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Innovative approaches
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TECHNICAL REPORT

Lockhart
TEXAS

Final Report
Roadway Impact Fee Program Update

City of Lockhart, Texas

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Final Report
Roadway Impact Fee Program Update

STATE OF TEXAS
SANDIPKUMAR FALDU
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LICENSED
PROFESSIONAL ENGINEER
3/2/2023

FREESE AND NICHOLS, INC.
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City of Lockhart, Texas

March 1, 2023

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INTRODUCTION

Chapter 1 Introduction

Chapter 395 of the Texas Local Government Code prescribes the process which Texas cities must follow in the update of impact fees. Statutory requirements mandate that impact fees be updated (at least) every five years. This analysis of roadways serves as the fourth generational update to the initial system adopted in 2001. Since its inception, the roadway impact fee system has been updated in 2007, 2012, and 2017. There was a formalized no change of program in 2012.

Land use assumptions serve as the basis from which travel demands over the ten-year planning period are developed. This analysis is based on data (ten-year planning period 2022-2032) contained in the "Land Use Assumption for the Impact Fees" report dated January 2023, which was presented to the Impact Fee Advisory Committee (IFAC) in December 2022.

As a funding mechanism for roadway improvements, impact fees allow cities to recover the costs associated with new or facility expansion to serve future development. Legislatively, roadway impact fees may consider arterial and collector status roads on the City's official Thoroughfare Plan. Statutory requirements mandate that impact fees be based on a specific list of improvements identified in the program and only the cost attributed (and necessitated) by new growth over a ten-year period may be considered. As projects in the program are completed, planned costs are updated with actual costs to more accurately reflect the capital expenditure of the program. Additionally, new capital improvement projects may be added to the system.

Initially authorized by the Texas Legislature in 1987, impact fees have undergone several technical and administrative changes, most notably since 2001. These include:

- Expansion of the service area structure for roadway facilities from three to six miles;
- A credit for the portion of ad valorem tax revenues generated by improvements over the program period, or the credit equal to 50% of the total projected cost of implementing the capital improvements plan;
- A city's share of costs on the federal or Texas highway system, including matching funds and costs related to utility line relocation, the establishment of curbs and gutters, sidewalks, drainage appurtenances, and rights-of-way;
- Increase in the time period of update of impact fee land use assumptions and capital improvements plan from a three to a five year period;
- Changes in compliance requirements related to annual reporting;
- Consolidation of the land use assumptions and capital improvements plan hearings; and
- The exemption of schools districts and federal housing from paying impact fees.

INTRODUCTION

METHODOLOGY

To update roadway impact fees for the City of Lockhart, a series of work tasks were undertaken. These tasks are described below.

1. Meetings were held with the City of Lockhart Staff and the Impact Fee Advisory Committee (IFAC) to discuss the methodology to be used in the update.
2. The existing roadway service area structure was divided into two service areas to reach the extent of the current city limits.
3. Vehicle-miles of travel in the PM peak hour retained as the service unit measure for roadway impact fee calculations.
4. A roadway conditions inventory was conducted to update lane geometries, roadway classifications and segment lengths, as necessary, of facilities in the impact fee program. Using updated traffic volumes collected while school was in session in late August 2022, any service area deficiencies were identified within the network.
5. Projected growth (service units) by service area over the ten-year planning period was determined using the 2023 Land Use Assumptions Report in conjunction with the revised Land Use Equivalency Table. Projected growth between the years 2022 and 2032 of population and employment are detailed in the land use assumptions report.
6. The previous roadway impact fee capital improvements program (IFCIP) was reviewed to ensure excess capacity remained in the program as well as to incorporate revised growth figures for the service area. Potential project additions were identified by City Staff based on growth needs and the city's anticipated future projects. Projects that have been fully recouped were removed.
7. Roadway cost data of construction, engineering, and right-of-way for impact fee projects were updated and compiled by service area based on data provided by the City. For recently completed projects, actual costs were incorporated into the system database.
8. The cost of capacity provided, maximum cost per service unit, and cost attributable to new development was calculated for each service area.
9. The Land Use Equivalency Table (service unit generation for specific land uses) was updated to incorporate new trip rate. Trip rate data was obtained from *Trip Generation, Eleventh Edition* by the Institute of Transportation Engineers (ITE). Trip length statistics of the city were retained from the previous program.
10. A report was prepared to document the procedures and findings of the analysis.

Chapter 2 Service Areas

Chapter 395 requires that service areas be defined for roadway impact fees to ensure that facility improvements are located in close proximity to areas generating needs. Legislative requirements stipulate that roadway service areas be limited to a six-mile maximum and must be located within the current city limits. Roadway service areas are different from water and wastewater systems, which can include the city limits and its extra-territorial jurisdiction (ETJ) or other defined service area. This is primarily because roadway systems are "open" to both local and regional (non-city) use as opposed to a defined level of utilization from residents within a water and wastewater system. The result is that new development can only be assessed an impact fee based on the cost of necessary capital improvements within a specific service area.

For this program update, the service area structure was adjusted to incorporate annexations that were not part of the previous study. In the 2017, several annexations encroached on the six-mile limit leading to a revised service area structure that split the city in two. A combination of street and railroad facilities are used to divide the city into Service Area 1 in the north and Service Area 2 in the south, including Maple Street, San Jacinto Street, San Antonio Street, Market Street, and the Union Pacific Railroad. The amended structure aimed to provide greater flexibility in the program for future further annexations.

As part of this update, the service area structure was amended to include annexations since 2017 and is illustrated in **Figure 2-2**.

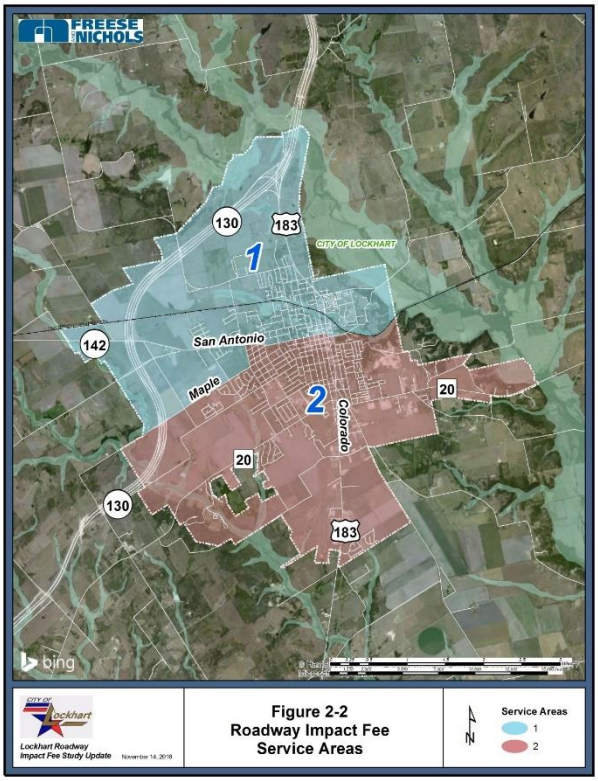

Figure 2-1: 2017 Roadway Service Area

SERVICE AREAS

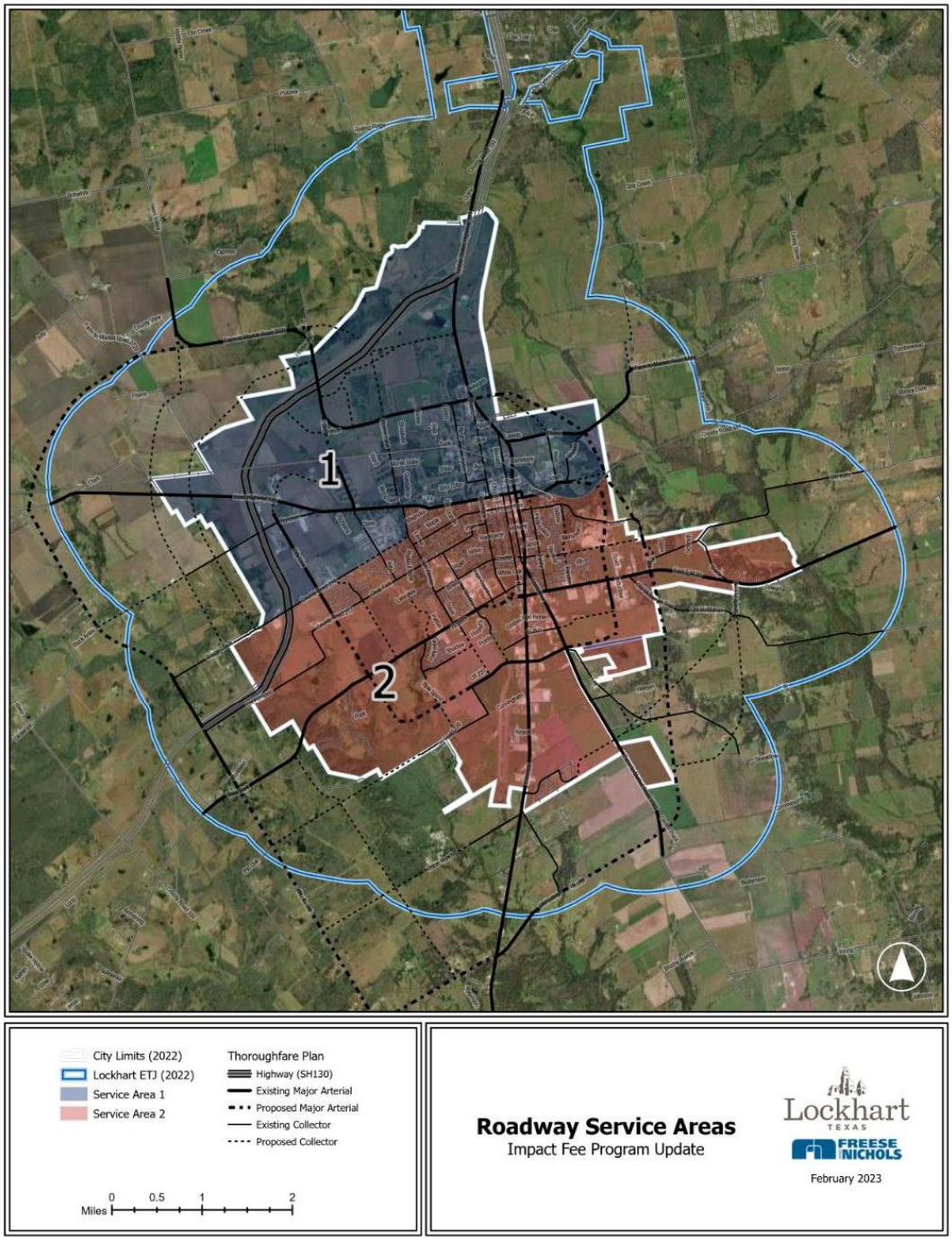

Figure 2-2: Roadway Service Areas

Chapter 3 Land Use Assumptions Summary

Population and land use assumptions are important elements in the analysis of water, wastewater, and roadway systems. To assist the City of Lockhart in determining the need and timing of capital improvements to serve future development, a reasonable estimation of future growth is required. Growth and future development projections were formulated based on assumptions pertaining to the type, location, quantity, and timing of various future land uses within the community. These land use assumptions, which include population projections, will become the basis for the preparation of impact fee capital improvement plans for water, wastewater, and roadway facilities. **Appendix G** contains the full Land Use Assumptions Report and is summarized in this chapter.

BASE YEAR DATA

Using the City's historical growth trends and data, the 2022 base year population estimate for the City of Lockhart and future growth rate were derived. This "benchmark" information provides a starting basis of data for the ten-year growth assumptions. A full description of this analysis is provided in Appendix G, the Land Use Assumption Report.

For the purposes of documenting changes in population, land use, density, and intensity, the data format to be used as a basis to formulate the land use assumptions will be principally population and employment. **Table 3-1** represents a summary of existing population and employment for Lockhart.

Table 3-1: Existing Population and Employment 2022

Housing Units [(1)]	5,877
Population [(2)]	15,600
Total Employment [(3)]	6,420
Basic	1,639
Service	3,760
Retail	1,021

[(1)] *Estimated derived from 2020 Census, City of Lockhart database*

[(2)] *Estimate derived from Census, ACS, and City database*

[(3)] *Estimate derived from ACS, CAMPO data*

GROWTH ASSUMPTIONS

Growth is characterized in two forms: population (residential) and employment (nonresidential). A series of assumptions were made to arrive at reasonable growth rates for population and

employment. The following assumptions have been made as a basis from which ten-year projections could be initiated.

1. Future land uses will occur as identified on the Future Land Use Plan in the approved Comprehensive Plan,
2. The City will be able to finance the necessary improvements to accommodate growth,
3. School facilities will accommodate increases in population, and
4. Densities will be in alignment with land uses of the Comprehensive Plan.

Population Growth Rate

An approximate 4.25% average annual growth rate was determined by the Impact Fee Advisory Committee (IFAC) to be a reasonable rate at which Lockhart's population could be expected to grow. Between 1990 and 2000, Lockhart's compound annual growth rate was approximately 1.37%. Between 2000 and 2010 the average annual growth rate was approximately 0.83%. Based upon anticipated and committed residential construction, development of additional industrial facilities, and anticipated City annexations, a 4.25% percent growth rate should be feasible and reasonable for planning purposes.

If population growth in Lockhart occurs at an average rate of 4.25% per year, a population of approximately 23,695 people could be expected by the year 2032 (ten years). With known development information, it is also reasonable to assume that the City limits will grow by at least 300 acres. This scenario uses similar land use proportions as the existing land use, and accounts for anticipated geographic and population growth of the City.

TEN-YEAR PROJECTION

The ten-year forecast considered 1) approved and/or anticipated development within the city, 2) the policies and growth rate established in the Comprehensive Plan, as well as growth patterns within the city limits as documented in the U.S. Census, ACS, and CAMPO data. Figure 3 illustrates development activity within the city as of August 2022. New development activity within the city includes subdivisions listed below (depicted in the supporting graphic) such as:

- **Service Area 1**: Centerpoint Meadows, Vintage Springs, Hansford, Lockhart Farms, Kelly Villas, The Stanton, Lockhart Gateway
- **Service Area 2**: Maple Park, Main Springs, Clear Fork, Heritage Place, Lockhart Place (TH), Cavalry, Ramendu at Lockhart, Spyglass, Golden Eagle, Summerside, and Seawillow.

LAND USE ASSUMPTIONS SUMMARY

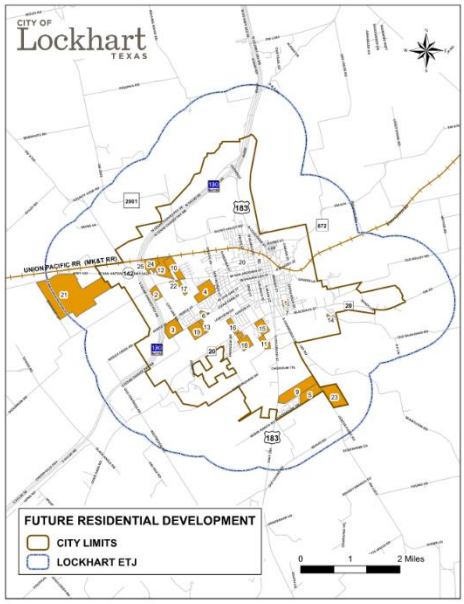

Figure 3: Future Residential Development

Outside the city (within ETJ), Juniper Springs will bring large-scale residential housing to the west, south of SH 142. **Table 3-2** lists ten-year compound annual growth projections of population for the roadway impact fee service areas. While growth is anticipated to occur in both service areas, slightly more residential growth will occur in Service Area 2. **Table 3-3** shows a summary of the employment projections for the roadway impact fee service areas. Currently, most of the employment is in Service Area 2; however, the SH-130 toll road will provide opportunities for employment growth in Service Area 1.

Table 3-2: Ten-Year Projections for the Roadway Service Area

	2022	2032	Net Growth (2022-2032)
	Population	Population	Population
Service Area 1	6,004	8,930	2,926
Service Area 2	9,596	14,765	5,169
Total	**15,600**	**23,695**	**8,095**

Table 3-3: Employment Projections for the Roadway Service Area

	2022				2032				Net Growth (2022-2032)
	Employment (Persons)				Employment (Persons)				
	Basic	Service	Retail	Total	Basic	Service	Retail	Total	
Service Area 1	573	1,316	357	2,247	849	1,948	529	3,326	1,079
Service Area 2	1,065	2,444	664	4,173	1,577	3,618	983	6,178	2,005
Total	**1,638**	**3,760**	**1,021**	**6,420**	**1,490**	**1,961**	**6,053**	**9,504**	**3,084**

LAND USE ASSUMPTIONS SUMMARY

ULTIMATE LAND AREA CAPACITY FOR POPULATION GROWTH

As currently developed, the city has 4,749 acres of agriculture/open space within the city limits. Assuming a majority of that acreage is developable and 1) two–thirds this acreage develops as residential (densities for single-family, two-family, and multi-family reasonably applied), 2) a 98 percent occupancy rate, 3) 4.0 dwelling units per acre, and 4) approximately 2.79 persons per household, the vacant acreage within the city could support approximately 34,279 persons. Including the existing population within the city, the ultimate holding capacity of the city limits is 49,879. Based on current growth rates, it is not anticipated that this population would not be reached until beyond 2050.

Summary

- Lockhart presently contains approximately 10,022 acres within the city limits.
- Existing estimated population of Lockhart in 2022 is 15,600 persons with 6,420 employed persons in the city.
    - The population in the water and wastewater service areas is 15,675 and 15,600, respectively.
- An average annual growth rate of 4.25% was used to calculate the Lockhart ten-year (2022-2032) population growth projection.
    - The ten-year growth projection for the roadway program (within the Lockhart City Limits) is an increase from 15,600 to 23,695 persons, representing a net growth of 8,095 persons total.
    - The ten-year growth projection for the water service area is forecasted to increase from 15,675 to 23,810, for a total net growth of 8,135 persons.
    - The ten-year growth projection for the wastewater service area is forecasted to have no increase in population outside the city limits and will be 23,695.
- An average annual growth of 4.00% was used to calculate the Lockhart ten-year employment growth projection.
    - The ten-year employment is to grow from 6,420 to 9,504 jobs, representing a net growth of 3,084 jobs total.

  The ultimate holding capacity for population growth within the city (roadway service areas 1 and 2) is expected to accommodate the projected 10-year growth.

Chapter 4 Roadway Impact Fee Service Units

Service units establish a relationship between roadway projects and demand placed on the street system by development, as well as, the ability to calculate and assess impact fees for specific development proposals. As defined in Chapter 395, "Service unit means a standardized measure of consumption, use, generation, or discharge attributable to an individual unit of development in accordance with generally accepted engineering or planning standards for a particular category of capital improvements or facility expansions."

To determine the roadway impact fee for a particular development, the service unit must accurately identify the impact that the development will have on the major roadway system (i.e., arterial and collector roads) serving the development. This impact is a combination of the number of new trips generated by the development, the particular peaking characteristics of the land-use(s) within the development, and the length of each new trip on the transportation system.

The service unit must also reflect the capacity, which is provided by the roadway system, and the demand placed on the system during the time in which peak, or design, conditions are present on the system. Transportation facilities are designed and constructed to accommodate volumes expected to occur during the peak hours (design hours). These volumes typically occur during the peak hours as motorists travel to and from work.

The vehicle-mile during the PM peak hour serves as the service unit for impact fees in Lockhart. This service unit establishes a more precise measure of capacity, utilization and intensity of land development through the use of published trip generation data. It also recognizes legislative requirements with regards to trip length.

Service Units

Service units create a link between supply (roadway projects) and demand (development). Both can be expressed as a combination of the number of vehicles traveling during the peak hour and the distance traveled by these vehicles in miles.

Service Unit Supply

For roadway capital project improvements, the number of service units provided during the peak hour is simply the product of the capacity of the roadway in one hour and the length of the product. For example:

> Given a four-lane divided roadway project with a 600 vehicle per hour per lane capacity and a length of two miles, the number of service units provided is:
>
> *600 vehicles per hour per lane x 4 lanes x 2 miles = 4,800 vehicles-miles*

ROADWAY IMPACT FEE SERVICE UNITS

Service Unit Demand

The demand placed on the system can be expressed in a similar manner. For example, a development generating 100 vehicle trips in the PM peak hour with an average trip length of two miles would generate:

100 vehicle-trips x 2 miles/trip = 200 vehicle-miles

Similarly, demand placed on the existing roadway network is calculated in the same manner with a known traffic volume (peak hour roadway counts collected in August 2022) on a street and a given segment length.

SERVICE UNITS FOR NEW DEVELOPMENT

An important objective in the development of the impact fee system is the development of a specific service unit equivalency for individual developments. The vehicle-miles generated by a new development are a function of the trip generation and average trip length characteristics of that development. The following describes the process used to develop the vehicle-equivalency table, which relates land use types and sizes to the resulting vehicle-miles of demand created by that development.

Trip Generation

Trip generation information for the PM peak hour was based on data published in the Eleventh Edition of *Trip Generation* by the Institute of Transportation Engineers (ITE). *Trip Generation* is a reference publication that contains travel characteristics of over 100 land uses across the nation and is based on empirical data gathered from over 3,400 studies that were reported to the Institute by public agencies, developers, and consulting firms. Transportation engineers throughout the nation universally accept data contained in this publication for use in studies.

Pass-by and Diverted Trips Adjustments

The actual "traffic impact" of a specific site for impact fee purposes is based on the amount of traffic added to the street system. To accurately estimate new trips generated by a new development, adjustments must be made to trip generation rates and equations to account for pass-by and diverted trips. The added traffic is adjusted so that each development is assigned only for a portion of trips associated with that particular development, reducing the possibility of over-counting by counting only primary trips generated.

Pass-by trips are those trips that are already on a particular route for a different purpose and simply stop at a particular development on that route. For example, a stop at a convenience store on the way home from the office is a pass-by trip for the convenience store. A pass-by trip does not create

an additional burden on the street system and therefore should not be counted in the assessment of impact fees of a convenience store.

A diverted trip is a similar situation, except that a diversion is made from the regular route to make an interim stop. For example, a trip from work to home using Colorado Street would be a diverted trip if the travel path were changed to Commerce Street for the purpose of stopping at the courthouse. On a system-wide basis, this trip places a slightly additional burden on the street system but in many cases, this burden is minimal.

Trip generation rates were reduced by the percentages presented in **Table 4-1** in an effort to isolate the primary trip purpose. Adjustments were based on studies conducted by ITE and other published studies.

The resulting recommended trip rates are illustrated as part of the Land Use/Vehicle Mile Equivalency Table illustrated later in this chapter. Rates were developed in lieu of equations to simplify the assessment of impact fees by the City and likewise, the estimation of impact fees by persons who may be required to pay an impact fee in conjunction with a development project.

ROADWAY IMPACT FEE SERVICE UNITS

Table 4-1: Trip Reduction Estimates (PM Peak Hour)

ITE Land Use	ITE Code	Dev. Unit	Avg. Trip Rate	Pass-By Rate	Diverted Trips	Avg. Trip Rate w/ Deductions
INDUSTRIAL						
* General Light Industrial	110	1,000 sq. ft.	0.65	0%	0%	0.65
Industrial Park	130	1,000 sq. ft.	0.34	0%	0%	0.34
Manufacturing	140	1,000 sq. ft.	0.74	0%	0%	0.74
Warehousing	150	1,000 sq. ft.	0.18	0%	0%	0.18
Mini-Warehouse	151	1,000 sq. ft.	0.15	0%	0%	0.15
High-Cube Fulfillment Center Warehouse	155	1,000 sq. ft.	0.16	0%	0%	0.16
Data Center	160	1,000 sq. ft.	0.09	0%	0%	0.09
RESIDENTIAL						
* Single-Family Detached Housing	210	DU	0.94	0%	0%	0.94
Multifamily Housing (Low-Rise)	220	DU	0.51	0%	0%	0.51
Multifamily Housing (Mid-Rise)	221	DU	0.39	0%	0%	0.39
Mid-Rise Residential with 1st-Floor Commercial	231	DU	0.17	0%	0%	0.17
Senior Adult Housing - Detached	251	DU	0.3	0%	0%	0.30
Continuing Care Retirement Community	255	DU	0.19	0%	0%	0.19
COMMERCIAL						
Hotel	310	Rooms	0.59	0%	0%	0.59
Golf Course	430	Holes	2.91	0%	0%	2.91
Miniature Golf Course	431	Holes	0.33	0%	0%	0.33
Golf Driving Range	432	Driving Positions	1.25	0%	0%	1.25
Batting Cages	433	Cages	2.22	0%	0%	2.22
Multipurpose Recreational Facility	435	1,000 sq. ft.	3.58	0%	0%	3.58
Movie Theater	445	Screens	13.96	15%	0%	11.87
Health/Fitness Club	492	1,000 sq. ft.	3.45	0%	0%	3.45
INSTITUTIONAL						
Elementary School	520	Students	0.16	0%	0%	0.16
Middle School/Junior High School	522	Students	0.15	0%	0%	0.15
High School	525	Students	0.14	0%	0%	0.14
Private School (K-8)	530	Students	0.26	0%	0%	0.26
Junior/Community College	540	Students	0.11	0%	0%	0.11
Place of Worship	560	1,000 sq. ft.	0.49	0%	0%	0.49
Day Care Center	565	Students	0.79	75%	0%	0.20
Hospital	610	1,000 sq. ft.	1.69	0%	0%	1.69
Clinic	630	1,000 sq. ft.	3.69	0%	0%	3.69
Animal Hospital/Veterinary Clinic	640	1,000 sq. ft.	3.53	0%	0%	3.53
Free-Standing Emergency Room	650	1,000 sq. ft.	1.52	0%	0%	1.52
OFFICE						
* General Office Building	710	1,000 sq. ft.	1.44	0%	0%	1.44
Small Office Building (<5,000 Sq Ft GFA)	712	1,000 sq. ft.	2.16	0%	0%	2.16
Medical-Dental Office Building	720	1,000 sq. ft.	3.93	0%	0%	3.93
Research and Development Center	760	1,000 sq. ft.	0.98	0%	0%	0.98
RETAIL						
* Shopping Center	820	1,000 sq. ft.	3.71	34%	26%	1.48
Hardware/Paint Store	816	1,000 sq. ft.	2.98	26%	28%	1.37
Shopping Center	820	1,000 sq. ft.	3.71	34%	26%	1.48
Supermarket	850	1,000 sq. ft.	8.95	36%	38%	2.34

Convenience Market	851	1,000 sq. ft.	49.11	63%	26%	5.40
Discount Club	857	1,000 sq. ft.	4.19	30%	30%	1.68
Home Improvement Superstore	862	1,000 sq. ft.	2.29	48%	24%	0.64
Office Supply Superstore	867	1,000 sq. ft.	2.77	30%	0%	1.94
Pharmacy/Drugstore w/ Drive-Through Window	881	1,000 sq. ft.	10.25	49%	13%	3.90
Furniture Store	890	1,000 sq. ft.	0.52	53%	31%	0.08
Drive-in Bank	912	Drive-in Lanes	21.01	47%	26%	5.67
Hair Salon	918	1,000 sq. ft.	1.45	25%	0%	1.09
Food Cart Pod	926	Food Carts	6.16	25%	0%	4.62
Fast Casual Restaurant	930	1,000 sq. ft.	12.55	43%	26%	3.89
Quality Restaurant	931	1,000 sq. ft.	7.8	44%	27%	2.26
High-Turnover (Sit-Down) Restaurant	932	1,000 sq. ft.	9.05	43%	26%	2.81
Fast-Food Restaurant w/ Drive-Through Window	934	1,000 sq. ft.	33.03	50%	23%	8.92
Coffee/Donut Shop w/ Drive-Through Window and No Indoor Seating	938	1,000 sq. ft.	15.08	50%	23%	4.07
Quick Lubrication Vehicle Shop	941	Service Positions	4.85	25%	0%	3.64
Automobile Parts Service Center	943	1,000 sq. ft.	2.06	0%	0%	2.06
Convenience Store/Gas Station	945	Fueling Positions	18.42	56%	31%	2.39
Car Wash and Detail Center	949	Wash Stalls	13.6	47%	26%	3.67
Drinking Place	975	1,000 sq. ft.	11.36	50%	0%	5.68
* Others Not Specified		1,000 sq. ft.				0.47

A local study may also be conducted to confirm rates in *Trip Generation* or to change rates reflecting local conditions. In such cases, a minimum of three similar sites should be counted. Selected sites should be isolated in nature with driveways that specifically serve the development and no other land uses. The results should be plotted on the scatter diagram of the selected land use contained in *Trip Generation* for comparison purposes. It is recommended that no change be approved unless the results show a variation of at least fifteen percent across the range of the sample size surveyed.

Trip Length

Trip lengths (in miles) are used in conjunction with site trip generation to estimate vehicle-miles of travel. Trip length data was retained from the previous impact fee study and was based on information from travel surveys conducted by the Capital Area Metropolitan Planning Organization, and travel characteristics from the U.S. Census Workplace Survey. A cross examination was made in relation to the current size of each service area and it was determined that the trip lengths, as defined, were a general representation of travel characteristics in Lockhart.

Table 4-2 summarizes the average trip lengths. These trip lengths represent the average distance that a vehicle will travel between an origin and destination of which either the origin or destination contains the land-use category identified below. Data compiled from data sources represents the best available information on trip lengths for this area.

Origin and Destination Adjustments

The assessment of an individual development's impact fee is based on the premise that each vehicle-trip has an origin and a destination and that the development end should pay for one-half of the cost necessary to complete each trip. To prevent the potential of double charging, trip lengths were divided by two to reflect half of the vehicle trip associated with development. **Table 4-2** illustrates the adjusted trip length.

Finally, as the service area structure was based on a six-mile boundary, those land uses that exhibited trip lengths greater than six miles would be capped to this threshold.

Table 4-2: Trip Lengths and Adjustments

ITE Land Use	ITE Code	Modeled Trip Length	Adjusted Trip Length
INDUSTRIAL			
* General Light Industrial	110	2.38	1.19
Industrial Park	130	2.38	1.19
Manufacturing	140	2.38	1.19
Warehousing	150	2.40	1.20
Mini-Warehouse	151	2.00	1.00
High-Cube Fulfillment Center Warehouse	155	2.40	1.20
Data Center	160	2.40	1.20
RESIDENTIAL			
* Single-Family Detached Housing	210	2.32	1.16
Multifamily Housing (Low-Rise)	220	2.32	1.16
Multifamily Housing (Mid-Rise)	221	2.32	1.16
Mid-Rise Residential with 1st-Floor Commercial	231	2.32	1.16
Senior Adult Housing - Detached	251	2.00	1.00
Continuing Care Retirement Community	255	2.00	1.00
COMMERCIAL			
Hotel	310	2.00	1.00
Golf Course	430	2.00	1.00
Miniature Golf Course	431	2.00	1.00
Golf Driving Range	432	2.00	1.00
Batting Cages	433	2.00	1.00
Multipurpose Recreational Facility	435	2.00	1.00
Movie Theater	445	2.00	1.00
Health/Fitness Club	492	2.00	1.00
INSTITUTIONAL			
Elementary School	520	1.60	0.80
Middle School/Junior High School	522	2.00	1.00
High School	525	2.00	1.00
Private School (K-8)	530	2.00	1.00
Junior/Community College	540	2.00	1.00
Place of Worship	560	2.00	1.00
Day Care Center	565	1.60	0.80
Hospital	610	2.00	1.00
Clinic	630	2.00	1.00
Animal Hospital/Veterinary Clinic	640	2.00	1.00
Free-Standing Emergency Room	650	2.00	1.00
OFFICE			
* General Office Building	710	2.32	1.16
Small Office Building (<5,000 Sq Ft GFA)	712	2.00	1.00
Medical-Dental Office Building	720	2.00	1.00
Research and Development Center	760	2.32	1.16
RETAIL			
* Shopping Center	820	2.00	1.00
Hardware/Paint Store	816	2.00	1.00
Shopping Center	820	2.00	1.00
Supermarket	850	2.00	1.00

Convenience Market	851	1.60	0.80
Discount Club	857	2.00	1.00
Home Improvement Superstore	862	2.00	1.00
Office Supply Superstore	867	2.00	1.00
Pharmacy/Drugstore w/ Drive-Through Window	881	2.00	1.00
Furniture Store	890	2.00	1.00
Drive-in Bank	912	2.00	1.00
Hair Salon	918	2.00	1.00
Food Cart Pod	926	2.00	1.00
Fast Casual Restaurant	930	2.00	1.00
Quality Restaurant	931	2.00	1.00
High-Turnover (Sit-Down) Restaurant	932	2.00	1.00
Fast-Food Restaurant w/ Drive-Through Window	934	2.00	1.00
Coffee/Donut Shop w/ Drive-Through Window and No Indoor Seating	938	2.00	1.00
Quick Lubrication Vehicle Shop	941	2.00	1.00
Automobile Parts Service Center	943	2.00	1.00
Convenience Store/Gas Station	945	1.60	0.80
Car Wash and Detail Center	949	2.00	1.00
Drinking Place	975	2.00	1.00
* Others Not Specified		2.00	1.00

Service Unit Equivalency Table

The result of combining the trip generation and trip length information is an equivalency table which establishes the service unit rate for various land uses. These service unit rates are based on an appropriate development unit for each land use. For example, a dwelling unit is the basis for residential uses, while 1,000 gross square feet of floor area is the basis for office, commercial, and industrial uses. Other less common land uses use appropriate independent variables.

Separate rates have been established for specific land uses within the broader categories of residential, commercial, industrial, and institutional to reflect the differences between land uses within the categories. However, even with these specific land use types, information is not available for every conceivable land use; so, limitations do exist. The updated equivalency table is illustrated in **Table 4-3**.

Service units for respective land uses were affected as a result of updated trip generation data in the latest ITE *Trip Generation* manual. Also, contributing to the change in service units was updated discount of trip generation for pass-by and diverted trips.

ROADWAY IMPACT FEE SERVICE UNITS

Table 4-3: Land Use Vehicle-Mile Equivalency

ITE Land Use	ITE Code	Dev. Unit	Avg. Trip Rate w/ Deductions	Avg. Trip Length	Veh-Mi Per Dev Unit
INDUSTRIAL					
* General Light Industrial	110	1,000 sq. ft.	0.65	1.19	0.77
Industrial Park	130	1,000 sq. ft.	0.34	1.19	0.40
Manufacturing	140	1,000 sq. ft.	0.74	1.19	0.88
Warehousing	150	1,000 sq. ft.	0.18	1.20	0.22
Mini-Warehouse	151	1,000 sq. ft.	0.15	1.00	0.15
High-Cube Fulfillment Center Warehouse	155	1,000 sq. ft.	0.16	1.20	0.19
Data Center	160	1,000 sq. ft.	0.09	1.20	0.11
RESIDENTIAL					
* Single-Family Detached Housing	210	DU	0.94	1.16	1.09
Multifamily Housing (Low-Rise)	220	DU	0.51	1.16	0.59
Multifamily Housing (Mid-Rise)	221	DU	0.39	1.16	0.45
Mid-Rise Residential with 1st-Floor Commercial	231	DU	0.17	1.16	0.20
Senior Adult Housing - Detached	251	DU	0.30	1.00	0.30
Continuing Care Retirement Community	255	DU	0.19	1.00	0.19
COMMERCIAL					
Hotel	310	Rooms	0.59	1.00	0.59
Golf Course	430	Holes	2.91	1.00	2.91
Miniature Golf Course	431	Holes	0.33	1.00	0.33
Golf Driving Range	432	Driving Positions	1.25	1.00	1.25
Batting Cages	433	Cages	2.22	1.00	2.22
Multipurpose Recreational Facility	435	1,000 sq. ft.	3.58	1.00	3.58
Movie Theater	445	Screens	11.87	1.00	11.87
Health/Fitness Club	492	1,000 sq. ft.	3.45	1.00	3.45
INSTITUTIONAL					
Elementary School	520	Students	0.16	0.80	0.13
Middle School/Junior High School	522	Students	0.15	1.00	0.15
High School	525	Students	0.14	1.00	0.14
Private School (K-8)	530	Students	0.26	1.00	0.26
Junior/Community College	540	Students	0.11	1.00	0.11
Place of Worship	560	1,000 sq. ft.	0.49	1.00	0.49
Day Care Center	565	Students	0.20	0.80	0.16
Hospital	610	1,000 sq. ft.	1.69	1.00	1.69
Clinic	630	1,000 sq. ft.	3.69	1.00	3.69
Animal Hospital/Veterinary Clinic	640	1,000 sq. ft.	3.53	1.00	3.53
Free-Standing Emergency Room	650	1,000 sq. ft.	1.52	1.00	1.52
OFFICE					
* General Office Building	710	1,000 sq. ft.	1.44	1.16	1.67
Small Office Building (<5,000 Sq Ft GFA)	712	1,000 sq. ft.	2.16	1.00	2.16
Medical-Dental Office Building	720	1,000 sq. ft.	3.93	1.00	3.93
Research and Development Center	760	1,000 sq. ft.	0.98	1.16	1.14
RETAIL					
* Shopping Center	820	1,000 sq. ft.	1.48	1.00	1.48
Hardware/Paint Store	816	1,000 sq. ft.	1.37	1.00	1.37
Shopping Center	820	1,000 sq. ft.	1.48	1.00	1.48
Supermarket	850	1,000 sq. ft.	2.34	1.00	2.34

ROADWAY IMPACT FEE SERVICE UNITS

Convenience Market	851	1,000 sq. ft.	5.40	0.80	4.32
Discount Club	857	1,000 sq. ft.	1.68	1.00	1.68
Home Improvement Superstore	862	1,000 sq. ft.	0.64	1.00	0.64
Office Supply Superstore	867	1,000 sq. ft.	1.94	1.00	1.94
Pharmacy/Drugstore w/ Drive-Through Window	881	1,000 sq. ft.	3.90	1.00	3.90
Furniture Store	890	1,000 sq. ft.	0.08	1.00	0.08
Drive-in Bank	912	Drive-in Lanes	5.67	1.00	5.67
Hair Salon	918	1,000 sq. ft.	1.09	1.00	1.09
Food Cart Pod	926	Food Carts	4.62	1.00	4.62
Fast Casual Restaurant	930	1,000 sq. ft.	3.89	1.00	3.89
Quality Restaurant	931	1,000 sq. ft.	2.26	1.00	2.26
High-Turnover (Sit-Down) Restaurant	932	1,000 sq. ft.	2.81	1.00	2.81
Fast-Food Restaurant w/ Drive-Through Window	934	1,000 sq. ft.	8.92	1.00	8.92
Coffee/Donut Shop w/ Drive-Through Window and No Indoor Seating	938	1,000 sq. ft.	4.07	1.00	4.07
Quick Lubrication Vehicle Shop	941	Service Positions	3.64	1.00	3.64
Automobile Parts Service Center	943	1,000 sq. ft.	2.06	1.00	2.06
Convenience Store/Gas Station	945	Fueling Positions	2.39	0.80	1.92
Car Wash and Detail Center	949	Wash Stalls	3.67	1.00	3.67
Drinking Place	975	1,000 sq. ft.	5.68	1.00	5.68
* Others Not Specified		1,000 sq. ft.	0.47	1.00	0.47

Chapter 5 Existing Conditions Analysis

Chapter 395 identifies specific requirements in the capital improvements plan for impact fees. The existing condition, including defining the existing roadway system, analysis of the total capacity, the level of current usage, and commitments for usage of the existing roadway, are required as part of the capital improvements plan. This chapter discusses the existing conditions.

EXISTING CONDITIONS

An inventory of the collector and arterial roadway facilities was conducted to determine capacity provided by the existing roadway system, the demand currently placed on the system, and the potential existence of deficiencies on the system. Data for the inventory was obtained from field reconnaissance, peak hour traffic volume count data, and city staff input.

Roadway Service Capacities

The roadways were divided into segments based on changes in lane configuration, major intersections, or area development that may influence roadway characteristics. For individual segment assessment, lane capacities were assigned to each segment based on roadway functional class and type of cross-section as shown in **Table 5-1**. Roadway hourly volume capacities are based on general carrying capacity values and reflect level-of-service "D" operation, which is typically identified as the minimum acceptable traffic operational condition by cities.

Table 5-1: Roadway Facility Vehicle Lane Capacities

ROADWAY FACILITY	DESIGNATION	HOURLY VEHICLE CAPACITY PER LANE-MILE OF ROADWAY FACILITY
Undivided Collector	UC	500
Divided Collector	DC	550
Special Collector *	SC	550
Undivided Arterial	UA	600
Divided Arterial	DA	700
Special Arterial *	SA	700

*Roadway with continuous two-way left turn lane

Existing Volumes

Current directional PM peak hour volumes were obtained from traffic counts collected at fifteen locations in late August 2022. Care was taken to ensure school was in session to represent a more accurate reading of typical week PM peak hour travel in the city. These traffic counts were collected on major roadways throughout the city. For segments not counted, existing volumes were used or estimates were developed based on data from adjoining roadway counts.

This data was compiled for roadway segments throughout the city and entered into the database for use in calculations. A summary of volumes by roadway segment is included in the **Appendix B** as part of the existing capital improvements database.

Vehicle-Miles of Existing Capacity (Supply)

An analysis of the total capacity for each service area was performed. For each roadway segment, the existing vehicle-miles of capacity supplied were calculated using the following:

Vehicle-Miles of Capacity = Link capacity per peak hour per lane x No. of Lanes x Length of segment (miles)

A summary of the current capacity available on the roadway system is shown in **Table 5-2**. It is important to note that the roadway capacity depicted in **Table 5-2** is system-wide for all roadways and not restricted to those roadways proposed in the impact fee capital improvements plan. For a detailed listing of vehicle-miles of capacity by roadway segment, refer to **Appendix B**.

Vehicle-Miles of Existing Demand

The level of current usage in terms of vehicle-miles was calculated for each roadway segment. The vehicle-miles of existing demand were calculated by the following equation:

Vehicle-Miles of Demand = PM peak hour volume x Length of segment (miles)

Table 5-2 also lists total vehicle-miles of demand. **Appendix B** includes a detailed listing of vehicle-miles of demand by directional roadway segment.

Vehicle Miles of Existing Excess Capacity or Deficiencies

For each roadway segment, the existing vehicle-miles of excess capacity and/or deficiencies were calculated. Each direction was evaluated to determine if vehicle demands exceeded the available capacity. If demand exceeded capacity in one or both directions, the deficiency is deducted from the supply associated with the impact fee capital improvement plan. A summary of peak hour excess capacity and deficiencies is also shown in **Table 5-2**. A detailed listing of existing excess capacity and deficiencies by roadway segment is also located in the **Appendix B**.

Table 5-2: Peak Hour Vehicle-Miles of Existing Capacity, Demand, Excess Capacity and Deficiencies

SERVICE AREA	CAPACITY	DEMAND	EXCESS CAPACITY	EXISTING DEFICIENCIES
1	21,115	9,051	12,064	0
2	31,826	11,845	19,981	0
Total	52,941	20,896	32,045	0

Chapter 6 Projected Conditions Analysis

Chapter 395 requires a description of all capital improvements or facility expansions and their costs necessitated by and attributable to new development within the service area. This section describes the projected growth, vehicle-miles of new demand, capital improvements program, vehicle-miles of new capacity supplied, and costs of the roadway improvements.

PROJECTED GROWTH

The projected growth for each roadway service area is represented by the increase in the number of new vehicle-miles generated over the 10-year planning period. The basis for the calculation of new demand is the population and employment projections that were prepared as part of the Land Use Assumptions Report for Impact Fees. Estimates of population and employment were prepared for the years 2022 and 2032.

Population data was provided in terms of the number of dwelling units and persons. Employment data was broken into three classes of employees that include basic, retail, and service, with institutional employment being included under service employment, and comprise a variety of employment groupings. Basic employment generally encompasses the industrial and manufacturing uses; retail employment includes commercial and retail uses; and service employment generally encompasses government and office uses. A summary of the projected growth is summarized in **Table 3-4**.

Projected Vehicle-Miles of New Demand

Projected vehicle-miles of demand were calculated based on the net growth expected to occur over the 10-year planning period and the service unit generation for each of the population and employment data components (basic, service and retail). Separate calculations were performed for each data component and were then aggregated for the service area. Vehicle-miles of demand for population growth were based on dwelling units (residential), and vehicle-miles of demand for employment were based on the number of employees and estimates of square footage per employee (industrial, office and retail uses). **Table 6-1** lists the 10-year projected vehicle-miles of demand by service area for Lockhart. **Appendix C** details the derivation of the projected demand calculations.

In 2007 and 2017, the ten-year VMT was 3,270 and 3,868, respectively. This ten-year VMT of 4,151 for 2022 correlates with the continued growth in the community.

Table 6-1: 10-Year Projected Service Units of Demand

SERVICE AREA	PROJECTED 10-YEAR GROWTH (VEHICLE-MILES)
1	1,257
2	2,894
TOTAL	4,151

CAPITAL IMPROVEMENTS PLAN

The impact fee capital improvements plan is aimed at facilitating long-term growth in Lockhart. Considerations in the development of the impact fee IFCIP include community growth (land use assumptions), financial considerations, project achievability, the Thoroughfare Plan, and City Staff input.

Eligible Projects

Legislative mandate stipulates that the impact fee IFCIP contain only those roadways which are included on the City's official Thoroughfare Plan that are classified as *arterial* or *collector* status facilities. A review of the Thoroughfare Plan identified projects which were eligible for consideration by impact fees. Impact fee legislation also allows for the recoupment of costs for previously constructed facilities. Only costs incurred by the City may be considered for impact fees. Roadways constructed with private funding cannot be included for impact fee consideration. Additionally, state facilities are eligible for inclusion to the impact fee system, however, only costs incurred by the City may be eligible for consideration.

Eligible Costs

In general, those costs associated with the design, right-of-way acquisition, and construction and financing of all items necessary to implement the roadway projects identified in the capital improvements plan are eligible. It is important to note that upon completion of the capital improvements identified in the IFCIP, the city must recalculate the impact fee using the *actual* costs and make refunds if the actual cost is less than the impact fee paid by greater than 10 percent. To prevent this situation, conservative estimates of project cost are considered.

Chapter 395.012 identifies roadway costs eligible for impact fee recovery. The law states that:

> "An impact fee may be imposed only to pay the cost of constructing capital improvements for facility expansions, including and limited to the construction contract price, surveying and engineering fees, land acquisition costs, including land purchases, court awards and costs, attorney fees, and expert witness fees; and fees actually paid or contracted to be paid

to an independent qualified engineer or financial consultant preparing or updating the capital improvements plan who is not an employee of the political subdivision."

"Projected interest charges and other finance costs may be included in determining the amount of impact fees only if the impact fees are used for the payment of principal and interest on bonds, notes, or other obligations issued by or on behalf of the political subdivision to finance the capital improvements or facility expansions identified in the capital improvements plan and are not used to reimburse bond funds expended for facilities that are not identified in the capital improvements plan."

The following details the individual cost components of the impact fee IFCIP.

Construction: Construction costs include those costs which are normally associated with construction, including: paving, dirt work (including sub-grade preparation, embankment fill and excavation), clearing and grubbing, retaining walls or other slope protection measures, and general drainage items which are necessary to build the roadway and allow the roadway to fulfill its vehicle carrying capability. Individual items may include bridges, culverts, inlets and storm sewers, junction boxes, man holes, curbs and/or gutters, and channel linings and other erosion protection appurtenances. Other items included in cost estimates may include: sidewalks, traffic control devices at select locations (initial cost only), and minimal sodding/landscaping.

Engineering: These are the costs associated with the design and surveying necessary to construct the roadway. Because the law specifically references fees, it has generally been understood that in-house City design and surveying cannot be included. Only those services that are contracted out can be included and it may be necessary to use outside design and surveying firms to perform the work. For planned projects, a percentage (7%) based on typical engineering contracts was used to estimate these fees.

Right-of-Way: Any land acquisition cost estimated to be necessary to construct a roadway can be included in the cost estimate. For planning purposes, only the additional amount of land needed to bring a roadway right-of-way to thoroughfare standard was considered. For example, if a 80' right-of-way for an arterial road was needed and 60' of right-of-way currently existed, only 20' would be considered in the acquisition cost. A conservative cost of $1.00 per square foot was assumed in the cost of ROW acquisition.

Debt Service: Predicted interest charges and finance costs may be included in determining the amount of impact fees only if the impact fees are used for the payment of principal and interest on bonds, notes, or other obligations issued by the city to finance capital improvements identified in the impact fee capital improvements plans. They cannot be used to reimburse bond funds for other facilities. Debt service of 3% over 10-years was assumed.

Study Updates: The fees paid or contracted to be paid to an independent qualified engineer or financial consultant preparing or updating the capital improvements plan who is not an employee of the political subdivision can be included in the impact fees.

Only the cost necessitated by new development will be considered for impact fee consideration. For example, if only 60% of the capacity provided by the impact fee CIP is needed over the ten-year window, then only 60% of the cost associated with those facilities will be considered.

Staff Input and Project Achievability

City Staff contributed to the identification of potential projects based on historic and projected growth and known/anticipated development activity within the city. An initial project list was compiled and reviewed with Staff prior to presentation to the IFAC. City Staff identified several projects that were recently completed or are anticipated to be funded and built by an upcoming bond program.

The proposed impact fee capital improvements plan was presented to the IFAC for discussion and consideration on December 14, 2022.

Capital Improvements Plan

During this programmatic update, several projects were added and removed from the impact fee capital improvement plan (IFCIP). The projects removed were those that were completed and have now been fully funded or projects that are no longer seen as likely projects to be implemented. The projects removed include:

- Maple (San Jacinto to Mockingbird; built)
- Maple (Mockingbird to about Lantana Avenue; built)
- Market (Carver to FM 672)
- McMillen/R.E. Lee (End of existing McMillen to MLK Jr. Industrial Blvd.)

Projects that were added include:

- Mockingbird (N. of Shenandoah Tr. to FM 2001/Silent Valley)
- Horseshoe Road (Mockingbird Ext. to FM 2001/Silent Valley)
- Old Fentress Road (City Line to SH130)
- CR220/Cunningham (MLK Jr. Industrial to W. City Limit)
- Old Kelley Road (FM20/Blackjack to Shady Lane)
- Shady Lane (Old Kelley to FM20/Blackjack)
- Lovers Lane (Old Kelley to Existing Lovers Lane)

The updated IFCIP consist of seventeen project segments. Only those segments of projects lying within or along the city limits were included in the impact fee capital improvements plan.

PROJECTED CONDITIONS ANALYSIS

Project costs were updated based on unit cost estimates compiled by Freese and Nichols. Individual project cost estimates can be found in **Appendix E**. These construction estimates included all appurtenances called for in the city construction standards. Other costs were updated for engineering, right-of-way, construction, and debt service based on the following:

- Engineering/surveying – 7% of construction costs
- Right-of-way acquisition - $1.00/s.f.
- Debt service – 3% compounded annually over ten-years

Additionally, impact fee study update costs were included to the project costs at a rate of two five-year updates at $50,000 each. The cost for the revised IFCIP program totals approximately $44.0 million. **Figure 6-1** and **Table 6-2** illustrate and list the capital improvement projects and their associated total cost for the impact fee system.

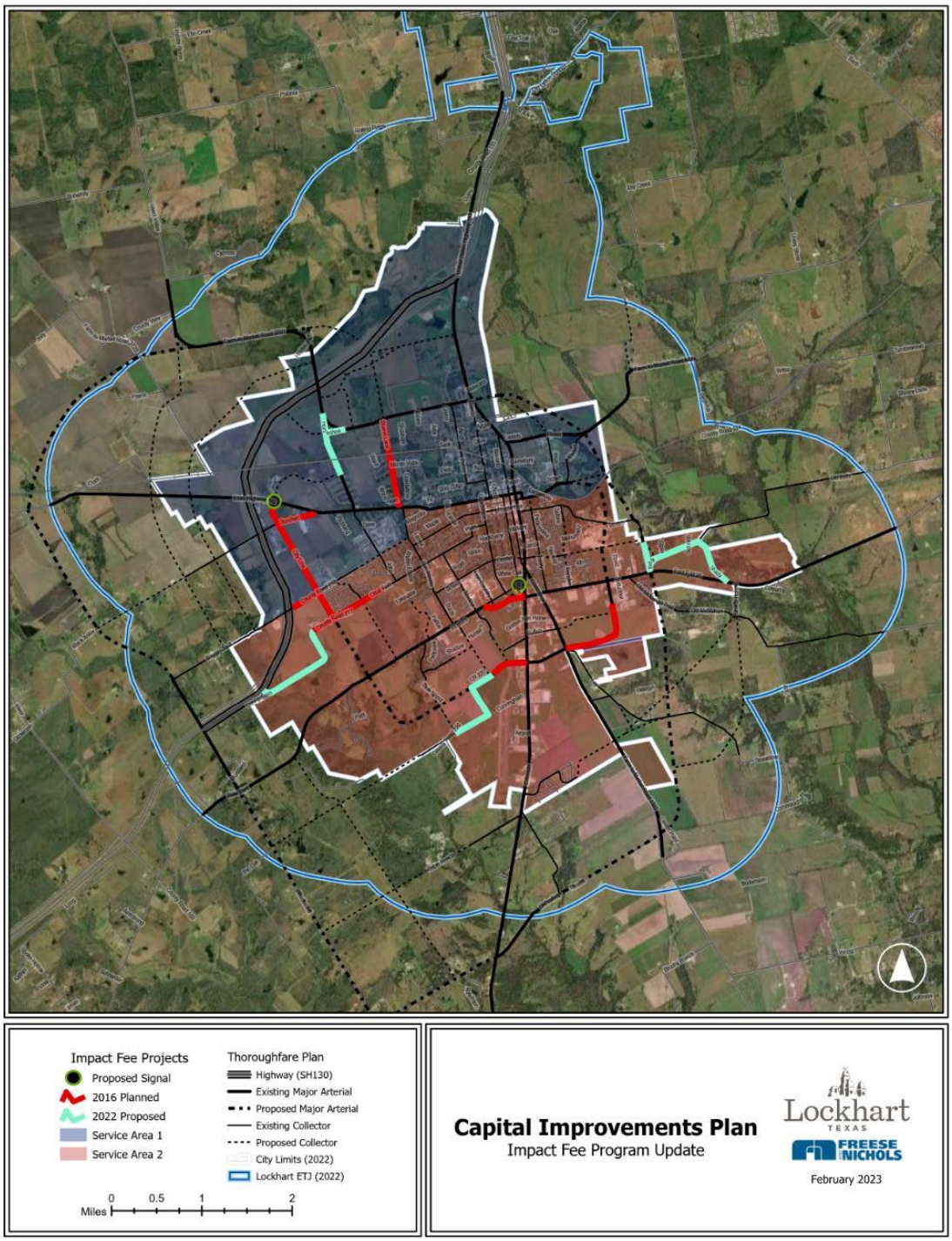

Figure 6-1: Roadway Impact Fee Projects

Table 6-2: Roadway Impact Fee Project Listing

Serv Area	Shared Svc Area	Project Type	Roadway	From	To	Length (mi)	Lanes	Type	Pct. in Serv. Area	Total Project Cost
1		N	Stueve Lane	W. San Antonio	FM 2001 (Silent Valley)	0.85	2	UC	100%	$ 3,749,391
1		N	Borchert	City Line	W. San Antonio	0.37	2	UC	100%	$ 1,477,100
1	2	N	Maple	City Line	SH 130	0.28	3	SC	50%	$ 570,603
1		N	City Line	Maple	W. San Antonio	0.98	4	UA	100%	$ 5,962,908
1		N	Mockingbird Ext.	N. of Shenandoah Tr.	FM 2001 (Silent Valley)	0.59	4	UA	100%	$ 3,876,876
1		N	Horseshoe Rd.	Mockingbird Ext.	FM 2001 (Silent Valley)	0.16	4	UA	100%	$ 888,757
Sub-Total Service Area 1						**3.23**				**$ 16,525,634**
2		N	Old Fentress Rd	City Line Rd	SH130	1.21	2	UC	100%	$ 4,851,400
2		N	Clear Fork St	City Line Rd	250' W. of Creek Bridge	0.59	2	UC	100%	$ 2,352,816
2	1	N	Maple	City Line	SH 130	0.28	3	SC	50%	$ 570,603
2		N	Main	State Park	Blackjack	0.11	3	SC	100%	$ 803,274
2		N	FM 20 Realignment	W. of Guadalupe	Colorado	0.41	2	UA	100%	$ 2,018,994
2		N	MLK Jr Industrial Blvd.W	Colorado	Cunningham	0.59	4	UA	100%	$ 3,353,255
2		N	MLK Jr Industrial Blvd. E	Commerce	E MLK Jr Industrial	0.82	2	UA	100%	$ 3,740,810
2		N	City Line	Clear Fork	Maple	0.29	4	UA	100%	$ 1,655,996
2		N	CR220/Cunningham	MLK Jr Industrial Blvd.	W. City Limit	0.64	2	UC	100%	$ 2,800,911
2		N	Old Kelley Rd	FM20/Blackjack St	Shady Ln	0.59	2	UC	100%	$ 2,388,289
2		N	Shady Ln	Old Kelley	FM20/Blackjack St	0.49	2	UC	100%	$ 1,957,863
2		N	Lovers Ln	Old Kelley	Existing Lovers Ln	0.23	2	UC	100%	$ 1,018,045
Sub-Total Service Area 2						**6.26**				**$ 27,512,257**
Totals:						***9.21***				***$ 44,037,891***
									x-check	$ 44,037,891

Summary:		
	Engineering Cost	$ 2,215,647
	Right-of-Way Cost	$1,646,918
	Construction Cost	$31,652,100
	Finance Cost	$7,923,226
	TOTAL NET COST	$44,037,891
	Future IF Study Update Cost	$100,000
	TOTAL IMPLEMENTATION COST	$44,137,891
	50% Percent Credit	$22,068,946

Notes:

UA - Undivided Arterial

UC - Undivided Collector

SC - Special Collector with two-way left turn lane (TWLTL)

Projected Vehicle-Miles Capacity Available for New Growth

The vehicle-miles of new capacity supply were calculated like the vehicle-miles of existing capacity supplied. The equation used was:

Vehicle-Miles of New Capacity = Link capacity per peak hour per lane x No. of Lanes x Length of segment (miles)

Vehicle-miles of new supply provided by the IFCIP are listed in **Table 6-3**. While the project has not been built, there are system deficiencies (by service area) that have been removed from the total supply as existing utilization to properly account for new "net" availability. **Table 6-3** depicts net availability of supply by the IFCIP. **Appendix D** details capacity calculations provided by the IFCIP program.

Table 6-3: Capacity, Net Capacity and Projected Needs of the Road IFCIP

SERVICE AREA	VEH-MILES OF NEW CAPACITY SUPPLIED	VEH-MILES OF EXISTING UTILIZATION	VEH-MILES OF DEFICIEN-CIES	VEH-MILES OF NET CAPACITY SUPPLIED	PROJECTED 10-YEAR VEH-MILES OF GROWTH	PCT. OF IFCIP ATTRIBUTABLE TO 10-YR GROWTH
1	5,516	367	0	5,149	1,260	24.5%
2	7,631	474	0	7,157	2,897	40.5%
Total	13,147	841	0	12,306	4,156	33.8%

Cost of Roadway Improvements

The total IFCIP cost, including study update costs, with 50% credit and cost of net capacity supplied to implement the roadway improvements plan projects by service area is shown in **Table 6-4**. If traffic exists on proposed IFCIP project roadways or there are any deficiencies present in each respective service area, the total system cost is adjusted to reflect the net capacity being made available by the impact fee program. In other words, only the unused portion of the IFCIP and its associated costs are considered eligible. A detailed listing by project segment in each service area can be found in **Appendix E**. **Appendix F** details system costs by service area.

Table 6-4: Summary of Roadway Improvements Plan Cost Analysis

SERVICE AREA	TOTAL COST OF IFCIP PROJECTS (INCLUDING IMPACT FEE UPDATE COST)	TOTAL COST OF IFCIP PROJECTS (WITH 50% IFCIP CREDIT)	COST OF NET CAPACITY SUPPLIED (WITH 50% IFCIP CREDIT)	PCT. OF IFCIP ATTRIBUT-ABLE TO GROWTH	IFCIP COST ATTRIBUTABLE TO GROWTH
1	$16,567,590	$8,283,795	$7,732,643	24.5%	$1,892,237
2	$27,570,301	$13,785,151	$12,928,885	40.5%	$5,233,335
Total	$44,137,891	$22,068,946	$20,661,529	33.8%	$7,125573

Chapter 7 Calculation of Impact Fees

This chapter discusses the calculation of the cost per service unit and the calculation of roadway impact fees. The roadway impact fee will vary by the specific land use, service area, and size of the development. Examples are included to better illustrate the method by which the roadway impact fees are calculated.

COST PER SERVICE UNIT

The cost per service unit is calculated by dividing the cost of the IFCIP necessitated and attributable to new demand (net cost) by the projected service units of growth over the 10-year planning period.

Generally, the cost per service unit varies by service area because of; the net capacity being provided by the proposed projects, variations in cost of IFCIP and, the number of service units necessitated by new growth in each impact fee service area. Where net capacity supplied is greater than demand, the cost per service unit is simply the cost of the net capacity divided by the number of service units provided. In this case, only the portion of the IFCIP necessitated by new development is used in the calculation. If net capacity supplied is *less* than projected new demand, then the cost per service unit is calculated by dividing the total cost of net supply by the portion of new demand attributable and necessary by development. The result is a decrease in the cost per service unit, because such cost is spread over the larger number of service units of growth.

Table 7-1 lists the results of the cost per service unit calculation by service area. The actual cost per service unit reflects the true burden to the City for the implementation of the roadway capital improvements program. As per state law, a credit for the portion of ad-valorem tax revenues generated by improvements over the program period, or a credit equal to 50% of the total projected cost of implementing the capital improvements plan must be given. Based on this analysis, the maximum collection rate reflects the maximum amount per service unit that can be charged to be in compliance with the state statute. **Appendix F** details the maximum fee per service unit calculation for each service area.

Table 7-1: Cost per Service Unit Summary

SERVICE AREA	ACTUAL COST PER SERVICE UNIT	MAXIMUM ALLOWABLE (50%) COST PER SERVICE UNIT
1	$3,002	$1,501
2	$3,612	$1,806

CALCULATION OF IMPACT FEES

CALCULATION OF ROADWAY IMPACT FEES

The calculation of roadway impact fees for new development involves a two-step process. *Step One* is the calculation of the total number of service units that will be generated by the development. *Step Two* is the calculation of the impact fee due by the new development.

Step 1: Determine number of service units (vehicle-miles) generated by the development using the equivalency table.

No. of Development Units	x	Vehicle-miles per development unit	=	Development's Vehicle-miles

Step 2: Calculate the impact fee based on the fee per service unit for the service area where the development is located.

Development's Vehicle-miles	x	Fee per vehicle-mile	=	Impact Fee due from Development

Examples: *The following fees would be assessed to new developments in Lockhart in Service Area 1 if the cost per service unit were $1,501.00*

Single-Family Dwelling

1 dwelling unit x 1.09 vehicle-miles/dwelling unit = 1.09 vehicle-miles

1.09 vehicle-miles x $1,501.00/vehicle-mile = **$1,636.09**

10,000 square foot (s.f.) Office Building

10 (1,000 s.f. units) x 1.67 vehicle-miles/1,000 s.f. units = 16.70 vehicle-miles

16.70 vehicle-miles x $1,501.00/vehicle-mile = **$25,066.70**

20,000 s.f. Retail Center

20 (1,000 s.f. units) x 1.47 vehicle-miles/1,000 s.f. units = 29.40 vehicle-miles

29.40 vehicle-miles x $1,501.00/vehicle-mile = **$44,129.40**

Chapter 8 Conclusion

Chapter 395 authorizes the assessment and collection of impact fees in Texas for road, water, and wastewater related capital improvements. This study was conducted to fulfill the requirements of Chapter 395 in updating the roadway impact fee system for the City of Lockhart.

Two (2) roadway service areas serve Lockhart and were amended to address recent annexations in the city. This service area structure was configured so that no two points are greater than six miles apart, as set forth by law. The six-mile limit ensures that roadway improvements are near the development paying the fees that it serves.

Vehicle-miles of travel in the PM peak hour was retained as the service unit for calculating and assessing impact fees. Vehicle-miles establish a relationship between the intensity of land development and the demand on the roadway system using published trip generation data and average trip length. The PM peak hour is used as the time for assessment because typically the greatest demand for roadway capacity occurs during this hour. Additionally, roadways are sized to meet this demand and roadway capacity can more accurately be defined on an hourly basis.

The service units (vehicle-miles) for new development are a function of trip generation and the average trip length for specific land uses. Trip generation information was based on data published by the Institute of Transportation Engineers. Where appropriate, trip generation rates were adjusted to reflect the primary trip purpose. This ensures that new development is assigned for the portion of trips associated with that specific development. Average trip length data retained from the previous study and was based on information from travel surveys conducted by the Capital Area Metropolitan Planning Organization, and travel characteristics from the U.S. Census Workplace Survey.

The result of combining trip generation and trip length information is an equivalency table that establishes a service unit rate for various land uses. Separate rates were established for specific land uses within the broader categories of residential, office, commercial/retail, industrial and institutional uses.

An analysis of existing conditions revealed that the current roadway system provides 52,941 vehicle-miles of capacity. The existing demand placed on the system was determined to be 20,896 vehicle-miles. Evaluation of the existing roadway system found no deficiencies on the existing roadway network.

Projected growth, in terms of vehicle-miles over the 10-year planning period, was based on population and employment data that was prepared in the Land Use Assumptions for Impact Fees. Based on this growth, the projected vehicle-miles of demand calculated to be 4,151.

CONCLUSION

Lockhart City Staff identified the roadway impact fee capital improvements program for the 10-year planning period. Projects eligible for this IFCIP include arterial and collector streets that have been designated on the officially adopted Thoroughfare Plan of the City. Developer funded roadways are not eligible for inclusion in calculating impact fees. Fourteen projects totaling $44.1 million, were identified for impact fee consideration based on need, projected growth, project affordability and achievability, financial considerations, jurisdictional issues, the Thoroughfare Plan, and staff recommendation. The credited (50%) cost attributable to new growth is $7.1 million and represents 33.7% of the net capacity made available for development by impact fee roadway projects. The recommended IFCIP program will provide 12,306 vehicle-miles of new net capacity.

The *actual* cost per service unit was calculated to be $3,002.00 in Service Area 1 and $3,612 in Service Area 2 and was based on the total cost of net capacity supplied by the IFCIP and the demand attributable to new development over the ten-year planning period. State legislation requires that a credit for the portion of ad-valorem tax revenues generated by improvements over the program period, or a credit equal to 50% of the total projected cost of implementing a roadway impact fee capital improvements program be given. Based on a 50% credit, the cost per service unit is $1,501.00 in Service Area 1 and $1,806 in Service Area 2.

The determination of fees due from new development is based upon the size of development, its associated service unit generation (equivalency table) and the cost per service unit derived or adopted for each service area.

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APPENDIX A: ROADWAY IMPACT FEE DEFINITIONS

APPENDICES

ROADWAY IMPACT FEE DEFINITIONS

Average Trip Length - the average actual travel distance between two points. The average trip length by specific land use varies.

Diverted Trip - similar to pass-by trip, but a diversion is made from the regular route to make an interim stop.

Impact Fee - a charge or assessment imposed by a city against new development to generate revenue for funding or recouping roadway improvements necessitated and attributable to new development.

Maximum Fee Per Service Unit - the highest impact fee that may be collected by the city per vehicle-mile of supply. Calculated by dividing the costs of the capital improvements by the total number of vehicle-miles of demand expected in the ten-year planning period.

Pass-by Trip - a trip made as an intermediate stop on the way from an origin to a primary trip destination. For example, a stop at a convenience store on the way to office from home.

PM Peak Hour - the hour when the highest volume of traffic typically occurs. Data collection revealed the peak hour of travel to be between 5:00 and 6:00 pm.

PM Peak Hour Traffic Counts - the number of vehicles passing a certain point during the peak hours of travel. Traffic counts are conducted during the PM peak hour because the greatest demand for roadway capacity occurs during this hour.

Primary Trip - a trip made for the specific purpose of visiting a destination; for example, from home to office.

Roadway Demand - the demand placed on the roadway network as a result of development. Determined by multiplying the trip generation of a specific land use by the average trip length.

Roadway Supply (or Capacity) - the number of service units provided by a segment of roadway over a period of time. Determined by multiplying the lane capacity by the roadway length.

Service Area - the area within the city boundaries to be served by capital improvements. Criteria for developing the service area structure include: 1) restricted to six-mile limit by legislation (to ensure proximity of roadway improvements to development), 2) conforms to census or forecast model boundaries, 3) projects on IFCIP as boundaries, 4) effort to match roadway supply with projected demand, and 5) city limit boundaries.

Service Unit - a measure of use or generation attributable to new development for roadway improvements. Also used to measure supply provided by existing and proposed roadway improvements.

Trip - a single, one-direction vehicle movement from an origin to a destination.

Trip Generation - the total trip ends for a land use over a given period or the total of all trips entering and exiting a site during that designated time. Used in the development of ten-year traffic demand projections and the equivalency table. Based primarily on data prepared by the Institute of Transportation Engineers (ITE).

Vehicle - for impact fee purposes, any motorized appurtenance that carries passengers and/or goods on the roadway system during peak periods of travel.

Vehicle-mile - a unit used to express both supply and demand provided by, and placed on, the roadway system. A combination of the number of vehicles traveling during a given time period and the distance which those vehicles travel in miles.

APPENDIX B: EXISTING CAPITAL IMPROVEMENTS

APPENDICES

Definitions

LANES	The total number of lanes in both directions available for travel.
TYPE	The type of roadway (used in determining capacity): DA = divided arterial UA = undivided arterial DC = divided collector UC = undivided collector SC = special collector (roadway with continuous left turn) SA = special arterial (roadway with continuous left turn)
PK-HR VOLUME	The existing volume of cars on the roadway segment traveling during the afternoon (P.M.) peak hour of travel. A and B indicate the two directions of travel. Direction A is a northbound or eastbound and direction B is southbound or westbound. If only one half of the roadway is located within the service area (see % in service area), the opposing direction will have no volume in the service area.
% IN SERVICE AREA	If the roadway is located on the boundary of the service area (with the city limits running along the centerline of the roadway), then half of the roadway is inventoried in the service area and the other half is not. This value is either 50% or 100%.
VEH-MI SUPPLY TOTAL	The number of total service units (vehicle-miles) supplied within the service area, based on the length and established capacity of the roadway type.
VEH-MI TOTAL DEMAND PK-HR	The total service unit (vehicle-mile) demand created by existing traffic on the roadway segment in the afternoon peak hour.
EXCESS CAPACITY PK-HR VEH-MI	The number of service units supplied but unused by existing traffic in the afternoon peak hour.
EXISTING DEFICIENCIES PK-HR VEH-MI	The number of service units of demand more than the service units supplied.

NOTE: Excess capacity and existing deficiencies are calculated separately for each direction. It is possible to have excess capacity in one direction and an existing deficiency in the other. When both directions have excess capacity or deficiencies, the total for both directions are presented.

APPENDICES

Lockhart Roadway Impact Fee Study Update
2022 Capital Improvements Analysis

Serv Area	Shared Svc Area	Roadway	From	To	No. of Lanes	Type	A	B	Total	VMT Supply Pk Hr Total	VMT Demand Pk Hr Total	Excess VMT Capacity	Exist. VMT Deficiency
1		Colorado (US183)	N. City Limits	Silent Valley	4	UA	651	728	1,378	4,488	2,578	1,910	0
1		Colorado (US183)	Silent Valley	UP RR	4	UA	676	756	1,432	1,872	1,117	755	0
1		Colorado (US183)	UP RR	Pecan St	4	UA	750	1100	1,850	264	204	61	0
1		Colorado (US183)	Pecan St	San Antonio (SH142)	5	SA	777	1125	1,902	308	209	99	0
1	2	Colorado (US183)	San Antonio (SH142)	Market	5	SA	835	0	835	84	50	34	0
1		Silent Valley (FM2001)	N. City Limits	Stueve Lane	2	UA	170	213	383	948	303	645	0
1		Silent Valley (FM2001)	Stueve Lane	Colorado (US183)	2	UA	166	208	374	1,056	329	727	0
1		Flores (FM 672)	Colorado (US183)	E. City Limit	2	UA	86	61	147	1,188	146	1,042	0
1		San Antonio (SH142)	W. City Limits	Borchert	2	UA	409	545	954	1,836	1,460	376	0
1		San Antonio (SH142)	Borchert	San Jacinto	2	UA	557	554	1,111	1,020	944	76	0
1	2	San Antonio (SH142)	San Jacinto	Colorado (US183)	2	UA	0	472	472	636	500	136	0
1		Commerce	Colorado (US183)	San Antonio (SH142)	2	UC	41	39	80	590	47	543	0
1		Blanco	San Antonio (SH142)	Olive	2	UC	120	185	305	550	168	382	0
1		Blanco	Olive	Colorado (US183)	2	UC	170	232	402	400	161	239	0
1		Pecos	Bois D'Arc	Silent Valley	2	UC	60	75	135	760	103	657	0
1		Stueve Lane	San Antonio (SH142)	Silent Valley	2	UC	81	83	164	850	139	711	0
1		City Line Road	Borchert	San Antonio (SH142)	2	UA	77	89	166	300	42	259	0
1		FM 2720	San Antonio (SH142)	N. City Limit	2	UC	108	144	252	630	159	471	0
1		Pecan	Colorado (US183)	Blanco	2	UA	136	94	230	300	57	243	0
1		Bois D'Arc	Blanco	Medina	2	UC	98	64	162	540	87	453	0
1		Bois D'Arc	Medina	San Antonio (SH142)	2	UC	78	44	122	300	36	264	0
1		Borchert	San Antonio (SH142)	W. City Limit	2	UC	81	83	164	900	148	752	0
1		Carver	Market	End	2	UC	28	12	40	360	14	346	0
1	2	Market	Colorado (US183)	RR	2	UC	0	19	19	135	5	130	0
1		Market	RR	Flores	2	UC	37	19	56	800	45	755	0
Sub-Total Service Area 1										**21,115**	**9,051**	**12,064**	**0**
2	1	Colorado (US183)	San Antonio (SH142)	Market	5	SA	0	1,151	1,151	84	69	15	0
2		Colorado (US183)	Market	Hickory	5	SA	835	1100	1,935	728	503	225	0
2		Colorado (US183)	Hickory	S. Commerce St.	5	SA	855	1075	1,930	1,036	714	322	0
2		Colorado (US183)	S. Commerce St.	FM 20/Blackjack St.	5	SA	904	958	1,862	784	521	263	0
2		Colorado (US183)	FM 20/Blackjack St.	CR 220	5	SA	904	958	1,862	2,548	1,694	854	0
2		Colorado (US183)	CR 220	S. Walmart Drive	5	SA	904	958	1,862	1,131	752	379	0
2		Colorado (US183)	S. Walmart Drive	S. City Limit	4	UA	850	900	1,750	2,020	1,473	547	0
2	1	San Antonio (SH142)	San Jacinto	Colorado (US183)	2	UA	378	0	378	636	401	235	0
2		FM 20/State Park	W. City Limits	San Jacinto	2	UA	*114*	*130*	245	1,428	291	1,137	0
2		FM 20/State Park	San Jacinto	Colorado (US183)	2	UA	347	395	742	960	594	366	0
2		FM 20/Blackjack St.	Colorado (US183)	S. Commerce St.	2	UA	471	286	757	168	106	62	0
2		FM 20/Blackjack St.	S. Commerce St.	Old McMahan Trail	2	UA	412	264	676	1,044	588	456	0
2		FM 20/Blackjack St.	Old McMahan Trail	E. City Limit	2	UA	346	158	504	1,715	720	995	0
2		S Commerce/FM 1322	San Antonio (SH142)	Live Oak	2	UC	130	133	263	190	50	140	0
2		S Commerce/FM 1322	Live Oak	Colorado (US183)	2	UC	122	127	249	530	132	398	0
2		S Commerce/FM 1322	Colorado (US183)	FM 20/Blackjack St.	2	UA	114	123	237	300	59	241	0
2		S Commerce/FM 1322	FM 20/Blackjack St.	S. City Limit	2	UA	*83*	*106*	189	2,064	325	1,739	0
2		Main	State Park	Live Oak	2	UC	*140*	*108*	248	660	164	496	0
2		Main	Live Oak	San Antonio (SH142)	2	UC	*208*	*203*	411	190	78	112	0
2		Guadalupe	State Park	Center	2	UC	*11*	*40*	51	310	16	294	0
2		Guadalupe	Center	San Antonio (SH142)	2	UC	*50*	*62*	112	600	67	533	0
2		Medina	FM 20/State Park	Clear Fork	2	UC	161	144	305	610	186	424	0
2		San Jacinto	FM 20/State Park	Clear Fork	2	UC	*253*	*270*	523	630	330	300	0
2		San Jacinto	San Antonio (SH142)	Maple	2	UC	134	163	297	300	89	211	0
2		San Jacinto	Maple	Clear Fork	2	UC	104	133	237	290	69	221	0
2		Mockingbird	San Antonio (SH142)	Clear Fork	2	UC	70	73	143	290	41	249	0
2		City Line Road	Clear Fork	Maple	2	UC	*56*	*66*	122	290	35	255	0
2		Prairie Lea	Colorado (US183)	Guadalupe	2	UC	240	212	452	330	149	181	0
2		Prairie Lea	Guadalupe	San Jacinto	2	UC	147	112	259	770	199	571	0
2		Live Oak	Guadalupe	Colorado (US183)	2	UC	*225*	*296*	521	330	172	158	0
2		Live Oak	Brazos	Monument	2	UC	*113*	*148*	262	340	89	251	0
2		Clear Fork	Frio	San Jacinto	2	UC	128	183	311	560	174	386	0
2		Clear Fork	San Jacinto	City Line Road	2	UC	77	107	184	990	182	808	0
2		Center	Main	Medina	2	UC	*161*	*144*	305	590	180	410	0
2		Center	Medina	San Jacinto	2	UC	154	76	230	250	58	193	0
2		Trinity	FM 20/Blackjack St.	Pin Oak	2	UC	65	107	172	320	55	265	0
2		Trinity	Pin Oak	Live Oak	2	UC	85	96	181	450	81	369	0
2		Pancho	FM 20/Blackjack St.	Fifth	2	UC	*21*	*39*	60	130	8	122	0
2		Torres	FM 20/Blackjack St.	Fifth	2	UC	*9*	*12*	21	140	3	137	0
2	1	Market	Colorado (US183)	RR	2	UC	28	0	28	135	8	127	0
2		Pin Oak	Colorado (US183)	Trinity	2	UC	*18*	*12*	30	140	4	136	0
2		E. MLK Jr Industrial Blvd	Colorado (US183)	S Commerce/FM 1322	2	UC	59	60	119	270	32	238	0
2		W. MLK Jr Ind. Blvd/CR220	Cunningham	S Commerce/FM 1322	2	UC	9	12	21	1,010	21	989	0
2		Old McMahan Tr (CR208)	FM 20/Blackjack St.	S. City Limit	2	UC	*49*	*28*	77	370	28	342	0
2		City Line Road	Maple	Borchert	2	UC	56	66	122	770	94	676	0
2		Mockingbird	Maple	San Antonio (SH142)	2	UC	70	73	143	500	72	429	0
2		Maple St/Boggy Creek Rd	W. City Limits	City Line Road	2	UC	33	27	60	641	38	602	0
2		Maple Street	City Line Road	Mockingbird	2	UC	84	72	156	690	108	583	0
2		Old Kelley Rd	FM 20/Blackjack St.	E. City Limit	2	UC	28	12	40	564	23	541	0
Sub-Total Service Area 2										**31,826**	**11,845**	**19,981**	**0**
Total										***52,941***	***20,896***	***32,045***	***0***

UA - Undivided Arterial
SA - Special Arterial with two-way left turn lane (TWLTL)
UC - Undivided Collector

APPENDIX C: CALCULATION OF VEHICLE-MILES OF NEW DEMAND

Vehicle-Mile Trip Generation by Service Area, Lockhart Impact Fee Update

Based on 2022-2032 Land Use Assumptions dated January 2023

Service Unit Equivalency

Residential	1.09	Service Emp	1.67
Basic Emp	0.77	Retail Emp	1.47

Estimated Residential Growth Vehicle-Mile Trip Generation

Conversion Factor: 2.80 *2020 persons/household*

Service Area	Added Population	Added Dwelling Units	Vehicle-Miles per DU	Total Vehicle-Miles
1	2,926	1,045	1.09	431
2	5,169	1,846	1.09	1,358

Estimated Basic Employment Growth Vehicle-Mile Trip Generation

Conversion Factor: 1,205 *square feet/employee*

Service Area	Added Employees	Total Square Feet	Vehicle-Miles per 1,000 Sq Ft	Total Vehicle-Miles
1	276	332,580	0.77	256
2	512	616,960	0.77	475

Estimated Service Employment Growth Vehicle-Mile Trip Generation

Conversion Factor: 350 *square feet/employee*

Service Area	Added Employees	Total Square Feet	Vehicle-Miles per 1,000 Sq Ft	Total Vehicle-Miles
1	632	221,200	1.67	369
2	1,174	410,900	1.67	686

Estimated Retail Employment Growth Vehicle-Mile Trip Generation

Conversion Factor: 800 *square feet/employee*

Service Area	Added Employees	Total Square Feet	Vehicle-Miles per 1,000 Sq Ft	Total Vehicle-Miles
1	172	137,600	1.47	202
2	319	255,200	1.47	375

Total Vehicle-Mile Generation Summary

Service Area	Residential Growth Vehicle-Miles	Basic Emp Growth Vehicle-Miles	Service Emp Growth Vehicle-Miles	Retail Emp Growth Vehicle-Miles	Total Growth Vehicle-Miles
1	431	256	369	202	**1,258**
2	1,358	475	686	375	**2,894**
Total	1,788	731	1,055	577	**4,151**

LUA Data - City Limits

Residential (Persons)

Service Area	2022	2032	Growth (2022-2032)
1	6,004	8,930	2,926
2	9,596	14,765	5,169

Basic (Employees)

Service Area	2022	2032	Growth (2022-2032)
1	573	849	276
2	1,065	1,577	512

Service (Employees)

Service Area	2022	2032	Growth (2022-2032)
1	1,316	1,948	632
2	2,444	3,618	1,174

Retail (Employees)

Service Area	2022	2032	Growth (2022-2032)
1	357	529	172
2	664	983	319

APPENDICES

APPENDIX D: ROADWAY IMPROVEMENT PLAN PROJECTS

APPENDICES

Definitions

LANES	The total number of lanes in both directions available for travel.
TYPE	The type of roadway (used in determining capacity): DA = divided arterial UA = undivided arterial DC = divided collector UC = undivided collector SC = special collector (roadway with continuous left turn) SA = special arterial (roadway with continuous left turn)
PK-HR VOLUME	The existing volumes of cars on the roadway segment traveling during the afternoon (P.M.) peak hour of travel.
% IN SERVICE AREA	If the roadway is located on the boundary of the service area (with the city limits running along the centerline of the roadway), then half of the roadway is inventoried in the service area and the other half is not. This value is either 50% or 100%.
VEH-MI SUPPLY TOTAL	The number of total service units (vehicle-miles) supplied within the service area, based on the length, and established capacity of the roadway type.
VEH-MI TOTAL DEMAND PK-HR	The total service unit (vehicle-mile) demand created by existing traffic on the roadway segment in the afternoon peak hour.
EXCESS CAPACITY PK-HR VEH-MI	The number of service units supplied but unused by existing traffic in the afternoon peak hour.

Lockhart Roadway Impact Fee Study Update

10 Year Roadway CIP

Proj No.	CIP Origin	Service Area	Roadway	From	To	Length (mi)	Lanes	Type	Pct. in Serv. Area	Peak Hour Volume A	Peak Hour Volume B	Peak Hour Volume Total	VMT Supply Pk Hr Total	VMT Demand Pk Hr Total	Excess VMT Capacity	CIP VMT Deficiency
1	*2001*	1	Stueve Lane	W. San Antonio	FM 2001 (Silent Valley)	0.85	2	UC	100%	81	83	164	849	140	709	0
3	*2017*	1	Borchert	City Line	W. San Antonio	0.37	2	UC	100%	76	80	156	367	57	310	0
5	*2007*	1 2	Maple	City Line	SH 130	0.28	3	SC	50%	0	27	27	156	8	148	0
6	*2007*	1	City Line	Maple	W. San Antonio	0.98	4	UA	100%	77	84	161	2,360	159	2,201	0
A	*2022*	1	Mockingbird Ext.	N. of Shenandoah Tr.	FM 2001 (Silent Valley)	0.59	4	UA	100%	0	0	0	1,409	0	1,409	0
B	*2022*	1	Horseshoe Rd.	Mockingbird Ext.	FM 2001 (Silent Valley)	0.16	4	UA	100%	8	12	20	375	3	372	0
		Sub-Total Service Area 1				**3.23**							**5,516**	**367**	**5,151**	**0**
7/C	*2017*	2	Old Fentress Rd	City Line Rd	SH130	1.21	2	UC	100%	44	52	96	1,210	116	1,094	0
8	*2001*	2	Clear Fork St	City Line Rd	250' W. of Creek Bridge	0.59	2	UC	100%	77	107	184	587	108	479	0
5	*2007*	2 1	Maple	City Line	SH 130	0.28	3	SC	50%	33	0	33	156	9	147	0
10	*2017*	2	Main	State Park	Blackjack	0.11	3	SC	100%	183	180	363	123	40	83	0
11	*2017*	2	FM 20 Realignment	W. of Guadalupe	Colorado	0.41	2	UA	100%	0	0	0	489	0	489	0
12	*2017*	2	MLK Jr Industrial Blvd.W	Colorado	Cunningham	0.59	4	UA	100%	51	51	102	1,423	60	1,363	0
13	*2017*	2	MLK Jr Industrial Blvd. E	Commerce	E MLK Jr Industrial	0.82	2	UA	100%	0	0	0	980	0	980	0
14	*2007*	2	City Line	Clear Fork	Maple	0.29	4	UA	100%	35	79	114	703	33	670	0
D	*2022*	2	CR220/Cunningham	MLK Jr Industrial Blvd.	W. City Limit	0.64	2	UC	100%	0	0	0	645	0	645	0
E	*2022*	2	Old Kelley Rd	FM20/Blackjack St	Shady Ln	0.59	2	UC	100%	50	50	100	595	60	535	0
F	*2022*	2	Shady Ln	Old Kelley	FM20/Blackjack St	0.49	2	UC	100%	50	50	100	487	48	439	0
G	*2022*	2	Lovers Ln	Old Kelley	Existing Lovers Ln	0.23	2	UC	100%	0	0	0	233	0	233	0
		Sub-Total Service Area 2				**6.26**							**7,631**	**474**	**7,156**	**0**
		Totals:				***8.97***							***13,147***	***841***	***12,306***	***0***

APPENDIX E: ROADWAY IMPROVEMENT PLAN COST ANALYSIS

APPENDICES

Definitions

LANES	The total number of lanes in both directions available for travel.
TYPE	The type of roadway (used in determining capacity): DA = divided arterial UA = undivided arterial DC = divided collector UC = undivided collector SC = special collector (roadway with continuous left turn) SA = special arterial (roadway with continuous left turn)
% IN SERVICE AREA	If the roadway is located on the boundary of the service area (with the city limits running along the centerline of the roadway), then half of the roadway is inventoried in the service area and the other half is not. This value is either 50% or 100%.
TOTAL SEGMENT COST	The estimated cost (in dollars) of the entire segment of the proposed improvement.
TOTAL COST IN SERVICE AREA	The estimated cost (in dollars) of the portion of the proposed roadway improvement within the service area.

Lockhart Roadway Impact Fee Study Update

10 Year Roadway CIP

Proj No.	CIP Origin	Service Area	Roadway	From	To	Length (mi)	Lanes	Type	Pct. in Serv. Area	Roadway Costs: Engineering	ROW	Construction	Signal	Finance	Total Project Cost
1	2001	1	Stueve Lane	W. San Antonio	FM 2001 (Silent Valley)	0.85	2	UC	100%	$ 198,121	$ 44,850	$ 2,830,300	$ -	$ 676,120	$ 3,749,391
3	2017	1	Borchert	City Line	W. San Antonio	0.37	2	UC	100%	$ 77,938	$ 19,400	$ 1,113,400	$ -	$ 266,362	$ 1,477,100
5	2007	1 2	Maple	City Line	SH 130	0.28	3	SC	50%	$ 30,107	$ 7,500	$ 430,100	$ -	$ 102,896	$ 570,603
6	2007	1	City Line	Maple	W. San Antonio	0.98	4	UA	100%	$ 287,126	$ 207,720	$ 4,101,800	$ 300,000	$ 1,066,262	$ 5,962,908
A	2022	1	Mockingbird Ext.	N. of Shenandoah Tr.	FM 2001 (Silent Valley)	0.59	4	UA	100%	$ 191,667	$ 248,000	$ 2,738,100	$ -	$ 699,109	$ 3,876,876
B	2022	1	Horseshoe Rd.	Mockingbird Ext.	FM 2001 (Silent Valley)	0.16	4	UA	100%	$ 46,039	$ 24,750	$ 657,700	$ -	$ 160,268	$ 888,757
		Sub-Total Service Area 1				**3.23**				$ 830,998	$ 552,220	$ 11,871,400	$ 300,000	$ 2,971,016	$ 16,525,634
7/C	2017	2	Old Fentress Rd	City Line Rd	SH130	1.21	2	UC	100%	$ 255,969	$ 63,888	$ 3,656,700	$ -	$ 874,843	$ 4,851,400
8	2001	2	Clear Fork St	City Line Rd	250' W. of Creek Bridge	0.59	2	UC	100%	$ 124,138	$ 31,000	$ 1,773,400	$ -	$ 424,278	$ 2,352,816
5	2007	2 1	Maple	City Line	SH 130	0.28	3	SC	50%	$ 30,107	$ 7,500	$ 430,100	$ -	$ 102,896	$ 570,603
10	2017	2	Main	State Park	Blackjack	0.11	3	SC	100%	$ 24,038	$ -	$ 343,400	$ 300,000	$ 135,836	$ 803,274
11	2017	2	FM 20 Realignment	W. of Guadalupe	Colorado	0.41	2	UA	100%	$ 97,013	$ 172,000	$ 1,385,900	$ -	$ 364,081	$ 2,018,994
12	2017	2	MLK Jr Industrial Blvd.W	Colorado	Cunningham	0.59	4	UA	100%	$ 173,670	$ 93,900	$ 2,481,000	$ -	$ 604,685	$ 3,353,255
13	2017	2	MLK Jr Industrial Blvd. E	Commerce	E MLK Jr Industrial	0.82	2	UA	100%	$ 178,038	$ 344,800	$ 2,543,400	$ -	$ 674,572	$ 3,740,810
14	2007	2	City Line	Clear Fork	Maple	0.29	4	UA	100%	$ 85,764	$ 46,410	$ 1,225,200	$ -	$ 298,622	$ 1,655,996
D	2022	2	CR220/Cunningham	MLK Jr Industrial Blvd.	W. City Limit	0.64	2	UC	100%	$ 136,829	$ 204,300	$ 1,954,700	$ -	$ 505,082	$ 2,800,911
E	2022	2	Old Kelley Rd	FM20/Blackjack St	Shady Ln	0.59	2	UC	100%	$ 126,014	$ 31,400	$ 1,800,200	$ -	$ 430,675	$ 2,388,289
F	2022	2	Shady Ln	Old Kelley	FM20/Blackjack St	0.49	2	UC	100%	$ 103,306	$ 25,700	$ 1,475,800	$ -	$ 353,057	$ 1,957,863
G	2022	2	Lovers Ln	Old Kelley	Existing Lovers Ln	0.23	2	UC	100%	$ 49,763	$ 73,800	$ 710,900	$ -	$ 183,582	$ 1,018,045
		Sub-Total Service Area 2				**6.26**				$ 1,384,649	$ 1,094,698	$ 19,780,700	$ 300,000	$ 4,952,210	$ 27,512,257
		Totals:				***8.97***				***$ 2,215,647***	***$ 1,646,918***	***$ 31,652,100***	***$ 600,000***	***$ 7,923,226***	***$ 44,037,891***

Summary:

Engineering Cost	$2,215,647
Right-of-Way Cost	$1,646,918
Construction Cost	$31,652,100
Finance Cost	$7,923,226
TOTAL NET COST	$44,037,891
Future IF Study Update Cost	$100,000
TOTAL IMPLEMENTATION COST	$44,137,891

Notes:

UA - Undivided Arterial

UC - Undivided Collector

SC - Special Collector with two-way left turn lane (TWLTL)

City of Lockhart

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Stueve Lane

W. San Antonio St. to FM 2001 (Silent Valley)

Roadway Information:	
Roadway Type:	2-Lane Undivided Collector
Length (lf):	4,485
Right-of-Way Width (ft.):	60
Median Type:	None
Pavement Width (BOC - BOC):	41
Description:	Construction of thoroughfare standard roadway section

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	45	STA	$ 1,800.00	$ 81,000
2	Unclassified Street Excavation	10,300	CY	$ 18.00	$ 185,400
3	HMAC Type D (2")	18,500	SY	$ 12.00	$ 222,000
4	8" Flex Base	22,500	SY	$ 37.00	$ 832,500
5	Prime & Tack Coat	3,700	GAL	$ 4.25	$ 15,725
6	Lime Subgrade	22,400	SY	$ 3.00	$ 67,200
7	Lime for Stabilization (43lbs/SY)	480	TON	$ 150.00	$ 72,000
8	6" Monolithic Concrete Curb & Gutter	8,970	LF	$ 21.00	$ 188,370
9	Block Sodding and Topsoil	9,500	SY	$ 5.00	$ 47,500
				Paving Estimate Subtotal:	**$ 1,711,695**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
9	Pavement Markings & Signage	2%	$ 34,300
10	Traffic Control	5%	$ 85,600
11	Erosion Control	3%	$ 51,400
12	Landscaping	0%	$ -
13	Drainage Improvements (RCP, Inlets, MH, Outfalls)	20%	$ 342,400
		Other Components Estimate Subtotal:	**$ 513,700**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
15	Drainage Structures	1 Small Crossing	$ 75,000	$ 75,000
16	Bridge Structures	None	$ -	$ -
17	Traffic Signals	None	$ -	$ -
18	Other	At-Grade RR Crossing Widening	$ 150,000	$ 150,000
			Special Components Estimate Subtotal:	**$ 225,000**

I, II, & III Construction Subtotal:		$ 2,450,395
Mobilization	5%	$ 122,600
Contingency	10%	$ 257,300
Construction Cost Estimate Total:		**$ 2,830,300**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 2,830,300
Engineering/Survey/Testing		7%	$ 198,121
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 44,850	$ 44,850
		Impact Fee Project Cost Estimate Total:	**$ 3,073,271**

Freese and Nichols, Inc.

City of Lockhart

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

BORCHERT

City Line Rd. to W. San Antonio St.

Roadway Information:	
Roadway Type:	2-Lane Undivided Collector
Length (lf):	1,940
Right-of-Way Width (ft.):	60
Median Type:	None
Pavement Width (BOC - BOC):	41
Description:	Construction of thoroughfare standard roadway section

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	20	STA	$ 1,800.00	$ 36,000
2	Unclassified Street Excavation	4,500	CY	$ 18.00	$ 81,000
3	HMAC Type D (2")	8,000	SY	$ 12.00	$ 96,000
4	8" Flex Base	9,700	SY	$ 37.00	$ 358,900
5	Prime & Tack Coat	1,600	GAL	$ 4.25	$ 6,800
6	Lime Subgrade	9,700	SY	$ 3.00	$ 29,100
7	Lime for Stabilization (43lbs/SY)	210	TON	$ 150.00	$ 31,500
8	6" Monolithic Concrete Curb & Gutter	3,880	LF	$ 21.00	$ 81,480
9	Block Sodding and Topsoil	4,100	SY	$ 5.00	$ 20,500
				Paving Estimate Subtotal:	**$ 741,280**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
9	Pavement Markings & Signage	2%	$ 14,900
10	Traffic Control	5%	$ 37,100
11	Erosion Control	3%	$ 22,300
12	Landscaping	0%	$ -
13	Drainage Improvements (RCP, Inlets, MH, Outfalls)	20%	$ 148,300
		Other Components Estimate Subtotal:	**$ 222,600**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
15	Drainage Structures	None	$ -	$ -
16	Bridge Structures	None	$ -	$ -
17	Traffic Signals	None	$ -	$ -
18	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 963,880
Mobilization	5%	$ 48,200
Contingency	10%	$ 101,300
Construction Cost Estimate Total:		**$ 1,113,400**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 1,113,400
Engineering/Survey/Testing		7%	$ 77,938
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 19,400	$ 19,400
	Impact Fee Project Cost Estimate Total:		**$ 1,210,738**

City of Lockhart

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

MAPLE STREET

San Jacinto St. to Mockingbird Ln.

Roadway Information:	
Roadway Type:	2-Lane Undivided Collector
Length (lf):	1,738
Right-of-Way Width (ft.):	60
Median Type:	None
Pavement Width (BOC - BOC):	41
Description:	Construction of new roadway to thoroughfare standard

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	18	STA	$ 1,800.00	$ 32,400
2	Unclassified Street Excavation	4,000	CY	$ 18.00	$ 72,000
3	HMAC Type D (2")	7,200	SY	$ 12.00	$ 86,400
4	8" Flex Base	8,700	SY	$ 37.00	$ 321,900
5	Prime & Tack Coat	1,440	GAL	$ 4.25	$ 6,120
6	Lime Subgrade	8,700	SY	$ 3.00	$ 26,100
7	Lime for Stabilization (43lbs/SY)	190	TON	$ 150.00	$ 28,500
8	6" Monolithic Concrete Curb & Gutter	3,480	LF	$ 21.00	$ 73,080
9	Block Sodding and Topsoil	3,700	SY	$ 5.00	$ 18,500
				Paving Estimate Subtotal:	**$ 665,000**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
9	Pavement Markings & Signage	2%	$ 13,300
10	Traffic Control	5%	$ 33,300
11	Erosion Control	3%	$ 20,000
12	Landscaping	0%	$ -
13	Drainage Improvements (RCP, Inlets, MH, Outfalls)	20%	$ 133,000
		Other Components Estimate Subtotal:	**$ 199,600**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
15	Drainage Structures	Drainage Ditch Relocation*	$ -	$ -
16	Bridge Structures	None	$ -	$ -
17	Traffic Signals	None	$ -	$ -
18	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

*Ditch relocation for information only, no additional cost assumed.

I, II, & III Construction Subtotal:		$ 864,600
Mobilization	5%	$ 43,300
Contingency	10%	$ 90,800
Construction Cost Estimate Total:		**$ 998,700**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 998,700
Engineering/Survey/Testing		7%	$ 69,909
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ -	$ -
	Impact Fee Project Cost Estimate Total:		**$ 1,068,609**

City of Lockhart

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

MAPLE STREET

City Line Rd. to SH 130

Roadway Information:	
Roadway Type:	3-Lane Undivided Collector w/ TWLTL
Length (lf):	1,500
Right-of-Way Width (ft.):	60
Median Type:	TWLTL
Pavement Width (BOC - BOC):	41
Description:	Widening of roadway to thoroughfare standard

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	15	STA	$ 1,800.00	$ 27,000
2	Unclassified Street Excavation	3,500	CY	$ 18.00	$ 63,000
3	HMAC Type D (2")	6,200	SY	$ 12.00	$ 74,400
4	8" Flex Base	7,500	SY	$ 37.00	$ 277,500
5	Prime & Tack Coat	1,240	GAL	$ 4.25	$ 5,270
6	Lime Subgrade	7,500	SY	$ 3.00	$ 22,500
7	Lime for Stabilization (43lbs/SY)	160	TON	$ 150.00	$ 24,000
8	6" Monolithic Concrete Curb & Gutter	3,000	LF	$ 21.00	$ 63,000
9	Block Sodding and Topsoil	3,200	SY	$ 5.00	$ 16,000
				Paving Estimate Subtotal:	**$ 572,670**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
9	Pavement Markings & Signage	2%	$ 11,500
10	Traffic Control	5%	$ 28,700
11	Erosion Control	3%	$ 17,200
12	Landscaping	0%	$ -
13	Drainage Improvements (RCP, Inlets, MH, Outfalls)	20%	$ 114,600
		Other Components Estimate Subtotal:	**$ 172,000**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
15	Drainage Structures	None	$ -	$ -
16	Bridge Structures	None	$ -	$ -
17	Traffic Signals	None	$ -	$ -
18	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 744,670
Mobilization	5%	$ 37,300
Contingency	10%	$ 78,200
Construction Cost Estimate Total:		**$ 860,200**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 860,200
Engineering/Survey/Testing		7%	$ 60,214
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 15,000	$ 15,000
	Impact Fee Project Cost Estimate Total:		**$ 935,414**

City of Lockhart

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

MAPLE STREET

Mockingbird Ln. to Lantana Ave.

Roadway Information:	
Roadway Type:	2-Lane Undivided Collector
Length (lf):	1,662
Right-of-Way Width (ft.):	60
Median Type:	None
Pavement Width (BOC - BOC):	47
Description:	Construction of new roadway to thoroughfare standard

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	17	STA	$ 1,800.00	$ 30,600
2	Unclassified Street Excavation	4,400	CY	$ 18.00	$ 79,200
3	HMAC Type D (2")	8,000	SY	$ 12.00	$ 96,000
4	8" Flex Base	9,500	SY	$ 37.00	$ 351,500
5	Prime & Tack Coat	1,600	GAL	$ 4.25	$ 6,800
6	Lime Subgrade	9,400	SY	$ 3.00	$ 28,200
7	Lime for Stabilization (43lbs/SY)	200	TON	$ 150.00	$ 30,000
8	6" Monolithic Concrete Curb & Gutter	3,330	LF	$ 21.00	$ 69,930
9	Block Sodding and Topsoil	2,500	SY	$ 5.00	$ 12,500
				Paving Estimate Subtotal:	**$ 704,730**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
9	Pavement Markings & Signage	2%	$ 14,100
10	Traffic Control	5%	$ 35,300
11	Erosion Control	3%	$ 21,200
12	Landscaping	0%	$ -
13	Drainage Improvements (RCP, Inlets, MH, Outfalls)	20%	$ 141,000
		Other Components Estimate Subtotal:	**$ 211,600**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
15	Drainage Structures	Drainage Ditch Relocation*	$ -	$ -
16	Bridge Structures	None	$ -	$ -
17	Traffic Signals	None	$ -	$ -
18	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

*Ditch relocation for information only, no additional cost assumed.

I, II, & III Construction Subtotal:		$ 916,330
Mobilization	5%	$ 45,900
Contingency	10%	$ 96,300
Construction Cost Estimate Total:		**$ 1,058,600**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 1,058,600
Engineering/Survey/Testing		7%	$ 74,102
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ -	$ -
	Impact Fee Project Cost Estimate Total:		**$ 1,132,702**

City of Lockhart

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

CITY LINE ROAD

Maple St. to W. San Antonio St.

Roadway Information:	
Roadway Type:	4-Lane Undivided Arterial
Length (lf):	5,193
Right-of-Way Width (ft.):	80
Median Type:	None
Pavement Width (BOC - BOC):	61
Description:	Widening of roadway to thoroughfare standard

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	52	STA	$ 1,800.00	$ 93,600
2	Unclassified Street Excavation	17,600	CY	$ 18.00	$ 316,800
3	HMAC Type D (2")	32,900	SY	$ 12.00	$ 394,800
4	8" Flex Base	37,600	SY	$ 37.00	$ 1,391,200
5	Prime & Tack Coat	6,580	GAL	$ 4.25	$ 27,965
6	Lime Subgrade	37,500	SY	$ 3.00	$ 112,500
7	Lime for Stabilization (43lbs/SY)	810	TON	$ 150.00	$ 121,500
8	6" Monolithic Concrete Curb & Gutter	10,390	LF	$ 21.00	$ 218,190
9	Block Sodding and Topsoil	11,000	SY	$ 5.00	$ 55,000
				Paving Estimate Subtotal:	**$ 2,731,555**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
9	Pavement Markings & Signage	2%	$ 54,700
10	Traffic Control	5%	$ 136,600
11	Erosion Control	3%	$ 82,000
12	Landscaping	0%	$ -
13	Drainage Improvements (RCP, Inlets, MH, Outfalls)	20%	$ 546,400
		Other Components Estimate Subtotal:	**$ 819,700**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
15	Drainage Structures	None	$ -	$ -
16	Bridge Structures	None	$ -	$ -
17	Traffic Signals	None	$ -	$ -
18	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 3,551,255
Mobilization	5%	$ 177,600
Contingency	10%	$ 372,900
Construction Cost Estimate Total:		**$ 4,101,800**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 4,101,800
Engineering/Survey/Testing		7%	$ 287,126
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 207,720	$ 207,720
	Impact Fee Project Cost Estimate Total:		**$ 4,596,646**

City of Lockhart

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Mockingbird Ln Ext.

N. of Shenandoah Tr. To FM 2001 (Silent Valley)

Roadway Information:	
Roadway Type:	4-Lane Undivided Arterial
Length (lf):	3,100
Right-of-Way Width (ft.):	80
Median Type:	None
Pavement Width (BOC - BOC):	61
Description:	Construction of new roadway to thoroughfare standard

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	31	STA	$ 1,800.00	$ 55,800
2	Unclassified Street Excavation	10,600	CY	$ 18.00	$ 190,800
3	HMAC Type D (2")	19,700	SY	$ 12.00	$ 236,400
4	8" Flex Base	22,400	SY	$ 37.00	$ 828,800
5	Prime & Tack Coat	3,940	GAL	$ 4.25	$ 16,745
6	Lime Subgrade	22,400	SY	$ 3.00	$ 67,200
7	Lime for Stabilization (43lbs/SY)	480	TON	$ 150.00	$ 72,000
8	6" Monolithic Concrete Curb & Gutter	6,200	LF	$ 21.00	$ 130,200
9	Block Sodding and Topsoil	6,600	SY	$ 5.00	$ 33,000
				Paving Estimate Subtotal:	**$ 1,630,945**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
9	Pavement Markings & Signage	2%	$ 32,700
10	Traffic Control	5%	$ 81,600
11	Erosion Control	3%	$ 49,000
12	Landscaping	0%	$ -
13	Drainage Improvements (RCP, Inlets, MH, Outfalls)	20%	$ 326,200
	Other Components Estimate Subtotal:		**$ 489,500**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
15	Drainage Structures	None	$ -	$ -
16	Bridge Structures	None	$ -	$ -
17	Traffic Signals	None	$ -	$ -
18	Other	RR Crossing	$ 250,000	$ 250,000
		Special Components Estimate Subtotal:		**$ 250,000**

I, II, & III Construction Subtotal:		$ 2,370,445
Mobilization	5%	$ 118,600
Contingency	10%	$ 249,000
Construction Cost Estimate Total:		**$ 2,738,100**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 2,738,100
Engineering/Survey/Testing		7%	$ 191,667
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 248,000	$ 248,000
	Impact Fee Project Cost Estimate Total:		**$ 3,177,767**

City of Lockhart

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Horseshoe Rd.

Mockingbird Ln Ext. To FM 2001 (Silent Valley)

Roadway Information:	
Roadway Type:	4-Lane Undivided Arterial
Length (lf):	825
Right-of-Way Width (ft.):	80
Median Type:	None
Pavement Width (BOC - BOC):	61
Description:	Widening of roadway to thoroughfare standard

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	9	STA	$ 1,800.00	$ 16,200
2	Unclassified Street Excavation	2,800	CY	$ 18.00	$ 50,400
3	HMAC Type D (2")	5,300	SY	$ 12.00	$ 63,600
4	8" Flex Base	6,000	SY	$ 37.00	$ 222,000
5	Prime & Tack Coat	1,060	GAL	$ 4.25	$ 4,505
6	Lime Subgrade	6,000	SY	$ 3.00	$ 18,000
7	Lime for Stabilization (43lbs/SY)	130	TON	$ 150.00	$ 19,500
8	6" Monolithic Concrete Curb & Gutter	1,650	LF	$ 21.00	$ 34,650
9	Block Sodding and Topsoil	1,800	SY	$ 5.00	$ 9,000
				Paving Estimate Subtotal:	**$ 437,855**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
9	Pavement Markings & Signage	2%	$ 8,800
10	Traffic Control	5%	$ 21,900
11	Erosion Control	3%	$ 13,200
12	Landscaping	0%	$ -
13	Drainage Improvements (RCP, Inlets, MH, Outfalls)	20%	$ 87,600
		Other Components Estimate Subtotal:	**$ 131,500**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
15	Drainage Structures	None	$ -	$ -
16	Bridge Structures	None	$ -	$ -
17	Traffic Signals	None	$ -	$ -
18	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 569,355
Mobilization	5%	$ 28,500
Contingency	10%	$ 59,800
Construction Cost Estimate Total:		**$ 657,700**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 657,700
Engineering/Survey/Testing		7%	$ 46,039
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 24,750	$ 24,750
	Impact Fee Project Cost Estimate Total:		**$ 728,489**

City of Lockhart

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Old Fentress Rd

City Line Rd to SH130

Roadway Information:	
Roadway Type:	4-Lane Undivided Colletor
Length (lf):	6,389
Right-of-Way Width (ft.):	60
Median Type:	None
Pavement Width (BOC - BOC):	41
Description:	Widening of roadway to thoroughfare standard

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	64	STA	$ 1,800.00	$ 115,200
2	Unclassified Street Excavation	14,600	CY	$ 18.00	$ 262,800
3	HMAC Type D (2")	26,300	SY	$ 12.00	$ 315,600
4	8" Flex Base	32,000	SY	$ 37.00	$ 1,184,000
5	Prime & Tack Coat	5,260	GAL	$ 4.25	$ 22,355
6	Lime Subgrade	31,900	SY	$ 3.00	$ 95,700
7	Lime for Stabilization (43lbs/SY)	690	TON	$ 150.00	$ 103,500
8	6" Monolithic Concrete Curb & Gutter	12,780	LF	$ 21.00	$ 268,380
9	Block Sodding and Topsoil	13,500	SY	$ 5.00	$ 67,500
				Paving Estimate Subtotal:	**$ 2,435,035**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
9	Pavement Markings & Signage	2%	$ 48,800
10	Traffic Control	5%	$ 121,800
11	Erosion Control	3%	$ 73,100
12	Landscaping	0%	$ -
13	Drainage Improvements (RCP, Inlets, MH, Outfalls)	20%	$ 487,100
		Other Components Estimate Subtotal:	**$ 730,800**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
15	Drainage Structures	None	$ -	$ -
16	Bridge Structures	None	$ -	$ -
17	Traffic Signals	None	$ -	$ -
18	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 3,165,835
Mobilization	5%	$ 158,300
Contingency	10%	$ 332,500
Construction Cost Estimate Total:		**$ 3,656,700**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 3,656,700
Engineering/Survey/Testing		7%	$ 255,969
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 63,888	$ 63,888
	Impact Fee Project Cost Estimate Total:		**$ 3,976,557**

City of Lockhart

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

CLEAR FORK ROAD

City Line Rd to 250' W. of Creek Bridge

Roadway Information:	
Roadway Type:	2-Lane Undivided Collector
Length (lf):	3,100
Right-of-Way Width (ft.):	60
Median Type:	None
Pavement Width (BOC - BOC):	41
Description:	Widening of roadway to thoroughfare standard

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	31	STA	$ 1,800.00	$ 55,800
2	Unclassified Street Excavation	7,100	CY	$ 18.00	$ 127,800
3	HMAC Type D (2")	12,800	SY	$ 12.00	$ 153,600
4	8" Flex Base	15,500	SY	$ 37.00	$ 573,500
5	Prime & Tack Coat	2,560	GAL	$ 4.25	$ 10,880
6	Lime Subgrade	15,500	SY	$ 3.00	$ 46,500
7	Lime for Stabilization (43lbs/SY)	330	TON	$ 150.00	$ 49,500
8	6" Monolithic Concrete Curb & Gutter	6,200	LF	$ 21.00	$ 130,200
9	Block Sodding and Topsoil	6,600	SY	$ 5.00	$ 33,000
				Paving Estimate Subtotal:	**$ 1,180,780**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
9	Pavement Markings & Signage	2%	$ 23,700
10	Traffic Control	5%	$ 59,100
11	Erosion Control	3%	$ 35,500
12	Landscaping	0%	$ -
13	Drainage Improvements (RCP, Inlets, MH, Outfalls)	20%	$ 236,200
		Other Components Estimate Subtotal:	**$ 354,500**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
15	Drainage Structures	None	$ -	$ -
16	Bridge Structures	None	$ -	$ -
17	Traffic Signals	None	$ -	$ -
18	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 1,535,280
Mobilization	5%	$ 76,800
Contingency	10%	$ 161,300
Construction Cost Estimate Total:		**$ 1,773,400**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 1,773,400
Engineering/Survey/Testing		7%	$ 124,138
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 31,000	$ 31,000
	Impact Fee Project Cost Estimate Total:		**$ 1,928,538**

City of Lockhart

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

MAIN STREET

State Park Rd. to Blackjack St.

Roadway Information:	
Roadway Type:	3-Lane Undivided Collector w/ TWLTL
Length (lf):	590
Right-of-Way Width (ft.):	60
Median Type:	None
Pavement Width (BOC - BOC):	41
Description:	Widening of roadway to thoroughfare standard

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	6	STA	$ 1,800.00	$ 10,800
2	Unclassified Street Excavation	1,400	CY	$ 18.00	$ 25,200
3	HMAC Type D (2")	2,500	SY	$ 12.00	$ 30,000
4	8" Flex Base	3,000	SY	$ 37.00	$ 111,000
5	Prime & Tack Coat	500	GAL	$ 4.25	$ 2,125
6	Lime Subgrade	3,000	SY	$ 3.00	$ 9,000
7	Lime for Stabilization (43lbs/SY)	60	TON	$ 150.00	$ 9,000
8	6" Monolithic Concrete Curb & Gutter	1,180	LF	$ 21.00	$ 24,780
9	Block Sodding and Topsoil	1,300	SY	$ 5.00	$ 6,500
				Paving Estimate Subtotal:	**$ 228,405**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
9	Pavement Markings & Signage	2%	$ 4,600
10	Traffic Control	5%	$ 11,500
11	Erosion Control	3%	$ 6,900
12	Landscaping	0%	$ -
13	Drainage Improvements (RCP, Inlets, MH, Outfalls)	20%	$ 45,700
	Other Components Estimate Subtotal:		**$ 68,700**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
15	Drainage Structures	None	$ -	$ -
16	Bridge Structures	None	$ -	$ -
17	Traffic Signals	None	$ -	$ -
18	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 297,105
Mobilization	5%	$ 14,900
Contingency	10%	$ 31,300
Construction Cost Estimate Total:		**$ 343,400**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 343,400
Engineering/Survey/Testing		7%	$ 24,038
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ -	$ -
	Impact Fee Project Cost Estimate Total:		**$ 367,438**

City of Lockhart

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

FM 20 (State Park Road) Realignment

W. of Guadalupe St. to Colorado St.

Roadway Information:	
Roadway Type:	2-Lane Undivided Arterial
Length (lf):	2,150
Right-of-Way Width (ft.):	80
Median Type:	None
Pavement Width (BOC - BOC):	41
Description:	Realignment of roadway

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	22	STA	$ 1,800.00	$ 39,600
2	Unclassified Street Excavation	4,900	CY	$ 18.00	$ 88,200
3	HMAC Type D (2")	8,900	SY	$ 12.00	$ 106,800
4	8" Flex Base	10,800	SY	$ 37.00	$ 399,600
5	Prime & Tack Coat	1,780	GAL	$ 4.25	$ 7,565
6	Lime Subgrade	10,800	SY	$ 3.00	$ 32,400
7	Lime for Stabilization (43lbs/SY)	230	TON	$ 150.00	$ 34,500
8	6" Monolithic Concrete Curb & Gutter	4,300	LF	$ 21.00	$ 90,300
9	Block Sodding and Topsoil	9,400	SY	$ 5.00	$ 47,000
				Paving Estimate Subtotal:	**$ 845,965**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
9	Pavement Markings & Signage	2%	$ 17,000
10	Traffic Control	5%	$ 42,300
11	Erosion Control	3%	$ 25,400
12	Landscaping	0%	$ -
13	Drainage Improvements (RCP, Inlets, MH, Outfalls)	20%	$ 169,200
		Other Components Estimate Subtotal:	**$ 253,900**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
15	Drainage Structures	None	$ -	$ -
16	Bridge Structures	None	$ -	$ -
17	Traffic Signals	None	$ -	$ -
18	Other	Utility Relocation	$ 100,000	$ 100,000
			Special Components Estimate Subtotal:	**$ 100,000**

I, II, & III Construction Subtotal:		$ 1,199,865
Mobilization	5%	$ 60,000
Contingency	10%	$ 126,000
Construction Cost Estimate Total:		**$ 1,385,900**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 1,385,900
Engineering/Survey/Testing		7%	$ 97,013
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 172,000	$ 172,000
	Impact Fee Project Cost Estimate Total:		**$ 1,654,913**

City of Lockhart

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Martin Luther King Jr. Industrial Boulevard

Colorado St. to Cunningham St.

Roadway Information:	
Roadway Type:	4-Lane Undivided Arterial
Length (lf):	3,130
Right-of-Way Width (ft.):	80
Median Type:	None
Pavement Width (BOC - BOC):	61
Description:	Widening of roadway to thoroughfare standard

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	32	STA	$ 1,800.00	$ 57,600
2	Unclassified Street Excavation	10,700	CY	$ 18.00	$ 192,600
3	HMAC Type D (2")	19,900	SY	$ 12.00	$ 238,800
4	8" Flex Base	22,700	SY	$ 37.00	$ 839,900
5	Prime & Tack Coat	3,980	GAL	$ 4.25	$ 16,915
6	Lime Subgrade	22,600	SY	$ 3.00	$ 67,800
7	Lime for Stabilization (43lbs/SY)	490	TON	$ 150.00	$ 73,500
8	6" Monolithic Concrete Curb & Gutter	6,260	LF	$ 21.00	$ 131,460
9	Block Sodding and Topsoil	6,700	SY	$ 5.00	$ 33,500
				Paving Estimate Subtotal:	**$ 1,652,075**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
9	Pavement Markings & Signage	2%	$ 33,100
10	Traffic Control	5%	$ 82,700
11	Erosion Control	3%	$ 49,600
12	Landscaping	0%	$ -
13	Drainage Improvements (RCP, Inlets, MH, Outfalls)	20%	$ 330,500
		Other Components Estimate Subtotal:	**$ 495,900**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
15	Drainage Structures	None	$ -	$ -
16	Bridge Structures	None	$ -	$ -
17	Traffic Signals	None	$ -	$ -
18	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 2,147,975
Mobilization	5%	$ 107,400
Contingency	10%	$ 225,600
Construction Cost Estimate Total:		**$ 2,481,000**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 2,481,000
Engineering/Survey/Testing		7%	$ 173,670
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 93,900	$ 93,900
	Impact Fee Project Cost Estimate Total:		**$ 2,748,570**

City of Lockhart

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Martin Luther King Jr. Industrial Boulevard

Commerce Street to E. MLK Jr. Industrial Blvd.

Roadway Information:	
Roadway Type:	2-Lane Undivided Arterial
Length (lf):	4,310
Right-of-Way Width (ft.):	80
Median Type:	None
Pavement Width (BOC - BOC):	41
Description:	Construction of new roadway to thoroughfare standard

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	44	STA	$ 1,800.00	$ 79,200
2	Unclassified Street Excavation	9,900	CY	$ 18.00	$ 178,200
3	HMAC Type D (2")	17,800	SY	$ 12.00	$ 213,600
4	8" Flex Base	21,600	SY	$ 37.00	$ 799,200
5	Prime & Tack Coat	3,560	GAL	$ 4.25	$ 15,130
6	Lime Subgrade	21,600	SY	$ 3.00	$ 64,800
7	Lime for Stabilization (43lbs/SY)	460	TON	$ 150.00	$ 69,000
8	6" Monolithic Concrete Curb & Gutter	8,620	LF	$ 21.00	$ 181,020
9	Block Sodding and Topsoil	18,700	SY	$ 5.00	$ 93,500
				Paving Estimate Subtotal:	**$ 1,693,650**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
9	Pavement Markings & Signage	2%	$ 33,900
10	Traffic Control	5%	$ 84,700
11	Erosion Control	3%	$ 50,900
12	Landscaping	0%	$ -
13	Drainage Improvements (RCP, Inlets, MH, Outfalls)	20%	$ 338,800
		Other Components Estimate Subtotal:	**$ 508,300**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
15	Drainage Structures	None	$ -	$ -
16	Bridge Structures	None	$ -	$ -
17	Traffic Signals	None	$ -	$ -
18	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 2,201,950
Mobilization	5%	$ 110,100
Contingency	10%	$ 231,300
Construction Cost Estimate Total:		**$ 2,543,400**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 2,543,400
Engineering/Survey/Testing		7%	$ 178,038
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 344,800	$ 344,800
	Impact Fee Project Cost Estimate Total:		**$ 3,066,238**

City of Lockhart

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

CITY LINE ROAD

Cleark Fork Rd. to Maple St.

Roadway Information:	
Roadway Type:	5-Lane Undivided Arterial w/ TWLTL
Length (lf):	1,547
Right-of-Way Width (ft.):	80
Median Type:	TWLTL
Pavement Width (BOC - BOC):	61
Description:	Widening of roadway to thoroughfare standard

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	16	STA	$ 1,800.00	$ 28,800
2	Unclassified Street Excavation	5,300	CY	$ 18.00	$ 95,400
3	HMAC Type D (2")	9,800	SY	$ 12.00	$ 117,600
4	8" Flex Base	11,200	SY	$ 37.00	$ 414,400
5	Prime & Tack Coat	1,960	GAL	$ 4.25	$ 8,330
6	Lime Subgrade	11,200	SY	$ 3.00	$ 33,600
7	Lime for Stabilization (43lbs/SY)	240	TON	$ 150.00	$ 36,000
8	6" Monolithic Concrete Curb & Gutter	3,100	LF	$ 21.00	$ 65,100
9	Block Sodding and Topsoil	3,300	SY	$ 5.00	$ 16,500
				Paving Estimate Subtotal:	**$ 815,730**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
9	Pavement Markings & Signage	2%	$ 16,400
10	Traffic Control	5%	$ 40,800
11	Erosion Control	3%	$ 24,500
12	Landscaping	0%	$ -
13	Drainage Improvements (RCP, Inlets, MH, Outfalls)	20%	$ 163,200
		Other Components Estimate Subtotal:	**$ 244,900**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
15	Drainage Structures	None	$ -	$ -
16	Bridge Structures	None	$ -	$ -
17	Traffic Signals	None	$ -	$ -
18	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 1,060,630
Mobilization	5%	$ 53,100
Contingency	10%	$ 111,400
Construction Cost Estimate Total:		**$ 1,225,200**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 1,225,200
Engineering/Survey/Testing		7%	$ 85,764
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 46,410	$ 46,410
	Impact Fee Project Cost Estimate Total:		**$ 1,357,374**

City of Lockhart

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

CR220/Cunningham

MLK Jr Industrial Blvd.to W. City Limit

Roadway Information:	
Roadway Type:	2-Lane Undivided Collector
Length (lf):	3,405
Right-of-Way Width (ft.):	60
Median Type:	None
Pavement Width (BOC - BOC):	41
Description:	Construction of new roadway to thoroughfare standard

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	35	STA	$ 1,800.00	$ 63,000
2	Unclassified Street Excavation	7,800	CY	$ 18.00	$ 140,400
3	HMAC Type D (2")	14,000	SY	$ 12.00	$ 168,000
4	8" Flex Base	17,100	SY	$ 37.00	$ 632,700
5	Prime & Tack Coat	2,800	GAL	$ 4.25	$ 11,900
6	Lime Subgrade	17,000	SY	$ 3.00	$ 51,000
7	Lime for Stabilization (43lbs/SY)	370	TON	$ 150.00	$ 55,500
8	6" Monolithic Concrete Curb & Gutter	6,810	LF	$ 21.00	$ 143,010
9	Block Sodding and Topsoil	7,200	SY	$ 5.00	$ 36,000
				Paving Estimate Subtotal:	**$ 1,301,510**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
9	Pavement Markings & Signage	2%	$ 26,100
10	Traffic Control	5%	$ 65,100
11	Erosion Control	3%	$ 39,100
12	Landscaping	0%	$ -
13	Drainage Improvements (RCP, Inlets, MH, Outfalls)	20%	$ 260,400
		Other Components Estimate Subtotal:	**$ 390,700**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
15	Drainage Structures	None	$ -	$ -
16	Bridge Structures	None	$ -	$ -
17	Traffic Signals	None	$ -	$ -
18	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 1,692,210
Mobilization	5%	$ 84,700
Contingency	10%	$ 177,700
Construction Cost Estimate Total:		**$ 1,954,700**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 1,954,700
Engineering/Survey/Testing		7%	$ 136,829
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 204,300	$ 204,300
	Impact Fee Project Cost Estimate Total:		**$ 2,295,829**

City of Lockhart

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Old Kelley Rd

MLK Jr Industrial Blvd.to W. City Limit

Roadway Information:	
Roadway Type:	2-Lane Undivided Collector
Length (lf):	3,140
Right-of-Way Width (ft.):	60
Median Type:	None
Pavement Width (BOC - BOC):	41
Description:	Widening of roadway to thoroughfare standard

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	32	STA	$ 1,800.00	$ 57,600
2	Unclassified Street Excavation	7,200	CY	$ 18.00	$ 129,600
3	HMAC Type D (2")	13,000	SY	$ 12.00	$ 156,000
4	8" Flex Base	15,700	SY	$ 37.00	$ 580,900
5	Prime & Tack Coat	2,600	GAL	$ 4.25	$ 11,050
6	Lime Subgrade	15,700	SY	$ 3.00	$ 47,100
7	Lime for Stabilization (43lbs/SY)	340	TON	$ 150.00	$ 51,000
8	6" Monolithic Concrete Curb & Gutter	6,280	LF	$ 21.00	$ 131,880
9	Block Sodding and Topsoil	6,700	SY	$ 5.00	$ 33,500
				Paving Estimate Subtotal:	**$ 1,198,630**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
9	Pavement Markings & Signage	2%	$ 24,000
10	Traffic Control	5%	$ 60,000
11	Erosion Control	3%	$ 36,000
12	Landscaping	0%	$ -
13	Drainage Improvements (RCP, Inlets, MH, Outfalls)	20%	$ 239,800
		Other Components Estimate Subtotal:	**$ 359,800**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
15	Drainage Structures	None	$ -	$ -
16	Bridge Structures	None	$ -	$ -
17	Traffic Signals	None	$ -	$ -
18	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 1,558,430
Mobilization	5%	$ 78,000
Contingency	10%	$ 163,700
Construction Cost Estimate Total:		**$ 1,800,200**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 1,800,200
Engineering/Survey/Testing		7%	$ 126,014
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 31,400	$ 31,400
	Impact Fee Project Cost Estimate Total:		**$ 1,957,614**

City of Lockhart

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Shady Ln

Old Kelley to FM20/Blackjack St

Roadway Information:	
Roadway Type:	2-Lane Undivided Collector
Length (lf):	2,570
Right-of-Way Width (ft.):	60
Median Type:	None
Pavement Width (BOC - BOC):	41
Description:	Widening of roadway to thoroughfare standard

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	26	STA	$ 1,800.00	$ 46,800
2	Unclassified Street Excavation	5,900	CY	$ 18.00	$ 106,200
3	HMAC Type D (2")	10,600	SY	$ 12.00	$ 127,200
4	8" Flex Base	12,900	SY	$ 37.00	$ 477,300
5	Prime & Tack Coat	2,120	GAL	$ 4.25	$ 9,010
6	Lime Subgrade	12,900	SY	$ 3.00	$ 38,700
7	Lime for Stabilization (43lbs/SY)	280	TON	$ 150.00	$ 42,000
8	6" Monolithic Concrete Curb & Gutter	5,140	LF	$ 21.00	$ 107,940
9	Block Sodding and Topsoil	5,500	SY	$ 5.00	$ 27,500
				Paving Estimate Subtotal:	**$ 982,650**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
9	Pavement Markings & Signage	2%	$ 19,700
10	Traffic Control	5%	$ 49,200
11	Erosion Control	3%	$ 29,500
12	Landscaping	0%	$ -
13	Drainage Improvements (RCP, Inlets, MH, Outfalls)	20%	$ 196,600
	Other Components Estimate Subtotal:		**$ 295,000**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
15	Drainage Structures	None	$ -	$ -
16	Bridge Structures	None	$ -	$ -
17	Traffic Signals	None	$ -	$ -
18	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 1,277,650
Mobilization	5%	$ 63,900
Contingency	10%	$ 134,200
Construction Cost Estimate Total:		**$ 1,475,800**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 1,475,800
Engineering/Survey/Testing		7%	$ 103,306
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 25,700	$ 25,700
	Impact Fee Project Cost Estimate Total:		**$ 1,604,806**

City of Lockhart

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Lovers Ln

Old Kelley to Existing Lovers Ln

Roadway Information:	
Roadway Type:	2-Lane Undivided Collector
Length (lf):	1,230
Right-of-Way Width (ft.):	60
Median Type:	None
Pavement Width (BOC - BOC):	41
Description:	Construction of new roadway to thoroughfare standard

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	13	STA	$ 1,800.00	$ 23,400
2	Unclassified Street Excavation	2,900	CY	$ 18.00	$ 52,200
3	HMAC Type D (2")	5,100	SY	$ 12.00	$ 61,200
4	8" Flex Base	6,200	SY	$ 37.00	$ 229,400
5	Prime & Tack Coat	1,020	GAL	$ 4.25	$ 4,335
6	Lime Subgrade	6,200	SY	$ 3.00	$ 18,600
7	Lime for Stabilization (43lbs/SY)	130	TON	$ 150.00	$ 19,500
8	6" Monolithic Concrete Curb & Gutter	2,460	LF	$ 21.00	$ 51,660
9	Block Sodding and Topsoil	2,600	SY	$ 5.00	$ 13,000
				Paving Estimate Subtotal:	**$ 473,295**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
9	Pavement Markings & Signage	2%	$ 9,500
10	Traffic Control	5%	$ 23,700
11	Erosion Control	3%	$ 14,200
12	Landscaping	0%	$ -
13	Drainage Improvements (RCP, Inlets, MH, Outfalls)	20%	$ 94,700
		Other Components Estimate Subtotal:	**$ 142,100**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
15	Drainage Structures	None	$ -	$ -
16	Bridge Structures	None	$ -	$ -
17	Traffic Signals	None	$ -	$ -
18	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 615,395
Mobilization	5%	$ 30,800
Contingency	10%	$ 64,700
Construction Cost Estimate Total:		**$ 710,900**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 710,900
Engineering/Survey/Testing		7%	$ 49,763
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 73,800	$ 73,800
	Impact Fee Project Cost Estimate Total:		**$ 834,463**

City of Lockhart

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

McMILLEN STREET

State Park Rd. to MLK Jr. Industrial Blvd.

Roadway Information:	
Roadway Type:	4-Lane Undivided Collector
Length (lf):	3,172
Right-of-Way Width (ft.):	60
Median Type:	None
Pavement Width (BOC - BOC):	47
Description:	Construction of new roadway to thoroughfare standard

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	32	STA	$ 1,800.00	$ 57,600
2	Unclassified Street Excavation	8,300	CY	$ 18.00	$ 149,400
3	HMAC Type D (2")	15,200	SY	$ 12.00	$ 182,400
4	8" Flex Base	18,000	SY	$ 37.00	$ 666,000
5	Prime & Tack Coat	3,040	GAL	$ 4.25	$ 12,920
6	Lime Subgrade	18,000	SY	$ 3.00	$ 54,000
7	Lime for Stabilization (43lbs/SY)	390	TON	$ 150.00	$ 58,500
8	6" Monolithic Concrete Curb & Gutter	6,350	LF	$ 21.00	$ 133,350
9	Block Sodding and Topsoil	4,600	SY	$ 5.00	$ 23,000
				Paving Estimate Subtotal:	**$ 1,337,170**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
9	Pavement Markings & Signage	2%	$ 26,800
10	Traffic Control	5%	$ 66,900
11	Erosion Control	3%	$ 40,200
12	Landscaping	0%	$ -
13	Drainage Improvements (RCP, Inlets, MH, Outfalls)	20%	$ 267,500
		Other Components Estimate Subtotal:	**$ 401,400**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
15	Drainage Structures	None	$ -	$ -
16	Bridge Structures	None	$ -	$ -
17	Traffic Signals	None	$ -	$ -
18	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 1,738,570
Mobilization	5%	$ 87,000
Contingency	10%	$ 182,600
Construction Cost Estimate Total:		**$ 2,008,200**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 2,008,200
Engineering/Survey/Testing		7%	$ 140,574
Right-of-Way Acquisition	Cost per sq. ft.: $ 0.75	$ 142,740	$ 142,740
	Impact Fee Project Cost Estimate Total:		**$ 2,291,514**

APPENDIX F: ROADWAY SERVICE AREA ANALYSIS SUMMARY

2022 Lockhart Roadway Impact Fee Update
Service Area Analysis Summary

	A	B	C	D	E	F	G	H	I	J	K	L	M		N
Service Area	Capacity Supplied by CIP	Existing Utilization	Existing Deficiencies	Net Capacity Supplied by CIP	Percentage Net Capacity Supplied	Total Project Cost of CIP	Cost of Net Capacity	Credited Project Cost of CIP	Credited Cost of Net Capacity	Cost to Meet Existing Utilization	Projected New Development (10-Yr Demand)	Percent of CIP Attributable to New Dev.	Credited Cost Attributable to New Dev.	Actual Cost per Service Unit	Credited Cost per Service Unit (Maximum Allowable)
	(veh-mi)	(veh-mi)	(veh-mi)	(veh-mi)		(Full Cost)	(Full Cost)	(50% Credit)	(50% Credit)	(50% Credit)	(veh-miles)		(50% Credit)	(Full Cost)	(50% Credit)
1	5,516	367	0	5,149	93.35%	16,567,590	15,465,287	8,283,795	$7,732,643	$551,152	1,258	24.4	$1,889,234	$3,002.00	$1,501.00
2	7,631	474	0	7,157	93.79%	27,570,301	25,857,770	13,785,151	$12,928,885	$856,265	2,894	40.4	$5,227,916	$3,612.00	$1,806.00
Totals	13,147	841	0	12,306	93.60%	$44,137,891	41,314,436	$22,068,946	$20,661,529	$1,407,417	4,151	33.7	$7,117,150	$3,428.00	$1,714.00
														Average	

Sample Development Fees at Maximum Allowable

SUE	1.09	1.67	1.47	0.77
Size	1 Dwelling Unit	10,000 Sq Ft	20,000 Sq Ft	50,000 Sq Ft
Service Area	Single Family Residential Dwelling	General Office Building	Shopping Center	General Light Industrial Building
1	$1,636.09	$25,066.70	$44,129.40	$57,788.50
2	$1,968.54	$30,160.20	$53,096.40	$69,531.00

APPENDIX G: LAND USE ASSUMPTIONS REPORT

Innovative approaches
Practical results
Outstanding service

City of Lockhart

Land Use Assumptions for Impact Fees

FINAL REPORT

January 2023

Prepared by Freese and Nichols, Inc.

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Fort Worth, TX 76102
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Land Use Assumptions for Impact Fees

Purpose

Chapter 395 of the Texas Local Government Code prescribes the process by which cities in Texas must formulate development impact fees. To assist the City of Lockhart in determining the need and timing of capital improvements to serve future development, a reasonable estimation of future growth is required. For the purposes of determining an impact fee structure, growth and development projections were formulated based on assumptions pertaining to the type, location, quantity, and time of various future land uses in the community. It is the purpose of this report to establish and document the methodology used for preparing the growth and land use assumptions for the City of Lockhart. These land use assumptions, which include population and employment projections, will become the basis for updated capital improvement plans for road, water, and wastewater impact fees.

Elements of Land Use Assumptions

This report contains:

- Explanation of the general methodology used to prepare the land use assumptions;
- Impact Fee Service Area Map (Figure 1);
- Base Year Data - Information on population, employment, and land use for Lockhart as of 2022; and
- Population, land use and employment growth assumptions for ten-year horizon (2032).

Methodology

These Land Use Assumptions (LUAs) and future growth projections take into consideration several factors influencing development patterns, including:

1. The type, density, and quantity of existing development
2. Existing zoning patterns
3. The Future Land Use Plan/The Lockhart 2020 Comprehensive Plan
4. Current growth trends in the City
5. Location and configuration of vacant land
6. Employment and population absorption rates
7. Known and anticipated future development

The data used to compile these land use assumptions were from several sources: the American Community Survey (ACS) 5-year estimates, the 2020 Decennial Census, the Capital Area Metropolitan Planning Organization (CAMPO) demographic data, the Lockhart 2020 Comprehensive Plan, Lockhart ISD demographic reports, and the City of Lockhart internal databases. The ten-year growth projections were calculated based upon reasonable growth rates based on using past absorption rates and development proposals known or approved by the City of Lockhart. Based on the growth assumptions and the capital improvements needed to support growth, it is possible to develop an impact fee structure that fairly allocates improvement costs to growth areas in relationship to their impact on the entire infrastructure system. Separate projections were previously prepared for the service areas addressing road, water and wastewater facilities. The following database and projections have been formulated using reasonable and generally accepted planning principles.

Service Area Map

Chapter 395 requires that service areas be defined for capital recovery fees to ensure that facility improvements are in close proximity to areas generating needs. Legislative requirements stipulate that roadway service areas be limited to a 6-mile maximum and must be located within the current city limits. Transportation service areas are different from water and wastewater systems, which can include the City limits, its extra-territorial jurisdiction (ETJ) or Certificate of Necessity and Need (CCN). The result is that new development can only be assessed an impact fee based on the cost of necessary capital improvements within their respective service area. **Figures 1, 2,** and **3** depict the service area structure for roads, water, and wastewater, respectively.

Data Format

The existing database and future projections were formulated according to the following format and categories:

1. Service Areas – Correlates to the proposed service areas identified on the attached map (Figure 1) that meets the requirements of Chapter 395.
2. Housing Units (2022) – All living units including single-family, duplex, multi-family, and group quarters.
3. Housing Units (2032) – Projected housing units by service areas for the year 2032 (ten-year growth projection).
4. Population and Households (2022-2032) – Existing and projected ten-year population tabulated for each service area.
5. Employment (2022-2032) – Three employment classifications were used:
    a. Basic – Land use activities that produce goods and services exported outside the local economy, such as manufacturing, construction, transportation, wholesale trade, warehousing, and other industrial uses
    b. b. Service – Land use activities that provide personal and professional services such as financial, insurance, government, and other professional administrative offices.
    c. c. Retail – Land use activities that provide for the retail sale of goods that primarily serve households and whose location choice is oriented to the household sector, such as grocery stores, restaurants, etc.

Figure 1: Roadway Impact Fee Service Areas

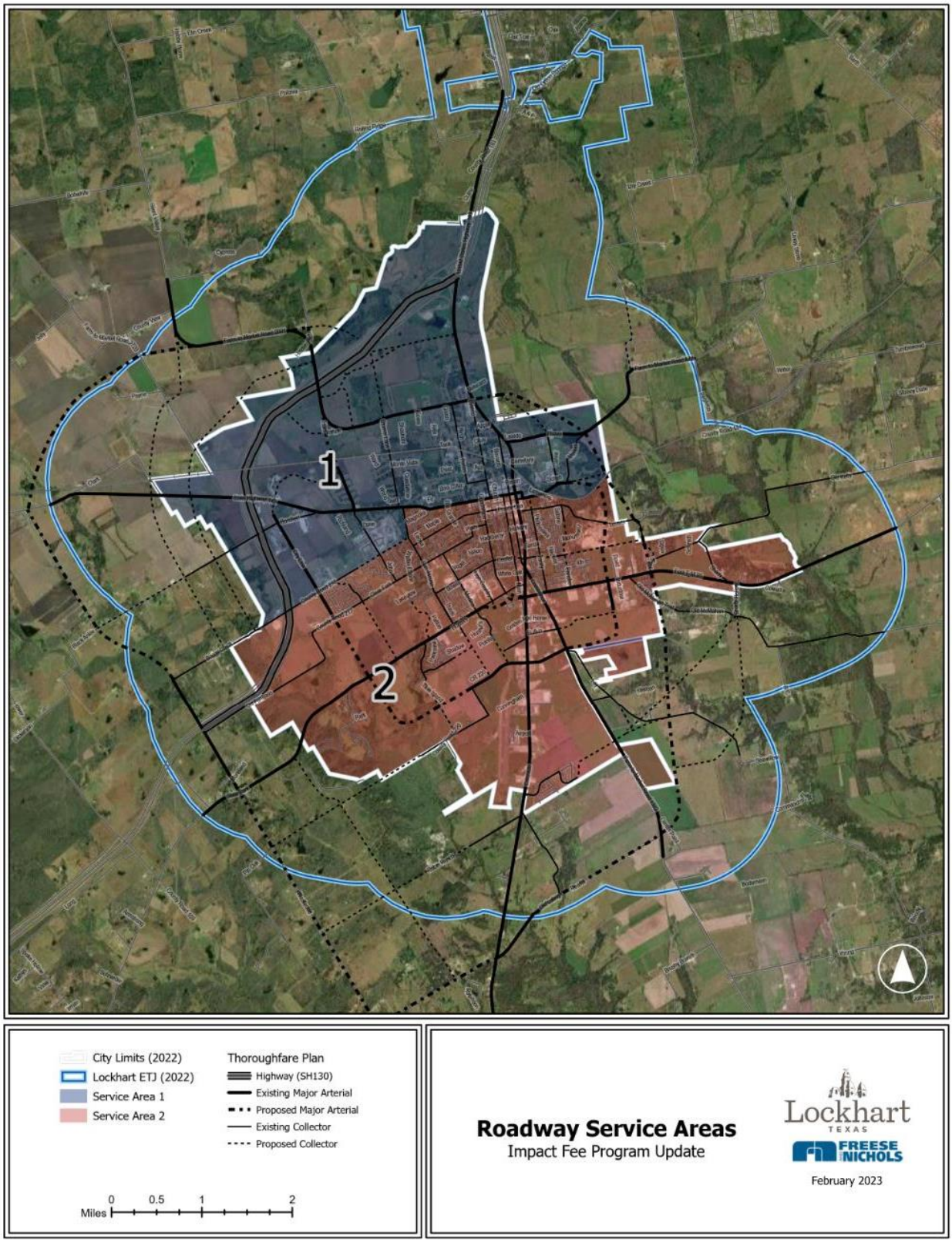


Figure 2: Water Impact Fee Service Area

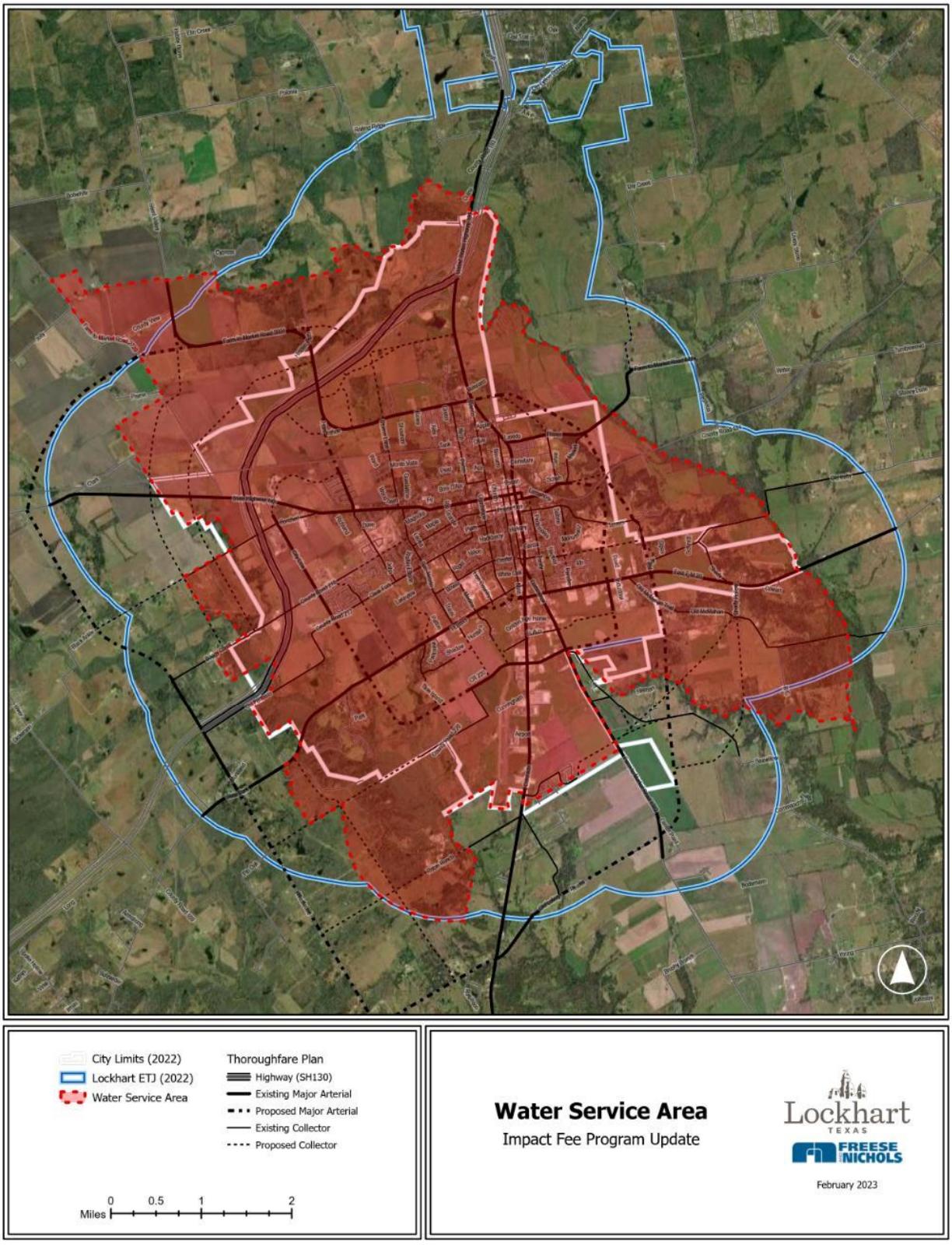
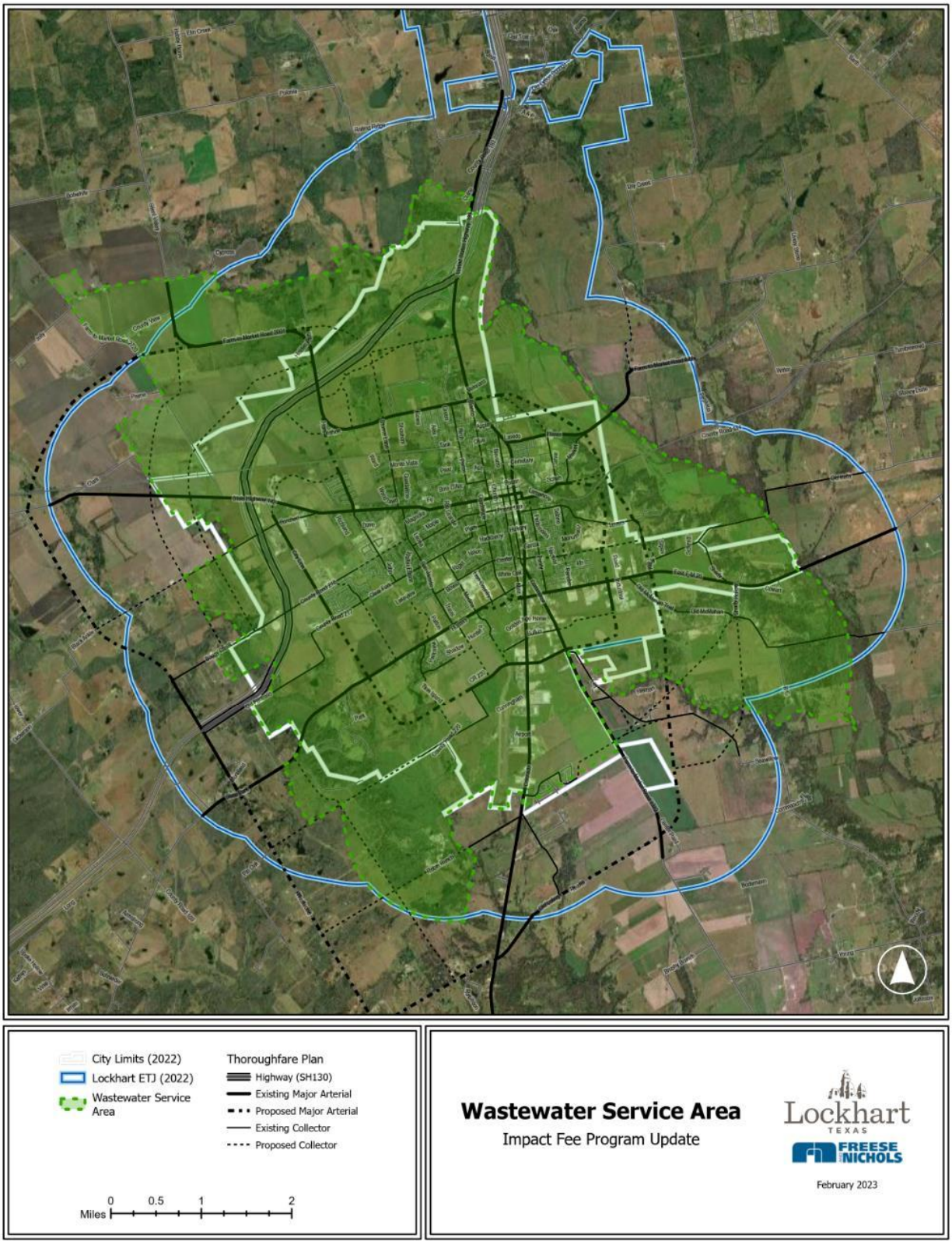


Figure 3: Wastewater Impact Fee Service Area



Base Data: Existing Land Use

A documentation of existing land use patterns and population was made from the City's 2020 Comprehensive Plan and was used as a base line for future growth projections. Table 1 shows a summary of the existing land uses for the area in Lockhart's city limits, updated with information provided by the City of Lockhart's Planning Department.

Table 1: Existing Land Use

Land Use Category		Acres	% of Total Land	Acres/100 Persons[(1)]
Service Area 1				
AO	Agriculture, Open Space	2,090.78	20.86%	13.40
CCB	Commercial – Central Business	6.83	0.07%	0.04
CHB	Commercial – Heavy Business	159.60	1.59%	1.02
CLB	Commercial – Light Business	14.80	0.15%	0.09
CMB	Commercial – Medium Business	102.60	1.02%	0.66
IH	Industrial Heavy	12.15	0.12%	0.08
IL	Industrial Light	180.52	1.80%	1.16
MH	Manufactured Home	43.41	0.43%	0.28
PDD	Planned Development	12.36	0.12%	0.08
PI	Public and Institutional	166.04	1.66%	1.06
RHD	Residential - High-Density	414.56	4.14%	2.66
RLD	Residential - Low-Density	260.67	2.60%	1.67
RMD	Residential - Medium Density	566.79	5.66%	3.63
Service Area 1 Total		***4,031.12***	***40.22%***	***25.84***
Service Area 2				
AO	Agriculture, Open Space	2,658.38	26.52%	17.04
CCB	Commercial – Central Business	15.76	0.16%	0.10
CHB	Commercial – Heavy Business	337.46	3.37%	2.16
CLB	Commercial – Light Business	45.76	0.46%	0.29
CMB	Commercial – Medium Business	72.88	0.73%	0.47
IH	Industrial Heavy	382.98	3.82%	2.46
IL	Industrial Light	116.02	1.16%	0.74
MH	Manufactured Home	0.89	0.01%	0.01
PDD	Planned Development	241.95	2.41%	1.55
PI	Public and Institutional	248.12	2.48%	1.59
RHD	Residential - High-Density	239.44	2.39%	1.53
RLD	Residential - Low-Density	736.65	7.35%	4.72
RMD	Residential - Medium Density	895.42	8.93%	5.74
Service Area 2 Total		***5991.70***	***59.78%***	***38.41***
Total Acreage Within City Limits		**10,022.82**		**64.25**

*[(1)]Based on a 2022 population of **15,600** people, City of Lockhart estimate*

Base Data: Population and Employment

For the purposes of documenting changes to population, land use, and density, the data format to be used as a basis to formulate the land use assumptions will be principally population and employment. Table 2 represents a summary of existing population and employment for Lockhart.

Table 2: Existing Population and Employment 2022

Housing Units[(1)]	5,877
Population[(2)]	15,600
Total Employment[(3)]	6,420
Basic	1,638
Service	3,760
Retail	1,021

[(1)] Estimated derived from 2020 Census, City of Lockhart database

[(2)] Estimate derived from Census, ACS, and City database

[(3)] Estimate derived from ACS, CAMPO data

Base Data: Growth Assumptions

Growth is characterized in two forms: population (residential) and employment (nonresidential). A series of assumptions were made to arrive at reasonable growth rates for population and employment. The following assumptions have been made as a basis from which ten-year projections could be initiated:

1. Future land uses will occur as identified on the Future Land Use Plan in the approved Comprehensive Plan;
2. The City will be able to finance the necessary improvements to accommodate growth;
3. School facilities will accommodate increases in population, and
4. Densities will be in alignment with land uses of the Comprehensive Plan.

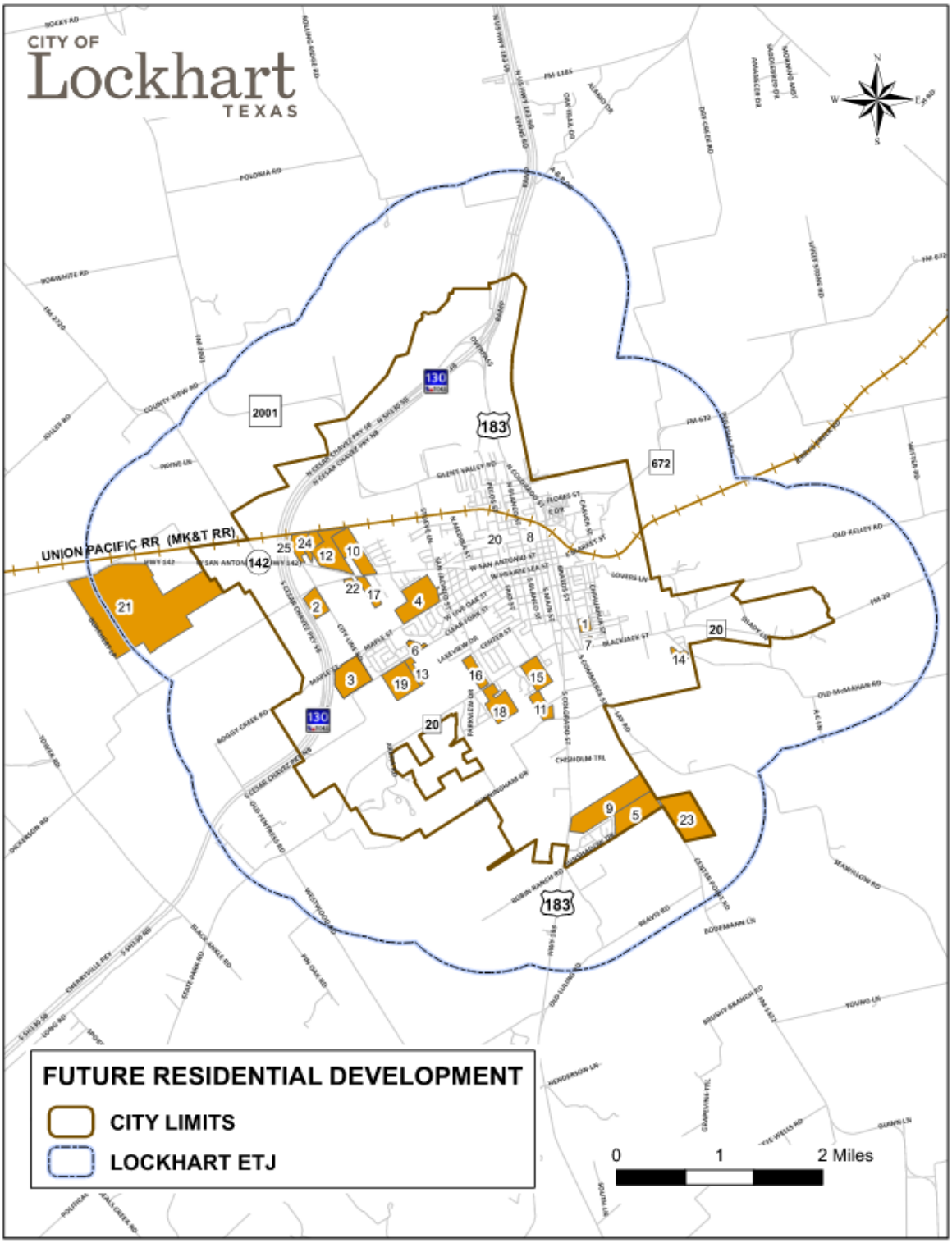
Ten-Year Projections

The ten-year projections or land use assumptions are based upon: 1) approved and/or anticipated development within the city, 2) the policies and growth rate established in the Comprehensive Plan, as well as growth patterns within the city limits as documented in the U.S. Census, ACS, and CAMPO data. Figure 4 illustrates development activity within the city as of August 2022. New development activity within the city includes subdivisions such as:

- **Service Area 1**: Centerpoint Meadows, Vintage Springs, Hansford, Lockhart Farms, Kelly Villas, The Stanton, Lockhart Gateway
- **Service Area 2**: Maple Park, Main Springs, Clear Fork, Heritage Place, Lockhart Place (TH), Cavalry, Ramendu at Lockhart, Spyglass, Golden Eagle, Summerside, and Seawillow.

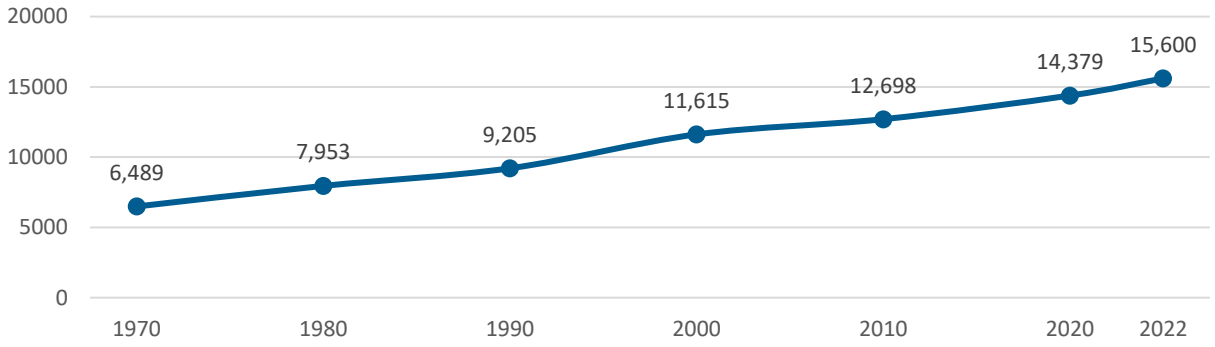
Outside the city (within ETJ), Juniper Springs will bring large-scale residential housing to the west, south of SH 142.

Figure 4: Development Activity within Lockhart, August 2022



Since 1970, the City of Lockhart has experienced relatively steady growth as indicated below:

Figure 5: City of Lockhart Historic Population Growth



The following formula was used to verify the City of Lockhart 2022 population estimate. The City's estimate is close enough to the general calculation to be used as a base population.

*5,877 housing units * 0.93 occupancy rate = approx. 5,480 occupied dwelling units*

*5,480 occupied dwelling units * 2.84 persons per household = approx. 15,600 residents*

Growth Rate

Population (Residential Growth)

An approximate 4.25% average annual growth rate was determined by the Impact Fee Advisory Committee (IFAC) to be a reasonable rate at which Lockhart's population could be expected to grow. Between 1990 and 2000, Lockhart's compound annual growth rate was approximately 1.37 percent. Between 2000 and 2010 the average annual growth rate was approximately 0.83 percent. Based upon anticipated and committed residential construction, development of additional industrial facilities, and anticipated City annexations, a 4.25% percent growth rate should be feasible and reasonable for planning purposes.

If population growth in Lockhart occurs at an average rate of 4.25% per year, a population of approximately 23,695 people could be expected by the year 2032 (ten years). With known development information, it is also reasonable to assume that the City limits will grow by at least 300 acres. Table 3 shows this increase and the resulting projected future land use breakdown within the City limits. This scenario uses similar land use proportions as the existing land use, and accounts for anticipated geographic and population growth of the City.

Table 3: General Future Land Use Projection

Land Use Category	Total Acres in 2022 (15,600 people)	Acre/100 Persons (2022)	Total Acres in 2032 (23,695 people)	Acre/100 Persons (2032)	Net Increase 2022-2032
Agriculture, Open Space	4,749.16	30.44	4,892.54	20.65	**143.38**
Commercial – Central Business	22.59	0.14	23.56	0.10	**0.97**
Commercial – Heavy Business	497.06	3.19	512.42	2.16	**15.36**
Commercial – Light Business	60.56	0.39	62.75	0.26	**2.19**
Commercial – Medium Business	175.48	1.12	181.09	0.76	**5.61**
Industrial Heavy	395.13	2.53	406.98	1.72	**11.85**
Industrial Light	296.54	1.90	305.77	1.29	**9.23**
Manufactured Home	44.30	0.28	45.76	0.19	**1.46**
Planned Development	254.31	1.63	261.59	1.10	**7.28**
Public and Institutional	414.16	2.65	427.15	1.80	**12.99**
Residential - High-Density	654.00	4.19	673.90	2.84	**19.90**
Residential - Low-Density	997.32	6.39	1,027.53	4.34	**30.21**
Residential - Medium Density	1,462.21	9.37	1,506.07	6.36	**43.86**
Total	**10,022.82**	**64.25**	**10,327.10**	**43.58**	**304.28**

Table 4 shows ten-year growth projections of population for the roadway impact fee service areas. While growth is occurring in both service areas, it is anticipated that more growth will occur in the southern portion (Service Area 2) of the city.

Table 4: Ten-Year Population Projections for the Roadway Service Areas

	2022	2032	Net Growth (2022-2032)
Service Area 1	6,004	8,930	2,926
Service Area 2	9,596	14,765	5,169
Total	**15,600**	**23,695**	**8,095**

Based on a 2022 estimate of **15,600 total population and a 2032 estimate of **23,695** total population*

Table 5: Ten-Year Population Projections for the Water/Wastewater Service Areas

	2022	2032	Net Growth (2022-2032)
Water Service Area	15,675	23,810	**8,135**
Wastewater Service Area	15,600	23,695	**8,095**

Employment (Nonresidential Growth)

An employment growth rate was determined using interpolated values from the CAMPO demographics and from known ACS employment data. A reasonable compound annual growth rate was determined to be approximately 4.0%. Table 6 shows a summary of the employment projections for the roadway impact fee service areas. Currently, most of the employment is in service area 2 but growth will be assumed to take place at an equal rate in both service areas for the purpose of this analysis. If employment growth in Lockhart occurs at an average of 4.0% per year, a total employment of approximately 9,504 jobs could reasonably be expected by the year 2032 (ten years).

Table 6: Ten-Year Employment Projections for the Roadway Service Areas

	2022				2032				Net Growth (2022-2032)
	Basic	Service	Retail	**Total**	Basic	Service	Retail	**Total**	
Service Area 1	573	1,316	357	2,247	849	1,948	529	3,326	1,079
Service Area 2	1,065	2,444	664	4,173	1,577	3,618	983	6,178	2,005
Total	1,638	3,760	1,021	**6,420**	1,490	1,961	6,053	**9,504**	3,084

Based on a 2022 estimate of **6,420 total jobs and a 2032 estimate of **9,504** total jobs*

Summary

- Lockhart presently contains approximately 10,022 acres within the City limits
- Existing estimated population of Lockhart in 2022 is 15,600 persons with 6,420 employed persons in the city.
    - The population in the water and wastewater service areas is 15,675 and 15,600, respectively.
- An average annual growth rate of 4.25% was used to calculate the Lockhart ten-year (2022-2032) population growth projection.
    - The ten-year growth projection for Lockhart is an increase from 15,600 to 23,695 persons, representing a net growth of 8,095 persons total.
    - The ten-year growth projection for water service area if forecasted to increase by an additional 115 persons, from 15,675 to 23,810, for a total net growth of 8,135 persons.
    - The ten-year growth projection for wastewater service area is forecasted to have no increase in population outside the city limits and will be 23,695.
- An average annual growth of 4.00% was used to calculate the Lockhart ten-year employment growth projection.
    - The ten-year employment is to grow from 6,420 to 9,504 jobs, representing a net growth of 3,084 jobs total.
- The ultimate holding capacity for population growth within the city (roadway service areas 1 and 2) is expected to accommodate the projected 10-year growth.