real time. A strategic plan for the City of Josephine will ensure that progress is made in a regular and orderly fashion that can respond to changes in priorities and the funding environment.

See the following pages for the implementation table, summarizing the goals, objectives, and strategies of this Comprehensive Plan.

Growth Management Goal: Josephine will have residential and commercial growth while retaining its agricultural community feel.			
Objective	*Strategies*	*Responsibility*	*Time Frame*
Objective 1: Manage observed increase in single family residential units according to the Future Land Use Plan.	a. Examine ultimate densities for residential housing in the city's zoning ordinance. Understand where flexibility for densities might be advantageous for development. Modify zoning ordinance to allow mixing of uses based on appropriate design.	City Staff P&Z City Council	1-3 years
	b. Accommodate multifamily residential development in limited forms. Multifamily development should be located in areas which provide transitions between lower and higher intensity uses, and in a manner that will not negatively impact surrounding uses. Multifamily uses should be located in small groupings around the city in a manner that provides a mix of uses and densities, rather than concentrating multifamily uses in one area which can have negative impacts upon the city.	City Staff P&Z City Council	1-5 years
Objective 2: Increase the number of commercial and retail uses to provide more shopping opportunities for residents and visitors.	a. Accommodate future commercial uses at key nodes throughout the city. It is recommended that commercial development and uses not be located along corridors in a "strip" manner.	City Staff P&Z City Council JCDC	1-3 years
	b. Accommodate businesses in several activity centers. At the intersection of FM 1777 and FM 6, a newly purchased area comprised of undeveloped land and floodplain has the potential for commercial development. This City Center should be focused on local retail, potentially containing restaurants, and local medical or office based services.	City Staff P&Z City Council JCDC	1-3 years
	c. In other commercial nodes, specifically at the intersections of FM 6 and County Roads 640 and 595, a variety of regionally-oriented medical facilities and retail would be appropriate. Development around these intersections will need to accommodate the railroad right-of-way on the northwest side of FM 6.	City Staff P&Z City Council JCDC	3-10 years
Objective 3: Recognize Josephine's unique characteristics which should be preserved and incorporated into potential design recommendations for new structures.	a. The center of any infill development surrounding the original Josephine city core, including the open spaces and surrounding neighborhoods, should provide a focus on preservation of what is historically important. Restoration, redevelopment, and infill in these areas could provide a more central location for the community along the FM 6 and FM 1777 intersection.	City Staff JCDC	5-10 years
	b. The development standards of the zoning ordinance will be examined to ensure that new development will be in compliance with appropriate architectural, landscaping, and setback design standards which are keeping with the vision of Josephine.	City Staff P&Z City Council JCDC	5-10 years

P&Z = Planning & Zoning Commission | JCDC = Josephine Community Development Corporation

Objective 4: The city will work with Municipal Utility Districts (MUDs) and Public Improvement Districts (PIDs) in order to create synergistic relationships to provide adequate public services – including water, wastewater, and transportation – which is efficient and safe.	a. The city should prepare an annexation strategy and coordinate the availability of municipal services with areas likely to experience development pressure with higher densities. The strategy will require coordination with other master plans that address water, wastewater, transportation, parks, and capital improvement programs.	City Staff	1-3 years
	b. The city will not encourage development at the far edges of its ETJ, in recognition of the higher costs of "leapfrog" development and haphazard sprawl. Incentives such as partnering with new development for capital improvements and infill development should be implemented, particularly within existing city limits.	City Staff P&Z City Council	1-3 years
	c. Properly manage development in new growth areas through development agreements, annexation policies, and the application of zoning regulations that support the recommended land uses plan.	City Staff P&Z City Council	1-3 years
	d. The city will work with adjacent municipalities to determine shared boundaries and will execute interlocal agreements based upon mutual agreement that will benefit affected property owners.	City Staff City Council	1-3 years

Future Land Use Goal: Josephine will have safe and convenient places to live, work, worship, and play.

Objective	*Strategies*	*Responsibility*	*Time Frame*
Objective 1: Develop land in accordance with the Future Land Use Plan.	a. Use the Future Land Use Map categories and areas to establish and communicate clear guidelines and refine regulations consistent with the vision for future development with the public and potential developers.	City Staff P&Z City Council	1-3 years
	b. Maintain a continuous and coordinated public planning process that involves citizens, the Planning and Zoning Commission and City Council, local public and private entities, and regional organizations in policy development and decision making.	City Staff P&Z City Council	1-3 years
	c. Rezone properties in accordance with the Future Land Use Plan.	City Staff P&Z City Council	1-3 years
	d. Encourage multifamily development in locations which make sense for the traffic accessibility and market.	City Staff P&Z City Council	1-3 years
	e. Encourage the types of non-residential uses which provide retail and services desirable by the community to locate in Josephine. Through the planning process, initial feedback suggests interest in locally-oriented retail and medical offices, a grocery store or supermarket, entertainment, and family friendly type activities.	City Staff P&Z City Council	1-5 years

P&Z = Planning & Zoning Commission

Objective 1: Develop land in accordance with the Future Land Use Plan. (continued)	f. Encourage a thematic design that can be easily transformed into sustainable new developments as uses may come and go within the development.	City Staff P&Z City Council JCDC	1-3 years
	g. Develop a unified internal streetscape and signage plan with recommendations for the incorporation of sidewalks, pedestrian seating, thematic public lighting, and signage and wayfinding.	City Staff P&Z City Council	1-3 years
	h. Coordinate between transportation planning and land use planning to ensure that potential impacts of the site development on roadway congestion (stacking of cars, turn lanes, intersections) are carefully considered and that uses and transportation improvements are mutually beneficial.	City Staff P&Z City Council TxDOT Collin County	1-3 years
Objective 2: Develop a set of expectations for the Extraterritorial Jurisdiction and Voluntary Annexation.	a. Encourage housing development in an orderly manner building on existing and future water and wastewater systems to naturally increase the infrastructure.	City Staff Public Works P&Z City Council	1-3 years
Objective 3: Ensure new development compatibility with existing neighborhoods in Josephine.	a. Development regulations which include zoning and the subdivision ordinances of the city must be revised to place greater emphasis on the importance of urban design. These can include: • The relationship between different buildings; • The relationship between buildings and the street, parks, and other spaces which make up the public domain.	City Staff P&Z City Council	1-3 years
	b. Visual quality objectives and a healthy business environment should not be considered mutually exclusive. Urban design should be incorporated into private development plans early in the development process.	City Staff P&Z City Council	1-3 years
	c. The impact of public features such as signage, utility locations, valve boxes, utility risers, solid waste containers, sidewalks, landscaping, and parking lots should be recognized as important factors in affecting community appearance.	City Staff Public Works	1-3 years

P&Z = Planning & Zoning Commission | JCDC = Josephine Community Development Corporation | TxDOT = Texas Department of Transportation

Transportation Goal: Josephine will have a transportation network which meets basic needs for movement, access, safety, and reasonably rapid travel for people and goods through and within the city.			
Objective	*Strategies*	*Responsibility*	*Time Frame*
Objective 1: Use concepts for Context Sensitive Design when improving existing streets and building new streets, interconnections, and sidewalks.	a. Integrate the concept of context sensitive design into all transportation project design standards.	City Staff Collin County Hunt County TxDOT	5-10 years
Objective 2: Fund and build improvements to existing streets as shown on the Master Thoroughfare Plan.	a. Continue to fund improvements through the city's Capital Improvements Program (CIP) and available grants and loans.	City Staff Public Works	1-3 years
	b. Create a Pavement Management System which extends existing roadway life and manages the CIP for future roadway replacement.	City Staff Public Works	5-10 years
	c. Continue to coordinate with the Texas Department of Transportation, Collin County, and Hunt County to address long-range transportation needs.	City Staff Collin County Hunt County TxDOT	1-3 years
	d. Organize a formal opposition to the proposed alignment of the Collin County Outer Loop that would travel through the western section of the City of Josephine. Provide feedback that a more preferred route would be to improve SH 78 along the east side of Lake Lavon. This process should be made through coordination with the Collin County Transportation Plan, NCTCOG, and TxDOT.	City Staff Collin County TxDOT	1-3 years
Objective 3: Require developers to dedicate right-of-way and construct collector and arterial streets as shown on the Master Thoroughfare Plan.		City Staff Developers	1-3 years
Objective 4: Make important interconnections of streets to activity centers.	a. Minimize use of cul-de-sacs in new neighborhoods so that emergency services can be provided as quickly as possible when needed.	City Staff Developers	1-3 years
	b. Design right-of-way through the City Center project to interconnect with FM 1777 and provide access internal to the site.	City Staff Developers	1-3 years
Objective 5: Improve existing sidewalks and construct new sidewalks for pedestrian access and citizen health.	a. Fund and build sidewalks to help create an interconnected sidewalk system throughout the city.	City Staff Public Works	5-7 years
	b. When designing new sidewalks along existing streets, recognize that right-of-way may not be sufficient for the ideal street cross-section shown in the typical street section examples. In these circumstances, provide the widest sidewalk possible for pedestrians.	City Staff Collin and Hunt Counties TxDOT	1-3 years

TxDOT = Texas Department of Transportation

Transportation Goal continued

Objective 6: Consider using unused railroad right-of-way for new trails as part of an interconnected trail system.	a. Work with the railroad right-of-way owner and nearby property owners to develop a plan for new trails in railroad right-of-way.	City Staff NETEX	5-7 years
	b. Provide direct access to adjacent properties with minimal interference to movement and safety of traffic on public roadways.	City Staff	5-7 years
Objective 7: Evaluate floodplains for the construction of trails.	a. Discourage and/or prevent construction of permanent structures in the floodplain to help protect property and environmental quality. If construction in existing floodplain is deemed necessary for any project, then measures should be taken to raise the land out of the floodplain and to amend the flood zone map.	City Staff	1-3 years
	b. Encourage the siting of trails based on natural topography of slope to ensure the lowest impact of the existing conditions by trail construction.	City Staff	1-3 years
	c. Look at opportunities to construct trails within floodplain areas which are grade separated from high-capacity roads.	City Staff Collin and Hunt Counties TxDOT	5-7 years
	d. Examine opportunities in new developments where natural connections can be made to trails through floodplain corridors connecting each neighborhood to another. Plan into the design of new neighborhoods trailhead connections to the full trail system.	City Staff Developers	1-3 years
Objective 8: Adopt transportation impact fees to assist in the funding of systemwide roadway improvements.	a. Implement a roadway impact fee study, separating out the different roadway areas of the community in order to accurately charge and relate the fee to those growth areas.	City Staff Public Works	1-3 years

***Economic Development Goal:* Josephine will develop a resilient economic base.**			
Objective	***Strategies***	***Responsibility***	***Time Frame***
Objective 1: Encourage neighborhood professional and medical offices to service the local community.	a. Strengthen and diversify the office / employment space offerings in Josephine to include more varied opportunities for emerging needs such as co-working, small businesses, and entrepreneur incubator space.	City Staff JCDC	1-3 years
	b. Encourage the expansion of local, community serving retail and service industries. Consider developing a "new resident" guide to provide information on community resources and local businesses.	City Staff JCDC	1-3 years
	c. Foster public/private partnerships that both enhance the local quality of life and strengthen the economy. Invest in public spaces and facilities co-located with private development.	City Staff JCDC	1-3 years

NETEX = Northeast Texas Rural Rail Transportation District | TxDOT = Texas Department of Transportation | JCDC = Josephine Community Development Corporation

Objective 2: Concentrate efforts on attracting destination-based local-oriented retail, grocery stores, and restaurants.	a. Work to attract predominantly convenience-based Class A retail spaces along the FM 6 corridor – specifically at the City Center, CR 640, and CR 595/CR 637 intersections. 1. Design standards must remain focused on traffic movement and landscaping as this is the visual entry to the community from neighboring communities. 2. Although convenience-based retail is easier to attract with demographics than destination-driven retail, the city can focus on some types of criteria as to what tenants would find appropriate. This includes reducing development permitting costs, creating potential tax incentives, and providing public infrastructure capital improvements. 3. Family-based retail needs traffic, land, infrastructure, and visibility to be sustainable. Providing these elements can bring restaurants, larger retail, and ancillary entertainment venues. The community has expressed interest at bringing a full-service grocery store to the city.	City Staff JCDC	5-7 years
	b. Commercial and neighborhood service land uses in Josephine should reflect a combination of visitor and resident-based retail availability especially in the City Center.	City Staff JCDC	1-3 years
	c. Concentrate efforts on retail attraction and retention. The catalyst for retail attraction and retention is customers, whether they are local or visiting. Workforce retail demand can be generated by focusing efforts on developing a local office park adjacent to local neighborhoods.	City Staff JCDC	5-7 years
Objective 3: Consider how the branding of the city may bring economic development and create a streetscape made up of streetlights, gateway elements, and wayfinding signs in the community.	a. Focus on signage at the entry points of the city through entry gateway signs at both the northern and southern ends of the community. Ideally these would be placed near the city limits. These entrances are the first opportunity that the city has to capture the imagination and interest of pass-through traffic made up of consumers and people looking for a new community in which to work and to live. The gateway entrances should incorporate the unique brand identifier and include appropriately designed signage that directs people to the amenities within the city, but also informs them of the relevance of the community to the region as a whole.	City Staff JCDC	1-3 years
	b. Develop a design plan for public lighting, median design, signage, and landscaping near the City Center then repeat the design in other focused areas such as the gateway signage and future entry features to new communities.	City Staff JCDC	1-3 years
Objective 4: Develop standard practices in the use of cooperative 380 agreements for the incentivization of new commercial growth.	a. Work with the school district and Collin and Hunt Counties to understand possibilities of coordinating 380/381 agreements to increase the draw for economic development possibilities within Josephine.	City Staff JCDC School District Collin County Hunt County	1-3 years

JCDC = Josephine Community Development Corporation

Economic Development Goal continued

Objective 4: Develop standard practices in the use of cooperative 380 agreements for the incentivization of new commercial growth. (continued)	b. Develop guidelines for the negotiation of a 380 agreement on behalf of the city including sales tax incentives levels; performance benchmarks; and offset levels on the benefit of the recipient for costs associated with construction and infrastructure.	City Staff JCDC	1-3 years
	c. Ensure reporting to the Texas State Comptroller's office all 380 agreements and their status.	City Staff JCDC	1-3 years

***Housing Goal:* Josephine will have a variety of housing types available to all incomes. All housing will be safe and decent for residents.**			
Objective	***Strategies***	***Responsibility***	***Time Frame***
Objective 1: Promote development of all housing types: single family detached units, attached units, townhouses, and apartments.	a. Support development of new areas for attached housing, townhouses, and apartments as shown on the Future Land Use Plan and where there is access to existing or planned services, jobs, and retail. These can be found within medium density, high density, or mixed use areas.	City Staff P&Z City Council	1-3 years
	b. To the extent possible, allow for a mixture of housing types within larger neighborhoods to support a variety of age groups and income levels.	City Staff P&Z City Council	1-3 years
	c. Redevelop existing residential lots where buildings have been removed. Doing so would provide opportunities for homebuilders looking for lower-cost land to build homes based on traditional Texas style architecture.	City Staff P&Z City Council	3-5 years
	d. Promote replatting of lots to make sure that housing meets minimum lot standards for zoning districts.	City Staff P&Z City Council	1-3 years
	e. Modify the zoning ordinance to improve opportunities for multifamily housing in appropriate locations and designs to serve younger populations.	City Staff P&Z City Council	1-3 years
Objective 2: Maintain and improve the existing housing stock.	a. Expand programs to maintain the existing housing stock such as those offered by Habitat for Humanity and other organizations and agencies.	City Staff P&Z City Council	1-3 years
	b. Use the development review process to evaluate private projects and their contributions to urban design.	City Staff P&Z City Council	1-3 years
	c. Align zoning and future land use allocation to ensure housing is located where it can be served by infrastructure without creating a burden on city services.	City Staff P&Z City Council	1-3 years

P&Z = Planning & Zoning Commission | JCDC = Josephine Community Development Corporation

Housing Goal continued

Objective 3: Promote the ability to provide a variety of mixed housing densities to allow residents to age-in-place through senior age-restricted housing and assisted living development.	a. Develop zoning land use categories and design standards for age-restricted and assisted living development within medium and high density zoning districts.	City Staff P&Z City Council	1-3 years
	b. Support the nonprofit community in creating housing opportunities for seniors and people with disabilities.	City Staff P&Z City Council	1-3 years
	c. Negotiation with development agreements and the creation of planned developments can provide opportunities to include various housing options.	City Staff P&Z City Council	1-3 years

Parks, Recreation, and Open Space Goal: Have excellent parks and recreational areas and preserve important natural resources.

Objective	*Strategies*	*Responsibility*	*Time Frame*
Objective 1: Assess the community needs and desires for additional public passive and active parks in a tiered park system located throughout the community in a parks, recreation, and open space master plan.	a. Creation of a tiered park system based on serving a variety of uses and purposes including open space preserve, linkages and greenways, neighborhood parks, community parks, and city-wide parks. Prepare a Parks, Recreation & Open Space Master Plan, and apply for a Texas Parks & Wildlife parks grant.	City Staff City Council Consultant	1-3 years
	b. Parks and open spaces may be located in or adjacent to floodplains, where possible, to aid in floodplain conservation efforts and to enhance recreational opportunities. Such areas may be developed with recreation facilities or set aside as open space to preserve sensitive areas. Use of floodplains should be an amenity to the parks system and an option, not the primary source of parkland.	City Staff City Council	5-7 years
	c. The city should acquire and develop parks in combination with other public facilities to provide the most cost-effective public services. Park property could be developed jointly with new schools, storm water detention basins, drainage channels, or new city facilities. This strategy should not contradict the spatial distribution objective of parks and recreation facilities to be located throughout the community.	City Staff Public Works City Council	5-7 years
Objective 2: Provide community programming at the new community center which is responsive to a variety of age groups and activity levels.	a. Improve partnerships with recreation providers to give residents access to a wide variety of cost-effective programs.	City Staff	1-3 years
	b. Be flexible in program offerings to respond to the changing needs of residents.	City Staff	1-3 years
	c. Increase program offerings to attract residents to the community center.	City Staff	1-3 years
	d. Evaluate opportunities to co-locate programming for indoor and outdoor activities for more program offerings.	City Staff	1-3 years

P&Z = Planning & Zoning Commission

Objective 3: Protect the floodplain for property preservation, water and environmental quality, and the inclusion of a trail system.	a. Discourage and/or prevent construction of permanent structures in the floodplain or reducing the size of natural floodplain by engineering and construction to help protect lives and property. If construction in existing floodplain is deemed necessary for any project, then measures should be taken to raise the land out of the floodplain and to amend the flood zone map.	City Staff Public Works	5-7 years
	b. Encourage planting of trees and shrubs in the floodplain (but not in floodway) to help improve water quality.	City Staff	5-7 years
Objective 4: Influence new development to provide public spaces in addition to private amenity centers.	a. Develop additional community parks on the eastern and southern sides of Josephine to expand publicly-owned parkland acreage and balance the spatial distribution of recreation facilities in the community.	City Staff City Council	5-7 years
	b. Develop multi-use trails to meet high demand for recreation and connectivity in the community.	City Staff City Council	1-3 years
	c. Develop additional nature areas, picnic/pavilion facilities, a community garden, and a dog park.	City Staff City Council	5-7 years
	d. Obtain dedicated parklands in new residential subdivisions and for the purpose of neighborhood and community parks to provide recreation options for residents.	City Staff City Council	5-7 years
	e. Acquire parklands for the development of publicly-owned indoor recreation facilities.	City Staff City Council	5-7 years
	f. Require parkland dedication in new subdivisions.	City Staff City Council	1-3 years

Utilities, Infrastructure, and City Services Goal: Josephine will have high quality infrastructure and service provision to support residents, businesses, and institutions in the city.

Objective	*Strategies*	*Responsibility*	*Time Frame*
Objective 1: Continue to foster strong relationships with surrounding municipal utility districts through shared information about new development and adequate service provision.	a. Josephine's goals, objectives, and strategies for future development as set out in this plan will be guiding principles for new development to achieve equivalent or better quality of development undertaken within potential MUDs.	City Staff Water Department	1-3 years
	b. The city will establish an equitable arrangement between the MUD and the city in order to influence the development as much as possible.	City Staff Water Department	1-3 years
	c. Establish clear guidelines with respect to MUDs for the benefit of City Council, city staff, and the MUD, and to ensure collaboration with Collin and Hunt Counties and neighboring communities as applicable.	City Staff Water Department	1-3 years

Objective 1: Continue to foster strong relationships with surrounding municipal utility districts through shared information about new development and adequate service provision. (continued)	d. Encourage alignment with the city's technical design standards, including by not limited to: roads, water, wastewater, and stormwater standards.	City Staff Water Department Public Works	1-3 years
	e. Verify the long-term fiscal sustainability of the MUD in order to protect the residents' investments and ensure that a financial burden is not placed on the residents of the MUD or the City of Josephine.	City Staff Water Department	1-3 years
Objective 2: Through Capital Improvement Project (CIP) planning, provide sufficient quantity and quality of water for the existing community and to promote new development and growth.	a. Examine all long-range agreements for the procurement of water. Make sure the quantity is scalable to meet future demand by new development growth.	City Staff Water Department	1-3 years
	b. Utilize capital improvement programming to indicate appropriate new system construction for the promotion of new growth and land development.	City Staff Water Department	5-7 years
	c. Maintain active participation with the development process of properties within and adjacent to the city's CCN boundaries to anticipate new growth and negotiate development agreements, potential system tie-in, and construction of new mains.	City Staff Water Department	5-7 years
Objective 3: Through Capital Improvement Project (CIP) planning, provide wastewater collection and treatment to meet all state and federal standards.	a. Utilize capital improvement programming to indicate appropriate new system construction for the promotion of new growth and land development.	City Staff Water Department	1-3 years
	b. Maintain active participation with the development process of properties within and adjacent to the city's CCN boundaries to anticipate new growth and negotiate development agreements, potential system tie-in, and construction of new mains.	City Staff Water Department	5-7 years
Objective 4: Provide for stormwater management that prevents flooding and siltation of creeks and streams and meets all state and federal regulations.	a. Develop a stormwater management plan to ensure that flooding does not occur in the city.	City Staff	1-3 years
Objective 5: Continue to provide solid waste disposal service in the city.	a. Promote the use of recycling to reduce the volume of waste deposited in landfills and therefore keep the cost of disposal at a reasonable level.	City Staff	1-3 years
	b. Monitor the needs of the community for solid waste disposal options and act in a timely fashion to meet these needs.	City Staff	5-7 years
	c. Promote mulching and composting of green wastes, such as leaves, tree limbs, grass clippings, brush, etc., as part of the recycling and waste minimization efforts.	City Staff	1-3 years

Objective 6: Continue to provide police services and programs to create a safe environment for all citizens in Josephine.	a. Foster the development of an emergency response summit including city, county, and state policing entities to determine the best organization for redefining inter-local agreements regarding jurisdictional boundaries; mutual response to emergent situations; and cross jurisdictional communication systems in both radio and dispatch technologies.	City Staff Collin and Hunt Counties	1-3 years
	b. Develop and maximize the use of human resources through effective management and training. These human resources include police personnel, other governmental agencies, the private sector, and the citizens of Josephine.	City Staff	1-3 years
	c. Evaluate the need for additional personnel and implement procedures to select only the most qualified personnel.	City Staff	5-7 years
	d. Update and advance technology to meet increasing challenges and legal requirements.	City Staff	5-7 years
	e. Monitor pay for police officers and adjust as needed to attract well-qualified personnel.	City Staff	1-3 years
Objective 7: Continue and enhance the relationship with the Josephine Volunteer Fire District for firefighting and protection services through the development of a new joint facility housing both city-provided and volunteer emergency professionals.	a. Assure relationships that ensure adequate fire protection facilities, equipment, and water pressure to respond to and fight a fire in any part of the community in a timely and efficient fashion.	City Staff Vol. Fire District	1-3 years
	b. Monitor the need for additional personnel, equipment, and facilities to provide timely response in all areas as the community increases in land area and population.	City Staff Vol. Fire District	1-3 years
	c. Continue to upgrade the emergency medical services so as to provide the highest level of service possible to the residents of Josephine/Collin County.	City Staff Vol. Fire District	1-3 years
	d. Focus on education of the public in areas of fire prevention and accident prevention.	City Staff Vol. Fire District	1-3 years
	e. Establish an Emergency Operations Center (EOC).	City Staff Vol. Fire District	5-7 years
	f. Consider additional fire stations in various parts of the city as the community grows in greater land area.	City Staff Vol. Fire District	5-7 years
	g. Consider economic and demographic growth factors in the future development of a mixed career / volunteer fire department for the city. These factors may include general fund revenues, service demand of taller buildings, or buildings closer together requiring specialized emergency equipment. Studies have shown that when administration costs for fire protection increase enough, mixed and career departments have lower costs than a volunteer department.	City Staff Vol. Fire District	5-7 years
Objective 8: Explore ways to provide additional library services to residents.		City Staff	5-7 years

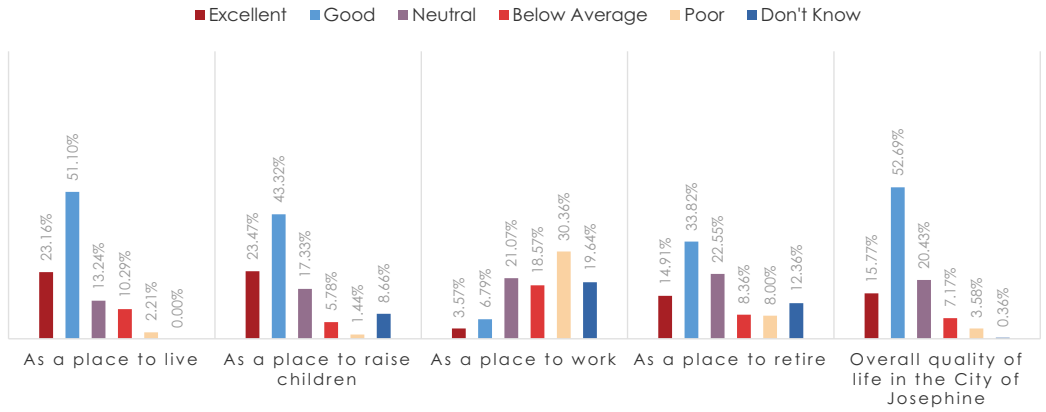
Utilities, Infrastructure, and City Services Goal continued

Objective 9: Continue to provide city administrative services from City Hall.	a. Conduct a facilities demand study based on future human resource budget for operational office space needs.	City Staff	1-3 years
	b. Keep the City Hall building in a good state of repair so that it continues to be an asset and an example of good stewardship for the community.	City Staff	1-3 years
Objective 10: Practice good stewardship of all city-owned properties.	a. Assure that city-owned property is adequately maintained and landscaped.	City Staff	Ongoing
	b. Dispose of public property which has no foreseeable use or which other types of development could better utilize.	City Staff	5-7 years

Appendix
Community Survey Results

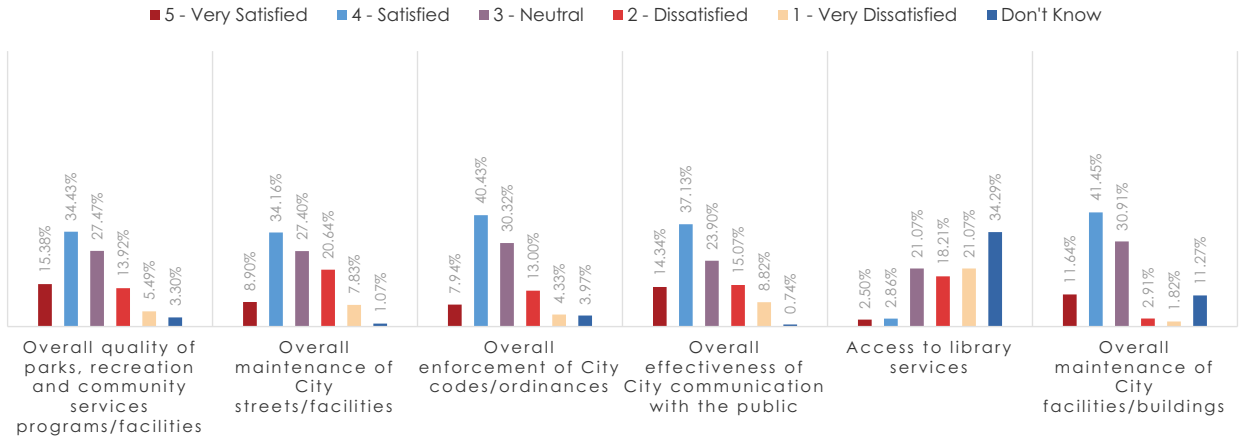
Q1: Quality of Life in the City of Josephine
Please rate the City of Josephine:

Answered: 285 Skipped: 0



Q2: Overall Satisfaction with Major City Services
Please rate your satisfaction with the following:

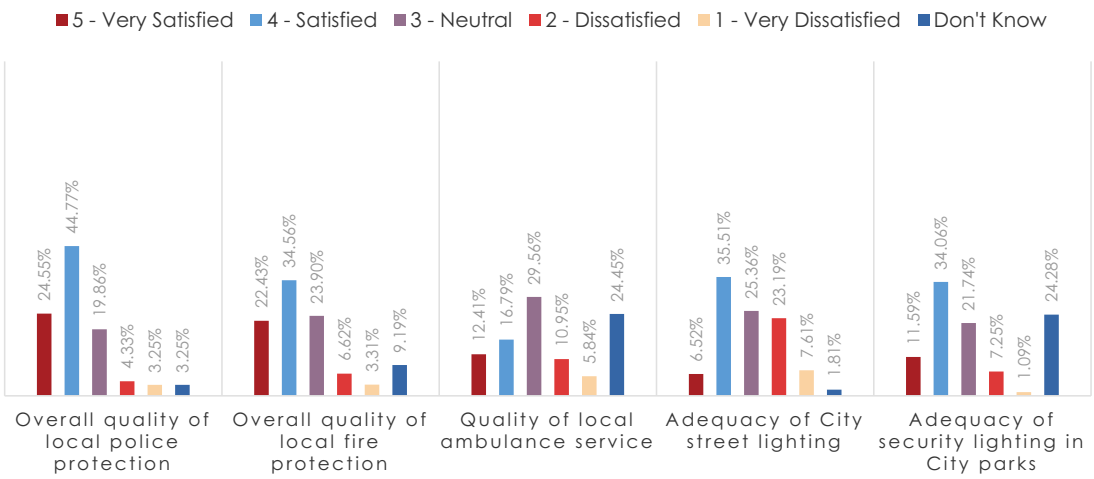
Answered: 285 Skipped: 0



Q3: Public Safety Services

Please rate your satisfaction with the following:

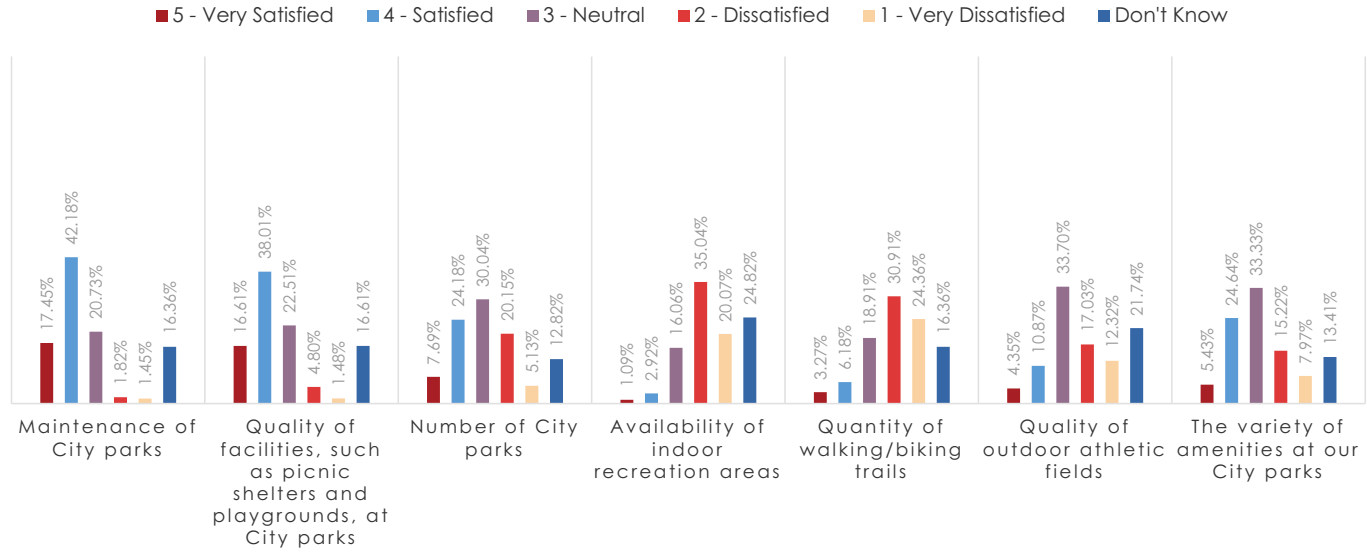
Answered: 283 Skipped: 2



Q4: Parks and Recreation Services

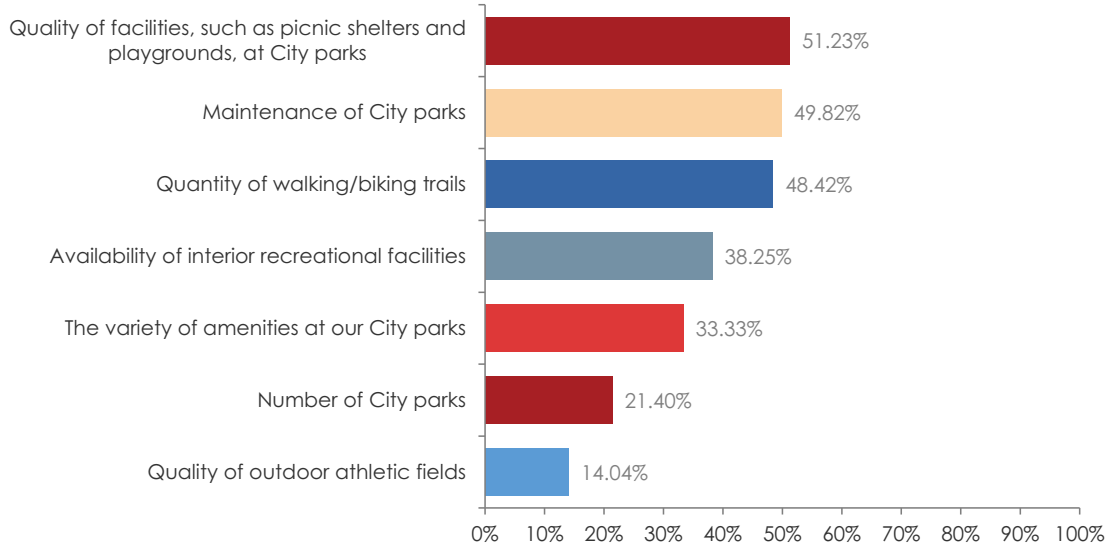
Please rate your satisfaction with the following:

Answered: 281 Skipped: 4



Q5: Which THREE of the parks and recreation services in Question #4 do you think are MOST IMPORTANT for the City to provide?

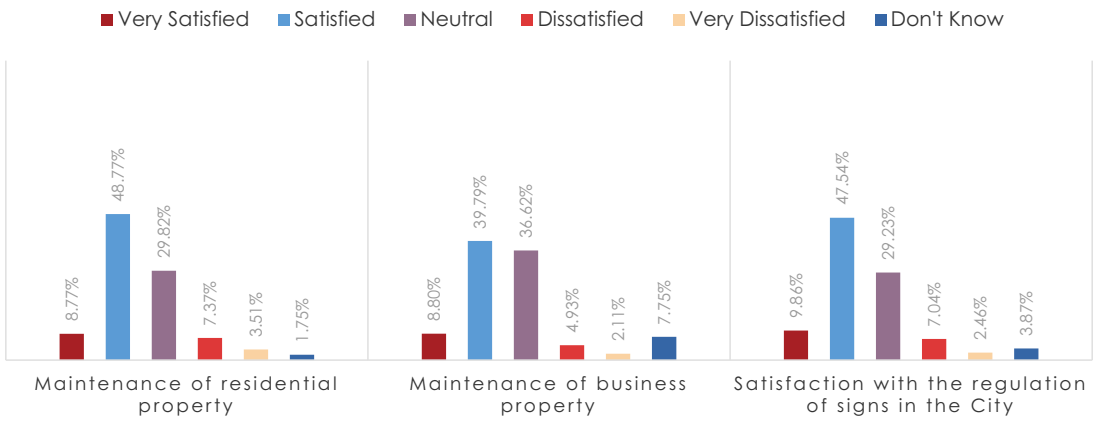
Answered: 285 Skipped: 0



Q6: Maintenance and Appearance of the City

Please rate your satisfaction with the following:

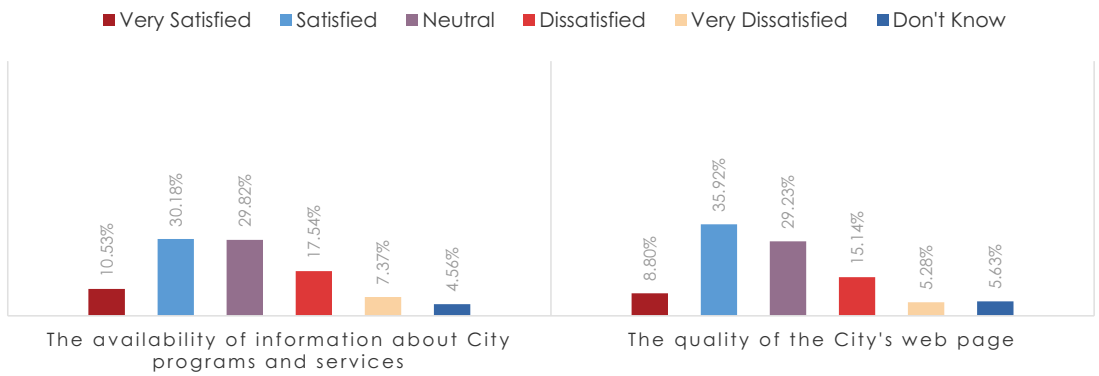
Answered: 285 Skipped: 0



Q7: City Communication

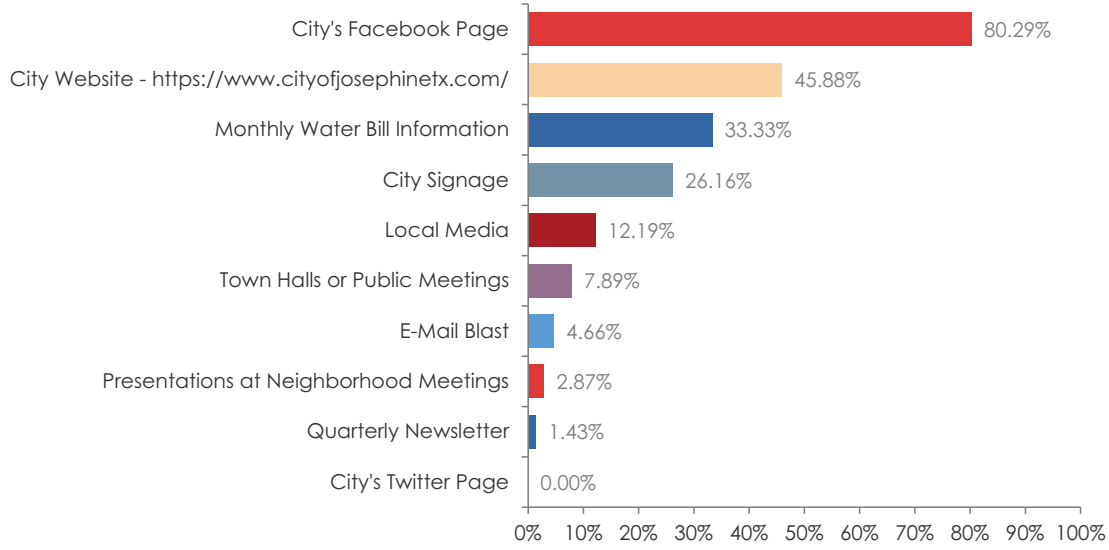
Please rate your satisfaction with the following:

Answered: 285 Skipped: 0



Q8: From which of the following sources do you receive news and information about the City? (Check all that apply)

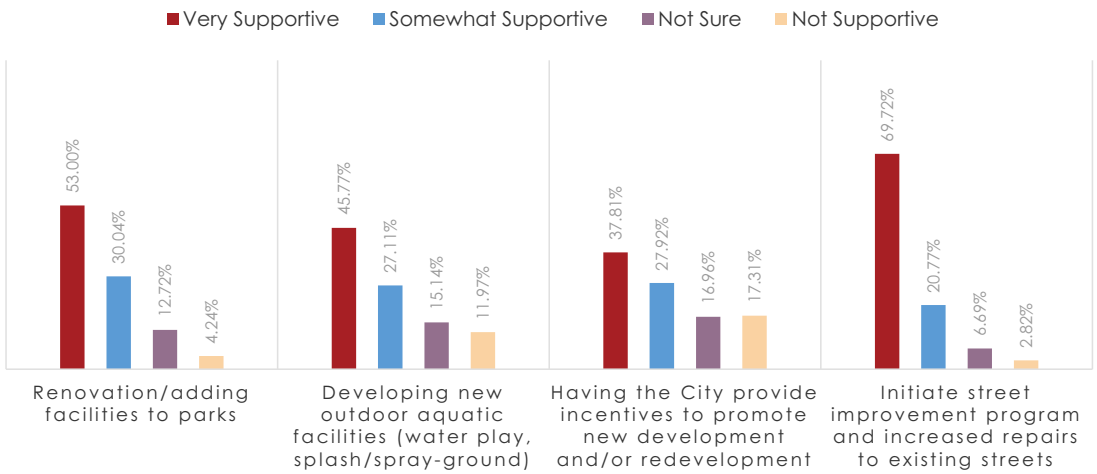
Answered: 279 Skipped: 6



Q9: Support for Various Initiatives

Please rate your satisfaction with the following:

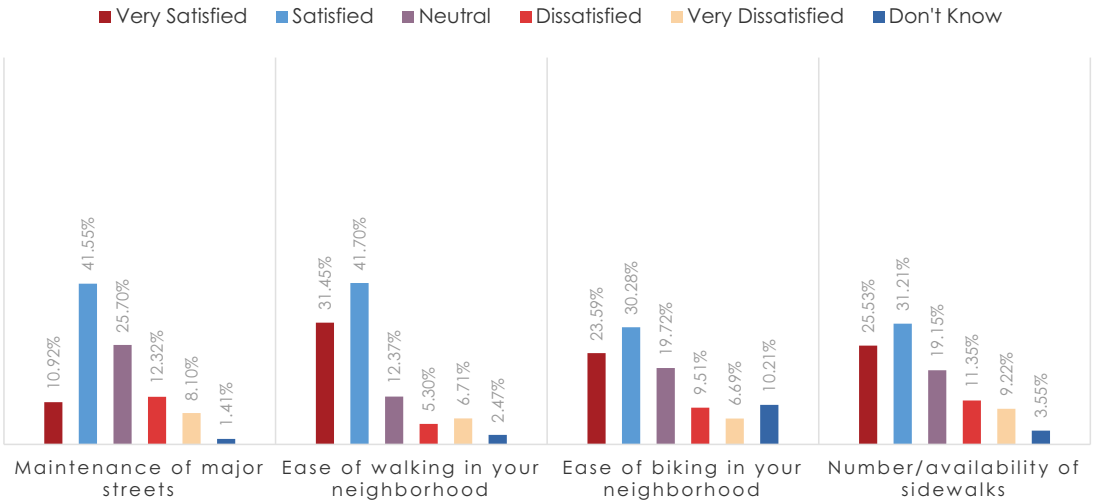
Answered: 285 Skipped: 0



Q10: Traffic & Transportation Services

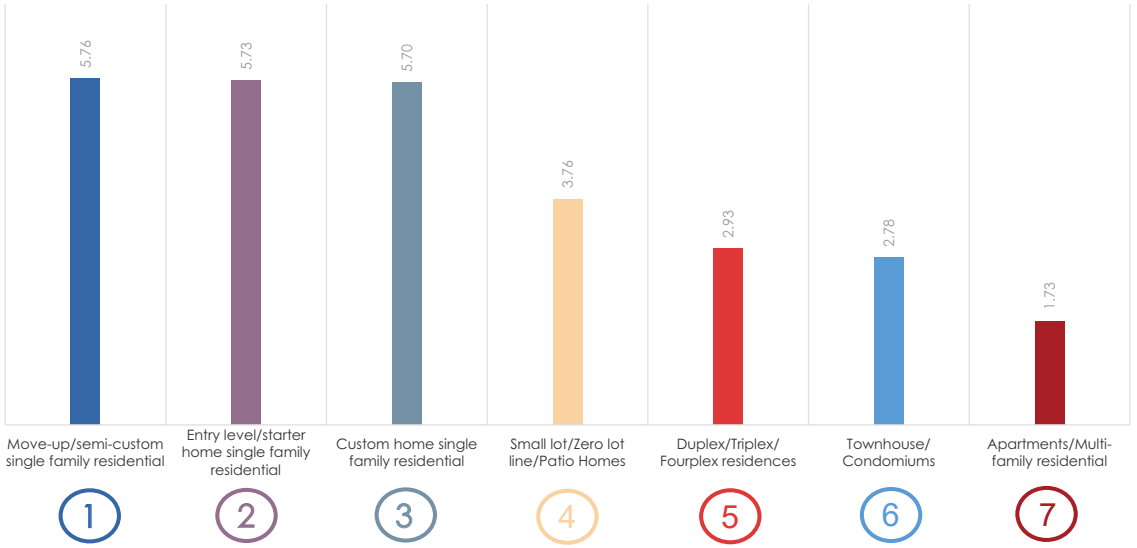
Please rate your satisfaction with the following facilities in the neighborhood where you live using a scale of 1 to 5 where 5 means "Very Satisfied" and 1 means "Very Dissatisfied."

Answered: 284 Skipped: 1



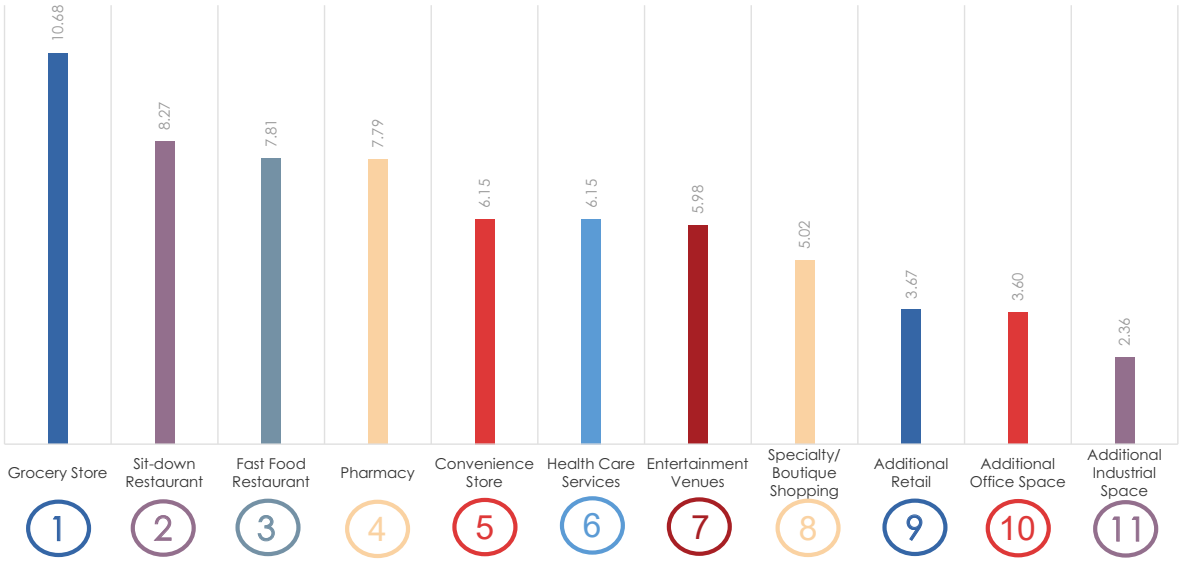
Q11: Please rank the top three Housing needs in the City of Josephine, with 1 being the most needed, 2 being the second most needed, and 3 being the third most needed.

Answered: 278 Skipped: 7



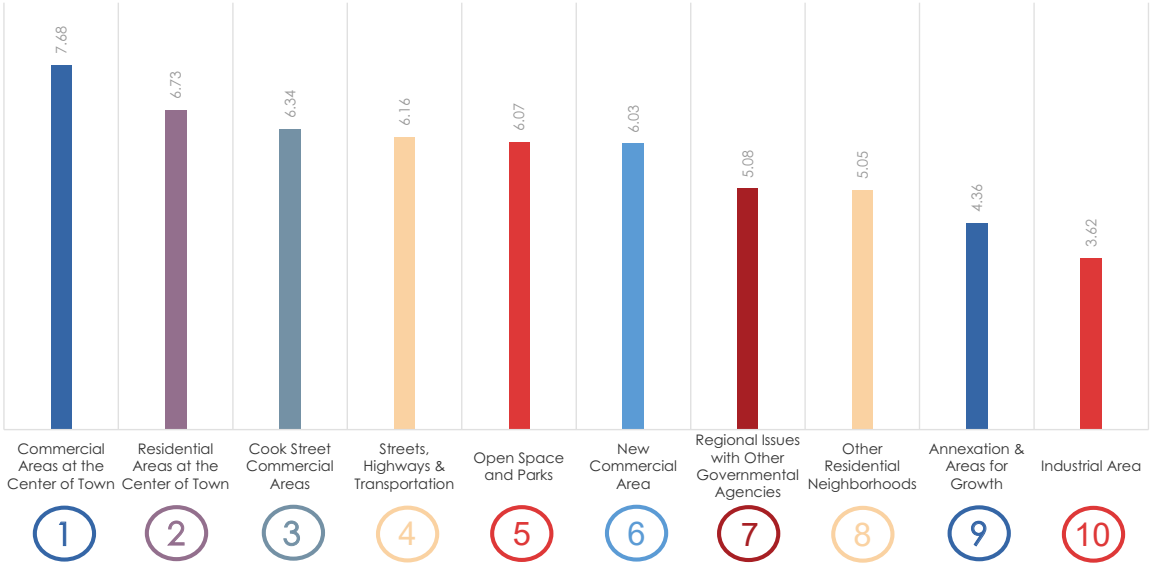
Q12: Please rank the top three Retail/Service/Employment needs in the City of Josephine with 1 being the most needed, 2 being the second most needed, and 3 being the third most needed.

Answered: 280 Skipped: 5



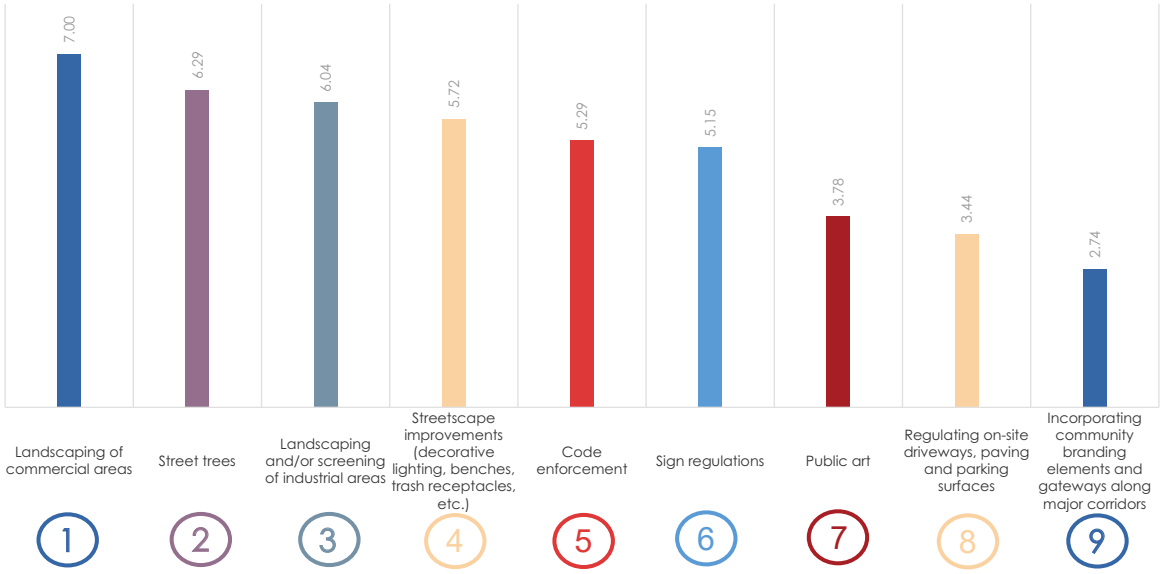
Q13: Please rank the top three areas in the City of Josephine where the Comprehensive Plan should direct the most focus, with 1 being the most needed, 2 being the second most needed, and 3 being the third most needed.

Answered: 272 Skipped: 13



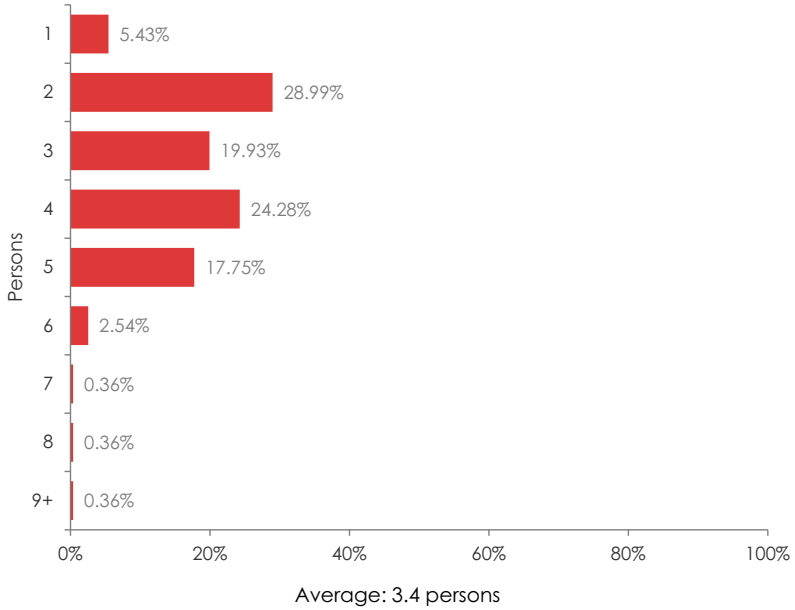
Q14: Please rank from 1 to 10 the importance of various aesthetic considerations in the City of Josephine where the city should direct the most focus, with 1 being the most important and 10 being the least important.

Answered: 257 Skipped: 28



Q15: How many persons live in your household?

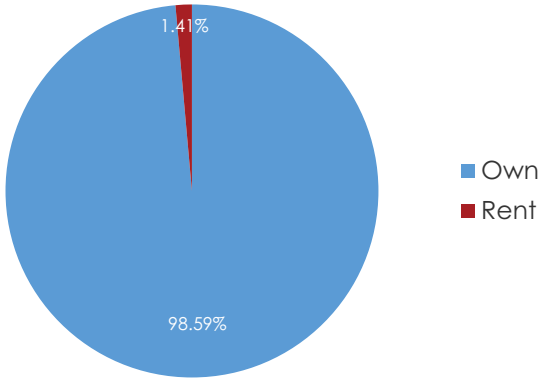
Answered: 277 Skipped/Indeterminate: 8



Average: 3.4 persons

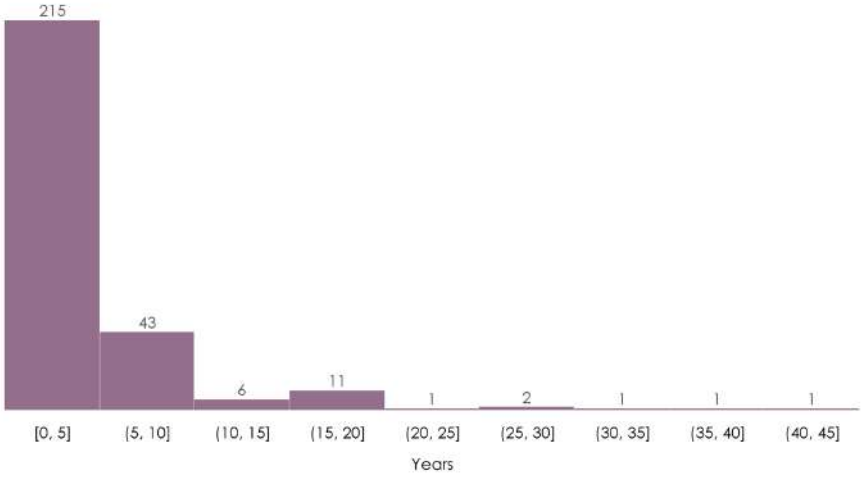
Q16: Do you own or rent your home?

Answered: 284 Skipped: 1



Q17: Approximately how many years have you lived in the City of Josephine?

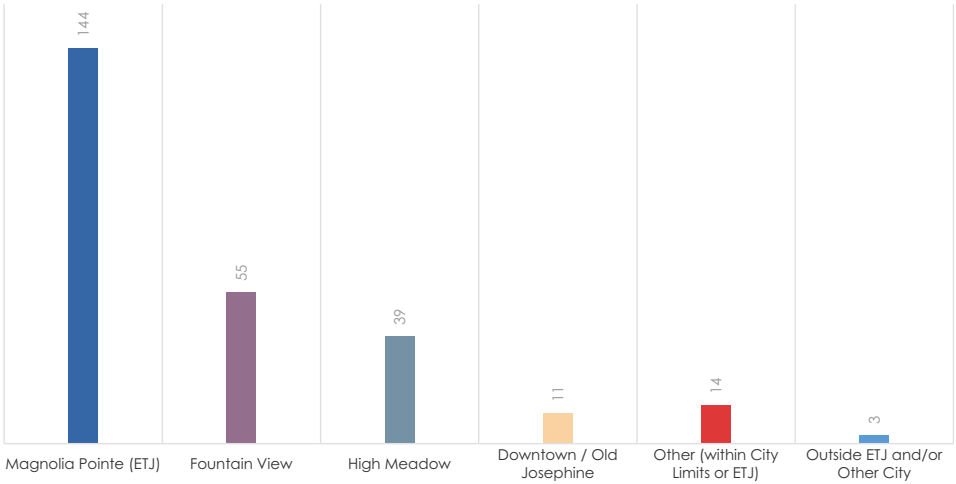
Answered: 281 Skipped/Indeterminate: 4



Average: 4.4 years

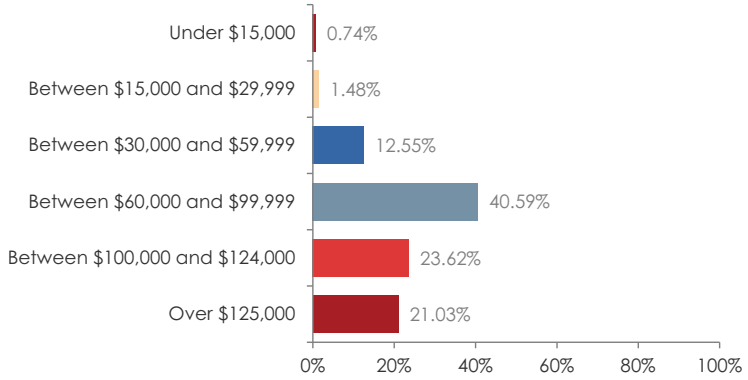
Q18: Which City of Josephine neighborhood do you live in?

Answered: 266 Skipped/Indeterminate: 19



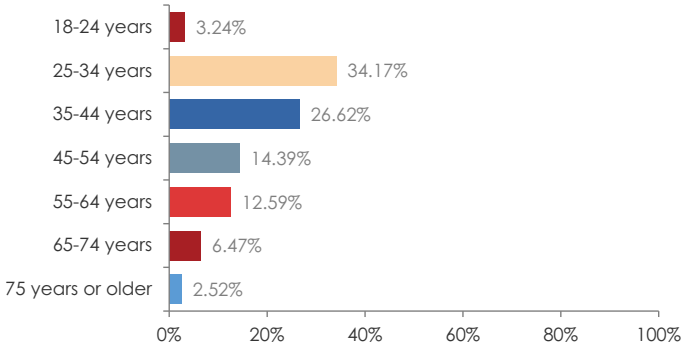
Q19: Which category is your total annual household income?

Answered: 271 Skipped: 14



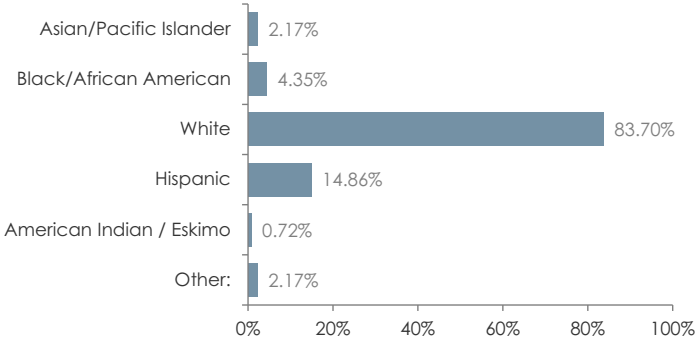
Q20: In which category is your age?

Answered: 278 Skipped: 7



Q21: Which of the following best described your race/ethnicity? (Check all that apply)

Answered: 276 Skipped: 9



Q22: Your gender:

Answered: 273 Skipped: 12