



# City of Colleyville

## Capital Improvement Advisory Committee Agenda

City Hall  
100 Main Street  
Colleyville, Texas 76034  
817. 503.1000  
www.colleyville.com

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Monday, September 27, 2021  
6:15 p.m.

Executive Conference Room  
Third Floor, City Hall

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1. CALL TO ORDER
2. REGULAR AGENDA ITEMS
  - 2a Presentation on the Water, Wastewater, and Roadway Impact Fee Update Study
3. ADJOURNMENT

*I hereby certify this agenda was posted on City Hall bulletin boards Thursday, September 23, 2021 by 5:00 p.m.*

Christine Loven, TRMC  
City Secretary

*A quorum of the Colleyville City Council and/or any other Colleyville Board, Commission, or Committee may be in attendance at this meeting. Any matter on this agenda may, at the discretion of the governing body, be opened for public comment and discussion. If you plan to attend this public meeting and have a disability that requires special accommodations, please advise the City Secretary at least 48 hours in advance at 817.503.1133, and reasonable accommodations will be made to assist you.*



# City of Colleyville Capital Improvement Advisory Committee Agenda Briefing

City Hall  
100 Main Street  
Colleyville, Texas 76034  
www.colleyville.com

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Agenda Number 2a

Agenda Date 9/27/2021

Number

Type Regular Agenda Items  
Department Engineering

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## Title

Presentation on the Water, Wastewater, and Roadway Impact Fee Update Study

## Explanation

The purpose of this item is to present to the Capital Improvement Advisory Committee (CIAC) the water, wastewater, and roadway impact fee study and to formulate written recommendations to the City Council. Representatives from Kimley-Horn and Associates, Inc. will provide a presentation to the committee and answer any questions on the impact fee update process, results, and final approval schedule. The study includes land use assumptions, impact fee capital improvements plan, fee analysis and methodology, and maximum assessable impact fees for water, wastewater, and roadways.

On March 3, 2020, the City Council approved a professional services agreement with Kimley-Horn and Associates, Inc. to perform an update of the City's water, wastewater, and roadway impact fees. Chapter 395 of the Texas Local Government Code provides the statutory authority for municipalities to collect water, wastewater, and roadway impact fees, to pay for the expansion of major public facilities, due to additional demands on these systems generated by new development. Chapter 395 also requires communities that collect impact fees to update the related impact fee analysis and recalculate the applicable fee schedules every five years.

Colleyville first began collecting roadway and water impact fees in 1990, and added wastewater impact fees in 1995. The current impact fees were adopted August 21, 2012.

The following is the tentative approval schedule for the update:

- September 27, 2021: Capital Improvement Advisory Committee (CIAC) meeting to discuss and formulate written recommendation to the City Council. If action to formulate comments is tabled on September 27<sup>th</sup>, an additional CIAC meeting will be held on November 8<sup>th</sup>.
- October 19, 2021: City Council worksession to review and discuss the impact fee draft study on the land use assumptions, impact fee capital improvements plan, and maximum assessable impact fee analysis.
- November 1, 2021: City Council meeting to set a public hearing date on the amendment of impact fees. The public hearing notice will be published 30 days in

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advance of discussing the resolution to amend the land use assumptions, impact fee capital improvements plan, and impact fees (Resolution).

- November 8, 2021 (Optional): CIAC meeting to discuss and formulate written recommendation to the City Council on amending the impact fees if action is not taken on September 27<sup>th</sup>.
- December 7, 2021: City Council meeting to review and consider approval of the amendments to the land use assumptions, impact fee capital improvements plan, and impact fees as part of the Land Development Code Chapter 13-Impact Fees (first reading ordinance).
- December 21, 2021: City Council meeting to review and consider approval of the amendments to the land use assumptions, impact fee capital improvements plan, and impact fees as part of the Land Development Code Chapter 13-Impact Fees (second reading ordinance).



The final approval of the impact fee report and requisite amendments to the Land Development Code Chapter 13-Impact Fees include codification of the revised land use tables for roadway impact fee assessments and approval of the actual impact fees to be assessed to new development.

#### Attachments

1. Impact Fee Update Presentation
2. DRAFT Colleyville 2020 Impact Fee Update Study

# Impact Fee Study Update

City of Colleyville




September 27, 2021

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## Outline

- The Impact Fee Process and Concepts
- Land Use Assumptions
- Impact Fee Capital Improvements Plan
- Impact Fee Study
- Comparisons



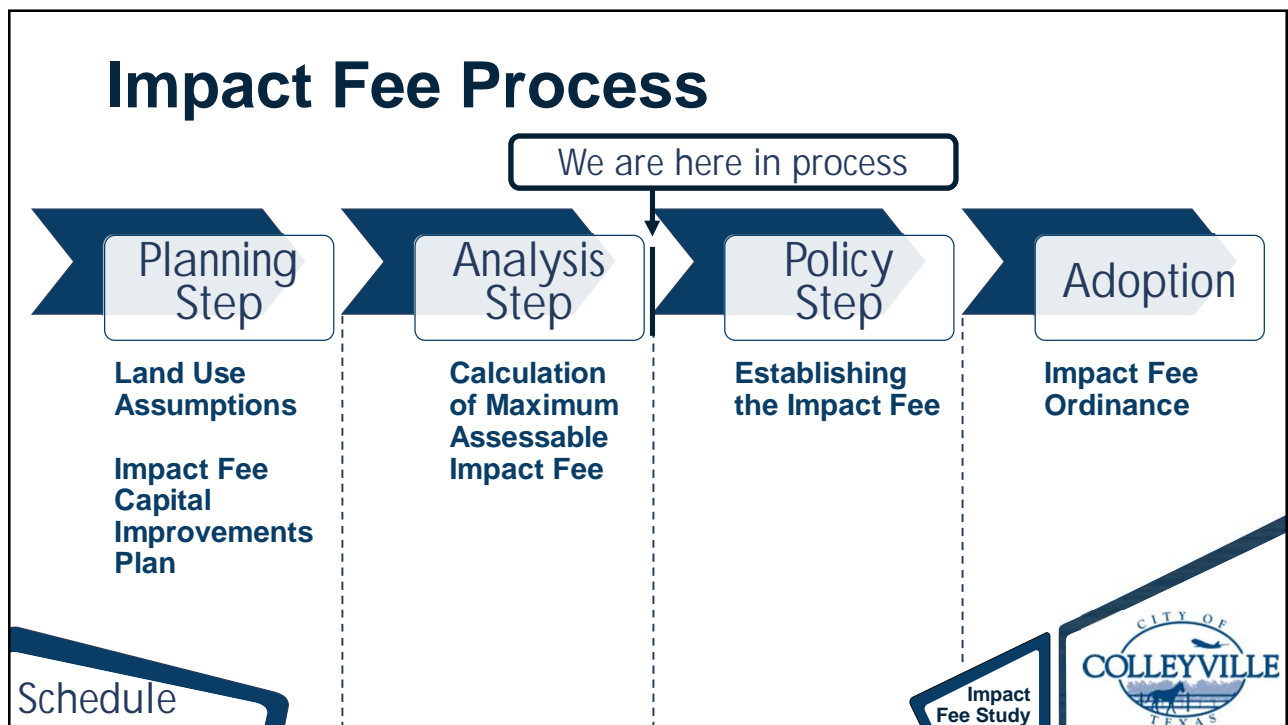
Impact Fee Study

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# Impact Fee Process and Concepts

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### Capital Improvements Advisory Committee (CIAC)


- Review and provide written comments to City Council on
  - Land Use Assumptions (LUA)
  - Impact Fee Capital Improvements Plan (IF CIP)
  - Impact Fees
- Between Future 5-Year Updates
  - Monitor and Evaluate Implementation of IF CIP
  - File Semiannual Reports
  - Advise on Needed Updates or Revisions

### City Council

- Review LUA, IF CIP, and Impact Fees
- Consider Comments Provided by CIAC
- Consider Recommended Updates or Revisions Brought Forth by CIAC

Roles

Impact Fee Study




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## What are Impact Fees?

- One-time fee for new development.
- Mechanism to recover infrastructure costs required to serve the future development.
- Legal way to collect a flexible fee for infrastructure.  
*This gives a City freedom (or flexibility) to spend money on high priority projects within a broader service area.*

Concepts

Impact Fee Study

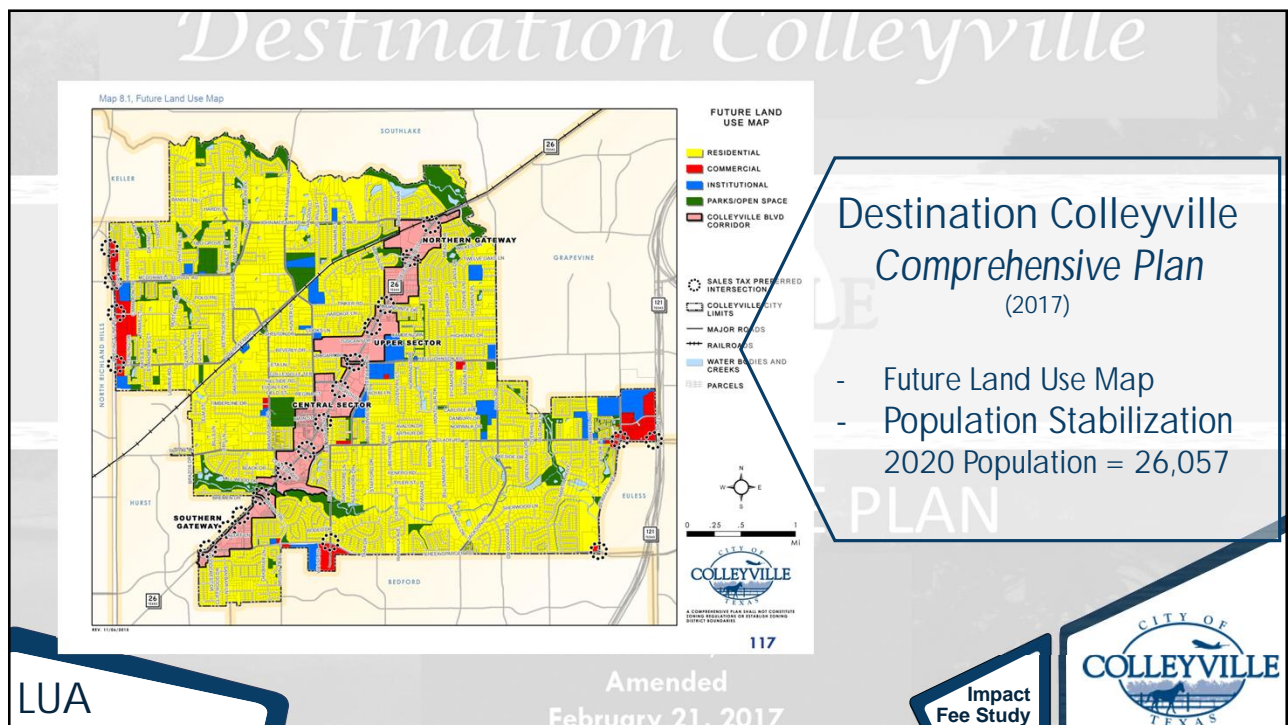


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# Land Use Assumptions

7



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### Service Areas

Funds collected within a service area must be spent on projects within the same service area within 10 years

Roadway	Water	Wastewater
Service Area: <b>City Limits</b>  6 mile trip length limit per Chapter 395	Service Area: <b>Land Use Study Area</b>	Service Area: <b>Land Use Study Area</b>

LUA

Impact Fee Study



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### Service Areas

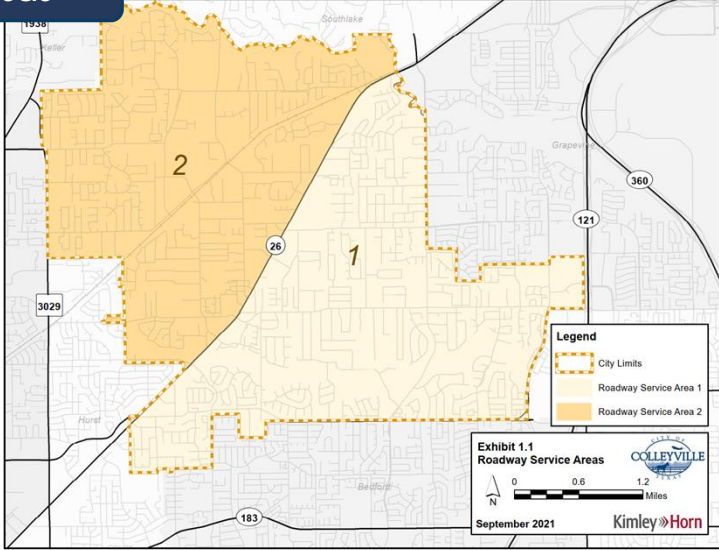



Exhibit 1.1  
Roadway Service Areas  
September 2021  
Kimley Horn

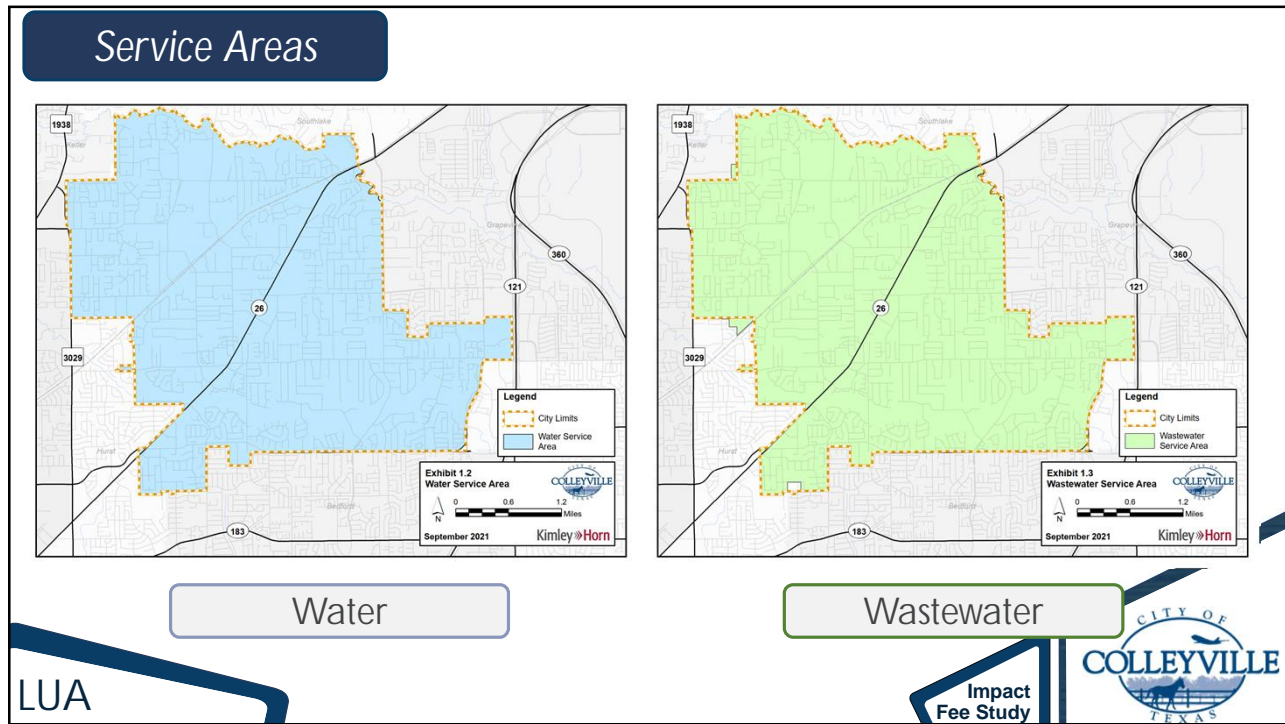
Roadway

LUA

Impact Fee Study



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## Future Land Use Assumptions of Currently Undeveloped Land

		Undeveloped Land
		Acres
<b>SERVICE AREA 2 (WEST OF SH26)</b>	Residential (R-20)	35
	Residential (R-40)	204
	Commercial	26
	Colleyville Boulevard Corridor	10
	<b>Total</b>	<b>275</b>
<b>SERVICE AREA 1 (EAST OF SH26)</b>	Residential (R-20)	29
	Residential (R-40)	60
	Commercial	0
	Colleyville Boulevard Corridor	16
	<b>Total</b>	<b>106</b>
<b>TOTAL</b>	Residential (R-20)	64
	Residential (R-40)	264
	Commercial	26
	Colleyville Boulevard Corridor	26
	<b>Total</b>	<b>380</b>

LUA

Impact Fee Study

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### 10-Year Growth Summary

Service Area	Residential Units	Employment Units		
	Single Family	Basic Sq Ft	Service Sq Ft	Retail Sq Ft
1	119	14,000	57,000	71,000
2	274	8,000	124,000	177,000
<u>City Total</u>	<u>393</u>	<u>22,000</u>	<u>181,000</u>	<u>248,000</u>

LUA

Impact Fee Study



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# Impact Fee Capital Improvements Plan

*(IF CIP)*

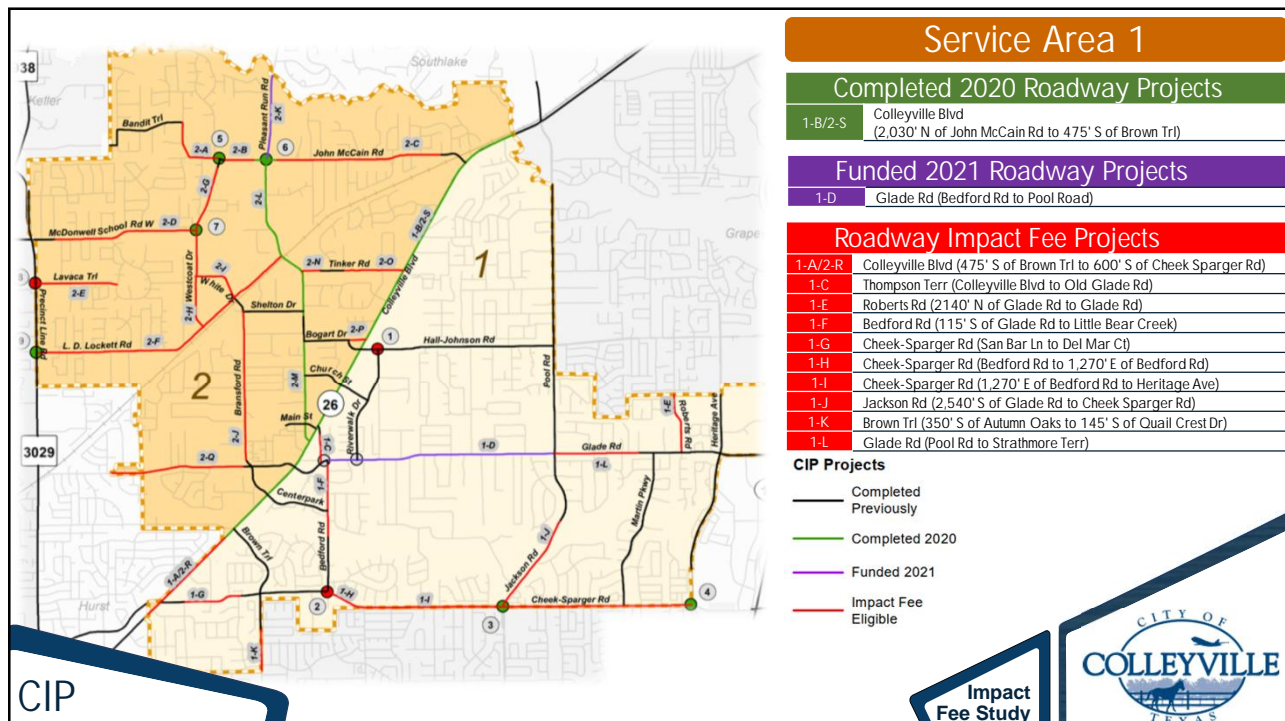
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## Roadway Impact Fee CIP Categories

- Widening – Existing roadways not currently built to ultimate classification in the Thoroughfare Plan and must be completely reconstructed.
- Completed – Completed project with excess capacity available to serve new growth that the City contributed to financially.
- Intersections – Major intersection improvements identified by the City and identified as either completed or proposed.

CIP

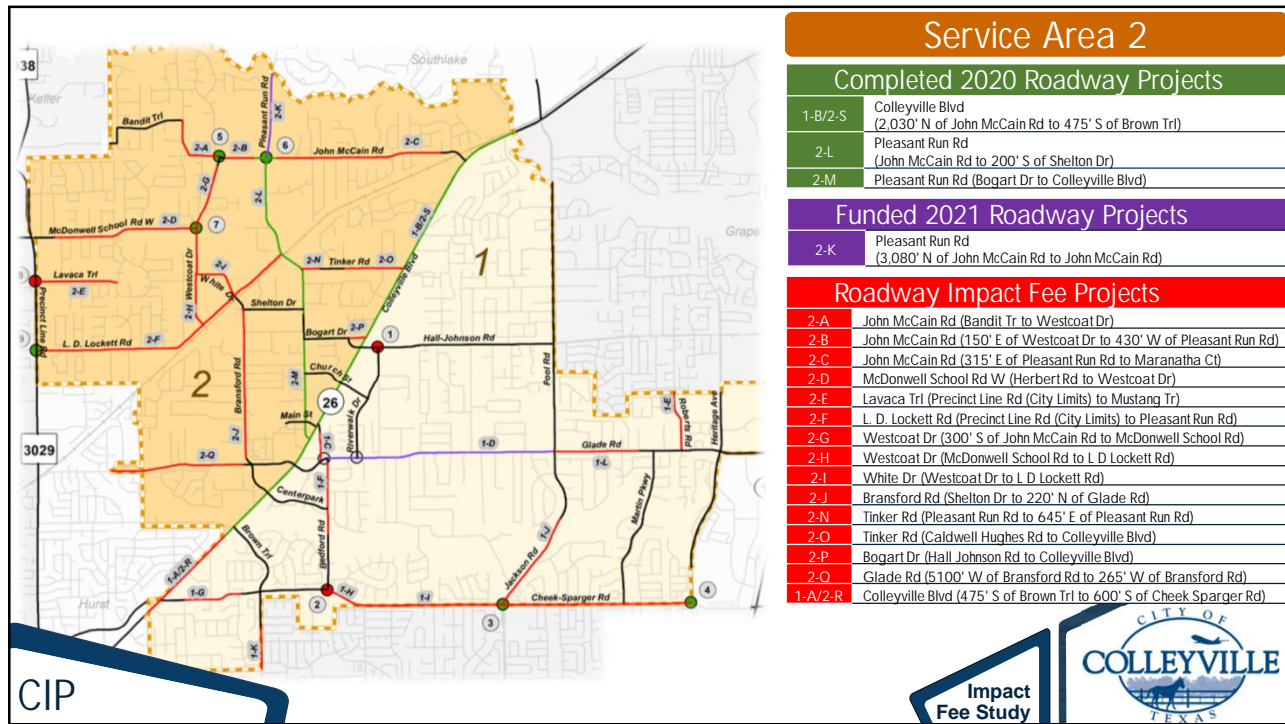
Impact Fee Study



CIP

Impact Fee Study





### Service Area 2

#### Completed 2020 Roadway Projects

1-B/2-S	Colleyville Blvd (2,030' N of John McCain Rd to 475' S of Brown Trl)
2-L	Pleasant Run Rd (John McCain Rd to 200' S of Shelton Dr)
2-M	Pleasant Run Rd (Bogart Dr to Colleyville Blvd)

#### Funded 2021 Roadway Projects

2-K	Pleasant Run Rd (3,080' N of John McCain Rd to John McCain Rd)
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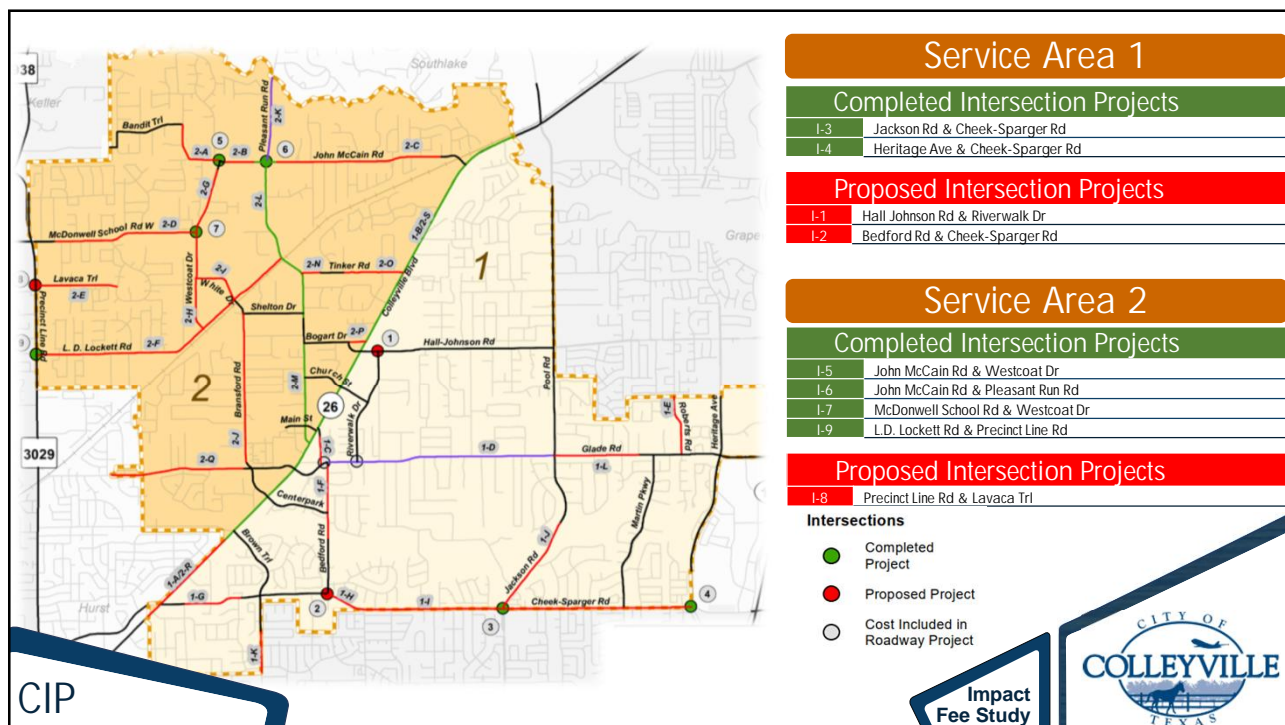
#### Roadway Impact Fee Projects

2-A	John McCain Rd (Bandit Trl to Westcoat Dr)
2-B	John McCain Rd (150' E of Westcoat Dr to 430' W of Pleasant Run Rd)
2-C	John McCain Rd (315' E of Pleasant Run Rd to Maranatha Ct)
2-D	McDonwell School Rd W (Herbert Rd to Westcoat Dr)
2-E	Lavaca Trl (Precinct Line Rd (City Limits) to Mustang Trl)
2-F	L. D. Lockett Rd (Precinct Line Rd (City Limits) to Pleasant Run Rd)
2-G	Westcoat Dr (300' S of John McCain Rd to McDonwell School Rd)
2-H	Westcoat Dr (McDonwell School Rd to L D Lockett Rd)
2-I	White Dr (Westcoat Dr to L D Lockett Rd)
2-J	Bransford Rd (Shelton Dr to 220' N of Glade Rd)
2-N	Tinker Rd (Pleasant Run Rd to 645' E of Pleasant Run Rd)
2-O	Tinker Rd (Caldwell Hughes Rd to Colleyville Blvd)
2-P	Bogart Dr (Hall Johnson Rd to Colleyville Blvd)
2-Q	Glade Rd (5100' W of Bransford Rd to 265' W of Bransford Rd)
1-A/2-R	Colleyville Blvd (475' S of Brown Trl to 600' S of Cheek Sparger Rd)

CIP



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### Service Area 1

#### Completed Intersection Projects

I-3	Jackson Rd & Cheek-Sparger Rd
I-4	Heritage Ave & Cheek-Sparger Rd

#### Proposed Intersection Projects

I-1	Hall Johnson Rd & Riverwalk Dr
I-2	Bedford Rd & Cheek-Sparger Rd

### Service Area 2

#### Completed Intersection Projects

I-5	John McCain Rd & Westcoat Dr
I-6	John McCain Rd & Pleasant Run Rd
I-7	McDonwell School Rd & Westcoat Dr
I-9	L. D. Lockett Rd & Precinct Line Rd

#### Proposed Intersection Projects

I-8	Precinct Line Rd & Lavaca Trl
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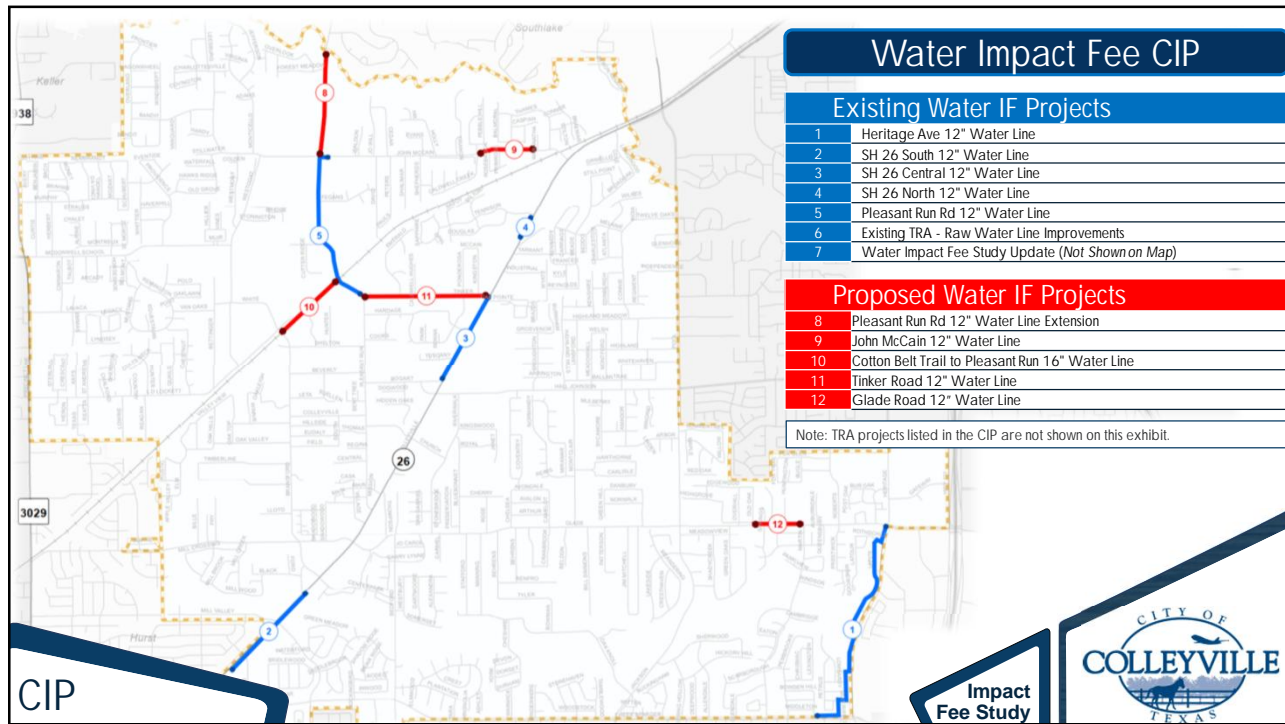
#### Intersections

- Completed Project
- Proposed Project
- Cost Included in Roadway Project

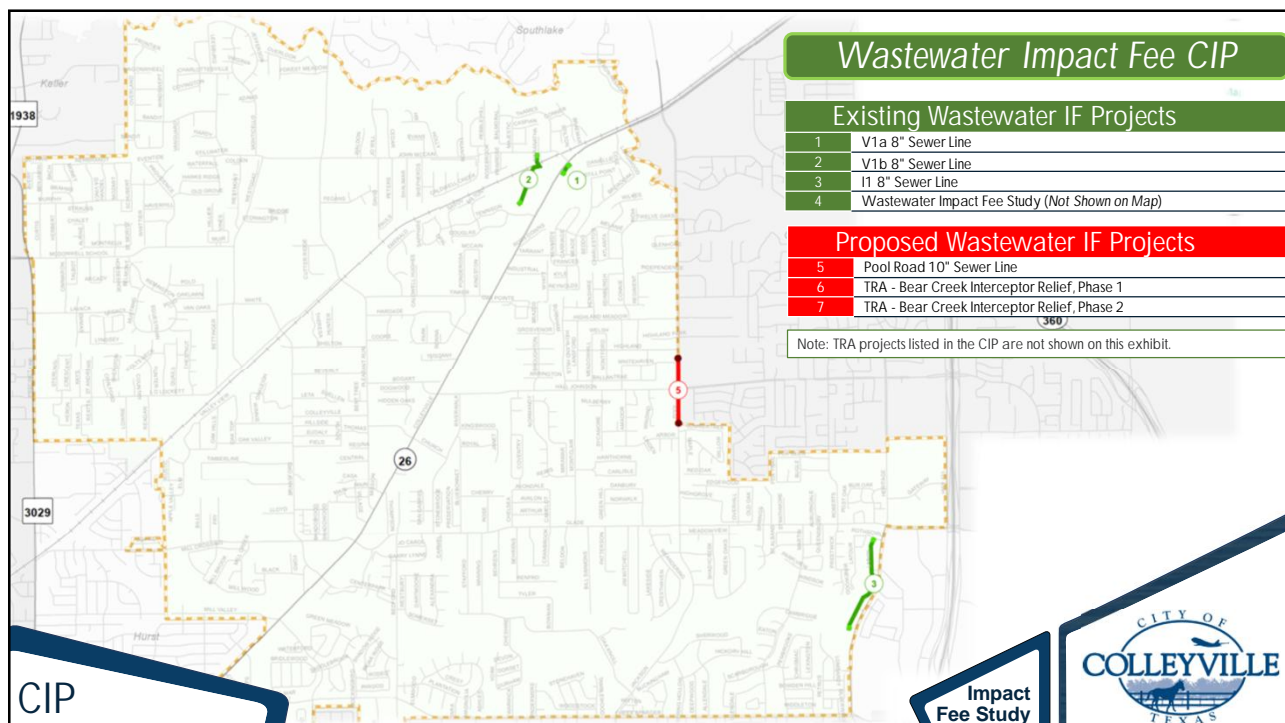
CIP



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# Impact Fee Study



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## Service Units

A standardized measure of consumption attributable to an individual unit of development.\*

Water	Wastewater	Roadway
		

\* Chapter 395 Definition

Study

Impact Fee Study



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## Water and Wastewater Service Units



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=



Study

Impact Fee Study



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## Water and Wastewater Service Units



=



=



Study

Impact Fee Study



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## Roadway Service Units

Two Variables

Trip Generation  ITE Trip Generation Manual 10 <sup>th</sup> Edition	Trip Length  National Household Travel Survey <hr/> Legal Requirements from Chapter 395
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Study
Impact Fee Study

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## Roadway Service Units

	ITE Land Use  Trips  X Trip Length  Vehicle-Miles	Single-Family Detached Housing (ITE # 210)  0.99 Vehicles (PM Peak) (ITE Trip Generation)  4.00 Miles  <b>3.96 Vehicle-Miles</b>
	ITE Land Use  Trips  Reduction for Pass-by Trips  X Trip Length  Vehicle-Miles**	Shopping Center (ITE #820)  2.51 Vehicles (PM Peak) (ITE Trip Generation)  34% (ITE Trip Generation Handbook) 3.81 Vehicles (PM Peak)  2.80 Miles  <b>7.03 Vehicle-Miles</b>

Study
Impact Fee Study

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### Maximum Assessable and Adopted Impact Fee Comparison

Impact Fee	2006		2012		2020	
	Maximum Assessable	Adopted (% of Max.)	Maximum Assessable	Adopted (% of Max.)	Maximum Assessable	Adopted (% of Max.)
Roadway Service Area 1	\$1,843	\$542 (29.4%)	\$2,360	\$1,222 (51.8%)	\$1,204	TBD
Roadway Service Area 2	\$2,165	\$541 (25%)	\$2,446	\$1,223 (50%)	\$1,937	TBD
Water	\$9,963	\$2,491 (25%)	\$6,100	\$2,491 (40.8%)	\$16,615	TBD
Wastewater	\$2,570	\$643 (25%)	\$2,521	\$643 (25.5%)	\$4,503	TBD

Comparison

Impact Fee Study

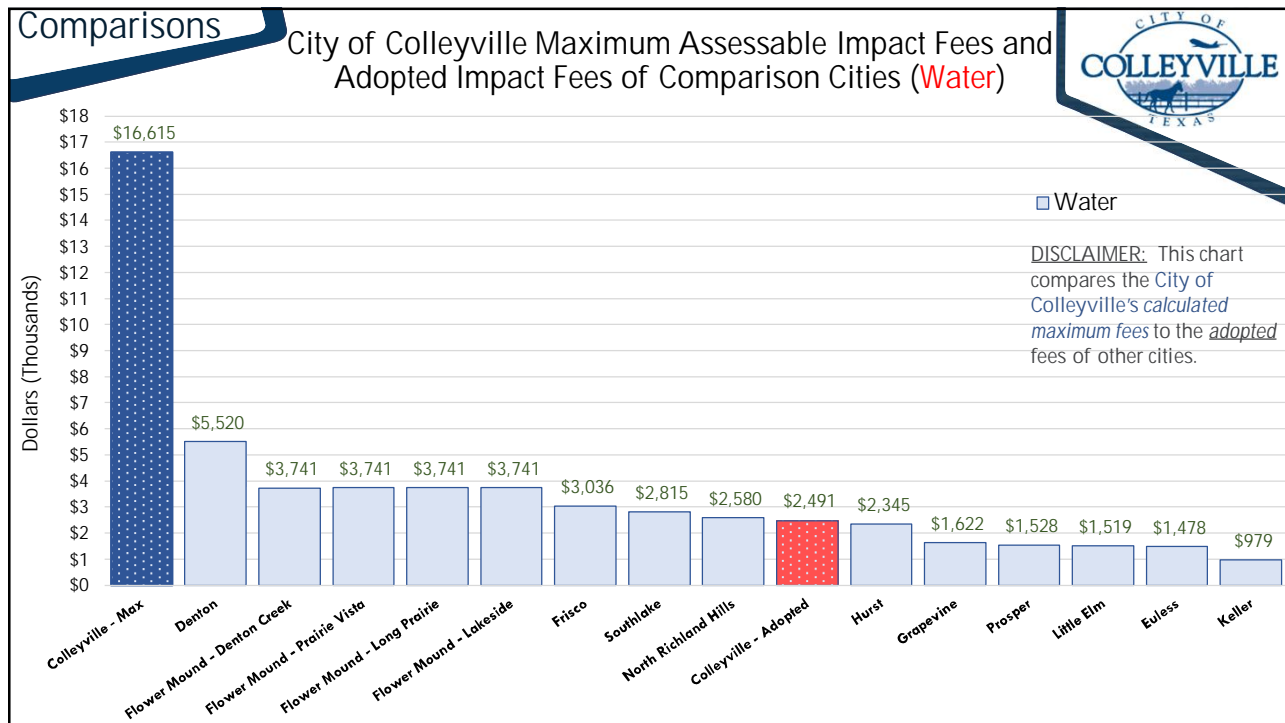


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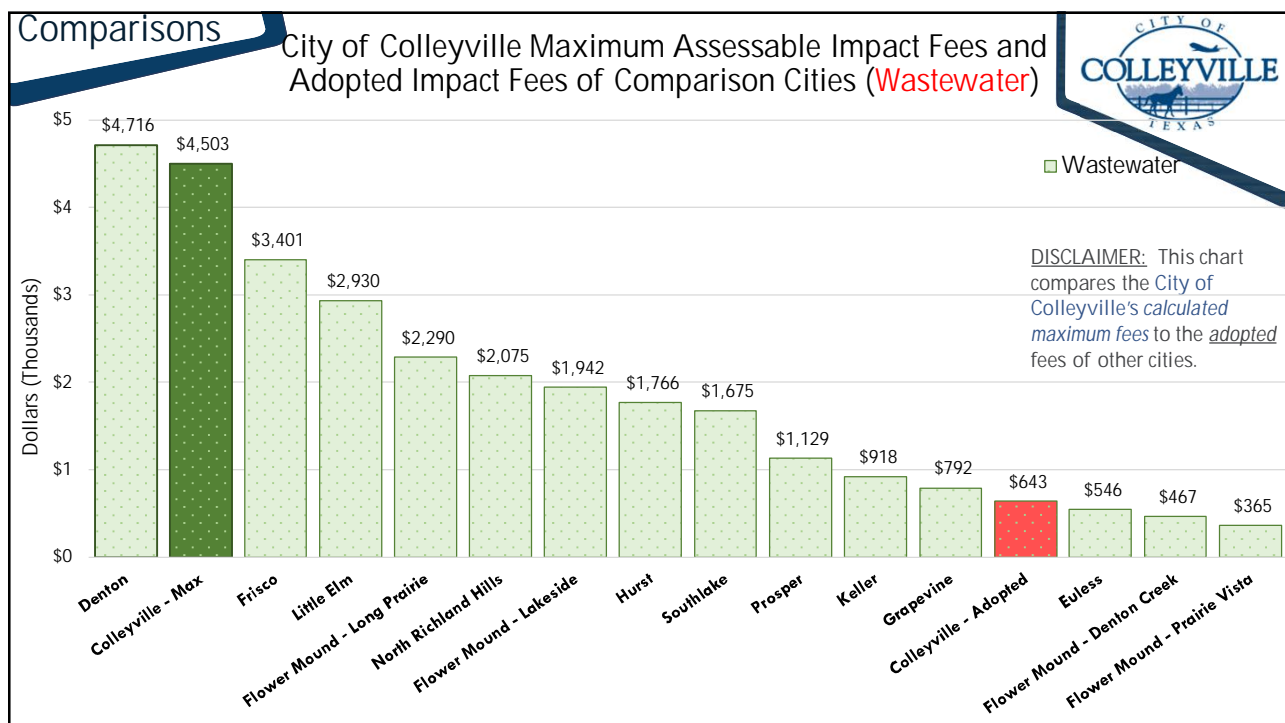
# Impact Fee Comparisons



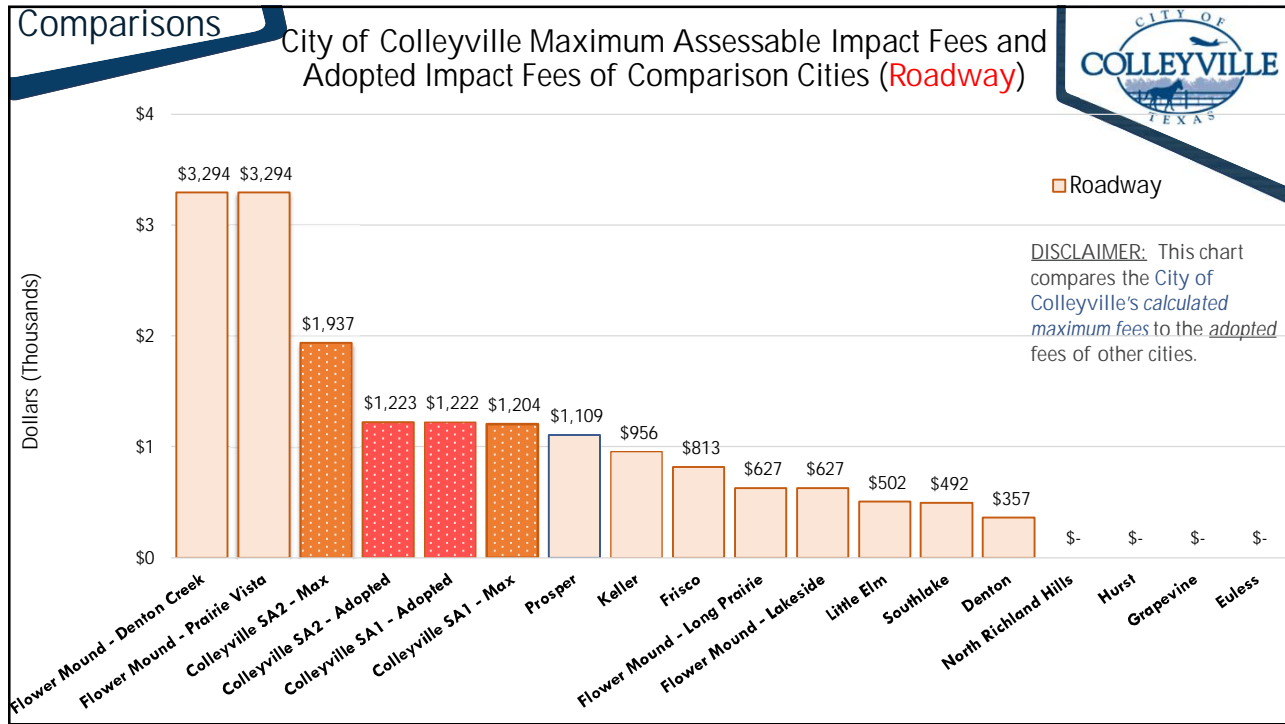
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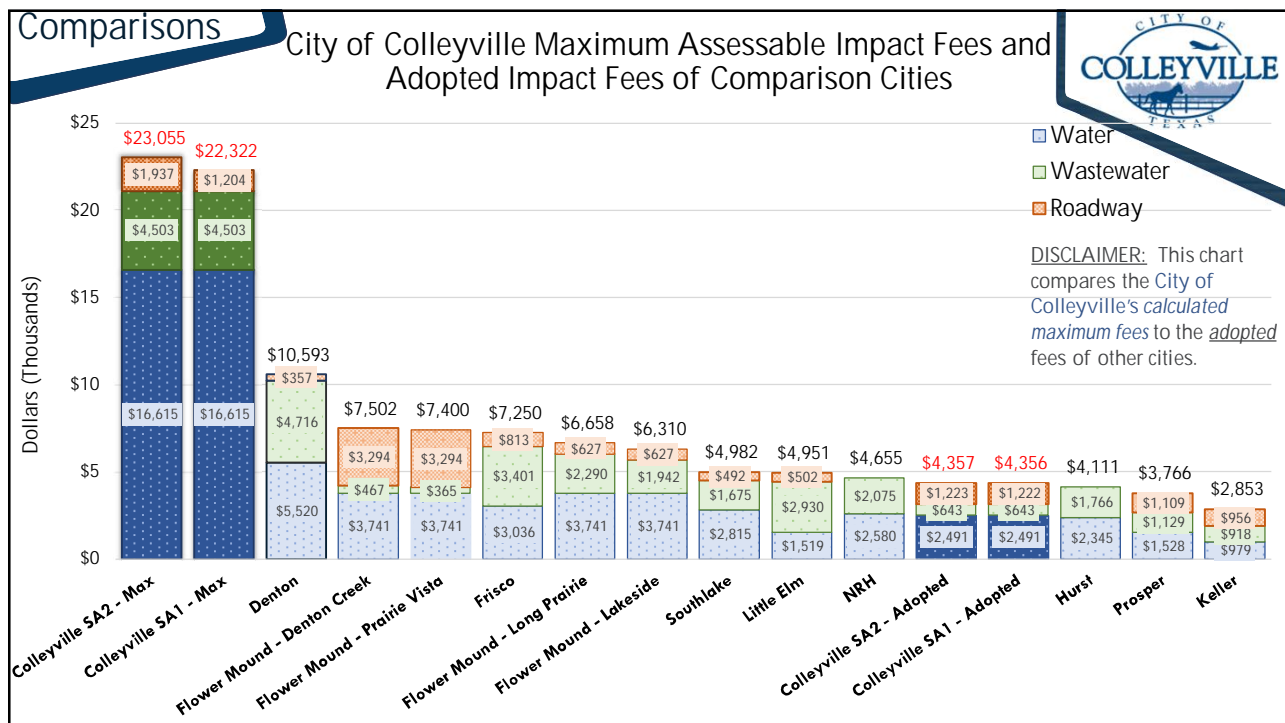
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### Impact Fee Update Schedule

	Date	Meetings
✓	9/27/21	Capital Improvements Advisory Committee (CIAC) Work Session on Land Use Assumptions, Impact Fee Capital Improvements Plan, and Impact Fees
●	10/19/21	City Council Work Session on Land Use Assumptions, Impact Fee Capital Improvements Plan, and Impact Fees
●	11/1/21	Council Meeting to Set Public Hearing Date for Impact Fee Study
●	11/8/21	<i>(Optional)</i> CIAC Work Session #2 on Land Use Assumptions, Impact Fee Capital Improvements Plan, and Impact Fees
●	11/30/21	CIAC Submit Written Comments to Council (before this date)
●	12/7/21	Council Public Hearing and Approval with 1 <sup>st</sup> Reading to Amend Impact Fee Ordinance
●	12/21/21	Council Meeting for 2 <sup>nd</sup> Reading to Amend Impact Fee Ordinance

Schedule

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# Questions

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[April.Escamilla@Kimley-Horn.com](mailto:April.Escamilla@Kimley-Horn.com)

PREPARED FOR

SEPTEMBER 2021



CITY OF COLLEYVILLE, TEXAS  
***2020 Roadway,  
Water, and Wastewater  
Impact Fee Study Update***

PREPARED BY

KIMLEY-HORN AND ASSOCIATES, INC.  
801 CHERRY STREET, UNIT 111, SUITE 1300  
FORT WORTH, TX 76102

PHONE: 817.335.6511

TBPE FIRM REGISTRATION NUMBER: F-928

PROJECT NUMBER: 061063055



**Kimley»Horn**

Executive Summary  
2020 Impact Fee Study



Sept  
2021

Prepared for the City of Colleyville

Prepared by:

Kimley-Horn and Associates, Inc.

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Fort Worth, TX 76102

Phone 817 335 6511

TBPE Firm Registration Number: F-928

Project Number: 061063055

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**JEFFREY A. WHITACRE** \_\_\_\_\_, P.E.  
SERIAL NUMBER. 102469  
DATE: SEPTEMBER 2021

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**JOSH KERCHO** \_\_\_\_\_, P.E.  
SERIAL NUMBER. 113002  
DATE: SEPTEMBER 2021

## EXECUTIVE SUMMARY

### INTRODUCTION

Impact Fees are a mechanism for funding the public infrastructure necessitated by new development. Across the country, they are used to fund police and fire facilities, parks, schools, roads, and utilities. In Texas, the legislature has allowed their use for roadway and drainage, water, and wastewater facilities. The Colleyville Impact Fee program was originally developed as a funding tool for infrastructure needs as a result of growth in the City in 1990 for roadway and water, with the addition of wastewater impact fees in 1995. In 2020, the City of Colleyville began exploring an update to the Roadway, Water, and Wastewater Impact Fees that were last updated in 2012.

In the most basic terms, impact fees are meant to recover the incremental cost of the impact of each new unit of development towards new infrastructure needs. Impact Fees are a mathematical calculation that determine a maximum fee that would be equivalent to growth paying for growth. This study's purpose is to calculate the maximum impact fee per service unit of new growth.

The Maximum Impact Fee is considered an appropriate measure of the impacts generated by a new unit of development on a City's infrastructure system. An impact fee program is anticipated to be designed so that it is predictable for both the development community and City. An impact fee program is transparent. This report describes in detail how the fee is calculated and how the Capital Improvements Advisory Committee (CIAC) monitors the Impact Fee program. An impact fee program is flexible in that funds can be used on priority projects and not just on projects adjacent to a specific development. An impact fee program is both equitable and proportional in that every new development pays an equal fee that is directly related to its systemwide impact.

### IMPACT FEE BASICS

#### *Service Areas*

A Service Area is a geographic area within which a unique maximum impact fee is determined. All fees collected within the Service Area must be spent on eligible improvements within the same Service Area. For Roadway Impact Fees, the Service Area may not exceed a 6-mile diameter trip length. In Colleyville, this results in the creation of two (2) separate Roadway Service Areas. For Water and Wastewater Impact Fees, a Service Area can be defined for both water and wastewater facilities that consists of the Certificate of Convenience and Necessity (CCN) boundary. Therefore, this study utilizes a singular Service Area for the Water and Wastewater components respectively.

### *Land Use Assumptions*

The Impact Fee determination is required to be based on the projected growth and corresponding capacity needs in a 10-year window. This study considers the years 2020-2030. The 10-year increase in residential units is projected to be 393 units within the City Limits. The 2030 projections show an increase of 451,000 square feet of non-residential land uses over the 10-year window. These projections set the basis for determining loadings and demands to serve new growth. The distribution of residential and non-residential growth utilized information from undeveloped land area, future land use data from the 2015 Comprehensive Plan, "Destination Colleyville", and input from City Staff on known future development locations.

### *Service Units*

The "service unit" is a measure of consumption or use of the capital facilities by new development. In other words, it is the unit of measure used to quantify the supply and demand for roads and utilities in the City. Service units are attributable to an individual unit of development and utilized to calculate the maximum impact fee of a development.

For roadway purposes, the service unit is defined as a vehicle-mile. A "vehicle-mile" refers to the capacity consumed in a single lane by a vehicle making a trip one mile in length during the PM peak hour. The PM peak hour is the one-hour period during the afternoon/evening when the highest vehicular volumes are observed. In accordance with the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10<sup>th</sup> Edition*, the PM peak is used as the basis for transportation planning and the estimation of trips caused by new development.

The service unit for water and wastewater impact fees is based on the size of the individual water meters used to serve growth related development. The base water service unit is the water demand associated with the smallest water meter issued for a new residential unit. The base wastewater service unit is the wastewater flow associated with the smallest water meter issued for a new residential unit. The smallest water meter issued for a new residential unit in the City of Colleyville is a 3/4-inch meter.

### *Capital Improvement Plans*

The City and project staff have identified the Roadway, Water, and Wastewater projects needed to accommodate the projected growth over the next ten (10) years within the City of Colleyville. These projects include existing, proposed, and recently completed projects that were determined based on their current or anticipated impact on each defined Service Area and the City as a whole.

### *Roadway Impact Fee Capital Improvement Plan*

The City of Colleyville Thoroughfare Plan is the ultimate plan for the roadway infrastructure within the City Limits. The projects on the Roadway Impact Fee Capital Improvement Plan were selected from the Thoroughfare Plan and cover existing, proposed, and completed roadway improvements, as well as intersection improvements with 10-year growth potential. The project team and City staff identified roadway and intersection projects with a projected total project cost (*not* impact fee eligible cost) of \$98,304,382 over two (2) Roadway Service Areas.

### *Water Impact Fee Capital Improvements Plan*

The Water Impact Fee Capital Improvements Plan was developed for the City of Colleyville based on recommended capital improvements outlines in the *Water Master Plan*, input from City Staff, and the population growth projections shown in the Land Use Assumptions. The recommended improvements will provide the required capacity and reliability to meet projected water demand through 2030. Elements of the water system, including storage facilities, pumping facilities, and the distribution network were evaluated against industry standards as outlined in the Design Criteria section of Water Impact Fee Chapter of this report.

A total of seven (7) existing and five (5) proposed projects were identified to develop the Water Impact Fee Capital Improvements Plan. The total project cost (*not* impact fee eligible cost) to be evaluated is \$11,627,893.

### *Wastewater Impact Fee Capital Improvements Plan*

Similar to the Water Impact Fee Capital Improvements Plan, the Wastewater Impact Fee Capital Improvements Plan was developed to address system improvements driven by growth. Elements of the wastewater system, including gravity pipes, force mains, and lift stations were evaluated against industry standards as outlined in the Design Criteria section of the Wastewater Impact Fee Chapter of this Report.

A total of four (4) existing and three (3) proposed projects were identified to develop the Wastewater Impact Fee Capital Improvements Plan. The total project cost (*not* impact fee eligible cost) to be evaluated is \$1,926,073.

### *Recoverable Project Costs*

Impact Fees are a one-time fee meant to recover the incremental cost of the impact of each new unit of development creating new infrastructure needs within a ten-year window. With this consideration, the maximum assessable impact fee does not specifically cover the entire cost of a roadway, water, or wastewater project. The calculations that determine the percentage of a project's cost that is impact fee eligible are defined as the project's *recoverable cost*.

### *Roadway Recoverable Project Costs*

The recoverable costs for roadway projects are calculated by first determining the net capacity of vehicle-miles supplied to support future growth within a 10-year window. This net capacity is then multiplied by the percentage of roadway capacity added attributable to this 10-year growth. This growth percentage is obtained through the derivation of a *transportation demand factor* (TDF), which computes the total vehicle-miles associated to a single land use development unit. The TDF is applied to both the net vehicle-miles supplied and the vehicle-mile growth projections to calculate the growth percentage needed to determine the total recoverable project costs, which total \$9,116,815 (pre-finance) over two (2) Roadway Service Areas. Per state law this recoverable cost is reduced to account for future ad valorem tax revenues from the new development.

### *Water Recoverable Project Costs*

The recoverable costs for water projects are calculated by determining the increase in water demand due to growth over the 10-year window. The City's current and future populations were utilized to calculate the percent utilization of each identified impact fee eligible project. The change in utilization of each project is multiplied by the total project cost to determine total recoverable project cost. The total recoverable cost is then divided by the growth in additional service units to determine the maximum fee per service unit. The total recoverable costs for the water distribution system is \$5,288,647 (pre-finance).

### *Wastewater Recoverable Project Costs*

The process for calculating the recoverable wastewater costs is similar to the water financial analysis. The recoverable costs for wastewater projects are calculated by determining the increase in wastewater flows due to growth over the 10-year window. The City's current and future populations were utilized to calculate the percent utilization of each identified impact fee eligible project. The change in utilization of each project is multiplied by the total project cost to determine total recoverable project cost. The total recoverable cost is then divided by the growth in additional service unites to determine the maximum fee per service unit. The total recoverable costs for the wastewater collection system is \$1,476,960 (pre-finance).

*Maximum Assessable Impact Fee Calculation*

In simplest terms, the maximum impact fee allowable by law is calculated by dividing the recoverable cost of the Capital Improvement Plans by the number of new service units of development. In accordance with state law, both the cost of the Capital Improvement Plan and the number of new service units of development used in the equation are based on the growth and corresponding capacity needs projected to occur within a 10-year window. This calculation is performed for each service area individually; each service area has a stand-alone Capital Improvement Plan and 10-year growth projection.

In practice, there are many factors that complicate this calculation. The 2020 maximum impact fee allowable by law for each service area is shown in the following table:

Roadway Service Area	Roadway Maximum Fee Per Service Unit (Vehicle-Mile)	Water Maximum Fee Per Service Unit (3/4-inch Meter)	Wastewater Maximum Fee Per Service Unit (3/4-inch Meter)
1	\$1,204	\$16,615	\$4,503
2	\$1,937		

*Adoption Process*

Chapter 395 of the Texas Local Government Code stipulates a specific process for the adoption of impact fees. A Capital Improvements Advisory Committee (CIAC) is required to review the Land Use Assumptions and the Impact Fee Capital Improvements Plan used in calculating the maximum fee, and to provide the Committee’s findings for consideration by the City Council. This CIAC also reviews the calculation and resulting maximum fees and provides its findings to the City Council. The composition of the CIAC is required to have adequate representation of the building and development communities. In Colleyville this is the Planning & Zoning Commission with an ETJ representative. The City Council then conducts a public hearing on the Land Use Assumptions, Capacity Plan, and Impact Fee Ordinance.

Following policy adoption, the CIAC is tasked with advising the City Council of the need to update the Land Use Assumptions or the Impact Fee Capital Improvements Plan at any time within five years of adoption. Finally, the CIAC oversees the proper administration of the Impact Fee, once in place, and advises the Council as necessary.

Chapter 395 of the Texas Local Government Code requires a minimum of one (1) public hearing before Council to amend an existing impact fee program. The public hearing to discuss the land use assumptions, capital improvements plan, and present a proposal for impact fee calculations will be held on December 7, 2021. The first reading to amend the existing impact fee ordinance will also occur on December 7, 2021 and the second reading will be on December 21, 2021.

*Maximum Assessable and Adopted Impact Fee Comparison to Previous 2006 and 2012 Updates*

Updates to the Roadway, Water, and Wastewater Impact Fees were previously completed in 2006 and 2012. A maximum assessable impact fee allowable by law was calculated, reviewed, and amendments were made to the previous impact fee ordinances in place as shown in the following table:

Impact Fee	2006		2012		2020	
	Maximum Assessable	Adopted (% of Max.)	Maximum Assessable	Adopted (% of Max.)	Maximum Assessable	Adopted (% of Max.)
Roadway Service Area 1	\$1,843	\$542 (29.4%)	\$2,360	\$1,222 (51.8%)	\$1,204	TBD
Roadway Service Area 2	\$2,165	\$541 (25%)	\$2,446	\$1,223 (50%)	\$1,937	TBD
Water	\$9,963	\$2,491 (25%)	\$6,100	\$2,491 (40.8%)	\$16,615	TBD
Wastewater	\$2,570	\$643 (25%)	\$2,521	\$643 (25.5%)	\$4,503	TBD

Chapter 1  
Land Use Assumptions for the  
2020 Impact Fee Study



Sept  
2021

Prepared for the City of Colleyville

Prepared by:

Kimley-Horn and Associates, Inc.

801 Cherry Street, Unit 11, Suite 1300

Fort Worth, TX 76102

Phone 817 335 6511

TBPE Firm Registration Number: F-928

Project Number: 061063055

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**JEFFREY A. WHITACRE**, P.E.  
SERIAL NUMBER. **102469**  
DATE: **SEPTEMBER 2021**

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## 1.1 PURPOSE

Chapter 395 of the Texas Local Government Code describes the procedure Texas political subdivisions must follow in order to assess impact fees for new development. The first step required in updating impact fees is the development of Land Use Assumptions. These Land Use Assumptions, which include both residential and employment estimates, form the basis for the development of impact fee Capital Improvement Plans (CIP) for roadway, water, and wastewater facilities.

Reasonable future growth estimates are necessary in order to aid the City of Colleyville in establishing the need for capital improvements required to serve future development. In accordance with Chapter 395, Kimley-Horn has compiled the information required to complete the Land Use Assumptions using the following sources:

- City of Colleyville 2035 Comprehensive Plan, Destination Colleyville (2015);
- City of Colleyville Thoroughfare Plan (2015);
- City of Colleyville Future Land Use;
- Building permit data; and
- City of Colleyville Staff.

## 1.2 COMPONENTS OF THE LAND USE ASSUMPTIONS CHAPTER

The Land Use Assumptions include the following components:

### LAND USE ASSUMPTIONS METHODOLOGY

An overview of the general methodology used to generate the land use assumptions.

### IMPACT FEE STUDY SERVICE AREAS

Explanation of the divisions of Colleyville into service areas for roadway, water, and wastewater facilities.

### 10-YEAR GROWTH ASSUMPTIONS

Walk through of the growth projections for 2020-2030.

### LAND USE ASSUMPTIONS SUMMARY

A synopsis of the land use assumptions.

### 1.3 LAND USE ASSUMPTIONS METHODOLOGY

The residential and employment growth projections formulated in this chapter were calculated using reasonable and generally accepted planning principles. The following factors were considered in developing these projections:

- Character, type, density, location and quantity of existing development;
- Building permit data;
- Probable future developments;
- Location of vacant land;
- Future Land Use; and
- Physical holding capacity of Colleyville.

The City of Colleyville is nearing full build-out. As available greenfield developable land is becoming scarcer, new building permits are not expected to follow the same pattern of past years. For this reason, future land use assumptions in Colleyville are based on availability of land rather than building permit data history. Building permit data was analyzed and is presented as reference in Figures 1.1-1.2.

Figure 1.1 Historic Single-Family Building Permits

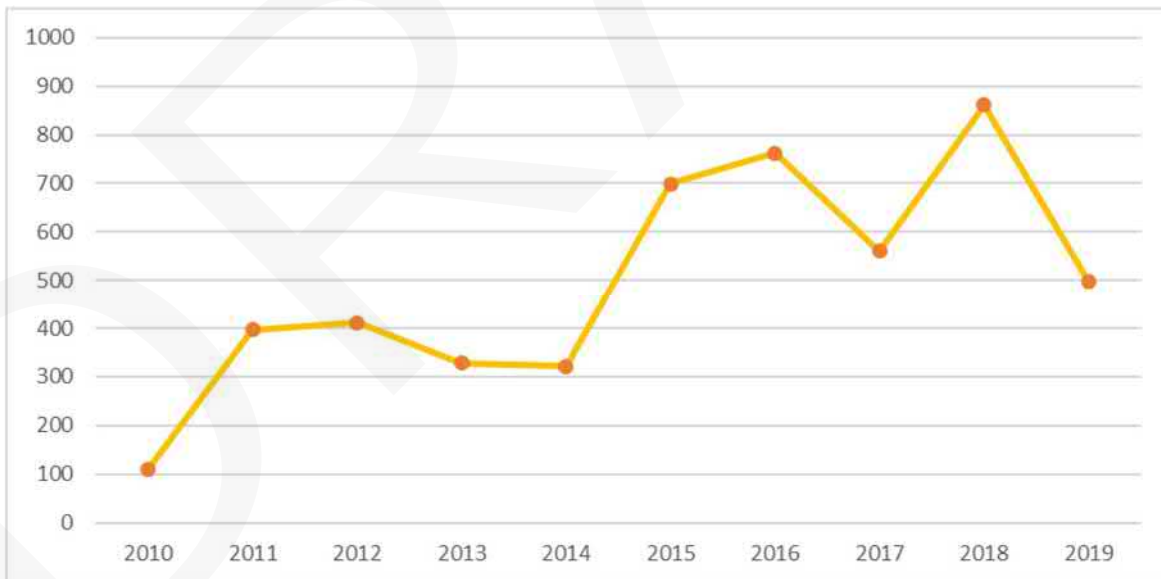
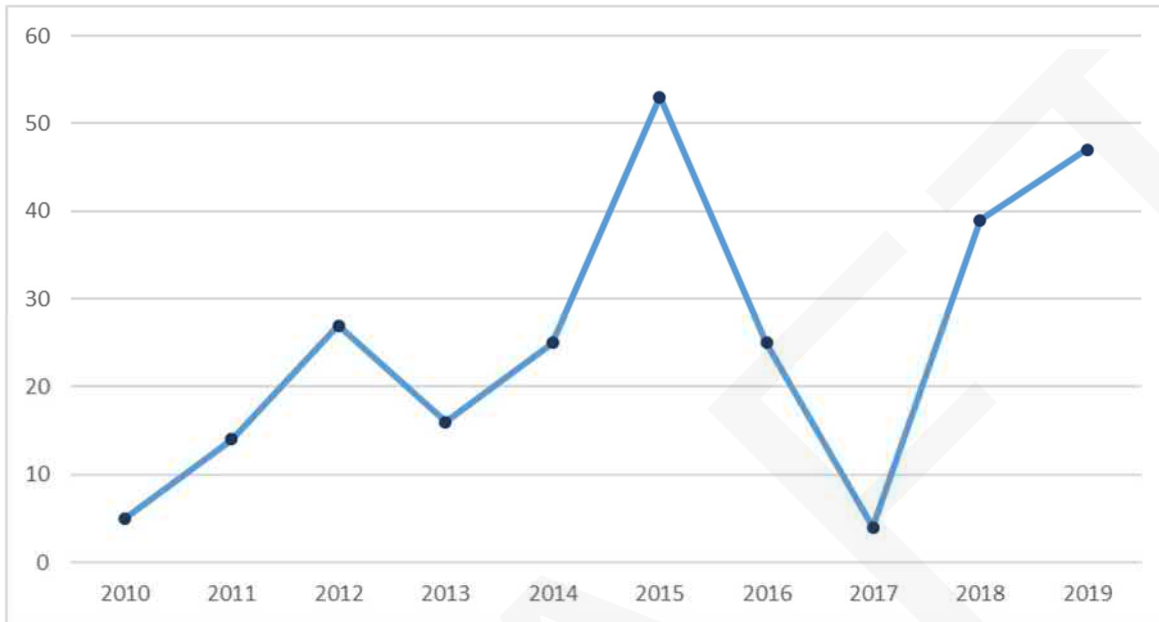


Figure 1.2 Historic Commercial Building Permits



Growth projections from 2020 – 2030 for the entire City of Colleyville were established using information from the 2035 Comprehensive Plan, available vacant land, probable future developments, and generally accepted planning principles. These City-wide growth projections were broken out into Service Area growth projections based the location of the probable future developments and an aerial overview determining the location of vacant land and the future land use.

Table 1.1 shows the amount of acreage identified as potential development over the next ten years. The land use was assumed based on either current zoning or the future land use plan.

Table 1.1 Future Land Use Assumptions of Currently Undeveloped Land

		Undeveloped Land
		Acres
<b>SERVICE AREA 2 (WEST OF SH26)</b>	Residential (R-20)	35
	Residential (R-40)	204
	Commercial	26
	Colleyville Boulevard Corridor	10
	<b>Total</b>	<b>275</b>
<b>SERVICE AREA 1 (EAST OF SH26)</b>	Residential (R-20)	29
	Residential (R-40)	60
	Commercial	0
	Colleyville Boulevard Corridor	16
<b>Total</b>	<b>106</b>	
<b>TOTAL</b>	Residential (R-20)	64
	Residential (R-40)	264
	Commercial	26
	Colleyville Boulevard Corridor	26
<b>Total</b>	<b>380</b>	

## 1.4 IMPACT FEE SERVICE AREAS

### SERVICE AREA DEFINITION

According to Chapter 395 of the Local Government Code, a Service Area refers to the area within the corporate boundaries or extraterritorial jurisdiction of the political subdivision to be served by the capital improvement or facilities specified in the Capital Improvement Plan. Funds collected in the specific service areas must be spent in the service area collected.

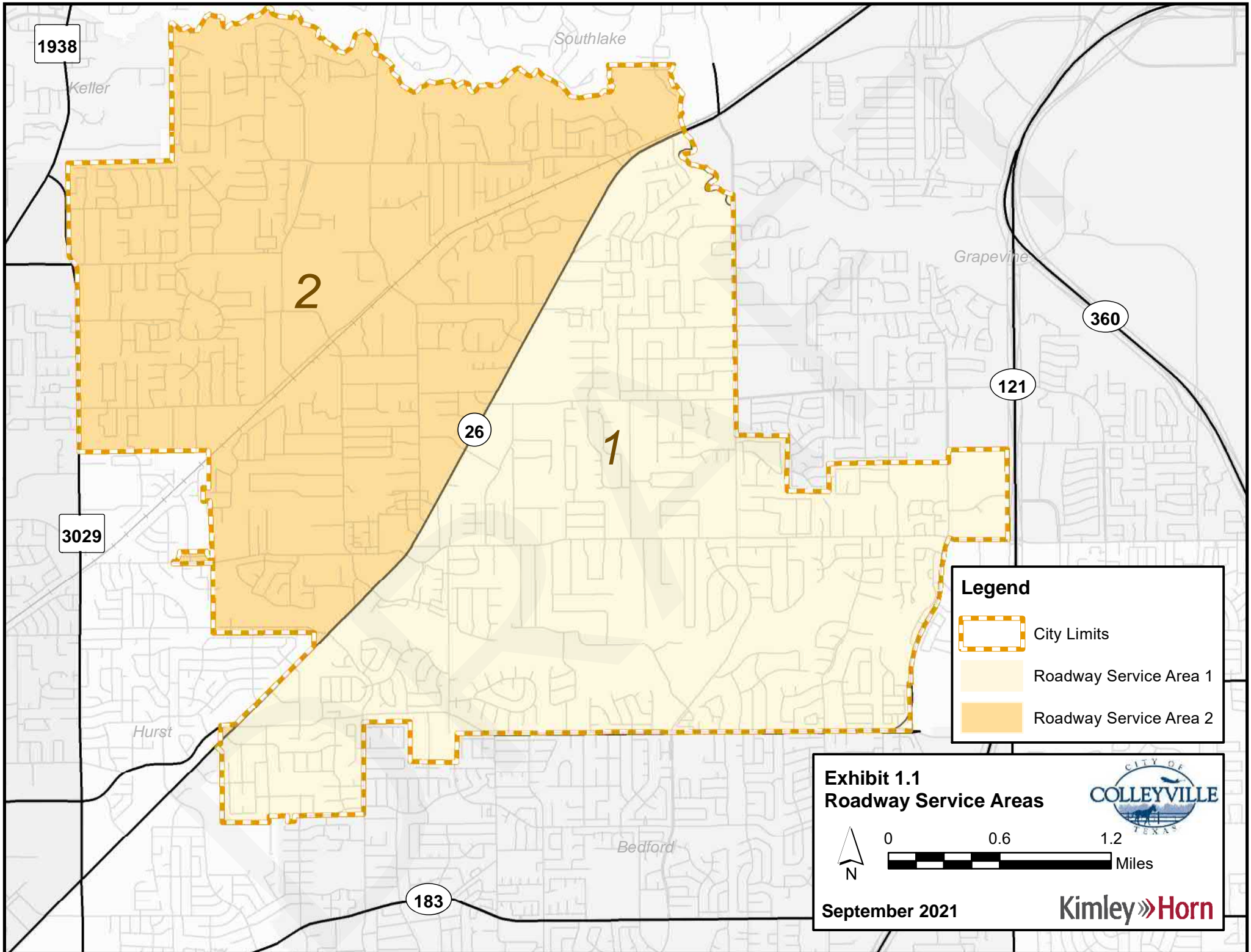
### ROADWAY IMPACT FEE SERVICE AREAS

The geographic boundaries of the two (2) impact fee service areas for roadway facilities are shown in Exhibit 1.1. The roadway service areas cover the entire corporate boundary of the City of Colleyville. Chapter 395 of the Texas Local Government Code specifies that “the service area is limited to an area within the corporate boundaries of the political subdivision and shall not exceed six (6) miles.”




Service Area 1 is located east of SH 26/Colleyville Blvd. Service Area 2 is located west of SH 26/Colleyville Blvd.

### WATER AND WASTEWATER IMPACT FEE SERVICE AREAS


The geographic boundaries of the impact fee service area for water and wastewater facilities are shown in Exhibit 1.2 and 1.3, respectively. The water and wastewater impact fee service areas include the area in the City’s water and wastewater Certificate of Convenience and Necessity (CCN).




**Legend**

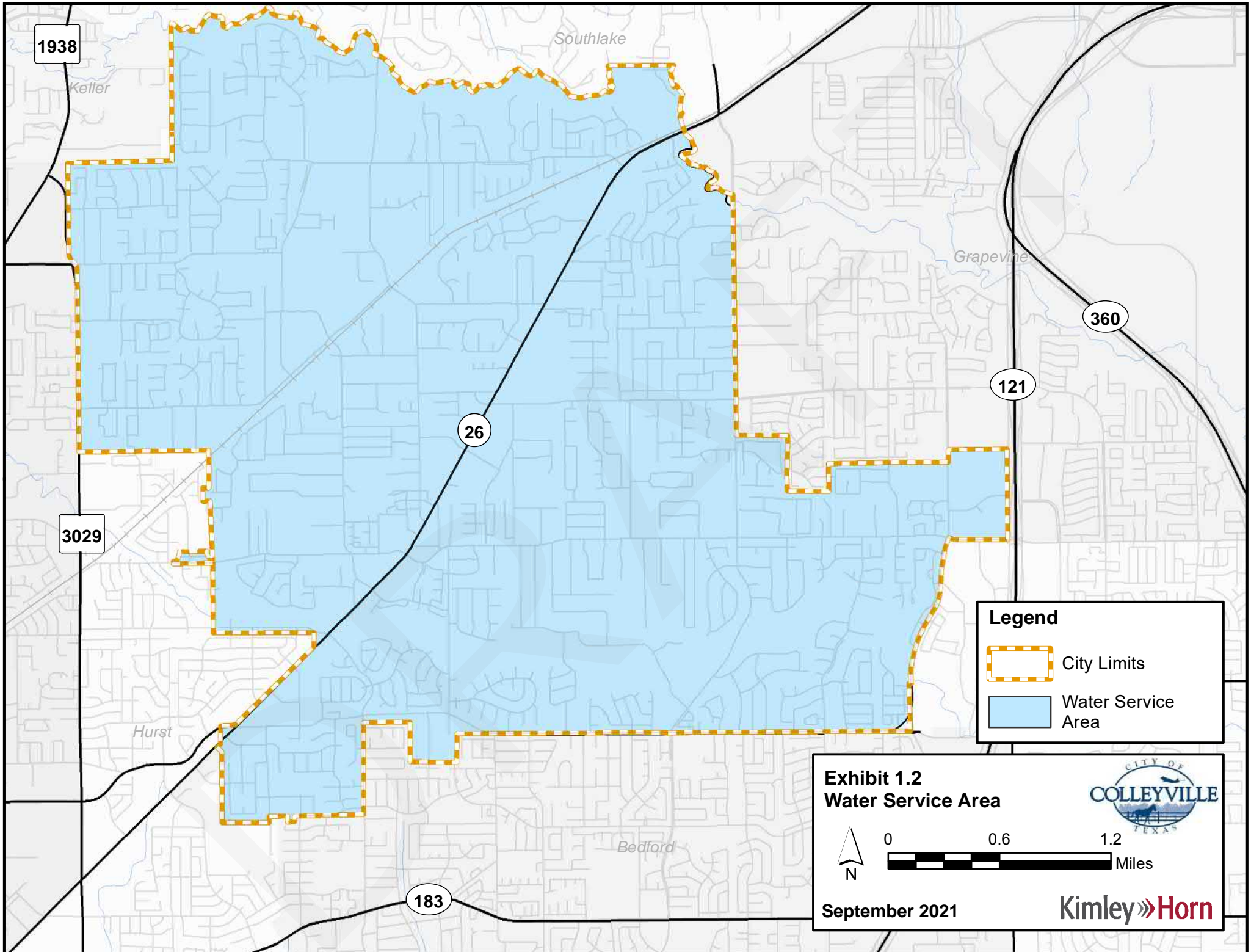
-  City Limits
-  Roadway Service Area 1
-  Roadway Service Area 2

**Exhibit 1.1**  
**Roadway Service Areas**


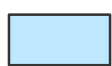


 0 0.6 1.2 Miles

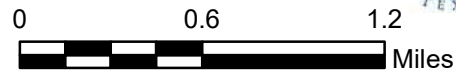

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**Legend**

-  City Limits
-  Water Service Area

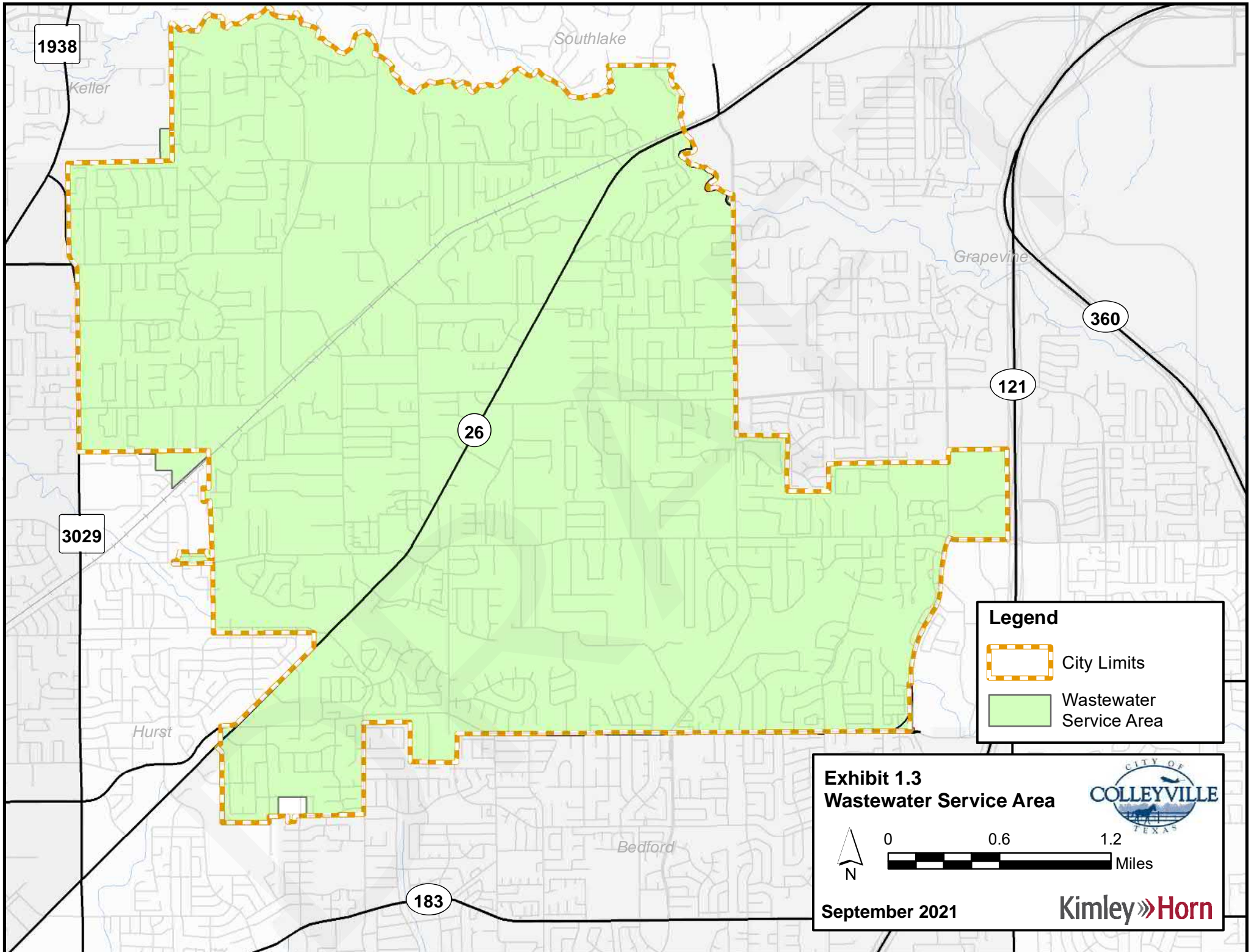
**Exhibit 1.2**  
**Water Service Area**



0 0.6 1.2 Miles



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1938

Keller

Southlake

Grapevine

360

121

26


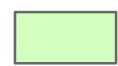
3029

Hurst


183


Bedford

**Legend**

-  City Limits
-  Wastewater Service Area

**Exhibit 1.3**  
**Wastewater Service Area**



 0 0.6 1.2 Miles

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## 1.5 DATA FORMAT

The population and employment estimates were all compiled in accordance with the following categories and format:

### IMPACT FEE SERVICE AREAS:

Larger zones, which correspond to the proposed roadway, water, and wastewater facilities service areas (as described in the previous section).

### UNITS:

Number of dwelling units, both single and multifamily.

### POPULATION:

Number of people based on person per dwelling unit factors.

### EMPLOYMENT:

Square feet of building area based on three (3) different classifications:

#### Retail:

Land use activities which provide for the retail sale of goods that primarily serve households and whose location choice is oriented toward the household sector (i.e. grocery stores and restaurants).

#### Service:

Land use activities which provide personal and professional services such as government and other professional offices.

#### Basic:

Land use activities that produce goods and services, including those that are exported outside the local economy (i.e. manufacturing, construction, transportation, wholesale, trade, warehousing, and other industrial uses).

## 1.6 10-YEAR GROWTH SUMMARY

Table 1.2 summarizes the residential and employment 10-year growth projections within the City Limits. These projections were found using the undeveloped acreage and future land use assumptions, as shown in Table 1.1. Different land use densities were used based on the Comprehensive Plan. For residential land use R-20, a density of 2 units per acre was assumed, while for R-40, 1 unit per acre was assumed. A 0.2 Floor Area Ratio (FAR) was applied to all acreage assumed to be a non-residential land use.

**Table 1.2 Residential and Employment Land Use Assumptions Growth Projections (2020 – 2030)**

Service Area	Residential	Employment Units		
	Single Family	Basic Sq Ft	Service Sq Ft	Retail Sq Ft
1	119	14,000	57,000	71,000
2	274	8,000	124,000	177,000
<u>City Total</u>	<u>393</u>	<u>22,000</u>	<u>181,000</u>	<u>248,000</u>

## 1.7 SUMMARY

The following is a land use assumptions summary for the City limits. This City limit summary is equivalent to the roadway land use assumptions.

- The ten year (2020 - 2030) residential growth projection is approximately:
  - City Total = 393 Dwelling Units
- The ten-year (2020 - 2030) employment growth projection is approximately:
  - City Total = 451,000 ft<sup>2</sup>

Chapter 2  
Roadway Impact Fee Study for the  
2020 Impact Fee Study



Sept  
2021

Prepared for the City of Colleyville

Prepared by:

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TBPE Firm Registration Number: F-928

Project Number: 061063055

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SERIAL NUMBER. **102469**  
DATE: **SEPTEMBER 2021**

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## 2.1 INTRODUCTION

Chapter 395 of the Texas Local Government Code describes the procedure political subdivisions must follow to create and implement impact fees. Chapter 395 defines an Impact Fee as “a charge or assessment imposed by a political subdivision against new development to generate revenue for funding or recouping the costs of capital improvements or facility expansions necessitated by and attributable to the new development.”

The City has retained Kimley-Horn and Associates, Inc. to provide professional transportation engineering services for the 2020 Roadway Impact Fee Update. This chapter includes details of the Roadway Impact Fee calculation methodology in accordance with Chapter 395, the applicable Land Use Assumptions, development of the Roadway Impact Fee CIP, and the Land Use Equivalency Table.

This report references two of the basic inputs to the Roadway Impact Fee:

1. Land Use Assumptions (LUA)
2. Roadway Impact Fee Capital Improvements Plan (RIF CIP)

Information from these LUA and RIF CIP are used extensively throughout the remainder of the report. There is a detailed discussion of the methodology for the computation of impact fees. This discussion is broken into three components:

1. Methodology for Roadway Impact Fees
2. Roadway Impact Fee Calculation
3. Plan for the Roadway Impact Fee Credit

The components of the Methodology for Roadway Impact Fees include development of:

- Service Areas
- Service Units
- Cost Per Service Unit
- RIF CIP Costing Methodology
- Summary of RIF CIP Costs
- Service Unit Calculation

The Roadway Impact Fee Calculation includes the calculation of the:

- Maximum Assessable Impact Fee Per Service Unit
- Service Unit Demand Per Unit of Development

The Plan for Awarding the Roadway Impact Fee Credit details the maximum assessable impact fee per service unit that may be applied under Chapter 395 of the Texas Local Government Code.

## 2.2 LAND USE ASSUMPTIONS

### SUMMARY

The methodology for land use assumptions is presented in Chapter 1: Land Use Assumptions for the 2020 Impact Fee Study. Table 2.1 presents the land use assumptions that were utilized in the roadway impact fee development. This table illustrates growth that is projected for the City of Colleyville from 2020 – 2030. These values were derived based on undeveloped land area, future land use data from the 2035 Comprehensive Plan, “Destination Colleyville”, and input from City Staff on known future development locations.

Table 2.1 Residential and Employment Land Use Assumptions Growth Projections (2020 – 2030)

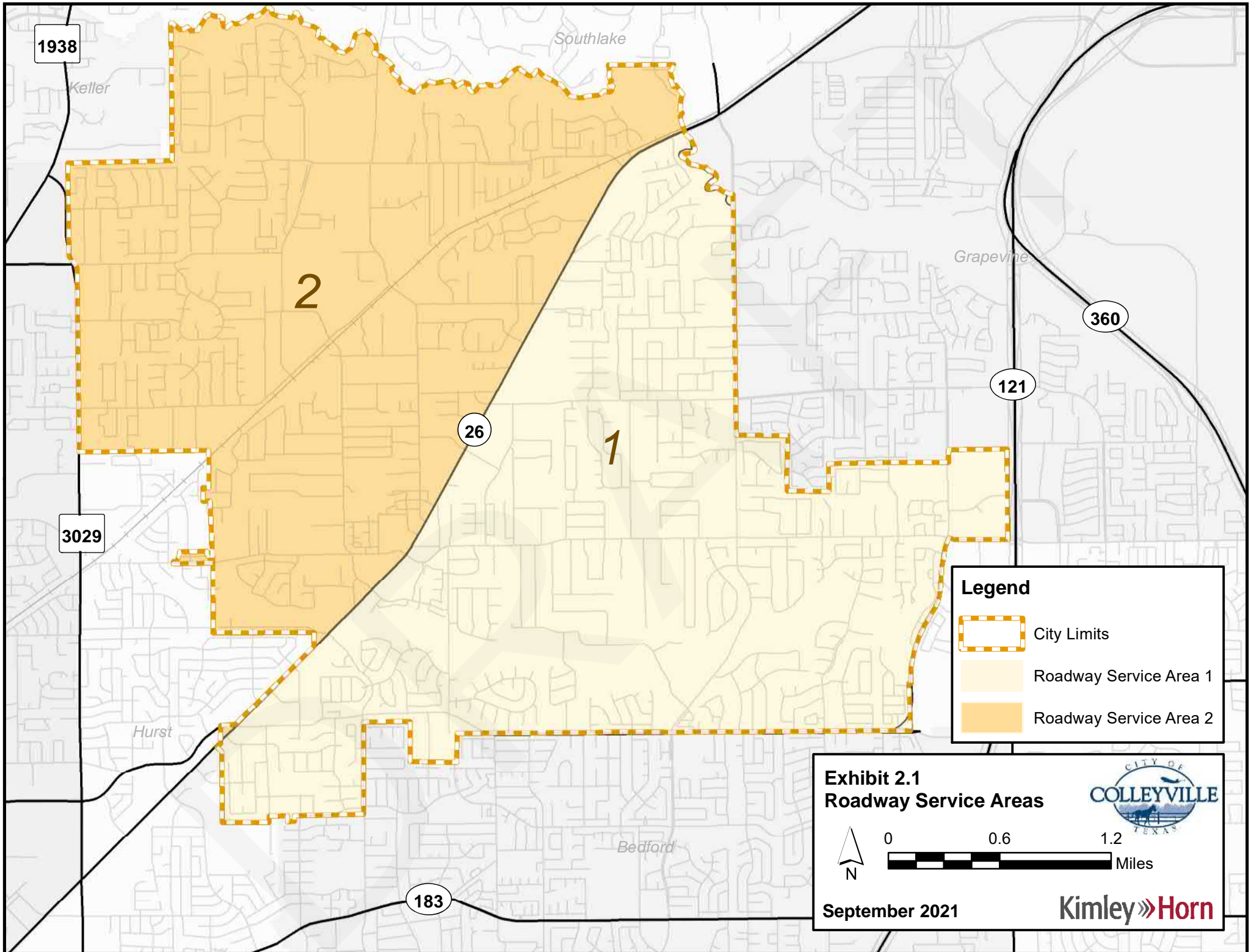
Service Area	Residential Units	Employment Units		
	Single Family	Basic Sq Ft	Service Sq Ft	Retail Sq Ft
1	119	14,000	57,000	71,000
2	274	8,000	124,000	178,000
City Total	393	22,000	181,000	249,000

### ROADWAY IMPACT FEE SERVICE AREAS

The geographic boundary of the proposed roadway impact fee service areas is shown in Exhibit 2.1. The City of Colleyville is divided into two (2) service areas. The service areas were based upon input from the City of Colleyville staff.

- Service Area 1 is located east of SH 26/Colleyville Blvd.
- Service Area 2 is located west of SH 26/Colleyville Blvd.


All thoroughfare facilities are assumed to be 100% within the City Limits, apart from facilities that are on the boundary of the service areas. In this instance, the proposed boundary is intended to follow the centerline of the roadway.



**Legend**


- City Limits
- Roadway Service Area 1
- Roadway Service Area 2

**Exhibit 2.1**  
**Roadway Service Areas**



0 0.6 1.2 Miles

September 2021



### 2.3 ROADWAY IMPACT FEE CAPITAL IMPROVEMENTS PLAN

The City has identified the roadway projects needed to accommodate the projected growth within the City. The Colleyville Thoroughfare Plan is the ultimate plan for the infrastructure within the City Limits. Only capacity improvements still needed to build out the Thoroughfare Plan to accommodate the expected growth within the next 10-years are included in the RIF CIP. The RIF CIP consists of 3 categories of projects. They are as follows:

- Widening – Existing roadways not currently built to the ultimate classification in the Thoroughfare Plan and must be completely reconstructed.
- Completed – Completed project with excess capacity available to serve new growth that the City contributed to financially.
- Intersections – Major intersection improvements identified by the City and identified as either completed or proposed.

All the roadway facilities identified are part of the currently adopted Thoroughfare Plan.

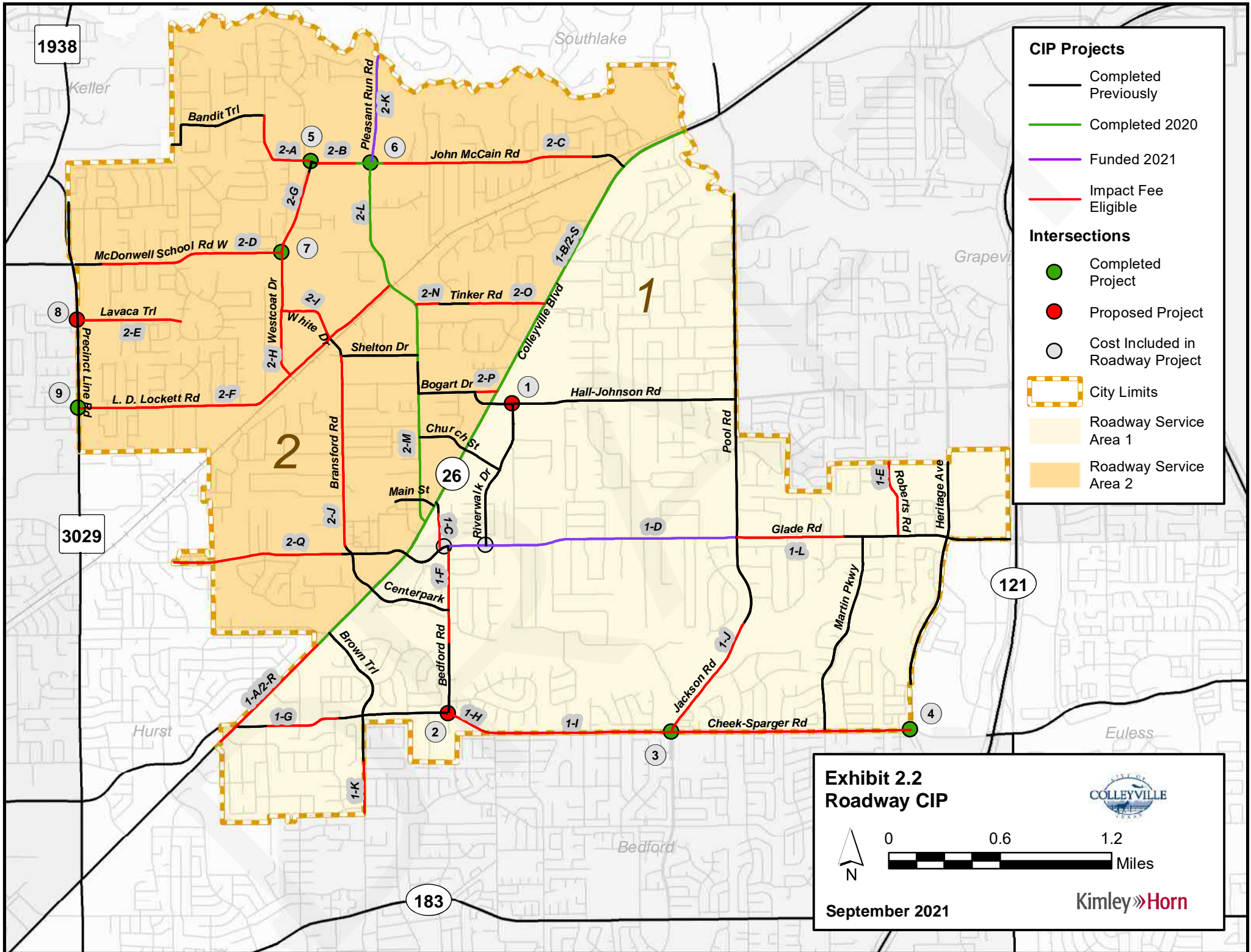
The proposed RIF CIP is listed in Tables 2.2 – 2.3 and mapped in Exhibit 2.2. The tables show the length of each project as well as the facility’s Thoroughfare Plan classification. The RIF CIP was developed in conjunction with input from City of Colleyville staff and represents projects that will be needed to accommodate the growth projected in Chapter 1: Land Use Assumptions for the 2020 Impact Fee Study.

Table 2.2 10-Year Roadway Impact Fee Capital Improvements Plan – Service Area 1

Service Area	Proj. #	Class	Roadway	Limits	Length (mi)	% In Service Area
SA 1 (East of SH 26)	1-A/2-R	P6D	Colleyville Blvd	475' S of Brown Trl (City Limits) to 600' S of Cheek Sparger Rd	0.74	50%
	1-B/2-S	P6D	Colleyville Blvd	2,030' N of John McCain Rd (City Limits) to 475' S of Brown Trl	3.46	50%
	1-C	C2U	Thompson Terr	Colleyville Blvd to Old Glade Rd	0.20	100%
	1-D	M2D	Glade Rd	Bedford Rd to Pool Rd	1.56	100%
	1-E	C2U	Roberts Rd	2,140' N of Glade Rd (City Limits) to Glade Rd	0.41	100%
	1-F	C2U	Bedford Rd	115' S of Glade Rd to Little Bear Creek	0.51	100%
	1-G	M4U (1/2)	Cheek-Sparger Rd	San Bar Ln to Del Mar Ct	0.40	100%
	1-H	M4U (1/2)	Cheek-Sparger Rd	Bedford Rd to 1,270' E of Bedford Rd	0.24	100%
	1-I	M4U (1/2)	Cheek-Sparger Rd	1,270' E of Bedford Rd to Heritage Ave (City Limits)	2.27	50%
	1-J	M4U (1/2)	Jackson Rd	2,540' S of Glade Rd to Cheek Sparger Rd	0.72	100%
	1-K	M4U (1/2)	Brown Trl	350' S of Autumn Oaks to 145' S of Quail Crest Dr	0.28	100%
	1-L	M4U (1/2)	Glade Rd	Pool Rd to Strathmore Terr	0.57	100%
	1-1	Intersection	Hall Johnson Rd & Riverwalk Dr	Intersection Improvements		100%
	1-2	Intersection	Bedford Rd & Cheek-Sparger Rd	Intersection Improvements		100%
	1-3	Intersection	Jackson Rd & Cheek-Sparger Rd	Intersection Improvements		50%
	1-4	Intersection	Heritage Ave & Cheek-Sparger Rd	Intersection Improvements		50%

Table 2.3 10-Year Roadway Impact Fee Capital Improvements Plan – Service Area 2

Service Area	Proj. #	Class	Roadway	Limits	Length (mi)	% In Service Area
SA 2 (West of SH 26)	2-A	C2U	John McCain Rd	Bandit Tr to Westcoat Dr	0.46	100%
	2-B	C2U	John McCain Rd	150' E of Westcoat Dr to 430' W of Pleasant Run Rd	0.21	100%
	2-C	C2U	John McCain Rd	315' E of Pleasant Run Rd to Maranatha Ct	1.14	100%
	2-D	C2U	McDonwell School Rd W	Herbert Rd to Westcoat Dr	0.99	100%
	2-E	C2U	Lavaca Trl	Precinct Line Rd (City Limits) to Mustang Tr	0.56	100%
	2-F	C2U	L. D. Lockett Rd	Precinct Line Rd (City Limits) to Pleasant Run Rd	1.93	100%
	2-G	C2U	Westcoat Dr	300' S of John McCain Rd to McDonwell School Rd	0.46	100%
	2-H	C2U	Westcoat Dr	McDonwell School Rd to L D Lockett Rd	0.68	100%
	2-I	C2U	White Dr	Westcoat Dr to L D Lockett Rd	0.35	100%
	2-J	C2U	Bransford Rd	Shelton Dr to 220' N of Glade Rd	1.03	100%
	2-K	C2U	Pleasant Run Rd	3,080' N of John McCain Rd (City Limits) to John McCain Rd	0.58	100%
	2-L	C2U	Pleasant Run Rd	John McCain Rd to 200' S of Shelton Dr	1.17	100%
	2-M	C2U	Pleasant Run Rd	Bogart Dr to Colleyville Blvd	0.70	100%
	2-N	C2U	Tinker Rd	Pleasant Run Rd to 645' E of Pleasant Run Rd	0.12	100%
	2-O	C2U	Tinker Rd	Caldwell Hughes Rd to Colleyville Blvd	0.41	100%
	2-P	C2U	Bogart Dr	Hall Johnson Rd to Colleyville Blvd	0.12	100%
	2-Q	M4U (1/2)	Glade Rd	5,100' W of Bransford Rd (City Limits) to 265' W of Bransford Rd	0.91	100%
	1-A/2-R	P6D	Colleyville Blvd	475' S of Brown Trl (City Limits) to 600' S of Cheek Sparger Rd	0.74	50%
	1-B/2-S	P6D	Colleyville Blvd	2,030' N of John McCain Rd (City Limits) to 475' S of Brown Trl	3.46	50%
	I-5	Intersection	John McCain Rd & Westcoat Dr	Intersection Improvements		100%
I-6	Intersection	John McCain Rd & Pleasant Run Rd	Intersection Improvements		50%	
I-7	Intersection	McDonwell School Rd & Westcoat Dr	Intersection Improvements		100%	
I-8	Intersection	Precinct Line Rd & Lavaca Trl	Intersection Improvements		50%	
I-9	Intersection	L.D. Lockett Rd & Precinct Line Rd	Intersection Improvements		50%	




**CIP Projects**

- Completed Previously
- Completed 2020
- Funded 2021
- Impact Fee Eligible

**Intersections**

- Completed Project
- Proposed Project
- Cost Included in Roadway Project
- ▭ City Limits
- ▭ Roadway Service Area 1
- ▭ Roadway Service Area 2

**Exhibit 2.2  
Roadway CIP**



0 0.6 1.2 Miles

September 2021

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## 2.4 METHODOLOGY FOR ROADWAY IMPACT FEES

### SERVICE AREAS

The two (2) service areas used in the 2020 Roadway Impact Fee Study are shown in the previously referenced Exhibit 2.1. These service areas cover the entire corporate boundary of the City of Colleyville. Chapter 395 of the Texas Local Government Code specifies that “the service area is limited to an area within the corporate boundaries of the political subdivision and shall not exceed six (6) miles.” The service areas in the 2020 Roadway Impact Fee Study are consistent with the specification of Chapter 395 of the Texas Local Government Code. Service Area 1 is located east of SH 26/Colleyville Boulevard and Service Area 2 is located west of SH 26/Colleyville Boulevard. Both service areas are approximately four (4) miles in diameter.

### SERVICE UNITS

The “service unit” is a measure of consumption or use of the capital facilities by new development. In other words, it is the unit of measure used in the 2020 Roadway Impact Fee Study to quantify the supply and demand for roads in the City. For transportation purposes, the service unit is defined as a vehicle-mile. Below is the definition for vehicle-mile.

Vehicle-Mile: The capacity consumed in a single lane in the PM peak hour by a vehicle making a trip one mile in length. The PM Peak is used as the basis for transportation planning and the estimation of trips caused by new development.

Total Vehicle-Miles of Supply: Based on the total length (miles), number of lanes, and capacity (vehicles per hour) provided by the Thoroughfare Plan (see Appendix B).

Total Vehicle-Miles of Demand: Based on the 10-year growth projections. The demand is equal to PM Trip Rate (trips) \* Trip Length (miles).

The capacity values used in the 2020 Roadway Impact Fee Study are based upon generally accepted thoroughfare capacity criteria. Tables 2.4 and 2.5 show the service volumes as a function of the City of Colleyville’s Thoroughfare Plan classifications.

Table 2.4 Service Volumes for Proposed Facilities

Thoroughfare Plan Classification	Median Configuration	Hourly Vehicle-Mile Capacity per Lane-Mile of Roadway Facility
P6D - Principal Arterial	Divided	900
M4D - Minor Arterial		725
M2D - Minor Arterial		725
M4U - Minor Arterial	Undivided	650
M2U - Minor Arterial		650
C3U - Major Collector		575
C2U - Major Collector		525
C2U - Minor Collector		525

\*Note: Used in Appendix B – CIP Units of Supply

Table 2.5 Service Volumes for Existing Facilities

Existing Section	Description	Hourly Vehicle-Mile Capacity per Lane-Mile of Roadway Facility
C2U	Minor Collector - Two-lane undivided	425
C2U	Major Collector - Two-lane undivided	425
C3U	Major Collector - Three-lane undivided (W/ TWLTL)	575
M2U	Minor Arterial - Two-lane undivided	650
M2D	Minor Arterial - Two-lane divided	700
M4U	Minor Arterial - Four-lane undivided	650
M4D	Minor Arterial - Four-lane divided	700
M5U	Minor Arterial - Five-lane undivided (W/ TWLTL)	725
P6U	Principal Arterial - Six-lane undivided	750
P6D	Principal Arterial - Six-lane divided	900

## COST PER SERVICE UNIT

A fundamental step in the impact fee process is to establish the cost for each service unit. In the case of the Roadway Impact Fee, this is the cost for each vehicle-mile of travel. Thus, it is the cost to construct a roadway (lane-mile) needed to accommodate a vehicle-mile of travel. The cost per service unit is calculated for each service area based on the roadway projects within that service area.

The second component of the cost per service unit is the determination of the number of service units in each service area. This number is the measure of the growth in transportation demand that is projected to occur in the ten-year period. Chapter 395 requires that Impact Fees be assessed only to pay for growth projected to occur in the city limits within the next ten-years. As noted earlier, the units of demand are vehicle-miles of travel.

## ROADWAY IMPACT FEE CIP COSTING METHODOLOGY

All of the project costs for a facility which serves the overall transportation system are eligible to be included in the RIF CIP. Chapter 395 of the Texas Local Government Code specifies that the allowable costs are "...including and limited to the:

1. Construction contract price;
2. Surveying and engineering fees;
3. Land acquisition costs, including land purchases, court awards and costs, attorney's fees, and expert witness fees; and
4. Fees actually paid or contracted to be paid to an independent qualified engineer or financial consultant preparing or updating the CIP who is not an employee of the political subdivision."

The engineer's opinion of the probable costs of the projects in the RIF CIP are based, in part, on the calculation of a unit cost of construction. This means that a cost per linear foot of roadway is calculated based on an average price for the various components of roadway construction. This allows the probable cost to be determined by the type of facility being constructed, the number of lanes, and the length of the project. The costs for location-specific items such as bridges, highway ramps, drainage structures, or any other special components are added to each project, as appropriate. In addition, future Colleyville Boulevard from Brown Trail to Cheek Sparger Road has been included in the CIP as a 20% portion of the total cost where the City anticipates contributing a portion of the total project costs. This cost assumption is based on the typical cost that the City is responsible for in a state project such as utility adjustments, street lighting, landscaping, and engineering and survey. Based upon discussions with City of Colleyville staff,

State, County, and developer-driven projects in which the City has contributed a portion of the total project cost have been included in the RIF CIP as lump sum costs. The following is a detailed description of the costing worksheet/methodology for the RIF CIP.

Overview of Roadway Impact Fee CIP Costing Worksheets

For each project a specific costing worksheet has been developed (see Appendix A). Each worksheet contains project information, construction pay items, construction component allowances, and a summary of costs and allowances. An example costing sheet can be seen below.

City of Colleyville		Kimley-Horn and Associates, Inc.			
2020 Roadway Impact Fee Update		updated: 10/21/2020			
Conceptual Level Project Cost Projection					
<b>Project Information:</b>		Description:	Project No. <b>1-C</b>		
Name:	Thompson Terr	This project consists of the reconstruction of an existing two-lane undivided facility to a two-lane undivided collector facility.			
Limits:	Colleyville Blvd to Old Glade Rd				
Impact Fee Class:	C2U				
Ultimate Class:	C2U				
Length (lf):	1,061				
Service Area(s):	1				
Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	1,946	CY	\$ 27.00	\$ 52,536
201	6" Lime Stabilization (with Lime @ 30#/sy)	3,892	SY	\$ 3.50	\$ 13,620
301	7" Concrete Pavement	3,656	SY	\$ 60.00	\$ 219,341
401	4" Topsoil	3,774	SY	\$ 10.00	\$ 37,736
601	5" Concrete Sidewalk	10,613	SF	\$ 8.00	\$ 84,906
501	Concrete Driveway Approach	1	EA	\$ 4,000.00	\$ 4,000
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 412,140</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$ 24,728		
√ Traffic Control	Construction Phase Traffic Control	5%	\$ 20,607		
√ Pavement Markings/Markers		3%	\$ 12,364		
√ Roadway Drainage	Standard Internal System	25%	\$ 103,035		
√ Illumination		6%	\$ 24,728		
√ Special Drainage Structures	None Anticipated	0%	\$ -		
√ Water	Minor Adjustments	6%	\$ 24,728		
√ Sewer	Minor Adjustments	4%	\$ 16,486		
√ Establish Turf / Erosion Control		3%	\$ 12,364		
√ Basic Landscaping		3%	\$ 12,364		
Other:		\$0	\$ -		
**Allowances based on % of Paving Construction Cost Subtotal			<b>Allowance Subtotal: \$ 251,405</b>		
<b>Paving and Allowance Subtotal: \$ 663,545</b>					
Construction Contingency: 15% \$ 99,532					
Mobilization: 6% \$ 5,972					
<b>Construction Cost TOTAL: \$ 770,000</b>					
Impact Fee Project Cost Summary					
Item Description	Notes:	Allowance	Item Cost		
Construction:		-	\$ 770,000		
Engineering/Survey/Testing:		18%	\$ 138,600		
Previous Town contribution					
Other					
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 115,500		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 1,024,000</b>		
NOTE: The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Colleyville. The planning level cost projections shall not supersede the City's design standards contained or the determination of the City Engineer for a specific project.					

Project Information

Roadway Construction Costs

Construction Component Allowances

CIP Allowances

Impact Fee Project Costs

## Project Information

In order to correctly estimate the cost of a roadway project, several attributes are first identified:

- Project Number – Identifies which Service Area the project is in with a corresponding number. The corresponding number does not represent any prioritizations and is used only to identify projects.
- Name – A unique identifier for each project.
- Limits – Represents the beginning and ending location for each project.
- Impact Fee Class – The costing class to be used in the analysis. The impact fee class provides the width for the various elements in the roadway. The construction costs are variable, based on the proposed Thoroughfare Plan classification of the roadway. For example, M4U indicates an undivided Major Arterial with 4 lanes. An M4U Impact Fee Class means the entire roadway is to be constructed. Additional classifications are utilized in cases where a portion of the facility currently exists and the road is only to be widened. The following notations are used for these projects:
  - “(1/2)” for facilities where half the facility still needs to be constructed
- Ultimate Class – The functional classification on the City of Colleyville’s Thoroughfare Plan.
- Length (ft) – The distance measured in feet that is used to cost out the project.
- Service Area(s) – Represents the service area where the project is located. Multiple service areas will be listed if the project lies along a service area boundary.
- Description – Used to describe the project type assumed in the costing such as a widening or completed.

## Roadway Construction Costs

A typical roadway project consists of a number of costs, including the following: construction, design engineering, survey, and right-of-way acquisition. While the construction cost component of a project may actually consist of approximately 100 various pay items, a simplified approach was used for developing the conceptual level project costs. The pay items are listed below:

- |                      |                              |
|----------------------|------------------------------|
| • Street Excavation  | • Earthwork/Topsoil          |
| • Lime Stabilization | • Sidewalk/Trail             |
| • Concrete Pavement  | • Concrete Driveway Approach |

### Construction Component Allowances

A percentage of the roadway construction cost is allotted for various major construction component allowances, as appropriate. These allowances include preparation of ROW, traffic control, signage and pavement markings, drainage, street lighting, minor utility adjustments, turf/erosion control, and basic landscaping.

If the project type is “New,” traffic control was set to 0%. If the project type is “Widening”, traffic control was set to 5%.

### CIP Allowances

To determine the total Impact Fee project cost, 15% of the Roadway Construction Costs and Construction Component Allowances subtotal is added for contingency and 6% for mobilization.

### Impact Fee Project Costs

The Impact Fee Project Cost Total is then the Roadway Construction Costs, Construction Component Allowances, and CIP Allowances. In addition, 18% of the Construction Cost total is added for engineering, surveying, and testing. If the project type is “New”, an additional 30% was added for ROW/easement acquisition; if the project type is “Widening”, a ROW/easement acquisition was set to 15%. State highway projects were included with a projected contribution of 20% of the total project.

Project cost total for some projects were based on cost estimates from the City, rather than the above methodology.

## SUMMARY OF ROADWAY IMPACT FEE CIP COSTS

Tables 2.6 – 2.7 are the 10-Year RIF CIP project lists for each service area with planning level project costs. Individual project cost worksheets can be seen in Appendix A, Conceptual Level Project Cost Projections. It should be noted that these tables reflect only conceptual-level opinions or assumptions regarding the portions of future project costs that are potentially recoverable through impact fees. Actual project costs are likely to change with time and are dependent on market and economic conditions that cannot be predicted.

The RIF CIP establishes the list of projects for which Impact Fees may be utilized. Projects not included in the RIF CIP are not eligible to receive impact fee funding. The cost projections utilized in this study should not be utilized for the City’s construction CIP.

Table 2.6 10-Year Roadway Impact Fee CIP with Conceptual Level Cost Projections – Service Area 1

Service Area	Proj. #	Class	Roadway	Limits	Length (mi)	% In Service Area	Total Project Cost	Cost in Service Area	
SA 1 (East of SH 26)	1-A/2-R	P6D	Colleyville Blvd	475' S of Brown Trl (City Limits) to 600' S of Cheek Sparger Rd	0.74	50%	\$ 1,893,200	\$ 946,600	
	1-B/2-S	P6D	Colleyville Blvd	2,030' N of John McCain Rd (City Limits) to 475' S of Brown Trl	3.46	50%	\$ 5,070,000	\$ 2,535,000	
	1-C	C2U	Thompson Terr	Colleyville Blvd to Old Glade Rd	0.20	100%	\$ 1,024,000	\$ 1,024,000	
	1-D	M2D	Glade Rd	Bedford Rd to Pool Rd	1.56	100%	\$ 11,655,011	\$ 11,655,011	
	1-E	C2U	Roberts Rd	2,140' N of Glade Rd (City Limits) to Glade Rd	0.41	100%	\$ 1,653,000	\$ 1,653,000	
	1-F	C2U	Bedford Rd	115' S of Glade Rd to Little Bear Creek	0.51	100%	\$ 2,583,000	\$ 2,583,000	
	1-G	M4U (1/2)	Cheek-Sparger Rd	San Bar Ln to Del Mar Ct	0.40	100%	\$ 1,589,000	\$ 1,589,000	
	1-H	M4U (1/2)	Cheek-Sparger Rd	Bedford Rd to 1,270' E of Bedford Rd	0.24	100%	\$ 947,000	\$ 947,000	
	1-I	M4U (1/2)	Cheek-Sparger Rd	1,270' E of Bedford Rd to Heritage Ave (City Limits)	2.27	50%	\$ 8,940,000	\$ 4,470,000	
	1-J	M4U (1/2)	Jackson Rd	2,540' S of Glade Rd to Cheek Sparger Rd	0.72	100%	\$ 2,824,000	\$ 2,824,000	
	1-K	M4U (1/2)	Brown Trl	350' S of Autumn Oaks to 145' S of Quail Crest Dr	0.28	100%	\$ 1,107,000	\$ 1,107,000	
	1-L	M4U (1/2)	Glade Rd	Pool Rd to Strathmore Terr	0.57	100%	\$ 2,264,000	\$ 2,264,000	
	I-1	Intersection	Hall Johnson Rd & Riverwalk Dr	Intersection Improvements		100%	\$ 1,000,000	\$ 1,000,000	
	I-2	Intersection	Bedford Rd & Cheek-Sparger Rd	Intersection Improvements		100%	\$ 1,000,000	\$ 1,000,000	
	I-3	Intersection	Jackson Rd & Cheek-Sparger Rd	Intersection Improvements		50%	\$ 1,931,523	\$ 965,761	
	I-4	Intersection	Heritage Ave & Cheek-Sparger Rd	Intersection Improvements		50%	\$ 250,000	\$ 125,000	
	<b>Service Area Project Cost Subtotal</b>							<b>\$ 36,688,372</b>	
	<b>2020 Roadway Impact Fee Update Cost Per Service Area</b>							<b>\$ 27,550</b>	
<b>Total Cost in SERVICE AREA 1</b>							<b>\$ 36,715,922</b>		

- a. These planning level cost projections have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Projects within the City of Colleyville
- b. These planning level cost projections shall not supersede the City's design standards or the determination of the City Engineer for a specific project.

Table 2.7 10-Year Roadway Impact Fee CIP with Conceptual Level Cost Projections – Service Area 2

Service Area	Proj. #	Class	Roadway	Limits	Length (mi)	% In Service Area	Total Project Cost	Cost in Service Area	
SA 2 (West of SH 26)	2-A	C2U	John McCain Rd	Bandit Tr to Westcoat Dr	0.46	100%	\$ 2,316,000	\$ 2,316,000	
	2-B	C2U	John McCain Rd	150' E of Westcoat Dr to 430' W of Pleasant Run Rd	0.21	100%	\$ 1,091,000	\$ 1,091,000	
	2-C	C2U	John McCain Rd	315' E of Pleasant Run Rd to Maranatha Ct	1.14	100%	\$ 5,789,000	\$ 5,789,000	
	2-D	C2U	McDonwell School Rd W	Herbert Rd to Westcoat Dr	0.99	100%	\$ 5,025,000	\$ 5,025,000	
	2-E	C2U	Lavaca Trl	Precinct Line Rd (City Limits) to Mustang Tr	0.56	100%	\$ 2,837,000	\$ 2,837,000	
	2-F	C2U	L. D. Lockett Rd	Precinct Line Rd (City Limits) to Pleasant Run Rd	1.93	100%	\$ 9,803,000	\$ 9,803,000	
	2-G	C2U	Westcoat Dr	300' S of John McCain Rd to McDonwell School Rd	0.46	100%	\$ 2,343,000	\$ 2,343,000	
	2-H	C2U	Westcoat Dr	McDonwell School Rd to L. D. Lockett Rd	0.68	100%	\$ 3,454,000	\$ 3,454,000	
	2-I	C2U	White Dr	Westcoat Dr to L. D. Lockett Rd	0.35	100%	\$ 1,781,000	\$ 1,781,000	
	2-J	C2U	Bransford Rd	Shelton Dr to 220' N of Glade Rd	1.03	100%	\$ 5,244,000	\$ 5,244,000	
	2-K	C2U	Pleasant Run Rd	3,080' N of John McCain Rd (City Limits) to John McCain Rd	0.58	100%	\$ 3,328,000	\$ 3,328,000	
	2-L	C2U	Pleasant Run Rd	John McCain Rd to 200' S of Shelton Dr	1.17	100%	\$ 4,769,000	\$ 4,769,000	
	2-M	C2U	Pleasant Run Rd	Bogart Dr to Colleyville Blvd	0.70	100%	\$ 231,000	\$ 231,000	
	2-N	C2U	Tinker Rd	Pleasant Run Rd to 645' E of Pleasant Run Rd	0.12	100%	\$ 626,000	\$ 626,000	
	2-O	C2U	Tinker Rd	Caldwell Hughes Rd to Colleyville Blvd	0.41	100%	\$ 2,092,000	\$ 2,092,000	
	2-P	C2U	Bogart Dr	Hall Johnson Rd to Colleyville Blvd	0.12	100%	\$ 599,000	\$ 599,000	
	2-Q	M4U (1/2)	Glade Rd	5,100' W of Bransford Rd (City Limits) to 265' W of Bransford Rd	0.91	100%	\$ 3,586,000	\$ 3,586,000	
	1-A/2-R	P6D	Colleyville Blvd	475' S of Brown Trl (City Limits) to 600' S of Cheek Sparger Rd	0.74	50%	\$ 1,219,200	\$ 609,600	
	1-B/2-S	P6D	Colleyville Blvd	2,030' N of John McCain Rd (City Limits) to 475' S of Brown Trl	3.46	50%	\$ 5,070,000	\$ 2,535,000	
	I-5	Intersection	John McCain Rd & Westcoat Dr	Intersection Improvements		100%	\$ 1,142,907	\$ 1,142,907	
	I-6	Intersection	John McCain Rd & Pleasant Run Rd	Intersection Improvements		50%	\$ 753,196	\$ 376,598	
	I-7	Intersection	McDonwell School Rd & Westcoat Dr	Intersection Improvements		100%	\$ 1,452,805	\$ 1,452,805	
	I-8	Intersection	Precinct Line Rd & Lavaca Trl	Intersection Improvements		50%	\$ 750,000	\$ 375,000	
	I-9	Intersection	L. D. Lockett Rd & Precinct Line Rd	Intersection Improvements		50%	\$ 310,000	\$ 155,000	
	<b>Service Area Project Cost Subtotal</b>							<b>\$ 61,560,910</b>	
	<b>2020 Roadway Impact Fee Update Cost Per Service Area</b>							<b>\$ 27,550</b>	
<b>Total Cost in SERVICE AREA 2</b>							<b>\$ 61,588,460</b>		

- a. These planning level cost projections have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Projects within the City of Colleyville.
- b. These planning level cost projections shall not supersede the City's design standards or the determination of the City Engineer for a specific project.

## SERVICE UNIT CALCULATION

The basic service unit for the computation of Colleyville's Roadway Impact Fee is the vehicle-mile of travel during the afternoon peak-hour. To determine the cost per service unit, it is necessary to project the growth in vehicle-miles of travel for the service areas for the ten-year period.

The growth in vehicle-miles from 2020 to 2030 is based upon projected changes in residential units and employment for the period. These growth projections are discussed in Chapter 1: Land Use Assumptions for the 2020 Impact Fee Study.

For the purposes of impact fees, all developed and developable land is categorized as either residential or non-residential. For residential land uses, the existing and projected number of dwelling units are estimated. The number of dwelling units in each service area is multiplied by a transportation demand factor (discussed in more detail below) to compute the vehicle-miles of travel that occur during the afternoon peak hour. This factor indicates the average amount of demand created by the residential land uses in the service area.

For non-residential land uses, the process is similar. Existing and projected number of building square footages for three (3) categories of employment – basic, service, and retail – are provided. These categories correspond to an aggregation of other specific land use categories based on the North American Industrial Classification System (NAICS).

Building square footage is the most common independent variable for the estimation of non-residential trips in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition. This characteristic is more appropriate than the number of employees, because building square footage is tied more closely to trip generation and is known at the time of application for any development that would require the assessment of an impact fee.

The existing and projected land use assumptions for the dwelling units and the square footage of basic, service, and retail land uses provide the basis for the projected increase in vehicle-miles of travel. As noted earlier, a transportation demand factor is applied to these values and then summed to calculate the total peak hour vehicle-miles of demand for each service area.

The transportation demand factors are aggregate rates derived from two sources – the ITE Trip Generation Manual, 10th Edition and information from the National Household Travel Survey (NHTS).

The ITE Trip Generation Manual, 10th Edition provides the number of trips that are produced or attracted to the land use for each dwelling unit, square foot of building, or other corresponding unit. For the retail category of land uses, the rate is adjusted to account for the fact that a percentage of retail trips are made by people who would otherwise be traveling past that

particular establishment anyway, such as a trip between work and home. For example, a stop at a nearby supermarket on the way home from work does not create a new trip onto the roadway network. These trips are called pass-by trips, and since the travel demand is accounted for in the land use calculations relative to the primary trip, it is necessary to discount the retail trip generation rates to avoid double counting trips.

The next component of the transportation demand factor accounts for the length of each trip. The average trip length for each category is based on the region-wide travel characteristics survey conducted by NHTS, requirements in Chapter 395, and other generally accepted planning principles.

The computation of the transportation demand factor is based on the following equation:

$$TDF = T * (1 - P_b) * L_{Max}$$

Where...  $L_{MaxIndustrial} = \min (L * OD \text{ or } 6)$  OR  $L_{Max} = \min (L * OD \text{ or } 3)$

Variables:

- TDF = Transportation Demand Factor,
- T = Trip Rate (peak hour trips / unit),
- P<sub>b</sub> = Pass-By Discount (% of trips),
- L = Average Trip Length (miles),
- L<sub>Max</sub> = Maximum Trip Length (miles), and
- OD = Origin-Destination Reduction (50%)

The maximum trip length was limited to four (4) miles for all land uses based on the maximum trip length within each service area. Chapter 395 of the Texas Local Government Code allows for a service area of six (6) miles; however, the service area within the City of Colleyville is approximated to be a four (4) mile distance.

The adjustment made to the average trip length statistic in the computation of the maximum trip length is the origin-destination reduction. This adjustment is made because the RIF is charged to both the origin and destination end of the trip. For example, impact fee methodology will account for a trip from home to work within Colleyville to both residential and non-residential land uses. To avoid counting these trips twice as both residential and non-residential trips, a 50% origin-destination (OD) reduction factor is applied. Therefore, only half of the trip length is assessed to each land use, and the total trip is only counted once. This methodology is consistent with that used in the National Household Travel Survey.

Table 2.8 shows the derivation of the Transportation Demand Factor for the residential land use and the three (3) non-residential land use categories. The values utilized for all variables shown in the transportation demand factor equation are also shown in the table.

Table 2.8 Transportation Demand Factor Calculations

Variable	Residential	Basic	Service	Retail
	Single Family			
T	0.99	0.63	1.15	3.81
Pb	0%	0%	0%	34%
L <sub>Max</sub> *	4.0	4.0	4.0	2.8
TDF	3.96	2.52	4.60	7.04

\*L<sub>Max</sub> is 4 miles for all land uses apart from Retail; therefore, this lower trip length is used for calculating the TDF for these land uses.

Variables:

- TDF = Transportation Demand Factor,      L = Average Trip Length (miles),
- T = Trip Rate (peak hour trips / unit),      L<sub>Max</sub> = Maximum Trip Length (miles), and
- P<sub>b</sub> = Pass-By Discount (% of trips),      OD = Origin-Destination Reduction (50%)

The application of the demographic projections and the transportation demand factors are presented in the 10-Year Growth Projections in Table 2.9. This table shows the total growth in total vehicle-miles by service area between the years 2020 and 2030. These estimates and projections lead to the Vehicle-Miles of Travel for the 10-year period.

Table 2.9 10-Year Growth Projections

2020-2030 Growth Projections<sup>1</sup>

SERVICE AREA	RESIDENTIAL VEHICLE-MILES		SQUARE FEET <sup>4</sup>			TRANS. DEMAND FACTOR <sup>5</sup>			NON-RESIDENTIAL VEHICLE-MILES <sup>9</sup>			TOTAL VEHICLE MILES <sup>10</sup>	
	DWELLING UNITS	Trip Rate TDF <sup>2</sup>	VEHICLE MILES <sup>3</sup>	BASIC	SERVICE	RETAIL	BASIC <sup>6</sup>	SERVICE <sup>7</sup>	RETAIL <sup>8</sup>	BASIC	SERVICE		RETAIL
1	119	0.99	469	14,000	57,000	71,000	0.63	1.15	2.51	35	262	500	797
2	274	3.96	1,086	8,000	124,000	178,000	2.52	4.60	7.04	20	570	1,253	1,843
<b>Totals</b>	<b>393</b>		<b>1,555</b>	<b>22,000</b>	<b>181,000</b>	<b>249,000</b>				<b>55</b>	<b>832</b>	<b>1,753</b>	<b>2,640</b>

VEHICLE-MILES OF INCREASE<sup>11</sup> (2020 - 2030)

SERVICE AREA	VEH-MILES
1	1,266
2	2,929

Notes:

- 1 From Land Use Assumptions (included in 2020 Roadway Impact Fee Update Report)
- 2 Transportation Demand Factor for each Service Area (from LUVMET) using Single Family Detached Housing land use and trip generation rate
- 3 Calculated by multiplying TDF by the number of dwelling units
- 4 From Land Use Assumptions included in 2020 Roadway Impact Fee Update Report
- 5 Trip generation rate and Transportation Demand Factors from LUVMET for each land use
- 6 'Basic' corresponds to General Light Industrial land use and trip generation rate
- 7 'Service' corresponds to General Office land use and trip generation rate
- 8 'Retail' corresponds to Shopping Center land use and trip generation rate
- 9 Calculated by multiplying Transportation Demand Factor by the number of thousand square feet for each land use
- 10 Residential plus non-residential vehicle-mile totals for each Service Area
- 11 Total Vehicle-Miles represent the increase in vehicle-miles over 10-years

## 2.5 ROADWAY IMPACT FEE CALCULATION

### MAXIMUM ASSESSABLE IMPACT FEE PER SERVICE UNIT

This section presents the maximum assessable impact fee rate calculated for each service area. The maximum assessable impact fee is the sum of the eligible RIF CIP costs for the service area divided by the growth in travel attributable to new development projected to occur within the 10-year period. A majority of the components of this calculation have been described and presented in previous sections of this report. The purpose of this section is to document the computation for each service area and to demonstrate that the guidelines provided by Chapter 395 of the Texas Local Government Code have been addressed.

Table 2.10 illustrates the computation of the maximum assessable impact fee computed for each service area. Each row in the table is numbered to simplify explanation of the calculation. The calculation of the maximum assessable impact fee is shown in Table 2.11.

Table 2.10 Maximum Assessable Roadway Impact Fee Computation

Line	Title	Description
1	<i>Total Vehicle-Miles of Capacity Added by the RIF CIP</i>	The total number of vehicle-miles added to the service area based on the capacity, length, and number of lanes in each project (from Appendix B – RIF CIP Units of Supply)

Each project identified in the CIP will add a certain amount of capacity to the City's roadway network based on its length and classification. This line displays the total amount added within each service area.

2	<i>Total Vehicle-Miles of Existing Demand</i>	A measure of the amount of traffic currently using the roadway facilities upon which capacity is being added. (from Appendix B – RIF CIP Units of Supply)
---	---	---

A number of facilities identified in the CIP have traffic currently utilizing a portion of their existing capacity. This line displays the total amount of capacity along these facilities currently being used by existing traffic.

3	<i>Total Vehicle-Miles of Existing Deficiencies</i>	Number of vehicle-miles of travel that are not accommodated by the existing roadway system (from Appendix C – Existing Roadway Facilities Inventory)
---	---	--

A number of facilities identified in the CIP have traffic currently utilizing a portion of their existing capacity. This line displays the total amount of capacity along these facilities currently being used by existing traffic.

4	<i>Net Amount of Vehicle-Miles of Capacity Added</i>	A measurement of the number of vehicle-miles added by the RIF CIP that will not be utilized by existing demand (Line 1 – Line 2 – Line 3)
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This calculation identifies the portion of the RIF CIP (in vehicle-miles) that may be recoverable through the collection of impact fees.

5	<i>Total Cost of the RIF CIP within the Service Area</i>	The total cost of the roadway projects within each service area (from Table 2.6 – 2.7: 10-Year RIF CIP with Conceptual Level Cost Opinions)
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This line simply identifies the total cost of all Roadway projects identified in each service area.

6	<i>Cost of Net Capacity Supplied</i>	The total RIF CIP cost (Line 5) prorated by the ratio of Net Capacity Added (Line 4) to Total Capacity Added (Line 1). [(Line 4 / Line 1) * (Line 5)]
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Using the ratio of vehicle-miles added by the RIF CIP available to serve future growth to the total vehicle-miles added, the total cost of the RIF CIP is reduced to the amount available for future growth (i.e. excluding existing usage and deficiencies).

7	<i>Cost to Meet Existing Needs and Usage</i>	The difference between the Total Cost of the Roadway Impact Fee CIP (Line 5) and the Cost of the Net Capacity supplied (Line 6) (Line 5 – Line 6)
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This line is provided for information purposes only – it is to present the portion of the total cost of the RIF CIP that is required to meet existing demand.

8	<i>Total Vehicle-Miles of New Demand over Ten Years</i>	Based upon the growth projection provided in Chapter 1: Land Use Assumptions for the 2020 Impact Fee Study, an estimate of the number of new vehicle-miles within the service area over the next ten years (from Table 2.9)
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This line presents the amount of growth (in vehicle-miles) projected to occur within each service area over the next ten years.

9	<i>Percent of Capacity Added Attributable to New Growth</i>	The result of dividing Total Vehicle-Miles of New Demand (Line 8) by the Net Amount of Capacity Added (Line 4), limited to 100%. This calculation is required by Chapter 395 to ensure capacity added is attributable to new growth.
10	<i>Chapter 395 Check</i>	

In order to ensure that the vehicle-miles added by the RIF CIP do not exceed the amount needed to accommodate growth beyond the ten-year window, a comparison of the two values is performed. If the number of vehicle-miles added by the RIF CIP exceeds the growth projected to occur in the next ten years, the RIF CIP cost is reduced accordingly. This does not occur in either service area.

11	<i>Cost of RIF CIP Attributable to New Growth</i>	The result of multiplying the Cost of Net Capacity Added (Line 6) by the Percent of Capacity Added Attributable to New Growth, limited to 100% (Line 10)
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This value is the total RIF CIP project costs (excluding financial costs) that may be recovered through impact fees. This line is determined considering the limitations to impact fees required by the Texas legislature.

12	<i>Pre-Credit Maximum Fee Per Service Unit (without financing)</i>	Found by dividing the Cost of the CIP by the Total Vehicle-Miles of New Demand Over Ten Years (Line 11 / Line 8)
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This value is the total pre-credit maximum fee per service unit (without financing) that may be recovered through impact fees. This line is determined considering limitations to impact fee required by Texas Legislature.

### PLAN FOR THE ROADWAY IMPACT FEE CREDIT

Chapter 395 of the Texas Local Government Code requires the RIF CIP to contain specific enumeration of a plan for awarding the impact fee credit. Section 395.014 of the Code requires:

- (A) a credit for the portion of ad valorem tax and utility service revenues generated by new service units during the program period that is used for the payment of improvements, including the payment of debt, that are included in the capital improvements plan; or
- (B) In the alternative, a credit equal to 50 percent of the total projected cost of implementing the capital improvements plan..."

The plan is summarized, as prepared by Eddie Peacock, PLLC in Appendix D, Plan for Awarding the RIF Credit. The plan for awarding the RIF Credit was determined for the service areas to account for the current existing fund balance. The continuation of Table 2.10 summarizes the portions of Table 2.11 that utilize this credit calculation.

The continuation of Table 2.10 summarizes the additional computations carried out to provide the maximum assessable impact fee.

Table 2.10 Maximum Assessable Roadway Impact Fee Computation (Continued)

Line	Title	Description
13	<i>Financing Costs</i>	(from Appendix D – Plan for Awarding the Roadway Impact Fee Credit)
14	<i>Interest Earnings</i>	(from Appendix D – Plan for Awarding the Roadway Impact Fee Credit)
15	<i>Existing Impact Fee Fund Balance</i>	The available non-allocated roadway impact fees in each Service Area as of October 2020 – from Appendix D.
16	<i>Cost of the CIP and Financing Attributable to New Growth</i>	The sum of the Cost of Capacity Added Attributable to New Growth, Financing Costs, Interest Earnings, and the Existing Impact Fee Fund Balance (Line 11 + Line 13 - Line 14 - Line 15)
17	<i>Pre-Credit Maximum Fee Per Service Unit</i>	Found by dividing the Cost of the CIP and Financing Attributable to New Growth (Line 16) by the Total Vehicle-Miles of New Demand Over Ten Years (Line 8) (Line 16 / Line 8)
18	<i>Credit for Ad Valorem Taxes</i>	A credit for the portion of ad valorem taxes projected to be generated by the new service units, as per Section 395.014 of the Local Government Code (from Appendix D – Plan for Awarding the Roadway Impact Fee Credit)
19	<i>Recoverable Cost of CIP and Financing</i>	The difference between the Cost of the CIP and Financing Attributable to New Growth (Line 16) and the Credit for Ad Valorem Taxes (Line 18) (Line 16 + Line 18)
20	<i>Maximum Assessable Fee Per Service Unit</i>	Found by dividing the Recoverable Cost of the CIP and Financing (Line 18) by the Total Vehicle-Miles of New Demand Over Ten Years (Line 8) (Line 19 / Line 8)

Table 2.11 summarizes the calculations walked through in Table 2.10 and provides the maximum assessable impact fee for each service area.

Table 2.11 Maximum Assessable Roadway Impact Fee

LINE	TITLE:	SERVICE AREA	
		1 (E. of SH 26)	2 (W. of SH 26)
1	TOTAL VEH-MI OF CAPACITY ADDED BY THE CIP (FROM CIP SERVICE UNITS OF SUPPLY, APPENDIX B)	23,486	25,137
2	TOTAL VEH-MI OF EXISTING DEMAND (FROM CIP SERVICE UNITS OF SUPPLY, APPENDIX B)	11,840	14,364
3	TOTAL VEH-MI OF EXISTING DEFICIENCIES (FROM EXISTING ROADWAY FACILITIES INVENTORY, APPENDIX C)	521	459
4	NET AMOUNT OF VEH-MI OF CAPACITY ADDED (LINE 1 - LINE 2 - LINE 3)	11,125	10,314
5	TOTAL COST OF THE CIP WITHIN SERVICE AREA (FROM TABLE 2.6/TABLE 2.7)	\$ 36,715,922	\$ 61,588,460
6	COST OF NET CAPACITY SUPPLIED (LINE 4 / LINE 1) * (LINE 5)	\$ 17,391,835	\$ 25,270,453
7	COST TO MEET EXISTING NEEDS AND USAGE (LINE 5 - LINE 6)	\$ 19,324,087	\$ 36,318,007
8	TOTAL VEH-MI OF NEW DEMAND OVER TEN YEARS (FROM TABLE 2.9 and Land Use Assumptions)	1,266	2,929
9	PERCENT OF CAPACITY ADDED ATTRIBUTABLE TO GROWTH (LINE 8 / LINE 4)	11.3%	28.3%
10	IF LINE 8 > LINE 4, REDUCE LINE 9 TO 100%, OTHERWISE NO CHANGE	11.3%	28.3%
11	COST OF CAPACITY ADDED ATTRIBUTABLE TO GROWTH (LINE 6 * LINE 10)	\$ 1,965,277	\$ 7,151,538
12	PRE-CREDIT MAX FEE PER SERVICE UNIT (\$ PER VEH-MI) WITHOUT FINANCING COSTS (LINE 11 / LINE 8)	\$ 1,552	\$ 2,442
13	FINANCING COSTS (FROM APPENDIX D)	\$ 560,744	\$ 2,040,514
14	INTEREST EARNINGS (FROM APPENDIX D)	\$ 49,132	\$ 178,788
15	EXISTING FUND BALANCE	\$ 197,182	\$ 587,355
16	COST OF CIP AND FINANCING ATTRIBUTABLE TO GROWTH (LINE 11 + LINE 13 - LINE 14 - LINE 15)	\$ 2,279,707	\$ 8,425,909
17	PRE-CREDIT MAX FEE PER SERVICE UNIT (\$ PER VEH-MI) (LINE 16 / LINE 8)	\$ 1,800	\$ 2,877
18	CREDIT FOR AD VALOREM TAXES (FROM APPENDIX D)	\$ (756,043)	\$ (2,751,266)
19	RECOVERABLE COST OF CIP AND FINANCING (LINE 16 + LINE 18)	\$ 1,523,664	\$ 5,674,643
20	MAX ASSESSABLE FEE PER SERVICE UNIT (\$ PER VEH-MI) (LINE 19 / LINE 8)	\$ 1,204	\$ 1,937

## SERVICE UNIT DEMAND PER UNIT OF DEVELOPMENT

The Roadway Impact Fee is determined by multiplying the impact fee rate by the number of service units projected for the proposed development. For this purpose, the City will utilize the Land Use/Vehicle-Mile Equivalency Table (LUVMET), presented in Table 2.12. This table lists the predominant land uses that may occur within the City of Colleyville. For each land use, the development unit that defines the development's magnitude with respect to transportation demand is shown. Although every possible use cannot be anticipated, the majority of local uses are found in this table. The descriptions for each land use are presented in Table 2.13. If the exact use is not listed, one similar in trip-making characteristics can serve as a reasonable proxy. The individual land uses are grouped into categories, such as residential, office, commercial, industrial, and institutional.

The trip rates presented for each land use is a fundamental component of the LUVMET. The trip rate is the average number of trips generated during the evening peak hour by each land use per development unit. The next column in Table 2.12, if applicable to the land use, presents the number of trips to and from certain land uses reduced by pass-by trips, as previously discussed.

The definitive source of the trip generation and pass-by statistics is the ITE Trip Generation Manual, 10th Edition, the latest edition. This manual utilizes trip generation studies for a variety of land uses throughout the United States, and is the standard used by traffic engineers and transportation planners for traffic impact analysis, site design, and transportation planning. However, for land uses not contained within the 10th Edition of the ITE Trip Generation Manual, an alternative service unit demand could be calculated by completing a trip generation study based on the procedure identified in the ITE Trip Generation Handbook.

To convert vehicle trips to vehicle-miles, it is necessary to multiply trips by trip length. The trip length values are based on land use, as explained in Section 2.4 - Service Unit Calculation.

The remaining column in the LUVMET shows the vehicle-miles per development unit. This number is the product of the trip rate and the maximum trip length. This number, previously referred to as the Transportation Demand Factor, is used in the impact fee to compute the number of service units attributed to each land use category. The number of service units is multiplied by the impact fee rate (established by City ordinance) in order to determine the impact fee for a development.

Table 2.12 Land Use / Vehicle-Mile Equivalency Table (LUVMET)

Land Use Category	ITE Land Use Code	Development Unit	Trip Gen Rate (PM)	Pass-by Rate	Pass-by Source	Trip Rate	NCTCOG Trip Length (mi)	Adj. For O-D	Adj. Trip Length (mi)	Max Trip Length (mi)	Veh-Mi Per Dev-Unit
<b>PORT AND TERMINAL</b>											
Truck Terminal	030	1,000 SF GFA	1.87			1.87	10.02	50%	5.01	4.00	7.48
<b>INDUSTRIAL</b>											
General Light Industrial	110	1,000 SF GFA	0.63			0.63	10.02	50%	5.01	4.00	2.52
Industrial Park	130	1,000 SF GFA	0.40			0.40	10.02	50%	5.01	4.00	1.60
Warehousing	150	1,000 SF GFA	0.19			0.19	10.02	50%	5.01	4.00	0.76
Mini-Warehouse	151	1,000 SF GFA	0.17			0.17	10.02	50%	5.01	4.00	0.68
<b>RESIDENTIAL</b>											
Single-Family Detached Housing	210	Dwelling Unit	0.99			0.99	9.79	50%	4.90	4.00	3.96
Townhomes	220	Dwelling Unit	0.56			0.56	9.79	50%	4.90	4.00	2.24
Multi-family Housing (Low-Rise)	220	Dwelling Unit	0.56			0.56	9.79	50%	4.90	4.00	2.24
Multi-family Housing (Mid-Rise)	221	Dwelling Unit	0.44			0.44	9.79	50%	4.90	4.00	1.76
Multi-family Housing (High-Rise)	222	Dwelling Unit	0.36			0.36	9.79	50%	4.90	4.00	1.44
Mid-Rise Residential with 1st Floor Commercial	231	Dwelling Unit	0.36			0.36	9.79	50%	4.90	4.00	1.44
Senior Adult Housing-Detached	251	Dwelling Unit	0.30			0.30	9.79	50%	4.90	4.00	1.20
Senior Adult Housing-Attached	252	Dwelling Unit	0.26			0.26	9.79	50%	4.90	4.00	1.04
Assisted Living	254	Beds	0.26			0.26	9.79	50%	4.90	4.00	1.04
<b>LODGING</b>											
Hotel	310	Room	0.60			0.60	6.43	50%	3.22	3.22	1.93
Motel / Other Lodging Facilities	320	Room	0.38			0.38	6.43	50%	3.22	3.22	1.22
<b>RECREATIONAL</b>											
Golf Course	430	Acre	0.28			0.28	7.86	50%	3.93	3.93	1.10
Miniature Golf Course	431	Hole	0.33			0.33	7.86	50%	3.93	3.93	1.30
Golf Driving Range	432	Tee	1.25			1.25	7.86	50%	3.93	3.93	4.91
Multiplex Movie Theater	445	Screens	13.73			13.73	15.77	50%	7.89	4.00	54.92
Ice Skating Rink	465	1,000 SF GFA	1.33			1.33	7.86	50%	3.93	3.93	5.23
Racquet / Tennis Club	491	Court	3.82			3.82	7.86	50%	3.93	3.93	15.01
Recreational Community Center	495	1,000 SF GFA	2.31			2.31	7.86	50%	3.93	3.93	9.08
<b>INSTITUTIONAL</b>											
Church	560	1,000 SF GFA	0.49			0.49	8.31	50%	4.16	4.00	1.96
Day Care Center	565	1,000 SF GFA	11.12	44%	B	6.23	3.49	50%	1.75	1.75	10.87
Primary/Middle School (1-8)	522	Students	0.17			0.17	3.49	50%	1.75	1.75	0.30
High School	530	Students	0.14			0.14	3.49	50%	1.75	1.75	0.24
Junior / Community College	540	Students	0.11			0.11	10.44	50%	5.22	4.00	0.44
University / College	550	Students	0.15			0.15	10.44	50%	5.22	4.00	0.60
<b>MEDICAL</b>											
Clinic	630	1,000 SF GFA	3.28			3.28	9.85	50%	4.93	4.00	13.12
Hospital	610	1,000 SF GFA	0.97			0.97	9.85	50%	4.93	4.00	3.88
Nursing Home	620	Beds	0.22			0.22	9.85	50%	4.93	4.00	0.88
Animal Hospital/Veterinary Clinic	640	1,000 SF GFA	3.53	30%	B	2.47	9.85	50%	4.93	4.00	9.88
<b>OFFICE</b>											
Corporate Headquarters Building	714	1,000 SF GFA	0.60			0.60	14.65	50%	7.33	4.00	2.40
General Office Building	710	1,000 SF GFA	1.15			1.15	14.65	50%	7.33	4.00	4.60
Medical-Dental Office Building	720	1,000 SF GFA	3.46			3.46	9.85	50%	4.93	4.00	13.84
Single Tenant Office Building	715	1,000 SF GFA	1.71			1.71	14.65	50%	7.33	4.00	6.84
Office Park	750	1,000 SF GFA	1.07			1.07	14.65	50%	7.33	4.00	4.28

**Key to Sources of Pass-by Rates:**  
A: ITE Trip Generation Handbook 3rd Edition (September 2017)  
B: Estimated by Kimley-Horn based on ITE rates for similar categories  
C: ITE rate adjusted upward by KHA based on logical relationship to other categories

Table 2.12 Land Use / Vehicle-Mile Equivalency Table (LUVMET) (Continued)

Land Use Category	ITE Land Use Code	Development Unit	Trip Gen Rate (PM)	Pass-by Rate	Pass-by Source	Trip Rate	NCTCOG Trip Length (mi)	Adj. For O-D	Adj. Trip Length (mi)	Max Trip Length (mi)	Veh-Mi Per Dev-Unit
<b>COMMERCIAL</b>											
<b>Automobile Related</b>											
Automobile Care Center	942	1,000 SF GFA	3.11	40%	B	1.87	4.45	50%	2.23	2.23	4.15
Automobile Parts Sales	843	1,000 SF GFA	4.91	43%	A	2.80	4.45	50%	2.23	2.23	6.23
Gasoline/Service Station	944	Vehicle Fueling Position	14.03	42%	A	8.14	1.20	50%	0.60	0.60	4.88
Gasoline/Service Station w/ Conv Market	945	Vehicle Fueling Position	13.99	56%	B	6.16	1.20	50%	0.60	0.60	3.69
New Car Sales	840	1,000 SF GFA	2.43	20%	B	1.94	5.60	50%	2.80	2.80	5.44
Quick Lubrication Vehicle Shop	941	Servicing Positions	4.85	40%	B	2.91	4.45	50%	2.23	2.23	6.47
Self-Service Car Wash	947	Stall	5.54	40%	B	3.32	1.20	50%	0.60	0.60	1.99
Tire Store	848	1,000 SF GFA	3.98	28%	A	2.87	4.45	50%	2.23	2.23	6.38
<b>Dining</b>											
Fast Food Restaurant with Drive-Thru Window	934	1,000 SF GFA	32.67	50%	A	16.34	5.64	50%	2.82	2.82	46.06
Fast Food Restaurant without Drive-Thru Window	933	1,000 SF GFA	28.34	50%	B	14.17	5.64	50%	2.82	2.82	39.96
High Turnover (Sit-Down) Restaurant	932	1,000 SF GFA	9.77	43%	A	5.57	5.64	50%	2.82	2.82	15.70
Quality Restaurant	931	1,000 SF GFA	7.80	44%	A	4.37	5.64	50%	2.82	2.82	12.32
Coffee/Donut Shop with Drive-Thru Window	937	1,000 SF GFA	43.38	70%	A	13.01	5.64	50%	2.82	2.82	36.70
<b>Other Retail</b>											
Free-Standing Discount Store	815	1,000 SF GFA	4.83	30%	C	3.38	5.60	50%	2.80	2.80	9.47
Nursery (Garden Center)	817	1,000 SF GFA	6.94	30%	B	4.86	5.60	50%	2.80	2.80	13.60
Home Improvement Superstore	862	1,000 SF GFA	2.33	42%	A	1.35	5.60	50%	2.80	2.80	3.78
Pharmacy/Drugstore w/o Drive-Thru Window	880	1,000 SF GFA	8.51	53%	A	4.00	5.60	50%	2.80	2.80	11.20
Pharmacy/Drugstore w/ Drive-Thru Window	881	1,000 SF GFA	10.29	49%	A	5.25	5.60	50%	2.80	2.80	14.69
Shopping Center	820	1,000 SF GFA	3.81	34%	A	2.51	5.60	50%	2.80	2.80	7.04
Supermarket	850	1,000 SF GFA	9.24	36%	A	5.91	5.60	50%	2.80	2.80	16.56
Toy/Children's Superstore	864	1,000 SF GFA	5.00	30%	B	3.50	5.60	50%	2.80	2.80	9.80
Department Store	875	1,000 SF GFA	1.95	30%	B	1.37	5.60	50%	2.80	2.80	3.82
<b>SERVICES</b>											
Walk-In Bank	911	1,000 SF GFA	12.13	40%	B	7.28	4.45	50%	2.23	2.23	16.19
Drive-In Bank	912	Drive-in Lanes	27.15	35%	A	17.65	4.45	50%	2.23	2.23	39.27
Hair Salon	918	1,000 SF GLA	1.45	30%	B	1.02	6.41	50%	3.21	3.21	3.25

**Key to Sources of Pass-by Rates:**

A: ITE Trip Generation Handbook 3rd Edition (September 2017)

B: Estimated by Kimley-Horn based on ITE rates for similar categories

C: ITE rate adjusted upward by KHA based on logical relationship to other categories

Table 2.13 Land Use Descriptions

Land Use Category	ITE Land Use Code	Land Use Description
<b>PORT AND TERMINAL</b>		
Truck Terminal	030	Point of good transfer between trucks or between trucks and rail
<b>INDUSTRIAL</b>		
General Light Industrial	110	Emphasis on activities other than manufacturing; typically employing fewer than 500 workers
Industrial Park	130	Area containing a number of industries or related facilities
Warehousing	150	Devoted to storage of materials but may have included office and maintenance areas
Mini-Warehouse	151	Facilities with a number of units rented to others for the storage of goods
<b>RESIDENTIAL</b>		
Single-Family Detached Housing	210	Single-family detached homes on individual lots
Townhomes	220	One or two levels (floors) per building (townhome/duplexes), includes condominiums and duplexes
Multi-family Housing (Low-Rise)	220	One or two levels (floors) per building (townhome/duplexes), includes condominiums and duplexes
Multi-family Housing (Mid-Rise)	221	Between three and ten levels (floors) per building
Multi-family Housing (High-Rise)	222	More than ten levels (floors) per building
Mid-Rise Residential with 1st Floor Commercial	231	
Senior Adult Housing-Detached	251	Consists of detached independent living developments that include amenities such as golf courses and swimming pools
Senior Adult Housing-Attached	252	Consists of attached independent living developments that include limited social or recreation services
Assisted Living	254	Residential settings that provide either routine general protective oversight or assistance with activities
<b>LODGING</b>		
Hotel	310	Lodging facilities that typically have on-site restaurants, lounges, meeting and/or banquet rooms, or other retail shops and services
Motel / Other Lodging Facilities	320	Lodging facilities that may have small on-site restaurant or buffet area but little or no meeting space
<b>RECREATIONAL</b>		
Golf Course	430	May include municipal courses and private country clubs; may have driving ranges, pro shops, and restaurant/banquet facilities
Miniature Golf Course	431	One or more individual putting courses; category should not be used when part of a larger entertainment center (with batting cages, video game centers, etc)
Golf Driving Range	432	Facilities with driving tees for practice; may provide individual or group lessons; may have pro shop and/or refreshment facilities
Multiplex Movie Theater	445	Movie theater with audience seating, minimum of ten screens, lobby, and refreshment area.
Ice Skating Rink	465	Rinks for ice skating and related sports; may contain spectator areas and refreshment facilities
Racquet / Tennis Club	491	Indoor or outdoor facilities specifically designed for playing tennis
Recreational Community Center	495	Category includes racquet clubs, health/fitness clubs, can include facilities such as YMCA's
<b>INSTITUTIONAL</b>		
Church	560	Churches and houses of worship
Day Care Center	565	Generally includes facilities for care of pre-school aged children, generally includes classrooms, offices, eating areas, and playgrounds
Primary/Middle School (1-8)	522	Serves students who have not yet entered high school
High School	530	Serves students who have completed middle or junior high school
Junior / Community College	540	Two-year junior, community or technical colleges
University / College	550	Four-year universities or colleges that may or may not offer graduate programs
<b>MEDICAL</b>		
Clinic	630	Facilities with limited diagnostic and outpatient care
Hospital	610	Medical and surgical facilities with overnight accommodations
Nursing Home	620	Rest and convalescent homes with residents who do little or no driving
Animal Hospital/Veterinary Clinic	640	Rest and convalescent homes with residents who do little or no driving
<b>OFFICE</b>		
Corporate Headquarters Building	714	Office building housing corporate headquarters of a single company or organization
General Office Building	710	Office buildings which house multiple tenants
Medical-Dental Office Building	720	Multi-tenant building with offices for physicians and/or dentists
Single Tenant Office Building	715	Single tenant office buildings other than corporate headquarters
Office Park	750	Office buildings (typically low-rise) in a campus setting and served by a common roadway system

Table 2.13 Land Use Descriptions (Continued)

Land Use Category	ITE Land Use Code	Land Use Description
<b>COMMERCIAL</b>		
<b>Automobile Related</b>		
Automobile Care Center	942	Automobile repair and servicing including stereo installations and upholstery
Automobile Parts Sales	843	Retail sale of auto parts but no on-site vehicle repair
Gasoline/Service Station	944	Gasoline sales without convenience store or car wash; may include repair
Gasoline/Service Station w/ Conv Market	945	Gasoline sales with convenience store where the primary business is gasoline sales
New Car Sales	840	New car dealerships, typically with automobile servicing, part sales, and used car sales
Quick Lubrication Vehicle Shop	941	Primary business is to perform oil changes and fluid filter changes with other repair services not provided
Self-Service Car Wash	947	Has stalls for driver to park and wash the vehicle
Tire Store	848	Primary business is sales and installation of tires; usually do not have large storage or warehouse area
<b>Dining</b>		
Fast Food Restaurant with Drive-Thru Window	934	High-turnover fast food restaurant for carry-out and eat-in customers with a drive-thru window
Fast Food Restaurant without Drive-Thru Window	933	High-turnover fast food restaurant for carry-out and eat-in customers, but without a drive-thru window
High Turnover (Sit-Down) Restaurant	932	Restaurants with turnover rates less than one hour; typically includes moderately-priced chain restaurants
Quality Restaurant	931	Restaurants with turnover rates of one hour or longer; typically require reservations
Coffee/Donut Shop with Drive-Thru Window	937	Coffee and Donut restaurants with drive-through windows, hold long store hours and have limited indoor seating
<b>Other Retail</b>		
Free-Standing Discount Store	815	Category includes free-standing stores with off-street parking; typically offer a variety of products and services with long store hours
Nursery (Garden Center)	817	Building with a yard of planting or landscape stock; may have office, storage, shipping or greenhouse facilities
Home Improvement Superstore	862	Warehouse-type facilities offering a large variety of products and services including lumber, tool, paint, lighting, and fixtures, among other items.
Pharmacy/Drugstore w/o Drive-Thru Window	880	Facilities that primarily sell prescription and non-prescription drugs without a drive-through window
Pharmacy/Drugstore w/ Drive-Thru Window	881	Facilities that primarily sell prescription and non-prescription drugs with a drive-through window
Shopping Center	820	Integrated group of commercial establishments; planning, owned, and managed as a unit
Supermarket	850	Primary business is sale of groceries, food, and household cleaning items; may include photo, pharmacy, video rental, and/or ATM
Toy/Children's Superstore	864	Businesses specializing in child-oriented merchandise
Department Store	875	Free-standing stores that specialize in the sale of apparel, footwear, bedding, home products, jewelry, etc.
<b>SERVICES</b>		
Walk-In Bank	911	Banks with their own parking lots, no drive-in lanes but contain non-drive-through ATMs
Drive-In Bank	912	Banking facilities to conduct financial transactions from the vehicle; also usually a part of a walk-in bank
Hair Salon	918	Facilities that specialize in cosmetic and beauty services including hair cutting and styling

## 2.6 SAMPLE CALCULATIONS

The following section details two (2) examples of maximum assessable Roadway Impact Fee calculations.

Example 1:

Development Type - One (1) Unit of Single Family Housing in Service Area 1

	Determine Development Unit and Vehicle-Miles Per Development Unit
Step 1	<i>From Table 2.12 [Land Use – Vehicle-Mile Equivalency Table]</i> Development Type: 1 Dwelling Unit of Single-Family Detached Housing Development Units: 1 Dwelling Unit Veh-Mi Per Development Unit: 3.96
	Determine Maximum Assessable Impact Fee Per Service Unit (Vehicle-Mile)
Step 2	<i>From Table 2.11, Line 20 [Maximum Assessable Fee Per Service Unit]</i> Service Area 1: \$1,204
	Determine Maximum Assessable Impact Fee
Step 3	Impact Fee = # of Development Units * Veh-Mi Per Dev Unit * Max. Fee Per Service Unit Impact Fee = 1 * 3.96 * \$1,204 Maximum Assessable Impact Fee = \$4,768

Example 2:

Development Type - 150,000 Square Foot Home Improvement Store in Service Area 2

	Determine Development Unit and Vehicle-Miles Per Development Unit
Step 1	<i>From Table 2.12 [Land Use – Vehicle-Mile Equivalency Table]</i> Development Type: 150,000 square feet of Home Improvement Store Development Units: 1,000 square feet of Gross Floor Area Veh-Mi Per Development Unit: 3.78
	Determine Maximum Assessable Impact Fee Per Service Unit (Vehicle-Mile)
Step 2	<i>From Table 2.11, Line 20 [Maximum Assessable Fee Per Service Unit]</i> Service Area 2: \$1,937
	Determine Maximum Assessable Impact Fee
Step 3	Impact Fee = # of Development Units * Veh-Mi Per Dev Unit * Max. Fee Per Service Unit Impact Fee = 150 * 3.78 * \$1,937 Maximum Assessable Impact Fee = \$1,098,279

## 2.7 ADOPTION AND ADMINISTRATION OF ROADWAY IMPACT FEES

### ADOPTION PROCESS

Chapter 395 of the Texas Local Government Code stipulates a specific process for the adoption of Roadway Impact Fees. A Capital Improvements Advisory Committee (CIAC) is required to review the Land Use Assumptions and Roadway Impact Fees CIP used in calculating the maximum fee, and to provide the Committee’s findings for consideration by the City Council. This CIAC also reviews the calculation and resulting maximum fees and provides its findings to the City Council. The composition of the CIAC is required to adequately represent the building and development communities. The City Council then conducts a public hearing on the Roadway Impact Fee Assumptions (Land Use and Capital Improvements Plan) and a second public hearing on the Roadway Impact Fee Calculation and Roadway Impact Fee Ordinance.

Following policy adoption, the CIAC is tasked with advising the City Council of the need to update the Land Use Assumptions or the Roadway Impact Fees CIP at any time within five years of adoption. Finally, the CIAC oversees the proper administration of the Impact Fee, once in place, and advises the Council as necessary.

### COLLECTION AND USE OF ROADWAY IMPACT FEES

Roadway Impact Fees are assessed when a final plat is recorded. The assessment defines the impact of each unit at the time of platting, according to land use, and may not exceed the maximum impact fee allowed by law. Roadway Impact Fees are collected when a building permit is issued. Therefore, funds are not collected until development-impacts are introduced to the transportation system. Funds collected within a service area can be used only within the same service area. Finally, fees must be utilized within 10 years of collection, or must be refunded with interest.

## 2.8 CONCLUSIONS

The City of Colleyville has established a process to implement the assessment and collection of Roadway Impact Fees through the adoption of an impact fee ordinance that is consistent with Chapter 395 of the Texas Local Government Code.

This report establishes the maximum allowable Roadway Impact Fee that could be assessed by the City of Colleyville, as shown in the previously referenced Table 2.11. This document serves as a guide to the assessment of Roadway Impact Fees pertaining to future development, and the City's need for transportation improvements to accommodate that growth. Following the public hearing process, the City Council may establish an impact fee amount to be collected, up to the calculated maximum and establish the Roadway Impact Fee Ordinance accordingly.

In conclusion, it is our opinion that the data and methodology used in this analysis are appropriate and consistent with Chapter 395 of the Texas Local Government Code. Furthermore, the Land Use Assumptions and the proposed Roadway Impact Fee Capital Improvements Plan are appropriately incorporated into the development of the maximum assessable Roadway Impact Fee.

Below is the listing of the 2020 Roadway Impact Fee Study's Maximum Assessable Impact Fee Per Service Unit (Vehicle-Mile):

Service Area	Maximum Fee Per Service Unit (per Vehicle-Mile)
1	\$1,204
2	\$1,937

In the 2012 Roadway Impact Fee Study, the Maximum Fee Per Service Unit was \$2,360 for Service Area 1 and \$2,446 for Service Area 2. This comparison shows that over the 8-year period between the 2012 Study and this Update, the Maximum Fee Per Service Unit has decreased \$1,156 for Service Area 1 and \$509 for Service Area 2. As the City reaches build out and greenfield development slows, it should be expected that the Maximum Fee will continually decrease.

Chapter 3  
Water Impact Fee Study for the  
2020 Impact Fee Study



Sept  
2021

Prepared for the City of Colleyville

Prepared by:

Kimley-Horn and Associates, Inc.

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TBPE Firm Registration Number: F-928

Project Number: 061063055

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**JOSH KERCHO \_\_\_\_\_, P.E.  
SERIAL NUMBER. \_\_\_\_\_ 113002  
DATE: \_\_\_\_\_ SEPTEMBER 2021**

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### 3.1 INTRODUCTION

The City of Colleyville retained the services of Kimley-Horn and Associates, Inc., for the purpose of developing the impact fees for water system improvements required to serve new development. These fees were originally developed in 1999 and updated in 2006 and 2012 in accordance with Chapter 395 of the *Local Government Code* (impact fees).

The purpose of this report is to satisfy the requirements of the law and provide the City with an impact fee capital improvements plan and associated impact fees.

For convenience and reference, the following is excerpted from Chapter 395 of the code:

- (a) *The political subdivision shall use qualified professionals to prepare the capital improvements plan and to calculate the impact fee. The capital improvements plan must contain specific enumeration of the following items:*
- (1) *a description of the existing capital improvements within the service area and the costs to upgrade, update, improve, expand, or replace the improvements to meet existing needs and usage and stricter safety, efficiency, environmental, or regulatory standards, which shall be prepared by a qualified professional engineer licensed to perform such professional engineering services in this state;*
  - (2) *an analysis of the total capacity, the level of current usage, and commitments for usage of capacity of the existing capital improvements, which shall be prepared by a qualified professional engineer licensed to perform such professional engineering services in this state;*
  - (3) *a description of all or the parts of the capital improvements or facility expansions and their costs necessitated by and attributable to new development in the service area based on the approved land use assumptions, which shall be prepared by a qualified professional engineer licensed to perform such professional engineering services in this state;*
  - (4) *a definitive table establishing the specific level or quantity of use, consumption, generation, or discharge of a service unit for each category of capital improvements or facility expansions and an equivalency or conversion table establishing the ratio of a service unit to various types of land uses, including but not limited to residential, commercial, and industrial;*
  - (5) *the total number of projected service units necessitated by and attributable to new development within the service area based on the approved land use assumptions and calculated in accordance with generally accepted engineering or planning criteria;*
  - (6) *the projected demand for capital improvements or facility expansions required by new service units projected over a reasonable period of time, not to exceed 10 years; and*

(7) plan for awarding:

- (A) a credit for the portion of ad valorem tax and utility service revenues generated by new service units during the program period that is used for the payment of improvements, including the payment of debt, that are included in the capital improvements plan; or
- (B) in the alternative, a credit equal to 50 percent of the total project cost of implementing the capital improvements plan.

The impact fee study includes information from the *Water and Wastewater Master Plan* completed by Garver in December 2014. The impact fees are based on recommended capital improvements outlined in the *Water and Wastewater Master Plan*, input from City Staff, and the service area growth projections shown in the *Land Use Assumptions Report*.

The study process was comprised of four tasks:

#### **A. LAND USE ASSUMPTIONS**

The development of land use assumptions included the following:

- Establishing impact fee service areas (SA) for water and wastewater;
- Collection/determination of population and employment data by SA; and
- Projection of the ten-year population and employment by SA.

A detailed discussion is outlined in the current Land Use Assumptions Chapter of this report.

#### **B. EVALUATION OF THE WATER SYSTEM MASTER PLAN**

This task involved reviewing the *Water and Wastewater System Master Plan* and its growth projection compatibility with the *Land Use Assumptions Report*. The water demand projections were then used to determine the additional service units.

#### **C. IMPACT FEE CAPITAL IMPROVEMENT PLAN**

This task involved reviewing the City's capital projects shown in the 2012 impact fee report and the water capital improvement plan outlined in the master plan with public works staff and interviews with the Trinity River Authority capital projects managers. Both parties provided information allowing us to develop the impact fee capital improvements plan that will be built in the 10-year planning window.

#### **D. IMPACT FEE ANALYSIS AND REPORT**

This task included calculating the growth of service units and credit reduction. These values were then used to determine the impact fee per service unit and the maximum assessable impact fee by meter size.

## 3.2 DESIGN CRITERIA

In accordance with the Chapter 290 of the Texas Administrative Code (Public Drinking Water) and the American Water Works Associations (AWWA) requirements for the design and operation of potable water systems the following design criteria is followed when planning for future water infrastructure.

### A. WATER LINES

Water Transmission Lines (12-inch and Larger)

Water transmission lines shall be sized to maintain the following pressure requirements:

- Peak hour demand with a minimum pressure of 35 pounds per square inch (psi);
- Night-time tank filling with a maximum pressure of 100 psi; and
- Peak day demand plus fire flow with a minimum pressure of 20 psi.

### B. STORAGE TANKS

The Texas Commission on Environmental Quality (TCEQ) and the State Board of Insurance (SBI) have established criteria for ground and elevated storage. These criteria address volume and height requirements only. The layout of the distribution system, location of the storage facilities, and the interaction with the high service and booster pumps affect the amount of storage necessary for the most efficient and reliable operation of the system.

#### (a) Ground Storage

Ground storage serves two functions:

- Equalization for differing feed rates between the water supply and pumping to the system; and
- Emergency capacity in the event of temporary loss of water supply.

Generally, ground storage facilities are located at water supply points or at each pump station within the water distribution system. Suggested storage capacities are established based on several criteria. There are specific requirements of the TCEQ. These criteria are detailed later in this section. Although ground and elevated storage facilities perform separate functions within the system, both are aimed at decreasing the impact of demand fluctuations. Their capacities are established based on knowledge of how demand varies seasonally and daily.

### (b) Elevated Storage

Elevated storage serves three purposes:

- Functionally, elevated storage equalizes the pumping rate to compensate for daily variations in demand and to maintain a fairly constant pumping rate (usually referred to as operational storage), or a pumping rate that conforms to the requirements of the electrical rate structure.
- Provides pressure maintenance and protection against surges created by instantaneous demand, such as fire flow and main breaks, and instantaneous change in supply, such as pumps turning on and off.
- Maintains a reserve capacity for fire protection and pressure maintenance in case of power failure to one or more pump stations. Sufficient storage should be maintained to provide four hours of fire flow demand during a loss of power to the pump station.

Suggested storage capacities are established by the TCEQ. Adequate operational storage is established by determining the required volume to equalize the daily fluctuations in flow during the maximum day demand, plus the reserve volume required for fire protection.

The minimum requirements for storage, according to Chapter 290 of the Texas Administrative Code, are as follows:

- Total Storage - Equal to 200 gallons per connection.
- Elevated Storage - Equal to 100 gallons per connection; or
- Elevated Storage – Equal to 200 gallons per connection for a firm pumping capacity reduction from 2.0 gallons per connection to 0.6 gallons per connection.

## C. PUMP STATIONS

Pumping capacities must provide the maximum demand, or the peak hour demand required by the water system or the suggested capacities established by the TCEQ. Pumping capacity should supply the maximum demand with sufficient redundancy to allow for the largest pump at the pump station to be out of service. This is known as firm pumping capacity.

Each pump station or pressure plane must have two or more pumps that have a total capacity of 2.0 gallons per minute per connection, or have a total capacity of at least 1,000 gallons per minute and the ability to meet peak hour demand with the largest pump out of service, whichever is less. If the system provides elevated storage capacity of 200 gallons per connection, two service pumps with a minimum combined capacity of 0.6 gpm per connection are required.

### 3.3 IMPACT FEE CAPITAL IMPROVEMENTS PLAN

The City Council commissioned Garver to develop a *Water and Wastewater System Master Plan*. The purpose of the plan is to provide the City with a logical strategy for upgrading and expanding its water distribution system to accommodate future growth and for addressing existing system deficiencies. Garver completed the *Water and Wastewater System Master Plan* and recommended system improvements to accommodate growth through the City’s build-out. State law only allows cost recovery associated with eligible projects in a ten (10) year planning window from the time of the impact fee study. The following details the projects and the eligible recoverable cost.

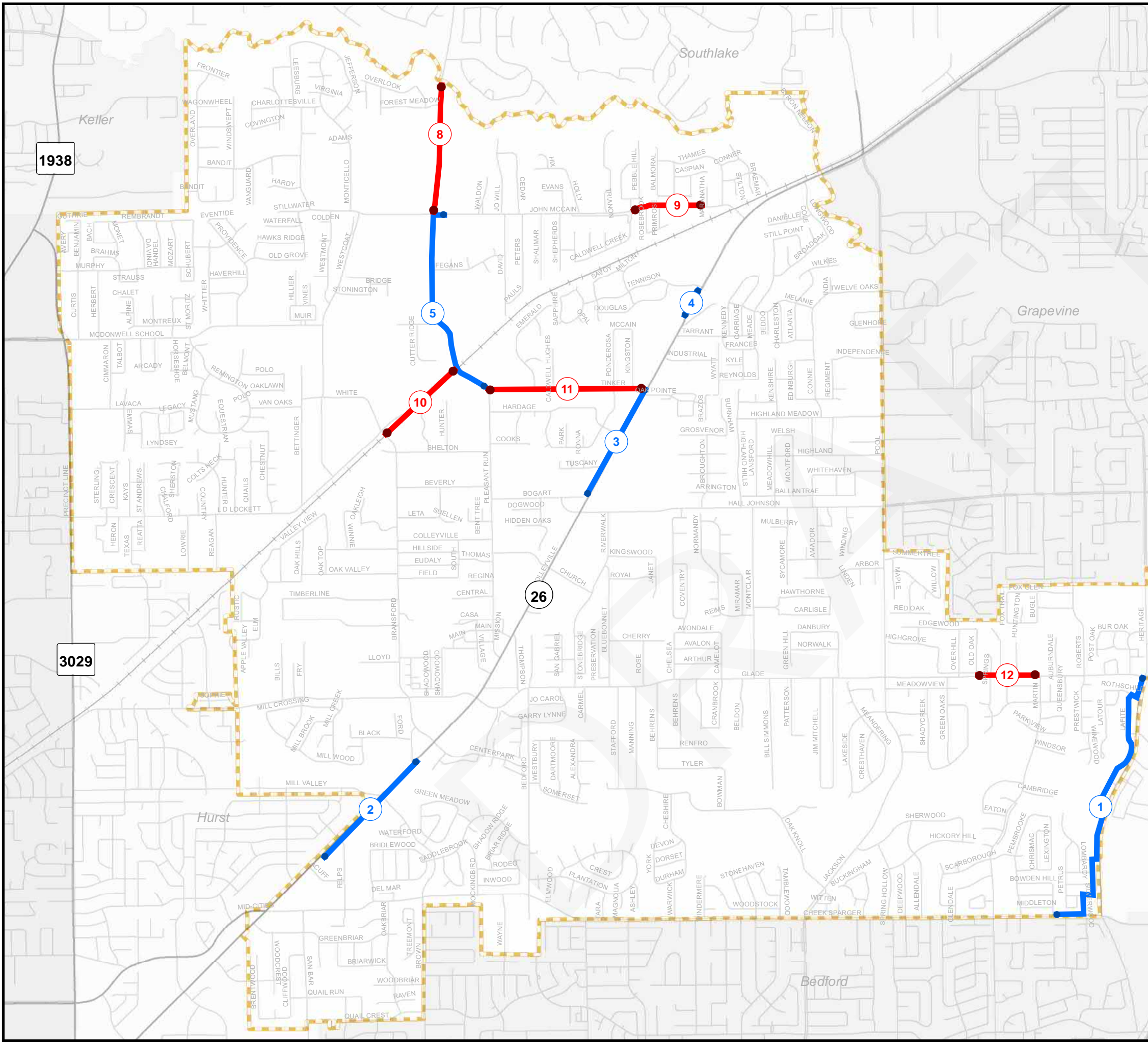
Seven (7) existing projects and five (5) proposed projects are determined eligible for recoverable cost through impact fee over the next 10 years. The City of Colleyville’s total cost of these projects is \$11,627,893. The projected total recoverable through impact fees is \$5,288,647. After financing costs are added and the credit reduction calculation is complete, \$6,562,858 is recoverable through impact fees serving the 10-year system needs. These impact fee capital improvements are shown in **Table 3.1** and illustrated in **Exhibit 3.1**.

**Table 3.1 Water Impact Fee Capital Improvements  
Project Cost and 10-Year Recoverable Cost**

Project #	Description	2020 Required Capacity (Percent Utilization)	2030 Required Capacity (Percent Utilization)	2020-2030 Required Capacity (Percent Utilization)	2030 Projected Recoverable Cost	Total Project Cost
<b>EXISTING</b>						
1	Heritage Ave 12" Water Line	92%	96%	4%	\$ 24,960	\$ 624,000
2	SH 26 South 12" Water Line	92%	96%	4%	\$ 15,480	\$ 387,000
3	SH 26 Central 12" Water Line	92%	96%	4%	\$ 11,960	\$ 299,000
4	SH 26 North 12" Water Line	92%	96%	4%	\$ 1,800	\$ 45,000
5	Pleasant Run Rd 12" Water Line	92%	96%	4%	\$ 18,000	\$ 450,000
6**	Existing TRA - Raw Water Line Improvements	92%	96%	4%	\$ 183,260	\$ 4,581,500
7	Water Impact Fee Study Update	-	-	100%	\$ 36,250	\$ 36,250
Existing Subtotal					\$ 291,710	\$ 6,422,750
<b>PROPOSED</b>						
8*	Pleasant Run Rd 12" Water Line Extension	0%	96%	96%	\$ 546,272	\$ 569,033
9*	John McCain 12" Water Line	0%	96%	96%	\$ 346,470	\$ 360,907
10*	Cotton Belt Trail to Pleasant Run 16" Water Line	0%	96%	96%	\$ 1,328,640	\$ 1,384,000
11*	Tinker Road 12" Water Line	0%	96%	96%	\$ 996,675	\$ 1,038,203
12	Glade Road 12" Water Line	0%	96%	96%	\$ 1,778,880	\$ 1,853,000
Proposed Subtotal					\$ 4,996,937	\$ 5,205,143
<b>Total</b>					<b>\$ 5,288,647</b>	<b>\$ 11,627,893</b>

\* Water project costs are prorated for upsize capacity only.

\*\* "Total Project Cost" for the TRA facility (item 6) reflects Colleyville's prorated portion (approx. 17%) of the TRA project cost according to relative demand capacities among member cities. Colleyville's impact fee can be used to pay the portion of the TRA water rate that is identified for projects accommodating future growth.



Existing Facility or Facility Under Construction	
Project Number	Project Description
1	Heritage Ave 12" Water Line
2	SH 26 South 12" Water Line
3	SH 26 Central 12" Water Line
4	SH 26 North 12" Water Line
5	Pleasant Run Rd 12" Water Line
6	Existing TRA - Raw Water Line Improvements
7	Water Impact Fee Study (Not Shown on Map)

Proposed 2020-2030 Facilities	
Project Number	Project Description
8	Pleasant Run Rd 12" Water Line Extension
9	John McCain 12" Water Line
10	Cotton Belt Trail to Pleasant Run 16" Water Line
11	Tinker Road 12" Water Line
12	Glade Road 12" Water Line

**Note:** TRA projects listed in the CIP are not shown on this exhibit.

**Legend**

- City Limits
- Water Service Area
- Existing Water Line or Water Line Under Construction
- Proposed 2020-2030 Water Line
- Existing Facility Project Label
- Proposed Facility Project Label

**Exhibit 3.1**  
**Water Impact Fee CIP**

0 0.5 1 Miles

September 2021

**PROJECT DESCRIPTIONS**

**Existing Facilities or Facilities under Construction**

**(1) Heritage Ave 12" Water Line**

Existing 12" water line along Heritage Avenue from Glade Road to Cheek-Sparger Road.

Total Project Cost	\$624,000
Recoverable Cost	\$24,960

**(2) SH 26 South 12" Water Line**

Existing 12" water line along SH 26 from Greenbriar Ln to Brown Trail.

Total Project Cost	\$387,000
Recoverable Cost	\$15,480

**(3) SH 26 Central 12" Water Line**

Existing 12" water line along SH 26 from Bogart Street to Tinker Road.

Total Project Cost	\$299,000
Recoverable Cost	\$11,960

**(4) SH 26 North 12" Water Line**

Existing 12" water line along SH 26 from Tennison Parkway to 474 feet south of Tennison Parkway.

Total Project Cost	\$45,000
Recoverable Cost	\$1,800

**(5) Pleasant Run Rd 12" Water Line**

Existing 12" water line along Pleasant Run from Tinker Road to John McCain Road.

Total Project Cost	\$450,000
Recoverable Cost	\$18,000

**(6) Existing TRA - Raw Water Line Improvements**

Colleyville's Prorated Portion of TRA Project Cost (17%)	\$4,581,500
Recoverable Cost	\$182,260

**(7) Water Impact Fee Study Update**

Update of the impact fees for water system improvements required to serve new development.

Total Project Cost	\$36,250
Recoverable Cost	\$36,250

**Note:** Project Descriptions are not provided for the TRA project listed in **Table 3.1**.

**Proposed Facilities, Improvements, and Water Lines**

**(8) Pleasant Run Rd 12" Water Line Extension**

Replace existing 6" water line along Pleasant Run Road from John McCain Road north toward Colleyville City Limits. This proposed water line is an extension of the existing (5) Pleasant Run Rd 12" Water Line impact fee project.

Total Project Cost	\$849,000
Total Upsize Project Cost	\$569,033
Recoverable Cost	\$546,272

**(9) John McCain 12" Water Line**

Replace existing 8" water line along John McCain Road from Pebble Hill Drive to Maranatha Court.

Total Project Cost	\$650,000
Total Upsize Project Cost	\$360,907
Recoverable Cost	\$346,470

**(10) Cotton Belt Trail to Pleasant Run 16" Water Line**

Construct 16" water line along Cotton Belt Trail from Bransford Road to Pleasant Run Road.

Total Project Cost	\$1,384,000
Recoverable Cost	\$1,328,640

**(11) Tinker Road 12" Water Line**

Replace existing 10" water line along Tinker Road from Pleasant Run Road to SH 26. This proposed water line is a continuation of the existing (5) Pleasant Run Rd 12" Water Line and (3) SH 26 Central 12" Water Line impact fee projects.

Total Project Cost	\$3,406,000
Total Upsize Project Cost	\$1,038,203
Recoverable Cost	\$996,675

**(12) Glade Road 12" Water Line**

Construct existing 12" water line along Glad Road from Old Oak Road to Martin Road.

Project Cost	\$1,853,000
Recoverable Cost	\$1,778,880

### 3.4 WATER IMPACT FEE CALCULATION

Chapter 395 of the Local Government Code defines a service unit as follows, “Service Unit means a standardized measure of consumption attributable to an individual unit of development calculated in accordance with generally accepted engineering or planning standards and based on historical data and trends applicable to the political subdivision in which the individual unit of development is located during the previous 10 years.” Therefore, the City of Colleyville defines a *service unit* based on historical water usage over the past 10 years as compared to the estimated residential units. The residential unit is the development type that predominately uses a 3/4” meter. The measure of consumption per service unit is based on a 3/4” meter and the data shown in **Table 3.2**.

**Table 3.2 Service Unit Consumption Calculation**

Year	Population <sup>1</sup>	Service Units (2.96 person/unit)	Water Average Day Demand (MGD) <sup>1</sup>	Demand per Service Unit (GPD)
2010	22,807	7,705	6.7	870
2011	22,949	7,753	8.11	1046
2012	23,090	7,801	7.93	1017
2013	23,270	7,861	6.52	829
2014	23,740	8,020	6.85	854
2015	23,760	8,027	6.2	772
2016	24,230	8,186	6.07	742
2017	24,623	8,319	5.91	710
2018	25,015	8,451	6.42	760
2019	25,408	8,584	6.44	750
<b>Average Historical Demand per Service Unit</b>				<b>835</b>

(1) Data Sources: City of Colleyville

Based on the City’s 10-year growth projections and the resulting water demand projections, water service will be required for an additional **395** service units. The calculation is as follows:

- A service unit, which is a unit of development that consumes approximately 835 gallons per day (GPD), is a typical residential connection that uses a 3/4” meter. **Table 3.3** outlines the future water demand projections and its relationship to the additional service units projected for the next 10-years.

**Table 3.3 10-year Additional Service Units Calculation**

Year	Average Day Demand (MGD) <sup>1</sup>	Service Unit Demand (GPD)	Projected Service Units
2020	7.28	835	8,719
2030	7.61	835	9,114
<b>10-year Additional Service Units</b>			<b>395</b>

(1) Data Sources: City of Colleyville; Water Master Plan by Garver

Impact fee law allows for a credit calculation to credit back the development community based on the utility revenues or ad valorem taxes that are allocated for paying a portion of future capital improvements. The intent of this credit is to prevent the City from double charging development for future capital improvements via impact fees and utility rates. If the city chooses not to do a financial analysis to determine the credit value they are required by law to reduce the recoverable cost by 50 percent. The city has chosen to calculate the credit value. Therefore, the maximum recoverable cost for impact fee shown below is 99 percent of the Pre Credit Recoverable Cost. A detailed credit calculation has been provided by Edward B. Peacock in the appendix.

A breakdown of the 10-year recoverable costs and the associated impact fee per service unit is as follows:

**Table 3.4 10-Year Recoverable Cost Breakdown**

Recoverable Impact Fee CIP Costs	\$ 5,288,647
Debt Service	\$ 1,320,296
<b>Pre Credit Recoverable Cost for Impact Fee</b>	<b>\$ 6,608,943</b>
Credit for Utility Revenues	\$ (46,085)
<b>Maximum Recoverable Cost for Impact Fee</b>	<b>\$ 6,562,858</b>

(1) Per Edward B. Peacock, CPA financial analysis, see the Appendix – Plan for Awarding the Water and Wastewater Impact Fee Credit

$$\text{Impact fee per service units} = \frac{\text{10-year recoverable costs}}{\text{10-year additional service units}}$$

$$\text{10-year recoverable cost} = \$6,562,858$$

$$\text{Impact fee per service units} = \frac{\$6,562,858}{395}$$

$$\text{Impact fee per service units} = \$16,615$$

Therefore, the maximum assessable water impact fee per service unit is \$16,615.

For a development that requires a different size meter, a service unit equivalent is established at a multiplier based on its capacity with respect to the 3/4" meter. The maximum impact fee that could be assessed for other meter sizes is based on the value shown on **Table 3.5**, Service Unit Equivalency Table for Commonly Used Meters.

**Table 3.5 Service Unit Equivalency Table for Commonly Used Meters**

Meter Size	Maximum Continuous Operating Capacity (GPM)*	Service Unit Equivalent	Maximum Assessable Water Impact Fee
5/8"x 3/4" PD	10	0.67	\$11,077
3/4" PD	15	1.00	\$16,615
1" PD	25	1.67	\$27,692
1 1/2" PD	50	3.33	\$55,383
2" PD	80	5.33	\$88,613
2" Compound	80	5.33	\$88,613
2" Turbine	100	6.67	\$110,767
3" Compound	175	11.67	\$193,842
3" Turbine	220	14.67	\$243,687
4" Compound	300	20.00	\$332,300
4" Turbine	420	28.00	\$465,220
6" Compound	675	45.00	\$747,675
6" Turbine	865	57.67	\$958,132
8" Compound	900	60.00	\$996,900
8" Turbine	2,400	160.00	\$2,658,400
10" Turbine	3,500	233.33	\$3,876,833

PD = Positive Displacement Meter (Typical Residential Meter)

\*Operating capacities obtained from American Water Works Association (AWWA) C-700-15, C-701-15, C702-19

Chapter 4  
Wastewater Impact Fee Study for the  
2020 Impact Fee Study



Sept  
2021

Prepared for the City of Colleyville

Prepared by:

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Project Number: 061063055

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**JOSH KERCHO \_\_\_\_\_, P.E.  
SERIAL NUMBER. \_\_\_\_\_ 113002  
DATE: \_\_\_\_\_ SEPTEMBER 2021**

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## 4.1 INTRODUCTION

The City of Colleyville retained the services of Kimley-Horn and Associates, Inc., for the purpose of developing the impact fees for wastewater system improvements required to serve new development. These fees were originally developed in 1999 and updated in 2006 and 2012 in accordance with Chapter 395 of the *Local Government Code* (impact fees).

The purpose of this report is to satisfy the requirements of the law and provide the City with an impact fee capital improvements plan and associated impact fees.

For convenience and reference, the following is excerpted from Chapter 395 of the code:

- (a) *The political subdivision shall use qualified professionals to prepare the capital improvements plan and to calculate the impact fee. The capital improvements plan must contain specific enumeration of the following items:*
- (1) *a description of the existing capital improvements within the service area and the costs to upgrade, update, improve, expand, or replace the improvements to meet existing needs and usage and stricter safety, efficiency, environmental, or regulatory standards, which shall be prepared by a qualified professional engineer licensed to perform such professional engineering services in this state;*
  - (2) *an analysis of the total capacity, the level of current usage, and commitments for usage of capacity of the existing capital improvements, which shall be prepared by a qualified professional engineer licensed to perform such professional engineering services in this state;*
  - (3) *a description of all or the parts of the capital improvements or facility expansions and their costs necessitated by and attributable to new development in the service area based on the approved land use assumptions, which shall be prepared by a qualified professional engineer licensed to perform such professional engineering services in this state;*
  - (4) *a definitive table establishing the specific level or quantity of use, consumption, generation, or discharge of a service unit for each category of capital improvements or facility expansions and an equivalency or conversion table establishing the ratio of a service unit to various types of land uses, including but not limited to residential, commercial, and industrial;*
  - (5) *the total number of projected service units necessitated by and attributable to new development within the service area based on the approved land use assumptions and calculated in accordance with generally accepted engineering or planning criteria;*
  - (6) *the projected demand for capital improvements or facility expansions required by new service units projected over a reasonable period of time, not to exceed 10 years; and*

(7) plan for awarding:

- (A) a credit for the portion of ad valorem tax and utility service revenues generated by new service units during the program period that is used for the payment of improvements, including the payment of debt, that are included in the capital improvements plan; or
- (B) in the alternative, a credit equal to 50 percent of the total project cost of implementing the capital improvements plan.

The impact fee study includes information from the *Water and Wastewater Master Plan* completed by Garver in December 2014. The impact fees are based on recommended capital improvements outlined in the *Water and Wastewater Master Plan*, input from City Staff, and the service area growth projections shown in the *Land Use Assumptions Report*.

The study process was comprised of four tasks:

#### **A. LAND USE ASSUMPTIONS**

The development of land use assumptions included the following:

- Establishing impact fee service areas (SA) for water and wastewater;
- Collection/determination of population and employment data by SA; and
- Projection of the ten-year population and employment by SA.

A detailed discussion is outlined in the current Land Use Assumptions Chapter of this report.

#### **B. EVALUATION OF THE WASTEWATER SYSTEM MASTER PLAN**

This task involved reviewing the *Water and Wastewater System Master Plan* and its growth projection compatibility with the *Land Use Assumptions Report*. The wastewater flow projections were then used to determine the additional service units.

#### **C. IMPACT FEE CAPITAL IMPROVEMENT PLAN**

This task involved reviewing the City's capital projects shown in the 2012 impact fee report and the wastewater capital improvement plan outlined in the master plan with public works staff and interviews with the Trinity River Authority capital projects managers. Both parties provided information allowing us to develop the impact fee capital improvements plan that will be built in the 10-year planning window.

#### D. IMPACT FEE ANALYSIS AND REPORT

This task included calculating the growth of service units and credit reduction. These values were then used to determine the impact fee per service unit and the maximum assessable impact fee by meter size.

## 4.2 DESIGN CRITERIA

In accordance with the Chapter 217 of the Texas Administrative Code (Design Criteria for Domestic Wastewater Systems) the following design criteria is followed when planning for future wastewater infrastructure.

### A. SEWER TRUNK LINES (INTERCEPTORS)

The design criteria for sewer trunk lines or interceptors is based on the TCEQ requirements that meet peak wet weather design flows with no overflows while maintaining a minimum of 2 ft/sec cleaning velocity and a maximum of 8 ft/sec velocity.

### B. LIFT STATION PUMPING CAPACITY

The design criteria for lift station pumping shall be to provide firm pumping capacity to meet 125% of the peak wet weather design flows. The firm pumping capacity is defined as the available total pumping capacity with the largest pump out of service.

### C. LIFT STATION WET WELL CAPACITY

The design criteria for lift station wet wells are to provide adequate volumes to limit pump cycling to once every 10 minutes. Based on this criterion, the required operating volume for each pump can be calculated as

$$V = tQ/4 \quad \text{where,}$$

$$t = \text{Maximum pump cycling time} = 10 \text{ minutes}$$

$$Q = \text{Lead pump discharge rate in gallons per minute (gpm)}$$

$$V = \text{Required wet well volume between pump start and stop elevation}$$

### D. FORCE MAINS

The design criteria recommended for force mains is to meet the required pumping capacity of the lift station at a velocity less than 8 feet per second and a maximum discharge pressure of 100 psi and to allow a minimum of 2 feet per second scouring velocity during a single pump operation.

### 4.3 IMPACT FEE CAPITAL IMPROVEMENTS PLAN

The City Council commissioned Garver to develop a *Water and Wastewater System Master Plan*. The purpose of the plan is to provide the City with a logical strategy for upgrading and expanding its wastewater collection system to accommodate future growth and for addressing existing system deficiencies. Garver completed the *Water and Wastewater System Master Plan* and recommended system improvements to accommodate growth through the City's build-out. State law only allows cost recovery associated with eligible projects in a ten (10) year planning window from the time of the impact fee study. The following details the projects and the eligible recoverable cost.

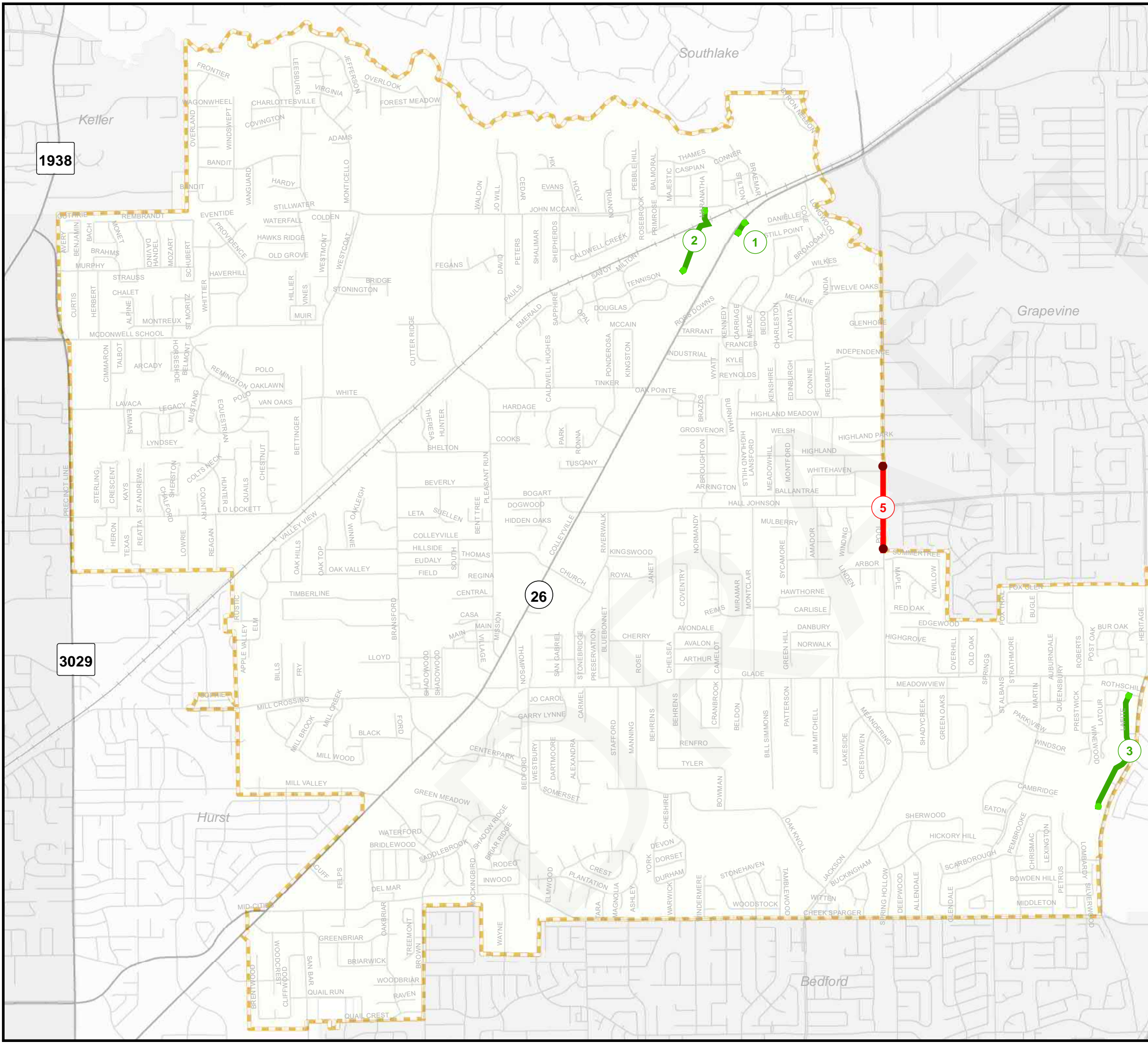
Four (4) existing projects and three (3) proposed projects are determined eligible for recoverable cost through impact fee over the next 10 years. The City of Colleyville's total cost of these projects is \$1,926,073. The projected total recoverable through impact fees is \$1,476,960. After financing costs are added and the credit reduction calculation is complete, \$1,832,782 is recoverable through impact fees serving the 10-year system needs. These impact fee capital improvements are shown in Table 4.1 and illustrated in Exhibit 4.1.

**Table 4.1** Wastewater Impact Fee Capital Improvements  
Project Cost and 10-Year Recoverable Cost

Project #	Description	2020 Required Capacity (Percent Utilization)	2030 Required Capacity (Percent Utilization)	2020-2030 Required Capacity (Percent Utilization)	2030 Projected Recoverable Cost	Total Project Cost
EXISTING						
1	V1a 8" Sewer Line	92%	96%	4%	\$ 2,680	\$ 67,000
2	V1b 8" Sewer Line	92%	96%	4%	\$ 5,360	\$ 134,000
3	I1 8" Sewer Line	92%	96%	4%	\$ 8,200	\$ 205,000
4	Wastewater Impact Fee Study	-	100%	100%	\$ 36,250	\$ 36,250
Existing Subtotal					\$ 52,490	\$ 442,250
PROPOSED						
5*	Pool Road 10" Sewer Line	0%	96%	96%	\$ 1,281,984	\$ 1,335,400
6**	TRA - Bear Creek Interceptor Relief, Phase 1	0%	96%	96%	\$ 77,520	\$ 80,750
7**	TRA - Bear Creek Interceptor Relief, Phase 2	0%	96%	96%	\$ 64,966	\$ 67,673
Proposed Subtotal					\$ 1,424,470	\$ 1,483,823
Total					\$ 1,476,960	\$ 1,926,073

\* Wastewater project costs are prorated for upsize capacity only.

\*\* "Total Project Cost" for the TRA facilities (item 6-7) reflects Colleyville's prorated portion (approx. 1.7%) of the TRA project cost according to relative demand capacities among member cities. Colleyville's impact fee can be used to pay the portion of the TRA wastewater rate that is identified for projects accommodating future growth.



Existing Facility or Facility Under Construction	
Project Number	Project Description
1	V1a 8" Sewer Line
2	V1b 8" Sewer Line
3	I1 8" Sewer Line
4	Wastewater Impact Fee Study (Not Shown on Map)
Proposed 2020-2030 Facilities	
Project Number	Project Description
5	Pool Road 10" Sewer Line
6	TRA - Bear Creek Interceptor Relief, Phase 1
7	TRA - Bear Creek Interceptor Relief, Phase 2

**Note:** TRA projects listed in the CIP are not shown on this exhibit.

Legend	
	City Limits
	Wastewater Service Area
	Existing Sewer Line or Sewer Line Under Construction
	Proposed 2020-2030 Sewer Line
	Existing Facility Project Label
	Proposed Facility Project Label

**Exhibit 4.1**  
**Wastewater Impact Fee CIP**

September 2021

PROJECT DESCRIPTIONS

Existing

(1) V1a 8" Sewer Line

Existing 8" sanitary sewer line along SH 26 from John McCain Road to just north of Tennison Parkway.

Total Project Cost \$67,000

Recoverable Cost \$2,680

(2) V1b 8" Sewer Line

Existing 8" sanitary sewer line along the Cotton Belt Rail Road Line from John McCain Road south to near Caldwell Creek Drive.

Total Project Cost \$134,000

Recoverable Cost \$5,360

(3) I1 8" Sewer Line

Existing 8" sanitary sewer line along the Cotton Belt Rail Road Line from John McCain Road south to near Caldwell Creek Drive.

Total Project Cost \$205,000

Recoverable Cost \$8,200

(4) Wastewater Impact Fee Study Update

Update of the impact fees for wastewater system improvements required to serve new development.

Total Project Cost \$36,250

Recoverable Cost \$36,250

Proposed

(5) Pool Road 10" Sewer Line

Replace existing 6" sewer line along Pool Road from Whitehaven Street to Summertree Lane.

Total Project Cost	\$1,585,000
Total Upsize Project Cost	\$1,335,400
Recoverable Cost	\$1,281,984

(6) TRA – Bear Creek Interceptor Relief, Phase 1

Total Project Cost	\$24,700,000
Total Upsize Project Cost	\$4,750,000
Colleyville Proportional Upsize Cost (1.7%)	\$80,750
Recoverable Cost	\$77,520

(7) TRA – Bear Creek Interceptor Relief, Phase 2

Total Project Cost	\$20,700,000
Total Upsize Project Cost	\$3,980,769
Colleyville Proportional Upsize Cost (1.7%)	\$67,673
Recoverable Cost	\$64,966

Note: Project Descriptions are not provided for the TRA projects listed in Table 4.1.

#### 4.4 WASTEWATER IMPACT FEE CALCULATION

Chapter 395 of the Local Government Code defines a service unit as follows, “Service Unit means a standardized measure of consumption attributable to an individual unit of development calculated in accordance with generally accepted engineering or planning standards and based on historical data and trends applicable to the political subdivision in which the individual unit of development is located during the previous 10 years.” Therefore, the City of Colleyville defines a *service unit* based on historical wastewater discharge or flow over the past 10 years as compared to the estimated residential units. The residential unit is the development type that predominately uses a 3/4” meter. The measure of discharge per service unit is based on a 3/4” meter and the data shown in Table 4.2.

**Table 4.2** Service Unit Consumption Calculation

Year	Population <sup>1</sup>	Service Units (2.96 person/unit)	Wastewater Average Day Flow (MGD) <sup>1</sup>	Flow per Service Unit (GPD)
2010	22,807	7,705	2.16	280
2011	22,949	7,753	2.20	284
2012	23,090	7,801	2.25	288
2013	23,270	7,861	2.30	293
2014	23,740	8,020	2.52	314
2015	23,760	8,027	2.93	365
2016	24,230	8,186	3.00	366
2017	24,623	8,319	2.93	352
2018	25,015	8,451	2.73	323
2019	25,408	8,584	2.78	324
Average Historical Flow per Service Unit				319

(1) Data Sources: City of Colleyville

Based on the City's 10-year growth projections and the resulting wastewater flow projections, wastewater service will be required for an additional 407 service units. The calculation is as follows:

- A service unit, which is a unit of development that discharges approximately 319 gallons per day (GPD), is a typical residential connection that uses a 3/4" meter. Table 4.3 outlines the future wastewater discharge projections and its relationship to the additional service units projected for the next 10-years.

**Table 4.3** 10-year Additional Service Units Calculation

Year	Average Day Flow (MGD) <sup>1</sup>	Service Unit Demand (GPD)	Projected Service Units
2020	2.78	319	8,715
2030	2.91	319	9,122
10-year Additional Service Units			407

(1) Data Sources: City of Colleyville; Wastewater Master Plan by Garver

Impact fee law allows for a credit calculation to credit back the development community based on the utility revenues or ad valorem taxes that are allocated for paying a portion of future capital improvements. The intent of this credit is to prevent the City from double charging development for future capital improvements via impact fees and utility rates. If the city chooses not to do a financial analysis to determine the credit value they are required by law to reduce the recoverable cost by 50 percent. The city has chosen to calculate the credit value. Therefore, the maximum recoverable cost for impact fee shown below is 99 percent of the Pre Credit Recoverable Cost. A detailed credit calculation has been provided by Edward B. Peacock, CPA in the appendix.

A breakdown of the 10-year recoverable costs and the associated impact fee per service unit is as follows:

**Table 4.4** 10-Year Recoverable Cost Breakdown

Recoverable Impact Fee CIP Costs	\$ 1,476,960
Debt Service	\$ 369,089
Pre Credit Recoverable Cost for Impact Fee	\$ 1,846,049
Credit for Utility Revenues	\$ (13,267)
Maximum Recoverable Cost for Impact Fee	\$ 1,832,782

(1) Per Edward B. Peacock, CPA financial analysis, see the Appendix – Plan for Awarding the Water and Wastewater Impact Fee Credit

$$\text{Impact fee per service units} = \frac{\text{10-year recoverable costs}}{\text{10-year additional service units}}$$

$$\text{10-year recoverable cost} = \$1,832,782$$

$$\text{Impact fee per service units} = \frac{\$1,832,782}{407}$$

$$\text{Impact fee per service units} = \$4,503$$

Therefore, the maximum assessable wastewater impact fee per service unit is \$4,503.

For a development that requires a different size meter, a service unit equivalent is established at a multiplier based on its capacity with respect to the 3/4" meter. The maximum impact fee that could be assessed for other meter sizes is based on the value shown on Table 4.5, Service Unit Equivalency Table for Commonly Used Meters.

**Table 4.5** Service Unit Equivalency Table for Commonly Used Meters

Meter Size	Maximum Continuous Operating Capacity (GPM)*	Service Unit Equivalent	Maximum Assessable Wastewater Impact Fee
5/8"x 3/4" PD	10	0.67	\$3,002
3/4" PD	15	1.00	\$4,503
1" PD	25	1.67	\$7,505
1 1/2" PD	50	3.33	\$15,010
2" PD	80	5.33	\$24,016
2" Compound	80	5.33	\$24,016
2" Turbine	100	6.67	\$30,020
3" Compound	175	11.67	\$52,535
3" Turbine	220	14.67	\$66,044
4" Compound	300	20.00	\$90,060
4" Turbine	420	28.00	\$126,084
6" Compound	675	45.00	\$202,635
6" Turbine	865	57.67	\$259,673
8" Compound	900	60.00	\$270,180
8" Turbine	2,400	160.00	\$720,480
10" Turbine	3,500	233.33	\$1,050,700

PD = Positive Displacement Meter (Typical Residential Meter)

\*Operating capacities obtained from American Water Works Association (AWWA) C-700-15, C-701-15, C702-19

# APPENDIX

CONCEPTUAL LEVEL PROJECT COST PROJECTIONS

ROADWAY IMPACT FEE CIP SERVICE UNITS OF SUPPLY

EXISTING ROADWAY FACILITIES INVENTORY

PLAN FOR AWARDING THE ROADWAY IMPACT FEE CREDIT

PLAN FOR AWARDING THE WATER AND WASTEWATER IMPACT FEE CREDIT

## CONCEPTUAL LEVEL PROJECT COST PROJECTIONS

## City of Colleyville - 2020 Roadway Impact Fee Update

Capital Improvements Plan for Roadway Impact Fees  
Summary of Conceptual Level Project Cost Projections

### Roadway Improvements - Service Area 1

#	Class	Project	Limits	Status	Project Cost
1-A/2-R	P6D	Colleyville Blvd	a	Widening	\$ 1,893,200
1-B/2-S	P6D	Colleyville Blvd	2,030' N of John McCain Rd (City Limits) to 475' S of Brown Trl	Completed	\$ 5,070,000
1-C	C2U	Thompson Terr	Colleyville Blvd to Old Glade Rd	Widening	\$ 1,024,000
1-D	M2D	Glade Rd	Bedford Rd to Strathmore Terr	Completed	\$ 14,277,000
1-E	C2U-S	Roberts Rd	2,140' N of Glade Rd (City Limits) to Glade Rd	Widening	\$ 1,653,000
1-F	C2U	Bedford Rd	115' S of Glade Rd to Little Bear Creek	Widening	\$ 2,583,000
1-G	M4U (1/2)	Cheek-Sparger Rd	San Bar Ln to Del Mar Ct	Widening	\$ 1,589,000
1-H	M4U (1/2)	Cheek-Sparger Rd	Bedford Rd to 1,270' E of Bedford Rd	Widening	\$ 947,000
1-I	M4U (1/2)	Cheek-Sparger Rd	1,270' E of Bedford Rd to Heritage Ave (City Limits)	Widening	\$ 8,940,000
1-J	M4U (1/2)	Jackson Rd	2,540' S of Glade Rd to Cheek Sparger Rd	Widening	\$ 2,824,000
1-K	M4U (1/2)	Brown Trl	350' S of Autumn Oaks to 145' S of Quail Crest Dr	Widening	\$ 1,107,000

### Intersection Improvements

I-1	Intersection	Hall Johnson Rd & Riverwalk Dr	Intersection Improvements	Proposed	\$ 1,000,000
I-2	Intersection	Bedford Rd & Cheek-Sparger Rd	Intersection Improvements	Proposed	\$ 1,000,000
I-3	Intersection	Jackson Rd & Cheek-Sparger Rd	Intersection Improvements	Completed	\$ 1,931,523
I-4	Intersection	Heritage Ave & Cheek-Sparger Rd	Intersection Improvements	Completed	\$ 250,000
<b>TOTAL</b>					<b>\$ 46,088,723</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Colleyville.

The planning level cost projections shall not supersede the City's design standards or the determination of the City Engineer for a specific project.

**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 10/21/2020

Project Information:		Description:	Project No.
Name:	Colleyville Blvd	<b>This project consists of the widening of a five-lane undivided facility to a six-lane divided principal arterial.</b>	<b>1-A/2-R</b>
Limits:	a		
Impact Fee Class:	P6D		
Ultimate Class:	P6D		
Length (lf):	3,881		
Service Area(s):	1, 2		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
108	Unclassified Street Excavation	16,819	CY	\$ 27.00	\$ 454,104
208	6" Lime Stabilization (with Lime @ 36#/sy)	33,637	SY	\$ 4.25	\$ 142,959
308	8" Concrete Pavement	31,481	SY	\$ 73.00	\$ 2,298,122
408	4" Topsoil	12,937	SY	\$ 10.00	\$ 129,374
608	8' Paved Trail	62,100	SF	\$ 8.00	\$ 496,798
508	Concrete Driveway Approach	4	EA	\$ 4,000.00	\$ 16,000
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 3,537,358</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$ 212,241		
Traffic Control	None Anticipated	0%	\$ -		
√ Pavement Markings/Markers		3%	\$ 106,121		
√ Roadway Drainage	Standard Internal System	25%	\$ 884,339		
√ Illumination		6%	\$ 212,241		
Special Drainage Structures	None Anticipated	0%	\$ -		
√ Water	Minor Adjustments	6%	\$ 212,241		
√ Sewer	Minor Adjustments	4%	\$ 141,494		
√ Establish Turf / Erosion Control		3%	\$ 106,121		
√ Basic Landscaping		3%	\$ 106,121		
Other:		\$0	\$ -		
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 1,980,920</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 5,518,278</b>
<b>Construction Contingency:</b>					<b>15% \$ 827,742</b>
<b>Mobilization:</b>					<b>6% \$ 49,664</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 6,396,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	<b>\$ 6,396,000</b>
<b>Engineering/Survey/Testing:</b>		18%	<b>\$ 1,151,280</b>
<b>Previous Town contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition:</b>	New Roadway Alignment	30%	<b>\$ 1,918,800</b>
<b>Impact Fee Project Cost TOTAL (20% City Contribution)</b>			<b>\$ 1,893,200</b>

NOTE: The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Colleyville.  
 The planning level cost projections shall not supersede the City's design standards contained or the determination of the City Engineer for a specific project.

**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.

updated: 10/21/2020

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Colleyville Blvd 2,030' N of John McCain Rd (City Limits)	<b>This completed project consisted of the reconstruction of an existing five-lane undivided facility to a six-lane divided principal arterial. This represents only the City of Colleyville's contribution to SH 26.</b>	<b>1-B/2-S</b>
<b>Limits:</b>	to 475' S of Brown Trl		
<b>Impact Fee Class:</b>	P6D		
<b>Ultimate Class:</b>	P6D		
<b>Length (lf):</b>	18,283		
<b>Service Area(s):</b>	1, 2		

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>City Contribution to Construction Cost:</b>		-	\$ 5,070,000
<b>Engineering/Survey/Testing</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition:</b>	No ROW Acquisition Costs included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 5,070,000</b>

NOTE: The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Colleyville.

The planning level cost projections shall not supersede the City's design standards contained within the Subdivision Ordinance or the determination of the City Engineer for a specific project.

**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.

updated: 10/21/2020

Project Information:		Description:	Project No.
Name:	Thompson Terr	<b>This project consists of the reconstruction of an existing two-lane undivided facility to a two-lane undivided collector facility.</b>	<b>1-C</b>
Limits:	Colleyville Blvd to Old Glade Rd		
Impact Fee Class:	C2U		
Ultimate Class:	C2U		
Length (lf):	1,061		
Service Area(s):	1		

Roadway Construction Cost Projection						
No.	Item Description	Quantity	Unit	Unit Price	Item Cost	
101	Unclassified Street Excavation	1,946	CY	\$ 27.00	\$ 52,536	
201	6" Lime Stabilization (with Lime @ 30#/sy)	3,892	SY	\$ 3.50	\$ 13,620	
301	7" Concrete Pavement	3,656	SY	\$ 60.00	\$ 219,341	
401	4" Topsoil	3,774	SY	\$ 10.00	\$ 37,736	
601	5' Concrete Sidewalk	10,613	SF	\$ 8.00	\$ 84,906	
501	Concrete Driveway Approach	1	EA	\$ 4,000.00	\$ 4,000	
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 412,140</b>	
Major Construction Component Allowances**:						
Item Description	Notes	Allowance	Item Cost			
√ Prep ROW		6%	\$ 24,728			
√ Traffic Control	Construction Phase Traffic Control	5%	\$ 20,607			
√ Pavement Markings/Markers		3%	\$ 12,364			
√ Roadway Drainage	Standard Internal System	25%	\$ 103,035			
√ Illumination		6%	\$ 24,728			
Special Drainage Structures	None Anticipated	0%	\$ -			
√ Water	Minor Adjustments	6%	\$ 24,728			
√ Sewer	Minor Adjustments	4%	\$ 16,486			
√ Establish Turf / Erosion Control		3%	\$ 12,364			
√ Basic Landscaping		3%	\$ 12,364			
Other:		\$0	\$ -			
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal:</b>	<b>\$ 251,405</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 663,545</b>	
<b>Construction Contingency:</b>					<b>15%</b>	<b>\$ 99,532</b>
<b>Mobilization:</b>					<b>6%</b>	<b>\$ 5,972</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 770,000</b>	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 770,000
Engineering/Survey/Testing:		18%	\$ 138,600
Previous Town contribution			
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 115,500
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 1,024,000</b>

NOTE: The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Colleyville.

The planning level cost projections shall not supersede the City's design standards contained or the determination of the City Engineer for a specific project.

**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.

updated: 10/21/2020

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>	<b>1-D</b>
<b>Name:</b>	Glade Rd	<b>This project consisted of the widening of an existing two-lane undivided facility to a four-lane undivided minor arterial.</b>		
<b>Limits:</b>	Bedford Rd to Strathmore Terr			
<b>Impact Fee Class:</b>	M2D			
<b>Ultimate Class:</b>	C2U/C3U			
<b>Length (lf):</b>	11,269			
<b>Service Area(s):</b>	1			

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>City Contribution to Construction Cost:</b>		-	\$ 14,276,642
<b>Engineering/Survey/Testing</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition:</b>	No ROW Acquisition Costs included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 14,277,000</b>

NOTE: The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Colleyville.

The planning level cost projections shall not supersede the City's design standards contained within the Subdivision Ordinance or the determination of the City Engineer for a specific project.

**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 10/21/2020

Project Information:		Description:	Project No.
<b>Name:</b>	Roberts Rd 2,140' N of Glade Rd (City Limits) to	<b>This project consists of the reconstruction of an existing two-lane undivided facility to a two-lane undivided collector facility.</b>	<b>1-E</b>
<b>Limits:</b>	Glade Rd		
<b>Impact Fee Class:</b>	C2U-S		
<b>Ultimate Class:</b>	C2U-S		
<b>Length (lf):</b>	2,166		
<b>Service Area(s):</b>	1		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
110	Unclassified Street Excavation	3,489	CY	\$ 27.00	\$ 94,213
202	6" Lime Stabilization (with Lime @ 36#/sy)	6,979	SY	\$ 4.25	\$ 29,660
310	8" Concrete Pavement	6,497	SY	\$ 60.00	\$ 389,847
410	4" Topsoil	5,776	SY	\$ 10.00	\$ 57,755
610	4' Concrete Sidewalk	10,829	SF	\$ 8.00	\$ 86,633
510	Concrete Driveway Approach	2	EA	\$ 4,000.00	\$ 8,000
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 666,108</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	39,966	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	33,305	
√ Pavement Markings/Markers		3%	\$	19,983	
√ Roadway Drainage	Standard Internal System	25%	\$	166,527	
√ Illumination		6%	\$	39,966	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	39,966	
√ Sewer	Minor Adjustments	4%	\$	26,644	
√ Establish Turf / Erosion Control		3%	\$	19,983	
√ Basic Landscaping		3%	\$	19,983	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 406,326</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 1,072,434</b>
<b>Construction Contingency:</b>					<b>15% \$ 160,865</b>
<b>Mobilization:</b>					<b>6% \$ 9,652</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 1,243,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	<b>\$ 1,243,000</b>
<b>Engineering/Survey/Testing:</b>		18%	<b>\$ 223,740</b>
<b>Previous Town contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition:</b>	Existing Alignment	15%	<b>\$ 186,450</b>
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 1,653,000</b>

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**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 10/21/2020

Project Information:		Description:	Project No.
<b>Name:</b>	Bedford Rd 115' S of Glade Rd to Little Bear Creek	<b>This project consists of the reconstruction of an existing two-lane undivided facility to a two-lane undivided collector facility.</b>	<b>1-F</b>
<b>Limits:</b>	Creek		
<b>Impact Fee Class:</b>	C2U		
<b>Ultimate Class:</b>	C2U		
<b>Length (lf):</b>	2,674		
<b>Service Area(s):</b>	1		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	4,902	CY	\$ 27.00	\$ 132,358
201	6" Lime Stabilization (with Lime @ 30#/sy)	9,804	SY	\$ 3.50	\$ 34,315
301	7" Concrete Pavement	9,210	SY	\$ 60.00	\$ 552,605
401	4" Topsoil	9,507	SY	\$ 10.00	\$ 95,072
601	5' Concrete Sidewalk	26,739	SF	\$ 8.00	\$ 213,912
501	Concrete Driveway Approach	3	EA	\$ 4,000.00	\$ 12,000
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 1,040,261</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	62,416	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	52,013	
√ Pavement Markings/Markers		3%	\$	31,208	
√ Roadway Drainage	Standard Internal System	25%	\$	260,065	
√ Illumination		6%	\$	62,416	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	62,416	
√ Sewer	Minor Adjustments	4%	\$	41,610	
√ Establish Turf / Erosion Control		3%	\$	31,208	
√ Basic Landscaping		3%	\$	31,208	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 634,559</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 1,674,820</b>
<b>Construction Contingency:</b>					<b>15% \$ 251,223</b>
<b>Mobilization:</b>					<b>6% \$ 15,073</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 1,942,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	<b>\$ 1,942,000</b>
<b>Engineering/Survey/Testing:</b>		18%	<b>\$ 349,560</b>
<b>Previous Town contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition:</b>	Existing Alignment	15%	<b>\$ 291,300</b>
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 2,583,000</b>

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**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.

updated: 10/21/2020

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Cheek-Sparger Rd	<b>This project consists of the widening of an existing two-lane undivided facility to a four-lane undivided minor arterial.</b>	<b>1-G</b>
<b>Limits:</b>	San Bar Ln to Del Mar Ct		
<b>Impact Fee Class:</b>	M4U (1/2)		
<b>Ultimate Class:</b>	M4U		
<b>Length (lf):</b>	2,132		
<b>Service Area(s):</b>	1		

<b>Roadway Construction Cost Projection</b>						
No.	Item Description	Quantity	Unit	Unit Price	Item Cost	
104	Unclassified Street Excavation	2,961	CY	\$ 27.00	\$ 79,949	
204	6" Lime Stabilization (with Lime @ 30#/sy)	5,922	SY	\$ 3.50	\$ 20,728	
304	8" Concrete Pavement	5,448	SY	\$ 73.00	\$ 397,733	
404	4" Topsoil	4,856	SY	\$ 10.00	\$ 48,562	
604	5' Concrete Sidewalk	10,660	SF	\$ 8.00	\$ 85,279	
504	Concrete Driveway Approach	2	EA	\$ 4,000.00	\$ 8,000	
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 640,251</b>	
<b>Major Construction Component Allowances**:</b>						
Item Description	Notes	Allowance	Item Cost			
√ Prep ROW		6%	\$	38,415		
√ Traffic Control	Construction Phase Traffic Control	5%	\$	32,013		
√ Pavement Markings/Markers		3%	\$	19,208		
√ Roadway Drainage	Standard Internal System	25%	\$	160,063		
√ Illumination		6%	\$	38,415		
Special Drainage Structures	None Anticipated	0%	\$	-		
√ Water	Minor Adjustments	6%	\$	38,415		
√ Sewer	Minor Adjustments	4%	\$	25,610		
√ Establish Turf / Erosion Control		3%	\$	19,208		
√ Basic Landscaping		3%	\$	19,208		
Other:		\$0	\$	-		
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal:</b>	<b>\$ 390,553</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 1,030,804</b>	
<b>Construction Contingency:</b>					<b>15%</b>	<b>\$ 154,621</b>
<b>Mobilization:</b>					<b>6%</b>	<b>\$ 9,277</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 1,195,000</b>	

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 1,195,000
<b>Engineering/Survey/Testing:</b>		18%	\$ 215,100
<b>Previous Town contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition:</b>	Existing Alignment	15%	\$ 179,250
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 1,589,000</b>

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**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.

updated: 10/21/2020

Project Information:		Description:	Project No.
Name:	Cheek-Sparger Rd	<b>This project consists of the widening of an existing two-lane undivided facility to a four-lane undivided minor arterial.</b>	<b>1-H</b>
Limits:	Bedford Rd to 1,270' E of Bedford Rd		
Impact Fee Class:	M4U (1/2)		
Ultimate Class:	M4U		
Length (lf):	1,273		
Service Area(s):	1		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
104	Unclassified Street Excavation	1,768	CY	\$ 27.00	\$ 47,739
204	6" Lime Stabilization (with Lime @ 30#/sy)	3,536	SY	\$ 3.50	\$ 12,377
304	8" Concrete Pavement	3,253	SY	\$ 73.00	\$ 237,493
404	4" Topsoil	2,900	SY	\$ 10.00	\$ 28,997
604	5' Concrete Sidewalk	6,365	SF	\$ 8.00	\$ 50,922
504	Concrete Driveway Approach	1	EA	\$ 4,000.00	\$ 4,000
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 381,528</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	22,892	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	19,076	
√ Pavement Markings/Markers		3%	\$	11,446	
√ Roadway Drainage	Standard Internal System	25%	\$	95,382	
√ Illumination		6%	\$	22,892	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	22,892	
√ Sewer	Minor Adjustments	4%	\$	15,261	
√ Establish Turf / Erosion Control		3%	\$	11,446	
√ Basic Landscaping		3%	\$	11,446	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 232,732</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 614,260</b>
<b>Construction Contingency:</b>					<b>15% \$ 92,139</b>
<b>Mobilization:</b>					<b>6% \$ 5,528</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 712,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 712,000
Engineering/Survey/Testing:		18%	\$ 128,160
Previous Town contribution			
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 106,800
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 947,000</b>

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**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 10/21/2020

Project Information:		Description:	Project No.
<b>Name:</b>	Cheek-Sparger Rd 1,270' E of Bedford Rd to Heritage Ave (City Limits)	<b>This project consists of the widening of an existing two-lane undivided facility to a four-lane undivided minor arterial.</b>	<b>1-I</b>
<b>Limits:</b>			
<b>Impact Fee Class:</b>	M4U (1/2)		
<b>Ultimate Class:</b>	M4U		
<b>Length (lf):</b>	11,984		
<b>Service Area(s):</b>	1		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
104	Unclassified Street Excavation	16,644	CY	\$ 27.00	\$ 449,395
204	6" Lime Stabilization (with Lime @ 30#/sy)	33,288	SY	\$ 3.50	\$ 116,510
304	8" Concrete Pavement	30,625	SY	\$ 73.00	\$ 2,235,655
404	4" Topsoil	27,297	SY	\$ 10.00	\$ 272,966
604	5' Concrete Sidewalk	59,919	SF	\$ 8.00	\$ 479,354
504	Concrete Driveway Approach	12	EA	\$ 4,000.00	\$ 48,000
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 3,601,880</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	216,113	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	180,094	
√ Pavement Markings/Markers		3%	\$	108,056	
√ Roadway Drainage	Standard Internal System	25%	\$	900,470	
√ Illumination		6%	\$	216,113	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	216,113	
√ Sewer	Minor Adjustments	4%	\$	144,075	
√ Establish Turf / Erosion Control		3%	\$	108,056	
√ Basic Landscaping		3%	\$	108,056	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 2,197,147</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 5,799,026</b>
<b>Construction Contingency:</b>					<b>15% \$ 869,854</b>
<b>Mobilization:</b>					<b>6% \$ 52,191</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 6,722,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	<b>\$ 6,722,000</b>
<b>Engineering/Survey/Testing:</b>		18%	<b>\$ 1,209,960</b>
<b>Previous Town contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition:</b>	Existing Alignment	15%	<b>\$ 1,008,300</b>
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 8,940,000</b>

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**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 10/21/2020

Project Information:		Description:	Project No.
<b>Name:</b>	Jackson Rd 2,540' S of Glade Rd to Cheek	<b>This project consists of the widening of an existing two-lane undivided facility to a four-lane undivided minor arterial.</b>	<b>1-J</b>
<b>Limits:</b>	Sparger Rd		
<b>Impact Fee Class:</b>	M4U (1/2)		
<b>Ultimate Class:</b>	M4U		
<b>Length (lf):</b>	3,782		
<b>Service Area(s):</b>	1		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
104	Unclassified Street Excavation	5,253	CY	\$ 27.00	\$ 141,838
204	6" Lime Stabilization (with Lime @ 30#/sy)	10,507	SY	\$ 3.50	\$ 36,773
304	8" Concrete Pavement	9,666	SY	\$ 73.00	\$ 705,620
404	4" Topsoil	8,615	SY	\$ 10.00	\$ 86,154
604	5' Concrete Sidewalk	18,912	SF	\$ 8.00	\$ 151,294
504	Concrete Driveway Approach	4	EA	\$ 4,000.00	\$ 16,000
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 1,137,679</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	68,261	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	56,884	
√ Pavement Markings/Markers		3%	\$	34,130	
√ Roadway Drainage	Standard Internal System	25%	\$	284,420	
√ Illumination		6%	\$	68,261	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	68,261	
√ Sewer	Minor Adjustments	4%	\$	45,507	
√ Establish Turf / Erosion Control		3%	\$	34,130	
√ Basic Landscaping		3%	\$	34,130	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 693,984</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 1,831,663</b>
<b>Construction Contingency:</b>					<b>15% \$ 274,749</b>
<b>Mobilization:</b>					<b>6% \$ 16,485</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 2,123,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	<b>\$ 2,123,000</b>
<b>Engineering/Survey/Testing:</b>		18%	<b>\$ 382,140</b>
<b>Previous Town contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition:</b>	Existing Alignment	15%	<b>\$ 318,450</b>
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 2,824,000</b>

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**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 10/21/2020

Project Information:		Description:	Project No.
<b>Name:</b>	Brown Trl 350' S of Autumn Oaks to 145' S of	<b>This project consists of the widening of an existing two-lane undivided facility to a four-lane undivided minor arterial.</b>	<b>1-K</b>
<b>Limits:</b>	Quail Crest Dr		
<b>Impact Fee Class:</b>	M4U (1/2)		
<b>Ultimate Class:</b>	M4U		
<b>Length (lf):</b>	1,490		
<b>Service Area(s):</b>	1		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
104	Unclassified Street Excavation	2,069	CY	\$ 27.00	\$ 55,867
204	6" Lime Stabilization (with Lime @ 30#/sy)	4,138	SY	\$ 3.50	\$ 14,484
304	8" Concrete Pavement	3,807	SY	\$ 73.00	\$ 277,928
404	4" Topsoil	3,393	SY	\$ 10.00	\$ 33,934
604	5' Concrete Sidewalk	7,449	SF	\$ 8.00	\$ 59,592
504	Concrete Driveway Approach	1	EA	\$ 4,000.00	\$ 4,000
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 445,805</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	26,748	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	22,290	
√ Pavement Markings/Markers		3%	\$	13,374	
√ Roadway Drainage	Standard Internal System	25%	\$	111,451	
√ Illumination		6%	\$	26,748	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	26,748	
√ Sewer	Minor Adjustments	4%	\$	17,832	
√ Establish Turf / Erosion Control		3%	\$	13,374	
√ Basic Landscaping		3%	\$	13,374	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 271,941</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 717,746</b>
<b>Construction Contingency:</b>					<b>15% \$ 107,662</b>
<b>Mobilization:</b>					<b>6% \$ 6,460</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 832,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	<b>\$ 832,000</b>
<b>Engineering/Survey/Testing:</b>		18%	<b>\$ 149,760</b>
<b>Previous Town contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition:</b>	Existing Alignment	15%	<b>\$ 124,800</b>
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 1,107,000</b>

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## City of Colleyville - 2020 Roadway Impact Fee Update

### Capital Improvements Plan for Roadway Impact Fees

#### Summary of Conceptual Level Project Cost Projections

### Roadway Improvements - Service Area 2

#	Class	Project	Limits	Status	Project Cost
2-A	C2U	John McCain Rd	Bandit Tr to Westcoat Dr	Widening	\$ 2,316,000
2-B	C2U	John McCain Rd	150' E of Westcoat Dr to 430' W of Pleasant Run Rd	Widening	\$ 1,091,000
2-C	C2U	John McCain Rd	315' E of Pleasant Run Rd to Maranatha Ct	Widening	\$ 5,789,000
2-D	C2U	McDonwell School Rd W	Herbert Rd to Westcoat Dr	Widening	\$ 5,025,000
2-E	C2U	Lavaca Trl	Precinct Line Rd (City Limits) to Mustang Tr	Widening	\$ 2,837,000
2-F	C2U	L. D. Lockett Rd	Precinct Line Rd (City Limits) to Pleasant Run Rd	Widening	\$ 9,803,000
2-G	C2U	Westcoat Dr	300' S of John McCain Rd to McDonwell School Rd	Widening	\$ 2,343,000
2-H	C2U	Westcoat Dr	McDonwell School Rd to L D Lockett Rd	Widening	\$ 3,454,000
2-I	C2U	White Dr	Westcoat Dr to L D Lockett Rd	Widening	\$ 1,781,000
2-J	C2U	Bransford Rd	Shelton Dr to 220' N of Glade Rd	Widening	\$ 5,244,000
2-K	C2U	Pleasant Run Rd	3,080' N of John McCain Rd (City Limits) to John McCain Rd	Completed	\$ 3,328,000
2-L	C2U	Pleasant Run Rd	John McCain Rd to 200' S of Shelton Dr	Completed	\$ 4,769,000
2-M	C2U	Pleasant Run Rd	Bogart Dr to Colleyville Blvd	Completed	\$ 231,000
2-N	C2U	Tinker Rd	Pleasant Run Rd to 645' E of Pleasant Run Rd	Widening	\$ 626,000
2-O	C2U	Tinker Rd	Caldwell Hughes Rd to Colleyville Blvd	Widening	\$ 2,092,000
2-P	C2U	Bogart Dr	Hall Johnson Rd to Colleyville Blvd	Widening	\$ 599,000
2-Q	M4U (1/2)	Glade Rd	5,100' W of Bransford Rd (City Limits) to 265' W of Bransford Rd	Widening	\$ 3,586,000
1-A/2-R	P6D	Colleyville Blvd	475' S of Brown Trl (City Limits) to 600' S of Cheek Sparger Rd	Widening	\$ 1,219,200
1-B/2-S	P6D	Colleyville Blvd	2,030' N of John McCain Rd (City Limits) to 475' S of Brown Trl	Completed	\$ 5,070,000
<b>Intersection Improvements</b>					
I-5	Intersection	John McCain Rd & Westcoat Dr	Intersection Improvements	Completed	\$ 1,142,907
I-6	Intersection	John McCain Rd & Pleasant Run Rd	Intersection Improvements	Completed	\$ 753,196
I-7	Intersection	McDonwell School Rd & Westcoat Dr	Intersection Improvements	Completed	\$ 1,452,805
I-8	Intersection	Precinct Line Rd & Lavaca Trl	Intersection Improvements	Proposed	\$ 750,000
I-9	Intersection	L.D. Lockett Rd & Precinct Line Rd	Intersection Improvements	Completed	\$ 310,000
<b>TOTAL</b>					<b>\$ 65,612,108</b>

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**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 10/21/2020

Project Information:		Description:	Project No.
<b>Name:</b>	John McCain Rd	<b>This project consists of the reconstruction of an existing two-lane undivided facility to a two-lane undivided collector facility.</b>	<b>2-A</b>
<b>Limits:</b>	Bandit Tr to Westcoat Dr		
<b>Impact Fee Class:</b>	C2U		
<b>Ultimate Class:</b>	C2U		
<b>Length (lf):</b>	2,405		
<b>Service Area(s):</b>	2		

Roadway Construction Cost Projection				
No.	Item Description	Quantity	Unit	Item Cost
101	Unclassified Street Excavation	4,410	CY	\$ 119,068
201	6" Lime Stabilization (with Lime @ 30#/sy)	8,820	SY	\$ 30,869
301	7" Concrete Pavement	8,285	SY	\$ 497,118
401	4" Topsoil	8,553	SY	\$ 85,526
601	5' Concrete Sidewalk	24,054	SF	\$ 192,433
501	Concrete Driveway Approach	2	EA	\$ 8,000
<b>Paving Construction Cost Subtotal:</b>				<b>\$ 933,014</b>
Major Construction Component Allowances**:				
Item Description	Notes	Allowance	Item Cost	
√ Prep ROW		6%	\$ 55,981	
√ Traffic Control	Construction Phase Traffic Control	5%	\$ 46,651	
√ Pavement Markings/Markers		3%	\$ 27,990	
√ Roadway Drainage	Standard Internal System	25%	\$ 233,254	
√ Illumination		6%	\$ 55,981	
Special Drainage Structures	None Anticipated	0%	\$ -	
√ Water	Minor Adjustments	6%	\$ 55,981	
√ Sewer	Minor Adjustments	4%	\$ 37,321	
√ Establish Turf / Erosion Control		3%	\$ 27,990	
√ Basic Landscaping		3%	\$ 27,990	
Other:		\$0	\$ -	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>		<b>Allowance Subtotal:</b>	<b>\$ 569,139</b>	
		<b>Paving and Allowance Subtotal:</b>	<b>\$ 1,502,153</b>	
		<b>Construction Contingency:</b>	15%	\$ 225,323
		<b>Mobilization:</b>	6%	\$ 13,519
		<b>Construction Cost TOTAL:</b>	<b>\$ 1,741,000</b>	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 1,741,000
<b>Engineering/Survey/Testing:</b>		18%	\$ 313,380
<b>Previous Town contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition:</b>	Existing Alignment	15%	\$ 261,150
		<b>Impact Fee Project Cost TOTAL:</b>	<b>\$ 2,316,000</b>

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**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 10/21/2020

Project Information:		Description:	Project No.
<b>Name:</b>	John McCain Rd 150' E of Westcoat Dr to 430' W of Pleasant Run Rd	<b>This project consists of the widening of an existing two-lane undivided facility to a two/three-lane undivided collector facility.</b>	<b>2-B</b>
<b>Limits:</b>			
<b>Impact Fee Class:</b>	C2U		
<b>Ultimate Class:</b>	C2U/C3U		
<b>Length (lf):</b>	1,132		
<b>Service Area(s):</b>	2		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	2,075	CY	\$ 27.00	\$ 56,025
201	6" Lime Stabilization (with Lime @ 30#/sy)	4,150	SY	\$ 3.50	\$ 14,525
301	7" Concrete Pavement	3,899	SY	\$ 60.00	\$ 233,911
401	4" Topsoil	4,024	SY	\$ 10.00	\$ 40,243
601	5' Concrete Sidewalk	11,318	SF	\$ 8.00	\$ 90,546
501	Concrete Driveway Approach	1	EA	\$ 4,000.00	\$ 4,000
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 439,250</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	26,355	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	21,962	
√ Pavement Markings/Markers		3%	\$	13,177	
√ Roadway Drainage	Standard Internal System	25%	\$	109,812	
√ Illumination		6%	\$	26,355	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	26,355	
√ Sewer	Minor Adjustments	4%	\$	17,570	
√ Establish Turf / Erosion Control		3%	\$	13,177	
√ Basic Landscaping		3%	\$	13,177	
Other:		\$0	\$	-	
<b>Allowance Subtotal:</b>					<b>\$ 267,942</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 707,192</b>
<b>Construction Contingency:</b>					<b>15% \$ 106,079</b>
<b>Mobilization:</b>					<b>6% \$ 6,365</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 820,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	<b>\$ 820,000</b>
<b>Engineering/Survey/Testing:</b>		18%	<b>\$ 147,600</b>
<b>Previous Town contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition:</b>	Existing Alignment	15%	<b>\$ 123,000</b>
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 1,091,000</b>

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**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 10/21/2020

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>	<b>2-C</b>
<b>Name:</b>	John McCain Rd 315' E of Pleasant Run Rd to	<b>This project consists of the widening of an existing two-lane undivided facility to a two/three-lane undivided collector facility.</b>		
<b>Limits:</b>	Maranatha Ct			
<b>Impact Fee Class:</b>	C2U			
<b>Ultimate Class:</b>	C2U/C3U			
<b>Length (lf):</b>	6,003			
<b>Service Area(s):</b>	2			

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	11,006	CY	\$ 27.00	\$ 297,170
201	6" Lime Stabilization (with Lime @ 30#/sy)	22,013	SY	\$ 3.50	\$ 77,044
301	7" Concrete Pavement	20,678	SY	\$ 60.00	\$ 1,240,708
401	4" Topsoil	21,346	SY	\$ 10.00	\$ 213,455
601	5' Concrete Sidewalk	60,034	SF	\$ 8.00	\$ 480,274
501	Concrete Driveway Approach	6	EA	\$ 4,000.00	\$ 24,000
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 2,332,651</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	139,959	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	116,633	
√ Pavement Markings/Markers		3%	\$	69,980	
√ Roadway Drainage	Standard Internal System	25%	\$	583,163	
√ Illumination		6%	\$	139,959	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	139,959	
√ Sewer	Minor Adjustments	4%	\$	93,306	
√ Establish Turf / Erosion Control		3%	\$	69,980	
√ Basic Landscaping		3%	\$	69,980	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 1,422,917</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 3,755,568</b>
<b>Construction Contingency:</b>					<b>15% \$ 563,335</b>
<b>Mobilization:</b>					<b>6% \$ 33,800</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 4,353,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	<b>\$ 4,353,000</b>
<b>Engineering/Survey/Testing:</b>		18%	<b>\$ 783,540</b>
<b>Previous Town contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition:</b>	Existing Alignment	15%	<b>\$ 652,950</b>
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 5,789,000</b>

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**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.

updated: 10/21/2020

Project Information:		Description:	Project No.	2-D
<b>Name:</b>	McDonwell School Rd W	<b>This project consists of the widening of an existing two-lane undivided facility to a two/three-lane undivided collector facility.</b>		
<b>Limits:</b>	Herbert Rd to Westcoat Dr			
<b>Impact Fee Class:</b>	C2U			
<b>Ultimate Class:</b>	C2U/C3U			
<b>Length (lf):</b>	5,213			
<b>Service Area(s):</b>	2			

Roadway Construction Cost Projection				
No.	Item Description	Quantity	Unit	Item Cost
101	Unclassified Street Excavation	9,556	CY	\$ 258,022
201	6" Lime Stabilization (with Lime @ 30#/sy)	19,113	SY	\$ 66,894
301	7" Concrete Pavement	17,954	SY	\$ 1,077,262
401	4" Topsoil	18,534	SY	\$ 185,335
601	5' Concrete Sidewalk	52,126	SF	\$ 417,005
501	Concrete Driveway Approach	5	EA	\$ 20,000
<b>Paving Construction Cost Subtotal:</b>				<b>\$ 2,024,518</b>
Major Construction Component Allowances**:				
Item Description	Notes	Allowance	Item Cost	
√ Prep ROW		6%	\$ 121,471	
√ Traffic Control	Construction Phase Traffic Control	5%	\$ 101,226	
√ Pavement Markings/Markers		3%	\$ 60,736	
√ Roadway Drainage	Standard Internal System	25%	\$ 506,129	
√ Illumination		6%	\$ 121,471	
Special Drainage Structures	None Anticipated	0%	\$ -	
√ Water	Minor Adjustments	6%	\$ 121,471	
√ Sewer	Minor Adjustments	4%	\$ 80,981	
√ Establish Turf / Erosion Control		3%	\$ 60,736	
√ Basic Landscaping		3%	\$ 60,736	
Other:		\$0	\$ -	
		<b>Allowance Subtotal:</b>	<b>\$ 1,234,956</b>	
		<b>Paving and Allowance Subtotal:</b>	<b>\$ 3,259,474</b>	
		<b>Construction Contingency:</b>	<b>\$ 488,921</b>	
		<b>Mobilization:</b>	<b>\$ 29,335</b>	
		<b>Construction Cost TOTAL:</b>	<b>\$ 3,778,000</b>	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 3,778,000
<b>Engineering/Survey/Testing:</b>		18%	\$ 680,040
<b>Previous Town contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition:</b>	Existing Alignment	15%	\$ 566,700
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 5,025,000</b>

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**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.

updated: 10/21/2020

Project Information:		Description:	Project No.	2-E
Name:	Lavaca Trl Precinct Line Rd (City Limits) to Mustang Tr	<b>This project consists of the widening of an existing two-lane undivided facility to a two-lane undivided collector facility.</b>		
Limits:				
Impact Fee Class:	C2U			
Ultimate Class:	C2U			
Length (lf):	2,940			
Service Area(s):	2			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	5,390	CY	\$ 27.00	\$ 145,531
201	6" Lime Stabilization (with Lime @ 30#/sy)	10,780	SY	\$ 3.50	\$ 37,730
301	7" Concrete Pavement	10,127	SY	\$ 60.00	\$ 607,603
401	4" Topsoil	10,453	SY	\$ 10.00	\$ 104,534
601	5' Concrete Sidewalk	29,400	SF	\$ 8.00	\$ 235,201
501	Concrete Driveway Approach	3	EA	\$ 4,000.00	\$ 12,000
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 1,142,599</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	68,556	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	57,130	
√ Pavement Markings/Markers		3%	\$	34,278	
√ Roadway Drainage	Standard Internal System	25%	\$	285,650	
√ Illumination		6%	\$	68,556	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	68,556	
√ Sewer	Minor Adjustments	4%	\$	45,704	
√ Establish Turf / Erosion Control		3%	\$	34,278	
√ Basic Landscaping		3%	\$	34,278	
Other:		\$0	\$	-	
<b>Allowance Subtotal:</b>					<b>\$ 696,985</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 1,839,584</b>
<b>Construction Contingency:</b>					<b>15% \$ 275,938</b>
<b>Mobilization:</b>					<b>6% \$ 16,556</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 2,133,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 2,133,000
Engineering/Survey/Testing: Previous Town contribution Other		18%	\$ 383,940
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 319,950
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 2,837,000</b>

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**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.

updated: 10/21/2020

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>	<b>2-F</b>
<b>Name:</b>	L. D. Lockett Rd Precinct Line Rd (City Limits) to Pleasant Run Rd	<b>This project consists of the widening of an existing two-lane undivided facility to a two/three-lane undivided collector facility.</b>		
<b>Limits:</b>				
<b>Impact Fee Class:</b>	C2U			
<b>Ultimate Class:</b>	C2U/C3U			
<b>Length (lf):</b>	10,167			
<b>Service Area(s):</b>	2			

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	18,639	CY	\$ 27.00	\$ 503,256
201	6" Lime Stabilization (with Lime @ 30#/sy)	37,278	SY	\$ 3.50	\$ 130,474
301	7" Concrete Pavement	35,019	SY	\$ 60.00	\$ 2,101,136
401	4" Topsoil	36,149	SY	\$ 10.00	\$ 361,486
601	5' Concrete Sidewalk	101,668	SF	\$ 8.00	\$ 813,343
501	Concrete Driveway Approach	10	EA	\$ 4,000.00	\$ 40,000
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 3,949,694</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	236,982	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	197,485	
√ Pavement Markings/Markers		3%	\$	118,491	
√ Roadway Drainage	Standard Internal System	25%	\$	987,423	
√ Illumination		6%	\$	236,982	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	236,982	
√ Sewer	Minor Adjustments	4%	\$	157,988	
√ Establish Turf / Erosion Control		3%	\$	118,491	
√ Basic Landscaping		3%	\$	118,491	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 2,409,313</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 6,359,007</b>
<b>Construction Contingency:</b>					<b>15% \$ 953,851</b>
<b>Mobilization:</b>					<b>6% \$ 57,231</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 7,371,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 7,371,000
<b>Engineering/Survey/Testing:</b>		18%	\$ 1,326,780
<b>Previous Town contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition:</b>	Existing Alignment	15%	\$ 1,105,650
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 9,803,000</b>

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**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.

updated: 10/21/2020

Project Information:		Description:	Project No.
<b>Name:</b>	Westcoat Dr 300' S of John McCain Rd to McDonwell School Rd	<b>This project consists of the widening of an existing two-lane undivided facility to a two/three-lane undivided collector facility.</b>	<b>2-G</b>
<b>Limits:</b>			
<b>Impact Fee Class:</b>	C2U		
<b>Ultimate Class:</b>	C2U/C3U		
<b>Length (lf):</b>	2,433		
<b>Service Area(s):</b>	2		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	4,461	CY	\$ 27.00	\$ 120,455
201	6" Lime Stabilization (with Lime @ 30#/sy)	8,923	SY	\$ 3.50	\$ 31,229
301	7" Concrete Pavement	8,382	SY	\$ 60.00	\$ 502,911
401	4" Topsoil	8,652	SY	\$ 10.00	\$ 86,522
601	5' Concrete Sidewalk	24,334	SF	\$ 8.00	\$ 194,675
501	Concrete Driveway Approach	2	EA	\$ 4,000.00	\$ 8,000
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 943,792</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	56,628	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	47,190	
√ Pavement Markings/Markers		3%	\$	28,314	
√ Roadway Drainage	Standard Internal System	25%	\$	235,948	
√ Illumination		6%	\$	56,628	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	56,628	
√ Sewer	Minor Adjustments	4%	\$	37,752	
√ Establish Turf / Erosion Control		3%	\$	28,314	
√ Basic Landscaping		3%	\$	28,314	
Other:		\$0	\$	-	
<b>Allowance Subtotal:</b>					<b>\$ 575,713</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 1,519,505</b>
<b>Construction Contingency:</b>					<b>15% \$ 227,926</b>
<b>Mobilization:</b>					<b>6% \$ 13,676</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 1,762,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	<b>\$ 1,762,000</b>
<b>Engineering/Survey/Testing:</b>		18%	<b>\$ 317,160</b>
<b>Previous Town contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition:</b>	Existing Alignment	15%	<b>\$ 264,300</b>
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 2,343,000</b>

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**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.

updated: 10/21/2020

Project Information:		Description:	Project No.
<b>Name:</b>	Westcoat Dr McDonwell School Rd to L D Lockett	<b>This project consists of the widening of an existing two-lane undivided facility to a two/three-lane undivided collector facility.</b>	<b>2-H</b>
<b>Limits:</b>	Rd		
<b>Impact Fee Class:</b>	C2U		
<b>Ultimate Class:</b>	C2U/C3U		
<b>Length (lf):</b>	3,577		
<b>Service Area(s):</b>	2		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	6,558	CY	\$ 27.00	\$ 177,063
201	6" Lime Stabilization (with Lime @ 30#/sy)	13,116	SY	\$ 3.50	\$ 45,905
301	7" Concrete Pavement	12,321	SY	\$ 60.00	\$ 739,252
401	4" Topsoil	12,718	SY	\$ 10.00	\$ 127,183
601	5' Concrete Sidewalk	35,770	SF	\$ 8.00	\$ 286,162
501	Concrete Driveway Approach	4	EA	\$ 4,000.00	\$ 16,000
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 1,391,565</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	83,494	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	69,578	
√ Pavement Markings/Markers		3%	\$	41,747	
√ Roadway Drainage	Standard Internal System	25%	\$	347,891	
√ Illumination		6%	\$	83,494	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	83,494	
√ Sewer	Minor Adjustments	4%	\$	55,663	
√ Establish Turf / Erosion Control		3%	\$	41,747	
√ Basic Landscaping		3%	\$	41,747	
Other:		\$0	\$	-	
<b>Allowance Subtotal:</b>					<b>\$ 848,855</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 2,240,420</b>
<b>Construction Contingency:</b>					<b>15% \$ 336,063</b>
<b>Mobilization:</b>					<b>6% \$ 20,164</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 2,597,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	<b>\$ 2,597,000</b>
<b>Engineering/Survey/Testing:</b>		18%	<b>\$ 467,460</b>
<b>Previous Town contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition:</b>	Existing Alignment	15%	<b>\$ 389,550</b>
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 3,454,000</b>

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**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 10/21/2020

Project Information:		Description:	Project No.
Name:	White Dr	<b>This project consists of the widening of an existing two-lane undivided facility to a two-lane undivided collector facility.</b>	<b>2-1</b>
Limits:	Westcoat Dr to L D Lockett Rd		
Impact Fee Class:	C2U		
Ultimate Class:	C2U		
Length (lf):	1,845		
Service Area(s):	2		

Roadway Construction Cost Projection				
No.	Item Description	Quantity	Unit	Item Cost
101	Unclassified Street Excavation	3,382	CY	\$ 91,322
201	6" Lime Stabilization (with Lime @ 30#/sy)	6,765	SY	\$ 23,676
301	7" Concrete Pavement	6,355	SY	\$ 381,277
401	4" Topsoil	6,560	SY	\$ 65,596
601	5' Concrete Sidewalk	18,449	SF	\$ 147,591
501	Concrete Driveway Approach	2	EA	\$ 8,000
<b>Paving Construction Cost Subtotal:</b>				<b>\$ 717,463</b>
Major Construction Component Allowances**:				
Item Description	Notes	Allowance	Item Cost	
√ Prep ROW		6%	\$ 43,048	
√ Traffic Control	Construction Phase Traffic Control	5%	\$ 35,873	
√ Pavement Markings/Markers		3%	\$ 21,524	
√ Roadway Drainage	Standard Internal System	25%	\$ 179,366	
√ Illumination		6%	\$ 43,048	
Special Drainage Structures	None Anticipated	0%	\$ -	
√ Water	Minor Adjustments	6%	\$ 43,048	
√ Sewer	Minor Adjustments	4%	\$ 28,699	
√ Establish Turf / Erosion Control		3%	\$ 21,524	
√ Basic Landscaping		3%	\$ 21,524	
Other:		\$0	\$ -	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>		<b>Allowance Subtotal:</b>	<b>\$ 437,652</b>	
		<b>Paving and Allowance Subtotal:</b>	<b>\$ 1,155,115</b>	
		<b>Construction Contingency:</b>	15%	\$ 173,267
		<b>Mobilization:</b>	6%	\$ 10,396
		<b>Construction Cost TOTAL:</b>	<b>\$ 1,339,000</b>	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 1,339,000
Engineering/Survey/Testing:		18%	\$ 241,020
Previous Town contribution			
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 200,850
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 1,781,000</b>

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**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.

updated: 10/21/2020

Project Information:		Description:	Project No.
Name:	Bransford Rd	<b>This project consists of the widening of an existing two-lane undivided facility to a two/three-lane undivided collector facility.</b>	<b>2-J</b>
Limits:	Shelton Dr to 220' N of Glade Rd		
Impact Fee Class:	C2U		
Ultimate Class:	C2U/C3U		
Length (lf):	5,442		
Service Area(s):	2		

Roadway Construction Cost Projection				
No.	Item Description	Quantity	Unit	Item Cost
101	Unclassified Street Excavation	9,978	CY	\$ 269,398
201	6" Lime Stabilization (with Lime @ 30#/sy)	19,955	SY	\$ 69,844
301	7" Concrete Pavement	18,746	SY	\$ 1,124,758
401	4" Topsoil	19,351	SY	\$ 193,507
601	5' Concrete Sidewalk	54,424	SF	\$ 435,390
501	Concrete Driveway Approach	5	EA	\$ 20,000
<b>Paving Construction Cost Subtotal:</b>				<b>\$ 2,112,896</b>
Major Construction Component Allowances**:				
Item Description	Notes	Allowance	Item Cost	
√ Prep ROW		6%	\$ 126,774	
√ Traffic Control	Construction Phase Traffic Control	5%	\$ 105,645	
√ Pavement Markings/Markers		3%	\$ 63,387	
√ Roadway Drainage	Standard Internal System	25%	\$ 528,224	
√ Illumination		6%	\$ 126,774	
Special Drainage Structures	None Anticipated	0%	\$ -	
√ Water	Minor Adjustments	6%	\$ 126,774	
√ Sewer	Minor Adjustments	4%	\$ 84,516	
√ Establish Turf / Erosion Control		3%	\$ 63,387	
√ Basic Landscaping		3%	\$ 63,387	
Other:		\$0	\$ -	
		<b>Allowance Subtotal:</b>	<b>\$ 1,288,867</b>	
		<b>Paving and Allowance Subtotal:</b>	<b>\$ 3,401,763</b>	
		<b>Construction Contingency:</b>	<b>\$ 510,264</b>	
		<b>Mobilization:</b>	<b>\$ 30,616</b>	
		<b>Construction Cost TOTAL:</b>	<b>\$ 3,943,000</b>	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 3,943,000
Engineering/Survey/Testing:		18%	\$ 709,740
Previous Town contribution			
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 591,450
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 5,244,000</b>

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**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.

updated: 10/21/2020

Project Information:		Description:	Project No.	2-K
Name:	Pleasant Run Rd 3,080' N of John McCain Rd (City Limits)	<b>This completed project consisted of the widening of an existing two-lane undivided facility to a two/three-lane undivided collector facility.</b>		
Limits:	to John McCain Rd			
Impact Fee Class:	C2U			
Ultimate Class:	C2U/C3U			
Length (lf):	3,051			
Service Area(s):	2			

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
City Contribution to Construction Cost:		-	\$ 3,328,304
Engineering/Survey/Testing			
Other			
ROW/Easement Acquisition:	No ROW Acquisition Costs included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 3,328,000</b>

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**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.

updated: 10/21/2020

Project Information:		Description:	Project No.
Name:	Pleasant Run Rd	<b>This completed project consisted of the widening of an existing two-lane undivided facility to a two/three-lane undivided collector facility.</b>	<b>2-L</b>
Limits:	John McCain Rd to 200' S of Shelton Dr		
Impact Fee Class:	C2U		
Ultimate Class:	C2U/C3U		
Length (lf):	6,175		
Service Area(s):	2		

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
City Contribution to Construction Cost:		-	\$ 4,769,138
Engineering/Survey/Testing			
Other			
ROW/Easement Acquisition:	No ROW Acquisition Costs included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 4,769,000</b>

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**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.

updated: 10/21/2020

Project Information:		Description:	Project No.
Name:	Pleasant Run Rd	<b>This completed project consisted of the widening of an existing two-lane undivided facility to a two/three-lane undivided collector facility.</b>	<b>2-M</b>
Limits:	Bogart Dr to Colleyville Blvd		
Impact Fee Class:	C2U		
Ultimate Class:	C2U/C3U		
Length (lf):	3,702		
Service Area(s):	2		

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
City Contribution to Construction Cost:		-	\$ 231,070
Engineering/Survey/Testing			
Other			
ROW/Easement Acquisition:	No ROW Acquisition Costs included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 231,000</b>

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**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.

updated: 10/21/2020

Project Information:		Description:	Project No.
<b>Name:</b>	Tinker Rd Pleasant Run Rd to 645' E of	<b>This project consists of the widening of an existing two-lane undivided facility to a two/three-lane undivided collector facility.</b>	<b>2-N</b>
<b>Limits:</b>	Pleasant Run Rd		
<b>Impact Fee Class:</b>	C2U		
<b>Ultimate Class:</b>	C2U/C3U		
<b>Length (lf):</b>	646		
<b>Service Area(s):</b>	2		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	1,184	CY	\$ 27.00	\$ 31,966
201	6" Lime Stabilization (with Lime @ 30#/sy)	2,368	SY	\$ 3.50	\$ 8,287
301	7" Concrete Pavement	2,224	SY	\$ 60.00	\$ 133,460
401	4" Topsoil	2,296	SY	\$ 10.00	\$ 22,961
601	5' Concrete Sidewalk	6,458	SF	\$ 8.00	\$ 51,662
501	Concrete Driveway Approach	1	EA	\$ 4,000.00	\$ 4,000
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 252,336</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	15,140	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	12,617	
√ Pavement Markings/Markers		3%	\$	7,570	
√ Roadway Drainage	Standard Internal System	25%	\$	63,084	
√ Illumination		6%	\$	15,140	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	15,140	
√ Sewer	Minor Adjustments	4%	\$	10,093	
√ Establish Turf / Erosion Control		3%	\$	7,570	
√ Basic Landscaping		3%	\$	7,570	
Other:		\$0	\$	-	
<b>Allowance Subtotal:</b>					<b>\$ 153,925</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 406,261</b>
<b>Construction Contingency:</b>					<b>15% \$ 60,939</b>
<b>Mobilization:</b>					<b>6% \$ 3,656</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 471,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	<b>\$ 471,000</b>
<b>Engineering/Survey/Testing:</b>		18%	<b>\$ 84,780</b>
<b>Previous Town contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition:</b>	Existing Alignment	15%	<b>\$ 70,650</b>
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 626,000</b>

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**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.

updated: 10/21/2020

Project Information:		Description:	Project No.
<b>Name:</b>	Tinker Rd Caldwell Hughes Rd to Colleyville	<b>This project consists of the widening of an existing two-lane undivided facility to a two/three-lane undivided collector facility.</b>	<b>2-0</b>
<b>Limits:</b>	Blvd		
<b>Impact Fee Class:</b>	C2U		
<b>Ultimate Class:</b>	C2U/C3U		
<b>Length (lf):</b>	2,171		
<b>Service Area(s):</b>	2		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
101	Unclassified Street Excavation	3,980	CY	\$ 27.00	\$ 107,449
201	6" Lime Stabilization (with Lime @ 30#/sy)	7,959	SY	\$ 3.50	\$ 27,857
301	7" Concrete Pavement	7,477	SY	\$ 60.00	\$ 448,610
401	4" Topsoil	7,718	SY	\$ 10.00	\$ 77,180
601	5' Concrete Sidewalk	21,707	SF	\$ 8.00	\$ 173,655
501	Concrete Driveway Approach	2	EA	\$ 4,000.00	\$ 8,000
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 842,752</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	50,565	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	42,138	
√ Pavement Markings/Markers		3%	\$	25,283	
√ Roadway Drainage	Standard Internal System	25%	\$	210,688	
√ Illumination		6%	\$	50,565	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	50,565	
√ Sewer	Minor Adjustments	4%	\$	33,710	
√ Establish Turf / Erosion Control		3%	\$	25,283	
√ Basic Landscaping		3%	\$	25,283	
Other:		\$0	\$	-	
<b>Allowance Subtotal:</b>					<b>\$ 514,079</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 1,356,830</b>
<b>Construction Contingency:</b>					<b>15% \$ 203,525</b>
<b>Mobilization:</b>					<b>6% \$ 12,211</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 1,573,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	<b>\$ 1,573,000</b>
<b>Engineering/Survey/Testing:</b>		18%	<b>\$ 283,140</b>
<b>Previous Town contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition:</b>	Existing Alignment	15%	<b>\$ 235,950</b>
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 2,092,000</b>

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**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 10/21/2020

Project Information:		Description:	Project No.
Name:	Bogart Dr	<b>This project consists of the widening of an existing two-lane undivided facility to a two/three-lane undivided collector facility.</b>	<b>2-P</b>
Limits:	Hall Johnson Rd to Colleyville Blvd		
Impact Fee Class:	C2U		
Ultimate Class:	C2U/C3U		
Length (lf):	616		
Service Area(s):	2		

Roadway Construction Cost Projection				
No.	Item Description	Quantity	Unit	Item Cost
101	Unclassified Street Excavation	1,129	CY	\$ 30,486
201	6" Lime Stabilization (with Lime @ 30#/sy)	2,258	SY	\$ 7,904
301	7" Concrete Pavement	2,121	SY	\$ 127,282
401	4" Topsoil	2,190	SY	\$ 21,898
601	5' Concrete Sidewalk	6,159	SF	\$ 49,270
501	Concrete Driveway Approach	1	EA	\$ 4,000
<b>Paving Construction Cost Subtotal:</b>				<b>\$ 240,840</b>
Major Construction Component Allowances**:				
Item Description	Notes	Allowance	Item Cost	
√ Prep ROW		6%	\$	14,450
√ Traffic Control	Construction Phase Traffic Control	5%	\$	12,042
√ Pavement Markings/Markers		3%	\$	7,225
√ Roadway Drainage	Standard Internal System	25%	\$	60,210
√ Illumination		6%	\$	14,450
Special Drainage Structures	None Anticipated	0%	\$	-
√ Water	Minor Adjustments	6%	\$	14,450
√ Sewer	Minor Adjustments	4%	\$	9,634
√ Establish Turf / Erosion Control		3%	\$	7,225
√ Basic Landscaping		3%	\$	7,225
Other:		\$0	\$	-
		<b>Allowance Subtotal:</b>	<b>\$</b>	<b>146,912</b>
		<b>Paving and Allowance Subtotal:</b>	<b>\$</b>	<b>387,752</b>
		<b>Construction Contingency:</b>	<b>15%</b>	<b>\$ 58,163</b>
		<b>Mobilization:</b>	<b>6%</b>	<b>\$ 3,490</b>
		<b>Construction Cost TOTAL:</b>	<b>\$</b>	<b>450,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 450,000
Engineering/Survey/Testing:		18%	\$ 81,000
Previous Town contribution			
Other			
ROW/Easement Acquisition:	Existing Alignment	15%	\$ 67,500
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 599,000</b>

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**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.

updated: 10/21/2020

Project Information:		Description:	Project No.	2-Q
<b>Name:</b>	Glade Rd 5,100' W of Bransford Rd (City Limits)	<b>This project consists of the widening of an existing two-lane undivided facility to a four-lane undivided minor arterial.</b>		
<b>Limits:</b>	to 265' W of Bransford Rd			
<b>Impact Fee Class:</b>	M4U (1/2)			
<b>Ultimate Class:</b>	M4U			
<b>Length (lf):</b>	4,803			
<b>Service Area(s):</b>	2			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
104	Unclassified Street Excavation	6,671	CY	\$ 27.00	\$ 180,115
204	6" Lime Stabilization (with Lime @ 30#/sy)	13,342	SY	\$ 3.50	\$ 46,697
304	8" Concrete Pavement	12,275	SY	\$ 73.00	\$ 896,040
404	4" Topsoil	10,940	SY	\$ 10.00	\$ 109,403
604	5' Concrete Sidewalk	24,015	SF	\$ 8.00	\$ 192,123
504	Concrete Driveway Approach	5	EA	\$ 4,000.00	\$ 20,000
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 1,444,378</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	86,663	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	72,219	
√ Pavement Markings/Markers		3%	\$	43,331	
√ Roadway Drainage	Standard Internal System	25%	\$	361,094	
√ Illumination		6%	\$	86,663	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	86,663	
√ Sewer	Minor Adjustments	4%	\$	57,775	
√ Establish Turf / Erosion Control		3%	\$	43,331	
√ Basic Landscaping		3%	\$	43,331	
Other:		\$0	\$	-	
<b>Allowance Subtotal:</b>					<b>\$ 881,070</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 2,325,448</b>
<b>Construction Contingency:</b>					<b>15% \$ 348,817</b>
<b>Mobilization:</b>					<b>6% \$ 20,929</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 2,696,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	<b>\$ 2,696,000</b>
<b>Engineering/Survey/Testing:</b>		18%	<b>\$ 485,280</b>
<b>Previous Town contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition:</b>	Existing Alignment	15%	<b>\$ 404,400</b>
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 3,586,000</b>

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**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.

updated: 10/21/2020

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Colleyville Blvd 475' S of Brown Trl (City Limits) to	<b>This project consists of the widening of a five-lane undivided facility to a six-lane divided principal arterial.</b>	<b>1-A/2-R</b>
<b>Limits:</b>	600' S of Cheek Sparger Rd		
<b>Impact Fee Class:</b>	P6D		
<b>Ultimate Class:</b>	P6D		
<b>Length (lf):</b>	3,881		
<b>Service Area(s):</b>	1, 2		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
108	Unclassified Street Excavation	16,819	CY	\$ 27.00	\$ 454,104
208	6" Lime Stabilization (with Lime @ 36#/sy)	33,637	SY	\$ 4.25	\$ 142,959
308	8" Concrete Pavement	31,481	SY	\$ 73.00	\$ 2,298,122
408	4" Topsoil	12,937	SY	\$ 10.00	\$ 129,374
608	8' Paved Trail	62,100	SF	\$ 8.00	\$ 496,798
508	Concrete Driveway Approach	4	EA	\$ 4,000.00	\$ 16,000
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 3,537,358</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	212,241	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	176,868	
√ Pavement Markings/Markers		3%	\$	106,121	
Roadway Drainage	None Anticipated	0%	\$	-	
√ Illumination		6%	\$	212,241	
Special Drainage Structures	None Anticipated	0%	\$	-	
Water	None Anticipated	0%	\$	-	
Sewer	None Anticipated	0%	\$	-	
√ Establish Turf / Erosion Control		3%	\$	106,121	
√ Basic Landscaping		3%	\$	106,121	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 919,713</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 4,457,070</b>
<b>Construction Contingency:</b>					<b>15% \$ 668,561</b>
<b>Mobilization:</b>					<b>6% \$ 40,114</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 5,166,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 5,166,000
<b>Engineering/Survey/Testing:</b>		18%	\$ 929,880
<b>Previous Town contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition:</b>	No ROW Acquisition Costs included	0%	\$ -
<b>Impact Fee Project Cost TOTAL (20% Town Contribution)</b>			<b>\$ 1,219,200</b>

NOTE: The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Colleyville.  
The planning level cost projections shall not supersede the City's design standards contained or the determination of the City Engineer for a specific project.

**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.

updated: 10/21/2020

Project Information:		Description:	Project No.
Name:	Colleyville Blvd 2,030' N of John McCain Rd (City Limits)	<b>This completed project consisted of the reconstruction of an existing five-lane undivided facility to a six-lane divided principal arterial. This represents only the City of Colleyville's contribution to SH 26.</b>	<b>1-B/2-S</b>
Limits:	to 475' S of Brown Trl		
Impact Fee Class:	P6D		
Ultimate Class:	P6D		
Length (lf):	18,283		
Service Area(s):	1, 2		

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
City Contribution to Construction Cost:		-	\$ 5,070,000
Engineering/Survey/Testing			
Other			
ROW/Easement Acquisition:	No ROW Acquisition Costs included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 5,070,000</b>

NOTE: The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Colleyville.

The planning level cost projections shall not supersede the City's design standards contained within the Subdivision Ordinance or the determination of the City Engineer for a specific project.

ROADWAY IMPACT FEE CIP SERVICE UNITS OF SUPPLY

**City of Colleyville - 2020 Roadway Impact Fee Update**

**CIP Service Units of Supply**

11/16/2020

**Service Area 1**

Project ID #	ROADWAY	LIMITS	LENGTH (MI)	LANES	IMPACT FEE CLASSIFICATION	PEAK HOUR VOLUME	% IN SERVICE AREA	VEH-MI CAPACITY PK-HR PER LN	VEH-MI SUPPLY PK-HR TOTAL	VEH-MI TOTAL DEMAND PK-HR	EXCESS CAPACITY PK-HR VEH-MI	TOTAL PROJECT COST	TOTAL PROJECT COST IN SERVICE AREA
1-A/2-R	Colleyville Blvd	475' S of Brown Trl (City Limits) to 600' S of Cheek Sparger Rd	0.74	6	P6D	2,652	50%	900	1,985	975	1,010	\$ 1,893,200	\$ 946,600
1-B/2-S	Colleyville Blvd	2,030' N of John McCain Rd (City Limits) to 475' S of Brown Trl	3.46	6	P6D	3,134	50%	900	9,349	5,426	3,923	\$ 5,070,000	\$ 2,535,000
1-C	Thompson Terr	Colleyville Blvd to Old Glade Rd	0.20	2	C2U	81	100%	525	211	16	195	\$ 1,024,000	\$ 1,024,000
1-D	Glade Rd	Bedford Rd to Strathmore Terr	2.13	2	M2D	1,338	100%	725	3,095	2,856	239	\$ 14,277,000	\$ 14,277,000
1-E	Roberts Rd	2,140' N of Glade Rd (City Limits) to Glade Rd	0.41	2	C2U	173	100%	525	431	71	360	\$ 1,653,000	\$ 1,653,000
1-F	Bedford Rd	115' S of Glade Rd to Little Bear Creek	0.51	2	C2U	571	100%	525	532	289	243	\$ 2,583,000	\$ 2,583,000
1-G	Cheek-Sparger Rd	San Bar Ln to Del Mar Ct	0.40	4	M4U (1/2)	878	100%	650	1,050	355	695	\$ 1,589,000	\$ 1,589,000
1-H	Cheek-Sparger Rd	Bedford Rd to 1,270' E of Bedford Rd	0.24	4	M4U (1/2)	1,194	100%	650	627	288	339	\$ 947,000	\$ 947,000
1-I	Cheek-Sparger Rd	1,270' E of Bedford Rd to Heritage Ave (City Limits)	2.27	4	M4U (1/2)	1,394	50%	650	2,951	1,582	1,369	\$ 8,940,000	\$ 4,470,000
1-J	Jackson Rd	2,540' S of Glade Rd to Cheek Sparger Rd	0.72	4	M4U (1/2)	724	100%	650	1,863	519	1,344	\$ 2,824,000	\$ 2,824,000
1-K	Brown Trl	350' S of Autumn Oaks to 145' S of Quail Crest Dr	0.28	4	M4U (1/2)	823	100%	650	734	232	502	\$ 1,107,000	\$ 1,107,000
1-1	Hall Johnson Rd & Riverwalk Dr	Intersection Improvements					100%					\$ 1,000,000	\$ 1,000,000
1-2	Bedford Rd & Cheek-Sparger Rd	Intersection Improvements					100%					\$ 1,000,000	\$ 1,000,000
1-3	Jackson Rd & Cheek-Sparger Rd	Intersection Improvements					50%					\$ 1,931,523	\$ 965,761
1-4	Heritage Ave & Cheek-Sparger Rd	Intersection Improvements					50%					\$ 250,000	\$ 125,000
<b>SUBTOTAL</b>									<b>22,825</b>	<b>12,609</b>	<b>10,216</b>	<b>\$ 46,088,723</b>	<b>\$ 37,046,361</b>

2020 Roadway Impact Fee Update Cost Per Service Area \$ 27,550

**TOTAL COST IN SERVICE AREA 1 \$ 37,073,911**

City of Colleyville - 2020 Roadway Impact Fee Update

CIP Service Units of Supply

11/16/2020

Service Area 2

Project ID #	ROADWAY	LIMITS	LENGTH (MI)	LANES	IMPACT FEE CLASSIFICATION	PEAK HOUR VOLUME	% IN SERVICE AREA	VEH-MI CAPACITY PK-HR PER LN	VEH-MI SUPPLY PK-HR TOTAL	VEH-MI TOTAL DEMAND PK-HR	EXCESS CAPACITY PK-HR VEH-MI	TOTAL PROJECT COST	TOTAL PROJECT COST IN SERVICE AREA
2-A	John McCain Rd	Bandit Tr to Westcoat Dr	0.46	2	C2U	167	100%	525	478	76	402	\$ 2,316,000	\$ 2,316,000
2-B	John McCain Rd	150' E of Westcoat Dr to 430' W of Pleasant Run Rd	0.21	2	C2U	167	100%	525	225	36	189	\$ 1,091,000	\$ 1,091,000
2-C	John McCain Rd	315' E of Pleasant Run Rd to Maranatha Ct	1.14	2	C2U	1,053	100%	525	1,194	1,197	-3	\$ 5,789,000	\$ 5,789,000
2-D	McDonwell School Rd W	Herbert Rd to Westcoat Dr	0.99	2	C2U	863	100%	525	1,037	852	185	\$ 5,025,000	\$ 5,025,000
2-E	Lavaca Trl	Precinct Line Rd (City Limits) to Mustang Tr	0.56	2	C2U	79	100%	525	585	44	541	\$ 2,837,000	\$ 2,837,000
2-F	L. D. Lockett Rd	Precinct Line Rd (City Limits) to Pleasant Run Rd	1.93	2	C2U	696	100%	525	2,022	1,340	682	\$ 9,803,000	\$ 9,803,000
2-G	Westcoat Dr	300' S of John McCain Rd to McDonwell School Rd	0.46	2	C2U	1,141	100%	525	484	526	-42	\$ 2,343,000	\$ 2,343,000
2-H	Westcoat Dr	McDonwell School Rd to L D Lockett Rd	0.68	2	C2U	321	100%	525	711	217	494	\$ 3,454,000	\$ 3,454,000
2-I	White Dr	Westcoat Dr to L D Lockett Rd	0.35	2	C2U	331	100%	525	367	116	251	\$ 1,781,000	\$ 1,781,000
2-J	Bransford Rd	Shelton Dr to 220' N of Glade Rd	1.03	2	C2U	605	100%	525	1,082	624	458	\$ 5,244,000	\$ 5,244,000
2-K	Pleasant Run Rd	3,080' N of John McCain Rd (City Limits) to John McCain Rd	0.58	2	C2U	893	100%	525	607	516	91	\$ 3,328,000	\$ 3,328,000
2-L	Pleasant Run Rd	John McCain Rd to 200' S of Shelton Dr	1.17	2	C2U	800	100%	525	1,228	936	292	\$ 4,769,000	\$ 4,769,000
2-M	Pleasant Run Rd	Bogart Dr to Colleyville Blvd	0.70	2	C2U	509	100%	525	736	357	379	\$ 231,000	\$ 231,000
2-N	Tinker Rd	Pleasant Run Rd to 645' E of Pleasant Run Rd	0.12	2	C2U	457	100%	525	128	56	72	\$ 626,000	\$ 626,000
2-O	Tinker Rd	Caldwell Hughes Rd to Colleyville Blvd	0.41	2	C2U	457	100%	525	432	188	244	\$ 2,092,000	\$ 2,092,000
2-P	Bogart Dr	Hall Johnson Rd to Colleyville Blvd	0.12	2	C2U	N/A	100%	525	122	0	122	\$ 599,000	\$ 599,000
2-Q	Glade Rd	5,100' W of Bransford Rd (City Limits) to 265' W of Bransford Rd	0.91	4	M4U (1/2)	970	100%	650	2,365	882	1,483	\$ 3,586,000	\$ 3,586,000
1-A/2-R	Colleyville Blvd	475' S of Brown Trl (City Limits) to 600' S of Cheek Sparger Rd	0.74	6	P6D	2,652	50%	900	1,985	975	1,010	\$ 1,219,200	\$ 609,600
1-B/2-S	Colleyville Blvd	2,030' N of John McCain Rd (City Limits) to 475' S of Brown Trl	3.46	6	P6D	3,134	50%	900	9,349	5,426	3,923	\$ 5,070,000	\$ 2,535,000
1-5	John McCain Rd & Westcoat Dr	Intersection Improvements					100%					\$ 1,142,907	\$ 1,142,907
1-6	John McCain Rd & Pleasant Run Rd	Intersection Improvements					50%					\$ 753,196	\$ 376,598
1-7	McDonwell School Rd & Westcoat Dr	Intersection Improvements					100%					\$ 1,452,805	\$ 1,452,805
1-8	Precinct Line Rd & Lavaca Trl	Intersection Improvements					50%					\$ 750,000	\$ 375,000
1-9	L.D. Lockett Rd & Precinct Line Rd	Intersection Improvements					50%					\$ 310,000	\$ 155,000
<b>SUBTOTAL</b>									<b>25,137</b>	<b>14,364</b>	<b>10,773</b>	<b>\$ 65,302,108</b>	<b>\$ 61,560,910</b>

2020 Roadway Impact Fee Update Cost Per Service Area \$ 27,550

TOTAL COST IN SERVICE AREA 2 \$ 61,588,460

# EXISTING ROADWAY FACILITIES INVENTORY

**City of Colleyville - 2020 Roadway Impact Fee Update  
Existing Roadway Facilities Inventory**

10/21/2020

**Service Area 1**

ROADWAY	FROM	TO	LENGTH (ft)	LENGTH (mi)	EXIST SECT	TYPE	PM PEAK HOUR VOL	% IN SERVICE AREA	VEH-MI CAPACITY PK-HR PER LN	VEH-MI SUPPLY PK-HR TOTAL	VEH-MI DEMAND PK-HR TOTAL	EXCESS CAPACITY PK-HR VEH-MI	EXISTING DEFICIENCIES PK-HR VEH-MI
Colleyville Blvd	475' S of Brown Trl (City Limits)	600' S of Cheek Sparger Rd	3,881	0.74	M5U	P6D	2,652	50%	725	1,066	975	91	
Colleyville Blvd	2,030' N of John McCain Rd (City Limits)	475' S of Brown Trl	18,283	3.46	P6D	P6D	3,134	50%	900	9,349	5,426	3,923	
Hall-Johnson Rd	Colleyville Blvd	Broughton Rd	2,805	0.53	M4D	M4D	2,451	100%	700	1,487	1,302	185	
Hall-Johnson Rd	Broughton Dr	Sycamore Dr	1,962	0.37	M4U	M4U	2,451	100%	650	966	911	55	
Hall-Johnson Rd	Sycamore Dr	Pool Rd (City Limits)	2,215	0.42	M4D	M4D	2,451	100%	700	1,175	1,028	146	
Riverwalk Dr	Hall Johnson Rd	Bluebonnet Dr	1,244	0.24	M4D	M4D	N/A	100%	700	660	0	660	
Riverwalk Dr	Bluebonnet Dr	Glade Rd	2,988	0.57	M4U	M4U	N/A	100%	650	1,472	0	1,472	
Church St	Colleyville Blvd	Riverwalk Dr	1,145	0.22	M4D	M4D	266	100%	700	607	58	550	
Thompson Terr	Colleyville Blvd	290' S of Colleyville Blvd	289	0.05	C2U	C2U	81	100%	425	47	4	42	
Thompson Terr	Colleyville Blvd	Old Glade Rd	1,061	0.20	C2U	C2U	81	100%	425	171	16	155	
Glade Rd	Colleyville Blvd	Bedford Rd	1,400	0.27	M2U	M2U	1,189	100%	650	345	315	29	
Glade Rd	Bedford Rd	Strathmore Terr	11,269	2.13	C3U	C2U/C3U	1,338	100%	575	2,454	2,856	-401	401
Glade Rd	Strathmore Terr	Roberts Rd	1,551	0.29	M2D	M2D	1,378	100%	700	411	405	6	
Glade Rd	Roberts Rd	Heritage Ave	1,396	0.26	M2D	M2D	1,451	100%	700	370	384	-13	13
Glade Rd	Heritage Ave	Hwy 121 (City Limits)	1,803	0.34	M4U	M4U	1,430	50%	650	444	244	200	
Roberts Rd	2,140' N of Glade Rd (City Limits)	Glade Rd	2,166	0.41	C2U-S	C2U-S	173	100%	425	349	71	278	
Bedford Rd	Glade Rd	115' S of Glade Rd	113	0.02	C2U	C2U	571	100%	425	18	12	6	
Bedford Rd	115' S of Glade Rd	Little Bear Creek	2,674	0.51	C2U	C2U	571	100%	425	430	289	141	
Bedford Rd	Little Bear Creek	Cheek Sparger Rd	1,981	0.38	C2U	C2U	571	100%	425	319	214	105	
Centerpark	Colleyville Blvd	Bedford Rd	2,353	0.45	C2U	C2U	N/A	100%	425	379	0	379	
Cheek-Sparger Rd	Colleyville Blvd	San Bar Ln	858	0.16	M4U	M4U	878	100%	650	422	143	280	
Cheek-Sparger Rd	San Bar Ln	Del Mar Ct	2,132	0.40	M2U	M4U	878	100%	650	525	355	170	
Cheek-Sparger Rd	Del Mar Ct	430' E of Brown Tr	1,095	0.21	M4U	M4U	1,194	100%	650	539	248	292	
Cheek-Sparger Rd	430' E of Brown Tr	Bedford Rd	2,052	0.39	M2U	M2U	1,194	100%	650	505	464	41	
Cheek-Sparger Rd	Bedford Rd	1,270' E of Bedford Rd	1,273	0.24	M2U	M4U	1,194	100%	650	313	288	26	
Cheek-Sparger Rd	1,270' E of Bedford Rd	Heritage Ave (City Limits)	11,984	2.27	M2U	M4U	1,394	50%	650	1,475	1,582	-107	107
Pool Rd	900' N of Twelve Oaks Ln	1,040' S of Hall Johnson Rd	6,874	1.30	M4U	M4U	665	50%	650	1,693	433	1,260	
Pool Rd	1,040' S of Hall Johnson Rd	Glade Rd	2,881	0.55	M4U	M4U	665	100%	650	1,418	363	1,056	
Jackson Rd	Glade Rd	2,540' S of Glade Rd	2,538	0.48	M4U	M4U	724	100%	650	1,250	348	902	
Jackson Rd	2,540' S of Glade Rd	Cheek Sparger Rd	3,782	0.72	M2U	M4U	724	100%	650	931	519	413	
Martin Pkwy	Glade Rd	Cheek Sparger Rd	5,798	1.10	M4U	M4U	108	100%	650	2,855	119	2,736	
Heritage Ave	2,140' N of Glade Rd (City Limits)	Glade Rd	2,141	0.41	M4U	M4U	934	100%	650	1,054	379	675	
Heritage Ave	Glade Dr	1,330' N of Cheek Sparger Rd	4,353	0.82	M2U	M2U	945	50%	650	536	390	146	
Brown Trl	Colleyville Blvd	Cheek Sparger Rd	2,880	0.55	M4U	M4U	571	100%	650	1,418	311	1,107	
Brown Trl	Cheek Sparger Rd	Autumn Oaks	933	0.18	M4U	M4U	823	100%	650	460	146	314	
Brown Trl	Autumn Oaks	350' S of Autumn Oaks	349	0.07	M4U	M4U	823	100%	650	172	54	117	
Brown Trl	350' S of Autumn Oaks	145' S of Quail Crest Dr	1,490	0.28	M2U	M4U	823	100%	650	367	232	135	
<b>SUBTOTAL</b>			<b>115,994</b>	<b>22</b>						<b>38,453</b>	<b>20,882</b>	<b>17,571</b>	<b>521</b>

**City of Colleyville - 2020 Roadway Impact Fee Update  
Existing Roadway Facilities Inventory**

**Service Area 2**

10/21/2020

ROADWAY	FROM	TO	LENGTH (ft)	LENGTH (mi)	EXIST SECT	TYPE	PM PEAK HOUR VOL	% IN SERVICE AREA	VEH-MI CAPACITY PK-HR PER LN	VEH-MI SUPPLY PK-HR TOTAL	VEH-MI DEMAND PK-HR TOTAL	EXCESS CAPACITY PK-HR VEH-MI	EXISTING DEFICIENCIES PK-HR VEH-MI
Bandit Trl	255' W of Overland Tr (City Limits)	Overland Tr	256	0.05	C2U	C2U	N/A	100%	425	41	0	41	
Overland Tr	Bandit Tr	Bandit Tr	545	0.10	C2U	C2U	N/A	100%	425	88	0	88	
Bandit Trl	Overland Tr	John McCain Rd	2,425	0.46	C2U	C2U	207	100%	425	390	95	295	
John McCain Rd	Bandit Tr	Westcoat Dr	2,405	0.46	C2U	C2U	167	100%	425	387	76	311	
John McCain Rd	Westcoat Dr	150' E of Westcoat Dr	150	0.03	C2U	C2U/C3U	167	100%	425	24	5	19	
John McCain Rd	150' E of Westcoat Dr	430' W of Pleasant Run Rd	1,132	0.21	C2U	C2U/C3U	167	100%	425	182	36	146	
John McCain Rd	430' W of Pleasant Run Rd	315' E of Pleasant Run Rd	746	0.14	C2U	C2U/C3U	167	100%	425	120	24	96	
John McCain Rd	315' E of Pleasant Run Rd	Maranatha Ct	6,003	1.14	C2U	C2U/C3U	1,053	100%	425	966	1,197	-231	231
John McCain Rd	Maranatha Ct	Colleyville Blvd	994	0.19	C2U	C2U/C3U	1,053	100%	425	160	198	-38	38
Precinct Line Rd	1,770' N of McDonwell School Rd	1,220' S of L D Lockett Rd	7,109	1.35	P6U	P6D	2,786	50%	750	3,029	1,875	1,154	
McDonwell School Rd W	Precinct Line (City Limits)	Herbert Rd	735	0.14	C2U	C2U/C3U	863	100%	425	118	120	-2	2
McDonwell School Rd W	Herbert Rd	Westcoat Dr	5,213	0.99	C2U	C2U/C3U	863	100%	425	839	852	-13	13
Lavaca Trl	Precinct Line Rd (City Limits)	Mustang Tr	2,940	0.56	C2U	C2U	79	100%	425	473	44	429	
L. D. Lockett Rd	Precinct Line Rd (City Limits)	Pleasant Run Rd	10,167	1.93	C2U	C2U/C3U	696	100%	425	1,637	1,340	297	
Westcoat Dr	John McCain Rd	300' S of John McCain Rd	301	0.06	C2U	C2U/C3U	1,141	100%	425	48	65	-17	17
Westcoat Dr	300' S of John McCain Rd	McDonwell School Rd	2,433	0.46	C2U	C2U/C3U	1,141	100%	425	392	526	-134	134
Westcoat Dr	McDonwell School Rd	L D Lockett Rd	3,577	0.68	C2U	C2U/C3U	321	100%	425	576	217	358	
White Dr	Westcoat Dr	L D Lockett Rd	1,845	0.35	C2U	C2U	331	100%	425	297	116	181	
Bransford Rd	L D Lockett Rd	Shelton Dr	614	0.12	C2U	C2U/C3U	605	100%	425	99	70	28	
Bransford Rd	Shelton Dr	220' N of Glade Rd	5,442	1.03	C2U	C2U/C3U	605	100%	425	876	624	253	
Bransford Rd	220' N of Glade Rd	Glade Rd	250	0.05	C2U	C2U/C3U	605	100%	425	40	29	12	
Bransford Rd	Glade Rd	355' S of Glade Rd	355	0.07	C2U	C2U/C3U	N/A	100%	425	57	0	57	
Bransford Rd	355' S of Glade Rd	Bransford Rd	362	0.07	C3U	C2U/C3U	N/A	100%	575	79	0	79	
Bransford Rd	Bransford Rd	Colleyville Blvd	547	0.10	C2U	C2U/C3U	N/A	100%	425	88	0	88	
Shelton Dr	Bransford Rd	Pleasant Run Rd	2,170	0.41	C2U	C2U	191	100%	425	349	79	271	
Pleasant Run Rd	3,080' N of John McCain Rd (City Limits)	John McCain Rd	3,051	0.58	C2U	C2U/C3U	893	100%	425	491	516	-25	25
Pleasant Run Rd	John McCain Rd	200' S of Shelton Dr	6,175	1.17	C2U	C2U/C3U	800	100%	425	994	936	58	
Pleasant Run Rd	200' S of Shelton Dr	Bogart Dr	884	0.17	C2U	C2U/C3U	509	100%	425	142	85	57	
Pleasant Run Rd	Bogart Dr	Colleyville Blvd	3,702	0.70	C2U	C2U/C3U	509	100%	425	596	357	239	
Main St	Cottage Ln	Colleyville Blvd	1,143	0.22	C2U	C2U	N/A	100%	425	184	0	184	
Tinker Rd	Pleasant Run Rd	645' E of Pleasant Run Rd	646	0.12	C2U	C2U/C3U	457	100%	425	104	56	48	
Tinker Rd	645' E of Pleasant Run Rd	Caldwell Hughes Rd	863	0.16	C2U	C2U/C3U	457	100%	425	139	75	64	
Tinker Rd	Caldwell Hughes Rd	Colleyville Blvd	2,171	0.41	C2U	C2U/C3U	457	100%	425	349	188	162	
Bogart Dr	Pleasant Run Rd	Hall Johnson Rd	1,613	0.31	C2U	C2U/C3U	664	100%	425	260	203	57	
Bogart Dr	Hall Johnson Rd	Colleyville Blvd	616	0.12	C2U	C2U/C3U	N/A	100%	425	99	0	99	
Hall Johnson Rd	Bogart Dr	Colleyville Blvd	636	0.12	M4D	M4D	N/A	100%	700	337	0	337	
Church St	Pleasant Run Rd	Colleyville Blvd	1,433	0.27	M4U	M4U	N/A	100%	650	706	0	706	
Glade Rd	5,100' W of Bransford Rd (City Limits)	265' W of Bransford Rd	4,803	0.91	M2U	M4U	970	100%	650	1,183	882	300	
Glade Rd	265' W of Bransford Rd	Bransford Rd	267	0.05	M4U	M4U	970	100%	650	132	49	82	
Glade Rd	Bransford Rd	Colleyville Blvd	1,597	0.30	M4U	M4U	970	100%	650	786	293	493	
Colleyville Blvd	475' S of Brown Trl (City Limits)	600' S of Cheek Sparger Rd	3,881	0.74	M5U	P6D	2,652	50%	725	1,066	975	91	
Colleyville Blvd	2,030' N of John McCain Rd (City Limits)	475' S of Brown Trl	18,283	3.46	P6D	P6D	3,134	50%	900	9,349	5,426	3,923	
<b>SUBTOTAL</b>			<b>110,478</b>	<b>21</b>						<b>28,275</b>	<b>17,628</b>	<b>10,646</b>	<b>459</b>

PLAN FOR AWARDING THE ROADWAY IMPACT FEE CREDIT SUPPORTING  
EXHIBITS

# City of Colleyville

## 2020 Roadway Impact Fee Update Plan for Awarding the Impact Fee Credit

### Introduction

Texas Local Government Code Section 395 “Financing Capital Improvements Required by New Development in Municipalities, Counties, and Certain Other Local Governments” requires the Capital Improvements Plan (CIP) to contain specific enumeration of a plan for awarding the impact fee credit.

Section 395.014, Texas Local Government Code states:

“... (a) The political subdivision shall use qualified professionals to prepare the capital improvements plan and to calculate the impact fee. The capital improvements plan must contain specific enumeration of the following items:

(7) A plan for awarding:

- (A) a credit for the portion of ad valorem tax and utility service revenues generated by new service units during the program period that is used for the payment of improvements, including the payment of debt, that are included in the capital improvements plan; or
- (B) In the alternative, a credit equal to 50 percent of the total projected cost of implementing the capital improvements plan....”

### Ad Valorem Tax Generated by New Development

The plan for awarding the credit assumes the future growth-related street CIP projects are funded from long-term bonds. The portion of ad valorem tax generated by the new development during the program period is estimated to equal the portion of the long term bond debt service payments related to the growth related street CIP projects.

<b>Debt Service Requirement</b>	<b>Area 1</b>	<b>Area 2</b>
Annual I&S requirement (impact fee street CIP projects)	\$71,593	\$250,104

### Impact Fee Credit per Vehicle Mile

The maximum impact fee is expressed in dollars per vehicle-mile. The annual per vehicle-mile credit is calculated by dividing the annual portion of estimated property tax by the current total vehicle miles of demand:

	Annual amount of ad valorem tax applied to growth related CIP for the ten year period	Current Vehicle-Miles of Demand	Credit Per Vehicle Mile
<b>Area 1</b>	\$71,593	1,266	\$56.55
<b>Area 2</b>	\$250,104	2,929	\$85.39

**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Plan for Awarding the Impact Fee Credit**

**Growth in Service Units (Vehicle Miles)**

The cumulative totals of 6,963 vehicle-miles in Service Area 1, and 16,110 vehicle-miles in Service Area 2, are derived from the 1,266 projected ten-year demand in Service Area 1, and 2,929 projected ten-year demand in Service Area 2. The growth in vehicle miles is applied equally over the ten-year period:

<b>NEW ROADWAY VEH-MILES IMPACT FEE PERIOD AREA 1</b>			
YR		ANNUAL	CUMULATIVE
1	NEW ROADWAY VEH-MILES	126.6	127
2	NEW ROADWAY VEH-MILES	126.6	253
3	NEW ROADWAY VEH-MILES	126.6	380
4	NEW ROADWAY VEH-MILES	126.6	506
5	NEW ROADWAY VEH-MILES	126.6	633
6	NEW ROADWAY VEH-MILES	126.6	760
7	NEW ROADWAY VEH-MILES	126.6	886
8	NEW ROADWAY VEH-MILES	126.6	1,013
9	NEW ROADWAY VEH-MILES	126.6	1,139
10	NEW ROADWAY VEH-MILES	126.6	1,266
	<b>TOTAL</b>	<b>1,266</b>	<b>6,963</b>

<b>NEW ROADWAY VEH-MILES IMPACT FEE PERIOD AREA 2</b>			
YR		ANNUAL	CUMULATIVE
1	NEW ROADWAY VEH-MILES	292.9	293
2	NEW ROADWAY VEH-MILES	292.9	586
3	NEW ROADWAY VEH-MILES	292.9	879
4	NEW ROADWAY VEH-MILES	292.9	1,172
5	NEW ROADWAY VEH-MILES	292.9	1,465
6	NEW ROADWAY VEH-MILES	292.9	1,757
7	NEW ROADWAY VEH-MILES	292.9	2,050
8	NEW ROADWAY VEH-MILES	292.9	2,343
9	NEW ROADWAY VEH-MILES	292.9	2,636
10	NEW ROADWAY VEH-MILES	292.9	2,929
	<b>TOTAL</b>	<b>2,929</b>	<b>16,110</b>

**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Plan for Awarding the Impact Fee Credit**

**CIP Credit by Service Area**

The credit per vehicle mile is multiplied times the ten year cumulative total of vehicle miles of demand by service area to equal the CIP credit by service area.

Colleyville 2020 Roadway Impact Fee Study Update					
New Roadway Vehicle-Miles and Credit per Service Area - 10 Year Impact Fee Period					
Service Area	Projected 10yr Demand (veh-miles)	Annual Demand (veh-miles)	10 YR Cumulative Demand Total	\$ PER VEH-MI CREDIT	CIP Credit by Service Area
1	1,266	127	6,963	\$56.55	\$393,758
2	2,929	293	16,110	\$85.39	\$1,375,633

**Maximum Impact Fee Per Vehicle-Mile After the Credit**

Calculation of the maximum impact fee per vehicle mile after the credit by service area (column H) is illustrated in the following table:

City of Colleyville 2020 Impact Fee Study Update								
Calculation of the Maximum Impact Fee After the Credit								
	(A)	(B)	(C)	(D)	(E) (C) X (D)	(F)	(G) (F) - (E)	(H) (G) / (A)
Service Area	Projected 10yr Demand (veh-miles)	Annual Demand (veh-miles)	10 YR Cumulative Demand Total	\$ PER VEH-MI CREDIT	CIP Credit by Service Area	Cost Attributable to Growth	Cost Attributable to Growth Less Credit	Maximum Impact Fee after Credit
1	1,266	127	6,963	\$56.55	\$393,758	2,382,888	\$1,989,130	\$1,571
2	2,929	293	16,110	\$85.39	\$1,375,633	8,425,909	\$7,050,276	\$2,407

The CIP credit by service area (column E) is subtracted from the cost attributable to growth by service area (column F) to result in the cost attributable to growth less credit by service area (column G).

The maximum impact fee per vehicle-mile after the credit per service area (column H) is calculated by dividing the cost attributable to growth less credit (column G) the projected 10 year demand (Column A).

**City of Colleyville**  
**2020 Roadway Impact Fee Update**  
**Plan for Awarding the Impact Fee Credit**

**Impact Fee per Single Family Unit**

**Comparisons of the Base Impact Fee, 50% Alternative, and the Maximum Impact Fee After the Credit**

A comparison to the base maximum impact fee and 50% reduction follows:

City of Colleyville 2020 Impact Fee Study Update						
Comparison of the Base Maximum Impact Fee to the 50% Maximum Impact Fee and Maximum Impact Fee after the Credit by Service Area						
	(A)	(B)	(C)	(D)	(E)	(F)
Service Area	Base Maximum Impact Fee per Veh-Mile	Fee per Veh-Mile @ 50% Discount	50% Alternative Maximum Fee per Single Family Dwelling Unit	Maximum Impact Fee after the credit per Veh-Mile	% of Base Maximum Impact Fee	After the Credit Maximum Fee per Single Family Dwelling Unit
1	\$1,882	\$941	\$3,727	\$1,571	83.48%	\$6,222
2	\$2,877	\$1,438	\$5,696	\$2,407	83.67%	\$9,532

PLAN FOR AWARDING THE WATER AND  
WASTEWATER IMPACT FEE CREDIT

## 2020 PLAN FOR AWARDING THE WATER AND WASTEWATER IMPACT FEE CREDIT

Texas Local Government Code Section 395 “Financing Capital Improvements Required by New Development in Municipalities, Counties, and Certain Other Local Governments” requires the Capital Improvements Plan (CIP) to contain specific enumeration of a plan for awarding the impact fee credit.

Section 395.014, Texas Local Government Code states:

“... (a) The political subdivision shall use qualified professionals to prepare the capital improvements plan and to calculate the impact fee. The capital improvements plan must contain specific enumeration of the following items:

(7) a plan for awarding:

(A) a credit for the portion of ad valorem tax and utility service revenues generated by new service units during the program period that is used for the payment of improvements, including the payment of debt, that are included in the capital improvements plan; or

(B) In the alternative, a credit equal to 50 percent of the total projected cost of implementing the capital improvements plan.”

The plan for awarding the credit assumes the future growth-related water and wastewater projects are funded from long-term debt. The portion of utility revenue generated by the new development during the 10-year program period is estimated to equal the portion of the long-term debt service payments used to fund the growth related water and wastewater projects.

<b>Annual Debt Service Requirements to Fund Growth Related Projects</b>	
Water Projects	184,955
Wastewater Projects	51,652

The maximum impact fee credit is expressed in dollars per service unit. The current demand is 8,719 water service units and 8,715 sewer service units (per Kimley-Horn W&S Impact fee Update, 2020). The monthly credit is \$1.77 per water service unit and \$0.49 per sewer service unit (annual “capital/ debt related” revenue divided by annual service units divided by 12 months):

	<b>Annual Debt Service</b>	<b>Current Annual Service Units</b>	<b>Monthly Credit</b>
Water Projects	184,955	8,719	1.77
Wastewater Projects	51,652	8,715	0.49

## 2020 PLAN FOR AWARDING THE WATER AND WASTEWATER IMPACT FEE CREDIT

The cumulative growth total of 2,173 water monthly service units and 2,239 sewer monthly service units is derived from the 395 water service units of new demand and 407 sewer service units of new demand (per Kimley-Horn W&S Impact Fee Update, 2020) applied equally over the ten-year period:

<b>NEW SERVICE UNITS - IMPACT FEE PERIOD</b>			
<b>WATER SERVICE UNITS</b>	<b>CUMUL SERVICE UNITS</b>	<b>SEWER SERVICE UNITS</b>	<b>CUMUL SERVICE UNITS</b>
395		407	
39.5	39.5	40.7	41
39.5	79.0	40.7	81
39.5	118.5	40.7	122
39.5	158.0	40.7	163
39.5	197.5	40.7	204
39.5	237.0	40.7	244
39.5	276.5	40.7	285
39.5	316.0	40.7	326
39.5	355.5	40.7	366
39.5	395.0	40.7	407
395	2,173	407	2,239
MONTHS	12		12
BILLS	26,070		26,862

The monthly credit per service units is multiplied times the ten-year cumulative total of monthly service units times 12 months to equal the total CIP credit.

	<b>10-Year Cumulative Total</b>	<b>Monthly Credit per Service Unit</b>	<b>Total CIP Credit</b>
<b>Total CIP Credit</b>			
Water Projects	26,070	1.77	46,085
Wastewater Projects	26,862	0.49	13,267

## 2020 PLAN FOR AWARDING THE WATER AND WASTEWATER IMPACT FEE CREDIT

The total CIP credit is subtracted from the CIP allocated to ten year growth (per Kimley-Horn W&S Impact Fee Update, 2020 report) plus financing costs to result in the amount to be paid from water and sewer impact fees:

	<b>Water Projects</b>	<b>Sewer Projects</b>
<b>Total CIP Credit</b>		
Total Growth-Related CIP	5,288,647	1,476,960
Add: Financing Costs	1,320,296	369,089
Pre Credit Impact Fee Recoverable Cost	6,608,943	1,846,049
Less: CIP Credit	(46,085)	(13,267)
Maximum Impact Fee Recoverable Cost	6,562,858	1,832,782

The maximum impact fee after the credit is calculated by dividing the total amount to be paid from impact fees by the service units of new demand:

<b>Maximum Impact Fee After the Credit</b>		
	<b>Water Projects</b>	<b>Sewer Projects</b>
Total Growth-Related CIP	5,288,647	1,476,960
Add: Financing Costs	1,320,296	369,089
Pre Credit Impact Fee Recoverable Cost	6,608,943	1,846,049
Less: CIP Credit	(46,085)	(13,267)
Maximum Impact Fee Recoverable Cost	6,562,858	1,832,782
Service Units of New Demand	395	407
Maximum Impact Fee Before the Credit	16,732	4,536
Maximum Impact Fee After the Credit	16,615	4,503

The result is an adjusted maximum water impact fee per service unit after the credit of \$16,615 or 99.30% of the base maximum impact fee of \$16,732, and an adjusted maximum sewer impact fee per service unit after the credit of \$4,503 or 99.28% of the base maximum sewer impact fee per service unit of \$4,536.

<b>% of the Maximum Impact Fee Before the Credit</b>		
Maximum Impact Fee Before the Credit	16,732	4,536
Maximum Impact Fee After the Credit	16,615	4,503
%	99.30%	99.28%

## 2020 PLAN FOR AWARDING THE WATER AND WASTEWATER IMPACT FEE CREDIT

This credit is less than the 50% alternative which results in an adjusted water impact fee per service unit after the 50% credit of \$8,366, and an adjusted sewer impact fee per service unit after the 50% credit of \$2,268.

50% of the Maximum Impact Fee Before the Credit		
Maximum Impact Fee Before the Credit	16,732	4,536
50% Maximum Impact Fee Before the Credit	8,366	2,268
%	50.00%	50.00%

The following is a conversion of service units to maximum assessable water impact fees for various meter types and sizes:

Meter Size	Service Unit Equivalent	Base Maximum Water Impact Fee	Maximum Assessable Water Impact Fee	50% of Base Maximum Fee
		\$ 16,732	\$ 16,615	\$ 8,366
5/8" X 3/4" PD	1.0	16,732	16,615	8,366
3/4" PD	1.5	25,098	24,923	12,549
1" PD	2.5	41,830	41,538	20,915
1 1/2" PD	5.0	83,660	83,075	41,830
2" PD	8.0	133,856	132,920	66,928
2" Compound	8.0	133,856	132,920	66,928
2" Turbine	10.0	167,320	166,150	83,660
3" Compound	16.0	267,712	265,840	133,856
3" Turbine	24.0	401,568	398,760	200,784
4" Compound	25.0	418,300	415,375	209,150
4" Turbine	42.0	702,744	697,830	351,372
6" Compound	50.0	836,600	830,750	418,300
6" Turbine	92.0	1,539,344	1,528,580	769,672
8" Compound	80.0	1,338,560	1,329,200	669,280
8" Turbine	160.0	2,677,120	2,658,400	1,338,560
10" Turbine	250.0	4,183,000	4,153,750	2,091,500

## 2020 PLAN FOR AWARDING THE WATER AND WASTEWATER IMPACT FEE CREDIT

The following is a conversion of service units to maximum assessable sewer impact fees for various meter types and sizes:

<b>Meter Size</b>	<b>Service Unit Equivalent</b>	<b>Base Maximum Sewer Impact Fee</b>	<b>Maximum Assessable Sewer Impact Fee</b>	<b>50% of Base Maximum Fee</b>
		\$ 4,536	\$ 4,503	\$ 2,268
5/8" X 3/4" PD	1.0	4,536	4,503	2,268
3/4" PD	1.5	6,804	6,755	3,402
1" PD	2.5	11,340	11,258	5,670
1 1/2" PD	5.0	22,680	22,515	11,340
2" PD	8.0	36,288	36,024	18,144
2" Compound	8.0	36,288	36,024	18,144
2" Turbine	10.0	45,360	45,030	22,680
3" Compound	16.0	72,576	72,048	36,288
3" Turbine	24.0	108,864	108,072	54,432
4" Compound	25.0	113,400	112,575	56,700
4" Turbine	42.0	190,512	189,126	95,256
6" Compound	50.0	226,800	225,150	113,400
6" Turbine	92.0	417,312	414,276	208,656
8" Compound	80.0	362,880	360,240	181,440
8" Turbine	160.0	725,760	720,480	362,880
10" Turbine	250.0	1,134,000	1,125,750	567,000